

# COMDIAL

## *DIGITECH*

Digital Telephone System

# System Manual

This publication is applicable to the following common equipment:

- C0408 Rev. A and later
- C0816 Rev. A and later
- C1632 Rev. A and later

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# CHAPTER 1 SYSTEM OVERVIEW

## SECTION 1 INTRODUCTION

The digital telephone system is an expandable communications system with many attractive characteristics including the following:

**Unitized base unit which includes all system features.** The base unit is full featured and self-contained.

**Expansion modules which increase station and line capacity.** A 4-line, 8-station expansion module is available. It can be added singly or in pairs to increase the station and line capacity of an existing base unit installation.

**Secure off-hook voice announce (SOHVA) feature.** The SOHVA feature allows a station user to talk to a busy station without being heard by the outside party at the busy station. The called user can easily send back a pre-programmed LCD message or talk to the caller without being heard by the outside party.

**Programmable buttons.** Many of the telephone buttons can be programmed to provide functions such as direct station selection (DSS), auto dial, system

feature access, line access, messaging and more. Programmed buttons helps station users eliminate manual dialing errors.

**Service observing.** Supervisors can help insure quality of service without interrupting calls by monitoring a trainee's call without being heard by the distant party at the trainee's station.

**Handset volume control on all stations.** Handset volume can be set to a comfortable listening level for each individual user of the telephone.

**Call cost display.** Built-in software records all outside call costs. Special programming allows an LCD speakerphone to display the accumulating cost of a call.

**Dual intercom.** A second intercom key can be provided so that station users can handle two intercom calls at once. One intercom call can be placed on hold while a second intercom call is serviced or both calls can be **conferenced** together.



## SECTION 2 PUBLICATIONS OVERVIEW

### MANUAL SCOPE

This publication contains a technical discussion of the digital telephone system. Included in this manual is the following information:

- **Chapter 1, System Overview:** This chapter provides a generalized understanding of the system, an explanation of the supporting documentation, and a summary of the equipment hardware.
- **Chapter 2, Feature Description:** This chapter provides a detailed discussion of the features provided by the digital telephone system.
- **Chapter 3, Installation:** This chapter provides detailed installation instructions and connection details.
- **Chapter 4, Programming:** This chapter provides detailed programming instructions for setting the operating parameters of the system.
- **Chapter 5, Operation:** This chapter summarizes operating procedures and provides special tone and indicator details.

- **Chapter 6, Maintenance:** Special maintenance details are provided in this chapter.

### RELATED PUBLICATIONS

Related publications, which contain additional information applicable to this system, are available from the manufacturer.

They are as follows:

#### GENERAL INFORMATION

- IMI 01-005 Handling Of Electrostatically Sensitive Components

#### USER INFORMATION

- GCA 70-I 82 Attendant's Guide
- GCA 70-I 83 System User's Guide
- GCA 70-I 84 Station User's Guide

## SECTION 3 HARDWARE SUMMARY

The digital telephone system consists of an electronic Key Service Unit (KSU) base unit, usually referred to as common equipment, optional expansion modules to extend station and line capacities as required, a software cartridge containing the operating **system** programming, dedicated digital electronic key telephones, and interconnecting wiring consisting of small, **2--** or **4--conductor**, twisted-pair cable.

The station and line capacity of the base unit and optional expansion module are per the following chart.

MODEL NO.	CO/PBX CAPACITY	STATION CAPACITY
CO408	4	8
CO816	8	16
CI 632	16	32
CM408	4	8

The digital telephone system is full featured, and supports the digital telephone models.

The digital system is expandable in both line and station **capacity** with the addition of add-on expansion modules. Refer to **Figure 3-14** on page 3-24 for an illustration of the expansion configurations.

### COMMON EQUIPMENT DESCRIPTION

The common equipment base unit is a fully electronic device. It is essentially a special purpose computer system acting as a communications controller between central office (CO), private branch exchange (PBX), or **CENTREX** supplied lines and the proprietary digital telephone stations. The software architecture of the common equipment provides complete system support **and** great flexibility of operation.

The system is fully digital and is **ISDN** up-gradable with two usable time slots available for each station. The digital information passes over time division multiplexing (TDM) highways. The digital information is an encoded version of the voice transmission and control signals that are translated into computer language. The TDM highway can transmit several signals over a single pair of wires at the same time. The signals are governed by a system clock. This clock creates an overall point of reference against which the TCM information is synchronized and partitioned into time slots. A time slot is a portion of time assigned to a particular position of the system clock. Each time a particular clock **position is** reached, the information associated with that **position**

can be read. As the system clock goes through the clock cycle, all necessary digital information is passed between the pieces of equipment sharing the highway.

The common equipment consists of a base unit, which provides complete feature support, and optional expansion modules which provide extended station and line coverage.

The common equipment is contained in a functional, modem-style metal housing of contemporary design in keeping with the needs of the modem office environment. It is engineered to be wall or rack mounted. The outline dimensions of the common equipment base units are illustrated in **Figure I-1**.

### STATION DESCRIPTION

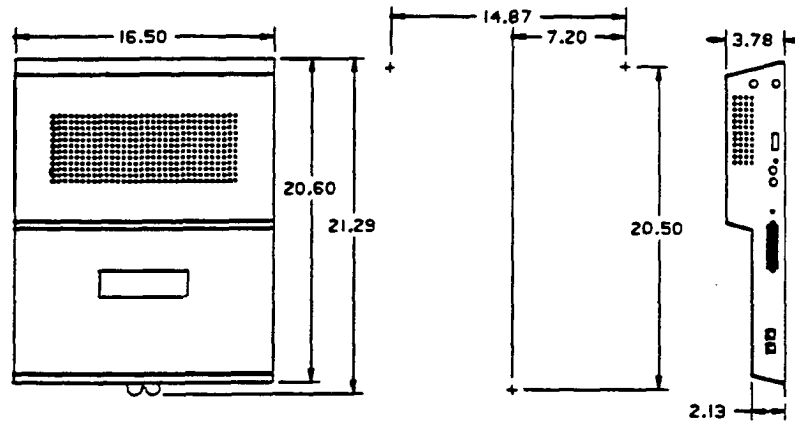
The digital telephone stations employed with the digital system are electronic, **microprocessor-**controlled, devices. They allow not only multiline pickup but also single key access to features available from the serving CO, PBX, or **CENTREX** switch **as** well as the common equipment. The digital telephone is available in two different images. The features of the images are as listed below and as detailed in **Figure 1-2** and in **Figure I-3**.

The wide-image digital telephone provides the following features:

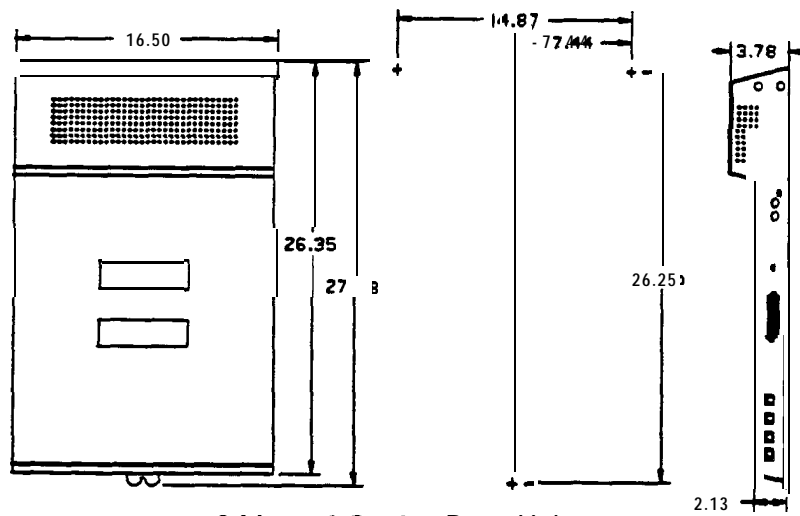
- Full modular connection
- 3 fixed buttons with indicators
  - . SPKR
  - HOLD
  - . ITCM
- 3 fixed buttons without indicators
  - TAP
  - . TRANS/CONF
  - . MUTE
- Programmable buttons with indicators
- 7-foot, G-conductor line **cord**
- 6 position, **4-** or **6-conductor** modular line jack
- K-type handset (hearing aid compatible)
- Ringer volume control (Off, Low, and High)
- Wall mounting capability

The image designations refer to the number of programmable buttons located below the keypad, including the hold and intercom buttons, as opposed to the number of programmable buttons located above the keypad.

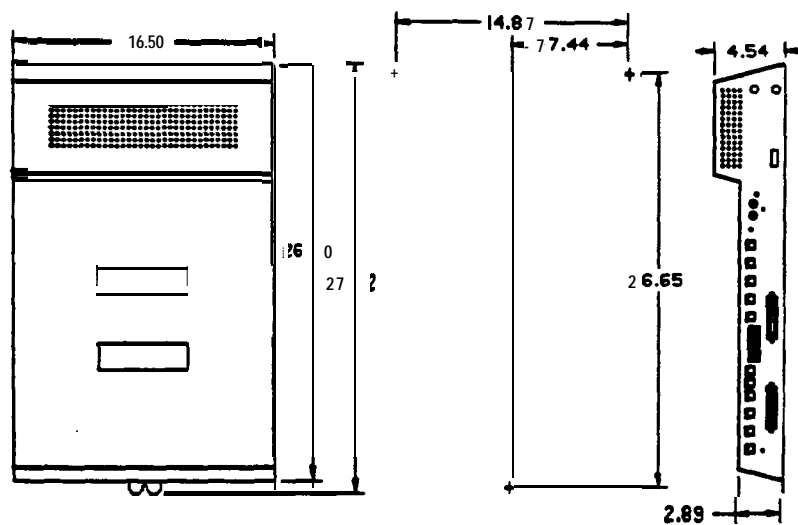
- The 10x14 image provides a moderate sized line button matrix along with a moderate sized priority line button grouping. This image is best suited for typical work area stations. The 10x14 image is available in both monitor and speakerphone versions.
- The LCD speakerphone is available in a 5x14 image, This image provides a priority line grouping and contains a liquid crystal display which shows call handling data and other **useful information**. The LCD speakerphone is used as an attendant station as well as being very applicable for use as an executive station.



**4-Line, 8-Station Base Unit**

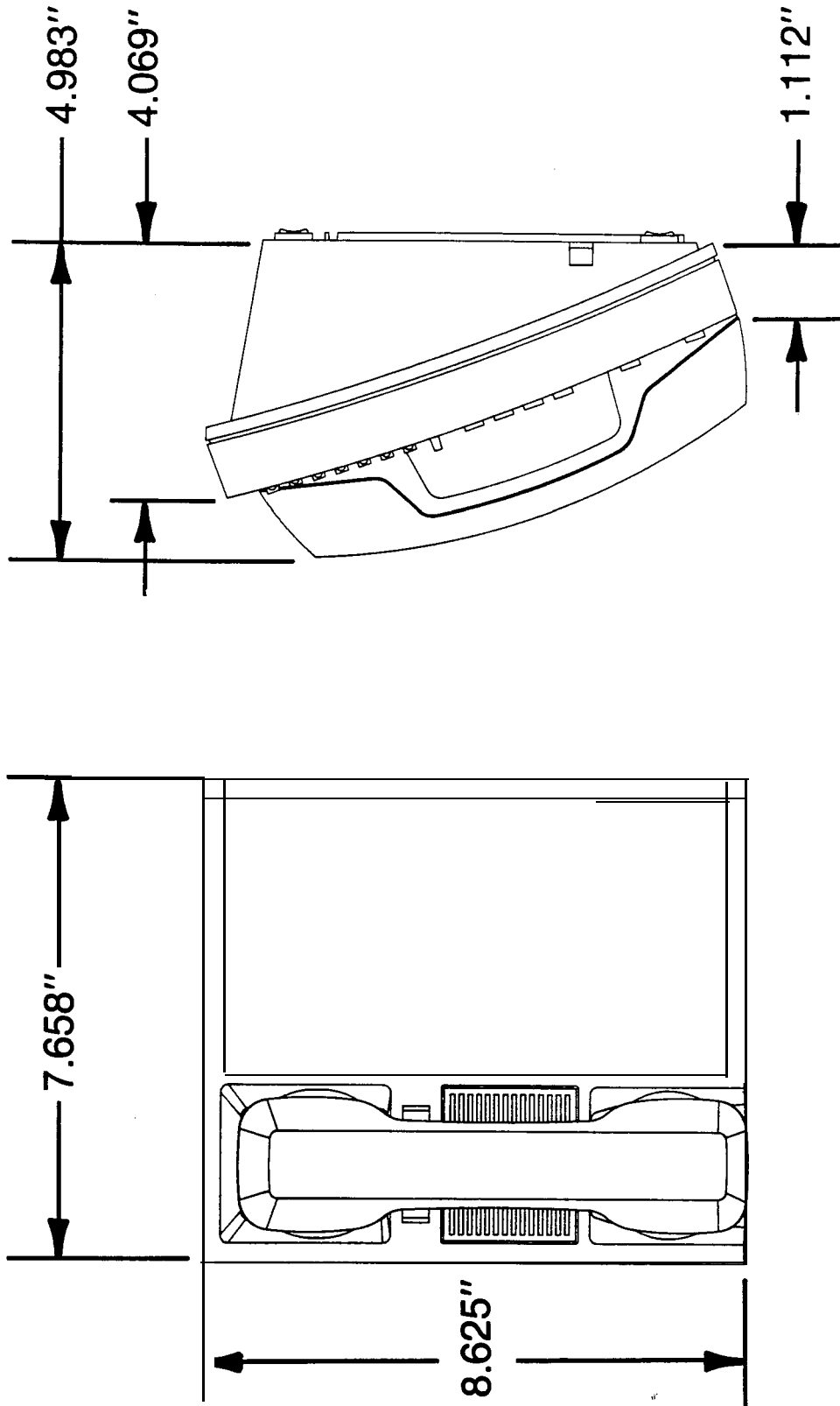


**8-Line, 16-Station Base Unit**

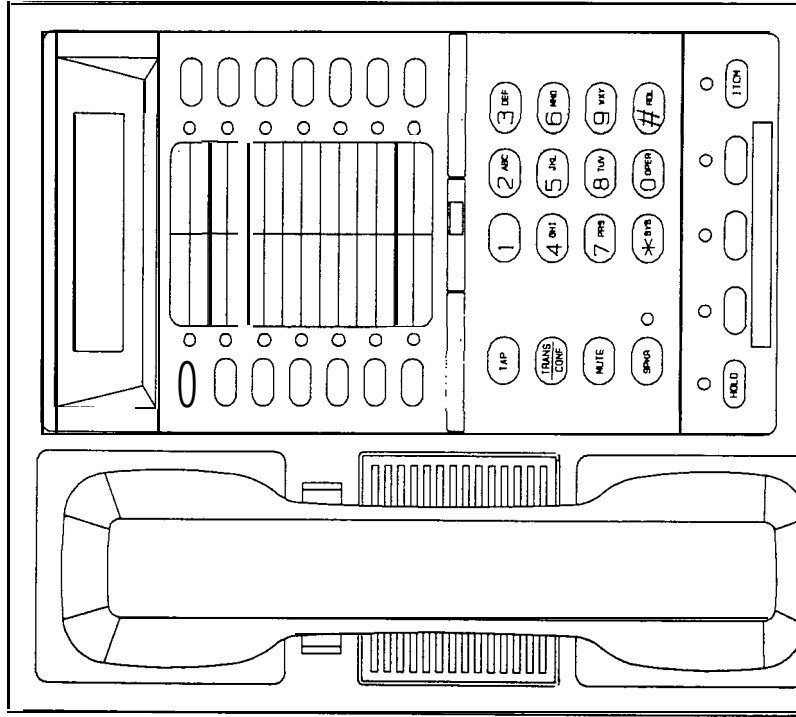


**16-Line, 32-Station Base Unit**

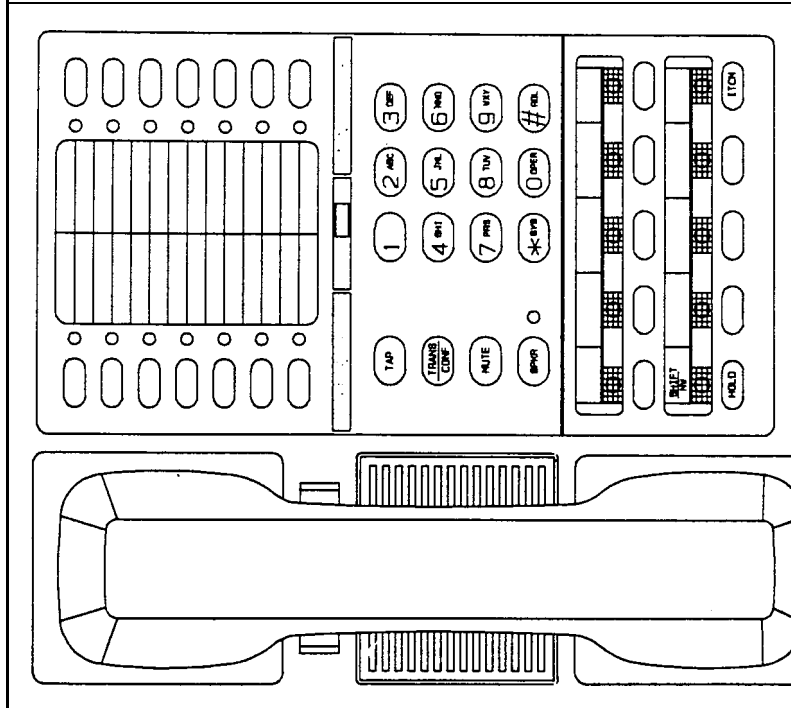
Figure 1-I. Outline Dimensions - Common Equipment



Digital Multiline Telephone  
Figure 1-2. Outline Dimensions - Station Equipment



5x14 LCD Speakerphone



10x14 Image Multiline Telephone

NOTE: See page 1-9 for a list of digital telephone product product codes.

Figure 1-3. Station Images

## SECTION 4

### GENERAL SPECIFICATIONS

	4-LINE, 8-STATION,	8-LINE, 16-STATION	16-LINE 32-STATION
<b>SYSTEM CAPACITY</b>			
LINES:	4	8	16
STATIONS:	8	16	32
<b>DSS/BLF CONSOLES:</b>	(FUTURE FEATURE)		
INTERCOM PATHS:	Non-blocking	Non-blocking	Non-blocking
MAXIMUM SIMULTANEOUS INTERCOM CONVERSATIONS:	Non-blocking	Non-blocking	Non-blocking
PAGING PORTS	1	1	1
PARK ORBITS	9	9	9
SPEED DIALS			
SYSTEM	99	99	99
STATION	10	10	10
AUTODIALS	Unused buttons	Unused buttons	Unused buttons
POWER FAIL CIRCUITS	1	1	1
<b>CONFERENCING</b> (Maximum Combinations At Any One Time)	1 five-way plus 1 three-way plus 2 SOHVA		4 five-way plus 5 three-way plus 1 SOHVA
	2 four-way plus 2 SOHVA		6 four-way plus 2 three-way
	1 four-way plus 3 three-way		3 four-way plus 9 three-way
	5 three-way plus 1 SOHVA		16 three-way
<b>POWER REQUIREMENTS</b> (Fully loaded system)			
AC POWER:	90 • 129 VAC Singlephase • all models		
	<b>0.6A</b>	2.0 A	<b>2.1A</b>
	70w	135w	150w
	<b>80VA</b>	<b>190VA</b>	200VA
<b>DIMENSIONS (approximate)</b>			
<b>COMMON EQUIPMENT</b>			
WIDTH (inches):	16.5	16.5	16.5
HEIGHT(inches):	21.3	27.1	27.6
DEPTH (inches):	3.8	3.8	4.5
WEIGHT (pounds):	17.5	26	30.5
<b>STATIONS</b>			
FOOTPRINT (inches):	8.625 X 7.658		
WEIGHT (pounds):	2.5		
<b>STATION CABLE REQUIREMENTS</b>			
TYPE:	P-wire (1-pair) twisted, non-shielded.		
MAXIMUM LENGTH:	1000 feet with 24 gauge wire		
SWITCHING PRINCIPLE:	Digital, time division multiplexing <b>(TDM)</b> . Provides non-blocking switching with stored program control		

**OPERATING ENVIRONMENT**

TEMPERATURE: 32-122 degrees F (0-50 degrees C)  
 HUMIDITY: 90 percent relative, non-condensing

**TERMINATIONS**

STATION: Standard 50-pin male connectors for connection to external distribution field.  
 LINE: Standard, G-conductor mini-jack (USOC 14C)

**STATION MESSAGE DETAIL RECORDING PORT**

FORMAT: Serial, pseudo RS-232C  
 PARITY: None  
 DATA BITS: 7 or 8 (programmable)  
 STOP BITS: 1 or 2 (programmable)  
 BAUD RATE: Programmable in class of service  
 HANDSHAKING: X on - **X off**  
 Hardware - CTS  
 CABLE LENGTH: 500 Feet maximum

**MUSIC INTERFACE**

INPUT LEVEL: 3 **Volts** peak-to-peak maximum  
 INPUT IMPEDANCE: Approximately 500 Ohms  
 CONNECTOR: RCA phono jack

**PA PORT**

OUTPUT LEVEL: 400 Millivolts peak-to-peak (typical speech)  
 OUTPUT IMPEDANCE: Approximately 500 Ohms  
 CONNECTOR: RCA phono jack

**CENTRAL OFFICE LIMITS**

LOOP LIMITS: 1900 Ohms maximum **loop**  
 CABLE INSULATION LEAKAGE: 15,000 Ohms minimum

**INDUSTRY/REGULATORY STANDARDS:**

FCC Certified, part 15 (Class A)  
 FCC registered (fully protected)  
 LISTED by OSHA-accredited, nationally recognized, test laboratory  
 EIA RS478  
 Bell publication 48002 guidance  
 Hearing aid compatible handset

**MEMORY RETENTION**

AFTER POWER LOSS: 60 hours minimum

**FCC REGISTRATION NUMBER:**

KEY SYSTEM: **CVWUSA-61535-KF-E**  
 HYBRID SYSTEM: **CVWUSA-61536-MF-E**

RINGER **EQUIVALANCE** NUMBER: 1.38

**PRODUCT CODES:****Common Equipment**

CO408 - **4-Line, 8-Station**  
 CO816 - **8-Line, 16-Station**  
 CI 632 - **16-Line, 32-Station**  
 CM408 - **4-Line, 8-Station**  
 Expansion Module

**Telephones**

7714X - 1 OX14 Image Monitor  
 7714S - 1 OX14 Image Speakerphone  
 7700S - **5X14** Image LCD Speakerphone

**Software Cartridge**

SO408  
 SO816  
 S1632



## CHAPTER 2 DESCRIPTION OF SYSTEM FEATURES

### ABANDONED HOLD RELEASE

If an on-hold party hangs up at the CO/PBX end of a connection, causing an interruption in the line current, the system will drop the line from the hold condition and return it to service. The time interval between hang-up and line-drop is programmable in line class of service programming with choices of either 50 msec or 350 msec. This feature is usually dependent upon special arrangements that must be made at the CO end of the connection. The line select indicator will turn off to indicate an idle line after a call on that line has been abandoned.

### ACCESS DENIED

Access to particular lines can be denied at certain stations in the system through system programming. A station user cannot select a denied line for use. This feature is programmable on a per line/per station basis in station class of service programming.

### ACCOUNT CODE BUTTON

Station class of service programming can be used to assign an Account Code button to any programmable button location at a station as part of the button mapping procedure. With this Account Code button available, the user can press it and then dial the account code without interrupting the call. Only the user of the Account Code button will hear the DTMF tones when the code is dialed. The distant on-line party will not hear the DTMF tones, and the line will not be placed on hold. The distant on-line party can be heard while the account code is being dialed.

### ACCOUNT CODES WITH POSITIVE VERIFICATION

Specific account codes can be assigned by station users to specific types of calls. The account codes are used by the system to identify calls by category, or special grouping, for call recording purposes. All calls with the same account code will be reported together by the station message detail accounting feature. The system may be programmed to verify the user entered account code and sound an **error** tone if it is incorrect. The system may be programmed by call costing and SMDA reporting class of service programming to permit station users to enter *account codes* for incoming calls and/or out going calls if desired. Account codes are entered while on line either before an out going call is dialed or after the distant party on an incoming call has hung up. On out going calls, the user who enters the account code is associated with the call record except when the call is

transferred. On transferred calls, the transferee is associated with the call record. On incoming calls, the last user active on a call is the one that is associated with the costed call record. The system can be programmed to place an appropriate message on the display to remind users of LCD speakerphones to enter an account code. Account codes may be from three to eight digits in length as set by class of service programming. When the user enters an account code, the system will force the use of the programmed length, but will verify only the first three digits to determine validity.

### ALL-CALL PAGING

All-call paging allows all stations to receive announcements through the station speaker at once. All-call paging is also sent to the paging port where it can be applied to the input of an external paging amplifier. Origination of announcements must be via the station handset. Each station can be programmed to receive and/or originate all-call page. The ability to receive and originate all-call paging at a station is enabled by station class of service programming. Also see the discussion titled: Zone Paging.

### AREA PAGING INTERFACE

Refer to the discussion titled: *External Paging Interface*.

### ASSIST BUTTON

This feature allows a station user to program a button to be used for sending a message to an LCD speakerphone. Once programmed, the station user can press the ASSIST button at anytime and then press a DSS button to sound a tone burst at the called station and present a preprogrammed message in the station display. A message can be sent while on a call without alerting the distant party. This feature is useful for requesting assistance while engaging on a call. For example, a customer service representative could request assistance from a supervisor while talking to a problem caller. The supervisor, upon receiving the tone and noting the display message, could perform an executive override or service observing action to join the call or monitor it.

### AUTOMATIC CALLBACK

If a busy tone is encountered after an intercom station is called, a special code number can be dialed that will cause the **system** to automatically ring the calling and called stations when the called station becomes idle.

No class of service programming is required to enable this feature.

### **AUTOMATIC DIALING**

The system supports up to 22 auto dial positions per station. **Autodial** buttons can store up to 16 digits plus an intercom or line selection. Stored digits include 9-0, \*, and #. A pause is stored at any point where the HOLD button is pressed, and a hookflash is stored at any point where the TAP button is pressed. Automatic dialing can be used to provide one-button access to system features. No class of service

programming is required to enable autodialing. Also refer to discussions titled: *Automatic Pause Insertion, Station Speed Dial, and Programmable DSS/BLF.*

### **AUTOMATIC HOLD FOR INTERCOM**

If the second intercom line is selected while a call is active on the first intercom line, this feature causes the first intercom call to be automatically placed on hold. Station class of service programming is required to enable this feature.

### **AUTOMATIC HOLD - TRANSFER TO INTERCOM (ANSWER HOLD)**

If the intercom line is selected while an outside line call is active, this system feature causes the outside call to be automatically placed on hold. No class of service programming is required to enable this feature.

### **AUTOMATIC HOLD - TRANSFER TO LINE**

This system feature is made available through programming to selected stations. When enabled, pressing any line button will cause an active line to automatically go on hold. This feature allows a user to move from line to line without having to press the HOLD button to place any current calls on hold. Station class of service programming is used to enable this feature at the desired stations.

### **AUTOMATIC PAUSE INSERTION**

When the system stores a dialed number for later redial, it automatically stores a pause whenever the user waits between digits for at least two seconds. The automatic pause is inserted in the stored number sequence at the point where the manual pause in dialing occurred. The length of the pause is fixed at two seconds by the system.

### **AUTOMATIC PRIVACY**

A line can be made private or non-private through programming. In the private mode, a station has exclusive use of the line during a call. No other Station can access that line unless it is included through the

use of the add-on conference feature. In the non-private mode, another station with that line appearance can gain access at the same time (sometimes known as common line pickup). A line is specified as private or non-private through the line class of service programming. Through station class of service programming, a line can be made non-private at a particular station. Also see the discussions titled: *Conference - Add-On and Privacy Release.*

### **AUTOMATIC REDIAL (OF BUSY NUMBER OR UNANSWERED CALL)**

A busy number or unanswered call can be automatically redialed by activating this feature. Once automatic redial is activated, the station will select the line, automatically dial the number, and wait for a response. It will do this once a minute for approximately 10 minutes unless deactivated because that button or another button is pressed or the handset is lifted. The feature cycle is timed and does not have busy detection circuitry. Because of this, if operating handsfree when the called party answers, the handset must be taken off-hook to prevent the caller from being cut off by the timing cycle. Automatic redial is a designated programmable button position and must be programmed by the user to be active but no class of service programming is required.

### **AUTOMATIC STATION RELOCATION**

With this feature, the system will automatically recognize a particular station should that station be relocated to a new station port. When installed at the new **port** location, the station will continue to provide the same class of service parameters and respond to the same extension numbers as it did at the original station port. This system feature is enabled with system class of service programming.

### **AUXILIARY EQUIPMENT INTERFACE**

A non-key system telephone device or a data device can be connected to a line ahead of the common equipment by using the auxiliary equipment interface. The system can detect an off-hook condition in the device connected to the auxiliary equipment interface, and **turn** on the status light for that line at the button system telephones. **It** does this to indicate that the line is busy and not available for station use. Auxiliary equipment interface connections provide connections to lines 2 and 4. Pressing the line button on a system station cannot interrupt an external device unless the line has been programmed to be non-private.

### **AUXILIARY RINGER INTERFACE**

The auxiliary ringer interface provides "dry-contact" relay closures which track the ringing pattern

activated when station port 17 rings or when ringing is sent to the paging port.

*When programmed for station port 17 ringing, an external device is often used to provide loud ringing.*

*When programmed for paging port ringing, an external paging amplifier is usually employed. The system supplies ringing tones to the paging port along with the relay closures. The ringing tones can be sent to the input of an external paging amplifier. The relay closures can be employed to energize the paging amplifier while the ringing tone is being sent to it.*

System class of service programming is used to choose either the paging port or station port 17 for the ringing port relay control. System class of service also determines the type of ringing sent to the paging port. Station class of service programming determines the type of ringing sent to station port 17. Also refer to the discussions titled: *Common Audible Ringer Interface* and *External Paging Interface*.

### **BACKGROUND MUSIC EXTERNAL MUSIC SOURCE RE6 UIRED)**

If an external music source is provided, background music can be turned on and off at individual stations. The loudness of the background music is adjusted with the call monitor speaker volume control, and the background music automatically turns off during calls. No class of service programming is required to provide this feature. Also refer to the discussion titled: *External Music Source*.

### **BASIC KEY SERVICE (1A2) EMULATION**

The system provides all of the basic, 1 A2-type, button service features. These features are: selective line pickup, common line pickup, multiline pickup, and hold. No special class of service programming is required.

### **BATTERY BACK-UP (CHASSIS, CABLE, AND BATTERIES)**

Battery back-up assemblies including chassis, cable, fuses, and batteries are offered as optional kits (available from Comdial). The assemblies are designed to connect directly to the **uninterruptable** power source (UPS) interface located on the common equipment chassis. No user intervention is required with this feature, and no class of service programming is required.

### **BATTERY BACK-UP INTERFACE**

Provision has been made for attaching a Comdial provided optional battery back-up **kit** to give full uninterrupted system power in case of an AC power

loss. The switching and charge circuitry are in the common equipment, while batteries, chassis, and cable are packaged as a separate option. When plugged into an active AC power source the common equipment will constantly charge the attached batteries. Built-in circuitry automatically switches to battery power when AC power is lost. **With** batteries at full charge, a fully loaded system will operate for a minimum of one hour without AC power.

### **BLOCK PROGRAMMING**

A class of service assigned to a particular station or line can be assigned to an entire block of stations or lines with one programming action. This feature eliminates the need to individually program stations and lines **with** the same class of service. Block programming class of service can be performed after a station class of service or line class of service has been programmed for a particular station or line.

### **CALL ANNOUNCE WITH HANDSFREE ANSWERBACK**

The internal speaker at each station provides call-announce capability over the intercom link. A handsfree response to a call-announce call can be made. This response is transmitted by the microphone built into the telephone housing.

### **CALL COSTING AND STATION MESSAGE DETAIL ACCOUNTING REPORTS**

The system provides **built-in**, estimated costing of all outside calls. **It** also provides station message detail accounting (SMDA) printout reports of all costed calls as well as displayed call costs on LCD speakerphones. Call costing, in general, provides a means of establishing costs to be applied to outside calls made from system telephones. Call costing computes charges for a call after it is completed. **It** does not restrict dialing as toll restriction does. Call costs are based on a two-tier time rate and includes a line surcharge cost. Allowances can be programmed for call set-up and minimum call duration. The system provides several ways of determining call costing making it possible to apply reasonable rates for the entire country.

The system is arranged to automatically provide a report whenever the costed call storage reaches 95 percent of **capacity**. Additionally, programming can be effected that causes these reports to be printed automatically at a specific time of day.

There are five different SMDA reports which can be produced:

- Detailed report sorted by stations
- Detailed report sorted by account codes
- Line summary report
  - Department summary report
  - A general output of all records

Upon completion of report printing, all records used for the reports can be deleted. Any call records created between the time the report printout was started and completed will not be deleted. If the reports are not deleted after they are printed, a later command to delete records will delete all records at that point and not just the ones that were printed in the previously generated reports. Programming action can be taken to always delete the records after they have been printed. The attendant has the **ability** to request particular reports to be printed at any time they are required.

Account codes can be established to allow system users to identify calls by category or by any other desired grouping so that costing by that category or grouping can be reported. Department numbers can be defined and stations assigned to different departments so that call cost reports can be produced on a department-by-department basis.

Feature programming is provided in call costing and SMDA Reporting class of service programming. Stations are assigned to specific SMDA departments through station class of service programming. The LCD speakerphone display of costed calls is also enabled through station class of service programming.

### CALL FORWARDING ON ALL CALLS

This feature allows a station user to designate another station or the attendant station as the recipient of all calls normally directed to ring at the user's station. If enabled when night transfer of ringing is activated, the night ringing assignment of the station is also forwarded. Calls that are forwarded to a recipient station can be forwarded again from that station to another station. Thus, two levels of call forwarding on all calls can occur, first, from station A to station B and then, from station B to station C. For each intercom call that is received while calls are forwarded, a short tone burst will occur at the user's station as a reminder that call **forwarding** is enabled. When a programmable button is programmed to serve as a call forward button, the associated LED will turn on when the button is pressed to indicate that the feature is enabled. If the call forward button is programmed as a second level to a **DSS/BLF** button, the LED indication is **always** reserved for BLF indication. On LCD speakerphones that are recipients of call forwarding, the display will indicate the extension

number or station name for the station from which an intercom call was forwarded.

### CALL FORWARDING - PERSONAL

Call forwarding on intercom allows a station user to designate another station number (or the attendant station number) to be the recipient of intercom calls normally directed to that user's station. For each intercom call received while call forward is enabled, a ring reminder (short tone burst) will be sounded at the forwarding station to remind the user that the calls are being forwarded. On LCD speakerphones that are recipients of call forwarding, the display will indicate the extension number or station name for the station from which an intercom call was forwarded.

### CALL PARK

The call park feature is similar to a manual hold condition. A call that is parked from a particular station can be retrieved at any station in the system by dialing the appropriate access code. (Note: the retrieving station cannot have access denied to the line on which the call appears.) Calls are parked and retrieved within the system through the use of dialing codes. The system provides nine parking circuits (orbits). Call park, when used **with** the paging features, allows a system attendant to direct calls to roving personnel. A call that is left in a parking orbit for preprogrammed length of time automatically returns to a timed hold recall condition at the station which originally parked the call.

### CALL PICKUP - DIRECTED

A station user can dial a code, followed by the extension number of a ringing station, to answer the ringing call.

### CALL PICKUP - GROUP

If a call rings to any station in a pre-programmed group and another user in the group wishes to answer the call, that user must dial the group pickup code to answer the call. Four different groups can exist with any number of stations in a group. Overlap is provided by allowing stations to be in more than one group thus enabling those stations to pick up for stations in more than one group. Stations within the system are placed in logical answering groups by programming action. Group stations together using the station class of service programming.

### CALL TRANSFER -SCREENED

Screened call transfer allows outside calls to be transferred from one station to another, via the intercom link, in one of two ways. If both stations have access to the line, a common line pickup transfer can

be effected. If the other station does not have access to the incoming line, transfer can still take place using the system transfer feature. For a screened transfer, a call is transferred to another station **with** a pre-transfer announcement by the transferring party. Transferring calls is accomplished with the TRANS/CONF button. Also refer to the discussion titled: *Call Transfer- Unscreened*.

### CALL TRANSFER - UNSCREENED,

An active call can be transferred to another station without being announced. The transferred call will camp-on to the other station where it will ring and await an answer. The call will automatically ring back to the transferring station after a programmable recall period. There is no limit as to how many calls can be camped onto another station. A transferred call will only ring if the station is idle. The system class of service programming determines the recall time for an unanswered transferred call.

### CALL WAITING TONE

The call waiting tone may be signalled to a busy station to indicate that another station or the attendant wants to contact the busy station. A special code is dialed to activate the tone.

### CALLING STATION IDENTIFICATION ON BLF

If the station number of a calling station has been programmed into the direct station select/busy lamp field (DSS/BLF) of a called station, the caller will be identified by flashing at the corresponding BLF light. The lights also indicate the status of the DSS telephones: dark = idle, steady-on = in use, flash = calling (or ringing when station monitoring is enabled), and flutter = call back request (if feature is available). No class of service programming is required for this feature. Also refer to the discussions titled: *Programmable DSS/BLF* and *Call Messaging*.

### CLASS OF SERVICE PROGRAMMING (FROM MAIN STATION)

Class of service (COS) programming is used by the installer to configure and assign all system, line, station, and special purpose operating features. The installer enters COS programming by dialing an access code over the intercom line. System administrators can enter COS programming with another code to reprogram any system, station, or special purpose operating feature that may require change at a later date. Line reprogramming **ability** is not available through system administration programming. The system attendant can reprogram certain system-wide features that require **periodic** change by entering COS programming with another

code provided for this purpose. The station user can program individual stations for speed dial, **autodial** and direct station selection (DSS) by entering COS with a code provided for that purpose. Thus, COS programming is arranged with a hierarchical order from the highest (the installer) to the lowest (the station user) level **with** a higher level programmer having the ability to do anything a lower level programmer can do without exiting a current programming mode. However, only the station user can program the speed dial and **autodial** locations at telephone.

All class of service (COS) programming is performed from station 10 or 12. Any station and console combination will function in this mode and provide visual feedback with the LED associated with the programming button. By employing an LCD speakerphone, however, the programmer will have the benefit of display prompts and verifications to simplify and clarify the programming procedures. Class of service programming access is as follows:

- Installer dials: **ITCM \* # 7 4 6 \***
- Administrator dials: **ITCM \* # 2 3 6 \***
- Attendant dials: **ITCM \* # 0**
- User dials: **ITCM \* \***

Class of service programming can be performed using instructions provided in Chapter 4, Sections **2, 3** and **4**.

### CLASS OF SERVICE PROGRAMMING (VIDEO DISPLAY TERMINAL)

An asynchronous, serial data terminal with an RS-232 interface can be used to effect class of service programming through menu-driven procedures. VDT programming provides a menu-driven approach to programming as discussed in Chapter 4, Section 5.

### CLASS OF SERVICE PROGRAM PRINTOUT

Connection terminals are provided to interface an RS-232 compatible, asynchronous serial data printer to the system. The connected printer will provide a printout of class of service and toll restriction records. The data printer service class of service programming determines the nature and extent of each requested printout. The system class of service programming specifies the bit-length and baud rate of the data.

### COMMON AUDIBLE RINGER INTERFACE

Connections are available at the common equipment that provides "dry-contact" relay closures whenever an incoming line rings. These contact closures track the ringing pattern and can be used to control an external

## CONFERENCING - ADD-ON

With this feature, a station, operating in a private mode, can add up to four other stations to an outside call.

## CONFERENCING - MULTILINE

This feature will allow one station to access up to four outside lines at the same time resulting in a conference arrangement. Conferencing is established through the use of the **TRANS/CONF** button.

## CONFERENCING - UNSUPERVISED

After a conference between an internal party and a maximum of two external parties has been established, this feature allows the internal party to drop out of the conference by dialing a special code. The conference between the two outside parties continues in an unsupervised condition. Also refer to the discussion titled: *Conferencing - Multiline*.

## DATA SECURITY

This data security feature will prevent any type of tone (DTMF, camp-on, barge-in, etc.) from interrupting a call that is active on a port programmed with the feature. This prevents interference to non-voice communications from occurring when the port is being used as a data port (when operating a modem through an OPX port for, example). Use station class of service programming to enable a data security port.

## DEFAULT FUNCTIONAL PROGRAM

At initial power-up of the system, the operating features are set to a specific group of operating conditions (default conditions). The default conditions provide a complete operating system for normal use. It can be left as a **defaulted** system or reprogrammed as desired. Default conditions can be reset if desired. A system can be defaulted by system, line, and station class of service programming. A master clear will **default** the entire system and erase all stored programmable button information.

## DEFAULT TOLL RESTRICTION

Two toll restriction tables are defaulted with pre-programmed values and are pre-assigned to all lines. The tables need only be assigned to the **stations** by programming action to put them into effect. **The** defaulted tables can be reprogrammed with different information using the normal programming procedure. Assign toll tables to stations using station class of service programming. Reprogram toll tables using toll restriction table configuration class of **service** programming.

## DELAYED RINGING

Pinging assignments are programmable. A station can be programmed to provide delayed ringing on some lines while providing immediate ringing on other lines. Delayed ringing is assigned to certain lines at each station through station class of service programming.

## DEPARTMENTAL CALLING DISTRIBUTION REPORT

The attendant station can request a Departmental Calling Distribution (DCD) report. **The** DCD report will provide a compilation of department call activity. The statistics that are reported are based on the department assignments that are active at the time of the report and are extracted from the SMDR records collected by the system. For a report to be generated, a department must exist. All calls that are included in the DCD report, must meet the following conditions before they are reported as department calls:

- They must be incoming calls. Outgoing calls are not reported in the DCD report.
- The port number of the line which received the call must be one that is assigned to a department.
- The port number of the station which answered the call must be assigned to a department.
- A DCD report consists of the following columns of information:

**Station Number:** The station name or extension number of the station being reported.

**Idle Time:** The amount of time that the station is on-hook and available to answer a call.

**Dept. Calls:** The amount of time spent on incoming calls that rang into the department and calls that were transferred to the department.

**Hold Time:** The amount of time that department calls spent in an on-hold state at a particular station.

**Avg. Dept. Calls:** The average time per call (including on-hold time) that a station spent on a call.

**Wrap-Up Time:** The time that a station spent in a wrap-up mode doing such things as follow-up paperwork. While a station is in a wrap-up mode, it does not receive department calls. The station user sets a wrap-up mode by pressing SHIFT DND and repeats the procedure to clear the wrap-up mode.

**Missed Calls:** The total number of calls that are not answered at a station and that are cycled by the system to another station for answering

Other **Calls**: This is a summation of the time spent on outgoing call activity, incoming call activity on non-department lines, plus all intercom call activity.

**On-Duty Time**: The on-duty time includes a summation of idle time, department call time, wrap-up time, and other call time.

**Off-Duty Time**: The time that a station spent in a do not disturb mode. While in a do-notdisturb condition, a station is not available to receive calls. The station user sets a do-not-disturb mode by pressing DND and repeats the procedure to clear the do not disturb mode.

**Unanswered Calls**: Total number of calls that went unanswered at a department.

**Calls Answered After 36 Seconds**: Total number of calls that waited at least 36 seconds (approximately six rings from the CO) before being answered.

**Calls Handled By Overflow Station**: Total number of calls that were answered and transferred by the overflow station and then answered and serviced by another station.

**Calls Terminated At Overflow Station**: Total number of calls that were received by the overflow station and were either answered but not transferred or were dropped by the caller before being answered.

Also refer to the discussion titled: *Direct Department Calling with Departments Call Distribution (DCD)*.

## DESIGNATED PROGRAMMABLE BUTTONS

**Station** programmable buttons can be assigned to provide one-button access to a broad range of features. There are designated buttons that must be assigned at each station using station class of **service** programming but the auto redial button and response message button are designated programmable buttons that can assigned by the station user.

## DIAL 0 FOR SYSTEM AI-I-ENDANT

The system attendant station (station 10) is signalled whenever the digit 0 is dialed on the intercom line.

## DIRECT DEPARTMENT CALLING WITH DEPARTMENTAL CALL DISTRIBUTION (DCD)

Direct department calling has been enhanced **with** departmental call distribution (DCD) and provides a means by which outside lines can be assigned to one of four different departments. Calls received on department lines and calls that are transferred to a department from within the system search for an idle station in that department. Department calls are distributed evenly throughout the department stations

for answering with individual stations having the ability to be taken out of service as necessary. Calls received on department lines and calls that are transferred to a department from within the system are placed in a queue for servicing. New calls, transferred calls, and held calls are all assigned a time stamp by the system so that they will be serviced in the order of their arrival.

Up to four departments can be formed with up to 16 stations (plus one overflow station) allowed in each one. A station can be assigned to more than one department, if desired. Since a station can be assigned to more than one department, the attendant station can be added to serve as the overflow station for all departments if desired. Separate pilot numbers (extension numbers) can be assigned to each department to be used for making intercom calls or doing call transfers to the department.

The direct department calling feature requires that lines and stations be assigned to a department. It does not require that department lines be assigned to to appear at buttons on department stations. If direct line appearance of a particular department line to a particular department station is required, it can be assigned. If this assignment is made, ensure that neither direct nor delayed ringing is enabled for that line at that station.

An incoming call searches for the first station available to answer a call. **If** all stations in a department are busy or are ring no-answer (RNA), the call will go to the overflow station in that department (if one has been programmed). **If** there is no overflow station programmed, the call continues to try the department stations until **it** is answered or dropped by the caller. The caller continues to receive **ringback** tone until the call is answered. The overflow station can service the call or transfer it back to the department using the department pilot number. When the call is transferred back to the department by an overflow station, it will not return to the overflow station until that station is idle and has no ringing calls either new or transferred. Instead, the call will **camp-on** at the department and wait for a station to become idle. The caller will receive music while on hold if the system is **SO** equipped. To provide reassurance to the caller during ringing it is recommended that a music source be connected to the system. The call will remain in a held state until it is **answered** or until the department transfer recall timeout **period** has ended. When the recall timeout period has ended, the call will return to the transferring **station**.

Intercom calls that are made to the department will test the department stations for busy or a RNA. If all stations are busy, a busy tone is returned to the caller. Intercom calls will not camp-on at the department but will go to the overflow station.

Further, the system camp-on feature cannot be used to camp-on to a department.

Subsequent calls to a department on a particular line always try the next station in the department from whichever station serviced the last call on that line. This means that if department stations 15 and 16 are programmed to answer line **1**, and station 15 services a call, the next line 1 call will ring at station 16. When both stations 15 and 16 are programmed to answer lines 1, 2 and 3, call delivery is on a per line basis: If station 15 handles and completes calls on line 2 and 3 while station 16 is still on line **1**, the next calls on line 2 or 3 goes to station 15 even if station 16 has become idle.

Since the RNA time of a station is a programmable feature, department stations can be set to have a short RNA time to allow a call to search rapidly through a department for an answer.

When an outside or transferred call is ringing at a department station, the station user can press the pre-programmed Do Not Disturb (DND) button to place the station in an off-duty condition. While off-duty, all outside and transferred calls skip to the next department station. This **off-duty** condition remains set until the DND button is pressed again to place the station back in service. When the overflow station is set to DND, all incoming and transferred calls will return to the department queue.

A department station can also be taken out of service and placed in a wrap-up mode to provide the user time for doing such things as follow-up paperwork. While a station is in a wrap-up mode, all outside and transferred calls skip to the next department station. The station user sets the wrapup mode by pressing SHIFT DND and presses these buttons again to clear the wrap-up mode.

It should be noted that the departments formed for use with this direct department calling feature are different from those departments used in SMDA reporting. Assign department transfer recall time (unanswered call transfer recall time feature) using the system class of service programming. Assign lines for direct department calling using the line class of service programming. Assign department stations, access codes to departments (flexible numbering feature), and busy/RNA timeout (call forward - busy feature) using the station class of service programming. Also refer to the discussion titled: Departmental **Calling Distribution** Report.

## DIRECT INWARD STATION DIALING (DISD)

The **DISD** feature allows an external party to call an intercom station **directly** without assistance by the attendant. The **DISD** call must be received on a line which has been specially programmed to allow this feature. Any line can be programmed to be a **DISD** line for both the normal mode of operation and the night transfer (of ringing) mode of operation.

The number of rings which occurs on a **DISD** line before **it** is answered is programmable. By setting a large number of rings, time is allowed for a call to be serviced in a regular manner by stations that have a line appearance for the **DISD** line. Setting the number of rings to 0 disables the line for **DISD** use. If a line is to be dedicated for **DISD** use, **it** is a good practice to set **it** for one ring. The amount of time allowed for an extension number to be dialed is programmable and a **DISD** assist station can be programmed to answer calls that are not completed during this dial time limit. When a **DISD** line is called, it rings for a programmed number of rings. If the call is not answered in a normal manner by a station with the line appearance during this time, the system answers it and presents a **DISD** dial tone to the caller. The **system** then waits for an extension number to be dialed from the calling telephone. Only one **DISD** line is serviced at a time; therefore, an incoming call could ring for more than the programmed number of rings if a **DISD** call is being serviced when a second **DISD** call is received.

When a valid extension number is dialed, a confirmation tone is sounded, the system attempts a transfer, and the called station rings if it is idle. If a called station does not answer within the transfer recall timeout period, the call is returned to **DISD** dial tone. If the called station has the call **forward** feature set, the forwarded station rings. **If** a called station is busy, the call is placed on hold and camped-on at the busy station. **If** the camp-cm is not answered within the transfer recall timeout period, a busy tone is given followed by **DISD** dial tone. The system will return the caller to **DISD** dial tone two additional times and then drop the line (a total of three attempts are made).

**NOTE:** *If the busy called station is part of a hunt group, the **DISD** call is muted to an idle station in the hunt group. **If** no idle stations are found, the call is **camped-on** at the dialed station. **The** hunt group is not followed in the case of a ring-no-answer (RNA).*

If an invalid extension number is dialed, an error tone is sounded before the **DISD** dial tone is returned. If a mistake in dialing is made, the caller can dial a S for a new **DISD** dial tone. The system will return the caller to **DISD** dial tone two additional times and then drop the line. If extension number dialing is not completed within the programmed dial time limit, the call is routed



to the **DISD** assist station if one is programmed; otherwise, the line is dropped. If the assist station is busy (call will camp-on at the assist station) or if the assist station does not answer before the transfer recall timeout period, the system will return the caller to **DISD** dial tone. If extension number dialing is not completed within the dial time limit this time, the line is dropped.

It is recommended that a music source be connected to the system to provide a reassurance to the caller during a camp-on situation when the **DISD** feature is being used.

### **DIRECT STATION CALL HOLD (STATION PARK)**

This feature allows a station user to park a call at a specific station where it will be held without ringing. A feature code plus a station extension number can be dialed over the intercom line to park the call or a programmable button can be programmed to provide a "directed hold" to a specific station. The parked call is picked up by directed station by dialing a feature code. It can be picked up at any station through the use of the call pickup feature. No class of service is required. Also refer to the discussions titled: *Call Pickup • Directed and Call Park.*

### **DIRECT STATION SELECTION (DSS) PROGRAMMABLE**

Refer to the discussion titled: *ProgrammableDSS/BLF.*

### **DISTINCTIVE RINGING**

The ringing cadence of an incoming call is the same as the ringing cadence of **the TELCO**, PBX, or **CENTREX** system. The ringing cadence of an intercom call presents two tone bursts sounded every four seconds.

### **DO NOT DISTURB**

Any station can be set to a do-not-disturb mode (DND) using the designated DND programmable button and associated indicator (indicator will light when DND is active). While in the DND mode, the station will not ring on any incoming call nor will it accept an intercom call. A party making an intercom call to a station set in the do-notdisturb mode hears a fast busy tone. The feature cannot be overridden by the calling party unless the override feature is enabled. The DND feature is used with the departmental calling feature to provide a station wrap-up mode and a station off-duty mode. Refer to the discussions titled: *Do Not Disturb Override, Executive/Attendant Override, and Departmental Calling Distribution Report.*

### **DO NOT DISTURB INHIBIT**

The system can be programmed to inhibit any station from entering the DND mode. System class of service programming is used to program this feature.

### **DO NOT DISTURB OVERRIDE**

Stations can be provided with DND override capability which will allow them to call a station that is set in the DND mode. The Executive/Attendant Override feature must also be active for DND override feature to function. Station class of service programming is used to assign this feature. Also refer to the discussions titled: *Do Not Disturb and Executive/Attendant Override.*

### **DUAL INTERCOM**

This feature provides for two separate intercom lines at the same station. One intercom line is fixed and is accessed with the **ITCM** button. The other intercom line is programmable and is accessed by a programmable button selected for that purpose by class of service programming. Calls are handled on the intercom lines in much the same manner as outside calls are handled using the line buttons. Special considerations are as follows:

- Distant party hang-up causes intercom link to drop.
- Intercom call to station already busy on intercom rings in subdued fashion and flashes indicator associated with other intercom button.
- With both intercom lines busy, a third intercom call **results** in a secure off-hook voice announce (if enabled) at busy station.
- Pressing a DSS button while on an active intercom call will drop the distant party unless the automatic hold feature is enabled for the intercom line through class of service programming. The hold button can be used, however, to place an intercom call on hold before selecting the other intercom line for use.
- Any action taken on the intercom by a station being observed via the service observing feature will cause the observing station to return to an idle state.

The station class of service button mapping procedure assigns a programmable button to **serve** as the second intercom button.

### **DYNAMIC LINE BUTTONS**

Through class of service programming, certain idle line buttons can be arranged to serve as dynamic line buttons. This feature allows the system to temporarily assign a line to a station that normally does not have the line assigned to it, and have that line appear on a dynamic line button. While the call is appearing on the dynamic line button (LED on), any normal call handling

operations can be performed. Station class of service programming allows certain buttons to be programmed as dynamic line buttons

### END-TO-END SIGNALLING ON INTERCOM

After an intercom call has been established, the system can continue to send dialing signals (DTMF tones) through the intercom path. This feature can be performed from every station in the system, and is used by peripherals such as voice mail equipment.

### END-TO-END SIGNALLING ON LINES

After an outside call has been established, the system can continue to send dialing signals (DTMF tones) through the telco network and have them received at the distant end for inward call completion (bank by phone, etc.). This conventional, off-hook dialing feature can be performed from every station in the system.

### EXCLUSIVE HOLD

Exclusive hold prohibits a held call from being retrieved by any other station. The exclusive hold condition also links the held call to the timed hold recall timeout feature. After timeout, audible and visual signalling will occur and the exclusive hold condition will revert to a normal line hold condition.

### EXCLUSIVE HOLD SYSTEM-WIDE ENABLE/DISABLE

This feature allow systems that do not require exclusive hold capability to have it turned off system-wide through programming. System class of service programming is used to enable or disable exclusive hold.

### EXECUTIVE/ATTENDANT OVERRIDE

This feature allows the user of a station, upon encountering a busy signal at another station, to dial a code that will override the busy signal of a call, sound a warning tone, and allow access to the existing conversation. This feature is enabled through station class of service programming.

### EXTERNAL PAGING INTERFACE

A dedicated paging port or a spare line port can be interfaced with an external paging amplifier. The paging amplifier can then be dial-accessed by stations in the system. DTMF tones can be dialed through the line port to provide zone selection if provided by the external paging amplifier. The dedicated paging port does not support any "talk-back" capability even if such a feature is provided by the external equipment. The

line class of service programming arranges a line port for external paging interface.

### FEATURE INHIBIT

A large array of individual features can be disabled system-wide to provide a basic telephone system. A basic telephone system is useful for installation environments where a large proportion of the stations are accessible to unauthorized users thus subject to tampering or for environments where station users must be limited as to the variety of features allowed to them. Features are disabled by system class of service. Once disabled, they can enabled by turning on all features at once using the system default programming.

### FLEXIBLE RINGING ASSIGNMENTS

Ringling assignments are programmable on a per station/per line basis. Pinging can be controlled for every line that has an appearance at each station. Delayed ringing is assigned to certain lines at each station through station class of service programming. Refer to the paragraph titled: Delayed Ringing.

### FLEXIBLE RINGING ASSIGNMENTS OF PA PORT

The PA port can be programmed for flexible ringing assignments and zone pages. Any desired lines can be programmed for direct ring, delay ring, or night transfer (of ringing) at this port. Paging can be to programmed zone or to all-call. A speaker can be connected to the PA port to sound the ringing that is generated by the system and sent to this port and paging announcements when they are sent to the programmed zone. Using such an arrangement, it is possible for a user to determine that certain lines are ringing, such as in a night transfer (of ringing) mode, and go to the nearest telephone and answer the call. The most common use for this arrangement is as a night bell eliminating the need for external equipment as required with the common ringer and auxiliary ringer interface. The speaker cannot be used for voice response as the path is one-way only. Use system class of service programming to assign ringing and paging to a PA port.

### FLEXIBLE STATION AND LINE CLASS OF SERVICE CONTROL

The extension number of a station and all other programmable attributes that are initially assigned to a particular station port and the line, along with all programmable line attributes that are initially connected to a particular line port can be re-assigned to a different port through programming action. This feature allows adds, moves, and changes without

re-locating the station and line wiring. Line and station class of service programming are used to reassign stations and lines. Also refer to the discussion titled, *Auxiliary Ringer Interface*.

### FLEXIBLE STATION NUMBERING PLAN

The system supports a flexible station numbering plan for individual stations. Each station can be programmed to respond to the dialing of any available number between 10 and 7999. This feature may be used to match the calling number of a station located in a pre-numbered area to that area number. A combination of two, three, or four digit extension numbers can be assigned as long as they do not conflict. For example: If 21 is assigned as an extension number, there can not be any other extension number assigned that begins with a 21. The system class of service programming is used to assign extension numbers to individual station ports.

### FULL BUTTON PROGRAMMABILITY OF FEATURES

Most digital communication system features can be made available at programmable buttons by programming the specific access codes necessary for dialing the features. Programmable features include those that can utilize lamp (on/off) supervision (e.g., call park orbits). All feature access codes can be stored, except for those requiring **TRANS/CONF** button action. Continuous strings of digits can be stored, including **ITCM** button presses, up to the maximum amount of storable digits allowed in an **autodial** entry (16).

### HANDSFREE ANSWER INHIBIT

The MUTE button on a station can be used to block all handsfree **answerback** response. This arrangement will prevent a station user from monitoring another station site using the monitoring **ability** of the voice announce feature. When the button is pressed, all handsfree answerback is disabled thus inhibiting any off-site monitoring. The **MNTR** (SPKR) light will flash to indicate that this feature is active. **Also** refer to the discussion titled: **Mute**.

### I HOLD AND I USE INDICATIONS

The light associated **with** a line button provides a **visual** indication of the status of that line. When a station user has a line in-use or on-hold at a station, the light indication provided at that station is of a different flash rate than the indication provided at the other stations in the system. No class of **service** programming is required.

### IDLE LINE PREFERENCE

When a station is programmed for idle line preference, it will automatically be connected to the first assigned idle line. The system can be programmed on a per station basis to enable idle line preference. When idle line preference is enabled, taking the handset off-hook will automatically connect the station to any assigned line that is idle and has been arranged for this feature. The line button will not have to be pressed. If this feature is used in conjunction **with** prime line automatic, the user will be given prime line first when going off-hook. An idle line will be given **if** the prime line is in use. The station class of service programming enables this feature on a per station/per line basis.

### INTERCOM CALL PROGRESS TONES

Intercom call progress is marked by special tones. A steady tone is provided for dial tone. Ring-back tone is one second on and three seconds off. For tone signalled intercom calls, a two-tone burst is sounded every four seconds at a called station and returned to the caller as ring-back. For a voice signalled intercom call, a single tone burst is sounded at a called station. When a called station is busy, a busy signal of one-half second on and one-half second off is received at the calling station. A fast busy tone will be supplied when the called station is in the do not disturb mode. OPX ports are only supplied with the regular busy tone since fast busy tones could interfere with the operation of some accessories that can be connected to this port.

### INTERCOM HUNT GROUP

Station ports can be assigned to intercom hunt groups. When a station that is assigned to a hunt group is busy or is a ring-no-answer (RNA), a call to it will **ring** at the next idle station in the group. A hunt group can be terminal or circular. A call will route down a terminal group from the called station until it finds an idle station or reaches the end of the group. A call will search around a circular group until it encounters an idle station or until all stations in the circular group are searched. The ringing time at any one station is programmable. Hunt groups are created through station class of service programming.

### INTERCOM LINE TIMEOUT

Should the intercom line be selected with no dialing or other action taking place, the intercom will timeout after ten seconds, and return to an idle state.

### LAST NUMBER REDIAL

Each station is provided with a last number redial feature. This feature will save 32 **digits** of the last outside number dialed. A newly dialed number will

always automatically replace a previously dialed number. Upon command, the system will choose a Line and redial the saved number. The system will first choose the prime line if assigned and idle. If it is busy or unavailable, the system will choose any line assigned to idle line preference. If they are unavailable, the system will choose the last line used at the station. If it is busy, no further choice is made. No class of service is required. Also refer to the discussion titled: *Automatic Pause Insertion*.

### LCD MESSAGING

Standard and system-supplied custom display messages can be set by dialing a specific code at any station. Such messages are to be received and displayed by any LCD speakerphone that calls the station which set the message. When a message is set, the intercom light at the setting station will flash to indicate that the feature is active.

### LCD SUPPORT

The system supports the use of digital telephones having a Liquid Crystal Display (LCD). The display is capable of providing the station user with a visual presentation of: call cost, call duration, number dialed, name of called station, name of active feature, date and time, and programming prompts.

### LINE ACCESS RESTRICTION

Refer to the discussion titled: *Access Denied*.

### LINE ANSWER FROM ANY STATION (NIGHT MODE)

When the attendant programs the system for nighttime operation using the night transfer of ringing feature, the line answer from any station feature is made active. With this feature, a user can dial an access code over the intercom line to allow him to answer any ringing outside line. The line need not be ringing at the user's station for this feature to be used.

### LINE GROUPS

Outside lines can be grouped together in up to four different groups. Each group is accessible through a unique dialing code or automatically selected with the programmable **autodial** feature. Grouping can reserve certain lines for certain clusters of stations as in a **tenant-service** arrangement. The assignment of line groups frees station buttons normally used for line selection thus making these buttons available for use with a feature such as personal **DSS/BLF** with station-to-station messaging. Lines are placed in line groups **with** the line class of service programming.

### LINE PRESELECTION

A line can be manually selected before lifting the handset (for handsfree dialing) or after the handset is lifted.

### LINE AND LINE GROUP QUEUING

With the line queuing feature, the station user can take action that will place a station in a queue where it awaits the availability of a line or line group. The station is automatically signalled with five tone bursts when the line is available to it for use. Each station can queue one line at a time.

### MANUAL HOLD

A button activated feature at each station will place an outside line on hold. Pressing the HOLD button holds the call, provides a distinctive flash rate of the line button indicator, and allows the user to access other station features. The holding station or any other station that has access to the line can retrieve the held call.

### MEET-ME ANSWER PAGE

Any station user can dial a special code number in response to an all-call or zone page and be connected to the paging party in a private conversation. **All-call** or zone paging is provided to the stations through the station class of service programming.

### MEMORY RETENTION WITHOUT BATTERIES

The system memory is electronically protected during AC power failures by an electronic device sometimes known as a "super cap." The stored program data will remain in **memory** for a minimum of **65** hours provided that the system has been powered continuously for at least 30 minutes prior to the power failure or disconnection. Also, the system clock will continue to run and keep time for at least 30 minutes after an AC power failure or disconnection.

### MESSAGE WAITING

Special feature access codes enable a station user to control the message waiting (**MW**) light at other stations in the system. When the message waiting light is turned on at a station, a call can be automatically placed to the station that turned it on.

Alternately, one station can be designated by COS programming as the central message desk and can be arranged for exclusive message waiting control. The central message desk can be used to control message waiting lights and deliver messages to and from all other stations in the system. The **ability** of a station to originate a message waiting signal is enabled by programming action. Station class of service

programming provides a station with the ability to originate a message waiting signal and is used to create a central message desk.

### MODULAR WIRING AND JACKS-R-OR 4-CONDUCTOR WIRE SYSTEM

The system can be completely interconnected by employing industry standard **50-pin** connectors and modular plug/jack combinations. Station wiring is small, **2-conductor**, twisted-pair cable throughout the system. A **4-conductor** twisted-pair cable can be employed if a spare pair is required for a separate wiring purpose.

### MUSIC INTERFACE (EXTERNAL SOURCE REQUIRED)

A jack is provided on the common equipment for the connection of a customer-provided music source. Also refer to the discussions titled: *Background Music* and *Music-On-Hold*.

### MUSIC-ON-HOLD

Music is provided to outside lines that are placed on hold if an external music source is connected to the system. Refer to the discussion titled: *Music Interface*.

### MUSIC-ON-HOLD SYSTEM-WIDE ENABLE/DISABLE

Music is provided to outside lines that are placed on hold if an external music source is connected to the system. Music-on-hold can be disabled system-wide by attendant action. Also see discussions titled: *Music Interface* and *Music-On-Hold*.

### MUTE

Each station has a MUTE button which, when pressed, will mute the handset transmitter (or internal microphone on speakerphones) to prevent the user's voice from being heard by the distant party. The MNTR (SPKR) light flutters to indicate a muted condition. The button provides push-on/push-off operation on speakerphones. No class of service is required. Also refer to the discussion titled: *Handsfree Answer Inhibit*.

### NIGHT TRANSFER (OF RINGING)

Night transfer (of ringing) is an attendant-controlled feature that transfers the day ringing program of all incoming calls to a particular station or stations for off-hour or special purpose answering. The **night** transfer mode can only be activated from station 10 or 12. The individual lines at each station that are to be transferred with this feature are selected by station class of **service** programming.

### ON-HOOK DIALING

Every station provides manual and/or automatic dialing while the station handset is on-hook. An internal speaker monitors call progress for completion. (The handset must be taken off-hook to provide the voice link on non-speakerphone stations.)

### ORIGINATING DENIED

The ability to originate calls on certain lines can be denied at individual stations through system programming. The originating denied feature is programmed on a per station/per line basis. Originating denied does not prevent a user from answering a ringing line, retrieving a held call or receiving a transferred call. Call origination on a line is denied at a particular station by the station class of service programming.

### PBWCENTREWCO COMPATIBLE

System features and programmable buttons support the requirements of most **PBXs**, Central Offices, and **CENTREX** systems. Numbers, # 's, s's, programmable pauses, and flash signals can be made a part of every stored number for access to host system feature codes.

