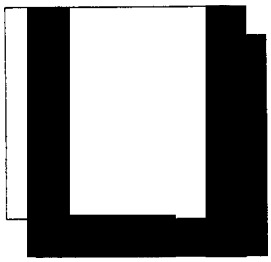
ExecuTech

Model 2000 Telephone System

System Manual

This publication is applicable to the following common equipment:
Model E34PT Rev. A and later
Model E60PT Rev. A and later
Model E80PT Rev. A and later

COMDIAL
Made right in the USA



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1. Introducing The ExecuTech 2000

1.1 Using This Book

This manual for the ExecuTech 2000, IMI 66-068, provides step-by-step instructions for installing and programming the system. We have designed the manual with you, the installer/programmer, in mind, and we have tried to "walk you through" all of the steps needed to fully install and program the ExecuTech 2000. If you are the least bit unsure about installing the system, read through this book at least ***once*** before you begin any installation. Remember, it' s much easier to reread a section of the manual than it is to reinstall a telephone system (cheaper too).

IMI 66-068 contains five chapters, each of which has a unique purpose.

- Chapter One introduces the 2000 and explains how to use this manual
- Chapter Two covers installation and checkout
- Chapter Three focuses on programming-perhaps the most important aspect of the installers job. The telephone system is capable of a great deal, but you must program it to meet the user' s needs.
- Chapter Four contains records for all of your programming decisions. Use ***this chapter!*** When the time comes for you to troubleshoot or reprogram the system, you will be glad to have a record of what you have done.
- Chapter Five lists all of the system' s features and gives brief descriptions of how the features work. We recommend that you read through this chapter before you do anything. There may be new features you never knew existed, and of course you want to be positive that the feature you **are** installing is exactly what the customer wants.

Do not underestimate the benefits of reading and ***really*** digesting this manual-it can save you a lot of time, countless headaches, and maybe even a customer' s business.

1.2 Using Related Publications

We have not included some information, such as expansion module installation or general user information, in this publication, but it can be found in related publications that are available from the manufacturer.

Refer to the following list for relevant information.

1.2.1 General Information

- IMI 01-001 Compliance Requirements To FCC Rules and Regulations Part 68 and 15
- IMI 01-005 Handling Of Electrostatically Sensitive Components

1.2.2 User Information

- GCA 70-l 14 Attendant' s Guide
- GCA 70-l 15 Station User' s Guide
- GCA 70- 130 Quick Reference Guide

. IMI 89-025 Add-On Expansion Module Installation Instructions

1.3 Getting To Know The 2000

The ExecuTech 2000 telephone system is an expandable communications system that provides dozens of different features and programming options. We have designed the system so that you, the installer, can customize the operations to fit each customer' s individual telephone needs. Each system consists of Hardware and Software. The common equipment cabinet and telephones, for example, are considered hardware. The software determines what functions you can program into the system Figure 1.1 illustrates all of the possible connections for the 2000. For further information on programming, see Chapter 3 of this manual.

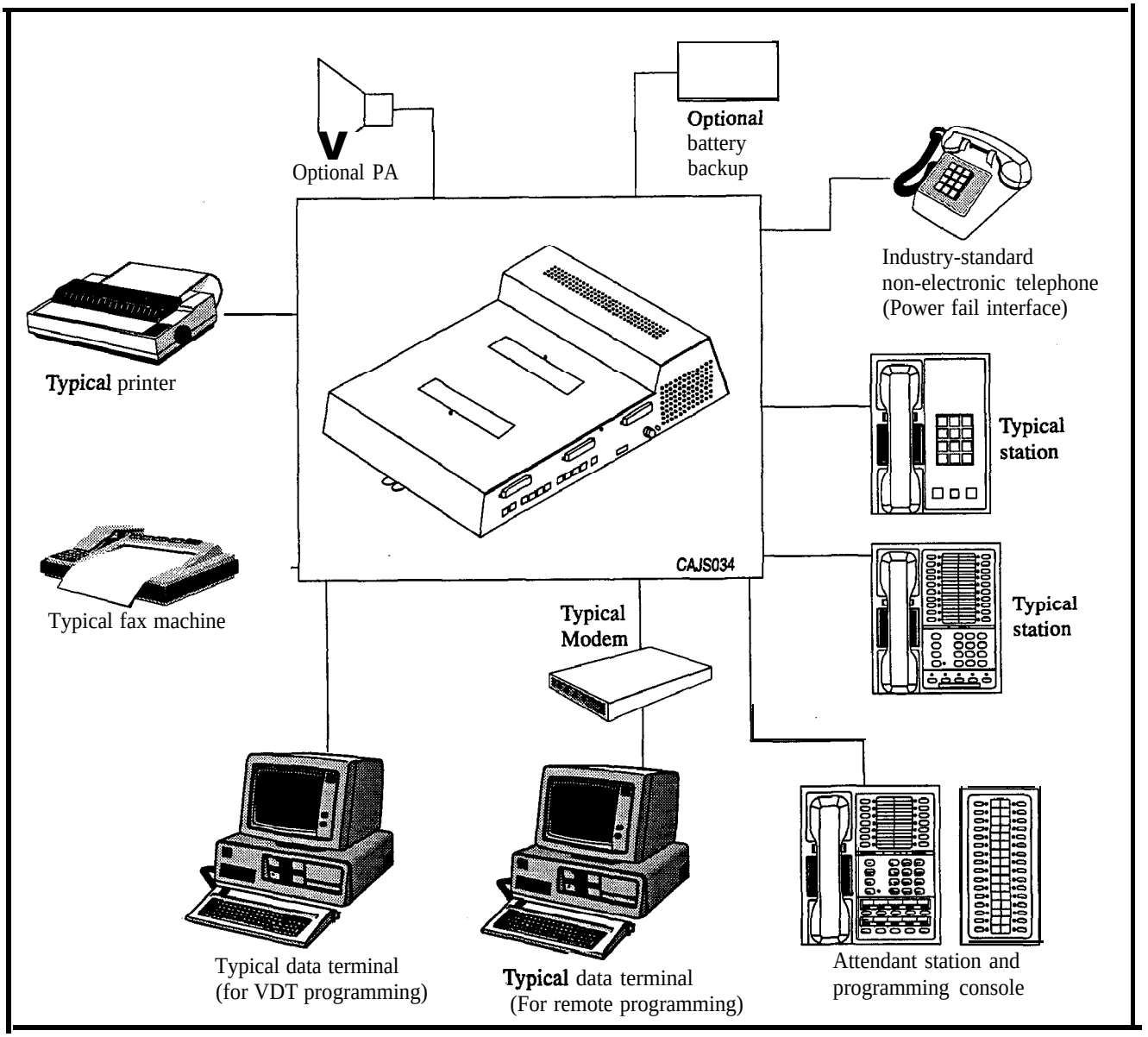


Figure 1.1. System Connections

1.4 Understandine The Hardware

Each ExecuTech 2000 system has the following hardware capabilities:

- Common Equipment cabinet. Each common equipment unit is full featured and self contained.
- Optional Expansion modules that increase station and line capacity.
- Telephones. All currently produced ExecuTech Analog telephones will work on the 2000.
- Optional Battery Backup.
- Four-conductor or six-conductor, twisted-pair cable (used for line and station connections).

1.4.1 Knowing The Common Equipment

The common equipment is essentially a special purpose computer system. Common equipment acts as a communications controller between central office (CO), private branch exchange (PBX), or CENTREX supplied telephone lines and the proprietary telephone stations. We have designed the common equipment cabinet in a modem and functional style that will accentuate any office environment. Figure 1.2 shows the three models of the common equipment and their dimensions.

There are three models of the 2000 common equipment, each with different station and line capacity.

Model Number	CO/PBX Capacity	Station Capacity
E34PT	6	12
E60PT	8	20
E80PT	16	32

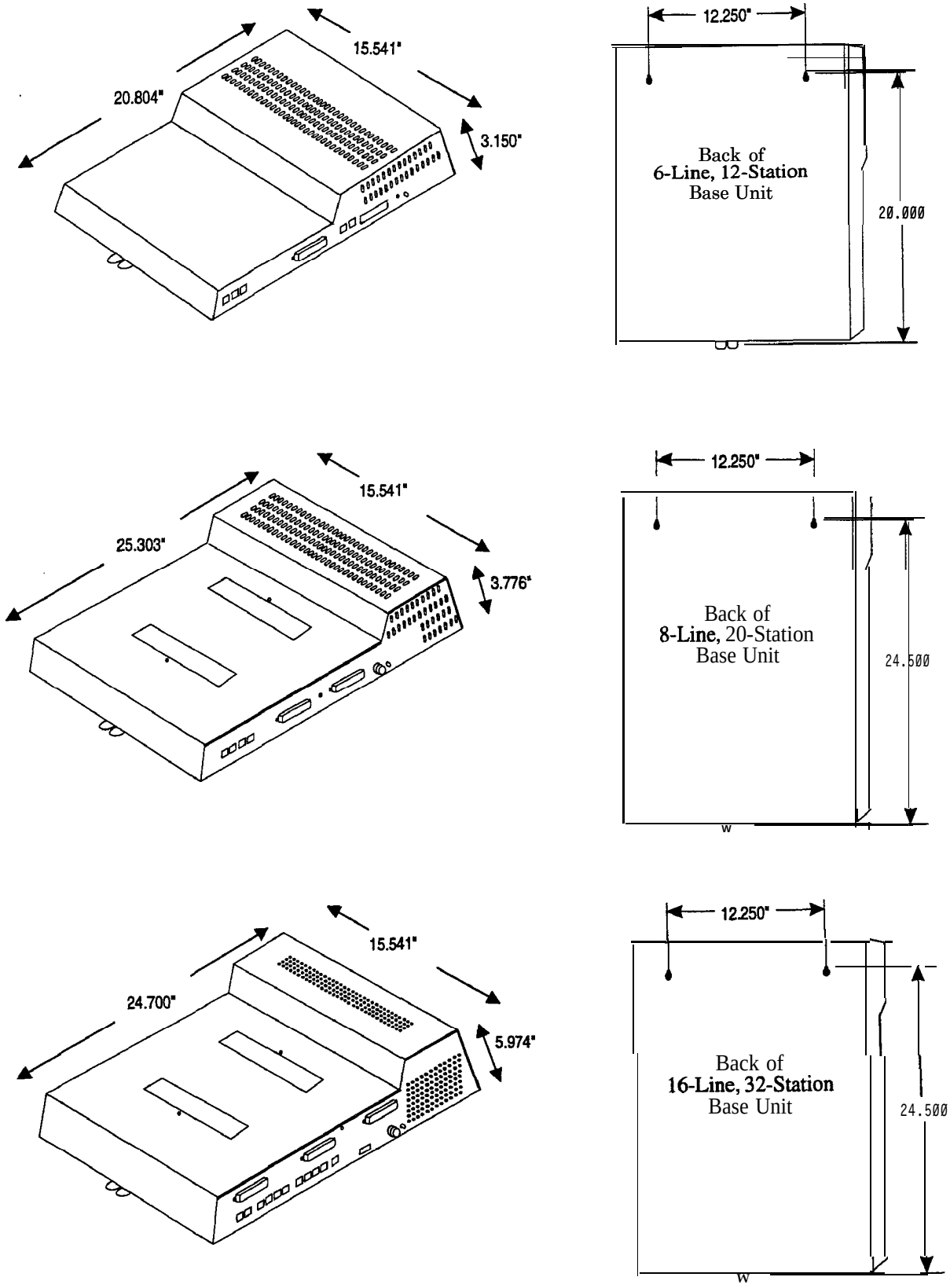


Figure 12. Common Equipment Cabinets

1.4.2 Knowing The Stations

You can install many different types of telephone stations, all of which are electronic microprocessor-controlled devices. The stations provide users with not only multiline pickup but also single button access to features available from the serving CO, PBX, or CENTREX switch and common equipment. You can program each telephone station to have a unique set of features and operating parameters, or you can block program a group of stations to all have the same parameters (see Chapter 3.7). All currently produced ExecuTech telephones will work with the ExecuTech 2000. Figure 1.3 shows a typical station' s mounting dimensions, and figure 1.4 shows all of the available telephones and DSS / BLF consoles.

You can install all of the following:

- Single Line Proprietary Telephones
- Multiline Telephones
- Single Line Telephones (Industry Standard)
- LCD Speakerphones
- DSS / BLF Console-This is an optional device that we have designed as a companion to a system attendant telephone for a high call volume situation. For more information on DSS / BLF see-2.7

Single Line Proprietary Telephone

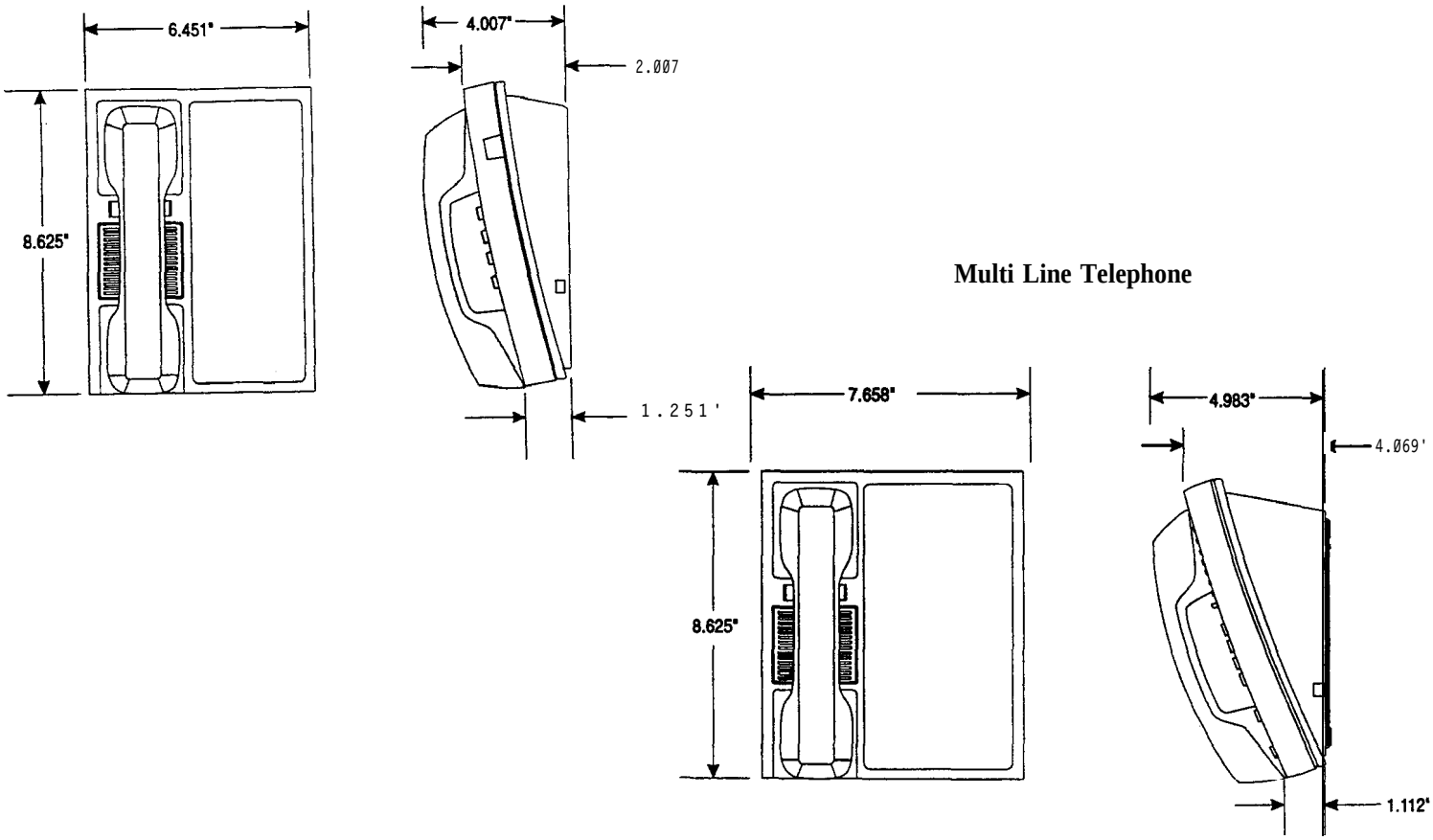
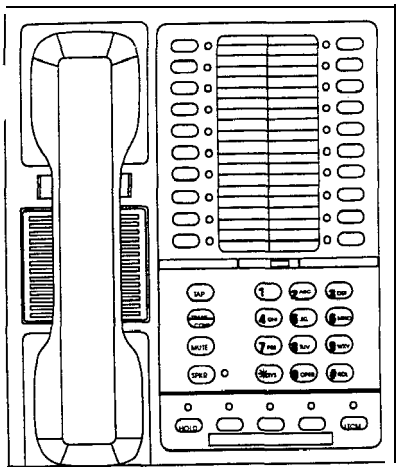
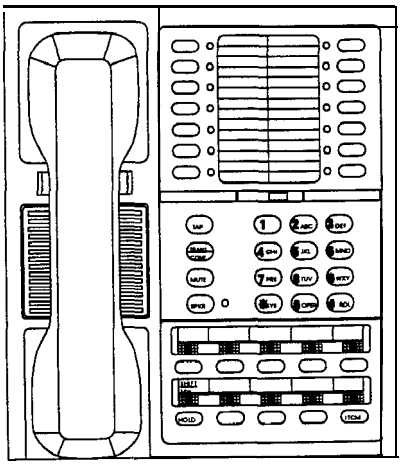


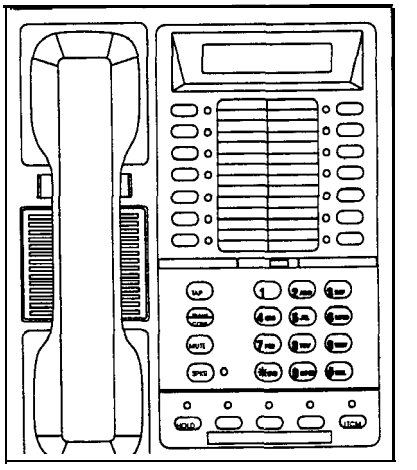
Figure 13. Telephone Station Dimensions



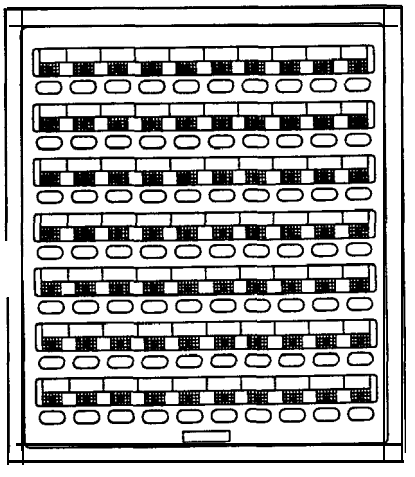
5 x 20 Image
Multiline Telephone



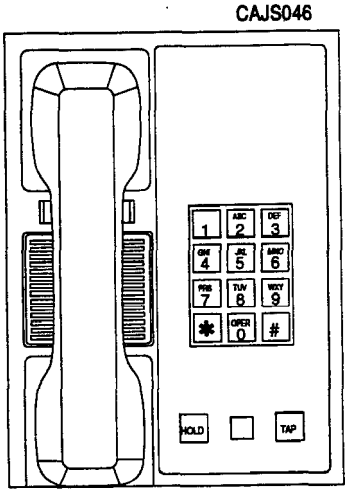
10 x 14 Image
Multiline Telephone



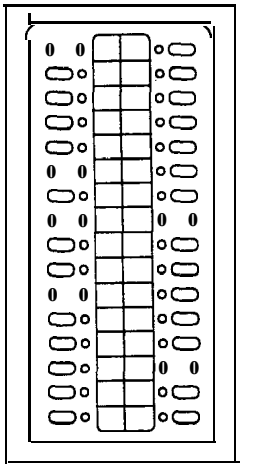
5 x 14 LCD Speakerphone



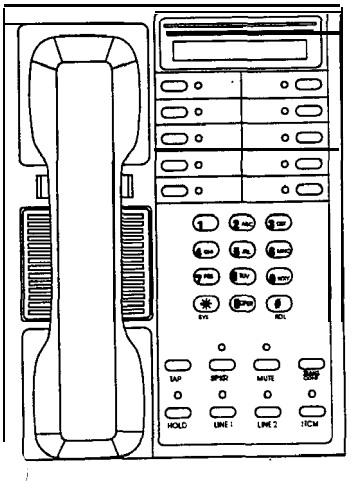
70-Button DSS/BLF Console



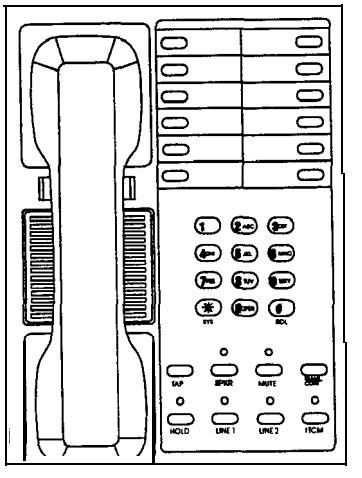
Single-Line Telephone



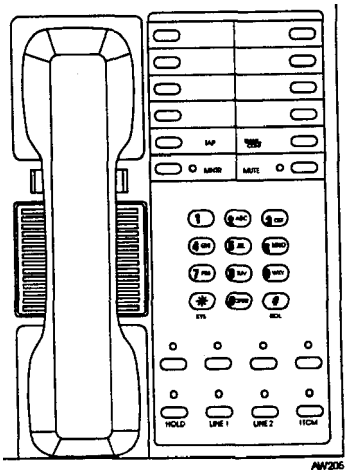
32-Button Console/Adjunct
Feature Module



12-Line LCD Speakerphone



14-Line Telephone



6-Line Monitor Telephone

Figure 1.4. Telephone Stations

1.5 Knowing The General Specifications

	Base Unit					
	6-Line, 12-Station (E34PT)	8-Line, 20-Station (E60PT)	16-Line, 32-Station (E80PT)	4-Line, 12 Station (MO412)	O-Line, 16 Station (MO016)	O-Line 16 Station (MO088)
System Capacity						
Lines:	6	8	16	4	Ø	0
stations:	12	20	32	12	16	16 (8 can be IST Telephones)
Dedicated Attendant Console Ports:	None	None	None	None	None	None
DSS/BLF Consoles:	6	10	16	6	8	8
Intercom Paths:	4	5	6	0	0	0
Maximum Simultaneous Intercom Conversations:	4	5	6	0	0	0
Call Cost Records	900	1800	1800	0	0	0
Power Requirements (Fully loaded system)						
AC Power:	117V +/- 10 % Singlephase - all models			0	0	0
	1.0 A	1.6 A	2.0 A	0	0	0
	100 W	160W	200w	0	0	0
	120 VA	200 VA	240 VA	0	0	0
Dimensions (approximate)						
Common Equipment						
Width (inches):	15.5	15.5	15.5	15.5	15.5	15.5
Height(inches):	20.8	25.5	24.5	9.4	9.4	9.4
Depth (inches):	3.2	3.8	5.8	1.6	1.6	1.6
Weight (pounds):	18	24	30	4.0	4.0	4.0
stations	Wide Image		Narrow Image			
Footprint (inches):	10.65 x 8.50		8.40 x 8.50			
Weight (pounds):	2.9		2.1			

Station Cable Requirements

Type:	6-wire (3-pair) twisted, non-shielded, (2-pair twisted if networking with auxiliary jack is not required)
Maximum Length:	1500 feet
Switching Principle:	Solid-state, space-division analog switching with stored program control

Operating Environment

Temperature:	32 to 122 degrees F (0 to 50 degrees C)
Humidity:	90 percent relative, non-condensing

Terminations

Station:	Standard 50-pin female connectors for connection to external distribution field.
Line:	Standard, 6-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:	Xon - X off Hardware - CTS
Cable Length:	500 Feet maximum

Cassette Recorder Interface

Data:	Serial, pulse-width modulated audio 1 .5Khz center frequency Baud rate of 50 or 100 (programmable)
Program Load Time:	Approximately 15 minutes
Connector:	Uses music interface jack

Music Interface

Input Level:	3 Volts peak-to-peak maximum
Input Impedance:	Approximately 500 Ohms
Connector:	RCA phono jack

Central Office Limits

Loop Limits:	1,900 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 30 hours minimum (typically 200 hours)

FCC Registration Number CVW7WC-12829-KF-E / CVW7WC-16553-MF-E
(Key System) (Hybrid System)

Ringer Equivalence Number 0.4B

Product Codes

6 x 12 System - E34PT
8 x 20 System - E60PT
10 x32 System - E80PT
4 x 12 Module - MO412
Ox 16 Module - M0016
0 x 16 Module - MOO88
5 x 20 Image Speakerphone - 6620T-xx Rev I and later
5 x 20 Image Monitor Telephone - 6620E-xx Rev D and later
10 x14 Image Speakerphone - 6614T-xx Rev I and later
10 x14 Image Monitor Telephone - 6614E-xx Rev D and later
5 x14 Image LCD Speakerphone - 6600E-xx Rev B and later
32-Button Console - DB32S-xx
70-Button Console - DB70-xx
Single Line Telephones - 6701X-xx
-6714X
- 67143
- 6706X
- 6700S
- EB32S

1.6 Seeking Technical Assistance

We have designed the ExecuTech 2000 and its accompanying manual to be so easy to use that you can install and program the entire system without any additional assistance. If, however, you should run into a problem in installation, checkout, or programming that you cannot solve, we have provided a technical support number that you can call for assistance. We have provided this service for you to use in *emergency* situations-it is not an alternative to using the manual. Should you need to call the technical services number, make sure you are on-site with the equipment and a copy of this manual, opened to the appropriate page. Please don' t call for technical support until you have thoroughly read through the appropriate section of the manual and tested the problem. For assistance, call the following number:

Comdial Technical Service staff-1430046643224

1.6.1 Repair Service

If your common equipment or an individual station should need repair after the warranty, you may return the defective equipment to Comdial. Comdial will, at their option, either repair the equipment or replace it with a remanufactured unit. There is a fixed charge for a repair. For information on repair charges, please call or write to tbe following address:

Comdial
P.O. Box 7266
Charlottesville, VA 22906
Attention: Repair Department

Telephone Number: (800) 366-8224

When returning equipment for repair, pack it carefully to prevent damage. Any damages incurred during shipment will be the responsibility of the purchaser. Always ship the equipment freight or postage prepaid. The shipping address for reparations is as follows:

Comdial
1180 Seminole Trail
Charlottesville, VA 22901
Attention: Repair Department

'A.2 Finding The Fuses

Comdial has included a slow-blow fuse in the common equipment to protect it against short circuit damage. The fuse is located on the left side of the common equipment cabinet. If you should need to replace a fuse, always replace the fuse with one of the same value and type; otherwise the equipment could be damaged. Refer to the following list when replacing a fuse:

- 6-Line, 12–Station Common Equipment—2A, 250V Slow-Blow
- &Line, 20–Station Common Equipment—3A, 250V Slow-Blow
- 16–Line, 32–Station Common Equipment—3A, 250V Slow-Blow

1.7 Summing-Up

Again, we encourage you to use this manual to its fullest potential. Look at this book as a tool. You wouldn't dream of trying to install a telephone system without a crimper or a punch-down tool, and you shouldn' t try to do anything without the manual. You should be familiar enough with the organization and contents of the book to take from it the information you need.

2 Installing The ExecuTech 2000

2 Installing The ExecuTech 2000

2.1 Using This Chapter

Chapter two provides you with a step-by-step procedure for installing the ExecuTech 2000. We have presented the information *in the most common order-for installation* and recommend that you follow the manual when installing. Always do a pre-installation check to make sure you have the necessary equipment and documentation.

2.2 Using The Right Tools

As a minimum, the tools and hardware required for installation include the following:

- ☐ Fasteners-wood screws ($^1/_4$ x l-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
- ☐ Volt-Ohm Meter-for testing power source, CO Lines, and Stations

2.3 Installing The Cabinet

Before you mount the cabinet, consider the following list in the layout and connection of the telephone system. It might be helpful to put a check-mark in each box as you complete that task.

- ☐ Attach the common equipment cabinet vertically to any sturdy flat surface. You may vertically rack-mount the system.
- ☐ Locate the cabinet within five 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).
- ☐ FCC requirements state that the distance between the common equipment and the TELCO/PBX jacks must be 25 feet or less. We recommend that you use a nominal distance of 7 feet.
- ❑ Make sure the mounting location is secure and dry and has adequate ventilation. The temperature range of the location must be within 32 to 122 degrees F (0 to 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, attach a backboard 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.
- ❑ If you choose to install battery backup, install the optional external batteries, cable assembly, common equipment, and the wiring connections in a dedicated equipment room-except for BBL02 (as defined in the *National Electric Code* published by The National Fire Protection Association, Quincy MA, 02269).

2.3.1 Mounting The Cabinet

1. Unpack and carefully inspect all equipment for shipping damage. Notify the shipper immediately of any damages. Verify that the packages contain all parts and accessories needed for proper installation and operation.
2. If you use a backboard at the mounting location, attach it securely to provide a stable mounting surface for the equipment.
3. Refer to the included template for the dimensions required for the three mounting screws. Mark the locations for the screws 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.

Steps 3 and 4

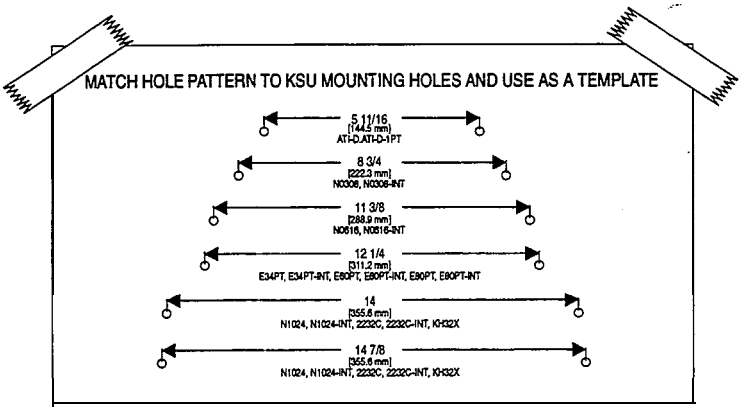
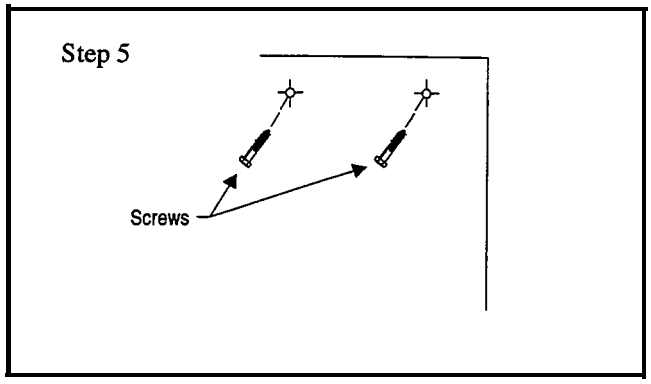
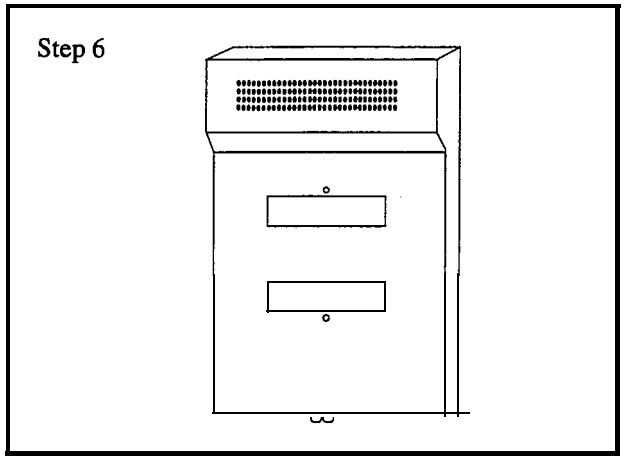


Figure 2.1 CAJS035

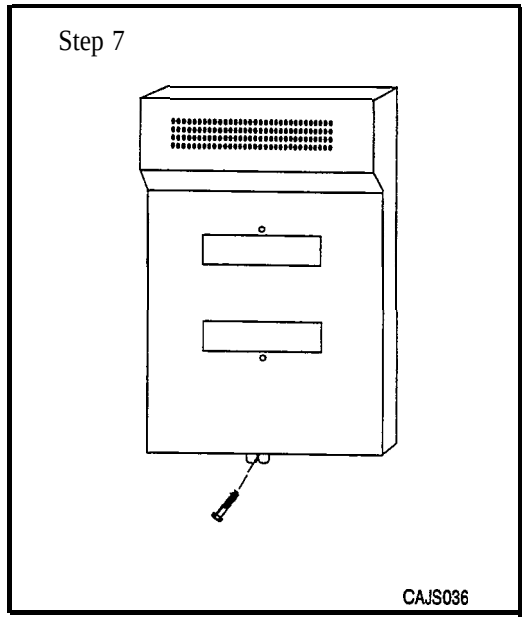
5. Insert the two top screws into the mounting surface and tighten them to within approximately 1/8-inch of the surface.



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 and tighten a third screw through the mounting tab located on the lower edge of the cabinet and into the mounting surface.



8. Place the individual telephone stations as desired and in keeping with accepted industry and office standards. You can wall mount a telephone station as they are desk/wall reversible.

2.4 Connecting The Power

2.4.1 Connecting AC Power

Use a dedicated 117VAC 15 AMF' circuit, with a third-wire ground, supplied to a standard electrical outlet (NEMA 5-15R) for the AC power connection.

Be sure that the following directions are followed when connecting the power:

- ❑ 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 through the power-line surge protection.

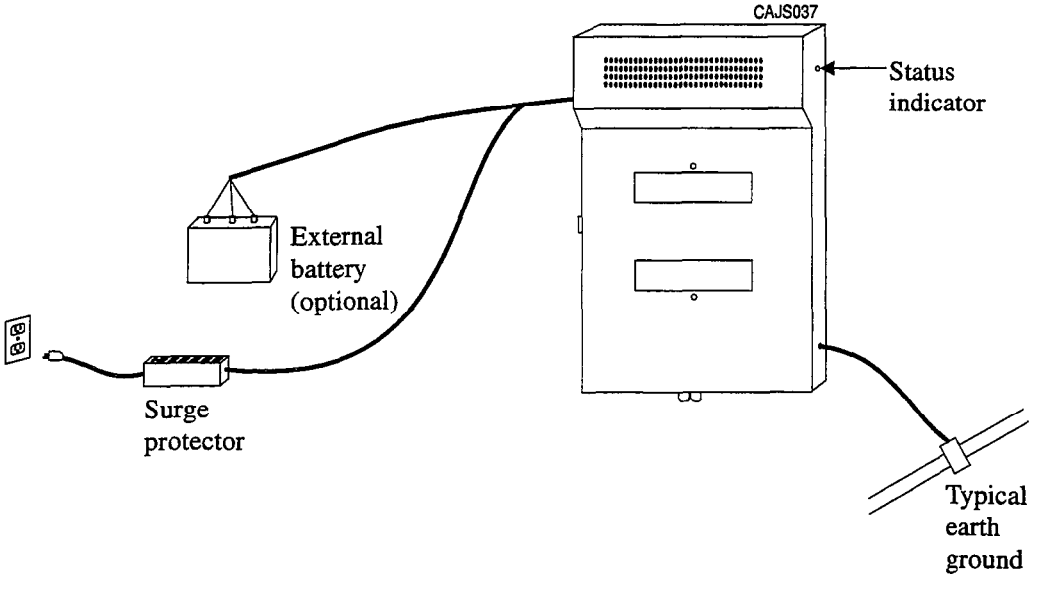


Figure 2.2. AC Power Connections and Grounding

2.4.2 Connecting A 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 internalprotection circuitry is operating to prevent damage that could result from improper connection.

The optional Comdial model BBU02, BBL02 external battery assembly provides a minimum of one hour of operation should the AC power to the system be interrupted. To calculate the actual minimum battery back-up time use the following equation:

$$T = \frac{(K)(e)}{1 + [(0.1)(N)}$$

T= Back up time in hours
K= 0.8
e = Ampere-hour capacity
N=Total Number of Stations

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

During AC operation, the common equipment provides recharging current to maintain the voltage potential of the external battery assembly at an operational level.

NOTE: The optional external battery assembly requires approximately ten (10) hours to completely recharge to full potential after it has been completely discharged and, in some cases, when initially installed.

Before installing a battery backup, check that the following items are all accurate:

- Correct voltage of battery charger circuit is between 13.6v DC and 13.8v DC (contact Comdial if the voltage is higher or lower),
- Correct voltage of the batteries themselves is 12v DC,
- A fully charged and disconnected battery should not exceed 13. 1v DC. A completely discharged battery may check as low as 10v DC,
- A fully charged battery connected to the system should be less than 13.8v DC; if the value is greater than 13.8, contact Comdial).

2.4.3 Grounding The System

The common equipment cabinet has internal secondary surge protection on all line ports. In order for this protection to be effective, you ***must*** connect the cabinet to a reliable earth ground such as a metal cold water pipe or a building frame ground. The grounding wire *must be* #10 or #12 insulated, solid copper and separate from the three-wire AC line cord. The common equipment cabinet has a ground stud for this purpose.

NOTE: When you install an expansion module on the base unit, attach a #10 or #I2 insulated, solid copper wire between the grounding terminal on the expansion unit and the grounding terminal on the common equipment unit.

2.5 Connecting The Lines

Once you have mounted the common equipment and connected the power, it is time to begin connecting the telephone lines.

Connect telephone lines to a Type 66MM-xx connector block and then connect that block to the telephone company's demarcation point.

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. You can use a type 66M-xx connector block or an individual 6-position modular jack for the outside line termination. Use twisted-pair wiring for the line cord that you route between the outside line termination and the common equipment termination. Table 2.1 shows the line connection details for all three of the common equipment base units. Figures 2.3 and 2.4 illustrate typical line connections.

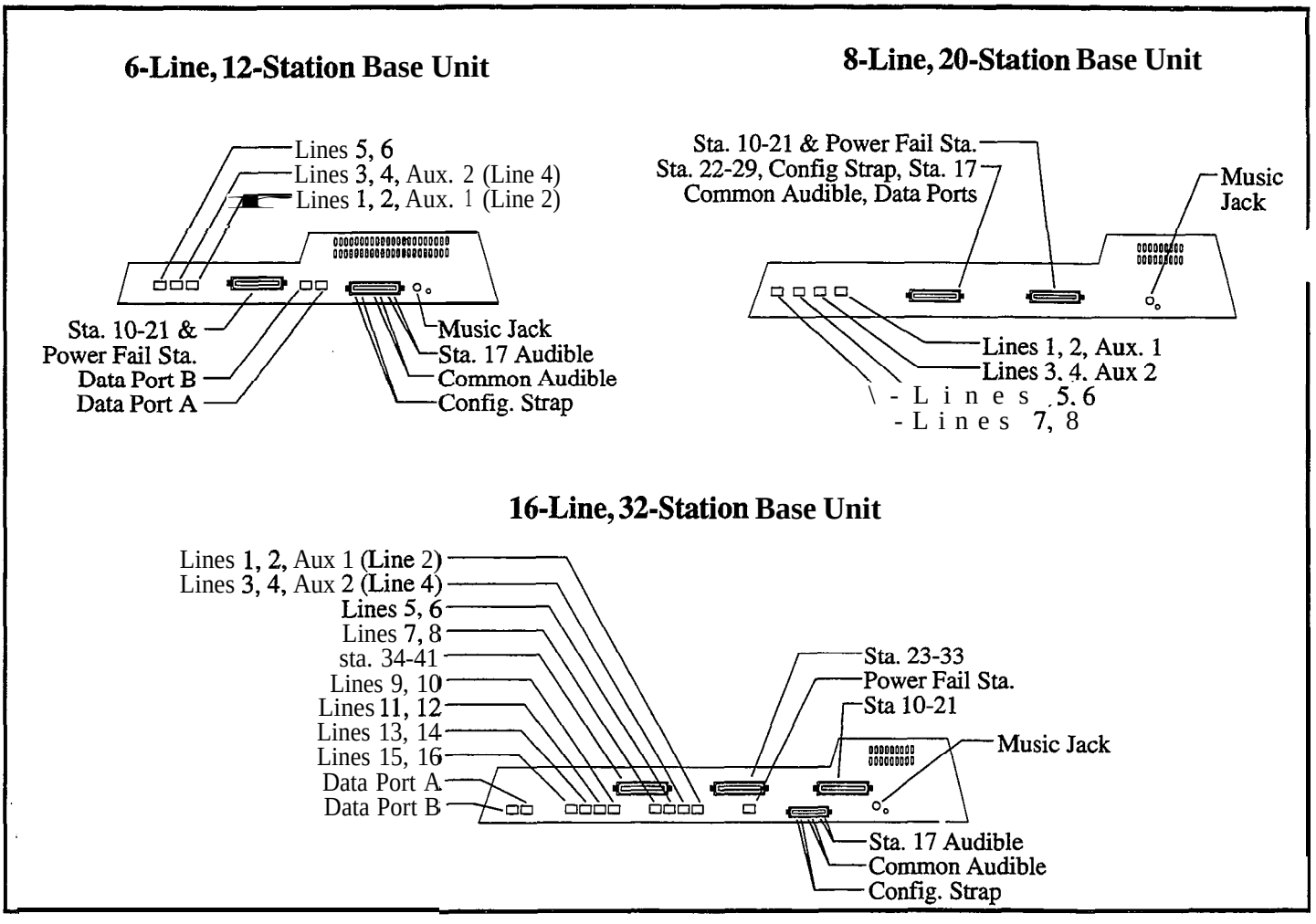


Figure 2.3. Typical Common Equipment Line Connections

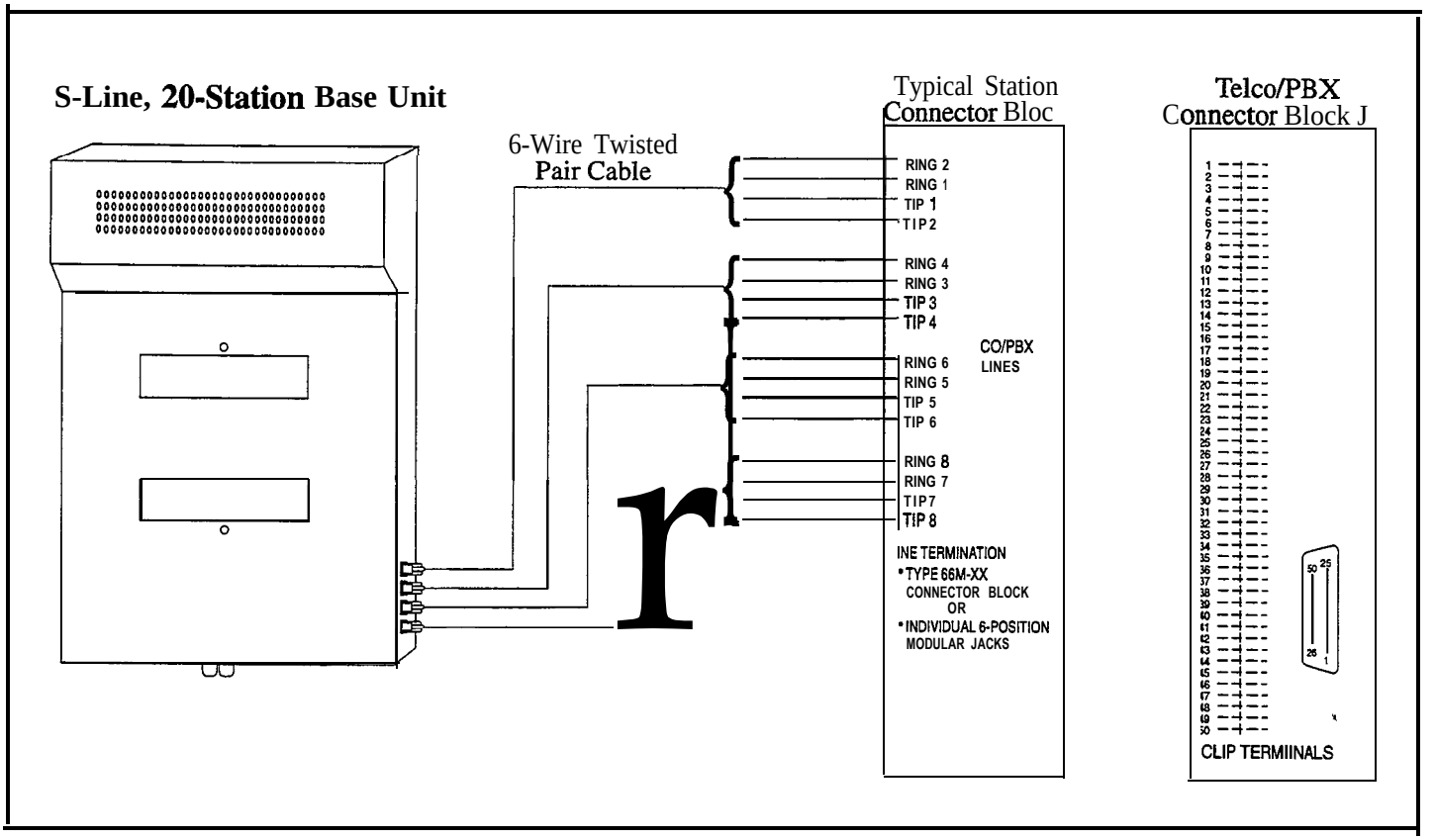


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Figure 2.4. Typical Common Equipment to CO Line Termination Connections

2.51 Connecting The Line Jacks

Table 2.1, below, shows the connections for each line on each common equipment cabinet. Jacks one, two, and three are the same for each system, and jacks four through eight are then applicable to only those systems supporting the greater number of lines.

