Strata® CTX

Digital Business Telephone Systems

CTX28, CTX100-S, CTX100 and CTX670 Programming Manual



Strata CTX100 and CTX670 General End User Information

The Strata CTX100 or CTX670 Digital Business Telephone System is registered in accordance with the provisions of Part 68 of the Federal Communications Commission's Rules and Regulations.

FCC Requirements

Means of Connection: The Federal Communications Commission (FCC) has established rules which permit the Strata CTX100 or CTX670 system to be connected directly to the telephone network. Connection points are provided by the telephone company—connections for this type of customer-provided equipment will not be provided on coin lines. Connections to party lines are subject to state tariffs.

Incidence of Harm: If the system is malfunctioning, it may also be disrupting the telephone network. The system should be disconnected until the problem can be determined and repaired. If this is not done, the telephone company may temporarily disconnect service. If possible, they will notify you in advance, but, if advance notice is not practical, you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC.

Service or Repair: For service or repair, contact your local Toshiba telecommunications distributor. To obtain the nearest Toshiba telecommunications distributor in your area, log onto www.toshiba.com/taistsd/locator.htm or call (800) 222-5805 and ask for a Toshiba Telecom Dealer.

Telephone Network Compatibility: The telephone company may make changes in its facilities, equipment, operations, and procedures. If such changes affect the compatibility or use of the Strata CTX100 or CTX670 system, the telephone company will notify you in advance to give you an opportunity to maintain uninterrupted service.

Notification of Telephone Company: Before connecting a Strata CTX100 or CTX670 system to the telephone network, the telephone company may request the following:

1. Your telephone number.
2. FCC registration number:
   - Strata CTX100 or CTX670 may be configured as a Key, Hybrid or PBX telephone system. The appropriate configuration for your system is dependent upon your operation of the system.
   - If the operation of your system is only manual selection of outgoing lines, it may be registered as a Key telephone system.
   - If your operation requires automatic selection of outgoing lines, such as dial access, Least Cost Routing, Pooled Line Buttons, etc., the system must be registered as a Hybrid telephone system. In addition to the above, certain features (tie Lines, Off-premises Stations, etc.) may also require Hybrid telephone system registration in some areas.
   - If you are unsure of your type of operation and/or the appropriate FCC registration number, contact your local Toshiba telecommunications distributor for assistance.
     CTX28 FCC/ACTA Registration Numbers
     Hybrid: CJ6MF03BDTCHS28, fully-protected multifunction systems
     Key: CJ6KD03BDTCHS28, key systems for analog applications
     CTX100 Registration Numbers
     PBX: CJ6MUL-35931-PF-E, fully-protected PBXs
     Hybrid: CJ6MUL-35930-MF-E, fully-protected multifunction systems
     Key: CJ6MUL-35929-KF-E, fully-protected telephone key systems
     CTX670 Registration Numbers
     PBX: CJ6MUL-35934-PF-E, fully-protected PBXs
     Hybrid: CJ6MUL-35933-MF-E, fully-protected multifunction systems
     Key: CJ6MUL-35932-KF-E, fully-protected telephone key systems
   - Ringer equivalence number: 0.3B. The ringer equivalence number (REN) is useful to determine the quantity of devices which you may connect to your telephone line and still have all of those devices ring when your number is called. In most areas, but not all, the sum of the RENs of all devices connected to one line should not exceed five (5.0B). To be certain of the number of devices you may connect to your line, as determined by the REN, you should contact your local telephone company to ascertain the maximum REN for your calling area.
3. Network connection information USOC jack required: RJ11/14C, RJ21/2E/2F/2G/2HX/RJ49C (see Network Requirements in this document). Items 2, 3 and 4 are also indicated on the equipment label.
4. Authorized Network Parts: 02LS2/GS2, 02RV2-T/O, OL13C/B, T11/12/31/32M, 04DU9-BN/DN/1SN, 02IS5, 04DU9-BN/DN/1SN1ZN

Radio Frequency Interference

Warning: This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the manufacturer's instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case, the user, at his/her own expense, will be required to take whatever measures may be required to correct the interference.

This system is listed with Underwriters Laboratory.

UL Requirement: If wiring from any telephone exits the building or is subject to lightning or other electrical surges, then secondary protection is required. Secondary protection is also required on DID, OPS, and Tie lines. (Additional information is provided in this manual.)

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CP01, Issue 8, Part I Section 14.1
Notice: The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the Equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

CAUTION! Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

CP01, Issue 8, Part I Section 14.2
Notice: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The terminal on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the Devices does not exceed 5.

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Introduction

This manual provides information required to program the Strata CTX28, CTX100-S, CTX100 and CTX670 business telephone systems using Toshiba's CTX WinAdmin™ software or Button Programming.

Important! *Whenever the CTX100 is mentioned in this book, it applies to both the CTX100-S and CTX100, unless specified otherwise.*

This programming manual only applies to CTX WinAdmin version 2.20G. If you have CTX WinAdmin versions 2.1D or lower, refer to previous versions of this manual.

Note The features described in this document assume that the Strata CTX system has the current software release installed. At the time of printing, Strata CTX R2.2 and CTX WinAdmin R2.20 are the most current versions.

Organization

Part 1: Getting Started

Chapter 1 - **Programming Guidelines** describes auto-recognition features, order of programming, and overview of general CTX WinAdmin and Button Programming operation.

Part 2: CTX WinAdmin Programming

Chapter 2 – CTX WinAdmin Overview provides general information about CTX WinAdmin's software capabilities.

Chapter 3 – Installation discusses system hardware and software requirements for CTX WinAdmin and includes the installation steps needed to install CTX WinAdmin.

Chapter 4 – System provides system programming information.

Chapter 5 – Station discusses station and station feature programming.

Chapter 6 – Trunks explains trunk programming information including T1, ISDN Basic Rate Interface (BRI) and Primary Rate Interface (PRI).

Chapter 7 – Attendant describes Attendant Console support and settings available in CTX WinAdmin.

Chapter 8 – IP Telephone describes the programs required to program IP Telephone features.

Chapter 9 – Services discusses programming of services available to Strata CTX through CTX WinAdmin.

Chapter 10 – Operation explains system setup options available to CTX WinAdmin users. System initialization, SmartMedia formatting, system software upgrades and Internet Protocol (IP) configuration are among the topics discussed.

Chapter 11 – Maintenance provides system and component trace program information. CTX WinAdmin Configuration and Flash Memory Testing are also described.

Chapter 12 – Tools and Profile discusses Strata CTX Tools and Utilities to help manage your Strata CTX System more efficiently.

Part 3: Telephone Button Programming

Chapter 13 – Telephone Button Programming discusses the button programming interface provided with Strata CTX.

Chapter 14 – Maintenance Procedures provides Strata CTX maintenance procedures that can be activated from the programming telephone.

Part 4: Appendices

Appendix A – Applications, Tips and Tricks gives information on using multiple programs to set up a feature.

Appendix B – System Error Codes is a reference for error codes encountered while programming the Strata CTX.

Appendix C – Strata CTX/DK Program Cross-reference provides cross-reference tables that compare Strata CTX and Strata DK programs that are similar in function.

Appendix D – Record Sheets contains all the record sheets required to program the Strata CTX.

Appendix E – Software and Firmware Updates contains IP Telephone and BIPU Firmware update procedures.

Conventions

Conventions	Description
Note	Elaborates specific items or references other information. Within some tables, general notes apply to the entire table and numbered notes apply to specific items.
Important!	*Calls attention to important instructions or information.*
CAUTION!	Advises you that hardware, software applications, or data could be damaged if the instructions are not followed closely.
WARNING!	Alerts you when the given task could cause personal injury or death.
[DN]	Represents any Directory Number button, also known as an extension or intercom number.
[PDN]	Represents any Primary Directory Number button (the extension number for the telephone).
[SDN]	Represents any Secondary appearance of a PDN. A PDN which appears on another telephone is considered an SDN.
[PhDN]	Represents any Phantom Directory Number button (an additional DN).
Arial Bold	Represents telephone buttons.
Courier	Shows a computer keyboard entry or screen display.
"Type"	Indicates entry of a string of text.
"Press"	Indicates entry of a single key. For example: Type **prog** then press **Enter**.
Plus (+)	Shows a multiple PC keyboard or phone button entry. Entries without spaces between them show a simultaneous entry. Example: **Esc**+**Enter**. Entries with spaces between them show a sequential entry. Example: **#** + **5**.
Tilde (~)	Means "through." Example: 350~640 Hz frequency range.
➤	Denotes the step in a one-step procedure.
➤	Denotes a procedure.
Start > Settings > Printers	Denotes a progression of buttons and/or menu options on the screen you should select.
See Figure 10	Grey words within the printed text denote cross-references. In the electronic version of this document (Library CD-ROM or FYI Internet download), cross-references appear in blue hypertext.

Related Documents/Media

Note Some documents listed here may appear in different versions on the CD-ROM or in print. To find the most current version, check the version/date in the Publication Information on the back of the document's title page.

General Description

- Strata CTX General Description

Installation and Maintenance Manual

- Strata CTX Installation and Maintenance

User Guides

- Strata CTX DKT/IPT Telephone
- Strata CTX DKT3001/2001 Digital Single Line Telephone
- Strata CTX Standard Telephone
- Strata CTX DKT2204-CT/DKT2304-CT Cordless Telephone

Quick Reference Guide

- Strata CTX DKT/IPT Telephone

CD-ROMs

- Strata CTX WinAdmin Application Software and CTX/DK/Partner Products Documentation Library
- Strata CTX Call Center Solutions Application Software and Documentation Library (includes Strata CTX ACD software and documentation, Net Server software and documentation, and Voice Assistant software and documentation.
- OAISYS (includes software and documentation of OAISYS Chat, Call Router, and Net Phone)

For *authorized users,* Internet site FYI (http://fyi.tsd.toshiba.com) contains all current Strata CTX documentation and enables you to view, print and download current publications.

Strata® CTX

Digital Business Telephone Systems

Part 1: Getting Started

Strata CTX Programming Guidelines 1

This chapter discusses Strata CTX programming basics and guides you through initial setup procedures. It also describes auto-recognition features, order of programming, and overview of general CTX WinAdmin and Button Programming operations. Programming sequence tables are provided to streamline your programming tasks.

Step 1: Use Default Auto-programming to Start Up

Important! *Defaults for the Strata CTX28 are also included in this chapter. All programs and instructions apply to all Strata CTX systems, except when specified otherwise.*

This feature reduces the programming time to install Strata CTX systems. The Strata CTX system will automatically program specific default data in a number of programs based on the PCBs that are installed in the system before processor initialization. The default data and procedure for auto-programming is provided in this section.

1. Install all line, station and optional PCBs that should be recognized for auto programming.
2. Power-on the system and initialize auto-programming for the system (Program 900, Level 1).
3. Verify "Station and BIOU Auto-programming" on page 1-2.
4. Verify "Station PDN Auto-programming" on page 1-3.
5. Verify "CO Line Auto-programming" on page 1-3.
6. Verify "CTX Processor NIC Interface TCP/IP Auto-programming" on page 1-8.

Notes

- The type of PCB, its cabinet and slot position are automatically recognized upon system initialization; or, when powering the CTX processor for the first time.
- Each installed PCB circuit equipment number is set in numerical order based on the cabinet and slot position of the PCB.
- Station Primary Directory Numbers (PDN) and CO line numbers are set in numerical order according to their equipment cabinet/slot positions.
- Other default data, such as the Strata CTX LAN and modem interface IP address, station and line class of service, outgoing and incoming line groups, etc., are automatically set for the optional hardware originally installed.

Limitations

The following are the limitations of Strata CTX auto-programming.

- CTI programs are not programmed automatically.
- Strata CTX cannot configure unique LAN requirements automatically. Strata CTX's LAN system data, CTX IP address and Community Name are set to a default.

Note DND is only assigned on 20-button telephones.

- When the system is initialized, it takes a few minutes to recognize the mounted hardware.
- The Primary DN on the first button and DND on the last button are assigned telephone buttons; all other buttons are not assigned automatically.
- Slot 101 must always have a BDKU, ADKU or PDKU. The BDKU is assigned if no PCB is installed.

Station and BIOU Auto-programming

Table 1-1 shows the Station and BIOU PCBs that will be recognized and set in Program 100 during auto-programming.

Note No special assignments are set for BIOU during auto-programming.

Important! *PCBs must be installed per the rules in the Strata CTX I&M manual, Configuration Chapter, Worksheet 6 and Worksheet 7.*

Table 1-1 Auto-Programming for Station and BIOU PCB Recognition (Program 100)

PCB Code	PCB Name	PCB Circuit Type	Parameter Setting	Comments
000		No PCB or RRCU		None or Remote Cabinets
002	RSTU	8 Standard Telephone circuits		Standard telephone no VM interface settings
003	PDKU2	8 Digital Telephone	PCM Highway: 8	DKT2000 or DKT3000 without S-OCA (DKT3000 limitations: DKT2000, 16 character LCD display on DKT3000, DKT3000 LCD Feature key does not function, DKT3014 large screen LCD does not display).
004	Not used	Not used		
017	BDKU	8 digital telephones	8, 1B circuits	DKT2000 or DKT3000 without S-OCA
018	BDKU1+BDKS	16 digital telephones	16, 1B circuits	DKT2000 or DKT3000 without S-OCA
019	BIOU	Page/MOH/Relay interface#1		No functions assigned
020	BIOU2	Page/MOH/Relay interface#2		No functions assigned. Strata CTX 100 assigns a virtual BIOU2 into a virtual location, Cabinet 02, Slot 05, to provide control of the ACTU relay.

Station PDN Auto-programming

When auto programming recognizes installed station PCBs, it assigns PDNs in numerical order as follows:

- Auto programming assigns PDNs to station PCB equipment numbers (cabinet, slot, circuit) in equipment number order. All installed station PCB circuits will be assigned a PDN regardless of the circuit type, digital (BDKU/BDKS, PDKU) or analog (RSTU).
- PDN 200 or PDN 2000 (depending on the system size) is assigned to the station circuit having the lowest equipment number in the system, then the PDN is incremented by one digit and assigned to the next highest station equipment number and so on. See Table 1-2.
- Program 205 Feature Button Setting – A Primary DN (PDN) is assigned to **FB01** on each digital telephone according to its equipment number (cabinet, slot, circuit) position. DND is assigned to FB20 on 20-button telephones and is not assigned on 10- and 14-button telephones.

Table 1-2 Auto-Programming for Station Primary Directory Number

First digit	CTX100 and CTX670 without BBMS and BEXS Installed on Processor	CTX670 with BBMS and BEXS Installed on Processor (First Digit is 2)
2	Primary DNs (3-digits) 200~299 depending on quantity of station PCBs installed	Primary DNs (4-digit) 2000~2571 depending on qty. of station PCBs installed
3	Primary DN (3-digits) 300~399 depending on qty. of station PCBs installed	

CO Line Auto-programming

Table 1-3 shows the CO line PCBs that will be recognized and set in Program 100 during auto-programming. The default data for CO line Incoming Line Groups (ILG), Outgoing Line Groups (OLG), and CO line service type is set as shown in Table 1-4.

Important! *PCBs must be installed per the rules in the CTX I&M manual, Configuration Chapter, Worksheet 6 and Worksheet 7.*

Table 1-3 Auto-Programming for CO line PCB Recognition (Program 100)

PCB Code	PCB Name	PCB Circuit Type	Parameter setting	Comments
000	-	No PCB or RRCU		None or Remote cabinets
001	RCOU, RGLU	4 analog Loop or ground start lines		Direct Incoming Termination (DIT) lines
005	RCOU+RCOS	8 analog loop start lines		Direct Incoming Termination (DIT) lines
006	RDDU	4 analog DID lines		Direct Inward Dial lines
007	RDTU2	16 or 24 digital T1 lines	PCM Highway: 16 or 24[1]	T1 Direct Incoming Termination (DIT) lines
008	RDSU	4 Standard telephone and for digital telephone		Standard telephone and DKT2000 and DKT3000 without S-OCA (DKT3000 limitations: DKT2000, 16 character LCD display on DKT3000, DKT3000 LCD Feature key does not function, DKT3014 large screen LCD does not display).

Table 1-3 Auto-Programming for CO line PCB Recognition (Program 100) *(continued)*

PCB Code	PCB Name	PCB Circuit Type	Parameter setting	Comments
009	RCIU2+RCIS	4 or 8 Caller ID interface		Caller ID interface for RCOU/RCOS and RGLU analog CLID lines. Note: The same Prg100 code (009) is used for RCIU2 with or without RCIS.
010	RMCU+RCMS	2 or 4 E911 analog CAMA lines		CAMA lines Note: The same Prg100 code (009) used for RCIU2 with or without RCIS.
011	REMU, BVPU	4 analog Tie lines, 4 VoIP circuits		Tie lines
012	RBSU	2 ISDN BRI (S/T) circuits	TIE Type: Two TIEs	ISDN BRI CO lines
013	RBSU+RBSS	4 ISDN BRI (S/T) circuits	TEI Type: Two TIEs	ISDN BRI CO lines
014	RPTU	16 or 24 ISDN PRI channels	PCM Highway: 16 or 24[1]	ISDN BRI CO lines
015	RBUU	2 ISDN BRI (U) circuits	TEI Type: Two TIEs	ISDN BRI CO lines
016	RBUU+RBUS	4 ISDN BRI (U) circuits	TEI Type: Two TIEs	ISDN BRI CO lines

1. If the slot next to an installed RDTU or RPTU is vacant, 24 line or channels will be installed; If the slot next to an installed RDTU or RPTU is occupied by another PCB, 16 lines or channels will be installed.

Table 1-4 Auto-Programming of Line Groups and Service Types

CO line type	OLG Prg 306	ILG Prg. 304	CO Service Type
RCOU/RCOS and RGLU analog loop and ground start	1	1	Direct In Termination (DIT) to the first PDN. (200 or 2000 – see Table 5)
RDDU analog DID	1	2	DID, wink – no default DID numbers
RDTU (T1)	1	3	DID – no default DID numbers
RMCU/RMCS analog CAMA	1	-	Direct In Termination (DIT) to the first PDN. (200 or 2000 – see next table)
RBUU/RBUS and RBSU ISDN BRI - set as CO side	2	4	DID – no default DID numbers
ISDN PRI	2	5	DID – no default DID numbers
REMU analog E&M	3	6	Non-QSIG

1. The line number is assigned to all lines in the numerical order according to the line PCB cabinet placements. Example: Line number 1 will be on the first circuit of the line PCB placed in the lowest cabinet/slot number.
2. OLG:1 is created even if there is are no analog line PCBs installed.

Table 1-5 Auto-Programming of Miscellaneous Line Parameters

Item	Settings
DIT line ringing assignment Program 310	All of the ringing destinations of DIT lines are the first PDN: PDN 200 for CTX100 and 2-cabinet CTX670 PDN2000 for 2~7 cabinet CTX670.
DID numbers - not assigned. Program 309	The destination of DID is not assigned. DID numbers and ringing destinations must be assigned manually from CTX WinAdmin or the programming telephone.
Format Setting for DIT (T1)	Zero Code Suppress = B8ZS, Frame Format = ESF.
Setting for CAMA	The destination of internal notification is the first DN 200 or 2000 in the all operation mode (DAY1, Day2, and Night).
Setting for ISDN BRI CO	Common D channel is not assigned. 1 channel group is assigned to each BRI PCB installed. The channel group number is assigned in order to each BRI interface in the order in which the BRI PCBs are installed. The destination of DID is not assigned.
Setting for ISDN PRI CO	Common D channel is not assigned. 1 channel group is assigned to each PRI PCB installed. The channel group number is assigned in order to each PRI interface in the order in which the PRI PCBs are installed. The destination of DID is not assigned.
Setting for E&M Tie lines	The node number and the other setting for networking are not assigned automatically

The destination of Program 318, No Calling Party Number and Out Of Search for DID number, is assigned to the first Primary DN of the system (200 or 2000) in the all system operating modes (Day1,Day 2, and Night).

The DIT line (ground and loop) destinations of all trunks which generated automatically are set as the first PDN 200 or 2000 depending on the system size – see Table 1-4.

BIPU Settings

Table 1-6 BIPU-M Automatic Settings

Item	Description	Settings
Card Type	Card Type	BIPU
IP Address (BIPU)	IP address of BIPU	In the order of smallest number of the slot where BIPU is inserted 192.168.254.200 .201 .202/..... Private address will be set.
Subnet mask (BIPU)	Subnet mask of BIPU substrate	255.255.255.0
Default gateway	Default gateway of BIPU substrate	0.0.0.0

Table 1-7 IPT Automatic Settings

Item	Description	Settings
DN Setting	DN setting of the terminal accommodated in BIPU	The number plan conforms to BDKU16. Assigned in the order of the lowest slot number.
Accommodated terminal setting (Station ID)	Parameter setting of Station ID in BIPU	Station ID = PDN
Accommodated terminal setting (IP Address)	Parameter setting of IP address in BIPU	IP address = 0.0.0.0
Accommodated terminal setting (MAC addresses)	Parameter setting of MAC addresses in BIPU	MAC addresses = (no data)

Table 1-8 System Related Basic Settings

Item	Description	Settings
QOS Control	Setting of priority control by Diffserv/IEEE802.1p	Use of Diffserv: Not applicable Set value of DSField = 0 Use of IEEE802.1p: Not applicable Priority level: Voice
Station ID	Automatic setting of Station ID	Not allowed
Terminal authentication setting	Application or non application of connection restriction function using MAC address	Not apply

BIPU-Q1A Initial Programming

After initializing the CTX System with BIPU for Strata Net over IP, Strata CTX detects the BIPU card for Strata Net over IP and basic programming is set automatically.

Table 1-9 BIPU-Q1A Automatic Settings

Item	Description	Settings
Card Type	Card Type	BIPU-Q1A
IP Address (BIPU)	IP address of BIPU-Q1A	In the order of smallest number of the slot where BIPU is inserted 192.168.254.800 for 1st BIPU .801 for 2nd BIPU .802 for 3rd BIPU Private address will be set.
Subnet mask (BIPU)	Subnet mask of BIPU-Q1A	255.255.255.0
Default gateway	Default gateway of BIPU-Q1A	0.0.0.0

Table 1-10 IP-Trunk Information

Program	Description	Settings
ILG	ILG Number	7
	Kind of Trunk (Analog/ISDN)	ISDN
	Type of Trunk	TIE
OLG	OLG Number	4
	Kind of Trunk (Analog/ISDN)	ISDN
	Type of Trunk	TIE
ISDN Trunk	CG Number	1: 1st BIPU 2: 2nd BIPU 3: 3rd BIPU
	Type of Protocol	IP
	ILG	7
	OLG	4
Voice Coding Procedure	CODEC (G.711, G.729A)	G.711
Index of Voice attribute table	(1~256)	1
Parameter of voice attribute table	-	Packet Interval: 20ms Type of Jitter buffer: Fixed Size of Jitter buffer: 1 Max Acceptable Delay: 1 Measure Time: 1000ms Packet Loss Ratio: 5 Packet discard ratio: 5
D-ch Establish/Release	D-ch Establish/Release	D-ch Release by Call Released
Fast Connect Procedure	-	Apply
Negotiation	Negotiation of H.245	Un-Apply
IP address for Node ID	IP Address	IP address

Table 1-11 System Information

Item	Description	Settings
QoS Control	Priority Control by Diffserv. IEEE802.1p	Diffserv: Disable DS Field: 0 IEEE802.1p Disable Priority: Voice (6)

CTX Processor NIC Interface TCP/IP Auto-programming

The following are the initial values of the LAN data that is automatically created for the system.

- Network TCP/IP. See "916 IP Configuration" on page 10-14.
  - IP address – **192.168.254.253**
  - Sub network master – **255.255.255.0**
  - Default gateway – **0.0.0.0**
  - IP routing table – Not used.
- SNMP Agent settings
  - Community name – **communityName**
  - IP address – **0.0.0.0** (not restricted by the IP address of the access source)
  - Privileges – **WRITE**
  - community-id – **1**
  - User level – **Super user**
- Trap destination
  - Community name – Nothing
  - IP address – Nothing
- Modem PPP Server settings
  - IP Address – **192.168.255.254** (Strata CTX modem fixed IP address for Dial-up connections).

Public Numbering Plan Analyzed Digit Numbers (Program 117)

Public Numbering Plan Analyzed Number	Public Numbering Plan Analyzed Digit Number
1NXX	11
N11	3
NXX	7
N = 2~9 and X = 0~9	

E911 Emergency Call to Outgoing Line Group (Program 550)

Emergency Call Group Number	OLG1
1	1

E911 Emergency Call Destination (Program 400)

System Mode	Emergency Call Called Number Index	Emergency Call Called Number
DAY1	1	200 or 2000 (the first PDN)
DAY2	1	200 or 2000 (the first PDN)
NIGHT	1	200 or 2000 (the first PDN)
The emergency call destination is set for the first PDN as 200 or 2000 in the all operation mode (DAY1, Day2, NIGHT).		

CTX28 Default Initialized Data

- The default programming data shown in Table 1-12 applies even if the option units (GCDU/GSTU/GVMU) are not mounted. This enables voice mail to be used as is if the GVMU is inserted. Default programming accommodates the other options similarly.
- When GCDU is not installed, CO 4-6 and DKTs 9-16 are in "make-busy" mode and cannot be used.
- When GSTU is not installed, SLT2 is not in "make busy" mode and cannot be used.
- When GVMU is not installed, VM ports1-4 are in "make busy" mode and cannot be used.

Table 1-12 CTX28 Digital Telephone Default Programming Data – Program 205

DKT1~8									
		DKT1	**DKT2**	**DKT3**	**DKT4**	**DKT5**	**DKT6**	**DKT7**	**DKT8**
FB7		CO6	CO6	CO6	CO6	CO6	CO6	CO6	CO6
FB6		CO5	CO5	CO5	CO5	CO5	CO5	CO5	CO5
FB5		CO4	CO4	CO4	CO4	CO4	CO4	CO4	CO4
FB4		CO3	CO3	CO3	CO3	CO3	CO3	CO3	CO3
FB3		CO2	CO2	CO2	CO2	CO2	CO2	CO2	CO2
FB2		CO1	CO1	CO1	CO1	CO1	CO1	CO1	CO1
FB1	PDN	200	201	202	203	204	205	206	207
VMID	same as PDN								
DKT9~16 (Optional)									
		DKT9	**DKT10**	**DKT11**	**DKT12**	**DKT13**	**DKT14**	**DKT15**	**DKT16**
FB7		CO6	CO6	CO6	CO6	CO6	CO6	CO6	CO6
FB6		CO5	CO5	CO5	CO5	CO5	CO5	CO5	CO5
FB5		CO4	CO4	CO4	CO4	CO4	CO4	CO4	CO4
FB4		CO3	CO3	CO3	CO3	CO3	CO3	CO3	CO3
FB3		CO2	CO2	CO2	CO2	CO2	CO2	CO2	CO2
FB2		CO1	CO1	CO1	CO1	CO1	CO1	CO1	CO1
FB1	PDN	209	210	211	212	213	214	215	216
VMID	same as PDN								

Table 1-13 Program 204 Default Data

In Program 204, all telephones are programmed as 20 buttons.

Table 1-14 Program 102 New Default Data

Feature Code	Default Value	Function
870	#963	Call Monitor Log Off

Table 1-15 Program 205/213/215 New Default Data

Button Code	Function
870	Call Monitor Feature Button

Table 1-16 Program 313 Default Data

Caller ID	Prog 313	Function		CTX28 default
	FB1	Caller ID Receive Method	nothing/ANI-MCI/ANI-Sprint/ CLASS	CLASS
	FB2	Caller ID Identification Notice Contents	ANI and DNIS/DNIS/DID	ANI or DNIS
under line is CTX100's default **Note** Class Equipment number is not required for CTX28 because CLID circuits are built-in and dedicated to each CO line.				

Table 1-17 Program 100 Default Data

Virtual Slot Equip. Nos.	Circuits	PCB Code	Station Line Numbers	Connection
0101	8 - Digital Telephones (no spkr OCA)	017	200~207	GMAU1A (motherboard)
0102	3 - CO lines, with CLID	028	CO1~CO3	
0103	Not used			
0104	Standard Telephone 01~02	026	01~208 02~217	01-GMAU1A 02-GSTU1A
0105	4 - Voice Mail ports	026	220~223	GVMU1A
0106	Not used			
0107	8 - Digital Telephones	017	209~216	GCDU1A
0108	3 - CO Lines with CLID	028	CO4~CO6	
0205	Virtual BIOU	020	Relay Contact Page, MOH	GCTU1A
*Slot codes are set during system initialization and cannot be changed.				

Table 1-18 Program 200 Default Data

	GMAU									
FB0	**DN**	**200**	**201**	**202**	**203**	**204**	**205**	**206**	**207**	**208**
FB1	EQUIP	010101	010102	010103	010104	010105	010106	010107	010108	010401
FB2		DKT	DKT	DKT	DKT	DKT	DKT	DKT	DKT	SLT
FB3		Ext.	Ext.	Ext.	Ext.	Ext.	Ext.	Ext.	Ext.	Ext.
FB19	VM ID	200	201	202	203	204	205	206	207	208
FB22	VM MW Center Port	220	220	220	220	220	220	220	220	220

Table 1-19 Prog 200 Default Data

	GCDU									GSTU
FB0	**DN**	**209**	**210**	**211**	**212**	**213**	**214**	**215**	**216**	**217**
FB1	EQUIP	010701	010702	010703	010704	010705	010706	010707	010708	010402
FB2		DKT	DKT	DKT	DKT	DKT	DKT	DKT	DKT	SLT
FB3		Ext.	Ext.	Ext.	Ext.	Ext.	Ext.	Ext.	Ext.	Ext.
FB19	VM ID	209	210	211	212	213	214	215	216	217
FB22	VM MW Center Port	220	220	220	220	220	220	220	220	220

Note To log into GVMU boxes for the first time, enter the default telephone station number plus 997. Example: for Station 200, enter 200997 as the Voice Mail ID.

Table 1-20 Prog 200 Default Data for GVMU

	GVMU				
FB0	**DN**	**220**	**221**	**222**	**223**
FB1	EQUIP	010501	010502	010503	010504
FB2		SLT	SLT	SLT	SLT
FB3		Voice Mail	Voice Mail	Voice Mail	Voice Mail
FB19	VM ID				
FB22	VM MW Center Port				

Table 1-21 Prog 579 Default Data

FB16	VM DN 220

Table 1-22 Prog 580 – Voice Mail Data Assignment Default Data for GVMU

FB0	DN	220	221	222	223
FB1	INBAND / SMDI	SMDI	SMDI	SMDI	SMDI
Note In Program 209, the above Voice Mail ports are assigned to Hunt Group 01 (circular).					

Table 1-23 Prog 218 – Voice Mail Hunt Group Assignment Default Data

FB0	GRP	1	1	1	1
FB1	INDEX	1	2	3	4
FB2	DN	220	221	222	223
Note VM ports are assigned to Hunt Group 1 (circular) in Prog. 209 in default data.					

Table 1-24 Prog 300 Default Data

FB0	TRK NO	1	2	3	4	5	6
FB1	EQUIP	010201	010202	010203	010801	010802	010803
FB2	ILG	1	1	1	1	1	1
FB3	OLG	1	1	1	1	1	1
FB4		DTMF	DTMF	DTMF	DTMF	DTMF	DTMF
FB5		LOOP	LOOP	LOOP	LOOP	LOOP	LOOP
FB12	HUNT ORDER	6	5	4	3	2	1

Table 1-25 Prog 310 Default Data (Trunk > Assignment > DIT)

FB0	Trunk Number	1	2	3	4	5	6
FB0	EQUIP	010201	010202	010203	010801	010802	010803
FB1	Day 1 Destination	No Data	No Data	No Data	No Data	No Data	No Data
FB2	Day 2 Destination	No Data	No Data	No Data	No Data	No Data	No Data
FB3	Day 3 Destination	No Data	No Data	No Data	No Data	No Data	No Data
FB4	Music on Hold Source	Processor MOH Jack	Processor MOH Jack	Processor MOH Jack	Processor MOH Jack	Processor MOH Jack	Processor MOH Jack

Default Feature Access Codes

Refer to "102 Flexible Access Codes" on page 4-4.

Step 2: Plan Your System Requirements

Plan for your Strata CTX system requirements in detail before beginning your installation. Use record sheets wherever they are provided to document your installation requirements. The following are some areas to consider:

- **Flexible Numbering Plan (102)** – Planning your Flexible Numbering requirements is essential to a smooth installation. Trunk group access and station range requirements are especially important areas of consideration.
- **COS (103)** – Determine the Class of Service (COS) requirements for your station and trunk groups. There are up to 32 possible COS plans.
- **DRL (111)** – Define up to 16 Destination Restriction Level (DRL) assignments.

Important! *Destination Restriction is an expanded feature of what has traditionally been known as Toll Restriction. Toll Restriction is only one facet of Strata CTX's Destination Restriction feature. Refer to Destination Restriction in this manual when programming Toll Restriction requirements.*

- **FRL and QPL (506)** – Define up to 16 Facilities Restriction Level (FRL) and Queuing Priority Level (QPL) assignments.

Step 3: Program CTX for First Time

Follow the steps below to program the Strata CTX for the first time. Following this initial setup procedure enables you to perform a standard Strata CTX setup with common System and Station default assignments. Toshiba recommends adherence to these procedures for initial setup.

1. **Card Assignments (100)** – Choose System > Card Assignment. It is not necessary to physically install PCBs prior to programming Strata CTX.

   If you physically install your PCBs prior to initial setup, CTX WinAdmin automatically recognizes PDKU, BDKU/BDKS, RSTU, RCOU/RCOS and RGLU PCBs and assigns default stations and trunks automatically. All other PCBs are assigned manually. See "100 Cabinet Slot PCB Assignments" on page 4-1 for more details.

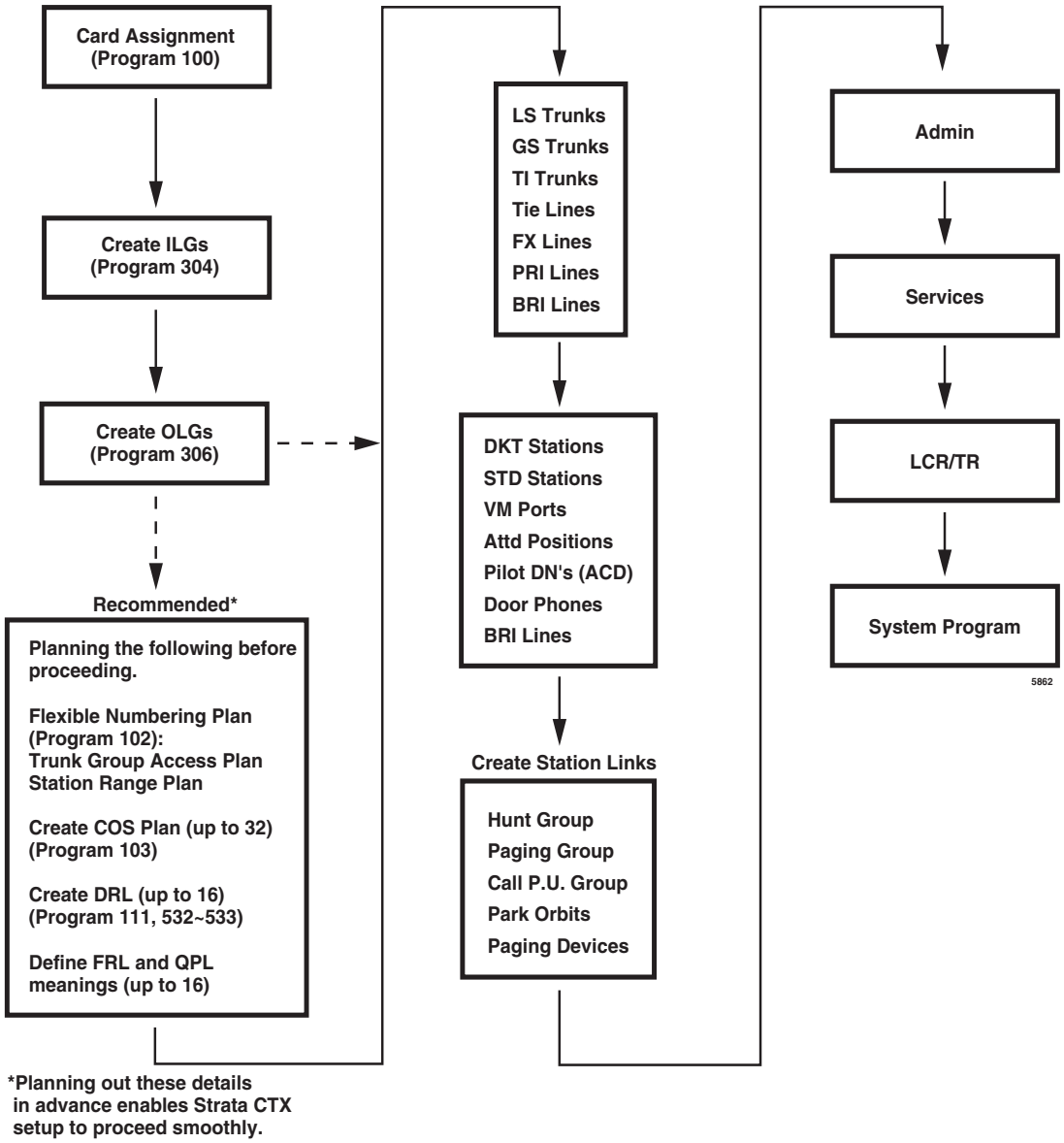
2. **ILG Assignment (304)** – Choose Trunk > ILG to assign Incoming Line Groups (ILG). See "304 Incoming Line Group Assignment" on page 6-2 for more details. ILGs enable line groupings of shared Class of Service features for incoming call handling.
3. **OLG Assignment (306)** – Choose Trunk > OLG to assign Outgoing Line Groups (OLG). See "306 Outgoing Line Groups" on page 6-4 for more details.
4. **Trunk Assignment (300)** – Choose Trunk > Basic. Set up your Trunks in the following order (see "300 Trunk Assignment" on page 6-6 for more details):
   - Loop Start Trunks
   - Ground Start Trunks
   - T1 Trunks
   - Tie lines
   - FX lines

- PRI lines
- BRI lines

5. **Station Assignment (200)** – Choose Station > Basic. Set up your stations in the following order (see "Assignment" on page 5-1 for more details):
   - DKT Stations
   - Standard Stations
   - Voice Mail (VM) Ports
   - Attendant Positions
   - Automatic Call Distribution (ACD) Pilot DNs
   - Door Phones
6. **Create Station Links** – Create the following groups wherever applicable and set stations to link as necessary.
   - Hunt Groups using Programs 209 and 218
   - Paging Groups using Program 502
   - Call Pickup Groups using Program 210
   - Park Orbits using Program 102
   - Paging Devices using Program 503
7. **Backup Data** – Choose Operation\Data Backup. Make sure the SmartMedia card is properly formatted (see "908 SmartMedia" on page 10-4) prior to running backup. See "910 Data Backup" on page 10-13 for details.
8. Continue programming Strata CTX details.

Review Program Flow

The basic program flow needed to set up Strata CTX is shown below. The figure displays the most critical programs in the left column and migrates right to optional programs. Also, programming flows from specific (left) to general (right).



Step 4: Identify Program Sequences

Use the following tables to quickly identify the programs needed to fulfill your setup requirements. See the Index to correlate program numbers and their functions.

Station Setup

Use the following table to quickly access the programs needed to set up Station requirements.

Station Type	Assignment	Run Programs in Sequence from left to right.							
DKT	PDN	100	200	204	208	205			
	PhDN	205	206						
	DADM	204	213						
	DDSS	214	215						
	Attd	100	200	204	208				
	Ext	100	200	208					
	VM	100	200	204	206	209	218	579	580
ISDN	Ext	100	202	217					
Pilot DN		540							
Station Hunting		209	218						
Call Pickup Groups		210							
Emergency Ringdown		216							
Paging Groups		502							
Station Speed Dial		516							

Trunk Setup – Analog

Use the following table to quickly access the programs needed to set up analog Trunk requirements.

Trunk Type	Assignment	Run Programs in Sequence from left to right.						
LS/GS	Basic	100	304	306	300			
	Ring	310						
	Timer	308						
	DISA	311						
Tie line	Basic	100	304	306	300			
	Timer	308						
	DISA	311						
DID	Basic	100	304	306	300			
	Ring	309						
	Timer	308						
	DISA	311						
	DNIS/ANI	313						
	Intercept	318	319					

Trunk Setup – T1

Use the following table to quickly access the programs needed to set up T1 Trunk requirements.

Trunk Type	Assignment	Run Programs in Sequence from left to right.						
LS/GS	Basic	100	304	306	300			
	Data	315						
	Ring	310						
	Timer	308						
	DISA	311						
Tie line	Basic	100	304	306	300			
	Data	315						
	Timer	308						
	DISA	311						
DID	Basic	100	304	306	300			
	Data	315						
	Ring	309						
	Timer	308						
	DISA	311						
	DNIS/ANI	313						
	Intercept	318	319					

Trunk Setup – ISDN PRI

Use the following table to quickly access the programs needed to set up ISDN PRI Trunk requirements.

Trunk Type	Assignment	Run Programs in Sequence from left to right.						
DID	Basic	100	304	306	302	320		
	Ring	309						
	Timer	308						
	DISA	311						
	DNIS/ANI	313						
	Intercept	318	319					
	CNIS	321	322					
Tie line	Basic	100	304	306	302	320		
	Ring	309						
	Timer	308						
D-share		100	304	306	302	320	316	
CBC		100	304[1]	306[1]	302[2]	320	323[3]	

Notes

1. Each CBC Group may require one ILG and one OLG.
2. Do not assign ILG/OLG using this program.
3. Assign ILG and OLG using Program 323.

Miscellaneous

Use the following table to quickly access the programs needed to set up other Strata CTX features.

Feature	Run Programs in Sequence from left to right.									
Account-Codes	570	571	103	506	306					
Automatic Busy Redial (ABR)	103	208	104							
Automatic Call Back (ACB)	104									
Automatic Camp-On	304									
Auto-Release of CO	308									
Background-Music (BGM)	102	103	109							
Call Forwarding	103	200	217							
Call History	204	205								
Call Park Orbit	104	102								
Call Xfer W/ Camp-On	103									
COS-Station	200	202								
COS-CO	304	306								
Credit-Card Calling	105	111	306							
Day/Night service	500	106	112	113	103	105				
Identification Services	309	318	579							
Digital PAD	107	114								
Direct Inward Dialing	309	318	304							
DISA	311									
Direct Inward Termination	304	310								
Do not Disturb (DND)	103	204	205	102						
Door Lock Control	104	204	508	205						
Door Phones	102	507	573							
DTMF DP Compatible	104									
DTMF BackTone	204									
DTMF Signal Time	579	104								
E911	105	200 202	217	550	104	306				
Executive Override	103	105								
External Ringing Repeat	300	204								
Flash	308	205	102	103						
Flexible Numbering	102									
Group Paging	502	503	102							
Least-Cost-Routing (LCR)	520	521	522	523	524	525	526	528	529	103
Line Group	304	305	306	307	317	302	323	300		
Message-Waiting Light	204	102	579							
Music-on-Hold	102	105	109	309	310					
Off-Hook Camp-on	104	200	217							
Network Call – Incoming	102	656								
Network Call – Outgoing	102	651	653	654	655					
Out-Going calls	200	217	104							
Ringing-Transfer	105									
SMDI	200	202	579	580						

Feature	Run Programs in Sequence from left to right.									
Station CO Line Access	204									
SMDR	512	513	514							
Tandem Connection	103	104	300							
DR Override by System's Speed Dial	105									
Destination Restriction	200	202	306	650	530	531	532	533	534	
Tone-First/Voice-First	204	206								
Travelling COS	105	200	510							
Voice-Mail Interface See "Voice Mail Set Up" on page A-1	100	200	209	218	579	580	803	804	309	318
Emergency Ring-Down	216									
Relay Services	515									
System Call-Forward	200	217	104	500	504					
Call Pick Up	210	103	200	205	102					

Strata® CTX

Digital Business Telephone Systems

Part 2: CTX WinAdmin Programming

CTX WinAdmin Overview 2

CTX WinAdmin is a powerful Microsoft® Windows® based telephone system management tool used to program, maintain and upgrade the Strata CTX Digital Business Telephone System. CTX WinAdmin uses a variety of networking and software technologies as follows:

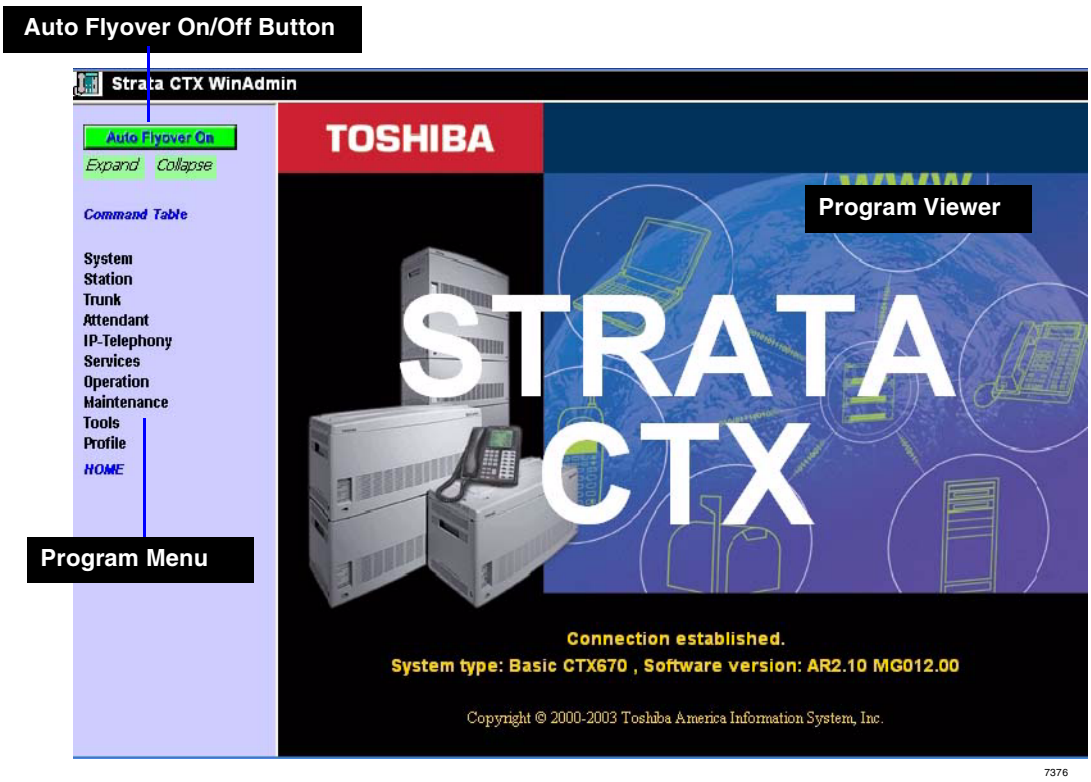
- **Virtual Local Area Network (LAN)** – System Administrators can connect their PC to Strata CTX via a network interface jack or modem. CTX WinAdmin views the Strata CTX system as a LAN providing a stable environment in which to program and access data.
- **Windows Management Instrumentation (WMI)** – enables query-based information retrieval and event notification. WMI is an access mechanism which enables CTX WinAdmin to access, monitor, command and control Strata CTX.
- **Virtual Web Server and Manager** – creates a virtual World Wide Web environment in Strata CTX. This technology enables CTX WinAdmin to view Strata CTX as if it were an Internet Service Provider (ISP), providing secure passage for System Administrators.
- **Microsoft Internet Explorer® browser access** – Virtual Web Service enables System Administrators to access Strata CTX using the Internet Explorer browser.
- **CTX WinAdmin Graphical User Interface (GUI)** – Sophisticated programming tasks are just a click-of-the-mouse away with CTX WinAdmin's GUI.
- **Mobile Access** – enables System Administrators to program, maintain, and/or upgrade a Strata CTX from any mobile location with an Internet connection—without ever leaving the office.
- **Internet Access** – CTX WinAdmin uses Microsoft IP technology to enable access to your Strata CTX as easy as browsing the World Wide Web.
  - Personal Web Server and Manager – Microsoft's Personal Web Server and Manager option package enables you to build a web environment between your Strata CTX and your PC.
  - Internet Explorer – provides a stable environment in which to program, maintain and upgrade your Strata CTX.

CTX WinAdmin's tight integration of the above technologies provide System Administrators with convenient, stable, user friendly and comprehensive access to Strata CTX system information.

CTX WinAdmin can connect directly to your Strata CTX Digital Business Telephone System via Network Interface (included with Strata CTX's BECU board and required on your PC) and Modem Interface. Mobile System Administrators can access a Strata CTX system from any location that provides Internet access.

CTX WinAdmin Main Screen

After you start CTX WinAdmin, log in and connect to the CTX, the main screen (shown below) displays. Verify the information on this screen. It contains the System type and Software version.



- **Auto Flyover On/Off Button** – You can click this toggle button to turn on or turn off flyovers.
- **Program Menu** – The primary tool used to navigate through CTX WinAdmin. Click the Expand or Collapse buttons at the upper left corner to expand or collapse the Program menu.

Note The CTX28 Program menus are different compared to the CTX100 and CTX670. For the Expanded view of all the CTX28 menus, see "CTX28 Programming Menus" on page 2-3.

- **Program Viewer** – This area is where the various programs and parameters are displayed as you navigate through CTX WinAdmin.

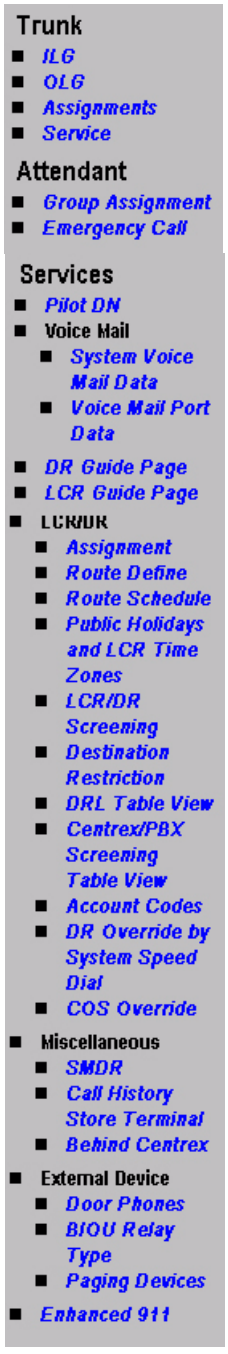
Notes

- You can verify the Strata CTX system type (CTX100 or CTX670) and the software version on the Title screen shown above.
- The software version is organized as follows:
  - Example: AR1.01 M0010.00
  - A = Country code (USA, Canada, Mexico).
  - R1.01 = CTX Release 1.01
  - M000xx.00 = Strata CTX software version.

CTX28 Programming Menus

The CTX28 Program menus are different compared to the CTX100 and CTX670. Below is the Expanded view of all CTX28 menus. It also lists programs menus that are not available when connected to the CTX28.





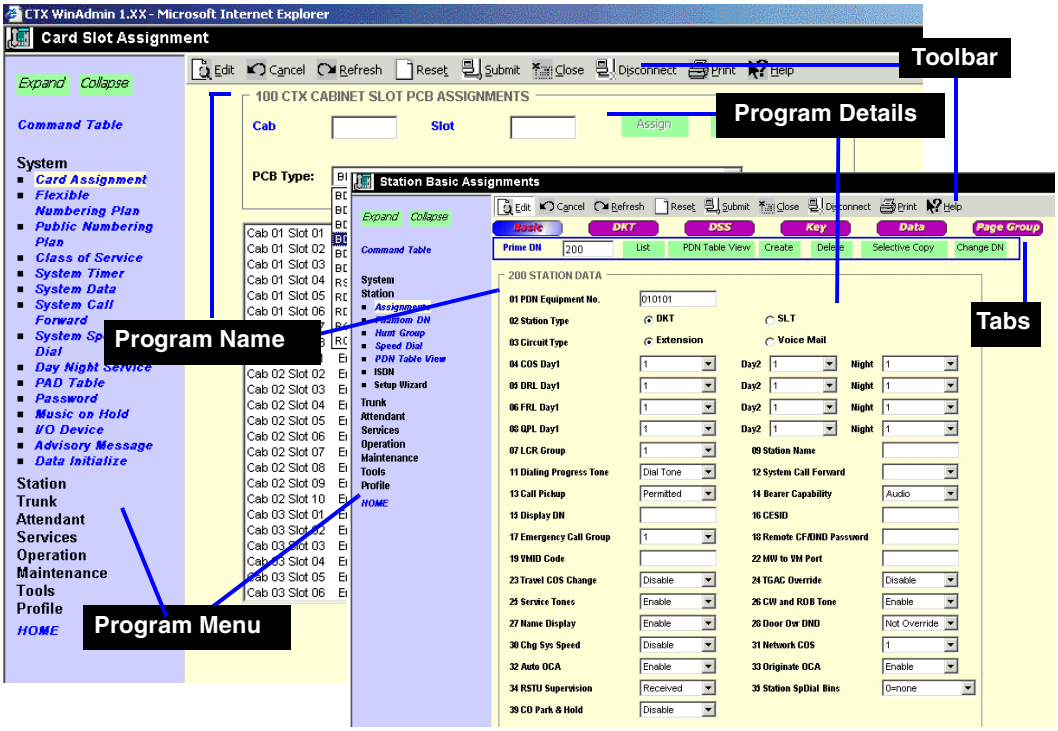


The following are not available in the CTX28 Menus:

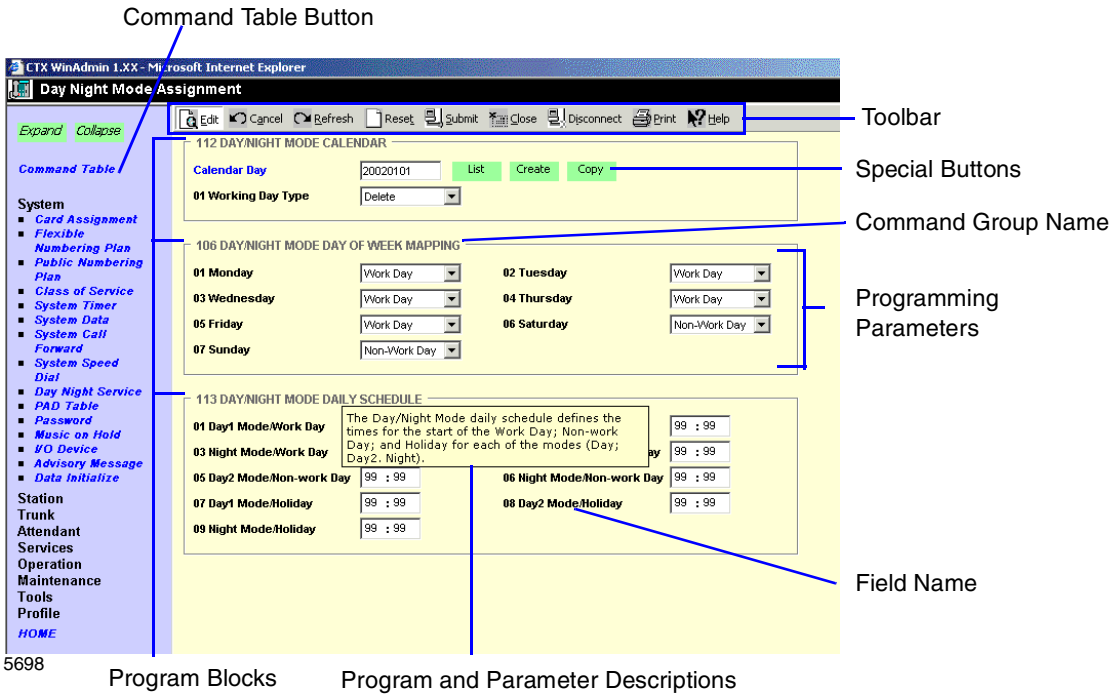
- Station > ISDN
- Services > Networking
- Trunk > DID
- Trunk > DID Intercept
- Trunk > T1
- Trunk > DID/DNIS Table View
- Trunk > ISDN
- Trunk > Setup Wizard
- Operation > License Control
- Operation > License Information

CTX WinAdmin Sub-screens

The CTX WinAdmin operates in a user friendly Windows environment featuring interactive Graphical User Interface (GUI) screens.The Program Viewer's GUI is arranged to streamline the Strata CTX programming process (see sample screen below).



Programming functions can be accessed by clicking on the appropriate link in the Program Menu. The Day Night Service (Programs 112, 106 and 113) screen is shown in the sample below.



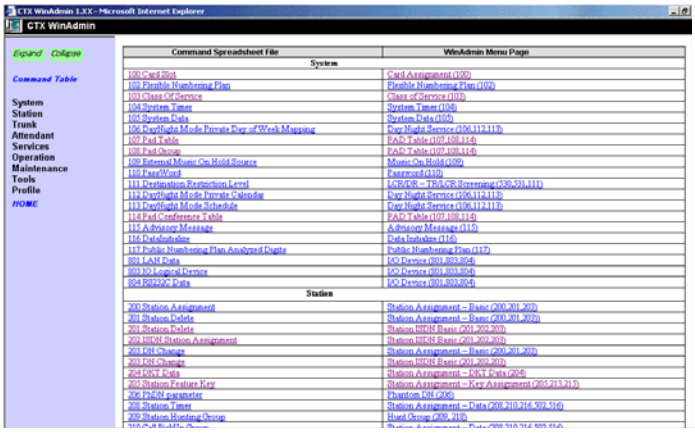
The following features enable you to browse and program CTX WinAdmin efficiently.

- **Program Blocks** – CTX WinAdmin arranges many related programs in blocks to enable the programmer to view essential and related programs on one screen.
- **Program Tabs –** You can access a variety of programs and features by clicking the Program Tabs found on some of the CTX WinAdmin screens.
- **Programming Parameters** – Choose values from scroll down menus.
- **Command Group Name** – Each program number and title is prominently displayed for easy reference.
- **Field Name** – Each Field Name or parameter displays and is coded with a prefix (**FB**) number for easy referencing.
- **Program and Parameter Descriptions** – Every program and parameter description displays in a pop-up window by placing the mouse cursor over the program or parameter information.
- **CTX WinAdmin Toolbar** – The CTX WinAdmin Toolbar enables Strata CTX updates with a click of your mouse button. The following options are provided.
  - **Edit** – CTX WinAdmin defaults to the Edit mode used to program, maintain, or upgrade your Strata CTX System.
  - **Cancel** – Cancels the previous entry.
  - **Refresh** – Displays the latest updates.
  - **Reset** – Resets to set your Strata CTX to manufacturer's default.

CAUTION! By pressing the Reset button, you are authorizing all data to be reset to manufacturing defaults. Any custom data entered will be lost.

  - **Submit** – New data is held in CTX WinAdmin's memory. Your Strata CTX is not updated with the new settings until the Submit button is clicked.
  - **Close** – Exits CTX WinAdmin and return to CTX Management Console Menu.
  - **Disconnect** – Disconnects CTX WinAdmin from Strata CTX and terminates TCP/IP Communications.
  - **Help** – Enables the CTX WinAdmin Help files.
- **Command Table Button –** This button enables you to locate programs by number or category (shown right).

  From this table, you can click on a program to open it.



CTX28 Command Table

The CTX28 Command Table displays commands or programs that are applicable to the CTX28 only.The CTX28 Command Table screens are as follows:

Command Spreadsheet File	WinAdmin Menu Page
System	
100 Card Slot	Card Assignment (100)
102 Flexible Numbering Plan	Flexible Numbering Plan (102)
103 Class Of Service	Class of Service (103)
104 System Timer	System Timer (104)
105 System Data	System Data (105)
106 DayNight Mode Private Day of Week Mapping	Day Night Service (106,112,113)
107 Pad Table	PAD Table (107,108,114)
108 Pad Group	PAD Table (107,108,114)
109 External Music On Hold Source	Music On Hold (109)
110 PassWord	Password (110)
111 Destination Restriction Level	LCR/DR – Toll Restriction (532,533,534,111))
112 DayNight Mode Private Calendar	Day Night Service (106,112,113)
113 DayNight Mode Schedule	Day Night Service (106,112,113)
114 Pad Conference Table	PAD Table (107,108,114)
115 Advisory Message	Advisory Message (115)
116 DataInitialize	Data Initialize (116)
117 Public Numbering Plan Analyzed Digits	Public Numbering Plan (117)
120 Tenant Data	Tenant Data (120)
801 LAN Data	I/O Device (801,803,804)
803 IO Logical Device	I/O Device (801,803,804)
804 RS232C Data	I/O Device (801,803,804)
Station	
200 Station Assignment	Station Assignment – Basic (200,201,203)
201 Station Delete	Station Assignment – Basic (200,201,203))
203 DN Change	Station Assignment – Basic (200,201,203)
204 DKT Data	Station Assignment – DKT Data (204)
205 Station Feature Key	Station Assignment – Key Assignment (205,213,215)
206 PhDN parameter	Phantom DN (206)
208 Station Timer	Station Assignment – Timer (208)
209 Station Hunting Group	Hunt Group (209, 218)
210 Call PickUp Group	Pickup Group (210)
213 Add On Module Key	Station Assignment – Key Assignment (205,213,215)
214 DSS Console	Station Assignment – DSS Data (214)
215 DSS key	Station Assignment – Key Assignment (205,213,215)
216 Emergency Ring Down	Station Assignment – RingDown (216)
218 Station Hunting Group Member	Hunt Group (209, 218)
Trunk	
300 Trunk Assign	Trunk Basic (300,301)
301 Trunk Delete	Trunk Basic (300,301)
304 Incoming Line Group	ILG (304,305,513)
305 ILG Delete	ILG (304,305,513)
306 Out Going Line Group	OLG (306,307)
307 OLG Delete	OLG (306,307)
308 Trunk Timer	Timer (308)
310 Direct Inward Termination Assignment	DIT (310)
311 DISA	Service (311,319)
313 Caller ID	Caller ID (313)
319 Intercept Position	Service (311,319)

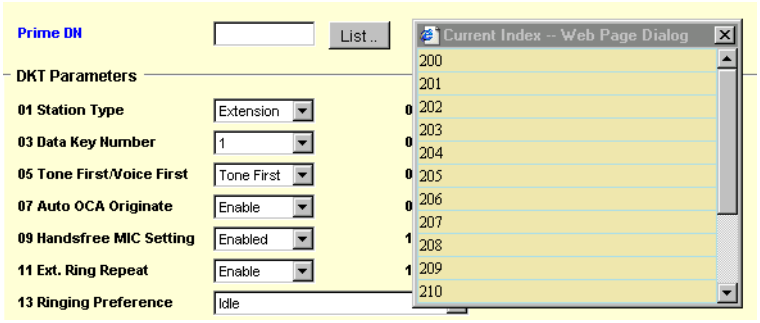
Attendant	
400 Emergency Call Destination	Emergency Call (400)
404 Attendant Group	Group Assignment (404)
Services	
500 System Call Forward	System Param – System Call Forward (500,504)
501 System Speed Dial	System Param – System Speed Dial (501)
502 Station Page Group	Station Page Group
503 Paging Device Paging Group	External Device – Paging Devices (503)
504 System Call ForwardType	System Param – System Call Forward (500,504)
506 Verified Account Code	LCR/DR – Account Codes (506,570,571)
507 Door Phone	External Device – Door Phones (507,508,573,576)
508 Door Lock Control	External Device – Door Phones (507,508,573,576)
509 Toll Restriction Override by Speed Dial	LCR/DR – DR Override by System Speed Dial (509)
510 Class Of Service Override	SystemParam – COS Override (510)
512 SMDR for SYSTEM	Miscellaneous – SMDR (512,513,514)
513 SMDR for ILG	Miscellaneous – SMDR (512,513,514)
514 SMDR for OLG	Miscellaneous – SMDR (512,513,514)
515 Relay Service Display	BIOU Relay Type (515)
516 Station Speed Dial	Station – Speed Dial
517 Multiple Call Group	Multiple Call Group Assignment (517)
518 Multiple Call Members	Multiple Call Members Assignment (518)
519 Multiple Call Group Delete	Multiple Call Group Delete (519)
520 LCR Parameters	LCR/DR – Assignment (520,521,522)
521 LCR Routing Plan Analysis Table	LCR/DR – Assignment (520,521,522)
522 LCR Exceptional Routing Plan Analysis Table	LCR/DR – Assignment (520,521,522)
523 LCR Route Plan Schedule Table	LCR/DR – Route Schedule (523,528)
524 LCR Route Choice Table	LCR/DR – Route Definition (524,525,526)
525 LCR Route Definition Table	LCR/DR – Route Definition (524,525,526)
526 LCR Digit Modification Table	LCR/DR – Route Definition (524,525,526)
527 LCR Public Holiday Calendar Table	LCR/DR – Holidays and Time Zones (527,529)
528 LCR Public Day Of Week Mapping Table	LCR/DR – Route Schedule (523,528)
529 LCR Route Plan Schedule Table Time Zone	LCR/DR – Holidays and Time Zones (527,529)
530 Toll Restriction LCR Screening Table	LCR/DR – TR/LCR Screening (530,531)
531 Toll Restriction LCR Screening For OLG Table	LCR/DR – TR/LCR Screening (530,531)
532 Toll RestrictionTable Allow Deny	LCR/DR – Toll Restriction (532,533,534,111)
533 Toll RestrictionTable	LCR/DR – Toll Restriction (532,533,534,111)
534 Exceptional Toll Restriction Table	LCR/DR – Toll Restriction (532,533,534,111)
540 ACD Pilot DN	ACD Pilot DN
541 Delete ACD Pilot DN	ACD Pilot DN
550 Enhanced 911 Emergency Call Group	System Param – Enhanced Emergency Call Group (550)
570 Account Code Digit Length	LCR/DR – Account Codes (506,570,571)
571 Exception Number Of Forced Account Codes	LCR/DR – Account Codes (506,570,571)
573 Door Phone Delete	External Device – Door Phones (507,508,573,576)
576 Door Phone Ring on External Paging In Night Mode	External Device – Door Phones (507,508,573,576)
577 Call History Store Terminal	Miscellaneous – Call History Store Terminal (577)
579 Voice Mail Data For System	Voice Mail – System Voice Mail Data (579)
580 Voice Mail Data	Voice Mail – Voice Mail Port Data (580)
650 Behind Connection	Miscellaneous – Behind Connection (650)

Special Buttons

These buttons appear on some of the CTX WinAdmin screens.



These buttons enable you to access the most common programming tasks quickly. For example, click on the **List** button to view the Current Index Web Page dialog box (shown right).



Clicking on any button lets you do the following:

- **Create** – Create a new record using system default values.
- **Start** – Starts a wizard.
- **Add/Delete/Modify** – Enables you to add/delete/modify entry(s). In some programs, click the Add or Delete button for a dialog box to display. Enter the required data, then click Add or Delete.
- **List** – Lists all data.
- **Copy** – Enables you to copy all the information from one screen to another.
- **Back/Next** – Enables you to navigate forward and backward through the screens.
- **Table View** – Displays the appropriate table view. For example, clicking the DR Table View button displays all the configured DRLs within the system.
- **Print** – Enables you to print to a local printer.
- **Refresh** – Enables you to get the most updated information.

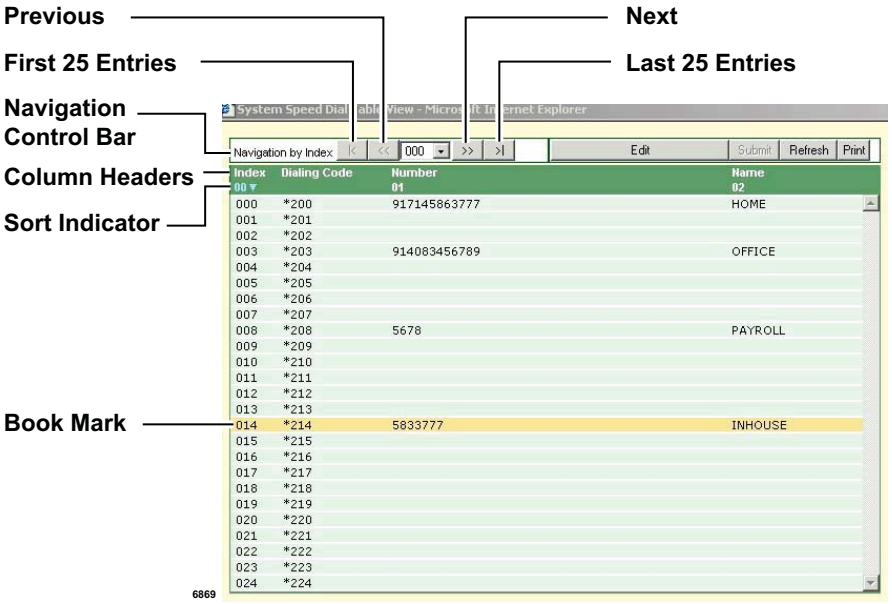
Table Views

Some programs contain supporting tables views. These tables can be accessed from the Program Menu or from the program itself, by clicking the Table view button. For example, the System Speed Dial Table View can be accessed by clicking System > System Speed Dial Table View or by clicking the System Speed Dial Table View button under Program 501 System > System Speed Dial.

Notes

- Depending on the speed of your PC and the size of your database, the table may take several minutes to download.
- Once table view displays, you can minimize the screen or send it to the background. It is an independent window that can always be brought back to the front of the screen for reference.

The tables have the following functionality (See table view example below):



- Navigational controls – enable viewing or moving on a table by 25-entry screens. These controls help sort information found in the table or view the table in full. These controls are found as Previous and Next buttons above the header.

  If you want to print or analyze the table, you can also select All from the Drop down between the Previous and Next buttons to view the entire table in blocks of 25 entries.

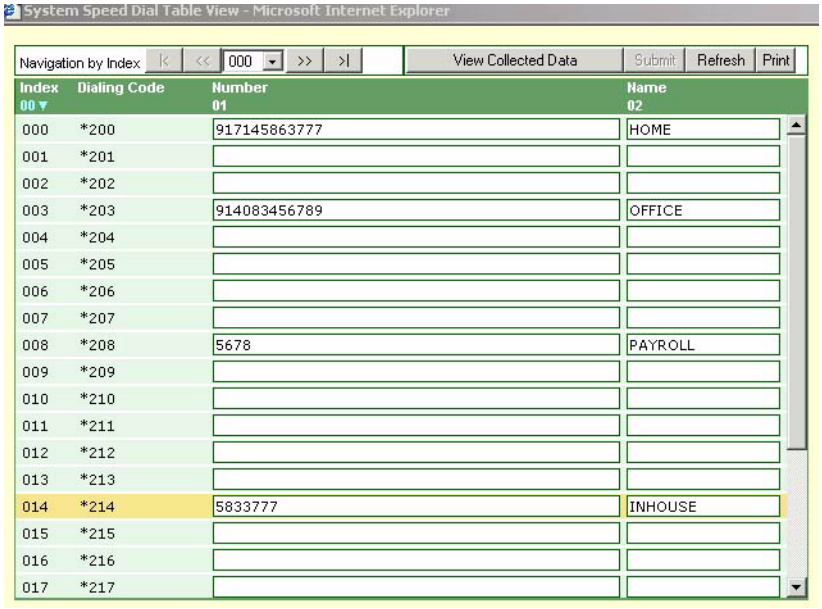
  In the Navigation Control bar, every button is dynamically activated or deactivated. For example, in the figure above the Previous button is not active because the view starts with the first record. The Submit is also not available because nothing has been changed.

- Sort – You can sort tables by clicking on the column header. The direction of the up/down toggles in an Ascending or Descending sort. The color indicator pointing Up or Down in the Header row indicates the column by which the sort is performed.

- Bookmark – You can bookmark a row on some tables by clicking on the row. This enables you to move forward and backward and come back to the original position with no problem.

Note The bookmark function is not provided in tables that have a Delete button, example "Hunt Group Table View" on page 5-28. Tables that have a Delete button also have Select All and Unselect All buttons.

- Edit/Refresh/Print buttons – You can edit, refresh or print the table by clicking the appropriate buttons at the top of the screen. In some tables the Edit button toggles between View Collected Data and Edit. Clicking the Edit button displays the following screen.



  The Edit function works for the Name, Number and Destination columns.

  Use the Refresh button if you add, delete or make changes to table entries, in Programs that feed tables or in Guide pages.

  The Print button enables you to print tables. However, when you click the Print button, only the part of the table that is displayed on the screen prints. Use the scroll bar to Print beyond what is displayed. It will then automatically print from where the last screen ended.

Installation 3

TDSVR02/TOSHIB-TAISThis chapter shows you how to install CTX WinAdmin software on your PC and discusses how to connect that PC to the Strata CTX system.

PC Hardware Requirements

The following table shows the minimum PC requirements for CTX WinAdmin and WinCTX to operate properly:

Hardware	Windows XP Professional	Windows 2000
Computer/Processor	300 MHz or higher processor clock speed. Intel Pentium or Celeron processors; or AMD K6, Athlon or Duron processors are recommended.	300 MHz or higher Pentium
Memory	128MB RAM	128MB RAM
Hard Disk	1.5GB of available space	2GB hard drive with a minimum of 650MB of free space
SVGA Card and Monitor	Yes	Yes
CD-ROM Drive	Yes	Yes
Network Interface Card (NIC) and/or PC Modem	Yes	Yes

PC Software Requirements

The "Install CTX WinAdmin..." selection on the CTX WinAdmin CD-ROM runs a Pre-installation Check to determine if your PC meets the minimum software requirements for CTX WinAdmin to operate properly. The Pre-installation Check tests for the following:

- **Windows Operating System** – CTX WinAdmin requires a Microsoft Windows XP Professional or Windows 2000 Operating System (OS).
- **Windows Option Components** – The Pre-installation Check tests to see if Windows Option Components, such as Internet Information Services and Management and Monitoring Tools are installed on your PC. If they are not installed, your Windows OS CD-ROM will be required; or if your PC has an Original Equipment Manufacturer (OEM) version of Windows, you may need the CD-ROM that came with your PC.

Disclaimer: *CTX WinAdmin has not been tested with Windows NT 4.0. This OS is not recommended. We recommend that you upgrade your OS to Windows XP Pro or Windows 2000 Pro.*

Note CTX WinAdmin *does not work* on these operating systems: Windows XP Home, Windows ME, Windows 98, Windows 95, and MS-DOS.

- Windows 2000 Service Pack 2 (SP2) – If not found, follow the steps given on the CTX WinAdmin CD-ROM to install SP2.
- **Internet Explorer (IE)** – If IE 5.5 or greater is not found, follow the steps given on the CTX WinAdmin CD-ROM and install it from there.

Note Windows XP Professional automatically installs IE 6.0 so installing IE 5.5 is not needed.

CAUTION! **Toshiba recommends not to install MS Network Monitor on WinAdmin PCs because MS Network Monitor software which is provided on the Microsoft System Management Server (SMS) production CD-ROM causes problems with the Windows WMI SNMP component needed to run WinAdmin.**

Step 1: Install CTX WinAdmin Software

1. Insert the CTX WinAdmin CD-ROM into your CD-ROM drive. Click "Install CTX WinAdmin...". The CD-ROM runs a Pre-installation check, determines the OS you have, then checks for all other software requirements.

   If the correct OS and all requirements were found on your PC, the "Pre-installation Check Complete!" screen displays. This enables you to perform any of the following:

- **First-time installation:** click "Install Now". Follow the prompts. Choose "Custom" to browse to the drive on which you want to install the software or "Complete" to install immediately on the C: drive.
- **If upgrading from a previous version:** click "Upgrade Now". Select "Complete" to install the new version on the C drive, select Custom to select another drive. The CTX WinAdmin Custom Profile folders will remain on the C drive or copied to the selected drive.
- **If installing over the same version:** click Install Now. You will be prompted to "Repair" or "Remove." Repair fixes corrupted files and registry entries. Remove removes the existing version to enable you to reinstall the same version as a new clean install.
- **If your PC did not pass the Pre-installation check and a requirement was not found:** see the details in "Requirements Not Found" on page 3-3.

CAUTION! **Do not open and/or run other applications during installation as this may corrupt the installation and/or other software on your PC. Installation takes several minutes.**

---

2. Once installation is complete, if the Windows Internet Wizard displays when you click on the CTX WinAdmin icon, enter the settings below if using a NIC or modem connection. This establishes a preliminary path to bring up the CTX WinAdmin log-in screen.

- **Windows XP Pro:** If the Windows "Welcome to the New Connection Wizard" comes up, you have not yet configured your Internet connection. Follow the prompts and select: Next > Connect to Internet > Next > Set up my connection manually > Next > Connect using broadband connect that is always on > Finish. Exit the wizard screen.
- **Windows 2000:** If the Windows "Welcome to the Internet Connection Wizard" comes up, you have not yet configured your Internet connection. Follow the prompts and select: I want to set up my Internet connection manually > Next > I want to connect through a local area network > Next > Automatic discovery of Proxy server > Next and No to Setup Your Internet Email Account > Next > Finish.

3. Go on to "Step 1: Install CTX WinAdmin Software" on page 3-5.

Requirements Not Found

Service Pack 2 Not Found - Windows 2000

If Service Pack 2 was not found on your Windows 2000 OS, follow these steps.

1. Click the "Windows 2000 Service Pack 2 Not Found" line. A help screen appears. Locate and click the "Install SP2 Now" link. SP2 installation will begin.
2. Follow the prompts to install SP2.
3. At the end of installation you will be prompted to restart your PC. Do so, log back into Windows 2000, then reinsert the CTX WinAdmin CD-ROM and select "Install CTX WinAdmin..." from the Main Menu.

Internet Explorer (IE) 5.5 or Greater Not Found - Windows 2000

1. Click the "Internet Explorer 5.5 or Greater Not Found" line. A help screen will appear. Locate and click the "Upgrade to IE 5.5 Now". The upgrade will begin. Follow the prompts to upgrade to IE 5.5.
2. At the end of installation you will be prompted to restart your PC. Do so, log back into Windows 2000.
3. Reinsert the CTX WinAdmin CD-ROM and select "Install CTX WinAdmin..." from the Main Menu.

Note We suggest using IE 6.0 or higher with CTX WinAdmin to enable lists to be displayed in numeric order.

Internet Information Services (IIS) Not Found - Windows XP Pro/Windows 2000

If IIS was not found, follow the steps below.

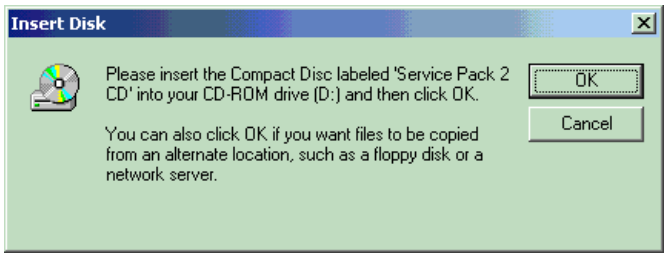
CAUTION! Installing Internet Information Services (IIS) on PCs connected to a LAN and/or the Internet may cause security issues - such as making your PC more susceptible to intrusion and/or computer viruses. A direct connection between your PC and Strata CTX reduces, but does not eliminate security issues.

- In all cases, *always* have a virus program with the latest virus tables running real-time on your PC.
- An NTFS file system is recommended if you are connected to a LAN and/or Internet. See your Windows Help files for more details.
- Consult the Microsoft Knowledge Base on the Internet for updates on Windows security issues.
- Check if you have the I386 folder located on you PC, if not have your Windows OS CD-ROM ready as you will be asked to insert it.

Installing IIS using Windows XP Pro or Windows 2000 CD-ROM

1. Windows XP Pro and Windows 2000: Click Start > Settings (2000 only)> Control Panel > Add/ Remove Programs > Add/Remove Windows Components. Checkmark Internet Information Services (IIS). Under IIS option, check mark FTP and do not uncheck any items that are already checked. If Management and Monitoring Tools were also Not Found you may checkmark this too. Click "Next".
2. Follow the prompts and have your Windows OS CD-ROM ready as you will be asked to insert it. If the Windows autoplay menu runs after inserting the CD-ROM, close this screen.
3. Once installation is complete, reinsert the CTX WinAdmin CD-ROM and select "Install WinAdmin..." from the Main Menu.

Note If your PC displays this error message (shown right), insert the Windows OS CD-ROM that came with your computer (Recovery or Companion type) and not the Service Pack2 CD-ROM. Follow the prompts to browse, open and install files.



Management and Monitoring Tools Not Found - Windows XP Pro/Windows 2000

If Management and Monitoring Tools were not found, follow the steps below.

1. Windows XP Pro and Windows 2000: Click Start > Settings (2000 only)> Control Panel > Add/ Remove Programs > Add/Remove Windows Components. Checkmark Management and Monitoring Tools. If Internet Information Services (IIS) were also Not Found you may checkmark this too. Click "Next".
2. Follow the prompts and have your Windows OS CD-ROM ready as you will be asked to insert it. If the Windows autoplay menu runs after inserting the CD-ROM, close this screen.
3. Once installation is complete, reinsert the CTX WinAdmin CD-ROM and select "Install CTX WinAdmin..." from the Main Menu.

WMI SNMP Provider Not Found - Windows 2000

If the WMI SNMP Provider was not found on your Windows 2000 PC, follow the steps below. Have your Windows 2000 CD-ROM ready, you'll be asked to insert it.

1. Click the "WMI SNMP Provider Not Found" line. A help screen appears.
2. Locate and click the "Install WMI SNMP Provider". Follow the prompts to install WMI SNMP Provider. Once complete, reinsert the CTX WinAdmin CD-ROM and select "Install CTX WinAdmin..." from the Main Menu.

Important! *Continue to choose "Step 1: Install CTX WinAdmin Software" on page 3-5 and/or "Step 1: Install CTX WinAdmin Software" on page 3-10. You can choose either or both, but you must choose one.*

Step 2: Set Up LAN Connection to Strata CTX

Step 2A: Connect CTX WinAdmin PC to Strata CTX Processor NIC

1. Connect the RJ45 cable between your PC's NIC jack and the Strata CTX Network Interface jack. If you are connecting to Strata CTX directly without using a Network hub, use an RJ45 cross-pinned cable. If you're connecting to the Strata CTX via a hub, use a straight-pinned RJ45 cable. See Figures 3-1 and 3-2.

WinAdmin PC or Server, Direct Connection to Strata CTX

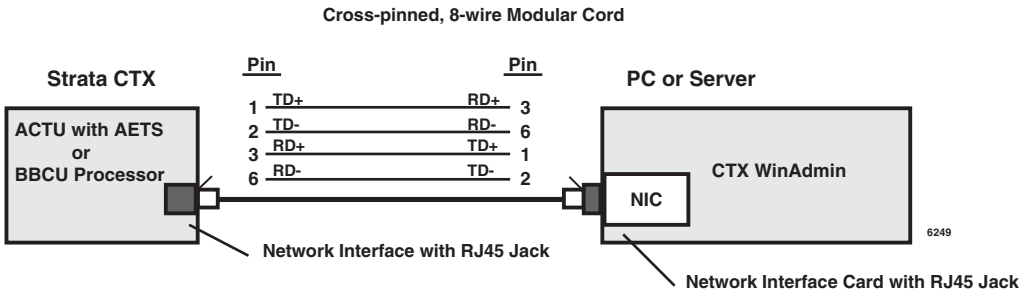


Figure 3-1 Direct Connection to Strata CTX

WinAdmin PC or Server, Network or HUB Connection to Strata CTX

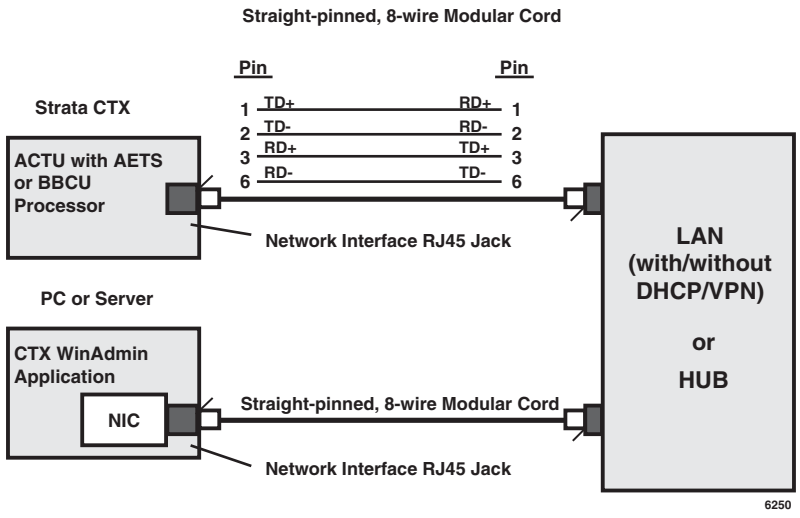


Figure 3-2 Network Interface Physical Jack Connection

Wide Area Networks and/or Internet Connections

- Connection of the Strata CTX and CTX WinAdmin over the Internet and/or Wide Area Network (WAN) Enterprise Networks requires registration of a domain IP address or blocks of domain IP addresses for CTX processors when using multiple Strata CTX and CTX WinAdmin connections.

- To setup CTX WinAdmin WAN and Internet connections using Dynamic Host Configuration Protocol (DHCP), Virtual Private Networks (VPN), etc., the proper IP addresses and setup procedures must be obtained from your Information Technology (IT) Administrator.
- We recommend using VPN networking. By using VPN networking, the content of SNMP messages between WinAdmin PCs and CTX systems will be encrypted for security.
- When connecting CTX WinAdmin through Fire Walls, Routers, etc., which apply packet filtering, make sure that the packets being sent between Strata CTX and CTX WinAdmin are not filtered.
- Strata CTX and CTX WinAdmin communicate using SNMP over User Datagram Protocol/Internet Protocol (UDP/IP) and FTP protocols. The standard ports are used for each protocol (161 and 162 for SNMP, 20 and 21 for FTP). These ports should not be blocked by firewalls.
- The default gateway IP address must be set up on CTX WinAdmin and on CTX processors per the example in Figure 3-3. The figure below shows you how to connect the multiple CTX sites via the WAN.
- The CTX processor requires the following IP addresses set in Program 916:
  - Processor static domain IP address
  - Processor subnet mask
  - Processor default Gateway IP address
- The diagram below is only one example of many network configurations allowing remote maintenance of CTX systems over the Internet and the WAN.

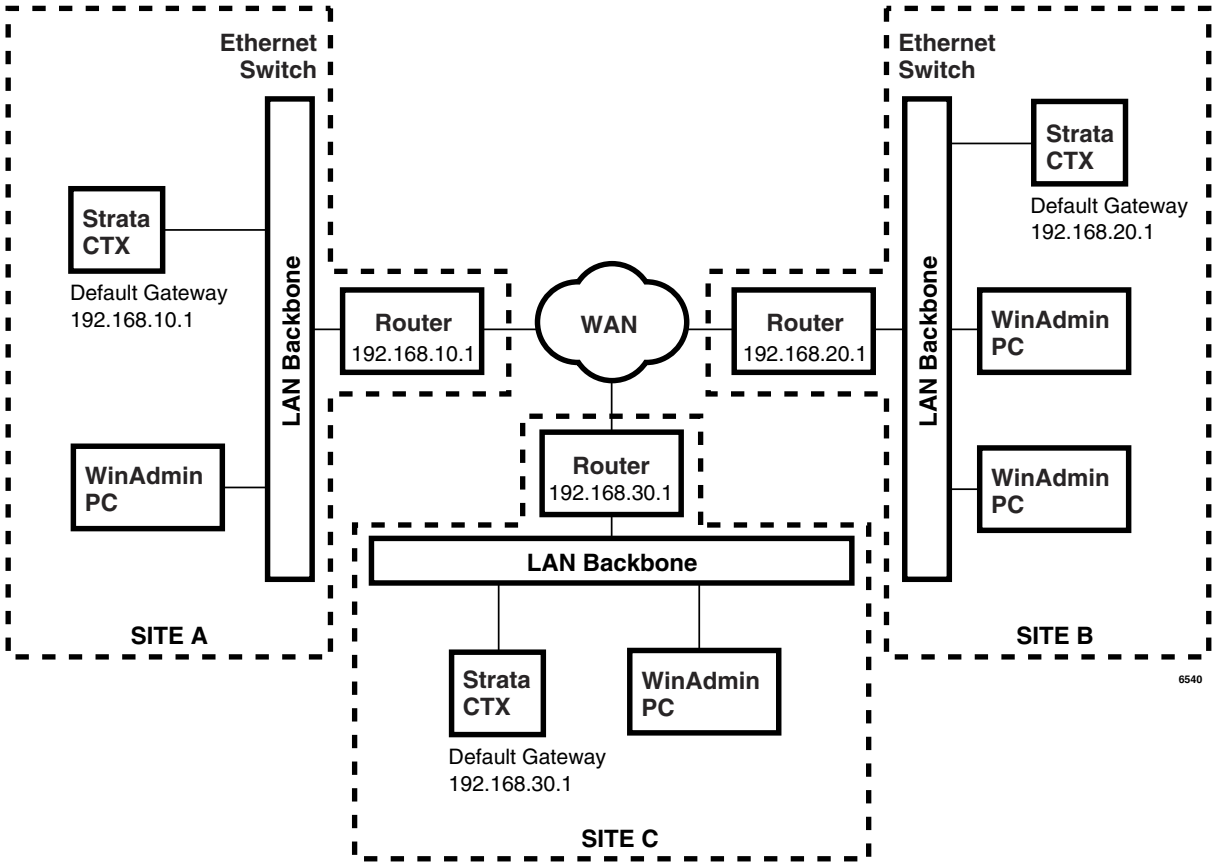


Figure 3-3 WAN Connection for Multiple Sites

Step 2B: Set Up IP Address of CTX NIC

Note This setup is only for direct connection to the Strata CTX or for simple Hub or LAN connections. For more complex LAN, WAN or Internet connections, refer to "Wide Area Networks and/or Internet Connections" on page 3-5.

1. Connect a 20-button LCD DKT to the Strata CTX System.
2. Enter the programming mode by pressing **Hold *#**#1*2*3***.
3. At the **PASSWORD=** prompt, enter **0000**.
4. Press **Hold**.
5. At the **PROG=** prompt enter **916** and press **Hold**.
6. Press Feature Button 1.
7. At the **TCP IP1=** prompt enter the Static IP address **a. Spkr**, **b. Spkr**, **c. Spkr**, **d. Hold**.
   Possible Values of CTX TCP/IP address octets a.b.c.d = 0~255.
   Default = 192.168.254.253, where **a** = 192, **b** = 168, **c** = 254, **d** = 253

   Example: At the **TCP IP1=** prompt the LCD displays 192. This is the first octet of the default CTX IP address. Pressing **Spkr** key three more times will display the remaining octets in succession as follows: 192.168.254.253
8. Press Feature Button 2.
9. At the **SNM IP1=** prompt enter the subnet mask **e. Spkr**, **f. Spkr**, **g. Spkr**, **h. Hold**.
   Possible Values of CTX Subnet mask octets e.f.g.h = 0~255
   Default = 255.255.255.0, where **e** = 255, **f** = 255, **g** = 255, **h** = 0
10. Press Feature Button 3.
11. At the **DGW IP1=** prompt enter default gateway **i. Spkr**, **j. Spkr**, **k. Spkr**, **l. Hold**.
    Possible Values for CTX Gateway octets i.j.k.l = 0~255
    Default = 0.0.0.0, where **i** = 0, **j** = 0, **k** = 0, **l** = 0
12. Press **Hold** (twice).

Important! *Windows XP: Choose Step 2C; Windows 2000: Choose Step 2D.*

Step 2C: Set Up IP Address of CTX WinAdmin PC NIC (Windows XP)

Follow the steps below to set up PC Network settings on your CTX WinAdmin PC.

Note This setup is only for direct connection to the Strata CTX or for simple Hub or LAN connections. For more complex LAN, WAN or Internet connections, refer to "Wide Area Networks and/or Internet Connections" on page 3-5.

1. Click Start > Control Panel > Network and Internet Connections > Network Connections > Broadband Connection.
2. At the Broadband Connection screen, click the Properties tab, then click on the Networking tab.
3. Select Internet Protocol (TCP/IP).
4. Click on the Properties tab.
5. Select "Use the following IP Address."
6. In the IP address field enter **`a.b.c.x`**
   `where` a.b.c = 0~255 **`and x`** = 0~252.
   Example: 192.168.254.x.

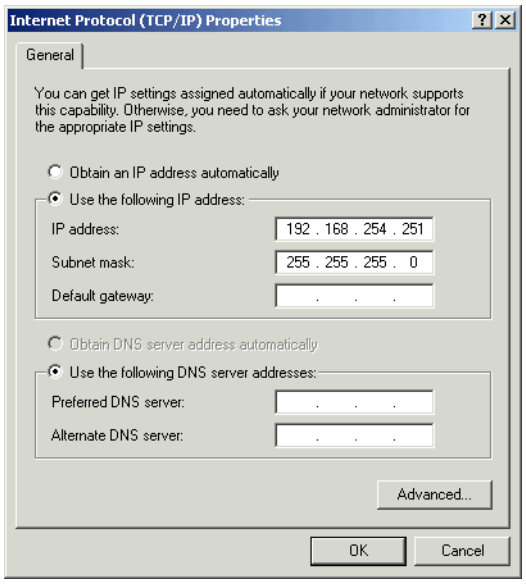
Note The first three octets a.b.c. have to be exactly the same as the first three octets of the CTX IP address set in Sub-step 7 of Step 2B. X cannot be 253 or above and it cannot be equal to octet d of the CTX TCP/IP address set in Sub-step 7 of Step 2B. This is the static IP Address of your PC.

7. Click OK and exit.

Step 2D: Set Up IP Address of CTX WinAdmin PC NIC (Windows 2000)

Follow the steps below to set up PC Network settings on your WinAdmin PC.

Note This setup is only for direct connection to the Strata CTX or for simple Hub or LAN connections. For more complex LAN, WAN or Internet connections, refer to "Wide Area Networks and/or Internet Connections" on page 3-5.



1. Click Start > Settings > Network and Dial-up Connections > Local Area Connections.
2. Right click on Local Area Connections to select Properties.
3. Local Area Connection Properties Connection screen displays. Ensure Internet Protocol (TCP/IP) is checked. Highlight TCP/IP, then click the Properties button.
4. On the General tab click the "Use the following IP Address" radio button (shown right).
5. In the IP address field enter **`a.b.c.x`** **`where`** a.b.c = 0~255 **`and x`** = 0~252.
   Example: 192.168.254.x.

   The first three octets a.b.c. have to be exactly the same as the first three octets of the CTX IP address set in Sub-step 7 of Step 2B. x cannot be 253 or above and it cannot be equal to octet d of the CTX TCP/IP address set in Sub-step 7 of Step 2B. This is the static IP Address of your PC.
6. Enter **`e.f.g.h`**. in the Subnet Mask field. The Subnet Mask should be exactly the same as the CTX Subnet Mask set in Sub-step 9 of Step 2B.
   Possible Values of Subnet mask octets e.f.g.h = 0~255
   Example: 255.255.255.0
7. Leave the DNS Server addresses blank.
8. Click OK (to accept all screens).
9. Go to "Step 1: Install CTX WinAdmin Software" on page 3-14.

   CTX WinAdmin is now ready to communicate and program your Strata CTX System.

Step 3: Set up Modem Connection (Optional)

Step 3A: Connect CTX WinAdmin PC to Strata CTX Modem

Connect an RJ11 cable from your PC modem to an active phone line or RSTU port. See Figure 3-43-4.

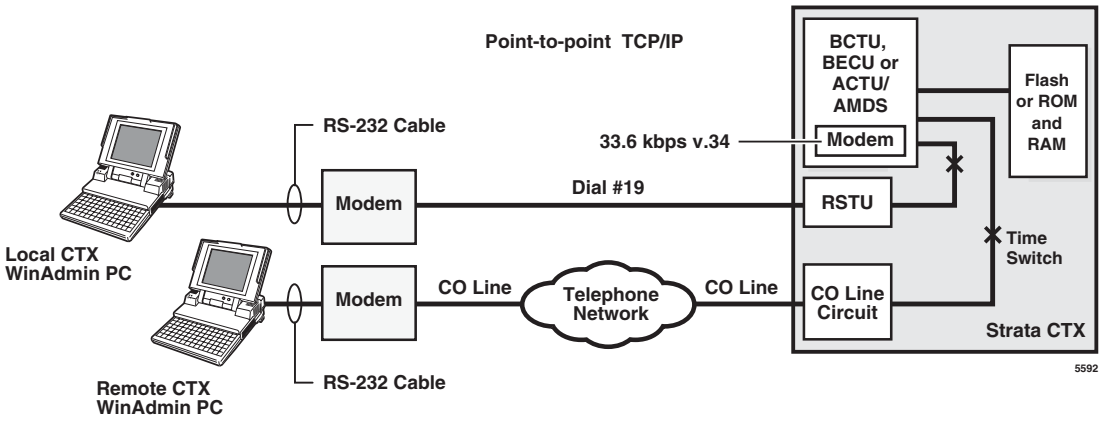


Figure 3-4 CTX WinAdmin Modem Interface Connection

CTX WinAdmin PC Modem to CTX Modem Call Setup – CTX Programming and Operation

- Direct ring connection over CO lines
  - DID lines: in PRG 309, assign "Built-in Modem" as the Audio Day1, Day, and/or Night destination type.
  - DIT ground/loop start lines: in PRG 310 assign "Built-in Modem" as the Day1, Day2, and/or Night destination type.
  - Direct Ring when connected to RSTU or DISA line: put "#19" in CTX WinAdmin Phone Number dial string.
- Transfer a CTX WinAdmin call to the Strata CTX modem from a CTX Auto Attendant or telephone

  After receiving the call from the CTX WinAdmin user, press **Cnf**/**Trn** or hook flash and dial #19 then hang up after receiving CTX modem tone.

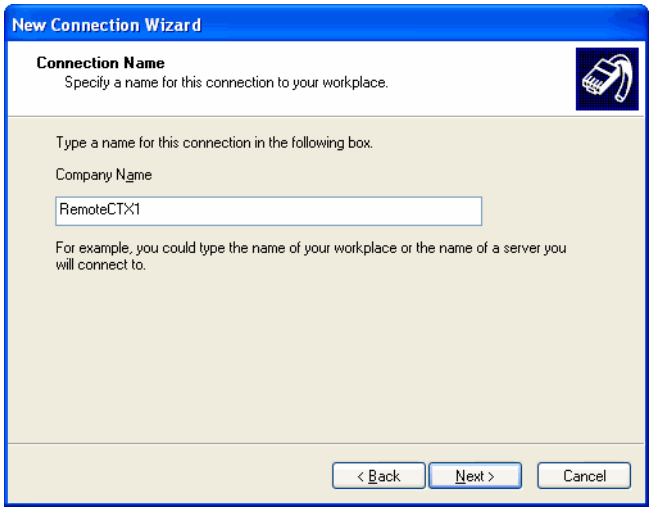
Note If calling an Auto Attendant put "xxxxxxx,,,,,,,, #19" in CTX WinAdmin Phone Number dial string. Where "xxxxxxx" is the site phone number and each "," adds a three-second delay before dialing #19 to connect to the modem.

Important! *Windows XP: Choose Step 3B; Windows 2000: Choose Step 3C.*

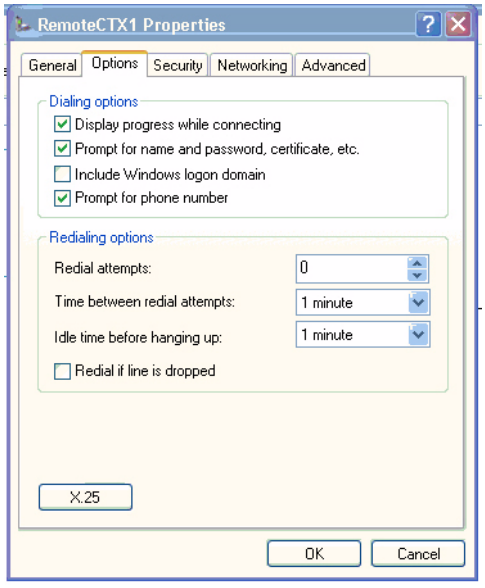
Step 3B: Set up IP Address of CTX WinAdmin PC Modem (Windows XP)

Note This setup is only for direct connection to the Strata CTX or for simple Hub or LAN connections. For more complex LAN, WAN or Internet connections, refer to "Wide Area Networks and/or Internet Connections" on page 3-5.

1. Set up PC modem settings for CTX WinAdmin. Click Start > Control Panel > Network and Internet Connection > Network Connections > Create a New Connection (under Network Tasks).
2. At the New Connection screen, click Next. Select radio button "Connect to the network at my workplace" and click Next.
3. Select radio button "Dial-up Connection" and click Next.
4. Enter the company name as "Remote CTX1", then click Next.
5. Leave the Phone Number to Dial field blank. Click Next.
6. Click Finish.
7. At the Connect Remote CTX1 screen, click Properties.
8. At the RemoteCTX1 Properties screen, select the PC modem that should be used to connect to the CTX modem.
9. Click the Networking tab.
10. Select Internet Protocol (TCP/IP).
11. Click Properties.
12. Select Use the following IP Address.



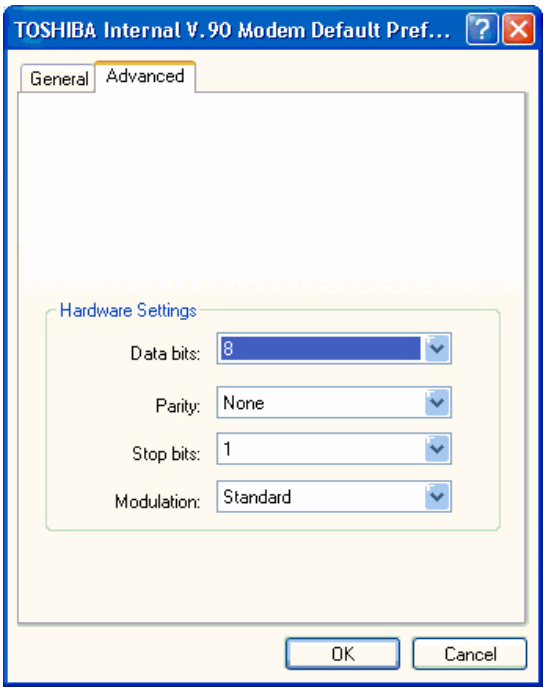
13. Enter an IP Address **`192.168.255.x (where x`** can be 1~252. It cannot be 253 or above. It cannot be the same as the CTX IP address in Program 916 for CTX NIC Connections**`)`**. This is the static IP Address of your PC when using the modem connection. Click OK.
14. At the CTX1 Properties screen, click the Options tab and set up options to the recommended settings shown as shown right.
15. Click OK. You can go back and change these settings later if needed.
16. At the CTX1 Properties screen, click OK and exit.
17. Go to "Step 1: Install CTX WinAdmin Software" on page 3-14.



Step 3C: Verify Modem Hardware Settings

Using the steps below verify that the modem hardware settings are set correctly to communicate with the CTX built-in modem.

1. Go to Start > Settings (Windows 2000 only) > Control Panel.
2. Click “Phone and Modem Options.”
3. Click the Modem tab.
4. Select the modem used by CTX WinAdmin.
5. Click the Properties button.
6. Click the Advanced tab to verify hardware settings on the screen (shown right).
7. Click OK and exit.



Step 3D: Set up IP Address of CTX WinAdmin PC Modem (Windows 2000)

Note This setup is only for direct connection to the Strata CTX or for simple Hub or LAN connections. For more complex LAN, WAN or Internet connections, refer to "Wide Area Networks and/or Internet Connections" on page 3-5.

1. Setup PC modem settings for CTX WinAdmin. Click Start > Settings > Network and Dial-up Connection > Make New Connection.
2. Click Next. Select radio button *Dial-up to private network* and click Next.
3. From the "Select a Device Screen" highlight the modem to be used to make a CTX WinAdmin dial-up connection and click Next.
4. Do not enter Phone number, then click Next.

Note The phone number for Dial up is entered when setting up the Profile in Strata CTX WinAdmin. See "User Management" on page 3-19.

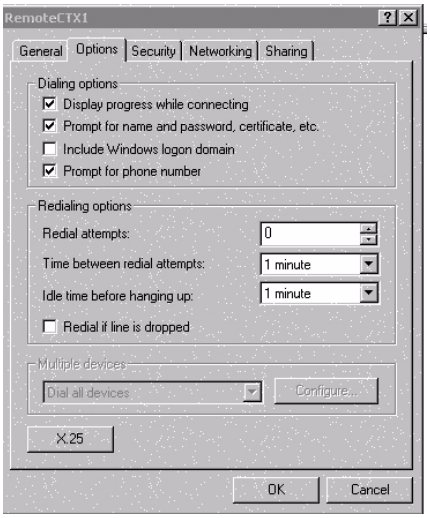
5. Select radio button "For all users," then click Next.
6. Use the recommended setting (Enable on-demand dialing) and click Next.
7. Type RemoteCTX1 as the name in Connection Wizard (shown right), then click Finish.
8. The Connect RemoteCTX1 screen displays.

Note The User name field on this screen will automatically be populated.

9. Click on the Properties button of the Connect RemoteCTX1 screen.
10. The RemoteCTX1 screen displays. Click on the Networking tab and select Internet Protocol (TCP/IP) in the Components checked are used by this connection box. Then click Properties button.



11. The Internet Protocol (TCP/IP) Properties screen displays. Select "Use the following IP Address" and enter the IP address (192.168.255.x, where x can be 1~252. It cannot be 253 or above. It cannot be the same as the CTX IP address in Program 916 for CTX NIC Connections). This IP address is the static IP address for the PC when using this modem connection. Click OK.
12. The initial setup screen displays. Click Properties.
13. Click the Options tab and set up options to the recommended settings (shown right).



Note Set "Idle time before hanging up" to more than one minute if you are transferring CTX WinAdmin calls to the CTX built-in modem versus direct calls to the modem.

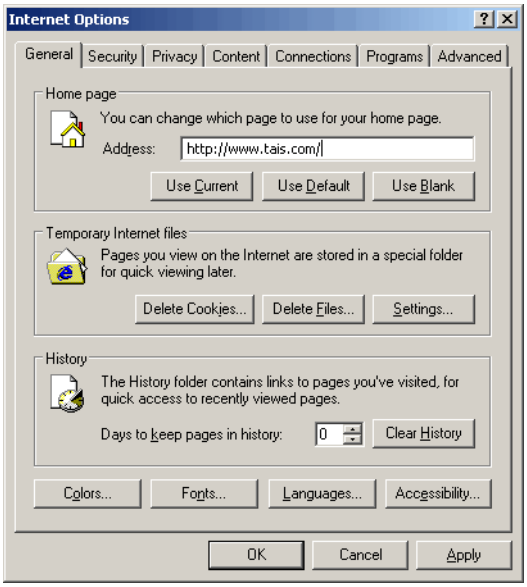
14. The initial setup screen displays, click OK and exit.
15. Go to Step 3C: Verify Modem Hardware Settings.
16. Go to "Establish Communication with Strata CTX" on page 3-14.

Step 4: Establish Communication with Strata CTX

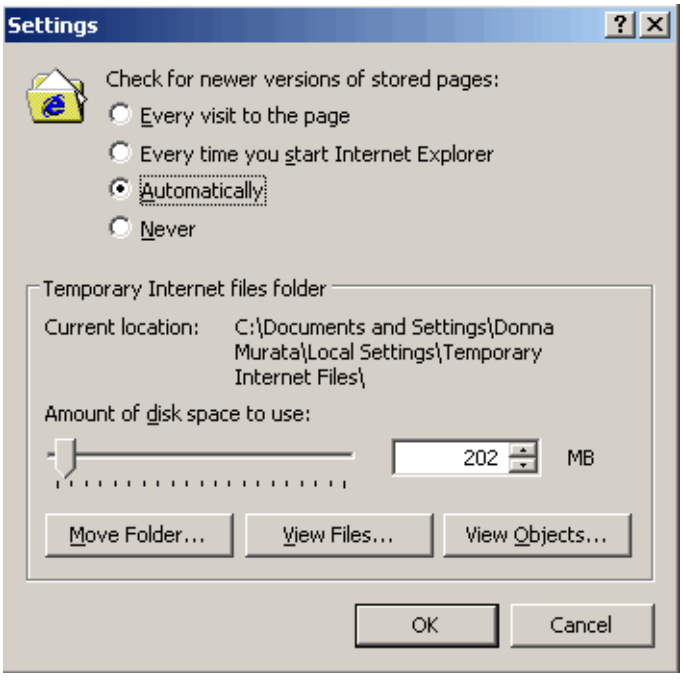
Make sure you have completed the Strata CTX to CTX WinAdmin setup procedures described in the first part of this chapter before proceeding.

➤ **To ensure your WinAdmin pages will automatically update**

1. Open Internet Explorer.
2. Click on Tools > Internet Options...
3. Under Temporary Internet Files, click on the Settings button.

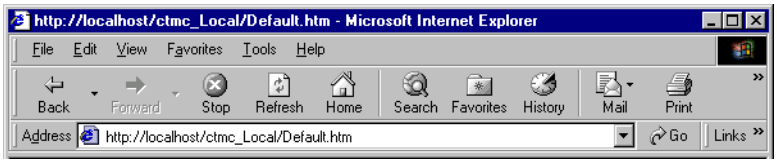


4. Check for newer versions of stored pages, set the radio button to "Automatically." Click OK. You only need to perform these steps once (unless the Settings are changed)



➤ **To establish communication with Strata CTX**

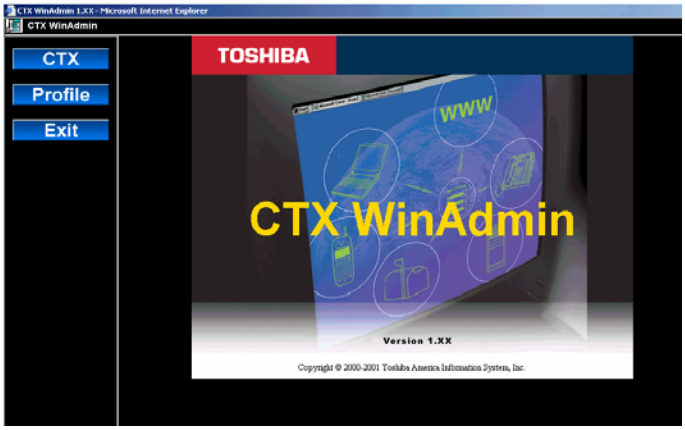
1. Open Internet Explorer and point the browser to **`http://localhost/Ctmc_Local/Default.htm`** as shown in the figure below or click on the CTX WinAdmin desktop icon. If the Internet Connection Wizard displays, refer to Step 2 under "Step 1: Install CTX WinAdmin Software" on page 3-2.



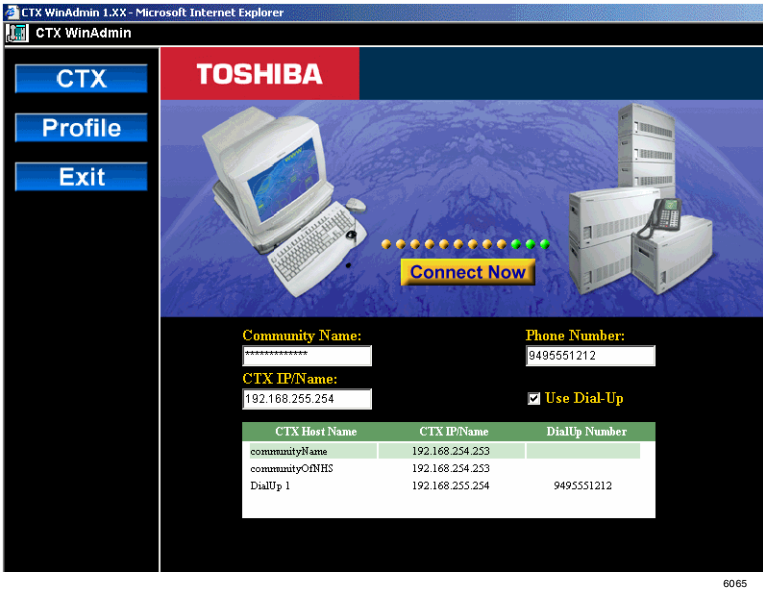
2. Click Go. The Login screen displays (shown right).
3. To log into CTX WinAdmin for the first time, enter *administrator* in User Name field and *password* in the Password field.



4. Click on the Login button. The CTX WinAdmin Title screen displays.
5. Click CTX (shown right) to go to the connection setup screen.



6. From the Connection Options Menu (shown at right) enter the following:
   - Community Name – **`communityName`** (entry is case sensitive). This is the default community name for CTX systems.
   - CTX IP/Name – **`192.168.254.253`** (NIC). This is the default IP Address of the CTX that is set in CTX Program 916.
   - IP Address – **`192.168.255.254`** This is the CTX built-in modem fixed IP address for Dial-up connections. It cannot be changed.



Notes

- If you are connecting to Strata CTX using your modem, click in the Use Dial-Up box and enter the phone number to connect to your Strata CTX. The CTX IP address in the CTX IP Name field automatically defaults to the Strata CTX modem's static IP address.
- If you are calling in from a modem line which is already connected to the CTX through manual dialing, check the Use Dial-Up box. You do not have to enter anything in the Phone Number box. When you hear modem tone, click Connect Now, then hang up.
- If you have set up the Profile User Management screen with CTX site information, click on the CTX Host name and IP address of the CTX listed in the box at the bottom of the screen.
- Adding and Saving a new CTX connection can be done by clicking Profile > User Management. For details see "User Management" on page 3-19.

7. Click on Connect Now. For CTX WinAdmin V2.10G.1 and higher, you will see a small dialog box appears. Ignore this box. It will close automatically after you see the Connection Complete window and click OK.

Important! *If you are not able to connect after clicking on the Connect Now button, then re-check the set up steps described in this chapter.*

Manual Dialing to Connect to the CTX Modem

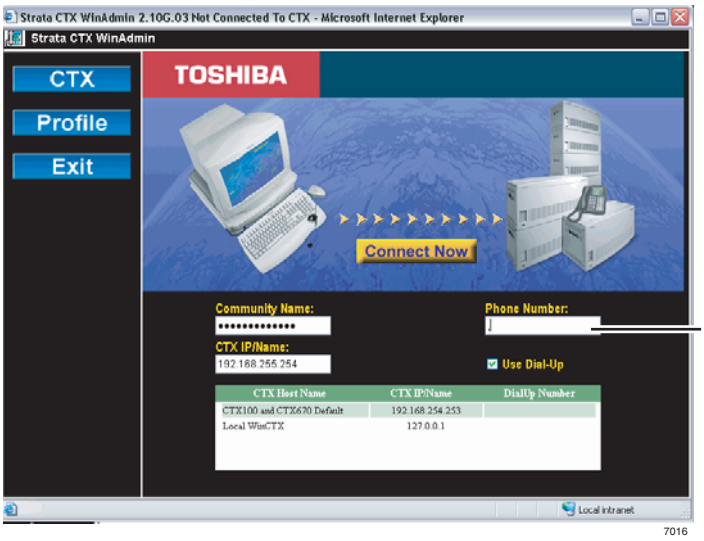
If the CTX WinAdmin application is running in Windows operating systems and you want to dial in to CTX manually with a bridged telephone (operator-assisted dialing) instead of having CTX WinAdmin dial the phone number, perform the following:

Step 1: Connect to the CTX modem with manual dialing

1. Make sure that your dialing phone is bridge connected to your modem's "Line" jack.
2. Set up your modem dialing for Windows Operator-Assisted Dialing by opening Network Connections in the Control Panel.
3. On the Advanced menu at the top of the screen, select Operator-Assisted Dialing, then Exit**.**

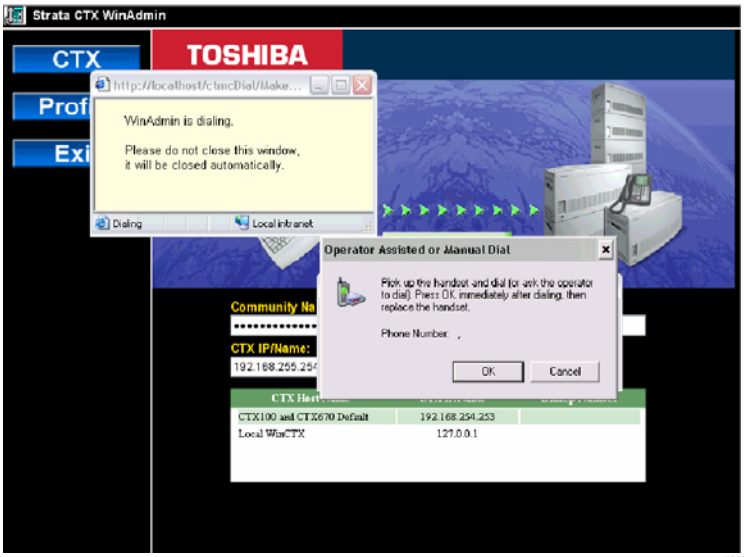
Step 2: Make an operator-assisted call

1. Bring up the CTX WinAdmin Connection page (shown right).
2. Enter the CTX Community Name (or select a CTX Host Name) and check Use Dial-Up.
3. Enter a comma or a phone number in this box.
4. Click Connect Now.
5. Go off-hook with the bridge telephone and dial the CTX site number.
6. When the call is answered by a person or Auto Attendant, ask to be transferred to the CTX modem number #19. The called party should then hang up.



You must enter a comma or a phone number.

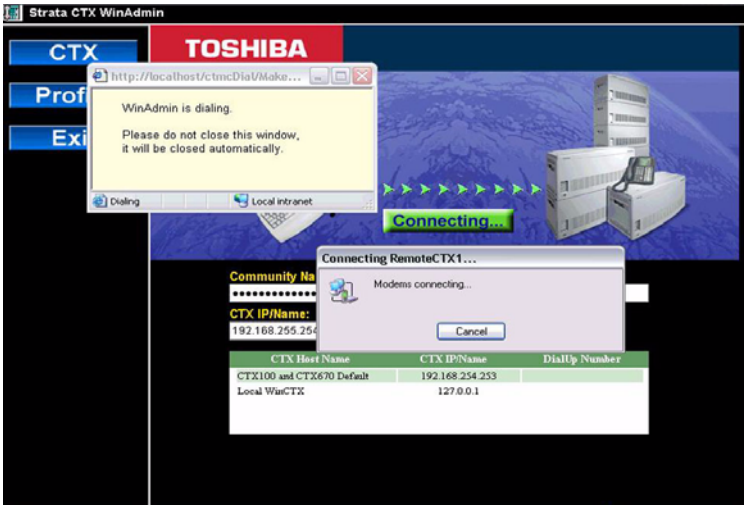
7. When you hear the modem beep or steady modem tone from the CTX modem, click OK from the Operator Assisted Manual Dial message box and then hang up the bridged telephone.



7028

The WinAdmin and CTX modems will communicate to start the session and the dialing message boxes will disappear.

8. Click OK.



7027

Step 5: Use Profile to Add Users and CTX Systems

User Management

Prerequisite Program: *None*

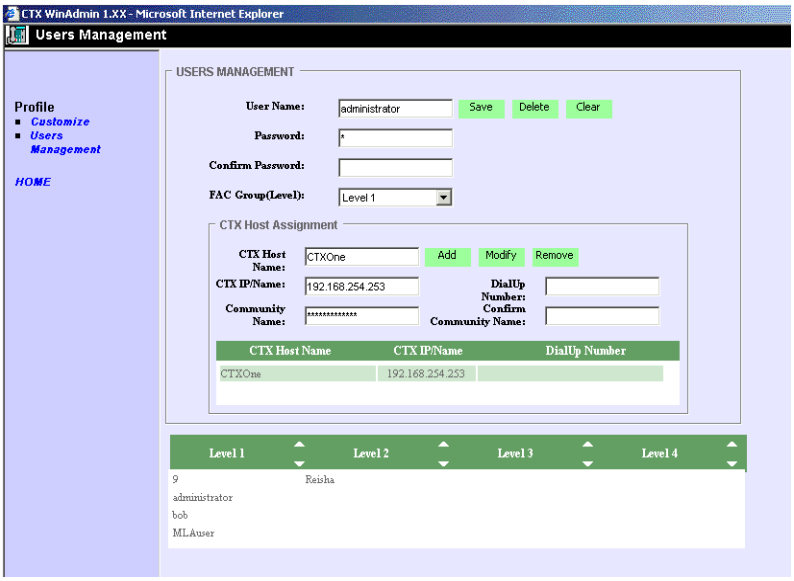
This program lets only the Administrator add or remove users to CTX WinAdmin.

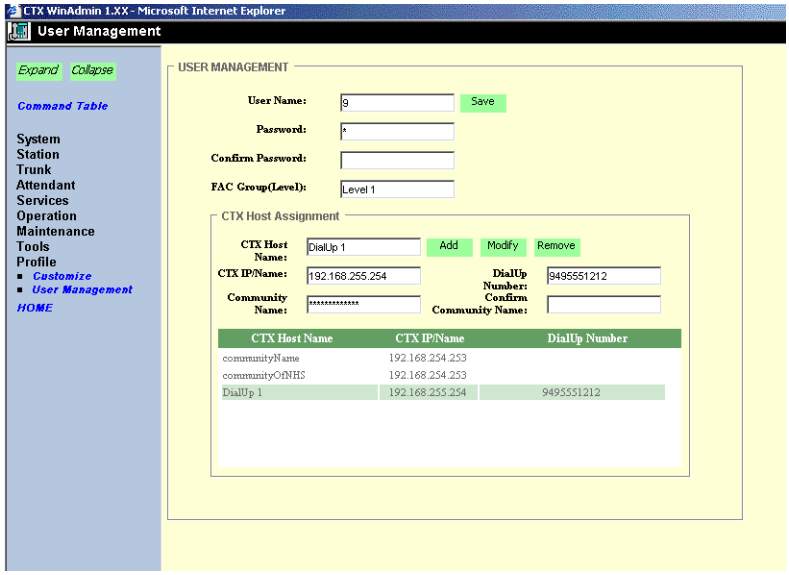
1. From the Program Menu, click Profile > Users Management.
2. Enter new User Name, Password, Confirm Password, and FAC Group Level fields.

Note The Administrator screen will displays (shown right). The Administrator can add new users using this screen. This screen is only accessible when logged in as Administrator only.

3. Click Save.
4. Enter the remaining fields.
5. Click Add/Modify/Remove.

The screen (shown right) is accessible to all users.





FIELD	DESCRIPTION
User Name	Enter the new User name. The initial user name of the Administrator is *administrator.* This name cannot be changed. Possible values: Alpha characters. **Note** The Administrator is the only user that can add new users. The administrator user name cannot be changed.
Password	Enter the new password. The initial password is *password.* This password can be changed by the administrator or user. The password is case sensitive. To protect User Passwords, open Internet Explorer and go to Tools > Internet Options > Content > Autocomplete. Uncheck User Names and Password on forms, then click on Clear Passwords. **CAUTION! Record all your passwords for CTX WinAdmin and passwords for any other applications that use Internet Explorer.** Possible values: Alpha characters.
Confirm Password	Repeat password entered in Password field. Possible values: Alpha characters.
FAC Group Level	Select the FAC Group Level. Possible values: Level 1, Level 2, Level 3, Level 4 (default = No value.) In the current version of CTX WinAdmin, all levels are the same and provide access to all CTX WinAdmin functions.
CTX Host Name	Enter CTX Host Name (name to identify the CTX or customer). Possible values: Alpha characters.
CTX IP/Name	Enter the IP Address of the CTX system. For the CTX NIC connection, enter the IP Address of the CTX as set in Program 916. For Modem connections, always enter 192.168.255.254. Possible values: Refer to "916 IP Configuration" on page 10-14.
Community Name	Enter the Community Name of the host. Possible values: Alpha characters (default = communityName). communityName is the default community name for all CTX systems. CTX community names are assigned in the Operation section of CTX WinAdmin.
DialUp Number	Enter the telephone number for Dial Up access. Possible values: Any telephone number (digits 0~9 and * or # and "," for three-second pauses.) **Note** The CTX modem number is #19
Confirm Community Name	Re-enter the Community Name. Possible values: Alpha characters.

Step 6: Set Up Users for CTX WinAdmin Access

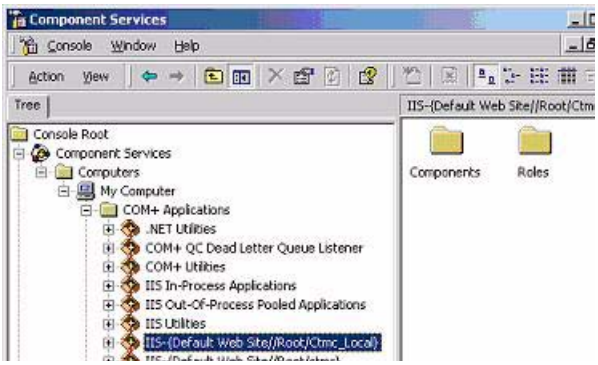
Prior to CTX WinAdmin V2.10G, only Microsoft® Windows® XP or Windows 2000 Administrators could use CTX WinAdmin to make changes. After CTX WinAdmin V2.10G has been installed, you can enable CTX WinAdmin access to Windows Users who are members of the Windows Administrator's group.

Users who are logged in to Windows on accounts that are not members of the Administrators group will also be able to use all features of the WinAdmin application including connection to CTX via dial-up networking. The only exception is that these non-Administrator users cannot modify the User Profile.

Set Up Users for CTX WinAdmin Access

After CTX WinAdmin has been installed, you can enable CTX WinAdmin access to Windows Users who are members of the Windows Administrator's group. Prior to CTX WinAdmin V2.10G, only Administrators could use CTX WinAdmin to make changes.

1. Go to the Windows Start button > Control Panel > Administrative Tools > Component Services.
2. Locate and open My Computer > COM+ Applications.



3. From the COM+ Applications folder, right click on IIS-{default web site/root/ctmc_Local}. Select Properties > Identity tab, then select "This User" (change from Interactive User).
4. Enter or browse and locate a Windows User name (User must be a member of the Windows Administrator group). Enter a password, and re-enter the password in the Confirm box. Click OK.
5. Click on "x" in the upper right corner to close out of Windows. The Windows User entered in the previous step can now access CTX WinAdmin.



Step 7: Exit CTX WinAdmin

1. From the Program Menu, click Home.
2. Click on Exit at the CTX Management Console page.
3. Close your browser.

WinCTX Offline Programming CTX R2.21 MH108

The WinCTX software in conjunction with CTX WinAdmin 2.21A11 and higher, enables you to perform offline programming for a Strata CTX100 or CTX670 system with Release R2.21 software MH109 or MH110 only. With WinCTX and WinAdmin loaded on your PC, you can make programming changes without being connected to the Strata CTX. WinCTX emulates the existence an operating CTX system so WinAdmin can backup and save the edited programming data into a "default.dat" file on your PC. The edited default.dat file can then be copied to a SmartMedia card and restored to a Strata CTX system.

CAUTION! Only use version MH108 of WinCTX on CTX Release 2.21 MH109 or MH110. Do not use this version of WinCTX on other versions or releases of CTX software– data errors will occur.

Tips and Limitations

1. The Download function of WinAdmin is not supported with WinCTX Off-line programming. You will get *error messages* if you attempt to download programs.
2. Real time functions that only apply to an actual CTX (Date, Time of Day, etc.) do not apply to WinAdmin Off-line programming.
3. When WinAdmin connects to WinCTX Off-line programming, the CTX Release will always show the WinCTX release number in the System Setup screen and top information bar.
4. Licenses - always show fully licensed processors when viewing the License screen.

WinCTX Minimum PC Requirements

WinCTX must run on the WinAdmin PC so the requirements of the PC are the same as those for WinAdmin. There are currently four WinCTX executable files. Each WinCTX executable file requires about 15MB of hard drive space; or they can run from a CD-ROM to save hard drive space. A separate WinCTX executable file is required for each CTX system (100 and 670) and each CTX release (R2.21) for a total of four WinCTX files.

CTX WinAdmin Requirements for WinCTX

CTX WinAdmin, Version 2.21A11 or higher, is required to use WinCTX to edit CTX release 2.21 MH109 or MH110 system data.

Installing and Running WinCTX

WinCTX is a self-executable file and does not need to be installed. The executable file can be opened from a CD-ROM, a folder on the hard drive or desktop icon. Click on the WinCTX.exe file or icon to run the program. The "StopSNMPAgent.exe" file must be installed in the same directory as the WinCTX.exe file (see "Run WinCTX" on page 3-23).

Basic Procedure for Using WinCTX

This is a summary of how to use WinCTX. For detailed, step-by-step instrctions, see the following section "Run WinCTX" on page 3-23.)

1. Open and then Start WinCTX. Be sure to open the correct version (see "Rules for Opening/Restoring "default.dat files"" on page 3-25).
2. Run WinAdmin and connect to WinCTX (select Local WinCTX 127.0.0.1)
3. Edit the database using CTX WinAdmin.
4. Backup the database using CTX WinAdmin.
5. Exit CTX WinAdmin.
6. Stop WinCTX.

Run WinCTX

1. Click on the WinCTX100 or WinCTX670 icon (shown right).



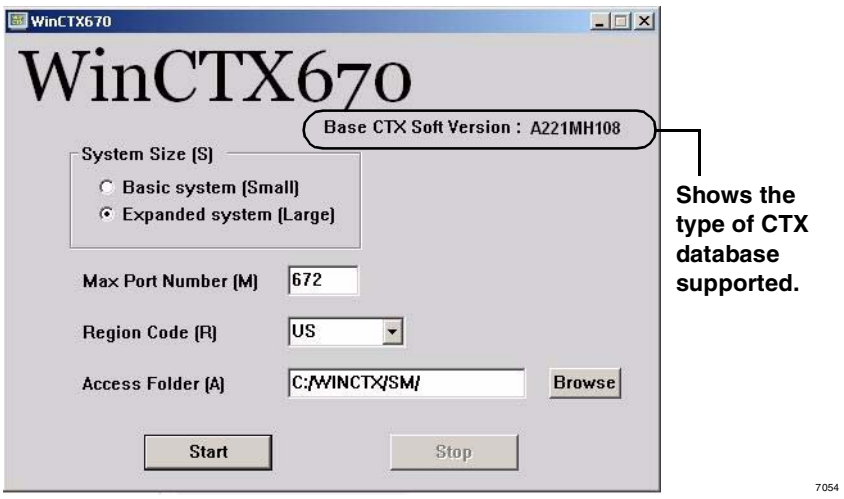
2. If Simple Network Management Protocol (SNMP) service for Windows2000 or XP is activated, WinCTX executes "StopSnmpAgent.exe." "**`Stopping SNMP Service. Please wait...`**" appears on screen. After the SNMP Service is stopped, the Main window for WinCTX670 or WinCTX100 appears (shown in Step 3, below).

   If another application is using the SNMP port, you will see the window shown below. You will have to manually stop the application by selecting Control Panel > Administrative tools > Services. Stop SNMP service to prevent connection problems between WinAdmin and WinCTX. After stopping SNMP service(s), click OK to continue.



3. For WinCTX670, select System Size (for WinCTX100, skip to the next step):
   - Basic system (Small) – Assumes BBMS and BEXU is not installed)
   - Expanded system (Large)– Assumes BBMS and BEXU is installed)

   The WinCTX670 port ranges are:
   - CTX100: 001 to 112
   - CTX670 (Basic System): 001 to 192
   - CTX670 (Expanded System): 001 to 672



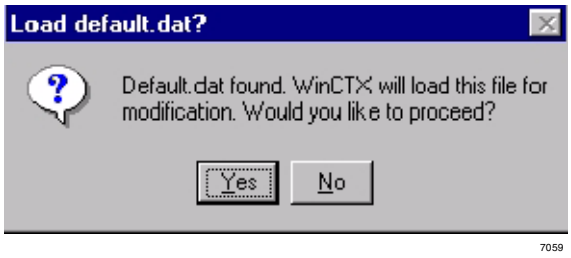
Shows the type of CTX database supported.

4. Select a Region Code: Click the down arrow and highlight a country. The Region Code is the same country list in Program 915-04.
5. Select the Access Folder: This is where the "default.dat" file will be stored. The empty default folder is "C:/WINCTX/SM/".

   If you want to use a different folder that contains a default.dat file or create a new "default.dat" file, click Browse. The Searching Access Folder window displays. Select a folder, then click Set.

   To edit an existing "default.dat" file, select the folder that contains the "default.dat" file which should be edited.
6. Click the Start button. The window title shows "WinCTX is running."
7. If you click "No," the second screen displays (see previous page).

   If a "default.dat"file exists in the selected folder, the window (shown right) displays:



   ➤ Click Yes to load the "default.dat" file into WinCTX. WinCTX shows "Restoring," as it loads the existing default.dat.

   If a "default.dat" file is not in the selected folder, the "Load default.dat?" screen does *not* appear and WinCTX immediately displays the "WinCTX is running" screen. You can still connect to WinCTX to create a new default.dat file in the selected folder by continuing with the following steps.
8. With WinCTX running, log on to WinAdmin.
   - Enter CTX IP/Name (IP address): 127.0.0.1 or your local PC's IP address.
   - Enter a Community Name (CTX default is "communityName").
9. Click the Connect Now button. WinAdmin should connect to WinCTX and operate exactly as if it were connected to a CTX system.

Note In the PC Local Area Connection Property Settings, you may need to set the PC Internet Protocol (TCP/IP) properties to use the following IP address: 192.168.254.251. Subnet mask: 255.255.255.0.

10. Make your offline programming changes from WinAdmin.
11. When you are done programming, select Operation > Data Backup. Click the Back Up button. When you see "Completed Successfully," it is done. This will create a new "default.dat" file that contains your programming changes.

Important! *Data changes will not be stored in the default.dat file unless you backup your data using WinAdmin.*

12. Log out of WinAdmin and then bring up the WinCTX application screen and click the Stop button to stop WinCTX (see "Stopping WinCTX").
13. To transfer the WinCTX database to a CTX system, locate the "default.dat" file in the folder previously selected in Step 4.
14. Transfer the "default.dat" file to a SmartMedia card (progdata folder) in the CTX, either locally or remotely, and then restore the data to the CTX using the system initialization procedure (Program 900 level 1). See Chapter 10–Operation, "900 CTX Restart."

Stopping WinCTX

1. Click the Stop button or click the ☒ button in the right corner. WinCTX displays window (shown right).
2. Click Yes to stop WinCTX

   ...or click No to continue using WinCTX.



Important! *Data changes will not be stored in the default.dat file unless you backup your data using WinAdmin.*

Viewing the CTX Release Number Supported by WinCTX

To display the CTX release number supported by WinCTX, open WinCTX and click on the WinCTX icon in the left corner, then click on the "version number WinCTXxxx." The CTX release (R2.21) and build (MH109 or MH110) number that WinCTX will emulate when it is running displays.

When you run WinCTX, it always shows the same CTX release and build information even if you open a default.dat file with different release and build numbers. You can restore the "default.dat" files created by WinCTX to CTX systems with different release numbers per the rules below.

Rules for Opening/Restoring "default.dat files"

Basically when opening and restoring default.dat files using WinCTX, the version of WinCTX must match the version of CTX. If the version numbers do not match, data errors will ocuur after updating the CTX using the default.dat file created or edited using WinCTX. WinCTX R2.21 MH109 or MH110 can only be used CTX R2.21 MH109 or MH110. If MH014 is released it may be compatible with WinCTX R2.21 MH109 or MH110 – this will be specified in the MH014 release documentation.

System 4

This chapter provides Strata CTX system programming information for programmers using the CTX WinAdmin programming interface.

100 Cabinet Slot PCB Assignments

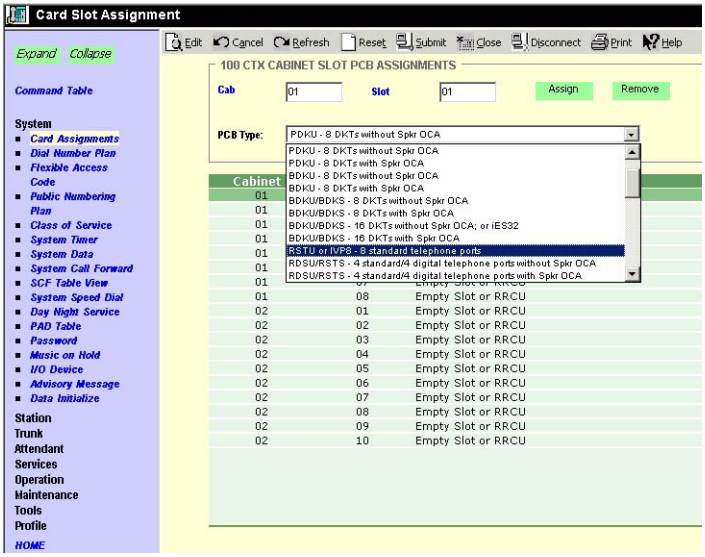
Prerequisite Program: *None*

All Printed Circuit Boards (PCBs), excluding the system processors, are assigned to cabinet slots. The processor PCBs have dedicated slots in the Base Cabinet which do not require this assignment. The system provides one Base Cabinet and up to six Expansion Cabinets. The Base Cabinet provides eight slots and each of the six Expansion Cabinets provide 10 slots for a total of 68 slots.

1. Fill out the "Card Assignment Record Sheets" on page D-1.
2. From the Program Menu click System > Card Assignment. The Card Slot Assignment screen displays (shown right).
3. Cabinet (01~07) – Select the two digit cabinet number to be assigned. The cabinet and slot number appear in the cab/slot field. Select 01 for Base and Expansion cabinet (CTX100).

   Select 01 for Base and 02~07 respectively for each Expansion cabinet (CTX670).
4. Slot (01~10) – Select 01~04 for Base Slots and 05~08 for Expansion slots (CTX100).

   Select 01~08 for Base Slots and 01~10 for Expansion Slots (CTX670).

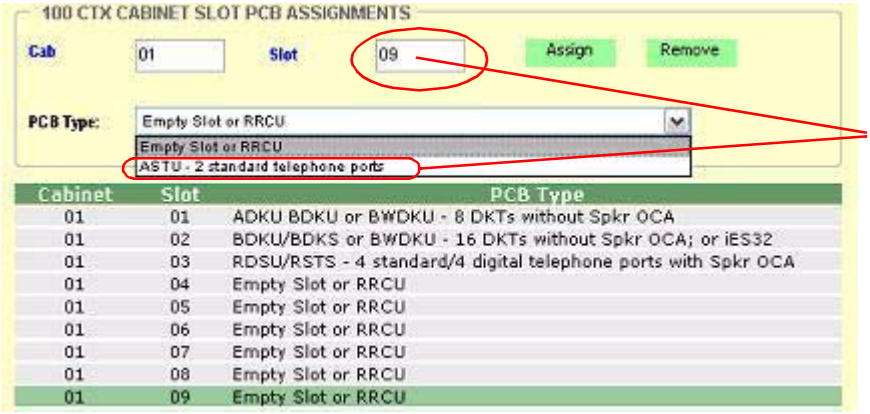


Note The CTX100 ACTU built-in relay is programmed as relay 5. For this relay operation, BIOU2 is installed as default in a virtual equipment position; Cabinet 2, Slot 5, PCB code 20 in Program 100. To install an actual BIOU2 and disable the ACTU built-in relay, use the programming telephone to remove the virtual BIOU2 and then install the actual BIOU2 in Cabinet 01/Slot 01~08 in the normal manner.

5. Select the PCB Type. Use the drop down menu to select the PCB type. WinAdmin will start a refresh cycle, watch the progress bar (lower right corner of PC screen) to verify when WinAdmin is complete. The PCB type that was selected will appear in the PCB Type field.
6. Click Submit to save your data.

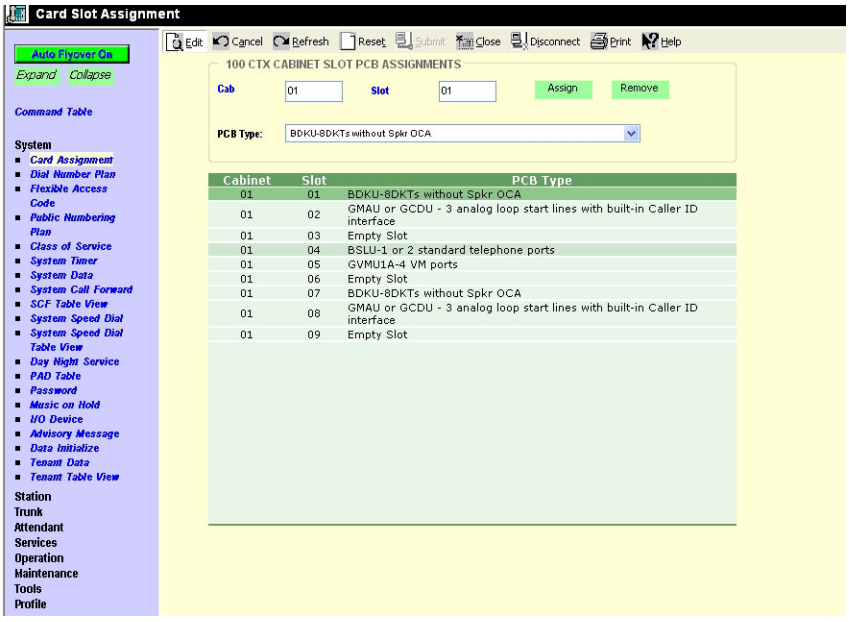
Notes

- **CTX100** – ASTU is always installed in virtual slot 09, as shown below .



Only ASTU shows for Slot 9

- **CTX28** – the slots will always be populated as shown below and cannot be changed.



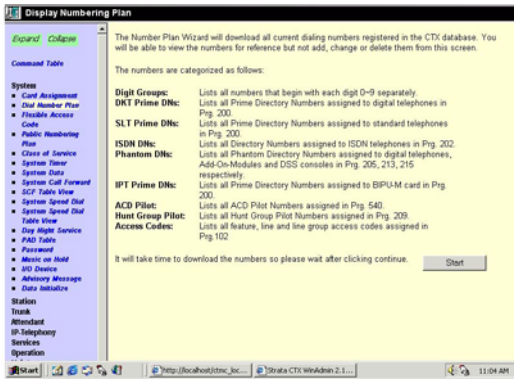
Dial Number Plan

Prerequisite Program: *None*

The Dial Number Plan lets you download all current dialing numbers registered in the CTX database.

The Numbering Plan screen (shown right) gives you details on the different categories of Numbers.

The table below contains the information shown on the screen to the right.

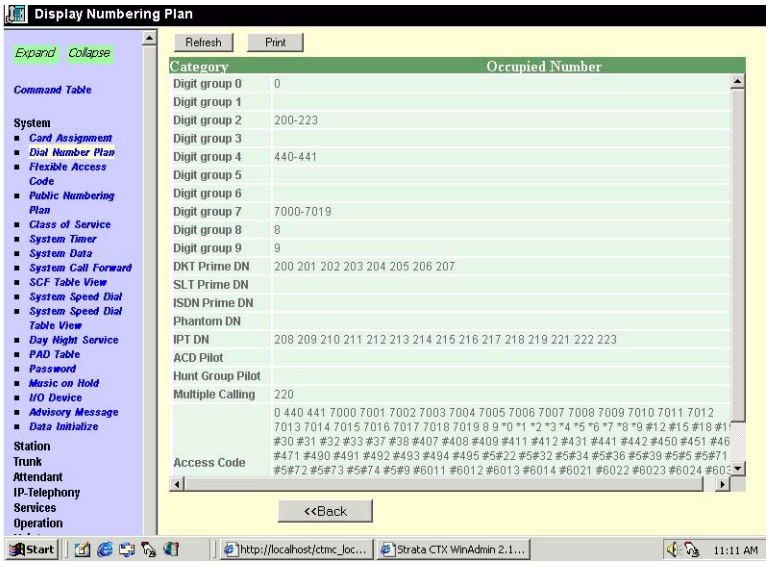


Number Type	Description
Digit Groups	Lists all numbers that begin with each digit 0~9 separately.
DKT Prime DNs	Lists all Prime Directory Numbers assigned to a digital telephone in Program 200.
SLT Prime DNs	Lists all Prime Directory Numbers assigned to a standard telephone in Program 200.
ISDN DNs	Lists all Directory Numbers assigned to ISDN telephones in Program 202.
Phantom DNs	Lists all Phantom Directory Numbers assigned to digital telephones, Add-On-Modules and DSS consoles in Programs 205, 213, 215 respectively.
IPT Prime DNs	Lists all Prime Directory Numbers assigned to BIPU-M card in Program 200 (requires CTX and WinAdmin Release 2.1 and above).
ACD Pilot	Lists all ACD Pilot Numbers assigned in Program 540.
Hunt Group Pilot	Lists all Hunt Group Pilot Numbers assigned in Program 209.
Access Codes	Lists all feature, line and line group access codes assigned in Program 102.

➤ Click Continue to view the next screen.

To the right is an example of all the numbers programmed in the CTX system.

You are able to view all the DNs, IPT DNs and other numbers used.



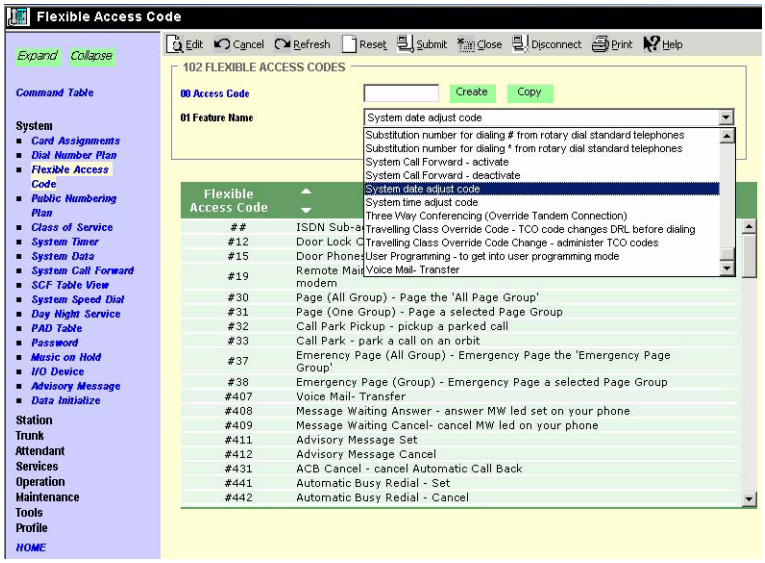
102 Flexible Access Codes

Prerequisite Program: *None*

Strata CTX comes with pre-assigned Flexible Access Codes that the telephone dials to access features. This enables you to create customized Flexible Access Codes. The Strata CTX Flexible Numbering Plan associates features stored in memory (i.e., "Store Code," see Table 4-1) to a Flexible Numbering Code assigned by the user.

Note Flexible Numbering Plan access codes cannot conflict with DN assignments.

1. Enter your customized Flexible Numbering Plan in the "Programmed Value" column of Table 4-1.
2. From the Program Menu click System > Flexible Numbering Plan. The Numbering Plan Assignment screen displays (shown at right).
3. *00 Flexible Numbering Plan* – Enter the digits to be dialed (0~9,#,*) to access a feature or an OLG. To delete, select "No Data" in "01 Feature Name." Conflict with an assigned DN will produce an error.
4. *01 Flexible Numbering Feature* – Select the Flexible Numbering Feature (see Table 4-1) to see which access code is being assigned.



Note To assign an access code to an OLG, select "Line Group access code - one access code for each OLG." To assign the prefix digit(s) for the access code of individual lines, select "Line access code - leading digit(s) to access individual lines". Example: If #7 is selected as the line access prefix, the users will dial #7xxx to access an individual line (where xxx is the line number).

5. *02 OLG Number* – Enter the Outgoing Line Group number to which the OLG access code is being assigned. This field is only required if you chose "Line Group Access Code – one access code for each OLG" for the Flexible Numbering Feature in Step 4 above. Enter a **0** in this field if a Feature Code other than 551 was selected.

Note 02 OLG Number (0~32 CTX100; 0~50 CTX670 Basic; 0~128 CTX670 Expanded) field appears only when 01 Feature Name Line Group Access Code – one access code for each OLG is selected.

6. Click Submit.

➤ **To delete an access code assignment**

➤ Click the Create button and enter the access code in the index, select No Assignment, click Submit. This clears the access code so that you can reassign it to another feature.

Creating New Feature Codes

1. Click on the Create button.
2. Enter new feature/access code. Click Ok. WinAdmin will start a refresh cycle, when your complete screen will change to a gray (edit mode) color and the feature/access code will be red.
3. From the Feature Name drop down menu select the feature to be assigned.
4. Submit your data.

Notes

- To range program feature/access codes use a "*" between a range of values and a "," for an additional entry not in a range.
- *System Date and Time Access Codes* – These functions require CTX R1.02, MA227 or higher software. The system date adjust code and system time adjust code is different for every system. The defaults are #651 and #652 respectively.

Important! *If you backup a CTX database (default.dat) with a CTX software that does not support Time/Date access codes and then restore it to a CTX software that supports these access codes, you must use this program to set the Time/Date access codes. This must be done to allow end users to set the Time/Date from their LCD digital telephones.*

Flexible Numbering Default Settings

Table 4-1 shows the default Flexible Numbering Feature and Flexible Numbering Plan code relationships. Pressing the Flexible Numbering Plan code from any station enables users to directly access the Flexible Numbering Feature. The Feature Index Codes will display on the LCD of the telephone once the Default Access Codes are entered.

Note These three-digit Feature Index Numbers should not be confused with the Program 205 three-digit Button Codes.

Table 4-1 Flexible Numbering Plan Default Settings

Flexible Numbering Feature	Feature Index	Default Access Code	Programmed Value
No Data			
ABR - Activate	150	#441	
ABR - Cancel	151	#442	
Call Park Orbits - Activate	170	#33	
Call Park Orbits - Park Answer (Retrieve Parked Call)	173	#32	
System Orbit Number	174	7000~7019	
DND -Local Activation	180	#6091	
DND -Local Cancellation	181	#6092	
DND -Remote Activation	182	#6191	
DND -Remote Cancellation	183	#6192	
Door Lock Control -Unlock	190	#12	
Door Phones -Call	191	#15	
Flash -short	200	#450	
Flash -long	210	#451	
Group Paging -Invoke All Group Paging	220	#30	
Group Paging -Invoke Individual Group Paging	230	#31	
Answer for External Group Paging	232	#5#36	
Emergency Page -Invoke All Emergency Paging	240	#37	
Emergency Page -Invoke Individual Emergency Paging	250	#38	
Originate Call by Terminal Speed Dial (Index: 00-99)	260	*1	

Table 4-1 Flexible Numbering Plan Default Settings *(continued)*

Flexible Numbering Feature	Feature Index	Default Access Code	Programmed Value
Originate Call by System Speed Dial (Index: 000-099)	261	*2	
Originate Call by System Speed Dial (Index: 100-199)	262	*3	
Originate Call by System Speed Dial (Index: 200-299)	263	*4	
Originate Call by System Speed Dial (Index: 300-399)	264	*5	
Originate Call by System Speed Dial (Index: 400-499)	265	*6	
Originate Call by System Speed Dial (Index: 500-599)	266	*7	
Originate Call by System Speed Dial (Index: 600-699)	267	*8	
Originate Call by System Speed Dial (Index: 700-799)	268	*9	
Register Speed Dial	269	#66	
Call Forward (CF-A; Any Call) - Activation	340	#6011	
Call Forward (CF-B; Any Call) - Activation	341	#6021	
Call Forward (CF-NA; Any Call) - Activation	342	#6031	
Call Forward (CF-B/NA; Any Call) - Activation	343	#6041	
Call Forward (CF-A; External Call) - Activation	350	#6013	
Call Forward CF-B; External Call) - Activation	351	#6023	
Call Forward (CF-NA; External Call) - Activation	352	#6033	
Call Forward (CF-B/NA; External Call) - Activation	353	#6043	
Call Forward (CF-A; Any Call) - Remote Activation	360	#6012	
Call Forward (CF-B; Any Call) - Remote Activation	361	#6022	
Call Forward (CF-NA; Any Call) - Remote Activation	362	#6032	
Call Forward (CF-B/NA; Any Call) - Remote Activation	363	#6042	
Call Forward (CF-A; External Call) - Remote Activation	370	#6014	
Call Forward (CF-B; External Call) - Remote Activation	371	#6024	
Call Forward (CF-NA; External Call) - Remote Activation	372	#6034	
Call Forward (CF-B/NA; External Call) - Remote Activation	373	#6044	
Call Forward (Any Call) - Cancellation	380	#6051	
Call Forward (External Call) - Cancellation	390	#6053	
Call Forward (Any Call) - Remote Cancellation	400	#6052	
Call Forward (External Call) - Remote Cancellation	410	#6054	
Change Password for Remote Activation/Cancellation	420	#670	
Input Account Code	530	#46	
Change DISA Security Code	540	#658	
Outgoing Call by Directing Individual Trunk	550	#7	
Outgoing Call by Directing Outgoing Line Group	551	None	
Three Way Conferencing (Override to Tandem Connection)	560	#494	
Enter User Programming Mode	570	#9876	
LCR -Outgoing Call	580	9	
Set Voice Mail Message Waiting (activate MW without ringing for VM)	591	#63	
Release Received Message Waiting	592	#409	
Release Sent Message Waiting (Cancel MW without ringing for VM))	593	#64	
MW Answer access code (Retrieve Received Message Waiting)	594	#408	
Cancel ACB	600	#431	
Start BGM	610	#490	
Stop BGM	611	#491	
Start BGM for External Paging Device	612	#492	
Stop BGM for External Paging Device	613	#493	
Built-in modem	630	#19	
Night Ring Answer	640	#5#39	
Travelling Class Override Code Input Number	650	#471	
Change Travelling Class Override Code	651	#69	

Table 4-1 Flexible Numbering Plan Default Settings *(continued)*

Flexible Numbering Feature	Feature Index	Default Access Code	Programmed Value
Activate System Call Forward	670	#620	
Cancel System Call Forward	671	#621	
Call Pickup -Directed DN Pickup of Ringing or Held DN calls and Call Park Answer	678	#5#29	
Call Pickup[1] - Directed DN pickup for either Ringing or Held Calls (Release 2.0, MF017 or higher)	679	#5#6	
Call Pickup for Incoming Call -Group Pickup	680	#5#34	
Call Pickup for Incoming Call -Directed Terminal	681	#5#5	
Call Pickup for Incoming Call -Directed Group	682	#5#32	
Call Pickup for Incoming Call -Directed DN	683	#5#22	
Call Pickup for Incoming Call -Any External Call	684	#5#9	
Call Pickup for On-Hold Call -Directed CO Retrieve	685	#5#73	
Call Pickup for On-Hold Call -Local Retrieve	686	#5#71	
Call Pickup for On-Hold Call -Remote Retrieve	687	#5#72	
Call Pickup for On-Hold Call -Directed DN Retrieve	688	#5#74	
Transfer to Voice Mail	690	#407	
Repeat Last Number Dialed	700	*0	
Volume Control for BEEP	710	#6101	
Change LCD Display Language	720	#495	
Advisory Message - Activation	730	#411	
Advisory Message - Cancellation	731	#412	
Emergency Call	740	#911	
Attendant Console Group Access Code	750	0	
Operator Call Special Dial (for Tenant Service)	751		
Private Network Access Code	760	8	
Node ID (Coordinated Directory Number Prefix)	770	None	
Substitution of Dial *	780	441	
Substitution of Dial #	781	440	
Originate Call with Sub Address -Outgoing Call/Internal Call	782	##	
Application starting access code	800	#18	
Split (Conference)	860	860	
Voice Mail Call Monitor Off	870	#963	
System Date Adjust Code (Release 1.02, MA227 or higher)	910	#651	
System Time Adjust Code (Release 1.02, MA227 or higher)	911	#652	

1. Feature key is not provided for this Call Pickup. If you want a feature key, please use Single Touch Button that has a feature access code for this call pickup.

