PCS *digital*™

System 24/48
Installation Manual

*Digital Communications
for the Growing Business*

Notices

Disclaimer

This manual contains current information about the PCS *digital*™ as written during the month of April 2003, the contents are subject to change without notice. Every effort has been made to ensure the accuracy of any information provided.

Electric-Static Discharge

All electronic boards are susceptible to electro-static discharge and the PCS *digital*™ is no exception. Care should be taken in when handling the circuit by the edges only and keeping the cards in antistatic bags is imperative. Us an antistatic wrist strap or grounding strap while installing the equipment. Any damage cause by electro-static discharge or mishandling will void the warranty provided by PCS *digital*™.

Voltage Do's and Don'ts

Ensure to check your local electrical codes for proper installation of telephone and electronic components. Follow the safety guidelines provided by the UL document 1459, issue 2, which is the safety specification for telephone equipment installation. Check your outlet for proper wiring and voltage levels, your neutral to ground voltage is critical for electronic equipment optimal operation and longevity. Typically an AC voltage reading of less than **.5 VAC** between your neutral to ground is required.

Safety Guidelines

When installing telephone equipment, the basic safety precautions should be met in order to minimize the risk of fire and or electrical shock.

◊ Read and understand all instructions in this manual and safety documentation.
◊ Do not use or install equipment where it is prone to water hazard or leakage.
◊ Read and understand all labels on product prior to installation.
◊ Equipment is manufactured with ventilation holes since they contain no fan; proper care must be taken so that these vents do not get blocked. There is a risk of equipment failure or fire if these vents are blocked.
◊ Install equipment on a dry flat fire retardant Plywood and never install on a shelf or desktop.

Life Support Notice

Since this product is not sold with a built in battery backup or UPS (Un-interruptible Power Supply), it is not the intent that this unit be installed in a life support environment or elevator.

FCC Regulation

This equipment has been tested by an independent lab and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules as reproduced below.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. The equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. FCC ruling states that the owner of the system to be installed gives the local telephone company sufficient advance notice of the intention to use privately owned telephone equipment. The owner must also furnish information as to the identification of the particular lines to be connected to the system and the affected telephone numbers. FCC registration information on the model number, FCC-assigned registration number and ringer equivalence information must also be furnished. The ringer equivalence (REN) is used to determine how many devices can be connected to a telephone line. In most areas, the sum of RENs of all devices on one line should not exceed five. If too many devices are attached, they may not ring properly. Should there be any questions that the customer provided equipment causes harm to the telephone network, the local operation company is required to notify the customer of an impending temporary interruption of service. The customer must be given the opportunity to correct the existing problem, if possible. The telephone company must also advise customers of their rights for filing complaints before the FCC. The telephone company may make changes in its technical operations and procedures. If such changes affect the compatibility or use of the system, the telephone company is required to give adequate notice of the changes. Under no circumstances is the equipment to be altered or modified without written approval of the manufacturer. Failure to gain permission for any modification will void the warranty.

"This equipment generates and uses RF energy and if not installed and used in accordance with the Instruction Manual, may cause interference to Radio Communications. It has been tested and found to comply with the limits for a Class A computing device, pursuant to Subpart J of Part 15 of the FCC Rules, which are designed to provide reasonable protection against such interference, when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user, at his own expense, will be required to take whatever measures may be required to correct the interference."

Regulatory Information (U.S.A.)

The Federal Communications Commission (FCC) has established rules that allow the direct connection of the PCS *digital*™ System 24 and PCS *digital*™ System 48 systems to the telephone network. Certain actions must be undertaken or understood before the connection of customer provided equipment is completed.

FCC Registration Number for PBX or hybrid operation (CO Line accessed by means of dial-access-codes or	D6XTAI-23086-MF-E	D6XTAI-25245-MF-E
FCC Registration Number for Key System operation (CO Line access by		D6TAI-25246-KF-E
Ringer Equivalence Number (REN) or	1.0B	1.2B
Type and USOC number of the inter	RJ21X	RJ21X

Telephone Company Notification

Before connecting the PCS *digital*™ System 24 and PCS *digital*™ System 48 system to the telephone network, the local telephone company must be given advance notice of intention to use customer-provided equipment, and must be provided with the following information:

◊ Telephone numbers to be connected to the system
◊ PCS *digital*™ System 24 or System 48 system information
◊ Ringer Equivalency Number (REN)
◊ USOC jack required for direct interconnection with the telephone network (RJ11C)
◊ FCC Registration Numbers (Refer to Table A)

Incidence of Injury

The telephone company determines that the customer-provided equipment is faulty and possibly causing harm or interruption to the telephone network, it should be disconnected until repairs can be made. If this is not done, the telephone company may temporarily disconnect service.

Hearing Aid Compatibility

All PCS *digital*™ Systems' digital terminals are Hearing Aid Compatible, as defined in Section 68.316 of Part 68 FCC Rules and Regulations.

UL/CSA Safety Compliance

The PCS *digital*™ System 24 and 48 have met all safety requirements and were found in compliance with the Underwriters Laboratories (UL) 1459.

Notice of Compliance

The PCS *digital*™ System 24 and 48 comply with all rules regarding radiation and radio frequency emissions by Class A computing devices. In accordance with FCC Standard 15 (Subpart J), the following information must be supplied to the end user:

Toll Fraud and DISA Disclaimer

The PCS *digital*™ System 24 / 48 device is designed by PCS *digital*™ to be reasonably secure against intrusions from fraudulent callers, it is by no means fraud proof. Therefore, no express or implied warranty is made against such fraud including interconnection to the long distance network
While this device is designed to be reasonably secure against invasion of privacy, it is by no means invulnerable to such invasions. Therefore, no express or implied warranty is made against unlawful or unauthorized utilization which results in the invasion of one's right of privacy.

PCS *digital*™ has made reasonable effort to ensure that this product works in most business environments. There may be some environments (RFI and EFI) in which this product may not work. In such cases, it is the responsibility of the interconnect to take the necessary actions to correct any RFI interference.

Warranty Repair

If you have troubles the with the PCS *digital*™ System 24 or the PCS *digital*™ System 48, please contact PCS *digital*™ technical support at (480)-222-1159 for repair, return authorization or warranty information.

Limited Warranty

PCS *digital*™ provides original purchases with a limited warranty against defects in material and workmanship on this product for three (3) years from date of purchase. This limited warranty is extended only to original purchasers.

THIS WARRANTY SPECIFICALLY EXCLUDES THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE. THIS LIMITED WARRANTY IS IN LIEU OF AND EXCLUDES ANY CLAIMS BY THE PURCHASER FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES.

Exclusions

This warranty does not apply to defects or malfunctions caused by abuse, accident, modification, negligence or any other damage not resulting from defects in the original materials or workmanship or for reasons beyond the control of PCS *digital*™.

Some states do not allow for the exclusion of consequential or incidental damages. In which case the foregoing exclusions may not apply to you. This warranty gives you specific legal rights that vary from state to state.

Use of Station Lock Feature 97 will restrict access to 911. Also, use of certain music sources for BGM or MOH may violate copyright laws.

PCS *digital*™
System 24
and
System 48

Installation

Introduction

This manual is intended to provide the information necessary to install, program and maintain the PCS *digital*™ System 24 and System 48.

Welcome to PCS *digital*™

The PCS *digital*™ is a compact, digital communication system. PCS *digital*™ has been designed to provide today's business with a feature-rich system enabling even the smallest company to project the image of a much larger company. Overall productivity of the company will increase because applications may be solved based on a compliment of communication features.

System Capabilities

The PCS *digital*™ provides a single company with the following two important business services:

Attendant Functions

PCS *digital*™ provides:

◊   Dial an extension number to reach someone.
◊   One button transfer with DSS appearance.
◊   Key or PBX line access.
◊   Hot Pad dialing.

Direct CO Line Ringing

◊   Day and Night Ring schedule.
◊   Ring multiple extensions.
◊   Ring to Hunt groups.
◊   External Preset transfer off site.

About this manual

This manual is intended to establish a guideline for the most common types of PCS *digital*™ System 24 and System 48 installations.

Typically there are two type of customer scenario's;

A) The customer that insists that calls be answered by a human first, then transferred to the appropriate party or station.

—CO Line→ System 24 / 48 —Ring Attendant→ Transfer to Station → Forward to Voicemail → PCS Mail

An alternative to ringing one station, ring an "All Ring Hunt Group"

—CO Line→ System 24 / 48 —Ring an "All Ring" Hunt Group → All Ring Hunt Group CO Preset Forward to VM → PCS Mail

B) The customer that has realized the value in having an auto attendant answer the calls and transfer to the appropriate party or extension.

—CO Line→ System 24 / 48 —Voicemail Auto Attendant → PCS Mail Answers the call —Ring Station→ Dialed Station Forward to Voicemail → PCS Mail

PCS *digital*™ General Description

The PCS *digital*™ System 24 and System 48 system technology incorporates a digital technology for voice switching and call processing utilizing Pulse Code Modulation and Time Division Multiplexing (PCM/TDM). The PCS *digital*™ System 24 and System 48 are allowed to migrate the digital terminals and terminal accessories throughout the entire PCS *digital*™ Systems. ISDN-like, 2B+D technology complements the system architecture and capabilities. On one industry standard twisted pair, key telephones perform all system functions and voice communications. Some additional features of the PCS *digital*™ systems include:

◊   A non-blocking switch, with no loss or degradation of voice signals.
◊   Stored-Program Control (SPC), utilizing a 16-bit, 8 MHz microprocessor.
◊   Memory consists of 512 KB of Read Only Memory (ROM) and 128 KB of Random Access Memory (RAM).

When an analog device interface is required, a 2-Port Central Office (CO) Module may be connected to any one digital station port. The 2B+D technology allows the PCS *digital*™ systems to split one digital key telephone port voice channel (B1) and the second voice channel (B2) to provide two independent SLT-type device interfaces. The 2-Port CO Module may be expanded with the 2-Port Analog Expansion (in the 2-Port CO Module housing).

The 2-Port CO Module and 2-Port Analog Expansion each require one dedicated digital station port.

System Components

The PCS *digital*™ system 24 and system 48 systems are comprised of two key telephone models, an optional Direct Station Selector (DSS) and a modular Key Service Unit (KSU) which houses the following KSU components:

◊   3 x 8 Module
◊   Option Module

The application of analog devices in the PCS *digital*™ System 24 and System 48 has the effect of two-to-one port gain. For every single digital port used to interface with the 2-Port Single Line Adaptor Box or Expansion card, two analog ports are available.

PCS *digital*™ System 24 / 48 Installation Guide

Guidelines

1. Remove all equipment from boxes and inspect for damage. If damage or abuse is detected, please contact the PCS *digital*™ MRA department at: (480)-222-1159.

2. Locate the wall mounting template and screws. Note: In some situations the installation might require different or longer screws. Place template level on wall and fasten screws where indicated on template for mount holes. Remove template from wall.

3. Remove the four (4) screws which secure the cover to the PCS *digital* KSU.

4. Locate the screw holes in both upper corners of the KSU. Holding the KSU with the letters upright will provide that your unit is properly positioned.

5. Hang KSU on wall, using the screws that you fastened onto the template.

6. Plug the amphenol cable onto the 3 X 8 Card / Board and punch down station wiring according to the wiring plan provided in this manual.

7. Plug the power cord into a 117 $\pm$ 10% VAC outlet. It is a good idea to double check the viability of the outlet ground by testing between the neutral and ground lugs, which ideally has an AC voltage reading of less than **.5 VAC.**

8. Apply power to the KSU by pressing the KSU switch to the ON position. KSU has a solid Red LED.

9. Now toggle the S-1 initialization switch into the ON position, KSU Red LED is now flashing.

10. If your wiring is correct then you should have station 10 displaying on your first station.

11. System needs to be left plugged in for 12 continuous hours to ensure database back up battery will maintain any Admin Database changes.

System 24 Wiring and Start-up

PCS _digital_™ System 24 Start-up Procedure

Step 1:   Before plugging the KSU in, check all connections:
1.   Turn the power switch ❸ off (left position marked with an O).
2.   Main power connector ❶ to Main Board.
3.   Battery charge connector ❸ to Main Board.
4.   3x8 Ribbon Cable to Main Board.
5.   Option Module Ribbon Cable to Main Board.
6.   25-pair Champ connector to 3x8 Board.
7.   Ground the cabinet.
8.   Make sure the Initialization Switch ❸ is turned OFF (left) for 2 minutes.
Step 2:   Turn Initialization Switch ❸ ON (right).
Step 3:   Plug the system into a UPS or Surge Suppressor. _Never plug the KSU directly into a wall outlet. A power surge can damage the system, and will void the warranty._
Step 4:   Turn the power switch ❸ ON (right position marked with -) and observe the LED ❸. The LED should begin to flash within 10 seconds.
Note: If the LED does not flash within 10 seconds, turn the power switch ❸ OFF, turn the Initialization Switch ❸ OFF for at least 2 minutes, and repeat steps 2 thru 4.
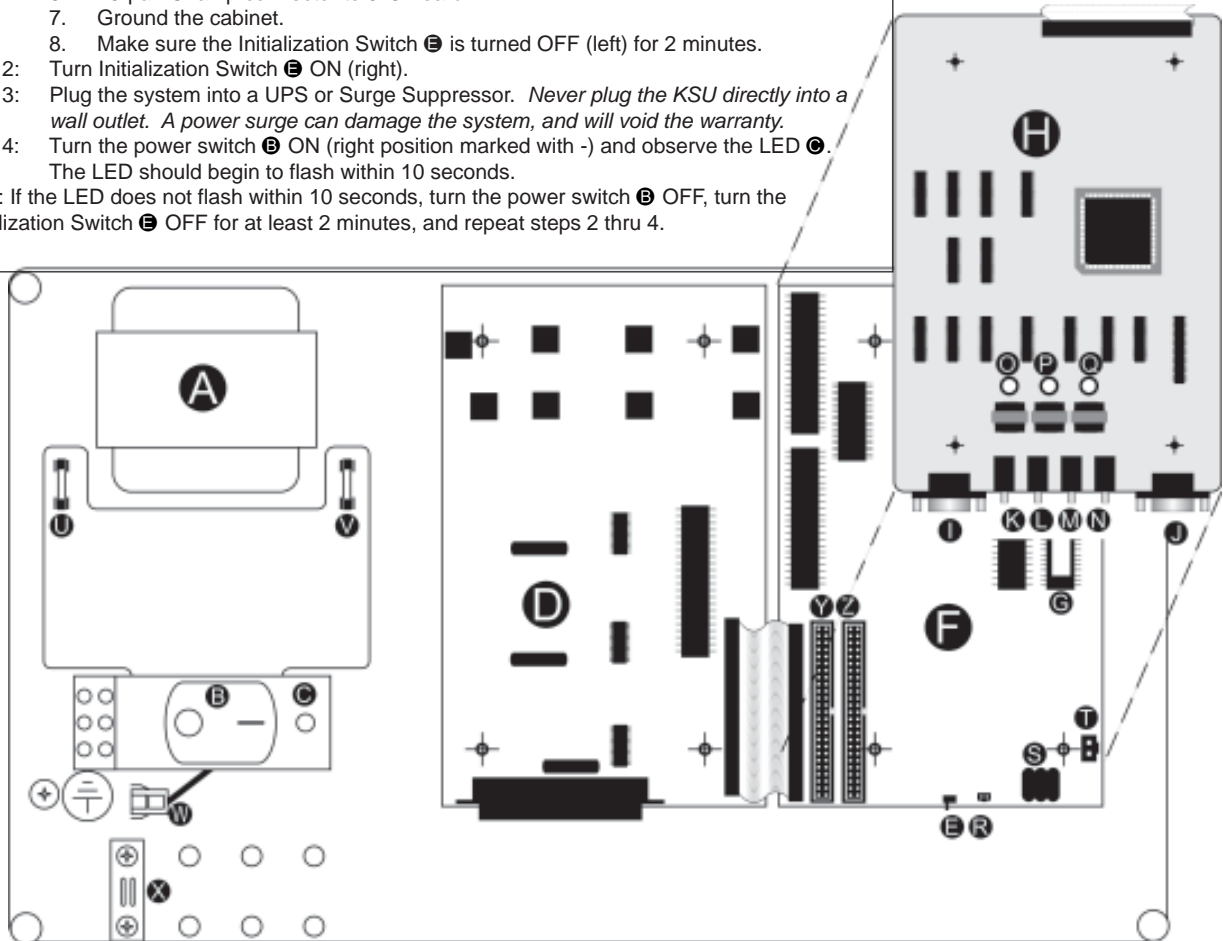
Ⓐ	Power Supply	Ⓝ	Music on Hold (MOH) Connector (1/8" Mono-Phono Plug)
Ⓑ	On / Off Switch	Ⓞ	BGM Volume Control
Ⓒ	Diagnostic LED	Ⓟ	Paging Volume Control
Ⓓ	3x8 Board (3 CO x 8 Station)	Ⓠ	MOH Volume Control
Ⓔ	Initialization Switch	Ⓡ	Ni-MH Battery Power Supply Connector
Ⓕ	CPU Board	Ⓢ	Ni-MH Battery for Memory Backup
Ⓖ	EPROM Software	Ⓣ	KSU Power Supply Connector
Ⓗ	Option Board	Ⓤ	DC Fuse
Ⓘ	SMDR RS-232 Port	Ⓥ	AC Fuse
Ⓙ	Remote Programming RS-232 Port	Ⓦ	Power Loss Backup Connector
Ⓚ	Loud bell Connector (24 **vdc**,1amp)(1/8" Mono-Phono Plug)	Ⓧ	Cable Stay
Ⓛ	Background Music (BGM) Connector (1/8" Mono-Phono Plug)	Ⓨ	Expansion Slot for 3x8 Board
Ⓜ	External Paging Port Connector (1/8" Mono-Phono Plug)	Ⓩ	Expansion Slot for 3x8 or 6 CO Board

Stations 10 thru 17

MDF

CO / PBX
LINES 1 thru 3

24AWG CAT3
Single Twisted Pair Wire
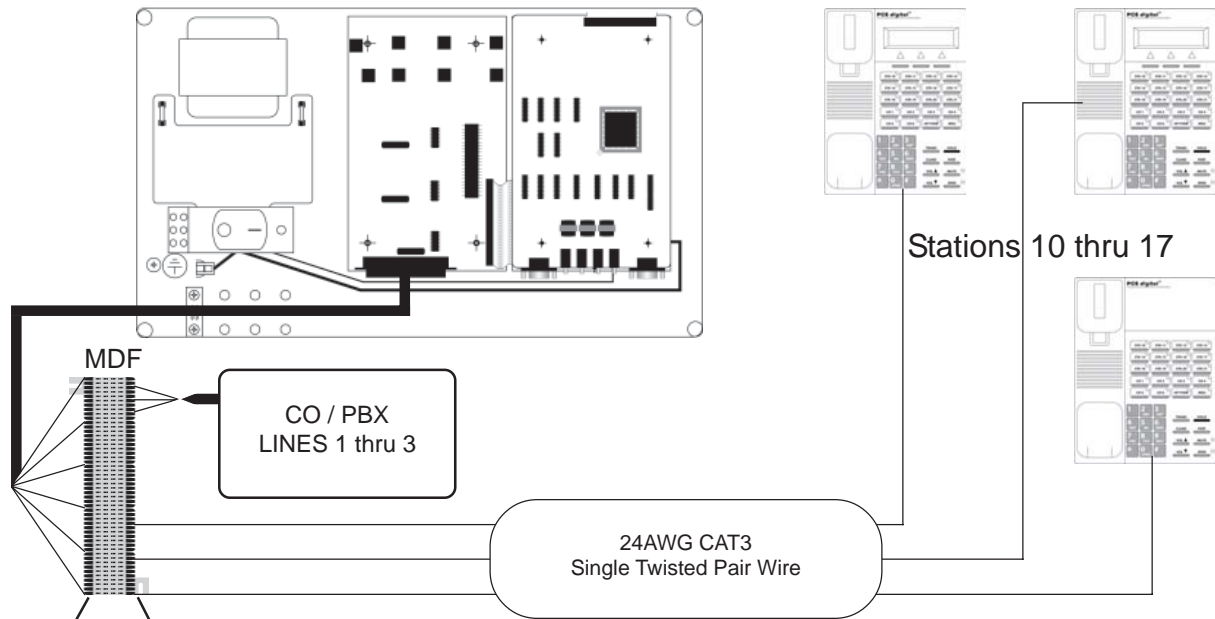
Cable Pair	Pair Color	Port Designation	Main 3x8 Board	Expansion #1 3x8 Board	Expansion #2 3x8 Board
26/1	White/Blue	N/C			
27/2	White/Orange	CO Port 3	Line 3	Line 6	Line 9
28/3	White/Green	CO Port 2	Line 2	Line 5	Line 8
29/4	White/Brown	CO Port 1	Line 1	Line 4	Line 7
30/5	White/Slate	N/C			
31/6	Red/Blue	N/C		Not Applicable when the 6-Port CO Module is installed in this position	Not Applicable when the 6-Port CO Module is installed in this position
32/7	Red/Orange	N/C			
33/8	Red/Green	N/C			
34/9	Red/Brown	N/C			
35/10	Red/Slate	N/C			
36/11	Black/Blue	N/C			
37/12	Black/Orange	N/C			
38/13	Black/Green	N/C			
39/14	Black/Brown	N/C			
40/15	Black/Slate	N/C			
41/16	Yellow/Blue	N/C			
42/17	Yellow/Orange	N/C			
43/18	Yellow/Green	Station Port 1	Ext. 10	Ext. 18	Ext. 26
44/19	Yellow/Brown	Station Port 2	Ext. 11	Ext. 19	Ext. 27
45/20	Yellow/Slate	Station Port 3	Ext. 12	Ext. 20	Ext. 28
46/21	Violet/Blue	Station Port 4	Ext. 13	Ext. 21	Ext. 29
47/22	Violet/Orange	Station Port 5	Ext. 14	Ext. 22	Ext. 30
48/23	Violet/Green	Station Port 6	Ext. 15	Ext. 23	Ext. 31
49/24	Violet/Brown	Station Port 7	Ext. 16	Ext. 24	Ext. 32
50/25	Violet/Slate	Station Port 8	Ext. 17	Ext. 25	Ext. 33

System 48 Wiring and Start-up

Ⓐ   Power Supply
Ⓑ   On / Off Switch
Ⓒ   Diagnostic LED
Ⓓ   (2) 3x8 Boards (3 CO x 8 Station each)
Ⓔ   Initialization Switch
Ⓕ   CPU Board
Ⓖ   EPROM Software
Ⓗ   SMDR RS-232 Port
Ⓘ   Remote Programming RS-232 Port
Ⓙ   Loud bell Connector
Ⓚ   External Paging Port Connector
Ⓛ   Music on Hold (MOH) Connector
Ⓜ   Background Music (BGM) Connector
Ⓝ   BGM Volume Control
Ⓞ   Paging Volume Control
Ⓟ   MOH Volume Control
Ⓠ   Ni-MH Battery Power Supply Connector
Ⓡ   Ni-MH Battery for Memory Backup
Ⓢ   KSU Power Supply Connector
Ⓣ   DC Fuse
Ⓤ   AC Fuse
Ⓥ   Expansion Slots for 3x8 Boards 3 and 4
Ⓦ   Expansion Slots for 3x8 Boards and 6
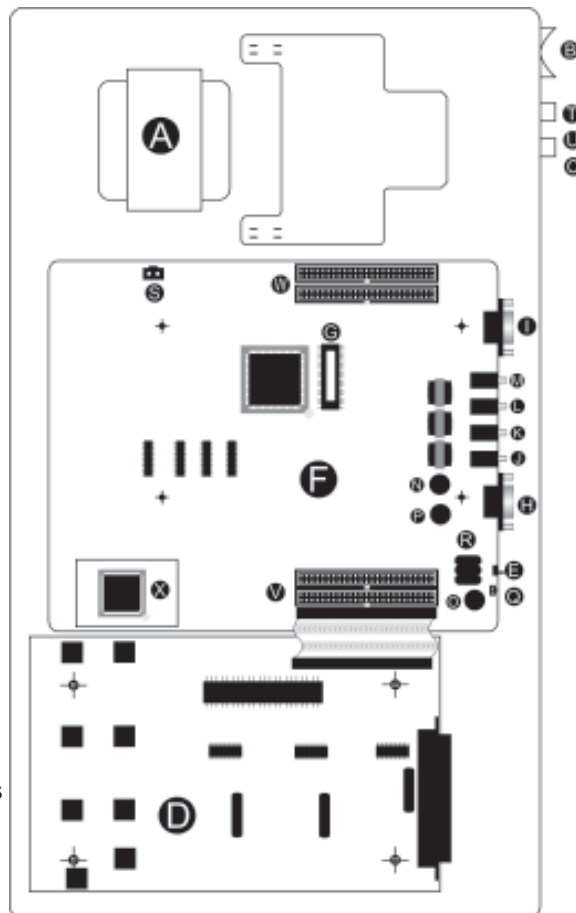
Note: Connectors "Ⓙ Ⓚ Ⓛ Ⓜ" are 1/8 inch mono phono plugs

Note: The Loud Bell Connector "Ⓙ" is rated at 24 vdc
1 amp. DO NOT USE AN AC POWER SUPPLY. The use
of AC will result in a loud bell failure.

PCS *digital*™ System 48 Start-up Procedure

Step 1: Before plugging the KSU in, check all connections:
       1.   Turn the power switch Ⓑ off (left position marked with an O)
       2.   Main power connector to Main Board at Ⓢ
       3.   Battery charge connector to Main Board at Ⓠ
       4.   3x8 Ribbon Cable to Main Board
       5.   25-pair Champ connectors to 3x8 Boards
       6.   Ground the cabinet
       7.   Make sure the Initialization Switch Ⓔ is turned OFF (down) for 2 minutes

Step 2: Turn Initialization Switch Ⓔ ON (right).

Step 3: Plug the system into a UPS or Surge Supersessor. *Never plug the KSU directly into a wall outlet. A power surge can damage the system, and will void the warranty.*

Step 4: Turn the power switch Ⓑ ON (right position marked with -) and observe the LED Ⓒ. The LED should begin to flash within 10 seconds.

Note: If the LED does not flash within 10 seconds, turn the power switch Ⓑ OFF, turn the Initialization Switch Ⓔ OFF for at least 2 minutes, and repeat steps 2 thru 4.
Note: The 6-CO board 7100-10 was designed for the System24 and it does not work in the System48
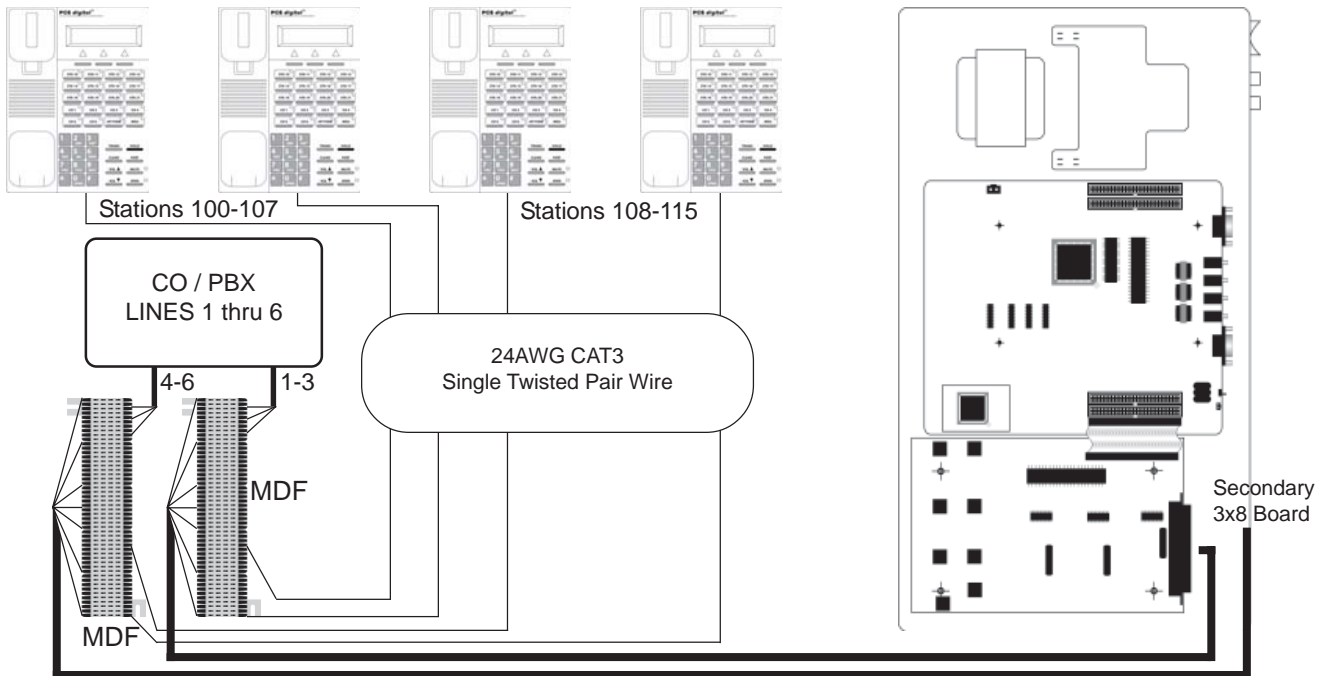
| Cable Pair	Pair Color	Port Designation	Main 3x8 Board	Secondary 3x8 Board	Expansion (1-4) 3x8 Boards
26/1	White/Blue	N/C			
27/2	White/Orange	CO Port 3	Line 3	Line 6	Lines 9 / 12 / 15 / 18
28/3	White/Green	CO Port 2	Line 2	Line 5	Lines 8 / 11 / 14 / 17
29/4	White/Brown	CO Port 1	Line 1	Line 4	Lines 7 / 10 / 13 / 16
30/5	White/Slate	N/C			
31/6	Red/Blue	N/C			
32/7	Red/Orange	N/C			
33/8	Red/Green	N/C			
34/9	Red/Brown	N/C			
35/10	Red/Slate	N/C			
36/11	Black/Blue	N/C			
37/12	Black/Orange	N/C			
38/13	Black/Green	N/C			
39/14	Black/Brown	N/C			
40/15	Black/Slate	N/C			
41/16	Yellow/Blue	N/C			
42/17	Yellow/Orange	N/C			
43/18	Yellow/Green	Station Port 1	Ext. 100	Ext. 108	116/ 124/ 132/ 140
44/19	Yellow/Brown	Station Port 2	Ext. 101	Ext. 109	117/ 125/ 133/ 141
45/20	Yellow/Slate	Station Port 3	Ext. 102	Ext. 110	118/ 126/ 134/ 142
46/21	Violet/Blue	Station Port 4	Ext. 103	Ext. 111	119/ 127/ 135/ 143
47/22	Violet/Orange	Station Port 5	Ext. 104	Ext. 112	120/ 128/ 136/ 144
48/23	Violet/Green	Station Port 6	Ext. 105	Ext. 113	121/ 129/ 137/ 145
49/24	Violet/Brown	Station Port 7	Ext. 106	Ext. 114	122/ 130/ 138/ 146
50/25	Violet/Slate	Station Port 8	Ext. 107	Ext. 115	123/ 131/ 139/ 147

Single Line Adaptor (SLA) Wiring

PCS *digital*™ System 24 / 48

PCS *digital*™
SLA

2   1
Out   In

Out 2 = B2-Station + 48
Out 1= B1-Same Station

Digital Extension 10

Analog Extension 58   Analog Extension 10
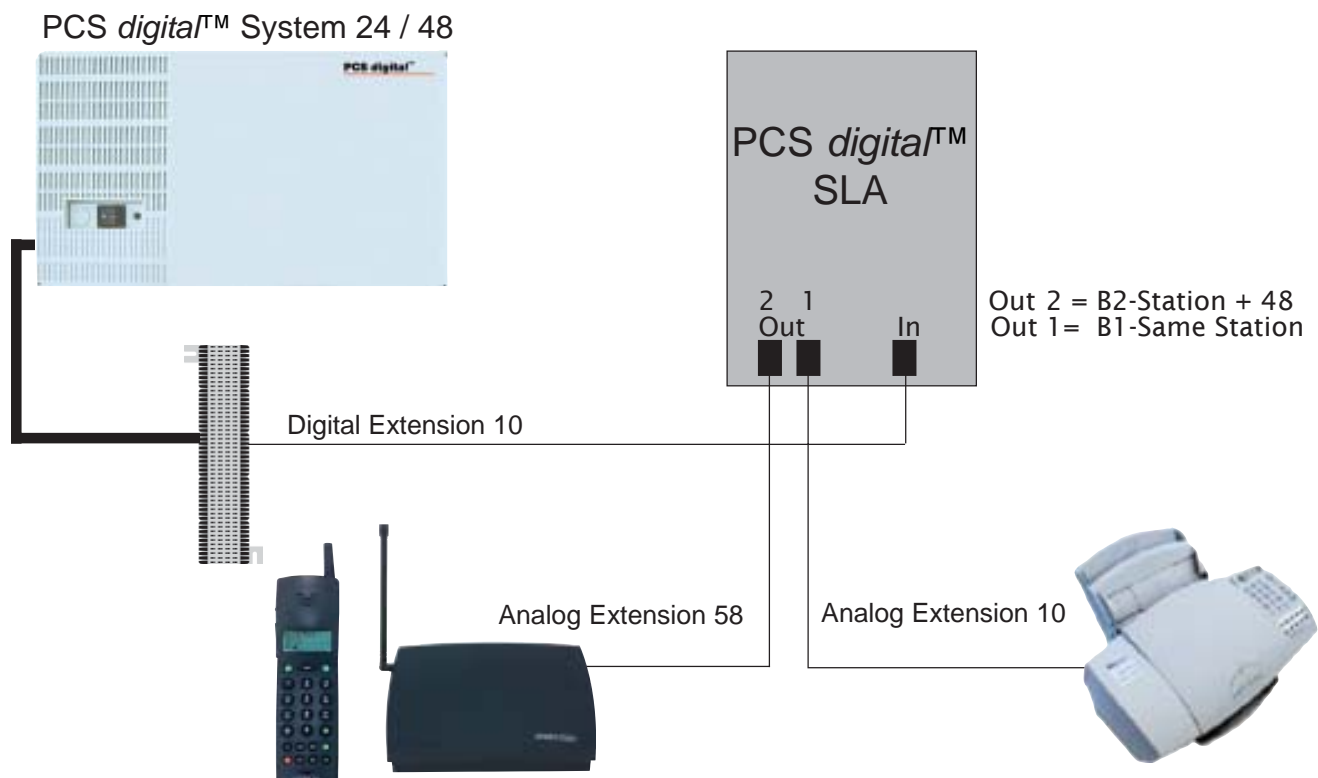
System 24 Conversion Chart

Digital Station	System 24 Analog Extension
Station 10	Ext. 10 & 58
Station 11	Ext. 11 & 59
Station 12	Ext. 12 & 60
...	...
Station 33	Ext. 33 & 81

System 48 Conversion Chart

Digital Station	System 48 Analog Extension
Station 100	Ext. 100 & 148
Station 101	Ext. 101 & 149
Station 102	Ext. 102 & 150
...	...
Station 138	Ext. 138 & 186

Note: A single extension is used to create two analog ports. When connecting a digital port to the analog adaptor, use only the center pair, do not use the outer pair. The digital signal is divided into two analog signals using the 2B + D technology. The Bearer channels carry the voice transmission while the Data channel directs the transmission to the correct single line device.

