

Strata[®] *DK24/56/96*

RELEASE 1, 2, 3, and 4

PROGRAMMING PROCEDURES

Chapter One INTRODUCTION

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1 PURPOSE

1.01 The purpose of this programming section is to provide the system installer with instructions to set the detailed feature configuration and operation of the system.

1.02 This chapter provides an overview of the programming section, its organization, and its general programming instructions.

1.03 For easy reference, every paragraph is numbered.

2 ORGANIZATION

2.01 This programming section is organized in modular chapters, which are titled as follows:

2.10 Chapter One—Introduction (Section 400-096-301): Begins with an overview of the section's purpose and organization. Also included are basic instructions on how to program the system with a 20-button LCD digital or electronic telephone, some general programming notes, and a description of system initialization.

2.20 Chapter Two—System Record Sheets and Instructions (Section 400-096-302): Provides a record sheet for every program (00 ~ 97), including Toll Restriction and Least Cost Routing, and instructions on how to fill them out. The system programmer programs the system from the data on the record sheets. Program cross-reference tables in numerical and alphabetical order are also included.

3 GENERAL PROGRAMMING INSTRUCTIONS

3.01 General Programming Instructions provide an overview of system programming considerations. Data is entered from System Record Sheets at the 20-button LCD digital or electronic telephone connected to Port 05. System Record Sheets document a specific system's data configuration, including attributes of a feature or group of features. The record sheets are organized by program number.

3.10 Programming Data Entry Overview

3.11 Keystrokes for entering data from System Record Sheets follow a pattern, consisting of a five-

step process described below and illustrated in Figure 1-1. *Button (key) sequences that stay the same for every program are abbreviated and shaded on each record sheet.* Button sequences that are unique for every program are white.

- 1) In Step 1, enter the programming mode by pressing a series of buttons. *To save space on the record sheets, abbreviation "A" is used to denote the beginning sequence.* "A" buttons are shaded.
- 2) In Step 2, enter the program number. This sequence is unique for every program. The buttons are white and never abbreviated.
- 3) In Step 3, enter the program data. Again, this sequence is unique for every program. The buttons are white and never abbreviated. To make another entry, repeat Step 3 until ready to exit the current program.
- 4) In Step 4, exit the current program. This sequence never changes. To save space on the record sheets, abbreviation "Z" is used to denote this sequence. "Z" buttons are shaded. Upon exiting the current program, repeat Step 2 to enter another program, or continue with step 5 to exit the programming mode entirely.
- 5) In Step 5, exit the programming mode by pressing the same buttons as in Step 4. This sequence also never changes.

3.12 Each System Record Sheet has the abbreviated button sequence shown in Figure 1-1 for its program illustrated at the top of the sheet.

3.20 Programming Data Variations

3.21 There are two different ways to enter data in Step 3 (Figure 1-1) of a program: pressing the buttons on the dialpad and pressing the LED buttons. Many programs are multidimensional and involve both types of entry.

3.22 Simple Programs: Simple programs, such as **Program 33**, only require data to be specified through the dialpad. Data entered from the dialpad displays on the programming digital or electronic telephone's LCD, along with prompts and confirmations. See Table 1-A for step-by-step data entry instructions for **Program 33**.

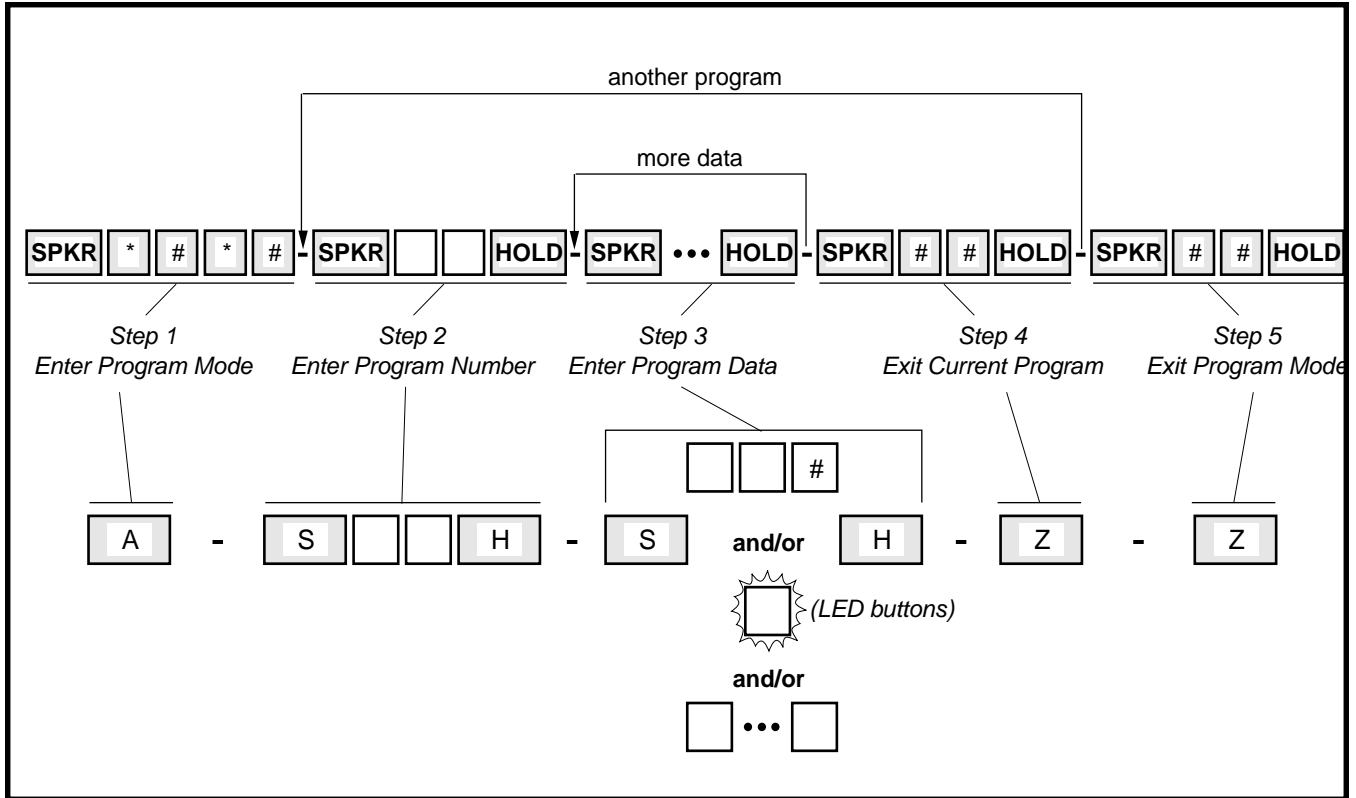


FIGURE 1-1—PROGRAMMING BUTTON SEQUENCE OVERVIEW

3.23 Multidimensional Programs: Once a program number is entered, the first dimension (usually a CO line number, a station port number, or a range of ports) must be specified. Upon specifying this first dimension on the dialpad, programming button LEDs 01 ~ 20 light in the default configuration. The status of each LED can be changed by pressing its associated button. Pressing the button while its LED is lit turns the LED off; pressing the button while its LED is off turns the LED on. **Program 30** is a multidimensional program; see Table 1-B for step-by-step data entry instructions for **Program 30**.

- **Range Programming:** When programming a range of station ports, the station's programming LEDs indicate whether the data programmed matches for all items in the range:
 - **LED On:** Indicates that all ports in the range are programmed with the data choice that lights the particular LED.
 - **LED Off:** Indicates that all ports in the range are programmed with the data choice that does not light the particular LED.
 - **LED Flashing:** Indicates that data is currently inconsistent for all ports in the range. Some may be programmed with the LED on; some with the LED off.

3.24 Programming Button/LED Buttonstrip Template: A special buttonstrip template is placed over the 20 flexible feature buttons of the programming telephone. The template assigns numbers to each of the 20 buttons that correspond with tables found on the System Record Sheets for programming purposes. The record sheets include assignments for on-hook programming, to identify programming LED buttons 01 ~ 20; and assignments for off-hook programming, to identify CO line programming LED buttons 21 ~ 36 (shaded). Templates are supplied with each manual.

3.30 Preparing the System for Programming

3.31 This section explains how to prepare a system for programming, including minimum hardware requirements and directions to clear the system's memory.

3.32 Minimum Hardware Requirements: A system must have the following minimum hardware installed for programming, as described in the installation section, Section **400-096-200**:

- **Power Supply:** The power supply must test satisfactorily.

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TABLE 1-A
SIMPLE PROGRAM: PROGRAM 33
(STATION HUNTING)

Step #	Press... BUTTONS + LED keys Action description	LCD RESPONSE ...
1.	Use the programming LCD electronic or digital telephone connected to port 05 - circuit 6. Make sure the programming button strip template is installed on the programming telephone (see Paragraph 3.24).	NO. 205 JAN 20 SUN 06:43
2.	Spkr * # * # Enter programming mode.	PROGRAM MODE
3.	Spkr 3 3 Hold Access Program 33. System beeps after Spkr key is pressed to indicate program number may be entered.	PROGRAM = 33 DATA STORE
4.	Spkr Prepare the system for a station port selection.	33 SELECT =
5.	0 0 # ~ 9 5 # Select the port number of the Hunt From station. A range of ports can be entered as specified in on the record sheet. After the Hunt From ports are entered, press the # button.	33 SELECT = (00 ~ 95) HUNT TO =
6.	0 0 ~ 9 5 Enter the port number of the Hunt To point, as recorded on the system record sheet. Press LED key 01 to delete a digit from Hunt To point ports.	33 SELECT = (00 ~ 95) HUNT TO = (00 ~ 95)
7.	Hold Secure data in system programming.	33 SELECT = (00 ~ 95) DATA PROGRAMMED
8.	Spkr Prepare system for another selection (go back to step 5), or exit Program 33 (continue with step 9).	33 SELECT =
9.	# # Hold Secure Program 33 data in system memory.	33 SELECT = ## DATA PROGRAMMED
10.	Spkr Exit Program 33. Enter another program number or exit programming mode (go to step 11). Speaker beeps to indicate it is exiting Program 33.	PROGRAM =
11.	# # Hold Exit programming mode.	NO. 205 JAN 20 SUN 06:58

NOTE:

The button designations above are for 2000-series digital telephones. The 1000-series digital telephone equivalents are **Hold** and **Speaker**. The 6500-series electronic telephone equivalents are **Hold** and **Spkr**.

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TABLE 1-B
MULTIDIMENSIONAL PROGRAM: PROGRAM 30
(STATION CLASS OF SERVICE)

Step #	Press... ACTION DESCRIPTION	LCD RESPONSE ...
1.	Use the programming LCD digital or electronic telephone connected to port 05 (station 205) - circuit 6. Make sure the programming button strip template is installed on the programming telephone (see Paragraph 3.24).	NO. 205 JAN 20 SUN 06:43
2.	Spkr * # * # Enter programming mode.	PROGRAM MODE
3.	Spkr 3 0 Hold Access Program 30. System beeps after Spkr key is pressed to indicate a program number may be entered.	PROGRAM = 30 DATA STORE
4.	Spkr Prepare system for a port number selection.	30 SELECT =
5.	0 0 # ~ 9 5 # Enter the port number where the station being defined is connected. Use two digits, followed by a # key. A range of ports may be entered at once by using the * key. (See Note on system record sheet.)	30 SELECT = (00 ~ 95)
6.	LED keys 01 ~ 20 LED keys 01 ~ 20 activate features for each station port or port range. Make the following selections by turning the appropriate key led ON or OFF for each item (01 ~ 20) for each port, as marked on the system record sheet: LED 01: Speakerphone Enabled. LED 02: Microphone Key Lock Enabled. LED 03: Microphone ON at Start of Call. LED 04: Not Used. LED 05: Speed Dial Allowed. LED 06: Automatic Busy Redial Access Enabled. LED 07: Automatic Off-hook Call Announce. LED 08: Forced Account Code Enabled. LED 09: Toll Restriction Override Code Revision Authority LED 10: DISA Security Code Change Allowed LED 11: Dial Pulse (DTMF Off) for Standard Telephone	

TABLE 1-B (continued)
MULTIDIMENSIONAL PROGRAM: PROGRAM 30,
STATION CLASS OF SERVICE

Step #	Press... ACTION description	LCD RESPONSE . . .
6.	<p>LED keys 01 ~ 20 (continued)</p> <p>LED 12 and 13: Digital Telephone Handset Receiver Volume (Release 3).</p> <p>LED 14: Account Codes Verified (Release 3).</p> <p>LED 15: Verified Account Code Revision Authority (Release 3)</p> <p>LED 16: Traveling Class of Service Code Revision Authority (Release 3).</p> <p>LED 17: Do Not Disturb Override Allowed.</p> <p>LED 18: Executive Override Allowed.</p> <p>LED 19: Privacy Overridden Allowed</p> <p>LED 20: Not Used</p> <p>If programming a port range, the LED indications are as follows:</p> <ul style="list-style-type: none"> • LED-ON, all ports in range are enabled for that item. • LED-OFF, all ports in range are disabled for that item. • LED-FLASHING, some ports in range are enabled and some ports are disabled. 	
7.	<p>Hold Secure data in system programming.</p>	<p>30 SELECT = (00 ~ 95) DATA PROGRAMMED</p>
8.	<p>Spkr Prepare system for another selection (go back to step 5), or exit Program 30 (continue with step 9).</p>	<p>30 SELECT =</p>
9.	<p>## Hold Secure Program 30 data in system memory.</p>	<p>30 SELECT = ## DATA PROGRAMMED</p>
10.	<p>Spkr Exit Program 30. Enter another program number (see Table Q), or exit programming mode (go to step 11). System beeps to indicate it is exiting Program 30.</p>	<p>PROGRAM =</p>
11.	<p>## Hold Exit programming mode.</p>	<p>NO. 205 JAN 20 SUN 06:58</p>

NOTE:

The button designations above are for 2000-series digital telephones. The 1000-series digital telephone equivalents are **Hold** and **Speaker**. The 6500-series electronic telephone equivalents are **Hold** and **Spkr**.

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- **PCTU or PCTUS (Common Control Unit PCB):** A PCTU or PCTUS must be installed and have its jumpers set for live operation.
- PDKU, PEKU, or PESU.
- LCD program telephone equipped with programming template connected to Port 05.

3.33 Minimum Software Requirements: To prepare the system software for programming, clear the memory by initializing its data (with **Programs 90** and **92**), as specified in Paragraph 4, *Initializing the System*. Next, **Program 03** must be completed to inform the software of the system's hardware configuration. Basic system programming can then begin.

3.40 General Programming Procedures

3.41 The general procedure for programming a system follows:

- 1) **Programs 90** and **92** must be run to initialize the system; this sets the following elements to initial status:
 - Data for **Programs 00 ~ 97**
 - Speed Dial Memory
 - Voice Mail Identification Codes
 - Character Message Memory
 - Timed Reminders
 - Digital Telephone Volume Levels
 - Call Forward Memory (POWER OFF, then ON).
- 2) **Program 03** must be run to inform the software of the system hardware configuration. (POWER OFF, then ON after running **Program 03**.)
- 3) Run **Program 19-1** to assign the BGM slot; if BGM is **not** connected to a PEKU, PESU or PSTU, **Program 19-1** must be run to assign slot 01 for BGM source connection. This will prevent corrupted data from causing a misoperation of PSTU ports (R4 only). Assigning BGM to slot 01 will not affect EKT or DKT stations connected to PEKU or PDKU circuits in slot 01.
- 4) Ensure that the Basic System Record SHEETS, Toll Restriction System Record Sheets, and Least Cost Routing System Record Sheets have been filled out. If they have been filled out, proceed to Step 4. If not, determine the customer's hardware/software configuration and continue with Step 3.
- 5) From an LCD telephone equipped with a programming template connected to Port 05, enter data from the record sheets. For help in entering this data, see example Tables 1-A and 1-B in this chapter.
- 6) Set the date, time, and day from an LCD telephone connected to Port 00 (Figures 1-4 ~ 1-6).

4 INITIALIZING THE SYSTEM

4.01 This section explains how to prepare the system software for programming. The system's memory must be cleared by initializing its data. Initializing data activates standard data assignments (stored in ROM).

4.10 Initialize Programs 00 ~ 97 Data with Program 90: Always initialize a system with **Program 90** when it is first installed or when its software must be brought to the default configuration. If only minor programming changes are being added to a system in which the programming is basically correct, skip this section. Follow the steps in Table 1-C and Figure 1-2 to run **Program 90**.

- 1) Ensure that the system meets minimum hardware requirements specified in Paragraph 3.32.
- 2) Place the system power switch in the ON position.
- 3) Follow the steps in Table 1-C.

4.20 Initialize Speed Dial Numbers, Voice Mail Identification Codes, Character Message Memory, Timed Reminders, Digital Telephone Volume, and Call Forward Backup Memory with Program 92

4.21 Complete this step if the system is being installed for the first time, or when all currently programmed speed dial numbers or the like must be deleted. Follow the steps in Table 1-D and refer to Figure 1-3.

4.30 After Initialization

4.31 Immediately after initializing the system, **Program 03** and **Program 19-1** must be run to inform the software of the system hardware configuration (see Table 1-E, **Program 19** record sheet), **Program 00** to assign remote maintenance security codes and to check the system software level (see Table 1-F); and **Program 04** to assign station numbers (see Table 1-G).

TABLE 1-C
PROGRAM 90
INITIALIZING PROGRAMS 00 ~ 97
See Program 90 System Record Sheet

Step #	Press... Action description	LCD RESPONSE ...
1.	Use the programming LCD electronic or digital telephone with programming template connected to port 05 (station 205) - circuit 6.	NO. 205 JAN 20 SUN 06:30
2.	Spkr * # * # Enter programming mode.	PROGRAM MODE
3.	Spkr 9 0 HOLD Access Program 90. System beeps after Spkr button is pressed to indicate the program number can be entered.	PROGRAM = 90 DATA STORE
4.	Spkr Prepare system for the programs to be initialized.	90 SELECT =
5.	0 0 * 9 7 + LED keys 01 & 02 Enter program numbers individually or in a range. For a range, separate the low program number and the high program number with an asterisk.	90 SELECT = 00*97 DATA CLR
6.	Hold Secure data in system programming. LEDs 01 and 02 flash.	90 SELECT = 00*97 DATA PROGRAMMED
7.	Spkr Prepare system for another selection (go back to step 5), or exit Program 90 (continue with step 8).	90 SELECT =
8.	# # Hold Secure Program 90 data in system memory.	90 SELECT = ## DATA PROGRAMMED
9.	Spkr Exit Program 90. Enter another program number (see Table 1-D), or exit programming mode (go to step 10). System beeps to indicate it's exiting Program 90.	PROGRAM =
10.	# # Hold Exit programming mode. NOTE: The system will not allow the Spkr LED to light to reenter the programming mode.	NO. 205 JAN 20 SUN 06:42
11.	If all programs or just Program 32 were initialized above, POWER OFF for 5 seconds then POWER ON. This resets Station 205 auto preference to select intercom when Spkr key is pressed.	

IMPORTANT NOTE

Always initialize **Programs 00 ~ 97** when installing a PCTU or PCTUS1 that is being installed for the first time for a particular configuration.

NOTE:

The button designations above are for 2000-series digital telephones. The 1000-series digital telephone equivalents are **Hold** and **Speaker**. The 6500-series electronic telephone equivalents are **Hold** and **Spkr**.

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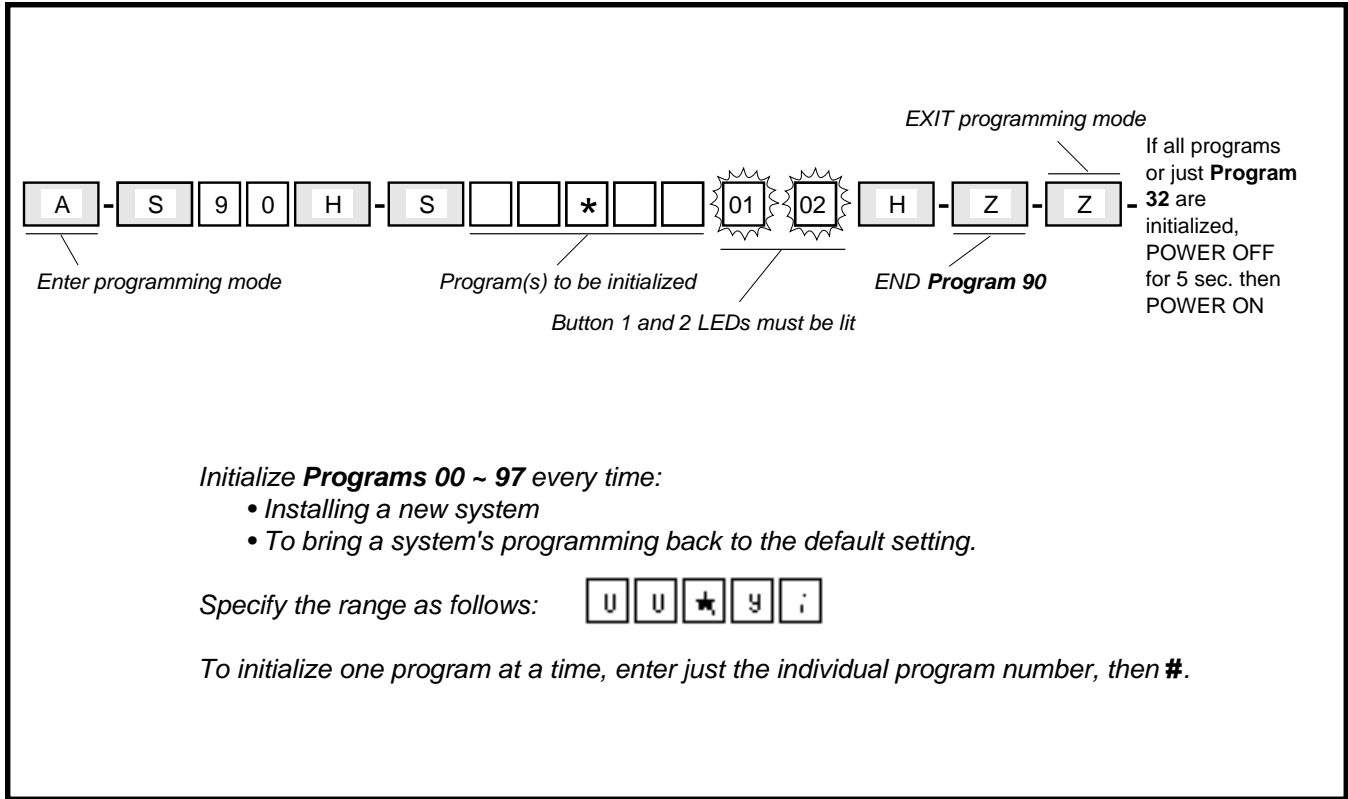


FIGURE 1-2—INITIALIZING DATA FOR PROGRAMS 00 ~ 97 WITH PROGRAM 90

4.32 Anytime after initialization, the time and date can be set. This is not accomplished from the programming station, but rather from the digital or electronic telephone connected to Port 00 (usually station number 200). Refer to Figures 1-4 for the date, 1-5 for the system time, and 1-6 for the day of the week (Monday, Tuesday, etc.).