COMMON EQUIPMENT	JACK	PIN NO.	CONNECTION	TELEPHONE NUMBER
	1	1	Auxiliary 1 (Line 2) TIP	
		2	Line 2 TIP	
		3	Line 1 TIP	
		4	Line 1 RING	
		5	Line 2 RING	
6-Line, 12-Sta. Base Unit		6	Auxiliary 1 (Line 2) RING	
8-Line, 20-Sta. Base Unit	2	1	Auxiliary 2 (Line 4) TIP	
		2	Line 4 TIP	
16-Line, 32-Sta. Base Unit		3	Line 3 TIP	
		4	Line 3 RING	
		5	Line 4 RING	
		6	Auxiliary 2 (Line 4) RING	
	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	
8-Line, 20-Sta. Base Unit		3	Line 7 TIP	
		4	Line 7 RING	
16-Line, 32-h. Base Unit		5	Line 8 RING	
		6	No Connection	
	5	1	No Connection	
		2	Line 10 TIP	
		3	Line 9 TIP	
		4	Line 9 RING	
		5	Line 10 RING	
6-Line, 32-h. **Base** Unit		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	

2.5.2 Using Line-To-Line Port Reassignment

You can reassign the programming attributes of one outside line to a different port without relocating any of the physical hardware. This feature allows additions, movements, and changes to be made without your having to relocate the line wiring. For example, let' s say that you initially installed CO line A to line 1. You assigned Line 1 to a station for use as a prime line and also assigned line 5 for use as needed . Should line 1 become defective for some reason, the CO line A and all programmed line attributes, such as prime line, now associated with line 1 can be exchanged with line 5. No physical reconnection at a connector block is required to exchange this defective line for an operational one, and no line attribute reprogramming is required. Refer to Chapter 3, section 3.6.10 for line-to-line port reassignment details.

2.5.3 Assigning Expansion Lines

Add-on expansion modules are available that can expand line capacity up to 24 lines. Refer to Section 2.9 for complete details.

2.5.4 Connecting The Cable Clips

Each cabinet-mounted 50-pin male connector has a retaining clip, which secures the mated connection. The clip secures the connection by snapping into a slot on the cable-mounted connector. You must pull back the retaining clip to unsnap it before the connectors can be separated.

2.5.5 Connecting a Surge Protector

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 this supplied surge protection will also provide some protection to the common equipment, it should not be relied upon for total protection. To help ensure that external over-voltage surges do not damage the system, we recommend that you install and properly ground gas discharge tubes, or similar primary protection devices, on all lines.

2.6 Connecting The Stations

Usually, the connections you make between the common equipment and the stations are via type 66M-xx connector blocks that are cable connected to the common equipment 50-pin male connector. The maximum distance allowed from the common equipment to the stations is 1500 feet for multiline keysets and 3000 feet for single-line keysets 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 to help prevent them from inducing radio frequency and/or AC interference into the system.

Caution:

The polarity between the individual wires in a particular voice or data pair is not critical; however, do not connect the voice circuits to the data circuits.

Tables 2.2-2.4 show the station connection details for all three common equipment base units. Figure 2.5 illustrates typical station connections.

All station ports are programmable.

2.6.1 Understanding Paired Ports

Station ports are paired for data and for overload protection. Because of this data pairing, a problem with station ten may actually manifest in station 1 l-keep this in mind when you are troubleshooting. Pairing the station ports is also necessary because some functions, such as SOHVA, require the use of two paired data ports for operation. The station ports are paired as follows:

Data And Overload Pairing

10 - 11	*26 - 27*
12 - 13	28 - 29
14 - 15	30 - 31
16 - 17	*32-33*
18 - 19	34 - *35*
20-21	*36-37*
22 - 23	38 - 39
24 - 25	40 - 41

Station ports are as follows:

- ❑ The 6- line, 12-station base unit has ports 10 through 21
- ☐ *The 8* line, 20-station base unit has ports 10 through 29
- ❑ The 16-line, 32-station base unit has ports 10 through 41 on

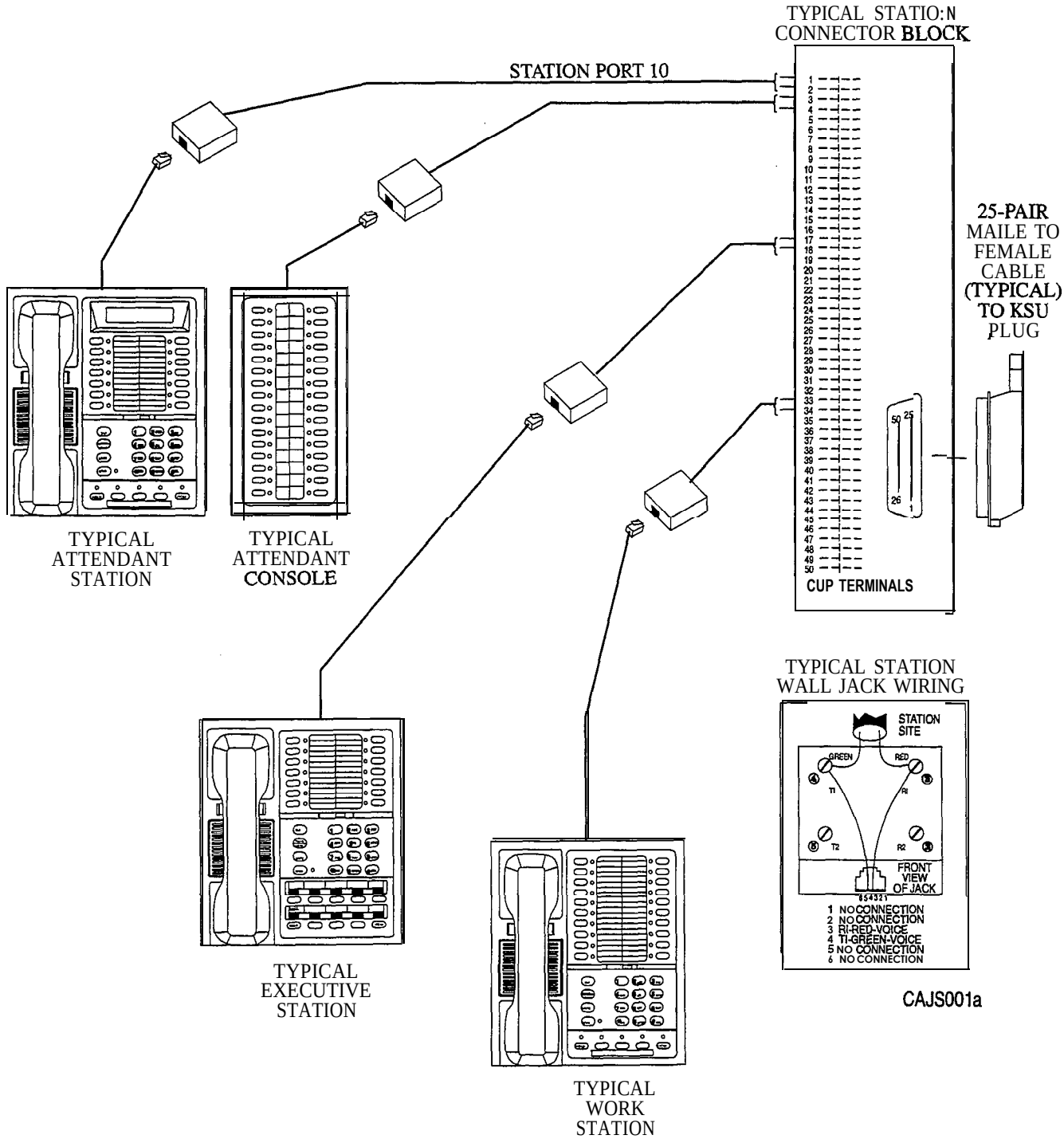

Figure 2.5. Typical Station Connections

2.6.2 Connecting A Six Line, Twelve Station Common Equipment

Table 2.2, below, shows the color coded connections on a type 66–xx connector block for a six line, twelve station system.

Table 2.2

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

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2.6.3 Connecting An Eight Line, Twenty Station Common Equipment

Table 2.3, below, shows the color coded connections on a type 66–xx connector block for an eight line, twenty station system.

Table 2.3

25-PAIR CABLE CONNECTIONS			4-WIRE CONNECTIONS			J-1 CONNECTIONS		J-2 CONNECTIONS	
WIRE COLOR	PAIR	PIN NO.	CLIP TERM.	PAIR	WIRE COLOR	STA.	LOCATION	STA.	LOCATION
WHITE-BLUE	1	26	1	VOICE	GREEN	10		22	
BLUE-WHITE		1	2		RED				
WHITE-ORANGE	2	27	3	DATA	YELLOW				
ORANGE-WHITE		2	4		BLACK				
WHITE-GREEN	3	28	5	VOICE	GREEN	11		23	
GREEN-WHITE		3	6		RED				
WHITE-BROWN	4	29	7	DATA	YELLOW				
BROWN-WHITE		4	a		BLACK				
WHITE-SLATE	5	30	9	VOICE	GREEN	12		24	
SLATE-WHITE		5	10		RED				
RED-BLUE	6	31	11	DATA	YELLOW				
BLUE-RED		6	12		BLACK				
RED-ORANGE	7	32	13	VOICE	GREEN	13		25	
ORANGE-RED		7	14		RED				
RED-GREEN	a	33	15	DATA	YELLOW				
GREEN-RED		a	16		BLACK				
RED-BROWN	9	34	17	VOICE	GREEN	14		26	
BROWN-RED		9	18		RED				
RED-SLATE	10	35	19	DATA	YELLOW				
SLATE-RED		10	20		BLACK				
BLACK-BLUE	11	36	21	VOICE	GREEN	15		27	
BLUE-BLACK		11	22		RED				
BLACK-ORANGE	12	37	23	DATA	YELLOW				
ORANGE-BLACK		12	24		BLACK				
BLACK-GREEN	13	38	25	VOICE	GREEN	16		28	
GREEN-BLACK		13	26		RED				
BLACK-BROWN	14	39	27	DATA	YELLOW				
BROWN-BLACK		14	28		BLACK				
BLACK-SLATE	15	40	29	VOICE	GREEN	17		29	
SLATE-BLACK		15	30		RED				
YELLOW-BLUE	16	41	31	DATA	YELLOW				
BLUE-YELLOW		16	32		BLACK				
YELLOW-ORANGE	17	42	33	VOICE	GREEN	18		NOT	
ORANGE-YELLOW		17	34		RED			USED	
YELLOW-GREEN	18	43	35	DATA	YELLOW				
GREEN-YELLOW		18	36		BLACK				
YELLOW-BROWN	19	44	37	VOICE	GREEN	19		RS232	TD
BROWN-YELLOW		19	38		RED			DATA	RD
YELLOW-SLATE	20	45	39	DATA	YELLOW			PORT A	CTS
SLATE-YELLOW		20	40		BLACK				SG
VIOLET-BLUE	21	46	41	VOICE	GREEN	20		RS232	TD
BLUE-VIOLET		21	42		RED			DATA	RD
VIOLET-ORANGE	22	47	43	DATA	YELLOW			PORT B	CTS
ORANGE-VIOLET		22	44		BLACK				SG
VIOLET-GREEN	23	48	45	VOICE	GREEN	21		NOT	
GREEN-VIOLET		23	46		RED			USED	
VIOLET-BROWN	24	49	47	DATA	YELLOW			STATION 17	
BROWN-VIOLET		24	48		BLACK			AUDIBLE	
VIOLET-SLATE	25	50	49		GREEN	POWER FAIL STA.		COMMON	
SLATE-VIOLET		25	50		RED	TIP & RING PAIR		AUDIBLE	

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2.6.4 Connecting A Sixteen Line, Thirty Two Station Common Equipment

Table 2.4, below, shows the color coded connections on a type 66–xx connector block for a sixteen line, thirty two station system.

Table 2.4

25-PAIR CABLE CONNECTIONS			4-WIRE CONNECTIONS			J-1 CONNECTIONS		J-2 CONNECTIONS	
WIRE COLOR	PAIR	PIN NO.	CLIP TERM.	PAIR	WIRE COLOR	STA.	LOCATION	STA.	LOCATION
WHITE-BLUE	1	26	1	VOICE	GREEN	10		22	
BLUE-WHITE		1	2		RED				
WHITE-ORANGE	2	27	3	DATA	YELLOW				
ORANGE-WHITE		2	4		BLACK				
WHITE-GREEN	3	28	5	VOICE	GREEN	11		23	
GREEN-WHITE		3	6		RED				
WHITE-BROWN	4	29	7	DATA	YELLOW				
BROWN-WHITE		4	8		BLACK				
WHITE-SLATE	5	30	9	VOICE	GREEN	12		24	
SLATE-WHITE		5	10		RED				
RED-BLUE	6	31	11	DATA	YELLOW				
BLUE-RED		6	12		BLACK				
RED-ORANGE	7	32	13	VOICE	GREEN	13		25	
ORANGE-RED		7	14		RED				
RED-GREEN	8	33	15	DATA	YELLOW				
GREEN-RED		8	16		BLACK				
RED-BROWN	9	34	17	VOICE	GREEN	14		26	
BROWN-RED		9	18		RED				
RED-SLATE	10	35	19	DATA	YELLOW				
SLATE-RED		10	20		BLACK				
BLACK-BLUE	11	36	21	VOICE	GREEN	15		27	
BLUE-BLACK		11	22		RED				
BLACK-ORANGE	12	37	23	DATA	YELLOW				
ORANGE-BLACK		12	24		BLACK				
BLACK-GREEN	13	38	25	VOICE	GREEN	16		28	
GREEN-BLACK		13	26		D				
BLACK-BROWN	14	39	27	DATA	YELLOW				
BROWN-BLACK		14	28		BLACK				
BLACK-SLATE	15	40	29	VOICE	GREEN	17		29	
SLATE-BLACK		15	30		RED				
YELLOW-BLUE	16	41	31	DATA	YELLOW				
BLUE-YELLOW		16	32		BLACK				
YELLOW-ORANGE	17	42	33	VOICE	GREEN	18		30	
ORANGE-YELLOW		17	34		RED				
YELLOW-GREEN	18	43	35	DATA	YELLOW				
GREEN-YELLOW		18	36		BLACK				
YELLOW-BROWN	19	44	37	VOICE	GREEN	19		31	
BROWN-YELLOW		19	38		RED				
YELLOW-SLATE	20	45	39	DATA	YELLOW				
SLATE-YELLOW		20	40		BLACK				
VIOLET-BLUE	21	46	41	VOICE	GREEN	20		32	
BLUE-VIOLET		21	42		RED				
VIOLET-ORANGE	22	47	43	DATA	YELLOW				
ORANGE-VIOLET		22	44		BLACK				
VIOLET-GREEN	23	48	45	VOICE	GREEN	21		33	
GREEN-VIOLET		23	46		RED				
VIOLET-BROWN	24	49	47	DATA	YELLOW				
BROWN-VIOLET		24	48		BLACK				
VIOLET-SLATE	25	50	49		GREEN	NOT USED		NOT USED	
SLATE-VIOLET		25	50		RED	NOT USED		NOT USED	

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Table2.4—continued—

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

Spare Pairs
Not Used

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2.7 Connecting A DSS/BLF Console

You can install a DSS/BLF Console at any port in the system as a companion to a station installed at the data-paired port (e.g.; ports 20 and 21). When installing a DSS/BLF, make sure that you consider all of the following:

- The maximum number of consoles that you may install on a system is equal to one-half of the total station capacity of the system.
- The installed distance limit between the common equipment and the console is the same as allowed for a telephone. Connect all four wires (voice and data pairs) of the console cable to the station connector block,
- When you install a console, you must also program the port as a console port (see chapter 3, section 3.7.30).
- The first 32 buttons of an installed console are defaulted as blank autodial buttons available for user programming. On installed 70-button consoles, the remaining 32 buttons are fixed as DSS buttons for station ports beginning with port 42 at button C42.
- The voice pair connections of the station port at which a console is installed can be used simultaneously to enable a station PA port function employing an external PA system-2.8.5. If you do this programming, the station port *must* be *defined* as a External Paging Interface (see chapter 3, section 3.7.18)

2.8 Installing System Options

The ExecuTech 2000 system offers several options that are not part of the regular installation of the common equipment. You may consider an expansion port or a power failure station connection, for example, as a non-mandatory installation option. Section 2.8 covers all of these non-mandatory options. The following is a list of those features:

- Key System / Hybrid System
- Power Failure Station
- Auxiliary Interface
- Common Audible and Auxiliary Station Interface
- External Paging Interface-Station PA Port
- External Paging Interface-Line Port
- Data Device
- Music Interface
- Cassette Tape Recorder Interface

2.8.1 Connecting a Key System or Hybrid System

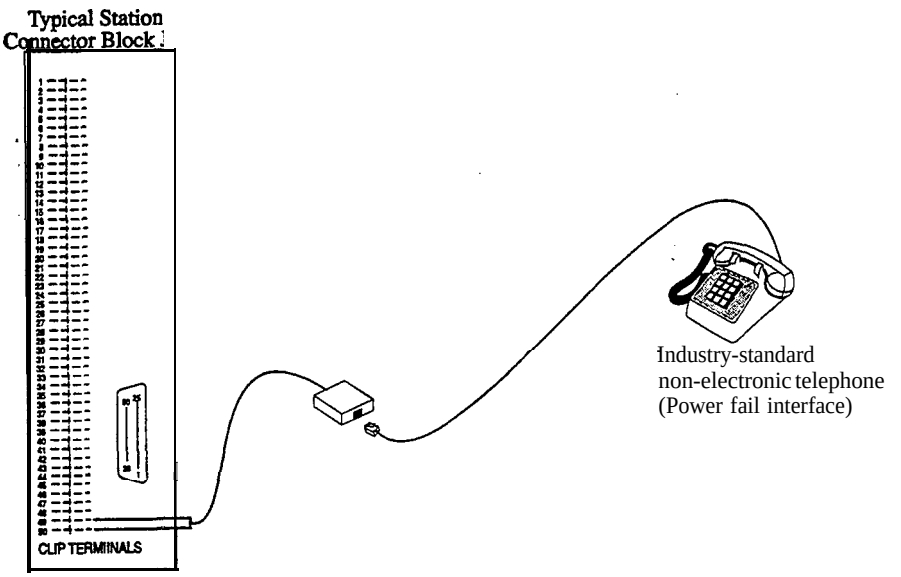
In the past, the Federal Communications Commission (FCC) required that telephone system manufacturers provide a hardware strap that installers could move to distinguish between hybrid and key system operation. Recent rulings by the FCC have eliminated the need for the hardware strap. Beginning with software release 11A of the ExecuTech 2000, the telephone system automatically assumes the hybrid mode whenever a programmer assigns lines to line groups, and the system no longer includes a hardware strap that the installer must move. The hybrid system may have a higher monthly tariff from the telephone company, so the FCC requires that the installer report the equipment category designation number (KF for key system MF for hybrid system) to the telephone company at the time of installation.

2.8.2 Connecting A Power Failure Station

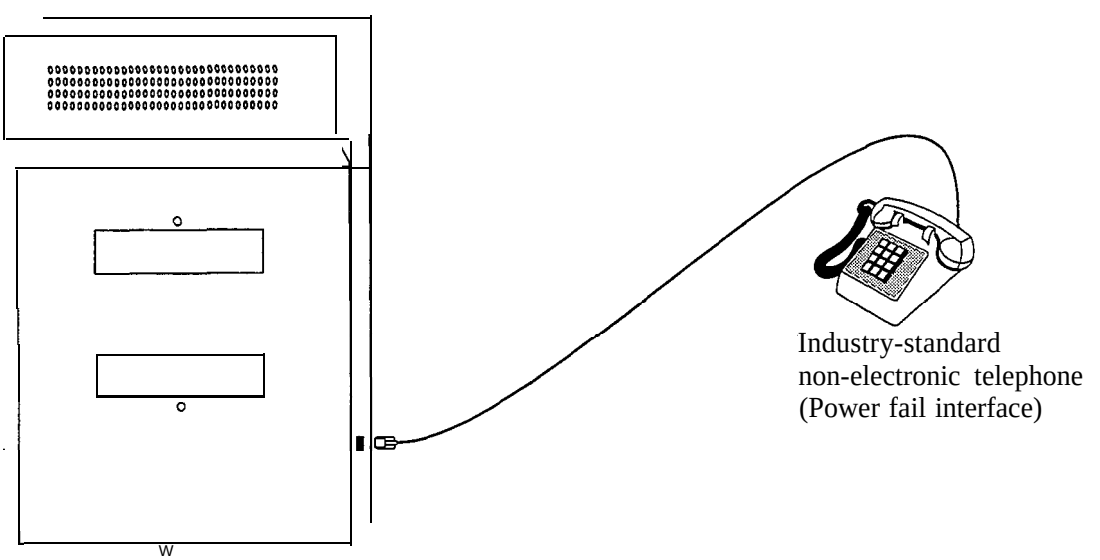
The system provides a tip and ring pair connected to line 1 as an emergency, power failure circuit. This circuit is active during a commercial AC power failure. You can connect an industry standard, single-line telephone, such as a Comdial model 2500-xx, to a power failure pair and use that station to provide communications capability until the AC power to the system is restored.

The power failure is detailed in Figure 2.6, below.

- Connect the 6-line, 12-station and 8 line, 20-station base unit directly to Clip terminals 49 and $0 on connector block J- 1.



- Connect the 16-line, 32-station base unit directly to the special power failure modular jack on the KSU.



2.8.3 Connecting An Auxiliary Interface

You can connect a non-key system telephone device or a data device, such as a modem or fax machine, onto 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 key system telephones to indicate that the line is busy. In other words, all stations would know that the fax or modem line is in use and would not pick up that line and risk damaging the fax or modem transmission. Table 2.1, page 2-8, and Figure 2.7, below, detail the auxiliary interface connections.

NOTE: When the auxiliary interface feature is being employed, the line to line **`port`** *reassignment, as discussed in section 2.5.2, can only be used to reassign line 2 to line port 4 and line 4 to line port 2*

- Connection is across tip and ring of lines 2 (aux 1) and 4 (aux 2). Use the auxiliary interface connections provided at terminals 1 and 6 of common equipment Line Jacks 1 and 2.

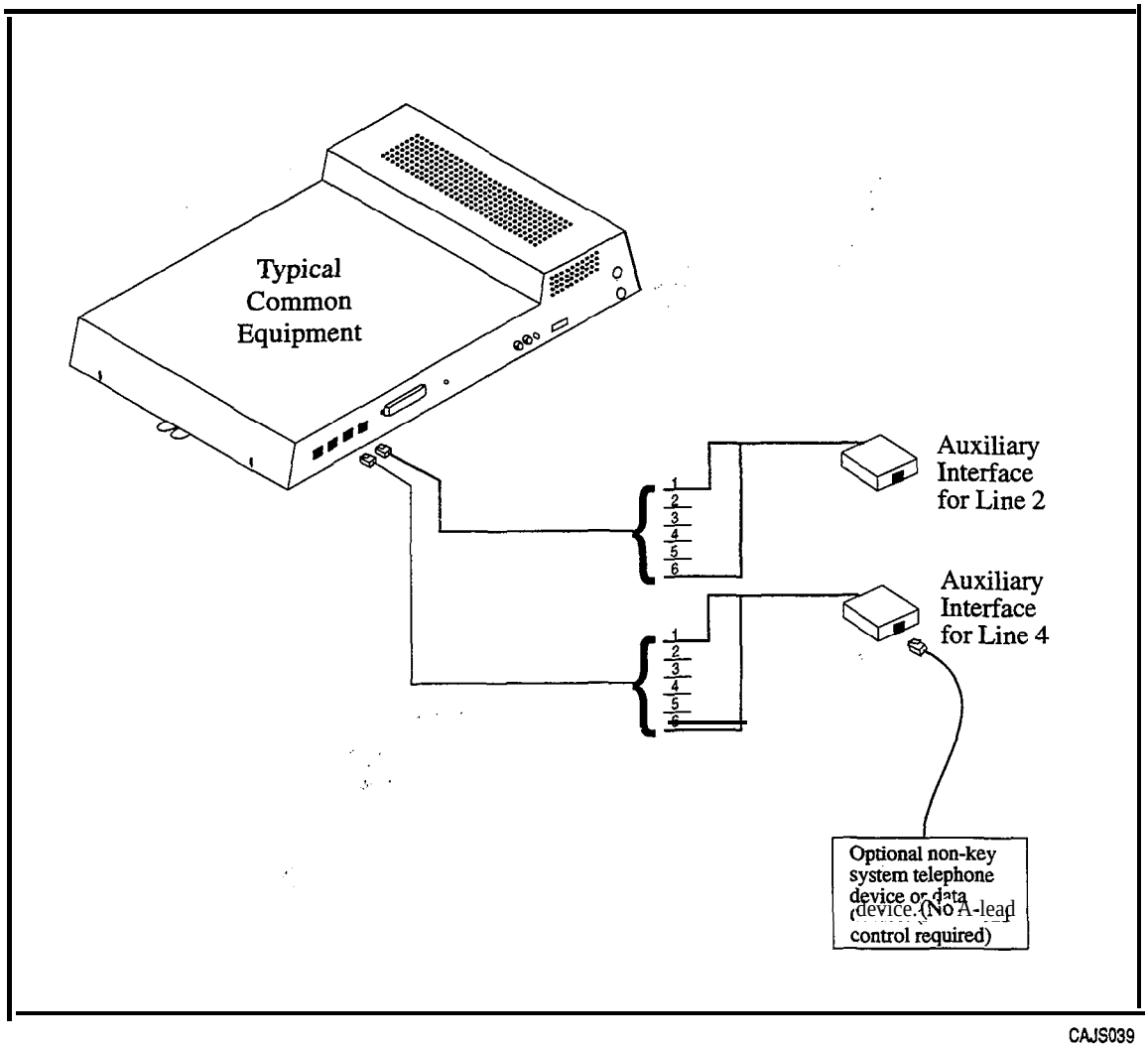


Figure 2.7. Auxiliary Interface Connection

2.8.4 Connecting A Common Audible And Auxiliary Station Interface

You can connect an external audible ringer, such as a loud bell or flashing light, that will operate when the system receives an outside call. The contact points for this operation are dry, meaning that the external ringer or light must have its own power supply.

There are two different ways to install an external ring indicator device. The two sets of relay closures with dry contact points are as follows:

- One set (common audible) provides a dry-contact closure whenever any *of the outside lines*, connected to the common equipment, ring.
- The other set (station 17 audible) provides a dry-contact closure whenever *station 17* rings. You must program the lines that you want to ring on station 17 (station 17 defaults to all lines, and you must remove the lines that you do not want to ring the external ringer).

These contact closures track the ringing pattern in both cases. The contacts are closed during the ringing period and are open during the silent period.

Caution:

Do not exceed a I 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.

Refer to the section 2.8.5 for a discussion on using these terminals in an alternate paging function.

Contact closure connections are located as follows.

- 6–line, 12-station and lo-line and 32-station base unit: Screw terminals l-2 and 3-4 on barrier-type terminal strip.
- 8–line, 20–station base unit: Clip terminals 47–48 and 49-50 on connector block J-2

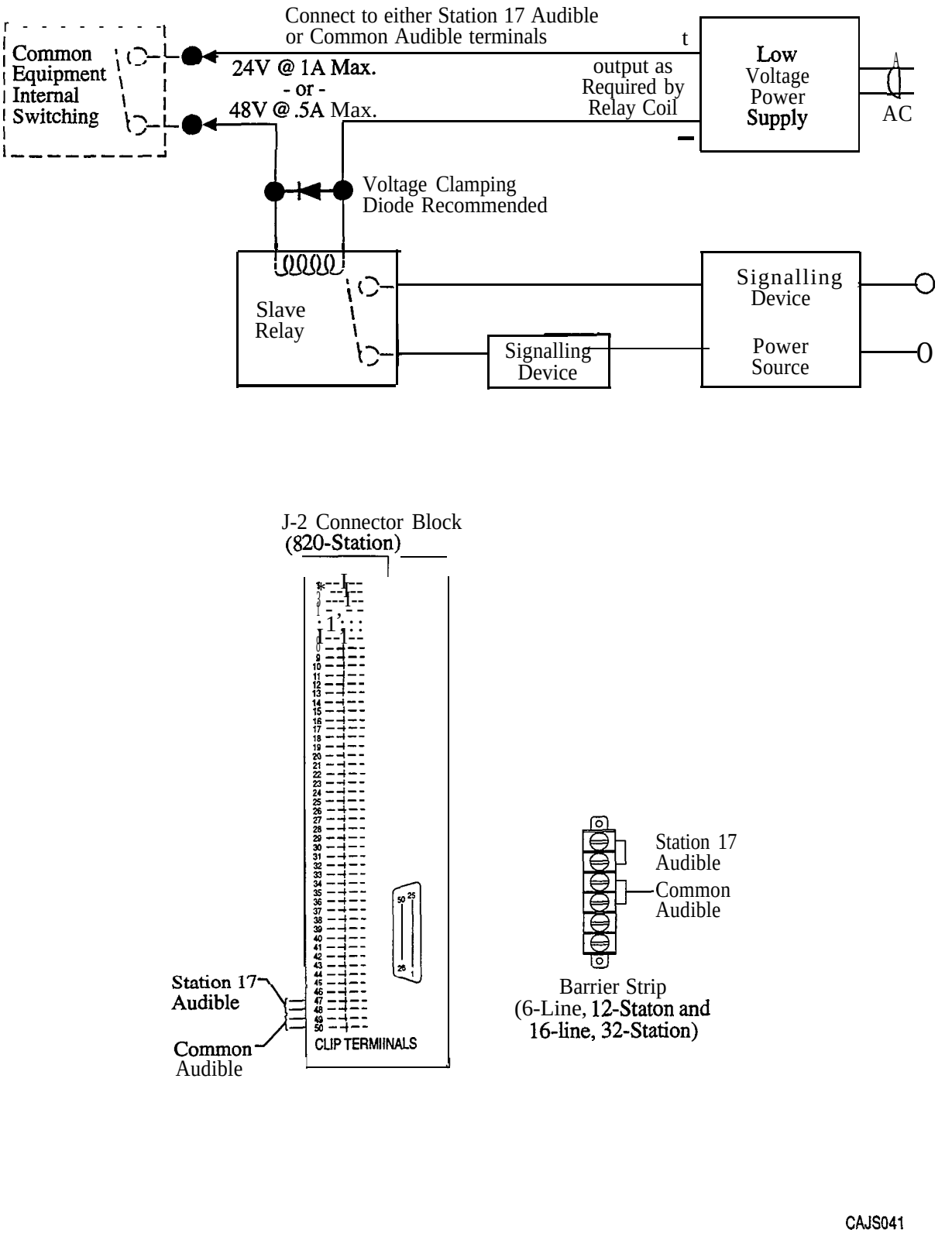


Figure 2.8. Common Audible Auxiliary Interface

2.8.5 Connecting An External Paging Interface—Station PA Port

You can program any station port, except for station 10, as a PA port. The station port that you choose can then couple a station voice path to an external paging amplifier. If **you configure** the PA port so that music plays over the PA until someone voices over, you must use either station 17 or common audible, station 15. No other station connection will allow the voice-over. Refer to Chapter 3, section 3.7.18 for more information on programming a PA port. Before you configure a port as a PA port, consider the following:

- The audio input connection must be isolated with a 600 ohm to 600 ohm audio matching transformer. Terminate the audio input of the paging amplifier with a 620 ohm (nominal value) resistor.
- If you program station port 17 as a PA port, the Auxiliary Station Interface (station 17 audible) contact points are automatically reconfigured as PA enable terminals. The contact closure now occurs when a user dials **PA** station 17. The normal auxiliary station interface function, as discussed in section 2.8.3, is disabled as long as station 17 is a PA station.

Connect the audio input of an external paging amplifier to the audio pair of the desired station port (refer to Tables 2-2 through 2-4 for station connection details). If the paging amplifier needs to be enabled in order to function, connect the audio input to station port 17 and the enabling leads according to the following discussion and as illustrated below.

- 6-line, 12-station and 16-line, 32-station base unit: Screw terminals 1 - 2 on barrier-type terminal strip.
- 8-line, 20-station base unit: Clip terminals 47 - 48 on connector block J-2.

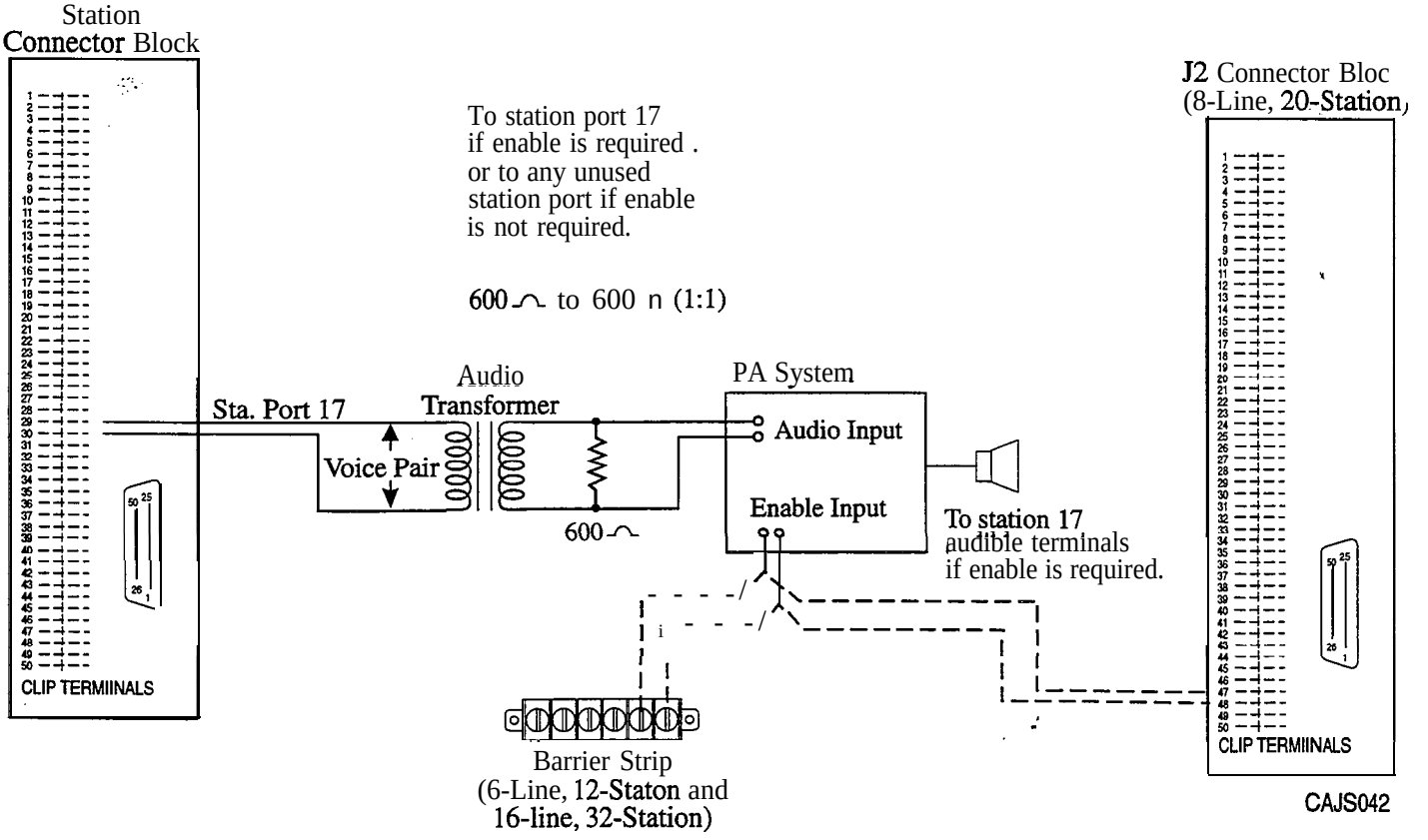


Figure 2.8. Typical PA Connection--Station Port

2.8.6 Connecting An External Paging Interface-Line Port

You can program a line port to be an Auxiliary port. As an Auxiliary port, the line port can be used to couple a station voice path to an external paging device. Any station with that line appearance can use the PA port simply by selecting the line. Users can dial DTMF tones or dial pulses through the Auxiliary port. If users need to be able to voice-over PA music, you must use station 17 or common audible, station 15, as the PA port. For more information, see Chapter 3, section 3.6.8. When configuring a line port as a PA port, consider the following:

- The audio input of an external paging amplifier can be connected to the tip and ring leads of the Auxiliary port as shown below.
- A DTMF tone select, zone-paging amplifier can be employed if desired. If you install this type of amplifier, users must dial the zone-select code after pressing the Auxiliary port line select key.

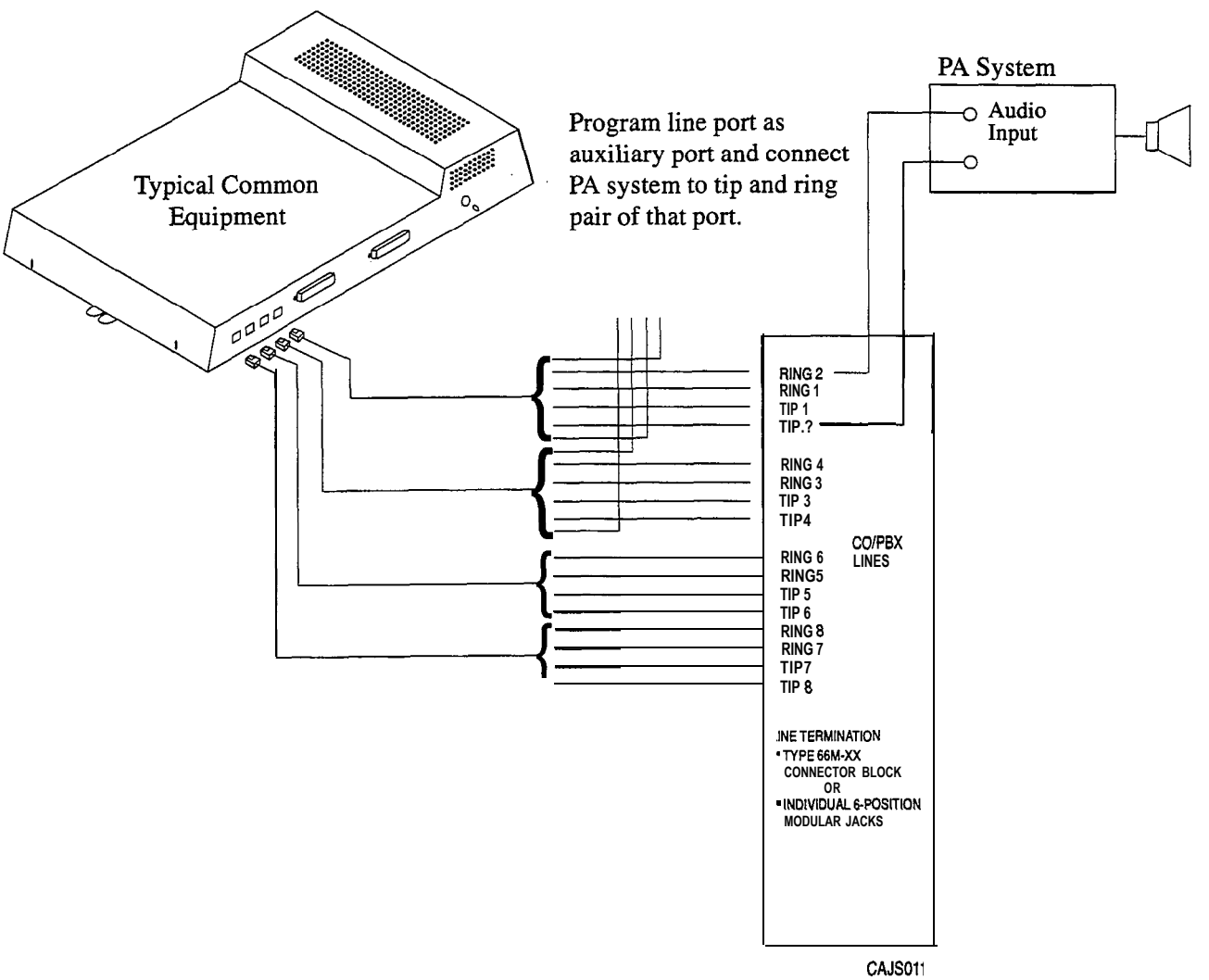


Figure 2.9 Typical PA Connection-Line Port

2.8.7 Connecting A Data Device

The system provides two RS232 Data Ports for use in connecting a data printer, video display terminal (VDT), or modem for remote programming. Before you connect anything to a data port, consider all of the following:

- When you use a video display terminal (VDT) or a personal computer to perform class of service programming, connect it to RS232 Data Port A.
- When you use a serial data printer 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.