### PERSONALIZED RINGING TONE

This feature allows a station user to choose one of four different ring tones to aid in distinguishing one ringing station from another.

### POOLED LINE ACCESS (GROUP LINE ACCESS)

Users can dial a special access code instead of pushing a line button to access one of up to four different groups of lines. Lines are arranged into groups **with** the line class of service programming.

### POWER FAILURE TRANSFER

A power failure line connection is available for connecting industry-standard telephones such as a **Comdial** model **2500**. The power-fail telephone is automatically connected directly to a certain line whenever there is an AC power failure. Normal origination and reception of calls on a power-fail station is possible during the power failure condition. The power-fail stations will automatically disconnect as soon as power is restored.

### PRIME LINE AUTOMATIC

If a station is programmed for prime line automatic, the designated outside line, intercom line or line group will be automatically selected when the handset is taken

off hook. Prime line pickup may be pre-empted by preselecting another line before lifting the handset. If the prime line is ringing, it is automatically answered by lifting the handset. Prime line automatic is assigned to a station through station class of service programming.

### PRIVACY • DESIGNATED PROGRAMMABLE BUTTON

Stations can be programmed to provide a privacy button. If a line is private, a user can press the privacy button to change it into a non-private one. If the line is non-private, pressing the button will have no effect. Station class of service programming is used to program the programmable button function at the stations.

### PRIVACY RELEASE/ BROKERAGE SERVICE

See the discussion titled: *Privacy • Designated Programmable button*

### PRIVATE LINES (ACCESS DENIED)

See the discussion titled: *Access Denied.*

### PROGRAMMABLE DSS/BLF (DIRECT STATION SELECTION/BUSY LIGHT FIELD)

A station user can store one-button, direct station selection (DSS) at any memory button location to create a DSS memory button. When this button is pressed, any active outside call is automatically placed on hold and an intercom call is automatically made to that previously stored station number. The visual indicators of the stations programmed at the button locations form a busy lamp field (BLF). The BLF conveys station status to the user. An **autodial** number can also be programmed as a secondary function at every **DSS/BLF** memory location. No class of **service** is required. **Also** refer to the discussion titled: *Tone Or Voice Signalling (intercom).*

### PROGRAMMABLE BUTTONS

Refer to the discussions titled: *Full Button Programmability Of Features, Programmable DSS/BLF, and Dedicated Programmable buttons.*

### PULSE/TONE SWITCHABLE

The system can be programmed on a per line basis to allow the stations to switch from pulse to DTMF type dialing as needed. Aftemately, the system can be programmed to only allow tone dialing. The line class of service programming sets the dialing mode required for a particular line.

### RESPONSE MESSAGING

This feature allows a user to reply in a non-verbal manner to a voice announce or tone-signalled intercom call or to a secure off-hook voice announce call if the intercom caller is using an LCD speakerphone. A station user can press a programmable button in response to an intercom call and send a message to be shown on the display of the calling station. Response messages are pre-programmed by the attendant and later stored by station users at programmable buttons on their individual stations as need dictates.

### REMOTE PROGRAMMING AND ADMINISTRATION

Both remote class of service programming and the transmission of SMDR data for printing are available through serial data ports. The system supports X-on X-off terminal control codes as well as a DTR signal for handshaking. The system data communications operates per the popular XMODEM protocol. The database can be uploaded or downloaded, error free, from or to a remote computer that is running software that supports the XMODEM protocol. The two serial data ports allow VDT programming (either local or remote) to be conducted through one port at the same time that the other port is being used to send SMDR data for printing. VDT programming of the system is menu driven.

### RINGING LINE PREFERENCE

The system can be programmed on a per station basis to provide ringing line preference on all lines programmed for ringing at the station.

When ringing line preference is enabled at a station, taking the handset off-hook automatically connects the station to any outside line that is ringing at it. A line button will not have to be pressed. If a station also has prime line assigned, the prime line will **always** be answered first even though it may be the second line to ring. The **ability** of a particular station to answer a ringing line without line selection is enabled by the station class of service programming.

### SAVED NUMBER REDIAL

This feature enables a button action to save the first 16 digits of the last number manually dialed from the buttonpad. The saved number can be redialed at a later time. The saved number is permanently available for later use until it is replaced with a new number.

### SECURE OFF-HOOK VOICE ANNOUNCE

**With** the secure off-hook voice announce (SOHVA) feature, a secure announcement can be made from one station to another station that is off-hook and busy

on a call. A station being operated in a handsfree mode cannot receive a SOHVA **With** SOHVA, the announcement is delivered and responded to in a secure manner that prevents the distant party from hearing either the announcement or the response. The announcement is preceded with a tone alert and is delivered to the handset receiver of the telephone. The announcing caller receives a tone alerting them that they are making a SOHVA call. Response to the announcement can be verbal or non-verbal. Verbal response is effected by pressing and holding the **MUTE** button and speaking into the handset. Non-verbal response is effected by pressing a pre-programmed programmable button to send a message to be shown on the display of the announcing station (if it is an LCD speakerphone). The announcing station is automatically disconnected after the message is delivered to **it** (and displayed if an LCD speakerphone). Stations that have the voice announce blocking feature turned on cannot receive a SOHVA Station class of service programming is used to disable the SOHVA feature at a station port if desired.

**SECURE OFF-HOOK VOICE ANNOUNCE ORIGINATE BUTTON**

This feature allows a telephone user to program a button at their station that must be pressed to enable the delivery of a SOHVA call. This SOHVA enabled button allows the caller, after hearing a busy signal, to decide whether the called party should be interrupted in a SOHVA manner. If they should, the button can be pressed and a SOHVA call completed. This button, along with SOHVA groups allows system users greater control of the callers that are allowed to make a SOHVA call and of the situations that SOHVA calls are allowed. Refer to the discussions titled: *Secure Off-Hook Voice Announce, and Secure Off-Hook Voice Announce Groups.*

**SECURE OFF-HOOK VOICE ANNOUNCE (SOHVA) GROUPS**

The ability of a station port to originate an&or receive SOHVA calls can be arranged by class of service programming with the assignment of SOHVA calling groups to station ports. This means that certain station ports can be arranged together for SOHVA calling between one another while other station ports in the system are excluded from this group.

Eight different SOHVA groups are provided by the system. They are fixed into a variety of SOHVA receive/originate configurations. One SOHVA group can be assigned to each station port to allow or to deny SOHVA receive and/or originate capability to **it**. By properly assigning SOHVA groups to station **ports**, SOHVA paths between stations can be opened or

blocked.

**The system is defaulted with no SOHVA groups assigned. When a station port does not have a SOHVA group assigned to it. It can originate SOHVA calls to any station port and receive SOHVA calls from any station port.**

SOHVA groups are **fixed** by the system into the following configurations:

SOHVA GROUP	GROUP CONFIGURATIONS							
GROUP 1	1	2	3	4	5	6	7	8
Receive From	X							
Originate To	X	X	X	X				
GROUP 2	1	2	3	4	5	6	7	8
Receive From	X	X						
Originate To		X	X	X				
GROUP 3	1	2	3	4	5	6	7	8
Receive From	X	X	X					
Originate To			X	X				
GROUP 4	1	2	3	4	5	6	7	8
Receive From	X	X	X					
Originate To								
GROUP 5	1	2	3	4	5	6	7	8
Receive From					X			
Originate To					X			
GROUP 6	1	2	3	4	5	6	7	8
Receive From						X		
Originate To						X		
GROUP 7	1	2	3	4	5	6	7	8
Receive From							X	
Originate To							X	
GROUP 8	1	2	3	4	5	6	7	8
Receive From								X
Originate To								X

**Example 1:** Allow station port 10 to originate SOHVA messages to all stations in the system and allow those stations the ability to originate SOHVA messages to each other but not to station port 10. Assign group 1 to station port 10 and assign group 2 to all other station ports.

**Example 2:** Allow station ports **14** and 15 to receive and originate SOHVA calls between each other but deny both receive and originate capability from any other system stations. Assign group 8 to both station **port 14 and** station port 15. Do not assign group 8 to any other station port **but be sure that all station ports have a group assigned to them.**

The SOHVA groups are assigned in station class of service programming. **Also** refer to the discussions titled: *Secure Off-Hook Voice Announce, and Secure Off Hook Voice Announce Button.*

## SELF DIAGNOSTICS

Each station can execute a self test when so enabled. This test verifies processor, indicator, and tone functions.

## SERVICE OBSERVING

Service observing allows a third party to enter an in-progress call in an unannounced muted mode to monitor the conversation. There will be no warning tones sounded when the call entry is made. This feature is useful in allowing a supervisor to monitor the performance of an employee during a phone conversation with a client. For a station to provide the service observing feature, the executive override feature is automatically enabled when the service observing feature is enabled. Service Observing can be blocked by class of service programming on a station basis. Use station class of service programming to give a station service observing (and executive override) or block this feature.

## SPEAKERPHONE SUPPORT

The optional speakerphone provides handsfree operation of all features, except voice-signalled intercom calls. The handset must be lifted for this purpose.

## SQUARE/NON-SQUARE CONFIGURATION

A system can be programmed to be square or non-square as desired. In a square system, the line 1 buttons of all telephone stations select line 1, the line 2 buttons select line 2, etc. In a non-square system, each line select button at every station may be assigned individually to select any line. Button mapping for line appearance can be performed on each station using the station class of service programming.

## STATION BY STATION PRIVACY

See the discussion titled: *Automatic Privacy*.

## STATION MESSAGE DETAIL ACCOUNTING (SMDA)

See the discussion titled: *Call Costing and SMDA Reporting*.

## STATION MESSAGE DETAIL RECORDING (SMDR)

The SMDR feature generates a call record for printing as soon as the record is collected by the system. The call record is presented at an W-232 level as ASCII transmit data in an **80-column** format at the data port available for that purpose. Refer to the discussion titled: *Call Costing and SMDA Reporting*.

## STATION MONITORING WITH DSS CALL PICKUP

The busy lamp field (BLF) of a station can provide visual indication of the idle, busy, and ringing status of monitored stations. Audible indication of direct and delayed ringing can also be provided if visual ring indication is enabled.

A one-button pickup of a ringing call at a **monitored** station can be made at the monitoring station by pressing the direct station selection (DSS) button associated with the ringing station.

The flashing BLF lights associated with visual ring indication can be enabled or disabled on a system-wide basis. When enabled, the audible indication of ringing can then be enabled on a station-by-station basis. Enable or disable visual ring indication on a system-wide basis with system class of service programming. Enable or disable audible ring indication on a station-by-station basis with station class of service programming.

## STATION SPEED DIAL

Each station can be programmed to provide 10 speed dial numbers at the buttonpad buttons. Station speed dial numbers can be up to **16** digits in length and can include line or intercom selection, numbers, **#**, **S**, pauses, and flash signals. A pause is stored each time the HOLD button is pressed, and a flash signal is stored each time the TAP button is pressed.

## STATION-TO-STATION MESSAGING

If a station has a **DSS/BLF** appearance at another station, a callback message indication can be left at that station with the **DSS/BLF** appearance. By dialing a special code, the BLF light at the called station that is assigned to the calling station can be activated. This **light** indicates that a callback is requested. The light is automatically turned off **if** a successful callback is made.

If a station number is not programmed for a **DSS/BLF** appearance at another station, attempting to place a call back message will cause the central message desk station to ring. **If** there is no central message desk assigned, no action will occur.



## SUBDUED RINGING

When a station is busy on a call and another call comes to the same station, the ringing of the second call will automatically be subdued to a lower volume.

## SYSTEM ALARM REPORTS

The system can be arranged to report alarm and status conditions to a particular station or stations that have been enabled to receive them. The station must be an LCD speakerphone for this feature to be used. When enabled to receive alarms, the station user can take appropriate action to cause the alarm codes to be presented on the LCD display. System and station class of service programming are used to enable this feature.

## SYSTEM SPEED DIAL

Ninety-nine system-wide speed dial numbers are provided. The system speed dial numbers can be up to thirty-two digits in length, and can include numbers, # 's, S's, pauses, and flash signals. System speed dial numbers are programmed at station 10 or 12 for use at every station in the system. No class of service is required.

## TANDEM ATTENDANT

When the tandem attendant feature is enabled, a recall from an unanswered call transfer or a timed hold recall will ring at the normal attendant station (station 10) that set the transfer or hold condition, and also at the tandem attendant station (station 12). System class of service programming is used to enable the tandem attendant mode.

## TAP (FLASH)/RECALL

When host system custom calling features are available via a hookflash signal, the system can be programmed so that the TAP (RECALL) button will generate a "flash" signal when it is pressed. When custom calling features are not available, the TAP (RECALL) button functions as a positive disconnect, or dial tone, recall button. These two features are mutually exclusive. The **flash/recall/tap** time is assigned through system class of service programming.

## TENANT SERVICE

One telephone system can be used for multiple tenants at a location by having flexible line appearance at each station. Button mapping for line appearance can be performed on each station using the station class of **service** programming. Refer to the discussion titled: Square/Non-Square Configuration.

## TIMED HOLD RECALL

After a call has been on hold for a programmed length of time the system will recall the station that placed the call on hold. The system class of service programming sets the timed hold recall time period.

## TOLL RESTRICTION (0 AND 1)

See the discussion titled: *Toll Restriction (flexible)*.

## TOLL RESTRICTION (FLEXIBLE)

System toll call restriction can be configured to prohibit some or all stations from calling a wide range of number combinations. The restricted numbers are specified on up to 16 tables. The system assigns several broad-range values to two of these tables, and assigns the tables to all lines as a default condition. The default tables need only to be enabled on a per station basis to activate the default toll restriction.

In general, toll restriction works as follows:

The programmable tables of restricted numbers contain up to four entries with each entry containing up to 16 digits.

Each table of restricted numbers can be programmed to be an "allow" table or a "deny" table with entries in an "allow" table overriding entries in a "deny" table. This arrangement allows exceptions to toll restriction to be enabled. For example, the dialing of **1-800-xxx-xxxx** numbers can be allowed even though the dialing of all 1-xxx-xxx-xxxx numbers is denied.

A "match anything" symbol (# ) can be stored to represent any digit from 0 to 9. The programmed toll restriction tables are individually assigned to each appropriate station and line. When an outside call is dialed, the system examines the dialed number and makes a comparison between **it** and the toll restriction tables. Any tables assigned to BOTH the station being used and the selected line determine the restrictions to be imposed.

Dialing a restricted number on a restricted line from a restricted station will cause the line to be automatically disconnected from the station.

Toll table class of service programming is used to create the tables of restricted numbers.

## TOLL RESTRICTION (NIGHT MODE)

Toll restriction tables that will only take effect when the system is in the night transfer (of ringing) mode, can be assigned to any or all stations in the system. These toll tables replace any that may be assigned to the station during normal, or day mode, operation. For example: A station that has no other toll restriction table assigned to it can be programmed to receive a toll restriction table which will restrict everything but

local calls and will only take effect when the system is placed in the night transfer (of ringing) mode. Therefore, even though toll calls can be made **from** this station during daytime operation, no toll calls can be made from it when the attendant programs the system for nighttime operation using the night transfer of ringing feature.

*NOTE This night mode **toll** restriction table assignment should not be confused **with the** night transfer (of ringing) feature.*

Toll restriction class of service programming is used to program the night mode toll restriction tables and to assign them to the stations.

### **tone or voice SIGNALLING (INTERCOM)**

Intercom calls can be tone signalled or voice signalled as desired.

Programming determines the signalling method employed as the primary method when an intercom call is made. The **alternate** method is available through user action at the station. Intercom call progress is marked by special tone signals. **Also** refer to the paragraph titled: **Intercom Call Progress Tones**. The system class of service programming determines which type of intercom signalling is first option signalling for the system.

### **TRANSFER/CONFERENCE BUTTON**

A fixed button is provided that gives quick, easy transferring and conferencing.

### **UNANSWERED CALL TRANSFER RECALL TIMING**

A transferred call that is unanswered after a pre-programmed length of time will return to the station that transferred it. The system will return the call to both attendant stations when the tandem attendant feature is enabled. When LCD speakerphones are employed, the display will show the station number or name as well as the line number that is being recalled. The system class of service

programming determines the recall time for an unanswered call transfer. Refer to the discussion titled: **Tandem Attendant**.

### **VOICE ANNOUNCE BLOCKING**

This feature allows station users to block voice announced intercom signalling by pressing a programmable button programmed for that purpose. The programmable button used to block voice signalling is enabled by station class of service programming.

### **VOICE MAIL TRANSFER ON BUSY**

When using ExecuMail, a busy station may desire to be alerted if ExecuMail is attempting to transfer a call to that station. This feature allows a station to be programmed for this option. With this option, when ExecuMail tries to transfer a call to a station that is busy on a call (outside or intercom call) and the station has an available intercom line (stations can be programmed to have a second intercom), the intercom will ring subdued. The call can be picked up by pressing the button of the ringing intercom line. In general, attendants will probably desire this feature so they can handle multiple calls, while other station users may prefer to have a message taken when they are already busy on a call.

### **ZONE PAGING (VIA STATION SPEAKERS)**

Zone paging allows groups of stations to receive announcements through the station speakers. The programming can enable zone paging in up to four different zones. Zone paging can also be received at the paging **port** where it can be connected to the input of an external paging amplifier. The **ability** of each station to originate and/or receive a page and the arrangement of the paging into different zones are **controlled** by station class of service programming. Zone paging through the paging **port** is enabled by system class of **service** programming. Also refer to the discussion titled: **All-Call Paging (Via Station Speakers)**

## CHAPTER 3 INSTALLATION

### SECTION 1 STANDARD INSTALLATION DETAILS

#### MOUNTING CONSIDERATIONS

- The common equipment cabinet should be attached vertically to any sturdy, flat surface. It may be vertically rack-mounted if desired.
- The cabinet must be located within six feet of a proper electrical outlet. The system requires a dedicated **117VAC** 15 AMP circuit, with a third-wire ground, supplied to a standard electrical outlet (NEMA 5-15R).
- The distance between the common equipment and the TELCO/PBX jacks must be 25 feet or less as per FCC requirements. A nominal distance of 7 feet is recommended.
- The mounting location must be secure and dry and have adequate ventilation. The temperature range of the location must be within 32-1 22 degrees F (0-50 degrees C), and the relative humidity must be less than 90 percent non-condensing.
- If the mounting surface is damp or if it is concrete or masonry material, a backboard must be attached to the mounting surface to be used for common equipment mounting. Suitable mounting backboards are available commercially or can be constructed out of **1/2-inch** plywood cut to size.

#### SPECIAL MOUNTING CONSIDERATION

When the battery back-up is to be included as part of the installation, the optional external batteries, cable assembly, the common equipment, and the wiring connections must be located in a dedicated equipment room (as defined in the National Electric Code published by The National Fire Protection Association, Quincy MA, 02269).

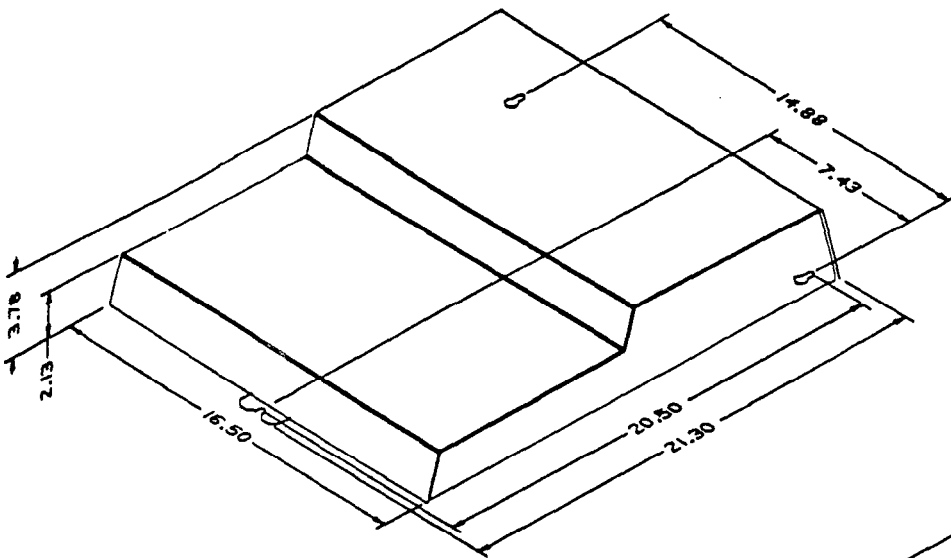
#### TOOLS AND HARDWARE

- Fasteners - wood screws (**1/4** x 1 -inch round head), toggle bolts, or -wall anchors
- Screwdriver-to match fasteners
- Electric drill - if prepared holes are required

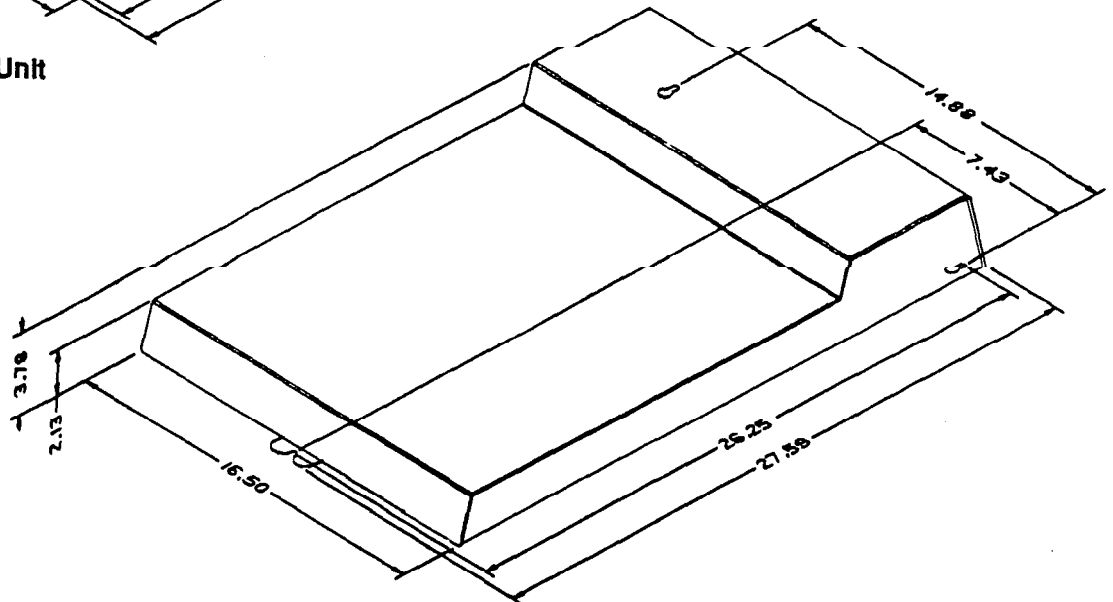
- Connecting tool - for fastening wires to a type-66 connector block.
- Crimping tool - for 623-type modular plugs

#### MOUNTING PROCEDURE

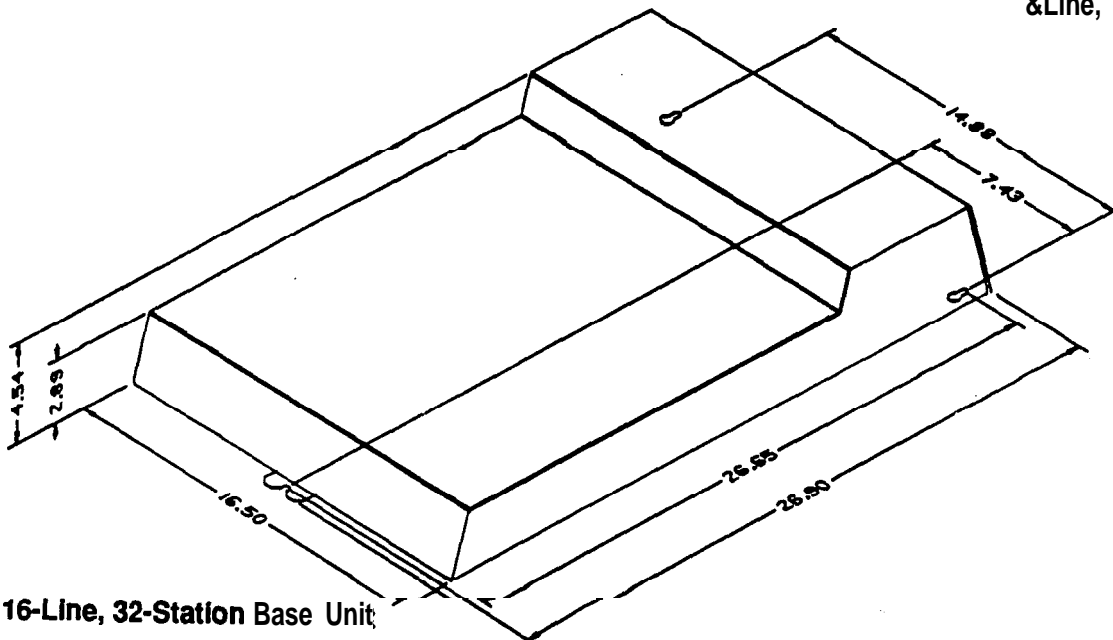
1. Unpack and carefully inspect all equipment for shipping damage. Notify the shipper immediately of any damages found. Verify that the packages contain all parts and accessories needed for proper installation and operation.
2. If a backboard is required at the mounting location, attach it securely to provide a stable mounting surface for the equipment.
3. Refer to **Figure 3-1** for the locating dimensions required for the three mounting screws, and mark their locations on the mounting surface.
4. Drill holes in the mounting surface of a proper size to accommodate the hardware being used. If necessary, prepare these holes with inserts, anchors or other attachment devices as dictated by the type of mounting surface.
5. Insert the two top screws into the mounting surface and tighten them to within approximately **1/8-inch** of the surface.
6. Hang the cabinet on the top screws using the mounting holes located on the rear of the cabinet. Note that these holes are elongated with an enlargement at one end. This feature allows the cabinet to snap down on the screws to secure the mounting when the cabinet is hung on them.
7. Insert a third screw through the mounting tab located on the lower edge of the cabinet and into the mounting surface, and tighten it into place.
8. Place the individual telephone stations as desired and in keeping with accepted industry and off ice standards. A telephone station can be wall mounted if necessary as they are desk/wall reversible. Refer to Chapter 6, Maintenance, for instructions in preparing a desk/wall reversible station for wall mounting.



4-Line, 8-Station Base Unit



8-Line, 16-Station Base Unit



16-Line, 32-Station Base Unit

Figure 3-1. Mounting Dimensions

### AC POWER CONNECTION

Employ a dedicated **117VAC** 15 AMP circuit, with a third-wire ground, supplied to a standard electrical outlet (NEMA **5-15R**) for the AC power connection. A c power connection is illustrated in **Figure 3-2** shown below.

- A plug-in power line surge protector should be installed between the power cord and the AC outlet.
- Do not connect the AC power cord until the installation has been checked.
- To apply AC power, connect the power cord to the electrical outlet.

### BATTERY BACK-UP

The common equipment provides an interface connector for the connection of an optional external battery assembly. This assembly is available separately as a kit.

#### CAUTION

**Be sure that the AC power cord is connected to the electrical outlet before connecting the external battery assembly to the common equipment interface connector. This ensures that internal protection circuitry is operating to prevent damage that could result from improper connection.**

- The optional Comdial model BBU02 external battery assembly provides a minimum of one hour of operation should the AC power to the system be interrupted. The BBU02 assembly has a 15 ampere-hour current rating. The BBU02 external battery assembly may include batteries from either of the following suppliers:
  - Model **PS-12150** from Power-Sonic Corporation, Redwood City CA, 94032.
  - Model **PE12V15** from **GS PORTALAC, City Of Industry CA, 91748**

The minimum battery backup time for a fully configured system can be calculated. The formula for doing this is:

$$T = \frac{Ke}{1 + [(0.1) (N)]}$$

**T** = Back-up time in hours

**K** = Constant

0.9 for CO408 with or without a CM408 module

0.8 for CO816 with or without CM408 modules

0.8 for CI 632 with or without CM408 modules

**e** = Ampere-hour capacity of battery (BBU02 = 15)

**N** = total number of stations

#### Example:

Assume that a CI 632 system plus two CM408 modules are installed along with a BBU02 battery assembly to provide back-up power.

$$T = \frac{(0.8) (15)}{1 + [(0.1) (48)]} = 5.8 = 2.1 \text{ Hours}$$

- During AC operation, the common equipment provides re-charging current to maintain the voltage potential of the external battery assembly at an operational level. The charging circuit may not provide an adequate charge if an installed battery assembly has a current rating of greater than 40 ampere-hours.

**NOTE:** *The optional BBU02 external battery assembly requires **approximately 10 hours** to completely re-charge **to full potential** after **it** has been completely discharged and, in some cases, when initially installed.*

### SYSTEM GROUNDING

The common equipment cabinet has internal secondary surge protection on all line ports. In order for this protection to **be** effective, the cabinet **MUST** be connected to a reliable earth ground such as a metal cold water pipe or a building frame ground. The grounding wire must be of **#10** or **#12** insulated, solid copper and separate from the three-wire AC line cord. A ground stud is located on the common equipment cabinet for this purpose. System grounding is illustrated in **Figure 3-2**,

**FUSE :**  
 4-LINE, 8-STATION BASE UNIT: 1 AMP 250V SLOW BLOW FUSE  
 8-LINE, 16-STATION BASE UNIT: 3A 250V SLOW BLOW FUSE  
 16-LINE, 32-STATION BASE UNIT: 3A 250V SLOW BLOW FUSE

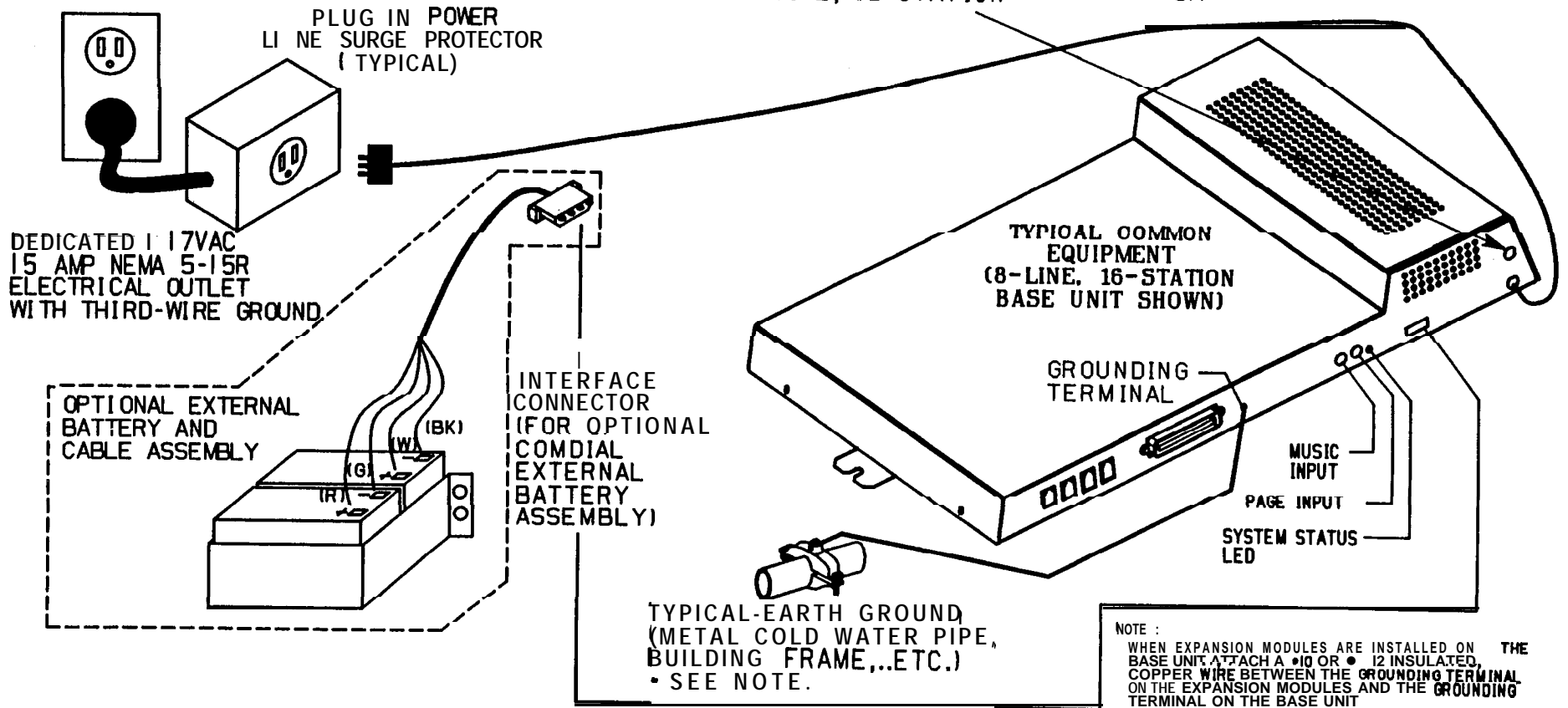


Figure 3-2. AC Power Connection And System Grounding

## LINE CONNECTIONS

The line terminations for the common equipment cabinet are standard modular plug/jack connections. Each modular jack provides termination for two lines. Modular line jacks 1 and 2 also provide termination for an auxiliary pair in addition to the two outside lines. The outside line termination can be a type **66M-xx** connector block or individual 6-position modular jacks. The line cord that is routed between the outside line termination and the common equipment termination should be twisted-pair wiring. Table 3-1 shows the line connection details for all three of the common equipment base units. Figure 3-4 illustrates typical line connections.

Transient voltage spikes, if induced onto CO or **CENTREX** lines, can travel through the cable and into the common equipment. The telephone company offers basic protection against this condition but it is usually designed to protect the central office circuits. While it will also provide some protection to the common equipment, it should not be relied upon for total protection. To help ensure that external overvoltage surges do not damage the system, it is recommended that gas discharge tubes, or similar primary protection devices, be installed and properly grounded on all lines.

The outside line that is initially connected to a particular line port along with all programmed attributes, can be reassigned to a different port by programming action. This feature allows adds, moves, and changes to be made without relocating the line wiring. Refer to Chapter 4, page 4-19 for line to line port re-assignment.

Add-on expansion modules are available to expand line capacity. Refer to Section 3 for complete details.

## STATION CONNECTIONS

The system supports the operation of the following digital station types:

- Comdial Digital Multiline Telephone
- Comdial Digital LCD Speakerphone

Connections between the common equipment and the stations are typically via type **66M-xx** connector blocks which are cable connected to the common equipment **50-pin** male connector. The connector block is, in turn, wired to modular jacks which the stations connect to through the line cord. The maximum distance allowed from the common equipment to the stations is 1000 feet using **#24** gauge, twisted-pair cable.

If spare conductors exist in the cables that are run between the **66M-xx** connector blocks and the station jacks, it is a good practice to connect them to earth ground as a preventative measure against radio frequency and/or AC interference.

Only one station should be connected to a station port. Do not bridge two stations to a single modular jack.

Table 3-2 shows the station connection details. Figure 3-5 illustrates typical station connections.

The extension number and all other programmable attributes of a station that are initially assigned to a particular port can be re-assigned to a different port by programming action. This feature allows adds, moves and changes to be made without re-locating the station wiring. Refer to the automatic station relocation programming procedure found on page 4-10 and the station-to-station programming procedure found on page 4-50.

**NOTE:** *The station 10 to station port 10 assignment can nor be relocated.*

Add-on expansion modules are available to expand station capacity. Refer to Section 3 for complete details.

## CABLE CLIPS

Each cabinet-mounted **50-pin** male connector is equipped with a retaining clip. This clip is designed to secure the mated connection once it is made. The clip does this by snapping into a slot on the cable-mounted connector when it is pressed together with the cabinet-mounted connector. This retaining clip must be pulled back slightly to unsnap it before the connectors can be separated.

Table 3-1 Line Connections

COMMON EQUIPMENT	LINE JACK	PIN NO.	CONNECTION	TELEPHONE NUMBER
4 Line, 8 Sta. Base Unit 8 Line, 16 Sta. Base Unit 16 Lhr, 32 Sta. Base Unit	1	1	Auxiliary 1 (Line 2) TIP	
		2	Line 2 TIP	
		3	Line 1 TIP	
		4	Line 1 RING	
		5	Line 2 RING	
		6	Auxiliary 1 (Line 2) RING	
	2	1	Auxiliary 2 (Line 4) TIP	
		2	Line A TIP	
		3	Line 3 TIP	
		4	Line 3 RING	
		5	Line 4 RING	
		6	Auxiliary 2 (Line 4) RING	
8 Line, 16 Sta. Base Unit 16 Line, 32 Sta. Base Unit	3	1	No Connection	
		2	Line 6 TIP	
		3	Line 5 TIP	
		4	Line 5 RING	
		5	Line 6 RING	
		6	No Connection	
	4	1	No Connection	
		2	Line 8 TIP	
		3	Line 7 TIP	
		4	Line 7 RING	
		5	Line 8 RING	
		6	No Connection	
6 Line, 32 Sta. Base Unit	5	1	No Connection	
		2	Line 10 TIP	
		3	Line 9 TIP	
		4	Line 9 RING	
		5	Line 10 RING	
		6	No Connection	
	6	1	No Connection	
		2	Line 12 TIP	
		3	Line 11 TIP	
		4	Line 11 RING	
		5	Line 12 RING	
		6	No Connection	
	7	1	No Connection	
		2	Line 14 TIP	
		3	Line 13 TIP	
		4	Line 13 RING	
		5	Line 14 RING	
		6	No Connection	
	8	1	No Connection	
		2	Line 16 TIP	
		3	Line 15 TIP	
		4	Line 15 RING	
		5	Line 16 RING	
		6	No Connection	



Table 3-2. J-1 Station Connections  
(4-Line, & Station Base Unit)

25-PAIR CABLE CONNECTIONS			2-WIRE CONNECTIONS		STA. CONNECTIONS		
WIRE COLOR	PAIR	PIN NO.	CLIP TERM.	PAIR	WIRE COLOR	STA	LOCATION
WHITE-BLUE BLUE-WHITE	1	26 1	1 2	SIGNAL PATH	GREEN RED	10	
WHITE-ORANGE ORANGE-WHITE	2	27 2	3 4	SIGNAL PATH	GREEN RED	11	
WHITE-GREEN GREEN-WHITE	3	28 3	5 6	SIGNAL PATH	GREEN RED	12	
WHITE-BROWN BROWN-WHITE	4	29 4	7 8	SIGNAL PATH	GREEN RED	13	
WHITE-SLATE SLATE-WHITE	5	30 5	9 10	SIGNAL PATH	GREEN RED	14	
RED-BLUE BLUE-RED	6	31 6	11 12	SIGNAL PATH	GREEN RED	15	
RED-ORANGE ORANGE-RED	7	32 7	13 14	SIGNAL PATH	GREEN RED	16	
RED-GREEN GREEN-RED	8	33 8	15 16	SIGNAL PATH	GREEN RED	17	
RED-BROWN BROWN-RED	9	34 9	17 18				SPARE PORTS
RED-SLATE SLATE-RED	10	35 10	19 20				
BLACK-BLUE BLUE-BLACK	11	36 11	21 22				
BLACK-ORANGE ORANGE-BLACK	12	37 12	23 24				
BLACK-GREEN GREEN-BLACK	13	38 13	25 26				
BLACK-BROWN BROWN-BLACK	14	39 14	27 28				
BLACK-SLATE SLATE-BLACK	15	40 15	29 30				
YELLOW-BLUE BLUE-YELLOW	16	41 16	31 32				
YELLOW-ORANGE ORANGE-YELLOW	17	42 17	33 34				
YELLOW-GREEN GREEN-YELLOW	18	43 18	35 36				
YELLOW-BROWN BROWN-YELLOW	19	44 19	37 38				
YELLOW-SLATE SLATE-YELLOW	20	45 20	39 40				
VIOLET-BLUE BLUE-VIOLET	21	46 21	41 42				
VIOLET-ORANGE ORANGE-VIOLET	22	47 22	43 44				
VIOLET-GREEN GREEN-VIOLET	23	48 23	45 46				
VIOLET-BROWN BROWN-VIOLET	24	49 24	47 48				
VIOLET-SLATE SLATE-VIOLET	25	50 25	49 50				
							KEY/HYBRID STRAP - IN FOR HYBRID
							RS 232 TD
							DATA RD
							PORT A CTS
							SG
							RS 232 TD
							DATA RD
							PORT B CTS
							SG
							COMMON AUDIBLE
							STATION 17 AUDIBLE
							POWER FAIL STATION

Table 3-3. J1 Station Connections  
(&Line, 16-Station Base Unit)

25-PAIR CABLE CONNECTIONS			2-WIRE CONNECTIONS			STA. CONNECTIONS	
WIRE COLOR1	PAIR	PIN NO.	CLIP TERM.	PAIR	WIRE COLOR	STA	LOCATION
WHITE-BLUE	1	26	1	SIGNAL	GREEN	10	
BLUE-WHITE		1	2	PATH	RED		
WHITE-ORANGE	2	27	3	SIGNAL	GREEN	11	
ORANGE-WHITE		2	4	PATH	RED		
WHITE-GREEN	3	28	5	SIGNAL	GREEN	12	
GREEN-WHITE		3	6	PATH	RED		
WHITE-BROWN	4	29	7	SIGNAL	GREEN	13	
BROWN-WHITE		4	8	PATH	RED		
WHITE-SLATE	5	30	9	SIGNAL	GREEN	14	
SLATE-WHITE		5	10	PATH	RED		
RED-BLUE	6	31	11	SIGNAL	GREEN	15	
BLUE-RED		6	12	PATH	RED		
RED-ORANGE	7	32	13	SIGNAL	GREEN	16	
ORANGE-RED		7	14	PATH	RED		
RED-GREEN	8	33	15	SIGNAL	GREEN	17	
GREEN-RED		8	16	PATH	RED		
RED-BROWN	9	34	17	SIGNAL	GREEN	18	
BROWN-RED		9	18	PATH	RED		
RED-SLATE	10	35	19	SIGNAL	GREEN	19	
SLATE-RED		10	20	PATH	RED		
BLACK-BLUE	11	36	21	SIGNAL	GREEN	20	
BLUE-BLACK		11	22	PATH	RED		
BLACK-ORANGE	12	37	23	SIGNAL	GREEN	21	
ORANGE-BLACK		12	24	PATH	RED		
BLACK-GREEN	13	38	25	SIGNAL	GREEN	22	
GREEN-BLACK		13	26	PATH	RED		
BLACK-BROWN	14	39	27	SIGNAL	GREEN	23	
BROWN-BLACK		14	28	PATH	RED		
BLACK-SLATE	15	40	29	SIGNAL	GREEN	24	
SLATE-BLACK		15	30	PATH	RED		
YELLOW-BLUE	16	41	31	SIGNAL	GREEN	25	
BLUE-YELLOW		16	32	PATH	RED		
YELLOW-ORANGE	17	42	33			NOT ASSIGNED	
ORANGE-YELLOW		17	34				
YELLOW-GREEN	18	43	35			KEY/HYBRID STRAP - IN FOR HYBRID	
GREEN-YELLOW		18	36				
YELLOW-BROWN	19	44	37			RS 232 DATA PORT A	TD
BROWN-YELLOW		19	38				RD
YELLOW-SLATE	20	45	39			PORT A	CTS
SLATE-YELLOW		20	40				SG
VIOLET-BLUE	21	46	41			RS 232 DATA PORT B	TD
BLUE-VIOLET		21	42				RD
VIOLET-ORANGE	22	47	43			PORT B	CTS
ORANGE-VIOLET		22	44				SG
VIOLET-GREEN	23	48	45			COMMON AUDIBLE	
GREEN-VIOLET		23	46				
VIOLET-BROWN	24	49	47			STATION 17 AUDIBLE	
BROWN-VIOLET		24	48				
VIOLET-SLATE	25	50	49			POWER FAIL STATION	
SLATE-VIOLET		25	50				

Table 34a. J1 Station Connections  
(16-Line, 32-Station Base Unit)

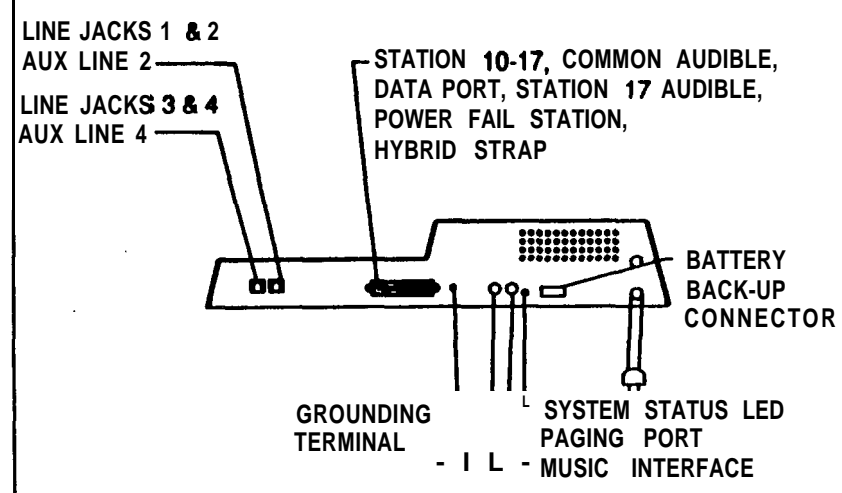
25-PAIR CABLE CONNECTIONS			2-WIRE CONNECTIONS		STA. CONNECTIONS		
WIRE COLOR	PAIR	PIN NO.	CLIP TERM.	PAIR	WIRE COLOR	STA	LOCATION
WHITE-BLUE	1	26	1	SIGNAL	GREEN	10	
BLUE-WHITE		1	2	PATH	RED		
WHITE-ORANGE	2	27	3	SIGNAL	GREEN	11	
ORANGE-WHITE		2	4	PATH	RED		
WHITE-GREEN	3	28	5	SIGNAL	GREEN	12	
GREEN-WHITE		3	6	PATH	RED		
WHITE-BROWN	4	29	7	SIGNAL	GREEN	13	
BROWN-WHITE		4	8	PATH	RED		
WHITE-SLATE	5	30	9	SIGNAL	GREEN	14	
SLATE-WHITE		5	10	PATH	RED		
RED-BLUE	6	31	11	SIGNAL	GREEN	15	
BLUE-RED		6	12	PATH	RED		
RED-ORANGE	7	32	13	SIGNAL	GREEN	16	
ORANGE-RED		7	14	PATH	RED		
RED-GREEN	8	33	15	SIGNAL	GREEN	17	
GREEN-RED		8	16	PATH	RED		
RED-BROWN	9	34	17	SIGNAL	GREEN	18	
BROWN-RED		9	18	PATH	RED		
RED-SLATE	10	35	19	SIGNAL	GREEN	19	
SLATE-RED		10	20	PATH	RED		
BLACK-BLUE	11	36	21	SIGNAL	GREEN	20	
BLUE-BLACK		11	22	PATH	RED		
BLACK-ORANGE	12	37	23	SIGNAL	GREEN	21	
ORANGE-BLACK		12	24	PATH	RED		
BLACK-GREEN	13	38	25	SIGNAL	GREEN	22	
GREEN-BLACK		13	26	PATH	RED		
BLACK-BROWN	14	39	27	SIGNAL	GREEN	23	
BROWN-BLACK		14	28	PATH	RED		
BLACK-SLATE	15	40	29	SIGNAL	GREEN	24	
SLATE-BLACK		15	30	PATH	RED		
YELLOW-BLUE	16	41	31	SIGNAL	GREEN	25	
BLUE-YELLOW		16	32	PATH	RED		
YELLOW-ORANGE	17	42	33	SPARE PORTS			
ORANGE-YELLOW		17	34				
YELLOW-GREEN	18	43	35				
GREEN-YELLOW		18	36				
YELLOW-BROWN	19	44	37				
BROWN-YELLOW		19	38				
YELLOW-SLATE	20	45	39				
SLATE-YELLOW		20	40				
VIOLET-BLUE	21	46	41				
BLUE-VIOLET		21	42				
VIOLET-ORANGE	22	47	43				
ORANGE-VIOLET		22	44				
VIOLET-GREEN	23	48	45				
GREEN-VIOLET		23	46				
VIOLET-BROWN	24	49	47				
BROWN-VIOLET		24	48				
VIOLET-SLATE	25	50	49				
SLATE-VIOLET		25	50				

Table 3-4b. J2 Station Connections  
(16-Line, 32-Station Base Unit)

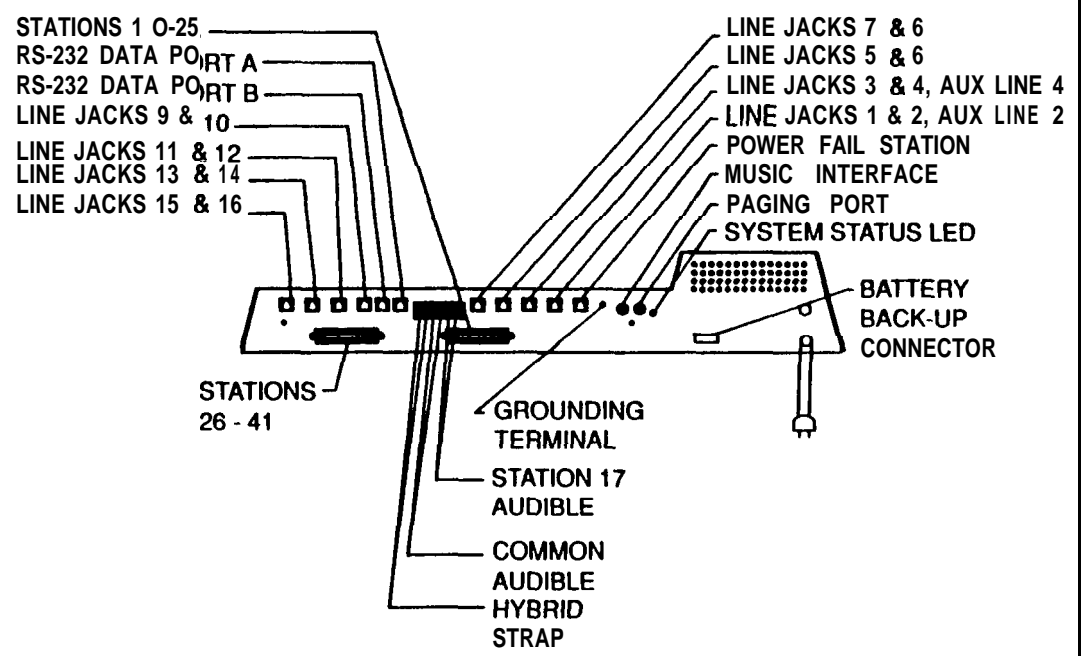
25-PAIR CABLE CONNECTIONS			2-WIRE CONNECTIONS		STA. CONNECTIONS		
WIRE COLOR	PAIR	PIN NO.	CLIP TERM.	PAIR	WIRE COLOR	STA	LOCATION
WHITE-BLUE	1	26	1	SIGNAL	GREEN	26	
BLUE-WHITE		1	2	PATH	RED		
WHITE-ORANGE	2	27	3	SIGNAL	GREEN	27	
ORANGE-WHITE		2	4	PATH	RED		
WHITE-GREEN	3	28	5	SIGNAL	GREEN	28	
GREEN-WHITE		3	6	PATH	RED		
WHITE-BROWN	4	29	7	SIGNAL	GREEN	29	
BROWN-WHITE		4	8	PATH	RED		
WHITE-SLATE	5	30	9	SIGNAL	GREEN	30	
SLATE-WHITE		5	10	PATH	RED		
RED-BLUE	6	31	11	SIGNAL	GREEN	31	
BLUE-RED		6	12	PATH	RED		
RED-ORANGE	7	32	13	SIGNAL	GREEN	32	
ORANGE-RED		7	14	PATH	RED		
RED-GREEN	8	33	15	SIGNAL	GREEN	33	
GREEN-RED		8	16	PATH	RED		
RED-BROWN	9	34	17	SIGNAL	GREEN	3 4	
BROWN-RED		9	18	PATH	RED		
RED-SLATE	10	35	19	SIGNAL	GREEN	35	
SLATE-RED		10	20	PATH	RED		
BLACK-BLUE	11	36	21	SIGNAL	GREEN	36	
BLUE-BLACK		11	22	PATH	RED		
BLACK-ORANGE	12	37	23	SIGNAL	GREEN	37	
ORANGE-BLACK		12	24	PATH	RED		
BLACK-GREEN	13	38	25	SIGNAL	GREEN	38	
GREEN-BLACK		13	26	PATH	RED		
BLACK-BROWN	14	39	27	SIGNAL	GREEN	39	
BROWN-BLACK		14	28	PATH	RED		
BLACK-SLATE	15	40	29	SIGNAL	GREEN	40	
SLATE-BLACK		15	30	PATH	RED		
YELLOW-BLUE	16	41	31	SIGNAL	GREEN	41	
BLUE-YELLOW		16	32	PATH	RED		
YELLOW-ORANGE	17	42	33	SPARE PORTS			
ORANGE-YELLOW		17	34				
YELLOW-GREEN	18	43	35				
GREEN-YELLOW		18	36				
YELLOW-BROWN	19	44	37				
BROWN-YELLOW		19	38				
YELLOW-SLATE	20	45	39				
SLATE-YELLOW		20	40				
VIOLET-BLUE	21	46	41				
BLUE-VIOLET		21	42				
VIOLET-ORANGE	22	47	43				
ORANGE-VIOLET		22	44				
VIOLET-GREEN	23	48	45				
GREEN-VIOLET		23	46				
VIOLET-BROWN	24	49	47				
BROWN-VIOLET		24	48				
VIOLET-SLATE	25	50	49				
SLATE-VIOLET		25	50				

3-11

### 4-LINE, 8-STATION BASE UNIT



### 16-LINE, 32-STATION BASE UNIT



### 8-LINE, 16-STATION BASE UNIT

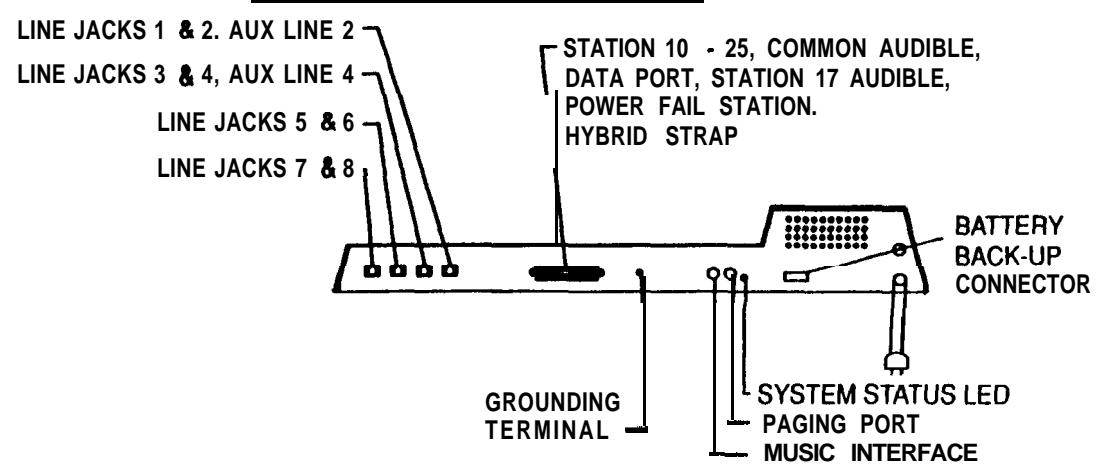


Figure 3-3. Common Equipment, Station And Line Connections

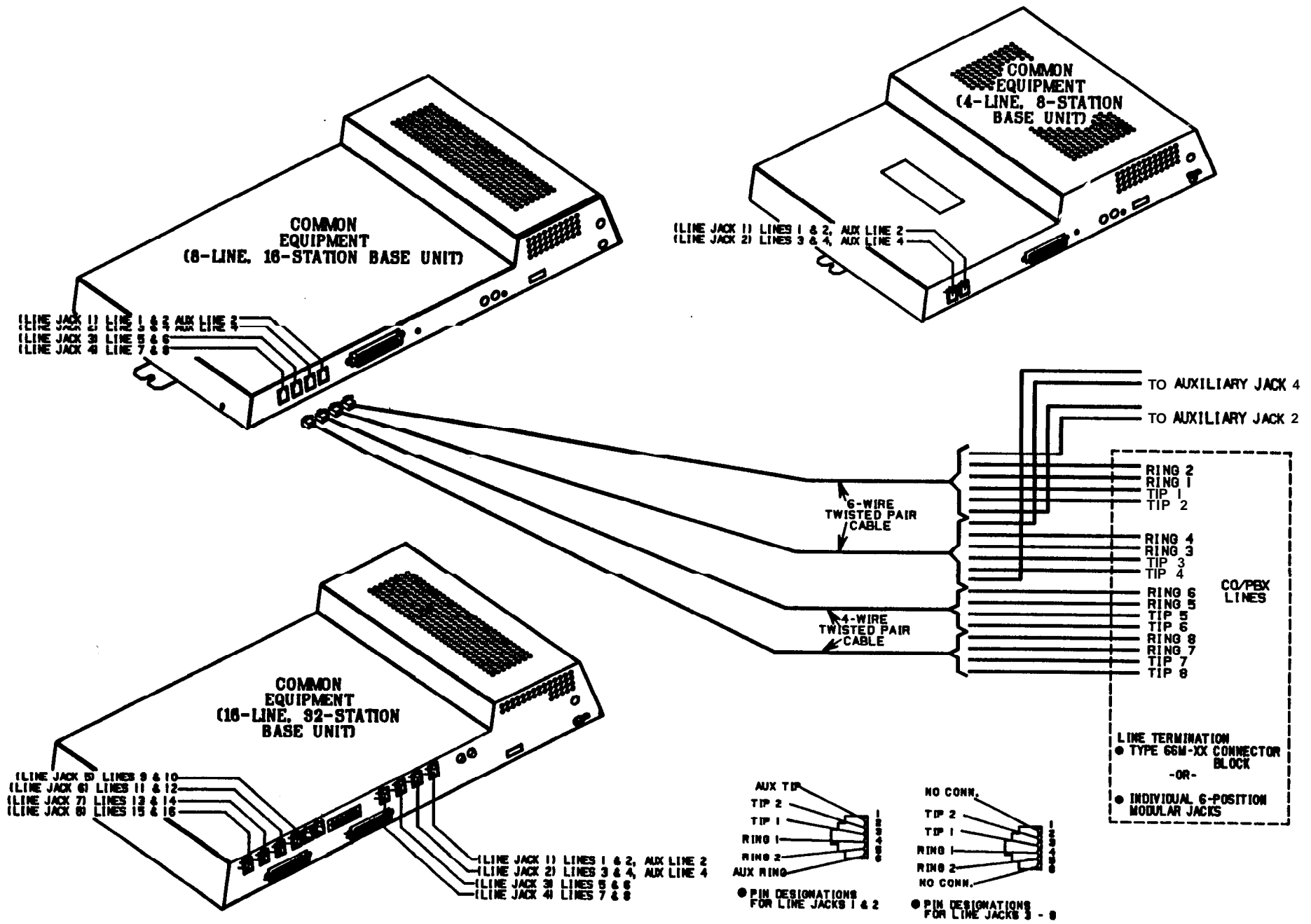


Figure 3-4. Typical Line Connections

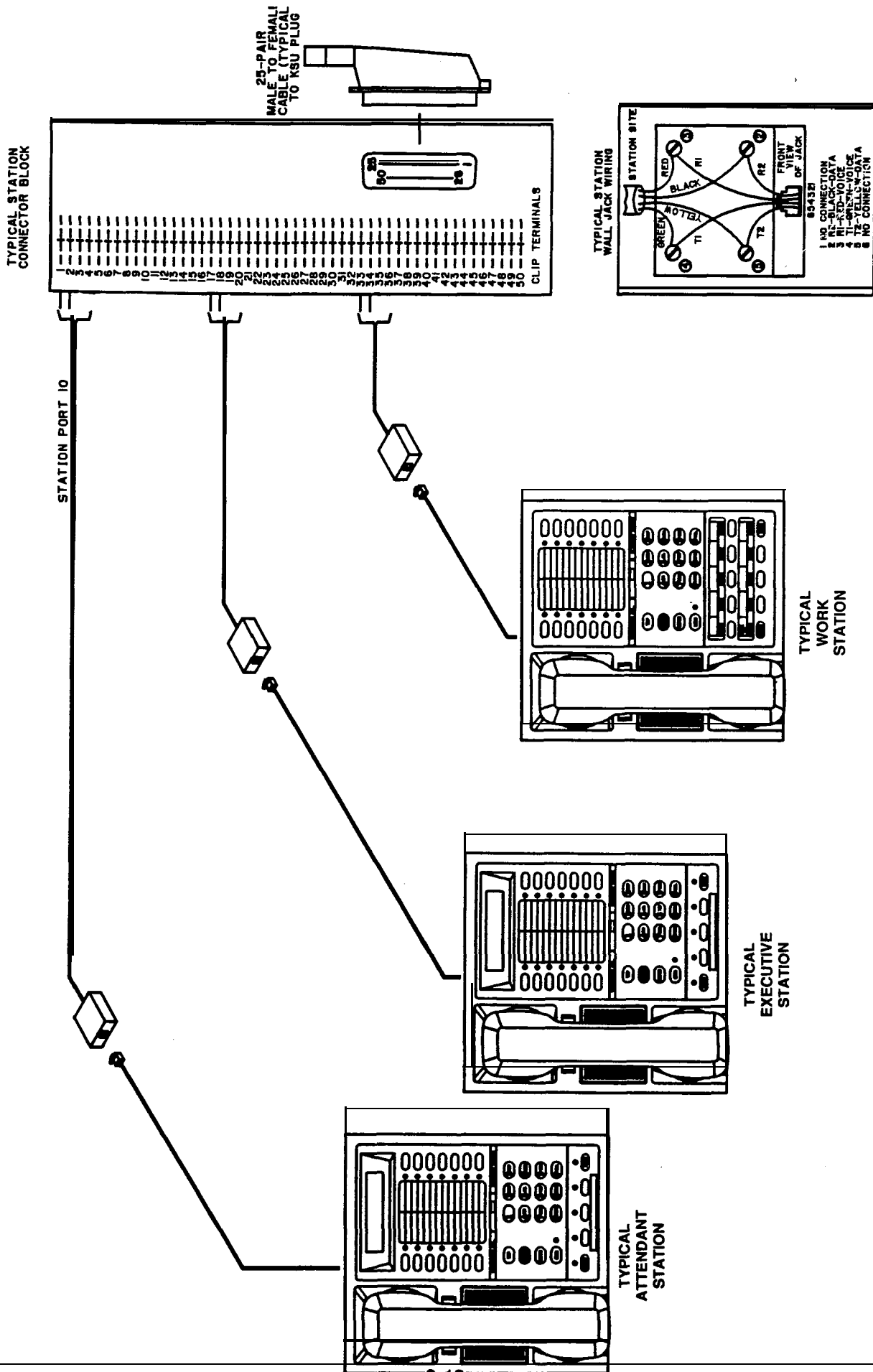


Figure 3-5 Typical Station Connections

## SECTION 2 OPTION INSTALLATION DETAILS

### KEY SYSTEM/HYBRID CONFIGURATION

The system can be configured to operate as either a key system or as a hybrid system. Configuration is by way of a wire strap connected as detailed below and illustrated in **Figure 3-6**.

The common equipment is shipped from the factory as a key system (KF). To convert operation over to the hybrid (MF) system, add the strap.

The KF and MF designations are equipment type categories as stipulated in FCC rules and regulations, Pan 68, and appear as part of the FCC Registration

Number on the equipment label. The appropriate registration number must be reported to the telephone company at the time of connection along with other FCC mandated information. Operationally, the hybrid configuration enables a PBX feature that may incur a higher monthly tariff to the telephone company. This feature allows dial access to (automatic selection of) outgoing lines. The specific system feature that is enabled by the multifunction (hybrid) configuration is:

- Line Group (Including Dial Access)

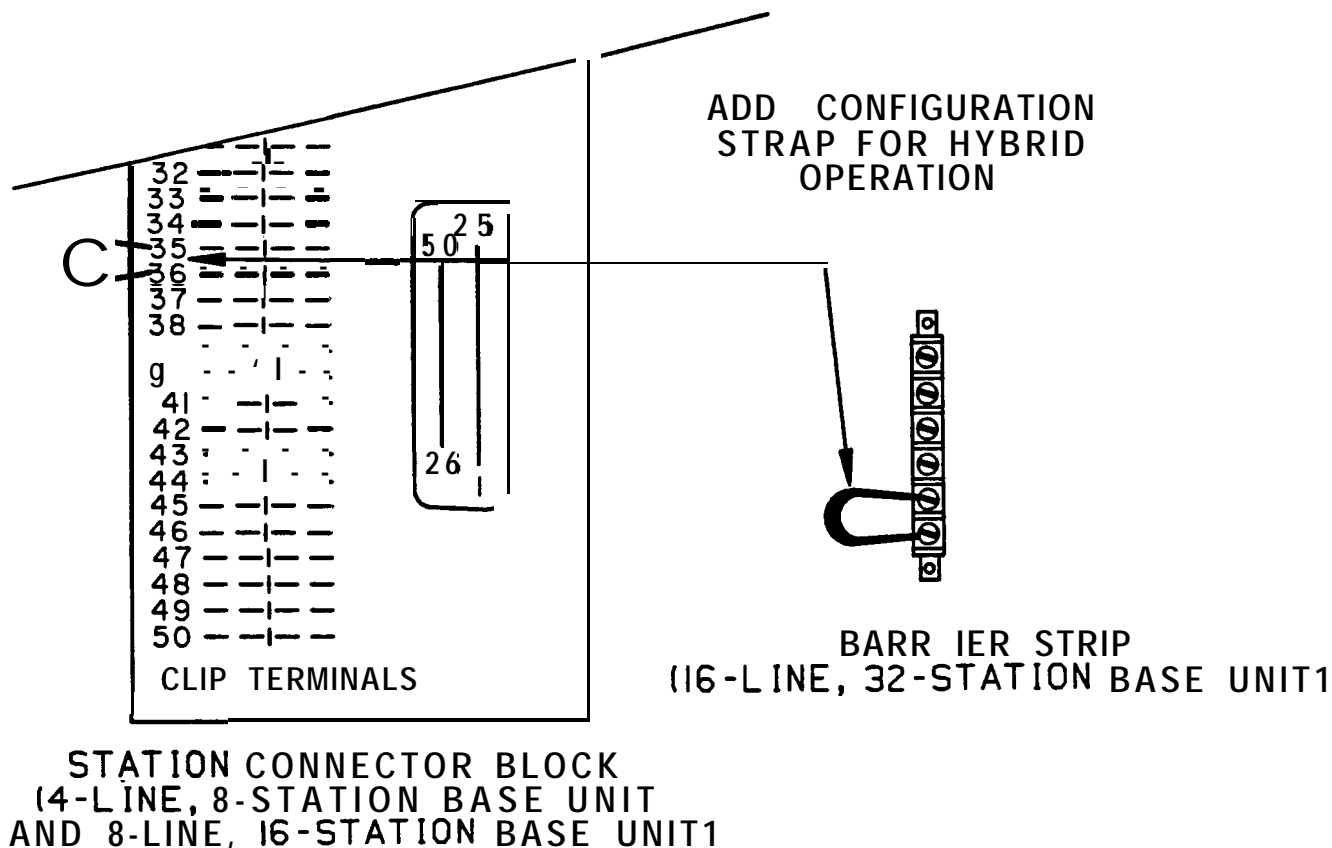


Figure 3-6. Key/Hybrid Configuration



### POWER FAILURE STATION CONNECTIONS

The system provides a tip and ring pair connected to line 1 as an emergency power failure circuit. This circuit is active during a commercial AC power failure if an external battery assembly is not installed to provide battery back-up power to the system. An

industry standard, single-line telephone, such as a Comdial model 2500-xx, can be connected to a power failure pair and used to provide communications capability until the AC power to the system is restored.