PCS *digital*™ System 24 / 48 Specification Table

System Programming Memory	Protection 300 Hours on a fully-charged battery (internal Ni-MH battery requires 14 continuous powered hours of system operation to become fully charged.)
Ports: PCS digital System 24 DSS Console 12 (Note: one for each digital station)	CO / PBX / Centrex Lines 12 (Note: 16 stations max. with this configuration)
Ports: PCS digital System 48 DSS Console 12 (Note: one for each digital station)	CO / PBX / Centrex Lines 18
Digital Stations PCS digital System 24	24 Digital Stations
Digital Stations PCS digital System 48	48 Digital Stations
Standard SLT PCS digital System 24	46 (Note: one digital port must be reserved for digital station operation. One digital station port is used for every 2 SLT ports required.)
Standard SLT PCS digital System 48	94 (Note: one digital port must be reserved for digital station operation. One digital station port is used for every 2 SLT ports required.)
DTMF Receivers: 2-Port CO Module 2-Port Analog Expansion Option Module	2 (One for each SLT port) 2 (One for each SLT port) 2 (Shared for advanced call processing system features; DISA, ECF) Located on the option Module DTMF Senders Unlimited.
Tone Detectors	1 Used for DISA
Contacts	1 LBC contact is available via the Option Module Conference Circuits Four-party conference circuits (8 per system).
DISA Circuits	Although it is not recommended, all CO lines may be programmed for DISA operation.
Dimensions and Weights: System24	Length 18.4 inches, Width 10.9 inches, and Height 4.2 inches. Weight (3x8) = 8.8 lbs
System48	Length 25.13 inches, Width 15.62 inches, and Height 4.8 inches. Weight (9x24) = 25.8 lbs
Internal Modem Extension and Settings: System48 (only) Communications protocol setup -	Extension 199 2400 bps 8 bit 1 stop bit No Parity XON/XOFF - Flow Control

Caller ID (ICLID) Installation

When using caller ID with the System 24 or System48 it is necessary to use the caller ID unit. The Caller ID unit must be connected to the ICLID/PC programming port on the option module using the supplied caller ID Cable (9 to 9 pin RS-232C straight-through cable) to receive caller ID information. PC programming and caller ID collection cannot be performed simultaneously. See diagram on the next page for wiring instructions.

Items Included
The following items are including with the Caller ID unit
◊   Caller ID Unit
◊   120 VAC to 12 VDC power adapter and cable
◊   9 to 9 pin RS-232C cable

Mounting the caller ID unit
The Caller ID unit is contained in a wall-mount enclosure with predrilled flanges for simple mounting. Once mounted the hinged cover will open upward and lock into position for servicing.

Connecting the Caller ID unit
1. If multiple Caller ID units will be used, connect the Caller ID units together according to the diagram below.
2. Connect the RS-232C to the output "G" connector (Out) on the Caller ID unit and connect the other end to the ICLID/PC Programming port.
3. Connect CO line one from the KSU's MDF to CO line 1 (RJ11) on the Caller ID unit. Repeat this step for all CO lines, connecting them in the order shown on the diagram on the next page .
4. Plug the power adaptor into a 120 VAC outlet, and insert the remaining end into the caller ID unit's DC-In power connector. When power is applied, the red LED in the Caller ID unit will begin to flash indicating the system is functioning.

Baud Rate Settings:
Confirm the Caller ID unit dip switches (A on next page) are set for 9600 bps for the System48 and 2400 bps for the System48 Settings range from: 1200 to 9600 bps.

To change the baud rate, make sure you are properly grounded before removing the CO-3 card located on the top of the unit. The Dip Switches are located in the center of the board.
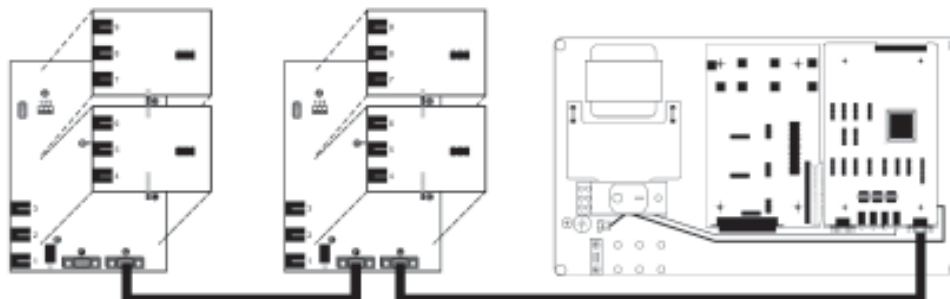
Caller ID (ICLID) Wiring
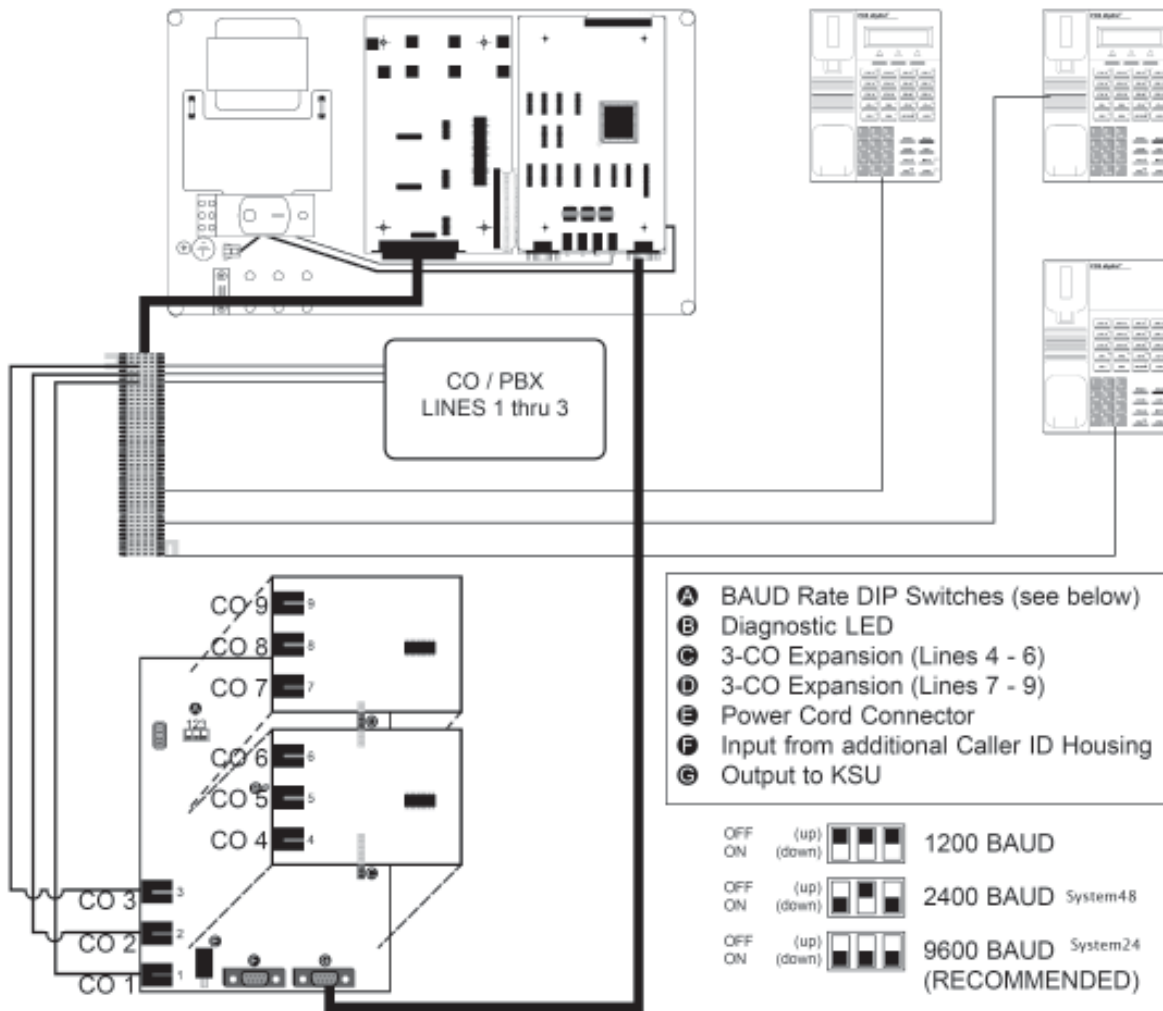
Ⓐ BAUD Rate DIP Switches (see below)
Ⓑ Diagnostic LED
Ⓒ 3-CO Expansion (Lines 4 - 6)
Ⓓ 3-CO Expansion (Lines 7 - 9)
Ⓔ Power Cord Connector
Ⓕ Input from additional Caller ID Housing
Ⓖ Output to KSU

OFF (up) / ON (down) — 1200 BAUD
OFF (up) / ON (down) — 2400 BAUD System48
OFF (up) / ON (down) — 9600 BAUD System24
(RECOMMENDED)

set up
1. Access Database Programming (‾FEAT‾ # ✱ + Password).
2. Go to 2. CO Line and press [show].
3. Dial the CO line you wish to program (all CO lines that have Caller ID will need to be programmed), and then press [show]
4. Go to ICLID PORT #: and press [chg].
5. Dial the port that the CO line is attached to, and press [save]

note: If wired as described on previous page, each port will be the same as the CO Line;
CO Line 1 = ICLID Port 01, CO Line 2 = ICLID Port 02,..., CO Line 9 = ICLID Port 09.

6. To continue Press the ‾HOLD‾ button until the display reads SHOW CO LINE: __ and repeat steps 4 and 5 for all CO Lines with Caller ID attached to the system.
7. Go to 3. Call Handling and press [show]
8. Go to Wait-ICLID:
9. Press [chg] until the display reads: WAIT-ICLID: 7.
10. Go to 4. RESOURCE and press [show]
11. Go to RMT X RATE:
12. Press [chg] until the display reads RMT X RATE:9600 for the System24 and RMT X RATE:2400 for the System48.

31 Button Digital Display Telephone
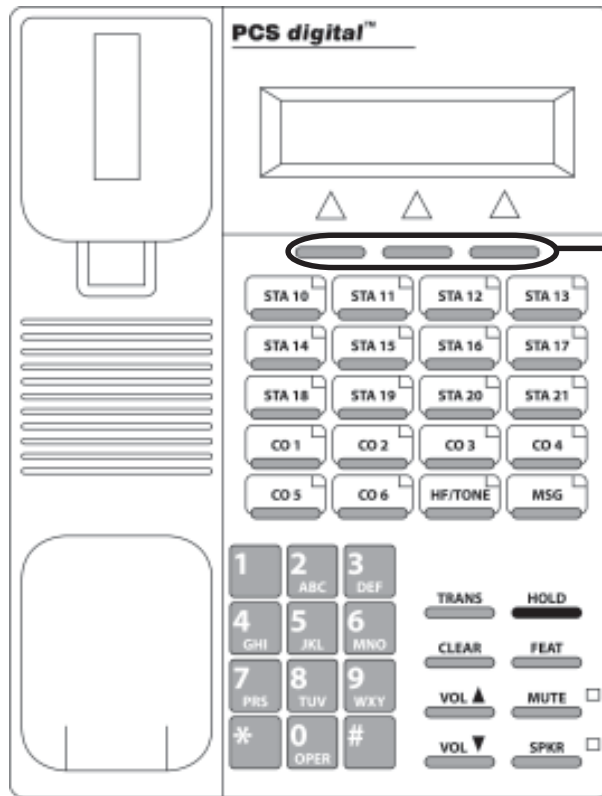
For flexibility, the 31 button Display Telephone uses 3 soft buttons that perform:
* Feature Button Programming
* Attendant Programming
* Database Programming

The Display Telephone has 3 "Soft Buttons" that are located below the display. These buttons are used for ease of programming. The display will show you the purpose of each button, depending on the screen you are on. For instance, your display may read:

```
STA  10  BUSY
cbck    msg next
```

In this example, the three soft buttons are available as follows:
Left Soft Button: Leave a Call Back message
Center Soft Button: Leave a custom text message
Right Soft Button: Go to the next set of options.

These menu items may be different for each feature of the phone. In general, the following buttons are used for many features:

back Returns you to the previous menu selection.
bksp Use this to delete the previous character entered, and move back (like the backspace of a computer)
chg   When you are able to enter digits or letters, this will erase the whole string entered.
next Advance to the next menu selection.
save Saves the current settings
show Displays the settings of the feature displayed.

PCS *digital™*
System 24
and
System 48
Programming

About this section:

This section is designed as a visual guide through the systems' programming menu screens from the 31 button display telephone. At the top of each page, you will find the number and name of the programming section.

```
SHOW STA: _ _

back    show    next
```
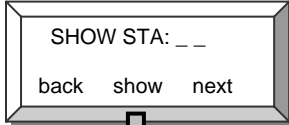
On the left side of the page, you will find a graphical reproduction of the telephone display showing step-by-step what you should see as well as the default value for each parameter.
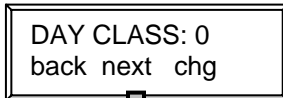
If the programming parameter requires you to go into a submenu, the graphical reproduction shows a smaller version of the display. If you do not choose to enter the submenu, press next to go onto the next menu item. If a submenu has a repetitive list, all parameters are in one continuous screen.

```
DAY CLASS: 0
back  next   chg
```

```
SHOW STA: __ __
back    show    next
```

```
CO LINE 1 : Y
back next chg

CO LINE 2 : Y
back next chg

CO LINE 3 : Y
back next chg

CO LINE 4 : Y
back next chg

CO LINE 5 : Y
back next chg

. . .

CO LINE 18:Y
back next chg
```
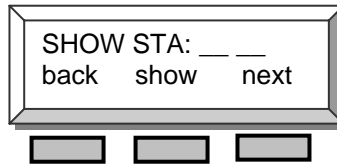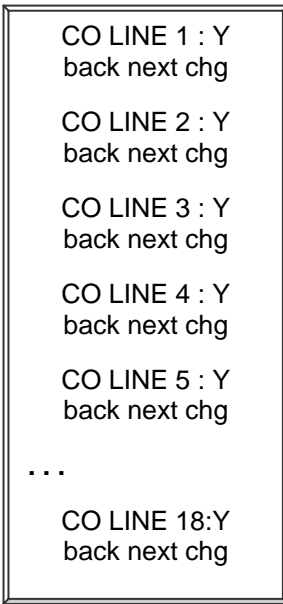
The three soft buttons under the display will assist in the programming process. If one of the three buttons is labeled "*save*" the new operation will become active after the save button is pressed. However, if "*save*" is not one of the choices, the moment that the "*chg*" is pressed, the new value is displayed and the new operation becomes active.

On the right side, you will see a brief description of each programming parameter as well as any related programming needed for proper operation of the current parameter.

Press chg and enter the station number to be modified. Valid stations are:
System24 – (10 – 48)
System48 – (100 – 148)

Each extension is assigned a day class of service which is used for DND override, privacy release and toll restriction. (See *5.Restriction*)

Each extension is assigned a night (NITE) class of service which is used for DND override, privacy release and toll restriction. (See *5.Restriction*)

Database Admin Programming the PCS digital ™ System 24 / 48

From any digital display extension, press [⎯FEAT⎯] and dial [# ✳] to enter Admin Database programming.

```
[⎯FEAT⎯]  #  ✳
```

```
DB PSWD 000000
bksp   show   chg
```

⬇

```
SYSTEM TYPE:  PBX
back    next    chg
```

⬇

```
1.  STATION
2.  CO LINE
3.  CALL HANDLING
4.  RESOURCE
5.  RESTRICTION
6.  SYS APPLICATION
back   next    show
```
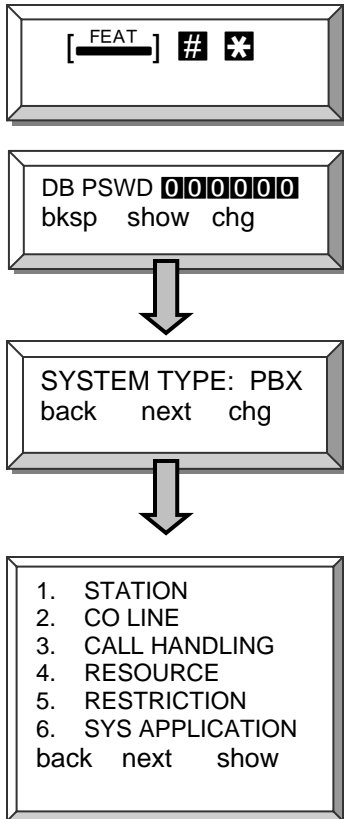
Enter the system password. The default password is 6 - zeros (000000). Then Press Save.

Press chg to toggle between KEY and PBX. PBX allows single line and digital extensions, on the system48, to dial 9 and access a CO Line. When set to KEY each extension requires a direct appearing CO line.

Press next to scroll through the 6 programming sections which are used to customize each installation.
The three soft buttons under the display will assist in the programming process.

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

1. STATION

1. STATION 2. CO LINE 3. CALL HANDLING 4. RESOURCE 5. RESTRICTION 6. SYS APPLICATION back next show	DAY CLASS NITE CLASS CO LINE ASSIGNM RECEIVE ASSIGNM RING ASSIGNMENT AC_CODE FORCED STA GROUP WARNING TONE DROP TIMEOUT STA POSITION VM PORT DSS OWNER

Press show to customize
STATION parameters or next to
go to 2. *CO LINE*

SHOW STA: _ _
back   show   chg

DAY CLASS: 0
back   next   chg

NITE CLASS: 0
back   next   chg

CO LINE ASSIGNM
back   next   show

CO LINE 1 : Y
back next chg

CO LINE 2 : Y
back next chg

CO LINE 3 : Y
back next chg

CO LINE 4 : Y
back next chg

CO LINE 5 : Y
back next chg

. . .

CO LINE 18:Y
back next chg

Show STA – Press show to customize station
parameters or press next to go to CO Line parameters.
Enter a valid extension number:

System24 – Digital (10 – 25)
                Analog (58 – 73)
System48 – Digital (100 – 147)
                Analog (148 – 195)

Day COS – Each extension is assigned a day and night
(NITE) class of service which is used for DND override,
privacy release and toll restriction. (see *5.Restriction*)

Night COS – Press show to view/modify the CO line
assignment for each extension or press next to go to
receive assignment.

CO Line Assignment – This parameter is used to allow
the entered extension access to each of the shown CO
lines. This parameter must be set for every CO line
physically installed in the system. For example, a 3 x 8
system has 3 CO lines, 6 x 16 system has 6 CO lines.

When all questions are answered, you will
automatically go to the next programming parameter,
CO Line Receive Assignment.

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

Notes:

1. STATION – Ring Assignment

```
1. STATION
2. CO LINE                 DAY CLASS
3. CALL HANDLING           NITE CLASS
4. RESOURCE                CO LINE ASSIGNM
5. RESTRICTION             RECEIVE ASSIGNM
6. SYS APPLICATION         RING ASSIGNMENT
  back   next   show       AC_CODE FORCED
                           STA GROUP
                           WARNING TONE
                           DROP TIMEOUT
                           STATION POSITION
                           VM PORT
                           DSS OWNER
```

```
RECEIVE  ASSIGNM
Back   next   show
```

```
 CO LINE 1 : Y
back  next  chg

 CO LINE 2 : Y
back  next  chg

 CO LINE 3 : Y
back  next  chg

 CO LINE 4 : Y
back  next  chg

 CO LINE 5 : Y
back  next  chg

. . .

 CO LINE 18:Y
back  next  chg
```

Receive Assignment – Stations with receive assignment set to Y (Yes) will have the ability to receive (answer) incoming CO Lines. This parameter allows the entered extension to receive access to the shown CO line. This parameter can be set for every CO line physically equipped in the system. For example, a 3 x 8 system has 3 CO lines, 6 x 16 system has 6 CO lines. When all questions are answered, you will automatically go to the next programming parameter, *CO Line Ring Assignment.*

Press chg to toggle
Values: Y (Yes) N (No)

```
RING ASSIGNMENT
back   next   show
```

```
CO LINE 1 : BOTH
 back  next  chg

CO LINE 2 : BOTH
 back  next  chg

CO LINE 3 : BOTH
 back  next  chg

CO LINE 4 : BOTH
 back  next  chg

CO LINE 5 : BOTH
 back  next  chg

. . .

CO LINE 18: BOTH
 back  next  chg
```

Ring Assignment – This parameter establishes ringing at the entered extension. Each CO line can be set to ring during the Day, NITE (Night), Both or None.

This parameter can be set for every CO line physically equipped in the system. For example, a 3 x 8 system has 3 CO lines, 6 x 16 system has 6 CO lines.

When all questions are answered, you will automatically go to the next programming parameter, *Drop Timeout.*

Press chg to toggle
Values: DAY, NITE, BOTH, NONE

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

1. Station – AC_Code Forced

```
AC_CODE FORCED:N
back    next    chg
```

⬇

```
STA GROUP: 1
back    next    chg
```

⬇

```
WARNING TONE: N
back    next    chg
```

⬇

```
DROP TIMEOUT: N
back    next    chg
```

⬇

```
STA POSITION: XX
back    next    chg
```

⬇

```
VM PORT:  N
back    next    chg
```

⬇
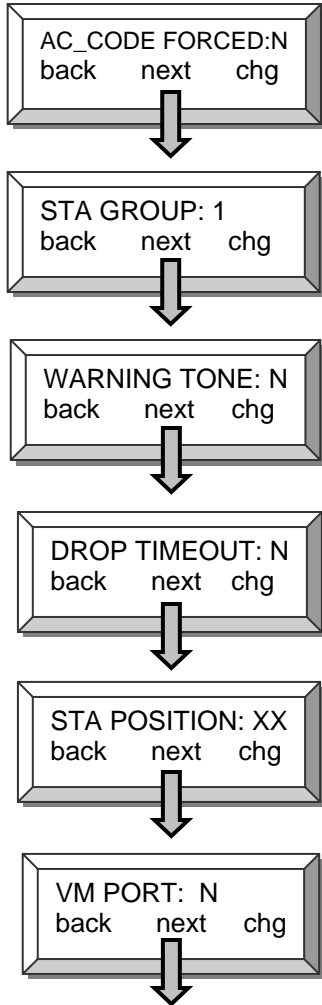
AC_code forced – To force this extension to enter a valid account code when placing a CO line call, change this to Y (yes). Once a valid account code is entered, the extension assumes a new class of service based on the programming in AC_Code Table, and can access a CO Line. See *AC_CODE TABLE(2-46)*

STA GROUP – Only stations within a common group will receive zone or group pages as well as the ability to do a group call pick up. There are 8 groups (1 – 8).

WARNING TONE – When set to Y (Yes), all calls placed from this extension will receive a warning tone, which repeats each time the D*rop Timeout Timer* expires. (See *Call Handling – Warning Time)*

DROP TIMEOUT – This parameter is used to limit the length of time for each outgoing CO line call. When set to Y (Yes) all calls placed from this extension will be governed by *Warning Time (See Call Handling).* When the timer expires, both parties will hear a tone and 10 seconds later the call will automatically be disconnected.

STA POSITION – Determines the extension number of the entered extension. Once the number is entered, the extension immediately becomes the new number. Press chg to modify Values:
System24 – (10 – 25)
System48 – (100 – 195)

VM PORT – To ensure proper operation of a voicemail system, any stations connected the voicemail system must be identified as "VM Port Y". When set to yes, the system will send these ports longer DTMF *(Dual Tone Multi Frequency)* tones. (See VM Dialing Ratio)

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

1. Station – DSS Owner

```
1. STATION
2. CO LINE
3. CALL HANDLING
4. RESOURCE
5. RESTRICTION
6. SYS APPLICATION
  back    next    show
```

```
DAY CLASS
NITE CLASS
CO LINE ASSIGNM
RECEIVE ASSIGNM
RING ASSIGNMENT
AC_CODE FORCED
STA GROUP
WARNING TONE
DROP TIMEOUT
STATION POSITION
VM PORT
DSS OWNER
```

```
DSS OWNER: NONE
back    next    chg
```

```
SHOW STA: _ _
back    show    chg
```

DSS owner – Press chg and enter the appropriate station number (See note below) This parameter establishes an association between the entered station and the station where the DSS console is wired.

Note: Valid station range:
System24 – (10 – 25)
System48 – (100 – 149)

Press "HOLD" to return to "1. Station" to continue programming.

Station 10   Station 11
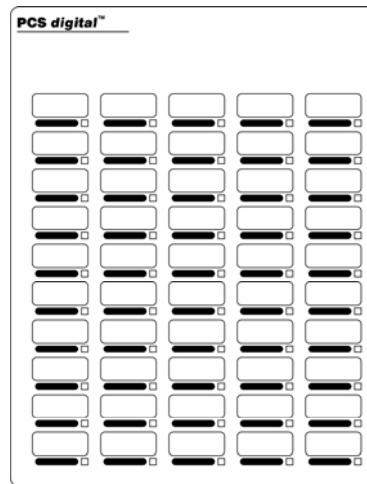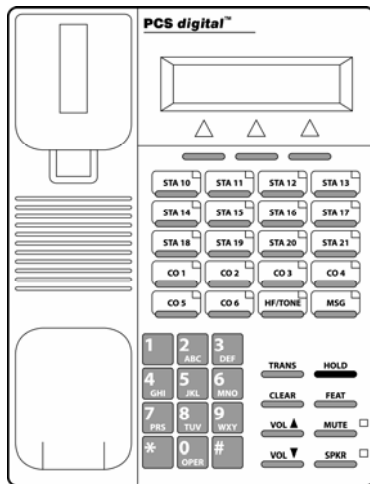
Note:
The DSS Owner is the digital station that, in programming, is associated with a DSS console. To program a DSS Owner:
1. *Go to "SHOW STA" and enter the station number of the DSS Console.*
2. *Press next until you get to the "DSS Owner"*
3. *Enter the digital station (Usually a 31-button display telephone) that will be associated with the DSS.*
For example, with the diagram shown above, you would enter station 11 at the "SHOW STA", and the DSS owner is station 10.

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

2. CO LINE Programming

```
1. STATION
2. CO LINE
3. CALL HANDLING
4. RESOURCE
5. RESTRICTION
6. SYS APPLICATION

back    next    show
```

```
DIALING
CALL ABANDON
CO LINE TYPE
LOUD BELL
CO LINE GROUP
PRIVATE TO
TOLL OVERRIDE
DISTINCT TONE
ICLID PORT #
```
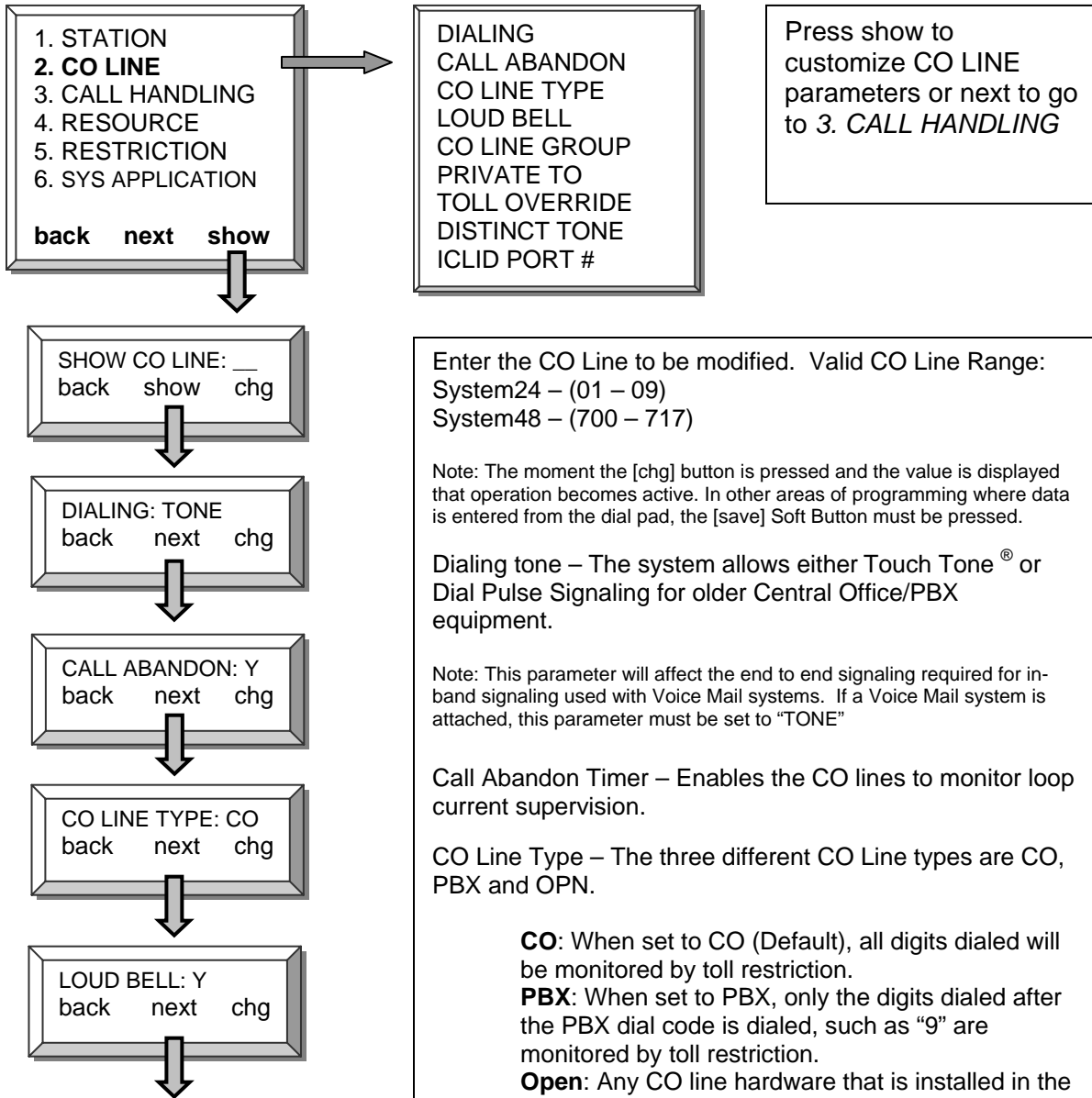
Press show to customize CO LINE parameters or next to go to *3. CALL HANDLING*

```
SHOW CO LINE: __
back    show    chg
```

```
DIALING: TONE
back    next    chg
```

```
CALL ABANDON: Y
back    next    chg
```

```
CO LINE TYPE: CO
back    next    chg
```

```
LOUD BELL: Y
back    next    chg
```

Enter the CO Line to be modified. Valid CO Line Range:
System24 – (01 – 09)
System48 – (700 – 717)

Note: The moment the [chg] button is pressed and the value is displayed that operation becomes active. In other areas of programming where data is entered from the dial pad, the [save] Soft Button must be pressed.