2.8.7.1 Wiring 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.

2.8.7.2 Configuring The Data Device

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

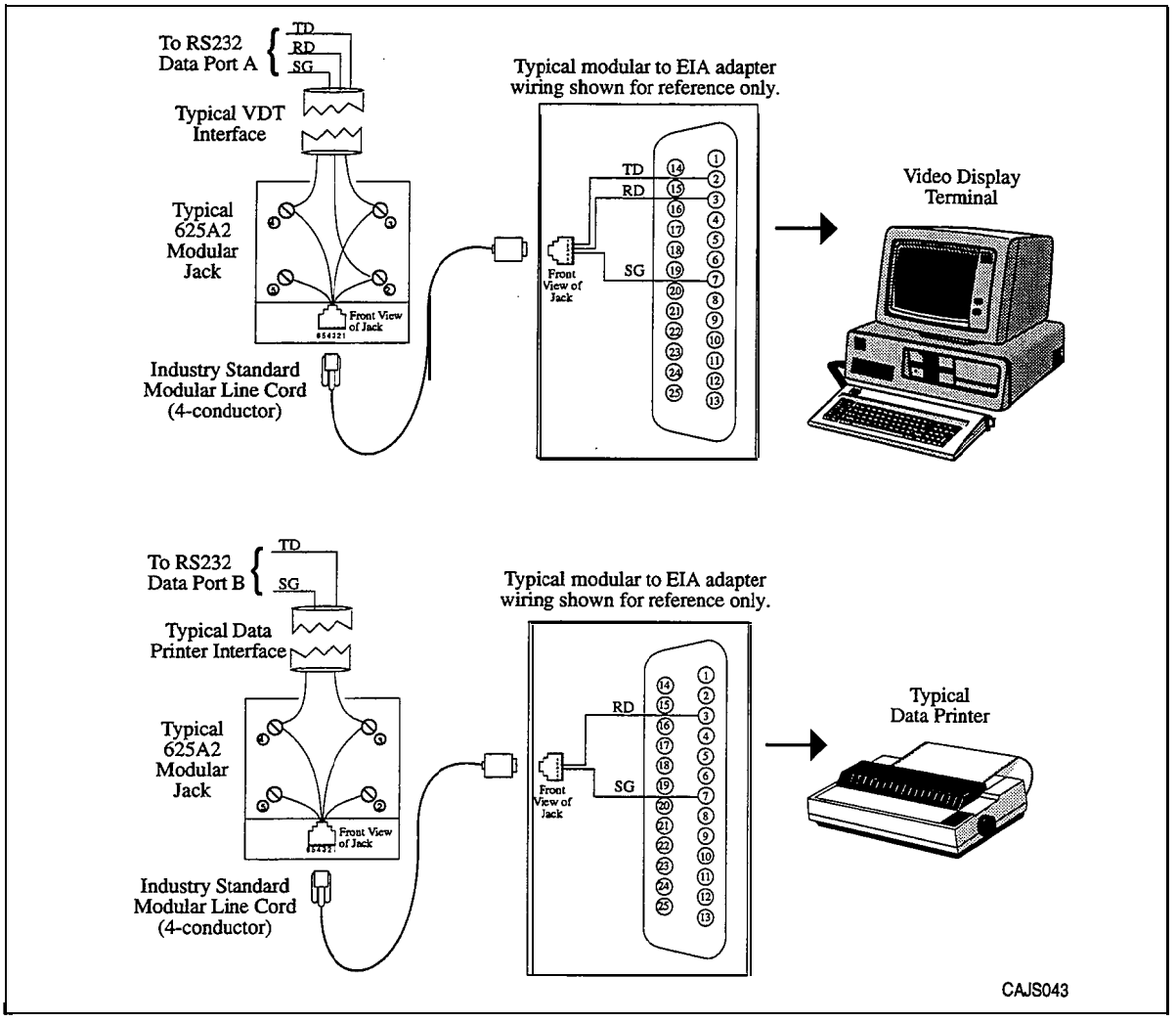
The following is a list of data port locations.

6-line, 12-station and 16-line, 32-station base units: Special modular jacks are available as data ports.

SIG.	JACK CONN.
none	1
CTS	2
RD	3
TD	4
SG	5
none	6

8-line, 20-station base unit: Clip terminals 37 - 40 (data port 1) and 41 - 44 (data port 2) on connector block J-2,

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



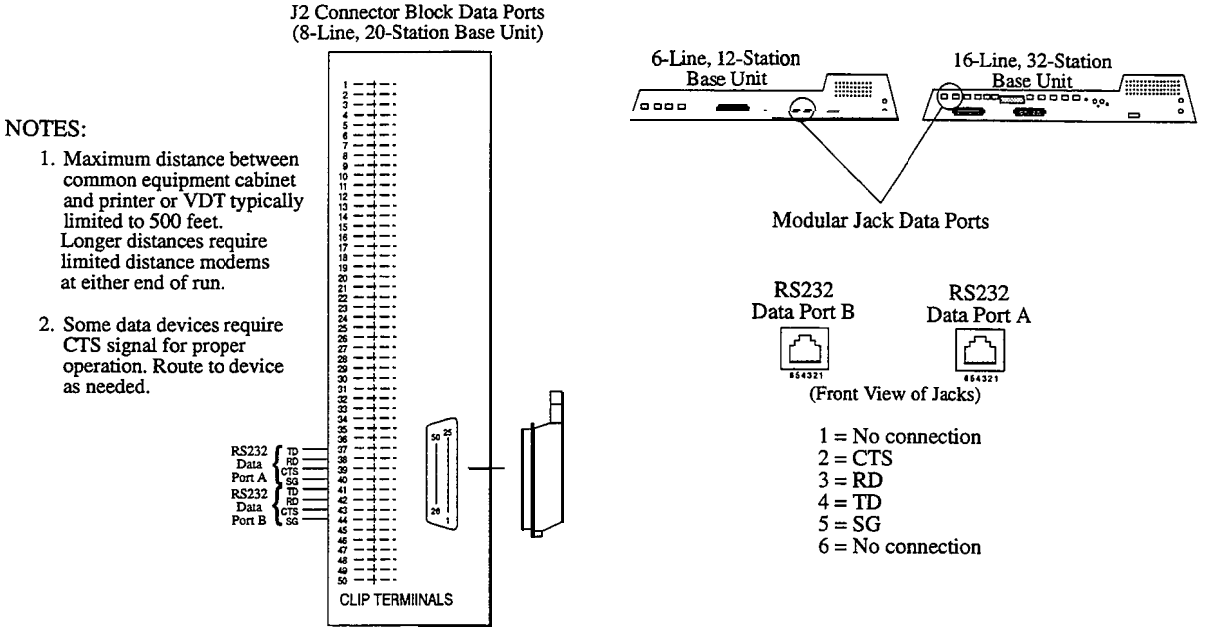


Figure 2.10. Typical Data Device Connection

2.8.8 Music Interface

If music is to be part of the system connect a music source to the common equipment music interface jack (phono jack) provided for this purpose. The impedance of this input is approximately 500 ohms. Level adjustment of the music source may be necessary. See 3.5.8 for more information.

2.8.9 Cassette Tape Recorder Interface

A customer provided, audio cassette tape recorder can be connected to the music interface jack. You can store and load programming information via the recorder by using this interface from station 10. For more information, see Chapter 3, section 3.16

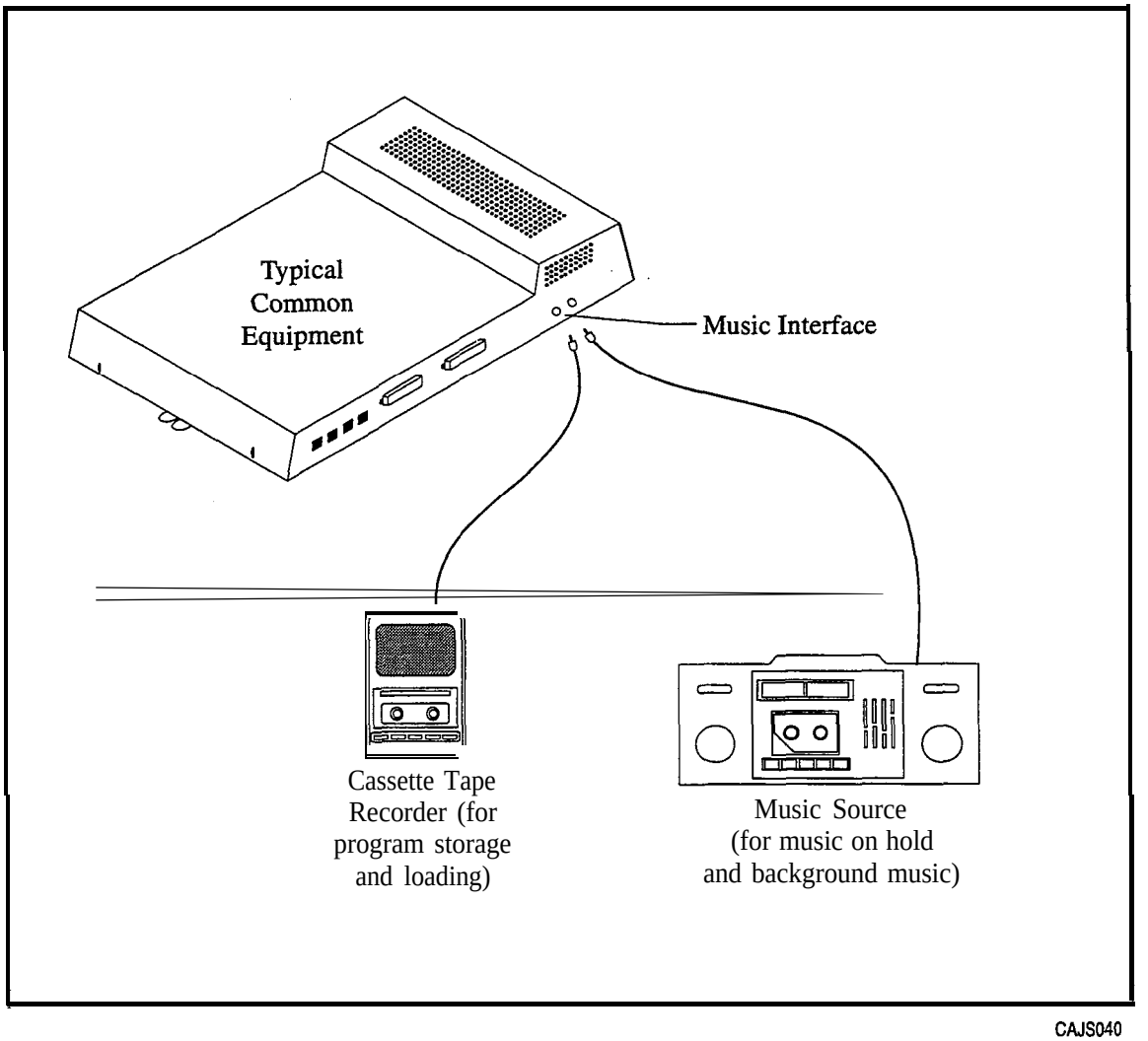


Figure 2.11 Music/Cassette Recorder Interface

2.9 Using Add-On Expansion Modules

There are three optional add-on, expansion modules that you can install on the common equipment base units. YOU can use these expansion module in various combinations to increase the line and/or station capacity of an installed system. The add-on modules are as follows:

- MO412 Expansion Module – A four-line by 12-station expansion unit
- MO016 Station Expansion Module – A 0 line, 16-station expansion unit
- MOO88 Expansion Module – A 0 line, 16 station (8 stations can be IST telephones) expansion unit

The default numbering of the expanded lines and/or stations begins 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, 20-station base unit provides station ports 10 through 29 and lines 1 through 8. When installed, a 412 Expansion module will provide station ports 30 through 41 and lines 9 through 12 thus creating a 12 line by 32 station system. Should two 16-station expansion modules be added to a 8-line, 20-station base unit, defaulted station port expansion numbering begins at the top unit, with station port 30, and continues through the lower unit to station port 61 thus creating an eight-line by 52 station system.

The station connections are available at one (412 expansion module) or two (16 station expansion module) 50-pin connectors. The port numbering begins with the connector on the right and proceeds through the left-hand connector (16 station expansion module only). For more information on expansion modules, see IMI89–025.

2.10 Connecting OHVA / SOHVA

The ExecuTech 2000 supports both subdued off hook voice announce (SOHVA) and off hook voice announce (OHVA) features. Two data-paired station ports are required to provide either feature. Station users can employ the DB32S–xx 32 button console to provide OHVA, or an ExecuTech multiline telephone with SOHVA capability will provide SOHVA. For more information see 3.7.34, and 3.7.35.

2.10.1 Connecting The Right Equipment

- For OHVA, connect an ExecuTech multiline telephone to the first data-paired port, and connect the 32–button console to the second port. Be sure to connect both voice and data pairs.
- For SOHVA, connect the ExecuTech multiline telephone with SOHVA capability to both data-paired ports as shown in Figure 2.12. This multiline telephone uses a 6–position, 3-pair line jack. Using 6-wire twisted pair cable, connect the two inside pairs of the line jack to the first data-paired port, and connect the outside pair to the second data-paired port.
- After you have done either one or the other of the above steps, depending upon your need for OHVA or SOHVA, connect pins 3 and 4 to the voice pair and pins 2 and 5 to the data pair of the first data-paired port.
- Connect pins 1 and 6 to the voice pair of the second data paired port.

2.10.2 Programming For SOHVA

For SOHVA to function, you must take certain programming steps. Make sure you have completed all of the following:

1. Program the first data paired-port for SOHVA by programming it as an integrated OHVA port, 3.7.34.
2. Program the first data paired-port as a multiline port, 3.7.30.
3. Program the second data paired-port as a console with call announce port, 3.7.30.

2.10.3 Programming For OHVA

For OHVA to function, you must take certain programming steps. Make sure you have completed all of the following:

1. Program the first data paired-port for OHVA by programming it as a non-integrated OHVA port, 3.7.34.
2. Program the first data paired-port as a multiline port, 3.7.30.
3. Program the second data paired-port as a console with call announce port, 3.7.30.

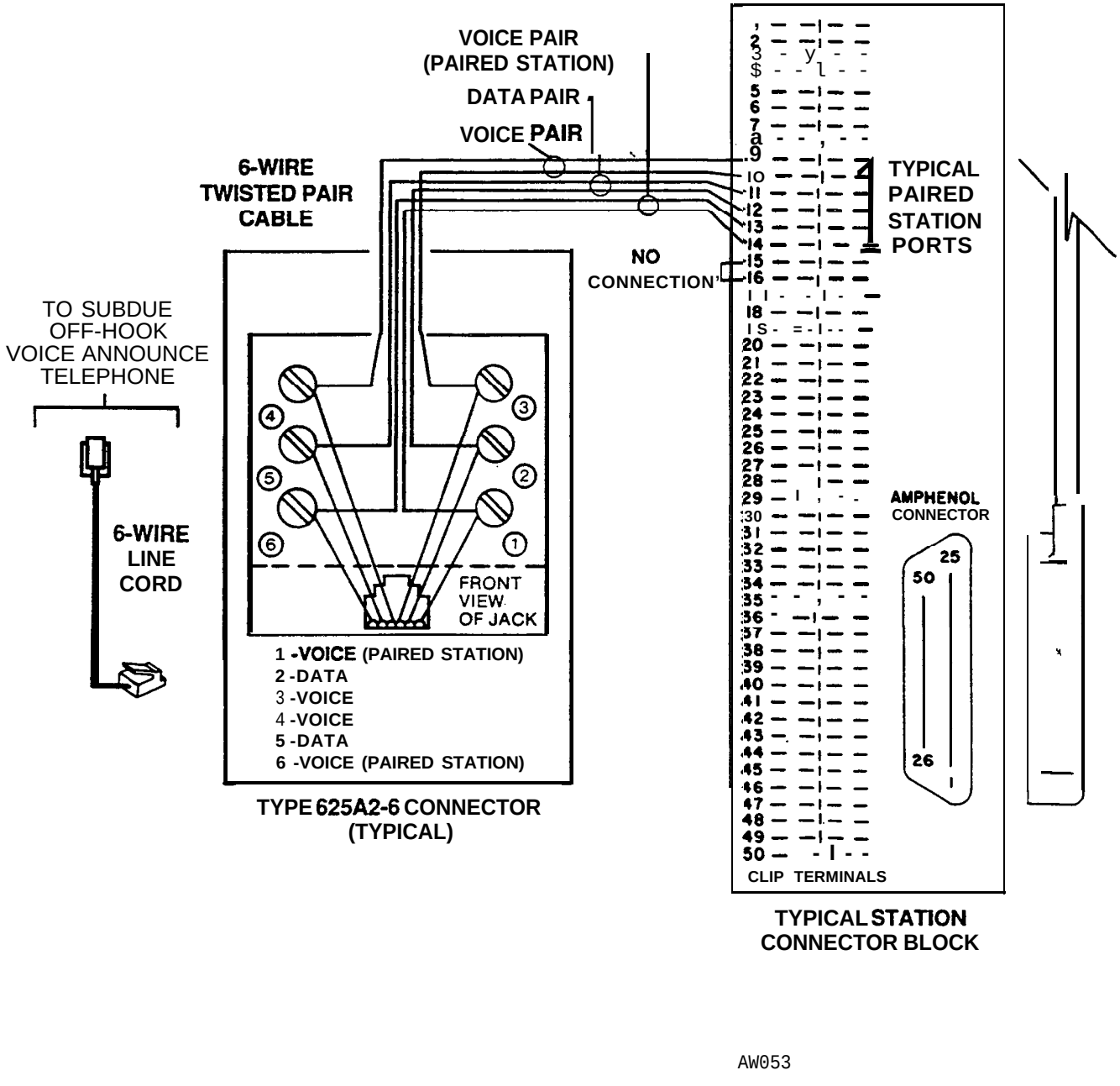


Figure 2.12 Off-Hook Voice Announce Connections

2.11 Checking The System

2.11.1 Checking The 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 11. For more information, see Chapter 3, section 3.4.

2.11.2 Doing A Final Check-Out

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

2.11.2.1 Checking The Resistance

Make the following resistance measurements 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.

1. 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.
2. Measure the resistance of the common equipment and cables from the common equipment side of the station connector blocks. Resistance values should be within the following limits.

Measured Pair	Station Resistance In Ohms			
	Multiline keyset	3 And 8 Line Keyset	Single Line Keyset	DSS/BLF Console
Voice Pair	40 - 150	40 - 150	40 - 150	0.3 - 100
Data Pair	03-100	40 - 150	0.3 - 100	0.3 - 100
Aux Pair	Open	Open	N/A	N/A

Measured Pair	Common Equipment Resistance In Ohms
Voice Pair	40 - 50
Data Pair	1 - 2

2.11.2.2 Checking The Voltage

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 one voice line and one data line and then across the other voice line and the other data line for each even and odd station. The measured voltage must be as follows:

2.11.2.3 Doing A 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. Once the basic system is verified as operational, perform the class of service programming as described in Chapter 3.

UNIT UNDER TEST	66M-xx BLOCK CONNECTION	METER LEAD POLARITY	MEASURED VOLTAGE
TYPICAL EVEN STATION (Repeat for each even station	Voice 1	(+)	
	Data 3	(-)	+33 +/- 8 VDC
	Voice 2	(+)	
	Data 4	(-)	+33 +/- 8 VDC
TYPICAL ODD STATION (Repeat for each odd station	Voice 5	(+)	
	Data 7	(-)	-33 +/- 8 VDC
	Voice 6	(+)	
	Data 8	(-)	*-33 +/- 8 VDC*

Variant readings can indicate a possible wiring, station, or common equipment problem.

2.12 Isolating System Failures

2.12.1 Checking The System Status Indicator

A red LED located on the common equipment cabinet near the cassette/music port is the system status indicator. When the system has power, this indicator stays lit. 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.

2.12.2 Doing A Station Self Test

You can self test the multiline stations for proper operation using the following instructions:

1. Disconnect line cord at station base.

NOTE: The adjacent odd or even station will momentarily be disabled during the time that the station line cord is *being disconnected or reconnected.*

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
- Indicators will then turn off in an orderly sequence
- Ringer will sound-be sure volume is set to med. or high

4. Replace any station that does not pass the self test.

2.12.3 Doing A DSS/BLF Console Self Test

The DSS/BLF Consoles can be self tested for proper operation as follows:

1. Disconnect console line cord plug from line.
2. Press and hold console key Cl0 while reconnecting line cord plug to line.

NOTE: The companion station will momentarily be disabled during the time that the console is being disconnected and reconnected.

3. Release console key **C10,** and note that BLF indicators will each turn on in sequence beginning with station 10 indicator. Indicators will then turn off and console will become operational.

2.12.4 Checking Failure Indications

If erratic light indications or ring signals occur at a paired station, an open data pair at either station may be the cause. A station with an open data line may work properly on a short loop but fail on a long loop.

Stations are paired for overload current protection. If a fault occurs that causes more than 300 milliamps of current to be drawn, the overload paired stations are disabled by circuit action. Disconnect the disabled stations and reconnect them one at a time to isolate the faulty one.

2.13 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.

2.13.1 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 KSU. The user/installer is required to notify the telephone company when final disconnection of this equipment from the telephone company line occurs.

2.13.2 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 effect the operation of this equipment. They must, however, provide adequate notice, in writing, of any future equipment changes that would make the system incompatible.

2.13.3 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 RJ21X or type RJ14C.

2.13.4 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.

2.13.5 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.

2.13.6 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.

2.13.7 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.***

2.13.8 Ringer Equivalence Number

The REN of each line is 0.4B. The FCC requires the installer to determine the total REN for each line, and record it at the equipment.

3 Programming The System

3.6 Programming The Lines 3-17

3.7 Programming The Stations 3-24

3 Programming The System

3.1 Using This Chapter

Programming the customer' s new system is the most intricate and important aspect of the installer' s job. The benefit of the ExecuTech 2000 is that you can program every system differently to fit each customer' s individual needs. Chapter 3 is divided into four programming sections: system lines, stations, and miscellaneous features, each of which lists features in alphabetical order. If you do not know where to find the feature you need, look in the Features chapter for a section number (for example, LCD Messaging is 3.5.7). Each programming step does include a brief explanation of that feature; however, before you begin programming you should familiarize yourself with *all* of the system' s features, listed in chapter 5, so that you can be certain that what you are programming is what the customer wants.

NOTE: Prior to taking any programming action., determine the desired parameters and requirements. Record this data on the programming reference tables provided in the Records chapter in the back of the manual.

3.2 Understanding How To Program

Once you have selected all of the features you are going to program into a new system go to chapter *5, Description of System Features,* and write down the numbers that correspond to that feature (for example, LCD Messaging is 3.5.7). Then locate the feature in chapter *3, Programming* The *System,* and reread the description to make sure it is' the feature you are looking for. Remember, if you have not already done so you must be in the configuration mode to do any programming (ITCM ✳ #746 ✳). When you are finished programming, press **SPKR** to end.

3.2.1 Using Class of Service Programming

The installer performs the Class of Service Programming when the system is first installed. Any programming function can be done under this type of programming. Class of service programming includes System, Station, and Line programming. The password for COS programming is ✳#746✳

3.2.2 Using Administration Programming

Administrators can use administration programming to program all system features except line attributes and the master clear. Administrators may perform this programming whenever system needs may dictate. The administration password is ✳#236✳

3.2.3 Using Attendant Programming

While all of the system programming is generally done by the installer, there are a few functions that can later be done by the system attendant. The Attendant programming password is ✳#0 plus the number of the feature. Attendant Programming features are as follows:

- System clock setting
- System speed dial
- Night transfer of ringing
- Music on hold
- LCD messages
- Station names
- SMDA reports

3.3 Understanding System Programming

3.3.1 Using A Telephone To Program The System

Perform Class of Service configuration programming from station port 10 or station port 12. The system will not accept programming commands from any other station port in the system. For best programming results, employ an LCD speakerphone. While you can install any non-LCD analog telephone and use it for programming, visual feedback of the programming operations will not be available.

3.3.2 Using A VDT To Program The System

You can perform programming using a customer-provided Video Display Terminal (VDT) with an RS-232 compatible, serial interface. VDT programming is completely menu driven and easy to follow. The programming is somewhat different from station port programming categories to facilitate menu usage. If you need more information on VDT programming, consult IMI66–068, *Video Display Terminal Programming.*

3.3.3 Using Block Programming

You can program a group of lines or stations to have the same configuration as one that you have already programmed. This block programming feature eliminates the need to individually program every line or station that requires the same configuration.

3.3.4 Master Clearing The System

After you have completely installed a telephone system for the first time or if a system that you previously installed has been turned off and taken out of service for a period of time (several weeks, for example), perform a master clear programming procedure before placing it into service. If you plan to perform a master clear procedure, perform it first before performing *any* other programming procedure. The master clear procedure clears all memory locations of any unwanted data that may be stored there. Master clearing also clears any previously programmed data, such as autodial numbers and defaults all class-of-service conditions. Therefore, never perform a master clear procedure on an existing installed system unless data loss and COS default are acceptable. Refer to section *3.4, Master Clearing and System Defaults,* for programming details.

3.3.5 Using Programming Overlays

Along with this manual, you should have received a programming overlay for use in identifying the buttons required for programming the system. The overlay fits over the buttons of the programming station. A full size copy of available programming overlays is included at the end of this chapter.

3.4 Master Clearing and System Defaults

You can return the entire programming configuration to the factory settings using the master clear procedure. You can also return the individual system, line, and station class of service configurations to their factory settings using the system, line, and station default procedures. The operating parameters and class of service values provided by the factory settings will provide satisfactory performance in a broad range of site applications.

Caution:

Not only does the master clearprocedure return ALL programmed variables to a known state of operation, but it also clears all currently stored autodial and speed dial numbers.

3.4.1 Master Clearing

Description: Returns entire system configuration to factory settings ***and clears all stored auto and speed dial numbers.***

To Program:
1. **Press ITCM** Dial ✳ *# 7 4 6* ✳ *"CONFIG. MODE"*
2. Dial **90** *' MASTER CLEAR"*
3. Dial 5 **16 8 4** to clear the entire system.
   System returns to normal operation mode automatically.

3.4.2 Defaulting The System

Description: Returns the system configuration features to factory settings.

To Program:
1. Press **ITCM** Dial ✳ *# 7 4 6* ✳ *"CONFZG. MODE"*
2. Dial **10** *"SYSTEM DEFAULT"*
3. Press #to default system features.
   System returns to configuration mode automatically.

3.4.3 Defaulting The Lines

Description Returns the line configuration features to factory settings.

To Program:
1. Press **ITCM** Dial ✳ **#** *7 4 6* ✳ *"CONFZG. MODE"*
2. Dial *30 "LINE DEFAULT"*
3. Press # to default line features.
   System returns to configuration mode automatically.

3.4.4 Defaulting The Stations

Description Returns the station configuration features to factory settings.

To Program:
1. Press **ITCM** Dial ✳ *# 7 4 6* ✳ *"CONFZG. MODE"*
2. Dial *50 "STATION DEFAULT"*
3. Dial 00 to default station ports system-wide,
   —OR—
   Select individual station port to be defaulted: Station 10 – 73, Dial **10 – 73** or press **Cl0 – C73.**
4. Dial ✳ for next station to default,
   —OR—
   Dial ✳ ✳ for configuration mode or SPKR to quit.

3.4.5 Defaulting Button Assignments

Description: Returns the button mapping of individual stations to its factory setting.

To Program:
1. Press **ITCM** Dial ✳ *# 7 4 6* ✳ *"CONFIG. MODE"*
2. Dial 56 *"BUTTON MAPPING"*
3. Dial *01 "BUTTON DEFAULT "*
4. Select station ports to be defaulted: Station 10 - 73, Dial **10 - 73** or press **Cl0 – C73**
5. Dial ✳ for next button mapping feature,
   —OR—
   Dial ✳ ✳ for configuration mode or SPKR to quit.

3.4.6 Defaulting Toll Restriction Table

Description: The system defaults two toll restriction tables with preprogrammed values and assigns them to the lines. You need only to assign them the stations to put them into effect. The preprogrammed values are as follows:

Table 1 (deny)	Table 2 (allow)
Entry 1 = 1	Entry 1= 1800
Entry 2 = 976	Entry 2 = 911
Entry 3 = 411	

These values will provide satisfactory system performance in a broad range of site applications; however, they can be changed as needed to meet different toll restriction needs.

To Program:
1. **Press ITCM** Dial ✳ *# 7 4 6* ✳ *"CONFIG. MODE"*
2. Dial *70 " ' DEFAULT TOLL"*
3. Press # to default toll tables
4. Dial ✳ for configuration mode or SPKR to quit.

3.5 Programming The System

Programming the system means that you are setting the parameters that will be true system wide. If you are unsure whether or not you are programming the correct function, check chapter *5, Description of System Features,* in the back of this manual for a full definition of the feature. You should make a record of all your programming decisions -it will help you keep track of what you have done and will help you troubleshoot any problem that might arise later. When you need to make a record of the programming configuration, mark the desired requirements in the system class of service records chart found in Chapter 4.

NOTE: A lighted LED next to the programming button shows which choice you have selected. When a single button provides a toggle (on/off) action, the lighted LED indicates the active feature.

The first step in any programming sequence is to enter the base level. Once in this mode, you can dial the feature code for any desired configuration. Enter the base level with the following procedure: press ITCM then dial ✳# 7 4 6 ✳. When you want to end the programming, press the **SPKR** button to end the programming procedure and return the system to normal operation.

3.5.1 Data Baud Rate

Description: 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.

NOTE: If you use XMODEM protocol for data transfer between a VDT and the common equipment, you must use 8-bit data. Data transfer can only be done on port A.

To Program:

1. **Dial15** *"BAUD RATE"*
2. Dial **1** for data port A

—OR—

3. Dial 2 for data port B

Choose baud rate.

Dial **01** or Press **Al**	*"W nD nS 110"*
Dial 02 or Press A2	*"W nD nS 150"*
Dial 03 or Press A3	*"W nD nS 300"*
Dial 04 or Press A4	*"W nD nS 600"*
Dial 05 or Press A5	*"W nD nS 1200"*
Dial 06 or Press **AS**	*"W nD nS 2400"*
Dial **07** or Press A9	*"W nD nS 4800"*
Dial OS or Press **A10**	*"W nD nS 9600"*
Dial **09** or Press **All**	*"W nD nS 19200"*

Dial **10** or Press A7 for 7 data bits and 2 stop bits *"W7D 2S ZZZZZ"*

Dial **11** or Press **Al4** for 8 data bits and 1 stop bit *"W8D IS ZZZZZ"*

4. Dial ✳ for next data port.
5. Dial ✳✳ for configuration mode.

3.5.2 Do Not Disturb (DND)

Description: A telephone user can press a button to set the station to a DND condition.

To program:
1. Dial 56 *"BUTTON MAPPING"*
2. Dial **07** *"ASSIGN DND CODE"*
3. Select button to be programmed: Press **Al - A14, B1 - B3,** or Dial 103 – 107 for B4 – **B8** or 122 for **Al5**
4. Select station ports to be programmed with a DND button: Station 10 - 73, **Dial 10 - 73** or press **Cl0 – C73**
5. Dial ✳ for further DND button assignment
   —OR—
   Dial ✳✳ for next button mapping feature
   —OR—
   Dial ✳✳✳ for configuration mode.

3.5.3 Do Not Disturb, Inhibit

Description: You can inhibit the ability to set DND on a system-wide basis.

To Program:
1. Dial **19** *"DND XXXXXXXX"*
2. Press **Al** to toggle between Enable and Disable (LED On = Enable)
   —OR—
   Dial **1** to Enable *"DND ENABLED"* (Al LED ON)
   Dial 2 to Disable *"DND DISABLED"*
3. Dial ✳ for configuration mode.

3.54 Do Not Disturb, Override

Description: A caller to a DND station can override a DND condition when you program the calling station to have the DND override feature.

To Program:
1. Dial **53***"STATION FEATURES"*
2. Dial 03 *"DND OVERRIDE"*
3. Select station ports to be programmed: Station 10 - 73, Dial **10 - 73,** or press C-10 – C73
4. Dial ✳ for next station feature,
   —OR—
   Dial ✳✳ for configuration mode.

3.5.5 DTMF Dialing Feedback

Description: You can program either DTMF or monotone feedback during dialing.

To Program:
1. Dial *27 "STATION FEATURES"*
2. Press Al to alternate between monotone and DTMF feedback (Al LED on = monotone feedback)
   —OR—
   Dial **1** for monotone feedback
   Dial 2 for DTMF feedback
3. Press ✳ for configuration mode.

3.5.6 Exclusive Hold

Description: This feature prevents a telephone user at one station from picking up a call that a user placed on hold at another station. You can enable or disable it system-wide using this procedure.

To Program:
1. Dial23 *"XXXXXXX EXC HOLD"*
2. Press **Al** to toggle between enable and disable (LED On = Enable)
   —OR—
   Dial **1** to enable *"ENABLE EXC HOLD"* (Al LED on)
   Dial 2 to disable *"DISABLE EXC HOLD"*
3. Dial ✳ for configuration mode.

3.5.7 LCD Messaging

Description: You can create custom messages that telephone users can set at their stations. These messages are displayed on any LCD speakerphone placing a call on the intercom line. The system provides two standard messages but you can use this programming procedure to create up to 10 custom messages. System attendants also have access to this feature.

NOTE: You can enter any attendant programming with the base level entry of ITCM ✳ #.

To Program:

1. Dial *05 ' LCD MESSAGES"*
2. Dial **0–9** for message number *"XXXX..."*
3. Dial # to clear current message
4. Refer to Table below and compose message (16 digits max.)
5. Dial all two-digit codes needed message. *"YYYYYYY..."*
   —OR—
   Dial **10** for pre-programmed message *" BACK AT"*
   —OR—
   Dial 20 for pre-programmed message *"CALL"*
6. Dial ✳ for next message location and repeat steps 2 - 5.
7. Dial ✳✳ for configuration mode.

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	4	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		

3.5.8 Music On Hold

Description: When you connect an external music source to the system, it will provide music to all outside lines that are placed on hold. You can disable the music using this programming procedure.
System attendants also have access to this feature.

NOTE: *You can enter any attendant programming with the base level entry of ITCM ✳ #.*

To Program
1. Dial04 *"MOH XXXXXXXX "*
2. Press **Al** to toggle between enable and disable (LED On = Enabled)
   —OR—
   Dial **1** to Enable (Al LED on) *"MOH ENABLED"*
   Dial 2 to Disable *"MOH DISABLED"*
3. Dial ✳ for configuration mode.

3.59 Station Monitoring-Visual Ringing

Description: The DSS/BLF at a station provides idle, busy, and ringing status of all of the monitored stations. If users deem the flashing BLF lights associated with visual ring indication distracting, you can disable this visual indication system-wide using this procedure.

To Program:
1. Dial 20 *"MONITOR XXXXXXX"*
2. Press **Al** to toggle between enable and disable (LED On = Enable)
   —OR—
   Dial **1** to Enable *"MONITOR ENABLED"* (Al LED ON)
   Dial 2 to Disable *"MONITOR DISABLED"*
3. Dial ✳ for configuration mode.

3.5.10 Station Monitoring-Audible Monitoring

Description: If you enable the visual ring indication, you can also enable audible indication of both direct and delayed ringing on a per-station basis if you wish.

To Program:
1. Dial *53 "STATION FEATURES"*
2. Dial *20 "AUDIBLE MONITOR"*
3. Dial **1** for no audible monitoring *"NONE"*
4. Dial 2 for direct ring monitoring *"DIRECT RING"*
5. Dial 3 for delayed ring monitoring *"DELAYED RING"*
6. Select stations for programming: Station 10 - 73, Dial **10 - 73** or press **Cl0 – C73**
7. Dial ✳ next monitoring condition,
   —OR—
   Dial ✳✳ for next station feature,
   —OR—
   Dial ✳✳✳ for configuration mode.

3.5.11 System Clock

Description: The system clock maintains current date and time information. The system provides this information to LCD speakerphones for display. Set the system time with this feature. The system attendant also has access to this feature.

NOTE: You can enter any attendant programming with the base level entry of ITCM ✳ #.

To Program:

1. Dial **01** *"SET CLOCK"*

LONG FORM	SHORT FORM
Dial 00 - 99 for yr.	- Dial 00-23 for hr.
Dial **01 - 12** for mo.	- Dial 00-59 for min.
Dial **01 - 31** for day	- Dial **#** to assign hours and minutes
Dial 00 - 23 for hr.	
Dial 00 - 59 for min.	

2. Dial ✳ for configuration mode.

3.5.12 System Speed Dial

Description: You can program a special system-wide list of numbers that all users can use for automatic dialing. The system attendant can also program the system speed dial numbers.

NOTE: You can enter any attendant programming with the base level entry of ITCM ✳ #.

To Program:

1. Dial 02 *"SYS SPEED DIAL."*
2. Dial 01 - 99 for storage location. *"XXXXXXXX..."*
3. Dial # to clear current entry *"LINE:"*
4. Choose line, line group, or intercom to be used with speed dial number *"LINE XX"*
   Line port 1-14 = Dial **01 - 14** or press **Al - Al4**
   Line port 15,16 = Dial **15, 16** or press **B1, B2**
   Line port 17-24 = Dial 17 - 24 or press B3 then **Al - A8**
   —OR—
   Dial *90* for last line *used* or prime line *"PRIME LINE"*
   —OR—
   Dial **91** - 94 for line group 1-4 *" ' LINE GROUP I'*
   Press **ITCM** button for intercom line *' INTERCOM"*
5. Dial number for storage (32 digits max) *"XXXXX..."*— If required, press **HOLD** button to store a pause. If required, press **TAP** button to store a hookflash
6. Press **TRANS/CONF** button to save the number
7. Repeat steps 2-6 for all speed dial numbers,
   —OR—
   Press ✳ for configuration mode.

3.5.13 Tandem Attendant

Description: When you enable this feature, a recall from an unanswered call transfer or timed hold recall will ring at both attendant stations. When you disable it, only the attendant station that transferred the call will ring.

To Program:
1. Dial *24 "TANDEM ATTN XXX"*
2. Press **Al** to toggle between enable and disable (LED On = Enable)
   —OR—
   Dial **1** to enable *"TANDEM ATTN OFF"*
   Dial 2 to disable (Al LED is on) *"TANDEM ATTN ON"*
3. Dial ✳ for configuration mode.

3.5.14 Tape Baud Rate

Description: You can up-load or down-load system information using a customer provided tape recorder.

To Program:
1. Dial17
2. Press **Al** to toggle between 50 and 100 baud (LED On = 100 baud)
   —OR—
   Dial **1** for 50 baud
   Dial 2 for 100 baud
3. Dial ✳ for configuration mode.

3.5.15 Tone or Voice Signaling

Description: Intercom calls can be tone signaled or voice signaled. Use this programming feature to select the system's signaling choice. With either method set as the system's first choice, the user can choose the other method as needed.

To Program:
1. Dial 16 *"XXXXX ANN. FIRST"*
2. Press **Al** to toggle between Voice To Tone. (LED On = voice signaling)
   —OR—
   Dial **1** for Voice First *"VOICE ANN. FIRST"*
   Dial 2 for Tone First *"TONE ANN. FIRST"*
3. Dial ✳ for configuration mode.

3.516 Timing Features-Call Park Recall Time

Description: A call that remains in a parking orbit for a programmed length of time automatically returns to a timed hold recall condition at the parking station. Set the call park recall time with this programming feature.

To Program:
1. Dial22 *C. P. RECALL X"*
2. Select recall time:
   Program button LED On = Selected Time
   Press **Al** 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 mm.
   Press AS or dial 6 = 6 min.
   Press A9 or dial 7 = Never Recall *"NEVER RECALL"*
3. Dial ✳ for configuration mode.

3.517 TimingFeatures-Extended DTMF Tones For Automatic Dialing

Description: The system can access outside equipment, answering machines or banking computers, for example, that require DTMF tones that are longer than the standard 80 msec. tone. The system automatically shifts to a longer tone 10 seconds after the last digit of a number is dialed. A user can shift from one tone length to the other by pressing the hold button and then reselecting the line.

To Program:
1. Dial26 *"DTMF DIALNG XXXX"*
2. Choose DTMF tone length
   Press Al or dial 1 = 80 msec.
   Press A2 or dial 2 = 160 msec.
   Press A3 or dial 3 = 240 msec.
   Press A4 or dial 4 = 320 msec.
   Press A5 or dial 5 = 400 msec.
   Press **AS** or dial 6 = 480 msec.
   Press **A9** or dial 7 = 560 msec.
   Press **A10** or dial 8 = 720 msec.
   Press **All** or dial 9 = 880 msec.
   Press **Al2** or dial 0 = 1040 msec.
3. Dial ✳ for configuration mode.

3.518 Timing Features-PA Port

Description: You can set PA ports to either timeout of the system for a programmed length of time or to remain on the system as long as necessary without timing out. The system default is set for no timeout option.

To Program:
1. Dial *92 "PA TIMEOUT"*
2. Choose Timeout length:
   Press **Al** or dial **1 = 30 sec.**
   Press A2 or dial 2 = 60 sec.
   Press A3 or dial 3 = 90 sec.
   Press **A4** or dial **4** = 120 sec.
   Press A5 or dial 5 = 150 sec.
   Press A8 or dial 6 = 180 sec.
   Press **A9** or dial **7** = 210 sec.
   Press **A10** or dial **8** = 240 sec.
   Press All or dial 9 = 300 sec.
   Press **Al2** or dial 0 = No timeout
3. Dial ✳ ✳ for configuration mode.

3.519 Timing Features-Pause Time

Description: During auto dials and speed dials, it is sometimes necessary to delay the sending of digits to give switching equipment time to prepare for receiving them. A pause is stored for this purpose whenever the user presses the **HOLD** button. You can set the length of the pause with this programming feature.

To Program:
1. Dial13 *"PAUSE TIME XXX"*
2. Select time:

Dial 1 or Press **Al**	*"PAUSE TIME 0.50"*
Dial 2 or Press A2	*"PAUSE TIME 1"*
Dial 3 or Press A3	*"PAUSE TIME I SO"*
Dial 4 or Press A4	*"PAUSE TIME 2"*
Dial 5 or Press **A5**	*"PAUSE TIME 3"*
Dial 6 or Press **AS**	*"PAUSE TIME 5"*
Dial 7 or Press A9	*"PAUSE TIME 7.50"*
Dial 8 or Press **A10**	*"PAUSE TIME 10"*
Dial **9** or Press **All**	*"PAUSE TIME 15"*
Dial 0 or Press **Al2**	*"PAUSE TIME 20"*

3. Dial ✳ for configuration mode.

3.520 Timing Features—Recall/Flash:

Description: The system can generate either a line disconnect (recall) or a host system feature access signal (flash) depending upon the programmed time.

To Program:
1. Dial12 *"RECALUFLSH XXXX"*
2. Select time:

Dial 1 or Press **Al**	*"RECALUFLSH 0.08"*
Dial 2 or Press A2	*"RECALUFLSH 0.30"*
Dial 3 or Press A3	*"RECALUFLSH 0.50"*
Dial 4 or Press A4	*' ' RECALUFLSH 0.60"*
Dial 5 or Press **A5**	*"RECALL/FLSH 0.75"*
Dial 6 or Press **A8**	*"RECALL/FLSH 0.88"*
Dial 7 or Press A9	*"RECALL/FLSH 1"*
Dial 8 or Press **A10**	*"RECALL/FLSH 1.50"*
Dial **9** or Press **All**	*"RECALL/FLSH 2"*
Dial 0 or Press **Al2**	*"RECALL/FLSH 3"*

3. Dial ✳ for configuration mode.

3.5.21 Timing Features-Timed Hold Recall

Description: 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. Set the hold recall time with this programming procedure.

To Program:

1. Dial14 *"HOLDRECALLXXXX"*
2. Select time:
   - Dial **1** or Press **Al** *"HOLD RECALL 30"*
   - Dial 2 or Press A2 *"HOLD RECALL 60"*
   - Dial 3 or Press A3 *"HOLD RECALL 90"*
   - Dial 4 or Press A4 *"HOLD RECALL 120 "*
   - Dial 5 or Press A5 *"HOLD RECALL 180 "*
   - Dial 6 or Press **A8** *"HOLD RECALL 240 "*
   - Dial 7 or Press A9 *"HOLD RECALL 300 "*
   - Dial 8 or Press **A10** *"HOLD RECALL 360 "*
   - Dial 9 or Press **All** *"HOLD RECALL 420 "*
   - Dial 0 or Press **Al2** *"HOLD RECALL"0"*
3. Dial ✳ for configuration mode.

3.5.22 Timing Features-Unanswered Call Transfer Recall Time

Description: A transferred call that remains unanswered after a programmed length of time will return to the transferring station for answering. Set the transfer recall time with this programming procedure.

To Program:

1. Dial **11** *"TRANSFER RECALL "*
2. Dial **1** (sta xfr recall) *"STA XFR RCL XXX "*
   —OR—
   Dial **2** (dept *xfr* recall) *"DEPTXFRRCLXXX"*
3. Choose transfer time:
   - Dial **1** or Press **Al** *"XFRRCL 10"*
   - Dial 2 or Press A2 *"XFR RCL 20"*
   - Dial 3 or Press A3 *"XFR RCL 25"*
   - Dial 4 or Press A4 *"XFR RCL 30"*
   - Dial 5 or Press **A5** *"XFR RCL 45"*
   - Dial 6 or Press **A8** *"XFR RCL 60"*
   - Dial 7 or Press A9 *"XFRRCL 90 "*
   - Dial **8** or Press **A10** *"XFR RCL 120 "*
   - Dial **9** or Press **All** *"XFR RCL 180 "*
   - Dial 0 or Press **Al2** *"XFR RCL 240"*
4. Press ✳ for next transfer recall feature.
5. Press ✳✳ for configuration mode.