The power failure pair is located as follows and as detailed in **Figure 3-7** below.

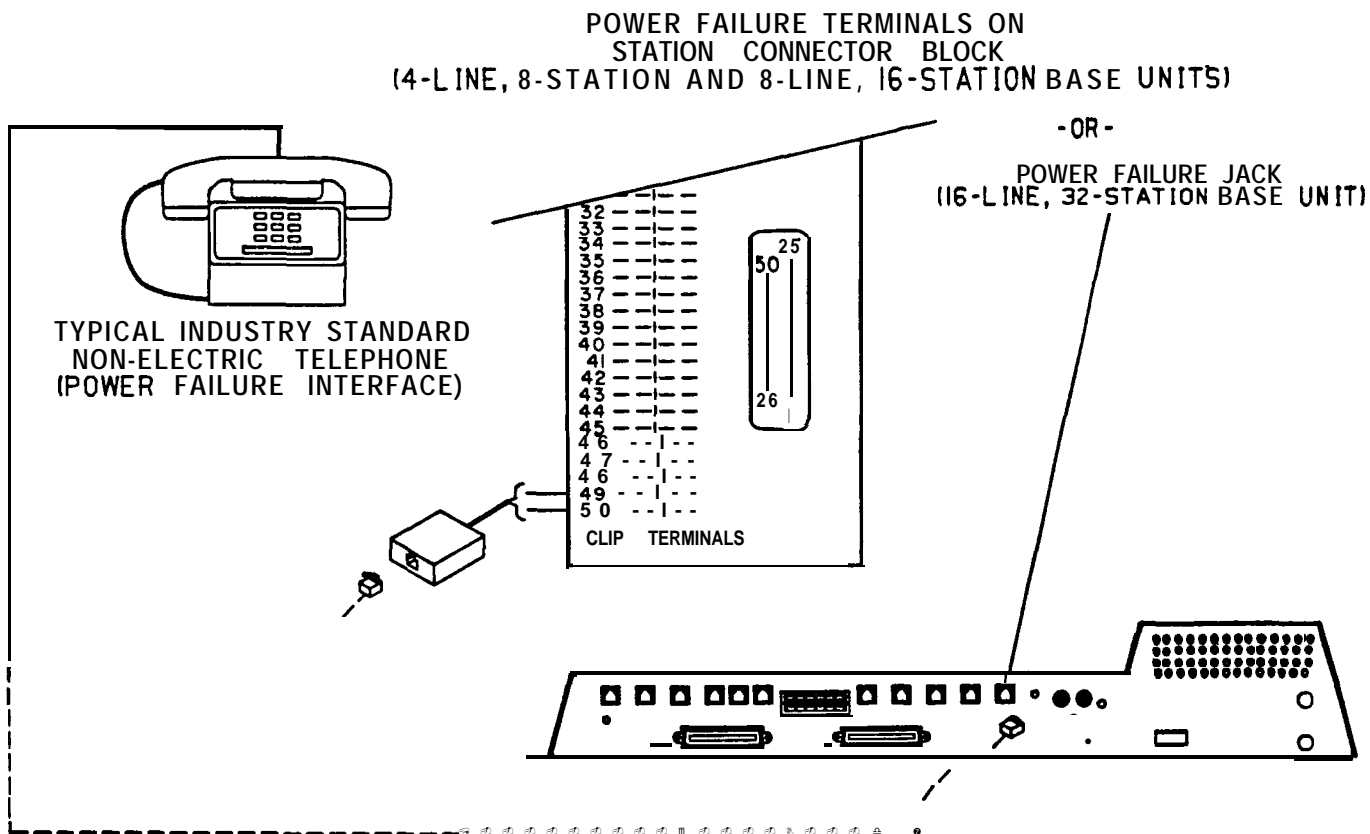


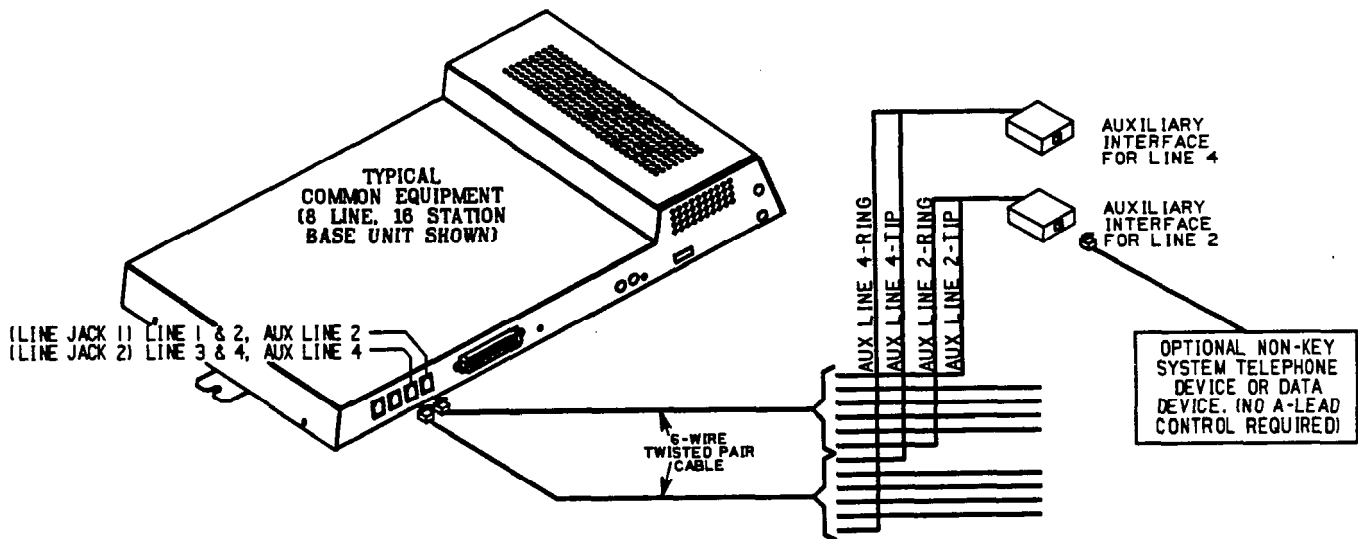
Figure 3-7. Power Failure Connection

### AUXILIARY EQUIPMENT INTERFACE

An industry standard non-electronic telephone device or a data device can be connected on a line ahead of the common equipment. The system can detect an off-hook condition in the connected device and turn on the line status light at the telephones to indicate that the line is busy. **Table 3-1** (given in Section 1) and **Figure 3-8** below detail the auxiliary interface connections.

**NOTE:** When the auxiliary interface feature is being employed, the line to line port reassignment as discussed on pages 3-5 and 4-19 works as described except in regard to line 2 and line 4. Line 2 can only be reassigned to line port 4 and line 4 can only be reassigned to line port 2

- Connection is across tip and ring of lines 2 and 4. The auxiliary interface connections are provided at terminals 1 and 6 of common equipment line jacks 1 and 2.



**Figure 3-8. Auxiliary Interface Connections**

### COMMON AUDIBLE AND AUXILIARY RINGING INTERFACE

Relay closure dry-contact points are available for controlling external audible equipment. These contact closures track the pattern of the ringing. The contacts are closed during the ringing period and are open during the silent period. A typical common audible connection is illustrated on Figure 3-9 below.

**CAUTION**

Do not exceed a 1 amp at 24 volts (0.5 amp at 48 volts) load on these control terminals. If the load requirements exceed this limit, connect the load through an external slave relay. **DO NOT CONNECT THESE CONTROL TERMINALS DIRECTLY TO THE 117VAC LINE.**

Outside Lines

- Common audible terminals provide a dry-contact closure whenever any of the outside lines that are connected to the common equipment.

Selected Ports

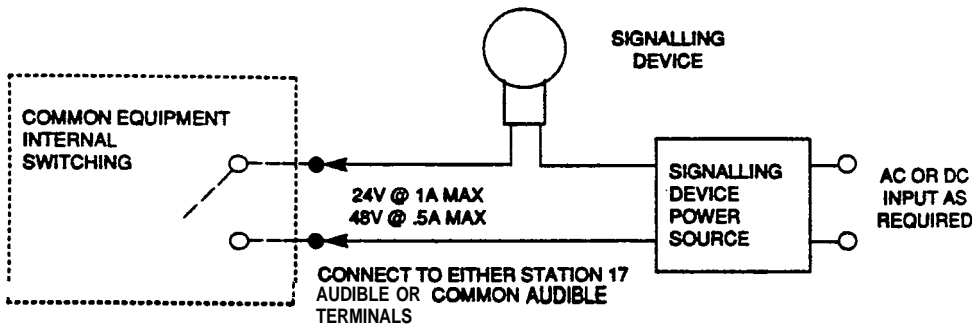
The station 17 audible terminals provide a dry-contact relay closure whenever ringing is sent to a programmable destination. Class of service programming is used to **choose** either the paging port or station port 17 as the ringing destination. Refer to page 4-13 for details.

When programmed for station port 17 ringing, an external device is often used to provide loud ringing similar to the common audible arrangement shown in Figure 3-8.

When programmed for paging port ringing, an external paging amplifier is employed to amplify and broadcast the ringing tones sent to the paging port. The relay closures that appear at the ringing terminals can be employed to energize the external paging amplifier during the periods when the ringing tones are being sent.

NOTE: Refer to the following paragraph headed External Paging Interface for a discussion of external paging amplifier connections and information for using the paging port ringing terminals in an alternate paging enable function.

(LOW CURRENT APPLICATIONS ONLY • SEE CAUTION TEXT)



(WITH SLAVE RELAY CONNECTIONS FOR HIGH CURRENT APPLICATION . SEE CAUTION TEXT)

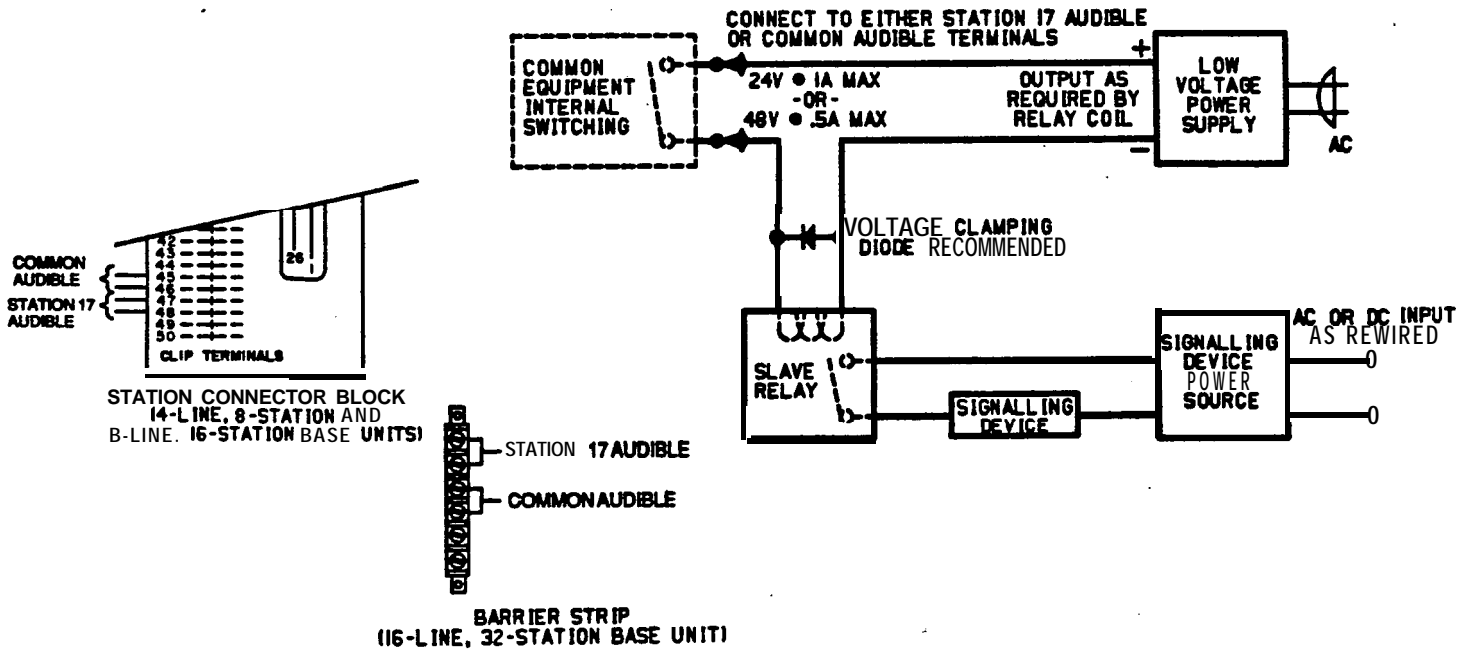


Figure 3-9. Typical Common Audible Interface Wiring

### EXTERNAL PAGING INTERFACE

A special transformer-isolated paging port is used to couple the system to an external paging amplifier.

Relay closure dry-contact points are available at the ringing port terminal and can be used for controlling the external paging amplifier during a paging operation. These contacts close and stay closed during the time that a paging operation is active to provide a constant enable signal path for the paging amplifier.

**NOTE:** This paging enable constant closure function overrides the ring pattern closure provided when ringing is sent to the paging port. See the previous paragraph titled Common Audible And Auxiliary Ringing Interface.

- Connect the audio input of an external paging amplifier to the paging port as shown below in **Figure 3-10**.
- If an enable signal is required by the paging amplifier, connect the enable leads to the station 17 audible terminals as shown in **Figure 3-10**.

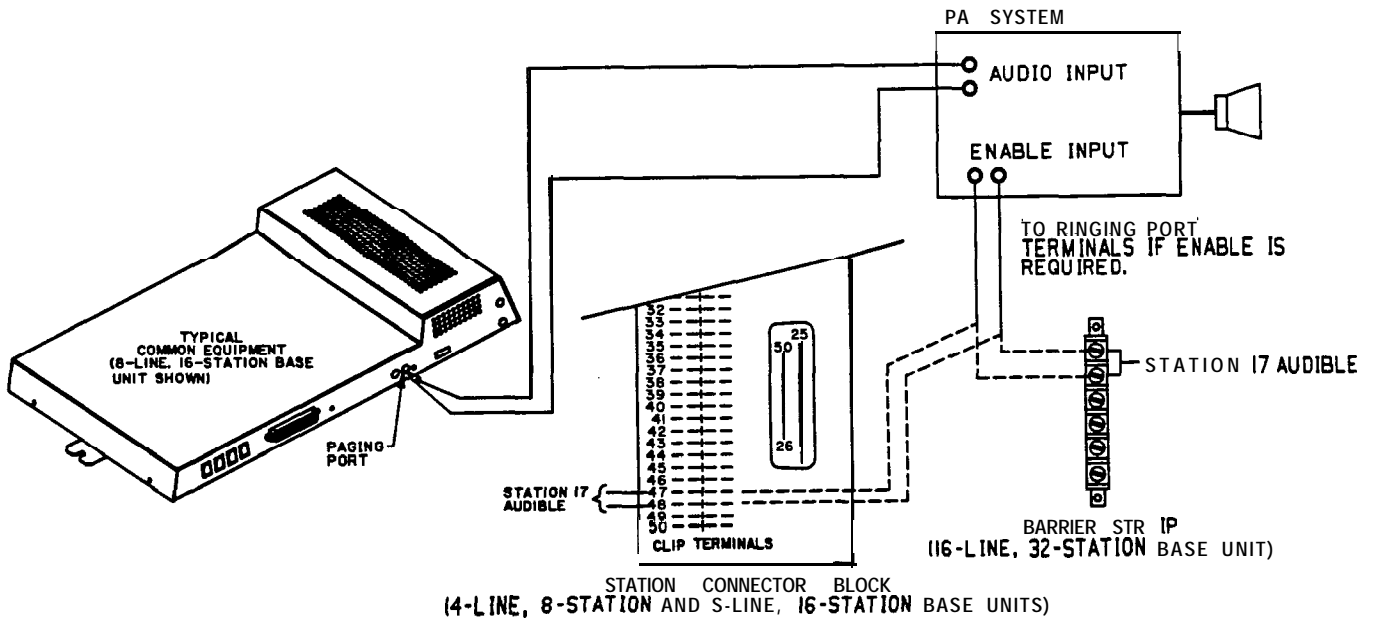


Figure 3-10. Typical External Paging Connection

### EXTERNAL PAGING INTERFACE - LINE PORT

A line port can be configured by class of service programming to be an AUXILIARY port. As an AUXILIARY port, it can be used to couple a station to an external paging device. This coupling is done from any station with that line presence by pressing the proper line key to select the AUXILIARY port. DTMF tones or dial pulses can be dialed through the AUXILIARY port as needed. The paging enable relay

closure feature is not available for use with this installation.

- The audio input of an external paging amplifier can be connected to the tip and ring leads of the AUXILIARY port as shown in **Figure 3-11** below.
- A DTMF tone select, zone-paging amplifier can be employed if desired. If used, the zone-select code must be dialed after the AUXILIARY port line select key is pressed.

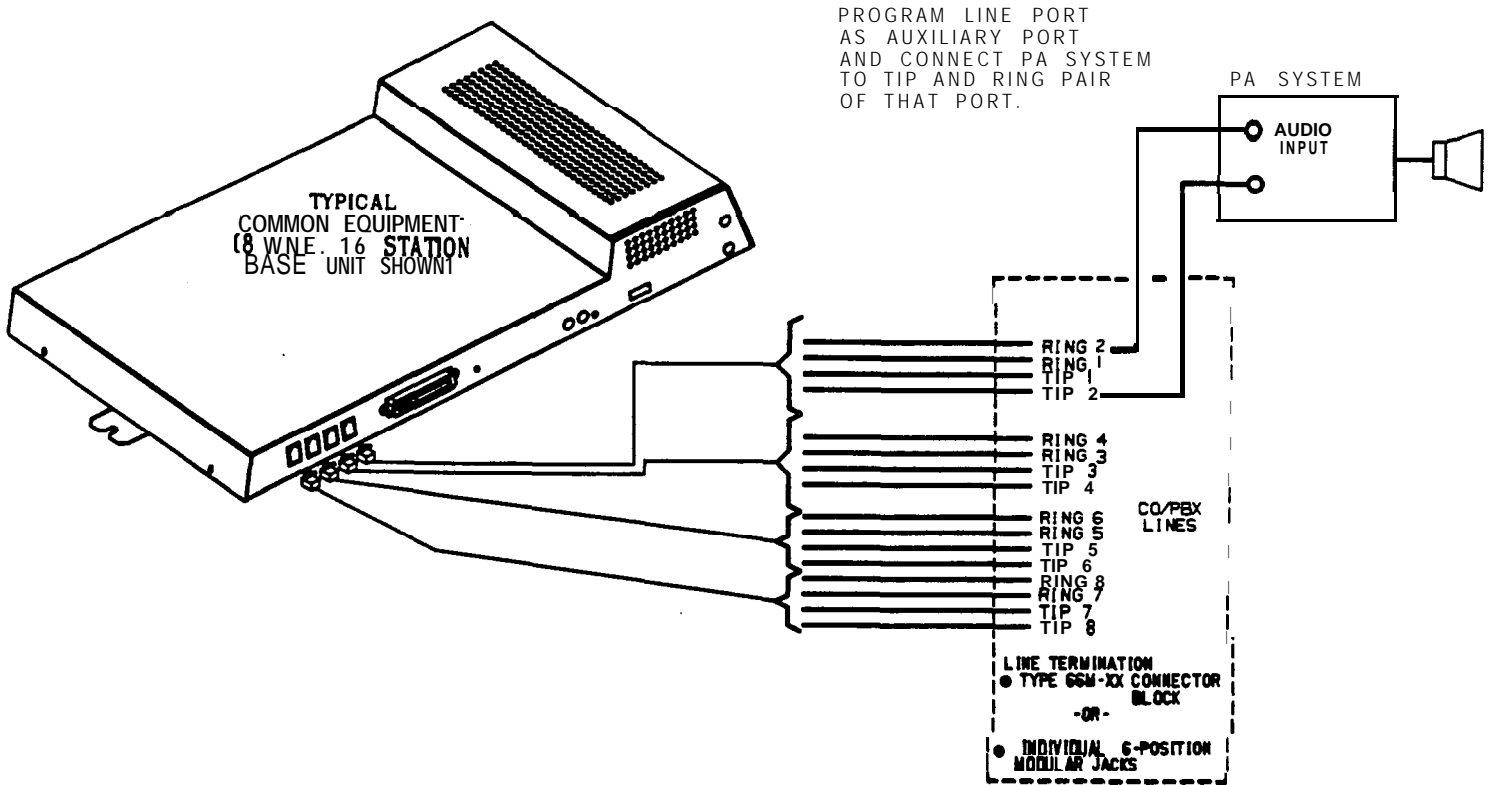


Figure 3-11. Typical External Paging Connection - Line Port

## DATA DEVICE CONNECTIONS

The system provides two RS232 Data Ports for use.

- When a video display terminal (VDT) is used to perform class of service programming, connect it to RS232 Data Port A.
- When a serial data printer is used for SMDR, SMDA, and COS printout, connect it to the RS232 Data Port B.

The distance between the data device and the common equipment can be up to 500 feet in a quiet electrical environment. Shielded cable may be required at some sites for long runs. For longer distances, a limited distance modem must be used to relay the data communications between the common equipment and the data device.

When preparing a cable for connection to a data device, refer to the manufacturer's manual for the equipment being interfaced and make the following wiring connections:

- Wire the common equipment RD (data from device to common equipment) connection to the device TD (transmit data) connection.
- Wire the common equipment TD (data to device from common equipment) connection to the device RD (receive data) connection.
- Wire the common equipment SG (signal ground) connection to the device SG (signal ground) connection.
- If required for proper operation, wire the common equipment CTS (clear-to-send status from device to

common equipment) connection to the device RTS (request-to-send) connection.

*NOTE: The common equipment requires a positive voltage, with respect to signal ground, in order to send data.*

The default data format is as follows. Configure the data device to match this data format for initial operation.

- 7-bit data with 2 stop bits and no parity
- Baud rate of 300 baud

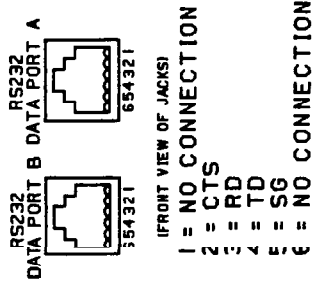
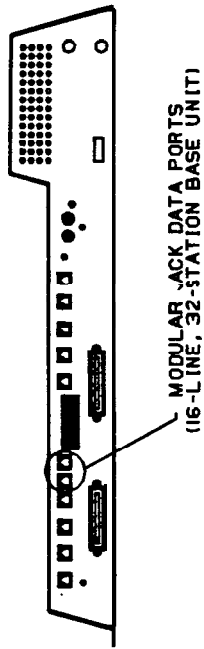
The Data Ports are located as follows and are connected as illustrated in **Figure 3-12** on the next page.

### 4-Line, &Station And 8-Line, 16-Station Base Units

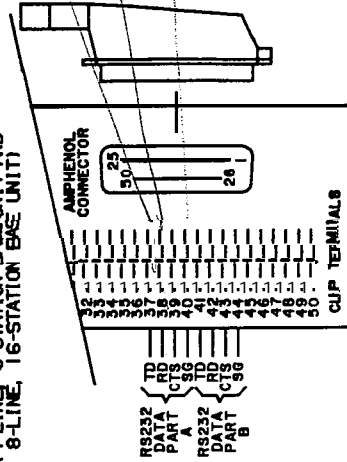
- Clip terminals 37 - 40 (data port A) and 41 - 44 (data port B) on station connector block.
- | SIG.  | PORT A      | PORT B      |
|-------|-------------|-------------|
| TD =  | TERMINAL 37 | TERMINAL 41 |
| RD =  | TERMINAL 38 | TERMINAL 42 |
| CTS = | TERMINAL 39 | TERMINAL 43 |
| SG =  | TERMINAL 40 | TERMINAL 44 |

### 16-Line, 32-Station Base Unit

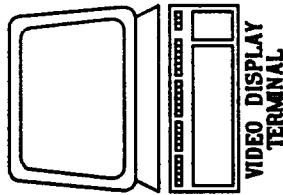
- Special modular jacks are available as data ports
- | SIG  | JACK CONN. |
|------|------------|
| None | 1          |
| CTS  | 2          |
| RD   | 3          |
| TD   | 4          |
| SG   | 5          |
| None | 6          |



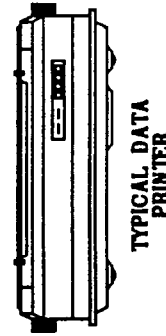
STATION CONNECTOR BLOCK DATA PORTS  
(4-LINE, 8-STATION BASE UNIT AND  
8-LINE, 16-STATION BASE UNIT)



- NOTES:
1. MAXIMUM DISTANCE BETWEEN COMMON EQUIPMENT CABINET AND PRINTER OR VDT TYPICALLY LIMITED TO 500 FEET. LONGER DISTANCES REQUIRE LIMITED DISTANCE MODEMS AT EITHER END OF RUN.
  2. SOME DATA DEVICES REQUIRE CTS SIGNAL FOR PROPER OPERATION. ROUTE TO DEVICE AS NEEDED.



TYPICAL MODULAR TO EIA ADAPTER  
WIRING SHOWN FOR REFERENCE ONLY.



TYPICAL MODULAR TO EIA ADAPTER  
WIRING SHOWN FOR REFERENCE ONLY.

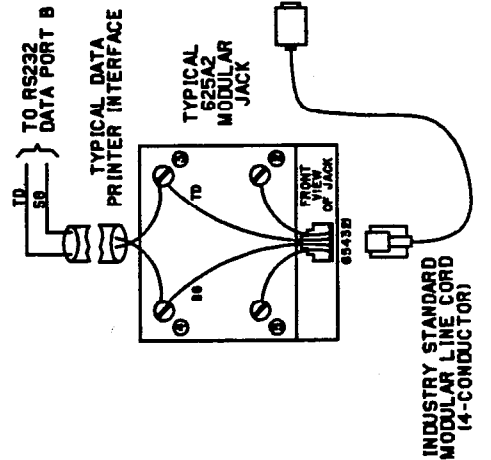
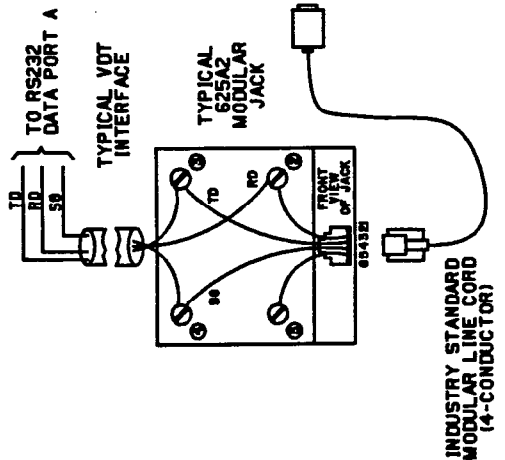


Figure 3-12. Typical Data Device Connections

### MUSIC INTERFACE

If music is to be part of the system, connect a customer-provided music source to the common **equipment** music interface jack (phono jack) provided for this **purpose** as shown below in Figure 3-13. The

impedance of this input is approximately 500 ohms. Use the volume control on the music source to adjust the audio level of the music as required.

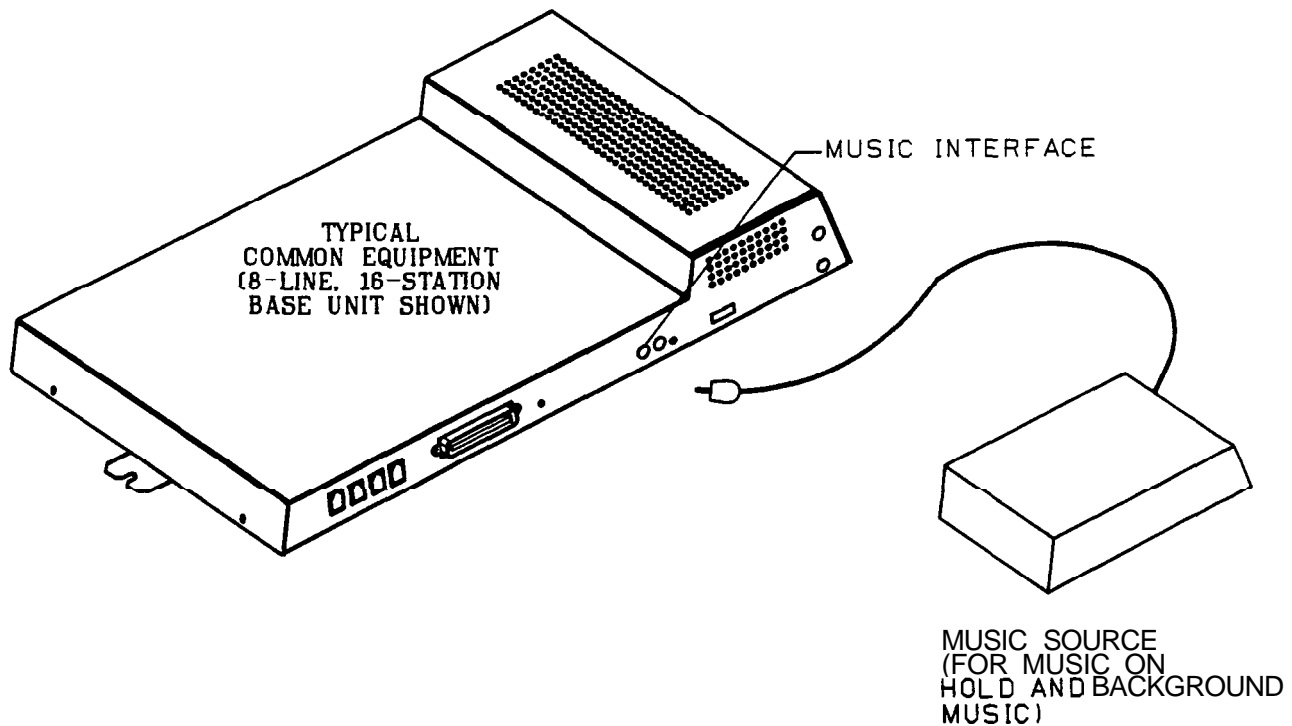


Figure3-13.MusicInterface



## SECTION 3 ADD-ON EXPANSION MODULES

### INTRODUCTION

One or two optional add-on expansion modules can be installed on the common equipment base unit to increase the line and station capacity of an installed system. The add-on module is as follows:

- 408 Expansion Module - A four-line by eight-station expansion unit

The expansion capabilities provided by the add-on module are shown in **Figure 3-14** on the next page.

The default numbering of the expanded lines and stations begin with the next higher line or station port number from that provided by the host base unit. The numbering continues sequentially from top module to bottom module if two modules are installed. For example: The defaulted **8-line, 16-station** base unit

provides station ports 10 through 25 and lines 1 through 8. When installed, a 408 Expansion module will provide station ports 26 through 33 and lines 9 through 12 thus creating a twelve line by twenty-four station system.

Each expansion module provides a tip and ring pair as an emergency power failure circuit. This circuit is connected to the first module-provided line.

The line connections of the expansion module are available at two modular jacks. When facing the jack openings, lines 1 and 2 are provided by the jack on the right and lines 3 and 4 are provided by the jack on the left. Line connections are detailed in Table 3-5, below.

The station connections are available at a 50-pin connector. **Table 3-6** detail these station connections.

**Table 3-5. Line Connections • 408 Expansion Module**

LINE JACK	PIN NO.	CONNECTION	TELEPHONE NUMBER
<b>1</b>	<b>1</b>	<b>No Connection</b>	
	<b>2</b>	<b>Line 2M TIP</b>	
	<b>3</b>	<b>Line 1M TIP</b>	
	<b>4</b>	<b>Line 1M RING</b>	
	<b>5</b>	<b>Line 2M RING</b>	
	<b>6</b>	<b>No Connection</b>	
<b>2</b>	<b>1</b>	<b>No Connection</b>	
	<b>2</b>	<b>Line 4M TIP</b>	
	<b>3</b>	<b>Line 3M TIP</b>	
	<b>4</b>	<b>Line 3M RING</b>	
	<b>5</b>	<b>Line 4M RING</b>	
	<b>6</b>	<b>No Connection</b>	

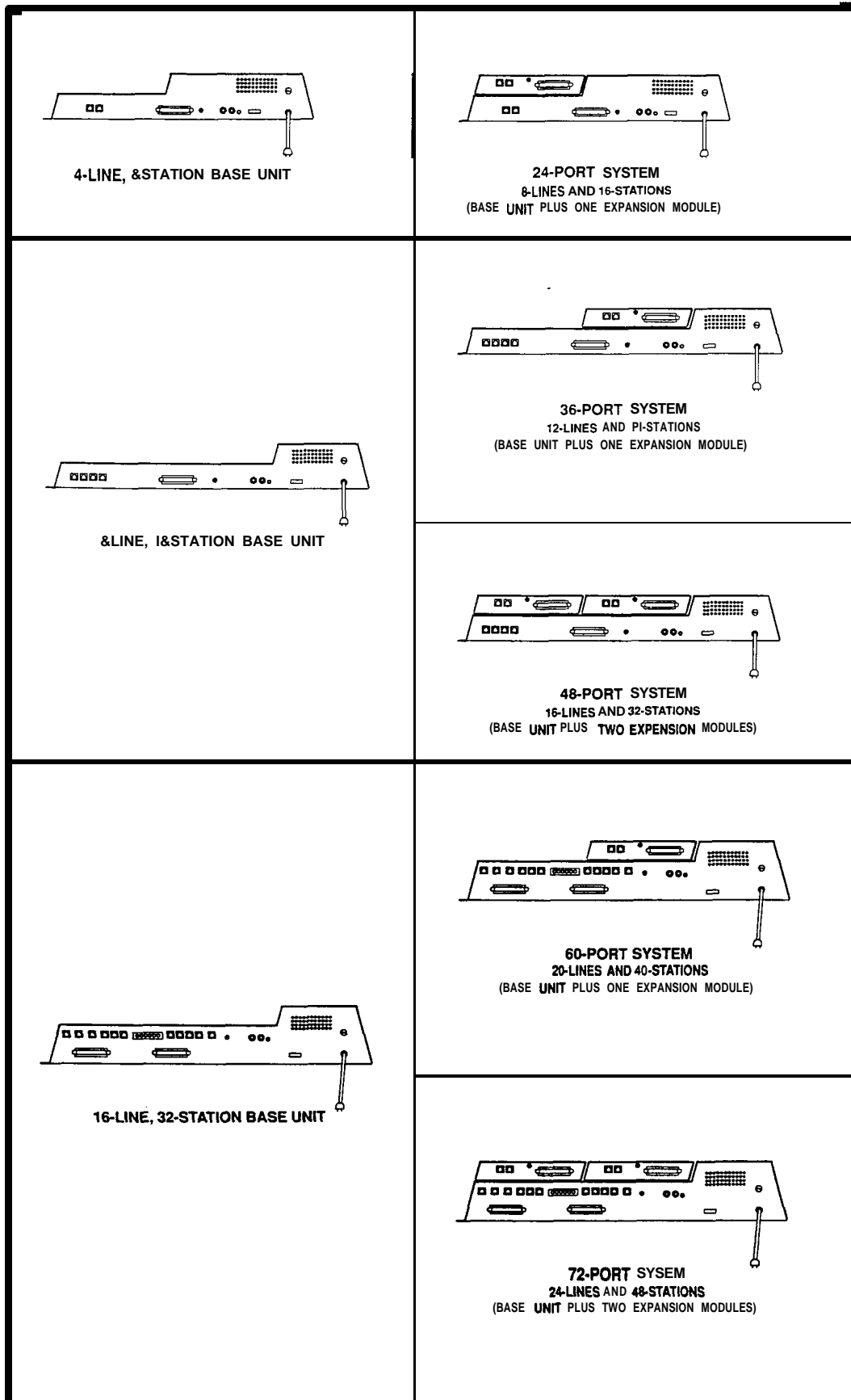


Figure 3-14. Add-On Expansion Module Configuration

Table 3-6. Station Connections • 408 Expansion Module

25-PAIR CABLE CONNECTIONS			2-WIRE CONNECTIONS		STA. CONNECTIONS		
WIRE COLOR	PAIR	PIN NO.	CLIP TERM.	PAIR	WIRE COLOR	STA.	LOCATION
WHITE-BLUE	1	26	1	SIGNAL	GREEN	1M	
BLUE-WHITE		1	2	PATH	RED		
WHITE-ORANGE	2	27	3	SIGNAL	GREEN	2M	
ORANGE-WHITE		2	4	PATH	RED		
WHITE-GREEN	3	28	5	SIGNAL	GREEN	3M	
GREEN-WHITE		3	6	PATH	RED		
WHITE-BROWN	4	29	7	SIGNAL	GREEN	4M	
BROWN-WHITE		4	8	PATH	RED		
WHITE-SLATE	5	30	9	SIGNAL	GREEN	5M	
SLATE-WHITE		5	10	PATH	RED		
RED-BLUE	6	31	11	SIGNAL	GREEN	6M	
BLUE-RED		6	12	PATH	RED		
RED-ORANGE	7	32	13	SIGNAL	GREEN	7M	
ORANGE-RED		7	14	PATH	RED		
RED-GREEN	8	33	15	SIGNAL	GREEN	8M	
GREEN-RED		8	16	PATH	RED		
RED-BROWN	9	34	17				
BROWN-RED		9	18				
RED-SLATE	10	35	19				
SLATE-RED		10	20				
BLACK-BLUE	11	36	21				
BLUE-BLACK		11	22				
BLACK-ORANGE	12	37	23				
ORANGE-BLACK		12	24				
BLACK-GREEN	13	38	25				
GREEN-BLACK		13	26				
BLACK-BROWN	14	39	27				
BROWN-BLACK		14	28				
BLACK-SLATE	15	40	29				
SLATE-BLACK		15	32				
YELLOW-BLUE	16	41	31				
BLUE-YELLOW		16	32				
YELLOW-ORANGE	17	42	33				
ORANGE-YELLOW		17	34				
YELLOW-GREEN	18	43	35				
GREEN-YELLOW		18	36				
YELLOW-BROWN	19	44	37				
BROWN-YELLOW		19	38				
YELLOW-SLATE	20	45	39				
SLATE-YELLOW		20	40				
VIOLET-BLUE	21	46	41				
BLUE-VIOLET		21	42				
VIOLET-ORANGE	22	47	43				
ORANGE-VIOLET		22	44				
VIOLET-GREEN	23	48	45				
GREEN-VIOLET		23	46				
VIOLET-BROWN	24	49	47				
BROWN-VIOLET		24	48				
VIOLET-SLATE	25	50	49	TIP		POWER   FAIL STATION	
SLATE-VIOLET		25	50	RING			

### INSTALLATION

Each add-on expansion module measures 15.5 wide x 3.4 high x 1.6 wide and weighs approximately 4 pounds. The modules are designed to be attached to the base unit and connected to it via cabling.

- The first module must be connected to the upper location on the base unit.

To install an expansion module to a base unit, refer to **Figure 3-15** and perform the following procedure.

1. Disconnect both AC power and external battery back-up power from the system.
2. Remove and set aside nameplate from base unit. This action exposes internal cable connector on base unit circuit board.
3. Reach through opening in base unit and mate module cable plug with base unit circuit board connectors.
4. Push excess cable inside base unit housing through connector opening.
5. install expansion module in place on all four mounting holes. Be sure excess cable is not pinched between add-on module and base unit.
6. Pull module down to latch in place.
7. Use flat-blade screw driver to tighten module securing screw into base unit threaded fastener.
8. Snap nameplate into slots on top of module housing.
9. Attach a #10 or #12 insulated, solid copper wire between the grounding terminal on the expansion module and the grounding terminal on the common equipment cabinet.

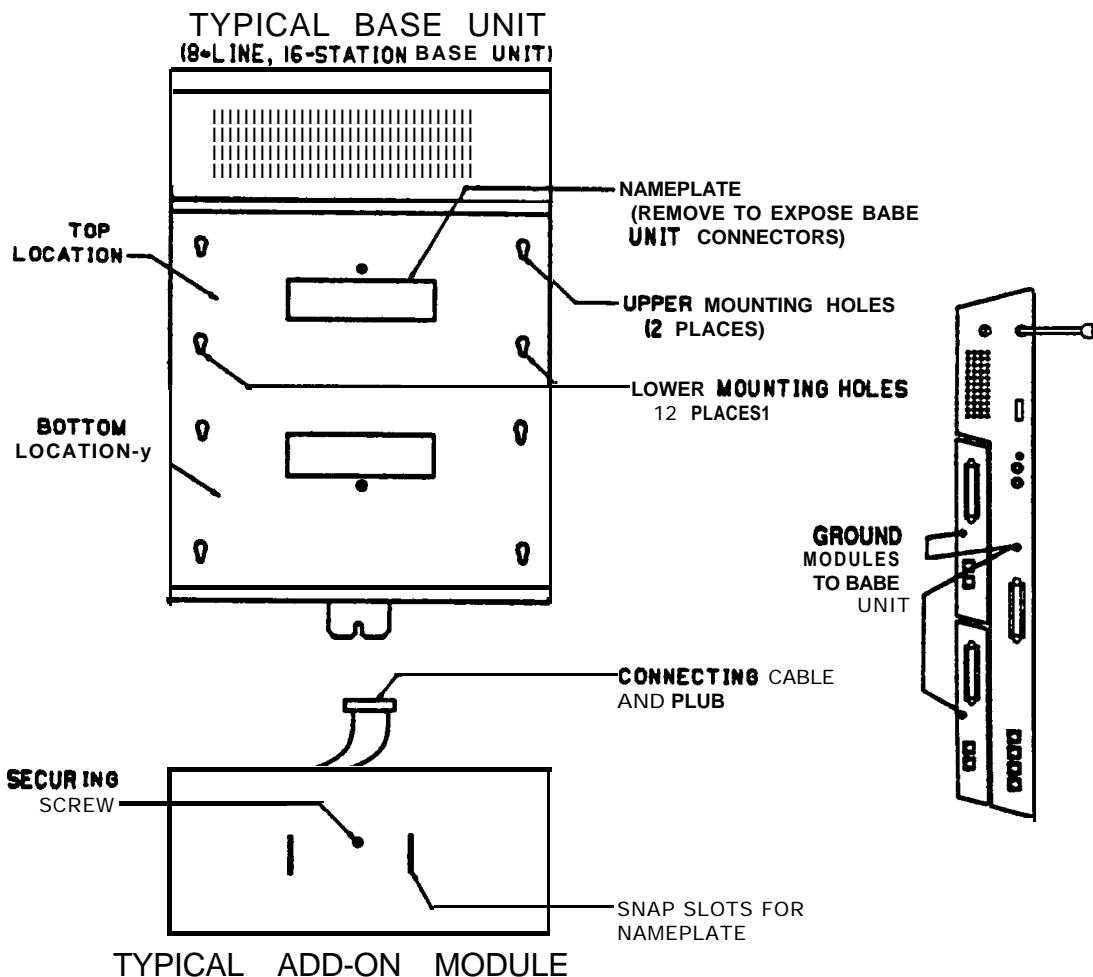


Figure 3-15. Expansion Module Installation

## SECTION 4 SOFTWARE CARTRIDGE

### INTRODUCTION

A plug-in module is required with the common equipment base unit to provide the following functions:

- Operating System Software Control
- **Default** Functional Program
- Call Cost Storage For System Collected Records

Installing the software cartridge provides the operating system software control of the digital telephone system.

All class of service data that is programmed into the system is stored in the common equipment memory and not in the software cartridge; therefore, no current class of service programming is lost if the software cartridge is replaced. Call cost records, however, are stored in the software cartridge. If a new software cartridge is exchanged for the one currently installed in the common equipment cabinet, all call cost records that are stored in the installed cartridge are lost. Because of this, be sure to obtain a print-out of all call cost records and then delete them from memory before exchanging a new cartridge for the currently installed one.

### INSTALLATION

The software cartridge plugs into the common equipment base unit housing as shown in Figure 3-16.

#### CAUTION

To avoid any chance of electrostatic discharge damage to the software cartridge, avoid touching the connector with your fingers while handling it.

#### CAUTION

Be sure to disconnect the AC power to the base unit (also disconnect battery backup power if it is connected) before installing or removing a software cartridge.

#### To install a cartridge,

*NOTE: Before installing a software cartridge into a base unit, be sure the product code matches the product code of the base unit (i.e., place an SO408 cartridge into a GO408 base unit; place an SO816 cartridge into a **G0816** base unit; and place an **S1632** cartridge into a G 1632 base unit.*

1. Orient the **cartridge** so that the connector end is toward the base unit opening and the removal notch, located at the top rear of the cartridge, is toward the front of the base unit.
2. Insert the cartridge into the base unit cabinet with a **steady** gentle pressure until it seats into place. Then, press the cartridge into place firmly to fully mate the connections.

#### To remove a cartridge,

1. Place the bit of a flat-blade screwdriver into the removal notch. Lift up on the cartridge with the screwdriver to un-mate the connections.
2. Slide the cartridge out of the base unit.

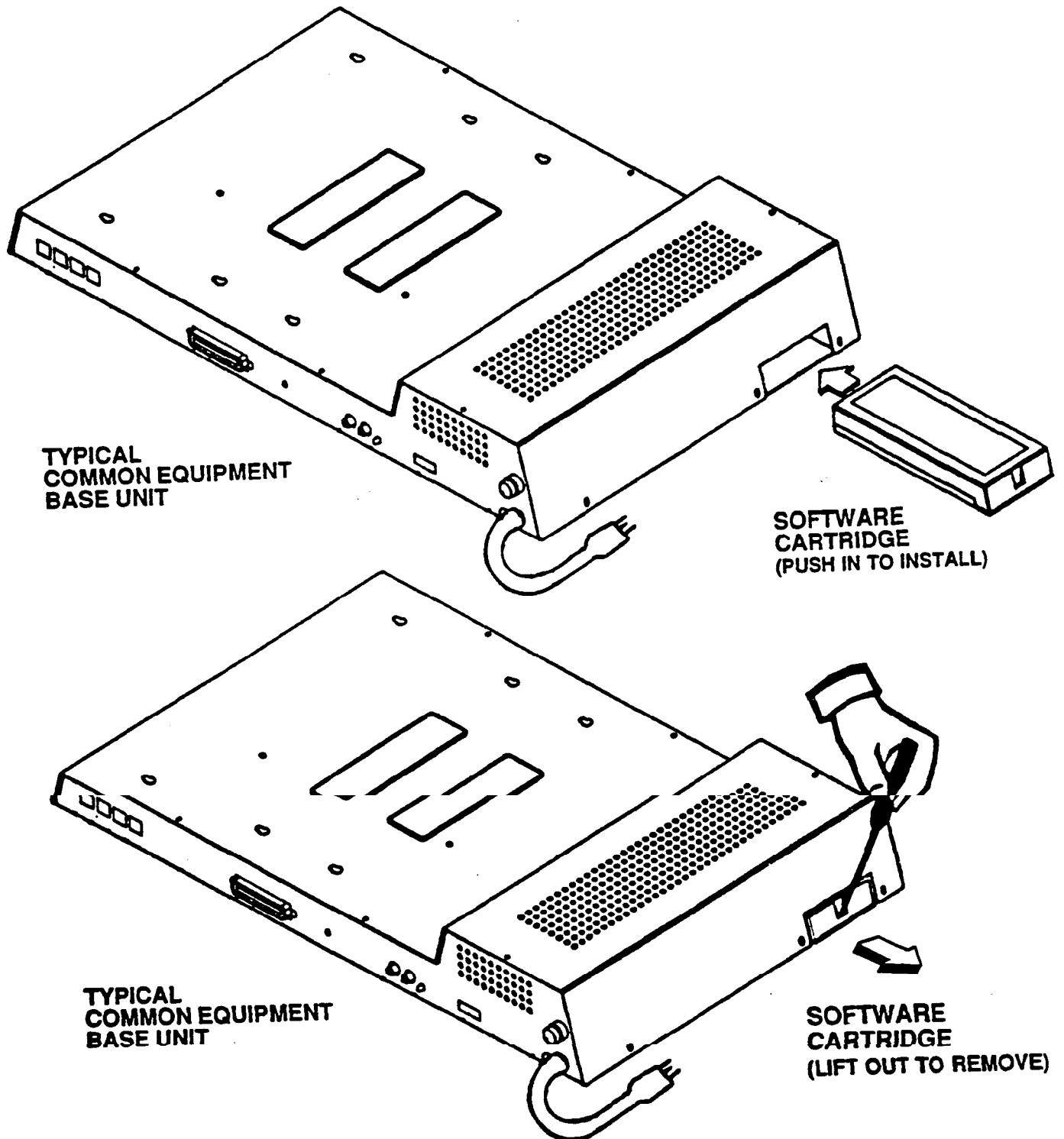


Figure 3-16. Software Cartridge Installation and Removal

## SECTION 5 DATA COMMUNICATIONS WITH THE DIGITAL TELEPHONE SYSTEM

Arrange both station-to-trunk and station-to-station data communications through the system stations, using a data device, a modem, and a data switch.

### EQUIPMENT REQUIRED

- Any data device (such as a VDT or a personal computer equipped with communications **software**)
- Any Hayes-compatible modem
- A data switch (such as the model PC-787JJ from *Precision Components Telephone, Addison IL, 60 10 1, telephone: 1-708-543-6400*)

### CONNECTIONS

Refer to Figure 3-1 7, and connect the equipment as illustrated. Certain digital telephone models include a headset jack located on the rear housing near the line jack. This headset jack marking reads "**HDST**". Installing this telephone requires the following connection changes:

- The telephone handset remains connected to the telephone and left on-hook.
- Connect the accessory headset to the headset jack of the data switch.
- Connect the telephone jack of the data switch to the headset jack of the telephone. Do not connect it to the the handset jack as illustrated. Make this connection with the modular cable supplied with the data switch. Make the modem and data device connections using cabling specified in the literature accompanying this equipment.

The data switch has a compatibility control located on the bottom of the cabinet. Set this control to match the telephone equipment being used. Change the settings **+/- 2** positions from the specified settings to provide the quietest data path possible.

Use a flat blade screw driver to set the compatibility control as follows:

- With the telephone handset connected to the data switch as illustrated, set the compatibility control to **position 5**.

- With the accessory headset connected to the data switch, set the compatibility control to **position 9**.

The data switch has a phase switch located on the right side of the cabinet.

- Set this switch to the **NORMAL** position (toward the rear of the cabinet).

It is very important to set the telephone volume control to the minimum level.

### COMMUNICATION PROCEDURES

#### STATION-TO-TRUNK

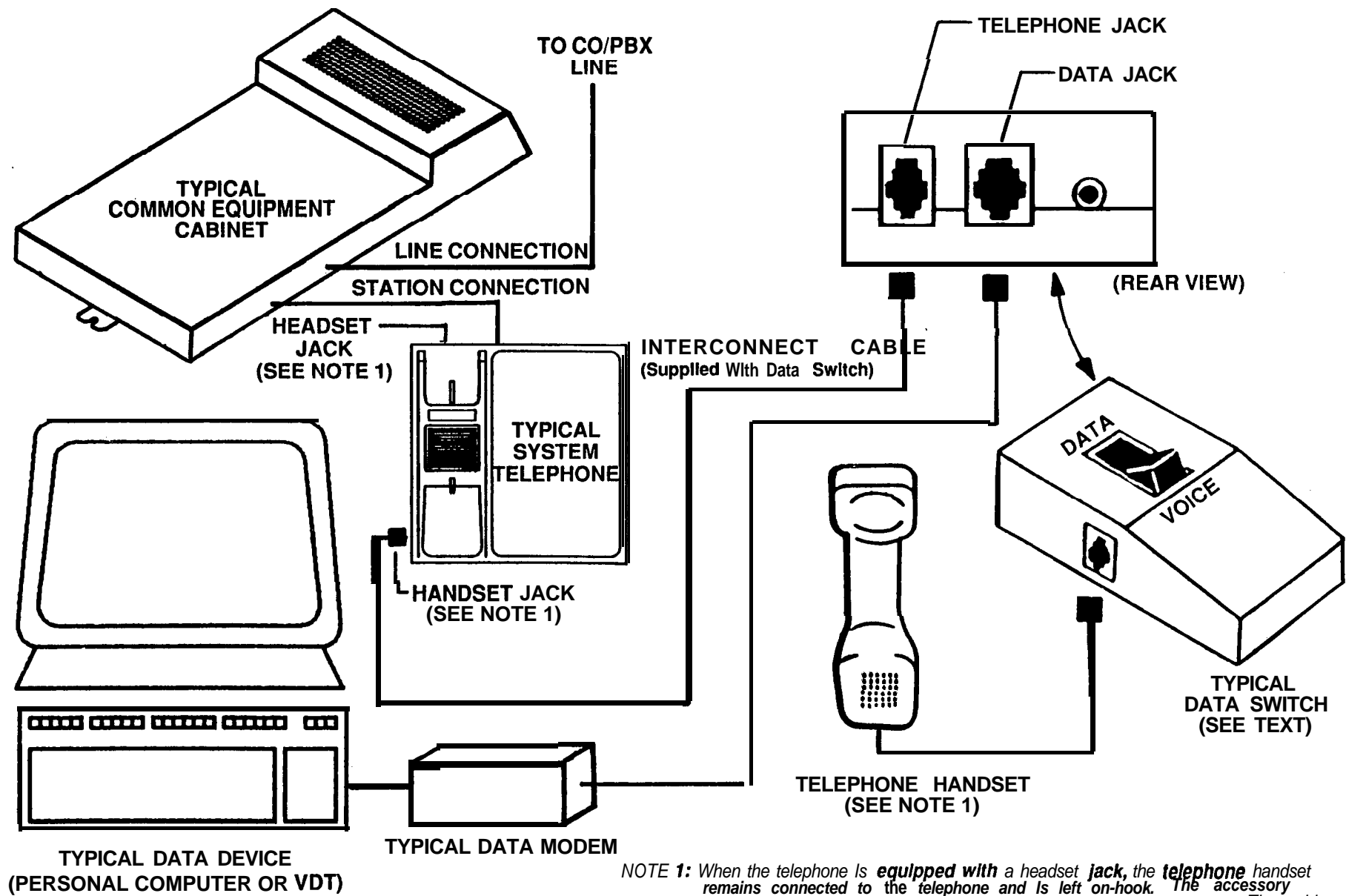
To make a data transmission to a distant site over a **CO/PBX** line,

1. Set data switch to **VOICE**.
2. Prepare modem and data device for data communications. Refer to information supplied with software and equipment.
3. Press telephone line button and hear dial tone.
4. Set data switch to **DATA**.
5. Issue dialing command to modem from data device keyboard.

#### STATION-TO-STATION

To make a data transmission to another station equipped and connected as shown in Figure **1**,

1. Set data switch to **VOICE**.
2. Prepare modem and data device for data communications. Refer to information supplied with software and equipment.
3. Press **ITCM** on telephone and hear dial tone.
4. Dial other station and set up voice call.
5. Type **ATX1 D** on data device keyboard but do not press ENTER. Ask intercom party to type **ATA** on their data device keyboard but do not press ENTER.
6. Complete voice conversation, ask intercom party to set their data switch to **DATA** and to press ENTER on their keyboard.
7. Set data switch to **DATA**, and press ENTER on data device keyboard. Modems will automatically complete data connection.



**NOTE 1:** When the telephone is equipped with a headset jack, the telephone handset remains connected to the telephone and is left on-hook. The accessory headset is then connected to the handset/a& of the data switch. The cable that is supplied with the data switch is connected between the telephone jack of the data switch and the headset jack of the telephone.

Figure 3-17. Data Communications Interconnection Diagram

3-3



## SECTION 6 SYSTEM CHECKOUT AND FAILURE ISOLATION

### INITIAL CONDITION

The system operating features are set to **default** conditions at initial power-up. These conditions provide a basic operating system with a known set of parameters, and the system should be initially checked out with the default conditions in place. At any time while the system is operating, default conditions can be reset from station port 10 or 12 per the instructions provided in Chapter 4, Programming.

### CHECK OUT

Check the common equipment and telephone installation for proper operation by performing the following resistance and voltage measurements.

#### RESISTANCE CHECK

Measure the resistance at the station connector blocks under the following conditions.

- AC power cord disconnected from electrical outlet.
- Common equipment connected to station connector blocks.
- Stations wired and wiring punched down on blocks.
- Bridging clips removed from blocks to isolate stations from common equipment.

Measure the resistance of each installed station and wiring from the station side of the connector blocks. Resistance values will vary with cable length and station type but should be within the following limits:

- Greater than 700 Kohms

#### VOLTAGE CHECK

Make the following voltage measurements at the station connector blocks under the following conditions:

- Bridging clips installed
- AC power connected to the common equipment

Measure the voltage across the signal pair. The measured voltage must be within the following limits:

**- 28 - 36 VDC**

### GENERAL CHECK

1. Check the red light emitting diode (LED) system status indicator. Be sure that it is on steady. If it is off or flashing, refer to the paragraph below titled, *Failure Isolation*.
2. Refer to Chapter 5 for operating information and perform a general operational test of the system by exercising the features from station port 10 or 11. Operational parameters are per the system default conditions as detailed in Chapter 4 until class of service programming is performed.
3. Once the basic system is verified as operational, perform the class of service programming as described in Chapter 4.

### FAILURE ISOLATION

#### SYSTEM STATUS INDICATOR

A red LED located on the common equipment cabinet near the music port is the system status indicator. This indicator is turned on steady when power is applied to the system. If the indicator flashes after power up, it could be indicating a processor failure. Unplug and reconnect the AC power to the power supply and observe the LED indication. If it still shows a flashing indication, equipment replacement may be necessary.

#### STATION SELF TEST

The multiline stations can be self tested for proper operation per the following instructions:

1. Disconnect line cord at station base.
2. Press and hold MUTE and reconnect line cord to station connector. Station will automatically perform self test routine.
3. Release MUTE as soon as test begins. Sequence of test is as follows:
  - Indicators will light in sequence
  - Ringer will sound ▪ be sure volume is set to low or high
  - Indicators and ringer will then turn off at the same time
4. Replace any station that does not pass the **self** test.

## SECTION 7 INSTALLER/USER INFORMATION REGARDING FCC RULES AND REGULATIONS

This electronic key system complies with Federal Communications Commission (FCC) Rules, Part 68. The FCC registration label on the KSU contains the FCC registration number, the ringer equivalence number, the model number, and the serial number or production date of the system.

### NOTIFICATION TO TELEPHONE COMPANY

Unless a telephone operating company provides and installs the system, the telephone operating company which provides the lines must be notified before a connection is made to them. The lines (telephone numbers) involved, the FCC registration number, and the ringer equivalence number must be provided to the telephone company. The FCC registration number and the ringer equivalence number of this equipment are provided on the label attached to the common equipment. The user/installer is required to notify the telephone company when final disconnection of this equipment from the telephone company line occurs.

### COMPATIBILITY WITH TELEPHONE NETWORK

When necessary, the telephone operating company provides information on the maximum number of telephones or ringers that can be connected to one line, as well as any other applicable technical information. The telephone operating company can temporarily discontinue service and make changes which could affect the operation of this equipment. They must, however, provide adequate notice, in writing, of any future equipment changes that would make the system incompatible.

### INSTALLATION REQUIREMENTS

Connection of the electronic key system to the telephone lines must be through a universal service order code (USOC) outlet jack supplied by the telephone operating company. If the installation site does not have the proper outlet, ask the telephone company business office to install one. The correct outlet jack for this system is either a type RJ21 X or type **RJ14C**.

### PARTY LINES AND COIN LINES

Local telephone company regulations may not permit connections to party lines and coin lines by anyone except the telephone operating company.

### TROUBLESHOOTING

If a service problem occurs, first try to determine if the trouble is in the on-site system or in the telephone company equipment. Disconnect all equipment not owned by the telephone company. If this corrects the problem, the **faulty** equipment must not be reconnected to the telephone line until the problem has been corrected. Any trouble that causes improper operation of the telephone network may require the telephone company to

discontinue service to the trouble site after they notify the user of the reason.

### REPAIR AUTHORIZATION

FCC regulations do not permit repair of customer owned equipment by anyone except the manufacturer, their authorized agent, or others who might be authorized by the FCC. However, routine repairs can be made according to the maintenance instructions in this publication, provided that all FCC restrictions are obeyed.

### RADIO FREQUENCY INTERFERENCE

The electronic key system contains incidental radio frequency generating circuitry and, if not installed and used properly, may cause interference to radio and television reception. This equipment 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. These limits are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area may cause interference to radio and television reception; in which case the user is encouraged to take whatever measures may be required to correct the interference. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Reorient the television or radio's receiving antenna, and/or relocate the KSU, the individual telephone stations, and the radio or TV with respect to each other. If necessary, the user should consult the manufacturer or an experienced **radio/television** technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the Government Printing Office, Washington D.C. 20402. Stock No. 004-000-00345-4.

This digital apparatus does not exceed the (Class A) limits for radio noise emissions from digital apparatus set out in the **Radio** Interference Regulations of the Canadian Department of Communications.

Le présent appareil **numérique** n'émet pas de bruits **radioélectriques dépassant** les limites **applicables** aux appareils **numériques** (de la class A) **prescrites** dans le **Règlement** sur le brouillage radioélectrique **édicte** par le **ministère** des Communications du Canada.

### RINGER EQUIVALENCE NUMBER

The REN of each line is 0.48. The FCC requires the installer to determine the total REN for each line, and record it at the equipment.

## CHAPTER 4 SYSTEM PROGRAMMING

### SECTION 1 GENERAL INFORMATION

Configuration programming is performed from station port 10 or station port 12. The programming station should be an LCD Speakerphone. Any digital telephone can be installed at station port 10 or 12 and used for programming but LCD feedback of the programming operations will not be available. Programming commands will not be accepted from any other station port in the system. Station 10 or 12 configuration programming consists of the following categories:

**Class Of Service Programming:** This class of service programming is unlimited as to the features that can be programmed using it. Class of service programming is usually performed by the installer when the system is first put into service.

**Administration Programming:** The administration programming can be used to program all system features except line attributes and the master clear. This procedure is usually employed by on-site personnel whenever system needs dictate.

**Attendant Programming:** The attendant programming is limited to those features which may need reprogramming by the system attendant, such as:

- System clock setting
- System speed dial
- Night transfer of ringing
- Music on hold
- LCD messages

- Station names
- SMDA reports

**Alternately**, programming can be performed from any customer-provided Video Display Terminal (VDT) with an RS-232 compatible, serial interface. VDT programming is completely menu driven and easy to follow. It is arranged somewhat differently from station port programming categories to facilitate menu usage. VDT programming is discussed in Section 4 of this chapter.

Prior to taking any programming action, determine the desired parameters and requirements. Record this data on the programming reference tables provided for this purpose along-side the station programming procedures in the following sections.

Block programming can be performed after a configuration has been programmed for a particular line or station. Block programming will program a group of lines or stations to have the same configuration as the programmed one. This feature eliminates the need to individually program every line or station that requires the same configuration.

### PROGRAMMING OVERLAYS

A programming overlay is included with each system for **use** in identifying the buttons required for programming. The overlay fits over the buttons of the programming station. A full size copy of the programming overlay is included at the end of this chapter for use **as** needed.

## SECTION 2 CLASS OF SERVICE PROGRAMMING

Class of service programming is usually performed by the system installer. Class of service programming procedures provide the means for programming all of the system variables. The installer may elect to program only the line attributes and allow the

remainder of the system variables to remain set to their **default** values.

Perform class of service programming as shown below.

**2** Enter the base level programming mode.  
Press: **ITCM \* # 7 4 6 \***.  
The display will show: **"CONFIG. MODE "**

**1** Mark the desired selections in the charts to record programming needs.

### TYPICAL FEATURE PROGRAMMING SEQUENCE

<p>Automatic Hold For Intercom: <b>With this</b> feature enabled, pressing another intercom button or line button while already on an intercom call will <b>automatically</b> place this existing call on hold.</p>	<p>1. Dial <b>53</b>. 2. Dial <b>12</b>. 3/Select station ports to be programmed: - Station 10 - 57: Dial 10 - <b>57</b>. 4. Dial <b>*</b> for next station feature. -OR- Dial <b>**</b> for configuration mode.</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> <tr> <td colspan="6" style="text-align: center;"><b>DEFAULT = NOT ASSIGNED</b></td> </tr> </tbody> </table>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57		<b>DEFAULT = NOT ASSIGNED</b>					
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**3** Dial a feature code to select a programming parameter.

A current program setting is indicated by a lighted LED next to the applicable programming button. When a toggle (ON/OFF) action is provided by a single button, the lighted LED indicates when the feature is active.

If a tone burst sounds three times during programming, it denotes an erroneous input. Programming can be continued after an error without ending and re-entering the programming mode **from** base level..

**4** Press **\*** to return to the most previous programming level. Each press returns to the next previous programming level.

**5** Press **SPKR** to end procedure.

MASTER CLEAR		
<p>The entire programming configuration, as discussed in the following programming procedures, can be defaulted to the factory settings at once using the Master Clear procedure.</p>		
<p><b>CAUTION</b></p> <p><i>Not on/y does <b>this</b> action <b>return</b> ALL programmed <b>variables</b> to a known state of operation, It also clears all <b>currently</b> stored <b>autodial</b> and speed dial numbers.</i></p>		
FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD
<p>Base Level: The first step in any programming sequence is to enter the base level. Once in this mode, the master clear can be performed.</p>	<p>Press <b>ITCM</b> Dial * # 7 4 6 * "COW/G. MODE"</p>	
<p>Master <b>Clear</b>: Returns entire system to default and clears all stored auto and speed dial numbers.</p>	<p>Dial 90. "MASTER CLEAR " Dial 5 1 6 8 4 to clear the entire system. System returns to normal operation mode automatically.</p>	

## SYSTEM DEFAULTS

- Mark the desired selections in the charts to record programming needs.
- Dial the feature code and then dial the selection code or press the programming button to program the selection.