Dialing tone – The system allows either Touch Tone ® or Dial Pulse Signaling for older Central Office/PBX equipment.

Note: This parameter will affect the end to end signaling required for in-band signaling used with Voice Mail systems. If a Voice Mail system is attached, this parameter must be set to "TONE"

Call Abandon Timer – Enables the CO lines to monitor loop current supervision.

CO Line Type – The three different CO Line types are CO, PBX and OPN.

> **CO**: When set to CO (Default), all digits dialed will be monitored by toll restriction.
> **PBX**: When set to PBX, only the digits dialed after the PBX dial code is dialed, such as "9" are monitored by toll restriction.
> **Open**: Any CO line hardware that is installed in the system, but does not have an active CO line plugged into it should be set to OPN. For example; if there are 4 active CO lines in a system, CO lines 5 and 6 should be marked as "OPN" which eliminates them from being accessed by specialized features such as *Last Number Redial*.

Loud Bell – When the extension rings the "loud bell relay" will close, completing the circuit, which will activate the ancillary loud bell or strobe light device.

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

2. CO Line – Line Group

```
1. STATION
2. CO LINE
3. CALL HANDLING
4. RESOURCE
5. RESTRICTION
6. SYS APPLICATION

back  next  show
```

```
Dialing
Call Abandon
CO Line Type
Loud Bell
Co Line
Group
Private To
Toll Override
Distinct tone
ICLID Port #
```

```
CO LINE GROUP: 1
back     next     chg
```

⬇

```
PRIVATE TO: Y
back     next     chg
```

⬇

```
TOLL OVERRIDE: N
back     next     chg
```

⬇

```
DISTINCT TONE: 0
back     next     chg
```

⬇

```
ICLID PORT #: 0
back     next     chg
```

⬇
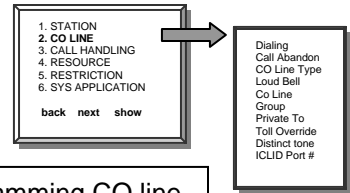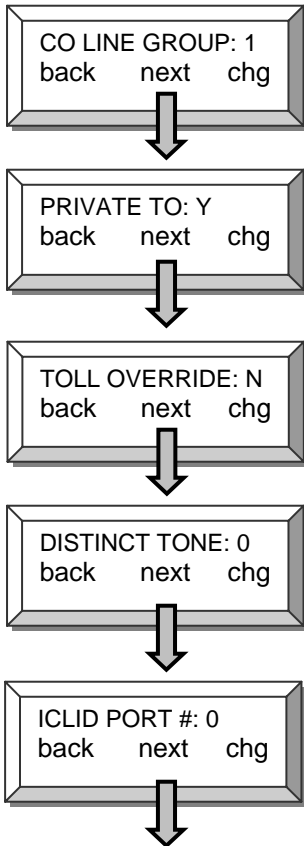
CO line Groups – are used when programming CO line access to flexible buttons.

Private To – Is used to establish ringing and exclusive access at the entered station. Press chg and enter a valid extension number, Values:
System24 – (10 – 81)
System48 – (100 – 195)

Toll Override – Allows the entered CO line to bypass and override all toll restriction entries.
Note: Marking this CO line toll override will allow unrestricted dialing.

Distinctive Tone – each CO line can be programmed to use one of 4 different ring tones. These tones will override station ring tones.

Incoming Caller ID port – Is required when the system is receiving Caller ID from the Telephone Company. Select the port which will be associated with the external (optional) Caller ID device The default value 0 indicates that no Caller ID will be received on this CO line and the feature is off. (See *Caller ID installation*).

Note: The System48 – Always reset this parameter to zero "0" before entering a two digit (10 – 18) CO Number.

Note:
Press Next to program another CO Line or press Hold until screen displays 2. CO Line
Press Next to go to 3. Call Handling

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

3. Call Handling

```
1. STATION
2. CO LINE
3. CALL HANDLING
4. RESOURCE
5. RESTRICTION
6. SYS APPLICATION

back    next    show
```

```
PRIVACY RLS
PRIV RLS TONE
EX_HOLD TIME
FLASH TIME
REMIND TIME
PARK REMIND
PAUSE TIME
PBX CODE
PBX AUTO PAUSE
DIALING RATIO
VM DIALING RATIO
WARNING TIME
RECALL TIME
SLT HOOK_FLASH
DISA
EXTERNAL FORWARD
UNS CONF TIME
OPERATOR CODE
UNS CONFERENCE
CALL ABANDON TIME
RING ALT POS
CO LN PRESET FWD
WAIT-ICLID
VM MON TIME
```
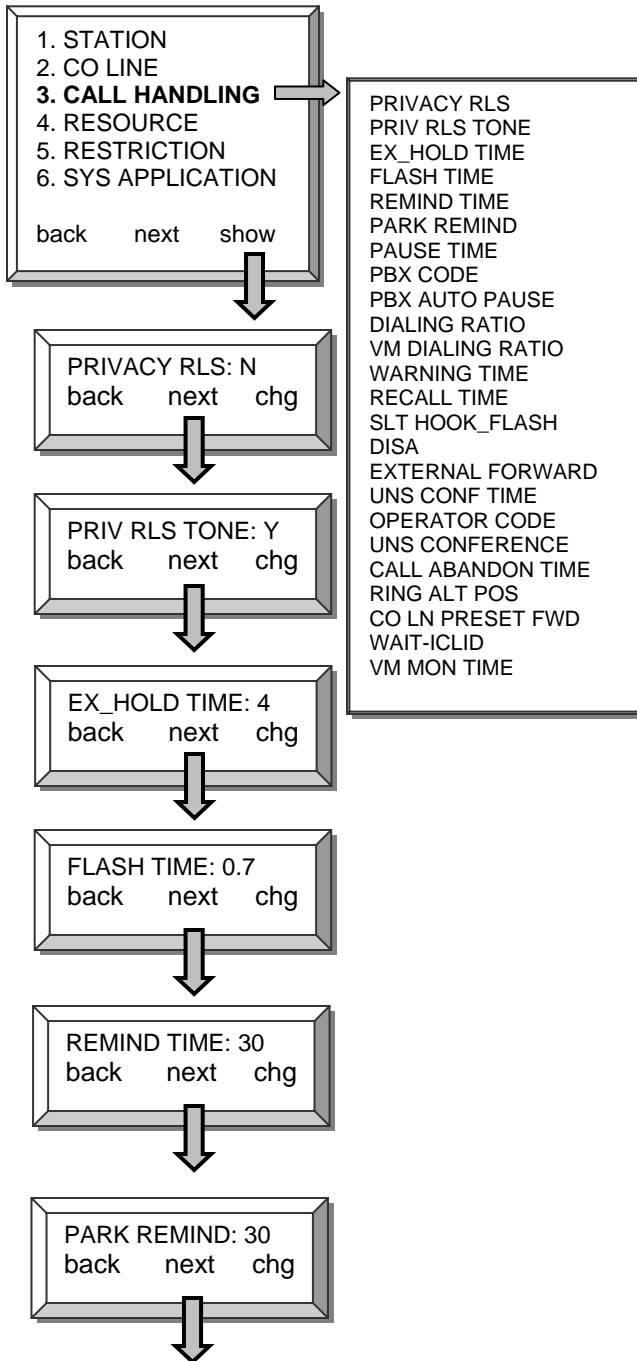
Press show to customize CALL HANDLING parameters or next to go to 4. *RESOURCE*

```
PRIVACY RLS: N
back    next    chg
```

```
PRIV RLS TONE: Y
back    next    chg
```

```
EX_HOLD TIME: 4
back    next    chg
```

```
FLASH TIME: 0.7
back    next    chg
```

```
REMIND TIME: 30
back    next    chg
```

```
PARK REMIND: 30
back    next    chg
```

Privacy Release – When set to Y (Yes), the Privacy feature is removed from stations with a lower COS. (see *Class of Service / Toll Restriction*)

Privacy Release Tone – When set to Y (Yes), all parties on an active CO line call will hear a tone when another party joins in on the conversation.

Note: Disabling this tone may be a violation of State or Federal Law. Please check with your local law enforcement agency before disabling this feature.

Exclusive Hold timer will allow calls to remain on exclusive (private) hold for the duration of this timer. When the timer expires, the call recalls at the originating station.

Note: When the timer expires a second time and the CO line remains on hold the station will receive a second alert tone and the CO line holding condition will change to System Hold so that any station may access the holding line.

Flash timer – This is the value needed to activate Central Office features.

Note: Flash is typically used on CO lines that are equipped with special features from the Telephone Company such as 3-way calling and Call Waiting. Flash may also be used on CO Lines connected to a PBX or to Centrex lines for call transfer on those lines.

Remind Time – A reminder tone will be heard at the originating station each time this timer expires.

Note: Setting this parameter to zero (0) will disable the feature.

Park Remind – is the length of time that a call can remain in a park location before recalling at the attendant.

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

3. Call Handling – Pause Time


```
1. STATION
2. CO LINE
3. CALL HANDLING  →
4. RESOURCE
5. RESTRICTION
6. SYS APPLICATION
back    next    show
```

```
PRIVACY RLS
PRIV RLS TONE
EX_HOLD TIME
FLASH TIME
REMIND TIME
PARK REMIND
PAUSE TIME
PBX CODE
PBX AUTO PAUSE
DIALING RATIO
VM DIALING RATIO
WARNING TIME
RECALL TIME
SLT HOOK_FLASH
DISA
EXTERNAL FORWARD
UNS CONF TIME
OPERATOR CODE
UNS CONFERENCE
CALL ABANDON TIM
RING ALT POS
CO LN PRESET FWD
WAIT_ICLID
VM MON TIME
```

```
PAUSE TIME: 1
back    next    chg
```
↓
```
PBX CODE: 9
back    next    chg
```
↓
```
PBX AUTO PAUS: 1
back    next    chg
```
↓
```
DIALING RATIO
back    next    chg
```
↓
```
TONE TIME:  70
back    next    chg
```
↓
```
INT_DIG TIME:  70
back    next    chg
```
↓

Pause Time – Is the length of time that must pass before the next set of digits are dialed and most commonly used when in Speed dial Bins. The feature code ($\overline{FEAT}$ **7 0**) is entered, and will produce a "F" in the dialing string.

PBX code – is the number entered when accessing a PBX line, the next number dialed will be monitored by toll restriction. (see *Toll Restriction*)

PBX Auot Pause – Automatically inserts a pause of this length after the PBX Code is dialed.

Dialing Ratio – Has two parameters that may be programmed; Tone Time and INT_DGT Time.

> Tone Time: this the actual duration of DTMF tone that the system will send for each key pressed while connected to a CO line.

> INT_DGT: Time is the minimum actual time between digits that the system will wait before sending the next tone.

Note: The PCS digital Sys 24 / 48 TONE TIME and INT_DGT TIME are set at 70 millisecond and the range is from: 50 to 150 milliseconds.

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

3. Call Handling – VM Dialing Ratio

```
VM DIALING RATIO
back   next   show
```

```
TONE TIME: 120
back   next   chg
```

```
INT_DIG TIME: 120
back   next   chg
```

```
WARNING TIME: 3
back   next   chg
```

```
RECALL TIME
back   next   chg
```

```
SLT HOOK_FLASH
back   next   show
```

```
START: 300
back   next   chg
```

```
END: 800
back   next   chg
```
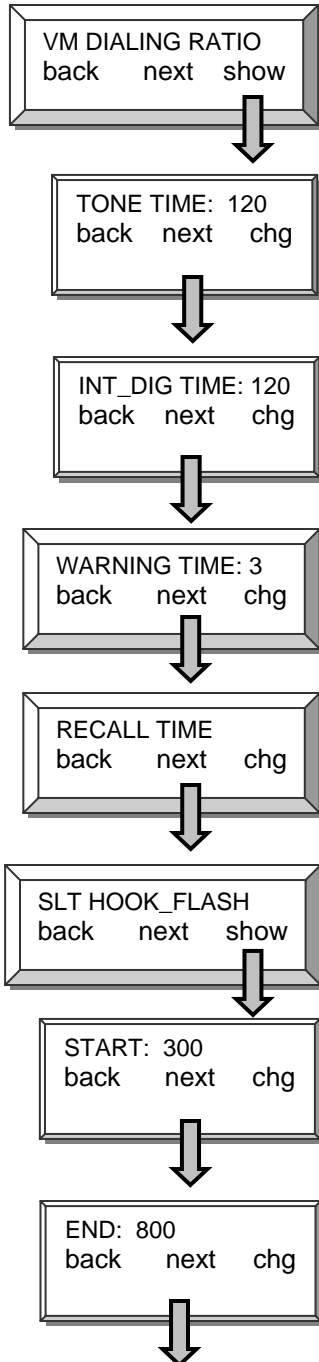
Dialing Ratio – Has two parameters that may be programmed; TONE TIME and INT_DGT TIME.

> INT_DGT: the inter-digit time is the minimum actual time between digits that the system will wait before sending the next tone.

> Tone Time: the tone time is the actual duration of DTMF tone that the system will send for each key pressed while connected to a CO line.

Note: For proper operation of the PCS Mail™ these should remain at default, 120 milliseconds.

Warning Time – is used in conjunction with the "Warning Tone" parameter set in the "*1. Station*" menu.

Recall Time – is the length of time that a call will remain on hold before recalling at the station that placed it on hold.

Note: This setting is system wide for Station Recall.

SLT Hook_Flash – is used to set the minimum and maximum thresholds for Single Line telephone (SLT) hook-flash detection for analog ports.

> Start – Start is the minimal length of time that a hook flash must be in order to be considered valid. Press chg to toggle through the values: 60 through 1400 milliseconds

> END – End is the maximum length of time that a hook flash can be in order to be considered valid. Press chg to toggle through the values: 60 to 1400 milliseconds

> *Note: The valid SLT HOOK_FLASH range is greater than 300 milliseconds, but less than 800 milliseconds. Therefore, a SLT hook flash can vary between these ranges and still be considered valid.*

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

3. Call Handling – DISA
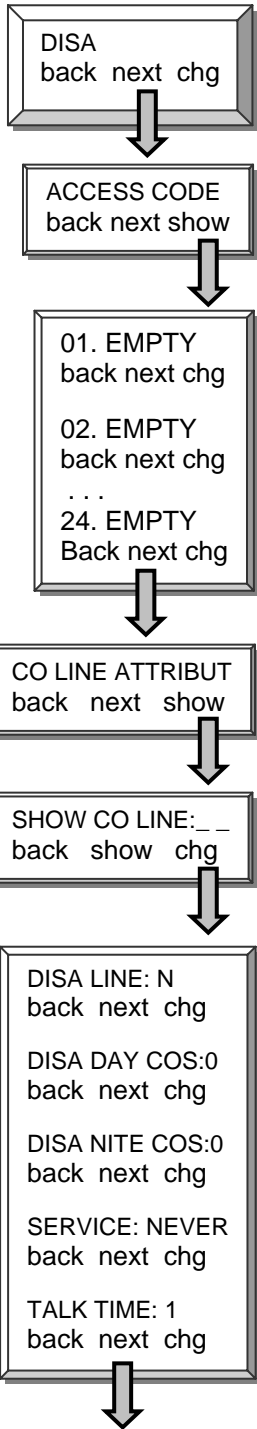
```
1. STATION
2. CO LINE
3. CALL HANDLING
4. RESOURCE
5. RESTRICTION
6. SYS APPLICATION
back    next   show
```

```
PRIVACY RLS
PRIV RLS TONE
EX_HOLD TIME
FLASH TIME
REMIND TIME
PARK REMIND
PAUSE TIME
PBX CODE
PBX AUTO PAUSE
DIALING RATIO
VM DIALING RATIO
WARNING TIME
RECALL TIME
SLT HOOK_FLASH
DISA
EXTERNAL FORWARD
UNS CONF TIME
OPERATOR CODE
UNS CONFERENCE
CALL ABANDON TIM
RING ALT POS
CO LN PRESET FWD
WAIT_ICLID
VM MON TIME
```

```
DISA
back  next  chg
```
↓
```
ACCESS CODE
back next show
```
↓
```
01. EMPTY
back next chg

02. EMPTY
back next chg
 . . .
24. EMPTY
Back next chg
```
↓
```
CO LINE ATTRIBUT
back   next   show
```
↓
```
SHOW CO LINE:_ _
back  show  chg
```
↓
```
DISA LINE: N
back  next  chg

DISA DAY COS:0
back  next  chg

DISA NITE COS:0
back  next  chg

SERVICE: NEVER
back  next  chg

TALK TIME: 1
back  next  chg
```
↓

Direct Inward System Access (DISA) –

Access Code – This feature allows an outside caller to dial in to the system on CO lines marked as DISA. The caller will hear intercom dial tone, allowing them to enter their private access code. Once the access code is verified the system allows the caller to dial an extension or dial 9 to access an outside CO line and is able to make an outside call. Each system will support up to 24 unique DISA access Codes.

Note: The use of this feature could result in unintentional toll charges. Additionally, it is unwise to mark any CO as toll override "Y" because it could result in further toll charges.

CO Line Attributes – Are a series of parameters that can be defined for each DISA CO Line.

   Show CO line – Enter the CO line that will have DISA Access. Valid entries:
           System24 – (01 – 09)
           System48 – (700 – 717)

   DISA Line – Change to Y to indicate that this CO line should be a DISA type.

   DISA DAY COS – This parameter governs the toll restriction of the entered CO Line, which is applied to the CO line after a caller enters their private DISA access code.

   DISA NITE COS – Does the same as the DISA DAY COS when the system is in Night Mode.

   Note: Do not mark a DISA CO line as "Toll Restriction override!" (See Toll Restriction)

   Service – Represents the time of day the entered CO will be available, day, night (NITE), always or never.

   Talk Time – Determines the length of time a caller can remain on an active call, once their DISA Access code is entered. The timer can be extended by entering the code.

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

3. Call Handling – External Forward

```
EXTERNAL FORWARD
back    next   show
```

```
INCOMING: 0
back  next  chg

OUTGOING: 0
back  next  chg

SERVICE: NEVER
back  next  chg

TALK TIME: 1
back  next  chg
```

```
UNS  CONF TIME:  1
back      next      chg
```

```
OPERATOR  CODE: 0
back      next      chg
```

```
UNS CONFERENCE: Y
back      next      chg
```
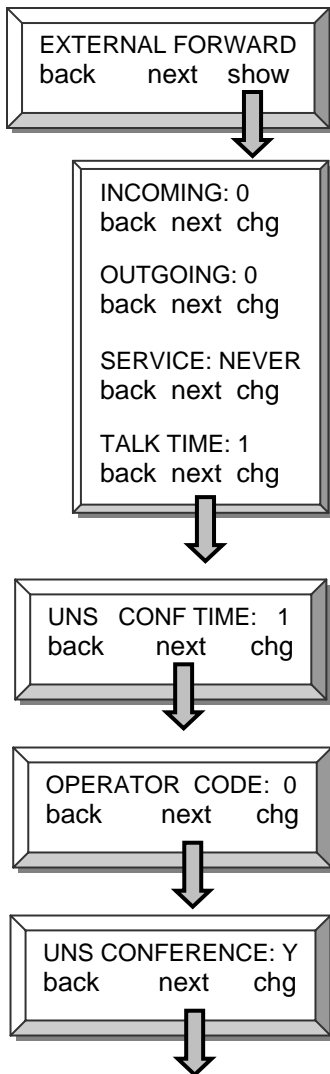
External forward – requires one inbound and one outbound CO line, which will be joined by system speed bin 99 (See System Speed Bin)

Incoming / Outgoing – Select an inbound and an outbound CO line to be used.

System24 – (01 – 09)
System48 – (700 – 717)

Service – Represents the time of day the entered CO will be available, day, night (NITE), always or never.

Talk Time – Determines the length of time a caller can remain on an active call, once their DISA Access code is entered. The timer can be extended by entering the code.

Unsupervised Conference Timer – is the timer that governs the length of an unsupervised conference.

Operator Code – Press "*chg*" to toggle between 9 and 0. This establishes the digit used to access the operator from within the system.

Unsupervised Conference – Allows or denies any CO line to be part of an unsupervised conference. An unsupervised conference is where 2 or more CO lines are conferenced together without an internal party being present. An unsupervised conference will follow the unsupervised conference timer.

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

3. Call Handling – Call Abandon Time

```
1. STATION
2. CO LINE
3. CALL HANDLING
4. RESOURCE
5. RESTRICTION
6. SYS APPLICATION
back    next    show
```

```
PRIVACY RLS
PRIV RLS TONE
EX_HOLD TIME
FLASH TIME
REMIND TIME
PARK REMIND
PAUSE TIME
PBX CODE
PBX AUTO PAUSE
DIALING RATIO
VM DIALING RATIO
WARNING TIME
RECALL TIME
SLT HOOK_FLASH
DISA
EXTERNAL FORWARD
UNS CONF TIME
OPERATOR CODE
UNS CONFERENCE
CALL ABANDON TIM
RING ALT POS
CO LN PRESET FWD
WAIT_ICLID
VM MON TIME
```

```
CALL ABANDON TIM
back   next   show
```

```
ACTIVE CALL: 600
back   next   chg

HELD CALL: 600
back   next   chg
```

```
RING ALT POS: 30
back      next    chg
```

Call Abandon Time – Has two parameters which are active call and held call. The call abandon time represents the minimum interruption in loop current during these modes of operation that must be detected to force a CO line on-hook.

> Active call – Press "*chg*" and enter the amount of time, from 50 to 2500 (2.5 seconds) milliseconds, that an open loop must be active to terminate an active call.

> Held Call – Press "*chg*" and enter the amount of time, from 50 to 2500 (2.5 seconds) milliseconds, that an open loop must be active to terminate a call on hold.

Ring Alternate Position – This value represents the amount of time, in seconds, that will pass before the alternate ringing position begins to ring. Press chg to toggle through the values between 30 and 180.

NOTE: One station may be assigned as the alternate attendant position. CO calls that go unanswered at the attendant will ring at the Alternate Position following expiration of this timer.

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

3. Call Handling – CO Preset Forward

```
┌─────────────────────┐
│ CO LN PRESET FWD    │         ┌─────────────────────┐
│ back   next   show  │  ───▶   │ CO P-FWD TIME:16    │    A
└─────────────────────┘         │ back    next    chg │
          │                     └─────────────────────┘
          ▼                                │
                                           ▼
                                ┌─────────────────────┐
                                │ CO LN ATTRIBUTE     │    B
                                │ back   next   show  │
                                └─────────────────────┘
                                           │
                                           ▼
                                ┌─────────────────────┐
                                │ SHOW CO LINE: _     │
                                │ bksp   show   chg   │
                                └─────────────────────┘
                                           │
                                           ▼
                                ┌─────────────────────┐
                                │ ACCESS CODE         │    C
                                │ Back   next   show  │
                                └─────────────────────┘
                                           │
                                           ▼
                                ┌─────────────────────┐
                                │ CO1 DEST: EMPTY     │    D
                                │ back    next    chg │
                                │                     │
                                │ CO1 VM: EMPTY       │    E
                                │ back    next    chg │
                                └─────────────────────┘
```
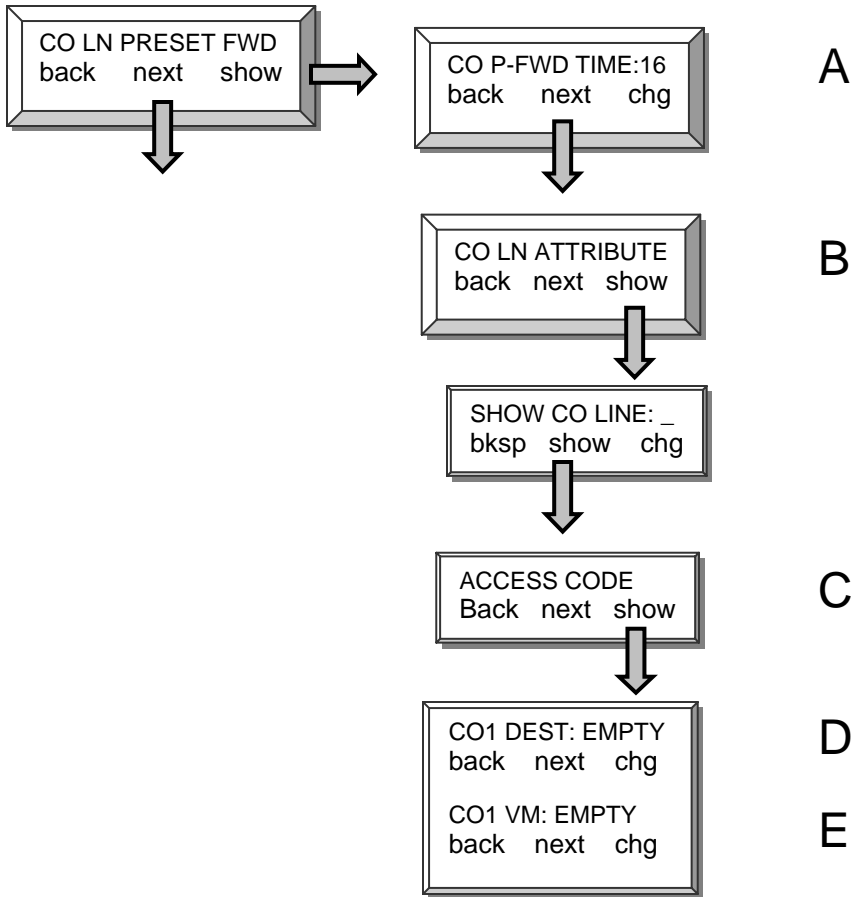
CO Line Preset Call Forward is similar to the No Answer Forward operation in which a timer, CO P-FWD TIME can be preset for each CO line selected. When a CO line rings the timer is activated. When the timer expires the call is forwarded to a preset destination.

Please refer to the "*Special Preset Call Forward*" section on the next page.

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

3. Call Handling – Preset Call Forward
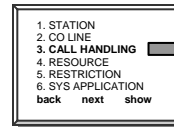
1. STATION
2. CO LINE
3. CALL HANDLING
4. RESOURCE
5. RESTRICTION
6. SYS APPLICATION
back   next   show

PRIVACY RLS
PRIV RLS TONE
EX_HOLD TIME
FLASH TIME
REMIND TIME
PARK REMIND
PAUSE TIME
PBX CODE
PBX AUTO PAUSE
DIALING RATIO
VM DIALING RATIO
WARNING TIME
RECALL TIME
SLT HOOK_FLASH
DISA
EXTERNAL FORWARD
UNS CONF TIME
OPERATOR CODE
UNS CONFERENCE
CALL ABANDON TIM
RING ALT POS
CO LN PRESET FWD
WAIT_ICLID
VM MON TIME

Special Preset Call Forward Table

A. Press Change to toggle Preset forward timer from values: 6, 10, 16, 22, 30, 40

B. Press Show to select which CO line is going to be programmed with preset call forwarding. Valid entries are:
    System24 – (01 – 09)
    System48 – (700 – 717)

C. Enter a valid CO line, for example 01, then press Show

D. Enter the destination to be forwarded to; such as another extension, hunt or Voice Mail group. Valid entries are:
    System24
        Stations: 10 – 95
        Hunt or Voice Mail group 82 – 89

    System48
        Extensions: 100 – 195 and 199 (system modem)
        Hunt or Voice Mail group 800 - 809

E. Press chg to enter the VMID. This ID can be used to direct callers to a specific location in the Voice Mail, for example, for multi-tenant applications.

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

3. Call Handling – Wait_ICLID

```
WAIT – ICLID: 6
back    next    chg
```

⬇

```
VM MON TIME: 10
back    next    chg
```

⬇
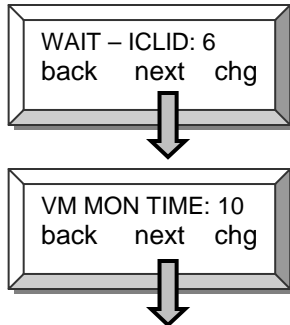
WAIT – ICLID - The amount of time that the system will wait for the Caller ID signal from the Telephone Company. Once this timer expires, the system presents the Caller ID and the first audible ring to the programmed extension(s). Valid entries are 3.5 to 7.

Note: Generally, this setting will range from 4 to 6 seconds.

VM Monitor Time – Is used with Answering Machine Emulation. After a call rings at an extension and it is forwarded to voicemail, this timer begins. Once the timer expires, the call can no longer be monitored or retrieved. Valid entries are between 10 and 60.

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

4. Resource

```
1. STATION
2. CO LINE
3. CALL HANDLING
4. RESOURCE
5. RESTRICTION
6. SYS APPLICATION

 back    next    show
```

```
RING SCHEME
LETTER TYPE
ATTENDANT
ALTERNATE
SYSTEM ALARM
NITE START
NITE END
DB PSWD
USER PASSWORD
USER NAMES
PREPROG MESSAGE
SYSTEM SPEED NO
BGM
CO LINE COPY
STATION COPY
FEATURE BTN COPY
SYSTEM TIME
AC_CODE TABLE
NAME DIRECTORY
DATA LINK
RMTX_RATE
SMDRX_RATE
HOUR MODE
DIAL TONE DET
DIAL WAIT TIME
RELAY CTRL
KSU REVISION
```

Press show to customize Resource parameters or next to go to 5. *RESTRICTION*

```
RING SCHEME: 0
 back   next   chg
```

Ring Scheme is used to customize the ring cadence of the system. Press chg to toggle through the values 0, 1, and 2.

Note: For proper voicemail operation please set the ring scheme to either 1 or 2. These settings supply the voicemail 1 second of "Ring Signal" which is needed to recognize an incoming call.

The PCS digital system may be set to three different ringing schemes. In ring Schemes 0 and 2, ringing is differentiated by cadence so that a user is aware of the type of call ringing at his station by the tone cadence. In Scheme 1, ringing of both intercom calls and CO line calls is the same.

	SCHEME 0	**SCHEME 1**	**SCHEME 2**
Intercom Ringing	1s ON, 3s OFF	1s ON, 3s OFF	300ms ON, 400ms OFF, 300ms ON, 4 seconds OFF
CO Line Ringing	300ms ON, 400ms OFF, 300ms ON, 4 second OFF	1s ON, 3s OFF	1s ON, 3s OFF

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

4. Resource – Letter Type

```
LETTER TYPE: 0
back    next    chg
```

```
ATTENDANT: 10
back    next    chg
```

```
ALTERNATE: EMPTY
back    next    chg
```

```
SYSTEM ALARM
back    next    show
```

```
ALARM 1 : EMPTY
back    next    chg

ALARM 2 : EMPTY
back    next    chg
…
ALARM 8 : EMPTY
back    next    chg
```

```
NITE START: 17:00
back    next    chg
```

```
NITE END: 08:00
back    next    chg
```
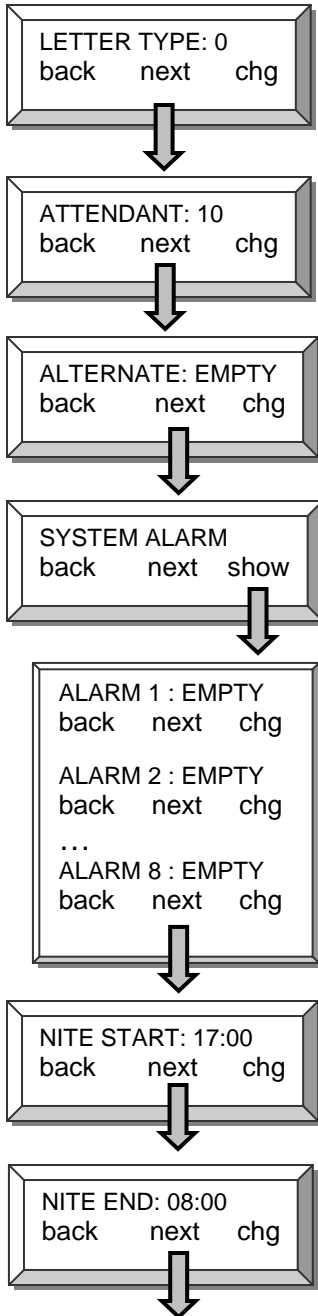
Letter type - Is used to customize the characters for the M*essaging* and *Name in Display features.* This allows the letters to be adjusted to accommodate special characters and language requirements.

Attendant – Defines the attendant and the extension that will ring when someone in the system dials "0".

Alternate – Defines the extension that will ring when the attendant is unavailable. Valid stations are:
System24 – (10 – 81)
System48 – (100 – 195)

System Alarm – There are 8 system alarms that can be set to alert all digital station users on the system. This is generally used to alert all users of a specific event such as "Lunch". Idle station users will hear one minute of background music (BGM).

Note: only idle stations will hear the alert. Extension set to play BGM may not be able to differentiate between the alarm and BGM.

Alarm 1 – To set a system alarm, Press "*chg*" and enter the designated time for each of the 8 alarms. The alarm will play daily at the programmed time. Enter the time using a 24-hour format, 00:00 to 23:59.

Nite Start – Is used when the system is set to *timed* (See *Attendant Administration*). The system will automatically change from day to night (NITE) mode. Press chg and enter time in 24-hour format, 00:00 to 23:59.