4.33 All programs are entered from the LCD digital or electronic telephone connected to Port 05.

TABLE 1-D

INITIALIZATION PROGRAM 92

INITIALIZING SPEED DIAL NUMBERS, VM ID CODES, CHARACTER MESSAGE MEMORY, TIMED REMINDERS, DIGITAL TELEPHONE VOLUME, AND CALL FORWARD MEMORY, AND CALL FORWARD BACKUP MEMORY

Step #	Press... BUTTONS + LED keys Action description	LCD RESPONSE ...
1.	Use the programming LCD electronic or digital telephone with programming template connected to port 05 (station 205) - circuit 6.	JAN 20 SUN NO. 205 06:43
2.	Spkr * * * # Enter programming mode. System beeps after Spkr button is pressed to indicate when to enter program number.	PROGRAM MODE
3.	Spkr 9 2 Hold Access Program 92.	PROGRAM = 92 DATA STORE
4.	Spkr Prepare system for selection of programs to initialize. For new system installation perform all 1 ~ 4.	92 SELECT =
5.	Select one of the following. A 1 + LED keys 01 & 03 Clears station speed dial, voice mail ID codes, and LCD memos assigned to station speed dial numbers. OR B 2 + LED keys 01 & 04 Clears system speed dial and LCD memos assigned to system speed dial numbers. OR C 3 + LED keys 02 & 03 Clears character message memory (station and system) and user name display. OR D 4 + LED keys 02 & 04 Clears timed reminders. OR E 5 + LED keys 01 & 05 Presets the Ring/Speaker, Mute Ring, and Intercom Tone/BGM, volume levels of all digital telephones to approximately midrange (Release 3 and higher). OR F 9 + LED keys 03 & 04 Clears Call Forward Memory except Fixed Call Forward Memory (Release 2 and higher).	92 SELECT = 1 EACH DIAL CLR 92 SELECT = 2 COMMON DIAL CLR 92 SELECT = 3 MSG CLR 92 SELECT = 4 TMR REMINDER CLR 92 SELECT = 5 DKT VR INITIAL 92 SELECT = 9 BACK UP RAM CLR
6.	Hold Secure data in system programming. Repeat steps 4 ~ 6 until steps 5A ~ 5F are completed (see note).	92 SELECT = (1~0) DATA PROGRAMMED
7.	Spkr Prepare system for another selection (go back to step 5), or exit Program 92 (continue with step 8).	92 SELECT =
8.	# # Hold Secure Program 92 data in system memory.	92 SELECT = ## DATA PROGRAMMED
9.	Spkr Exit Program 92. Enter another program number (see Table C), or exit programming mode (go to step 10). System beeps to indicate it's exiting Program 92.	PROGRAM =
10.	# # Hold Exit programming mode.	JAN 20 SUN NO. 205 06:58

NOTES:

- The button designations above are for 2000-series digital telephones. The 1000-series digital telephone equivalents are **Hold** and **Speaker**. The 6500-series electronic telephone equivalents are **Hold** and **Spkr**.
- If the call forward memory was cleared, cycle system power after Step 6, if it is required to reset telephone

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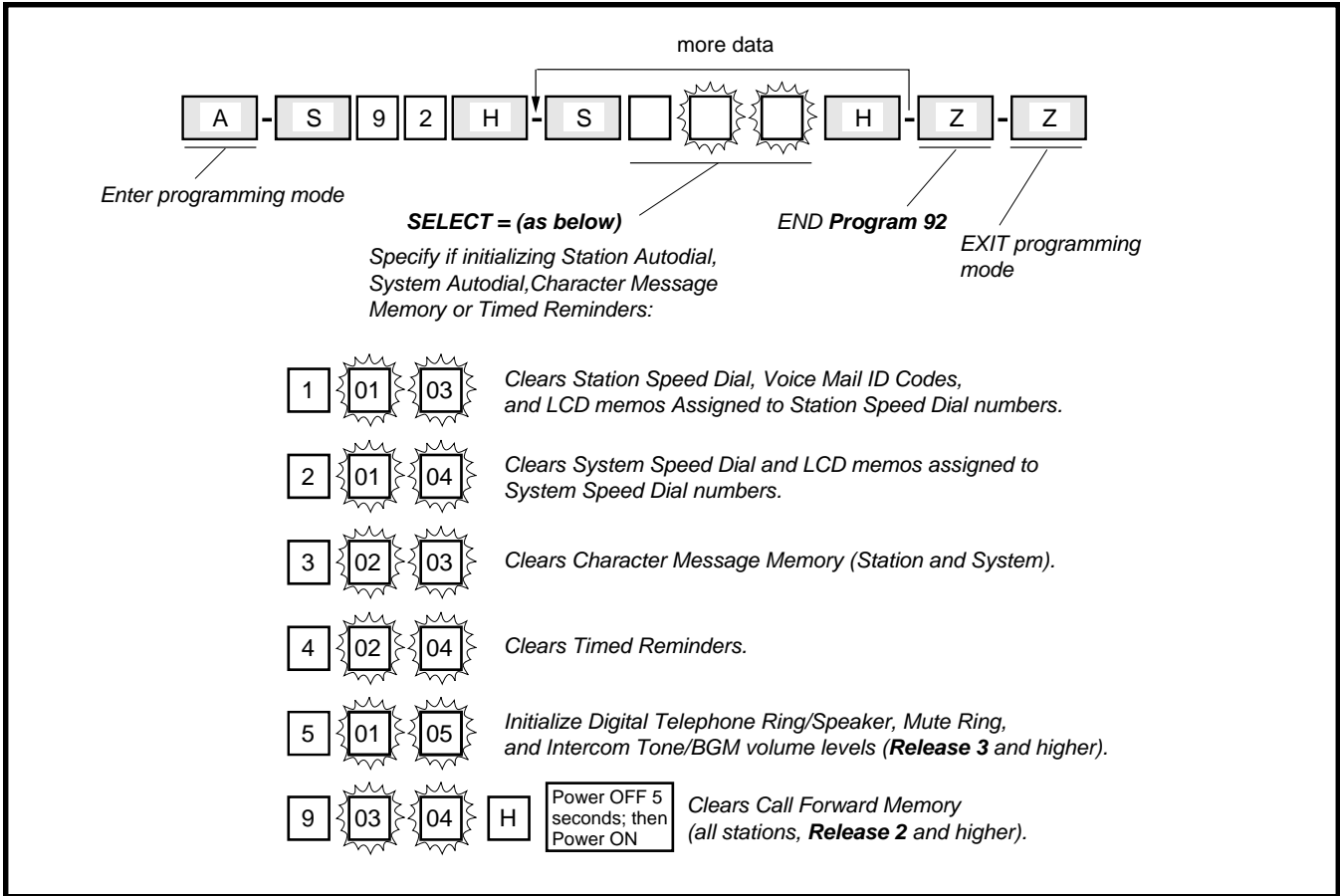


FIGURE 1-3—INITIALIZING SPEED DIAL NUMBERS, VM ID CODES, CHARACTER MESSAGE MEMORY, TIMED REMINDERS, DIGITAL TELEPHONE VOLUME, AND CALL FORWARD BACKUP MEMORY WITH PROGRAM 92

**TABLE 1-E
PROGRAM 03
FLEXIBLE PCB SLOT ASSIGNMENTS**

Step #	Press... BUTTONS + LED keys Action description	LCD RESPONSE ...
1.	Use the programming LCD electronic or digital telephone with programming template connected to port 05 (station 205) - circuit 6.	NO. 205 JAN 20 SUN 06:43
2.	Spkr * * * Enter programming mode.	PROGRAM MODE
3.	Spkr 0 3 HOLD Access Program 03. After Spkr key is pressed, system beeps to indicate program number may be entered.	PROGRAM = 03 DATA STORE
4.	Spkr Prepare system for a selection.	03 SELECT =
5.	Dial a PCB slot number (00~14) using the dial. The system defaults as follows: 0 0 Initialized data assigns slot 00 to be a non-optioned PCTU without CRUCU. 0 1 Initialized data assigns slot 01 to be a non-optioned PEKU without door phone, DSS console or OCA. 0 2 ~ 1 4 Initialized data assigns slots 02 ~ 14 to be empty.	03 SELECT = (00 ~ 14) CARD = (91, 21 or 00) 03 SELECT = <u>00</u> CARD = 91 └─ SLOT NUMBER 03 SELECT = <u>01</u> CARD = 21 └─ SLOT NUMBER 03 SELECT = (<u>02 ~ 14</u>) CARD = 00 └─ SLOT NUMBER
6.	0 0 ~ 9 3 Dial the PCB code recorded on the record sheet. Refer to the PCB code reference table on Program 03 System Record Sheet for a definition of the codes.	03 SELECT = (00 ~ 14) CARD = (00 ~ 93)
7.	Hold Secure data in system programming.	03 SELECT = (00 ~ 14) DATA PROGRAMMED
8.	Spkr Prepare system for another selection (go back to step 5), or exit Program 03 (continue with step 9).	03 SELECT =
9.	# # Hold Secure Program 03 data in system memory.	03 SELECT = ## DATA PROGRAMMED
10.	Spkr Exit Program 03. Enter another program number (see Table E), or exit programming mode (go to step 11). System beeps to indicate it's exiting Program 03.	PROGRAM =
11.	# # Hold Exit programming mode.	NO. 205 JAN 20 SUN 06:58
12.	In order to secure Program 03 entries, POWER OFF for 5 seconds, then POWER ON.	

NOTE:

The button designations above are for 2000-series digital telephones. The 1000-series digital telephone equivalents are **Hold** and **Speaker**. The 6500-series electronic telephone equivalents are **Hold** and **Spkr**.

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TABLE 1-F
PROGRAM 00
SOFTWARE CHECK AND REMOTE MAINTENANCE SECURITY CODE ASSIGNMENTS

Step #	Press... Action description	LCD RESPONSE ...
1.	Use the programming LCD electronic or digital telephone with programming template connected to port 05 (station 205) - circuit 6.	JAN 20 SUN NO. 205 06:43
2.	Spkr * # * # Enter programming mode.	PROGRAM MODE
3.	Spkr 0 0 Hold Speaker beeps to indicate when to enter program number. Access Program 00.	PROGRAM = 00 DATA STORE
4.	Spkr Prepare system for a selection.	00 SELECT =
5.	Select one of the following attributes: A. 0 View the software version. This attribute is not editable. OR B. 1 ■■■■■ Define the Level 1 remote maintenance security code from the System Record Sheet (four digit max.). Level 1 allows remote access to all programs and data. Default Level 1 security code is "0000." OR C. 2 ■■■■■ Define the Level 2 remote maintenance security code from the System Record Sheet (four digit max.). Level 2 allows remote entry to Programs 30 ~ 39 and 77 ~ 89 only. Default Level 2 security is "0000." OR D. 8 View the software RAM Checksum. This attribute is not editable. The default checksum may change. OR E. 9 View the PPSU Power Cycle Counter. This attribute is not editable. The counter indicates the number of times power is removed from the system after Program 00 was initialized via Program 90 .	00 SELECT = 0 • DX□□ = PCTU1 OR PCTU2 VERSION • DV□□ = PCTUS VERSION • PCMX □□ = PCTU3 VERSION • PCPX □□ = PCTU4 VERSION NOTE: □□ = THE ACTUAL VERSION NUMBER AND LETTER 00 SELECT = 1 PASSWORD = 0000 00 SELECT = 2 PASSWORD = 0000 00 SELECT = 8 SUM = XXXXXXXXXX 00 SELECT = 9 COUNTER = XXXX
6.	Hold Secure data in system programming. (Only works for "1" and "2")	00 SELECT = (0,1,2,8 or 9) DATA PROGRAMMED
7.	Spkr Prepare system for another selection (go back to step 5), or exit Program 00 (continue with step 8).	00 SELECT =

NOTE:

**TABLE 1-F (Continued)
PROGRAM 00**

SOFTWARE CHECK AND REMOTE MAINTENANCE SECURITY CODE ASSIGNMENTS

Step #	Press... Action description	LCD RESPONSE ...
8.	## HOLD Secure Program 00 data in system memory.	00 SELECT = ## DATA PROGRAMMED
9.	SPKR Exit Program 00. Enter another program number (see Table D), or exit programming mode (go to step 10). System beeps to indicate it's exiting Program 00.	PROGRAM =
10.	## HOLD Exit programming mode.	NO. 205 JAN 20 SUN 06:58

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TABLE 1-G
PROGRAM 04
PORT/STATION NUMBER ASSIGNMENT

Step #	Press... Action description	LCD RESPONSE ...
1.	Use the programming LCD electronic or digital telephone with programming template connected to port 05 (station 205) - circuit 6.	NO. 205 06:43
2.	Spkr * * * # Enter programming mode.	PROGRAM MODE
3.	Spkr 0 4 Hold Access Program 04. System beeps after Spkr is pressed to indicate a program number may be entered.	PROGRAM = 04 DATA STORE
4.	Spkr Prepare system for a selection.	04 SELECT =
5.	0 0 # ~ 9 5 # Select the number of the port (use two digits). Initialized data assigns station numbers 200 ~ 295.	04 SELECT = 00 INT = 200
6.	■■■■ Enter the port's station number from the record sheet (four digits max.). <i>NOTE:</i> <i>Station numbers must not exceed four digits, or conflict with feature access codes listed in Program 05 System Record Sheet.</i>	04 SELECT = 00 ~ 95 INT = XXXX
7.	Hold Secure data in system programming.	04 SELECT = (00 ~ 95) DATA PROGRAMMED
8.	Spkr Prepare system for another port selection (go back to step 5), or exit Program 04 (continue with step 8).	04 SELECT =
9.	# # Hold Secure Program 04 data in system memory.	04 SELECT = ## DATA PROGRAMMED
10.	Spkr Exit Program 04. Enter another program number (see Table F), or exit programming mode (go to step 10). System beeps to indicate it's exiting Program 04.	PROGRAM =
11.	# # Hold Exit programming mode.	NO. 205 JAN 20 SUN 06:58

NOTE:

The button designations above are for 2000-series digital telephones. The 1000-series digital telephone equivalents are **Hold** and **Speaker**. The 6500-series electronic telephone equivalents are **Hold** and **Spkr**.

HOW TO SET THE DATE

The date must be set from the electronic or digital telephone assigned to Port 00 (station 200). Press the following button sequence with the handset on the hook:

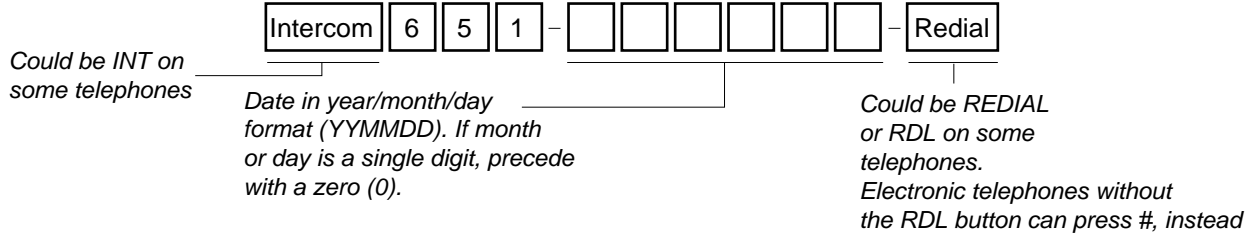


FIGURE 1-4—SETTING SYSTEM DATE

HOW TO SET THE TIME

The time must be set from the electronic telephone or digital assigned to Port 00 (station 200). Press the following button sequence with the handset on the hook:

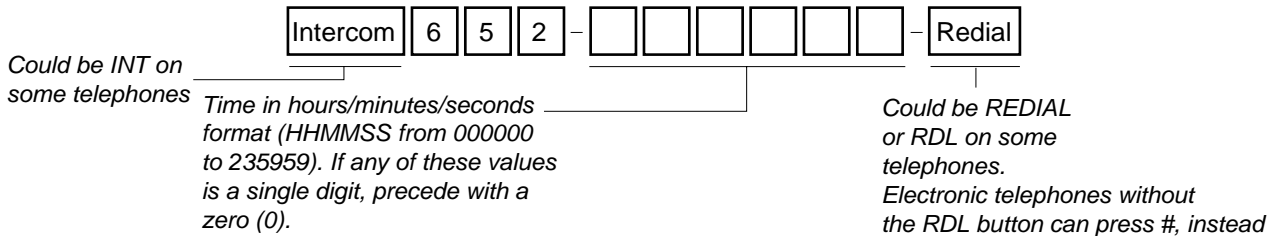


FIGURE 1-5—SETTING SYSTEM TIME

HOW TO SET THE DAY

The day must be set from the electronic or digital telephone assigned to Port 00 (station 200). Press the following button sequence with the handset on the hook:

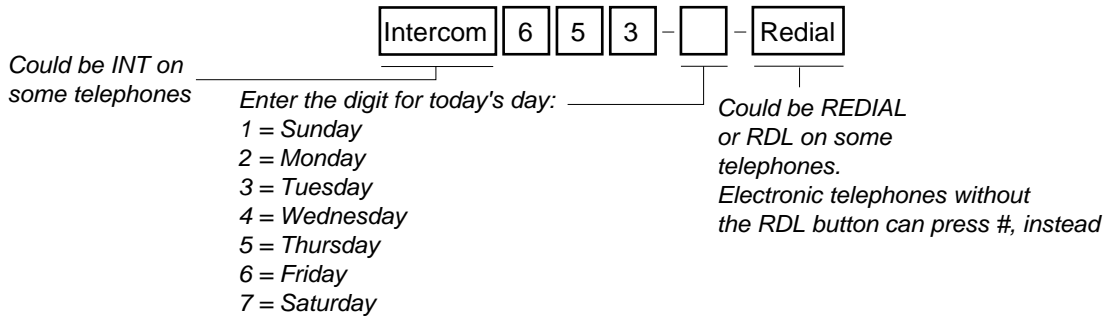


FIGURE 1-6—SETTING SYSTEM DAY OF WEEK

Strata[®] *DK24/56/96*

RELEASE 1, 2, 3, and 4

PROGRAMMING PROCEDURES

Chapter Two
INSTRUCTIONS/RECORD SHEETS

IMPORTANT INITIAL INSTALLATION NOTES:

These minimum installation steps must be carried out for proper system operation.

- 1. Set PCTU or PCTUS jumper for BATTERY OPERATION; otherwise, all programmed customer data will be lost on power down.*
- 2. Place PEPU, PIOU, or PIOUS PCB in highest slot number of KSU.*
- 3. Place all other PCBs in KSU from lowest slot number to highest in the following order:
PCTU or PCTUS (always slot 00)
PEKU or PDKU (starting at Slot 01)
PESU
PSTU
PCOU
PEMU*
- 4. Run Program 90. Initialize Programs 00 ~ 97, and turn power OFF for 5 seconds, then turn power back ON.*
- 5. Run Program 92.*
- 6. Enter the hardware configuration with Program 03, exit the programming mode, and turn power OFF for 5 seconds, then turn power back ON.*

WHEN LATER ADDING KSU PCBs:

- 1. Move PEMU PCBs to a higher slot number to create empty slots for additions.*
- 2. Install new PCBs and reprogram with Program 03 (turn power OFF for 5 seconds, then turn back ON). Change PEMU station and CO line numbers or reassign stations.*
- 3. Program new features, options, etc. created by new additions.*

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1 GENERAL

1.00 This chapter consists of System Record Sheets and instructions on how to fill out each of them. The chapter begins with the instructions: first the basic program instructions, followed by Toll Restriction instructions, then the Least Cost Routing instructions. The remainder of the chapter contains the System Record Sheets, organized in the same sequence as the instructions.

1.10 System Record Sheet Data Entry

1.11 The System Record Sheets are used to record the assignment of features or the operation of each program. Each sheet provides space to record data. This data will be referred to when programming the system. The following consists of descriptions of each of the programs available with the STRATA DK systems.

1.12 Initialized data information can be found in the Notes at the bottom of each System Record Sheet.

1.20 Basic System Record Instructions

Program 90—Initializing Programs: All customer data can be cleared and set to the initialized state for any program or range of programs. If the system is being installed for the first time, this program **must be run** to erase random data from RAM which may have been caused by the PCTU's (or PCTUS's) jumper movement to the internal battery. Initialized data information can be found at the bottom of each System Record Sheet. If the system is being installed in a new location, all programs (**00 ~ 97**) should be initialized.

NOTE:

*After complete entry of **Program 90**, turn the KSU power supply switch off and wait five seconds before turning back on.*

Program 92—Initializing Speed Dial Numbers, VM ID Codes, Character Message Memory, Timed Reminders, Digital Telephone Volume Levels, and Call Forward Memory: All

previously entered or random data (of the type listed) is cleared by this program. This program **must be run** when first installing a system or a PCTU (or PCTUS).

Program 03—Flexible PCB Slot Assignments:

The software **must be informed** as to what type of PCB and PCB option(s) are installed in each slot of the KSU. Use the PCB Code Reference Table on the **Program 03** record sheet to determine the proper PCB Code. Always enter PCTU or PCTUS in Slot 00. Enter options from the choice of CRCU-4, CRCU-8, EOCU, DDSS console, or HDSS console. Also enter DDCB or HDCB where installed—this will become useful elsewhere. Record station ports assigned to the PDKU, PEKU, PSTU, PESU, and PEMU interfaces. Enter CO/TIE line numbers for the PCOU and PEMU PCBs. Always enter the code for the PIOUS or PEPUS in the last slot. This record sheet is the main record for the hardware configuration of the entire system. An example of the proper recording of **Program 03** can be found at the end of Section **400-096-204**.

IMPORTANT NOTE!

After complete entry of Program 03, turn the KSU power supply switch off and wait five seconds before turning back on. This will set in memory all of the configuration data entered in Program 03.

Program 00—Software Check/Remote Maintenance Security Code Assignments:

- **Level 1 Security Code**—Remote Maintenance security code which allows entry to all programs and data.
- **Level 2 Security Code**—Remote Maintenance security code which allows entry to **Programs 30 ~ 39** and **77 ~ 89**.

Program 04—Port/Station Number Assignment:

Initialized station numbers are 200 ~ 295. Door phone standard numbering is 151 ~ 159 and 161 ~ 163; the internal modem (IMDU) is 19, and port 99 is the DISA class of service port. This numbering cannot be changed with **Program 04**. Only the first digit can be changed by

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using **Program 05**. The system automatically assigns door phone station numbers if a door phone is specified in **Program 77-1**. Station number assignment is fully flexible so that each station can have any number assigned up to four digits. However, *if the first digit is not 2, access code conflicts may exist* (see **Program 05**), and a new system numbering plan will have to be carefully worked out. All STRATA DK telephone and data interface unit user guides are written using the standard access codes and station numbers. If desired, a telephone accompanying a DSS console can have a station number of 0 or 01, etc. without conflict. If no assignment is made in **Program 04**, the system, upon powering up, will automatically assign eight station numbers for each PDKU, PEKU, PESU and PSTU installed and four for each PEMU. This is done in sequence of ascending slot numbers for station numbers 200 and up. If station numbers are assigned in **Program 04** then they are fixed to a slot number—any movement of PDKU, PEKU, PESU or PSTU station cards must be accompanied by reassignment in **Program 04** or else the telephones will have their station numbers changed.

Program 05—Flexible Access Code Numbering:

The first digit of a feature access code may be changed to a different digit or to two digits. Digits after this prefix cannot be changed. Standard access codes are provided with the **Program 05** System Record Sheet. Some access codes cannot be changed (such as the code for Automatic Callback) and are shown with N/A on the record sheet. *Access code conflicts may exist if new access codes are assigned*, and a new system numbering plan will have to be carefully worked out. Pay particular attention to the internal modem (station number 19) and door phones (151 ~ 159, 161 ~ 163). Station number assignments may have to be changed using **Program 04**.

Program 10-1—System Assignments 1: The following options are available on a system-wide basis.

- **Two CO Conference, LED 20**—Two CO lines can be conferenced with one or two

telephones (digital, electronic, or standard). Conference (see LED 19) in this program must be enabled for this feature to work. Also, two CO line conference must be allowed for Direct Inward System Access (DISA) use of outgoing lines.

- **Conference, LED 19**—The ability of stations to perform any conference can be allowed or disallowed system-wide with LED 19.
- **Ring Detect Time, LED 18 (Release 2 and Higher)**—This should be set to "normal" unless connected to Central Office/CENTREX lines that send ring signals less than 120 milliseconds. (**Release 1** is short-ring only.)
- **Intercom Volume PAD, LED 17**—ON reduces station-to-station intercom volume. LED 17 should be OFF in all cases except where extreme quiet room noise is expected.
- **ABR Cycles, LED 12**—If activated from an electronic or digital telephone, Automatic Busy Redial will retry dialing a telephone number on a CO line if a far end busy signal is detected. Turn LED 12 ON to have the system try up to 10 times; turn OFF for up to 15 attempts. This feature is not available with standard telephones.
- **ABR Redial Time, LED 11**—Upon detection of a far end busy signal on a CO line, Automatic Busy Redial will retry either once every 30 seconds or once every minute. Turn LED 11 ON for 30 seconds; turn OFF for one minute.
- **System Speed Dial Override, Toll Restriction, LED 10**—System Speed Dial (6 0 ~ 9 9) can be chosen to override Toll Restriction if LED 10 is turned ON.
- **Exclusive Hold, LED 09**—Exclusive Hold allows electronic and digital telephones to place calls on hold (by pressing the **Hold (HOLD)** button twice) so that other stations cannot pick up the held call with a CO line button. This feature can be disabled on a system-wide basis. Any station can pick up an exclusive hold call by using the call pickup code.