3.5.23 Feature Inhibit Programming

Description: You can disable certain features system-wide to provide a basic telephone system. This option is beneficial in installations where a large proportion of the stations are accessible to unauthorized users. You can re-enable any features that *you* disable with this procedure by performing the system default procedure.

To Program:

1. Dial *29 "FEATURE INHIBIT"*
2. 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 mode.

3.6 Programming **The Lines**

3.6.1 Introduction

You can program the parameters for individual lines by using line class of service programming. The programming decisions you make, therefore, will only be true for that line and not for the entire telephone system, as is the case for system configuration. You should keep a record of all programming decisions that you make-it will help you keep track of what you have done and will help you trouble-shoot any problem that might arise later. When you need to make a record of the programming configuration, mark the desired requirements in the line class of service records chart located in Chapter 4.

NOTE: A lighted LED next to the programming button shows which choice you have selected. When a single button provides a toggle (on/off) action, the lighted LED indicates the active feature.

The first step in any programming sequence is to enter the base level. Once in this mode, you can dial the feature code for any desired configuration. Enter the base level with the following procedure: press ITCM then dial ✳# 7 4 6 ✳. The last step is to press the SPKR button to end the programming procedure and return the system to normal operation.

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

KEYPAD BUTTONS	PROG. BUTTONS	LINE
01 - 14	Al - Al4	1 - 14
15, 16	B1, B2	15, 16
17 - 34	B3 plus Al - A8	17-34

NOTE: B3 button is used to toggle program buttons between lines I - 14 and 17 - 24.

3.6.2 Abandoned Hold Release

Description: When a distant party abandons a hold condition and disconnects from a line (hangs up), the central office will send a forward disconnect signal to the digital telephone system. This signal can be either 50 msec. or 350 msec. Check the signal length from the telephone company and program all of the central office line ports to match that signal length.

To Program:
1. Dial *38 "HOLD RELEASE 50"*
2. Select hold release time for line ports (LED On = 50 msec, LED Off = 350 rnsec)
   Line port l-14 = Dial **01 - 14** or Press **Al - Al4**
   Line port 15, 16 = Dial **15, 16** or press **B1, B2**
   Line port 17-24 = Dial 17 **- 24**
   —OR—
   Press B3 then press **Al - A8**
3. Dial ✳ for configuration mode.

3.6.3 Automatic Privacy

Description: You can make a line private or non-private. In the private mode, a station has exclusive use of a line during a call. Lines are private unless you re-program them and make them non-private.

To Program:
1. Dial *40 ' PRIVACY RELEASE"*
2. Select line ports to be non-private (LED On = Non Private)
   Line port 1-14 = Dial **01 - 14** or Press **Al - Al4**
   Line port 15, 16 = Dial **15, 16** or press **B1, B2**
   Line port 17-24 = Dial 17 - 24
   —OR—
   Press B3 then press **Al - A8**
3. Dial ✳ for configuration mode.

3.6.4 Automatic Privacy Release

Description: You can arrange for individual stations to automatically release privacy while on certain lines. With this arrangement, other stations can join that particular station whenever it is on the privacy released line.

To Program:
1. Dial *54 "STA/LINE CONFIG."*
2. Dial *4 "PRIVACY RELEASE"*
3. Select line ports:
   Line port l-14 = Dial **01 - 14** or press **Al - Al4**
   Line port 15, 16 = Dial **15, 16** or press **B1, B2**
   Line port 17 - 24 = Dial 17 - 24
   —OR—
   Press B3 then press **Al - A8**
4. Dial # when all line ports are selected
5. Select station ports to be programmed: Station 10 - 73, Dial **10 - 73** or press **C10– C73**
6. Dial ✳ when all station ports are selected,
   —OR—
   Dial ✳ ✳ for next station/line feature,
   —OR—
   Dial ✳ ✳ ✳ for configuration mode.

3.6.5 Line Disable

Description: You can take a line port out of service when necessary (because of defect, for example) using this programming procedure. Return the line to service with the central office lines programming procedure, page 3-21.

To Program:
1. Dial 31 *"DISABLE LINES"*
2. Select line ports to be disabled (LED On = Disabled)
   Line port 1-14 = Dial **01 - 14** or Press **Al - Al4**
   Line port 15, 16 = Dial **15, 16** or press **B1, B2**
   Line port 17-24 = Dial 17 - 24
   —OR—
   Press B3 then press **Al - AS.**
3. Dial ✳ for configuration mode.

3.6.6 Line Groups

Description: Group outside lines of the same type together for dial-up outgoing access. Access codes for the line groups are as follows:

Group 1 = Dial 9
Group 2 = Dial **81**
Group 3 = Dial 82
Group 4 = Dial 83

NOTE: *Assigning lines to groups automatically arranges the system for hybrid operation. Remember, hybrid operation may incur a higher monthly tariff than the key system operation incurs. Ask the local telephone company for details.*

To Program:
1. Dial 35 *"' ASSIGN LINE GRPS"*
2. Dial 0 for no groups assigned *"NO LINE GROUP"*
   —OR—
   Dial **1** for Line Group 1 *"LINE GROUP I"*
   Dial 2 for Line Group 2 *"LINE GROUP 2"*
   Dial 3 for Line Group 3 *"' LINE GROUP 3"*
   Dial 4 for Line Group 4 *"LINE GROUP 4"*
3. Select line ports to be assigned (LED On = Lines Assigned)
   Line port 1-14 = Dial **01-14** or press **Al-Al4**
   Line port 15-l **6** = Dial **15-16** or press **Bl-B2**
   Line port 17-24 = Dial 17-24 or press B3 then press Al-A8
4. Dial ✳ for next group,
   —OR—
   Dial ✳✳ for configuration mode.

NOTE: *To remove lines from a line group enter 0 for the line.*

3.6.7 Line Names

Description: You can name lines to identify them for use. Names such as WATTS, or CO, for example, make locating a desired line easier for the station user. The station name appears on the LCD of the station user. A line name can contain up to five characters.

To Program:
1. Dial34 *"LINE NAME"*
2. Select line ports to be assigned (LED On = Assigned)
   Line port 1-14 = Dial **01 - 14** or Press **Al - Al4**
   Line port 15, 16 = Dial **15, 16** or press **B1, B2**
   Line port 17-24 = Dial 17 - 24
   —OR—
   Press **B3** then press **Al - A8**
3. Press # to clear current name
4. Dial line name character codes (5 characters maximum for each line port from chart shown below).

Example: WATS = Dial **9121818173**
0156 = Dial 00, **01, 05, 06**
(Each character must be represented by two digits.)

5. Dial ✳ and repeat last three steps for next line,
   —OR—
   Dial ✳✳ for configuration mode.

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	96	y	96		
Z	13	z	16		

3.6.8 Line Port Functions-Auxiliary Lines

Description: You can condition a line port to serve as a port for an external paging amplifier.

To program:
1. Dial *32 "AUXILIARY LINES"*
2. Select line ports to be assigned (LED On = Assigned)
   Line port 1-14 = Dial **01 - 14** or Press **Al - Al4**
   Line port 15, 16 = Dial **15, 16** or press **B1, B2**
   Line port 17-24 = Dial 17 - 24
   —OR—
   Press B3 then press **Al - AS**
3. Dial ✳ for configuration mode.

3.6.9 Line Port Functions—Central Office Lines:

Description: You can condition line ports to serve as ports for standard telephone company supplied central office lines.

To program:
1. Dial 33 *"C.O. LINES"*
2. Select line ports to be assigned (LED On = Assigned)
   Line port 1-14 = Dial **01 - 14** or Press **Al - Al4**
   Line port 15, 16 = Dial **15, 16** or press **B1, B2**
   Line port 17-24 = Dial 17 - 24
   —OR—
   Press B3 then press **Al - A8**
3. Dial ✳ for configuration mode.

3.6.10 Line To Line Port Re-Assignment

Description: You can reassign the programming attributes for a line that the installer has connected to a particular line port to a different line port with this programming action. This feature allows you to automatically exchange all software attributes for one line with those assigned to another at a different line port without physically re-locating the lines or reprogramming any of the attributes.

To Program:
1. Dial 41 *"ASSIGN LOGICAL/PHYS"*
2. Select currently assigned line port number. *"PHYS LATCH XX"*
   Line port 1-14 = Dial **01 - 14** or Press **Al - Al4**
   Line port 15, 16 = Dial **15, 16** or press **B1, B2**
   Line port 17-24 = Dial 17 - 24
   —OR—
   Press B3 then press **Al - A8**
3. Dial new line port number **(01 - 24 =** line 1 - 24) *"LOGICAL LINE XX"*
4. Dial #to make assignment
5. Repeat steps 2 -4 for another assignment,
   —OR—
6. Dial ✳ for configuration mode.

3.6.11 Puke/Tone Switchable-Pulse

Description: If the installer has connected rotary dial lines to the system, you must condition those line ports as pulse dial ports.

NOTE: The user can switch from pulse (rotary dial signaling) to tone (dual tone multiplefrequency - DTMF) for accessing special circuits requiring DTMF tones, such as banking machines, when they need to do so from a rotary dial line by dialing # after dialing access number.

To Program:

1. Dial *36 "PULSE DIAL"*
2. Select pulse dial line ports (LED On = Pulse)
   Line port 1-14 = **Dial 01 - 14** or Press **Al - Al4**
   Line port 15, 16 = Dial **15**, **16** or press **B1**, **B2**
   Line port 17-24 = Dial 17 - 24
   —OR—
   Press B3 then press **Al - AS**
   —OR—
   Dial **00** to default all lines to pulse dial
3. Dial ✳ for configuration mode.

3.6.12 Puke/Tone Switchable-Tone

Description: If the installer has connected tone dial lines to the system, you must condition those line ports as tone dial ports.

To Program:

1. Dial 37 *"TONE DIAL"*
2. Select tone dial line ports (LED On = Tone)
   Line port 1-14 = Dial **01 - 14** or Press **Al - Al4**
   Line port 15, 16 = Dial **15**, **16** or press **B1**, **B2**
   Line port 17-24 = Dial 17 - 24
   —OR—
   Press B3 then press **Al - A8**
   —OR—
   Dial 00 to default all lines to tone dial.
3. Dial ✳ for configuration mode.

3.613 Block Programming-Line Button Method

Description: You can use this programming procedure to assign those features that you have already assigned to any other line or entire block of lines.

To Program:
1. Dial *42 "BLK PROGRAMMZNG"*
2. Select model line port *"MODEL LINE XX"*
   Line port 1-14 = Press **Al - Al4**
   Line port 15, 16 = Press **B1, B2**
   Line port 17-24 = Press B3 then press **Al - AS**
3. Select lines to match model line (as detailed above)
4. Dial ✳ and repeat steps 2 and 3 for next model line,
   —OR—
   Dial ✳✳ for configuration mode.

3.614 Block Programming-Keypad Method

Description: You can use this programming procedure to assign those features that you have already assigned to any other line or entire block of lines.

To Program:
1. Dial 42 *"BLK PROGRAMMING"*
2. Select model line port *"MODEL LINE XX"*
   Line port 1 - 24 = Dial **01 - 24**
3. Dial first line port in block (dial **01 - 24)**
4. Dial **#**
5. Dial last line port in block (dial **01 - 24)**
6. Dial **#**
7. Dial ✳ for next model line,
   - O R -
   Dial ✳✳ for configuration mode.

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).*

3.7 Programming The Stations

3.7.1 Introduction

Station programming means that you are programming the functions for one particular station, or port. While it isn't necessary, it is a good idea to do station programming after you have done system and line programming. You should keep a record of programming decisions that you make-it will help you keep track of what you have done and will help you trouble-shoot any problem that might arise later. When you need to make a record of the programming configuration, mark the desired requirements in the station class of service records chart found at the back of this manual.

NOTE: A lighted LED next to the programming button shows which choice you have selected. When a single button provides a toggle (on/off) action, the lighted LED indicates the active feature.

The first step in any programming sequence is to enter the base level. Once in this mode, you can dial the feature code for any desired configuration. Enter the base level with the following procedure: press **ITCM** then dial ✳**#** 7 4 6 ✳**.** The last step is to press the **SPKR** button to end the programming procedure and return the system to normal operation.

Make station port selection by dialing a selection number on the keypad or pressing the console buttons as in the following reference chart.

STATION PORTS	KEYPAD BUTTONS	CONSOLE BUTTONS
10-73	**10-73**	Cl0 - c73

Caution:

You should program feature 3.7.30, Port Definition, before you do any other station programming. All programming for a port is lost when the port is redefined in 3.7.30.

3.7.2 Access Denied (Line Access Denied)

Description: You can deny access to certain lines at certain stations. When you do this, a station user cannot select a denied line. This feature and all level 54 features are toggle on / off.

To Program:
1. Dial 54 *"STA/LINE CONFIG."*
2. Dial 5 *"ACCESS DENY"*
3. Select line ports (LED On = Access Denied)
   Line port 1-14 = Dial **01 - 14** or press **Al - Al4**
   Line port **15, 16** = Dial **15, 16** or press **B1, B2**
   Line port 17-24 = Dial 17 - 24 or press B3 then press **A1 - A8**
4. Dial # when all line ports are selected
5. Select station ports (LED On = Feature Assigned): Station 10 - 73, Dial **10 - 73** or press **Cl0 - C73.**
6. Dial ✳ when all station ports are selected,
   —OR—
   Dial ✳ ✳ for next station/line feature,
   —OR—
   Dial ✳ ✳ ✳ for configuration mode.
7. To change setting, repeat procedure and make opposite selection.

3.7.3 All-Call and Zone Paging

Description: Telephone users can receive voice announcements through their telephone loudspeakers or through an external paging amplifier and speaker connected to a PA port. They can transmit these voice announcements with their telephone handsets. You can arrange the programming so that the users can make announcements to stations located in certain areas of the site or to all of the stations. You can also arrange stations to originate but not receive zone pages (or receive but not originate).

To Program:

1. Dial *55 "PAGING"*
2. Choose paging assignment
   - Dial **1** for zone 1 originate *' ORIGINATE ZONE I"*
   - Dial 2 for zone 2 originate *' ORIGINATE ZONE 2"*
   - Dial 3 for zone 3 originate *' ORIGINATE ZONE 3"*
   - Dial 4 for ah-call originate *"ALL-CALL ORZG."*
   - Dial **5** for zone 1 receive *"RECEIVE ZONE I"*
   - Dial 6 for zone 2 receive *"RECEIVE ZONE 2"*
   - Dial 7 for zone 3 receive *"RECEIVE ZONE 3"*
   - Dial **8** for all-call receive *"ALL-CALL RECEIVE"*
   - Dial *9* to clear all assignments *"CLEAR PAGING"*
3. Select station ports (LED On = Feature Active): Station 10 - 73: Dial **10 - 73** or press **Cl0 - C73**
4. Dial ✳ to assign other paging,
   —OR—
   Dial ✳✳ for configuration mode.
5. To change setting, repeat procedure and make different selection.

3.7.4 All-Call and Zone Paging-Button

Description: If you wish, you can assign a paging button to provide a station with one-button access to the all-call and zone paging feature.

To Program:

1. Dial *56 "BUTTON MAPPZNG"*
2. Dial **09** "ASSIGN *ZONE"*
3. Select button to be programmed (LED On = Paging Button): Press **Al - A14, B1 - B3** or 103 -107 for B4 **– B8**
4. Dial **1 - 3** for zone 1 - 3 *"ASSIGN ZONE X"*
   —OR—
   Dial 4 for all-call ' ASSIGN *ALL CALL"*
5. Select station ports (LED On = Button Assigned To Port): Station 10 - 73, Dial **10 - 73** or press **Cl0 - C73**
6. Dial ✳ for further paging button assignment,
   —OR—
   Dial ✳✳ for next button mapping feature,
   —OR—
   Dial ✳✳✳ for configuration mode.
7. To clear a paging button, dial 5604, press paging button, dial **#,** and repeat above steps 5 and 6.

3.7.5 Audible Monitoring

Description: The DSS/BLF at a multiline station provides a visual indication of idle, busy, and ringing status of the monitored stations. You can also provide audible indication of direct and delayed ringing for selected stations; however, you must first enable the station monitoring feature on a system-wide basis (see 3.7.21).

To Program

1. Dial **20** *"'MONITOR XXXXXXX"*
2. Press **Al** to switch between enable and disable (LED On = Enable)
   —OR—
   Dial **1** to Enable *"MONITOR ENABLED"* (Al = LED On)
   —OR—
   Dial 2 to Disable *"'MONITOR DISABLED"*
3. Dial ✳ for configuration mode
   To change setting, repeat procedure and make opposite selection.

3.7.6 Audible Monitoring-Station Assignments

Description: Once you have enabled audible monitoring system-wide, you must select each station and the type of audible monitoring that you want to program.

To Program:

1. Dial *53 "STATION FEATURES"*
2. Dial **20** *'AUDIBLE MONITOR"*
3. Dial **1** for no audible monitoring *"NONE"*
4. Dial 2 for direct ring monitoring *"DIRECT RING"*
5. Dial 3 for delayed ring monitoring *"DELAYED RING"*
6. Dial 4 for console 32 "CONSOLE 32"
7. Dial **5** for console 70 "CONSOLE 70"
8. Select stations ports (LED On = Feature Assigned): Station 10 - 73, Dial **10 - 73** or press **Cl0 - C73**
9. Dial ✳ next monitoring condition,
   —OR—
   Dial ✳✳ for next station feature,
   —OR—
   Dial ✳✳✳ for configuration mode.
10. To change setting, repeat procedure and make different selection.

3.7.7 Automatic Hold

Description: When you enable this feature, the telephone user can automatically place an existing line call on hold when she or he presses another line button to answer a second call.

To Program:
1. Dial *53 "STATION FEATURES"*
2. Dial **11** *' AUTO HOLD"*
3. Select station ports (LED On = Feature Assigned): Station 10 - 73, Dial **10 - 73** or press **Cl0 - C73**
4. Dial ✳ for next station feature,
—OR—
Dial ✳✳ for configuration mode.
5. To change setting, repeat procedure and make opposite selection.

3.7.8 Automatic Hold For Intercom

Description: If you want the telephone user to also have the automatic hold feature when he or she is on an existing intercom call and presses another intercom button or a line button, take this additional programming action.

To Program:
1. Dial *53 "STATION FEATURES"*
2. Dial 12 *"ITCM AUTO HOLD"*
3. Select station ports (LED On = Feature Assigned): Station 10 - 73, Dial **10 - 73** or press **Cl0 - C73**
4. Dial ✳ for next station feature,
—OR—
Dial ✳✳ for configuration mode.
5. To change setting, repeat procedure and make opposite selection.

3.7.9 Automatic Privacy

Description: You can make a line private or non-private. In the private mode, a station has exclusive use of a line during a call. This information is repeated in 3.6.3. You do not need to program this feature again if you have don so in 3.6.3.

To Program:
1. Dial *40 "PRIVACY RELEASE"*
2. Select line ports to be non-private (LED On = Non Private Port)
   Line port 1-14 = Dial **01 - 14** or Press **Al - Al4**
   Line port 15, 16 = Dial **15, 16** or press **B1, B2**
   Line port 17-24 = Dial 17 - 24 or press B3 then press **Al - A8**
3. Dial ✳ for configuration mode.
4. To change setting, repeat procedure and make opposite selection.

3.7.10 Automatic Privacy Release

Description: You can arrange for individual stations to automatically release privacy while on certain private lines. With this arrangement, other stations can join that particular station whenever it is on the line that you have assigned as a privacy release line.

NOTE: This feature and all level 54 *programming features are toggle on /off.*

To Program:
1. Dial 54 *"STA/LINE CONFIG."*
2. Dial *4 "PRIVACY RELEASE"*
3. Select line ports (LED On = Selected Ports)
   Line port 1-14 = Dial **01 - 14** or press **Al - Al4**
   Line port 15, 16 = Dial **15, 16** or press **B1, B2**
   Line port 17-24 = Dial 17 - 24 or press B3 then press **Al - A8**
4. Dial # when all line ports are selected.
5. Select station ports (LED On = Feature Assigned) : Station 10 - 73, Dial **10 - 73** or press **Cl0 - C73**
6. Dial ✳ when all station ports are selected,
   —OR—
   Dial ✳ ✳ for next station/line feature,
   —OR—
   Dial ✳ ✳ ✳ for configuration mode.
7. To change setting, repeat procedure and make opposite selection.

3.7.11 Call Forward On Busy/Ring – No Answer

Description: The system can automatically forward busy and ring-no answer calls. When a user places a call to station A, for example, that call can be automatically forwarded to any other station associated either by intercom hunt group or by department. Use this feature to arrange for calls to cycle rapidly through such associated stations testing each one in turn with several rings. For this feature to work, you must program either hunt groups or departments (3.7.28 or 3.9).

NOTE: If you enable this feature, also program the system intercom signaling as tone first.

To Program:

1. Dial *53 "STATION FEATURES"*
2. Dial 21 *"CALL FWD RNA"*
3. Dial 0 - 9 for 0 - 9 rings before forwarding *"RING S= X"*
4. Select station ports (LED On = Feature Assigned): Station 10 - 73, Dial **10 - 73** or press **Cl0 - C73**
5. To change setting, repeat procedure and make different selection
6. After you have enabled Call Forward, set tone first intercom signaling by doing the following:
7. Dial 16 *"XXXXX ANN. FIRST"*
8. Press **Al** to toggle from Voice To Tone (LED Off = Tone),

   —OR—

   Dial 2 for Tone First. *"TONE ANN. FIRST"*
9. Dial ✳ for configuration mode
10. To change setting, repeat procedure and make opposite selection
11. Dial ✳ for additional station ring assignments,

    —OR—

    Dial ✳✳ for next station feature,

    —OR—

    Dial ✳✳✳ for configuration mode.

3.7.12 Call Origin&on Denied (Line Origination Denied)

Description: You can deny users of selected stations the ability to originate calls on specified lines. This feature does not prevent the user from answering incoming calls on these lines.

To Program:
1. Dial 54 *"STA/LINE CONFIG."*
2. Dial *6 "ORIGINATION DENY"*
3. Select line ports (LED On = Selected Ports)
   Line port 1-14 = Dial **01 - 14** or press **Al - Al4**
   Line port 15, 16 = Dial **15**, **16** or press **B1**, **B2**
   Line port 17-24 = Dial 17 **- 24** or press B3 then press **Al - AS**
4. Dial #when all line ports are selected
5. Select station ports (LED On = Feature Assigned): Station 10 - 73, Dial **10 - 73** or press **Cl0 - C73**
6. Dial ✳ when all station ports are selected,
   —OR—
   Dial ✳✳ for next station/line feature,
   —OR—
   Dial ✳✳✳ for configuration mode.
7. To change setting, repeat procedure and make opposite selection.

3.7.13 Central Message Desk

Description: Use this feature to designate one station in the system as the central message desk. When you do this, the' system automatically arranges for the central message desk station to have message wait originate capability so that it can control message waiting lights at other stations.

To Program:
1. Dial *53 "' STATION FEATURES"*
2. Dial **08** *"MSG DESK'*
3. Select station port (LED On = Feature Assigned): Station 10 - 73, Dial **10 - 73** or press **Cl0 - C73**
4. Dial ✳ for next station feature,
   —OR—
   Dial ✳✳ for configuration mode.
5. To change setting, repeat procedure and make opposite selection.

3.7.14 Data Security Port

Description: While port is active on a call, this feature prevents any incoming tones associated with other system features from interrupting the call.

To Program:
1. Dial 53 *"STATION FEATURES"*
2. Dial *26 "DATA SECURE PORT"*
3. Select station port (LED On = Feature Assigned): Station 10 - 73, Dial **10 - 73** or press **Cl0 - C73**
4. Dial ✳ for next station feature,
   —OR—
   Dial ✳ ✳ for configuration mode.
5. To change setting, repeat procedure and make opposite selection.

3.7.15 Dedicated ITCM For Attendant

Description: An intercom link can be reserved for exclusive use by a station. This feature should be used for stations that process a high rate of calls, usually the attendant.

To Program:
1. Dial 53 *"STATION FEATURES"*
2. Dial 17 *"RESERVE ITCM"*
   Dial l-5 for link 1–5
   (For 408, dial 1-4, For 612, dial 1-5, For 1632, dial 1-6)
3. Select station port (LED On = Feature Assigned): Station 10 - 73, Dial **10 - 73** or press **Cl0 - C73**
4. Dial ✳ for next station feature,
   —OR—
   Dial ✳ ✳ for configuration mode.

NOTE: *When a line is reserved, it reduces the number of lines for other stations use.*

3.7.16 Direct/Delayed Ringing

Description: See Flexible Ringing Assignments for this feature

3.7.17 Executive Override

Description: You can provide selected stations with busy override, which allows the station to override a busy condition at a station, sound a warning tone, and gain access to the existing conversation.

To Program:
1. Dial *53 "STATION FEATURES"*
2. Dial *02 "EXEC. OVERRIDE "*
3. Select station ports (LED On = Feature Assigned): Station 10 - 73, Dial **10 - 73** or press **Cl0 - C73**
4. Dial ✳ for next station feature,
   —OR—
   Dial ✳ ✳ for configuration mode.
5. To change setting, repeat procedure and make opposite selection.

3.7.18 External Paging Interface

Description: A station port can be programmed to interface with an external paging amplifier (PA Port).

To Program:
1. Dial *53 "STATION FEATURES'*
2. Dial **01** *"PA PORT"*
3. Select station ports (LED On = Feature Assigned): Station 10 - 73, Dial **10 - 73** or press **Cl0 - C73.**
4. Dial ✳ for next station feature,
   —OR—
   Dial ✳ ✳ for configuration mode.
5. To change setting, repeat procedure and make opposite selection.

3.7.26 Idle Line Preference

Description: When you enable idle line preference, a station will automatically connect to any assigned and idle line when the user takes the station off hook.

To Program:

1. Dial 54 *"STA/LINE CONFIG."*
2. Dial **7** *"IDLE LINE PREF."*
3. Select line ports (LED On = Selected Port)
   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 **B3** then press **A1 - A8**
4. Dial # when all line ports are selected
5. Select station ports (LED On = Feature Assigned): Station 10 - 73, Dial **10 -** 73 or press **C10 -** C73
6. Dial ✳ when all station ports are selected,
   —OR—
   Dial ✳ ✳ for next station/line feature,
   —OR—
   Dial ✳ ✳ ✳ for configuration mode.
7. To change setting, repeat procedure and make opposite selection.

3.7.27 Intercom Hunt Group

Description: You can link stations together to form intercom hunt groups. Calls to a busy station in a hunt group will search the group for an idle station to ring.

To Program:

1. Dial **53** ' STATION *FEATURES"*
2. Dial **18** *"ITCM HUNT LINK"*
3. Select first linking station: Station 10 - 73, Dial **10 -** 73 or press **C10 - C73**
4. Select second linking station: Station 10 - 73, Dial **10 -** 73 or press C**10 - C73**
5. 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—
   Dial ✳ ✳ for next station feature,
   —OR—
   Dial ✳ ✳ ✳ for configuration mode.
6. Disable link by repeating procedure.

3.7.28 Personal Ringing Tones

Description: You can program stations to ring in one of four distinctive tones:

1. 5091610 Hz @ 10 Hz warble
2. 7630016 Hz @ 10 Hz warble
3. 509/610 Hz @ 19 Hz warble
4. 76311016 Hz @ 19 Hz warble

To Program:

1. Dial 53 *"STATION FEATURES"*
2. Dial **14** *"' RINGING TONE'*
3. Select ringing tone
   - Dial **1** for tone 1 *"RINGING TONE 1"*
   - Dial 2 for tone 2 *"' RINGING TONE 2"*
   - Dial 3 for tone 3 *"RINGING TONE 3"*
   - Dial 4 for tone 4 *"RINGING TONE 4"*
4. Select station ports (LED On = Feature Assigned) : Station 10 - 73, Dial **10 - 73** or press **C10 - C73**
5. Dial ✳ for next ringing tone assignment,

   —OR—

   Press ✳ ✳ for next station feature,

   —OR—

   Press ✳ ✳ ✳ for configuration mode.
6. To change setting, repeat procedure and make different selection.

3.7.29 Port Definition

Description: You can program a station port to accept one of several different types of station equipment, such as the following:

3–8 Line Telephone—Models 3503, 3508, 3593, 3598, 6414
Multiline Telephone—Multiline without LCD
Single Line Telephone--Proprietary single-line telephone
DSS Console—DSS/BLF consoles
DSS Console W/CA—OHVA and SOHVA ports
LCD-LCD Speakerphone
Execumail
OPX (Including ATI–X)
IST

To Program:

1. Dial 51 *"' PORT TYPE"*
2. Select port definition
   - **02** (3-8 Line) *"3–8 LINE PHONE"*
   - **03** (Multiline) *"MULTILINE"*
   - *04* (Single Line) *"SINGLE LINE"*
   - **05** (Console) *"DSS CONSOLE"*
   - *06* (Console W/CA) *"DSS CONSOLE W/CA"*
   - *07* (LCD) *"' LCD"*
   - *08* (Execumail) *"EXECUMAIL"*
   - *09* (OPX) *"OPX"*
   - **10** (IST) *"IST"*
3. Select all station ports to match definition: Station 10-73, Dial **10–73** or press **C10–C73**
4. Press ✳ for next port definition,

   —OR—

   Press ✳ ✳ for configuration mode.

NOTE: Changing a port' s definition eliminates all previous programming for that port.

3.7.19 Flexible Ringing Assignments— Direct/Delayed Ringing

Description: You must program ringing assignments on a per station/per line basis. You can control ringing for every line that has appearance at a station-assigning immediate, or direct, ringing to some lines and delayed ringing to others. This feature and all level 54 features are toggle on / off.

NOTE: Do not program direct ringing for lines that you assign to the direct department calling feature.

To Program:
1. Dial 54 *"STA/LINE CONFIG."*
2. Dial **1** *"DIRECTRING"*
   —OR—
   Dial 2 *"DELAY RING"*
3. Select line ports for ringing (LED On = Selected 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 B3 then press **A1 - A8**
4. Dial # when all line ports are selected
5. Select station ports (LED On = Feature Assigned): Station 10 - 73, Dial **10 - 73 or** press **C10 - C73**
6. Dial ✳ when all station ports are selected,
   —OR—
   Dial ✳✳ for next station/line ringing assignment,
   —OR—
   Dial ✳✳✳ for configuration mode.
7. To change setting, repeat procedure and make opposite selection.

3.7.20 Flexible Ringing Assignments— Night Ringing-Line/Station Assignments

Description: You, or the system attendant, can place the system into the night transfer (of ringing) mode of operation. While in this mode of operation, the system will activate special line/station ringing assignments. This feature and all level 54 features are toggle on / off.

To Program:
1. Dial **54** *"STA/LINE CONFIG"*
2. Dial 3 *"NIGHTRING"*
3. Select line ports for night ringing (LED On = Selected Ports)
   Line port l-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 B3 then press **A1 - AS**
4. Dial # when all line ports are selected
5. Select station ports (LED On = Feature Assigned): Station 10 - 73, Dial **10 - 73** or press **C10 - C73**
6. Dial ✳ when all station ports are selected,
   —OR—
   Dial ✳✳ for next station/line feature,
   —OR—
   Dial ✳✳✳ for configuration mode.
7. To change setting, repeat procedure and make opposite selection.

3.7.21 Flexible Ringing Assignments- Night Ringing Mode

Description: After you have assigned Night Ringing to the stations and lines desired, you must enable the feature.

To Program:
1. Dial *03 "NIGHT XFER XXX"*
2. Press **Al** to toggle between enable and disable (LED On = Enabled).
   —OR—
   Dial **1** to enable (Al LED on). *"NZGHTXFER ON"*
   —OR—
   Dial *2* to disable. *"NIGHT XFER OFF"*
3. Dial ✳ for configuration mode.
4. To change setting, repeat procedure and make opposite selection.

3.7.22 Flexible Ringing Assignments- (PA Port)

Description: You can assign a PA port to a station port and then enable that PA port with a particular ringing assignment.

To Program:
1. Dial *53 ' STATION FEATURES"*
2. Dial 23 to enable ringing at PA port *"PA RING PORT"*
3. Identify PA port Station 10 - 73, Dial **10 - 73** or press **Cl0 - C73**
4. Dial ✳ for next station/line feature,
   —OR—
   Dial ✳✳ for configuration mode.

3.7.23 Flexible Station Numbering

Description: The system supports a flexible station numbering plan for calling individual stations and departments. You can program each station port to respond to the dialing of any available number between 10 and 7999. However, the system will not allow you to assign the same dialing code to both a station extension number and a department access code, nor will the system allow you to assign an extension number or access code conflict such as 15 and 1500.

To Program:
1. Dial 52 *"ACCESS CODE"*
2. Dial **1** to assign extension number *"ASSIGN EXT. NUM."*
3. Select station port: *"EXT. XXXX"* - Station 10 - 73 = Dial **10 - 73** or press **Cl0 - C73**
4. Dial new extension number *"EXT. XXXX YYYY"*

NOTE: *Extension number* can *be max. of four digits. Zf less than four digits, leading zeros must be dialed before number. Example: For ext. no. 15, dial 001.5*

5. Select next station number and assign extension number,
   —OR—
   Dial ✳ for configuration mode.
6. To change setting, repeat procedure and make opposite selection.

3.7.24 Group Call Pickup

Description: If a call rings to any station in a prearranged group, a user at another station in that group can dial a group pickup code and answer the call. Assign the stations to call pickup groups using this procedure.

To Program:
1. Dial *53 "STATION FEATURES"*
2. Dial *16 "GRP. CALL PICKUP"*
3. Dial 0 for no group
   —OR—
4. Dial **1 - 4** for group 1 - 4 *"GROUP X"*
5. Select station ports (LED On = Feature Assigned): Station 10 - 73, Dial **10 - 73** or press **Cl0 - C73**
6. Dial ✳ for next group,
   —OR—
   Dial ✳✳ for next station feature,
   —OR—
   Dial ✳✳✳ for configuration mode.
7. To remove station from call pickup group, assign it to group 0.

3.7.25 Headset Interface

Description: A station port can be enabled to allow headset operation with a special telephone that provides this feature.

NOTE: *The system delivers subdued off-hook voice announcements (SOHVA) to the headset. Because a headset exhibits a coupling effect between the earpiece and microphone, it may allow the outside party to hear the SOHVA message. You should inform the user of this possibility.*

To Program:
1. Dial *53 "STATION FEATURES"*
2. Dial 13 *"HEADSET MODE"*
3. Select station ports (LED On = Feature Assigned): Station 10 - 73, Dial **10 - 73** or press **Cl0 - C73**
4. Dial ✳ for next station feature,
   —OR—
   Dial ✳✳ for configuration mode.
5. To change setting, repeat procedure and make opposite selection.

3.7.30 Prime Line-Prime Group And Prime Intercom

Description: If you assign a group of lines, an intercom line, or one individual line to a particular station for use as its prime line, the station automatically selects that line for use when the user takes it off-hook.

To Program:
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 **Al - Al4**
Line port 15, 16 = Dial **15**, **16** or press **B1**, **B2**
Line port 17-24 = **Dial 17-24** or press B3 then press **Al - AS**
3b. Assign prime group, Dial 51-54 for groups l-4 *"PRIME LINE GRP X"*
3c. Assign prime intercom, Dial 50 for intercom line *"PRIME INTERCOM"*
4. Select station ports (LED On = Feature Assigned): Station 10 - 73, Dial **10 - 73** or press **Cl0 - C73**
5. Dial ✳ for next prime line, group, or intercom assignment,
—OR—
Press ✳ ✳ for next station feature,
—OR—
Press ✳ ✳ ✳ for configuration mode.
6. To change setting, repeat procedure and make different selection.

3.7.31 Message Wait Originate

Description: Any station that you program with this feature can control the message waiting light at other stations in the system. When a station user sees his or her message waiting light on, he or she can press ITCM HOLD to call the station that activated the light.

To Program:
1. Dial *53 "' STATION FEATURES'*
2. Dial **06** *"MSG. WAIT ORIG."*
3. Select station ports (LED On = Feature Selected): - Station 10 - 73, Dial **10 - 73** or press **Cl0 - C73**
4. Dial ✳ for next station feature,
—OR—
Dial ✳ ✳ for configuration mode.
5. To change setting, repeat procedure and make opposite selection.

3.7.32 Ringing Line Preference

Description: When you assign this feature to a station, that station will automatically answer a ringing line when its user takes it off-hook.

NOTE: Without Direct Ringing Assigned, Ringing Line Preference will not function.

To Program:
1. Dial 53 *" STATION FEATURES"*
2. Dial *09 "RING LINE PREF."*
3. Select station ports (LED On = Feature Selected): Station 10 - 73, Dial **10 - 73** or press Cl0 - C73
4. Dial ✳ for next station feature,
   —OR—
   Dial ✳ ✳ for configuration mode.
5. To change setting, repeat procedure and make opposite selection.

3.7.33 Subdued Off-Hook Voice Announce (SOHVA) Disable

Description: Off hook voice announce capability can be either SOHVA, subdued off hook voice announce, or OHVA, off hook voice announce. SOHVA prevents the distant party from hearing the announcement or the verbal reply; OHVA does not.

NOTE: *Special wiring to both ports of a pair of station ports is required to provide either SOHVA or OHVA. Station ports are defaulted for SOHVA. Refer to the installation chapter for more information on SOHVA and OHVA.*

To Program:
1. Dial 53 *"STATION FEATURES"*
2. Dial *24 " SOHVA"*
3. Select station port (LED On = SOHVA port, LED Off = OHVA port-remember, OHVA only works with a 32 button DSS console) Station 10 - 73, Dial **10 - 73** or press **Cl0 - C73**
4. Dial ✳ for next station feature,
   —OR—
   Dial ✳ ✳ for configuration mode.
5. To change setting, repeat procedure and make opposite selection.

3.7.34 Subdued Off-Hook Voice Announce (SOHVA) Groups

Description: Use this procedure to arrange station ports to originate and/or receive SOHVA calls by assigning them to SOHVA calling groups. Also provide selective SOHVA calling to the system by arranging certain station ports together into groups for SOHVA calling between one another.

To Program:

1. Dial 53 *"STATION FEATURES"*
2. Dial *30 ' SOHVA GROUP"*
3. Dial 1 - *8* for group *1-8 "SOHVA GROUP X"*
4. Select all station ports to receive SOHVA group (LED On = Feature Assigned): Station 10 - 73, Dial **10 - 73** or press **C10 - C73**
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.
6. To change setting, repeat procedure and make opposite selection.

ixed SOHVA Groups

SOHVA GROUP	GROUP CONFIGURATIONS							
GROUP1	1	*2*	*3*	*4*	**5**	*6*	*7*	*8*
Receive From	X							
Originate To	X	X	X	X				
GROUP2	1	*2*	*3*	*4*	**5**	*6*	*7*	**8**
Receive From	X	X						
Originate To		x	x	x				
GROUP3	**1**	*2*	*3*	*4*	*5*	*6*	*7*	**8**
Receive From	X	x	x					
Originate To			X	X				
GROUP4	1	*2*	*3*	*4*	*5*	*6*	*7*	**8**
Receive From	X	*X*	*X*					
Originate To								
GROUP5	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
Receive From					X			
Originate To					X			
GROUP6	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
Recewe From						*X*		
Originate To						X		
GRo u P 7	1	*2*	*3*	*4*	**5**	*6*	*7*	*8*
Receive From							X	
Originate To							X	
GROUPS	1	*2*	*3*	*4*	**5**	*6*	*7*	*8*
Receive From								X
Oriainate To								X

3.7.35 Service Observing

Description: You can give selected stations the capability to monitor, in an un-announced manner, an active call at another station.

NOTE: Since this feature requires the executive override feature to function, the system automatically enables executive override for the station when you enable servicing observing. You can also arrange selected stations *so that they cannot be serviced observed.*

To Program:
1. Dial *53 "STATION FEATURES'*
2. Dial **10** "' *SERVICE OBSERVE'*
3. Select station ports (LED On = Feature Assigned): Station 10 - 73, Dial **10 - 73** or press **Cl0 - C73**
4. Dial ✳ for next station feature,
   —OR—
   Dial ✳✳ for configuration mode.
5. To change setting, repeat procedure and make opposite selection.

3.7.34 Service Observing-Blocking

Description: You can block a user from being service observed by another station.

To Program:
1. Dial *53 "STATION FEATURES"*
2. Dial *29 "UNOBSERVABLE"*
3. Select station ports (LED On = Feature Assigned): Station 10 - 73, Dial **10 - 73** or press **Cl0 - C73**
4. Dial ✳ for next station feature,
   —OR—
   Dial ✳✳ for configuration.
5. To change setting, repeat procedure and make opposite selection.

3.7.37 Station Names

Description: You can assign individual names or category names to stations. These names will then be displayed by LCD speakerphones when the speakerphones' station is called by the named station. Typical names could be TECH, MKT 1, J Smith. System attendants also have access to this station naming feature. You can program all attendant level programming features with the base level entry **ITCM ✳ #**

To Program:

1. Dial *06 " ' STATIONNAMES"*
2. Select station port (LED On = Selected):*"XXXXXX"- Station 10 - 73, Dial* **10 - 73** or press **C10 - C73**
3. Dial **#** to clear current station name
4. Refer to Table below and compose station name (7 digits max.)
5. Dial all two-digit codes necessary to enter a new station name *"XXXXXXX YYYYYYY"*
6. Dial ✳ for next station and repeat steps 2-5
7. Dial ✳ ✳ for configuration mode
8. To change setting, repeat procedure and make different selection.

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		

3.7.38 Station To Station Port Reassignment

Description: You can reassign the programming attributes from one station to a different station port with this programming procedure (logical to physical reassignment). This feature allows you to automatically exchange all software attributes for a station (logical assignment) connected at one station port with those attributes assigned to a different station port without physically relocating the stations (physical assignment) or reprogramming any of the attributes.

You can use this programming action to reassign the extension number and all other programmable attributes that you have assigned to one station port to a different port. This feature allows you to make adds, moves, and changes without relocating the station wiring. You cannot reassign ports 10 or 12.

To Program:
1. Dial 57 to re-assign station to port *' ASSIGNSTA/PORT"*
2. Dial station extension number **0010 - 7999.***"PHYS PORTXX"*
3. Dial physical port number 10 - *73 "LOGICAL STA XX"*
4. Dial # to make assignment
5. Dial ✳ for configuration mode.

3.7.39 Thru Dialing/OPX

Description: When enabled at the OPX station port, DTMF signaling tones can be generated over the intercom line and through any line connection to a programmed station.

To Program:
1. Dial *53 "STATION FEATURES"*
2. Dial 7 *"OPX THRU DIALING"*
3. Select station ports for programming: Station 10 - 73, Dial **10 - 73** or press **Cl0 –C73**
4. Dial ✳ for next station feature,
   —OR—
   Dial ✳ ✳ for configuration mode.

3.7.40 Voice Announce Blocking

Description: This feature allows a station user to block voice signaled intercom calls.

To Program:
1. Dial *53 "STATION FEATURES"*
2. Dial **04** *"VOICE BLOCK"*
3. Select station ports to be programmed: Station 10 - 73, Dial **10 - 73** or press **Cl0 –C73**
4. Dial ✳ for next station feature,
   —OR—
   Dial ✳ ✳ for configuration mode.

3.7.41 Station Configuration - Button Mapping (Non-Square System Configuration)

Description: You can assign (map) every programmable button at each station to be line select buttons that provide access to outside lines, to be direct station select (DSS) buttons that provide quick access to system stations, to be special purpose buttons that provide telephone users one-button access to features, or to be idle buttons that provide autodial locations for the station user.

When you map a button at a station port, press the corresponding button on the programming station to select the button to be mapped. If you must map buttons at a station port while using a programming telephone that does not provide a full complement of buttons, you can dial a 3-digit code to select the buttons to be mapped.

3.7.41.1 Account Code Button

Description: Press the account code button and then dial an account code to record a call into a particular category without interrupting the call.