Nite end – Is used when the system is set to *timed* (See *Attendant Administration*). The system will automatically change from night (NITE) to day mode. Press chg and enter time in 24-hour format, 00:00 to 23:59.

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

4. Resource – DB Password
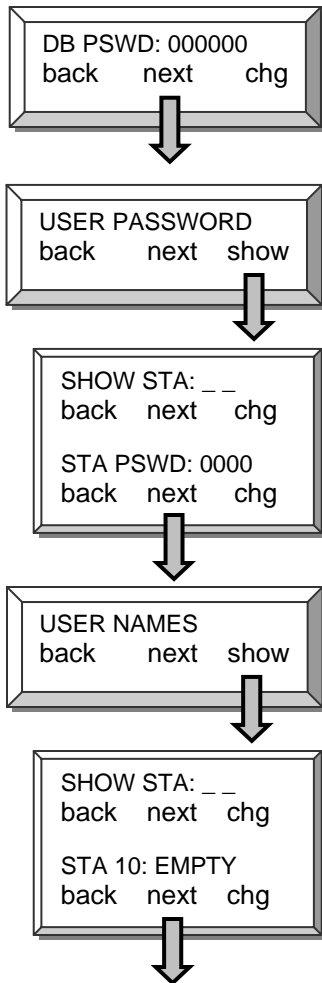
```
1. STATION
2. CO LINE
3. CALL HANDLING
4. RESOURCE
5. RESTRICTION
6. SYS APPLICATION

back  next  show
```

```
RING SCHEME
LETTER TYPE
ATTENDANT
ALTERNATE
SYSTEM ALARM
NITE START
NITE END
DB PSWD
USER PASSWORD
USER NAMES
PREPROG MESSAGE
SYSTEM SPEED NO
BGM
CO LINE COPY
STATION COPY
FEATURE BTN COPY
SYSTEM TIME
AC_CODE TABLE
NAME DIRECTORY
DATA LINK
RMTX_RATE
SMDRX_RATE
HOUR MODE
DIAL TONE DET
DIAL WAIT TIME
RELAY CTRL
KSU REVISION
```

```
DB PSWD: 000000
back   next   chg
```

```
USER PASSWORD
back    next   show
```

```
SHOW STA: _ _
back   next   chg

STA PSWD: 0000
back   next   chg
```

```
USER NAMES
back    next   show
```

```
SHOW STA: _ _
back   next   chg

STA 10: EMPTY
back   next   chg
```

DB PSWD – Customize the system database password. The password must be 6 digits in length and can be any digit between `000000` and `999999`. `*` and `#` are not valid digits.

User Password – Allows various stations to have a unique user password as well as establishing the "*Attendant Administration*" password. Once the Attendant is defined in the Resource (See *Resource – Attendant)* the Attendant Administration password becomes that station user's password. By default the Attendant is station 10, and the password is "`0000`". Additionally this feature is used to lock the station. Once locked, the station CANNOT make any CO line calls. This includes 911 calls. Stations that have a need to access 911 must never be locked. Enter extension number and Press "show" to view the password. Press "next" to continue or "back" to view another station's password.

User Name - Allows each telephone to have the user's, or specialized name, in the display. Each name can have up to seven characters. The "Dial input screen" below will assist in the programming of the names.

Dial input screen

Key	1st Depression	2nd Depression	3rd Depression
1	Special Characters		
2	A	B	C
3	D	E	F
4	G	H	I
5	J	K	L
6	M	N	O
7	P	R	S
8	T	U	V
9	W	X	Y
0	Q	Z	Next
*	To enter a number, rather than a letter, Press "*" before pressing a number key. For lower case letters Press the "*" key after a letter is selected.		
#	Space or when two letter are used back to back. Lloyd for example, would require the following entry "555#5556669993"		

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

4.Resource – Preprogrammed Messages

```
PREPROG MESSAGE
back    next   show
```
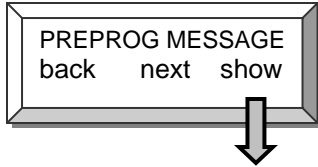
There are two types of Preprogrammed Messages; Outgoing and Executive Notify. The Outgoing Message works with Message Waiting and allows a display telephone to display a text message when called. Executive Notify is used to send a text message to a busy display telephone.

```
OUTGOING MESSAGE_
back    next   show
```

```
EXECUTIVE NOTIFY_
back    next   show
```

```
CALL OPERATOR
back   next   chg

CALL HOME
back   next   chg

CALL SCHOOL
back   next   chg

VISITORS WAITING
back   next   chg

URGENT
back   next   chg

COME SEE ME
back   next   chg
```

```
OUT FOR LUNCH
back   next   chg

BE BACK SOON
back   next   chg

LEFT FOR THE DAY
back   next   chg

IN A MEETING
back   next   chg

OUT OF OFFICE
back   next   chg

ON VACATION
back   next   chg
```
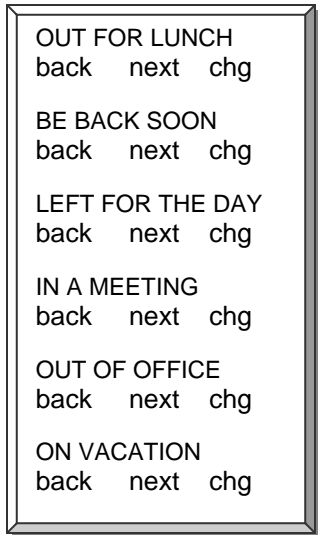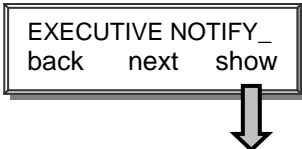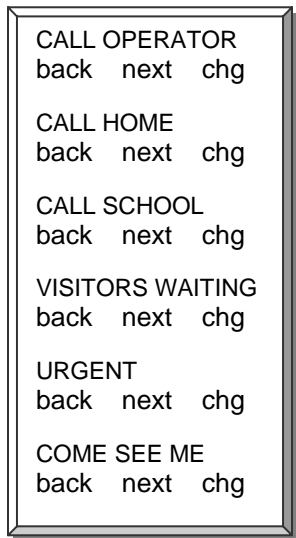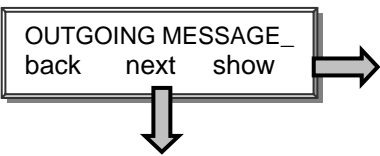
Press **Hold** to back up one programming menu
Press **Clear** to exit programming

4. Resources – System Speed No

1. STATION
2. CO LINE
3. CALL HANDLING
4. RESOURCE
5. RESTRICTION
6. SYS APPLICATION

back   next   show

RING SCHEME
LETTER TYPE
ATTENDANT
ALTERNATE
SYSTEM ALARM
NITE START
NITE END
DB PSWD
USER PASSWORD
USER NAME
PREPROG MESSAGE
SYSTEM SPEED NO
BGM
CO LINE COPY
STATION COPY
FEATURE BTN COPY
SYSTEM TIME
AC_CODE TABLE
NAME DIRECTORY
DATA LINK
RMTX_RATE
SMDRX_RATE
HOUR MODE
DIAL TONE DET
DIAL WAIT TIME
RELAY CTRL
KSU REVISION

```
SYSTEM SPEED NO
back    next   show
```

```
SPEED NO : _ _
back    next   chg
```

```
BGM : Y
back    next    chg
```

Each system has 80 (20-99) System Speed Dial Bins.
Note: Access and use of system speed dial bins are governed by the extensions' Class of Service (COS) assignment.

COS (0-5) can access all eighty System Speed Dial Bins
COS 6 can only access speed bins 20-39 and override the stations toll restriction.
COS 7 cannot use System Speed Dial Bins.

Programmable digits are:
   Digits (**0**-**9**) [**✱**], [**#**]
Specialized digits are:
   Pause [____FEAT____**7** **0**]
   Flash [____FEAT____**3**]
   Chain together up to 16 System Speed Bins [____FEAT____**1** + NN]

Press chg to toggle Y (Yes) or N (No) to enable background music.
         Note: This is a system wide setting.

```
CO LINE COPY
back    next   show
```
```
COPY FROM:
back   save   chg
```
```
COPY TO:
back   save   chg
```

```
STATION COPY
back    next   show
```
```
COPY FROM:
back   save   chg
```
```
COPY TO:
back   save   chg
```

```
FEATURE BTN COPY
back    next   show
```
```
COPY FROM:
back   save   chg
```
```
COPY TO:
back   save   chg
```

CO line, station and feature button copy all work the same way. The first entry "Copy From" is the template to be copied. The "Copy To" is the CO line, station or feature button format that will emulate the template.

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

4. Resource – System Time

```
SYSTEM TIME_
back    next    show
```

⬇

```
YEAR : 00
back  next   chg

MONTH: JAN
back   next   chg

DAY: 00
back   next   chg

WEEKDAY:  MON
back   next  chg

HOUR:  00
back   next   chg

MINUTE:  00
back   next   chg
```

⬇

```
AC_CODE TABLE
back    next    show
```

⬇

```
LENGTH: 4
back   next     chg
```

⬇

```
001. EMPTY
back  next  chg

002. EMPTY
back  next  chg
 . . .
100. EMPTY
Back  next  chg
```
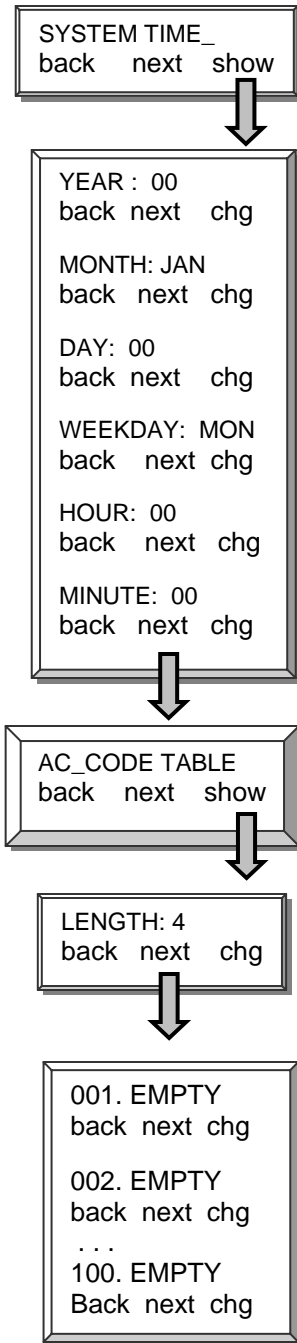
System time is displayed on all digital display telephones. Use the following parameters to program the current system time and date. Press chg to change or select the following parameters.

Year – Enter the year in two digit format (05)

Month – Select the current month

Day – Enter the current day (01 - 31)

Weekday – Select the day of the week

Hour – Enter the hour in 24 hour format (00:00 – 23:59). Examples:
        14:00 = 2:00 pm
        18:00 = 6:00pm
        21:00 = 9:00 pm.

Minute – Enter the current minutes (00 – 59)

Account code tables - Are used to store up to 100 unique account codes. When a station user enters an account code, the codes are verified against these entries. If a valid account code is entered, the station will have the ability to override specific toll restrictions assigned by their Class of Service.

Length – To increase security the account code length is adjustable from 4 to 8 digits. If the account code length is increased, after account codes are entered, those numbers will have a "0" added for each numbered increased. For example, if 1234 is a valid 4 digit account code and the account code length is changed to 8 digits the code 1234 changes to 12340000. Conversely, if 12345678 is a valid 8 digit account code and the account code length is changed to 4 digits, the code 12345678 changes to 1234.

"Table" 001 ~ 100 - Enter one unique account code in each "Table". Valid entries can be from **0 0 0 0** – **9 9 9 9 9 9 9 9** depending on the "*Length*" value.

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

4. Resource – Name Directory

```
1. STATION
2. CO LINE
3. CALL HANDLING
4. RESOURCE
5. RESTRICTION
6. SYS APPLICATION

  back   next   show
```

```
RING SCHEME
LETTER TYPE
ATTENDANT
ALTERNATE
SYSTEM ALARM
NITE START
NITE END
DB PSWD
USER PASSWORD
USER NAME
PREPROG MESSAGE
SYSTEM SPEED NO
BGM
CO LINE COPY
STATION COPY
FEATURE BTN COPY
SYSTEM TIME
AC_CODE TABLE
NAME DIRECTORY
DATA LINK
RMTX_RATE
SMDRX_RATE
HOUR MODE
DIAL TONE DET
DIAL WAIT TIME
RELAY CTRL
KSU REVISION
```

```
NAME DIRECTORY
back    next   show
```
⬇
```
SHOW ENTRY:
back    show   chg
```
⬇
```
NAME
back    next   show
```
⬇
```
EMPTY
back    show   chg
```
⬇
```
DESTINATION
back    next   show
```
⬇
```
TYPE : ICM
back  next    chg

DEST: _ _
back  next    chg
```
⬇
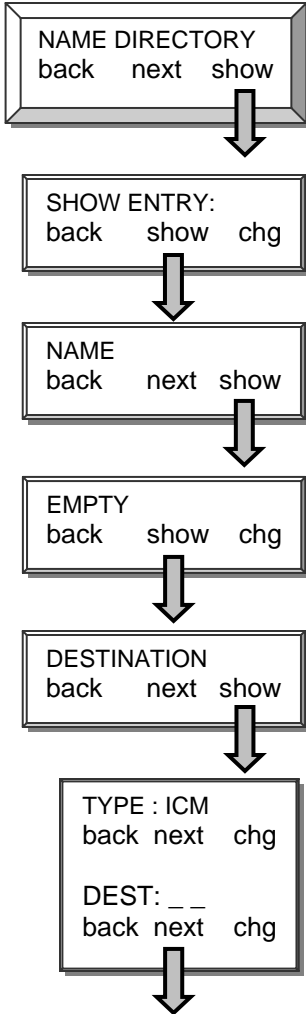
Name Directory Associates names with Stations or a System Speed Dial Bins.

> Show entry – Enter the Table/bin number of the entry to be modified. Valid entries are 001 -968

> Name – Use the "*Dial input screen*" (See page 2-21) to enter the name that will be associated with the IMC/Speed dial bin. ("Home", for example would require the following entry: 4 4 6 6 6 # 6 3 3)

> Note: Use the " " key to insert a space or to go to the next character when the same letters, on a button, will be used back to back.

> Destination – Is where the name, that was just entered, is associated with the ICM or speed dial bin.

> Type – Associate the previously entered name with either an Intercom Extension (ICM) or a Speed Dial Bin (SPD).

> DEST – Enter the Station (ICM) or the Speed Dial Bin (SPD) Number that will be associated with the previously entered name.

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

4. Resource – Data Link

```
DATA LINK: MANUAL
back    next    chg
```
⬇

```
RMT X_RATE: 9600
back    next    chg
```
⬇

```
SMDRX_RATE: 9600
back    next    chg
```
⬇

```
HOUR MODE: 24
back    next    chg
```
⬇

```
DIAL TONE DET: N
back    next    chg
```
⬇

```
DIAL WAIT TIME: 0
back    next    chg
```
⬇

```
RELAY CTRL:EMPTY
back    next    chg
```
⬇

```
KSU REVISION
back    next    chg
```
⬇
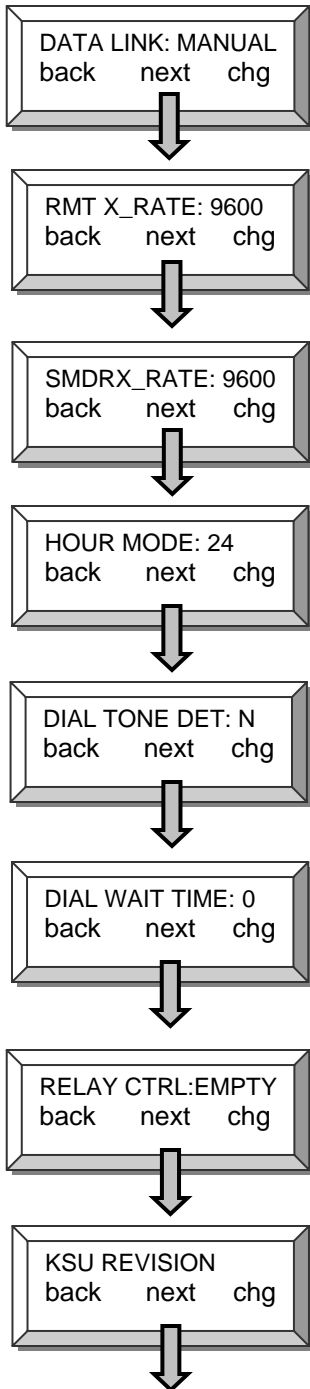
Data link - *** Future Feature ****

RMT X_Rate – Adjusts the baud rate for the remote programming/ICLID port. It can be adjusted from 110 to 19200 kbps. PCSDigital recommends 9600 bps for the System24 and 2400 bps for the sytem48.

SMDRX_Rate – Adjusts the baud rate for the SMDR port. It can be adjusted from 110 to 19200 kbps.

Hour mode – Determines how the time will be displayed on the digital display telephones. Press chg to toggle between 12 or 24 hour format.

Dial tone det: - This parameter is used with older Central Office equipment. It will cause a delay before out dialing is permitted when accessing a CO line.

Note: It is recommended that this feature only be used in cases where dialing problems persist.

Dial Wait Time – Is used with older central office equipment, delaying the DTMF digits from being dialed directly to their equipment.

Note: This timer will override the dial tone detector. Do not change this value unless instructed by tech support!

Relay control – Enter the extension that will activate the loud bell relay when it goes off hook.

Note: This feature uses the Loud Bell contact.

KSU REVISION – Press show to see the KSU software version number. Looks like this. KSU: K12UV3.F03

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

Toll Restriction

Toll Restriction Description:
There are 100 "digit interval locations" or bins that are used to define the system's toll Restriction. Toll Restriction is based on the "*Allow Only principal"*, and each table is comprised of four data fields:

Digits From

Digits To

DCOS = DAY COS ALLOWED

NCOS = NITE COS ALLOWED

```
1. STATION
2. CO LINE
3. CALL HANDLING
4. RESOURCE
5. RESTRICTION
6. SYS APPLICATION

back     next     show
```

```
CO LN CALL DISCR

back      next      show
```

```
DGT INTERVAL:###
bksp    show    chg

FROM: 0
back      next      chg

TO: 9
back      next      chg

DAY ALLOWED:
back      next      chg

NITE ALLOWED:
back      next      chg
```

```
COS 0: Y
back  next  chg

COS 1: N
back  next  chg

COS 2: N
back  next  chg

COS 3: N
back  next  chg

COS 4: N
back  next  chg
…

COS 7: Y
back  next  chg
```

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

Toll Restriction – Theory

The "From" and "To" data fields, which appear as right arrows (   ), allow the programmer to enter a range of allowed telephone numbers up to 10 digits each in length. This flexibility allows the programmer to enter only the digits significant to the dialing restriction desired.

In class of service example below, each COS is read vertically. In this example, stations with COS 0 can dial all digits, except "*" and "#" during the day, and only local calls and 911 at night.

COS 1 can only dial 1800, 1888, 1877, and 911 during the day, and only 911 at night. To allow COS 1 to dail only 911 at night, 911 was entered for both the "From" and "To"; no other numbers will be allowed.

Example of a basic toll restriction:

Digit Interval	Digits From	Digits To	Day COS 0	Day COS 1	Day COS 2	…Day COS 7	Night COS 0	Night COS 1	Night COS 2	…Night COS 7
001	0	9	Y							
002	1800	1800		Y						
003	1888	1888		Y						
004	1877	1877		Y						
005	2	9			Y		Y			
006	911	911	Y	Y	Y	Y	Y	Y	Y	Y
...100										

Note: When designing and using toll restriction the following System Speed Dial Bins are only available to the listed Classes of service
COS (0-5) can access all eighty System Speed Dial Bins
COS 6 can only access System Speed Dial Bins 20-39 – and these will override the station's toll restriction.
COS 7 cannot use System Speed Dial Bins.

Note: The default Class of Service (0) allows station users to dial, as the first digit, any number from   to   . Therefore neither [ ] nor [ ]can be dialed as the first digit, which will restrict access to some Telephone Company features, such as Caller ID Block Clear,   .

Digit Interval 001 – Default Entry:

Digit Interval	Digits From	Digits To	Day COS 0	Night COS 0
001	0	9	Y	Y

To allow [ ] and [ ] as the first digits dialed, you must change "Digit interval" table 001, which currently has "From 0" - "To 9", to "From 0" – "To #".

Digit Interval	Digits From	Digits To	Day COS 0	Night COS 0
001	0	#	Y	Y

System Application (PCS *mail* ™ Programming)

```
1. STATION
2. CO LINE
3. CALL HANDLING
4. RESOURCE
5. RESTRICTION
6. SYS APPLICAT.        →        STA HUNT GROUP
                                  VOICE MAIL
  back   next   show
```
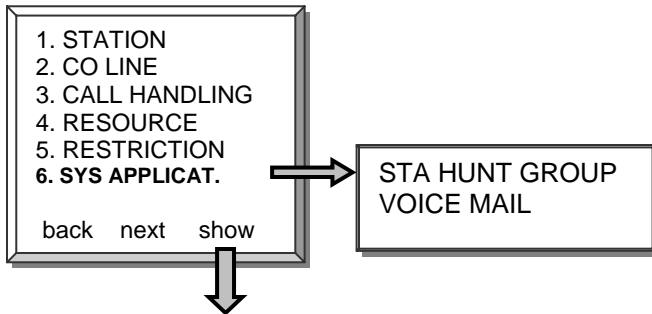
The System Application parameter deals with two types of station groups, Hunt and Voice mail. Both contain a group of stations that are assigned to ring, in the order that they are entered, when a pilot or group number is dialed. There are 8 different groups, each can have up to 24 members.

Below are the groups and their pilot numbers:

	PCS *digital* System 24	PCS *digital* System 48
Group 1 = Pilot number	82	800
Group 2 = Pilot number	83	801
Group 3 = Pilot number	84	802
Group 4 = Pilot number	85	803
Group 5 = Pilot number	86	804
Group 6 = Pilot number	87	805
Group 7 = Pilot number	88	806
Group 8 = Pilot number	89	807

Hunt Group – When the pilot number is dialed, the first station is checked, if it is busy, the call will "Hunt" on until it finds an idle station. When an idle station if found, the call begins to ring. An optional "All Ring Hunt Group" is available; when the pilot number is dialed, all idle stations in the group ring simultaneously.

Voice mail – A voice mail hunt group is used when integrating the telephone system with a voice mail system. This type of group works like a regular Hunt group with one exception; when the pilot number is dialed, before ringing the voice mail stations, special tables (See *6. System Application – Voice mail*) are referenced. These tables contain the "In-Band" signaling that is required to integrate the two systems. Only one hunt group per system can be a "Voice mail" hunt group.

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

6. System Applications - Station Hunt Group

1. STATION
2. CO LINE
3. CALL HANDLING
4. RESOURCE
5. RESTRICTION
6. SYS APPLICATION

back   next   show

Sta Hunt group
Voicemail

```
STA HUNT GROUP
back    next   show
```

```
HUNT GROUP: _ _
bksp    next    chg
```

```
GROUP TYPE:  HUNT
back    next    chg
```

```
GROUP MEMBER
back    next   show
```

```
MEMBER 01: _ _
back   next   chg

MEMBER 02: _ _
back   next   chg
 . . .
MEMBER 24: _ _
back   next   chg
```

```
RING  ASSIGNMENT
back    next    chg
```

```
CO LINE 1: NONE
back    next    chg

CO LINE 2: NONE
back    next    chg
. . .
CO LINE 18: NONE
back    next    chg
```

Hunt group - Enter the number (1 – 8) representing the value of the hunt group, listed below, to be viewed or changed.
        System24 – (82-89)
        System48 – (800-807)

Group type – Choose the hunt group type, HUNT, ALL RING OR VOICE MAIL type.

Note: Next step we will select which station will be members of this group.

Group Member – Press show to add members into a hunt group. Each group can have up to 24 members.

Member 01: enter the member's extension number.
        System24 – Digital (10 – 25)
                    Analog (58 – 73)
        System48 – Digital (100 – 147)
                    Analog (148 – 195)

Note: Press next to input up to 24 members.

Ring Assignment - This parameter establishes ringing for each CO line at the entered hunt group. Ringing can be set for Day, Night (NITE), Both or None. This parameter must be set for every CO line physically on the system. For example, a 3 x 8 system has 3 CO lines, 6 x 16 system has 6 CO lines.

Note: When all questions are answered, you will return to "Hunt Group: __" Press Hold to return to "Sta Hunt Group" and next to program "Voice Mail"

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

6. System Application – Voice Mail

```
┌─────────────────────────┐
│ VOICE MAIL              │
│ back    next    show    │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│ ICM PREFIX: EMPTY:      │
│ back   next   chg       │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│ XFR PREFIX:  EMPTY      │
│ back   next   chg       │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│ RECORD DGT: EMPTY       │
│ back     next   chg     │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│ ICM SUFFIX: EMPTY       │
│ back   next   chg       │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│ DIS DGT: EMPTY          │
│ back   next     chg     │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│ 1. STATION              │
│ 2. CO                   │
│ 3. CALL HANDLING        │
│ 4. RESOURCE             │
│ 5. RESTRICTION          │
│ 6. SYS APPLICATION      │
│                         │
│ back    next    show    │
└─────────────────────────┘
```
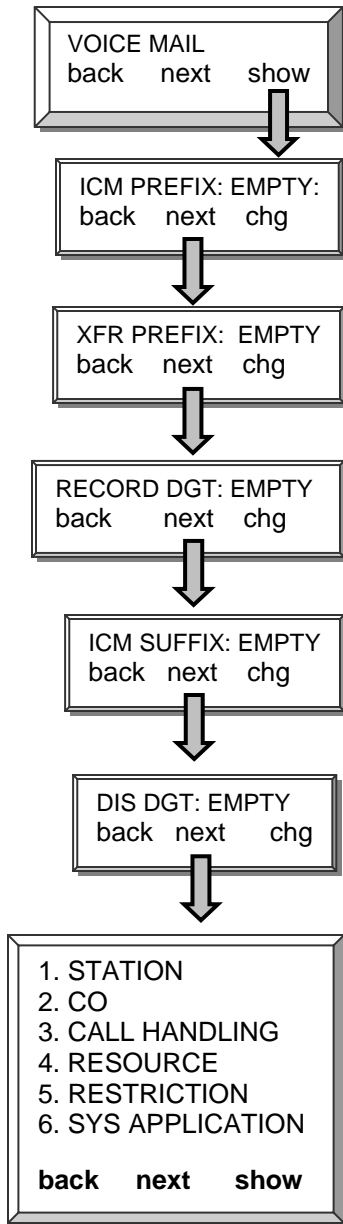
Press show to display the Voice Mail Group integration fields.

Values:
ICM Prefix = Intercom Prefix digits
XFR Prefix = Transfer CO Line Prefix digits
Record DGT = One touch record digits
ICM Suffix = Intercom suffix digits
DIS DGT = Disconnect digits.

ICM Prefix – This is the digit that will precede the voice mailbox number when the voice mail button ($\frac{FEAT}{}$ 6 4)is pressed at an extension. For the PCS Mail - Press chg and enter "#" then press save.

XFR Prefix – This is the digit that will precede the voice mailbox number when a call is transferred a voice mail extension. For the PCS Mail – This parameter should remain empty.

RECORD DGT – This is the digit required by the voice mail to begin recording. For the PCS Mail – This parameter should remain empty.

ICM SUFFIX – This is the digit that follows the voice mailbox number when the voice mailbox button ($\frac{FEAT}{}$ 6 4) is pressed at an extension. For the PCS Mail – This parameter should remain empty.

XFR Suffix – This is the digit that follows the voice mailbox number when a call is transferred to a voice mailbox extension.   For the PCS Mail – This parameter should remain empty.

DIS DGT – This is the digits required by the voice mail to ensure a positive disconnect signal from the KSU. For the PCS Mail – To ensure quick disconnects enter "✱ ✱ ✱ ✱" then press "*save*".

Note: Refer to Appendix A for a quick step by step PCS mail installation guide

Note: When all parameters are reviewed, you will return to *"Hunt Group: __"* Press Hold to return to "*Sta Hunt Group*" and next to program "*Voice Mail*"

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

Appendix A (*Programming PCS digital ™ System 24 / 48 with PCS mail™*)

In Band Integration Procedure

Article I.   Step 1

At any PCS Digital Key Telephone station:
[FEAT] + **[#]** + **[*]**
The display reads DB PSWD:
Enter password **[000000]** (default password)
Press the **[SHOW]** soft-key
Press the **[NEXT]** soft-key
The display reads 1. STATION
Press the **[SHOW]** soft-key
The display reads SHOW STA:
Enter **[16]**
Press the **[SHOW]** soft-key
Press the **[NEXT]** soft-key until the display reads VM PORT: N
Press the **[CHG]** soft-key
The display reads VM PORT: Y
Press the **[HOLD]** key
The display reads SHOW STA:
Enter **[64]**
Press the **[SHOW]** soft-key
Press the **[NEXT]** soft-key until the display reads VM PORT: N
Press the **[CHG]** soft-key
The display reads VM PORT: Y

NOTE: In this example only two voice mail ports are being used. Repeat these steps if you are adding more than two voicemail ports.

Note: When setting the ringing assignment In Step 2, "BOTH" is used for Auto Attendant applications where the voicemail will answer all of the inbound calls. "NITE" (night), which is the most commonly used, is used to have a live attendant answer during the day, and the voicemail answer only at night. "DAY" is used to have a live attendant answer at night, and the voicemail answer only during the day. "NONE" is used if the voicemail is only being used for recording and sending message. None of the CO lines will ring directly to the voicemail.

Press **Hold** to back up one programming menu
Press **Clear** to exit programming

Step 2

Press the **[HOLD]** key twice
The display reads 1. STATION
Press the **[NEXT]** soft-key until the display reads 6. SYS APPLICAT.
Press the **[SHOW]** soft-key
The display reads STA HUNT GROUP
Press the **[SHOW]** soft-key
The display reads HUNT GROUP:
Enter **[8]**
Press the **[SHOW]** soft-key
The display reads GROUP TYPE: HUNT
Press the **[CHG]** soft-key
The display reads GROUP TYPE: VM
Press the **[NEXT]** soft-key
The display reads GROUP MEMBER
Press the **[SHOW]** soft-key
The display reads MEMBER 01: EMPTY
Press the **[CHG]** soft-key
Enter **[16]**
Press the **[SAVE]** soft-key
Press the **[NEXT]** soft-key
The display reads MEMBER 02: EMPTY
Press the **[CHG]** soft-key
Enter **[64]**
Press the **[SAVE]** soft-key
Press the **[HOLD]** key
The display reads GROUP MEMBER
Press the **[NEXT]** soft-key
The display reads RING ASSIGNMENT
Press the **[SHOW]** soft-key
The display reads CO LINE 1: NONE
Press the **[CHG]** soft-key until the display reads CO LINE 1: BOTH
Press the **[NEXT]** soft-key
The display reads CO LINE 2: NONE
Press the **[CHG]** soft-key until the display reads CO LINE 2: BOTH

NOTE: In this example only two CO Lines are being used. For your Installation you will need these steps for
every CO line installed on the PCS Digital KSU.

Step 3

Press the **[HOLD]** key until the display reads 6: SYS APPLICAT.
Press the **[NEXT]** soft-key
The display reads 1. STATION
Press the **[SHOW]** soft-key
The display reads SHOW STA:
Enter **[10]**
Press the **[SHOW]** soft-key
Press the **[NEXT]** soft-key until the display reads RING ASSIGNMENT
Press the **[SHOW]** soft-key
The display reads CO LINE 1: BOTH
Press the **[CHG]** soft-key until the display reads CO LINE 1: NONE
Press the **[NEXT]** soft-key
The display reads CO LINE 2: BOTH
Press the **[CHG]** soft-key until the display reads CO LINE 2: NONE

> Note: The ringing assignment In Step 3 should be the opposite of the ringing assignment from Step 2. "NONE" is used for Auto Attendant applications where the voicemail will answer all of the inbound calls. "DAY" which is the most commonly used, is used to have a live attendant answer during the day, and the voicemail answer only at night. "NITE" (night) is used to have a live attendant answer at night, and the voicemail answer only during the day. "BOTH" is used if the voicemail is only being used for recording and sending message. None of the CO lines will ring directly to the voicemail.