- **Alternate Point Answer/Transfer Privacy, LED 08**—If Transfer Privacy is selected, a transferred call can *only* be answered at the called station upon transfer of that call. With Alternate Point Answer, any electronic or digital telephone with the appropriate CO line button can pick up a call transferred to another telephone. In either case, call pickup will function from any station.
 - **Ring Transfer, LED 07**—This option defines station operation for transferring CO line calls. If Ring Transfer is allowed, the system will allow “blind” transfers to busy or idle stations—the transferring station may release a transferred call before the called party answers. If not allowed, the system will allow supervised transfers only—the called station must answer before the transferring station releases. If Ring Transfer is not allowed, immediate recall occurs if “blind” transfer is attempted. The system denies Ring Transfer to stations in the Do Not Disturb (DND) mode, and immediate recall will occur if it is attempted.
 - **CO Repeat Ringing, LED 06**—If selected, the incoming ringing timing pattern at a station will be the same as the CO line ringing pattern. This is used mainly with CENTREX or PBX systems which may vary the ring pattern to distinguish between intercom and incoming calls, etc. If Standard Ringing is chosen, CO line station ringing will be a one second on, three seconds off cycle regardless of the incoming ring pattern. Some Central Offices have ringing characteristics such that this option would not be desirable.
 - **Incoming Call Abandon Timing, LED 05**—The amount of time between incoming CO line ring signals determines when the system will discontinue (abandon) sending ringing tones to stations. The choice of six or eight seconds is dependent on the CO ring pattern. This assignment has no effect if the CO Repeat Ringing option is used.
 - **Dual-tone Multi-frequency (DTMF) Signal Time, LED 04**—DTMF signals sent out to CO lines can be either 80 or 160 milliseconds in length. DTMF to PSTU/PESU ports (including voice mail ports) are not affected by this assignment. See **Program 10-2** for PSTU/PESU DTMF timing. This program pertains to manual dialing or speed dialing from all Toshiba telephones, including the 2000-series Digital Telephones.
 - **Dial Pulse (DP) Make Ratio, LED 03**—Dial Pulse timing sent out to CO lines can be changed from the normal 40% make ratio to 33%. This selection only applies to those CO lines assigned in **Program 15** to signal dialing with dial pulse instead of Dual-tone Multi-frequency (DTMF).
 - **CO Line Reseize Guard Time, LED 02 (Release 2 and Higher)**—Should be set for 0.45 seconds for most installations. Set guard time for 1.5 seconds (using **Program 10-1**, LED 02 ON, and **Program 42-0**), if CO lines experience the following situations: no dial tone when a line is released and reseized immediately; or, when operating behind CENTREX or PBX, false hookflash signals are sent to the Central Office when stations release and reseize the same CO line immediately.
 - **Tone First/Voice First Signaling-Electronic and Digital Telephone, LED 01**—With Voice First, an intercom call to an electronic or digital telephone will be preceded by a one second burst of tone, followed by voice communication via the Handsfree Answerback function. For Tone First, repetitive intercom ring tone is sent in a one-second on, three-seconds off pattern. Conversion from one signaling mode to the other can be made by dialing an additional digit of **1** from the calling station.
- Program 10-2—System Assignments 2:** The following options are available on a system-wide basis.
- **Stations Use External Amplified Conference, LED 19**—Use this feature only (LED 19 ON) if an external amplifier (**Program 10-3**) is used for two-CO line conference calls. This will provide additional

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amplification to the station during a two-CO line conference call. If an external amplifier is not switched into two-CO line conference calls in all cases, LED 19 must be OFF if there is line unbalance which may cause "HUM" noise on the station talk path during two CO-line conference calls. It is recommended to test two-CO line conference with LED 19 ON; if there is no HUM noise, keep LED 19 ON.

- **Two-CO Line Conference, LED 18**—LED 18 should be ON whenever two-CO line (Tandem, DISA, TIE) connection is allowed in **Program 15-5** and **Program 10-1**, LEDs 19 and 20. This will increase the volume level between the two outside parties on a Tandem (two-CO line) connection; but, it will not affect station volume if conferenced into the tandem connection. This option is not associated with external amplified conference (**Program 10-3**).
- **"TRNS" Soft Key Immediate Transfer, LED 17 (Release 4)**—If this feature is activated and a transfer is initiated with the "TRNS" Soft Key, the call will ring transfer (Camp-on Busy) immediately after the last digit of the called station (busy or idle) number is dialed. This feature does not apply to transfers initiated with the fixed **Cnf/Trn (CONF/TRNS)** button or "CONF" Soft Key.
- **Executive Override Warning Tone, LED 16**—Executive Override allows a station user (if assigned in **Program 30**) to break into and overhear an existing station conversation. A warning tone can be set optionally to be heard by the conversing parties.
- **External Page Included with All Call Page, LED 15**—If the All Call voice page access code (39) is dialed, external page (all zones) may be included with this option. This option does not affect the **AllCallPage** button function, which activates electronic and digital telephone speakers only, never external page.
- **Privacy Override Warning Tone, LED 14**—Privacy Override allows a station user to enter into, and overhear, an existing CO

line conversation by pressing a CO line button (if the called station is assigned in **Program 30**). A warning tone can be set optionally to be heard by the conversing parties.

- **Auto Callback Camp-on Tone, LED 13**—A busy called digital or electronic telephone user may optionally hear a one-time beep tone (from the speaker) signifying that another station has tried to call and has activated the Automatic Callback feature.
- **CO Line Beep Tone, LED 12**—If this LED is lit, a beep tone will be sent every three minutes to stations on outgoing CO line calls.
- **Dual-tone Multi-frequency (DTMF) Tone Return, LED 11 (Release 2 and Higher)**—This option deletes DTMF tones that are returned to digital or electronic telephones when manually dialing or speed dialing. It also eliminates auto dial digits returned to callers when digits are automatically sent to voice mail ports on forwarded calls.
- **Background Music/Music-on-Hold Separation, LEDs 10 and 9 (Release 2 and Higher)**—A separate Background Music (BGM) source can be sent to digital telephone speakers, electronic telephone speakers, and external page speakers, while another Music-on-hold (MOH) source can be sent to outside lines or internal stations on hold. With **Release 2**, the BGM source can be connected to either Circuit 3 on a PEKU PCB or Circuit 8 on a PESU PCB, and the PCB must be installed in Slot 01. With **Release 3**, the PCB can be installed in any slot (see **Program 19**). **Release 4** enables PSTU Circuits 3 or 8 to connect with the BGM source. No matter what release, the MOH source connects to the **P6** terminal on the PCTU or PCTUS PCB.
- **Display Dialed Number Timing, LED 08**—An LCD telephone will display a dialed number for either 15 or 60 seconds before the display changes back to the normal time and date format.
- **Standard Telephone Distinctive Ring,**

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LED 07 (Release 2 and Higher)—The outside-call ring pattern to standard telephones, can be made distinct from the intercom ring pattern. If Distinctive Ring is enabled, the CO-line call ring pattern will be 0.2-seconds on, 0.4-seconds off, 0.2-seconds on, 3.4-seconds off; if Distinctive Ring is not enabled, the pattern will be per **Program 10-1**, LED 06. Intercom calls, with or without Distinctive Ring enabled, ring with a one-second on and 3-seconds off pattern.

- **Voice Mail Identification Code, Dual-tone Multi-frequency (DTMF) Signal Time, LED 06 (Release 2 and Higher)**—DTMF digits automatically sent to PSTU/PESU voice mail ports can be sent in either 80- or 160-millisecond bursts. This applies to digits sent via the voice mail identification code (656/657) set at each station. This also applies to manually dialed digits sent to voice mail ports from Toshiba telephones, including 2000-series Digital Telephones. The signal time is fixed at 160 milliseconds for **Release 1**.
- **TIE/DISA Busy Tone Cadence, LED 05 (Release 3 and Higher)**—Select the busy tone cadence for DISA/TIE lines with this LED. Light the LED for a 0.5 second cadence (Bell Precise busy tone cadence); Leave it OFF for the STRATA 0.25 second busy tone cadence. The Bell Precise busy tone cadence should be selected so callers will know that they have reached a busy station when calling in on a TIE or DISA line. If it is not selected, the busy tone may be confused with the reorder tone cadence.
- **Voice Mail Message Waiting Cancel Via Dial 6 4/Automatic, LED 04 (Release 2 and Higher)**—"Dial 6 4" should be enabled if the DK system is connected to a voice mail (VM) system that sets station Message Waiting (MW) LEDs by dialing **6 3 + station number**. This insures the message LED remains flashing until all VM messages have been retrieved, at which time the VM machine should cancel the Message LED by dialing **6 4 + station number**. With "Dial 6 4" enabled, mes-

sage indications set on a station from VM ports will not automatically be cancelled by the DK system when the station calls Voice Mail to retrieve messages. If "Automatic" is selected, the flashing message waiting LED is canceled any time a station calls the VM machine and the VM machine answers.

NOTE:

*Message Waiting cancel via "Dial 6 4 + station number" only applies to VM ports that have LEDs 16 and 17 set ON in **Program 31**.*

- **Ringling Modes, LED 03**—The STRATA DK system can be set for either two-ringing-mode or three-ringing-mode operation. The DAY and NIGHT modes are available with two-mode operation, and the DAY, DAY2, and NIGHT modes are available with three-mode operation. Each ringing mode has distinct CO line ring assignments (**Programs 78**, and **81 ~ 89**). The three-mode selection is useful for alternate answering positions. Station users can change modes with the Night Transfer button on either a DSS console (**Program 29**) or a telephone (**Program 39**).
- **Call Forward Override From DSS Console, LED 02**—If a station has activated Call Forwarding, all calls to that station—except for calls from the DSS console position—will forward to another number. A choice exists of whether to call forward from the console itself or from the digital or electronic telephone assigned to it. If the console calls (using the DSS console station buttons) are forwarded, the attendant telephone will not be forwarded, and vice versa. This allows the console operator flexibility in reaching a station user.

NOTE:

This feature applies to both types of DSS consoles, the DDSS and the HDSS.

- **Tone First/Voice First-DSS Console, LED 01**—The intercom call signal from a DSS console can be set for Tone First Signaling or Voice First Signaling. This

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setting is independent of the system-wide signal option in **Program 10-1**. Thus, DSS consoles and their attendant stations can ring with different signaling modes.

Program 10-3—System Assignments 3: The following options are available on a system-wide basis.

- **Speed Dial Entry Timeout, LED 19 (Release 4)**—Station users can either have up to one minute or up to three minutes to store a Speed Dial number or memo. If they fail to store the number or memo within the set time, their station will exit the Speed Dial-storage mode and return to the normal idle state. The three-minute setting is recommended if station users will frequently be storing memos with Speed Dial numbers using the MODE key below the Liquid Crystal Display (LCD). The timer is required because of the **Release 4** User Programmable Feature Buttons feature, which allows the **Intercom (INT)**, **Hold (HOLD)**, and **Cnf/Trns (CONF/TRNS)** button functions to be programmed in Speed Dial Memory. There is no time limit for programming Speed Dial with **Releases 1, 2, and 3**.

Amplified Conference Assignments (LED 01 ~ 04, Release 3 and Higher): Light LEDs 01 ~ 04 to identify which PEKU ports should be connected to external amplifiers. External Amplified Conference is provided by customer-supplied two-way amplifiers connected to system PEKU ports to provide amplification of “two-CO” line calls. Up to four amplifiers can be connected (2 PEKU ports for each amplifier) to amplify up to four two-CO line calls simultaneously. The amplifier is switched into the call automatically when a two-CO line call is established, amplifiers are switched into calls starting from the lowest PEKU ports to the highest (see **Program 10-3** System Record Sheet). Skipping PEKU ports is allowed. Example: The first amplifier can be connected to PEKU ports 17 and 18, skipping ports 09 and 10. In this case, LED 02 should be ON and LED 01 should be OFF. (See **Program 10-1**, LEDs 19

and 20; **Program 10-2**, LEDs 18 and 19; and **Program 15-5** for more information regarding two-CO line conference.)

IMPORTANT NOTE!

The DK system allows up to eight simultaneous two-CO line conference connections. The amplifiers are switched in automatically starting with the first two-CO line call. Calls made when there are no amplifiers available will not be amplified.

NOTE:

The external amplifiers will also amplify two-CO line DISA and TIE line calls.

Program 12—System Assignments-Basic Timing:

- **Pause Timing, Code 3**—Short and long pauses may be programmed in speed dial numbers by station users. The short pause length can be set system wide for either 1.5 or 3 seconds with this program. The long pause length is always 10 seconds.

NOTE:

This program applies to Speed Dial numbers used for both voice and data calls. Data call pause length is determined by the program.

- **Flash Timing, Code 4**—When on a CO line, a station user can press the **Flash (FLASH)** button and the CO line will open (flash) for a period of either 2 seconds, 0.2 seconds, or 0.5 seconds depending on this assignment. (A flash can also be activated by dial code **Cnf/Trn 4 5** or **CONF/TRNS 4 5**.) In general, this choice reflects whether to disconnect and regain dial tone (2 seconds), or to use PBX or CENTREX features which require a flash signal (0.5 seconds). This flash timing also applies to flashes inserted when dialing via data interface units (DIUs).

NOTE:

The 0.2 seconds option is not normally used in the United States.

- **Pause After Flash, Code 5**—Some Cen-

tral Offices or CENTREX facilities require a period of time after a flash signal before they can accept dialing signals. A selection of pause timing is available to automatically delay any dialing signals after flash. This timing applies to Speed Dial calls (with flash signals between the telephone number digits) as well as manual dialing.

- **CRCU Seize Time, Code 9**—One channel of the CRCU Dual-tone Multi-frequency (DTMF) receiver/decoder is seized when it is needed for the decoding process, such as with a standard telephone with a DTMF dialpad. When placing outgoing calls with DTMF standard telephones, the talk path to the outside party is not “cut-through” until the CRCU circuit is released. The release time of the CRCU channel can be programmed for a time between one and nine seconds (initialized timing is four seconds)—this is the time it takes to release the CRCU circuit after the last digit is dialed. The choice of timing is a trade-off between CO line time to connect and user speed. If the time is too long, the outside called party may answer before the voice path is “cut-through,” and the caller will not be heard. If the time is too short, a standard telephone user inputting DTMF tones could be cut off prematurely from using other features, such as speed dial. Standard telephones will also be able to defeat Toll Restriction if the seize time is too short and they are not required to dial outgoing calls via Least Cost Routing (LCR)—it is recommended that standard telephones always be required to dial outgoing calls via LCR to prevent them from defeating Toll Restriction.

NOTE:

If no digits are dialed after accessing an outside line, the CRCU remains seized for 15 seconds and then drops; however, the CO line remains connected.

Program 13—Defining the Message Center:

Each digital and electronic telephone can receive a maximum of four message waiting indications. One of these four is reserved for the designated Message Center. Typically, a

telephone (digital or electronic) accompanying a DSS console (DDSS or HDSS) will be the Message Center. However, if incoming traffic to a DDSS or HDSS console attendant is heavy, another station may be assigned to be the Message Center.

Program 15—Assigning DP/DTMF, Tenant Service to Individual CO Lines:

- **Automatic Release (AR) on Voice Mail Calls, Code 0 (Release 3 and Higher)**—Some Central Offices will send the AR signal—a 95 or 450-millisecond open of the CO line loop—after (typically 1 ~ 15 seconds) an external party hangs up to disconnect the CO line. If the Central Office sends this signal after an external party hangs up and before the VM/auto attendant transfers a call, D tone will be sent to the voice mail port (**Program 30**, LED 15), releasing and clearing that port for another call. With **Release 3**, D tone will not be sent to release the call if the outside caller hangs up after the VM/auto attendant hook flashes (to transfer the call). With **Release 4**, D tone will be sent after the hookflash. This feature is active on all voice calls. The LCD of a station which is disconnected from a CO line call by the AR signal will display, "CO LINE HANG UP" with **Release 4** systems. "BUSY" will display with **Release 3** systems. With **Releases 3** and **4**, the CO line, can be disconnected anytime by the AR signal during the "talk state" of a call. With **Release 4**, CO line calls disconnected by the AR signal will be represented on the Station Message Detail Recording (SMDR) report by a "*" next to the CO line number.

IMPORTANT NOTE:

This option can not always be utilized because some Central Offices may send unreliable AR signaling or no AR signaling. AR signaling is sometimes referred to as Calling Party Control or Loop Supervision.

- **CO Outgoing Signal, Code 1**—Each CO line can be independently assigned to have either Dial Pulse (DP) or Dual-tone Multi-

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frequency (DTMF) signaling.

- **CO Dial Pulse (DP) Rate, Code 2**—If a CO line is assigned DP signaling, the rate can be either 20 or 10 pulses per second. Some Central Offices do not reliably accept 20 pulses per second.
- **Automatic Release (AR) From Hold/Transfer, Code 3**—Some Central Offices will send the AR signal—a 95 or 450-millisecond open of the CO line loop—after (typically 1 ~ 15 seconds) an external party hangs up. If the system CO line is on hold (or being transferred to another station or Auto Attendant port) when this signal occurs, it will be automatically disconnected if this option is activated. Two-CO line DISA calls always release when AR is sent. DISA release via AR is not related to this program (**Release 2** and higher). CO line calls disconnected by the AR signal will be represented on the Station Message Detail Recording (SMDR) report by a "*" next to the CO line number.

IMPORTANT NOTE:

This option can not always be utilized because some Central Offices may send unreliable AR signaling or no AR signaling. AR signaling is sometimes referred to as Calling Party Control or Loop Supervision.

- **Automatic Release (AR) Time, Code 4**—AR signaling timing is different depending on the Central Office equipment. An assignment choice exists between Crossbar or ESS Central Offices.
- **Tandem CO Line Connection, Code 5**—Once a two-CO line conference call is made by an electronic or digital telephone user, the user may drop out of the conference and leave the two CO lines connected. The choice exists for each CO line that may have this capability. This option must be enabled to allow CO lines to be used for outgoing DISA calls (for **Release 2** and higher).
- **CO Line Tenant Assignment, Code 6**—

A system may be effectively split into two parts in order to serve two tenants using the same system in a shared arrangement. This assignment dedicates CO lines to one tenant or the other. If tenant service is not desired, leave the assignments all for Tenant 1, as initialized.

NOTE:

*The **Night Transfer 1 (NT1)** and the **Night Transfer 2 (NT2)** buttons control CO ring modes for Tenant 1 and Tenant 2, respectively.*

- **Forced Account Code (Verified or Non-verified), Code 7**—If the Forced Account Code feature is used (see **Program 30**) a station user is required to enter an account code before a CO line call can be completed. A choice exists for each CO line.
- **Operation After CO Line Flash, Code 8**—If a standard telephone user is on an existing CO line call and flashes the hookswitch, a Dual-tone Multi-frequency (DTMF) receiver channel may or may not be connected, depending on this assignment. If the CO is a rotary dial only type, the CRCU must be seized after flash when dialing from DTMF standard telephones. The CRCU will decode the dialed tones and send dial pulses to the CO line.

Program 16—Assigning CO Line Groups:

CO lines may be accessed with a dialing code instead of with a CO line button. Up to eight groups may be accessed by dialing 81 ~ 88; this is useful for WATS lines or other facilities, and is heavily used in Least Cost Routing and Pooled Line Button assignments. A general group for outside calling is available with a "dial 9" access code, which is the initialized state for all CO lines. **Program 16** is used to assign each CO line to one of these groups. Do not attempt to assign a CO line to more than one group. A CO line need not be assigned to a group. If CO lines are not used, they should be taken out of all groups, including the "dial 9" group. Automatic Busy Redial (ABR) will not function if unconnected lines are assigned to a line group.

Program 17—TIE Line Page/Handsfree Answerback: The External Page and Handsfree Answerback features can be optionally activated for each TIE line. For reference purposes, on the System Record Sheet, enter the slot number where each PEMU is installed—this program does not assign TIE lines to slot numbers; the CO/TIE line number (01 ~ 36) is needed for input to this program, but is actually determined by the PEMU's slot position in the KSU. **Program 03** contains the CO/TIE line number needed for input.

Program 19—Alternate Background Music (BGM) Source Slot Assignment (Release 3 and Higher): The printed circuit board (PCB) connected to the alternate BGM source can be in any slot with **Release 3** and higher. Use this program to designate that slot. The PCB, though, must reside in Slot 01 with **Release 2**. (An alternate BGM is not supported with **Release 1**.) See **Program 10-2** to tell the system which type of PCB (PEKU, PESU, PSTU) will support the source. The alternate BGM source sends BGM to the external speakers and telephone (digital and electronic) speakers. If an alternate BGM source is utilized, the Music-on-Hold (MOH) source connected to the PCTU or PCTUS will continue to play for CO lines and stations that are on hold.

IMPORTANT NOTE:

If alternate BGM source is not connected to a PEKU, PESU or PSTU, assign slot 01 as data in Program 19-1. This will ensure that all PSTU ports function normally. EKTs and DKTs installed in Slot 01 will not be affected by this assignment.

Program 20—Data Interface Unit (DIU: PDIU-DI and PDIU-DS) Configuration (Release 3 and higher): This program identifies the PDKU station ports connected to DIUs and the type of DIU connected.

NOTE:

DIUs can be connected to ports associated with PDKU1A Circuits 1 ~ 7 only. All PDKU2A circuits, 1 ~ 8, can support DIUs.

- **LED 01**—Light this LED if there is an Integrated Data Interface Unit (PDIU-DI) or a

Stand-alone Data Interface Unit (PDIU-DS) connected to the PDKU port. Each PDIU-DI uses the same PDKU port as the station it is attached to. Each PDIU-DS requires a separate PDKU port.

- **LED 02**—If the DIU must respond to AT commands and return result codes, this LED should be lit. DIU “AT” dialing commands and “result” codes are listed in the *Data Interface User Guide* in the Operating Procedures section of this manual. If LED 02 is not lit, the DIU will only respond to AT dialing commands (ATDT, ATD, and ATDD) and will not return result codes. If the DIU is connected to a terminal or a personal computer with communication software, LED 02 should be ON. If the DIU is connected to a modem, LED 02 should be ON. If the DIU is connected to a printer, LED 02 should be OFF.
- **LED 03**—If a PDIU-DS is connected to the PDKU port, identify whether the PDIU-DS is connected to a modem (LED ON) or not connected to a modem (LED OFF). If not connected to a modem (LED OFF), the connected device can be a DCE or DTE. This option is not necessary for PDIU-DIs, because they are not normally connected to modems.
- **LED 04**—Light this LED if a PDIU-DS is connected to the PDKU port; leave OFF, if a PDIU-DI is connected. If a PDIU-DI is connected, the digital telephone supporting it may require the **DataCall (DATA)**, **DataRelease (DRLS)**, and/or **Modem (MODEM)** buttons assigned in **Program 39**.
- **LED 05**—If the system CO lines are connected to a PBX, CENTREX, or a Central Office that is slow to return dial tone after seizure, light this LED to insert a pause before and after the PBX or CENTREX access code is dialed by the DIU also; light LED 05 to automatically insert a pause before network telephone numbers are autodialed by DIUs.

NOTE:

*The pause length is set in **Program 12-3**, and CO lines behind PBX/CENTREX are assigned in **Programs 42-0** and **42-1 ~ 8**.*

- **LED 06 (Release 4)**—If a PDIU-DS is connected to a modem, turn LED 06 ON to

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cause the modem to disconnect the line when the user presses the **Data Release (DRLS)** button. The PDIU-DS will pulse DTR on outgoing modem calls only, not on incoming modem calls. Initially, the modem should be sent AT command "AT & D2" so it can recognize DTR pulse sent to it from the PDIU-DS. The LED 06 option is available only with **Release 4**.

NOTE:

*It is recommended to change the escape sequence (typically + + +) of a modem connected to a PDIU-DS. Separate sequences will enable users to escape more efficiently. Escape sequences are changed with the **ATS2 = __** command.*

- **LEDs 17 ~ 20**—Data security groups can be set to block data calls between DIUs. DIUs can only make data calls to DIUs in the same security group. LEDs 17 ~ 20 assign the DIU to the appropriate security group: light LED 17 for Group 1; LED 18, for Group 3; LED 19, for Group 2; and LED 20, for Group 4.

Typical LED settings for **Program 20**.

- **PDIU-DI Connected to a Terminal or Personal Computer**—LEDs 01, 02, 05, and 17 ON; all other LEDs OFF.
- **PDIU-DS Connected to a Printer**—LEDs 01, 04, and 17 ON; all other LEDs OFF.
- **PDIU-DS Connected to a Modem**—LEDs 01, 02, 03, 04, 06, and 17 ON; all other LEDs OFF.