To Program:
1. Dial *56 "BUTTON MAPPING"*
2. Dial 17 *"ASSIGN ACCT KEY "*
3. Select button to be programmed: Press **Al - A14, B1 - B3,** or press 103-107 for **B4–B8** or 122 for **A15**
4. Select station ports to be programmed: Station 10 - 73, Dial **10 - 73** or press **Cl0 –C73**

Dial ✳ for further ACCOUNT CODE button assignment,

—OR—

Dial ✳✳ for next button mapping feature,

—OR—

Dial ✳✳✳ for next configuration mode.

3.7.41.2 Automatic Call-Back Button

Description: When a user presses this button after he or she encounters a busy tone, the system will automatically ring both the called station and the user' s station when the called station becomes idle.

To Program:
1. Dial *56 "BUTTON MAPPING"*
2. Dial **10** *' ASSIGN CALL BACK"*
3. Select button to be programmed: Press **Al - A14, B1 - B3,** or press 103-107 for **B4–B8** or 122 for **A15**
4. Select station ports to be programmed with CALL-BACK button: Station 10 - 73, Dial **10 - 73** or press **Cl0 –C73**
5. Dial ✳ for next auto call-back button assignment,

—OR—

Dial ✳✳ for next button mapping feature,

—OR—

Dial ✳✳✳ for configuration mode.

3.7.41.3 Bhnk Buttons

Description: Blank those buttons that you want to be dynamic line buttons or autodial buttons.

NOTE: *When blanking buttons, be sure a previously assigned button is idle (feature not selected by user) before you blank it.*

To Program:
1. Dial 56 *"BUTTON MAPPING"*
2. Dial *04 "BLANK/AUTODIAL"*
3. Select button to be programmed: Press **Al - A14, B1 - B3,** or press 103-107 for **B4–B8** or 122 for **Al5**
4. Dial #
5. Select station ports to be programmed with this blank button assignment: Station 10 - 73, Dial **10 - 73** or press **C10–C73**
6. Dial ✳ for further button blanking,
   —OR—
   Dial ✳ ✳ for next button mapping feature,
   —OR—
   Dial ✳ ✳ ✳ for configuration mode.

3.7.41.4 Call Forward Button

Description: This button provides one-button forwarding of all calls to another extension.

To Program:
1. Dial *56 'BUTTON MAPPING"*
2. Dial **11** *'ASSIGN CALL FWD"*
3. Select button to be programmed: Press **Al - A14, B1 - B3,** or press 103-107 for **B4–B8** or 122 for Al5
4. Select station ports to be programmed with a CALL FWD button: Station 10 - 73, Dial **10 - 73** or press **C10–C73**
5. Dial ✳ for next call forward button assignment,
   —OR—
   Dial ✳ ✳ for next button mapping feature,
   —OR—
   Dial ✳ ✳ ✳ for configuration mode.

3.7.41.5 Call Park Orbit Button

Description: The call park orbit button will automatically park an active call in orbit when the user presses it.

To Program:
1. Dial *56 "BUTTON MAPPING "*
2. Dial 12 *"ASSIGN CALL PK"*
3. Select button to be programmed: Press **Al - A14, B1 - B3,** or press 103-107 for **B4–B8** or 122 for **Al5**
4. Dial 1 - 9 for parking orbit 1 - 9 "*ASSIGN CALL PKX"*
5. Select station ports to be programmed with ORBIT button: Station 10 - 73, Dial **10 - 73** or press **C10–C73**
6. Dial ✳ for next call park orbit button assignment,
   —OR—
   Dial ✳ ✳ for next button mapping feature,
   —OR—
   Dial ✳ ✳ ✳ for configuration mode.

3.7.41.6 Do Not Disturb (DND) Button

Description: Pressing the DND button prevents other stations from calling the DND station.

To Program:
1. Dial 56 *"BUTTON MAPPING"*
2. Dial **07** "ASSIGN *DND CODE"*
3. Select button to be programmed: Press **Al - A14, B1 - B3,** or press 103-107 for **B4–B8** or 122 for **Al5**
4. Select station ports to be programmed with a DND button: Station 10 **- 73, Dial 10 - 73 or** press **C10–C73**
5. Dial ✳ for further DND button assignment,
   —OR—
   Dial ✳✳ for next button mapping feature,
   —OR—
   Dial ✳✳✳ for configuration mode.

3.7.41.7 DSS/BLF Button

Description: DSS buttons provide quick access to system stations and their lights and show the busy status of the monitored stations.

To Program:
1. Dial 56 *"BUTTON MAPPING"*
2. Dial 03 "*ASSIGNDSS/BLF"*
3. Select button to be programmed: Press **Al - A14, B1 - B3,** or press 103-107 for **B4–B8** or 122 for **Al5**
4. Select station port to be assigned: Station 10 **-** 73, Dial **10 - 73** or press Cl&C73
5. Repeat steps 3 and 4 until all ports are assigned
6. Dial #
7. Select station ports to be programmed with this DSS/button assignment: Station 10 - 73, Dial **10 - 73**
8. Dial ✳ for further DSS/button assignment,
   —OR—
   Dial ✳✳ for next button mapping feature,
   —OR—
   Dial ✳✳✳ for configuration mode.

3.7.41.8 Dynamic Line Button

Description:

To Program:
1. Dial *56 "BUTTON MAPPING"*
2. Dial 16 *"DYNAMIC KEYSX"*
3. Press **Al** or dial **01** for A-field locations
   —OR—
   Press **AS** or dial 02 for B-field locations (B 1, B2, B3)
4. Select station ports to be programmed with a Dynamic line button: Station 10 - 73, **Dial 10 - 73** or press **C10–C73**
5. Dial ✳ for further Dynamic Line button assignment,
   —OR—
   Dial ✳ ✳ for next button mapping feature,
   —OR—
   Dial ✳ ✳ ✳ for configuration mode.

3.7.41.9 Line Button

Description: Line select buttons provide access to outside lines.

To Program:
1. Dial *56 "BUTTON MAPPING"*
2. Dial 02 "ASSIGN *LINE"*
3. Select button to be programmed:- Press **Al - A14, B1 - B3,** or press 103-107 for **B4–B8** or 122 for **A15**
4. Select line ports to be assigned.- Line port 1-14 = Dial **01 - 14** or Press **Al - Al4**
   Line port 15, 16 = Dial **15, 16** or Press **B1, B2** - Line port 17 - 24 = Dial 17 - 24
   —OR—
   Press B3 then press **Al - A8**
5. Repeat steps 3 and 4 until all lines are assigned
6. Dial # to finish button mapping
7. Select station port to be programmed: Station 10 - 73: Dial **10 - 73** or press **C10–C73**
8. Dial ✳ for further line/button assignment,
   —OR—
   Dial ✳ ✳ for next button mapping feature,
   —OR—
   Dial ✳ ✳ ✳ for configuration mode.

3.7.41.10 Line Group Button

Description: This button provides one-button access to a line group.

To Program:
1. Dial 56 *"BUTTON MAPPING"*
2. Dial **13** *"ASSIGN LINE GRP"*
3. Select button to be programmed: Press **Al - A14, B1 - B3,** or press 103–107 for **B4–B8** or 122 for **Al5**
4. Dial 1 - 4 for line group 1 - 4 *"ASSIGN LINE GRP X"*
5. Select station ports to be programmed with GROUP button: Station 10 - 73, Dial **10 - 73** or press **C10–C73**
6. Dial ✳ for next line group button assignment,
   —OR—
   Dial ✳ ✳ for next button mapping feature,
   —OR—
   Dial ✳ ✳ ✳ for configuration mode.

3.7.41.11 Line Group Queue Button

Description: A station user can queue for a busy line by pressing a line group queue button.

To Program:
1. Dial 56 *"BUTTON MAPPING"*
2. Dial **15** *"ASSIGN LINE GRP Q"*
3. Select button to be programmed: Press **Al - A14, B1 - B3,** or press 103-107 for **B4–B8** or 122 for **Al5**
4. Select station ports to be programmed with QUEUE button: Station 10 - 73, Dial **10 - 73** or press **C10–C73**
5. Dial ✳ for next line group queue button assignment,
   —OR—
   Dial ✳ ✳ for next button mapping feature,
   —OR—
   Dial ✳ ✳ ✳ for configuration mode.

3.7.41.12 Dual Intercom Button

Description: You can assign a second intercom button to stations that may make many intercom calls.

To Program:
1. Dial 56 *"BUTTON MAPPING"*
2. Dial 05 *"ASSIGN 2ND ITCM"*
3. Select button to be programmed:- Press **Al - A14, B1 - B3,** or press 103-107 for **B4–B8** or 122 for **Al5**
4. Select station ports to be programmed with a second intercom button: Station 10 - 73, Dial **10 - 73** or press **C10–C73**
5. Dial ✳ for further intercom button assignment,
   —OR—
   Dial ✳ ✳ for next button mapping feature,
   —OR—
   Dial ✳ ✳ ✳ for configuration mode.

3.7.41.13 Privacy Release Button

Description: A user engaged in a private call can press the privacy button to change a current call into a non-private one.

To Program:
1. Dial 56 "' BUTTON*MAPPING"*
2. Dial **06** *"ASSZGN PRIVACY"*
3. Select button to be programmed: Press **Al - A14, B1 - B3,** or press 103-107 for **B4–B8** or 122 for Al5
4. Select station ports to be programmed with a PRIVACY button: Station 10 - 73, Dial **10 - 73** or press **C10–C73**
5. Dial ✳ for further privacy release button assignment,
   —OR—
   Dial ✳✳ for next button mapping feature,
   —OR—
   Dial ✳✳✳ for configuration mode.

3.7.41.14 Save Button

Description: A telephone user can press the SAVE button to store the last dialed number for later redial.

To Program:
1. Dial *56 "BUTTON MAPPING"*
2. Dial *08 "ASSIGN SAVE"*
3. Select button to be programmed: Press **Al - A14, B1 - B3,** or press 103-107 for **B4–B8** or 122 for **Al5**
4. Select station ports to be programmed with a SAVE button: Station 10 - 73, Dial **10 - 73** or press **C10–C73**
5. Dial ✳ for further Save button assignment,
   —OR—
   Dial ✳✳ for next button mapping feature,
   —OR—
   Dial ✳✳✳ for configuration mode.

3.7.41.15 Voice Announce Block Button

Description: Telephone users can block voice announced intercom calls and station paging by pressing this button.

To Program:
1. Dial 56 *"BUTTON MAPPING"*
2. Dial 14 *"ASSIGN VA B"*
3. Select button to be programmed: Press **Al - A14, B1 - B3,** or press 103-107 for **B4–B8** or 122 for **Al5**
4. Select station ports to be programmed with a Voice Announce Block button: Station 10 - 73, Dial **10 - 73** or press **C10–C73**
5. Dial ✳ for next voice announce block button assignment,
   —OR—
   Dial ✳✳ for next button mapping feature,
   —OR—
   Dial ✳✳✳ for configuration mode.

3.7.41.16 Zone Page/All-Call Button

Description: This button will provide a station with one-button access to all-call and zone paging.

To Program:
1. Dial *56 "BUTTON MAPPING"*
2. Dial **09** ' ASSIGN *ZONE"*
3. Select button to be programmed: Press **Al - A14, B1 - B3,** or press 103-107 for **B4–B8** or 122 for A15
4. Dial **1 - 3** for zone 1 - 3 *"ASSIGN ZONE X"*
   —OR—
   Dial 4 for all-call ' *ASSIGN ALL CALL"*
5. Select station ports to be programmed: Station 10 - 73: Dial **10 - 73, or press Cl0 – C73**
6. Dial ✳ for further paging button assignment,
   —OR—
   Dial ✳✳ for next button mapping feature,
   —OR—
   Dial ✳✳✳ for configuration mode.

3.7.41.17 Block Programming

Description: You can use this last station configuration procedure to assign those features that you have assigned to any one station (using the procedures detailed on the previous pages) to any other station or to an entire block of stations.

To Program:
1. Dial *58 "BLK PROGRAMMING"*
2. Select model station port: Station 10 - *73* = dial **10** - *73 "MODEL STA XX"*
3. Dial first station port in block (dial code as above)
4. Dial #
5. Dial last station port in block (dial code as above)
6. Dial #
7. Dial ✳ for further block programming,
   —OR—
   Dial ✳✳ for configuration mode.

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.)*

3.8 Account Codes

The ExecuTech 2000 telephone system uses account codes to identify calls by category, or by any other desired grouping, primarily so that it can record the cost of the calls by that category or grouping. The account code can be either verified or not verified by the system. When you enable account code verification, the system compares the account code entered by a station user with the account entries that you have programmed.

Remember, it is always a good idea to record your programming decisions in the records section of this book, Chapter 4.

NOTE: A lighted LED next to the programming button for the selection indicates the current configuration. When a single button provides a toggle (on/off) action, the lighted LED indicates the active feature.

The first step in any programming sequence is to enter the base level. Once in this mode, you can dial the feature code for any desired configuration. Enter the base level with the following procedure: press ITCM then dial ✳# 7 4 6 ✳. The last step is to press the **SPKR** button to end the programming procedure and return the system to normal operation.

3.8.1 Account Codes (Feature Enabled Or Disabled)

Description: Use this procedure to enable or disable the account code feature for the system.

To Program:
1. Dial *75 "SMDA PROGRAMMING"*
2. Dial 07 *"XXXXXXXX ACCOUNT*
3. Press **Al** to toggle the feature on or off (LED On = Enabled)
   —OR—
   Dial **1** to enable account codes *"ENABLE ACCOUNT*
   Dial 2 to disable account codes *"DISABLE ACCOUNT'*
4. Dial ✳ ✳ for configuration mode
5. To change setting, repeat procedure and make opposite selection

3.8.2 Account Codes (Verified Entry)

Description: Use this programming procedure to arrange for the system to either verify or not verify the account codes that the user' s enter.

To Program:
1. Dial *75 "SMDA PROGRAMMING"*
2. Dial *OS "VERIFICATION XXX"*
3. Press **Al** to toggle the feature on or off (LED On = Verified)
   —OR—
   Dial **1** to enable verification *"VERIFICATION ON"* (Al = LED On)
   Dial 2 to disable verification *"VERIFICATION OFF"*
4. Dial ✳ ✳ for configuration mode
5. To change setting, repeat procedure and make opposite selection.

3.8.3 Account Code List

Description: Use this programming feature to create the list of account codes for use.

To Program:
1. Dial 75 *"SMDA PROGRAMMING"*
2. Dial 05 *"SET ACCT. CODE"*
3. Dial account code digits. Maximum number of digits must be equal to number of account code digits specified in previous programming step *titled Account Code Length (Entered), 3.8.7.*
4. To enter another account code, dial **#,** then dial its number
5. Dial ✳✳ for configuration mode.

3.8.4 Account Codes List-Clearing

Description: Use this programming feature to clear the list of account codes for use.

To Program:
1. Dial 75 *"SMDA PROGRAMMING"*
2. Dial **06** *"CLEAR ACCT. CODE'*
3. Dial account code to be removed
4. To remove another account code, dial **#,** then dial its number
5. Dial ✳ ✳ for configuration mode.

3.8.5 Account Code Message Display Time Enabling—Disabling

Description: You must enable or disable the account code message display time for both incoming and outgoing calls.

To Program:
1. Dial *75 "SMDA PROGRAMMING"*
2. Dial **11** for Incoming Calls. *"XXXXXXX INCOMING"*
   —OR—
   Dial **12** for Outgoing Calls. *"XXXXXXX OUTGOING"*
3. Press **Al** to toggle feature on or off (LED On = Enabled)
   —OR—
   Dial **1** to enable *"ENABLE INCOMING"*
   Dial 2 to disable *"DISABLE INCOMING"*
4. Dial ✳✳ for configuration mode
5. To change setting, repeat procedure and make opposite selection.

3.8.6 Account Code Message Display Time

Description: When you have enabled the account code feature, LCD speakerphones will prompt users with a displayed message that the system clears at the end of the programmable display time. Valid range for the display time is 1 to 20 seconds. (If you set the range to 0 seconds, the system defaults the setting to 5 seconds.) If account codes are forced, the system drops the line if the user fails to enter a valid account code during the display period. You also can make this prompting message appear in the telephone display when the user answers an incoming call. This will prompt users to enter account codes for answered calls.

To Program:
1. Dial 75 *"SMDA PROGRAMMING"*
2. Dial **10** *"DISPLAY TIMEX"*
3. Dial **1 - 20** to select new display time (in seconds)
4. Dial ✳✳ for configuration mode
5. To change setting, repeat procedure and make different selection.

3.8.7 Account Code Message Length

Description: You can set the number of digits in a programmed account code.

To Program:
1. Dial 75 *"SMDA PROGRAMMING"*
2. Dial 09 *"MAX ACCT. CODE X"*
3. Dial 3 – 8 for number of digits
4. Dial ✳✳ for configuration mode
5. To change setting, repeat procedure and make opposite selection.

3.9 Direct Department Calling

Outside calls can be sent directly to a department where they system will search for any open station to send that call.

NOTE: A lighted LED next to the programming button for the selection shows which choice you have selected. When a single button provides a toggle (on/off) action, the lighted LED indicates the active feature.

3.9.1 Direct Department Calling-Access Codes

Description: You can program department access codes to be any number between 10 and 7999; however, the system will not allow you to assign the same dialing code 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. Further, with system defaulted extension numbers, the assigned department access codes must start at 0058 or larger,

To Program:
1. Dial 52 *"ACCESS CODE"*
2. Dial 2 to assign access codes to deepest. *"DEPT. CALLING"*
3. Dial **1 - 4** for dept. *1-4 "DEPTXYYYY"*
4. Dial new access code *"DEPT X YYYY ZZZZ"*

NOTE: New code can be max. of four digits. If less than four digits, leading zeros must be dialed before number. Code cannot conflict with station extension numbers.

5. Dial next department number and program access code,

—OR—

Dial ✳ for next access code feature,

—OR—

Dial ✳ ✳ for configuration mode

3.9.2 Direct Departmental Calling-Line Ports

Description: You can assign outside lines to one of four different departments. If you do this, calls received on a line that you have assigned to a department will hunt for any idle station in that department to ring.

To Program:
1. Dial *39 "DEPT. CALLING"*
2. Select department
   - Dial 0 for none — *"NO DEPARTMENT"*
   - Dial **1** for dept 1 — *"DEPARTMENT1"*
   - Dial 2 for dept 2 — *"DEPARTMENT 2"*
   - Dial 3 for dept 3 — *"DEPARTMENT 3"*
   - Dial 4 for dept 4 — *"DEPARTMENT 4"*
3. Select line ports to be assigned (LED On = Assigned)
   - Line port 1-14 = Dial **01 - 14** or Press **Al - Al4**
   - Line port 15, 16 = Dial **15, 16** or press **B1, B2**
   - Line port 17-24 = Dial 17 **- 24**

   —OR—

   Press B3 then press **Al - AS**
4. Dial ✳ for next department,

   —OR—

   Dial ✳ ✳ for configuration mode.

3.9.3 Direct Department Calling-Station Ports

Description: You can group stations by department to allow a call to search for an idle station within a department. This search occurs when a busy or RNA is encountered at a called department station. The system allows up to four departments with up to 16 stations in each. You can place one additional station 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.

To Program:
1. Dial *53 "STATION FEATURES"*
2. Dial **19** *"DEPT. CALLING"*
3. Dial 1 - 4 for dept. 1 - *4. "DEPARTMENT X*
4. Select department stations: Station 10 - 73 Dial **10 - 73** or press **Cl0 – C73**
5. Dial ✳ to program next department
6. Dial 5 - **8** for termination station in dept. 1 - *4 "DEPARTMENT X"*
7. Select termination station: Station 10 - 73: Dial **10 - 73** or press **Cl0 – C73**
8. Dial ✳ to program next department termination station,

   —OR—

   Dial ✳ ✳ for next station feature,

   —OR—

   Dial ✳ ✳ ✳ for configuration mode.

3.9.4 Call Forward on Busy / Ring-No-Answer

Description: The system can automatically busy or ring-no-answer calls to a different station for answering. The system sends these calls to any idle station associated either by intercom hunt group, or in this case, by department.

To Program:
1. Dial *53 "STATION FEATURES"*
2. Dial 21 "CALL *FWD RNA"*
3. Dial 0 – 9 for number of rings before forwarding *"RING = X"*
4. Select stations for which calls are to forward: Station 10 - 73: Dial **10 - 73** or press **Cl0 – C73**
8. Dial ✳ and repeat steps 3 and 4 to program next busy ring-no-answer station,

   —OR—

   Dial ✳ ✳ for next station feature,

   —OR—

   Dial ✳ ✳ ✳ for configuration mode.

3.10 Direct Inward Station Dialing (DISD)

The DISD feature allows an external party to call an intercom station directly without assistance by the attendant. The system must receive the DISD call on a line that you have programmed to allow this feature. You can program any line to be a DISD line for both the normal mode of operation and the night of ringing mode of operation.

You can program the number of rings that the system will allow to occur on a DISD line. If you set a large number of rings, the system allows stations that have a line appearance for the DISD line time to service the call in a regular manner. Setting the number of rings to 0 disables the line for DISD use. If you wish to dedicate a line for DISD use, it is a good practice to set it for one ring. You can program the amount of time the system allows for a caller to dial an extension number. You can also program the DISD assist station that will answer calls that callers do not complete during the dial time limit.

It is a good practice for you to connect a music source to the system to provide a reassurance to the caller during a camp-on situation when the DISD feature is being used.

NOTE: *A lighted LED next to the programming button for the selection shows which choice you have selected. When a single button provides a toggle (on/off) action, the lighted LED indicates the active feature.*

The first step in any programming sequence is to enter the base level. Once in this mode, you can dial the feature code for any desired configuration. Enter the base level with the following procedure: press **ITCM** then dial ✳# 7 4 6 ✳. The last step is to press the SPKR button to end the programming procedure and return the system to normal operation.

3.10.1 Dial Time Limit

Description: When a caller does not complete extension number dialing within the programmed dial time limit, the system routes a DISD call to the assist station if you have programmed one; otherwise, it drops the line.

To **Program:**

1. Dial *44 "DISD DZALTZME X"*
2. Press program button to select dial time limit: (LED On = Enabled)
   Dial 1 or press Al = 6 seconds
   Dial 2 or press A2 = 9 seconds
   Dial 3 or press A3 = 12 seconds
   Dial 4 or press A4 = 15 seconds
   Dial 5 or press A5 = 30 seconds
3. Press ✳ for configuration mode.
4. To change setting, repeat procedure and make different selection.

3.10.2 DISD Assist Station

Description: When a caller does not complete extension number dialing within the programmed dial time limit, the system routes the call to the DISD assist station.

To Program:
1. Dial 46 *"DISD ASSIST"*
2. Choose operating mode to be programmed: Dial **1** or press **Al** = normal mode *"DZSD ASSIST DAY X"*
   —OR—
   Dial 2 or press A2 = night transfer (of ringing) mode *"DZSD ASSIST NZTE"*
3. Select assist station - Dial 00 for no DISD assist station (line drops after time-out)
   —OR—
   Dial **10** - 57 or press **Cl0** - C57 (LED On = Selected)
4. Dial #
5. Assign line ports to DISD assist station (LED On = Assigned)
   Line port 1 - 14 = Dial **01-14** or Press **Al - Al4**
   Line port 15, 16 = Dial **15, 16** or Press **B1, B2**
   Line port 17-24 = Dial 17-24 or press B3 then press **Al - A8**
6. Press ✳ and repeat steps 2 and 3 for further assist station programming,
   —OR—
   Press ✳✳ for configuration mode.
7. To change setting, repeat procedure and make different selection.

3.10.3 DISD Incoming Rings

Description: The number of rings that occur on a DISD 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 DISD line if such action is desired.

To Program:
1. Dial *45 "DISD RZNGS"*
2. Press program button to choose operating mode-Dial **1** or press **Al** = normal mode *"DISD RZNGS DAY X"*
   —OR—
   Dial 2 or press **A2** = night transfer (of ringing) mode *"DISD RINGS NITE X"*
3. Select rings to occur before line is answered.-Dial 0 for no rings (disables DISD for the line)
   —OR—
   Dial 1 - 9 = rings 1 - 9 LED On = lines assigned to number of rings
4. Dial #
5. Assign line ports to have designated ring (LED On = Assigned)
   Line port 1 - 14 = Dial **01-14** or Press **Al - Al4**
   Line port 15, 16 = Dial **15, 16** or Press **B1, B2**
   Line port 17-24 = Dial 17-24 or press B3 then press **Al - AS**
6. Press ✳ and repeat steps 2 and 3 for further DISD ring assignment,
   —OR—
   Press ✳✳ for configuration mode.
7. To change setting, repeat procedure and make different selection.

3.11 Data Printer Service Confieuration

When you connect a data printer to the system, the system automatically prints the station message detail record (SMDR) for the entire system without any programming or user intervention.

You can also command the data printer to print partial or complete printouts of the configuration data for the system. While you are using the printer to print the configuration data or SMDA information, the system temporarily halts the SMDR printout although it continues to collect the SMDR data You should note, however, that if it logs more than two calls for any one line while it is printing, call records may be lost.

NOTE: A lighted LED next to the programming button for the selection shows which choice you have selected, When a single button provides a toggle (on/off) action, the lighted LED indicates the active feature.

The first step in any programming sequence is to enter the base level. Once in this mode, you can dial the feature code for any desired configuration. Enter the base level with the following procedure: press ITCM then dial ✳# 7 4 6 ✳. The last step is to press the **SPKR** button to end the programming procedure and return the system to normal operation.

To **Program:**

1. Dial 91 *"PRINT CONFIG."*
2. Choose configuration:
   - Dial **1** to print all configuration data *"PRINT ALL"*
   - Dial 2 to print system data *"PRINT SYSTEM"*
   - Dial 3 to print line data *"PRINT LINES"*
   - Dial 4 to print *data* for all stations *"PRINT STATIONS"*
   - Dial **5** to print data for selected station *"PRINT STA."*
   - Select station to be printed *"PRINT STA.* XXX" -Dial **10-73** for stations 10 - 73 or press Cl0 – C73
   - Dial 6 to print toll restriction assignment *"PRINT TOLL"*
   - Dial 7 to abort printing *"ABORT PRINT"*
3. Dial ✳ for configuration mode.

3.12 ExecuMail Interface

The ExecuTech 2000 system supports the use of the ExecuMail voice mail system connected to the system' s station ports through the Comdial VMI-X analog terminal interface device. The VMI-X is a multipurpose *on-premise* accessory that has dual circuits to allow a 2-port ExecuMail system to interface to two analog station ports. Two VMI-X devices are needed to interface 4-port ExecuMail systems. Refer to Comdial publication IMI89-023, *Installation Instructions For The Voice Mail Interface (VMZ-X),* for complete details about how the VMI-X interfaces between the analog telephone system and the ExecuMail 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 with ExecuMail operation that are optional for use as needed.

NOTE: A lighted LED next to the programming button for the selection shows which choice you have selected. When a single button provides a toggle (on/off) action, the lighted LED indicates the active feature.

The first step in any programming sequence is to enter the base level. Once in this mode, you can dial the feature code for any desired configuration. Enter the base level with the following procedure: press ITCM then dial ✳# 7 4 6 ✳. The last step is to press the **SPKR** button to end the programming procedure and return the system to normal operation.

3.12.1 Voice Mail Port

Description: When you connect the ExecuMail voice mail system to a station port through the VMI-X, you must use this programming feature to enable the station port as a voice mail port.

NOTE: The system automatically disables this feature if you replace the VMZ-X with a analog multiline telephone at the programmed station port. You must manually disable the station port as a voice mail port when you use it to interface a model 2500 telephone through the VMZ-X.

With its automatic attendant feature, the ExecuMail voice mail 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 that you have identified as a voice mail port. You must choose a ringing assignment for the lines that you have assigned to the voice mail ports before the ExecuMail system can provide the automatic attendant feature.

To Program:

1. Dial 51 *"PORT TYPE"*
2. Dial 08 *"EXECUMAIL"*
3. Select station ports to be programmed: Station 10 - 73, Dial **10 - 73** or press **Cl0 – C73**
4. Dial ✳ for next feature,

   —OR—

   Dial ✳ ✳ for configuration mode.

3.12.2 Voice Mail Port-Direct Ringing For Automatic Attendant Operation

Description: With this feature, the voice mail system automatically answers any line that is ringing at a voice mail port. You must choose a ringing assignment for the lines that you have assigned to the voice mail ports before the voice mail system can provide the automatic attendant feature.

To Program:

1. Dial *54 "STA/LINE CONFIG"*
2. Dial **1** *"DIRECT RING"*
3. Select line ports for direct ringing
   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 B3 then press **A1 - A8**
4. Dial # when all line ports are selected
5. Select station ports to be programmed: station 11- 73, dial **11 - 73** or press **C10 – C73**
6. Dial ✳ when all station ports are selected
7. Dial ✳ ✳ ✳ for configuration mode.

3.12.3 Voice Mail Port-Delayed Ringing For Automatic Attendant Operation

Description: You must assign all voice mail ports to a circular hunt group to take advantage of that feature' s multiple-port interface capability. Make a circular hunt group by linking all voice mail ports to one another and then linking the last voice mail port in the hunt group with the first voice mail port in the hunt group. For example, with the ExecuMail voice mail system connected through the VMI-X to station ports 013, 014,015, and 016, place port 013 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 finially place 016 in a hunt group and link 013 to it to complete the circle. With this arrangement, a call will first try to ring at port 013, then try port 014 and so forth until it trys all four voice mail ports.

To Program:

1. Dial 54 *"STA/LINE CONFIG."*
2. Dial 2 *" DELAY RING"*
3. Select line ports for delayed ringing
   line port l-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 B3 then press **A1 - A8**
4. Dial # when all line ports are selected
5. Select station ports to be programmed: station 11- 73, Dial **11 - 73**
6. Dial ✳ when all station ports are selected
7. Dial ✳ ✳ ✳ for configuration mode.

3.12.4 Voice Mail Port-Night Ringing For Automatic Attendant Operation

Description: You can program the voice mail port to ring diferently in night mode.

To Program:
1. Dial 54 *"STA/LINE CONFIG"*
2. Dial 3 *" ' NIGHT RING"*
3. Select line ports
   line port 1-14 = Dial **01 - 14** or press **Al - Al4**
   line port 15, 16 = Dial **15, 16** or press **B1, B2**
   line port 17 - **24 = Dial 17 -** 24 or press B3 then press **Al - A8**
4. Dial # when all line ports are selected
5. Select station ports to be programmed: station 11 - 73, Dial **11 - 73**
6. Dial ✳ when all station ports are selected
7. Dial ✳✳✳ for configuration mode.

3.12.5 Voice Mail Port-Assign Voice Mail Ports To Hunt Group

Description:

To Program:
1. Dial *53 ' STATION FEATURES"*
2. Dial **18** *"ITCM HUNT LINK"*
3. Select first linking station: station 11 - 73, Dial **11 - 73**
4. Select second linking station: station 11 - 73, Dial **11 - 73**
5. Dial ✳✳ for configuration mode.

3.12.6 Automatic Transfer of Voice Mail

Description: When you include an ExecuMail voice mail system with the analog telephone system, use this programming feature to arrange for an immediate line transfer without delay from the ExecuMail system to an analog station port.

NOTE: Do not turn on this feature if you turn on the screen and/or confirm options provided by the ExecuMail system. This is because the immediate transfer will preclude any screen or confirm action that the ExecuMail can provide.

To Program:
1. Dial *25 "V MAIL AUTO XFER"*
2. Press **Al** to toggle between enable and disable (LED On = Enable)
   —OR—
   Dial **1** to enable (Al LED is on)
   Dial 2 to disable
3. Dial ✳ for configuration mode

3.12.7 Voice Mail Line ID

Description: When you have included the ExecuMail voice mail system with the analog telephone system, assign voice mail identification (ID) numbers to the lines. A voice mail ID number can contain up to a maximum of six digits. A voice mail ID number allows the ExecuMail equipment to identify which line it is answering. The ID numbers that you assign here must match the ID numbers that you assign when you program the ExecuMail equipment.

To Program:
1. Dial 43 *"VOICE MAIN LN ID"*
2. Select line port (LED On = Line assigned)
   Line port 1-14 = Dial **01 - 14** or Press **Al - Al4**
   Line port 15, 16 = Dial **15**, **16** or press **B1**, **B2**
   Line port 17-24 = Dial 17 - 24 or press B3 then press **Al - AS**
3. Dial # to clear current ID
4. Dial ID number (6 digit maximum)
5. Dial ✳ for further ID assignment,
   —OR—
   Dial ✳ ✳ for configuration mode.

3.12.8 Voice Mail Transfer on Busy

Description: Normally, the Execumail voice mail system automatically routes calls that are made to a busy station to that station' s voice mail box. Alternately, you can arrange for the system to alert the busy station when the ExecuMail system is attempting a call transfer to it. You may need to program the attendant station to have this option.

To Program:
1. Dial 53 *" ' STATION FEATURES"*.
2. Dial 31 *"VMAIL XFR ON BSY"*
3. Select station ports to be programmed. Station ports 10 - 73, Dial **10 - 73** or press **Cl0 – C73**
4. Dial ✳ for next feature,
   —OR—
   Dial ✳ ✳ for configuration mode.

3.13 Integrated Call Costing

Call costing provides a means of establishing costing that the system can apply 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 that 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. The system applies call costing to a dialed number as described below. Refer to the call costing diagram shown on page 3-75 for an illustration of the call costing process.

NOTE: *A lighted LED next to the programming button for the selection shows what choice you have selected. When a single button provides a toggle (on/off) action, the lighted LED indicates the active feature.*

The first step in any programming sequence is to enter the base level. Once in this mode, you can dial the feature code for any desired configuration. Enter the base level with the following procedure: press ITCM then dial ✳# 7 4 6 ✳. The last step is to press the **SPKR** button to end the programming procedure and return the system to normal operation.

3.13.1 Exception Tables (Local Calls And Long Distance Calls)

Description: The system first compares all calls to entries in four exception tables (one entry per table). These tables provide the first priority level of costing. The system searches these tables on a first match basis. This means that the first programmed entry that matches the call is the one that the system uses. It does not make a search for the best possible match. The system costs matched calls using the values that you have programmed into the call rate tables that you have assigned to the call costing exception tables. You can use these call costing 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.

To Program:

1. Dial *78 "' EXCEPTION TBL"*
2. Dial **1 - 4** for entry 1 - 4 *"ENTRY X"*
3. Dial **1** to assign *the* call rate table *"CALL COST TBL XX"*
4. Dial **01 -** 33 for call rate table number
5. Dial ✳
6. Dial 2 to assign matching digits *"XXXXXXXXXXXXXXXX"*
7. Dial #to clear current entry
8. Dial matching digits (16 max # = match anything) *"XXXXXXXXXXXXXXXX"*
9. Dial ✳ ✳ for next entry, and repeat steps 2 - 9 until all entries are made
10. Dial ✳ ✳ ✳ for configuration mode.

3.13.2 Office Code Band Tables (local Calls)

Description: The system measures calls that do not match exception tables for the number of digits dialed. It compares calls with numbers that have less than 10 digits (local calls) to entries that you have made in office code banding tables. Office code band tables are the *second priority level of costing* for local calls. They provide a means for you to assign local office codes into different bands and apply 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, the system costs the calls that users make to 976-nnnn at a different rate than it costs the calls that users make to 977-nnnn or 978-nnnn.

To Program:

1. Dial *75 "SMDA PROGRAMMING"*
2. Dial **01** to program costing bands *"COSTING BANDS"*
3. Dial **1** to program office code bands *"OFFCE CODE BANDS"*
4. Dial 0 if no band is to be assigned "NO *BAND"*

   —OR—

   Dial **1 - 7** for bands 1 - 7 *"BAND X"*
5. Dial **200** - 999 to assign office code
6. Dial # and repeat step 5 for additional code
7. Dial ✳ and repeat steps 3-6 to program next band
8. Dial ✳✳ for next SMDA feature,

   —OR—

   Dial ✳✳✳ for configuration mode.

3.13.3 Zone Call Band Tables (Long Distance Calls)

Description: In certain heavily populated geographic areas, different area codes exist within the same geographic distance (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 calling location.

The system measures all calls that do not match exception tables for the number of digits that the user dials. It then compares those calls with numbers that have 10 digits or more (long distance calls) to entries that you have made 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 the system costs it 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 1-412-508-nnnn is costed at a different rate than a call made to 1-203-545-nnnn or 1-412-654-nnnn.

To Program:

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 assigned "NO ZONE"

   —OR—

   Dial **1 - 4** for zones 1 - 4 *"ZONE X"*
5. Dial **200** - 999 to assign an area code
6. Dial #
7. Dial 200 - 999 to assign 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.

3.13.4 Area Code Band Table (Long Distance Calls)

Description: The system compares the long distance calls that do not match entries in zone call band tables to entries that you have made in area code band tables. Area code band tables are the *third priority* level *of costing* for long distance calls. Area code band tables 1 - 7 are associated with call rate costing tables 1 1 - 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. Croup 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 l-415-nnn-nnnn are costed with values assigned to call rate table 17.

To Program:

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 assigned "NO *BAND"*
   —OR—
   Dial **1 - 7** for bands 1 - 7 *"BAND X"*
5. Dial **200 -** 999 to assign area code
6. Dial # and repeat step 6 for additional code
7. Dial ✳ and repeat steps 3-6 to program next band
8. Dial ✳✳ for next SMDA feature,
   —OR—
   Dial ✳✳✳ for configuration mode.

3.13.5 Call Rate Tables (Local And Long Distance Calls)

Description: The system compares 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 with the entries that you have made in any of the call rate tables 2 - 33 and costs them accordingly. This is the *thirdpriority level ofcosting* for local calls and *thefourth priority level of* costing for long distance calls. You can use the call rate tables to cost any calls that require special or extraordinary rates such as l-800-555-1212 or 1-900-976-nnnn. If the system can not match a called number with any entries that you have made in the call rate tables, it costs that call with the entries that you have made in call rate table 1 (the table of last resort for costing all calls). When you are making entries in the call rate tables, note the following items:

- You can program a maximum of 16 digits into each call rate table.
- Select digits so that the system can match a particular dialed number or number group to a particular rate table. Remember, the system uses the table with the best match to a dialed number to cost the call.
- Since a dialed number must match all of the digits that you have programmed into a table before it is considered a match, you can program a # character 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).

Office code band tables = call rate tables 18 - 25
Zone call band tables = call rate tables 25 - 28
Area code band table = 1 1 - 17

1. Dial *76 "CALL COST TBL"*
2. Dial table number (01 - *33) "CALL COST TBL XX"*
3. Dial 1 to enter matching digits *"XXXXXXXX"*

NOTE: Call Cost Table 1 will not accept matching digits.

4. Dial # to clear previous digits
5. Dial matching digits for costed number (32 max. # = match anything digit) *"XXXXXXXX"*
6. Dial ✳ to end matching digits
7. Dial 2 then dial 01 - 99 for Tier 1 time in tenths of minutes *"TIER 1 TIME XX"*
8. Dial ✳
9. Dial 3 then dial 001 - 999 for Tier 1 rate in cents *"TIER 1 RATE XXX"*
10. Dial%
11. Dial 4 then dial 001 - 999 for Tier 2 rate in cents *"TIER 2 RATE XXX"*
12. Dial ✳
13. Dial 5 then dial 001 - 999 for surcharge rate in cents *"SURCHARGE XXX"*
14. Dial ✳✳ to program next call cost table and repeat steps 2-14 until all tables are entered
15. Dial ✳✳✳ for configuration mode.

NOTE : Dialing a 00 or a 000 as an entry in steps 7, 9, 11, and 13 will clear the current entry for those steps,

3.13.6 Discard Digits

Description: When the telephone system is installed behind a host system such as a PBX or CENTREX, users must dial access codes before obtaining an outside line dial tone. To ensure that the system costs a call on just the actual telephone number that the user dials, you should arrange for the system to ignore these access codes. You can program up to six different access codes entries with up to eight digits per entry.

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 9-555-1212 is dialed, the 9 is discarded and the call is costed based on 555-1212.

To Program:

1. Dial *75 "SMDA PROGRAMMING"*
2. Dial **01** to program costing bands *"COSTING BANDS"*
3. Dial *4* to program discard *digits ' DISCARDDIGITS "*
4. Dial 1 - *6* to select entry 1 - *6 "ENTRY X"*
5. Dial # for no discard digits

   —OR—

   Dial up to 8 discard digits then dial # *"XXXXXXXX"*
6. Dial ✳ and repeat steps 3-5 to program next discard digit entry
7. Dial ✳✳ for next SMDA feature,

   —OR—

   Dial ✳✳✳ for configuration mode.

3.13.7 Dialing Time

Description: The system does not include dialing time when it records the time of a call for costing. You can program the amount of time that the system ignores for dialing purposes.

To Program:

1. Dial *75 "SMDA PROGRAMMING"*
2. Dial 02 to program dial time limit *"DIAL TIME XXX"*
3. Dial time in tenths of a minute **(001 - 999. or** dial 000 to clear) "XXXX"
4. Dial ✳ for next SMDA feature.
5. Dial ✳✳ for configuration mode.

3.13.8 Answer Time

Description: You can program the system to wait for a period of time before beginning to record costs for a call. This answer time allows a call to ring and be answered by the called party before the system costs it.

To Program:

1. Dial *75 "SMDA PROGRAMMING"*
2. Dial 03 to program answer time limit *' ANSWERTIME XXX "*
3. Dial time in tenths of a minute **(001 - 999 or dial 000** to clear) "XXX"
4. Dial ✳ for next SMDA feature.
5. Dial ✳✳ for configuration mode.

3.13.8 LCD Speakerphone Display of Costed Calls

Description: When you arrange the telephone system to cost the calls, you should also arrange for the LCD speakerphones being employed with the system to display the cost of each call the user make from that station.

To Program:

1. Dial *53 "STATION FEATURES"*
2. Dial 27 *" ' LCD CALL COST"*
3. Select station ports for programming: Station 10 - 73, Dial **10 - 73** or press **Cl0 –C73**
4. Dial ✳ for next station feature,

   —OR—

   Dial ✳✳ for configuration mode.

3.13.9 Call Costing Diagram

Figure 3.1 shows a flow chart for a costed call.