Step 4

Press the **[HOLD]** soft-key until the display reads 1. STATION
Press the **[BACK]** soft-key
The display reads 6: SYS APPLICAT.
Press the **[SHOW]** soft-key
The display reads STA HUNT GROUP
Press the **[NEXT]** soft-key
The display reads VOICE MAIL
Press the **[SHOW]** soft-key
The display reads ICM PREFIX: EMPTY
Press the **[CHG]** soft-key
Enter [#]
Press the **[SAVE]** soft-key
Press the **[NEXT]** soft-key until the display reads RECORD DGT: EMPTY
Press the **[CHG]** soft-key
Enter [#]
Press the **[SAVE]** soft-key
Press the **[NEXT]** soft-key until the display reads DIS DGT: EMPTY
Press the **[CHG]** soft-key
Enter **[****]**
Press the **[SAVE]** soft-key
Press the **[CLEAR]** key to exit programming

Alphabetical List of Feature Codes

Alphabetical Feature Code List			
Account Code	FEAT **7 1**	Flash	FEAT **3**
Alarm - Reminder Delete	FEAT **✱ 9 2**	Forced Tone Ringing	**✱**
Alarm - Reminder	FEAT **9 2**	Group Call Pickup	FEAT **5 4**
Answering machine emulation	FEAT **6 4**	Headset Mode	FEAT **9 #**
Attendant Administration	FEAT **# 0**	Hold - Automatic	FEAT **9 4**
Authority Code	FEAT **5 5**	H-T-P mode	FEAT **9 8**
Auto Line Select	FEAT **9 5**	Key Set	FEAT **5 8**
Auto Line Select Delete	FEAT **✱ 9 5**	LNR	FEAT **8**
Call Back (Non-display only)	FEAT **9 1**	Meet Me Page	FEAT **5 9**
Call Back Delete (non-display only)	FEAT **✱ 9 1**	Message Waiting	FEAT **9 6**
Call Forward	FEAT **2**	MOH	FEAT **5 2**
Call Forward Message in Display	FEAT **# 6**	Monitor	FEAT **7 ✱**
Call Park Answer	FEAT **7 3**	Mute	FEAT **7 6**
Call Wait Allow/Deny	FEAT **6 8**	Night Service	FEAT **# 2**
Caller ID Table Display	FEAT **# 9**	Paging - All, External, both, group	FEAT **5 0**
CO Line Queuing (Non-Display only)	FEAT **9 3**	Pause (Speed Dial Bins)	FEAT **7 0**
Conference	FEAT **6 0**	Saved Number Redial	FEAT **5 1**
Direct Pickup	FEAT **5 3**	Speed Dial	FEAT **1**
Directory Dial	FEAT **7 9**	Speed Number Program	FEAT **# 1**
Distinctive Ringing (Ring Type)	FEAT **# 7**	Station Lock	FEAT **9 7**
DND	FEAT **4**	Unsupervised Conference	FEAT **7 7**
DSS Button Programming	FEAT **# 5**	User Saved Number Redial	FEAT **5 ✱**
Executive Display Message	FEAT **9 0**	VM Access Code	FEAT **6 4**
Extension Status	FEAT **# 8**	Voice Recorder	FEAT **7 2**
Feature Button Programming	FEAT **# 3**	Voice Select	FEAT **9 ✱**

Feature Code list by Feature Code

Alphabetical Feature Code List			
✱	Forced Tone Ringing	FEAT **5 9**	Meet Me Page
FEAT **# 0**	Attendant Administration	FEAT **6 0**	Conference
FEAT **# 1**	Speed Number Program	FEAT **6 4**	Answering machine emulation
FEAT **# 2**	Night Service	FEAT **6 4**	VM Access Code
FEAT **# 3**	Feature Button Programming	FEAT **6 8**	Call Wait Allow/Deny
FEAT **# 5**	DSS Button Programming	FEAT **7 ✱**	Monitor
FEAT **# 6**	Call Forward Message in Display	FEAT **7 0**	Pause (Speed Dial Bins)
FEAT **# 7**	Distinctive Ringing (Ring Type)	FEAT **7 1**	Account Code
FEAT **# 8**	Extension Status	FEAT **7 2**	Voice Recorder
FEAT **# 9**	Caller ID Table Display	FEAT **7 3**	Call Park Answer
FEAT **✱ 9 1**	Call Back Delete (non-display only)	FEAT **7 6**	Mute
FEAT **✱ 9 2**	Alarm - Reminder Delete	FEAT **7 7**	Unsupervised Conference
FEAT **✱ 9 5**	Auto Line Select Delete	FEAT **7 9**	Directory Dial
FEAT **1**	Speed Dial	FEAT **8**	LNR
FEAT **2**	Call Forward	FEAT **9 #**	Headset Mode
FEAT **3**	Flash	FEAT **9 ✱**	Voice Select
FEAT **4**	DND	FEAT **9 0**	Executive Display Message
FEAT **5 ✱**	User Saved Number Redial	FEAT **9 1**	Call Back (Non-display only)
FEAT **5 0**	Paging - All, External, both, group	FEAT **9 2**	Alarm - Reminder
FEAT **5 1**	Saved Number Redial	FEAT **9 3**	CO Line Queuing (Non-Display only)
FEAT **5 2**	MOH	FEAT **9 4**	Hold - Automatic
FEAT **5 3**	Direct Pickup	FEAT **9 5**	Auto Line Select
FEAT **5 4**	Group Call Pickup	FEAT **9 6**	Message Waiting
FEAT **5 5**	Authority Code	FEAT **9 7**	Station Lock
FEAT **5 8**	Key Set	FEAT **9 8**	H-T-P mode

PCS *digital*™
System 24
and
System 48

System Features and Operation

General Conventions

The following conventions are used in this manual:

◊   Digital Display Telephones have 3 soft buttons: Left, Center, and Right.

```
 _____
|  _____  |
| / APR 15    TUE 10:30  \               |
| | Robert           17  |               |
|  _____/                |
|_____|

        ▲           ▲           ▲
       ___         ___         ___
```
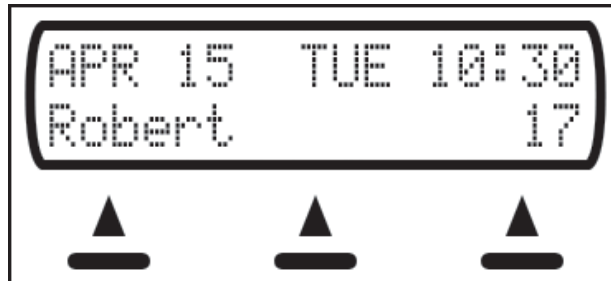
◊   When a soft button is to be pressed, the display menu item corresponding to the soft button will be placed in square brackets as follows: [next]
◊   Fixed Function Buttons and Dial Pad Buttons that are required will look as follows: ⎯FEAT⎯ 2
◊   Valid programming will be confirmed with a single beep from the speaker.
◊   Invalid programming can be identified with by a double beep from the speaker.
◊   Database programming (⎯FEAT⎯ # ✱) can only be programmed with a Digital Display Telephone.
◊   The default Database Password is six zero's (0 0 0 0 0 0).   To access Database Programming, press ⎯FEAT⎯ # ✱ 0 0 0 0 0 0 and then press [show].
◊   Only one Digital Display Telephone may be in Database Programming at a time.
◊   Any feature or resource code may be stored as a flex button. See Flex Button Review and Programming for programming instructions.
◊   Press ⎯CLEAR⎯ to cancel the current operation.

Soft Button Prompts

These menu items may be different for each feature of the phone. In general, the following buttons are used for many features:

back   Returns you to the previous menu selection.
bksp   Use this to delete the previous character entered, and move back (like the backspace of a computer)
chg   When you are able to enter digits or letters, this will erase the whole string entered.
next   Advance to the next menu selection.
save   Saves the current settings
show   Displays the settings of the feature displayed.

Feature	Digital Display	Digital Non-Display	Analog (SLT)
Account Code -Forced	1. Access CO Line 2. Dial Account Code 3. Dial Tel Number	1. Access CO Line 2. Dial Account Code 3. Dial Tel Number	
-Unforced	1. Access CO Line 2. Press [FEAT] 7 1 3. Dial Tel Number	1. Access CO Line 2. Press [FEAT] 7 1 3. Dial Tel Number	
Alarm -Station Activate	1. Press [FEAT] 9 2 2. Press [chg] 3. Dial alarm time (4 digits) 4. Press [save]	1. Press [FEAT] 9 2 2. Dial the alarm time (4 digits)	1. Press # 9 2 2. Dial alarm time (4 digits)
Deactivate	- Press [ack] at alarm time - Press [FEAT] * 9 2 any time	- Press [FEAT] * 9 2	- Dial # * 9 2
Answering Machine Emulation	1. When a call goes to VM, press [FEAT] 6 4 2. Press [yes] to listen 3. To answer, press [answer], to stop listening, press [exit]	1. When a call goes to VM, press [FEAT] 6 4 2. Press 1 to listen 3. To answer, press 1, to stop listening, press 3	
Attendant Administration	1. Press [FEAT] # 0 2. Dial the Attendant password 3. Press [save]		
Authority Code - Traveling COS	1. Press [FEAT] 5 5 from the station you wish to dial from 2. Dial your station number 3. Dial your password	1. Press [FEAT] 5 5 from the station you wish to dial from 2. Dial your station number 3. Dial your password	1. Dial # 5 5 from the station you wish to dial from 2. Dial your station number 3. Dial your password
Auto Line Select -Activate	1. Press [FEAT] 9 5 2. Select: - [icm] Intercom - [outg ln] Any Line - [co ln] Specific Line	1. Press [FEAT] 9 5 2. Select: - 0 Intercom - 1 Any CO Line - 2 1 CO Line 1 - 2 9 CO Line 9 - 2 0 CO Line 10 - 2 * CO Line 11 - 2 # CO Line 12	
-Deactivate	- Press [FEAT] * 9 5	- Press [FEAT] * 9 5	
Automatic Redial	1. Access CO Line 2. Dial Tel Number 3. Hang Up 4. Press [FEAT] 7 8	1. Access CO Line 2. Dial Tel Number 3. Hang up 4. Press [FEAT] 7 8	
Background Music	- Press [FEAT] 5 2 to toggle	- Press [FEAT] 5 2	

Quick Reference Chart

Feature	Digital Display	Digital Non-Display	Analog (SLT)
Call Back -Activate	1. Call a station 2. Press [cbck] 3. When station is available, pick up the handset	1. Call a station 2. Press [FEAT] 9 1 3. When station is available, pick up the handset	1. Call a busy station 2. Dial # 9 1 3. A confirmation tone is heard.
-Deactivate	- Press [del]	- Press [FEAT] * 9 1	- Press # * 9 1
Call Forward -Display	- Press [FEAT] # 6 to toggle		

-Activate	1. Press [FEAT] 2
	2. Select:
	  - [idle] Idle
	  - [busy] Busy
	  - [direct] Direct
	  - [follow] Follow Me
	  - [na] No Answer
	  - [busy/na] Busy or No Answer
	3. Dial the station to transfer to/from
	4. Press [save]
	5. For No Answer (na & busy/na), you will need to select a time. Press [chg] to change.
		1. Press [FEAT] 2
		2. Select:
		  - 0 Idle
		  - 1 Busy
		  - 2 Direct
		  - 3 Follow Me
		  - 4 No Answer
		  - 5 Busy or No Answer
		3. Dial the station to transfer to/from
		4. For No Answer, you will need to select a time: 0 = 10 sec, 4 = 50 sec
			1. Dial # 2
			2. Select:
			  -0 Idle
			  -1 Busy
			  -2 Direct
			  -3 Follow Me
			  -4 No Answer
			  -5 Busy/No Answer
			3. Dial station to transfer to/from
			4. For No Answer, you will need to select a time: 0=10 sec, 4=50 sec

-Deactivate	- Press [FEAT] 2	- Press [FEAT] 2	- Dial # 2
Caller ID Review	1. Press [FEAT] # 9 2. Press VOL▲ and VOL▼ to scroll 3. Press [more] for more opts		
Call Park -Parking	1. While on a CO Line call, press [FEAT] 7 3 2. Dial station to Park at 3. Hang up	1. While on a CO Line call, press [FEAT] 7 3 2. Dial station to Park at 3. Hang up	
-Retrieving	1. Press [FEAT] 7 3 2. Dial station where Parked	1. Press [FEAT] 7 3 2. Dial station where Parked	1. Dial # 7 3 2. Dial station where Parked
Call Pickup -Direct Station	1. Press [FEAT] 5 3 2. Dial the station to Pick Up	1. Press [FEAT] 5 3 2. Dial the station to Pick Up	1. Dial # 5 3 2. Dial station to Pick Up
-Group	- Press [FEAT] 5 4	- Press [FEAT] 5 4	- Dial # 5 4
Call Waiting	- Press [FEAT] 6 8 to toggle	- Press [FEAT] 6 8 to toggle	

Feature	Digital Display	Digital Non-Display	Analog (SLT)
CO Line Access - Line Group Access	1. Press ⎓FEAT⎓ #3 2. Press the programmable button and press [chg] 3. Press [CO Ln] 4. Dial [0] + [Line Group]	1. Press ⎓FEAT⎓ #3 2. Press the programmable button and press [chg] 3. Press [CO Ln] 4. Dial [0] + [Line Group]	- Dial 9 - Dial ✱4 + Group Number (1 thru 4) - Dial ✱3 + Specific CO Line (1-9, 0, *, #)
Conference - Supervised	1. Access CO Line and dial Tel Number (#1) 2. Press ⎓HOLD⎓ 3. Access another CO Line and dial Tel Number (#2) 4. Press ⎓FEAT⎓ 60	1. Access CO Line and dial Tel Number (#1) 2. Press ⎓HOLD⎓ 3. Access another CO Line and dial Tel Number (#2) 4. Press ⎓FEAT⎓ 60	
- Unsupervised	1. Access CO Line and dial Tel Number (#1) 2. Press ⎓HOLD⎓ 3. Access another CO Line and dial Tel Number (#2) 4. Press ⎓FEAT⎓ 60	1. Access CO Line and dial Tel Number (#1) 2. Press ⎓HOLD⎓ 3. Access another CO Line and idle Tel Number (#2) 4. Press ⎓FEAT⎓ 60	
- To Leave	- Press ⎓FEAT⎓ 77	- Press ⎓FEAT⎓ 77	
- To Rejoin	- Press ⎓FEAT⎓ 60	- Press ⎓FEAT⎓ 60	
Directory Dial	1. Press ⎓FEAT⎓ 79 2. Use the keypad to enter the first letter of the name in the directory, or use ⎓VOL▲⎓ and ⎓VOL▼⎓ buttons to scroll 3. Press any soft button to dial		
Distinctive Ring - Station	1. Press ⎓FEAT⎓ #7 2. Press [chg] until the desired tone is reached	1. Press ⎓FEAT⎓ #7 2. Dial a ring type (1 thru 5) 3. Repeat from Step 1 to change again	
Do Not Disturb	- Press ⎓FEAT⎓ 4 to toggle	- Press ⎓FEAT⎓ 4 to toggle	- Dial #4 to toggle
DND Override	1. Dial the station 2. Press [override] - While on a CO Line call,	 - While on a CO Line call,	
Flash	press ⎓FEAT⎓ 3	press ⎓FEAT⎓ 3	1. Press Hook Flash 2. Dial #3

Quick Reference Chart

Feature	Digital Display	Digital Non-Display	Analog (SLT)
Flex Button -Review -Programming	1. Press <u>FEAT</u> #3 2. Press a flex button to view its current programming 1. Press <u>FEAT</u> #3 2. Press the flex button to change 3. Press [chg] 4. Follow on-screen prompts: [co ln] = CO Line [sta] = Station [feat] = Feature button - Press the <u>FEAT</u> button as the first button when programming	1. Press <u>FEAT</u> #3 2. Press the flex button to change 3. Do one of the following: a. Press 0 + CO Line for CO Line Programming b. Press 00 + Line Group for Line Group Programming c. Press 1 + Station for Station Programming d. Press 2 + <u>FEAT</u> + Feature Code for Feature Programming	
Forced Tone Ring	1. While on an intercom call in Voice Announce or Hands-Free mode, press ✱ 2. Press ✱ to return to VA/HF	1. While on an intercom call in Voice Announce or Hands-Free mode, press ✱ 2. Press ✱ to return to VA/HF	1. Press ✱ to toggle
Headset Mode	- Press <u>FEAT</u> 9 # to toggle	- Press <u>FEAT</u> 9 # to toggle	
Hold -System -Exclusive -Automatic	- Press <u>HOLD</u> - Press <u>HOLD</u> again to retrieve call, or press CO Line button - Press <u>FEAT</u> <u>HOLD</u> - Press <u>HOLD</u> to retrieve call, or press CO Line button - Press <u>FEAT</u> 9 4 to toggle	- Press <u>HOLD</u> - Press <u>HOLD</u> again to retrieve call, or press CO Line button - Press <u>FEAT</u> <u>HOLD</u> - Press <u>HOLD</u> to retrieve call or press CO Line button - Press <u>FEAT</u> 9 4 to toggle	1. Press Hook Flash 2. After 5 seconds, caller is on hold. Hang up. - Press ✱6 to retrieve held call
Hot Line -Auto Internal All-Call Page -Auto External Page -Auto All-Call Page -Specific Group Page -Auto Dial Speed Dial Bin -Hot CO Line (Specific Line) -Hot CO Line (Group) * System 48 users see page 3-47 for proper operation			1. Dial # # 4 2. Dial delay (0-9) 3. Dial destination: #500 #501 #502 #503 + Group ✱1 + Speed Dial Bin ✱3 + CO Line ✱4 + CO Line Group
Last Number Redial	- Press <u>FEAT</u> 8 to redial	- Press <u>FEAT</u> 8 to redial	- Dial # 8 to redial
Message Waiting		1. Press <u>FEAT</u> 9 6 2. Dial station to leave message at	1. Dial # 9 6 2. Dial station to leave message at

Feature	Digital Display	Digital Non-Display	Analog (SLT)
Night Service	- Press FEAT #2 to toggle	- Press FEAT #2 to toggle	
One Button Record	1. While on CO Line or Station call, press FEAT 7 2 2. Press FEAT 7 2 to stop recording and save the message	1. While on a CO Line or Station call, press FEAT 7 2 2. Press FEAT 7 2 to stop recording and save the message	
Paging -Placing a Page	1. Press FEAT 5 0 2. Select: - [all] All stations - [extern] External Paging Equipment - [both] All Stations and External Paging Equipment 3. Speak into the handset or speakerphone	1. Press FEAT 5 0 2. Select: -0 All stations -1 External Paging Equipment -2 All Stations and External Paging Equipment 3. Speak into the handset or speakerphone	
-Meet Me	- Press FEAT 5 9 to answer a page	- Press FEAT 5 9 to answer a page	
Pause	- Press FEAT 7 0	- Press FEAT 7 0	
Pulse-to-Tone Switch over	- When in Pulse (Rotary) dial mode, press ✱ to change to Tone mode.	- When in Pulse (Rotary) dial mode, press ✱ to change to Tone mode.	
Save Dialed Number -Save	- After making a CO Call, press FEAT 5 1	- After making a CO Call, press FEAT 5 1	
-Dial	1. Access CO Line 2. Press FEAT 5 1	1. Access CO Line 2. Press FEAT 5 1	
Station Camp On	1. Dial a busy Station 2. Press [next] 3. Press [camp] 4. When Station becomes available, your Station will ring	1. Dial busy station 2. Press 2 3 When Station becomes available, your Station will ring	1. Dial busy station 2. Dial 2 3. When station is available, your station will ring
Station Feature Status Check	1. Press FEAT #8 2. Press [next] to scroll		
Station Lock -Change Password -Lock -Unlock	1. Press FEAT 9 7 2. Do one of the following: - Press [pswd] and dial your new 4-digit password - Press [yes] - Press [no]	1. Press FEAT 9 7 2. Do one of the following: - dial your new 4-digit password - Press # - Press ✱	1. Dial #9 7 2. Do one of following: - Dial new 4-digit password - Dial # - Dial ✱

Quick Reference Chart

Feature	Digital Display	Digital Non-Display	Analog (SLT)
Station Speed Dial -Save	1. Press FEAT #1 2. Dial Speed Dial Bin (00-19) 3. Press [chg] 4. Dial Tel Number 5. Press [save]	1. Press FEAT #1 2. Dial Speed Dial Bin (00-19) 3. Dial Tel Number 4. Press HOLD	1. Dial #1 2. Dial Speed Dial Bin 3. Dial Tel Number 4. Press Hook Flash
-Dial	1. Press FEAT 1 2. Dial Speed Dial Bin (00-19)	1. Press FEAT 1 2. Dial Speed Dial Bin (00-19)	1. Dial ✳1 2. Dial Speed Dial Bin
System Speed Bins - Enter a new number	1. Press FEAT #0 2. Enter Attendant Password 3. Press [show] 4. Press [spd] 5. Press [show] 6. Enter speed bin (20 - 99) 7. Press [show] 8. Enter the telephone number 9. Press [save]		
- Dialing using a speed bin	1. Press FEAT 1 2. Dial Speed Dial Bin (20 - 99)	1. Press FEAT 1 2. Dial Speed Dial Bin (20 - 99)	1. Dial ✳1 2. Dial Speed Dial Bin
Transfer	1. While on a CO Line Call, press HOLD 2. Dial station to Transfer to 3. Press TRANS	1. While on a CO Line Call, press HOLD 2. Dial station to transfer to 3. Press TRANS	1. While on a CO Line press Hook Flash. 2. Dial station to transfer to 3. Hang up
Trunk Queuing	1. Press a busy CO Button 2. Press [camp] 3. When CO Line becomes available, your Station will ring	1. Access a busy CO Line 2. Press FEAT 93 3. When CO Line becomes available, your Station will ring	1. Access busy CO Ln 2. Dial #93 3. When CO Line is available, your station will ring
User Saved Number Redial -Save	1. While on a CO Line call, press FEAT 5✳ 2. Dial the number you wish to save 3. Press [save]	1. While on a CO Line call, press FEAT 5✳ 2. Dial the number you wish to save 3. Press HOLD	
-Retrieve	- Press FEAT 5✳	- Press FEAT 5✳	
Voice Mail	- Press FEAT 64	- Press FEAT 64	
Voice-over-Busy	1. Call the busy station 2. Press [next] 3. Press [voice] and speak	1. Call the busy station 2. Press FEAT 56 and speak	

Account Code

Forced and Verified

Description

When account codes are forced enabled, users must dial a valid account code in order to make an outgoing call.

Setup

1. Access Database Programming (⎯FEAT⎯ # ✱ + Password).
2. Go to 4.RESOURCE and press [show].
3. Go to AC_CODE TABLE and press [show].
4. Set the length of the code (4 to 8 digits) using [chg].
5. Press [next].
6. To enter the first code, press [chg] and enter the code.
7. Press [save].
8. Press [next] to move to the next code.

Activation

1. Access Database Programming (⎯FEAT⎯ # ✱ + Password).
2. Go to 1.STATION and press [show].
3. Enter the station number and press [show].
4. Go to ACC CODE FORCED.
5. Press [chg] to toggle Forced and Verified Account Code.

Operation

ALL TELEPHONES

1. Access an outside line:
    a. Press a CO Line button
    b. If your phone is set up to automatically give you an outside line (see Auto Line Select), simply pick up the handset or press the ⎯SPKR⎯ button.
2. When you hear a tone, dial a valid account code.

Note: if an invalid code is dialed, hang up and start again from step 1.

3. Upon entering a valid code, you will hear a confirmation tone, and receive dial tone. You may now dial the telephone number you wish to call.

Unforced and Unverified

Description

Account codes are set up by your system administrator. When account codes are not forced, you may enter a feature code and an account code. This feature is useful if you are using Station Message Detail Recording (SMDR) to track call times. See your system administrator for more details on SMDR and Account Codes

Setup
1. Access Database Programming (FEAT **#** **✳** + Password).
2. Go to 4.RESOURCE and press [show].
3. Go to AC_CODE TABLE and press [show].
4. Set the length of the code (4 to 8 digits) using [chg].
5. Press [next].
6. To enter the first code, press [chg] and enter the code.
7. Press [save].
8. Press [next] to move to the next code, or [back] to return to the previously viewed code.

Operation
<u>ALL TELEPHONES</u>
1. Access an outside line:
   a. Press a CO Line button.
   b. If your phone is set up to automatically give you an outside line (see Auto Line Select), simply pick up the handset or press the SPKR button.
2. Press FEAT **7** **1**.
3. Dial a valid account code.
Note: if an invalid code is dialed, hang up and start again from step 1.
4. a. From a Display telephone, press the [save] soft button.
   b. From a Non-Display telephone, press **✳**.

Alarm - Station

Description
Each digital telephone may be programmed to ring at a set time, similar to an alarm clock. Once the alarm time is reached, and the alarm is canceled, the Alarm feature is deactivated.

Operation
<u>DISPLAY TELEPHONES</u>
1. Press FEAT **9** **2**. Your display will show the last set alarm time.
Note: skip to step 4 to keep the previously set time, as shown on the display.
2. Press [chg] to change the alarm time.
3. Dial the time you wish the alarm to sound. The time must be entered as four (4) digits, and in 24 hour format:
   0 **9** **0** **0** = 9:00AM, **1** **7** **0** **0** = 5:00PM.
note: you may use the [bksp] soft button as a backspace to correct errors, and [chg] to erase the entire alarm time.
4. Press [save] to accept.
5. When the alarm time is reached, press [ack] to stop and deactivate the alarm.

NON-DISPLAY TELEPHONES
1. Press ▬▬FEAT▬▬ 9 2 .
2. Dial the time you wish the alarm to sound. The time must be entered as four (4) digits, and in 24 hour format:
   0 9 0 0 = 9:00AM, 1 7 0 0 = 5:00PM.
   The time is automatically saved after a valid 4 digits are entered.
3. When the alarm time is reached, your telephone will ring. Press ▬▬FEAT▬▬ ✱ 9 2 to stop and deactivate the alarm.

ANALOG TELEPHONES (SLT)
1. Press # 9 2 from Intercom Dial Tone.
2. Dial the time you wish the alarm to sound. The time must be entered as four (4) digits, and in 24-hour format:
   0 9 0 0 = 9:00AM, 1 7 0 0 = 5:00PM.

Cancellation
ALL DIGITAL TELEPHONES
◊ Press ▬▬FEAT▬▬ ✱ 9 2 to deactivate the alarm at any time.

ANALOG TELEPHONES
◊ Dial # ✱ 9 2 from Intercom Dial Tone.

Alarm - System

Description
The system can be programmed for eight separate alarm times. Unlike the Station Alarm, the System Alarms stay active until disabled by the system administrator. These alarms will play at the programmed time every day of the week. The System Alarms will play Background Music for one minute on all idle stations not in Do Not Disturb mode. Background Music must be present for the System Alarm to function (see Background Music).

Setup
1. Access Database Programming (▬▬FEAT▬▬ # ✱ + Password).
2. Go to 4.RESOURCE and press [show].
3. Go to SYSTEM ALARM and press [show].
4. Select the alarm you wish to change (1 thru 8) and press [show].
5. Press [chg] to change the alarm time.
6. Enter the time you wish the background music to play. The time must be entered in 24-hour format:
   0 9 0 0 = 9:00AM, 1 7 0 0 = 5:00PM.
7. Press [save].

Conditions
◊ Desk phones that are currently listening to Background Music will not be aware when the system alarm sounds.
◊ Background Music must be enabled - See Background Music.
◊ A music source is required to hear the System Alarm.

Alternate Attendant Position

Description
A second station may be programmed as an alternate attendant. This may be used as a backup attendant. When the attendant station is busy, or if calls to the attendant time out, calls will be forwarded to the alternate attendant station.

Setup
1. Access Database Programming (FEAT #✱ + Password).
2. Go to 4.RESOURCE and press [show].
3. Go to ALTERNATE.
4. Press [chg] and enter the Alternate Attendant station.
5. Press [save].

To change the amount of time before ringing the Alternate Attendant:
1. Access Database Programming (FEAT #✱ + Password).
2. Go to 3.CALL HANDLING and press [show].
3. Go to RING ALT POS.
4. Press [chg] until the desired time is reached.

Answering Machine Emulation

Description
When equipped with an Integrated Voice Mail System, this feature enables users to listen to messages being left and answer the call, if desired. This feature requires your station to be forwarded to the Voice Mail hunt group. Please contact your system administrator for more information.

Setup
Answering Machine Emulation requires an Integrated Voice Mail System. For setup, please see the Voice Mail Installation Manual.

Operation
DISPLAY TELEPHONES
1. After a call is received and transferred to Voice Mail (you will hear a double ring tone), press FEAT 6 4.
note: Typically, you will have a Flex Button programmed as Voice Mail (FEAT 6 4). You may press this button in place of pressing FEAT 6 4.

2. Press [yes]. You will be able to listen to the message that the caller is leaving.
3. If you wish to answer the call, and stop the Voice Mail recording, press [answer], or press [exit] to stop listening. If you exit, the caller will continue to leave a voice mail.

NON-DISPLAY TELEPHONES
1. After a call is received and transferred to Voice Mail (you will hear a double ring tone), press ⎯FEAT⎯ 6 4.
2. Press 1. You will be able to listen to the message that the caller is leaving.
3. If you wish to answer the call, and stop the Voice Mail recording, press 1, or press 3 to stop listening. If you exit, the caller will continue to leave a voice mail.

Attendant Administration

Description
Attendant Administration is used to set system features like Day/Night/ Time mode, System Date and Time, and System Speed Dial Numbers. These features may be enabled from any digital station in the system, using the Attendant Position password.

Operation
DISPLAY TELEPHONES
1. Press ⎯FEAT⎯ # 0.
2. Dial the Attendant Position password.
3. Press [save].
4. Press the option you wish to program:
    a. [svc] is used to set the service mode (Day/Night/Time)
    b. [time] is used to set the system's date and time.
    c. [spd] is used to program the system speed dial numbers.

Service Mode
Day Mode
For Day System Mode of operation, Day Class of Service is valid.

Night Mode
For the Night System Mode of Operation, Night Class of Service is valid.

Time Mode
When Time Mode is selected, the system may be set to automatically change the Service Mode from Day to Night Mode and back again. The system relates the NITE START and NITE END tables located in database programming (see 4. Resource)

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Setup
1. Access Database Programming (<u>FEAT</u> **#✱** + Password).
2. Go to `4.RESOURCE` and press [`show`].
3. Go to `NITE START`.
4. Press [`chg`] and enter the Night Start time in 24-hour format (**0900** = 9:00AM, **1700** = 5:00PM).
5. Press [save].
6. Go to `NITE END`.
7. Press [`chg`] and enter the Night End (Day Start) time in 24-hour format (**0900** = 9:00AM, **1700** = 5:00PM).
8. Press [`save`].

Attendant Position

Description
The Attendant Position is used as the default answering position for all CO telephone lines, and as the system "Operator". Whenever any telephone in the system presses **0**, they will be directed to the Attendant Position.

The Attendant Position is also used to program special system features like Day/Night/Time mode, System Date and Time, Alarms, and System Speed Dial numbers.

Setup
1. Access Database Programming (<u>FEAT</u> **#✱** + Password).
2. Go to `4.RESOURCE` and press [`show`].
3. Go to `ATTENDANT`.
4. Press [`chg`] and enter the Attendant station.
5. Press [`save`].

Authority Code - Traveling Class of Service

Description
If you have dialing privileges at your station, you can temporarily transfer your class of service to a station that does not have these dialing privileges for one minute. For instance, if your station does not have toll restriction, and the station you wish to use does, you may enter your Authority Code and temporarily turn off the toll restriction.

Operation
DISPLAY TELEPHONES
1. Press ⎯FEAT⎯ 5 5.
2. Dial your station number.
3. Dial your password.
4. Press [save].
5. The station is now in the new class of service for 1 minute.

NON-DISPLAY TELEPHONES
1. Press ⎯FEAT⎯ 5 5.
2. Dial your station number.
3. Dial your password.
4. The station is now in the new class of service for 1 minute.

ANALOG TELEPHONES (SLT)
1. Press # 5 5.
2. Dial your station number.
3. Dial your password.
4. The telephone is now in the new class of service for 1 minute.

Conditions
◊   Features and programming, such as line access, ring, and receive assignments are not transferred for Traveling Class of Service

Auto Line Selection

Description
Auto Line Selection is used to allow you to automatically select an outside line or the intercom when you pick up the handset or press the ⎯SPKR⎯ button.

This feature is only active when your telephone is idle (not in use). When an outside call or intercom call rings your telephone, picking up the handset or pressing the ⎯SPKR⎯ button will answer the call. To override the ringing line and pick up an idle line, press one of the idle CO Line buttons.

Operation
DISPLAY TELEPHONES
1. Press ⎯FEAT⎯ 9 5.
note: ICM = Intercom, OUTG LN = any outgoing line, CO LN = a specific outgoing line, and empty = deactivate auto line selection.
2. To change the selection, press [chg] until your selection is displayed.
3. Press ⎯CLEAR⎯ or hang up to save.

NON-DISPLAY TELEPHONES
1. Press ══FEAT══ **9** **5**.
2. Press the following to select your preference:
       0   Intercom
       1   Any available outgoing line
       2(**1** thru **9**) Line 1 thru 9
       2 **0**   Line 10
       2 **✹** Line 11
       2 **#** Line 12

Cancellation
ALL TELEPHONES
◊ Press ══FEAT══ **✹** **9** **5** to cancel auto line selection.

Background Music

Description
This feature allows you to hear music through the speaker of your
desk phone. The music source is the same for all phones, and is
whatever source is plugged into the BGM port on the telephone system.
To change the music, please contact your system administrator.