Program 21—Modem Pool Port Assignments (Release 3 and Higher): With this program, identify modems connected to PSTU or PESU standard telephone ports (line side of modem) and PDKU/PDIU-DS ports (RS-232 side of modem). Each selection pair assigns the modem to the system modem pool. With data security groups (**Program 20**, LEDs 17 ~ 20) and the call blocking feature (**Program 31**, LED 04), modem access can be denied or allowed to data users.

NOTES:

1. When modems are connected to PSTU or PESU ports, the Executive/Privacy Override blocking feature (**Program 31**, LED 18) should be enabled for the modem PSTU or PESU ports for data security. The LED 18 feature should be disabled to enable callers to switch from voice to data, or vice versa.
2. Digital telephones with PDIU-DIs that must access modems from a pool require a **Modem (MODEM)** button assigned in **Program 39**.
3. PDKU/PDIU-DS ports that are connected to modems in the modem pool should be set with LEDs 01, 02, 03, 04, and 06 ON in **Program 20**.
4. If a modem connected to PDIU-DS is connected to a telephone network CO line, instead of a PSTU or PESU station port, **Program 21** should not be used.
5. Use **Program 22** to assign modem/PDIU-DS stations to hunt sequences
6. DIUs can be connected to ports associated with PDKU1A Circuits 1 ~ 7 only. All PDKU2A circuits, 1 ~ 8, can support DIUs.

Program 22—Data Interface Unit (DIU) Station Hunting (Release 3 and Higher): If a DIU station (printer, modem, etc.) is busy, data station hunting allows the data call to that station to hunt to an alternate DIU station assigned in this program. If the hunted DIU station is busy, the system will ring the next "hunt-to" station, and so on. If all DIU stations in the "hunt-to" sequence are busy, then the data caller will receive a busy tone. It is recommended that all PDIU-DS/PDKU station ports grouped in a modem pooling or printer pooling/server configuration be placed into a hunt-sequence arrangement with **Program 22**. **Program 22** applies to PDIU-DS and PDIU-DI data stations, not telephone stations.

NOTE:

*When a PDIU-DS is connected to a modem(s) assigned to the system modem pool in **Program 21**, modem hunting is automatic when the user presses the DATA button to transfer a CO line call to a modem; however, if the*

user dials the modem's PDIU-DS's station number, modem hunting will follow the hunt sequence specified in Program 22.

Program 28—DSS Console (DDSS and HDSS)/

Attendant Telephone Assignments: Up to four DDSS consoles, or four HDSS consoles, or any combination of the two types of consoles up to four may be installed. A DDSS console can only be connected to Circuit 8 of a PDKU, and an HDSS console can only be connected to Circuits 7 and 8 of a PEKU. The telephone connected to Circuit 1 of the PCB supporting a console is designated as an Attendant telephone. Consoles and telephones are numbered 1 ~ 4 as they are installed from the lowest to highest slot number. For example, if a PDKU in Slot 01 had a DDSS console connected to it, the DDSS console would be designated Console #1 and the digital telephone connected to Circuit 1 would be Attendant Telephone #1. As many as four consoles can be assigned to one attendant telephone. Because more than one console can be assigned to an attendant telephone, the detailed arrangement must be programmed. Initialized data assigns one console to one attendant telephone, both connected to the same PDKU or PEKU PCB. Up to four DSS consoles can be assigned to an attendant telephone.

NOTES:

1. *DDSS consoles and digital telephones are only available with Release 3 and higher.*
2. *DSS console #4 is not available with the PCTUS PCB.*

Program 29—DSS (DDSS and HDSS) Console

Button Assignments: Each button on the DSS consoles may be flexibly assigned as either a **DirectStationSelection (DSS)**, **Line (CO)**, or **SD** button. The standard equipped **NightTransfer (NT)**, and **AllCallPage (AC)** buttons may be changed to one of these three types, but not vice versa. Station Speed Dial buttons assigned to a DSS console share the associated attendant digital or electronic telephone's Speed Dial memory. The personal Speed Dial numbers of the DSS console circuit port(s) are not available. Initialized data assigns

the 60 buttons to be **DirectStationSelection (DSS)** 200 ~ 257, **AllCallPage (AC)**, and **NightTransfer (NT)**. Each of the four possible consoles can be independently programmed.

Program 30—Station Class of Service:

- **Privacy Override, LED 19**—Privacy Override allows a station to enter into and overhear an existing CO line conversation by pressing a common CO line button. A maximum of two stations may override an existing "station-CO line" conversation. A warning tone may be set optionally (see **Program 10-2**). The choice with LED 19 is for which station is allowed to override calls with Privacy Override. Privacy Override of Direct Inward System Access (DISA) two-CO line calls is not allowed.

NOTES:

1. *To configure the DK system to operate as nonprivate, allow Privacy Override from all stations.*
2. *Privacy Override can be blocked by a station via a Privacy button (Program 39) or by the Executive/Privacy Override blocking option (Program 31, LED 18).*
3. *See Table 2-C at the end of this chapter.*

- **Executive Override, LED 18**—Executive Override allows a station to break into and overhear an existing station conversation by dialing the digit **3** after the busy station number. A warning tone may be set optionally (see **Program 10-2**). The LED 18 option is for which calling station can use Executive Override.

NOTE:

Executive Override can be blocked by stations that have Executive/Privacy Override blocking enabled in Program 31, LED 18; the PrivacyLine (PRIVACY) button does not block Executive Override. See Table 2-C at the end of this chapter.

- **DND Override, LED 17**—An electronic or digital telephone can have a button programmed for Do Not Disturb (DND). When called, a station with DND activated will return very fast busy tone (four tones per

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second). If the caller dials "2" after dialing the station number, a DND Override tone will be heard on the called station's speaker. The LED 17 assignment is for which *calling* station can use DND Override.

- **Toll Restriction Traveling Class Code Change, LED 16 (Release 3 and Higher)**—If this LED is lit for a port, the station occupying it can change the four-digit Toll Restriction Traveling Class of Service Codes established in **Program 44B**. Stations selected for this feature must follow the dialing sequences below to change the codes:

- Class 1: **Intercom (INT) + 6 2 2** + the 4-digit code + **Redial (REDIAL)**
- Class 2: **Intercom (INT) + 6 2 3** + the 4-digit code + **Redial (REDIAL)**
- Class 3: **Intercom (INT) + 6 2 4** + the 4-digit code + **Redial (REDIAL)**
- Class 4: **Intercom (INT) + 6 2 5** + the 4-digit code + **Redial (REDIAL)**

NOTE:

The # button may be used instead of the Redial (REDIAL) button.

- **Verified Account Code Change, LED 15 (Release 3 and Higher)**—If selected for this feature, a station can change the Verified Account Codes established in **Program 69**. Selected stations must dial the the following sequence to change the codes:

Intercom (INT) + 6 5 9 + 0 0 0 ~ 2 9 9 + Verified Account Code + **Redial (REDIAL)**

NOTE:

The # button may be used instead of the Redial (REDIAL) button.

- **Verified Account Code, LED 14 (Release 3 and Higher)**—If this feature is selected, all Account Codes (Forced or Voluntary) dialed by the station user (or

DISA line user) will be verified per Account Codes set in **Program 69**. If the station user fails to dial one of these specific Verified Account Codes, the call cannot be executed (Forced), or the account code will not be validated for the SMDR call report (Voluntary).

- **Handset/Headset Volume Level, LEDs 12 and 13 (Release 3 and Higher)**—This program sets the initial off-hook volume level for each digital telephone handset and/or headset. This level can be changed with the digital telephone's volume control button while the handset or headset is off-hook, but it will return to the default level set in this program after the handset is placed on-hook. The volume level range for digital telephone handsets is 1 ~ 9, with 1 as the lowest volume. Anytime a handset is off-hook, its volume level can be adjusted by the telephone anywhere between 1 ~ 9. The level setting established in this program, however, can only be from 2 ~ 5. This level is set with LEDs 12 and 13:

For level 5: Both LEDs ON (High)

For level 4: LED 12, OFF; LED 13, ON

For level 3: LED 12, ON; LED 13, OFF (Initialized setting)

For level 2: Both LEDs OFF (Low)

NOTE:

Program 92-5 (LEDs 01 and 05) does not affect receiver handset/headset volume levels.

- **Dial Pulse (Dual-tone Multi-frequency (DTMF) Off), LED 11**—If any device connected to a PSTU or PESU port does not require the CRCU for DTMF decoding, it should be programmed for Dial Pulse. When the device goes off-hook, the CRCU will not be accessed, thereby reducing potential traffic to the CRCU.
- **Change DISA Security Code, LED 10 (Release 2 and Higher)**—This allows a selected station to change the DISA security code by dialing **Intercom (INT) + 6 5 8**.

- **Change TR Override Code, LED 09**—Two Toll Restriction Override codes are available in the system. When one of these codes is dialed from any station, all Toll Restriction is bypassed. These codes can be changed only by stations assigned in this program by dialing **Intercom (INT) + 6 5 4** for Code 1, or by dialing **Intercom (INT) + 6 5 5** for Code 2.
- **Forced Account Code, LED 08**—If this feature is selected, a station or Direct Inward System Access (DISA) line user using a CO line with a Forced Account requirement (Program 15-7) must enter an Account Code before a CO line call can be completed. If Forced Account Codes should be verified, turn on LED 14 in **Program 30**. The digit length of Forced Account Codes is determined in **Program 60-4**.
- **Off-hook Call Announce (OCA) Automatic, LED 07**—A busy digital or electronic telephone can receive a second voice communication on intercom via Handsfree Answerback if the OCA feature is installed. If a *calling* station does not have the automatic function, the user must dial an extra digit of **2** after hearing busy tone in order to gain access to OCA. Initialized data makes all stations automatic for OCA.
- **Automatic Busy Redial (ABR) Access, LED 06**—The ABR feature can be enabled or denied for each station. The system will select the last CO line in the originating line group each time ABR is initiated (also see **Program 10-1**). If the ABR access feature is not enabled here, the "ABR" Soft Key will not appear on LCD telephones. (Soft Keys are available only with **Release 4**.)

NOTE:

*ABR is restricted via **Program 41** in **Release 1** software; ABR overrides **Program 41** in **Release 2** and higher software. **Program 41** is normally used with Least Cost Routing (LCR); therefore, ABR may not function with LCR in **Release 1**, but will always function with LCR with **Release 2** and higher software.*

- **Speed Dial, LED 05**—A station may be denied the use of Speed Dial (Station and System) with this program. Initialized data allows Speed Dial for every port.
- **Microphone (Mic (MIC) Button LED) On at Start of Call, LED 03**—The microphone, as well as the **Mic (MIC)** button LED, can be selected to be on or off at the start of a call if the Push On/Push Off mode (see **Mic (MIC)** Button Lock) is chosen.

NOTE:

*When receiving intercom calls, the flexible **MicrophnCut-off (MCO) button (Program 39)** can control the microphone to prevent room monitoring and Handsfree Answerback.*

- **Mic (MIC) Button Lock, LED 02**—An electronic or digital telephone microphone can be turned on or off by using the **Mic (MIC)** button. Two modes of operation are available. A momentary operation requires that the **Mic (MIC)** button be continuously pressed to disable the microphone. A Button Lock operation allows an alternate action Push On/Push Off of the **Mic (MIC)** button. LED 02 should be ON if microphone lock operation is desired.
- **Speakerphone Enabled, LED 01**—Any electronic or digital full speakerphone operation can be disabled by assignment with this program. If disabled, a speakerphone will act as a handsfree electronic or digital telephone. Initialized data enables all speakerphones.

Program 31—Station Class of Service: This program sets most voice mail (VM) port assignments. Each PESU/PSTU port connected to a Toshiba VP (or INTOUCH) voice mail system should have LEDs 04, 05, 09, 15, 16, 17, 18, 19, and 20 turned ON. These LED's should be set ON for VM ports only, not for telephone ports.

NOTE:

LED 04 may be ON or OFF, depending on VM device operation. See the LED 04 write up that follows.

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- **Toshiba VP (B + Station Number), LED 20**—This feature is designed for Toshiba VP (or INTOUCH with **B.06** and higher software) systems connected to a PSTU or PESU port. DTMF B tone followed by the station number is sent to Toshiba VP (or INTOUCH) in situations in which Toshiba VP (or INTOUCH) would not normally know the location from which a call was coming, such as hold recall or "blind" ring transfer recall. This allows Toshiba VP (or INTOUCH) to respond more intelligently with appropriate voice prompts. LED 20 should be lit for PSTU or PESU ports connected to voice mail devices only, not for station ports connected to telephones. The station number is not returned, it blind transfers to a DND station.

NOTE:

Toshiba VP (B No Station) must be enabled with LED 19 to allow this function.

- **Toshiba VP (B No Station), LED 19**—DTMF "B" tone is sent to Toshiba VP (or INTOUCH with **B.06** and higher software) to signify a recall where Toshiba VP (or INTOUCH) already knows the recalling station number. Again, this allows Toshiba VP (or INTOUCH) to respond more intelligently with appropriate voice prompts. This LED should be lit for PSTU or PESU ports connected to voice mail devices only, not for station ports connected to telephones.
- **Executive and Privacy Override Blocking (Modem), LED 18**—This feature *denies* a station user the capability to break in with Privacy or Executive Override to a *called* station's connection. It should be set for PSTU and PESU ports connected to a modem or voice mail/auto attendant device in order to ensure data and voice security. This feature may also be used to deny override of any station.

NOTES:

1. The **Privacy Release (PRVIRLS)** button may be used to disable Privacy on a

call-by-call basis; this button cannot disable Executive Override blocking.

2. *If a modem is assigned to the system modem pool in **Program 21**, use this option to provide data security (LED 18 ON for modem PSTU and PESU ports assigned in **Program 21**).*
3. *If using the system modem pool for data calls that must be switched between voice and data, LED 18 in **Program 31** should be OFF for the modem PSTU and PESU ports assigned in **Program 21**.*

- **End/End Signal RCV (VM), LED 17**—Activation of this option allows End-to-End Signaling of Dual-tone Multi-frequency (DTMF) tones through the system. It is required on all voice mail-PSTU/PESU ports for proper signaling communication.
- **Receive Voice Mail (VM) ID Code, LED 16**—When a station is call forwarded to a VM system, certain identification (ID) Dual-tone Multi-frequency (DTMF) tones will automatically be sent to direct the call to a specific mailbox (VM ID Code 656). The automatic ID is also sent to the voice mail device when electronic or digital telephone users retrieve messages via the Intercom and Message Waiting buttons (VM ID Code 657). The VM port must be programmed for this feature to allow the reception of DTMF digits.
- **Toshiba VP Integration (A Tone/D Tone), LED 15**—This option will cause an answer tone (DTMF A tone) to be automatically sent to Toshiba VP (or INTOUCH) when a station answers, and a disconnect tone (DTMF D tone) when a station disconnects. This allows Toshiba VP (or INTOUCH) to respond quickly rather than waiting a long time in time-out situations. If the Central Office (CO) provides an Automatic Release (AR) signal, D tone is also sent to disconnect voice mail (VM) ports when outside callers hang up (see **Program 15-0** and **15-3**).

NOTE:

AR signaling is sometimes referred to as

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Calling Party Control or Loop Supervision.

- **Group Page 1 ~ 4, LEDs 11 ~ 14**—Intercom paging can be directed to digital and/or electronic telephone speakers in a group arrangement. Up to four groups are possible. This program assigns digital and electronic telephones to the groups. Telephones can be assigned to as many groups as desired.
 - **All Call Page Allowed-Digital and Electronic Telephones, LED 10**—Any station may be allowed to *receive* an All Call page. This does not alter the station's ability to initiate an All Call Page. Initialized data allows every port to receive an All Call page.
 - **Voice Mail (VM) No Conference, LED 09**—If activated, a station is prohibited from having any conference calls. It should be used for VM (PSTU and PESU) ports to prevent undesirable conference calls.
 - **Voice Mail (VM) Groups 1 ~ 4, LED 05 ~ 08**—The system allows up to four VM station port groups to be configured for support of up to four VM/auto attendant devices. One group is intended for each different machine. All PSTU and PESU ports connected to a particular VM machine should be assigned to the same VM group. The purpose of the VM grouping is to allow efficient use of the message waiting (MW) set and cancel operations *from* the VM machine. Since each digital and electronic telephone can only have a maximum of four messages waiting, the VM device should set MW only once, regardless of how many messages there are.
 - **Voice Mail (VM) to VM Call Blocking, LED 04 (Release 3 and Higher)**—This prevents VM/auto attendant ports from call forwarding to other VM ports during screened or supervised voice mail transfers. If auto attendant calls are screened or supervised, this LED should be ON for all VM/auto attendant ports; if VM/auto attendant calls are ring (blind) transferred, this LED should be OFF for all VM/auto attendant ports.
 - **Off-hook Call Announce (OCA) Enabled (Receive), LED 03**—Any digital or electronic telephone equipped for OCA should be assigned this option to *receive* OCA. This program does not affect the station's ability to originate OCA.
 - **Handsfree No Warning, LED 02**—Normally, a 1-second warning tone is sent to a handsfree digital or electronic telephone to inform its user that someone is calling and that they can be heard. If the warning tone is not desired at the *called* digital or electronic telephone, this assignment can disable it. This will also prevent ringing the digital or electronic telephone as a ring-first situation, allowing silent room monitoring of the area surrounding the telephone. Initialized data activates the warning tone for all ports.
 - **Handsfree Disabled, LED 01**—It is possible to disable the intercom handsfree function on any digital or electronic telephone.
- Program 32—Automatic Preference:** Automatic Preference for digital or electronic telephones (see Note 2) via handset off-hook or Speaker button is the automatic connection to CO lines or intercom under various conditions. With Ringing Line Preference, a digital or electronic telephone user by going off-hook (or by pressing the Speaker button) may be automatically connected to the lowest CO line ringing in without having to press a CO line button or dial an access code. If no CO lines are ringing and an electronic or digital telephone goes off-hook, the station can be automatically connected to intercom or to a CO line. The CO line connected can be the lowest numbered CO line available on the telephone or the highest idle CO line from a selected group (1 ~ 8).

NOTES:

1. *The programming digital or electronic telephone at Port 05 is set to auto select an intercom line any time system power is turned OFF, then ON.*
2. *This program does not apply to standard telephones. To allow system features to be accessed, standard telephones always receive system intercom dial tone when*

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originating calls.

Program 33—Station Hunting (Voice Calls Only): If a station is busy, Station Hunting allows the ringing of an alternate station as defined by the assignments in this program. If the "hunt-to" station is busy, the system will try to ring the next "hunt-to" station, and so on. If a "hunt-to" station is in the Call Forward mode, the call forward will have priority over the hunt. A CO Line will hunt from a station only if it has been assigned to ring at that station exclusively (see **Programs 81 ~ 89**).

Program 34—Hold Recall/ParkTiming: Each station can have a different time (from 011 to 160 seconds) from the point of placing a call on hold or park to the point of recall.

Program 35—Station Class of Service:

- **Busy Station Transfer with LED 20 and Busy Station Ringing with LED 19 (Release 4)**—Busy Station Transfer (BST) and Busy Station Ringing (BSR) operate together to ensure that a busy digital or electronic telephone station always receives transferred CO line calls along with LED and tone indications. The station or Voice mail (VM)/auto attendant device that transfers the call must be programmed with BST (LED 20 ON) and the one that receives it must have BSR (LED 19). When a busy station with BSR receives a transfer from a station or VM/auto attendant with BST, there will be a muted repetitive tone (1 second ON, 3 seconds OFF) at the busy station and the intercom LED will flash at the ringing rate until the station transferring the call hangs up. When it does hang up, the CO line call will then camp-on to the busy station. The busy station will be alerted of the camp-on by a camp-on tone (five quick tone bursts), the CO line LED will flash at the exclusive hold rate, and a message ("CAMP-ON X", X = the CO line number) will appear on the LCD (if equipped). Among other applications, one in which a VM/auto attendant device that transfers calls to a typically

busy answering position station will benefit from this feature—some auto attendant devices cannot transfer a call to a busy station if BST and BSR are not activated.

NOTE:

A BST station will receive ringback tone, instead of busy tone, when transferring a call to a busy BSR station.

- **Auto Hold, LED 18 (Release 4)**—If this feature is allowed, station users with CO line buttons can place a CO line or intercom call on hold, then call another CO line or station just by pressing another CO line button or the **Intercom (INT)** button and dialing the number. If Auto Hold is not allowed, users can put calls on hold and place calls, but they will have to press the **Hold (HOLD)** button before accessing another CO or intercom line.

NOTES:

1. *CO lines or intercom calls that appear on the intercom button will automatically hold when accessing another CO line button.*
2. *it is recommended that the **Release Call (RLS)** button be provided via **Program 39** to telephones programmed for Auto Hold.*

- **No Call Forward/No Answer on Hands-free Answerback Calls, LED 16 (Release 4)**—A Handsfree Answerback call to an idle station in the Call Forward No-Answer or Call Forward-Busy/No Answer mode will not forward if this feature is activated. This prevents the call from being forwarded 12 seconds after the called party has been talking. Outside calls and busy intercom calls to the station will continue to forward with this feature set.

NOTE:

The caller can press the "RING" Soft Key on digital telephones or dial 1 on digital or electronic telephones to activate Call Forward on Handsfree Answerback calls.

- **LCD Individual Message, LED 05**—This option allows LCD digital and electronic telephones to store up to ten personal messages and offers the option of entering alphanumeric memos for each of the LCD's Station Speed Dial numbers. As many as 16 stations can have this option with systems operating with a PCTU, and as many as six stations can have it with PCTUS-operated systems. This program defines which ports can have this feature. Initialized data assigns the lowest ports to have this ability. A low port must be disabled before adding a port above the initialized ports.
- **Message Waiting (RCV), LED 04**—If the message waiting indication is not desired on an electronic or digital telephone, this program can be used to deny it. This does not affect that station's ability to send a message waiting indication to another station.
- **LCD Type 32/12, LED 02**—Digital and 6500-series LCD electronic telephones have 32-character displays. Therefore, assignments should be left in the initialized state of 32 characters. LED 02 must be ON to receive the voice mail message waiting indication.
- **LCD Display, LED 01**—This option should be used (LED 01 ON) for all stations (even non-LCD), unless it is desired to disable the station's LCD and message waiting functions.

Program 36—Fixed Call Forward: Fixed Call Forwarding is different from other station Call Forwarding options. It is fixed in terms of the destination station number which is assigned in this program. The station user cannot change the Fixed Call Forward destination, unlike the other station Call Forwarding options. This feature is valuable for forwarding to voice mail (VM) devices or to an attendant. If Fixed Call Forwarding is set on a station, the station will not ring and all calls will forward.

Program 37—Ring Transfer (Camp-on) Recall Time: If a busy or ringing station does not

answer a call sent to it via call transfer, the station originating the transfer will be recalled after an amount of time determined with this program. This time (011 ~ 999 seconds) is set independently for each originating station. Initialized data sets all stations for a 32-second recall time. Ring Transfer must first be enabled for the system with **Program 10-1**, LED 07 ON.

Program 38—Digital and Electronic Telephone Buttonstrip Type: Three digital telephone and four standard electronic telephone button arrangements are provided (see the **Program 38** System Record Sheet). It is best to start with one of these three or four, and then move on to **Program 39**, where individual buttons may be programmed. Initialized data with **Release 4** systems treats all digital telephone ports as 20-button types with 17 CO line buttons, one intercom line button, one Do Not Disturb button, and the Speed Dial button. See the System Record Sheet for electronic telephone and **Release 3** digital telephone arrangements.

Program 39—Flexible Buttonstrip Assignment: **Program 38** should be run before entering **Program 39**. Flexible feature buttons are assigned to telephones on a button-by-button basis with **Program 39**. There are as many as 40 feature buttons to choose from (see the System Record Sheet for details).

Program 40—Station CO Line Access: Any station can have access to as many CO lines as desired. Any station denied access (either to make a call or to answer a call) to a CO line cannot seize that line by dialing either an access or pickup code or by using a CO line button. This also denies access via Least Cost Routing. Use this program to divide CO lines for Tenant Service.

Use **Program 40** to deny CO line call pickup. If only *outgoing* access is to be prevented, use **Program 41**.

Program 41—Station Outgoing Call Restriction: Each station (or Direct Inward System Access (DISA) CO line) can be restricted from outgoing access to each CO line. If so re-

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stricted, that station can still answer a ringing CO line or pick up a call on hold. All Call Pickup functions operate normally. This *does not* deny access via LCR. **Program 41** denies Automatic Busy Redial (ABR) in **Release 1** software; but ABR overrides **Program 41** in **Release 2** and higher software.