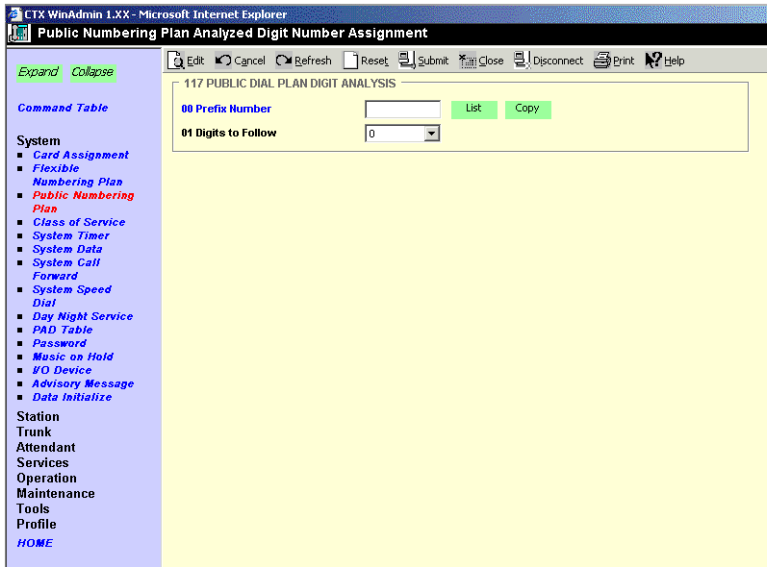
117 Public Dial Plan Digit Analysis

Prerequisite Program: *None*

This program is used to prevent users from circumventing Destination Restriction (DR) by sending tones directly to the PSTN before DR analysis is complete. It defines the number of digits expected in PSTN numbers beginning with identified sequences.

For example, a number starting with the toll prefix "1" would be expected to be 11 digits long. Calls will be cut through to the public network only after the expected number of digits have been received.

1. From the Program Menu click System > Public Numbering Plan. The Public numbering Plan Analyzed Digit Number Assignment screen displays (shown at right).
2. Enter the *Prefix Number* used for external calls.
3. Select *Digits to Follow.*
4. Click Submit.



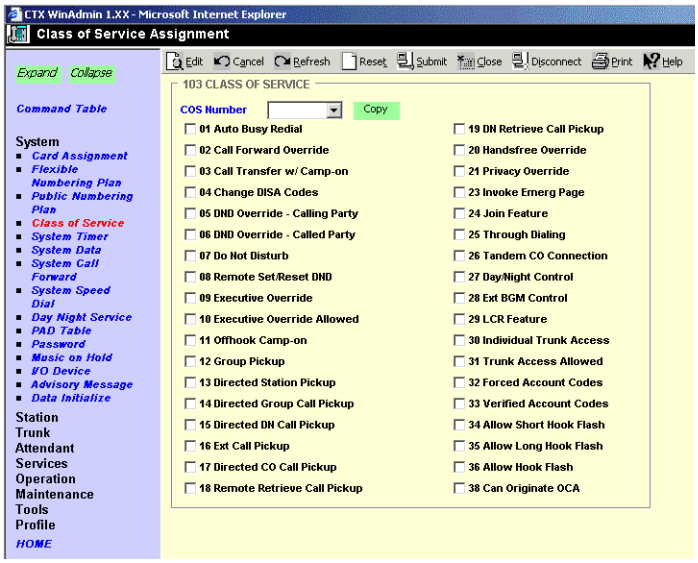
FIELD	DESCRIPTION
00 Prefix Number	Enter the initial, identifying external digits. 1 to 7 digits may include wild cards "X" and "N". Possible values: 1~7 (N = 2~9 and X = 0~9) (default = no value)
01 Digits to Follow	Select the number of digits to follow the prefix number established above. It is the total number of digits in a number beginning with the Prefix Number above. Possible values: 0~64 (default = 0)

103 Class of Service

Prerequisite Program: *None*

Class of Service (COS) assignments are a registration of feature capabilities to a specific user or group of users. Up to 32 COS feature sets can be registered.

1. Enter your COS assignments in the "COS Record Sheet" on page D-4.
2. From the Program Menu click System > Class of Service The Class of Service Assignment screen displays (shown right).
3. COS Number – Select the COS Number (1~32).
4. Place a check mark in each of the services you wish to enable.
5. Click Submit.



FIELD	DESCRIPTION
01 Auto Busy Redial	Enable Automatic Busy Redial after dialing a busy outside destination.
02 Call Forward Override	Enable Call Forward Override. If enabled, this station does not forward calls from a calling station with System or Station Call Forward activated. This includes when dialing from the dial pad or DSS button located on the telephone or DSS console.
03 Call Transfer w/ Camp-on	Allows a call transferred by a station to Camp-on to a busy destination.
04 Change DISA Codes	Enable stations to change the DISA Security Code.
05 DND Override - Calling Party	Permits a caller to override the DND status of a station.
06 DND Override - Called Party	Permits calling parties with DND Override privileges to override DND status.
07 Do Not Disturb	Enables user to place stations on DND mode.
08 Remote Set/Reset DND	Enables stations with the ability to set/reset DND on other phones.
09 Executive Override	Enable Executive Override on a call.
10 Executive Override Allowed	Permit Executive Override for incoming callers.
11 Offhook Camp-on	Enable Off-hook Camp-on when encountering a busy destination.
12 Group Pickup	Enable stations for Group Call Pickup within one's own group.
13 Directed Station Pickup	Enable stations to pick another specific ringing station.
14 Directed Group Call Pickup	Enable stations to pick up a ringing station in a specified group.

FIELD	DESCRIPTION
15 Directed DN Call Pickup	Enable stations to pick up a specified DN.
16 Ext Call Pickup	Enable stations to pick up any incoming trunk call.
17 Directed CO Call Pickup	Enable stations to pick up a specific incoming trunk call.
18 Remote Retrieve Call Pickup	Enable stations to retrieve any call placed on Hold at a designated terminal (PDN).
19 DN Retrieve Call Pickup	Enable stations to retrieve a held call on another DN.
20 Handsfree Override	Permit stations to override Hands Free Answerback with Ringing mode.
21 Privacy Override	Enable stations to override a private call.
23 Invoke Emergency Page	Enable the Emergency Page feature. **Note** Not used in Release 1.
24 Join Feature	Enable the Join feature (Attendant Feature).
25 Through Dialing	Enable the Perform Through Dialing (Attendant Feature).
26 Tandem CO Connection	Set up a Trunk-to-Trunk connection.
27 Day/Night Control	Enable Day/Night Mode changing privilege.
28 Ext BGM Control	Permit BGM over external speakers to be turned on/off.
29 LCR Feature	Enable access to LCR.
30 Individual Trunk Access	Enable Dial individual trunk access codes to access specific lines.
31 Trunk Access Allowed	Enable Access trunk groups by trunk access codes.
32 Forced Account Codes	Use Forced Account Codes for placing external calls.
33 Verified Account Codes	Verify Account Codes before an external call is placed.
34 Allow Short Hook Flash	Use a Short Flash signal over outside lines.
35 Allow Long Hook Flash	Use a Long Flash signal over outside lines.
36 Allow Hook Flash	Receive hook flash over CO Lines, and enable telephones and voice mail ports to perform hook flashes.
38 Can Receive OCA	Permission for others to call this station using Off-hook Call Announce.
39 LCR on Direct Trunk Access	Sets whether LCR should be used if trunk is accessed directly - Available in R2
40 Disconnect Outgoing Call	If this parameter is enable for a level of Class of Service, COS, any O/G calls made by Extensions with this COS will be automatically released after a defined time period. Time period defined in Program 104.
41 BGM Enable	Disable to remove Background Music from stations with this COS.
42 DSS Override Call Fwd	Enable: When this station calls another station using a DSS key, the called station will NOT call forward if Call Forward is set. When calling stations using the dial pad the called tation's Call Forward will occur. Disable: When this station calls another station using a DSS key, the called station will call forward if Call Forward is set. When calling stations using the dial pad the called station's Call Forward will occur

104 System Timer

Prerequisite Program: *None*

This command assigns the system timers. System timers set a variety of times to control calls and features for the Strata CTX.

1. From the Program Menu click System > System Timer. System Timer Assignment screen displays (shown right).
2. Select the desired timer value for each of the 19 fields.
3. Click Submit.



FIELD	DESCRIPTION
01 ACB Callback Timer	The Automatic Callback timer sets the time (5 ~ 180 seconds) that the callback will be attempted before being cancelled. Possible values: 5~180 sec. (default = 30)
02 ACB Cancel Recall Timer	Select the ACB overall timer value. This value establishes a limit for registering a callback. Once the timer expires, the callback will be cancelled. Possible values: 5~180 min. (default = 30)
03 Park Recall Timer	Select the Park timer value. This sets the length of time a call can remain in Park. Possible values: 10~600 sec. (default = 120)
04 Camp-on Timer	Select Camp-on timer value. This sets the time needed to remain off-hook prior to Camp-on being automatically activated. Possible values: 5~15 sec. (default = 10)
05 SMDR Valid Call Timer	The length of time that a call should be active before being captured by SMDR. The SMDR Answer timer sets a default time for when an outgoing call will be considered to be answered for SMDR reporting when a true answer signal is not returned from the public network. Setting the too time short will include calls that may not be completed, setting the time too long may exclude short calls that are answered and terminated in a short time. Possible values: 0~180 sec. (default = 10)
06 Tandem Timer #1	Select timer for a Trunk-to-trunk connection for which neither CO Line has release supervision, a timer is needed to release the call if no user monitoring has taken place. Possible values: 0~3600 sec. (default = 300)
07 Tandem Timer #2	Provides the time to enable an external user to dial a digit to extend the disconnect time when the connection is unsupervised. This feature is used primarily with DISA. Possible values: 0~180 (default = 30)
08 Call Forward No Ans Time	The System Call Forward No Answer timer specifies the time period that a phone will ring prior to invoking the Call Forward operation. Possible values: 1~180 sec. (default = 30)

FIELD	DESCRIPTION
09 Dial Input Timer	Permits dialed input for a telephone and trunk using DTMF. Possible values: 0~60 sec. (default = 20)
10 Delay 1 Ringing Timer	Specifies the time to wait before applying ringing to the designated phones. Possible values: 1~60 sec. (default = 12)
11 Delay 2 Ringing Timer	Selects the time to wait before applying ringing to the designated phones. Possible values: 1~60 sec. (default = 24)
12 Door Unlock Timer	Select the length of time to send an electrical signal to a door for releasing the lock. Possible values: 1~30 sec. (default = 6)
13 9+11 Judgement Timer	The 9+11 Inter-digital timer provides a timing value (1~30 seconds) for the system to wait for additional digits to be dialed looking for the 911 or 9+911 dialed codes for treatment using the E911 procedures rather than normal dialing treatment. Possible values: 1~30 sec. (default = 5)
14 Emergency Call Timer	Sets a time for advancing the call to the next station in a list of destinations for the call. Possible values: 10~180 sec. (default = 30)
15 ABR Busy Detection Time	The Destination Busy Detection timer sets the time to wait while looking for a busy condition on an external call. If detected, it will trigger the initiation of the Automatic Busy Redial cycle. Possible values: 1~30 sec. (default = 5)
16 Lost Call Timer	The Lost Call timer sets the time that a failed transfer recall will ring on the originating station prior to attempting to recall a secondary location. Possible values: 1~600 sec. (default = 180)
17 Lost Call Final Timer	The Lost Call Final timer sets the time that a failed transfer recall will ring on the secondary location before being automatically disconnected. Possible values: 1~600 sec. (default = 30)
18 DTMF Tone Sending Time	The DTMF tone sending duration for dialing on CO Lines. Possible values: 80msec (default) or 160msec
19 Auto Disconnect	Time after which an unsupervised trunk may be automatically released. Possible values: 0~60 min. (default = 0)
20 Tie Line Delay Timer	This timer inserts a pause before any dialled information is sent to a Tie Line, this pause allows the distant end time to prepare for the receipt of dialled digits.
21 Answer timer before disconnect	If an incoming DISA call routes over a Tie Line and the call is not answered by the distant end within a certain period of time the DISA caller will be cut off. The time period before cut off is determined by this setting.
22 Outgoing Call Talking Disconnect Timer	If Program 103 FB40 is set to enable then after this timer expires the out going call is cut off

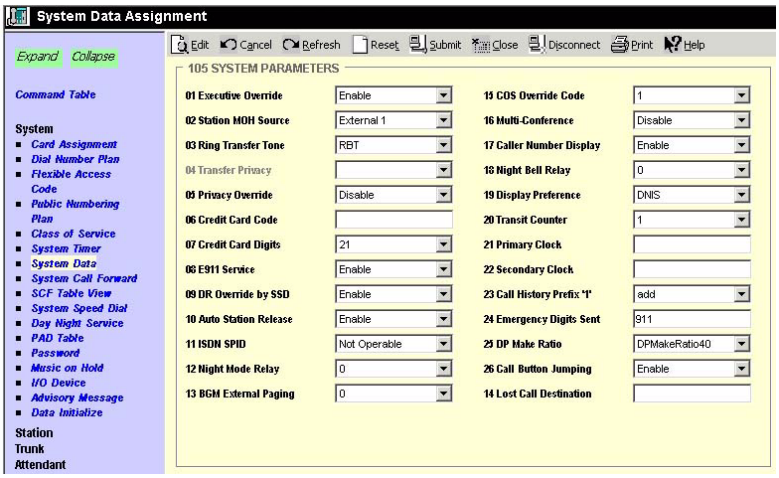
FIELD	DESCRIPTION
23 System Timer Network DSS Refresh Timer	Select Network DSS Refresh Timer (20 -180 seconds). The time interval when all Network DSS settings are refreshed system wide. **Note** DSS button LEDs change state immediately when the status of the DSS button changes - regardless of this timer value. Possible values: 20~180 seconds (default = 30)
24 Outgoing Number Display Timer	This timer sets how long dialed numbers will display on telephone LCDs for outgoing line calls. (This feature is available with CTX R2.2 or higher and CTX WinAdmin R2.2G.0 and higher.) Possible values:1~120 seconds (default = 10)

105 System Data

Prerequisite Program: *None*

This command assigns system settings for your Strata CTX.

1. From the Program Menu click System > System Data. The System Data Assignment screen displays (shown right).
2. Enter System Parameter data using the table below.
3. Click Submit.



FIELD	DESCRIPTION
01 Executive Override	Enable break in warning tone for Executive Override. Possible values: Enable (default) or Disable
02 Station MOH	Select MOH for private lines and stations. Possible values: Quiet Tone, External 1 (default), External 2, External 3, External 4, External 5, External 6, External 7, External 8, External 9, External 10, External 11, External 12, External 13, External 14 or External 15
03 Ring Transfer Tone	Select tones for the transferred party to hear after a ringing transfer takes place. Possible values: RBT (default) or MOH

FIELD	DESCRIPTION
04 Transfer Privacy	Transfer Privacy enabled: CO line buttons that have multiple appearances will only flash and ring on the transferred-to telephone; the same CO line button on other telephones will be red-busy. Transfer Privacy Disabled: CO line buttons that have multiple appearances will flash and ring on all telephones that have the CO line button appearance. Possible values: Enable (default) or Disable
05 Privacy Override	Enable Privacy Override Attendant Monitor warning. Possible values: Enable or Disable (default)
06 Credit Card Code	Enter Service Indentifier for Credit Card Calling. If no value is entered in this field any previously programmed data is lost. Possible values: Up to 32 digits (default = no value)
07 Credit Card Digits	Enter the Minimum Dial Digits for Credit Card Calling. Possible values: 1~66 (default = 21)
08 E911 Service	Enable E911 Service availability. Possible values: Enable (default) or Disable
09 DR Override by SSD	Enable DR Override by System Speed Dial. Possible values: Enable (default) or Disable
10 Auto Station Release	Enable Automatic Station Release. Possible values: Enable (default) or Disable
11 ISDN SPID	Enable Auto Service Profile Identifier (SPID). Possible values: Operable or Not Operable (default)
12 Night Mode Relay	Assign BIOU Relay as the Night Relay. This relay activates when the system is in the Night Mode. Possible values: 0~8 (default = 0) BIUO1 provides relays 1 to 4; BIUO2 provides relays 5 to 8 **Note** On CTX100 the ACTU built-in relay is programmed as relay 5. For this operation, in Program 100 the BIOU2 must be installed in Cabinet 2, Slot 5, PCB code 20.
13 BGM External Paging	Set the External Page Group Number that includes the external paging zones to which BGM will be sent. See Program 503 Possible values: 0~4 (CTX100) 0~8 (CTX670 Basic) 0~16 (CTX670 Expanded) (default = 0)
14 Lost Call Destination	Enter Lost Call Destination. If no value is entered in this field any previously programmed data is lost. Possible values: Up to 5 digits (default = no value)
15 COS Override Code	Class of Service Override Code Digits (1-8 digits). The digit length of COS override codes. COS override codes are set in Program 510. Possible values: 1~8 (default = 1)

FIELD	DESCRIPTION
16 Multi-Conference	Enable Multi-Conference capabilities for Analog Internal Calls and Outgoing Calls. Possible values: Enable or Disable (default)
17 Caller Number Display	Enable Caller Number Display. If a soft key display competes with a Caller ID, the Caller ID displays. Possible values: Enable (default) or Disable
18 Night Bell Relay	Assign BIOU Relay as the Night Bell Relay; this relay activates whenever Night Ringing takes place. Possible values: 0~8 (default = 0) BIUO1 provides relays 1 to 4; BIUO2 provides relays 5 to 8 **Note** On CTX100 the ACTU built-in relay is programmed as relay 5. For this operation, in Program 100 the BIOU2 must be installed in Cabinet 2 Slot 5, PCB code 20.
19 Display Preference	Select Display Preference. Possible values: DNIS (default) or Caller ID
20 Transit Counter	Select the Networking Transit Counter. This device limits the number of nodes through which a QSIG call can pass before being terminated as a lost call. Possible values: 0~128 (default = 1)
21 Primary Clock **22 Secondary Clock**	Enter data as xxyyzz. zz=channel 01 if clock source is RPTU or RDTU zz=channel 01, 02, 03, or 04 if clock source is RBUU/RBUS or RBSU Example: If the Primary Clock Source should be a assigned to an RPTU in cabinet 5, slot 2, enter 050201. Cabinet numbers: CTX100: Select 01 for Base and Expansion cabinet. CTX670: Select 01 for Base and 02~07 respectively for each Expansion cabinet. Slot numbers: CTX100: Select 01~04 for Base slots and 05~08 for Expansion slots. CTX670: Select 01~08 for Base slots and 01~10 for Expansion slots.
23 Call History Prefix 1	Add the dialing prefix **1** when using the callback feature in Call History. Possible values: Add (default) or Do Not Add
24 Emergency Digits Sent	Enter an alternative emergency dialing string. If no value is entered in this field any previously programmed value is overwritten. Possible values: Up to 5 digits (default = 911)
25 DP Make Ratio	Select the Dial Pulse Make/Break ratio. Possible values: 33% (default) or 40%

FIELD	DESCRIPTION
26 Call Button Jumping	Select whether to execute Jumping LED. Possible values: Enable (default) or Disable • If enabled, line calls move from a telephone DN button to a line button after they are answered. After answering the call, the DN button is cleared to receive another call. With Call Jumping, the DN acts as an Answer button. This only applies if the line that is answered has a CO/GCO/Pooled button appearance on the telephone. • If disabled, line calls remain on the DN after they are answered.
27 Set Domestic Code	Set to 0 (zero) to enable CTX/CIX to insert the leading zero when receiving a National CLI
29 CPN Numbering Plan	Called Party Number numbering plan format. Possible values: Unknown (default) or ISDN
30 SLT Recall Timer	Hooking = 100mS On_Off Hook = 500mS <<investigate>>
31 Analog Trunk Hunting	This parameter defines the order in which analog trunks are selected during the outgoing call trunk selection process. Possible values: Terminal (default) or Cyclical
32 Display Check Sum Error	Enable a System Checksum error to be displayed and an error log to be created. Possible values: Enable or Disable (default) Enable a System Checksum error to be displayed and an error log to be created. Possible values: Enable (default) or Disable
33 Analog Tie Line Disconnect Timer	Analog Tie Line Disconnect Timer enables tandem analog Tie Lines to automatically disconnect if the timer expires. Possible values: Enable or Disable (default)
34 Analog DID Method	Analog DID method: Normal(DTMF)/MFC-R2 3 digits/MFC-R2 4 digits Possible values: Normal (default), MFC-R2 3, MFC-R2 3
35 ALaw/MuLaw	Choose the companding technique appropriate to the local PSTN. Mu Law in North America. Possible values: A Law or Mu Law (default)
36 Play Melody	Possible values: Start or Stop (default)
37 Select Melody	Possible values: Melody 1 (default) or Melody 2
38 Internal Pad	Possible values: Enable or Disable (default)

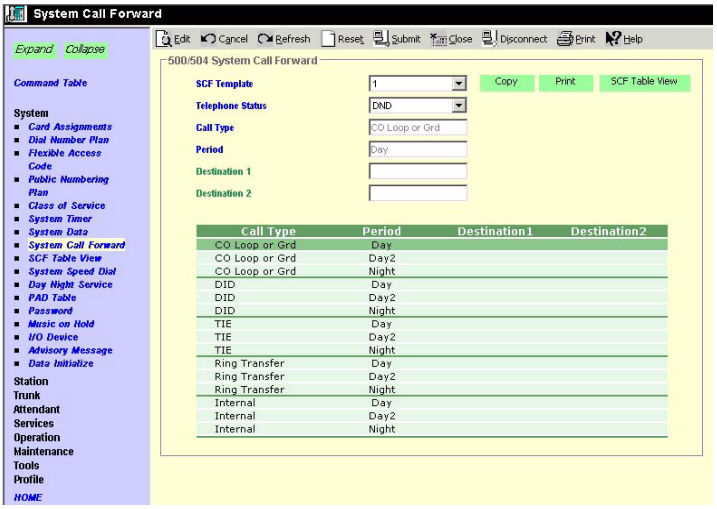
FIELD	DESCRIPTION
39 Std. Tel. Ringing Cadence	Select the Ringing Cadence for Standard Telephone circuits. This parameter is available only with CTX WinAdmin R2.1 and above. **Note** This does not apply to Digital to IP telephones. (Ringing Type1) External Ring:20Hz, 1sec. ON - 3sec. OFF Internal Ring:20Hz, 0.4sec.ON - 0.2sec. OFF - 0.4sec. ON - 3sec. OFF Recall:20Hz, 1sec. ON - 1sec. OFF (Ringing Type2) 'Ringing Type2' is the same Ringing Cadence as DK. External Ring:20Hz, 0.4sec. ON - 0.2sec. OFF - 0.4sec. ON - 3sec. OFF Internal Ring:20Hz, 1sec.ON - 3sec. OFF Recall:20Hz, 1sec. ON - 3sec. OFF
40 Sys CF Cascade	Enable: A call that forwards to a destination that is also System Call forwarded, will be sent to the destinations System Call Forward destination. **Note** Note: If enabled, the SCF alternate destination set in Prg 500-05 will be ignored. Disable: A call that forwards to a destination that is System Call Forwarded, will not follow the destinations System Call Forward. Possible values: Enable or Disable (default)
41 CSTA B-Ch. Operation	Enabled - CSTA shall provide full 'B' Channel path information. Disabled - CSTA shall provide channel group only. Possible values: Enable (default) or Disable
42 ISDN Complete IE Option	Whether to append Sending Complete IE into SETUP message and INFO message in ISDN. Possible values: Enable (default) or Disable
43 Repeat Last No. Dialed	Enable - to store dialed numbers that are not complete in the last number dialed buffer. Disable - to only store complete telephone numbers in the last number dialed buffer. Possible values: Enable (default) or Disable
44 Default Calling Number	Enabled - the system will send the default Calling Number to the PSTN when stations make ISDN calls in the local node. Disable -the system will not send the default Callling number to the PSTN on ISDN calls in the local node. Possible values: Enable or Disable (default)
45 DSS Ringing Indication	Select whether DSS LEDs should flash red or not light when their respective Directory Numbers are ringing. Ringing - DSS LEDs flash red when their respective Directory Numbers are ringing. Idle - DSS LEDS are idle (not lit) when their respective Directory Numbers are ringing. Possible values: Ringing (default) or Idle

System Call Forward

Program Number(s): 500 and 504

Set up System Call Forward (SCF) parameters using the following programs.

1. Complete the "System Call Forward Record Sheets" on page D-6.
2. From the Program Menu, click System > System Call Forward. The System Call Forward Destination screen displays (shown right).
3. Enter Program 500 data.
4. Enter Program 504 data.
5. Click Submit.



500 System Call Forward Assignment

Prerequisite Program: *None*

This assignment is used to configure up to 32 system call forward patterns. Station DNs are assigned to these patterns in the station COS assignments.

Note The Administrator programs the condition of transfer by setting Call Type, Period and Telephone Status. Destinations 1 and 2 should be programmed after transfer conditions are set.

FIELD	DESCRIPTION
00 SCF Number	Select the SCF pattern number to configure. Possible values: 1~4 (CTX100), 1~10 (CTX670 Basic), 1~32 (CTX670 Exp.), (default = no value)
01 Call Type	Select the type of call that should forward in this pattern. Possible values: CO Loop or Grd, DID, Tie, Ring Transfer and Internal (default = no value)
02 Period	Select the system time period in which this SCF pattern should operate. Possible values: Day1, Day2 or Night (default = no value)
03 Telephone Status	Select the telephone DN status that should cause this SCF pattern to operate. Possible values: Busy, No Answer, Busy No Answer or DND (default = no value)
04 Destination 1	Select the first destination to which the call should forward. Possible values: Up to 32 digits (default = no value)
05 Destination 2	Select an alternate destination to which the call should forward. Possible values: Up to 32 digits (default = no value)

504 System Call Forward Operation Status

Prerequisite Program: *None*

This command assigns System Call Forward (SCF) Type for the pattern.

FIELD	DESCRIPTION
00 SCF Number	Select the SCF pattern number to configure. Possible values: 1~4 (CTX100), 1~10 (CTX670 Basic), 1~32 (CTX670 Exp.), (default = no value)
01 Telephone Status	Select the status or state in which the telephone should be for this system call forward pattern to activate. Possible values: No Data (default), Busy, No Answer, Busy No Answer or DND

System Call Forward Copy

The copy function enables you to selectively copy SCF destinations to any or all SCF segments and any or all SCF templates. It combines Program 500 and Program 504 on the same screen.

Note They were separate screens in previous versions of CTX WinAdmin.

1. Select System > System Call Forward > a SCF template (1-32) and then a Telephone Status (example "Busy No Answer"). The System Call Forward screen displays (shown above) showing the status of the first available call forwarding system.
2. Select the needed values from the drop-down menus for the System Call Forward and Telephone Status fields. These fields are required. As soon as the second field is selected, the full page displays for editing.

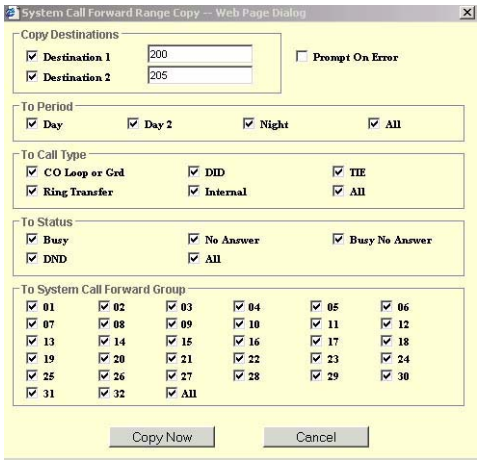
Note If it is not yet configured, the Telephone Status field indicates No Forwarding.

3. Select Call Type and Period by highlighting the desired line in the display.
4. Type the needed information into the Destination 1 and 2 fields. Destination 1 is always required, Destination 2 is optional.
5. Click Submit to send the data to the CTX.
6. Click Submit to send the destination assignments to the CTX

   ...or click Copy to display the Copy dialog box. You can click on Copy at any time to copy Destinations to any SCF template, Call type and period, including all SCF segments and templates.

Copy Dialog Box

➤ To copy SCF Destinations to any selected SCF assignment click Copy on the System Call Forward screen. The System Call Forward Range Copy screen displays (shown right).



➤ **To select the Destination(s) that should be copied**

1. You can remove a destination entry by removing the checkmark from it.
2. Select the appropriate Period, Call type, Status and SCF assignments to which the destination(s) should be copied.
3. Click Copy Now. Your entries are submitted to the CTX and the destination(s) are copied to all assignments that you selected.

Possible Errors

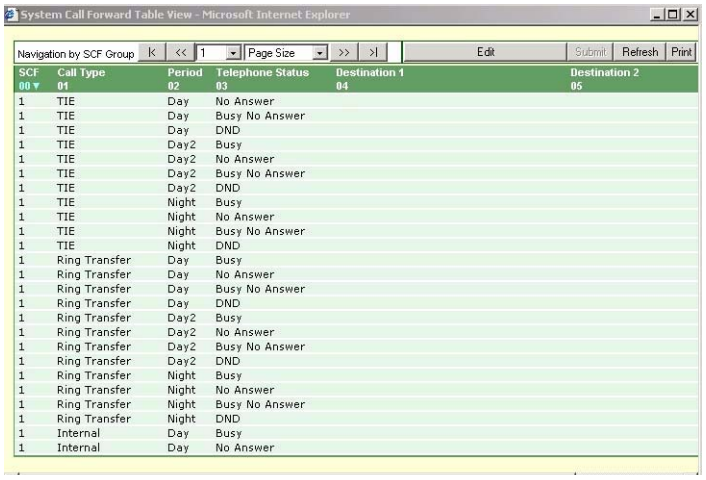
- If you attempt to remove Destination1 (only) when there is a Destination2 assigned.
- If you attempt to assign Destination2 when Destination1 is not assigned.

Notes

- If you check "Prompt on Error," the copy function stops if one of the above errors occurs, then you are given a choice to continue or abort. Continue skips the error and does not perform the copy.
- If you do not check "Prompt on Error," all errors, if any, are skipped and the copy is not executed.
- You can assign or remove both destinations at the same time without causing an error.

System Call Forward Table View

SCF Table View shows the entire set up of all available system call forward levels.



➤ **To access the SCF Table View**

➤ Select System > SCF Table View.

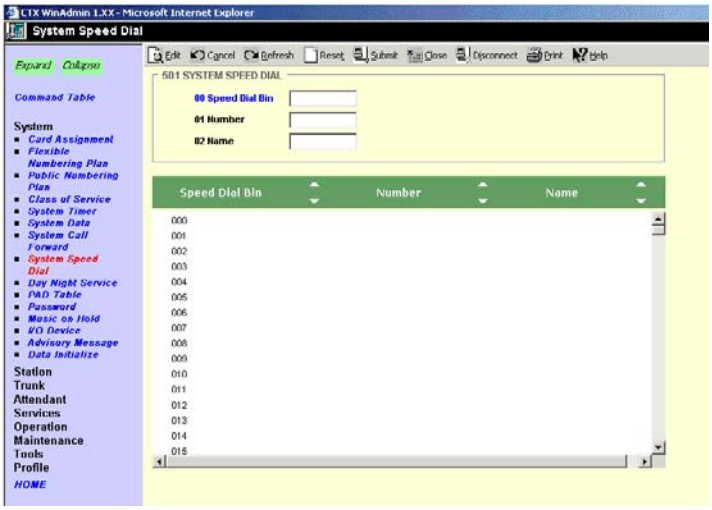
See "Table Views" on page 2-8 for table functionality.

501 System Speed Dial

Prerequisite Program: *None*

System Speed Dial consists of up to 800 pre-programmed numbers each containing up to 32 digits. If the number being entered exceeds the 32 digits, the next speed dial location will automatically be appended to create longer numbers. One other speed dial location can be nested within the number for dialing a common routine with the number (see "516 Station Speed Dial" on page 5-35 for more information about nesting).

1. Complete the "System Speed Dial Record Sheet" on page D-7.
2. From the Program Menu, click System > System Speed Dial. The System Speed Dial screen displays (shown right).
3. Enter Program 501 data.
4. Click Submit.



FIELD	DESCRIPTION
00 Speed Dial Bin	Enter the speed dial bin location. Possible values: 000~799 (default = no value)
01 Number	This is the dialable number stored in the speed dial bin. Possible values: Up to 32 digits, 0~9, *, # and Pauses (default = no value) To enter pauses enter Px, where x equals 1~9 (seconds), which is the length of the pause.
02 Name	This is the Name that appears on Telephone LCD dial directories. Possible values: Up to 8 ASCII characters (default = no value)

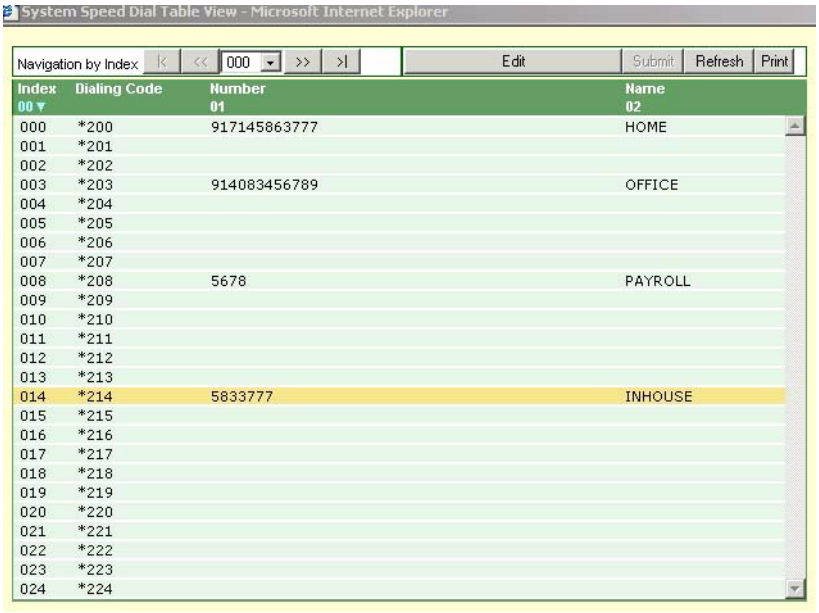
System Speed Dial Table View

System Speed Dial Table View shows the entire set up for all speed dial numbers.

➤ **To access the System Speed Dial Table View**

➤ Select System > System Speed Dial Table View.

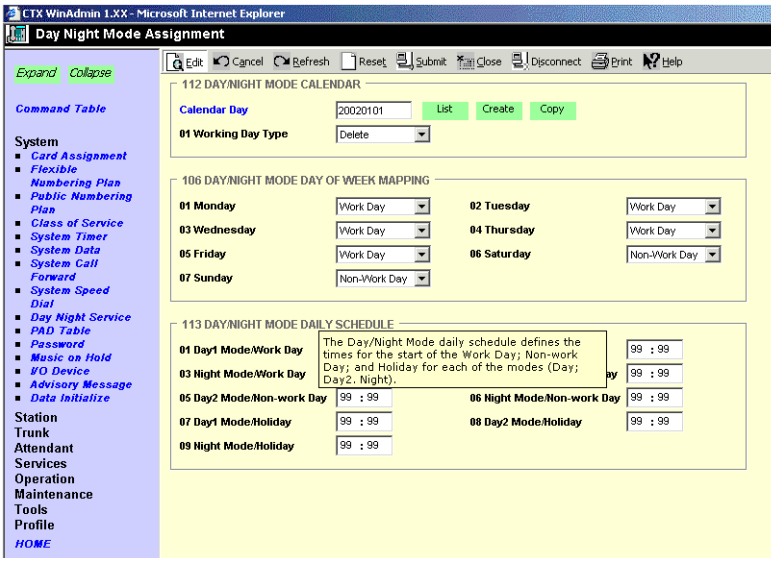
See "Table Views" on page 2-8 for table functionality.



Day Night Service

Program Number(s): 112, 106 and 113

The programs that follow are used to set up Day and Night modes in Strata CTX.



1. Complete the "Day/Night Mode Record Sheet" on page D-8.
2. From the Program Menu click System > Day Night Services. The Day Night Mode Assignment screen displays (shown right).
3. Enter the Calendar Day (YYYYMMDD) to assign a Working Day Type schedule

   ...or click on one of the following buttons.

   - List – View a summary list of programmed Calendar days.
   - Create – Assign a new Calendar Day with custom settings.
   - Copy – Copies the currently viewed record to another record(s).
4. Enter remaining Program 112 data.
5. Enter Program 106 data.
6. Enter Program 113 data.
7. Click Submit.

112 Day/Night Mode Calendar

Prerequisite Program: *106 on page 4-23*

This program enables you to assign Working Day Types for up to 128 unique Calendar Days. These settings override the default system schedules in Strata CTX to enable Day/Night scheduling for unique circumstances.

FIELD	DESCRIPTION
Tenant Number	Select the Tenant number for which the daily schedules will be configured. (This feature is available with CTX R2.2 or higher and CTX WinAdmin R2.2G.0 and higher.) Possible values:1~8.
00 Calendar Day	Enter the Calendar Day for which to assign a Working Day Type schedule. Possible values: YYYY = Year, MM = Month, DD = Day (default = no value)
01 Working Day Type	Select the Working Day Type. Possible values: Delete (default), Work Day, Non-Work Day or Holiday

106 Day/Night Mode "Type of Day" Mapping Table Assignment

Prerequisite Program: *113 on page 4-24*

The Day of the Week schedule defines each day as the type of day the schedule shall follow. These types of days are called Work Day, Non-work Day, and Holiday. Each day of the week can be classified.

FIELD	DESCRIPTION
Tenant Number	Select the Tenant number for which the daily schedules will be configured. (This feature is available with CTX R2.2 or higher and CTX WinAdmin R2.2G.0 and higher.) Possible values:1~8.
01 Monday **02 Tuesday** **03 Wednesday** **04 Thursday** **05 Friday**	Assign the type of day schedule that is to be used for each day of the week. Possible values: Work Day (default), Non-work Day or Holiday
06 Saturday **07 Sunday**	Assign the type of day schedule that is to be used for each day of the weekend. Possible values: Work Day, Non-work Day (default) or Holiday

113 Day/Night Mode Schedule per Tenant Assignment

Prerequisite Program: *None*

The Day/Night Mode daily schedule defines the times for the start of the Work Day, Non-work Day, and Holiday for each of the modes (Day, Day2. Night) per Tenant. Each "type of day" defined in "106 Day/ Night Mode "Type of Day" Mapping Table Assignment" on page 4-23 requires an assigned schedule. Complete "Day/Night Mode Record Sheet" on page D-8.

Note The start time for Day 1 mode equals the end time for Night mode.

FIELD	DESCRIPTION
Tenant Number	Select the Tenant number for which the daily schedules will be configured. (This feature is available with CTX R2.2 or higher and CTX WinAdmin R2.2G.0 and higher.). Possible values:1~8.
Work Day • **01 Day 1 Mode** • **02 Day2 Mode** • **03 Night Mode**	Enter the Day1, Day2 and Night Mode start time for Work Day day type. Possible values: hhmm; hh = hour (00~23, 99), mm = minutes (00~59, 99) (default = 9999) **Note** 9999 deletes or skip modes.
Non-Work Day • **04 Day 1 Mode** • **05 Day2 Mode** • **06 Night Mode**	Enter the Day1, Day2 and Night Mode start times for Non-Work Day day type. Possible values: hhmm; hh = hour (00~23, 99), mm = minutes (00~59, 99) (default = 9999) **Note** Enter 9999 deletes or skip modes.
Holiday • **07 Day 1 Mode** • **08 Day2 Mode** • **09 Night Mode**	Enter the Day1, Day2 and Night Mode start times for Holiday Day day type. Possible values: hhmm; hh = hour (00~23, 99), mm = minutes (00~59, 99) (default = 9999) **Note** 9999 deletes or skip modes.

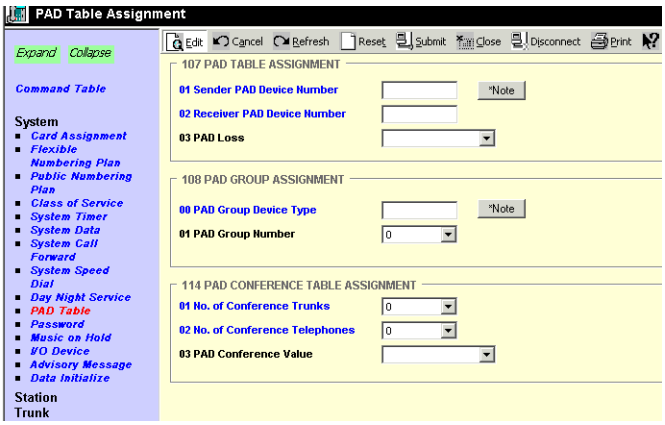
PAD Table

Program Number(s): 107, 108 and 114

Assign PAD groups, PAD tables and PAD conference tables using these programs.

1. From the Program Menu click System > PAD Table. The PAD Table Assignment screen displays (shown right).
2. Enter Program 107 data.
3. Enter Program 108 data.
4. Enter Program 114 data.
5. Click Submit.

Note Clicking **Note* displays Table 4-2 for Program 107 and Table 4-3 for Program 108.



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107 PAD Table Assignment

Prerequisite Program: *None*

Assigns additional Sender and Receiver PAD values to PAD groups in the PAD table.

FIELD	DESCRIPTION
01 Sender PAD Device Number	Enter Sender PAD device or group number. See Table 4-2 or use drop-down menu. Possible values: Up to 3 digits. (default = no value.) 1~10 (PAD device number) 101~106 (CTX100 - PAD group number) 101~110 (CTX670 - PAD group number) 101~132 (CTX670 Expanded - PAD group number)
02 Receiver PAD Device Number	Enter Receiver PAD device or group number. See Table 4-2 or use drop-down menu. Possible values: Up to 3 digits. (default = no value.) 1~10 (PAD device number) 101~106 (CTX100 - PAD group number) 101~110 (CTX670 - PAD group number) 101~132 (CTX670 Expanded - PAD group number)
03 PAD Loss	Enter PAD Value (see Table 4-2 or use the drop-down menu). The value shown represents the net effect. **Note** To PAD is to insert loss; therefore, “negative loss” equals net gain. Possible values: 1 = 6 dB Net Gain 2 = 3dB Net Gain 3 = 0dB 4 = 3dB Net Loss 5 = 6dB Net Loss 6 = 9dB Net Loss 7 = 12dB Net Loss 8 = 15dB Net Loss (default = no value)

Program 107 PAD Table Example

If the Sender is an analog telephone (PAD device number 1) and the receiver is a T1 trunk (PAD device number 4), then the PAD value is 6. (6 = 9dB Net Loss).

PAD group numbers are assigned in Program 108 PAD Group Assignment.

Table 4-2 Program 107 PAD Table

		PAD Device or Group Number of Receiver (Listener)														
		Analog Telephone	DKT	Analog Trunk	T1 Trunk	ISDN Station	ISDN Trunk	CONF Bridge	Music Source	Ext. Paging	IPT	PAD Group 1	PAD Group 2	PAD Group 3	:	PAD Group 123
PAD Device No. of Sender (Speaker)		1	2	3	4	5	6	7	8	9	10	101	102	103	:	132
1	Analog Telephone	0	0	0	6	6	6	X[1]	-	0	0	0	0			
2	DKT	0	0	0	6	6	6	0	-	0	0	0	0			
3	Analog Trunk	0	0	6	6	6	6	X[1]	-	6	0	0	0			
4	T1 Trunk	6	6	6	0	0	0	0	-	6	3	0	0			
5	ISDN Station	6	6	6	0	0	0	0	-	6	3	0	0			
6	ISDN Trunk	6	6	6	0	0	0	0	-	6	3	0	0			
7	Conference Bridge	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	0	0	0			
8	Music Source	0	0	0	0	0	0	0	0	0	0	0	0			
9	Ext. Paging	0	0	6	6	6	6	0	0	0	0	0	0			
10	IPT	-6	0	-6	0	0	0	-6	-	-6	0	0	0			
101[2]	PAD Group 1 (IP QSIG only)[3]	0	0	-3	-3	-3	-3	-3	-3	-3	0	0	0			
102	PAD Group 2 (ISDN PRI QSIG only)	3	3	3	3	3	3	3	3	3	3	3	0			
103	PAD Group 3															
:	:															
132	PAD Group 32															

PAD values

1. “X” data set for PAD Conference Table Assignment.
2. These are recommended channel group PAD numbers, but they can be changed in Program 302 PRI and IP QSIG.
3. For IP QSIG only. The default values for PAD Group 1 is 0dB. dB is the value for attenuation level.

108 PAD Group Assignment

Prerequisite Program: *None*

You can enter up to 32 additional devices to the PAD table to deal with exceptions to the default table.

FIELD	DESCRIPTION
00 PAD Group Device Type	Enter the Device Type. Possible values: Up to 6 digits. See Table 4-3 for device type and number. x = Device Type y = Device number (1~5 digits) (default = no value)
01 PAD Group Number	Enter the PAD Group Number. Possible values: 0~6 (CTX100) 0~10 (CTX670 Basic) 0~32 (CTX670 Exp.) (default = 0)

Table 4-3 Program 108 PAD Group Device Type Examples

Device Name	Device Type (x)	Device Number (y)	Example
DKT, SLT, ISDN, IPT Station	1	0~99999 (PDN)	if DKT device = 200, value = 1200.
ISDN or IP QSIG Channel Group	2	1~128 (Channel Group No. per Prog. 302)	if Channel Group # = 10, value = 210.
Analog Trunk, T1 Trunk	3	1~264 (Trunk Number)	if Trunk # = 120, value = 3120.
Conference Bridge	4	none (Conference Bridge is only one)	value = 4.
Music Source	5	1~15 (Music Port)	if Music port = 8, value = 58.
External Paging Device	6	1~8 (Zone Relay Number)	if External Paging Device = 3, value = 63.

114 PAD Conference Assignment

This program enables you to assign PAD values for combinations of analog trunks and telephones in conference.

FIELD	DESCRIPTION
01 PAD Conference Trunks	Enter the number of analog trunks using Table 4-4 below. Possible values: 0~6 (default = 0)
02 PAD Conference Telephone	Enter the number of analog telephones. See Table 4-4 below. Possible values: 0~8 (default = 0)
03 PAD Conference Value	Enter the desired PAD Value for the combination of analog trunks and telephones specified in *PAD Conference Trunks* and *Telephones* above. The value shown shows the net effect. **Note** To pad is to insert loss; therefore, “negative loss” equals net gain. Possible values: 1 = 6 dB Net Gain 2 = 3dB Net Gain 3 = 0dB 4 = 3dB Net Loss 5 = 6dB Net Loss 6 = 9dB Net Loss 7 = 12dB Net Los 8 = 15dB Net Loss (default = no value).

Table 4-4 Program 114 PAD Conference Table

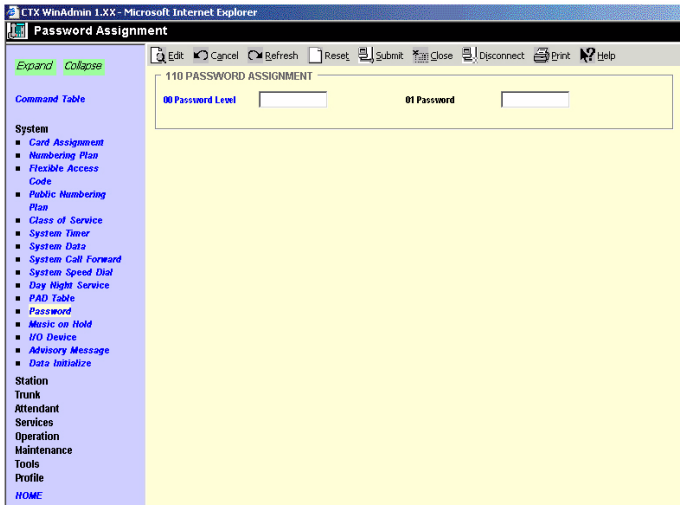
		Number of Analog Telephones								
		0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Number of Analog Trunks	**0**	0	0	0	0	0	3	3	6	6
	1	0	0	0	0	3	3	3	6	
	2	3	3	3	3	3	6	6		
	3	6	6	6	6	6	9			
	4	9	9	9	9	9				
	5	9	9	9	9					
	6	9	9	9						

110 Password

Prerequisite Program: *None*

This command assigns the password. The system has two passwords levels for. Logging into the system with the Level 1 password enables the user to administer all system programs while the level 2 password provides restricted program administration.

1. From the Program Menu click System > Password.
2. Enter *00 Password Level.*
3. Enter *01 Password.*
4. Click Submit.



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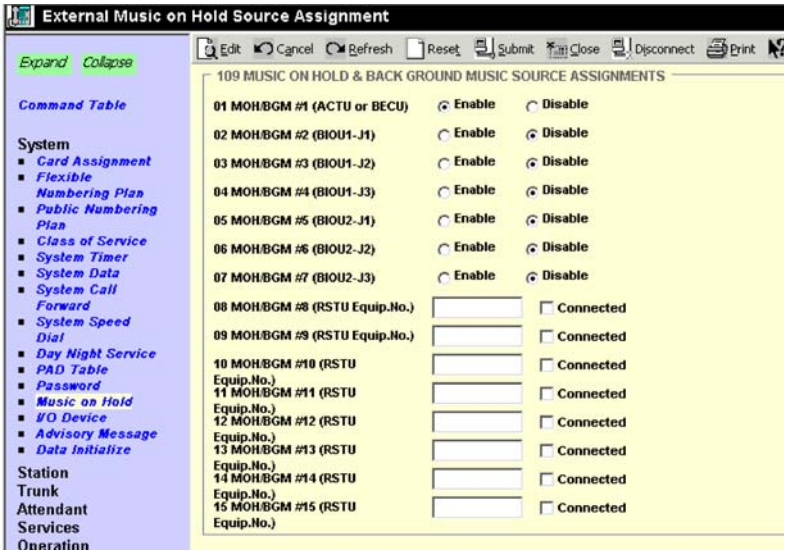
FIELD	DESCRIPTION
00 Password Level	Enter the digit 1 or 2 for the password as follows: Possible values: Enter **1** to set the unrestricted administration password. Enter **2** to set a restricted administration password. Level 2 users can administer all programs but are restricted from initializing the CTX and from updating the CTX software (default = no value).
01 Password	Enter the desired password. **Note** Only one password can be set for each level. Possible values: Up to 16 ASCII character (default = no value)

109 Music on Hold

Prerequisite Program: *None*

This command assigns external Music on Hold (MOH) and Background Music (BGM) sources.

1. From the Program Menu click System > Music on Hold. The External Music on Hold Source Assignment screen displays (shown right).
2. For fields 01~07, click in the adjacent radio button to activate MOH/BGM.
3. For fields 08~15, enter the equipment location identifier and check the Connected box to activate.
4. Click Submit.



FIELD	DESCRIPTION
MOH/BGM #1 (BECU) **MOH/BGM #2 (BIOU1-J1)** **MOH/BGM #3 (BIOU1-J2)** **MOH/BGM #4 (BIOU1-J3)** **MOH/BGM #5 (BIOU2-J1)** **MOH/BGM #6 (BIOU2-J2)** **MOH/BGM #7 (BIOU2-J3)**	For MOH/BGM #1~#7, click in the radio button to enable MOH/BGM for the specified PCB. Possible values: Enable (default) or Disable
MOH/BGM #8 (RSTU) **MOH/BGM #9 (RSTU)** **MOH/BGM #10 (RSTU)** **MOH/BGM #11 (RSTU)** **MOH/BGM #12 (RSTU)** **MOH/BGM #13 (RSTU)** **MOH/BGM #14 (RSTU)** **MOH/BGM #15 (RSTU)**	Enter the RSTU equipment number to which MOH/BGM source #8 or #9~#15 are connected. Enter data as xxyyzz: Example: If the MOH/BGM source should be a assigned to an RSTU in cabinet 5, slot 2, circuit 3; enter 050203. A PDN can not be assigned to an RSTU equipment number if it is to be a MOH circuit. If a PDN is assigned to the circuit that will connect to a MOH/BGM source, you must first delete it using PRG201 Cabinet numbers: CTX100: Select 01 for Base and Expansion cabinet. CTX670: Select 01 for Base and 02~07 respectively for each Expansion cabinet. Slot numbers: CTX100: Select 01~04 for Base slots and 05~08 for Expansion slots. CTX670: Select 01~08 for Base slots and 01~10 for Expansion slots. **Notes** • A PDN can not be assigned to an RSTU equipment number if it is to be a MOH circuit. • If a PDN is assigned to an MOH/BGM circuit, you must first delete the PDN using PRG201

I/O Device

Program Number(s): 803, 801 and 804

These commands assign LAN devices, RS-232C devices and device relationships for I/O Logical Devices SMDR, SMDI, CTI and physical ports.

1. From the Program Menu click System > I/O Device. The Equipment Assignment screen displays (shown right).
2. Enter Program 803 data.



803 SMDR SMDI CTI Port Assignments

This program assigns one of the following:

- SMDR and Toshiba Proprietary Integration (TPI) to the logical device and BSIS, RS-232 port numbers.
- WinAdmin, ACD server, TPI and Attendant Console to BECU, Network Jack logical device and LAN port numbers.

FIELD	DESCRIPTION
00 Logical Device Number	Select the 3 digit logical device number for SMDR, SMDI, and LAN devices or Network application. See Table 4-5. Possible values: 100 = SMDR 200~208 = CTI LAN devices or PCs (default = no value) 300 = SMDI of TPI 400 = BLF (for CTX Attendant Console) 500 = DSS (for Telephone, DSS Console, and ADM DSS buttons) **Note** BLF and DSS are available only with CTX Release 1.3 or higher software and with CTX WinAdmin Release 1.3 or higher software.
01 Device Connection	1. Select RS-232 for SMDR or SMDI devices or PCs. These devices are connected to BSIS, RS-232 ports. 2. Select LAN for WinAdmin, ACD Server, TPI, and Attendant Console PC. These devices are connected to the BECU Network Jack directly or via a HUB or LAN. Possible values: None (default), LAN or RS-232

FIELD	DESCRIPTION
Device Port No.	Select the Device Port numbers (one port per device). Possible values: For a RS-232 connection: 1~4 (default = 1) For an LAN connection: 1~9 (default = 1) For BLF Networking: 11 For DSS Networking: 12 **Notes** • SMDR and SMDI devices can be assigned to any BSIS RS-232 Port. • BLF and DSS are available only with CTX Release 1.3 or higher software and with CTX WinAdmin Release 1.3 or higher software. • LAN devices and PCs can be assigned to logical Ports 1~9 according to the following logical device number assignments: LAN Port1 = device 200 LAN Port2 = device 201 LAN Port3 = device 202 LAN Port4 = device 203 LAN Port5 = device 204 LAN Port6 = device205 LAN Port7 = device206 LAN Port8 = device207

Table 4-5 Device Table

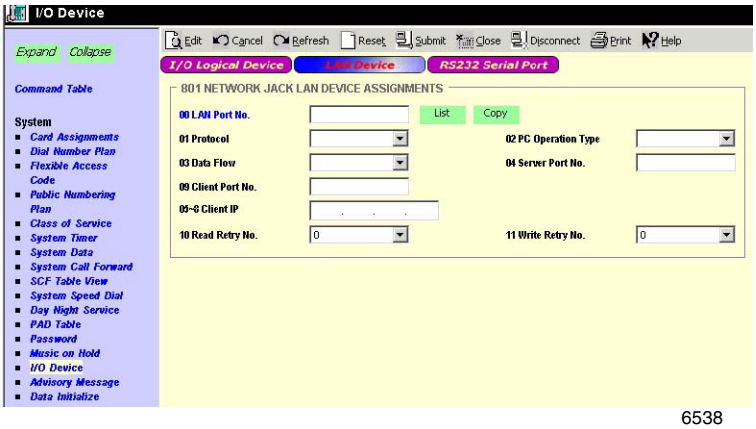
Logical Device	Logical Device Serial Number	Physical Device				Define I/O Logical Device Number
		LAN	PPP	RS-232C	Smart Media	
SMDR	0	-	-	OK	-	100
CTI	0	OK	-	-	-	200
	1	OK	-	-	-	201
	2	OK	-	-	-	202
	3	OK	-	-	-	203
	4	OK	-	-	-	204
	5	OK	-	-	-	205
	6	OK	-	-	-	206
	7	OK	-	-	-	207
	8	OK	-	-	-	208
SMDI	0	OK	-	OK	-	300
	1	OK	-	OK	-	301

801 Network Jack LAN Device Assignment

Prerequisite Program: *803 on page 4-31 and 804 on page 4-34.*

This screen assigns Strata CTX LAN parameters, enabling PC applications to connect to the BECU network jack.

1. From the Program Menu click System > I/O Device. The Equipment Assignment screen displays.
2. Click the LAN Device tab. 801 Network Jack LAN Device Assignments screen displays (shown right).
3. Enter Program 801 data.



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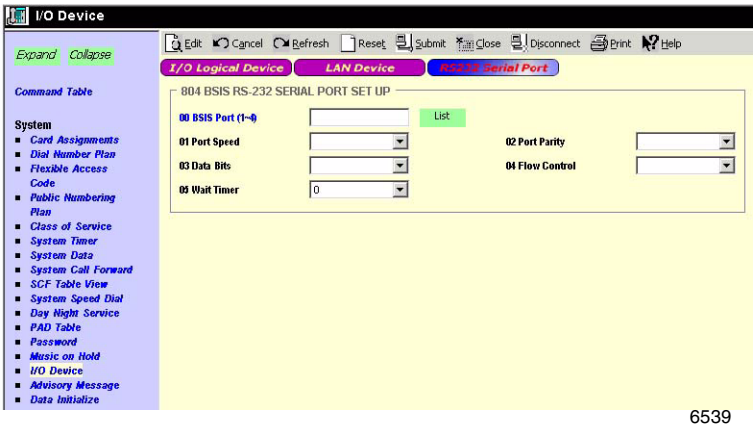
FIELD	DESCRIPTION
00 LAN Port Number	Enter the port number of the LAN device to be assigned. Refer to "803 SMDR SMDI CTI Port Assignments" on page 4-31. Possible values: **1~12 (default = no value**) **Notes** • Program the local port number for LCD Control of Voice Mail • Use the same Device Port No. (11) for Network BLF. • Use 10 for Network TPI • Use 12 for Network DSS • Network BLF and DSS are available only with CTX Release 1.3 or higher software and with CTX WinAdmin Release 1.3 or higher software.
01 Protocol	Select communication Protocol. Possible values: TCP (default) or UDP **Note** Select UDP for Network DSS.
02 PC Operation Type	Select the Operation Type. • If Server is selected, enter *04 Server Port Number*. • If Client is selected, enter the *05 Client IP Address*. Possible values: Server (default) or Client **Note** Select Client for TPI.
03 Data Flow	Select the data flow protocol for CTX and PC communications. **Note** If the logical device set up in "803 SMDR SMDI CTI Port Assignments" on page 4-31 is set to CTI, this field must be set to Asynchronous data flow. Possible values: Synchronization or Asynchronization (default = Asynchronization)
04 Server Port Number	Enter the Server Port Number and proceed to *07 Read Retry Number*. This field is required if Server was selected in *02 PC Operation Type* above. If not, leave this field blank and proceed to *05 Client IP Address*. Possible values: 0~65535 (default = 0) **Note** Use 6000 for Network BLF, 3000 for Network DSS and 5000 for Network TPI.
05~08 Client IP Address	Enter the Client LAN IP Address. This field is required if Client was selected in *02 PC Operation Type* above. Possible values: 0~255 for each octet (default = 0) **Note** Enter IP address of Stratagy iES32 or SES.

804 BSIS RS-232 Serial Port Setup

Prerequisite Program: *None*

Use this screen to setup the RS-232 serial ports on the BSIS PCB.

1. From the Program Menu click System > I/O Device. The Equipment Assignment screen displays.
2. Click the RS232 Serial Port tab. 804 BSIS RS232 Serial Port Set Up screen displays (shown right).
3. Enter Program 804 data.
4. Click Submit.



6539

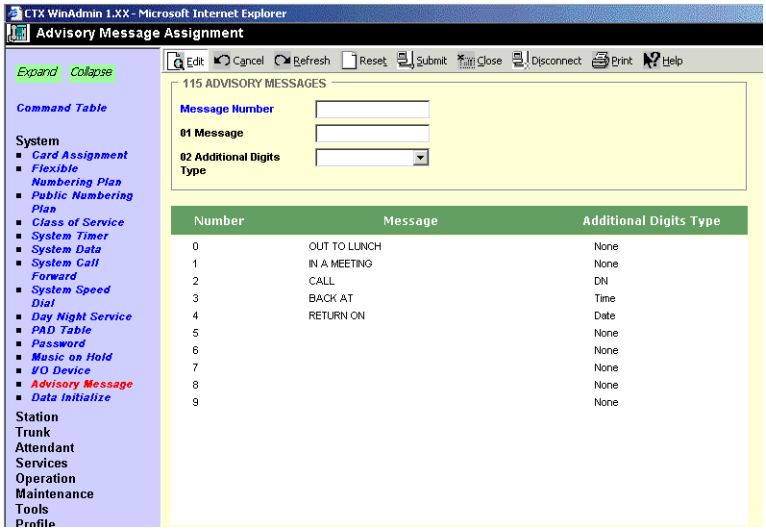
FIELD	DESCRIPTION
00 BSIS Port (1~4)	Enter the BSIS PCB port number. Possible values: 1~4 (default = no value)
01 Port Speed	Select the data speed for the BSIS port in bits per second (bps). Possible values: 300, 1200, 2400, 4800, 9600 (default), 19200, 38400 or 57600 **Note** The total combined maximum speed of BSIS ports cannot exceed 57,600 bps.
02 Port Parity	Select the parity error checking method used by the BSIS port. Possible values: None, Even or Odd (default)
03 Data Bits	Select Data Length. Possible values: 7 Bits (default) or 8 Bits
04 Flow Control	This setting indicates the type of flow control used between the BSIS port and the SMDI or SMDR device. To enable Strata CTX to buffer call records, set this field to Flow. Possible values: None (default) or Flow
05 Wait Timer	Select the maximum time to wait for connection. The Timer value can be one through 255 seconds. Select 0 to set to permanent waiting. Possible values: 0~255 (default = 30)

115 Advisory Messages

Prerequisite Program: *None*

This command specifies a set of messages that users may apply to their telephone to provide status information when others call your station. These messages can be customized to include a directory number, time or date as part of the message.

1. From the Program Menu click System > Advisory Messages. The Advisory Message Assignment screen displays (shown right).
2. Select the *Message Number*.
3. Enter the desired message in *01 Message*.
4. Select *02 Additional Digits Type*.
5. Click Submit.



FIELD	DESCRIPTION
Message Number	Select from 5 pre-programmed messages or 5 custom messages. See Table 4-6 below for details. Possible values: 0~4 = pre programmed messages, 5~9 = custom messages (default = 0)
01 Message	Enter the Advisory Message to be displayed on the receiving parties LCD. Possible values: Up to 16 ASCII characters (default = no value)
02 User Entered Variable	Select the type of Additional Digits that can be appended to complete the Advisory Message. The total message cannot exceed 16 characters total. Possible values: None (default), DN, Time or Date

Table 4-6 Advisory Message Default Code Table

#	Advisory Message	Type of Additional
0	OUT TO LUNCH	None
1	IN A MEETING	None
2	CALL	Directory Number
3	BACK AT	Time
4	RETURN ON	Date
5	(No Data)	None
6	(No Data)	None
7	(No Data)	None
8	(No Data)	None
9	(No Data)	None

116 Data Initialize

Prerequisite Program: *None*

This program is used to initialize the tables of selected programs in the Strata CTX system.

1. From the Program Menu click System > Data Initialize. The Data Initialize screen displays (shown right).
2. Select a Program to initialize from the *01 Command No.* dialog box.
3. Click Submit.

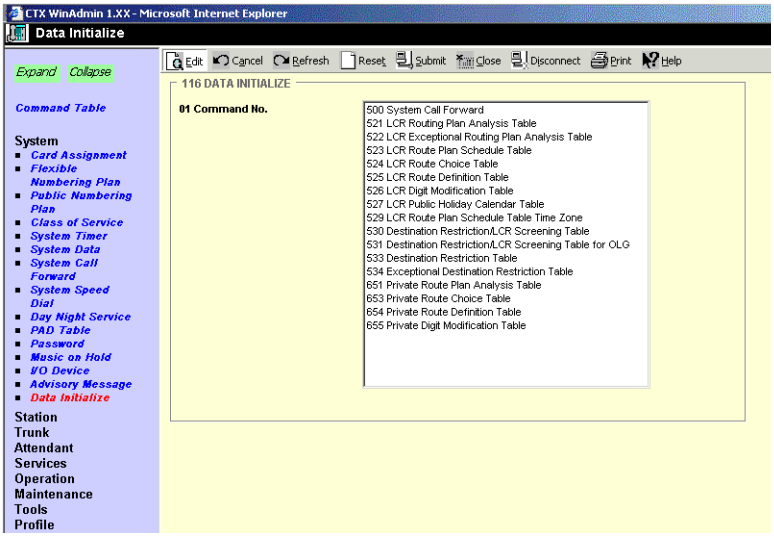


Table 4-7 Data Initialize Programs

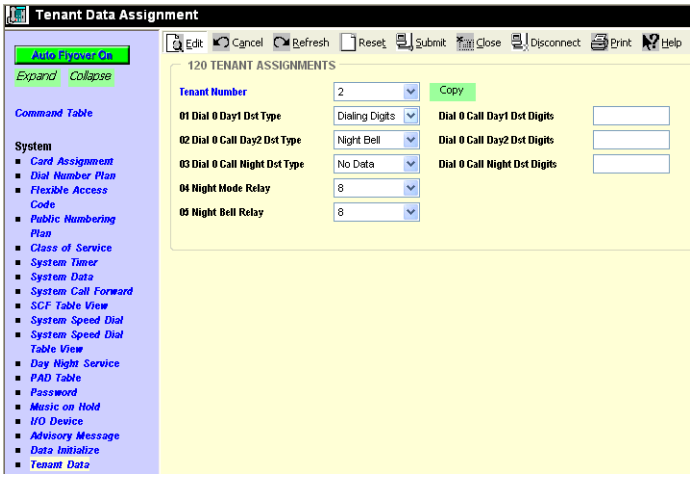
Program Numbers	Program Name	Page #
500	500 System Call Forward Assignment	4-18
520 **521** **522** **523** **524** **525** **526** **527** **529**	LCR Guide Page	9-17
530 **531** **533** **534** **651** **531** **533** **534**	Destination Restriction Guide Page	9-10
651	651 Private Routing Plan Analysis	9-56
653	653 Private Route Choice Table Assignment	9-57
654	654 Private Route Definition Table Assignment	9-57
655	655 Private Network Digit Modification Table Assignment	9-57

120 Tenant Data Assignment

Prerequisite Program: *None*

This program enables you to select an Attendant or Night Bell to ring when dialing 0 in Day 1, Day 2 or Day 3 mode for up to eight different Tenants. You can also assign the general purpose relay to the Night Bell in this program. (This feature is available with Strata CTX R2.2 or higher and CTX WinAdmin R2.2G0 or higher.)

1. From the Program Menu, click System > Tenant Data.
2. Enter the Tenant Number or use the pull-down to select a number.
3. Enter data.
4. Click Submit.



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FIELD	DESCRIPTION
00 Tenant Number	Select the Tenant number for which the daily schedules will be configured. Possible values: 1~8. No Data (Default)
01 Dial 0 Call Day 1 Dst Type **02 Dial 0 Call Day 2 Dst Type** **03 Dial 0 Call Night Dst Type**	Select to call an Attendant or select to ring the Night Bell when dialing the Tenant Attendant Access Code in the Day1, Day 2, or Day 3 mode for this Tenant. **Important!** *The Tenant Attendant Access Code must be assigned in Prg 102. If it should be "0," the Attendant Console Group Access Code, which is "0," must be deleted.* Possible values: No Data (default), Dialing Digits, Night Bell
01 Dial 0 Call Day 1 Dst Digits **02 Dial 0 Call Day 2 Dst Digits** **03 Dial 0 Call Night 3 Dst Digits**	Enter the PDN of the Attendant (BATI) to ring when dialing Tenant Attendant Access Code in Day, Day2, or Day 3 mode. Possible values: Up to 32 digits for each Day Mode selected (default = noData)
04 Night Mode Relay	Enter the General Purpose relay number assigned to the Night Bell. BIOU relays 1~8. This operation activates the relay continuously when the system is in the night mode. BIOU 1 = relay 1~4 BIOU 2 = relays 5~8 ACTU = relay 5
05 Night Bell Relay	Enter the General Purpose relay number assigned to the Night Bell. BIOU relays 1~8. This operation activates the relay when a CO line or DID rings when the system is in night mode. The CO or DID line must be assigned to ring the night bell. BIOU 1 = relay 1~4 BIOU 2 = relays 5~8 ACTU = relay 5

Station 5

This chapter provides Strata CTX station programming information for programmers using the CTX WinAdmin programming interface.

Assignment

Program Number(s): 200, 204, 214, 205, 213, 215, 208, 210, 216 and 502

The following programs assign station data.

Basic/200 Station Data

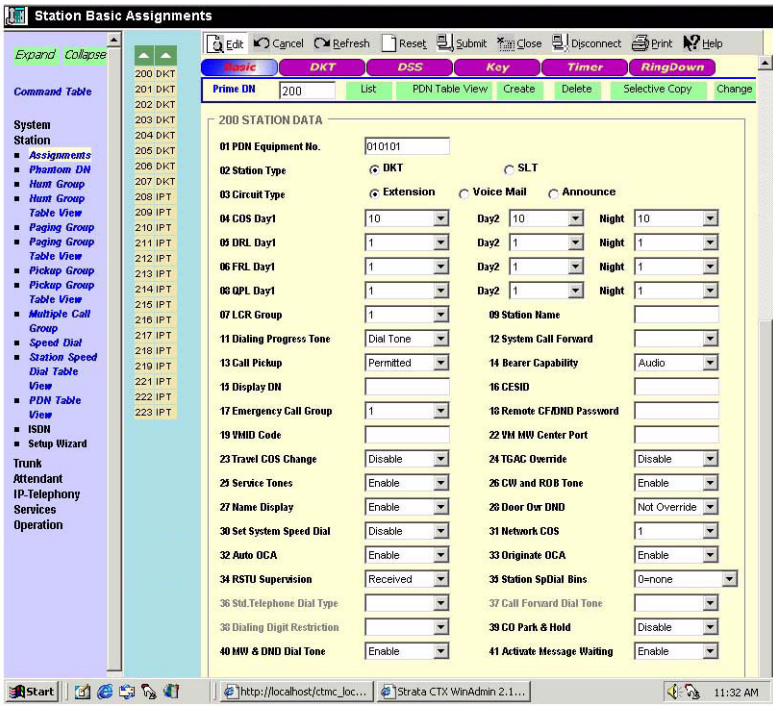
Prerequisite Program: *100 page 4-1*

This command assigns stations to the system.

1. Use the "Basic Station Record Sheets" on page D-11 to record your desired Station settings.
2. From the Program Menu, click Station > Assignment.
3. Click on the Basic tab (shown right).
4. Enter a DN number in the *Primary DN* field

   ...or click one of the following buttons:

   - List – view a summary list of programmed DNs.
   - Extended List – view a detailed list of programmed DNs.
   - Create – Assign a new DN with custom settings by entering a DN value. Press OK, assign the PDN Equipment No. and click Submit.
   - Selective Copy – Enter a DN in the *Primary DN* field and click Selective Copy to make a new DN assignment with settings copied from the DN entered in the *Primary DN* field.
   - Delete – Enter a Primary DN or a range of Primary DNs to delete and click OK.



- Change DN – Enter a DN in the *Primary DN* field and click Change DN. Enter the new DN assignment and click OK.

5. Setup the DN by adding values to the remaining fields.
6. Click Submit.

FIELD	DESCRIPTION
01 PDN Equipment No.	Enter the PDN equipment number (xxyyzz). This is the cabinet, slot, and circuit number of the ADKU, BDKU/BDKS, PDKU, or RSTU interface PCB to which the the PDN is, or should be assigned. Example: If the PDN should be a assigned to a BDKU in cabinet 5, slot 2, circuit 3; enter 050203. CTX28 Equipment Numbers: DKT 1~8 = 0101(01~08); SLT 1 & 2 = 0104 (01~02); DKT 9~16 = 0107 (01~08). Cabinet numbers: CTX100: Select 01 for Base and Expansion cabinet. CTX670: Select 01 for Base and 02~07 respectively for each Expansion cabinet. Slot numbers: CTX100: Select 01~04 for Base slots and 05~08 for Expansion slots. CTX670: Select 01~08 for Base slots and 01~10 for Expansion slots.
02 Station Type	Select Station Type. Possible values: DKT (default) or SLT
03 Circuit Type	Select Extension or Assign Voice Mail attributes to analog circuits Possible values: Extension (default) or Voice Mail • Extension – Should be assigned to PDNs that are associated with Digital or Standard telephones. • Voice Mail – Should be assigned to PDNs associated with Voice Mail circuits. • Announce – Not used in the U.S.A. or Canada. (This feature is available with CTX R2.2 or higher and CTX WinAdmin R2.2G.0 and higher.)
04 COS Day1 • **Day2** • **Night**	Assign COS to Day1, Day 2 and Night modes. Possible values: 1~32 (default = 1)
05 DRL Day1 • **Day2** • **Night**	DRL for DAY1, Day 2 and Night Possible values: 1~16 (default = 1)
06 FRL Day1 • **Day2** • **Night**	Assign FRL to Day1, Day 2 and Night modes. The higher the FRL number, the more trunk access is available. Possible values: 1~16 (default = 1)
07 LCR Group	Station LCR Group Number Possible values: 1~16 (default = 1)

FIELD	DESCRIPTION
08 QPL Day1 • **Day2** • **Night**	QPL for Day1, Day 2 and Night modes. Possible values: 1~16 (default = 1)
09 Station Name	Enter Station Name to be displayed on this PDNs LCD. Possible values: Max. 8 characters for CTXR1.0~2.20. Max. 16 chars. for R2.21 and higher. (default = no value)
10 Call Waiting Tone	Select desired waiting tone for Offhook Campon. Possible values: None (default), Singular or Continuity
11 Dialing Progress Tone	Select type of Tone to hear after dialing LCR access code Possible values: Dial Tone (default), Entry Tone or Silence
12 System Call Forward.	Select the System Call Forward Group number. Possible values: 0~4 (CTX100), 0~10 (CTX670 Basic), 0~32 (CTX670 Exp.), (default = 0)
13 Call Pickup	The station privilege to activate Call Pickup. Possible values: Permitted (default), Group Only or Not Permitted
14 Bearer Capability	ISDN Bearer Capability the PSTN is expecting from non ISDN stations. 3.1kHzAudio (data and speech) or Speech. **Notes** • Standard telephone type data devices (modems, G3-Fax signals) must be set for 3.1KHz audio on ISDN lines. • The IP-QSIG network does not support 3.1KHz (data and speech), all standard telephone equipment must be set to 'Speech' if making calls over IP-QSIGs. Possible values: 3.1kHzAudio (default) or Speech
15 Display DN	Enter the number to be displayed on the calling telephone that rings this PDN number. This number is will be overridden by Program 209, 04 (if assigned) and if the PDN is in a hunt group. Possible values: Up to 5 ASCII characters (default = no value)
16 Caller Emergency Service Identification (CESID)	Enter the E911 Calling Party Information identifier for this station (CESID). Possible values: Up to 16 digits (default = no value), however CESID should be 10 digits or less for Centralized Automatic Message Accounting (CAMA) E911 trunk. PRI E911 allows upto 16 digits.
17 Emergency Call Group	Enter the Emergency call group that this station belongs to. Possible values: 1~8 (default = 1)
18 Remote CF/DND Password	Enter password to set or cancel DND or station Call Forward from another CTX station; or, for Call Forward only, from a external DSIA line. Possible values: Up to 4 ASCII characters (default = no value) **Note** DND can not be set/canceled remotely from a DISA line.

FIELD	DESCRIPTION
19 VMID Code SMDI	Enter the voice mail box number that should answer calls when this PDN calls voice mail; or, when this PDN is called and then forwards to voice mail (this number is prefixed by codes in Program 579, 11~16) Possible values: Digits 0~9, * and #, up to 10 characters (default = no value). **Note** This VMID code is sent to the voice mail device in SMDI packets or DTMF tones on direct calls to voice mail from the PDN; and on calls to the PDN that forward to voice mail. See Program 580 for SMDI or DTMF choice.
22 MW to VM Port	Enter the Message Waiting center DN. For Remote CTXs, assign message center including Node IP for TPI integration. This parameter enables Call Record function too. Possible values: Up to 7 ASCII characters (default = no value)
23 Travelling COS Change	Enable this station with the privilege to change the Travelling COS Override Code. Possible values: Enable or Disable (default)
24 TGAC Override[1]	Enable Trunk Group Access Code (TGAC) override (for Attendant console) from this station. Possible values: Enable or Disable (default)
25 Service Tones	Disable Service Tone for Data Privacy. Possible values: Enable (default) or Disable **Note** Service tone such as Call Waiting should be disabled for modems, faxes, and similar devices.
26 CW and ROB Tone	Enable/Disable the station to receive Call Waiting (Campon) and Ring Over Busy Tone. Possible values: Enable (default) or Disable **Notes** • CW tone is always two beeps. • ROB tone can be two beeps or continuous as set in PRG 204, 27.
27 Name Display	Enable this station with the privilege to put the user name in the Directory Assistance display of a large LCD. Possible values: Enable (default) or Disable
28 Door Ovr DND	Enable DND override by door phone. Possible values: Override or Do not Override (default)
30 Chg Sys Speed	Enable this parameter to program System Speed Dial. Possible values: Enable or Disable (default)
31 Network COS	Select Network COS value. Possible values: 1~32 (default = 1)
32 Auto OCA	OCA occurs automatically when making a call to a busy station that allows OCA calls to be received. Possible values: Enable or Disable (default = Enable)
33 Originate OCA	Enable this station with the privilege to make OCA calls to other stations. Possible values: Enable (default) or Disable

FIELD	DESCRIPTION
34 RSTU Supervision	This enables the auto disconnect Tandem timer in Program 104, FB06 for these types of Connections. Possible values: Received (default) or Not Received Possible values: Devices connected to RSTU circuits that do not automatically hang up, and connect to CO lines that do not provide disconnect supervision, should be set with “Not Received.”
35 Station SpDial Bins	The number of station speed dial bins allocated to this station: Possible values: 0~100 (default = 0)
36 Set SLT Dial Type	Choose DP (Old style - dial pulse dialling) or DTMF (Newer type - tone dialling).
37 Set Call Forward Dial Tone	When the handset is picked up, the user will hear stutter dial tone if a call forward is enabled.
38 Dialling Digit Restriction	After the Extension has made a call it can be prevented from dialling any subsequent digits.
39 CO Park & Hold	You can enable or disable CO Park and Hold. **Note** This feature is available for CTX Software version R1.03 or higher. Enabled: When this station parks a line call, CO or GCO buttons of the parked line that appear on other stations will be on hold. This will allow the other stations to press the CO or GCO button to pickup the parked call. Disabled: When this station parks a line call, CO or GCO buttons of the parked line that appear on other stations will appear busy. This will prevent the other stations to press the CO or GCO button to pickup the parked call. Possible values: Enable or Disable (default)
40 MW & DND Dial Tone	Enable: When this station goes off hook, the station will receive stuttered dial tone when it has a message waiting indication; and the station will receive a busy tone burst before dial tone when in the DND mode. Disable: This station will receive normal dial tone when it has a message waiting or when it is in the DND mode.
41 Activate Message Waiting	This feature is available only with CTX Release 1.3 or higher software and with CTX WinAdmin Release 1.3 or higher software. Enable: This station is allowed to activate station-to-station message waiting on other stations by dialing the other station number plus 7, 8 or 9; or, by pressing the Msg key. This feature is available with Strata CTX R1.3 software. Disable: This station cannot activate station-to-station message waiting on other stations by dialing the station number plus 7, 8 or 9. **Notes** • When disabled, digital telephones are still allowed to activate station-to-station message waiting by pressing the Msg button. • This parameter does not apply to Voice Mail ports to use the special Message Waiting access codes.
42 Tenant Number	Enter the Tenant number to which this PDN should be assigned. (This feature is available with CTX R2.2 or higher and CTX WinAdmin R2.2G.0 and higher.) Possible values: 1~8.

FIELD	DESCRIPTION
43 Hook-Switch Recall	Whether to start Recall when a station does On Hook in C-Hold. Possible values: Enable: Activate Recall Disable: Not activate Recall
44 Auto-Campon to PDN	This feature allows automatic camp-on to a PDN, even when it is busy and called by a CO line. If Automatic Camp-on to PDN is enabled, a call to a PDN can camp on even if the CO line group has auto-camp on disabled in Program 304-17. Possible values: Enable: Allows auto camp-on to a PDN, even when it is busy and called by a CO line. Disable: Does not allow auto camp-on to a PDN.
45 LCR PDN Code	Enter the number of digits that determine when to send the LCR PDN code. The PDN code is registered in the LCR Modified Digits table. Possible values: 3 or 4 digits.

Station PDN Selective Copy

This screen provides you the option of selecting either all or some of the parameters to be copied to the destination PDNs.

Using this screen you can do any of the following functions:

- Copy to multiple destination PDNs.
- Check All to highlight all the parameters to be copied.

  ...or select individual/multiple parameter(s) to be copied.



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1. Select Station > Assignments. Enter the Primary DN.
2. Click Submit > Copy. The Selective Copy screen displays (shown right).
3. Check Highlight All to highlight all the parameters to be copied.
   ...or select individual/multiple parameter(s) to be copied.

Note If you want to copy almost all items and leave out a few, you can check Highlight All and then click on the items that you don't want to copy to deselect them.

4. Click Copy Now to start the copying process.
5. When copy is complete, a dialog box displays that reads "End of Copy!"

Note You can return to the previous page and/or reselect copy to different destination PDNs by clicking Back.

Station Extended List

The Extended List displays the following parameters that are set in Program 200—Station Equipment Number, DKT/SLT, Extension/Voice Mail, Primary DN, User Name, PDN VMID, COS, DRL, FRL, LCR Group, System Call Forward Template, Network COS and the quantity of Station Speed Dial bins.

➤ **To access the extended list**

➤ Select Station > Assignments > Extended List. The Extended List spreadsheet displays after it downloads from the CTX (sample shown below). This takes some time depending on the CTX connection speed and database size.


Station XList -- Web Page Dialog

Click on a column header to sort by that column. Click again to reverse order. Click on a line to select.

Refresh | Print

Equipment Number 01	Type 02	VM 03	PrimeDN 00	User Name 09	VMID 19	COS D1 04	COS D2 04	COS N 04	DRL D1 05	DRL D2 05	DRL N 05	FRL D1 06	FRL D2 06	FRL N 06	LCR Grp 07	SYS CF 12	NET COS 31	Sta. Spd 35
010101	DKT	Extension	200	PAT	200	1	1	1	1	1	1	1	1	1	1	0	1	0
010102	DKT	Extension	201	JOHN	201	1	1	1	1	1	1	1	1	1	1	0	1	0
010103	DKT	Extension	202		202	1	1	1	1	1	1	1	1	1	1	0	1	0
010104	DKT	Extension	203		203	1	1	1	1	1	1	1	1	1	1	0	1	0
010105	DKT	Extension	204		204	1	1	1	1	1	1	1	1	1	1	0	1	0
010106	DKT	Extension	205		205	1	1	1	1	1	1	1	1	1	1	0	1	0
010107	DKT	Extension	206		206	1	1	1	1	1	1	1	1	1	1	0	1	0
010108	DKT	Extension	207		207	1	1	1	1	1	1	1	1	1	1	0	1	0
010109	DKT	Extension	208		208	1	1	1	1	1	1	1	1	1	1	0	1	0
010110	DKT	Extension	209		209	1	1	1	1	1	1	1	1	1	1	0	1	0
010111	DKT	Extension	210		210	1	1	1	1	1	1	1	1	1	1	0	1	0
010112	DKT	Extension	211		211	1	1	1	1	1	1	1	1	1	1	0	1	0
010113	DKT	Extension	212		212	1	1	1	1	1	1	1	1	1	1	0	1	0
010114	DKT	Extension	213		213	1	1	1	1	1	1	1	1	1	1	0	1	0
010115	DKT	Extension	214		214	1	1	1	1	1	1	1	1	1	1	0	1	0
010116	DKT	Extension	215		215	1	1	1	1	1	1	1	1	1	1	0	1	0

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The screen may be kept up and moved around to use as a reference and can be printed. The Extended List spreadsheet can be sorted by all 19 columns and sorting can be toggled between Ascending and Descending order. The entire table can be printed using the Print button on the screen.

204 DKT Parameters

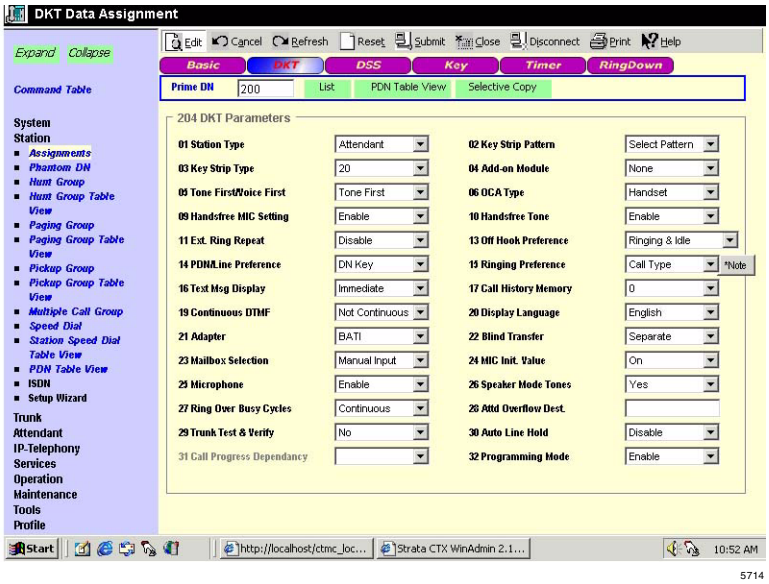
Prerequisite Program: *200 page 5-1*

This command is used to set up DKT digital telephones station parameters.

1. Use the "DKT Parameters Record Sheet" on page D-12 to record your desired DKT settings.
2. From the Program Menu, click Station > Assignment.
3. Click on the DKT tab (shown right).
4. Enter a DN number in the *Primary DN* field

   ...or click one of the following buttons:

   - List – view a summary list of programmed DKTs.
   - PDN Table View – view a detailed list of programmed PDNs.
   - Selective Copy – Enable you to copy some or all of the parameters to the destination PDNs.



5. Setup the DKT by adding values to the remaining fields.
6. Click Submit.

FIELD	DESCRIPTION
01 Station Type	Select the Station Type. When set to Attendant, the system can support four circuits. Possible values: Extension (default) or Attendant
02 Key Strip Pattern	This option allows you select a pre-defined keystrip pattern and submit it to the digital telephone. It does not display what pre-defined keystrip (if any) has been assigned to the telephone. Use the Key tab screen to view or edit telephone keystrip assignments. **CAUTION! Submitting a keystrip pattern will overwrite existing keys programmed on a telephone.** Default key strip patterns for digital telephones. The selected Pattern is applied to the 'Key Strip Type' parameter. None – applies PDN to button 01 and blank to all other buttons. Pattern 1 – applies PDN to button 01, plus line buttons and DND. Pattern 2 – applies PDN to button 01, plus line buttons, One-Touch buttons and DND. Pattern 3 – applies PDN to button 01 and blank to all other buttons. (DKT3014 uses only Pattern 1 or None). Possible values: Pattern 1, 2 or None (default)

FIELD	DESCRIPTION
03 Key Strip Type	Select the number of feature buttons to assign to this station. **Note** Although the scroll down menu enables you to choose any value from 1~24, valid values are 10, 14 and 20. Possible values: 1, 3, 7, 10, 14 or 20 (default) Applies 1, 3, 10, 14, or 20 button keystrip type to digital telephones: 1 and 3 button keystrips apply to DKT2001 and DKT3001| 7 button keystrips apply to DKT3007 and SoftIPT 10 button keystrips apply to DKT2010 and DKT30010 14 button keystrips apply to the Large LCD DKT3014 20 button keystrips apply to DKT2020 and DKT3020.
04 Add on Modules	Select the number of Add On Modules (ADM) assigned to this station. This field is required if you want to program ADM FBs in Program 213. See "Key" on page 5-16. Possible values: None (default), 1 unit, or 2 units
05 Tone First /Voice First	Set PDN to have Tone First or Voice First signaling when called. For each iES32 PDN, set to "Tone First", if set to Voice First iES32 will not answer. Possible values: Tone or Voice (default)
06 OCA Type	Select the OCA type. This field must be programmed with Auto OCA Originate below. Possible values: Handset (default) or Speaker
09 Handsfree MIC Setting	If you call a station configured for Voice First signalling, you can use this parameter to enable the called parties microphone from your DKT. Possible values: Enable (default) or Disable
10 Handsfree Tone	If you call a DKT configured for Voice First signalling, you can use this parameter to send a splash tone to the called party. Possible values: Enable (default) or Disable
11 Ext. Ring Repeat	Enable repetitive ringing for incoming CO / PBX / Centrex signals. Disabling this parameter defaults to standard CO ringing pattern (1 sec on / 3 sec Off). Possible values: Enable or Disable (default)

FIELD	DESCRIPTION
13 Off Hook Preference	Select Off Hook Preference. Possible values: Idle, Ringing, Prime, No Preference, Prime and Idle, Prime and Ringing or Ringing and Idle (default) When a digital telephone user goes off hook, presses the Spkr Button or dials a digit while the telephone is idle (Hot Dial Pad), the telephone will select an idle PDN or Line button, or answer an incoming call, according to the preferences set in this command. This command works in conjunction with the "14 PDN/Line preference" and "15 Call Answer Preference" programs. The possible values are described as follows: • Idle – The telephone will select and idle DN or Line button depending on the "14 PDN or Line preference" choice. In either case priority is always the lowest numbered button that is idle. The telephone will not answer ringing calls automatically. • Ringing – The telephone will answer a ringing call (any PDN, secondary DN, PhDN, or any Line type button) by call type or longest ringing button depending on the "15 Call Answer Preference" choice. The telephone will not automatically select a DN or Line button when going off hook to originate a call. • Primary DN – The telephone will automatically try to select the PDN button, if idle or ringing, no matter what the status is of other buttons on the telephone. • No Preference – The telephone will not select any button when the user goes off hook or presses the Spkr button. This selection will also disable the telephone's Hot Dial Pad feature. • Primary DN and Idle – The telephone will automatically try to select the PDN button, if idle or ringing. If the PDN is busy the telephone will select an idle Line button (14 PDN or Line preference - Line Preference) or another idle DN button (14 PDN or Line preference - PDN Preference). • Primary DN and Ringing – The telephone will automatically try to select the PDN button, if idle or ringing. If the PDN is busy the telephone will select a ringing Line button (14 PDN or Line preference - Line Preference) or a ringing DN button (14 PDN or Line preference - PDN Preference). • Ringing and Idle – The telephone will always answer any ringing call according to "15 Call Answer Preference" . If a call is not ringing it will select and idle Line button (14 PDN or Line preference - Line Preference) or idle DN button (14 PDN or Line preference - PDN Preference).
14 PDN/Line Preference	Offhook preference button Type. Possible values: CO Key or DN Key (default) • CO Line buttons - Line buttons (any type CO, Pooled or Group CO line button) have priority over DN buttons with "13 Off Hook Preference" choices. The lowest numbered line button on the telephone has priority over other line buttons for idle selection. • Primary DN button - DN buttons (any type PDN, Secondary DN or PhDN button) have priority over Line buttons with "13 Off Hook Preference" choices. The PDN button has first priority for idle selection, the lowest numbered DN button on the telephone has priority over other DN buttons for idle selection if the PDN button is busy. **Note** Off hook ringing selections are also based on "15 Call Answer Preference" choices.

FIELD	DESCRIPTION
15 Ringing Preference	Ringing call answer preference. Possible values: Longest or Call Type (default) • Longest Ringing - any call type - Calls are answered in order of the longest ringing line no matter what type of call (FIFO). • Longest Ringing - by call type priority - Call Type priority is applied to the longest ringing button. Call Type Priorities are fixed is software as shown below: • Emergency Calls • Hands Free Calls (after it is switched to ringing by the caller). • ACD calls • Recalls (Hold recall, Automatic call back, ABR, etc.) • External Calls (DID, DIT DISA line calls etc.) • Internal Calls (station, Attendant, Tie line, door phone, etc.)
16 Text Message Display	Select whether to display an LCD text message. Immediate displays the message. Not immediate does not display the message. Possible values: Immediate (default) or Not Immediate
17 Call History Memory	Enter the number of calls to be stored in memory for this station. Possible values: 0~100 (default = 0)
18 DTMF Back Tone	Enables audible DTMF when dialing from a DKT to a trunk or Voice Mail port. Padded dialing mutes the volume level to the caller not the called trunk or VM device. Possible values: Padded, DTMF Tone (default) or No Tone
19 Continuous DTMF	Enable / Disable Continuous DTMF for DKT2000 and DTK3000 series telephones. Enabled allows the telephone to send DTMF tones to the far end continuously as long as the key on the dial pad is held down. **Notes** • For each iES32 PDN, set to 'Not Continuous', if set to 'Continuous', outdial notification to pagers and calls to AMIS nodes will not function properly. • DKT1000 series telephones do not support continuous DTMF. DKT1000 series telephones must be set to 'Not Continuous' or they will misdial. Possible values: Continuous (default) or Not Continuous
20 Display Language	Select the LCD Display Language. Possible values: English (default), British English or French
21 Adapter	Select the Adapter Type (Desktop OAI or Attendant Console). • BPCI – for USB interface. • BATI – for PC Attendant Console Interface. Possible values: None (default), BPCI or BATI
22 Blind Transfer	Set Blind Transfer Action (Attendant Type Only). Possible values: Leave or Separate (default)

FIELD	DESCRIPTION
23 Mail Box Selection	Select the method to enter the destination Mailbox for Call Recording. If set to "Auto" CTX uses the VM ID of the station initiating the record function. **Notes** • The DN assigned as the MSG center in PROG 200 is used to call the VM port or Hunt group (PROG 200 FK 22). • When set to "Auto" the VM-ID of the station initiating the record function is sent to Stratagy ES as the destination mailbox. • When set to "Manual Input" the user may enter any valid Mailbox followed by the "#" sign. If the user Presses "#" without additional data the CTX will send the VMID of the originating station. Possible values: Auto or Manual (default)
24 MIC Init. Value	Turn on the microphone automatically when making a speaker phone call. **Note** The microphone must be enabled. Possible values: On (default) or Off
25 Microphone	Enable microphone. Possible values: Enable (default) or Disable
26 Speaker Mode Tones	Enable telephone to receive Call Waiting (Camp-on) and Ring Over Busy Tone while on a speaker phone call. Possible values: Yes (default) or No
27 Ring Over Busy Cycles	Set ROB to ring two times or continuously. Possible values: Two Cycles or Continuous (default) **Note** See PRG200, 26 to enable ROB to be sent to individual telephones.
28 Attd Overflow Dest.	Select overflow destination for attendant. Possible values: Up to 32 ASCII characters (default = none)
29 Trunk Test and Verify	Allow Trunk Tests and Verification. Possible values: Yes or No (default)
30 Auto Line Hold	Enable Automatic Line Hold. This parameter allows a station to "line hop" from one call to another automatically by placing the first call on hold. Possible values: Enable or Disable (default)
31 Call Progress Dependency	Allows the telephone to be set to ring or not ring when busy on a call. If a telephone has multiple DNs (PDN + PhDNs), set this parameter to the Line Mode. Line Mode: Calls will ring the telephone when the user is talking on a line or DN button if the telephone has multiple DN or line buttons in a hunt configuration. If Call Forward Busy/No Answer is set, the telephone will Ring No Answer and then forward when a call is delivered to the telephone while the user is talking on a DN or CO line button. Terminal Mode: Callers will receive busy tone when any DN or CO line button on the telephone is in-use. If Call Forward Busy/No Answer is set on the telephone a call to the telephone will forward immediately when a call is delivered while the user is talking on any DN or CO line button. Possible values: Line Mode (default) or Terminal Mode

FIELD	DESCRIPTION
32 Programming Mode	Enable: Allows the telephone to enter the Programming Mode. Disable: Restricts the telephone from entering the Programming Mode. This parameter is available only with Strata CTX Release 2.0 MF017 and higher. **CAUTION! Since we added this parameter, you cannot downgrade to previous versions of CTX because we do not support downward compatibility of CTX database. If you attempt downgrading, the entire Program 204 will be lost. Toshiba recommends keeping the current database for emergency situations. We guarantee upward compatibility of the database, so you can upgrade the system without any problems.** Possible values: Enable (default) or Disable

Feature Button Patterns

The following tables show the various feature button patterns available for **FB02** above.

Table 5-1 20 Button (when FB03 value is 20)

	PATTERN1	PATTERN2	PATTERN3
FB01	Primary DN	Primary DN	Primary DN
FB02	CO 1	CO 1	No Data
FB03	CO 2	CO 2	No Data
FB04	CO 3	CO 3	No Data
FB05	CO 4	CO 4	No Data
FB06	CO 5	CO 5	No Data
FB07	CO 6	CO 6	No Data
FB08	CO 7	CO 7	No Data
FB09	CO 8	CO 8	No Data
FB10	CO 9	CO 9	No Data
FB11	CO 10	CO 10	No Data
FB12	CO 11	CO 11	No Data
FB13	CO 12	CO 12	No Data
FB14	CO 13	Single Touch Button	No Data
FB15	CO 14	Single Touch Button	No Data
FB16	CO 15	Single Touch Button	No Data
FB17	CO 16	Single Touch Button	No Data
FB18	CO 17	Single Touch Button	No Data
FB19	CO 18	Single Touch Button	No Data
FB20	Do Not Disturb	Do Not Disturb	No Data

Table 5-2 10 Button (when FB03 value is 10)

	PATTERN1	PATTERN2	PATTERN3
FB01	Primary DN	Primary DN	Primary DN
FB02	CO 1	CO 1	No Data
FB03	CO 2	CO 2	No Data
FB04	CO 3	CO 3	No Data
FB05	CO 4	CO 4	No Data
FB06	CO 5	Single Touch Button	No Data
FB07	CO 6	Single Touch Button	No Data
FB08	CO 7	Single Touch Button	No Data
FB09	CO 8	Single Touch Button	No Data
FB10	Do Not Disturb	Do Not Disturb	No Data

Table 5-3 14 Button (when FB03 value is 14)

	PATTERN1	PATTERN2	PATTERN3
FB01	Primary DN	Primary DN	Primary DN
FB02	CO 1	No Data	No Data
FB03	CO 2	No Data	No Data
FB04	CO 3	No Data	No Data
FB05	CO 4	No Data	No Data
FB06	CO 5	No Data	No Data
FB07	No Data	No Data	No Data
FB08	CO 7	No Data	No Data
FB09	CO 8	No Data	No Data
FB10	CO 9	No Data	No Data
FB11	CO 10	No Data	No Data
FB12	CO 11	No Data	No Data
FB13	Do Not Disturb	No Data	No Data
FB14	No Data	No Data	No Data

214 DSS Console Assignment

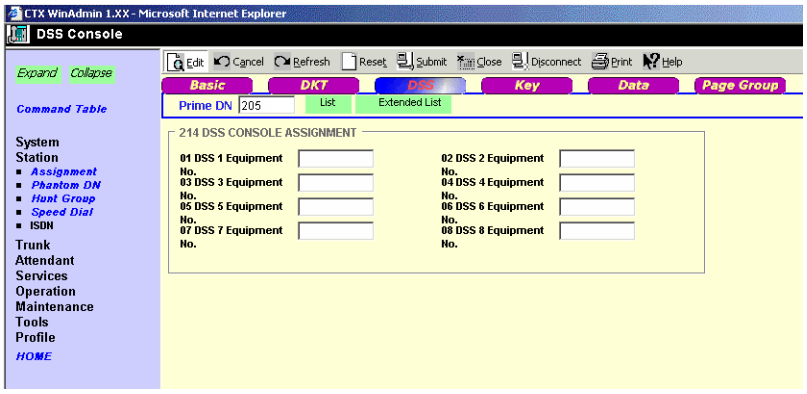
Prerequisite Program: *200* *page 5-1*

This assignment allows up to eight Direct Station Selection (DSS) Consoles to be assigned to a station. The assignment is referenced to the stations's Primary DN.

1. From the Program Menu, click Station > Assignment.
2. Click on the DSS tab (shown right).
3. Enter a DN number in the *Primary DN* field

   ...or click one of the following buttons:

   - List – view a summary list of programmed DSSs.
   - Extended List – view a detailed list of programmed DSSs.



4. Enter the Equipment number in which the DSS(s) is installed.
5. Click Submit.

FIELD	DESCRIPTION
Prime DN	Enter the PDN of the station that is to be associated with the DSS console(s). Possible values: Any string up to 5 digits (default = no value).
01~08 DSS Equipment No. 1~8	Enter the DSS equipment number as xxyyzz. CTX28 Equipment Numbers: DKT 1~8 = 0101(01~08); SLT 1 & 2 = 0104 (01~02); DKT 9~16 = 0107 (01~08). Cabinet – Select 01 for Base and Expansion cabinet (CTX100). Select 01 for Base and 02~07 respectively for each Expansion cabinet (CTX670). Slot – Select 01~04 for Base slots and 05~08 for Expansion slots (CTX100). Select 01~08 for Base slots and 01~10 for Expansion slots (CTX670). Example: If the DSS console should be connected to a PDKU or BDKU/BDKS in cabinet shelf 5, slot 2, circuit 3, enter 050203. If a PDN is assigned to the DSS equipment number it must be deleted, using PRG201, before attempting to assign the DSS console.

Key

Program Number(s): 205, 213, and 215

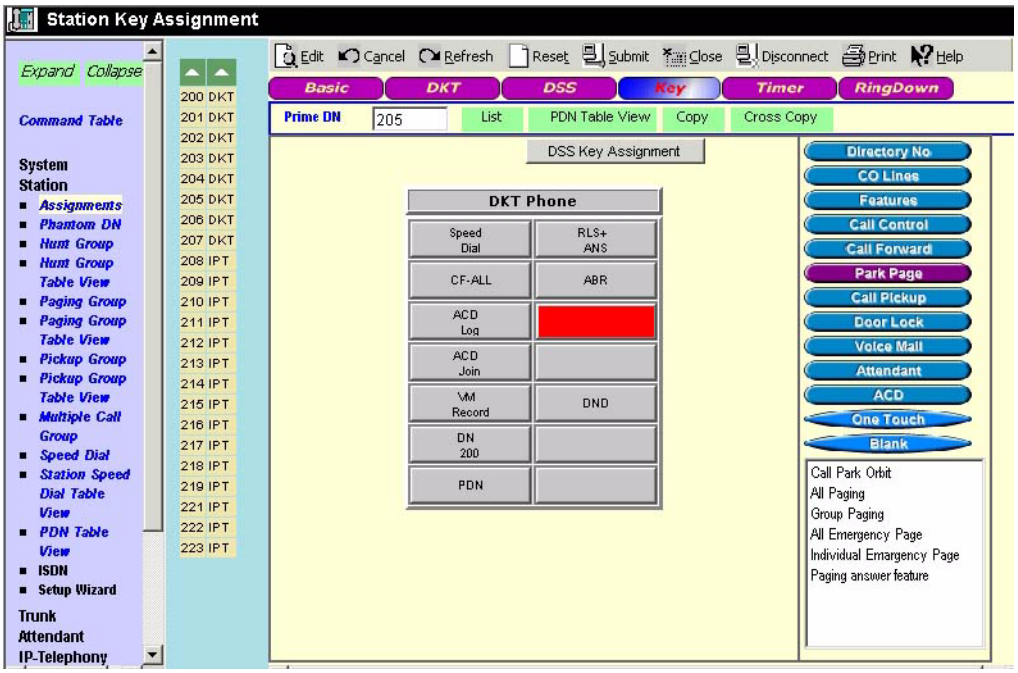
Prerequisite Program: *200 page 5-1 and 204 page 5-8*

The Feature Button assignments enable each button on the telephone to be addressed and coded to represent a function or feature to be performed. Some feature buttons require additional parameters to completely define the key (e.g., a Phantom DN needs a directory number, ringing assignment, and the tone pitch when ringing occurs).

1. Use the "Feature Button Record Sheet" on page D-13 to plan your FB assignments.
2. From the Program Menu, click Station > Assignment.
3. Click on the Key tab (shown below).

Notes

- To Program DSS buttons, Program 214 should be completed.
- To program ADM buttons (ADM 1 or ADM 2 shown below), FB04 *Add on Modules* in Program 204 must be set to One or Two.



4. Enter one of the following in the *Primary DN* field:
   - Primary DN to program DKT FBs.
   - Primary DN plus an ADM number to Program ADM FBs.
   - Primary DN plus DSS Key Assignment button to program DSS FBs

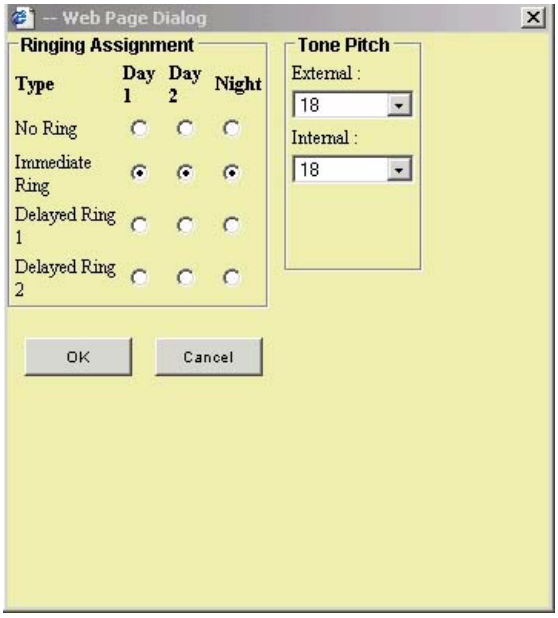
   ...or click one of the following buttons:
   - List – view a summary list of programmed DKTs.
   - Extended List – view a detailed list of programmed DKTs.

- Copy – After entering the source DN in the *Primary DN* field, click Copy and designate which FB buttons to copy (click the DKT Phone header to select all). Enter the destination DN and click OK. (Range is permitted.)
- Cross Copy – This button enables you to copy specific keys from a station's keypad to desired keys of other station key pads. This function is available only with CTX WinAdmin R2.1 and above. Refer to "Cross Copy" on page 5-19 for steps to use this function.

Distinctive Ringing – Release 1.3 and higher software enables you to set different incoming ringing tones for internal and external calls on a Prime DN. Ten different tones are available. This can be set from Programs 205, 213 and 215.

➤ To set Distinctive Ringing, double click the button that you want to set distinctive ringing. A dialog box displays (shown right).

Click the drop-down arrows to set the External and Internal tone pitches. The possible values are shown in Table 5-4.



Notes

- You must have the following versions of processor boards for Distinctive Ringing:
  CTX670: BECU1A, V.1C or later.
  CTX100: ACTU1A, V.2D or later.
- For any older versions of processor boards, you can assign only "01" to Tone Pitch for internal calls and you can assign only "11," "13," "15," or "17" to Tone Pitch for external calls.
- Ringing tone pitch has no effect on telephone volume.
- When programming External Ringing Repeat with a Distinctive Ringing Pitch, we recommend that you use pitches "11" or "12" and not "17" or "18".
- Incoming recall tone cannot be changed.
- Calls to Tie lines adopt the internal call pitch.

Table 5-4 Internal and External Call Ringing Tones

Tone No.	Frequency and Cadence
01	500 Hz 1 sec. On, 3 sec. Off, repeat
02	1300 Hz 1 sec. On, 1 sec. Off, repeat
11	500/640 Hz 1 sec. On, 3 sec. Off, repeat
12	500/640 Hz 1 sec. On, 1 sec. Off, repeat
13	860/1180 Hz 1 sec. On, 3 sec. Off, repeat
14	860/1180 Hz 1 sec. On, 1 sec. Off, repeat
15	1300/1780 Hz 1 sec. On, 3 sec. Off, repeat
16	1300/1780 Hz 1 sec. On, 1 sec. Off, repeat
17	860/1180 Hz 0.5 sec. On, 1300/1780 Hz 3 sec. Off, repeat
18	860/1180 Hz 0.5 sec. On, 1300/1780 Hz 1 sec. Off, repeat

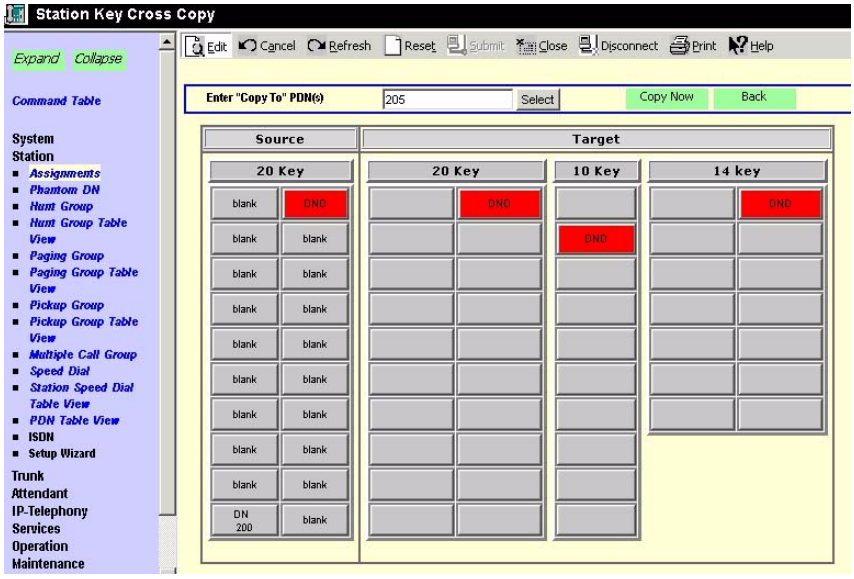
5. Click on the FB to program (the button turns from yellow to red).
6. Click the desired option from the blue parameter buttons on the right.
   - Directory No – Assign a Primary DN key, Secondary/Phantom DN, Phantom DN Message Waiting, or DSS key to this FB. See "Directory Number Sub-parameters" on page 5-20 for more details.
   - CO Line – Assign FB as a CO, GCO or a Pooled Line. See "CO Lines Sub-parameters" on page 5-21 for more details.
   - Features – Assign ABR, ACB, DND, Short Flash, Long Flash, Privacy, Privacy Release, BGM Key, Program Access, Account Code, Application Starting or Split Key feature to this FB.
   - Call Control – Activate Speed Dial, Release Button, Release/Answer, Cancel, Source Party, Destination Party, CLID or Night Transfer from this FB.
   - Call Forward – Set Call Forwarding assignments for this FB. Forward All Calls, Forward Busy, Forward No Answer, Forward Busy No Answer, Forward Ext/All Call, Forward Ext/Busy, Forward Ext/No Answer and Forward Ext/Busy No Answer are available selections.
   - Park Page – Assign Call Park Orbit, All Paging, Group Paging, All Emergency Paging, Individual Emergency Paging and Paging Answer Feature access to this FB.
   - Call Pickup – Assign FB to a Pickup-Group, Pickup-Directed Terminal, Pickup-Directed Group, Pickup-Directed DN, Pickup-Any External, Pickup-CO Retrieve, Pickup-Local Retrieve, Pickup-Remote, Pickup-Directed DN Retrieve and Pickup-On Hold and Incoming.
   - Door Lock – Enable FB to unlock Door Lock. See "Door Lock Sub-parameters" on page 5-21 for more details.
   - Voice Mail – Enable FB to Record or Pause/Resume Voice Mail.
   - Attendant – Assign Out Dial, Attendant Answer, Overflow, Position Busy, Trunk Test, Attendant Loop or Supervised Loop Key Attendant features to this FB.
   - One Touch – Assign FB as a One Touch button. See "Setting the One Touch Button" on page 5-19. This feature is available only with CTX software release 1.03 or higher and CTX WinAdmin software 1.17 and higher.
   - Split – Assign FB to Split the connected party and the conference master from the conference (for private call). (Join button is used to reconnect both parties to the conference.) This feature will be available only with CTX software release 2.2 or higher and CTX WinAdmin software 2.2 and higher. The Split button should *not* be assigned to a DKT2304-CT cordless telephone.
   - Blank – Clear FB assignment.
7. Click on one feature in the sub-parameter dialog box. If no other settings are required, the FB displays an abbreviation for the selected feature.

   ...or if you select Directory No, CO Lines or Door Lock parameters, additional fields are required. See the tables that follow for more details. Follow the directions in each pop-up dialog box.
8. To modify an existing feature button, double-click the feature button and make the change in the appropriate dialog box that displays.
9. Click Submit.

Cross Copy

This function is available only with CTX WinAdmin Release 2.1 software and above. Use the following steps to cross copy keys from one station to the keys of another stations key pad:

1. From the Key Page, enter the Prime DN.
2. Click Submit.
3. Click the Cross Copy button. The Source and Target Copy screen displays (shown right). Enter the "Copy To" PDNs ...or click Select to select the target PDN.
4. From the Source DKT, select key to be copied.
5. Click the Copy Now button. The Detail report screen displays.
6. Click Done. The Target DKT with the copied key displays.
7. Verify the key copied.



Setting the One Touch Button

Follow the step above 1~8 above to assign an FB as a One Touch button. Then complete the following steps:

1. Double click the key assigned as One Touch.
2. The following dialog box displays

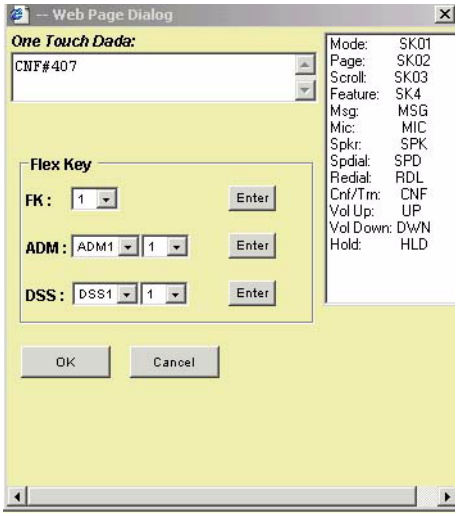
   This dialog box is used to define each button with the One Touch Data.
3. Enter the One Touch data, then click OK.

   Example 1: Setting up a One Touch button to transfer to Voice Mail.

   Select the Cnf/Trn from the white box on the right, CNF displays in the One Touch Data field. Then type #407 after CNF displays in the One Touch Data box. It adds Cnf/Trn #407 in the One Touch Data. Click OK. Then click Submit.

   Example 2: To originate a call from the PDN, select the FK as 01 if the PDN is on the first key, then add the telephone number next to FK01 in the One Touch Data box.

Cancel clears the changes and takes you back to the previous page.



Directory Number Sub-parameters

FIELD	DESCRIPTION
Primary DN	1. Select *Ringing Assignment* for *Day1*, *Day2* and *Night*. Possible values: No Ring, Immediate Ring, Delayed Ring1 and Delayed Ring2. 2. Select *Tone Pitch*. Possible values: 1~4 (default = 1)
Secondary/Phantom DN	1. Enter *DN Number*. Possible values: Any string up to 5 digits 2. Select *Ringing Assignment* for *Day1*, *Day2* and *Night*. Possible values: No Ring, Immediate Ring, Delayed Ring1 and Delayed Ring2. 3. Select *Tone Pitch*. Possible values: 1~4 (default = 1)
Phantom DN Message Warning	Enter *Phantom DN No*. Possible values: Any string up to 5 digits
DSS Key	Enter *DSS Primary DN No*. Possible values: Any string up to 5 digits

CO Lines Sub-parameters

FIELD	DESCRIPTION
CO	1. Select *CO Line #*. Possible values: 1~264 (CTX670), 1~64 (CTX100) (default = no value) 2. Enter *Owner DN*. Possible values: Any string up to 5 digits 3. Select *Ringing Assignment* for *Day1*, *Day2* and *Night*. Possible values: No RIng, Immediate Ring, Delayed Ring1 and Delayed Ring2. 4. Select *Tone Pitch*. Possible values: 1~4 (default = 1)
GCO	1. Select *GCO No*. Possible values: 1~128 (CTX670), 1~32 (CTX100) (default = no value) 2. Select *Index*. Possible values: 1~128 (CTX670), 1~32 (CTX100) (default = no value) 3. Enter *Owner DN*. Possible values: Any string up to 5 digits 4. Select *Ringing Assignment* for *Day1*, *Day2* and *Night*. Possible values: No RIng, Immediate Ring, Delayed Ring1 and Delayed Ring2. 5. Select *Tone Pitch*. Possible values: 1~4 (default = 1)
Pooled Line Key	1. Select *Pool Line No*. Possible values: 1~128 (CTX670), 1~32 (CTX100) (default = no value) 2. Select *Ringing Assignment* for *Day1*, *Day2* and *Night*. Possible values: No RIng, Immediate Ring, Delayed Ring1 and Delayed Ring2. 3. Select *Tone Pitch*. Possible values: 1~4 (default = 1)

Door Lock Sub-parameters

FIELD	DESCRIPTION
Door Unlock	Select *Door Lock No*. Possible values: 1~10 (default = 1)

Station Flexible Button Assignments

Use the "Record Sheets for 10-button and 20-button Telephones" on page D-14 and "Record Sheets for the DKT3014" on page D-15 to plan your Station Flexible Button Assignments.

Timer

Program Number(s): 208

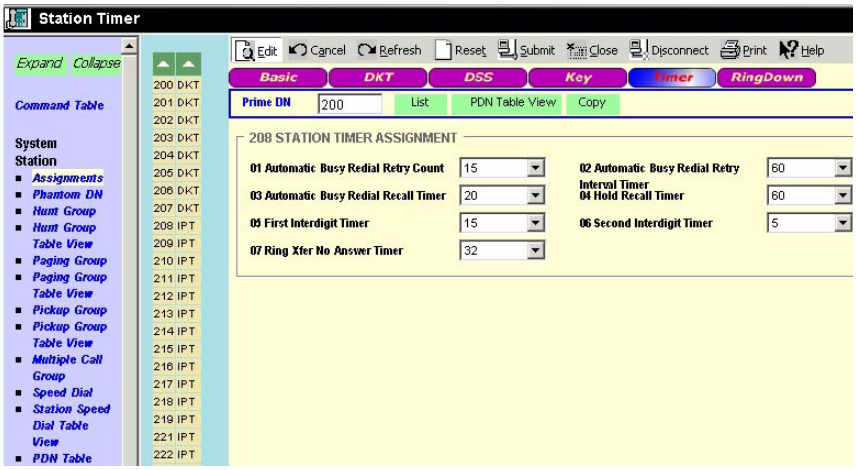
Prerequisite Program: *200 page 5-1*

Assigns timing parameters to Primary DNs.

1. Complete the "Station Data Record Sheets" on page D-18.
2. From the Program Menu click Station > Assignment.
3. Click on the Timer tab (shown right).
4. Enter a DN number in the *Primary DN* field.

   ...or select an existing record by clicking one of the following buttons:

   - List – view a summary list of programmed DKTs.
   - Extended List – view a detailed list of programmed DKTs.
   - Copy – Enter a DN in the *Primary DN* field and click Copy. Enter a new DN to assign existing Station Timer settings.
5. Select the desired values. See descriptions below.
6. Click Submit.



FIELD	DESCRIPTION
Primary DN	Enter the Primary DN. Possible values: Up to 5 digits (default = no value)
01 ABR Retry Count	Enter the number of retry attempts made by ABR when dialing a busy telephone number. Possible values: 5~20 (default = 15)
02 ABR Retry Interval Timer	Select the amount of time (in seconds) ABR waits between dialing attempts. Possible values: 30~180 (default = 60)
03 ABR Recall Timer	Select the number of seconds ABR will call back the station after receiving ring back tone from the dialed number. Possible values: 5~60 (default = 20)
04 Hold Recall Timer	Select the number of seconds before a call is placed on hold recalls. Possible values: 0~255 (default = 60)
05 First Interdigit Timer	Select the amount of time a Station has to dial after going off hook before a call is terminated (ROT is heard). Possible values: 1~180 (default = 15)

FIELD	DESCRIPTION
06 Second Interdigit Timer	Select the amount of time the system waits between dialed digits before terminating a call (ROT is heard). Possible values: 1~180 (default = 5)
07 Ring Xfer No Answer Timer	Select the Ring Transfer Idle station or Busy station (Camp-on) Recall Time (in seconds) Possible values: 1~600 (default = 32)

Emergency Ringdown Assignment

Program Number(s): 216

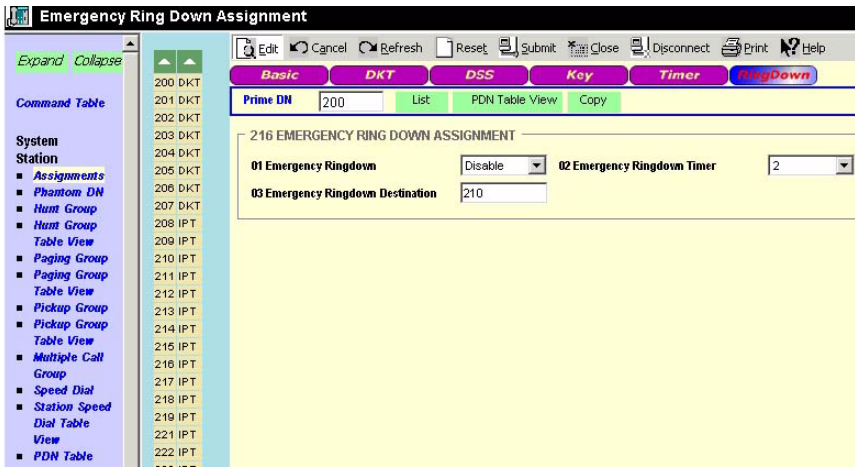
Prerequisite Program: *200 page 5-1*

Assigns Emergency Ring Down parameters to Primary DNs.

1. Complete the "Station Data Record Sheets" on page D-18.
2. From the Program Menu click Station > Assignment.
3. Click on the RingDown tab (shown right).
4. Enter a DN number in the *Primary DN* field.

   ...or select an existing record by clicking one of the following buttons:

   - List – view a summary list of programmed DKTs.
   - Extended List – view a detailed list of programmed DKTs.
   - Copy – Enter a DN in the *Primary DN* field and click Copy. Enter a new DN to assign existing Station Timer settings.
5. Select the desired values. See descriptions below.
6. Click Submit



FIELD	DESCRIPTION
01 Emergency Ringdown	Enable an Emergency Ringdown Number. Possible values: Enable or Disable (default)
02 Emergency Ringdown Timer	Enter the length of off-hook time that will cause a DN to originate an Emergency Possible values: 0~60 (default = 0)
03 Destination	Enter the destination DN for the Emergency Ringdown. Possible values: Up to 5 digits (default = no value)

206 Phantom DN

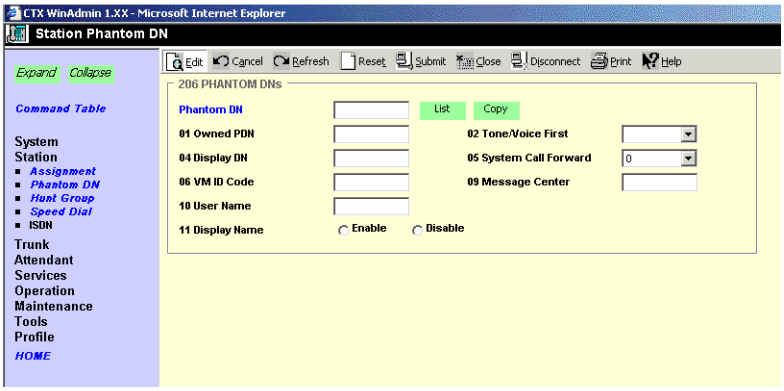
Prerequisite Program: *200 page 5-1*

This command assigns Phantom DN parameters.

1. Complete the "Phantom DN Record Sheet" on page D-16.
2. From the Program Menu, click Station > Phantom DN. The Station Phantom DN screen displays (shown right).
3. Enter a *Phantom DN* number

   ...or click one of the following buttons:

   - List – view a summary list of programmed Phantom DNs.
   - Copy – Enter the Phantom DN to copy data from, then click Copy and designate a Phantom DN to copy the data too. Click OK.
4. Click Submit.



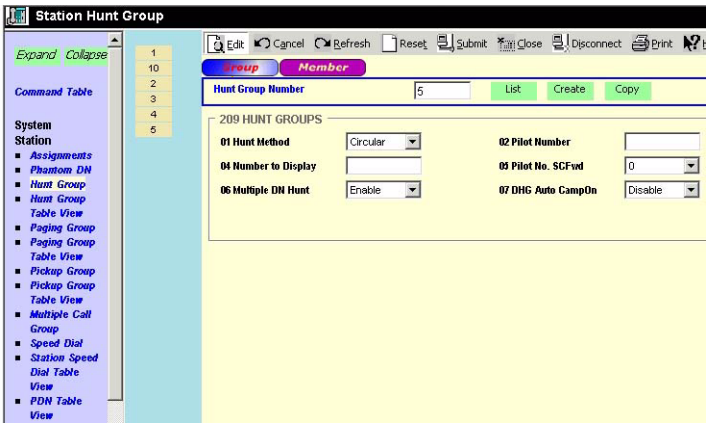
FIELD	DESCRIPTION
Phantom DN	Enter Phantom DN. Possible values: Up to 5 ASCII characters (default = no value)
01 Owned PDN	Set PhantomDN's Owner Station Possible values: Up to 5 ASCII characters (default = no value)
02 Tone/Voice First	Select from Tone first, or Voice first signaling. Possible values: Tone First (default) or Voice First
04 Display DN	Enter the number displayed on the calling telephone that rings this Phantom DN number. Possible values: Up to 5 ASCII characters (default = no value) This number is overridden by the number in Program 209, FB04 (if assigned) and if the Phantom DN is in a hunt group. When calling from this Phantom DN, the number displayed on the called telephone appears in order of priority as follows: This number in Program 209, FB04 (if assigned) and if the PhDN is in a hunt group. ...or this number in Program 200, FB15 (if assigned). ...or the calling telephone's PDN.
05 System Call Forward	Select the System Call Forward value. Possible values: 0~4 (CTX100), 0~10 (CTX670 Basic),0~32 (CTX670 Exp.) (default = 0)

FIELD	DESCRIPTION
06 VM ID Code	Enter the voice mail box number that should answer calls when this PhDN calls voice mail; or, when this PhDN is called and then forwards to voice mail (This number is prefixed by codes in Program 579, **FB11**~**FB16**). Possible values: Digits 0~9, * and #, up to 10 characters (default = no value). This VMID code is sent to the voice mail device in SMDI packets or DTMF tones on direct calls to voice mail from the PhDN; and on calls to the PhDN that forward to voice mail (see Program 580 for SMDI or DTMF choice). **Note** Do not enter a VMID code in this field if this PhDN is associated with a PDN in a multiple DN hunt group (Program 209, **FB06**). The associated PDN's VMID code (Program 200, **FB19**) will be sent to voice mail.
09 Message Center	Enter the Message Waiting Center DN, VM Pilot Number or lowest member of VM hunt group. Up to 7 ASCII characters (default = no value)
10 User Name	Enter user name. Possible values: Up to 8 ASCII characters (default = no value)
11 Display Name	Select radio button for user name to be included in the list display of Large LCD (Directory Assistance) Possible values: Enable or Disable (default)

209 Hunt Group

Prerequisite Program: *200 page 5-1*

This command assigns Station Hunting Group data.



1. Complete the "Hunt Group Record Sheet" on page D-17.
2. From the Program Menu, click Station > Hunt Group. The Station Hunt Group screen displays.
3. Click on the Group tab (shown right).
4. Enter a *Group Number* for an existing record

   ...or click one of the following buttons:

   - List – view a summary list of programmed Hunt Groups.
   - Create – Assign a new Hunt Group with custom settings.
5. Click Submit.

FIELD	DESCRIPTION
Group Number	Hunt Group Number Possible values: 1~90 (CTX100), 1~200 (CTX670 Basic),1~640 (CTX670 Exp.) (default = no value)
01 Hunt Method	Select Hunt Method Possible values: Distributed (for Voice Mail hunt groups) or Circular (for Multiple DN hunt groups) (default)
02 Pilot Number	Enter Pilot Directory Number. This is the number that is dialed to call the hunt group. Possible values: Up to 5 ASCII characters (default = no value) any type of hunt group can have a pilot number. **Note** Any type of hunt group can have a pilot number. Distributed hunt groups must have a pilot number. Voice Mail hunt groups should be Distributed with a Pilot Number. Multiple DN Hunt groups should be Circular with no Pilot Number.
04 Number to Display	Enter the number that is displayed when called by, or when calling any member of the hunt group. Possible values: Up to 5 ASCII characters (default = no value) **Note** This number should be the DH Group Pilot number for Voice Mail hunt groups. This number could be the PDN of a Multiple DN Hunt group, in which case the number would override the number assigned in Program 200, FB15 for PDNs and Program 206, FB04 for Phantom DNs.
05 Pilot No. SCFwd	Allows you to assign a System Call Forward pattern to the Pilot Number of a Hunt Group. Possible values: 0~4 (CTX100), 0~10 (CTX670 Basic),0~32 (CTX670 Exp.) (default = 0)

FIELD	DESCRIPTION
06 Muitple DN Hunt	Enable if hunt group is created for multiple DN operation. Multiple DN hunt groups should be circular with no pilot number. Possible values: Enable or Disable (default)
07 DHG Auto Camp-on	Whether to execute Automatic Camp On to the Distributed Hunt Group or not. Possible values: Enable or Disable (default) Should be applied to VM Distributed Hunt Groups so callers automatically camp on to Voice Mail when all VM ports are busy. Does not apply to Circular or Serial hunt groups.

218 Station Hunt Assignments

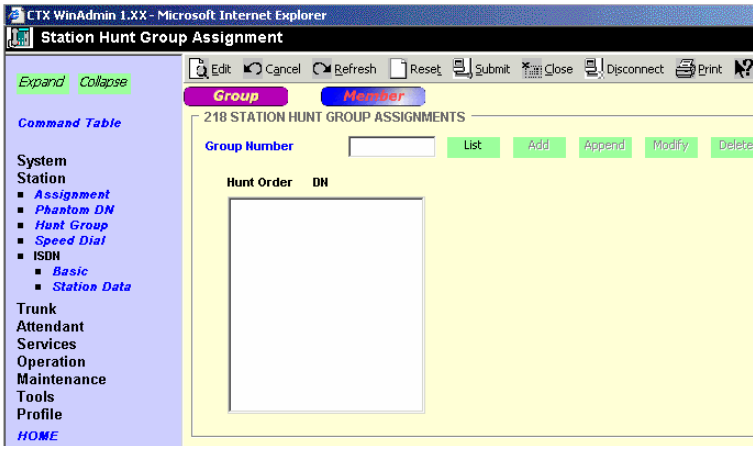
Prerequisite Program: *209 page 5-26*

This program assigns station DNs to Hunt Groups using Program 209, and assigns the rotation order in which DNs are hunted.

1. Complete the "Hunt Group Record Sheet" on page D-17.
2. From the Program Menu, click Station > Hunt Group. The Station Hunt Group screen displays.
3. Click on the Member tab (shown right).
4. Enter a *Group Number* for an existing record

   ...or click one of the following buttons:

   - List – view a summary list of programmed Hunt Groups.
   - Add – Assign a new station DN to the Hunt Group number entered above.
   - Append – Assign a new DN as the last DN in a Hunt Group's hunt order.
   - Modify – Highlight an existing DN in the Hunt Order and change the station DN assignment.
   - Delete – Delete station DN assignment to Hunt Order number.
5. Click Submit.

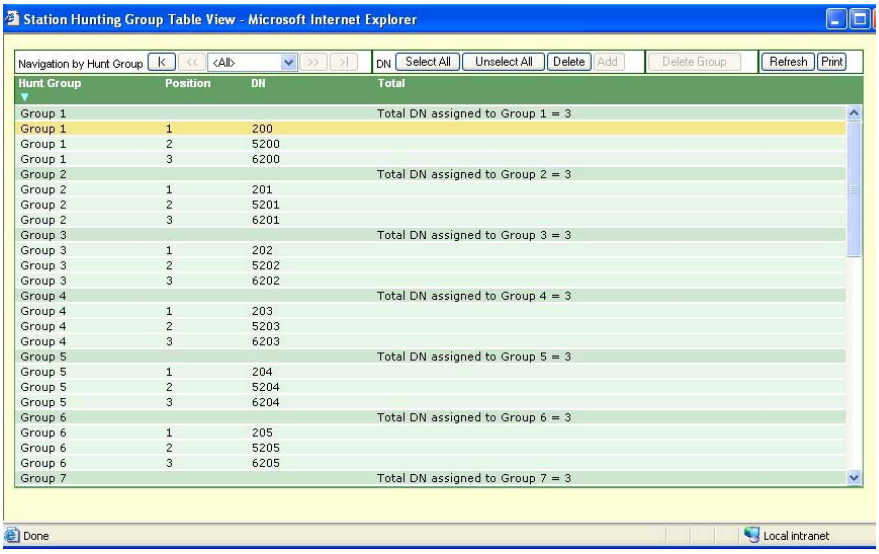


FIELD	DESCRIPTION
Hunt Group Number	Enter an existing Hunt Group number or use the List, Add, Append, Modify, or Delete buttons as described above. Possible values: 1~640 (default = no value)
01 Hunt Order	This field assigns a station DNs position within a Hunt Group's Hunt Order. The Hunt Order is selected automatically by CTX WinAdmin. Programmers should assign the last station in the Hunt Order first and assign the first station in the Hunt Order last. Possible values: 1~560 (default = no value)
02 DN	By selecting the Insert button you can add a new DN to the Hunt Group's Hunt Order. Enter the desired DN in the pop-up dialog box. To modify an existing entry, use the Modify button as described above. Possible values: Up to 5 ASCII characters (default = no value)

FIELD	DESCRIPTION
03 DN Set Type	Modify (replace) an existing assignment. Possible values: Modify (default) or Insert

Hunt Group Table View

Hunt Group Table View enables you to view all hunt groups and its members.



➤ **To access the Hunt Group Table View**

➤ Select Station > Hunt Group Table View.

See "Table Views" on page 2-8 for table functionality.

Note This table has more functions in addition to the regular functionality found in other table views.

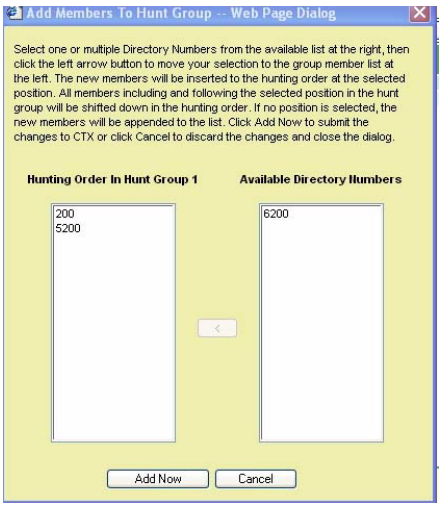
The Navigation Bar has the following additional buttons:

- Delete – Click on a row to delete any directory number from a Hunt Group, then click the Delete button. When the Delete button is active, the Add button and the Delete Group button will not be active. To unselect a row that is selected (in yellow), click the row again.
- Add – To add directory numbers to a hunt group select the Hunt group in the table view from the Navigation drop down in the Navigation bar, then click the Add button.

  If no rows are selected, the Add button is active. Click the Add button to add members to Hunt groups. When you click the Add button, the Add dialog box displays (shown right).

  Select the DN from the Available Directory Numbers box, then click the Arrow button in the center. This moves the DN to Hunt Group box on the left. Click Add now to Save the entry or Cancel to cancel. Clicking Add Now automatically refreshes the table view.

  In the dialog box shown right, if you want 6200 to appear before 5200, click 6200 on the right, then click 5200 on the left and then click the arrow in the center.



- Select All and Unselect All – Clicking these buttons, selects or unselects all groups in a table.

Paging Group

502 Terminal Paging Group Assignment

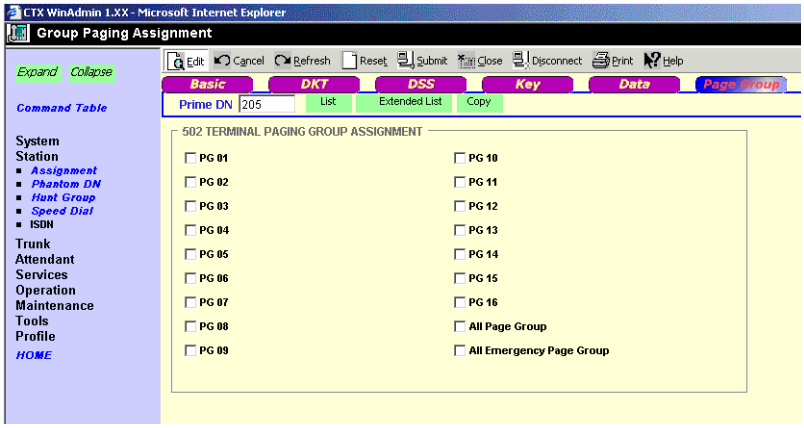
Prerequisite Program: *200 page 5-1*

Assigns Primary DNs to Paging Group(s).

1. From the Program Menu click Station > Page Group.
2. Enter a DN number in the *Primary DN* field.

   ...or select an existing record by clicking one of the following buttons:

   - List – view a summary list of programmed DKTs.
   - Extended List – view a detailed list of programmed DKTs.
   - Copy – Enter a DN in the *Primary DN* field and click Copy. Enter a new DN(s) to assign existing Paging Group settings.

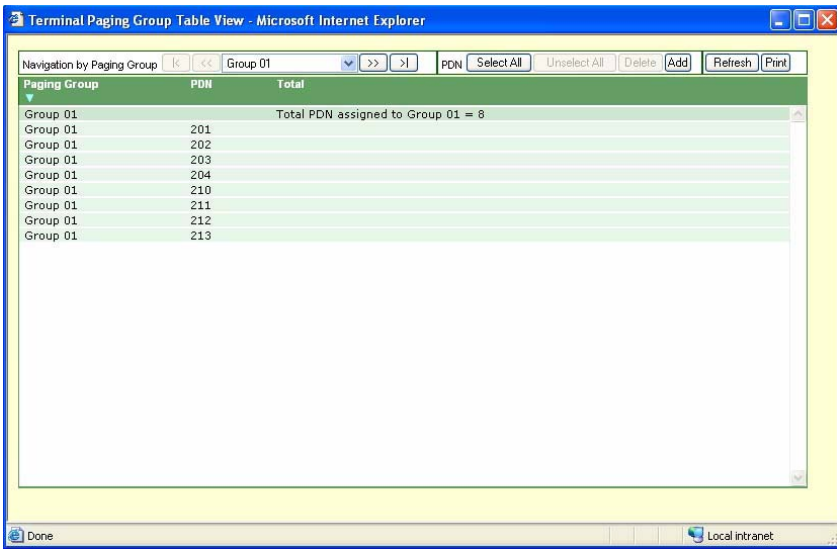


3. Select the desired values. See descriptions below.
4. Click Submit.

FIELD	DESCRIPTION
00 Primary DN	Enter the Prime DN of the station to be assigned to Paging Groups. A station may belong to more than one paging group. **Note** You can have up to 72 stations in a paging group in the Strata CTX100 and up to 120 stations in a paging group in the Strata CTX 670. Any software release before R1.01, M19 supports only 32 stations in a paging group for all CTX system types. Page Group capacity: CTX100 – 4 Page Groups; CTX670 Basic – 6 Page Groups; CTX670 Expanded – 16 Page Groups Possible values: Up to 5 ASCII characters (default = no value)
PG01~PG16	Check to assign the DN to this paging group. The number of Page Groups that can be assigned are: 1~4 (CTX100); 1~8 (CTX670 Basic); 1~16 (CTX670 Exp.) Possible values: On or Off (default) **Note** Up to 120 stations may be assigned to a paging group in the Strata CTX 670
All Page Group	Check to assign the DN to the All Page Group. You can have up to 72 stations in a paging group in the Strata CTX100 and up to 120 stations in a paging group in the Strata CTX 670. Possible values: On or Off (default)
All Emergency Page Group	Check to assign the DN to the All Emergency Page Group. You can have up to 72 stations in a paging group in the Strata CTX100 and up to 120 stations in a paging group in the Strata CTX 670. Possible values: On or Off (default)

Paging Group Table View

Paging Group Table View enables you to view all paging groups and its members.



➤ **To access the Paging Group Table View**

➤ Select Station > Paging Group Table View.

See "Table Views" on page 2-8 for table functionality.

For functionality on Delete, Add, Select All and Unselect All, refer to "Hunt Group Table View" on page 5-28

Note The Add button works a little different on this table.

When you click Add, the Add dialog box displays, select the entry by clicking on it and then click the Add Now button.

210 Pickup Group

Prerequisite Program: *200 page 5-1*

The Call Pickup Group assignment specifies which group numbers this station will participate when either the Group Call Pickup or the Group Directed Call Pickup features are invoked. A user may be assigned to more than one group.

FIELD	DESCRIPTION
01~32	Click in the radio button to Indicate which Call Pickup Group(s) this stations is to participate in. A station can be assigned to more than one group. Possible values: check = On or unchecked = Off (default) **Note** 01~05 are available for CTX100, 01~10 are available for CTX670 Basic, and 01~32 are available for CTX670 Exp.

Pickup Group Table View

Pickup Group Table View enables you to view all Pickup groups and its members.

➤ **To access the Paging Group Table View**

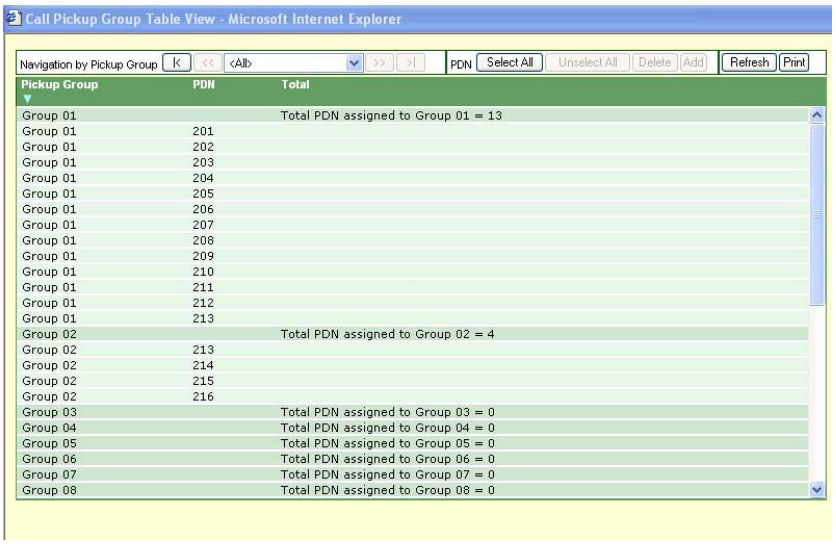
➤ Select Station > Pickup Group Table View.

See "Table Views" on page 2-8 for table functionality.

For functionality on Delete, Add, Select All and Unselect All, refer to "Hunt Group Table View" on page 5-28.

Note The Add button works a little different on this table.

When you click Add, the Add dialog box displays, select the entry by clicking on it and then click the Add Now button.



Multiple Call Group

To set up Multiple Call/Delayed Ringing you must have a Multiple Call (MC) Group set in Program 517. You can register up to 25 calling members for every MC Group in Program 518. You can set each member to be Immediate, Delayed Ring 1, or Delayed Ring 2. The Delayed Ring times are independently adjustable (1~180 seconds) for each Multiple Call Group Member.

Important! *Immediate Destinations can only be PDNs (Digital and/or Standard Telephones) and PhDNs. See "Member Requirements" below.*

Delay Destinations can be PDNs of Standard telephone circuits only and Voice Mail Hunt Group Pilot Numbers (not Multiple DN Hunt Groups).

Incoming Call to Multiple Call (MC) Group

The following can occur when calling members are set as Immediate, Delayed Ring 1, or Delayed Ring 2.

- If the members of a MC Group are assigned Immediate ring, the call is received at all destinations immediately. In this case, each destination LCD displays the same incoming call information.
- If the MC Group destination (member) is assigned to Delayed Ring 1 or Delayed Ring 2, each destination will start to ring when the delay time runs out. During the delay time the member PDN or PhDN button will flash red but not ring.

Important! *Delay Destinations can be PDNs of Standard telephone circuits only and Voice Mail Hunt Group Pilot Numbers (not Multiple DN Hunt Groups).*

- If some MC Group destinations are busy, incoming call rings only idle destinations. However, if the camp-on feature is in effect, incoming calls will camp-on to busy destinations.
- Members can be assigned to multiple MC Groups.

MCPN Owner Privileges

When you assign members to an MC group, the member assigned to Index 1 in Program 518 is considered the owner of the group. The owner of the group is the only member entitled to the following privileges:

- The owner is the only member in the group that can receive Automatic Call Back calls and Message Waiting Indications.
- The ringing option for the owner is always set to Immediate ring.
- The owner can be a PhDN or PDN.

Member Requirements

The table below has details for members that can and cannot be in a group.

Members that can be in a Group	Members that cannot be in a Group
PDNs	Pilot DNs - ACD, MCP
PhDNs	CO Line Access Codes
Station Hunt Group Pilot DNs	Att.Consoles and BATI or DKTs assigned to the Attendant in programming.

Important!

- *Immediate Destinations can only be PDNs (Digital and/or Standard Telephones) and PhDNs.*
- *Delay Destinations can be PDNs of Standard telephone circuits only and Voice Mail Hunt Group Pilot Numbers (not Multiple DN Hunt Groups).*
- *Attendant Consoles cannot be members of multiple call groups and cannot overflow to MC groups. Assigning Attendant Consoles to MC groups will cause Attendant Consoles to misfunction. Do not set Attendant Consoles to overflow to MC groups.*

Call Forward Activation

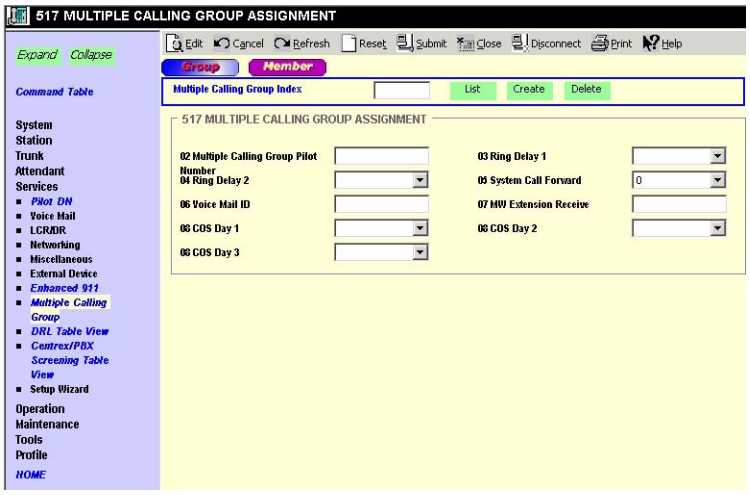
System and Station Call Forward can be set up for each Multiple Calling (MC) Group. The Call Forward Remote Access Code is used to activate or de-activate Station Call Forward of MC Group. System Call Forward is activated/deactivated using CTX WinAdmin. The MC Group can also be set as the destination of System on Station Call Forward.

517 Multiple Calling Group Assignment

Multiple Call/Delayed Ringing which enables you to delay ring to voice mail and auto attendants.

1. From the Program Menu, click Station > Multiple Calling Group.
2. Click Create. A dialog box displays.
3. Enter a calling group index in the dialog box.

   The calling group index can be 1~16 (CTX100), 1~32 (CTX670 Basic), and 1~64 (CTX670 Expanded).
4. Click Ok. Parameter 01 MC Group Pilot Number gets highlighted.
5. Enter the DN of the MC group. This number should not conflict with an existing telephone number.
6. Verify and change other parameters.
7. Click Submit. The group index displays on the left of the program name.



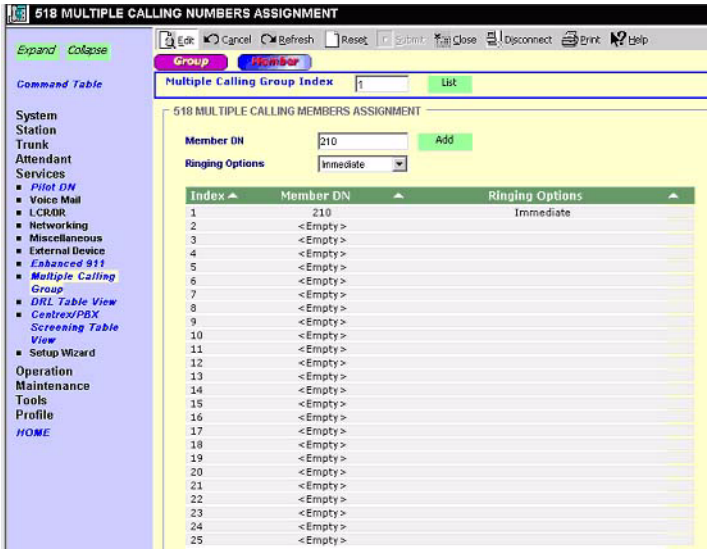
FIELD	DESCRIPTION
Multiple Call Group Number	Select a group number. Possible values: 1~16 (CTX100), 1~32 (CTX670 Basic) and 1~64 (CTX670 Exp.)
01 MC Group Pilot Number	Enter the Pilot Directory Number that should be assigned to the Multiple Call Group. This can be any number 1~5 digits that does not conflict with numbers in the current system Number Plan. Possible values: 1~5 digits
02 Ring Delay 1 Timer	Set the timer in seconds. Possible values: 1~180
03 Ring Delay 2 Timer	Set the timer in seconds. Possible values: 1~180
04 System Call Forward	Assign a System Call Forward template number to the multiple calling group. Enter 0 or 1~32. Possible values: 0~32
05 Voice Mail ID	Enter the VM call forward ID digits for the Multiple Calling Group. Possible values: Up to 10 digits.

518 Multiple Calling Members Assignment

Prerequisite Program: *517*

Use this program to assign members to a group.

1. From the Program Menu, click Station > Multiple Calling Group.
2. Click the Member tab.
3. Select the Index Number, then enter the Member DN.



Important! *Immediate Destinations can only be PDNs (Digital and/or Standard Telephones) and PhDNs.*

Delay Destinations can be PDNs of Standard telephone circuits only and Voice Mail Hunt Group Pilot Numbers (not Multiple DN Hunt Groups).

Note Each group can have up to 25 members. You can have up to 64 groups.

4. Submit is greyed out because the members are automatically submitted as they get added.

Note The buttons on this screen are dynamic. When you select an empty Index number, the Add button displays. When you select and existing Index number, the Modify and Remove buttons display. Modify enables you to edit, while Remove deletes the multiple ringing group index number.

FIELD	DESCRIPTION
Multiple Calling Group Index	Enter a group number. Possible values: 1~16 (CTX100), 1~32 (CTX670 Basic) and 1~64 (CTX670 Exp.)
01 Member DN	Enter the DN of the extension you wish to add. Possible values: Up to 32 digits **Important!** • *Immediate Destinations can only be PDNs (Digital and/or Standard Telephones) and PhDNs.* • *Delay Destinations can be PDNs of Standard telephone circuits only and Voice Mail Hunt Group Pilot Numbers (not Multiple DN Hunt Groups).* *Attendant Consoles cannot be members of multiple call groups and cannot overflow to MC groups. Assigning Attendant Consoles to MC groups will cause Attendant Consoles to misfunction. Do not set Attendant Consoles to overflow to MC groups.*
05 Ringing Options	Select either: Immediate, Delay 1 or Delay 2.

516 Station Speed Dial

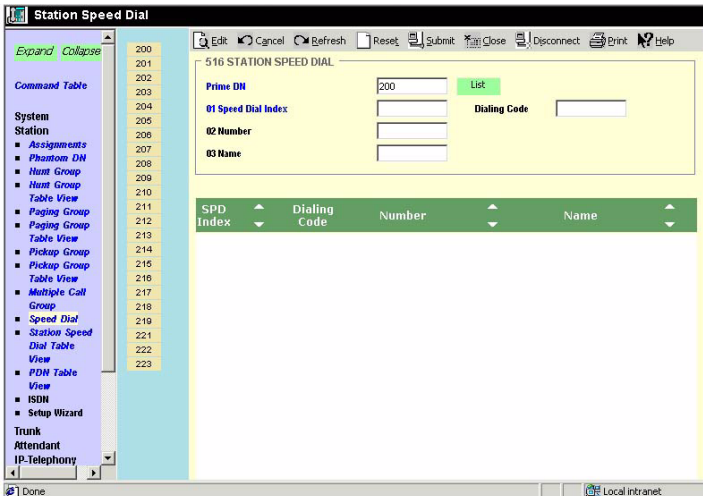
Prerequisite Program: *200 page 5-1*

Up to 100 pre-programmed Speed Dial numbers (up to 32 digits each) can be assigned to each station. Speed Dial numbers are stored in "Bins" and each station accesses the Speed Dial numbers by entering the Speed Dial Bin number from their respective stations. The following advanced Speed Dialing features are available in Strata CTX.

- Speed Dial Bin Linking – Whenever a Speed Dial number exceeds the 32-digit Speed Dial Bin memory limitation, the digits exceeding the 32 digit limitation are automatically stored into the adjacent Speed Dial Bin. The entire string is activated by using the primary Speed Dial Bin number.

Note Bin linking is automatic. Any previously programmed data in the "adjacent Speed Dial Bin" as described above is overwritten. Furthermore, if a number exceeding the maximum allowable dial digit length is overwritten with a new number which complies to the 32-digit restriction, the excess digits recorded in the next Bin (from the previous entry) is treated as a unique Speed Dial record.

- Speed Dial Number Nesting – A Speed Dial number can be nested into another Speed Dial number. For example, if an international dialing prefix is used often, program the prefix in any Speed Dial Bin. Then in the another Speed Dial Bin, program the first Bin number + the number to dial. When the second Speed Dial Bin is activated, Strata CTX first retrieves and dials the international dialing prefix from the first Bin location, then adds the numbers to dial.



1. From the Program Menu, click Station > Speed Dial. The Station Speed Dial screen displays (shown right).
2. Enter Program 516 data.
3. Click Submit.