Operation
ALL TELEPHONES
◊ Press ══FEAT══ **5** **2**.

Busy Lamp Field (BLF)

Description
Each System 24/48 Digital Telephone has 20 programmable flex
buttons. Each of these flex buttons has a lamp to show you the status
of the feature or station programmed to that button. Each of these
buttons has a 2-color lamp and can flash at different rates to show
you the status. For instance, when your current station has a CO
Line call on hold, and you have a flex button programmed for that CO
Line, the lamp will slowly flash with a green lamp. Other stations that
have the CO Line programmed as a flex button will see this button
slowly flashing with a red lamp. The status of individual features can
be found under the feature description in this section.

Call Back

Description
When calling a station that is busy, in do not disturb mode, or not answering, you can use Call Back to notify you with a special ring that the station you were calling has become available.

Operation
DISPLAY TELEPHONES
1. Call the station you are trying to reach.

Note: your display will show one of the following, depending on the status of the station you are calling:

Idle, Hands-Free Mode: CALLING STA 12
Busy: STA 12 BUSY

2. Press [cbck] to activate Station Call Back.

Note: when the station you are calling already has a call back waiting, your call back request will be denied, and your display will show: CALL BACK DENIED

3. When the station becomes available, your phone will ring with a distinctive tone. Simply pick up the handset or press ⎯SPKR⎯ to call the extension.
4. Press [del] to cancel Call Back.

NON-DISPLAY TELEPHONES
1. Call the station you are trying to reach.
2. Press ⎯FEAT⎯ 9 1 .

note: when the station you are calling already has a call back waiting, your call back request will be denied.

3. When the station becomes available, your phone will ring with a distinctive tone. Simply pick up the handset or press ⎯SPKR⎯ to call the extension.
4. Press ⎯FEAT⎯ ✱ 9 1 to cancel Station Call Back.

ANALOG TELEPHONE (SLT)
1. Call the station you are trying to reach.
2. While listening to busy tone, press # 9 1 .
3. When the station becomes available, your phone will ring. Simply answer the phone to connect to the station where the call back was left.
4. Press # ✱ 9 1 at dial tone to cancel call back.

Conditions
◊   The station you are calling must be busy or in Tone Ring mode.
◊   Only one Call Back may be initiated on a station. If there is already a Call Back request at the station, your Call Back will be denied.
◊   Call Back begins only when the calling station and the call back station are idle.

Call Brokering

Description
Call Brokering is a feature that allows Analog Telephone (SLT) users to connect to a second party while maintaining a connection with the first party. When speaking to the second party, the first party is placed on hold. When connecting back to the first party, the second party is placed on hold.

Operation
1. While on a call (CO or Intercom), press the Hook Flash (some phones have a FLASH button. If your phone does not, you will need to depress your on-hook switch for just under a second, then release it. You will receive intercom dial tone.
2. Place your next call (CO or Intercom).
3. Press the Hook Flash button to toggle between the two calls.

Call Forward Display

Description
When Call Forwarding is enabled, display telephones will display the call forwarding mode instead of the date and time when the telephone is idle.

Operation
DISPLAY TELEPHONES
◊ Press ⎯FEAT⎯ #6 to toggle on and off.

Call Forward

Description
Call Forwarding allows you to have your station forwarded to another extension, or to voice mail (where applicable).

There are 6 different Call Forward choices:
No Answer, Busy, Busy/No Answer, All Call, Idle, and Follow Me

Operation
NON-DISPLAY TELEPHONES
The following table shows the buttons to press to program any of the above forward choices on non-display telephones.

Idle	$\underline{\text{FEAT}}$ **2**|**0** + Ext. Number[1]
Busy	$\underline{\text{FEAT}}$ **2**|**1** + Ext. Number[1]
Direct	$\underline{\text{FEAT}}$ **2**|**2** + Ext. Number[1]
Follow Me	$\underline{\text{FEAT}}$ **2**|**3** + Your Station
No Answer	$\underline{\text{FEAT}}$ **2**|**4** + Ext. Number[1] + Time[2]
Busy/No Answer	$\underline{\text{FEAT}}$ **2**|**5** + Ext. Number[1] + Time[2]
Disable Call Fwd	$\underline{\text{FEAT}}$ **2**

[1]*Extension Numbers can be a station number, a single line extension, or a hunt group.* [2]*For Time, 0=10 seconds, 1=20 sec, ..., 4=50 sec*

ANALOG TELEPHONES (SLT)

Idle	**#**|**2**|**0** + Ext. Number[1]
Busy	**#**|**2**|**1** + Ext. Number[1]
Direct	**#**|**2**|**2** + Ext. Number[1]
Follow Me	**#**|**2**|**3** + Your Station
No Answer	**#**|**2**|**4** + Ext. Number[1] + Time[2]
Busy/No Answer	**#**|**2**|**5** + Ext. Number[1] + Time[2]
Disable Call Fwd	**#**|**2**

[1]*Extension Numbers can be a station number, a single line extension, or a hunt group.* [2]*For Time, 0=10 seconds, 1=20 sec, ..., 4=50 sec*

No Answer Call Forward

Description

No Answer Call Forward forwards all unanswered calls to a specified extension. The extension can be either a digital telephone, a single line telephone, or a hunt group.

No Answer Call Forward is especially useful when integrated Voice Mail is being used. Example: If your voice mail hunt group is 82, you can Call Forward No Answer your station to extension 82. Whenever you cannot answer a call, it will be forwarded to voice mail.

Operation
DISPLAY TELEPHONES
1. Press $\underline{\text{FEAT}}$ **2**.
2. Press [na].
3. Dial the extension number where you would like calls forwarded.
4. Press [save].
5. Press [chg] until the desired time is displayed,
6. Press $\underline{\text{CLEAR}}$ to exit.

*Note: press $\underline{\text{FEAT}}$ **2** again to turn off call forwarding.*

Busy Call Forward

Description

Busy Call Forward forwards all calls immediately to a specified extension whenever your station is in use (on an outside line call or an intercom call).

Operation
<u>DISPLAY TELEPHONES</u>
1. Press <u>FEAT</u> 2.
2. Press [busy].
3. Dial the extension number where you would like calls forwarded to.
4. Press [save].

Note: press <u>FEAT</u> 2 *again to turn off call forwarding*

Busy/No Answer Call Forward

Description

Busy/No Answer Call Forward forwards all calls immediately to a specified extension whenever your station is in use. If your station is not in use, your station will ring for a programmed period of time and then forward to a specified extension if unanswered.

Operation
<u>DISPLAY TELEPHONES</u>
1. Press <u>FEAT</u> 2.
2. Press [next] to get to a different set of options.
3. Press [bsy/na].
4. Dial the extension number where you would like calls forwarded.
5. Press [save].
6. Press [chg] until the desired time is displayed,
7. Press <u>CLEAR</u> to clear your display.

Note: press <u>FEAT</u> 2 *again to turn off call forwarding*

Idle Call Forward

Description

Idle Call Forward forwards all calls immediately to a specified extension whenever your telephone is not in use. If you are on a phone call (intercom or outside line), incoming calls will not be forwarded.

Operation
    <u>DISPLAY TELEPHONES</u>
    1. Press <u>FEAT</u> **2**.
    2. Press [next] to scroll to the next set of options.
    3. Press [idle].
    4. Dial the extension number where you would like calls forwarded.
    5. Press [save].
*Note: press <u>FEAT</u> **2** again to turn off call forwarding*

All Call (Direct) Forward

Description
    All Call (Direct) Call Forward forwards all calls immediately to a specified extension.

Operation
    <u>DISPLAY TELEPHONES</u>
    1. Press <u>FEAT</u> **2**.
    2. Press [next] twice to scroll to the direct option.
    3. Press [direct].
    4. Dial the extension number where you would like calls forwarded.
    5. Press [save].
*Note: press <u>FEAT</u> **2** again to turn off call forwarding*

Follow Me

Description
    Follow Me Call Forward is used to remotely program an extension to receive calls from a remote extension.

Operation
    <u>DISPLAY TELEPHONES</u>
    1. Press <u>FEAT</u> **2**.
    2. Press [next] twice to scroll to the follow option.
    3. Press [follow].
    4. Dial the extension number of the station you want forwarded.
    5. Press [save].
    6. Dial the password for the station being forwarded.
    7. Press [save].
*Note: follow me call forward can only be turned off from the phone that originated the forward. Press <u>FEAT</u> **2** to turn off call forwarding.*

Conditions
◊ When Call Forward is active, the station that is forwarded will hear a fast stuttering dial tone when accessing intercom dial tone.
◊ Call Forward cannot be invoked when the station is in Do Not Disturb (DND) mode. You must disable DND prior to forwarding the station.
◊ Only one type of Call Forward per station can be invoked at one time.
◊ Call Forward cannot be programmed for more than 3 stations in series. For example, you can program Station 10 to forward to Station 11. If Station 11 forwards to Station 12, then Station 12 cannot be Call Forwarded.

Call Park

Description
Call park allows you to put a call on hold at a specific station for later retrieval from any station, including stations that do not have outside line access.

Operation
ALL DIGITAL TELEPHONES
1. While on an outside line telephone call, press ⏤FEAT⏤ **7** **3**.
2. Dial the station number where you want to park the call.
Note: only one call may be parked at any given extension. If a call is already parked at an extension, a warning tone will be heard. Display Telephones will show: PARK (ext.) IS BUSY.
3. You may retrieve a parked call from any idle phone by one of the following methods:
    a. Press ⏤FEAT⏤ **7** **3** followed by the station number where you parked the call.
    b. Press the CO Line button of the parked call, if the button appears on the station.

ANALOG TELEPHONES (SLT)
Analog telephones cannot park calls, but can pick up parked calls as follows:
1 Dial **#** **7** **3**.
2. a. To pick up a CO Line, press **0** + CO Line number:
        1 = Line 1

        ...
        9 = Line 9
        0 = Line 10
        ✱ = Line 11
        # = Line 12
    b. To pick up a call parked at a station, dial the station number.

    Conditions
◊ Calls can be parked on any valid station number, even if a telephone is not assigned to that number.
◊ Parked calls are on system hold and can be retrieved from any telephone in the system.

Call Pickup

Direct Station
Description

Direct Call Pickup allows you to pick up calls that are ringing at a specific station. Calls are picked up based on the following:

1. Queued/Camped-On Calls - Calls that are ringing on an extension that is already in use.
2. Recalling Calls - Calls that were transferred to an extension that didn't answer, so the call is sent back to the originating telephone.
3. Transferred Calls - Calls that were transferred to an extension
4. Incoming Calls - Calls that have not been answered by an extension
5. Incoming Intercom Calls
6. Voice Calls

Operation
<u>ALL DIGITAL TELEPHONES</u>
1. When a station that you want to pick up is ringing, press [FEAT] [5] [3] from an idle phone.
2. Dial the station number. You will be connected to the caller that was ringing at the station. You may pick up the handset or talk on the speakerphone.

<u>ANALOG TELEPHONES (SLT)</u>
1. When a station that you want to pick up is ringing, at dial tone, press [#] [5] [3].
2. Dial the station number. You will be connected to the caller that was ringing at the station.

Group
Description

Group Call Pickup allows you to pick up calls that are ringing at any station in the group.

Operation
<u>ALL DIGITAL TELEPHONES</u>
◊ When a station rings within the same group as your current station, press [FEAT] [5] [4]. You will be connected to the caller that was ringing. You may pick up the handset or talk on the speakerphone.

ANALOG TELEPHONES (SLT)
◊   When a station rings within the same group as your current station,
    press **#54**. You will be connected to the caller that was ringing.

Call Waiting

Description
This feature prevents other stations from being able to use the Voice
Over Busy feature when calling your station. When Call Waiting is
active, you will hear a tone through the speaker of your station.

Operation
1. Press ⎯**FEAT**⎯**68** to toggle on and off.
2. When a station calls you, you may reply or reject the station calling
   you with [reply] or [reject].

*Note: When you accept a station calling you with Call Waiting enabled,
the original call will be disconnected, unless Hold Automatic is enabled.
See Hold Automatic to enable this feature.*

Caller Identification

Description
The System 24/48 Display telephones are capable of receiving Caller
ID information from the telephone company (your organization must
subscribe to the Caller ID service, and compatible Caller ID equipment
is required).

*Note: some telephone companies do not provide the name and/or number
of the caller. Callers can also block their information from displaying.*

Setup
For setup instructions, see the Installation section of this manual.

Operation
DISPLAY TELEPHONES
When an outside call rings to your extension:
1. One of the following will appear on the display:
   a. The name of the calling party will be displayed.
   b. If the name is not available, but the telephone number is
       available, the telephone number will be displayed.
   c. If neither name or number is available, your display will read
       UNAVAILABLE
2. You may toggle the display between the name and telephone
   number by pressing the third (right) soft button.

Caller Identification Review

Description
> The past 200 callers are stored in the system-wide Caller ID table. Any display telephone may view this data.

Operation
> DISPLAY TELEPHONES
> 1. Press FEAT #9.
> 2. Use the VOL▲ and VOL▼ buttons to scroll through the table.
> 3. Press [more] to view the telephone number, if available
>   Press the [more] again to view the date and time the call was received
>
> *note: While viewing the date and time the call was received, ✳ will appear if the call was answered.*
> *Note: When using integrated voice mail, all calls will be answered when the auto attendant is active.*
> 4. Press [dial] for dialing options:
>   a. Press [longd] soft button to dial a 1 + the area code and phone number.
>   b. Press [local] soft button to dial the last 7 digits only.
>   c. Press the [more] for additional dialing options:
>   - Press [10 dgt] to dial the area code and phone number
>   - Press [8 dgt] to dial 1 + the phone number (no area code)
> 5. Press [del] to delete the current Caller ID data from the table.

Class of Service

Description
> Class of Service has three specific uses: (1) to restrict outbound dialing, (2) to allow/disallow the override of Do Not Disturb, and (3) to allow/disallow Privacy Release (when enabled).
>
> ◊ Each station can have one Day COS and one Night COS
> ◊ COS 0 is the highest (least restricted) Class of Service.
> ◊ COS 7 is the lowest (most restricted) Class of Service.
> ◊ Stations with a lower COS may have DND overridden by stations with a higher COS. For example, if Station 10 is set up as COS 0, and Station 11 is in DND mode and set up as COS 1, Station 10 can call Station 11, even though Station 11 is in DND Mode (See DND Override).
> ◊ When Privacy Release is enabled in Database Programming (See Privacy Release), stations with the same or higher COS can join a call already in progress. For example, if Station 10 and Station 11 are set up with COS 1, Station 10 may join any CO Line call that Station 11 is on (and vice versa since both stations have the same COS).

Class of Service

◊   Day Class of Service is valid whenever the system is in Day
       Mode.
◊   Night Class of Service is valid whenever the system is in Night
       Mode.
◊   For Dialing Restrictions, the COS is set up in Database
       Programming, in the 5.RESTRICTIONS table (see below).

Station Setup
1. Access Database Programming (‾‾FEAT‾‾ #✱ + Password).
2. Go to 1.STATION and press [show].
3. Dial the station number you want to program and press [show].
4. Go to DAY COS or NIGHT COS
5. Press [chg] to toggle through the Classes of Service (0 thru 7).

Dialing Restriction Setup
1. Access Database Programming (‾‾FEAT‾‾ #✱ + Password).
2. Go to 5.RESTRICTION and press [show].
3. Go to CO CALL DISCR and press [show]
4. Go to DGT INTERVAL.
5. Enter the interval table you wish to view and press [show].

*Note: you can program up to 100 separate digit interval tables. Each
table can be programmed to be allowed or disallowed by each class of
service. For instance, table 001 is set by default to allow any station with
a day or night class of service of 0 to dial any digits from* **0** *to* **9***, which
excludes the* **✱** *and* **#***. All other classes of service are denied all dialing
rights.*

6. In the FROM field, press [chg] to change the current setting.
7. Dial the digits to allow and press [save]
8. Press [next]
9. In the TO field, press [chg] to change the current setting.
10. Dial the digits to allow and press [save]
11. Press [next].
12. From the DAY ALLOWED field, press [show].
13. Go through the Day Classes of Service (0 thru 7) using the [chg]
    soft button to toggle from Y (Yes, allow) to N (No, do not allow).
14. Press [next] to go through all of the Day Classes of Services.
15. Press ‾‾HOLD‾‾ then [next], or [next] past Day Class of Service 7 to
    go to NITE ALLOWED field. Press [show].
16. Go through the Night Classes of Service (0 thru 7) using the [chg]
    soft button to toggle from Y (Yes, allow) to N (No, do not allow).
17. Press [next] to go through all of the Night Classes of Service.

*Example: If you wish to allow stations with Day and Night COS set at 1 to
call only local numbers, you need to disallow dialing* **1***.*
1. *Since Digit Interval Table 001 refers only to Class of Service 0, we will
    leave this one alone.*

2. Access *DGT INTERVAL* Table 002. Set the *FROM* field to 0 and the *TO* field to 0. Set the *DAY* and *NITE COS 1* to *Y*. This will allow all stations with a Class of Service of 1 to dial **0**.
3. Access *DGT INTERVAL* Table 003. Set the *FROM* field to 2 and the *TO* field to 9. Set the *DAY* and *NITE COS 1* to *Y*. This will allow all stations with a Class of Service of 1 to dial **2** thru **9**.

Note: If you plan on setting up complex classes of service, be aware that 911 should be allowed on all classes of service. You can do this by programming an unused *DGT INTERVAL* *Table with* *FROM* *and* *TO* *set to 911, and all* *DAY* *and* *NITE COS (0 thru 7) set to* *Y*.

CO Line Access

Description

From an analog telephone, you may access a CO Line by one of three methods, depending on system setup.

Operation

◊ If the system is set up as *SYSTEM TYPE:PBX*, the Attendant Position is set as 0, dial **9** to access a CO Line.

◊ To access a Line Group:
   a. At intercom dial tone, press **✱****4**.
   b. Dial the group you wish to access (**0** - **4**. **0** is any available group).

◊ To access a specific line:
   a. At intercom dial tone, press **✱****3**.
   b. Dial the CO Line you wish to access:

   1 = Line 1
   ...
   9 = Line 9
   0 = Line 10
   ✱ = Line 11
   # = Line 12

CO Line Assignment

Description

Each station can be assigned access to any or all of the system's CO Lines. When a CO Line Assignment is enabled, the station may access the CO Line to make outgoing calls. When disabled, the CO Line will not be available for outgoing calls.

Setup
1. Access Database Programming (⎯FEAT⎯ **#** **✳** + Password).
2. Go to 1.STATION and press [show].
3. Dial the station you wish to modify and press [show].
4. Go to CO LINE ASSIGN and press [show].
5. Use [back] and [next] to scroll through the CO Line Assignments. Press [chg] to toggle the CO Line Assignment.

CO Line Group Assignment

Description
CO Line Groups allow the system to group specific lines into a group for CO Line Pool access (see CO Line Pool). By default, all CO Lines are in Group 1. Using multiple groups is useful when there are more than one group of people that utilize different CO Lines for incoming and outgoing telephone calls. The system can be programmed for up to 4 CO Line Groups.

Setup
1. Access Database Programming (⎯FEAT⎯ **#** **✳** + Password).
2. Go to 2.CO LINE and press [show]
3. Dial the CO Line you wish to program.
4. Go to CO LINE GRP.
5. Press [chg] to change the assigned group (1 thru 4).

CO Line Pool

Description
CO Line Pool can be used to reduce the number of CO Line buttons a telephone needs to be programmed with. CO Line Pools are directly related to CO Line Groups, and can be used to answer individual groups, or all groups.

Operation
Placing a Call with a CO Line Pool button - ALL TELEPHONES
1. Press the flex button for the CO Line Pool you wish to access.
2. Dial the telephone number you wish to call.
Note: If all the CO Lines in the CO Line Pool are in use, you can use Trunk Queuing to access the next available line. Only one station may queue the CO Line Pool.

Conditions

◊ When all CO Lines in a group are busy, pressing a CO Line Pool button will automatically queue the first available CO Line (see Trunk Queuing for details).

◊ If a station has a CO Line Pool button and a CO Line button that is part of that pool, only the CO Line button will indicate an incoming call for that line.

◊ Pressing an individual CO Line button instead of a CO Line Pool button will not affect the LED of the CO Line Pool button.

CO Line Status Indication

Description

When individual CO Line buttons are programmed as flex buttons on your station, you can determine the status of the line by the color and flashing cadence of the lamp on that button as follows:

Fast Wink, Green	In use by you
Slow Flash, Green	On hold by you
Solid, Red	Busy by another station
Fast Flash, Red	Ringing to you
Slow Flash, Red	On hold by another station

CO Line Type Assignment

Description

The CO Line ports of the system can be one of 3 types:

CO   Indicates that the CO Line port is connected directly to Central Office telephone lines.

OPEN Indicates that the CO Line port is not to be used by the system.

PBX   Indicates that the CO Line port is connected to an extension of a PBX telephone system. When set to PBX, the system will dial the PBX Code digit programmed, and insert a pause before any additional digits are dialed at the station.

Setup

1. Access Database Programming ($\overline{}$^FEAT #✱ + Password).
2. Go to 2.CO LINE and press [show]
3. Dial the CO Line you wish to program and press [show].
4. Go to CO LINE TYPE.
5. Press [chg] until the desired CO Line Type is reached.

Conditions
When set up as type PBX, the following parameters may also need to be changed. See your PBX documentation for details.
1.   Access Database Programming ($\underline{\text{FEAT}}$ **#** **✳** + Password).
2.   Go to 3.CALL HANDLING and press [show].
3.   Go to PBX CODE
4.   To change, press [chg] and dial the PBX line access digit.
5.   Press [save]
6.   Go to PBX AUTO PAUSE
7.   Press [chg] and dial the time that the System 24/48 should pause after dialing the PBX Code.

Conference

Supervised
Description
A Supervised Conference is where there are one or more stations connecting to one or two outside telephone lines. The maximum number of parties (stations and CO lines combined) that can participate in a conference is four parties (3 stations with 1 CO line, 2 stations with 2 CO lines, 2 stations with 1 CO line, and 1 station with 2 CO lines).

Operation
ALL TELEPHONES
1.   While on a CO Line call, press $\underline{\text{HOLD}}$.
2.   Make the next call; do one of the following:
     a.   Press an available CO Line and dial the next party's number.
     b.   Press a held CO Line that you wish to join the conference.
     c.   Dial the station number of the party you wish to join the conference.
3.   Join the parties by pressing $\underline{\text{FEAT}}$ **6** **0**.
4.   Repeat steps 1 thru 3 for an additional party.

DISPLAY TELEPHONES
Releasing a member
1.   Press [forced].
2.   Dial the station or press the CO Line button that you wish to release.
Talk privately to a member
1.   Press [private].
2.   Dial the station or press the CO Line button that you wish to speak with privately. The other parties will hear Music On Hold.

<u>NON-DISPLAY TELEPHONES</u>
<u>Releasing a member</u>
1. Press ⎯FEAT⎯ **7 4**.
2. Dial the station or press the CO Line button that you wish to release.

<u>Talk privately to a member</u>
1. Press ⎯FEAT⎯ **5 7**.
2. Dial the station or press the CO Line button that you wish to talk privately to. The other parties will hear Music On Hold.

Conditions

◊ The station that establishes a conference is the only station that can invite or forcibly release any member of the conference.
◊ The station that establishes a conference is the only station that can set up a private conversation with any member of the conference.
◊ When adding additional members to the conference, or while talking privately to one of the members, the rest of the members will hear Music-On-Hold, if enabled.
◊ Conferences can only be established by key telephones.
◊ A confirmation tone will be heard by all members of the conference when the conference is established.

Unsupervised

Description

Unsupervised Conference allows you to exit a conference while allowing two outside lines to continue the conference.

Setup

Unsupervised Conference needs to be enabled through Database Programming. You can also set a time limit to Unsupervised Conference calls. When the time limit is reached, the Unsupervised Conference members will be disconnected.
1. Access Database Programming (⎯FEAT⎯ **# ✻** + Password).
2. Go to 3.CALL HANDLING and press [show]
3. Go to UNS CONFERENCE.
4. Use [chg] to toggle from N (No, do not allow Unsupervised Conferences) to Y (Yes, allow Unsupervised Conferences).
5. Go to UNS CONF TIME.
6. Press [chg] until the desired time (in minutes) is reached.

Operation
ALL TELEPHONES
1. While on a CO Line call, press ___HOLD___.
2. Make the next CO Line call:
    a. Press an available CO Line and dial the next party's number.
    b. Press a held CO Line that you wish to join the conference
3. Join the two CO Lines by pressing ___FEAT___ **6** **0**.
4. a. Leave the conference, allowing the 2 CO Lines to conference together: ___FEAT___ **7** **7**.
    b. Rejoin the conference: ___FEAT___ **6** **0**.

Conditions
◊ New conference parties may only be added when the station that established the Unsupervised Conference is a member of the conference.

Direct Inward System Access (DISA)

Description
With DISA, you can remotely access system features, such as System Speed Dial, CO Line Access, Conferencing, and Intercom dialing.

DISA can be enabled on any CO Line, and can be set based on the system service mode (Day, Night, or Always). When enabled and active, the CO Line will automatically be answered by the system, and a tone will be heard by the caller.

Up to 24 four-digit passwords can be set for DISA.

Setup
1. Access Database Programming (___FEAT___ **#** **✳** + Password).
2. Go to 3.CALL HANDLING and press [show].
3. Go to DISA and press [show].
4. To set up Passwords, go to ACCESS CODE and press [show].
5. Use the [back] and [next] button to go to the access code you wish to add or change. Press [chg] to change the code.
6. Enter the 4-digit code you wish to assign and press [save].
7. You may continue adding Passwords by repeating steps 5 and 6.
8. Return to DISA and press [show].
9. Go to CO LN ATTRIB and press [show].
10. Dial the CO Line you wish to change and press [show].
11. To make the selected line a DISA Line, go to DISA LINE and press [chg] to Y (Yes, make this line a DISA Line).
12. To activate DISA, go to SERVICE and press [chg] until the desired service mode is selected.

Note: setting SERVICE to NEVER will disable DISA even if the CO Line is designated as a DISA Line (from step 11).

13. You may assign DISA Day and Night Classes of Service by going to DISA DAY COS or DISA NITE COS and using the [chg] button.

14. To restrict the time a user is allowed to be connected to the DISA line, go to TALK TIME and press [chg] until the desired Talk Time is reached.

Operation

Initiate the call

1. From an outside telephone, dial the line that is DISA enabled. DISA Dial Tone will be heard after the system answers.
2. Press #.
3. Dial a valid password.
4. Press #.

Using Speed Dial

1. Dial 1, followed by the System Speed Dial Bin (20 thru 99).
2. The system will select an idle CO Line and dial the stored speed dial number.

Accessing a CO Line

1. Dial 2, followed by a line number as follows:
   1   Line 1
   2 thru 9 Lines 2 thru 9
   0   Line 10
   ✱   Line 11
   #   Line 12
2. If the CO Line is idle, you will hear CO Line dial tone. Dial the number you wish to call.

Disconnecting from a CO Line Call

◊ Press 0#.

Placing an Intercom Call

◊ Dial 3, followed by the station number.

Note: if the station number you dial does not exist on the system, you will automatically be redirected to the system attendant. Also, if you dial 3 and do not dial a station number, you will be directed to the attendant after 10 seconds.

Extending CO Line Talk Time
To extend the talk time above the programmed talk time:
◊   During your conversation, press **0** **✱**.

Conditions
◊   Two DISA CO Lines may be used simultaneously. Subsequent
    DISA calls will be answered by the system and give the caller an
    intercom busy tone.

Directory Dial

Description
Allows you to view the directory of station users and system speed
dial names that are set up in the Directory Dial table. Once a name is
found, you can view their station number or stored speed dial number.

Station users and system speed dial names must be set up by your
system administrator. Please see your system administrator for more
details.

Setup
1. Access Database Programming (⎯⎯FEAT⎯⎯ **#** **✱** + Password).
2. Go to 4.RESOURCE and press [show].
3. Go to NAME DIRECTORY and press [show].
4. Select an entry number (**0** **0** **1** thru **2** **0** **0**) and press [show].
5. To set or change the Name, go to NAME and press [show].
6. Press [chg] to change the name.
7. Using the dial pad, enter the name you wish to program. Press **✱**
    to change the last character from UPPER case to lower case.
    Press **#** to advance to the next position.
*Note: when the last character is entered, be sure to press **#** to advance,*
or the last digit will not be saved.
8. Press [save].
9. To set the destination, go to DESTINATION and press [show].
10. Go to TYPE and change the destination type (ICM, CO, SPD).
    Press [chg] to toggle the choices.
11. Go to DEST to change the destination and press [chg].
12. Enter the destination and press [save].

Operation
DISPLAY TELEPHONES
1. Press ⎯⎯FEAT⎯⎯ **7** **9**.
2. Use the dial pad (2 thru 9 and 0) to enter the first letter of the
    person's name (or company name, depending on how it is stored).

3. Press [show] to locate the closest match.
4. You may press VOL▲ and VOL▼ to scroll to the next or previous alphabetical match.
5. Press any soft button to dial the station or speed dial bin of the displayed name. If the number is a station, you will be connected immediately. If the number is a speed dial bin, and an outside line is available, the number will be dialed.

Distinctive Ring - CO Line

Description

Distinctive Ringing allows you to differentiate incoming lines. This feature is useful when you have multiple phone numbers for different departments. Whenever there is an incoming call and your station rings, you will hear the tone that is programmed for that CO Line.

Setup
1. Access Database Programming (⎯FEAT⎯ #✱ + Password).
2. Go to 2.CO LINE and press [show].
3. Dial the CO Line you wish to change and press [show].
4. Go to DISTINCT TONE.
5. Press [chg] until the desired number is selected.

Distinctive Ring - Station

Description

Distinctive Ringing allows you to differentiate your station from neighboring stations. Whenever your station rings, you will hear the tone that you select.

Operation
DISPLAY TELEPHONES
1. Press ⎯FEAT⎯ #7. Your display will show:
   RING TYPE: 1
2. Press [chg] until you hear a distinctive ring tone that you want to use.

NON-DISPLAY TELEPHONES
1. Press ⎯FEAT⎯ #7.
2. Dial a distinctive ring code (1 thru 5)
note: If you wish to try a different code, you need to repeat from step 1.
CODE 5 RESULTS IN NO RING TONE.

Do Not Disturb

Description

Do Not Disturb (DND) keeps all incoming calls (station calls and outside calls) from ringing your telephone. Stations with a higher class of service will be able to override DND. See Class Of Service for further details.

Operation

ALL DIGITAL TELEPHONES
◊ Press ⸺FEAT⸺ 4 to turn DND off and on.

ANALOG TELEPHONES (SLT)
◊ Press # 4 to turn DND off and on.

Conditions

◊ Do Not Disturb (DND) cannot be invoked when the station is in Call Forward mode. You must disable Call Forward prior to invoking Do Not Disturb.

Do Not Disturb Override

Description

Stations with a higher class of service may override the Do Not Disturb mode of stations with lower classes of service, COS 0 being the highest and COS 7 being the lowest. See Class Of Service for further details.

Operation

1. Call the station you wish to contact.
2. If the station you are calling is in Do Not Disturb mode, and is a lower class of service than the station you are dialing from, your display will give you an [override] option. Press [override].

Drop Caller Time-Out

Description

Drop Caller Time-Out is used to limit outbound call traffic. When a CO Line call is placed from a station that has Drop Caller Time-Out enabled, the CO Line will be disconnected after the system Warning Time has been reached.

Setup

Set Warning Time
1. Access Database Programming (⎯FEAT⎯ # ✱ + Password).
2. Go to 3.CALL HANDLING and press [show].
3. Go to WARNING TIME.
4. Press [chg] until the desired warning time is reached. Time is shown in minutes.

Set Drop Caller Time-Out
1. Access Database Programming (⎯FEAT⎯ # ✱ + Password).
2. Go to 1.STATION and press [show].
3. Dial the station you wish to program and press [show].
4. Go to DROP TIMEOUT.
5. Press [chg] to toggle (Y = Yes, drop the call when the warning time is reached).

DSS Console

Description

One DSS Console may be assigned to a station, and up to 12 DSS Consoles can be installed on the system.

The DSS Console adds 50 flex buttons to the station it is assigned to. This is best suited for an attendant that needs to know the status of all members of the system.

Setup

A DSS Console is wired to the KSU like any other station. The DSS Console should be assigned a Station number, based on the port it is connected to. See Installation and Programming for wiring instructions. Once the Station number is determined, continue as follows:

1. Access Database Programming (⎯FEAT⎯ # ✱ + Password).
2. Go to 2.STATION and press [show].
3. Dial the station number of the DSS Console and press [show].
4. Go to DSS OWNER and press [chg].
5. Dial the Station that the DSS Console will be used with.
6. Press [save].
Note: To program the DSS Console Flex Buttons, see Flex Button Review and Programming.

External Call Forward (ECF)

Description
External Call Forward is used to provide an automatic unsupervised conference between two CO Lines. When a call is received on a line that is programmed as an Incoming ECF line, a second line programmed as an Outgoing ECF line is accessed, and Speed Dial Bin 99 is dialed. These two lines are conferenced together.