**NOTE:** A current program setting is indicated by a lighted **LED** next to the programming button for that selection. When a toggle (on/off) action is provided by a single button, the lighted LED indicates an active feature.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD
<b>Base Level:</b> The first step in any programming sequence is to enter the base level. Once in this mode, any desired configuration can be set.	Press <b>ITCM</b> Dial *# 7 4 6 *. "CONFIG. MODE "	
<b>System Default:</b> The system configuration features can be defaulted to factory settings. These values will provide satisfactory system performance in a broad range of site applications.	Dial 10. "SYSTEM DEFAULT" Press # to default system features. System returns to configuration mode.	
<b>Line Default:</b> The line configuration features can be defaulted to factory settings. These values will provide satisfactory system performance in a broad range of site applications.	Dial 30. "LINE DEFAULT " Press # to default line features. System returns to configuration mode.	
<b>Station Default:</b> The station configuration features can be defaulted to factory settings. These values will provide satisfactory system performance in a broad range of site applications.	Dial 50. "STATION DEFAULT " Dial 00 to default station ports system-wide. -OR- <b>Select station port to be defaulted:</b> ▪ Station 10 - 57: Dial 10 ▪ 57 . Dial * for additional stations to default. Dial * * for configuration mode.	

Press SPKR to end.

## SYSTEM CONFIGURATION

- Mark the desired selections in the charts to record programming needs.
- Dial the feature code and then dial the selection code or press the programming button to program the selection.

**NOTE:** A current program setting is indicated **by** a lighted LED next to **the programming button** for **that selection**. When a **toggle (on/off) action** is provided by a **single button**, the lighted LED indicates an active feature.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																																				
<p><b>Base Level:</b> The first step in any programming sequence is to enter the base level. Once in this mode, any desired configuration can be set.</p>	<p>Press <b>ITCM</b> Dial <b>*# 7 4 6 *</b>.</p>																																					
<p><b>System Default:</b> The system configuration features, described in the following procedures, can be defaulted to a standard set of values. <b>These</b> values will provide satisfactory system performance in a broad range of site applications.</p>	<p>1. Dial <b>10</b>. "SYSTEM DEFAULT"                      2. Press <b># to</b> default system features.</p>																																					
<p><b>Unanswered Call Transfer Recall Time:</b> A transferred call that remains unanswered after a programmed length of time will return to the transferring station for answering.</p>	<p>1. Dial <b>11</b>. "TRANSFER RECALL "                      2. Dial <b>1</b> (sta xfr recall). "STA XFR RCL XXX "                      -OR-                      Dial <b>2</b> (dept xfr recall). "DEPT XFR RCL XXX"                      3. Choose transfer time.                      - Dial <b>1</b> or Press <b>A1</b>. "STA XFR RCL 10 "                      - Dial <b>2</b> or Press <b>A2</b>. "STA XFR RCL 20 "                      - Dial <b>3</b> or Press <b>A3</b>. "STA XFR RCL 25 "                      - Dial <b>4</b> or Press <b>A4</b>. "STA XFR RCL 30 "                      - Dial <b>5</b> or Press <b>A5</b>. "STA XFR RCL 45 "                      - Dial <b>6</b> or Press <b>A8</b>. "STA XFR RCL 60 "                      - Dial <b>7</b> or Press <b>A9</b>. "STA XFR RCL 90 "                      - Dial <b>8</b> or Press <b>A10</b>. "STA XFR RCL 120 "                      - Dial <b>9</b> or Press <b>A11</b>. "STA XFR RCL 180 "                      - Dial <b>0</b> or Press <b>A12</b>. "STA XFR RCL 400 "                      4. Press <b>*</b> for next transfer recall feature.                      5. Press <b>* *</b> for configuration mode.</p>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>BUTTON</th> <th>SEC</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>1</td><td>10</td><td></td></tr> <tr><td>2</td><td>20</td><td></td></tr> <tr><td>3</td><td>25</td><td></td></tr> <tr><td>4</td><td>30</td><td></td></tr> <tr><td>5</td><td>45</td><td></td></tr> <tr><td>6</td><td>60</td><td></td></tr> <tr><td>7</td><td>90</td><td></td></tr> <tr><td>8</td><td>120</td><td></td></tr> <tr><td>9</td><td>180</td><td></td></tr> <tr><td>0</td><td>400</td><td></td></tr> <tr><td colspan="3">DEFAULT = 20 sec.</td></tr> </tbody> </table>	BUTTON	SEC	ENTRY	1	10		2	20		3	25		4	30		5	45		6	60		7	90		8	120		9	180		0	400		DEFAULT = 20 sec.		
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Press SPKR to end.

Press **ITCM \* # 7 4 6 \*** for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																																				
<p>Recall/Flash: A line disconnect (<b>recall</b>) or a host system feature <b>access</b> signal (flash) can be <b>generated</b> depending upon the <b>programmed</b> time.</p>	<ol style="list-style-type: none"> <li>Dial 12 "RECALUFLSH XXXX"</li> <li>Select time. <ul style="list-style-type: none"> <li>Dial 1 or Press A1. "RECALUFLSH 0.08"</li> <li>Dial 2 or Press A2. "WECALUFLSH 0.30"</li> <li>Dial 3 or Press A3. "WECALUFLSH 0.50"</li> <li>Dial 4 or Press A4. "RECALUFLSH 0.60"</li> <li>Dial 5 or Press A5. "RECALUFLSH 0.75"</li> <li>Dial 6 or Press A6. "RECALUFLSH 0.88"</li> <li>Dial 7 or Press <b>A9</b>. "RECALUFLSH 1 "</li> <li>Dial 6 or Press <b>A10</b>. "RECALUFLSH 7.50"</li> <li>Dial 9 or Press A11. "RECALUFLSH 2 "</li> <li>Dial 0 or Press A12. "RECALUFLSH 3 "</li> </ul> </li> <li>Dial * for configuration mode.</li> </ol>	<table border="1"> <thead> <tr> <th>BUTTON</th> <th>SEC</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>1</td><td>.08</td><td></td></tr> <tr><td>2</td><td>.30</td><td></td></tr> <tr><td>3</td><td>.50</td><td></td></tr> <tr><td>4</td><td>.60</td><td></td></tr> <tr><td>5</td><td>.75</td><td></td></tr> <tr><td>6</td><td>.88</td><td></td></tr> <tr><td>7</td><td>1.0</td><td></td></tr> <tr><td>8</td><td>1.5</td><td></td></tr> <tr><td>9</td><td>2.0</td><td></td></tr> <tr><td>0</td><td>3.0</td><td></td></tr> <tr><td colspan="3">DEFAULT = 2.0 sec.</td></tr> </tbody> </table>	BUTTON	SEC	ENTRY	1	.08		2	.30		3	.50		4	.60		5	.75		6	.88		7	1.0		8	1.5		9	2.0		0	3.0		DEFAULT = 2.0 sec.		
BUTTON	SEC	ENTRY																																				
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<p>Pause Time: During auto dials and speed dials, it is sometimes necessary to delay the sending of <b>digits</b> to give switching equipment time to prepare for receiving them. A pause is stored whenever the user presses the <b>HOLD</b> button. The pause length options are stored in seconds.</p>	<ol style="list-style-type: none"> <li>Dial 13 "PAUSE TIME XXX "</li> <li>Select time. <ul style="list-style-type: none"> <li>Dial 1 or Press A1. "PAUSE TIME 0.50 "</li> <li>Dial 2 or Press A2. "PAUSE TIME 1 "</li> <li>Dial 3 or Press A3. "PAUSE TIME 1.50 "</li> <li>Dial 4 or Press A4. "PAUSE TIME 2 "</li> <li>Dial 5 or Press A5. "PAUSE TIME 3 "</li> <li>Dial 6 or Press A6. "PAUSE TIME 5 "</li> <li>Dial 7 or Press <b>A9</b>. "PAUSE TIME 7.50 "</li> <li>Dial 6 or Press <b>A10</b>. "PAUSE TIME 10 "</li> <li>Dial 9 or Press A11. "PAUSE TIME 15 "</li> <li>Dial 0 or Press A12. "PAUSE TIME 20 "</li> </ul> </li> <li>Dial * for configuration mode.</li> </ol>	<table border="1"> <thead> <tr> <th>BUTTON</th> <th>SEC</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>1</td><td>.50</td><td></td></tr> <tr><td>2</td><td>1.0</td><td></td></tr> <tr><td>3</td><td>1.5</td><td></td></tr> <tr><td>4</td><td>2.0</td><td></td></tr> <tr><td>5</td><td>3.0</td><td></td></tr> <tr><td>6</td><td>5.0</td><td></td></tr> <tr><td>7</td><td>7.5</td><td></td></tr> <tr><td>8</td><td>10</td><td></td></tr> <tr><td>9</td><td>15</td><td></td></tr> <tr><td>0</td><td>20</td><td></td></tr> <tr><td colspan="3">DEFAULT = 1 sec.</td></tr> </tbody> </table>	BUTTON	SEC	ENTRY	1	.50		2	1.0		3	1.5		4	2.0		5	3.0		6	5.0		7	7.5		8	10		9	15		0	20		DEFAULT = 1 sec.		
BUTTON	SEC	ENTRY																																				
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Press SPKR to end.



Press **ITCM** \* # 7 4 6 \* for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																																							
<p><b>Imed Hold Recall:</b> After a call has been on hold for a programmed length of time, the system will recall the station that placed the call on hold. The timing is in seconds.</p>	<ol style="list-style-type: none"> <li>Dial 14 "HOLD RECALL XXXX"</li> <li>Select time. <ul style="list-style-type: none"> <li>Dial 1 or Press <b>A1.</b> "HOLD RECALL 30 "</li> <li>Dial 2 or Press <b>A2.</b> "HOLD RECALL 60 "</li> <li>Dial 3 or Press <b>A3.</b> "HOLD RECALL 90 "</li> <li>Dial 4 or Press <b>A4.</b> "HOLD RECALL 120 "</li> <li>Dial 5 or Press <b>A5.</b> "HOLD RECALL 180 "</li> <li>Dial 6 or Press <b>A8.</b> "HOLD RECALL 240 "</li> <li>Dial 7 or Press <b>A9.</b> "HOLD RECALL 300 "</li> <li>Dial 8 or Press <b>A10.</b> "HOLD RECALL 360 "</li> <li>Dial 9 or Press <b>A11.</b> "HOLD RECALL 420 "</li> <li>Dial 0 or Press <b>A12.</b> "HOLD RECALL "</li> </ul> </li> <li>Dial * for configuration mode.</li> </ol>	<table border="1"> <thead> <tr> <th>BUTTON</th> <th>SEC</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>1</td><td>30</td><td></td></tr> <tr><td>2</td><td>60</td><td></td></tr> <tr><td>3</td><td>90</td><td></td></tr> <tr><td>4</td><td>120</td><td></td></tr> <tr><td>5</td><td>180</td><td></td></tr> <tr><td>6</td><td>240</td><td></td></tr> <tr><td>7</td><td>300</td><td></td></tr> <tr><td>8</td><td>360</td><td></td></tr> <tr><td>9</td><td>420</td><td></td></tr> <tr><td>0</td><td colspan="2">NEVER RECALL</td></tr> <tr><td colspan="3">DEFAULT = 60 Sec.</td></tr> </tbody> </table>	BUTTON	SEC	ENTRY	1	30		2	60		3	90		4	120		5	180		6	240		7	300		8	360		9	420		0	NEVER RECALL		DEFAULT = 60 Sec.					
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<p><b>Data Baud Rate:</b> The speed or baud rate of the data bit stream, which carries the SMDR and configuration data between the system and an external data device, must be programmed to match the requirements of the data device.</p> <p><i>VOTE: If XMODEM protocol is to be used for data transfer between a VDT and the common equipment, 8-bit data is required.</i></p>	<ol style="list-style-type: none"> <li>Dial 15. 'BAUD RATE '</li> <li>Dial 1 for data port A. <b>-OR-</b> Dial 2 for data port B</li> <li>Choose baud rate. <ul style="list-style-type: none"> <li>Dial 01 or Press <b>A1.</b> "W nD nS 110"</li> <li>Dial 02 or Press <b>A2.</b> "W nD nS 150"</li> <li>Dial 03 or Press <b>A3.</b> "W nD nS 300"</li> <li>Dial 04 or Press <b>A4.</b> "W nD nS 600"</li> <li>Dial 05 or Press <b>A5.</b> "W nD nS 1200"</li> <li>Dial 06 or Press <b>A8.</b> "W nD nS 2400"</li> <li>Dial 07 or Press <b>A9.</b> "W nD nS 4800"</li> <li>Dial 08 or Press <b>A10.</b> "W nD nS 9600"</li> <li>Dial 09 or Press <b>A11.</b> "W nD nS 19200"</li> <li>Dial 10 or Press <b>A7</b> for 7 data bits and 2 stop bits. "W 7D 2S ZZZZ"</li> <li>Dial 11 or Press <b>A14</b> for 8 data bits and 1 stop bit. "W 8D 1S ZZZZ"</li> </ul> </li> <li>Dial * for next data port.</li> <li>Dial * * for configuration mode.</li> </ol>	<table border="1"> <thead> <tr> <th>BUTTON</th> <th>BAUD</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>01</td><td>110</td><td></td></tr> <tr><td>02</td><td>150</td><td></td></tr> <tr><td>03</td><td>300</td><td></td></tr> <tr><td>04</td><td>600</td><td></td></tr> <tr><td>05</td><td>1200</td><td></td></tr> <tr><td>06</td><td>2400</td><td></td></tr> <tr><td>07</td><td>4800</td><td></td></tr> <tr><td>08</td><td>9600</td><td></td></tr> <tr><td>09</td><td>19200</td><td></td></tr> <tr><td>10</td><td colspan="2">7 DATA/2 STOP</td></tr> <tr><td>11</td><td colspan="2">8 DATA/1 STOP</td></tr> <tr><td colspan="3">DEFAULT = 300 baud, 7-bit data with two stop bits</td></tr> </tbody> </table>	BUTTON	BAUD	ENTRY	01	110		02	150		03	300		04	600		05	1200		06	2400		07	4800		08	9600		09	19200		10	7 DATA/2 STOP		11	8 DATA/1 STOP		DEFAULT = 300 baud, 7-bit data with two stop bits		
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Press SPKR to end

Press **ITCM** \* # 7 4 6 \* for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD												
<p><b>Tone or Voice Signalling:</b> Intercom calls can be tone signalled or voice signalled. The first choice in signalling is programmable.</p>	<p>1. Dial 16. "XXXXX ANN. FIRST"            2. Press <b>AI</b> to toggle between Voice <b>To</b> Tone.            (LED On = voice signalling).  <b>-OR-</b>            Dial <b>1</b> for Voice First. "VOICE ANN. FIRST"            Dial <b>2</b> for Tone First. "TONE ANN. FIRST"            3. Dial * for configuration mode.</p>	<table border="1"> <tr> <td><b>SIGNALLING</b></td> <td><b>VOICE</b></td> <td><b>TONE</b></td> </tr> <tr> <td colspan="3">DEFAULT = VOICE</td> </tr> </table>	<b>SIGNALLING</b>	<b>VOICE</b>	<b>TONE</b>	DEFAULT = VOICE								
<b>SIGNALLING</b>	<b>VOICE</b>	<b>TONE</b>												
DEFAULT = VOICE														
<p><b>Delete Station Message Detail Accounting(SMDA) records by Attendant:</b> When SMDA records exceed storage capacity, they must be deleted to make room for more. The attendant can be allowed to delete these records if enabled by this programming step.</p>	<p>1. Dial 18. "ATTN DELETE XXX "            2. Press <b>AI</b> to toggle between enable and disable            (LED On = Enable).  <b>-OR-</b>            Dial <b>1</b> to Enable "ATTN DELETE ON "            (AI LED On).            Dial <b>2</b> to Disable "ATTN DELETE OFF "            3. Dial * for configuration mode.</p>	<table border="1"> <tr> <td colspan="3"><b>ATTENDANT SMDA RECORD DELETE</b></td> </tr> <tr> <td><b>ENABLE</b></td> <td></td> <td></td> </tr> <tr> <td><b>DISABLE</b></td> <td></td> <td></td> </tr> <tr> <td colspan="3">DEFAULT = DISABLE</td> </tr> </table>	<b>ATTENDANT SMDA RECORD DELETE</b>			<b>ENABLE</b>			<b>DISABLE</b>			DEFAULT = DISABLE		
<b>ATTENDANT SMDA RECORD DELETE</b>														
<b>ENABLE</b>														
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DEFAULT = DISABLE														
<p>Do <b>Not Disturb (DND) Inhibit:</b> Any station can be set to a DND condition which cannot be overridden by a caller unless calling station is programmed for DND override. The DND feature can be disabled by this programming.  <b>NOTE:</b> Also program a button as the DND button. See page 4-44.</p>	<p>1. Dial 19. "DND XXXXXXXX "            2. Press <b>AI</b> to toggle between Enable and disable            (LED On = Enable).  <b>-OR-</b>            Dial <b>1</b> to Enable "DND ENABLED "            (AI LED ON).            Dial <b>2</b> to Disable. "DND DISABLED "            3. Dial * for configuration mode.</p>	<table border="1"> <tr> <td colspan="3"><b>DO NOT DISTURB INHIBIT</b></td> </tr> <tr> <td><b>ENABLED!</b></td> <td></td> <td></td> </tr> <tr> <td><b>DISABLED!</b></td> <td></td> <td></td> </tr> <tr> <td colspan="3">DEFAULT = ENABLED</td> </tr> </table>	<b>DO NOT DISTURB INHIBIT</b>			<b>ENABLED!</b>			<b>DISABLED!</b>			DEFAULT = ENABLED		
<b>DO NOT DISTURB INHIBIT</b>														
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Press SPKR to **end.**

Press ITCM \* # 7 4 6 \* for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																												
<p><b>Station Monitoring:</b> The DSS/BLF at a station provides idle, busy and line ringing status of monitored stations. If the flashing BLF lights associated with the visual ring indication are deemed distracting, this visual indication can be disabled system-wide.</p>	<p>1. Dial 20. "MONITOR XXXXXXXX"                  2. Press AI to toggle between enable and disable (LED On = Enable).  <b>-OR-</b>                  Dial 1 to Enable "MONITOR ENABLED"                  (AI LED ON).                  Dial 2 to Disable. "MONITOR DISABLED"                  3. Dial * for configuration mode.</p>	<table border="1"> <tr><td colspan="7">STATION MONITORING</td></tr> <tr><td>ENABLED</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>DISABLED</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td colspan="7">DEFAULT = DISABLED</td></tr> </table>	STATION MONITORING							ENABLED							DISABLED							DEFAULT = DISABLED						
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<p><b>Call Park Recall Time:</b> A call that is left in a parking orbit for a programmed length of time automatically returns to a timed hold recall condition at the parking station.</p>	<p>1. Dial 22. "C. P. RECALL X"                  2. Select recall time:                  Program button LED On = Selected Time                  Press AI or dial 1 = 1 min. "C.P. RECALL X "                  Press A2 or dial 2 = 2 min.                  Press A3 or dial 3 = 3 min.                  Press A4 or dial 4 = 4 min.                  Press A5 or dial 5 = 5 min.                  Press A8 or dial 6 = 6 min.                  Press A9 or dial 7 = Never Recall                  "NEVER RECALL"                  3. Dial * for configuration mode.</p>	<table border="1"> <tr><td colspan="7">CALL PARK RECALL TIME</td></tr> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>NEVER</td></tr> <tr><td colspan="7">DEFAULT = 2 MINUTES</td></tr> </table>	CALL PARK RECALL TIME							1	2	3	4	5	6	NEVER	DEFAULT = 2 MINUTES													
CALL PARK RECALL TIME																														
1	2	3	4	5	6	NEVER																								
DEFAULT = 2 MINUTES																														
<p><b>Exclusive Hold:</b> This feature prevents a held call from being retrieved at any other extension. It can be enabled or disabled system-wide.</p>	<p>1. Dial 23. "XXXXXXX EXC HOLD"                  2. Press AI to toggle between enable and disable (LED On = Enable).  <b>-OR-</b>                  Dial 1 to enable "ENABLE EXC HOLD "                  (AI LED on).                  Dial 2 to disable. "DISABLE EXC HOLD"                  3. Dial * for configuration mode.</p>	<table border="1"> <tr><td colspan="7">EXCLUSIVE HOLD</td></tr> <tr><td>ENABLED</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>DISABLED</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td colspan="7">DEFAULT = ENABLED</td></tr> </table>	EXCLUSIVE HOLD							ENABLED							DISABLED							DEFAULT = ENABLED						
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Press SPKR to end.

Press **ITCM \* # 7 4 6 \*** for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD								
<p><b>Tandem Attendant:</b> When this feature is enabled, a recall from an <b>unanswered</b> call transfer or timed hold <b>recall</b> will ring at both attendant stations. When disabled, only the attendant station which transferred <b>the</b> call will ring.</p>	<p>1. Dial 24. "TANDEM ATTN XXX "</p> <p>2. Press <b>AI</b> to toggle between enable and disable (LED On = Enable).</p> <p><b>-OR-</b></p> <p>Dial <b>1</b> to enable. "TANDEM ATTN OFF"</p> <p>Dial 2 to disable (AI LED is on). "TANDEM ATTN ON "</p> <p>3. Dial * for configuration mode.</p>	<table border="1"> <tr><td colspan="2"><b>TANDEM ATTENDANT</b></td></tr> <tr><td>ENABLE</td><td></td></tr> <tr><td>DISABLE</td><td></td></tr> <tr><td colspan="2"><b>DEFAULT = DISABLE</b></td></tr> </table>	<b>TANDEM ATTENDANT</b>		ENABLE		DISABLE		<b>DEFAULT = DISABLE</b>	
<b>TANDEM ATTENDANT</b>										
ENABLE										
DISABLE										
<b>DEFAULT = DISABLE</b>										
<p><b>Automatic Station Relocation: With</b> this feature, the system will automatically recognize a particular station should that station be re-located to a different station port, and supply the same COS parameters as programmed for the station at the original port.</p> <p><i>NOTE: Refer to station re-assignment on page 4-51.</i></p>	<p>1. Dial 27 "AUTO STA RELOCAT"</p> <p>2. Press <b>AI</b> to toggle between enable and disable (LED On = Enable)</p> <p><b>-OR-</b></p> <p>Dial <b>1</b> to Enable (AI LED On)</p> <p>Dial 2 to Disable</p> <p>3. Dial * for configuration mode.</p>	<table border="1"> <tr><td colspan="2"><b>AUTO STA RELOCATE</b></td></tr> <tr><td>ENABLE</td><td></td></tr> <tr><td>DISABLE</td><td></td></tr> <tr><td colspan="2"><b>DEFAULT = DISABLE</b></td></tr> </table>	<b>AUTO STA RELOCATE</b>		ENABLE		DISABLE		<b>DEFAULT = DISABLE</b>	
<b>AUTO STA RELOCATE</b>										
ENABLE										
DISABLE										
<b>DEFAULT = DISABLE</b>										
<p><b>System Alarm Reporting:</b> Special codes which convey certain system alarm conditions can be sent to a station where they will show on the LCD display.</p> <p><i>NOTE: Also, choose the alarm reporting stations. See page 4-35.</i></p>	<p>1. Dial 28. "ALARM REPORTS "</p> <p>2. Press <b>AI</b> to toggle between enable and disable. (LED On = Enable)</p> <p><b>-OR-</b></p> <p>Dial <b>1</b> to enable.</p> <p>Dial 2 to disable.</p> <p>3. Dial * for configuration mode.</p>	<table border="1"> <tr><td colspan="2"><b>ALARM REPORT</b></td></tr> <tr><td>ENABLE</td><td></td></tr> <tr><td>DISABLE</td><td></td></tr> <tr><td colspan="2"><b>DEFAULT = DISABLE</b></td></tr> </table>	<b>ALARM REPORT</b>		ENABLE		DISABLE		<b>DEFAULT = DISABLE</b>	
<b>ALARM REPORT</b>										
ENABLE										
DISABLE										
<b>DEFAULT = DISABLE</b>										

Press **SPKR** to end.

4-10

Press **ITCM** \* # 7 4 6 \* for base level.

**Feature Inhibit** Programming:  
 Certain features can be disabled system-wide to provide a basic telephone system for use in installations where a large proportion of the stations are accessible to unauthorized users thus subject to tampering. These features are enabled when system default is performed.

- Dial 29. "FEATURE INHIBIT"
- . Select feature.
  - Dial 01 to disable Line Group 1.
  - Dial 02 to disable Line Group 2.
  - Dial 03 to disable Line Group 3.
  - Dial 04 to disable Line Group 4.
  - Dial 05 to disable Zone 1 Paging.
  - Dial 06 to disable Zone 2 Paging.
  - Dial 07 to disable Zone 3 Paging.
  - Dial 08 to disable All Call.
  - Dial 09 to disable Meet Me Page.
  - Dial 10 to disable Night Transfer.
  - Dial 11 to disable Background Music.
  - Dial 12 to disable Voice Announce Block.
  - Dial 13 to disable Message Waiting.
  - Dial 14 to disable Call Pickup.
  - Dial 15 to disable Call Forward.
  - Dial 16 to disable Automatic Call Back.
  - Dial 17 to disable Station-to-Station Messaging.
  - Dial 18 to disable Line Group Queue.
  - Dial 19 to disable Directed Station Hold.
  - Dial 20 to disable Call Park Orbit 1.
  - Dial 21 to disable Call Park Orbit 2.
  - Dial 22 to disable Call Park Orbit 3.
  - Dial 23 to disable Call Park Orbit 4.
  - Dial 24 to disable Call Park Orbit 5.
  - Dial 25 to disable Call Park Orbit 6.
  - Dial 26 to disable Call Park Orbit 7.
  - Dial 27 to disable Call Park Orbit 8.
  - Dial 28 to disable Call Park Orbit 9.
  - Dial 29 to disable Call Waiting.
  - Dial 30 to disable LCD Messaging.
  - Dial 31 to disable Executive Override/Service Observing.
  - Dial 32 to disable Account Code.
  - Dial 33 to disable Personal Call Forward
  - Dial 34 to Enable All Features.
  - Dial \* for next item.
  - Dial \* \* for configuration {

FEATURE	DISABLED	ENABLED
Line Group 1		
Line Group 2		
Line Group 3		
Line Group 4		
Zone 1 Paging		
Zone 2 Paging		
Zone 3 Paging		
All Call		
Meet Me Page		
Night Transfer		
Background Music		
Voice Announce Block		
Message Waiting		
Call Pickup		
Call Forward		
Automatic Call Back		
Station-to-Station Mesg.		
Line Group Queue		
Directed Station Hold		
Call Park Orbit 1		
Call Park Orbit 2		
Call Park Orbit 3		
Call Park Orbit 4		
Call Park Orbit 5		
Call Park Orbit 6		
Call Park Orbit 7		
Call Park Orbit 8		
Call Park Orbit 9		
Call Waiting		
LCD Messaging		
Executive Override/ Service Observing		
Account Code		
Personal Call Fwd.		

DEFAULT = ALL ENABLED

NOTE: Feature status is not conveyed via LED.

Press **SPKR** to end.

Press ITCM \* # 7 4 6 \* for base level.

**PA Options:** The PA port can be assigned lines for direct ring, delayed ring, or night transfer (of ringing). The port can also be arranged to receive either zone or all-call paging.

Delay tracking of the enabled ringing can be selected as either station 17 ringing or paging port ringing.

#### Ringing

1. Dial 60. "P.A. OPTIONS "
2. Choose ringing assignment.
  - Dial **1** for direct ring. "DIRECT RING "
  - Dial 2 for delay ring. "DELAY RING "
  - Dial 3 for night ring. "NIGHT RING "
3. Select line ports:
  - Line port **1-14** = Dial **01 - 14** or press **A1 - A14**
  - Line port **15, 16** = Dial **15, 16** or press **B1, B2**
  - Line port 17-24 = Dial 17 - 24.
  - or press **HOLD** then press **A1 - A8**

*NOTE: LEDS turn on when line is assigned.*

4. Dial \* for next PA option.
  - OR-**
  - Dial \* \* for configuration mode.

#### Zone Paging

1. Dial 60. "P.A. OPTIONS "
2. Dial 4 to assign zone paging "PA ZONES "
3. Choose zone.
  - Press **A1** or dial **1** for zone 1.
  - Press **A2** or dial 2 for zone 2.
  - Press **A3** or dial 3 for zone 3.
  - Press **A4** or dial 4 for all-call.

*NOTE: A1, A2, A3, or A4 LED turns on when a zone is assigned.*

4. Dial \* for next PA option
  - OR-**
  - Dial \* \* for configuration mode.

Continued on next page

Press SPKR to end.

<p><b>'A Options</b> - continued</p>	<p>Continued from previous page</p> <p><b>Ringling Tracking Relay</b></p> <ol style="list-style-type: none"> <li>Dial 60. <span style="float: right;"><i>"P.A. P O R T "</i></span></li> <li>Dial 5. <span style="float: right;"><i>"RELAY XXXXXXXX"</i></span></li> <li>Choose relay tracking assignment. Press <b>AI</b> to toggle between paging port and station port 17. (LED On = paging port) <b>-OR-</b> Dial <b>1</b> for station port 17. <i>"RELAY STA. 17 "</i> Dial <b>2</b> for paging port. <i>"RELAY P.A. PORT"</i></li> <li>Dial * for next PA option. <b>-OR-</b> Dial * * for configuration mode.</li> </ol>	<table border="1" style="width: 100%;"> <tr><th colspan="5">RINGING LINES</th></tr> <tr><td>DIRECT</td><td></td><td></td><td></td><td></td></tr> <tr><td>DELAYED</td><td></td><td></td><td></td><td></td></tr> <tr><td>NIGHT</td><td></td><td></td><td></td><td></td></tr> <tr><td>ZONE</td><td>1</td><td>2</td><td>3</td><td>ALL-CALL</td></tr> <tr><th colspan="5">RINGING PORT RELAY</th></tr> <tr><td>STATION 17</td><td></td><td></td><td></td><td></td></tr> <tr><td>PAGING PORT</td><td></td><td></td><td></td><td></td></tr> <tr><td colspan="5">DEFAULT = NO DIRECT RING NO DELAY RING ALL ZONES STATION 17 RELAY</td></tr> </table>	RINGING LINES					DIRECT					DELAYED					NIGHT					ZONE	1	2	3	ALL-CALL	RINGING PORT RELAY					STATION 17					PAGING PORT					DEFAULT = NO DIRECT RING NO DELAY RING ALL ZONES STATION 17 RELAY				
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**Press ITCM \*#746\* for base level.**

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																														
<p><b>Extended DTMF Tones For Automatic Dialling:</b> When a number is automatically dialed (autodial, saved number redial, etc), the length of the generated DTMF tones are as set with this programming option. This is useful when the automatically dialed number is to be used to access answering machines, banking computers, voice mail, etc that require DTMF tones that are longer than standard tones.</p>	<ol style="list-style-type: none"> <li>Dial 26 <span style="float: right;"><i>"DTMF DIALNG XXXX"</i></span></li> <li>Choose DTMF tone length <ul style="list-style-type: none"> <li>Press <b>AI</b> or dial 01 = 60 msec.</li> <li>Press A2 or dial 02 = 80 msec.</li> <li>Press A3 or dial 03 = 100 msec.</li> <li>Press A4 or dial <b>04</b> = 120 msec.</li> <li>Press A5 or dial 05 = 160 msec.</li> <li>Press A6 or dial 66 = 240 msec.</li> <li>Press A7 or dial 07 = 320 msec.</li> <li>Press A8 or dial <b>08</b> = 400 msec.</li> <li>Press A9 or dial <b>09</b> = 480 msec.</li> <li>Press <b>A10</b> or dial 10 = 560 msec.</li> <li>Press <b>All</b> or dial <b>11</b> = 720 msec.</li> <li>Press AI 2 or dial 12 = 880 msec.</li> <li>Press AI3 or dial 13 = 1040 msec.</li> </ul> </li> <li>Dial * for configuration mode.</li> </ol>	<table border="1" style="width: 100%;"> <tr><th colspan="2">EXTENDED DTMF</th></tr> <tr><td>60 MSEC</td><td></td></tr> <tr><td>80 MSEC</td><td></td></tr> <tr><td>100 MSEC</td><td></td></tr> <tr><td>120 MSEC</td><td></td></tr> <tr><td>160 MSEC</td><td></td></tr> <tr><td>240 MSEC</td><td></td></tr> <tr><td>320 MSEC</td><td></td></tr> <tr><td>400 MSEC</td><td></td></tr> <tr><td>480 MSEC</td><td></td></tr> <tr><td>560 MSEC</td><td></td></tr> <tr><td>720 MSEC</td><td></td></tr> <tr><td>880 MSEC</td><td></td></tr> <tr><td>1040 MSEC</td><td></td></tr> <tr><td>DFLT = 80 MSEC</td><td></td></tr> </table>	EXTENDED DTMF		60 MSEC		80 MSEC		100 MSEC		120 MSEC		160 MSEC		240 MSEC		320 MSEC		400 MSEC		480 MSEC		560 MSEC		720 MSEC		880 MSEC		1040 MSEC		DFLT = 80 MSEC	
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**Press SPKR to end.**

## LINE CONFIGURATION

Mark the desired selections in the charts to record programming needs.

Dial the feature code and then dial the selection code or press the programming button to program the selection.

**NOTE:** A current program setting is indicated **by** a lighted LED next to the programming button for that selection. When a toggle (on/off) action is provided **by** a **single** button, the **lighted LED** indicates an active feature.

To make a line port selection, press a programming button or dial a selection number on the keypad as follows:

LINE	PROG. BUTTONS	KEYPAD BUTTONS
1 - 14	AI • AI4	01 - 14
15, 16	B1, B2	15, 16
17 • 24	HOLD plus AI • A8	17-24

NOTE HOLD button is used to toggle program buttons between lines 1 • 14 and 17 • 24.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																																																												
<p><b>Base Level:</b> The first step in any programming sequence is to enter the base level. Once in this mode, any desired configuration can be set.</p>	<p>Press ITCM Dial * # 7 4 6 *.</p>																																																													
<p>Line Default: The line configuration features, described in the following procedures, can be defaulted to a standard set of values. These values will provide satisfactory system <b>performance</b> in a broad range of site <b>applications</b>.</p>	<p>1. Dial 30. "LINE DEFAULT " 2. Press # to default line features. System automatically returns to base level.</p>																																																													
<p>Line <b>Disable:</b> A line port can be taken out of service because of defect or other reason. Return the line to service with the central office lines programming procedure.</p>	<p>1. Dial 31. "DISABLE LINES " 2. Select line ports to be disabled (LED On = Disabled). Line port 1-14 = Dial 01 • 14 or Press AI • AI 4 Line port 15, 16 = Dial 15, 16 or press B1, B2 Line port 17-24 = Dial 17 • 24 -OR- Press HOLD then press AI • A8. 3. Dial * * for configuration mode.</p>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td>9</td> <td></td> <td>17</td> <td></td> </tr> <tr> <td>2</td> <td></td> <td>10</td> <td></td> <td>18</td> <td></td> </tr> <tr> <td>3</td> <td></td> <td>11</td> <td></td> <td>19</td> <td></td> </tr> <tr> <td>4</td> <td></td> <td>12</td> <td></td> <td>20</td> <td></td> </tr> <tr> <td>5</td> <td></td> <td>13</td> <td></td> <td>21</td> <td></td> </tr> <tr> <td>6</td> <td></td> <td>14</td> <td></td> <td>22</td> <td></td> </tr> <tr> <td>7</td> <td></td> <td>15</td> <td></td> <td>23</td> <td></td> </tr> <tr> <td>8</td> <td></td> <td>16</td> <td></td> <td>24</td> <td></td> </tr> <tr> <td colspan="6"><b>DEFAULT = NO LINES DISABLED</b></td> </tr> </tbody> </table>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	1		9		17		2		10		18		3		11		19		4		12		20		5		13		21		6		14		22		7		15		23		8		16		24		<b>DEFAULT = NO LINES DISABLED</b>					
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Press SPKR to end.



Press **ITCM \* # 7 4 6 \*** for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																																																												
<p><b>Auxiliary Lines:</b> A line port can be conditioned to serve as a port for an external paging amplifier.</p>	<p>1. Dial 32. <span style="float: right;">"AUXILIARY LINES"</span>            2. Select line ports to be disabled (LED On = Disabled).            Line port 1-14 = Dial <b>01 - 14</b> or Press <b>A1 - A14</b>            Line port <b>15, 16</b> = Dial <b>15, 16</b> or press <b>B1, B2</b>            Line port 17-24 = Dial 17 - 24            -OR-            Press <b>HOLD</b> then press <b>A1 - A6</b>.            3. Dial * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>1</td><td></td><td>9</td><td></td><td>17</td><td></td></tr> <tr><td>2</td><td></td><td>10</td><td></td><td>16</td><td></td></tr> <tr><td>3</td><td></td><td>11</td><td></td><td>19</td><td></td></tr> <tr><td>4</td><td></td><td>12</td><td></td><td>20</td><td></td></tr> <tr><td>5</td><td></td><td>13</td><td></td><td>21</td><td></td></tr> <tr><td>6</td><td></td><td>14</td><td></td><td>22</td><td></td></tr> <tr><td>7</td><td></td><td>15</td><td></td><td>23</td><td></td></tr> <tr><td>8</td><td></td><td>16</td><td></td><td>24</td><td></td></tr> <tr> <td colspan="6" style="text-align: center;">DEFAULT = NO LINES ASSIGNED</td> </tr> </tbody> </table>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	1		9		17		2		10		16		3		11		19		4		12		20		5		13		21		6		14		22		7		15		23		8		16		24		DEFAULT = NO LINES ASSIGNED					
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<p><b>Central Office Lines:</b> A line port can be conditioned to serve as a port for a standard telephone company supplied central office line.</p>	<p>1. Dial 33. <span style="float: right;">"C.O. LINES"</span>            2. Select line ports to be disabled (LED On = Disabled).            Line port 1-14 = Dial <b>01 - 14</b> or Press <b>A1 - A14</b>            Line port <b>15, 16</b> = Dial <b>15, 16</b> or press <b>B1, B2</b>            Line port 17-24 = Dial 17 - 24            -OR-            Press <b>HOLD</b> then press <b>A1 - A6</b>.            3. Dial * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>1</td><td></td><td>9</td><td></td><td>17</td><td></td></tr> <tr><td>2</td><td></td><td>10</td><td></td><td>18</td><td></td></tr> <tr><td>3</td><td></td><td>11</td><td></td><td>19</td><td></td></tr> <tr><td>4</td><td></td><td>12</td><td></td><td>20</td><td></td></tr> <tr><td>5</td><td></td><td>13</td><td></td><td>21</td><td></td></tr> <tr><td>6</td><td></td><td>14</td><td></td><td>22</td><td></td></tr> <tr><td>7</td><td></td><td>15</td><td></td><td>23</td><td></td></tr> <tr><td>8</td><td></td><td>16</td><td></td><td>24</td><td></td></tr> <tr> <td colspan="6" style="text-align: center;">DEFAULT = ALL LINES ARE CO LINES</td> </tr> </tbody> </table>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	1		9		17		2		10		18		3		11		19		4		12		20		5		13		21		6		14		22		7		15		23		8		16		24		DEFAULT = ALL LINES ARE CO LINES					
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<p><b>Line Names:</b> Lines can be named as to their function to identify them for use. Names such as WATTS, CO, etc., when appearing on the display, make locating a desired line easier for the station user to do. Up to five characters can be used to form a line name.</p>	<p>1. Dial 34. <span style="float: right;">"LINE NAME"</span>            2. Select line ports to be disabled (LED On = Disabled).            Line port 1-14 = Dial <b>01 - 14</b> or Press <b>A1 - A14</b>            Line port <b>15, 16</b> = Dial <b>15, 16</b> or press <b>B1, B2</b>            Line port 17-24 = Dial 17 - 24            -OR-            Press <b>HOLD</b> then press <b>A1 - A8</b>.            3. Press # to clear current name.            4. Dial line name char. codes (5 char. max.).            - See character code chart (Table 4-1 on Page 4-21).            - Examples:            - WATTS = Dial <b>9121 81 81 73</b>            - 0156 = Dial 00, <b>01, 05, 06</b>            (Each character must be represented by two digits.)            5. Dial * and repeat last three steps for next line.            -OR-            Dial * * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>1</td><td></td><td>9</td><td></td><td>17</td><td></td></tr> <tr><td>2</td><td></td><td>10</td><td></td><td>18</td><td></td></tr> <tr><td>3</td><td></td><td>11</td><td></td><td>19</td><td></td></tr> <tr><td>4</td><td></td><td>12</td><td></td><td>20</td><td></td></tr> <tr><td>5</td><td></td><td>13</td><td></td><td>21</td><td></td></tr> <tr><td>6</td><td></td><td>14</td><td></td><td>22</td><td></td></tr> <tr><td>7</td><td></td><td>15</td><td></td><td>23</td><td></td></tr> <tr><td>8</td><td></td><td>16</td><td></td><td>24</td><td></td></tr> <tr> <td colspan="6" style="text-align: center;">DEFAULT = NO LINE NAMES ASSIGNED</td> </tr> </tbody> </table> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 20px auto;"> <p>Press <b>SPKR</b> to end.</p> </div>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	1		9		17		2		10		18		3		11		19		4		12		20		5		13		21		6		14		22		7		15		23		8		16		24		DEFAULT = NO LINE NAMES ASSIGNED					
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Press ITCM \* # 7 4 6 \* for base level.

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<p>Line Groups: Outside lines of the same type can be grouped together for dial-up outgoing access. Access codes for the line groups are:</p> <p>Group 1 = Dial 9            Group 2 = Dial 81            Group 3 = Dial 82            Group 4 = Dial 83</p> <p><b>NOTE:</b> System must be strapped for hybrid operation, as detailed in Chapter 3, before this programming feature is available. A line group queue button can be assigned on a per station basis as detailed on page 4-48.</p>	<p>1. Dial 35 "ASSIGN LINE GRPS"            2. Dial 0 for no groups assigned "NO LINE GROUP"</p> <p><b>-OR-</b>            Dial 1 for Line Group 1 "LINE GROUP 1"            (LED On = Lines Assigned)            2. Select line ports to be disabled (LED On = Disabled).            Line port 1-14 = Dial 01 - 14 or Press AI - A14            Line port 15, 16 = Dial 15, 16 or press B1, B2            Line port 17-24 = Dial 17 - 24</p> <p><b>-OR-</b>            Press HOLD then press AI - A8.</p> <p>4. Dial * for next group.  <b>-OR-</b>            Dial * * for next feature.            5. Dial 2 for Line Group 2 "LINE GROUP 2"            (LED On = Lines Assigned)            8. Select line ports to be disabled (LED On = Disabled).            Line port 1-14 = Dial 01 - 14 or Press AI - A14            Line port 15, 16 = Dial 15, 16 or press B1, B2            Line port 17-24 = Dial 17 - 24</p> <p><b>-OR-</b>            Press HOLD then press AI - A8.</p> <p>7. Dial * for next group.  <b>-OR-</b>            Dial * * for configuration mode.            8. Dial 3 for Line Group 3 "LINE GROUP 3"            (LED On = Lines Assigned)            9. <b>Select</b> line ports:            Select line ports to be disabled (LED On = Disabled).            Line port 1-14 = Dial 01 - 14 or Press AI - A14            Line port 15, 16 = Dial 15, 16 or press B1, B2            Line port 17-24 = Dial 17 - 24</p> <p><b>-OR-</b>            Press HOLD then press AI - A8.</p> <p>10. Dial * for next group.  <b>-OR-</b>            Dial * * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td>9</td> <td></td> <td>17</td> <td></td> </tr> <tr> <td>2</td> <td></td> <td>10</td> <td></td> <td>18</td> <td></td> </tr> <tr> <td>3</td> <td></td> <td>11</td> <td></td> <td>19</td> <td></td> </tr> <tr> <td>4</td> <td></td> <td>12</td> <td></td> <td>20</td> <td></td> </tr> <tr> <td>5</td> <td></td> <td>13</td> <td></td> <td>21</td> <td></td> </tr> <tr> <td>6</td> <td></td> <td>14</td> <td></td> <td>22</td> <td></td> </tr> <tr> <td>7</td> <td></td> <td>15</td> <td></td> <td>23</td> <td></td> </tr> <tr> <td>8</td> <td></td> <td>16</td> <td></td> <td>24</td> <td></td> </tr> </tbody> </table> <p><b>DEFAULT = NO LINE GROUPS ASSIGNED</b></p>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	1		9		17		2		10		18		3		11		19		4		12		20		5		13		21		6		14		22		7		15		23		8		16		24	
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Line Groups • continued on next page

Press SPKR to end.

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**Press ITCM \* # 7 4 6 \* for basel level .**

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																																																						
<p><b>Line Groups</b> - continued</p>	<p><b>10.</b> Dial 4 for Line Group 4. "LINE GROUP 4 " (LED On = Lines Assigned) <b>11.</b> Select line ports to be disabled (LED On = Disabled). Line port 1-14 = Dial 01 - 14 or Press A1 - A14 Line port 15, 16 = Dial <b>15, 16</b> or press B1 , B2 Line <b>port</b> 17-24 = Dial 17 - 24 <b>-OR-</b> Press HOLD then press A1 - A8. <b>12.</b> Dial * for next group. <b>-OR-</b> Dial * * for configuration mode.</p>																																																							
<p><b>Pulse/Tone Switchable:</b> When rotary dial lines are installed, the user can switch from pulse (rotary dial signalling) to tone (dual tone multiple frequency - DTMF) for accessing special circuits requiring DTMF tones such as banking machines, etc. Line port dialing must be programmed as pulse for rotary dial line interfacing or tone for DTMF line interfacing.</p>	<p><b>1.</b> Dial 36. "PULSE DIAL " <b>2.</b> Select pulse dial line ports (LED On = Pulse): Line port 1-14 = Dial 01 - 14 or Press A1 - A14 Line <b>port 15, 16</b> = Dial <b>15, 16</b> or press <b>B1, B2</b> Line port 17-24 = Dial 17 - 24 <b>-OR-</b> Press HOLD then press A1 - A8. <b>-OR-</b> Dial <b>00</b> to default all lines to pulse dial. <b>3.</b> Dial * for configuration mode.</p> <p><b>1.</b> Dial 37 "TONE DIAL " <b>2.</b> Select tone dial line ports (LED On = Tone): Line port 1-14 = Dial 01 - 14 or Press A1 - A14 Line <b>port 15, 16</b> = Dial <b>15, 16</b> or press B1 , B2 Line port 17-24 = Dial 17 - 24 <b>-OR-</b> Press HOLD then press A1 - A8. <b>-OR-</b> Dial <b>00</b> to default all lines to tone dial. <b>3.</b> Dial * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td>9</td> <td></td> <td>17</td> <td></td> </tr> <tr> <td>2</td> <td></td> <td>10</td> <td></td> <td>18</td> <td></td> </tr> <tr> <td>3</td> <td></td> <td>11</td> <td></td> <td>19</td> <td></td> </tr> <tr> <td>4</td> <td></td> <td>12</td> <td></td> <td>20</td> <td></td> </tr> <tr> <td>5</td> <td></td> <td>13</td> <td></td> <td>21</td> <td></td> </tr> <tr> <td>6</td> <td></td> <td>14</td> <td></td> <td>22</td> <td></td> </tr> <tr> <td>7</td> <td></td> <td>15</td> <td></td> <td>23</td> <td></td> </tr> <tr> <td>8</td> <td></td> <td>16</td> <td></td> <td>24</td> <td></td> </tr> </tbody> </table> <p><b>DEFAULT = ALL LINES ARE TONE DIAL</b></p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 20px auto;"> <p><b>Press SPKR to end.</b></p> </div>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	1		9		17		2		10		18		3		11		19		4		12		20		5		13		21		6		14		22		7		15		23		8		16		24	
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Press **ITCM \* # 7 4 6 \*** for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																																																						
<p><b>Abandoned Hold Release:</b> When a <b>distant</b> party abandons a hold condition <b>and</b> disconnects, the central office will <b>send</b> a forward disconnect signal to the <b>system</b>. The signal can be either 50 msec. or 350 msec. in length. Program the system to match the central office time.</p>	<p>1. Dial 38. <b>"HOLD RELEASE 50 "</b></p> <p>2. Select hold release time for line ports. (LED On = 50 msec.) Line port 1-14 = Dial <b>01 - 14</b> or Press <b>AI - AI4</b> Line port <b>15, 16</b> = Dial <b>15, 16</b> or press <b>B1, B2</b> Line port 17-24 = Dial 17 - 24 <b>-OR-</b> Press <b>HOLD</b> then press <b>AI - A8</b>.</p> <p>3. Dial * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td>9</td> <td></td> <td>17</td> <td></td> </tr> <tr> <td>2</td> <td></td> <td>10</td> <td></td> <td>18</td> <td></td> </tr> <tr> <td>3</td> <td></td> <td>11</td> <td></td> <td>19</td> <td></td> </tr> <tr> <td>4</td> <td></td> <td>12</td> <td></td> <td>20</td> <td></td> </tr> <tr> <td>5</td> <td></td> <td>13</td> <td></td> <td>21</td> <td></td> </tr> <tr> <td>6</td> <td></td> <td>14</td> <td></td> <td>22</td> <td></td> </tr> <tr> <td>7</td> <td></td> <td>15</td> <td></td> <td>23</td> <td></td> </tr> <tr> <td>8</td> <td></td> <td>16</td> <td></td> <td>24</td> <td></td> </tr> </tbody> </table> <p>DEFAULT = 50 MSEC.</p>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	1		9		17		2		10		18		3		11		19		4		12		20		5		13		21		6		14		22		7		15		23		8		16		24	
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<p><b>Direct Departmental Calling:</b> Outside lines can be assigned to one of four <b>different</b> departments. Calls received on a line assigned to a department will <b>ring</b> for any idle station in that department to ring.</p> <p><b>NOTE:</b> Assign stations to <b>these</b> departments <b>per</b> the procedure on <b>page 4-31</b>.</p>	<p>1. Dial 39. <b>"DEPT. CALLING "</b></p> <p>2. Select department. Dial 0 for none. <b>"NO DEPARTMENT "</b> Dial <b>1</b> for dept 1. <b>"DEPARTMENT 1 "</b> Dial 2 for dept 2. <b>"DEPARTMENT 2 "</b> Dial 3 for dept 3. <b>"DEPARTMENT 3 "</b> Dial 4 for dept 4. <b>"DEPARTMENT 4 "</b></p> <p>3. Select line ports to be disabled (LED On = Disabled). Line port 1-14 = Dial <b>01 - 14</b> or Press <b>AI - AI4</b> Line port 15, 16 = Dial <b>15, 16</b> or press <b>B1, B2</b> Line port 17-24 = Dial 17 - 24 <b>-OR-</b> Press <b>HOLD</b> then press <b>AI - A8</b>.</p> <p>4. Dial * for next department. <b>-OR-</b> Dial * * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td>9</td> <td></td> <td>17</td> <td></td> </tr> <tr> <td>2</td> <td></td> <td>10</td> <td></td> <td>18</td> <td></td> </tr> <tr> <td>3</td> <td></td> <td>11</td> <td></td> <td>19</td> <td></td> </tr> <tr> <td>4</td> <td></td> <td>12</td> <td></td> <td>20</td> <td></td> </tr> <tr> <td>5</td> <td></td> <td>13</td> <td></td> <td>21</td> <td></td> </tr> <tr> <td>6</td> <td></td> <td>14</td> <td></td> <td>22</td> <td></td> </tr> <tr> <td>7</td> <td></td> <td>15</td> <td></td> <td>23</td> <td></td> </tr> <tr> <td>8</td> <td></td> <td>16</td> <td></td> <td>24</td> <td></td> </tr> </tbody> </table> <p>DEFAULT = NO DEPARTMENT/LINE ASSIGNMENTS</p>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	1		9		17		2		10		18		3		11		19		4		12		20		5		13		21		6		14		22		7		15		23		8		16		24	
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Press **SPKR** to end.

01-4

Press ITCM \* # 7 4 6 8 for base level.

4-14

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																																																						
<p><b>Automatic Privacy:</b> A line can be made private or non-private. In the private mode, a station has exclusive use of a line during a call. Lines are private unless re-programmed making them non-private.</p> <p><b>NOTE:</b> Program a station button to act as a privacy release button as detailed on page 4-43.</p>	<ol style="list-style-type: none"> <li>Dial 40. "PRIVACY RELEASE "</li> <li>Select line ports to be non-private (LED On = Non Private): Line port 1-14 = Dial <b>01 • 14</b> or Press A1 • A14 Line port 15, 16 = Dial <b>15, 16</b> or press <b>B1, B2</b> Line port 17-24 = Dial 17 • 24 <b>-OR-</b> Press <b>HOLD</b> then press A1 • A8.</li> <li>Dial * for configuration mode.</li> </ol>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>1</td><td></td><td>9</td><td></td><td>17</td><td></td></tr> <tr><td>2</td><td></td><td>10</td><td></td><td>18</td><td></td></tr> <tr><td>3</td><td></td><td>11</td><td></td><td>19</td><td></td></tr> <tr><td>4</td><td></td><td>12</td><td></td><td>20</td><td></td></tr> <tr><td>5</td><td></td><td>13</td><td></td><td>21</td><td></td></tr> <tr><td>6</td><td></td><td>14</td><td></td><td>22</td><td></td></tr> <tr><td>7</td><td></td><td>15</td><td></td><td>23</td><td></td></tr> <tr><td>8</td><td></td><td>16</td><td></td><td>24</td><td></td></tr> </tbody> </table> <p><b>DEFAULT = ALL LINES PRIVATE</b></p>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	1		9		17		2		10		18		3		11		19		4		12		20		5		13		21		6		14		22		7		15		23		8		16		24	
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<p><b>Line To Line Port Re-Assignment:</b> The programming attributes for a line that is connected to a particular line port can be re-assigned to a different line port by this programming action. This feature allows all software attributes for a line to be automatically exchanged with those assigned to another line at a different line port without physically re-locating the lines or reprogramming any line attributes.</p> <p><b>VOTE:</b> refer to page 3-4 for additional discussion.</p>	<ol style="list-style-type: none"> <li>Dial 41. "ASSIGN LOGICAL/PHYS "</li> <li>Select currently assigned line port number. "PHYS LATCH XX " Line port 1-14 = Dial <b>01 • 14</b> or Press A1 • A14 Line port 15, 18 = Dial <b>15, 16</b> or press <b>B1, B2</b> Line port 17-24 = Dial 17 • 24 <b>-OR-</b> Press <b>HOLD</b> then press A1 • A8.</li> <li>Dial new line port number (<b>01 • 24 = line 1 • 24</b>). "LOGICAL LINE XX "</li> <li>Dial # to make assignment.</li> <li>Repeat steps 2 -4 for another assignment. <b>-OR-</b></li> <li>Dial * for configuration mode.</li> </ol>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>1</td><td></td><td>9</td><td></td><td>17</td><td></td></tr> <tr><td>2</td><td></td><td>10</td><td></td><td>18</td><td></td></tr> <tr><td>3</td><td></td><td>11</td><td></td><td>19</td><td></td></tr> <tr><td>4</td><td></td><td>12</td><td></td><td>20</td><td></td></tr> <tr><td>5</td><td></td><td>13</td><td></td><td>21</td><td></td></tr> <tr><td>6</td><td></td><td>14</td><td></td><td>22</td><td></td></tr> <tr><td>7</td><td></td><td>15</td><td></td><td>23</td><td></td></tr> <tr><td>8</td><td></td><td>16</td><td></td><td>24</td><td></td></tr> </tbody> </table> <p><b>DEFAULT = 1 = 1, 2 = 2, 3 = 3, 4 = 4, etc.</b></p>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	1		9		17		2		10		18		3		11		19		4		12		20		5		13		21		6		14		22		7		15		23		8		16		24	
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<p><b>Block Programming:</b> Features that are assigned to a particular line can be reassigned to another line or to an entire block of lines with one programming action.</p>	<p><b>Line Button Method</b></p> <ol style="list-style-type: none"> <li>Dial 42. "ELK PROGRAMMING "</li> <li>Select model line port "MODEL LINE XX " Line port 1-14 = Press A1 • A14 Line port <b>15, 16</b> = Press B1, B2 Line port <b>17-24</b> = Press <b>HOLD</b> then press A1 • A8.</li> <li>Select lines to match model line (press buttons as detailed above).</li> <li>Dial * and repeat steps 2 and 3 for next model line <b>-OR-</b> Dial * * for configuration mode. Continued on next page</li> </ol>	<table border="1"> <thead> <tr> <th>MODEL LINE</th> <th>BLOCKED LINES</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	MODEL LINE	BLOCKED LINES																																																				
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Press SPKR to em-

Press **ITCM \* # 7 4 6 \*** for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																																																			
<p>Block Programmng • continued</p>	<p><b>Keypad Method</b></p> <p>1. Dial <b>42</b>. "BLK PROGRAMMING "</p> <p>2. Select model line port with keypad. "MODEL LINE XX "</p> <p>2. Select line ports to be disabled                      Line port 1 - 14 = Press <b>A1 - A14</b>                      Line <b>Port 15, 16</b> = Press <b>B1, B2</b>                      Line Port 17 - 24 = Press HOLD then                      press <b>A1 - A6</b></p> <p>3. Dial first line port in block (dial code as above).</p> <p>4. Dial <b>#</b>.</p> <p>5. Dial last line port In block (dial code as above).</p> <p>6. Dial <b>#</b>.</p> <p>7. Dial <b>*</b> for next model line.</p> <p><b>-OR-</b>                      Dial <b>**</b> for configuration mode.</p> <p><i>NOTE: The first, last and all lines in between will be block programmed like the model line. To block program an individual line, select the first line and last line to be the same number. For example: 01, 02#, 02# programs line 02 the same as line 01 is programmed.</i></p>	<table border="1"> <thead> <tr> <th>MODEL LINE</th> <th>FIRST LINE</th> <th>LAST LINE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	MODEL LINE	FIRST LINE	LAST LINE																																																
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Press **SPKR** to end.

**Table 4-1. CHARACTER DIALING CODES CHART**

CHAR	CODE	CHAR	CODE	CHAR	CODE
A	21	a	24	Space	12
B	22	b	25	.	15
C	23	c	26	,	17
D	31	e	34	I /	(18
E	32	f	35	"	19
F	33		36		27
G	41	g	44	,	28
H	42	h	45	:	29
I	43	i	46	1	01
J	51	i	54	2	02
K	52	k	55	3	03
L	53	l	56	4	04
M	61	m	64	5	05
N	62	n	65	6	06
16	(63	o	66	7	07
P	71	p	74	8	08
Q	11	q	14	9	09
R	72	r	75	0	00
S	73	s	76		
T	81	t	84		
U	82	u	85		
V	83	v	86		
W	91	w	94		
X	92	x	95		
Y	93	Y	96		
Z	13	z	16		

## STATION CONFIGURATION

Mark the desired selections in the charts to record programming needs. (Make copies of the pages to provide additional records if needed.) Additional records may be needed when add-on expansion modules are employed to extend the station capacity of a base unit.) Dial the feature code and then dial the selection code or press the **programming** button to program the selection.

**NOTE:** A current **program** setting is indicated **by** a lighted LED next to the programming button for that selection. When a **toggle (on/off)** action is provided **by** a single button, the lighted LED indicates an active feature. When programming without a console, repeat **the procedure to disable a feature** at a keypad selected station.

Station port selection is made by dialing a selection number on the keypad per the following reference chart.

STA	KEYPAD	BUTTONS
<b>10 - 57</b>	1 0 - 5 7	

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD
<p><b>Base Level:</b> The first step in any programming sequence is to <b>enter</b> the base level. Once in this mode, any desired configuration can be set.</p>	<p>Press <b>ITCM</b> Dial * # 7 4 6 *</p>	
<p><b>Station Default:</b> The station configuration features, described in the following procedures, can be defaulted to a standard <b>set or values</b>. These <b>values</b> will provide satisfactory system performance in a broad range of site applications.</p>	<p>1. Dial <b>50</b>. "STATION DEFAULT "                  2. Dial <b>00</b> to <b>default</b> station ports system-wide.  <b>-OR-</b>  <b>3. Select station port to be defaulted:</b>                  ▪ Station <b>10</b> ▪ 57: Dial 10 ▪ 57.                  4. Dial * for additional stations to default.  <b>-OR-</b>                  Dial * * for configuration mode.</p>	

**Press SPKR to end.**



Press **ITCM \* # 7 4 6 \*** for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																																																																																																						
<p><b>Flexible Station Numbering:</b> The system supports a flexible station numbering plan for calling individual stations and departments. Each station can be programmed to respond to the dialing of any available number between 10 and 7999; however, the same dialing code cannot be assigned as both a station extension number and a department access code, nor will the system allow an extension number or access code conflict such as 15 and 1500 to be assigned.</p>	<ol style="list-style-type: none"> <li>Dial 52. "ACCESS CODE "</li> <li>Dial 1 to assign Ext no. "ASSIGN EXT. NUM."</li> <li>Select station number: "EXT. xxxx " -Station 10 - 57 = Dial10-57</li> <li>Dial new ext. number. "HT. xxxx YYYY " <i>NOTE: Extension number can be max. of four digits. If less than four digits, leading zeros must be dialed before number. Example: For ext. no. 15, dial 0015).</i></li> <li>Select next station number and assign ext. no. <b>-OR-</b> Dial * for configuration mode.</li> </ol>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> </tbody> </table> <p><b>DEFAULT: STA 10 - 57 = EXT 10 - 57</b></p>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57	
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<p><b>Direct Department Calling (Access Codes):</b> Department access codes can be programmed to be any number between 10 and 7999; however, the same dialing code cannot be assigned as both a station extension number and a department access code nor will the system allow an extension number conflict such as 15 and 1500 to be assigned. Further, with system default extension numbers, assigned department access codes must start at 0058 or larger.</p> <p><b>NOTE: See page 4- 18 for line assignment and page 4-3 1 for station assignment</b></p>	<ol style="list-style-type: none"> <li>Dial 52. "ACCESS CODE "</li> <li>Dial 2 to assign access codes to depts. "DEPT. CALLING "</li> <li>Dial 1 - 4 for dept. 1 - 4. "DEPT X YYYY "</li> <li>Dial new access code. "DEPT X YYYY ZZZZ " <b>NOTE:</b> New code can be max. of four digits. <i>If less than four digits, leading zeros must be dialed before number. Code cannot conflict with station extension numbers.</i></li> <li>Dial next department number and program access code. <b>-OR-</b> Dial * for next access code feature. <b>-OR-</b> Dial * * for configuration mode.</li> </ol>	<table border="1"> <thead> <tr> <th colspan="4">DEPARTMENT ACCESS CODE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2</td> <td>3</td> <td>41</td> </tr> </tbody> </table> <p>DEFAULT <input type="checkbox"/> NOT AS'GND</p>	DEPARTMENT ACCESS CODE				1	2	3	41																																																																																														
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<p><b>Executive Override:</b> Selected stations can be provided with busy override. This feature allows the station to override a busy condition at a station, sound a ringing tone, and gain access to the existing conversation.</p>	<p>1. Dial 53 "STATION FEATURES"                  2. Dial 02. "EXEC. OVERRIDE"                  3. Select station ports to be programmed:                  - Station 10-57: Dial 10-57.                  1. Dial * for next station feature.                  -OR-                  Dial * * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> <tr> <td colspan="2">DEFAULT = NO</td> <td colspan="4">ASSIGNED</td> </tr> </tbody> </table>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57		DEFAULT = NO		ASSIGNED				<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> <tr> <td colspan="2">DEFAULT =</td> <td colspan="4">NOT ASSIGNED</td> </tr> </tbody> </table>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57		DEFAULT =		NOT ASSIGNED				<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> <tr> <td colspan="2">DEFAULT =</td> <td colspan="4">NOT ASSIGNED</td> </tr> </tbody> </table>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57		DEFAULT =		NOT ASSIGNED			
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<p><b>Do Not Disturb (DND) Override:</b> Selected stations can be provided with DND override capability. This capability allows the station to override a do not disturb condition and ring a station operating in that mode.</p> <p><b>NOTE:</b> Executive override, as described above, is automatically enabled when DND override is programmed. Also refer to DND inhibit procedure on page 4-8.</p>	<p>1. Dial 53 "STATION FEATURES"                  2. Dial 03. "DND OVERRIDE"                  3. Select station ports to be programmed:                  - Station 10 - 57: Dial 10 - 57.                  4. 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<p><b>Voice Announce Blocking:</b> This feature allows a station user to block voice announced intercom signalling.</p>	<p>1. Dial 53. "STATION FEATURES"                      2. Dial 04. "VOICE BLOCK"                      3. Select station ports to be programmed:                      • Station 10 • 57: Dial 10 • 57.                      4. Dial * for next station feature.  <b>-OR-</b>                      Dial * * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> <tr><td colspan="6">DEFAULT = NOT ASSIGNED</td></tr> </tbody> </table>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57		DEFAULT = NOT ASSIGNED										
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<p><b>System Speed Dial Toll Restriction:</b>                      When this feature is enabled, previously programmed toll restriction tables that are assigned to a station are applied to system speed dial calls when they are made from the station.</p>	<p>1. Dial 53. "STATION FEATURES"                      2. Dial 05. "SYS SPD TOLL RST"                      3. Select station ports to be programmed:                      • Station 10 • 57: Dial 10 • 57.                      4. Dial * for next station feature.  <b>-OR-</b>                      Dial * * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>6</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> <tr><td colspan="6">DEFAULT = NOT ASSIGNED</td></tr> </tbody> </table>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		6		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57		DEFAULT = NOT ASSIGNED										
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<p><b>Message Wait Originate:</b> A station that is programmed with this feature can control the message waiting light at the stations in the system.</p> <p><b>NOTE:</b> This feature must be programmed at a station that is designated as a central message desk per the procedure below.</p>	<p>1. Dial 53. "STATION FEATURES"                      2. Dial 06. "MSG. WAIT ORIG."                      3. Select station ports to be programmed:                      - Station 10 • 57: Dial 10 • 57.                      4. Dial * for next station feature.                      -OR-                      Dial ** for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> <tr> <td colspan="6">DEFAULT = NOT ASSIGNED</td> </tr> </tbody> </table>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57		DEFAULT = NOT ASSIGNED					
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<p><b>Central Message Desk:</b> One station in the system can be designated as the central message desk and be arranged for exclusive messaging waiting control. This station must have message wait originate enabled in order to control message waiting light at another station.</p> <p><b>VOTE:</b> This station will also have the message wait originate feature, as detailed above, automatically enabled when the central message desk feature is enabled.</p>	<p>1. Dial 63. "STATION FEATURES"                      2. Dial 08. "MSG DESK"                      3. Select station ports to be programmed:                      - Station 10 • 57: Dial 10 • 57.                      4. Dial * for next station feature.                      -OR-                      Dial ** for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td></td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>38 39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> <tr> <td colspan="6">DEFAULT = NOT ASSIGNED</td> </tr> </tbody> </table>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22				54		23		38 39		55		24		40		56		25		41		57		DEFAULT = NOT ASSIGNED					
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Press SPKR to end.