FIELD	DESCRIPTION
Primary DN	Select the PDN assigned the speed dial number.
01 Speed Dial Bin	Enter the station speed dial bin number. A station can have up to 100 speed dial bins. Possible values: 00~99 (default = no value) **Note** Adding bin numbers here will automatically increment the number of speed dial bins available to the station in increments of 10 speed dial bins. The number of speed dial bins available to the station can also be assigned and displayed in Prg 200, 35 - Station SpDial Bins. Example: If bin number 50 is entered here, 50 speed dial bins will automatically be assigned to the station and will also be displayed in Prg 200, 35.

FIELD	DESCRIPTION
02 Number	This is the dialable number stored in the speed dial bin. Possible values: Up to 32 digits, 0~9, *, # and Pauses (default = no value) To enter pauses enter Px, where x equals 0~9 (seconds), which is the length of the pause, 0=10 seconds. **Notes** • If the number being entered exceeds the 32 digits, the next speed dial location will automatically be appended to create longer numbers. • Also another speed dial bin can be nested within another bin for dialing common numbers. If speed dial bin 100 has long distance access digits 1010321, these digits can be nested in to other speed dial bins by using *100 as the first digits of the other bins. Example putting *10017145563425 into speed dial bin 150 would cause SD150 to dial the access digits plus the number 10132117145563425. • If you are programming from the Telephone the digits * and # have a special meaning when programming speed dial numbers. The # digit indicates the end of entry and * is an escape character. To dial the digits * or # as part of the number; enter ** or *#. To enter pauses enter *0~*9. The second digit represents the number of seconds for the pause function.
03 Name	Enter the LCD Name that displays on LCD dial directories. Possible values: Up to 8 characters (default = no value)

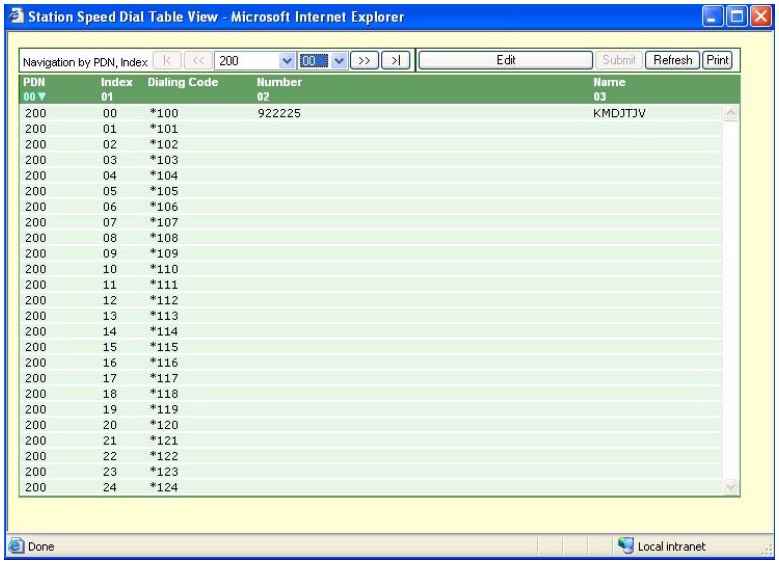
Station Speed Dial Table View

Station Speed Dial Table View shows the entire set up for all speed dial numbers.

➤ **To access the System Speed Dial Table View**

➤ Select System > System Speed Dial Table View.

See "Table Views" on page 2-8 for table functionality.



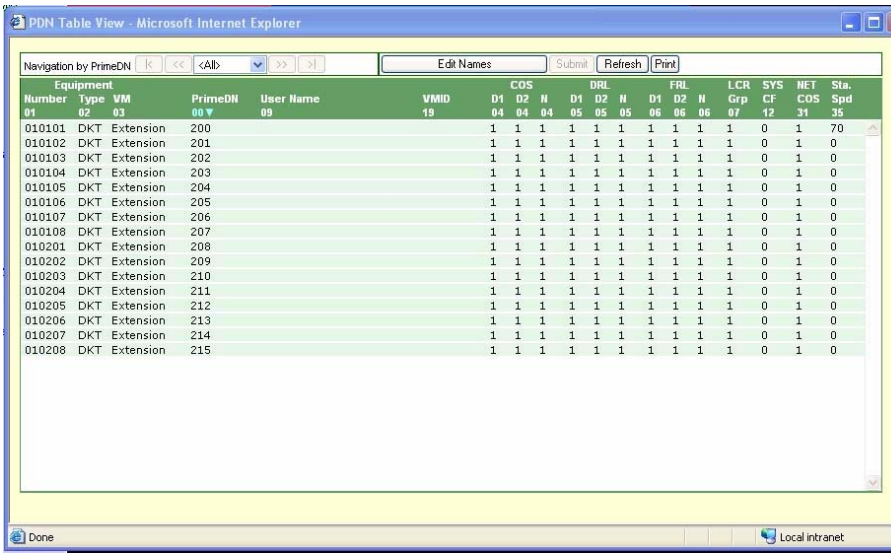
PDN Table View

This screen shows the entire list of available PDNs (shown right).

➤ **To access the Station Speed PDN Table View**

Select Station > PDN Table View.

Note See "Table Views" on page 2-8 for table functionality.



ISDN

The following programs assign ISDN data to stations.

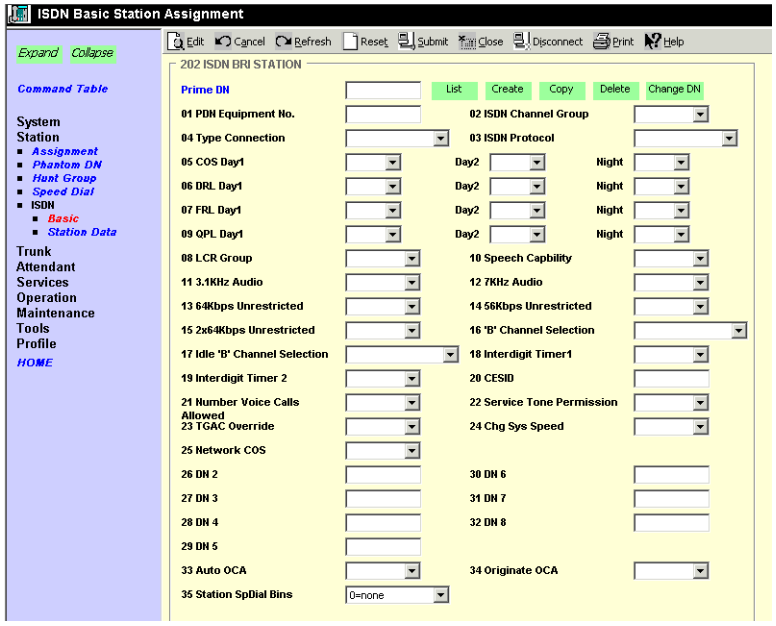
Program Number(s): 202 and 217

System Availability: Not available with CTX28

202 ISDN BRI Station

Prerequisite Program: *100 page 4-1*

This command assigns ISDN BRI stations.



1. Complete the "ISDN BRI Station Record Sheets" on page D-19.From the Program Menu, click Station > ISDN > Basic. The ISDN Basic Station Assignment screen displays (shown right).
2. Enter a *Primary DN* for an existing record

   ...or click one of the following buttons:

   - List – view a summary list of programmed DN's.
   - Create – Assign a new Primary DN with custom BRI Station settings.
   - Copy – Enter a DN in the *Primary DN* field and click Copy to make a new DN assignment with BRI Station settings copied from the DN entered in the *Primary DN* field.
   - Delete – Enter a ISDN Primary DN to delete and click OK.
   - Change DN – Enter a DN in the *Primary DN* field and click Change DN to assign a new DN to the ISDN BRI Station.

3. Set up ISDN BRI Station using the Program Detail table below.
4. Click Submit.

FIELD	DESCRIPTION
Primary DN	Enter the PDN. When a required DN is not programmed, the DN is regarded as a new station. The System assigns default data as defined in 217 ISDN Station Data. Possible values: Up to 5 digits (default = no value)
01 PDN Equipment No.	Enter the BRI equipment number assigned to this PDN. This is the cabinet, slot, and circuit number of the RBUU/RBUS or RBSU/RBSS interface PCB to which the the PDN is, or should be, assigned. Enter data as xxyyzz: Example: If the PDN should be a assigned to a BDKU in cabinet 5, slot 2, circuit 3; enter 050203. Cabinet numbers: CTX100: Select 01 for Base and Expansion cabinet. CTX670: Select 01 for Base and 02~07 respectively for each Expansion cabinet. Slot numbers: CTX100: Select 01~04 for Base slots and 05~08 for Expansion slots. CTX670: Select 01~08 for Base slots and 01~10 for Expansion slots.
02 ISDN Channel Group	Enter the ISDN Channel Group number. Possible values: 1~32 (CTX100), 1~48 (CTX670 Basic)1~128 (CTX670 Exp.) (default = 1)
03 ISDN Protocol	Select the ISDN protocol. Only Bearer capabilities specified by the protocol can be entered in this field. The Initial value for ISDN Protocol corresponds to information set in the hardware level. Possible values: Nat'l ISDN (default), ETSI, TTC or Nat'l ISDN Nortel **Note** National ISDN = North America, ETSI = England and TTC = Japan.
04 Type Connection	Select connection type. Possible values: Point to point (default) or Point to Multi-point
05 BRI Station COS • **Day1 COS** • **Day2 COS** • **Night COS**	Select the BRI Station COS assignments. Possible values: 1~32 (default = 1)
06 BRI Station DRL • **Day1 DRL** • **Day2 DRL** • **Night DRL**	Select the BRI Station DRL assignments. Possible values: 1~16 (default = 1)
07 BRI Station FRL • **Day1 FRL** • **Day2 FRL** • **Night FRL**	Select the BRI Station FRL assignments. Possible values: 1~16 (default = 1)
09 BRI Station QPL • **Day1 QPL** • **Day2 QPL** • **Night QPL**	Select the BRI Station QPL assignments. Possible values: 1~16 (default = 1)

FIELD	DESCRIPTION
08 LCR Group	Select the LCR Group number to which this BRI Station belongs. Possible values: 1~16 (default = 1)
10 Speech Capability	Enable speech capability. See Table 5-5 on page 40. Possible values: Enable (default) or Disable
11 3.1 KHz Audio	Enable 3.1 KHz audio capability. See Table 5-5 on page 40. Possible values: Enable (default) or Disable
12 7 KHz Audio	Enable 7 KHz audio capability. See Table 5-5 on page 40. Possible values: Enable or Disable (default)
13 64Kbps Unrestricted **14 56Kbps Unrestricted** **15 2 x 64Kbps Unrestricted**	Enable one of the unrestricted capabilities. See Table 5-5 on page 40. Possible values: Enable (default) or Disable
16 B Channel Selection	Select originating B Channel method. Possible values: • Exclusive – (default) Channel is indicated, and no alternative is acceptable. • Preferred – Channel is indicated, and any alternative is acceptable. • Any Channel – Channel is indicated, and any channel is acceptable.
17 Idle B Channel Selection	Choose Idle B Channel selection method. Possible values: Forward Cyclic, Backward Cyclic, Forward Terminal or Backward Terminal (default) • Select Forward Cyclic (from lowest to highest number of B-channel). • Select Backward Cyclic (from highest to lowest number of B-channel). • Select Forward Terminal for the lowest number B-channel (The Low-Low B-channel selection). • Select Backward Terminal for the highest number B-channel. (The High-High B-channel selection)
18 Interdigit Timer 1	Select the Interdigit timer value, to time-out during dial tone. Possible values: 1~180 (default = 15)
19 Interdigit Timer 2	Interdigit timer value to time-out after the first digit is dialed. Possible values: 1~180 (default = 5)
20 CESID	Enter the CESID value for 911 calls. Possible values: Up to 16 ASCII characters (default = no value)
21 Number Voice Calls Allowed	Select the Number of Voice Calls Allowed. If a selection is not made, previously written data in this field is erased. Possible values: One or Two (default) **Note** If One is selected, the other channel is reserved for Data.
22 Service Tone Permission	Enable Service Tone Permission. Select Disable for modems and faxes. Possible values: Enable or Disable (default)

FIELD	DESCRIPTION
23 TGAC Override	Enable TGAC Override. Possible values: Enable or Disable (default)
24 Change System Speed	Enable System Speed Dial changing permission. Possible values: Enable or Disable (default)
25 Network COS	Enter the Network COS value. If a selection is not made, previously written data in this field is erased. Possible values: 1~32 (default = 1)
26 DN2~32 DN8	Add a DN to this BRI Station. When a DN is entered into one of the seven available fields, default data as defined in 217 ISDN Station Data is applied to the DNs. If a selection is not made, any previously written data in this field is erased. Possible values: Up to 5 ASCII characters (default = no value)
33 Auto OCA	Enable OCA to occur automatically when making a call to a busy station that allows calls to be received. Possible values: Enable (default) or Disable
34 Originate OCA	Enable this station to make OCA calls to other stations. Possible values: Enable or Disable (default)
38 MW/DND	Enable: When this station goes off hook, the station will receive stuttered dial tone when it has a message waiting indication; and the station will receive a busy tone burst before dial tone when in the DND mode. Disable: This station will receive normal dial tone when it has a message waiting or when it is in the DND mode.
39 Tenant Number	Enter the Tenant number to which this PDN should be assigned. (This feature is available with CTX R2.2 or higher and CTX WinAdmin R2.2G.0 and higher.) Possible values: 1~8
40 Auto-Campon to PDN	This feature allows automatic camp-on to a PDN, even when it is busy and called by a CO line. If Automatic Camp-on to PDN is enabled, a call to a PDN can camp on even if the CO line group has auto-camp on disabled in Program 304-17. Possible values: Enable: Allow auto camp-on to PDN Disable: No auto camp-on to PDN
41 LCR PDN Code	Enter the number of digits that determine when to send the LCR PDN code. The PDN code is registered in the LCR Modified Digits table. Possible values: 3 or 4 digits.

Table 5-5 BRI Bearer Capability of ISDN

Bearer Services			Bellcore Nat'l ISDN	ETSI	TTC
Circuit Mode	Speech		X	X	X
	3.1kHz Audio		X	X	X
	7kHz Audio			X	X
	Unrestricted Digital Information	64 kbps	X	X	X
		Rate adaptation from 56 kbps	X		
		2x64		X	X

217 ISDN Station Data

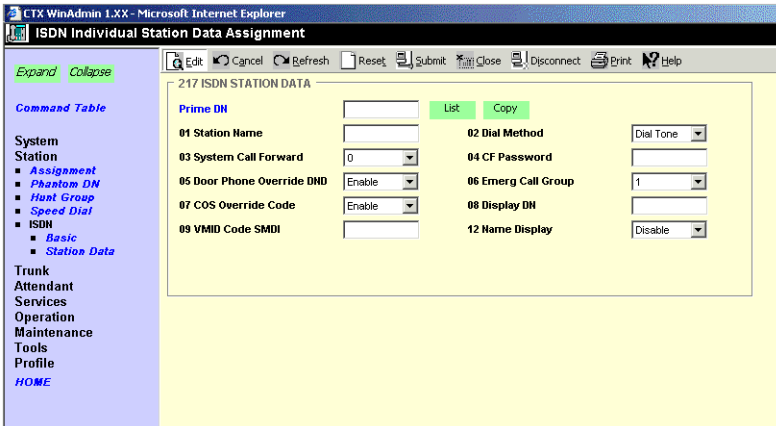
Prerequisite Program: *202 page 5-37*

Set ISDN Station parameters to define ISDN capabilities.

1. Complete the "ISDN Station Data Record Sheet" on page D-20.
2. From the Program Menu, click Station > ISDN > Station Data. The ISDN Individual Station Data Assignment screen displays (shown right).
3. Enter a *Primary DN* for an existing record

   ...or click one of the following buttons:

   - List – view a summary list of programmed Hunt Groups.
   - Copy – Enter a DN in the *Primary DN* field and click Copy to make a new DN assignment with BRI Station settings copied from the DN entered in the *Primary DN* field.
4. Set up ISDN Station Data using the Program Detail table below.
5. Click Submit.



FIELD	DESCRIPTION
Primary DN	Enter Primary DN. Possible values: Up to 5 digits (default = no value)
01 Station Name	Enter a name for this station. Possible values: Up to 9 ASCII characters (default = no value)
02 Dial Method	Select the audible tone when dialing. Possible values: Dial Tone (default), Entry Tone or No Tone
03 System Call Forward	Select the System Call Forward assignment for this station. Possible values: 0~32 (default = 0)
04 CF Password	Protect the System Call Forward settings by creating a password. Possible values: Up to 4 digits (default = no value)
05 Door Phone Override DND	Enable the Door Phone ringing indicator to override Do Not Disturb. Possible values: Enable or Disable (default)
06 Emerg Call Group	Select this station's emergency call group. Possible values: 1~8 (default = 1)
07 COS Override Code	Enable Class of Service override. Possible values: Enable or Disable (default)
08 Display DN	Enter the DN to be displayed on the LCD. Possible values: Up to 5 digits (default = no value)

FIELD	DESCRIPTION
09 VMID Code SMDI	Enter the voice mail box number that should answer calls when this PDN calls voice mail; or, when this PDN is called and then forwards to voice mail (this number is prefixed by codes in Program 579, 11~16). Possible values: Digits 0~9, * and #, up to 10 characters (default = no value). **Note** This VMID code is sent to the voice mail device in SMDI packets or DTMF tones on direct and forwarded calls to the PDN. See Program 580 for SMDI or DTMF choice.
12 Name Display	Whether to put the user name in the list display. Possible values: Enable or Disable (default)

Setup Wizards

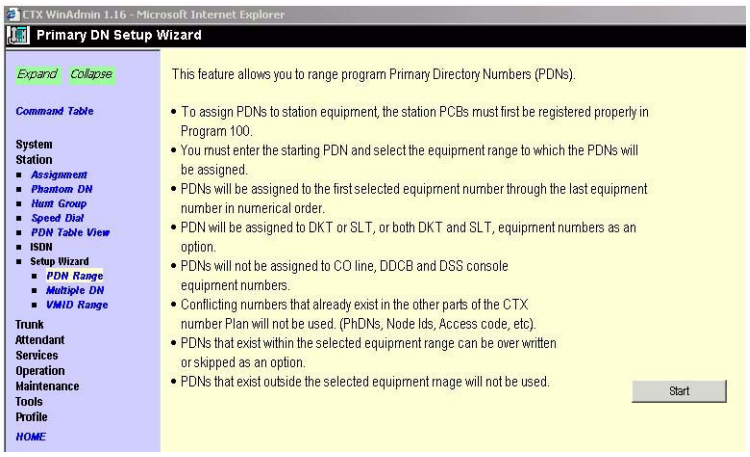
There are three Station setup wizards—PDN Range, Multiple DN, and VMID Range. Each of them are described below.

PDN Range Setup Wizard

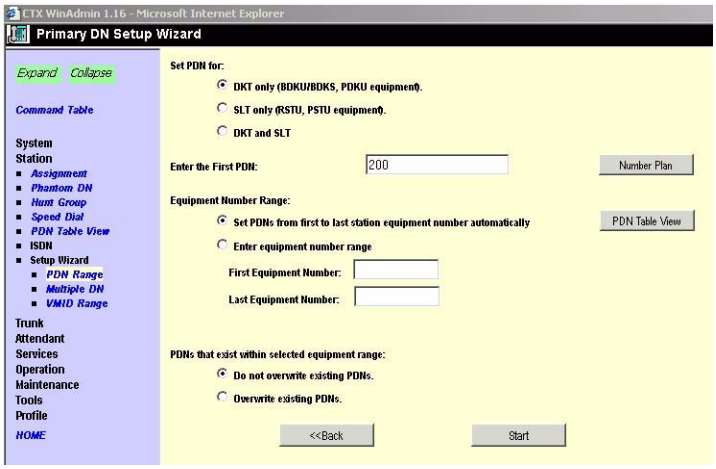
This wizard is a programming time saver that reduces the time it takes to create or change Primary Directory Numbers (PDN) and assign them to phones. The wizard guides the user to create a range of desired PDNs to be assigned to a range of available station ports.

1. Select Station > Setup Wizard > PDN Range.

   Review the instructions that display on the Wizard screen (shown right).



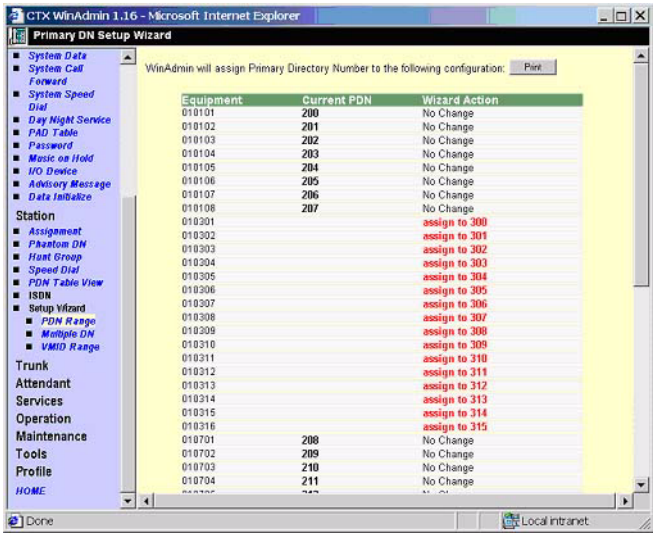
2. Click Start. The Primary DN Setup Wizard screen displays (shown right).
3. Select the appropriate radio buttons and enter the data in the other fields.
   - Range of associated PDN equipment.
   - Selection to overwrite the existing PDNs.
4. (Optional) Click Number Plan button to access Numbering Plan page.
5. (Optional) Click PDN Table View button to view existing PDN Table.



6. Press Start to create PDNs.

   The screen containing the PDN assignments (shown right) displays.

Note The first available equipment number (card slot/circuit) is automatically used to create the first PDN, etc.



Multiple DN Assignment Wizard

Important!

- *To avoid conflicts on new installations, you should use this wizard immediately after establishing and assigning Primary DNs on telephones, especially before you program key strips or hunt groups.*
- *The wizard can be used to assign Multiple DNs to new stations when adding new station cards.*

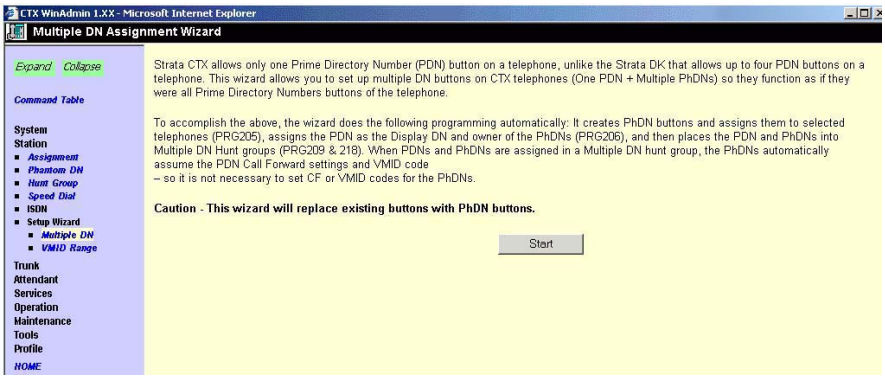
This wizard substantially reduces CTX installation time when you need multiple DN buttons on telephones. Multiple DNs are required in most CTX installations.

The wizard automatically programs multiple buttons onto telephones to operate as PDN buttons on the telephones. This wizard automatically groups the telephone's PDN button with the Phantom Directory Number (PhDN) buttons so they all operate like PDNs on the telephone—this simulates Strata DK multiple PDN operation. You will not have to set Call forward or VMID codes for the PhDNs since they automatically assume the PDN Call Forward and VMID code assignments.

On these screens you need to specify how many button appearances should appear as PDNs on each telephone or range of telephones (the number of buttons including the PDNs plus the PhDNs). You should also specify the starting PhDN and Hunt Group number to be used to set up the multiple DN groups.

Important! *Make sure you know exactly how many multiple DNs should be on each telephone before using this wizard. After running the Multiple DN wizard, deletions or additions to Multiple DN assignments must be made manually, one-by-one, for each telephone PhDN button and Multiple DN hunt group. The wizard does not support changing existing Multiple DN assignments in this version of CTX WinAdmin.*

1. Click Station > SetUp Wizard > Multiple DN. The Multiple DN Assignment Wizard screen displays (shown right).



2. Click Start. CTX WinAdmin automatically assigns the:
   - Appropriate number of PhDN buttons onto the telephone. These operate as PDN buttons on the telephone. PhDNs are assigned in sequence starting with the first button above the PDN.

CAUTION! If other buttons were installed in a PhDN location they will be overwritten.

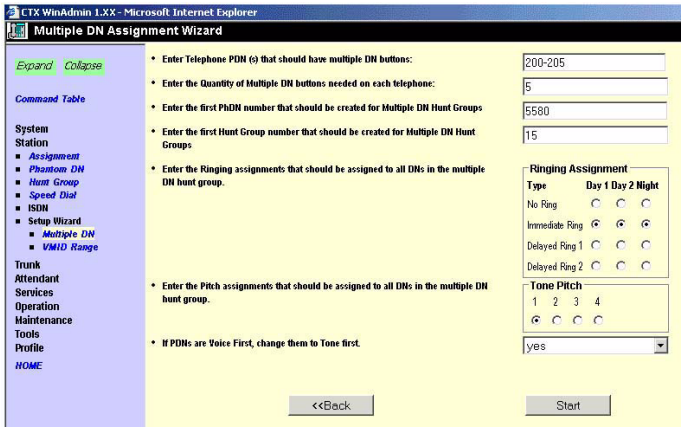
   - Appropriate telephone as the owner of the PhDN buttons, starting with the PhDN you specified.
   - PDN of the telephone as the name of the PhDN buttons.
   - PDN and appropriate PhDNs of the telephone to the appropriate Multiple DN Hunt group, starting with Hunt group number you specified.

   The screen shown at right displays.

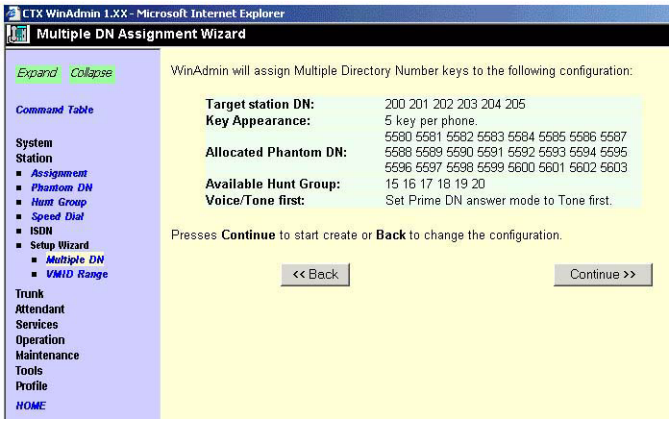
3. Based on your requirements, enter the necessary fields.

Note The example on this screen shows that five buttons were entered. This assigns the PDN plus four PhDNs on the telephone starting with Key 1~Key 5.

4. Click Start to generate the request.



The screen changes to the one shown at right.



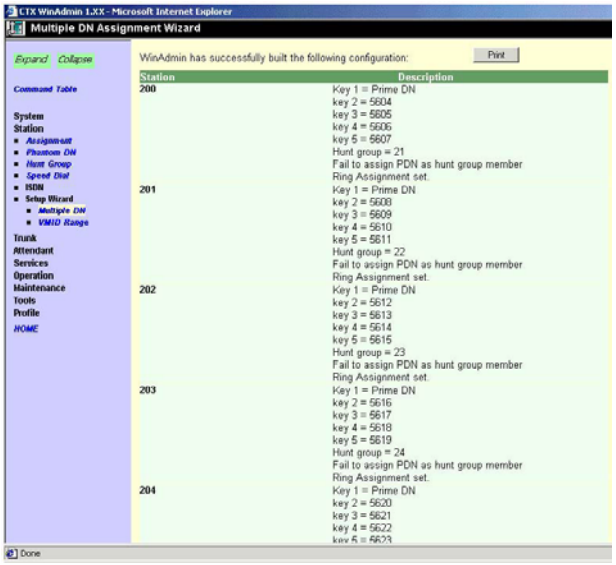
Important!

- *This is a report that provides the Multiple DN assignments that will be sent to the CTX.*
- *Ensure that this information is correct before you click Continue. You can change the assignments by clicking Back.*

5. Click Continue to generate results onto CTX database.

Note To modify these entries later, you will have to use the appropriate individual program assignments.

6. Review the configuration screen. This is how the multiple DNs are assigned in the CTX after the wizard is done.
7. (Optional) To print the configuration results, click Print.
8. To exit, select a command from the Program pane.



VMID Range

This wizard reduces CTX programming time when you need to assign Voice Mail ID (VMID) codes. The wizard will automatically assign specified VMID codes for a range of Primary DNs, PhDNs, and/or Pilot DNs.

Specify the range of PDNs, PhDNs, or Pilot DNs that should have VMID code assignments. Then select the VMID code assignment method.

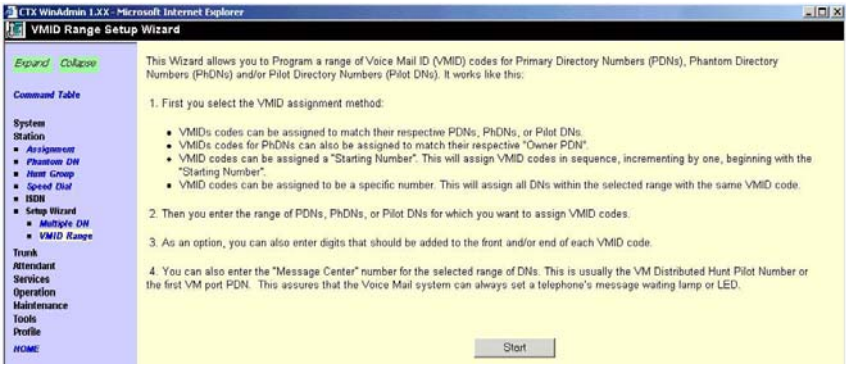
The three code assignment methods are to assign the VMID to:

- Be the same number as the appropriate DN (PDN, PhDN or Pilot DN).
- Start at specific number and increment by one for each consecutive DN.
- Be the same number for all DNs.

In addition to the above assignments, specific digits including * and # can be added to the front and/or back of each VMID. This is not for Stratagy codes 91, 92, etc., they are set in Program 579.

You can program a range of VMID codes for PDNs, PhDNs and/or Pilot DNs.

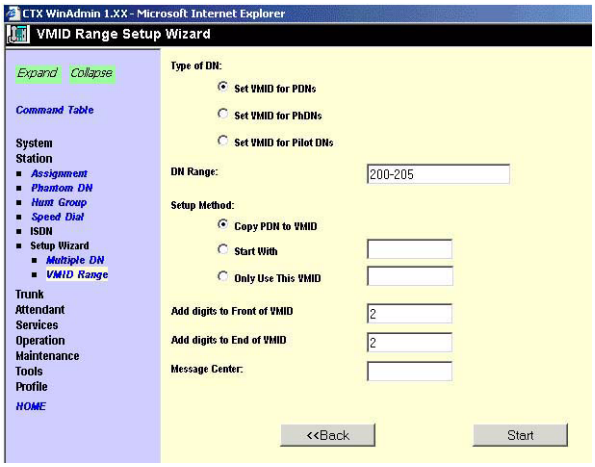
1. Select Station > Setup Wizard > VMID Range.
2. The VMID Range Setup Wizard displays (shown at right).



3. Click Start. The input screen of the VMID Range Setup Wizard displays (shown at right).
4. Select the type of VMID that should be assigned to the PDN, PhDN or Pilot DN. Then select the assignment method and the digits, if any, to be added to front and/or end of each VMID.

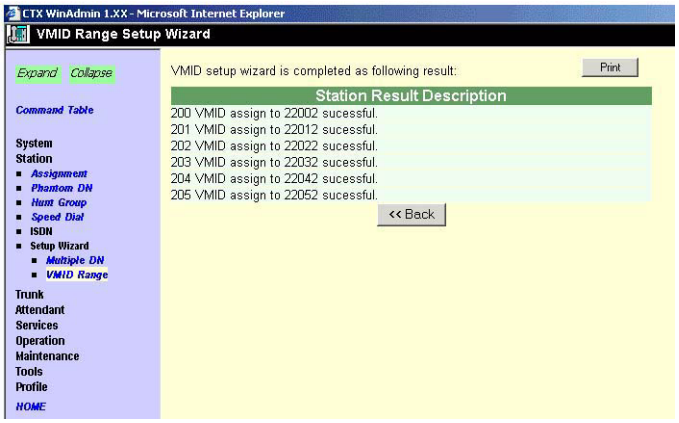
Note DN range is supported. VMID prefix and/or suffix are supported.

5. Click Start to submit the settings to the CTX database.



The result requested displays on the screen shown at right.

6. (Optional) Click Print to save a hard copy of the VMID assignment.



Trunks 6

This chapter provides trunk programming information for Strata CTX.

304 Incoming Line Group

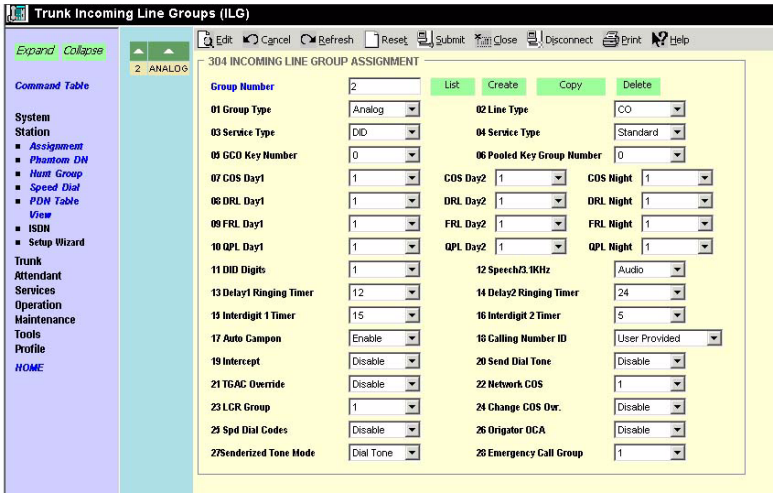
Program Number(s): 304

Incoming Line Groups (ILG) is a line selection feature which enables the use of external trunk or private line groups for incoming service.

1. Complete the "ILG Record Sheet" on page D-21.
2. From the Program Menu, click Trunk > ILG. The Trunk ILG screen displays (shown right).
3. Enter an ILG number

   ...or click one of the following buttons:

   - List – view a summary list of programmed ILGs.
   - Create – Assign a new ILG with default settings.
   - Copy – Enter an ILG in the *Group Number* field and click Copy to make a new ILG assignment with settings copied from the ILG entered in *Group Number*.
   - Delete – Delete an ILG.
4. Enter Program 304 data.
5. Click Submit.



304 Incoming Line Group Assignment

Prerequisite Program: *None*

This assignment is used to configure ILGs only, OLGs are configured in the Outgoing Line Group Assignment 306. The same line can be placed in an ILG and OLG.

FIELD	DESCRIPTION
00 Group Number	Enter the group number of the line group that should be configured. Possible values: 1~32 (CTX28 & CTX100), 1~50 (CTX670 Basic), 1~128 (CTX670 Exp), (default = no value)
01 Group Type	Select the ILG Type. Possible values: Analog (default) or ISDN
02 Trunk Type	Select the Trunk Type. Possible values: CO (default) or Tie
03 Service Type	Select CO Trunk Service Type. Possible values: DID or DIT (default)
04 Private Service Type	Select the Tie Trunk Service Type. This field is required when Trunk Type is set to Tie. Possible values: Standard (default) or QSIG
05 GCO Key Number	Select ILG GCO Key Group for DIT mode (see Trunk Type above). The same GCO cannot belong to different ILGs. Possible values: 0~32 (CTX28 & CTX100), 0~50 (CTX670 Basic), 0~128 (CTX670 Exp), (default = 0)
06 Pooled Key Number	Select ILG Pooled Line Key Group for DIT mode. The same Pooled Line Group cannot belong to different ILGs. Possible values: 0~32 (CTX28 & CTX100), 0~50 (CTX670 Basic), 0~128 (CTX670 Exp), (default = 0)
07 COS	Select Day 1, Day 2 and Night Values. Possible values: 1~32 (default = 1)
08 DRL	Select Day 1, Day 2 and Night Values. Possible values: 1~16 (default = 1)
09 FRL	Select Day 1, Day 2 and Night Values. Possible values: 1~16 (default = 1)
10 QPL	Select Day 1, Day 2 and Night Values. Possible values: 1~16 (default = 1)
11 DID Digits	Select number of DID digits received from CO. Possible values: 0~7 (default = 0)
12 Speech/3.1 KHz	Select Bearer Capability 3.1 KHz Audio or Speech. Possible values: Audio (default) or Speech

FIELD	DESCRIPTION
13 Ringing Timer Delay 1	Select time to ring the Delay 1 destination. Possible values: 1~60 sec. (default = 12)
14 Ringing Timer Delay 2	Select time to ring the Delay 2 destination. Possible values: 1~60 sec. (default = 24)
15 Interdigit 1 Timer	Select Interdigit 1 timer value. Possible values: 1~180 sec. (default = 15)
16 Interdigit 2 Timer	Select Interdigit 2 timer value. Possible values: 1~180 sec. (default = 5)
17 Auto Camp-on	Select in box to toggle Automatic Camp-on. Possible values: On (default) or Off
18 Calling Number ID	Select Calling Number Identification source. Possible values: User Provided (default) or Network Provided
19 Intercept	Enable Intercept. A call is transferred to a special destination called intercept position when the destination of a trunk line call is not determined with DID, DIT or DISA. Intercept is also activated when the destination is determined, but the call cannot be terminated due to a defect or an incorrect number. If the system has a simplified attendant console, the Attendant Console is usually specified to terminate the call. This function ensures termination of a trunk line call. Possible values: Enable or Disable (default)
20 Send Dial Tone	Enable Send Dial Tone. Possible values: Enable or Disable (default)
21 TGAC Override	Enable Trunk Group Access Code (TGAC) override. Possible values: Enable or Disable (default)
22 Network COS	Enter the Network COS number. Possible values: 1~32 (default = 1)
23 LCR Group	Enter the LCR Group number. Calls from this ILG cannot tandem if this field is not entered. Possible values: 1~16 (default = 1)
24 Change COS Override Code	Enable authority to change COS Override Code. Possible values: Enable or Disable (default)
25 Register Speed Dial Codes	Enable authority to create system speed dial codes. Possible values: Enable or Disable (default)
26 Originator Invoke OCA	Enable authority for the originator of a call to invoke OCA when encountering a busy station. Possible values: Enable or Disable (default)
27 Senderized Tone Mode	Send DTMF tones as a complete number rather than digit-by-digit. Possible values: Dial Tone (default), Entry Tone or Silence

FIELD	DESCRIPTION
28 Emergency Call Group	Used to enable E911 calling across a QSIG network. The QSIG ILG is assigned to an Emergency Call Group in the same way a station is in Program 200 FB17. Without this assignment, the call will not attempt to complete to one of the trunks in the Emergency Group and will result in an abandoned call. See Program 550 Enhanced 911 Emergency Call Group Assignment. Possible values: 1~8 (default = 1)
29 Tenant Number	Enter the Tenant number to which this DID number should be assigned. (This feature is available with CTX R2.2 or higher and CTX WinAdmin R2.2G.0 and higher.) Possible values: 1~8.
30 Call-By-Call Cause	Enter the condition for which incomming ISDN calls disconnect when programmed for Call-By-Call (min./max.). User Busy: Cause 17 Circuit/Channel congestion: Cause 34

306 Outgoing Line Groups

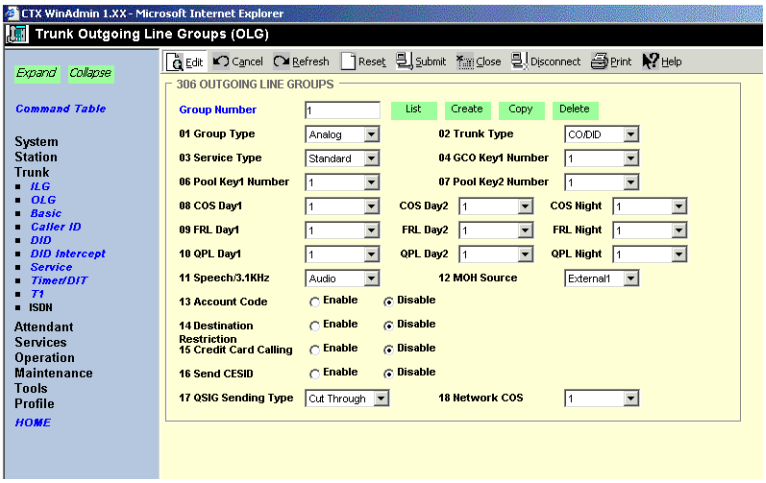
Prerequisite Program: *None*

OLG is a line selection feature which enables the use of external trunk or private line groups for outgoing service. Assign and configure up to 128 OLGs (the same line can be placed in an OLG and an ILG).

1. Complete the "OLG Record Sheet" on page D-22.
2. From the Program Menu, click Trunk > OLG. The Trunk Outgoing Line Groups (OLG) screen displays (shown right).
3. Enter an OLG number in the *Group Number* field for an existing record

   ...or click one of the following buttons:

   - List – view a summary list of programmed OLGs.
   - Create – Assign a new OLG with default settings.
   - Copy – Enter an OLG in the *Group Number* field and click Copy to make a new OLG assignment with settings copied from the OLG entered in *Group Number*.
   - Delete – Delete an OLG.



4. Enter Program 306 data.
5. Enter Program 531. See "Destination Restriction Guide Page" on page 9-10 for details.
6. Enter Program 514. See "514 SMDR for OLG Assignment" on page 9-65 for details.
7. Click Submit.

FIELD	DESCRIPTION
Group Number	Enter the OLG Group number. Possible values: 1~32 (CTX28 & CTX100), 1~50 (CTX670 Basic), 1~128 (CTX670 Exp), (default = no value)
01 Group Type	Select the OLG Type. Possible values: Analog (default) or ISDN
02 Trunk Type	Select the Trunk Type. Possible values: CO (default) or Tie
03 Private Service Type	TIE Trunk Service Type. Possible values: Standard (default) or QSIG
04 GCO Key1 Number	Select the first GCO Key Group number. Possible values: 0~32 (CTX28 & CTX100), 0~50 (CTX670 Basic), 0~128 (CTX670 Exp), (default = 0)
06 Pooled Key1 Number	Select first Pooled Line Key Group number. Possible values: 0~32 (CTX28 & CTX100), 0~50 (CTX670 Basic), 0~128 (CTX670 Exp), (default = 0)
07 Pooled Key2 Number	Select second Pooled Line Key Group number. Possible values: 0~32 (CTX28 & CTX100), 0~50 (CTX670 Basic), 0~128 (CTX670 Exp), (default = 0)
08 COS	Select Day 1, Day 2 and Night Values. Possible values: 1~32 (default = 1)
09 FRL	Select Day 1, Day 2 and Night Values. Possible values: 1~16 (default = 1)
10 QPL	Select Day 1, Day 2 and Night Values. Possible values: 1~16 (default = 1)
11 Speech/3.1 KHz	Bearer Capability 3.1 KHz Audio or Speech. Possible values: Audio (default) or Speech
12 MOH Source	Select MOH Source. Possible values: Silence, External1~15 (default = External1)
13 Account Codes	Enable Trunk forced Account Codes. Possible values: Enable or Disable (default)
14 Destination Restriction	Enable Destination Restriction. Possible values: Enable or Disable (default)
15 Credit Cart Calling	Enable Credit Card Calling. Possible values: Enable or Disable (default)
16 Send CESID	Enable CESID sending. Possible values: Enable or Disable (default)

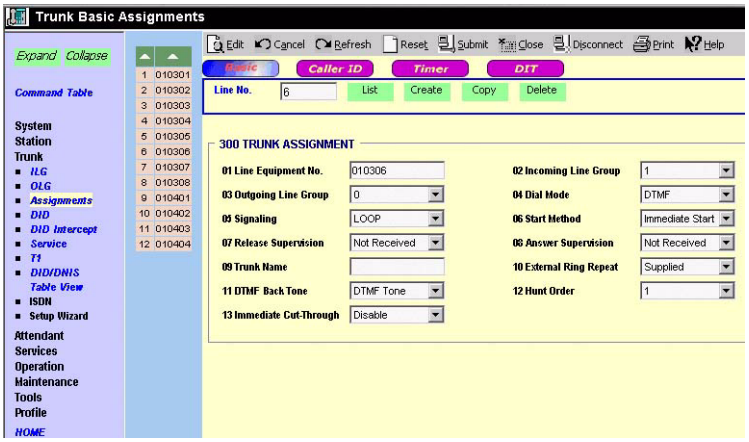
FIELD	DESCRIPTION
17 QSIG Sending Type	Digit sending Mode for QSIG only. Possible values: Cut Through or Senderized (default = Cut through)
18 Network COS	Select Network COS number. Possible values: 1~32 (default = 1)
19 Recall on AC15	This enables or disables the sending and detection of a recall signal on AC15 TIE lines. (This applies to the PACU PCBs only.)

300 Trunk Assignment

Prerequisite Program: *100 page 4-1*

Assigns an analog or T1 trunk (line) and its parameters to the system. Click on each tab to navigate through the programs. The trunks assigned to the equipment display on the left of the screen. The first column displays the trunks used and the second column displays the equipment. You can also sort based on trunks and equipment.

Important! *You must have Internet Explorer (IE) 6.0 on your PC for the sort to work correctly. If you have IE 5.0, you can upgrade to IE 6.0 using the Strata CTX CD-ROM. IE 6.0 does not auto-install from the CD-ROM; run ie6setup.exe from the IE 6.0 folder on the CD-ROM.*



1. Complete the "Trunk Assignment Record Sheet" on page D-23.
2. From the Program Menu, click Trunk > Assignment. The Trunk Basic Assignments screen displays (shown right).
3. Enter a *Trunk Number*

   ...or click one of the following buttons:

   - List – view a summary list of programmed Trunks.
   - Create – Assign a new Trunk with default settings.
   - Copy – Enter an *Trunk Number* and click Copy to make a new Trunk assignment with settings copied from the OLG entered in *Group Number.*
   - Delete – Delete an Trunk.
4. Enter Trunk Assignment Data.
5. Click Submit.
6. Click the *Go Timer/DIT* link to view Programs 308 and 310 (see "308 Trunk Timer" on page 6-10 for details).

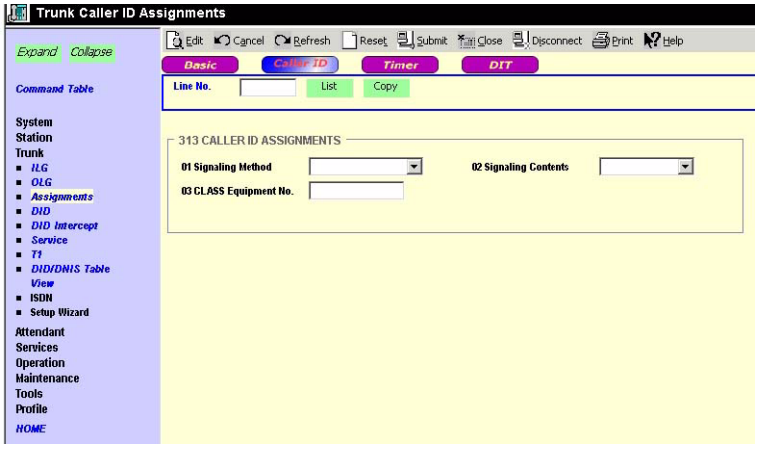
FIELD	DESCRIPTION
Line Number	Enter the Line Number. Possible values: CTX28: Line 01~03 = 0102 (01~03); Line 04~06 = 0108 (01~03) 1~64 (CTX100), 1~96 (CTX670 Basic), 1~264 (CTX670 Exp.), (default = no value)
01 Line Equipment No.	Enter the line equipment number as xxyyzz. Equipment numbers are required when assigning a new trunk to the system. It can also be used to display the equipment location of existing trunks. Example: If the trunk should be connected to an RCOU in cabinet shelf 5, slot 2, circuit 3, enter 050203. Possible values: xx = Cabinet 01~07; yy = Slot 01~10; zz = Circuit 01~08 ...or zz = T1 Circuit 01~24 (CTX670). xx = Cabinet 01; yy = Slot 01~8; zz = Circuit 01~08 (CTX100) (default = no value). Cabinet numbers: • CTX100 – Select 01 for Base and Expansion cabinet. • CTX670 – Select 01 for Base and 02~07 respectively for each Expansion cabinet. Slot numbers: • CTX100 – Select 01~04 for Base slots and 05~08 for Expansion slots. • CTX670 – Select 01~08 for Base slots and 01~10 for Expansion slots.
02 Incoming Line Group	Assign the trunk to Incoming Line Group. Two-way trunks need to be members of one incoming and one outgoing line group. Possible values: 0~32 (CTX100), 0~50 (CTX670 Basic), 0~128 (CTX670 Exp), (default = 0)
03 Outgoing Line Group	Assign the trunk to Outgoing Line Group. Two-way trunks need to be members of one incoming and one outgoing line group. Possible values: 0~32 (CTX100), 0~50 (CTX670 Basic), 0~128 (CTX670 Exp), (default = 0)
04 Dial Mode	Enter the Dial Mode. Possible values: DP 10PPS, DP 20PPS or DTMF (default) • DP 10 PPS = Rotary Dial, 10 PPS • DP 20 PPS = Rotary Dial, 20 PPS
05 Signaling	Enter the signalling type. Possible values: DID, Loop (default), Ground, Tie, LP (Japan), SR (Japan) or ACU (UK)
06 Start Method	Enter the Start Method. This setting defines the start protocol method used between the PSTN and this trunk. For DID/Tie trunks. Possible values: Immediate Start (default), Timing Start or Wink Start
07 Release Supervision	Enable Release Supervision from the CO. Possible values: Received or Not Received (default)
08 Answer Supervision	Enable Answer Supervision from the CO. Possible values: Received or Not Received (default)

FIELD	DESCRIPTION
09 Trunk Name	Enter the trunk name. Possible values: Up to 14 ASCII characters (default = no value)
10 External Ring Repeat	This option determines what ring signal is sent to telephones when a line rings the telephone. Select CO Ring Repeat (“Supplied” in older versions of software) to use the ring signal supplied by the CO or Centrex line. Select CTX Ring (“Not Supplied” in older versions of software) to use the standard ring signal supplied by the CTX. **Important!** *CTX Ring must be used on all DISA lines for proper ringing operation.* Possible values: CO Ring Repeat (default), CTX Ring
11 DTMF Back Tone	Select DTMF Back Tone type. Possible values: Padded, DTMF Tone (default) or No Tone
12 Hunt Order	Change the trunk hunting order sequence for this Trunk. Possible values: 1~264 or Last One (default = 1)
13 Immediate Cut-Through	This option should be enabled on a line only if the talk-path must be established immediately after seizing a selected outgoing line. Example, a line connected to a Central Office Ringdown circuit. Possible values: Enable, Disable (default) **CAUTION! This option will bypass Destination Restriction and E911 digit analysis. Do not enable this option on a line where these functions are required.** This option is available only on ground and loop, analog or T1 circuits. It should not be enabled for Tie, DID, ISDN and QSIG lines. Available with CTX R1.02, MA217 and above software.
14 CO Line Guard Time	The interval between the release of a CO line and its eligibility to be seized again.

313 Caller ID

Prerequisite Program: *300 page 6-6*

This program assigns Caller ID circuits to the CO Line to which the circuit is connected. The ANI, DNIS, DID formats for TI and analog DID CO Lines are also defined.



1. Complete the "Caller ID Assignment Record Sheet" on page D-24.
2. From the Program Menu, click Trunk > Assignment, the click the Caller ID tab. The Trunk Caller ID Assignments screen displays (shown right).
3. Enter a Trunk Number in *Trunk Index* for an existing record or click one of the following buttons:
   - List – to view a summary list of programmed Trunks.
   - Copy – Enter the Trunk Number in the *Trunk Number* field and click Copy to make new Caller ID trunk numbers.
4. Enter Caller ID Assignment data.
5. Click Submit.

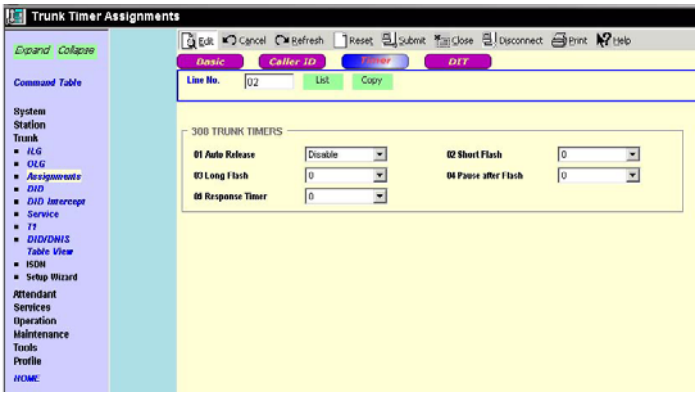
FIELD	DESCRIPTION
Trunk Number	Enter the Trunk Number. Possible values: 1~64 (CTX100), 1~96 (CTX670 Basic), 1~264 (CTX670 Exp.), (default = no value)
01 Signaling Method	Specify the format for the interface being used. Possible values: Nothing (default), ANI/DNIS-MCI, ANI/DNIS-Sprint or CLASS (Caller ID)
02 Signaling Contents	Specify the contents of the ANI/DNIS format. Possible values: ANI and DNIS, ANI only, DNIS only or DID only (default = no value).
03 CLASS Equipment No.	If the CLASS type is chosen, the trunk must be assigned to a Caller ID circuit. Enter the RCIU/RCIS equipment number as xxyyzz. Possible values: xx = Cabinet 01(CTX100); 01~02 (CTX670 Basic); 01~07 (CTX670 Exp.) yy = Slot 01~08 (CTX100); 01~10 (CTX670) zz = Circuit 01~08 **Notes** • CLASS equipment numbers are required when assigning a trunk to a RCIU/ RCIS circuit. • It can also be used to display the equipment location of existing caller ID circuit to trunk assignments. Example: If the trunk should be connected to a caller ID circuit (RCIU/RCIS) in cabinet shelf 5, slot 2, circuit 3, enter 050203.

308 Trunk Timer

Prerequisite Program: *300 page 6-6*

These commands assign Trunk timers.

1. Complete the "Trunk Timer/DIT Record Sheet" on page D-27.
2. From the Program Menu, click Trunk > Assignment, then click the Timer tab. The Trunk Timer and DIT Assignments screen displays (shown right).
3. Enter Trunk equipment number field. Enter Program 308 data.
   - List – to view a summary list of programmed Trunks timers.
   - Copy – to copy to trunk timer ports.
4. Click Submit.



FIELD	DESCRIPTION
Line No.	Enter the trunk equipment number. Possible values: xx = Cabinet 01~07; yy = Slot 01~10; zz = Circuit 01~08 or zz = T1 Circuit 01~24 (CTX670) xx = Cabinet 01; yy = Slot 01~08; zz = Circuit 01~24 (CTX100) (default = no value) **Note** Equipment numbers are required when assigning a new trunk to the system. It can also be used to display the equipment location of existing trunks.
01 Auto Release	Select the Automatic Release timing. Possible values: Disable, Detect 95ms or Detect 450ms (default) **Note** Select Disable if the CO does not send the automatic release signal to the loop start trunk.
02 Short Flash	Select Short Flash Time Possible values: 0~15, where 1 = 100msec. (default = 5, which is .5 seconds) 0 = no flash, 1 = .1 sec., 2 = .2 sec. – 15=1.5 sec. 5 is the most common duration of a hook flash signal When a telephone initiates the short flash signal to the CO line it is connected to (using the short Flash feature button or access code #450) the duration of a short flash is determined by this command. Normally this signal is used to hook flash a centrex line. The short flash range is 0 to 1.5 seconds in increments of 0.1 seconds.
03 Long Flash	Select Long Flash Time. Possible values: 0, 5, 10, 15, 20, 25 and 30, where 5 = .5 seconds. (default = 5) When a telephone initiates the long flash signal to the CO line it is connected to (using the Long Flash feature button or access code #451) the duration of a long flash is determined by this command. Normally this signal is used to disconnect the line. The long flash range is 0 to 3 seconds in increments of 0.5 seconds. Possible values: 0=no flash, 5=.5 sec., 10=1sec. 15=1.5 sec., 20=2 sec., 25=2.5 sec., 30=3 sec.

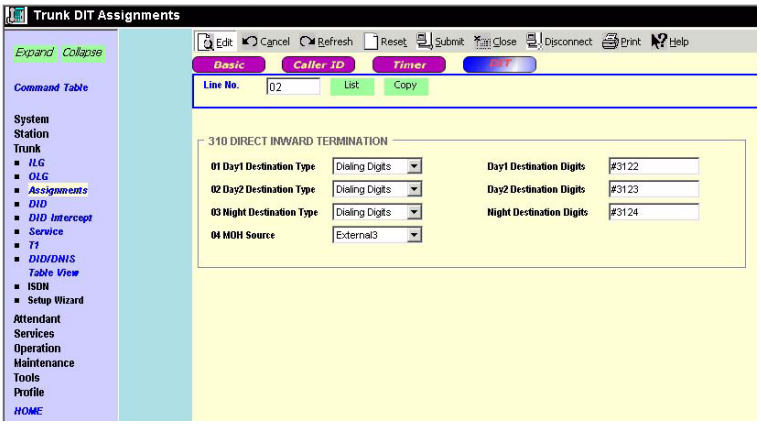
FIELD	DESCRIPTION
04 Pause after Flash	Pause time after flash: After a flash signal is sent to a CO line, this timer determines when the line will start to send the dialed digits to the other end. Possible values: 0~5, 0 = immediately sent, and 1sec.delay to 5sec.delay (default = 1 second delay before sending digits)
05 Response Information	The response timer is for analog DID/TIE lines that have the "start method" set for "Timing" in Prg300-06. After a line is seized this timer determines when the line will start to send the dialed digits to the other end. Possible values: 0=immediatly sent, and 50msec.delay to 500msec.delay (default = 500mseconds delay before sending digits)
06 Call Abandon Timer	The interval after which the CTX stops sending ring tone to stations when an incoming call is abanboned (caller hangs up before the call is answered).

310 DIT Assignment

Prerequisite Program: *300 page 6-6*

This program assigns DIT Number Analysis Table for DIT trunks. DIT trunks are ground and loop start trunks.

1. Complete the "Trunk Timer/DIT Record Sheet" on page D-27.
2. From the Program Menu, click Trunk > Assignment, then click the DIT tab. The DIT Assignments screen displays (shown right).
3. Enter Trunk equipment number field. Enter Program 310 data.
   - List – to view a summary list of programmed Trunks timers.
   - Copy – to copy to trunk timer ports.
4. Click Submit.



FIELD	DESCRIPTION
Line No.	Enter the trunk equipment number. Equipment numbers are required when assigning a new trunk to the system. It can also be used to display the equipment location of existing trunks. Example: If a line should be assigned to an RCOU in cabinet shelf 5, slot 2, circuit 3, enter 050203. Possible values: xx = cabinet 01~07; yy =slot 01~10; zz = circuit 01~08 or Channel 01~24 (CTX670). xx = cabinet 01; yy =slot 01~08; zz = circuit 01~24 or Channel (CTX100) (default = no value). Cabinet numbers: • CTX28 equipment assignments are fixed. See Program 100. • CTX100 – Select 01 for Base and Expansion cabinet. • CTX670 – Select 01 for Base and 02~07 respectively for each Expansion cabinet. Slot numbers: • CTX28 equipment assignments are fixed. See Program 100. • CTX100 – Select 01~04 for Base slots and 05~08 for Expansion slots. • CTX670 – Select 01~08 for Base slots and 01~10 for Expansion slots.
01 Day1 Destination Type **02 Day2 Destination Type** **03 Night Destination Type**	Select Destination Type for each. Possible values: : No Data (default), Dialing Digits, DISA, Built-in Modem, or Night Bell • No Data – no destination will ring when the line rings into the system. • Dialing Digits – assigns the line to ring the directory number or access code defined in the “Destination Digits” assignment • DSIA – assigns the line to ring in as a DSIA call. DSIA dial tone will be returned to the caller. • Modem – assigns the line to ring the remote maintenance modem on the CTX processor. Used to call into the system with a CTX WinAdmin PC and modem. • Night Bell – Assigns the line to cause the night relay to pulse (one-sec.close/3-sec.open)
Day1 Destination Digits **Day2 Destination Digits** **Night Destination Digits**	Enter Destination, Directory Number or Access Codes for each, only if Dialing Digits is selected as Destination Type. • If Dialing Digits is the Destination Type, enter the Directory Number that the line should ring.If the line should ring over external page, enter #31xx, where xx is the external Page group number. • If the default page access code #31 was changed, use the new page access code as the leading digits. • Line access codes and network routing numbers can also be entered to route incoming calls back out to a public or private network number. Possible values: Up to 32 digits (default = no value)
04 MOH Source	Select the MOH source for Analog DIT Trunk. The Scroll key must be used to select MOH sources indicated by 10 or higher. Possible values: External1~15 (default = External1)

309 Direct Inward Dialing

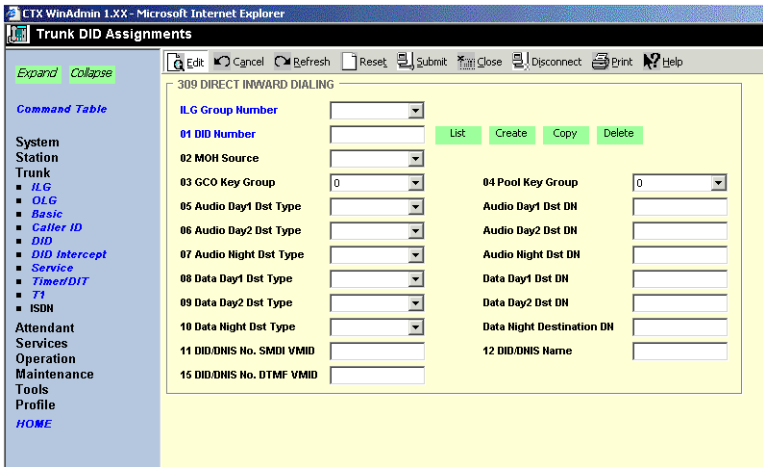
System Availability: Not available with CTX28

This command assigns DID number analysis tables to ILGs.

1. Complete the "DID Assignment Record Sheet" on page D-25.
2. From the Program Menu, click Trunk > DID. The Trunk DID Assignments screen displays (shown right).
3. Select an ILG Number.
4. Enter a DID Number in the *01 DID Number* field

   ...or click one of the following buttons:

   - List – view a list of programmed DIDs.
   - Create – Make a new DID assignment using default settings.
   - Copy – Enter a DID Number in *01 DID Number* and click Copy to make a new DID assignment with settings copied from the DID Number entered.
   - Delete – Delete a DID.
5. Enter DID Assignment data.
6. Click Submit.



FIELD	DESCRIPTION
ILG Group Number	Select the ILG number. Possible values: 1~32 (CTX28 & CTX100), 1~50 (CTX670 Basic), 1~128 (CTX670 Exp), (default = no value)
01 DID Number	Enter a DID number. Possible values: 1~7 digits may include wild card "?" where "?" = 0~9 (default = no value).
02 MOH Source	Set Music On Hold for Analog ISDN DID Trunk Possible values: Quiet Tone or External 1~15 (default = External 1)
03 GCO Key Group	GCO Key Group number. Possible values: 0~32 (CTX28 & CTX100), 0~50 (CTX670 Basic), 0~128 (CTX670 Exp), (default = 0)

FIELD	DESCRIPTION
04 Pool Key Group	If this line group is not assigned to ring a CO, GCO or a Pooled line key, enter the Destination type that should ring: No Data - no destination will ring when the line rings into the system. Dialing Digits - assigns the line to ring the directory number or access code defined in the 'Destination Digits' assignment. DISA - assigns the line to ring in as a DISA call - DISA dial tone will be returned to the caller. Modem - assigns the line to ring the remote maintenance modem on the CTX processor. Used to call into the system with a WinAdmin PC and modem. Night Bell - Assigns the line to cause the night relay to pulse (one-sec.close/3-sec.open).. Possible values: 0~32 (CTX28 & CTX100), 0~50 (CTX670 Basic), 0~128 (CTX670 Exp), (default = 0)
05 Audio Day1 Dst Type **06 Audio Day2 Dst Type** **07 Audio Night Dst Type**	If this line group is not assigned to ring a CO, GCO or a Pooled line key, enter the Destination type that should ring: No Data - no destination will ring when the line rings into the system. Dialing Digits - assigns the line to ring the directory number or access code defined in the 'Destination Digits' assignment. DISA - assigns the line to ring in as a DISA call - DISA dial tone will be returned to the caller. Modem - assigns the line to ring the remote maintenance modem on the CTX processor. Used to call into the system with a WinAdmin PC and modem. Night Bell - Assigns the line to cause the night relay to pulse (one-sec.close/3-sec.open). Possible values: No Data (default), Dialing Digits, DISA, Built-in Modem or Night Bell
Audio Day1 Destination **Audio Day2 Destination** **Audio Night Destination**	Enter the Destination Directory Number or Access Code. Possible values: Up to 32 digits (default = no value) If Dialing Digits is the Destination Type enter the Directory Number that the line should ring. If the line should ring over external page, enter #31xx, where xx is the external Page group number. If the default page access code #31 was changed, use the new page access code as the leading digits. Line access codes and network routing numbers can also be entered to route incoming calls back out to a public or private network number.
08 Data Day1 Dst Type **09 Data Day2 Dst Type** **10 Data Night Dst Type**	Select the Destination Type for data calls Possible values: No Data (default), Dialing Digits, DISA, Built-in Modem or Night Bell
Data Day1 Destination **Data Day2 Destination** **Data Night Destination**	Enter the Destination Directory Number or Access Code. Possible values: Up to 32 digits (default = no value) If Dialing Digits is the Destination Type enter the Directory Number that the line should ring. If the line should ring over external page, enter #31xx, where xx is the external Page group number. If the default page access code #31 was changed, use the new page access code as the leading digits. Line access codes and network routing numbers can also be entered to route incoming calls back out to a public or private network number.

FIELD	DESCRIPTION
11 DNIS VMID Code	Enter the VM mail box number which should answer calls for this DID/DNIS number. Possible values: Up to 10 digits (default = no value) **Note** This code is only sent if using SMDI VM integration in Program 580, 01. This code will be replaced, after voice mail answers, by the DTMF code set in Program 309, 15 DID/DNIS DTMF VMID code - if programmed; therefore, if using Program 309, 15 code, this VMID code is not necessary. This mail box number will be sent to voice mail on a DID/DNIS call that rings directly to voice mail; and, on a direct DID/DNIS call to a DN that forwards to voice mail before it is answered by the DN. If a DID/DNIS call is answered by a station and then transferred to a DN that forwards to voice mail, this mail box number of the DID/DNIS number or the forwarding DN's mail box number will be sent to voice mail per Program 579, 01. If this VMID code is not set, direct DID/DNIS calls will go to the VM general greeting and DID/DNIS calls that forward from a DN to VM will go to the DN's VMID mail box. This Voice Mail box number is added to SMDI packets direct and forwarded DID\DNIS calls to voice mail as explained above.
12 DNIS Name	Enter DNIS name. DNIS names can be assigned from the CTX WinAdmin (not from programming phones). Possible values: Up to 16 ASCII characters (default = no value)
15 DID/DNIS No. DTMF VMID	Enter the VM mail box number which should answer calls for this DID/DNIS number. Possible values: Digits 0~9, * and #. For a pause enter Px, where x=0~9 (seconds), up to 10 characters (default = no value). This mail box number will be sent to voice mail on a DID/DNIS call that rings directly to voice mail; and, on a direct DID/DNIS call to a DN that forwards to voice mail before it is answered by the DN. If a DID/DNIS call is answered by a station and then transferred to a DN that forwards to voice mail, this mail box number of the DID/DNIS number or the forwarding DN's mail box number will be sent to voice mail per Program 579, 01. If this VMID code is not set, direct DID/DNIS calls will go to the VM general greeting and DID/DNIS calls that forward from a DN to VM will go to the DN's VMID mail box. This voice mail box number is sent to the VM port, as DTMF digits, after the VM port answers a DID/DNIS call as explained above. These digits are sent to the VM port if the CTX is set for SMDI or DTMF integration in Program 580, 01.
16 Tenant Number	Enter the Tenant number to which this DID number should be assigned. Possible values: 1~8.

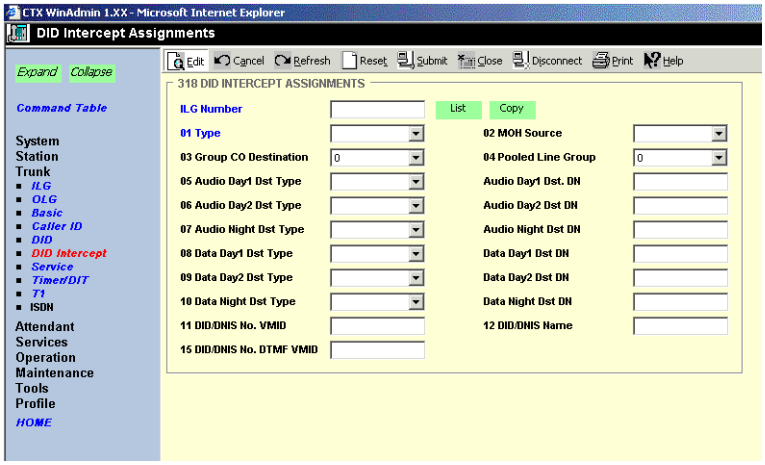
318 DID Intercept Assignments

System Availability: Not available with CTX28
Prerequisite Program: *304* *page 6-2*

This command assigns the DID Routing table when DID numbers are undefined or not received.

1. Complete the "DID Intercept Assignment Record Sheet" on page D-26.
2. From the Program Menu, click Trunk > DID Intercept.The DID Intercept Assignments screen displays (shown right).
3. Enter an ILG Number

   ...or click List to view a summary list of programmed ILGs.
4. Enter DID Type in the *01 Type* field.
5. Enter DID Intercept Assignment data.
6. Click Submit.



FIELD	DESCRIPTION
ILG Number	Enter ILG number. Possible values: 1~32 (CTX28 & CTX100), 1~50 (CTX670 Basic), 1~128 (CTX670 Exp), (default = no value
01 Type	No DID, set destination that should ring when the DID number received does not match DID numbers in this group's DID table. Not Determined, set the destination that should ring when the normal programmed ringing destination is disconnected. Possible values: No DID (default) or Not Determined
02 MOH Source	Select Music On Hold Possible values: External 1~15 (default = External 1)
03 Group CO Destination	GCO Key Group number. Possible values: 0~32 (CTX28 & CTX100), 0~50 (CTX670 Basic), 0~128 (CTX670 Exp), (default = 0)
04 Pooled Line Group	POOL Line Key Group Number. Possible values: 0~32 (CTX28 & CTX100), 0~50 (CTX670 Basic), 0~128 (CTX670 Exp), (default = 0)

FIELD	DESCRIPTION
05 Audio Day1 Dst Type **06 Audio Day2 Dst Type** **07 Audio Night Dst Type**	Select the Audio/Speech call Day1 destination type. Possible values: No Data (default), Dialing Digits, DISA, Built-in Modem or Night Bell • No Data – no destination will ring when the line rings into the system. • Dialing Digits – assigns the line to ring the directory number or access code defined in the “Destination Digits” assignment • DSIA – assigns the line to ring in as a DSIA call. DSIA dial tone will be returned to the caller. • Modem – assigns the line to ring the remote maintenance modem on the CTX processor. Used to call into the system with a CTX WinAdmin PC and modem. • Night Bell – Assigns the line to cause the night relay to pulse (one-sec.close/3-sec.open)
Audio Day1 Dst. DN **Audio Day2 Dst DN** **Audio Night Dst DN**	Enter the Destination Directory Number. Destination DN is only required if the destination type is “Dialing Digits” Possible values: Up to 32 ASCII characters (default = no value)
08 Data Day1 Dst Type **09 Data Day2 Dst Type** **10 Data Night Dst Type**	Select the data call Day1 destination type Possible values: No Data (default), Dialing Digits, DISA, Built-in Modem or Night Bell • No Data – no destination will ring when the line rings into the system. • Dialing Digits – assigns the line to ring the directory number or access code defined in the “Destination Digits” assignment • DSIA – assigns the line to ring in as a DSIA call. DSIA dial tone will be returned to the caller. • Modem – assigns the line to ring the remote maintenance modem on the CTX processor. Used to call into the system with a CTX WinAdmin PC and modem. • Night Bell – Assigns the line to cause the night relay to pulse (one-sec.close/3-sec.open)
Data Day1 Dst DN **Data Day2 Dst DN** **Data Night Dst DN**	Enter the Destination Directory Number. Destination DN is only required if the destination type is “Dialing Digits” Possible values: Up to 32 ASCII characters (default = no value)
11 DID/DNIS No. VMID	Enter the VM mail box number which should answer calls for this DID/DNIS number. Possible values: Up to 10 digits (default = no value). **Note** This code is only sent if using SMDI VM integration in Program 580, 01. This code will be replaced, after voice mail answers, by the DTMF code set in Program 318, 15 DID/DNIS DTMF VMID code - if programmed; therefore, if using Program 318, 15 code, this VMID code is not necessary. This mail box number will be sent to voice mail on a DID/DNIS call that rings directly to voice mail; and, on a direct DID/DNIS call to a DN that forwards to voice mail before it is answered by the DN. If a DID/DNIS call is answered by a station and then transferred to a DN that forwards to voice mail, this mail box number of the DID/DNIS number, or the forwarding DN's mail box number will be sent to voice mail per Program 579, 01. If this VMID code is not set, direct DID/DNIS calls will go to the VM general greeting and DID/DNIS calls that forward from a DN to VM will go to the DN's VMID mail box. This Voice Mail box number is added to SMDI packets of direct and forwarded DID\DNIS calls to voice mail as explained above.

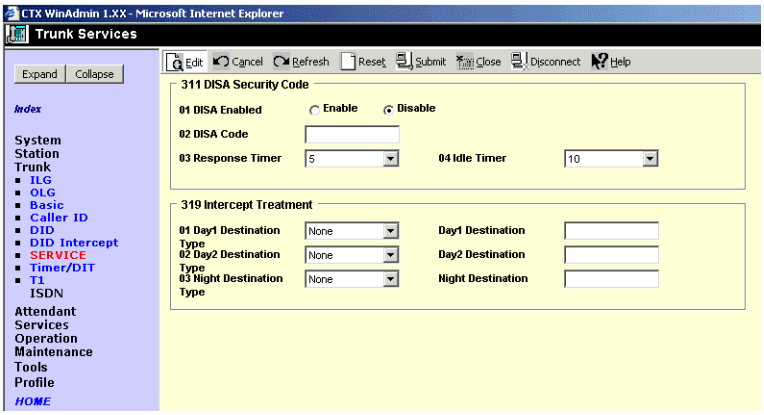
FIELD	DESCRIPTION
12 DID/DNIS Name	Enter DNIS Name. DNIS names can be assigned from the CTX WinAdmin (not from programming phones). Possible values: Up to 16 ASCII characters (default = no value)
15 DID/DNIS No. DTMF VMID	Enter the VM mail box number which should answer calls for this DID/DNIS number. Possible values: Digits 0~9, * and #. For a pause enter Px, where x=0~9 (seconds), up to 10 characters (default = no value). This mail box number will be sent to voice mail on a DID/DNIS call that rings directly to voice mail; and, on a direct DID/DNIS call to a DN that forwards to voice mail before it is answered by the DN. If a DID/DNIS call is answered by a station and then transferred to a DN that forwards to voice mail, the mail box number of the DID/DNIS number or the forwarding DN's mail box number will be sent to voice mail per Program 579, 01. If this VMID code is not set, direct DID/DNIS calls will go to the VM general greeting and DID/DNIS calls that forward from a DN to VM will go to the DN's VMID mail box. This voice mail box number is sent to the VM port, as DTMF digits, after the VM port answers a DID/DNIS call as explained above. These digits are sent to the VM port if the CTX is set for SMDI or DTMF integration in Program 580, 01.

Service

Program Number(s): 311 and 319

These commands assign Assigns Direct Inward System Access (DISA) properties.

1. From the Program Menu, click Trunk > Service. The Trunk Services screen displays (shown right).
2. Enter Program 311 data.
3. Enter Program 319 data.
4. Click Submit.



311 DISA Security Code

Prerequisite Program: *None*

Assigns DISA parameters.

FIELD	DESCRIPTION
01 DISA Enabled	Enable DISA security code. Possible values: Enable or Disable (default)
02 DISA Code	Enter DISA security code. Only required if DISA Security Code is marked as necessary. Possible values: Up to 15 digits (default = no value)
03 Response Timer	Choose the time, in seconds, the CTX will wait before answering an incoming DISA call. Possible values: 0~30 (default = 5)
04 Idle Timer	Choose the time, in seconds, the CTX will wait for the first DTMF tones after answering a DISA call. Possible values: 0~60 (default = 10)
05 Tie Line Access	Enable this feature to allow DISA callers to access Tie lines when they call into the system. (This feature is available with CTX R2.2 or higher and CTX WinAdmin R2.2G.0 and higher.) Possible values: Enable or Disable (default)

319 Intercept Treatment

Prerequisite Program: *None*

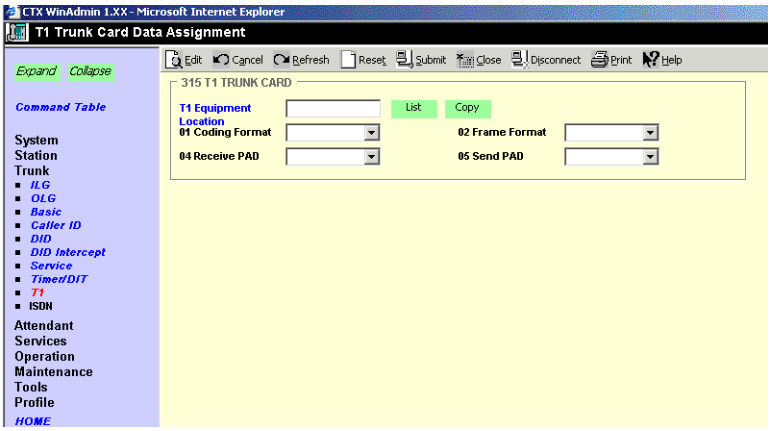
This command assigns Intercept positions for Strata CTX Day/Night schedules. Intercept positions are used when the destination of a trunk line call is not determined with DID or DIT.

FIELD	DESCRIPTION
Tenant Number	Select the Tenant number for which the Intercept Destinations should be assigned. Possible values: 1~8.
01 Day1 Destination Type **02 Day2 Destination Type** **03 Night Destination Type**	Select Destination Type for each. Possible values: None (default), Dialing Digits or Night Bell
Day1 Destination **Day2 Destination** **Night Destination**	Enter Destination for each. Possible values: Up to 32 ASCII characters (default = no value) • To intercept with a DN use 0~99999 • To intercept with a Network DN use 1~32 • To intercept with Dial Digits Paging 1~16

315 T1 Trunk Card

System Availability: Not available with CTX28
Prerequisite Program: *100 page 4-1*

This command assigns T1 Trunk Card Data to the system.



1. Complete the "Trunk Timer/DIT Record Sheet" on page D-27.
2. From the Program Menu, click Trunk > T1. The T1 Trunk Card Data Assignment screen displays (shown right).
3. Enter T1 card location in *Shelf/Slot* field (xxyy). The selected slot requires a DTU Card.
   - xx = Cabinet 01~07
   - yy = Slot 01~10

   ...or click the following buttons:
   - List – to view a summary list of programmed Trunks.
   - Copy – to T1 trunk equipment.
4. Enter values for Program 315.
5. Click Submit.

FIELD	DESCRIPTION
T1 Equipment Location	Enter the RDTU PCB equipment location. Enter data as XXYYZZ: XX=cabinet 01~07 YY=slot 01~10 ZZ=analog trunk circuit 01~08 or ZZ=T1channel 01~24. Cabinet numbers: CTX100: Select 01 for Base and Expansion cabinet. CTX670: Select 01 for Base and 02~07 respectively for each Expansion cabinet. Slot numbers: CTX100: Select 01~04 for Base slots and 05~08 for Expansion slots. CTX670: Select 01~08 for Base slots and 01~10 for Expansion slots.
01 Coding Format	Select the Coding Format. Possible values: None, PZC, B8ZS (default) or ZCS
02 Frame Format	Select the Frame Format. Possible values: SF Mode or ESF Mode (default)
04 Receive PAD	Select the Receive PAD values. Possible values: None, Plus 6 dB, Plus 3 dB, Zero dB (default), Minus 3 dB, Minus 6 dB, Minus 9 dB, Minus 12 dB or Minus 15 dB
05 Send PAD	Select the Send PAD values. Possible values: None, Plus 6 dB, Plus 3 dB, Zero dB (default), Minus 3 dB, Minus 6 dB, Minus 9 dB, Minus 12 dB or Minus 15 dB

DID/DNIS Table View

System Availability: Not available with CTX28

This screen provides the DID/DNIS Table View on the DID command page.

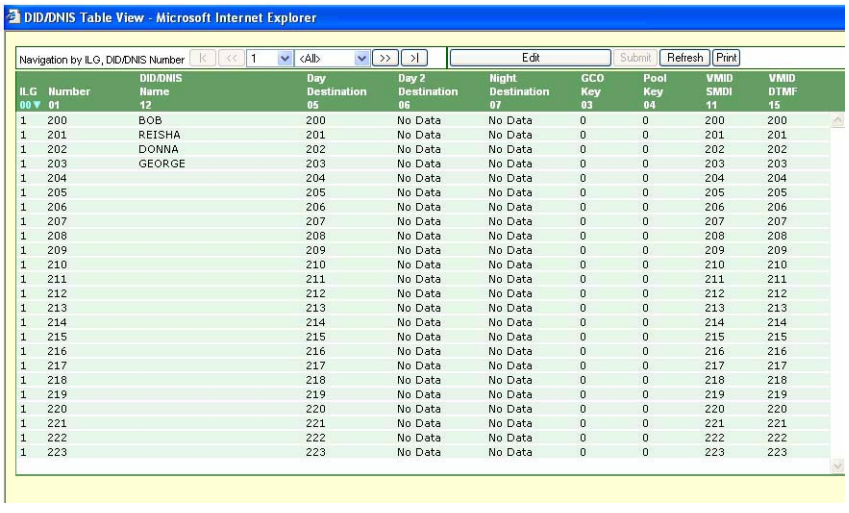
Important! *To avoid any errors, you must first set the digit length under Trunk > ILG.*

➤ **To access DID/DNIS table view**

➤ Click Trunk > DID/DNIS Table View...or use Program 309.

See "Table Views" on page 2-8 for table functionality.

Note You can navigate this table using the ILG and the DID/DNIS which are the first and second drop-downs between the Previous and Next buttons.



ILG 00	Number 01	DID/DNIS Name 12	Day Destination 05	Day 2 Destination 06	Night Destination 07	GCO Key 03	Pool Key 04	VMID SMDI 11	VMID DTMF 15
1	200	BOB	200	No Data	No Data	0	0	200	200
1	201	REISHA	201	No Data	No Data	0	0	201	201
1	202	DONNA	202	No Data	No Data	0	0	202	202
1	203	GEORGE	203	No Data	No Data	0	0	203	203
1	204		204	No Data	No Data	0	0	204	204
1	205		205	No Data	No Data	0	0	205	205
1	206		206	No Data	No Data	0	0	206	206
1	207		207	No Data	No Data	0	0	207	207
1	208		208	No Data	No Data	0	0	208	208
1	209		209	No Data	No Data	0	0	209	209
1	210		210	No Data	No Data	0	0	210	210
1	211		211	No Data	No Data	0	0	211	211
1	212		212	No Data	No Data	0	0	212	212
1	213		213	No Data	No Data	0	0	213	213
1	214		214	No Data	No Data	0	0	214	214
1	215		215	No Data	No Data	0	0	215	215
1	216		216	No Data	No Data	0	0	216	216
1	217		217	No Data	No Data	0	0	217	217
1	218		218	No Data	No Data	0	0	218	218
1	219		219	No Data	No Data	0	0	219	219
1	220		220	No Data	No Data	0	0	220	220
1	221		221	No Data	No Data	0	0	221	221
1	222		222	No Data	No Data	0	0	222	222
1	223		223	No Data	No Data	0	0	223	223

ISDN

System Availability: Not available with CTX28

The following program enables set up for ISDN related system settings.

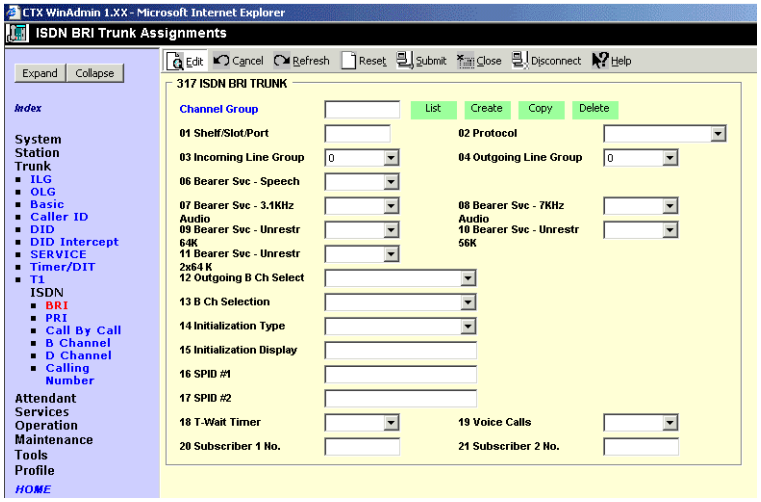
317 ISDN BRI Trunk

Prerequisite Program: *100 page 4-1*

1. This command assigns ISDN BRI Trunks.
1. Complete the "ISDN BRI Station Record Sheets" on page D-19. From the Program Menu, click Trunk > ISDN > BRI.
2. Enter Channel Group number

   ...or click one of the following buttons:

   - List – view a summary list of programmed Trunks.
   - Create – Assign a new Trunk with default settings.
   - Copy – Enter a *Channel Group* number and click Copy to make a new Trunk assignment with settings copied from the Channel Group you entered.
   - Delete – Delete an Trunk.
3. Enter data.
4. Click Submit.



FIELD	DESCRIPTION
Channel Group	Enter the BRI channel Group Number. Possible values: 1~32 (CTX28 & CTX100), 1~48 (CTX670 Basic), 1~128 (CTX670 Exp), (default = no value)
01 Equipment Number	Enter the equipment number xxyyzz to which the ISDN BRI Trunk is to be assigned. Example: If the RBUU is installed in cabinet shelf 5, slot 3, enter 050301 for circuit 1. Possible values: xx = Cabinet 01~07; yy = Slot 01~10; zz = Circuit 01~08 or 01~24 (CTX670) xx = Cabinet 01; yy = Slot 01~08; zz = Circuit 01~04 (CTX100) (default = no value). Cabinet numbers: • CTX100 – Select 01 for Base and Expansion cabinet. • CTX670 – Select 01 for Base and 02~07 respectively for each Expansion cabinet. Slot numbers: • CTX100 – Select 01~04 for Base slots and 05~08 for Expansion slots. • CTX670 – Select 01~08 for Base slots and 01~10 for Expansion slots.

FIELD	DESCRIPTION
02 Protocol	Select the ISDN protocol. Only Bearer capabilities specified by the protocol can be entered in this field. The Initial value for ISDN Protocol corresponds to information set in the hardware level. Possible values: Nat'l ISDN (default), ETSI, TTC or Nat'l ISDN Nortel National ISDN = North America, ETSI = England and TTC = Japan.
03 ILG	ILG assignments must be made for basic ISDNs to process the calls being received. Possible values: 0~32 (CTX100), 0~50 (CTX670 Basic), 0~128 (CTX670 Exp), (default = no value).
04 OLG	OLG assignments must be made for basic ISDNs to process the calls being originated. Possible values: 0~32 (CTX100), 0~50 (CTX670 Basic), 0~128 (CTX670 Exp), (default = no value).
06 Bearer Svc - Speech	Enable speech capability. See Table 6-1, "Bearer Capability Table" on page 24. Possible values: Enable (default) or Disable
07 Bearer Svc - 3.1 KHz Audio	Enable 3.1 KHz audio capability. See Table 6-1, "Bearer Capability Table" on page 24. Possible values: Enable (default) or Disable
08 Bearer Svc - 7 KHz Audio	Enable 7 KHz audio capability. See Table 6-1, "Bearer Capability Table" on page 24. Possible values: Enable or Disable (default)
09 Bearer Svc - Unrestricted 64K **10 Bearer Svc - Unrestricted 56K** **11 Bearer Svc - Unrestricted 2x64K**	Enable one of the unrestricted capabilities. See Table 6-1, "Bearer Capability Table" on page 24. Possible values: Enable (default) or Disable bearer capabilities for the channel group. Possible values: Enable (default) or Disable
12 Outgoing B Ch Select	Select originating B Channel method. Possible values: • Explicit – Channel is indicated, and no alternative is acceptable. • Preferred – (default) Channel is indicated, and any alternative is acceptable. • Any Channel – Channel is indicated, and any channel is acceptable.
13 B Ch Selection	Choose Idle B Channel selection method. Possible values: Forward Cyclic, Backward Cyclic, Forward Terminal or Backward Terminal (default = Backward Terminal) • Select Forward Cyclic (from lowest number to highest number of B-channel). • Select Backward Cyclic (from highest number to lowest number of B-channel). • Select Forward Terminal for the lowest numbered B-channel. Select Backward Terminal for the oldest number B-channel. (The High-High B-channel selection)
14 Initialize Type	Enter the Service Profile Identifier (SPID) type of initialization. Possible values: User Entry (Auto SPID On), User Entry (Auto SPID Off), Auto SPID or None (default)

FIELD	DESCRIPTION
15 Initialization Display	Enter the text to be displayed for SPID Initialization. Possible values: Up to 4 ASCII characters (default = User)
16 SPID #1 **17 SPID #2**	Enter the SPID value. These fields are required if you selected National ISDN in Protocol. When no data is entered, any previously entered information is overwritten. Possible values: Up to 20 ASCII characters (default = No Value)
18 T-Wait Timer	Enable the T-Wait Timer. This field is needed if you selected National ISDN in Protocol above. This timer, used along with the SPID, assigns random initializing SPID times to prevent BRI interfaces from re-initialize at the same time after a reset or power outage. Possible values: Enable or Disable (default)
19 Voice Calls	Select the number of simultaneous voice (speech) calls that can exist at the same time on this interface. Possible values: One or Two (default)
20 Trunk Subscriber 1	Enter the telephone number for subscriber 1. Telephone number should be consistent with D channel data. If no data is entered in this field any previously programmed information is lost. Possible values: Up to 10 digits (default = no value)
21 Trunk Subscriber 2	Enter the telephone number for subscriber number 2. If no data is entered in this field any previously programmed information is lost. Possible values: Up to 10 digits (default = no value)
22 Layer 1 Short Break Tolerant	If layer 1 is interrupted for a short period of time CTX will ignore it
23 TEI assignment	TEI assignment for ISDN CO Trunk Leave in default Possible values: TEI FIXED, SINGLE TEI or 3:TWO TEI (default)
24 Malicious Call ID	Enable - to be allow Malicious Call ID to be sent by this terminal. Disable - to not allow Malicious Call ID to be sent on this terminal.(also see Program 302-31) Note: MCID supplementry service must be provided by PSTN for this feature to operate. Possible values: Enable or Disable (default)

Table 6-1 Bearer Capability Table

Bearer Services			Bellcore National ISDN	ETSI	TTC
Circuit Mode	Speech		X	X	X
	3.1 KHz		X	X	X
	7 KHz			X	X
	Unrestricted Digital Information	64 Kbps	X	X	X
		Rate adaptation from 56 Kbps	X		
		2x64 Kbps		X	X

302 PRI and IP QSIG

System Availability: Not available with CTX28
Prerequisite Program: *100 page 4-1*

The PRI (RPTU, BPTU) and IP QSIG (BIPU-Q) interface cards need to have a number of assignments for defining its operation. These include assigning which channels are available for use and the location of the D-channel or signaling channel. The D-channel exists on the circuit assigned in this command. Also, a number of optional functional capabilities also need to be enabled or disabled.

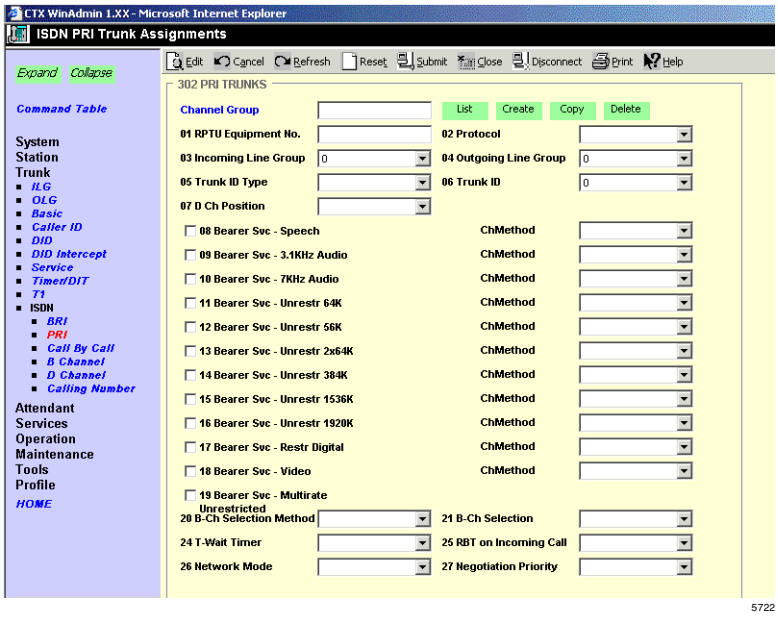
For BIPU-Q channel groups, parameters 01~04 must be configured, all other parameters should remain at default. All parameters should be configured for ISDN. Many of these are normally set to default.

Note PRI ILGs and OLGs are assigned using "Call-by-Call" on page 6-29. Therefore, ILG and OLG must be set to **0**.

1. Complete the "PRI Trunks Record Sheet" on page D-29.
2. From the Program Menu, click Trunk > ISDN > PRI.
3. Enter Channel Group number

   ...or click one of the following buttons:

   - List – View a summary list of programmed Trunks.
   - Create – Assign a new Trunk with default settings.
   - Copy – Enter an *Channel Group* number and click Copy to make a new Trunk assignment with settings copied from the Channel Group entered.
   - Delete – Delete an Trunk (Trunks 1~128 for CTX670 and 1~32 for CTX100).



4. Enter data.
5. Click Submit.

FIELD	DESCRIPTION
Channel Group	Channel Group Number. Assign the proper PAD levels to channel groups in Programs 107, 108 and 114. These levels are critical for ISDN and IP QSIG speech levels, as well as Quality Of Service. Possible values: 1~32 (CTX100), 1~48 (CTX670 Basic), 1~128 (CTX670 Exp), (default = no value)

FIELD	DESCRIPTION
01 RPTU Equipment No.	Enter the ISDN RPTU, BPTU or BIPU-Q equipment number as xxyyzz. XX=cabinet 01~07 YY=slot 01~10 ZZ=T1channel 01~24. (default = no value) Cabinet numbers: CTX100: Select 01 for Base and Expansion cabinet. CTX670: Select 01 for Base and 02~07 respectively for each Expansion cabinet. Slot numbers: CTX100: Select 01~04 for Base slots and 05~08 for Expansion slots. CTX670: Select 01~08 for Base slots and 01~10 for Expansion slots. **Note** zz = Channel 01 is always used to assign RPTU, BPTU or BIPU-Q parameters Example: If the RPTU is installed in cabinet shelf 5, slot 3, enter 050301. Enter the equipment number xxyyzz to which the ISDN PRI Trunk is to be assigned. Equipment numbers are required when assigning ISDN RPTU parameters in the system. They can also be used to display the equipment location of existing RPTU PCBs.
02 Protocol	The Protocol to be followed defines the type of interface expected based upon the equipment type at the distant end of the connection. In North America, the choices are 1-Bellcore National ISDN; 4-Bellcore National ISDN NT; or 5-Q-Sig. Use IP for BIUP-Q, IP Qsig. Use QSIG for RPTU/BPTU, PRI Qsig Possible values: National ISDN, ETSI, TTC, National ISDN Nortel or Q-Sig (default = None)
03 ILG	ISDN and IP Qsig need to have Trunk Group assignments to process the calls being received. If multiple trunk groups are used within the Channel Group, then Call-by-Call Services must be used. Possible values: 0~32 (CTX100), 0~48 (CTX670 Basic), 0~128 (CTX670 Exp), (default = 0)
04 OLG	ISDN and IP Qsig needs to have Trunk Group assignments to process the calls being originated. If multiple trunk groups are used within the Channel Group, then Call-by-Call Services must be used. Possible values: 0~32 (CTX100), 0~48 (CTX670 Basic), 0~128 (CTX670 Exp), (default = 0)
05 Trunk ID Type	Identify whether the communication with the PSTN requires an identifier. Select Explicit to require an identifier. Possible values: Implicit (default) or Explicit
06 Trunk ID	An identifier must be used as part of the addressing when an “explicit” identified is used to communicate with the PSTN which channel on which link is used for the given call. This identifier is assigned by the connected PSTN. Possible values: 0 ~ 126 (default = 0)

FIELD	DESCRIPTION
07 D Ch Position	PRI includes a 64-kbps D-channel (for transfer of signal information). Select the channel position to be used for D channel signaling. **Note** This field is used only when the span interface speed is 1.5M. If the span interface speed is 2M the value is fixed at 16. Possible values: 0 ~ 24 (default = 24)
08~13 Bearer Services: • **Speech** • **3.1 KHz Audio** • **7 KHz Audio** • **Unrestr. 64K** • **Unrestr. 56K** • **Unrestr. 2x64K**	1. Enable the Bearer Capabilities allowed for this PRI Trunk channel group. Possible values: Enable (default) or Disable 2. Select the Channel Method (map) to identify the channels. **Note** In North America, only Channel Number map is used (Channel Number). See Table 6-2. Possible values: Channel Number (default) or Slot Number
14~18 Bearer Services: • **Unrestr. 384K** • **Unrestr. 1536K** • **Unrestr. 1920K** • **Restr. Digital** • **Video**	1. The Bearer Capabilities (384k Unrestricted(H0), 1536k Unrestricted(H11), 1920k Unrestricted, Restricted Digital Info, Trunk Video, and Unrestricted Multirate) are not used and should remain disabled. Possible values: Enable or Disable (default) 2. Select the Channel Method (map) to identify the channels. **Note** In North America, only Channel Number B map is used. See Table 6-2. Possible values: Channel Number B (default), Channel Number H, Slot Map B or Slot Map H
19 Bearer Svc Multirate Unrestricted	The Bearer Capabilities 384k Unrestricted (H0), 1536k Unrestricted (H11), 1920k Unrestricted, Restricted Digital Info, Trunk Video and Unrestricted Multirate are not used and should remain disabled. See Table 6-2. Possible values: Enable or Disable (default)
20 B Ch Selection Method	The method used for selecting an idle 'B' channel and the reaction if the PSTN indicates the channel is not available needs to be chosen to originate a call from CTX. Possible values: Explicit (default), Preferred or Any Channel Preferred option is recommended, unless PSTN needs other choice.
21 B-Ch Selection	The search method for choosing an idle 'B' channel shall also be specified. Backward Terminal is the normal method with the PSTN following a Forward Terminal method. Possible values: Forward Cyclic, Backward Cyclic, Forward Terminal or Backward Terminal (default)
22 T1 Time Slot Pattern	1544 Time Slot Pattern. Possible values: Fixed1 (default), Flexible or Floating
23 E1 Time Slot Pattern	2048 Time Slot Pattern Possible values: Fixed1 (default), Fixed2 or Flexible
24 T-Wait Timer	Specify whether the T-Wait timer is to be enabled or disabled. This field is only valid for Nat'l ISDN. This should not be enabled for PRI, it is for BRI. Possible values: Enable or Disable (default)

FIELD	DESCRIPTION
25 RBT on Incoming Call	Enable Ringback Tone when terminating a call. This field is only valid for Nat'l ISDN. Possible values: Enable or Disable (default)
26 Network Mode	Set this span as Master or Slave for Layer 2 of a QSIG PRI. The opposite value must be set for the node in which this QSIG PRI terminates. This governs call setup activity and is not related to clock synchronization. Possible values: Master (default) or Slave
27 Negotiation Priority	Sets this span as Side A or Side B for Layer 3 of a QSIG PRI. The opposite value must be set for the node in which this QSIG PRI terminates. Possible values: Side A (default) or Side B
28 Layer 1 Short Break Tolerant	If layer 1 is interrupted for less than 90 seconds. CTX will keep the current calls open. (This feature is available with Strata CTX R2.2 or higher and CTX WinAdmin R2.2G0 or higher.) Possible values: Enable (default) or Disable
29 2-B channel Transfer	Enable this option to allow 2-B channel conference on PRI calls. This allows to PRI channels to be connected in the same conference or Tandem call. **Note** This option must also be enabled by PRI provider to allow it to work.
30 Q931 Protocol Timer	Sets the Q931 Protocol Timer. If Long is set, T303 is 8s and T301 is 300s.

Table 6-2 Bearer Services Table

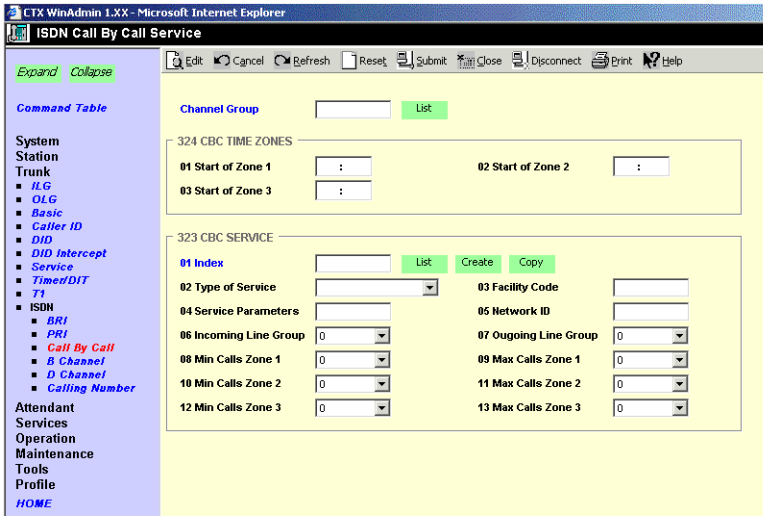
Bearer Services			**Nat'l ISDN**	**ETSI**	**TTC**
Circuit Mode	Speech		X	X	X
	3.1 KHz Audio		X	X	X
	7 KHz Audio			X	X
	unrestricted digital information	64 kbps	X	X	X
		Rate adaptation from 56 kbps	X		
		2x64		X	X
		384kbp (H0)	X	X	X
		1536kbps (H11)	X	X	X
		1920kbps (H12)		X	
		multirate (n x 64 kbps)	X		
	Restricted digital Information			X	X
	Video			X	X
Packet Mode	Shelf/Slot/Circuit				

Call-by-Call

System Availability: Not available with CTX28
Program Number(s): 324 and 323

Call-by-Call service allows multiple facilities to share a PRI channel group. Traffic requirements of different facilities vary at different times, and sharing B channels on a Call-by-Call basis makes it possible to use fewer B channels to perform an equivalent service to the discrete counterpart.

1. Complete the "324 CBC Time Zones" on page 6-30.
2. From the Program Menu, click Trunk > ISDN > Call by Call. The ISDN Call by Call Service screen displays (shown right).
3. Enter Channel Group number.
4. Enter Program 323 data.
5. Enter Program 324 data.
6. Click Submit.



323 CBC Service

Prerequisite Program: *302 page 6-25*

Call-by-Call service allows multiple facilities to share the PRI channel group. Since the traffic requirements of each facility may vary at different times, it becomes possible to use fewer 'B' channels to perform the equivalent services of the discrete counterpart. This sharing the 'B' channels on a call-by-call basis can save the user money. To accomplish CBC services, each facility needs to be defined, its related Line Group assigned and minimum and maximum values for the services provided. These service parameters may be set for three different time zones, thus allowing fewer or more services of different types at different times of the day. Complete the "Call-by-Call Record Sheet" on page D-30.

FIELD	DESCRIPTION
Channel Group	Enter the Channel Group Number. Possible values: 1~32 (CTX100), 1~48 (CTX670 Basic), 1~128 (CTX670 Exp.), (default = no value)
01 Index	Enter the CBC Service Index, or click one of the following buttons: • List – view a summary list of programmed Trunks. • Create – Assign a new Trunk with default settings. Possible values: 0~32 (CTX100), 0~48 (CTX670 Basic), 0~128 (CTX670 Exp.), (default = no value)
02 Type of Service	Select the CBC Service Type. **Note** To delete CBC, set this field to **`1: No Data`**. Possible values: No data (default), POTS, FX, Tie Line (Enbloc), Tie Line (Cut through), Intra LATA Out WATS, Banded Out WATTS, Inter LATA Out WATS or INWATS

FIELD	DESCRIPTION
03 Facility Code	Enter the supplied Facility code value from the PSTN. If no data is entered in this field, any previously entered data is deleted. Possible values: 00~31(default = no value)
04 Service Parameter	Enter the Service parameters supplied from PSTN. If no data is entered in this field, any previously entered data is deleted. Possible values: Up to 5 digits (default = no value)
05 Network ID	Enter the Network ID code supplied from PSTN (this field is required if you selected "Inter LATA Out WATS" Type of Service. If no data is entered in this field, any previously entered data is deleted. Possible values: 3 to 4 digits (default = no value)
06 ILG	Specify the ILG for this facility. Possible values: 0~32 (CTX100), 0~50 (CTX670 Basic), 0~128 (CTX670 Exp.), (default = 0)
07 OLG	Specify the OLG for this facility. Possible values: 0~32 (CTX100), 0~50 (CTX670 Basic), 0~128 (CTX670 Exp.), (default = 0)
08 Min Calls Zone 1	Select the minimum number of Bch in Time Zone 1. Possible values: 0~47 (default = 0)
09 Max Calls Zone 1	Select the maximum number of Bch in Time Zone 1. Possible values: 0~47 (default = 47)
10 Min Calls Zone 2	Select the minimum number of Bch in Time Zone 2. Possible values: 0~47 (default = 0)
11 Max Calls Zone 2	Select the maximum number of Bch in Time Zone 2. Possible values: 0~47 (default = 47)
12 Min Calls Zone 3	Select the minimum number of Bch in Time Zone 3. Possible values: 0~47 (default = 0)
13 Max Calls Zone 3	Select the maximum number of Bch in Time Zone 3. Possible values: 0~47 (default = 47)

324 CBC Time Zones

This command assigns Call-by-Call Time Zone.

FIELD	DESCRIPTION
Channel Group	Channel Group Number Possible values: 1~32 (CTX100), 1~48 (CTX670 Basic), 1~128 (CTX670 Exp.), (default = no value)
01 Start Zone 1 **02 Start Zone 2** **03 Start Zone 3**	Enter the Time Zone Starting Time (hhmm). Possible values: hh = 00~23, 99 (hour) mm = 00~59, 99 (minutes) **9999** = delete time zone, (default = no value)

320 B Channel

System Availability: Not available with CTX28
Prerequisite Program: *302 page 6-25*

PRI interfaces are purchased on per interface and channel basis. The B channel assignments allow for a flexible activation of channels to match the subscribed services from the PSTN.

1. Complete the "B Channel Select Record Sheet" on page D-31.
2. From the Program Menu, click Trunk > ISDN > B Channel. The ISDN B-Channel Assignments screen displays (shown right).
3. Enter the Equipment Number, or click List to see a summary of progammed circuits.
4. Click the B Channel numbers that you want to activate (see Table 6-3 below for T1 and E1 B Channel default settings).
5. Click Submit.

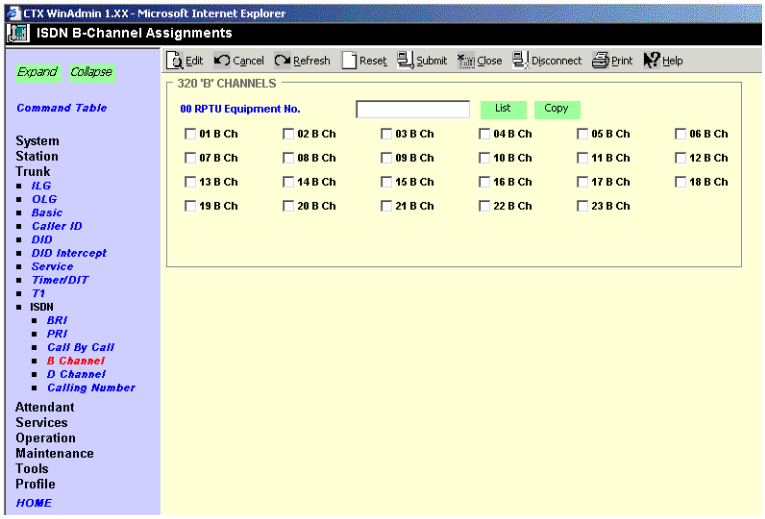


Table 6-3 B Channel Defaults

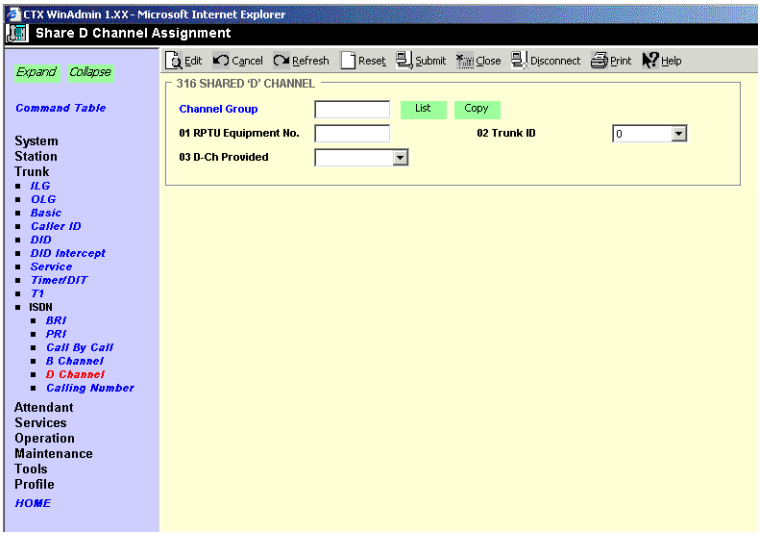
B Channel Position / Span Interface Speed	01~15	16	17~23	24	25~31
1.5M (T1)	ON	ON	ON	OFF (Dch Pos)	
2.0M (E1)	ON	OFF (Dch Pos)	ON	ON	ON

316 Shared D Channel

System Availability: Not available with CTX28
Prerequisite Program: *302 page 6-25*

The PRI Interface can be extended to include an additional PRI card to expand the total number of channels to 47 on a Channel Group. This second PRI may optionally offer a backup D channel.

1. Complete the "Shared D Channel Record Sheet" on page D-32.
2. From the Program Menu, click Trunk > ISDN > D Channel. The Share D Channel Assignment screen displays (shown right).
3. Enter the Channel Group number (1~128, default = no value), or click the *List* button to view a summary list of programmed Channel Groups.
4. Enter data.
5. Click Submit.



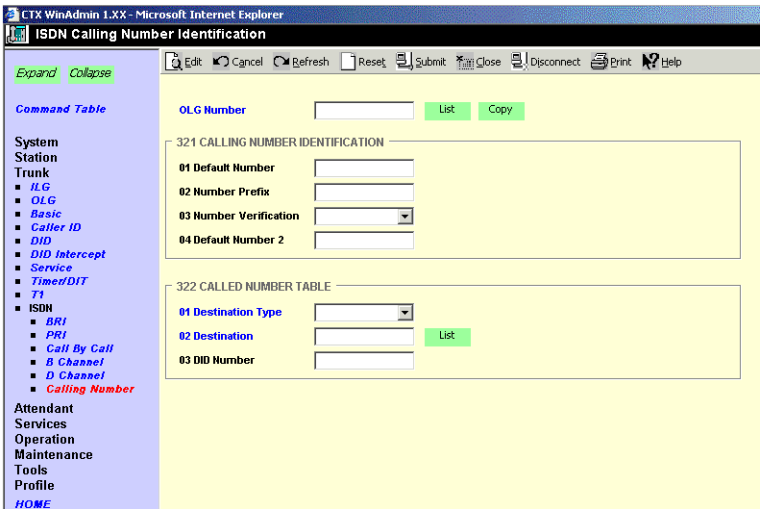
FIELD	DESCRIPTION
Channel Group	Channel Group Number. Possible values: 1~32 (CTX100), 1~48 (CTX670 Basic), 1~128 (CTX670 Exp), (default = no value)
01 Equipment Number	Enter the ISDN RPTU equipment number as xxyyzz: Possible values: xx = Cabinet 01, yy = 03, 05, or 07 and zz = Channel 01 is always used to assign RPTU parameters ...or xx = Cabinet 02~10, yy = 01, 03, or 05 and zz = Channel 01 is always used to assign RPTU parameters (default = no value) Example: If the RPTU is installed in cabinet shelf 5, slot 3, enter 050301. Equipment numbers are required when assigning ISDN RPTU parameters in the system. It can also be used to display the equipment location of existing RPTU PCBs.
02 Channel ID	An identifier must be used as part of the addressing to communicate with the PSTN which channel on which link is used the given call. This identifier is assigned by the connected PSTN. Possible values: 1~ 126 (default = 1)
03 D-Ch Provided	If a backup 'D' Channel is to be used, it needs to be enabled. Possible values: D-channel or No D-channel (default)
04 Backup D-Ch Position	The channel position within the 24 channels must be identified to be used for the 'D' channel signaling. Possible values: 1~24

Calling Number

System Availability: Not available with CTX28
Program Number(s): 321 and 322

When calls are made using ISDN services, the telephone number for which the call originates must be identified to the PSTN.

1. Complete the "Calling Number Record Sheets" on page D-33.
2. From the Program Menu, click Trunk > ISDN > Calling Number. The ISDN Calling Number Identification screen displays (shown right).
3. Enter the OLG Number, or click the *List* button to view a summary list of programmed OLGs.
4. Enter Program 321 data.
5. Enter Program 322 data.
6. Click Submit.



321 Calling Number Identification

Prerequisite Program: *306 page 6-4*

The Calling Number ID is what is defined as the user supplied Calling Number. This number may be optionally screened by the PSTN to ensure only calls from valid billable telephone numbers are allowed to originate calls.

FIELD	DESCRIPTION
OLG Number	Enter the OLG Number. Possible values: 1~32 (CTX100), 1~50 (CTX670 Basic), 1~128 (CTX670 Exp), (default = no value)
01 Default Number	Enter the telephone number to use by default when originating a call. This is the number that the PSTN has registered for billing purposes. Possible values: Up to 10 ASCII characters (default = no value)
02 Number Prefix	Enter the prefix telephone number for which a DID number will be appended to create a User Identified telephone number. Possible values: Up to 10 ASCII characters (default = no value) This number may or may not be a billed number, but is used for Caller ID at the distant end and could be used for returning your call.
03 Number Verification	Specify whether the number provided should be screened by the PSTN before the call is to proceed. Possible values: Enable or Disable (default)
04 Default Number 2	Enter the second telephone number to use by default when originating a call. Possible values: Up to 10 ASCII characters (default = no value) This is the number that the PSTN has registered for billing purposes. The second number is for BRI only

322 Called Number Table

Prerequisite Program: *306 page 6-4*

When calls are received from the PSTN, a Called Number is supplied as part of the Setup Message. This Called Number may be used for directing the call to the appropriate service with Strata CTX.

FIELD	DESCRIPTION
OLG Number	OLG Number. Possible values: 1~32 (CTX100), 1~50 (CTX670 Basic), 1~128 (CTX670 Exp), (default = no value)
01 Source Type	Specify the type of circuit used for outgoing calls: 1- PDN; 2- GCO; 3- Pooled Line. Possible values: Primary DN (0~99999), Group CO (1~128) or Pool Line Group (1~128); (default = no value)
02 Source Number	Specify the number of the source type selected (PDN, GCO or Pooled Line). Possible values: 1~32 (CTX100), 1~50 (CTX670 Basic), 1~128 (CTX670 Exp), (default = no value)
03 DID Number	Specify the number to be sent when calling out from the source (max. seven digits). This number is appended to Program 321 FB02 Possible values: Up to 7 digits (default = no value) **Note** Destination Type and Destination must be entered before a DID number can be assigned.

Trunk DID/DNIS Setup Wizard

System Availability: Not available with CTX28

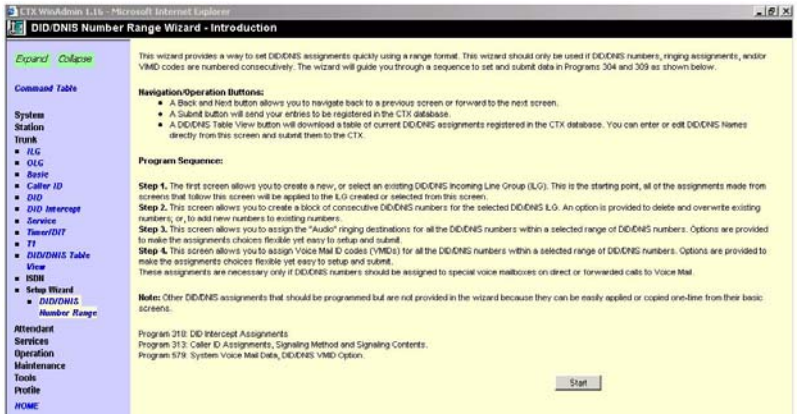
This wizard enables you to assign Direct Inward Dialing / Dialed Number Identification Service (DID/DNIS) to ILGs quickly and easily. The wizard automatically takes you through the different programs and parameters required.

Follow the steps below to start using the DID/DNIS Wizard.

Step 1: Select or Create DID/DNIS ILG

1. Select Trunk > Setup Wizard > DID/DNIS.

2. After reading the instructions on the screen (shown right), click Start.



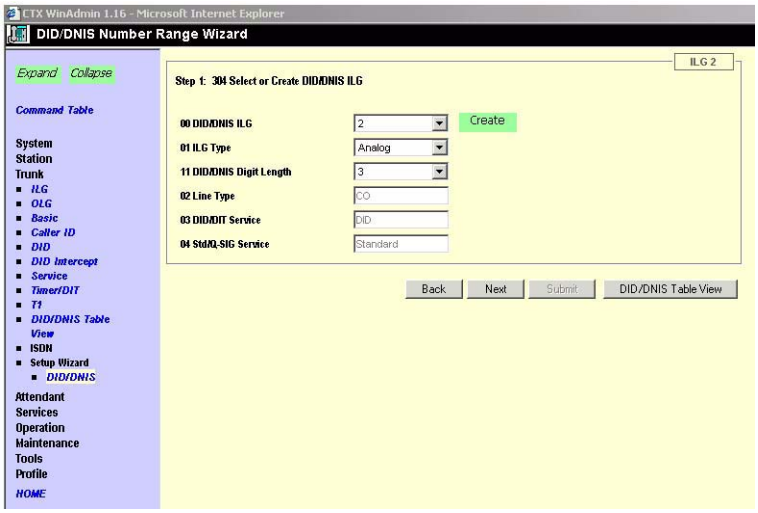
Step 1: 304 Select or Create DID/DNIS ILG screen displays (shown right).

3. In the *00 DID/DNIS Incoming Line Group (ILG)* field, click Create

   ...or from the drop-down menu, select a DID/DNIS ILG to edit.

Note Only DID/DNIS ILGs appear in the drop-down box.

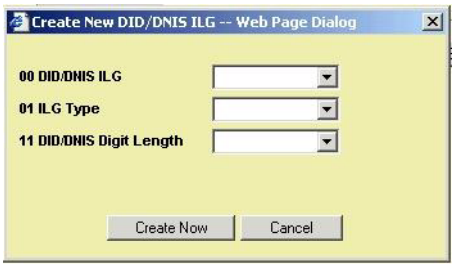
See table below for screen fields and field descriptions.



FIELD	DESCRIPTION
01 ILG Type	Select analog for RDDU or RDTU interface, or ISDN for RPTU interface.
11 DID/DNIS Digit Length	Select the number of digits (1~7) that compose each DID number for this DID/DNIS ILG. This is the number of DID digits sent from the CO on incoming DID/DNIS. If ANI digits are sent with DID digits, only set this parameter for the quantity of DID digits sent.
02 Line Type	DID lines should always be set as CO type lines.
03 DID/DIT Service	DID lines should always be set as DID service
04 Std/Q-SIG Service	DID lines should always be set for “Standard” service

4. If you clicked Create in Step 3, the Create New DID/DNIS ILG screen displays (shown at right).

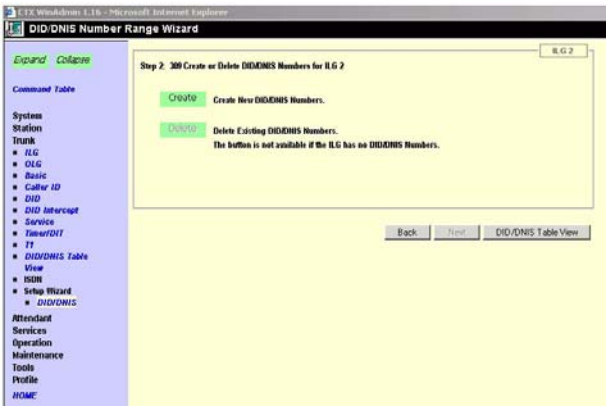
   Fill in the three fields on the screen and click Create Now. The DID/DNIS Number Range Wizard screen displays with the new information.



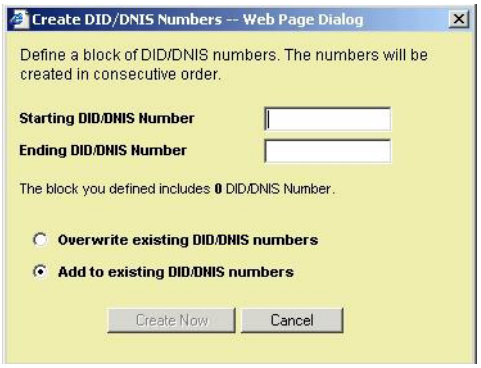
5. (Optional) Click DID/DNIS Table View to view existing DID/DNIS assignments. This table displays assignments for all DID/DNIS ILGs currently programmed in the CTX. For more details, see "DID/DNIS Table View" on page 6-21.
6. After creating or selecting a DID/DNIS ILG, click Next.

Step 2: Create or Delete DID/DNIS Numbers for ILG 2

1. From the Step 2: 309 Create or Delete DID/DNIS Numbers for ILG 2 screen (shown right), click Create to create a block of DID/DNIS numbers. The numbers are created in consecutive order.



   The Create DID/DNIS Numbers screen displays (shown right).



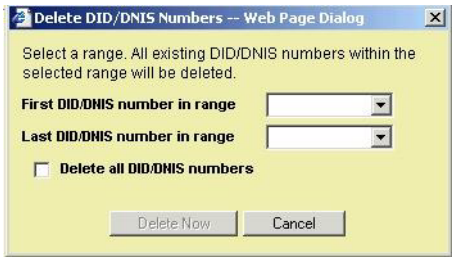
   - Specify the first number in the DID/DNIS block.

Note The quantity of digits must match the quantity of digits assigned to the selected ILG (refer back to "DID/DNIS Digit Length" on the previous screen).

   - Specify the DID/DNIS Number block size that should be created. This is the quantity of DID/DNIS numbers ordered from the DID/DNIS provider.

   - Specify "overwrite existing" or "add to existing" DID/DNIS numbers. If no DID/DNIS numbers exist, add or overwrite is OK.

   ...or click Delete and the delete DID/DNIS number dialog box displays (shown right). Specify the first and last DID/DNIS number to delete using the drop-down boxes; or, check mark Delete all DID/DNIS numbers. Click Delete Now. The numbers are deleted.

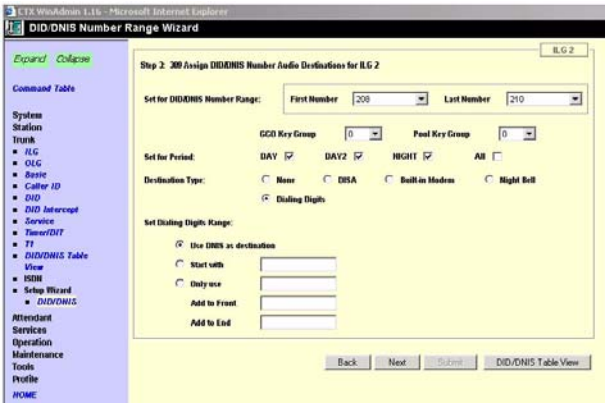


CAUTION! Overwrite erases all existing DID/DNIS numbers currently programmed for the selected ILG.

2. (Optional) Click DID/DNIS Table View to view existing DID/DNIS assignments. For more details, see "DID/DNIS Table View" on page 6-21.
3. When finished, click Next.

Step 3: Assign DID/DNIS Number Audio Destinations for ILG 2

1. From the Step 3: 309 Assign DID/DNIS Number Audio Destinations for ILG 2 screen (shown right), set the DID/DNIS Number range.



Note This step enables you to assign the ringing destinations for all DID/DNIS numbers in the selected ILG. This assignment applies only to Voice (audio) calls—not to data calls.

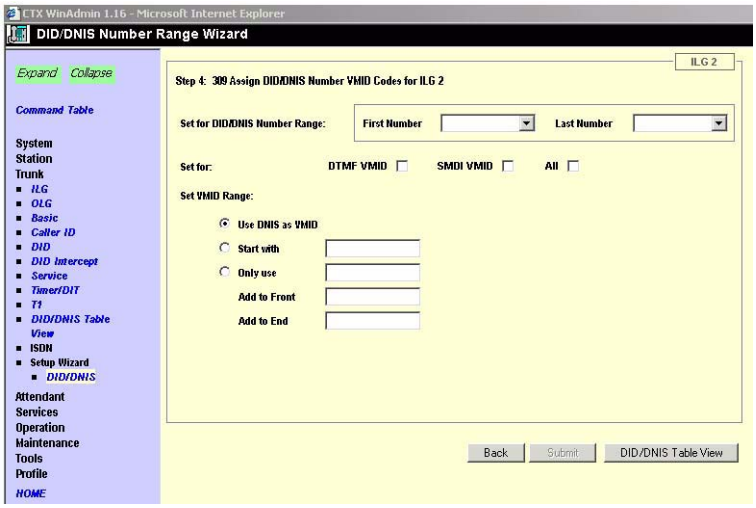
2. Specify the range of DID/DNIS numbers for which ringing assignments should be made. Use the First Number/Last Number drop-down arrows.
3. Fill in the appropriate fields on this screen (see field descriptions below).
4. (Optional) Click DID/DNIS Table View to view existing DID/DNIS assignments. For more details, see "DID/DNIS Table View" on page 6-21.
5. After selecting DID/DNIS ringing destination assignments, click Submit to register them in the CTX database.
6. After creating DID/DNIS ringing destinations, click Next to assign DID/DNIS Voice Mail ID codes. These VM codes are optional and are only used if DID/DNIS numbers have unique VM boxes to "call forward to" or "ring directly to".

FIELD	DESCRIPTION
GCO Key Group	If a Group CO Key is selected, all selected DID/DNIS numbers will ring on telephones that have this key. **Note** This selection will override any GCO or Pool Key Group assignment made in the Program 304, ILG assignments. Day/Day2/Night period assignments do not apply, GCO or Pool Keys will ring in all periods.
Pool Key Group	If a Pool Key Group is selected, all selected DID/DNIS numbers will ring on telephones that have this key. **Note** This selection will override any GCO or Pool Key Group assignment made in the Program 304, ILG assignments. Day/Day2/Night period assignments do not apply, GCO or Pool Keys will ring in all periods.
Set for Period	DID/DNIS ringing assignments can be unique for each CTX time period: Day, Day2 and Night. Select the period(s) in which the destinations should ring. Then select the destination type.

FIELD	DESCRIPTION
Destination Type	Select the type of destination: DISA - to call in and receive DISA dial tone. Built-in modem - to call in directly to the CTX modem with CTX WinAdmin. Night Bell - to call in and close the BIOU or ACTU night bell control relay. Dialing Digits - to call in and: • Ring PDNs, PhDNs, and/or Pilot Numbers • Night Ring over External Page - feature access code must be included in the dialing digits. • Access outgoing CO lines, Network Nodes and/or LCR to set up tandem calls - line access codes must be included in the dialing digits. **Notes** • When Dialing Digits is the selected Destination Type, you must set the Dialing Digit Range below. • This selection will override any GCO or Pool Key Group assignment made in this Program or Program 304, ILG assignments.
Set the Dialing Digits range	Select the method in which dialing digit ringing destinations should be created: Use DNIS as Destination - the destination digits for each DID/DNIS number will be the same as the DID/DNIS number. This option is normally used when the DID/DNIS numbers match the telephone PDNs, PhDNs etc. Start with - enter the number to which the first selected DID/DNIS number should ring. Ringing destinations will be assigned consecutively, starting with this number, to each consecutive DID/DNIS number. Only Use - all selected DID/DNIS numbers will be assigned to the dialing digits entered here. Add to front - these digits will be added in front of each dialing digit number. Add to End - these digits will be added to the end of each dialing digit number.

Step 4: Assign DID/DNIS VMID Codes for ILG

1. From the Step 4: Assign DID/DNIS Number VMID Codes for ILG 2 screen, assign VMID codes for all DID/DNIS numbers in the selected ILG. See field descriptions below.
2. (Optional) Click DID/DNIS Table View to view existing DID/DNIS assignments. For more details, see "DID/DNIS Table View" on page 6-21.
3. After selecting VMID code assignments, click Submit to register them in the CTX database.



FIELD	DESCRIPTION
Set for DID/DNIS Number range:	Specify the range of DID/DNIS numbers for which VMID code assignments should be made. Use the First Number/Last Number drop down arrows.
Set for:	The codes can be set independently for DTMF in band or SMDI Voice Mail integration.
DTMF VMID	Select to set VMID code assignments for DTMF voice mail integration.
SMDI VMID	Select to set VMID code assignments for SMDI voice mail integration.
All	Select to set VMID code assignments for DTMF and SMDI voice mail integration. **Note** DTMF and SMDI Voice Mail integration will not function simultaneously on CTX.
Set the VMID range	Select the method in which VMID codes should be created: Use DNIS as VMID - the VMID code for each DID/DNIS number will be the same as the DID/DNIS number. Start with - enter the VMID that should be assigned to the first selected DID/DNIS number. VMID codes will be assigned consecutively, starting with this code, to each consecutive DID/DNIS number. Only Use - all selected DID/DNIS numbers will be assigned to the VMID code entered here. Add to front - these digits will be added in front of each VMID code. Add to End - these digits will be added to the end of each VMID code.

Attendant

7

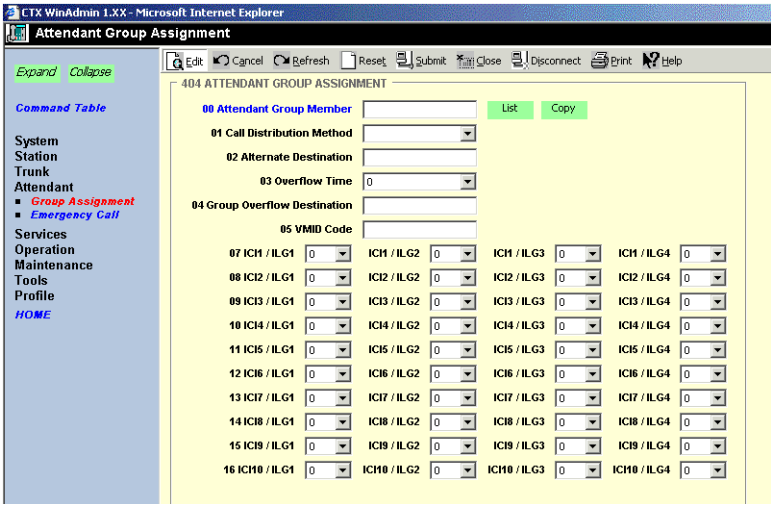
This chapter provides programming information for Strata CTX Attendants.

404 Attendant Group Assignment

Prerequisite Program: *None*

This program establishes Attendant Groups, distribution methods and alternate destinations.

1. Complete the "Attendant Group Record Sheet" on page D-34.
2. From the Program Menu, click Attendant > Group Assignment. The Attendant Group Assignment screen displays (shown right).
3. Select the Attendant Group Member.
   ...or click one of the following buttons.
   - List – to view data list window.
   - Copy – to Attendant group numbers.
4. Enter Program 404 data.
5. Click Submit.



FIELD	DESCRIPTION
00 Attendant Group Member	Select the Attendant Group Member Number. Possible values: 1(CTX100 & CTX670 Basic), 1~8 (CTX670 Exp.), (default = no value)
01 Call Distribution Method	Select the Call Distribution Method for attendant console. Possible values: Most Idle First (default), Next Available First or Broadcast
02 Alternate Destination	Enter the Alternate Attendant Destination (DN, Network DN or Group Pilot Number). If no data is entered in this field, any previous entries are overwritten. Possible values: Up to 32 digits (default = no value)
03 Overflow Time	Select the Attendant Overflow Time in minutes. Possible values: 0~180 (default = 30)

FIELD	DESCRIPTION
04 Group Overflow Destination	Enter the overflow destination for this attendant group. If no data is entered in this field, any previous entries are overwritten. Possible values: Up to 32 digits (default = no value)
05 VMID Code SMDI	Enter the Attendant's Voice Mail ID code. If no data is entered in this field, any previous entries are overwritten. Possible values: Up to 10 digits (default = no value)
07 ICI1~16 ICI10	For 07 ICI1~16 ICI10, select ILG Assignments for ICI Groups.
• ILG1	• Assign the 1st ILG to ICI Groups 1~10.
• ILG2	• Assign the 2nd ILG to ICI Groups 1~10.
• ILG3	• Assign the 3rd ILG to ICI Groups 1~10.
• ILG4	• Assign the 4th ILG to ICI Groups 1~10. **Note** Each ILG can only be assigned once in any of the ICI Groups. Possible values: 0~32 (CTX100), 0~50 (CTX670 Basic), 0~128 (CTX670 Exp.), (default = 0)

400 Emergency Call Destination Assignment

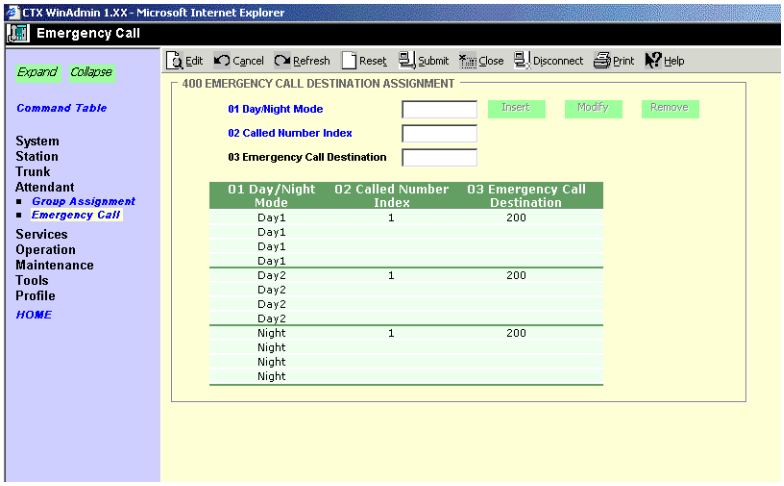
Prerequisite Program: *None*

This command assigns Emergency Call destinations to Emergency Call groups. There is one group for each Day mode (Day1, Day2 and Night).

1. From the Program Menu, click Attendant > Emergency Call. The Emergency Call screen displays (shown right).
2. Enter Program 400 data.

   ...or click one of the following buttons:

   - Insert – assigns the destination for the selected index.
   - Modify – assigns a new destination to the selected index.
   - Remove – removes the assigned destination from the table.
3. Click Submit.



FIELD	DESCRIPTION
01 Day/Night Mode	Select the time of day mode (Day1,Day2,Night) from the table below. Possible values: Day1, Day2, Night (default = no value)
02 Called Number Index	Emergency Call Group Number (1~4). The system will hunt through these in numerical order to find an available emergency destination. Possible values: 1~4 (default = no value)
03 Emergency Call Destination	Enter the DN, Pilot Number or Private Number to be associated with the Called Number Index. Possible values: Up to 32 ASCII characters (default = no value)
04 Action	Choose whether you are replacing an existing Emergency Number Index or inserting one in the list. If inserting, the new entry will assume the specified index. The remaining indices will be increased by one and the last one, 4, will be deleted.

IP Telephone Programming 8

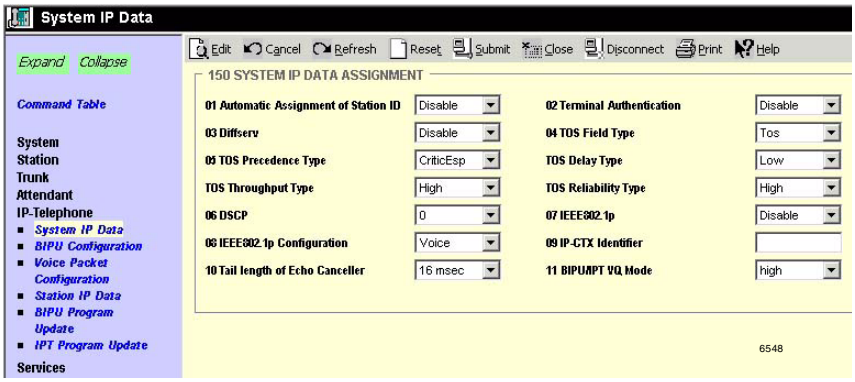
All programs and features found in this chapter require CTX Release 2.0 software or higher and WinAdmin Release 2.1 software or higher. This covers IP and 2B-channel conference programming. For CTX IP Telephone Programming guidelines, refer to Appendix A – Applications, Tips and Tricks on page A-1. IP Telephone Programming is not available with the CTX28.

150 System IP Data Assignment

Prerequisite Program:

This command assigns IP data to the system.

1. From the Program Menu, click IP-Telephone > System IP Data. The Trunk System IP data Assignment screen displays (shown right)
2. Enter Program 150 data.
3. Click Submit.



FIELD	DESCRIPTION
01 Automatic Assignment of Station ID	Enable Automatic Assignment of Station ID when the IPT has no station ID. In program 250, FB04 is the same parameter and is per terminal. When IPT searches to connect a CTX with no station ID, CTX looks for a PDN which is set this parameter as “automatic”, and sends the PDN to the IPT and IPT sets it in the setting of IPT. Possible values: Enable or Disable (default)

FIELD	DESCRIPTION
02 Terminal Authentication	Enable this parameter if you want to reserve the PDNs on IP Telephones system wide. When “enable” is set, terminal authentication by MAC address of IPT is valid. So if another IPT with the same PDN is connected to the network, CTX rejects the registration of this IPT because the MAC address of IPT is different. When “disable” is set, you can move the PDN from a IPT to another IPT and another IPT can be connected to the CTX. In program 250 FB05 is the same parameter exists. Program 250 FB05, the individual IPT setting will override this system wide setting. Possible values: Enable or Disable (default)
03 Diffserv	Enable Diffserv (Differentiated Services) priority control if voice packets on an IP (internal) Network should be prioritized with priority tagging. Higher priority, time-critical BIPU\IPT voice traffic can have preferential treatment when other traffic is running at best effort. If Diffserv is enabled you must set the '04 TOS Field Type' as DSCP or TOS. Note: Diffserv is usually not standard feature with most ISPs, contact your ISP to make arrangements to provide Diffsrv or this feature will not work accurately. Possible values: Enable or Disable (default)
04 TOS Field Type	If '03 Diffserv' is enabled, select DSCP 'Differentiated Service Format' or TOS 'Type Of Service format'. Then, if TOS is selected, set the packet priority level in '05 TOS Precedence Type'. Then, if DSCP is selected, set the packet priority level in '06 DSCP'. Possible values: Tos (default) or Dscp
05 TOS Precedence Type	If TOS is selected in '04 TOS Field Type' select a packet priority level - where CRITIC/ESP provides the highest and Routine provides the lowest priority. If TOS is selected in '04 TOS Field Type' make selections in TOS Delay, TOS Throughput Delay, and TOS Reliability Type. Possible values: Routine, Priority, Immediate, Flash, Flash Override, or CriticEsp (default = 0)
TOS Delay Type	If TOS is selected in '04 TOS Field Type' select 'Normal' for most cases. Possible values: Normal (default) or Low
TOS Throughput Type	If TOS is selected in '04 TOS Field Type' select 'Normal' for most cases. Possible values: Normal (default) or High
TOS Reliability Type	If TOS is selected in '04 TOS Field Type' select 'Normal' for most cases. Possible values: Normal (default) or High
06 DSCP	If DSCP is selected in '04 TOS Field Type' select a priority level from 1~ 64. Level guidelines: 0,Best effort, default for most non-voice IP traffic. 24, Assured Flow 'AF' or Controlled Load, intended to classify streaming traffic. 40, Expedited Flow 'EF' or Guaranteed, intended to classify high priority traffic. Possible values: 0~63 (default = 0)

FIELD	DESCRIPTION
07 IEEE802.1p	Enable IEEE802.1p priority control if voice packets on an Ethernet LAN should be prioritized with priority tagging. Higher priority, time-critical BIPU\IPT voice traffic can have preferential treatment when other traffic is running at best effort. If you enable IEEE802.1p, select which priority level to use (Voice or Best Effort) in '08 IEEE802.1p Configuration' on this screen. **Note** All Ethernet devices on the LAN (routers, switches, etc., must support IEEE802.1p for this feature to work accurately. Possible values: Enable or Disable (default)
08 IEEE802.1p Configuration	If 07 IEEE802.1p is enabled, select 'Voice' priority. BIUP\IPT voice packets will be tagged with the highest priority level. **Note** Best Effort is not recommended for VoIP. Possible values: BestEffort or Voice (default)
09 IP-CTX Identifier	Enter a CTX Node ID if more than one CTX Node is on the IP Network. This can be the same as the Qsig Network Node ID used for this system if it is in a CTX Qsig. Network - but the two IDs are not related in software logic. This ID must match the Node 'number' programmed in the IP telephone using 369Hold-2, FB06 Possible values: Up to 5 digits
10 Tail length of Echo Canceller	Enter the length for echo cancellation. To lessen the echo, select 32MS. Possible values: 16 msec (default) or 32 msec.
11 BIPU/IPT VQ Mode	Set the Voice Quality Mode to control the Gain of IPT and BIPU to the appropriate level in the existing system environment. This may require some trial and error testing to find the optimum level. Possible values: high (default), middle or low

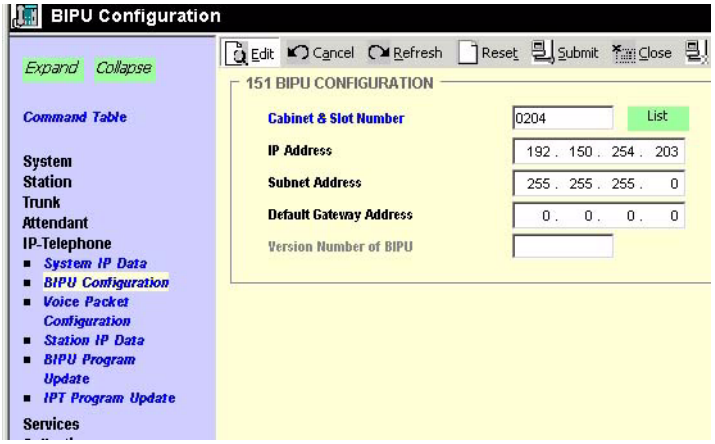
Table 8-1 Program 250 FB05 and Program 150 FB02 Combination Matrix

		Program 250 FB05		
		Enable	**Disable**	**Don't Care**
Program 150 FB02	**Enable**	Apply	Not Apply	Apply
	Disable	Apply	Not Apply	Not Apply

151 BIPU Configuration

This program is used to set up the IP address of the specific BIPU card to support the IP-Telephone. BIPU card must be assigned before configuring the specific BIPU card.

1. From the Program Menu, click IP-Telephone > BIPU Configuration. The BIPU Configuration screen displays (shown right)
2. Enter Program 151 data.
3. Click Submit.



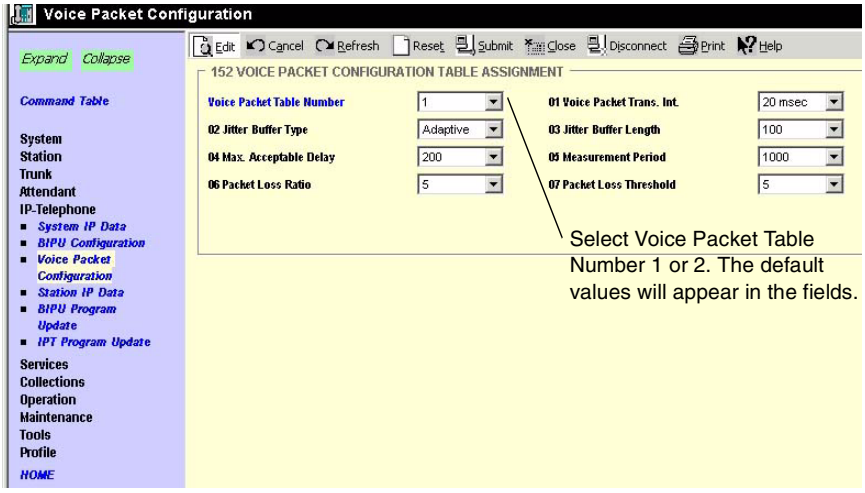
6550

FIELD	DESCRIPTION
Cabinet & Slot Number	Enter the cabinet and slot number of the BIPU to be configured. Note: BIPUs must first be installed using PRG100 - System\Card Assignment. BIPUs can be installed in the slots listed: Possible values: Slots 01-08 (CTX100 and CTX670 Basic), 01-06 (CTX670 Exp).
IP Address	Enter the BIPU IP Address.
Subnet Address	Enter the Subnet Address of the BIPU.
Default Gateway Address	Enter the Default Gateway Address of the BIPU card.
Version Number of BIPU	This is a read-only field.

152 Voice Packet Configuration Table Assignment

This program assigns timing parameters to Prime DNs.

1. From the Program Menu, click IP-Telephone > Voice Packet Configuration. The Voice Packet Configuration Table Assignment screen displays (shown right)
2. Enter Program 152 data.
3. Click Submit.



Important!

- *When setting Voice Packet Configuration Tables on an IP QSIG network, the packet table settings for each node on an end-to-end connection must be the same.*
- *Whenever Voice Packet Configuration Table changes are made for IP telephones on IP QSIG nodes, Toshiba recommends pressing the reset button on the BIPU to assure the changes take effect.*

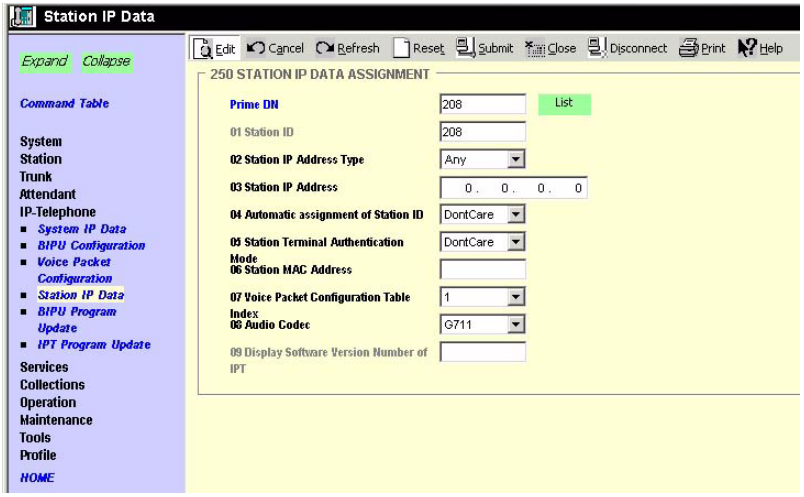
FIELD	DESCRIPTION
Voice Packet Table Number	Enter the Voice Packet Configuration Table Number (1-256). **Important!** *The default values in Voice Packet Table 1 are the recommended values for G.711 codecs. The default values in Voice Packet Table 2 are the recommended values for G.729A codecs. If the codec selected for an IP telephone in Program 250-08 is switched from the default G.711 to G.729A, the table used for the IPT is automatically switched from Table 1 to Table 2 in Program 250-07. However switching back to the G.711 requires that you manually switch back to the Table 1 default parameter settings.* Possible values: 1~128 (CTX100 & CTX670 Basic) 1~256 (CTX670 Exp.)
01 Voice Packet Trans. Int.	Voice Packet Transmission Interval – This is depends on the encoding method G711 or G729A. The default setting are G711: 20msec., G729A: 40msec. 10msec. is only used to test. So don't use 10ms. Normally the default settings provide the best quality. If LAN bandwidth is not enough for these parameters and the problem is resolved to extend the interval according to the LAN requirement, you can change to G711:40msec. and G729a: 80msec. **Note** 30msec. need not be used. Possible values: 10 msec (available for testing only up to release 200MF008), 20 msec (default), 30 msec, 40 msec or 80 msec

FIELD	DESCRIPTION
02 Jitter Buffer Type	The default values for the selected codec is recommended. If the voice quality is not as expected you can change the jitter buffer type of DSP on BIPU. Possible values: Fixed, Sequential, or Adaptive The default values are: G.711 = Adaptive, G.729A = Sequential (recommended).
03 Jitter Buffer Length	The default values for the selected codec is recommended. If the voice quality is not as expected you can change the jitter buffer length. Possible values: 0~250 The default values are: G.711= 100msec., G.729A=40msec.
04 Max. Acceptable Delay	Not available in Release 2.0.
05 Measurement Period	Not available in Release 2.0.
06 Packet Loss Ratio	Not available in Release 2.0.
07 Packet Loss Threshold	If packet loss is more than 10, an error is recorded in the CTX error log and you cannot talk by IPT. The default value 5 is recommended. Possible values: 0~10

250 IPT Data Assignment

Program 250 is used to set up the IP address of the specific IP phone card to support IP-Telephone feature. The IP Phone Prime DN must be assigned using Program 200 before you configure the BIPU card.

1. From the Program Menu, click IP-Telephone > Station IP Data. The Station IP Data Assignment screen displays (shown right)
2. Enter Program 250 data.
3. Click Submit.



FIELD	DESCRIPTION
Prime DN	Enter the IPT Prime Directory Number (PDN) Possible values: Up to five digits.
01 Station ID	Station ID is set from the IPT to match its PDN in station Program ’369 Hold-2-FB05’. The station ID is the same as the station PDN unless there is more than one CTX system having BIPU-Ms on the same network. In this case the station ID for each IP telephone must contain the CTX Node ID+PDN. Possible values: Up to five digits.
02 Station IP Address Type	Select the Station IP Address to be static ’fixed’ or dynamic in which case it obtains an IP address from a DHCP server. Possible values: Fix or Any (default)
03 Station IP Address	Enter the Station static IP Address if a static address is needed per Station IP Address Type set in 02 above.
04 Automatic assignment of Station ID	Use Automatic when the IPT has no Station ID. Use ’Not Automatic’ when IPT has station ID in the IPT setting. In Program 150, FB01 is the same parameter for system. When ’Don’t Care’ is set, Program 150-01 precedes in Program 250-04. Enabling Program150-01 is equal to using ’automatic’ in Program 250-04. Disabling in Program150-01 is equal to ’not automatic’ in Program 250-04. When IPT requests to connect to a Strata CTX with no station ID, CTX searches for a PDN that is set in this parameter as ’automatic’, and send the PDN to the IPT, and IPT records it in the IPT setting. Possible values: Permitted, NotPermitted or DontCare (default)

FIELD	DESCRIPTION
05 Station Terminal Authentication Mode	Apply this parameter if you want to reserve a PDN for the IP Telephone connected at the present time. When 'apply' is set, terminal authentication by MAC address of IPT is valid. So if other IPT which has the same PDN is connected the network, CTX rejects the registration of this IPT because the MAC address of IPT is different. When 'not apply' is set, you can move the PDN from a IPT to another IPT and another IPT can be connected to the CTX. When 'don't care' is set, terminal authentication for this telephone is determined by Program 150-02. The Terminal Authentication setting 'Apply or Not Apply' in this program overrides the Terminal Authentication any setting in Program 150-02. Refer to Table 8-1. Possible values: Apply, NotApply or DontCare (default)
06 Station MAC Address	Station Media Access Control (MAC) Address. This address is hard coded uniquely in each IPT. The MAC will only display if the IPT is connected to the BIPU-M1A and is operating properly. Possible values: Up to 12 digits
07 Voice Packet Configuration Table Index	Select the Voice Packet configuration table that should be assigned to this IPT (The voice tables are configured in Program 152). When the G711 Audio Codec is selected in 08 codec below, the default values in Program 152-01, Table 1 should be used. When the G.729A codec is selected in 08 Audio Codec below, the default values in Program 152-01 Table 2 should be used. **Important!** *When switching the IP telephone from the G.711 to the G.729 codec (the first time), the CTX will automatically switch the Voice Packet Table from Table 1 to Table 2.* Possible values: 1~128 (CTX100 and CTX670 Basic) 1~256 (CTX670 Exp.)
08 Audio Codec	Select the audio codec that should be used in this IPT. Possible values: G711(default) or G729A IP telephones have two built-in codecs: The G.711codec – provides the highest voice quality but uses the most network bandwidth (about 115kbps per IPT when in use). The G.729A codec – provides less voice quality but uses the least amount of network bandwidth (about 29kbps per IPT when in use). High traffic or low speed networks may require the IP Telephones to use G729A. Example If installing remote IP telephones connected to Cable or DSL lines, the upstream rate is usually restricted and may not provide a consistent upstream bandwidth (advertised as 128kbs but is normally less because of traffic) so the G729a codec would probably be the best choice for this situation. The Voice Packet Table 'Program 250-07' and the VP Table's Voice packet parameters 'Prg152' must be set properly for the codec assigned.
09 Display Software Version Number of IPT	This is read-only. If any problem occurs, it is useful to analyze the problem with this version. The sample of software version is "DIP11NA." DIP1 represents the IPT model. 1NA represents software version of IPT. "1N" represents the version of updatable software and "A" means the version of not-updatable software (BootROM).

BIPU-M and IPT Program Update

To start updating the BIPU-M or IPT firmware, the Update firmware files must be stored on FTP Server (see Appendix E – Software and Firmware Updates on page E-1). You can update the BIPU-M using WinAdmin. You cannot update BIPU-Q. If you need to update BIPU-Q, return it to Toshiba.

WinAdmin automatically disables the BIPU before any BIPU/IPT program update and preserves the initial state of the BIPU (idle or disable) after program update is done.