Program 42—CO Line To PBX/CENTREX Connection & PBX/CENTREX Access Codes: The system recognizes PBX/CENTREX access codes via **Programs 42-1 ~ 8**. **Program 42-0** informs the software which CO lines are connected to a PBX or to CENTREX. This combination allows Toll Restriction and Speed Dialing to function properly. This program must be utilized to allow (after flash) PBX/CENTREX features to operate on incoming calls.

Program 43—0+ Credit Card Dialing Option (Release 3 and Higher): Selected station users can bypass their normal Toll Restriction assignments by dialing "0" immediately after seizing a CO line. Both the station and the CO line must be enabled for this feature with this program. After seizing the CO line, the station user is required to dial a specific number of digits, which includes the leading 0. This digit-length requirement forces the user to dial a telephone number or a telephone number plus a credit card number; as a result, these calls are billed to the credit card, and operator-placed calls are not billed to the CO line. The digit length, 1 ~ 30 numbers, is set in **Program 60-7**. This length is determined by the system's call routing method.

- If calls are routed via Least Cost Routing (LCR), the digit length should usually be set at 12, the length, including 0, of the telephone numbers dialed on 0+ credit card calls. Do not add the amount of digits in the credit card (usually 14), although these numbers will be dialed by the user after system LCR seizes the line and the system dials the telephone number (see Important Note).
- When not dialing via LCR, the digit length

should usually be 26, the sum of the digits in the telephone (12) and credit card (14) numbers.

IMPORTANT NOTE:

More digits than the length set in Program 60-7 are allowed to be dialed; there is no limit to the amount of digits that can be dialed.

Program 44A—Emergency Bypass of Verified Account Code (Release 3 and Higher): This program exempts numbers up to four digits, such as the emergency 911 number, from Verified Account Code dialing restrictions. As many as three of these special numbers can be programmed. When dialed, these numbers will be sent out the CO line immediately, bypassing any Verified Account Code dialing restrictions set in **Programs 69** and **30**, button/LEDs 8 and 14, respectively. If CO lines are behind CENTREX or PBX, program the appropriate 1- or 2-digit CENTREX/PBX trunk access code in front of the emergency number. Example: If the PBX trunk access code is 9, then program 9911 in **Program 44A-51** to allow 911 to bypass Forced Account Code dial requirements.

NOTES:

1. *If Verified Account Codes assigned in **Program 69** conflict (duplicate) with emergency or other type telephone numbers set in **Program 44A**, **Program 44A** has priority.*
2. *Toll Restriction and Direct Inward System Access (DISA) parameters requirements are not affected by this program.*

Programs 45 ~ 48 Toll Restriction: All Toll Restriction program information is provided later in this chapter.

Programs 50 ~ 56—Least Cost Routing: All Least Cost Routing program information is provided later in this chapter.

Program 60—SMDR Output/Account Code Digit Length:

- **SMDR Threshold Time, Item 2 (Release 4)**—The time that a call must be in progress before it will register with SMDR can be set to 1 or 10 seconds with **Release 4**. The default is 10 seconds. With previous releases, the time is always 10 seconds.
 - **SMDR Output, Item 3**—System output to a Station Message Detail Recording (SMDR) device can include information for both incoming and outgoing calls, or only for outgoing calls. Local and long distance call data will be sent out.
 - **Forced/Voluntary/Verified Account Code Digit Length, Item 4**—The Account Code entered at a station can vary in length from 4 ~ 15 digits. For Forced Account Code use, a call will not be completed unless the specified number of digits is entered by a station user. In the case of Voluntary Account Codes, the Account Code will not be sent to the Station Message Detail Recording (SMDR) call record unless the specified number of digits is dialed. See **Program 69** for Verified Account Codes.
 - **Station Message Detail Recording (SMDR) Printout Options, Item 5 (Release 2 and Higher)**—This option selectively deletes local call data and allows long distance/toll call data only to be sent out the SMDR port. The type of long distance/toll call data that prints out is selected by long distance prefix codes 0, 1, 00, or 1 or 0.
 - **Direct Inward System Access (DISA) Security Code, Item 6 (Release 2 and Higher)**—The optional security code (1 ~ 15 digits) is required for incoming DISA calls to access outgoing CO lines. If the DISA security code is not set in programming, DISA users can access outgoing CO lines without dialing a security code. This code is not required for DISA/DISC internal calls to stations. The DISA security code can also be changed from stations enabled in **Program 30**. DISA access of outgoing CO calls is available with **Release 2** and higher software only.
 - **Credit Card Call Digit Length, Item 07 (Release 3 and Higher)**—Station users bypassing Toll Restriction with the “0+” Credit Card Calling feature (**Program 43**) must dial a predetermined number of digits including the “0.” This predetermined number is established with Item 7, and can be 1 ~ 30 digits.
- Program 69—Verified Account Codes (Release 3 and Higher):** Up to 300 Verified Account Codes may be added, deleted, or changed with **Program 69**. Each Verified Account Code can be 1 ~ 15 digits long, but cannot exceed the Account Code length requirement set in **Program 60-4**. The following programs and options should be considered when establishing Verified Account Codes.
- **Account Code Digit Length—Program 60-4** sets the digit length that must be dialed for all account codes: Forced (Verified/Nonverified) and Voluntary (Verified/Nonverified).
 - **Full and Partially Verified Account Codes (Release 3 and Higher)**—Verified Account Codes can contain the same number of digits (full Verified Account Code) or less (partially Verified Account Code) than the length set in **Program 60-4**. If partially verified, the first part of the Account Code is verified and the remainder is not. For example, if Verified Account Code 2734 is set in **Program 69**, but the digit length is set to eight in **Program 60-4**, then the user must dial 2734 plus any other four digits to enter a partially Verified Account Code. There are many applications for partially Verified Account Codes. For instance, using the code in the example above, the numbers 2734 could be the user’s dial restriction code and the remaining four digits could be a customer-client code, a sales order, etc.
 - **Verified Account Code Toll Restriction Assignments (Release 3 and Higher)**—A Toll Restriction Class can be assigned with **Program 70** to each of the 300 Verified Account Codes .
 - **Verified Account Code Dial Requirement (Release 3 and Higher)**—Verified

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Account Code Dial Requirement is assigned on a station-by-station basis in **Program 30**, LED 14 ON. All Account Codes dialed (Forced or Voluntary) from stations assigned in this program will be verified.

- **Code Change (Release 3 and Higher)**—Stations selected in **Program 30**, LED 15 ON, can change Verified Account Codes (VAC) by dialing the following:
Intercom (INT) + 6 5 9 + 0 0 0 ~ 2 9 9 + VAC + Redial (REDIAL)
- **Verified Account Codes: Forced/Voluntary Program Options (Release 3 and Higher)**—Any station can dial a Voluntary Account Code after accessing a CO line—**CONF/TRNS 4 6**; or, with **Release 3** and higher, dial * **5 0** or press the **Account Code (ACCNT)** button. Forced Account Code requirements are assigned via station and CO line program options: stations are assigned in **Program 30**, LED 08 ON; and CO lines are assigned in **Program 15-7**. Stations must dial Verified Account Codes when assigned in **Program 30**, LED 14 ON. Direct Inward System Access (DISA) callers that access outgoing CO lines can be required to enter Verified Account Codes with **Program 30** (LED 08 ON for Port 99).

Program 70—Verified Account Code Toll Restriction Assignments (Release 3 and Higher): A Toll Restriction Class can be assigned with this program to each of the 300 Verified Account Codes assigned in **Program 69**. Therefore, when a Forced Verified Account Code is dialed at a station, the station temporarily assumes the Toll Restriction Class assigned to the Verified Account Code. When **Program 70** is initialized, all Verified Account Codes are assigned as not Toll Restricted (data = 00). Verified Account Code Toll Restriction class assignments are not user programmable; so if the assignments are not known, it is recommended to assign a number (block) of Verified Account Codes to each type of Toll Restriction class. For example:

VACs 000 ~ 050 = no restriction
VACs 051 ~ 100 = total restriction

VACs 101 ~ 150 = Class 1
etc.

Program 77-1—Peripheral Options

- **Door Lock Time, LED 20**—The Door Lock Relay contact may be programmed to operate for either three or six seconds (applies to PIOUS, PIOUS, PEPUS, DDCB, and HDCB door lock controls).
- **Port Number/Door Phone/Lock Control Units, LEDs 16 ~ 19 (Release 2 and higher)**—Door phone/lock existence is defined by this program. Door phone/lock controllers (DDCBs and/or HDCBs) can *only* exist at Ports 04, 12, 20 and 28, and can *only* be installed on Circuit 5 of a PDKU, PEKU and/or PESU. PDKUs support DDCBs, but not HDCBs. PEKUs and PESUs can support HDCBs, but not DDCBs. After assignment of a DDCB or HDCB, door phone numbers (151 ~ 159, 161 ~ 163) will effectively replace the station number assignment in **Program 04**. The door lock option is set via **Program 77-2**.

NOTES:

1. DDCBs are available only with **Release 4**.
2. HDCB4, port 28, is not available with PCTUS.

- **IMDU Modem, LED 14**—Informs the software that an internal Remote Maintenance modem (IMDU) is installed. Its station number is 19 (unless the access code prefix has been changed with **Program 05**).
- **Night Ringing over External Page Zones, LEDs 10 ~ 13 (Release 3 and Higher):** Tenant 1 or Tenant 2 CO lines can be selected with this program to selectively night ring external page zones. For this feature to work, the appropriate CO lines must be programmed to night ring over external page in **Program 78**. Tenant assignments are made in **Program 15**.

NOTE:

The PIOUS option PCB must be installed to allow this option.

- **Door Phone Ring On External Page,**

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LED 08—If a door phone button is pressed, a ring tone can be enabled or disabled to external paging when the system is in the NIGHT mode. Activation of a Tenant 1 **Night Transfer (NT)** button is required to activate this feature. The Tenant 2 **Night Transfer (NT)** button does not apply to door phones.

- **Door Lock Relay/External Page Relay, LED 07**—A relay on the PIOU, PIOUS, or PEPU can be assigned to operate with the Door Lock function *or* with External Page for mute control. The door lock button is assigned in **Program 39**; the door lock activation time is assigned in **Program 77-1**. This door lock function is not associated with the DDCB or HDCB door lock, but is an addition to them.
- **NT Relay, LED 06**—A relay located on the PIOU, PIOUS or PEPU can be assigned to operate in one of two Night Transfer modes (see next item, MOH/NT Relay). In one mode, the relay will activate for 1 second, then be idle for 3 seconds when a CO line rings (incoming) while the system is in the NIGHT mode. The intended application is to control an external ringing device at night. **Program 78** must have Ring Over External Page activated for this feature. In the second mode, the relay will operate continuously while the NIGHT mode is activated. One application for this mode is to control an external answering machine.
- **MOH/NT Relay, LED 05**—A relay on the PIOU, PIOUS, or PEPU can be assigned to operate in one of two applications. A choice must be made between use for Night Transfer application (see NT Relay, LED 06) or Music-on-Hold (MOH). If used for MOH, the relay will activate when any CO line or station is placed on hold. The intended application is to control a tape player which can be used as a Music-on-Hold source.

Program 77-2—Door Phone and Door Lock Assignments:

- **Door Phone Ring Count, LED 20 (Release 4)**—The number of times that a door phone will ring digital and electronic tele-

phones is set with this LED. Light the LED for one ring; turn it OFF for five rings. The default is five rings. See **Program 79** to assign which telephones will be rung by door phones.

- **Door Phone Busy Out, LEDs 01, 02, 03, 05, 06, 07, 09, 10, 11, 13, 14, and 15**—Each door phone controller (DDCB or HDCB) can interface with up to three door phones. The system treats each controller as a station. Therefore, this is quite different from all other station arrangements using telephones. The system does not automatically know how many door phones are connected to each DDCB or HDCB, so it must be told. This program is used to enter that information so that a caller will receive fast busy tone if the called door phone does not exist. Door phones 1A, 1B, 1C are numbered 151, 152, 153, respectively, and are connected to the DDCB or HDCB at Port 04. Door phones 2A, 2B, 2C are numbered 154, 155, 156, respectively, and are connected to the DDCB or HDCB at port 12, etc.
- **Door Lock Assignments, LEDs 04, 08, 12, and 16 (Release 2 and Higher)**—Each B-jack on the DDCB and HDCB output can be configured for door lock control. Door lock control buttons for door locks are assigned to electronic or digital telephones in **Program 39**. Door lock activation time is set in **Program 77-1**. A maximum of four DDCB/HDCB door lock controls are available with a PCTU PCB; three are available with a PCTUS PCB. Each DDCB requires one PDKU circuit, and each HDCB requires one PEKU or PESU electronic telephone circuit. These door locks are not associated with, but are in addition to, the door lock control provided by the PIOU, PIOUS, or PEPU PCB. DDCBs are available with **Release 4** only.

Program 78—CO Line Special Ringing Assignments:

- **Ring Over External Page During Night Mode, Feature 1**—This program selects which CO lines will activate ringing over

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external paging facilities during the NIGHT mode (for Tenants 1 and 2). The NT Relay on the PIOU, PIOUS, or PEPU will also be activated if it is in the 1-second ON/3-seconds OFF mode.

- **DISA/DISC CO Line Assignment, Feature 2**—This program assigns CO lines to be used with the Direct Inward Station Calling (DISC) and the Direct Inward System Access (DISA) features. These CO lines may be set for DISC/DISA operation during the different system modes of DAY, DAY2, and NIGHT. A CO line will switch to normal ringing after ten seconds if the outside caller does not use the DISA/DISC feature. Normal function of these lines occurs for outgoing calls. DISA, which allows outgoing CO line access and internal station calling, is available with **Release 2** and higher software only.

NOTE:

*An optional security code for DISA outgoing CO calls is available via **Program 60-6**.*

- **Ring IMDU Maintenance Modem, Feature 5**—IMDU Remote Maintenance modem can be accomplished with this program. Different alternatives are available for the system modes of DAY, DAY2, and NIGHT. If none of these are selected, the IMDU can still be reached on Station 19 with the DISC/DISA feature or by a Ring Transfer from the DSS console attendant or any other station. IMDU station 19 must be enabled with **Program 77-1**.

Program 79—Door Phone Ringing:

- **Muted Ring to Busy Electronic and Digital Telephone, LED 20**—If all electronic and digital telephones are busy and a door phone button is pressed, a muted ring tone can be sent to selected digital and electronic telephones, as defined with this program. (Only the lowest port in the appropriate ringing group will mute ring.)
- **Door Phone Ring, LEDs 01 ~ 12**—When a door phone button is pressed, selected digital and/or electronic telephones will ring as assigned with this program. See **Program 77-2** for an explanation of the door

phone A, B, and C numbering scheme.

Program 80—Electronic and Digital Telephone

Ringing Tones: Distinctive system ringing sends a different ring tone for CO line ringing than that for intercom ringing. In addition, CO line ringing at electronic and digital telephones can be different from one phone to another. Two choices are available with **Program 80**; one is 500 Hz modulated with 640 Hz (PERCEPTION ring tone), while the other is 600 Hz modulated with 800 Hz (STRATA ring tone). Two electronic or digital telephones that are close in proximity can then have distinctive CO line ringing, as chosen with this program.

Programs 81 ~ 89—CO Line Ringing Assignments:

A wide variety of CO line ringing to stations can be programmed into the system. Nine categories exist, which are DAY IMMEDIATE, DAY DELAY 1, DAY DELAY 2, DAY2 IMMEDIATE, DAY2 DELAY 1, DAY2 DELAY 2, NIGHT IMMEDIATE, NIGHT DELAY 1, and NIGHT DELAY 2. DAY, DAY2 and NIGHT refer to the three modes of the Night Transfer key. DELAY 1 is a 12-second delay of ringing signal to an electronic or digital telephone, and DELAY 2 is a 24-second delay of ringing. The delay functions are mainly used in CENTREX applications but can be used for other situations. If delayed ringing occurs, the station that initially rings will continue to ring with subsequent delayed ring stations.

Program 93—CO Line Identification:

This program assigns alphanumeric names (such as "WATS BAND 5", "FX TO NY", "MR JONES", etc) to CO lines. The names may be up to 16 characters each, and display when the CO line is being used by an LCD station.

Program 97—Printing Program Data Through

SMDR: Contents of each program can be sent to the SMDR port for a hard copy printout.

Setting Date, Time and Day:

The current date, time, and day of the week can be set from an electronic or digital telephone connected to Port 00 (usually Station 200). The programming electronic or digital telephone at Port 05.

cannot make these settings.

2 TOLL RESTRICTION

2.01 The following provides the programmer with an overview of the Toll Restriction feature and step-by-step instructions to fill in the Toll Restriction System Record Sheets.

3 TOLL RESTRICTION OVERVIEW

3.00 Toll Restriction Methods

3.01 Toll Restriction screens and selectively restricts outgoing calls using three different methods. Each type of restriction can be programmed for individual stations. Toll Restriction can also be enabled/disabled for each outgoing CO line in the system.

3.02 Simple Toll Restriction: The first method, Simple Toll Restriction, only involves the first digit dialed. The system can be programmed to reject outgoing calls beginning with 0 or 1 (see **Program 48**).

3.03 Three-digit Toll Restriction: The second method, Three-digit Toll Restriction, involves the system analyzing the area code dialed, and selectively allowing/disallowing outgoing calls following the criteria defined in Area Code Tables 1 ~ 4 (see **Program 46**, Codes 2 ~ 4).

3.04 Six-digit Toll Restriction: The third method, Six-digit Toll Restriction, involves the system analyzing the area code and the office code, and selectively allowing/disallowing outgoing calls following the criteria defined in Area Code Tables 1 ~ 4 and Office Code Tables 1 ~ 4 (see **Program 46**, codes 2 ~ 4 and 6 ~ 8).

NOTE:

Standard telephones that are Toll Restricted should always be forced to use Least Cost Routing (LCR) to place outside calls. This will prevent Toll Restriction defeat when the CRCU circuit times out.

3.10 Toll Restriction Features

3.11 For description purposes, Toll Restriction is divided into several components, or subfeatures. The subfeatures operate independently of the restriction methods just described, although they may employ these methods.

3.12 Station Priority Classes 1 ~ 4: Four classes of Toll Restriction can be defined to assign different levels of priority to individual stations. Classes can be defined so each is progressively more restrictive by allowing or denying specific area or office codes, calls to long distance information, international calls, and operator assisted calls (**Programs 46-10 ~ 40**).

3.13 Office Code Exception Tables: Class 1 ~ 4 restrictions can be further modified by defining as many as eight exception tables to allow or deny access to specific office codes that fall within previously restricted area codes (**Program 47**). Exception office code access is accomplished with the Six-digit Toll Restriction method described earlier.

3.14 Emergency, Information, and Toll-free Long Distance Toll Restriction Override: Toll Restricted stations may be allowed to dial special codes such as **911** for emergency response, **1-411** or **411** for information, or 800 prefix toll-free calls (**Program 46**).

IMPORTANT!

Always be sure to provide access to emergency numbers such as 911.

3.15 Toll Restriction Override by System Speed Dial: System speed dial numbers can be programmed to override toll restriction (see Basic System Features, **Program 10-1**).

3.16 Toll Restriction/Traveling Class Override Codes: Up to two Toll Restriction Override Codes can be defined. When dialed at a toll restricted station, these codes enable the station user to override toll restrictions defined at the station (**Program 44B or 45-8 ~ 9**). Codes may be changed by stations chosen in programming (see Basic System Features, **Program 30**).

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3.17 Special Common Carrier Authorization: Toll Restriction can be programmed to recognize Other Common Carrier (OCC) telephone numbers, directory numbers, authorization codes, and PBX access codes. The system starts inspecting numbers for toll restriction purposes after the recognizable code is dialed (**Program 45-3 ~ 6**).

4 COMPLETING THE TOLL RESTRICTION SYSTEM RECORD

4.01 The following instructions explain how to complete System Record Sheets used to program the Toll Restriction feature. They are arranged in the same order in which the tables appear in the *Toll Restriction System Record Sheets*. The following instructions are intended to give a concise general definition of the programming characteristics defined by each record sheet.

NOTES:

1. *On each record sheet, mark an X in the space provided to indicate that a choice is selected. Unless otherwise specified, this indicates the LED is lit. When appropriate, indicate digits to be entered using the station dialpad.*
2. *Initialized data and considerations are documented when applicable.*

4.10 Program 44B—Toll Restriction/Traveling Class Override Codes (Release 3 and Higher)

4.11 Each of the four Toll Restriction classes established in **Program 46** can be assigned a code with this program. If one of these codes is entered at a station, the station will assume the code's class for that call. When the call is complete, the station returns to its regular class assigned in **Program 48**. The Traveling Class code data is not sent out the SMDR port and will not print out on station call records.

NOTE:

*Stations selected in **Program 30**, LED 16 ON, can add, change, or delete the codes set in **Program 44B**.*

4.20 Program 45-1—Toll Restriction Dial Plan

4.21 A dial plan must be defined for the Toll Restriction software to recognize the typical dial-

ing sequence of long distance/local calls made from the system's home area code, and identify area and office codes. The dialing plan defines several components of a telephone number for long distance calling:

- **Long Distance Prefix 1**—In most areas, a **1** must be the first digit dialed for long distance calling. In such areas, the area code is dialed right away. The dial plan defines whether the prefix **1** is required for a particular installation's long distance calling.
- **Area/Office Code Numbering Schemes**—In most places, the middle digit of an area code is **0** or **1**, and the middle digit of an office code is **2 ~ 9**. Toll Restriction examines the first three-digit sequence dialed and determines whether it is an area code or an office code.
 - If the middle digit is **0** or **1**, then the sequence is an area code.
 - If the middle digit does not equal **0** or **1**, then the sequence is an office code, and the office code parameters of the selected dialing plan apply.

4.22 An exception to this rule exists. In some places, area and office codes are interchangeable. The middle digit is always **0** or **1** (see Code 3 selection). In such a case, the system only knows that three digits dialed are an area code if **1** is dialed before them. If **1** is not dialed first, the system knows the three digits are an office code. The dial plan defines the numbering scheme applicable to the installation site.

- **Office Codes:** Office Code elements are defined as follows:
 - **N** = 2 ~ 9
 - **X** = 0 ~ 9
 - **NXX** = interchangeable with area code; 2nd digit may be **0** or **1**.
 - **NNX** = not interchangeable with area code; 2nd digit may not be **0** or **1**.

4.23 Equal Access Codes and Special Common Carrier Authorization Codes may be entered as exceptions to the dialing plan in **Program 45-3 ~ 6**.

4.24 Selections: On the record sheet for **Program 45-1**, choose one of the following dial plans by marking an X in the space next to the code.

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- **Plan 1** for dialing plan **AC+NNX/1+NNX** with **Release 1** and **2** or **AC+NXX/1+NNX** with **Release 3** and higher should be selected if the installation is in a location where a user places a long distance call to a destination *outside* the area code without dialing **1** before dialing the area code. The user places a long distance call to a destination in the *same* area code by dialing **1** directly before the office code.
- When using this plan, the system recognizes the following:
 - The first three digits of a ten-digit number is an area code if the middle digit is **0** or **1**.
 - With **Release 1** and **2**, the first three digits dialed immediately after a **1** in an eight-digit string are a non-interchangeable office code (the middle digit *must* be **2 ~ 9**); or, with **Release 3** and higher, the first three digits dialed immediately after a **1** in an eight-digit string is an interchangeable office code (the middle digit may be 0 or 1).
 - A seven-digit string starting with an office code is a local call.
 - An 11-digit string is not recognized.
- **Plan 2** for dialing plan **1+AC+NNX/1+NNX** with **Release 1** and **2** or **1+AC+NXX/1+NNX** with **Release 3** should be selected if the installation is in a location where a user places a long distance call to a destination *outside* the area code by dialing a **1** before dialing the area code. The user places a long distance call to a destination in the *same* area code by dialing a **1** directly before the office code
- When using this plan, the system recognizes the following:
 - The first three digits following a **1** in an 11-digit number are an area code, if the middle digit is **0** or **1**.
 - With **Release 1** and **2**, the first three digits dialed after a **1** in an eight-digit string are a non-interchangeable office code (the middle digit *must* be **2 ~ 9**); or, with **Release 3**, the first three digits dialed immediately after a **1** in an eight-digit string is an interchangeable office code (the middle digit may be 0 or 1).
 - Digits 5 ~ 7 in an 11-digit string may be an interchangeable office code as well.
- **Plan 3** for dialing plan **1+AC+NXX/NNX** should

be selected if the installation is in a location where a user places a long distance call to a destination *outside* the area code by dialing a **1** before dialing the area code. The user places a long distance call to a destination in the *same* area code by simply dialing the number, without a **1** in front. The area and office codes may be interchangeable. The system differentiates between them whenever it sees the digit **1** dialed.