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4-21

**Press ITCM \* # 7 4 6 \* for base level.**

**Ring Line Preference:** A ringing line will automatically be answered when a station is taken off-hook.

1. Dial **53**. "STATION FEATURES"
  2. Dial **09**. "RING LINE PREF."
  3. Select station ports to be programmed:  
- Station 10 - 57: Dial 10 - 57.
  4. Dial \* for next station feature.
- OR-**  
Dial \* \* for configuration mode.

PORT	ENTRY	PORT	ENTRY	PORT	ENTRY
10		26		42	
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**Service Observing:** Selected stations can be given the capability to monitor, in an un-announced manner, an active call at another station. Selected stations can also be arranged so that they cannot be serviced observed.

**NOTE:** Executive override, as detailed on page 4-24, is automatically enabled when the service observing feature is enabled.

- Assign Service Observing**
1. Dial **53**. "STATION FEATURES"
  2. Dial **10**. "SERVICE OBSERVE"
  3. Select station ports to be programmed:  
- Station 10 - 57: Dial 10 - 57.
  4. Dial \* for next station feature.
- OR-**  
Dial \* \* for configuration mode.

- Block Service Observing**
1. Dial **53**. "STATION FEATURES"
  2. Dial **29**. "UNOBSERVABLE"
  3. Select station ports to be programmed:  
- Station 10 - 57: Dial 10 - 57.
  4. Dial \* for next station feature.
- OR-**  
Dial \* \* for configuration

PORT	ENTRY	PORT	ENTRY	PORT	ENTRY
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Press SPKR to end.

**Press ITCM \* # 7 4 6 \* for base level.**

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																																																																																																											
<p><b>Automatic Hold:</b> With this feature enabled, pressing another line button while already on a line call will automatically place this existing call on hold.</p>	<p>1. Dial 53. "STATION FEATURES"                      2. Dial 11. "AUTO HOLD"                      3. Select station ports to be programmed:                      • Station 10 - 57: Dial 10 - 57.                      4. Dial * for next station feature.                      -OR-                      Dial * * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> </tbody> </table> <p>DEFAULT = NOT ASSIGNED</p>						PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57	
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<p><b>Automatic Hold For Intercom:</b> With this feature enabled, pressing another intercom button or line button while already on an intercom call will automatically place this existing call on hold.</p>	<p>1. Dial 53. "STATION FEATURES"                      2. Dial 12. "ITCM AUTO HOLD"                      3. Select station ports to be programmed:                      • Station 10 - 57: Dial 10 - 57.                      4. Dial * for next station feature.                      -OR-                      Dial * * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> </tbody> </table> <p>DEFAULT = NOT ASSIGNED</p>						PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57	
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**Press SPKR to end.**

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Press **ITCM \* # 7 4 6 \*** for base level.

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<b>Headset Interface:</b> A station port can be <b>enabled</b> to allow headset operation.	1. Dial 53. <b>"STATION FEATURES"</b> 2. Dial 13. <b>"HEADSET MODE "</b> 3. Select station ports to be programmed: • Station 10 - 57: Dial <b>10 - 57</b> . 4. Dial * for next station feature. <b>-OR-</b> Dial * * for configuration mode.	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> </tbody> </table> <p><b>DEFAULT = NOT ASSIGNED</b></p>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57	
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<b>Personal Ringing Tones:</b> A station can be programmed to <b>ring</b> in one of four distinctive tones: 1. <b>666/571 Hz @ 16 Hz warble</b> 2. <b>1000/800 Hz @ 18 Hz warble</b> 3. <b>666/571 Hz @ 23 Hz warble</b> 4. <b>1000/800 Hz @ 23 Hz warble</b>	1. Dial <b>53</b> . <b>"STATION FEATURES"</b> 2. Dial <b>14</b> . <b>"RINGING TONE "</b> 3. Select ringing tone. • Dial 1 for tone 1. <b>"RINGING TONE 1 "</b> • Dial 2 for tone 2. <b>"RINGING TONE 2 "</b> • Dial 3 for tone 3. <b>"RINGING TONE 3 "</b> • Dial 4 for tone 4. <b>"RINGING TONE 4 "</b> 4. Select station ports to be programmed: • Station 10 - 57: Dial <b>10 - 57</b> . 5. Dial * for next ringing tone assignment. <b>-OR-</b> Press * * for next station feature. <b>-OR-</b> Press * * * for configuration mode.	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> </tbody> </table> <p><b>DEFAULT = TONE 1</b></p>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57	
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Press SPKR to end.

Press **ITCM** \* # 7 4 6 \* for base level.

**Group Call Pickup:** If a call rings to any station in a prearranged group, it can be answered at another station in that group when that user dials a group pickup code.

1. Dial **53**. "STATION FEATURES"
2. Dial **16**. "GRP. CALL PICKUP"
3. Dial **0** for no group.
- OR-
4. Dial **1 -4** for group. "GROUP X"
5. Select station ports to be programmed:
  - Station 10 ▪ 57: Dial **10 ▪ 57**.
6. Dial \* for next group
- OR-
- Dial \* \* for next station feature.
- OR-
- Dial \* \* \* for configuration mode.

NOTE: To **remove** station **from** group, assign it to group 0.

PORT	ENTRY	PORT	ENTRY	PORT	ENTRY
10		26		42	
11		27		43	
12		28		44	
13		29		45	
14		30		46	
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16		32		48	
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20		36		52	
21		37		53	
22		38		54	
23		39		55	
24		40		56	
25		41		57	

**DEFAULT = ALL STATIONS IN GROUP 1**

**Intercom Hunt Group:** Stations can be linked together to form an intercom hunt group. Calls to a busy station in a hunt group will search the group for an idle station to ring.

1. Dial **53**. "STATION FEATURES"
2. Dial **18**. "ITCM HUNT LINK"
3. Select first linking station.
  - Station 10 - 57: Dial **10 - 57**.
4. Select second linking station
  - Station 10 ▪ 57: Dial **10 ▪ 57**.
5. Disable a link, if desired, by linking a station to itself.
6. Dial \* for another link  
(Example A: 17 to 16, 18 to 16 and 19 to 16;  
Example B: 16 to 17, 17 to 18, and 18 to 16.)
- OR-
7. Dial \* \* for next station feature.
- OR-
- Dial \* \* \* for configuration mode.

PORT	ENTRY	PORT	ENTRY	PORT	ENTRY
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**DEFAULT = NONE ASSIGNED**

Press **SPKR** to end.



Press ITCM \* # 7 4 6 \* for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																																																																																																						
<p><b>Direct Department Calling:</b> Stations can be grouped by department to allow a call to search for an idle station within a department if a busy or RNA is encountered at a called station. There can be up to four departments with up to 16 stations in each one. One additional station can be placed in each department to serve as a termination station. Calls that roll to a termination station will follow a call forward if it is set at that station.</p> <p><b>NOTE:</b> See page 4- 18 for <i>department line assignments</i> and page 4-23 for <i>department access code assignemnt.</i></p>	<ol style="list-style-type: none"> <li>Dial 53. "STATION FEATURES"</li> <li>Dial 19. "DEPT. CALLING "</li> <li>Dial 1 - 4 for dept. 1 - 4. "DEPARTMENT X"</li> <li>Select department stations:                             <ul style="list-style-type: none"> <li>Station 10 - 57: Dial 10 - 57.</li> </ul> </li> <li>Dial * to program next department.</li> <li>Dial 5 - 8 for termination station in dept. 1 - 4. "DEPARTMENT X "</li> <li>Select termination station:                             <ul style="list-style-type: none"> <li>Station 10 - 57: Dial 10 - 57.</li> </ul> </li> <li>Dial * to program next department termination station..</li> </ol> <p><b>-OR-</b> Dial * * for next station feature.</p> <p><b>-OR-</b> Dial * * * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>0</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>1</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>2</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>3</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>5</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>6</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>7</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>5</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> </tbody> </table> <p>DEFAULT = NONE ASSIGNED</p>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	0		26		42		1		27		43		2		28		44		3		29		45		14		30		46		5		31		47		6		32		48		7		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		5		41		57	
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<p><b>Audible Monitoring:</b> The DSS/BLF at a multiline station provides a visual indication of idle, busy and line ringing status of monitored stations. Audible indication of direct and delayed ringing can be provided for selected stations if the visual indications are program enabled (refer to system configuration "station monitoring" procedure on page 4-9).</p>	<ol style="list-style-type: none"> <li>Dial 53. "STATION FEATURES"</li> <li>Dial 20. "AUDIBLE MONITOR "</li> <li>Dial 1 for no audible monitoring. "NONE "</li> <li>Dial 2 for direct ring monitoring. "DIRECT RING "</li> <li>Dial 3 for delayed ring monitoring. "DELAYED RING "</li> <li>Select stations for programming:                             <ul style="list-style-type: none"> <li>Station 10 - 57: Dial 10 - 57.</li> </ul> </li> <li>Dial * next monitoring condition.</li> </ol> <p><b>-OR-</b> Dial * * for next station feature.</p> <p><b>-OR-</b> Dial * * * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>4</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>15</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> </tbody> </table> <p>DEFAULT = NONE ASSIGNED</p>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		4		40		56		15		41		57	
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<p><b>Call Forward On Busy/Ring - No Answer (RNA):</b> Call forwarding of busy, and ring-no answer calls to a particular station can be automatic. As such, it sends those calls to any idle station associated either by intercom hunt group or by department with the called station. Use this feature to arrange for calls to cycle rapidly through such associated stations testing each one in turn with several rings.</p> <p><i>NOTE:</i> Also program the system intercom signalling as tone for the first choice. See page 4-8.</p>	<p>1. Dial 53. "STATION FEATURES"                      2. Dial 21. "CALL FWD RNA "                      3. Dial 0 - 9 for 0 - 9 rings before forwarding. "RING = X "                      4. Select stations for which calls will be forwarded after selected number of rings:                      - Station 10 - 57: Dial 10 - 57.                      5. Dial * for additional station ring assignments.                      -OR-                      Dial * * for next station feature.                      -OR-                      Dial * * * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> <tr> <td colspan="2">DEFAULT = NO</td> <td colspan="4">ASSIGNED</td> <td></td> </tr> </tbody> </table>						PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57		DEFAULT = NO		ASSIGNED				
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<p><b>Station Message Detail Account (SMDA) Departments:</b> Selected stations can be arranged together making it possible for an SMDA report to be generated which will only include information concerning that specific station arrangement.</p> <p><i>NOTE:</i> Also assign SMDA department numbers. See page 4-68.</p>	<p>1. Dial 53. "STATION FEATURES"                      2. Dial 22. "SMDA DEPARTMENTS"                      3. Dial 0 for no SMDA dept. assigned. "DEPARTMENT 0 "                      -OR-                      4. Dial 1 - 8 for dept 1 - 8. "DEPARTMENT X "                      5. Select stations for SMDA department:                      - Station 10 - 57: Dial 10 - 57.                      6. Dial * for additional department/station assignments.                      -OR-                      Dial * * for next station feature.                      -OR-                      Dial * * * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> <tr> <td colspan="2">DEFAULT = NOT</td> <td colspan="4">ASSIGNED</td> <td></td> </tr> </tbody> </table>						PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57		DEFAULT = NOT		ASSIGNED				
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FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																																																																																																						
<p><b>Secure Off-Hook Voice Announce (SOHVA) Disable:</b> The SOHVA feature is standard for every digital telephone station. The feature can be disabled with his programming selection.</p>	<p>1. Dial 53                                    "STATION FEATURE5                  2. Dial 24                                    "SECURE OHVA                  3. Select station port for programming                     • Station 10 - 57: Dial 10 - 57.                  4. Dial * for next station feature.                     -OR-                     Dial * * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> </tbody> </table> <p>DEFAULT = SOHVA ENABLED AT ALL STA.</p>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57	
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<p><b>Secure Off-Hook Voice Announce (SOHVA) Groups:</b> Arrange the ability of a station port to originate and/or receive SOHVA calls by assigning SOHVA calling groups to station ports. Certain station ports can be arranged together for SOHVA calling between one another while other station ports in the system are excluded from this group. Eight different fixed-configuration SOHVA groups are provided by the system.</p>	<p>1. Dial 53.                                    "STATION FEATURES                  2. Dial 30.                                    "SOHVA GROUP                  3. Dial 1 - 6 for gp. 1-8.                "SOHVA GROUP X                  4. Select all station ports to receive SOHVA group                     -Station 10 - 57: Dial 10 - 57                  5. Dial * and repeat steps 4 and 5 for additional SOHVA group/station assignments                     -OR-                     Dial * * for next station feature                     -OR-                     Dial * * * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>GROUP</th> <th>PORT</th> <th>GROUP</th> <th>PORT</th> <th>GROUP</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> </tbody> </table> <p>DEFAULT = NO GROUPS AS'GND</p>	PORT	GROUP	PORT	GROUP	PORT	GROUP	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57	
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FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD					
<p><b>Data Security Port:</b> While port is active on a call, this feature prevents any incoming tones associated with other system features from interrupting the call.</p>	<p>1. Dial 53. "STATION FEATURES"                      2. Dial 26. "DATA SECURE PORT"                      3. Select station port for programming:                      • Station 10 • 57: Dial 10 • 57.                      1. Dial * for next station feature.                      -OR-                      Dial ** for configuration mode.</p>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY
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<p><b>LCD Speakerphone Display of Costed Calls:</b> When call costing is being employed with the system, an LCD speakerphone can be programmed to display the cost of a call as it is made from the station.</p>	<p>1. Dial 63. "STATION FEATURES"                      2. Dial 27. "LCD CALL COST"                      3. Select station ports for programming:                      • Station 10 • 57: Dial 10 • 57.                      4. Dial * for next station feature.                      -OR-                      Dial ** for configuration mode.</p>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY
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FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																																																																																																																							
<p><b>System Alarm Report Station:</b> When the system has been arranged to report alarms, use this programming feature to enable stations to display the alarm reports when the station user takes appropriate action.</p> <p><b>NOTE:</b> Also enable system alarm reporting. See page 4-10.</p>	<ol style="list-style-type: none"> <li>Dial 53. "STATION FEATURES"</li> <li>Dial 28. "ALARM RECEIVE"</li> <li>Select station ports for programming:               <ul style="list-style-type: none"> <li>Station 10 - 57: Dial 10 - 57.</li> </ul> </li> <li>Dial * for next station feature.</li> </ol> <p><b>-OR-</b> Dial * * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> <tr> <td colspan="6">DEFAULT □ NOT ASSIGNED</td> </tr> </tbody> </table>						PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57		DEFAULT □ NOT ASSIGNED																	
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<p><b>All-Call and Zone Paging:</b> Stations can receive voice announcements through the telephone speaker, or through an external paging speaker connected to a PA port, and transmit voice announcements with the telephone handset. Announcements can be made to certain areas of the system or to all stations in the system.</p> <p><b>NOTE:</b> A button can be assigned to a station for paging access per the procedure shown on page 4-45.</p>	<ol style="list-style-type: none"> <li>Dial 55. "PAGING"</li> <li>Choose paging assignment.               <ul style="list-style-type: none"> <li>Dial 1 for zone 1 originate. "ORIGINATE ZONE 1"</li> <li>Dial 2 for zone 2 originate. "ORIGINATE ZONE 2"</li> <li>Dial 3 for zone 3 originate. "ORIGINATE ZONE 3"</li> <li>Dial 4 for all-call originate. "ALL-CALL ORIG."</li> <li>Dial 5 for zone 1 receive. "RECEIVE ZONE 1"</li> <li>Dial 6 for zone 2 receive. "RECEIVE ZONE 2"</li> <li>Dial 7 for zone 3 receive. "RECEIVE ZONE 3"</li> <li>Dial 8 for all-call receive. "ALL-CALL RECEIVE"</li> <li>Dial 9 to clear all assignments. "CLEAR PAGING"</li> </ul> </li> <li>Select station ports to be programmed:               <ul style="list-style-type: none"> <li>Station 10 - 57: Dial 10 - 57</li> </ul> </li> <li>Dial * to assign other paging.</li> </ol> <p><b>-OR-</b> Dial * * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> <tr> <td colspan="6">DEFAULT = ALL-CALL TO ALL STATIONS</td> </tr> <tr> <td colspan="6">Suggested Entries: R = Receive, O = Originate, A = All-Call, 1-3 = Zone 1-3, (e.g.; 1R = zone 1 receive, AO = originate all-call)</td> </tr> </tbody> </table>						PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57		DEFAULT = ALL-CALL TO ALL STATIONS						Suggested Entries: R = Receive, O = Originate, A = All-Call, 1-3 = Zone 1-3, (e.g.; 1R = zone 1 receive, AO = originate all-call)					
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Press ITCM \* # 7 4 6 \* for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD
<p><b>Prime Line (also prime group or prime intercom):</b> A preprogrammed group of lines, an intercom line, or one individual line can be designated to a particular station where it is automatically selected or use when that station is taken off-hook.</p>	<p>1. Dial 53. "STATION FEATURES"                  2. Dial 15. "PRIME LINE"                  3a. Assign prime line. "PRIME LINE XX"                  - Line port 1-14 = Dial 01 -14 or press AI -A14                  - Line port 15, 16 = Dial 15, 16 or press B1, B2.                  - Line port 17 - 24 = Dial 17 - 24                  -OR-                  Press HOLD then press AI - A6                  3b. Assign prime group,                  - Dial 51-54 for gps. 1-4. "PRIME LINE GRP X"                  3c. Assign prime intercom,                  - Dial 50 for intercom line. "PRIME INTERCOM"                  4. Select station ports to be programmed:                  - Station 10 - 57: Dial 10 - 57.                  5. Dial * for next prime line, group, or intercom assignment.                  -OR-                  Press * * for next station feature.                  -OR-                  Press * * * for next station feature</p>	<p>MARK STATION/LINE RECORD ON PAGE 4-40                  DEFAULT = NONE ASSIGNED</p>
<p><b>Flexible Ringing Assignments: Ringing</b> assignments are programmed on a per station/per line basis. Ringing is controlled for every line that has appearance at a station. Immediate, or direct, ringing can be assigned to some lines and delayed ringing to others.</p> <p><i>NOTE: Do not program direct ringing for lines that are assigned to direct department calling. See page 4- 18.</i></p>	<p><b>Direct Ringing</b>                  1. Dial 54. "STATION CONFIG."                  2. Dial 1. "DIRECT RING"                  3. Select line ports for direct ringing:                  - Line port 1-14 = Dial 01 - 14 or press AI - A14                  - Line port 15, 16 = Dial 15, 16 or press B1, B2.                  - Line port 17 - 24 = Dial 17 - 24                  -OR-                  Press HOLD then press AI - A6                  4. Dial # when all line ports are selected.                  5. Select station ports to be programmed:                  - Station 10 - 57: Dial 10 - 57.                  6. Dial * when all station ports are selected.                  -OR-                  Dial * * for next station/line ringing assignment                  -OR-                  Dial * * * for configuration mode.</p> <p style="text-align: center;">Continued on next page</p>	<p>MARK STATION/LINE RECORD ON PAGE 4-40                  DEFAULT = ALL LINES DIRECT RING AT STATION PORTS 10 AND 17</p> <p style="text-align: right; border: 1px solid black; padding: 5px;">Press SPKR to end.</p>

Press **ITCM** \* # 7 4 6 \* for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD
<p><b>Flexible Ringing Assignments</b> - continued</p>	<p><b>Delayed Ringing:</b></p> <ol style="list-style-type: none"> <li>1. Dial <b>54</b>. "STA/LINE CONFIG."</li> <li>2. Dial 2. "DELAY RING "</li> <li>3. Select line ports for delayed ringing:               <ul style="list-style-type: none"> <li>- Line port <b>1-14</b> = Dial <b>01 - 14</b> or press <b>A1 - A14</b></li> <li>- Line port <b>15, 16</b> = Dial <b>15, 16</b> or press <b>B1, B2</b>.</li> <li>- Line port <b>17 - 24</b> = Dial <b>17 - 24</b></li> </ul> <p style="text-align: center;"><b>-OR-</b></p> <p style="text-align: center;">Press <b>HOLD</b> then press <b>A1 - A6</b></p> <li>4. Dial # when all line ports are selected.</li> <li>5. Select station ports to be programmed:               <ul style="list-style-type: none"> <li>- Station 10 - 57: Dial <b>10 - 57</b>.</li> </ul> </li> <li>6. Dial * when all station ports are selected.               <p style="text-align: center;"><b>-OR-</b></p> <p style="text-align: center;">Dial * * for next station/line ringing feature.</p> <p style="text-align: center;"><b>-OR-</b></p> <p style="text-align: center;">Dial * * * for configuration mode.</p> </li> </li></ol>	<p style="border: 1px solid black; padding: 2px;"><b>MARK STATION/LINE RECORD ON PAGE 4-40</b>  <b>DEFAULT = NO DELAYED RING</b></p>
<p><b>Night Transfer (of ringing):</b> The attendant can place the system into the light transfer (of ringing) mode of operation. While in this mode of operation, special line/station ringing assignments are active. These assignments are programmed per this procedure.</p> <p><b>NOTE:</b> Also refer to night transfer (of ringing) on page 4-75.</p>	<ol style="list-style-type: none"> <li>1. Dial 64. "STA/LINE CONFIG"</li> <li>2. Dial 3. "NIGHT RING"</li> <li>3. Select line ports:               <ul style="list-style-type: none"> <li>- Line port 1-14 = Dial <b>01 - 14</b> or press <b>A1 - A14</b></li> <li>- Line port 15, 16 = Dial <b>15, 16</b> or press <b>B1, B2</b>.</li> <li>- Line port 17 - 24 = Dial 17 - 24</li> </ul> <p style="text-align: center;"><b>-OR-</b></p> <p style="text-align: center;">Press <b>HOLD</b> then press <b>A1 - A8</b></p> <li>4. Dial # when all line ports are selected.</li> <li>5. Select station ports to be programmed:               <ul style="list-style-type: none"> <li>- Station 10 - 57: Dial 10 - 57.</li> </ul> </li> <li>6. Dial * when all station ports are selected.               <p style="text-align: center;"><b>-OR-</b></p> <p style="text-align: center;">Dial * * for next station/line feature.</p> <p style="text-align: center;"><b>-OR-</b></p> <p style="text-align: center;">Dial * * * for configuration mode.</p> </li> </li></ol>	<p style="border: 1px solid black; padding: 2px;"><b>MARK STATION/LINE-RECORD ON PAGE 4-40</b>  <b>DEFAULT = ALL LINES NIGHT RING AT STATION PORTS 10 AND 17</b></p>

Press SPKR to err

Press ITCM \* # 7 4 6 \* for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD
<p><b>Privacy Release:</b> A line can be made non-private at a particular station while remaining private at all other stations. Stations can be programmed to automatically release privacy while on certain lines. With this arrangement, other stations can join that particular station whenever it is on the privacy release line.</p>	<p>1. Dial 54. <span style="float: right;"><b>"STALINE CONFIG."</b></span>                  2. Dial 4. <span style="float: right;"><b>"PRIVACY RELEASE"</b></span>                  3. Select line ports:                      - Line port 1-14 = Dial 01 -14 or press A1 - A14                      - Line port 15, 16 = Dial 15, 16 or press B1, B2.                      - Line port 17 - 24 = Dial 17 - 24                      -OR-                      Press HOLD then press A1 - A6                  4. Dial # when all line ports are selected.                  5. Select station ports to be programmed:                      - Station 10 - 57: Dial 10 - 57.                  6. Dial * when all station ports are selected.                      -OR-                      Dial * * for next station/line feature.                      -OR-                      Dial * * * for configuration mode.</p>	<p>MARK STATION/LINE RECORD ON PAGE 4-40                  DEFAULT = ALL LINES PRIVATE</p>
<p><b>Access Denied:</b> Access to particular lines can be denied to certain stations. A station user cannot select a denied line.</p>	<p>1. Dial 64. <span style="float: right;"><b>"STALINE CONFIG."</b></span>                  2. Dial 5. <span style="float: right;"><b>"ACCESS DENY"</b></span>                  3. Select line ports:                      - Line port 1-14 = Dial 01 - 14 or press A1 - A14                      - Line port 15, 16 = Dial 15, 16 or press B1, B2.                      - Line port 17 - 24 = Dial 17 - 24                      -OR-                      Press HOLD then press A1 - A6                  4. Dial # when all line ports are selected.                  5. Select station ports to be programmed:                      - Station 10 - 57: Dial 10 - 57.                  6. Dial * when all station ports are selected.                      -OR-                      Dial * * for next station/line feature.                      -OR-                      Dial * * * for configuration mode.</p>	<p>MARK STATION/LINE RECORD ON PAGE 4-40                  DEFAULT = NO ACCESS RESTRICTIONS</p>

4-30

Press SPKR to end.



4-33

Press ITCM \* # 7 4 6 \* for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD
<p><b>Call Origination Denied:</b> The ability to originate calls on certain lines can be denied to individual stations. The ability to answer incoming calls on these lines is still allowed.</p>	<p>1. Dial 54. <b>"STALINE CONFIG."</b>                  2. Dial 6. <b>"ORIGINATION DENY"</b>                  3. Select line ports:  <ul style="list-style-type: none"> <li>• Line port 1-14 = Dial <b>01 - 14</b> or press <b>A1 - A14</b></li> <li>• Line port 15, 16 = Dial <b>15, 16</b> or press <b>B1, B2.</b></li> <li>• Line port 17 - 24 = Dial <b>17 - 24</b></li> </ul> <p style="text-align: center;"><b>-OR-</b></p> <p style="text-align: center;">Press <b>HOLD</b> then press <b>A1 - A8</b></p>                 4. Dial <b>#</b> when all line ports are selected.                  5. Select station ports to be programmed:  <ul style="list-style-type: none"> <li>• Station 10 - 57: Dial <b>10 - 57.</b></li> </ul>                 6. Dial <b>*</b> when all station ports are selected.  <p style="text-align: center;"><b>-OR-</b></p>                 Dial <b>**</b> for next station/line feature.  <p style="text-align: center;"><b>-OR-</b></p>                 Dial <b>***</b> for configuration mode.</p>	<p>MARK STATION/LINE RECORD ON PAGE 4-40                  DEFAULT = NO ORIG. RESTRICTIONS</p>
<p><b>Idle Line Preference:</b> With idle line preference enabled, taking a station off-hook will automatically connect it to any assigned and idle line programmed for this purpose.</p>	<p>1. Dial 64. <b>"STALINE CONFIG."</b>                  2. Dial 7. <b>"IDLE LINE PREF."</b>                  3. Select line ports:  <ul style="list-style-type: none"> <li>• Line port 1-14 = Dial <b>01 - 14</b> or press <b>A1 - A14</b></li> <li>• Line port <b>15, 16</b> = Dial <b>15, 16</b> or press <b>B1, B2.</b></li> <li>• Line port <b>17 - 24</b> = Dial <b>17 - 24</b></li> </ul> <p style="text-align: center;"><b>-OR-</b></p> <p style="text-align: center;">Press <b>HOLD</b> then press <b>A1 - A8</b></p>                 4. Dial <b>#</b> when all line ports are selected.                  5. Select station ports to be programmed:  <ul style="list-style-type: none"> <li>• Station 10 - 57: Dial <b>10 - 57.</b></li> </ul>                 6. Dial <b>*</b> when all station ports are selected.  <p style="text-align: center;"><b>-OR-</b></p>                 Dial <b>**</b> for next station/line feature.  <p style="text-align: center;"><b>-OR-</b></p>                 Dial <b>***</b> for configuration mode.</p>	<p>MARK STATION/LINE RECORD ON PAGE 4-40                  DEFAULT = NONE ASSIGNED</p>

Press SPKR to end.

### STATION/LINE CONFIGURATION RECORD

(Write applicable line port numbers for each station/feature)

Sta.	Prime Line	Prime Intercom	Direct Ringing	Delayed Ringing	Night Transfer (of ringing)	Private	Non-Private	Access Denied	Call Origination Denied	Idle Line Preference
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
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44										
45										
46										
47										
48										
49										
50										
51										
52										
53										
54										
55										
56										
57										

Press **ITCM \* # 7 4 6 \*** for base level.

1 4-4

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD
<p>Jon-Square System: Every <b>programmable</b> buttons at each digital <b>stations</b> can be assigned individually (mapped) to select any line assigned to that station or to provide other functions. <b>These</b> buttons can be assigned as direct <b>station</b> select (DSS) buttons to provide <b>quick</b> access to system stations or <b>assigned</b> as idle to provide <b>autodial</b> <b>buttons</b> for station the user. Idle buttons <b>B1, B2, and B3 or A14, A15 and A16</b> serve as dynamic line buttons. These <b>buttons</b> allow the system to temporarily <b>assign</b> a line appearance to a station <b>which</b> normally does not have that line assigned to it. That line will appear at a <b>dynamic</b> line button. While the line is in appearance there, any normal call <b>handling</b> operations can be performed. Refer to <b>Figure 4-1</b> on page 4-50 for <b>button</b> locations.</p>		<p>SEE CHART ON PAGE <b>4- 49</b></p>
<p><b>Default Button Asslgnments</b></p>	<p>1. Dial 56. <b>"BUTTON MAPPING "</b>                  2. Dial 01. <b>"BUTTON DEFAULT "</b>                  3. Select station ports to be defaulted:                  - Station 10 - 57: Dial 10 - 57.                  3. Dial * for next button mapping feature.  <b>-OR-</b>                  Dial * * for configuration mode.</p>	
<p><b>Assign Lines To Buttons</b></p> <p>Assign Lines To Buttons • Continued on next page</p>	<p>1. Dial 56. <b>"BUTTON MAPPING "</b>                  2. Dial 02. <b>"ASSIGN LINE "</b>                  3. Select button to be programmed:                  • Press <b>AI - A14, B1 - B8</b>.                  4. Select line ports to be assigned.                  • Line port 1-14 = Dial <b>01 - 14</b> or Press <b>AI - A14</b>.                  • <b>Line port 15, 16 = Dial 15, 16</b> or Press <b>B1, B2</b>                  • Line port 17 - 24 = Dial 17 - 24.  <b>-OR-</b>                  Press <b>HOLD</b> then press <b>AI - A8</b>.                  5. Repeat steps 3 and 4 until all " s; are assigned.</p>	<p>Press SPKR to end.</p>

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD
<p><b>Lines To Buttons - continued</b></p>	<p>6. Dial # to finish button mapping.                      7. Select station port to be programmed:                      • Station 10 - 57: Dial <b>10 - 57</b>.                      8. Dial * for further line/button assignment.  <b>-OR-</b>                      Dial * * for next button mapping feature.  <b>-OR-</b>                      Dial * * * for configuration mode.</p>	<p>SEE CHART ON PAGE 4-49</p>
<p><b>Assign DSS/BLF Selection To Buttons</b></p>	<p>1. Dial 56. <i>"BUTTON MAPPING"</i>                      2. Dial 03. <i>"ASSIGN DSS/BLF"</i>                      3. Select button to be programmed:                      • Press <b>AI - A14, B1 - B8</b>.                      4. Select station port to be assigned:                      • Station 10 - 57: Dial <b>10 - 57</b>.                      5. Repeat steps 3 and 4 until all ports are assigned.                      6. Dial #.                      7. Select station ports to be programmed with this <b>DSS/button</b> assignment:                      • Station 10 - 57: Dial <b>10 - 57</b>.                      8. Dial * for further <b>DSS/button</b> assignment.  <b>-OR-</b>                      Dial * * for next button mapping feature  <b>-OR-</b>                      Dial * * * for configuration mode.</p>	
<p><b>Blank Buttons For User Autodial and Dynamic Line Buttons</b>  <i>NOTE When blanking buttons, be sure a previous/y assigned button is <b>idle</b> (feature not selected by user) before it is blanked</i></p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p><b>Dynamic line buttons are located at B1, B2, &amp; B3.</b></p> </div>	<p>1. Dial <b>56</b>. <i>"BUTTON MAPPING"</i>                      2. Dial 04. <i>"BLANK/AUTODIAL"</i>                      3. Select all buttons to be programmed:                      • Press <b>AI - A14, B1 - B8</b>.                      4. Dial #.                      5. Select station ports to be programmed with this auto dial button assignment:                      - Station 10 - 57: Dial <b>10 - 57</b>.                      6. Dial * for further button blanking.                      Dial * * for next button mapping feature.  <b>-OR-</b>                      Dial * * * for configuration mode.</p>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin-left: auto; margin-right: auto;"> <p><b>Press SPKR to end.</b></p> </div>

4-43

Press ITCM * # 7 4 6 * for base level.		
FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD
<p><b>Multiple Intercom Button:</b> Stations can be programmed to provide a second intercom button.</p>	<p>1. Dial 55. <b>"BUTTON MAPPING "</b>                  2. Dial 05. <b>"ASSIGN 2ND ITCM "</b>                  3. Select button to be programmed:                  • Press <b>AI - A14, B1 - B8.</b>                  4. Select station ports to be programmed with multiple intercom button:                  • Station 10 - 57: Dial <b>10 - 57.</b>                  5. Dial * for further intercom button assignment                  -OR-                  Dial * * for next button mapping feature.  <b>-OR-</b>                  Dial * * * for configuration mode.</p>	<p>SEE CHART ON PAGE 4-49</p>
<p><b>Privacy Button:</b> Stations can be programmed to provide a privacy button. A user engaged in a private call can press the privacy button to change the current call into a non-private one.</p>	<p>1. Dial 55. <b>"BUTTON MAPPING "</b>                  2. Dial 05. <b>"ASSIGN PRIVACY "</b>                  3. Select button to be programmed:                  • Press <b>AI - A14, B1 - B6.</b>                  4. Select station ports to be programmed with a PRIVACY button:                  • Station 10 - 57: Dial <b>10 - 57.</b>                  5. Dial * for further privacy button assignment.  <b>-OR-</b>                  Dial * * for next button mapping feature.  <b>-OR-</b>                  Dial * * * for configuration mode.</p>	

Press SPKR to end.

Press ITCM \* # 7 4 6 \* for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD
<p><b>Do Not Disturb (DND) Button:</b> Stations can be programmed to provide a do not disturb (DND) button. Pressing the DND button prevents other stations from calling the DND station. System default arranges L22 as the DND button.</p> <p><i>NOTE: Also refer to DND inhibit on page 4-8 and DND override on page 4-24.</i></p>	<p>1. Dial 56. "BUTTON MAPPING "                  2. Dial 07. "ASSIGN DND CODE "                  3. Select button to be programmed:                  - Press A1 - A14, B1 - B8.                  4. Select station ports to be programmed with a DND button:                  - Station 10 - 57: Dial 10 - 57.                  5. Dial * for further DND button assignment                  -OR-                  Dial * * for next button mapping feature.                  -OR-                  Dial * * * for configuration mode.</p>	<p>SEE CHART ON PAGE 4-49</p>
<p><b>Save Button:</b> The SAVE button is pressed to store the last dialed number for later re-dial. Any idle button can be programmed to serve as the SAVE button.</p>	<p>1. Dial 56. "BUTTON MAPPING "                  2. Dial 08. "ASSIGN SAVE "                  3. Select button to be programmed:                  - Press A1 - A14, B1 - B8.                  4. Select station ports to be programmed with a SAVE button:                  - Station 10 - 57: Dial 10 - 57.                  5. Dial * for further Save button assignment                  -OR-                  Dial * * for next button mapping feature.                  -OR-                  Dial * * * for configuration mode.</p>	

Press SPKR to end.

Press ITCM \* # 7 4 6 \* for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD
<p><b>Zone Page/All-Call Button:</b> A button can be programmed to provide a station with one-button access to all-call and zone paging.</p>	<ol style="list-style-type: none"> <li>1. Dial 56. <span style="float: right;"><i>"BUTTON MAPPING "</i></span></li> <li>2. Dial 09. <span style="float: right;"><i>"ASSIGN ZONE "</i></span></li> <li>3. Select button to be programmed: - Press <b>A1 - A14, B1 - B8.</b></li> <li>4. Dial <b>1 - 3</b> for zone <b>1 - 3.</b> <span style="float: right;"><i>"ASSIGN ZONE X "</i></span> -OR- Dial <b>4</b> for all-call. <span style="float: right;"><i>"ASSIGN ALL CALL "</i></span></li> <li>5. Select station ports to be programmed: - Station <b>10 - 57:</b> Dial <b>10 - 57.</b></li> <li>6. Dial * for further paging button assignment. -OR- Dial * * for next button mapping feature. -OR- Dial * * * for configuration mode.</li> </ol>	<div style="border: 1px solid black; padding: 5px; width: fit-content;">SEE CHART ON PAGE 4-49</div>
<p><b>Automatic Call-Back Button:</b> A button can be programmed to be an automatic call-back button. When a user presses this button after a busy tone is encountered, the system will automatically ring the called and calling stations when the called station becomes idle.</p>	<ol style="list-style-type: none"> <li>1. Dial 56. <span style="float: right;"><i>"BUTTON MAPPING "</i></span></li> <li>2. Dial 10. <span style="float: right;"><i>"ASSIGN CALL BACK"</i></span></li> <li>3. Select button to be programmed: - Press <b>A1 - A14, B1 - B8.</b></li> <li>4. Select station ports to be programmed with CALL-BACK button: - Station <b>10 - 57:</b> Dial <b>10 - 57.</b></li> <li>5. Dial * for next auto call-back button assignment. -OR- Dial * * for next button mapping feature. -OR- Dial * * * for configuration mode.</li> </ol>	

Press SPKR to end.

4-46

**Press ITCM \* # 7 4 6 \* for base level.**

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD
<p><b>Call Forward Button:</b> A button can be programmed to provide one-button forwarding of all calls to another extension.</p>	<p>1. Dial 56. <i>"BUTTON MAPPING "</i>                  2. Dial 11. <i>"ASSIGN CALL FWD "</i>                  3. Select button to be programmed:                  - Press <b>A1 - A14, B1 - B8</b>.                  4. Select station ports to be programmed with a CALL FWD button:                  - Station 10 - 57: Dial <b>10 - 57</b>.                  5. Dial * for next call forward button assignment.                  -OR-                  Dial * * for next button mapping feature.                  -OR-                  Dial * * * for configuration mode.</p>	<p><b>SEE CHART ON PAGE 4-49</b></p>
<p><b>Call Park Orbit Button:</b> Pressing a button programmed as the call park orbit button will automatically park an active call in orbit.</p>	<p>1. Dial 56. <i>"BUTTON MAPPING "</i>                  2. Dial 12. <i>"ASSIGN CALL PK "</i>                  3. Select button to be programmed:                  - Press <b>A1 - A14, B1 - B8</b>.                  4. Dial <b>1 - 9</b> for parking orbit 1 - 9.  <i>"ASSIGN CALL PK X"</i>                  5. Select station ports to be programmed with ORBIT button:                  - Station 10 - 57: Dial <b>10 - 57</b>.                  6. Dial * for next call park orbit button assignment.                  -OR-                  Dial * * for next button mapping feature.                  -OR-                  Dial * * * for configuration mode.</p>	

**Press SPKR to end.**



4-47

**Press ITCM \* # 7 4 6 \* for base level.**

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD
<p><b>Line Group Button:</b> One-button access to a trunk group is provided by a button programmed as the line group button.</p>	<ol style="list-style-type: none"> <li>1. Dial 56. <span style="float: right;"><i>"BUTTON MAPPING "</i></span></li> <li>2. Dial 13. <span style="float: right;"><i>"ASSIGN LINE GRP "</i></span></li> <li>3. Select button to be programmed: - Press <b>A1 - A14, B1 - B8.</b></li> <li>4. Dial 1 - 4 for line group 1 - 4. <span style="float: right;"><i>"ASSIGN LINE GRP X"</i></span></li> <li>5. Select station ports to be programmed with GROUP button: - Station 10 - 57: Dial <b>10 - 57.</b></li> <li>6. Dial * for next line group button assignment. -OR- Dial * * for next button mapping feature. -OR- Dial * * * for configuration mode.</li> </ol>	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p><b>SEE CHART ON PAGE 4-49</b></p> </div>
<p><b>Voice Announce Block Button:</b> Voice announced intercom calls and station paging can be blocked when the station user presses a button programmed as the voice announce block button.</p>	<ol style="list-style-type: none"> <li>1. Dial 56. <span style="float: right;"><i>"BUTTON MAPPING "</i></span></li> <li>2. Dial 14. <span style="float: right;"><i>"ASSIGN V. A. B. "</i></span></li> <li>3. Select button to be programmed: -Press <b>A1 - A14, B1 - B8.</b></li> <li>4. Select station ports to be programmed with a V.A. BLOCK button: - Station 10 - 57: Dial <b>10 - 57.</b></li> <li>5. Dial * for next voice announce block button assignment. -OR- Dial * * for next button mapping feature. -OR- Dial * * * for configuration mode.</li> </ol>	

**Press SPKR to end.**

Press **ITCM \* # 7 4 6 \*** for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD
<p><b>Line Group Queue Button:</b> A station user can queue for a busy line by pressing a button that is programmed as the line group queue button.</p>	<ol style="list-style-type: none"> <li>1. Dial 66. <i>"BUTTON MAPPING "</i></li> <li>2. Dial 15. <i>"ASSIGN LINE GRP Q"</i></li> <li>3. Select button to be programmed: -Press <b>AI - A14, B1 - B8.</b></li> <li>4. Select station ports to be programmed with QUEUE button: ▪ Station <b>10 - 57:</b> Dial 10 - 57.</li> <li>5. Dial * for next line group queue button assignment. <b>-OR-</b> Dial * * for next button mapping feature <b>-OR-</b> Dial * * * for configuration mode..</li> </ol>	<p>SEE CHART ON PAGE 4-49</p>
<p><b>Account Code Button:</b> Press the account code button and then dial an account code to record a call into a particular category without interrupting the call.</p>	<ol style="list-style-type: none"> <li>1. Dial 66. <i>"BUTTON MAPPING "</i></li> <li>2. Dial 17. <i>"ASSIGN ACCT KEY "</i></li> <li>3. Select button to be programmed: - Press AI - A14, <b>B1 - B6</b></li> <li>4. Select station ports to be programmed: ▪ Station 10 - 57: Dial 10 - 57.</li> <li>5. Dial * for further ACCOUNT CODE button assignment. <b>-OR-</b> Dial * * for next button mapping feature. <b>-OR-</b> Dial * * * for next configuration mode.</li> </ol>	<p>SEE CHART ON PAGE 4-49</p>

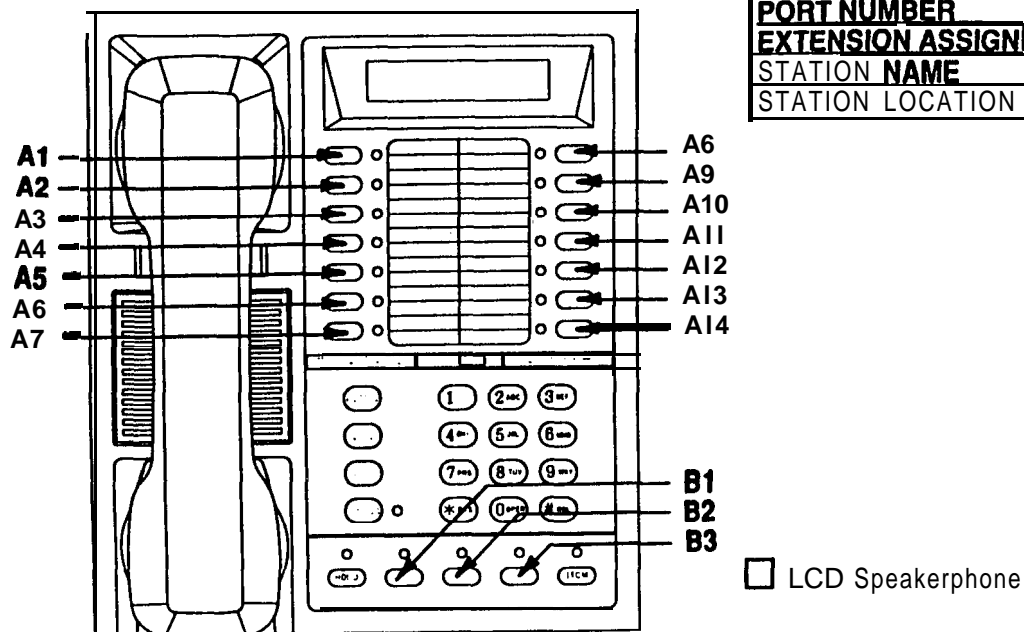
Press SPKR to end.



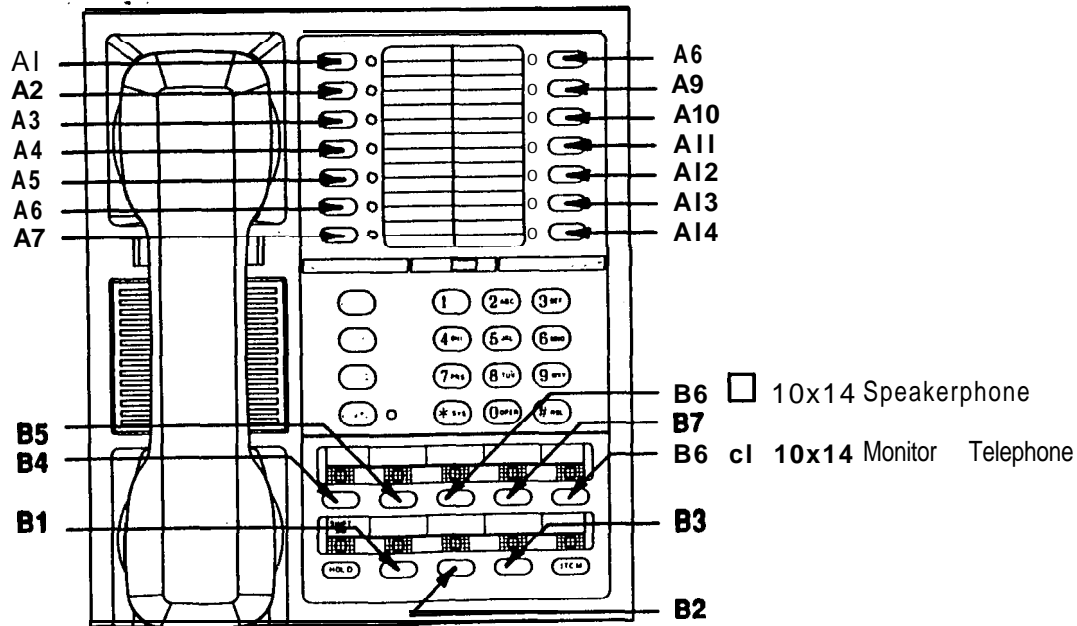
# STATION RECORD

(Copy This Record Sheet As Required For Additional Stations)

<b>PORT NUMBER</b>	
<b>EXTENSION ASSIGNED</b>	
<b>STATION NAME</b>	
<b>STATION LOCATION</b>	



BUTTON CHART			
<b>B1</b>	<b>A1</b>	<b>A9</b>	
<b>B2</b>	<b>A2</b>	<b>A10</b>	
<b>B3</b>	<b>A3</b>	<b>A11</b>	
<b>B4</b>	<b>A4</b>	<b>A12</b>	
<b>B5</b>	<b>A5</b>	<b>A13</b>	
<b>B6</b>	<b>A6</b>	<b>A14</b>	
<b>B7</b>	<b>A7</b>		
<b>B8</b>	<b>A8</b>		



### PROGRAMMED BUTTON FUNCTION

(Enter code on button chart)

- BLK** ..... Blank
- Lnn** ..... Line 01 - 24
- Snn** ..... Station **10-57**
- DND** ..... Do not disturb
- PRI** ..... Privacy
- IC2** ..... Second intercom
- ACC** ..... Account code
- SAV** ..... Save
- ZPn** ..... Zone page 1-3
- AC** ..... All-call page
- ACB** ..... Automatic call back
- CF** ..... Call forward
- CPn** ..... Call park orbii 1-9
- TGn** ..... Line group 1-4
- VAB** ..... Voice announce block
- TGQ** ..... Line group queue

Figure 4-1. Location Of Buttons On Telephone Faceplate

Press **ITCM \* # 7 4 6 \* for base level.**

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																																																																																																						
<p><b>Station-to-Station Port Reassignment:</b> The extension number and all other <b>programmable</b> attributes of a station that <b>are</b> initially assigned to a particular port <b>can</b> be reassigned to a different <b>port</b> by <b>programming</b> action. This feature allows <b>adds, moves, and changes</b> to be made <b>without</b> relocating the station wiring.</p> <p><i>NOTE: Refer to automatic station relocation on page 4-10 and the station connections discussion found on page 3-6. Remember, the station 10 to station port 10 assignment cannot be reassigned.</i></p>	<p>. Dial 57 to re-assign station to port.  <b>"ASSIGN STA/PORT "</b></p> <p>∴ Dial station extension number. <b>0010 • 7999.</b>  <b>"PHYS PORT XX "</b></p> <p>∴ Dial physical port number <b>10 • 57.</b>  <b>"LOGICAL STA XX "</b></p> <p>1. Dial <b>#</b> to make assignment.            i. Dial <b>*</b> for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> </tbody> </table> <p><b>DEFAULT = LOGICAL SAME AS PHYSICAL (PORT 10 = STA 10, ETC.)</b></p>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57	
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<p><b>Block Programming:</b> A configuration assigned to a particular station can be assigned to one other station or to an entire block of stations with one programming action.</p>	<p>1. Dial 56. <b>"BLK PROGRAMMING "</b></p> <p>2. Select model station port:            • Station 10 • 57 = dial <b>10 • 57.</b>  <b>"MODELSTA XX "</b></p> <p>3. Dial first station port in block (dial code as above)</p> <p>4. Dial <b>#</b>.</p> <p>5. Dial last station port in block (dial code as above)</p> <p>6. Dial <b>#</b>.</p> <p>7. Dial <b>*</b> for further block programming.</p> <p><b>-OR-</b></p> <p>Dial <b>* *</b> for configuration mode.</p> <p><b>NOTE: The first, last and all station ports in between will be block programmed like the model/ station port. To block program an individual station port, select the first and last port to be the same number. (For example: 25, 26# 26# programs station 26 exactly as 25 .)</b></p>	<table border="1"> <tr> <td>MODEL STATION</td> <td></td> </tr> <tr> <td>BLOCKED STATIONS</td> <td></td> </tr> </table>	MODEL STATION		BLOCKED STATIONS																																																																																																			
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Press SPKR to end.

Press ITCM \* # 7 4 6 \* for **base** level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD					
<p><b>Station Disable:</b> Station <b>ports</b> can be <b>disabled</b> on a per station basis.</p>	<p>1. Dial 59. <span style="float: right;"><i>"DISABLE STATIONS"</i></span>                      !. Select station ports to be disabled.                      - Station 10 - 57: Dial <b>10 - 57</b>.                      }. Dial * for configuration mode.</p>	<b>PORT</b>	<b>ENTRY</b>	<b>PORT</b>	<b>ENTRY</b>	<b>PORT</b>	<b>ENTRY</b>
		10		26		42	
		11		27		43	
		12		28		44	
		13		29		45	
		14		30		46	
		15		31		47	
		16		32		48	
		17		33		49	
		18		34		50	
		19		35		51	
		20		36		52	
		21		37		53	
		22		38		54	
		23		39		55	
		24		40		56	
		25		41		57	
		DEFAULT = NO STATIONS DISABLED					

Press SPKR to end.

## DIRECT INWARD STATION DIALING (DISD)

The **DISD** feature allows an external party to call an intercom station directly without assistance by the attendant. The **DISD** call must be received on a line which has been specially programmed to allow this feature. Any line can be programmed to be a **DISD** line for both the normal mode of operation and the night transfer (of ringing) mode of operation.

The number of rings which occurs on a **DISD** line before it is answered is programmable. By setting a large number of rings, time is allowed for a call to be serviced in a regular manner by stations that have a line appearance for the **DISD** line. Setting the number of rings to 0 disables the line for **DISD** use. If a line is to be dedicated for **DISD** use, it is a good practice to set it for one ring. The amount of time allowed for an extension number to be dialed is programmable as is the **DISD** assist station that will answer calls that are not completed during this dial time limit.

It is recommended that a music source be connected to the system to provide a reassurance to the caller during a camp-on situation when the **DISD** feature is being used.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD												
Base Level: The first step in any programming sequence is to enter the base level. Once in this mode, any desired configuration can be set.	Press <b>ITCM</b> Dial * # 7 4 6 *													
<b>Dial Time Limit:</b> When extension number dialing is not completed within the programmed dial time limit, a <b>DISD</b> call is routed to the assist station if one is programmed; otherwise, the line is dropped.	<ol style="list-style-type: none"> <li>1. Dial 44. <span style="float: right;"><i>"DISD DIAL TIME X"</i></span></li> <li>2. Press program button to select dial time limit: <ul style="list-style-type: none"> <li>• Dial 1 or press A1 = 6 sec.</li> <li>• Dial 2 or press A2 = 9 sec.</li> <li>• Dial 3 or press A3 = 12 sec.</li> <li>• Dial 4 or press A4 = 15 sec.</li> </ul> </li> <li>3. Press * for configuration mode.</li> </ol>	<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td colspan="4" style="text-align: center;"><b>DIAL TIME LIMIT (SEC)</b></td> </tr> <tr> <td style="text-align: center;">6</td> <td style="text-align: center;">9</td> <td style="text-align: center;">12</td> <td style="text-align: center;">15</td> </tr> <tr> <td colspan="4" style="text-align: center;">DEFAULT <input type="checkbox"/> 12 SEC</td> </tr> </table>	<b>DIAL TIME LIMIT (SEC)</b>				6	9	12	15	DEFAULT <input type="checkbox"/> 12 SEC			
<b>DIAL TIME LIMIT (SEC)</b>														
6	9	12	15											
DEFAULT <input type="checkbox"/> 12 SEC														
<b>DISD Incoming Rings:</b> The number of rings which occurs on a <b>DISD</b> line before it is answered is programmable. Setting a large number of rings allows time for a call to be serviced in a regular manner by stations that have line appearance for the <b>DISD</b> line if such action is desired.	<ol style="list-style-type: none"> <li>1. Dial 45. <span style="float: right;"><i>"DISD RINGS "</i></span></li> <li>2. Press program button to choose operating mode <ul style="list-style-type: none"> <li>• Dial 1 or press A1 = normal mode. <span style="float: right;"><i>"DISD RINGS DAY X "</i></span></li> <li style="text-align: center;">-OR-</li> <li>• Dial 2 or press A2 = night transfer (of ringing) mode. <span style="float: right;"><i>"DISD RINGS NITE X"</i></span></li> </ul> </li> <li>3. Select rings to occur before line is answered. <ul style="list-style-type: none"> <li>• Dial 0 for no rings. This disables <b>DISD</b> for line.</li> <li style="text-align: center;">-OR-</li> <li>• Dial 1 - 9 = rings 1 - 9 (LED On = lines assigned to number of rings).</li> </ul> </li> </ol> <p style="text-align: center;">Continued</p>													

Press **ITCM** \* # 7 4 6 \* for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																														
<p><b>DISD Incoming Ring</b> - Continued</p>	<ul style="list-style-type: none"> <li>• Dial # then assign line port to ring number.</li> <li>Line port <b>1-14</b> = Dial <b>01</b>-14 or Press AI • A14</li> <li>Line port <b>15, 16</b> = Dial 15, 16 or Press BI, <b>B2</b></li> <li>Line port <b>17 - 24</b> = Dial <b>17 - 24</b></li> <li style="text-align: center;"><b>-OR-</b></li> <li>Press <b>HOLD</b> then press AI • A8</li> <li>4. Press * and repeat steps 2 and 3 for further <b>DISD ring</b> assignment.</li> <li style="text-align: center;"><b>-OR-</b></li> <li>Press * * for configuration mode.</li> </ul>	<table border="1" style="width: 100%; text-align: center;"> <tr> <th colspan="10">DISD INCOMING RINGS</th> </tr> <tr> <td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td> </tr> <tr> <td colspan="10">DEFAULT = 0 RINGS</td> </tr> </table>	DISD INCOMING RINGS										0	1	2	3	4	5	6	7	8	9	DEFAULT = 0 RINGS									
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<p><b>DISD Assist Station:</b> When extension number dialing is not completed within the programmed dial time limit, the call is routed to the <b>DISD</b> assist station.</p>	<ol style="list-style-type: none"> <li>1. Dial 46. <span style="float: right;"><b>"DISD ASSIST "</b></span></li> <li>2. Choose operating mode to be programmed:             <ul style="list-style-type: none"> <li>• Dial 1 or press AI = normal mode. <span style="float: right;"><b>"DISD ASSIST DAY X "</b></span></li> <li style="text-align: center;"><b>-OR-</b></li> <li>- Dial 2 or press A2 = night transfer (of ringing) mode. <span style="float: right;"><b>"DISD ASSIST NITE"</b></span></li> </ul> </li> <li>3. <b>Select</b> assist station.             <ul style="list-style-type: none"> <li>- Dial <b>00</b> for no station (line drops after timeout).</li> <li style="text-align: center;"><b>-OR-</b></li> <li>- Dial IO • 67 to select <b>DISD</b> assist station. (LED <b>On</b> = lines assigned to assist station).</li> <li>• Dial # then assign line <b>ports</b> to assist station.</li> <li>Line port <b>1 - 14</b> = Dial <b>01</b>-14 or Press AI • A14</li> <li>Line port 15, 16 = Dial 15, 16 or Press <b>B1</b>, B2</li> <li>Line port <b>17 - 24</b> = Dial 17 • 24</li> <li style="text-align: center;"><b>-OR-</b></li> <li>Press <b>HOLD</b> then press AI • A8</li> </ul> </li> <li>4. Press * and repeat steps 2 and 3 for further assist station programming.</li> <li style="text-align: center;"><b>-OR-</b></li> <li>Press * * for configuration mode.</li> </ol>	<table border="1" style="width: 100%; text-align: center;"> <tr> <th>DAY STA</th> <th>NIGHT STA</th> <th>LINES AS'GND</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td colspan="3">DEFAULT = STA IO DAY AND NIGHT</td> </tr> </table>	DAY STA	NIGHT STA	LINES AS'GND				DEFAULT = STA IO DAY AND NIGHT																							
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Press SPKR to end.]

4-4



## ANALOG TERMINAL INTERFACE

The Analog Terminal Interface (ATI) device is an optional accessory available for use with the digital telephone system. Connect it to a station port to provide interfacing for such external telephony equipment as an ExecuMail system, an industry-standard model 2500 tone dial telephone, a model 500 rotary dial telephone, etc. Perform the following programming actions as necessary when operating external equipment through the ATI device.

Press **ITCM \* # 7 4 6 \*** for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																																																																		
<p><b>Automatic Transfer of Voice Mail:</b> When ExecuMail is included with the system, use this programming feature to arrange for a immediate line transfer without delay from ExecuMail to a station port.</p>	<p>1. Dial 25 <span style="float: right;"><i>"V MAIL AUTO XFER"</i></span>                  2. Press <b>AI</b> to toggle between enable and disable.                  (LED On = Enable)  <b>-OR-</b>                  Dial <b>1</b> to enable.                  (AI LED is on)                  Dial <b>2</b> to disable.                  3. Dial <b>*</b> for configuration mode</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: left;">AUTO VOICE MAIL XFER</th> </tr> <tr> <td style="width: 50%;">ENABLE</td> <td style="width: 50%;">DISABLE</td> </tr> <tr> <td colspan="2">DEFAULT = DISABLE</td> </tr> </table>	AUTO VOICE MAIL XFER		ENABLE	DISABLE	DEFAULT = DISABLE																																																													
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<p><b>Voice Mail Line ID:</b> When ExecuMail is included with the system, program the lines with identification (ID) numbers. These numbers allow the ExecuMail system to identify which line it is answering. The ID numbers that are assigned here must match the ID numbers that are selected as part of ExecuMail system programming.</p>	<p>1. Dial 43. <span style="float: right;"><i>"VOICE MAIN LN ID"</i></span>                  2. Select line port (LED On = Line assigned)                  Line port 1-14 = Dial <b>01 - 14</b> or Press <b>AI - AI4</b>                  Line port 15, 16 = Dial <b>15, 16</b> or press <b>B1, B2</b>                  Line port 17-24 = Dial <b>17 - 24</b>  <b>-OR-</b>                  Press <b>HOLD</b> then press <b>AI - A8</b>                  3. Dial #to clear current ID.                  4. Dial ID number (8 digit maximum).                  5. Dial <b>*</b> for further ID assignment.  <b>-OR-</b>                  Dial <b>**</b> for configuration mode.</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="6" style="text-align: left;">VOICE MAIL IDENTIFICATION</th> </tr> <tr> <th style="width: 12.5%;">PORT</th> <th style="width: 12.5%;">ENTRY</th> <th style="width: 12.5%;">PORT</th> <th style="width: 12.5%;">ENTRY</th> <th style="width: 12.5%;">PORT</th> <th style="width: 12.5%;">ENTRY</th> </tr> <tr> <td>1</td> <td></td> <td>9</td> <td></td> <td>17</td> <td></td> </tr> <tr> <td>2</td> <td></td> <td>10</td> <td></td> <td>18</td> <td></td> </tr> <tr> <td>3</td> <td></td> <td>11</td> <td></td> <td>19</td> <td></td> </tr> <tr> <td>4</td> <td></td> <td>12</td> <td></td> <td>20</td> <td></td> </tr> <tr> <td>5</td> <td></td> <td>13</td> <td></td> <td>21</td> <td></td> </tr> <tr> <td>6</td> <td></td> <td>14</td> <td></td> <td>22</td> <td></td> </tr> <tr> <td>7</td> <td></td> <td>15</td> <td></td> <td>23</td> <td></td> </tr> <tr> <td>8</td> <td></td> <td>16</td> <td></td> <td>24</td> <td></td> </tr> <tr> <td colspan="6">DEFAULT = NO ID ASSIGNED</td> </tr> </table>	VOICE MAIL IDENTIFICATION						PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	1		9		17		2		10		18		3		11		19		4		12		20		5		13		21		6		14		22		7		15		23		8		16		24		DEFAULT = NO ID ASSIGNED					
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Press **SPKR** to end.

Press ITCM \* # 7 4 6 \* for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																																																																																																						
<p><b>Voice Mail Transfer on Busy:</b> When ExecuMail is included with the system, a busy station may need to be alerted if the ExecuMail system is attempting a call transfer to it instead of having the call automatically routed to a voice mail box. This program feature allows a station (usually the attendant station) to be programmed for this option.</p>	<ol style="list-style-type: none"> <li>1. Dial 53. "STATION FEATURES".</li> <li>2. Dial 31. "VMAIL XFR ON BSY".</li> <li>3. Select station ports to be programmed. Station ports 10 - 57: Dial 10 - 57</li> <li>4. Dial * for next feature.</li> </ol> <p style="text-align: center;"><b>-OR-</b></p> <p style="padding-left: 20px;">Dial * * for configuration mode.</p>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> </tbody> </table> <p style="text-align: center; border: 1px solid black; padding: 2px;">(DEFAULT = NOT ENABLED)</p>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57	
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<p><b>Thru Dialing/ATI:</b> Connect external telephony equipment to a station port through the Analog Terminal Interface (ATI) device.</p> <p>With this programming feature enabled, DTMF signalling tones, generated by the external equipment, pass through the ATI device, the common equipment and any line connection. This feature is automatically enabled when the ATI device is connected to the station port. It is used by connected equipment such as the ExecuMail system or a model 2500 industry-standard telephone. Disable this feature for equipment such as rotary-dial telephones.</p>	<ol style="list-style-type: none"> <li>1. Dial 53. "STATION FEATURES"</li> <li>2. Dial 07. "ATI THRU DIALING"</li> <li>3. Select station ports to be programmed Station 10 - 57: Dial 10 - 57</li> <li>4. Dial * for next feature.</li> </ol> <p style="text-align: center;"><b>-OR-</b></p> <p style="padding-left: 20px;">Dial * * for configuration mode.</p>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> </tbody> </table> <p style="text-align: center; border: 1px solid black; padding: 2px;">DEFAULT = NOT ENABLED</p>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57	
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Press SPKR to end.

Press **ITCM** \* # 7 4 6 \* for base level.

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<p><b>Voice Mail Port:</b> Connect the <b>ExecuMail</b> system or a model 2500 industry-standard telephone to a station port through the Analog Terminal Interface (ATI) device. Use this programming feature to enable the station port for <b>ExecuMail</b> operation (voice mail port). Disable the station port as a voice mail port when used for model 2500 telephone operation.</p> <p><b>NOTE:</b> <i>This feature is automatically disabled if the <b>ATI</b> device is replaced with a <b>multiline</b> telephone at the programmed station port.</i></p>	<ol style="list-style-type: none"> <li>Dial 53. "STATION FEATURES"</li> <li>Dial 32. "VOICE MAIL PORT "</li> <li>Select station ports to be programmed - Station 10 • 57: Dial 10 • 57</li> <li>Dial * for next feature.</li> </ol> <p><b>-OR-</b> Dial * * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> </tbody> </table> <p>DEFAULT = NOT ENABLED</p>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57	
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<p><b>ATI Distinctive Ringing:</b> Intercom calls that ring at equipment connected through an <b>ATI</b> device have a different cadence than outside calls have. Intercom ring cadence is: 1 sec. on, 0.5 sec. off, 1 sec. on, 3.5 sec. off. Outside calling cadence is: 2 sec. on, 4 sec. off. Disable this distinctive ringing feature to make the intercom ring cadence the same as that for outside calls.</p>	<ol style="list-style-type: none"> <li>Dial 53. "STATION FEATURES"</li> <li>Dial 33. "DIST. RING ON "</li> <li>Press AI to toggle between enable and disable (LED On = Enable)</li> </ol> <p><b>-OR-</b></p> <ol style="list-style-type: none"> <li>Dial 1 to Enable. "DIST. RING ON "</li> <li>(AI LED on) Dial 2 to Disable. "DIST. RING OFF "</li> <li>Dial * for next feature.</li> </ol> <p><b>-OR-</b> Dial * * for configuration mode.</p>	<table border="1"> <tr> <td colspan="2"><b>DISTINCTIVE RINGING</b></td> </tr> <tr> <td><b>ENABLED</b></td> <td><input type="checkbox"/></td> </tr> <tr> <td><b>DISABLED</b></td> <td><input type="checkbox"/></td> </tr> <tr> <td colspan="2"><b>DEFAULT = ENABLED</b></td> </tr> </table>	<b>DISTINCTIVE RINGING</b>		<b>ENABLED</b>	<input type="checkbox"/>	<b>DISABLED</b>	<input type="checkbox"/>	<b>DEFAULT = ENABLED</b>																																																																																															
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Press **SPKR** to end.