The BIPU program update has two processing options: sequential and simultaneous. If the FTP server is a CTX (SmartMedia), sequential processing must be used.

The IPT program update is performed sequentially only. A table sorted by BIPU shows a summary of the IPT selection. You can select multiple IPTs. You can change the selection at any time before the update process starts. The process flow is as follows:

- The BIPU corresponding to the first group of IPTs is automatically disabled (if its current status is "idle")
- IPTs are updated one by one. Up to maximum 128 IPTs can be selected for one Updating process.
- BIPU is re-enabled (if its initial state was "idle")

These steps are repeated automatically until the entire user selection is processed.

Both the BIPU and IPT update pages have an Abort and Abort All button. The Abort button is available per item (BIPU, IPT), only when the current processing status allows the abort operation. Aborting the update process is allowed only in two phases "Getting the update file" and "Resetting."

The Abort All button is available when an update is in progress. You can click on Abort All to abort all updates starting with the one is currently processing. If abort operation is not allowed at the time, the message "Please wait while system has a chance to abort..." appears. All program update processes will be aborted when this is allowed by CTX.

The synchronization between WinAdmin and CTX is not perfect during this process. WinAdmin sends a command, then checks for the completion of the command. If you click on Abort at the end of the "Getting the update file" phase, WinAdmin will abort in the next phase that abort is allowed, which is resetting.

FTP Server Information

CTX SmartMedia

When FTP server is CTX-SmartMedia, the files for BIPU/IPT program update must be stored in "PROGRAM" folder on SmartMedia. BIPU/IPT screens will automatically fill the Directory field in the FTP information group using the name "PROGRAM," and will provide a list box with the files that exist in this directory on Smart Media.

WinAdmin Machine

When FTP server is a WinAdmin machine, the WinAdmin installation will create a physical directory under \WinAdmin. named "CTXIPUPDATE." This is the physical path that you should indicate when creating "CTXIPUPDATE" virtual directory on the Default FTP Site. The files for BIPU/IPT program update will be stored in "CTXIPUPDATE" directory on WinAdmin machine. BIPU/IPT pages will automatically fill the Directory field in the FTP Server information group using the name "CTXIPUPDATE" and will provide a list box with the files that exist in this directory on WinAdmin machine.

External FTP

When FTP server is “External FTP,” not CTX - Smart Media, nor WinAdmin machine, users will have to provide all the information in the FTP information group.

Important! *The External FTP Server must be used if IPT, BIPUs and/or CTX WinAdmin do not have the same subnet address.*

WinAdmin provides an External FTP list page to manage FTP information for “External” FTP servers. This page can be used to add, modify and remove FTP Server information (user, password, IP address, directory and file) for External FTP servers or WinAdmin local machine. The information will be stored in a file on WinAdmin machine and will be provided in selection window when user clicks on “External FTP” on the BIPU/IPT pages. This eliminates the need to enter the same FTP information for “External FTP” servers each time the BIPU/IPT program update is run.

BIPU Program Update

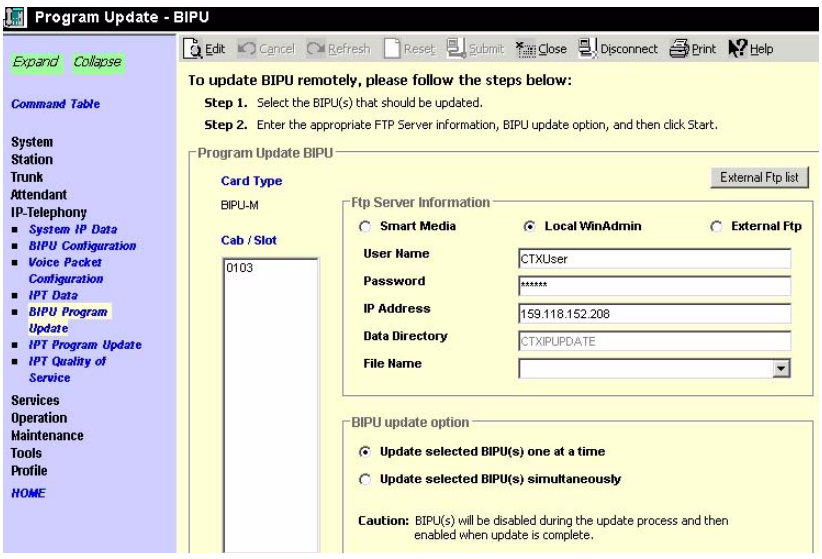
Prerequisites

1. Make sure that the networking devices between BIPU and the FTP server meet the requirements for IP-CTX (min 100Mb/s switching hub(s).
2. Create an account on the machine designated to be the FTP server.
3. Create a FTP virtual directory on the FTP server machine and specify the physical location of the updated file on the FTP server machine.
4. The FTP server machine IP address should be configured such that is visible by the IPT IP address.

CAUTION! Do not run other updates simultaneously.

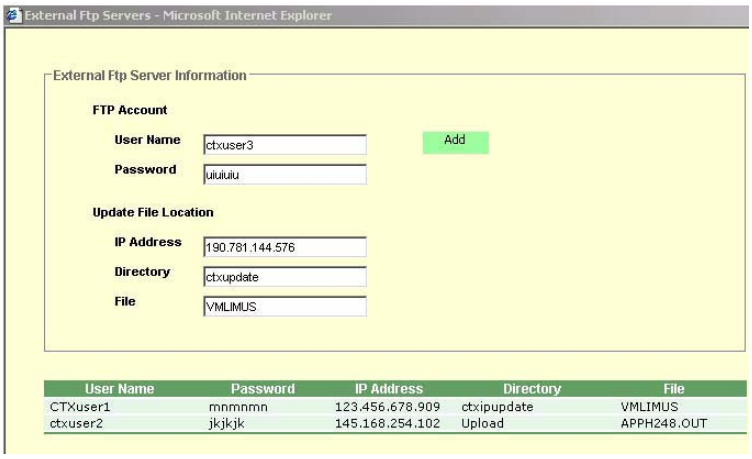
Programming

1. From the Program Menu, click IP-Telephone > BIPU Program Update. The BIPU Update screen displays (shown right)
2. Select card slot to be updated
3. Enter the FTP information.
4. Select BIPU Update option.
5. Click Start to begin the BIPU update.



FIELD	DESCRIPTION
User Name	Enter the name of a valid user account on the FTP server you select: Smart Media (CTX) or external FTP server.
Password	Enter the password of a valid user account on the FTP server you select: Smart Media (CTX) or external FTP server.
IP Address	Enter the IP address of a valid user account on the FTP server you select For Smart Media, this is the IP address of the CTX. For External FTP, this is the IP address of the computer used as the external FTP server.
Data Directory	This is the folder on the Smart Media card where the update file is stored. The virtual directory Path property indicates the physical location where the update file is stored.
File Name	Enter the name of the updated file ("vmlinus").

External FTP List – Click the External FTP List button enables users to store External FTP Server Information.



FIELD	DESCRIPTION
FTP Account	
User Name	Enter the name of a valid user account on the external FTP server.
Password	Enter the name of a valid user account on the external FTP server.
Update File Location	
IP Address	Enter the IP address of the computer used as the external FTP server.
Data Directory	If the FTP server is, this is the folder on the Smart Media card where the update file is stored. If the FTP Server is Local eManager or External Server, this is a virtual FTP directory. The virtual directory Path property indicates the physical location where the update file is stored.
File Name	Enter the name of the updated file.

IPT Program Update

The IPT program update function consists of retrieving the updated file from an FTP server, updating and rebooting the selected IPT.

CAUTION! Do not run other updates simultaneously.

Prerequisites

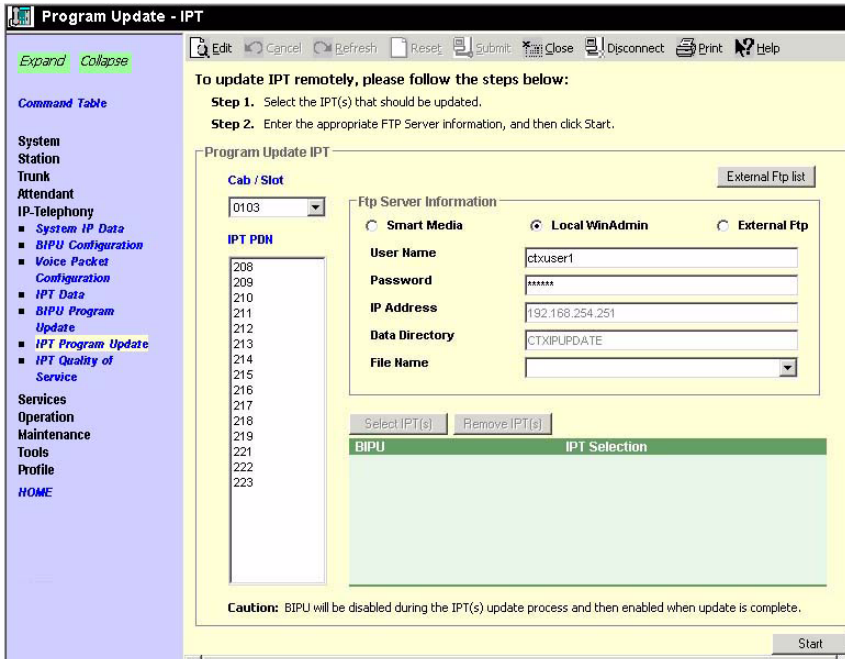
1. Make sure that the networking devices between BIPU, IPT and the FTP server meet the requirements for IP-CTX (min 100Mb/s switching hub(s)).
2. Create an account on the machine designated to be the FTP server.
3. Create a FTP virtual directory on the FTP server machine and specify the physical location of the updated file on the FTP server machine.
4. The FTP server machine IP address should be configured such that is visible by the BIPU IP address.

Programming

1. From the Program Menu, click IP-Telephone > IPT Program Update. The IPT Program Update screen displays (shown right)
2. Select BIPU card slot.
3. Select IPTs to be updated.
4. Repeat step 2 and 3 for multiple BIPU/IPT updates.
5. Enter the FTP information.
6. Click Start to begin the IPT Program update.

Notes

- All selected IPTs are updated sequentially.
- Maximum of 128 IPTs can be selected in one IPT update process.



FIELD	DESCRIPTION
User Name	Enter the user name of the account created on the FTP server.
Password	Enter the password for the account created on the FTP server.
IP Address	Enter the IP address of the FTP server machine.
Data Directory	Enter the name of the FTP virtual directory on the FTP server.
File Name	Enter the name of the updated file (“apph248.out”).

Services 9

This chapter covers a variety of services offered by Strata CTX. Automatic Call Distribution (ACD), Voice Mail, Destination Restriction (DR), Least Cost Routing (LCR), Networking, Station Message Detail Reporting (SMDR), External Devices, System Parameters and other miscellaneous services are discussed.

Important!

- *Advanced Strata CTX programming topics are covered in this chapter. Programmers should make sure each section is thoroughly understood before proceeding to programming.*
- *Networking Programs found in this chapter are not available with the Strata CTX28.*

540 Pilot DN Assignment

Prerequisite Program: *None*

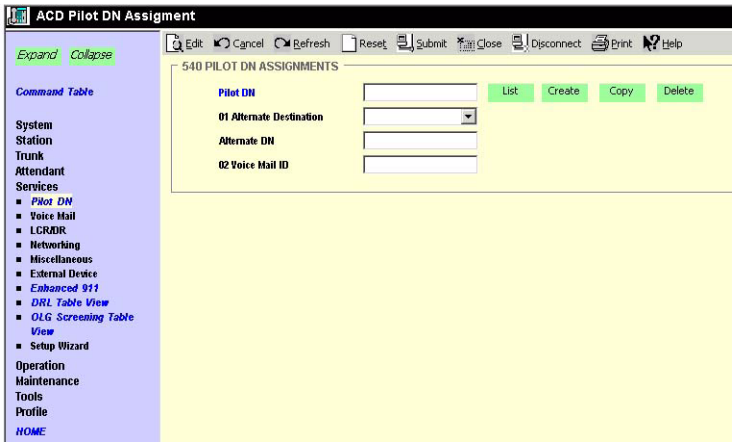
Pilot DNs are directory numbers that have no physical appearance, they are true virtual numbers. They can be used in CTI and Voice Mail applications. In ACD Pilot Numbers are used as ACD group numbers. In Voice Mail applications Pilot DNs are used to call directly to, or transfer calls directly to specific voice mail boxes – this is done by setting VM as the alternate destination and using the VMID to send the call to a specific VM box.

Maximum Pilot DNs

CTX100: R1.00 & R1.01 = 5 max./R1.02 = 100 max.

CTX670 Basic: R1.00 & R1.01 = 10 max./R1.02 = 200 max.

CTX670 with BBMS/BEXS: R1.00 & R1.01 = 32 max./R1.02 = 256 max.



1. Complete the "Pilot DN Assignment Record Sheet" on page D-37.
2. Click Services > Pilot DN.
3. Enter a Pilot DN Number

   ...or click one of the following buttons:

   - List – view a summary list of programmed Pilot DNs.
   - Create – Assign a new Pilot DN with default settings.
   - Copy – Enter a *Pilot DN* number and click Copy to make a new Pilot DN assignment with settings copied from the Pilot DN entered.
   - Delete – Enter a Pilot DN and click OK.
4. Enter Program 540 data.
5. Click Submit.

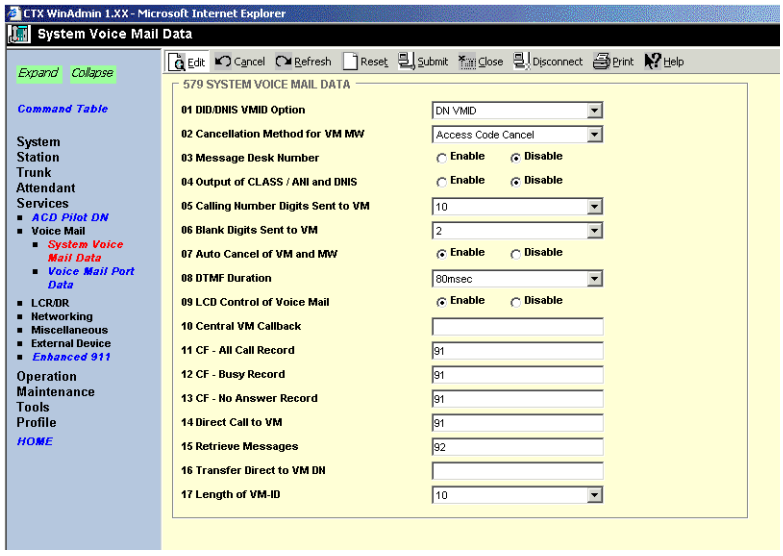
Field	DESCRIPTION
Pilot DN	Pilot DNs are directory numbers that have no physical appearance. They are true virtual numbers. They can be used in CTI and Voice Mail applications. In ACD, Pilot Numbers are used as ACD group numbers. In Voice Mail applications they are used to call directly to or transfer calls directly to specific voice mail boxes - this is done by setting VM as the alternate destination and using the VMID to send the call to a specific VM box. Possible values: Maximum characters for Pilot DNs: CTX100: R1.00 & R1.01=5 max./R1.02=100 Max.. CTX670 Basic: R1.00 & R1.01=10max./R1.02=200max. CTX670 with BBMS/BEXS: R1.00 & R1.01=32max./ R1.02=256max
01 Alternate Destination	Calls to the Pilot DN will be routed to the Alternate Destination if the Pilot DN is not available (example: ACD After Shift). If Dialing Digits is selected, enter the appropriate DN in the Alternate DN assignment. Possible values: No Data (default), Dialing Digits or Night Bell
Alternate DN	If Dialing digits is selected as the Alternate Destination, enter the PDN, PhDN or Hunt Group pilot number to which the call should be routed. Possible values: Up to 32 ASCII characters (default = no value)
02 Voice Mail ID	If the Alternate Destination is Voice Mail, enter the Voice Mail ID that should be sent. Possible values: Up to 16 ASCII characters (default = no value)

579 System Voice Mail Data

Prerequisite Program: *None*

Refer to "Voice Mail Set Up" on page A-1 for all Voice Mail setup steps. This command assigns DTMF/ SMDI Voice Mail interface parameters for the system.

1. Complete the "System Voice Mail Record Sheet" on page D-38.
2. Click Services > Voice Mail > System Voice Mail Data.
3. Enter Program 579 data.
4. Click Submit.



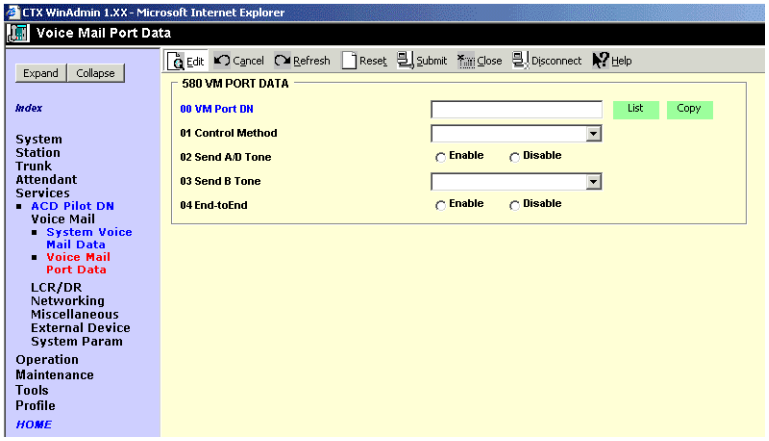
FIELD	DESCRIPTION
01 DID/DNIS VMID Option	Select DN VMID to send the DN's VMID to voice mail on DID/DNIS calls that are answered and then transferred to a DN which then forwards to voice mail. Select DID/DNIS VMID to send the DID/DNIS number's VMID to voice mail on DID/DNIS calls that are answered and then transferred to a DN which then forwards to voice mail. Possible values: DN VMID (default), DID/DNIS VMID. If a DID/DNIS call is answered by a station and then transferred to a DN which then forwards to voice mail, the VMID of the DID/DNIS number (Program 309, **FB11** or **FB15**) or the VMID of the forwarding DN (Program 200, **FB19** or 206, **FB06**) will be sent to voice mail per this option. **Note** The DID/DNIS number's VMID (Program. 309, **FB11** or **FB15**) is always sent to voice mail on DID/DNIS calls that ring directly to voice mail or ring a DN which then forwards to voice mail before it is ever answered.
02 Cancellation Method for VM MW	Select the method used to cancel Voice Mail message waiting indication. Possible values: Auto and Access Code Cancel or Access Code Cancel (default)
03 Message Desk Number	Enable to send the SMDI Message Desk Number (001) in the SMDI packet; otherwise, 000 for a station call or the 3-digit CO line number is sent. Possible values: Enable or Disable (default)
04 Output of CLASS / ANI and DNIS	Enable to include Caller ID/ANI numbers in SMDR records. Possible values: Enable or Disable (default)
05 Calling Number Digits Sent to VM	Select how many calling number digits to send to the VM unit. Possible values: 2~10 digits (default = 10) **Note** If *04 Output of CLASS / ANI and DNIS* is enabled, this value must be 10.
06 Blank Digits Sent to VM	Send SMDI-Bellcore Standard VM Interface. Possible values: 1 or 2 (default). • 1 = 1985 (single space) • 2 = 1991 (two spaces).
07 Auto Cancel of VM and MW[1]	Setting of auto cancel of VM and MW. Possible values: Enable (default) or Disable
08 DTMF Duration	Select VM ID Code and System DTMF Signal Time. Possible values: 80 ms (default) or 160 ms
09 LCD Control of Voice Mail	Enables Toshiba Proprietary Integration (TPI) for Soft Key Control of VM. TPI and Soft Key Control of Voice Mail requires Stratagy Enterprise Server Release 3.x or higher. Possible values: Enable (default) or Disable
10 Central VM Callback	Enter the pilot DN for the centralized voice mail system. If this field is left blank, the previously stored number will be deleted. Possible values: Up to 7 ASCII characters (default = no value)

FIELD	DESCRIPTION
11 CF - All Call Record	Enter DTMF VM-ID prefix string for calls arriving to voice mail via “Call Fwd All Calls.” Possible values: Up to 4 ASCII characters (default = 91)
12 CF - Busy Record	Enter DTMF VM-ID prefix string for calls arriving to voice mail via “Call Fwd Busy.” Possible values: Up to 4 ASCII characters (default = 91)
13 CF - No Answer Record	Enter DTMF VM-ID prefix string for calls arriving at the voice mail via “Call Fwd No Answer.” Possible values: Up to 4 ASCII characters (default = 91)
14 Direct Call	Enter DTMF VM-ID string for a call arriving at the voice mail as a Direct Call. Possible values: Up to 4 ASCII characters (default = 91)
15 Retrieve Messages	Enter DTMF VM-ID string for calls arriving at the voice mail to retrieve messages. Possible values: Up to 4 ASCII characters (default = 92)
16 Voice Main DN	Use a VM Pilot DN as a transfer destination. Possible values: Up to 7 ASCII characters (default = no value)
17 Length of VM ID	Select the number of characters in VM-ID string. Possible values: 1~10 (default = 10)
18 SMDI Call ID Packet	Enable - to send SMDI Call ID DC packet on Voice mail calls. Disable - do not send SMDI Call ID DC packet on Voice mail calls. This feature requires Stratagy R5 or higher. It should be enabled when using multi-language VM (French, English, etc.) or other VM adaptability features. Possible values: Enable or Disable (default)
19 SMDI ANI/CLID Digit Length	Enter the number of digits to be sent to on the SMDI packet for Class, CLID,, ANI, and DNIS numbers. Possible values: 2~20 (default = 10)

580 Voice Mail Port Data

Prerequisite Program: *None*

Assign characteristics of individual voice mail ports.



1. Complete the "Voice Mail Port Data Record Sheet" on page D-39.
2. Click Services > Voice Mail > Voice Mail Port Data.
3. Enter a VM Port DN

   ...or click one of the following buttons:

   - List – view a summary list of programmed VM Port DNs.
   - Copy – Enter an VM Port DN value in the field with the same name. Click Copy to make a new VM Port DN assignment with settings copied from the Port entered in *VM Port DN*.
4. Enter Program 580 data.
5. Click Submit.

FIELD	DESCRIPTION
00 VM Port DN	Enter the DN of an individual VM port. For direct transfer to voice mail, enter the remote Node ID and Pilot DN. **Note** Do not enter a Pilot DN. This feature is available only with CTX Release 1.3 or higher software and with CTX WinAdmin Release 1.3 or higher software. Possible values: Up to 5 digits (default = no value)
01 Control Method	Specify In-band or SMDI integration. Select SMDI for Remote voice mail. Possible values: Inband or SMDI (default = no value)
02 Send A/D Tone	Select whether Strata CTX sends A or D tone when a station connecting to voice mail answers or disconnects. Possible values: Enable or Disable (default = no value)
03 Send B Tone	Enable Strata CTX to send B tones in the event of a Blind Transfer Recall. Possible values: B Tone, No Tone or B Tone and Extension Number (default = no value)
04 End-to-end	Enable Strata CTX to send DTMF tones to voice mail in response to key presses from a digital telephone. Possible values: Enable or Disable (default = no value)
07) VM to VM Call Blocking	Set to blocking to prevent Voice Mail Auto Attendant, supervised transferred, calls from forwarding back into Voice Mail. Possible values: Blocking or Non-blocking (default)

Destination Restriction/Least Cost Routing

The Guide Pages and programs that follow control Strata CTX's Destination Restriction (DR) and Least Cost Routing (LCR) capabilities.

Programming DR/LCR features in Strata CTX requires an advanced knowledge of telephone programming. Make sure you have a thorough understanding of the discussion that follows before attempting to program these features. For details on LCR, see "LCR Overview" on page 9-16.

DR Overview

Strata CTX offers DR as a major expansion of traditional Toll Restriction. Toll Restriction was used to prevent the unauthorized use of toll prefixes to the PSTN as follows:

- **1** – long distance
- **0** – operator assistance
- **011** – international

Strata CTX has expanded this to include restriction based on any string of dialed digits. Strata CTX can restrict any string of up to 11 dialed digits including ***** and **#**.

Eleven-digit screening allows control of access to individual telephone numbers in remote Area Codes. Restriction of ***** and **#** controls user's access to vertical service codes from the central office such as Camp On and Call Forwarding.

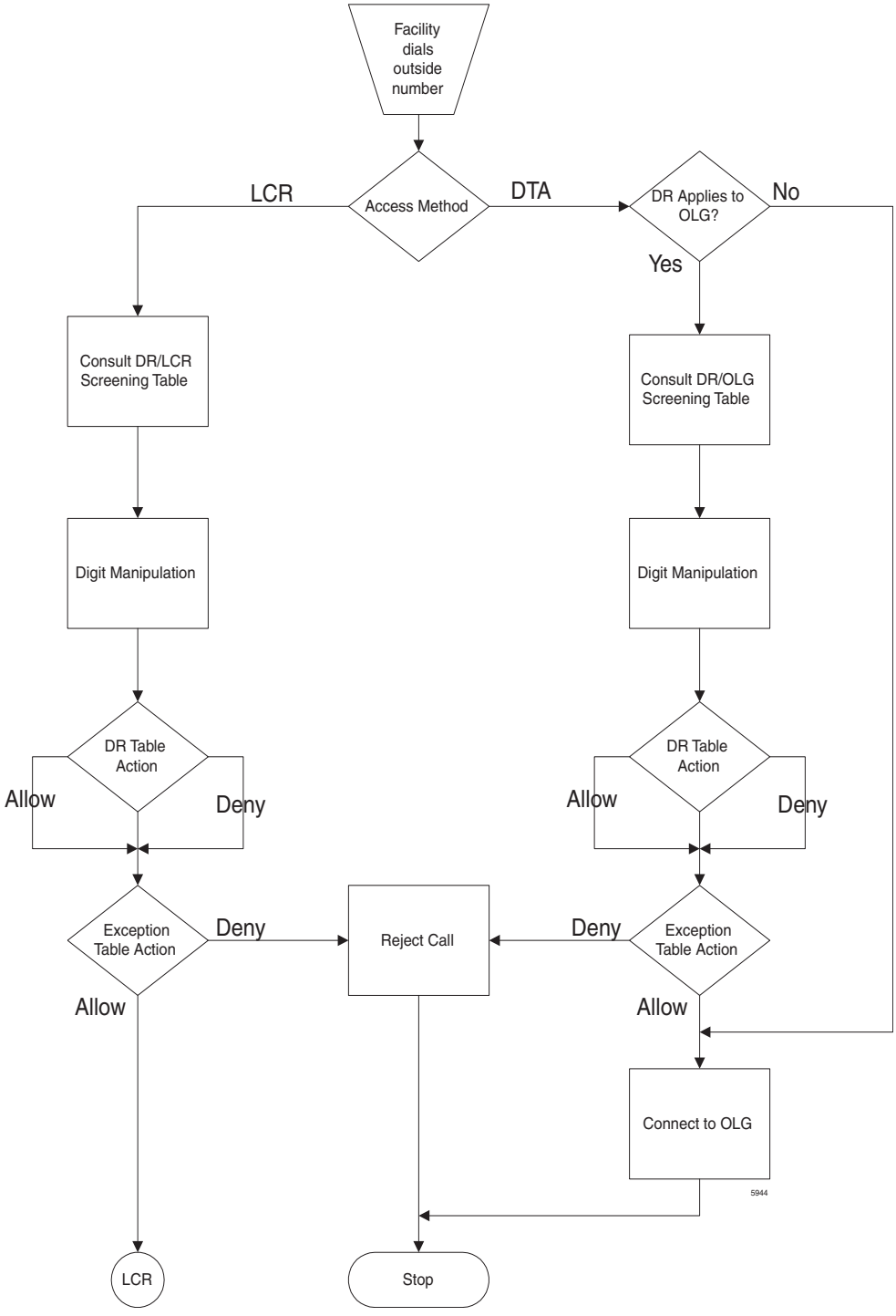
DR is always applied to calls originated through LCR and may be applied to calls originated through Trunk Group Access, Individual Trunk Access, CO Key, Group CO Key, Pooled Line Key, and Strata Net private networking. Special screening tables allow restriction of calls placed through Centrex or PBXs to which the Strata CTX may be connected.

Each OLG can be programmed to require or not require DR in "306 Outgoing Line Groups" on page 6-4. If a trunk group requires DR, a table must then be established using "531 DR Screening Table for OLG" on page 9-32.

DR is controlled by a DR Level (DRL) that is assigned to any station or trunk capable of making an outside call. Each of the 16 DRLs relate to a DR Table. A DR Table may be an Allow or Deny table and may be associated with an Exception Table. A Deny Toll Restriction Table contains a list of dial strings that are prohibited. Its associated Exception Table lists the dial strings within the Deny Table ranges that would be allowed. For example, a Deny table might deny access to all of Area Code **1-800**. Its exception table could permit access to specific office codes within that area such as **1-800-234**.

Basic Operation

The flow chart below describes the basic logic by which calls are connected or rejected as a result of DR.



Tables

Strata CTX uses two or three tables to apply DR:

- Screening Tables. There are two types of screening tables as follows:
  - LCR Screening Tables.
  - OLG-Specific Screening Tables.
- DR Table or Exception Table to the DR Table.

Screening tables are used in Behind Centrex/PBX operations to detect access codes required by the Centrex/PBX and processes them appropriately in a way that is transparent to end users.

DR/LCR Screening

DR is applied to all LCR calls using "530 DR LCR Screening Table Assignment" on page 9-31. It analyzes the digits dialed after the LCR access code (typically **9**).

Example: A station user dials **9*72 1-617-234-5678**. The outgoing line will serve as an incoming line that this user is attempting to forward to his home. The System Administrator has created an LCR/ Screening entry to prevent the forwarding of this line to the users home. With Skip & Apply under DR action and a Skip Length of 0, the call will be forced to present ***72** to the DR table where the call will be rejected. *Apply* under LCR Action ensures that the entire string will be processed by LCR. In this case, Digit Modification is irrelevant.

DR Screening for OLG Table

An OLG-specific DR Screening Table is used when a call is originated through a Line Key, Pooled Line Key, Group CO Key, Trunk Group Access Code or Direct Trunk Access Code and a CO line is chosen that requires DR. The decision to apply DR to an OLG is made in "306 Outgoing Line Groups" on page 6-4. If the OLG does not require DR, the call is connected to the desired line and all dialed digits, minus the Strata CTX access code, are sent.

The OLG-specific table performs two functions:

- It manipulates the digits that will be screened by the DR table.
- It creates a Pause Value that ensures that the Centrex or PBX which is the source of the trunk will receive and interpret the digits correctly. This is used to compensate for older, slower equipment.

Example: A station user dials 81-9-1-617-234-5678 where 81 is the Trunk Group Access Code for a Centrex trunk group. 9 is the Centrex' LCR access code. The Skip Length of 1 tells the system how many of the first digits constitute an access code or other digits that may be ignored. The DR Action of Skip & Apply tells the system to ignore the 9 and present 16172345678 to the DR Table use in the next step in the process. The Pause Value of two seconds tells the system that, if it passes the DR Tables and is connected to a trunk, it is to pause two seconds after outdialing the 9 and before outdialing 16172345678.

Dial String	DR Action	Skip Length	Pause Value
9	Skip & Apply	1	2

DR Table

Each DRL is associated with a DR Table that defines the destinations to which a holder of that DRL is entitled to place a call. Permission may be expressed in Allow or Deny tables depending on the field technician's choices. The DR Table is activated by defining the table as Allow or Deny through "523 LCR Route Plan Schedule Assignment" on page 9-28. The table is then populated one string at a time through "533 DR Level Table Assignment" on page 9-33. The table may have up to 100 entries. Entries may include any DTMF character including ***** and **#**.

As soon as Strata CTX finds a match in the table, it acts upon it. Therefore, entering **1** in a Deny table will deny all 1+ calling to users with that DRL whereas entering **1-888** denies calls to the 888 Area Code. Exceptions can be created in the DRL Exception Table.

DRL Exception Table Assignment – Once a DR Table has been established for a DRL, its exception table can be created using "534 DRL Exception Table Assignment" on page 9-34. Exceptional DR Tables are optional. Dial Strings in Exception tables my be as long as 11 digits. If a field technician wanted to deny access to every office code in the 617 area code except Directory Assistance, he would first create a deny table that included 617 and then create an associated exception table that allowed 617-555-1212. See the table below for more examples.

Interaction With Other Features

Behind Centrex Operation

Behind Centrex operation for OLGs is defined in. The CTX will use the values stored here to strip local and Centrex access codes from the dial string and determine the external number being dialed. This external number will then be processed according to the DR rules described above.

Note The Centrex to which the OLG is attached may impose its own DRs.

Credit Card Calling

If a valid credit card number is detected, the CTX will not apply DR to a call because the charges for such a call are applied to the credit card rather than the outgoing line used.

Destination Restriction Guide Page

Use the Destination Restriction (DR) guide pages to program Destination Restriction.

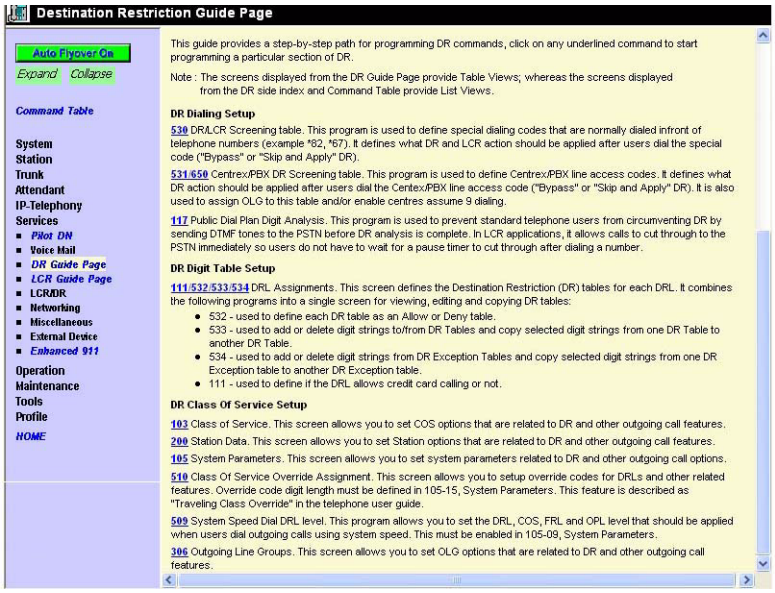
1. Click Services > DR Guide Page.

   The Destination Restriction Guide Page opening screen displays (shown right).

2. Click on any Program number to start using the Guide page.

Note Every Guide Page has Back and Next buttons to help you navigate to the previous and next programs in a group.

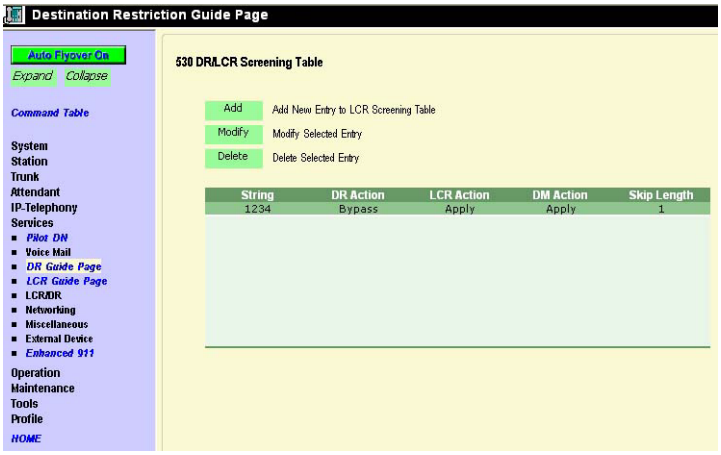
The Program at the end of a group has a Guide Page button instead of a Next button to take you to the main Destination Restriction Guide Page.



DR Dialing Setup

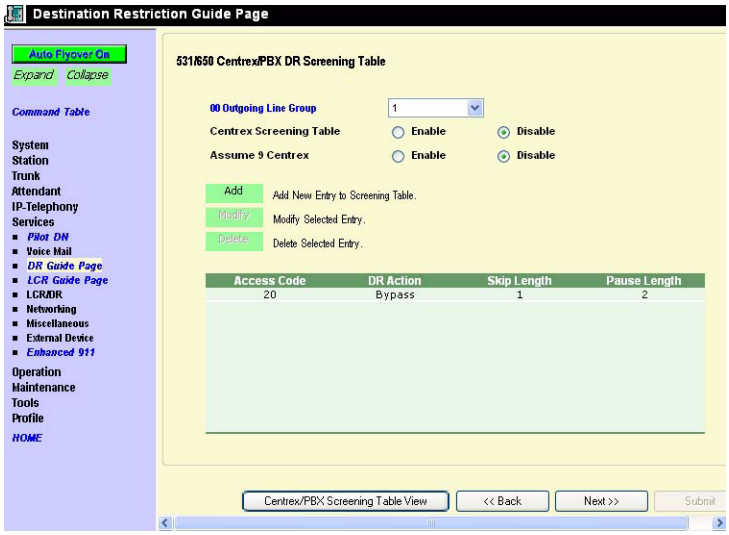
Program 530 – DR/LCR Screening table (shown right).

Use this program to define special dialing codes that are normally dialed in front of telephone numbers (example *82, *67). It defines what DR and LCR action should be applied after users dial the special code (“Bypass” or “Skip and Apply” DR).



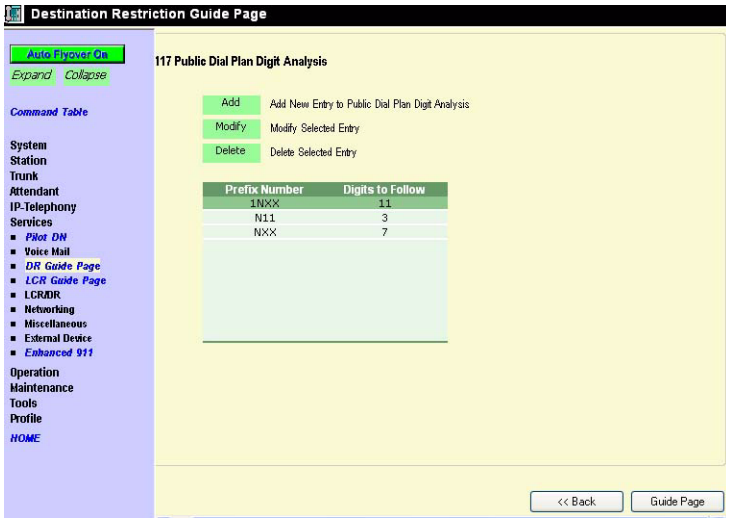
Programs 531/650 – Centrex/ PBX DR Screening table.

Use this program to define Centrex/PBX line access codes. It defines what DR action should be applied after users dial the Centrex/PBX line access code ("Bypass" or "Skip and Apply" DR). It is also used to assign OLG to this table and/or enable centres assume 9 dialing.



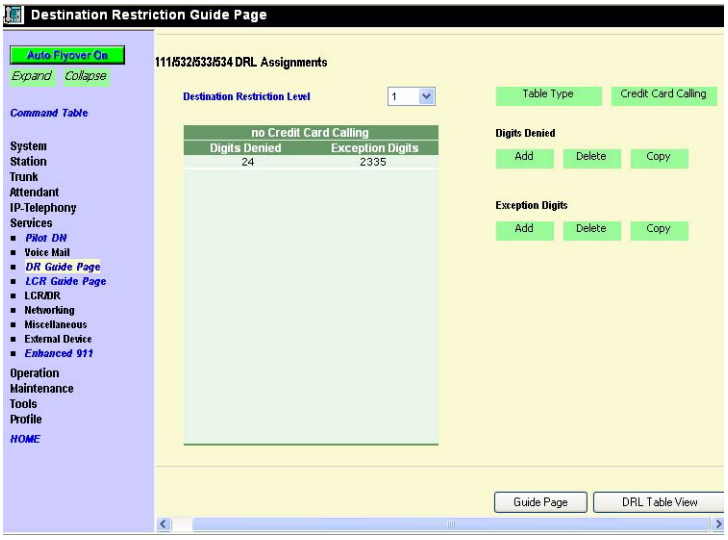
Program 117 – Public Dial Plan Digit Analysis (shown right).

Use this program to prevent standard telephone users from avoiding DR by sending DTMF tones to the PSTN before DR analysis is complete. In LCR applications, it allows calls to cut through to the PSTN immediately, so users do not have to wait for a pause timer to cut through after dialing a number.



DR Digit Table Setup

Programs 111/532/533/534 – DRL Assignments (shown right).



Use this screen to define Destination Restriction tables for each DRL. It combines the following programs into a single screen for viewing, editing and copying DR tables.

111 - Used to define if the DRL allows credit card calling or not.

532 - Used to define each DR table as an Allow or Deny table.

533 - Used to add or delete digit strings from DR Exception Tables and copy selected digit strings from one DR Exception table to another DR Exception table.

534 - Used to add or delete digit strings from DR Exception Tables and copy selected digit strings from one DR Exception table to another DR Exception Table.

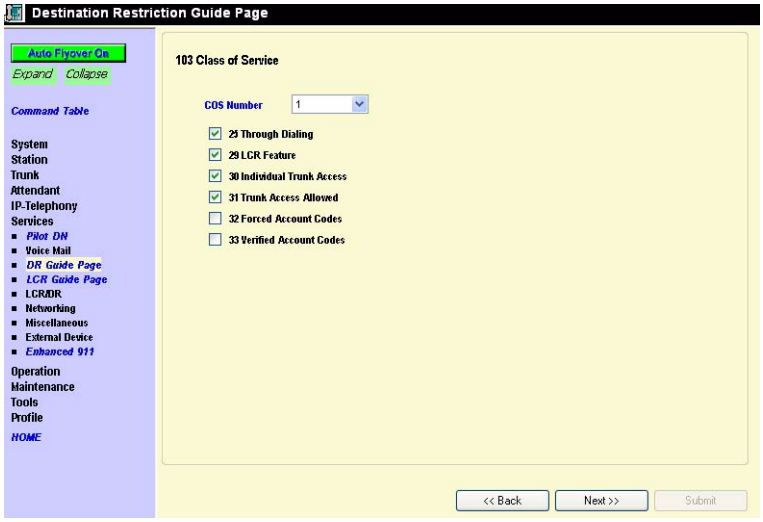
Table 9-1 DRL Dial String Template

DRL	Allow/Deny/Exception	Dial String	Comments
DRL1	Deny	Nothing	Deny nothing so all calling is allowed
DRL10	Allow	Nothing	Allow nothing so all outbound calls are restricted
DRL11	Deny	1, 809, 900, 976, NXX976	Denies long distance calls, pay per service toll calls, except for toll free calls and allows local calls
	Exception	1800, 1877, 1888	
DRL12	Deny	011, 1809, 1900,1976, 809,900, 976, 1NXX976, NXX976	Allows local and long distance calls, restricts pay per service toll calls, and restricts international calls

DR Class of Service Setup

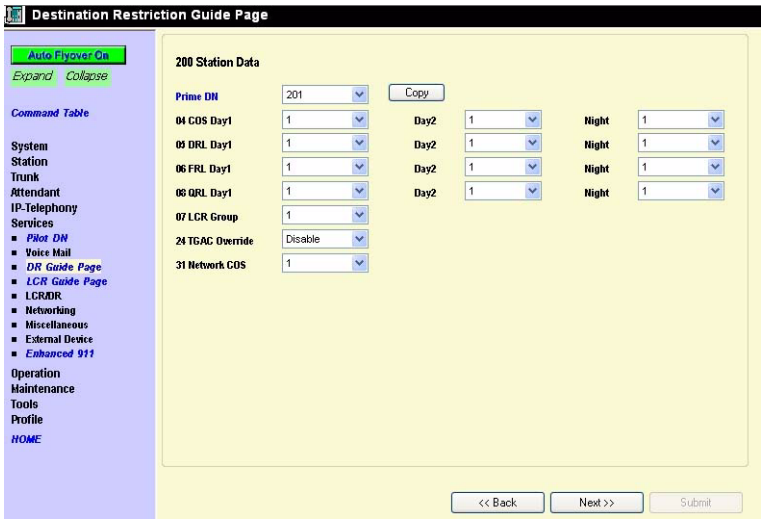
Program 103 – Class of Service (COS).

Use this screen to set COS options that are related to DR and other outgoing call features.



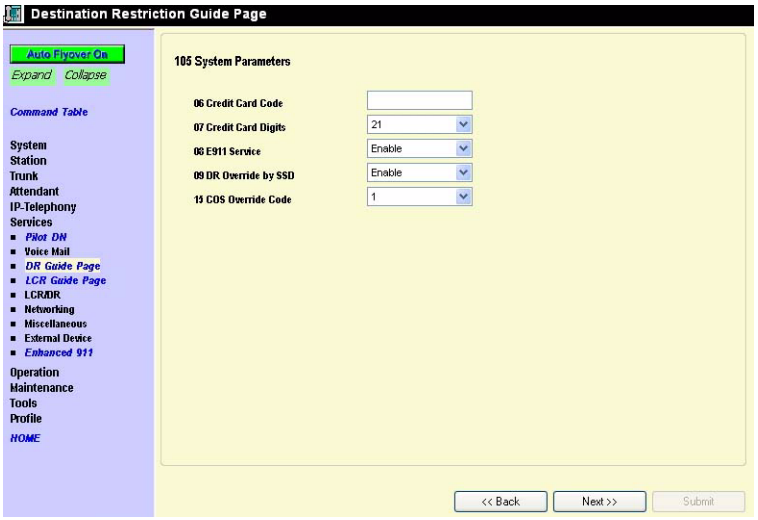
Program 200 – Station Data.

Set the COS options that are related to DR and other outgoing call features.



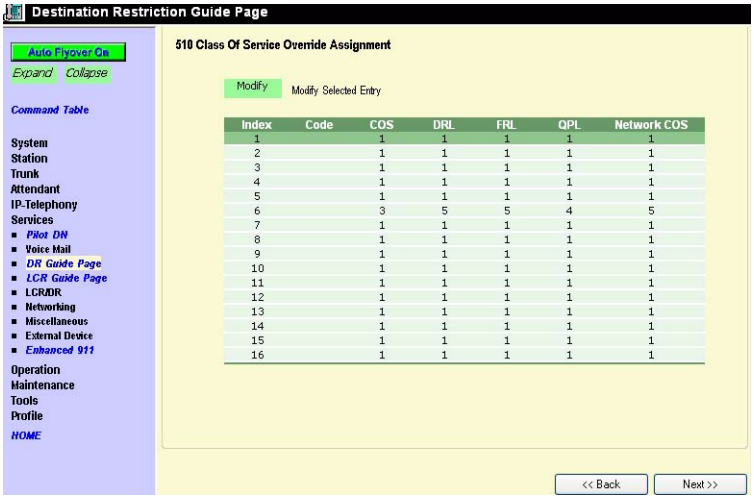
Program 105 – System Parameters.

Set the system parameters related to DR and other outgoing call options.



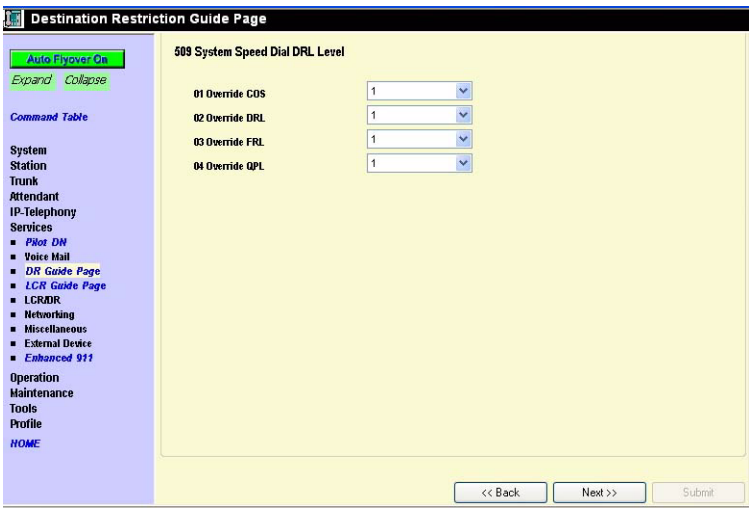
Program 510 – Class of Service.

Setup override codes for DRLs and other related features. Override code digit length must be defined in Program 105-15, System Parameters. This feature is described as “Travelling Class Override” in the telephone user guide.



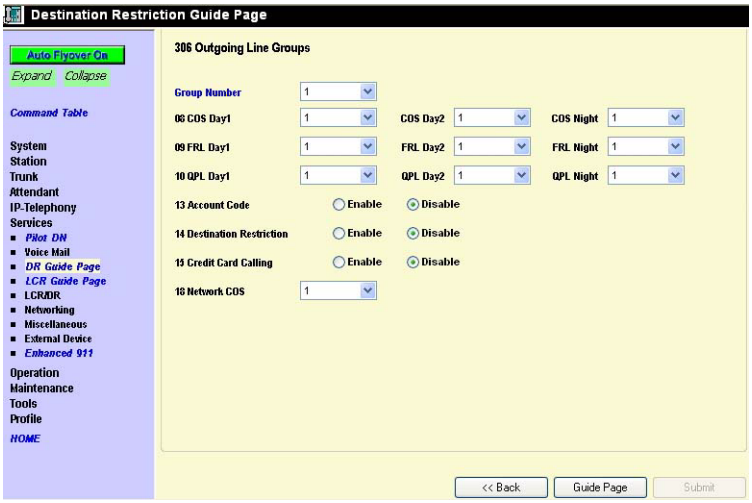
Program 509 – System Speed Dial DRL level.

Set the DRL, COS, FRL and OPL level that should be applied when users dial outgoing calls using system speed. This must be enabled in 105-09, system parameters.



Program 306 – Outgoing Line Groups.

Set Station options that are related to DR and other outgoing call features.



LCR Overview

LCR Analysis Process

The flowchart below represents the process by which Strata CTX analyzes dialed digits and makes LCR decisions. The graphic is divided into four areas each described below. DR and call connection are described elsewhere in this document and are shown here only for their roles in the LCR process.

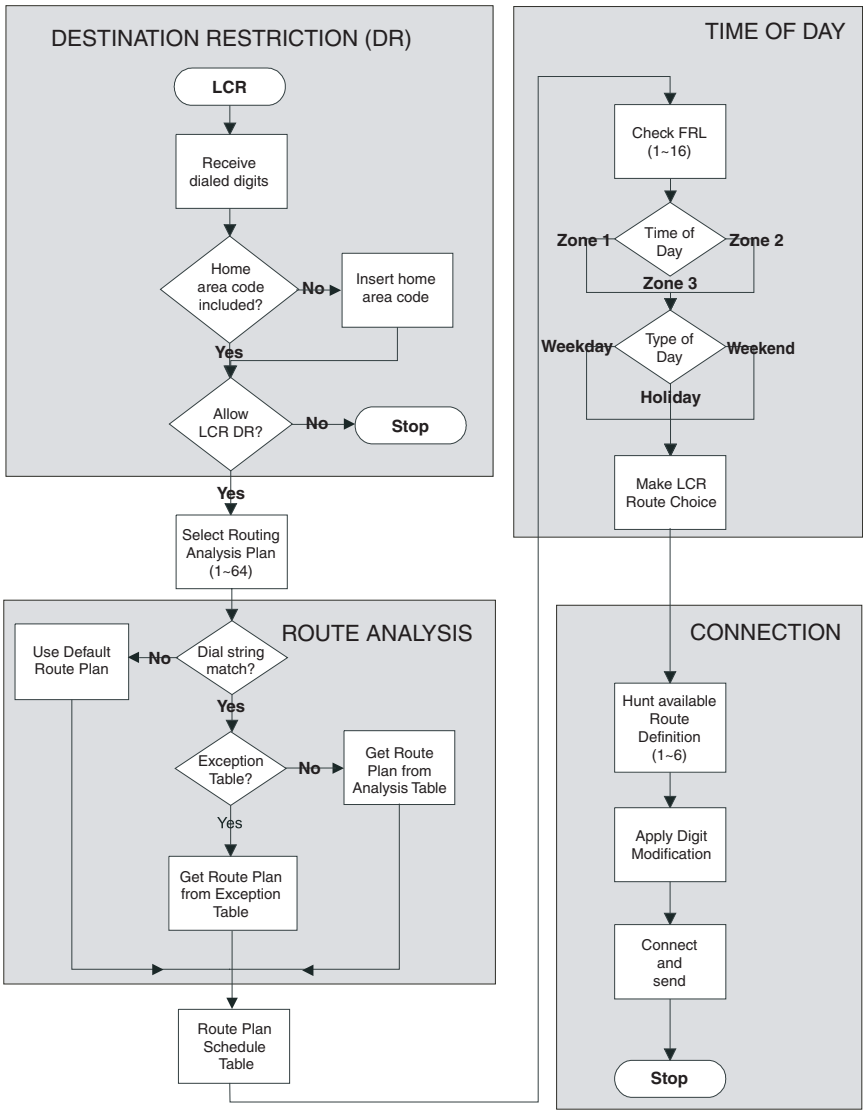


Figure 1 LCR Analysis Process Flow

DR

LCR begins with the receipt of a dial string from a facility capable of originating an outgoing call: station, automated attendant, Tie trunk, DISA trunk, DID trunk, etc. The dial string is identified as an LCR call by the presence of the LCR Feature Access Code—typically **9**. The LCR Access Code is removed and the remaining external digits are processed.

Route Analysis

Route Analysis chooses a Route Plan based on the dialed digits. The Routing Analysis Plan becomes the index into the time/date calculations described in the next section. If the Strata CTX is unable to match the dial string, it uses the default route plan which assures a route out of the system. If a match is found, Strata CTX determines if a exception table is associated with the dial string. If the dial string appears in the exception table, the call is assigned to the Route Plan stored in the exception table. Otherwise, the Route Plan stored in the initial table is used.

Time of Day

The Strata CTX maintains time and day values for LCR separate from those for the general system. One day can be divided into three zones, and each day can be categorized as a Weekday, Weekend, or Holiday.

Connection

Selection of a Route Choice Table begins the process of actually connecting the call to an outgoing trunk. Each Route Choice Table consists of six Route Definitions which operate in terminal hunt fashion to select an OLG and to apply a digit modification treatment.

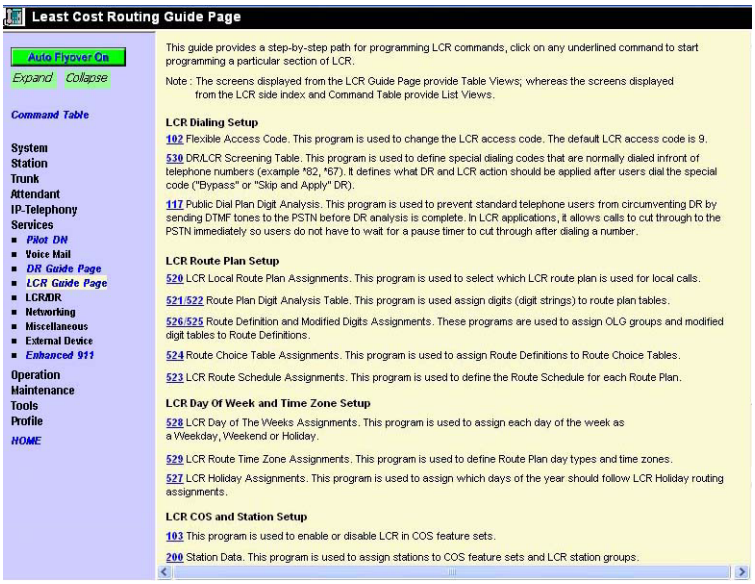
LCR Guide Page

1. Complete the "LCR Assignment Record Sheets" on page D-42.
2. Click Services > LCR Guide Page.

   The Least Cost Routing Guide Page screen displays (shown right).
3. Click on any Program Number to start using the Guide pages.

Note Every Guide Page has Back and Next buttons to help you navigate to the previous and next programs in a group.

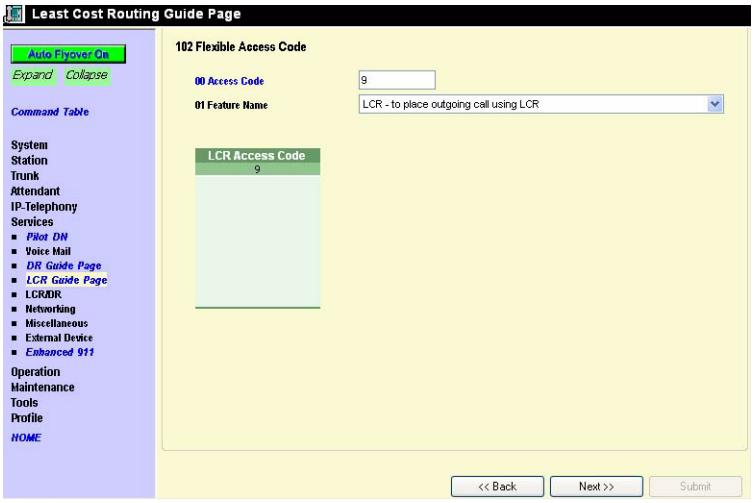
The Program at the end of a group has a Guide Page button instead of a Next button to take you to the main Least Cost Routing Guide Page.



LCR Dialing Setup

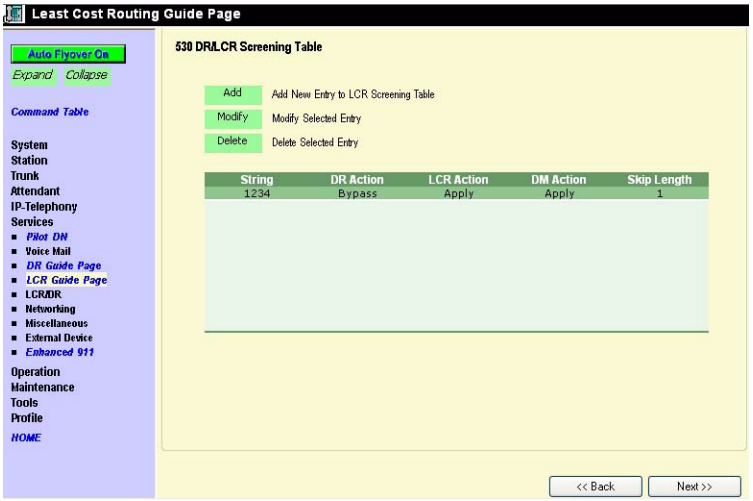
Program 102 – Flexible Access Codes

Use this program to change the LCR access code. The default LCR access code is 9. You can change the default access code to any number from 0~9, *, and/or #. Enter an access code number that does not conflict with the existing numbering plan.



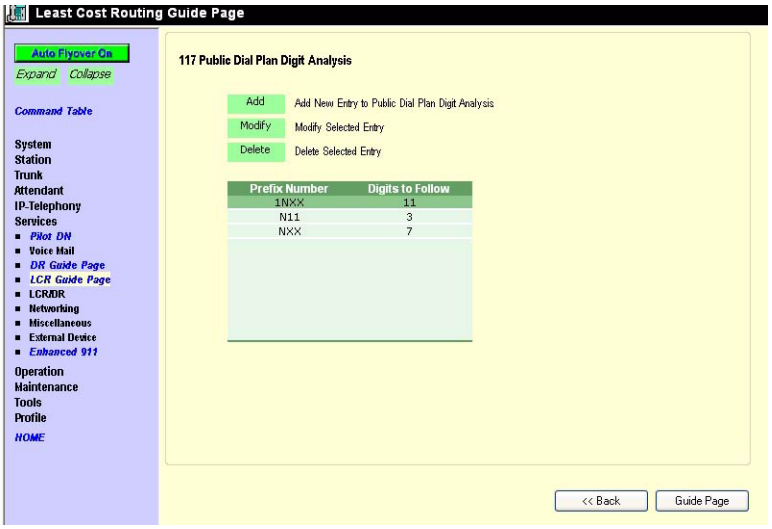
Program 530 – DR/LCR Screening Table.

Use this program to define special dialing codes that are normally dialed in front of telephone numbers (example *82, *67). It defines what DR and LCR action should be applied after users dial the special code ("Bypass" or "Skip and Apply" DR).



Program 117 – Public Dial Plan Digit Analysis.

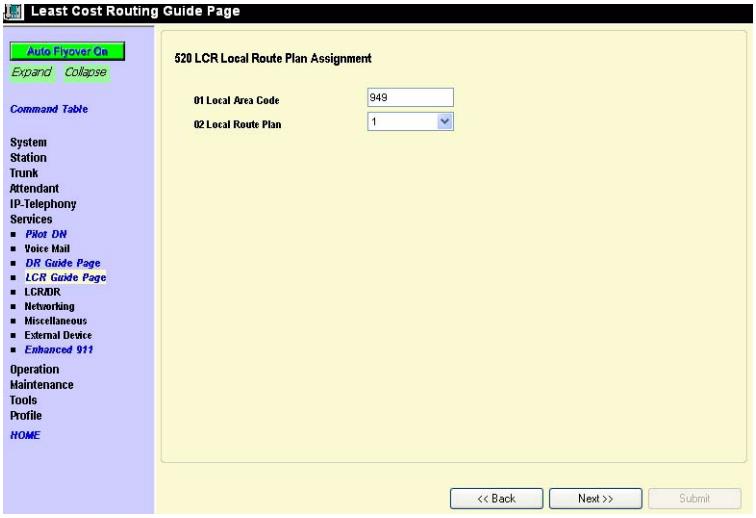
Use this program to prevent standard telephone users from circumventing DR by sending DTMF tones to the PSTN before DR analysis is complete. In LCR applications, it allows calls to cut through to the PSTN immediately so users do not have to wait for a pause timer to cut through after dialing a number.



LCR Route Plan Setup

Program 520 – LCR Local Route Plan Assignments.

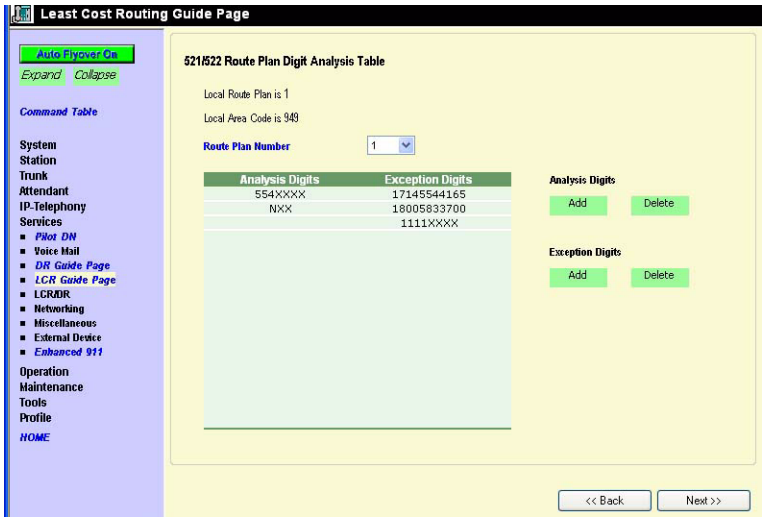
Use this program to select which LCR route plan is used for local calls.



Programs 521 and 522– Route Plan Digit Analysis Table.

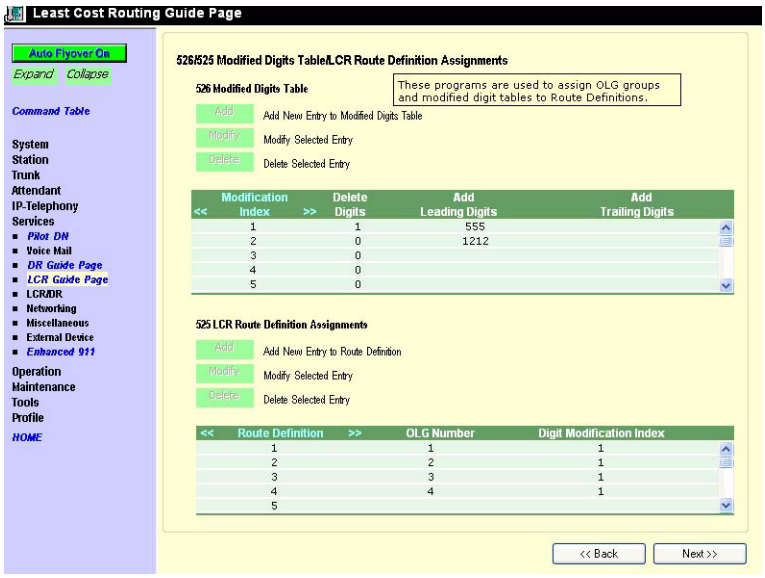
Use this program to assign Analysis and Exception digits (digit strings) to route plan tables.

This screen enables you to view, add and delete Analysis Digits and Exception Digits.



Programs 526 and 525 – Route Definition and Modified Digits Assignments.

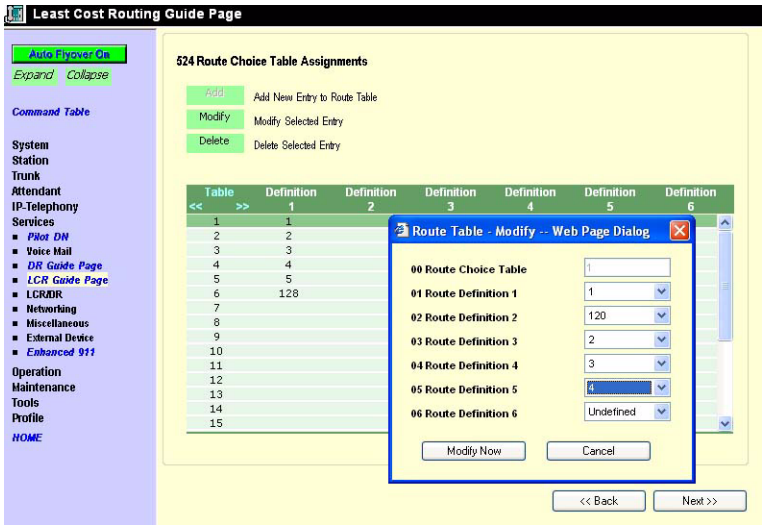
Use these programs to assign OLG groups and modified digit tables to Route Definitions.



Program 524 – Route Choice Table Assignments.

Use this program to assign Route Definitions to Route Choice Tables.

Note Double click a row to activate the Add, Modify and Delete buttons.



Program 523 – LCR Route Schedule Assignments.

Use this program to define the Route Schedule for each Route Plan.

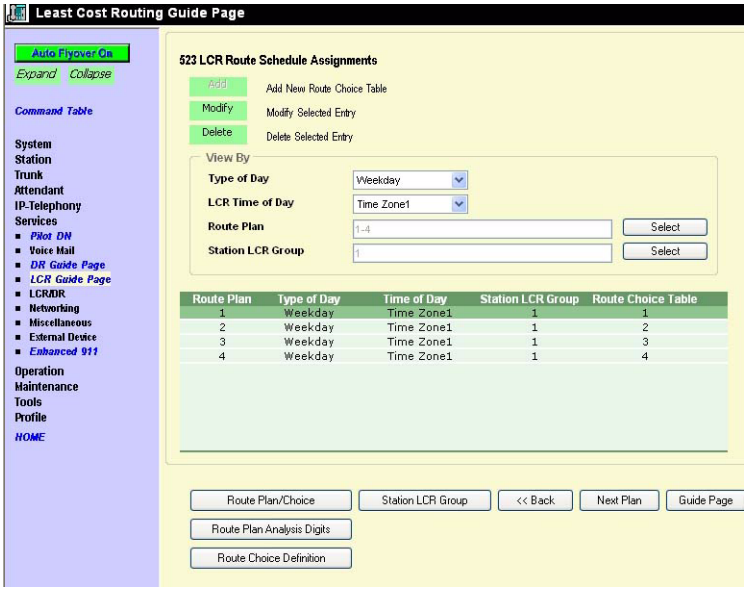
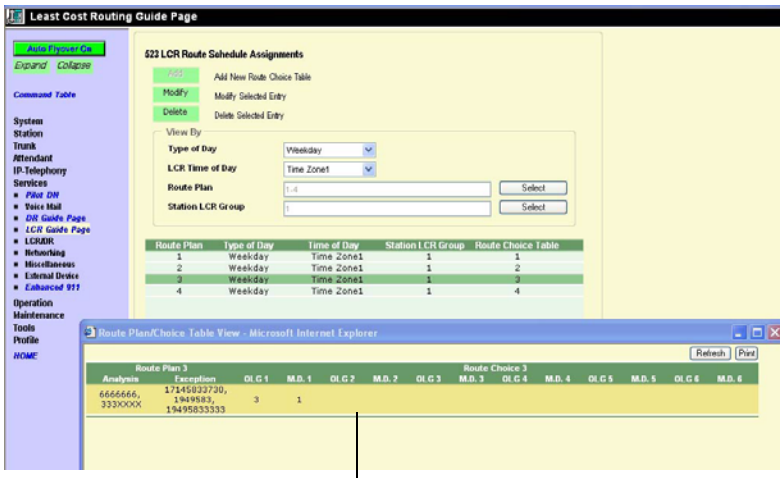


Table Buttons on this screen

Notes

- Clicking table buttons display exclusive and dynamic tables. You can move these tables anywhere on the screen by clicking the blue title bar and dragging it to a desired location. (See screen below as an example).
- The tables are dynamic because you can click on any route plan on the 523 LCR Route Schedule Assignment screen and notice the table information change to pertain to that route plan.



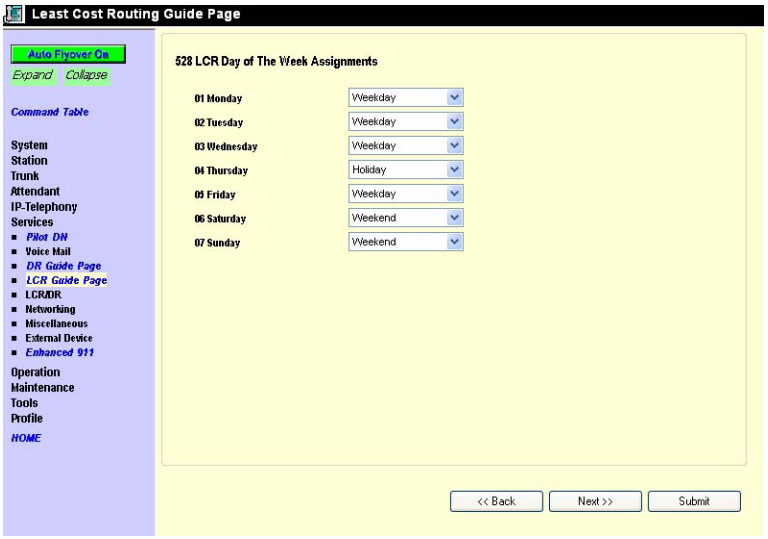
Route Plan/Choice Table

- Route/Plan Choice – Click this button to view route plans and route choice. This table combines all information found in the Route Plan Analysis Digits table and Route Choice Definition table on a per Route Plan basis.
- Route Plan Analysis Digits – Click this button to view the Route Plan Analysis table.
- Route Choice Definition – Click this button to view the Route Choice Table view.
- Station LCR Group – Click this button to view Station LCR Group table.

LCR Day of Week and Time Zone Setup

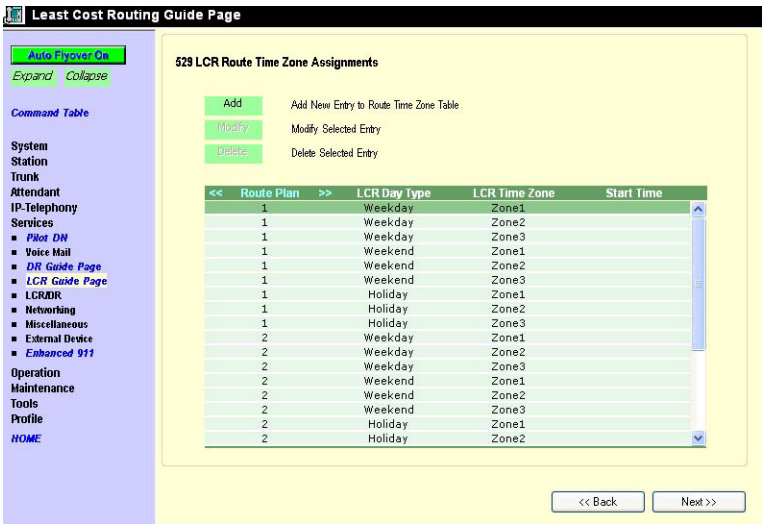
Program 528 – LCR Days of the Week Assignments.

Use this program to assign each day of the week as a Weekday, Weekend or Holiday.



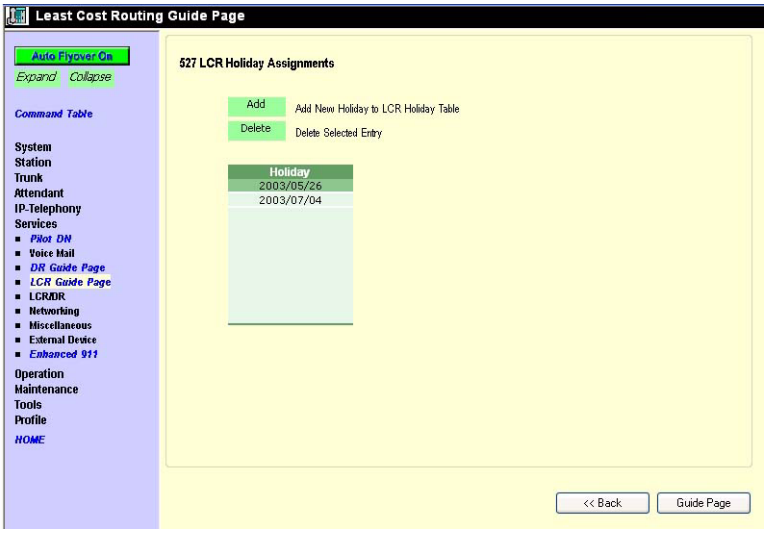
Program 529 – LCR Route Time Zone Assignments.

Use this program to define Route Plan day types and time zones.



Program 527 – LCR Holiday Assignments.

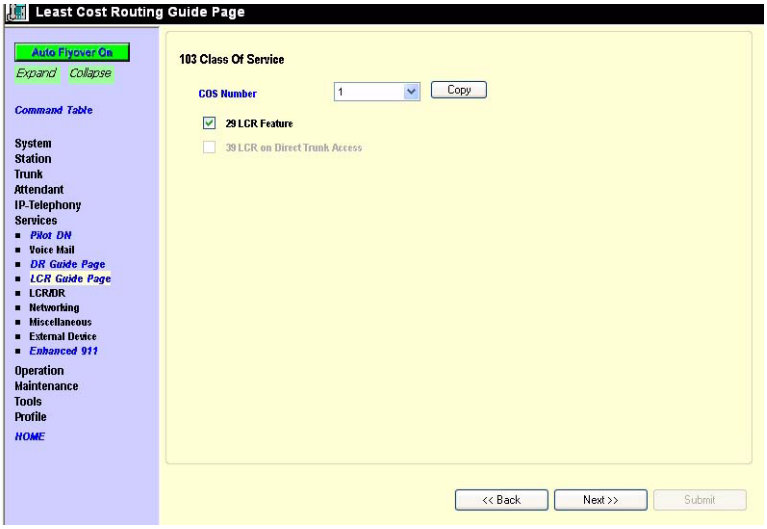
Use this program to assign which days of the year should follow LCR Holiday routing assignments.



LCR COS and Station Setup

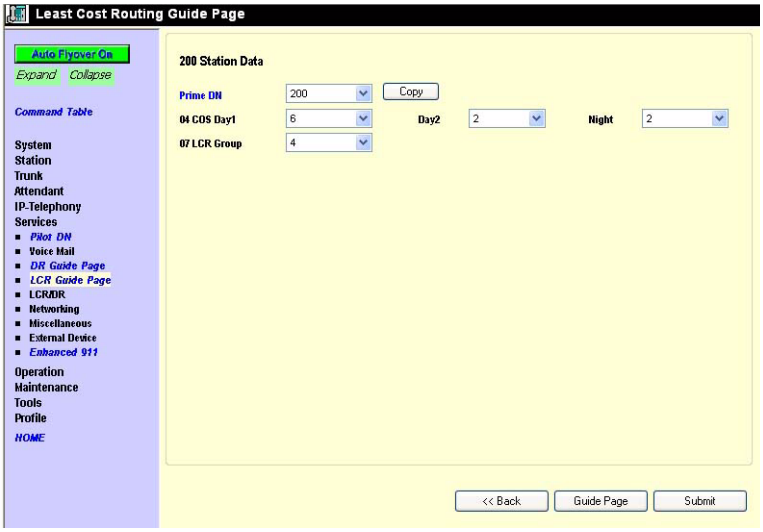
Program 103 – Class of Service.

Use this program to enable or disable LCR in COS feature sets.



Program 200 – Station Data.

Use this program to assign stations to COS feature sets and LCR station groups.



LCR/DR

LCR Assignment

Program Number(s): 520, 521 and 522

User access to LCR is determined by programming the following:

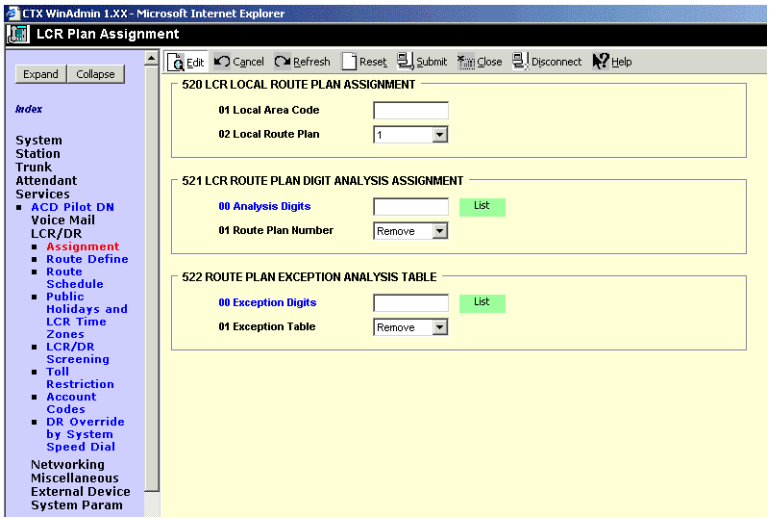
- **103 COS Assignment** – 29 LCR Feature (see page 4-9) enables access to LCR COS.
- **200 Station Assignment** – 07 LCR Group (see page 5-2) assigns a station to an LCR Group.
- **304 ILG Assignment** – 23 LCR Group (see page 6-3) assigns an LCR Group to an ILG.

Note Appropriate COS, DRL and FRL assignments must be made to all LCR stations and trunks.

1. Complete the "LCR Assignment Record Sheets" on page D-36.
2. Click Services > LCR/DR > Assignment.
3. Enter Program 520 data.
4. Enter Program 521 data.
5. Enter Program 522 data.

Note For steps 3~5, complete"LCR Assignment Record Sheets" on page D-36.

6. Click Submit.



520 LCR Local Route Plan Assignment

Prerequisite Program: *None*

There are 64 LCR route plans. This assignment is used to select which LCR route plan should be used to route local calls. The Local Route Plan, which must be defined in the route definition assignment, determines which CO line group is used for local outgoing calls.

FIELD	SUMMARY
01 Local Area Code	Enter the area code for the dialing area in which the system is installed. This is the area code for the Central Office (CO) that provides local CO lines to the system. If no data is entered in this field, any previously programmed data is lost. Possible values: 3 digits (default = no value)
02 Local Route Plan	Enter the LCR Route Plan number that should be used to route local calls. Local calls are made by dialing 7-digit public telephone numbers that do not require an Area Code. There are 64 LCR Route Plans from which to choose.

521 LCR Route Plan Digit Analysis Assignment

Prerequisite Program: *520 page 9-24*

This program builds the basic LCR Analysis Table.

FIELD	DESCRIPTION
00 Analysis Digits	Enter the external digit strings (area codes, toll prefixes, service codes, etc.) to be assigned to a Route Plan Analysis Table. Strings may be up to 32 digits long. There Route Plan Analysis Table may have 1280 members. A digit string can only be in one table at a time. Possible values: Digits may include wild cards “X” and “N” where X = 0~9 and N = 2~9 (default = no value).
01 Route Plan Number	Enter the Route Plan number to which to assign the Analysis Digits. **Note** Entering 0 deletes the Analysis Digits from the table to which they had been assigned.

522 LCR Exception Number Route Plans

Prerequisite Program: *521 page 9-25*

This command assigns up to 1280 dialed external digit strings to the Route Plan Exception Analysis Table which assigns each string to 1 of 64 Route Choice Tables. The values expressed here are exceptions to the values established in Program 521.

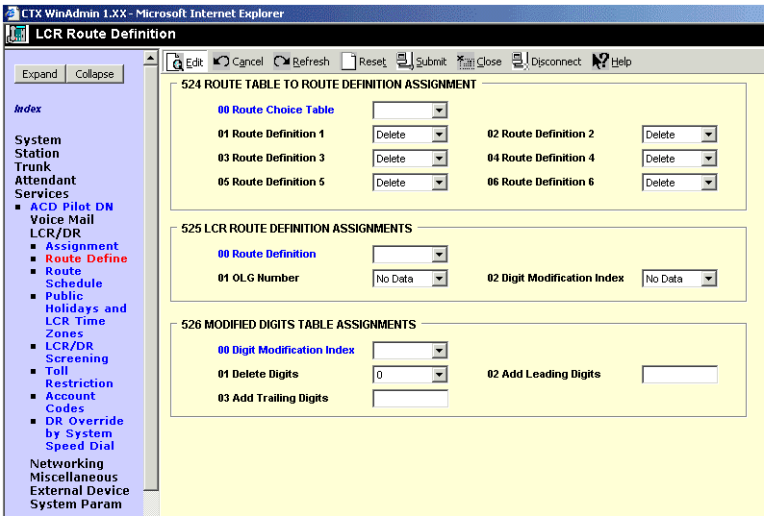
FIELD	DESCRIPTION
00Exception Route Plan Table	Enter the external digit strings (area codes, toll prefixes, service codes, etc.) to be assigned to a Route Plan Exception Analysis Table. Strings may be up to 32 digits long. The Exception Route Plan Analysis Table may have 1280 members. A digit string can only be in one table at a time. Possible values: Digits may include wild cards “X” and “N” where X = 0~9 and N = 2~9 (default = no value).
01Exception Route Plan	Enter the Route Plan Table in which to assign the Exception Digits. **Note** Entering 0 deletes the Exception Digits from the table.

Route Define

Program Number(s): 524, 525 and 526

Define the participants in the LCR Route Plan.Complete the "Route Choice Definition Record Sheet" on page D-42.

1. Click Services > LCR/DR > Route Define.
2. Enter Program 524 data.
3. Enter Program 525 data.
4. Enter Program 526 data.
5. Click Submit.



524 Route Table to Route Definition Assignment

Prerequisite Program: *525 below*

This command defines up to six possible Route Definitions for a given Route Table.

FIELD	DESCRIPTION
00 Route Choice Table	Enter the Route Choice Table to be defined. Possible values: 1~128
01 Route Definition 1	Enter Route Definitions to be assigned to this Route Table. Possible values: 1~128, 0 = Delete (default = 1)
02 Route Definition 2	
03 Route Definition 3	
04 Route Definition 4	
05 Route Definition 5	
06 Route Definition 6	

525 LCR Route Definition Assignment

Prerequisite Program: *520 page 9-24*

This command assigns Route Definitions for LCR. A Route Definition consists of an OLG and a Digit Modification index.

FIELD	DESCRIPTION
1~128	Select the Route Definition number. Possible values: 1~128 (default = no value)
0~32 (CTX100) 0~50 (CTX670 Basic) 0~128 (CTX670 Exp.) (default = 1)	Select the OLG Number associated with this Route Definition. Possible values: 1~128 (default = 1)
1~128 (default = 1)	Select the Digit Modification number associated with this Route Definition.

526 Modified Digits Table Assignment

Prerequisite Program: *521 page 9-25*

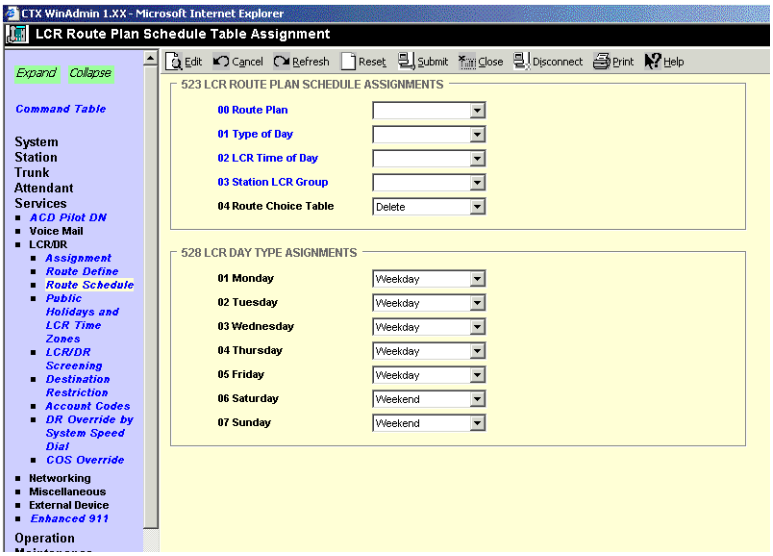
This command modifies LCR dialed numbers by deleting digits from and adding digits to the dialed numbers.

FIELD	DESCRIPTION
00 Digit Modification Index	Select the Digit Modification Index used by the LCR Route Choice table to determine the digit modification treatment to be applied. Leading digits of a dialed number may be deleted; leading and trailing digits may be added to the dialed number. Possible values: 1~128 (default = no value)
01 Delete Digits	Select the quantity of digits to be deleted from the beginning of dialed number. Possible values: 0~10 (default = 0)
02 Add Leading Digits	Enter the digit string to be inserted at the beginning of the number. Possible values: Up to 23 ASCII characters (default = no value)
03 Add Trailing Digits	Enter the digit string to be inserted at the end of the number. Possible values: Up to 23 ASCII characters (default = no value)

Route Schedule

Program Number(s): 523 and 528

1. Complete the "Route Schedule Record Sheets" on page D-35.
2. Click Services > LCR/DR > Route Schedule.
3. Enter Program 523 data.
4. Enter Program 528 data.
5. Click Submit.



523 LCR Route Plan Schedule Assignment

Prerequisite Program: *None*

This command assigns Route Plan Schedule Tables for LCR. Each table is a 3-dimensional array of 144 values (3 Types of Day x 3 Times of Day x 16 LCR Groups).

FIELD	DESCRIPTION
00 Route Plan	Enter the Route Plan Number to build a schedule indexed by Time of Day, Type of Day and LCR Group. Possible values: 1~64 (default = no value)
01 Type of Day	Select the Type of Day. Possible values: Weekday (default), Weekend or Holiday
02 LCR Time of Day	Select the Time Zone. Possible values: Time Zone 1, Time Zone 2 or Time Zone 3 (default = no value)
03 Station LCR Group	Select the Station LCR Group. Possible values: 1~16 (default = 1)
04 Route Choice Table	Enter the Route Choice Table Number to be used with this combination of time, type and LCR group. Possible values: 1~128, 0 = delete (default = 1)

528 LCR Public Day of Week Mapping Table

Prerequisite Program: *520 page 9-24*

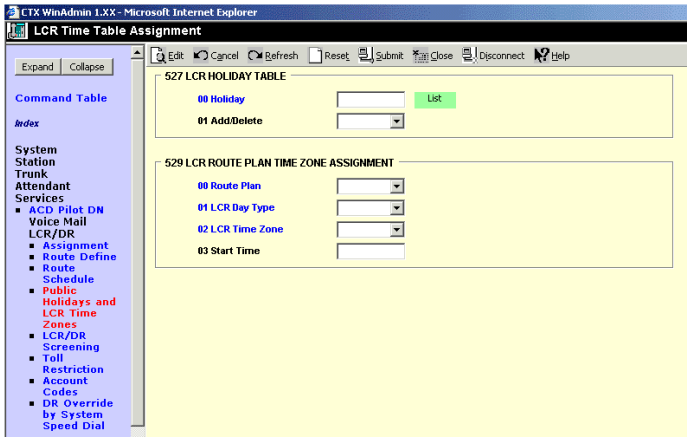
This command defines the days of the week as weekdays, weekend days or holidays for LCR.

FIELDD	DESCRIPTION
01 Monday	Select the Day Type to assign to this day. Possible values: Weekday (default), Weekend or Holiday
02 Tuesday	
03 Wednesday	
04 Thursday	
05 Friday	
06 Saturday	Select the Day Type to assign to this day. Weekday, Weekend (default) or Holiday
07 Sunday	Select the Day Type to assign to this day. Weekday, Weekend (default) or Holiday

Public Holidays and LCR Time Zones

Program Number(s): 527 and 529

1. Complete the "LCR Time Zone Record Sheets" on page D-37.
2. Click Services > LCR/DR > Public Holidays and LCR Time Zones.
3. Enter Program 527 data.
4. Enter Program 529 data.
5. Click Submit.



527 LCR Holiday Table

Prerequisite Program: *None*

This command assigns up to 128 holidays for LCR processing. These assignments are related to the Day assignments established in Program 523.

FIELD	DESCRIPTION
00 Holiday	Enter Date (YYYYMMDD). A maximum of 128 dates is allowed. Possible values: YYYY = Year, MM = Month and DD = Day (default = no value)
01 Add/Delete	Choose to add or delete this date from the holiday table. Expired dates remain in the table unless deleted. Possible values: Add or Delete (default)

529 LCR Route Plan Time Zone Assignment

Prerequisite Program: *520 page 9-24*

This command creates a three-dimensional array (Day, Time & LCR Group) for each Route Plan

FIELD	DESCRIPTION
00 Route Plan	Select the LCR Route Plan Number to assign to this time zone. Possible values: 1~64 (default = no value)
01 LCR Day Type	Select a Day Type for which to define a time zone. Possible values: Weekday, Weekend or Holiday (default = no value)
02 LCR Time Zone	Select a Time Zone. Possible values: Zone 1, Zone 2 or Zone 3 (default = no value)
03 Start Time	Enter the start time for the selected Time Zone (hhmm). **Note** Enter your Day Type and Time Zone selections before entering data in to this field. Possible values: hh = hour (0-23) and mm = minutes (0-59) (default = 0000)

LCR/DR Screening

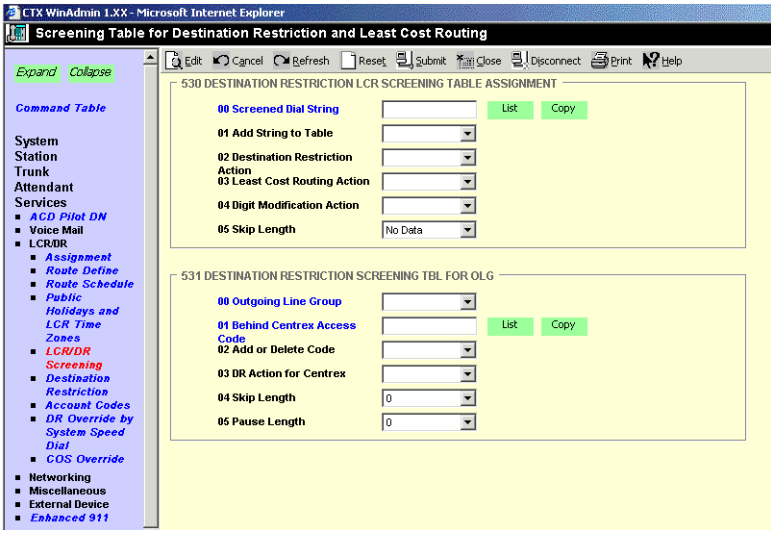
Program Number(s): 530 and 531

These programs enable and set up screening for DR and LCR.

1. Complete the "DR LCR Screening Record Sheet" on page D-38.
2. Click Services > LCR/DR > LCR/DR Screening.
3. Enter Program 530 and 531 data

   ...or click one of the following buttons:

   - List – view a summary list of programmed Screened Dial Strings or Behind Centrex Access Codes.
   - Copy – Enter a Screened Dial String or Behind Centrex Access Code in the field with the corresponding name. Click Copy to make a new assignment.
4. Click Submit.



530 DR LCR Screening Table Assignment

Prerequisite Program: *None*

This command screens dialed digits for access codes such as Carrier Identification Codes or Behind Centrex/PBX access codes. Used only in LCR calls.

FIELD	DESCRIPTION
00 Screening Dial String	Enter the string of external digits to be screened. Possible values: Up to 7 ASCII characters (default = no value)
01 Add String to Table	Add the Screening Dial String to the DR LCR Screening Table. Possible values: Add or Delete (default)
02 Destination Restriction Action	Select DR Action. Possible values: Bypass (default) or Skip and Apply • Bypass – Do not apply DR. • Skip and Apply – Apply DR to the dialed digits excluding the number of digits specified in Skip Length.
03 Least Cost Routing Action	Select LCR Action. Possible values: • Apply – (default) Apply LCR to all of the external dialed digits. • Skip and Apply – Apply LCR to the dialed digits excluding the number of digits specified in Skip Length.

FIELD	DESCRIPTION
04 Digit Modification Action	Select Digit Modification application. Possible values: • Apply – (default) Apply Digit Modification from the first digit. • Retain – Retain the skipped digits and apply Digit Modification starting from the next digit specified by Skip Length. • Discard – Discard the skipped digits and apply Digit Modification starting from the next digit specified by Skip Length.
05 Skip Length	Specify the number of digits at the beginning of the dial string to be ignored before DR, Digit Modification, or LCR is applied. Possible values: 0~5, 0 = delete (default = 0)

531 DR Screening Table for OLG

Prerequisite Program: *None*

Assigns DR Screening Table for an Outoing Line Group (OLG). Up to four codes may be assigned per line group. Used for outgoing calls other than LCR.

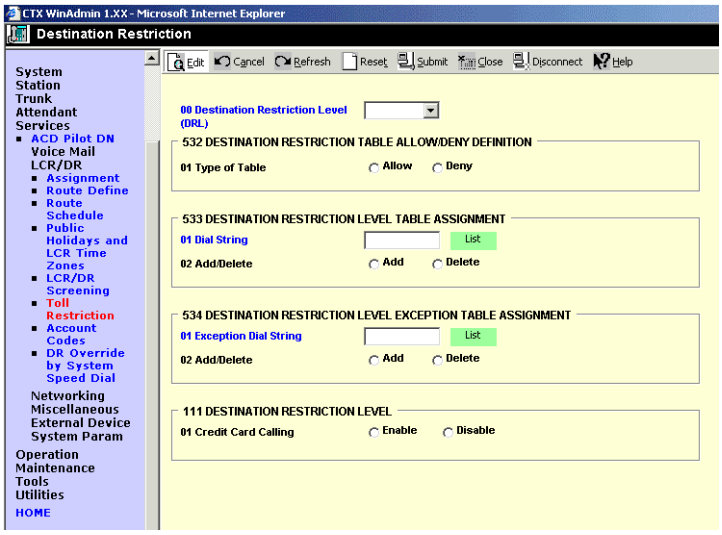
FIELD	DESCRIPTION
00 Outgoing Line Group	Enter the OLG Number. Possible values: 1~32 (CTX100), 1~50 (CTX670 Basic), 1~128 (CTX670 Exp.), (default = no value)
01 Behind Centrex Access Code	Enter the access code expected by an attached Centrex PBX. Possible values: Up to 8 ASCII characters (default = no value)
02 Add or Delete Code	Add or Delete the Code entered above. Leaving the field empty removes an existing code. Activation requires entries in OLG Group number and 01 Behind Centrex Access Code above. Possible values: Add or Delete (default)
03 DR Action for Centrex	Apply DR to the dialed digits. Possible values: • Bypass (default) – does not apply DR. • Skip and Apply– applies DR to the dialed digits excluding the number of digits specified in Skip Length.
04 Skip Length	Enter the number of leading digits to be ignored by DR. Possible values: 0~8 (default = 0)
05 Pause Length	Enter the length of the pause to be inserted between dialing digits. Possible values: 0~10 (default = 0)

Destination Restriction

Program Number(s): 532, 533, 534 and 111

Assign Destination Restriction (DR) features for the Strata CTX.

1. Complete the "DR Record Sheets" on page D-39.
2. Click Services > LCR/DR > Destination Restriction.
3. Enter *00 DR Level (DRL)*.
4. Enter Program 532 data.
5. Enter Program 533 data. Click *List* to view a summary list of programmed Dial Strings.
6. Enter Program 534 data. Click *List* to view a summary list of programmed Dial Strings.
7. Enter Program 111 data.
8. Click Submit.



532 DR Table Allow/Deny Definition

Prerequisite Program: *533 below.*

Specify the Destination Restriction (DR) Table Type using this command.

FIELD	DESCRIPTION
00 DRL Number	Select the DRL Number. Possible values: 1 ~ 16 (default = no value).
01 Type of Table	Specify whether this DR Table is an Allow Table or Deny Table. Possible values: Allow or Deny (default).

533 DR Level Table Assignment

Prerequisite Program: *None*

This program adds or deletes entries in the DR Table associated with the DRL entered in Step 3 above.

FIELD	DESCRIPTION
00 Destination Restriction Level	Choose the DRL. Possible values: 1 ~ 16 (default = no value)
01 Dial String	Enter the string of dialed digits to be allowed or denied. Wild cards (X and N) can only be assigned through CTX WinAdmin, not the programming phones. Possible values: 1~7 digits (default = no value)
02 Add/Delete	Add or delete the string entered in *01 Dial String* above to the DR Table. Possible values: Add or Delete (default)

534 DRL Exception Table Assignment

Prerequisite Program: *533 above*

This program assigns a DRL Exception Table to an existing DRL table. If the DRL Table is an allow table, its Exception Table must be a deny table and vice versa

FIELD	DESCRIPTION
00 Destination Restriction Level	Enter the DRL for which you want to populate an Exception Table. Possible values: 1~16 (default = no value)
01 Dial String	Add the dial string you wish to be treated as an exception. Possible values: 1~ 7 digits may include wild cards “X” and “N” where X = 0~9 and N = 2~9.(default = no value)
02 Add/Delete	Add or delete the string entered in *01 DR Exception Table* above to the DR Exception Table. Possible values: Add or Delete (default)

111 DR Level

Prerequisite Program: *None*

This program enables credit card calling for a DRL.

FIELD	DESCRIPTION
DRL Number	Enter the DRL number. Possible values: 1~16 (default = no value)
01 Credit Card Calling	Enable Credit Card Calling for this DRL. Possible values: Enable or Disable (default)

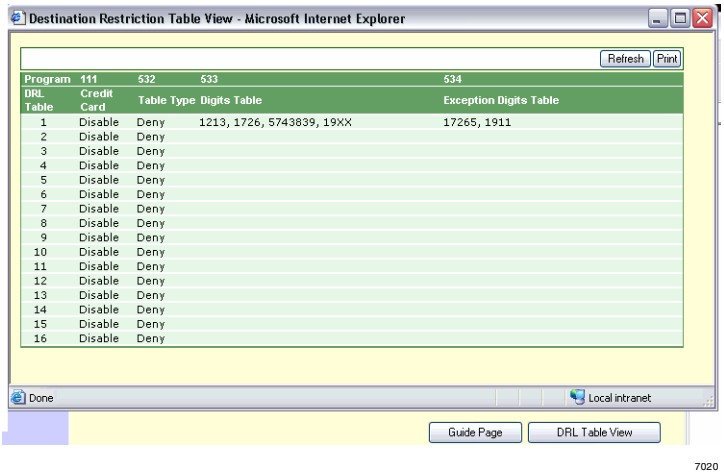
DRL Table View

The DRL table view enables you to view all programmed DRLs. This table is a read only table.

➤ **To access the DRL table view**

➤ Click Services > LCR/DR > DRL Table View.

See “Table Views” on page 2-8 for table functionality.



7020

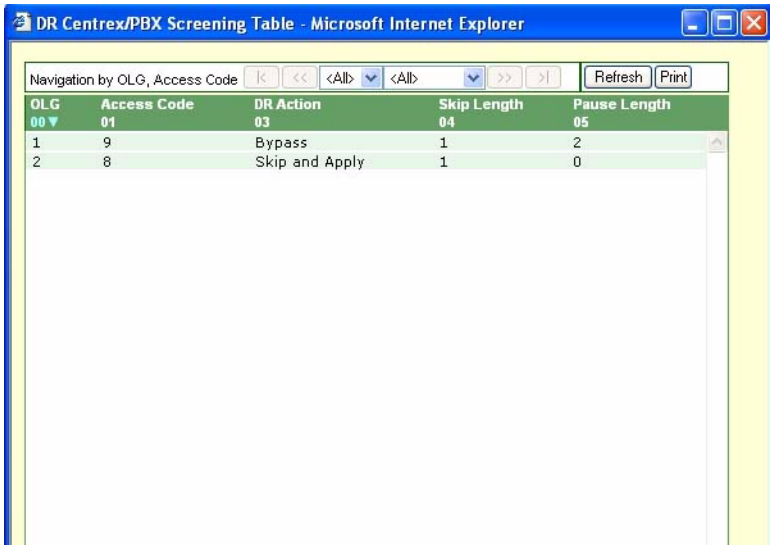
Centrex/PBX Screening Table View

The Centrex/PBX Screening Table View enables you to the Centrex/PBX Screening table.

➤ **To access the Centrex/PBX Screening Table View**

➤ Click Services > LCR/DR >Centrex/PBX Screening Table View.

See "Table Views" on page 2-8 for table functionality.

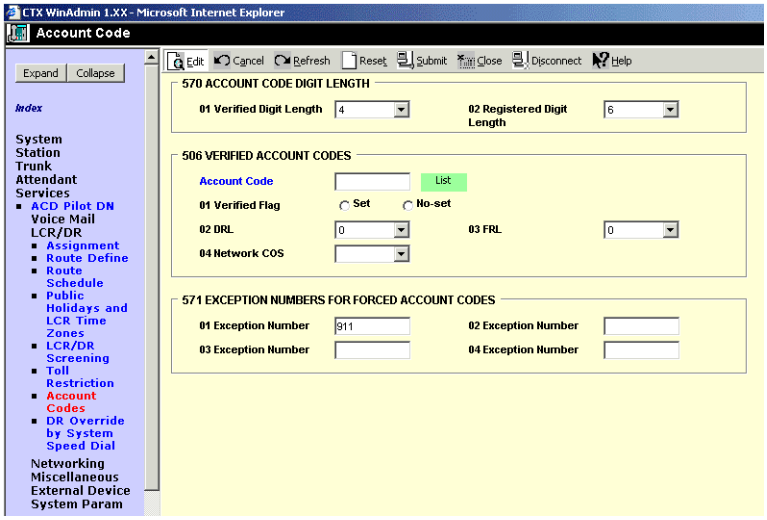


Account Codes

Program Number(s): 570, 506 and 571

Assign Account Code data to Strata CTX.

1. Complete the "Strata Net Private Networking" on page 9-39.
2. Click Services > LCR/DR > Account Codes.
3. Enter Program 570 data.
4. Enter Program 506 data. Click *List* to view a summary list of programmed Account Codes.
5. Enter Program 571 data.
6. Click Submit.



570 Account Code Digit Length

Prerequisite Program: *None.*

Accounting Codes need to be specified for the number of digits that are expected to be used for registering a number. This allows dialing within Strata CTX to proceed automatically once the correct account code is dialed. The following numbers are then dialed digits used for making the phone call.

A second length is provided to allow the number of digits to be used for verification of the code to be less than the total code entered; thus, the code may contain two parts, one required and one part optional to the user.

FIELD	DESCRIPTION
01 Verified Digit Length	The Verified Digit Length sets a number of digits to verify with a pre-set list. This number may be the same or smaller than the account code digits set to be entered for creating a complete accounting code. **Note** This field is not changed, when "506 Verified Account Codes" on page 9-36 are registered. Possible values: 4~15 (default = 4)
02 Registered Digit Length	The Registered Digit Length sets a number for the digits to be entered to make a complete accounting code entry. **Note** The Registered Digit Length (**FB02**) must be greater than or equal to the Verified Digit Length (**FB01**). Possible values: 4~15 (default = 6)

506 Verified Account Codes

Prerequisite Program: *570 page 9-36*

This program adds or deletes entries in the DR Table associated with the DRL entered in Step 3 on 9-33..

FIELD	DESCRIPTION
Account Code	Enter a valid accounting code that the user will be expected to dial. Digits 0~9 can be used. **Note** The Account Code is set to the same digit length as the Verified Digit Length in Program 570 above. Possible values: Up to 15 ASCII characters (default = no value)
01 Verified Flag	The Account Code Flag determines whether the number entered is to be used as a verified account code or not. Some applications may allow users to dial an accounting code which changes the restriction level for the call allowing it to be placed. Possible values: Set or No Set (default) **Note** To delete a Verified Account Code set this field to No Set.
02 DRL	The DRL assigned to an accounting code allows users to override their stations assigned DRL enabling a call to be placed. Possible values: 0~16 (default = 0)
03 FRL	The FRL assigned to an accounting code enables users to override the station assigned FRL. Possible values: 0~16 (default = 0)
04 Network COS	Assign the Network COS to be used by this accounting code. Possible values: 1~32 (default = 1)

571 Exception Numbers for Forced Account Codes

Prerequisite Program: *506 page 9-36*

Up to four telephone numbers can be programmed as exceptions to the forced and /or verified account code entries (including 911). These special codes enable numbers to bypass the verification process and proceed unhindered.

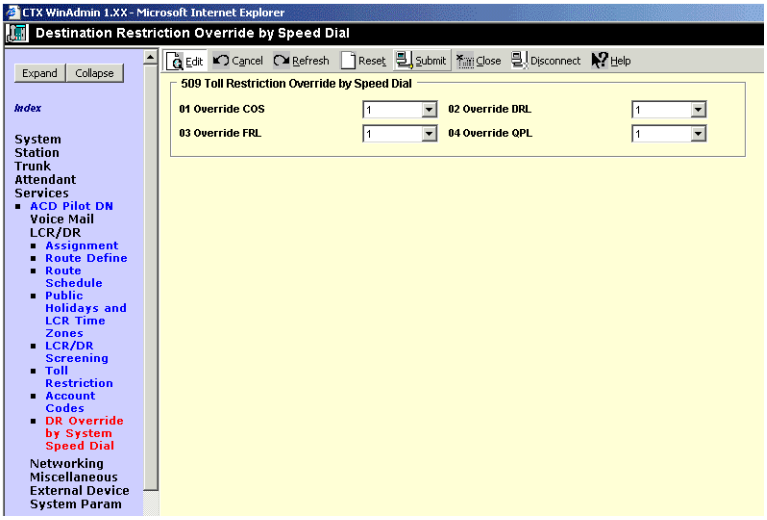
FIELD	DESCRIPTION
01 Exception Number 1 **02 Exception Number 2** **03 Exception Number 3** **04 Exception Number 4**	Enter a Forced Account Code Exception. Possible values: Up to 4 digits Exception 1 default = 911 Exception 2~4 default = no value **Note** One of the assigned exception numbers should be 911. Exception Numbers for Forced Account Code fields cannot be duplicated.

509 DR Override by System Speed Dial

Prerequisite Program: *None*

This command assigns the COS, DRL, FRL and QPL values used by DR Override by Speed Dial.

1. Click Services > LCR/DR > DR Override by System Speed Dial.
2. Select the COS, DRL, FRL and QPL override values.
3. Click Submit.



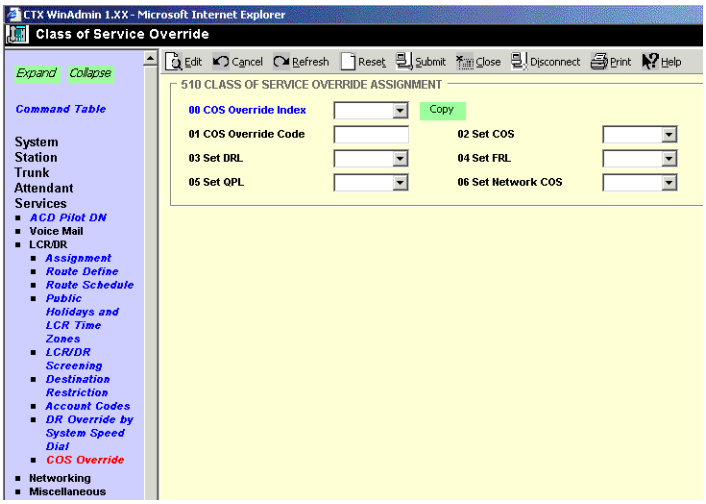
FIELD	DESCRIPTION
01 Override COS	Select the override COS value. Possible values: 1~32 (default =1)
02 Override DRL	Select the override DRL value. Possible values: 1~16 (default =1)
03 Override FRL	Select the override FRL value. Possible values: 1~16 (default =1)
04 Override QPL	Select the override QPL value. Possible values: 1~16 (default =1)

510 COS Override Assignment

Prerequisite Program: *None*

Assigns Class of Service Overrides and their parameters (COS, FRL, DRL, QPL).

1. Complete the "COS Override Code Record Sheet" on page D-40.
2. Click Services > System Param > COS Override.
3. Enter Program 510 data or Select a COS Override Index and click *Copy* to copy settings from the selected COS Override Index.
4. Click Submit.



FIELD	DESCRIPTION
00 COS Override Index	Select the COS Override index. Possible values: 1~16 (default = no value)
01 COS Override Code	Select the COS Override Code as entered by users. If no data is entered in this field, any previously entered data is erased. Possible values: Up to 8 ASCII characters (default = no value)
02 Set COS	Select COS number for this override code. Possible values: 1~32 (default = 1)
03 Set DRL	Select DRL number for this override code. Possible values: 1~16 (default = 1)
04 Set FRL	Select FRL number for this override code. Possible values: 1~16 (default = 1)
05 Set QPL	Select QPL number for this override code. Possible values: 1~16 (default = 1)
06 Set Network COS	Select Network COS index for this override code. Possible values: 1~32 (default = 1)

Networking

System Availability: Not available with CTX28

Strata CTX enables networking of resources using Strata Net Private Networking. Read the following discussion before programming Strata CTX networking features.

Strata Net Private Networking

The Strata CTX introduces robust private networking, Strata Net, to the Toshiba family of telecommunications products. Based on an international standard, QSIG, Strata Net will allow multiple Strata CTX systems to share voice mail systems and attendants, share features and a coordinated numbering plan and route calls simply and easily throughout the enterprise. Strata Net is distinguished from CTX Basic Networking which provides interconnection of nodes through conventional, E&M Tie lines.

QSIG

Toshiba has adopted QSIG as the basis for Strata Net. QSIG is an open, international standard for networking PBXs. It was begun in 1994 with a memo of understanding between twelve leading PBX manufacturers. The *QSIG Handbook* can be found on the web at http://www.qsig.ie/. The standards were developed and are maintained by the European Computer Manufacturers Association (ECMA), an international, Europe-based industry association founded in 1961 and dedicated to the standardization of information and communication systems. ECMA may be found on the web at http://www.ecma.ch.

QSIG is an intelligent and powerful signalling system, providing great flexibility in terms of network architecture. Any network node can establish routes to 128 other nodes and segmented networks can grow beyond that. New nodes can be added to the network as business needs dictate. The use of QSIG does not impose the use of a specific network topology and it can be used with any network configuration: meshed, star, main and satellite, etc.

Toshiba, like most of its competitors, has chosen to implement QSIG over Primary Rate Interface. Strata Net supports QSIG Basic Call Control that allows it to interoperate with other PBXs that conform to the QSIG standard.

Node ID

The basic logical element in Strata Net routing is the Node ID. It functions similarly to the address in a packet data network. As a call is routed through the network, each node examines the leading received digits for a Node ID defined in its Flexible Numbering Plan. After first discerning a Node ID, the Strata CTX then determines whether the Node ID is for itself or for a remote node. If it is a remote Node ID, the call goes through a routing process that selects an OLG, manipulates the digits and sends the call to the next node in the network. If the call contains the local Node ID, the Strata CTX manipulates the number according to the Overlap Code and delivers the call to a local station, trunk or feature.

The Node ID is one to six digits long. The Strata CTX knows that a Node ID to which an Overlap Code has been assigned is for the local node and that all others are for the remote nodes.

Strata Net bases its routing decisions exclusively on the Node ID and makes no attempt to analyze or restrict the remaining dialed digits. These remaining digits are not processed until delivered to the destination Strata Net node. This provides a simple, powerful tool because the programmer does not need to consider local conditions in transit nodes and does not need to fear interference with the call regardless of the path it takes through the network.

Network Directory Number

A Network Directory number consists of two elements: the Node ID and the local directory number. A Node ID is a string of 1 to 6 digits that identifies one node on the network. A Network DN may be a simple concatenation of the two elements in which the complete Node ID precedes the complete extension or the two elements may overlap. In the event of an overlap, an Overlap Code identifies the digits to be substituted for the received Node ID.

The Node ID allows a call to route through multiple Strata Net nodes until its destination node recognizes it as a local call. Local Node IDs are programmed using Command 656 "Node ID." Remote Node IDs are programmed in Command 651 "Network Routing Plan Analysis" to define the appropriate outgoing route to the desired destination. Digits received after the Node ID are passed on to the distant node without analysis.

One node may have up to four Node IDs. A unique Overlap Code is programmed for each Node ID. The Overlap Code allows the programmer to control the number of digits to be dialed for network calls and to create a coordinated dialing scheme across the network. If the Network DN is to be a simple concatenation with no overlap, the Overlap Code field is left blank. All Node IDs, local and remote, must be defined as such in the Flexible Numbering Plan.

The following are examples of linked and overlapped Node IDs.

Linked:

- Node ID = 789
- Extension = 2345
- Overlap Code = BLANK
- Network DN = 7892345

Overlapped:

- Node ID = 789
- Network DN = 789345
- Overlap Code = 2
- Local Extension = 2345

This simple, powerful, logical tool will support large, complex networks. It is the means by which a Coordinated Numbering Plan can be established across all Strata Net nodes including existing systems with established numbering plans.

Network Feature Access Code

The Network Feature Access Code is similar to the Network DN but is used to access features in a remote Strata Net node. Features may include routing features, such as Trunk Group Access and Least Cost Routing, or user features such as Message Waiting and Paging.

The Network FAC format is:

Node ID (1~6 digits) + Local FAC (1~5 digits) + Parameters (unlimited).

For example, **789 9 16175551212** access' Node ID 789 and uses that node's LCR (**9**) to dial directory assistance in Boston.

Given their variability, Network Faces are usually processed without Overlap Codes. If a Node ID with an Overlap Code has been established for local extensions, it cannot be used for feature access; a separate Node ID must be established. If no Overlap Codes are used, one Node ID will serve for all purposes.

Digit Manipulation

Digit Manipulation is the term for the altering of an original string of dialed digits in order to re-route a call or connect it to a specific service. Digit Manipulation is usually applied to the leading digits in the string which appear left-most in written form. Strata Net uses two forms of manipulation: Overlap Codes, described above, for inbound calls and Network Digit Modification Tables for outbound calls. The Network Digit Modification Tables contain up to 64 treatments in each of which as many as 10 leading digits may be deleted and as many as 23 leading digits substituted. These 64 treatments may be applied to any of 64 Route Definitions.

Traveling Class Mark

Calling privileges, restrictions and priorities may be imposed across Strata Net using the Traveling Class Mark. The Traveling Class Mark accompanies all calls across the network. When the call reaches its terminating node, that node uses the Traveling Class Mark to determine whether the originator of the call is entitled to the dialed facility. The mark is a single information element linked from the following:

- Network Class of Service
- Network DR Level
- Network Facility Restriction Level
- Network Queuing Priority Level

All nodes contain tables to translate between local and network DR Levels, Facility Restriction Levels and Queuing Priority Levels. DRL, FRL and QPL each require two tables: one to translate from the local level to the network level for outgoing calls and one to translate from network to local level for incoming calls.

Network Class of Service is an exception for two reasons. First, at the originating node, each station is assigned a Network Class of Service; there is no translation. The terminating node does contain a table to translate the received Network Class of Service to a local Class of Service but it adds parameters to the local Class of Service before determining how to process the call. Those parameters are:

- Permission for Off-Hook Call Announce
- Ability to register System Speed Dial numbers in the terminating node
- Ability to register Class of Service Override in the terminating node and
- Trunk Group Override Access

Time of day considerations are handled at the originating node. If a call originates in a node that is in Night Mode and terminates in another node, it will deliver the Night Mode values regardless of the condition of the terminating node.

Path Replacement

Known also as Route Optimization and Release Link, Path Replacement makes the most efficient use of talk paths between network nodes. For example, if a series of transfers around the network results in a conversation between two stations in the same node, all of the tie line circuits are released and a simple station-to-station call is established in the one node. This efficiency reduces the number of facilities to be provided and improves transmission quality by minimizing the number of links over which loss could occur.

Path Replacement applies to:

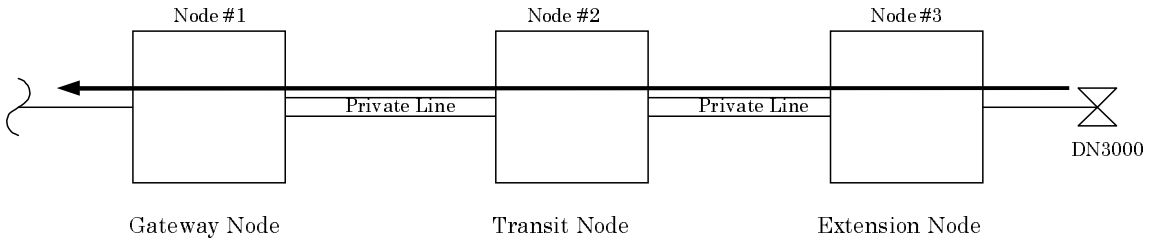
- Call Transfer
- Ring Transfer
- Station Call Forward
- System Call Forward

Coordinated Numbering Plan

A Coordinated Numbering Plan rationalizes the dialing patterns required of network users and relieves them of the need to know complicated access codes to navigate the network. The basic mechanism is the Network Directory Number described above. The combination of Node ID and Directory Number appear to the user as simple extension dialing. The ability to overlap the two components reduces the number of dialed digits. If it is necessary to preserve legacy extension ranges at individual nodes, a Network Access Code can be used to resolve numbering conflicts with other nodes.

Station Message Detail Recording (SMDR)

Strata Net generates call records for incoming or outgoing calls from the nodes in which they originated or terminated. For example, if a station user in Node 3 makes an outside call that is routed through transit Node 2 to gateway Node 1 for connection to the public network, Nodes 1 and three generates SMDR records; Node 2 does not.



The record in Node #3 will include the Network DN of the calling station, the dialed digits and the OLG number and Channel Group number used to access Node #2. The record in Node #1 will include the ILG number and Channel Group number of the Strata Net trunk on which the call was received and the PSTN trunk to which it was connected. The record format and conditions are the same as for a single node system using the new format adopted for Strata CTX.

Station-to-station calls across Strata Net are considered internal calls and do not generate SMDR records in any nodes. Abandoned Call SMDR records are only generated for incoming calls over local trunks.

Unforced account codes are generated from the node in which they originated. Forced account codes are included in the records of the node that required them. Similarly, the node which provides DISA services is responsible for checking the DISA Security code and for generating the SMDR record. The remote node and the transit node will not generate the SMDR record.

Plowable buffers are usually attached to each network node and polled by a central call accounting system. If the buffer is not available, the Strata CTX will buffer up to 1000 records. Equipment numbers, time stamps and call type designations assist the call accounting system in associating records for the same call from different nodes.

Centralized Voice Mail

Users in multiple network nodes may use the services of a single voice mail system attached to one node. The network transmits the Voice Mail ID (VMID) for remote stations and the calling conditions under which the call is being directed to voice mail (Call Forward All Calls, Busy, etc.). The centralized voice mail system can control message waiting indications and provide automated attendant services throughout the network through its integration with a single node.

Centralized Voice Mail requires a Coordinated Numbering Plan throughout the network for proper operation. The Coordinated Numbering Plan allows the voice mail to interact with the entire network as if it were on large PBX. Basic operations include:

- Forward to Voice Mail – A forwarded, busy or unanswered extension may forward across the network to the voice mail unit. Centralized Voice Mail notifies the voice mail of the source and calling conditions and the voice mail returns the greeting of the original target extension. Notification of calling conditions requires SMDI integration.
- Message Retrieval – A user can press the a Message button on his phone and be directed to a voice mail system connected to his own or a remote node. The call will be correctly identified as a retrieval for the correct VMID and the user will be prompted for his security code. The same operation may be programmed for PhDNs in Station Programming.
- Message Waiting – The voice mail system can control message waiting indications in distant switches by accessing the remote node via Node ID, registering the Message Waiting Feature Access Code and specifying the desired station.
- Automated Attendant – Automated attendant calls to the voice mail may be transferred to stations or services in distant nodes using the Network Directory Number. If the automated attendant transfers the call to a busy destination, it can activate Call Transfer with Camp-on across the network simply by hanging up.

Not all Stratagy features available to a single switch are available to remote Strata Net nodes. This is a result of the local node being directly integrated to the voice mail system. The following table shows the availability of voice mail features across the Strata Net.

Stratagy Feature	Attached Node	Remote Node
Message Lamp Control	X	X
Forward to Voice Mail	X	X
Message Retrieval	X	X
Automated Attendant	X	X
Call Record	X	X
Soft Keys	X	X (R1.3 and higher)
Transfer Direct to Voice Mail	X	X (R1.3 and higher)

Networking Multiple Voice Mail Systems – Refer to "Networking Multiple Voice Mail Systems" on page A-3.

Centralized Attendant

It is possible for one Attendant to serve an entire Strata Net. Station users anywhere in the network can simply dial **0** to reach the centralized attendant. Calls to the attendant are identified with calling number and name. Incoming trunk calls to any node in the network can be routed to one attendant and then extended anywhere in the network.

Network Busy Lamp Field (BLF) (R1.3 and higher)

System Availability: Not available with CTX28

Network BLF is an indication on the CTX Attendant Console and Digital Telephones that an extension is Busy, Idle or in DND over different nodes. With software release 1.3 and higher, the Primary CTX can read the BLF information from the remote CTXs.

In order to use Network BLF, the CTX Attendant Console and Digital Telephones must have access to each CTX by LAN/WAN and requires the IP addresses of each node/CTX. Figure 2 is a BLF/DSS networking flow diagram. It shows you the types of connections required between the BLF servers, the Strata CTXs and the CTX Attendant Console.

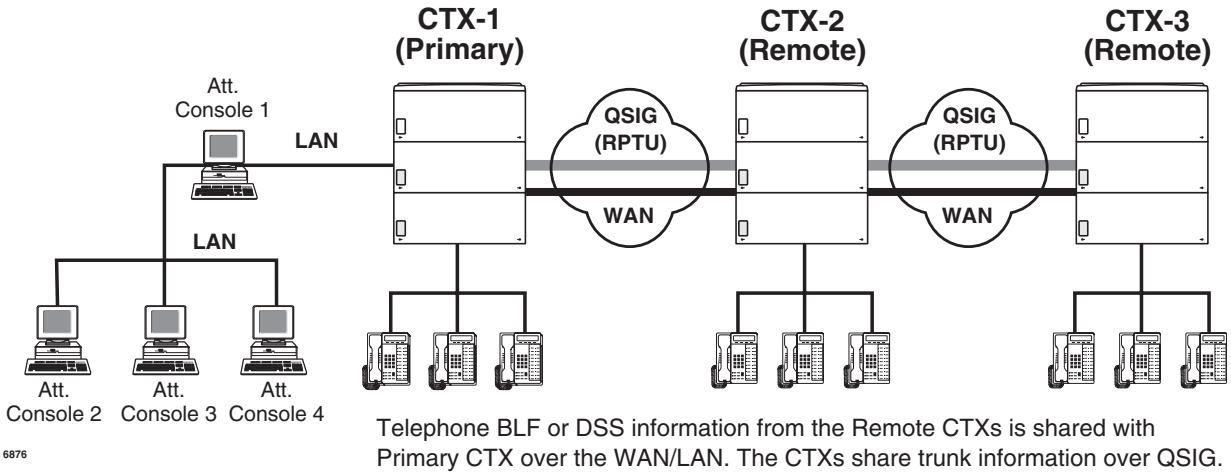


Figure 2 BLF/DSS Networking

Note The Node ID must be independent of the Station DNs for Network BLF to work.

Network Attendant Console BLF

System Availability: Not available with CTX28

Follow these steps to program Network BLF and Figure 9-1:

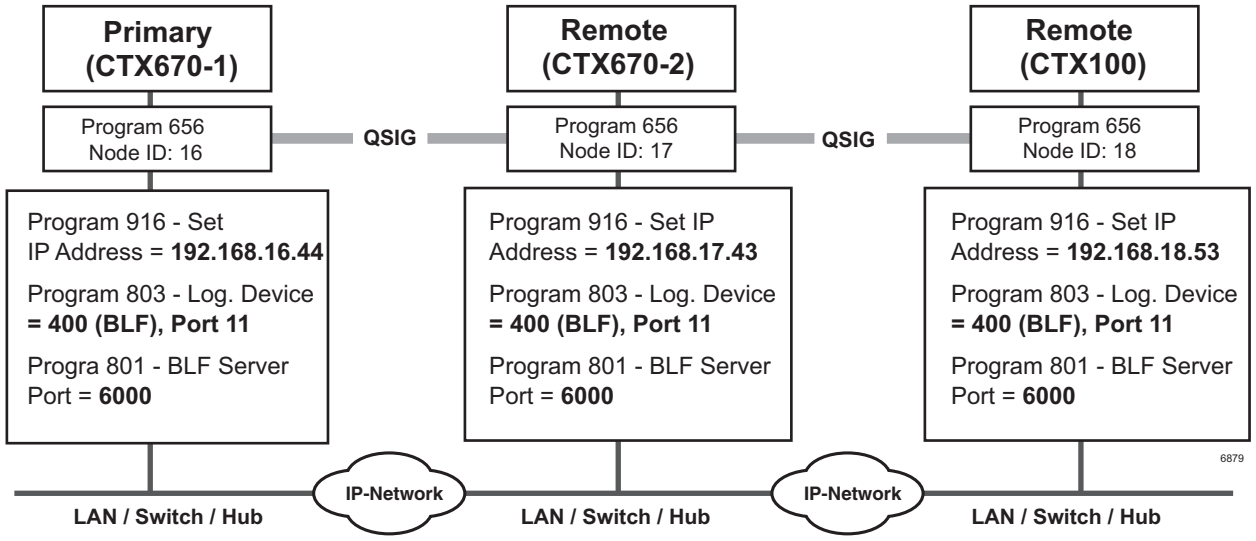


Figure 9-1 Network BLF Example

Important! *See steps for programming Network BLF from CTX WinAdmin and CTX Attendant Console on the following pages.*

Step 1: Program Network BLF from WinAdmin for CTX Attendant Console

Perform the all of the following steps on the local CTX first, then repeat them on each of the remote CTXs.

1. Create the Node ID in "102 Flexible Access Codes" on page 4-4.

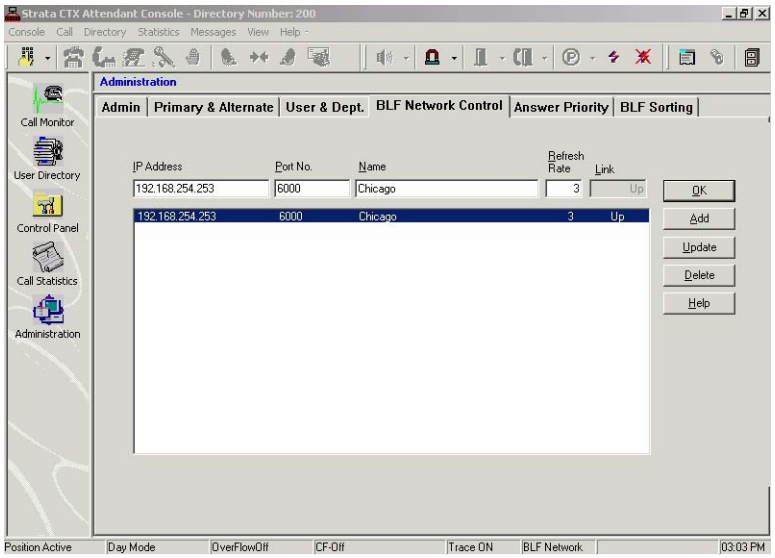
Note If you have already created the Node ID using QSIG, skip Step 1 and go to the next step.

2. Set up the IP address of the primary CTX using Program "916 IP Configuration" on page 10-14.
3. From the Program menu, select Services > Networking > Node ID to set the Primary Node ID. Refer to "656 Node ID Assignment" on page 9-54.
4. From the Program menu, select System > I/O Device. Refer to Program "803 SMDR SMDI CTI Port Assignments" on page 4-31.
   - 00 Logical Device No. = 400 (BLF)
   - 01 Device Connection = LAN
   - 02Device Port No. = 11
5. Define the LAN Device port number (11 in the example above). Select System > I/O Device, select the LAN Device tab. Refer to "801 Network Jack LAN Device Assignment" on page 4-33. Make the following selections:
   - 00 LAN Port No. = 11
   - 01 Protocol = TCP
   - 02 PC Operation Type = Server
   - 03 Data Flow = Asynchronization
   - 04 Server Port No. = 6000
   - 05~08 Client IP 1-4 No. = Default
   - 09 Client Port No. = Default
   - 10 Read Retry No. = 1
   - 11 Write Retry No. = 1

Step 2: From CTX Attendant Console Set up BLF Network

Important! *Complete Step 1:"Program Network BLF from WinAdmin for CTX Attendant Console" on page 9-46 before you begin the following steps.*

1. Click Administration view.
2. Select the BLF Network Control tab.
3. Enter the IP addresses of primary and remote CTXs.
4. Enter the Port Number (6000).
5. In the Name field, enter the Node Identified. For example, names such as Dallas, Chicago, etc., depending on where the remote CTXs are located.
6. Enter the Refresh rate. This is the frequency that the software will poll the remote site.
7. Click Add.
8. Enter the data for the other nodes, then click OK.



6599

Notes

- When you make the directory in the CTX Attendant Console and when entering user information, add the Node ID as prefix to the extension.
- When you start the CTX Attendant Console for the first time, a dialog box appears that requires the IP addresses and Port numbers of each CTX.

Network DSS/BLF for Digital Telephones

System Availability: Not available with CTX28

Follow these steps to program Network BLF/DSS and Figure 9-2:

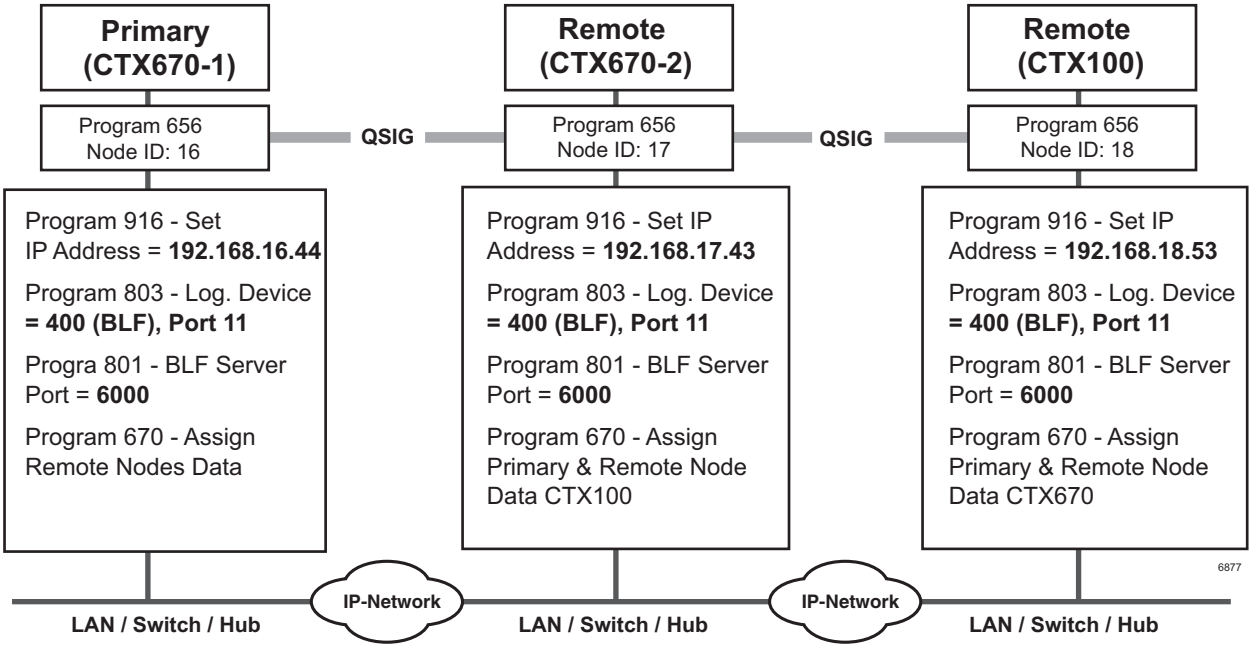


Figure 9-2 Network BLF Example

Important! *See steps for programming Network BLF from CTX WinAdmin on the following pages*

➤ Programming Network BLF from WinAdmin for Digital Telephones

System Availability: Not available with CTX28

Perform the all of the following steps on the local CTX first, then repeat them on each of the remote CTXs.

1. Create the Node ID in "102 Flexible Access Codes" on page 4-4.

Note If you have already created the Node ID using QSIG, skip Step 1 and go to the next step.

2. Set up the IP address of the primary CTX using Program "916 IP Configuration" on page 10-14.
3. From the Program menu, select Services > Networking > Node ID to set the Primary Node ID. Refer to "656 Node ID Assignment" on page 9-54.
4. From the Program menu, select System > I/O Device. Refer to Program "803 SMDR SMDI CTI Port Assignments" on page 4-31.
   - 00 Logical Device No. = 400 (BLF)
   - 01 Device Connection = LAN
   - 02 Device Port No. = 11
5. Define the LAN Device port number (11 in the example above). Select System > I/O Device, select the LAN Device tab. Refer to "801 Network Jack LAN Device Assignment" on page 4-33. Make the following selections:
   - 00 LAN Port No. = 11
   - 01 Protocol = TCP
   - 02 PC Operation Type = Server
   - 03 Data Flow = Asynchronization
   - 04 Server Port No. = 6000
   - 05~08 Client IP 1-4 No. = Default
   - 09 Client Port No. = Default
   - 10 Read Retry No. = 1
   - 11 Write Retry No. = 1
6. Verify the DSS refresh time in System > System Timer, FB 23 – System Timer Network DSS Refresh Timer. Refer to "104 System Timer" on page 4-11.
7. From each remote CTX, repeat steps 1~6 to set up Network BLF.

Network DSS (R1.3 and higher)

System Availability: Not available with CTX28

When you set up Network DSS, you assign the DSS numbers in the primary CTX first. Then, once you network the remote CTXs, they will use the DSS numbers set in the primary CTX.

An example of how to set up Network DSS is shown in Figure 9-3. In this example, if CTX670-1 is the primary/host site, then CTX670-2 and CTX100 become remote sites.

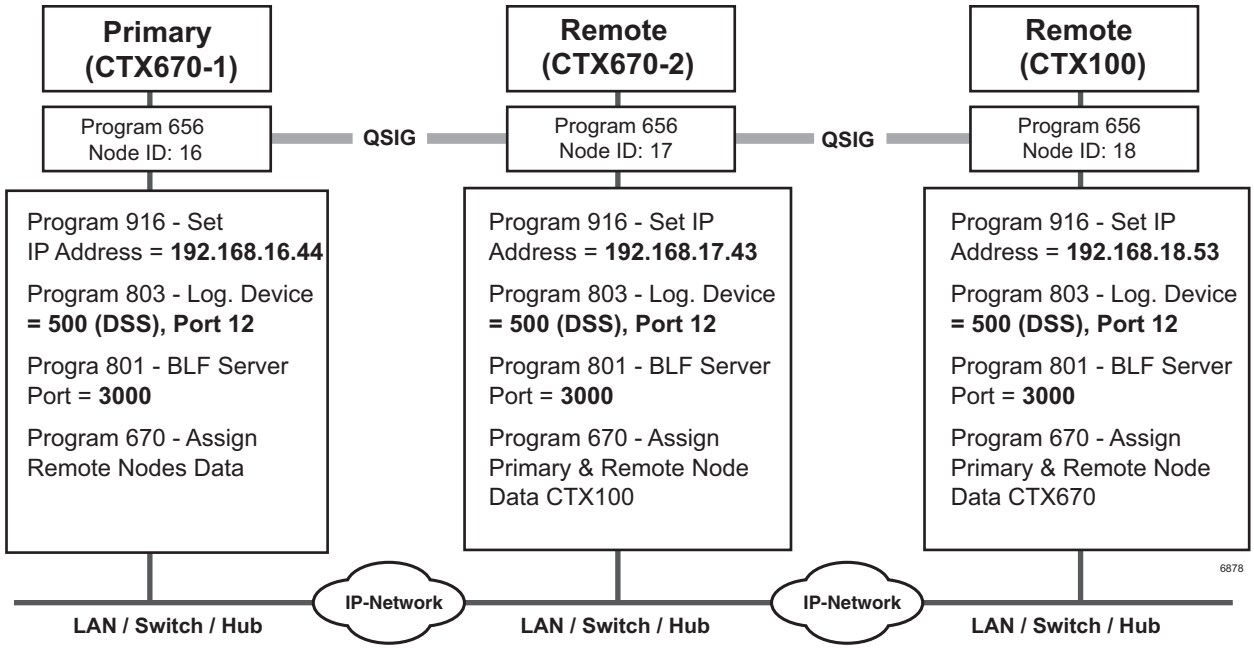


Figure 9-3 Network DSS Example

Important! *See steps for programming Network DSS from CTX WinAdmin on the following page.*

➤ **Program Network DSS from WinAdmin**

System Availability: Not available with CTX28

1. Create the Node ID in "102 Flexible Access Codes" on page 4-4.

Note If you have already created the Node ID using QSIG, skip Step 1 and go to the next step.

2. Set up the IP address of the primary CTX using Program "916 IP Configuration" on page 10-14.
3. From the Program menu, select Services > Networking > Node ID to set the Primary Node ID. Refer to "656 Node ID Assignment" on page 9-54.
4. Program the CTI Port for Network DSS. From the Program menu, select System > I/O Device. Refer to "803 SMDR SMDI CTI Port Assignments" on page 4-31.
   - 00 Logical Device No. = 500 (DSS)
   - 01 Device Connection = LAN
   - 02 Device Port No. = 12
5. Define the LAN Device port number (12 in the example above). Select System > I/O Device, select the LAN Device tab. Refer to "801 Network Jack LAN Device Assignment" on page 4-33. Make the following selections:
   - 00 LAN Port No. = 12
   - 01 Protocol = UDP
   - 02 PC Operation Type = Server
   - 03 Data Flow = Asynchronization
   - 04 Server Port No. = 3000
   - 05~08 Client IP 1-4 No. = Default
   - 09 Client Port No. = Default
   - 10 Read Retry No. = 1
   - 11 Write Retry No. = 1
   - Select FB01 Protocol to UDP and FB04 Server Port No. to 3000. FB04 is the DSS Server Port. All other parameter can have defaults.
6. Make sure the Remote Node IP address and Network DSS port Number are consistent. From the Program Menu, select Services > Networking > Remote Node Data Assignment (Program 670).
7. In Program 670, enter the parameters as follows:

   Remote Node ID = 17. (This is a QSIG Node ID. In the example above these Node IDs are 16, 17 and 18.

   Remote Node IP Address = IP address of the remote CTX. Using Node 17 in this example, the IP address is 192.168.1.43.

   Remote Node Port No. = 3000. This port number is the Network DSS port number. The Network DSS port number can be any available port. All Network DSS ports should also be the same, i.e; 3000 in the above example.
8. Verify the DSS refresh time in System > System Timer, FB 23 – System Timer Network DSS Refresh Timer. Refer to "104 System Timer" on page 4-11.
9. Assign the DSS Remote Node feature key using Program 205, 213 and 215. Refer to "Key" on page 5-16. DSS button can have up to seven digits, so Node ID can be included. Before R1.3 five digits were the maximum allowed in a DSS button.
10. From each remote CTX, repeat steps 1~9 to set up Network DSS.

Network Feature Content

System Availability: Not available with CTX28

The following is a list of Strata CTX features that operate across multi-node Strata Net connections.

- Account Codes Forced/Voluntary/ Verified*
- Automatic Busy Redial*
- Automatic Camp-on
- Automatic Release of CO
- Call Forward
- Call Park Orbits Park and Page
- Call Transfer
- Call Transfer With Camp-on*
- Call Waiting
- Caller Identification
- Class Of Service
- Conference On Hold
- Conferencing
- Consultation Hold Manual
- Credit Card Calling*
- Day/Night Modes*
- Dial For Quick Launch
- Dialed Number Identification Service
- Digital PAD
- Direct Inward Dialing
- Direct Inward System Access
- Direct Inward Termination
- Directory Number Presentation
- DISA Security Code Revision*
- Do Not Disturb *
- Do Not Disturb Override*
- Door Lock Control
- E911
- Executive Override*
- External Ring Repeat
- Flexible Numbering
- Intercept
- Least Cost Routing *
- Message Waiting
- Offhook Camp-on*
- Outgoing Call
- Recall Treatment
- Speed Dial System/Station
- Station CO Line Access
- Station To Station Connection
- System Call Forward
- Tandem CO Line Connection
- DR
- Toll Restriction Override by System Speed Dial
- Traveling Class Of Service
- Trunk Access*
- Trunk Group Access*

* Features that can be limited by Network Class of Service.

Configuration

RPTU2 PCB

The Strata CTX uses a new Primary Rate Interface PCB that can terminate either a Strata Net connection or a public PRI: the RPTU-2A. The RPTU-2A is backwardly compatible with the RPTU-1A for standard ISDN operation. The mode of operation (standard or QSIG) is controlled by a programming parameter named "Private Service Type." This parameter must be chosen in establishing both incoming and OLGs.

Circuits

Two Strata Net nodes are connected to each other by a full or fractional DS1. The QSIG basic call convention will select one DS0 to act as the "D" channel and the remainder as "B" channels. This allows the interconnecting DS1(T-1) to act as a Primary Rate Interface. The appropriate command set is in new firmware on the card to allow Strata CTX for signal according to CPE-to-CPE rules which differ from CPE-to-PSTN rules. Fractional DS1s may consist of 8, 12 or 16 channels including the "D" channel.

The most common type of interconnection is a leased DS-1 from a Common Carrier such as the primary telephone company or long distance provider. DS1s may also be created across fiber optics, Frame Relay equipment, IP networks or other transport media using dealer-supplied equipment as long as they conform to the following specifications.

- 1.544 MBPS
- B8ZS
- ESF

Nodes may also be connected directly over two copper pairs to a maximum distance of 738 feet. See the *Strata CTX Installation and Maintenance Manual* for pin configurations and other details.

Strata Net Programming Overview

Follow the sequences below to program Strata Net.

Step 1: Basic Incoming Network Calls

1. Establish the Node ID as part of the Flexible Numbering Plan (Program 102).

Note Node ID is located under *01 Feature Name* as "Node ID (CTX network number prefix)."

2. Establish up to four Local Node IDs (Program 656) for the primary node. Each Node ID can have a unique Overlap Code.
3. Process the digit string as manipulated by the Overlap Code from Flexible Numbering Plan. The resulting number can be an extension call, feature activation, or tandem call.

Step 2: Basic Outgoing Network Calls

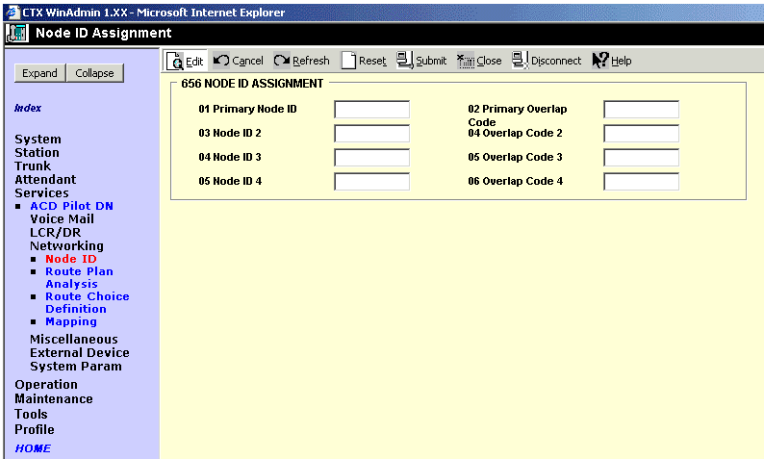
1. Establish the Node ID as part of 102 Flexible Numbering Plan.
2. Use Program 651 Routing Plan Analysis Table Assignment to associate each Remote Node ID with a Private Route Choice table which will provide up to six routing choices to the desired node.
3. Use Program 653 to define a Private Route Choice table. The table should contain up to six Route Definitions. The system steps through these Route Definitions in terminating hunt fashion to find a route to the desired private networking node.
4. Use Program 654 to define a Private Route Definition consisting of an OLG and a pointer into the Private Digit Modification table.
5. Use Program 655 to set up Private Digit Modification tables containing up to 64 entries. Each entry specifies the number of leading digits to be deleted from the dialed number and the dial string to be added as leading digits.

656 Node ID Assignment

System Availability: Not available with CTX28
Prerequisite Program: *102 page 4-4*

This program assigns up to four Network Node IDs to process incoming network calls. Each Node ID has an overlap code. Strata CTX will substitute the Overlap Code for the Node ID before processing the call further. A Network Directory Number consists of a Node ID and the desired node.

1. Click Services > Networking > Node ID.
2. Enter Program 656 data.
3. Click Submit.



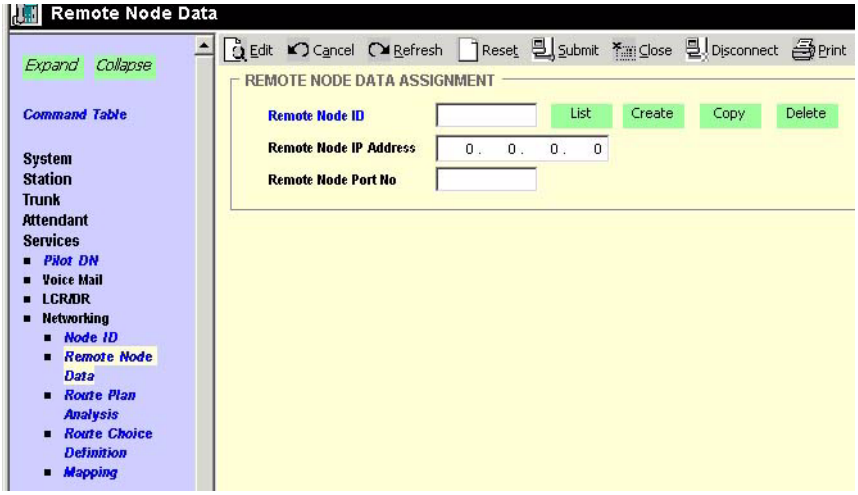
FIELD	DESCRIPTION
01 Primary Node ID	Enter the Primary Node ID for this node. This Node ID identifies the node used for administering Strata Net. Possible values: Up to 6 digits (default = no value)
Primary Overlap Code	Enter the Overlap Code associated with the Primary Node ID. An Overlap Code is the string of digits that replaces the Node ID to continue call processing. Possible values: Up to 4 digits (default = no value)
02 Node ID 2	Enter Node ID 2 for this node. Possible values: Up to 6 digits (default = no value)
Overlap Code 2	Enter Overlap Code for Node ID 2. Possible values: Up to 4 digits (default = no value)
03 Node ID 3	Enter Node ID 3 for this node. Possible values: Up to 6 digits (default = no value)
Overlap Code 3	Enter Overlap Code for Node ID 3. Possible values: Up to 4 digits (default = no value)
04 Node ID 4	Enter Node ID 4 for this node. Possible values: Up to 6 digits (default = no value)
Overlap Code 4	Enter Overlap Code for Node ID 4. Possible values: Up to 4 digits (default = no value)

670 Remote Node Data Assignment

System Availability: Not available with CTX28

This command assigns the Remote node data (requires R1.3 and higher).

1. Click Services > Networking > Remote Node Data.
2. Enter Program 670 data.
3. Click Submit.

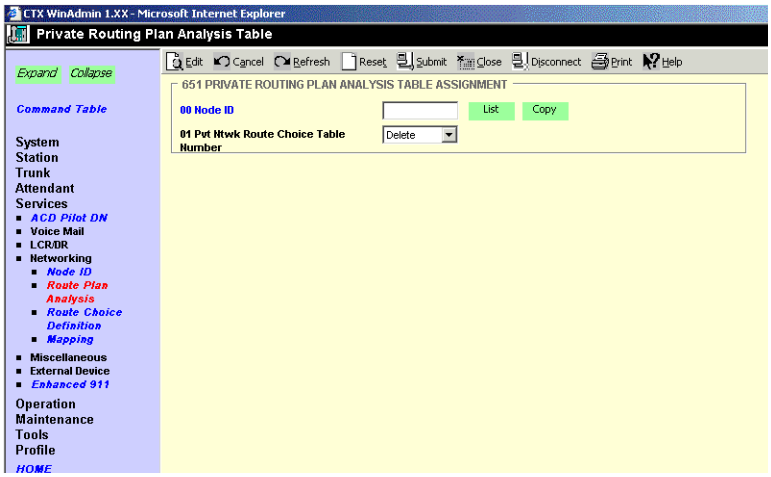


FIELD	DESCRIPTION
Remote Node ID	Enter the Remote Node ID for this node. Possible values: Up to 6 digits (default = no value)
Remote Node IP Address	Enter the remote node IP address. Possible values: Up to 15 digits (default = no value)
Remote Node Port Number	Enter remote node port number. Possible values: 0~65535 (default = no value)

651 Private Routing Plan Analysis

System Availability: Not available with CTX28
Prerequisite Program: *656 page 9-54 and 306 page 6-4*

Assigns the Node IDs to Route Choice Tables for Private Networking.



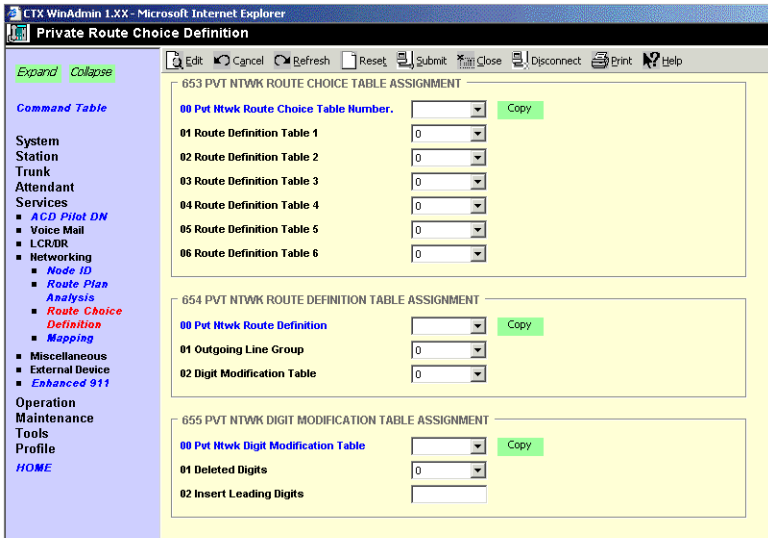
1. Complete the "Private Routing Plan Analysis Table Record Sheet" on page D-48.
2. Click Services > Networking > Route Plan Analysis.
3. Enter the Node ID number (six digit numeral) to add to the Private Routing Plan Analysis Table.

   Click *List* to see a summary list of programmed Node IDs or click *Copy* to copy data from an existing Node ID.
4. Select the Private Route Choice Table in which to add the Node ID entered in Step 3 above. Possible values are 1~64, 0 = Delete and default = 0.
5. Click Submit.

Private Route Choice Definition

System Availability: Not available with CTX28
Program Number(s): 653, 654 and 655

Use these command to define Private Network Routing parameters.



1. Complete the "Route Choice Definition Record Sheet" on page D-49.
2. Click Services > Networking > Route Choice Definition.
3. Enter Program 653, 654 and 655 data.
4. Select the Private Network.
5. Click Submit.

653 Private Route Choice Table Assignment

Prerequisite Program: *None*

Use this command to define a Private Route Choice Table. A Private Route Choice Table contains up to six Route Definitions. The system will step through these Route Definitions in terminating hunt fashion to find a route to the desired private networking node. There may be up to 64 Route Choice Tables.

FIELD	DESCRIPTION
00 Pvt Ntwk Route Choice Table Number	Select the Private Network Route Choice Table Number. Possible values: 1~64 (default = no value)
01~06 Route Definition Tables	Select Route Definition Tables 1~6 to be used for this Private Network Route Choice. Possible values: 1~64, 0 = delete (default)

654 Private Route Definition Table Assignment

System Availability: Not available with CTX28
Prerequisite Program: *None*

Use this command to define a Private Route Definition. A Private Route Definition consists of an OLG and a pointer into the Private Digit Modification Table that contains the dialed digits to be deleted and/or inserted before being communicated to the distant node.

FIELD	DESCRIPTION
00 Private Network Route Definition	Select the number of the Private Route Definition to be defined or deleted. Possible values: 1~64 (default = no value)
01 Outgoing Line Group	Select the OLG to be used by this route. Possible values: 1~32 (CTX100), 1~50 (CTX670 Basic), 1~128 (CTX670 Exp.), 0 = delete (default = 0)
02 Digit Modification Table	Select the Digit Modification Table to be used by this route. Possible values: 1~64, 0 = delete (default)

655 Private Network Digit Modification Table Assignment

System Availability: Not available with CTX28
Prerequisite Program: *None*

This command assigns Digit Modification Tables for Private Networking.

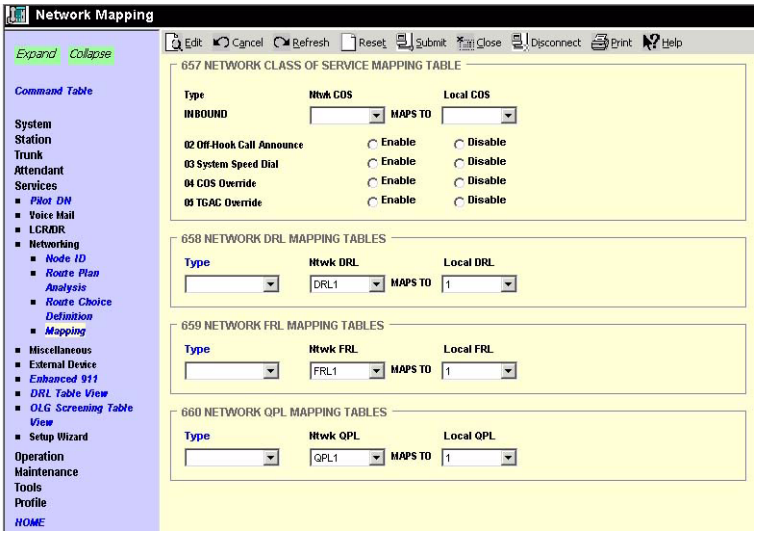
FIELD	DESCRIPTION
00 Private Network Digit Modification Table	Select the Private Network Digit Modification Table to be defined. Possible values: 1~64 (default = no value)
01 Deleted Digits	Select the number of leading digits to be deleted. Possible values: 1~10, 0 = delete (default)
02 Insert Leading Digits	Select the leading digits to be inserted. Possible values: Up to 23 digits (default = no value)

Mapping

System Availability: Not available with CTX28
Program Number(s): 657, 658, 659 and 660

The following programs map network and primary COS, DRL, FRL and QPL settings to each other.