- When using this plan, the system recognizes the following:
 - If **1** is the first number dialed in an 11-digit string, the next three digits are an area code.
 - A ten-digit string is not recognized.
 - The first three digits in a seven-digit string are an office code. (There is no distinction between local call dialing and long distance dialing within the area code.)
 - Digits 5 ~ 7 in an 11-digit string may be an interchangeable office code as well.
- **Plans 4** and **5** are not used in the United States.

NOTE:

Program 45-1 must be completed for the Least Cost Routing feature to function properly. See LCR Program 50-1.

4.30 Program 45-2—Toll Restriction Disable

4.31 Selected CO lines may be programmed to be exempt from any toll restrictions defined in this section. Mark the exempt CO lines with an X on the record sheet. Initialized data leaves all LEDs off, which causes all CO lines to be affected by toll restrictions defined.

NOTE:

Toll Restrictions disabled in this program override station toll restrictions defined in Program 48.

4.40 Program 45-3 ~ 6—Equal Access/Special Common Carrier Numbers and Authorization Code Digit Length

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4.41 The purpose of this program is to notify the system of how many digits to ignore before it applies Toll Restriction. This enables the system to allow the use of Special Common Carrier authorization codes.

4.42 Special Common Carrier (SPCC) telephone numbers may be defined to notify the system to modify restrictions when the station user is dialing a long distance carrier. The user dials a code to access the carriers. Original restrictions re-activate after the carrier number is dialed.

4.43 There are two elements toll restriction software must verify for a user to successfully complete long distance calling:

- The first five digits of the number dialed to access the long distance special common carrier (SPCC).
- The total number of digits belonging to the authorization code of the SPCC.

4.44 Items 3 and 5: Enter the first five digits of the SPCC telephone number in the spaces labeled *SPCC1 Telephone Number* (item 3) or *SPCC2 Telephone Number* (item 5) on the record sheet. The initialized state assigns "00000" to items 3 and 5.

4.45 Items 4 and 6: Enter each SPCC's authorization code digit length. The number of digits allowed (including the first five specified in items 3 and 5) ranges from 00 ~ 99. Initialized data assigns "00" to items 4 and 6. Enter two digits on the record sheet.

4.46 A restricted station is not able to place a toll call through a long distance carrier by dialing the SPCC1 or SPCC2 telephone number if the station is denied from that number in other toll restriction programs. Upon recognizing the first five digits dialed, Toll Restriction software is notified to allow the number of digits programmed in items 4 or 6 (00 ~ 99, including the first five dialed as SPCC1 or 2).

4.47 The system interprets data to be a seven-digit local call to an SPCC. Only five digits of the seven-digit number are entered; therefore, the last two digits are don't care digits. Any number dialed

that has the same first five digits as the carrier, the system will assume the SPCC is being called.

IMPORTANT NOTE!

For items 4 and 6, do not enter more digits than necessary for the authorization code. If too many digits are allowed, toll restrictions may be ignored.

4.50 Program 45-8 ~ 9—Toll Restriction Override Code

4.51 Two different codes may be dialed by any station user to override station-specific restrictions.

4.52 Fill in the codes on the record sheet. They must be four digits each.

4.53 Selected stations in the system are able to alter the override code. These stations are defined by **Program 30**. To change the codes from selected stations:

Code 1: **Intercom (INT) + 6 5 4 + code + Redial (REDIAL)**

Code 2: **Intercom (INT) + 6 5 5 + code + Redial (REDIAL)**

NOTE:

The # button can be used instead of the Redial (REDIAL) button.

4.60 Program 46-2 ~ 4—Toll Restriction Allowed/Denied Area Codes Assigned by Class

4.61 Four Toll Restriction classes can be defined for the system. Each class area code provides for a different combination of restrictions.

4.62 This program defines the area codes allowed or denied for each Toll Restriction class. Area code tables for classes 1 ~ 4 can each describe area codes that are allowed or denied for the class. The tables (in memory) operate as allow tables. If an area code exists in a table (displays with **4 #**), then it is allowed. Anything not displaying is not allowed. Initialized data allows all area codes for each class (all codes are in all tables). All allowed area codes can be displayed (**4 #**) for each class.

4.63 For each class, choose whether the record table is used to record allowed area codes in memory (ALLOWED) or denied area codes not in memory (DENIED). Enter the area codes that define the set.

4.70 Program 46-6 ~ 8—Toll Restriction Allowed/Denied Office Codes Assigned by Class

4.71 This program defines the office codes allowed or denied for each Toll Restriction Class within the home area code. Office code tables for classes 1 ~ 4 can each describe office codes allowed or denied for the class. The tables (in memory) operate as allow tables. If an office code exists in a table (displays with **8 #**), then it is allowed. Anything not displaying is not allowed. Initialized data allows all office codes in the home area code for each class.

4.72 For each class, choose whether the record table is used to record allowed office codes in memory (ALLOWED) or denied office codes not in memory (DENIED). Enter the office codes that define the set.

4.80 Program 46-10 ~ 40—Toll Restriction Class Parameters (Classes 1 ~ 4)

4.81 This program defines parameters of each Toll Restriction class, including dialing plan restrictions and exceptions to previous restrictions.

4.82 Toll Restriction exceptions and dialing plan restrictions may be defined for each class. **Program 46-10** assigns class 1 restriction exceptions and parameters; **46-20** assigns class 2; **46-30** assigns class 3; **46-40** assigns class 4. This program also relates to **Program 47**. See **Program 47** for more explanation.

4.83 To define the proper parameters for a Toll Restriction class, make the appropriate selections on the record sheet designated for classes 1 ~ 4:

- **LED 01: 0 Restricted**—Mark an X next to LED 01 if operator or operator-assisted calls are restricted for the class being defined.

IMPORTANT NOTE!

To allow 0 + dialing (LED 01 must be off), codes 020 ~ 099 must be allowed in Program 46, and digit free must be allowed in Program 48. Warning—Allowing 0 + dialing also allows operator-assisted toll calls.

- **LED 02: 01 Restricted**—Mark an X next to LED 02 if overseas operator or unassisted overseas operator calls are restricted for the class being defined.
- **LED 03: 1+AC+555 and AC+555 Allowed**—Mark an X next to LED 03 to allow the particular class to call all restricted area codes plus the office code of **555**, including out-of-area directory assistance calls. Turning the LED off does not necessarily deny information calls. This may also be accomplished in the office code table and/or the area/office code exception tables.
- **LEDs 11 ~ 18: Area Code/Office Code Exception Tables 1 ~ 8**—Select the exception tables that apply to the class being defined by marking an X in the box. Exception tables for both area and office codes will be defined in **Program 47**.

NOTE:

Each class can be assigned any or all of the eight available office code exception tables.

4.90 Program 47—Toll Restriction Exception Office Codes Assigned by Area Codes (Table 1 ~ 8)

4.91 This program defines exceptions to previously defined office code restrictions for up to eight area codes, allowing six-digit Toll Restriction. Office codes entered in Tables 1 ~ 8 are opposite of what is defined for the area code by **Program 46-2 ~ 8**. For instance, if **Program 46** denies area code 714, entering office codes **530** and **555** into an exception table for area code **714** will allow those office codes.

4.92 Eight exception tables are available. Each area code with exception office codes requires a table. Each table may hold up to 800 exception office codes.

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4.93 Enter the area code and required office codes on the record sheet.

4.100 Program 48—Station Toll Restriction Classification

4.101 This program assigns a combination of two restrictions to each station port defined in the system. The first feature is Digit Restriction and the second is Station Restriction Assignment.

4.102 Digit Restrict Code: If Digit Restrict is enabled for a particular station, the station is able to dial the number of digits defined in the **Program 45-1** toll restriction dialing plan.

- **1: Enable Digit Restriction**—Enter **1** in the Digit Restrict Code column, next to the port number to enable the restriction for the station. This is used to prevent a user from dialing a second call when dial tone is returned from a CO after the outside party disconnects.
- **2: Disable Digit Restriction**—Enter **0** in the Digit Restrict Code column, next to the port number to disable digit restriction for the station. This allows toll restricted users to dial any number of digits (i.e., to an external voice mail device, computer, etc.).

4.103 Station Restrict Code: The second feature assigns Toll Restriction to individual station ports, in addition to previous restrictions. It includes seven different choices. One of the choices must be entered for each port. Initialized data assigns **0** or no restrictions to all ports. The seven choices are explained as follows.

NOTE:

*Station restrictions are overridden by CO lines disabled as defined in **Program 45-2**. If a station port has appearance of a CO line with restrictions disabled, the restrictions will be removed from the station on an individual CO line basis through **Program 45-2**.*

- **0: No Station Toll Restriction**—Enter **0** in the Station Restrict Code column, next to the port number, to remove toll restrictions from the station.
- **1: Area Code Toll Restriction**—Enter **1** in the

Station Restrict Code column, next to the port number. If the selected station must be restricted from dialing all area codes.

- **2: Area Code Toll Restriction and “0” or “1” as a 1st or 2nd Digit**—Enter **2** in the Station Restrict Code column, in the space available for the port number, if the selected station must be restricted from dialing all area codes, and **0** or **1** when used as a first or second digit. This restriction prevents the station from making any long distance calls or operator-assisted calls, in addition to outgoing calls outside the home area code. In applicable areas, this prevents long distance office codes from being dialed (if 1+NNX).
- **3: Class 1 Toll Restriction**—Enter **3** in the Station Restrict Code column in the space provided for the port number, if the selected station will be assigned to the Class 1 level of restriction. Class 1 area and office code restrictions are defined in **Program 46**, and exception office code tables in **46-10**.
- **4: Class 2 Toll Restriction**—Enter **4** in the Station Restrict Code column in the space provided for the port number, if the selected station will be assigned to the Class 2 level of restriction. Class 2 area and office code restrictions are defined in **Program 46**, and exception office code tables in **46-20**.
- **5: Class 3 Toll Restriction**—Enter **5** in the Station Restrict Code column in the space provided for the port number, if the selected station will be assigned to the Class 3 level of restriction. Class 3 area and office code restrictions are defined in **Program 46**, and exception office code tables in **46-30**.
- **6: Class 4 Toll Restriction**—Enter **6** in the Station Restrict Code column in the space provided for the port number, if the selected station will be assigned to the Class 4 level of restriction. Class 4 area and office code restrictions are defined in **Program 46**, and exception office code tables in **46-40**.

5 LEAST COST ROUTING

5.01 The following provides the programmer an overview of the Least Cost Routing feature and

step-by-step instructions to fill in the Least Cost Routing System Record Sheets.

6 LEAST COST ROUTING OVERVIEW

6.00 Definition

6.01 The Least Cost Routing (LCR) feature enables the system to automatically route each outgoing voice and data call over common carriers and selected CO lines. The customer chooses these lines for the specific time of day, and for system users with varying priorities. If the system is programmed properly, LCR can select the most economical route, helping save money. If the best routes are unavailable, users with priority can access more expensive outgoing routes. Several elements of LCR must be defined in programming.

NOTE:

*For LCR to function properly, CO line groups must be created in **Program 16**; CO line restrictions set in **Programs 40 and 41**; and the area dialing plan assigned in **Program 45-1**.*

6.02 LCR General Parameters: Enables features including a warning tone for last choice route number, a comfort dial tone during LCR processing, and the Long Distance Information dialing plan.

6.03 LCR Home Area Code: Notifies LCR software of the area code of the installation site.

6.04 LCR Special Codes: Notifies LCR of special emergency and operator codes that will be automatically routed as a local call, without unnecessary delay.

6.05 Long Distance Information Plan Number: Notifies LCR software how to route a long distance information call.

6.06 Local Call Plan Number: Notifies LCR software which call routing plan is specifically designed to handle local and special calls.

6.07 LCR Timeout after 0 (Zero) is Dialed:

Notifies the system of the time delay to the user after dialing a 0, before a regular operator is accessed.

6.08 LCR Area Codes: As many as eight separate area code tables can be defined; one for each available call routing plan. Each table defines the area codes that are handled by the particular routing plan.

6.09 LCR Office Code Exceptions for Area Codes: As many as eight LCR office code exception tables may be defined to inform LCR software how to handle specific office codes within area codes. According to the tables defined, specific exception office codes can be routed through a different call plan than the overall area code plan.

6.10 LCR Schedule Assignments: Call routing plans 1 ~ 8 can send the outgoing calls of different groups of stations according to a time schedule, and call route definitions.

6.11 LCR Route Definitions: Groups of CO lines assigned to special common carriers, foreign exchange lines, or other special services can be specified as call routes.

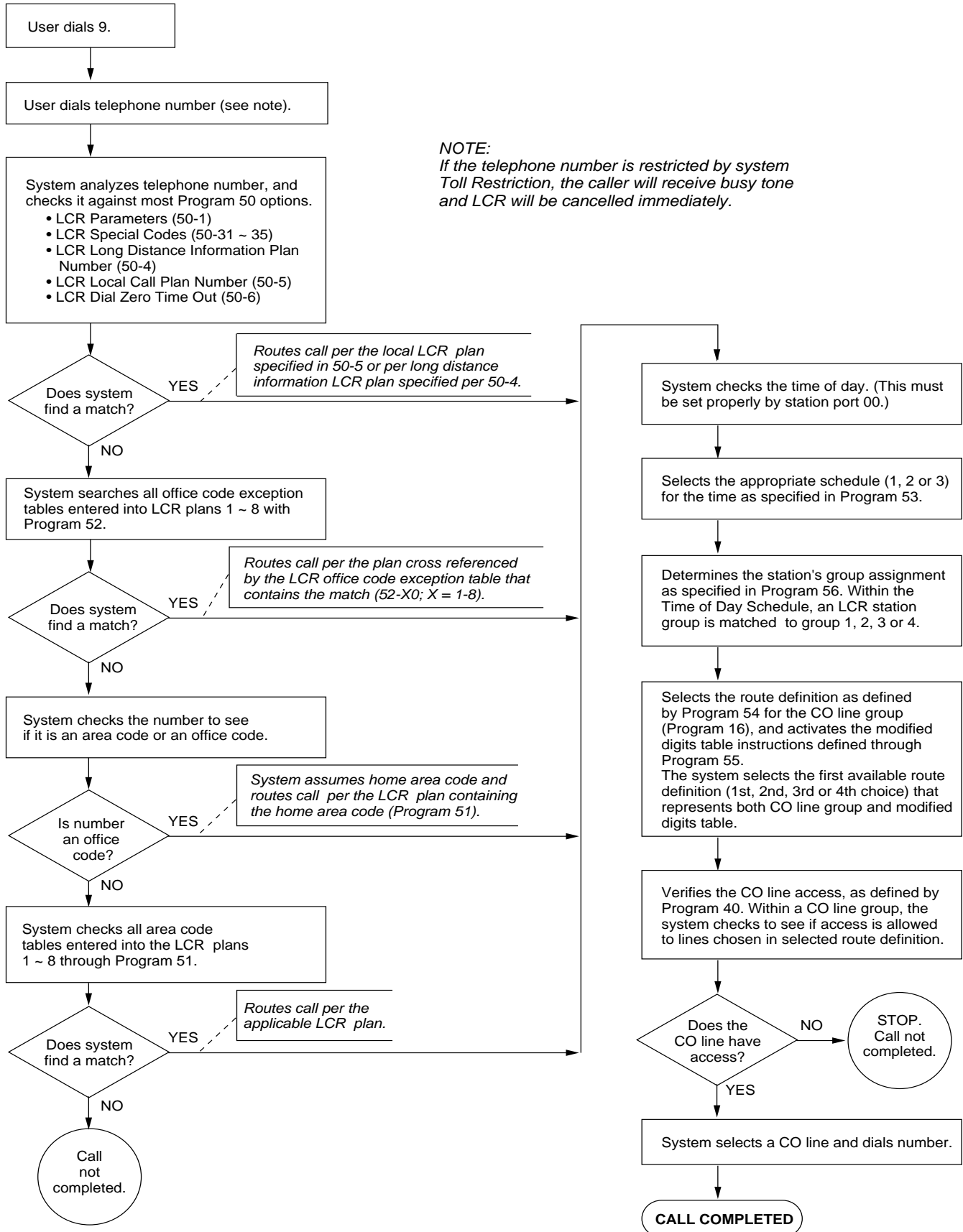
6.12 LCR Modified Digit Assignments: Carrier codes can be programmed to dial automatically when a call is placed over the appropriate route. Digits can be added to the front or back of special common carrier codes or other access numbers to make placing calls an invisible process for the user. Digits may also be deleted from the front of the dialed number.

6.13 LCR Station Access Priority Assignments: Each station port defined in the system may be assigned to one of four station priority groups. The groups can have varying access to the defined call routes at different times of day. Each group is partitioned from the other groups.

6.20 Conditions

6.21 A number of conditions apply to LCR assignment. A summary of each is listed here. Paragraph 7, *Completing the Least Cost Routing Record*

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NOTE:
 If the telephone number is restricted by system Toll Restriction, the caller will receive busy tone and LCR will be cancelled immediately.

FIGURE 2-1—LCR OPERATIONAL BLOCK DIAGRAM

Sheets, gives more detailed explanations and examples of how the conditions relate to the programming process.

6.22 If a station has direct CO appearances, or pooled CO line buttons programmed to allow direct outgoing line access, LCR will be bypassed using the pooled line or a CO line button.

6.23 LCR accommodates special code dialing, such as **911** for emergency response, **1-411** or **411** for information, or **800** area code toll-free numbers. These calls can be directed to the local call route (see **Program 50-31 ~ 35**).

IMPORTANTNOTE!

Always provide emergency service access for numbers such as 911.

6.24 Basic System Record programs related to LCR include:

- **Program 16** defines which outgoing CO lines are assigned to CO line groups 81 ~ 88.
- **Program 40** denies a station complete CO line access. This also applies to LCR.
- **Program 41** restricts outgoing CO line calls to selected stations. These stations may make outgoing calls through LCR. In this Program, **Release 1** software denies ABR; **Release 2** and above software allows ABR.

6.25 Standard telephones that are Toll Restricted should be required to use Least Cost Routing (LCR) to place outgoing calls. This prevents Toll Restriction defeat when the CRCU times out.

7 COMPLETING THE LEAST COST ROUTING SYSTEM RECORD

NOTE:

*All stations using LCR should be ALLOWED CO line access in **Program 40**, and DENIED CO line access in **Program 41**.*

7.01 The following instructions explain completion of the System Record Sheets used to program LCR. Instructions are arranged in the same order as the *Least Cost Routing System Record Sheets*.

The instructions are intended to give a concise, general definition of LCR characteristics defined by each record sheet.

NOTES:

1. *On each record sheet, enter required data in the space provided to make a selection, unless otherwise specified.*
2. *The initialized state and considerations are documented on the record sheet.*

7.10 LCR CO Line Programming Reference Table

7.11 This table is intended for reference only. Information relevant to LCR is compiled here from *Basic System Programming*.

- 1) Under the column labeled "CO Lines in Group (01 ~ 36)," enter the numbers of the CO lines assigned to groups 81 ~ 88. Refer to the completed record sheet in **Program 16** for this information.
- 2) Under the column labeled "CO Line Type/Comments," enter the service type, the common carrier name, or the line type for each line group, e.g., local line, Foreign Exchange (FX) to 818 (LA), WATS (out of state), etc.
- 3) Refer to Basic System Record, **Program 40**, to restrict stations from incoming and outgoing access of CO lines, including using LCR. All stations that must use LCR to make outgoing calls must NOT be restricted in this program. These restrictions do apply to LCR.
- 4) Refer to Basic System Record, **Program 41**, to restrict stations from accessing outgoing CO lines, except through LCR. All stations that must use LCR for outgoing calls must be restricted from CO line access in this program.

7.20 Program 50 Series—LCR Definitions

7.21 Program 50-1—LCR Parameters: This program defines general operating parameters for LCR software.

NOTE:

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Mark an X in the column to indicate which programming button LEDs should be lit. Initialized data leaves all LEDs OFF.

LED Button 01

- **ON:** LCR software is enabled system-wide.
- **OFF:** LCR software is disabled. None of the LCR programming referred to by this section is recognized. Dial 9 access assigned in **Program 16** is enabled.

LED Button 02

- Not used.

LED Button 03

- **ON:** LCR routes long distance information (LDI) calls over the plan number specified in **Program 50-4**.
- **OFF:** LCR routes LDI calls using area codes specified in route plans 1 ~8, as it would for any other call.

LED Button 04

- **ON:** Station users hear a simulated dial tone immediately after dialing the access LCR code (typically 9), until the first digit of the phone number is dialed. The dial tone is simulated to assure the user of the system's proper operation, but it is not a functional dial tone.
- **OFF:** Station users hear nothing after dialing the LCR access code until the destination rings or issues a busy signal.

LED Button 05

- **ON:** The user is notified with a warning tone to indicate that LCR has routed the call over the least desirable route number. The most expensive route is typically programmed to be the least desirable. A user has three choices upon hearing the warning tone:
 - a) Ignore the tone, LCR places the call using the least desirable route.
 - b) Hang up and try later to save money.
 - c) Activate the Automatic Call Back feature. The appropriate CO line group calls the user back when a more desirable route number becomes available.

- **OFF:** No warning tone sounds.

7.22 Program 50-2—LCR Home Area Code: Enter the local area code in the spaces provided on the record sheet. Initialized data leaves the home area code blank.

- LCR matches the area code entered here with the LCR route plan containing the home area code in its Area Code Table (the home area code is later entered into one of the eight available LCR route plans through **Program 51**). Thus, LCR is informed of how to handle local calls.
- Typically, systems are configured to have the LCR route plan containing the home area code as the same as the local route plan defined in **Program 50-5**. This is typically programmed by the installer to be route plan number 1, rather than the default plan 8.

7.23 Programs 50-31 ~ 35—LCR Special Codes: Five Special Codes may be entered in spaces provided next to 31 ~ 35. The codes may be a maximum of four digits, and should include items such as **911** for emergency calls, and **411** or **1-411** for local information, etc. Initialized data leaves all codes blank.

- When any of these codes are dialed, LCR is flagged to treat the call as follows:
 - The call will be sent over the local call route plan specified in **Program 50-5**.
 - No additional digits need to be dialed. They are not necessary. Therefore, the call is put through immediately.

7.24 Program 50-4—LCR Long Distance Information (LDI) Plan Number: Enter the number of the LCR route plan (1 ~ 8) over which long distance information calls will be routed. Typically, long distance information calls are routed over the local call route defined in **Program 50-5**.

- If the long distance information plan is chosen in **Program 50-1**, the call is routed as defined by this table.
- Initialized data assigns plan 8 to be the LDI route plan.

7.25 Program 50-5—LCR Local Call Plan Number: Of the eight route plans available for LCR call processing, one must be defined as the Local Call Plan, typically route plan 1. Enter the number of the plan (1 ~ 8) over which local calls, operator-assisted/0+ calls, and special code calls will be routed.

7.26 Program 50-6—LCR Dial 0 (Zero) Time-out: Enter the maximum number of seconds LCR waits for a user to dial additional digits after a 0, before it routes the call to an operator for assistance. LCR will wait this number of seconds to receive additional digits that will indicate charge calls, collect calls or other 0+ calls.

- The allowed range is 04 ~ 10 seconds. Always enter two digits. Initialized data assigns an LCR dial zero time-out value of 06 seconds.

7.30 Route Plan Overview

7.31 Four groups of programs define eight separate LCR route plans. They are **Programs 51 ~ 54**. The purpose of the plan scheme is to provide the system with directions for routing all possible calls, made by all possible users at all possible times of day. Eight separate plans provide the customer flexibility enough to route different area codes and exception office codes over different CO line groups.

7.32 Initialized data assigns all calls to plan eight. Any assignments made in **Programs 51 ~ 54** for plans 1 ~ 7 will exempt the defined call from being made on route plan 8. Likewise, any phone number not specified in routes 1 ~ 7 automatically defaults to route plan 8.

7.33 Tables for **Programs 51 ~ 54** appear on LCR Route Plan Numbers 1 ~ 8. The following instructions reveal how to fill in individual tables within the plans. Each of the following program tables must be completed for all plans.

7.34 Program 51—LCR Area Code Tables: Every route plan can be assigned to define a set of area codes and/or office codes.