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## TOLL RESTRICTION TABLE CONFIGURATION

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Before programming the toll restriction configuration, enter the toll restriction requirements on the programming reference tables found at the end of this procedure.

In order for toll restriction to take effect, the following three-fold process must occur.

- One or more toll tables must be entered
- Toll tables must be assigned to **all** appropriate lines.
- Toll tables must be assigned to all appropriate stations.

**After** the toll tables are programmed, they must then be assigned to both a line and a station using that line before any programmed toll restriction will be activated at the station.

1. Determine the types of dialing restrictions which must be imposed on the system. Typically, this includes access codes which result in toll charges, and certain local numbers as desired.
2. If the restricted dialing codes will be imposed consistently on most or all stations in the system, list them on one or two tables. If wide variation in the dialing restrictions is planned, spread the listing out across several tables.
3. Strategically group the listings on the tables so that a list of restrictions can be applied to a particular station or group of stations.
4. Designate each table as a DENY table or as an ALLOW table. The numbers entered in a DENY table are prevented from being dialed. ALLOW tables take precedence over DENY tables. Therefore, an entry in an allow table will provide an explicit exception to an entry in a DENY table. Note that the system always permits the dialing of any number not explicitly denied. Also, system speed dial numbers will not be toll restricted unless specified by station COS programming.
  - Example A: Provide a simple and broad toll restriction format by creating a DENY table with two entries:
    - ENTRY (1) = **1**; ENTRY (2) = 0. This format prevents all long distance and operator calls.
  - Example B: Prevent the dialing of all numbers within the (804) area code, while allowing the dialing of one specific number within that area code. by entering 1804 in a DENY table and 18049782200 in an ALLOW table.
5. Press the # button in place of a particular digit to condense a range of numbers into one entry. The # character is a “match-anything” digit, and can be included in an entry in either a DENY table or an ALLOW table.
  - Example A: If **357, 377, 387**, and 397 dialing is to be prohibited, list one entry of **3#7** on a DENY table to cover them all.
  - Example B: Since area codes typically have a 1 or a 0 as a middle digit, prevent long distance calls to those area codes by entering **1#1#** and **1#0#** in a DENY table.
8. Since it is important that emergency numbers never be restricted, always create an allow table with entries of 911 and 1911 to override any DENY tables that have been created.
7. If the system is installed behind a PBX, include an access code as part of every table entry.

11/17/17

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD										
<p>Base Level: The first step in any programming sequence is to enter the base level. Once in this mode, any desired configuration can be set.</p>	<p>Press ITCM Dial *#746*.</p>											
<p><b>System Default:</b> Two toll restriction tables are defaulted with pre-programmed values and are pre-assigned to the lines. They need only to be assigned to the stations to put them into effect. The defaulted tables can be re-programmed with different information using the normal programming procedure.</p> <p>The preprogrammed values are as follows:</p> <table border="0"> <tr> <td><b>TABLE 1(Deny)</b></td> <td><b>TABLE 2 (Allow)</b></td> </tr> <tr> <td>1 1</td> <td>1 1800</td> </tr> <tr> <td>2 978'</td> <td>2 911</td> </tr> <tr> <td>3 411'</td> <td>3</td> </tr> <tr> <td></td> <td>4</td> </tr> </table> <p>These values will provide satisfactory system performance in a broad range of site applications.</p>	<b>TABLE 1(Deny)</b>	<b>TABLE 2 (Allow)</b>	1 1	1 1800	2 978'	2 911	3 411'	3		4	<p>1. Dial 70. "DEFAULT TOLL " 2. Press #to default toll tables.</p>	
<b>TABLE 1(Deny)</b>	<b>TABLE 2 (Allow)</b>											
1 1	1 1800											
2 978'	2 911											
3 411'	3											
	4											

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Press SPKR to end.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																																																						
<p><b>Toll Table Entry:</b></p>	<ol style="list-style-type: none"> <li>Dial <b>71</b>. "TOLL TABLE "</li> <li>Dial <b>01 - 16</b> or Press <b>A1 - A14, B1, B2</b> for toll table 1 - 16. "XXXXX TABLE Y "</li> <li>Dial <b>5</b> or Press <b>A1</b> to establish an allow toll table (A1 LED on = allow) "ALLOW TABLE Y "</li> <li><b>-OR-</b> Dial <b>6</b> or Press <b>A2</b> to establish a deny toll table, (A2 LED on = deny) "DENY TABLE Y "</li> <li>Dial <b>1 - 4</b> or Press <b>A8, A9, A10, A11</b> for entry number 1 - 4. "XXXXXX "</li> <li>Dial #to clear current entry. "</li> <li>Dial keypad digits (0 - 9, #) to enter numbers. "XXXXXX ... "</li> <li>Dial * for next entry and repeat steps 4 - 6 until all table restrictions are entered.</li> <li>Dial * * for next table and repeat steps 2 - 7 until all tables are entered.</li> <li>Dial * * * for configuration mode.</li> </ol>	<p><b>TOLL TABLE RECORD INCLUDED AT END OF PROCEDURE</b></p>																																																						
<p><b>Rssign Toll Table To Line:</b></p>	<ol style="list-style-type: none"> <li>Dial <b>72</b>. "ASSIGN TOLL-LINE"</li> <li><b>Dial 01 - 16</b> or Press <b>A1 - A14, B1, B2</b> for toll table 1 - 16.</li> <li>Dial <b>#</b> to finish entry and display lines.</li> <li>Select line ports. <ul style="list-style-type: none"> <li>Line port 1-18 = Dial <b>01 - 14</b> or Press <b>A1 - A14</b></li> <li>Line port <b>15, 16</b> = Dial <b>15, 16</b> or Press <b>B1, B2</b></li> <li>Line port 17-24 = Dial <b>17 - 24</b></li> </ul> </li> <li><b>-OR-</b> Press <b>HOLD</b> then dial <b>A1 - A8</b> (LED On = Lines as'gnd to receive tables)</li> <li>Dial * and repeat steps 2-4 for next toll table to line assignment.</li> <li><b>-OR-</b> Dial * * for configuration mode.</li> </ol>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td>9</td> <td></td> <td>17</td> <td></td> </tr> <tr> <td></td> <td></td> <td>10</td> <td></td> <td>18</td> <td></td> </tr> <tr> <td>3</td> <td></td> <td>11</td> <td></td> <td>19</td> <td></td> </tr> <tr> <td>4</td> <td></td> <td>12</td> <td></td> <td>20</td> <td></td> </tr> <tr> <td>5</td> <td></td> <td>13</td> <td></td> <td>21</td> <td></td> </tr> <tr> <td></td> <td></td> <td>14</td> <td></td> <td>22</td> <td></td> </tr> <tr> <td>7</td> <td></td> <td>15</td> <td></td> <td>23</td> <td></td> </tr> <tr> <td>8</td> <td></td> <td>16</td> <td></td> <td>24</td> <td></td> </tr> </tbody> </table> <p><b>DEFAULT = ALL TABLES AS'GND TO ALL PORTS</b></p>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	1		9		17				10		18		3		11		19		4		12		20		5		13		21				14		22		7		15		23		8		16		24	
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Press **ITCM \* # 7 4 6 \*** for base level.

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<p><b>Assign Toll Table To Station</b></p>	<p>1. Dial 73. "ASSIGN TOLL-STA. "            2. Dial <b>01</b> - 16 for toll tables 1-16 to be as'gnd to sta</p> <p><b>-OR-</b>            Press <b>AI</b> - <b>A14</b>, <b>B1</b>, <b>B2</b> for tables 1-16.            (LED On = Selected table)</p> <p>3. Dial # to finish entry.            4. Select station ports to be programmed:            • Station 10 - 57: Dial <b>10</b> - <b>57</b>.            5. Dial * for next toll table to station assignment.</p> <p><b>-OR-</b>            Dial * * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> </tbody> </table> <p><b>DEFAULT = NONE AS'GND</b></p>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57	
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<p><b>Assign Toll Table</b> to be applied when <b>system</b> is programmed by the attendant or night transfer of ringing.</p>	<p>1. Dial 74. "ASSIGN TOLL-NITE"            2. Dial <b>01</b> - 16 for toll tables 1 - 16 to be as'gnd.</p> <p><b>-OR-</b>            Press <b>AI</b> - <b>A14</b>, <b>B1</b>, <b>B2</b> for tables 1-16.            (LED On = Selected table)</p> <p>3. Dial #to finish entry.            4. Select station ports to be programmed:            • Station 10 - 57: Dial 10 - 57 .            5. Dial * for next toll table to night answer assignment.</p> <p><b>-OR-</b>            Dial * * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> </tbody> </table> <p><b>DEFAULT □ NONE AS'GND</b></p>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57	
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Press **SPKR** to end.

### Toll Restriction Programming Reference Tables

TOLL RESTRICTION TABLE <span style="float: right;">1</span>																
TYPE: ALLOW            DENY <b>X</b>																
ENTRY	ENTRY NUMBER (16 MAXIMUM)															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1															
2	9	7	6													
3	4	1	1													
4	0															
TABLE ASSIGNMENT: LINES ALL STATIONS																

TOLL RESTRICTION TABLE <span style="float: right;">5</span>																
TYPE: ALLOW            DENY																
ENTRY	ENTRY NUMBER (16 MAXIMUM)															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
TABLE ASSIGNMENT: LINES            STATIONS																

TOLL RESTRICTION TABLE <span style="float: right;">2</span>																
TYPE: ALLOW <b>X</b> DENY																
ENTRY	ENTRY NUMBER (16 MAXIMUM)															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	8	0	0												
2	9	1	1													
3																
4																
TABLE ASSIGNMENT: LINES ALL STATIONS																

TOLL RESTRICTION TABLE <span style="float: right;">6</span>																
TYPE: ALLOW            DENY																
ENTRY	ENTRY NUMBER (16 MAXIMUM)															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
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3																
4																
TABLE ASSIGNMENT: LINES            STATIONS																

TOLL RESTRICTION TABLE <span style="float: right;">3</span>																
TYPE: ALLOW            DENY																
ENTRY	ENTRY NUMBER (16 MAXIMUM)															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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2																
3																
4																
TABLE ASSIGNMENT: LINES            STATIONS																

TOLL RESTRICTION TABLE <span style="float: right;">7</span>																
TYPE: ALLOW            DENY																
ENTRY	ENTRY NUMBER (16 MAXIMUM)															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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TABLE ASSIGNMENT: LINES            STATIONS																

TOLL RESTRICTION TABLE <span style="float: right;">4</span>																
TYPE: ALLOW            DENY																
ENTRY	ENTRY NUMBER (16 MAXIMUM)															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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3																
4																
TABLE ASSIGNMENT: LINES            STATIONS																

TOLL RESTRICTION TABLE <span style="float: right;">8</span>																
TYPE: ALLOW            DENY																
ENTRY	ENTRY NUMBER (16 MAXIMUM)															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
TABLE ASSIGNMENT: LINES            STATIONS																



Toll Restriction Programming Reference Tables - continued

TOLL RESTRICTION TABLE		9															
TYPE: ALLOW		DENY															
ENTRY		ENTRY NUMBER (16 MAXIMUM)															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																	
2																	
3																	
4																	
TABLE ASSIGNMENT: LINES		STATIONS															

TOLL RESTRICTION TABLE		13															
TYPE: ALLOW		DENY															
ENTRY		ENTRY NUMBER (16 MAXIMUM)															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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3																	
4																	
TABLE ASSIGNMENT: LINES		STATIONS															

TOLL RESTRICTION TABLE		10															
TYPE: ALLOW		DENY															
ENTRY		ENTRY NUMBER (16 MAXIMUM)															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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3																	
4																	
TABLE ASSIGNMENT: LINES		STATIONS															

TOLL RESTRICTION TABLE		1 4															
TYPE: ALLOW		DENY															
ENTRY		ENTRY NUMBER (16 MAXIMUM)															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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3																	
4																	
TABLE ASSIGNMENT: LINES		STATIONS															

TOLL RESTRICTION TABLE		11															
TYPE: ALLOW		DENY															
ENTRY		ENTRY NUMBER (16 MAXIMUM)															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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2																	
3																	
4																	
TABLE ASSIGNMENT: LINES		STATIONS															

TOU RESTRICTION TABLE		15															
TYPE: ALLOW		DENY															
ENTRY		ENTRY NUMBER (16 MAXIMUM)															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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2																	
3																	
4																	
TABLE ASSIGNMENT: LINES		STATIONS															

TOLL RESTRICTION TABLE		12															
NPE: AUOW		DENY															
ENTRY		ENTRY NUMBER (16 MAXIMUM)															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																	
2																	
3																	
4																	
TABLE ASSIGNMENT: LINES		STATIONS															

TOLL RESTRICTION TABLE		16															
TYPE: ALLOW		DENY															
ENTRY		ENTRY NUMBER (16 MAXIMUM)															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																	
2																	
3																	
4																	
TABLE ASSIGNMENT: LINES		STATIONS															

### DATA PRINTER SERVICE

When a data printer is connected to the system, the station message detail record (SMDR) for the system is printed automatically without any programming or user intervention.

The data printer can also be commanded to print the configuration data for the system. Partial or complete printouts can be obtained as desired. When the printer is being used to print the configuration data or SMDA information, SMDR printout is temporarily halted. The SMDR data collection is continued by the system during this time, but if more than two calls are logged for any one line, call records may be lost.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY																						
<p><b>Base Level:</b> The first step in any programming sequence is to enter the base level. Once in this mode, the printing of configuration data can be commanded.</p>	<p>Press <b>ITCM</b>. Dial * # 7 4 6 *.</p>																						
<p><b>Enable data printer operation</b></p>	<table style="width: 100%; border: none;"> <tr> <td style="width: 70%;">1. Dial <b>91</b>.</td> <td style="width: 30%; text-align: right;"><b>"PRINT CONFIG. "</b></td> </tr> <tr> <td>2. Choose configuration:</td> <td></td> </tr> <tr> <td style="padding-left: 20px;">Dial <b>1</b> to <b>print</b> all configuration data.</td> <td style="text-align: right;"><b>"PRINT ALL "</b></td> </tr> <tr> <td style="padding-left: 20px;">Dial <b>2</b> to <b>print</b> system data.</td> <td style="text-align: right;"><b>"PRINT SYSTEM "</b></td> </tr> <tr> <td style="padding-left: 20px;">Dial <b>3</b> to print line data.</td> <td style="text-align: right;"><b>"PRINT LINES "</b></td> </tr> <tr> <td style="padding-left: 20px;">Dial <b>4</b> to print data for all stations.</td> <td style="text-align: right;"><b>"PRINT STATIONS "</b></td> </tr> <tr> <td style="padding-left: 20px;">Dial <b>5</b> to print data for selected station.</td> <td style="text-align: right;"><b>"PRINT STA. "</b></td> </tr> <tr> <td style="padding-left: 40px;">Select station to be printed.</td> <td style="text-align: right;"><b>"PRINT STA. XXX "</b></td> </tr> <tr> <td style="padding-left: 60px;">- Dial <b>10-57</b> for stations 10 - 57.</td> <td></td> </tr> <tr> <td style="padding-left: 20px;">Dial <b>6</b> to print toll restriction assignment.</td> <td style="text-align: right;"><b>"PRINT TOLL "</b></td> </tr> <tr> <td style="padding-left: 20px;">Dial <b>7</b> to abort printing</td> <td style="text-align: right;"><b>"ABORT PRINT "</b></td> </tr> </table> <p>Dial * for configuration mode.</p>	1. Dial <b>91</b> .	<b>"PRINT CONFIG. "</b>	2. Choose configuration:		Dial <b>1</b> to <b>print</b> all configuration data.	<b>"PRINT ALL "</b>	Dial <b>2</b> to <b>print</b> system data.	<b>"PRINT SYSTEM "</b>	Dial <b>3</b> to print line data.	<b>"PRINT LINES "</b>	Dial <b>4</b> to print data for all stations.	<b>"PRINT STATIONS "</b>	Dial <b>5</b> to print data for selected station.	<b>"PRINT STA. "</b>	Select station to be printed.	<b>"PRINT STA. XXX "</b>	- Dial <b>10-57</b> for stations 10 - 57.		Dial <b>6</b> to print toll restriction assignment.	<b>"PRINT TOLL "</b>	Dial <b>7</b> to abort printing	<b>"ABORT PRINT "</b>
1. Dial <b>91</b> .	<b>"PRINT CONFIG. "</b>																						
2. Choose configuration:																							
Dial <b>1</b> to <b>print</b> all configuration data.	<b>"PRINT ALL "</b>																						
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Dial <b>4</b> to print data for all stations.	<b>"PRINT STATIONS "</b>																						
Dial <b>5</b> to print data for selected station.	<b>"PRINT STA. "</b>																						
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- Dial <b>10-57</b> for stations 10 - 57.																							
Dial <b>6</b> to print toll restriction assignment.	<b>"PRINT TOLL "</b>																						
Dial <b>7</b> to abort printing	<b>"ABORT PRINT "</b>																						

4-04

**Press SPKR to end**

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## INTEGRATED CALL COSTING

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Call costing provides a means of establishing costing to be applied to outside calls made from system telephones. Call costing computes charges for a call after it is completed. It does not restrict dialing as toll restriction does. The system provides several ways of establishing call costing. They are as follows:

- Exception tables
- Area code band tables
- Zone call band tables
- Call rate tables
- Office code band tables
- Call rate table of last resort

With this range of costing methods, it is possible to apply reasonable rates for the entire country. Call costing is applied to a dialed number as described below. The call costing process is illustrated by the diagram shown in **Figure 4-2**.

### 1. EXCEPTION TABLES (LOCAL CALLS AND LONG DISTANCE CALLS)

All calls are first compared to entries in 4 exception tables (one entry per table). These tables provide the first priority level of costing. The tables are searched on a first match basis. This means that the first programmed entry that matches the call is the one that is used. A search is not made for the best possible match. Matched calls are costed with values programmed into the call rate tables that are assigned to the exception tables. Use exception tables to provide very specific exceptions to a bracket of calls similar to the following example.

**Example:** With all calls to area code 804 costed per a particular rate, make an exception for 804-555-1212 by programming exception table 1 with that number. Since exception table entries are the highest priority, the values in the call rate table assigned to exception table 1 are applied to all calls made to the 804-555-1212 number.

### 2. OFFICE CODE BAND TABLES (LOCAL CALLS)

Calls **that** do not match exception tables are measured for the number of digits dialed. Calls with numbers that have less than 10 digits (local calls) are compared to entries in office code banding tables. Office code band tables are the second priority level of costing for local calls. They provide a means of assigning local office codes into different bands and applying a separate call costing rate table to each band. Bands 1 - 7 are associated with call rate tables 18 - 24 respectively. Use office code band tables to cost calls made within a specific area code but to sites located at different geographic distances from the calling location.

**Example:** A telephone company exchange consists of office codes 976, 977, and 978. Office code 976 is assigned to an outlying area while office codes 977 and 978 are assigned to the heart of the city. Assign 977 and 978 to one office code band table and 976 to another one. Program a special call costing rate for each banding table. Then, calls that are made to 976-nnnn are costed at a different rate than calls that are made to 977-nnnn or 978-nnnn.

### 3. ZONE CALL BAND TABLES (LONG DISTANCE CALLS)

In certain heavily populated geographic areas, different area codes exist within the same geographic distance, or zone, from the calling location. In these cases, use zone call band tables to cost calls based upon the zone, or geographic distance, from the caller.

All calls that do not match exception tables are measured for the number of digits dialed. Those calls with numbers that have 10 digits or more (long distance calls) are compared to entries in the zone call band tables. Zone call band tables are the second priority level of costing for long distance calls. They provide a means of assigning office **codes** and corresponding area code into different zones and applying a separate call costing rate table to each zone. Zone call band tables 1 - 4 are associated with call rate tables 25 - 28. A call must match both the office code and area code of an entry before it is costed by a zone call band table.

**Example:** Zone 1 contains area code 203 with office codes 445 and 456. It also contains area code 412 with office code 508. Zone 2 contains area code 203 with office code 545. Zone 2 also contains area code 412 with office code 654. Zone 1 is costed at one rate and zone 2 is costed at another rate. A call made to **1-203-445-nnnn**, **1-203-456-nnnn**, or, I-41 **2-508-nnnn** is costed at a different rate than a call made to **1-203-545-nnnn** or I-41 **2-654-nnnn**.

#### 4. AREA CODE BAND TABLE (LONG DISTANCE CALLS)

Long distance calls that do not match entries in zone call band tables are matched against area code band tables. **Area code band tables are the third priority vel of costing** for long distance calls. Area code band tables 1 - 7 are associated with call rate costing tables 11 - 17. Use area code band tables to cost calls based upon the area code of the called number. Assign any or all area codes nnn (200-999) to one of seven different bands. Group area codes into bands based on frequently called areas, distance from the caller, or any other desired category.

Example: Assign area codes 703 and 804 to area code band table 1. Assign area code 415 to area code band table 7. Calls made to numbers such as **1-703-nnn-nnnn** and **1-804-nnn-nnnn** are costed with values assigned to call rate table 11. calls made to numbers such as I-41 **5-nnn-nnnn** are costed with values assigned to call rate table 17.

#### 5. CALL RATE TABLES (LOCAL AND LONG DISTANCE CALLS)

Local calls and long distance calls that do not match entries in any exception table, office code band table, zone call band table or area code band table are matched against entries in any call rate tables 2 - 33 and costed accordingly. This is the **third priority level of costing** for local calls and the **fourth priority vel of costing** for long distance calls. Call rate tables are also used to cost any calls that require special or extraordinary rates such as i-800-555-1 212 or **1-900-976-nnnn**. If a matching call rate table can not be found, calls are costed by call rate table 1 (the table of last resort for costing all calls).

- A maximum of 16 digits can be programmed into each call rate table.
- In programming a call rate table, select digits so that a particular dialed number or number group will be matched to a particular rate table. The table with the best match to a dialed number is used by the system to cost the call.
- Since a dialed number must match all of the digits that are programmed into a table to be considered a match, a # character can be programmed into the table in place of a specific character to serve as a "match anything" digit.
- If a dialed number does not match all of the digits programmed into any call rate table, the system costs the call with the values programmed into the call rate table of last resort (table 1).

#### 6. DISCARD DIGITS

When the digital telephone system is installed behind a host system such as a PBX or **CENTREX**, access codes must be dialed before obtaining an outside line dial tone. These access codes should be removed so that calls are costed based on just the actual telephone numbers dialed. Up to six different access codes entries with up to eight digits per entry can be programmed.

Example: If the system is installed behind a PBX using a 9 as an outside line access code, program a 9 as the discard digit. When a number such as 9-555-I 212 is dialed, the 9 is discarded and the call is costed based on 555-I 212.

#### 7. DIALING TIME AND ANSWER TIME

Dialing time is not included when the time of a call is recorded for costing. The amount of time that the system ignores for dialing purposes is programmable. Plus, the system can be programmed to wait for a period of time before beginning to record costs for a call. This wait time allows a call to ring and be answered before it is costed.

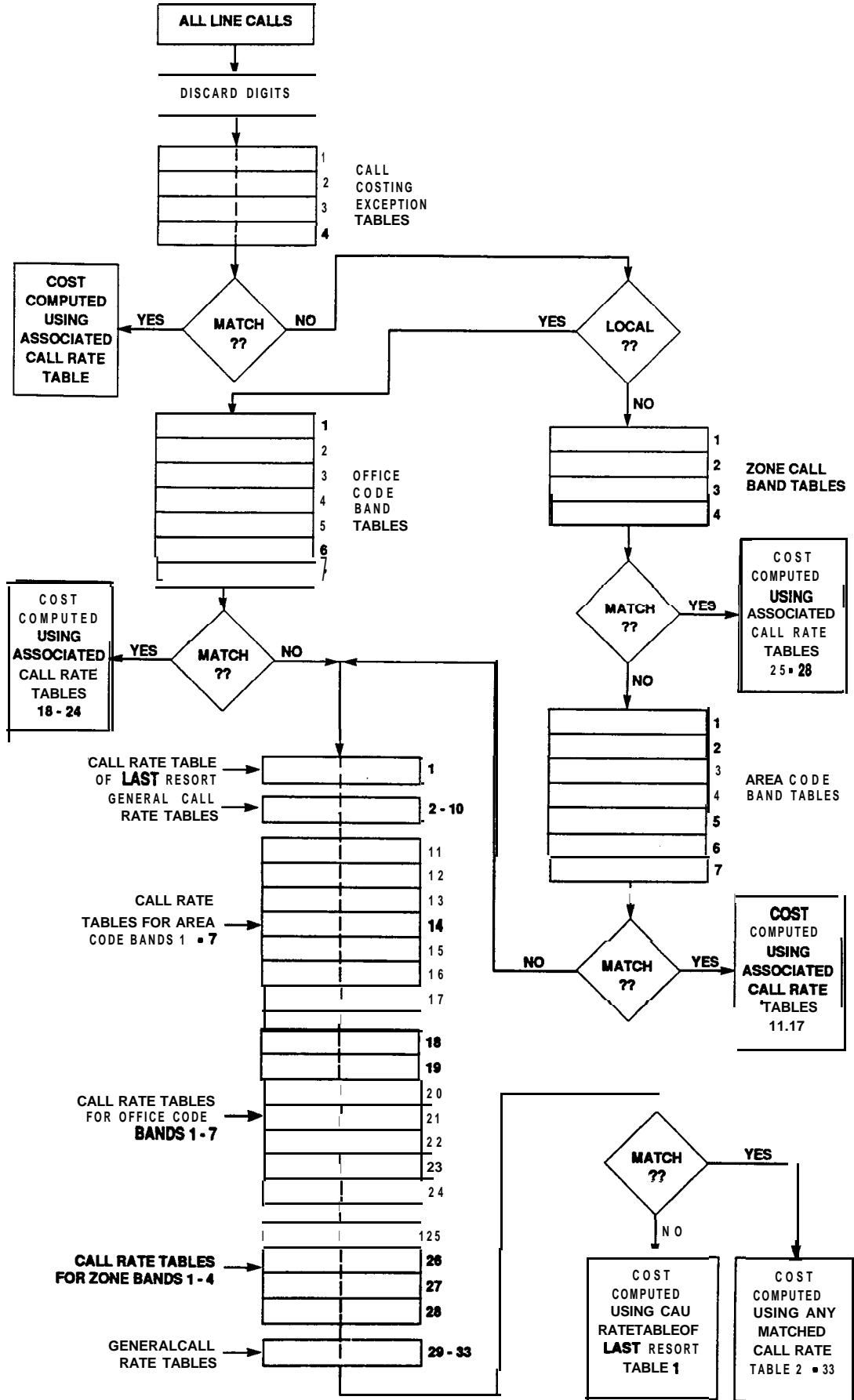


Figure 4-2 Call Costing Diagram

4-68

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD
<p><b>Base Level:</b> The first step in any programming sequence is to enter the base level. Once in this mode, any desired configuration can be set</p>	<p>Press <b>ITCM * # 7 4 6 *</b></p>	

<p><b>Exception Tables:</b> Calls are first compared to entries in the call cost exception tables to determine if a match can be made.</p>	<p>1. Dial 78. <i>"EXCEPTION TBL "</i></p>	<table border="1"> <thead> <tr> <th rowspan="2">ENTRY TABLE</th> <th colspan="16">DIGITS</th> <th rowspan="2">COST TABLE</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th><th>11</th><th>12</th><th>13</th><th>14</th><th>15</th><th>16</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>2</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>3</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>4</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td colspan="18"> <p>DEFAULT = NONE AS'GND</p> </td> </tr> </tbody> </table>	ENTRY TABLE	DIGITS																COST TABLE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	1																	2																	3																	4																	<p>DEFAULT = NONE AS'GND</p>																	
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<p>DEFAULT = NONE AS'GND</p>																																																																																																																										
<p>2. Dial 1 - 4 for entry 1-4. <i>"ENTRY X "</i></p>																																																																																																																										
<p>3. Dial 1 to assign the call rate table. <i>"CALL COST TBL XX"</i></p>																																																																																																																										
<p>4. Dial 01-33 for call rate table number.</p>																																																																																																																										
<p>5. Dial *.</p>																																																																																																																										
<p>8. Dial 2 to assign matching digits. <i>"XXXXXXXXXXXXXXXXXX"</i></p>																																																																																																																										
<p>7. Dial # to clear current entry.</p>																																																																																																																										
<p>8. Dial matching digits (16 max. # = match anything) <i>"XXXXXXXXXXXXXXXXXX"</i></p>																																																																																																																										
<p>9. Dial ** for next entry, and repeat steps 2-9 until all entries are made.</p>																																																																																																																										
<p>10. Dial *** for configuration mode.</p>																																																																																																																										

<p><b>Office Code Band Tables (Local Calls)</b> Calls that do not match exception tables are measured for the number of digits dialed. Calls with numbers that are have less than 10 digits (local calls) are compared to entries in seven different office code band tables. Program the cost values for off ice code band tables in call rate tables 18 - 25.</p>	<p>1. Dial 75. <i>"SMDA PROGRAMMING"</i></p>	<table border="1"> <thead> <tr> <th>BAND</th> <th>OFFICE CODE PREFIX(ES)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> </tr> <tr> <td>2</td> <td></td> </tr> <tr> <td>3</td> <td></td> </tr> <tr> <td>4</td> <td></td> </tr> <tr> <td>5</td> <td></td> </tr> <tr> <td>6</td> <td></td> </tr> <tr> <td colspan="2"> <p>DEFAULT = NONE AS'GND</p> </td> </tr> </tbody> </table>	BAND	OFFICE CODE PREFIX(ES)	1		2		3		4		5		6		<p>DEFAULT = NONE AS'GND</p>	
	BAND		OFFICE CODE PREFIX(ES)															
	1																	
	2																	
	3																	
	4																	
	5																	
6																		
<p>DEFAULT = NONE AS'GND</p>																		
<p>2. Dial 01 to program costing bands. <i>"COSTING BANDS "</i></p>																		
<p>3. Dial 1 to program office code bands. <i>"OFFCE CODE BANDS"</i></p>																		
<p>4. Dial 0 if no band is to be as'gnd. <i>"NO BAND "</i></p>																		
<p><b>-OR-</b> Dial 1-7 for bands 1-7. <i>"BANDX "</i></p>																		
<p>5. Dial 200-999 to as'gn office code.</p>																		
<p>8. Dial # and repeat step 5 for additional code.</p>																		
<p>7. Dial * and repeat steps 4-6 to program next band.</p>																		
<p>8. Dial ** for next SMDA feature.</p>																		
<p><b>-OR-</b> Dial *** for configuration mode.</p>																		

Press SPKR to end.

Press **ITCM \* # 7 4 6 \*** for base level.

**Zone Call Band Tables (Long Distance Calls):** Calls that do not match exception tables are measured for the number of digits dialed. Those calls with numbers that have 10 digits or more (long distance calls) are compared to entries in four different zone call band tables. Program the cost values for zone call band tables in call rate tables 25 - 28.

1. Dial 75. **"SMDA PROGRAMMING"**
2. Dial **01** to program costing bands. **"COSTING BANDS "**
3. Dial 3 to program zone call bands. **"ZONE BANDS "**
4. Dial 0 if no zone is to be as'gned. **"NO ZONE "**
- OR-  
Dial **1 - 4** for zones 1 - 4. **"ZONEX "**
5. Dial **200 - 999** to assign an area code.
6. Dial #.
7. Dial **200 - 999** to as'gn an office code.
8. Dial # and repeat step 7 for another office code.
9. Dial \* and repeat steps 3-9 to add another area code to same zone or to program next zone.
10. Dial \* \* for next SMDA feature.
- OR-  
Dial \* \* \* for configuration mode.

BAND	AREA CODE	OFFICE CODE
1		
2		
3		
4		
<b>DEFAULT = NONE AS'GND</b>		

**Area Code Band Table (Long Distance Calls):** Long distance calls that do not match entries in zone call band tables are matched against seven different area code band tables. Program the cost values for area code band tables in call rate tables 11 - 17.

1. Dial 75. **"SMDA PROGRAMMING"**
2. Dial **01** to program costing bands. **"COSTING BANDS "**
3. Dial 2 to program area code bands. **"AREA CODE BANDS"**
4. Dial 0 if no band is to be as'gned. **"NO BAND "**
- OR-  
Dial **1 - 7** for bands 1 - 7. **"BAND X "**
6. Dial **200 - 999** to as'gn area code.
5. Dial # and repeat step 8 for additional code.
8. Dial \* and repeat steps 3-6 to program next band
7. Dial \* \* for next SMDA feature.
- 8 -OR-  
Dial \* \* \* for configuration mode.

BAND	AREA CODE PREFIX(ES)
1	
2	
3	
4	
5	
6	
7	
<b>DEFAULT = NONE AS'GND</b>	

4-0-4

Press **SPKR to end.**

Press **ITCM** \* # 7 4 6 \* for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																					
<p><b>Call Costing Tables (Local And Long Distance Calls):</b> Local calls and long distance calls that do not match entries in any exception table, office code band table, zone call band table or area code band table are matched against entries in call rate tables 2 - 10 and 29 - 33 and costed accordingly. Call rate tables are also used to cost calls that are matched in the office code band tables, zone call band tables, area code band tables, and any calls that require special or extraordinary rates. If a matching call rate table can not be found, calls are costed by call rate table 1 (the table of last resort for costing all calls).</p> <p><b>Office code band tables = call rate tables 18 - 25</b>  <b>Zone call band tables = call rate tables 25 - 28</b>  <b>Area code band table = 11 - 17</b></p> <p><b>NOTE :</b> Dialing a 00 or a 000 as an entry in steps 7, 9, 11, and 13 will clear the current entry for those steps.</p>	<ol style="list-style-type: none"> <li>1. Dial 76. "CALL COST TBL "</li> <li>2. Dial table number (01 - 33). "CALL COST TBL XX"</li> <li>3. Dial 1 to enter matching digits. "XXXXXXXX "</li> </ol> <p><b>NOTE: Cal Cost Table 1 will not accept matching digits.</b></p> <ol style="list-style-type: none"> <li>4. Dial # to clear previous digits.</li> <li>5. Dial matching digits for costed number (32 max. # = match anything digit). "XXXXXXXX "</li> <li>6. Dial * to end matching digits.</li> <li>7. Dial 2 then dial 01 - 99 for Tier 1 time in tenths of minutes. "TIER 1 TIME XX "</li> <li>8. Dial *.</li> <li>9. Dial 3 then dial 001 - 999 for Tier 1 rate in cents. "TIER 1 RATE XXX "</li> <li>10. Dial *.</li> <li>11. Dial 4 then dial 001 - 999 for Tier 2 rate in cents. "TIER 2 RATE XXX "</li> <li>12. Dial *.</li> <li>13. Dial 5 then dial 001 - 999 for surcharge rate in cents. "SURCHARGE XXX "</li> <li>14. Dial * * to program next call cost table and repeat steps 2-14 until all tables are entered.</li> <li>15. Dial * * * for configuration mode.</li> </ol>	<p>CALL COSTING RECORDING TABLES SHOWN ON NEXT PAGES</p> <p>EXAMPLE TABLE:</p> <table border="1"> <thead> <tr> <th>PROGRAM STEPS</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>2</td> <td>CALL RATE TABLE</td> <td>33</td> </tr> <tr> <td>5</td> <td>NUMBER</td> <td>19009762525</td> </tr> <tr> <td>7</td> <td>TIER 1 TIME</td> <td>30 (3 MIN.)</td> </tr> <tr> <td>9</td> <td>TIER 1 RATE</td> <td>120 (\$1.20)</td> </tr> <tr> <td>11</td> <td>TIER 2 RATE</td> <td>75 (75¢)</td> </tr> <tr> <td>13</td> <td>SURCHARGE</td> <td>50 (50¢)</td> </tr> </tbody> </table>	PROGRAM STEPS			2	CALL RATE TABLE	33	5	NUMBER	19009762525	7	TIER 1 TIME	30 (3 MIN.)	9	TIER 1 RATE	120 (\$1.20)	11	TIER 2 RATE	75 (75¢)	13	SURCHARGE	50 (50¢)
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Press SPKR to end.



LAST  
RESORT  
TABLE

<b>CALL COST TABLE 1</b>	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

<b>CALL COST TABLE 2</b>	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

<b>CALL COST TABLE 3</b>	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

<b>CALL COST TABLE 4</b>	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

<b>CALL COST TABLE 5</b>	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

<b>CALL COST TABLE 6</b>	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

<b>CALL COST TABLE 7</b>	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

<b>CALL COST TABLE 8</b>	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

<b>CALL COST TABLE 9</b>	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

<b>CALL COST TABLE 10</b>	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

<b>CALL COST TABLE 11</b>	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

<b>CALL COST TABLE 12</b>	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

<b>CALL COST TABLE 13</b>	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

<b>CALL COST TABLE 14</b>	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

<b>CALL COST TABLE 15</b>	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

<b>CALL COST TABLE 16</b>	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

<b>CALL COST TABLE 17</b>	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

<b>CALL COST TABLE 18</b>	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

CALL COST TABLE 19	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

CALL COST TABLE 20	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

CALL COST TABLE 21	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

CALL COST TABLE 22	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

CALL COST TABLE 23	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

CALL COST TABLE 24	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

CALL COST TABLE 25	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

CALL COST TABLE 26	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

CALL COST TABLE 27	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

CALL COST TABLE 28	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

CALL COST TABLE 29	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

CALL COST TABLE 30	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

CALL COST TABLE 31	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

CALL COST TABLE 32	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

CALL COST TABLE 33	
NUMBER	
TIER 1 TIME	
TIER 1 RATE	
TIER 2 RATE	
SURCHARGE	

Press ITCM \* # 7 4 6 \* for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																																																																																	
<p><b>Discard Digits:</b> When the telephone system is installed behind a host system such as a PBX or CENTREX, access ties must be dialed before obtaining an outside line dial tone. These access codes should be removed before calls are costed so that they are costed based on just the actual telephone numbers dialed. Up to six different access codes entries with up to eight digits per entry can be programmed.</p>	<ol style="list-style-type: none"> <li>Dial 75. "SMDA PROGRAMMING"</li> <li>Dial 01 to program costing bands. "COSTING BANDS "</li> <li>Dial 4 to program discard digits. "DISCARD DIGITS "</li> <li>Dial 1 - 6 to select entry 1 - 6. "ENTRY X "</li> <li>Dial # for no discard digits. -OR- Dial up to 6 discard digits then dial #. "XXXXXXXXX "</li> <li>Dial * and repeat steps 4-5 to program next discard digit entry.</li> <li>Dial ** for next SMDA feature. -OR- Dial *** for configuration mode.</li> </ol>	<table border="1"> <thead> <tr> <th colspan="9">DISCARD DIGITS</th> </tr> <tr> <th>ENTRY</th> <th colspan="8">DIGITS</th> </tr> <tr> <th></th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> <th>8</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>6</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>DEFAULT = NO DISCARD DIGITS ASSIGNED</p>	DISCARD DIGITS									ENTRY	DIGITS									1	2	3	4	5	6	7	8	1									2									3									4									5									6								
DISCARD DIGITS																																																																																			
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<p><b>Dial Time Limit:</b> The amount of time that the system ignores for dialing purposes is programmable. Dialing time is not costed when the time of a call is recorded for costing.</p>	<ol style="list-style-type: none"> <li>Dial 75. "SMDA PROGRAMMING"</li> <li>Dial 02 to program dial time limit. "DIAL TIME XXX "</li> <li>Dial time in tenths of a minute (001-999 or dial 000 to clear). "XXXXX "</li> <li>Dial * for next SMDA feature.</li> <li>Dial ** for configuration mode.</li> </ol>	<table border="1"> <thead> <tr> <th>DIAL TIME LIMIT</th> </tr> </thead> <tbody> <tr> <td>DEFAULT = 0 SEC.</td> </tr> </tbody> </table>	DIAL TIME LIMIT	DEFAULT = 0 SEC.																																																																															
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<p><b>Answer Time Limit:</b> The system can be programmed to wait for a period of time before beginning call cost recording. This time will allow for a call to ring and be answered before being costed.</p>	<ol style="list-style-type: none"> <li>Dial 75. "SMDA PROGRAMMING"</li> <li>Dial 03 to program answer time limit. "ANSWER TIME XXX "</li> <li>Dial time in tenths of a minute (001 - 999 or dial 000 to clear). "XXX "</li> <li>Dial * for next SMDA feature.</li> <li>Dial * * for configuration mode.</li> </ol>	<table border="1"> <thead> <tr> <th>ANSWER TIME LIMIT</th> </tr> </thead> <tbody> <tr> <td>DEFAULT = 0 SEC.</td> </tr> </tbody> </table>	ANSWER TIME LIMIT	DEFAULT = 0 SEC.																																																																															
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DEFAULT = 0 SEC.																																																																																			

Press SPKR to end.

Press ITCM \* # 7 4 6 \* for base level.

**STATION MESSAGE DETAIL ACCOUNTING REPORTING**

Five different call cost reports can be produced by the system for printing. They are:

1. Detailed report of all station
2. Detailed report of *all* accounts
3. Trunk summary report
4. Department summary report
5. All records

Reports are generated automatically for printing whenever the system detects that the records storage area is ninety-five percent full. The reports to be printed are chosen by programming action and are printed in the order of selection. The system can be programmed for these reports to be generated automatically for printing at a certain time each day. Programming action can also be taken so that all printed records are then deleted except for those collected during the printing operation. These are stored for later printing.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD																				
<p><b>Station Message Detail Accounting Department Numbers:</b> Eight different department numbers can be defined so that SMDA call cost reports can be produced on a department by department basis.-.</p> <p><i>NOTE: Each station in the system can be assigned to a department for call costing purposes although no assignment is required. Refer to the procedure given on page 4-32 for station assignment details..</i></p>	<ol style="list-style-type: none"> <li>1. Dial 75. "SMDA PROGRAMMING"</li> <li>2. Dial 04 to define department numbers. "SMDA DEPARTMENTS"</li> <li>3. Dial 1-6 for dept. 18. "DEPT X "</li> <li>4. Dial 0000-9999 for department number. "DEPT X YYYY "</li> <li>5. Dial * for next department, and repeat steps 3-7 until all departments are numbered.</li> <li>6. Dial ** for next SMDA feature.</li> <li>7. Dial *** for configuration mode.</li> </ol>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">DEPT</th> <th style="width: 90%;">DEPT. NUMBER</th> </tr> </thead> <tbody> <tr><td>1</td><td></td></tr> <tr><td>2</td><td></td></tr> <tr><td>3</td><td></td></tr> <tr><td>4</td><td></td></tr> <tr><td>5</td><td></td></tr> <tr><td>6</td><td></td></tr> <tr><td>7</td><td></td></tr> <tr><td>8</td><td></td></tr> <tr> <td colspan="2" style="text-align: center;">DEFAULT = NONE AS'GND</td> </tr> </tbody> </table>	DEPT	DEPT. NUMBER	1		2		3		4		5		6		7		8		DEFAULT = NONE AS'GND	
DEPT	DEPT. NUMBER																					
1																						
2																						
3																						
4																						
5																						
6																						
7																						
8																						
DEFAULT = NONE AS'GND																						

Press SPKR to end.

4-14



Press **ITCM** \* # 7 4 6 \* for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD												
Account Codes: <b>(continued)</b>	6. Dial 09 to program the account code maximum length. <b>"MAXACCT. CODE X"</b> • Dial 3•6 for number of digits (3 min.; 6 max.). <b>"MAXACCT. CODE X"</b> 7. Dial * for next SMDA feature <b>-OR-</b> Dial * * for configuration mode.													
Account Code Display: As a feature for users of LCD speakerphones, a reminder message can be programmed to appear on the station display to prompt the user to enter an account code during incoming and/or outgoing calls. The message display time is programmable.	1. Dial 75. <b>"SMDA PROGRAMMING"</b> 2. Dial 10. <b>"DISPLAY TIME XX "</b> • Dial 01•20 to display time in seconds. <b>"DISPLAY TIME YY "</b> • Dial * for next SMDA feature. 3. Dial 11 to program message disable on incoming calls. <b>"XXXXXXX INCOMING"</b> • Press Al to toggle between enable and disable (LED On = Enabled). <b>-OR-</b> • Dial 1 to enable. <b>"ENABLE INCOMING "</b> (AI LED on). • Dial 2 to disable <b>"DISABLE INCOMING"</b> • Dial * for next SMDA feature. 4. Dial 12 to program message disable on outgoing calls. <b>"XXXXXXX OUTGOING"</b> • Press Al to toggle between enable and disable (LED On = Enabled). <b>-OR-</b> • Dial 1 to enable. <b>"ENABLE OUTGOING "</b> (AI LED On). • Dial 2 to disable <b>"DISABLE OUTGOING"</b> 5. Dial * for next SMDA feature. <b>-OR-</b> Dial * * for configuration mode.	<table border="1"> <tr> <th colspan="3">DISPLAY TIME IN SEC:</th> </tr> <tr> <td>INCOMING CALLS</td> <td>ENABLED</td> <td>DISABLED</td> </tr> <tr> <td>OUTGOING CALLS</td> <td>ENABLED</td> <td>DISABLED</td> </tr> <tr> <td colspan="3">DEFAULT = BOTH DISPLAYS ENABLED FOR 5 SEC.</td> </tr> </table> <div style="border: 1px solid black; padding: 5px; text-align: right;">                     Press SPKR to end.                 </div>	DISPLAY TIME IN SEC:			INCOMING CALLS	ENABLED	DISABLED	OUTGOING CALLS	ENABLED	DISABLED	DEFAULT = BOTH DISPLAYS ENABLED FOR 5 SEC.		
DISPLAY TIME IN SEC:														
INCOMING CALLS	ENABLED	DISABLED												
OUTGOING CALLS	ENABLED	DISABLED												
DEFAULT = BOTH DISPLAYS ENABLED FOR 5 SEC.														







Press **ITCM \* # 7 4 6 \*** for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY	REFERENCE RECORD
System Speed Dial - continued	<ul style="list-style-type: none"><li>• Dial <b>91</b> - 94 for line group 1-4. "LINE GROUP 1 "</li><li>• Press <b>ITCM</b> button for intercom line. "INTERCOM "</li></ul> <p>5. Dial number for storage (32 digits max). "XXXXX.. . "</p> <ul style="list-style-type: none"><li>• If required, press <b>HOLD</b> button to store a pause.</li><li>• If required, press <b>TAP</b> button to store a hookflash</li></ul> <p>6. Press <b>TRANS/CONF</b> button to save the number.</p> <p>7. Repeat steps 2-6 for all speed dial numbers.</p> <p><b>-OR-</b> Press * for configuration mode.</p>	

Press SPKR to end.

# SYSTEM SPEED DIAL RECORD

SYSTEM SPEED DIAL RECORD							
LOC	NUMBER	LOC	NUMBER	LOC	NUMBER	LOC	NUMBER
01		26		51		76	
02		27		52		77	
03		28		53		78	
04		29		54		79	
05		30		55		80	
06		31		56		81	
07		32		57		82	
08		33		58		83	
09		34		59		84	
10		35		60		85	
11		36		61		86	
12		37		62		87	
13		38		63		88	
14		39		64		89	
15		40		65		90	
16		41		66		91	
17		42		67		92	
18		43		68		93	
19		44		69		94	
20		45		70		95	
21		46		71		96	
22		47		72		97	
23		48		73		98	
24		49		74		99	
25		50		75			

**DEFAULT = NONE AS'GND**

Press **ITCM \* # 7 4 6 \*** for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY'	REFERENCE RECORD																																																																																																																																																																																																					
<p><b>Night Transfer</b> (of ringing): The attendant can place the system into the night transfer (of ringing) mode of operation. While in this mode, special line/station ringing assignments are enabled.  <i>NOTE: See night transfer of tinging on page 4-37 for line/station ringing assignments</i></p>	<p>1. Dial 03. "NIGHT XFER XXX "</p> <p>2. Press <b>Al</b> to toggle between enable and disable (LED On = Enabled).  <b>-OR-</b>                      Dial <b>1</b> to enable (Al LED on). "NIGHT XFER ON "                      Dial <b>2</b> to disable. "NIGHT XFER OFF "</p> <p>3. Dial * for configuration mode.</p>	<table border="1"> <tr> <td>ENABLE</td> <td>DISABLE</td> </tr> <tr> <td>DEFAULT =</td> <td>DISABLED</td> </tr> </table>	ENABLE	DISABLE	DEFAULT =	DISABLED																																																																																																																																																																																																	
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<p><b>Music on Hold:</b> Music is provided to outside lines that are placed on hold if an external music source is connected to the system. Music on hold can be disabled by attendant action.</p>	<p>1. Press 04. "MOH XXXXXXXX "</p> <p>2. Press <b>Al to</b> toggle between enable and disable (LED On = Enabled).  <b>-OR-</b>                      Dial <b>1</b> to enable. "MOH ENABLED "                      (Al LED on).                      Dial <b>2</b> to disable "MOH DISABLED "</p> <p>3. Dial * for configuration mode.</p>	<table border="1"> <tr> <td>ENABLE</td> <td>DISABLE</td> </tr> <tr> <td>DEFAULT □</td> <td>ENABLED</td> </tr> </table>	ENABLE	DISABLE	DEFAULT □	ENABLED																																																																																																																																																																																																	
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<p><b>LCD Messaging:</b> A message can be set at any system station and displayed by any LCD speakerphone that calls it on the intercom line. Two standard messages are provided for use but the attendant can create up to 10 custom messages if needed.</p>	<p>1. Dial 05. "LCD MESSAGES "</p> <p>2. Dial <b>1 • 0</b> for message number. "XXXX..."</p> <p>3. Dial <b>#</b> to clear current message.</p> <p>4. Refer to Table 4-1 (page 4-21), and compose message (16 digits max.).</p> <p>5. Dial all <b>two-digit</b> codes necessary to enter the message. "YYYYYYY..."</p> <p><b>-OR-</b>                      Dial <b>10</b> for pre-programmed message "BACK AT "</p> <p><b>-OR-</b>                      Dial <b>20</b> for pre-programmed message "CALL "</p> <p>6. Dial * for next message location and repeat steps 2 • 5.</p> <p>7. Dial * * for configuration mode.</p>	<table border="1"> <thead> <tr> <th rowspan="2">MSG. CODE</th> <th colspan="10">LOCATION</th> </tr> <tr> <th>01</th> <th>02</th> <th>03</th> <th>04</th> <th>05</th> <th>06</th> <th>07</th> <th>08</th> <th>09</th> <th>10</th> </tr> </thead> <tbody> <tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>12</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>13</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>14</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>15</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>16</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table> <p>DEFAULT: 1 = BACK AT, 2 = CALL</p>	MSG. CODE	LOCATION										01	02	03	04	05	06	07	08	09	10	1											2											3											4											5											6											7											8											9											10											11											12											13											14											15											16										
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Press SPKR to end. |

Press ITCM \* # 7 4 6 \* for base level.

FEATURE DESCRIPTION	ENTRY CODE AND PROMPTING DISPLAY'	REFERENCE RECORD																																																																																																						
<p>Station Names: Stations can be assigned individual names or category names that will be displayed by an LCD speakerphone when it is called by the station. Typical names could be TEC SER, MKT 1, J Smith.</p>	<p>1. Dial 06. "STATION NAMES "</p> <p>2. Select station port to be programmed: "XXXXXX "</p> <p>• Station 10 - 57: Dial 10 • 57 .</p> <p>3. Dial # to clear current station name. 1. Refer to Table 4-1 (page 4-21), and compose station name (7 digits max.).</p> <p>5. Dial all <b>two-digit</b> codes necessary to enter a new station name. "XXXXXXXX YYYYYYY"</p> <p>3. Dial * for next station and repeat steps 2-5.</p> <p>7. Dial * * for configuration mode.</p>	<table border="1"> <thead> <tr> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> <th>PORT</th> <th>ENTRY</th> </tr> </thead> <tbody> <tr><td>10</td><td></td><td>26</td><td></td><td>42</td><td></td></tr> <tr><td>11</td><td></td><td>27</td><td></td><td>43</td><td></td></tr> <tr><td>12</td><td></td><td>28</td><td></td><td>44</td><td></td></tr> <tr><td>13</td><td></td><td>29</td><td></td><td>45</td><td></td></tr> <tr><td>14</td><td></td><td>30</td><td></td><td>46</td><td></td></tr> <tr><td>15</td><td></td><td>31</td><td></td><td>47</td><td></td></tr> <tr><td>16</td><td></td><td>32</td><td></td><td>48</td><td></td></tr> <tr><td>17</td><td></td><td>33</td><td></td><td>49</td><td></td></tr> <tr><td>18</td><td></td><td>34</td><td></td><td>50</td><td></td></tr> <tr><td>19</td><td></td><td>35</td><td></td><td>51</td><td></td></tr> <tr><td>20</td><td></td><td>36</td><td></td><td>52</td><td></td></tr> <tr><td>21</td><td></td><td>37</td><td></td><td>53</td><td></td></tr> <tr><td>22</td><td></td><td>38</td><td></td><td>54</td><td></td></tr> <tr><td>23</td><td></td><td>39</td><td></td><td>55</td><td></td></tr> <tr><td>24</td><td></td><td>40</td><td></td><td>56</td><td></td></tr> <tr><td>25</td><td></td><td>41</td><td></td><td>57</td><td></td></tr> </tbody> </table> <p>DEFAULT = NONE ASSIGNED</p>	PORT	ENTRY	PORT	ENTRY	PORT	ENTRY	10		26		42		11		27		43		12		28		44		13		29		45		14		30		46		15		31		47		16		32		48		17		33		49		18		34		50		19		35		51		20		36		52		21		37		53		22		38		54		23		39		55		24		40		56		25		41		57	
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<p><b>Station Message Detail Accounting (SMDA) Printout:</b> The attendant can command the system to print several different types of SMDA reports and to delete all stored SMDA records.</p> <p><b>NOTE:</b> <i>The departmental call distribution report reflects statistics based on current departmental station assignments. Before class of service programming is used to reassign stations to different departments, it is a good practice to: (1) print the departmental call report and any other desired SMDA reports, (2) make any desired reassignments, (3) delete all SMDA records.</i></p>	<p>1. Dial 07. "SMDA REPORTS "</p> <p>2. Choose <b>report</b> for printout</p> <ul style="list-style-type: none"> <li>• Dial 1 # for station. "STATION REPORT "</li> <li>• Dial 2 # for trunk "TRUNK REPORT "</li> <li>• Dial 3 # for SMDA dept. "DEPT. REPORT "</li> <li>• Dial 4 # for ac'nt <b>code</b>: "ACCOUNT REPORT "</li> <li>• Dial 5 # for auto report. "AUTO REPORT "</li> <li>• Dial 6 # for all records. "PRINT RECORDS "</li> <li>• Dial 7 # to delete SMDA records. "DELETE RECORDS "</li> <li>• Dial 0 # for DCD report "DCD REPORT "</li> <li>• Dial 8 to obtain the number of free records remaining in system. "FREE RECS XXXXX "</li> <li>• Dial 9 to abort printout. "ABORT PRINT "</li> </ul> <p>3. Dial * for configuration mode.</p>																																																																																																							

Press SPKR to end.

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## SECTION 3 VIDEO DISPLAY TERMINAL PROGRAMMING

### INTRODUCTION

The class of service can be programmed from a video display terminal (VDT) instead of from the programming station. The VDT that is used must be a serial-data, **RS-232** type, asynchronous device. A keyboard send/receive (KSR) hard-copy printer can be used instead of a VDT if preferred.

A personal computer (PC) can be employed if it will run a communications software program which allows it to emulate a data terminal device (DTE equipment). Many effective communications software programs are available for this purpose. Any that can be arranged to match the following data communications parameters can be used:

- Full Duplex
- XMODEM communication protocol (8 bit data required)

Regardless of the type of programming terminal employed, it is connected to the common equipment data port A. Refer to the Chapter 3, Section 2 paragraph titled, **DATA DEVICE CONNECTIONS** for complete connection details.

### VDT PROGRAMMING PROCEDURE

#### INTRODUCTION

The programming procedure is menu driven.

- A list of selections are presented for consideration which differ in content and required response.
- Each selection, when responded to, either causes a further breakdown of selections to be presented or causes a particular COS programming action to take place.
- This menu system prompts the programmer for the required response and, where appropriate, will repeat prompts to allow programming of more than one device without having to make another menu selection.
- All of the menus operate in the same manner. They differ in only the required response.
- Each prompt requires a response followed by a Carriage Return (RETURN). The responses usually consist of a one or two-digit number or a string of numbers or alpha-numeric characters when programming names and messages.

Successive entries are separated by a space or a comma.

#### GENERAL INFORMATION

There are two responses which allow a programmer to quit a procedure.

- RETURN (ENTER on some keyboards) - This action returns the user to the top of the current menu.
- CONTROL C - This action returns the user to the top of the main menu.

There are certain other responses which have special functions.

- Responding with the **@** key will print or display the menu that the programmer is currently using. The system is waiting at the same prompt line as it was before the menu was repeated.
- Responding with the **?** key will cause a help menu to be printed if one is available. The system is waiting at the same prompt line as it was before the help menu was requested.

There are special line edit characters.

- Backspace, Delete, Rub-out - Used to delete characters from the response line as they are being typed.
- CONTROL **R** - Causes the current response line to be echoed for review.
- CONTROL **D** - Causes the current response line to be deleted.
- CONTROL **S** - Causes printing or display action stop.
- CONTROL **Q** - Causes the printing or display to resume.

There are two system acknowledgement messages to a response line.

- COMMAND ACCEPTED - Response accepted.
- **\*\*\*COMMAND REJECTED\*\*\*** - Response not accepted. The terminal bells also sounded.

## PROCEDURE

1. Determine the system programming parameters, and record them for future reference.
2. Turn on the AC power to the system and the VDT.
3. Press the RETURN (ENTER) key. The system enters an approximate 20 second timeout cycle. Step 4 must be performed within this timeout period or the programming sequence will be aborted.
4. Type the password: 1 \* 7 4 6 \*, and press **RETURN** (ENTER). The VDT will display the main programming menu. The system enters an approximate 3 minute timeout cycle. A selection or response must be entered within this timeout period, otherwise; the programming sequence is aborted.
5. Execute the programming procedures by responding to the prompts listed in first the main menu and then in subsequent menus.

## REMOTE PROGRAMMING

The telephone system can be programmed remotely using the following equipment:

- A VDT or a PC and appropriate software program,
- A pair of data modems.

The data modems can be any commercially available 300 or **300/1** 200 baud type with auto-answer capability. Be sure to verify the auto-answer capability before purchasing the units. **It** is recommended that the same make and model of modem be used at both the installation site and the remote programming site.

## INSTALLATION

The equipment connections at the customer location are as illustrated in **Figure 4-3** on page 4-80, Connect the equipment for remote programming as illustrated therein and discussed below.

- Determine the signal needs of the modem from the user's manual for it.
- Wire the proper connector (to match the data jack) on one end of a length of multiline cable.
- Punch down the appropriate leads on the connector block. Refer to Chapter 3 for connection details as needed.

- Connect the network jack of the data modem to an outside telephone line. (If a line is not reserved for remote programming, a line **switch** can be installed so that an outside telephone line can be switched by on-site personnel between the data modem and the common equipment cabinet when remote programming is to be done.)
- Refer to the user's manual for the modem, and program the modem to automatically answer after the first ring.
- Interface the VDT or PC with the modem at the programming site per the user's manuals for the equipment be used.

## OPERATION

To establish a communications link for programming the system from a remote site, proceed as follows:

- If a line switch is being employed, call someone at the customer site, and ask that the switch be set for modem operation.
- After the outside line is connected to the modem, the data link can be made between the originating and the remote modems.

Programming can then be performed from the remote site just as if the VDT or PC was connected directly to the system.

## TYPICAL PC OPERATION

The following procedure is given as a typical example for using a PC and an XMODEM-type communications software program to program the telephone system. It is only provided for illustration and reference purposes and describes a set-up using a typical communications software program known as **PROCOMM** (produced by Datastorm Technologies, Inc.). Many other communications software programs are also available which can be used for this purpose. Individual operating procedures may vary with different communications software programs but the general process is similar to this.

1. Perform turn-on and program-load procedures. **If** operating through modems, take action, as described in the previous discussion, to establish a communications link between the PC and the common equipment.

2. If the PC is directly connected to the common equipment, match the data communications parameters of the software program to those now programmed at the telephone system.

**-OR-**

If remote programming is being employed, the data parameters of the PC must match the modem connected to it. The modem **connected to** the common equipment must match the data parameters of it as well.

*NOTE: Remember, **8-bit** data is required for XMODEM protocol. If the common equipment is not now programmed to provide **8-bit** data, it **will** have to be re-programmed from station 10 (see page **4-7** for details) before data communications can take place. The baud rate to match the modem or the PC should be set at the same time.*

Set the data communication parameters as follows:

- Press ALT P.
- Type 11 then press ENTER. This action selects a baud rate of 9600 baud.
- Type 17 then press ENTER. This action selects 8-bit data.
- Type **18** then press ENTER. This action selects one stop bit.
- Type 24 then press ENTER. This action saves the data parameters.

3. Set the terminal parameters as follows:

- Press ALT S.
- Type 2 then press **ENTER**.
- Type 1 then press ENTER.
- Use arrow keys to select VDT-100 or similar emulation then press ENTER.

*NOTE: **Setting** the terminal emulation for a **Wyse-50** or **VT-100** emulation will provide a **compatible** set of default values; however, any emulation which provides **full** duplex operation is satisfactory.*

- Press **ESC** to finish.
- Press S then press **ENTER**. This action saves the terminal parameters.

- Press **ESC** then press **ENTER** to end the terminal parameter set up.
4. When computer screen displays a prompt for password, type **1 \* 7 4 6** then press **ENTER**. This causes main COS programming menu to be displayed.
  5. From main menu, type 1 then press **ENTER**. This causes system COS programming menu to be displayed.
  6. From system menu, make all selections necessary to perform class of service programming then return to the main menu.
  7. From the main menu, type 4 then press **ENTER**. This causes load/save menu to be displayed.
  8. From load/save menu, down-load COS data from common equipment to computer or up-load COS data from computer to common equipment,

#### Down-Load COS Data From Common Equipment To Computer

- Type 1 then press **ENTER**.
- Press **PAGE DOWN**.
- Type **1** to choose XMODEM protocol.
- Type file name for down-loaded COS data to save into.
- Press **ENTER**. The COS data, as programmed in the common equipment, is automatically down-loaded to the computer file.

#### Up-Load COS Data From Computer To Common Equipment

- Type 2 then press **ENTER**.
  - Press **PAGE UP**.
  - Type **1** to choose XMODEM protocol.
  - Type file name of saved COS data.
  - Press **ENTER**. The COS data, as stored in the computer file, is automatically up-loaded to the common equipment.
9. Repeat step 8 except type 3 to down-load currently stored auto dial and speed dial numbers or type 4 to up-load them.

**10.Return** to main menu and log off.

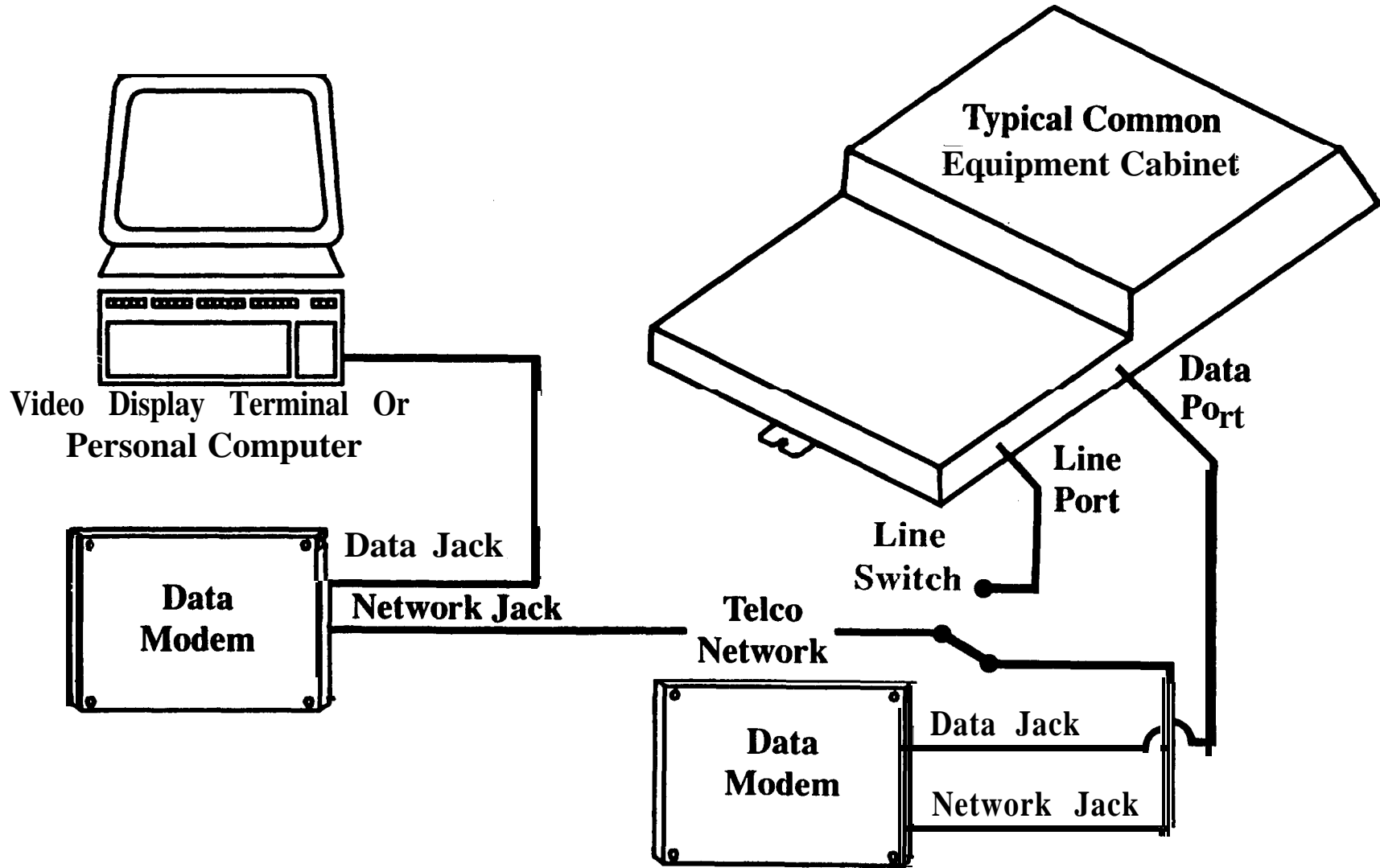


Figure 4-3. Remote Programming Block Diagram



## MENU DESCRIPTIONS

### C.O.S. Programming

1. System C.O.S.
2. Line C.O.S.
3. Station C.O.S.
4. Toll Restriction Table Administration
5. Information
6. Logoff

Enter Selection:

### MAIN MENU SELECTIONS

- Selection 1: Chooses system COS programming.
- Selection 2: Chooses line COS programming.
- Selection 3: Chooses station COS programming.
- Selection 4: Chooses toll restriction table administration programming.
- Selection 5: Choses an information menu to provide assistance with VDT programming.