1. Complete the "Network Mapping Record Sheets" on page D-50.
2. Click Services > Networking > Mapping.
3. Enter Program 657 data.
4. Enter Program 658 data.
5. Enter Program 659 data.
6. Enter Program 660 data.
7. Click Submit.



657 Network COS Mapping Table

System Availability: Not available with CTX28
Prerequisite Program: *None*

This table maps a Network COS received as part of a Traveling Class Mark to a local Class of Service for access to local services. There is no translation of Outgoing Network COS.

FIELD	DESCRIPTION
Ntwk COS	Enter the Network COS to be mapped. Possible values: 1~32 (default = no value)
01 Local COS	Enter the Local COS to be used in place of the received Network COS. Possible values: 1~32 (default = no value)
02 Off-hook Call Announce	Choose whether an incoming call with this Network COS can activate OCA. Possible values: Enable or Disable (default)
03 System Speed Dial	Choose whether an incoming call with this Network COS can use a System Speed Dial number to make an outgoing call. Possible values: Enable or Disable (default)
04 COS Override	Choose whether an incoming call with this Network COS can use Class of Service Override. Possible values: Enable or Disable (default)
05 TGAC Override	Choose whether an incoming call with this Network COS can override local Trunk Group Access Control. Typically an attendant function. Possible values: Enable or Disable (default)

658/659/660 Network DRL/FRL/QPL Mapping Tables

System Availability: Not available with CTX28
Prerequisite Program: *None*

These commands are used to establish two mapping tables to equate local DRLs, FRLs and QPLs with network DRLs, FRLs and QPLs for both outbound and inbound network calls.

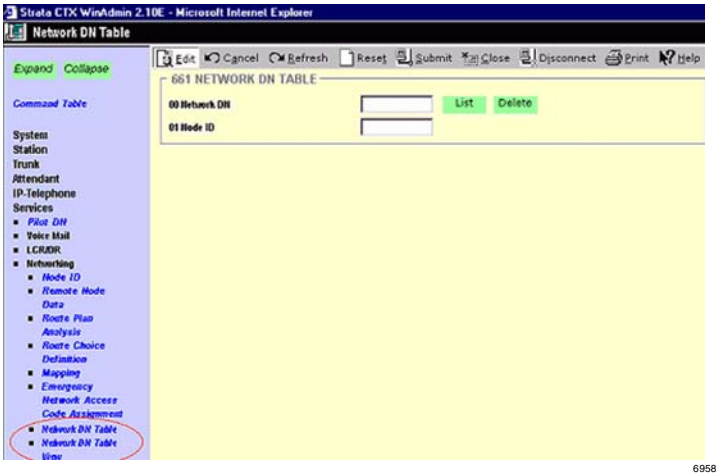
FIELD	DESCRIPTION
Type	Select the Network DRL/FRL/QPL type. Possible values: Outbound or Inbound (default = no value) • Outbound – maps a local DRL/FRL/QPL to a Network DRL/FRL/QPL. • Inbound – maps a Network DRL/FRL/QPL to a local DRL/FRL/QPL.
Network DRL/FRL/QPL	Enter the Network DRL/FRL/QPL (for outbound) you want to map to a Local DRL/FRL/QPL. Possible values: DRL/FRL/QPL1~DRL/FRL/QPL16 (default = 1~16)
Local DRL/FRL/QPL	Enter the Local DRL/FRL/QPL (for inbound) you want to map to the Network DRL/FRL/QPL selected in the *Network DRL/FRL/QPL* field above. Possible values: 1~16 (default = 1~16)

661 Network DN Table Assignment

System Availability: Not available with CTX28
Prerequisite Program: *None*

This program assigns the PDN, PhDN or Pilot DNs to a CTX node ID. This include all DNs in all CTX nodes on the CTX network, except the DNs in the node you are currently programming (This feature is available with CTX R2.2 or higher and CTX WinAdmin R2.2G.0 and higher.)

This enables someone in one node to call an extension in another node, without having to dial the node ID number. The caller dials the extension and the system appends the Node ID. This function is transparent to the caller and the dialed party. (See Example.)



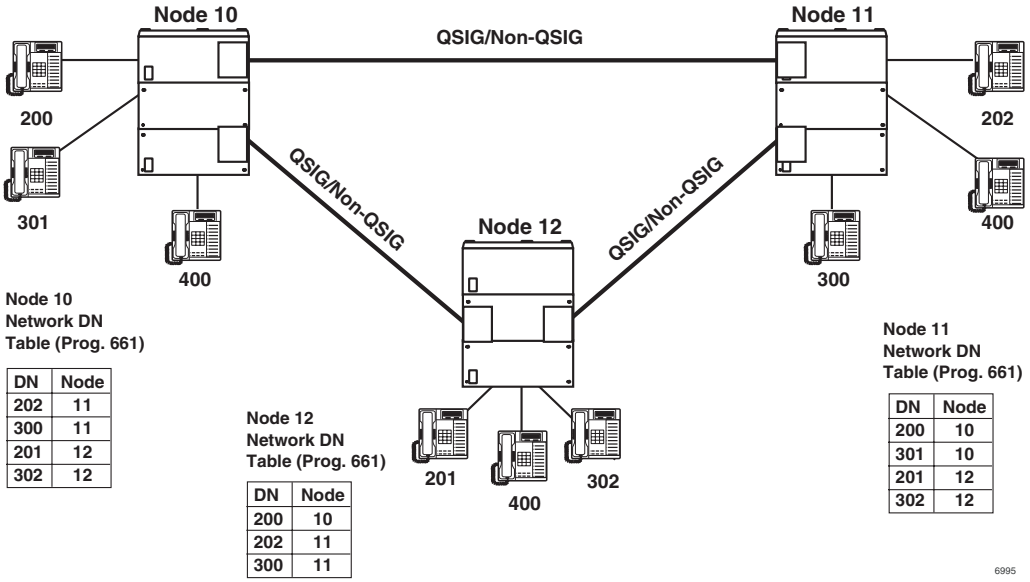
6958

➤ In Program 661, enter a Network DN, followed by it's node MD. Repeat this process for each DN.

FIELD	DESCRIPTION
00 Network DN	Enter the PDN, PhDN or Pilot DNs that should be assigned to a CTX Node ID. This include all DNs in all CTX Nodes on the CTX network, except the DNs in the node you are currently programming. Possible values: 3000 (CTX670), 1000 (CTX100) Five digits max. (Default = No Data)
01 Node ID	Enter the CTX Node ID that should be assigned to the DN. Possible values: Six digits max. (Default = No Data)

Example

Refer to the illustration below and this example: When programming the DNs for telephones in Node 10, enter the DNs and their node ID numbers for DNs in nodes 11 and 12 into the Network DN table, Program 661.



Node 10 Network DN Table (Prog. 661)

DN	Node
202	11
300	11
201	12
302	12

Node 12 Network DN Table (Prog. 661)

DN	Node
200	10
202	11
300	11

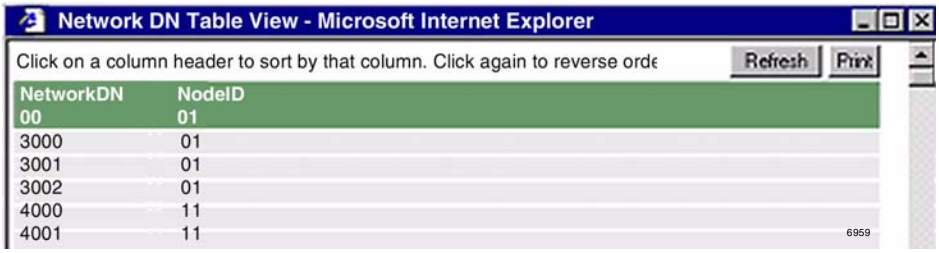
Node 11 Network DN Table (Prog. 661)

DN	Node
200	10
301	10
201	12
302	12

Notes

- If the same DN exists in more than one Node (i.e., DN 400), it should not be placed in the Node ID tables of any node. The user must dial the Node ID where the DN is located, plus the DN to call the DN.
- When using Network DN tables for CTX networking, assign the Primary Node ID in Program 656, but do not assign overlap codes.

The networking tables shows the DN numbers and node ID that have been assigned in this table.



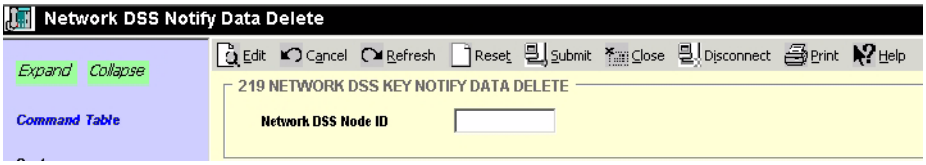
219 Network DSS Notify Data Delete

System Availability: Not available with CTX28

This program lets you disable the DSS function for the node ID entered in this screen.

Important! *Don't use this program unless requested by Toshiba Technical Support.*

1. Click Services > Networking > Network DSS Notify Data Delete.
2. Enter the Node ID of the Network DSS key Notify Data to be deleted.



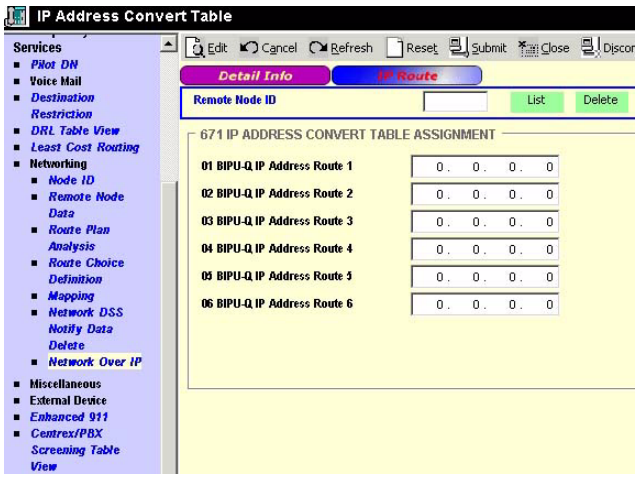
Strata Net QSIG Over IP

System Availability: Not available with CTX28

To use programs 671 and 672, refer to "Strata Net over IP Programming Guidelines" on page A-13.

671 IP Address Convert Table

1. Click Services > Networking > Network Over IP.
2. Enter Program 671 data.
3. Click Submit.



FIELD	DESCRIPTION
Remote Node ID	Enter the Node ID of the remote CTX that the primary CTX should route to in the IP Private Network. Possible values: Up to six digits.
01 BIPU-Q IP Address Route 1	Enter the IP Address of the remote BIPU-Q IP that should be routed to first. Possible values: 0~255
02 BIPU-Q IP Address Route 2	Enter the IP Address of the remote BIPU-Q IP that should be used if all channels in the first BIPU-Q route is busy or disabled. Possible values: 0~255
03 BIPU-Q IP Address Route 3	Enter the IP Address of the remote BIPU-Q IP that should be used if all channels in BIPU-Q Route 1 and 2 are busy or disabled. Possible values: 0~255
04 BIPU-Q IP Address Route 4	Enter the IP Address of the remote BIPU-Q IP that should be used if all channels in BIPU-Q Route 1, 2 and 3 are busy or disabled. Possible values: 0~255
05 BIPU-Q IP Address Route 5	Enter the IP Address of the remote BIPU-Q IP that should be used if all channels in BIPU-Q Route 1, 2, 3 and 4 are busy or disabled. Possible values: 0~255
06 BIPU-Q IP Address Route 6	Enter the IP Address of the remote BIPU-Q IP that should be used if all channels in BIPU-Q Route 1, 2, 3, 4 and 5 are busy or disabled. Possible values: 0~255

672 Node ID Detail Information

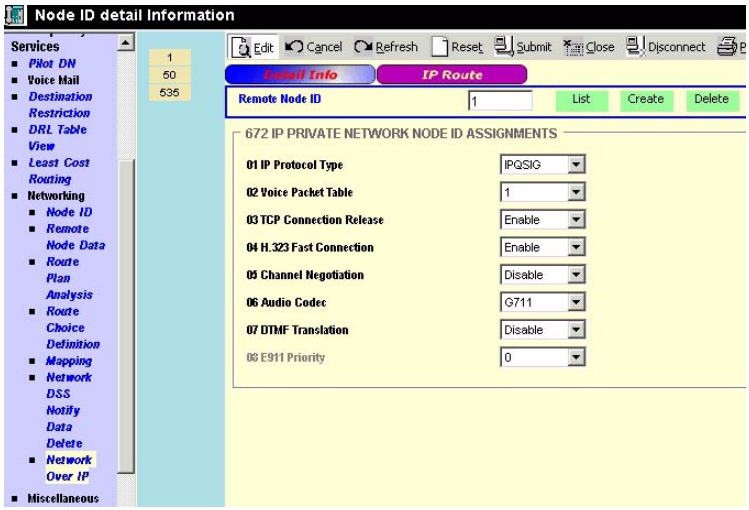
System Availability: Not available with CTX28

This command assigns the parameters to the is used by BIPU-Q1As at the remote nodes connecting to the BIPU-Q1A in the local node over IP Private Networking.

Important!

- *These parameters must match all nodes on the IP network.*
- *When setting Node ID assignments on an IP QSIG network, the Node ID assignment settings for each node on an end-to-end connection must be the same.*
- *Whenever Node ID assignment change are made for IP telephones or IP QSIG Node IDs, Toshiba recommends pressing the reset button on the BIPU to assure the changes take effect.*

1. Click Services > Networking > Network Over IP.
2. Click Detailed Info tab.
3. Enter Program 672 data.
4. Click Submit.



FIELD	DESCRIPTION
Remote Node ID	Node ID of remote CTX connected to this CTX with BIUP-Q, IP networking. Possible values: Up to six digits.
01 IP Protocol Type	Select the desired IP protocol to be used by the BIUP-Q1A at the remote node. This parameter must match on both nodes of an end-to-end connection on the IP network. Possible values: IPQSIG (default), H.323 (Do not use; H.323 is not available)
02 Voice Packet Table	Select the desired voice packet configuration table number (programmed in this CTX) to be used by the BIUP-Q1A at the remote node. Voice Packet tables are configured in Program 152 Possible values: 1~128 (CTX100 and CTX670 Basic) 1~256 (CTX670 Exp.) (default = 1)

FIELD	DESCRIPTION
03 TCP Connection Release	Select whether to release TCP connection when the Call was released. TCP release should be enabled for normal IP calling operation. This parameter must match on both nodes of an end-to-end connection on the IP network. Possible values: Enable (default) or disable **Notes** • If disabled, the TCP connection is connected continually. • This parameter is normally used with its default, which means TCP connection is established and released for each call. If only two nodes on Strata Net over IP network, this parameter should be set to Disable which means TCP connection is always established.
04 H.323 Fast Connection e	Fast connection should be enabled for H.323 protocol only when the remote end has this this option enabled. This should be disabled for IP Qsig. Protocol Possible values: Enable (default) or disable
05 Channel Negotiation	Select whether channel negotiation for Call Control is applied or not. This parameter must match on both nodes of an end-to-end connection on the IP network. This programming is applied only to H.323 protocol. Possible values: Enable or disable (default)
06 Audio Codec	Select the desired audio codec type. Important, G.711 must be used for transmission of end-to-end DTMF signaling. G.711 provides the highest voice quality but requires the most bandwidth. This parameter must match on both nodes of an end-to-end connection on the IP network. Possible values: G711(default) or G729A
07 DTMF Translation	Select of whether DTMF translation by the Control Channel is enabled or not. This parameter should be enabled when using G.729A codecs and disable if using G.711 codecs for end-to-end DTMF signaling. This parameter must match on both nodes of an end-to-end connection on the IP network. Possible values: Enable or disable (default)
08 E911 Priority	If E911 calls originated from this CTX should be sent over the IP network to the selected remote node, enter the E911 priority assignment that should be used for the selected remote node. Assign 0 or 1~5. Assign 1, the highest priority, to the remote node that has the main CAMA or ISDN E911 connection.; 2~5 reduces the E911prioity with 5 providing the lowest priority - these priorities should be used for alternate network routing of E911 calls. If E911calls should not be sent over the IP network to the selected node, assign 0 as the E911 priority. Note If two or more remote nodes have the same priority, E911calls will route to the CTX with the lowest node number. Possible values: 0 (default) or 1~5

Miscellaneous

The Strata CTX system can monitor SMDR, Call History and Behind Centrex. Use the following programs to set up these services.

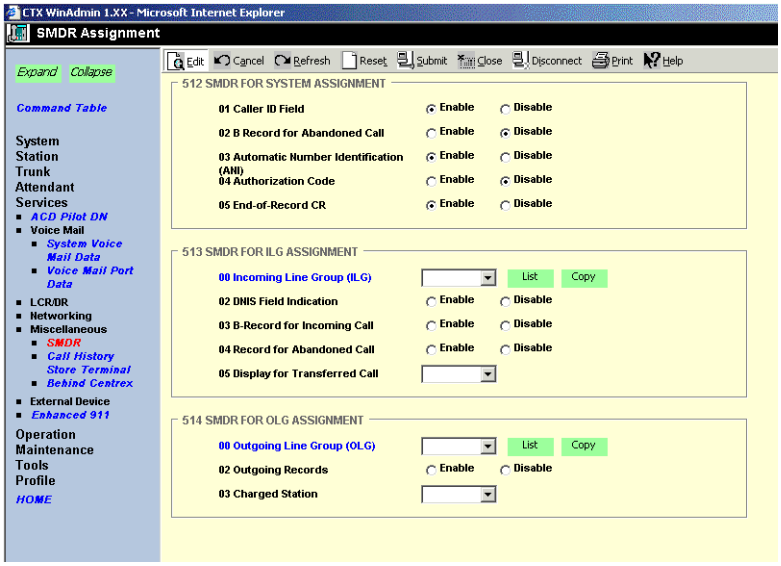
SMDR

The following enable programming for SMDR, Call History and Behind Connection settings.

Program Number(s): 512, 513 and 514

The following programs assigns system-wide SMDR parameters.

1. Click Services > Miscellaneous > SMDR.
2. Enter Program 512 data.
3. Enter Program 513 data.
4. Enter Program 514 data.
5. Click Submit.



512 SMDR for System Assignment

Prerequisite Program: *None*

This table translates a Network COS received as part of a Traveling Class Mark to a local Class of Service for access to local services. There is no translation of Outgoing Network COS.

FIELD	DESCRIPTION
01 Caller ID Field	Include Caller ID records in SMDR.
02 B-Record for Abandoned Call	Generate B Record for an abandoned call. Possible values: Enable or Disable (default)
03 Automatic Number Identification (ANI)	Include ANI in SMDR record. Possible values: Enable (default) or Disable
04 Authorization Code	Include authorization codes in SMDR records. Possible values: Enable or Disable (default
05End-of-Record CR	Include a Carriage Return (CR) at the end of an SMDR record. Possible values: Enable (default) or Disable

513 SMDR for ILG Assignment

Prerequisite Program: *None*

This program assigns SMDR parameters for ILGs.

FIELD	DESCRIPTION
00 Incoming Line Group (ILG)	Specify the ILG for which to set SMDR parameters. Possible values: 1~32 (CTX100), 1~50 (CTX670 Basic), 1~128 (CTX670 Exp.) (default = no value)
01 Generate SMDR Records	Enable to generate records for this ILG Possible values: Enable (default) or Disable
02 DNIS Field Indication	Check to include DNIS information in records for this ILG. Possible values: Enable (default) or Disable
03 B Record for Incoming Call	Enable B Record generation for incoming calls with or without incoming SMDR being enabled. Possible values: Enable or Disable (default)
04 Abandoned Call Record Output	Enable record generation for abandoned calls. Incoming SMDR must be turned on. Abandoned call records will be generated whether or not incoming SMDR has been set. Enable or Disable (default)
05 Display Transferred Call Records	Select whether to charge a transferred call to the source or destination party. Possible values: Source (default) or Destination

514 SMDR for OLG Assignment

Prerequisite Program: *None*

This command assigns SMDR parameters for OLGs

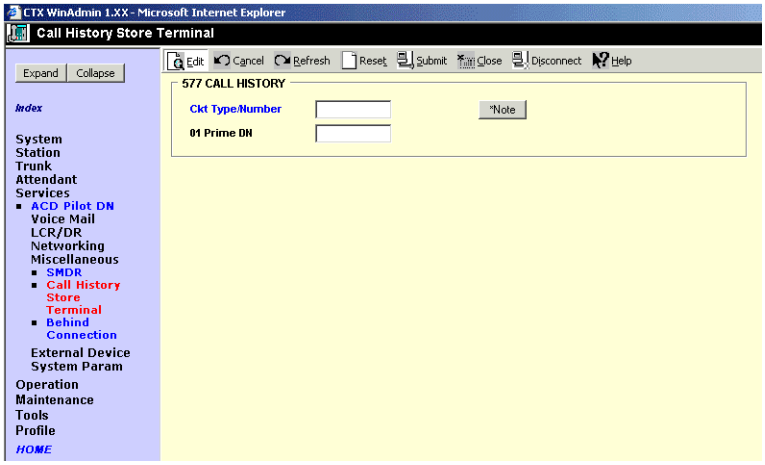
FIELD	DESCRIPTION
00 Outgoing Line Group (OLG)	Specify the OLG for which to set SMDR parameters. Possible values: 1~32 (CTX100), 1~50 (CTX670 Basic), 1~128 (CTX670 Exp.)
02 Outgoing Records	Generate records for outgoing calls. SMDR Record Display must be Enabled. Possible values: Enable (default) or Disable
03 Charged Station	Apply the SMDR record of a transferred call to its source or its destination. Possible values: Source (default) or Destination

577 Caller History

Prerequisite Program: *None*

Accounting Codes need to be specified for the number of digits that are expected to be used for registering the number. This allows the dialing within the system to proceed automatically once the correct account code is dialed, the following numbers are then dialed digits used for making the phone call. A second length is provided to allow the number of digits to be used for verification of the code to be less than the total code entered, thus the code may contain two parts, one required and one part optional to the user.

1. Complete the "Call History Record Sheet" on page D-51.
2. Click Services > Miscellaneous > Behind Connection.
3. Click Submit.



FIELD	DESCRIPTION
Ckt Type/Number	Enter the Circuit Type and number. See the Table 9-2 below. Possible values: Up to 6 digits (default = no value)
01 Primary DN	Enter Station DN to store call history data. Possible values: Up to 5 digits (default = no value)

Table 9-2 Circuit Type Code Definitions

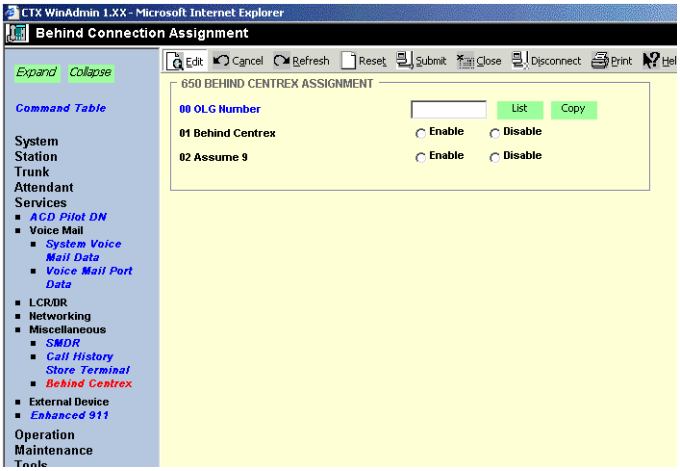
Circuit Name	Circuit Type	Circuit Number	Example
DN	1	0~99999 (DN)	if DN is 200, value is 1200
CO	2	1~264 (Trunk Number)	if CO is 30, value is 230
GCO	3	1~128 (GCO Key Group Number)	if GCO is 50, value is 350
POOL	4	1~128 (POOL Key Group Number)	if POOL is 80, value data is 480

650 Behind Centrex Assignment

Prerequisite Program: *None*

This feature allows Strata CTX to connect to the station side of a PBX or Centrex using a physical loop trunk interface. DR and Least Cost Routing may need to account for access codes required by the PBX or Centrex before connecting to the public network.

1. Complete the "Behind Centrex Assignment Record Sheet" on page D-52 below.
2. Click Services > Miscellaneous > Behind Centrex Assignment.
3. Click Submit.



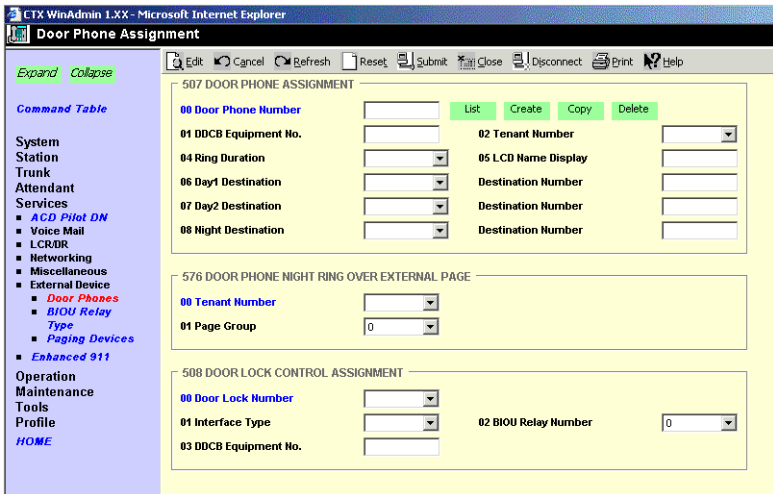
FIELD	DESCRIPTION
00 OLG Number	Select OLG that is attached to a Centrex (or other PBX). Possible values: 1~32 (CTX100), 1~50 (CTX670 Basic), 1~128 (CTX670 Exp.), (default = no value)
01 Behind Centrex	Enable Behind Centrex Operation for this OLG. Possible values: Enable or Disable (default)
02 Assume 9	Enable the Assume 9 feature. Possible values: Enable or Disable (default)
03 Pause Timer	Enter the number of seconds (0~5) the CTX will wait for second dial tone from Centrex/PBX. Possible values: 0~5 (default = 0

External Devices

Door Phones

Program Number(s): 507, 576 and 508

This command assigns Door Phone parameters.



1. Complete the "Door Phone Assignment Record Sheet" on page D-53.
2. Click Services > External Device > Door Phones.
3. Enter Door Phone Number

   ...or click one of the following buttons:

   - List – View a summary list of programmed Door Phones.
   - Create – Assigns a new Door Phone with default settings.
   - Copy – Copies settings from an existing Door Phone.
   - Delete – Deletes a Door Phone.
4. Enter remaining Program 507 data.
5. Enter Program 576 data.
6. Enter Program 508 data.
7. Click Submit.

507 Door Phone Assignment

Prerequisite Program: *None*

This assignment configures Door Phone Control Boxes (DDCBs) and Door Phones (MDFBs). DDCBs can be connected to ADKU, PDKU and/or BDKU interface PCBs. Up to three MDFBs can be connected to one DDCB. A Door lock control relay may be assigned to the B output of the DDCB in place of a MDFB door phone (see "508 Door Lock Control Assignment" on page 9-70).

FIELD	DESCRIPTION
00 Door Phone Number	Enter the door phone number. Possible values: 1~6 (CTX100), 1~9 (CTX670 Basic), 1~24 (CTX670 Exp.), (default = no value) Door phone numbering for both CTX100 and CTX670 is as follows: • DDCB 1 provides door phone numbers 1~3, 2 can be a door phone or door lock. • DDCB 2 provides door phone numbers 4~6, 5 can be a door phone or door lock.

FIELD	DESCRIPTION
	Door phone numbering for CTX670 only is as follows: • DDCB 3 provides door phone numbers 7~9, 8 can be a door phone or door lock. • DDCB 4 provides door phones 10~12, 11can be a door phone or door lock. • DDCB 5 provides door phones 13~15, 14 can be a door phone or door lock. • DDCB 6 provides door phones 16~18, 17 can be a door phone or door lock. • DDCB 7 provides door phones 19~21, 20 can be a door phone or door lock. • DDCB 8 provides door phones 22~24, 23 can be a door phone or door lock. DDCBs are numbered by the system automatically by DDCB Equipment (Shelf/Slot/Circuit). DDCB1 is assigned to the lowest DDCB Equipment and DDCB2 to the next lowest, etc. If DDCB Circuit B is set to Door Lock, a Door Phone cannot be set.
01 DDCB Equipment No.	Enter the DDCB equipment number to which the Door phone should be assigned. Possible values: xx = cabinet 01 (CTX100), 01~02 (CTX670 Basic), 01~07 (CTX670 Exp.); yy = slot 01~8 (CTX100) 01~10 (CTX670); zz = circuit 01~16 (default = no value) Example: If the DDCB interface should be connected to a PDKU or BDKU/BDKS in cabinet shelf 5, slot 2, circuit 3, enter 050203. **Notes** • This is the cabinet, slot, and circuit number of the BDKU/BDKS or PDKU interface PCB to which the DDCB is to be connected. • If a PDN is assigned to the DDCB equipment number it must be deleted, using Program 201, before attempting to assign the DDCB console. Cabinet numbers: • CTX100 – Select 01 for Base and Expansion cabinet. • CTX670 – Select 01 for Base and 02~07 respectively for each Expansion cabinet. Slot numbers: • CTX100 – Select 01~04 for Base slots and 05~08 for Expansion slots. • CTX670 – Select 01~08 for Base slots and 01~10 for Expansion slots.
02 Tenant Number	Select the Tenant Number for which the door phone should ring over external page in the system Night mode. Possible values: 1~2 (CTX100); 1~8 (CTX670); (default = 1)
04 Ring Duration	Select the time that the door phone should ring destination devices when the door phone button is pressed. The ring time can be 3 to 30 seconds set in 3 second intervals - each 3 second interval provides one ring to the destination. Destination devices include selected DNs and Page groups. Possible values: 3~30 (default = 9)
05 LCD Name Display	Enter the Door Phone name that should display on LCD telephones when the door phone rings the telephones; or, when the telephone calls the door phone. Possible values: Up to 16 characters (default = no value)

FIELD	DESCRIPTION
06 Day1 Destination **07 Day2 Destination** **08 Night Destination**	Select the type of destination that should ring when the door phone button is pressed during the system Day1, Day2 or Night mode. Possible values: None (default), DN or Paging Group 1~4 (CTX100); 1~8 (CTX670 Basic); 1~16 (CTX670 Exp.) Enter the Destination Number. If the ring destination type is a PDN or PhDN, enter the directory number. If the ring destination type is Page, enter the Page Group number. Possible values: Up to 5 ASCII characters (default = no value)

576 Door Phone Night Ring Over External Page

This assignment sets the Page Group that should ring during the system Night Mode when a door phone button is pressed. The assignment can be made for Tenant 1 only.

FIELD	DESCRIPTION
00 Tenant Number	Select the system Tenant number to be assigned Door Phone to Page Group/ Night Ringing. Possible values: 1(CTX100 and CTX670) (default = no value)
01 Page Group Number	Select the system Page Group number that should ring for the selected Tenant when a door phone button is pressed during the system Night Mode. Possible values: 0~4 (CTX100), 0~8 (CTX670 Basic), 0~16 (CTX670 Exp.) (default = 0)

508 Door Lock Control Assignment

This assignment is used to configure up to 10 door lock control relays. The contacts of these relays are used to control electrical door locks. One door lock relay can be assigned to each of the eight Door Phone Control Boxs (DDCB, Port -B) and/or one to each of the two BIOU PCBs (any one of the four control relays).

Note If a door lock is assigned to a DDCB, the second jack (Port B) will provide the door lock relay contacts. This jack can not be used to connect an MDFB door phone.

FIELD	DESCRIPTION
00 Door Lock Number	Enter the door lock control number to configure. Possible values: 1~4 (CTX100); 1~5 (CTX670 Basic); 1~10 (CTX670 Exp.), (default = no value)
01 Interface Type	Enter the system Page Group number that should ring for the selected tenant when a door phone button is pressed during the system Night Mode. Possible values: None (default), BIOU or DDCB

FIELD	DESCRIPTION
02 BIOU Relay Number	Assign BIOU control relay as a Door Lock Relay. This relay activates when the Door Lock button is pressed or a Door Lock access code is dialed. Possible values: 0~8 (default = 0) BIOU1 provides control relays 1~4 BIOU2 provides control relays 5~8. **Note** The CTX100 ACTU built-in relay is programmed as relay 5. For this relay operation BIOU2 is installed as default in a virtual equipment position Cabinet 2, Slot 5, PCB code 20, in Program 100. To install an actual BIOU2 and disable the ACTU built-in relay, use the programming telephone to remove the virtual BIOU2 and then install the actual BIOU2 in Cabinet 01/slot 01~08 in the normal manner. BIOU relay functions are assigned in "515 View BIOU Control Relay Assignments" on page 9-72. This field is required if you selected BIOU in *01 Interface Type* above.
03 DDCB Equipment No.	Enter the DDCB equipment number to which the Door Lock should be assigned. This is the cabinet, slot, and circuit number of the BDKU/BDKS or PDKU interface PCB to which the DDCB is to be connected. Possible values: CTX28 Equipment Numbers: DKT 1~8 = 0101(01~08); SLT 1 & 2 = 0104 (01~02); DKT 9~16 = 0107 (01~08). xx = Cabinet 01 (CTX100), 01~02 (CTX670 Basic), 01~07 (CTX670 Exp.) yy = Slot 01~08 (CTX100), 01~10 (CTX670); zz = Circuit 01~16 (default = no value) Example: If the DDCB interface should be connected to a PDKU or BDKU/BDKS in cabinet shelf 5, slot 2, circuit 3, enter 050203. **Notes** • This is the cabinet, slot, and circuit number of the BDKU/BDKS or PDKU interface PCB to which the DDCB is to be connected. • If a PDN is assigned to the DDCB equipment number it must be deleted, using PRG201, before attempting to assign the DDCB console.

515 View BIOU Control Relay Assignments

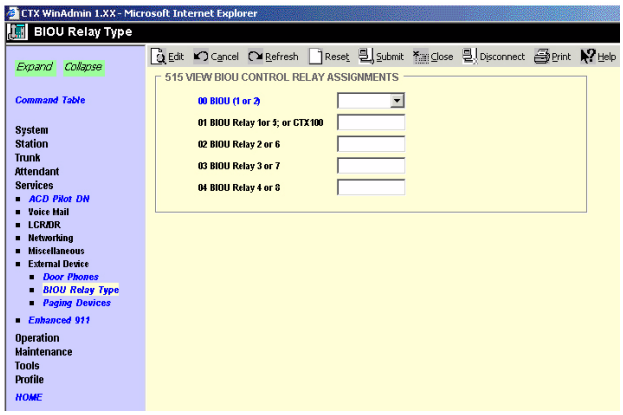
Prerequisite Program: *100 page 4-1, and 105 page 4-13*

This assignment is used to view functions of the four control relays on each BIOU PCB set in Program 105 12 Night Relay and 18 Night Bell Relay; Program 508 Door Lock Control Assignment; and Program 503 19 BGM Mute Relay. The system allows up to two BIOU PCBs to provide a total of eight control relays. The control relays can be configured as an external BGM mute control, Night Bell control, Night Mode Control, and Door Lock Control.

Notes

- BIOU-1 relays are identified as Control Relays 1~4.
- BIOU-2 relays are identified as Control Relays 5~8.

1. Click Services > External Device > BIOU Relay Type.
2. Enter Program 515 data.
3. Click Submit.



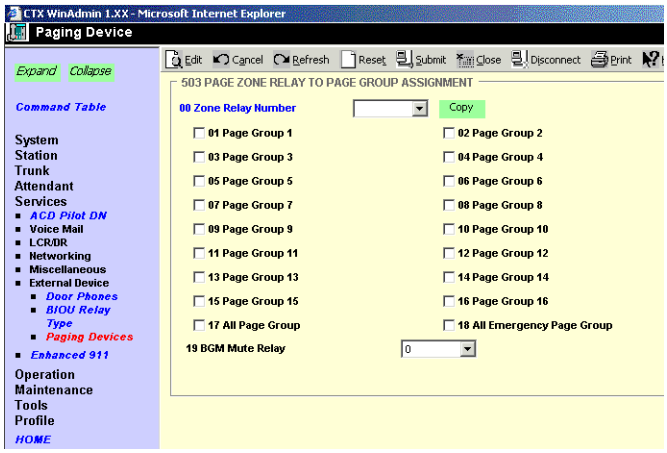
FIELD	DESCRIPTION
00 BIOU (1 or 2)	Enter the BOIU PCB number. Possible values: 1 or 2 (default = no value) **Note** BIOU 1 and BIOU 2 are assigned in Program 100 - Card Assignment.
01 BIOU Relay 1 or 5 **02 BIOU Relay 2 or 6** **03 BIOU Relay 3 or 7** **04 BIOU Relay 4 or 8**	View the function of BIOU1, control relay 1 or BIOU2, control relay 5: View the function of BIOU1, control relay 2 or BIOU2, control relay 6: View the function of BIOU1, control relay 3 or BIOU2, control relay 7: View the function of BIOU1, control relay 4 or BIOU2, control relay 8: Possible values: Not Use, Ext Paging, Night Bell, Night Relay or Door Lock (default = no value) • NOT USE – if the relay is not used. • PAGE MUTE – External BGM mute control activates during an external page (see "503 Paging Devices Group Assignments" on page 9-73). • NIGHT BELL – Night Bell control activates during the system Night Mode only when incoming CO lines ring (see "102 Flexible Access Codes" on page 4-4). • NIGHT RELAY – Night Mode Control activates continuously during the system Night Mode (see "105 System Data" on page 4-13). • DOOR LOCK – Door Lock Control activates when a telephone's Door Unlock button is pressed (see "508 Door Lock Control Assignment" on page 9-70).

503 Paging Devices Group Assignments

Prerequisite Program: *502 page 5-29*

Assigns BIOU Page Zone Relays to Page Groups.

1. Complete the "Paging Device Group Assignment Record Sheet" on page D-54.
2. Click Services > External Device > Paging Devices.
3. Enter 00 Zone Relay Number.
4. Check the Paging Groups that you wish to activate.
5. Select the external generic relay number.
6. Click Submit.



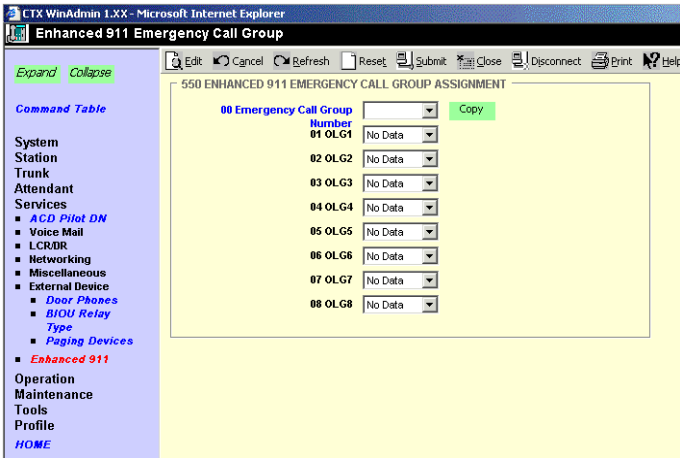
FIELD	DESCRIPTION
00 Zone Relay Number	Select the BIOU Page Zone relay that should be assigned to the Page Groups below. This relay activates whenever the selected Page Group is paged. • BIOU1 = Zone Relays 1~4. • BIOU2 = Zone Relays 5~8. Possible values: 1~8 (default = no value)
01 PG 1~16 PG 16 17 All Page Group 18 All Emergency Page Group	Check the box if the selected BIOU Page Zone Relay should activate with this Page Group. Possible values: On or Off (default)
19 BGM Mute Relay	Assign BIOU generic relay as the BGM mute relay. This relay activates whenever the external page is in use • BIOU1 = Generic Relays 1~4. • BIOU2 = Generic Relays 5~8. Possible values: 1~8 (default = 0) **Note** The CTX100 ACTU built-in relay is programmed as relay 5. For this relay operation,BIOU2 is installed, as default, in a virtual equipment position - Cabinet 2, Slot 5, PCB code 20, in Program 100. To install an actual BIOU2 and disable the ACTU built-in relay, use the programming telephone to remove the virtual BIOU2 and then install the actual BIOU2 in Cabinet 01 Slot 01~08 in the normal manner.

550 Enhanced 911 Emergency Call Group

Prerequisite Program: *Program 105*

This command assigns OLGs to the Enhanced 911 Emergency Call Group.

1. Complete the "Emergency Call Group Assignment Record Sheet" on page D-55.
2. Click Services > Enhanced 911.
3. Select Program 550 data.
4. Click Submit.



FIELD	DESCRIPTION
00 Emergency Call Group Number	Specify the Emergency Call Group. Possible values: 1~8 (default = no value)
01 OLG1~08 OLG8	Specify the first through eighth OLG to be chosen for an E911 call. Possible values: 0~32 (CTX100), 0~50 (CTX670 Basic), 0~128 (CTX670 Exp.), (default = no data)

Operation 10

This chapter discusses CTX WinAdmin's operational programming functions.

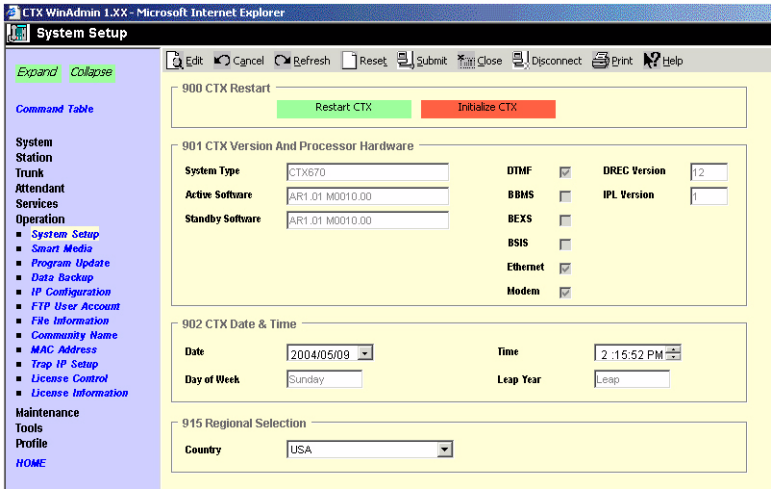
System Setup

Program Number(s): 900, 901, 902 and 915

These programs enable programmers to simulate system Power Off/On, initialize Strata CTX, check software versions and set system clock and date.

1. From the Program Menu, click Operation > System Setup.
2. Click *Restart CTX* to reset Strata CTX

   ...or click *Initialize CTX* to delete programmed data and revert to default settings.
3. 901 CTX Version data is for viewing only.
4. Set Strata CTX date and time.
5. Click Submit.



900 CTX Restart

Prerequisite Program: *None*

This program enables you to reset hardware and initializes or restores programmed data.

CAUTION! Both commands will drop all existing calls.

FIELD	DESCRIPTION
Restart CTX	Clicking on this button initializes a System Power Off/Power On sequence to reset hardware. This is also known as an Initialize Level 2.
Initialize CTX	Clicking on this button invokes an Initialize Level 1 sequence which erases programmed data and enters default data into the Strata CTX System. If a Toshiba SmartMedia is installed in the available slot, using this option restores data from backed up data from the SmartMedia (see Restoring Data from SmartMedia below).

Important! *Choosing Initialize CTX without installing a SmartMedia Card deletes all programmed data and returns your Strata CTX to factory default settings. All previously programmed data is lost (See "Restoring Data from SmartMedia" on page 10-2).*

Restoring Data from SmartMedia

When initializing with Initialize CTX, you can restore custom data that was previously programmed and stored on a SmartMedia card. To do so, follow the steps below.

1. Insert a SmartMedia card that contains the **Progdata** folder with the **default.dat** file. The **default.dat** file contains your custom settings and can be created by running Data Backup. See "910 Data Backup" on page 10-13.
2. Run System Initialization by clicking Initialize CTX.

Notes

- Restoring data from the SmartMedia card may take an hour or more.
- During the restore process, the telephone LCD may display date and time data. This does not necessarily indicate completion of the restore process.
- To verify completion of the restore process access the Programming Mode from a telephone and enter your password. If the system enables you to continue, the data restore process is complete.

3. Remove the SmartMedia card and restart the CTX again after restoring system data. This is necessary to reset BIBU-M, BIPU-Q, QSIG, ISDN and other advanced features.

901 Display Version

Prerequisite Program: *None*

This program enables you to view the Active and Standby software versions installed on the Strata CTX system processor.

FIELD	DESCRIPTION
System Type	Displays the system that is connected. Possible values: CTX670, CTX100 (Active only).
Active Software	Displays the software versions.
Standby Software	These fields indicate the following: A = Indicates software for USA, Canada or Mexico. Rx.xx = Indicates the CTX release level. M0011.00 = The software version number. **Note** The Active software does not always have to be the same as the Standby software, although the Active and Standby software versions may be the same when you receive it from Toshiba.

DTMF, BBMS, BEXS, BSIS, Ethernet, and Modem	The check marks in these boxes indicate the hardware that is installed on the Strata CTX processor.
	Notes
	• On the CTX100:
	  • Ethernet means AETS is installed on ACTU.
	  • Modem means AMDS is installed on ACTU.
	  • DTMF means ARCS is installed on ACTU.

DREC Version	Indicates the DTMF/ABR software.
IPL Version	Indicates basic boot-up software version.

902 Set Time and Date

Prerequisite Program: *None*

This program enables you to change the system clock in Strata CTX.

FIELD	DESCRIPTION
CTX Date	Set Strata CTXs current date. • Select current date (YYYYMMDD). Possible values: YYYY = Year, MM = Month and DD = Day • Current Day of Week will display once the Year, Month and Day parameters have been entered. Possible values: Sunday ~ Saturday (Read only) (default = no value). • Leap Year will display based on the year entered. Possible values: Leap, Leap Next x, where x = 1, 2 or 3. X. is the number of years since the previous leap year (Read only) (default = no value).
CTX Time	Set Strata CTXs current time (hhmmss). Possible values: hh = hour, mm = minutes and ss = seconds (default = no value).

915 Regional Selection

Prerequisite Program: *None*

This program enables you to select the country.

FIELD	DESCRIPTION
Country	Select Country. Possible values: USA, Canada and Mexico.

908 SmartMedia

This program enables you to format and perform file management tasks on a SmartMedia card while it is installed in the CTX processor.

SmartMedia Card

The SmartMedia card is a small memory card that is used in digital cameras, MP3 players etc. It is available in most retail stores that sell digital cameras, personal computers supplies, etc. The capacities of standard SmartMedia cards are 32MB, 64MB and 128MB.

Notes

- 32MB or 64MB must be used for Strata CTX maintenance functions.
- The Strata CTX does not use Compact Flash or other similar types of small storage devices.

Functions

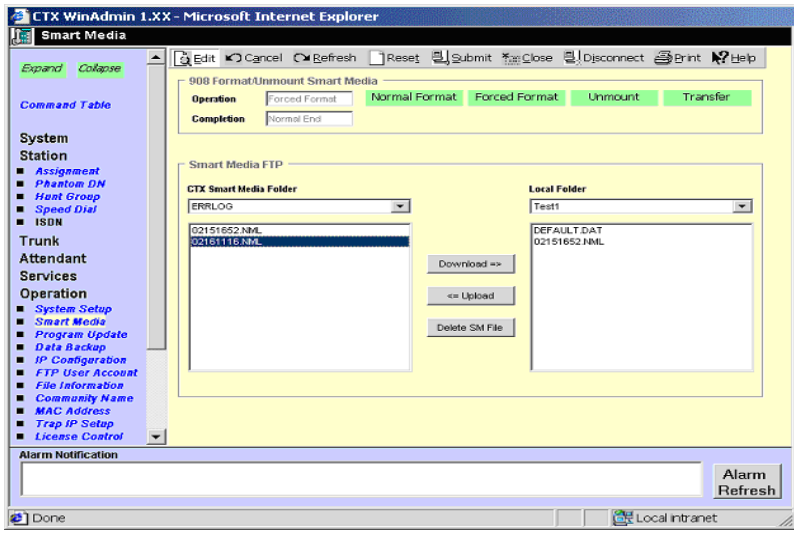
A SmartMedia Card(s) is required for most of the important Strata CTX maintenance functions such as:

- Saving (Backup) and re-loading the programmed database of a particular Strata CTX system.
- Saving Event trace data files for troubleshooting problems.
- Updating or upgrading the Strata CTX operating software version.

Administration and Use

- SmartMedia card read/writer installed in or connected to a PC can be used to perform a basic format and administer SmartMedia files. (SmartMedia card read/writers are available in most computer supply retail stores. They come with USB, PCI, floppy disk, and other types of PC interfaces).
- When the SmartMedia card is used to perform one of its functions, it is installed in the SmartMedia slot of the Strata CTX processor. It must be first formatted for Strata CTX operation by running Forced Format (program 908).
- The Strata CTX format will create five special folders. These folders and how to use them are explained below and in, Chapter –Maintenance.

1. Install the SmartMedia Card into the SmartMedia slot of the Strata CTX processor.
2. From the Program Menu, click Operation > SmartMedia.
3. Click one of the following:



   - Normal Format – creates any CTX SmartMedia folder that does not exist already. Existing folders are not overwritten by this procedure.
   - Forced Format – erases any existing folders and files. All existing data is overwritten. It then creates the five Strata CTX folders. See "CTX SmartMedia Folders" on page 10-6 for more information.
   - Unmount – copies the CTX event and alarm log files from the CTX processor buffers (RAM) to the SmartMedia card and then clears the buffers. It then stops CTX from writing to the SmartMedia Card so it can be removed without damaging it.

CAUTION! Always run unmount before removing the SmartMedia card. Failure to comply can cause damage to the card.

   - Transfer – copies the CTX event and alarm log files from the CTX processor buffers (RAM) to the SmartMedia card and then clears the buffers.

FIELD	DESCRIPTION
Operation	Displays the procedure selected. Possible values: Normal Format, Forced Format, Unmount and Transfer.
Completion	Displays the progress and status of the procedure selected. Possible values: Processing or Complete
CTX SmartMedia Folder	Contains files in the CTX SmartMedia Folder. Possible values: Files listed under Admlog, Errlog, Evnttrce, Progdata, and Program folders.
Local Folder	You must manually create a new folder on your PC under ctx folder > WinAdmin > Ctmc > Ctmc_Local > SmartMedia > New Folder The created folders will be available in the Local Folder drop-down box. You can store CTX SmartMedia files on these folders (See details below).

Smart Media Card FTP File Management

1. The Smart card files can be copied from the Smart media card to your CTX WinAdmin PC and vice versa using the CTX WinAdmin Smart Media FTP function. The Smart Media card must be installed in the CTX processor and formatted using Program 908 before it can be used. After it is installed and formatted the CTX will automatically store files under the Admlog, Errolog and Evnttrce folder of the Smart Media card - see CTX Smart Media folders below for details.
2. New folders must be created (with your own chosen names) on the CTX WinAdmin PC using Windows Explorer before you can use the Smart Media FTP screen. The folders must be created under the following path which already exists on the CTX WinAdmin PC: CTX>WinAdmin>Ctmc_Local>SmartMedia>Your Folder Name.
3. After the SM card has been formatted and your folders have been created on the CTX WinAdmin PC you can manage files as described below:

- Download: Copy files from the CTX Smart Media Card to your CTX WinAdmin PC.
  - From the CTX Smart Media drop down, select the CTX Smart Media folder and file(s) that should be copied to the CTX WinAdmin PC.
  - From the Local Folder drop down, select the CTX WinAdmin PC folder to which the files should be copied to - then click on Download.
- Upload: Copy files from the CTX WinAdmin PC to the CTX Smart Media card
  - From the Local Folder drop down, select the CTX WinAdmin PC Smart Media folder and file(s) that should be copied to the CTX Smart Media card.
  - From the CTX Smart Media Folder drop down, select the CTX Smart Media folder to which the files should be copied to - then click on Upload.
- Delete SM File: Delete files stored on the CTX Smart Media card.
  - From the CTX Smart Media drop down, select the CTX Smart Media folder and file(s) that should be deleted - them click Delete SM file.

CTX SmartMedia Folders

Running the Normal and Forced options of this program creates five folders on the SmartMedia card as follows:

- **Admlog** – The Admlog folder saves a history of CTX Administration (programming) command entries in xxx.SNP and xxx.DKT files. SNP files provide a log of CTX WinAdmin entries and DKT files provide a log of programming Telephone entries.
- **Errlog** – System error logs are saved into this folder. See Maintenance chapter, Event Trace Control Programs 903, 904 and 905 to set up trace.
- **Evnttrce** – CTX WinAdmin Event Trace files are saved into this folder.
- **Progdata** – Your Strata CTX programmed settings are all saved in this folder. When a backup is performed, Strata CTX saves programmed data to the **Progdata** folder as a default.dat file.

Note To perform the backup function you must first delete any existing default.datfiles to allow CTX to create a new default.dat file.

- **Program** – The operating software of the Strata CTX is saved in this folder as a nhs.prg file.

SmartMedia Errors

Any error causes the SmartMedia LED to flash (0.25sec ON – 0.25sec OFF continuous), except if the SmartMedia Volume Label is UPDATE; in this case the SmartMedia LED will always flash.

SmartMedia LED Specification

SmartMedia LED, located near the SmartMedia slot on the CTX processor, is lit when the following occurs:

- When the SmartMedia is accessed for read and write.
- When the errors are detected. See above for the detail of errors.
- When SmartMedia is inserted into the slot, SmartMedia LED blinks once. This is because the system accesses the media to read the house keeping data. When it does not blink, it means that the SmartMedia is not detected by the system at all. If the blink does not stop, it means that any of above error is detected or the SmartMedia volume label is UPDATE.

911 Remote Program Update

Prerequisites

The following are the prerequisites to Remote Update:

- The SmartMedia card must be installed in the system with a Backup of the current database (default.dat) file.
- Activation of the new software requires a Clear-reboot operation that will drop all existing calls and will take the system out of service from 10 minutes to an hour or more, depending on the system size.
- Requires a different system software Update file (provided on the Toshiba FYI site), depending on the type of CTX system and the type of Update that will be performed.

CTX Software Update Files

Each Strata CTX system type has two Software Update files: one for CTX WinAdmin Remote Update and another file for Local Update (to use with the Programming Telephone procedure).

CAUTION! Using the wrong file in either case will cause the Update to fail.

CTX Software Identification

Refer to the table below to identify CTX software release and builds in software file names or when verifying CTX software versions. For example, if the software ID is MA228, this means MA2 is equal to CTX Release 1.02 and nn is the software build 28.

CTX Release	Software ID
R1.00 and R1.01	= M01nn
R1.02	= MA2nn
R1.03	= MA3nn
R1.3	= ME0nn
R2.0	= MF0nn

nn = Software build level/number

Step 1: Download and Extract CTX Software

The latest released version of CTX system software Update files are posted on the Toshiba FYI site http://fyi.tsd.toshiba.com. To download the software files, follow the procedure below.

Step 1A: To download CTX System Software Files from FYI

1. From the Toshiba FYI website, click on Technical Services > Software (Strata Systems). The files are located under the heading "CTX System Software."
2. Double-click the appropriate link.

   CTX100 MXnnn Software (Remote Update)

   ...or CTX670 MXnnn Software (Remote Update)
3. When the Toshiba Software License Agreement screen displays, click the Agree button. The File Download dialog box displays.
4. Select the "Save this program to disk" radio button, then click OK. The Save As screen displays.
5. Save the file to an appropriately named folder that identifies the system type and software version, then click Save.

Step 1B: Extract Downloaded Files

1. After the file download is complete, select the Open or Open Folder button on the Download Complete screen to extract/open the files now, or select the Close button to extract the files later.

Notes

- The WinZip Self-Extractor screen displays if you selected the Open or Open Folder button.
- If you selected Close, double-clicking the .exe file later will bring up the WinZip Self-Extractor screen.

These files are the Remote Update self extracting .exe files:

- CTX100_R_MXnnn.exe (for CTX100 Remote Update file)
- CTX670_R_MXnnn.exe (for CTX670 Remote Update file)

2. In the "Unzip to folder:" field, make sure the path leads to the correct folder as shown below. If the path is incorrect, click the Browse button to navigate to the appropriate path, then click the Unzip button.
3. Verify the unzip folder path for Remote Update: C:\Ctx\WinAdmin\Ctmc\Ctmc_local\Upload
4. Verify the unzipped files or folders for Remote Update: "CTX100_R_MXnnn" or "CTX670_R_MXnnn"

Note The files can also be extracted to a temporary folder and the copied to the appropriate SmartMedia PROGRAM folder or CTX WinAdmin Upload folder. The extracted (decompressed) files will be approximately 15MB.

Step 2: Perform CTX WinAdmin Remote Program Update

This program enables you to send the new CTX system software to the CTX processor standby memory (CTX670) or SmartMedia card (CTX100) while the system is in use without interrupting service. After the new software is loaded into memory it can be activated at any time.

CAUTION! Activation of the new software requires a Clear-reboot operation that will drop all existing calls and take the system out of service from 10 minutes to an hour or more.

CTX WinAdmin will automatically go back to the login screen. After Clear-reboot, you must wait until the system initializes the new software and reloads the database. After the CTX database is reloaded, you must reconnect CTX WinAdmin to the Strata CTX and verify that the new software is loaded.

➤ **To get started**

1. At the CTX site, install a SmartMedia card in the CTX670 or CTX100 processor. All existing files on this SmartMedia card should be saved on a PC just in case they are needed later.

Notes

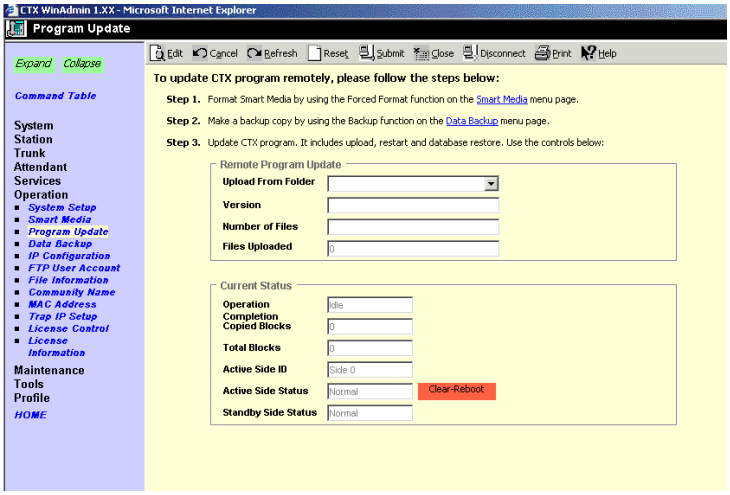
- A SmartMedia card volume label is not necessary for CTX670 or CTX100 remote update. If you use a volume label, it cannot be PRGUPDATE or PRGRESCUE0, PRGRESCUE01, etc.
- The SmartMedia card is used to back up the customer's latest system data (default.dat) which will automatically reload after the software update process is complete (see Step 7 on 10-10).
- For CTX100 systems only, CTX WinAdmin loads the Program Update files onto the SmartMedia card before making the Update software active on the ACTU processor.
- For CTX670, CTX WinAdmin loads the Program Update files onto the Standby Flash memory of the BECU/BBCU processor before making the update software active.

2. Make sure the Remote Update folder containing the Update files (xx.nhs) is placed properly in CTX WinAdmin Upload folder, for example C:\Ctx\WinAdmin\Ctmc\Ctmc_local\Upload\CTX100_R_MXnnn, then you may proceed with the Remote Update procedure.

➤ **To perform the Update**

1. Connect the CTX WinAdmin PC to the Strata CTX system that should be updated via LAN or modem.
2. From the Program Menu, click Operation > Program Update. The Program Update screen displays.
3. Complete Step 1 on the Program Update screen by clicking on SmartMedia (blue hyperlink).

   This takes you to Program 908 – Format/Unmount SmartMedia screen.
4. On the "Format/Unmount SmartMedia screen," click the Forced Format button to format the SmartMedia card.
5. Go back to the Program Update screen (from Program Menu, click Operation > Program Update).



6. Complete Step 2 on the screen by clicking on Data Backup.
7. Click the green "Back Up" button to start the back up. The CTX will store the programmed data (default.dat file) on the PROGDATA folder of the SmartMedia card.
8. After completing Data Backup, go back to the Program Update screen (from Program Menu, click Operation > Program Update) and complete Step 3. For field descriptions refer to the table "Program Update Screen Field Descriptions" on page 10-12
9. From the "Upload From Folders" drop-down menu on the Program Update screen, select the Remote Update folder for the CTX100 or CTX670 to be updated.
10. Click on Start Remote Program Update. CTX service will not be interrupted during this process.

CAUTION! Do not change the CTX Admin screen after the Update process has begun. Changing the screen, touching the keyboard etc., will cause the process to stop and fail. If for any reason the Update process stops, you must reconnect and start the process over.

Notes

- CTX WinAdmin will send approximately 200~300 files to the Strata CTX. This will not interrupt service on the Strata CTX.
- CTX WinAdmin indicates the status of the Remote Update process in the "Files Uploaded" box and status toolbar. Remote Update can take from 15 minutes to more than one hour, depending on the transmission speed of the connection (i.e; LAN or modem speed).
- After all files have been sent to the CTX completing this step of the Update process, a message displays to indicate the new system software has been sent to the CTX processor memory successfully (to the CTX670 standby side of flash memory or CTX100 SmartMedia PROGRAM folder).

11. From the message screen that displays after the Remote Program Update files have been sent to the CTX, click OK or Cancel.

    Clicking OK starts the Clear-reboot process and activates the new software immediately.

    Clicking Cancel enables you to activate the software later. To activate the new software later, go to the Program Update screen and click the Clear-reboot button.

Important! *Keep the SmartMedia card installed on the Strata CTX processor to allow the programmed data to be restored automatically following the Remote Update and Clear-reboot process.*

Note After clicking Clear-reboot CTX WinAdmin disconnects from the CTX. Wait 15 minutes to an hour or more before re-connecting CTX WinAdmin to the CTX. The CTX must first initialize the new software and reload the customer database.

CAUTION! The Clear-reboot process drops all calls and takes the Strata CTX out of service from 10 minutes to an hour, depending on the size of the Backup data file.

After Clear-reboot is complete, the Strata CTX runs on the new software version (this is now the active side of flash memory). The Backup data has been restored from the SmartMedia card to the Strata CTX processor memory. On the CTX670 only, the original software version is on the standby side of flash memory.

Do not turn CTX670 power off/on at this time. You must first switch the Active software from "Trial" to "Normal".

If the system power is turned off/on while the Active side of flash memory is in the Trial mode, the original software will switch back to Active and the new software will switch back to Standby. This is to provide an automatic method of switching back to the original software version if the new version is causing problems.

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12. After the CTX restarts and is functioning, re-established communication between CTX WinAdmin and the CTX. Then go to Operation > System Setup and check that the new software is loaded on the Active side of the processor flash RAM.
13. CTX670 only: If the CTX670 system is operating correctly, go to the Program Update screen and switch the Active Software to "Normal" by clicking the green "Set Normal" button.
14. From the Program Menu, click Operation > System Setup screen and click the green "Restart CTX" button or turn the Strata CTX power off/on. CTX WinAdmin will return to the Login screen.

    This is necessary to reset BIPU-M, BIPU-Q, QSIG, ISDN and other advanced features.

CAUTION! Restarting CTX or turning the power off/on will drop all existing calls.

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15. Test the system to verify that the new software is running properly by checking dial tone, making incoming and outgoing calls, internal and external calls and all other peripherals, such as voice mail, etc., are working correctly.

Important!

- *If power is turned off/on or if the Strata CTX is re-started before switching the Active software from "Trial" to "Normal", the CTX670 will switch the old software back to Active.*
- *It is your responsibility to verify the system is working correctly after Remote Update is complete.*

Notes

- If the new version of software is not performing properly, on the CTX670 only, you can activate the old version of software again by initiating a Clear-reboot.
- Clear-reboot swaps the active and standby sides of flash memory. You must always install a SmartMedia card containing a copy of the current back up data before initiating a Clear-reboot or all programmed data will be erased.
- If the CTX100 system is not working properly with the new software, you must reinstall the original software using this Update procedure.

Table 10-1 Program Update Screen Field Descriptions

FIELD	DESCRIPTION
Upload from Folder	Select the Strata CTX type. Possible values: CTX100_R_MXnnn, CTX670_R_MXnnn.
Version Number	Software version number displays. Example: A102MXnnn00. See CTX Software Identification.
Number of Files	Displays number of files that have to be uploaded. This file is static.
Files Uploaded	Displays number of files uploaded. This is a dynamic field and will change during the process.
Operation Completion	View operation status.
Copied blocks	View number of blocks copied. Possible values: 0~65536 (default = 0)
Total Blocks	View total blocks to be updated. Possible values: 0~65536 (default = 0)
Active Side ID	Active Side Number. Possible values: 0 or 1 (default = 0)
Active Side Status	Software status display. Possible values: Normal (default), Trial, Fault, Don't care or Error
Standby Side Status	Standby Backup Type. This field will display only when connected to a CTX670. It will not display when connected to CTX100. Possible values: Normal (default), Trial, Fault, Don't Care or Error

910 Data Backup

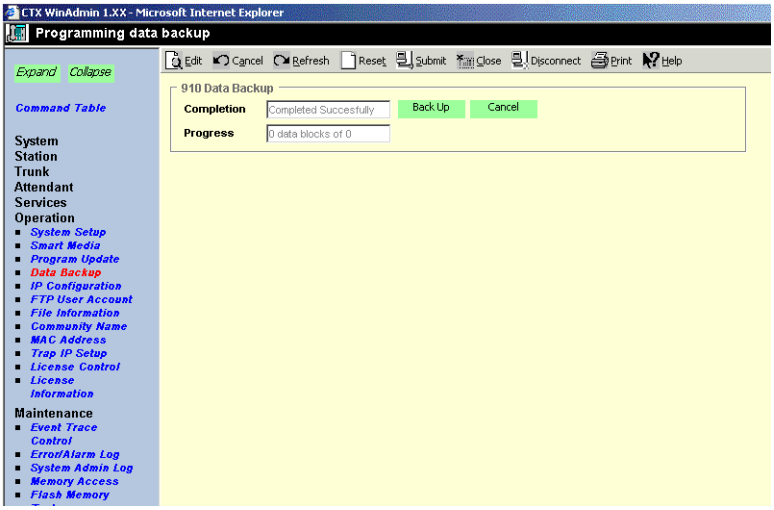
Prerequisite Program: *908 on page 4*

This program enables you to backup programmed data from Strata CTX to a SmartMedia Card.

1. Install the SmartMedia Card into the designated slot of the Strata CTX processor.

Note The SmartMedia card must be formatted by Strata CTX and the "Progdata" folder must be empty (no Default.dat file)

2. From the Program Menu, click Operation > Data Backup.
3. Select the Backup button. Click Cancel to interrupt the selected function.
4. Click Backup.
5. The Progress field displays the progress of the selected function.

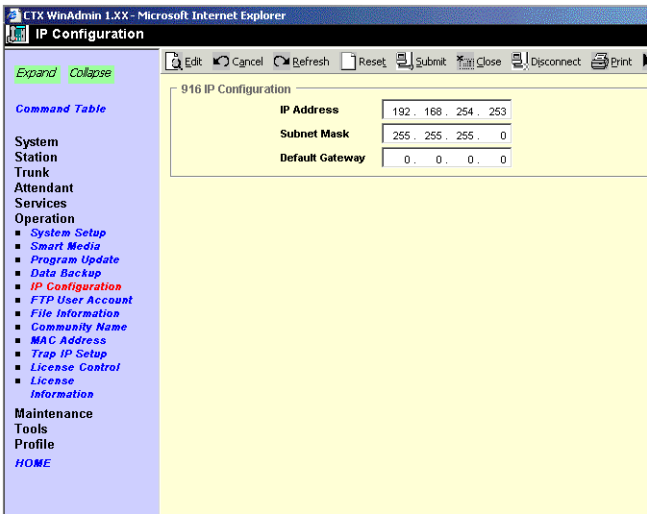


FIELD	DESCRIPTION
Backup	Select one of the following buttons. When performing a Backup, you must use a formatted SmartMedia card. • Backup – Backup Strata CTX data to SmartMedia card. This creates a **Default.dat** file under the **Progdata** folder of the SmartMedia card. **Notes** • **Default.dat** is the name of the file that is created and it contains all Strata CTX programmed data. It is not default data. It is data that is currently programmed in the Strata CTX. • The **Progdata** folder on the SmartMedia card must be empty before trying to backup data. You can use FTP to copy and delete an existing default.dat file. • Cancel – Cancel the Backup/Restore function.
Completion	Current Status of Backup. Possible values: Completed successfully, Not completed.

916 IP Configuration

Prerequisite Program: *None*

This program displays Network Communication IP address configuration. This program applies to the Strata CTX Network (NIC) jack connection only. It does not apply to the CTX maintenance modem. To change TCP/IP settings see "Step 2B: Set Up IP Address of CTX NIC" on page 3-7.



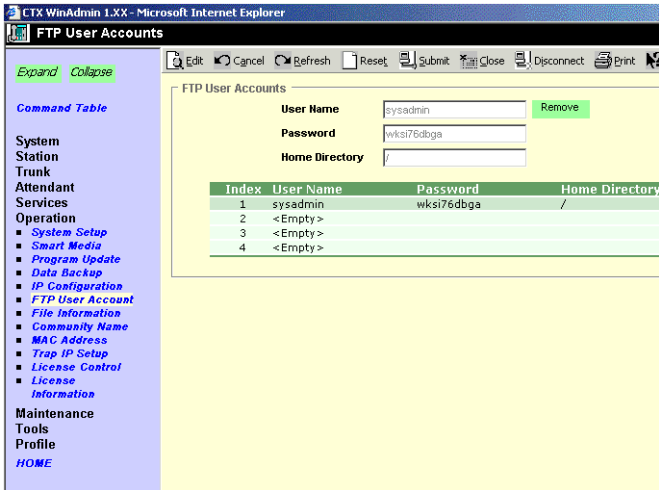
1. From the Program Menu, click Operation > IP Configuration.
2. The following Strata CTX default address displays:
   - IP Address – **a.b.c.d**
     where a.b.c.d = 0~255. This IP Address is for the NIC/Ethernet only. (default = 192.168.254.253).
   - **`192.168.255.254`** is the Strata CTX modem fixed IP address for Dial-up connections. Do not enter this IP address on this screen.
   - Subnet Mask – **e.f.g.h**
     where e.f.g.h = 0~255 (default = 255.255.255.0). Octet "h" in SubNet Mask cannot be the same as octet "d" in the IP address.
   - Default Gateway (default = 0.0.0.0).
3. Select another program from the Program Menu.

FTP User Accounts

Prerequisite Program: *None*

This program establishes up to four FTP users for the built-in Strata CTX FTP server function located on the Strata CTX processor. These Strata CTX FTP accounts allow FTP access to the Strata CTX SmartMedia card. This allows administration of the Strata CTX SmartMedia folders and files.

1. From the Program Menu, click Operation > FTP User Account.
2. Select the FTP Index. Up to four FTP Users can be established.
3. Assign the FTP User's Account Name.
4. Assign the FTP User a Password.
5. Enter the default folder that this FTP account is to access. This should be /0/ which is the root folder of the Strata CTX SmartMedia card.
6. Click Submit.



Note FTP User Accounts are stored in memory on the Strata CTX processor and are intentionally deleted for security when the Strata CTX is powered off/on or initialized.

File Information

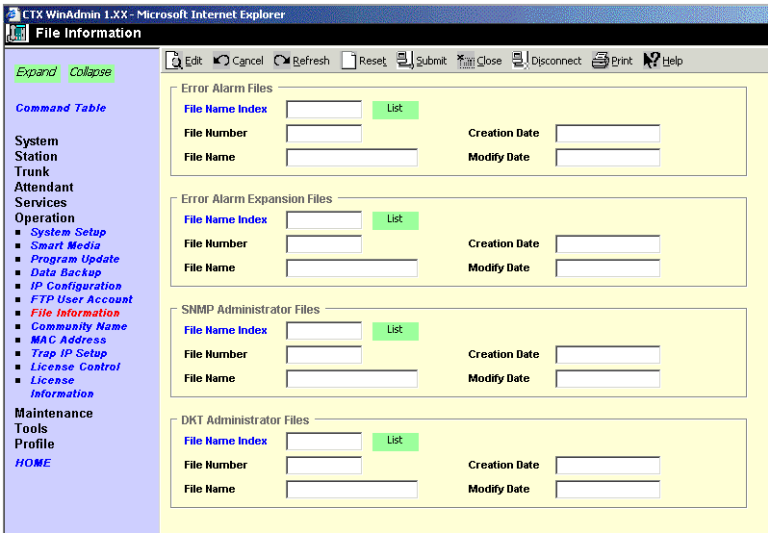
Prerequisite Program: *None*

This program enables you to view lists of Alarm and Administration files stored on the Strata CTX SmartMedia card. See "908 SmartMedia" on page 10-4 for more information about these files.

1. From the Program Menu, click Operation > File Information.
2. Select from one of the following options

   ...or click List to see a summary list of Files already programmed into the system. View the file name index, number, name, and creation and modification dates under each of the categories listed below.

   - Error Alarm Files.
   - Error Alarm Expansion Files.
   - SNMP Administrator Files (CTX WinAdmin log).
   - DKT Administrator Files (Programming telephone log).



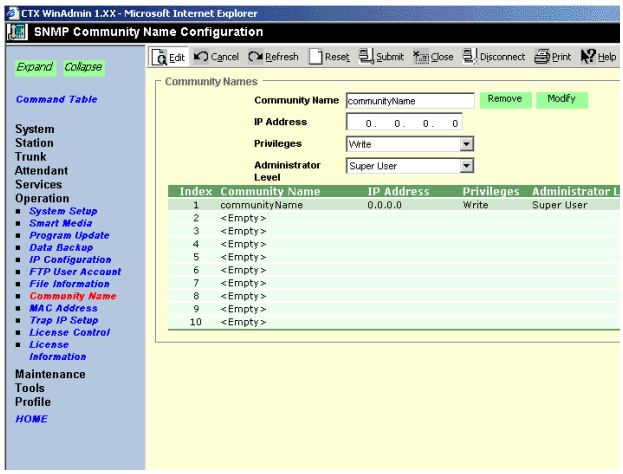
Note For a detailed description on Trace function go to "Trace Function" on page 14-8.

Community Name

Prerequisite Program: *None*

This program enables you to create and set up a Community Name (or passwords) to allow access to specific Strata CTX systems.

1. From the Program Menu, click Operation > Community Name.
2. Select the Index Number to assign to the Community or click one of the following buttons:
   - Remove – highlight an existing community from the table and click this button to remove the selected community from the index.
   - Modify – highlight an existing community from the table and click this button to modify the IP Address, Privileges and Administrator Level settings for this community.
3. Enter the remaining fields.
4. Click Submit.



FIELD	DESCRIPTION
Community Name	Enter the Community name. The Community Name is a password that is stored in the Strata CTX. To communicate with a Strata CTX, the CTX WinAdmin PC must send a legal community name to the CTX when attempting to connect. The default community name stored in the CTX is communityName (case sensitive). The Strata CTX can store up to 10 community names.
IP Address	Enter the IP Address of the Community Name. Each community name is associated with an IP Address. This IP address is stored in the CTX with its associated community name. Possible values: a.b.c.d.; a = 0~255, b = 0~255, c = 0~255, d = 0~255 **Notes** • To allow any CTX WinAdmin PC to connect to the Strata CTX with a particular community name, enter **0.0.0.0** as the IP address for that Community Name. • To allow only a specific CTX WinAdmin PC to connect to the CTX with a particular community name, enter the static IP address of that PC for that community name.
Privileges	Select User Privilege Levels. These privileges are to assign the community name or IP address to an internal Strata CTX level. Possible values: Read (default) or Write **Note** Read – The user cannot modify Strata CTX data regardless of the CTX WinAdmin User level 1~4. Write – The user can modify Strata CTX data according to the CTX WinAdmin user level 1~4.

FIELD	DESCRIPTION
Administrator Level	Select Administrator Level. This level is to assign the community name or IP address to an internal Strata CTX access level. Possible values: Super User (default) or Ordinary User **Notes** • Super User – Strata CTX allows the user access to all Strata CTX commands. Super Users can only view ordinary user community names and their own community name but not other Super User community names. • Ordinary User – Strata CTX allows the user access to all Strata CTX programs except 900 Initialization/Restart and 911 Update. Ordinary users can only view their own community name.

909 MAC Address

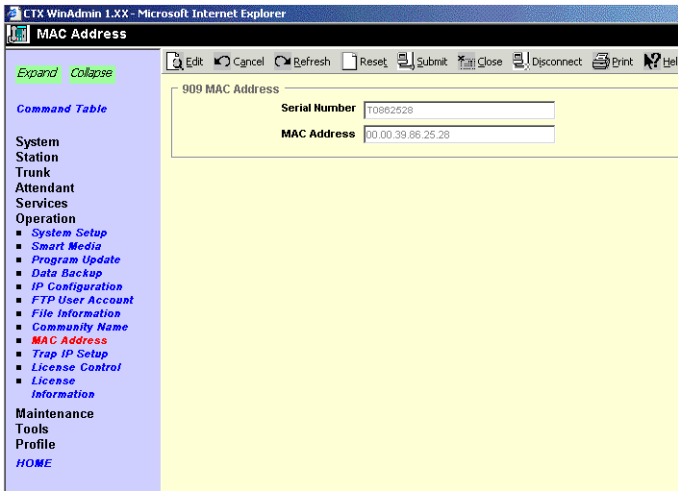
Prerequisite Program: *None*

This program enables you to view the Media Access Control (MAC) Address assigned to your Strata CTX System processor PCB. The MAC address is a unique serial number that is electronically coded in the CTX processor memory at the factory – it cannot be changed. The MAC Address is also printed on the back of the processor card that is used for the CTX670 (Processor Part Number BBCU1A) and CTX100 (Processor Part Number ACTU1A). A MAC Address must be converted to the applicable serial number utilized in Internet FYI for License code generation.

1. From the Program Menu, click Operation > MAC Address.
2. Review your system serial number.

Note The serial number is printed on the invoice and bar code of the product shipment.

3. MAC Address displays as shown to the right. AABBCCDDEEFF = 0~9, A~F (Hexadecimal values).
4. Click another program from the Program Menu.

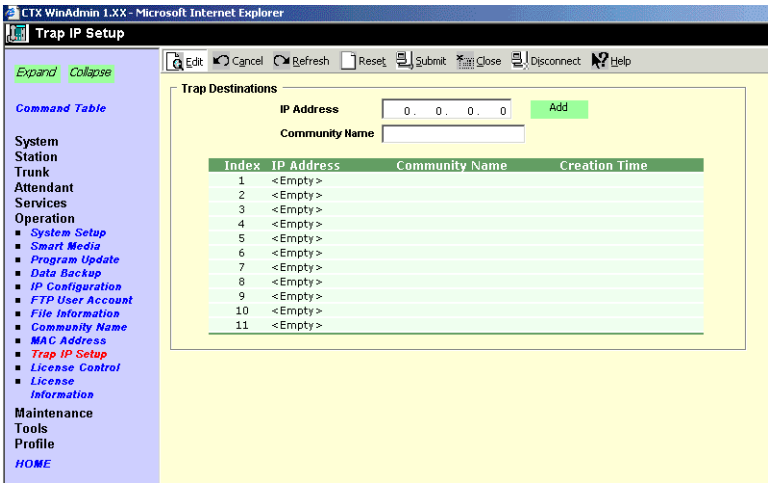


Trap Destinations

Prerequisite Program: *None*

This program enables you to setup Trap IPs.

1. From the Program Menu, click Operation > Trap IP Setup.
2. Select a Trap IP Index number or click Add to add a Trap IP index.
3. Click Submit.



FIELD	DESCRIPTION
Community Name	Enter the Name of the Community. Possible values: Alpha characters (default = no value).
IP Address	Enter the IP Address for remote connection. Possible values: a.b.c.d.; a = 0~255, b = 0~255, c = 0~255, d = 0~255

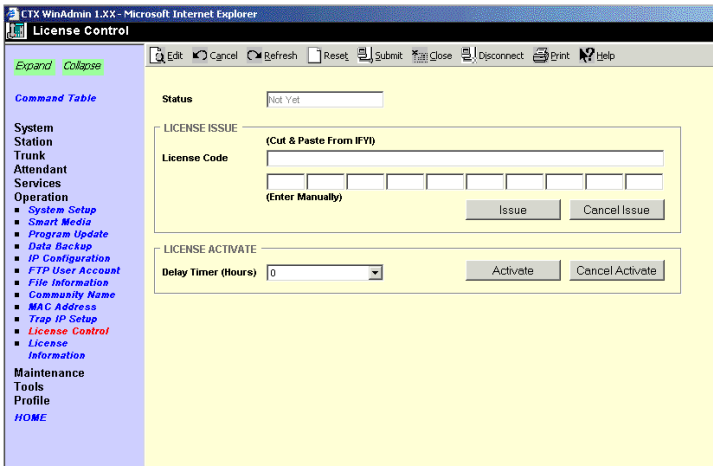
License Control

System Availability: Not available with CTX28
Program Number(s): 913 and 914

The following programs enable you to issue and maintain License Activation settings for CTX WinAdmin users.

Prerequisite Program: *None*

This program enables you to issue new licenses.



1. From the Program Menu, click Operation > License Control.
2. Issue a License by cutting and pasting or manually entering the 60-character string in the License Code text box.

Note If you are not adding the License Code to CTX WinAdmin immediately, copy and save the code onto a disk. Save code in Notepad using Fixedsys font.

3. Click one of the following buttons:
   - Issue – to issue the License Code.
   - Cancel Issue – to cancel the License Code issue.
4. Activate the License entered above by selecting the delay timer.
5. Click one of the following buttons:
   - Activate – for license activation.
   - Cancel Activate – to cancel license activation.

Note Cancel Issue (step 3) and Cancel Activate buttons work only in Standby mode.

License Issue

Prerequisite Program: *None*

This program enables System Administrators to issue Licenses for CTX WinAdmin users.

FIELD	DESCRIPTION
Status	Status applies to both License issue and License Activate. Displays Licensing Status. Possible values: Not yet, Issue Stand by, Issue Finished, Cancel Issue, Activate Stand by, Activate Finished or Cancel Activate
License Code	Cut and paste the License code text string or manually enter the License Code (six characters per box). Possible values: 60 characters. **Note** The License Code will have to be generated from Toshiba's FYI website (http://fyi.tsd.toshiba.com). After obtaining the License code from FYI save it as a Text file. Cut and paste the License code obtained from Toshiba's FYI website. The License Code is made up of the MAC Address and the number of ports. The License Code that is generated for a particular MAC Address is only good for the processor that contains that MAC Address.

License Activate

Prerequisite Program: *913 above*

This program enables activation of CTX WinAdmin licenses issued in Program 913.

FIELD	DESCRIPTION
Delay Timer	Select Activation Delay Timer in hours. Possible values: 0~24 (default = 0) **Notes** • Enter **0** to issue or activate the license immediately or 1~24 to set the automatic delay activation feature, where 1 = 1 hour delay; 2 = 2 hour delay, etc. • After the license is activated, use the License Information screen below to check that all Ports and features have been activated properly.

License Information

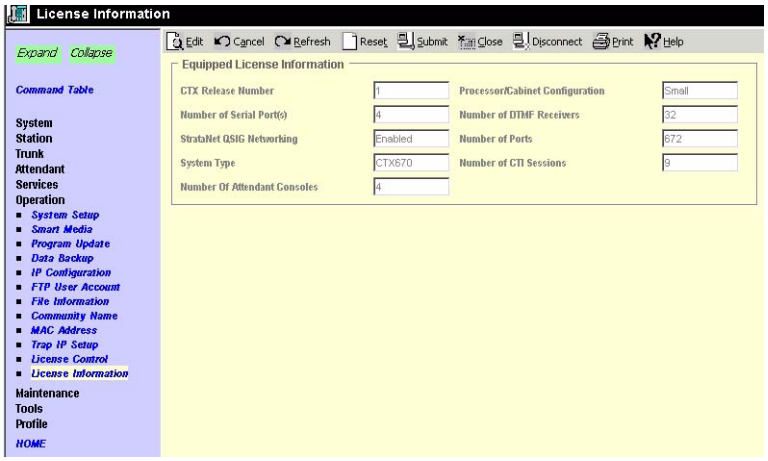
System Availability: Not available with CTX28

The following programs enable you to set up Licensing details for CTX WinAdmin users.

Prerequisite Program: *None*

1. From the Program Menu, click Operation > License Information.
2. View Licensing details for this Strata CTX account.

   This view is read-only information.



FIELD	DESCRIPTION
CTX Release Number	This is the Basic Release Number of CTX software. To view the Active Software Version, go to Operations/System Setup.
Number of Serial Ports	This identifies the number of serial ports licensed on the BSIS. One license is needed for each SMDR and SMDI device connected to BSIS. (Programs 803 and 804 assigns BSIS ports).
StrataNet QSIG Networking	This license must be enabled on each CTX in a QSIG Network.
System Type	This identifies the type of CTX system to which CTX WinAdmin is currently connected.

FIELD	DESCRIPTION
Number Of Attendant Consoles	This identifies the number of Attendant Consoles licensed. One license is required for each Attendant Console. A CTI Session License is also required for each Attendant Console (see Number of CTI Sessions).
Processor\Cabinet Configuration	This identifies the CTX Processor hardware size Small: ACTU, supports CTX100 Base + Expansion cabinet and CTX670. ACTU2A-S, supports the CTX100-S. BBCU\BECU without BBMS\BEXS, supports CTX670 Base + one Expansion cabinet. Large CTX670: BBCU\BECU with BBMS\BEXS, supports CTX670 Base + six Expansion cabinets
Number Of DTMF Receivers	This identifies the number of DTMF receivers licensed. The ARCS Subassembly is required on the CTX100 processor, no additional hardware is required for CTX670.
Number of Ports	This identifies the number of Line circuits, Station circuits and ISDN B channels licensed. Station circuits use a license only when a PDN, DDS, BATI or Door Phone is assigned to the circuit. Analog and T1 line circuits use a license only when a line number is assigned to the circuit or B-channel. ISDN B-Channels use a license when assigned in PRI and BRI assignments.
Number of CTI Sessions	This identifies the number of licensed CTI sessions. Each Attendant Console, the ACD or OAISYS Sever and each third party CTI application requires one CTI session license. (Command 803 assigns CTI sessions).

Maintenance 11

This chapter discusses CTX WinAdmin's maintenance functions.

Quality Of Service

Note This program is not available at this time.

This program enables you to collect information measurement of the call via IP Telephone by a specific IP Station.

There are five call records can be collected by each request.

➤ From the Program Menu, click Maintenance > Quality of Service. The Quality of Service screen displays (shown right)



Trace Function

To analyze Strata CTX problems efficiently, Toshiba needs to get the event trace data and ISDN trace data. These data sets enable analysis of the problems Strata CTX may experience. It is helpful for troubleshooting problems that are difficult to duplicate.

Please contact Toshiba Technical Support to coordinate the running of the procedures that appear in this section. Technical Support will walk you through the required steps.

Trace Data

By running traces when tests are conducted on your Strata CTX system, you ensure that data are being kept in the event your system encounters a problem. This data can be sent to Toshiba Tech Support for analysis and troubleshooting.

Strata CTX can collect the following trace data:

- Error Log (including crash dump)
- Event Trace
- ISDN L3 trace

Event traces can be performed by running Program 903 "Event Trace Control" on page 11-3, through Program 908 "Format/Unmount SmartMedia" on page 13-105.

Error Log

When Strata CTX detects an error, the information is stored automatically without executing a program. However, if the system locks up, you must restart the system to save the data to SmartMedia.

Start/Stop/Store Trace Data

Whenever you execute a test, start recording the trace data by enabling the Event Trace Control (Program 903). See page 11-3. If you use ISDN extensions or trunks, please record ISDN trace data by starting "904 ISDN Trace Location" on page 11-4.

➤ **To test and retrieve trace data**

Note This procedure requires use of optional SmartMedia reading hardware and software or FTP management with a personal computer. See "908 SmartMedia" on page 10-4.

1. Start your test. If a problem occurs, stop the trace (please refer to the Event Trace Control and 904 ISDN Trace Location program instructions in this manual).
2. Verify the results by running the same test(s) again. If the problem can be duplicated the information contained in the trace data becomes more useful.
3. Unmount data to SmartMedia using "Format/Unmount SmartMedia" on page 13-105.
4. Remove the SmartMedia card from Strata CTX. Use caution. The SmartMedia device can be damaged if removed incorrectly.
5. Insert the SmartMedia card into your SmartMedia reader.
6. Locate the Evnttrce folder and save all files ending with .sdt and .mdt to your PCs hard drive.
7. Locate the Crash Dump in the errlog folder. File extensions are .exp and .mnl and append to your hard drive.
8. E-mail the files to your Toshiba support person.

If you start recording trace data after a problem occurs, the previous data is overwritten. Make sure the required data files are stored to SmartMedia and saved to disk prior to starting another trace.

The following table shows you how much SmartMedia card memory is allocated to each directory. System traffic load will determine how much data is stored in the Evnttrace log.

Table 11-1 SmartMedia card file allocation size in Mega Bytes

SmartMedia Type	16MB	32MB	64MB	128MB
Errlog	2MB	4MB	8MB	24MB
Evnttrce	4MB	12MB	32MB	64MB
Admlog	2MB	8MB	16MB	32MB
Progdata	8MB	8MB	8MB	8MB
Program	0MB	0MB	0MB	0MB
Total	16MB	32MB	64MB	128MB

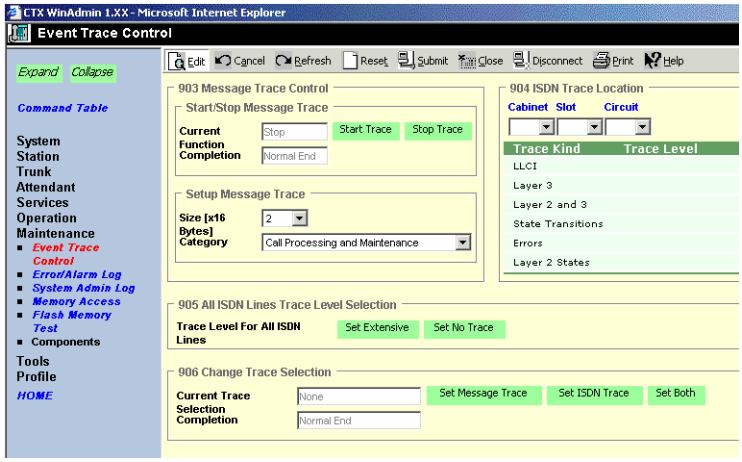
Event Trace Control

Program Number(s): 903, 904, 905 and 906

Prerequisite Program: *None*

This program enables you to trace message events occurring in Strata CTX. Program Numbers 903, 904, 905 and 906 are consolidated in one CTX WinAdmin screen (shown below).

1. Install the SmartMedia Card into the designated slot of the Strata CTX processor.
2. From the Program Menu, click Maintenance > Event Trace Control.
3. Enter Program 903 data.
4. Enter Program 904 data
5. Enter Program 905 data.
6. Enter Program 906 data.
7. Trace data displays in the dialog boxes.



903 Start/Stop Trace

FIELD	DESCRIPTION
Start/Stop Trace	Click in the appropriate button to Start or Stop Message Trace. Start Trace indicates that the system's trace data collection process has begun. Stop indicates the trace data collection process is terminated Before removing the SmartMedia card run Program 908. See "908 SmartMedia" on page 10-4. Possible values: Start Trace or Stop Trace (default)
Size	Set the trace data size. Toshiba recommends leaving this parameter at the default setting which provides approximately 15 minutes of trace data. Possible values: 1~256 bytes with 1 unit = 16 bytes (default = 2)
Category	Select Trace data type to be stored. Possible values: Call Processing, Maintenance, and Call Processing and Maintenance (default)

904 ISDN Trace Location

ISDN protocol event trace collection conditions are established using this program.

Note This trace can be performed on BSU and PTU cards only.

FIELD	DESCRIPTION
Cabinet/Slot/Port	Enter the Equipment Location to be traced (xxyyzz). Possible values: xx = Cabinet 01~07; yy = Slot 01~10; zz = Circuit 01~04
Trace Kind	Select the trace collection level. Possible values: LLCI Trace, Layer 2, Layer 2 & Layer 3 Trace, State Transitions Trace, ERRORS Trace, Layer 2 Trace.
Trace Level	Select the extent to which the trace collects information. Possible values: No Trace (default), Brief or Extensive

905 All ISDN Trunk Trace Selection

FIELD	DESCRIPTION
Trace all ISDN Trunks	Select whether to trace all ISDN PRI and BRI trunks. Possible values: On (default) or Off

906 Change Trace Side

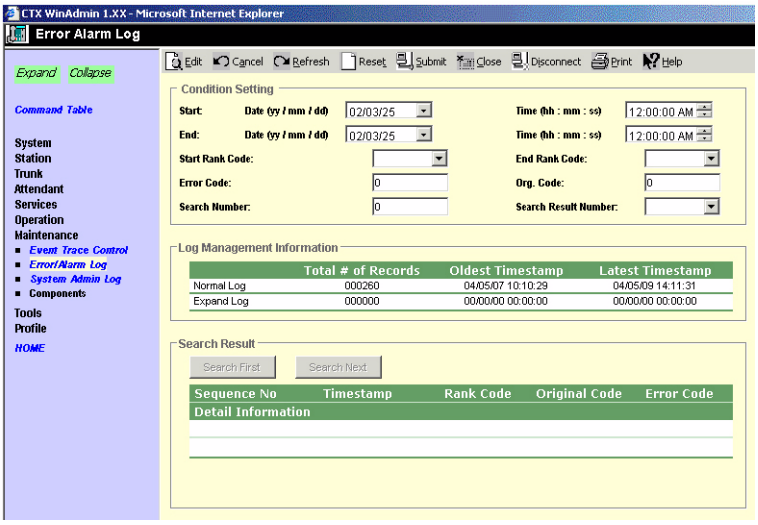
FIELD	DESCRIPTION
Trace side	Select Trace side change. Possible values: Message Trace (default), ISDN Trace or Both

Error Alarm Log

Prerequisite Program: *None*

This program enables you to trace errors and alarms in Strata CTX.

1. Install the SmartMedia Card into the designated slot of the Strata CTX processor.
2. From the Program Menu, click Operation > Maintenance > Error/ Alarm Logs.
3. Click Submit.

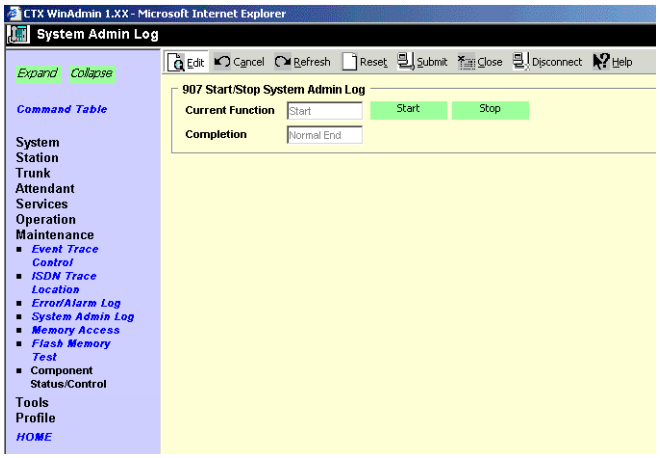


FIELD	DESCRIPTION
Start Date	Enter the date (YYMMDD) and time (hhmmss) on which to start the log. Possible values: YY = Year, MM = Month and DD = day (default = no value) hh = Hour, mm = Minutes and ss = seconds (default = no value)
End Date	Enter the date and time on which to end the log. Possible values: YY = Year, MM = Month and DD = day (default = no value) hh = Hour, mm = Minutes and ss = seconds (default = no value)
Start Rank Code	Prioritize by selecting a Rank Code. Possible values: 1~99 (default = no value)
End Rank Code	Organize by selecting an End Rank Code. Possible values: 1~99 (default = no value)
Error Code	This field logs the number of error codes. Possible values: 0~9999999999 (default = 0)
Org. Code	This field reflects the Error origination code. Possible values: 1~10 (default = no value)
Search Number	Displays the search sequence. Possible values: 1~1000 (default = 0)
Search Result Number	This field displays the Search result number. Possible values: 1 or 2 (default = no value)
Normal Log	This field displays the log information.
Expand Log	This field displays details of the logged data.
Search Result	Search results are displayed in this field.

907 System Admin Log

Prerequisite Program: *None*

Use this command to Start/Stop the System Admin Log. When running this program, make sure to insert the SmartMedia card into the appropriate slot.



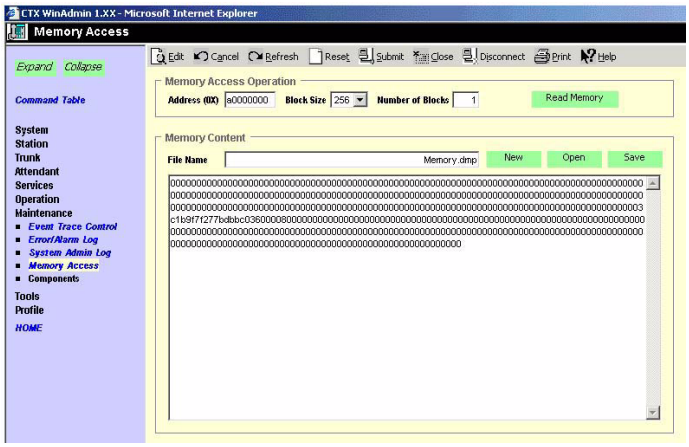
1. Insert the SmartMedia Card into the designated slot of the Strata CTX processor.
2. From the Program Menu, click Maintenance > System Admin Log.
3. Click to Start or Stop the System Admin Log.
4. Click the Checking System Admin Log Completion Status button to view progress of this operation.

Note When CTX670 stops logging data, it automatically sends data to the SmartMedia card. Run the Unmount command (Program 908) before removing the SmartMedia card to ensure complete data transfer.

Memory Access Operation

Prerequisite Program: *None*

This program enables you to manipulate memory settings.



1. From the Program Menu, click Maintenance > Memory Access.
2. Click the Read Memory or Write Memory button to access memory.
3. Enter the memory Address to be accessed.
4. Select size of memory to access (1~256, default = no value).
5. Click one of the following buttons:
   - New – click this button to create a new Memory Access filename.
   - Open – click this button to open an existing Memory Access file.
6. Click Submit.
7. Click Save to save Memory Access file.

Note The Content box displays the contents of the memory address selected.

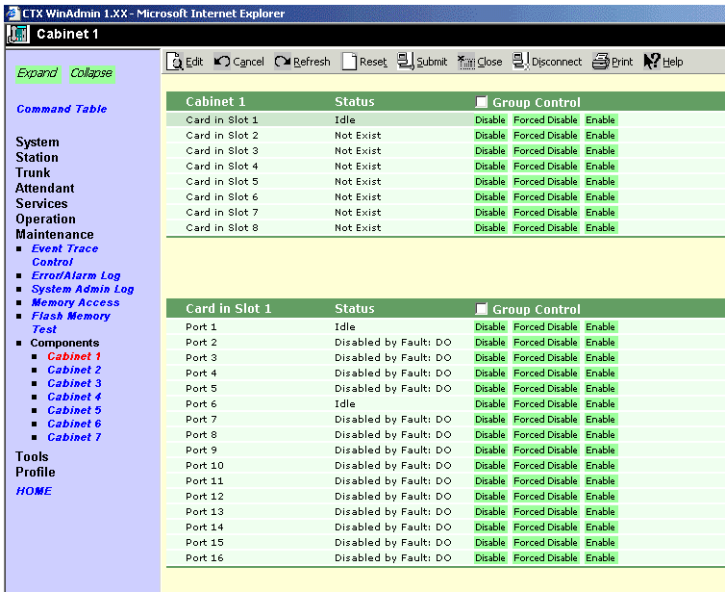
Components

Prerequisite Program: *None*

The following programs enable you to monitor the status of individual Strata CTX slots and ports.

This is the main system slot/port monitor. The Components screen allows each cabinet card slot and each card slot port to be monitored, enabled or disabled. The card slot and port failure codes are provided in the Table below.

➤ From the Program Menu, click Maintenance > Components > Cabinets 1~7.



Auto Fault Detection/Disable

When an error occurs in hardware resources used for a station or line, the Strata CTX system will make them busy. In this case the Strata CTX system will automatically disable the card slot or card port (circuit or channel). The Component Status/Control screen will indicate the card or port failure status with "Disabled by Fault xx" where xx is the status code in the table below. When a digital telephone is disabled the telephone's LCD will display "Make Busy". The station or line PCB can be disabled temporarily to perform maintenance or parts replacements as well.

Note The port or slot to which your programming phone is connected cannot be set to Make Busy.

The table on the next page states the possible error codes that can be displayed in the *Status* column of the Main Components screen shown above.

Table 11-2Status Column Error Codes

Component Type	Status Code	Description
Expansion Cabinet	CP	Cabinet power failure
Line/Station/Option PCB	CR	Card PCB set in Program 100, but not installed
Port (ISDN)	IL	ISDN loss of signal
Port (ISDN)	IF	ISDN frame sync failure
Port (ISDN)	IA	ISDN AIS
Port (ISDN-U)	UM	ISDN-U maintenance mode
Port (ISDN-U)	UE	ISDN-U Eoc maintenance mode
Port (ISDN-U)	UA	ISDN-U Act
Port (ISDN-U)	UB	ISDN-U aib
Port (T1)	TY	T1 Yellow alarm
Port (T1)	TB	T1 Blue alarm
Port (T1)	TF	T1 Frame sync. failure
Port (DKT)	DO	Digital Telephone not connected.

Manual Disable/Enable

The components screen enables you to enable or disable any card slot or port.

- When disabled by Disable or Forced Disable, line or stations are made busy and the status will display “disable by cmd” on the screen. On the telephone LCD, it will display “Make busy.”
  - *Disable* will disable an idle port or slot and cause ports/slots that are in use to go to Pending Disable – which go to Make Busy after they go idle. Disable waits till a call clears to disable it.
  - *Forced Disable* will disable an idle port or a port that is in-use (the call will be disconnected).
- *Enable* – removes the Make Busy condition if the slot or port is manually disabled.

Note You cannot enable a slot or port if the system automatically disabled it. The status on the screen will display “Disabled by Fault.”

Tools and Profile 12

This chapter discusses Tools and Profile to customize and manage your Strata CTX System.

Tools

The download tool provided in CTX WinAdmin enables you to download databases stored in system memory into a CTX WinAdmin folder named “Download”. These downloaded databases can then be viewed in your PC to check for errors or other anomalies. The downloaded commands are saved as files on the C: drive or on whichever drive Strata CTX WinAdmin is installed, in this path: CTX\WinAdmin\ctmc\ctm c_Local\DownLoad. They may be opened and viewed using Excel, Word or some other application.

Download

Prerequisite Program: *None*



1. From the Program Menu, click Tools > Download.
2. A list of all CTX WinAdmin programs displays as shown to the right.
3. Click on the program to be downloaded. Selected programs are highlighted in green and the word “Selected” displays to the right as shown in the figure to the right. The following buttons are also available:
   - Clear All – click this button to clear all previously selected files.
   - Select All – click this button to select all programs for downloading.
4. Click the Start Downloading button in the top right corner of the display.
5. The system notifies you when the download is complete.

Profile

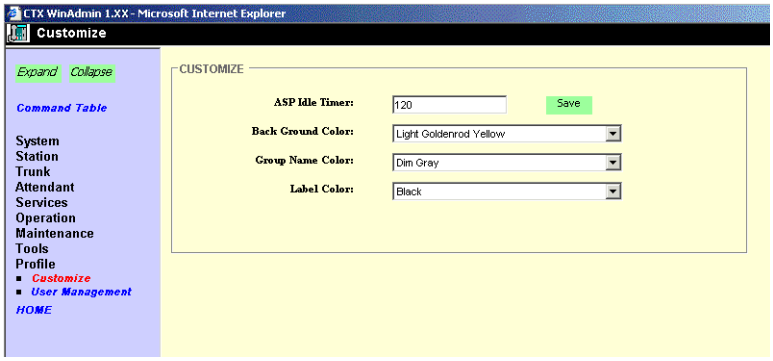
The Programs included in the Profile menu enables you to change GUI display settings in CTX WinAdmin and change the system IP Address.

Customize

Prerequisite Program: *None*

Customize the look and feel of CTX WinAdmin using this program.

1. From the Program Menu, click Profile > Customize.
2. Select your customized settings.
3. Click Save Changes.



FIELD	DESCRIPTION
ASP Idle Time	CTX WinAdmin is designed to automatically log off any inactive users after the time set in this field. Possible values: Maximum = 999 minutes (Default = 120 minutes) **Note** Set the ASP Idle time to 999 when using long CTX WinAdmin sessions in a secure environment.
Back Ground Color	Select the background Color from the scroll down menu. Possible values: Aqua, Yellow, Sky Blue, Light Sky Blue, Light Blue, Medium Spring Green, Light Green, Powder Blue, Light Goldenrod Yellow (default), Misty Rose, Lavender.
Group Name Color	Select the color in which to display the Group Name (see figure above). Possible values: Black, White, Dim Grey (default), Red, Dark Red, Blue, Indigo, Navy, Purple, Maroon, Teal, Fuchsin, Dark Green.
Label Color	Select the color with which to display the field name text. Possible values: Black (default), White, Dim Grey, Red, Dark Red, Blue, Indigo, Navy, Purple, Maroon, Teal, Fuchsin, Dark Green.

User Management

For information on User Management, refer to Chapter 2 "User Management" on page 3-19.

Strata® CTX

Digital Business Telephone Systems

Part 3: Telephone Button Programming

Telephone Button Programming 13

This chapter discusses the button programming interface provided with Strata CTX. This chapter also includes Button Programming examples, procedures, and tables to program 100~800 series programs. This chapter has tables that list programs sequentially by program number. Tables found below a program table contain required information for the above program.

Important! *If you do not program button sequences correctly, the DKT LCD will display an error code. Refer to Appendix B – System Error Codes.*

Record Sheet Overview

Fill out the Appendix D – Record Sheets (see Figure 13-1 as an example), then enter this data using a 20-button LCD digital (DKT) telephone.

Record Sheet
Provides a list of available features. The sheet is used to record the assignment of features or the operation of each program. Each sheet provides space to record data. This data will be referred to when programming the system.

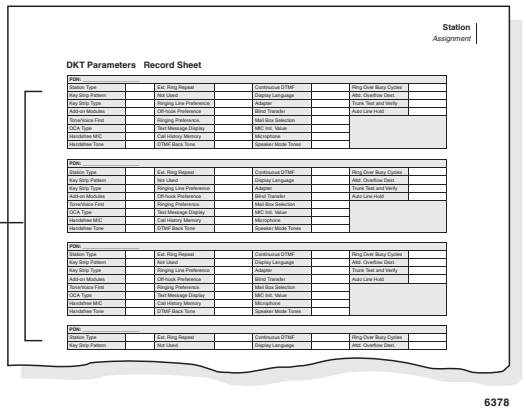


Figure 13-1 System Record Sheet Sample

Telephone Button Overview

Strata CTX programmers can access programming mode from any DKT LCD telephone, except DKTs connected to an RDSU. A 20-button telephone (shown below) is required to ensure full access to all programming parameters. The telephone button programming interface enables limited programming capabilities over ranges of stations or trunks.

Note Telephones connected to an RDSU cannot be used to program Strata CTX.

Figure 13-2 shows the telephone button pad for the DKT3020-series digital telephone or IPT1020-SD.

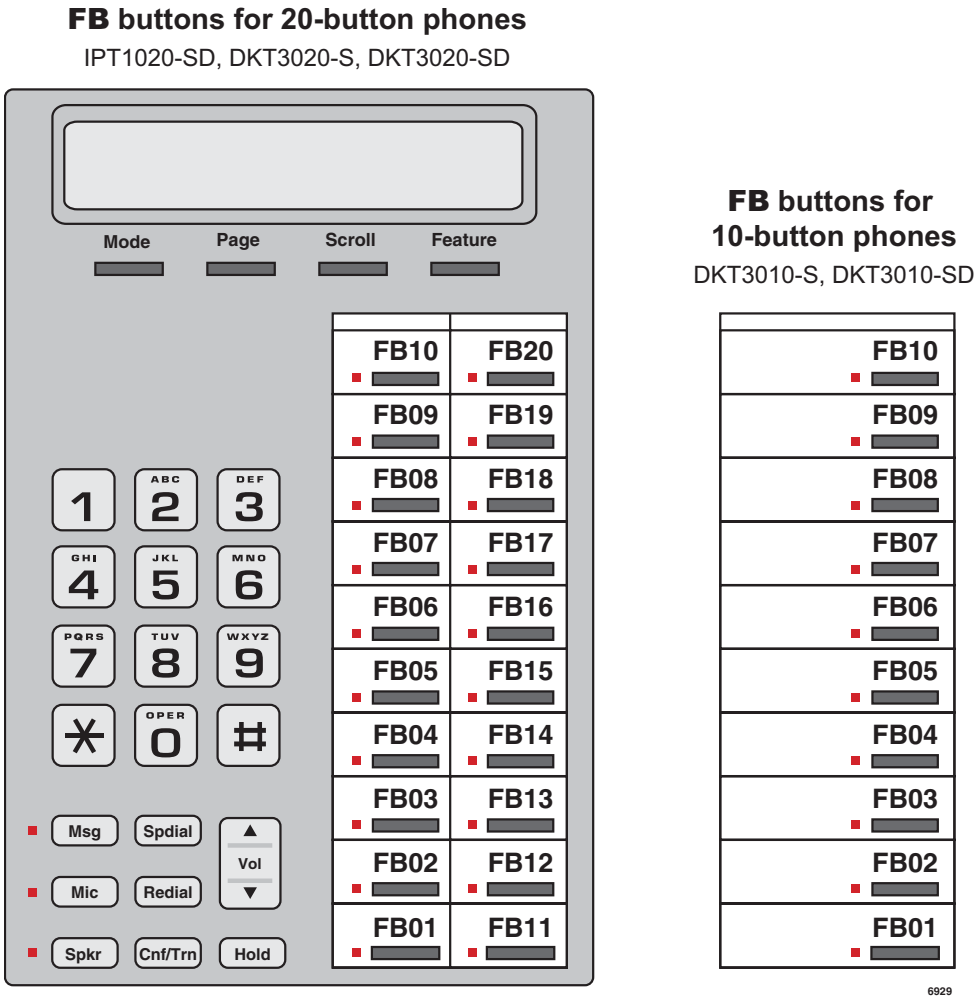


Figure 13-2 DKT3010/3020 and IPT1020-SD Button Telephones

Telephone Button Commands

1. Use the following buttons to execute the commands:
   - **Hold** – Enter.
   - **Page/Scroll** – Scroll up or down.
   - **Spkr** – This delimiter moves cursors between sub-parameter values.
   - **Vol▲** – Escape. **Vol▲** displays as **&** on the LCD. Press **Vol▲** to program **#** or ***** in dialing sequences.
   - **Vol▼** – Back space for line editing.
   - **# # Hold** – Cancel.
   - ***** – Use this button between values to specify a range of objects to be programmed (e.g., 1001*1005 enables programming of stations 1001 through 1005).
   - ****** – Use this button between values to specify a set of objects to be programmed (e.g., 1001**1005**1012 enables programming of stations 1001, 1005 and 1012).
   - Off-hook – lift and replace the handset to immediately exit programming mode.
2. Keep the following in mind as you maneuver through Strata CTX programs.
   - Default and/or current settings are displayed on the telephone LCD with an asterisk.
   - Some Strata CTX Programs have more than 20 programmable parameters. To toggle from parameters **FB01~FB20** and **FB21~FB40** press the **Scroll** or **Page** button after entering Program Mode.
   - To view parameter options on your telephone LCD, press the desired **FB** button and press the **Scroll** or **Page** button.
   - Each parameter shows a number to the left (e.g., **2:DISABLE**). Program the desired parameter by pressing the number button (in this example **2**) that corresponds to your desired parameter.
   - To enter data, use the number keys.
   - To submit your program entry press **Hold**. To confirm a submitted entry, press **Hold** again.
   - To exit a program press **# # Hold**.
   - To enter the **#** character in your data string press the **Vol▲** and the **#** button simultaneously. An **&** sign appears in your LCD. Press the **#** button, then enter the remaining data.
   - If you get an error code, press **Hold** (twice) to continue programming. See "System Error Codes" on page B-1 for error code details.

Programming Parameters

Programs can have between one and 40 programmable parameters, each represented by the **FBnn** buttons. The LEDs light up for each **FBnn** button that features a programmable parameter. Each parameter is programmed by entering values into the LCD from the telephone button pad.

1. At the SELECT PARAM prompt, press the appropriate **FBnn** button.
2. Enter the appropriate value from the telephone button pad using the Parameter Fields tables supplied with each program.
3. Press **Hold** to submit.
4. Press another **FBnn** button to program more parameters

   ...or press **Hold** again to program.

Programming Sub-parameters

Some commands enable programming of Sub-parameters to further refine Strata CTX settings. Internet or Network IP addresses are entered using sub-parameter data. IP addresses are displayed as four three-digit values, or Octets, separated by "periods" (e.g., **192.168.255.253**). Your programming telephone's LCD is only capable of displaying the IP information three digits, or one Octet, at a time.

For example, selecting **FB01** in Program 916 displays the first Octet, **192**, on the LCD. To view or change the next Octet (in this example **168**) in the IP Address, press the **Spkr** button. Pressing **Spkr** again, displays the following Octet (in this example **255**).

The following is an example from Program 200, **FB04**. **FB04** is broken down into three sub-parameters as follows COS DAY1, COS DAY2 and COS NIGHT.

1. At the **SELECT PARAM** prompt, press **FB04**.
2. At the **COS DAY1=** prompt, enter a value from 1~32.
3. Press **Spkr**.
4. At the **COS DAY2=** prompt, enter a value from 1~32.
5. Press **Spkr**.
6. At the **COS NIGHT=** prompt, enter a value from 1~32.
7. Press **Hold** to submit.
8. Press another **FBnn** button to program more parameters

   ...or press **Hold** again to program a new DN.

Note To change one of the sub-parameters, you must proceed through all three sub-parameters before pressing **Hold**. For example, to change the value of COS DAY1, you must change the COS DAY1 value, then press **Spkr** twice, and finally, press **Hold**.

Button Programming Examples

The following examples show you how to use the Strata CTX button programming interface. Toshiba highly recommends the use of Strata CTX WinAdmin to meet the demands of your telephone system programming.

Suppose a customer needed to assign a DKT Station to a PDN. Based on the "Identify Program Sequences" on page 1-15, you can immediately identify the Program numbers and sequence required to complete this basic task. Login to the Button Programming Mode using the directions on Page -7 and follow the steps below.

Program 100

Reference "Program 100" on page 11. For this example, an eight station BDKU PCB is assigned to Slot 01/Cabinet 01 (xxyy).

1. Enter programming mode. See "Step 1: Enter Program Mode on page 13-7."
2. At the **PROG=** prompt enter **100** and press **Hold**.
3. At the **EQUIP=** prompt enter **0101** (xxyy) and press **Hold**.

   "Program 100" on page 11 tells us that a three digit PCB code (nnn) is required. From the table, "PCB Codes" on page 13-12, we can derive that the PCB code for a BDKU is "017." Furthermore, the "Program 100" table shows us the button sequence required for programming a BDKU in the fourth row of the table.
4. Press **FB01**. Enter **017** and press **Hold**.

   "Program 100" on page 11 also informs us that an "n" value is required to complete the PCB assignment. These "n" values are listed in the column titled "Value(s)." When you look in the fourth row of the "Value(s)" column there are five "n" value choices. For this example, select "2. 8 DKT no OCA."
5. Press **FB03**. Enter **2** and press **Hold** twice.
6. Press **##Hold** to return to the **PROG=** prompt.

Program 200

Reference "200 Series Programs" on page 13-28. A DKT assignment (DN = 1000) is made to Circuit 01, Slot 01, and Cabinet 01 for the BDKU card installed in Step 1 above.

1. Enter programming mode. See "Step 1: Enter Program Mode on page 13-7."
2. At the **PROG=** prompt enter **200** and press **Hold**.
3. At the **DN=** prompt enter **1000** (n) and press **Hold**.
4. Press **FB01**. At the **EQUIP=** prompt enter **010101** (xxyyzz) and press **Hold**.
5. Press **FB02**. Press **1** to select a DKT and press **Hold**.
6. Press **FB03**. Press **1** to select Extension as the Circuit Type and press **Hold**.

   For this example, only the above **FB**s need to be assigned. Press **Hold** again before proceeding to the next step.
7. Press **##Hold** to return to the **PROG=** prompt.

Note Additional assignments can be made to fine tune this DKT assignment. If specific assignments are not made, the system automatically assigns the default value.

Program 204

Reference "Program 204" on page 34 and review Summary column field descriptions. This program enables you to setup the DKT parameters.

1. Enter programming mode. See "Step 1: Enter Program Mode on page 13-7."
2. At the **PROG=** prompt enter **204** and press **Hold**.
3. At the **DN=** prompt enter **1000** (n) and press **Hold**.
4. Press **FB01**. Press **1** to select a Extension and press **Hold**.
5. Press **FB02**. Press **3** to select Pattern 3 for this DKT and press **Hold**.

   For this example, we are using a 20-button DKT. There are three button patterns to choose from for each type of digital telephone.

   Only the above **FB**s need to be assigned. Press **Hold** again before proceeding to the next step.
6. Press **##Hold** to return to the **PROG=** prompt.

Note Additional assignments can be made to fine tune DKT parameters. See Summary column for field descriptions and default values. If specific assignments are not made, the system automatically assigns the default value.

Program 205

Reference "Program 205" on page 39 and "Feature/Button Code Parameter Assignments" on page 13-41. This program assigns features and parameters to the FB buttons on your DKT telephone. In this example, the **FB10** button on your DKT will be programmed to act as a GCO button.

1. Enter programming mode. See "Step 1: Enter Program Mode on page 13-7."
2. At the **PROG=** prompt enter **205** and press **Hold**.
3. At the **DN=** prompt enter **1000** (n) and press **Hold**.
4. Press **FB10**. Enter **130** to assign a GCO and press **Spkr**.

   To select the n1, n2, n3, n4 and n5 values required in "Program 205" on page 39, see "GCO" in the table titled "Feature/Button Code Parameter Assignments" on page 13-41.
5. Enter **1** to assign a GCO number and press **Spkr**.
6. Enter **1** to assign a GCO index and press **Spkr**.
7. Enter **2** to enable immediate ringing for this GCO and press **Spkr**.
8. Enter **1** to assign a soft ring tone to this GCO and press **Spkr**.
9. Enter **900** to assign an Owner DN to this GCO number and press **Hold** twice.
10. Press **##Hold** to return to the **PROG=** prompt.

Note Press **##Hold** again to exit Button Programming Mode.

Program 208

Reference "Program 208" on page 46. This program assigns timing parameters to Primary DNs.

1. Enter programming mode. See "Step 1: Enter Program Mode on page 13-7."
2. At the **PROG=** prompt enter **208** and press **Hold**.
3. At the **DN=** prompt enter **1000** (n) and press **Hold**.
4. Press **FB01**. Press **10** to set the number of ABR attempts and press **Hold**.

5. Press **FB02**. Press **60** to set ABR to attempt redials in 60 second increments and press **Hold**.
6. Press **FB03**. Press **20** to set the ABR Recall Timer and press **Hold**.
7. Press **FB04**. Press **60** to set the Hold Recall Timer and press **Hold**.
8. Press **FB05**. Press **15** to set the First Interdigit Timer and press **Hold**.
9. Press **FB06**. Press **5** to set the Second Interdigit Timer and press **Hold**.
10. Press **FB07**. Press **32** to set the Ring Transfer No Answer Timer and press **Hold** twice.
11. Press **##Hold** to return to the **PROG=** prompt.

Now that you are more familiar with the Strata CTX button programming interface, begin programming your Strata CTX system starting with Step 1 below.

Button Programming Procedure

Step 1: Enter Program Mode

Enter the button sequence displayed below to enter the CTX670 programming interface from a DKT station.

1. Log in by pressing: **Hold *##*#1*2*3***.
2. At the **PASSWORD=** prompt, enter your password. Default is **0000**.
3. Press **Hold**.

Step 2: Enter Program Number

1. At the **PROG=** prompt enter the three digit program code (e.g., **200**) and press **Hold**.
2. Programmable parameters are identified by the FB LEDs that are illuminated on the DKT. Go to "Choose a Button Sequence" on page 13-7 Press on the related **FBnn** button to program a parameter.

   ...or if there are no illuminated FB LEDs, continue to Step 3.

Step 3: Enter FB00 Parameters

FB00 parameters designate a specific station, trunk, or circuit to be programmed. The **FB00** prompt (e.g., **EQUIP=**, **DN=**, **INDEX=**, etc.) appears automatically in the LCD screen.

1. At the **FB00** prompt, enter the desired value using the telephone number pad.
2. Press **Hold**.

Step 4: Choose a Button Sequence

➤ Select the button sequences based on the programs required for programming the Strata CTX from the Telephone. For 100~900 series programs, refer to pages 11~97.

Program Listings

This table is a list of programs found in this chapter.

Program Number	Program Name
100	Card Slot Assignment
102	Flexible Access Codes

Program Number	Program Name
103	Class of Service
104	System Timers
105	System Parameters
106	Day/Night Mode Day of Week Mapping
107	PAD Table Assignment
108	PAD Group Assignment
109	Music on Hold
110	Password Assignment
111	Destination Restriction Level
112	Day/Night Mode Calendar
113	Day/Night Mode Daily Schedule
114	PAD Conference Table Assignment
115	Advisory Messages
116	Data Initialize
117	Public Dial Plan Digit
200	Station Data
201	Station Delete
202	ISDN BRI Station
203	Change DN
204	DKT Parameters
205	DKT Feature Keys
206	Phantom DNs
207	One Touch Assignment
208	Station Timer Assignments
209	Hunting Group Assignments
210	Group Call Pickup
213	ADM Feature Keys
214	DSS Console Assignment
215	DSS Feature Keys
216	Emergency Ringdown Assignment
217	ISDN Station Data
218	Station Hunt Group Assignment (Member Assignments)
300	Trunk Assignment
301	Trunk Delete
302	PRI Trunks
303	ISDN Trunk Delete
304	Incoming Line Group Assignment
305	ILG Delete
306	Outgoing Line Group Assignment
307	OLG Delete
308	Trunk Timers
309	Direct Inward Dialing
310	DIT Assignment
311	MOH Source

Program Number	Program Name
312	DID Delete
313	Caller ID Assignment
315	T1 Trunk Card
316	Shared D Channel
317	ISDN BRI Trunk
318	DID Intercept Assignment
319	Intercept Treatment
320	B Channel Position ISDN Primary Trunk
321	Calling Number Identification
322	ISDN Calling Number Table
323	Call by Call Service
324	CBC Time Zones
400	Emergency Call Destination Assignment
404	Attendant Group Assignment
500	System Call Forward Assignment
501	System Speed Dial Assignment
502	Terminal Paging Group Assignment
503	Paging Devices Group Assignment
504	System Call Forward Operation Status
506	Verified Account Codes
507	Door Phone Assignment
508	Door Lock Control Assignment
509	DR Override by System Speed Dial
510	COS Override Assignment
512	SMDR for System Assignment
513	SMDR for ILG Assignment
514	SMDR for OLG Assignment
515	View BIOU Control Relay Assignment
516	Station Speed Dial
520	LCR Local Route Plan
521	LCR Route Plan Digit Analysis Assignment
522	LCR Exception Number Route Plans
523	LCR Route Plan Schedule Assignment
524	Route Table to Route Definition Assignment
525	LCR Route Definition Assignment
526	Modified Digits Table Assignment
527	LCR Holiday Table Assignment
528	LCR Public Day of Week Mapping Table
529	LCR Route Plan Time Zone Assignment
530	DR LCR Screening Table Assignment
531	DR Screening Table for OLG
532	DR Table Allow/Deny Definition
533	DR Level Table Assignment
534	DRL Exception Table Assignment

Program Number	Program Name
540	Pilot DN Assignment
541	Pilot DN Delete
550	Enhanced 911 Emergency Call Group Number
570	Account Code Digit Length
571	Exception Numbers for Forced Account Codes
573	Delete Door Phone
576	Door Phone Night Ring Over External Page
577	Caller History
579	System Voice Mail Data
580	Voice Mail Port Data
650	Behind Connection Assignment
651	Private Routing Plan Analysis Table Assignment
653	Private Route Choice Table Assignment
654	Private Route Definition Table Assignment
655	Private Digit Modification Table Assignment
656	Node ID Assignment
657	Network COS Mapping Table Assignment
658/659/660	Network DRL Mapping Tables
801	Network Jack LAN Device Assignment
803	IO Logical Device Assignment
804	RS232C Data Assignment
900	System Initialize
901	Display Version
902	Set Time and Date
903	Event Trace Control
904	ISDN Trace Location
905	All ISDN Trunk Trace
906	Event Trace Side Change
907	System Admin Log
908	Format/Unmount SmartMedia
909	MAC Address (System Serial Number)
910	Data Backup
911	Program Update
912	Make Busy Control
915	Regional Selection
916	IP Configuration

Programming Tables

The programming tables in this chapter appear sequentially, beginning with the 100 series programs and ending with the 900 series programs. Tables immediately following a program table are provided for reference. For example, the PCB Code table shown after the Program 100 table gives important PCB codes needed in Program 100.

100 Series Programs

Table 13-1 Program 100

Button	Sequence	Value(s)	Summary
100	Card Slot Assignment **100**, **Hold**		
100-00	Card Slot Assignment xxyy, **Hold**	xx = Cabinet: 01~02 (Basic CTX670 and CTX100) 01~07 Expanded CTX670 yy = Slot: 01~8 (CTX100) 01-10 (CTX670)	Equipment Number
100-01	PCB Type **FB01**, nnn, **Hold**, **Hold**	nnn = 3 digit PCB Code (See table below). Valid Codes: 000, 001, 002, 005, 006, 009, 010, 011, 013.	Assign one of the following: • BIOU1 or BIOU2 Page/MOH/BGM Relay Control. • RSTU or PSTU w/ 8 standard phones. • All Analog CO Line OCBs. • BVPU with 4 VoIP circuits. • RBSU/RBSS with 4 BRI S/T interface. • Delete PCB
100-02	PDKU/RDTU/RPTU Options **FB01**, nnn, **Hold**, **FB02**, n, **Hold**, **Hold**	nnn = 3 digit PCB Code. Valid Codes: 017, 018 n = 1. None 2. DKT no OCA or 8 Ch 3. DKT w/ OCA or 16 Ch 4. 24 Ch (n/a for PDKU) 5. 30 Ch (n/a for PDKU)	Assign one of the following: • PDKU with OCA toggle • RDTU or RPTU, T1 or PRI Channel
100-03	BDKU/BDKA Options **FB01**, nnn, **Hold**, **FB03**, n, **Hold**, **Hold**	nnn = 3 digit PCB Code Valid Codes: 003, 007, 014 n = 1. None 2. 8 DKT no OCA 3. 8 DKT w/ OCA 4. 16 DKT no OCA 5. 16 DKT w/ OCA	Assign BDKU or BDKS
100-04	BRI TEI Options **FB01**, nnn, **Hold**, **FB04**, n, **Hold**, **Hold**	nnn = 3 digit PCB Code. Valid Codes: 012, 013, 015, 016 n = 1. None 2. 8 DKT no OCA 3. 8 DKT w/ OCA 4. 16 DKT no OCA 5. 16 DKT w/ OCA	Assign RBUU/RBUS or RBSU/RBSS.

Table 13-2 PCB Codes

Code	PCB Type	Assigned Name	Circuit/Type
000	None	No Card or Delete Card	n/a
001	COU	RCOU RGLU2	4 Loop Lines 8 Gnd./Loop Lines
002	STU	RSTU2	8 Stations
003	DKU	PDKU2 RWIU	8 Stations 8 or 32 wireless
004	Not used	n/a	n/a
005	8COU	RCIOU+RCOS	8 Loop CO Lines
006	DDU	RDDU	4 DID Lines
007	DTU	RDTU2	8, 16, 24 and 30 channel T1
008	DSU	RDSU	4 Standard Ports 4 Digital Ports
009	CIU	RCIU2	4 or 8 Circuit Caller ID
010	MCU	RMCU	2 or 4 E911 CAMA Lines

Code	PCB Type	Assigned Name	Circuit/Type
011	EMU	REMU BVPU	4 Circuits
012	BSU	RBSU	2 S/T interfaces
013	BSU_BSS	RBSU+RBSS	4 S/T interfaces
014	PTU	RPTU	8, 16 and 24 PRI Lines
015	BUU	RBUU	2 U Interfaces
016	BUU_BUS	RBUU+RBUS	4 U Interfaces
017	NEW_DKU_8	BDKU1	8 Stations
018	NEW_DKU_16	BDKU1+BDKS1	16 Stations
019	IOU1	BIOU	Page/MOH/BGM Relay
020	IOU2	BIOU	Page/MOH/BGM Relay

Table 13-3 Program 102

Button	Sequence	Value(s)	Summary
102	Flexible Access Plan **102**, **Hold**		Assigns feature access codes, individual line access codes and outgoing line group (OLG) access codes to the Flexible Numbering Plan. Does not include PDNs, PhDNs, Pilot numbers, or Hunt Group pilot numbers.
102-00	Access Code n, **Hold**,	n = Up to 5-digit Flexible Numbering Plan	Enter the digits to be dialed (0~9,#,*) to access a Feature or an Outgoing Line Group (OLG). To delete, select 'No Data' in '01 Feature Name'. Conflict with an assigned DN will produce an error.
102-01	**FB01**, nnn, **Hold**	nnn = 3 digit Feature Code (551 should be selected for a Flexible Numbering OLG)	Select the Feature to which the access code is being assigned. **Note** To assign an access code to an Outgoing Line Group (OLG), select "Line Group access code - one access code for each OLG." To assign the prefix digit(s) for the access code of individual lines, select "Line access code - leading digit(s) to access individual lines." Example: If #7 is selected as the line access prefix, the users will dial #7xxx to access an individual line (where xxx is the line number).
102-02	**FB02**, n1, **Hold**, **Hold**	n1 = 0~32 (CTX100) 0~50 (CTX670 Basic) 0~128 (CTX670 Expanded)	Enter the Outgoing Line Group number to which the OLG access code is being assigned.

Note These three-digit Feature Index Numbers should not be confused with the Program 205 three-digit Button Codes.

Table 13-4 Flexible Numbering Plan Default Settings

Flexible Numbering Feature	Feature Index	Default Access Code	Programmed Value
No Data			
ABR - Activate	**150**	**#441**	
ABR - Cancel	**151**	**#442**	
Call Park Orbits - Activate	**170**	**#33**	
Call Park Orbits - Park Answer (Retrieve Parked Call)	**173**	**#32**	
System Orbit Number	**174**	**7000~7019**	

Table 13-4 Flexible Numbering Plan Default Settings *(continued)*

Flexible Numbering Feature	Feature Index	Default Access Code	Programmed Value
DND -Local Activation	180	#6091	
DND -Local Cancellation	181	#6092	
DND -Remote Activation	182	#6191	
DND -Remote Cancellation	183	#6192	
Door Lock Control -Unlock	190	#12	
Door Phones -Call	191	#15	
Flash -short	200	#450	
Flash -long	210	#451	
Group Paging -Invoke All Group Paging	220	#30	
Group Paging -Invoke Individual Group Paging	230	#31	
Answer for External Group Paging	232	#5#36	
Emergency Page -Invoke All Emergency Paging	240	#37	
Emergency Page -Invoke Individual Emergency Paging	250	#38	
Originate Call by Terminal Speed Dial (Index: 00-99)	260	*1	
Originate Call by System Speed Dial (Index: 000-099)	261	*2	
Originate Call by System Speed Dial (Index: 100-199)	262	*3	
Originate Call by System Speed Dial (Index: 200-299)	263	*4	
Originate Call by System Speed Dial (Index: 300-399)	264	*5	
Originate Call by System Speed Dial (Index: 400-499)	265	*6	
Originate Call by System Speed Dial (Index: 500-599)	266	*7	
Originate Call by System Speed Dial (Index: 600-699)	267	*8	
Originate Call by System Speed Dial (Index: 700-799)	268	*9	
Register Speed Dial	269	#66	
Call Forward (CF-A; Any Call) - Activation	340	#6011	
Call Forward (CF-B; Any Call) - Activation	341	#6021	
Call Forward (CF-NA; Any Call) - Activation	342	#6031	
Call Forward (CF-B/NA; Any Call) - Activation	343	#6041	
Call Forward (CF-A; External Call) - Activation	350	#6013	
Call Forward CF-B; External Call) - Activation	351	#6023	
Call Forward (CF-NA; External Call) - Activation	352	#6033	
Call Forward (CF-B/NA; External Call) - Activation	353	#6043	
Call Forward (CF-A; Any Call) - Remote Activation	360	#6012	
Call Forward (CF-B; Any Call) - Remote Activation	361	#6022	
Call Forward (CF-NA; Any Call) - Remote Activation	362	#6032	
Call Forward (CF-B/NA; Any Call) - Remote Activation	363	#6042	
Call Forward (CF-A; External Call) - Remote Activation	370	#6014	
Call Forward (CF-B; External Call) - Remote Activation	371	#6024	
Call Forward (CF-NA; External Call) - Remote Activation	372	#6034	
Call Forward (CF-B/NA; External Call) - Remote Activation	373	#6044	
Call Forward (Any Call) - Cancellation	380	#6051	
Call Forward (External Call) - Cancellation	390	#6053	
Call Forward (Any Call) - Remote Cancellation	400	#6052	
Call Forward (External Call) - Remote Cancellation	410	#6054	
Change Password for Remote Activation/Cancellation	420	#670	
Input Account Code	530	#46	
Change DISA Security Code	540	#658	

Table 13-4 Flexible Numbering Plan Default Settings *(continued)*

Flexible Numbering Feature	Feature Index	Default Access Code	Programmed Value
Outgoing Call by Directing Individual Trunk	550	#7	
Outgoing Call by Directing Outgoing Line Group	551	None	
Three Way Conferencing (Override to Tandem Connection)	560	#494	
Enter User Programming Mode	570	#9876	
LCR -Outgoing Call	580	9	
Set Voice Mail Message Waiting (activate MW without ringing for VM)	591	#63	
Release Received Message Waiting	592	#409	
Release Sent Message Waiting (Cancel MW without ringing for VM))	593	#64	
MW Answer access code (Retrieve Received Message Waiting)	594	#408	
Cancel ACB	600	#431	
Start BGM	610	#490	
Stop BGM	611	#491	
Start BGM for External Paging Device	612	#492	
Stop BGM for External Paging Device	613	#493	
Built-in modem	630	#19	
Night Ring Answer	640	#5#39	
Travelling Class Override Code Input Number	650	#471	
Change Travelling Class Override Code	651	#69	
Activate System Call Forward	670	#620	
Cancel System Call Forward	671	#621	
Call Pickup for Incoming Call -Group Pickup	680	#5#34	
Call Pickup for Incoming Call -Directed Terminal	681	#5#5	
Call Pickup for Incoming Call -Directed Group	682	#5#32	
Call Pickup for Incoming Call -Directed DN	683	#5#22	
Call Pickup for Incoming Call -Any External Call	684	#5#9	
Call Pickup for On-Hold Call -Directed CO Retrieve	685	#5#73	
Call Pickup for On-Hold Call -Local Retrieve	686	#5#71	
Call Pickup for On-Hold Call -Remote Retrieve	687	#5#72	
Call Pickup for On-Hold Call -Directed DN Retrieve	688	#5#74	
Transfer to Voice Mail	690	#407	
Repeat Last Number Dialed	700	*0	
Volume Control for BEEP	710	#6101	
Change LCD Display Language	720	#495	
Advisory Message - Activation	730	#411	
Advisory Message - Cancellation	731	#412	
Emergency Call	740	#911	
Attendant Console Group Access Code	750	0	
Private Network Access Code	760	8	
Node ID (Coordinated Directory Number Prefix)	770	None	
Substitution of Dial *	780	441	
Substitution of Dial #	781	440	
Originate Call with Sub Address -Outgoing Call/Internal Call	782	##	
Application starting access code	800	#18	
Voice Mail Call Monitor Off	870	#963	
System Date Adjust Code (Release 1.02, MA227 or higher)	910	#651	
System Time Adjust Code (Release 1.02, MA227 or higher)	911	#652	

Table 13-5 Programs 103~107

Button	Sequence	Value(s)	Summary
103	Class Of Service **103**, **Hold**		Class of Service assignments are a registration of feature capabilities the user is entitled to use. Each assignment is defined as Enabled or Disabled for privileges/permissions granted. Privileges enable users to perform a feature while permissions allow others to use some feature when calling your phone.
103-00	COS Number n, **Hold**,	n = 1~32 (COS Number)	Class of Service assignments are made for user's of telephones, attendant consoles, and incoming calls based upon the line the call arrives or in some cases on a call-by-call basis when using DISA or Tie Line with QSIG interfaces. For telephone users, the class of service assignments are made for each of the Day/Night Modes to allow different services during different parts of the day.
103-01	**Auto Busy Redial** **FB01**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	The privilege to invoke Automatic Busy Redial after dialing a busy outside destination.
103-02	**Call Forward Override** **FB02**, n1, **Hold Hold**	n1 = 1. Enable 2. Disable (default)	If enabled, stations with this COS will not forward when calling stations that have System or Station Call Forward activated. This includes when dialing from the dial pad or DSS button located on the telephone or DSS console.
103-03	**Call Transfer w/ Camp-on** **FB03**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	Allows a call transferred by this station to camp on to a busy destination.
103-04	**Change DISA Codes** **FB04**, n1, **Hold Hold**	n1 = 1. Enable 2. Disable (default)	The privilege to change the DISA Security Code.
103-05	**DND Override - Calling Party** **FB05**, n1, **Hold Hold**	n1 = 1. Enable 2. Disable (default)	Allows a caller to override the Do Not Disturb status of a called party.
103-06	DND Override - Called Party **FB06**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	Allows calling parties with DND Override privileges to override this station's DND status.
103-07	Do Not Disturb **FB07**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	The privilege to place this phone in Do Not Disturb.
103-08	Remote Set/Reset DND **FB08**, n1, **Hold Hold**	n1 = 1. Enable 2. Disable (default)	The privilege of setting/resetting Do Not Disturb on other phones.
103-09	Executive Override **FB09**, n1, **Hold Hold**	n1 = 1. Enable 2. Disable (default)	The privilege to invoke an Executive Override on a call.
103-10	Executive Override Allowed **FB10**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	Permission for others to use Executive Override when calling this station.
103-11	Offhook Camp-on **FB11**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	The privilege to use Off-hook Camp-on when encountering a busy destination.
103-12	Group Pickup **FB12**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	The privilege to pick up a call ringing on a station in one's own group.
103-13	Directed Station Pickup **FB13**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	The privilege to pick a specified ringing station.
103-14	Directed Group Call Pickup **FB14**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	The privilege to pick up a ringing station in a specified group.
103-15	Directed DN Call Pickup **FB15**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	The privilege to pick a specified DN.

Table 13-5 Programs 103~107 *(continued)*

Button	Sequence	Value(s)	Summary
103-16	Ext Call Pickup **FB16**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	The privilege to pick up any incoming trunk call.
103-17	Directed CO Call Pickup **FB17**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	The privilege to pick up a specified incoming trunk call.
103-18	Remote Retrieve Call Pickup **FB18**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	The privilege to retrieve any call placed on Hold on a designated terminal (PDN).
103-19	DN Retrieve Call Pickup **FB19**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	The privilege to retrieve a held call on another DN.
103-20	Handsfree Override **FB20**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	Permission for others to change this phone from Ringing to Hands Free Answerback.
103-21	Privacy Override **FB21**, n1, **Hold Hold**	n1 = 1. Enable 2. Disable (default)	The privilege to override a private call.
103-23	Invoke Emergency Page **FB23**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	The privilege to use the Emergency Page feature.
103-24	Join Feature **FB24**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	The privilege to use the Join feature (Attendant Feature).
103-25	Through Dialing **FB25**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	The privilege to perform Through Dialing (Attendant Feature).
103-26	Tandem CO Connection **FB26**, n1, **Hold Hold**	n1 = 1. Enable 2. Disable (default)	The privilege to set up a Trunk-to-Trunk connection.
103-27	Day/Night Control **FB27**, n1, **Hold Hold**	n1 = 1. Enable 2. Disable (default)	The privilege to change Day/Night Mode.
103-28	Ext BGM Control **FB28**, n1, **Hold Hold**	n1 = 1. Enable 2. Disable (default)	The privilege to turn on/off background music over external speakers.
103-29	LCR Feature **FB29**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	The privilege to use Least Cost Routing.
103-30	Individual Trunk Access **FB30**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	The privilege to dial individual trunk access codes to access specific lines.
103-31	Trunk Access Allowed **FB31**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	The privilege to access trunk groups by trunk access codes.
103-32	Forced Account Codes **FB32**, n1, **Hold Hold**	n1 = 1. Enable 2. Disable	The privilege to use Forced Account Codes for placing external calls.
103-33	Verified Account Codes **FB33**, n1, **Hold Hold**	n1 = 1. Enable 2. Disable	The privilege to have Account Codes verified before an external call is placed.
103-34	Allow Short Hook Flash **FB34**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	The privilege to use a Short Flash signal over outside lines.
103-35	Allow Long Hook Flash **FB35**, n1, **Hold Hold**	n1 = 1. Enable 2. Disable (default)	The privilege to use a Long Flash signal over outside lines.

Table 13-5 Programs 103~107 *(continued)*

Button	Sequence	Value(s)	Summary
103-36	Allow Hook Flash **FB36**, n1, **Hold Hold**	n1 = 1. Enable (default) 2. Disable	The privilege to receive hook flash over CO Lines and to allow telephones to hook flash.
103-37	Automatic Line Hold **FB37**, n1, **Hold Hold**	n1 = 1. Enable 2. Disable (default)	The privilege to have an active call automatically held when accessing another line.
103-38	Can Originate OCA **FB38**, n1, **Hold Hold**	n1 = 1. Enable 2. Disable (default)	Permission for others to call this station using Off-hook Call Announce.
104	System Timers **104**, **Hold**		System timers set a variety of times to control calls and features for the system.
104-01	ACB Callback Timer **FB01**, n, **Hold Hold**	n = 5~180 sec. (default = 30)	The Automatic Callback timer sets the time (5 ~ 180 seconds) that the callback will be attempted before being cancelled.
104-02	ACB Cancel Recall Timer **FB02**, n, **Hold Hold**	n = 5~180 sec. (default = 30)	The Automatic Callback overall timer sets the time (5 ~ 180 minutes) that a callback can be registered. Once the timer expires, the callback will be cancelled.
104-03	Park Recall Timer **FB03**, n, **Hold Hold**	n = 10~600 sec. (default = 120)	The Park timer sets the length of time (10 ~ 600 seconds) a call can remain in Park prior to a recall to the station that initiated the Park.
104-04	Camp-on Timer **FB04**, n, **Hold Hold**	n = 5~15 sec. (default = 10)	The Camp-on timer sets the time (5 ~ 60 seconds) needed to remain off-hook prior to Camp-on being automatically activated.
104-05	SMDR Valid Call Timer **FB05**, n, **Hold Hold**	n = 0~180 sec. (default = 1)	The SMDR Answer timer sets a default time (0 ~ 180 seconds) for when an outgoing call will be considered to be answered for SMDR reporting when a true answer signal is not returned from the public network. Setting the time short will include calls that may not be completed, setting the time too long may exclude short calls that are answered and terminated in a short time.
104-06	Tandem Connection #1 **FB06**, n, **Hold Hold**	n = 0~3600 sec. (default = 300)	For Trunk-to-trunk connections which neither CO Line has release supervision, a timer (0 ~ 3600 seconds) is needed to release the call if no user monitoring has taken place. Also used for CO line to RSTU port connections in which the CO line has no supervision and the device connected to the RSTU port does not hang up automatically (see Prg200, PB34).
104-07	Tandem Connection #2 **FB07**, n, **Hold Hold**	n = 0~180 sec. (default = 30)	The Trunk-to trunk User Input Timer provides a time (0 ~ 180 seconds) to allow an external user to dial a digit to extend the disconnect time when the connection is unsupervised. This feature is used primarily with DISA service.
104-08	Call Forward No Ans Time **FB08**, n, **Hold Hold**	n = 1~180 sec. (default = 20)	The System Call Forward No Answer timer (1 ~ 180 seconds) specifies the time period that a phone will ring prior to invoking the Call Forward operation.
104-09	Dial Input Timer **FB09**, n, **Hold Hold**	n = 0~60 sec. (default = 20)	Time system will wait for the beginning of DTMF input.
104-10	Delay 1 Ringing Timer **FB10**, n, **Hold Hold**	n = 1~60 sec. (default = 12)	The Delayed Ringing 1 timer specifies the time (1 ~ 60 seconds) to wait before applying ringing to the designated phones.
104-11	Delay 2 Ringing Timer **FB11**, n, **Hold Hold**	n = 1~60 sec. (default =240)	The Delayed Ringing 2 timer specifies the time (1 ~ 60 seconds) to wait before applying ringing to the designated phones.
104-12	Door Unlock Timer **FB12**, n, **Hold Hold**	n = 1~30 sec. (default = 6)	The Door Unlock Timer specifies the length of time (1 ~ 30 seconds) the electrical signal is sent to the door for releasing the lock.
104-13	9+11 Judgement Timer **FB13**, n, **Hold Hold**	n = 1~30 sec. (default = 5)	The 9+11 Inter-digital timer provides a timing value (1 ~ 30 seconds) for the system to wait for additional digits to be dialed looking for the 911 or 9+911 dialed codes for treatment using the E911 procedures rather than normal dialing treatment.

Table 13-5 Programs 103~107 *(continued)*

Button	Sequence	Value(s)	Summary
104-14	Emergency Call Timer **FB14**, n, **Hold Hold**	n = 10~180 sec. (default = 30)	The Emergency Call timer sets a time (10 ~ 180 seconds) for advancing the call to the next station in a list of destinations for the call.
104-15	ABR Busy Detection Time **FB15**, n, **Hold Hold**	n = 1~30 sec. (default = 5)	The Destination Busy Detection timer sets the time (1 ~ 30 seconds) to wait while looking for a busy condition on an external call. If detected, it will trigger the initiation of the Automatic Busy Redial cycle.
104-16	Lost Call Timer **FB16**, n, **Hold Hold**	n = 1~600 sec. (default = 180)	The Lost Call timer sets the time (1 ~ 600 seconds) that a failed transfer recall will ring on the originating station prior to attempting to recall a secondary location.
104-17	Lost Call Final Timer **FB17**, n, **Hold Hold**	n = 1~600 sec. (default = 180)	The Lost Call Final timer sets the time (1 ~ 600 seconds) that a failed transfer recall will ring on the secondary location before being automatically disconnected.
104-18	DTMF Tone Sending Time **FB18**, n, **Hold Hold**	n = 1. 80 ms (default) 2. 160 ms	The DTMF tone sending duration (1-80 msecs, 2-160 msecs) for dialing on CO Lines.
104-19	Auto Disconnect **FB19**, n, **Hold Hold**	n = 0~60 sec. (default = 0)	Time after which an unsupervised trunk may be automatically released.
104-23	System Timer Network DSS Refresh Timer	n = 20~180 sec. (default = 30)	Select Network DSS Refresh Timer (20 -180 seconds). The time interval when all Network DSS settings are refreshed system wide. **Note** DSS button LEDs change state immediately when the status of the DSS button changes - regardless of this timer value.
104-24	Outgoing Number Display Timer	n = 1~120 sec. (default = 10)	This timer sets how long dialed numbers will display on telephone LCDs for outgoing line calls.
105	System Parameters **105**, **Hold**		This command assigns the system parameters.
105-01	Executive Override **FB01**, n, **Hold**, **Hold**	n = 1. Enable (default) 2. Disable	Break in warning tone of Executive Override Enable or Disable.
105-02	Station MOH **FB02**, n, **Hold**, **Hold**	n = 1. Quiet Tone 2. External 1 (default) 3. External 2 4. External 3 5. External 4 6. External 5 7. External 6 8. External 7 9. External 8 10. External 9 11. External 10 12. External 11 13. External 12 14. External 13 15. External 14 16. External 15	Music On Hold selection of Private Line and Station.
105-03	Ringing Transfer **FB03**, n, **Hold**, **Hold**	n = 1. RBT (default) 2. MOH	Tones for the transferred party after the ringing transfer takes place.
105-04	Transfer Privacy **FB04**, n, **Hold**, **Hold**	n = 1. Enable (default) 2. Disable	Transfer Privacy enabled: CO line buttons that have multiple appearances will only flash and ring on the transferred-to telephone; the same CO line button on other telephones will be red-busy. Transfer Privacy Disabled: CO line buttons that have multiple appearances will flash and ring on all telephones that have the CO line button appearance.
105-05	Privacy Override **FB05**, n, **Hold**, **Hold**	n = 1. Enable 2. Disable (default)	Privacy Override Attendant Monitor warning Enable or Disable.

Table 13-5 Programs 103~107 *(continued)*

Button	Sequence	Value(s)	Summary
105-06	Credit Card Code **FB06**, n, **Hold**, **Hold**	n = Up to 32 digits	Enter the number dialed to initiate a Credit Card Call. This is normally "0" in the USA.
105-07	Credit Card Digits **FB07**, n, **Hold**, **Hold**	n = 1~66 digits	Minimum Dial Digits required for Credit Card Calling. This should be the quantity of digits in a credit card number. If this quantity of digits is not dialed when making credit card calls, the caller will be disconnected. This is to insure that the call is charged to a credit card. DRL tables in Program 111 and OLGs in Program 306 must be enabled with credit card calling for this feature to be active. Users must be assigned to a DRL table enable with credit card calling and call out on a credit card calling enabled OLG for this featured to be applied to the call.
105-08	E911 Service **FB08**, n, **Hold**, **Hold**	n = 1. Enable (default) 2. Disable	Offer of E911 Service.
105-09	DR Override by SSD **FB09**, n, **Hold**, **Hold**	n = 1. Enable (default) 2. Disable	Destination Restriction Override by System Speed Dial.
105-10	Auto Station Release **FB10**, n, **Hold**, **Hold**	n = 1. Enable (default) 2. Disable	Automatic Station Release.
105-11	ISDN SPID **FB11**, n, **Hold**, **Hold**	n = 1. Operable 2. Not Operable (default)	Operation when Auto SPID or User Entry Of SPID fails.
105-12	Night Mode Relay **FB12**, n, **Hold**, **Hold**	n = 0~8	Assign BIOU Relay (1~8) as the Night Relay - this relay activates when the system is in the Night Mode. BIUO1 provides relays 1 to 4. BIUO2 provides relays 5 to 8 **Note** The CTX100 ACTU built-in relay is programmed as relay 5. For this relay operation, a virtual BIOU2 is installed, as default, in a virtual equipment position - Cabinet 2 slot 5. (Cab. 02 slot 05, PCB code 20, in program 100). To install an actual BIOU2 and disable the ACTU built-in relay, use the programming telephone. To remove the virtual BIOU2 and then install the actual BIOU2 in Cab. 01/slot 01~08 in the normal manner.
105-13	BGM External Paging **FB13**, n, **Hold**, **Hold**	n = 0~4 (CTX100) 0~8 (CTX670 Basic) 0~16 (CTX100 Expanded)	Set the External Page Group Number that includes the external paging zones to which BGM will be sent. See PRG503.
105-14	Lost Call Destination **FB14**, n, **Hold**, **Hold**	n = Up to 5 digits	Set Lost Call Destination.
105-15	COS Override Code **FB15**, n, **Hold**, **Hold**	n = 1~8 (default = 1)	Class of Service Override Code Digits.
105-16	Multi-Conference **FB16**, n, **Hold**, **Hold**	n = 1. Enable 2. Disable (default)	Conference connection of many member for Analog Internal Call and Outgoing Call.
105-17	Caller Number Display **FB17**, n, **Hold**, **Hold**	n = 1. Enable (default) 2. Disable	Caller number display preferentially.

Table 13-5 Programs 103~107 *(continued)*

Button	Sequence	Value(s)	Summary
105-18	Night Bell Relay **FB18**, n, **Hold**, **Hold**	n = 0~8 (default = 0)	Assign BIOU Relay (1~8) as the Night Relay - this relay activates when the system is in the Night Mode. BIOU1 provides relays 1 to 4. BIOU2 provides relays 5 to 8 **Note** The CTX100 ACTU built-in relay is programmed as relay 5. For this relay operation, a virtual BIOU2 is installed, as default, in a virtual equipment position - Cabinet 2 slot 5. (Cab. 02 slot 05, PCB code 20, in program 100). To install an actual BIOU2 and disable the ACTU built-in relay, use the programming telephone. To remove the virtual BIOU2 and then install the actual BIOU2 in Cab. 01/slot 01~08 in the normal manner.
105-19	Display Preference **FB19**, n, **Hold**, **Hold**	n = 1. DNIS (default) 2. Caller ID	Whether to display DNIS or Caller ID.
105-20	Transit Counter **FB20**, n, **Hold**, **Hold**	n = 0~128 (default = 1)	The Networking Transit Counter limits the number of nodes through which a QSIG call can pass before being terminated as a lost call.
105-21	Primary Clock **FB21**, xxyyzz, **Hold**, **Hold**	xx = Cabinet 1 (CTX100), 01~02 (CTX670 Basic), 01~07 (CTX670 Exp.) yy = Slot 01~8 (CTX100), 01~10 (CTX670) zz = Circuit (01~30)	Enter data as xxyyzz. zz=channel 01 if clock source is RPTU or RDTU zz=channel 01, 02, 03 , or 04 if clock source is RBUU/RBUS or RBSU Example: If the Primary Clock Source should be a assigned to an RPTU in cabinet 5, slot 2, enter 050201. Cabinet numbers: • CTX100: Select 01 for Base and Expansion cabinet. • CTX670: Select 01 for Base and 02~07 respectively for each Expansion cabinet. Slot numbers: • CTX100: Select 01~04 for Base slots and 05~08 for Expansion slots. • CTX670: Select 01~08 for Base slots and 01~10 for Expansion slots.
105-22	Secondary Clock **FB22**, xxyyzz, **Hold**, **Hold**	xx = Cabinet 1 (CTX100), 01~02 (CTX670 Basic), 01~07 (CTX670 Exp.) yy = Slot 01~8 (CTX100), 01~10 (CTX670) zz = Circuit (01~30)	Enter data as xxyyzz: zz=channel 01 if clock source is RPTU or RDTU zz=circuit 01, 02, 03 , or 04 if clock source is RBUU/RBUS or RBSU Example: If the Secondary Clock Source should be a assigned to an RBUU in cabinet 5, slot 2, circuit 2; enter 050202. Cabinet numbers: • CTX100: Select 01 for Base and Expansion cabinet. • CTX670: Select 01 for Base and 02~07 respectively for each Expansion cabinet. Slot numbers: • CTX100: Select 01~04 for Base slots and 05~08 for Expansion slots. • CTX670: Select 01~08 for Base slots and 01~10 for Expansion slots.
105-23	Call History Prefix 1 **FB23**, n, **Hold**, **Hold**	n = 1. add (default) 2. not add	Whether prefix 1 is added or not in callback of Call History Feature.
105-24	Emergency Digits Sent **FB24**, n, **Hold**, **Hold**	n = Up to 5 digits (default = 911)	Default = “911” for North America. Enter alternative emergency dialing strings up to 5 digits as required by local conditions.
105-25	DP Make Ratio **FB25**, n, **Hold**, **Hold**	n = 1. DPMakeRatio33 2. DPMakeRatio40 (default)	Dial pulse Make/Break ratio can be set to 33% or 40%. The default value is 40%.