Setup
1. Access Database Programming (͞F͞E͞A͞T #✱ + Password).
2. Go to 3.CALL HANDLING and press [show].
3. Go to EXTERNAL FWD and press [show].
4. Go to INCOMING and press [chg] until the desired Incoming CO Line is shown.
5. Press [next].
6. Go to OUTGOING and press [chg] until the desired Outgoing CO Line is shown.
7. Go to SERVICE and press [chg] to toggle through the service modes until the desired mode is reached.
8. Go to TALK TIME and press [chg] to change the amount of time to allow the ECF to operate.
9. Program Speed Dial Bin 99 with the Outgoing telephone number. See System Speed Dial for programming instructions.

Operation
1. Call into the system, to the line designated as the Incoming ECF Line.
2. The second call will automatically be placed on the Outgoing ECF Line. The Incoming and Outgoing ECF Lines will be conferenced together (unsupervised).
3. To extend the Talk Time beyond the programmed time, press **0**✱.
4. To disconnect, press **0**#.

Flash

Description
This feature allows you to access certain CO features, like Call Waiting and 3-Way Calling when subscribed to these features by your telephone company. It is also useful to access PBX features when the CO Lines are connected to PBX extensions.

Flash may be programmed in a Speed Dial Bin string of numbers.

Setup
> Flash can be programmed to last between 0.1 seconds and 1.5 seconds. A typical setting for Flash Time (and the default flash time) is 0.7 seconds. Setting Flash Time too high may disconnect the current call and reestablish dial tone. Too short of a Flash Time may not be recognized as being a hook flash, and will not function. If you are connecting the System 24/48 behind a PBX, review your PBX documentation for correct Flash Time programming.

> 1. Access Database Programming (⎯FEAT⎯ #✱ + Password).
> 2. Go to 3.CALL HANDLING and press [show].
> 3. Go to FLASH TIME.
> 4. Press [chg] until the desired time is reached.

Operation
> <u>ALL DIGITAL TELEPHONES</u>
> ◊   While on a CO Line, press ⎯FEAT⎯ 3.

> <u>ANALOG TELEPHONES</u>
> 1. Press the flash hook. You will receive intercom dial tone.
> 2. Press #3.

Flex Button Review and Programming

Description
> The System 24/48 Digital Telephones have 20 programmable flex buttons with dual-colored LEDs. All system feature codes may be stored on the programmable Flex Buttons for one-button operation. Certain programmed feature buttons will light when activated (DND, Call Forward, etc.), while others do not (Call Park, BGM, LNR, etc.).

> Features are separated into three separate categories for programming on a button: CO Line, Station, and Feature.

Setup
> <u>DISPLAY TELEPHONES</u>
> 1. Press ⎯FEAT⎯ #3 for Stations, or ⎯FEAT⎯ #5 for the DSS Console.
> 2. Press a programmable Flex Button. The current programmed feature code will be displayed. To view the feature description, press the [show] button.
> 3. Press [chg] to change the current Flex Button programming
> *note: if the system times out while looking at a programmable flex button's feature, you may need to press the flex button again.*

Flex Button Review and Programming

4. Do one of the following:
    CO Line
    a. Press [co ln].
    b. Dial the CO Line number.
    System 24:   **1** = Line 1
                  2 = Line 2

                  ...
                  9 = Line 9
                  0 = Line 10
                  ✱ = Line 11
                  # = Line 12
    System 48:   **7 0 0** = Line 1
                  7 0 1 = Line 2

                  ...
                  7 1 7 = Line 18
    c. Press [save].

    CO Line Group
    a. Press [co ln].
    b. Dial the CO Line Group:
    System 24:   Dial **0** + Line Group
                  0 = Any Group
                  1 = Group 1
                  2 = Group 2
                  3 = Group 3
                  4 = Group 4.
    System 48:   Dial **2 0** + Line Group.
                  1 = Group 1
                  2 = Group 2
                  3 = Group 3
                  4 = Group 4
    c. Press [save].

    Station
    a. Press [sta].
    b. Dial the station number.
    c. Press [save].

    Feature
    a. Press [feat].
    b. Press ‾‾FEAT‾‾ + feature code.
    c. Press [save].

Delete Flex Button Program
a. Press any flex button.
b. Press [chg].
c. Press any soft button ([co ln], [sta], or [feat]).
d. Press [save]. Do not enter a CO Line, Station, or Feature Code.

NON-DISPLAY TELEPHONE
1. Press ‾FEAT‾ #3 for Stations, or ‾FEAT‾ #5 for the DSS Console.
2. Press a programmable flex button.
3. Do one of the following:

CO Line
a. Dial 0 for CO Line programming.
b. Dial the CO Line number.

System 24:   1 = Line 1

             ...
             9 = Line 9
             0 = Line 10
             ✳ = Line 11
             # = Line 12
System 48:   700 = Line 1

             ...
             717 = Line 18
c. Press ‾HOLD‾.

CO Line Group
a. Dial 0 for CO Line programming.
b. Dial the CO Line Group:

System 24: Dial 0 + Line Group. 0 = Any Group, 1 = Group 1,
    ..., 4 = Group 4.
System 48:   Dial 20 + Line Group.
             0 = Group 1
             1 = Group 2
             2 = Group 3
             3 = Group 4.
c. Press ‾HOLD‾.

Station
a. Dial 1 for Station Programming.
b. Dial the station number.
c. Press ‾HOLD‾.

Feature
a. Dial **2** for Feature Programming
b. Press ___FEAT___ + feature code.
c. Press ___HOLD___.

Delete Flex Button Program
a. Dial **0**.
b. Press ___HOLD___.

Conditions
◊ Each feature can only be programmed for one button. When assigning a feature, CO Line or Station to a button, its duplicate will be erased.
◊ Programmable Flex Buttons cannot be programmed for CO Line Group operation when the system is configured for KEY system operation.
◊ To program the DSS/BLF Console, use ___FEAT___**#5** instead of ___FEAT___**#3**.

Forced Tone Ring

Description
When calling a station in Voice Announce or Hands-Free mode, you can force the station to ring.

Operation
1. While on an intercom call in Voice Announce or Hands-Free mode, press **✳**. The station you are calling will begin to ring.
2. Press **✳** again to return to Voice Announce or Hands-Free mode.

Condition
◊ If the station you are calling is in Tone Ring mode, you cannot force the station to Voice Announce or Hands-Free mode.

Headset Mode

Description
When a headset is installed, the ___SPKR___ button is used to turn the headset on and off.

Setup
◊ To enable or disable headset mode, press ___FEAT___**9#**.

Operation

◊ To answer an incoming call using the headset, press $\underline{\text{SPKR}}$.
◊ To toggle between Speakerphone mode and Headset mode, press $\underline{\text{SPKR}}$ during an intercom or CO Line call.
◊ Picking up the handset will turn off the speakerphone or headset.
◊ To disconnect from a call while in headset mode, press $\underline{\text{CLEAR}}$.

Conditions

◊ Background Music and Ringing can be heard through the speaker regardless of Headset Mode.

Hold

System Hold

Description

You may place any outside line on hold. The system has a Hold Remind time that notifies you when your call has been on hold for a time programmed by your system administrator. Your call will continue to hold until it is picked up or the caller disconnects.

Operation

ALL DIGITAL TELEPHONES
1. While on an outside call, press the $\underline{\text{HOLD}}$ button.

Note: if you have a CO Line button corresponding to the line that is on hold, the button will blink with a Green Lamp. Other stations will see this button blinking with a Red Lamp.

2. You may answer other intercom and outside calls, and you may make other intercom and outside calls.

Note: you may place any number of calls on hold.

3. To retrieve calls on hold:
    a. Press the CO Line button corresponding to the call you want to retrieve.
    b. Press the $\underline{\text{HOLD}}$ button to pick up the call you placed on hold. If you have multiple lines on hold, pressing the $\underline{\text{HOLD}}$ button will pick up the call that has been on hold the longest.

ANALOG TELEPHONES (SLT)
1. While on an outside call, press the Hook Flash (FLASH) button.
2. After a 5 second delay, dial tone is heard, and the party is placed on hold.
3. Hang up.
4. To retrieve the call from the same phone, press ✶6.
5. To retrieve the call from another analog telephone, press ✶7 followed by the station where the call is held.

Hold - Exclusive

Exclusive Hold
Description
When a call is put on Exclusive Hold, it can only be retrieved by the station that placed the call on Exclusive Hold unless the Exclusive Hold Time expires. After the Exclusive Hold Time expires, the call will be placed on system hold.

Setup
1. Access Database Programming (FEAT #✱ + Password).
2. Go to 3.CALL HANDLING and press [show].
3. Go to EX HOLD TIME.
4. Press [chg] until the desired time (in minutes) is reached.

Operation
◊ While on a CO Line call, press FEAT HOLD.

Reminder Time
Description
The system provides a programmable timer to remind you that a call has been left on System or Exclusive hold. When enabled, you will hear one ring tone repeated each time the timer expires.

Setup
1. Access Database Programming (FEAT #✱ + Password).
2. Go to 3.CALL HANDLING and press [show].
3. Go to REMIND TONE.
4. Press [chg] until the desired Reminder Time is reached. To disable Reminder, set the REMIND TONE to 0.

Hold Abandon (Loop Supervision)
Description
Each CO Line can be programmed to monitor for call abandon. If a CO Line is placed on hold and the caller hangs up, or if the CO Line was inadvertently placed on hold with no caller on the line, the system will disconnect from the CO Line if Call Abandon is enabled.

Setup
1. Access Database Programming (FEAT #✱ + Password).
2. Go to 2.CO LINE and press [show].
3. Dial the line you wish to program, and press [show].
4. Go to CALL ABANDON.
5. Press [chg] to toggle Call Abandon on (Y) and off (N).

Conditions
◊ Not all Central Offices support Loop Supervision. Contact your telephone company for more information.

Automatic Hold
Description

This feature allows you to automatically place calls on hold when you press a programmed CO Line button or programmed Station button while you are currently on a CO Line or intercom with another station. When disabled (default), pressing a different programmed CO Line button will disconnect the caller.

Operation

ALL TELEPHONES

◊   Press ⎯FEAT⎯ **9** **4** to turn Hold Automatic on or off.

Note: automatic hold places calls on exclusive hold. Only your station will be able to retrieve the call.

Hot Line

Description

This feature allows you to directly connect the analog extension (SLT) directly to a Page/Page Group, Speed Dial Bin, CO Line, CO Line Group, Hunt Group, or Station.

Setup

Paging
1. Access intercom dial tone.
2. Dial **#** **#** **4**.
3. Dial the time to delay before accessing the hot line - **0** to **9** seconds.
4. Dial the destination code as follows:
5. Paging:
    ◊   Internal Station All Call: **#** **5** **0** **0**
    ◊   External   **#** **5** **0** **1**
    ◊   All Call (Internal and External)   **#** **5** **0** **2**
    ◊   Specific Group:
        i.   Dial **#** **5** **0** **3**.
        ii. Dial the station group (**1** thru **8**).

Speed Dial Bin
1. Access intercom dial tone.
2. Dial **#** **#** **4**.
3. Dial the time to delay before accessing the hot line - **0** to **9** seconds.
4. Dial the destination code as follows:
5. Speed Dial Bin:
    i.   Dial **✱** **1**.
    ii. Dial the Speed Dial Bin # (**0** **0** thru **9** **9**)

Specific CO Line
1. Access intercom dial tone.
2. Dial #️⃣#️⃣4️⃣.
3. Dial the time to delay before accessing the hot line - 0️⃣ to 9️⃣ seconds.
4. Dial the destination code as follows:
5. Specific CO Line:
   i.   Dial ✳️3️⃣.
   ii. Dial the CO Line number:
        1️⃣ = Line 1

        ...
        9️⃣ = Line 9
        0️⃣ = Line 10
        ✳️ = Line 11
        #️⃣ = Line 12

CO Line Group
1. Access intercom dial tone.
2. Dial #️⃣#️⃣4️⃣.
3. Dial the time to delay before accessing the hot line - 0️⃣ to 9️⃣ seconds.
4. Dial the destination code as follows:
5. CO Line Group
   i.   Dial ✳️4️⃣.
   ii   Dial the CO Line Group (0️⃣ thru 4️⃣; 0️⃣ = Any Group)
   iii   Dial a valid extension:
         System24 (10 - 25 or 58 - 73)
         System48 (100 - 147 or 148 - 195)
   iiii Dial a Hunt Group:
         Sytsem24 (82 - 89)
         System48 (800 - 807)

Cancellation
1. Pick up the handset. If no delay time is set, or if the delay time is too short for you to program, press Flash Hook. You should receive intercom dial tone.
2. Press #️⃣#️⃣4️⃣.
3. Hang up.

Hour Mode Selection

Description

The system can display time in 12-hour (AM/PM) format or 24-Hour format. This is a system-wide feature. All display stations are affected.

Setup

1. Access Database Programming (‾‾ᶠᴱᴬᵀ‾#🟊 + Password).
2. Go to 4.RESOURCE and press [show].
3. Go to HOUR MODE.
4. Press [chg] to toggle from 12-hour to 24-hour format.

Hunt Groups

Description

Up to 8 hunt groups can be assigned. Each Hunt Group can contain up to 24 members. There are 3 types of hunt groups: All Ring, Linear Hunt, and Voice Mail. Hunt Groups 1 thru 8 correspond to extensions 82 thru 89.

All Ring: All stations ring when calls are sent to, or a station dials, an All Ring Hunt Group.

Linear Hunt: Stations ring in a linear fashion, in order that they are programmed. If a member in sequence is busy, the next available member will ring. For instance, if Member 1 and Member 2 are busy, Member 3 will ring. As soon as the busy members are no longer busy, they are placed back into queue. Whenever a Linear Hunt Group is called, the members are always called in sequence, always starting with Member 1.

Voice Mail: When connected to an integrated voice mail, designating a hunt group to Voice Mail will allow the system to dial digits required by the Voice Mail system. See your Voice Mail installation manual for details.

Setup

1. Access Database Programming (‾‾ᶠᴱᴬᵀ‾#🟊 + Password).
2. Go to 6.SYSTEM APPLICATION and press [show].
3. Go to STATION HUNT GROUPS and press [show].
4. Dial the hunt group number (**1** thru **8**), and press [show].
5. At GROUP TYPE, use [chg] to select the type of hunt group.
Note: you can only have 1 hunt group set as Voice Mail type. The VM option will not be available if another hunt group is already set as VM.
6. Go to GROUP MEMBER and press [show].
7. Go to the Group Member you wish to change/add and press [chg].
8. Dial the station you wish to add, and press [save].

9. Go to `RING ASSIGNMENT` and press [`show`].
10. Go to the CO Line that you want to be automatically directed to the Hunt Group. For each CO Line that you want to ring to the Hunt Group, press [`chg`] to toggle the ring assignment to `DAY`, `NITE`, or `BOTH`, depending on the mode you wish the Hunt Group to operate.

Note: if you do not wish calls to be directed to the hunt group, leave all CO Line `RING ASSIGNMENTS` to `NONE`.

Operation
◊   To call the hunt group, dial:
8 **2** for Hunt Group 1
8 **3** for Hunt Group 2

...
8 **9** for Hunt Group 8

Intercom Calling

Description
Intercom Calling is used to converse with other station users in the system. Stations may be programmed as Direct Station Select (DSS) button on your station (see Direct Station Select in this manual).

Operation
ALL TELEPHONES
◊   You may place an intercom call with one of the following methods:
a. Pick up your handset and dial the station of the person you wish to reach.
b. Simply dial the station of the person you wish to reach. This will activate your speakerphone.
c. If you have a DSS button programmed with the station of the person you wish to reach, you may pick up your handset and press the DSS button, or simply press the DSS button while the handset is in the cradle.

Note: if you have automatic line select programmed to access a CO Line when you pick up your handset, you will need to dial the station or press the DSS button before you pick up your handset.

DISPLAY TELEPHONES
You will receive one of the following messages when you attempt to intercom a station:

`VOICE CALL 10`	Connected to Station
`STA 10 BUSY`	Station is Busy
`STA 10 DND`	Station is in DND mode
`OUT OF SERVICE`	Station does not exist
`YOUR NUMBER`	Station is your own

Last Number Redial

Description
   Last Number Redial allows you to dial the most recent number dialed.

Operation
   ALL DIGITAL TELEPHONES
   ◊   Press ⎯FEAT⎯ 8.
   note: all digits from the point of pressing the CO Line button are re-dialed.
   If you dialed additional digits (i.e. bank information), all digits are re-dialed
   immediately.

   ANALOG TELEPHONES
   ◊   Dial #8 from intercom dial tone.

Letter Scheme

Description
   Station User Names may be enhanced for special requirements using
   the choices available in the Letter Schemes. There are 6 different
   letter schemes. Only one letter scheme may be used by the system
   at any time.

Setup
   1.   Access Database Programming (⎯FEAT⎯ #✱ + Password).
   2.   Go to 4.RESOURCE and press [show].
   3.   Go to LETTER TYPE.
   4.   Press [chg] to toggle through the different letter types as follows:

   Scheme 0:   Æ Ɛ ø Ø à Á
   Scheme 1:   Ç Ã Ō Ñ Å Ä
   Scheme 2:   Ò É ê è à Û
   Scheme 3:   Č Ď É Ñ Ō Ř
   Scheme 4:   Á É ó Ü Ú
   Scheme 5:   Ł ż Ą ę

Operation
   ◊   When in User Name Programming, press 1 until the desired
       character is displayed.

Loud Bell Control

Description

The system provides one dry contact closure for interface to an external Loud Bell device which is associated with incoming CO Line ringing. If Loud Bell is assigned to a specific CO Line, the incoming call signaling on this CO Line will initiate Loud Bell Control operation. The Loud Bell contacts will follow the CO ring cadence programmed in Ring Scheme. It is recommended that a 24VDC 0.5a device be used. An external power source is required for customer-provided external loud bell device.

Setup

1. Access Database Programming (FEAT #✱ + Password).
2. Go to 2.CO LINE and press [show]
3. Dial the CO Line you wish to associate to the Loud Bell and press [show].
4. Go to LOUD BELL.
5. Use [chg] to toggle the Loud Bell Control on (Y) and off (N).

To program the ring cadence:
1. Access Database Programming (FEAT #✱ + Password).
2. Go to 4.RESOURCE and press [show].
3. Go to RING SCHEME.
4. Press [chg] to toggle through the Ring Scheme choices:

Message Waiting

Description

Message Waiting allows users of Non-Display Telephones to leave a call-me message for a station to call back. For Display Telephone users, see Text Messaging.

Leaving a Message
Operation

NON-DISPLAY DIGITAL TELEPHONES
1. Press FEAT 9 6
2. Dial the extension where the message should be left.

ANALOG TELEPHONES (SLT)
1. Press #9 6.
2. Dial the extension where the message should be left.

Receiving a Message
Operation

NON -DISPLAY DIGITAL TELEPHONES
◊   Press ⎯FEAT⎯ 9 6. You will be connected to the station that left a message.

ANALOG TELEPHONES (SLT)
◊   Dial # 9 6. You will be connected to the station that left a message.

Cancellation
Operation

NON-DISPLAY DIGITAL TELEPHONES
◊   Press ⎯FEAT⎯ * 9 6.

ANALOG TELEPHONES (SLT)
◊   Dial # * 9 6 from intercom dial tone.

Music-On-Hold (MOH)

Description
Whenever a music or message source is connected to the MOH port of the System 24/48, this source will be heard whenever a CO Line or station is placed on hold within the system.

Operation
◊   While on a CO Line, or when talking with another station, press ⎯HOLD⎯. The other party will hear MOH.

Mute

Description
During a conversation with another station or a CO Line, ⎯MUTE⎯ will prevent the distant party from hearing your voice. You will still be able to hear the distant party.

Operation
◊   While on a call, press ⎯MUTE⎯. The light next to the ⎯MUTE⎯ button will light, indicating that the distant party will not be able to hear you. Press ⎯MUTE⎯ again to continue your telephone conversation.

Muted Ringing

Description
While on a call, incoming CO Line calls will automatically ring at a lower volume level at this station. When the station becomes available, calls will ring at the last programmed level.

Night Service

Description

Night Service is used to change CO Line Ring and Receive assignments. By placing the system in Night Service, Toll Restrictions, Classes of Service, DISA, and External Forward are affected.

Night Service can be automatically set to turn on and off at specific times, or manually.

Setup of Automatic Night Service

1. Access Database Programming (⎯FEAT⎯ #✱ + Password).
2. Go to 4.RESOURCE and press [show].
3. Go to NITE START.
4. To change the time that you wish Night Service to start, press [chg] and enter the correct Night Start time in 24-hour format: 0800 = 8:00AM, and 1700 = 5:00PM.
5. Press [save] to save the Night Start time.
6. Go to NITE END.
7. To change the time that you wish Night Service to end (day mode to start), press [chg] and enter the correct Night End time in 24-hour format.
8. Press [save] to save the Night End time.

Operation

◊ To toggle Night Service on and off, press ⎯FEAT⎯ #2 from an idle telephone.

Note: display telephones will show NIGHT in the display when the system is in Night Service mode.

One Button Record

Description

When equipped with an Integrated Voice Mail System, this feature allows users to record and store telephone conversations (both CO Line and Intercom conversations). After the recording is saved, it is sent to your station's voice mail box as a new message for future retrieval.

Operation

ALL TELEPHONES

note: The use of this feature may be interpreted as a violation of Federal,

State, or Local Laws, and an invasion of privacy. Check applicable laws in your area before using this feature.
1. Press ——FEAT——**7 2**. After 3 seconds, recording will begin.
2. To stop recording during your conversation, press ——FEAT——**7 2**.
3. Hanging up will save the message and disable One Button Record.

Paging

Description
Paging allows you to broadcast your voice through all idle telephones (internal paging), through external paging equipment (external paging), or both (all call paging).

Operation - Making a Page Call
DISPLAY TELEPHONES
1. Press ——FEAT——**5 0**. Your display will show:
    PAGING
2   a. To broadcast to all internal stations, press [all].
    b. To broadcast to an external paging system, press [extern].
    c. To broadcast to both internal stations and the external paging system, press [next] followed by [both].
    d. To broadcast to a station group, press [group] and dial the group number (**1** - **8**)

NON-DISPLAY TELEPHONES
1. Press ——FEAT——**5 0**.
2   a. To broadcast to all internal stations, press **0**.
    b. To broadcast to an external paging system, press **1**.
    c. To broadcast to both internal stations and the external paging system, press **2**.

Operation - Station Allow/Deny
Stations may disable (deny) paging through their station. This does not affect station-to-station calls, background music, or any other speaker function

Deny
◊ Press ——FEAT——**9 9**. Pages will not be heard through this station.

Allow
◊ Press ——FEAT——**✱ 9 9**. Pages will be heard through this station.

Operation - Meet Me Page
Any Page may be answered by any station in the system, thereby

turning off the page, and setting up a 2-station conversation.
◊ During a page (prior to the station making the page disconnects), press <u>FEAT</u> 5 9. The page will be ended and the 2-way conversation set up.

Pause

Description
A pause is used to insert an intentional delay when making CO Line calls. This feature is most useful when stored in speed dial bins to dial special features.

Setup
The length of the delay that Pause creates can be set in system programming as follows:
1. Access Database Programming (<u>FEAT</u> # ✱ + Password).
2. Go to 3.CALL HANDLING and press [show].
3. Go to PAUSE TIME.
4. Press [chg] until the desired Pause time is reached (in seconds).

Operation
◊ Press <u>FEAT</u> 7 0 to insert a pause in a speed dial bin, or during a CO Line call

Preset (CO Line) Call Forward

Description
Preset Call Forward allows any CO Line to be forwarded to a preprogrammed destination, which includes stations, Hunt and Voice mail groups. If the destination is a voice mail group, Voice Mail Identification Digits (VMID) can be sent to the voice mail, via In-band signaling. These digits are used to ensuring that the call is forward to the proper destination.

Setup
1. Access Database Programming (<u>FEAT</u> # ✱ + Password).
2. Go to 3.CALL HANDLING and press [show].
3. Go to CO PRESET FWD
4. Press [show], CO Preset forward time [CO P-FWD:16] toggle through the preset forward times (6-40), by default it is set to 16 seconds. Press [next].
5. Select CO Line Attribute [CO LN ATTRIBUTE], Press [show]
6. Enter the CO line to be programmed [SHOW CO LINE], Press [show]
7. Enter the forward destination - This can be a station, a hunt or voice mail group, such as 8 9, Press [save], then Press [next]

8. Enter VMID digits (up to 6 digits) - These are the digits that are sent via In-Band signaling from the KSU to the voice mail.
9. Repeat steps 7 and 8 for all CO lines that will be preset forwarded. Press <u>CLEAR</u> to exit programming.

Operation
◊   The CO Line must be initially ringing. Once answered, by either a live or automated attendant, the preset call forward feature is no longer active.
◊   Preset Call Forward is the only type of forwarding that will work with a CO Line that is programmed to ring using the "Private To" feature.
◊   Although it is not PCS digital's intention to sell the System24 or the System48 as a multiple company solution. This feature can be helpful when multiple companies are using the same system.

Privacy Release

Description
By default, each station on the System 24/48 are private. Privacy Release allows another station with the same Class of Service or greater to join and participate in a CO Line conversation. Up to 4 stations may join a line when Privacy Release is enabled.

Setup
1. Access Database Programming (<u>FEAT</u> #✱ + Password).
2. Go to 3.CALL HANDLING and press [show].
3. Go to PRIVACY RLS.
4. Press [chg] to toggle Privacy Release on (Y) and off (N).
5. Go to PRIVACY RLS TONE.
6. To hear a tone when someone joins in the CO Line, set this to Y. To have members quietly join in the CO Line, set this to N.

Operation
◊   Press the CO Line button of the CO Line you wish to join.

Private Line

Description
> Each CO Line can be set as a private line to specific stations. This is useful when a CO Line needs to be dedicated to a specific station, like a fax line.

Setup
> 1. Access Database Programming (⎯FEAT⎯ #✱ + Password).
> 2. Go to 2.CO LINE and press [show].
> 3. Dial the CO Line you wish to make private to a station and press [show].
> 4. Go to PRIVATE TO.
> 5. To set or change, press [chg].
> 6. Dial the extension you wish to make the selected line private to.
> 7. Press [save].

Conditions
> ◊ Making a CO Line private to an extension overrides that stations Receive and Ring assignments. All calls to the CO Line will ring to the station, and can be answered by the station, regardless of Receive or Ring assignments.

Receive Assignment

Description
> Each station can be assigned receive access to any or all of the system's CO Lines. When Receive Assignment is enabled, the station may receive calls that are on hold, answer incoming calls, and use Call Pickup to retrieve calls. When disabled, the station cannot pick up calls.

Setup
> 1. Access Database Programming (⎯FEAT⎯ #✱ + Password).
> 2. Go to 1.STATION and press [show].
> 3. Dial the station you wish to modify and press [show].
> 4. Go to RECEIVE ASSIGNMENT and press [show].
> 5. Use [back] and [next] to scroll through the Receive Assignments. Press [chg] to toggle the Receive Assignment.

Ring Assignment

Description

Each station can be assigned ring access to any or all of the system's CO Lines. When Ring Assignment is enabled, the station will ring whenever a call is received on the CO Line. When disabled, the station will not ring.

Setup

1. Access Database Programming (‾‾‾FEAT‾‾‾ #✱ + Password).
2. Go to 1.STATION and press [show].
3. Dial the station you wish to modify and press [show].
4. Go to RING ASSIGNMENT and press [show].
5. Use [back] and [next] to scroll through the Ring Assignments. Press [chg] to toggle the Ring Assignment.

Conditions

◊ If Ring Assignment is enabled, but Receive Assignment is disabled, the station will not ring. Receive Assignment must be enabled in order to have the station ring.

Ringing Line Priority

Description

When a station is called by multiple parties (Multiple CO Lines, or Stations, or combinations of these), the calls can be answered by picking up the handset. By picking up the handset or pressing the ‾‾SPKR‾‾, the calls are answered in the following priority order:

1. Intercom Call Backs
2. Trunk Queued CO Lines
3. Transfer Recalled CO Lines
4. Transferring CO Lines
5. Incoming CO Lines
6. Incoming station intercom calls

Conditions

◊ Ringing Line Priority can be overridden for CO Lines by pressing the specific CO Line before picking up the handset or pressing the ‾‾SPKR‾‾ button.

Save Dialed Number

Description

This feature is used to save a number dialed. Only one saved number is allowed.

Operation

ALL TELEPHONES

1. After calling the number you wish to reach, press $\underline{\text{FEAT}}$ **5 1** before hanging up.
2. To dial the saved number, press $\underline{\text{FEAT}}$ **5 1**.

Station Camp On

Description

Busy Station Camp On allows you to notify a busy station that you are waiting to speak to the person at that station.

Note: If you place an internal station on hold in order to answer a camp-on call, you must press the $\underline{\text{HOLD}}$ button again to return to the station on hold.

Operation

DISPLAY TELEPHONES

1. Dial the station you wish to speak to. If the station is busy, the display will show:
    STA 10 BUSY
2. Press the [next] soft button to scroll to another set of soft button options.
3. Press [camp]. The display will show:
    CAMP ON TO 10

note: if equipped and enabled, you will hear Music-On-Hold until your camp on is answered.

4. When the station you have camped on to places their current call on hold or hangs up, your station will begin to ring. Pick up the handset to speak.

NON-DISPLAY TELEPHONES

1. Dial the station you wish to speak to. You will hear a busy tone if the station is busy.
2. While listening to the busy tone, press **2**.
3. When the station you have camped on to places their current call on hold or hangs up, your station will begin to ring. Pick up the handset to speak.

ANALOG TELEPHONES (SLT)
1. From Intercom Dial Tone, dial the station you wish to speak to. You will hear a busy tone if the station is busy.
2. While listening to busy tone, dial **2**.
3. Hang up.

Station Feature Status Check

Description
A Display Telephone user can quickly determine the status of all user-controlled features of their station. This feature is useful for technicians to view the state of the station for troubleshooting.

Operation
1. Press ⎯FEAT⎯ #8.
2. The display will show the features as follows. Use [next] to scroll through these features.
   a. Last Number Redial
   b. Save Dialed Number
   c. User Saved Number
   d. Day Class of Service
   e. Night Class of Service
   f. Auto Hold Status
   g. Phone Lock Status
   h. Voice Announce Status
   i. Call Waiting Status
   j. Page Receive Status
   k. Night Station

Station Groups

Description
The system provides eight Station Groups for partitioning the system into separate departments or related features. Members of a Station Group have the ability to pick up incoming or transferred calls from other associated members in the same group, via the Call Pickup Group code. As a Station Group member, you also receive internal zone pages directed to your Station Group.

Setup
1. Access Database Programming (⎯FEAT⎯ #✱ + Password).
2. Go to 1.STATION and press [show].
3. Dial the station you wish to change and press [show].
4. Go to STATION GROUP.
5. Press [chg] until the desired group is reached.

Station Lock/Unlock

Description

    This feature can be used to prevent unauthorized outside calling from your station.

Operation

    DISPLAY TELEPHONES

1. Press ⎯FEAT⎯ 9 7 .
2. Dial your current 4-digit password.
3. Do one of the following:
    a. Press [Pswd] to change your 4-digit password. Dial the new password and press [save].
    b. Press [yes] to LOCK your station.
    c. Press [no] to UNLOCK your station.

    NON-DISPLAY TELEPHONES

1. Press ⎯FEAT⎯ 9 7 .
2. Dial your current 4-digit password.
3. Do one of the following:
    a. Dial a new 4-digit password to change the current password.
    b. Press # to LOCK your station.
    c. Press ✳ to UNLOCK your station.

    ANALOG TELEPHONES (SLT)

1. Dial # 9 7 from Intercom Dial Tone.
2. Dial your current 4-digit password.
3. Do one of the following:
    a. Dial a new 4-digit password to change the current password.
    b. Press # to LOCK your station.
    c. Press ✳ to UNLOCK your station.

Conditions

    ◊ When locked, your station can only make intercom calls.
    ◊ Calls on hold, and incoming calls can still be answered.
    ◊ To retrieve a forgotten password, go to Database Programming, 4.RESOURCE,USER PASSWORD.

Station Message Detail Recording (SMDR)

Description

SMDR is used to track all incoming and outgoing CO Line traffic. SMDR is sent from the SMDR RS323 serial port. An external serial printer or call accounting device may be connected for permanent record keeping or call cost accounting. Data communications is one direction only through this port and is programmable for data rate selection in system programming.

If entered, an account coded may also be recorded for each call record. SMDR information includes CO Line used, station number, time and date the call was placed, number dialed, duration of the call, Ring Time to Answer, an account code (if entered), and a comment for special call handling record. The system will also provide ring-in duration and call processing information relative to the call as it was handled by the system.

Setup

1. Access Database Programming ($\underline{\text{FEAT}}$ #✱ + Password).
2. Go to 4.RESOURCE and press [show].
3. Go to SMDR X_RATE.
4. Press [chg] until the desired baud rate is displayed.