### System C.O.S. Programming

1. System Defaults
2. System Options
3. System Timing
4. Load / Save C.O.S. Data
5. Serial Communication Parameters
6. C.O.S. Data Printout
7. Set Clock Date / Time
8. SMDA Programming
9. SMDR Print Parameters
10. Logical / Physical Assignments • Stations
11. Logical / Physical Assignments • Lines
12. Automatic Station Relocation
13. Feature inhibit Programming
14. Enable Ail inhibited Features
15. LCD Messages
16. Software Version Number
17. Return To Previous Menu

Enter Selection

### SYSTEM COS MENU SELECTIONS

- **Selection 1:** System defaults
  - Default Ail System Data
  - Default Ail Line Data
  - Default Ail Station Data
  - Default Selected Station Data
  - Pulse Dial on All Lines
  - Tone Dial on Ail Lines
  - Default key Mapping on ail Stations

- Master Clear System Data
- Default Toll Restriction Tables

On each **default** selection, the system questions the user as to whether the **default** should be made. If response to the question is yes (Y), the default is performed.

When defaulting selected station data, the station to be defaulted must be identified by port number (10 - 57)

- Selection 2: System Options
  - Voice/Tone Announce First on Intercom (Choose either Voice or Tone signalling as standard intercom signalling method.)
  - Station Message Desk (Assign or clear one station port as the central message desk.)
  - Assign Extension Number to Port (Gives a station flexible extension numbers from 2 - 4 digits.)
  - Assign Pilot Number to Department (Gives an entire department one extension number.)
- Music on Hold
  - Do Not Disturb Inhibit
  - Station Monitoring (Visual ring indication for station with BLF appearance at programmed station can be enabled or disabled.)
  - Tandem Attendent (One or both attendants can receive timed hold recall and recall from transfer.)
  - Voice Mail Auto Transfer (Enables immediate line transfer when voice mail unit is included with system.)
  - Disable Stations (Disable station ports)
- System Alarm Reporting
  - PA Options (Enables direct ringing, delayed ringing, or night transfer (of ringing) and zone paging on the PA port. Also chooses ringing port relay control as either paging port or station **port 17**.)

The station to be programmed must be identified by port number (10 - 57).

When assigning extension numbers, enter station port or department number then make extension number entry.

- **Selection 3 :** System timing (system timing requirements)
  - Recall / TAP Time
  - Pause Time
  - Timed Hold Recall Time
  - Transfer Recall Time
  - Call Park Recall Time
  - Extended DTMF Dialing Tones

- Selection 4: Load/Save COS data (on cassette tape and the transfer of this data through remote programming)
- Selection 5 : Serial communication parameters (for data port A and data port B)
- **Selection 6:** COS data printout
- **Selection 7:** Set clock date/time.
- **Selection 8:** SMDA programming (Configures the Station Message Detailed Accounting feature. Also refer to page 4-59 for an explanation of call costing and SMDA reporting.)
  - Assign Area Codes / Prefixes to Bands
  - Enter band number 0-7, enter 0 for no band, or enter area codes or prefixes as 200-999.
  - Set Dial Time Limit (non-costed time allowed for dialing to take place in /I 0 min)
  - Set Answer Time Limit (non-costed time allowed for call to ring and be answered in /I 0 min)
  - Define Department Numbers (Calls can be costed on a department basis by department basis.)
  - Assign Stations to Departments (for costing by department)
  - Set Account Codes (Calls can be identified by account code for costing by **category**.)
  - Clear Account Codes
    - Enable Account Codes With **Verify** (User account code entry is compared **with** programmed account code.)
    - Enable Account Codes **Without** Verify (User account code entry is not compared with programmed account code.)
  - Disable Account Codes
    - Account Code Message Display Parameters (LCD speakerphones can prompt users for account code entry on incoming and/or outgoing calls.)
    - Account Code Message Display Time
    - Maximum Account Code Length
  - Call Cost Tables
    - Call Cost Exception Tables
    - Automatic Reports (Call cost reports can be produced for **printing**.)
    - SMDA Delete By Attendant (allows attendant to delete SMDA records)
- **Selection 9:** SMDR print parameters (enables Or disables call cost reporting along with a Station Message Detail Report).
- **Selection 10: Logical/physical assignments** • stations (For example; assign station extension 25 to station port 25. Also refer to the **discussion** provided on page 3-6.)
- **Selection 11:** Logical/physical assignments • lines (For example; assign line 1 to line port 1. Also refer to the discussion on page 3-5.)
- **Selection 12:** Automatic station relocation (allows individual features to be physically relocated without losing their programming parameters and extension assignments)
- **Selection 13:** Feature **inhibit** programming (allows individual features to be inhibited)
- **Selection 14:** Enable all inhibited features (will enable all features inhibited **with** selection 13)
- **Selection 15:** LCD messages (programs the messages for the LCD messaging and response messaging features)
- **Selection 16:** Software version number (identifies the software release version of the system)

#### Line C.O.S. Programming

1. Line Type
2. Line Group Assignment (reads "Reserved" if no hybrid strap is installed)
3. Line Dialing Mode
4. Line Privacy Release
5. Line Toll Restriction Table Assignments
6. Line Abandoned Hold Release Time
7. Set Up a Line ( Using a Model Line )
8. Assign Name to Line
9. Assign Line to Department
10. Exclusive Hold
11. **Voice** Mail Line I.D.
12. D.I.S.D. Assignments
13. Return To Previous Menu

Enter Selection:

#### LINE COS MENU SELECTIONS

In each line COS menu selection, after choosing the feature, enter all line **port** numbers which are to be assigned to it.

- **Selection 1:** Line type (specifies the characteristics of the line port)
  - Disabled
  - Auxiliary (Configures port for installation of external paging amplifier.)
  - **CO/PABX** (Typical line connection)

- **Selection 2:** Line group assignment (assigns line to line groups, will be reserved if the hybrid strap is not installed)
- **Selection 3:** Line dialing mode (pulse or tone to match the connected line)
- **Selection 4:** Line privacy release (releases privacy on a line)
- **Selection 5:** Line toll restriction table assignment
- **Selection 6:** Line abandoned hold release time
- **Selection 7:** Set up a line (Using a model line) (provides a means of programming a group of lines to match the programming of a model line)
- **Selection 8:** Assign name to line.
- **Selection 9:** Assign line to department.
- **Selection 10:** Exclusive hold.
- **Selection 11:** Voice mail line ID (Specifies identification number of a particular line to the voice mail accessory for personalized call coverage)
- **Selection 12:** DISD assignment (Assigns DISD to lines and specifies calling characteristics of them)

**Station C.O.S. Programming**

1. Set Up a Station (Using a Model Station)
2. Assign Name to Station
3. Assign Station to Department
4. Assign Station to SOHVA Group
5. Line/ Intercom Features
6. Ringing Assignment
7. Button Mapping
8. Toll Restriction Administration
9. Automatic Busy/ RNA Call Forwarding
10. Miscellaneous Feature Programming
11. Return To Previous Menu

Enter Selection:

**STATION COS MENU SELECTION**

In each station COS menu selection, after choosing the feature, enter a station port number which is to be assigned to it and enter line port numbers where prompted. **Multiple** station number entries are allowed for some features as prompted.

- **Selection 1:** Set up a station (Using a model station) (program a group of stations to match the programming of a model station)

- **Selection 2:** Assign name to station
- **Selection 3:** Assign station to department
- **Selection 4:** Assign station to SOHVA groups
- **Selection 5:** Line/Intercom features
  - Prime Line (assign prime line, prime group, prime intercom, or clear all)
  - Ringing Line Preference (enable or disable)
  - Line Access Deny (enable or disable station access to a line)
  - Line Originate Deny (enable or disable station ability to originate a call on a line)
  - Idle Line Preference (enable or disable access to an idle line when station is taken off hook)
  - Block Voice Announce Intercom Call
  - Audible Monitoring (audible ringing sounded for stations with BLF appearance at programmed station)
- **Selection 6:** Ringing assignment
  - Personal Ringing Tones (One of four different tones can be chosen. Refer to page 4-29 for frequencies if required.)
  - Direct/Delayed Ringing (of each line assigned to programmed station)
  - Night Ringing (enable or disable night transfer, of ringing, to programmed station for programmed lines)
- **Selection 7:** Button mapping (assign functions to buttons)

***Special Note:** Although buttons are identified by Ax and Bx codes as shown in **Figure 4-1** on page 449 and on the programming overlay supplied with the system, do not type an "A" or "B" before the **button** number when identifying it for function assignment. To do so, causes the system to interpret the typed entry as a line number choice instead of a button number choice.*

- Functions that can be assigned are identified per the following list:

To display list, enter **?**.  
 Return to key mapping with **Control Z**.

BLK ..... Blank  
**Lxx** ..... **Line (1 - 24)**  
**Sxx** ..... **Station (10 - 57)**  
 DND ..... Do Not Disturb  
 PRI ..... Privacy  
**IC2** ..... 2nd Intercom  
 SAV ..... Save  
 ACC ..... Account Code Button  
**ZPx** ..... **Zone Page (1-3)**  
 AC ..... All Call  
 ACB ..... Auto Callback  
 CF ..... Call Forward

- CPx.....Call Park (1-9)
- TGx.....Line Group (1-4)
- VAB.....Voice Announce Block
- TGQ.....Line Group Queue
- EX.....Exit Button Mapping

System displays list of current key mapping at station. equipment. Some keys listed may not be present on the station being programmed.

Enter new function for key and press **ENTER**, or press ENTER to accept current function.

- Selection 8: Toll restriction administration (assigns toll tables to station)
  - Toll Restriction Table Assignment (assign pre-programmed toll restriction tables to be applied to all regular calls)
  - Night Mode Toll Restriction Table Assignment (assign pre-programmed table to be applied to calls on night transferred line)
  - System Speed Dial Toll Restriction (assign pre-programmed toll restriction tables applied to system speed dial numbers)
- Selection 9: Automatic busy/RNA forwarding (Links programmed station to another one to form hunt group. Also, selects number of rings to occur at programmed station before ring-no answer (RNA) call is forwarded to linked station.
- **Selection 10:** Miscellaneous feature programming (programs a variety of features for the station)
  - Automatic Privacy Release (Enable or disable automatic privacy release or a per line basis.)
  - Line Auto Hold (active line automatically held when new line is selected)
  - Intercom Auto Hold (intercom automatically **held** when new line is selected)

- **Thru Dialing/ATI** (arrange port to allow DTMF tones to pass through to connected equipment)
- Executive Override
- Do Not Disturb Override
- Service Observing
- All-Call and Zone Paging
- Message Wait Originate
- Head Set Mode
- Group Call Pickup
- Secure Off Hook Voice Announce
- Data Security Ports
- LCD Call Costs (display of cost for current call)
- System alarm recipient
- Unobservable station
- Voice mail transfer on busy for station
- Voice mail port

**Toll Restriction Table Administration**

1. Build / Modify an Allow Table
2. Build / Modify a Deny Table
3. Clear a Table / Entry
4. Return To Previous Menu

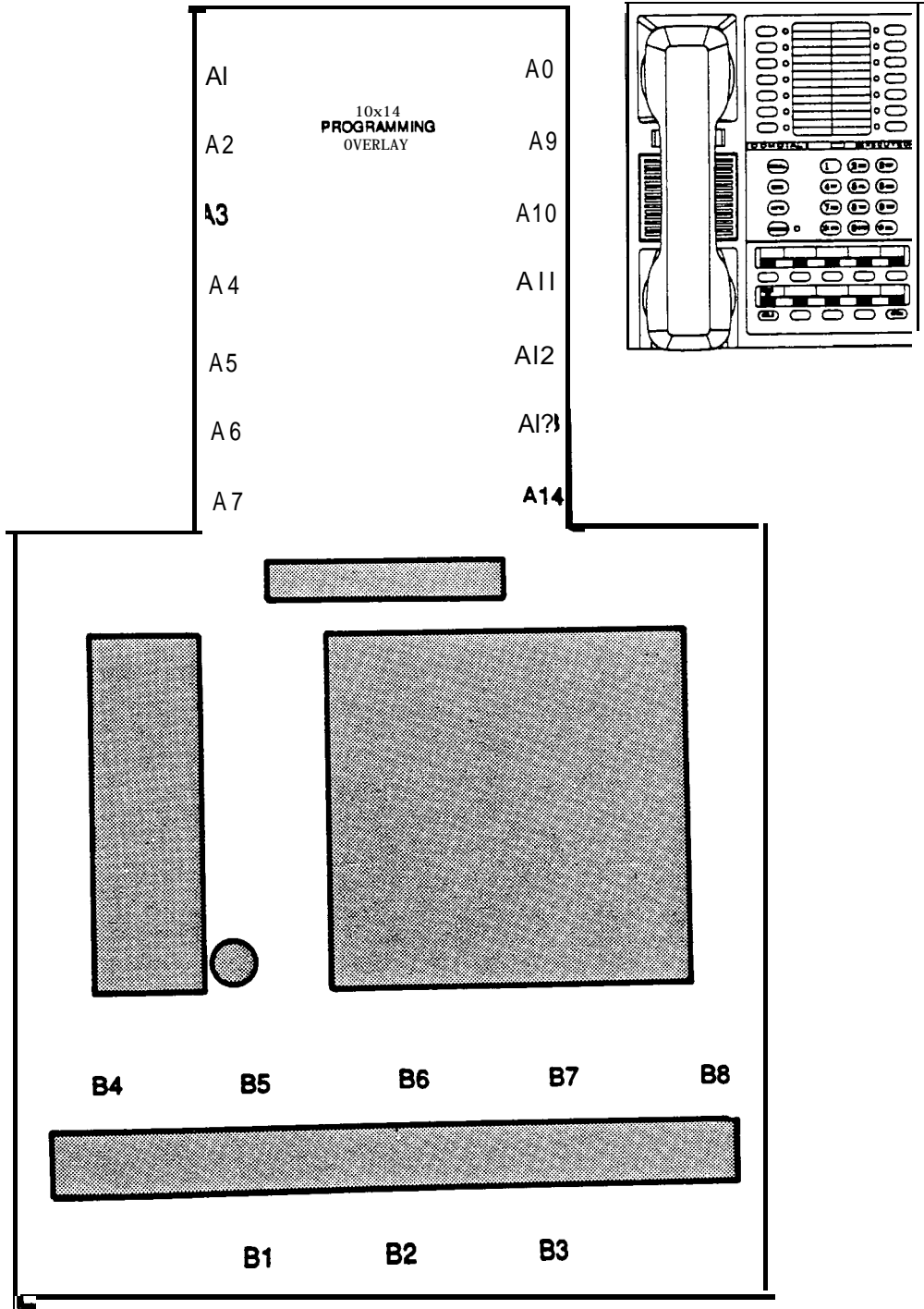
Enter Selection

**TOLL RESTRICTION TABLE ADMINISTRATION**

Use the toll restriction table administration menu to build toll restriction tables for line and station assignment. Refer to page 4-52 for a discussion concerning toll restriction table construction and assignment.

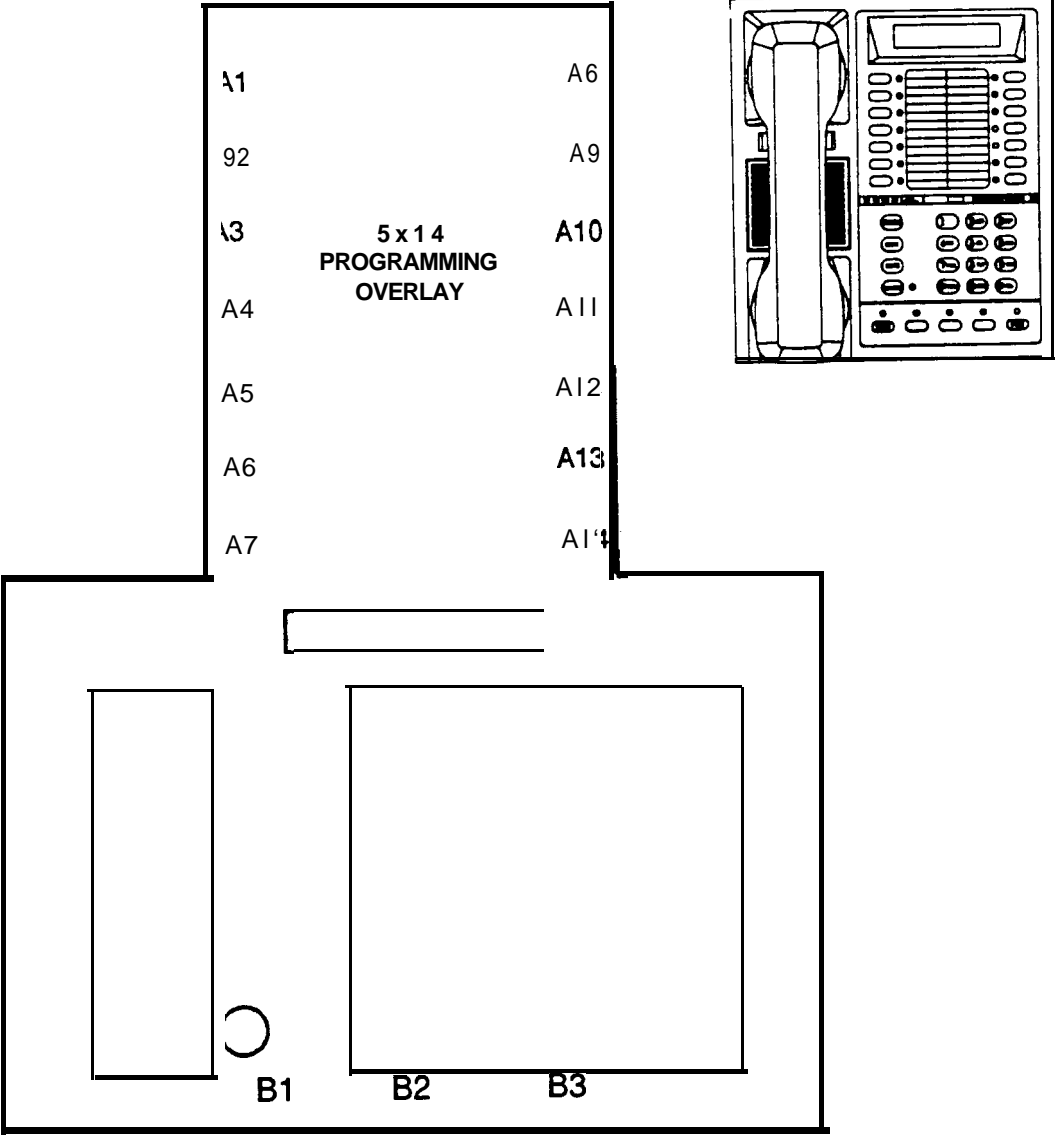
# STATION 10 - PROGRAMMING OVERLAY

- Cut out along border.
- Cut out shaded openings.
- Fit over station faceplate.



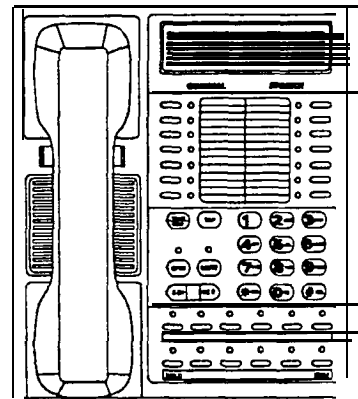
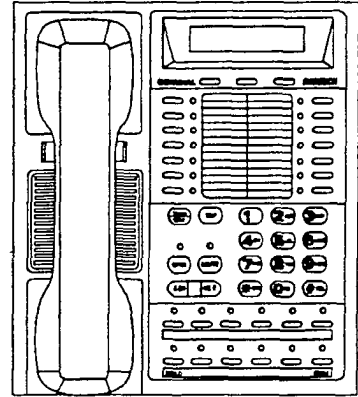
**STATION 10 - PROGRAMMING OVERLAY**

- Cut out along border.
- Cut out shaded openings.
- Fit over station faceplate.



# STATION 10 - PROGRAMMING OVERLAY

- . Cut out along border.
- . Cut out shaded openings.
- . Fit over station faceplate.



A1		A8
A2		A9
A3	<b>PP013-100</b>	A10
A4	DIGITECH	A11
A5	(REV 1 OR HIGHER)	A12
A6	PROGRAMMING	A13
A7	OVERLAY	A14

B5
B6
B7
B8
B9
B10

HOLD
B1
B2
B3
B4
ITCM

# CHAPTER 5 SYSTEM OPERATING PROCEDURES

## SECTION 1 STATION OPERATION

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### ANSWERING CALLS

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#### ANSWERING OUTSIDE CALLS

If **the** ringing line appears at your telephone,

- Press line button of ringing line (line button with flashing light).
- Lift handset.

*NOTE: If a prime line is assigned and is ringing, or if ringing line preference is enabled, pressing the line button of the ringing line is not necessary.*

#### ANSWERING INTERCOM CALLS

To answer a voice call,

- Speak toward the telephone.
- Lift handset if privacy is desired.

*NOTE: Voice calling can be blocked. See the discussion titled, Voice Announce Blocking for details.*

To answer a tone call,

- Lift handset to talk.

To respond in a non-verbal manner,

- Press preprogrammed response message programmable button to cause a set message to appear in display of announcing station (if it is an LCD speakerphone). This action also disconnects the announcing station.

#### CALL PICKUP ANSWERING

##### DIRECT

To answer a call that is ringing at another telephone,

- Lift handset.
- Press **ITCM**.
- Dial \* 4.
- Dial extension number of ringing telephone.

##### GROUP

To answer a call that is ringing at any station in your pick-up group,

- Lift handset.
- Press **ITCM**.
- Dial # 4.

#### STATION MONITORING

With station monitoring enabled, a call ringing at a monitored station can be answered at a monitoring station.

- See flashing BLF light, then press DSS button. Light turns off and call is answered.

To return to call from hold or an unanswered transfer,

- Press **TAP** button.

#### LINE ANSWER FROM ANY STATION

When the attendant station has enabled the night transfer (of ringing) feature (denoted by a fluttering **ITCM** light at stations 10 and 12), an outside call can be answered from any station in the system.

- Hear ringing (loud ringer, night transfer station, etc.).
- Lift handset.
- Press **ITCM**.
- Dial 80
- Answer call.

#### SECURE OFF-HOOK VOICE ANNOUNCE (SOHVA)

While a station is off-hook and busy on a call, a secure off-hook voice announcement (SOHVA) may be sounded through the handset receiver of the telephone if it is programmed to allow SOHVA.

To respond to a SOHVA announcement,

- Hear tone alert and announcement in handset receiver. Distant party cannot hear announcement.
- **Voice Response:**  
Press and hold **MUTE** button, and reply by speaking into handset transmitter. Distant party cannot hear response.

Press and release **MUTE** button to return to distant party.

- **Message Response:**

Press preprogrammed response message programmable button to cause a set message to appear in display of announcing station (if it is an LCD speakerphone). This action also disconnects the announcing station.



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## MAKING CALLS

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### OUTSIDE LINE CALLING

- Press line button to select line.

*NOTE: Selecting a line is not necessary if:*

- *A priority line has been assigned to a telephone (prime line feature enabled).*
- *The telephone automatically picks an **idle** line for use when the handset is lifted (idle line preference feature enabled).*

- Listen for dial tone.
- Dial number.

When **party answers**,

- Lii handset.

To **end call**,

- Hang up handset.

### LINE GROUP ACCESS

If the system provides line groups,

- Press **ITCM**.
- Dial line group access code
  - 9 = line group 1
  - 81 = line group 2
  - 82 = line group 3
  - 83 = line group 4
- Listen for dial tone.
- Dial number.

### LINE AND LINE GROUP QUEUING

When a line or line group is busy, a station can be placed in a queue to await the availability of it.

**To queue for a busy line,**

- Press **HOLD**.
- Press line button of busy line. A short tone burst will sound. When line is free, station will sound several quick tone bursts.

**To queue for a busy line group,**

- Press **ITCM**.
- Dial line group access code (**9, 81, 82, 83**).
- Hear busy tone.

- Dial **\* 8** and hang up. When line group is free, station will sound several quick tone bursts.
- Lii handset, hear line dial tone, and place call.
- To cancel queuing,
- Press **ITCM**.
- Dial **# 8**, and hang up.

### INTERCOMCALLING

Intercom calls may be manually dialed or automatically dialed using a preprogrammed Direct Station Selection (DSS) button.

### VOICE CALLING

**To voice call an Intercom station,**

- Lift handset.
- Press **ITCM**.
- Dial extension number. (To call system operator, dial 0.)
- Speak to called party.

**To voice call a DSS number,**

- Lii handset.
- Press programmable button that is programmed for desired station.
- Speak to called party.

*NOTE: The outside line is automatically placed on hold when a DSS button is pressed or when the **ITCM** button is pressed prior to manually dialing an intercom extension number.*

### TONE CALLING

**To tone call an Intercom station,**

- Lii handset.
- Press **ITCM**.
- Dial extension number.
- Press **ITCM** again. Called telephone will ring.

*NOTE: Some systems may be programmed to tone signal as the first option. Pressing **ITCM** a second time is not necessary in this case*

**To tone call a DSS number,**

- Lift handset.
- Press programmable button that is programmed for desired station.
- Press **ITCM**. Called telephone will ring.

*NOTE: The lights (LEDs) adjacent to programmable buttons indicate status of DSS telephones: DARK indicates idle telephone, STEADY-ON indicates telephone in use. FLASHING indicates station is ringing (providing station monitoring is enabled).*

## **SECURE OFF-HOOK VOICE ANNOUNCE (SOHVA)**

### **To make a secure voice announcement to another station that is off-hook or busy on a call,**

*If the calling station has a SOHVA originate button programmed,*

- Lift handset.
- Make intercom call and hear busy signal.
- Press SOHVA button and hear SOHVA warning tones (six quick tone bursts). If busy signal continues, message cannot be delivered until called party picks up handset; however, called station will sound intercom ringing.
- Deliver message.
- Wait on line for reply.

*If the calling station **does** not have a SOHVA button programmed,*

- Lift handset.
  - Make intercom call.
  - Hear SOHVA warning tones (six quick tone bursts). If busy signal sounds, message cannot be delivered until called party picks up handset; however, called station will sound intercom ringing.
- If calling from an LCD speakerphone,*
- Called station may send non-verbal message response for display. As non-verbal response message is displayed, calling station is disconnected.

## **SPEED DIALING**

### **To dial station speed dial numbers,**

- Press keypad digit 0 - 9 for desired personal speed dial number.
- OR-**

### **If on line listen to dial tone,**

- Press **HOLD** and then press desired keypad digit **0-9**.

### **To dial system speed dial numbers,**

- Press \*.
  - Press keypad digits 01 - 99 for desired system speed dial number.
- OR-**

### **If on line listen to dial tone,**

- Press **HOLD** \* and then press desired keypad digits **01 - 99**.

## **AUTOMATIC DIALING**

### **To automatically dial numbers,**

- Press desired programmable button.
- If desired programmable button is also programmed for DSS (one-button intercom) calling.
- Press **HOLD** and then press desired programmable button.

## **AUTOMATIC REDIALING**

### **To activate automatic redial,**

- Press programmable button pre-programmed for that purpose. **ITCM** light flutters while auto redial is active.
- Number will be dialed once a minute for ten minutes.

### **If called number is busy,**

- Press auto redial programmable button to immediately start the re-dial cycle.

### **If call is answered,**

- Take control by **lifting** handset. If control is not taken, call will drop.

### **To cancel automatic redial,**

- Press auto redial button, lift and replace handset, or press any station button.

*NOTE: Any user originated station activity during automatic redial **will** cancel the feature.*

## **LAST NUMBER REDIAL**

The last number previously dialed can be automatically redialed with one-button or two-button action.

- **Dial #.** (If on-line listening to dial tone, press **HOLD** then dial **#**.)
- Listen for ringing or busy tone.
  - Ringing tone: When party answers, lift handset.
  - Busy tone: Press **MNTR** (SPKR) to disconnect.

## SAVED NUMBER REDIAL

The first 16 digits of the last manually dialed number can be saved for later redial.

To **save the number**,

- Press programmable button designated by class of service programming for this purpose.

To dial a saved number,

- Lift handset. Listen for dial tone.
- Press HOLD then press pre-programmed programmable button.

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## HOLDING CALLS

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### MANUAL HOLD

To place call on hold,

- Press **HOLD**. Status light will flash for line calls. Intercom hold causes intercom light to flash

To retrieve held call,

- Press button with flashing light.  
-OR-
- For line calls, press **TAP** if station does not have line appearance.

**EXCLUSIVE HOLD (Only your telephone can retrieve held call.)**

- Press **HOLD** twice.

### HOLD RECALL FEATURE

After a preprogrammed length of time, a call placed on hold will automatically ring back to the telephone which placed it on hold. If the call is on exclusive hold, it will revert to manual hold after the hold recall time period. The call can then be retrieved by anyone with that line appearance.

### DIRECT STATION HOLD

To place a call on direct hold (park a call at a particular station),

- While on line, press **ITCM** (outside call placed on hold).
- Dial \* 9 0 plus extension number of station to receive parked call.

To retrieve direct hold call,

- From the hold receiving extension, Dial # 9 0.
- From the station which placed call on hold,
  - Dial \* 4 plus the extension number of hold receiving station.

### CALL PARK

To park a call with Park button (user programmed programmable button),

- Press **Park** button. Light associated with button will turn on.

To manually park a call,

- While on line, press **ITCM**.
- Dial \*.
- Dial a park orbii access code (**91 - 99**).

*NOTE: If a parked call is not retrieved within a programmable limit (0 -6 minutes, 0-never recalls), it **reverts** to the parking station as a standard held call.*

To retrieve parked call with Park button (user programmed programmable button),

- Press lighted Park button.

To manually retrieve a parked call,

- From any extension, press **ITCM**.
- Dial #.
- Dial a park **orbit** access code (**91 - 99**).

---

## TRANSFERRING CALLS

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### SCREENEDTRANSFER

To transfer a call to another station in the system,

- Answer outside call (Do not press HOLD.)
- Press **TRANS/CONF**. (Outside call is placed on hold automatically.)

- Dial extension number of party to be transferred to (or press DSS button for one-button intercom calling).
- When intercom party answers, announce call and line number.
- Hang up handset.

**If the called party is busy or does not answer,**

- Press **TRANS/CONF** button or flashing line button to retrieve call.

**UNSCREENED TRANSFER****To transfer a call to another station in the system,**

- Answer outside call. (Do not press HOLD.)

- Press **TRANS/CONF**. (Outside call is placed on hold automatically.)
- Dial extension number of party to be transferred (or press **DSS** button for one-button intercom calling).
- Hang up handset. If transferred call is not received after pre-programmed length of time, it will ring back at transferring station.

**To answer recall of transferred call,**

- Press **TAP** button.

---

## CONFERRING

---

Conferring can include the originating station and up to four outside lines, or four additional stations, or a combination of stations and lines to a maximum total of five parties.

**FIVE-PARTY CONFERENCE**

To set up a conference that includes outside lines, intercom stations, or a combination of both (maximum of five parties, originator plus four additional parties).

1. Make first call.
2. Press **TRANS/CONF**. Call is placed on hold automatically.
3. Make next call.
4. Press **TRANS/CONF**. Conference is established.
5. Repeat steps 2 • 4 to add up to two more parties.

*NOTE: When setting up a conference call with outside lines and inside stations, you must call the outside lines first.*

To continue conference with last conferee after outside lines (up to three) have dropped out of conference,

- Press line button of remaining party.

**To drop outside lines from conference,**

- Press **HOLD** to place all lines on hold before caller hangs up. Not doing this will result in a tone sounding in the handset receiver, interrupting the remaining conferees.

**To retrieve remaining lines and bring back into conference,**

- Repeat five-party conference procedure for all remaining lines.

**UNSUPERVISED CONFERENCE CALL (Maximum of Two Outside Lines)**

Dropping out of a conference call and leaving up to two outside lines in conference together is known as an unsupervised conference call

**To do this, dial # and hang up.**

*NOTE: Conference volume levels are dependent upon the quality of the external lines.*

---

## MESSAGING

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**MESSAGE WAITING CONTROL**

The message waiting light at any telephone can be turned on from another telephone to alert the user that a message awaits pickup. The ability to control message waiting lights is enabled by class of service programming and is usually limited to one station in the system. This station is designated as a central message desk.

**To turn on MW light from central message desk,**

- Press **ITCM**.
- Dial \* 3.
- Dial extension number of station to be alerted. (The MW light of called station will flash.)

**To turn off MW light from central message desk,**

- Press **ITCM**.
- Dial **# 3**.
- Dial extension number of station that was alerted. (The MW light of called station will turn off .)

**To turn off MW light while delivering message,**

- Press **ITCM**.

**To receive message at an alerted station,**

- Observe flashing MW light.
- Lift handset.
- Press **ITCM HOLD**.
- Connection to message desk is automatic.

**LCD MESSAGING**

System supplied messages can be set at a station to be displayed by a calling LCD speakerphone

**To turn on message,**

- Press **ITCM**.
- Dial \*02
- Dial message code number (1 - 0). See attendant for list of messages available.
- Press MNTR (SPKR). Intercom light flashes. The default messages of "BACK AT" and "CALL" may be provided for use:

If "BACK AT" is provided as message 1, then dial time in twelve-hour format after dialing message access code 1.

If "CALL" is provided as message 2, then dial extension that calls are forwarded to after dialing message access code 2.

**To turn off message,**

- Press **ITCM**.

- Dial # 02.

**To send message for assistance while idle or on a call,**

- Press **\*\*\*** button.
- If extension number of assisting station is not programmed, press DSS button for it. If assisting station is idle, tone burst sounds and message appears on display. If it is busy, message appears when it becomes idle.

**STATION-TO-STATION MESSAGING**

If a station has BLF appearance at another station, a call-back message indication can be left at that station.

**To activate messaging,**

- Make intercom call and hear ring-back tone.
- Dial \*7. **BLF light at called station flutters.**

**To cancel messaging,**

- Press **ITCM**.
- Dial # 7.
- Dial extension number of station at which message call-back indication was left.

**To answer messaging,**

- Press DSS button associated with lighted BLF light.

---

**VOICE ANNOUNCE BLOCKING**


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**To block voice calls,**

- Press **ITCM**.
- Dial \* 2.

**To unblock voice calls,**

- Press **ITCM**.
- Dial # 2.

---

**LINE MONITORING**


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**To activate while on a call,**

- Press **MNTR (SPKR)**. Monitor light will turn on.
- Hang up handset.

*NOTE: If a distant party places the call on hold, the station user can monitor in a handsfree manner until the party returns, and then lift the station handset to resume the call.*

**To cancel,**

- Lift handset to resume conversation
- **-OR-**
- Press **MNTR (SPKR)** to disconnect. Monitor light will turn off.

---

## RECALL/FLASH

---

### FLASH

PBX, CENTREX and custom calling services may require this feature.

#### If a system has been configured for flash,

- Press **TAP** to generate a timed flash signal.

### RECALL

This feature provides disconnect and dial tone recall.

#### If a system has been configured for recall,

- Press **TAP** to disconnect current call and receive a new dial tone for another call.

*NOTE: A system can be configured for either flash or recall but not for both.*

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## PAGING

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### EXTERNAL PAGING

Requires external paging unit.

- Lift handset.
- Press **ITCM** then dial 89.  
-OR-
- Press programmable button programmed for paging access.
- Make paging announcement and hang up.

### ALL-CALL AND ZONE PAGING

#### To page,

- Lift handset.
- Press **ITCM**.

- Dial zone number • (**84, 85, 86**, or 87 for all-call).
- Make announcement.
- Hang up handset or wait on line for an answer.

### MEET-ME PAGE (Answerback of Page)

#### To answer all-call or zone page from any telephone,

- Lift handset.
- Press **ITCM**.
- Dial 88.
- Meet paging party on line for private conversation.

---

## DO NOT DISTURB

---

#### To activate (silence station ringer and appear busy to intercom calls),

- Press programmable button pre-programmed for this purpose. (Associated light will turn **on**).

*NOTE: The calling party will hear two quick tone bursts every 1.5 seconds. The feature cannot be overridden by the calling party.*

#### To cancel,

- Press programmable button again. (Associated light will turn off .)

Through class of **service** programming, a station can be allowed to override a do not disturb (DND) condition at another station.

#### If DND override is allowed,

- Make intercom call and hear busy signal.
- Dial \* **03**. An intercom call rings at the called station.

---

## MUTE / HANDSFREE ANSWER INHIBIT

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**To prevent distant party from hearing while handset is lifted,**

- Press **MUTE**. MNTR (SPKR) light will flutter.

**To resume two-way conversation,**

- Press **MUTE**. MNTR (SPKR) light will turn off.

**To block out handsfree answer of intercom calls,**

- Press **MUTE**. MNTR (SPKR) light will flutter.

**To release handsfree answer of intercom calls,**

- Press **MUTE**. MNTR (SPKR) light will turn off.

---

## PULSE/TONE SWITCHING

---

**If the local telephone service is pulse (rotary) but tone generation is required during the call, convert to tone while dialing as follows:**

- Press # at point in dialing sequence where conversion to tone is required. (System will switch back to pulse dialing when call is ended.)

*NOTE: Pulse/Tone switching can be programmed into auto dial numbers by pressing # during number storage.*

---

## PERSONAL RINGING TONES

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A station user can select one of four different ringing tones for use at a station.

- Press **ITCM \* \***.
- Dial 4.
- Dial **1, 2, 3**, or 4 (selects tones **1, 2, 3**, or 4).

TONE	FREQUENCY PAIR	WARBLE RATE
TONE 1	666/571 Hz	16Hz
TONE 2	1000/800 Hz	16Hz
TONE 3	666/571 Hz	23 Hz
TONE 4	1000/800 Hz	23 Hz

---

## BACKGROUND MUSIC

---

Music must be supplied by the system before it can be turned on at a telephone. Background music, when supplied, automatically turns off during calls.

**To turn music on,**

- Press **ITCM**.
- Dial **\* 1**. MNTR (SPKR) light will turn **on**.

- Adjust loudness of music with call monitor speaker volume control.

**To turn music off,**

- Press **ITCM**.
- Dial **# 1**. MNTR (SPKR) light will turn off.

---

## CALL FORWARD

---

A station user can designate another station to be the recipient of just the intercom calls and prime line calls that are directed to the user's station or the recipient of all calls that are directed to the user's station.

### CALL FORWARD- PERSONAL

**To forward Intercom calls and prime line to another telephone,**

- Press **ITCM**.
- Dial \* 05.
- Dial extension number of telephone to which calls are to be forwarded.

**To cancel intercom call and prime line forwarding,**

- Press **ITCM**.
- Dial # 05.

### CALL FORWARD- ALL

**To forward all calls to another telephone,**  
Press **ITCM**.

Dial \* 5.

Dial extension number of station to which calls are to be forwarded.

**To cancel all call forward,**  
Press **ITCM**.

Dial # 5.

**NOTE:** For each intercom call received during call forward, a ring reminder (short tone burst) will be heard at the called station to remind the user that calls are being forwarded.

---

## AUTOMATIC CALL-BACK

---

**To arrange for the system to call back when a busy telephone becomes idle,**

- Make intercom call. Hear busy signal.
- Dial \* 6.
- Hang up. Calling telephone will ring when called telephone becomes idle.

**To answer call-back ring,**

- **Lift** handset. Called telephone will ring.

**NOTE:** Call-back is cancelled if handset is not lifted.

**To cancel automatic call back before it rings,**

- Press **ITCM**.
- Dial # 6.
- Hang up.

---

## CALL WAITING

---

A call waiting tone can be sent to a busy station while the calling station waits on line for an answer.

**To activate call waiting,**

- Make intercom call and receive busy signal.
- Dial \* 0 **1**. (Called and calling parties hear three short tone bursts.1,
- Wait on line for an answer.

**To cancel call waiting.**

- Hang up handset.

**To answer a call waiting tone,**

- Hear three short tone bursts over existing conversation.
- Complete present call or place it on hold.
- Hang up. Waiting call will begin ringing.
- **Lift** handset to answer.



---

## SERVICE OBSERVING

---

A station can be programmed by system class of service to allow the user to *monitor* a conversation *at another station in an un-announced and muted manner*.

- Press ITCM.
- Dial # 03.

- . Dial extension number of station to be monitored.
- Monitor the in-progress call.

To end observation,

- Press MNTR (SPKR).

---

## EXECUTIVE OVERRIDE

---

A station can be programmed by system class of service to allow the user to break into a conversation at another station.

- Make an intercom call, and hear busy signal.

- . Dial \* 03. A warning tone will sound at the called station.
- . Join in-progress call.

---

## ACCOUNT CODE OPERATION

---

Account codes are assigned by SMDA class of service programming and are used by the system to identify calls by category, or special grouping, for SMDA call reporting purposes. Enter an account code while on line either before an outgoing call is dialed, after the distant party has hung up, or during a call. Account code entry is voluntary. If it is not entered, an outgoing call will still go through or an incoming one can still be completed. To enter an account code, first either dial the entry code or press an ACCOUNT CODE button (**if** one is assigned by class of service programming). After doing this, dial the account code number.

### OUTGOING CALL

#### WITHOUT ACCOUNT CODE BUTTON

- Select line. Display on LCD speakerphone will prompt for account code entry if feature is active.
- Press **ITCM \* 0 4**. Line is automatically placed on hold.
- Dial account code. Listen for dial tone. If error tone sounds or error message shows on LCD, check account code for validity and re-enter correct code.
- Dial number to be called.

#### WITH ACCOUNT CODE BUTTON

- Select line. Display on LCD speakerphone will prompt for account code entry if feature is active.
- Press **ACCOUNT CODE** button. Associated LED will flash while system awaits account code entry. **It**

will turn off when account code is entered. It will also turn off after 10 seconds with no account code entry or if button is pressed a second time (to void entry requirement).

- Dial account code number. If error tone sounds or error message shows on LCD, check account code for validity and re-enter correct **code**.
- Dial number to be called.

### INCOMING CALL

#### WITHOUT ACCOUNT CODE BUTTON

- Answer call.
- Press **ITCM \* 0 4**. Incoming call is automatically placed on hold.
- Dial account **code**. **If** error tone sounds or error message shows on LCD, check account **code** for **validity** and re-enter correct **code**.
- Press line button to return to call.

#### WITH ACCOUNT CODE BUTTON

- Answer call.
- Press **ACCOUNT CODE** button and dial account **code** number anytime during call. If error tone sounds or error message shows on LCD, check account **code** for validity and re-enter correct **code**.

**NOTE:** *The ACCOUNT CODE button will only work when account codes have been programmed by SMDA class of service programming.*

---

## SPEAKERPHONE OPERATION

---

The optional speakerphone can use the previously described features in a handsfree manner. Handsfree calling and answering is as described below.

To place a call,

- Press line button or ITCM.
- Dial number or press programmable button.
- When party answers, speak toward the telephone.

To answer a call,

- Press a line button.

- Speak toward the telephone.

To end a call,

- Press SPKR.

To **switch** from speakerphone to handset,

- Lift handset.

To **switch** from handset to speakerphone,

- Press SPKR.
- Hang up handset.

---

## DEPARTMENTAL STATION OPERATION

---

When a station is within a departmental group of stations, the station user can place the station in either an off-duty or a wrap-up mode. In either mode the station will refuse an outside or transferred call. The call will then skip to the next station in the department.

To *place station* in **off-duty** mode, press DND button. Calls ring at another departmental station.

To return to **on-duty** mode, press DND again.

To *place station* in **wrap-up** mode, press SHIFT DND buttons. Calls ring at another departmental station.

To **return to** on-duty mode, press SHIFT DND again.

---

## STATION USER PROGRAMMING

---

### AUTODIAL PROGRAMMING

**Autodial** numbers can be programmed at any programmable button locations that do not have a line assigned to them. They can also be programmed as a secondary function at every **DSS/BLF** memory location. Typical **autodial** numbers are: frequently dialed telephone numbers or extension numbers, or frequently used host system or button system feature codes. When programming an **autodial** number, first decide over which line the call must be made. Then, determine the digits which normally have to be manually dialed to reach the called party or feature. This line selection and digit sequence can be stored as an **autodial** for later one or two-button access. **If** line pre-selection is not programmed, the system will automatically pick the prime line assigned to the telephone (if enabled), or pick the last used line at that station and place the call over that selection.

To program **autodial numbers**,

- Press **ITCM \* \* 1**.
- Press desired programmable button. Listen for fast tone bursts.

- Press specific line button, **ITCM** button, or dial 1 - 4 for line groups, to store line pre-selection.

**-OR-**

- If no line pre-selection is desired, dial 0 (system will choose last line used at calling station).
- Dial the number sequence to be stored. (Up to sixteen digits can be stored. Valid digits include 0 - 9, #, and \*).
  - To store a pause if required, press HOLD.
  - To store a hookflash if required, press TAP.

To store another number,

- Press **TRANS/CONF**.
- Press next programmable button.
- Make line pre-selection if desired.
- Dial number for storage.
- Repeat this procedure until all desired numbers are stored.

To end autodial programming,

- Press MNTR (SPKR).

## STATION SPEED DIAL PROGRAMMING

Station speed dial numbers can be stored by the station user for later redial. The storage locations are keypad digits 0 through 9 on the station. Before attempting to program, decide on the following **items**: (1) the number or feature to be stored, (2) which storage location will be used (0 - 9), (3) the circuit that the call will go over (individual line or intercom).

To **program numbers**,

- Press **ITCM \* \* 2**.
- Dial a memory location (0 through 9). Listen for fast tone bursts.
- **Press** specific line button, **ITCM** button, or dial 1 - 4 for line groups, to store circuit pre-selection.

-OR-

- \* If no circuit pre-selection is desired, dial 0 (system will choose last line used at calling station or prime line if one is assigned to calling station).
- Dial the number sequence to be stored. (Up to sixteen digits can be stored. Valid digits include 0 - 9, #, and \*.)
  - To store a pause if required, press **HOLD**.
  - To store a hookflash if required, press **TAP**.

**Example:** Store a telephone number under location 0. The number is **1(804)555-2222**. Program as follows:

**ITCM, \*, \*, 2, 0, Line Button, 1, 8, 0, 4, 5, 5, 2, 2, 2, 2.**

To **store another number**,

- Press **TRANS/CONF**.
- Press next speed dial location.
- Make line pre-selection if desired.
- Dial number for storage.
- Repeat this procedure until all desired numbers are stored.

To **end station speed dial programming**,

- Press **MNTR (SPKR)**.

## DIRECT STATION SELECTION/BUSY LAMP FIELD (DSS/BLF) PROGRAMMING

One-button intercom calling with visual indication of telephone status can be programmed as programmable buttons not assigned to lines.

To **program DSS**,

- Press **ITCM \* \* 3**.
- Press programmable button to be programmed as DSS button.
- Dial extension number.
- Repeat last two steps for all desired extension numbers.

To **end DSS programming**,

- Press **MNTR (SPKR)**.

*NOTE: An **autodial** number can also be programmed as a secondary function at every **DSS/BLF memory** location. See *Automatic Dialing instructions* for programming details.*

## PROGRAMMING AUTOMATIC REDIAL BUTTON

The system will allow the last previously dialed number to be automatically and repeatedly redialed for approximately ten minutes. A programmable button is defaulted to provide this feature. A different programmable button can be assigned for this function if desired.

To **program another programmable button for use as an automatic redial button**,

- Press **ITCM \* \* 1**.
- To remove function assignment,
- Press current assigned programmable button, then press **TRANS/CONF** button.
- Press desired programmable button to receive function. Listen for fast tone burst.
- Press #to assign function.
- Press **MNTR (SPKR)** to end.

## PROGRAMMING RESPONSE MESSAGE BUTTON

The system will allow a station user to make a non-verbal response to an intercom call or to a secure off-hook voice announcement. This response will provide a preprogrammed message for display at the calling station if it is an LCD speakerphone.

To **assign programmable button for non-verbal one-button response**,

- **Press ITCM \* \* 1**.
- Press desired programmable button.
- Dial 5.
- Dial message location number **(1-0)**.

*NOTE: The response message is preprogrammed and made available for use by attendant programming.*

- Press **MNTR (SPKR)** to end.
- Label button.

**PROGRAMMING ASSIST BUTTON**

- Press **ITCM** \* \* 1.
- Press desired programmable button.
- Dial 7.
- Dial 0 ■ 9 to choose preprogrammed message. See attendant for list of messages.  
**-OR-**
- Dial \* to choose system-provided message. (System message is: "**ASSIST**" plus name or extension number of station sending message. Name or extension is automatically added by system.)
- If one particular station must **always** receive message, dial extension number of that station.

- Press MNTR (**SPKR**) to end.
- Label button.

**PROGRAMMING SECURE OFF-HOOK VOICE  
ANNOUNCE ORIGINATE BUTTON**

- Press **ITCM** \* \* 1.
- Press desired programmable button.
- Dial 8.
- Press MNTR (SPKR) to end.
- Label button.

## SECTION 2 ATTENDANT STATION OPERATION

The attendant station provides additional operating features that are not available from other stations in the system.

---

### SYSTEM CLOCK

---

The system clock can be programmed to maintain current date and time information. This information is provided to the LCD speakerphone for display.

1. Press **ITCM**.
2. Dial \* # 0 1. .
3. Dial two digits (00-99) for yr.
4. Dial two digits (01-12) for mo.
5. Dial two digits (01-31) for day.
6. Dial two digits (00-23) for hr.
7. Dial two digits (**00-59**) for min.
8. Press **MNTR (SPKR)** to end.

---

### SYSTEM SPEED DIAL PROGRAMMING

---

A special system-wide list of numbers can be programmed for automatic dialing by all users.

1. Press **ITCM**
2. Dial \* # 0 2.
3. Dial 01 - 99 to chose storage location.
4. Dial #to clear current entry.
5. Choose line to be used:
  - Dial 90 for no line assignment (system will choose last line used at calling station or prime line if one is assigned to calling station).
  - Press buttons **A1 - A14** for lines 1-14 or dial **01 - 14**.
6. Dial the number to be stored (32 digits maximum).
  - Press **HOLD** to store pause (**if** required).
  - Press **TAP** to store flash (if required).
7. Press **TRANS/CONF** to save number.
8. Repeat steps 3 - 7 to store next number.
9. Press **MNTR (SPKR)** to end.

---

### NIGHT TRANSFER (of ringing)

---

The day, or normal, ringing assignments of incoming lines can be transferred to a particular station or stations (these line/station ringing assignments are chosen through class of service programming) for off-hour or special-purpose answering. Additionally, stations can be arranged through class of service programming, to be able to answer any ringing outside line. This line answer from any station action. is also enabled **with** the night transfer (of ringing).

1. Press **ITCM**.
2. Dial \* # 0 3.
3. Press **A1** (top, left-hand programmable button) to toggle feature on or off. Associated light will turn on when night transfer is active and turn off when **it** is inactive.
 

**OR**

  - Dial 1 to enable (AI LED turns on).
  - Dial 2 to disable (AI LED turns off).
4. Press **MNTR (SPKR)** to end.

*NOTE: When this feature is on, the **ITCM** light will flash.*

---

## MUSIC ON HOLD

---

Music that is provided to outside lines while they are on hold can be disabled and enabled by attendant action.

1. Press **ITCM**.
2. Dial \* # 0 4.
3. Press **AI** (top, left-hand programmable button) to toggle feature on and off. Associated light will turn

on when music on hold is provided and turn off when it is disabled.

**-OR-**

- Dial 1 to enable (AI LED turns on).
  - Dial 2 to disable (AI LED turns off).
4. Press **MNTR (SPKR)** to end.

---

## LCD MESSAGING

---

A message can be set at any station in the system to be displayed by any calling LCD speakerphone. Two standard messages are provided at locations 1 and 2 by system default. The attendant can create up to ten custom messages (or eight plus the default messages) as needed. If a non-verbal response to an intercom call or to a secure off-hook voice announce (SOHVA) is to be provided for station use, one or more LCD messages can be stored as appropriate response messages.

1. Press **ITCM**.
2. Dial \* # 0 5.
3. Dial 1 • 0 for message number.
4. Dial #to clear current message.
5. Refer to **Table 5-1**, and compose the message (16 digits maximum).

6. Dial all two-digit codes necessary to enter the message.

7. Dial \* and repeat steps 3 - 7.

Examples:

- For message "I am busy"
  - **Dial 3 # 43 12 24 64 12 25 85 76 96 \***
- For message "Call Back Later"
  - **Dial 4 # 232456561222242655125324 843575X**
- If default locations 1 and 2 have been cleared, return to default messages as follows
  - Dial 10 to obtain default message "BACK AT".
  - Dial 20 to obtain default message "CALL".

8. Press **MNTR (SPKR)** to end.

9. Make list of stored messages and location numbers to station users.

---

## STATION NAMES

---

Stations can be assigned individual names or category names which will be displayed by a calling LCD speakerphone. Typical names could be TECH-SV, SALES 1, J. Smith, etc.

1. Press **ITCM**.
2. Dial \* # 0 6
3. Select station to be programmed by dialing station port number 10 • 67.

4. Dial #to clear current name.

5. Refer to **Table 5-1**, and compose station name (7 digits maximum).

6. Dial all two-digit codes necessary for new station name.

7. Dial \* for next station and repeat steps 3 - 7.

- 8 Press **MNTR (SPKR)** to end.

**Table 5-1. Character Codes**

CHAR	CODE	CHAR	CODE	CHAR	CODE
A	21	a	24	Space	12
B	22	b	25	-	15
C	23	c	26	;	17
D	31	d	34	/	18
E	32	e	35	"	19
F	33	f	36	.	27
G	41	g	44	,	28
H	42	h	45	:	29
I	43	i	46	1	01
J	51	j	54	2	02
K	52	k	55	3	03
L	53	l	56	4	04
M	61	m	64	5	05
N	62	n	65	6	06
O	63	o	66	7	07
P	71	p	74	8	08
Q	11	q	14	9	09
R	72	r	75	0	00
S	73	s	76		
T	81	t	84		
U	82	u	85		
V	83	v	86		
W	91	w	94		
X	92	x	95		
Y	93	y	96		
Z	13	z	16		

---

## STATION MESSAGE DETAIL ACCOUNTING (SMDA) PRINTOUT

---

The attendant can command the system to print several different types of reports and to delete all stored SMDA records.

### 1. Press **ITCM**.

2. Dial \* # 0 7.

3. Choose report to be printed.

- . Dial 1 # for station report.
- . Dial 2 # for line report.
- . Dial 3 #for SMDA department report.
- . Dial 4 #for account code report.

- . Dial 5 #for automatic reports.
  - . Dial 6 #to print all records.
  - . Dial 7 #to delete SMDA records.
  - . Dial 0 # for Departmental Call Distribution (DCD) report.
  - . Dial 8 to obtain the number of free records remaining in the system.
  - . Dial 9 to abort printing.
4. Press MNTR (SPKR) to end.

---

## SYSTEM ALARM REPORTING

---

The attendant can command the system to present alarm codes on the station display. This feature is available to any LCD speakerphone when provided for by class of service programming.

To display alarm codes,

- . Press and hold \* for 5 seconds. The following status reports will be displayed:
  - . Station disconnected from station port for more than five minutes. Month, day, station port number, and station extension number are shown.  
Display shows: "**Mo/Da Pxx xxxx A**"

- . Communications difficulty between a station and the common equipment. The number of parity errors, up to 256, and the affected station port are shown.  
Display shows: "**xxx PAR/N Pxx "**"

- . Data printer off -line.  
Display shows: "**PRINTER OFF LINE**"

After the information has been shown on the display, the \* disappears until another alarm **occurs**.

---

## DIRECT INWARD STATION DIALING

---

The direct inward station dialing (DISD) feature allows an external party to call an intercom station directly without assistance by the attendant if the call is made over a line programmed for that purpose.

### To make a **DISD** call from an outside telephone,

1. Call is made on **DISD** line. Hear **ringback** tone.
2. **If call** is *answered*, ask for transfer to desired station. If ringing stops and dial tone sounds again, dial station extension number.  
**If called** station is id/e, confirmation tone is sounded and called station **rings**. **If** called station does not answer within transfer recall timeout period, call is returned to **DISD** dial tone.  
*If called station has call forward feature set, forward station rings.*  
**If called station is busy**, call is placed on hold and camped-on at busy station.  
**If camp-on is not answered within transfer recall**

*timeout period*, busy tone is given followed by **DISD** dial tone.

**NOTE:** The system will return the caller to **DISD** dial tone two additional **times** and then drop the line.

**If busy called station is part** of hunt group, **DISD** call is routed to **idle** station in hunt group if available; **otherwise**, call is camped-on at dialed station. Hunt group not followed in case of RNA.

*If invalid extension number is dialed*, error tone is sounded before **DISD** dial tone is returned.

**If mistake in dialing is made**, caller can dial \* for new **DISD** dial tone.

**NOTE:** The system will return the caller to **DISD** dial tone **two** additional times and then drop the line.

**If extension number dialing is not completed within programmed dial time limit**, call is routed to **DISD** assist station if available; otherwise, line is dropped.



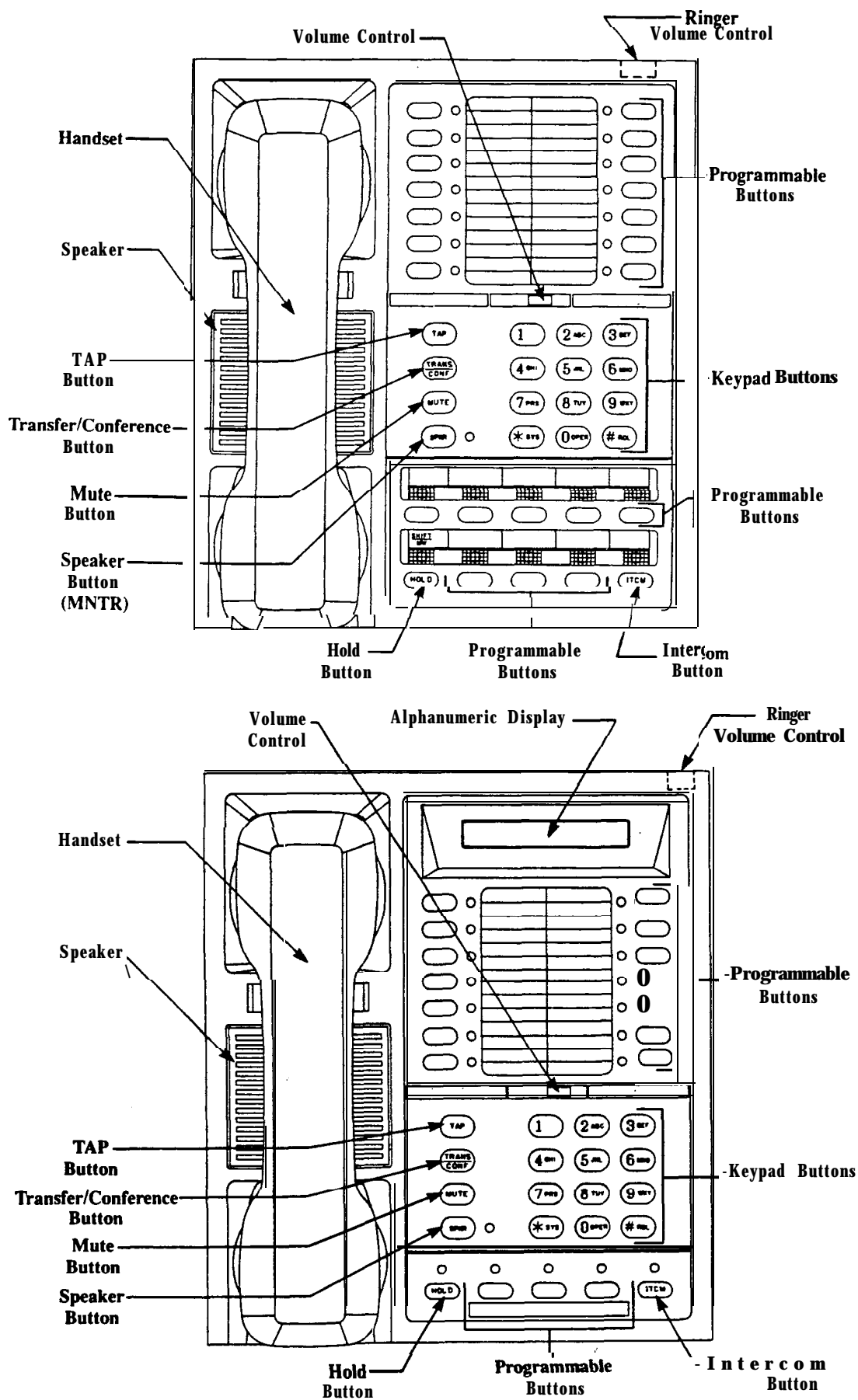


Figure 5-1. Controls and Indicators

### SECTION 3 SYSTEM OPERATING CHARACTERISTICS

#### FEATURE DIALING CODE NUMBERING PLAN

FEATURE		DIALING CODES
All Call Paae		ITCM 87
Attendant Calling		ITCM 0
Automatic Redialing		Programmed Button
Background Music	On	ITCM * 1
	off	ITCM # 1
Automatic Call Back	Activate	ITCM, Ext., * 6
	Cancel	ITCM # 6
Station-to-Station Messaging	A c t i v a t e	ITCM, Ext., * 7
	Cancel	ITCM, # 7, Ext.
LCD Messaging	Set	ITCM * 02 (1 - 0 )
	Cancel	ITCM # 02
Call Forward	Personal	ITCM * 05. Ext.
	Cancel	ITCM # 05
	All Calls	ITCM * 5, Ext.
	Cancel	ITCM # 5
Call Park	Orbit 91 - 99	ITCM * 191 - 99)
Park Pick Up		ITCM # (91 - 99)
call Pickup	Directed.	ITCM, * 4, Ext
	Group	ITCM # 4
Call Waiting Tone	Send	ITCM, Ext., * 01
	Cancel	Hang up
Do Not Disturb	set	Programmed Button
	Cancel	Programmed Button
I Executive Override		I ITCM, Ext., * 03
External Page		ITCM 89
Handsfree Answer Inhibit	Set	MUTE
	Cancel	MUTE
Hold	Manual	HOLD
	Exclusive	HOLD, HOLD
	Direct	ITCM * 90, Ext.
	Direct Hold Piiup	ITCM # 90

Continued on next page

## NUMBERING PLAN • continued

FEATURE		DIALING CODES
Line Answer From Any Station		ITCM 80
Line Group Access	Group 1	ITCM 9
	Group 2	ITCM 81
	Group 3	ITCM 82
	Group 4	ITCM 83
Line Queuing	Enable tine	HOLD
	Enable Line Group	ITCM (Group code) * 8
	Cancel	ITCM # 8
Meet Me Answer (Paging)		ITCM 88
Message Waiting	Set	ITCM * 3, Ext.
	Cancel From Idle	ITCM # 3, Ext.
	Cancel On tine	ITCM
	Retrieve Message	ITCM, HOLD
Night Transfer (Attendant Station )	On	ITCM * # 03 (A1 )
	Off	ITCM * # 03 (A1)
Personal Ringing Tones	Set Tone 1 • 4	ITCM * * 4 (1 - 4)
Pulse/Tone Switching		#
Saved Number Redial	Use	HOLD, Programmed Button
	Store	Programmed' Button
Service Observing		ITCM # 03, Ext
Speed Dial	Station	1 - 0
	System	* 01-99
Redial (Last Dialed Number)		#
Voice Announce Block	Block	* 2
	Unblock	# 2
Zone Page	Zone 1	ITCM 84
	zone2	ITCM 85
	Zone 3	ITCM 06

## RINGER VOLUME CONTROL

Each station has a ringer volume control. Depending upon the model, the ringer control is located on the front edge, rear edge, or bottom of the telephone. Adjust the control lever to OFF, LOW or HIGH volume as desired.

## STATUS INDICATORS AND TONE SEQUENCES

The following pages describe the light and ring patterns associated with system operation.

*NOTE: The values shown are typical. They are provided for illustration purposes only.*


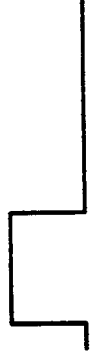
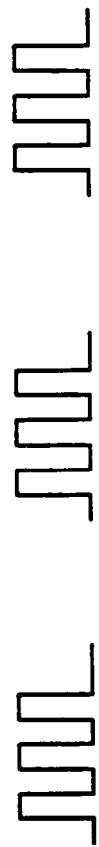
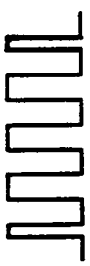


## DISPLAY INTENSITY

The intensity (brightness and contrast) of the liquid crystal display readout, included on some digital telephones, can be adjusted to a desired operating level at any time that the telephone is idle and on-hook.






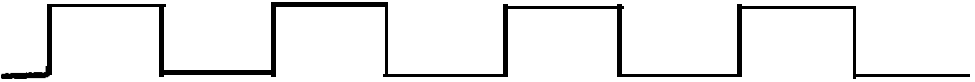
### To adjust the display Intensity,



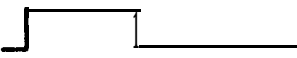


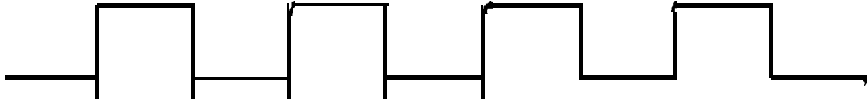



- Press and hold the **MUTE** button until the desired intensity is achieved.