Table 13-5 Programs 103~107 *(continued)*

Button	Sequence	Value(s)	Summary
105-26	Call Button Jumping **FB26**, n, **Hold**, **Hold**	n = 1. Enable (default) 2. Disable	If enabled, line calls move from a telephone DN button to a line button after they are answered. After the call is answered, the DN button is cleared to receive another call. With this operation the DN acts as an answer button for the phone. This only applies if the line answered has a CO, GCO, or Pooled line button appearance on the phone. If disabled, line calls remain on the DN after they are answered.
106	Day/Night Mode Day of Week Mapping **106**, **Hold**		The Day of the Week schedule defines each day as the type of day the schedule shall follow. These types of days are called Work Day, Non-work Day, and Holiday. Each day of the week can be classified.
106-00	Tenant Number	n = Enter 1~8	Select the Tenant number for which the daily schedules will be configured.
106-01	Monday	n = 1. Work Day (default) 2. Non-Work 3. Holiday	Enter the type of day to follow for daily schedule. 1- Work Day; 2- Non-Work Day; or 3- Holiday.
106-02	Tuesday	n = 1. Work Day (default) 2. Non-Work 3. Holiday	Enter the type of day to follow for daily schedule. 1- Work Day; 2- Non-Work Day; or 3- Holiday.
106-03	Wednesday	n = 1. Work Day (default) 2. Non-Work 3. Holiday	Enter the type of day to follow for daily schedule. 1- Work Day; 2- Non-Work Day; or 3- Holiday.
106-04	Thursday	n = 1. Work Day (default) 2. Non-Work 3. Holiday	Enter the type of day to follow for daily schedule. 1- Work Day; 2- Non-Work Day; or 3- Holiday.
106-05	Friday	n = 1. Work Day (default) 2. Non-Work 3. Holiday	Enter the type of day to follow for daily schedule. 1- Work Day; 2- Non-Work Day; or 3- Holiday.
106-06	Saturday	n = 1. Work Day 2. Non-Work (default) 3. Holiday	Enter the type of day to follow for daily schedule. 1- Work Day; 2- Non-Work Day; or 3- Holiday.
106-07	Sunday	n = 1. Work Day 2. Non-Work (default) 3. Holiday	Enter the type of day to follow for daily schedule. 1- Work Day; 2- Non-Work Day; or 3- Holiday.
107	PAD Table Assignment **107**, **Hold**		Assigns additional Sender and Receiver PAD values to pad groups in the pad table.
107-01	Sender PAD Device Number **FB01**, n, **Hold** See "PAD Table" on page 13-22.	n = Up to 3 digits 1-10 (PAD device number) or PAD Group Number: 101~106 (CTX100) 101~110 (CTX670 Basic) 101~132 (CTX670 Exp.)	Enter Sender PAD Device or Group Number from PAD Table (following this section).
107-02	Receiver PAD Device Number **FB02**, n1, **Hold**	n1 = Up to 3 digits 1-10 (PAD device number) or PAD Group Number: 101~106 (CTX100) 101~110 (CTX670 Basic) 101~132 (CTX670 Exp.)	Enter Receiver PAD Device Number or Group Number from PAD Table (following this section).
107-03	PAD Loss **FB03**, n2, **Hold**, **Hold**	n2 = 1. 6 dB Net Gain 2. 3 dB Net Gain 3. 0 dB 4. 3 dB Net Loss 5. 6 dB Net Loss 6. 9 dB Net Loss 7. 12 dB Net Loss 8. 15 dB Net Loss	Enter PAD Value (See PAD Table below). The value shown shows the net effect. **Note** To PAD is to insert loss; therefore, negative loss equals net gain.

Table 13-6 PAD Table

	PAD Device Number	1	2	3	4	5	6	7	8	9	10	101	102	··
PAD Device Number	Receiver (Listener) Sender (Speaker)	Analog Telephone	DKT	Analog Trunk	T1 Trunk	ISDN Station	ISDN Trunk	CONF Bridge	Music Source	Ext. Paging	IPT	PAD Group 1	PAD Group 2	:
1	Analog Telephone	**0**	**0**	**0**	**6**	**6**	**6**	**X**[1]	**-**	**0**	**0**	**0**	**0**	
2	DKT	**0**	**0**	**0**	**6**	**6**	**6**	**0**	**-**	**0**	**0**	**0**	**0**	
3	Analog Trunk	**0**	**0**	**6**	**6**	**6**	**6**	**X**[1]	**-**	**6**	**0**	**0**	**0**	
4	T1 Trunk	**6**	**6**	**6**	**0**	**0**	**0**	**0**	**-**	**6**	**3**	**0**	**0**	
5	ISDN Station	**6**	**6**	**6**	**0**	**0**	**0**	**0**	**-**	**6**	**3**	**0**	**0**	
6	ISDN Trunk	**6**	**6**	**6**	**0**	**0**	**0**	**0**	**-**	**6**	**3**	**0**	**0**	
7	Conference Bridge	**(0)**	**(0)**	**(0)**	**(0)**	**(0)**	**(0)**	**(0)**	**(0)**	**(0)**	**0**	**0**	**0**	
8	Music Source	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
9	Ext. Paging	**0**	**0**	**6**	**6**	**6**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	
10	IPT	**-6**	**0**	**-6**	**0**	**0**	**0**	**-6**	**-**	**-6**	**0**	**0**	**0**	
101	PAD Group 1[2]	**0**	**0**	**-3**	**-3**	**-3**	**-3**	**-3**	**-3**	**-3**	**0**	**0**	**0**	
102	PAD Group 2[3]	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**0**	
:	:													
131	PAD Group 31													
132	PAD Group 32													

Notes

1. "X" data set for PAD Conference table Assignment
2. For IP QSIG only. The default values for PAD Group 1 is 0dB. dB is the value for attenuation level.
3. For PRI QSIG only.

Table 13-7 Program 108

Button	Sequence	Value(s)	Summary
108	PAD Group Assignment **108**, **Hold**		This program permits the addition of up to 32 devices to the Pad Table to deal with exceptions to the default table.
108-00	PAD Group Device Type. xyyyyy, **Hold**	xyyyyy Up to 6 digits x = Device Type yyyyy = Device number	Enter the Device Type(x) and Device number(y). Refer to the table below.
108-01	PAD Group Number. **FB01**, n1, **Hold**, **Hold**	n1 = 0~6 (CTX100) 0~10 (CTX670 Basic) 0~32 (CTX670 Expanded)	Enter the PAD Group Number.

Table 13-8 PAD Group Device Type Examples

Device Name	Device Type	Device Number	Example
DKT, SLT, ISDN, Station	**1**	0~99999 (PDN)	if DKT device = 200, value = 1200.
ISDN Trunk	**2**	1~128 (Channel Group Number per Prog. 302)	if Channel Group # = 10, value = 210.
Analog Trunk, T1 Trunk	**3**	1~264 (Trunk Number)	if Trunk # = 120, value = 3120.
Conference Bridge	**4**	none (Conference Bridge is only one)	value = 4.
Music Source	**5**	1~15 (Music Port)	if Music port = 8, value = 58.
External Paging Device	**6**	1~8 (Zone Relay Number)	if External Paging Device = 3, value = 63.

Table 13-9 Programs 109~114

Button	Sequence	Value(s)	Summary
109	Music on Hold. **109**, **Hold**		This command assigns external Music on Hold (MOH) and Background Music (BGM) sources.
109-01	MOH/BGM #1 (BECU) **FB01**, n, **Hold**	n = 1. Enable (default) 2. Disable	Enable this assignment if MOH source #1 is connected to the system processor MOH RCA jack.
109-02	MOH/BGM #2 (BIOU1-J1) **FB02**, n, **Hold**	n = 1. Enable 2. Disable (default)	Enable this assignment if MOH source #2 is connected to BIOU-1, MOH RCA jack (J1).
109-03	MOH/BGM #3 (BIOU1-J2) **FB03**, n, **Hold**	n = 1. Enable 2. Disable (default)	Enable this assignment if MOH source #3 is connected to BIOU-1, MOH RCA jack (J2).
109-04	MOH/BGM #4 (BIOU1-J3) **FB04**, n, **Hold**	n = 1. Enable 2. Disable (default)	Enable this assignment if MOH source #4 is connected to BIOU-1, MOH RCA jack (J3).
109-05	MOH/BGM #5 (BIOU2-J1) **FB05**, n, **Hold**	n = 1. Enable 2. Disable (default)	Enable this assignment if MOH source #5 is connected to BIOU-2, MOH RCA jack (J1).
109-06	MOH/BGM #6 (BIOU2-J2) **FB06**, n, **Hold**	n = 1. Enable 2. Disable (default)	Enable this assignment if MOH source #6 is connected to BIOU-2, MOH RCA jack (J2).
109-07	MOH/BGM #7 (BIOU2-J3) **FB07**, n, **Hold**	n = 1. Enable 2. Disable (default)	Enable this assignment if MOH source #7 is connected to BIOU-2, MOH RCA jack (J3).
109 08~15	MOH/BGM #8 (RSTU) **FB08/-FB15**, xxyyzz, **Spkr**, n, **Hold**	xx = Cabinet 1 (CTX100), 01~02 (CTX670 Basic), 01~07 (CTX670 Exp.) yy = Slot 01~8 (CTX100), 01~10 (CTX670 zz = Circuit 01~08	Enter the RSTU equipment number to which MOH/BGM source #8 or #9~#15 are connected. Enter data as xxyyzz: Example: If the MOH/BGM source should be a assigned to an RSTU in cabinet 5, slot 2, circuit 3; enter 050203. **Note** A PDN can not be assigned to an RSTU equipment number if it is to be a MOH circuit. If a PDN is assigned to the circuit that will connect to a MOH/BGM source, you must first delete it using PRG201 Cabinet numbers: • CTX100: Select 01 for Base and Expansion cabinet. • CTX670: Select 01 for Base and 02~07 respectively for each Expansion cabinet. Slot numbers: • CTX100: Select 01~04 for Base slots and 05~08 for Expansion slots. • CTX670: Select 01~08 for Base slots and 01~10 for Expansion slots.
110	Password Assignment. **110**, **Hold**		The system has two passwords levels. Logging into the system with the Level 1 password allows you to administer all system programs while the level 2 password provides restricted program administration.
110-00	Password Level n, **Hold**	n = 1. Unrestricted Admin 2. Restricted Admin	Enter the digit 1 or 2 for the password level. Enter 1 to set the unrestricted administration password. Enter 2 to set the restricted administration password. **Note** Level 2 users can administer all programs, but are restricted from initializing the CTX and from updating the CTX software.
110-01	Password **FB01**, n1, **Hold**, **Hold**	n1 = Up to 16 digits	Enter a 1~16 digit password for the selected level. Each level can have only one password.

Table 13-9 Programs 109~114 *(continued)*

Button	Sequence	Value(s)	Summary
111	Destination Restriction Level **111**, **Hold**		This command establishes a Destination Restriction Level (DRL).
111-00	DRL Number n, **Hold**	n = 1~16	Enter the DRL number (1~16)
111-01	Credit Card Calling **FB01**, n1, **Hold**, **Hold**	n1 = 1. Enable 2. Disable (default)	Enable or Disable Credit Card Calling for this DRL
112	Day/Night Mode Calendar **112**, **Hold**		The Calendar will override the current Day of the Week setting with the type of day specified in the calendar. Thus a Working Day or a Non-working Day can be changed to a Holiday based upon the calendar.
112-00	Tenant	n = 1~8	Enter the Tenant to schedule for Day/Night mode calendar.
112-01	Calendar Day **FB01**, YYYYMMDD, **Hold**	YYYY = Year MM = Month DD = Day	Enter the calendar day to be treated individually as an exception to the Day of Week treatment. Maximum table size is 128. Format: YYYYMMDD
112-02	Working Day Type **FB02**, n, **Hold**, **Hold**	n = 1. Delete (default) 2. Work Day 3. Non-Working Day 4. Holiday	Enter the Day Type to override the Weekly Mapping.
113	Day/Night Mode Daily Schedule **113**, **Hold**		The Day/Night Mode daily schedule defines the times for the start of the Work Day, Non-work Day, and Holiday for each of the modes (Day, Day2. Night).
113-00	Tenant Number	n = Enter 1~8	Select the Tenant number for which the daily schedules will be configured.
113-01	Day1 Mode/Work Day **FB01**, hhmm, **Hold**	hh = hour (00~23) mm = minute (00~59) 9999 to delete	Enter the start time for Day1 Mode for the Work type of day. Enter “9999” to omit this mode.
113-02	Day2 Mode/Work Day **FB02**, hhmm, **Hold**	hh = hour (00~23) mm = minute (00~59) 9999 to delete	Enter the start time for Day2 Mode for the Work type of day. Enter “9999” to omit this mode.
113-03	Night Mode/Work Day **FB03**, hhmm, **Hold**	hh = hour (00~23) mm = minute (00~59) 9999 to delete	Enter the start time for Night Mode for the Work type of day. Enter “9999” to omit this mode.
113-04	Day1 Mode/Non-Work Day **FB04**, hhmm, **Hold**	hh = hour (00~23) mm = minute (00~59) 9999 to delete	Enter the start time for Day1 Mode for the Non-work type of day. Enter “9999” to omit this mode.
113-05	Day2 Mode/Non-Work Day **FB05**, hhmm, **Hold**	hh = hour (00~23) mm = minute (00~59) 9999 to delete	Enter the start time for Day2 Mode for the Non-work type of day. Enter “9999” to omit this mode.
113-06	Night Mode/Non-Work Day **FB06**, hhmm, **Hold**	hh = hour (00~23) mm = minute (00~59) 9999 to delete	Enter the start time for Night Mode for the Non-work type of day. Enter “9999” to omit this mode.
113-07	Day1 Mode/Holiday **FB07**, hhmm, **Hold**	hh = hour (00~23) mm = minute (00~59) 9999 to delete	Enter the start time for Day1 Mode for the Holiday type of day. Enter “9999” to omit this mode.
113-08	Day2 Mode/Holiday **FB08**, hhmm, **Hold**	hh = hour (00~23) mm = minute (00~59) 9999 to delete	Enter the start time for Day2 Mode for the Holiday type of day. Enter “9999” to omit this mode.

Table 13-9 Programs 109~114 *(continued)*

Button	Sequence	Value(s)	Summary
113-09	Night Mode/Holiday **FB09**, hhmm, **Hold**, **Hold**	hh = hour (00~23) mm = minute (00~59) 9999 to delete	Enter the start time for Night Mode for the Holiday type of day. Enter "9999" to omit this mode.
114	PAD Conference Table Assignment **114**, **Hold**		Assigns PAD values for combinations of analog trunks and telephones in conference.
114-01	No. of Conference Trunks **FB01**, n, **Hold**	n = 0~6 0~8 1. 6 dB Net Gain 2. 3 dB Net Gain 3. 0 dB 4. 3 dB Net Loss 5. 6 dB Net Loss 6. 9 dB Net Loss 7. 12 dB Net Loss 8. 15 dB Net Loss	Enter the number of analog trunks in the conference.
114-02	No. of Conference Telephones **FB02**, n1, **Hold**	n1 = 0~8	Enter the number of analog telephones in the conference.
114-03	PAD Conference Value **FB03**, n2, **Hold**, **Hold**	n2 = 1. 6 dB Net Gain 2. 3 dB Net Gain 3. 0 dB 4. 3 dB Net Loss 5. 6 dB Net Loss 6. 9 dB Net Loss 7. 12 dB Net Loss 8. 15 dB Net Loss	Enter the desired PAD value for the combination of analog trunks and telephones specified in 01 and 02 above. See "PAD Conference Table" on page 13-25.

Table 13-10 PAD Conference Table

Number of Trunks	Number of Analog Telephones								
	0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
0	0	0	0	0	0	3	3	6	6
1	0	0	0	0	3	3	3	6	
2	3	3	3	3	3	6	6		
3	6	6	6	6	6	9			
4	9	9	9	9	9				
5	9	9	9	9					
6	9	9	9						

Table 13-11 Program 116

Button	Sequence	Value(s)	Summary
116	Data Initialize **116**, **Hold**		This program is used to initialize the tables of selected programs in the Strata CTX system.
116-01	**FB01**, n, **Hold**, **Hold** See "Data Initialize Programs" on page 13-26.	n = 3 digit Program Number (100~999)	Enter Program Number to be initialized.

Table 13-12 Data Initialize Programs

Program Number	Program Name	Page #
500	System Call Forward Assignment	74
520	LCR Local Route Plan Assignment	82
521	LCR Route Plan Digit Analysis Assignment	83
522	LCR Exception Number Route Plans	83
523	LCR Route Plan Schedule Assignment	83
524	Route Table to Route Definition Assignment	84
525	LCR Route Definition Assignment	84
526	Modified Digits Table Assignment	84
527	LCR Holiday Table	84
529	LCR Route Plan Time Zone Assignment	85
530	DR LCR Screening Table Assignment	85
531	DR Screening Table for OLG	86
533	DR Level Table Assignment	86
534	DRL Exception Table Assignment	87
651	Private Routing Plan Analysis	91
653	Private Route Choice Table Assignment	91
654	Private Route Definition Table Assignment	92
655	Private Network Digit Modification Table Assignment	92

Table 13-13 Program 117

Button	Sequence	Value(s)		Summary
117	Public Dial Plan Digit **117**, **Hold**			This command is used to prevent users from circumventing Destination Restriction by sending tones directly to the PSTN before DR analysis is complete. It defines the number of digits expected in PSTN numbers beginning with identified sequences. For example, a number starting with the toll prefix “1” would be expected to be 11 digits long. Calls will be cut through to the public network only after the expected number of digits have been received.
117-00	Prefix Number n, **Hold**,	n =	Up to 7 digits (Wild Cards n and x)	The initial, identifying external digits. 1 to 7 digits may include wild cards “x” and “n” where x = 0~9 and n = 2~9.
117-01	Digits to Follow **FB01**, n1, **Hold**, **Hold**	n1 =	1~64	The total number of digits in a number beginning with the Prefix Number above.

Table 13-13 Program 117

Button	Sequence	Value(s)		Summary
120	Tenant Data Assignment **120**, **Hold**			This program enables you to select an Attendant or Night Bell to ring when dialing 0 in Day 1, Day 2 or Day 3 mode for up to eight different Tenants. You can also assign the general purpose relay to the Night Bell in this program.
120-00	Tenant Number n, **Hold**,	n =	1~8. No Data (Default)	Select the Tenant number for which the daily schedules will be configured.
120-01, 120-02, 120-03	Dial 0 Call Day 1, 2, or 3 Dst Type **FB01**, n=1 or 3, **Hold** or (see next row)	n =	1. No Data (default) 2. Dialing Digits (see "n=2" below) 3. Night Bell	Select to call an Attendant or select to ring the Night Bell when dialing the Tenant Attendant Access Code in the Day1, Day 2, or Day 3 mode for this Tenant. The Tenant Attendant Access Code must be assigned in Prg 102. If it should be "0," the Attendant Console Group Access Code, which is "0," must be deleted.
	FB01, n=**2** (Dialing Digits), **Spkr**. DEST=enter values. **Hold**	DEST =	Up to 32 digits for each Day Mode selected (default = noData)	Enter the PDN of the Attendant (BATI) to ring when dialing Tenant Attendant Access Code in Day, Day2, or Day 3 mode.
120-04	Night Mode Relay **FB04**, n, **Hold**	n =	BIOU 1 = relay 1~4 BIOU 2 = relays 5~8 ACTU = relay 5	Enter the General Purpose relay number assigned to the Night Bell. BIOU relays 1~8. This operation activates the relay continuously when the system is in the night mode.
120-05	Night Bell Relay **FB05**, n, **Hold**	n =	BIOU 1 = relay 1~4 BIOU 2 = relays 5~8 ACTU = relay 5	Enter the General Purpose relay number assigned to the Night Bell. BIOU relays 1~8. This operation activates the relay when a CO line or DID rings when the system is in night mode. The CO or DID line must be assigned to ring the night bell.

200 Series Programs

Table 13-14 Programs 200~202

Button	Sequence	Value(s)	Summary
200	Station Data **200**, **Hold**		This command assigns stations to the system.
200-00	Primary DN n, **Hold**	n = Up to 5 digits	Primary DN (enter an existing PDN or enter a PDN you wish to create for a new station).
200-01	PDN Equipment Number **FB01**, xxyyzz, **Hold**	xx = Cabinet 1 (CTX100), 01~02 (CTX670 Basic), 01~07 (CTX670 Exp.) yy = Slot (01~10) zz = Circuit (01~16)	Enter the PDN equipment number (xxyyzz). This is the cabinet, slot, and circuit number of the ADKU, BDKU/BDKS, PDKU, or RSTU interface PCB to which the the PDN is, or should be assigned. Example: If the PDN should be a assigned to a BDKU in cabinet 5, slot 2, circuit 3; enter 050203. Cabinet numbers: • CTX100: Select 01 for Base and Expansion cabinet. • CTX670: Select 01 for Base and 02~07 respectively for each Expansion cabinet. Slot numbers: • CTX100: Select 01~04 for Base slots and 05~08 for Expansion slots. • CTX670: Select 01~08 for Base slots and 01~10 for Expansion slots.
200-02	Station Type **FB02**, n, **Hold**	n = 1. DKT 2. SLT	Station Type. **Note** Select SLT to set up voice mail.
200-03	Circuit Type **FB03**, n, **Hold**	n = 1. Extension 2. Voice Mail 3. Announce (Not used in USA or Canada)	Extension: Should be assigned to PDNs the are associated with Digital or Standard telephones Voice Mail: Should be assigned to PDNs associated with Voice Mail RSTU circuits.
200-04	Station COS • Day1 COS • Day2 COS • Night COS **FB04**, n, **Spkr**, n, **Spkr**, n, **Hold**	n = 1~32	COS for Day1. COS for Day2. COS for Night.
200-05	Station DRL • Day1 DRL • Day2 DRL • Night DRL **FB05**, n, **Spkr**, n, **Spkr**, n, **Hold**	n = 1~16	DRL for Day1 (Used for Credit card calling). DRL for Day2. DRL for Night.
200-06	Station FRL • Day1 FRL • Day2 FRL • Night FRL **FB06**, n, **Spkr**, n, **Spkr**, n, **Hold**	n = 1~16	FRL for Day1. FRL for Day2. FRL for Night.
200-07	LCR Group **FB07**, n, **Hold**	n = 1~16	Station LCR Group Number.

Table 13-14 Programs 200~202 *(continued)*

Button	Sequence	Value(s)	Summary
200-08	Station QPL • Day1 QPL • Day2 QPL • Night QPL **FB08**, n, **Spkr**, n, **Spkr**, n, **Hold**	n = 1~16	QPL for Day1. QPL for Day2. QPL for Night.
200-09	Station Name **FB09**, n, **Hold**	n = Up to 8 digits	Station Name to be displayed on LCD (Cannot be entered from DKT in R1).
200-10	Call Waiting Tone for Offhook Camp-on **FB10**, n, **Hold**	n = 1. None 2. Singular 3. Continuous	Call Waiting Tone of Offhook Camp-on.
200-11	Dialing Progress Tone **FB11**, n, **Hold**	n = 1. Dial Tone 2. Entry Tone 3. Quiet Tone	Type of Tone to hear after dialing LCR access code.
200-12	System Call Forward Group Number **FB12**, n, **Hold**	n = 0~4 (CTX100) 0~10 (CTX670 Basic) 0~32 (CTX670 Exp.)	System Call Forward group number.
200-13	Call Pickup **FB13**, n, **Hold**	n = 1. Permitted 2. Group Only 3. Not Permitted	The station privilege to activate Call Pickup.
200-14	Bearer Capability – 3.1KHz **FB14**, n, **Hold**	n = 1. Audio 2. Speech	ISDN Bearer Capability the PSTN is expecting from non ISDN stations. 3.1kHzAudio or Speech.
200-15	Display DN **FB15**, n, **Hold**	n = Up to 5 digits	The number displayed on the calling telephone that rings this PDN number. The number displayed on the called telephone when calling from any DN on this telephone. This number will be overridden by PRG209, 04 (if assigned) and if the PDN is in a hunt group.
200-16	Caller Emergency Service Identification (CESID) **FB16**, n, **Hold**	n = Up to 16 digits	E911 Calling Party Information identifier for this station (CESID). **Note** CESID should be 10 digits or less for Centralized Automatic Message Accounting (CAMA) E911 trunk. PRI E911 allows pot 16 digits.
200-17	Emergency Call Group **FB17**, n, **Hold**	n = 1~8	The Emergency call group that this station belongs to.
200-18	Remote CF/DND Password **FB18**, n, **Hold**	n = Up to 4 digits	Password to remotely set or cancel DND or station Call Forward from another CTX station, or for Call Forward only, from a external DISA line. **Note** DND can not be set/canceled remotely from a DISA line.
200-19	VMID Code SMDI **FB19**, n, **Hold**	n = Up to 16 digits	Enter the voice mail box number that should answer calls when this PDN calls voice mail, or when this PDN is called and then forwards to voice mail (this number is prefixed by codes in Program 579, 11~16). Valid entries: digits 0~9, * and #, maximum 10 characters. This VMID code is sent to the voice mail device in SMDI packets or DTMF tones on direct calls to voice mail from the PDN and on calls to the PDN that forward to voice mail (see Program 580 for SMDI or DTMF choice).
200-22	Message Waiting to VM Port **FB22**, n, **Hold**	n = Up to 5 digits	Message Waiting Center DN.

Table 13-14 Programs 200~202 *(continued)*

Button	Sequence	Value(s)	Summary
200-23	Travelling COS Change **FB23**, n, **Hold**	n = 1. Enable 2. Disable	Privilege to change the Travelling Class of Service Override Code.
200-24	TGAC Override **FB24**, n, **Hold**	n = 1. Enable 2. Disable	Trunk Group Access Code Over Ride (for Attendant console) (Not available in R1).
200-25	Service Tones **FB25**, n, **Hold**	n = 1. Enable 2. Disable	Disable Services Tone for Data Privacy. Service tone, such a Call Waiting Tone, should be disabled for modems, FAXes, and similar devices.
200-26	Call Waiting and ROB Tone **FB26**, n, **Hold**	n = 1. Enable 2. Disable	Enable/Disable the station to receive Call Waiting (Campon) and Ring Over Busy Tone. CW tone is always two beeps. ROB tone can be two beeps or continuous as set in PRG 204, 27.
200-27	Name Display **FB27**, n, **Hold**	n = 1. Enable 2. Disable	Privilege to put the user name in the list display of Large LCD (Directory Assistance)
200-28	Door Ovr DND **FB28**, n, **Hold**	n = 1. Override 2. Do not Override	Enable DND override by door phone.
200-29	Emergency Ringdown **FB29**, n, **Hold**	n = 1. Enable 2. Disable	Enable Emergency ringdown.
200-30	Change System Speed Dial **FB30**, n, **Hold**	n = 1. Enable 2. Disable	Privilege to use System Speed Dial.
200-31	Network COS **FB31**, n, **Hold**	n = 1~32	Network COS number.
200-32	Auto OCA **FB32**, n, **Hold**	n = 1. Enable 2. Disable	OCA occurs automatically when making a call to a busy station that allows OCA calls to be received.
200-33	Originate OCA **FB33**, n, **Hold**	n = 1. Enable 2. Disable	The privilege to make OCA calls to other stations.
200-34	RSTU Supervision **FB34**, n, **Hold**	n = 1. Received 2. Not Received	Devices connected to RSTU circuits that do not automatically hang up, and connect to CO lines that do not provide disconnect supervision, should be set with “Not Received.” This enables the auto disconnect Tandem timer in PRG 104, PB06 for these types of Connections.
200-35	Station Speed Dial Bins **FB35**, n, **Hold**	n = 0~100	The number of station speed dial bins allocated to this station (maximum=100 per station).
200-39	CO Park & Hold **FB39**, n, **Hold**	n = 1. Enable 2. Disable	Enabled: When this station parks a line call, CO or GCO buttons of the parked line that appear on other stations will be on hold. This will allow the other stations to press the CO or GCO button to pickup the parked call. Disabled: When this station parks a line call, CO or GCO buttons of the parked line that appear on other stations will appear busy. This will prevent the other stations to press the CO or GCO button to pickup the parked call.
200-40	Stutter Dial Tone **FB40**, n, **Hold**	n = 1. Enable 2. Disable	This feature is available only with CTX Release 1.3 or higher software and with CTX WinAdmin Release 1.3 or higher software. Enable: This station will receive stuttered dial tone when it has a station-to-station or Voice Mail message waiting, or if DND is set. This feature is available with Strata CTX R1.3 software. Disable: This station will receive normal dial tone when it has a station-to-station or Voice Mail message waiting, or if DND is set.

Table 13-14 Programs 200~202 *(continued)*

Button	Sequence	Value(s)	Summary
200-41	Activate Message Waiting **FB41**, n, **Hold**	n = 1. Enable 2. Disable	This feature is available only with CTX Release 1.3 or higher software and with CTX WinAdmin Release 1.3 or higher software. Enable: This station is allowed to activate station-to-station message waiting on other stations by dialing the other station number plus 7, 8 or 9; or, by pressing the Msg key. This feature is available with Strata CTX R1.3 software. Disable: This station cannot activate station-to-station message waiting on other stations by dialing the station number plus 7, 8 or 9. **Notes** • When disabled, digital telephones are still allowed to activate station-to-station message waiting by pressing the Msg button. • This parameter does not apply to Voice Mail ports to use the special Message Waiting access codes.
200-42	Tenant Number **FB42**, n, **Hold**, **Hold**	n = 1. 1~8. (Default = 1)	Enter the Tenant number to which this PDN should be assigned.
201	Station Delete **201**, **Hold**		This command deletes stations.
201-01	Primary DN **FB01**, n, **Hold**, **Hold**		PDN or PhDN to be deleted.
202	ISDN BRI Station **202**, **Hold**		This command assigns ISDN BRI Stations.
202-00	Primary DN n, **Hold**.	n = Up to 5 digits	ISDN BRI circuit Prime Directory Number.
202-01	Equipment **FB01**, xxyyzz, **Hold**	xx = Cabinet 1 (CTX100), 01~02 (CTX670 Basic), 01~07 (CTX670 Exp.) yy = Slot 01~8 (CTX100), 01~10 (CTX670) zz = Circuit (01~04)	Enter the BRI equipment number assigned to this PDN. This is the cabinet, slot, and circuit number of the RBUU/RBUS or RBSU/RBSS interface PCB to which the the PDN is, or should be, assigned. Enter data as xxyyzz: Example: If the PDN should be a assigned to a BDKU in cabinet 5, slot 2, circuit 3; enter 050203. Cabinet numbers: • CTX100: Select 01 for Base and Expansion cabinet. • CTX670: Select 01 for Base and 02~07 respectively for each Expansion cabinet. Slot numbers: • CTX100: Select 01~04 for Base slots and 05~08 for Expansion slots. • CTX670: Select 01~08 for Base slots and 01~10 for Expansion slots.
202-02	ISDN Channel Group **FB02**, n, **Hold**	n = 1~32 (CTX100) 1~48 (CTX670 Basic) 1~128 (CTX670 Exp.)	Channel Group Number.
202-03	ISDN Protocol **FB03**, n, **Hold**	n = 1. National ISDN 2. ETSI 3. TTC 4. National ISDN - Nortel	Protocol
202-04	Type Connection **FB04**, n, **Hold**	n = 1. Point to Point 2. Point to Multi Point	Connection format

Table 13-14 Programs 200~202 *(continued)*

Button	Sequence	Value(s)	Summary
202-05	BRI Station COS • Day1 COS • Day2 COS • Night COS **FB05**, n, **Spkr**, n, **Spkr**, n, **Hold**	n = 1~32	COS for Day1 COS for Day2 COS for Night
202-06	BRI Station DRL • Day1 DRL • Day2 DRL • Night DRL **FB06**, n, **Spkr**, n, **Spkr**, n, **Hold**	n = 1~16	DRL for Day1 DRL for Day2 DRL for Night
202-07	BRI Station FRL • Day1 FRL • Day2 FRL • Night FRL **FB07**, n, **Spkr**, n, **Spkr**, n, **Hold**	n = 1~16	FRL for Day1 FRL for Day2 FRL for Night
202-08	LCR Group **FB08**, n, **Hold**	n = 1~16	LCR Group Number
202-09	BRI Station QPL • Day1 QPL • Day2 QPL • Night QPL **FB09**, n, **Spkr**, n, **Spkr**, n, **Hold**	n = 1~16	QPL for Day1 QPL for Day2 QPL for Night
202-10	Speech Capability **FB10**, n, **Hold**	n = 1. Enable 2. Disable	Enable Bearer Capability Speech. See "BRI Bearer Capability of ISDN" on page 13-34.
202-11	3.1 KHz Audio **FB11**, n, **Hold**	n = 1. Enable 2. Disable	Enable Bearer Capability 3.1kHzAudio. See "BRI Bearer Capability of ISDN" on page 13-34.
202-12	7 KHz Audio **FB12**, n, **Hold**	n = 1. Enable 2. Disable	Enable Bearer Capability 7kHzAudio. See "BRI Bearer Capability of ISDN" on page 13-34.
202-13	64Kbps Unrestricted **FB13**, n, **Hold**	n = 1. Enable 2. Disable	Enable Bearer Capability unrestricted digital Information 64kbps. See "BRI Bearer Capability of ISDN" on page 13-34.
202-14	56Kbps Unrestricted **FB14**, n, **Hold**	n = 1. Enable 2. Disable	Bearer Capability unrestricted digital Information 56kbps.
202-15	2 x 64Kbps Unrestricted **FB15**, n, **Hold**	n = 1. Enable 2. Disable	Bearer Capability unrestricted digital Information 2x64kbps.
202-16	B Channel Selection **FB16**, n, **Hold**	n = 1. Exclusive 2. Preferred 3. Any Channel	B Channel selected originating method.
202-17	Idle B Channel Selection **FB17**, n, **Hold**	n = 1. Forward Cyclic 2. Backward Cyclic 3. Forward Terminal 4. Backward Terminal	Idle B Channel selection method.
202-18	Interdigit Timer 1 **FB18**, n, **Hold**	n = 1~180	Interdigit1 Timer
202-19	Interdigit Timer 2 **FB19**, n, **Hold**	n = 1~180	Interdigit2 Timer

Table 13-14 Programs 200~202 *(continued)*

Button	Sequence	Value(s)	Summary
202-20	CESID **FB20**, n, **Hold**	n = Up to 16 digits	Enter the Caller Emergency Services Identification (CESID) for E911 calls.
202-21	Number Voice Calls Allowed **FB21**, n, **Hold**	n = 1. One 2. Two	Voice Call Allowed Number for Interface.
202-22	Service Tone Permission **FB22**, n, **Hold**	n = 1. Enable 2. Disable	Service Tone Permission.
202-23	TGAC Override **FB23**, n, **Hold**	n = 1. Enable 2. Disable	TGAC Override.
202-24	Change System Speed **FB24**, n, **Hold**	n = 1. Enable 2. Disable	Permission to register System Speed Dial.
202-25	Network COS **FB25**, n, **Hold**	n = 1~32	Network COS index.
202-26	Additional DN2 **FB26**, n, **Hold**	n = Up to 5 digits	Additional DN2.
202-27	Additional DN3 **FB27**, n, **Hold**	n = Up to 5 digits	Additional DN3.
202-28	Additional DN4 **FB28**, n, **Hold**	n = Up to 5 digits	Additional DN4.
202-29	Additional DN5 **FB29**, n, **Hold**	n = Up to 5 digits	Additional DN5.
202-30	Additional DN6 **FB30**, n, **Hold**	n = Up to 5 digits	Additional DN6.
202-31	Additional DN7 **FB31**, n, **Hold**	n = Up to 5 digits	Additional DN7.
202-32	Additional DN8 **FB32**, n, **Hold**	n = Up to 5 digits	Additional DN8.
202-33	Auto OCA **FB33**, n, **Hold**	n = 1. Enable 2. Disable	OCA occurs automatically when making a call to a busy station that allows calls to be received.
202-34	Originate OCA **FB34**, n, **Hold**	n = 1. Enable 2. Disable	The privilege to make OCA calls to other stations.
202-35	Station SpDial Bins **FB35**, n, **Hold**	n = 1~100 (in intervals of 10)	The number of station speed dial bins allocated to this station (maximum=100).
202-38	MW Stutter Dial Tone **FB38**, n, **Hold**, **Hold**	n = 1. Enable 2. Disable	Enable: This station will receive stuttered dial tone when it has a station-to-station or Voice Mail message waiting. Disable: This station will receive normal dial tone when it has a a station-to-station or Voice Mail message waiting.
202-39	Tenant Number **FB39**, n, **Hold**, **Hold**	n = 1~8 (default = 1)	Enter the Tenant number to which this PDN should be assigned.

Table 13-15 BRI Bearer Capability of ISDN

Bearer Services			Bellcore Nat'l ISDN	ETSI	TTC
Circuit Mode	Speech		X	X	X
	3.1kHz Audio		X	X	X
	7kHz Audio			X	X
	Unrestricted Digital Information	64 kbps	X	X	X
		Rate adaptation from 56 kbps	X		
		2x64		X	X

Table 13-16 Programs 203~204

Button	Sequence	Value(s)	Summary
203	Change DN **203**, **Hold**		This command changes DN.
203-00	Primary DN n, **Hold**	n = Up to 5 digits	Enter DN to change.
203-01	Enter new DN **FB01**, n1, **Hold**, **Hold**	n1 = Up to 5 digits	Enter new DN.
204	DKT Parameters **204**, **Hold**		This command assigns DKT digital telephone data.
204-00	Primary DN n, **Hold**	n = Up to 5 digits	Primary DN
204-01	Station Type **FB01**, n, **Hold**	n = 1. Extension 2. Attendant	For CTX R1 this must be set to "Extension." The "Attendant" option is not available for this release.
204-02	Key Strip Pattern **FB02**, n, **Hold**	n = 1. Pattern1 2. Pattern2 3. Pattern3 4. None	Default key strip patterns for digital telephones. The selected Pattern is applied to the "Key Strip Type" parameter (DKT3014 uses only Pattern 1 or None). • None - applies PDN to button 01 and blank to all other buttons. • Pattern 1 - applies PDN to button 01, plus line buttons and DND. • Pattern 2 - applies PDN to button 01, plus line buttons, One-Touch buttons and DND. • Pattern 3 - applies PDN to button 01 and blank to all other buttons.
204-03	Key Strip Type **FB03**, n, **Hold**	n = 1~24	Apply 1, 3, 10, 14, or 20 button keystrip type to digital telephones. • 1 and 3 button keystrips apply to DKT2001 and DKT3001. • 10 button keystrips apply to DKT2010 and DKT3010. • 14 button keystrips apply to the Large LCD DKT3014 • 20 button keystrips apply to DKT2020 and DKT3020.
204-04	Add on Modules **FB04**, n, **Hold**	n = 1. None 2. One Unit 3. Two Units	The Number of Add-on Modules assigned to this station.
204-05	Tone 1st /Voice 1st **FB05**, n, **Hold**	n = 1. Tone 2. Voice	Set PDN to have Tone First or Voice First signaling when called. For each iES32 PDN, set to "Tone First", if set to Voice First iES32 will not answer.
204-06	OCA Type **FB06**, n, **Hold**	n = 1. Handset 2. Speaker	Select the OCA type. This field must be programmed with Auto OCA Originate below.

Table 13-16 Programs 203~204 *(continued)*

Button	Sequence	Value(s)	Summary
204-09	Handsfree MIC Setting **FB09**, n, **Hold**	n = 1. Enable 2. Disable	If you call a station configured for Voice First signalling, you can use this parameter to enable the called parties microphone from your DKT.
204-10	Handsfree Tone **FB10**, n, **Hold**	n = 1. Enable 2. Disable	If you call a DKT configured for Voice First signalling, you can use this parameter to send a splash tone to the called party.
204-11	Ext. Ring Repeat **FB11**, n, **Hold**	n = 1. Enable 2. Disable	Enable repetitive ringing for incoming CO/PBX/Centrex signals. Disabling this parameter defaults to standard CO ringing pattern (1 second on/3 seconds Off).
204-13	Ringing Line Preference **FB13**, n, **Hold**	n = 1. Idle 2. Ringing 3. Prime 4. No Preference 5. Prime and Idle 6. Prime and Ringing 7. Ringing and Idle	Select Off Hook Preference. When a digital telephone user goes off hook, presses the Spkr Button or dials a digit while the telephone is idle (Hot Dial Pad), the telephone will select an idle PDN or Line button, or answer an incoming call, according to the preferences set in this command. This command works in conjunction with the "14 PDN/Line preference" and "15 Call Answer Preference" programs. The possible values are described as follows: • Idle – The telephone will select and idle DN or Line button depending on the "14 PDN or Line preference" choice. In either case priority is always the lowest numbered button that is idle. The telephone will not answer ringing calls automatically. • Ringing – The telephone will answer a ringing call (any PDN, secondary DN, PhDN, or any Line type button) by call type or longest ringing button depending on the "15 Call Answer Preference" choice. The telephone will not automatically select a DN or Line button when going off hook to originate a call. • Primary DN – The telephone will automatically try to select the PDN button, if idle or ringing, no matter what the status is of other buttons on the telephone. • No Preference – The telephone will not select any button when the user goes off hook or presses the Spkr button. This selection will also disable the telephone's Hot Dial Pad feature. • Primary DN and Idle – The telephone will automatically try to select the PDN button, if idle or ringing. If the PDN is busy the telephone will select an idle Line button (14 PDN or Line preference - Line Preference) or another idle DN button (14 PDN or Line preference - PDN Preference). • Primary DN and Ringing – The telephone will automatically try to select the PDN button, if idle or ringing. If the PDN is busy the telephone will select a ringing Line button (14 PDN or Line preference - Line Preference) or a ringing DN button (14 PDN or Line preference - PDN Preference). • Ringing and Idle – The telephone will always answer any ringing call according to "15 Call Answer Preference" . If a call is not ringing it will select and idle Line button (14 PDN or Line preference - Line Preference) or idle DN button (14 PDN or Line preference - PDN Preference).
204-14	Off-hook Preference **FB14**, n, **Hold**	n = 1. CO Key 2. DN Key	Offhook preference button Type. Off hook ringing selections are also based on "15 Call Answer Preference" choices. • CO Line buttons - Line buttons (any type CO, Pooled or Group CO line button) have priority over DN buttons with "13 Off Hook Preference" choices. The lowest numbered line button on the telephone has priority over other line buttons for idle selection. • Primary DN button - DN buttons (any type PDN, Secondary DN or PhDN button) have priority over Line buttons with "13 Off Hook Preference" choices. The PDN button has first priority for idle selection, the lowest numbered DN button on the telephone has priority over other DN buttons for idle selection if the PDN button is busy.

Table 13-16 Programs 203~204 *(continued)*

Button	Sequence	Value(s)	Summary
204-15	Ringing Preference **FB15**, n, **Hold**	n = 1. Longest 2. Call Type	Ringing call answer preference. • Longest Ringing - any call type - Calls are answered in order of the longest ringing line no matter what type of call (FIFO). • Longest Ringing - by call type priority - Call Type priority is applied to the longest ringing button. Call Type Priorities are fixed in software as shown below: 1. Emergency Calls 2. Hands Free Calls (after it is switched to ringing by the caller). 3. ACD calls 4. Recalls (Hold recall, Automatic call back, ABR, etc.) 5. External Calls (DID, DIT DISA line calls etc.) 6. Internal Calls (station, Attendant, Tie line, door phone, etc.)
204-16	Text Message Display **FB16**, n, **Hold**	n = 1. Immediate 2. Not Immediate	Select whether to display an LCD text message. • Immediate - displays the message. • Not immediate - does not display the message.
204-17	Call History Memory **FB17**, n, **Hold**	n = 0~100	Enter the number of calls to be stored in memory for this station.
204-18	DTMF Back Tone **FB18**, n, **Hold**		Not Used, has no effect on system operation
204-19	Continuous DTMF **FB19**, n, **Hold**	n = 1. Continuous 2. Not Continuous	Enable / Disable Continuous DTMF. For each iES32 PDN, set to “not Continuous”, if set to “Continuous”, outdial notification to pagers and calls to AMIS nodes will not function properly. Possible values: Enable, Disable
204-20	Display Language **FB20**, n, **Hold**	n = 1. English 2. British English 3. French	Select the LCD Display Language.
204-21	Adapter **FB21**, n, **Hold**	n = 1. None 2. BPCI 3. BATI	Select the Adapter Type (Desktop OAI or Attendant Console). • None (default), BPCI or BATI • BPCI – for USB interface. • BATI – for PC Attendant Console Interface.
204-22	Blind Transfer **FB22**, n, **Hold**	n = 1. Leave 2. Separate	Set Blind Transfer Action (Attendant Type Only).
204-23	Mail Box Selection **FB23**, n, **Hold**	n = 1. Auto 2. Manual	Select the method to enter the destination Mailbox for Call Recording. If set to “Auto” CTX uses the VM ID of the station initiating the record function. **Notes** • The DN assigned as the MSG center in PROG 200 is used to call the VM port or Hunt group (PROG 200 FK 22). • When set to “Auto” the VM-ID of the station initiating the record function is sent to Stratagy ES as the destination mailbox. • When set to “Manual Input” the user may enter any valid Mailbox followed by the “#” sign. If the user Presses “#” without additional data the CTX will send the VMID of the originating station.
204-24	MIC Init. Value **FB24**, n, **Hold**	n = 1. On 2. Off	Turn on the microphone automatically when making a speaker phone call. The microphone must be enabled.
204-25	Microphone **FB25**, n, **Hold**	n = 1. Enable 2. Disable	Enable microphone.
204-26	Speaker Mode Tones **FB26**, n, **Hold**	n = 1. Yes 2. No	Enable telephone to receive Call Waiting (Camp-on) and Ring Over Busy Tone while on a speaker phone call.

Table 13-16 Programs 203~204 *(continued)*

Button	Sequence	Value(s)	Summary
204-27	Ring Over Busy Cycles **FB27**, n, **Hold**	n = 1. Two Cycles 2. Continuous	Set ROB to ring two times or continuously. **Note** See PRG200, 26 to enable ROB to be sent to individual telephones.
204-28	Attd Overflow Dest. **FB28**, n, **Hold**	n = Up to 32 digits	Select overflow destination for attendant.
204-29	Trunk Test and Verify **FB29**, n, **Hold**	n = 1. Yes 2. No	Allow Trunk Tests and Verification.
204-30	Auto Line Hold **FB30**, n, **Hold**	n = 1. Enable 2. Disable	Enable Automatic Line Hold. This parameter allows a station to “line hop” from one call to another automatically by placing the first call on hold.
204-31	Call Progress Dependency **FB31**, n, **Hold**, **Hold**	n = 1. Terminal Mode 2. Line Mode (default)	Allows the telephone to be set to ring or not ring when busy on a call. If a telephone has multiple DNs (PDN + PhDNs), set this parameter to the Line Mode. Terminal Mode: Callers will receive busy tone when any DN or CO line button on the telephone is in-use. If Call Forward Busy/No Answer is set on the telephone a call to the telephone will forward immediately when a call is delivered while the user is talking on any DN or CO line button. Line Mode: Calls will ring the telephone when the user is talking on a line or DN button if the telephone has multiple DN or line buttons in a hunt configuration. If Call Forward Busy/No Answer is set, the telephone will Ring No Answer and then forward when a call is delivered to the telephone while the user is talking on a DN or CO line button.

Feature Button Patterns

The following tables show the various feature button patterns available for **FB02** above.

Table 13-17 20 Button (when FB03 value is 20)

	PATTERN1	PATTERN2	PATTERN3	PATTERN4
FB01	Primary DN	Primary DN	Primary DN	None
FB02	CO 1	CO 1	No Data	
FB03	CO 2	CO 2		
FB04	CO 3	CO 3		
FB05	CO 4	CO 4		
FB06	CO 5	CO 5		
FB07	CO 6	CO 6		
FB08	CO 7	CO 7		
FB09	CO 8	CO 8		
FB10	CO 9	CO 9		
FB11	CO 10	CO 10		
FB12	CO 11	CO 11		
FB13	CO 12	CO 12		
FB14	CO 13	Single Touch Button		
FB15	CO 14			
FB16	CO 15			
FB17	CO 16			
FB18	CO 17			
FB19	CO 18			
FB20	Do Not Disturb	Do Not Disturb		

Table 13-18 10 Button (when FB03 value is 10)

	PATTERN1	PATTERN2	PATTERN3	PATTERN4
FB01	Primary DN	Primary DN	Primary DN	None
FB02	CO 1	CO 1	No Data	
FB03	CO 2	CO 2		
FB04	CO 3	CO 3		
FB05	CO 4	CO 4		
FB06	CO 5	Single Touch Button		
FB07	CO 6			
FB08	CO 7			
FB09	CO 8			
FB10	Do Not Disturb	Do Not Disturb		

Table 13-19 14 Button (when FB03 value is 14)

	PATTERN1	PATTERN2	PATTERN3	PATTERN4
FB01	Primary DN	Primary DN	Primary DN	None
FB02	CO 1	No Data	No Data	
FB03	CO 2			
FB04	CO 3			
FB05	CO 4			
FB06	CO 5			
FB07	No Data			
FB08	CO 7			
FB09	CO 8			
FB10	CO 9			
FB11	CO 10			
FB12	CO 11			
FB13	Do Not Disturb			
FB14	No Data			

Table 13-20 Program 205

Button	Sequence	Value(s)	Summary
205	DKT Feature Keys. **205**, **Hold**		The Feature Key assignment allows each key on the telephone to be addressed and assigned a code representing the function to be performed. Some feature keys require additional parameters to completely define the key. For example, a Phantom DN needs a directory number, ringing assignment, and the tone pitch when ringing occurs.
205-00	Primary DN n, **Hold**	n = 0~99999	Enter a Primary DN number to program FBs. **Note** FB04 *Add on Modules* in Program 204 must be set to One or Two.

Table 13-20 Program 205

Button	Sequence	Value(s)	Summary
205-01	Key Number **FB01~FB20**		Press the desired FB to program. **Note** On the 14-button telephones, the left side buttons are FB01~FB07 and the right side buttons are FB11~FB17.
	Code n, **Spkr**	n =	Select Desired Feature Code. See "Flexible Button Assignment Feature Code Table" on page 13-42. 100 - PDN 110 - PhDN 120 - CO 130 - GCO 140 - Pooled Line Button 540 - Door Lock Cancel 560 - PhDN Message Waiting 610 - DSS Button 900 - Start Application
	Parameter 1 n1, see Note **Note** For Feature Code 560, 610 and 900, make your selection and push Spkr for further options.	n1 = See "Feature/Button Code Parameter Assignments" on page 13-41.	This Parameter is required for all Feature Codes.
	Parameter 2 n2, see Note **Note** For Feature Code 100, make your selection and push Spkr for further options.	n2 = See "Feature/Button Code Parameter Assignments" on page 13-41.	This Parameter is required for all Feature Codes except Feature Codes 560, 610 and 900.
	Parameter 3 n3, see Note **Note** For Feature Code 110 and 140, make your selection and push Spkr for further options.	n3 = See "Feature/Button Code Parameter Assignments" on page 13-41.	This Parameter is required for Feature Codes 110, 120, 130 and 140 only.
	Parameter 4 n4, see Note **Note** For Feature Code 120, make your selection and push Spkr for further options.	n4 = See "Feature/Button Code Parameter Assignments" on page 13-41.	This Parameter is required for Feature Codes 120 and 130 only.
	Parameter 5 n5, see Note **Note** For Feature Code 130, make your selection and push Spkr for further options.	n5 = See "Feature/Button Code Parameter Assignments" on page 13-41.	This Parameter is required for Feature Codes 130 only.

Table 13-21 Feature/Button Code Parameter Assignments

Feature	Button Code	Sub-parameters	Description	Values	LCD Prompt
PDN	100	Parameter 1	Set ring pattern.	1. No Ring 2. Immediate 3. Delay 1 4. Delay 2	
		Parameter 2	Set ring tone.	Enter a value of 1~4.	PITCH=
PhDN	110	Parameter 1	Set PhDN.	Maximum 5 digit number.	DN=
		Parameter 2	Set ring pattern.	1. No Ring 2. Immediate 3. Delay 1 4. Delay 2	
		Parameter 3	Set ring tone.	Enter a value of 1~4.	PITCH=
CO	120	Parameter 1	Set CO number.	Enter a value of 0~264.	LINE NO=
		Parameter 2	Set ring pattern.	1. No Ring 2. Immediate 3. Delay 1 4. Delay 2	
		Parameter 3	Set ring tone.	Enter a value of 1~4.	PITCH=
		Parameter 4	Owner DN.	Max 5 characters	OWNER DN=
GCO	130	Parameter 1	Set GCO number.	Enter a value of 0~128.	GCO NO=
		Parameter 2	GCO Index.	Enter a value of 0~128.	INDEX=
		Parameter 3	Set ring pattern.	1. No Ring 2. Immediate 3. Delay 1 4. Delay 2	
		Parameter 4	Set ring tone.	Enter a value of 1~4.	PITCH=
		Parameter 5	Owner DN.	Max 5 characters	OWNER DN=
Pooled Line Button	140	Parameter 1	Pooled Line number.	Enter a value from 0~128.	POOL NO=
		Parameter 2	Set ring pattern.	1. No Ring 2. Immediate 3. Delay 1 4. Delay 2	
		Parameter 3	Set ring tone.	Enter a value of 1~4.	PITCH
Door Lock Cancel	540	Parameter 1	Door Lock number.	Enter a value from 1~10.	NUMBER=
PhDN Message Waiting	560	Parameter 1	Set PhDN number.	Max 5 characters.	PH DN=
DSS Button	610	Parameter 1	DSS Button PDN number. Up to 7 digits with CTX Release 1.3 or higher software. Up to 5 digits for releases earlier than 1.3.	You cannot set the same DN in DSS Key for one station.	PDN=
Start Application	900	Parameter 1	Enter Application number.	Enter a value between 0~99.	APL NO=

Table 13-22 Flexible Button Assignment Feature Code Table

Feature	Buttons Code
No Data/Delete Code	**000**
Account Code (Frequently used codes)	**660**
Attendant Console Group Access Code	n/a
Automatic Attendant (The extension terminal having the simplified attendant console attribute must set at least the ATT-ANSWER button)	
• Answer	**700**
• Overflow	**790**
Automatic Busy Redial	**150**
Automatic Callback Cancel	**160**
BGM	**530**
Call Forward	
• All Call	**340**
• All Call (Remotely)	**350**
• Busy (External Call Activation)	**390**
• Busy CF-A (External Call Activation)	**380**
• No Answer	**360**
• No Answer (External Call Activation)	**400**
• Busy No Answer	**370**
• Busy No Answer (External Call Activation)	**420**
Call Handling	
• Cancel	**290**
• Release	**270**
• Destination Party	**310**
• Release/Answer	**280**
• Privacy	**320**
• Privacy Release	**330**
• Source Party	**300**
Call Park	
• System Orbit	**170**
Call Pickup	
• Incoming - Group Pickup	**430**
• Incoming - Directed Terminal Pickup	**440**
• Incoming - Directed Group Pickup	**450**
• Incoming - Directed DN Pickup	**460**
• On hold - Local Retrieve	**490**
• On hold - Remote Retrieve	**500**
• On hold - Outside line Retrieve	**480**
• On hold - Directed DN Retrieve	**510**
• On hold and Incoming - Any External Call	**470**
• On hold and Incoming -	**520**
Calling Number Identification (CLID)	**580**
Dialing	
• Dial Out	**620**
Do Not Disturb (DND)	**180**

Table 13-22 Flexible Button Assignment Feature Code Table *(continued)*

Feature	Buttons Code
Door Lock Cancel	**540**
Flash - Short	**200**
Flash - Long	**210**
• Attendant	**820**
• Supervised	**830**
Microphone Cut Off (MCO)	**840**
Message Waiting	
• Phantom (PhDN) Message Waiting	**560**
Night Transfer	**600**
Paging	
One Touch Button	**570**
• Page All Groups	**220**
• Page Individual Groups	**230**
• Emergency Page - Individual Group	**250**
• Emergency Page - All Groups	**240**
• Answer Feature	**590**
Position Busy	**800**
Programming Mode (Enter User Programming Mode)	**650**
Split (Conference Split)	**860**
Speed Dial (register Speed Dial)	**260**
Start Application	**900**
Trunk Test	**810**
Voice Mail	
• Auto Voice Mail Playback	**640**
• Auto Voice Mail Record	**630**
• Call Monitor	**870**

Notes

1. T = Telephone type PCB
2. L = CO line type PCB
3. * = Allowed T1/PRI slots
4. The Base cabinet allows Speaker OCA and DIU data with PDKU in all slots; expansion cabinets provide these features in slots S_01~S_06 only.
5. Last available slot: B1C=S108, B2C=206, B3C=310, and B5C=510.

Table 13-23 Programs 206

Button	Sequence	Value(s)	Summary
206	Phantom DN **206**, **Hold**		This command assigns PhantomDN parameters.
206-00	Phantom DN n, **Hold**	n = Up to 5 digits	Enter Phantom DN.
206-01	Owned PDN **FB01**, n, **Hold**	n = Up to 5 digits	Set PhantomDN's Owner Station
206-02	Tone/Voice First **FB02**, n, **Hold**	n = 1. Tone First (default) 2. **Voice First**	Select from Tone first, or Voice first signaling.

Table 13-23 Programs 206 *(continued)*

Button	Sequence	Value(s)	Summary
206-03	Handsfree Answerback **FB03**, n, **Hold**	n = 1. Enable (default) 2. Disable	Whether to regard an incoming call as a hands free call
206-04	Display DN **FB04**, n, **Hold**	n = Up to 5 digits	Enter the number displayed on the calling telephone that rings this Phantom DN number. This number is overridden by the number in Program 209, FB04 (if assigned) and if the Phantom DN is in a hunt group. When calling from this Phantom DN, the number displayed on the called telephone appears in order of priority as follows: This number in Program 209, FB04 (if assigned) and if the PhDN is in a hunt group. ...or this number in Program 200, FB15 (if assigned). ...or the calling telephone's PDN.
206-05	System Call Forward **FB05**, n, **Hold**	n = 0~4 (CTX100) 0~10 (CTX670 Basic) 0~32 (CTX670 Exp.) (default = 0)	Select the System Call Forward value.
206-06	VM ID Code **FB06**, n, **Hold**	n = Up to 16 digits	Enter the voice mail box number that should answer calls when this PhDN calls voice mail; or, when this PhDN is called and then forwards to voice mail (This number is prefixed by codes in Program 579, **FB11**~**FB16**). This VMID code is sent to the voice mail device in SMDI packets or DTMF tones on direct calls to voice mail from the PhDN; and on calls to the PhDN that forward to voice mail (see Program 580 for SMDI or DTMF choice). **Note** Do not enter a VMID code in this field if this PhDN is associated with a PDN in a multiple DN hunt group (Program 209, **FB06**). The associated PDN's VMID code (Program 200, **FB19**) will be sent to voice mail.
206-09	Message Center **FB09**, n, **Hold**	n = Up to 16 digits	Enter the Message Waiting Center DN, VM Pilot Number or lowest member of VM hunt group.
206-11	Display Name **FB11**, n, **Hold**, **Hold**	n = Up to 16 digits	Select radio button for user name to be included in the list display of Large LCD (Directory Assistance).

Program 207

Note Use Program 207 only for CTX software versions R1.03 and above.

Assign the Feature button as a One Touch button using the following programs before using Program 207.

- Use Program 205 to assign DKT's feature button as a One Touch button
- Use Program 213 to assign the Add-on Module feature button as a One Touch button
- Use Program 215 to assign DSS Console feature button as a One Touch button

Button	Sequence	Value(s)	Summary
207	Single Touch Button Data Assignments **207**, **Hold**		Assigns timing parameters to Primary DNS.
207-00	Primary DN n, **Hold**	n = Up to 5 digits	Enter Primary DN of DKT.
207-01	Feature Key Number **FB01**, n, **Hold**	n = 1~2860	Enter the feature number of the one touch button that registers the operating data.

Button	Sequence	Value(s)	Summary
207-02	Registration Data (See details below) **FB02**, n, **Hold**	n = Up to 64 digits	Registration of the operating data.

1. FB00 – Primary DN.
2. FB01 – The button that you assign as the One Touch Button on the DKT.

   You can assign the One Touch Button from the DKT for the DKT FB key, Add-on Module FB key and also DSS Console FB key. Follow the steps and examples below to assign One Touch Buttons for each of the following.

➤ **To assign the One Touch Button for the DKT**

➤ The data is 1~24. Example: FB1 is 1, FB20 is 20.

➤ **To assign the One Touch Button for the Add-on Module**

➤ Use four digits (1yzz) to assign the single touch button for the Add-on Module.

1 is for Add-on Module.

y is the location of Add-on Module (1 or 2)

zz is the feature button for the Add-on Module (01~20). zz is equal to two digits.

Example 1: FB01 for Add-on Module 1 is 1101

Example 2: FB20 for Add-on Module 2 is 1220

➤ **To assign the One Touch Button for the DSS Console**

➤ Use four digits (2yzz) to assign the single touch button for the DSS Console.

2 is for the DSS console

y is the location of DSS console (1~8)

zz is the feature button for DSS console (01~60). zz is equal to two digits.

Example 1: FB01 for DSS console 1 is 2101

Example 2: FB20 for DSS console 8 is 2860

3. FB02 – The Information data for One Touch Button

   From the programming DKT.

Note You will have to use the ESC code when programming the DKT. The table below gives you One Touch Data Entry sequences.

Table 13-24 One Touch Data Entry Sequences

Data for Single Touch Button	Setting code from DKT	Display Data
1~9, 0	1~9, 0	1~9, 0
*	[Vol Up] + *	&*
#	[Vol Up] + #	&#
Mode	[Vol Up] + [Mode]	&SK01
Page	[Vol Up] + [Page]	&SK02
Scroll	[Vol Up] + [Scroll]	&SK03
Feature	[Vol Up] + [Feature]	&SK04
Msg	[Vol Up] + [Msg]	&MSG

Table 13-24 One Touch Data Entry Sequences *(continued)*

Data for Single Touch Button	Setting code from DKT	Display Data
Mic	[Vol Up] + [Mic]	&MIC
Spkr	[Vol Up] + [Spkr]	&SPK
Spdial	[Vol Up] + [Spdial]	&SPD
Redial	[Vol Up] + [Redial]	&RDL
Cnf/Trn	[Vol Up] + [Cnf/Trn]	&CNF
Vol Up	[Vol Up] + [Vol Up]	&UP
Vol Down	[Vol Up] + [Vol Down]	&DWN
DKT's FB	[Vol Up] + [FB on DKT]	&FByy (yy=01-24)
ADM's FB	[Vol Up] + [FB on ADM]	&ADxyy (x=1,2 yy=01-20)
DSS's FB	[Vol Up] + [FB on DSS]	&DSxyy (x=1-8 yy=01-60)
Note & means ESC code		

Example for Setting the data of Single Touch Button from Programming DKT

1. Choose Program 207 and press **Hold** key.
2. Choose Primary DN number and press **Hold** Key.
3. Press **FB01** and input digits for FB and press **Hold** key. In this case 12.
4. Press **FB02** and Press [**Vol Up**][**FB01**]**0425851234**.

Table 13-25 Programs 208~218

Button	Sequence	Value(s)	Summary
208	Station Timer Assignments **208**, **Hold**		Assigns timing parameters to Primary DNS.
208-00	Primary DN n, **Hold**	n = 1~640	Enter the Primary DN. Up to 5 digits (default = no value)
208-01	ABR Retry Count **FB01**, n, **Hold**	n = 5~20 (default = 15)	Enter the number of retry attempts made by ABR when dialing a busy telephone number.
208-02	ABR Retry Interval Timer **FB02**, n, **Hold**	n = Up to 5 digits (default = 60)	Select the amount of time (in seconds) ABR waits between dialing attempts.
208-03	ABR Recall Timer **FB03**, n, **Hold**	n = Up to 9 digits (default = 20)	Select the number of seconds ABR will call back the station after receiving ring back tone from the dialed number.
208-04	Hold Recall Timer **FB04**, n, **Hold**	n = Up to 5 digits (default = 60)	Select the number of seconds before a call is placed on hold recalls.
208-05	First Interdigit Timer **FB05**, n, **Hold**	n = 0~32 (default = 15)	Select the amount of time a Station has to dial after going off hook before a call is terminated (ROT is heard).
208-06	Second Interdigit Timer **FB06**, n, **Hold**	n = 0~180 (default = 5)	Select the amount of time the system waits between dialed digits before terminating a call (ROT is heard).
208-07	Ring Xfer No Answer Timer **FB07**, n, **Hold**, **Hold**	n = 0~600 (default = 32)	Select the Ring Transfer Idle station or Busy station (Camp-on) Recall Time (in seconds).

Table 13-25 Programs 208~218 *(continued)*

Button	Sequence	Value(s)	Summary
209	Station Hunting Group **209**, **Hold**		This command assigns Station Hunting Group data.
209-00	Group Number n, **Hold**	n = Up to 3 digits 1~90 (CTX100) 1~200 (CTX670 Basic) 1~640 (CTX670 Exp.) (default = no value)	Hunt Group Number.
209-01	Hunt Method **FB01**, n, **Hold**	n = 1. Serial 2. Circular (for Multiple DN hunt groups) (default) 3. Distributed (for Voice Mail hunt groups)	Select Hunt Method.
209-02	Pilot Number **FB02**, n, **Hold**	n = Up to 5 digits	Enter Pilot Directory Number. This is the number that is dialed to call the hunt group. **Note** Any type of hunt group can have a pilot number. Distributed hunt groups must have a pilot number. Voice Mail hunt groups should be Distributed with a Pilot Number. Multiple DN Hunt groups should be Circular with no Pilot Number.
209-04	Number to Display **FB04**, n, **Hold**	n = Up to 5 digits	Enter the number that displays when called by, or when calling any member of the hunt group. **Note** This number should be the DH Group Pilot number for Voice Mail hunt groups. This number could be the PDN of a Multiple DN Hunt group, in which case the number would override the number assigned in Program 200, FB15 for PDNs and Program 206, FB04 for Phantom DNs.
209-05	Pilot No. SCF **FB05**, n, **Hold**	n = 0~4 (CTX100) 0~10 (CTX670 Basic) 0~32 (CTX670 Exp.) (default = 0)	Allows you to assign a System Call Forward pattern to the Pilot Number of a Hunt Group.
209-06	Multiple DN Hunt **FB06**, n, **Hold**	n = 1. Enable (default) 2. Disable	Enable if hunt group is created for multiple DN operation. Multiple DN hunt groups should be circular with no pilot number.
209-07	DHG Auto Camp-on **FB07**, n, **Hold**, **Hold**	n = 1. Enable 2. Disable (default)	Whether to execute Automatic Camp On to the Distributed Hunt Group or not. Should be applied to VM Distributed Hunt Groups so callers automatically camp on to Voice Mail when all VM ports are busy. Does not apply to Circular or Serial hunt groups.
210	Group Call Pickup **210**, **Hold**		The Call Pickup Group assignment specifies which group numbers this station will participate when either the Group Call Pickup or the Group Directed Call Pickup features are invoked. A user may be assigned to more than one group.
210-00	Primary DN n, **Hold**	n = Up to 5 digits	Enter the Primary DN.
210-01~32	Group 1~32 **FB01~FB32**, n, **Hold**, **Hold**	n = 1. Yes 2. No (default)	Indicate whether this station is to participate in this Call Pickup group. **Note** 01~05 are available for CTX100, 01~10 are available for CTX670 Basic, and 01~32 are available for CTX670 Exp.
211	Delete Station Hunting Group		Delete Station Hunting Group
211-00	Delete Station Hunting Group	n = 1~90 (CTX100) 1~200 (CTX670 Basic) 1~640 (CTX670 Exp.) (default = 0)	Delete Station Hunting Group
213	ADM Feature Keys **213**, **Hold**		The Feature Key assignment allows each key on the telephone to be addressed and assigned a code representing the function to be performed. Some feature keys require additional parameters to completely define the key. For example, a Phantom DN needs a directory number, ringing assignment, and the tone pitch when ringing occurs.
213-00	PDN+ADM yyyyyx, **Hold**	yyyyy = Primary DN (0~99999) x = ADM (1 or 2)	Enter a Primary DN plus an ADM number to Program ADM FBs. **Note** FB04 *Add on Modules* in Program 204 must be set to One or Two.

Table 13-25 Programs 208~218 *(continued)*

Button	Sequence	Value(s)	Summary
213-01	Key Number **FB01~FB20**		Press the desired FB to program.
	Code n, **Spkr**	n = 1~20	Select Desired Feature Code. See the Feature Code Table 13-22 on page 42. 100 - PDN 110 - PhDN 120 - CO 130 - GCO 140 - Pooled Line Button 540 - Door Lock Cancel 560 - PhDN Message Waiting 610 - DSS Button 900 - Start Application
	Parameter 1 n1, see Note **Note** For Feature Code 560, 610 and 900, make your selection and push **Spkr for further options**.	n1 = See "Flexible Button Assignment Feature Code Table" on page 13-42 and "Feature/Button Code Parameter Assignments" on page 13-41 for more details.	This Parameter is required for all Feature Codes.
	Parameter 2 n2, see Note **Note** For Feature Code 100, make your selection and push **Spkr for further options**.	n2 = See "Flexible Button Assignment Feature Code Table" on page 13-42 and "Feature/Button Code Parameter Assignments" on page 13-41 for more details.	This Parameter is required for all Feature Codes except Feature Codes 560, 610 and 900.
	Parameter 3 n3, see Note **Note** For Feature Code 110 and 140, make your selection and push **Spkr for further options**.	n3 = See "Flexible Button Assignment Feature Code Table" on page 13-42 and "Feature/Button Code Parameter Assignments" on page 13-41 for more details.	This Parameter is required for Feature Codes 110, 120, 130 and 140 only.
	Parameter 4 n4, see Note **Note** For Feature Code 120, make your selection and push **Spkr for further options**.	n4 = See "Flexible Button Assignment Feature Code Table" on page 13-42 and "Feature/Button Code Parameter Assignments" on page 13-41 for more details.	This Parameter is required for Feature Codes 120 and 130 only.
	Parameter 5 n5, see Note **Note** For Feature Code 130, make your selection and push **Spkr for further options**.	n5 = See "Flexible Button Assignment Feature Code Table" on page 13-42 and "Feature/Button Code Parameter Assignments" on page 13-41 for more details.	This Parameter is required for Feature Codes 130 only.

Table 13-25 Programs 208~218 *(continued)*

Button	Sequence	Value(s)	Summary
214	DSS Console Assignment **214**, **Hold**		This assignment allows up to eight Direct Station Selection (DSS) Consoles to be assigned to a station. The assignment is referenced to the stations's Primary DN.
214-00	Primary DN n, **Hold**	n = Up to 5 digits	Enter the Prime Directory Number of the station that is to be associated with the DSS console(s).
214-01~08	DSS 1~DSS 8 **FB01**~**FB08**, xxyyzz, **Hold**, **Hold**	xx = Cabinet (01~07) yy = Slot (01~10) zz = Circuit (01~08)	Enter the DSS equipment number as xxyyzz. • Cabinet – Select 01 for Base and Expansion cabinet (CTX100). Select 01 for Base and 02~07 respectively for each Expansion cabinet (CTX670). • Slot – Select 01~04 for Base slots and 05~08 for Expansion slots (CTX100). Select 01~08 for Base slots and 01~10 for Expansion slots. Example: If the DSS console should be connected to a PDKU or BDKU/BDKS in cabinet shelf 5, slot 2, circuit 3, enter 050203. **Note** If a PDN is assigned to the DSS equipment number it must be deleted, using PRG201, before attempting to assign the DSS console.
215	DSS Feature Keys **215**, **Hold**		The Feature Key assignment allows each key on the telephone to be addressed and assigned a code representing the function to be performed. Some feature keys require additional parameters to completely define the key. For example, a Phantom DN needs a directory number, ringing assignment, and the tone pitch when ringing occurs.
215-00	PDN+DSS yyyyyx, **Hold**	yyyyy = Primary DN (0~99999) x = DSS (1~8)	Enter a Primary DN plus DSS Key Assignment button to program DSS FBs. **Note** FB04 *Add on Modules* in Program 204 must be set to One or Two.

Table 13-25 Programs 208~218 *(continued)*

Button	Sequence	Value(s)	Summary
215-01	DSS Key Number **FB01~FB20**		Press the desired FB to program on your DSS.
	Code n, **Spkr**	n =	Select Desired Feature Code. See "Flexible Button Assignment Feature Code Table" on page 13-42. 100 - PDN 110 - PhDN 120 - CO 130 - GCO 140 - Pooled Line Button 540 - Door Lock Cancel 560 - PhDN Message Waiting 610 - DSS Button 900 - Start Application
	Parameter 1 n1, see Note **Note** For Feature Code 560, 610 and 900, make your selection and push **Spkr for further options**.	n1 = See "Flexible Button Assignment Feature Code Table" on page 13-42 and "Feature/Button Code Parameter Assignments" on page 13-41 for more details.	This Parameter is required for all Feature Codes.
	Parameter 2 n2, see Note **Note** For Feature Code 100, make your selection and push **Spkr for further options**.	n2 = See "Flexible Button Assignment Feature Code Table" on page 13-42 and "Feature/Button Code Parameter Assignments" on page 13-41 for more details.	This Parameter is required for all Feature Codes except Feature Codes 560, 610 and 900.
	Parameter 3 n3, see Note **Note** For Feature Code 110 and 140, make your selection and push **Hold**, **Hold**. Otherwise. push **Spkr**.	n3 = See "Flexible Button Assignment Feature Code Table" on page 13-42 and "Feature/Button Code Parameter Assignments" on page 13-41 for more details.	This Parameter is required for Feature Codes 110, 120, 130 and 140 only.
	Parameter 4 n4, see Note **Note** For Feature Code 120, make your selection and push **Spkr for further options**.	n4 = See "Flexible Button Assignment Feature Code Table" on page 13-42 and "Feature/Button Code Parameter Assignments" on page 13-41 for more details.	This Parameter is required for Feature Codes 120 and 130 only.
	Parameter 5 n5, see Note **Note** For Feature Code 130, make your selection and push **Spkr for further options**.	n5 = See "Flexible Button Assignment Feature Code Table" on page 13-42 and "Feature/Button Code Parameter Assignments" on page 13-41 for more details.	This Parameter is required for Feature Codes 130 only.

Table 13-25 Programs 208~218 *(continued)*

Button	Sequence	Value(s)	Summary
216	Emergency Ringdown Assignment. **216**, **Hold**		Assigns Emergency Ring Down parameters to Primary DNs.
216-00	Primary DN n, **Hold**	n = Up to 5 digits	Enter the Primary DN.
216-01	Emergency Ringdown **FB01**, n, **Hold**	n = 1. Enable 2. **Disable** (default)	Enable an Emergency Ringdown Number.
216-02	Emergency Ringdown Timer **FB02**, n, **Hold**	n = 5~60 (default = 0)	Enter the length of off-hook time that will cause a DN to originate an Emergency
216-03	Destination **FB03**, n, **Hold**, **Hold**	n = Up to 5 digits	Enter the destination DN for the Emergency Ringdown.
217	ISDN Station Data **217**, **Hold**		ISDN stations need a set of parameters to be set to define its capabilities. These include a Name when calling display phones, Call of Service settings, etc.
217-00	Primary DN n, **Hold**	n = Up to 5 digits	Enter Primary DN.
217-01	Station Name **FB01**, n, **Hold**,	n = Up to 9 digits	Enter a name for this station.
217-02	Dial Method **FB02**, n, **Hold**,	n = 1. **Dial Tone** (default) 2. Entry Tone 3. No Tone	Select the audible tone when dialing.
217-03	System Call Forward **FB03**, n, **Hold**,	n = 0~32 (default = 0)	Select the System Call Forward assignment for this station.
217-04	CF Password **FB04**, n, **Hold**,	n = Up to 4 digits	Protect the System Call Forward settings by creating a password.
217-05	Door Phone Override DND **FB05**, n, **Hold**,	n = 1. Enable 2. **Disable** (default)	Enable the Door Phone ringing indicator to override Do Not Disturb.
217-06	Emergency Call Group **FB06**, n, **Hold**,	n = 1~8 (default = 1)	Select this station's emergency call group.
217-07	COS Override Code **FB07**, n, **Hold**,	n = 1. Enable 2. **Disable** (default)	Enable Class of Service override.
217-08	Display DN **FB08**, n, **Hold**,	n = Up to 5 digits	Enter the DN to be displayed on the LCD.
217-09	VMID Code SMDI **FB09**, n, **Hold**,	n = Up to 10 digits Digits 0~9, * and #	Enter the voice mail box number that should answer calls when this PDN calls voice mail; or, when this PDN is called and then forwards to voice mail (this number is prefixed by codes in Program 579, 11~16). **Note** This VMID code is sent to the voice mail device in SMDI packets or DTMF tones on direct and forwarded calls to the PDN. See Program 580 for SMDI or DTMF choice.
217-12	Name Display **FB12**, n, **Hold**, **Hold**	n = 1. Enable 2. **Disable**	Whether to put the user name in the list display.
218	Station Hunt Group Assignment **218**, **Hold**		This assignment configures station DNs to hunt groups and assigns the order of rotation in which the DNs are hunted.
218-00	Hunt Group Number n, **Hold**	n = 1~640	Enter an existing Hunt Group number or use the List, Add, Append, Modify, or Delete buttons as described above.

Table 13-25 Programs 208~218 *(continued)*

Button	Sequence	Value(s)	Summary
218-01	Hunt Order **FB01**, n, **Hold**,	n = 1~560	This field assigns a station DNs position within a Hunt Group's Hunt Order. Programmers should assign the last station in the Hunt Order first and assign the first station in the Hunt Order last.
218-02	DN **FB02**, n, **Hold**,	n = Up to 5 digits	Enter a new DN to the Hunt Group's Hunt Order.
218-03	DN Set Type **FB03**, n, **Hold**, **Hold**	n = 1. **Modify** 2. Insert	Modify (replace) an existing assignment.
219	Network DSS Key Notify Data Delete **219**, **Hold**		This program lets you disable the DSS function for the node ID entered in this screen.
219-00	Network DSS Node ID n, **Hold**	n =	**Important!** *Don't use this program unless requested by Toshiba Technical Support.* Enter the Node ID of the Network DSS key Notify Data to be deleted.

300 Series Programs

Table 13-26 Programs 300~302

Button	Sequence	Value(s)	Summary
300	Trunk Assignment **300**, **Hold**		This command assigns an analog or T1 trunk (line) and its parameters to the system.
300-00	Line Number n, **Hold**	n = 1~64 (CTX100) 1~96 (CTX670 Basic) 1~264 (CTX670 Exp.)	Enter the Line Number.
300-01	Line Equipment No. **FB01**, xxyyzz, **Hold**	xx = Cabinet 1 (CTX100), 01~02 (CTX670 Basic), 01~07 (CTX670 Exp.) yy = Slot 01~8 (CTX100), 01~10 (CTX670) zz = Circuit (01~04) ...or zz = T1 Circuit 01~24 (CTX670).	Enter the line equipment number as xxyyzz. Equipment numbers are required when assigning a new trunk to the system. It can also be used to display the equipment location of existing trunks. Example: If the trunk should be connected to an RCOU in cabinet shelf 5, slot 2, circuit 3, enter 050203. Cabinet numbers: • CTX100 – Select 01 for Base and Expansion cabinet. • CTX670 – Select 01 for Base and 02~07 respectively for each Expansion cabinet. Slot numbers: • CTX100 – Select 01~04 for Base slots and 05~08 for Expansion slots. • CTX670 – Select 01~08 for Base slots and 01~10 for Expansion slots.
300-02	Incoming Line Group **FB02**, n, **Hold**	n = 0~32 (CTX100) 0~50 (CTX670 Basic) 0~128 (CTX670 Exp.) (default = 0)	Assign the trunk to Incoming Line Group. Two-way trunks need to be members of one incoming and one outgoing line group.
300-03	Outgoing Line Group **FB03**, n, **Hold**	n = 0~32 (CTX100) 0~50 (CTX670 Basic) 0~128 (CTX670 Exp.) (default = 0)	Assign the trunk to Outgoing Line Group. Two-way trunks need to be members of one incoming and one outgoing line group.
300-04	Dial Mode **FB04**, n, **Hold**	n = 1. Rotary Dial 10PPS 2. Rotary Dial 20PPS 3. DTMF (default)	Enter the Dial Mode. • DP 10 PPS = Rotary Dial, 10 PPS • DP 20 PPS = Rotary Dial, 20 PPS
300-05	Signaling **FB05**, n, **Hold**	n = 1. DID 2. Loop (default) 3. Ground 4. Tie 5. LP (Japan) 6. SR (Japan) 7. ACU (UK)	Enter the signalling type.
300-06	Start Method **FB06**, n, **Hold**	n = 1. Immediate Start (default) 2. Timing Start 3. Wink Start	Enter the Start Method. This setting defines the start protocol method used between the PSTN and this trunk. For DID/Tie trunks.
300-07	Release Supervision **FB07**, n, **Hold**	n = 1. Received 2. Not Received (default)	Enable Release Supervision from the CO.
300-08	Answer Supervision **FB08**, n, **Hold**	n = 1. Received 2. Not Received (default)	Enable Answer Supervision from the CO.
300-09	Trunk Name	n = Up to 14 digits	Enter the trunk name. **Note** This function is accessible only through CTX WinAdmin.
300-10	External Ring Repeat **FB10**, n, **Hold**	n = 1. Supplied (default) 2. Not Supplied	Supply the External Ringing Signal pattern to stations. For behind PBX/Centrex trunks.

Table 13-26 Programs 300~302 *(continued)*

Button	Sequence	Value(s)	Summary
300-11	DTMF Back Tone **FB11**, n, **Hold**	n = 1. Padded 2. DTMF Tone (default) 3. No Tone	Select DTMF Back Tone type.
300-12	Hunt Order **FB12**, n, **Hold**	n = 1~999 (default = 1)	Change the trunk hunting order sequence for this Trunk.
300-13	Immediate Cut-Through **FB13**, n, **Hold**, **Hold**	n = 1. Enable 2. Disable (default)	This option should be enabled on a line only if the talk-path must be established immediately after seizing a selected outgoing line. Example, a line connected to a Central Office Ringdown circuit. **CAUTION! This option will bypass Destination Restriction and E911 digit analysis. Do not enable this option on a line where these functions are required.** This option is available only on ground and loop, analog or T1 circuits. It should not be enabled for Tie, DID, ISDN and QSIG lines. Available with CTX R1.01, M22 and above software.
301	Delete Trunk **302**, **Hold**		Deletes trunks from the system.
301-01	Trunk Number n, **Hold**	n = 1-264	Enter the Trunk Number to be deleted (1~264)
302	PRI Trunks **302**, **Hold**		The PRI and IP QSIG interface cards need to have a number of assignments for defining its operation. These include which channels are available for use and the location of the D channel or signaling channel. A number of optional functional capabilities also need to be enabled or disabled.
302-00	Channel Group n, **Hold**	n = 1~32 (CTX100) 1~48 (CTX670 Basic) 1~128 (CTX670 Exp.)	Channel Group Number
302-01	RPTU Equipment No. **FB01**, xxyyzz, **Hold**	xx = Cabinet 1 (CTX100), 01~02 (CTX670 Basic), 01~07 (CTX670 Exp.) yy = Slot 01~8 (CTX100), 01~10 (CTX670) zz = Circuit 01	Enter the ISDN RPTU equipment number as xxyyzz. **Note** zz = Channel 01 is always used to assign RPTU parameters Example: If the RPTU is installed in cabinet shelf 5, slot 3, enter 050301.Enter the equipment number xxyyzz to which the ISDN PRI Trunk is to be assigned. Equipment numbers are required when assigning ISDN RPTU parameters in the system. It can also be used to display the equipment location of existing RPTU PCBs.
302-02	Protocol **FB02**, n, **Hold**	n = 1. Nat'l ISDN 2. ETSI 3. TTC 4. Nat'l ISDN - Nortel 5. **QSIG**	The Protocol to be followed defines the type of interface expected based upon the equipment type at the distant end of the connection.
302-03	ILG **FB03**, n, **Hold**	n = 0~32 (CTX100) 0~48 (CTX670 Basic) 0~128 (CTX670 Exp.) (default = 0)	Primary ISDN needs to have Trunk Group assignments to process the calls being received. If multiple trunk groups are used within the Channel Group, then Call-by-Call Services must be used.
302-04	OLG **FB04**, n, **Hold**	n = 0~32 (CTX100) 0~48 (CTX670 Basic) 0~128 (CTX670 Exp.) (default = 0)	Primary ISDN needs to have Trunk Group assignments to process the calls being originated. If multiple trunk groups are used within the Channel Group, then Call-by-Call Services must be used.
302-05	Trunk ID Type **FB05**, n, **Hold**	n = 1. **Implicit** 2. Explicit	Identify whether the communication with the PSTN requires an identifier. Select Explicit to require an identifier.

Table 13-26 Programs 300~302 *(continued)*

Button	Sequence	Value(s)	Summary
302-06	Trunk ID Number **FB06**, n, **Hold**	n = 0~126 (default = 0)	An identifier must be used as part of the addressing when an "explicit" identified is used to communicate with the PSTN which channel on which link is used for the given call. This identifier is assigned by the connected PSTN.
302-07	D Ch Position **FB07**, n, **Hold**	n = 1~24 (default = 24)	PRI includes a 64-kbps D-channel (for transfer of signal information). Select the channel position to be used for D channel signaling. **Note** This field is used only when the span interface speed is 1.5M. If the span interface speed is 2M the value is fixed at 16.
302-08~13	Bearer Services: • Speech • 3.1 KHz Audio • 7 KHz Audio • Unrestr. 64K • Unrestr. 56K • Unrestr. 2x64K **FB08**~**FB13**, n, **Spkr**, n1, **Hold**	n = 1. Enable 2. Disable n1 = 1. Channel Number 2. Slot Map	Enable the Bearer Capabilities allowed for this PRI Trunk channel group. Select the Channel Method (map) to identify the channels. **Note** In North America, only Channel Number map is used (Channel Number).
302-14~18	Bearer Services: • Unrestr. 384K • Unrestr. 1536K • Unrestr. 1920K • Restr. Digital • Video **FB14**~**FB18**, n, **Spkr**, n1, **Hold**	n = 1. Enable 2. Disable (default) n1 = 1. Channel Number B 2. Channel Number H 3. Slot Map B 4. Slot Map H	The Bearer Capabilities (384k Unrestricted(H0), 1536k Unrestricted(H11), 1920k Unrestricted, Restricted Digital Info, Trunk Video, and Unrestricted Multirate) are not used and should remain disabled. Select the Channel Method (map) to identify the channels. **Note** In North America, only Channel Number B map is used.
302-19	Bearer Service Multirate Unrestricted **FB19**, n, **Hold**	n = 1. Enable 2. Disable (default)	The Bearer Capabilities 384k Unrestricted (H0), 1536k Unrestricted (H11), 1920k Unrestricted, Restricted Digital Info, Trunk Video and Unrestricted Multirate are not used and should remain disabled.
302-20	B Ch Selection Method **FB20**, n, **Hold**	n = 1. Exclusive 2. Preferred 3. Any	The method used for selecting an idle 'B' channel and the reaction if the PSTN indicates the channel is not available needs to be chosen to originate a call from CTX. Preferred option is recommended, unless PSTN needs other choice.
302-21	B Ch Selection **FB21**, n, **Hold**	n1 = 1. Forward Cyclic 2. Backward Cyclic 3. Forward Terminal 4. Backward Terminal	The search method for choosing an idle 'B' channel shall also be specified. Backward Terminal is the normal method with the PSTN following a Forward Terminal method.
302-22	T1 Time Slot Pattern **FB22**, n, **Hold**	n = 1. Fixed1 (default) 2. Fixed2 3. Flexible	1544 Time Slot Pattern.
302-23	E1 Time Slot Pattern **FB23**, n, **Hold**	n = 1. Fixed1 (default) 2. Fixed2 3. Flexible	2048 Time Slot Pattern.
302-24	T-Wait Timer **FB24**, n, **Hold**	n = 1. Enable 2. Disable (default)	Specify whether the T-Wait timer is to be enabled or disabled. This field is only valid for Nat'l ISDN.
302-25	RBT on Incoming Call **FB25**, n, **Hold**	n = 1. Enable (default) 2. Disable	Enable Ringback Tone when terminating a call. This field is only valid for Nat'l ISDN.
302-26	Network Mode **FB26**, n, **Hold**	n = 1. Master 2. Slave (default)	Set this span as Master or Slave for Layer 2 of a QSIG PRI. The opposite value must be set for the node in which this QSIG PRI terminates. This governs call setup activity and is not related to clock synchronization.
302-27	Negotiation Priority **FB27**, n, **Hold**	n = 1. Side A (default) 2. Side B	Sets this span as Side A or Side B for Layer 3 of a QSIG PRI. The opposite value must be set for the node in which this QSIG PRI terminates.

Table 13-26 Programs 300~302 *(continued)*

Button	Sequence	Value(s)	Summary
302-28	Layer 1 Short Break Tolerant **FB28**, n, **Hold**	n = 1. Enable 2. Disable	Sets this span as Side A or Side B for Layer 3 of a QSIG PRI. The opposite value must be set for the node in which this QSIG PRI terminates. (Not used in U.S.A. Used in the UK.)
302-29	2-B channel Transfer **FB29**, n, **Hold**	n = 1. Enable 2. Disable	Enable this option to allow 2-B channel conference on PRI calls. This allows to PRI channels to be connected in the same conference or Tandem call. **Note** This option must also be enabled by PRI provider to allow it to work.
302-30	Q931 Protocol Timer **FB30**, n, **Hold**	n = 1. Normal 2. Long	Sets the Q931 Protocol Timer. If Long is set, T303 is 8s and T301 is 300s.

Table 13-27 Bearer Services Table

Bearer Services			Nat'l ISDN	ETSI	TTC
Circuit Mode	Speech		X	X	X
	3.1 KHz Audio		X	X	X
	7 KHz Audio			X	X
	unrestricted digital information	64 kbps	X	X	X
		Rate adaptation from 56 kbps	X		
		2x64		X	X
		384kbp (H0)	X	X	X
		1536kbps (H11)	X	X	X
		1920kbps (H12)		X	
		multirate (n x 64 kbps)	X		
	Restricted digital Information			X	X
	Video			X	X
Packet Mode	Shelf/Slot/Circuit				

Table 13-28 Programs 303~315

Button	Sequence	Value(s)	Summary
303	ISDN Trunk Delete **303**, **Hold**		This command deletes ISDN Trunks.
303-00	Channel Group Number n, **Hold**, **Hold**	n = 1~32 (CTX100) 1~48 (CTX670 Basic) 1~128 (CTX670 Exp.)	Enter the channel group number to delete.
304	Incoming Line Group Assignment **303**, **Hold**		This assignment is used to configure ILGs only, OLGs are configured in the Outgoing Line Group Assignment 306. The same line can be placed in an ILG and OLG.
304-00	Group Number n, **Hold**	n = 1~32 (CTX100) 1~50 (CTX670 Basic) 1~128 (CTX670 Exp.)	Enter the group number of the line group that should be configured.

Table 13-28 Programs 303~315 *(continued)*

Button	Sequence	Value(s)	Summary
304-01	Group Type **FB01**, n, **Hold**	n = 1. Analog (default) 2. ISDN	Select the ILG Type.
304-02	Trunk Type **FB02**, n, **Hold**	n = 1. CO (default) 2. Tie	Select the Trunk Type.
304-03	Service Type **FB03**, n, **Hold**	n = 1. DID 2. DIT (default)	Select CO Trunk Service Type.
304-04	Private Service Type **FB04**, n, **Hold**	n = 1. Standard (default) 2. QSIG	Select the Tie Trunk Service Type. This field is required when Trunk Type is set to Tie.
304-05	GCO Key Number **FB05**, n, **Hold**	n = 0~32 (CTX100) 0~50 (CTX670 Basic) 0~128 (CTX670 Exp.) (default = 0)	Select ILG GCO Key Group for DIT mode (see Trunk Type above). The same GCO cannot belong to different ILGs.
304-06	Pooled Key Number **FB06**, n, **Hold**	n = 0~32 (CTX100) 0~50 (CTX670 Basic) 0~128 (CTX670 Exp.) (default = 0)	Select ILG Pooled Line Key Group for DIT mode. The same Pooled Line Group cannot belong to different ILGs. 0~128 (CTX670), 0~32 (CTX100) (default = 0)
304-07	COS **FB07**, n, **Spkr**, n, **Spkr**, n, **Hold**	n = 1~32 (default = 1)	Select Day 1, Day 2 and Night Values.
304-08	DRL **FB08**, n, **Spkr**, n, **Spkr**, n, **Hold**	n = 1~16 (default = 1)	Select Day 1, Day 2 and Night Values.
304-09	FRL **FB09**, n, **Spkr**, n, **Spkr**, n, **Hold**	n = 1~16 (default = 1)	Select Day 1, Day 2 and Night Values.
304-10	QPL **FB10, n, Spkr, n, Spkr, n, Hold**	n = 1~16 (default = 1)	Select Day 1, Day 2 and Night Values.
304-11	DID Digits **FB11**, n, **Hold**	n = 0~7 (default = 0)	Select number of DID digits received from CO.
304-12	Speech/3.1 KHz **FB12**, n, **Hold**	n = 1. **Audio** (default) 2. Speech	Select Bearer Capability 3.1 KHz Audio or Speech.
304-13	Ringing Timer Delay 1 **FB13**, n, **Hold**	n = 0~60 sec. (default = 12)	Select time to ring the Delay 1 destination.
304-14	Ringing Timer Delay 2 **FB14**, n, **Hold**	n = 0~60 sec. (default = 24)	Select time to ring the Delay 2 destination.
304-15	Interdigit 1 Timer **FB15**, n, **Hold**	n = 1~180 sec. (default = 15)	Select Interdigit 1 timer value.
304-16	Interdigit 2 Timer **FB16**, n, **Hold**	n = 1~180 sec. (default = 5)	Select Interdigit 2 timer value.
304-17	Auto Camp-on **FB17**, n, **Hold**	n = 1. **Enable** (default) 2. Disable	Select in box to toggle Automatic Camp-on.
304-18	Calling Number ID **FB18**, n, **Hold**	n = 1. **User Provided** (default) 2. Network Provided	Select Calling Number Identification source.

Table 13-28 Programs 303~315 *(continued)*

Button	Sequence	Value(s)	Summary
304-19	Intercept **FB19**, n, **Hold**	n = 1. Enable 2. **Disable** (default)	Enable Intercept. A call is transferred to a special destination called intercept position when the destination of a trunk line call is not determined with DID, DIT or DISA. Intercept is also activated when the destination is determined, but the call cannot be terminated due to a defect or an incorrect number. If the system has a simplified attendant console, the attendant console is usually specified to terminate the call. This function ensures termination of a trunk line call.
304-20	Send Dial Tone **FB20**, n, **Hold**	n = 1. Enable 2. **Disable** (default)	Enable Send Dial Tone.
304-21	TGAC Override **FB21**, n, **Hold**	n = 1. Enable 2. **Disable** (default)	Enable Trunk Group Access Code (TGAC) override.
304-22	Network COS **FB22**, n, **Hold**	n = 1~32 (default = 1)	Enter the Network COS number.
304-23	LCR Group **FB23**, n, **Hold**	n = 1~16 (default = 1)	Enter the LCR Group number. Calls from this ILG cannot tandem if this field is not entered.
304-24	Change COS Override Code **FB24**, n, **Hold**	n = 1. Enable 2. Disable (default)	Enable authority to change COS Override Code.
304-25	Register Speed Dial Codes **FB25**, n, **Hold**	n = 1. Enable 2. Disable (default)	Enable authority to create system speed dial codes.
304-26	Originator Invoke OCA **FB26**, n, **Hold**	n = 1. Enable 2. Disable (default)	Enable authority for the originator of a call to invoke OCA when encountering a busy station.
304-27	Senderized Tone Mode **FB27**, n, **Hold**	n = 1. Dial Tone (default) 2. Entry Tone 3. Silence	Send DTMF tones as a complete number rather than digit-by digit.
304-28	Emergency Call Group **FB27**, n, **Hold**, **Hold**	n = 1~8 (default = 1)	Used to enable E911 calling across a QSIG network. The QSIG ILG is assigned to an Emergency Call Group in the same way a station is in Program 200 FB17. Without this assignment, the call will not attempt to complete to one of the trunks in the Emergency Group and will result in an abandoned call. See Program 550 "Enhanced 911 Emergency Call Group" on page 13-87.
304-29	Tenant Number **FB29**, n, **Hold**, **Hold**	n = 1~8 (default = 1)	Enter the Tenant number to which this DID should be assigned.
305	ILG Delete **305**, **Hold**		This command deletes Incoming Line Groups.
305-00	ILG Number n, **Hold**, **Hold**	n = 1~32 (CTX100) 1~50 (CTX670 Basic) 1~128 (CTX670 Exp.)	Enter the ILG number to delete.
306	Outgoing Line Group Assignment **306**, **Hold**		OLG is a line selection feature which enables the use of external trunk or private line groups for outgoing service. Assign and configure up to 128 OLGs (the same line can be placed in an OLG and an ILG).
306-00	Group Number n, **Hold**	n = 1~32 (CTX100) 1~50 (CTX670 Basic) 1~128 (CTX670 Exp.)	Enter the OLG Group number.
306-01	Group Type **FB01**, n, **Hold**	n = 1. Analog (default) 2. ISDN	Select the OLG Type.
306-02	Trunk Type **FB02**, n, **Hold**	n = 1. CO (default) 2. Tie	Select the Trunk Type.

Table 13-28 Programs 303~315 *(continued)*

Button	Sequence	Value(s)	Summary
306-03	Service Type **FB03**, n, **Hold**	n = 1. Standard (default) 2. QSIG	TIE Trunk Service Type.
306-04	GCO Key1 Number **FB04**, n, **Hold**	n = 0~32 (CTX100) 0~50 (CTX670 Basic) 0~128 (CTX670 Exp.) (default = 0)	Select the first GCO Key Group number.
306-06	Pooled Key1 Number **FB06**, n, **Hold**	n = 0~32 (CTX100) 0~50 (CTX670 Basic) 0~128 (CTX670 Exp.) (default = 0)	Select first Pooled Line Key Group number.
306-07	Pooled Key2 Number **FB07**, n, **Hold**	n = 0~32 (CTX100) 0~50 (CTX670 Basic) 0~128 (CTX670 Exp.) (default = 0)	Select second Pooled Line Key Group number.
306-08	COS **FB08**, n, **Spkr**, n, **Spkr**, n, **Hold**	n = 1~32 (default = 1)	Select Day 1, Day 2 and Night Values.
306-09	FRL **FB09**, n, **Spkr**, n, **Spkr**, n, **Hold**	n = 1~16 (default = 1)	Select Day 1, Day 2 and Night Values.
306-10	QPL **FB10**, n, **Spkr**, n, **Spkr**, n, **Hold**	n = 1~16 (default = 1)	Select Day 1, Day 2 and Night Values.
306-11	Speech/3.1 KHz **FB11**, n, **Hold**	n = 1. Audio (default) 2. Speech	Bearer Capability 3.1 KHz Audio or Speech.
306-12	MOH Source **FB12**, n, **Hold**	n = 1. Quiet Tone 2. External 1 (default) 3. External 2 4. External 3 5. External 4 6. External 5 7. External 6 8. External 7 9. External 8 10. External 9 11. External 10 12. External 11 13. External 12 14. External 13 15. External 14 16. External 15	Select MOH Source.
306-13	Account Codes **FB13**, n, **Hold**	n = 1. Enable 2. Disable (default)	Enable Trunk forced Account Codes.
306-14	Destination Restriction **FB14**, n, **Hold**	n = 1. Enable 2. Disable (default)	Enable Destination Restriction.
306-15	Credit Cart Calling **FB15**, n, **Hold**	n = 1. Enable 2. Disable (default)	Enable Credit Card Calling.
306-16	Send CESID **FB16**, n, **Hold**	n = 1. Enable 2. Disable (default)	Enable CESID sending.
306-17	QSIG Sending Type **FB17**, n, **Hold**	n = 1. Cut through (default) 2. Senderized	Digit sending Mode for QSIG only.

Table 13-28 Programs 303~315 *(continued)*

Button	Sequence	Value(s)	Summary
306-18	Network COS **FB18**, n, **Hold**, **Hold**	n = 1~32 (default = 1)	Select Network COS number.
307	OLG Delete **307**, **Hold**		This command deletes Outgoing Line Groups.
307-00	OLG Number n, **Hold**, **Hold**	n = 1~32 (CTX100) 1~50 (CTX670 Basic) 1~128 (CTX670 Exp.)	Enter the OLG number to delete.
308	Trunk Timers **308**, **Hold**		Assigns trunk timers for analog and T1 trunks.
308-00	Trunk Equipment No. xxyyzz, **Hold**	xx = Cabinet 1 (CTX100), 01~02 (CTX670 Basic), 01~07 (CTX670 Exp.) yy = Slot 01~8 (CTX100), 01~10 (CTX670) zz = Circuit 01~24	Enter the trunk equipment number. **Note** Equipment numbers are required when assigning a new trunk to the system. It can also be used to display the equipment location of existing trunks.
308-01	Auto Release **FB01**, n, **Hold**,	n = 1. Disable 2. Detect 95ms 3. **Detect 450ms** (default)	Select the Automatic Release timing. **Note** Select Disable if the CO does not send the automatic release signal to the loop start trunk.
308-02	Short Flash **FB02**, n, **Hold**,	n = 0~15, where 1 = 100msec. (default = 5, which is .5 seconds) 0 = no flash	Select Short Flash Time. When a telephone initiates the short flash signal to the CO line it is connected to (using the short Flash feature button or access code #450) the duration of a short flash is determined by this command. Normally this signal is used to hook flash a centrex line. The short flash range is 0 to 1.5 seconds in increments of 0.1 seconds.
308-03	Long Flash **FB03**, n, **Hold**	n = 0, 5, 10, 15, 20, 25 and 30, where 5 = .5 seconds. (default = 20)	Select Long Flash Time. When a telephone initiates the long flash signal to the CO line it is connected to (using the Long Flash feature button or access code #451) the duration of a long flash is determined by this command. Normally this signal is used to disconnect the line. The long flash range is 0 to 3 seconds in increments of 0.5 seconds.
308-04	Pause after Flash **FB04**, n, **Hold**	n = 0~5, 0 = immediately sent, and 1sec.delay to 5sec.delay (default = 1 second delay before sending digits)	Pause time after flash: After a flash signal is sent to a CO line, this timer determines when the line will start to send the dialed digits to the other end.
308-04	Response Timer **FB05**, n, **Hold**	n = 0~3000	The response timer is for analog DID/TIE lines that have the “start method” set for “Timing” in Program 300-06. After a line is seized this timer determines when the line will start to send the dialed digits to the other end. Possible Values 0=immediatly sent, and 50msec.delay to 500msec.delay. (default=500mseconds delay before sending digits).
309	Direct Inward Dialing **309**, **Hold**		This command assigns DID Number Analysis Table to ILG.
309-00	ILG Number n, **Hold,**	n = 1~32 (CTX100) 1~50 (CTX670 Basic) 1~128 (CTX670 Exp.)	Select the ILG number.
309-01	DID Number **FB01**, n, **Hold**	n = 1~7 digits may include wild card “?” where “?” = 0~9	Enter a DID number.

Table 13-28 Programs 303~315 *(continued)*

Button	Sequence	Value(s)	Summary
309-02	MOH Source **FB02**, n, **Hold**	n = 1. Quiet Tone 2. **External 1** (default) 3. External 2 4. External 3 5. External 4 6. External 5 7. External 6 8. External 7 9. External 8 10. External 9 11. External 10 12. External 11 13. External 12 14. External 13 15. External 14 16. External 15	Set Music On Hold for Analog ISDN DID Trunk
309-03	GCO Key Group **FB03**, n, **Hold**	n = 0~32 (CTX100) 0~50 (CTX670 Basic) 0~128 (CTX670 Exp.) (default = 0)	GCO Key Group number.
309-04	Pool Key Group **FB04**, n, **Hold**	n = 0~32 (CTX100) 0~50 (CTX670 Basic) 0~128 (CTX670 Exp.) (default = 0)	Pooled Line Key Group
309-05~07	Audio Day1/Day2/ Night Destination Type **FB05**~**FB07**, n, **Spkr**	n = 1. **No Data** (default) 2. Dialing Digits 3. DISA 4. Built-in modem 5. Night Bell	Select the Destination Type for Audio/Speech calls.
	Audio Day1/Day2/ Night Destination Digits n1, **Hold**	n1 = Up to 32 digits	Enter the Destination Directory Number or Access Code. If Dialing Digits is the Destination Type enter the Directory Number that the line should ring. If the line should ring over external page, enter #31xx, where xx is the external Page group number. If the default page access code #31 was changed, use the new page access code as the leading digits. Line access codes and network routing numbers can also be entered to route incoming calls back out to a public or private network number.
309-08~10	Data Day1/Day2/ Night Destination Type **FB08**~**FB10**, n, **Spkr**	n = 1. **No Data** (default) 2. Dialing Digits 3. DISA 4. Built-in modem 5. Night Bell	Select the Destination Type for Audio/Speech calls.
	Data Day1/Day2/ Night Destination Digits n1, **Hold**	n1 = Up to 32 digits	Enter the Destination Directory Number or Access Code. If Dialing Digits is the Destination Type enter the Directory Number that the line should ring. If the line should ring over external page, enter #31xx, where xx is the external Page group number. If the default page access code #31 was changed, use the new page access code as the leading digits. Line access codes and network routing numbers can also be entered to route incoming calls back out to a public or private network number.

Table 13-28 Programs 303~315 *(continued)*

Button	Sequence	Value(s)	Summary
309-11	DNIS VMID Code **FB11**, n, **Hold**	n = Up to 10 digits	Enter the VM mail box number which should answer calls for this DID/DNIS number. **Note** This code is only sent if using SMDI VM integration in Program 580, 01. This code will be replaced, after voice mail answers, by the DTMF code set in Program 309, 15 DID/DNIS DTMF VMID code - if programmed; therefore, if using Program 309, 15 code, this VMID code is not necessary. This mail box number will be sent to voice mail on a DID/DNIS call that rings directly to voice mail; and, on a direct DID/DNIS call to a DN that forwards to voice mail before it is answered by the DN. If a DID/DNIS call is answered by a station and then transferred to a DN that forwards to voice mail, this mail box number of the DID/DNIS number or the forwarding DN's mail box number will be sent to voice mail per Program 579, 01. If this VMID code is not set, direct DID/DNIS calls will go to the VM general greeting and DID/DNIS calls that forward from a DN to VM will go to the DN's VMID mail box. This Voice Mail box number is added to SMDI packets direct and forwarded DID\DNIS calls to voice mail as explained above.
309-12	DNIS Name **FB12**, n, **Hold**	n = Up to 16 digits	Enter DNIS name. DNIS names can be assigned from the CTX WinAdmin (not from programming phones).
309-15	VM Dial **FB15**, n, **Hold**, **Hold**	n = Digits 0~9, * and #. For a pause enter Px, where x=0~9 (seconds), up to 10 characters (default = no value).	Enter the VM mail box number which should answer calls for this DID/DNIS number. This mail box number will be sent to voice mail on a DID/DNIS call that rings directly to voice mail; and, on a direct DID/DNIS call to a DN that forwards to voice mail before it is answered by the DN. If a DID/DNIS call is answered by a station and then transferred to a DN that forwards to voice mail, this mail box number of the DID/DNIS number or the forwarding DN's mail box number will be sent to voice mail per Program 579, 01. If this VMID code is not set, direct DID/DNIS calls will go to the VM general greeting and DID/DNIS calls that forward from a DN to VM will go to the DN's VMID mail box. This voice mail box number is sent to the VM port, as DTMF digits, after the VM port answers a DID/DNIS call as explained above. These digits are sent to the VM port if the CTX is set for SMDI or DTMF integration in Program 580, 01.
309-16	Tenant Number **FB16**, n, **Hold**, **Hold**	n = 1~8 (default = 1)	Enter the Tenant number to which this DID should be assigned.
310	DIT Assignment **310**, **Hold**		This command assigns DIT Number Analysis Table for DIT trunks. DIT trunks are ground and loop start trunks.
310-00	Line Equipment No. xxyyzz, **Hold**	xx = Cabinet 1 (CTX100), 01~02 (CTX670 Basic), 01~07 (CTX670 Exp.) yy = Slot 01~8 (CTX100), 01~10 (CTX670) zz = Circuit 01~24	Enter the trunk equipment number. Equipment numbers are required when assigning a new trunk to the system. It can also be used to display the equipment location of existing trunks. Example: If a line should be assigned to an RCOU in cabinet shelf 5, slot 2, circuit 3, enter 050203. Cabinet numbers: • CTX100 – Select 01 for Base and Expansion cabinet. • CTX670 – Select 01 for Base and 02~07 respectively for each Expansion cabinet. Slot numbers: • CTX100 – Select 01~04 for Base slots and 05~08 for Expansion slots. • CTX670 – Select 01~08 for Base slots and 01~10 for Expansion slots.

Table 13-28 Programs 303~315 *(continued)*

Button	Sequence	Value(s)	Summary
310-01~03	Day1/Day2/Night Destination Type **FB01**~**FB03**, n, **Spkr**	n = 1. No Data (default) 2. Dialing Digits 3. DISA 4. Built-in Modem 5. Night Bell	Select Destination Type for each. • No Data – no destination will ring when the line rings into the system. • Dialing Digits – assigns the line to ring the directory number or access code defined in the "Destination Digits" assignment • DISA – assigns the line to ring in as a DISA call. DISA dial tone will be returned to the caller. • Modem – assigns the line to ring the remote maintenance modem on the CTX processor. Used to call into the system with a CTX WinAdmin PC and modem. • Night Bell – Assigns the line to cause the night relay to pulse (one-sec. close/3-sec. open)
	Day1/Day2/Night Destination Digits n1, **Hold**	n1 = Up to 32 digits	Enter Destination, Directory Number or Access Codes for each, only if Dialing Digits is selected as Destination Type. • If Dialing Digits is the Destination Type, enter the Directory Number that the line should ring.If the line should ring over external page, enter #31xx, where xx is the external Page group number. • If the default page access code #31 was changed, use the new page access code as the leading digits. • Line access codes and network routing numbers can also be entered to route incoming calls back out to a public or private network number.
310-04	MOH Source **FB04**, n, **Hold**, **Hold**	n = 1. Silence 2. External 1 (default) 3. External 2 4. External 3 5. External 4 6. External 5 7. External 6 8. External 7 9. External 8 10. External 9 11. External 10 12. External 11 13. External 12 14. External 13 15. External 14 16. External 15	Select the MOH source for Analog DIT Trunk. The Scroll key must be used to select MOH sources indicated by 10 or higher.
311	DISA Security Codes **311**, **Hold**		This command assigns DISA parameters.
311-01	DISA Enabled **FB01**, n, **Hold**	n = 1. Enable 2. **Disable** (default)	Enable DISA security code.
311-02	DISA Code **FB02**, n, **Hold**	n = Up to 15 digits	Enter DISA security code.
311-03	Response Timer **FB03**, n, **Hold**	n = 0~30 (default = 5)	Enter the time, in seconds, for Strata CTX to respond to a call.
311-04	Idle Timer **FB04**, n, **Hold, Hold**	n = 0~60 (default = 10)	Enter the time in seconds to wait for idle DTMF.
311-05	Tie Line Access **FB05**, n, **Hold, Hold**	n = 1. Enable 2. Disable (default)	Enable this feature to allow DISA callers to access Tie lines when they call into the system.
312	DID Number Delete **312**, **Hold**		This command deletes DID Number.
312-00	ILG Number	n = 1~32 (CTX100) 1~50 (CTX670 Basic) 1~128 (CTX670 Exp.) (default = 0)	ILG Number.

Table 13-28 Programs 303~315 *(continued)*

Button	Sequence	Value(s)	Summary
312-01	DID Number	n = up to seven digits	DID Number to be deleted.
313	Caller ID Assignment **313**, **Hold**		This program assigns Caller ID circuits to the CO Line to which the circuit is connected. The ANI, DNIS, DID formats for TI and analog DID CO Lines are also defined.
313-00	Trunk Number n, **Hold**,	n = 1~64 (CTX100) 1~96 (CTX670 Basic) 1~264 (CTX670 Exp.)	Enter the Trunk Number.
313-01	Signalling Method **FB01**, n, **Hold**	n = 1. None (default) 2. ANI/DNIS-MCI 3. ANI/DNIS-Sprint 4. CLASS (Caller ID)	Specify the format for the interface being used.
313-02	Signalling Contents **FB02**, n, **Hold**	n = 1. ANI and DNIS (default) 2. ANI only 3. DNIS only 4. DID only	Specify the contents of the ANI/DNIS format.
313-03	CLASS Equipment Position **FB03**, xxyyzz, **Hold**	xx = Cabinet 01 (CTX100), 01~02 (CTX670 Basic), 01~07 (CTX670 Exp.) yy = Slot 01~8 (CTX100), 01~10 (CTX670) zz = Circuit 01~08	If the CLASS type is chosen, the trunk must be assigned to a Caller ID circuit. Enter the RCIU/RCIS equipment number as xxyyzz. **Notes** • CLASS equipment numbers are required when assigning a trunk to a RCIU/RCIS circuit. • It can also be used to display the equipment location of existing caller ID circuit to trunk assignments. Example: If the trunk should be connected to a caller ID circuit (RCIU/RCIS) in cabinet shelf 5, slot 2, circuit 3, enter 050203.
315	T1 Trunk Card **313**, **Hold**		This command assigns T1 Trunk Card Data to the system.
315-00	T1 Equipment Location xxyy, **Hold**	xxyy xx = Cabinet 01, yy = slot 01, 03, 05, or 07 ...or xx = Cabinet 02~07, yy = slot 01, 03, or 05	Enter the RDTU PCB equipment location as xxyy: Example: If the RDTU is installed in cabinet shelf 5, slot 3, enter 0503. Cabinet numbers: CTX100: Select 01 for Base and Expansion cabinet. CTX670: Select 01 for Base and 02~07 respectively for each Expansion cabinet. Slot numbers: CTX100: Select 01~04 for Base slots and 05~08 for Expansion slots. CTX670: Select 01~08 for Base slots and 01~10 for Expansion slots.
315-01	Coding Format **FB01**, n, **Hold**	n = 1. None 2. PZC 3. B8ZS (default) 4. ZCS	Select the Coding Format.
315-02	Frame Format **FB02**, n, **Hold**	n = 1. None 2. SF mode 3. ESF mode (default)	Select the Frame Format.
315-03	Time Slots	n = 1. None 2. 8 Time Slots (default) 3. 16 Time Slots 4. 24 Time Slots	Set the number of Time Slots to be used.

Table 13-28 Programs 303~315 *(continued)*

Button	Sequence	Value(s)	Summary
315-04	Receive PAD **FB05**, n, **Hold**, **Hold**	n = 1. None 2. Plus 6 dB 3. Plus 3 dB 4. Zero dB (default) 5. Minus 3 dB 6. Minus 6 dB 7. Minus 9 dB 8. Minus 12 dB 9. Minus 15 dB	Select the Receive PAD values.
315-05	Send Pad **FB04**, n, **Hold**	n = 1. None 2. Plus 6 dB 3. Plus 3 dB 4. Zero dB (default) 5. Minus 3 dB 6. Minus 6 dB 7. Minus 9 dB 8. Minus 12 dB 9. Minus 15 dB	Select the Send PAD values.

Table 13-29 Programs 316~317

Button	Sequence	Value(s)	Summary
316	Shared D Channel **316**, **Hold**		The PRI Interface can be extended to include an additional PRI card to expand the total number of channels to 47 on a Channel Group. This second PRI may optionally offer a backup D channel.
316-00	Channel Group n, **Hold**	n = 1~32 (CTX100) 1~48 (CTX670 Basic) 1~128 (CTX670 Exp.)	Channel Group Number.
316-01	Equipment Number **FB01**, xxyyzz, **Hold**	xx = yy = zz = xx = Cabinet 01, yy = 03, 05, or 07 and zz = Channel 01 is always used to assign RPTU parameters or xx = Cabinet 02~10, yy = 01, 03, or 05 and zz = Channel 01 is always used to assign RPTU parameters	Enter the ISDN RPTU equipment number as xxyyzz: Example: If the RPTU is installed in cabinet shelf 5, slot 3, enter 050301. Cabinet numbers: CTX100: Select 01 for Base and Expansion cabinet. CTX670: Select 01 for Base and 02~07 respectively for each Expansion cabinet. Slot numbers: CTX100: Select 01~04 for Base slots and 05~08 for Expansion slots. CTX670: Select 01~08 for Base slots and 01~10 for Expansion slots..
316-02	Trunk ID **FB02**, n, **Hold**	n = 0~126 (default = 1)	An identifier must be used as part of the addressing to communicate with the PSTN which channel on which link is used the given call. This identifier is assigned by the connected PSTN.
316-03	D Channel Provided **FB03**, n, **Hold**	n = 1. D-Channel 2. No D-Channel (default)	If a backup 'D' Channel is to be used, it needs to be enabled.
316-04	Backup D Channel Position **FB04**, n, **Hold**, **Hold**	n = 1~128 (default = 24)	Channel Group Number.
317	ISDN BRI Trunk **317**, **Hold**		The following program enables set up for ISDN related system settings.
317-00	Channel Group n, **Hold**	n = 1~32 (CTX100) 1~48 (CTX670 Basic) 1~128 (CTX670 Exp.)	Enter the BRI channel Group Number.

Table 13-29 Programs 316~317 *(continued)*

Button	Sequence	Value(s)	Summary
317-01	Equipment Number **FB01**, xxyyzz, **Hold**	xx = CTX670 yy = Cabinet (01~07) zz = Slot (01~10) Circuit (01~08 or 01~24) or CTX100 Cabinet (01) Slot (01~08) Circuit (01~04)	Enter the equipment number xxyyzz to which the ISDN BRI Trunk is to be assigned. Example: If the RBUU is installed in cabinet shelf 5, slot 3, enter 050301 for circuit 1. Cabinet numbers: • CTX100 – Select 01 for Base and Expansion cabinet. • CTX670 – Select 01 for Base and 02~07 respectively for each Expansion cabinet. Slot numbers: • CTX100 – Select 01~04 for Base slots and 05~08 for Expansion slots. • CTX670 – Select 01~08 for Base slots and 01~10 for Expansion slots.
317-02	Protocol **FB02**, n, **Hold**	n = 1. National ISDN 2. ETSI 3. TTC 4. National ISDN Nortel	Select the ISDN protocol. Only Bearer capabilities specified by the protocol can be entered in this field. The Initial value for ISDN Protocol corresponds to information set in the hardware level. National ISDN = North America, ETSI = England and TTC = Japan.
317-03	ILG **FB03**, n, **Hold**	n = 0~32 (CTX100) 0~50 (CTX670 Basic) 0~128 (CTX670 Exp.)	ILG assignments must be made for basic ISDNs to process the calls being received.
317-04	OLG **FB04**, n, **Hold**	n = 0~32 (CTX100) 0~50 (CTX670 Basic) 0~128 (CTX670 Exp.)	OLG assignments must be made for basic ISDNs to process the calls being originated.
317-05	Connection Format **FB05**, n, **Hold**	n = 1. Point to Point 2. Point to Multi Point	Identify connection format with the PSTN is 1- Point-to-Point or 2- Point-to-Multipoint.
317-06	Bearer Svc - Speech **FB06**, n, **Hold**	n = 1. Enable (default) 2. Disable	Enable speech capability.
317-07	Bearer Svc - 3.1 KHz Audio **FB07**, n, **Hold**	n = 1. Enable (default) 2. Disable	Enable 3.1 KHz audio capability.
317-08	Bearer Svc - 7 KHz Audio **FB08**, n, **Hold**	n = 1. Enable 2. **Disable** (default)	Enable 7 KHz audio capability.
317-09	Bearer Svc - Unrestricted 64K **FB09**, n, **Hold**	n = 1. **Enable** (default) 2. Disable	Enable one of the unrestricted capabilities.
317-10	Bearer Svc - Unrestricted 56K **FB10**, n, **Hold**	n = 1. **Enable** 2. Disable (default)	
317-11	Bearer Svc - Unrestricted 2x64K **FB11**, n, **Hold**	n = 1. **Enable** 2. Disable (default)	
317-12	Outgoing B Ch Select **FB12**, n, **Hold**	n = 1. Explicit 2. **Preferred** (default) 3. Any Channel	Select originating B Channel method. • Explicit – Channel is indicated, and no alternative is acceptable. • Preferred – (default) Channel is indicated, and any alternative is acceptable. • Any Channel – Channel is indicated, and any channel is acceptable.

Table 13-29 Programs 316~317 *(continued)*

Button	Sequence	Value(s)	Summary
317-13	B Ch Selection **FB13**, n, **Hold**	n = 1. Forward Cyclic 2. Backward Cyclic (default) 3. Forward Terminal 4. **Backward Terminal**	Choose Idle B Channel selection method. • Select Forward Cyclic (from lowest number to highest number of B-channel). • Select Backward Cyclic (from highest number to lowest number of B-channel). • Select Forward Terminal for the lowest numbered B-channel. Select Backward Terminal for the oldest number B-channel. (The High-High B-channel selection)
317-14	Initialize Type **FB14**, n, **Hold**	n = 1. User Entry Of SPID Auto SPID ON 2. User Entry Of SPID Auto SPID OFF 3. Auto SPID 4. **None** (default)	Enter the Service Profile Identifier (SPID) type of initialization.
317-15	Initialization Display **FB15**, n, **Hold**	n = Up to 4 digits (default = User)	Enter the text to be displayed for SPID Initialization.
317-16	SPID #1 **FB16**, n, **Hold**	n = Up to 20 digits	Enter the SPID value. These fields are required if you selected National ISDN in Protocol. When no data is entered, any previously entered information is overwritten.
317-17	SPID #2 **FB17**, n, **Hold**	n = Up to 20 digits	
317-18	T-Wait Timer **FB18**, n, **Hold**	n = 1. Enable 2. **Disable** (default)	Enable the T-Wait Timer. This field is needed if you selected National ISDN in Protocol above. This timer, used along with the SPID, assigns random initializing SPID times to prevent BRI interfaces from re-initialize at the same time after a reset or power outage.
317-19	Voice Calls **FB19**, n, **Hold**	n = 1. One 2. **Two** (default)	Select the number of simultaneous voice (speech) calls that can exist at the same time on this interface.
317-20	Trunk Subscriber 1 **FB20**, n, **Hold**	n = Up to 10 digits	Enter the telephone number for subscriber 1. Telephone number should be consistent with D channel data. If no data is entered in this field any previously programmed information is lost.
317-21	Trunk Subscriber 2 **FB21**, n, **Hold**, **Hold**	n = Up to 10 digits	Enter the telephone number for subscriber number 2. If no data is entered in this field any previously programmed information is lost.

Table 13-30 Bearer Capability Table

Bearer Services			Bellcore National ISDN	ETSI	TTC
Circuit Mode	Speech		X	X	X
	3.1 KHz		X	X	X
	7 KHz			X	X
	Unrestricted Digital Information	64 Kbps	X	X	X
		Rate adaptation from 56 Kbps	X		
		2x64 Kbps		X	X

Table 13-31 Programs 318~320

Button	Sequence	Value(s)	Summary
318	DID Intercept Assignment **318**, **Hold**		This command assigns the DID Routing table when DID numbers are undefined or not received.
318-00	ILG Number n, **Hold**	n = 1~32 (CTX100) 1~50 (CTX670 Basic) 1~128 (CTX670 Exp.)	Enter ILG number.
318-01	Type **FB01**, n, **Hold**	n = 1. **No DID** 2. Not Determined	Select Routing Type.
318-02	MOH Source **FB02**, n, **Hold**	n = 1. Quiet Tone 2. **External 1** (default) 3. External 2 4. External 3 5. External 4 6. External 5 7. External 6 8. External 7 9. External 8 10. External 9 11. External 10 12. External 11 13. External 12 14. External 13 15. External 14 16. External 15	Select Music On Hold
318-03	GCO Destination **FB03**, n, **Hold**	0~32 (CTX100) 0~50 (CTX670 Basic) 0~128 (CTX670 Exp.) (default = 0)	GCO Key Group number.
318-04	Pooled Line Group **FB04**, n, **Hold**	0~32 (CTX100) 0~50 (CTX670 Basic) 0~128 (CTX670 Exp.) (default = 0)	POOL Line Key Group Number.
318-05~07	Audio Day1/Day2/ Night Dst Type **FB05**~**FB07**, n, **Spkr**	n = 1. **No Data** (default) 2. Dialing Digits 3. DISA 4. Built-in modem 5. Night Bell	Select the Audio/Speech call Day1 destination type. • No Data – no destination will ring when the line rings into the system. • Dialing Digits – assigns the line to ring the directory number or access code defined in the “Destination Digits” assignment • DISA – assigns the line to ring in as a DISA call. DISA dial tone will be returned to the caller. • Modem – assigns the line to ring the remote maintenance modem on the CTX processor. Used to call into the system with a CTX WinAdmin PC and modem. • Night Bell – Assigns the line to cause the night relay to pulse (one-sec.close/3-sec.open)
	Audio Day1/Day2/ Night Dst DN n1, **Hold**	n1 = Up to 32 digits	Enter the Destination Directory Number. Destination DN is only required if the destination type is “Dialing Digits”

Table 13-31 Programs 318~320 *(continued)*

Button	Sequence	Value(s)	Summary
318-08~10	Data Day1/Day2/ Night Dst Type **FB08**~**FB10**, n, **Spkr**	n = 1. **No Data** (default) 2. Dialing Digits 3. DISA 4. Built-in modem 5. Night Bell	Select the data call Day1 destination type • No Data (default), Dialing Digits, DISA, Built-in Modem or Night Bell • No Data – no destination will ring when the line rings into the system. • Dialing Digits – assigns the line to ring the directory number or access code defined in the "Destination Digits" assignment • DISA – assigns the line to ring in as a DISA call. DISA dial tone will be returned to the caller. • Modem – assigns the line to ring the remote maintenance modem on the CTX processor. Used to call into the system with a CTX WinAdmin PC and modem. • Night Bell – Assigns the line to cause the night relay to pulse (one-sec.close/3-sec.open)
	Data Day1/Day2/ Night Dst DN n1, **Hold**	n1 = Up to 32 digits	Enter the Destination Directory Number. Destination DN is only required if the destination type is "Dialing Digits"
318-11	VMID for DNIS No. **B11**, n, **Hold**	n = Up to 10 digits	Enter the VM mail box number which should answer calls for this DID/ DNIS number. This code is only sent if using SMDI VM integration in Program 580, 01. This code will be replaced, after voice mail answers, by the DTMF code set in Program 318, 15 DID/DNIS DTMF VMID code - if programmed; therefore, if using Program 318, 15 code, this VMID code is not necessary. This mail box number will be sent to voice mail on a DID/DNIS call that rings directly to voice mail; and, on a direct DID/DNIS call to a DN that forwards to voice mail before it is answered by the DN. If a DID/DNIS call is answered by a station and then transferred to a DN that forwards to voice mail, this mail box number of the DID/DNIS number, or the forwarding DN's mail box number will be sent to voice mail per Program 579, 01. If this VMID code is not set, direct DID/DNIS calls will go to the VM general greeting and DID/DNIS calls that forward from a DN to VM will go to the DN's VMID mail box. This Voice Mail box number is added to SMDI packets of direct and forwarded DID\DNIS calls to voice mail as explained above.
318-12	DNIS Name **FB12**, n, **Hold**, **Hold**	n = Up to 16 digits	Enter DNIS Name. DNIS names can be assigned from the CTX WinAdmin (not from programming phones).
318-15	**DID/DNIS No. DTMF VMID** **FB15**, n, **Hold**, **Hold**	n = Digits 0~9, * and #. For a pause enter Px, where x=0~9 (seconds), up to 10 characters (default = no value).	Enter the VM mail box number which should answer calls for this DID/ DNIS number. This mail box number will be sent to voice mail on a DID/DNIS call that rings directly to voice mail; and, on a direct DID/DNIS call to a DN that forwards to voice mail before it is answered by the DN. If a DID/DNIS call is answered by a station and then transferred to a DN that forwards to voice mail, the mail box number of the DID/DNIS number or the forwarding DN's mail box number will be sent to voice mail per Program 579, 01. If this VMID code is not set, direct DID/DNIS calls will go to the VM general greeting and DID/DNIS calls that forward from a DN to VM will go to the DN's VMID mail box. This voice mail box number is sent to the VM port, as DTMF digits, after the VM port answers a DID/DNIS call as explained above. These digits are sent to the VM port if the CTX is set for SMDI or DTMF integration in Program 580, 01.

Table 13-31 Programs 318~320 *(continued)*

Button	Sequence	Value(s)	Summary
319	Intercept Treatment **319**, **Hold**		This command assigns Intercept positions for Strata CTX Day/Night schedules. Intercept positions are used when the destination of a trunk line call is not determined with DID or DIT
319-00	Tenant Number	n = Enter 1~8	Select the Tenant number for which the Intercept Destinations will be configured.
01 02 03	Day1 Destination Day2 Destination Night Destination **FB01**~**FB03**, n, **Spkr**, n1, **Hold**, **Hold**	n = 1. **None** (default) 2. Dialing Digits 3. Night Bell n1 = Up to 32 digits	Select Destination Type for each. Enter Destination for each. • To intercept with a DN use 0~99999 • To intercept with a Network DN use 1~32 • To intercept with Dial Digits Paging 1~16
320	B Channel **320**, **Hold**		PRI interfaces are purchased on per interface and channel basis. The 'B' channel assignments allow for a flexible activation of channels to match the subscribed services from the Public Service Telephone Network.This command allows you to enable or disable each B channel on selected RPTU PCBs.
320-00	RPTU Equipment No. xxyyzz, **Hold**	xx = xx = cabinet 01 yy = yy = 03, 05, or 07 zz = zz = Channel 01 is always used to assign RPTU parameters or xx = cabinet 02~10 yy = 01, 03, or 05 zz = Channel 01 is always used to assign RPTU parameters	Enter the ISDN RPTU equipment number. Equipment numbers are required when assigning ISDN RPTU parameters in the system. It can also be used to display the equipment location of existing RPTU PCBs. Example: If the RPTU is installed in cabinet shelf 5, slot 3, enter 050301.
320-01~23	B Channel **FB01**~**FB23**, n, **Hold**, **Hold**	n = 1. **Enable** (default) 2. Disable	Assign each 'B' channel as enabled or disabled for each channel on the interface. The assignments must match exactly to the subscription from the PSTN.

Table 13-32 B Channel Defaults

B Channel Position Span Interface Speed	01~15	16	17~23	24	25~31
1.5M (T1)	ON	ON	ON	OFF (Dch Pos)	
2.0M (E1)	ON	OFF (Dch Pos)	ON	ON	ON

Table 13-33 Programs 321~324

Button	Sequence	Value(s)	Summary
321	Calling Number Identification **321**, **Hold**		The Calling Number ID is what is defined as the user supplied Calling Number. This number may be optionally screened by the PSTN to ensure only calls from valid billable telephone numbers are allowed to originate calls.
321-00	OLG Number n, **Hold**	n = 1~32 (CTX100) 1~50 (CTX670 Basic) 1~128 (CTX670 Exp.)	Enter the OLG Number.
321-01	Default Number **FB01**, n, **Hold**	n = Up to 10 digits	Enter the telephone number to use by default when originating a call. This is the number that the PSTN has registered for billing purposes.

Table 13-33 Programs 321~324 *(continued)*

Button	Sequence	Value(s)	Summary
321-02	Number Prefix **FB02**, n, **Hold**	n = Up to 10 digits	Enter the prefix telephone number for which a DID number will be appended to create a User Identified telephone number. This number may or may not be a billed number, but is used for Caller ID at the distant end and could be used for returning your call.
321-03	Number Verification **FB03**, n, **Hold**	n = 1. Enable 2. **Disable**	Specify whether the number provided should be screened by the PSTN before the call is to proceed.
321-04	Default Number 2 **FB04**, n, **Hold**, **Hold**	n = Up to 10 digits	Enter the second telephone number to use by default when originating a call. This is the number that the PSTN has registered for billing purposes. The second number is for BRI only
322	CNIS Presentation And Special Number Assignment **322**, **Hold**		When calls are sent to the PSTN with Calling Number Identification Service (CNIS), the CTX can supply special CNIS information as part of the Setup Message. This program may be used for sending a unique number based on the source directing the call to the Strata CTX PRI.
322-00	OLG Number n, **Hold**	n = 1~32 (CTX100) 1~50 (CTX670 Basic) 1~128 (CTX670 Exp.)	OLG Number.
322-01	Source Type **FB01**, n, **Hold**	n = 1. Primary DN (0~99999) 2. Group CO (1~128) 3. Pooled Line Group (1~128)	Specify the type of circuit used for outgoing calls: 1- PDN; 2- GCO; 3- Pooled Line.
322-02	Source Number **FB02**, n, **Hold**	n = Up to 5 digits GCO and POOL: 1~32 (CTX100) 1~50 (CTX670 Basic) 1~128 (CTX670 Exp.)	Specify the number of the source type selected (PDN, GCO or Pooled Line). **Note** Entries for this field depend on the Destination Type chosen. There are no default values for this field (default = no value). • PDN: 0~99999 • GCO: 1~128 • POOL: 1~128
322-03	Special Number Assignments **FB03**, n, **Hold**, **Hold**	n = Up to 7 digits	Specify the number to be sent when calling out from the source (max. seven digits). This number is appended to Program 321 FB02. **Note** Destination Type and Destination must be entered before a DID number can be assigned.
323	CBC Service **323**, **Hold**		To accomplish CBC services, each facility needs to be defined, its related Line Group assigned and minimum and maximum values for the services provided. These service parameters may be set for three different time zones, thus allowing fewer or more services of different types at different times of the day.
323-00	Channel Group n, **Hold**	n = 1~32 (CTX100) 1~48 (CTX670 Basic) 1~128 (CTX670 Exp.)	Enter the Channel Group Number.
323-01	Index **FB01**, n, **Hold**	n = 0~32 (CTX100) 0~48 (CTX670 Basic) 0~128 (CTX670 Exp.)	Enter the CBC Service Index, or click one of the following buttons: • List – view a summary list of programmed Trunks. • Create – Assign a new Trunk with default settings.
323-02	Type of Service **FB02**, n, **Hold**	n = 1. No Data (default) 2. POTS 3. FX 4. Tie line (Enbloc) 5. Tie line (Cut throuogh) 6. Intra LATA Out WATS 7. Banded Out WATS 8. Inter LATA Out WATS 9. INWATS	Select the CBC Service Type. **Note** To delete CBC, set this field to **`1: No Data`**.
323-03	Facility Code **FB03**, n, **Hold**	n = 00~31	Enter the supplied Facility code value from the PSTN. If no data is entered in this field, any previously entered data is deleted.

Table 13-33 Programs 321~324 *(continued)*

Button	Sequence	Value(s)	Summary
323-04	Service Parameter **FB04**, n, **Hold**	n = Up to 5 digits	Enter the Service parameters supplied from PSTN. If no data is entered in this field, any previously entered data is deleted.
323-05	Network ID **FB05**, n, **Hold**	n = 3~4 digits	Enter the Network ID code supplied from PSTN (this field is required if you selected “Inter LATA Out WATS” Type of Service. If no data is entered in this field, any previously entered data is deleted.
323-06	ILG **FB06**, n, **Hold**	n = 0~32 (CTX100) 0~50 (CTX670 Basic) 0~128 (CTX670 Exp.) (default = 0)	Specify the ILG for this facility.
323-07	OLG **FB07**, n, **Hold**	n = 0~32 (CTX100) 0~50 (CTX670 Basic) 0~128 (CTX670 Exp.) (default = 0)	Specify the OLG for this facility.
323-08	Min Calls Zone 1 **FB08**, n, **Hold**	n = 0~47 (default = 0)	Select the minimum number of Bch in Time Zone 1.
323-09	Max Calls Zone 1 **FB09**, n, **Hold**	n = 0~47 (default = 47)	Select the maximum number of Bch in Time Zone 1.
323-10	Min Calls Zone 2 **FB10**, n, **Hold**	n = 0~47 (default = 0)	Select the minimum number of Bch in Time Zone 2.
323-11	Max Calls Zone 2 **FB11**, n, **Hold**	n = 0~47 (default = 0)	Select the maximum number of Bch in Time Zone 2.
323-12	Min Calls Zone 3 **FB12**, n, **Hold**	n = 0~47 (default = 0)	Select the minimum number of Bch in Time Zone 3.
323-13	Max Calls Zone 3 **FB13**, n, **Hold**, **Hold**	n = 0~47 (default = 0)	Select the maximum number of Bch in Time Zone 3.
324	CBC Time Zones **324**, **Hold**		This command assigns Call-by-Call Time Zone.
324-00	Channel Group n, **Hold**	n = 1~32 (CTX100) 1~48 (CTX670 Basic) 1~128 (CTX670 Exp.)	Channel Group Number
324-01	Start Zone 1 **FB01**, hhmm, **Hold**	hh = hour (00~23) mm = minute (00~59) 9999 to delete	Enter the Time Zone Starting Time (hhmm).
324-02	Start Zone 2 **FB02**, hhmm, **Hold**		
324-03	Start Zone 3 **FB03**, hhmm, **Hold**, **Hold**		

400 Series Programs

Table 13-34 Programs 400~404

Button	Sequence	Value(s)	Summary
400	Emergency Call Destination Assignment **400**, **Hold**		This command assigns Emergency Call destinations to Emergency Call groups. There is one group for each Day mode (Day1, Day2 and Night).
400-01	Day/Night Mode **FB01**, n, **Hold**	n = 1. Day 1 2. Day 2 3. Night	This is a display only field. It is controlled by the Strata CTX system.
400-02	Called Number Index **FB02**, n, **Hold**	n = 1~4	This is a display only field. It is controlled by the Strata CTX system.
400-03	Emergency Call Destination **FB03**, n, **Hold**	n = Up to 32 digits	Enter the destination DN for the emergency call.
400-04	Action **FB04**, n, **Hold**, **Hold**	n = 1. Modify (default) 2. Insert	Choose whether you are replacing an existing Emergency Number Index or inserting one in the list. If inserting, the new entry will assume the specified index. The remaining indices will be increased by one and the last one, 4, will be deleted.
404	Attendant Group Assignment **404**, **Hold**		This program establishes Attendant Groups, distribution methods and alternate destinations.
404-00	Attendant Group Member n, **Hold**	n = 1 (CTX100 & CTX670 Basic) 1~8 (CTX670 Exp.)	Select the Attendant Group Member Number.
404-01	Call Distribution Method **FB01**, n, **Hold**	n = 1. **Most Idle First** (default) 2. Next Available First 3. Broadcast	Select the Call Distribution Method for attendant console.
404-02	Alternate Attendant Destination **FB02**, n, **Hold**	n = Up to 32 digits	Enter the Alternate Attendant Destination (DN, Network DN or Group Pilot Number). If no data is entered in this field, any previous entries are overwritten.
404-03	Overflow Time **FB03**, n, **Hold**	n = 0~180 (default = 30)	Select the Attendant Overflow Time in minutes.
404-04	Group Overflow Destination **FB04**, n, **Hold**	n = Up to 32 digits	Enter the overflow destination for this attendant group. If no data is entered in this field, any previous entries are overwritten.
404-05	VMID Code SMDI **FB05**, n, **Hold**	n = Up to 10 digits	Enter the Attendant's Voice Mail ID code. If no data is entered in this field, any previous entries are overwritten.
404-07~16	ICI1~ ICI10 **FB07**~**FB16**, n, **Spkr**, n, **Spkr**, n, **Spkr**, n, **Hold**, **Hold**	n = 0~32 (CTX100) 0~50 (CTX670 Basic) 0~128 (CTX670 Exp.) (default = 0)	• For 07 ICI1~16 ICI10, select ILG Assignments for ICI Groups.ILG1 • Assign the 1st ILG to ICI Groups 1~10. • Assign the 2nd ILG to ICI Groups 1~10. • Assign the 3rd ILG to ICI Groups 1~10. • Assign the 4th ILG to ICI Groups 1~10. **Note** Each ILG can only be assigned once in any of the ICI Groups.

500 Series Programs

Table 13-35 Programs 500~577

Button	Sequence	Value(s)	Summary
500	System Call Forward Assignment **500**, **Hold**		This assignment is used to configure up to 32 system call forward patterns. Station DNs are assigned to these patterns in the station COS assignments. **Note** The Administrator programs the condition of transfer by setting Call Type, Period and Telephone Status. Destinations 1 and 2 should be programmed after transfer conditions are set.
500-00	SCF Number n, **Hold**	n = 1~4 (CTX100) 1~10 (CTX670 Basic) 1~32 (CTX670 Exp.)	Select the SCF pattern number to configure.
500-01	Call Type **FB01**, n, **Hold**	n = 1. CO Loop Ground 2. DID 3. Tie 4. Ring Transfer 5. Internal	Select the type of call that should forward in this pattern. **Note** Each 500-01 call type must be the same telephone status. Also, all calls must be the same Call Forward type.
500-02	Period **FB02**, n, **Hold**	n = 1. Day 2. Day2 3. Night	Select the system time period in which this SCF pattern should operate.
500-03	Telephone Status **FB03**, n, **Hold**	n = 1. Busy 2. Off No Answer 3. Busy No Answer 4. DND	Select the telephone DN status that should cause this SCF pattern to operate. **Note** Each 500-01 call type must be the same telephone status. Also, all calls must be the same Call Forward type.
500-04	Destination 1 **FB04**, n, **Hold**, **Hold**	n = Up to 32 digits	Select the first destination to which the call should forward.
501	System Speed Dial Assignment **501**, **Hold**		System Speed Dial consists of up to 800 pre-programmed numbers each containing up to 32 digits. If the number being entered exceeds the 32 digits, the next speed dial location will automatically be appended to create longer numbers. One other speed dial location can be nested within the number for dialing a common routine with the number (see “516 Station Speed Dial” on page 5-31 for more information about nesting).
501-00	Speed Dial Bin n, **Hold**	n = 000~799	Enter the speed dial bin location.
501-01	Number **FB01**, n, **Hold**	n = Up to 32 digits, 0~9, *, # and Pauses	This is the dialable number stored in the speed dial bin. **Note** To enter pauses enter Px, where x equals 1~9 (seconds), which is the length of the pause.
501-02	Name **FB02**, n, **Hold**, **Hold**	n = Up to 8 digits	This is the Name that appears on Telephone LCD dial directories. **Note** This feature is available in CTX WinAdmin and Strata DKT30xxSD only.
502	Terminal Paging Group Assignment **502**, **Hold**		Assigns Primary DNs to Paging Group(s).
502-00	Primary DN n, **Hold**	n = Up to 5 digits	Enter the Primary DN of the station to be assigned to Paging Groups. A station may belong to more than one paging group. **Note** You can have upto 72 paging groups in the Strata CTX100 and upto 120 paging groups in the Strata CTX670. Any software release before R1.01, M19 supports only 32 paging groups for all systems.
502-01~16	PG01~PG16 **FB01**~**FB16**, n, **Hold**	n = 1. On 2. **Off** (default)	Activate the Paging Group(s) this station belongs too. The number of DNs that can be assigned are 1~4 (CTX100), 1~8 (CTX670 Basic), 1~16 (CTX670 Exp.)

Table 13-35 Programs 500~577 *(continued)*

Button	Sequence	Value(s)	Summary
502-17	All Page Group **FB17**, n, **Hold**	n = 1. On 2. **Off** (default)	Enter this station in all Paging Groups.
502-18	All Emergency Page Group **FB18**, n, **Hold**, **Hold**	n = 1. On 2. **Off** (default)	Enter this station in all Emergency Paging Groups.
503	Paging Devices Group Assignment **503**, **Hold**		Assigns BIOU Page Zone Relays to Page Groups.
503-00	Zone Relay Number n, **Hold**	n = 1~8 • BIOU1 = 1~4 • BIOU2 = 5~8	Select the BIOU Page Zone relay that should be assigned to the Page Groups below. This relay activates whenever the selected Page Group is paged. • BIOU1 = Zone Relays 1~4. • BIOU2 = Zone Relays 5~8.
503-01~16	PG01~PG16 **FB01**~**FB16**, n, **Hold**	n = 1. On 2. Off (default)	Turn on if the selected BIOU Page Zone Relay should activate with this Page Group.
503-17	All Page Group **FB17**, n, **Hold**	n = 1. On 2. Off (default)	
503-18	All Emergency Page Group **FB18**, n, **Hold**	n = 1. On 2. Off (default)	
503-19	BGM Mute Relay **FB19**, n, **Hold**, **Hold**	n = 0~8 (default = 0) • BIOU1 = 1~4 • BIOU2 = 5~8	Assign BIOU generic relay as the BGM mute relay. This relay activates whenever the external page is in use • BIOU1 = Generic Relays 1~4. • BIOU2 = Generic Relays 5~8. **Note** The CTX100 ACTU built-in relay is programmed as relay 5. For this relay operation,BIOU2 is installed, as default, in a virtual equipment position - Cabinet 2, Slot 5, PCB code 20, in Program 100. To install an actual BIOU2 and disable the ACTU built-in relay, use the programming telephone to remove the virtual BIOU2 and then install the actual BIOU2 in Cabinet 01 Slot 01~08 in the normal manner.
504	System Call Forward Operation Status **504**, **Hold**		This command assigns System Call Forward Type for the pattern.
504-00	SCF Number n, **Hold**	n = 1~4 (CTX100) 1~10 (CTX670 Basic) 1~32 (CTX670 Exp.)	Select the SCF pattern number to configure.
504-01	Telephone Status **FB01**, n, **Hold**, **Hold**	n = 1. **No Data** (default) 2. Busy 3. No Ans 4. Busy No Ans 5. DND	Select the status or state in which the telephone should be for this system call forward pattern to activate. **Notes** • Each 500-01 call type must be the same telephone status. Also, all calls must be the same Call Forward type. • Telephone status must be the same as telephone status selected in 500-03.
506	Verified Account Codes **506**, **Hold**		This program adds or deletes entries in the DR Table associated with the DRL.
506-00	Account Code n, **Hold**	n = Up to 15 digits	Enter a valid accounting code that the user will be expected to dial. Digits 0~9 can be used. **Note** The Account Code is set to the same digit length as the Verified Digit Length in Program 570 above.

Table 13-35 Programs 500~577 *(continued)*

Button	Sequence	Value(s)	Summary
506-01	Verified Flag **FB01**, n, **Hold**	n = 1. Set 2. **No Set** (default)	The Account Code Flag determines whether the number entered is to be used as a verified account code or not. Some applications may allow users to dial an accounting code which changes the restriction level for the call allowing it to be placed. **Note** To delete a Verified Account Code set this field to No Set.
506-02	DRL **FB02**, n, **Hold**	n = 0~16 (default = 0)	The DRL assigned to an accounting code allows users to override their stations assigned DRL enabling a call to be placed.
506-03	FRL **FB03**, n, **Hold**	n = 0~16 (default = 0)	The FRL assigned to an accounting code enables users to override the station assigned FRL.
506-04	Network COS **FB04**, n, **Hold**, **Hold**	n = 1~32 (default = 1)	Assign the Network COS to be used by this accounting code.
507	Door Phone Assignment **507**, **Hold**		This assignment configures Door Phone Control Boxes (DDCBs) and Door Phones (MDFBs). DDCBs can be connected to ADKU, PDKU and/or BDKU interface PCBs. Up to three MDFBs can be connected to one DDCB. A Door lock control relay may be assigned to the B output of the DDCB in place of a MDFB door phone.
507-00	Door Phone Number n, **Hold**	n = 1~6 (CTX100) 1~9 (CTX670 Basic) 1~24 (CTX670 Exp.)	Enter the door phone number. Door phone numbering for both CTX100 and CTX670 is as follows: • DDCB 1 provides door phone numbers 1~3, 2 can be a door phone or door lock. • DDCB 2 provides door phone numbers 4~6, 5 can be a door phone or door lock. Door phone numbering for CTX670 only is as follows: • DDCB 3 provides door phone numbers 7~9, 8 can be a door phone or door lock. • DDCB 4 provides door phones 10~12, 11can be a door phone or door lock. • DDCB 5 provides door phones 13~15, 14 can be a door phone or door lock. • DDCB 6 provides door phones 16~18, 17 can be a door phone or door lock. • DDCB 7 provides door phones 19~21, 20 can be a door phone or door lock. • DDCB 8 provides door phones 22~24, 23 can be a door phone or door lock. DDCBs are numbered by the system automatically by DDCB Equipment (Shelf/Slot/Circuit). DDCB1 is assigned to the lowest DDCB Equipment and DDCB2 to the next lowest, etc. If DDCB Circuit B is set to Door Lock, a Door Phone cannot be set.

Table 13-35 Programs 500~577 *(continued)*

Button	Sequence	Value(s)	Summary
507-01	DDCB Equipment No. **FB01**, xxyyzz, **Hold**	xx = Cabinet 01 (CTX100), 01~02 (CTX670 Basic), 01~07 (CTX670 Exp.) yy = Slot 01~8 (CTX100), 01~10 (CTX670) zz = Circuit 01~16	Enter the DDCB equipment number to which the Door phone should be assigned. Example: If the DDCB interface should be connected to a PDKU or BDKU/BDKS in cabinet shelf 5, slot 2, circuit 3, enter 050203. **Notes** • This is the cabinet, slot, and circuit number of the BDKU/BDKS or PDKU interface PCB to which the DDCB is to be connected. • If a PDN is assigned to the DDCB equipment number it must be deleted, using Program 201, before attempting to assign the DDCB console. Cabinet numbers: • CTX100 – Select 01 for Base and Expansion cabinet. • CTX670 – Select 01 for Base and 02~07 respectively for each Expansion cabinet. Slot numbers: • CTX100 – Select 01~04 for Base slots and 05~08 for Expansion slots. • CTX670 – Select 01~08 for Base slots and 01~10 for Expansion slots.
507-02	Tenant Number **FB02**, n, **Hold**	n = 1~2 (CTX100) 1~8 (CTX670) (default = 1)	Select the Tenant Number for which the door phone should ring over external page in the system Night mode.
507-03	Connection Status	n = 1. Enable 2. **Disable** (default)	Check the box if the door phone is physically connected to the DDCB.
507-04	Ring Duration **FB04**, n, **Hold**	n = 3~30 (default = 9)	Select the time that the door phone should ring destination devices when the door phone button is pressed. The ring time can be 3 to 30 seconds set in 3 second intervals - each 3 second interval provides one ring to the destination. Destination devices include selected DNs and Page groups.
507-05	LCD Name Display **FB05**, n, **Hold**	n = 1~16	Enter the Door Phone name that should display on LCD telephones when the door phone rings the telephones; or, when the telephone calls the door phone.
507-06	Day1 Destination **FB06**, n, **Spkr**, n1, **Hold**	n = 1. **None** (default) 2. DN 3. Paging Group 1~4 (CTX100) 1~8 (CTX670 Basic) 1~16 (CTX670 Exp.) n1 = Up to 5 digits	1. Select Destination Type – Select the type of destination that should ring when the door phone button is pressed during the system Day1, Day2 or Night mode. 2. Enter the Destination Number – If the ring destination type is a PDN or PhDN, enter the directory number. If the ring destination type is Page, enter the Page Group number.
507-07	Day2 Destination **FB07**, n, **Spkr**, n1, **Hold**	n = 1. **None** (default) 2. DN 3. Paging Group 1~4 (CTX100) 1~8 (CTX670 Basic) 1~16 (CTX670 Exp.) n1 = Up to 5 digits	1. Select Destination Type – Select the type of destination that should ring when the door phone button is pressed during the system Day1, Day2 or Night mode. 2. Enter the Destination Number – If the ring destination type is a PDN or PhDN, enter the directory number. If the ring destination type is Page, enter the Page Group number.
507-08	Night Destination **FB08**, n, **Spkr**, n1, **Hold**, **Hold**	n = 1. **None** (default) 2. DN 3. Paging Group 1~4 (CTX100) 1~8 (CTX670 Basic) 1~16 (CTX670 Exp.) n1 = Up to 5 digits	1. Select Destination Type – Select the type of destination that should ring when the door phone button is pressed during the system Day1, Day2 or Night mode. 2. Enter the Destination Number – If the ring destination type is a PDN or PhDN, enter the directory number. If the ring destination type is Page, enter the Page Group number.

Table 13-35 Programs 500~577 *(continued)*

Button	Sequence	Value(s)	Summary
508	Door Lock Control Assignment **508**, **Hold**		This assignment is used to configure up to 10 door lock control relays. The contacts of these relays are used to control electrical door locks. One door lock relay can be assigned to each of the eight Door Phone Control Boxes (DDCB, Port B) and/or one to each of the two BIOU PCBs (any one of the four control relays). **Note** If a door lock is assigned to a DDCB, the second jack (Port B) will provide the door lock relay contacts. This jack can not be used to connect an MDFB door phone.
508-00	Door Lock Number n, **Hold**	n = 1~4 (CTX100) 1~5 (CTX670 Basic) 1~10 (CTX670 Exp.)	Enter the door lock control number to configure.
508-01	Interface Type **FB01**, n, **Hold**	n = 1. **None** (default) 2. BIOU 3. DDCB	Enter the system Page Group number that should ring for the selected tenant when a door phone button is pressed during the system Night Mode.
508-02	BIOU Relay Number **FB02**, n, **Hold**	n = 0~8 (default = 0) • BIOU1 provides control relays 1~4 • BIOU2 provides control relays 5~8.	Assign BIOU control relay as a Door Lock Relay. This relay activates when the Door Lock button is pressed or a Door Lock access code is dialed. **Note** The CTX100 ACTU built-in relay is programmed as relay 5. For this relay operation BIOU2 is installed as default in a virtual equipment position Cabinet 2, Slot 5, PCB code 20, in Program 100. To install an actual BIOU2 and disable the ACTU built-in relay, use the programming telephone to remove the virtual BIOU2 and then install the actual BIOU2 in Cabinet 01/slot 01~08 in the normal manner. BIOU relay functions are assigned in "Program 515" on page 80. This field is required if you selected BIOU in *01 Interface Type* above.
508-03	DDCB Equipment No. **FB03**, n, **Hold**, **Hold**	n = Cabinet 01 (CTX100), 01~02 (CTX670 Basic), 01~07 (CTX670 Exp.) Slot 01~8 (CTX100), 01~10 (CTX670) Circuit 01~16	Enter the DDCB equipment number to which the Door Lock should be assigned. This is the cabinet, slot, and circuit number of the ADKU, BDKU/BDKS or PDKU interface PCB to which the the DDCB is to be connected. Enter data as XXYYZZ: XX=cabinet 01~07; YY=slot 01~10; ZZ=circuit 01~16 Example: If the DDCB interface should be connected to a ADKU, PDKU or BDKU/BDKS in cabinet shelf 5, slot 2, circuit 3, enter 050203. **Note** If a PDN is assigned to the DDCB equipment number it must be deleted, using PRG201, before attempting to assign the DDCB console. Cabinet numbers: • CTX100: Select 01 for Base and Expansion cabinet. • CTX670: Select 01 for Base and 02~07 respectively for each Expansion cabinet. Slot numbers: • CTX100: Select 01~04 for Base slots and 05~08 for Expansion slots. • CTX670: Select 01~08 for Base slots and 01~10 for Expansion slots.
509	DR Override by System Speed Dial **509**, **Hold**		This command assigns the COS, DRL, FRL and QPL values used by DR Override by Speed Dial.
509-01	Override COS **FB01**, n, **Hold**	n = 1~32 (default =1)	Select the override COS value.
509-02	Override DRL **FB02**, n, **Hold**	n = 1~16 (default =1)	Select the override DRL value.
509-03	Override FRL **FB03**, n, **Hold**	n = 1~16 (default =1)	Select the override FRL value.