Station Speed Dial

Description

Station Speed Dial allows you to save frequently accessed numbers. These numbers are saved for quick access. Each station may store up to 20 speed dial numbers of up to 16 digits each. You may insert pauses ($\underline{\text{FEAT}}$ 7 0) and flashes ($\underline{\text{FEAT}}$ 3) in the speed dial number. Each pause and flash occupies one digit of the 16 digit capacity.

Saving Speed Dial Numbers

Operation

DISPLAY TELEPHONES

1. Press $\underline{\text{FEAT}}$ # 1. The display will show:
   SPEED NO:__
2. Dial the bin number where you wish to store the telephone number (0 0 thru 1 9). The display will show the current contents of the bin:
   EMPTY
3. Press [chg] to change the bin's contents.
4. Dial the telephone number to be saved.
5. Press [save] to save.

     NON-DISPLAY TELEPHONES
1. Press <u>FEAT</u> #1.
2. Dial the bin number where you wish to store the telephone number (00 thru 19)
3. Dial the telephone number to be saved.
4. Press <u>HOLD</u> to save.

     ANALOG TELEPHONES
1. Press #1 from Intercom Dial Tone.
2. Dial the bin number where you wish to store the telephone number (00 thru 19).
3. Dial the telephone number to be saved.
4. Press the Hook Flash.

Retrieving Speed Dial Numbers

     ALL DIGITAL TELEPHONES
1. Press <u>FEAT</u> 1.
2. Dial the bin number where the speed dial number is saved (00 thru 19).

     ANALOG TELEPHONES (SLT)
1. Press *1 from Intercom Dial Tone.
2. Dial the bin number where the speed dial number is saved (00 thru 19).

Station Status

Description
31-button display telephone users can quickly determine the status of the following features: User Saved Number, Day COS, Night COS, Auto Hold, Phone Lock, Voice Announce, Call Wait Setting, Page Receive, and Night Station.

Operation
1. 31-Button display telepone users can dial <u>FEAT</u> #8
2. LNR will be displayed first, Press "next" to scroll through the settings.

System Speed Dial

Description
> System Speed Dial allows the system administrator to save frequently accessed numbers. System Speed Dial overrides all Toll Restrictions, except for Class of Service 7. In other words, if a station is restricted from any outbound dialing on any CO Line, and the user dials a programmed System Speed Dial bin, the number will be dialed, regardless of COS or Toll Restriction settings.

Setup
1. Access Database Programming (⎯FEAT⎯ #✱ + Password).
2. Go to 4.RESOURCE and press [show].
3. Go to SYSTEM SPEED NO and press [show].
4. Dial the System Speed Dial number (2 0 thru 9 9) and then press [show].
5. To change the current number in the bin, press [chg].
6. Dial the number exactly as you want it to be dialed.
7. Press [save].

Operation
1. Press ⎯FEAT⎯ 1.
2. Dial the bin number where the speed dial number is saved (2 0 thru 9 9).

System Time

Description
> The system has a built-in clock for certain features such as Night Service, SMDR, Alarm, etc. It can also be displayed on any Display Telephone in idle mode, depending on station status.

Setup
1. Access Database Programming (⎯FEAT⎯ #✱ + Password).
2. Go to 4.RESOURCE and press [show].
3. Go to SYSTEM TIME and press [show].
4. At YEAR, press [chg] and dial the last 2 digits of the current year. Press [save].
5. Go to MONTH. Press [chg] until the current month is displayed.
6. Go to DAY, press [chg] and dial the current day. Press [save].
7. Go to WEEKDAY and press [chg] until the current weekday is displayed.
8. Go to HOUR, press [chg] and dial the current hour, in 24 hour

format (08 = 8 AM, 17 = 5 PM). Press [save].

9. Go to MINUTE, press [chg] and dial the current minute. Press [save].

Text Messaging

Description

You may send a preprogrammed or customized message to any Display Telephone. The message length can be up to 16 characters (letters and numbers).

Sending a Text Message

Operation

DISPLAY TELEPHONES

1. Dial the station number of the person you are trying to reach. Your display will look similar to:
   CALLING STA 10

2. Press [msg] to access the Text Messaging menu. Your display will show:
   MESSAGE TYPE

3 a. To send a preprogrammed Call Me message, press [CALL ME]. Using the Call Me feature allows you to leave a message for Non-Display Telephones, if they have a Message button programmed (see DSS Programming for details)

   b. Press [PREPROG] to view a list of preprogrammed messages or to enter a personal text message.

4 a. To view a list of the preprogrammed messages, press [next] until you find the desired message.

   b. To create your own text message, use the dial pad to enter up to 16 characters. See the chart on the following page for instructions on using the dial pad to enter text.

5. Press [send] to send the text message.
   →

Available preprogrammed messages:

```
CALL OPERATOR     CALL HOME
CALL SCHOOL       VISITORS WAITING
URGENT            COME SEE ME
```

Number of Presses:

	1	2	3
1	Special Character - Letter Type		
2	A	B	C
3	D	E	F
4	G	H	I
5	J	K	L
6	M	N	O
7	P	R	S
8	T	U	V
9	W	X	Y
0	Q	Z	

✱ Pressing this BEFORE a dial pad button will make the next entry a number.
Pressing this AFTER a dial pad button will make the current character lower case.

Moves you to the next character position. It can also act like a space.

Receiving a Text Message

Operation

DISPLAY TELEPHONES

1. If you have received a text message, your display will show:
   MSG FROM STA 10
2. Press [show] to view the message.

Station Notification

Description

DISPLAY TELEPHONES

Station notification allows you to set a message for your station. When an intercom caller with a display telephone attempts to call you, they will receive the notification that you program.

Operation

DISPLAY TELEPHONES

1. Press ͞FͫEͣAͭ͞ **9 0**. Your display will be similar to:
   EMPTY
2. Press [chg] to change the message.
3. Use the dial pad buttons to type in the desired message. (See Text Messaging:Sending a Text Message for typing a text message)
4. To view a list of the preprogrammed messages, press [next].
5. Press [store] to save the message.
6. To remove your Station Notification message, press ͞FͫEͣAͭ͞ **9 0**.

Toll Restriction

Description

The System 24/48 can be set to monitor digits dialed on CO Lines. If a digit or range of digits dialed on a CO Line does not correlate with the Allow Digit Interval table, the CO Line is released immediately. On any non-allowed call, the station user will receive error tone and the CO Line button LED will turn off. At a Display Telephone, the user will see Call Restricted on the LCD. The Toll Restriction Allow Digit Interval table may be constructed in a matrix format and associated to any of the Classes of Service. Stations may be assigned a separate COS for Day and Night System Mode operation.

Setup Toll Restriction Table

1. Access Database Programming (FEAT #✳ + Password).
2. Go to 5.RESTRICTION and press [show].
3. Go to CO LN CALL DISCR and press [show].
4. Dial the digit interval row you wish to change (001 - 100), and press [show].
5. Go to START (   ) and press [chg] to change the starting digit to allow. Press [save].
6. Go to END (   ) and press [chg] to change the ending digit to allow. Press [save].
7. Go to DAY ALLOW and press [show] to show the Day Classes of Service that this digit interval should be applied to.
8. Select the COS to change, and press [chg] to toggle the Class of Service between Y (Allow this interval) and N (Do Not Allow this interval).
9. Go to NITE ALLOW and press [show] to show the Night Classes of Service that this digit interval should be applied to.
10. Select the COS to change, and press [chg] to toggle the Class of Service between Y (Allow this interval) and N (Do Not Allow this interval).
11. Set the station Class of Service as described in Class Of Service programming, based on the changes made above.

Tone / Inter-Digit Duration

Description

Depending on the type of CO, and the customer specialized dialing requirements, the DTMF On time and Inter-Digit time may be modified for manually dialed or system automatically-dialed digits. Typically, no modification of tone/inter-digit duration is required. However, in some installations where line conditions are poor, tone duration and/ or inter-digit duration timing may be increased to offset poor conditions.

Setup
1. Access Database Programming ($\overline{\text{FEAT}}$ **#** **✱** + Password).
2. Go to `3.CALL HANDLING` and press [`show`].
3. Go to `DIALING RATIO` and press [`show`].
4. Go to `TONE TIME`, and press [`chg`] until the desired length of DTMF tone is displayed (in milliseconds).
5. Go to `INT_DGT TIME` and press [`chg`] until the desired length of time between DTMF tones is displayed (in milliseconds).

Tone (DTMF)/Pulse (rotary) Mode

Description
The system is capable of dialing Dial Pulse (rotary) or DTMF Tones. This is set up on a per-CO Line basis. When set to Dial Pulse mode, you can temporarily override the system to dial DTMF tones for access to special features, like bank account access or off-site voice mail.

Setup
1. Access Database Programming ($\overline{\text{FEAT}}$ **#** **✱** + Password).
2. Go to `2.CO LINE` and press [`show`].
3. Dial the CO Line you wish to program and press [`show`].
4. Go to `DIALING`.
5. Press [`chg`] to toggle between `TONE` and `PULSE`.

Pulse to Tone Switch over
◊ After dialing a telephone number on a pulse-enabled line, press **✱** to change from Pulse Mode to Tone (DTMF) Mode.

Transfer

Description
You may transfer CO Lines to different stations. There are 2 types of transfers:

Unsupervised (Direct) Transfer is used to transfer callers directly to a station unannounced.

A Supervised Transfer is when you announce a caller to a station prior to sending the call to that person.

Supervised Transfer
Operation
ALL DIGITAL TELEPHONES
1. While on a CO Line call, press the $\underline{\text{HOLD}}$ button.
2. Call the station you wish to transfer to.
3. After speaking to the station, you may press the $\underline{\text{TRANS}}$ button to complete the transfer.

Note: If you need to speak to the CO Line party, press the CO Line button instead of ___TRANS___.

ANALOG TELEPHONES (SLT)
1. While on a CO Line call, press the Hook Flash.
2. Dial the station you wish to transfer to within 5 seconds.

Note: if you do not dial a station number within 5 seconds, the caller will be disconnected.

3. After speaking to the station, you may hang up to complete the transfer.

Note: If you need to speak to the CO Line party, press the Hook Flash instead of hanging up.

Unsupervised / Direct Transfer
Operation
ALL DIGITAL TELEPHONES
1. While on a CO Line call, do one of the following:
    a. Press the Direct Station Select (DSS) button for the station you want to transfer to, and hang up, OR
    b. Press ___HOLD___ and dial the station you want to transfer to and press ___TRANS___.

ANALOG TELEPHONES (SLT)
1. While on a CO Line call, press the Hook Flash.
2. Dial the station you wish to transfer to within 5 seconds.

Note: if you do not dial a station number within 5 seconds, the caller will be disconnected.

3. Hang up to complete the transfer.

Transfer Recall

Description
When a call is transferred from one station to another, the call will be recalled to the station that made the transfer if the call is unanswered.

Setup
The amount of time before the call is recalled can be set in Database Programming as follows:
1. Access Database Programming (___FEAT___ # ✱ + Password).
2. Go to 3.CALL HANDLING and press [show].
3. Go to RECALL TIME.
4. Press [chg] until the desired Recall Time is displayed (in seconds).

Trunk Queuing

Description

Trunk Queuing allows you to reserve a specific CO line for use when it becomes available.

Operation

DISPLAY TELEPHONES

1. Press the CO line you wish to reserve for next use. If the line is busy, the display will show:
   `CO LINE 1 BUSY`
2. Press [camp].

Note: only one station may camp on to any single line.

   a. If the line has not been camped on, the display will show:
      `CAMP ON CO LN 1`
   b. If the line has been camped on by another station, the display will show:
      `CAMP ON FAILURE`

3. When the line becomes available, your station will ring, and the display will show:
   `LN 1`
   Press the line button or pick up the handset to use the CO line.

NON-DISPLAY TELEPHONES

1. Press the CO line you wish to reserve for next use. You will hear a busy tone.
2. Press ^{FEAT} 9 3.
3. When the line becomes available, your station will ring. Press the line button or pick up the handset to use the CO line.

Note: only one station may camp on to any single line.

ANALOG TELEPHONES (SLT)

1. Attempt to access a CO Line. (See CO Line Access)
2. When you receive busy tone, press # 9 3.
3. When the line becomes available, your station will ring. When you answer the phone, you will be connected to the CO Line.
4. To cancel Trunk Queuing, press # * 9 3.

User Name

Description
> An alphanumeric, seven-charater user name may be assigned to each station in the system. This name will be displayed on Display Telephones in place of the standard STATION message. When any station calls a Display Telephone station, the name of the calling station will be displayed, if programmed.

Setup
1. Access Database Programming (FEAT #✱ + Password).
2. Go to 4.RESOURCE and press [show].
3. Go to USER NAMES and press [show].
4. Dial the station you wish to change, and press [show].
5. Press [chg] to change or add a name.
6. Use your numeric keypad as follows. Multiple presses toggles through the letters of each key:
   Press 1 to display special characters (See Letter Scheme).
   Press 2 for A, B, and C.
   Press 3 for D, E, and F.
   Press 4 for G, H, and I.
   Press 5 for J, K, and L.
   Press 6 for M, N, and O.
   Press 7 for P, R, and S.
   Press 8 for T, U, and V.
   Press 9 for W, X, and Y.
   Press 0 for Q, Z, and _.
   Press ✱ BEFORE a number to display a number.
   Press ✱ AFTER the desired letter is shown to make the selected
       letter lower case.
   Press # to save the current letter and move to the next position.
   Press # again to add a blank space.

Note: Always press # after the last letter in the name, or the last letter will not be saved.

7. Press [save].

User Saved Number Redial

Description

USNR is used to store numbers while you are on an outside CO Line.
USNR can only be used with Display Telephones.

Operation

ALL TELEPHONES
1. While on a CO Line call, press ⸺^{FEAT} **5** ✱.
2. Dial the numbers you wish to save
3. Press [save].
4. To retrieve, press ⸺^{FEAT} **5** ✱ when your station is idle.

Voice Announce

Description

Voice Announce allows you to call a station and have the other station
immediately connect allowing you to talk to the other station.

Voice Announce has 2 modes: Hands-Free and Private. In Hands-
Free mode, both stations may talk and listen to each other. In Private
mode, the calling station may talk, but the microphone on the receiving
party is muted.

Alternately, there is a Tone Ring mode. When a station calls another
station in Tone ring mode, the receiving station rings.

Each station is preprogramming with a Voice Announce button as one
of the Programmable Flex Buttons. It is on the bottom row, the #3
button from the left, marked HF/TONE. The following chart shows you
what the color of the button lamp means:

Voice Mail Button

Description
When Integrated Voice Mail is installed, the Voice Mail button is used to retrieve Voice Mail messages, and will flash the LED indicator on the button designated as the Voice Mail button.

Setup
1. Press ‾‾FEAT‾‾ #3 to access Feature Button Programming.
2. Press the Flex Button you wish to program as Voice Mail.
3. Press [chg] and select [feat].
4. Press ‾‾FEAT‾‾ 64 to make the button a Voice Mail button.
5. Press [save].

Voice Over Busy

Description
Voice Over Busy allows you to speak to another station that is on a CO Line without the person on the CO Line hearing. The person originating the Voice Over Busy will not be able to hear the person on the CO Line, and vice versa.

Activating
Operation
DISPLAY TELEPHONES
1. When calling a station that is on a CO Line, your display will show:
   STA 10 BUSY
2. Press [next] to get to the next set of menu options.
3. Press [voice] to initiate the Voice Over Busy.

NON-DISPLAY TELEPHONES
- When calling a station that is on a CO Line, press ‾‾FEAT‾‾ 56.

Rejecting
Operation
DISPLAY TELEPHONES
◊ Press [reject].

NON-DISPLAY TELEPHONES
◊ Press ‾‾FEAT‾‾ 56.

Talk Back
Operation
ALL TELEPHONES
◊ Press the ‾‾MUTE‾‾ button to speak to the Station that is calling you. Your handset mic will be muted to the outside caller, and active to the Station calling you.

Volume Control

Description
Using the <u>VOL▲</u> and <u>VOL▼</u> buttons, you can control the volume of the currently active mode. The volume will remain at the most recent level until changed.

Operation
Use the <u>VOL▲</u> and <u>VOL▼</u> buttons while the phone is in the following states to change the volume settings:

Ringer   The phone needs to be in an idle state, with Background Music turned off (<u>FEAT</u> 5 2 to toggle).

BGM   The phone needs to be in an idle state, with Background Music turned on (<u>FEAT</u> 5 2 to toggle).

Speaker   To control the Speakerphone volume, you need to be off hook in speakerphone mode (i.e. on an outside call, an intercom call, or during intercom dial tone).

Handset   To control the volume of the handset, you need to be off hook with the handset off the cradle (i.e. on an outside call, an intercom call, or during intercom dial tone).

Headset   To control the volume of a headset, you need to be off hook, in headset mode (<u>FEAT</u> 9 #), with the handset in the cradle (i.e. on an outside call, an intercom call, or during intercom dial tone).

Warning Tone

Description
When the Warning Time is set in Call Handling, and Warning Tone is enabled on a station (through Station programming), a Warning Tone will be heard at the specified time when making outgoing CO Line calls on the programmed extension. Once the Warning Time is reached, a warning tone will be heard every 10 seconds until the call is disconnected.

Notes:

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Installation Worksheets Examples

Station Flexible Button Layout

STA 10				STA 11				STA 12				STA 13			
BTN1	BTN2	BTN3	BTN4	BTN1	BTN2	BTN3	BTN4	BTN1	BTN2	BTN3	BTN4	BTN1	BTN2	BTN3	BTN4
BTN5	BTN6	BTN7	BTN8	BTN5	BTN6	BTN7	BTN8	BTN5	BTN6	BTN7	BTN8	BTN5	BTN6	BTN7	BTN8
BTN9	BTN10	BTN11	BTN12	BTN9	BTN10	BTN11	BTN12	BTN9	BTN10	BTN11	BTN12	BTN9	BTN10	BTN11	BTN12
BTN13	BTn 14	BTN15	BTN16	BTN13	BTn 14	BTN15	BTN16	BTN13	BTn 14	BTN15	BTN16	BTN13	BTn 14	BTN15	BTN16
BTN17	BTN18	BTN19	BTN20	BTN17	BTN18	BTN19	BTN20	BTN17	BTN18	BTN19	BTN20	BTN17	BTN18	BTN19	BTN20

STA 14				STA 15				STA 16				STA17			
BTN1	BTN2	BTN3	BTN4	BTN1	BTN2	BTN3	BTN4	BTN1	BTN2	BTN3	BTN4	BTN1	BTN2	BTN3	BTN4
BTN5	BTN6	BTN7	BTN8	BTN5	BTN6	BTN7	BTN8	BTN5	BTN6	BTN7	BTN8	BTN5	BTN6	BTN7	BTN8
BTN9	BTN10	BTN11	BTN12	BTN9	BTN10	BTN11	BTN12	BTN9	BTN10	BTN11	BTN12	BTN9	BTN10	BTN11	BTN12
BTN13	BTn 14	BTN15	BTN16	BTN13	BTn 14	BTN15	BTN16	BTN13	BTn 14	BTN15	BTN16	BTN13	BTn 14	BTN15	BTN16
BTN17	BTN18	BTN19	BTN20	BTN17	BTN18	BTN19	BTN20	BTN17	BTN18	BTN19	BTN20	BTN17	BTN18	BTN19	BTN20

STA 18				STA 19				STA 20				STA 21			
BTN1	BTN2	BTN3	BTN4	BTN1	BTN2	BTN3	BTN4	BTN1	BTN2	BTN3	BTN4	BTN1	BTN2	BTN3	BTN4
BTN5	BTN6	BTN7	BTN8	BTN5	BTN6	BTN7	BTN8	BTN5	BTN6	BTN7	BTN8	BTN5	BTN6	BTN7	BTN8
BTN9	BTN10	BTN11	BTN12	BTN9	BTN10	BTN11	BTN12	BTN9	BTN10	BTN11	BTN12	BTN9	BTN10	BTN11	BTN12
BTN13	BTn 14	BTN15	BTN16	BTN13	BTn 14	BTN15	BTN16	BTN13	BTn 14	BTN15	BTN16	BTN13	BTn 14	BTN15	BTN16
BTN17	BTN18	BTN19	BTN20	BTN17	BTN18	BTN19	BTN20	BTN17	BTN18	BTN19	BTN20	BTN17	BTN18	BTN19	BTN20

STA 22				STA 23				STA 24				STA 25			
BTN1	BTN2	BTN3	BTN4	BTN1	BTN2	BTN3	BTN4	BTN1	BTN2	BTN3	BTN4	BTN1	BTN2	BTN3	BTN4
BTN5	BTN6	BTN7	BTN8	BTN5	BTN6	BTN7	BTN8	BTN5	BTN6	BTN7	BTN8	BTN5	BTN6	BTN7	BTN8
BTN9	BTN10	BTN11	BTN12	BTN9	BTN10	BTN11	BTN12	BTN9	BTN10	BTN11	BTN12	BTN9	BTN10	BTN11	BTN12
BTN13	BTn 14	BTN15	BTN16	BTN13	BTn 14	BTN15	BTN16	BTN13	BTn 14	BTN15	BTN16	BTN13	BTn 14	BTN15	BTN16
BTN17	BTN18	BTN19	BTN20	BTN17	BTN18	BTN19	BTN20	BTN17	BTN18	BTN19	BTN20	BTN17	BTN18	BTN19	BTN20

<u>Station Programming Worksheet</u>

Programming Parameters			New Values >	10	11	12	13	14	15	16	17
		Default	Range								
Day Class		0	0 - 7								
Eve Class		0	0 - 7								
CO Line Assignment	Line 1	Y	Y / N								
	Line 2	Y	Y / N								
	Line 3	Y	Y / N								
	Line 4	Y	Y / N								
	Line 5	Y	Y / N								
	Line 6	Y	Y / N								
Receive Assignment	Line 1	Y	Y / N								
	Line 2	Y	Y / N								
	Line 3	Y	Y / N								
	Line 4	Y	Y / N								
	Line 5	Y	Y / N								
	Line 6	Y	Y / N								
Ring Assignment	Line 1	None	None/Day/Night/Both								
	Line 2	None	None/Day/Night/Both								
	Line 3	None	None/Day/Night/Both								
	Line 4	None	None/Day/Night/Both								
	Line 5	None	None/Day/Night/Both								
	Line 6	None	None/Day/Night/Both								
Account Code Forced		N	Y / N								
Station Group		1	1 - 8								
Warning Tone		N	Y / N								
Drop Timeout		N	Y / N								
Station Position		Current	10 - 81								
VM Port		N	Y / N								
DSS Owner		NULL	10 - 81								

CO Line Programming Worksheet

Programming Parameters	New Values >		CO1	CO2	CO3	CO4	CO5	CO6
	Default	Range						
Dialing	TONE	TONE / PULSE						
Call Abandon	Y	Y / N						
CO Line Type	CO	CO / PBX / OPEN						
Loud Bell	N	Y / N						
CO Line Group	1	1 - 4						
Private To	NULL	NULL / EXT#						
Toll Override	N	Y / N						
Distinct Tone	0	0 - 4						
ICLID Port	0	0 - 9						

Call Handling Programming Worksheet

Privacy Release				N	Y / N	
Privacy Release Tone				Y	Y / N	
Exclusive Hold Time				4 min	0 - 8	
Flash Time				0.7 sec	0.1 - 1.5 (0.1 inc)	
Remind Time				30 sec	0 / 10 / 30 / 60 / 90	
Park Remind				30 sec	30 / 60 / 90 / 120 / 150 / 180	
Pause Time				2 sec	1.5 / 2 / 3/5 / 5	
PBX Code				9	0 - 9	
PBX Auto Pause				1 sec	1 - 9	
Dialing Ratio	Tone Time			70 ms	50 - 150 (10 int)	
	Inter-Digit Wait Time			70 ms	50 - 150 (10 int)	
VM Dialing Ratio	Tone Time			120 ms	60 / 90 / 120 / 150	
	Inter-Digit Wait Time			120 ms	60 / 90 / 120 / 150	
Warning Time				3 min	1 - 8	
Recall Time				30 sec	16 / 30 / 60 / 90 / 120	
SLT Hook Flash	Start			300 ms	60 / 100 - 1400 (100 int)	
	End			800 ms	100 - 1500 (100 int)	
DISA	Access Code	Code 01		Empty		
		Code 02		Empty		
		Code 03		Empty		
	CO Line Attributes	Line 1	DISA Line	Y	Y / N	
			DISA Day COS	0	0 - 7	
			DISA Night COS	0	0 - 7	
			Service	Never	Day / Nite / Always / Never	
			Talk Time	1 min	1 / 2 / 3 / 5 / 10 / 15	
		Line 2	DISA Line	Y	Y / N	
			DISA Day COS	0	0 - 7	
			DISA Night COS	0	0 - 7	
			Service	Never	Day / Nite / Always / Never	
			Talk Time	1 min	1 / 2 / 3 / 5 / 10 / 15	
		Line 3	DISA Line	Y	Y / N	
			DISA Day COS	0	0 - 7	
			DISA Night COS	0	0 - 7	
			Service	Never	Day / Nite / Always / Never	
			Talk Time	1 min	1 / 2 / 3 / 5 / 10 / 15	
External Forward	Incoming Line			0	0 - 18	
	Outgoing Line			0	0 - 18	
	Service			Never	Day / Nite / Always / Never	
	Talk Time			1 min	1 / 2 / 3 / 5 / 10 / 15	
Unsupervised Conference Time				1 min	1 / 2 / 3 / 5 / 10 / 15	

Call Handling Programming Worksheet (cont.)

Auto Busy Redial	Attempts			10	1 - 10	
	IInterval between attempts			60 sec	16 / 30 / 60 / 90 / 120	
	Tone Detection Time			0 sec	0 - 9	
Call Abandon Time	Active Call			600 ms	50 - 2500 (10 int)	
	Held Call			600 ms	50 - 2500 (10 int)	
Ring to Alternate Position Time				30 sec	30 / 60 / 90 / 120 / 150 / 180	
CO Preset Forward	Preset Forward Time			16 sec	6 / 10 / 16 / 22 / 30 / 40	
	CO Line Attributes	CO Line 1	Destination	Empty	STATION #	
			VMID	Empty		
		CO Line 2	Destination	Empty	STATION #	
			VMID	Empty		
		CO Line 3	Destination	Empty	STATION #	
			VMID	Empty		
ICLID Wait Time				6 sec	3.5 - 7 (0.5 int)	
Voice Mail Monitor Time				10 Sec	10 - 60 (10 int)	

Resource Programming Worksheet

Ring Scheme					2	0 - 1	
Letter Type					0	0 - 5	
Attendant					10	10 - 81	
Alternate Attendant					Empty	10 - 81	
System Alarm	Alarm 1				Empty	Empty / TIME	
	Alarm 2				Empty	Empty / TIME	
	Alarm 3				Empty	Empty / TIME	
	Alarm 4				Empty	Empty / TIME	
Night Start					17:00	TIME	
Night End					08:00	TIME	
Database Password					000000	000000 - 999999	
User Passwords	Extension 10				0000	4 DIGITS	
	Extension 11				0000	4 DIGITS	
	Extension 12				0000	4 DIGITS	
	Extrension 13				0000	4 DIGITS	
	Extension 14				0000	4 DIGITS	
	Extension 15				0000	4 DIGITS	
	Extension 16				0000	4 DIGITS	
	Extension 17				0000	4 DIGITS	
User Names	Extension 10				NULL	NULL / 8 LETTERS	
	Extension 11				NULL	NULL / 8 LETTERS	
	Extension 12				NULL	NULL / 8 LETTERS	
	Extension 13				NULL	NULL / 8 LETTERS	
	Extension 14				NULL	NULL / 8 LETTERS	
	Extension 15				NULL	NULL / 8 LETTERS	
	Extension 16				NULL	NULL / 8 LETTERS	
	Extension 17				NULL	NULL / 8 LETTERS	
Preprogrammed Messages	Outgoing Messages		Message 1		Call Operator	NULL / 16 LETTERS	
			Message 2		Call Home	NULL / 16 LETTERS	
			Message 3		Call Shcool	NULL / 16 LETTERS	
			Message 4		Visitors Waiting	NULL / 16 LETTERS	
			Message 5		Urgent	NULL / 16 LETTERS	
			Message 6		Come See Me	NULL / 16 LETTERS	
	Executive Notify		Message 1		Out For Lunch	NULL / 16 LETTERS	
			Message 2		Be Back Soon	NULL / 16 LETTERS	
			Message 3		Left For The Day	NULL / 16 LETTERS	
			Message 4		In A Meeting	NULL / 16 LETTERS	
			Message 5		Out Of Office	NULL / 16 LETTERS	
			Message 6		On Vacation	NULL / 16 LETTERS	
System Speed Dial Numbers	20				NULL	NULL / 16 DIGITS	
	99				NULL	NULL / 16 DIGITS	

Resource Programming Worksheet (cont.)

Account Code Table	Length			4	4 - 8	
	001			Empty	Empty / 4 / 8 DIGITS	
	100			Empty	Empty / 4 / 8 DIGITS	
Directory Dial	001	Name		Empty	NULL / 16 LETTERS	
		Destination	Type	ICM		
			Destination	Empty		
	100	Name		Empty	NULL / 16 LETTERS	
		Destination	Type	ICM		
			Destination	Empty		
Distinctive Ring				1		
Remote Transmit Rate				9600		
SMDR Transmit Rate				9600		
Hour Mode				12	12 / 24	
Dial Tone Detect				Y	Y / N	
Dial Wait Time				0	0 - 8	
Modem Port #				NULL		

Toll Restriction Programming Worksheet

Toll Restriction	Digit Interval 1	Start		0	10 DIGITS	
		End		9	10 DIGITS	
		Day Allowed	COS 0	Y	Y / N	
			COS 1	N	Y / N	
			COS 2	N	Y / N	
			COS 3	N	Y / N	
			COS 4	N	Y / N	
			COS 5	N	Y / N	
			COS 6	N	Y / N	
			COS 7	N	Y / N	
		Night Allowed	COS 0	Y	Y / N	
			COS 1	N	Y / N	
			COS 2	N	Y / N	
			COS 3	N	Y / N	
			COS 4	N	Y / N	
			COS 5	N	Y / N	
			COS 6	N	Y / N	
			COS 7	N	Y / N	
	Digit Interval 100	Start			10 DIGITS	
		End			10 DIGITS	
		Day Allowed	COS 0		Y / N	
			COS 7		Y / N	
		Night Allowed	COS 0		Y / N	
			COS 7		Y / N	

Single Line Station Number Conversion

SLT - Voicemail Station conversion			
System24		**System48**	
Station B1	**Station B2**	**Station B1**	**Station B2**
10	58	100	148
11	59	101	149
12	60	102	150
13	61	103	151
14	62	104	152
15	63	105	153
16	64	106	154
17	65	107	155
18	66	108	156
19	67	109	157
20	68	110	158
21	69	111	159
22	70	112	160
23	71	113	161
24	72	114	162
25	73	115	163
26	74	116	164
27	75	117	165
28	76	118	166
29	77	119	167
30	78	120	168
31	79	121	169
32	80	122	170
33	81	123	171
		124	172
		125	173
		126	174
		127	175
		128	176
		129	177
		130	178
		131	179
		132	180
		133	181
		134	182
		135	183
		136	184
		137	185
		138	186
		139	187
		140	188
		141	189
		142	190
		143	191
		144	192
		145	193
		146	194
		147	195

<u>System Application Programming Worksheet</u>

Hunt Group	1	Type		HUNT / ALLRG / VM				
		Member	1 - 4	Station #				
			5 - 8	Station #				
			9 - 12	Station #				
			13 - 16	Station #				
			17 - 20	Station #				
			21 - 24	Station #				
		Ring Assignment	CO Line 1	DAY / NIGHT / BOTH / NONE				
			CO Line 2	DAY / NIGHT / BOTH / NONE				
			CO Line 3	DAY / NIGHT / BOTH / NONE				
			CO Line 4	DAY / NIGHT / BOTH / NONE				
			CO Line 5	DAY / NIGHT / BOTH / NONE				
			CO Line 6	DAY / NIGHT / BOTH / NONE				
	8	Type		HUNT / ALLRG / VM				
		Member	1 - 4	Station #				
			5 - 8	Station #				
			9 - 12	Station #				
			13 - 16	Station #				
			17 - 20	Station #				
			21 - 24	Station #				
		Ring Assignment	CO Line 1	DAY / NIGHT / BOTH / NONE				
			CO Line 2	DAY / NIGHT / BOTH / NONE				
			CO Line 3	DAY / NIGHT / BOTH / NONE				
			CO Line 4	DAY / NIGHT / BOTH / NONE				
			CO Line 5	DAY / NIGHT / BOTH / NONE				
			CO Line 6	DAY / NIGHT / BOTH / NONE				
Voice Mail	ICM Prefix Digit(s)							
	XFR Prefix Digit(s)							
	Record Digit(s)							
	ICM Suffix Digit(s)							
	XFR Suffix Digit(s)							
	Disconnect Digit(s)							

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