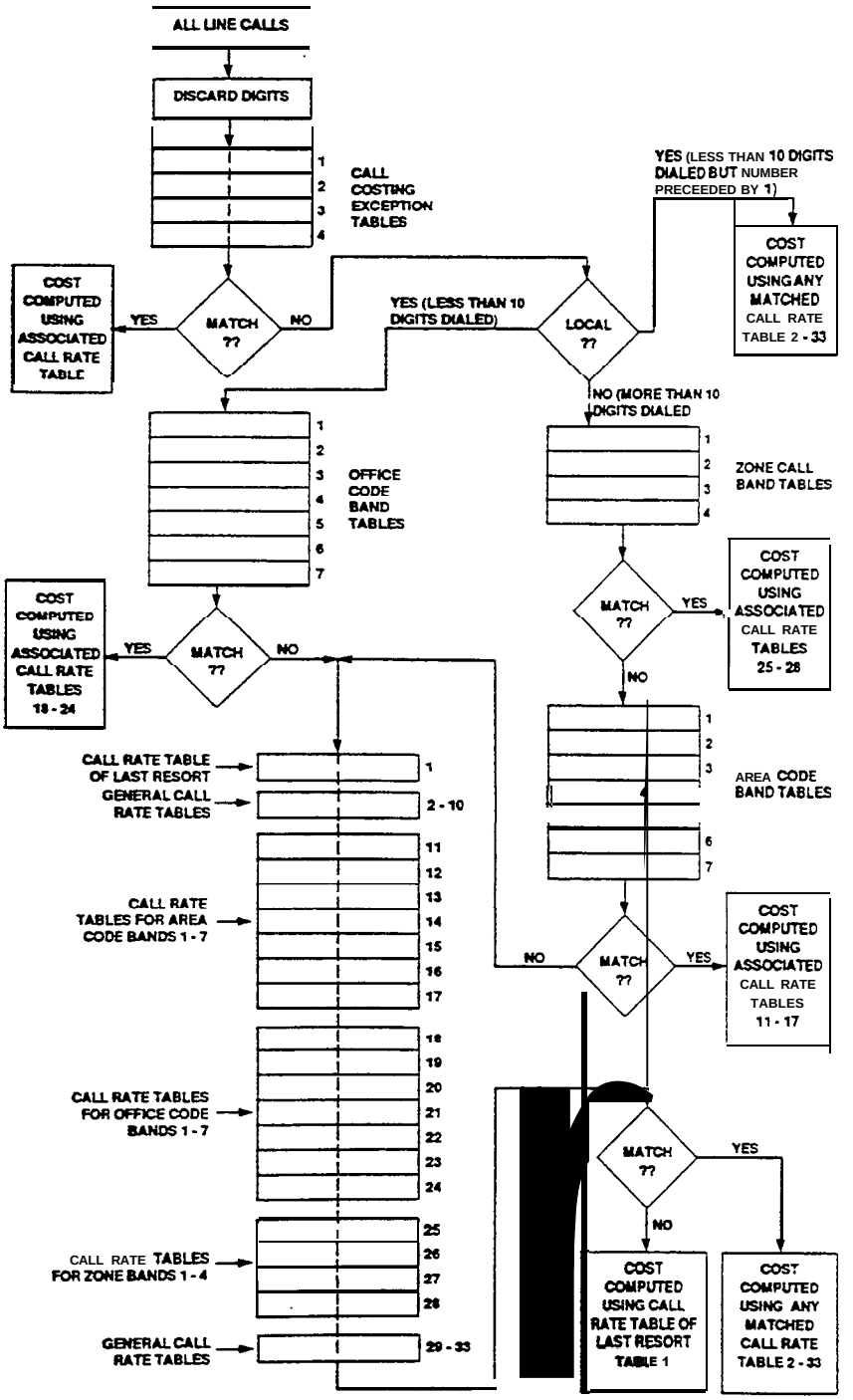
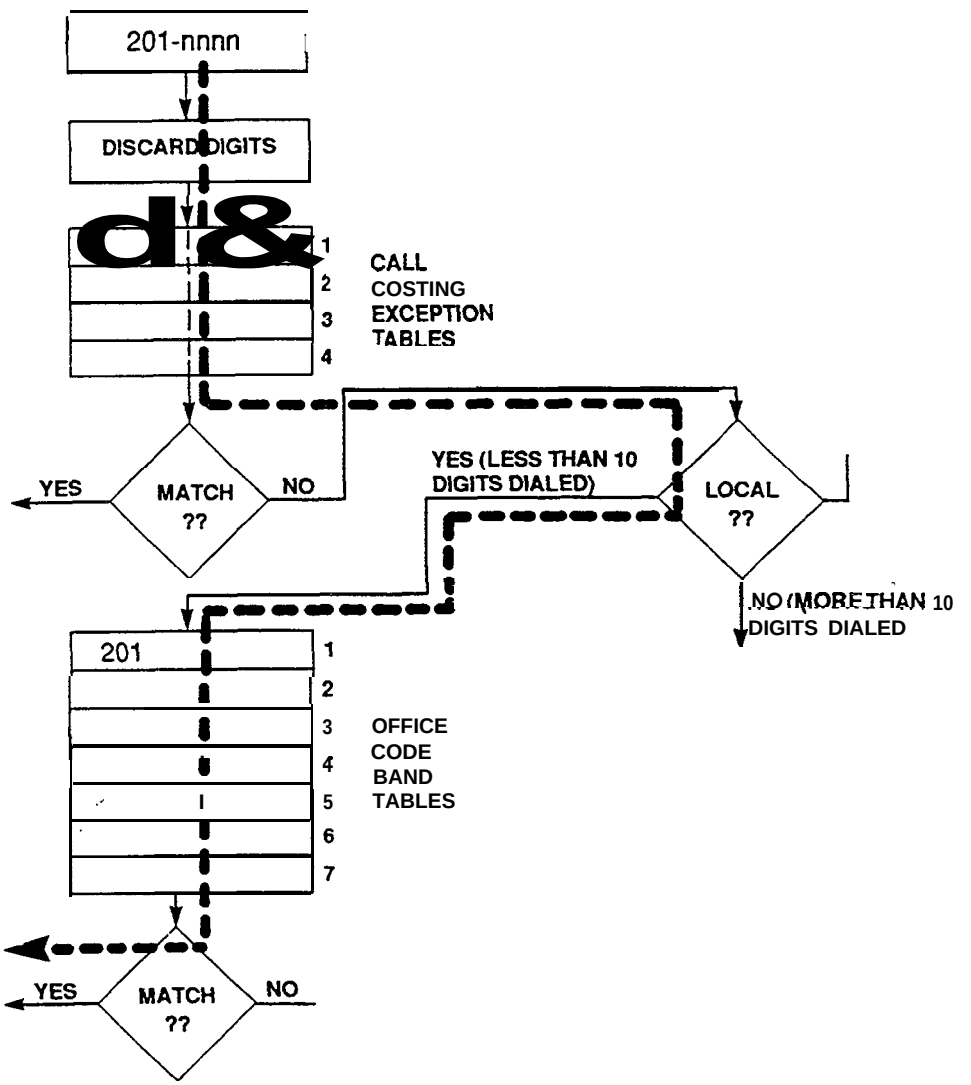


Figure 3.1

3.13.10 Call Costing--Local (Example)

Description: Assume that you have installed the telephone system where callers have an opportunity to dial number combinations that contain a common number sequence in both the area and office code (for purposes of example, we have used 201). **Figures 3.2-3.5** show examples of how the system costs different types of calls.

Dialing Sequence 201-nnnn. The following sequence is a **local** call (less than 10 digits) and 201 is the office code. Program call rate table 18 to cost calls of this sequence. Also program the office code band table adding office code 201 into band 1. Band tables will accept unlimited entries.



Call Rate Table 18	
Number	
Tier 1 Time	500
Tier 1 Rate	11
Tier 2 Rate	4
Surcharge	50 cents

Figure 3.2

3.13.11 Call Costing—LongDistance With Office Code(Example)

Description: **Dialing Sequence 1-201-201-nnnn.** The following sequence is for a long distance call (more than 10 digits) with 201 as both the area code and the office code. To cost this call, program call rate table 25 to cost calls of this sequence. Also program the zone call band table adding office code 201 to area code 201 in band 1. Add any other desired office codes (for example 478) to area code band 1.

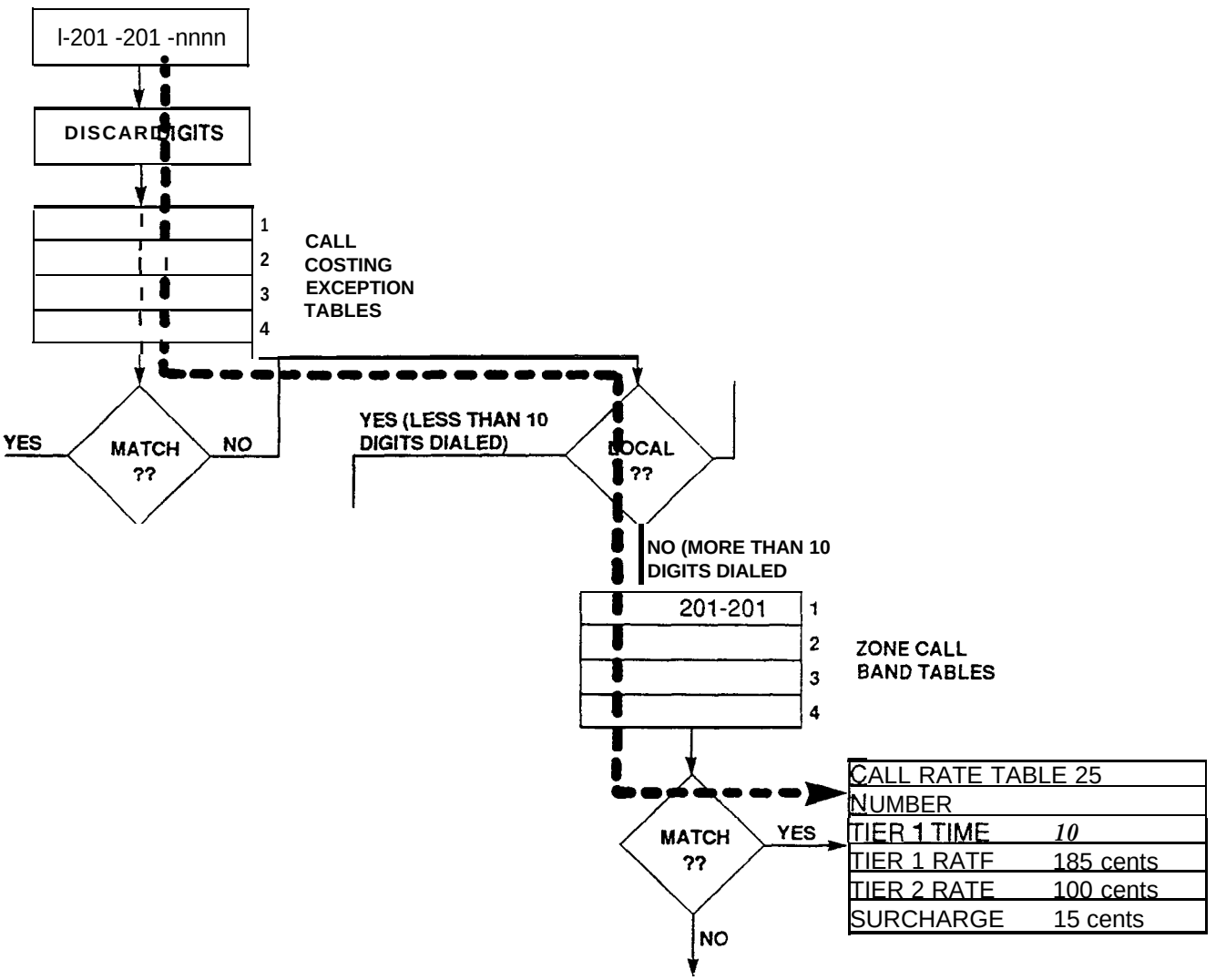
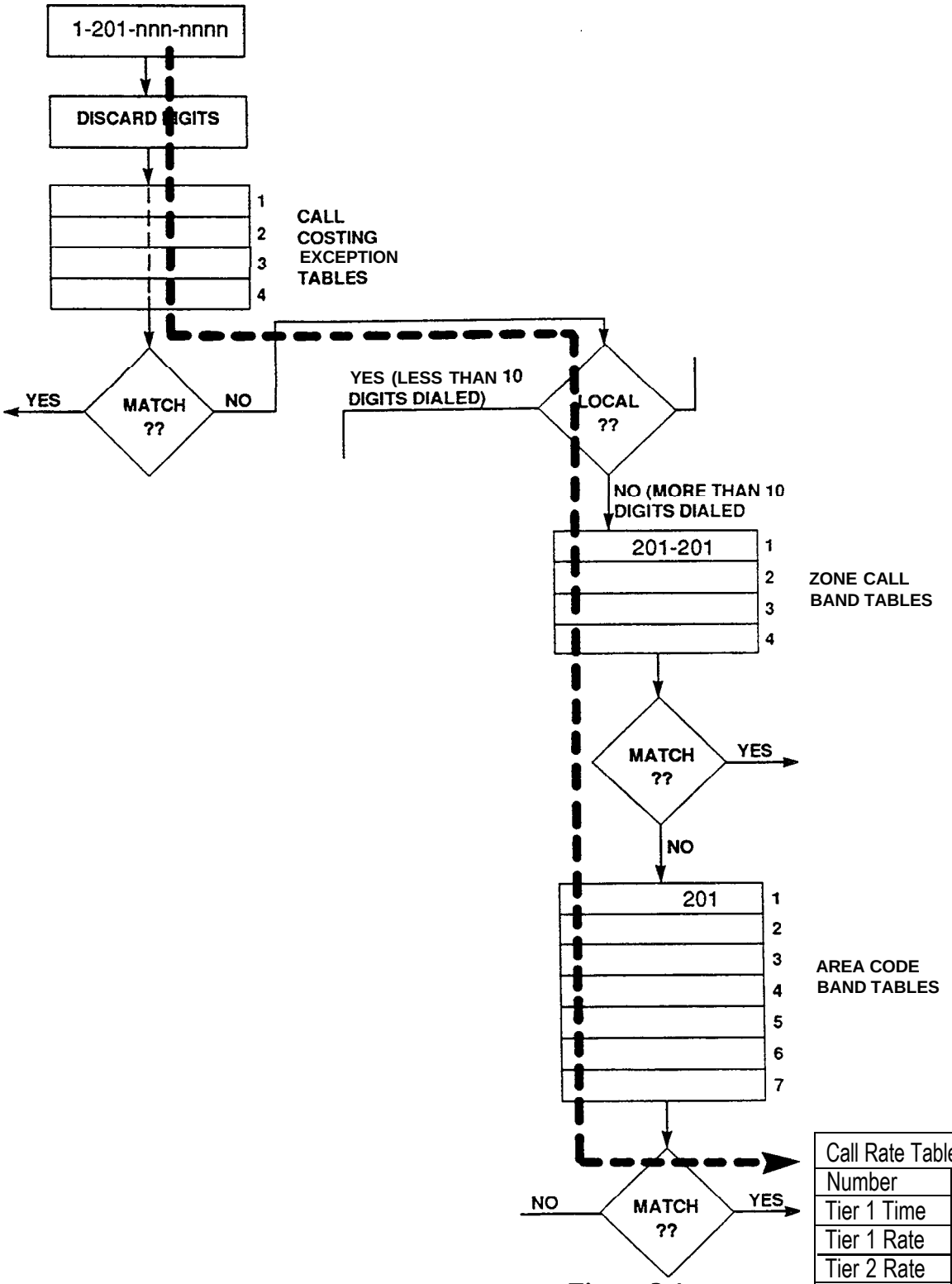


Figure 3.3

3.13.12 Call Costing Example--Long Distance (Example)

Description: **Dialing Sequence 1-201-nnn-nnnn.** The following dialing sequence is a long distance call (more than 10 digits) with 201 as the area code. To cost the following call, program call rate table 11 to cost calls in this sequence. Also, program the area code band table adding area code 201 to band 1.



Call Rate Table 11	
Number	
Tier 1 Time	30 cents
Tier 1 Rate	20 cents
Tier 2 Rate	18 cents
Surcharge	0 cents

Figure 3.4

3.13.13 Call Costing-Exception (Example)

Description: **Dialing sequence nnn-nnnn, 1-nnn-nnn-nnnn.** Program call rate table 1 to cost call that do not match any other programmed call rate table.

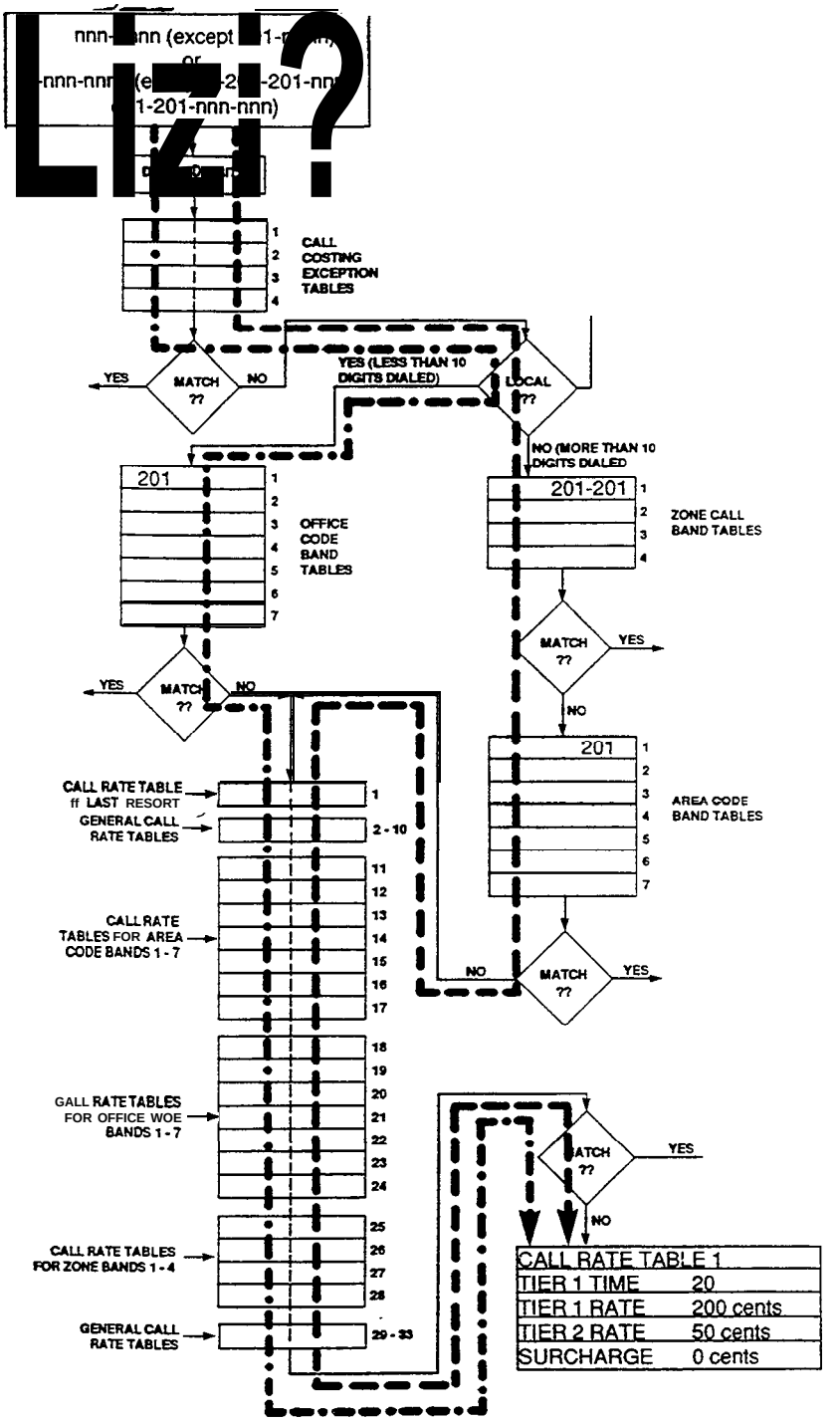


Figure 3.5

3.13.14 Typical SMDR Call Costing Report

Description: The following is an example of a typical SMDR call costing report.

10	**1**	**12/28/90 16:05**	*0.9*	2014567	**$** 0.50
10	*1*	**12/28/90 16:06**	1.8	12017894567	**$** 1.35
10	1	**12/28/90 16:08**	1.5	12014785693	$ 1.12
10	1	**12/28/90 16:11**	1.5	2012014563	$ 2.50
10	2	**12/28/90 16:12**	0.5	**5551212**	$ 1.00
10	1	**12/28/90 16:13**	1.1	2012013	$ 0.50

Note 1: Costed by rate table 18
Note 2: Costed by rate table 25
Note 3: Costed by rate table 11
Note 4: Costed by rate table 1

3.13.15 Typical SMDA Call Costing Report

Description: The following is an example of a typical SMDA call costing report.

Station Report for Extension - 10

Date : 12/28/90 Time : 16:15

DATE	TIME	STATION	ACCOUNT	LNGTH	COST	I/O	RING	LINE NUMBER
12/28	16:05	10		0.9	$ 0.50	0	1	2014567
12/28	16:06	10		1.8	8 1.35	0	1	12017894567
12/28	16:08	10		1.5	$ 1.12	0	1	12014785693
12/28	16: 11	10		1.5	$ 2.50	0	1	2012014563
12/28	16:12	10		0.5	$ 1.00	0	2	5551212
2/28	16:13	10		1.1	$ 0.50	0	1	2012013
TOTALS:				5.8	$ 6.97			INCOMING 0
AVERAGES :				0.9	$ 1.16			OUTGOING 6
								TOTAL CALLS 6

3.14 Station Message Detail Accounting/Reporting

The system produces five different call cost reports for printing. They are as follows:

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

The system generates reports automatically for printing whenever it detects that its records storage area is 95 percent full. You can use class of service programming to choose the reports that you want the system to generate. It generates the reports for printing in the order that you selected and at a certain time each day. You can also take programming action to delete all printed records except for those collected during the printing operation, which are stored for later printing.

NOTE: A lighted LED next to the programming button for the selection shows the choice you have selected. When a single button provides a toggle (on/off) action, the lighted LED indicates the active feature.

The first step in any programming sequence is to enter the base level. Once in this mode, you can dial the feature code for any desired configuration. Enter the base level with the following procedure: press ITCM then dial ✳# 7 4 6 ✳. The last step is to press the **SPKR** button to end the programming procedure and return the system to normal operation.

3.14.1 SMDA Department Numbers

Description: Use this programming feature to define different department numbers and assign stations to the departments so that SMDA call cost reports will only include information concerning that specific station arrangement.

To Program:

1. Dial *75 "SMDA PROGRAMMING"*
2. Dial 04 to define department numbers *"SMDA DEPARTMENTS"*
3. Dial 1 - 8 for department 1-8 *"DEPT X"*
4. Dial 0000 - 9999 for department number *"DEPTX YYYY"*
5. Dial ✳ for next department, and repeat steps 3 - 7 until all departments are numbered
6. Dial ✳✳ for next SMDA feature
7. Dial ✳✳✳ for configuration mode.

3.14.2 SMDA-Assigning Stations To Departments

Description:

To Program:

1. Dial *53 "STATION FEATURES"*
2. Dial *22 "SMDA DEPARTMENTS"*
3. Dial 0 for no SMDA department assigned *'DEPARTMENT 0"*
   —OR—
   Dial 1 - 8 for department 1 - *8 "DEPARTMENT X"*
4. Select stations for SMDA department: Station 10 - 73, Dial **10 - 73** or press **Cl0 – C73**
5. Dial ✳ and repeat steps 3 and 4 for additional department/station assignments,
   —OR—
   Dial ✳✳ for next station feature,
   —OR—
   Dial ✳✳✳ for configuration mode.

3.14.3 Station Message Detail Accounting (SMDA) Printout

Description: Call cost reports, produced by the system for printing, are generated automatically whenever the system detects that the records storage area is ninety-five percent full. Program the system to automatically generate these reports for printing at a certain time each day if desired. You can command the system to print several different types of SMDA reports and to delete all stored SMDA records.

NOTE: The departmental call distribution report reflects statistics based on current departmental station assignments. Before you use the previous programming feature to reassign stations to different departments, it is a good practice to: (I) print the departmental call report and any other desired SMDA reports, (2) make any desired reassignments, (3) delete all SMDA records.

To Program:

1. Dial *75 "SMDA PROGRAMMING"*
2. Dial 13 for auto report time *"AUTO TIME XXXX"*
   -Dial new time in hours and minutes (HH Min 24 hour time) or dial ✳ to accept current time
3. Dial 14 for report definition *"AUTO REPORT"*
4. Choose reports for printing
   Dial **1** for station report *"STATION REPORT"*
   Dial 2 account. report *"ACCOUNT REPORT'*
   Dial *3* line report *"LINE REPORT"*
   Dial 4 department report *' DEPT. REPORT"*
   Dial 5 print all *"PRINT RECORDS"*
   Dial 6 delete records *"DELETE RECORDS'*
   Dial *7* for DCD report *"DCD REPORT"*
5. Dial ✳ for next SMDA feature,
   —OR—
   Dial ✳✳ for configuration mode.

3.14.4 SMDA Report Type

Description: The attendant can command the system to print several different types of SMDA reports and to delete all stored SMDA records.

To Program:

1. Dial 07 *"SMDA REPORTS"*
2. Choose report for printout - Dial 1 # for station. *"STATION REPORT"*
   Dial 2 # for trunk *"TRUNK REPORT"*
   Dial 3 # for SMDA department *"DEPT. REPORT"*
   Dial 4 # for account code *"ACCOUNT REPORT"*
   Dial 5 # for auto report *"AUTO REPORT"*
   Dial *6* # for all records *"PRINT RECORDS"*
   Dial 7 # to delete SMDA records *"DELETE RECORDS"*
   Dial 8 to obtain the number of free records remaining in system *"FREE RECS XXXXX"*
   Dial 0 # for DCD report *"DCD REPORT"*
   Dial 9 to abort printout *"ABORT PRINT"*
3. Dial ✳ for configuration mode.

3.14.5 Station Message Detail Reporting (SMDR) Cost Reporting

Description: Program the system for the SMDR to provide continuous printout of system-wide station call activity as it is collected by the system. Additional programming action will cause the printing of the cost of each reported call to be included when the printout occurs.

To program:
1. Dial *77 "SMDR PRINT"*
2. Dial **1** *"XXXXXXX* **COSTING***"*
3. Press **Al** to toggle between enable and disable (Al LED On = Enabled)
   —OR—
   Dial **1** to enable (Al LED on) *"WITH COSTING"*
   Dial 2 to disable *"WITHOUT COSTING"*
4. Dial ✳ for configuration mode.

3.14.6 Station Message Detail Reporting (SMDR) Printout

Description:

To program:
1. Dial 77 *"SMDR PRINT"*
2. Dial 2 *"SMDR PRINT XXX"*
3. Press Al to toggle between enable and disable (Al LED On = Enabled)
   —OR—
   Dial **1** to enable printing."SMDR PRINT ON" (Al LED on)
   Dial 2 to disable printing *"SMDR PRINT OFF"*
4. Dial ✳ for configuration mode.

3.14.7 Station Message Detail Accounting (SMDA) Deleted By The Attendant

Description: This programming step gives the attendant station the ability to delete SMDA records when commanded to do so by its user. During day-to-day system operation, when SMDA records exceed storage capacity, the attendant can delete current records to make room for additional ones if you perform this programming step. Typically the attendant would do this after he or she has requested the system to print an SMDA report. If you have set the system to delete the records after it has generated an automatic report, you usually do not need to give the attendant this manual deletion feature.

To Program:

1. Dial **18** *"ATTN DELETE XXX"*
2. Press **Al** to toggle between enable and disable (LED On = Enable)
   —OR—
   Dial **1** to Enable *"ATTN DELETE ON"* (Al LED On)
   Dial 2 to Disable *"ATTN DELETE OFF"*
3. Dial ✳ for configuration mode.

3.15 Toll Restriction Table Confimration

In order for toll restriction to take effect, you must perform all of the following functions:

- Program entries in one or more toll tables
- Assign toll tables to all appropriate lines.
- Assign toll tables to all appropriate stations.

Description: After you program the toll tables, you must assign them to both a line and the station that uses that line before the system will activate any programmed toll restriction at the station.

1. Determine the types of dialing restrictions that you wish imposed on the system. Typically, this includes access codes which result in toll charges, and certain local numbers as desired.
2. If you wish the restricted dialing codes to be imposed consistently on most or all stations in the system, list them on one or two tables. If you must allow for a wide variation in the dialing restrictions, 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 system prevents the dialing of numbers entered in a DENY table. 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, note that the system will not toll restrict system speed dial numbers unless you specify them to be restricted with a separate programming step.
   - **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 373, 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 an DENY table.
6. 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 you have created.
7. If the system is installed behind a PBX, include an access code as part of every table entry.

NOTE: The system defaults two toll restriction tables with preprogrammed values and assigns them to the lines. You need only to assign them the stations to put them into effect. The preprogrammed values are as follows:

Table 1 = deny	Table 2 = allow
Entry 1 = 1	*Entry 1 = 1800*
Entry 2 = 976	*Entry2 = 911*
Entry 3 = 411	

These values will provide satisfactory system performance in a broad range of site applications; however, they can be changed as needed to meet different toll restriction needs.

3.15 Toll Restriction Configuration

NOTE: A lighted LED next to the programming button for the selection shows the choice you have selected. When a single button provides a toggle (on/off) action, the lighted LED indicates the active feature.

The first step in any programming sequence is to enter the base level. Once in this mode, you can dial the feature code for any desired configuration. Enter the base level with the following procedure: press **ITCM** then dial ✳# 7 4 6 ✳. The last step is to press the **SPKR** button to end the programming procedure and return the system to normal operation.

You can return the toll table values to the default state by entering base level, dialing **70#,** and pressing **SPKR.**

3.15.1 Assign Entries To Toll Restriction Tables

Description: Program the entries that you want each toll restriction table to contain.

To Program:
1. Dial 71 *"TOLL TABLE"*
2. Dial 01 - 16 or Press **Al - A14, B1, B2** for toll table 1 - 16 *"XXXXX TABLE Y"*
3. Dial 5 or Press **Al** to establish an allow toll table (Al LED on = allow) *"ALLOW TABLE Y"*
   —OR—
   Dial 6 or Press **A2** to establish a deny toll table (A2 LED on = deny) *"DENY TABLE Y"*
4. Dial **1 - 4** or Press **AS, A9, A10, All** for entry number **1 - 4** *"XXXXXX"*
5. Dial # to clear current entry
6. Dial keypad digits (0 - 9, #) to enter numbers *"XXXXXX . . ."*
7. Dial ✳ for next entry and repeat steps 4 - 6 until all table restrictions are entered
8. Dial ✳✳ for next table and repeat steps 2 - 7 until all tables are entered
9. Dial ✳✳✳ for configuration mode.

3.15.2 Assign Toll Restriction Tables To Lines

Description: Once you have created a toll restriction table, assign it to the appropriate line(s).

To Program:
1. Dial *72 "ASSIGN TOLL-LINE"*
2. Dial 01 - 16 or Press **Al - A14, B1, B2** for toll table 1 - 16 (LED On = Selected Table)
3. Dial # to finish entry and display lines
4. Select line ports
   Line port l-16 = Dial **01 - 14** or Press **Al - Al4**
   Line port 15, 16 = **Dial 15, 16** or Press **B1, B2**
   Line port 17-24 = Dial 17 - 24
   —OR—
   Press B3 then dial **Al - AS**
5. Dial ✳ and repeat steps 2-4 for next toll table to line assignment,
   —OR—
   Dial ✳✳ for configuration mode.

3.153 Assign Toll Restriction Tables To Stations

Description: Assign the toll restriction table to each appropriate station.

To Program:
1. Dial *73 ' ASSIGN TOLL-STA."*
2. Dial 01 - 16 for toll tables 1-16 to be assigned to station
   —OR—
   Press **Al - A14, B1, B2** for tables 1-16 (LED On = Selected table)
3. Dial #to finish entry
4. Select station ports to be programmed: Station 10 - 73, Dial **10 - 73** or press **Cl0 – C73**
5. Dial ✳ for next toll table to station assignment,
   —OR—
   Dial ✳✳ for configuration mode.

3.15.4 Assign Toll Restriction Tables To Stations For Night Ringing

Description: Toll tables assigned with this feature have an effect only when the attendant places the telephone system in the night ringing mode of operation.

To Program:
1. Dial *74 ' ASSIGNTOLL-NITE"*
2. Dial 01 - 16 for toll tables 1 - 16 to be assigned.
   —OR—
   Press **Al - A14, B1, B2** for tables l-16. (LED On = Selected table)
3. Dial #to finish entry
4. Select station ports to be programmed: Station 10 - 73, Dial **10 - 73** or press **Cl0 – C73**
5. Dial ✳ for next toll table to night answer assignment,
   —OR—
   Dial ✳✳ for configuration mode.

3.15.5 Assign Toll Restriction Tables To System Speed Dial Calls

Description: When you enable this feature, the system applies toll restriction tables that you have assigned to a station to the system speed dial calls that users make from that station.

To Program:
1. Dial 53 *"STATION FEATURES"*
2. Dial **05** *"SYS SPD TOLL RST"*
3. Select station ports to be programmed: Station 10 - 73, Dial **10 - 73** or press **C10 – C73**
4. Dial ✳ for next station feature,

   —OR—

   Dial ✳✳ for configuration mode.

3.16 Cassette Tape Recorder Interface

Description: You can down-load configuration data from a programmed system to a cassette tape. You can use this programming information for later reloading into the same system or for loading into the same model of a different system. Before you begin programming, make sure you have done all of the following:

- Connect the audio cassette tape recorder microphone connector to the music interface jack on the side of the common equipment.
- Place the cassette recorder on a stable location so that vibration or movement will not hamper the operation.
- Do not perform any other programming action while the tape system is active.
- Program the baud rate of the tape data to be either 100 or 50 baud (see-3.5.14).
- The system will send appropriate response and error messages to data port B during the recording and loading of data. If the system includes a data printer connected to this port, it will print the response and error messages.
- When the common equipment sends data to an audio cassette, it sends a lead-in tone prior to the data. During playback, this lead-in tone alerts the system to receive the configuration data.
- You must start the tape during the lead-in tone when you play back the stored data.
- To insure a successful load, comparison, or verification of recorder data always start the tape during the lead in tone. The following list will help you make sure you are successful.

  1. Rewind the tape to the beginning
  2. Disconnect the cable connecting the recorder and the common equipment
  3. Set the playback volume for approximately one-half of maximum
  4. Play the tape and listen to the lead-in tone. Verify that it is not distorted
  5. Rewind the tape to the point where the lead-in tone begins
  6. Connect the cable between the common equipment and the tape recorder.
  7. Prepare the system to a accept prerecorded data.
  8. Start the tape from the point where the lead-in tone was first heard.

- A tape data transfer operation requires approximately 20 to 25 minutes to complete. When the tape data transfer operation finishes, the system causes three quick tone bursts to sound at station 10 as an indication of completion.
- If a load is unsuccessful, repeat the load procedure with the playback volume set for approximately two-thirds of maximum (You may have to adjust more than once).

To Program:

1. To load previously recorded configuration data into the system to replace current values (Loading time is approximately 10 minutes), Dial *80 "LOAD DATA"*
2. To record current program values onto cassette tape for later use (recording time is approximately 12 minutes), Dial **81** *"SAVE DATA"*
3. To abort load or record operation, Dial *82 "ABORT XFER"*
4. To exchange current program values with recorded values, Dial *83 "SWAP DATA"*
5. To compare recorded values with system values, Dial *84 "COMPARE DATA"*
6. To verify accuracy of previously recorded data, Dial 85 *"VERIFY TAPE"*
7. To load previously recorded auto dial numbers into system from tape, Dial 86 *"RECORD AUTODIAL"*
8. To record currently stored system and station speed dial numbers onto tape, Dial 87 *"SAVE SPD. DIAL"*
9. To record currently stored autodial numbers from individual stations onto cassette tape, Dial 88 for stations 10 – XX *"SAVE AUTODZAL L"*
10. Dial *89* for next feature *"SAVE AUTODIAL U"*

3.16.1 Troubleshooting

Error messages mean that the data is incorrect and that you must then repeat the record or play-back procedure. The system will send error messages to data port B for printing by the SMDR printer. If error messages continue, check the following.

1. Make sure the cables are connected properly.
2. Try a different cassette tape.
3. Try a different tape recorder.

Abort Error Codes

Code	Definition
0	Header Error (Header Never Started
1	Header Error (Trouble Reading Header)
2	Header Error (Header Too Short)
3	Header Error (Header Too Long)
4	Header Error (Trouble Reading Header)
5	Header Error (Trouble Reading Header)
6	Data Error (Trouble Reading Data)
7	Data Error (Trouble Reading Data)
8	Data Error (Data Distorted)
9	Data Error (Data Distorted)
A	User Generated Record Abort
B	User Generated Play–back abort
C	Error When Comparing Data to Taped Data
D	Error in Verifying Taped Data
E	Baud Rate Error (Should Be 50 When Set For 100)
F	Baud Rate Error (Should Be 100 When Set For 50)

4 System Programming Records

LCD Messages										
Msg.	Location									
No.	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										

Default: 1 = BACK AT, 2 = CALL

System Speed Dial Record		(Be sure to record a line or line group number with each speed dial number.)					
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			

4.2 System Programming — Timing Features

Recall / Flash Time	.08 sec	.30 sec	SO sec	.60 sec	.75 sec	.88 sec	1.0 sec	1.5 sec	2.0 sec	3.0sec
Default = 2 seconds										

Pause Time	.5 sec	1.0 sec	1.5 sec	2.0 sec	3.0 sec	5.0 sec	7.5 sec	10 sec	15 sec	2osec
Default = I second										

Timed Hold Recall Time	30 sec	60 sec	90 sec	120 sec	180sec	240 sec	300 sec	360 sec	420 sec	Never
Default = 60 seconds										

Unanswered Call Transfer Recall Time	10 sec	20 sec	25 sec	30 sec	45 sec	60 sec	90 sec	120 sec	180 sec	240 sec
Default = 20 seconds	☐ For Stations									

Unanswered Call Transfer Recall Tie	10 sec	20 sec	25 sec	30 sec	45 sec	60 sec	90 sec	120sec	180sec	240sec
Default = 20 seconds	☐ For Deaprtments									

Call Park Recall Time	1 min	2 min	3 min	4 min	5 min	6 min	Never
Default = 2 minutes							

Extended DTMF Tones For Automatic Dialing	
80 msec	480 msec
160	560 msec
240 msec	720 msec
320 msec	880 msec
400 msec	1040 msec
Default = 80 msec	

4.3 System Programming— Feature Inhibiting

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		
Cll Park Orbit 7		
Call Park Orbit 8		
Call Park Orbit 9		
Call Waiting		
LCD Messaging		
Executive Override/		
Service Observing		
Account Code		
Personal Call Fwd.		
Enable All Features		
Default = all features enabled		

Do Not Disturb Inhibit-System Wide	Enable	Disable
Default = Inhibit Enable		

4.4 Line Configuration Records

Feature	Line Port (Write number, name, group, or other data)							
	1	2	3	4	5	6	7	8
Abandoned Hold Release (50/350 msec)								
Automatic Privacy (On/Off)								
Privacy Release Lines								
Line Port Disable (On/Off)								
Line Groups (0, 1-4)								
Line Name (5 characters)								
Line Port Function (AUX/CO)								
Line To Line Port Reassignment (1/1, etc.)								
Pulse/Tone Switchable (pulse/tone)								
Voice Mail ID (6 digits max)								

Default = 50 msec hold release, privacy on all with no station released, no disabled lines, no groups asgn'd., no names asgn'd., all ports co, same line/port, all tone dialing, no VM ID.

Feature	Line Port (Write number, name, group, or other data)							
	9	10	11	12	13	14	15	16
Abandoned Hold Release (50/350 msec)								
Automatic Privacy (On/Off)								
Privacy Release Lines								
Line Port Disable (On/Off)								
Line Groups (0, 1-4)								
Line Name (5 characters)								
Line Port Function (AUX/CO)								
Line To Line Port Reassignment (1/1, etc.)								
Pulse/Tone Switchable (pulse/tone)								
Voice Mail ID (6 digits max)								

Default = 50 msec hold release, privacy on all with no station released, no disabled lines, no groups asgn'd., no names asgn'd., all ports co, same line/port, all tone dialing, no VM ID.

Feature	Line Port (Write number, name, group, or other data)							
	17	18	19	20	21	22	23	24
Abandoned Hold Release (50/350 msec)								
Automatic Privacy (On/Off)								
Privacy Release Lines								
Line Port Disable (On/Off)								
Line Groups (0, 1-4)								
Line Name (5 characters)								
Line Port Function (AUX/CO)								
Line To Line Port Reassignment (1/1, etc.)								
Pulse/Tone Switchable (pulse/tone)								
Voice Mail ID (6 digits max)								

Default = 50 msec hold release, no privacy released, no disabled lines, no groups asgn'd., no names asgn'd., all ports co, same line/port, all tone dialing, no VM ID.

	Block Programming	
Model Line Port	Start Line Port	End Line Port

4.5 Station Configuration

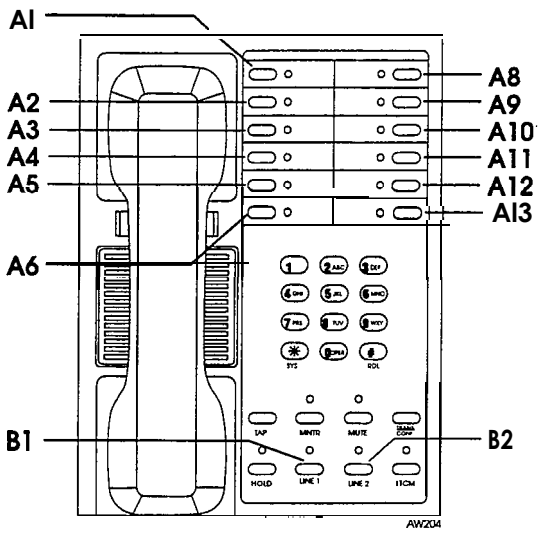
(Use this sheet as an individual station record or as a record for a block of like-programmed stations. You can make copies of this blank sheet as needed to meet the system capacity)

Feature	Choice	*Default*	Enter Station Port Numbers)							
Access Denied	Lines 1-24	*None*								
All-Call and Zone Paging Receive	All/1-3	*All*								
Originate	All/1-3	*All*								
Audible Monitoring	None/Dir./Delay	*None*								
Automatic Hold	Yes/No	*No*								
Automatic Hold - Intercom	Yes/No	*No*								
Automatic Privacy Privacy Release	None/1-24	*None*								
Call Forward On Busy/ Ring - No Answer	No/0-9 Rings	*No*								
Call Origination Denied	No/1-24	*No*								
Central Message Desk	Yes/No	*No*								
Data Security Port	Yes/No	*No*								
Do Not Disturb Override	Yes/No	*No*								
Executive Override	Yes/No	*No*								
Flexible Ringing Direct	1-24	*All (Sta. 10, 17)*								
Delayed	1-24	*None*								
Night Transfer (of ringing)	1-24	*All (Sta. 10, 17)*								
Flexible Station Numbering	10-7999	*Ext = Port*								
Group Call Pickup	1-4	*1*								
Headset Interface	Yes/No	*No*								
Idle Line Preference	No/1-24	*No*								
Intercom Hunt Group	10-73	*None*								
Personal Ring Tones	1-6	*1*								
Prime Line -	1-24	*None*								
Group	1-4	*None*								
Intercom	Itcm.	*None*								
Message Wait Originate	Yes/No	*Yes*								
Ringing Line Preference	Yes/No	*No*								
SOHVA Disable	Yes/No	*Yes*								
SOHVA Groups	None/1-8	*None*								
Service Observing	Yes/No	*No*								
Station To Station Port Reassignment	10–73	*Sta = Port*								
Voice Announce Blocking	Yes/No	No								

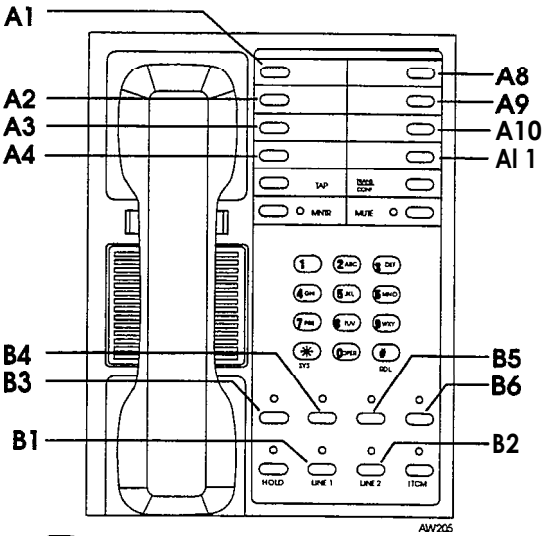
		Block Programming			
Model Station Port					
First Station Port					
Last Station Port					

Station Record

(Copy this record sheet as required for additional stations)



☐ **Z-Line Monitor Telephone**



☐ **6-Line Monitor Telephone**

A1		A11	
A2		B1	
A3		B2	
A4		B3	
A8		B4	
A9		B5	
A10		B6	

A1		A9	
A2		A10	
A3		A11	
A4		A12	
A5		A13	
A6		B1	
A7		B2	

PORT NUMBER:
EXTENSION ASSIGNMENT:
STATION NAME:
STATION LOCATION:

PROG CODE	FUNCTION
BLK	Blank
LXX	Line 1-24
SXX	Station 10-73
DND	Do Not Disturb
PRI	Privacy
IC2	Second Intercom
ACC	Account Code
SAV	Save
ZPX	Zone Page l-3
AC	All Call
ACB	Automatic Call Back
CF	Call Forward
CPx	Call Park Orbit 1-9
TGx	J ine Group l-4
VAB	Voice Announce Block
TGQ	Line Group Oueue

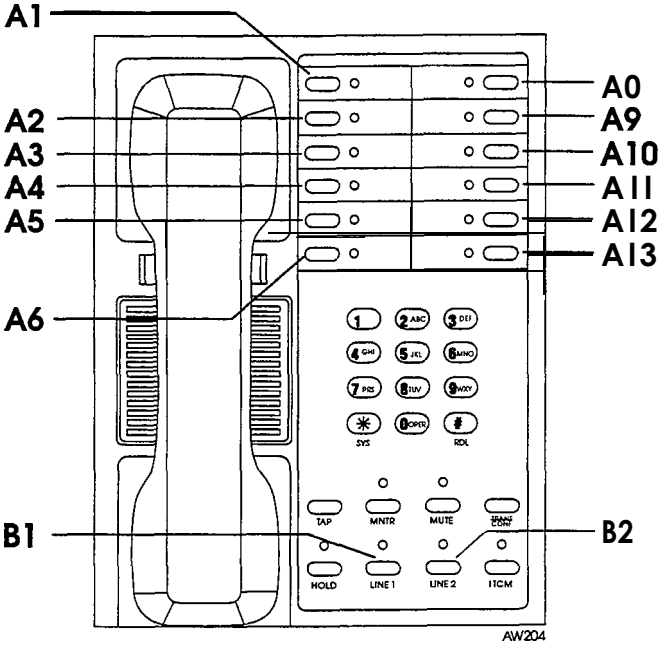
DEFAULT SETTINGS - STATION 10: B1-B8=Line l-Line 8, and Al=Line 21, A2=19, A3=17, A4=15, A5=13, A6=11, A7=9, A8=22, A9=20, A10=18, Al 1=16, A12=14, A13=12, A14=10, A15=Blank.