Table 13-35 Programs 500~577 *(continued)*

Button	Sequence	Value(s)	Summary
509-04	Override QPL **FB04**, n, **Hold**, **Hold**	n = 1~16 (default =1)	Select the override QPL value.
510	COS Override Assignment **509**, **Hold**		Assigns Class of Service Overrides and their parameters (COS, FRL, DRL, QPL).
510-00	COS Override Index n, **Hold**	n = 1~16	Select the COS Override index.
510-01	COS Override Code **FB01**, n, **Hold**	n = Up to 8 digits	Select the COS Override Code as entered by users. If no data is entered in this field, any previously entered data is erased.
510-02	Set COS **FB02**, n, **Hold**	n = 1~32 (default = 1)	Select COS number for this override code.
510-03	Set DRL **FB03**, n, **Hold**	n = 1~16 (default = 1)	Select DRL number for this override code.
510-04	Set FRL **FB04**, n, **Hold**	n = 1~16 (default = 1)	Select FRL number for this override code.
510-05	Set QPL **FB05**, n, **Hold**	n = 1~16 (default = 1)	Select QPL number for this override code.
510-06	Set Network COS **FB06**, n, **Hold**, **Hold**	n = 1~32 (default = 1)	Apply this override code to Network COS index
512	SMDR for System Assignment **512**, **Hold**		Assigns system-wide SMDR parameters.
512-01	Caller ID Field **FB01**, n, **Hold**	n = 1. Enable (default) 2. Disable	Include Caller ID records in SMDR.
512-02	B Record for Abandoned Call **FB02**, n, **Hold**	n = 1. Enable 2. Disable (default)	Generate B Record for an abandoned call.
512-03	ANI **FB03**, n, **Hold**	n = 1. Enable (default) 2. Disable	Include ANI in SMDR record.
512-04	Authorization Code **FB04**, n, **Hold**	n = 1. Enable 2. Disable (default)	Include authorization codes in SMDR records.
512-05	End-of-Record CR **FB05**, n, **Hold**, **Hold**	n = 1. Enable (default) 2. Disable	Include a Carriage Return (CR) at the end of an SMDR record.
513	SMDR for ILG Assignment **513**, **Hold**		This program assigns SMDR parameters for ILGs.
513-00	ILG n, **Hold**	n = 1~32 (CTX100) 1~50 (CTX670 Basic) 1~128 (CTX670 Exp.)	Specify the ILG for which to set SMDR parameters.
513-01	Generate SMDR Records **FB01**, n, **Hold**	n = 1. Enable (default) 2. Disable	Enable to generate records for this ILG
513-02	DNIS Field Indication **FB02**, n, **Hold**	n = 1. Enable (default) 2. Disable	Check to include DNIS information in records for this ILG.
513-03	B Record for Incoming Call **FB03**, n, **Hold**	n = 1. Enable 2. Disable (default)	Enable B Record generation for incoming calls with or without incoming SMDR being enabled.

Table 13-35 Programs 500~577 *(continued)*

Button	Sequence	Value(s)	Summary
513-04	Abandoned Call Record Output **FB04**, n, **Hold**	n = 1. Enable 2. Disable (default)	Enable record generation for abandoned calls. Incoming SMDR must be turned on. Abandoned call records will be generated whether or not incoming SMDR has been set.
513-05	Display Transferred Call Records **FB05**, n, **Hold**, **Hold**	n = 1. Source (default) 2. Destination	Select whether to charge a transferred call to the source or destination party.
514	SMDR for OLG Assignment **514**, **Hold**		This command assigns SMDR parameters for OLGs.
514-00	OLG n, **Hold**	n = 1~32 (CTX100) 1~50 (CTX670 Basic) 1~128 (CTX670 Exp.)	Specify the OLG for which to set SMDR parameters.
514-01	SMDR Record Display **FB02**, n, **Hold**	n = 1. Enable (default) 2. Disable	Enable SMDR Record Display.
514-02	Outgoing Records **FB03**, n, **Hold**, **Hold**	n = 1. Enable (default) 2. Disable	Enable to generate records for outgoing calls. SMDR Record Display must be on.
514-03	Outgoing Records **FB03**, n, **Hold**, **Hold**	n = 1. Source (default) 2. Destination	Enable to apply the SMDR record of a transferred call to its source or its destination.
515	View BIOU Control Relay Assignment **515**, **Hold**		This assignment is used to view functions of the four control relays on each BIOU PCB set in Program 105 12 Night Relay and 18 Night Bell Relay; Program 508 Door Lock Control Assignment; and Program 503 19 BGM Mute Relay. The system allows up to two BIOU PCBs to provide a total of eight control relays. The control relays can be configured as an external BGM mute control, Night Bell control, Night Mode Control, and Door Lock Control. **Notes** • BIOU-1 relays are identified as Control Relays 1~4. • BIOU-2 relays are identified as Control Relays 5~8.
515-00	BIOU (1 or 2) n, **Hold**	n = 1 or 2	Enter the BOIU PCB number. **Note** BIOU 1 and BIOU 2 are assigned in Program 100 - Card Assignment.
515-01	BIOU Relay 1 or 5 **FB01**, n, **Hold**	n = 1. Not Use (default) 2. Ext Paging 3. Night Bell 4. Night Relay 5. Door Lock	View the function of BIOU1, control relay 1 or BIOU2, control relay 5: View the function of BIOU1, control relay 2 or BIOU2, control relay 6: View the function of BIOU1, control relay 3 or BIOU2, control relay 7: View the function of BIOU1, control relay 4 or BIOU2, control relay 8: • NOT USE – if the relay is not used. • PAGE MUTE – External BGM mute control activates during an external page (see "Program 503" on page 75). • NIGHT BELL – Night Bell control activates during the system Night Mode only when incoming CO lines ring (see "Program 102" on page 12). • NIGHT RELAY – Night Mode Control activates continuously during the system Night Mode (see "Program 105" on page 18). • DOOR LOCK – Door Lock Control activates when a telephone's Door Unlock button is pressed (see "Program 508" on page 78).
515-02	BIOU Relay 2 or 6 **FB02**, n, **Hold**		
515-03	BIOU Relay 3 or 7 **FB03**, n, **Hold**		
515-04	BIOU Relay 4 or 8 **FB04**, n, **Hold**, **Hold**		

Table 13-35 Programs 500~577 *(continued)*

Button	Sequence	Value(s)	Summary
516	Station Speed Dial **516**, **Hold**		Up to 100 pre-programmed Speed Dial numbers (up to 32 digits each) can be assigned to each station. Speed Dial numbers are stored in "Bins" and each station accesses the Speed Dial numbers by entering the Speed Dial Bin number from their respective stations. The following advanced Speed Dialing features are available in Strata CTX. • Speed Dial Bin Linking – Whenever a Speed Dial number exceeds the 32-digit Speed Dial Bin memory limitation, the digits exceeding the 32 digit limitation are automatically stored into the adjacent Speed Dial Bin. The entire string is activated by using the primary Speed Dial Bin number. **Note** Bin linking is automatic. Any previously programmed data in the "adjacent Speed Dial Bin" as described above is overwritten. Furthermore, if a number exceeding the maximum allowable dial digit length is overwritten with a new number which complies to the 32-digit restriction, the excess digits recorded in the next Bin (from the previous entry) is treated as a unique Speed Dial record. • Speed Dial Number Nesting – A Speed Dial number can be nested into another Speed Dial number. For example, if an international dialing prefix is used often, program the prefix in any Speed Dial Bin. Then in the another Speed Dial Bin, program the first Bin number + the number to dial. When the second Speed Dial Bin is activated, Strata CTX first retrieves and dials the international dialing prefix from the first Bin location, then adds the numbers to dial.
516-00	PDN n, **Hold**	n = Up to 5 digits	Select the PDN assigned the speed dial number.
516-01	Speed Dial Bin **FB01**, n, **Hold**	n = 00~99	Enter the station speed dial bin number. A station can have up to 100 speed dial bins. **Note** Adding bin numbers here will automatically increment the number of speed dial bins available to the station in increments of 10 speed dial bins. The number of speed dial bins available to the station can also be assigned and displayed in Program 200, 35 - Station SpDial Bins. Example: If bin number 50 is entered here, 50 speed dial bins will automatically be assigned to the station and will also be displayed in Program 200, 35.
516-02	Number **FB02**, n, **Hold**	n = Up to 32 digits, 0~9, *, # and Pauses	This is the dialable number stored in the speed dial bin. To enter pauses enter Px, where x equals 0~9 (seconds), which is the length of the pause, 0=10 seconds. **Notes** • If the number being entered exceeds the 32 digits, the next speed dial location will automatically be appended to create longer numbers. • Also another speed dial bin can be nested within another bin for dialing common numbers. If speed dial bin 100 has long distance access digits 1010321, these digits can be nested in to other speed dial bins by using *100 as the first digits of the other bins. Example putting *10017145563425 into speed dial bin 150 would cause SD150 to dial the access digits plus the number 10132117145563425. • If you are programming from the Telephone the digits * and # have a special meaning when programming speed dial numbers. The # digit indicates the end of entry and * is an escape character. To dial the digits * or # as part of the number; enter ** or *#. To enter pauses enter *0~*9. The second digit represents the number of seconds for the pause function.
516-03	Name **FB02**, n, **Hold**, **Hold**	n = Up to 8 characters	Enter the LCD Name that displays on LCD dial directories. **Note** This feature is available in CTX WinAdmin and Strata DKT30xxSD only.

Table 13-35 Programs 500~577 *(continued)*

Button	Sequence	Value(s)	Summary
517	Multiple Calling Group Assignment **517**, **Hold**		This feature is available only with CTX Release 1.3 or higher software and with CTX WinAdmin Release 1.3 or higher software.
517-00	Multiple Call Group Number n, **Hold**	n = 1~16 (CTX100), 1~32 (CTX670 Basic) 1~64 (CTX670 Exp.)	Select a group number.
517-01	MC Group Pilot Number **FB01**, n, **Hold**	n = 1~5 digits	Enter the Pilot Directory Number that should be assigned to the Multiple Call Group. This can be any number 1~5 digits that does not conflict with numbers in the current system Number Plan.
517-02	Ring Delay 1 Timer **FB02**, n, **Hold**	n = 1~180	Set the timer in seconds.
517-03	Ring Delay 2 Timer **FB03**, n, **Hold**	n = 1~180	Set the timer in seconds.
517-04	System Call Forward **FB04**, n, **Hold**	n = 0~32	Assign a System Call Forward template number to the multiple calling group. Enter 0 or 1~32.
517-05	Voice Mail ID **FB05**, n, **Hold**, **Hold**	n = Up to 10 digits	Enter the VM call forward ID digits for the multiple calling group
518	Multiple Calling Members Assignment **518**, **Hold**		This feature is available only with CTX Release 1.3 or higher software and with CTX WinAdmin Release 1.3 or higher software. This program assigns members to a group.
518-01	Multiple Calling Group Index **FB01**, n, **Hold**	n = 1~16 (CTX100), 1~32 (CTX670 Basic) and 1~64 (CTX670 Exp.)	Enter a group number.
518-02	Member Index Number **FB02**, n, **Hold**	n = Up to 32 digits	Enter the DN of the extension you wish to add.
518-03	Member Type **FB03**, n, **Hold**	n = No Data Dialing Digits	Enter Dialing Digits to make the extension ring.
518-04	Member DN **FB04**, n, **Hold**	n = Up to 32 digits	Enter the DN of the extension you wish to add.
518-05	Ringing Options **FB05**, n, **Hold**, **Hold**	n = Immediate Delay 1 Delay 2	Select either: Immediate, Delay 1 or Delay 2.
519	Delete Multiple Calling Group Index **519**, **Hold**		This program deletes multiple calling group.
519-01	Delete	1~16 (CTX100), 1~32 (CTX670 Basic) 1~64 (CTX670 Exp.)	Enter the multiple ringing group index number
520	LCR Local Route Plan Assignment **520**, **Hold**		There are 64 LCR route plans. This assignment is used to select which LCR route plan should be used to route local calls. The Local Route Plan, which must be defined in the route definition assignment, determines which CO line group is used for local outgoing calls.
520-01	Local Area Code **FB01**, n, **Hold**	n = 3 digits	Enter the area code for the dialing area in which the system is installed. This is the area code for the Central Office (CO) that provides local CO lines to the system. If no data is entered in this field, any previously programmed data is lost.
520-02	Local Route Plan **FB02**, n, **Hold**, **Hold**	n = 1~64 (default = 1)	Enter the LCR Route Plan number that should be used to route local calls. Local calls are made by dialing 7-digit public telephone numbers that do not require an Area Code. There are 64 LCR Route Plans from which to choose.

Table 13-35 Programs 500~577 *(continued)*

Button	Sequence	Value(s)	Summary
521	LCR Route Plan Digit Analysis Assignment **521**, **Hold**		This program builds the basic LCR Analysis Table.
521-00	Analysis Digits n, **Hold**	n = Up to 11 digits Wild Card uses **n** and **X** where **X** = 0~9 and **n** = 2~9	Enter the external digit strings (area codes, toll prefixes, service codes, etc.) to be assigned to a Route Plan Analysis Table. Strings may be up to 32 digits long. There Route Plan Analysis Table may have 1280 members. A digit string can only be in one table at a time.
521-01	Route Plan Number **FB01**, n, **Hold**, **Hold**	n = 0~64 (default = 0)	Enter the Route Plan number to which to assign the Analysis Digits. **Note** Entering 0 deletes the Analysis Digits from the table to which they had been assigned.
522	LCR Exception Number Route Plans **522**, **Hold**		This command assigns up to 1280 dialed external digit strings to the Route Plan Exception Analysis Table which assigns each string to 1 of 64 Route Choice Tables. The values expressed here are exceptions to the values established in Program 521.
522-00	Exception Route Plan Table n, **Hold**	n = Up to 11 digits Wild Card uses **n** and **X** where **X** = 0~9 and **n** = 2~9.	Enter the external digit strings (area codes, toll prefixes, service codes, etc.) to be assigned to a Route Plan Exception Analysis Table. Strings may be up to 32 digits long. The Exception Route Plan Analysis Table may have 1280 members. A digit string can only be in one table at a time.
522-01	Exception Route Plan **FB01**, n, **Hold**, **Hold**	n = 1~64 (default = 0)	Enter the Route Plan Table in which to assign the Exception Digits. **Note** Entering 0 deletes the Exception Digits from the table.
523	LCR Route Plan Schedule Assignment **523**, **Hold**		This command assigns Route Plan Schedule Tables for LCR. Each table is a 3-dimensional array of 144 values (3 Types of Day x 3 Times of Day x 16 LCR Groups).
523-00	Route Plan n, **Hold**	n = 1~64	Enter the Route Plan Number to build a schedule indexed by Time of Day, Type of Day and LCR Group.
523-01	Type of Day **FB01**, n, **Hold**	n = 1. **Weekday** 2. Weekend 3. Holiday	Select the Type of Day.
523-02	LCR Time of Day **FB02**, n, **Hold**	n = 1. Time Zone1 2. Time Zone2 3. **Night**	Select the Time Zone.
523-03	Station LCR Group **FB03**, n, **Hold**	n = 1~16 (default = 1)	Select the Station LCR Group.
523-04	Route Choice Table **FB04**, n, **Hold**, **Hold**	n = 1~128 (default = 1)	Enter the Route Choice Table Number to be used with this combination of time, type and LCR group.

Table 13-35 Programs 500~577 *(continued)*

Button	Sequence	Value(s)	Summary
524	Route Table to Route Definition Assignment **524**, **Hold**		This command defines up to six possible Route Definitions for a given Route Table.
524-00	Route Choice Table n, **Hold**	n = 1~128 0 = Delete	Enter the Route Choice Table to be defined.
524-01	Route Definition 1 **FB01**, n, **Hold**	n = 1~128 0 = Delete (default = 1)	Enter Route Definitions to be assigned to this Route Table.
524-02	Route Definition 2 **FB02**, n, **Hold**	n = 1~128 0 = Delete (default = 1)	Enter Route Definitions to be assigned to this Route Table.
524-03	Route Definition 3 **FB03**, n, **Hold**	n = 1~128 0 = Delete (default = 1)	Enter Route Definitions to be assigned to this Route Table.
524-04	Route Definition 4 **FB04**, n, **Hold**	n = 1~128	Enter Route Definitions to be assigned to this Route Table.
524-05	Route Definition 5 **FB05**, n, **Hold**, **Hold**	n = 1~128	Enter Route Definitions to be assigned to this Route Table.
525	LCR Route Definition Assignment **525**, **Hold**		This command assigns Route Definitions for LCR. A Route Definition consists of an OLG and a Digit Modification index.
525-00	Route Definition n, **Hold**	n = 1~128	Select the Route Definition number.
525-01	OLG Number **FB01**, n, **Hold**	n = 0~32 (CTX100) 0~50 (CTX670 Basic) 0~128 (CTX670 Exp.) (default = 1)	Select the OLG Number associated with this Route Definition.
525-02	Digit Mod Index **FB02**, n, **Hold**, **Hold**	n = 1~128 (default = 1)	Select the Digit Modification number associated with this Route Definition.
526	Modified Digits Table Assignment **526**, **Hold**		This command modifies LCR dialed numbers by deleting digits from and adding digits to the dialed numbers.
526-00	Digit Modification Index n, **Hold**	n = 1~128	Select the Digit Modification Index used by the LCR Route Choice table to determine the digit modification treatment to be applied. Leading digits of a dialed number may be deleted; leading and trailing digits may be added to the dialed number.
526-01	Delete Digits **FB01**, n, **Hold**	n = 0~10 (default = 0)	Select the quantity of digits to be deleted from the beginning of dialed number.
526-02	Add Leading Digits **FB02**, n, **Hold**	n = Up to 23 digits	Enter the digit string to be inserted at the beginning of the number.
526-03	Add Trailing **FB03**, n, **Hold**, **Hold**	n = Up to 23 digits	Enter the digit string to be inserted at the end of the number.
527	LCR Holiday Table Assignment **527**, **Hold**		This command assigns up to 128 holidays for LCR processing. These assignments are related to the Day assignments established in Program 523.
527-00	Holiday YYYYMMDD, **Hold**	YYY Year Y = Month MM = Day DD =	Enter Date (YYYYMMDD). A maximum of 128 dates is allowed.
527-01	Add/Delete **FB01**, n, **Hold**, **Hold**	n = 1. Add 2. **Delete** (default)	Choose to add or delete this date from the holiday table. Expired dates remain in the table unless deleted.

Table 13-35 Programs 500~577 *(continued)*

Button	Sequence	Value(s)	Summary
528	LCR Public Day of Week Mapping Table **528**, **Hold**		This command defines the days of the week as weekdays, weekend days or holidays for LCR.
528-01	Monday **FB01**, n, **Hold**	n = 1. **Weekday** (default) 2. Weekend 3. Holiday	Select the Day Type to assign to this day.
528-02	Tuesday **FB02**, n, **Hold**	n = 1. **Weekday** (default) 2. Weekend 3. Holiday	
528-03	Wednesday **FB03**, n, **Hold**	n = 1. **Weekday** (default) 2. Weekend 3. Holiday	
528-04	Thursday **FB04**, n, **Hold**	n = 1. **Weekday** (default) 2. Weekend 3. Holiday	
528-05	Friday **FB05**, n, **Hold**	n = 1. **Weekday** (default) 2. Weekend 3. Holiday	
528-06	Saturday **FB06**, n, **Hold**	n = 1. Weekday (default) 2. **Weekend** 3. Holiday	Select the Day Type to assign to this day.
528-07	**FB07**, n, **Hold**, **Hold**	n = 1. Weekday (default) 2. **Weekend** 3. Holiday	Select the Day Type to assign to this day.
529	LCR Route Plan Time Zone Assignment **529**, **Hold**		This command creates a three-dimensional array (Day, Time & LCR Group) for each Route Plan.
529-00	Route Plan Time Zone n, **Hold**	n = 1~64	Select the LCR Route Plan Number to assign to this time zone.
529-01	Day Type for Time Zone **FB01**, n, **Hold**	n = 1. Weekday 2. Weekend 3. Holiday	Select a Day Type for which to define a time zone.
529-02	Time Zone **FB02**, n, **Hold**	n = 1. Zone1 2. Zone2 3. Zone3	Select a Time Zone.
529-03	Time Zone Start Time **FB03**, hhmm, **Hold**, **Hold**	hh = hour (00~23) mm = minute (00~59) (default = 0000)	Enter the start time for the selected Time Zone (hhmm). **Note** Enter your Day Type and Time Zone selections before entering data in to this field.
530	DR LCR Screening Table Assignment **530**, **Hold**		This command screens dialed digits for access codes such as Carrier Identification Codes or Behind Centrex/PBX access codes. Used only in LCR calls.
530-00	Screening Dial String n, **Hold**	n = Up to 7 digits	Enter the string of external digits to be screened.
530-01	Add String to Table **FB01**, n, **Hold**	n = 1. Add 2. **Delete** (default)	Add the Screening Dial String to the DR LCR Screening Table.
530-02	DR Action **FB02**, n, **Hold**	n = 1. **Bypass** (default) 2. Skip and Apply	Select DR Action. • Bypass – Do not apply DR. • Skip and Apply – Apply DR to the dialed digits excluding the number of digits specified in Skip Length.

Table 13-35 Programs 500~577 *(continued)*

Button	Sequence	Value(s)	Summary
530-03	LCR Action **FB03**, n, **Hold**	n = 1. Apply (default) 2. Skip and Apply	Select LCR Action. • Apply – (default) Apply LCR to all of the external dialed digits. • Skip and Apply – Apply LCR to the dialed digits excluding the number of digits specified in Skip Length.
530-04	Digit Modification Action **FB04**, n, **Hold**	n = 1. Apply (default) 2. Retain 3. Discard	Select Digit Modification application. • Apply – (default) Apply Digit Modification from the first digit. • Retain – Retain the skipped digits and apply Digit Modification starting from the next digit specified by Skip Length. • Discard – Discard the skipped digits and apply Digit Modification starting from the next digit specified by Skip Length.
530-05	Skip Length **FB05**, n, **Hold**, **Hold**	n = 0~5 0 = delete (default = 0)	Specify the number of digits at the beginning of the dial string to be ignored before DR, Digit Modification, or LCR is applied.
531	DR Screening Table for OLG **531**, **Hold**		Assigns DR Screening Table for an OLG. Up to four codes may be assigned per line group. Used for outgoing calls other than LCR.
531-00	OLG n, **Hold**	n = 1~32 (CTX100) 1~50 (CTX670 Basic) 1~128 (CTX670 Exp.)	Enter the OLG Number.
531-01	Behind Centrex Access Code **FB01**, n, **Hold**	n = Up to 8 digits	Enter the access code expected by an attached Centrex PBX.
531-02	Add or Delete Code **FB02**, n, **Hold**	n = 1. Add 2. **Delete** (default)	Add or Delete the Code entered above. Leaving the field empty removes an existing code. Activation requires entries in OLG Group number and 01 Behind Centrex Access Code above.
531-03	DR Action for Centrex **FB03**, n, **Hold**	n = 1. **Bypass** (default) 2. Skip and Apply	Apply DR to the dialed digits. • Bypass (default) – does not apply DR. • Skip and Apply– applies DR to the dialed digits excluding the number of digits specified in Skip Length.
531-04	Skip Length **FB04**, n, **Hold**	n = 0~8 (default = 0)	Enter the number of leading digits to be ignored by DR.
531-05	Pause Insertion **FB05**, n, **Hold**, **Hold**	n = 0~10 (default = 0)	Enter the length of the pause to be inserted between dialing digits.
532	DR Table Allow/Deny Definition **532**, **Hold**		Specify the DR Table Type using this command.
532-00	DRL Number n, **Hold**	n = Up to 8 digits	Select the DRL Number.
532-01	Table Type **FB01**, n1, **Hold**, **Hold**	n1 = 1. Allow 2. **Deny** (default)	Specify whether this DR Table is an Allow Table or Deny Table.
533	DR Level Table Assignment **533**, **Hold**		This program adds or deletes entries in the DR Table associated with the DRL entered in above.
533-00	DRL Number n, **Hold**	n = Up to 16 digits	Enter the DRL for which you want to populate an Exception Table.
533-01	Dial String **FB01**, n1, **Hold**	n1 = 1~ 7 digits may include wild cards “X” and “N” where X = 0~9 and N = 2~9.	Add the dial string you wish to be treated as an exception.
533-02	Add or Delete **FB02**, n2, **Hold**, **Hold**	n2 = 1. Add 2. **Delete** (default)	Add or delete the string entered in *01 DR Exception Table* above to the DR Exception Table.

Table 13-35 Programs 500~577 *(continued)*

Button	Sequence	Value(s)	Summary
534	DRL Exception Table Assignment **534**, **Hold**		This program assigns a DRL Exception Table to an existing DRL table. If the DRL Table is an allow table, its Exception Table must be a deny table and vice versa.
534-00	DRL Number n, **Hold**	n = Up to 8 digits	Enter the DRL for which you want to populate an Exception Table.
534-01	Dial String **FB01**, n1, **Hold**	n1 = 1~ 7 digits may include wild cards “X” and “N” where X = 0~9 and N = 2~9.	Add the dial string you wish to be treated as an exception.
534-02	Add/Delete **FB02**, n2, **Hold**, **Hold**	n2 = 1. Add 2. **Delete** (default)	Add or delete the string entered in *01 DR Exception Table* above to the DR Exception Table.
540	Pilot DN Assignment **540**, **Hold**		Pilot DNs are directory numbers that have no physical appearance, they are true virtual numbers. They can be used in CTI and Voice Mail applications. In ACD Pilot Numbers are used as ACD group numbers. In Voice Mail applications Pilot DNs are used to call directly to, or transfer calls directly to specific voice mail boxes – this is done by setting VM as the alternate destination and using the VMID to send the call to a specific VM box.
540-00	Pilot DN n, **Hold**	n = Up to 8 digits	Pilot DNs are directory numbers that have no physical appearance. They are true virtual numbers. They can be used in CTI and Voice Mail applications. In ACD, Pilot Numbers are used as ACD group numbers. In Voice Mail applications they are used to call directly to or transfer calls directly to specific voice mail boxes - this is done by setting VM as the alternate destination and using the VMID to send the call to a specific VM box. Maximum characters for Pilot DNs: • CTX100: R1.00 & R1.01=5 max./R1.02=100 Max • CTX670 Basic: R1.00 & R1.01=10max./R1.02=200max • CTX670 with BBMS/BEXS: R1.00 & R1.01=32max./ R1.02=256max
540-01	After Shift Type **FB01**, n, **Hold**	n = 1. **No Data** (default) 2. Dialing Digits 3. Night Bell	Calls to the Pilot DN will be routed to the Alternate Destination if the Pilot DN is not available (example: ACD After Shift). If Dialing Digits is selected, enter the appropriate DN in the Alternate DN assignment.
540-02	After Shift Destination **FB02**, n, **Hold**	n = Up to 32 digits	If Dialing digits is selected as the Alternate Destination, enter the PDN, PhDN or Hunt Group pilot number to which the call should be routed.
540-03	Voice Mail ID **FB03**, n, **Hold**, **Hold**	n = Up to 16 digits	If the Alternate Destination is Voice Mail, enter the Voice Mail ID that should be sent.
541	Pilot DN Delete **541**, **Hold**		This command enables you to delete Pilot DNs.
541-01	Delete Pilot DN n, **Hold**, **Hold**	n = Up to 5 digits	Enter the Pilot DN Number that you wish to delete.
550	Enhanced 911 Emergency Call Group **550**, **Hold**		This command assigns OLGs to the Enhanced 911 Emergency Call Group.
550-00	Emergency Call Group Number n, **Hold**	n = 1~8	Specify the Emergency Call Group.
550-01~08	OLG1~OLG8 **FB01**~**FB08**, n, **Hold**, **Hold**	n = 0~32 (CTX100) 0~50 (CTX670 Basic) 0~128 (CTX670 Exp.) (default = 0)	Specify the first through eighth OLG to be chosen for an E911 call.

Table 13-35 Programs 500~577 *(continued)*

Button	Sequence	Value(s)	Summary
570	Account Code Digit Length **570**, **Hold**		Accounting Codes need to be specified for the number of digits that are expected to be used for registering a number. This allows dialing within Strata CTX to proceed automatically once the correct account code is dialed. The following numbers are then dialed digits used for making the phone call. A second length is provided to allow the number of digits to be used for verification of the code to be less than the total code entered; thus, the code may contain two parts, one required and one part optional to the user..
570-01	Verified Digit Length **FB01**, n, **Hold**	n = 4~15 (default = 4)	The Verified Digit Length sets a number of digits to verify with a pre-set list. This number may be the same or smaller than the account code digits set to be entered for creating a complete accounting code. **Note** This field is not changed, when "Program 506" on page 75 are registered.
570-02	Registered Digit Length **FB02**, n, **Hold**, **Hold**	n = 4~15 (default = 6)	The Registered Digit Length sets a number for the digits to be entered to make a complete accounting code entry. **Note** The Registered Digit Length (**FB02**) must be greater than or equal to the Verified Digit Length (**FB01**).
571	Exception Numbers for Forced Account Codes **571**, **Hold**		Up to four telephone numbers can be programmed as exceptions to the forced and /or verified account code entries (including 911). These special codes enable numbers to bypass the verification process and proceed unhindered.
571-01	Exception Number 1 **FB01**, n, **Hold**	n = Up to 4 digits Exception 1 default = 911 Exception 2~4 default = no value	Enter a Forced Account Code Exception. **Note** One of the assigned exception numbers should be 911. Exception Numbers for Forced Account Code fields cannot be duplicated.
571-02	Exception Number 2 **FB02**, n, **Hold**		
571-03	Exception Number 3 **FB03**, n, **Hold**		
571-04	Exception Number 4 **FB04**, n, **Hold**, **Hold**		
573	Delete Door Phone **573**, **Hold**		This command deletes door phone.
573-00	Door Phone n, **Hold**, **Hold**	n = 1~6 (CTX100) 1~9 (CTX670 Basic) 1~24 (CTX670 Exp.)	Enter the number of the door phone that is to deleted.
576	Door Phone Night Ring Over External Page **576**, **Hold**		This command assigns a Page Group to ring during system Night Mode when a door phone button is pressed. The assignment can be made independently for each Tenant.
576-00	Tenant Number n, **Hold**	n = 1~2 (CTX100) 1~8 (CTX670)	Select the system Tenant number to be assigned Door Phone to Page Group/Night Ringing.
576-01	Page Group Number **FB01**, n, **Hold**, **Hold**	n = 0~4 (CTX100) 0~8 (CTX670 Basic) 0~16 (CTX670 Exp.) (default = 0)	Select the system Page Group number that should ring for the selected Tenant when a door phone button is pressed during the system Night Mode.
577	Caller History **577**, **Hold**		This command assigns which station stores Caller ID information for PDN,CO,GCO and POOL line buttons
577-00	Circuit Type/Number n, **Hold**	n = Up to 6 digits	Enter the Circuit Type and number. See the Table 13-36 on page 89 below.
577-01	Primary DN **FB01**, n, **Hold**, **Hold**	n = Up to 5 digits	Enter Station DN to store call history data.

Table 13-36 Circuit Type Code Definitions

Circuit Name	Circuit Type	Circuit Number	Example
DN	1	0~99999 (DN)	if DN is 200, value is 1200
CO	2	1~264 (Trunk Number)	if CO is 30, value is 230
GCO	3	1~128 (GCO Key Group Number)	if GCO is 50, value is 350
POOL	4	1~128 (POOL Key Group Number)	if POOL is 80, value data is 480

Table 13-37 Programs 579~580

Button	Sequence	Value(s)	Summary
579	System Voice Mail Data **579**, **Hold**		This command assigns DTMF/SMDI Voice Mail interface parameters for the system.
579-01	VM ID to DID/DNIS Association **FB01**, n, **Hold**	n = 1. DN VMID (default) 2. DID/DNIS VMID	Select DN VMID to send the DN's VMID to voice mail on DID/DNIS calls that are answered and then transferred to a DN which then forwards to voice mail. Select DID/DNIS VMID to send the DID/DNIS number's VMID to voice mail on DID/DNIS calls that are answered and then transferred to a DN which then forwards to voice mail. If a DID/DNIS call is answered by a station and then transferred to a DN which then forwards to voice mail, the VMID of the DID/DNIS number (Program 309, **FB11** or **FB15**) or the VMID of the forwarding DN (Program 200, **FB19** or 206, **FB06**) will be sent to voice mail per this option. **Note** The DID/DNIS number's VMID (Program. 309, **FB11** or **FB15**) is always sent to voice mail on DID/DNIS calls that ring directly to voice mail or ring a DN which then forwards to voice mail before it is ever answered.
579-02	Cancellation Method for VM MW **FB02**, n, **Hold**	n = 1. Auto and Access Code Cancel 2. **Access Code Cancel** (default)	Select the method used to cancel Voice Mail message waiting indication.
579-03	Message Desk Number **FB03**, n, **Hold**	n = 1. Enable 2. Disable (default)	Enable to send the SMDI Message Desk Number (001) in the SMDI packet; otherwise, 000 for a station call or the 3-digit CO line number is sent.
579-04	Output of CLASS, ANI and DNIS **FB04**, n, **Hold**	n = 1. Enable 2. **Disable** (default)	Enable to include Caller ID/ANI numbers in SMDR records.
579-05	Calling Number Digits Sent to VM **FB05**, n, **Hold**	n = 2~10 (default = 10)	Select how many calling number digits to send to the VM unit. **Note** If *04 Output of CLASS / ANI and DNIS* is enabled, this value must be 10.
579-06	Blank Digits Sent to VM **FB06**, n, **Hold**	n = 1. 1985 2. **1991** (default)	Send SMDI-Bellcore Standard VM Interface. • 1 = 1985 (single space) • 2 = 1991 (two spaces).
579-07	Auto Cancel of VM and MW **FB07**, n, **Hold**	n = 1. **Enable** 2. Disable (default)	Setting of auto cancel of VM and MW.
579-08	DTMF Duration **FB08**, n, **Hold**	n = 1. **80 ms** (default) 2. 160 ms	Select VM ID Code and System DTMF Signal Time.
579-09	LCD Control of Voice Mail **FB09**, n, **Hold**	n = 1. **Enable** (default) 2. Disable	Enables Toshiba SMDI+ and integration for LCD control of VM. To enable this feature you must have Stratagy Enterprise Server Release 3.x or higher.

Table 13-37 Programs 579~580 *(continued)*

Button	Sequence	Value(s)	Summary
579-10	Central VM Callback **FB10**, n, **Hold**	n = Up to 7 digits	Enter the pilot DN for the centralized voice mail system. If this field is left blank, the previously stored number will be deleted.
579-11	CFWD All Call Record **FB11**, n, **Hold**	n = Up to 4 digits (default = 91)	Enter DTMF VM-ID prefix string for calls arriving to voice mail via "Call Fwd All Calls.
579-12	CFWD Busy Record **FB12**, n, **Hold**	n = Up to 4 digits (default = 91)	Enter DTMF VM-ID prefix string for calls arriving to voice mail via "Call Fwd Busy."
579-13	CFWD No Answer Record **FB13**, n, **Hold**	n = Up to 4 digits (default = 91)	Enter DTMF VM-ID prefix string for calls arriving at the voice mail via "Call Fwd No Answer."
579-14	Direct Call **FB14**, n, **Hold**	n = Up to 4 digits (default = 91)	Enter DTMF VM-ID string for a call arriving at the voice mail as a Direct Call.
579-15	Retrieve Messages **FB15**, n, **Hold**	n = Up to 4 digits (default = 91)	Enter DTMF VM-ID string for calls arriving at the voice mail to retrieve messages.
579-16	Voice Main DN **FB16**, n, **Hold**	n = Up to 7 digits (default = 91)	Use a VM Pilot DN as a transfer destination.
579-17	Length of VM ID **FB17**, n, **Hold**, **Hold**	n = 1~10 (default = 91)	Select the number of characters in VM-ID string.
580	Voice Mail Port Data **580**, **Hold**		Assign characteristics of individual voice mail ports.
580-00	VM Port DN n, **Hold**	n = Up to 5 digits	Enter the DN of an individual VM port. For direct transfer to voice mail, enter the remote Node ID and Pilot DN. **Note** Do not enter a Pilot DN. This feature is available only with CTX Release 1.3 or higher software and with CTX WinAdmin Release 1.3 or higher software.
580-01	Control Method **FB01**, n, **Hold**	n = 1. **Inband/DTMF** 2. SMDI (default = no value)	Specify In-band or SMDI integration. Select SMDI for Remote voice mail.
580-02	Send A/D Tone **FB02**, n, **Hold**	n = 1. **Enable** (default) 2. Disable	Select whether Strata CTX sends A or D tone when a station connecting to voice mail answers or disconnects.
580-03	Send B Tone **FB03**, n, **Hold**	n = 1. **B Tone** 2. No Tone (default) 3. B Tone and Extension Number	Enable Strata CTX to send B tones in the event of a Blind Transfer Recall.
580-04	End-to-end **FB04**, n, **Hold**, **Hold**	n = 1. **Enable** (default) 2. Disable	Enable Strata CTX to send DTMF tones to voice mail in response to key presses from a digital telephone.

600 Series Programs

Table 13-38 Programs 650~660

Button	Sequence	Value(s)	Summary
650	Behind Centrex Assignment **650**, **Hold**		Assigns parameters for operation behind Centrex or another PBX
650-00	OLG Number n, **Hold**	n = 1~32 (CTX100) 1~50 (CTX670 Basic) 1~128 (CTX670 Exp.)	Specify OLG Number that is attached to a Centrex or another PBX. (1~128 Expanded; 1~47 Basic)
650-01	Behind Centrex **FB01**, n, **Hold**	n = 1:Enable 2:Disable (default)	Enable or disable Behind Centrex operation for this OLG.
650-02	Assume 9 **FB02**, n, **Hold**	n = 1:Enable 2:Disable (default)	Check to turn on the Assume 9 feature.
650-03	Pause Timer (Seconds) **FB03**, n, **Hold**	n = 0~5 (default = 0)	Enter the number of seconds (0~5) the CTX will wait for second dial tone from Centrex/PBX.
651	Private Routing Plan Analysis Table Assignment **651**, **Hold**		Assigns Node IDs to Route Choice Tables for Private Networking
651-00	Node ID n, **Hold**.	n = Up to 6-digits.	Enter the Node ID to be associated with a Private Route Choice Table Number.
651-01	Private Network Route Choice Table Number **FB01**, n, **Hold**, **Hold**	n = 0~64, 0 = Delete	**Note** Enter the Private Route Choice Table Number to be associated with this Node ID. Entering “0” deletes the Node ID.
653	Private Route Choice Table Assignment **653**, **Hold**		Use this command to define a Private Network Route Choice Table. A Private Network Route Choice Table contains up to six Route Definitions. The system will step through these Route Definitions in terminating hunt fashion to find a route to the desired Private Network networking node. There may be up to 64 Route Choice Tables.
653-00	Private Network Route Choice Table Number. n, **Hold**,	n = 1~64, 0 = delete	Enter the Private Network Route Choice Table Number (1~64).
653-01~06	**01 Route Definition Table~06 Route Definition Table** **FB01~FB06**, n, **Hold**, **Hold**	n = 0~64, 0 = delete	Enter the first, second, third, fourth, fifth, last Route Definition Table to be used for for this Private Network Route Choice. Entering “0” will delete an existing entry.
654	Private Route Definition Table Assignment **654**, **Hold**		Use this command to define a Private Network Route Definition. A Private Network Route Definition consists of an Outgoing Line Group (OLG) and a pointer into the Private Network Digit Modification Table that contains the dialed digits to be deleted and/or inserted before being communicated to the distant node.
654-00	Private Network Route Definition n, **Hold**	n = 1~64	Enter the number of the Private Network Route Definition (1~64) to be defined or deleted.
654-01	OLG **FB01**, n, **Hold**	n = 1~32 (CTX100) 1~50 (CTX670 Basic) 1~128 (CTX670 Exp.) 0 = delete	Enter the OLG to be used by this route definition.(1~128 Expanded; 1~47 Basic)
654-02	Digit Modification Table **FB02**, n, **Hold**, **Hold**	n = 0~64, 0 = delete	Enter the Digit Modification Table Number (1~64) to be used by this route definition.

Table 13-38 Programs 650~660 *(continued)*

Button	Sequence	Value(s)	Summary
655	Private Digit Modification Table Assignment **655**, **Hold**		The Private Network Digit Modification table may contain up to 64 entries. Each entry specifies the number of leading digits to be deleted from the dialed number and the dial string to be inserted as leading digits. The inserted dial string may have up to 23 digits.
655-00	Private Digit Modification Table n, **Hold**	n = 1~64	Enter the Private Network Digit Modification Table (1~64) to be defined.
655-01	Private Digit Modification Digit To Be Deleted **FB01**, n, **Hold**	n = 1~10, 0 = delete	Enter the number of leading digits to be deleted (1~10).
655-02	Insert Leading Digits **FB02**, n, **Hold**, **Hold**	n = Up to 23 digits	Enter the leading digits to be inserted. A numerical string up to 23 digits.
656	Node ID Assignment **656**, **Hold**		Assigns up to 4 Network Node IDs to this node for processing incoming network calls. Each Node ID has an overlap code. The CTX will substitute the Overlap Code for the Node ID before processing the call further. A Network Directory Number consists of a Node ID and the desired extension in that node. Node ID must first be established in CMD102.
656-01	Primary Node ID Primary Overlap Code **FB01**, n, **Hold**	n = Up to 6 digits	Enter the Primary Node ID for this node. This Node ID identifies the node for administration. Node ID must first be established in Program 102.
		n = Up to 4 digits	Enter the Overlap Code associated with the Primary Node ID. An Overlap Code is the string of digits that will replace the Node ID for further call processing.
656-02	Node ID 2 Overlap Code 2 **FB02**, n, **Spkr**, n1, **Hold**	n = Up to 6 digits	Enter Node ID 2 for this node. Node ID must first be established in CMD102.
		n1 = Up to 4 digits	Enter the Overlap Code associated with Node ID 2. An Overlap Code is the string of digits that will replace the Node ID for further call processing.
656-04	Node ID 3 Overlap Code 3 **FB03**, n, **Spkr**, n1, **Hold**	n = Up to 6 digits	Enter the Overlap Code associated with Node ID 3. An Overlap Code is the string of digits that will replace the Node ID for further call processing.
		n1 = Up to 4 digits	Enter Node ID 4 for this node. Node ID must first be established in CMD102.
656-05	Node ID 4 Overlap Code 4 **FB04**, n, **Spkr**, n1, **Hold**, **Hold**	n = Up to 6 digits	Enter the Overlap Code associated with Node ID 4. An Overlap Code is the string of digits that will replace the Node ID for further call processing.
		n1 = Up to 4 digits	The privilege to pick a specified DN.

Table 13-38 Programs 650~660 *(continued)*

Button	Sequence	Value(s)	Summary
657	Network COS Mapping Table Assignment **657**, **Hold**		This table translates a Network COS received as part of a Traveling Class Mark to a local Class of Service for access to local services. There is no translation of Outgoing Network COS.
	Network COS n, **Hold**	n = 1~32	Enter the Network COS to be translated (1~32).
657-01	Local COS **FB01**, n, **Hold**	n = 1~32	Enter the Local COS to be used in place of the received Network COS (1~32).
657-02	Off-hook Call Announce **FB02**, n, **Hold**	n = 1. Enable 2. Disable (default)	Choose whether an incoming call with this Network COS can activate Off-Hook Call Announce.
657-03	System Speed Dial **FB03**, n, **Hold**		Choose whether an incoming call with this Network COS can use a System Speed Dial number to make an otherwise restricted outgoing call.
657-04	COS Override **FB04**, n, **Hold**		Choose whether an incoming call with this Network COS can use Class of Service Override.
657-05	TGAC Override **FB05**, n, **Hold**, **Hold**		Choose whether an incoming call with this Network COS can override local Trunk Group Access Control. Typically an attendant function.
658/ 659/ 660	Network DRL Mapping Tables **658/659/660**, **Hold**		This command is used to establish two mapping tables to equate local DRLs with network DRLs for both outbound and inbound network calls.
	Type n, **Hold**	n = 1. Outbound 2. Inbound	Choose “Outbound” to equate the DRL of the local originator to a Network DRL. Choose “Inbound” to equate a received Network DRL with a local DRL for local termination.
	Network DRL/FRL/ QPL **FB01**, n, **Hold**	n = 1~16	Enter the local DRL/FRL/QPL you want to map to Network DRL/FRL/ QPL 1~DRL/FRL/QPL 16. This value can be different depending on the type of table chosen above.
661	Network DN Table **661**, **Hold**		This program assigns the PDN, PhDN or Pilot DNs to a CTX node ID. This include all DNs in all CTX nodes on the CTX network, except the DNs in the node you are currently programming.
661-00	Network DN n, **Hold**	n = Five ASCII characters max. (Default = No Data)	Enter the PDN, PhDN or Pilot DNs that should be assigned to a CTX Node ID. This include all DNs in all CTX Nodes on the CTX network, except the DNs in the node you are currently programming.
661-01	Node ID **FB01**, n, **Hold**	n = Six ASCII characters max. (Default = No Data)	Enter the CTX Node ID that should be assigned to the DN.
673	Delete Node ID for Private Networking Over IP **673**, **Hold**		This program deletes Node IDs..
673-00	Node ID n, **Hold**	n = upto six digits	Delete Node ID
673-01	Registration State **FB01**, n, **Hold**	n = 1. doesn’t exist 2. exist 3. delete	Delete Registration State.

800 Series Programs

Table 13-39 Programs 801~803

Button	Sequence	Value(s)	Summary
801	Network Jack LAN Device Assignments **801**, **Hold**		This screen assigns the LAN parameters for the PC applications connected to the BECU Network Jack through a LAN or Hub.
801-00	LAN Port Number n, **Hold**	n = 1~12 (default = no value)	Enter the port number of the LAN device to be assigned. Refer to Program 803 SMDR SMDI CTI Port Assignments. **Notes** • Program the local port number for LCD Control of Voice Mail • Use the same Device Port No. (11) for Network BLF. • Use 10 for Network TPI • Use 12 for Network DSS Network BLF and DSS are available only with CTX Release 1.3 or higher software and with CTX WinAdmin Release 1.3 or higher software.
801-01	Protocol **FB01**, n, **Hold**	n = 1. TCP (default) 2. UDP	Select communication Protocol. **Note** Select UDP for Network DSS.
801-02	PC Operation Type **FB02**, n, **Hold**	n = 1. Server (default) 2. Client	Enter the application PC type: Server or Client.
801-03	Data Flow **FB03**, n, **Hold**	n = 1. Synchronization 2. Asynchronization (default)	Enter the data flow protocol that should take place between the CTX and PC. If the PC is a CTX, CTI application assign “Asynchronization” to data flow.
801-04	Server Port Number **FB04**, n, **Hold**	n = 0~65535 (default = 0)	Enter the Server Port Number and proceed to *07 Read Retry Number*. This field is required if Server was selected in *02 PC Operation Type* above. If not, leave this field blank and proceed to *05 Client IP Address*. **Note** Use 6000 for Network BLF, 3000 for Network DSS, and 5000 for Network TPI.
801-05 801-06 801-07 801-08	Client IP Address **FB05, FB06, FB07, or FB08**, n, **Hold**	n = 0~255 (default = 0)	Enter the Client LAN IP Address. This field is required if Client was selected in *02 PC Operation Type* above. 0~255 for each octet (default = 0) Enter IP address of Stratagy iES32 or SES.
801-09	Write Retry Number **FB09**, n, **Hold**	n = 0~65535 (default = 0)	Enter the Client Port number. This field is required if Client was selected in *02 PC Operation Type* above.
801-10	Write Retry Number **FB10**, n, **Hold**	n = 0~10 (default = 1)	Set the Read Retry counter to (1~10).
801-11	Write Retry Number **FB11**, n, **Hold**, **Hold**	n = 0~10 (default = 1)	Set the Write Retry counter to (1~10).
803	IO Logical Device Assignment **803**, **Hold**		This screen is used to assign: 1. SMDR and SMDI to logical device and BSIS, RS-232 port numbers. 2. CTX WinAdmin, ACD sever, and Attendant Console to BECU, Network Jack logical device and LAN port numbers.
803-00	Logical Device Number n, **Hold**	n = 100 = SMDR 300 or 301 = SMDI 200~208 = CTI LAN Devices of PCs (default = no value) 400 = BLF 500 = DSS	Enter the 3-digit logical device number for SMDR, SMDI, and LAN device or PC application. See “Device Table” on page 13-95 SMDR: 100 SMDI: 300 or 301 CTI LAN devices or PCs can be assigned to any of the 9 LAN devices numbers available: 200~208.

Table 13-39 Programs 801~803 *(continued)*

Button	Sequence	Value(s)	Summary
803-01	Device Connection **FB01**, n, **Hold**	n = 1. None (default) 2. LAN 3. RS-232	1. Enter RS-232 for SMDR or SMDI devices or PCs. These devices are connected to BSIS, RS-232 ports. 2. Enter LAN for CTX WinAdmin, ACD Server, and Attendant Console PC. These devices are connected to the BECU Network Jack directly or via a HUB or LAN.
803-02	Device Port Number **FB02**, n, **Hold**	n = 1~4 (for RS-232) 1~9 (for LAN) 11 (for BLF Networking) (default = 1)	1. SMDR and SMDI devices can be assigned to any BSIS, RS-232 Port: 1~4 (one port per device).. 2. LAN devices and PCs can be assigned to LAN logical Port (1~9) according to their logical device number assignments as shown: LAN Port1=device200 LAN Port2=device201 LAN Port3=device202 LAN Port4=device203 LAN Port5=device204 LAN Port6=device205 LAN Port7=device206 LAN Port8=device207

Table 13-40 Device Table

Logical Device	Logical Device Serial Number	Physical Device				Define I/O Logical Device Number
		LAN	PPP	RS-232C	Smart Media	
SMDR	0	-	-	OK	-	100
CTI	0	OK	-	-	-	200
	1	OK	-	-	-	201
	2	OK	-	-	-	202
	3	OK	-	-	-	203
	4	OK	-	-	-	204
	5	OK	-	-	-	205
	6	OK	-	-	-	206
	7	OK	-	-	-	207
	8	OK	-	-	-	208
SMDI	0	OK	-	OK	-	300
	1	OK	-	OK	-	301

Table 13-41 Program 804

Button	Sequence	Value(s)	Summary
804	RS232C Data Assignment **804**, **Hold**		Use this screen to setup the RS-232 serial Ports on the BSIS interface PCB.
804-00	BSIS Port n, **Hold**	n = 1~4 (default = no value)	Enter the BSIS PCB port number.
804-01	Port Speed **FB01**, n, **Hold**	n = 1. 300 2. 1200 3. 2400 4. 4800 5. 9600 (default) 6. 19200 7. 38400 8. 57600	This is the data speed of BSIS port in bits per second (bps). **Note** The total combined maximum speed of BSIS ports cannot exceed 57,600 bps.
804-02	Port Parity **FB02**, n, **Hold**	n = 1. None 2. Even 3. Odd (default)	This is the parity error checking methods used by the BSIS port.
804-03	Data Bits **FB03**, n, **Hold**	n = 1. 7 Bits (default) 2. 8 Bits	This is the number of data bits used for each data block.
804-04	Flow Control **FB04**, n, **Hold**	n = 1. None (default) 2. Flow	This is the type of flow control used between the BSIS port and the SMDI or SMDR device. Must be set to “FLOW” in order for the CTX to buffer call records.
804-05	Wait Timer **FB05**, n, **Hold**, **Hold**	n = 0~255 (default = 30 seconds)	Maximum time to wait for connection. 1. 0 means wait permanently 2. Timer value can be 1-255 seconds.

900 Series Programs

These programs are organized based on functions versus program numbers.

System Initialize

This program enables you to reset hardware and initializes, or restores programmed data.

Program Number(s): 900

Prerequisite Program: *None*

Reference: *None*

Access Sequence: *Login to programming mode from your telephone button pad:* **Hold ✱#✱#1✱2✱3✱**.

At the ***PASSWORD=*** *prompt, Enter your password and press* **Hold**.

At the **PROG=** *prompt enter* **900** *and press* **Hold**.

FB Name	FB	Summary	Value	LCD Prompt
Initialize Level	01	Press **1** or **2** to select the initialize level. Level 1 – Erases programmed data and enters default data or backed up data if a SmartMedia Card is installed (see Note). Level 2 – Simulates System Power Off/Power On operation to reset hardware.	1. Initialize Level 1 2. Initialize Level 2	1:Restart with Clear Data 2:Restart

➤ **To access programming parameters**

1. Press **FB01** to choose Initialize Level 1 or 2.
2. Press **Hold** twice to initialize.

Important! *Choosing Initialize Level 1 without installing a SmartMedia Card deletes all programmed data and returns your Strata CTX to factory default settings. All previously programmed data is lost.*

Restoring Data from SmartMedia

When initializing with Level 1 you can restore custom data that was previously programmed and stored on a SmartMedia card. To do so, follow the steps below.

1. Install a SmartMedia card that contains the **Prgdata** directory with the **default.dat** file. The **default.dat** file contains your custom settings and can be created by running Data Backup. See "Data Backup" on page 13-106.

Important! *A CTX* **default.dat** *database can only be restored to a CTX software version that is the same or higher than the CTX software version on which the default.dat file was created. Examples: A* **default.dat** *created on CTXR2.0 MF029 can be restored on an R2.0 MF030, MF031 and higher R2.1MG0XX, R2.2 MF0XX (XX = 01~99, but it cannot be restored on R2.0 MF012, MF011 and lower, or R1.X ME0XX, MD0XX, etc.*

2. After installing the SmartMedia card, run System Initialization using Initialize Level 1.
   Restoring data from the SmartMedia card may take an hour or more. To verify completion of the restore process access, the Programming Mode from a telephone and enter your password. If the system enables you to continue, the data restore process is complete.

Note During the restore process, the telephone LCD may display date and time data. This does not necessarily indicate completion of the restore process.

Display Version

This program enables you to view current software versions for the Strata CTX system and installed options.

- Active – As the name implies, this is the current active software operating the Strata CTX system.
- Standby – This is a software version released prior to the active version. It acts as a backup in the event problems are experienced by the Active version.

Program Number(s): 901

Prerequisite Program: *None*

Reference: *None*

Access Sequence: *Login to programming mode from your telephone button pad:* **Hold ✱##✱1✱2✱3✱**.

At the ***PASSWORD=*** *prompt, Enter your password and press* **Hold**.

At the ***PROG=*** *prompt enter* **901** *and press* **Hold**

FB Name	FB	Summary	Value	LCD Prompt
Version Number Active	01	Display Active side software version and installed options. As the name implies, this is the current active software operating the CTX system.	6~31 digits	Installed Version
Version Number Standby (CTX670 only).	02	Display Standby side software version and installed options. This is a software version released prior to the active version. It acts as a backup in the event problems are experienced by the Active version.		Installed Version

1. Press **FB01** to view current Strata CTX software version. Press the **Scroll** or **Page** key to move the display left or right.
2. Press **FB02** to view backup Strata CTX software version.
3. Press **Hold**, then **# # Hold** to return to the **PROG=** prompt.
4. Enter another program number to continue programming or press **# # Hold** again to exit programming mode.

Reading the Version Code

The figure below is an example of the Strata CTX software version code.

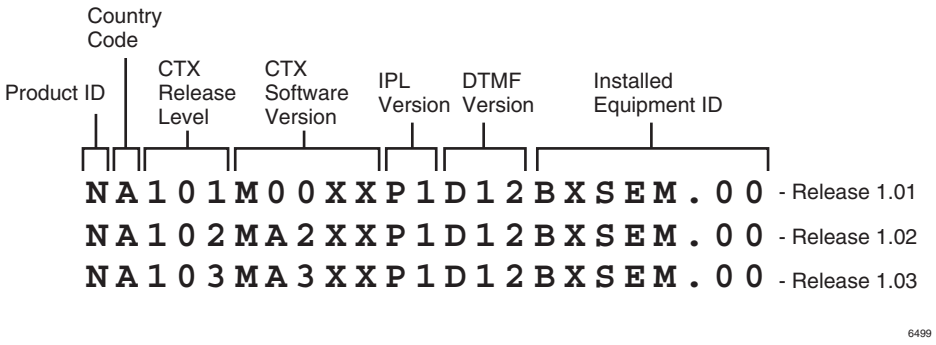


Figure 13-3 Version Code

- **Product ID** – This is the first character in the version code string. “N” designates CTX670 and “S” CTX100.
- **Country Code** – “A” identifies the country (USA, Canada, Mexico).
- **CTX Release Level** – This string of numbers identifies the Strata CTX Release level (NA101=R1.01, NA102=R1.02, NA103=R1.03, etc).
- **CTX Software Version** – This string of characters identifies the current software version. For the example above, the software is called “M00XX, MA2XX, MA3XX, etc,” where XX is the version number.
- **DTMF Version** – This three character string identifies the existence of DTMF and ABR circuits and the version. The “D” designation indicates that DTMF is being applied to the Strata CTX while “09” indicates the DTMF version number.
- **Installed Equipment ID** – There are five characters, each referencing a unique equipment identification value assigned to hardware installed in your Strata CTX system. If the particular hardware is not installed a “-” displays. The following are the equipment identifier designations.
  - B – BBMS is installed.
  - X – BEXS is installed.
  - S – BSIS is installed.
  - E – The Ethernet is installed.
  - M – The Modem is installed.

Set Time and Date

This program enables you to change the system clock in Strata CTX.

Program Number(s): 902

Prerequisite Program: *None*

Reference: *None*

Access Sequence: *Login to programming mode from your telephone button pad:* **Hold ✱##✱1✱2✱3✱**.

At the ***PASSWORD=*** *prompt, Enter your password and press* **Hold**.

At the ***PROG=*** *prompt enter* **902** *and press* **Hold**.

FB Name	FB	Summary	Value	LCD Prompt
Date	01	Enter current system date in this field.	yymmdd format yy = current year mm = current month dd = current day	DATE=
Time	02	Enter the current time in this field.	hhmmss format hh = current hour mm = current minute ss = current second	TIME=

1. Press **FB01** to enter current Strata CTX Date. See table above for format.
2. Press **Hold** to program.
3. Press **FB02** to enter current Strata CTX time. See table above for format.
4. Press **Hold** to program.
5. Press **Hold** to submit, then **# # Hold** to return to the **PROG=** prompt.
6. Enter another program number to continue programming or press **# # Hold** again to exit programming mode.

Event Trace Control

This program enables you to trace message events occurring in Strata CTX.

Program Number(s): 903

Prerequisite Program: *None*

Reference: *Install SmartMedia card*

Access Sequence: *Login to programming mode from your telephone button pad:* **Hold ✱##✱1✱2✱3✱**.

At the ***PASSWORD=*** *prompt, Enter your password and press* **Hold**.

At the ***PROG=*** *prompt enter* **903** *and press* **Hold**.

FB Name	FB	Summary	Value	LCD Prompt
Trace State	01	Enter **1** or **2** to Start or Stop Message Trace. Stopping the trace outputs data to the SmartMedia card. Wait for the **PROG=** prompt on the LCD before proceeding. Before removing the SmartMedia card run Program 908. See "Format/Unmount SmartMedia" on page 13-105.	1:Start 2:Stop	1:START 2:STOP
Trace Size	02	Set the trace data size. Toshiba recommends leaving this parameter at the default setting which provides approximately 15 minutes of trace data.	1~256 (in bytes) 1 unit = 16 bytes. default = 2	SIZE=
Trace Category	03	Trace data type to be stored.	1:Call Processing 2:Maint and Admin 3:Both of the above	1.CP 2.M&A 3.CP+M&A (default)

1. Press **FB01** to enable Start or Stop trace. Use the number key pad to make your selection.
2. Press **Hold**.

Notes

- Start indicates the trace was previously started and is currently running.
- Stop indicates the trace is not running and all trace buffer data was transferred to SmartMedia.

3. Press **FB02** to enter trace file size. To change the setting, use the number Dial Pad.
4. Press **Hold**.
5. Press **FB03** to set trace category. To view setting options, press the **Scroll** or **Page** button.
6. Press **Hold** twice to execute. Wait for the **PROG=** prompt to display before proceeding.
7. Enter another program number to continue programming or press **# # Hold** again to exit programming mode.

Note When CTX 670 stops logging data, it automatically sends data to the SmartMedia card. A new trace file is stored on SmartMedia under the **Evnttrace** directory. Run the Unmount command (Program 908) before removing the SmartMedia card to ensure complete data transfer.

ISDN Trace Location

This program enables set up of ISDN protocol event trace collection conditions.

Program Number(s): 904

Prerequisite Program: *None*

Reference: *None*

Access Sequence: *Login to programming mode from your telephone button pad:* **Hold ✱##✱1✱2✱3✱**.

At the ***PASSWORD=*** *prompt, Enter your password and press* **Hold**.

At the ***PROG=*** *prompt enter* **904** *and press* **Hold**.

At the ***EQUIP=*** *prompt enter the Shelf, Slot and Port numbers.*

Notes

- Shelf, Slot and Circuit number is entered in "XXYYZZ" format where Shelf is a two digit value from 01~07 corresponding to the Strata CTX Cabinet number, Slot is a two digit value from 01~10 corresponding to the Strata CTX Cabinet's PCB slot number and Circuit is a two digit value from 01~04 corresponding to the Strata CTX PCB Slot's circuit number.
- Always use circuit 01 for RPTU.

FB Name	FB	Summary	Value	LCD Prompt
LLCI	01	Level of collecting LLCI values.	1:None (no information) 2:Brief (important information) 3:Detailled (all information)	1:NON 2:BRIEF 3:DETAILED
Layer 3	02	Level of collecting Layer 3 messages.		
Layer 2 and 3	03	Level of collecting Layer 2 and Layer 3 messages.		
State Transitions	04	Level of collecting State Transitions.		
Errors	05	Level of collecting errors.		
Layer 2 States	06	Level of collecting Layer 2 States.		

1. Press **FB01** to run a LLCI Trace. Press the **Scroll** or **Page** button to view Non, Brief, or Detailed options. Enter 1~3 to determine Trace Level.
2. Press **FB02** and set CCL3 Trace Level. Press the **Scroll** or **Page** button to view Non, Brief, or Detailed options. Enter 1~3 to determine Trace Level.
3. Press **FB03** and set L2L3 Trace Level. Press the **Scroll** or **Page** button to view Non, Brief, or Detailed options. Enter 1~3 to determine Trace Level.
4. Press **FB04** and set STATE Trace Level. Press the **Scroll** or **Page** button to view Non, Brief, or Detailed options. Enter 1~3 to determine Trace Level.
5. Press **FB05** and set ERRORS Trace Level. Press the **Scroll** or **Page** button to view Non, Brief, or Detailed options. Enter 1~3 to determine Trace Level.
6. Press **FB06** and set L2 Trace Level. Press the **Scroll** or **Page** button to view Non, Brief, or Detailed options. Enter 1~3 to determine Trace Level.
7. Press **Hold** to execute.
8. Press **# # Hold** to return to the **PROG=** prompt.
9. Enter another program number to continue programming or press **# # Hold** again to exit programming mode.

All ISDN Trunk Trace

Program start/stop of packaged detailed collection of event trace functions. This program is only available in the telephone button programming mode.

Program Number(s): 905

Prerequisite Program: *"Format/Unmount SmartMedia" on page 13-105, "ISDN Trace Location" on page 13-102, "ISDN Trace Location" on page 13-102 and "Event Trace Control" on page 13-100*

Reference: *Install SmartMedia card*

Access Sequence: *Login to programming mode from your telephone button pad:* **Hold ✱###1✱2✱3✱**.

At the ***PASSWORD=*** *prompt, Enter your password and press* **Hold**.

At the ***PROG=*** *prompt enter* **905** *and press* **Hold**.

FB Name	FB	Summary	Value	LCD Prompt
Trace All ISDN Trunks	01	Output All ISDN Trunk Events to SmartMedia.	1:On (default) 2:Off	1:ON 2:OFF

1. Press **FB01**.
2. Select **1**, or **2** to turn on or off.
3. Press **Hold** twice to execute.
4. Press **# # Hold** to return to the **PROG=** prompt.
5. Enter another program number to continue programming or press **# # Hold** again to exit programming mode.

Event Trace Side Change

This program enables you to manage your ISDN protocol trace. This program is only available in the telephone button programming mode.

Program Number(s): 906

Prerequisite Program: *"Format/Unmount SmartMedia" on page 13-105*

Reference: *Install SmartMedia card*

Access Sequence: *Login to programming mode from your telephone button pad:* **Hold ✱###1✱2✱3✱**.

At the ***PASSWORD=*** *prompt, Enter your password and press* **Hold**.

At the ***PROG=*** *prompt enter* **906** *and press* **Hold**.

FB Name	FB	Summary	Value	LCD Prompt
Side Change	01	Enter desired parameter number.	1:Message 2:ISDN 3:Message+ISDN	1:MESSAGE 2:ISDN 3:MESSAGE+ISDN

1. Press **FB01**.
2. Select **1**, **2**, or **3** to select parameter.
3. Press **Hold** to execute.
4. Press **# # Hold** to return to the **PROG=** prompt.
5. Enter another program number to continue programming or press **# # Hold** again to exit programming mode.

Note When the CTX 670 stops logging data, it automatically sends data to the SmartMedia card. Run the Unmount command (Program 908) before removing the SmartMedia card to ensure complete data transfer.

System Admin Log

Use this command to Start/Stop the System Admin Log.

Program Number(s): 907

Prerequisite Program: *None*

Reference: *Install SmartMedia card*

Access Sequence: *Login to programming mode from your telephone button pad:* **Hold ✱#✱#1✱2✱3✱**.

At the ***PASSWORD=*** *prompt, Enter your password and press* **Hold**.

At the ***PROG=*** *prompt enter* **907** *and press* **Hold**.

FB Name	FB	Summary	Value	LCD Prompt
Admin Log On/Off	01	Enter **1** or **2** to Start or Stop Admin Log.	1:Start 2:Stop	1:START 2:STOP

1. Press **FB01**. To run System Admin Log press **1 Hold** (twice). You are sent to the **PROG=** prompt.
2. To Stop the log, press **FB01** and press **2** on the dial pad.
3. Press **Hold** twice and wait for the **PROG=** prompt to appear before proceeding.

Note When the CTX 670 stops logging data, it automatically sends data to the SmartMedia card. Run the Unmount command (Program 908) before removing the SmartMedia card to ensure complete data transfer.

Format/Unmount SmartMedia

This program enables Administrators to format a SmartMedia card from Strata CTX WinAdmin or the telephone button pad.

Note Strata CTX WinAdmin cannot view SmartMedia files directly. Additional hardware is required to view the contents of the SmartMedia card.

Program Number(s): 908

Prerequisite Program: *None*

Reference: *None*

Access Sequence: *Login to programming mode from your telephone button pad:* **Hold ✱##✱1✱2✱3✱**.

At the ***PASSWORD=*** *prompt, Enter your password and press* **Hold**.

At the ***PROG=*** *prompt enter* **908** *and press* **Hold**

.

FB Name	FB	Summary	Value	LCD Prompt
Control	01	Choose SmartMedia card formatting method: **Normal** – creates any Strata CTX SmartMedia directory that does not exist already. Exiting directories are not overwritten by this procedure. **Forced** – erases any existing directories and files. All existing data is overwritten. See Strata CTX SmartMedia Directories for more information. **Unmount** – writes data into SmartMedia Card. Always run unmount before removing the SmartMedia card to prevent damage to the card. **Transfer** – writes data from static RAM to SmartMedia Card.	1:Normal 2:Forced 3:Unmount 4:Transfer	1:NORMAL 2:FORCED 3:UNMOUNT 4:TRANSFER

1. Press **FB01** to enter parameter. Enter **1~4** as your command choice. Press the **Scroll** or **Page** button to make your selection.
2. Press **Hold** to confirm and **Hold** again to execute.
3. Wait for the **PROG=** prompt to appear before proceeding.
4. Enter another program number to continue programming or press **# # Hold** again to exit programming mode.

Strata CTX SmartMedia Directories

Running the Normal and Forced options of this program creates five directories on the SmartMedia card as follows:

- **Admlog** – The Admlog folder saves
- **Errlog** – System error logs are saved into this folder.
- **Evnttrce** – Strata CTX WinAdmin Event Trace files are saved into this folder.
- **Progdata** – Your Strata CTX programmed settings are all saved in this folder.
- **Program** – The operating software and default data of the Strata CTX is saved in this folder.

When a backup is performed, Strata CTX saves programmed data to the **Progdata** folder.

MAC Address (System Serial Number)

This program enables you to display your CTX 670 System Serial Number.

Program Number(s): 909

Prerequisite Program: *None*

Reference: *None*

Access Sequence: *Login to programming mode from your telephone button pad:* **Hold ✱##✱1✱2✱3✱**.

At the ***PASSWORD=*** *prompt, Enter your password and press* **Hold**.

At the ***PROG=*** *prompt enter* **909** *and press* **Hold**.

FB Name	FB	Summary	Value	LCD Prompt
MAC Address	01	Display System Serial Number.	12 digits	MAC Address

1. Press **FB01** to view parameter. The MAC Address is view only and cannot be changed.
2. Press **Hold** (twice) to exit to the **PROG=** prompt.
3. Enter another program number to continue programming or press **# # Hold** again to exit programming mode.

Data Backup

This program enables you to Back up system data to a SmartMedia card.

Program Number(s): 910

Prerequisite Program: *"Format/Unmount SmartMedia" on page 13-105*

Reference: *None*

Access Sequence: *Login to programming mode from your telephone button pad:* **Hold ✱##✱1✱2✱3✱**.

At the ***PASSWORD=*** *prompt, Enter your password and press* **Hold**.

At the ***PROG=*** *prompt enter* **910** *and press* **Hold**.

FB Name	FB	Summary	Value	LCD Prompt
Backup Function	01	Start and Stop system backup. **Note** Restore function is not operational and should never be executed. Use System Initialize (Program 900) Level 1 to restore system backup.	1:Backup 2:Restore (Do not use. See Note on left). 3:Cancel	1:BACKUP 2:RESTORE 3:CANCEL
Numbers	02	The number of data blocks. This number varies depending on the amount of programming the system contains.	Variable	ALL NO=
Current Number	03	This number increments as the backup progresses. When the backup is complete this number should match the total number of data blocks displayed in Numbers (**FB02**).	Variable	CUR NO=

FB Name	FB	Summary	Value	LCD Prompt
Backup State	04	**All_Ok** – Backup completed with no errors. **Partial_Ok** – Backup has completed with errors. **NG** – Backup has failed. **Cancel** – Cancel Backup. **Importing** – Program data is being restored. **Exporting** – Program data is being sent out.	1:normal end all 2:normal end part 3:abnormal end 4:cancel 5:importing 6:exporting	

Note Before running this program, make sure the SmartMedia card is properly formatted. See "Format/ Unmount SmartMedia" on page 13-105 for more details.

1. Press **FB01** to enter your Backup choice. Press the **Scroll** or **Page** button to view your selection options.
2. Press **1**. **FB01** and **FB04** should blink green.
3. Press **Hold** to execute. Press **Hold** again to Cancel. This program stops running if you exit programming mode from your telephone.

➤ **To view Backup progress**

1. While the program is running (**FB01** and **FB04** blink green), press **FB02** to view the total number of files to be transferred.
2. Press **FB03** to view the current file number that is being transferred.
3. The Backup is complete when **FB04** blinks intermittently.
4. To verify success, push **FB04**. Your telephone LCD should indicate ***1.ALL_OK**.
5. Press **# # Hold** to exit.

Note Do not press the **Hold** button. Pressing the **Hold** button restarts the Backup procedure.

To Restore data from the SmartMedia card to Strata CTX, see "System Initialize" on page 13-97.

Program Update

This program enables you to update the Strata CTX programs.

Program Number(s): 911

Prerequisite Program: *Format SmartMedia Card*

Reference: *None*

Access Sequence: *Login to programming mode from your telephone button pad:* **Hold ✱##✱1✱2✱3✱**.

At the ***PASSWORD=*** *prompt, Enter your password and press* **Hold**.

At the ***PROG=*** *prompt enter* **911** *and press* **Hold**.

FB Name	FB	Summary	Value	LCD Prompt
Update Function	01	Enter 1 or 2 to identify the type of Update intended. Select 3 to cancel a running update.	1:Update 2:Reboot 3:Cancel	1:Update 2:Reboot 3:Cancel
Total Blocks	02	View total blocks to be updated (total blocks will vary depending on software versions).	0~65536 (CTX670) 0~128 (CTX100) default = 0	n/a
Copied Blocks	03	View number of blocks copied.	0~65536 (CTX670) 0~128 (CTX100) default = 0	n/a
Active Side Status	04	Backup Type Display	1:Normal 2:Trial 3:Fault 4:Don't Care 5:Error	1:Normal 2:Trial 3:Fault 4:Don't Care 5:Error
Stand by Side Status	05	Stand by Backup Type	1:Normal 2:Trial 3:Fault 4:Don't Care 5:Error	1:Normal 2:Trial 3:Fault 4:Don't Care 5:Error
Active Side Number	06	Active Side Number.	0 or 1 default = 0	ACT SIDE=
Status	07	View Backup Status.	1:Idle 2:Running 3:Success 4:Error	1:Idle 2:Running 3:Success 4:Error

Note Before running this program, make sure the SmartMedia card is properly formatted. See "Format/ Unmount SmartMedia" on page 13-105 for more details.

1. Press **FB01** to enter your Backup choice. Press the **Scroll** or **Page** button to view your selection options.
2. Press **1**. **FB01** and **FB04** should blink green.
3. Press **Hold** to execute. Press **Hold** again to Cancel. This program stops running if you exit programming mode from your telephone.

Make Busy Control

When an error occurs in hardware resources used for a station or a line fails, this feature makes them busy. The station or line PCB can be disabled temporarily to perform maintenance or parts replacements as well. This program is only available in the telephone button programming mode.

Program Number(s): 912

Prerequisite Program: *Format SmartMedia Card*

Reference: *None*

Access Sequence: *Login to programming mode from your telephone button pad:*
Hold ✱##✱1✱2✱3✱.

*At the **PASSWORD=** prompt, Enter your password and press **Hold**.*

*At the **PROG=** prompt enter **912** and press **Hold**.*

*At the **CABINET=** prompt enter the Shelf number.*

Note The Shelf number is entered in "XX" format where Shelf is a two digit value from 01~07 corresponding to the Strata CTX Cabinet number. See "Program Button LEDs" below for a description of the LED display.

FB Name	FB	Summary	Value	
Equipment	00	Enter Cabinet Number	01~07 (value=xx)	
Slot #1	01	Enter **1** or **2**	1: Set make busy 2: Clear make busy	
Slot #2	02			
Slot #3	03			
Slot #4	04			
Slot #5	05			
Slot #6	06			
Slot #7	07			
Slot #8	08			
Slot #9	09			
Slot #10	10			

1. Press **FB01~FB10** to enter your Make Busy selection for the appropriate Slot in the Cabinet entered in Access Sequence above.

Note The slot to which your programming phone is connected can not be set to Make Busy.

2. Press **Hold** to execute.
3. Press **Hold** again to return to **CABINET=** prompt.
4. Press **# # Hold** to return to the **PROG=** prompt.
5. Enter another program number to continue programming or press **# # Hold** again to exit programming mode.

Program Button LEDs

The LED blink pattern indicates the following:

- Red continuous blinking – PCB experienced a Make Busy status error.
- Red continuous illumination – PCB Make Busy Status mode is on.
- Green continuous blinking – PCB Make Busy Status mode is stand by.
- Green intermittent blinking – PCB Make Busy Status mode is idle.

Regional Selection

Set Operating region for your Strata CTX. This assignment sets built-in core LSI hardware parameters that are not changeable with jumpers or switches. These parameters must be set unique for each country and affect system operation.

Program Number(s): 915

Prerequisite Program: *None*

Reference: *None*

Access Sequence: *Login to programming mode from your telephone button pad:* **Hold ✱##✱1✱2✱3✱**.

*At the **PASSWORD=** prompt, Enter your password and press* **Hold**.

*At the **PROG=** prompt enter* **915** *and press* **Hold**.

FB Name	FB	Summary	Value	LCD Prompt
Region	01	Set region number. 0~2 are valid entries for North American Operations.	0~31 (USA = 0, Canada = 1, and Mexico = 2).	REGION=

1. Press **FB01**. Enter **0**~**2**. Press **Hold**.
2. Press **Hold** (twice).
3. Enter another program number to continue programming or press **# # Hold** again to exit programming mode.

IP Configuration

This program enables you to set up Network Communication Protocols.

Program Number(s): 916

Prerequisite Program: *None*

Reference: *None*

Access Sequence: *Login to programming mode from your telephone button pad:* **Hold ✱##✱1✱2✱3✱**.

At the ***PASSWORD=*** *prompt, Enter your password and press* **Hold**.

At the ***PROG=*** *prompt enter* **916** *and press* **Hold**.

FB Name	FB	Summary	Value
IP Address	01	Enter IP Address 1. 192 = First IP Address Octet 168 = Second IP Address Octet 254 = Third IP Address Octet 253 = Fourth IP Address Octet	0~255 default = **192.168.254.253**
Subnet Mask	02	Enter Subnet Mask Address 1.	0~255 default = **255.255.255.0**
Default Gateway	03	Enter Default Gateway 1.	0~255 default = **0.0.0.0**

Notes

- The LCD only displays three of the twelve IP address digits at a time. Press the **Spkr** button to view the remaining digits.
- The IP Address is the static IP address of the Strata CTX processor NIC/Ethernet connection only. The PPP IP address for the Strata CTX processor modem is always 192.168.255.254 and cannot be changed.

1. Press **FB01** to view the current TCP/IP Address 1 (press **FB02** to view the current Subnet Mask Address 1, or press **FB03** to view Default Gateway Address 1).

   Press **Hold**.
2. Enter first IP Address Octet. To keep current setting go to Step 3.
3. Press **Spkr** button and enter second IP Address Octet. To keep current setting go to Step 4.
4. Press **Spkr** button and enter third IP Address Octet. To keep current setting go to Step 5.
5. Press **Spkr** button and enter fourth IP Address Octet. To keep current setting go to Step 6.
6. Press **Hold**.
7. Press **FB02** to configure the remaining parameters.
8. Press **Hold**.
9. After all parameters are entered press **Hold** to submit the new settings.
10. You are automatically returned to the **PROG=** prompt.
11. Enter another program number to continue programming or press **# # Hold** again to exit programming mode.

Maintenance 14

This chapter provides Strata CTX maintenance procedures that can be activated from the programming telephone. For SmartMedia, refer to "Format/Unmount SmartMedia" on page 13-105.

Data Backup

1. Format the SmartMedia using "Format/Unmount SmartMedia" on page 13-105 (Program 908).
2. Insert the formatted SmartMedia into Strata CTX.
3. Backup data using "Data Backup" on page 13-106 (Program 910). LED indicators should show the following:
   - **FB01**~**FB03** solid red light.
   - **FB04** intermittent green.
4. Press **FB01** and choose Backup by pressing **1** on the telephone button pad.

CAUTION! Never use Restore (2). It is not valid for current versions of CTX software and could result in corrupt databases and system mis-operation.

---

5. Press **Hold**. Backup for programmed data starts. The LED indicator **FB04** consistently blinks green during back up. After back up is complete, **FB04** will flash inconsistently slower.

CAUTION! Do not press Hold while Backup is being performed.

---

6. Press **Hold** twice to exit programming.

Backup Progress and Completion Indicators

You can monitor Backup progress by pressing the **FB02** or **FB03** buttons as follows. See "Data Backup" on page 13-106 for more details.

- If the value displayed in the LCD is increasing each time **FB03** is pressed, the Backup is proceeding successfully.
- When the value displayed in the LCD for **FB03** and **FB02** are the same, the Backup process is complete.
- When the **FB04** LED returns to an intermittent green, Backup is complete.
- Press **FB04** to verify Backup is completed. If the LCD displays ***1:ALL_OK** the Backup was successful.

Restoring Programmed Data

To restore data from a Backup performed onto SmartMedia, follow the directions below:

1. Insert the SmartMedia card that has the system's default.dat file (under the PROGDATA folder) into the Strata CTX SmartMedia slot.
2. Run Program 900 "System Initialize" on page 13-97, Level 1 (ALL DATA CLEAR). See programming steps below.

   Restoring data takes anywhere from 10 minutes to one hour for completion, depending on the size of the database (default.dat file).
3. When the programming telephone LCD becomes active, enter the programming mode and enter your password.

   Restore is complete if the system accepts the password and enables you to enter programming mode.
4. Remove the SmartMedia card and restart the CTX again after restoring system data. This is necessary to reset BIBU-M, BIPU-Q, QSIG, ISDN and other advanced features.

Local Update

The following procedures are required for both systems Local Update, i.e; Strata CTX100 and CTX670.

Prerequisites for CTX100 and CTX670 Local Update

The following are the prerequisites for Local Update:

- The SmartMedia card must be installed in the system with a Backup of the current database (default.dat) file.
- Activation of the new software requires a Clear-reboot operation that will drop all existing calls and will take the system out of service from 10 minutes to an hour or more, depending on the system size.
- Requires a different system software Update file (provided on the Toshiba FYI site), depending on the type of CTX system and the type of Update that will be performed.

CTX Software Update Files

Each Strata CTX system type has two Software Update files: one for CTX WinAdmin Remote Update and another file for Local Update (to use with the Programming Telephone procedure).

CAUTION! Using the wrong file in either case will cause the Update to fail.

CTX Software Identification

Refer to the table below to identify CTX software release and builds in software file names or when verifying CTX software versions.

CTX Release	Software ID
R1.00 and R1.01	= M01nn
R1.02	= MA2nn
R1.03	= MA3nn
R1.3	= ME0nn
R2.0	= MF0nn
R2.1	= MG0nn

nn = Software build level/number

Step 1: Download and Extract CTX Software

The latest released version of CTX system software Update files are posted on the Toshiba FYI site http://fyi.tsd.toshiba.com. To download the software files, follow the procedure below.

Step 1A: To Download CTX System Software Files from FYI

1. From the Toshiba FYI website, click on Technical Services > Software (Strata Systems). The files are located under the heading "CTX System Software."
2. Double-click the appropriate link.

   CTX100 System Software: CTX100 MXnnn Software (Local Update)

   CTX670 System Software: CTX670 MXnnn Software (Local Update)
3. When the Toshiba Software License Agreement screen displays, click the Agree button. The File Download dialog box displays.
4. Select the "Save this program to disk" radio button, then click OK. The Save As screen displays.
5. Save the file to an appropriately named folder that identifies the system type and software version, then click Save.

Step 1B: Extract Downloaded Files

1. After the file download is complete, select the Open or Open Folder button on the Download Complete screen to extract/open the files now, or select the Close button to extract the files later.

Notes

- The WinZip Self-Extractor screen displays if you selected the Open or Open Folder button.
- If you selected Close, double-clicking the .exe file later will bring up the WinZip Self-Extractor screen.

These files are the self extracting .exe files:

- CTX100_L_MXnnn.exe (for CTX100 Local Update file)
- CTX670_L_MXnnn.exe (for CTX670 Local Update file)

2. In the "Unzip to folder:" field, make sure the path leads to the correct folder as shown below. If the path is incorrect, click the Browse button to navigate to the appropriate path, then click the Unzip button.
3. Verify the unzip folder path for Local Update: SmartMedia Drive:\PROGRAM
4. Verify the unzipped files or folders for Local Update of the Strata CTX100 and CTX670 the file name is the same "nhs.prg".

The files can also be extracted to a temporary folder and the copied to the appropriate SmartMedia PROGRAM folder or CTX WinAdmin Upload folder. The extracted (decompressed) files will be approximately 15MB.

Step 2: Choose Strata CTX100 or CTX670 for Local Update

Choose one of the following:

- Strata CTX100 Local Update
- Strata CTX670 Local Update

Strata CTX100 Local Update

The Update process is used to change the Strata CTX software version and restore programmed data. The new software is first loaded on the SmartMedia card. It is then transferred to the Strata CTX100 processor flash RAM. The Strata CTX100 programmed data is then restored.

Step 1: Prepare SmartMedia Card with Backup of Customer Database

This SmartMedia card will contain a back up of the Strata CTX programmed data (default.dat).

1. Insert a SmartMedia card into the CTX, format it, and then back up the customer database onto the SmartMedia card using the Backup Data procedure (see the "Data Backup" on page 14-1).

   This operation writes the default.dat file under the PROGDATA directory to the SmartMedia card.

2. Remove the SmartMedia card from the CTX and physically label it "Strata CTX Backup data."

Step 2: Prepare SmartMedia Card with a Copy of New CTX Software

This SmartMedia card will contain the new Strata CTX software file (nhs.prg) used to Update the system software:

1. Obtain the Strata CTX operating software file (nhs.prg) from Toshiba FYI and store it on an appropriately named folder on your PC – see the Download and Extract CTX Software procedure on page 1.
2. Insert a SmartMedia card into Strata CTX processor SmartMedia socket and activate the Forced Format command using Program 908; then Unmount SmartMedia using Program 908.
3. Remove the formatted SmartMedia card from the CTX and Install the SmartMedia card into a PC SmartMedia reader/writer.
4. Copy the new Strata CTX software file named "nhs.prg" into SmartMedia card PROGRAM folder.

Note It is not necessary to create a SmartMedia Card Volume label for CTX100 Update. However, if you create a volume label, do not use PRGUPDATE, PRGRESCUE0, or PRGRESCUE01 as volume labels.

5. Pull out the SmartMedia card and physically label it "CTX100, MXnnn" or whatever software version you are updating to.

Note After completing Steps 1 and 2 above you should have two SmartMedia cards:

- One card containing the CTX backed up database file: PROGDATA\default.dat
- One card containing the CTX software update file: PROGRAM\nhs.prg

Step 3: Update CTX100 Software

CAUTION! This operation will take the system out of service for 10 minutes to an hour or more depending on the CTX database.

1. Insert the SmartMedia card containing PROGRAM\nhs.prg file into the Strata CTX processor SmartMedia socket.
2. From the programming telephone enter Program 911, and press **Hold**. Press **FB01** and dial **1** (UPDATE) and then press **Hold**.

CAUTION! Pressing Hold twice will cause the Update to fail

After a short pause the Strata CTX will begin to upload the software from the SmartMedia card to the processor flash RAM causing the following:

- If FB07-LED is flashing green, it indicates that the Update process is in progress.
- If FB07-LED is flashing red, it indicates an error. This could be caused by a corrupt or incorrect nhs.prg file or a defective SmartMedia card. Make sure the file is a CTX100 nhs.prg file and not CTX670 file.
- You can now check the Update progress using FB02 (Total) and FB03 (Copied) to view data block status. Periodically switch between FB02 and FB03 to view the data blocks.
- When all the data blocks are copied, the Strata CTX stops normal processing and all telephone LCDs go blank.
  - The processor Heartbeat LED is on steady red.
  - The processor SmartMedia LED turns on flashing rapidly at first, then flashes slowly and finally stops flashing.
  - The above will last about five to 10 minutes.
  - When the Update is complete the system begins to operate normally with default data.

3. Use Program 901 to check that the new software version of CTX software has been loaded. If you cannot enter the Program Mode the new software may still be loading.
4. Remove the SmartMedia card (which contains PROGRAM/nhs.prg file) from the CTX processor.

Step 4: Restart and Restore Strata CTX100 Backup Data

1. Insert the SmartMedia labeled “Strata CTX Backup data” which you previously made at the start of this procedure. This card contains PROGDATA/default.dat file.
2. From the programming telephone enter Program 900. Press **FB01** and dial **1** (ALL DATA CLEAR) and then press **Hold** (twice). The Strata CTX will restart (initialize) on the new software and restore the backed up program data. The time required for this operation will vary from a few minutes to 30 minutes or more depending on the size of the database.

Step 5: Confirm Software is Updated and Backup Data is Restored

1. When the telephone LCDs display and system dial tone is available, try to log in to the Programming Mode from digital telephone. (If Update/Restore is finished, you can log in).
2. From the programming telephone check the Strata CTX version number using Program 901.

3. Turn the CTX100 power off for 5 seconds and then back on to reset QISG, ISDN and other advanced features.
4. Test the system to verify that the new software is running properly by checking dial tone, making incoming and outgoing calls, internal and external calls and all other peripherals, such as voice mail, etc., are working correctly.
5. Toshiba recommends that the SmartMedia card containing the customer data remains installed on the CTX processor. This enables you to make and back up changes using CTX WinAdmin remotely.

Important! *It is your responsibility to verify the system is working correctly after local Update is complete.*

Strata CTX670 Local Update

The Update process is used to change the Strata CTX software version and restore programmed data. The new software is first copied from the SmartMedia card to the standby side of the Strata CTX670 processor flash RAM. Then the new software on the Standby flash RAM is switched to the active mode and the original software is switched to the Standby mode for a trial run.

After swapping the software version making the new software "Active," the Strata CTX restores the programmed data. If the system functions properly, the trial operation can be set to normal operation; if there are problems you can switch the original software back to Active.

A CTX **`default.dat`** database can only be restored to a CTX software version that is the same or higher than the CTX software version on which the **`default.dat`** file was created.

Examples:

- A default.dat created on CTXR2.0 MF013 can be restored on an R2.0 MF013, MF014 and higher.
- R2.2 MF0XX, R2.1MG0XX (XX = 01~99), cannot be restored on R2.0 MF012, MF011 and lower, or R1.X ME0XX, MD0XX, etc.

Step 1: Prepare SmartMedia Card with a Backup of the Customer Database

This SmartMedia card will contain a Backup of the Strata CTX programmed data (default.dat).

1. Insert a SmartMedia card into the CTX, format it, and then back up the customer database onto the SmartMedia card using the Backup Data procedure (see "Data Backup" on page 14-1).

   This operation writes the default.dat file under the PROGDATA directory to the SmartMedia card.
2. Remove the SmartMedia card from the CTX and physically label it "Strata CTX Backup data."

Step 2: Prepare SmartMedia Card with a Copy of the New CTX Software

This SmartMedia card will contain the new Strata CTX software file (nhs.prg) used to Update the system software.

1. Obtain the Strata CTX operating software file (nhs.prg) from Toshiba FYI and store it on an appropriately named folder on your PC – see "Download and Extract CTX Software" on page 14-3.
2. Insert a SmartMedia card into Strata CTX processor SmartMedia socket and activate the Forced Format command using Program 908; then Unmount SmartMedia using Program 908.
3. Remove the formatted SmartMedia card from the CTX and install the SmartMedia card into a PC SmartMedia reader/writer.
4. Copy the new Strata CTX software file named "nhs.prg" into SmartMedia card PROGRAM folder.
5. Create a SmartMedia Card Volume label "PRGUPDATE" on CTX670 Update SmartMedia card as shown:

- Select and right mouse click the appropriate SmartMedia drive, for example, drive E or G in some computers.
- Click Properties.
- Under General tab, in the Label field enter label name (in this case PRGUPDATE).

6. Pull out the SmartMedia card and physically label it "CTX670, MXnnn" or whatever software version you are updating to.

Note After completing Steps 1 and 2 above you should have two SmartMedia cards:

- One card containing the CTX backed up database file: PROGDATA\default.dat
- One card having the volume label "PRGUPDATE" and containing the CTX software Update file: PROGRAM\nhs.prg

Step 3: Update CTX670 software

1. Insert the SmartMedia card containing PROGRAM\nhs.prg file into the Strata CTX processor SmartMedia socket.
2. From the programming telephone enter Program 911, and press **Hold**. Press **FB01** and dial **1** (UPDATE) and then press **Hold** once. Pressing **Hold** twice will cause the Update to fail. This will not interrupt the CTX system operation.
   - If FB07-LED is flashing green, it indicates that the Update process is in progress.
   - If FB07-LED is flashing red, it indicates an error. This could be caused by a corrupt or incorrect nhs.prg file or a defective SmartMedia card. Make sure it is a CTX670 nhs.prg file and not a CTX100 file.
   - You can now check the Update progress using FB02 (Total) and FB03 (Copied) to view data block status. Periodically switch between FB02 and FB03 to view the data blocks.
   - When FB07-LED is solid green with periodic short blinks, it indicates the first part of Update completed successfully (2 to 10 minutes).
3. After FB07 is on solid green with a periodic wink, press **Hold**, while in Program 911. Press **FB05** and dial **2** (TRIAL) and then press **Hold**. This will change the status of the Standby Flash Memory to trial.
4. Pull out the SmartMedia card labeled PRGUPDATE (which includes PROGRAM/nhs.prg file).
5. Insert the SmartMedia CARD labeled "Strata CTX Backup data" into processor/ SmartMedia socket. The SmartMedia LED on the processor begins to blink.

   The "Strata CTX Backup data" SmartMedia card is the card you previously made that includes the Strata CTX programmed data in the default.dat file under the PROGDATA folder. If this is not done before starting Clear-reboot, all programmed data will be lost.

   The next operation will take the system out of service for 10 minute to an hour depending on the size of the CTX database.
6. From the programming telephone enter Program 911 and press **Hold**; Press **FB01** and dial **3** (CLRREBOOT) and then press **Hold**. This will Clear-reboot the system to switch the new software version from standby to active and restore Backup data.

CAUTION! This operation will take the system out of service for 10 minutes to an hour or more depending on the CTX database. Do not skip any steps or Update will fail.

Notes

- If CLRREBOOT is activated without the Backup data SmartMedia card installed, the active and standby software is swapped and the system default program data is restored.
- The Strata CTX processor heartbeat LED stops flashing and all telephones become inactive. After a few minutes the Strata CTX initializes and starts up with new version of software as active and the original software as standby, and then restores the backed up program data from the SmartMedia card default.dat file (the processor SmartMedia LED flashes while it restores the program data to the processor RAM).
- After CLRREBOOT has completed the new version of CTX System software will be active in Trial mode.
- If system power is turned off/on while the Active side of flash memory is in the Trial mode, the original software switches back to active and the new software will switch back to Standby. This is to provide an automatic method of switching back to the original software version if the new version is causing problems.

7. Confirm that the software is updated and the Backup data is restored by verifying/doing the following:
   - Make sure the processor SmartMedia LED is off.
   - Log in to Programming Mode from a digital telephone. If you cannot log in, it means the data restore process is not completed.
   - From the programming telephone, in Program 901 make sure that the new Strata CTX system software version number is on the active side. FB01 shows the new system software version number on the active side, and FB02 shows the original software version number on standby side.
8. Set the Active side of flash RAM from "Trial" to "Normal" as follows:
   - From the programming telephone, enter Program 911 and press **Hold**. Press **FB04** and dial **1** (NORMAL), then press **Hold**. The new software is on the active side running in Normal mode.
   - If Strata CTX power is turned off/on before the Active side is switched to "Normal", the Strata CTX will automatically perform a CLRREBOOT and make the old software active.

Note The active side switches from "Trial" to "Normal" automatically after 24 hours if it is not done manually using Program 911.

9. Remove the SmartMedia card and turn the CTX670 power off for 5 seconds and then back on to reset BIPU-M, BIPU-Q, QISG, ISDN and other advanced features.
10. Test the system to verify that the new software is running properly by checking dial tone, making incoming and outgoing calls, internal and external calls and all other peripherals, such as voice mail, etc., are working correctly.
11. Toshiba recommends that the SmartMedia card containing the customer data remains installed on the CTX processor. This enables you to make and Backup changes using CTX WinAdmin remotely.

Important! *It is your responsibility to verify the system is working correctly after local Update is complete.*

Trace Function

To analyze Strata CTX problems efficiently, Toshiba needs to get the event trace data and ISDN trace data. These data sets enable analysis of the problems Strata CTX may experience. It is helpful for troubleshooting problems that are difficult to duplicate.

Please contact Toshiba Technical Support to coordinate the running of the trace procedures. Technical Support will walk you through the required steps.

Strata® CTX

Digital Business Telephone Systems

Part 4: Appendices

Applications, Tips and Tricks A

Voice Mail Set Up

The following steps/program sequences are provided as a guideline to programming System Voice Mail settings.

Note Enter programming mode before step 1. Refer to "Enter Program Mode" on page 13-7. Press **Hold** each time you want to save your settings and press **##** before you move to the next step.

Analog Ports

1. Program 100 "Card Slot Assignment" on page 13-11. Assign the PCB for Voice Mail ports (RSTU).
2. Program 200 "Station Data" on page 13-28. Verify FB1~FB4.
   - FB03 Circuit Type – Assigns Voice Mail to be assigned to PDNs associated with Voice Mail RSTU circuits.
   - FB15 Display DN – DN to be displayed and assigned to Hunt Group. Manually assign DNs and equipment.
3. Program 209 "Station Hunting Group" on page 13-47. Voice Mail Group is determined by the Hunt Group.
4. Program 218 "Station Hunt Group Assignment" on page 13-51.
5. Program 579 "System Voice Mail Data" on page 13-89. Complete FB01~FB17.

Notes

- FB10 Central Message Callback – Enter the node ID and hunt group for voice mail. Used for centralized voice mail SMDI only.
- DTMF – Message Waiting Call Back DN across QSIG TIE lines. DTMF integration uses the number that displays in Program 200, field 15.

6. Program 580 "Voice Mail Port Data" on page 13-90. This is the collection of all ports.
7. Program 803 "IO Logical Device Assignment" on page 13-94. You can add members to the hunt group. Assign BSIS RS-232 port for SMDI.

Note System only provides Code 300 for SMDI. Code 301 is not supported.

8. Program 804 BSIS RS-232 Serial Port setup.
9. Program 309 "Direct Inward Dialing" on page 13-60.
   - FB11 DNIS VMID Code
   - FB15 DID/DNIS Number DTMF VMID
10. Program 318 "DID Intercept Assignment" on page 13-68.
   - FB11 VMID for DNIS Number
   - FB15 DID/DNIS Number DTMF VMID

Digital Ports

1. Program the following initial settings:
   - Program 100 – Set cabinet slot PCB type to "BDKU/BDKS 16 DKTs without Spkr OCA".
   - Program 200 – Assign stations to the slot and assign as voice mail. For example, 200~215 (for 16 ports). Set "Display DN" as the pilot number of the Voice Mail Hunt Group. This value should be the same as "Number to Display" in Program 209.
   - Program 204 – Change station's parameters to Tone First, Adapter: BPCI. Set "Continuous DTMF" to "Not Continuous." Copy the changes to all voice mail stations.
2. Install and program serial card BSIS in the Strata CTX.

Note TPI is required for iES32. A BSIS card must be installed in the Strata CTX.

3. Install a serial cable between the BSIS card and the Stratagy (see CTX wiring diagrams in *Strata CTX Installation and Maintenance Manual*, Peripheral Installation chapter).
4. Specify CTX BSIS output port # and set the port type to be "300 SMDI #0" and "RS-232".
5. Set the port attributes to:
   - Baud rate: 9600
   - Data Bits: 8
   - Parity: none
   - Flow control: 1
   - Wait timer: 0

Note Refer to Programs 803, 804, 579 and 580.

6. Program 579 "System Voice Mail Data" on page 13-89. Complete FB01~FB17.
7. Program 580 – Set all CTX voice mail ports as SMDI integration.
8. Program Station Hunting Programs 209 and 218

Telephone Station Ports

1. Program 200 Station Data.
   - FB19 VMID Code SMDI – Voice Mail ID number to send in SMDI and DTMF in-band integration for forwarded and direct calls.
   - FB22 MW to VM Port – Message Waiting center DN.
2. Program 579 System Voice Mail Data.
   - Complete 11~15. See "Program 579" on page 13-89.
3. Program 204 DKT Parameters.
   - FB23 Mailbox Selection – Used for the Voice Recording Feature. Uses the VM ID from Program 200 if set to Auto or allows the user to enter any valid mailbox on Stratagy followed by **#**.
4. Program 206 Phantom DN.
   - FB06 VM ID Code – Voice Mail ID number to send in SMDI and DTMF in-band integration for forwarded and direct calls.
   - FB09 Message Center – Message Waiting center DN.

Networking Multiple Voice Mail Systems

More than one voice mail system can be connected to one network node and one or more voice mail systems can be connected to multiple nodes. Access, integration and message waiting are controlled on a call-by-call basis according to parameters assigned to individual extensions. There is nothing to prevent a single DKT from having access to four voice mail systems, each connected to a remote node.

The Primary DN and three PhDNs are each programmed with independent voice mail destinations, Voice Mail IDs and Record and Playback codes. Figure A-1 is an example for networking multiple voice mail systems to enable Soft keys. A similar set up can be used for enabling other voice mail features.

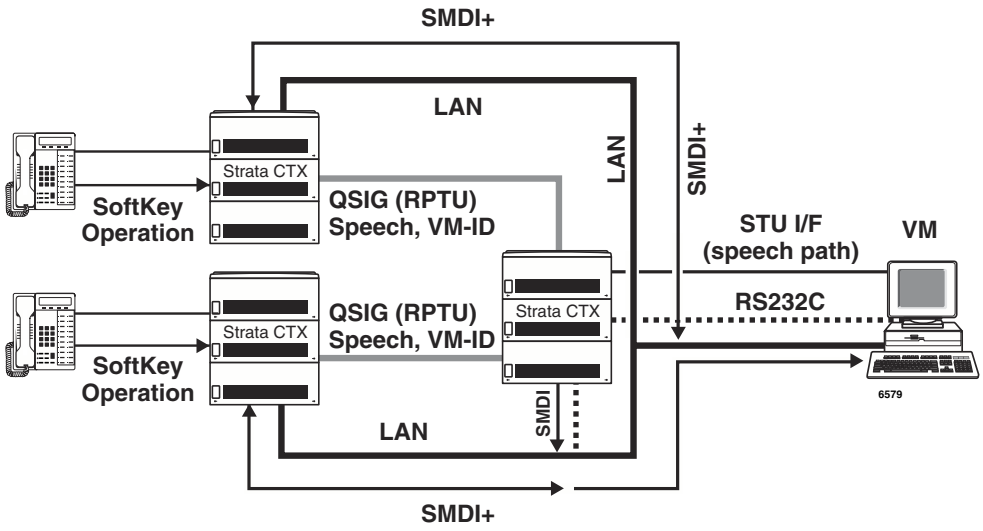


Figure A-1 Voice Mail Networking

Call Record and Soft Keys

A station can record conversations with another station or external line in a specific mail box in Voice Mail (VM) using the Record function button. You can replay the recorded conversation using the Message Waiting button or using the voice mail menu.

Networking for Call Record and Soft Keys is available only with WinAdmin Release 1.3 and higher software and with CTX software 1.2 MD series or higher. You must have a Stratagy ES/IES R4 or higher.

Step 1: Set up Station Message Desk Interface (SMDI) for Local and Remote CTXs

1. From the Program menu, select System > I/O Device. Program 803 – SMDR SMDI CTI Port Assignments screen displays.
2. Enter/Select the following:
   - FB00 Logical Device No. = select 300 SMDI #0.
   - FB01 Device Connection = LAN.
   - Device Port No. = 1~9.
3. Click LAN Device tab. Program 801 Network Jack Lan Device Assignments screen displays.
4. Enter the LAN data:
   - 00 LAN Port No. = 1~9
   - 01 Protocol = TCP

- 02 PC Operation Type = Client
- 03 Data Flow = Asynchronization
- 04 Service Port No. = 0 (default)
- 05~08 Client IP 1-4 No. = 192.168.254.250
- 09 Client Port No. = 5000
- Client IP No. = Stratagy IP Address
- 10 Read Retry No. = 1
- 11 Write Retry No. = 1.

5. Click Submit.

Step 2: Set up Remote CTX

1. From the Program menu, select Services > Voice Mail > Voice Mail Port Data. Program 580 – VM Port Data displays.
2. Enter the appropriate fields. Refer to "580 Voice Mail Port Data" on page 9-5.
3. Select Station > Assignment. Program 200 – Station Data screen displays.
4. Enter the Prime DN. For Call Record, enter the Node ID and Pilot number of the local CTX (where the voice mail is located).
5. In FB22 – MW to VM Port, enter the local CTX IP address for call recording. For Remote CTXs, assign message center including Node IP for TPI integration. This parameter enables Call Record function too.

Note Refer to "Voice Mail Set Up" on page A-1 for regular voice mail set up.

Step 3: Set up QSIG Between All Nodes

Use the following programs to set up QSIG:

1. "304 Incoming Line Group Assignment" on page 6-2.
2. "306 Outgoing Line Groups" on page 6-4.
3. "302 PRI and IP QSIG" on page 6-25
4. "102 Flexible Access Codes" on page 4-4
5. "651 Private Routing Plan Analysis" on page 9-56
6. "653 Private Route Choice Table Assignment" on page 9-57
7. "654 Private Route Definition Table Assignment" on page 9-57
8. "655 Private Network Digit Modification Table Assignment" on page 9-57
9. "656 Node ID Assignment" on page 9-54

For all other voice mail set up steps refer to "Voice Mail Set Up" on page A-1.

Strata CTX BRI Video Conferencing Programming

The table below shows the programs required to program a PRI line to ring to a RBSU interface to allow for Video Conferencing capabilities.

The following may differ in your system: card slot assignments, trunk groups, channel groups and BRI station numbers.

The following program changes are required once the system has been installed and initialized.

Programs	Description
Program 100	Card Assignment 105=RPTU and 107=RBSU S/T Interface with each two TIE's
Program 105	System Data Primary Clock, FB21=RPTU card slot, 10501
Program 304	Incoming Line Groups ILG=1, FB1=ISDN, FB2=CO, FB3=DID, FB4=Standard
Program 306	Outgoing Line Groups OLG=1, FB1=ISDN, FB2=CO/DID, FB3=Standard
Program 309	Direct Inward Dialing ILG=1, FB1=3000, FB5 through FB10=Dialing Digits with Destination Digits 3000
Program 302	PRI Trunks Channel Group=1, FB1=010501, FB2=Nat'l ISDN, FB3=1, FB4=1, FB7=24, FB 8=Enable, FB9=Enable, FB11=Enable, FB12=Enable, FB19=Enable
Program 320	"B" Channels FB00=010501, FB1 through FB23=Enable
Program 202	ISDN BRI Station Prime DN=3000, FB1=010701, FB2=2, FB3=Nat'l ISDN, FB4=Point to Multi-Point, FB13=Enable, FB14=Enable
	Prime DN=3001, FB1=010702, FB2=3, FB3=Nat'l ISDN, FB4=Point to Multi-Point, FB13=Enable, FB14=Enable
	Prime DN=3002, FB1=010703, FB2=4, FB3=Nat'l ISDN, FB4=Point to Multi-Point, FB13=Enable, FB14=Enable
	Prime DN=3003, FB1=010704, FB2=5, FB3=Nat'l ISDN, FB4=Point to Multi-Point, FB13=Enable, FB14=Enable **Note** FB2 must be a different channel group for each BRI station and cannot conflict with PRI channel group.

CTX IP Telephone Programming Guidelines

Use the following guidelines to program your CTX IP Telephone.

Basic CTX IP Setup Using WinAdmin

1. Select System > Card Assignments (Program 100) to set the BIPU-M PCBs in the appropriate slots.

   BIPU-M card can only be installed in 16 channel card slots:
   CTX100 slots 1~8; CTX670 Base slots 1~8; and CTX670 Expansion slots 1~6

Note If the CTX is initialized (Program 900-01) after the BIPU-M is installed, the CTX assigns the BIPU-M, code 021, to the appropriate card slots automatically.

2. Select IP Telephone > BIPU Configuration (Program151) to set BIPU-M IP address (check with the Network Administrator for IP Address, subnet mask, etc.). The BIPU version number will be displayed when the BIPU is operating and is connected on the same network as WinAdmin PC.

Note If the CTX is initialized (Program 900-01) after the BIPU-M is installed, the CTX assigns the BIPU-M default parameters as shown in Table 1-6 on page 1-5.

3. Select Station > Assignments > Basic to assign PDNs to IP telephones (BIPU equipment numbers) if this was not done during CTX system initialization. The WinAdmin PDN Range wizard can also be used to assign PDNs to the BIPU channels.

Note Currently IPT PDNs are listed as DKT, they will be listed as IPT in a future version of WinAdmin. IP telephones are programmed exactly like DKTs, so any Program command used for DKTs can be used for IPTs.

4. Select IP Telephone > Station IP Data (Program 250). Set “05 Station Terminal Authentication Mode” to apply if the PDN assigned to a particular IP Telephone should be linked (reserved for) to that telephone’s MAC address. Each telephone has a unique hard coded MAC address. This prevents other IP telephones from using the reserved PDN when an IP telephone is moved.

Note If IPT Authentication is applied/not applied in Program 250-05, it will override the IPT Authentication setting in Program 150-02.

5. If multiple CTX systems with BIPU-Ms are connected to the IP network, Select IP Telephone > System IP Data (Program 150), and set “09 IP CTX Identifier.”

   Enter a CTX Node identifier if more than one CTX Node is on the IP Network. This can be the same as the QSIG Network Node ID used for this system if it is in a CTX QSIG. Network - but the two IDs are not related in software logic.

   This ID must match the Node number programmed in the IP telephone using 369Hold-2, FB06 6.

6. Run all other CTX programs necessary to customize the features required for each IP Telephone. All programs used to program Digital Telephones also apply to IP Telephones (Program 205 keystrips, 213 Add-on-Modules, Program 204 DKT Parameters, etc.).

IP Telephone Installation and Network Connection setup

1. Install the IP telephones using instructions in the IPT chapter of the *CTX Installation and Maintenance manual*.
2. From each IP Telephone, set its network connection parameters using the "369Hold" program mode (refer to the instructions that follow).

Notes

- Some IP telephones parameters must be set from each individual IPT using "369Hold" programming. These parameters remain stored in the IP telephone even if the telephone is unplugged. This allows the telephone to be moved to different locations without reprogramming.
- Other IPT parameters must be set in IP Telephone > Station IP data (Program 250) in WinAdmin. Initially, the parameters in WinAdmin are normally kept at defaults.

IPT1020-SD Telephone Network Settings

This section explains how to enter data for your IPT1020-SD telephone. Before you begin, make sure that you have the following information: IP address, subnet mask number, router address, Station ID, CTX Strata Net node number, IP address for the BIPU-M, etc.

Notes

You may want to enter a period or backspace when performing the following steps. While in programming mode [Press **3**+**6**+**9**+**Hold** (simultaneously) to enter programming mode], you can use these buttons for the following functions:

- Press * to enter a period.
- Press **Vol** ▼ to backspace.
- Press **Spkr** to cancel entry and start over.

IPT-to-IP Network Connection Instructions

1. Press **3**+**6**+**9**+**Hold** (simultaneously).
2. Press **2**, then press **Hold** to select the Network Setting Mode.
3. Press **FB1** to see if the DHCP server is in use or not. Press one of the following:

   1: manual setting, then press **Hold**.

   2: auto setting by DHCP server, then press **Hold**.
4. If Step 3 above is set for manual setting, then press **FB2**. Enter the IP address for this IPT and press **Hold**. To enter the period in an IP address, press the ***** button on your dialpad (e.g., if the IP address is "192.168.1.241," press **192*168*1*241**).
5. Press **FB3**. Enter the subnet mask number and press **Hold**. (e.g., if the subnet mask address is "255.255.255.0, press **255*255*255*0**).
6. If the IPT is connected to a router or other gateway device and if Step 3 above is set for manual setting, then press **FB4**. Enter the router address, then press **Hold**.
7. Press **FB5**. Enter a Station ID for the IPT and press **Hold**. This is usually your telephone's primary number (PDN), which must be set in CTX Program 200.
8. Press **FB6** to enter the node number of the CTX node that contains the BIPU-M to which this IPT interfaces, then press **Hold**. This FB setting is for CTX networked systems only. This node number must match the IP CTX Identifier number set in Program 150-09.
9. Press **FB11** for BIPU IP address mode. Press one of the following:

   1: manual setting, then press **Hold**. Press **FB12** and enter the BIPU IP address, then press **Hold**. (e.g., if the BIPU IP address is "192.168.1.241," enter it in this format **192*168*1*241**).

   2: auto setting by broadcast, then press **Hold**.

   3: auto setting by multicast (IPT doesn't support multicast setting in this first release), then press **Hold**.

   Press **Hold** again to set all the above data.
10. Go off-hook and hang up. The IPT will search for the BIPU-M, initialize and then set the IP address (from 20 sec. to 60 sec.). Time, Date and PDN displays on LCD when the information is set.

Note See "IP Telephone Start Up Sequence"below for an explanation of the LCDs that you will see during this procedure.

IP Telephone Start Up Sequence

After the IP telephone network setting has been programmed, the following displays occur after the IP telephone is hung-up:

Action	LCD Indication	Remarks
1. IPT initializes.	**INITIALIZING** **PLEASE WAIT**	
2. IPT searches for IP address.	**IPADDRESS SETTING...**	Possible errors: • IP address is not set. **IPADDRESS SETTING...** **CAN'T SET IPADDRESS** • No DHCP server, etc. If error occurs, IP address setting is carried out continuously.
3. IPT searches for BIPU.	**SEARCHING BIPU**	Retries every 10 seconds. Possible errors: • BIPU is not found "time out." **SEARCHING BIPU** **BIPU NOT FOUND** • BIPU is not found (Station ID automatic setting). **SEARCHING BIPU** **CAN'T GET STATIONID** • BIPU is not found (StationID manual setting) **SEARCHING BIPU** **STATION ID UNMATCH** • Multicast address is not registered (BIPU IP address setting mode is automatic setting by multicast) **NOT EXIST MULTICAST ADDR** • BIPU IP address is not registered (BIPU IP address setting mode is manual setting. **NOT EXIST BIPU ADDRESS**
4. Registering to BIPU	**REGISTERING IPT...**	When registering fails, IPT retries by starting at Step 2 again. Error message: **REGISTERING IPT...** **CAN'T REGISTER IPT:EXXX** "Exxx" is error number.
5. Registering completion - normal action.	LCD data is indicated from CTX. Example: **NO. 205** **FEB 28 THURSDAY**	

Viewing IPT1020-SD Terminal Information

1. Press **3**+**6**+**9**+**Hold** (simultaneously).
2. Press **1**, then press **Hold**.
3. Press **FB1** to view IPT firmware version (application and boot versions, read only).
4. Press **FB2** to view IPT MAC address (read only).
5. Go off-hook and hang up.

Initializing the IPT1020-SD (Optional)

CAUTION! If you initialize, the IP telephone network settings return to default.

1. Press **3**+**6**+**9**+**Hold** (simultaneously).
2. Press **Vol ▲**+**Hold**.
3. Press **FB03** to initialize the telephone's IP network connection settings (LED On = initialize, LED Off = don't initialize). See "IPT-to-IP Network Connection Instructions"below for details.
4. Press **Hold** again to complete the initialization process.
5. Go off-hook and hang up.

IP Telephone Quality of Service (QoS) Programming

Deploying many IP telephones on a data LAN can have some unexpected pitfalls if the network does not have the bandwidth and speed required to handle VoIP traffic. To prevent delay, jitter, and data loss for VoIP traffic and to retain the performance of your other business-critical network applications a network Voice Readiness Assessment should completed before installing VoIP.

Important! *Voice Readiness Assessments are the responsibility of the installing TSD dealer. Toshiba is not responsible for supporting problems which occur because the network on which the IP telephones are installed does not meet VoIP packet requirements.*

CTX IP provides a number of adjustable tuning parameters dealing with sharing of network resources, collectively referred to as Quality of Service (QoS). Some CTX IP voice quality and packet priority parameters that can be adjusted are described below:

General QoS Adjustments

The CTX provides parameters that can be adjusted to improve IP voice quality. These are normally kept at default but may be adjusted as necessary to modify IP voice quality. Set each item individually and then test for voice quality improvements each time a parameter is changed.

1. In WinAdmin, select IP Telephone > Station IP Data (Program 250) "08 Audio Codec" and select the codec that should be enabled for individual IP telephones.

   The G711 provides the best voice quality but requires the most network bandwidth. Usually G.729A is used when IP telephones are connected remotely.

2. In WinAdmin, select IP Telephone > System IP data (Program 150) and select the 11 BIPU/IPT VQ mode setting.

3. You can assign a Voice Packet Table to individual IP telephones in IP Telephone > Station IP Data (Program 250–07) Voice Packet Table. In WinAdmin, select IP Telephone > Voice Packet Configuration (Program 152) and configure up to 256 different tables (see below).

Voice Packet Configuration Table (Program 152)

Normally the default table settings are used. If experiencing voice quality problems, set each item individually and then test for voice quality improvements each time a parameter is changed. The default settings are shown below. The tables in this program must be assigned to individual IP telephones in IP Telephone > Station IP Data (Program 250) for them to be used by the CTX.

Important!

- *When setting Voice Packet Configuration Tables on an IP QSIG network, the packet table settings for each node on an end-to-end connection must be the same.*
- *Whenever Voice Packet Configuration Table changes are made for IP telephones on IP QSIG nodes, Toshiba recommends pressing the reset button on the BIPU to assure the changes take effect.*

Voice Packet Configuration Parameters defaults:

- Voice Packet Transmission Interval – 20 msec
- Jitter buffer type – adaptive
- Jitter buffer length – 100 (smooth out packet playback)
- Maximum acceptable delay – 200 (not adjustable in CTX R2.0)
- Packet loss threshold – 5
- Packet loss ratio – 5 (not adjustable in CTX R2.0).
- Measurement period – 1000 (not adjustable in CTX R2.0).

Priority Control Adjustments

This VoIP feature provides a framework in which voice traffic flowing on the network is prioritized over other types of traffic. CTX supports two industry standard types of Priority control: IEEE802.1p and Diffserv (Differentiated Services). These options should be enabled simultaneously so the voice packets remain prioritized through the whole network path. IEEE802.1p prioritizes voice packets on the Ethernet (LAN) level and DiffServ prioritizes voice packets that pass through the internet, intranet, etc.

Important! *Priority Control processing has two requirements for it to work accurately. All network Ethernet equipment connected to the BIPU LAN (routers, switches, etc.) must be in compliance with IEEE802.1p voice packet prioritization. When going through a network provider (ISP, etc.), the provider must support the DiffServ feature - contact your ISP for this service.*

➤ **To setup priority control from WinAdmin**

1. Select IP Telephone > System IP Data
2. For Ethernet level (LAN) voice packet priority control.

   Enable 07 IEEE802.1p

   Set 08 IEEE802.1p. Configuration and set “voice” or “best effort”, voice provides a higher level of priority.
3. For IP level (Internet) voice packet priority control. Enable 03 DiffServ

   Set 04 TOS Field Type (TOS -Type Of Service or DSCP - Differentiated Service code point)

Note The most common type used is TOS

If set to “TOS”

Set 05 “TOS Precedence type” (CRITIC/ECP ~ Routine) where CRITIC has the highest priority.

Set “TOS Delay type” (Normal or Low) – Low is the best service setting

Set “TOS Throughput” (Normal or High) – High is the best service setting

Set “TOS Reliability” (Normal or High) – High is the best service setting

IF set to “DSCP”

Set “06 DSCP” from 1~64, Basic setting should be one of the following:

0 = Best effort, The default setting for most IP traffic.

24 = Assured flow (AF) or Controlled Load, intended to classify streaming traffic.

40 = Expedited Flow (EF) or Guaranteed, intended to classify high priority traffic. Used by VoIP gateways to mark VoIP traffic.

Strata Net over IP Programming Guidelines

Use the following steps/programs to program Strata Net over IP.

1. Assign the BIPU-Q card using Program 100 (System > Card Assignments).
2. Use Program 151 to set up the BIPU IP address, subnet mask, and default gateway (IP Telephone > BIPU Configuration).
3. Program ILG and OLG using Programs 304 and 306 (Trunk > ILG, OLG).
4. Program the Channel group using Program 302 [Trunk > ISDN > PRI (IP Protocol)].
5. After assigning an IP channel group in Program 302, assign the PAD levels to the PAD Groups 1 or 2 in Program 107 (System > PAD Table) using the "Program 107 PAD Table" on page 4-26.
6. After assigning the PAD level to the PAD Table in Program 107, assign the IP channel group to the PAD group in Program 108 (System > PAD Table). Use ISDN trunk as the device type for IP Channel Group Assignments.

Important! *These PAD values in steps 5 and 6 must be set properly to avoid low volume levels.*

7. Assign network IDs for all nodes using Program 102 (System > Flexible Access Codes).
8. Program networking using Programs 651~656 (Services > Networking > Route Plan Analysis).
9. Setup Strata Net over IP routing using Programs 671 and 672 (Services > Networking > Network Over IP). See example below.
10. If voice quality is low on Strata Net over IP calls, change defaults in Program 152 for parameters FB01~FB04.
11. Use Program 320 (Trunk > ISDN > B Channel) to control the number of channels to be used. This may be necessary to limit the number of simultaneous calls allowed over the IP network. The IP network bandwidth determines how many simultaneous calls can be supported. As a general guideline one Strata Net over IP call requires a minimum of 36 kbps bandwidth.

Important! *The BIPU IP address must be set in Program 151. If the BIPU-Q1A has a private IP address, IP QSIG communication must be over a Virtual Private Network (VPN) connection. To avoid needing VPN for this IP connection, assign a Global IP address to the BIPU-Q1A interface.*

Example

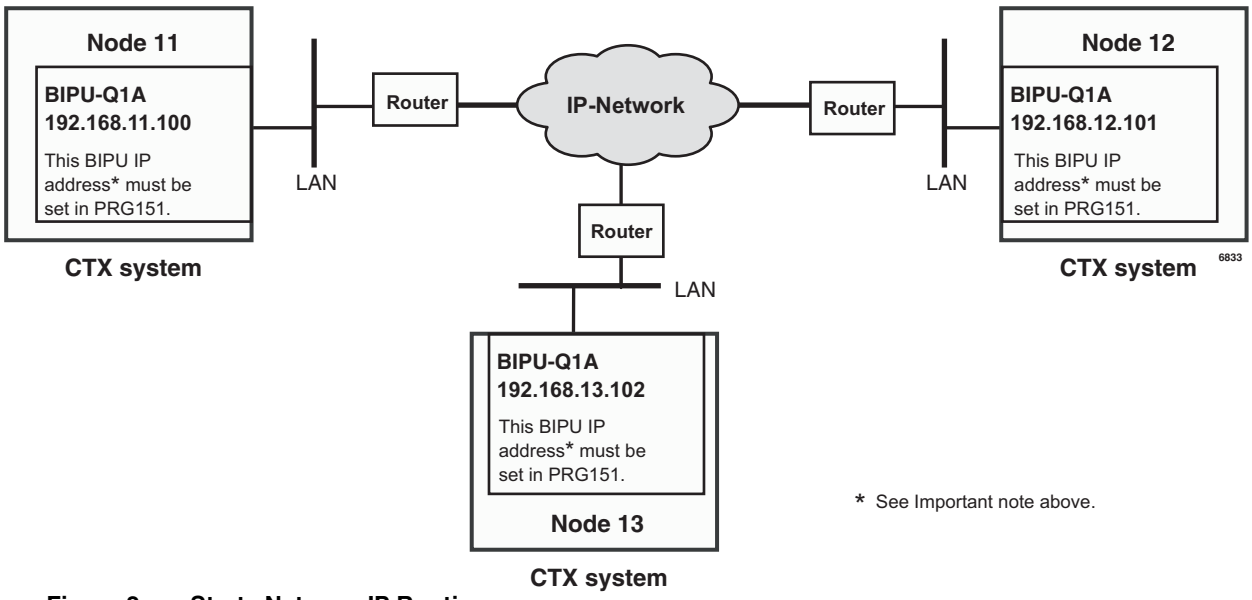


Figure 2 Strata Net over IP Routing

➤ **To program the configuration in the above figure using programs 671 and 672**

The steps below show you how to setup Node 11 to route to remote Nodes 12 and 13.

1. With WinAdmin connected to Node 11, go to Program 672 (Services > Networking > Network Over IP > Detail Info tab). Parameters for all Remote Nodes connected to Node 11 are pre-set in this program.
2. Select Node 12 and verify all parameters are set to defaults.
3. Select Node 13 and verify all parameters are set to defaults.
4. With WinAdmin connected to Node 11, go to Program 671 (Services > Networking > Network Over IP > IP Route tab). The IP addresses of BIPU-Qs connected to Node 11 are set in this program.
5. Select Node 12 and enter its BIPU-Q IP address (192.168.12.101) into IP Address Route 1.
6. Select Node 13 and enter its BIPU-Q IP address (192.168.13.102) into IP Address Route 1.

Notes

- The IP addresses used in this example are only examples, check with the facility network administrator for the IP addresses that should be used in your installation.
- If a remote node has more than one BIPU-Q installed, its IP address would be entered in Route 2. A maximum of six remote BIPU-Qs can be assigned in each remote node. Route 1 will be used until all channels are busy, or not working, in which case Routes 2~6 will be used in sequentially.

7. Repeat Steps 1~6 with WinAdmin connected to Node 12 to set up Remote Nodes 11 and 13.
8. Repeat Steps 1~6 with WinAdmin connected to Node 13 to set up Remote Nodes 11 and 12.

Echo Cancellation and Volume Level Adjustments

Dealing with Echo Problems in General

The first step in isolating echo problems is to find the source. Usually only one party hears echo. If that's the case, the echo source is the far end – if you hear echo, it is coming from the other party's side.

Example: if your local gateway is causing echo, you will not hear it because there is no delay in signals that may bounce back to you. However, as the echo causing gateway is moved further away, echo becomes more noticeable because the delay in the sound that is returned increases. Once you find out which end of the network is causing the echo, check for devices such as cheap headsets or conference telephones – these devices allow the earphone or speaker output to be feed back into the microphone to cause echo. Other devices that cause echo are two-wire to four-wire converters and digital-to-analog gateways.

Echo Caused by Older CTX Analog PCBs

To provide optimum voice quality of IP telephones on Strata CTX systems, there are some compatibility requirements that need to be followed when using analog CO line cards in the system.

- It is highly recommended to only use RCOU3A, RCOS3A, REMU1A (four-wire, not two-wire), RDDU2A, and RGLU3A analog CO line interfaces in IP telephone applications. These PCBs provide optimum speech quality for IPT1020-SD IP telephone connections.
- Do not use RCOU1A, RCOS1A, REMU1A (two-wire), RDDU1A, RGLU1A, or RGLU2A analog CO line interfaces in IP telephone applications. These PCBs will work but will cause IP telephone users to experience unacceptable voice quality and echo return loss.

Echo Reduction Adjustments

The items listed below can be adjusted to help eliminate echo. The below items will need to be tweaked, case by case with trial and error, for each situation.

1. In WinAdmin, select IP Telephone > System IP data (Program 150-10); use "Tail length of Echo Canceller" (set to different options and test).
2. In WinAdmin, select System > PAD table (Program 107) pad table; use IPT selection and reduce the volume (increase Net Loss) to reduce the echo. This setting is a compromise between the acceptable echo and volume loss levels (set to different options and test).
3. The IP telephone user taps the telephone Vol key (up or down), while on a call to cancel echo on a call-by-call basis.
4. If using a Headset, the user can adjust the IP Telephone headset transmit volume level. In some cases, lowering the headset transmit level can reduce echo.

Setting the IPT1020-SD Headset Transmit Volume

1. Press **3**+**6**+**9**+**Hold** (simultaneously).
2. Press **#**.
3. Press the Feature Buttons to turn the LEDs On/Off for the desired volume transmission level (see Table A-14).

Table A-14 Volume Level Transmitted from Headset Microphone

LEDS			Transmit Level
FB3	FB2	FB1	
ON	ON	ON	Level 7 (max.)
ON	ON	OFF	Level 6
ON	OFF	ON	Level 5
ON	OFF	OFF	Level 4
OFF	ON	ON	Level 3 (initial value)
OFF	ON	OFF	Level 2
OFF	OFF	ON	Level 1
OFF	OFF	OFF	Level 0 (min.)

4. Press FB4 for handset voice output in speakerphone mode (LED On = with, LED Off = without).
5. Press **Hold** to set the above data.
6. Go off-hook and hang up.

System Error Codes B

The following Error Code Tables are needed when programming Strata CTX670 using the button programming method. Error Codes display on the programming DKT's LCD.

Note The following error codes only appear when using the telephone button programming method. These tables are provided for reference only. CTX WinAdmin will feature error codes in a future release.

Common Error Code Table

Program	Code	Error Descriptions
Common	1	Invalid Program number.
	2	Invalid value.
	3	Invalid parameter designation • Input parameter range error. • Required sub-parameter data was not entered.
	4	Invalid FB button pressed.
	5	The time allotted to enter a modification in the desired field has been exceeded.
	6	Invalid parameter entry • Incorrect characters entered • Input method is wrong
	7	Some settings carried out using the range function may not have been programmed correctly.
	16	Identification error
	17	Required parameter is not entered.
	18	Required parameter does not exist.

System Programming Error Codes

Program	Code	FB	Sub-parameter	Error Descriptions
100	33	FB00		The entered Cabinet/Slot value is out of range.
	33	FB01		The entered PCB Type is out of range.
	33	FB01		In CTX100, the Card Type Code other than ASTU (STU) was assigned into S109.
	33	FB01		In CTX670, the equipment entered is S109 or S110. In CTX100, the equipment entered is S110.
	49	FB01		Deleting a Card (000) – Programmed station and/or trunk data must be deleted before a card can be deleted.
	49	FB01		Changing Card Type Code – Card Type cannot be changed. Delete the existing Card Type before entering a new Card Type.
	49	FB01		The designated BIOU is already in use.
	49	FB01		IOU card cannot be deleted because the Control Relay is assigned to that card.
	49	FB01		The PCB cannot be assigned to the designated equipment position.
	49	FB01		“004” is not assigned as Card Type Code.
	50	FB01		One of the required parameters (PCM Highway, BDKU Type or TEI Assignment) has not been assigned.
	50	FB02		The PCM highway value entered is not applicable for the desired PCB assignment. PCB parameters are required for PDKU or BDKU, RDTU, RDSU, RPTU.
	50	FB03		The Channel Type value entered is not applicable for the desired PCB assignment. PCB parameters are required for PDKU or BDKU, RDTU, RDSU, RPTU.
	50	FB04		The TEI Type value entered is not applicable for the desired PCB assignment. PCB parameters are required for PDKU or BDKU, RDTU, RDSU, RPTU.
	54	FB01		The number of MF2U cards exceeds the system limit.
102	33	FB01		The entered Feature Code is out of range.
	33	FB02		The OLG entered is out of range.
	49	FB02		An invalid OLG number was entered in OLG Number field when assigning a Flexible Numbering Feature code of 551.
	50	FB02		“0” is not a valid OLG Number.
	51	FB00		Flexible Numbering Plan values cannot be repeated. The value entered cannot be registered (e.g., If 1234 is registered, 123 cannot be registered).
	52	FB00		The value entered conflicts with an existing extension and cannot be registered.
103	-	-		See “Common Error Code Table” on page B-1.

Program	Code	FB	Sub-parameter	Error Descriptions
104	-	-		See "Common Error Code Table" on page B-1.
105	33	FB21~FB22		The entered Clock value is out of range.
	33	FB13		The Paging Group No. entered is out of the range.
	49	FB12 FB18		The BIOU general relay number value conflicts with existing parameter assignments.
	49	FB21~FB22		The entered circuit number is not the clock source port.
	80	FB12		The Paging Group No. entered does not exist in the system.
106	-	-		See "Common Error Code Table" on page B-1.
107	33	FB00~FB01		The entered Pad device number is invalid.
	96	FB01~FB02		The number of Pad groups exceed the system capacity.
108	33	FB00		The entered Device Type is out of range.
	33	FB01		The PAD group entered is out of the range.
	80	FB00		The Device number entered does not exist in the system.
109	33	FB08~FB16		The entered equipment is out of range.
	49	FB08~FB16		The equipment which the card type was assigned was not entered.
	50	FB08~FB16		The entered equipment is registered as MOH already.
	80	FB01~FB07		A BIOU circuit with other data such as door phone, etc. is assigned in MOH/BGM 1~7.
	80	FB08~FB16		A circuit with a non-STU circuit is designated in MOH/BGM 8~16.
110	16	-		Identification error: A super user password cannot be checked if you are logged in with a general user level password.
111	-	-		See "Common Error Code Table" on page B-1.
112	33	FB00		The entered date is out of range.
	98	-		Allowable number of Working Day Type has been exceeded.
113	33	FB01~FB09		The entered time value is out of range.
114	-	-		See "Common Error Code Table" on page B-1.
115	-	-		See "Common Error Code Table" on page B-1.
116	33	FB01		The Program Number entered is invalid.
117	32	FB00		An invalid character exists in the entered value.
	51	FB00		The inputted analysis number is using in a part of the other analysis number.
118		FB01		Incorrect Master ID code.
119		-		Common error. See Common Error Code table.
150	32	FB09		Incorrect value. The values should be numerals only.

Program	Code	FB	Sub-parameter	Error Descriptions
151	19	**FB01**		Unable to change the selected BIPU configurations during updates of selected BIPUs or IPTs to prevent the flash memory of BIPU from being broken.
	33	**FB00**		The equipment number entered is out of the range.
	49	**FB00**		Slot card type entered is other than BIPU card.
	52	**FB01**		The IP address entered is a global IP address already assigned to CTX or another BIPU. This restriction is only applied to the duplication of global IP addresses.
152	33	**FB01**		You cannot use 1:10msec in this release.
153	-	-		Common error. See Common Error Code table.

Station Programming Error Codes

Program	Code	FB	Sub-parameter	Error Descriptions
200	33	FB01		The entered Shelf/Slot/Circuit value is out of range.
	33	FB12		The entered System Call Forward index is out of the range.
	49	FB01		The selected PDN(s) conflicts with an existing PDN(s) assignments for the selected circuit.
	49	FB02		Station Type cannot be changed.
	49	FB15 FB22		The desired DN does not exist.
	51	FB00		The entered value conflicts with an existing numbering scheme.
	52	FB00		The entered value conflicts with an existing ISDN assignment etc.
	54	FB00		The quantity of lines, ISDN channels and PDNs entered exceeds the number of ports licensed with this processor.
	80	FB00		The DN does not exist.
	80	FB01		A PCB without “DKT/SLT setting allowed” is designated for a PCB connecting the selected ISDN extensions.
	96	FB00		The allowed number of extensions has been exceeded.
	98	FB35		The quantity of station speed dial bins entered exceeds the system's capacity.
201	50	-		The DN entered is the DN that is used as the administration terminal. FB which this error occur : FB01
	51	FB01		The entered number is not the extension number.
	52	FB01		The entered number is not the extension number.
	80	FB01		The entered value is not a valid extension.
202	33	FB01		The equipment number entered is out of the range.
	49	FB01		PCB assignment is not set for the ISDN card connecting selected extensions.
	49	FB01		The entered equipment is using as other ISDN extension.
	49	FB02		An ISDN trunk channel group conflict has been detected.
	49	FB02		Although the P-P connection was selected, an additional DN is registered.
	49	FB26~FB32		The desired value conflicts with existing ISDN extensions.
	51	-		The Primary DN entered conflicts with a value of an existing numbering scheme.
	51	FB00, FB26 ~FB32		The desired value conflicts with existing number schemes.
	52	FB00		A DN used for DKT extensions is designated.

Program	Code	FB	Sub-parameter	Error Descriptions
202	52	FB26~FB32		The additional ISDN extension number cannot be registered. The number is already in use by a DKT extensions, etc.
	54	FB00		The quantity of lines, ISDN channels and PDNs entered exceeds the number of ports licensed with this processor.
	80	FB00		The DN entered is invalid.
	80	FB01		A PCB without ISDN extension settings allowed' is designated for the PCB connecting the ISDN extension(s) selected.
	96	FB02		The number of channel group exceeds the system capacity when ISDN station is registered.
	96	FB00		The quantity of lines, ISDN channels and PDNs entered exceeds the number of ports licensed with this processor.
	98	FB35		The quantity of station speed dial bins entered exceeds the system's capacity.
203	33	FB01		The new DN is not assigned.
	49	FB01		The new DN value conflicts with an existing value DN, PhDN, etc.
	51	-		The Primary DN entered conflicts with a value of an existing numbering scheme.
	51	FB01		The new DN value conflicts with an existing numbering scheme value.
	52	FB00		The new DN value conflicts with existing group extensions.
	80	FB00		The new DN value does not exist.
204	33	FB17		The Call History memory size entered is wrong.
	49	FB01		The number of attendant consoles exceed the number specified in the system.
	52	FB00		DKT is not assigned to DN (ISDN, etc.).
	80	FB00		The DN entered is an extension number that does not exist.
	98	FB04		Allowable Feature Button number is exceeded.
	98	FB17		Allowable Call History Memory size is exceeded.
205	33	FB01	100 110 120 130 140	Sub-parameters must be assigned.
	33		120	The line number entered is out of range for the system's capacity.
	33		130	The GCO key group/index entered is out of the range.
	33		140	The POOL group entered is out of the range.
	33		530	The BGM number entered is out of the range.

Program	Code	FB	Sub-parameter	Error Descriptions
205	33		540	The door lock number entered is out of the range.
	33		900	The application number entered is out of the range.
	48	-		Required parameter for each Feature Code is not entered.
	49	**FB01**	110	Two or more PhDNs with the same value are registered to one extension.
	49	**FB01**	700 790 800 810 820 830	Only Feature Code(s) allowed for Attendant Console is registered.
	49	**FB01**	610	Two or more DSSs with the same value are registered to one extension.
	49	**FB01**	120 130 560 610	While assigning sub-parameters to a DN: A DN was selected that does not exist in the system.
	51	**FB01**		The Primary DN entered conflicts with a value of an existing numbering scheme.
	51		110	The Primary DN entered conflicts with a value of an existing numbering scheme.
	51	**FB01**	120 130	When assigning an Owner DN to a CO or GCO, the related CO or GCO buttons are not assigned to the respective FB(s) of the owner's extension.
	52			The Primary DN entered conflicts with a value of an existing numbering scheme.
	52	**FB01**	110	The Secondary/PhDN entered is already used in ISDN extenstion(s), etc.
	52	**FB01**	120 130	The CO or GCO Owner DN entered does not exist.
	80	**FB00**		The PrimeDN does not exist in the system.
	82	-		The sub-parameter values assigned to the FB are invalid.
	82		120	The line number entered does not exist.
	96	-	110 130 140	The maximum allowable value for GCO, POOL, or PhDN has been exceeded.
	98	**FB01** **FB04**		The quantity of Flexible keys programmed exceeds the system's capacity.

Program	Code	FB	Sub-parameter	Error Descriptions
206	33	**FB05**		The System Call Forward index entered is out of the range.
	49	**FB01** **FB04**		An invalid DN was selected. The entered PDN is not related to this Phantom DN.
	51	-		Phantom DN entered is invalid (the entered value is used as a part of an existing extension number or numbering plan).
	51	**FB00** **FB01** **FB14**		An invalid DN was selected (the entered value is used as a part of an existing extension number or numbering plan).
	52	-		The Phantom DN entered conflicts with an existing DKT extension.
	52	**FB00** **FB04**		The entered DN conflicts with an existing DKT extension, or numbering plan, etc.
	80	**FB00**		A Phantom DN that does not exist in the system has been selected.
207	33	**FB05**		The feature key entered is not a “Single Touch Button”.
208	51	**FB00**		An invalid DN was selected (the entered value is used as a part of an existing extension number or numbering plan).
	52	**FB00**		The entered DN conflicts with an existing numbering plan.
	80	**FB00**		The DN entered is an extension number that does not exist in the system.
209	33	**FB05**		The System Call Forward index entered is out of the range.
	49	**FB01**		If Hunt Method field is set to Distribute, the incoming destination Pilot Number must be assigned.
	50	**FB02**		If Hunt Method is set to Distribute, Pilot Number must be assigned.
	51	**FB02**		The entered value conflicts with an existing number or numbering plan.
	52	**FB02**		The entered value conflicts with an existing DKT extension.
	80	**FB00**		The designated Hunt Group number does not exist in the system.
	96	**FB00**		The assigned Hunt Group number, exceeds the system capacity.
210	51	**FB00**		The entered DN does not exist in the system (The entered value is used in an extension number or numbering plan).
	52	**FB00**		The entered value is used in the numbering plan.
	80	**FB00**		The entered Prime DN does not exist in the system.
	96	-		The Pickup group number entered is out of the range for the system's capacity.
211	80	-		The hunting group number entered (FB00) is a number that does not exist in the system.

Program	Code	FB	Sub-parameter	Error Descriptions
213	33	**FB01**	100 110 120 130 140	The sub-parameters for Feature Code (Key Number) must be assigned.
	33	-	120	The line number entered is out of range for the system's capacity.
	33	-	130	The GCO key group/index entered is out of the range.
	33	-	140	The POOL group entered is out of the range.
	33	-	530	The BGM number entered is out of the range.
	33	-	540	The door lock number entered is out of the range.
	33	-	900	The application number entered is out of the range.
	48	-		Essential sub-parameter values must be entered.
	49	**FB01**	110	Two or more PhDNs with the same value are registered to one extension.
	49	**FB01**	700 790 800 810 820 830	The feature code(s) allowed to attendant console only is registered.
	49	**FB01**	610	Two or more DSSs with the same value are registered to one extension.
	49	**FB01**	120 130 560 610	The entered DN does not exist in the system.
	51	-		The Prime DN entered conflicts with a value of an existing numbering scheme.
	51	**FB01**	110	The secondary/PhDN entered cannot be registered. The number conflicts with an existing number scheme.
	51	**FB01**	120 130	When setting an owner extension to the additional information of CO, GCO, the said CO, GCO keys are not assigned to the Feature Buttons of the owner extension.
	52	-		The Primary DN entered conflicts with an existing DKT extension.
	52	**FB01**	110	The secondary/PhDN entered cannot be registered. The number conflicts with an existing ISDN extension(s), etc.
	52	**FB01**	120 130	The CO or GCO Owner DN entered does not exist.
	80	**FB00**		The specified Prime DN does not exist in the system.

Program	Code	FB	Sub-parameter	Error Descriptions
213	82	-		The additional information assigned to the Feature Button is invalid.
	82	-	120	The line number entered does not exist.
	96	-	110 130 140	The allowable number of GCO, POOL or PhDn has been exceeded.
	98	-		The quantity of Flexible buttons programmed exceeds the system's capacity.
214	33	FB01~FB08		The equipment number entered is out of the range.
	49	-		The designated circuit is already in use.
	50	-		Multiple DSSs cannot be assigned to the same Shelf/Slot/ Circuit.
	51	-		The entered DN does not exist in the system (the entered value conflicts with an existing extension number or numbering plan).
	52	-		The entered value conflicts with an existing numbering plan.
	80	FB00		The designated Prime DN does not exist in the system.
	80	FB01~FB08		The designated PCB and extension combination is not allowed.
	96	FB01~FB08		The number of DSS consoles entered exceeds the system's capacity.
	98	-		The number of DSS buttons entered exceeds the system's capacity. This error can occur with PB1~PB8
215	33	-		The add-on module number is out of the range.
	33	FB01	100 110 120 130 140	The sub-parameters for Key Number field must be assigned.
	33	-	120	The line number entered is out of range for the system's capacity.
	33	-	130	The GCO key group/index entered is out of the range.
	33	-	140	The POOL group entered is out of the range.
	33	-	530	The BGM number entered is out of the range.
	33	-	540	The door lock number entered is out of the range.
	33	-	900	The application number entered is out of the range.
	48	-		Essential sub-parameter values must be entered.
	49	FB01	110	Two or more PhDNs with the same value are registered to one extension.

Program	Code	FB	Sub-parameter	Error Descriptions
	49	**FB01**	700 790 800 810 820 830	The feature code(s) allowed to attendant console only is registered.
	49	**FB01**	610	Two or more DSSs with the same value are registered to one extension.
	49	**FB01**	120 130 560 610	The entered DN does not exist in the system.
	51			The Primary DN entered conflicts with a value of an existing numbering scheme.
	51	**FB01**	110	The secondary/phantom DN entered cannot be registered. The number conflicts with an existing number scheme.
	51	**FB01**	120 130	When setting an owner extension to the additional information of CO, GCO, the said CO, GCO keys are not assigned to the Feature buttons of the owner extension.
	52	-		The Primary DN entered conflicts with an existing DKT extension.
	52	**FB01**	110	The secondary/PhDN entered cannot be registered. The number conflicts with an existing ISDN extension(s), etc.
	52	**FB01**	120 130	The CO or GCO Owner DN entered does not exist.
	80	**FB00**		The specified PrimeDN does not exist in the system.
	82	-		The additional information assigned to the Feature Button is invalid.
	82	-	120	The line number entered does not exist.
	96	-		The allowable number of GCO, POOL or PhDn has been exceeded.
	98	-		The number of Flexible buttons programmed exceeds the system's capacity.
216	51	**FB00**		The entered DN does not exist in the system (the entered value conflicts with an existing extension number or numbering plan).
	52	**FB00**		The entered DN conflicts with an existing ISDN extension(s), etc.
	80	**FB00**		The designated Prime DN does not exist in the system.

Program	Code	FB	Sub-parameter	Error Descriptions
217	33	**FB03**		The Node ID entered is over maximum digits, or Node ID was not entered.
	51	**FB00**		The entered DN does not exist in the system (the entered value conflicts with an existing extension number or numbering plan).
	52	**FB00**		The entered DN is not designated as an ISDN extension in Program 202.
	80	**FB00**		The designated DN does not exist in the system.
218	49	**FB02**		
	49	**FB02**		The DN entered is already assigned to another Hunt Group. A DN can only be in one Hunt Group.
	51	**FB02**		The entered DN does not exist in the system (the entered value conflicts with an existing extension number or numbering plan).
	52	**FB00**		The entered DN conflicts with an existing numbering plan.
	80	**FB00**		The entered Hunt Group number does not exist in the system.
	80	**FB02**		The entered DN does not exist in the system.
	82	**FB00**		The number of Hunt Group assignments has exceeded the system capacity.
	96	**FB01**		The allowable number of Hunt Group member assignments has been exceeded.
	98	**FB01**		More than 560 DNs are designated for members of one hunting group.
219	33	**FB00**		The Node ID entered is over maximum digits, or Node ID was not entered.
250	32	**FB06**		The MAC address entered includes invalid characters. The valid characters are numerals and alphabet A(a) to F(f).
	49	**FB02**		Despite that “1:Fix” is selected in FB02, the fixed IP address for this IPT is not registered in the system.
	50	**FB03**		Despite that “1:Fix” is selected in FB02, the fixed IP address is not set in FB03.
	51			The DN entered is not an IPT. (This number entered conflicts with a value of an existing numbering plan.) FB which this error occur : FB00
	52			IPT is not assigned to this DN (DKT etc.). FB which this error occur : FB00
	80			The DN entered is an extension number that does not exist in the system. FB which this error occur : FB00
Note For FBs in Program 205, 213 and 215, codes shows the entered Feature Code.				

Trunk Programming Error Codes

Program	Code	Occurred FB	Sub-parameter	Error Descriptions
300	33	**FB01**		The equipment number entered is out of the range.
	33	**FB02**		The ILG entered is out of the range.
	33	**FB03**		The OLG entered is out of the range.
	33	**FB12**		The hunting order entered is out of the range.
	49	**FB01**		When modifying previously assigned equipment: • The designated PCB Type does not allow CO trunk assignments. • The designated circuit does not allow CO trunk assignments.
	49	**FB02**		The ISDN ILG number is designated for analog trunks or the entered ILG number does not exist in the system.
	49	**FB02**		“0” was entered in ILG when OLG was not registered.
	49	**FB02**		The OLG entered is not registered in the system.
	49	**FB03**		The ISDN OLG number is designated for analog trunks or the entered OLG number does not exist in the system.
	49	**FB03**		“0” was entered in OLG when ILG was not registered.
	49	**FB02** **FB03**		A conflict exists between the ILG number and the OLG number trunk type.
	54	**FB00**		The quantity of lines, ISDN channels and PDNs entered exceeds the number of ports licensed with this processor.
	80	**FB00**		A trunk number that does not exist in the system has been selected.
	80	**FB02**		The entered ILG number does not exist in the system.
	80	**FB03**		The entered OLG number does not exist in the system.
	96	**FB00**		Allowable number of trunks has been exceeded.
	96	**FB00**		The line number entered exceeds the system's capacity.
301	33	**FB01**		The trunk number entered is out of the range.
	80			A trunk number that does not exist in the system has been selected.

Program	Code	Occurred FB	Sub-parameter	Error Descriptions
302	33	FB01		The equipment number entered is out of the range.
	33	FB03		The ILG entered is out of the range.
	33	FB04		The entered OLG is out of the range.
	48	FB07		Dch position is not set to 16. When setting the time slot pattern for a 2048 kbps interface, this value must be set to 16.
	49	FB03		The type of ILG or OLG entered in not an ISDN.
	49	FB04		The ILG or OLG entered does not exist in the system.
	49	FB01		When the equipment is moved, the number of the PCM highway in the moved equipment is different from the current equipment.
	49	-		The ILG entered is not registered in the system. FB which this error occur : FB03
	49	-		The OLG entered is not registered in the system. FB which this error occur : FB03
	49	FB02		When the card type is “PTU1F”, the protocol type entered should be “Bellcore” or “Bellcore Northern Telecom”.
	49	FB02		When the card type is “PTU”, the protocol type entered is “ETSI”.
	49	FB02		The card type is not “IPU-Q” when IP is selected.
	49	FB02		The card type is not “PTU” or “PTU1F” when TTC or QSIG is selected.
	49	FB07		When the card type is “PTU1F”, the inputted D channel position is not 16.
	49	FB07		D channel position must assign “0” when the card type is “IPU-Q”.
	49	FB07		D channel position must not be assigned “0” when the card type is not “IPU-Q”.
	50	FB24		The T-Wait Timer can only be enabled if the Protocol is set to National ISDN.
	52	FB00		The entered Channel Group conflicts with an existing ISDN extension(s), etc.
	54	FB00		The quantity of lines, ISDN channels and PDNs entered exceeds the number of ports licensed with this processor.
	80	FB00		The entered Channel Group number does not exist in the system.
	80	FB01		An ISDN trunk cannot be assigned to the designated Shelf/ Slot/Circuit.
	80	FB03		The designated ILG does not exist in the system.
	80	FB04		The designated OLG does not exist in the system.
	96	FB00		The number of allowable Channel Groups has been exceeded when a new ISDN trunk assignment is made.

Program	Code	Occurred FB	Sub-parameter	Error Descriptions
303	33	**FB01**		The channel group entered is out of the range.
	52	**FB01**		The entered Channel Group number conflicts with an existing ISDN extension(s).
	80	**FB01**		The entered Channel Group number does not exist.
304	49	**FB01** **FB02**		The Group Type and Trunk Type are assigned based on the ILG settings found in ILG field of Program 300 and in ILG field of Program 302.
	49	**FB06**		The entered Pool Key Number cannot be assigned. It belongs to another ILG number.
	49	**FB05**		The entered GCO Key Number cannot be assigned. It belongs to another ILG number.
	49	**FB11**		The digit of DID number cannot change when DID number is already registered.
	80	**FB00**		The entered ILG does not exist in the system.
	96	**FB05** **FB06**		The allowable number of GCO or POOL Key Number has been exceeded.
	96	**FB00**		The number of ILGs exceed the system capacity.
305	33	**FB01**		The ILG entered is out of the range.
	49	**FB01**		The entered ILG number cannot be deleted. Trunk relationships assigned in Programs 300 and 302 must deleted first.
	80	**FB01**		The entered ILG does not exist in the system.
306	49	**FB01** **FB02**		The Group Type and Trunk Type are assigned based on the OLG settings found in ILG field of Program 300 and in ILG field of Program 302.
	49	**FB06** **FB07**		The entered Pool Key Number cannot be assigned. It belongs to another OLG number.
	49	**FB04**		The entered GCO Key Number cannot be assigned. It belongs to another ILG number.
	80	**FB00**		The entered OLG does not exist in the system.
	96	**FB00**		The allowable number of OLG Group Number has been exceeded.
	96	**FB04** **FB06** **FB07**		The allowable number of GCO or POOL Key Number has been exceeded.
307	33	**FB01**		The OLG entered is out of the range.
	49	**FB01**		The entered OLG number cannot be deleted. Trunk relationships assigned in Programs 300 and 302 must be deleted first.
	80	**FB01**		The entered OLG does not exist in the system.

Program	Code	Occurred FB	Sub-parameter	Error Descriptions
308	33	FB00		The entered equipment value is invalid.
	33	FB03		Wrong assignment intervals.
	80	FB00		The designated trunk equipment does not exist in the system.
309	33	FB15		The pause assignment is wrong.
	48	FB05 ~ FB10		No incoming destination number is entered for the parameter required.
	49	FB00		The entered DID conflicts with an existing wild card PCB. The allowable number of DID assignments including a wild card PCB is exceeded.
	49	FB03		The selected GCO conflicts with an existing ILG number.
	49	FB04		The selected Pool Line Group conflicts with an existing ILG number.
	51	FB00		The entered ILG number does not exist in the system.
	51	FB01		The length of entered DID value exceeds the allowable contract digit number.
	80	FB03		The entered GCO key group does not exist in the system.
	82	FB01		The selected ILG number does not exist in the system. The number of ILGs exceed the system capacity.
	96	FB03 FB04		The number of allowable GCO or POOL key group assignments has been exceeded.
	98	FB01		The allowable number of DID assignments has been exceeded.
310	33	FB00		The entered equipment value is invalid.
	48	FB01 ~ FB03		No incoming destination number is assigned for the required parameter.
	80	FB00		The entered circuit is not set to support the designated trunk.
311	49	FB01		Although DISA security is set to Necessary, no DISA code has been assigned.
312	49	FB01		The entered DID number is not assigned to an ILG.
	49			The DID Number entered is invalid.
	80			DID Number entered does not exist in the system.
	82	FB00		The entered ILG number does not exist in the system.
313	33	FB00		The trunk number entered is out of the range.
	33	FB00		The entered equipment value is invalid.
	49	FB02 FB03		When Signalling Method field is set to CLASS: • The Signalling Contents field value must be assigned • The CLID Equipment Number Position circuit for the CIU must be entered.
	80	FB00		The entered trunk number does not exist in the system.