**SYSTEM RINGING PATTERNS**

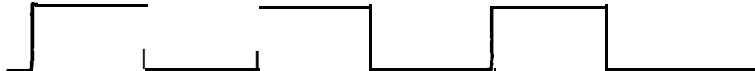



CO/PBX Line Ring	Host system ring cadence	RING CADENCE DEPENDENT UPON HOST SYSTEM
Intercom Tone Signalling	Two 150 msec. tone bursts sounded every 4 seconds	
Voice Signalling alert	One 215 msec. tone burst	
Timed hold recall at station that put call on hold	Three 150 msec. tone bursts sounded at the end of each timeout period	
Call back alert	One 80 msec. tone burst followed by three 150 msec. tone bursts and one 80 msec. tone burst	
Queue Enabled	One 80 msec. tone burst	
Call forward alert	Two 1.1 sec tone bursts sounded every 4 seconds	

**INTERCOM CALL PROGRESS TONES**  
 (Heard through handset **receiver** or over **monitor** speaker)



Dial Tone	Continuous on	
Called station ring-back	One sec. on and 3 sec. off.	
Base level <b>program entry</b>	80 msec. tone burst sounded once	
Error tone- <b>incorrect</b> entry	<b>530</b> msec. tone burst sounded three times	
All-call and zone paging <b>notification</b> tone	80 msec. tone burst followed by 280 msec. tone burst	
Busy tone	530 msec. tone bursts sounded continuously	
Override feature not allowed		
<b>Night</b> transfer feature not allowed		

Call waiting tone	Three 80 msec. tone bursts sounded once	
Called station in do-not-disturb mode	140 msec.tone burst sounded twice every 1.5 sec.	
Call-back busy feature on	260 msec. tone burst sounded once	
System is awaiting memory dial number or key mapping entry after location is specified	80 msec. tone bursts sounded continuously	
Override feature on • warning tone	Six 100 msec tone bursts sounded for 1.5 sec.	
SOHVA tone		
ISD ringback tone	Dual 440/480 Hz tone sounded 1 sec.on/1 sec off	
ISD dial tone	381 Hz tone sounded continuously	
ISD confirmation tone	Two 125 sec. bursts of 381 Hz tone sounded once	
ISD busy/error tone	Three 500 msec. bursts of 381 Hz tone sounded once	


LINE SELECT LIGHTS

Idle	Steady off	
Ringing	Continuous flash (560 msec. on • 560 msec. off)	
In use-your station	Steady on with wink off (2.3 sec. on 70 msec. off)	
In use-other station	Steady on	
On hold-your station	Winking with repeative off periods (winking rate • 560 msec. off)	
On hold other station	Continuous winking (490 msec. on • 70 msec. off)	
Exclusive hold	Steady on	

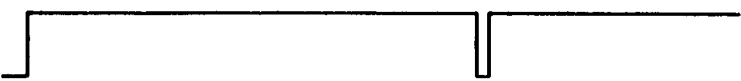





Held call timeout your station	Flutter with repetitive off periods (flutter rate - 560 msec. off)	
Held call timeout other station	Continuous flutter (70 msec. on - 70 msec. off)	

**MESSAGE WAITING LIGHT**





Message Wafting	Continuous flash (560 msec. on - 560 msec. off)	
-----------------	-------------------------------------------------	-------------------------------------------------------------------------------------

**INTERCOM LIGHT**





In use-your station	Steady on with wink off (2.3 sec. on - 70 msec. off)	
Auto redial active		
Messaging display		
Night mode • Station 10 and 12	Flutter with repetitive off periods (flutter rate - 560 msec. off)	

27 - c

**BLF LIGHTS**

LCD messaging	Continuous flutter (70 msec. on - 70 msec. off.)	
DSS station idle	Steady on	
DSS station busy on outside line or intercom line	Steady on	
DSS station in do not disturb mode		

**SPEAKER LIGHT**

On line and speaker on (mike also on if speakerphone)	Steady on	
Background music on		
Mute or Handsfree Answer Inhibit	Continuous flutter (70 msec. on - 70 msec. off.)	
Active Line plus Mute	Flutter with repetitive off periods (flutter rate - 500 msec. off)	

## CHAPTER 6 MAINTENANCE

### TECHNICAL ASSISTANCE AND REPAIR SERVICE

#### TECHNICAL ASSISTANCE

Should you experience difficulty with installation, checkout, or programming, and have made an attempt to isolate the problem using information provided herein; or should you encounter problems at a later date which cannot be resolved by referring to this manual, call the **Comdial** Technical Service staff. They can be reached at 1-800-366-8224 between the hours of 8:00 AM and 8:00 PM Eastern time, Monday through Friday.

When calling for technical assistance, you should be at the job site and you should have in your possession, as a minimum, an accurate volt-ohm meter and a copy of this manual.

#### REPAIR SERVICE

If your common equipment cabinet or an individual station needs repair, it may be returned to Comdial. Comdial will, at their option, either repair the defective equipment or replace it with a remanufactured unit. This repair will be done for a fixed charge. For information on this charge, please call or write to the address given below.

Comdial  
P.O. Box 7266  
Charlottesville, VA 22906  
Attention: Repair Department  
Telephone: (804) 978-2400  
1-800-877-4448

When returning equipment for repair, pack it carefully to prevent damage. Any damages during shipment will be the responsibility of the purchaser. The equipment should be shipped freight or postage prepaid. The shipping address is:

**Comdial**  
1180 Seminole Trail  
Charlottesville, VA 22901  
Attention: Repair Department

#### FUSE LOCATION

The system is protected against short circuit damage by a slow-blow fuse located on the right side of the common equipment cabinet. Always replace the fuse with one of the same value and type, otherwise, equipment damage could result.

- 4-Line, **8-Station** Base Unit - 1 A, 250V Slow-Blow
- **8-Line, 16-Station** Base Unit - **3A**, 250V Slow-Blow
- 1 B-Line, 32-Station Base Unit - **3A**, 250V Slow-Blow

#### WIRING

Refer to Chapter 3, Section 4, *Checkout and Failure Isolation*, for instructions for testing the system wiring and components for possible failure.

#### STATION WALL MOUNTING

No conversion is required to prepare a digital telephone to be hung on the wall. Two keyhole shaped slots are available on the bottom housing which enable a digital telephone to be either mounted directly on a wall using two, **#10, panhead** screws (obtained locally), or mount on a wall jack cover plate. **if mounted using a wall jack cover plate, an AT&T type 6308 wall plate is recommended for best results.**

1. If **#10** screws are used, thread them into the wall within **1/8-inch** of the surface. Refer to Figure 6-1 for the spacing dimensions.
2. Turn the telephone over and remove the plastic tab that is molded into the housing. It is located at the lower right-hand corner of the housing.
3. Position the keyhole shaped holes in the bottom of the station over the **#10** screws or the cover plate studs. Slide the station down until a slight click is **felt**.
4. Insert the plastic tab that was removed from the lower housing in step 2 into the handset **cavity**. This tab provides a secure retention for the handset when it is hung up.
5. To remove the station, lift up to unsnap both screws or studs from the bottom housing, and iii the station away from the wall.

Wall Plate — Or — #10 Screws  
, *NOTE: AT&T 630B Wall Plate is Recommended  
For Secure Mount.*

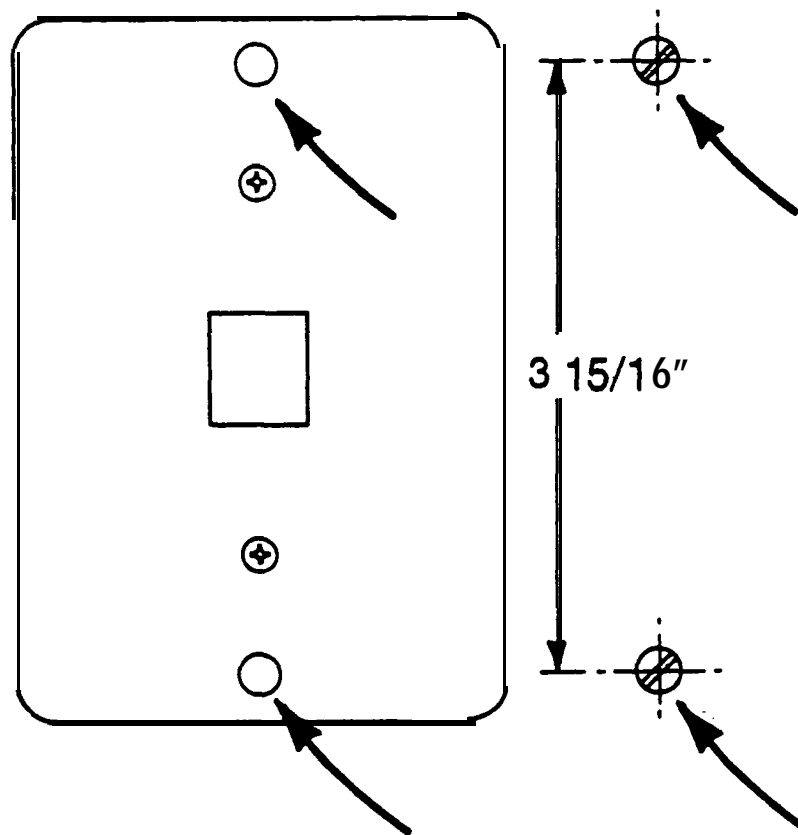


Figure 6-1. Station Wall Mounting Details

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Please Tape — Do Not Staple

Made right in the USA  
**COMDIAL**

Cut Along Line

Fold



NO POSTAGE  
NECESSARY  
IF MAILED  
IN THE  
UNITED STATES

**BUSINESS REPLY MAIL**  
FIRST CLASS MAIL PERMIT NO.594  
CHARLOTTESVILLE, VA 22906

POSTAGE WILL BE PAID BY ADDRESSEE

**COMDIAL**  
**TECHNICAL PUBLICATIONS DEPARTMENT**  
**P O BOX 7266**  
**CHARLOTTESVILLE VA 22906-7266**



Fold

Cut Along Line

Please Tape — Do Not Staple

# TECHNICAL ADVISORY BULLETIN

Date: January 1993

Issue: TAB 099

## SOFTWARE ENHANCEMENTS FOR THE DigiTech DIGITAL TELEPHONE SYSTEM

This bulletin discusses the following software enhancements and feature additions to the DigiTech telephone system:

- Enhanced SMDA reporting
- Expanded options for account code entry
- Support for Caller ID service

Availability of these enhancements is as follows:

### BASE UNIT PRODUCT CODE

GO408 All Revisions

GO81 6 All Revisions

**G1632** All Revisions

### SOFTWARE CARTRIDGE PRODUCT CODE

SO408 Rev. 13a and later

SO816 Rev. 13a and later

S1632 Rev. 13a and later

Note: Due to the addition of a new account code table, you should follow these steps when updating software in the field:

1. Save current database
2. Install new software
3. Master clear system
4. Restore database
5. Perform additional programming, if desired

### FEATURE AND BENEFIT

This section describes the major features and benefits of this software enhancement, including programming information.

#### FEATURE

#### BENEFIT

**SMDA Reporting  
Through VDT  
Programming and  
Per-Station SMDA**

A menu selection has been added so that SMDA reports can now be requested from VDT programming and can be sent to either port A or port B. This feature can be used remotely to capture SMDA reports; as well, SMDA station reports can now be requested per station. Note, however, that only one station report can be requested at a time. The Class of Service programming requirements for SMDA reporting are as follows:

### **STATION 10 PROGRAMMING**

1. Press **ITCM \* # 7 4 6 \*** to enter COS programming
2. Dial 07 for SMDA reports
3. Dial **1** for station reports
4. Dial **station number** and then press **#**, or press # for all stations

<b>FEATURE</b>	<b>BENEFITS</b>
<b>SMDA Reports (cont.)</b>	<p><b><u>VDT COS PROGRAMMING</u></b></p> <p>Enter COS programming</p> <ol style="list-style-type: none"> <li>1. Enter 1 for "System COS"</li> <li>2. Enter 8 for "SMDA Programming"</li> <li>3. Enter 11 for "SM DA Reports"</li> <li>4. Enter selection for desired report: <ul style="list-style-type: none"> <li>- press 1 for Selected Station Reports</li> <li>- press 2 for Station Reports</li> <li>- press 3 for Account Reports</li> <li>- press 4 for Line Reports</li> <li>- press 5 for Departmental Reports</li> <li>- press 6 for All Detail Records</li> <li>- press 7 for Departmental Calling Distribution Reports</li> <li>- press 8 to Display Number of Free Records</li> <li>- press 9 to Delete Records (After Next Print)</li> <li>- press 10 to Start Printing Report</li> <li>- press 11 to Stop Printing Report</li> <li>- press 12 to Return to Previous Menu</li> </ul> </li> </ol>
<b>SMDA Record Storage Capacity</b>	<p>DigiTech systems have the following SMDA record storage capacities:</p> <p>SO408 = 800 records  SO816 = 1600 records  <b>S1632</b> = 1600 records</p>
<b>SMDA Reports with Caller ID Information</b>	<p>Refer to Figure 3 in this Technical Advisory Bulletin (under the Caller ID heading) for an example of an SMDR printout with Caller ID information for incoming calls.</p>
<b>Forced Account Code Option</b>	<p><b>ACCOUNT CODES AND ACCOUNT CODE VERIFICATION</b></p> <p>The Account Code feature has been enhanced so that account code entry may be either forced or optional for outgoing calls. When account code verification is enabled, the system compares the account code entered by a station user with the programmed account entries. If the system does not find a match and the forced account code feature is enabled through class of service programming, the system prevents further dialing until the user enters a matching account code. For account code verification to work properly, the system programmer must maintain (within the system) a current list of valid account codes.</p> <p>When a station user activates redial and auto-redial features for outgoing calls, the system will automatically <b>re-use</b> the last account entered at that station. Additionally, users may enter an account code before seizing a line for an outgoing call.</p> <p><b>ACCOUNT CODE LENGTH, VERIFIED ACCOUNT CODE LENGTH AND VALID ACCOUNT CODES</b></p> <p>Account Code Length defines the number of digits that a user must enter before the system will accept the code. Account code length can range from 3 to 16 digits but may never be set lower than the current Verified Account Code Length.</p> <p>Verified Account Code Length defines the number of digits that will be verified before a verified account code will be accepted. As well, Verified Account Code Length defines the number of</p>

**Account Codes (cont.)**

**BENEFITS**

valid account codes that can be stored (as shown in the following table). Be aware that when you change the Verified Account Code Length, the list of Valid Account Codes is emptied.

<b>Digits Verified</b>	<b>Number of Valid Account Codes</b>
<b>3</b>	<b>1000</b>
<b>4</b>	<b>400</b>
<b>5, 6</b>	<b>266</b>
<b>7, 8</b>	<b>200</b>
<b>9, 10</b>	<b>160</b>
<b>11, 12</b>	<b>133</b>
<b>13, 14</b>	<b>114</b>
<b>15, 16</b>	<b>100</b>

**ACCOUNT CODE MESSAGE DISPLAY TIME**

When account codes are enabled, LCD telephones will prompt users with an "account code" message, which is cleared at the end of the programmable display time. If the account codes are forced and the call is outgoing, then the line is dropped at the end of the display time if a valid account code is not entered. Valid range for the display time is 1 to 20 seconds. If display duration is ever set for zero seconds, time-out for account code entry prior to the line being dropped defaults to 5 seconds.

**ACCOUNT CODES AND EMERGENCY NUMBERS**

When the Forced Account Codes feature is enabled, emergency numbers may be dialed without account code entry. You may define up to three programmable emergency numbers. Minimum length of an emergency number is 1 digit; maximum length is 12 digits. Users may dial emergency numbers manually, or through system speed dial, personal speed dial, last-number redial, or automatic redial -- with or without account code entry.

**ACCOUNT CODE ENTRY**

Users may enter account codes after they select a line, or they may enter the code without selecting a line at all. When a code is entered without line selection, the code will apply to any line subsequently selected at that station for the next call attempted manually or through automatic redial, system speed dial, personal speed dial, or last number redial.

If an Account Code button is programmed at the telephone, the user can press this button for automatic account code entry. If no such button is programmed, the user must press **ITCM** and then dial \* 0 4. The prompt "Account Code" will appear on the top line of the telephone's LCD. The user then enters account code digits to be verified, followed by any additional digits necessary to make up the required length of the account code.

If the system is set for Verified Account Codes, a verification attempt will be made after the entire code has been entered. Failure by the system to verify the code will cause "Error" to display in the LCD. The user may re-enter account code digits at this point. If the verification attempt is successful (or if the system does not require that the code be verified), the LCD will return to the normal display of date and time.

A user may clear an account code stored at a programmable button by pressing the Account Code button twice, or by pressing **ITCM \* 0 4 SPKR**.

FEATURE	BENEFITS
Account Codes (cont.)	<b><u>ACCOUNT CODE FEATURE DEFAULTS</u></b>
	Account Code Feature : <b>Off</b>
	Verified/Non-Verified : Verified
	Forced/Optional : Optional
	Prompted/Non-Prompted : Prompted
	Prompt Display Duration : 5 seconds
	Station Exceptions to Forced : None
	Emergency Numbers: : None
	Valid Account Codes : None
	Account Code Length : <b>3</b>
	Verified Account Code Length : 3

### **STATION 10 PROGRAMMING**

1. Press **ITCM** \* # 7 4 6 \* to enter COS programming

2. Press 7 5 for SMDA programming

*To set account codes,*

- . Press 0 5
- . Dial number of account digits
- . To enter another number, press **#**, then dial digits

*To clear account codes,*

- . Press 0 6
- . Dial number of account code digits
- . To enter another number, press **#**, then dial digits

*To enable or disable account codes,*

- . Press 0 7
- . Press **AI** to toggle the feature on and off (AI LED on = account codes enabled)
- or-
- . Press **1** to enable account codes, 2 to disable account codes

*To set verified or unverified account codes,*

- Press 0 8
- . Press **AI** to toggle the feature on and off (AI LED on = verification on)
- or-
- . Press **1** to enable verification, 2 to disable verification

*To set maximum account code digits,*

- . Press 0 9
- . Dial number of digits (3 ▪ 16)

*To set the account code display time,*

- . Press **1 0**
- . Dial **1** ▪ 20 to select new display time (in seconds)

FEATURE	BENEFITS
Account Codes (cont.)	<p><b><u>STATION 10 PROGRAMMING (cont.)</u></b></p> <p><i>To enable or disable the account code prompt for incoming calls,</i></p> <ul style="list-style-type: none"> <li>. Press 1 1</li> <li>. Press A1 to toggle feature on and off (A1 LED on = feature enabled for incoming calls)</li> </ul> <p style="text-align: center;">-or-</p> <ul style="list-style-type: none"> <li>. Press 1 to enable prompt for incoming, 2 to disable prompt for incoming</li> </ul> <p><i>To set the number of account code digits to be verified,</i></p> <ul style="list-style-type: none"> <li>. Press 1 5</li> <li>. Dial 3 ■ 16 for number of digits to be verified</li> </ul> <p><i>To set emergency numbers (which will not require account codes for dialing),</i></p> <ul style="list-style-type: none"> <li>. Press 1 6</li> <li>. Dial emergency number (up to 12 digits)</li> <li>. To enter another emergency number, press #, then dial number</li> </ul> <p><i>To clear emergency numbers,</i></p> <ul style="list-style-type: none"> <li>. Press 1 7</li> <li>. Dial emergency number (up to 12 digits)</li> <li>. To clear another number, press #, then dial number</li> </ul> <p>3. Press * * for configuration mode</p> <p>4. Press 5 3 for station features Press 3 5 for <b>Optional/Forced</b> Account Codes</p> <p><i>To set all stations to forced account codes,</i></p> <ul style="list-style-type: none"> <li>. Press A1</li> <li>. Enter station number(s), <b>if</b> any, of station(s) to be "Exception(s) to Forced" (i.e., they will have optional account codes)</li> </ul> <p><i>To set all stations to optional account codes,</i></p> <ul style="list-style-type: none"> <li>. Press A2</li> <li>. Enter station number(s), <b>if</b> any, of station(s) to be "Exception(s) to Optional" (i.e., they will have forced account codes)</li> </ul> <p>5. Enter * * for configuration mode</p>



**FEATURE**  
Account  
Codes (cont.)

**BENEFITS**  
**VDT COS PROGRAMMING**

1. Enter COS programming
2. Enter 1 for system COS programming
3. Enter 8 for SMDA programming
4. Enter 6 for account codes

*To set account codes,*

- . Enter **1**
- . If the Verified Account Code Length is 3, the system will prompt you to "Enter Account Codes (0 - 999)"
  - . Type in valid account code(s), delimited by commas  
If you enter fewer than three digits, the system will assume leading zeros
- . If the Verified Account Length is between 4 and 16, the system will respond "Table is Full" (if all possible account codes are stored) or "Enter Account Code"
  - . If the prompt "Enter Account Code" appears, type in only one valid account code (the system will respond with "Command Accepted" and will allow subsequent account code entry)
  - . If you type in more or less than the number of digits specified as the verified account code length, the system will respond with " . \*\* Command Rejected . \*\* "

*To clear account codes,*

- . Enter **2**
- . If the Verified Account Code Length is 3, the system will prompt you to "Enter Account Codes (0 - 999)"
  - . Type in valid account code(s) to be deleted, delimited by commas  
If you enter fewer than three digits, the system will assume leading zeros
- . If the Verified Account Length is between 4 and **16**, the system will respond "Table is Empty" (if there are no valid account codes in the **list**) or "Enter Account Code"
  - . If the prompt "Enter Account Code" appears, type in only one valid account code (the system will respond with "Command Accepted" and will allow immediate subsequent account code entry)
  - . If you type in more or less than the number of digits specified as the verified account code length, the system will respond with " . \*\* Command Rejected . \*\* "

*To enable optional account codes (with verification),*

- . Enter **3**

*To enable optional account codes (without verification),*

- . Enter **4**

*To enable forced account codes (with verification),*

- . Enter **5**

*To enable forced account codes (without verification),*

- . Enter **6**

FEATURE	BENEFITS
Account Codes (cont.)	<b>V D T C O S P R O -</b>
	<p>To disable account codes,</p> <ul style="list-style-type: none"> <li>. Enter 7</li> </ul>
	<p>To enable account code display for incoming calls,</p> <ul style="list-style-type: none"> <li>. Enter 8</li> </ul>
	<p>To disable account code display for incoming calls,</p> <ul style="list-style-type: none"> <li>. Enter 9</li> </ul>
	<p>To enable account codes display for outgoing calls,</p> <ul style="list-style-type: none"> <li>. Enter 1 0</li> </ul>
	<p>To disable account code display for outgoing calls,</p> <ul style="list-style-type: none"> <li>. Enter 1 1</li> </ul>
	<p>To set the account code message display time,</p> <ul style="list-style-type: none"> <li>. Enter 1 2</li> <li>. Type in display time (1-20 seconds)</li> </ul>
	<p>To set the maximum account code length,</p> <ul style="list-style-type: none"> <li>. Enter 1 3</li> <li>. Type in account code length (3 - 16 digits) -- this number must be greater than or equal to the number of digits to verify</li> </ul>
	<p>To set the number of <b>account</b> code digits to verify,</p> <ul style="list-style-type: none"> <li>. Enter 1 4</li> <li>. Enter Y to prompt "Change Deletes All Verify Account Codes" "Are you sure you want to do this (Y/N) ?"</li> <li>. Enter account code length to verify (3 - 16 digits) -- this number must be less than or equal to maximum account code length</li> </ul>
	<p>To set emergency numbers (which will not require account codes for dialing),</p> <ul style="list-style-type: none"> <li>. Enter 1 5 (If there are already three emergency numbers stored, system will respond "Table is Full," in which case you will need to clear emergency numbers before entering a new number -- see below)</li> <li>. Type in the emergency number (1 - 12 digits)</li> </ul>
	<p>To clear previously stored emergency numbers,</p> <ul style="list-style-type: none"> <li>. Enter 1 6 (If there are no emergency numbers already stored, system will respond "Table is Empty")</li> <li>. Type in the emergency number to be cleared (1 - 12 digits)</li> </ul>

**FEATURE****BENEFITS****Account  
Codes (cont.)****VDT COS PROGRAMMING (cont.)**

To display a list of stored emergency numbers,

- . Enter **1 7** (if there are no emergency numbers already stored, the system will respond "Table is Empty")

To return to the previous menu during programming,

- . Enter **1 8**

To print out all information pertaining to account code programming,

- . Enter COS programming
- . Enter **1** for System COS
- Enter 6 for COS Data Printout
- . Enter 7 for Toll Restriction Data Printout; the system will print the status of the following parameters:

Verified/Non-Verified  
Account Code Length  
Verified Account Code Length  
Account Code Display Duration  
Account Code Display for Incoming -- Enable/Disable  
Account Code Display for Outgoing -- Enable/Disable  
Emergency Numbers  
Valid Account Codes

- . Enter 5 for All Station COS Data Printout; the system will print the status of "Forced Account Code at Station"

*Note: If Account Code Length is greater than eight **digits**, SMDA reports by station and by account will print in a two-line format. Also, SMDR and SMDA reports will include the Caller ID number in the number field for incoming calls. The Caller ID number will be **preceded** by a slash to distinguish it from outgoing digits.*

**Support for  
Caller ID Service****GENERAL INFORMATION**

Caller ID data is sent from the Central Office along lines assigned to the Caller ID service. Caller ID information is displayed at a station only if the station is assigned to the Caller ID service, and then only for Caller ID lines at that station which:

- . ring audibly
- . are answered by pressing the ringing line
- . are transferred to the station

Caller ID data for a call is received at a station between the first and second rings. Through programming, you can enable the first ring for a line assigned to Caller ID to be either audible or silent. Selecting the "silent" option insures that the Caller ID data is displayed prior to ringing, which nearly eliminates the loss of Caller ID data due to premature answering.

**AUTOMATICALLY DIALING CALLER ID NUMBERS**

Station users may automatically retrieve and dial the last Caller ID number displayed at a station by using a preprogrammed SAVE recovery button. Because you can store the local area code and up to 100 local office codes, ten-digit Caller ID numbers can automatically be transformed into a **dialable** format (seven-, eight-, and eleven-digit Caller ID numbers are already **dialable** and do not need to be transformed).

**FEATURE**

**BENEFITS**

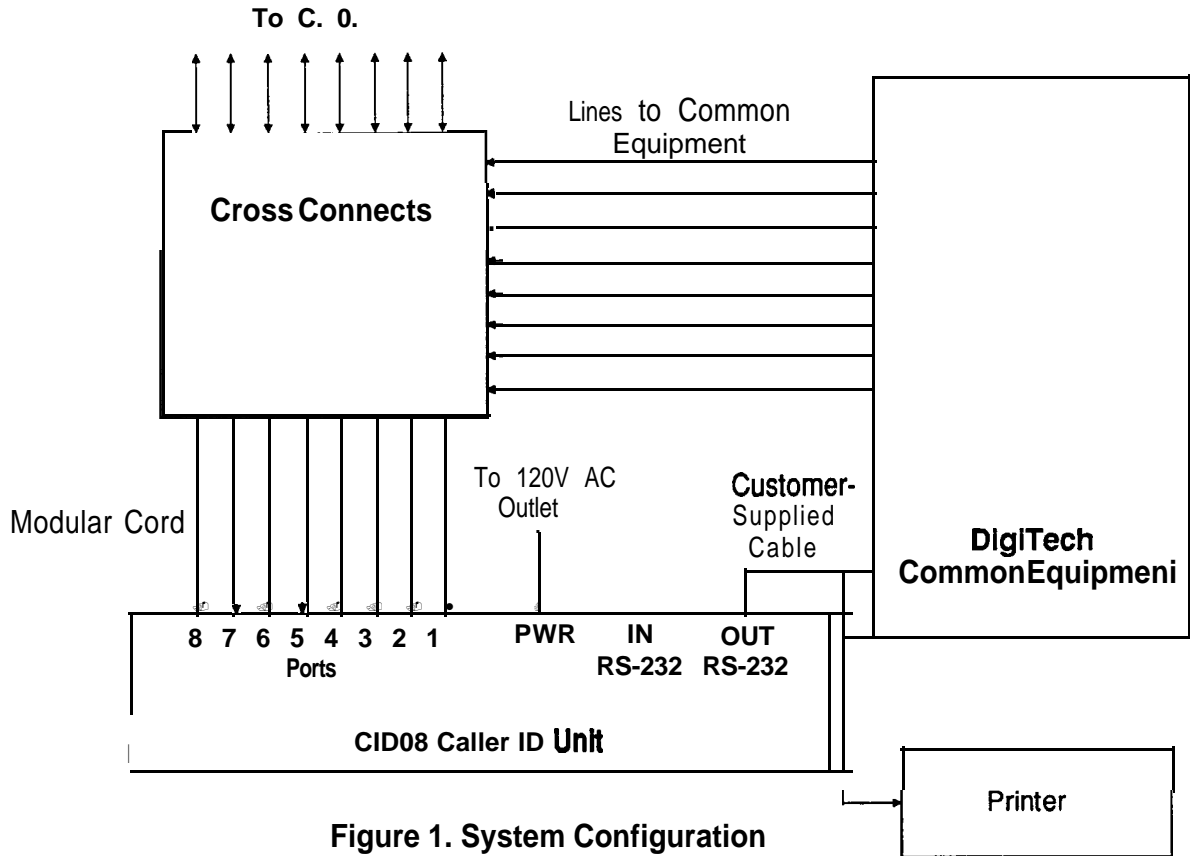
**Caller ID (cont.)**

**INSTALLATION NOTES**

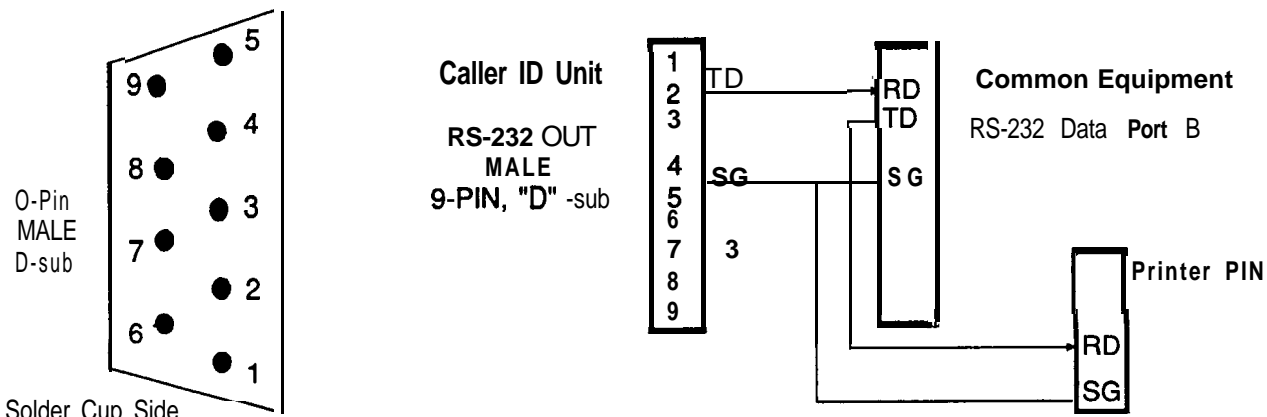
All Caller ID features require the delivery of Caller ID data to the input Port B. This port must be configured to match the output of the Caller ID decoder device. The recommended configuration is 9600 baud, with eight data bits and one stop bit. You can configure the port either from the terminal Class of Service programming menus, or from station 10 or 12.

You have the option to provide Caller ID Distribution through the **RS-232** port (Port B), over which SMDR information is delivered. Caller ID Distribution is in the form of messages which specify the Caller ID data for lines with incoming calls, and identify the stations answering such lines. The data is in ASCII, formatted for use with PC-based application programs.

Figure 1 shows system configuration. Figure 2 illustrates the Printer-to-Port B connection.



**Figure 1. System Configuration**



**Figure 2. Caller ID Unit and Printer to Common Equipment Through Data Port B**

**FEATURE****BENEFITS**

Caller ID (cont.)

**STATION 10 PROGRAMMING**

1. Press **ITCM** \* # 7 4 6 \* to enter COS programming
2. To assign Caller ID lines,
  - . Press 47
  - . Dial line number(s)
3. To assign Caller ID stations,
  - . Press 5 3 for Station Features
  - . Press 3 6 for Caller ID stations
  - . Dial station number(s)
4. To set the Audible First Ring feature,
  - . Press 1 7
  - . Press 0 1 for Audible First Ring Option
  - . Press 1 to silence the first ring on Caller ID lines
  - . Press 2 to enable Audible First Ring
5. To set the Caller ID Distribution feature,
  - . Press 1 7
  - . Press 0 2 for the Caller ID Distribution Option
  - . Press 1 to disable Caller ID Distribution
  - . Press 2 to enable Caller ID Distribution to Port B
6. Press \* \* for configuration mode

**VDT PROGRAMMING**

1. Enter COS programming
2. Enter 2 for Line COS
3. Enter 1 3 for Caller ID assignments
  - To assign Caller ID service to lines,*
    - . Enter 1
    - . Dial line number(s)
  - To remove Caller ID service from lines,*
    - Enter 2
    - . Dial line number(s)
  - To assign Caller ID service to stations,*
    - . Enter 3
    - . Dial station number(s)
  - To remove Caller ID service from stations,*
    - Enter 4
    - . Dial station number(s)

FEATURE	BENEFITS
Caller ID (cont.)	<b><u>VDI PROGRAMMING (cont.)</u></b>
	<p>To define your local area code,</p> <ul style="list-style-type: none"> <li>. Enter 5</li> <li>. Enter Y if displayed area code is correct</li> </ul> <p style="text-align: center;"><b>or</b></p> <ul style="list-style-type: none"> <li>. <b>Enter N</b> if displayed area code is incorrect, then enter the correct three-digit area code</li> </ul>
	<p>To define your local office codes,</p> <ul style="list-style-type: none"> <li>. Enter 6 <ul style="list-style-type: none"> <li>. Enter 1 to define a new local office code, then enter six sigits or five digits plus a <b>wildcard</b> character (#)</li> <li>. Enter 2 to delete the local off ice code last displayed</li> <li>. Enter 3 to display the next office code</li> <li>. Enter 4 to display all local off ice codes in list</li> <li>. Enter 5 to return to previous menu</li> </ul> </li> </ul>
	<p>To set the Audible first Ring option,</p> <ul style="list-style-type: none"> <li>. Enter 7</li> <li>. Enter 0 to silence first ring on Caller ID lines</li> </ul> <p style="text-align: center;"><b>or</b></p> <ul style="list-style-type: none"> <li>. Enter <b>1</b> to enable Audible First Ring</li> </ul>
	<p>To set the <b>Caller ID Distribution</b> option,</p> <ul style="list-style-type: none"> <li>. Enter 8</li> <li>. Enter 0 to disable Caller ID Distribution</li> </ul> <p style="text-align: center;"><b>or</b></p> <ul style="list-style-type: none"> <li>. Enter <b>1</b> to enable Caller ID Distribution to SMDR port</li> </ul>
	<p>To return to previous menu,</p> <ul style="list-style-type: none"> <li>. Enter 9</li> </ul>
	<p>To set terminal printout of line and station Caller ID assignment status,</p> <ul style="list-style-type: none"> <li>. Enter COS programming</li> <li>. Enter <b>1</b> for System COS</li> <li>. Enter 6 for COS data printout <ul style="list-style-type: none"> <li>. Enter 3 for ALL line COS data</li> <li>. Enter 4 for SELECTED line COS data, then enter line number</li> <li>. Enter 5 for ALL station COS data</li> <li>. Enter 6 <b>for</b> SELECTED COS data, then enter station number</li> </ul> </li> </ul>

### Caller ID Records SMDR Printouts

Figure 3 (following page) provides an example of an SMDR printout with Caller ID information for incoming calls (preceded by a slash in the "Called or Calling #" column).

Continued on next page . . .

	Sta #	Line #	Date	Time	call length	Ans time	Called or Calling #	call cost
(1)	1000	12	10/15/92	04:38	0.1		1234567890123456	\$ 0.51
(2)	12	3	10/15/92	00:56	0.2		99736243	
(3)		1	10/15/92	00:56	NOANS	.2	/973 3437	
(4)	10	1	10/15/92	00:56	0.1	.1	/973 3437	
(5)		4	10/15/92	01:00	NOANS	.2		
(6)	10	4	10/15/92	01:00	0.1	.0		
(7)	10	1(D)	10/15/92	04:23	0.2	.1	/9733694	\$ 0.00
(8)	10	1(D)	10/15/92	04:19	0.2	.1		\$ 0.00

- (1) outgoing call
- (2) outgoing call
- (3) unanswered incoming call, with caller ID
- (4) answered incoming call, with caller ID
- (5) unanswered incoming call, without caller ID
- (6) answered incoming call, without caller ID
- (7) answered incoming **DISD** call, with caller ID
- (8) unanswered incoming **DISD** call, without caller ID

Figure 3. Sample SMDR Printout



# TECHNICAL ADVISORY BULLETIN

Date: JUNE 1992

Issue: TAB091A

## SOFTWARE ENHANCEMENTS FOR THE DIGITECH DIGITAL TELEPHONE SYSTEM

This bulletin discusses the software enhancements and feature additions for the DigiTech digital telephone system that are available with software releases 10 and 11 A.

### Software release 10 provides the following enhancements:

- Additional dial time for the **DISD** option
- Changed defaulted first choice signalling style for intercom calls
- Supports both on-hook and off -hook call announcing from speakerphones
- Enhanced secure off -hook voice announce operation
- Expanded personal ring tone choice
- Simplified hybrid operation
- Support for DigiTech telephones **with** a revision letter of I or later

### Software release 11A provides all of the above enhancements plus the following additional ones:

- Enhanced automatic call back
- Support for digital single-line proprietary telephone
- Support for **ExecuMail** voice processing system

Availability of these enhancements is as follows:

SYSTEM	BASE UNIT PRODUCT CODE	SOFTWARE CARTRIDGE PRODUCT CODE
CO408	GO408 All Revisions	SO408 Rev. 11 a and later
CO81 6	GO81 6 All Revisions	SO81 6 Rev. 11 a and later
CI632	G1632 All Revisions	S1632 Rev. 11 a and later

### FEATURE AND BENEFIT

The major feature and benefit of these software enhancements are per the following discussion.

FEATURE	BENEFIT
<b>Additional dial time for the DISD option</b>	With this software release, the digital telephone system provides an additional dial time limit for the Direct Inward Station Dialing (DISD) option. When a caller does not finish dialing an extension number within the programmed dial time limit, the system routes the call to the assist station if one is programmed; <b>otherwise</b> , it drops the line. Previous software provided dial time limit choices of <b>6, 9, 12</b> , and 15 seconds. This software release adds a 30 second dial time limit to the list of programmable choices.
<b>Changed defaulted first choice signalling style for Intercom calls</b>	Intercom calls can be tone signalled or voice signalled. The first choice in signalling is programmable; however, previous software defaulted the choice to voice first signalling. This software release changes the default setting to the tone first choice.



FEATURE	BENEFIT						
<b>Supports both on-hook and off-hook call announcing from speakerphones</b>	With previous software, users were required to lift the handset of a speakerphone before they could make a voice <b>signalled</b> intercom call. This software release allows a station user to perform either a on-hook or an-off-hook call announce from a speakerphone.						
<b>Enhanced secure off-hook voice announce</b> operation	This software enhancement makes <b>it</b> possible for a station user to make a secure off-hook voice announcement (SOHVA) to a station that he or she is currently service observing. Although a programmer can disable the SOHVA feature when necessary, every DigiTech telephone can send and receive SOHVA calls as a system default, he or she must enable the service observe feature before a user can make use of it.						
<b>Expanded personal ring tone choice</b>	The system provides a group of distinctive tones for station ringing. A station user can choose a tone from this group to provide a distinctive ring at his or her telephone. Often when several telephones are located close to each other, each user chooses a different personal ring tone. Previous software provided four different tone choices. This software enhancement increases the distinctive ring tones to six. The personal ring tone choices now provided include the following distinctive tones: <table border="0"> <tr> <td>1. 666/571 Hz @ 16 Hz warble</td> <td>4. 1000/800 Hz @ 23 Hz warble</td> </tr> <tr> <td>2. 1000/800 Hz @ 16 Hz warble</td> <td>5. 500/444 Hz @ 16 Hz warble</td> </tr> <tr> <td>3. 666/571 Hz @ 23 Hz warble</td> <td>6. 500/444 Hz @ 23 Hz warble</td> </tr> </table>	1. 666/571 Hz @ 16 Hz warble	4. 1000/800 Hz @ 23 Hz warble	2. 1000/800 Hz @ 16 Hz warble	5. 500/444 Hz @ 16 Hz warble	3. 666/571 Hz @ 23 Hz warble	6. 500/444 Hz @ 23 Hz warble
1. 666/571 Hz @ 16 Hz warble	4. 1000/800 Hz @ 23 Hz warble						
2. 1000/800 Hz @ 16 Hz warble	5. 500/444 Hz @ 16 Hz warble						
3. 666/571 Hz @ 23 Hz warble	6. 500/444 Hz @ 23 Hz warble						
<b>Simplified hybrid operation</b>	In the past, the Federal Communications Commission (FCC) has required that telephone system manufacturers provide a hardware strap that installers could move to distinguish between hybrid system and key system operation. The DigiTech system provided this strap at either the <b>J1</b> station connector or at a special terminal strip (depending upon the system model). The installer strapped two terminals together at either the <b>66M-xx</b> station connector block or at the special terminal strip to select the hybrid mode. Recent rulings by the FCC have eliminated the need for the hardware strap. <b>With this software release, whenever the programmer assigns lines to line groups the DigiTech system automatically assumes the hybrid mode.</b> The hybrid system mode may still incur a higher monthly tariff to the <b>telephone</b> company; therefore, the FCC still requires that the installer report the equipment-type category designation number (KF for key system, MF for hybrid system) to the telephone company at the time of installation.						
<b>Enhanced automatic call back</b>	Prior to this software release, a station user could only camp on to a station that was busy on the intercom line. With this software release 11 a, a user can also camp on to a station after calling on the intercom line and receiving no answer.						
<b>Support for DigiTech telephones with a revision letter of I or later</b>	With the release of <b>the</b> revision I models, Comdial has enhanced the design of the DigiTech telephones. These enhanced telephones require changes to the system software that this release provides.  All revision I DigiTech Telephones provide red, orange, and green light emitting diodes ( <b>LEDs</b> ). Red <b>LEDs</b> indicate which lines are in use at another station. Green <b>LEDs</b> indicate which lines are in use or on hold at a station. An orange LED indicates a ringing line thus distinguishing between lines that are on hold and a line that is ringing. Additionally, all revision I DigiTech telephones provide pushbutton volume control on their front panels and a group listening feature. <b>Withgroup</b> listening, a user can <b>turn</b> on the telephone speaker while the handset is off hook.  The <b>7700S-** 24-line</b> , LCD speakerphone provides enhanced displays that prompt users on the operation of the many system features available to them. The LCD speakerphone provides three interactive buttons that provide quick easy access to system features and <b>straight-forward</b> button programming without dialing codes. It also includes an auxiliary jack on the rear panel where the installer or the user can connect devices such as headsets, tape recorders, external ringers and external pagers.						

FEATURE	BENEFIT
Support for <b>DigiTech</b> telephones with a revision letter of I or later • <b>continued</b>	<p>There are several items that the installer/programmer needs to consider when installing the revision I and later DigiTech telephone to a DigiTech system. These items are detailed below.</p> <ul style="list-style-type: none"> <li>✓ While the DigiTech system with software release 11 a and later supports the use of all DigiTech telephones regardless of their revision letter, any systems with a software release of 9 or earlier will not support the revision I and later telephones. In other words, whenever a system includes revision I or later telephones, be sure that the system software release is 11 a or later.</li> <li>✓ Always program station ports to provide ringing line preference to revision I and later telephones that are connected there. This action is necessary before the orange LED feature can become active.</li> <li>✓ The auxiliary jack will only serve the external device listed in the telephone display and will only serve one of those devices at a time. The user must program a separate enable/disable button for each external device that he or she plans to connect to the auxiliary jack. The installer must provide external power for the auxiliary device if it requires power. The telephone does not supply any power to the device through the auxiliary jack. The auxiliary jack is a source of audio output from the telephone and is not designed to receive signals or power from an external device or a telephone line. Do not connect the output of an external device or the tip and ring leads of a telephone line to the auxiliary jack. Do not connect any devices other than those mentioned in the telephone users guide to the auxiliary jack.</li> </ul>
Support for <b>single-line</b> proprietary telephones	<p>With this software release, the DigiTech digital telephone system provides support for the <b>Comdial</b> proprietary single-line digital telephone (product code <b>7701X-**</b>). The system automatically recognizes the 7701 <b>X-**</b> telephone when the installer connects it to a station <b>port</b>. This means that the system programmer does not have to take any special programming steps to allow the <b>7701X-**</b> telephone to operate. He or she can use any of the station programming described in the system manual provided with the telephone system to adjust the parameters of the station port as they are needed. Publication <b>GCA70-232</b>, <i>Proprietary Single-Line Telephone User's Guide</i> provides complete instructions for using the 7701 <b>X-**</b> telephone</p>

FEATURE	BENEFIT
Support for ExecuMail voice processing system	<p>With software release 1 la, the <b>DigiTech</b> digital telephone system supports the use of the ExecuMail voice processing system connected to the system's station ports through the Comdial ATI-D analog terminal interface. The ATI-D is a <b>multipurpose on-premise</b> accessory for the digital telephone system. It has dual circuits that allow the ExecuMail to interface to two station ports. Refer to Comdial publication <b>IM189-037, Installation Instructions For The Analog Terminal Interface (AT/-D)</b> for complete details for using the ATI-D to interface between the digital telephone system and the <b>ExecuMail</b> system. In addition to the required programming task of identifying the ExecuMail station ports as voice mail ports, there are several other programming considerations associated <b>with</b> the ExecuMail operation that the programmer can make whenever their options are wanted.</p>

#### VOICE MAIL PORT (Required)

The programmer must identify the station ports where the installer has connected the ExecuMail system. Identifying them as voice mail ports enables the digital telephone system to recognize them as such for proper call handling. Use the following programming feature to enable the station port for ExecuMail operation.

*NOTE: The digital telephone system automatically disables this feature if an installer replaces the **ATI-D** with a multiline telephone at the programmed station port.*

To program this feature, press **ITCM \* # 7 4 6 \*** then do the following steps:

*NOTE: The station that is being used for programming cannot be programmed as a voice mail port.*

1. Dial 63.                                    "**STATION FEATURES**"
2. Dial 32.                                    "**VOICE MAIL PORT \***"
3. Select station ports to be programmed:
  - station 1 1 - 57: Dial 11 - 67.
4. Press SPKR to end.

#### **AUTOMATIC ATTENDANT (Option)**

With the automatic attendant feature, the ExecuMail system automatically answers any line that is ringing at a voice mail port. As a default, the system automatically enables ringing line preference for any port the programmer identifies as voice mail ports. The programmer must choose a ringing assignment for the lines assigned to the voice mail port before the ExecuMail system can provide the automatic attendant feature.

To program this feature, press **ITCM \* # 7 4 6 \*** then do the following steps:

#### **Direct Ringing**

1. Dial 64.                                    "**STALINE CONFIG**"
2. Dial 1.                                     "**DIRECT RING \***"
3. Select line ports for direct ringing:
  - line port **1-14 = Dial 01 -140**press **AI - A14,**
  - line port **15, 16 = Dial 15, 16** or press **B1, B2,**
  - line port 17 - 24 = Dial 17 - 24 ( or press **HOLD** then press **AI - A8**).
4. Dial # when all line ports are selected.

*Continued on next page . . .*

FEATURE  
**Support for ExecuMail voice processing system**  
**- continued**

BENEFIT

5. Select station ports to be programmed:  
station 1 **1-57** = dial **11** • **57**.
6. Dial \* when all station ports are selected.
7. Dial \* \* for next station/line ringing assignment or press **SPKR** to end.

Delayed Ringing

1. Dial 54. **"STALINE CONFIG."**
2. Dial 2. **"DELAY RING "**
3. Select line ports for delayed ringing:
  - line port 1-14 = Dial 01 - 14 or press **AI** - A14,
  - line port **15, 16** = Dial **15, 16** or press **B1, B2.**,
  - line port 17 - 24 = Dial 17 - 24 (or press HOLD then press AI - A8).
4. Dial # when all line ports are selected.
5. Select station ports to be programmed:
  - station 1 **1- 57**: Dial **11** • **57**.
6. Dial \* when all station ports are selected.
7. Dial \* \* for next station/line ringing feature or press SPKR to end.

Night Transfer (of ringing)

1. Dial 54. **"STALINE CONFIG"**
2. Dial 3. **"NIGHT RING"**
3. Select line ports:
  - line port 1-14 = Dial 01 - 14 or press **AI** - **A14**,
  - line **port 15, 16** = Dial **15, 16** or press **B1, B2**,
  - line port 17 - 24 = Dial 17 - 24 (or press HOLD then press AI - A8).
4. Dial # when all line ports are selected.
5. Select station ports to be programmed:
  - station 11 - 57: Dial 11 - **57**.
6. Dial \* when all station **ports** are selected.
7. Dial \* \* for next station/line ringing feature or press SPKR to end.

**AUTOMATIC TRANSFER OF VOICE MAIL (Option)**

The programmer can choose the immediate transfer mode for voice mail transfers. However, **if** he turns on the screen **and/or** confirm options provided by the **ExecuMail** system, he must not choose the immediate transfer mode because it allows the system to transfer a call as soon as it answers **it** precluding any screen and confirm action that the ExecuMail can provide.

To program this feature, press **ITCM \* # 7 4 6 \*** then do the following steps:

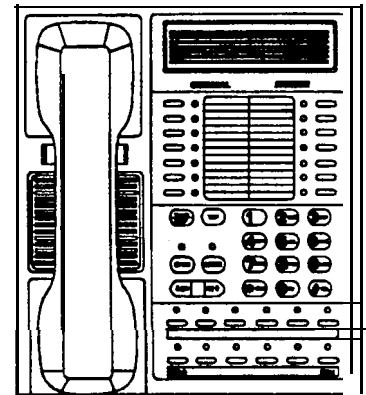
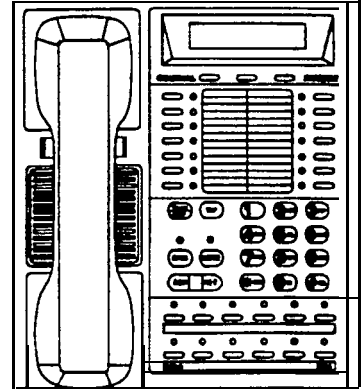
1. Dial 25 **"V MAIL AUTO XFER"**
2. Press **AI** to toggle between enable and disable (LED On = Enable) or dial **1 to enable** (AI LED on) and dial 2 to disable.
3. Press SPKR to end.

Continued on next page . . .

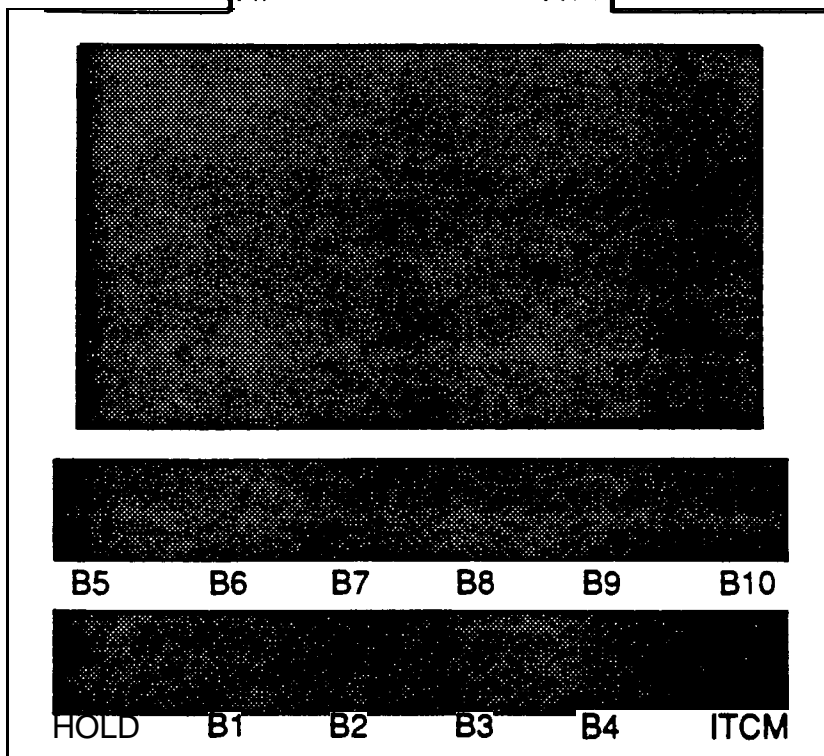
FEATURE	BENEFIT
<p>Support for ExecuMail voice processing system • continued</p>	<p><b>HUNT GROUPS (Option)</b></p> <p>When a station port that has been assigned to a hunt group is busy, a call to it will ring at the next idle station port in the group. A call will try to ring every port in a hunt group and if all are busy, the telephone system will return a busy tone to the caller. A programmer can assign all ExecuMail ports to a circular hunt group to take advantage of its multiple-port interface capability. Make a circular hunt group by linking all ExecuMail ports to one another and then linking the last ExecuMail port in the hunt group with the first ExecuMail port in the group. For example, with the ExecuMail connected at station ports <b>013, 014, 015,</b> and 016, place <b>port 013</b> in a hunt group and link 014 to it, then place 014 in a hunt group and link 015 to it, then place 015 in a hunt group and link 016 to it, and finally place 016 in a hunt group and link 013 to it to complete the circle. <b>With</b> this arrangement, a call will first try to ring at port 013, then try port 014 and so forth until it tries all four ports.</p> <p>To program this feature, press <b>ITCM * # 7 4 6 *</b> then do the following steps:</p> <ol style="list-style-type: none"> <li>1. Dial 53.                                <b>"STATION FEATURES"</b></li> <li>2. Dial 18.                                <b>"ITCM HUNT LINK"</b></li> <li>3. Select first linking station:    • station 11 • 57: Dial <b>11 - 57.</b></li> <li>3. Select second linking station:    station 11 • 57: Dial <b>11 - 57.</b></li> <li>4. Dial <b>*</b> for another link or press <b>SPKR</b> to end.</li> </ol> <p><b>VOICE MAIL LINE ID (Option)</b></p> <p>The programmer can program the ExecuMail lines with identification (ID) numbers that allow the ExecuMail system to identify which line it is answering. The ID numbers that the programmer assigns here must match the ID numbers that are selected as part of ExecuMail system programming.</p> <p>To program this feature, press <b>ITCM * # 7 4 6 *</b> then do the following steps:</p> <ol style="list-style-type: none"> <li>1. Dial 43.                                <b>"VOICE MAIL LN ID"</b></li> <li>2. Select line port:    • line port 1-14 = Dial <b>01 • 14</b> or Press <b>Al • A14,</b>    • line port <b>15, 16</b> = Dial <b>15, 16</b> or press <b>B1, B2,</b>    • line port 17-24 = Dial <b>17 • 24</b> (or press <b>HOLD</b> then press <b>Al • A8).</b></li> <li>3. Dial #to clear current ID.</li> <li>4. Dial ID number (6 digit maximum).</li> <li>5. Press <b>SPKR to end.</b></li> </ol> <p><b>VOICE MAIL TRANSFER ON BUSY (Option)</b></p> <p>The programmer can arrange the system to alert a busy telephone that the ExecuMail system is attempting to transfer a call to it instead of having it automatically route the call to a voice mail box. He or she can use this programming feature to program a station (usually the attendant station) for this option.</p> <p>To program this feature, press <b>ITCM * # 7 4 6 *</b> then do the following steps:</p> <ol style="list-style-type: none"> <li>1. Dial 53.                                <b>"STATION FEATURES!"</b></li> <li>2. Dial 31.                                <b>"VMAIL XFR ON BSY".</b></li> <li>3. Select station ports to be programmed:    • station 11 • 57: Dial <b>11 - 57.</b></li> <li>4. Press <b>SPKR to end.</b></li> </ol>

**STATION 10 • PROGRAMMING OVERLAY**

- . Cut out along border.
- . Cut out shaded openings.
- . Fit over station faceplate.



A1		A0
A2		A9
A3	<b>PP013-100</b>	A10
A4	DIGITECH	A1 1
A5	(REV 1 OR HIGHER)	A1 2
	PROGRAMMING	
	OVERLAY	
A6		A13
A7		A14





# TECHNICAL ADVISORY BULLETIN

Date: July 1991

Issue: TAB080

## SOFTWARE ENHANCEMENTS FOR THE DigiTech DIGITAL TELEPHONE SYSTEM

This bulletin discusses the following software enhancement and programming clarification for the DigiTech digital telephone system:

- Support for dual 32-button consoles
- Button mapping **with** a DigiTech **7700S-xx** LCD speakerphone

Availability of this enhancement is as follows:

SYSTEM	BASE UNIT PRODUCT CODE	SOFTWARE CARTRIDGE PRODUCT CODE
CO 408	GO408 All Revisions	SO408 Rev. 9 and later
CO816	GO816 All Revisions	SO816 Rev. 9 and later
CI 632	G1632 All Revisions	S1632 Rev. 9 and later

### FEATURE AND BENEFIT

The major feature and benefit of the revision 9 software enhancement is per the following discussion.

FEATURE	BENEFIT
<b>Dual Console Feature</b>	The dual console feature allow users of <b>DigiTech</b> telephone systems to have two <b>32-button</b> consoles (product code <b>DD32X-xx</b> ) assigned to one telephone. This feature is especially useful when used with a DigiTech CI632 system that has one or two CM408 expansion modules included with it. The dual console feature allows a station user to monitor up to 48 stations from one station location. The first <b>32-button</b> console automatically complements the telephone at the port that is logic-paired with the port that the console occupies. Install the second <b>32-button</b> console at any station port and, using COS programming, assign it as a second console to the same station port that is paired with the first console. The dual console should not be placed at station ports 10 or 11.

DigiTech station ports are logic-paired asfollows:

10-11	26-27	42-43
<b>12-13</b>	<b>28-29</b>	44-45
14-15	30-31	46-47
16-17	32-33	<b>48-49</b>
18-19	34-35	SO-51
20-21	36-37	52-53
22-23	<b>38-39</b>	54-55
24-25	-40 -41	56-57

Station ports are as follows:

Potts 10 through 17 on **4-line**, *g*-station base unit  
Potts **10** through 25 on **8-line, 16-station** base unit  
Ports **10** through 47 on **16-line, 32-station** base unit  
Ports 42 through 57 on **16-line, 32-station** base unit  
with two **4-line, g**-station expansion modules

Continued on next page. . .

**FEATURE**

**BENEFIT**

ii  
Console  
Feature  
- continued

The first console (the one installed at the logic-paired port) extends the **autodial** buttons of the paired telephone by 32 and provides DSS/BLF coverage for station ports 10 through 41. Additionally, the first console provides COS programming buttons C10 through C41 when needed. Refer to the programming overlay that is included at the end of this publication.

The second console (the one installed at the programmed station port) provides DSS/BLF coverage as follows:

- On a CI 632 with two CM408 expansion modules, the first 16 buttons are automatically assigned (defaulted) to station ports 42 through 57.
- On a CI 632 with one CM408 expansion module, the first 8 buttons are automatically assigned (defaulted) to station ports 42 through 49.
- On any other smaller station capacity system, all buttons are unassigned.
- All 32 buttons on the second console are programmable for DSS and/or **autodial** use.

The second console provides COS programming buttons C42 through C57 when needed. Refer to the programming overlay that is included at the end of this publication.

It is important to remember that when a second-console assignment is made or cleared, the console button mapping and **autodial** values are reset to match the default values, or any previously programmed ones, for the active feature. This means that when the second-console feature is cleared, the console installed at that port complements the telephone that is installed at the logic-paired port instead of the one at the port set with the second-console programming. The console buttons are **automatically** reassigned (defaulted) to stations 10 through 41 or to the maximum station number on system. Figure 1 illustrates a typical dual console configuration.

A second console can be installed and programmed without having a first console installed at a logic-paired port. The button assignment is automatically defaulted for a second console but can be reprogrammed as required. This configuration is convenient for adding a console to an existing telephone installation that already has the logic-paired port occupied. Do not use this configuration for station ports 10 and 12 because the console buttons will not be usable for programming.

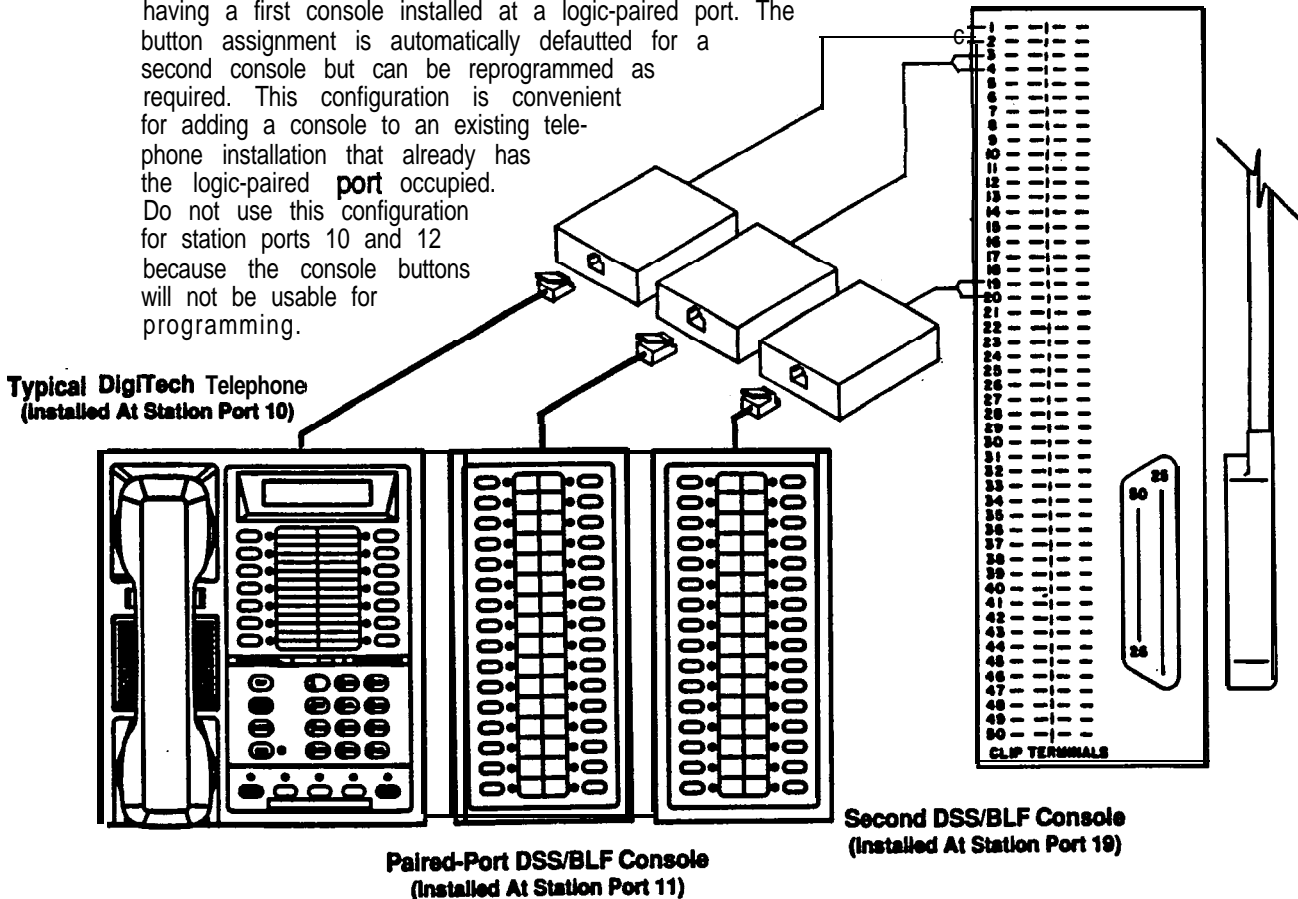


Figure 1. Dual Console Wiring

Continued on next page. . .



**FEATURE****BENEFIT**

Dual  
Console  
Feature  
▪ continued

**STATION 10 PROGRAMMING**

To program a station port for the second-console feature,

1. Press **ITCM** and dial \* # 7 4 6 \* **CONFIG. MODE**
2. Dial 53 for station features.      *STATION FEATURES*
3. Dial 34 for second console.      *SECOND CONSOLE*
4. Assign console to station.
  - Type console port number then type station port number that console is to be assigned to.
5. Press **SPKR** (MNTR) to end.

To clear a second-console feature assignment,

1. Repeat steps 1 through 3 above.
2. Type console port number twice.
3. Press **SPKR** (MNTR) to end.

**VDT PROGRAMMING**

To program a station port **for the** second-console feature,

1. Type | \* 7 4 6 \* and press RETURN
2. Type 3, RETURN for Station COS.
3. Type 10, RETURN for Miscellaneous Feature Programming.
4. Type 20, RETURN for Assign Second DSS Console to a Station.
5. Type 1, RETURN to assign second DSS console to a station.
6. Type console **port** number.
7. Type station port number of assigned station.

To **clear a** second-console **feature**,

1. Repeat steps 1 through 5 above.
2. Type 0, RETURN to clear previous assignment.
3. Type console port number.

**PROGRAMMING CLARIFICATION**

The programming clarification is per the following discussion.

**CLARIFICATION****DESCRIPTION**

**Button Mapping  
With DigiTech  
7700S-xx LCD  
Speakerphones**

When programming the button mapping on a DigiTech telephone using a DigiTech **7700S-xx** LCD speakerphone as the programming station, press buttons **A1 - A4** and **B1 - B3** to select those same buttons on the telephone being mapped. Because the DigiTech **7700S-xx** LCD speakerphone does not provide buttons B4 through B8, dial 103 - 107 to select buttons **B4 - B8** on the telephone being mapped.

STATION 10 - PROGRAMMING OVERLAY

- Cut out along border.
- fit over station faceplate.

PP016-000  
PROGRAMMING OVERLAY, DD32X

C25	C41
C24	C40
C23	C39
C22	C38
C21	C37
C20	C36
C19	C35
C18	C34
C17	C33
C16	C32
C15	C31
C14	C30
C13	C29
C12	C28
C11	C27
C10	C26

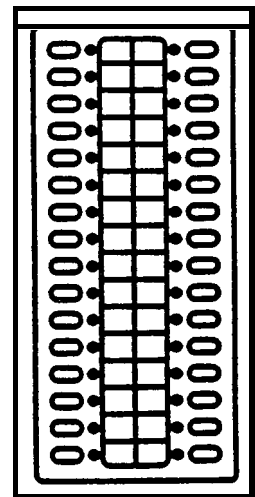
PAIRED-PORT  
CONSOLE

C25	C41
C24	C40
C23	C39
C22	C38
C21	C37
C20	C36
C19	C35
C18	C34
C17	C33
C16	C32
C15	C31
C14	C30
C13	C29
C12	C28
C11	C27
C10	C26

PAIRED-PORT  
CONSOLE (SPARE)

C57	
C56	
C55	
C54	
C53	
C52	
C51	
C50	
C49	
C48	
C47	
C46	
C45	
C44	
C43	
C42	

PROGRAMMED  
DUAL CONSOLE



32-BUTTON DSS/BLF  
CONSOLE  
DD32X-xx