- The purpose of **Program 51** is to define which area code calls are placed over which LCR Plan Number (1 ~ 8). Initialized data assigns all

possible area codes (000 ~ 999) to LCR Plan 8. Therefore, calls made to all area codes will be routed over route definitions defined in **Program 54** for plan 8, following the time schedule specified by **Program 53** for plan 8 (unless other assignments are made in plans 1 ~ 7).

- For example, any area code entered in a **Program 51** LCR area code table for plans 1 ~ 7 is subtracted from plan 8. An area code cannot be lost. If it is subsequently deleted from plans 1 ~ 7, LCR software automatically adds it to plan 8.
- To fill in record sheets for plans 1 ~ 8:
 - Check the box by Area Code Table.
 - Enter the applicable area codes, three digits per box.

NOTE:

*Remember that LCR matches the home area code entered in **P r o g r a m 51** with the LCR route plan containing the home area code in its Area Code Table. The home area code must be entered into one of the eight available LCR route plans through **P r o g r a m 51**. Thus, LCR is informed of how to handle local calls. Typically, systems are configured to have the LCR route plan containing the home area code as the same as the local route plan defined in **P r o g r a m 51**. Usually is programmed by the installer to be route plan number 1, rather than the default plan 8.*

7.35 Program 52—LCR Office Code Exceptions for Specified Area Code: The purpose of the Office Code Exception Table is to enable the customer the flexibility of routing specific office codes through a different call plan than other office codes used with that area code.

- Eight LCR office code exception tables may be defined for the overall LCR scheme. Any number of exception code tables may be assigned to each route plan, although each exception table may only be used once system-wide.
- Every route plan can be assigned to define a set of area codes and office code exceptions or a set of office code exceptions.
- This program applies to both examples listed below. In the first case, an office code exception table does not need to be defined in addition to the area codes in **Program 51**, but

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it may. In the second case, the plan may only pertain to exception office codes for certain area codes.

Example 1—In the first example, office code exception tables will be defined to the area code table. Use the continuation sheet to define the exception office codes. As many as eight of the office code exception tables may be linked to a plan, but each exception table may only be used once. When using the continuation sheet, be sure that the same exception table is not assigned to more than one plan.

- Turn to the continuation sheet (that follows plan 8 record sheet).
- Determine the plan number where the exception office codes will be rooted.
- Fill in the area code of the exception office codes in the spaces provided by the correct plan number. These office codes will be routed differently than the overall area code.
- Enter the specific office codes that are to be routed differently.

Example 2—In the second example, the route plan only applies to office code exceptions. The first office code exception table may be documented on the LCR Plan record sheet:

- Check the box on the record sheet next to Office Code Exception Table number.
- Enter the number of the exception table (1 ~ 8). Make sure this table number is not entered on any other plan, or on the continuation sheet.
- Enter the applicable area code.
- Enter the specific office codes that are to be routed differently than the area code.

7.36 Program 53—LCR Schedule Assignments: This program assigns up to three time schedules to each plan. Each time schedule consists of four different route definition choices (defined in **Program 54**) available to the four station groups (defined in **Program 56**). It may be helpful to complete **Program 54** portions of the plans and **Program 56** before proceeding.

Typical Installation without time scheduling

feature—In most cases, an installation will not require use of the time schedule feature. To reflect this on the record sheets for plans 1 ~ 8:

1: Enter the same **Schedule Start Times** for **Schedules 1** and **2**. Use military time, in the format HH:MM (Hours:Minutes). Fill in all four digits. Initialized data assigns “0000” to all times.

- If LCR software sees schedules 1 and 2 have the same start times, then it only looks at schedule 1 for route definitions.

2: Enter **Route Definition Numbers** for **Schedules 1** and **2**. Four definitions may be entered for each group.

- LCR Station (Class) Groups 1 ~ 4 are assigned in **Program 56**.
- LCR Route Definition numbers 1~ 4 are defined in **Program 54**.
- The order in which the route definitions are entered defines the order of LCR line selection. The most desirable route should be entered in the leftmost position, and the least desirable route in the rightmost position.
- If “1” is assigned to Station Group 1, and 1 for route definition only, then those assigned will only be able to use route definition 1, thereby restricting them during times that route definition 1 is not allowed.
- Keep in mind that the route definition number is being entered, not the CO line group number. The definitions are assigned in **Program 54**.

Installation requiring time scheduling feature—When an installation requires the time scheduling feature to be programmed, three “shifts” of route definitions can be assigned per station group. To reflect this on the record sheet, substitute step 1 of the procedure described for the typical customer with the following:

1: Enter the **Schedule Start Times** for **Schedules 1, 2** and **3**. Use military time, in the format HH:MM (Hours:Minutes). Fill in all four digits. Initialized data assigns “0000” to all times.

- Start time for schedule 2 is the stop time for schedule 1.
- Start time for schedule 3 is the stop time for

schedule 2.

- Start time for schedule 1 is the stop time for schedule 3.

7.37 Program 54—LCR Route Definition: The purpose of this program is to define four different ways of routing calls for each of the eight LCR plans. Define each route by selecting and entering:

1: CO Line Group (1 ~ 8): Refer to the LCR CO Line Programming Reference Table completed at the beginning of the LCR record sheets.

- Each CO line group represents a type of service, e.g., special common carrier, foreign exchange, local line group, etc.
- **Program 16** assigns CO lines to CO line groups 1 ~ 8 (81 ~ 88).
- **Program 40** denies incoming and outgoing CO line access to stations, including LCR access.
- **Program 41** allows CO line access to stations using LCR only for outgoing calls when enabled.

2: Modified Digits Table (1 ~ 6): Refer to **Programs 55-0, 55-1** and **55-2**. The system handles CO line groups differently, according to which modified digits table was assigned in **Program 54**.

7.40 Program 55 Series—LCR Modified Digits Tables

7.41 This program defines six modified digits tables for LCR call handling. Each modified digits table assigns editing steps that include:

- Deleting a pre-defined quantity of digits from the front of the number dialed (**Program 55-0**).
- Adding a pre-defined number to the front of the number dialed (**Program 55-1**).
- Adding a pre-defined number to the end of the number dialed (**Program 55-2**).

7.42 The purpose of this program is to define call handling so the route definition used by LCR is invisible to the station user. The station user handles all calls the same way. The goal is for LCR to remember the dialing peculiarities of each call

route, so the user doesn't need to know.

7.43 Program 55-0—LCR Modified Digits-Delete: Enter the **Quantity of Digits** that should be deleted from the front of the number dialed for each of the six **Table Numbers** in the **Delete Digits Table**. The maximum number is ten. Always make the entry two digits.

7.44 Program 55-1—LCR Modified Digits-Add to Front of Dialed Number: Enter the digits that must be added to the front of the number dialed in the **Add Digits Table**. The maximum quantity of digits is 22, including pauses.

- Length of pause can be indicated by using codes (P1 ~ P8) specified in the **Pause Entry Reference Table**. Each pause takes two digits of memory space.
- Try to allow for the longest wait, e.g., make the pause longer, rather than shorter, to accommodate the length of time a carrier may need to access the service tones, etc.

7.45 Program 55-2—LCR Modified Digits-Add to End of Dialed Number: Enter the digits that must be added to the end of the number dialed in the **Add Digits Table**. The maximum quantity of digits is 22, including pauses.

- Length of pause can be indicated by using codes (P1 ~ P8) specified in the **Pause Entry Reference Table**. Each pause takes two digits of memory space.
- Try to allow for the longest wait, e.g., make the pause longer, rather than shorter, to accommodate the length of time a carrier may need to access the service tones, etc.

7.46 Program 56—LCR Station Group Assignment: The purpose of this program is to assign all defined station ports to one of four LCR Station Groups.

- Station groups are completely independent of one another. Therefore, each station group must be defined separately.
- Software does not automatically assign the highest, all-inclusive routing priority to class 1 stations, making all routes available to class 2, 3 and 4 stations available to class 1 as well.

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- Instead, stations are assigned to independent groups (partitioned). Completely flexible assignment of routing definitions to groups is allowed, with no one group's definition affecting another's. Each group's route definitions are specified to activate separately according to the time schedules set by **Program 53**.

1: Enter the station group number next to the port number.

Strata[®] *DK24/56/96*

RELEASE 1, 2, 3, and 4

SYSTEM RECORD SHEETS

IMPORTANT INITIAL INSTALLATION NOTES:

These minimum installation steps must be carried out for proper system operation.

- 1. Set PCTU or PCTUS jumper plug for BATTERY OPERATION; otherwise, all programmed customer data will be lost on power down.*
- 2. Place PEPU, PIOUS, or PIOUS PCB in highest slot number of KSU.*
- 3. Place all other PCBs in KSU from lowest slot number to highest in the following order:
PCTU or PCTUS (always Slot 00)
PEKU or PDKU (starting at Slot 01)
PESU
PSTU
PCOU
PEMU*
- 4. Run Program 90. Initialize Programs 00 ~ 97, and turn power OFF for five seconds, then turn power back ON.*
- 5. Run Program 92.*
- 6. Enter the hardware configuration with Program 03, exit the programming mode, and turn power OFF for five seconds, then turn power back ON.*

WHEN LATER ADDING KSU PCBs:

- 1. Move PEMU PCBs to a higher slot number to create empty slots for additions.*
- 2. Install new PCBs and reprogram with Program 03 (turn power OFF for five seconds, then turn back ON). Change PEMU station and CO line numbers or reassign stations.*
- 3. Program new features, options, etc. created by new additions.*

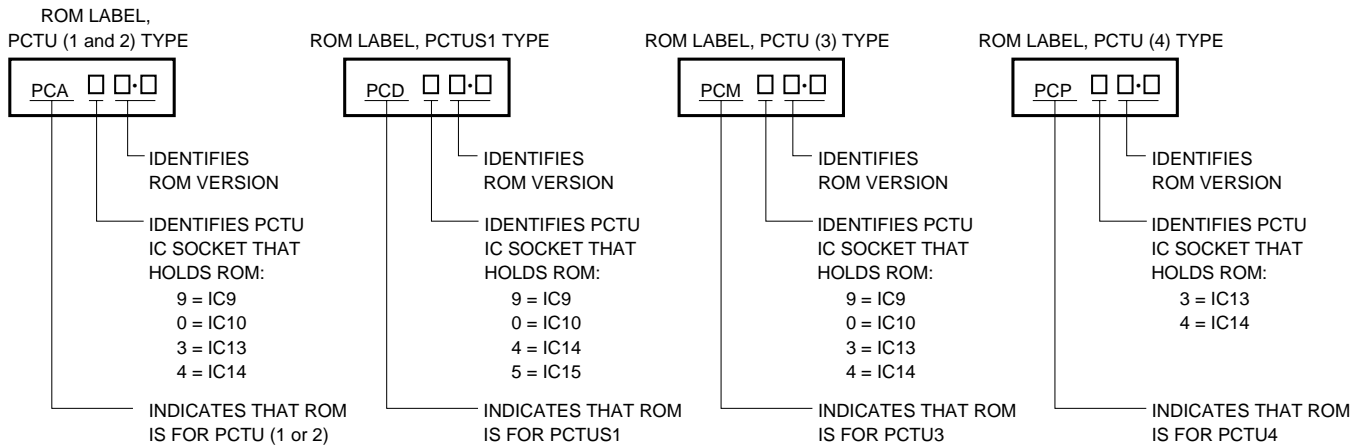
STRATA DK SOFTWARE RELEASES

Software Guide: This reference guide provides updated information regarding software enhancements to the STRATA Digital Key (DK) System.

DK Software Identification: The DK operating software is stored on Read Only Memory (ROM) chips and is identified by ROM Version.

A DK ROM set consist of either two or four ROM chips, which are installed on the common control (PCTU) PCB. There are five PCTU versions: PCTU4 is the **Release 4** version; PCTU3, the **Release 3** version; PCTU2, the **Release 2** version; PCTUS1, the **Release 2** version for DK24 only; and PCTU1 is the first released version. PCTU1 can be upgraded to PCTU2 by changing ROMs supplied in the Toshiba PURR2 upgrade kit. All other PCTU ROMs cannot be interchanged.

The ROM version may be displayed by running **Program 00-0** from the local programming telephone or remote programming terminal. The ROM version is also printed on the label attached to each of the four ROM chips in a set. The last two or three characters on the label (e.g., **1E, 7AJ**) identify the ROM version, as shown below:



IMPORTANT NOTE:

Only PCTU1 and PCTU2 ROMs are interchangeable with each other.

System Record Sheets: The same System Record Sheets are used for the STRATA DK24, DK56, and DK96 models and are updated with each DK software release. Each updated and new record sheet will be dated when released and may be inserted in the original document to replace the outdated record sheet (the record sheets released with the original PCTU1 PCA2K software are dated June 1989).

On the record sheets, the letters “**R2**” note options available with **Release 2** and higher only. The letters “**R3**” note options available with **Release 3** and higher only. The letters “**R4**” notes options available with **Release 4** only.

See the **Release 2, 3, and 4** Software Guides that follow.

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RELEASE 2 (R2) SOFTWARE GUIDE

With the exception of Busy and Group Station LCD Messaging, all items available with **R1** software are available with **R2** software; items listed below are available with **R2** software and above only.

Item Description	*Related Programs	Comments
PESU PCB	<u>03</u> , Code 25 and 26	Station PCB, supports 2 standard telephones, 4 electronic telephones
BGM/MOH separation	<u>10-2</u> , Button/LED 09	Separates music-on-hold and background music; 2 music sources required
HDCB, door lock option	<u>39</u> , Code 72, 73, 74, 75 <u>77-2</u> , Button/LED 4, 8, 12, 16	Allows HDCB, port B, to be optioned as a door lock control; 4 maximum
Release key	<u>39</u> , Code 76	Provides more efficient way of releasing calls (headset or handset)
SMDR, print toll only	<u>60-5</u> , 0, 1, 2, 3, 4	Allows system SMDR to send SMDR data for long distance calls only
Pickup code to selectively pickup CO lines on-hold	None	Provides the call park/page for pickup function for outside call
DISA – same as DISC but allows access to outgoing CO line	<u>60-6</u> = security code Port 99 = COS class <u>78</u> assigns DISA CO lines	DISA code must be entered to call out on CO lines via DISA (optional). 4-minute disconnect timer (reset-dial "0").
DISA security code change from station	<u>30</u> , Button/LED 10	Allows stations designated in programming to change the DISA code
Call forward busy, no answer, busy/no answer	<u>39</u> Codes: 57 = BNA/604 58 = NA/603 59 = BSY/602	Calls forward if station is busy, does not answer, or busy/no answer
FIXED call forward displays on LCD	<u>36</u>	LCD displays that phone has fixed call forward set
2 CO line conference with standard telephone	<u>10-1</u> and <u>15-5</u>	Allows a standard telephone to set up a conference with 2 CO lines
Distinctive ringing for CO/Int to standard telephone	<u>10-2</u> , Button/LED 07 on	Standard telephone ringing pattern is different between intercom and CO line call
"NAME" display on LCD	None	Called LCD displays name/number of calling station
Auto-preference and pooled line seizure operate like STRATA e	None	Changes off-hook and pooled line operation to allow fast release/seize
DSS transfers call when answering another call-like STRATA e	None	CO lines ring transfer automatically when pressing another CO line key

**All program numbers are underlined in this column.*

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RELEASE 2 (R2) SOFTWARE GUIDE (continued)

With the exception of Busy and Group Station LCD Messaging, all items available with R1 software are available with R2 software; items listed below are available with R2 software and above only.

Item Description	*Related Programs	Comments
80/160 DTMF option for VM ID Codes	<u>10-2</u>	Allows Voice Mail auto digits to be sent at 80 or 160 ms
Immediate drop when Toll Restricted digits are recognized	None	Call drops as soon as a restricted number sequence is detected
CO line, incoming ring detector time change: (120/223 ms)	<u>10-1</u> , Button/LED18	Changes CO ringing detect time to eliminate false ring-ins from some COs
ABR overrides <u>Program 41</u>	None	Allows ABR to function with all LCR program configurations
Change RM prompt from DKTS Version 1.0 to DK Connect	None	Changes Remote Maintenance prompt to verify that IMDU connection is made
Message waiting cancel from voice mail port only by: Dial 64 and station number	<u>10-2</u> , Button/LED 4	Deletes auto-cancel of MW LED when VM answers a call from a station that has MW LED from voice mail
Operation change when sending "D" tone to VM	None	Prevents disconnects when VM device does not recognize "D" tone to drop connection
Ring detect time option	<u>10-1</u> , Button/LED 18	Ring detect time INITIALIZES TO NORMAL to eliminate CO line false rings
Two-CO line via access code or LCR	None	Allows two-CO line conference to be set up from telephones via LCR and access codes. Stations must remain in the conference.
DTMF tone return ☒ Manual dialing ☒ Voice mail I.D. auto digits (dial codes 656 and 657) ☒ Speed dialing	<u>10-2</u> , Button/LED 11	Deletes DTMF tone returned to electronic telephones when manual dialing and speed dialing; deletes DTMF tones from callers when the called station forwards the call to voice mail. DTMF digits are still sent out to CO line and voice mail ports.
Call forward backup memory	<u>92-9</u> , Button/LED 03 and 04	Clears call forward backup memory when system is first initialized
Call forward memory save	None	Station call forward information is retained during system power down; when power is returned, stations will forward as before power loss.
CO line reseize guard time option	<u>10-1</u> , Button/LED 02 <u>42-0</u> , Button/LED 01 ~ 36	Allows CO line reseize guard time to be changed from 0.45 seconds to 1.5 seconds to meet central office and CENTREX seize/hookflash timing requirements

**All program numbers are underlined in this column.*

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RELEASE 3 (R3) SOFTWARE GUIDE

All items available with **R1** and **R2** software are available with **R3** software; items listed below are available with **R3** and higher software only.

Item Description	*Related Programs	Comments
Night ringing over selected page zones	<u>77-1</u> , Button/LEDs 10 ~ 13 <u>78</u> , 1 ~ 3	Allows CO lines to ring over selected PIOUS page zones. CO lines can be placed into two groups (tenant 1 and tenant 2), and each group can be assigned to night ring over different PIOUS paging zones.
Digital telephone volume level initialization	<u>92-5</u> , Buttons/LEDs 01 and 05	Sets digital telephone volume levels to their initialized settings: ring, busy override, Intercom (muted) ring, speaker, and BGM.
Digital telephone handset receive volume level set for individual telephones	<u>30</u> , Buttons/LEDs 12 and 13 Initialize data is Level 3.	Allows the initial off-hook volume level to be set individually for each digital telephone. The settable range is from level 2 to 5 (5 = loudest). The digital telephone can be manually adjusted using the volume control for each call over the full range of 1 to 9.
Privacy button	<u>39</u> , Code 53	Allows non-private stations to deny privacy-override to other stations when privacy button is activated. This prevents override calls by pressing common CO line button appearances.
Busy and group station LCD station messaging which is available in R1 , but not R2 , is available in R3	None	<p>Busy station messaging: Allows an LCD message to be sent (live) to a busy LCD station.</p> <p>Group station messaging: Allows an LCD station to set a "called or calling station message" for another station or a group of stations.</p>
"0+" credit card calls that bypass toll restriction but do not allow operator placed calls	<u>43</u> and <u>60-7</u>	Selected stations can be configured in programming to be allowed "0+" dialing which will override toll restriction on selected CO lines or all CO lines. If a station does not dial a programmable number of digits after dialing "0", the call will be disconnected after 10 seconds.
Data Interface Station Hunting	<u>22</u>	Allows data calls to busy data stations to hunt to an idle data station. This program is separate from voice call hunting, Program 33 . Voice and data calls to the same station can hunt to different stations.

**All program numbers are underlined in this column.*

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RELEASE 3 (R3) SOFTWARE GUIDE (continued)

All items available with R1 and R2 software are available with R3 software;
items listed below are available with R3 and higher software only.

Item Description	*Related Programs	Comments
PDKU PCB	<u>03</u> , Code 62 and 64	Station PCB, supports eight Toshiba digital telephones (DKT) or seven DKTs and one DDSS console. Also supports up to seven stand-alone Data Interface Units (PDIU-DS) and DKT Integrated Data Interface Units (PDIU-DI).
Bell Precise Busy Tone cadence is sent from STRATA DK to outside callers that dial busy numbers when calling into DK on TIE, DISC, or DISA CO lines	<u>10-2</u> , Button/LED 05	Allows STRATA DK busy tone cadence to be changed from 0.25 seconds on/off to 0.5 seconds on/off. For busy TIE line or DISC/DISA calls.
Automatic release of Voice Mail ports when outside caller hangs up	<u>15</u> , Code 0	Selected CO lines will detect the Automatic Release (AR) signal (calling party control) if sent from the CO line when the calling party hangs-up on a voice mail call. This prompts "D" tone to be sent to the PSTU or PESU voice mail port causing the voice mail machine to release. AR can be detected between voice mail answer and hookflash to transfer.
Verifiable account codes	<u>70</u> <u>30</u> , Button/LED 14 <u>69</u> , <u>60-4</u> , <u>15-7</u>	Verified Account Code with Toll Restriction class assignments. Up to 300 verifiable account codes (4 ~ 15 digits) can be set in system programming.
Voice mail (VM) to VM call blocking	<u>31</u> , Button/LED 4	Prevents VM ports from call forwarding or hunting to other VM ports during screened or supervised VM transfers.
Switched Data: <ul style="list-style-type: none"> • Simultaneous voice/data over a single wire pair via DKT with an integrated data interface unit (PDIU-DI) • Modem pooling and printer sharing using a stand-alone data interface unit (PDIU-DS) • Data security group 1 ~ 4 	<u>20</u> , Buttons/LEDs 01 ~ 05 <u>39</u> , DATA button, Code 56 DRLS button, Code 54 MODEM button, Code 55 <u>21</u> , <u>22</u> <u>20</u> , Buttons/LEDs 17 ~ 20	Allows digital telephones with DIUs connected to personal computers to make data calls internal to other DKT/DIUs with PC for file transfers, etc. Allows DKTs with DIUs to make external data calls over the public telephone network automatically via modems connected to stand-alone DIUs specially programmed to auto-connect in customer configuration programming.

**All program numbers are underlined in this column.*

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RELEASE 3 (R3) SOFTWARE GUIDE (continued)

All items available with R1 and R2 software are available with R3 software; items listed below are available with R3 and higher software only.

Item Description	*Related Programs	Comments
Emergency number override of verified/forced account code	<u>44A</u> (51 ~ 53)	Allows up to three emergency numbers (911, etc.) to be programmed to bypass the forced (verified or nonverified) account code dialing requirement.
Traveling class of service	<u>44B</u> (1 ~ 4)	This feature allows a toll restriction override code to be assigned to each station class (class 1 ~ 4). When the toll restriction override code is dialed from a telephone, the telephone will assume the class the code is assigned to until the call is complete. The telephone will return to its normal class when the call is complete.
Account Code button	<u>39</u> , Code 50	Flexible button, allows voluntary account codes to be entered anytime without interrupting existing conversations.
Amplified Conference (External)	<u>10-1</u> , Buttons/LEDs 01 ~ 04 <u>10-2</u> , Buttons/LEDs 18 and 19 <u>10-3</u>	Allows up to four customer-supplied amplifiers to be connected to selected system PEKU ports. The amplifiers automatically switch into two CO line (Tandem) and two CO line/station conference calls. The amplifiers increase the transmission volume level that is typically degraded because of added telephone network losses during two CO line calls. Two line DISA and TIE line calls are also amplified.
Flexible BGM connection	<u>19</u> , <u>10-3</u>	Allows alternate BGM source and external page output connection to any slot with a PEKU or PESU installed.
Block Secretary Call Forward to Voice Mail (VM) Ports	31, Button/LED 17	A calling VM port will not ring stations that are set to Call Forward back to the calling VM port. The calling ports will receive busy tone, instead. The called station will ring with Releases 1 and 2.
Enhanced Toll Restriction Dialing Plans for Interchangeable O/C and A/C areas	45-1	Allows interchangeable O/Cs and A/Cs to be programmed for Toll Restriction and LCR in the few areas that use the 1+NNX dialing plan.

**All program numbers are underlined in this column.*

RELEASE 4 (R4) SOFTWARE GUIDE

All items available with **R1** and **R2** and **R3** software are available with **R4** software;
items listed below are available with **R4** and higher software only.