OTHER STATIONS: B1-B8=Line l-Line 8, and A1-A15 are blank.

CAJS065

Station Record

(Copy this record sheet as required for additional stations)



14-Line Telephone

☐ Speakerphone

❑ Monitor Telephone

PORT NUMBER:
EXTENSION ASSIGNMENT:
STATION NAME:
STATION LOCATION:

A1		B1	
A2		B2	
A3			
A4			
A5			
A6			
A8			
A9			
A10			
A11			
A12			
A13			

CAJS062

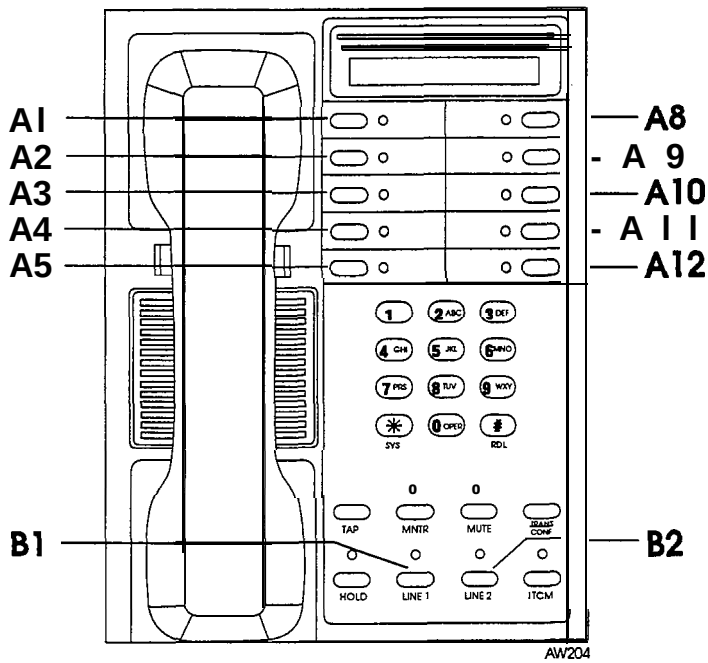
PROG CODE	FUNCTION
BLK	Blank
Lxx	Line 1-24
SXX	Station 10-73
DND	Do Not Disturb
PRI	Privacy
IC2	Second Intercom
ACC	Account Code
SAV	Save
ZPx	Zone Page l-3
AC	All Call
ACB	Automatic Call Back
CF	Call Forward
CPx	Call Park Orbit l-9
TGx	Line Group l-4
VAB	Voice Announce Block
TGQ	Line Group Queue

DEFAULT SETTINGS - STATION 10: Bl-B&Line l-Line 8, and A1=Line 21, A2=19, A3=17, A4=15, A5=13, A6=11, A7=9, A8=22, A9=20, A10=18, A11=16, A12=14, A13=12, A14=10, A15=Blank.

OTHER STATIONS: B1-B8=Line l-Line 8, and Al-Al5 are blank.

Station Record

(Copy this record sheet as required for additional stations)



12-Line LCD Speakerphone

PORT NUMBER:
EXTENSION ASSIGNMENT:
STATION NAME:
STATION LOCATION:

A1	
A2	
A3	
A4	
A5	
A8	
A9	
A10	
A11	
A12	
B1	
B2	

CAJS061

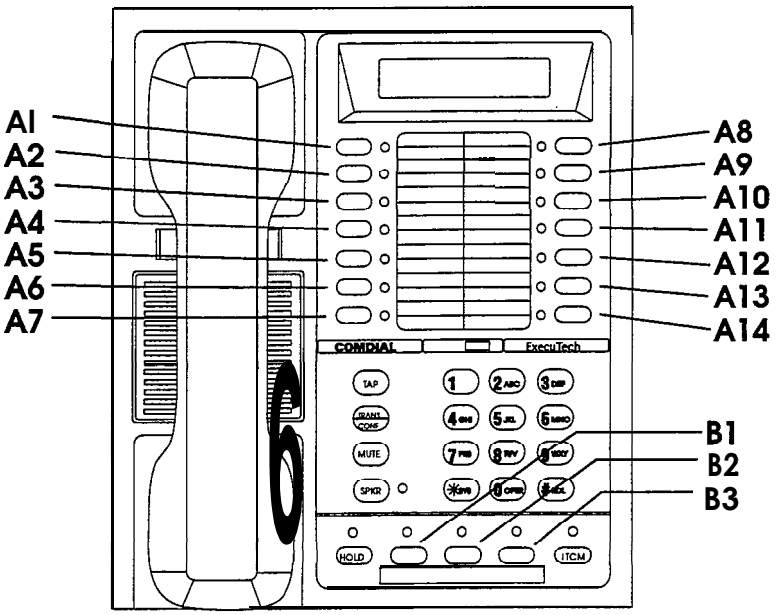
PROG CODE	FUNCTION
BLK	Blank
Lxx	Line 1-24
SXX	Station 10-73
DND	Do Not Disturb
PRI	Privacy
IC2	Second Intercom
ACC	Account Code
SAV	Save
ZPX	Zone Page 1-3
AC	All Call
ACB	Automatic Call Back
CF	Call Forward
CPx	Call Park Orbit 1-9
TGx	Line Group 1-4
VAB	Voice Announce Block
TGQ	Line Group Queue

DEFAULT SETTINGS - STATION 10: B1-B8=Line 1-Line 8, and A1=Line 21, A2=19, A3=17, A4=15, A5=13, A6=11, A7=9, A8=22, A9=20, A10=18, Al 1=16, A12=14, A13=12, A14=10, A15=Blank.

OTHER STATIONS: B1-B8=Line 1-Line 8, and Al-Al5 are blank.

Station Record

(Copy this record sheet as required for additional stations)



17-Line LCD Speakerphone

PORT NUMBER:
EXTENSION ASSIGNMENT:
STATION NAME:
STATION LOCATION:

A1		A13	
A2		A14	
A3		B1	
A4		B2	
A5		B3	
A6			
A7			
A8			
A9			
A10			
A11			
A12			

CAJS060

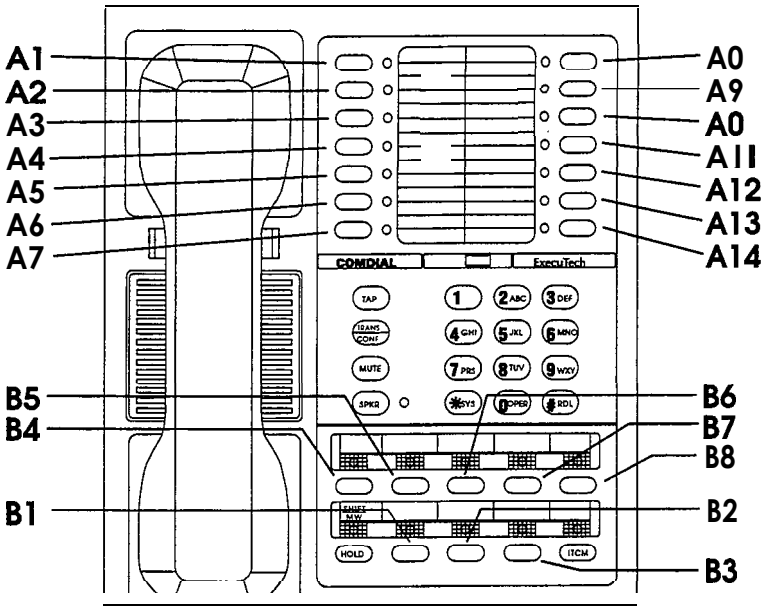
PROG CODE	FUNCTION
BLK	Blank
LXX	Line 1-24
sxx	Station 10-73
DND	Do Not Disturb
PRI	Privacy
IC2	Second Intercom
ACC	Account Code
SAV	Save
ZPx	Zone Page 1-3
AC	All Call
ACB	Automatic Call Back
CF	Call Forward
CPx	Call Park Orbit 1-9
TGx	Line Group 1-4
VAB	Voice Announce Block
TGQ	Line Group Queue

DEFAULT SETTINGS - STATION 10: B1-B8=Line 1-Line 8, and A1=Line 21, A2=19, A3=17, A4=15, A5=13, A6=11, A7=9, A8=22, A9=20, A10=18, A11=16, A12=14, A13=12, A14=10, A15=Blank.

OTHER STATIONS: B1-B8=Line 1-Line 8, and A1-A15 are blank.

Station Record

(Copy this record sheet as required for additional stations)



10X14Telephone

❑ Speakerphone

☐ Monitor Telephone

PORT NUMBER:
EXTENSION ASSIGNMENT:
STATION NAME:
STATION LOCATION:

A1		A13	
A2		A14	
A3		B1	
A4		B2	
A5		B3	
A6		B4	
A7		B5	
A8		B6	
A9		B7	
A10		B8	
A11			
A12			

CAJS059

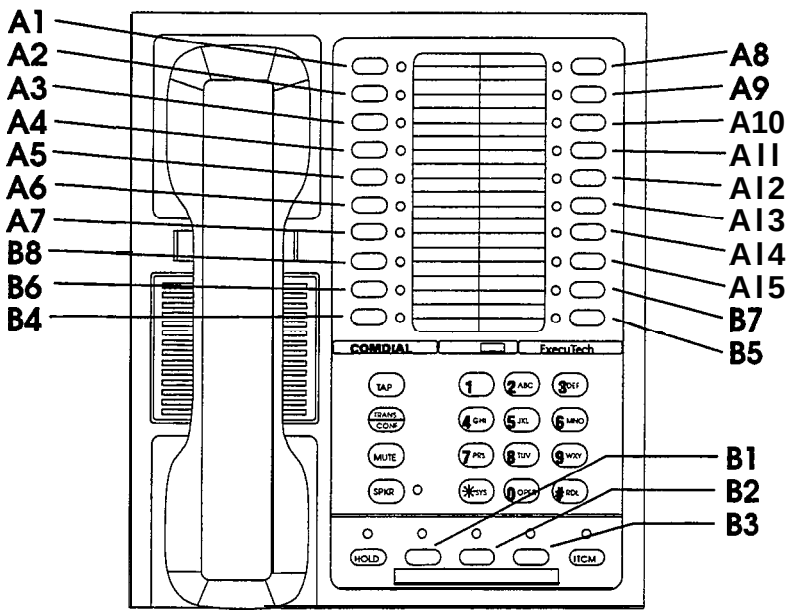
PROG CODE	FUNCTION
B L K	Blank
Lxx	Line 1-24
Sxx	Station 10-73
DND	Do Not Disturb
PRI	Privacy
IC2	Second Intercom
ACC	Account Code
SAV	Save
ZPx	Zone Page 1-3
AC	All Call
ACB	Automatic Call Back
CF	Call Forward
CPx	Call Park Orbit 1-9
TGx	Line Group 1-4
VAB	Voice Announce Block
TGQ	Line Group Queue

DEFAULT SETTINGS - STATION 10: B1-B8=Line l-Line 8, and Al=Line 21, A2=19, A3=17, A4=15, A5=13, A6=11, A7=9, A8=22, A9=20, A10=18, A11=16, A12=14, A13=12, A14=10, A15=Blank.

OTHER STATIONS: B1-B8=Line l-Line 8, and Al-Al5 are blank.

Station Record

(Copy this record sheet as required for additional stations)



5X20 Telephone

☐ Speakerphone

☐ Monitor Telephone

PORT NUMBER:
EXTENSION ASSIGNMENT:
STATION NAME:
STATION LOCATION:

A1		A13	
A2		A14	
A3		A15	
A4		B1	
A5		B2	
A6		B3	
A7		B4	
A8		B5	
A9		B6	
A10		B7	
A11		B8	
A121			

CAJS058

PROG CODE	FUNCTION
BLK	Blank
Lxx	Line 1-24
SXX	Station 10-73
DND	Do Not Disturb
PRI	Privacy
IC2	Second Intercom
ACC	Account Code
SAV	Save
ZPx	Zone Page l-3
AC	All Call
ACB	Automatic Call Back
CF	Call Forward
CPx	Call Park Orbit l-9
TGx	Line Group l-4
VAB	Voice Announce Block
TGQ	Line Group Queue

DEFAULT SETTINGS - STATION 10: B1-B8=Line l-Line 8, and Al=Line 21, A2=19, A3=17, A4=15, A5=13, A6=11, A7=9, A8=22, A9=20, A10=18, A11=16, A12=14, A13=12, A14=10, A15=Blank.

OTHER STATIONS: B1-B8=Line l-Line 8, and Al-Al5 are blank.

4.6 Account Codes

Account Code	Catagory	Account Code	Catagory

Account Code Usage Verification	Enabled On	Disabled Off
Verified Digits		
Account Code Length		
LCD Display Time		
Display On Incoming	Yes	No
Display On Outgoing	Yes	No

Default = Account Code Usage: Disabled, Verified Status: On, Verified Digits 3, Account Code Digits: 3, Display Time: 5 sec., Incoming Display: On. Outgoing Display: On.

4.7 Direct Inward Station Dialing (DISD)

Dial Time Limit	**6 sec.**	**9 sec.**	**12 sec**	**15 sec.**
Default = I2 Seconds				

Assist Station
Station Assigned Lines Assigned
Day Station
Night Station
Default = Station 10 Day And Night

Incoming Rings	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Default = 0 Rings										

4.8 Execumail Interface Records

Voice Mail Port			
10	26	42	58
11	27	43	59
12	28	44	60
13	29	45	61
14	30	46	62
15	31	47	63
16	32	48	64
17	33	49	65
18	34	50	66
19	35	51	67
20	36	52	68
21	37	53	69
22	38	54	70
23	39	55	71
24	40	56	72
25	41	57	73
Default = Not Enabled			

Automatic Attendant - Ringing Lines (1-24) Per Station											
Station	Direct	Delay	Night	Station	Direct	Delay	Night	Station	Direct	Delay	Night
10				35				58			
11				36				59			
12				37				60			
13				38				61			
14				39				62			
15				40				63			
16				41				64			
17				42				65			
18				43				66			
19				44				67			
20				45				68			
21				46				69			
22				47				70			
23				48				71			
24				49				72			
25				50				73			
26				51							
27				52							
28				53							
29				54							
30				55							
32				56							
33				57							
34				Default = None Assigned							

ExecuMail Records - Continued

A[illegible] Voic[illegible]il
E[illegible]e
D[illegible]le
D[illegible]lt = Disabled

Voice Mail Line Port Identification					
Port	Entry	Port	Entry	Port	Entry
		9		17	
2		10		18	
		11		19	
4		12		20	
5		13		21	
6		14		22	
7		15		23	
8		16		24	
Default = No ID Assigned					

Voice Mail Transfer On Busy Port			
10	26	42	58
11	27	43	59
12	28	44	60
13	29	45	61
14	30	46	62
15	31	47	63
16	32	48	64
17	33	49	65
18	34	50	66
19	35	51	67
20	36	52	68
21	37	53	69
22	38	54	70
23	39	55	71
24	40	56	72
25	41	57	73
Default = Not Enabled			

4.9 Direct Department Calling

Department 1	
Access Code 10 - 7999	
Line Ports 1-24	
station Ports 10 - 73	

Department 2	
Access Code 10 - 7999	
Line Ports 1 - 24	
Station Ports 10 - 73	

Department 3	
Access Code 10-799	
Line Ports 1-24	
Station Ports 10-73	

Department 4	
Access Code 10 - 7999	
Line Ports 1-24	
Station Ports 10-73	

Defaults = No Access Code Assigned, No Line Ports Assigned, No Station Ports Assigned

4.10 Integrated Call Costing

Exception Tables																
Execpt. Table	Digits															Cost Table
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1																	
2																	
3																	
4																	
Default = None Assigned																	

Office Code Band Tables	
Band	Office Code Prefix(es)
1	
2	
3	
4	
5	
6	
7	
Default = None Assigned	

Zone Call Band Tables	
Band	Area Code Prefix(es)
4	
Default = None Assigned	

Area Code Band Tables	
Band	Area Code Prefix(es)
1	
2	
3	
4	
5	
6	
7	
Default = None Assigned	

Discard Digits								
Entry	**Digits**							
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1								
2								
3								
4								
5								
6								
Default = No Discard Digits Assigned								

Dial Time Limit	
(01 - 999 Sec.)	
Default = 0 Seconds	

Answer Time Limit	
(01 - 999 Sec.)	
Default = 0 Seconds	

Integrated Call Costing Configuration Records-Call Rate Tables

Last Resort Table

Call Rate Table 1	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 2	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 3	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 4	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 5	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 6	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 7	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 8	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 9	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 10	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 11	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 12	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 13	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 14	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 15	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 16	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 17	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 18	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

CAJS047

Integrated Call Costing Configuration Records-Call Rate Tables - continued

Call Rate Table 19	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 20	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 21	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 22	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 23	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 24	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 25	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 26	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 27	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 28	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 29	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 30	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 31	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 32	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

Call Rate Table 33	
Tier 1 Time	
Tier 1 Rate	
Tier 2 Rate	
Surcharge	

CAJS048

4.11 Station Message Detail Accounting/Reporting

Dept	Dept. Number	Department Station
1		
2		
3		
4		
5		
6		
7		
8		
Default = None Assigned		

Automatic Report Time	
Hours	
Minutes	
Station Report	
Account Report	
Line Report	
Department Report	
DCD Report	
Print All Records	
Delete Records	
Default = None Assigned	

SMDR Cost Reporting	Enabled	Disabled
SMDR Printout	Enabled	Disabled
Default = No Cost Reported, Printout Enabled		

4.12 Toll Restriction Table Configuration

Toll Restriction Tables

Toll Restriction Table 1
Type: Allow Deny X
Entry Entry Numbers (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 2
Type: Allow X Deny
Entry Entry Numbers (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 3
Type: Allow Deny
Entry Entry Numbers (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 4
Type: Allow Deny
Entry Entry Numbers (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 5
Type: Allow Deny
Entry Entry Numbers (16 Maximum)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1										I	I	I	I	I	I	
2																
3																
4																

Table Assignment: Lines Stations

Toll Restriction Table 6
Type: Allow Deny
Entry Entry Numbers (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 7
Type: Allow Deny
Entry Entry Numbers (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 8
Type: Allow Deny
Entry Entry Numbers (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

cAJso49

Toll Restriction Tables - continued

Toll Restriction Table 9
Type: Allow Deny
Entry Entry Numbers (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 10
Type: Allow Deny
Entry Entry Numbers (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 11
Type: Allow Deny
Entry Entry Numbers (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 12
Type: Allow Deny
Entry Entry Numbers (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 Numbers (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 14
Type: Allow Deny
Entry Entry Numbers (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 15
Type: Allow Deny
Entry Entry Numbers (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 Numbers (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

CAJS050

Assign Toll Restriction Tables To Lines

Assign Toll Restriction Tables To Lines			
Port	**Tables**	**Port**	**Tables**
1		14	
2		15	
3		16	
4		17	
5		18	
6		19	
7		20	
8		21	
9		22	
10		23	
11		24	
12			
13			
Default = All Tables Assigned To All Ports			

Assign Toll Restriction To Stations

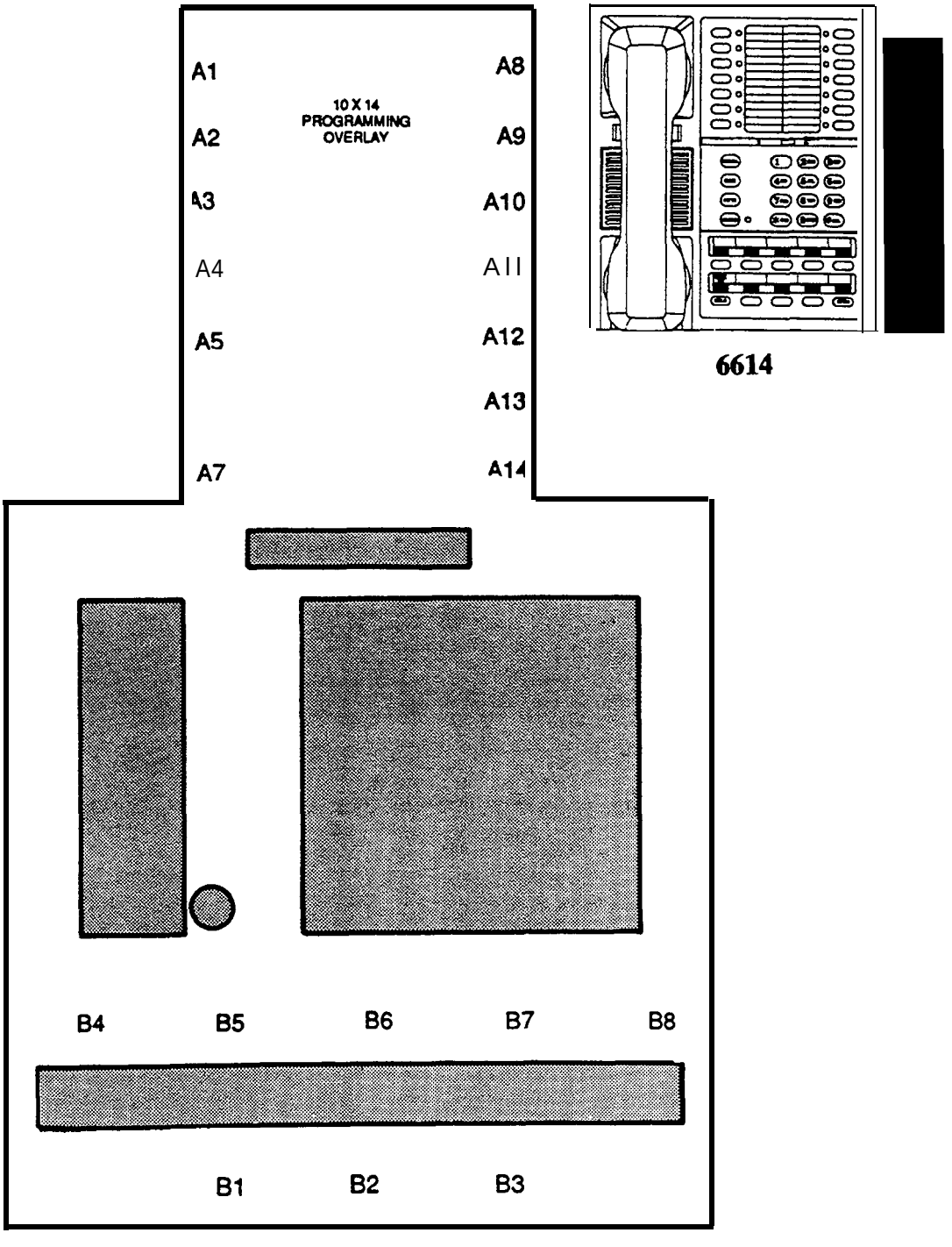
Station Port	Toll Table Assignments Normal Calls	Night Transfer Calls	Speed Dial Calls
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
31			
22			
23			
74			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			

Station Port	Toll Table Assignments Normal Calls	Night Transfer Calls	Speed Dial Calls
36			
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55			
56			
57			
58			
59			
60			
61			
62			
63			
64			
65			
66			
67			
68			
69			
70			
71			
72			
73			

Default = None Assigned

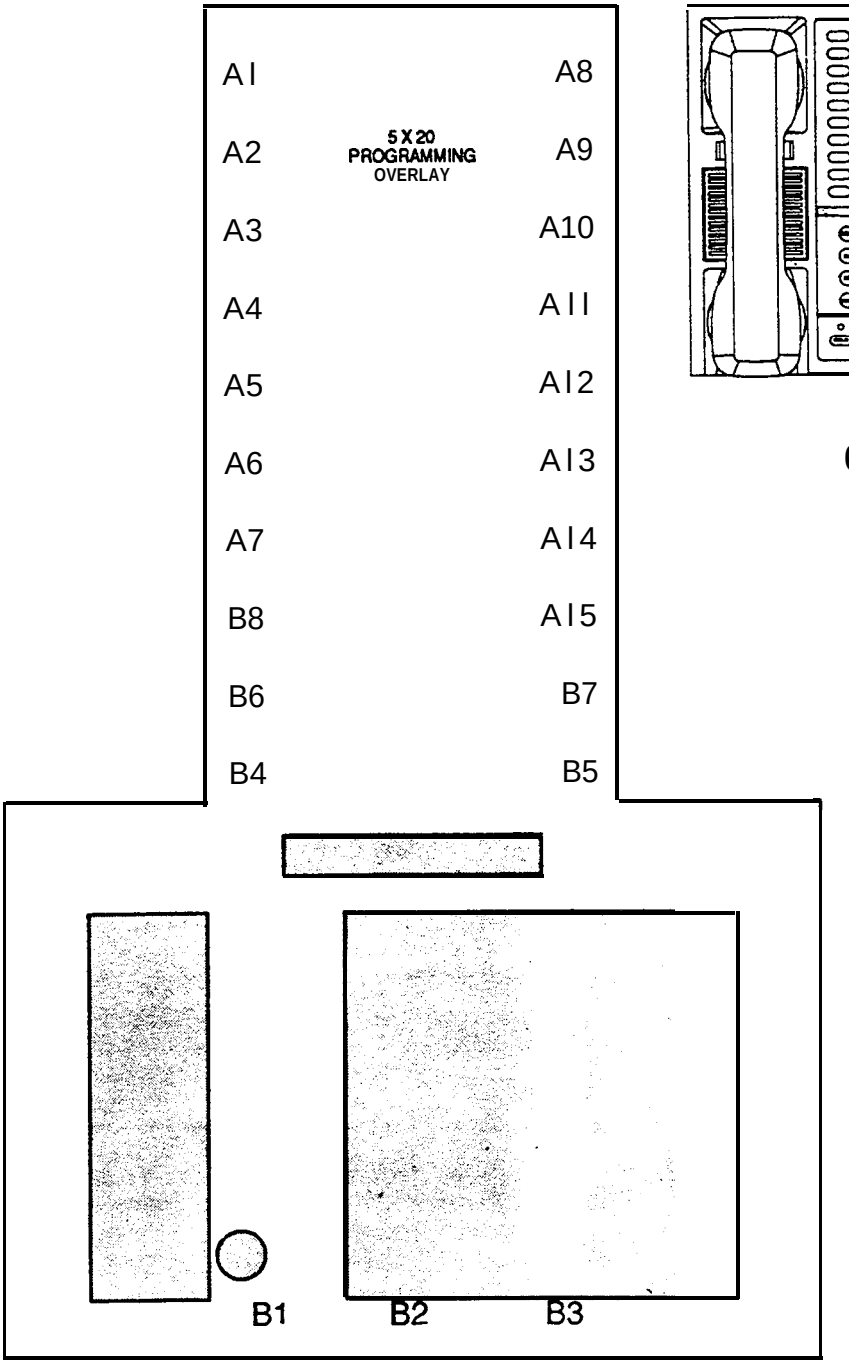
STATION 10 - PROGRAMMING OVERLAY

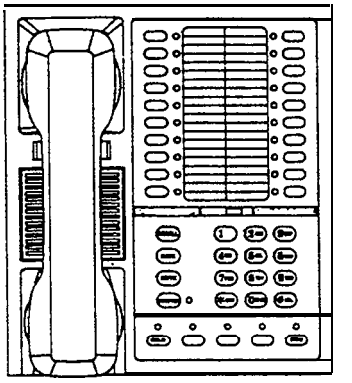
- **Cut out along border.**
- **Cut out shaded openings.**
- **Fit over station faceplate.**



STATION 10 - PROGRAMMING OVERLAY

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

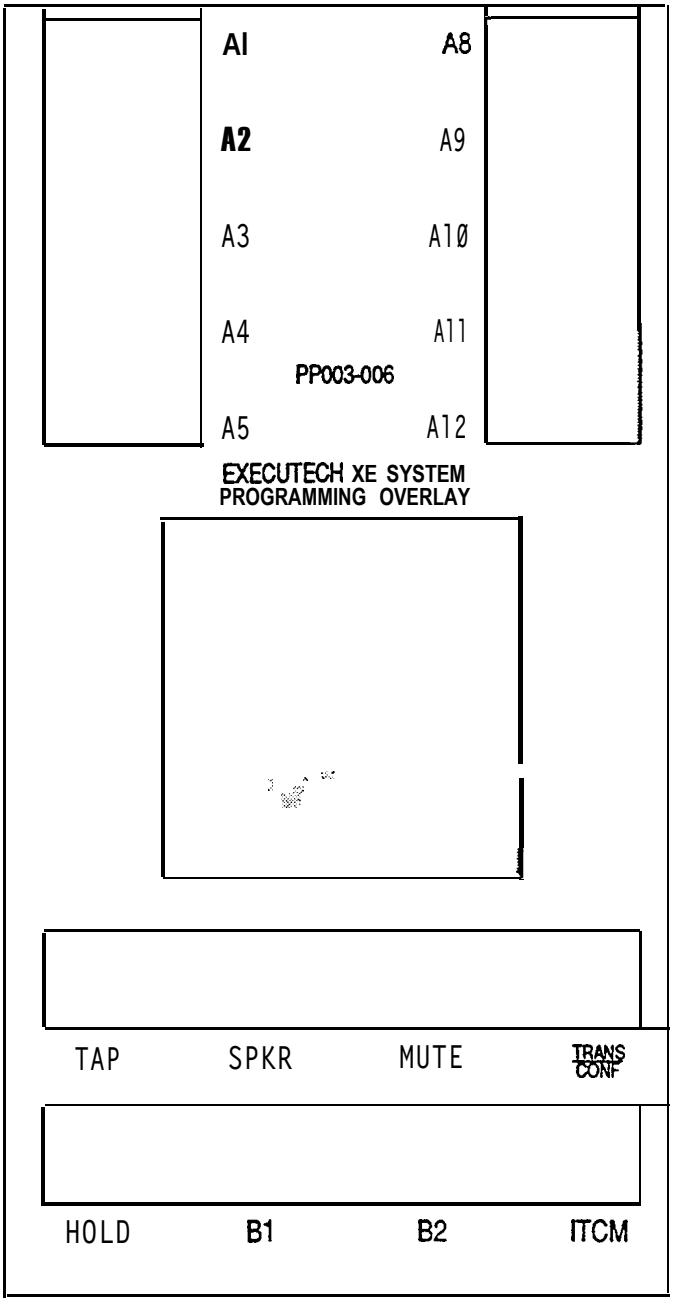


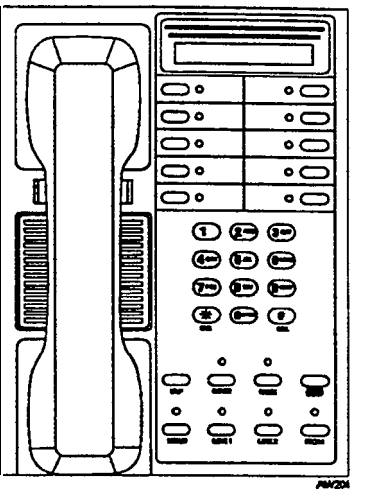


6620T

STATION 10 - PROGRAMMING OVERLAY

- Cut out along border.
- Cut out shaded openings.
- Fitoverstation faceplate.



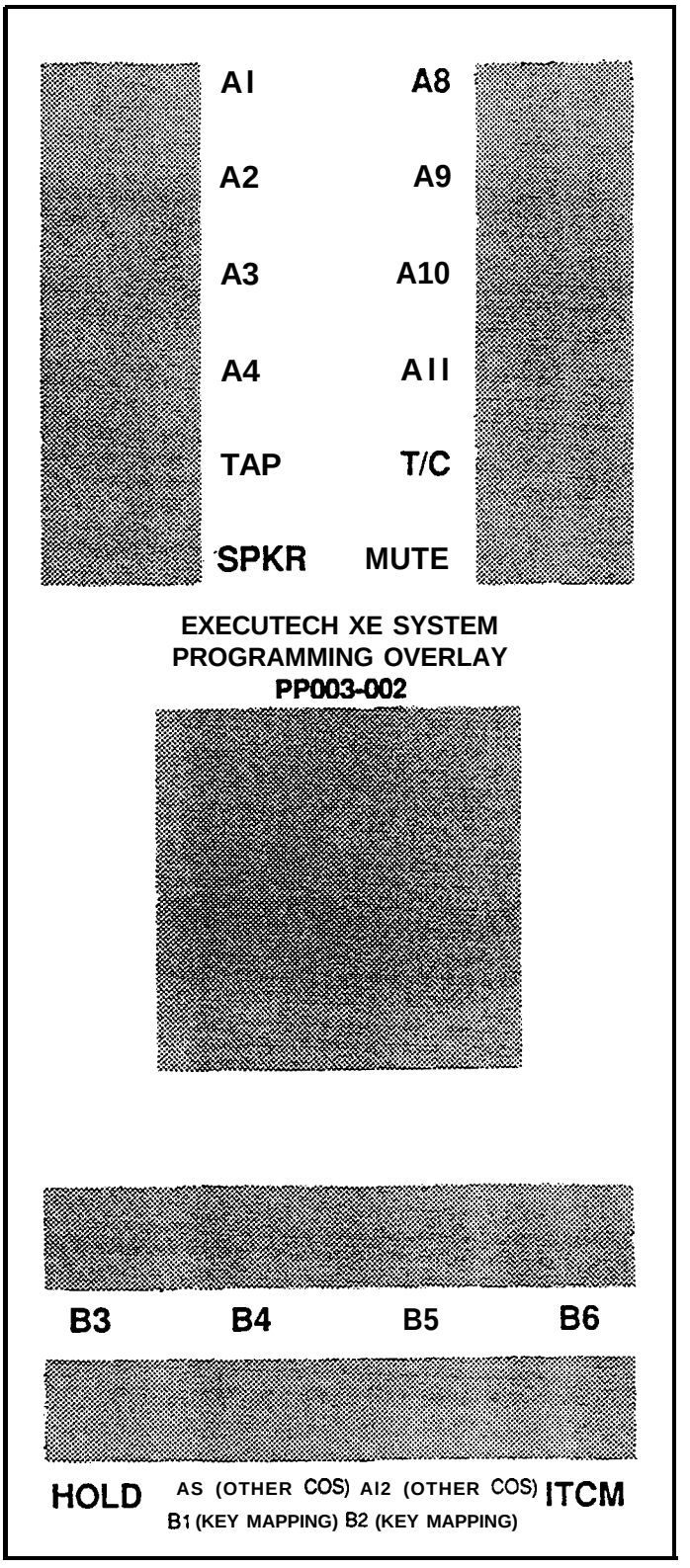


6700S

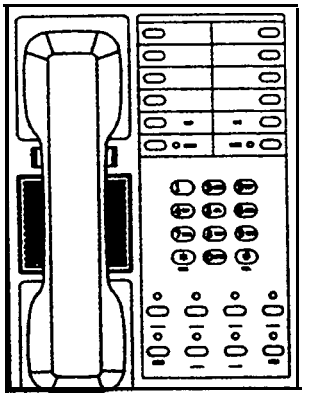
BUTTONS A6 AND A13 CANNOT BE MAPPED WITH THIS TELEPHONE

STATION 10 - PROGRAMMING OVERLAY

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



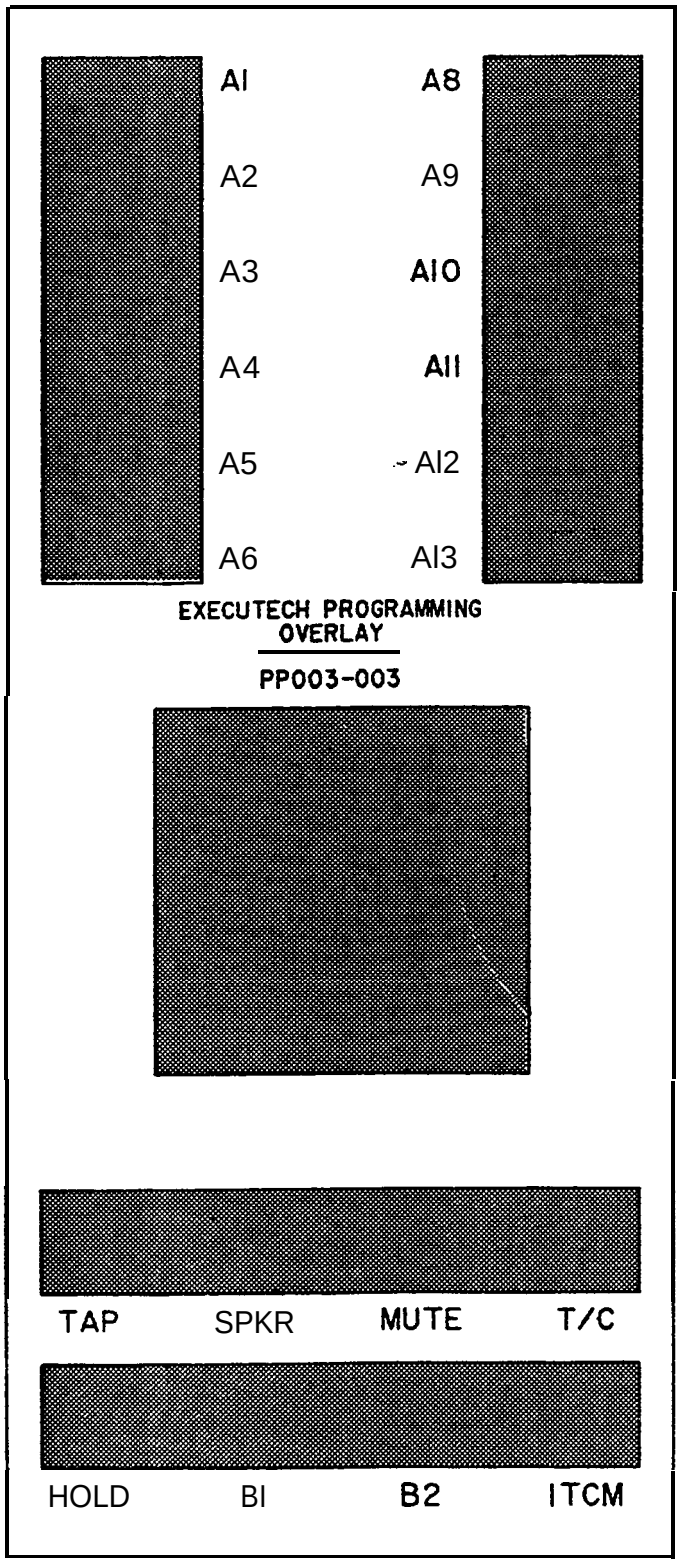
6706X

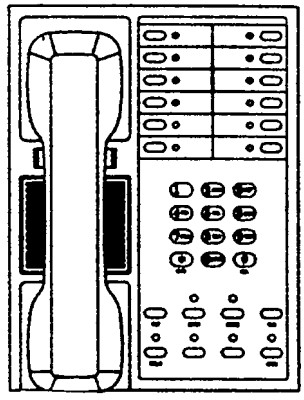


PERFORMING CLASS OF SERVICE PROGRAMMING WITH A MODEL 6706X TELEPHONE IS NOT RECOMMENDED UNLESS ALL TELEPHONES INSTALLED IN THE SYSTEM ARE MODEL 6706X TELEPHONES.