Program	Code	Occurred FB	Sub-parameter	Error Descriptions
315		**FB01** **FB02** **FB04** **FB05**		"NONE" entered in any field is invalid.
	33	**FB03**		The entered equipment value is invalid.
	49	**FB00**		The PCB installed in the designated Shelf/Slot must be a RDTU.
316	33	**FB01**		The channel group entered is out of the range.
	33	**FB01**		RPTU Equipment Number entered is invalid.
	49	**FB01**		When the equipment is moved, the number of the PCM highway in the moved equipment is different from the current equipment.
	49	**FB04**		If the Span Interface speed is set to a value not equal to 1.5M, the Dch position is modified.
	52	**FB00**		The entered channel group number conflicts with an existing ISDN extension(s).
	54	**FB01**		The equipment number entered is out of range.
	80	**FB00**		The entered channel group number does not exist in the system.
	80	**FB01**		The entered circuit must be an assigned ISDN.
317	33	**FB00**		The entered equipment value is invalid.
	33	**FB03**		The ILG entered is out of the range.
	33	**FB04**		The OLG entered is out of the range.
	49	**FB03**		"0" was entered in ILG when OLG was not registered.
	49	**FB03** **FB04**		The entered ILG/OLG values do not have ISDN assignments.
	49	**FB04**		The OLG entered is not registered in the system.
	49	**FB04**		"0" was entered in OLG when ILG was unregistered.
	50	**FB18**		The T-Wait Timer can only be enabled if the Protocol is set to National ISDN.
	52	**FB00**		The entered channel group number conflicts with an existing ISDN extension(s).
	54	**FB00**		The quantity of lines, ISDN channels and PDNs entered exceeds the number of ports licensed with this processor.
	80	**FB00**		The entered channel group number does not exist in the system.
	80	**FB01**		The entered circuit must be an assigned ISDN.
	80	**FB03**		The entered ILG number does not exist in the system.
	80	**FB04**		The entered OLG number does not exist in the system.
	96	**FB00**		The allowable channel group assignments exceed the system capacity.

Program	Code	Occurred FB	Sub-parameter	Error Descriptions
318	33	FB15		The pause assignment is wrong.
	48	FB05 ~ FB10		No incoming destination number is assigned for the required parameter.
	49	FB03		The selected GCO conflicts with an existing ILG number.
	49	FB04		The selected Pool Line Group conflicts with an existing ILG number.
	80	FB03		The entered GCO key group does not exist in the system.
	82	FB00		The selected ILG number does not exist in the system.
	82	FB01		The selected ILG number does not exist in the system. The number of ILGs exceed the system capacity.
	96	FB03 FB04		The number of allowable GCO or POOL key group assignments has been exceeded.
319	33	FB01~FB03		The destination number entered is wrong.
	48	FB01~FB03		The destination number is not assigned.
320	33	FB00		The entered equipment value is invalid.
	54	FB01~FB03		The quantity of lines, ISDN channels and PDNs entered exceeds the number of ports licensed with this processor.
	80	FB00		The circuit for the designated PCB must be an assigned ISDN primary trunk.
321	33	FB00		The OLG entered is out of the range.
	80	FB00		The entered OLG number does not exist in the system.
322	33	-		The Group CO or Pool Line Group Destination is out of range (1~128).
	80	FB00		The entered OLG number does not exist in the system.
	80	FB01 FB02		The designated extension number does not exist in the system.
	80	FB01 FB02		The entered GCO value does not exist in the system.
	80	FB01 FB02		The entered POOL value does not exist in the system.
	82	FB00		The OLG entered is out of the range.
	96	FB03		The allowable system DID assignments has been exceeded.

Program	Code	Occurred FB	Sub-parameter	Error Descriptions
323	18	FB02		Select the Type of Service for CBC.
	33	FB06		The Incoming Line Group entered is invalid.
	33	FB07		The Outgoing Line Group entered is invalid.
	49	FB02~FB05		The same value is designated to the Type of Service, Facility Code, Service Parameters, and Network ID fields that correspond to the same channel group and different line service index.
	49	FB02		The entered values in Channel Group and Index fields are not valid CBC assignments. Select NODATA in Type of Service field to delete CBC setting.
	49	FB02 FB06		When an INWATS ILG is assigned in ILG field an Out WATS Type of Service cannot be assigned.
	49	FB02 FB06		If OUTWATS service is selected for Type of Service, an OLG value must be assigned.
	49	FB02 FB06		The selected ILG conflicts with an existing ILG number.
	49	FB02 FB07		When an Out WATS OLG is assigned in OLG field an INWATS Type of Service cannot be assigned.
	49	FB02 FB07		Make a selection in OLG field.
	49	FB02 FB07		The selected OLG conflicts with an existing ILG number.
	49	FB08~FB13		The assigned minimum Bch value (Minimum Calls Zones 1~3) exceeds the related (Maximum Calls Zones 1~3) maximum Bch value.
	49	FB08 FB10 FB12		The assigned minimum Bch value (Minimum Calls Zones 1~3) exceeds the related (Maximum Calls Zones 1~3) maximum Bch value.
323	49	FB08~FB13		The B channel entered is invalid.
	49	FB07		The OLG entered does not exist in system.
	49	FB06 FB07		The entered ILG/OLG values are not assigned ISDNs.
	50	FB02~FB07		Make a Service Type selection for field 02.
	52	FB00		The entered channel number conflicts with an existing ISDN extension(s), etc.
	80	FB00		The entered channel group number does not exist in the system.
	82	-		The Channel Group entered does not exist in the system.
	82	FB01		The allowable number of assigned channel groups has been exceeded.
	96	-		The number of allowable CBCs has been exceeded.

Program	Code	Occurred FB	Sub-parameter	Error Descriptions
324	33	FB00		The channel group entered is out of the range.
	33	FB01~FB03		The time entered is invalid.
	52	FB00		The entered channel number conflicts with an existing ISDN extension(s), etc.
	80	FB00		The entered channel group number does not exist in the system.

Attendant Position Programming Error Codes

Program	Code	Occurred FB	Sub-parameter	Error Descriptions
400	50	FB02		If the Called Number Index is not assigned, Call Destination must be set to insert.
404	33	FB00		The Attendant group number entered is out of the range.
	33	FB07~FB16		The ILG entered is out of the range.
	80	FB00		The entered Attendant group number does not exist in the system.
	80	FB07~FB16		The designated ILG does not exist in the system.

Service Programming Error Codes

Program	Code	Occurred FB	Sub-parameter	Error Descriptions
500	32	**FB04** **FB05**		A character that is not permitted is included in the Destination number.
	50	**FB04**		Although 2nd destination has been assigned, you cannot remove the 1st destination. You cannot assign the 2nd destination without the 1st destination.
	50	**FB05**		A value must be assigned to Destination 1if an assignment was made in Destination 2.
	82	**FB00**		The entered System Call Forward number does not exist in the system.
	96	-		System Call Forward Index number exceeds the system capacity.
501	32	**FB01**		A character that is not permitted is included in the entered Speed Dial number.
	33	**FB00**		The entered Speed Dial number is out of range.
	33	**FB01**		The pause assignment is wrong.
502	51	**FB00**		The entered DN does not exist in the system (the entered value conflicts with an existing extension number or numbering plan).
	52	**FB00**		The entered number conflicts with an existing numbering plan.
	80	**FB00**		The entered extension does not exist. The entered Attendant Console does not exist.
	96	-		The Page group number entered exceeds the system's capacity.
	98	**FB01~FB18**		The number of allowable Device number per paging group has been exceeded.
503	49	**FB19**		The entered External Generic Relay number conflicts with an existing device, such as a door lock, etc.
	80	**FB00**		IOU card is not registered in the system.
	96	-		The Page group number entered exceeds the system's capacity.
	98	**FB01~FB18**		Device Number per paging group is exceeded.
504	33	**FB01**		The System Call Forward index entered is out of the range.
506	53	**FB00**		Account Code cannot be verified.
	80	**FB00**		Account code confirmation digit does not coincide. (It is larger than the value that was registered by Program 570.)
	98	**FB00**		The Account code number exceeds the system's capacity.

Program	Code	Occurred FB	Sub-parameter	Error Descriptions
507	33	FB01		The DDCB Equipment number entered is invalid.
	33	FB06~FB08		The destination number value is out of range (when destination type is Paging Group).
	33	FB06~FB08		The allowable number of Paging Groups have been exceeded.
	33	FB04		The entered Ring Duration is invalid.
	49	FB01		Door Phone number entered conflicts with an existing Door Phone number.
	49	FB01		The equipment assigned in DDCB Equipment Number is already in use.
	49	FB01		The entered value conflicts with an existing DKT extension.
	50	FB06~FB08		The destination number is not registered.
	52	FB01		The entered Circuit conflicts with an existing door lock.
	80	FB00		The entered Door Phone number does not exist in the system.
	80	FB01		The PCB Type designated for this circuit must be a DKU.
	82	FB00		The entered Door Phone number does not exist in the system.
	96	FB00		The allowable number of Door Phones has been exceeded.
508	33	FB03		The entered equipment value is invalid.
	49	FB02		The designated BIOU PCB circuit is used by another device (Night Bell, etc.), or two or more door locks are designated for the same BIOU PCB.
	49	FB03		The PCB Type designated for this DDCB circuit must be a PDKU or BDKU.
	49	FB03		The DDCB Equipment number entered conflicts with an existing door lock.
	52	FB03		Other devices (DKT extensions, door phones, etc.) are designated for the specified DDCB circuit.
	96	FB00		The allowable number of Door Locks has been exceeded.
509	-	-		No error occurs for this command except for common errors.
510	49	FB01		The specified COS Override Code digit is invalid.
512	-	-		No error occurs for this Program except for common errors.
513	33	FB00		The ILG entered is out of the range.
	80	FB00		ILG number enter does not exist.
514	33	FB00		The OLG entered is out of the range.
	80	FB00		The entered OLG number does not exist.
515	-	-		No error occurs for this Program except for common errors.

Program	Code	Occurred FB	Sub-parameter	Error Descriptions
516	32	FB02		A character that is not permitted is used in the Speed Dial number.
	50	FB01		The allowable number of Speed Dial Bins has been exceeded.
	51	FB00		The entered DN does not exist in the system (the entered value conflicts with an existing extension number or numbering plan).
	52	FB00		The entered value conflicts with an existing numbering plan.
	80	FB00		The entered PrimeDN does not exist.
	98	FB00		The allowable Short-dial number has been exceeded.
517	18	FB01		Multiple Calling Pilot DN is not assigned.
	48	FB01		Cannot delete Multiple Calling Pilot DN.
	51	FB01		The Multiple Calling Pilot DN entered is using in a part of the numbering plan, extension number, etc.
	52	FB01		The Multiple Calling DN entered is an already existing DN .
	52	FB01		The Multiple Calling Pilot DN entered already exists.
518	32	FB02		ISDN station cannot be assigned to the destination number.
	52	FB02		Cannot delete Multiple Calling Pilot DN.
	49	FB02		The Multiple Calling Pilot DN entered is using in a part of the numbering plan, extension number, etc.
	52	FB02		The plural trunk access number can not assign in the same Multiple Calling Group.
	80			Cannot assign the destination number because the Multiple Calling Group does not exist.
	48	FB02		The destination type and the destination number must be assigned at the same time.
	82	FB00		The Multiple Calling Group entered is out of the range.
519	33	FB00		The Multiple Calling Group entered is out of the range.
	80	-		The Multiple Calling Group entered does not exist.
520	-	-		No error occurs for this Program except for common errors.
521	51	FB00		The Route Plan Number must be complete to be registered to the Route Plan Table.
	98	-		The allowable number of participants in the Route Plan Table has been exceeded.
522	51	FB00		The Exception Route Plan Number must be complete to be registered to the Route Plan Table.
	98	-		The allowable number of participants in the Route Plan Table has been exceeded.
523	-	-		No error occurs for this Program except for common errors.
524	-	-		No error occurs for this Program except for common errors.

Program	Code	Occurred FB	Sub-parameter	Error Descriptions
525	33	FB01		The OLG entered is out of the range.
	49	FB01 FB02		Both the OLG Number and the Digit Modification Index must be entered.
	50	FB01		Digit Modification Index value cannot be 0.
526	32	FB02 FB03		The value entered is not permitted.
527	33	FB00		The entered date is out of range.
	98	FB00		The public holiday number entered exceeds the system's capacity.
528	-	-		No error occurs for this Program except for common errors.
529	33	FB03		The entered time is out of range.
530	32	FB00		A character(s) that is not permitted is included in the specified code.
	51	FB00		DR LCR Table codes cannot be repeated. The value entered cannot be registered (e.g., If 1234 is registered, 123 cannot be registered).
	80	FB00		The code is not registered in the screening table.
531	32	FB01		A character(s) that is not permitted is included in the specified code.
	51	FB01		LCR OLG Access codes cannot be repeated. The value entered cannot be registered (e.g., If 1234 is registered, 123 cannot be registered).
	82	FB01		The allowable number of LCR OLG Access codes has been exceeded.
	82	FB00		The OLG entered is out of the range.
	98	FB01		The allowable number of DR sharing tables has been exceeded.
532	-	-		No error occurs for this Program except for common errors.
533	32	FB01		A character(s) that is not permitted is included in the specified code.
	51	FB01		Dial Strings cannot be repeated. The value entered cannot be registered (e.g., If 1234 is registered, 123 cannot be registered).
	98	FB01		The allowable number of DRLs has been exceeded.
534	32	FB01		A character(s) that is not permitted is included in the specified code.
	51	FB01		To add a DRL to the DR Exception Table, the DRL number must be complete.
	98	FB01		The allowable number of participants in the DR Exception Table has been exceeded.
535	32	FB01~FB09		The value entered is not permitted.

Program	Code	Occurred FB	Sub-parameter	Error Descriptions
540	48	FB01		An incoming destination number must be entered when After Shift Type field is set to Dialing Digits.
	51	FB00		The entered value conflicts with an existing number scheme.
	52	FB00		The entered DN conflicts with an existing DKT, ISDN extension, etc.
	80	FB00		The entered DN does not exist.
541	20	FB01		A character(s) that is not permitted is included in the specified code.
	52	-		The entered DN conflicts with an existing DKT, ISDN extension, etc.
	80	-		The entered DN does not exist.
550	33	FB01~FB08		The OLG entered is out of the range.
	49	FB01~FB08		Two or more OLG numbers with the same value exist in the same group.
	80	FB01~FB08		The entered OLG number does not exist.
551	32	FB01~FB03		The value entered is not permitted.
570	49	FB01		Registered Digit Length cannot be less than the Verified Digit Length.
	50	FB02		Registered Digit Length cannot be less than the Verified Digit Length.
571	49	FB01~FB04		The same account code cannot be repeated.
	50	FB01~FB04		The same account code cannot be repeated.
573	33	FB01~FB08		The door phone number entered is out of the range.
	80	FB01		The entered Door Phone does not exist.
576	33	FB00		The tenant number entered is not “1”.
	33	FB01		The paging group number entered is out of the range.
	80	FB01		The entered Paging Group does not exist.
577	33	FB00		The entered circuit type is out of range.
	33	FB00		The Ckt Type number entered, CO, GCO or POOL is invalid.
	51	FB00		The entered circuit number is invalid.
	52	FB00		The entered circuit number is invalid.
	80	FB00		The Device installed in the Circuit does not existed in the system.
	80	FB01		The entered station number does not exist.
579	-	-		No error occurs for this Program except for common errors.
580	52	-		The entered DN is not a VM extension.
	80	-		No error occurs for this command except for common errors.

Networking Programming Error Codes

Program	Code	Occurred FB	Sub-parameter	Error Descriptions
650	33	FB00		The OLG entered is out of the range.
	80	-		An OLG number has not been assigned in system.
651	98	-		The allowable number of Node ID assignments has been exceeded.
653	-	-		No error occurs for this Program except for common errors.
654	33	FB00		The OLG entered is out of the range.
655	-	-		No error occurs for this Program except for common errors.
656	49	FB01 ~ FB04		The entered Overlap Code already exists.
657	-	-		No error occurs for this Program except for common errors.
658	-	-		No error occurs for this Program except for common errors.
659	-	-		No error occurs for this Program except for common errors.
660	-	-		No error occurs for this Program except for common errors.
670	33	FB00		The Node ID entered is out of the range.
	51	FB00		The Node ID entered is using a part of the registered Node ID.
671	33	FB00		The Node ID entered is out of the range.
	51	FB00		The Node ID entered is using a part of the registered Node ID.
672	33	FB00		The Node ID entered is out of the range.
	51	FB00		The Node ID entered is using a part of the registered Node ID.
673	50	FB01		The Node ID entered is not registered.

Equipment Programming Error Codes

Program	Code	Occurred FB	Sub-parameter	Error Descriptions
801	49	**FB02**		Server Port Number must be entered when PC Operation Type is set to Server, or Client Port Number must be entered when PC Operation Type is set to Client.
	49	**FB03**		If a CTI value (200~208) is assigned to the Logical Device in Program 803, then Data Flow must be set to Asynchronization.
	49	**FB09**		When PC Operation Type is set to Client, the Client Port Number cannot be deleted.
	49	**FB04**		When PC Operation Type is set to Server, the Server Port Number cannot be deleted.
	50	**FB02**		When “Server” is selected, the Server Port number (FB04) is not able to assign “0”. When “Client” is selected, the connecting port number (FB06) is not able to assign “0”.
	50	**FB04**		When “Server” is selected, the Server Port number (FB04) is not able to assign “0”.
	50	**FB06**		When “Client” is selected, the connecting port number (FB06) is not able to assign “0”.
	80	**FB00**		The values assigned in Program 803 conflict with related I/O Logical and Physical Device assignments.
803	49	-		The selected port conflicts with existing devices, such as CTI, etc.
	50	-		The Physical Device assignment conflicts with existing serial number assignments.
804	80	-		The values assigned in Program 803 conflict with related I/O Logical and Physical Device assignments.

Strata CTX/DK Program Cross-reference C

This chapter is helps you cross-reference programs from Strata DK to CTX and vice versa. For example, Program 03 of the DK is similar to Program 100 of the Strata CTX. Only programs that have similar functions have been listed in these tables. The first table lists Strata DK program numbers in ascending order and the next table, "Strata CTX to Strata DK" on page C-15 lists Strata CTX program numbers in ascending order.

Strata DK to Strata CTX

The following numerical listing gives you the Strata DK program numbers and names. It cross-references Strata CTX programs that are similar.

Strata DK				Strata CTX			
Prg No.	Program Name	Parameter	Summary	Prg No.	Program Name	FB No.	Summary
00	Software Check	Code 1, 2	Level 1 Security Code, Level 2 Security Code	110	Password Assignment	1	Password
03	Flexible PCB Cabinet and Slot Assignments	-	Set PCB Code	100	Card Slot Assignment	1	Card Type
05	Flexible Access Code Numbering	-	set Access Code	102	Flexible Numbering Plan Assignment	1	Feature Code
*09	[PDN],[PhDN],DH, ACD or Modem DID Ext. Assignments	N/A	Set DID Extension Number	309	Direct Inward Dialing Assignment	5	(1)Destination Type (Day1,audio/speech) (2)Destination
						6	(1)Destination Type (Day2,audio/speech) (2)Destination
						7	(1)Destination Type (Night,audio/speech) (2)Destination
						8	(1)Destination Type (Day1,data) (2)Destination
						9	(1)Destination Type (Day2,data) (2)Destination
						10	(1)Destination Type (Night,data) (2)Destination

Strata DK				Strata CTX			
Prg No.	**Program Name**	**Parameter**	**Summary**	**Prg No.**	**Program Name**	**FB No.**	**Summary**
10	System Assignments, Part 3 of 3	LED 10-13	SMDI Station Number Digit Length	579	Voice Mail Data for System Assignment	5	Setting of caller number digits sent to VM unit
	Part 2 of 3	LED 04	Voice Mail Message Waiting Cancel Via Dial #64/Automatic			7	Setting of auto cancel of VM and MW
		LED 06	Voice Mail Identification Code, Dual Multi-frequency (DTMF) Signal Time			8	Dial sending time at Voice Mail port
10-1	System Assignments, Part 1 of 3	LED 07	Ring Transfer of CO Line Allowed	103	Class of Service Assignment	3	Whether to activate Call Transfer With Campon
		LED 01	Tone First/Voice First	204	DKT Data Assignment	5	Tone first / Voice first signaling
		LED 01	Tone First/Voice First	206	Phantom DN Parameter Assignment	2	Tone first / Voice first signaling
		LED 03	Dial Pulse (DP) Make Ratio	105	System Timer Assignment	25	The assignment of Dial Pulse Make Ratio
		LED 04	Dual-tone Multi-frequency (DTMF) Signal Time	104	System Timer Assignment	18	Dial sending time on external line and extension station
		LED 06	CO Line Repeat Ringing	204	DKT Data Assignment	11	Whether to activate External Ringing Repeat (Enable/ Disable)
		LED 10	System Speed Dial Override, Toll Restriction	105	System Timer Assignment	9	Destination Restriction Override by System Speed Dial. Enable/Disable
		LED 11	ABR Redial Time	104	System Timer Assignment	15	Destination busy detection time when recalling the analog external line
		LED 11	ABR Redial Time	208	Station Timer Assignment	3	Automatic Busy Redial's Recall Timer
		LED 12	Automatic Busy Redial (ABR) Cycles	208	Station Timer Assignment	1	Automatic Busy Redial's Retry Count when Outgoing Call

Strata DK				Strata CTX			
Prg No.	**Program Name**	**Parameter**	**Summary**	**Prg No.**	**Program Name**	**FB No.**	**Summary**
10-2	System Assignments, Part 2 of 3	LED 16	Executive Override Warning Tone	105	System Data Assignment	1	Break in warning tone of Executive Override Enable or Disable
		LED 05	Music-on-hold or Ring Back Tone			3	Tones for the transferred party after the ringing transfer takes place
		LED 14	Privacy Override Warning Tone			5	Privacy Override/ Attendant Monitor warning Enable/ Disable
		LED 11, 20	Dual-tone Multi-Frequency (DTMF) Tone, Padded Tone Return	300	Trunk Assignment	11	DTMF Back Tone
10-3	System Assignments, Part 3 of 3	LED 20	VM SMDI Message desk Number	579	Voice Mail Data for System Assignment	3	Setting of output of Message Desk No
		LED 08	Call ID / Automatic Number ID			4	Setting of output of Class, ANI and DNIS information
		LED 09	SMDI Bellcore Standard Version			6	Set Blank Number for VM unit
10-4	ACD/ISDN Parameters	LED 11	PRI ISDN Timer	302	ISDN Primary Trunk Assignment	24	T-WAIT
		LED 12	BRI T-WAIT Timer	317	ISDN Basic Trunk Assignment	18	T-WAIT
11	ACD Timing Assignments	9	Call Disconnect Timer	104	System Data Assignment	19	Automatic disconnect timer
*11-0	E911/CAMA Trunk Assignments	LED 11	CAMA Operation Enabled/Disabled	105	System Data Assignment	8	offer of E911 Service
*11-2	CAMA Trunk Group Hunting Assignment	Second parameter	Hunt to CAMA Trunk Group	550	Enhanced 911 Emergency Call Group Assignment	1-8	OLG associated with Emergency Call Group Number
*11-5	CAMA Digits Send on 911 Calls	N/A	Set sending digits for E911	105	System Data Assignment	24	The sending dialing digits as E911
*11-6	E911 Interdigital Timer	-	E911 Interdigital Timer	104	System Timer Assignment	13	Dialed 9 and 11 Judgment Timer
*11-8	911 Special [DN] Notification Assignments	N/A	Set [PDN],[PhDN] port number	400	Emergency Call Destination Assignment	2	Called Number of Emergency Call(DN, Pilot Number,Private Number)
12	System Assignments, Basic Timing	Code 9	K4RCU3/RRCS DTMF Inter-digital Release Time	104	System Timer Assignment	9	Timer to permit dial input for the telephone and trunk using DTMF
		Code 4	Flashing Timing	308	Trunk Timer Assignment	2	Short Flash Time
		Code 4	Flashing Timing			3	Long Flash Time
		Code 5	Pause After Flash			4	Pause time after flash
12-1	System Assignments, Basic Timing	N/A	Standard Telephone Ring Down Timer	216	Emergency Ring Down Assignment	2	Emergency Ring Down Timer setting of an originating terminal

Strata DK				Strata CTX			
Prg No.	**Program Name**	**Parameter**	**Summary**	**Prg No.**	**Program Name**	**FB No.**	**Summary**
*12	CESID Station Information	N/A	Set CESID	200	Station Assignment	16	CESID
				202	ISDN Basic Station Assignment	20	CESID
13	Defining the Message Center	N/A	Set Message Center	200	Station Assignment	22	Voice Mail to Message Waiting
*13	Station To CAMA Trunk Group Assignment	N/A	E911 Station CAMA Trunk Number	200	Station Assignment	17	Emergency call group of extension terminal
				217	ISDN Individual Station Data Assignment	6	Emergency call group of extension terminal
14-6	After Shift Service Destination	Second parameter	Destination	540	ACD Pilot DN Assignment	1	(1)After Shift Forward Type
							(2)After Shift Forward Destination
15	Ground/Loop/Tie/DID Line Options	5	Tandem Line Connection	103	Class of Service Assignment	26	Tandem CO Line Connection
		Code 1, Code 2	CO/DID/Tie Line Signal CO/DID/Tie Dial Pulse Rate	300	Trunk Assignment	4	Dial Mode
		Code 7	Forced Account Code	306	Outgoing Line Group Assignment	13	Set Trunk forced Account Code need/ no need
		Code 4	Automatic Release Time	308	Trunk Timer Assignment	1	Detect Automatic Release / Calling Party Control, and detection time
16	Assign CO Line Groups	LED 01-20	Set CO Line	300	Trunk Assignment	2	Incoming Line Group. Port became of member that ILG
						3	Outgoing Line Group. Port became of member that OLG
*16	ISDN Trunk Group Type Assignment	N/A	Set Trunk Group Type	304	Incoming Line Group Assignment	1	Analog/ISDN Type
				306	Outgoing Line Group Assignment	1	Analog/ISDN Type
17	DID/Tie Line Options	LED 02	Wink/Immediate	300	Trunk Assignment	6	Start Method
		LED 03	DID Camp-on/Busy	304	Incoming Line Group Assignment	17	Automatic Campon on/off
		LED 04	DID/Tie Second Dial Tone Option			20	Called Dial Tone send on/off

Strata DK				Strata CTX			
Prg No.	**Program Name**	**Parameter**	**Summary**	**Prg No.**	**Program Name**	**FB No.**	**Summary**
28	DSS Console/ Attendant Telephone Assignments	N/A	Set DSS Console	214	DSS Console Assignment	1	Input DSS1 card slot position
						2	Input DSS2 card slot position
						3	Input DSS3 card slot position
						4	Input DSS4 card slot position
						5	Input DSS5 card slot position
						6	Input DSS6 card slot position
						7	Input DSS7 card slot position
						8	Input DSS8 card slot position
29	DSS Console and Number Button Assignments	LED 01-20	Set Feature Code	215	DSS Key Assignment	1-60	(1) Feature Code
							(2)parameter1
							(3)parameter2
							(4)parameter3
							(5)parameter4
							(6)parameter5
*29	Add-on Modules Button Assignments	01,02	The number of Add-on Modules	204	DKT Data Assignment	4	Number of Add-on Modules
		LED 01-20	Set Feature Code	213	Add on Module Key Assignment	1-20	(1) Feature Code
							(2)parameter1
							(3)parameter2
							(4)parameter3
							(5)parameter4
							(6)parameter5
30	Station Class of Service	LED 06	Automatic Busy Redial(ABR) Access	103	Class of Service Assignment	1	Automatic Busy Redial required
		LED 10	Change DISA Security Code			4	Change DISA Codes
		LED 17	Do Not Disturb(DND) Override			5	DND Override - Calling Party
						6	DND Override - Called Party
						9	Privilege as the originator of Executive Override
		LED 18	Executive Override			21	Privacy Override privilege
		LED 08	Forced Account Code			32	Originator forced Account Code
		LED 14	Verify Account Code			33	Verified Account Codes

Strata DK				Strata CTX			
Prg No.	**Program Name**	**Parameter**	**Summary**	**Prg No.**	**Program Name**	**FB No.**	**Summary**
30	Station Class of Service	LED 16	Change Toll Restriction Travelling Class Code	200	Station Assignment	23	Permission to Change of Travelling Class Override Code
		LED 05	Speed Dial			30	Change System Speed Dial
		LED 07	Off-hook Call Announce (OCA) Automatic			32	Automatic OCA
		LED 05	Speed Dial	202	ISDN Basic Station Assignment	24	Change System Speed Dial
		LED 03	Microphone Button On at Start of Call	204	DKT Data Assignment	24	Set Microphone initial value
		LED 02	Mic Button - Locked/ Momentary			25	Set use or no use of the microphone
*30	Telephone Group Page Assignments	LED 01	Page Group A	502	Terminal Paging Group Assignment	1~16	Paging Group Number
		LED 02	Page Group B				
		LED 03	Page Group C				
		LED 04	Page Group D				
		LED 05	Page Group E				
		LED 06	Page Group F				
		LED 07	Page Group G				
		LED 08	Page Group H				
31	Station Class of Service	LED 18	Executive and Privacy Override Blocking (Modem)	103	Class of Service Assignment	10	Allowed or not allowed as the overridden party of Executive Override
		LED 10	All Call Page Allowed-Digital and Electronic Telephones			23	Whether to invoke Emergency Paging
		LED 05-08	Voice Mail (VM) Groups 1-4	209, 218	Voice Mail Hunt Group		Message Center Hunt for Voice Mail Port
		LED 14	Off-hook Call Announce (OCA) Handset or Speaker	204	DKT Data Assignment	6	Type of OCA if OCA is allowed
		LED 01	Handsfree Disabled			9	Whether to turn the microphone ON or OFF when a hands free call is started
		LED 02	Handsfree No Warning			10	Whether to ring a splash tone when a hands free call is started. Enable or Disable
		LED 11	Busy Override (BOV) Tone			27	Ring Over Busy repetition timers

Strata DK				Strata CTX			
Prg No.	**Program Name**	**Parameter**	**Summary**	**Prg No.**	**Program Name**	**FB No.**	**Summary**
31	Station Class of Service	LED 10	All Call Page Allowed	502	Terminal Paging Group Assignment	17	All Page Group
		LED 15	Toshiba Stratagy, Stratagy DK and/or VP Integration (A Tone/D Tone)	580	Voice Mail Data Assignment	2	whether to send A,D tone or not send for Voice Mail
		LED 19, 20	19:Toshiba Stratagy/ Stratagy DK/VP (B No Station) 20:Toshiba Stratagy/VP (B+Station Number)			3	whether to send only B Tone, Not Send, or B Tone and Extension Number for Voice Mail
		LED 17	End-to-end Signal RCV (VM)			4	whether send End to End Signal or not send for Voice Mail Port
		LED 03	Off-hook Call Announce(OCA) Enabled (Receive)	103	Class of Service Assignment	38	Can Originate OCA
*31	Group Pick up Assignments	LED 01~20	Pickup Group 1~20	210	Call Pickup Group Assignment	1~20	Pickup Group 1~32
32	Automatic Preference	N/A	set Automatic Preference type	204	DKT Data Assignment	13	Programmed with one of the preference type
33	[PDN]/[PhDN]Station Hunting	N/A	-	209	Station Hunting Group Assignment	1	Hunt Method
33	[PDN]/[PhDN] Station Hunting	N/A	Set Station Hunting member	218	Station Hunting Group Members Assignment	2	Set Hunting Group Member DN
						3	DN set type(modify/ insert)
*33	[PhDN] Owner Telephone Assignment	N/A	Set Owner Station Logical Port No.	206	Phantom DN Parameter Assignment	1	Owner PDN
34	Hold Recall Timing	N/A	Set Recall Timing	208	Station Timer Assignment	4	On-hold recall timer
35	Station Class of Service	LED 17	Continuous DTMF Tones Off	204	DKT Data Assignment	19	Set Continuous DTMF
37	Ring Transfer (Camp-on) Recall Time	N/A	Set Ring Transfer Recall Time	208	Station Timer Assignment	7	No Answer Timer of Ringing Transfer
*37	Park Recall Timing	-	PARK TIME=Seconds	104	System Timer Assignment	3	Park timer
38	Digital and Electronic Telephone Keystrip Type	N/A	The appropriate code	204	DKT Data Assignment	2	Feature Key Pattern
*38	Standard Telephone Ring-Down Destination	N/A	Set Destination Port No.	216	Emergency Ring Down Assignment	3	Emergency Ring Down Destination
39	Flexible Button Assignments	LED 01-20	Set Feature	205	Station Feature Key Assignment	1-20	(1) Feature Code
							(2)parameter1
							(3)parameter2
							(4)parameter3
							(5)parameter4
							(6)parameter5

Strata DK				Strata CTX			
Prg No.	**Program Name**	**Parameter**	**Summary**	**Prg No.**	**Program Name**	**FB No.**	**Summary**
41	Station Outgoing Call Restriction		Restrict stations from making outgoing calls	306	FRL	9	Assign FRL.
				200	FRL Assignments	6	
*41-1	T1 Span Frame and Line Code Assignments	LED 02	T1 Span Line Code Assignments	315	T1 Trunk Card Data Assignment	1	Coding Format
		LED 01				2	Set frame format
*41-3	T1 Span Transmit Level Pad Assignments	N/A	Set Transmit Pad			5	Set send PAD value
*41-4	T1 Span Receive Level Pad Assignments	N/A	Set Receive Pad			4	Set receive PAD value
*42	Clock Source	1	Set Primary Clock	105	System Data Assignment	21	Primary Clock Source
		2	Set Secondary Clock			22	Secondary Clock Source
43	0 + Credit Card Dialing Option	LED 01-20	restrict/not restrict	111	Destination Restriction Level Assignment	1	Credit Card Calling Enable/Disable
*43-1	D-Channel Control and NFAS Assignments	N/A	D-Channel Circuit No.	302	ISDN Primary Trunk Assignment	7	D channel position.
*43-3	D-Channel Control and NFAS Assignments	N/A	Network PRI Interface PRI Interface ID Code	302	ISDN Primary Trunk Assignment	6	I/f ID Number
			Network PRI Interface Assignment	316	DCH Shared ISDN Primary Trunk Assignment	2	I/f ID Number
44-1-8	Toll Restriction/ Traveling Class Override Codes	-	Toll Restriction Code	510	Class Of Service Override Assignment	1	COS Override Code
*44	BRI Service Profile Identifier (SPID) Parameters	N/A	SPID Type, SPID Value	317	ISDN Basic Trunk Assignment	14	SPID Initialize Type
						15	Display for ISDN SPID Initialize Type
						16	SPID Value1
						17	SPID Value2
*45-2 *45-3	LCR/Toll Restriction Bypass for Special Numbers that Do Not Begin with */# LCR/Toll Restriction Bypass For Special Numbers that Begin with */#	-	Digit Code Digit String	530	Toll Restriction / LCR Screening Table Assignment	1	Toll Restriction / LCR table Code(set / no set)
						2	Toll Restriction Action
						3	Least Cost Routing Action
46-2 46-6	Toll Restriction Allowed/Denied Area Codes by Class Toll Restriction Allowed/Denied Local Office Codes Assigned by Class	Third parameter	Area Codes	533	Toll Restriction Table Assignment	1	Dial String
						2	Add/Delete codes
47	Toll Restriction Exception Office Codes Assigned by Area Codes	-	Office Codes	534	Exceptional Toll Restriction Table Assignment	1	Exception Dial Strings
						2	Add/Delete codes
50-1	LCR Parameters	LED 01	Enable System LCR	103	Class Of Service Assignment	29	LCR feature availability

Strata DK				Strata CTX			
Prg No.	**Program Name**	**Parameter**	**Summary**	**Prg No.**	**Program Name**	**FB No.**	**Summary**
50-2	LCR Home Area Code	-	Set Home Area Code	520	LCR Parameters Assignment	1	Local Area Code
*50	Caller ID Circuit Assignments to CO Line PCBs	N/A	Set Caller ID circuit number	313	Caller ID Assignment	3	Class Equipment No.
53	LCR Schedule Assignments for LCR Plans	First parameter	LCR Plan	523	LCR Route Plan Schedule Table Assignment	2	LCR Time of Day
		Second parameter	Schedule			3	Station LCR Group Number
		Third parameter	LCR Station Group Number	524	LCR Route Table to Route Definition Assignment	1	LCR Route Definition Index - priority No.1
		Fourth parameter	Route Definition Numbers (First Pick)			2	LCR Route Definition Index - priority No.2
		Fourth parameter	Route Definition Numbers (Second Pick)			3	LCR Route Definition Index - priority No.3
		Fourth parameter	Route Definition Numbers (Third Pick)			4	LCR Route Definition Index - priority No.4
		Fifth parameter	Route Definition Numbers (Fourth Pick)			5	LCR Route Definition Index - priority No.5
						6	LCR Route Definition Index - priority No.6
				529	LCR Route Plan Schedule Table Time Zone Assignment	2	LCR Time Zone
		Fourth parameter	Start Time			3	set Start Time for Time Zone
54	LCR Route Definition Tables	First parameter	LCR Plan No.	525	LCR Route Definition Table Assignment	1	Outgoing Line Group - Number
		Second parameter	Route Definition Numbers			2	Digit Modification Index
55	LCR Modified Digits	-	Modified Digits Table	525	LCR Route Definition Table Assignment	2	Digit Modification Index
55-0	Delete Number of Digits From the Front of Dialed	Second parameter	Quantity of Digits	526	LCR Digit Modification Table Assignment	1	Digits to be deleted
55-1	Add Digits Before and/ or After the Dialed Number	Third parameter	Digits added	526	LCR Digit Modification Table Assignment	2	Add Leading Digits
55-2	Add Digits Before and/ or After the Dialed Number	Third parameter	Digits added	526	LCR Digit Modification Table Assignment	3	Add Trailing Digits
56	LCR Station Group Assignments	Second parameter	Set LCR Station Group	200	Station Assignment	7	Station LCR Group Number
				202	ISDN Basic Station Assignment	8	LCR Group Number
58-1	DK424 Attendant Console Series	First parameter	Attendant Console Overflow Timer	404	Attendant Group Assignment	3	Overflow Timer

Strata DK				Strata CTX			
Prg No.	**Program Name**	**Parameter**	**Summary**	**Prg No.**	**Program Name**	**FB No.**	**Summary**
58-5	Attendant Console Overflow Destination Assignments	Second parameter	Overflow Destination	204	DKT Data Assignment	28	Overflow destination of attendant
58-5	DK424 Attendant Console Series	Second parameter	Attendant Console Overflow Destination Assignment	404	Attendant Group Assignment	4	Overflow destination of attendant group
60-1	SMDR Data Output Options	LED 01	Caller ID, ANI and DNIS data will be sent from the system SMDR port	512	SMDR For System Assignment	1	Caller ID field indication
60-1	SMDR Data Output Options	LED 01	Caller ID, ANI and DNIS data will be sent from the system SMDR port.	512	SMDR For System Assignment	3	ANI field indicate
60-1	SMDR Data Output Options	LED 01	Caller ID, ANI and DNIS data will be sent from the system SMDR port	513	SMDR For ILG Assignment	2	DNIS field indication
60-2	SMDR Threshold Time	2	SMDR Threshold Time	104	System Timer Assignment	5	Valid Call timer on SMDR
60-3	SMDR Incoming/ Outgoing Calls	-	SMDR Output when a call is completed	513	SMDR For ILG Assignment	3	Output of SMDR record for the incoming call
60-3	SMDR Incoming/ Outgoing Calls	-	SMDR Output when a call is completed	514	SMDR For OLG Assignment	2	Output of SMDR record for the outgoing call
60-4	Forced/Voluntary Account Code Digit Length	-	Forced/Voluntary Account Code Digit Length	570	Account Code Digit Length Assignment	1	Forced/Voluntary Account Code Verified Digit Length
60-7	Credit Card Call Digit Length	-	Credit Card Call Digit Length	105	System Data Assignment	7	Minimum Dial Digits of Credit Card Calling
*60	BRI Line/Station Operation Assignment	LED 01-04	Set TE/NT	317	ISDN Basic Trunk Assignment	1	BRI Equipment Number
*61	Analog Trunk Service for ISDN	1	Bearer Service	304	Incoming Line Group Assignment	12	Bearer Capability 3.1kHzAudio or Speech
				306	Outgoing Line Group Assignment	11	Number of DID digits received from CO.
*62	Non-ISDN Station Bearer Service	1	Bearer Service	200	Station Assignment	14	Bearer Capability 3.1kHzAudio / Speech
*64-2	Number of DID/DNIS Digits for Trunk Groups	Third parameter	Number of DID Incoming Call Digits per Trunk Group	304	Incoming Line Group Assignment	11	DID Contract Beam Count
*66-1	Channel Group Number Parameters	Second parameter	Set Channel Group No.	302	ISDN Primary Trunk Assignment	1	Create Channel Group Number
						3	Set ILG
						4	Set OLG

Strata DK				Strata CTX			
Prg No.	**Program Name**	**Parameter**	**Summary**	**Prg No.**	**Program Name**	**FB No.**	**Summary**
*66-2	Call-by-Call Trunk Group Codes and Network ID			323	Call By Call Service Assignment	6	Incoming Line Group
				323	Call By Call Service Assignment	7	Outgoing Line Group
		Second parameter	Set Facility Code	323	Call By Call Service Assignment	3	Facility code Value
		Third parameter	Set Service Parameters			4	Service Parameters
				323	Call By Call Service Assignment	2	Kind of Line Service
*66-3	Channel Group/Trunk Parameters	LED 03-06	Trunk Group Type	302	ISDN Primary Trunk Assignment	1	Set ISDN Trunk Group Number
*66-4	Call-by-Call Trunk Group Codes and Network ID	N/A	Set Network ID Code	323	Call By Call Service Assignment	5	Network ID
*67-2	Call Types for ISDN Trunk Group Supported	LED 01	“Set “”Speech”Speech””“	302	ISDN Primary Trunk Assignment	8	(1)Bearer Capability Speech.
							(2)Channel identifier number slot map, channel type for Speech
		LED 02	“Set “”3.1 kHz Audio”Audio””	302	ISDN Primary Trunk Assignment	9	(1)Bearer Capability 3.1kHzAudio.
							(2)Channel identifier number slot map, channel type. for 3.1kHz Audio
		LED 03	“Set “”64 kbps. Data”Data””“	302	ISDN Primary Trunk Assignment	11	(1)Bearer Capability unrestricted digital Information 64kbps.
							(2)Channel identifier number slot map, channel type for unrestricted digital Information 64kHz.
		LED 04	“Set “”56 kbps. Data”Data””Data”Data”” ”	302	ISDN Primary Trunk Assignment	12	(1)Bearer Capability unrestricted digital Information 56kbps.
							(2)Channel identifier number slot map, channel type for unrestricted digital Information 56kHz
*67-3	Call Types for ISDN Trunk Groups	N/A	Set Minimum number of B-channels reserved	323	Call By Call Service Assignment	8	Minimum number of Bch in Time Zone1
						10	Minimum number of Bch in Time Zone2
						12	Minimum number of Bch in Time Zone3

Strata DK				Strata CTX			
Prg No.	**Program Name**	**Parameter**	**Summary**	**Prg No.**	**Program Name**	**FB No.**	**Summary**
*67-4	ISDN Trunk Groups Maximum Channel Reservation	N/A	Set Maximum number of B-channels reserved	323	Call By Call Service Assignment	9	Maximum number of Bch in Time Zone1
						11	Maximum number of Bch in Time Zone2
						13	Maximum number of Bch in Time Zone3
*67-5	Multiple Time Zone Settings	N/A	Set Start Time for Time Zone	324	Call By Call Time Zone Assignment	1	Start time of Time Zone1
						2	Start time of Time Zone2
						3	Start time of Time Zone3
*68-1	Calling Number ID	First Parameter	Trunk Group 1. Outgoing 2. Outgoing Status Change 3. Incoming	321	ISDN Calling Number Identification Assignment	1	Default calling Number
*69-1	CNIS	First Parameter	Station Port	321	ISDN Calling Number		OLG Number
		Second Parameter	Channel Group				
		Third Parameter	Index Number				
*69-2	CNIS Special Number	First Parameter	Index Number	322	CNIS Presentation Special Number	1	Source Type
		Second Parameter	Calling Party Number			2	Source Number
						3	Calling Party Number
69	Verify Account Codes	-	Verify Account Codes	506	Verified Account Code Assignment	1	Whether set or no set as Verified Account Code
71-4	DNIS	N/A	DNIS and ANI Only Lines Voice Mail ID Assignments	309	Direct inward dialing assignment	11	Voice Mail ID of DNIS
71-5	DNIS	N/A	DNIS Number Name Display	309	Direct inward dialing assignment	12	Destination Name of DNIS
77-1	Peripheral Options(Door Phones) RSIU/RSIS/RMDS, PIOU/PIOUS/IMDU, PEPU	LED 20	Door Lock Time	104	System Timer Assignment	12	Electric door lock unlocking time

Strata DK				Strata CTX			
Prg No.	**Program Name**	**Parameter**	**Summary**	**Prg No.**	**Program Name**	**FB No.**	**Summary**
77-1	Peripheral Options(Door Phones) RSIU/RSIS/RMDS, PIOU/PIOUS/IMDU, PEPU.	LED 05	MOH/NT Relay	109	External Music On Hold Source Assignment	1	Set External Music On Hold1 on ACTU/ BECU connected or not connected
						2	Set External Music On Hold2 on BIOU1 connected or not connected
						3	Set External Music On Hold3 on BIOU1 connected or not connected
						4	Set External Music On Hold4 on BIOU1 connected or not connected
						5	Set External Music On Hold5 on BIOU2 connected or not connected
						6	Set External Music On Hold6 on BIOU2 connected or not connected
						7	set External Music On Hold7 on BIOU2 connected or not connected
77-1	Peripheral Options(Door Phones) RSIU/RSIS/RMDS, PIOU/PIOUS/IMDU, PEPU.	LED 07	Door Lock Relay/ External Page Relay	508	Door Lock Control Assignment	2	Set Relay Number of BIOU
		LED 08	Door Phone Ring On External Page in Night mode	576	Door Phone Ring On External Paging In Night Mode Assignment	1	Set External Paging Group for termination in Night Mode
		LED 16-19	Port Number/Door Phone/Lock Control Units	507	Door Phone Assignment	0	DDCB Equipment Number that connects to Door Phone
		LED 16-19	Port Number/Door Phone/Lock Control Units	507	Door Phone Assignment	1	Deleted Door Phone Number
77-2	Door Phone Busy Signal/Door Lock Assignments	LED 20	Door Phone Ring Count	507	Door Phone Assignment	4	Ring Duration
		LED 04,08,12,16	Door Lock Assignments	508	Door Lock Control Assignment	3	DDCB Equipment Number
79, *79	Door Phone Ringing, Door Phone to [DN] Flashing Assignments	LED 1-12(79)	Door Phone Number	507	Door Phone Assignment	6	(1)Destination Type of DAY1
		LED 1-12(79)	Door Phone Number			6	(2)Destination Number of DAY1
81-83	Ground/LOOP Start/ CO Line Station Ringing	LED 01-20	Set Ringing Station at DAY	310	Direct Inward Termination Assignment	1	(1)Destination Type (Day1)
							(2)Destination

Strata DK				Strata CTX			
Prg No.	**Program Name**	**Parameter**	**Summary**	**Prg No.**	**Program Name**	**FB No.**	**Summary**
84-86	Ground/LOOP Start/ CO Line Station Ringing	LED 01-20	Set Ringing Station at DAY2	310	Direct Inward Termination Assignment	2	(1)Destination Type (Day2)
							(2)Destination
87-89	Ground/LOOP Start/ CO Line Station Ringing	LED 01-20	Set Ringing Station at NIGHT	310	Direct Inward Termination Assignment	3	(1)Destination Type (Night)
							(2)Destination

Legend: **N/A** = *Not Applicable*

Strata CTX to Strata DK

The following numerical listing gives you the Strata CTX program numbers and titles and cross-reference Strata DK programs that are similar.

Note Only programs having a similar Strata DK program have been listed in the table below.

Strata CTX				Strata DK			
Prg No.	**Program Name**	**FB No**	**Summary**	**Prg No.**	**Program Name**	**Parameter**	**Summary**
100	Card Slot Assignment	1	Card Type	03	Flexible PCB Cabinet and Slot Assignments	-	Set PCB Code
102	Flexible Numbering Plan Assignment	1	Feature Code	05	Flexible Access Code Numbering	-	set Access Code
103	Class of Service Assignment	1	Automatic Busy Redial	30	Station Class of Service	LED 06	Automatic Busy Redial(ABR) Access
		3	Call Transfer With Campon	10-1	System Assignments, Part 1 of 3	LED 07	Ring Transfer of CO Line Allowed
		4	Changing DISA Security Code	30	Station Class of Service	LED 10	Change DISA Security Code
		5	DND Override - Calling Party			LED 17	Do Not Disturb(DND) Override
		6	DND Override - Called Party				
		9	Executive Override			LED 18	Executive Override
		10	Overridden party of Executive Override	31	Station Class of Service	LED 18	Executive and Privacy Override Blocking (Modem)
		21	Privacy Override	30	Station Class of Service	LED 18	Executive Override
		23	Emergency Paging	31	Station Class of Service	LED 10	All Call Page Allowed-Digital and Electronic Telephones
		26	Tandem CO Line Connection	15	Ground/Loop/Tie/DID Line Options	5	Tandem Line Connection
		29	LCR feature	50-1	LCR Parameters	LED 01	Enable System LCR
		32	Forced Account Code	30	Station Class of Service	LED 08	Forced Account Code
		33	Account Code Verify			LED 14	Verify Account Code
		38	Can originate OCA	31	Station Class of Service	LED 03	Off-hook Call Announce(OCA) Enabled (Receive)
104	System Timer Assignment	3	Park timer	*37	Park Recall Timing	-	PARK TIME=Seconds
		5	Valid call timer on SMDR	60-2	SMDR Threshold Time	2	SMDR Threshold Time
		9	Timer to permit dial input for the telephone and trunk using DTMF	12	System Assignments, Basic Timing	Code 9	K4RCU3/RRCS DTMF Inter-digital Release Time

Strata CTX				Strata DK			
Prg No.	**Program Name**	**FB No**	**Summary**	**Prg No.**	**Program Name**	**Parameter**	**Summary**
104	System Timer Assignment	12	Door lock unlock timer	77-1	Peripheral Options(Door Phones) RSIU/RSIS/RMDS, PIOU/PIOUS/IMDU, PEPU	LED 20	Door Lock Time
		13	9+11 Judgment Timer	*11-6	E911 Interdigital Timer	-	E911 Interdigital Timer
		15	Destination busy detection time when recalling the analog external line	10-1	System Assignments, Part 1 of 3	LED 11	ABR Redial Time
		18	Dial sending time on external line and extension station			LED 04	Dual-tone Multi-frequency (DTMF) Signal Time
		19	Automatic disconnect timer	11	ACD Timing Assignments	9	Call Disconnect Timer
105	System Data Assignment	1	Warning tone of Executive Override	10-2	System Assignments, Part 2 of 3	LED 16	Executive Override Warning Tone
		3	Tones for the transferred party after the ringing transfer takes place			LED 05	Music-on-hold or Ring Back Tone
		5	Privacy Override/ Attendant Monitor warning			LED 14	Privacy Override Warning Tone
		7	Minimum Dial Digits of Credit Card Calling	60-7	Credit Card Call Digit Length	-	Credit Card Call Digit Length
		8	E911 Service	*11-0	E911/CAMA Trunk Assignments	LED 11	CAMA Operation Enabled/Disabled
		9	Destination Restriction Override by System Speed Dial.	10-1	System Assignments, Part 1 of 3	LED 10	System Speed Dial Override, Toll Restriction
		21	Primary Clock Source	*42	Clock Source	1	Set Primary Clock
		22	Secondary Clock Source			2	Set Secondary Clock
		24	E911 digits	*11-5	CAMA Digits Send on 911 Calls	N/A.	Set sending digits for E911
		25	Dial Pulse Make Ratio	10-1	System Assignments, Part 1 of 3	LED 03	Dial Pulse (DP) Make Ratio
109	External Music on Hold Source Assignment	1	External Music On Hold1 on BCTU	77-1	Peripheral Options (Door Phones) RSIU/ RSIS/RMDS, PIOU/ PIOUS/IMDU, PEPU	LED 05	MOH/NT Relay
		2	External Music On Hold2 on BIOU1				

Strata CTX				Strata DK			
Prg No.	**Program Name**	**FB No**	**Summary**	**Prg No.**	**Program Name**	**Parameter**	**Summary**
109	External Music on Hold Source Assignment	3	External Music On Hold3 on BIOU1.	77-1	Peripheral Options(Door Phones) RSIU/RSIS/RMDS, PIOU/PIOUS/IMDU, PEPU	LED 05	MOH/NT Relay
		4	External Music On Hold4 on BIOU1.				
		5	External Music On Hold5 on BIOU2				
		6	External Music On Hold6 on BIOU2				
		7	External Music On Hold7 on BIOU2				
110	Password Assignment	1	Password	00	Software Check	Code 1, 2	Level 1 Security Code, Level 2 Security Code
111	Destination Restriction Level Assignment	1	Credit Card Calling	43	0 + Credit Card Dialing Option	LED 01-20	Restrict/Not Restrict
200	Station Assignment	22	Message Waiting to Voice Mail	13	Defining the Message Center	N/A	Set Message Center
		7	Station LCR Group Number	56	LCR Station Group Assignments	Second Parameter	Set LCR Station Group
		14	Bearer Capability 3.1kHzAudio / Speech	*62	Non-ISDN Station Bearer Service	1	Bearer Service
		15	Display DN	-	The same parameter does not exist in DK424	-	-
		16	CESID	*12	CESID Station Information	N/A	Set CESID
		17	Emergency call group of extension terminal	*13	Station To CAMA Trunk Group Assignment	N/A	E911 Station CAMA Trunk Number
		22	Message Waiting Center Port for Voice Mail Port	13	Defining the Message Center	LED 05-08	Voice Mail (VM) Groups 1-4
		23	Permission to Change of Travelling Class Override Code	30	Station Class of Service	LED 16	Change Toll Restriction Travelling Class Code
		30	Change System Speed Dial	30	Station Class of Service	LED 05	System Speed Dial (SSD) (Only Port 000 can change SSD)
		32	Automatic OCA	30	Station Class of Service	LED 07	Off-hook Call Announce (OCA) Automatic
202	ISDN Basic Station Assignment	8	LCR Group Number	56	LCR Station Group Assignments	Second Parameter	Set LCR Station Group
		20	CESID	*12	CESID Station Information	N/A	Set CESID
		24	Change System Speed Dial		Station Class of Service	LED 05	Speed Dial (Only Port 000 can change SSD)

Strata CTX				Strata DK			
Prg No.	**Program Name**	**FB No**	**Summary**	**Prg No.**	**Program Name**	**Parameter**	**Summary**
204	DKT Data Assignment	2	Feature Key Pattern	38	Digital and Electronic Telephone Keystrip Type	N/A	The appropriate code
		4	Number of Add-on Modules	*29	Add-on Modules Button Assignments	1,2	The number of Add-on Modules
		5	Tone first / Voice first signaling	10-1	System Assignments, Part 1 of 3	LED 01	Tone First/Voice First
		6	Type of OCA	31	Station Class of Service	LED 14	Off-hook Call Announce (OCA) Handset or Speaker
		9	Microphone ON or OFF when a hands free call is started	31	Station Class of Service	LED 01	Handsfree Disabled
		10	Whether to ring a splash tone when a hands free call is started.	31	Station Class of Service	LED 02	Handsfree No Warning
		11	Activate External Ringing Repeat (Enable/Disable)	10-1	System Assignments, Part 1 of 3	LED 06	CO Line Repeat Ringing
		13	Off hook preference type	32	Automatic Preference	N/A	set Automatic Preference type
		19	Set Continuous DTMF	35	Station Class of Service	LED 17	Continuous DTMF Tones Off
		24	Set Microphone initial value	30	Station Class of Service	LED 03	Microphone Button On at Start of Call
		25	Enable/Disable the microphone	30	Station Class of Service	LED 02	Mic Button - Locked/ Momentary
		27	Ring Over Busy repetition timers	31	Station Class of Service	LED 11	Busy Override (BOV) Tone
		28	Overflow destination of attendant	58-5	Attendant Console Overflow Destination Assignments	Second Parameter	Overflow Destination
205	Station Feature Key Assignment	1-20	The Feature Key assignment allows each key on the telephone to be addressed and assigned a code representing the function to be performed. Some feature keys require additional parameters to completely define the key.	39	Flexible Button Assignments	LED 01-20	Set Feature
206	Phantom DN Parameter Assignment	1	Owner PDN	*33	[PhDN] Owner Telephone Assignment	N/A	Set Owner Station Logical Port No.
		2	Tone first / Voice first signaling	10-1	System Assignments, Part 1 of 3	LED 01	Tone First/Voice First
		9	Message Waiting Center Port for Voice Mail Port	31	Station Class of Service	LED 05-08	Voice Mail (VM) Groups 1-4

Strata CTX				Strata DK			
Prg No.	**Program Name**	**FB No**	**Summary**	**Prg No.**	**Program Name**	**Parameter**	**Summary**
208	Station Timer Assignment	1	Automatic Busy Redial's Retry Count when Outgoing Call	10-1	System Assignments, Part 1 of 3	LED 12	Automatic Busy Redial (ABR) Cycles
		3	Automatic Busy Redial's Recall Timer	10-1	System Assignments, Part 1 of 3	LED 11	ABR Redial Time
		4	On-hold recall timer	34	Hold Recall Timing	N/A	Set Recall Timing
		7	No Answer Timer of Ringing Transfer	37	Ring Transfer (Camp-on) Recall Time	N/A	Set Ring Transfer Recall Time
209	Station Hunting Group Assignment	1	Hunt Method	33	[PDN]/[PhDN]Station Hunting	N/A	-
210	Call Pickup Group Assignment	1~20	Pickup Group 1~20	*31	Group Pick up Assignments	LED 01~20	Pickup Group 1~20
213	Add on Module Key Assignment	1-20	The Feature Key assignment allows each key on the telephone to be addressed and assigned a code representing the function to be performed. Some feature keys require additional parameters to completely define the key.	*29	Add-on Modules Button Assignments	LED 01-20	Set Feature Code
214	DSS Console Assignment	1	DSS1 card slot position	28	DSS Console/ Attendant Telephone Assignments	N/A	Set DSS Console
		2	DSS2 card slot position				
		3	DSS3 card slot position				
		4	DSS4 card slot position				
		5	DSS5 card slot position				
		6	DSS6 card slot position				
		7	DSS7 card slot position				
		8	DSS8 card slot position				
215	DSS Key Assignment	1-60	The Feature Key assignment allows each key on the telephone to be addressed and assigned a code representing the function to be performed. Some feature keys require additional parameters to completely define the key.	29	DSS Console and Number Button Assignments	LED 01-20	Set Feature Code

Strata CTX				Strata DK			
Prg No.	**Program Name**	**FB No**	**Summary**	**Prg No.**	**Program Name**	**Parameter**	**Summary**
216	Emergency Ring Down Assignment	2	Emergency Ring Down Timer setting of an originating terminal	12-1	System Assignments, Basic Timing	N/A	Standard Telephone Ring Down Timer
		3		*38	Standard Telephone Ring-Down Destination	N/A	Set Destination Port No.
217	ISDN Individual Station Data Assignment	6	Emergency call group of extension terminal	*13	Station To CAMA Trunk Group Assignment	N/A	E911 Station CAMA Trunk Number
218	Station Hunting Group Members Assignment	2	Hunting Group Member DN	33	[PDN]/[PhDN] Station Hunting	N/A	Set Station Hunting member
		3	DN set type				
300	Trunk Assignment	2	Incoming Line Group Assignment	16	Assign CO Line Groups	LED 01-20	Set CO Line
		3	Outgoing Line Group Assignment				
		4	Dial Mode	15	Ground/Loop/Tie/DID Line Options	Code 1 Code 2	CO/DID/Tie Line Signal CO/DID/Tie Dial Pulse Rate
		6	Start Method	17	DID/Tie Line Options	LED 02	Wink/Immediate
		11	DTMF Back Tone	10-2	System Assignments, Part 2 of 3	LED 11, 20	Dual-tone Multi-Frequency (DTMF) Tone, Padded Tone Return
302	ISDN Primary Trunk Assignment	1	Create Channel Group Number	*66-1	Channel Group Number Parameters	Second Parameter	Set Channel Group No.
		3	Set ILG				
		4	Set OLG				
		6	PSTN ID Number	*43-3	D-Channel Control and NFAS Assignments	N/A	Network PRI Interface PRI Interface ID Code
		7	D channel position.				D-Channel Circuit No.
		8	(1) Bearer Capability Speech.	*67-2	Call Types for ISDN Trunk Group Supported	LED 01	“Set “”Speech”
			(2) Channel identifier number slot map/ channel type for Speech			LED 01	“Set “”Speech”“
		9	(1) Bearer Capability 3.1kHzAudio.			LED 02	"Set ""3.1 kHz Audio”Audio”"
			(2) Channel identifier number slot map/ channel type for 3.1kHz Audio.			LED 02	"Set ""3.1 kHz Audio""
		11	(1) Bearer Capability unrestricted digital Information 64kbps.			LED 03	"Set ""64 kbps. Data""

Strata CTX				Strata DK			
Prg No.	**Program Name**	**FB No**	**Summary**	**Prg No.**	**Program Name**	**Parameter**	**Summary**
302	ISDN Primary Trunk Assignment	11	(2) Channel identifier number slot map/ channel type for unrestricted digital Information 64kHz	*67-2	Call Types for ISDN Trunk Group Supported	LED 03	"Set ""64 kbps. Data""
		12	(1) Bearer Capability unrestricted digital Information 56kbps.			LED 04	"Set ""56 kbps. Data""
		12	(2) Channel identifier number slot map, channel type for unrestricted digital Information 56kHz			LED 04	"Set ""56 kbps. Data""
302	ISDN Primary Trunk Assignment	24	T-WAIT Timer	10-4	ACD/ISDN Parameters	LED 11	PRI ISDN Timer
304	Incoming Line Group Assignment	1	Analog/ISDN Type	*16	ISDN Trunk Group Type Assignment	N/A	Set Trunk Group Type
		11	Number of DID Digits received from CO	*64-2	Number of DID/DNIS Digits for Trunk Groups	Third Parameter	Number of DID Incoming Call Digits per Trunk Group
		12	Bearer Capability 3.1kHzAudio or Speech	*61	Analog Trunk Service for ISDN	1	Bearer Service
		17	Automatic Campon	17	DID/Tie Line Options	LED 03	DID Camp-on/Busy
		20	Called Dial Tone send			LED 04	DID/Tie Second Dial Tone Option
306	Outgoing Line Group Assignment	1	Analog/ISDN Type	*16	ISDN Trunk Group Type Assignment	N/A	Set Trunk Group Type
		11	Bearer Capability 3.1kHzAudio / Speech	*61	Analog Trunk Service for ISDN	1	Bearer Service
		13	Set Trunk forced Account Code	15	Ground/LOOP/Tie/DID Line Options	Code 7	Forced Account Code
308	Trunk Timer Assignment	1	Detect Automatic Release / Calling Party Control, and detection time	15	Ground/LOOP/Tie/DID Line Options	Code 4	Automatic Release Time
		2	Short Flash Time	12	System Assignments, Basic Timing	Code 4	Flashing Timing
		3	Long Flash Time			Code 4	Flashing Timing
		4	Pause time after flash			Code 5	Pause After Flash
309	Direct Inward Dialing Assignment	5	(1) Destination Type (Day1,audio/speech)	*09	[PDN], [PhDN], DH, ACD or Modem DID Ext. Assignments	N/A	Set DID Extension Number
			(2) Destination				
		6	(1) Destination Type (Day2,audio/speech)				
			(2) Destination				
		7	(1) Destination Type (Night,audio/speech)				
			(2) Destination				

Strata CTX				Strata DK			
Prg No.	**Program Name**	**FB No**	**Summary**	**Prg No.**	**Program Name**	**Parameter**	**Summary**
309	Direct Inward Dialing Assignment	8	(1) Destination Type (Day1,data)	*09	[PDN], [PhDN], DH, ACD or Modem DID Ext. Assignments	N/A	Set DID Extension Number
			(2) Destination				
		9	(1) Destination Type (Day2,data)				
			(2) Destination				
		10	(1) Destination Type (Night,data)				
			(2) Destination				
		11	Voice Mail ID of DNIS	71-4	DNIS	N/A	DNIS and ANI Only Lines Voice Mail ID Assignments
		12	Destination Name of DNIS	71-5	DNIS	N/A	DNIS Number Name Display
310	Direct Inward Termination Assignment	1	(1) Destination Type (Day1)	81-83	Ground/LOOP Start/ CO Line Station Ringing	LED 01-20	Set Ringing Station at DAY
			(2) Destination				
		2	(1) Destination Type (Day2)	84-86	Ground/LOOP Start/ CO Line Station Ringing	LED 01-20	Set Ringing Station at DAY2
			(2) Destination				
		3	(1) Destination Type (Night)	87-89	Ground/LOOP Start/ CO Line Station Ringing	LED 01-20	Set Ringing Station at NIGHT
			(2) Destination				
313	Caller ID Assignment	3	Class Equipment Number	*50	Caller ID Circuit Assignments to CO Line PCBs	N/A	Set Caller ID circuit number
315	T1 Trunk Card Data Assignment	1	Coding Format	*41-1	T1 Span Frame and Line Code Assignments	LED 02	T1 Span Line Code Assignments
		2	Set frame format	*41-1	T1 Span Frame and Line Code Assignments	LED 01	T1 Span Framing Assignments
		4	Set receive PAD value	*41-4	T1 Span Receive Level Pad Assignments	N/A	Set Receive Pad
		5	Set send PAD value	*41-3	T1 Span Transmit Level Pad Assignments	N/A	Set Transmit Pad
316	DCH Shared ISDN Primary Trunk Assignment	2	I/f ID Number	*43-3	D-Channel Control and NFAS Assignments	N/A	Network PRI Interface Assignment
317	ISDN Basic Trunk Assignment	1	BRI Equipment Number	*60	BRI Line/Station Operation Assignment	LED 01-04	Set TE/NT
		14	SPID Initialize Type	*44	BRI Service Profile Identifier (SPID) Parameters	N/A	SPID Type, SPID Value
		15	Display for ISDN SPID Initialize Type				
		16	SPID Value1				
		17	SPID Value2				
		18	T-WAIT	10-4	ACD/ISDN Parameters	LED 12	BRI T-WAIT Timer

Strata CTX				Strata DK			
Prg No.	**Program Name**	**FB No**	**Summary**	**Prg No.**	**Program Name**	**Parameter**	**Summary**
321	ISDN Calling Number Identification Assignment	1	Default calling Number	*68-2	Outbound CNIS Parameters	N/A	Set CPN
321	ISDN Calling Number Identification Assignment	1	OLG Number	*68-1	Calling Number ID	First Parameter	Trunk Group 1. Outgoing 2. Outgoing Status Change 3. Incoming
				*69-1	CNIS	First Parameter	Station Port
						Second Parameter	Channel Group
322	CNIS Presentation Special Number	1	Source Type	*69-2	CNIS Special Number	First Parameter	Index Number
		2	Source Number			Second Parameter	Calling Party Number
		3	Calling Party Number				
323	Call by Call Service Assignment	2	Kind of Line Service	*66-3	Channel Group/Trunk Parameters	LED 03-06	Trunk Group Type
		3	Facility code Value	*66-2	Call-by-Call Trunk Group Codes and Network ID	N/A	Set Facility Code
		4	Service Parameters	*66-2	Call-by-Call Trunk Group Codes and Network ID	N/A	Set Service Parameters
		5	Network ID	*66-4	Call-by-Call Trunk Group Codes and Network ID	N/A	Set Network ID Code
		6	Incoming Line Group	*66-1	Channel Group Number Parameters	N/A	Set Channel Group No.
		7	Outgoing Line Group	*66-1	Channel Group Number Parameters	N/A	Set Channel Group No.
		8	Minimum number of Bch in Time Zone1	*67-3	Call Types for ISDN Trunk Groups	N/A	Set Minimum number of B-channels reserved
		9	Maximum number of Bch in Time Zone1	*67-4	ISDN Trunk Groups Maximum Channel Reservation	N/A	Set Maximum number of B-channels reserved
		10	Minimum number of Bch in Time Zone2	*67-3	Call Types for ISDN Trunk Groups	N/A	Set Minimum number of B-channels reserved
		11	Maximum number of Bch in Time Zone2	*67-4	ISDN Trunk Groups Maximum Channel Reservation	N/A	Set Maximum number of B-channels reserved
		12	Minimum number of Bch in Time Zone3	*67-3	Call Types for ISDN Trunk Groups	N/A	Set Minimum number of B-channels reserved
		13	Maximum number of Bch in Time Zone3	*67-4	ISDN Trunk Groups Maximum Channel Reservation	N/A	Set Maximum number of B-channels reserved

Strata CTX				Strata DK			
Prg No.	**Program Name**	**FB No**	**Summary**	**Prg No.**	**Program Name**	**Parameter**	**Summary**
324	Call by Call Time Zone Assignment	1	Start time of Time Zone1	*67-5	Multiple Time Zone Settings	N/A	Set Start Time for Time Zone
		2	Start time of Time Zone2				
		3	Start time of Time Zone3				
400	Emergency Call Destination Assignment	2	Called Number of Emergency Call(DN, Pilot Number,Private Number)	*11-8	911 Special [DN] Notification Assignments	N/A	Set [PDN],[PhDN] port number
404	Attendant Group Assignment	3	Overflow Timer	58-1	DK424 Attendant Console Series	First Parameter	Attendant Console Overflow Timer
		4	Overflow destination of attendant group	58-5	DK424 Attendant Console Series	Second Parameter	Attendant Console Overflow Destination Assignment
502	Terminal Paging Group Assignment	1	Paging Group Number	*30	Telephone Group Page Assignments	LED 01	Page Group A
		2				LED 02	Page Group B
		3				LED 03	Page Group C
		4				LED 04	Page Group D
		5				LED 05	Page Group E
		6				LED 06	Page Group F
		7				LED 07	Page Group G
		8				LED 08	Page Group H
		17	All Page Group	31	Station Class of Service	LED 10	All Call Page Allowed
506	Verified Account Code Assignment	1	Whether set or no set as Verified Account Code	69	Verify Account Codes	-	Verify Count Codes
507	Door Phone Assignment	1	DDCB Equipment Number which connects to Door phone	77-1	Peripheral Options(Door Phones) RSIU/RSIS/RMDS, PIOU/PIOUS/IMDU, PEPU	LED 16-19	Port Number/Door Phone/Lock Control Units
		4	Ring Duration	77-2	Door Phone Busy Signal/Door Lock Assignments	LED 20	Door Phone Ring Count
		6	(1) Destination Type of DAY1	"79, *79	Door Phone Ringing, Door Phone to [DN] Flashing Assignments	LED 1-12(79)	-Door Phone Number
			(2) Destination Number of DAY1				
508	Door Lock Control Assignment	2	Set Relay Number of BIOU	77-1	Peripheral Options(Door Phones) RSIU/RSIS/RMDS, PIOU/PIOUS/IMDU, PEPU	LED 07	Door Lock Relay/ External Page Relay
		3	DDCB Equipment Number	77-2	Door Phone Busy Signal/Door Lock Assignments	LED 04,08,12,16	Door Lock Assignments
510	Class of Service Override Assignment	1	COS Override Code	44-1-8	Toll Restriction/ Traveling Class Override Codes	-	Toll Restriction Code

Strata CTX				Strata DK			
Prg No.	**Program Name**	**FB No**	**Summary**	**Prg No.**	**Program Name**	**Parameter**	**Summary**
512	SMDR for System Assignment	1	Caller ID field indication	60-1	SMDR Data Output Options	LED 01	Caller ID, ANI and DNIS data will be sent from the system SMDR port
		3	ANI field indicate				
513	SMDR for ILG Assignment	2	DNIS field indication	60-1	SMDR Data Output Options	LED 01	Caller ID, ANI and DNIS data will be sent from the system SMDR port
		3	Output of SMDR record for the incoming call	60-3	SMDR Incoming/ Outgoing Calls	-	SMDR Output when a call is completed
514	SMDR for OLG Assignment	2	Output of SMDR record for the outgoing call	60-3	SMDR Incoming/ Outgoing Calls	-	SMDR Output when a call is completed
520	LCR parameters Assignment	1	Local Area Code	50-2	LCR Home Area Code	-	Set Home Area Code
523	LCR Route Plan Schedule Assignment	2	<input Key> select Time zone	53	LCR Schedule Assignments for LCR Plans	First parameter	LCR Plan
						Second parameter	Schedule
		3	Station LCR Group Number			Third parameter	LCR Station Group Number
524	LCR Route Table to Route Definition Assignment	1	LCR Route Definition Index - priority No.1	53	LCR Schedule Assignments for LCR Plans	Fourth parameter	Route Definition Numbers (First Pick)
		2	LCR Route Definition Index - priority No.2			Fourth parameter	Route Definition Numbers (Second Pick)
		3	LCR Route Definition Index - priority No.3			Fourth parameter	Route Definition Numbers (Third Pick)
		4	LCR Route Definition Index - priority No.4			Fifth parameter	Route Definition Numbers (Fourth Pick)
		5	LCR Route Definition Index - priority No.5				
		6	LCR Route Definition Index - priority No.6				
525	LCR Route Definition Table Assignment	1	Outgoing Line Group - Number	54	LCR Plan Number	First parameter	CO Line Group
						Second parameter	Route Definition Number
		2	Digit Modification Index	55	LCR Modified Digits Table	-	Modified Digits Table
526	LCR Digit Modification Table Assignment	1	Digits to be deleted	55-0	Delete Number of Digits From the Front of Dialed	Second parameter	Quantity of Digits
		2	Add Leading Digits	55-1	Add Digits Before and/ or After the Dialed Number	Third parameter	Digits added
		3	Add Trailing Digits	55-2	Add Digits Before and/ or After the Dialed Number	Third parameter	Digits added

Strata CTX				Strata DK			
Prg No.	**Program Name**	**FB No**	**Summary**	**Prg No.**	**Program Name**	**Parameter**	**Summary**
529	LCR Route Plan Schedule Table Time Zone Assignment	2	LCR select Time zone	53	LCR Schedule Assignments for LCR Plans	Fourth parameter	Start Time
		3	Start time for Time Zone				
530	Toll Restriction/LCR screening Table Assignment	1	Toll Restriction / LCR table Code(set / no set)	*45-2 *45-3	LCR/Toll Restriction Bypass for Special Numbers that Do Not Begin with */# LCR/Toll Restriction Bypass For Special Numbers that Begin with */#	-	Digit Code Digit String
		2	Toll Restriction Action				
		3	Least Cost Routing Action				
533	Toll Restriction Table Assignment	1	Dial String	46-2 46-6	Toll Restriction Allowed/Denied Area Codes by Class	Third parameter	Area Codes
		2	Add/Delete Codes		Toll Restriction Allowed/Denied Local Office Codes Assigned by Class	Third parameter	Area Codes
534	Exceptional Toll Restriction Table Assignment	1	Exception Dial String	47	Toll Restriction Exception Office Codes Assigned by Area Codes	-	Office Codes
		2	Add/Delete codes				
540	ACD Pilot DN Assignment	1	(1) After Shift Forward Type	14-6	After Shift Service Destination	Second parameter	Destination
			(2) After Shift Forward Destination				
550	Enhanced 911 Emergency Call Group Assignment	1-8	OLG associated with Emergency Call Group Number	*11-2	CAMA Trunk Group Hunting Assignment	Second parameter	Hunt to CAMA Trunk Group
570	Account Code Digit Length Assignment	1	Forced/Voluntary Account Code Verified Digit Length	60-4	Forced/Voluntary Account Code Digit Length	-	Forced/Voluntary Account Code Digit Length
573	Door Phone Delete	1	Deleted Door Phone Number	77-1	Peripheral Options(Door Phones) RSIU/RSIS/RMDS, PIOU/PIOUS/IMDU, PEPU	LED 16-19	Port Number/Door Phone/Lock Control Units
576	Door Phone Ring on External Paging in Night Mode Assignment	1	Set External Paging Group for termination in Night Mode	77-1	Peripheral Options(Door Phones) RSIU/RSIS/RMDS, PIOU/PIOUS/IMDU, PEPU	LED 08	Door Phone Ring On External Page in Night mode.

Strata CTX				Strata DK			
Prg No.	**Program Name**	**FB No**	**Summary**	**Prg No.**	**Program Name**	**Parameter**	**Summary**
579	Voice Mail Data for System Assignment	3	Setting of output of Message Desk No	10-3	System Assignments, Part 3 of 3	LED 20	VM SMDI Message desk Number
		4	Setting of output of Class, ANI and DNIS information			LED 08	Call ID / Automatic Number ID
		5	Setting of caller number digits sent to VM unit	10		LED 10-13	SMDI Station Number Digit Length
		6	Set Blank Number for VM unit	10-3		LED 09	SMDI Bellcore Standard Version
		7	Setting of auto cancel of VM and MW	10	System Assignments, Part 2 of 3	LED 04	Voice Mail Message Waiting Cancel Via Dial #64/Automatic
		8	Dial sending time at Voice Mail port			LED 06	Voice Mail Identification Code, Dual Multi-frequency (DTMF) Signal Time
580	Voice Mail Data for System Assignment	2	Whether send A,D tone or not send for Voice Mail	31	Station Class of Service	LED 15	Toshiba Stratagy, Stratagy DK and/or VP Integration (A Tone/D Tone)
		3	Whether Send Only B Tone, Not Send, or B Tone and Extension Number for Voice Mail			LED 19, 20	19:Toshiba Stratagy/ Stratagy DK/VP (B No Station) 20:Toshiba Stratagy/ VP (B+Station Number)
		4	Whether send End to End Signal or not send for Voice Mail Port			LED 17	End-to-end Signal RCV (VM)

Legend: **N/A** = *Not Applicable*

Record Sheets D

System

Card Assignment Record Sheets

The following record sheets are designed for both CTX WinAdmin and button programming users. PCB Code and Options are provided for Button Programmers only.

CTX670 Base Cabinet 1: Location – Local/Remote _____

Slot Number		B101	B102	S101	S102	S103	S104	S105	S106	S107	S108
PCB Name		BECU	BBCU								
PCB Code (**FB01**)		n/a	n/a								
Options	FB02	n/a	n/a								
	FB03	n/a	n/a								
	FB04	n/a	n/a								
Line/Channel Number		n/a	n/a								
Port Station Number		n/a	n/a								

Notes

- The designated BECU slot is B101 and the BBCU slot is B102.
- Slot S101 is designated for PDKU, BDKU or BDKU/BDKS.

CTX670 Expansion Cabinet 2: Location – Local/Remote _____

Slot Number		S_01	S_02	S_03	S_04	S_05	S_06	S_07	S_08	S_09	S_10
PCB Name											
PCB Code (**FB01**)											
Options	FB02										
	FB03										
	FB04										
Line/Channel Number											
Port Station Number											

CTX670 Expansion Cabinet 3: Location – Local/Remote _____

Slot Number		S_01	S_02	S_03	S_04	S_05	S_06	S_07	S_08	S_09	S_10
PCB Name											
PCB Code (**FB01**)											
Options	FB02										
	FB03										
	FB04										
Line/Channel Number											
Port Station Number											

CTX670 Expansion Cabinet 5: Location – Local/Remote _____

Slot Number		S_01	S_02	S_03	S_04	S_05	S_06	S_07	S_08	S_09	S_10
PCB Name											
PCB Code (**FB01**)											
Options	FB02										
	FB03										
	FB04										
Line/Channel Number											
Port Station Number											

CTX670 Expansion Cabinet 6: Location – Local/Remote _____

Slot Number		S_01	S_02	S_03	S_04	S_05	S_06	S_07	S_08	S_09	S_10
PCB Name											
PCB Code (**FB01**)											
Options	FB02										
	FB03										
	FB04										
Line/Channel Number											
Port Station Number											

CTX670 Expansion Cabinet 7: Location – Local/Remote _____

Slot Number		S_01	S_02	S_03	S_04	S_05	S_06	S_07	S_08	S_09	S_10
PCB Name											
PCB Code (**FB01**)											
Options	FB02										
	FB03										
	FB04										
Line/Channel Number											
Port Station Number											

Notes

- RDTU, RPTU and RWIU (up to 16 handsets) allowed slots are: S_01, S_03, S_05 and S_07. The adjacent slot must be vacant to reach maximum capacity.
- RWIU slots for up to 32 handsets are S105 and S_07. Up to three adjacent slots must be vacant to reach maximum capacity.
- All Base Cabinet slots support Speaker OCA. Speaker OCA is supported in slots S_01~S_06 for Expansion Cabinets.

Card Assignment Record Sheet – Strata CTX 100

CTX100: Location – Local/Remote _____

		CTX100 Base Cabinet				CTX 100 Expansion Cabinet			
Slot Number		**S_01**	**S_02**	**S_03**	**S_04**	**S_05**	**S_06**	**S_07**	**S_08**
PCB Name									
PCB Code (**FB01**)									
Options	FB02								
	FB03								
	FB04								
Line/Channel Number									
Port Station Number									
AMDS									
AETS									
BSIS									
ASTU									

COS Record Sheet

COS Assignment Code:_____					
Service Name	**Enable**	**Disable**	**Service Name**	**Enable**	**Disable**
Auto Busy Redial			DN Retrieve Call Pickup		
Call Forward Override			Handsfree Override		
Call Transfer w/ Camp-on			Privacy Override		
Change DISA Codes			Invoke Emerg Page[1]		
DND Override - Calling Party			Join Feature		
DND Override - Called Party			Through Dialing		
Do Not Disturb			Tandem CO Connection		
Remote Set/Reset DND			Day/Night Control		
Executive Override			Ext BGM Control		
Executive Override Allowed			LCR Feature		
Offhook Camp-on			Individual Trunk Access		
Group Pickup			Trunk Access Allowed		
Directed Station Pickup			Forced Account Codes		
Directed Group Call Pickup			Verified Account Codes		
Directed DN Call Pickup			Allow Short Hook Flash		
Ext Call Pickup			Allow Long Hook Flash		
Directed CO Call Pickup			Allow Hook Flash		
Remote Retrieve Call Pickup			Can Originate OCA		

1. Not used in Release 1.

System Data Record Sheet

Service Name	Values	Service Name	Values
01 Executive Override		15 COS Override Code	
02 Station MOH Source		16 Multi-Conference	
03 Ring Transfer Tone		17 Call Number Display	
04 Transfer Privacy	Not Used	18 Night Bell Relay	
05 Privacy Override		19 Display Preference	
06 Credit Card Code		20 Transit Counter	
07 Credit Card Digits		21 Primary Clock	
08 E911 Service		22 Secondary Clock	
09 DR Override by SSD		23 Call History Prefix 1	
10 Auto Station Release		24 Emergency Digits Sent	
11 ISDN SPID		25 DP Make Ratio	
12 Night Mode Relay		26 Call Button Jumping	
13 BGM External Paging		14 Lost Call Destination	

System Call Forward Record Sheets

Program 500 Values						Program 504 Values
00 SCF Number	01 Call Type	02 Period	03 TelStatus	04 Destination 1	05 Destination 2	01 TelephoneStatus
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

System Speed Dial Record Sheet

00 Speed Dial Bin	01 Number	02 Name

Day/Night Mode Record Sheet

Program 112 Values	
Calender Day	**01 Working Day Type**

SMDR SMDI CTI Port Assignments

Service Name	Values	
00 Logical Device Number	SMDR	
	SMDI	
	LAN	
	BLF	
	DSS	
01 Device Connection	RS232	
	LAN	
Device Port Number	RS232	
	LAN	
	BLF	
	DSS	

BSIS RS-232 Serial Port Setup

Service Name	Values
00 BSIS Port (1~4)	
01 Port Speed	
02 Port Parity	
03 Data Bits	
04 Flow Control	
05 Wait Timer	

Station

Basic Station Record Sheets

Primary DN: _____									
01 PDN Equipment No.			08 QPL	Day 1		17 Emerg Call Group		31 Network COS	
02 Station Type				Day 2		18 Remote CF/DND PW		32 Auto OCA	
03 Circuit Type				Night		19 VMID Code SMDI		33 Originate OCA	
04 COS	Day 1		07 LCR Group			20 MW to VM Port		34 RSTU Supervision	
	Day 2		09 Station Name			23 Travel COS Change		35 Station Sp Dial Bins	
	Night		10 Call Waiting Tone			24 TGAC Override			
05 DRL	Day 1		11 Dialing Progress Tone			25 Service Tones			
	Day 2		12 System Call Forward			26 CW and ROB Tone			
	Night		13 Call Pickup			27 Name Display			
06 FRL	Day 1		14 Bearer Capability			28 Door over DND			
	Day 2		15 Display DN			29 Emerg Ringdown			
	Night		16 CESID			30 Chg Sys Speed			

Primary DN: _____									
01 PDN Equipment No.			08 QPL	Day 1		17 Emerg Call Group		31 Network COS	
02 Station Type				Day 2		18 Remote CF/DND PW		32 Auto OCA	
03 Circuit Type				Night		19 VMID Code SMDI		33 Originate OCA	
04 COS	Day 1		07 LCR Group			20 MW to VM Port		34 RSTU Supervision	
	Day 2		09 Station Name			23 Travel COS Change		35 Station Sp Dial Bins	
	Night		10 Call Waiting Tone			24 TGAC Override			
05 DRL	Day 1		11 Dialing Progress Tone			25 Service Tones			
	Day 2		12 System Call Forward			26 CW and ROB Tone			
	Night		13 Call Pickup			27 Name Display			
06 FRL	Day 1		14 Bearer Capability			28 Door over DND			
	Day 2		15 Display DN			29 Emerg Ringdown			
	Night		16 CESID			30 Chg Sys Speed			

Primary DN: _____									
01 PDN Equipment No.			08 QPL	Day 1		17 Emerg Call Group		31 Network COS	
02 Station Type				Day 2		18 Remote CF/DND PW		32 Auto OCA	
03 Circuit Type				Night		19 VMID Code SMDI		33 Originate OCA	
04 COS	Day 1		07 LCR Group			20 MW to VM Port		34 RSTU Supervision	
	Day 2		09 Station Name			23 Travel COS Change		35 Station Sp Dial Bins	
	Night		10 Call Waiting Tone			24 TGAC Override			
05 DRL	Day 1		11 Dialing Progress Tone			25 Service Tones			
	Day 2		12 System Call Forward			26 CW and ROB Tone			
	Night		13 Call Pickup			27 Name Display			
06 FRL	Day 1		14 Bearer Capability			28 Door over DND			
	Day 2		15 Display DN			29 Emerg Ringdown			
	Night		16 CESID			30 Chg Sys Speed			

Primary DN: _____									
01 PDN Equipment No.			08 QPL	Day 1		17 Emerg Call Group		31 Network COS	
02 Station Type				Day 2		18 Remote CF/DND PW		32 Auto OCA	
03 Circuit Type				Night		19 VMID Code SMDI		33 Originate OCA	
04 COS	Day 1		07 LCR Group			20 MW to VM Port		34 RSTU Supervision	
	Day 2		09 Station Name			23 Travel COS Change		35 Station Sp Dial Bins	
	Night		10 Call Waiting Tone			24 TGAC Override			
05 DRL	Day 1		11 Dialing Progress Tone			25 Service Tones			
	Day 2		12 System Call Forward			26 CW and ROB Tone			
	Night		13 Call Pickup			27 Name Display			
06 FRL	Day 1		14 Bearer Capability			28 Door over DND			
	Day 2		15 Display DN			29 Emerg Ringdown			
	Night		16 CESID			30 Chg Sys Speed			

DKT Parameters Record Sheet

Primary DN: _____							
01 Station Type		11 Ext. Ring Repeat		19 Continuous DTMF		27 Ring Over Busy Cycles	
02 Key Strip Pattern		12 Not Used		20 Display Language		28 Attd. Overflow Dest.	
03 Key Strip Type		13 Off Hook Line Preference		21 Adapter		29 Trunk Test and Verify	
04 Add-on Modules		14 PDN/Line Preference		22 Blind Transfer		30 Auto Line Hold	
05 Tone/Voice First		15 Ringing Preference.		23 Mail Box Selection			
06 OCA Type		16 Text Message Display		24 MIC Init. Value			
09 Handsfree MIC		17 Call History Memory		25 Microphone			
10 Handsfree Tone		18 DTMF Back Tone		26 Speaker Mode Tones			

Primary DN: _____							
01 Station Type		11 Ext. Ring Repeat		19 Continuous DTMF		27 Ring Over Busy Cycles	
02 Key Strip Pattern		12 Not Used		20 Display Language		28 Attd. Overflow Dest.	
03 Key Strip Type		13 Off Hook Line Preference		21 Adapter		29 Trunk Test and Verify	
04 Add-on Modules		14 PDN/Line Preference		22 Blind Transfer		30 Auto Line Hold	
05 Tone/Voice First		15 Ringing Preference.		23 Mail Box Selection			
06 OCA Type		16 Text Message Display		24 MIC Init. Value			
09 Handsfree MIC		17 Call History Memory		25 Microphone			
10 Handsfree Tone		18 DTMF Back Tone		26 Speaker Mode Tones			

Primary DN: _____							
01 Station Type		11 Ext. Ring Repeat		19 Continuous DTMF		27 Ring Over Busy Cycles	
02 Key Strip Pattern		12 Not Used		20 Display Language		28 Attd. Overflow Dest.	
03 Key Strip Type		13 Off Hook Line Preference		21 Adapter		29 Trunk Test and Verify	
04 Add-on Modules		14 PDN/Line Preference		22 Blind Transfer		30 Auto Line Hold	
05 Tone/Voice First		15 Ringing Preference.		23 Mail Box Selection			
06 OCA Type		16 Text Message Display		24 MIC Init. Value			
09 Handsfree MIC		17 Call History Memory		25 Microphone			
10 Handsfree Tone		18 DTMF Back Tone		26 Speaker Mode Tones			

Primary DN: _____							
01 Station Type		11 Ext. Ring Repeat		19 Continuous DTMF		27 Ring Over Busy Cycles	
02 Key Strip Pattern		12 Not Used		20 Display Language		28 Attd. Overflow Dest.	
03 Key Strip Type		13 Off Hook Line Preference		21 Adapter		29 Trunk Test and Verify	
04 Add-on Modules		14 PDN/Line Preference		22 Blind Transfer		30 Auto Line Hold	
05 Tone/Voice First		15 Ringing Preference.		23 Mail Box Selection			
06 OCA Type		16 Text Message Display		24 MIC Init. Value			
09 Handsfree MIC		17 Call History Memory		25 Microphone			
10 Handsfree Tone		18 DTMF Back Tone		26 Speaker Mode Tones			

Primary DN: _____							
01 Station Type		11 Ext. Ring Repeat		19 Continuous DTMF		27 Ring Over Busy Cycles	
02 Key Strip Pattern		12 Not Used		20 Display Language		28 Attd. Overflow Dest.	
03 Key Strip Type		13 Off Hook Line Preference		21 Adapter		29 Trunk Test and Verify	
04 Add-on Modules		14 PDN/Line Preference		22 Blind Transfer		30 Auto Line Hold	
05 Tone/Voice First		15 Ringing Preference.		23 Mail Box Selection			
06 OCA Type		16 Text Message Display		24 MIC Init. Value			
09 Handsfree MIC		17 Call History Memory		25 Microphone			
10 Handsfree Tone		18 DTMF Back Tone		26 Speaker Mode Tones			

Primary DN: _____							
01 Station Type		11 Ext. Ring Repeat		19 Continuous DTMF		27 Ring Over Busy Cycles	
02 Key Strip Pattern		12 Not Used		20 Display Language		28 Attd. Overflow Dest.	
03 Key Strip Type		13 Off Hook Line Preference		21 Adapter		29 Trunk Test and Verify	
04 Add-on Modules		14 PDN/Line Preference		22 Blind Transfer		30 Auto Line Hold	
05 Tone/Voice First		15 Ringing Preference.		23 Mail Box Selection			
06 OCA Type		16 Text Message Display		24 MIC Init. Value			
09 Handsfree MIC		17 Call History Memory		25 Microphone			
10 Handsfree Tone		18 DTMF Back Tone		26 Speaker Mode Tones			

Feature Button Record Sheet

PDN	Button Number	Button Name	Button Code	PDN, Phantom DN, CO, GCO, PL	Sub-parameter Settings				
					1	2	3	4	5

Record Sheets for 10-button and 20-button Telephones

PDN No. _____		10 ❑ 20 ❑	DSS ❑ ADM ❑
Location:			
Button	Code	Button	Code
10		20	
09		19	
08		18	
07		17	
06		16	
05		15	
04		14	
03		13	
02		12	
01		11	

PDN No. _____		10 ❑ 20 ❑	DSS ❑ ADM ❑
Location:			
Button	Code	Button	Code
10		20	
09		19	
08		18	
07		17	
06		16	
05		15	
04		14	
03		13	
02		12	
01		11	

PDN No. _____		10 ❑ 20 ❑	DSS ❑ ADM ❑
Location:			
Button	Code	Button	Code
10		20	
09		19	
08		18	
07		17	
06		16	
05		15	
04		14	
03		13	
02		12	
01		11	

PDN No. _____		10 ❑ 20 ❑	DSS ❑ ADM ❑
Location:			
Button	Code	Button	Code
10		20	
09		19	
08		18	
07		17	
06		16	
05		15	
04		14	
03		13	
02		12	
01		11	

PDN No. _____		10 ❑ 20 ❑	DSS ❑ ADM ❑
Location:			
Button	Code	Button	Code
10		20	
09		19	
08		18	
07		17	
06		16	
05		15	
04		14	
03		13	
02		12	
01		11	

PDN No. _____		10 ❑ 20 ❑	DSS ❑ ADM ❑
Location:			
Button	Code	Button	Code
10		20	
09		19	
08		18	
07		17	
06		16	
05		15	
04		14	
03		13	
02		12	
01		11	

PDN No. _____		10 ❑ 20 ❑	DSS ❑ ADM ❑
Location:			
Button	Code	Button	Code
10		20	
09		19	
08		18	
07		17	
06		16	
05		15	
04		14	
03		13	
02		12	
01		11	

PDN No. _____		10 ❑ 20 ❑	DSS ❑ ADM ❑
Location:			
Button	Code	Button	Code
10		20	
09		19	
08		18	
07		17	
06		16	
05		15	
04		14	
03		13	
02		12	
01		11	

PDN No. _____		10 ❑ 20 ❑	DSS ❑ ADM ❑
Location:			
Button	Code	Button	Code
10		20	
09		19	
08		18	
07		17	
06		16	
05		15	
04		14	
03		13	
02		12	
01		11	

PDN No. _____		10 ❑ 20 ❑	DSS ❑ ADM ❑
Location:			
Button	Code	Button	Code
10		20	
09		19	
08		18	
07		17	
06		16	
05		15	
04		14	
03		13	
02		12	
01		11	

PDN No. _____		10 ❑ 20 ❑	DSS ❑ ADM ❑
Location:			
Button	Code	Button	Code
10		20	
09		19	
08		18	
07		17	
06		16	
05		15	
04		14	
03		13	
02		12	
01		11	

Record Sheets for the DKT3014

PDN No. _____			
Location:			
Button	Code	Button	Code
07		14	
06		13	
05		12	
04		11	
03		10	
02		09	
01		08	

PDN No. _____			
Location:			
Button	Code	Button	Code
07		14	
06		13	
05		12	
04		11	
03		10	
02		09	
01		08	

PDN No. _____			
Location:			
Button	Code	Button	Code
07		14	
06		13	
05		12	
04		11	
03		10	
02		09	
01		08	

PDN No. _____			
Location:			
Button	Code	Button	Code
07		14	
06		13	
05		12	
04		11	
03		10	
02		09	
01		08	

PDN No. _____			
Location:			
Button	Code	Button	Code
07		14	
06		13	
05		12	
04		11	
03		10	
02		09	
01		08	

PDN No. _____			
Location:			
Button	Code	Button	Code
07		14	
06		13	
05		12	
04		11	
03		10	
02		09	
01		08	

PDN No. _____			
Location:			
Button	Code	Button	Code
07		14	
06		13	
05		12	
04		11	
03		10	
02		09	
01		08	

PDN No. _____			
Location:			
Button	Code	Button	Code
07		14	
06		13	
05		12	
04		11	
03		10	
02		09	
01		08	

PDN No. _____			
Location:			
Button	Code	Button	Code
07		14	
06		13	
05		12	
04		11	
03		10	
02		09	
01		08	

PDN No. _____			
Location:			
Button	Code	Button	Code
07		14	
06		13	
05		12	
04		11	
03		10	
02		09	
01		08	

PDN No. _____			
Location:			
Button	Code	Button	Code
07		14	
06		13	
05		12	
04		11	
03		10	
02		09	
01		08	

PDN No. _____			
Location:			
Button	Code	Button	Code
07		14	
06		13	
05		12	
04		11	
03		10	
02		09	
01		08	

PDN No. _____			
Location:			
Button	Code	Button	Code
07		14	
06		13	
05		12	
04		11	
03		10	
02		09	
01		08	

PDN No. _____			
Location:			
Button	Code	Button	Code
07		14	
06		13	
05		12	
04		11	
03		10	
02		09	
01		08	

PDN No. _____			
Location:			
Button	Code	Button	Code
07		14	
06		13	
05		12	
04		11	
03		10	
02		09	
01		08	

PDN No. _____			
Location:			
Button	Code	Button	Code
07		14	
06		13	
05		12	
04		11	
03		10	
02		09	
01		08	

PDN No. _____			
Location:			
Button	Code	Button	Code
07		14	
06		13	
05		12	
04		11	
03		10	
02		09	
01		08	

Phantom DN Record Sheet

Phantom DN	01 Owned PDN	02 Tone/Voice 1st		04 Display DN	05 System Call Forward	Voice Mail			
		Tone	Voice			06 ID	09 Message Center	10 User Name	11 Display Name

Hunt Group Record Sheet

Program 209 Values							
Group Number	01 Hunt Method		02 Pilot Number	04 Number to Display	05 Pilot No. SCFwd	06 Multiple DN Hunt	07 DHG Auto Camp-on
	Dist	Circ					

Station Data Record Sheets

Program 208 Values							
Prime DN	01 ABR Retry Count	02 ABR Retry Interval	03 ABR Recall	04 Hold Recall	05 1st Inter digit	06 2nd Inter digit	07 Ring Xfer Ans

Program 210 Values (Enter a Check to turn "ON")																															
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

Program 216 Values			
Prime DN	01 Emerg Ring down	02 Ring down Timer	03 Dest

Program 502 Values (Enter a Check to turn "ON")																	
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	All Page Grp	All Emerg Page

Program 516 Values		
01 Speed Dial Bin	02 Number	03 Name

ISDN BRI Station Record Sheets

Primary DN: _____									
01 Equipment			07 FRL	Day 1		14 56Kbps Unrestricted		25 Network COS	
02 ISDN Ch Grp				Day 2		15 2x64Kbps Unrestricted		26 Additional DN2	
03 ISDN Protocol				Day 3		16 B Channel Selection		27 Additional DN3	
04 Type Connection			09 QPL	Day 1		17 Idle B Ch Selection		28 Additional DN4	
05 COS	Day 1			Day 2		18 Interdigit Timer 1		29 Additional DN5	
	Day 2			Day 3		19 Interdigit Timer 2		30 Additional DN6	
	Day 3		08 LCR Group			20 CESID		31 Additional DN7	
06 DRL	Day 1		10 Speech Capability			21 Voice Calls Allowed		32 Additional DN8	
	Day 2		11 3.1 KHz Audio			22 Svc Tone Permission		33 Auto OCA	
	Day 3		12 7 KHz Audio			23 TGAC Override			
			13 64Kbps Unrestricted			24 Ch Sys Speed			

Primary DN: _____									
01 Equipment			07 FRL	Day 1		14 56Kbps Unrestricted		25 Network COS	
02 ISDN Ch Grp				Day 2		15 2x64Kbps Unrestricted		26 Additional DN2	
03 ISDN Protocol				Day 3		16 B Channel Selection		27 Additional DN3	
04 Type Connection			09 QPL	Day 1		17 Idle B Ch Selection		28 Additional DN4	
05 COS	Day 1			Day 2		18 Interdigit Timer 1		29 Additional DN5	
	Day 2			Day 3		19 Interdigit Timer 2		30 Additional DN6	
	Day 3		08 LCR Group			20 CESID		31 Additional DN7	
06 DRL	Day 1		10 Speech Capability			21 Voice Calls Allowed		32 Additional DN8	
	Day 2		11 3.1 KHz Audio			22 Svc Tone Permission		33 Auto OCA	
	Day 3		12 7 KHz Audio			23 TGAC Override			
			13 64Kbps Unrestricted			24 Ch Sys Speed			

Primary DN: _____									
01 Equipment			07 FRL	Day 1		14 56Kbps Unrestricted		25 Network COS	
02 ISDN Ch Grp				Day 2		15 2x64Kbps Unrestricted		26 Additional DN2	
03 ISDN Protocol				Day 3		16 B Channel Selection		27 Additional DN3	
04 Type Connection			09 QPL	Day 1		17 Idle B Ch Selection		28 Additional DN4	
05 COS	Day 1			Day 2		18 Interdigit Timer 1		29 Additional DN5	
	Day 2			Day 3		19 Interdigit Timer 2		30 Additional DN6	
	Day 3		08 LCR Group			20 CESID		31 Additional DN7	
06 DRL	Day 1		10 Speech Capability			21 Voice Calls Allowed		32 Additional DN8	
	Day 2		11 3.1 KHz Audio			22 Svc Tone Permission		33 Auto OCA	
	Day 3		12 7 KHz Audio			23 TGAC Override			
			13 64Kbps Unrestricted			24 Ch Sys Speed			

Primary DN: _____									
01 Equipment			07 FRL	Day 1		14 56Kbps Unrestricted		25 Network COS	
02 ISDN Ch Grp				Day 2		15 2x64Kbps Unrestricted		26 Additional DN2	
03 ISDN Protocol				Day 3		16 B Channel Selection		27 Additional DN3	
04 Type Connection			09 QPL	Day 1		17 Idle B Ch Selection		28 Additional DN4	
05 COS	Day 1			Day 2		18 Interdigit Timer 1		29 Additional DN5	
	Day 2			Day 3		19 Interdigit Timer 2		30 Additional DN6	
	Day 3		08 LCR Group			20 CESID		31 Additional DN7	
06 DRL	Day 1		10 Speech Capability			21 Voice Calls Allowed		32 Additional DN8	
	Day 2		11 3.1 KHz Audio			22 Svc Tone Permission		33 Auto OCA	
	Day 3		12 7 KHz Audio			23 TGAC Override			
			13 64Kbps Unrestricted			24 Ch Sys Speed			

ISDN Station Data Record Sheet

Primary DN	01 Station Name	02 Dial Method	03 System CF	04 CF Password	05 Door Phone Override	06 Emerg Call Croup	07 COS Override	08 Display DN	09 VMID Code SMDI\DTMF	12 Name Display

Trunks

ILG Record Sheet

Program 304 Values											
ILG: _____											
01 Group Type		08 DRL	Day 1		11 DID Digits			20 Send Dial Tone			
02 Trunk Type			Day 2		12 Speech/3.1KHz			21 TGAC Override			
03 Service Type			Night		Ringing Timer	13 Delay 1		22 Network COS			
04 Private Svc Type		09 FRL	Day 1			14 Delay 2		23 LCR Group			
05 GCO Key Number			Day 2		Interdigit Timer	15 Timer 1		24 Change COS Ovr Code			
06 Pooled Key Number			Night			16 Timer 2		25 Reg Speed Dial Codes			
07 COS	Day 1	10 QPL	Day 1		17 Auto Camp-on			26 Originator Invoke OCA			
	Day 2		Day 2		18 Calling Number ID			27 Senderized Tone Mode			
	Night		Night		19 Intercept			28 Emergency Call Group			
Program 513 Values											
01 Generate SMDR Records		02 DNIS Field Indication		03 B Record for Incoming Call		04 Abandoned Call Record Output		05 Display Xsferred Call Records			

Program 304 Values											
ILG: _____											
01 Group Type		08 DRL	Day 1		11 DID Digits			20 Send Dial Tone			
02 Trunk Type			Day 2		12 Speech/3.1KHz			21 TGAC Override			
03 Service Type			Night		Ringing Timer	13 Delay 1		22 Network COS			
04 Private Svc Type		09 FRL	Day 1			14 Delay 2		23 LCR Group			
05 GCO Key Number			Day 2		Interdigit Timer	15 Timer 1		24 Change COS Ovr Code			
06 Pooled Key Number			Night			16 Timer 2		25 Reg Speed Dial Codes			
07 COS	Day 1	10 QPL	Day 1		17 Auto Camp-on			26 Originator Invoke OCA			
	Day 2		Day 2		18 Calling Number ID			27 Senderized Tone Mode			
	Night		Night		19 Intercept			28 Emergency Call Group			
Program 513 Values											
01 Generate SMDR Records		02 DNIS Field Indication		03 B Record for Incoming Call		04 Abandoned Call Record Output		05 Display Xsferred Call Records			

Program 304 Values											
ILG: _____											
01 Group Type		08 DRL	Day 1		11 DID Digits			20 Send Dial Tone			
02 Trunk Type			Day 2		12 Speech/3.1KHz			21 TGAC Override			
03 Service Type			Night		Ringing Timer	13 Delay 1		22 Network COS			
04 Private Svc Type		09 FRL	Day 1			14 Delay 2		23 LCR Group			
05 GCO Key Number			Day 2		Interdigit Timer	15 Timer 1		24 Change COS Ovr Code			
06 Pooled Key Number			Night			16 Timer 2		25 Reg Speed Dial Codes			
07 COS	Day 1	10 QPL	Day 1		17 Auto Camp-on			26 Originator Invoke OCA			
	Day 2		Day 2		18 Calling Number ID			27 Senderized Tone Mode			
	Night		Night		19 Intercept			28 Emergency Call Group			
Program 513 Values											
01 Generate SMDR Records		02 DNIS Field Indication		03 B Record for Incoming Call		04 Abandoned Call Record Output		05 Display Xsferred Call Records			

OLG Record Sheet

Group Number: _____							
01 Group Type			08 COS	Day 1		11 Speech 3.1KHz	
02 Trunk Type				Day 2		12 MOH Source	
03 Pvt Service Type				Night		13 Account Code	
GCO Number	04 Key 1		09 FRL	Day 1		14 DR	
	05 Key 2			Day 2		15 Credit Card Calling	
Pool Number	06 Key 1			Night		16 Send CESID	
	07 Key 2		10 QPL	Day 1		17 QSIG Sending Type	
				Day 2		18 Network COS	
				Night			

Group Number: _____							
01 Group Type			08 COS	Day 1		11 Speech 3.1KHz	
02 Trunk Type				Day 2		12 MOH Source	
03 Pvt Service Type				Night		13 Account Code	
GCO Number	04 Key 1		09 FRL	Day 1		14 DR	
	05 Key 2			Day 2		15 Credit Card Calling	
Pool Number	06 Key 1			Night		16 Send CESID	
	07 Key 2		10 QPL	Day 1		17 QSIG Sending Type	
				Day 2		18 Network COS	
				Night			

Group Number: _____							
01 Group Type			08 COS	Day 1		11 Speech 3.1KHz	
02 Trunk Type				Day 2		12 MOH Source	
03 Pvt Service Type				Night		13 Account Code	
GCO Number	04 Key 1		09 FRL	Day 1		14 DR	
	05 Key 2			Day 2		15 Credit Card Calling	
Pool Number	06 Key 1			Night		16 Send CESID	
	07 Key 2		10 QPL	Day 1		17 QSIG Sending Type	
				Day 2		18 Network COS	
				Night			

Group Number: _____							
01 Group Type			08 COS	Day 1		11 Speech 3.1KHz	
02 Trunk Type				Day 2		12 MOH Source	
03 Pvt Service Type				Night		13 Account Code	
GCO Number	04 Key 1		09 FRL	Day 1		14 DR	
	05 Key 2			Day 2		15 Credit Card Calling	
Pool Number	06 Key 1			Night		16 Send CESID	
	07 Key 2		10 QPL	Day 1		17 QSIG Sending Type	
				Day 2		18 Network COS	
				Night			

Group Number: _____							
01 Group Type			08 COS	Day 1		11 Speech 3.1KHz	
02 Trunk Type				Day 2		12 MOH Source	
03 Pvt Service Type				Night		13 Account Code	
GCO Number	04 Key 1		09 FRL	Day 1		14 DR	
	05 Key 2			Day 2		15 Credit Card Calling	
Pool Number	06 Key 1			Night		16 Send CESID	
	07 Key 2		10 QPL	Day 1		17 QSIG Sending Type	
				Day 2		18 Network COS	
				Night			

Trunk Assignment Record Sheet

Trunk	01 Trunk Equipment Number	02 ILG	03 OLG	04 Dial Mode	05 Signal	06 Start Method	07 Release Supervision	08 Answer Supervision	09 Trunk Name	10 External Rng Repeat	11 DTMF Back Tone	12 Hunt Order

Caller ID Assignment Record Sheet

Trunk Number	01 Signal Method	02 Signal Content	03 CLID Equip

DID Assignment Record Sheet

ILG _____		Audio Destination Type						Data Destination Type					
01 DID Num		05 Day 1		06 Day 2		07 Night		08 Day 1		09 Day 2		10 Night	
02 MOH Source		Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest
03 GCO Key Group													
04 Pool Key Group													
						11 DNIS VMID				12 DNIS NAME			

ILG _____		Audio Destination Type						Data Destination Type					
01 DID Num		05 Day 1		06 Day 2		07 Night		08 Day 1		09 Day 2		10 Night	
02 MOH Source		Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest
03 GCO Key Group													
04 Pool Key Group													
						11 DNIS VMID				12 DNIS NAME			

ILG _____		Audio Destination Type						Data Destination Type					
01 DID Num		05 Day 1		06 Day 2		07 Night		08 Day 1		09 Day 2		10 Night	
02 MOH Source		Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest
03 GCO Key Group													
04 Pool Key Group													
						11 DNIS VMID				12 DNIS NAME			

ILG _____		Audio Destination Type						Data Destination Type					
01 DID Num		05 Day 1		06 Day 2		07 Night		08 Day 1		09 Day 2		10 Night	
02 MOH Source		Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest
03 GCO Key Group													
04 Pool Key Group													
						11 DNIS VMID				12 DNIS NAME			

ILG _____		Audio Destination Type						Data Destination Type					
01 DID Num		05 Day 1		06 Day 2		07 Night		08 Day 1		09 Day 2		10 Night	
02 MOH Source		Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest
03 GCO Key Group													
04 Pool Key Group													
						11 DNIS VMID				12 DNIS NAME			

ILG _____		Audio Destination Type						Data Destination Type					
01 DID Num		05 Day 1		06 Day 2		07 Night		08 Day 1		09 Day 2		10 Night	
02 MOH Source		Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest
03 GCO Key Group													
04 Pool Key Group													
						11 DNIS VMID				12 DNIS NAME			

ILG _____		Audio Destination Type						Data Destination Type					
01 DID Num		05 Day 1		06 Day 2		07 Night		08 Day 1		09 Day 2		10 Night	
02 MOH Source		Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest
03 GCO Key Group													
04 Pool Key Group													
						11 DNIS VMID				12 DNIS NAME			

ILG _____		Audio Destination Type						Data Destination Type					
01 DID Num		05 Day 1		06 Day 2		07 Night		08 Day 1		09 Day 2		10 Night	
02 MOH Source		Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest
03 GCO Key Group													
04 Pool Key Group													
						11 DNIS VMID				12 DNIS NAME			

ILG _____		Audio Destination Type						Data Destination Type					
01 DID Num		05 Day 1		06 Day 2		07 Night		08 Day 1		09 Day 2		10 Night	
02 MOH Source		Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest
03 GCO Key Group													
04 Pool Key Group													
						11 DNIS VMID				12 DNIS NAME			

DID Intercept Assignment Record Sheet

ILG Number _____		Audio Destination						Data Destination					
01 Type		05 Day 1		06 Day 2		07 Night		08 Day 1		09 Day 2		10 Night	
02 MOH Source		Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest
03 GCO Key Group													
04 Pool Key Group													
						11 VMID for DNIS				12 DNIS Name			

ILG Number _____		Audio Destination						Data Destination					
01 Type		05 Day 1		06 Day 2		07 Night		08 Day 1		09 Day 2		10 Night	
02 MOH Source		Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest
03 GCO Key Group													
04 Pool Key Group													
						11 VMID for DNIS				12 DNIS Name			

ILG Number _____		Audio Destination						Data Destination					
01 Type		05 Day 1		06 Day 2		07 Night		08 Day 1		09 Day 2		10 Night	
02 MOH Source		Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest
03 GCO Key Group													
04 Pool Key Group													
						11 VMID for DNIS				12 DNIS Name			

ILG Number _____		Audio Destination						Data Destination					
01 Type		05 Day 1		06 Day 2		07 Night		08 Day 1		09 Day 2		10 Night	
02 MOH Source		Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest
03 GCO Key Group													
04 Pool Key Group													
						11 VMID for DNIS				12 DNIS Name			

ILG Number _____		Audio Destination						Data Destination					
01 Type		05 Day 1		06 Day 2		07 Night		08 Day 1		09 Day 2		10 Night	
02 MOH Source		Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest
03 GCO Key Group													
04 Pool Key Group													
						11 VMID for DNIS				12 DNIS Name			

ILG Number _____		Audio Destination						Data Destination					
01 Type		05 Day 1		06 Day 2		07 Night		08 Day 1		09 Day 2		10 Night	
02 MOH Source		Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest
03 GCO Key Group													
04 Pool Key Group													
						11 VMID for DNIS				12 DNIS Name			

ILG Number _____		Audio Destination						Data Destination					
01 Type		05 Day 1		06 Day 2		07 Night		08 Day 1		09 Day 2		10 Night	
02 MOH Source		Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest
03 GCO Key Group													
04 Pool Key Group													
						11 VMID for DNIS				12 DNIS Name			

ILG Number _____		Audio Destination						Data Destination					
01 Type		05 Day 1		06 Day 2		07 Night		08 Day 1		09 Day 2		10 Night	
02 MOH Source		Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest
03 GCO Key Group													
04 Pool Key Group													
						11 VMID for DNIS				12 DNIS Name			

ILG Number _____		Audio Destination						Data Destination					
01 Type		05 Day 1		06 Day 2		07 Night		08 Day 1		09 Day 2		10 Night	
02 MOH Source		Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest	Type	Dest
03 GCO Key Group													
04 Pool Key Group													
						11 VMID for DNIS				12 DNIS Name			

Trunk Timer/DIT Record Sheet

Program 308 Values					
Trunk Equip No.	01 Auto Release	02 Short Flash	03 Long Flash	04 Pause	05 Response

ISDN BRI Record Sheet

Channel Group: _____							
01 Equipment Number		07 3.1KHz Audio		12 Outgoing B Channel		17 SPID 2	
02 Protocol		08 7KHz		13 B CH Selection		18 T-Wait Timer	
03 ILG		09 Unrestricted 64K		14 Initialize Type		19 Voice Calls	
04 OLG		10 Unrestricted 56K		15 Initialization Display		20 Trunk Subscriber 1	
06 Speech		11 Unrestricted 2x64K		16 SPID 1		21 Trunk Subscriber 2	

Channel Group: _____							
01 Equipment Number		07 3.1KHz Audio		12 Outgoing B Channel		17 SPID 2	
02 Protocol		08 7KHz		13 B CH Selection		18 T-Wait Timer	
03 ILG		09 Unrestricted 64K		14 Initialize Type		19 Voice Calls	
04 OLG		10 Unrestricted 56K		15 Initialization Display		20 Trunk Subscriber 1	
06 Speech		11 Unrestricted 2x64K		16 SPID 1		21 Trunk Subscriber 2	

Channel Group: _____							
01 Equipment Number		07 3.1KHz Audio		12 Outgoing B Channel		17 SPID 2	
02 Protocol		08 7KHz		13 B CH Selection		18 T-Wait Timer	
03 ILG		09 Unrestricted 64K		14 Initialize Type		19 Voice Calls	
04 OLG		10 Unrestricted 56K		15 Initialization Display		20 Trunk Subscriber 1	
06 Speech		11 Unrestricted 2x64K		16 SPID 1		21 Trunk Subscriber 2	

Channel Group: _____							
01 Equipment Number		07 3.1KHz Audio		12 Outgoing B Channel		17 SPID 2	
02 Protocol		08 7KHz		13 B CH Selection		18 T-Wait Timer	
03 ILG		09 Unrestricted 64K		14 Initialize Type		19 Voice Calls	
04 OLG		10 Unrestricted 56K		15 Initialization Display		20 Trunk Subscriber 1	
06 Speech		11 Unrestricted 2x64K		16 SPID 1		21 Trunk Subscriber 2	

Channel Group: _____							
01 Equipment Number		07 3.1KHz Audio		12 Outgoing B Channel		17 SPID 2	
02 Protocol		08 7KHz		13 B CH Selection		18 T-Wait Timer	
03 ILG		09 Unrestricted 64K		14 Initialize Type		19 Voice Calls	
04 OLG		10 Unrestricted 56K		15 Initialization Display		20 Trunk Subscriber 1	
06 Speech		11 Unrestricted 2x64K		16 SPID 1		21 Trunk Subscriber 2	

Channel Group: _____							
01 Equipment Number		07 3.1KHz Audio		12 Outgoing B Channel		17 SPID 2	
02 Protocol		08 7KHz		13 B CH Selection		18 T-Wait Timer	
03 ILG		09 Unrestricted 64K		14 Initialize Type		19 Voice Calls	
04 OLG		10 Unrestricted 56K		15 Initialization Display		20 Trunk Subscriber 1	
06 Speech		11 Unrestricted 2x64K		16 SPID 1		21 Trunk Subscriber 2	

Channel Group: _____							
01 Equipment Number		07 3.1KHz Audio		12 Outgoing B Channel		17 SPID 2	
02 Protocol		08 7KHz		13 B CH Selection		18 T-Wait Timer	
03 ILG		09 Unrestricted 64K		14 Initialize Type		19 Voice Calls	
04 OLG		10 Unrestricted 56K		15 Initialization Display		20 Trunk Subscriber 1	
06 Speech		11 Unrestricted 2x64K		16 SPID 1		21 Trunk Subscriber 2	

Channel Group: _____							
01 Equipment Number		07 3.1KHz Audio		12 Outgoing B Channel		17 SPID 2	
02 Protocol		08 7KHz		13 B CH Selection		18 T-Wait Timer	
03 ILG		09 Unrestricted 64K		14 Initialize Type		19 Voice Calls	
04 OLG		10 Unrestricted 56K		15 Initialization Display		20 Trunk Subscriber 1	
06 Speech		11 Unrestricted 2x64K		16 SPID 1		21 Trunk Subscriber 2	

Channel Group: _____							
01 Equipment Number		07 3.1KHz Audio		12 Outgoing B Channel		17 SPID 2	
02 Protocol		08 7KHz		13 B CH Selection		18 T-Wait Timer	
03 ILG		09 Unrestricted 64K		14 Initialize Type		19 Voice Calls	
04 OLG		10 Unrestricted 56K		15 Initialization Display		20 Trunk Subscriber 1	
06 Speech		11 Unrestricted 2x64K		16 SPID 1		21 Trunk Subscriber 2	

PRI Trunks Record Sheet

Channel Group: _____			Enable/ Disable		Ch Method			Enable/ Disable		Ch Method					
			En	Dis	Ch	Slt		En	Dis	CB	CH	SB	SH		
01 RPTU Equip		08 Speech					14 Unrestricted 384K							21 B Ch Select	
02 Protocol		09 3.1KHz Audio					15 Unrestricted 1536K							22 T1 Time Slot	
03 ILG		10 7KHz Audio					16 Unrestricted 1920K							23 E1 Time Slot	
04 OLG		11 Unrestricted 64K					17 Restricted Digital							24 T-Wait Timer	
05 Trunk ID Type		12 Unrestricted 56K					18 Video							25 RBT on Incoming	
06 Trunk ID		13 Unrestricted 2x64K					19 Multirate Unrest.							26 Network Mode	
07 D Ch Position							20 B Ch Sel Method							27 Negotiation Priority	

Channel Group: _____			Enable/ Disable		Ch Method			Enable/ Disable		Ch Method					
			En	Dis	Ch	Slt		En	Dis	CB	CH	SB	SH		
01 RPTU Equip		08 Speech					14 Unrestricted 384K							21 B Ch Select	
02 Protocol		09 3.1KHz Audio					15 Unrestricted 1536K							22 T1 Time Slot	
03 ILG		10 7KHz Audio					16 Unrestricted 1920K							23 E1 Time Slot	
04 OLG		11 Unrestricted 64K					17 Restricted Digital							24 T-Wait Timer	
05 Trunk ID Type		12 Unrestricted 56K					18 Video							25 RBT on Incoming	
06 Trunk ID		13 Unrestricted 2x64K					19 Multirate Unrest.							26 Network Mode	
07 D Ch Position							20 B Ch Sel Method							27 Negotiation Priority	

Channel Group: _____			Enable/ Disable		Ch Method			Enable/ Disable		Ch Method					
			En	Dis	Ch	Slt		En	Dis	CB	CH	SB	SH		
01 RPTU Equip		08 Speech					14 Unrestricted 384K							21 B Ch Select	
02 Protocol		09 3.1KHz Audio					15 Unrestricted 1536K							22 T1 Time Slot	
03 ILG		10 7KHz Audio					16 Unrestricted 1920K							23 E1 Time Slot	
04 OLG		11 Unrestricted 64K					17 Restricted Digital							24 T-Wait Timer	
05 Trunk ID Type		12 Unrestricted 56K					18 Video							25 RBT on Incoming	
06 Trunk ID		13 Unrestricted 2x64K					19 Multirate Unrest.							26 Network Mode	
07 D Ch Position							20 B Ch Sel Method							27 Negotiation Priority	

Channel Group: _____			Enable/ Disable		Ch Method			Enable/ Disable		Ch Method					
			En	Dis	Ch	Slt		En	Dis	CB	CH	SB	SH		
01 RPTU Equip		08 Speech					14 Unrestricted 384K							21 B Ch Select	
02 Protocol		09 3.1KHz Audio					15 Unrestricted 1536K							22 T1 Time Slot	
03 ILG		10 7KHz Audio					16 Unrestricted 1920K							23 E1 Time Slot	
04 OLG		11 Unrestricted 64K					17 Restricted Digital							24 T-Wait Timer	
05 Trunk ID Type		12 Unrestricted 56K					18 Video							25 RBT on Incoming	
06 Trunk ID		13 Unrestricted 2x64K					19 Multirate Unrest.							26 Network Mode	
07 D Ch Position							20 B Ch Sel Method							27 Negotiation Priority	

Channel Group: _____			Enable/ Disable		Ch Method			Enable/ Disable		Ch Method					
			En	Dis	Ch	Slt		En	Dis	CB	CH	SB	SH		
01 RPTU Equip		08 Speech					14 Unrestricted 384K							21 B Ch Select	
02 Protocol		09 3.1KHz Audio					15 Unrestricted 1536K							22 T1 Time Slot	
03 ILG		10 7KHz Audio					16 Unrestricted 1920K							23 E1 Time Slot	
04 OLG		11 Unrestricted 64K					17 Restricted Digital							24 T-Wait Timer	
05 Trunk ID Type		12 Unrestricted 56K					18 Video							25 RBT on Incoming	
06 Trunk ID		13 Unrestricted 2x64K					19 Multirate Unrest.							26 Network Mode	
07 D Ch Position							20 B Ch Sel Method							27 Negotiation Priority	

Call-by-Call Record Sheet

Program 323 Values														Program 324 Values		
Ch Group	01 Index	02 Type of Service	03 Fac Code	04 Service Param	05 Network ID	06 ILG	07 OLG	Zone 1		Zone 2		Zone 3		Start Zone 1	Start Zone 2	Start Zone 3
								08 Min	09 Max	10 Min	11 Max	12 Min	13 Max			

B Channel Select Record Sheet

Channel Group: _____ (Enter a check mark to indicate activated B Channels)											
01 B Ch		02 B Ch		03 B Ch		04 B Ch		05 B Ch		06 B Ch	
07 B Ch		08 B Ch		09 B Ch		10 B Ch		11 B Ch		12 B Ch	
13 B Ch		14 B Ch		15 B Ch		16 B Ch		17 B Ch		18 B Ch	
19 B Ch		20 B Ch		21 B Ch		22 B Ch		23 B Ch			

Channel Group: _____ (Enter a check mark to indicate activated B Channels)											
01 B Ch		02 B Ch		03 B Ch		04 B Ch		05 B Ch		06 B Ch	
07 B Ch		08 B Ch		09 B Ch		10 B Ch		11 B Ch		12 B Ch	
13 B Ch		14 B Ch		15 B Ch		16 B Ch		17 B Ch		18 B Ch	
19 B Ch		20 B Ch		21 B Ch		22 B Ch		23 B Ch			

Channel Group: _____ (Enter a check mark to indicate activated B Channels)											
01 B Ch		02 B Ch		03 B Ch		04 B Ch		05 B Ch		06 B Ch	
07 B Ch		08 B Ch		09 B Ch		10 B Ch		11 B Ch		12 B Ch	
13 B Ch		14 B Ch		15 B Ch		16 B Ch		17 B Ch		18 B Ch	
19 B Ch		20 B Ch		21 B Ch		22 B Ch		23 B Ch			

Channel Group: _____ (Enter a check mark to indicate activated B Channels)											
01 B Ch		02 B Ch		03 B Ch		04 B Ch		05 B Ch		06 B Ch	
07 B Ch		08 B Ch		09 B Ch		10 B Ch		11 B Ch		12 B Ch	
13 B Ch		14 B Ch		15 B Ch		16 B Ch		17 B Ch		18 B Ch	
19 B Ch		20 B Ch		21 B Ch		22 B Ch		23 B Ch			

Channel Group: _____ (Enter a check mark to indicate activated B Channels)											
01 B Ch		02 B Ch		03 B Ch		04 B Ch		05 B Ch		06 B Ch	
07 B Ch		08 B Ch		09 B Ch		10 B Ch		11 B Ch		12 B Ch	
13 B Ch		14 B Ch		15 B Ch		16 B Ch		17 B Ch		18 B Ch	
19 B Ch		20 B Ch		21 B Ch		22 B Ch		23 B Ch			

Channel Group: _____ (Enter a check mark to indicate activated B Channels)											
01 B Ch		02 B Ch		03 B Ch		04 B Ch		05 B Ch		06 B Ch	
07 B Ch		08 B Ch		09 B Ch		10 B Ch		11 B Ch		12 B Ch	
13 B Ch		14 B Ch		15 B Ch		16 B Ch		17 B Ch		18 B Ch	
19 B Ch		20 B Ch		21 B Ch		22 B Ch		23 B Ch			

Channel Group: _____ (Enter a check mark to indicate activated B Channels)											
01 B Ch		02 B Ch		03 B Ch		04 B Ch		05 B Ch		06 B Ch	
07 B Ch		08 B Ch		09 B Ch		10 B Ch		11 B Ch		12 B Ch	
13 B Ch		14 B Ch		15 B Ch		16 B Ch		17 B Ch		18 B Ch	
19 B Ch		20 B Ch		21 B Ch		22 B Ch		23 B Ch			

Shared D Channel Record Sheet

Ch Group	01 Equipment Number	02 Trunk ID	03 D Ch Provided

Calling Number Record Sheets

Program 321 Values				
OLG Number	01 Default Number	02 Number Prefix	03 Number Verification	04 Default Number 2

Attendant

Attendant Group Record Sheet

00 Attendant Group Member	01 Call Dist Method	02 Alternate Destination	03 Overflow Time	04 Group Overflow Destination	05 Voice Mail ID

ICI1				ICI2				ICI3				ICI4				ICI5				ICI6				ICI7				ICI8				ICI9				ICI10			
ILG1	ILG2	ILG3	ILG4	ILG1	ILG2	ILG3	ILG4	ILG1	ILG2	ILG3	ILG4	ILG1	ILG2	ILG3	ILG4	ILG1	ILG2	ILG3	ILG4	ILG1	ILG2	ILG3	ILG4	ILG1	ILG2	ILG3	ILG4	ILG1	ILG2	ILG3	ILG4	ILG1	ILG2	ILG3	ILG4	ILG1	ILG2	ILG3	ILG4

IP Telephone Programming

System IP Data Assignment

Service Name	Values	Service Name	Values
01 Automatic Assignment of Station ID		02 Terminal Authentication	
03 Diffserv		04 TOS Field Type	
05 TOS Precedence Type		TOS Delay Type	
TOS Throughput Type		TOS Reliability Type	
06 DSCP		07 IEEE802.1p	
08 IEEE802.1p Configuration		09 IP-CTX Identifier	
10 Tail Length of Echo Canceller		11 BIPU/IPT VQ Mode	

Station IP Data Assignment

Service Name	Values
Prime DN	
01 Station ID	
02 Station IP Address Type	
03 Station IP Address	
04 Automatic assignment of Station ID	
05 Station Terminal Authentication Mode	
06 Station MAC Address	
07 Voice Packet Configuration Table Index	
08 Audio Codec	
09 Display Software Version Number of IPT	

Services

Pilot DN Assignment Record Sheet

Pilot DN	After Shift		03 Voice Mail ID
	01 Type	02 Destination	

System Voice Mail Record Sheet

System Name:_____		**System Type:**_____		**Date:**_____	
01 VM ID to DID/DNIS		07 Auto Cancel		13 CF No Answer Record	
02 Cancellation Method		08 DTMF Duration		14 Direct Call	
03 Message Desk No.		09 LCD Control of VM		15 Retrieve Messages	
04 CLASS Output		10 Central VM Callback		16 Voice Mail DN	
05 Calling Number Digits		11 CF All Call Record		17 Length of VMID	
06 Blank Digits		12 CF Busy Record			

Voice Mail Port Data Record Sheet

00 VM Port DNs	01 Control Method	02 Send A/D Tone	03 Send B Tone	04 End-to-end

Routing Definition Record Sheets

Program 524 Values						
00 Route Choice Table	01 Rte 1	02 Rte 2	03 Rte 3	04 Rte 4	05 Rte 5	06 Rte 6

Route Schedule Record Sheets

Program 528 Values						
Mon	**Tues**	**Wed**	**Thur**	**Fri**	**Sat**	**Sun**

Program 523 Values																							
LCR Group 1			**LCR Group 2**			**LCR Group 3**			**LCR Group 4**			**LCR Group 5**			**LCR Group 6**			**LCR Group 7**			**LCR Group 8**		
Day Type			Day Type			Day Type			Day Type			Day Type			Day Type			Day Type			Day Type		
T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3
Rte Choice			Rte Choice			Rte Choice			Rte Choice			Rte Choice			Rte Choice			Rte Choice			Rte Choice		
LCR Group 9			**LCR Group 10**			**LCR Group 11**			**LCR Group 12**			**LCR Group 13**			**LCR Group 14**			**LCR Group 15**			**LCR Group 16**		
Day Type			Day Type			Day Type			Day Type			Day Type			Day Type			Day Type			Day Type		
T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3
Rte Choice			Rte Choice			Rte Choice			Rte Choice			Rte Choice			Rte Choice			Rte Choice			Rte Choice		

LCR Assignment Record Sheets

Program 520 Values	
01 Local Area Code	
02 Local Route Plane	

Program 521 Values	
00 Analysis Digits	
01 Route Plan Number	

Program 522 Values	
00 Exception Digits	
01 Exception Table	

LCR Time Zone Record Sheets

Program 527 Values							
00 Holiday		00 Holiday		00 Holiday		00 Holiday	
Date	Desc	Date	Desc	Date	Desc	Date	Desc

Program 529 Values							
00 Route Plan	01 Day Type	02 Time Zone	03 Start Time	00 Route Plan	01 Day Type	02 Time Zone	03 Start Time

DR LCR Screening Record Sheet

Program 530 Values						
00 Screening Dial String	01 Add String		02 DR Action	03 LCR Action	04 Digit Mod Action	05 Skip Length
	Add	Delete				

Program 531						
00 OLG	01 Behind Centrex Access Code	02 Code		03 DR Action for Centrex	04 Skip Length	05 Pause Length
		Add	Del			

DR Record Sheets

Program 532 Values		
00 DRL	01 Type	
	Allow	Deny

Program 533 Values		
01 Dial String	02 Action	
	Add	Delete

Program 534 Values		
01 DRE Table	02 Action	
	Add	Delete

Program 111 Values					
DRL Number	Credit Card Calling		DRL Number	Credit Card Calling	
	Enable	Disable		Enable	Disable
01			09		
02			10		
03			11		
04			12		
05			13		
06			14		
07			15		
08			16		

COS Override Code Record Sheet

00 COS Override	01 COS Override Code	02 Set COS	03 Set DRL	04 Set FRL	05 Set QPL	06 Network COS
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						

Node ID Assignment Record Sheet

	01 Primary Node ID	03 Node ID 2	04 Node ID 3	05 Node ID 4
Local Nodes				
Overlap Codes				

Private Routing Plan Analysis Table Record Sheet

00 Node ID	01 Route Choice Table	00 Node ID	01 Route Choice Table	00 Node ID	01 Route Choice Table

Route Choice Definition Record Sheet

Program 653 Values						
00 Route Choice Table	Route Definition Tables					
	01	02	03	04	05	06

Program 654 Values		
00 Route Definition	01 OLG	02 Digit Mod

Program 655 Values		
00 Digit Mod Table	01 Delete Digits	02 Insert Digits

Network Mapping Record Sheets

Program 657 Values					
Network COS	Local COS	02 OCA	03 Sys SD	04 COS Override	05 TGAC Override

Program 658 Values	
Table Type: _____	
DRL1	
DRL2	
DRL3	
DRL4	
DRL5	
DRL6	
DRL7	
DRL8	
DRL9	
DRL10	
DRL11	
DRL12	
DRL13	
DRL14	
DRL15	
DRL16	

Program 659 Values	
Table Type: _____	
FRL1	
FRL2	
FRL3	
FRL4	
FRL5	
FRL6	
FRL7	
FRL8	
FRL9	
FRL10	
FRL11	
FRL12	
FRL13	
FRL14	
FRL15	
FRL16	

Program 660 Values	
Table Type: _____	
QPL1	
QPL2	
QPL3	
QPL4	
QPL5	
QPL6	
QPL7	
QPL8	
QPL9	
QPL10	
QPL11	
QPL12	
QPL13	
QPL14	
QPL15	
QPL16	

Call History Record Sheet

Circuit Type	01 PDN	Circuit Type	01 PDN	Circuit Type	01 PDN

Behind Centrex Assignment Record Sheet

00 OLG Number	01 Behind Centrex	02 Assume 9	03 Pause Timer

00 OLG Number	01 Behind Centrex	02 Assume 9	03 Pause Timer

Door Phone Assignment Record Sheet

Program 507 Values										
00 Door Phone Number	01 DDCB Equipment	02 Tenant Number	04 Ring Duration	05 LCD Name	06 Day 1		07 Day 2		08 Night	
					Dest	Num	Dest	Num	Dest	Num

Program 576 Values	
00 Tenant Number	01 Page Group
1	
2	
3	
4	
5	
6	
7	
8	

Program 508 Values			
00 Door Lock	01 Interface	02 BIOU Relay	03 DDCB Equip
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Paging Device Group Assignment Record Sheet

00 Zone Relay	Paging Groups (Enter Check to turn On)																17 Include in All Paging Group	18 All Emerg Page Group	19 Ext Generic Relay Number
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16			
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			

Emergency Call Group Assignment Record Sheet

00 E-Call Group	OLG Number							
	01	02	03	04	05	06	07	0 8
1								
2								
3								
4								
5								
6								
7								
8								

Software and Firmware Updates

E

IP Telephone/BIPU Firmware Update Procedures

These procedures provide the steps for updating IP telephones and BIPU firmware. The procedures apply to IPT1020-SD telephones and BIPU-M interface PCBs. Use CTX WinAdmin version 2.1D or above to perform updates. Before you start the update procedure, store the update files on a File Transfer Protocol (FTP) server. The FTP server can be:

- CTX SmartMedia card
- WinAdmin PC using Windows virtual ftp
- An External Server (required if IP telephones are not in the same network domain (subnet) as the BIPU interface)

The methods below are written based on CTX WinAdmin 2.1F.03. Screens may vary if you have WinAdmin 2.1D. To perform an update you can use one of the following methods:

Important! *Download the appropriate DIPXXXX and BIPUXXX IP firmware update files from TSD FYI, click Technical Services > Software (Strata Systems) > CTX IP Firmware.*

Method 1: Update from CTX SmartMedia Card

Prerequisites

1. Requires a WinAdmin PC and CTX SmartMedia card for BIPU and IPT program updates.
2. Do not connect the WinAdmin PC directly to the Strata CTX processor network jack (see Figure E-3).
3. All connections must be through the network (see Figure E-3).
4. The BIPU must have the same subnet address as the Strata CTX and CTX WinAdmin – both must be in the same domain.

CAUTION! Do not unplug BIPU, press the BIPU reset button, or turn off the CTX power during the BIPU program update process. Any of these operations will damage the BIPU kernel software and require the BIPU software restoration process to enable the BIPU to function. Restoration can only be done at a Toshiba TSD repair facility.

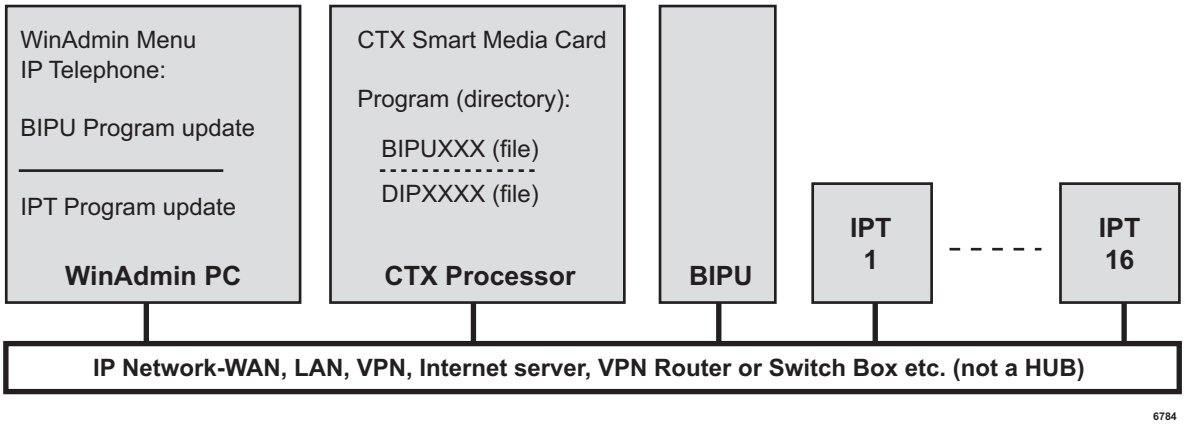


Figure 3 FTP Server (SmartMedia card) Network Connection

BIPU Update

Important! *Complete all "Prerequisites" on page E-1 before you do the following.*

➤ **From the WinAdmin PC or External SmartMedia read\write device**

1. "Force format" a SmartMedia card using WinAdmin.
2. Copy the BIPUXXX update file under the SM card PROGRAM folder (XXX is the BIPU firmware version level).

Note The firmware update files can be obtained from TSD FYI, click Technical Services > Software (Strata Systems) > CTX IP Firmware.

➤ **To perform the BIPU update from the WinAdmin PC**

1. Select Operations > SmartMedia to Make sure the BIPUXXX file is stored on the SM card under the PROGRAM directory.

Important! *The BIPUs and IPTs will automatically be disabled while Update takes place and return to the idle state when Update is complete (if they were in the idle state when the Update was started).*

2. Select IP Telephone > BIPU Program Update, then select the BIPU card slot.

Note Only BIPU-M can be updated. Only BIPU-M card slots will be shown with WinAdmin 2.1F or higher. The BIPU type selection is not required.

3. Select CTX Internal (SmartMedia) radio button.
   An ftp Name and Password is inserted automatically. The IP address of the CTX processor (SmartMedia card) is also inserted automatically.
4. Data Directory box will be "PROGRAM".
5. From File Name drop down box select "BIPUXXX".
6. Click Start and observe the update status: Getting Updated file\Updating\Finished Updating\Resetting\idle.

Notes

- *It could take 1 to 5 minutes to update the BIPU*
- *If an error occurs, recheck file names, locations etc. and try again.*

7. After the update is complete, select BIPU Configuration, and check the BIUP version numbers to verify they have been updated properly.

8. Press the BIPU reset button for proper initialization.

IP Telephone Update

Important! *Complete all "Prerequisites" on page E-1 before you do the following.*

➤ **From the WinAdmin PC or External SmartMedia read\write device**

1. Store the update files on the SM card.
2. "Force format" a SmartMedia card using WinAdmin
3. Copy the DIPXXXX update file under the SmartMedia card PROGRAM folder (XXXX is the IP Telephone firmware version level).

➤ **From the WinAdmin PC perform the update**

1. Select Operations > SmartMedia. Check that the DIPXXXX file is stored on the SM card under the PROGRAM directory.

Important! *The BIPUs and IPTs will automatically be disabled while Update takes place and return to the idle state when Update is complete (if they were in the idle state when the Update was started).*

2. Select IP Telephone > IPT Program Update. Select the IPT PDN to be updated.
3. Select CTX Internal (SmartMedia) radio button.
4. An ftp Name and Password is inserted automatically.
5. The IP address of the CTX processor (SM card) is inserted automatically.
6. Data Directory box will be: PROGRAM
7. From File Name drop down box select: DIPXXXX
8. Click Start and observe the update status: Getting Updated file\Updating\Finished Updating\Resetting\idle.

Notes

- *It could take 30 seconds to 2 minutes to update the IP telephone.*
- *If an error occurs, recheck file names, locations etc. and try again.*

9. Select IP telephone > Station Data, check the IPT version number to verify that all IPTs have been updated properly.

➤ **To check the IP telephone firmware version directly from an IP telephone**

1. Simultaneously press **369Hold** buttons on the IP Telephone.
2. At the SELECT = prompt, press **1** then press **Hold**.
3. At the Select function key prompt, press **FB01**, the IP telephone will be displayed.

Notes

- *The WinAdmin PC cannot be connected directly to the CTX processor network jack.*
- *All connections must be through the network.*

Method 2: Update From a FTP Directory on the WinAdmin PC

Prerequisites

1. Install the "File Transfer Protocol (FTP) Service" component under "Internet Information Services" on the WinAdmin PC. This is not installed by default when installing IIS in Windows XP or 2000. See "To create a Virtual FTP directory on the WinAdmin PC" below.
2. Create an FTP virtual directory and path to C:\CTX\WinAdmin\CTXIPUPDATE. The drive letter must be the drive on which WinAdmin is installed. This can be done automatically by running the "CreateFTPVdir" executable file provided by Toshiba. See "To create a Virtual FTP directory on the WinAdmin PC" below.

➤ **To create a Virtual FTP directory on the WinAdmin PC**

Setup the Virtual FTP server function on the WinAdmin PC for IP Updates. These procedures were written using Microsoft Windows XP, there may be some variance when using Windows 2000.

1. Install the MS Windows component FTP on your PC.

   Using the Windows XP or 2000 professional installation CR-ROM, install the FTP Service on the WinAdmin PC.
   To verify FTP Service is installed, it should be located under: Control Panel > Administrative Tools > Internet Information Services (IIS).
2. Go to CTXIpScripts and run "CreateFTPdir." This creates a virtual directory.

   To get the "CreateFTPVdir" file go to C:\ctx\WinAdmin\CTXIpScripts.

➤ **Download the IP Firmware files and store them on the WinAdmin PC**

1. Download the appropriate DIPXXXX and BIPUXXX firmware update files from TSD FYI, click Technical Services > Software (Strata Systems) > CTX IP Firmware.
2. Copy the DIPXXXX and BIPUXXX to the CTXIPUPDATE folder on the WinAdmin PC (C:\ctx\WinAdmin\CTXIPUPDATE\. These files will be accessed during the IP update processes.

Notes

- Make sure the WinAdmin PC is not connected directly to the CTX processor network jack (see the figure below).

  Make all connections through the network (see the figure below).
- Make sure the IP Telephones have the same subnet address as the CTX and WinAdmin - both must be in the same domain.

CAUTION! **Do not unplug BIPU, press the BIPU reset button or turn off the CTX power during the BIPU program update process. Any of these operations will damage the BIPU kernel software and require the BIPU software restoration process to allow the BIPU to function.**

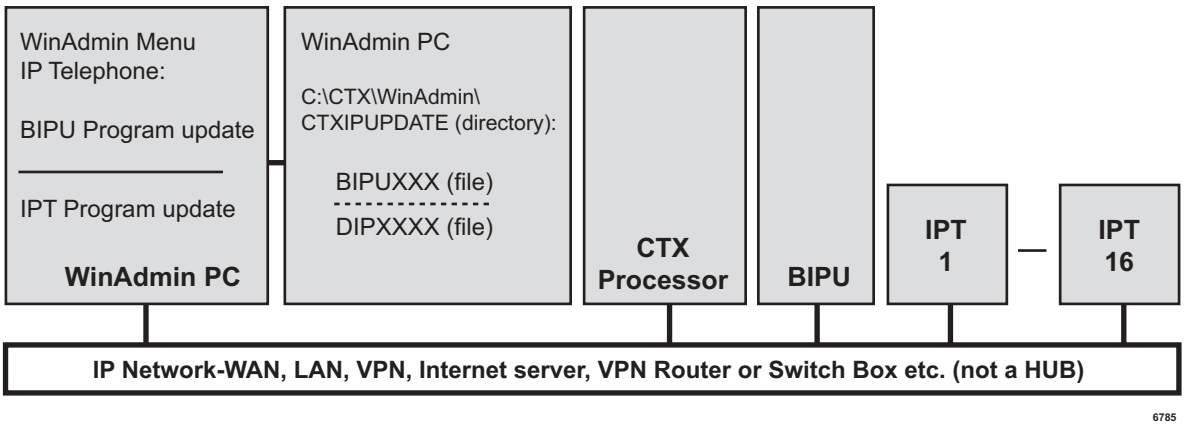


Figure 4 FTP Server (WinAdmin PC) Network Connection

BIPU Update

Important! *Complete all "Prerequisites" on page E-4 before you do the following.*

➤ Copy the BIPUXXX file into the WinAdmin PC CTXIPUPDATE directory.

Notes

- *The directory location should be C:\Ctx\W inAdmin\CTXIPUPDATE. The drive letter must be the drive on which WinAdmin is installed.*
- *(XXX in the BIPU file name is the BIPU firmware version level).*

➤ **From the WinAdmin PC perform the BIPU update**

Important! *The BIPUs and IPTs will automatically be disabled while Update takes place and return to the idle state when Update is complete (if they were in the idle state when the Update was started).*

1. Select IP Telephone > BIPU Program Update.
2. Select the BIPU card slot(s).

Note Only BIPU-M can be updated. Only BIPU-M card slots will be shown with WinAdmin 2.1F or higher. The BIPU type selection is not required.

3. Select Local WinAdmin (radio button)
4. Enter the Windows User login Name and Password.

Note If in doubt, create a new Window logon User Name and password and use it in Step 5.

5. The IP address of the WinAdmin PC is inserted automatically.
6. Select to update BIPUs one at a time or simultaneously.
7. Data Directory will be: CTXIPUPDATE
8. From File Name drop down box select: BIPUXXX
9. Click Start and observe the update status: Getting Updated file\Updating\Finished Updating\Resetting\idle.

Notes

- *It could take 1 to 5 minutes to update the BIPU*
- *If an error occurs, recheck file names, locations etc. and try again.*

10. After the update is complete, select IP Telephone > BIPU Configuration. Check the BIUP version numbers to verify they have been updated properly.

11. Press the BIPU reset button for proper initialization.

IP Telephone Update

Important! *Complete all "Prerequisites" on page E-4 before you do the following.*

➤ Copy the DIPXXXX file into the WinAdmin PC CTXIPUPDATE directory.

Notes

- *The directory location should be C:\Ctx\W inAdmin\CTXIPUPDATE The drive letter must be the drive on which WinAdmin is installed.*
- *(XXXX in the DIP file name is the firmware version level of the IP telephone).*

➤ **From the WinAdmin PC perform the update**

Important! *The BIPUs and IPTs will automatically be disabled while Update takes place and return to the idle state when Update is complete (if they were in the idle state when the Update was started).*

1. Select IP Telephone > IPT Program Update.
2. Select the IPT PDN(s) to be updated.
3. Select Local WinAdmin (radio button).
4. Enter the Windows user login Name and Password.

Note If in doubt, create a new Window logon User Name and password and use it in Step 6.

5. The IP address of the WinAdmin PC is inserted automatically.
6. Data Directory will be: CTXIPUPDATE
7. From File Name drop down box select: DIPUXXX
8. Click Start and observe the update status: Getting Updated file\Updating\Finished Updating\Resetting\idle.

Notes

- *It could take 30 seconds to 2 minutes to update the IP telephone*
- *If an error occurs, recheck file names, locations etc. and try again.*

9. Select IP telephone > Station Data. Check the IPT version number to verify that all IPTs have been updated properly.
10. To check the IP telephone firmware version directly from an IP telephone.
    - Simultaneously press the **369Hold** buttons on the IP Telephone.
    - At the SELECT = prompt, press **1** then press **Hold**.
    - At the Select function key prompt, press **FB01**, the IP telephone will be displayed.
    - To exit this mode, go off and on hook.

Notes

- *The WinAdmin PC cannot be connected directly to the CTX processor network jack.*
- *All connections must be through the network.*

Method 3: Update from an External FTP Server

Prerequisites

1. An FTP server must be connected on the same network domain as the IP telephones. The WinAdmin PC, CTX processor and BIPU must be in the same domain but it does not have to be the domain that supports the IP telephones and FTP server.
2. The WinAdmin PC cannot be connected directly to the CTX processor network jack. All connections must be through the network (see Figure E-5 below).

CAUTION! **Do not unplug BIPU, press the BIPU reset button or turn off the CTX power during the BIPU program update process. Any of these operations will damage the BIPU kernel software and require the BIPU software restoration process to allow the BIPU to function.**

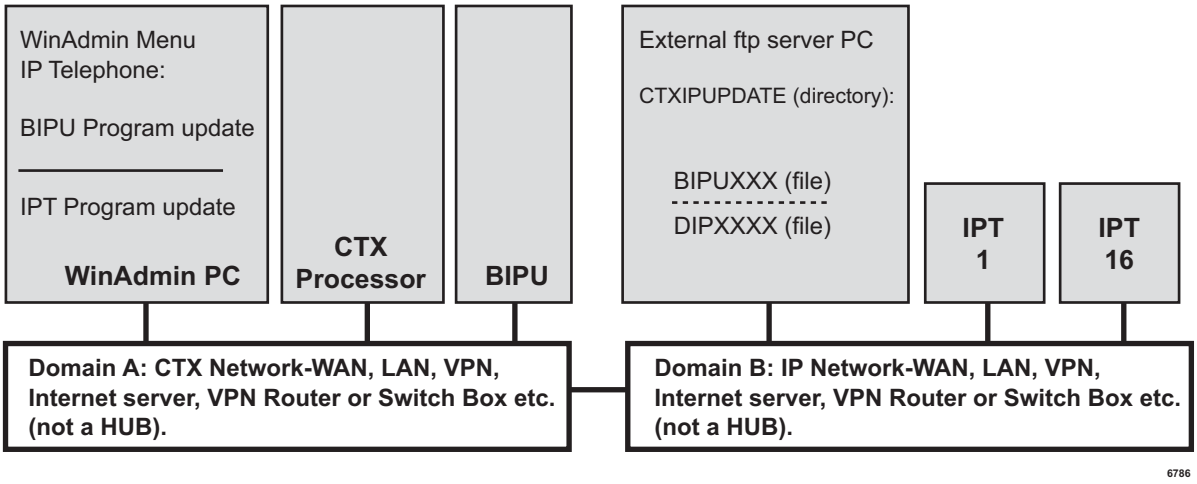


Figure 5 FTP Server (External Server) Network Connection

Note The WinAdmin PC cannot be connected directly to the CTX processor network jack - all connections must be through the network.

BIPU Update

Important! *Complete all "Prerequisites" on page E-7 before you do the following.*

➤ **Store the IP update files on the external ftp sever**

1. Create an ftp directory and name it CTXIPUPDATE.
2. Copy the BIPUXXX update files to CTXIPUPDATE directory (XXX is the BIPU firmware version level).

➤ **From the WinAdmin PC perform the BIPU update**

Important! *The BIPUs and IPTs will automatically be disabled while Update takes place and return to the idle state when Update is complete (if they were in the idle state when the Update was started).*

1. Select IP Telephone > BIPU Program Update.
2. Select the BIPU card slot and BIPU-M card type.

Note Only BIPU-M can be updated. Only BIPU-M card slots will be shown with WinAdmin 2.1F or higher. The BIPU type selection is not required.

3. Select Other (radio button).
4. Enter the ftp user login Name and Password.
5. Enter the IP address external ftp server.
6. From Data Directory box enter: CTXIPUPDATE
7. From File Name box enter: BIPUXXX
8. Click Start and observe the update status: Getting Updated file\Updating\Finished Updating\Resetting\idle.

Notes

- *It could take 1 to 5 minutes to update the BIPU*
- *If an error occurs, recheck file names, locations etc. and try again.*

9. After the update is complete, select IP Telephone > BIPU Configuration. Check the BIUP version numbers to verify they have been updated properly.
10. Press the BIPU reset button for proper initialization.

IP Telephone Update

Important! *Complete all "Prerequisites" on page E-7 before you do the following.*

➤ **Store the IP update files on the external ftp sever**

1. Create an ftp directory and name it CTXIPUPDATE
2. Copy the DIPUXXXX update files to CTXIPUPDATE directory (XXX is the BIPU firmware version level).

➤ **From the WinAdmin PC perform the update**

Important! *The BIPUs and IPTs will automatically be disabled while Update takes place and return to the idle state when Update is complete (if they were in the idle state when the Update was started).*

1. Select IP Telephone > IPT Program Update.
2. Select the IP PDN to be updated.
3. Select Other (radio button)
4. Enter the external server ftp user login Name and Password.
5. Enter the IP address external ftp server.
6. From Data Directory box enter: CTXIPUPDATE

7. From File Name box enter: DIPXXXX
8. Click Start and observe the update status: Getting Updated file\Updating\Finished Updating\Resetting\idle.

Notes

- *It could take 1 to 5 minutes to update the BIPU*
- *If an error occurs, recheck file names, locations etc. and try again.*

9. After the update is complete, select IP Telephone > IP Telephone Data. Select the IP telephone Prime DN to check that the firmware version level has been updated properly.

➤ **To check the IP telephone firmware version directly from an IP telephone**

1. Simultaneously press the **369Hold** buttons on the IP Telephone.
2. At the SELECT = prompt, press **1** then press **Hold**
3. At the Select function key prompt, press **FB01**, the IP telephone will be displayed.
4. To exit this mode, go off and on hook.

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