STATION 10 - PROGRAMMING OVERLAY

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

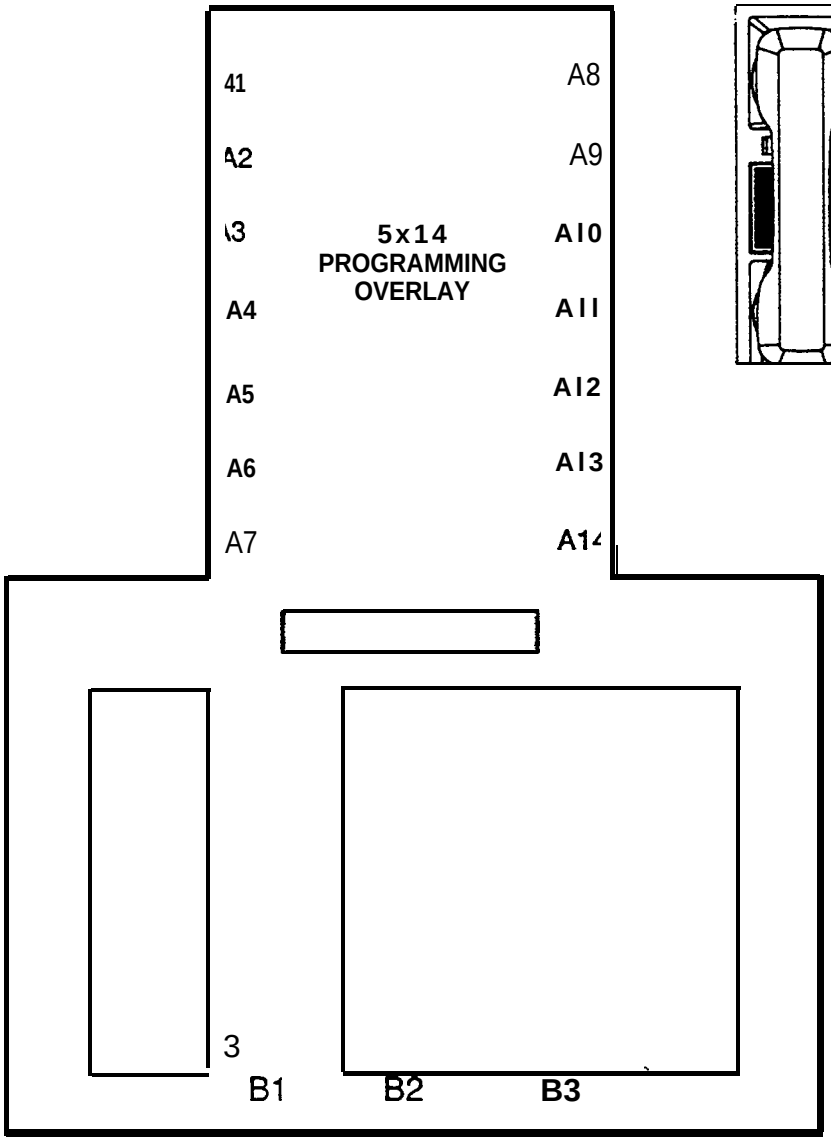


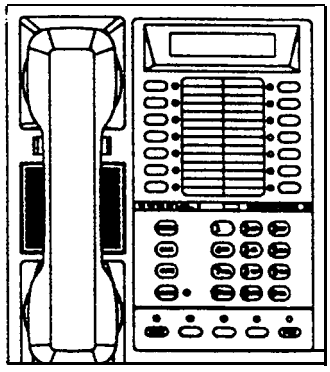


6714X

STATION 10 - PROGRAMMING OVERLAY

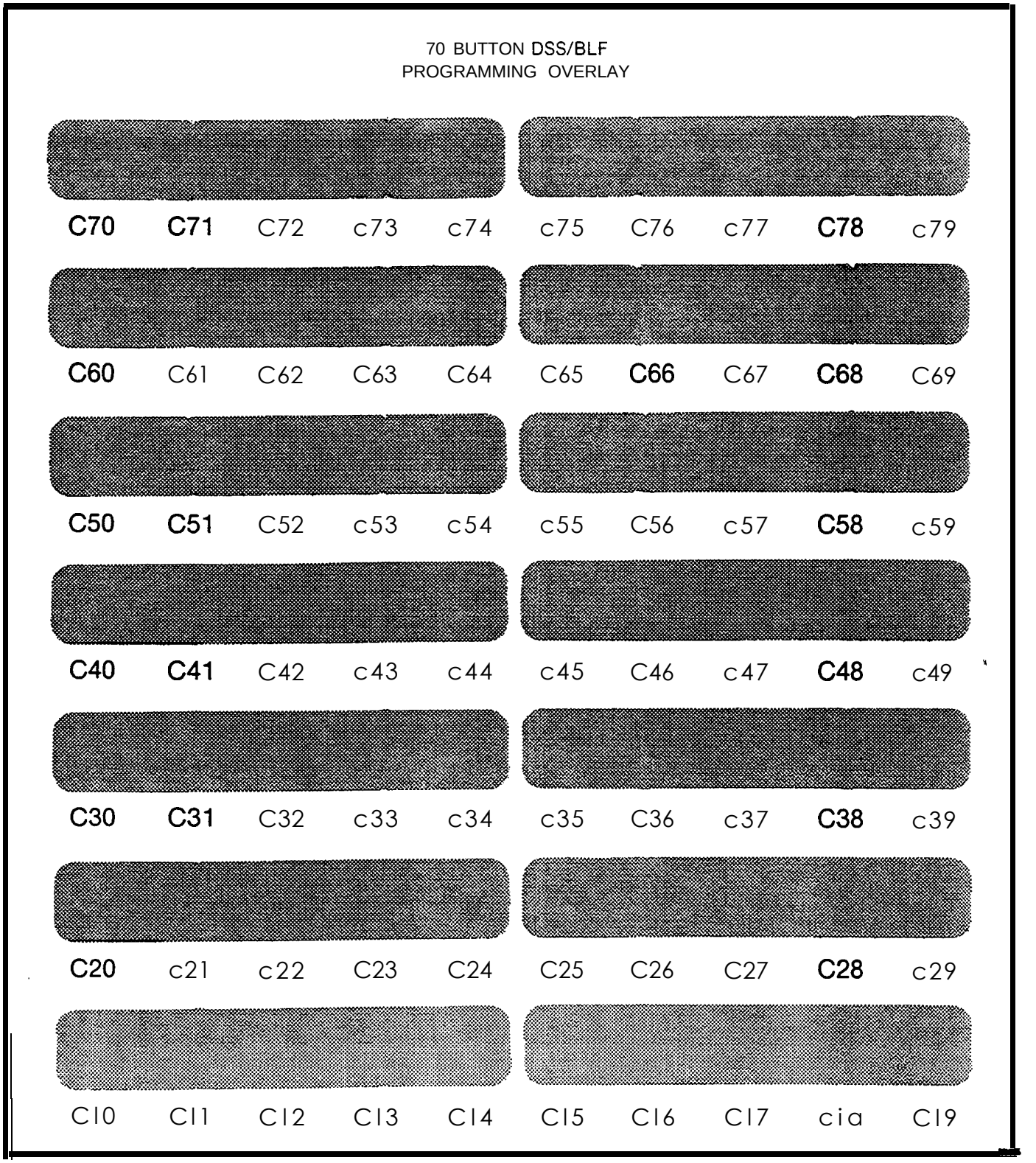
- **Cut out along border.**
- **Cut out shaded openings.**
- **Fit over station faceplate.**





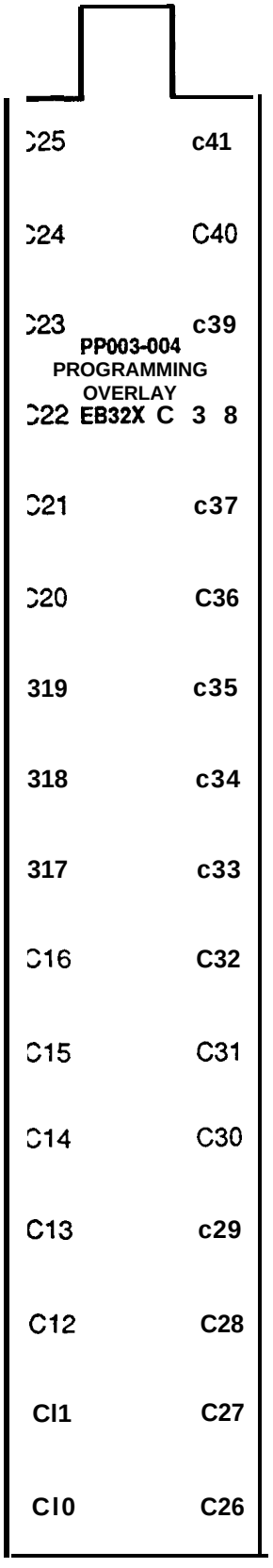
STATION 10 - PROGRAMMING OVERLAY

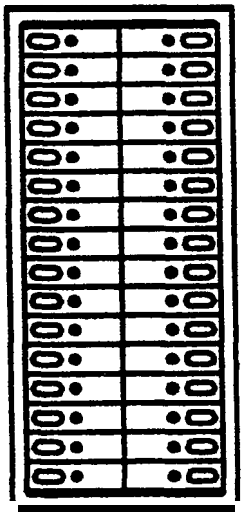
- Cut out along border.
- Cut out shaded openings where necessary.
- Fit over station faceplate.



STATION 10 - PROGRAMMING OVERLAY

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





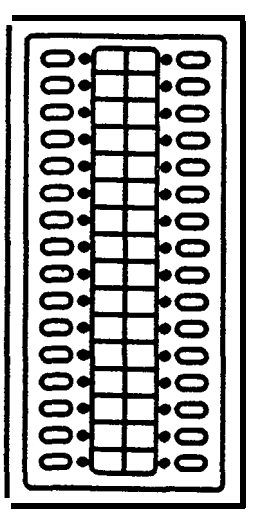
32-BUTTON ADJUNCT FEATURE MODULE EB32X

STATION 10 - PROGRAMMING OVERLAY

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

703804-456
PROGRAMMING
OVERLAY
DB32S

c 2 5	C41
c 2 4	C40
C23	C39
C22	C38
C21	C37
C20	C36
C19	C35
C18	C34
C1-7	c33
C16	C32
C15	C31
C14	C30
C13	c29
C12	C28
C11	C27
C10	C26



32-BUTTON ADJUNCT FEATURE MODULE DB32S

5. Description Of System Features

A.

Abandoned Hold Release—3.6.2—

When a distant party abandons a Hold condition (hangs up), causing an interruption in the line current, the system will drop the line from hold and return it to service. You can program the time interval between hang-up and line-drop between either 50 msec. or 350 msec. This feature usually depends 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—3.7.2—

You can deny access to particular lines at certain stations in the system through system programming. A station user cannot select a denied line for use. You can program this feature on a per line/per station basis in station class of service programming.

Account Codes With Positive Verification—3.8—

Station users can assign account codes to specific types of calls, codes which are then used by the system to identify calls by category, or special grouping, for call recording purposes. The system will report all calls with the same account code together, using the station message detail accounting feature. You can program the system to verify the user entered account code and to sound an error tone if that code is incorrect. You can also program the system to permit station users to enter account codes for incoming calls and/or outgoing calls. Users enter the account codes while on-line either before dialing an outgoing call or after the distant party on an incoming call has hung up. On outgoing calls, the system associates the call record with the user who enters the account code. When a user transfers a call, the system associates the call record with the transferee. On incoming calls, the system associates the costed call record with the last user active on a call . You can program the system to place an appropriate message on the display to remind users of LCD speakerphones to enter an account code. You set the length of the account codes, which may be from three to eight digits. The system will force the use of the programmed length, but will verify only the first three digits to determine validity.

All-Call Paging—3.7.3—

All-call paging allows all stations, except 6701x, to receive announcements through the station speaker at once. Origination of announcements must be via the station handset. You can program each station to receive and/or originate all-call page. Also see--Zone Paging.

All Intercom Links Busy Indication

When all intercom paths are busy, the system causes the intercom light at each station to be on steady. No class of service programming is required to enable this feature; however, station class of service programming will allow an intercom link to be reserved for exclusive use by a particular station-3.7.15

Area Paging Interface

See-External Paging Interface.

Audible Monitoring-3.7.5 —

The DSS / BLF at a multiline station provides a visual indication of idle, busy, and ringing status of the monitored stations. You can also provide audible indication of direct and delayed ringing for selected stations; however, you must first enable the station monitoring feature on a system wide basis.

Automatic Call-back

When a user encounters a busy tone on an intercom call, he or she can dial a special code number that will cause the system to automatically ring both 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 40 autodial positions per station. A DSS / BLF provides additional autodial positions.

The user can store autodial buttons with a maximum of 16 digits plus an intercom or line selection. Stored digits include 9-0, ✳ and #. Users can store a pause at any point by pressing the HOLD button. A user can also store a hookflash at any point by pressing the TAP button. Automatic dialing can provide one-button access to certain system features. No class of service programming is required to enable autodialing. *Also see- Automatic Pause Insertion, Station Speed Dial, and Programmable DSS/BLF.*

Automatic Hold For Intercom—3.7.8—

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.

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—3.7.7—

When you enable this feature, an active line will automatically go on hold when the user presses any line button. 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.

Automatic Privacy—3.6.3—

You can program a line to be private or non-private. In the private mode, a station has exclusive use of the line during a call, and no other station can access that line unless the user includes the add-on station through the use of the add-on conference feature. In the non-private mode, all stations with that line appearance can gain access at the same time (sometimes known as common line pickup). Use line class of service programming to make a line private or non-private, 3.6.3. Through station class of service programming, you can make a line non-private at a particular station *3.7.10.* Also *see-Conference - Add-On*

Automatic Privacy Release-3.7.1 0—

You can arrange for individual stations to automatically release privacy while on certain private lines. With this arrangement, other stations can join that particular station whenever it is on the line that you have assigned as a privacy release line.

Automatic Redial (Of Busy number Or Unanswered Call)

A user can automatically redial a busy number or unanswered call by activating this feature. Once the user selects automatic redial, the station will select the line, automatically dial the number, and wait for a response. The station will do this once a minute for approximately 10 minutes unless deactivated-a user can deactivate the function by pressing the line button, or any button, or by lifting the handset. The system times the redial cycle. The automatic redial feature does not have busy detection circuitry, which means that if a user is operating handsfree when the called party answers, he or she must take the handset off-hook to prevent the caller from being cut off by the timing cycle. Automatic redial is a designated programmable button position and the user must program it to be active, but no class of service programming is required.

Auxiliary Equipment Interface

You can connect a non-key system telephone device or a data device, such as a fax machine, 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 key system telephones. The lights, therefore, indicate that the line is busy and not available for station use. Auxiliary equipment interface connections provide connections to lines 2 and 4. A user pressing the line button on a station will not interrupt an external device unless the line has been programmed to be non-private. No class of service programming is required.

Auxiliary Station Ringer Interface

The auxiliary station ringer interface provides "dry-contact" relay closures whenever station 17 rings. The contact' closures track the ringing pattern of station 17 and can control an external signaling device. When you program station port 17 to function as a PA port, the auxiliary ringer interface relay contacts automatically become supervisory contacts and close when someone calls the PA port. No class of service programming is required. Also *see-Common Audible Ringer Interface.*

B.

Background Music (External Music Source Required)

If the system user provides an external music source, station users can turn on background music at their particular stations. Users adjust the loudness of the background music 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 *see-Music on Hold*

Basic Key Service (la2) Emulation

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

Battery Back-up Interface

We have made it possible to attach a Comdial provided optional battery back-up kit to the common equipment. Battery back-up will give full uninterrupted system power in case of an AC power loss. The switching and trickle 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 with a trickle current. 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. No class of service programming is required.

Block Programming—3.6.13—

You can assign class of service that you have already programmed at a particular station or line can 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. You can perform block programming class of service after you have programmed a station class of service or line class of service function for a particular station or line.

C.

Call Announce With Handsfree Answerback

The internal speaker at each multiline station provides call-announce capability over the intercom link. Users can make handsfree response to a call-announce. The microphone built into the handset transmits this response. No class of service programming is required (not available on 6701X).

Call Costing—3.13—

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, but it does not restrict dialing as toll restriction does. Call costs are based on a two-tier time rate and include a line surcharge cost. You can program allowances for call set-up and minimum call duration. The system provides three ways of determining call costing. These call cost methods are as follows: exception tables, area/office code banding, and call cost tables. Between these three means of call costing, it is possible to apply very accurate rates.

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 his or her station. If you have enabled call forwarding when night transfer of ringing is activated, the system also forwards the night ringing assignment of the station. The system can also forward calls that have been forwarded once. Therefore, 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 a station receives while calls are forwarded, a short tone burst will occur at the forwarding station as a reminder that call forwarding is enabled. When you designate a programmable button to serve as a call forward button, the associated LED will turn on when the user presses the button. The LED will indicate that the feature is enabled. If you program the call forward button 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. No class of service programming is required Also *see-Call Forwarding-Busy Ring No-Answer*

Call Forwarding-Busy /Ring-No-Answer-3.7.11-

The system can automatically forward busy or ring-no answer calls to a different station for answering. The system sends these calls to any idle station associated either by intercom hunt group or by department.

Call Forwarding-Personal

A user can forward just his or her personal calls to another station. For each personal call received with call forward enabled, the system rings a short tone burst at the forwarding station to remind the user that the calls are being forwarded.

Call Park

The call park feature is similar to a manual hold condition. A call that a user parks at his or her 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.) Users park and retrieve calls 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 a preprogrammed length of time automatically returns to a timed hold recall condition at the station that originally parked *the* call-see ***Call Park Recall Time.***

Call Park Recall Time-3.5.1X

A call that remains in a parking orbit for a programmed length of time automatically returns to a timed hold recall condition at the parking station.

Call Pickup-Directed

A station user can dial a code, followed by the extension number of a ringing station, to answer the ringing call. No class of service programming is required.

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. You can provide an overlap by allowing stations to be in more than one group. Croup stations together using the station class of service programming, 3.7.24.

Call Transfer-Screened

Screened call transfer allows a user to transfer outside calls from one station to another, via the intercom link, in one of two ways. If both stations have access to the line, they can simply use a common line pickup transfer-the transferred station merely presses the line button of the incoming call. 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 user transfers a call with a pre-transfer announcement. Users can transfer calls with the T/C (TRANS/CONF) button. No class of service programming is required. Also see—***Call Transfer-Unscreened.***

Call Transfer-Unscreened

A user can transfer an active call without being announced. The transferred call will camp onto 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, 3.5.21.

Call Transfer-Unscreened (with Automatic Camp-on to Busy Station)

A user can transfer an active call can without being announced. The transferred call will immediately ring at that station if it is idle. If a user transfers a call to a busy station, the transferred call will automatically camp-on at the busy station. If tbe user transfers additional calls to the busy station, the system places those calls in a camp-on queue. When the user who has received all of the transferred calls hangs up the current call, the first queued transferred call will ring. This sequence continues until the user has answered all transferred calls. Stations that have line appearance for a transferred line will show a "my-line" held call status indication for the transferred call, The transferred call will automatically ring back to the transferring station after a programmable transfer recall period.

Call Waiting Tone

A user can send the call waiting tone to a busy station to indicate that he or she wants to contact the busy station. Users dial a special code to activate the tone. No class of service programming is required.

Calling Station Identification On BLF

If you have programmed the station number of a calling station into the direct station select/busy lamp field (DSS/BLF) of a called station, the caller will be identified by a flashing 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.

Class Of Service Programming (From Main Station)

Use class of service (COS) programming to configure and assign all system, line, station, and special purpose operating features. Enter COS programming by dialing an access code over the intercom line. System administrators can enter COS programming with another code to re-program 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. However, only the station user can program the speed dial and autodial locations at telephone. Also see-3.2.

Perform all class of service (COS) programming from station 10 or 12. Any multiline 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 programrning procedures. Class of service programming access is as follows:

- Installer dials: ITCM ✳ # 7 4 6 ✳
- Administrator dials: ITCM ✳ # 2 3 6 ✳
- Attendant dials: ITCM ✳ #
- User dials: ITCM ✳ ✳

Class Of Service Programming (Video Display Terminal)

You can use an asynchronous, serial data terminal with an RS-232 interface to effect class of service programming through menu-driven procedures. VDT programming provides a menu-driven approach to programming as discussed in IMI66-068.

Class Of Service Program Printout

We have provided connection terminals 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, 3 5.1.

Class Of Service Program Storage (Cassette Tape recorder Interface)

You can use a customer-supplied cassette tape recorder to both store and load all class of service programming and station programmable button data. The programming station provides control. Connect the tape recorder through the music interface jack. COS recording or loading requires approximately 15 minutes. The programming station will ring when recording or loading is complete. Follow the instructions provided in the cassette tape recorder interfacing class of service programming discussion, 3.16.

Common Audible Ringer Interface

Connections are available at the common equipment that provide "dry-contact" relay closures whenever an incoming line rings. These contact closures track the ringing pattern and can be used to control an external signaling device. When you program station port 15 to be a PA port, the common audible ringer interface contact points automatically become supervisory contacts that close when someone calls the PA port. Also, *see-Auxiliary Station Ringer Interface.*

Conferencing-Add-on

With this feature, a station operating in a private mode can add another station to an outside call. No class of service programming is required.

Conferencing-Multiline

This feature will allow one multiline station to access two outside lines at the same time resulting in a conference arrangement. A user can establish conferencing by using the T/C button. Conference transmission levels are not compensated. No class of service programming is required.

Conferencing-Unsupervised

After a conference between an internal party and 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. No class of service programming is required. Also *see-Corzferencing - Multiline.*

D.

Data Baud Rate-3.5. 1—

You must program 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, to match the requirements of the data device.

Data Printer Service Configuration—3.11—

You, the installer, can configure an external printer to print only sections of the SMDR records, such as data for all lines or data for all stations. Also see—*SMDA Reporting 3.14*

Data Security—3.7.14—

Data security prevents any type of tone (DTMF, camp-on, barge-in, etc.) from interrupting an active call on a port programmed with the feature. This feature prevents interference to non-voice communications from occurring when you are using the port as a data port (when operating a modem through an OPX port for, example).

Dedicated Intercom for Attendant—3.7.15—

This programmable feature ensures that an attendant at a principal call answering position will always have a free intercom link to use for announcing the incoming calls to the stations. Intercom links can also be reserved for exclusive use by any particular station in the system.

Defaults—3.4—

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. You can leave the system as a defaulted system or reprogram. You can reset the default conditions 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—3.4.6—

The system defaults two toll restriction tables with pre-programmed values and are assigns those tables to all lines. All you have to do is assign the tables to the stations to put them into effect. You can reprogram the defaulted tables 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. Also see-3.15.

Delayed Ringing—3.7.19—

You can program the ringing assignments for individual stations. You can program a station to provide delayed ringing on some lines while providing immediate ringing on other lines. *See-Flexible Ringing Assignments.*

Designated Programmable Buttons

You can assign station programmable buttons to provide one-button access to a broad range of features. There are designated buttons that you must be assign at each station using station class of service programming, but the station user can assign the auto redial button.

Dial 0 For System Attendant

Whenever any station user dials 0 on the intercom line, the system signals the attendant station (station 10) No class of service programming is required.

Direct Department Calling—3.9—

Direct department calling provides a means by which you can assign outside lines to one of four different departments. Calls received on lines that are assigned to a department search for an idle station in that department. You can form up to four departments with up to 16 stations allowed in each department. The system also allows one additional terminating station in each department. You can assign a station to one, several, or all departments.

An incoming call searches for the first available station that is not busy or a ring-no-answer (RNA). If all the stations in a department are busy or are RNA, the call will go to the terminating station in that department (if one has been programmed). If the terminating station is busy, the call will test the department stations again. This action will continue until someone answers the call or until the call is **dropped.** Subsequent calls to a department always ring at the next station in the department from whichever station serviced the last department call. You can program the ring-no-answer time to allow a call to search rapidly through a department for an answer.

You can assign unique access codes to departments that can be used for making intercom calls or doing call transfers to a department. Intercom calls will test the department stations for busy or a RNA. A transferred call, however, will follow the standard direct department calling procedure.

It should be noted that the departments formed for use with this feature are different from departments used in SMDA reporting.

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. Users can dial a feature code plus a station extension number over the intercom line to park the call, or you can program a programmable button to provide a "directed hold" to a specific station. The directed station user picks up the parked call by dialing a feature code. The call can be picked up at any station through the use of the call pickup feature. No class of service is required. *Also see-Call Pickup and Call Park.*

Direct Station Selection (DSS) Programmable

See-Programmable DSS/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. No class of service programming is required.

Do-Not-Disturb-3.5.2-

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 DND mode hears a fast busy tone. The feature cannot be overridden by the calling party unless you have enabled the override feature. Refer to the discussions titled: *Do-Not-Disturb Inhibit, Do-Not-Disturb Override* and *Executive/Attendant Ovem' de.*

Do Not Disturb Inhibit—3.5.3—

You can program the system to inhibit any station from entering the DND mode.

Do Not Disturb Override—3.5.4—

You can provide stations with DND override capability that 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. Also *see-Do Not Disturb and Executive/Attendant Override.*

DSS / BLF

You can install a DSS/BLF to enhance call handling at multiline stations. When installed at any station port, the DSS/BLF extends the programmable button field of the data-paired companion station by additional buttons and status lights. The model DB32S Module also provides off-hook voice announce (OHVA) and handsfree answerback features to the station user. The DSS/BLF console offers DSS and a BLF light for each monitored telephone. You must program the station port for a DSS/BLF, see-3.7.29. You can use unused buttons on a telephone as DSS/BLF buttons.

DSS/BLF Console Support

You can use the data-paired port of a station for a DSS console. The use of DSS/BLF consoles is limited only by port availability; however, since a console must be data-paired with a corresponding station, you can only use up to one-half of the available station ports for consoles.

The console provides a one-button direct station selection (DSS) intercom and an associated busy lamp field (BLF). The console also provides additional auto dial capability to the station user.

Dual Intercom—3.7.43.12—

This feature provides two separate intercom lines at the same station. One intercom line is fixed, and a user can access that intercom line by pressing the lTCh4 button. You can program the other intercom line, and a user can access that intercom line by pressing the programmable button selected for that purpose. A user would handle calls on the intercom lines in much the same manner as he or she would handle outside calls. Special considerations for dual intercom operation are as follows:

- Remote call pickup is not available.
- 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 off-hook voice announce 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 and receive dial tone.

Dynamic Line Buttons—3.7.43.8—

You can arrange certain idle line buttons 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. The station will then also have that line appear on a dynamic line button. While the call is appearing on the dynamic line button (LED on), users can perform any normal call handling operations.

E.

End-to-end Signaling on Intercom

After a user has established an intercom call, the system can continue to send dialing signals (DTMF tones) through the intercom path. Users can perform this feature from every station in the system and it can be used by peripherals such as an OPX accessory unit and voice mail equipment. No class of service programming is required.

End-to-end Signaling on Lines

After a user has established an outside call, 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. No class of service programming is required.

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 signaling will occur and the exclusive hold condition will revert to a normal line hold condition. No class of service programming is required.

Exclusive Hold System-wide Enable/Disable—3.5.6—

This feature allows you to turn off exclusive hold system-wide.

Executive/Attendant Override-3.7.1 7—

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 , sound a warning tone. The caller will then have access to the existing conversation.

External Paging Interface—2.8.6— and —3.7.18—

You can program a station port or line port to interface with an external paging amplifier. Users can then access the paging amplifier through the station port or directly through the line port from other stations in the system. The user can dial DTMF tones through the line port to provide zone selection if provided by the external paging amplifier. The line class of service programming arranges a line port for external paging interface, and the station class of service arranges a station port for external paging interface.

Extended Dual Tone Multiple Frequency (DTMF)—3.5.17—

The system can access outside equipment, answering machines, banking computers, voice mail equipment, for example, that require DTMF tones that are longer than the standard 80 msec tone. A shift to a longer tone, of pre-programmed length, is automatically made 10 seconds after a line is selected or 10 seconds after the last digit of a number is dialed. A user can shift from one tone length to the other by pressing the hold button and then re-selecting the line.

F.

Flexible Ringing Assignments—3.7.21—

You can program ringing assignments on a per station/per line basis for every line that has an appearance at each station. Also *see-Delayed Ringing and Night Ringing.*

Flexible Ringing Assignments Of PA Ports—3.7.22—

Stations ports that you program as PA ports can also be programmed for flexible ringing assignments. You can program any desired lines to direct or delay ring at this port. You can connect a speaker to the voice pair of this port and when connected, it will sound the ringing that is generated by the system and sent to this port as if it were a regular station port. Using such an arrangement, the user can 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. You can only program one PA port per system as a ringing PA port. Users cannot use the speaker for voice response as the path is one-way only.

Flexible Station And Trunk Class Of Service Control

See Line-to-Line Port Reassignment and Station–to–Station Port Reassignment

Flexible Station Numbering Plan—3.7.23—

You can program each station to respond to the dialing of any available number between 10-79, 100-799, or 1000-7999. Also, you can assign any combination of two, three, or four digit extension numbers as long as they do not conflict. For example: If you assign 21 as an extension number, there cannot be any other extension number assigned that begins with a 21.

Full Button Programmability Of Features

You can make most ExecuTech features 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). You can store all feature access codes, except for those requiring T/C button action. You can also store continuous strings of digits, including ITCM button presses, up to sixteen digits-3.5.23.

G.

Group Call Pickup—3.7.24—

If a call rings to any station in a prearranged group, a user at another station in that group can dial a group pickup code and answer the call.

H.

Handsfree Answer Inhibit

A user can press the MUTE button on a multiline station 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 user presses the button, all handsfree answerback is disabled thus inhibiting any off-site monitoring. The monitor light will flash to indicate that this feature is active. No class of service programming is required. Also see—*Mute*.

Headset Interface-3.7.25

You can enable a station port to allow headset operation with a special telephone that provides this feature. You must program that telephone to accept the headphone.

Hunt Group On Intercom—3.7.27—

You can assign station ports 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 that station 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. Up to 16 stations can be placed in one hunt group. You can program the ringing time at any one station.

I.

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—3.7.26—

When you program a station for idle line preference, it will automatically connect to the first assigned idle line. You can program the system 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 user will not have to press the line button. If someone uses this feature 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.

Intercom Call Progress Tones

The system marks intercom call progress by special tones. A steady tone sounds for dial tone. A one second on and three seconds off tone sounds for ring-back, For tone signaled intercom calls, a two-tone burst sounds every four seconds at a called station and returns to the caller as ring-back. For a voice-signaled intercom call, a single tone burst sounds at a called station and returns to the caller as ring-back. When a called station is busy on an intercom call, a busy signal of one-half second on and one-half second off sounds at the calling station. When a station is busy on an outside call, the called station gets a subdued ring, and the calling station gets a ring back tone. A fast busy tone will be supplied when the called station is in the do-not-disturb mode. Off-Premise Extension (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. No class of service programming is required.

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. No class of service programming is required.

L.

Last Number Redial

The system provides each station 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 prime line is busy or unavailable, the system will choose any line assigned to idle line preference. If they too 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 *see-Automatic Pause Insertion.*

LCD Messaging—3.5.7—

Users can set standard and system-supplied custom display messages by dialing a specific code at any multiline station. Such messages are to be received and displayed by any LCD speakerphone that calls the station which set the message. When a user sets a message, the intercom light at the setting station will flash to indicate that the feature is active. No class of service programming is required.

LCD Alphanumeric Calling Party And Trunk Display

See-Station Names, 3.7.37 and Line Names, 3.67

LCD Support

The system supports the use of LCD speakerphones having a Liquid Crystal Display (LCD). The LCD speakerphone ports are identified by station class of service programming. Also refer to the discussion titled: *LCD Alphanumeric Calling Party and Trunk Display.*

Line Disable—3.6.5—

You can take a line port out of service when necessary (because of defect, for example) using this programming procedure. Return the line to service with the central office lines programming step, 3.6.9.

Line Port Functions-Auxiliary Lines—3.6.8—

You can program a line to serve as a port for an external paging amplifier. *See-External Paging Interface.*

Line Port Functions-Central Office Lines—3.6.9—

You can condition a line port to serve as a port for a standard telephone company supplied central office line.

Line Groups—3.6.6—

You can group outside lines together in up to four different groups. Each group is accessible through a unique dialing code or is automatically selected with the programmable autodial feature. Grouping can reserve certain lines for certain clusters of stations as in a tenant-service arrangement or reserve certain lines for access only by single-line keysets. 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 call messaging.

Line Preselection

A user can manually select a line before lifting the handset (for handsfree dialing) or after the handset is lifted. No class of service programming is required.

Line Queuing

With the line queuing feature, a user can dial a special code number that will place a station in a queue where it awaits the availability of a line or line group. When the line is available to it for use, the system automatically signals the station with five tone bursts . Each station can queue one line at a time. No class of service programming is required.

Line to Line Port Reassignment-3.6.1 0—

You can reassign the programming attributes for a line connected to a particular line port to a different line port with this programming action. This feature allows you to automatically exchange all software attributes of one line with those assigned to another at a different line port without physically relocating the lines or reprogramming any of the attributes.

M.

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. No class of service programming is required.

Meet-me, Answer Page—3.7.3—

Any station user can dial a special code number in response to an all-call or zone page and connect to the paging party in a private conversation.

Memory Retention Without Batteries

An electronic device sometimes referred to as a "super-cap," electronically protects the system memory during AC power failures. The stored program data will remain in memory for a minimum of 30 hours, provided that the system has been powered continuously for at least 30 minutes prior to the power failure or disconnection. Some models include a system clock. On those models, the system clock will continue to run and keep time for at least 30 minutes after an AC power failure or disconnection. No class of service programming is required.

Message Waiting-3.7.31 and —3.7.13—

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

Alternately, you can designate one station as the central message desk and arrange for exclusive message waiting control. The system attendant can use the central message desk to control message waning lights and deliver messages to and from all other stations in the system 3.7.13. The ability of a station to originate a message waning signal is enabled by programming action, 3.7.32.

Mixed Station Capacities—3.7.29—

See--Port Definition.

Modular Wiring And Jacks/4- Or 6-conductor Wire System

You can completely interconnect the system by employing industry standard 50-pin connectors and modular plug/jack combinations. Station wiring is small, 4- or B-conductor, twisted-pair cable throughout the system. No class of service programming is required.

Music Interface (External Source Required)—2.8.8—

We have provided the system with a jack for the connection of a customer-provided ASCAN registered music source. No class of service programming is required. Also *see-Background Music* and *Music-On-Hold.*

Music-on-Hold

The system provides music to outside lines that are placed on hold if an external music source is connected to the system. No class of service programming is required. Also see—*Music Interface.*

Music-on-hold System-wide Enable/Disable—3.5.8—

The system provides music 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 -Music Interface*** and *Music-On-Hold.*

Mute

Each station has a MUTE button that, 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 mute light flashes to indicate a muted condition. The button provides push-on/push-off operation on speakerphones. No class of service is required. Also see—*Handsfree Answer Inhibit.*

N.

Night Ringing—3.7.21—

Night transfer 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. Select the individual lines at each station that are to have ringing transferred with this feature with station class of service programming.

0.

Off-Hook Voice Announce With Handsfree Answerback—3.7.33—

With the off-hook voice announce (OHVA) feature, users can make an announcement to a station that is off-hook or busy on a call. To receive an OHVA, the OHVA station can have either a telephone and a DSS / BLF or a telephone that has subdued off-hook voice announce (SOHVA) capability built into it. The announcement is preceded by an alerting tone and delivered through the loudspeaker in the DSS/BLF or the SOHVA-equipped telephone. The called party can reply in a handsfree manner to an OHVA announcement without interrupting the active call, either through the OHVA microphone included in the DSS/ BLF or in the integrated OHVA capability telephone. Stations that have the voice announce blocking feature turned on cannot receive an OHVA. Use station class of service programming to enable the OHVA feature at a station port and to program a port to accept a telephone with integrated OHVA capability if one is installed. Also ***see-Subdued Off-Hook Voice Announce.***

On-Hook Dialing

Every multiline 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.) No class of service programming is required.

Originating Denied—3.7.12—

You can deny individual stations the ability to originate calls on certain lines through system programming. Program the originating denied feature 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.

P.

Pause Time—3.5.19—

During autodials and speed dials, it is sometimes necessary to delay the sending of digits to give switching equipment time to prepare for receiving those digits. The system stores a pause for this purpose whenever the user presses the HOLD button. You can program the length of the pause.

PBX/CENTREX/CO Compatible

System features and programmable buttons support the requirements of most PBXs, Central Offices, and CENTREX systems. Numbers, #'s, ✳'s, programmable pauses, and flash signals can be made a part of every stored number for access to host system feature codes. No class of service programming is required.

Personalized Ringing Tone—3.7.28—

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

Users can dial a special access code instead of pushing a line button to access one of four different groups of lines. Single-line keysets do not have line appearances, so a user must use this feature for accessing an outside line for dialing out. Lines are arranged into groups with the line class of service programming, 3.6.6.

Port Definition—3.7.29—

You can program a station port to accept one of several different types of equipment, such as a single line telephone, a multiline line telephone, or a DSS / BLF.

Power Failure Transfer

A power failure line connection is available for connecting industry-standard telephones such as a Comdial model 2500. These power-fail telephones automatically connect directly to certain lines 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. No class of service programming is required.

Prime Line Automatic—3.7.30—

If you program a station for prime line automatic, the system automatically selects the designated outside line, intercom line, or line group when the user takes The handset off hook. Users may preempt prime line pickup by preselecting another line before lifting the handset. If the prime line is ringing, it is automatically answered when the user lifts the handset.

Privacy Release -Designated Programmable Button-3.7.41.1 3—

You can program stations 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.

Privacy Release /Brokerage Service

See -Privacy - Designated Programmable button

Private Lines (Access Denied)

See -Access Denied.

Programmable DSS/BLF (Direct Station Selection/Busy Light Field)

A multiline station user can store one-button, direct station selection (DSS) at any programmable button location to create a DSS button. When a user presses this button, the system automatically places any active outside call on hold and then makes an intercom call 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. You can also program an autodial number as a secondary function at every DSS/BLF memory location. No class of service is required. *Also see—Tone or Voice Signaling (Intercom).*

Programmable Buttons

See-Full Button Programmability of Features, Programmable DSS/BLF, and Dedicated Programmable buttons.

Pulse / Tone Switchable—3.6.11— and —3.6.12—

You can program the system on a per-line basis to allow the stations to switch from pulse to DTMF dialing as needed. Alternately, you can program the system to only allow tone dialing.

Response Messaging

This feature allows a user to reply in a non-verbal mode to a SOHVA call non-verbally when 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. The attendant preprograms response messages and later stores them at programmable buttons on the individual stations as need dictates.

Remote Programming And Administration

Remote programming of the system and SMDR output for printing are both available through serial data ports. These data ports will support X-on X-off control codes for terminal control as well as a DTR signal for handshaking. They also have the popular XMODEM protocol so that the system database can be uploaded or downloaded, error free, from or to a remote computer running software that supports the XMODEM protocol. Two serial data ports allow concurrent VDT programming (either local or remote) through one port while the other is sending SMDR data for printing. VDT programming of the system is menu driven.

Ringing Line Preference—3.7.32—

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

When you enable ringing line preference .at a station, taking it off-hook automatically connects it to any outside line that is ringing. 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 with line selection is enabled by the station class of service programming.

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Saved Number Rediul

This feature enables a button action to save the first 16 digits of the last number manually dialed from the keypad. The user can redial the saved number at a later time. The saved number is permanently available for later use until the user replaces it with a new number. No class of service programming is required.

Subdued Off-Hook Voice Announce (SOHVA)—3.7.33—

With the subdued off-hook voice announce (SOHVA) feature, a user can make a subdued announcement to a station that is off-hook or busy on a call. A station must be equipped with a telephone that includes SOHVA capability to receive a SOHVA message, and the station cannot be on a call in a handsfree mode to receive a SOHVA. With SOHVA, the user delivers an announcement to a busy called party, and the called station responds in a subdued manner that prevents the distant party from hearing either the announcement or the response. The announcement is preceded with a tone alert delivered to the handset receiver of the telephone. The announcing caller receives a tone alert to tell them that they are making a SOHVA call. A user' s response to the announcement can be verbal or non-verbal. They can make a verbal response by pressing and holding the MUTE key and speaking into the handset or can make a non-verbal response by pressing a pre-programmed button to send a message to be shown on the display of the announcing station (if it is an LCD speakerphone). The announcing station automatically disconnects after the message displays. Stations that have the voice announce blocking feature turned on cannot receive a SOHVA call. Also see—*Off-Hook Voice Announce with Handsfree Answerback.*

SOHVA Groups-3.7.3"

SOHVA groups allow the user to send a SOHVA message to a selected group of stations.

Self Diagnostics

Each station can execute a self test when so enabled. This test verifies processor, indicator, and tone functions. No class of service programming is required. For a self diagnostic, hold down the MUTE key when plugging telephone into the KSU.

Service Observing—3.7.35—

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, that station must have the executive override feature enabled as well as the service observing feature. Also see-Executive Override, 3.7.17

Single-Line Proprietary Telephone Support

The system supports a proprietary single-line telephone. The single-line station provides basic intercom service coupled with the ability to access outside lines and system features through special access codes. You can program the single-line station port so that the single-line telephone acts as a full-featured business telephone for hybrid system installations. The single-line station ports are identified by station class of service programming.

Speakerphone Support

The optional speakerphone provides handsfree operation of all features, except voice-signaled intercom calls. The user must lift the handset for this purpose. No class of service programming is required.

Square /Non-Square Configuration—3.7.41

You can program a system 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, you may assign each line select button at every station individually to select any line. You can perform button mapping for line appearance on each station using the station class of service programming.

Station By Station Privacy

See -Automatic Privacy.

Station Message Detail Accounting (SMDA)—3.14—

You can program the system to automatically generate selected reports to be printed at a specific time of day. Additionally, the system provides the selected report whenever the costed call storage reaches 95 percent of **capacity.** There are five different SMDA reports which can be selected:

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

Users can delete all records upon completion of report printing. Any call records created between the time the report printout was started and completed will not be deleted. If the attendant does not delete the reports after they are printed, a later command to delete records will delete *all* records at that point You can program the system 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.

The user can establish Account codes 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. Users can also define and assign department numbers 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.

Station Message Detail Recording (SMDR)—3.14.5—

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 RS-232 level as ASCII transmit data in an 80-column format at the data port available for that purpose. No class of service programming is required. Also see—*Call Costing and SMDA Reporting.*

Station Monitoring With DSS Call Pickup—3.5.9— and —3.5.10—

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

Users can make a one-button pickup of a ringing call at a monitored station by pressing the direct station selection (DSS) button associated with the ringing station.

You can enable or disable the flashing BLF lights associated with visual ring indication on a system-wide basis. When enabled, the audible indication of ringing can then be enabled on a station-by-station basis. *See-Visual Ring Indication and Audible Ring Indication.*

Station Speed Dial

Each station can be programmed to provide 10 speed dial numbers at the keypad buttons. Station speed dial numbers can be up to 16 digits in length and can include line or intercom selection, numbers, #, *, pauses, and flash signals. The system stores a pause each time the user presses the HOLD button, and it stores a flash signal each time the user presses the TAP button. No class of service programming is required.

Station-To-Station Messaging

If a station has a DSS/BLF appearance at another station, the station user can leave a call-back message indication at that other station. By dialing a special code, the user can activate the BLF light at the called station. This light indicates that another station has requested a callback. The system automatically turns off the light if a successful callback is made.

If you have not programmed a station number 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 you have not assigned a central message desk, no action will occur. No class of service programming is required

Station-To-Station Port Reassignment—3.7.39—

The user can reassign the programming attributes for a station to a different port. This feature allows you to automatically exchange all software attributes from one station to another station without physically moving the stations or reprogramming.

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. No class of service programming is required.

System Clock-3.5.11

The system provides current time and date information, which is displayed on all LCD speakerphones.

System Speed Dial—3.5.12—

The system provides up to ninety-nine system-wide speed dial numbers. The system speed dial numbers can be up to 16 digits in length and can include numbers, #'s, S' s, pauses, and flash signals. Program system speed dial numbers at station 10 or 12 for use at every station in the system. No class of service is required.

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Tandem Attendan t-3.5.13-

When you enable the tandem attendant feature, 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).

Tap (Flash) / Recall—3.5.20—

When host system custom calling features are available via a hookflash signal, you can program the system so that the TAP (RECALL) button will generate a "flash" signal when a user presses it. 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.

Tenant Service

You can have one telephone system function for multiple tenants by having flexible line appearance at each station. You can use button mapping for line appearance on each station using the station class of service programming. Refer to the discussion titled: *Square/Non-Square Configuration.*

Timed Hold Recall—3.5.21—

After a call has been on hold for a programmed length of time the system will re-call the station that placed the call on hold.

Toll Restriction (0 And 1)

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

Toll Restriction (Flexible)—3.15—

You can program system toll call restriction 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. All you need to do is to default the tables 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.

You can program each table of restricted numbers to be an "allow" table or a "deny" table with entries in an "allow" table overriding entries in a "deny" table. For example, the dialing of1-800-xxx-xxxx numbers can be allowed even though the dialing of all 1-xxx-xxx-xxxx numbers is denied.

The system can store a "match anything" symbol(#) to represent any digit from 1 to 0. Assign the programmed toll restriction tables to each appropriate station and line. When a user dials an outside call, 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 Restriction (Night Mode)—3.15—

You can assign toll restriction tables that will only take effect when the system is in the night transfer of ringing mode. You can assign these night mode tables to any or all stations in the system . These toll tables work in addition to any tables that may already be assigned to the station. For example: You can program a station that has no other toll restriction table assigned to receive a toll restriction table that 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 a user can make toll calls from this station during daytime operation, he or she cannot make toll calls 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.*

Tone Or Voice Signaling (Intercom)—3.5.15—

You can program the system as either tone or voice first for the primary intercom The user can activate the alternate method at his or her station. The system marks intercom call progress by special tone signals. Also *see-Zntercom Call Progress Tones.*

Transfer / Conference Button

The system provides a fixed button that gives quick, easy transferring and conferencing. No class of service programming is required.

Trunk Access Restriction

See-Access Denied.

Trunk Answer From Any Station (Night Mode)

When the attendant programs the system for nighttime operation using the night transfer of ringing feature, the system automatically activates the trunk answer from any station feature (TAFAS). With the TAFAS feature, a user can dial an access code over the intercom line to allow him or her to answer any ringing outside line. The line need not be ringing at the user' s station. No class of service programming is required.

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Unanswered Call Transfer Recall Timing—3.5.21—

A transferred call that goes 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 you have enabled the tandem attendant feature. When the station uses an LCD speakerphone, the display will show the station number or name as well as the line that is being re-called. Also see—*Tandem Attendant.*

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Voice Announce Blocking—3.7.40—

This feature allows the user of multiline stations to block voice announced intercom signaling by dialing a special code (or using a preprogrammed button).

Zone Paging (Via Station Speakers)—3.7.3—

Zone paging allows groups of stations to receive announcements through the station speakers. You can enable zone paging in up to four different zones. Zone paging can be received at a station port that has been programmed as a PA port and connected to an external loudspeaker. Also *see-All-Call Paging* (Via *Station Speakers).*

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