Item Description	*Related Programs	Comments
Door Phone Ring Number Option	<u>77-2</u> /LED 20	Door phones can ring telephones once or five times with Release 4 .
Softkey Feature Prompting	None for basic operation (10-2, Button/LED 17, for Immediate "TRNS" Softkey option)	Any digital telephone with an LCD can use this feature. During calls, feature prompts will appear on the LCD directly above each of the three keys labelled MODE, SCROLL, and PAGE. Users can press these keys to access a variety of useful features, such as Conferencing, Transfer, Automatic Call Back, and more.
Automatic Hold	<u>35</u> Button/LED 18	With this feature station users on a call on a CO line or intercom button can answer another call and place the existing call on hold without having to press the HOLD button.
Call Forward/No Answer Option with Handsfree Answerback	<u>35</u> Buttons/LED 16	Call Forward/No Answer can be eliminated on Handsfree Answerback calls.
Busy Station Transfer/ Busy Station Ringing	<u>35</u> Buttons/LEDs 20 and 19	Transferred calls will always be sent to busy stations and have distinctive LED and tone indications when Busy Station Transfer and Busy Station Ringing are programmed.
User Programmable Feature Buttons	None	Digital and electronic telephone users can now store feature access code sequences, as well as telephone numbers, on their Speed Dial buttons.
DDCB (Digital Door Phone/Lock Control Unit)	<u>77-1</u> , Button/LEDs 16 ~ 20 <u>77-2</u>	Digital telephone circuits associated with Ports 04, 12, 20, and 28 can support door phones and door lock control with the DDCB, which has the same fit/form/function as the HDCB.
SMDR Threshold Time	<u>60-2</u>	SMDR can now be set to begin registering at either 1 second or at 10 seconds.
PSTU Background Music Source Connection	<u>10-2</u> , Buttons/Leds 9 and 10 <u>19</u>	The Background Music Source can now be connected to the PSTU. (Isolation transformer may be required.)

**All program numbers are underlined in this column.*

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RELEASE 4 (R4) SOFTWARE GUIDE (continued)

All items available with **R1** and **R2** and **R3** software are available with **R4** software;
 items listed below are available with **R4** and higher software only.

Item Description	*Related Programs	Comments
Speed Dial Entry Timeout	<u>10-3</u> Button/LED 19	A 1 or 3 minute timeout can be set for for storing Speed Dial numbers.
Voice Mail Port Release Enhancement <i>NOTE: Central Office must send Automatic Release signal for this feature to work.</i>	<u>15-0</u>	If an outside caller hangs up during a voice mail/auto attendant hookflash and dial operation, STRATA DK will sent D Tone to disconnect the voice mail/auto attendant port. A "*" will follow the CO line number on the SMDR report whenever a CO line call is disconnected by an Automatic Release signal from the Central Office.
CO Line Hang Up LCD Display and SMDR Printout <i>NOTE: Central Office must send Automatic Release signal for this feature to work.</i>	<u>15-0</u>	If an outside caller hangs up while talking to a STRATA DK station, the station will receive busy tone and the LCD will display, "CO LINE HANG UP". With earlier software releases, the LCD displays, "BUSY". A "*" will follow the CO line number on the SMDR report whenever a CO line call is disconnected by an Automatic Release signal from the Central Office.
Extended Automatic Busy Redial Busy Tone Detection Time	None	When using Automatic Busy Redial, after dialing, the system will wait for 30 seconds to detect busy tone before alerting the station that the called number is not busy. The system waits 20 seconds with earlier releases.
LCD Password Security with Voice Mail Dialing	None	Digits will not appear on the LCD when station users dial digits (identification codes) while connected to a voice mail port.
PDIU-DS Modem Disconnect Enhancement	<u>20</u> , Button LED 06	The PDIU-DS DTR lead will pulse one second to prompt a modem to disconnect a CO line when a user presses the Data Release (DRLS) button on an outgoing data call.
PDIU-DS Auto Timeout	None	The PDIU-DS will always release automatically if it does not receive data for nine minutes. With Release 3 , LED 02 in Program 20 had to be ON for it to release automatically.
Voluntary Account Code Entry Assurance	None	If an external party hangs up after a station user presses the Account Code button to enter a Voluntary Account Code, the system will still register the code. The code will not be registered with earlier releases.

*All program numbers are underlined in this column.

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PROGRAM NUMBER INDEX

FEATURE OR TOPIC	PROGRAM NO.	FEATURE OR TOPIC	PROGRAM NO.
Account Codes	70, 39, 69, 15, 30, 60	Do Not Disturb	05, 39
Alarm Sensor	39	Do Not Disturb Override	05, 30
All Call Voice Page	05, 10-2, 31, 39	Door Lock Control	39, 77-1, 77-2
Alternate Point Answer	10-1	Door Phones	05, 77-1, 77-2, 79
Amplified Conference (External)	10-2, 10-3	DSS Console Features	03, 28, 29-1 ~ 29-4, 10-2
Automatic Busy Redial	10-1, 16, 30, 39	DSS DKT/EKT	39
Automatic Callback	05, 39, 10-2	DTMF and Dial Pulse Assignments	10-1, 15, 30, 39
■ Automatic Hold	35	DTMF Receiver (CRCU) Operation	03, 12, 15
Automatic Hold Recall	34	DTMF Signal Time, CO lines (80/160 ms)	10-1
Automatic Preference	32	DTMF Signal Time, VM Ports (80/160 ms)	10-2
Automatic Release Hold/VM Port	15	DTMF Tone Return	10-2
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Busy Override	05	Exclusive Hold	10-1
■ Busy Station Transfer/Ringing	35	Executive Override	05, 10-2, 30
Busy Tone Cadence Change	10-2	External Page Interface	10-2, 77-1, 78
Call Blocking (VM Ports)	31	External Zone Paging	05, 77-1
Call Forwarding (all types)	10-2, 36, 39	Fixed Call Forwarding	36, 39
■ Call Forward Blocking with Handsfree	35	Flash Timing	12
Call Pickup	10-1, 15, 39	Flexible Access Code Numbering	05
Call Transfer with Camp-on	10-1	Flexible Button Assignments	38, 39
Camp-on	10-1, 37	Flexible Intercom Numbering	04, 05, 39
Centrex/PBX Compatible	42-0, 42-1 ~ 8	Flexible Line Ringing Assignment	81 ~ 89
Centrex Ringing Repeat	10-1	Flexible PCB Slot Configuration	03
CO/Centrex/PBX Feature Buttons	39, 42-0, 42-1 ~ 8	Forced and Voluntary Account Codes	15, 30, 60, 39
CO Line Access	39, 40, 41	Group Paging	05, 31
CO Line Alpha Identification	93	Handsfree Answerback	17, 31
CO Line Groups	16	Hold/Park Recall Timing	34
CO Line Reseize Guard Time	10-1, 42-0	Immediate Transfer with Soft Key	10-2 ■
CO Line Queuing	05, 16	Initialization (system programs)	90
CO Line Ringing	78, 81 ~ 89	Initialization (system/personal memory)	92
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Credit Card Calls (0 + dialing)	43, 60-7	Least Cost Routing	50 ~ 56
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Delayed Ringing	82, 83, 85, 86, 88, 89	Message Waiting/Flash	12, 35, 39
Digital Telephone	03, 30, 38, 92-5	Microphone Control	30, 39
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Direct Inward System Access (DISA)	15, 10-1, 60, 78	Music-on-Hold	77-1
Direct Station Selection Buttons	29-1 ~ 29-4, 39	Night Pickup Code	05
DISA Code Revision	30	Night Ringing over External Page	15, 77-1, 78
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FEATURE OR TOPIC	PROGRAM NO.	FEATURE OR TOPIC	PROGRAM NO.
Off-hook Call Announce	03, 30, 31	Slot Assignment	03
On-hook Dialing	32	Speakerphone Assignment	30
Outgoing Call Restriction	41	Speed Dial	10-1, 30, 39
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Passwords-Remote Programming	00	Speed Dial Entry Timeout	10-3
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PBX Access Code	42-1 ~ 42-8	Station Class of Service	30, 31, 35
PBX Backup	42-0	Station Hunting (Data Calls)	22
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Privacy Override	10-2, 30, 31	TIE Lines	03, 17
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		Volume Reset (Digital Telephones)	92-9
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TABLE 2-A
PROGRAMS 00 ~ 97 IN NUMERICAL ORDER WITH SECTIONS CROSS-REFERENCED

Program Number	Title <i>(Applicable Sections)</i>	Program Number	Title <i>(Applicable Sections)</i>
00	Software Check/Remote Password Assignments <i>(Basic System)</i>	29-1	DSS Button Assignment, DSS Console 1 <i>(Basic System)</i>
03	Flexible PCB Slot Assignments <i>(Basic System)</i>	29-2	DSS Button Assignment, DSS Console 2 <i>(Basic System)</i>
04	Port/Station Number Assignment <i>(Basic System)</i>	29-3	DSS Button Assignment, DSS Console 3 <i>(Basic System)</i>
05	Flexible Access Code Numbering <i>(Basic System)</i>	29-4	DSS Button Assignment, DSS Console 4 <i>(Basic System)</i>
10-1	System Assignments, Part One of Two <i>(Basic System)</i>	30	Station Class of Service <i>(Basic System)</i>
10-2	System Assignments, Part Two of Two <i>(Basic System)</i>	31	Station Class of Service <i>(Basic System)</i>
10-3	Amplified Conference (External) <i>(Basic System)</i>	32	Automatic Preference <i>(Basic System)</i>
12	System Assignments – Basic Timing <i>(Basic System)</i>	33	Station Hunting (Voice Calls) <i>(Basic System)</i>
13	Defining the Message Center <i>(Basic System)</i>	34	Hold Recall Timing <i>(Basic System)</i>
15	Assigning DP/DTMF, Tenant Service to Individual CO Lines <i>(Basic System)</i>	35	Station Class of Service <i>(Basic System)</i>
16	Assigning CO Line Groups (Dial 9 or 81 ~ 88) <i>(Basic System)</i>	36	Fixed Call Forward <i>(Basic System)</i>
17	TIE Line Page/Handsfree Answerback <i>(Basic System)</i>	37	Ring Transfer (Camp-on) Recall Time <i>(Basic System)</i>
19	Alternate Background Music (BGM) Source Slot Assignment <i>(Basic System)</i>	38	Electronic and Digital Telephone Buttonstrip Type <i>(Basic System)</i>
20	Data Interface Unit (DIU: PDIU-DI and PDIU-DS) Configuration <i>(Basic System)</i>	39	Flexible Buttonstrip Assignment <i>(Basic System)</i>
21	Modem Pool Port Assignments <i>(Basic System)</i>	40	Station CO Line Access <i>(Basic System)</i>
22	Station Hunting (Data Calls) <i>(Basic System)</i>	41	Station Outgoing Call Restriction <i>(Basic System)</i>
28	DSS Console/Attendant Telephone Assignments <i>(Basic System)</i>	42-0	CO Line to PBX Connection <i>(Basic System)</i>
		42-1~8	PBX Access Code <i>(Basic System)</i>
		43	0+ Credit Card Dialing Option <i>(Basic System)</i>

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**TABLE 2-A
PROGRAMS 00 ~ 97 IN NUMERICAL ORDER WITH SECTIONS CROSS-REFERENCED
(continued)**

Program Number	Title (Applicable Sections)	Program Number	Title (Applicable Sections)
44A	Emergency Bypass of Verified Account Codes (Basic System)	50-31~35	Least Cost Routing Special Codes (Least Cost Routing)
44B	Toll Restriction Traveling Class Override Codes (Toll Restriction)	50-4	Least Cost Routing Long Distance Information Route Plan (Least Cost Routing)
45-1	Toll Restriction Dial Plan (Toll Restriction)	50-5	Least Cost Routing Call Route Plan Number (Least Cost Routing)
45-2	Toll Restriction Disable (Toll Restriction)	50-6	Least Cost Routing Dial Zero Timeout (Least Cost Routing)
45-3~6	Equal Access/Special Common Carrier Numbers and Authorization Code Digit Length (Toll Restriction)	51	Least Cost Routing Area Codes (Least Cost Routing)
45-8~9	Toll Restriction Override Code (Toll Restriction)	52	Least Cost Routing Office Code Exceptions for Specified Area Code (Least Cost Routing)
46-2~4	Toll Restriction Allowed/Denied Area Codes Assigned by Class (Toll Restriction)	53	Least Cost Routing Schedule Assignments (Least Cost Routing)
46-6~8	Toll Restriction Allowed/Denied Office Codes Assigned by Class (Toll Restriction)	54	Least Cost Routing Route Definition (Least Cost Routing)
46-10	Toll Restriction Class 1 Parameters (Toll Restriction)	55-0	Least Cost Routing Modified Digits—Delete (Least Cost Routing)
46-20	Toll Restriction Class 2 Parameters (Toll Restriction)	55-1~2	Least Cost Routing Modified Digits—Add (Least Cost Routing)
46-30	Toll Restriction Class 3 Parameters (Toll Restriction)	56	Least Cost Routing Station Group Assignments (Least Cost Routing)
46-40	Toll Restriction Class 4 Parameters (Toll Restriction)	60	Station Message Detail Recording Output/Account Code Digit Length (Basic System)
47	Toll Restriction Exception Office Codes Assigned by Area Code (Toll Restriction)	69	Verified Account Codes (Basic System)
48	Station Toll Restriction Classification (Toll Restriction)	70	Verified Account Code Toll Restriction Assignments (Basic System)
50-1	Least Cost Routing Parameters (Least Cost Routing)	77-1	Doorphone Selections (Basic System)
50-2	Least Cost Routing Home Area Code (Least Cost Routing)	77-2	Doorphone Busy Signal Assignments (Basic System)

TABLE 2-A
PROGRAMS 00 ~ 97 IN NUMERICAL ORDER WITH SECTIONS CROSS-REFERENCED
(continued)

Program Number	Title <i>(Applicable Sections)</i>	Program Number	Title <i>(Applicable Sections)</i>
	<i>(Basic System)</i>	88	NIGHT DELAY1 Ringing <i>(Basic System)</i>
79	Door Phone Ringing <i>(Basic System)</i>	89	NIGHT DELAY2 Ringing <i>(Basic System)</i>
80	Electronic and Digital Telephone Ringing Tones <i>(Basic System)</i>	90	Initializing Program 00~89 <i>(Basic System)</i>
81	DAY IMMEDIATE Ringing <i>(Basic System)</i>	92	Initializing Speed Dial Numbers, VM ID Codes, Character Message Memory, Timed Reminder, Digital Telephone Volume Levels, and CO Line Identifications <i>(Basic System)</i>
82	DAY DELAY1 Ringing <i>(Basic System)</i>	93	CO Line Identification <i>(Basic System)</i>
83	DAY DELAY2 Ringing <i>(Basic System)</i>	97	Station Message Detail Recording Data Printout Options <i>(Basic System)</i>
84	DAY2 IMMEDIATE Ringing <i>(Basic System)</i>		
85	DAY2 DELAY1 Ringing <i>(Basic System)</i>		
86	DAY2 DELAY2 Ringing <i>(Basic System)</i>		
87	NIGHT IMMEDIATE Ringing <i>(Basic System)</i>		

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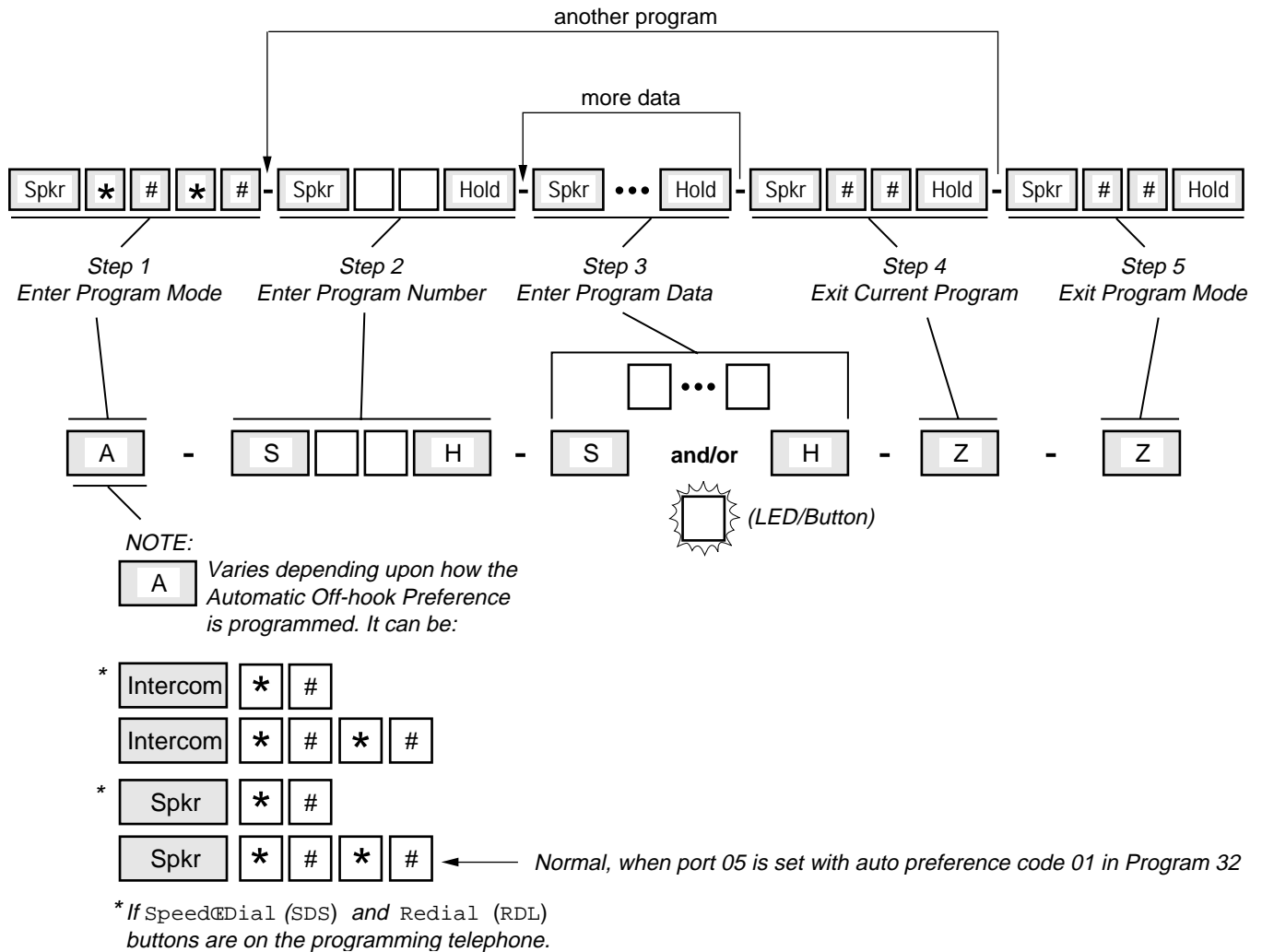


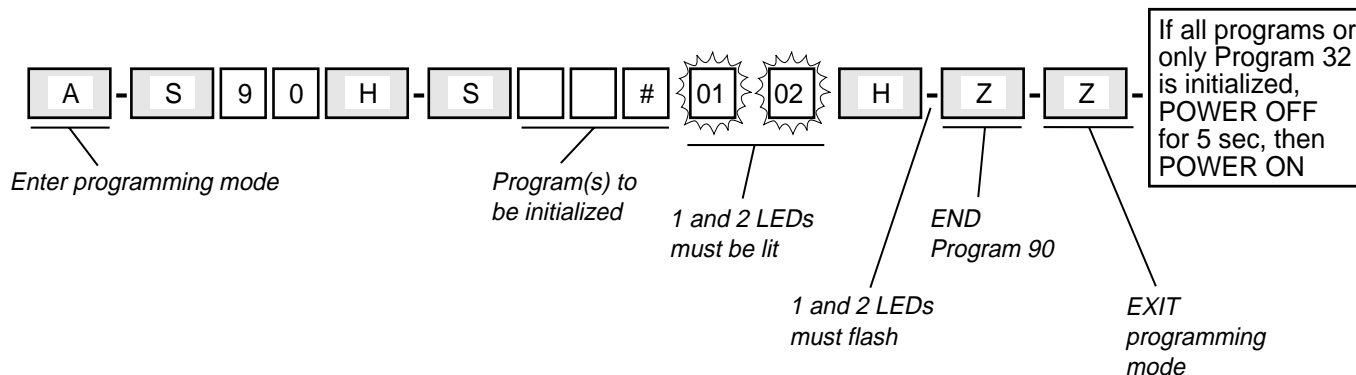
FIGURE 2-2-PROGRAMMING BUTTON SEQUENCE OVERVIEW

The System Record contains programming forms for **Programs 00 ~ 97**. A System Record should be filled out for each system installed as detailed in Chapters 1 and 2.

Each programming form is supplemented with a guide for entering data from the form. The guide illustrates the key sequence a programmer must press, with the exception of sequences common to all programs, e.g., entering programming mode (A), exiting current program (Z), and exiting programming mode (Z). To save space, these common sequences are coded, as illustrated in **Figure 2-2**. The **Spkr (SPEAKER)** and **Hold (HOLD)** buttons are also coded "S" and "H" to save space.

NOTE: **Programs 90, 92, and 03** are out of order and placed in front purposely because they must always be completed first, and in this order. Upon completing these steps, begin with **Program 00**.

**INITIALIZATION PROGRAM 90
INITIALIZING PROGRAMS 00 ~ 97**



IMPORTANT

Initialize Programs 00 ~ 97 every time :

- A new system is installed
- To bring a system's programming back to the default setting.

Specify the range as follows:

0 0 * 9 7

To initialize one program at a time, just enter the individual program number, then #.

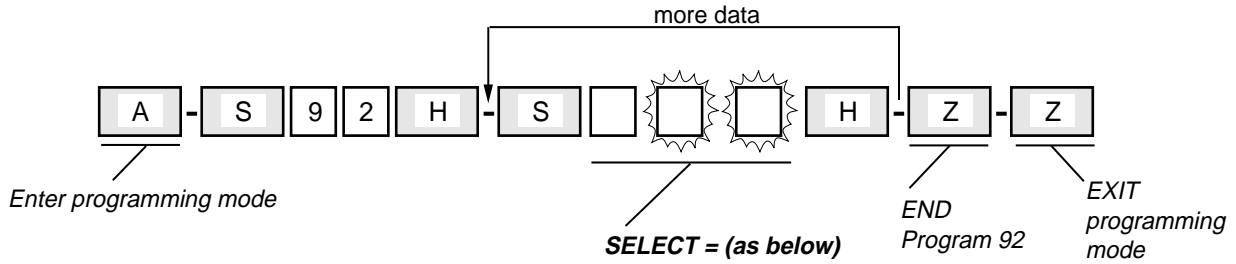
NOTES:

1. Always complete **Program 90** at new system installs, before programming anything else. Skipping this step may cause erratic system behavior.
2. Follow instructions in Table 1-C (Section **400-096-301**) to clear this data.
3. When **Program 90** is run, it will initialize any program or range of Programs without cycling system power. System power may be cycled to cause **Program 32** to initialize the programming station with Intercom autopreference. This allows the programming station to enter the Programming Mode using the **Spkr** (**SPKR** button (A) = **SPKR * # * # HOLD**).

WARNING!

Running this program will erase customer data.

INITIALIZATION PROGRAM 92
INITIALIZING SPEED DIAL NUMBERS, ID CODES CHARACTER MESSAGE MEMORY, TIMED REMINDERS,
DIGITAL TELEPHONE VOLUME, AND CALL FORWARD BACKUP RAM



- | | | | | | |
|---|--|----|---|---|--|
| 1 | 01 | 03 | Clears Station Speed Dial, Voice Mail ID Codes, and LCD memos assigned to Station Speed Dial numbers. | | |
| 2 | 01 | 04 | Clears System Speed Dial and LCD memos assigned to System Speed Dial numbers. | | |
| 3 | 02 | 03 | Clears Character Message Memory (Station and System) and User Name/Number Display. | | |
| 4 | 02 | 04 | Clears Timed Reminders. | | |
| 5 | 01 | 05 | Resets digital telephone volume levels to initialized settings, specifically, speaker volume levels for Intercom Tone/BGM, busy override (muted ring), and ringing volume to approximately mid-range on all DKTs (Release 3 and higher). ⁴ | | |
| 9 | 03 | 04 | <table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="text-align: center;">H</td> <td>Power OFF
5 seconds;
then Power ON</td> </tr> </table> ⁵ Clears Call Forward Memory (all stations, Release 2 and higher). | H | Power OFF
5 seconds;
then Power ON |
| H | Power OFF
5 seconds;
then Power ON | | | | |

NOTES:

1. **IMPORTANT:** It is mandatory to complete all parts of **Program 92** at every new system install. If **Program 92** is not completed certain feature operations may cause erratic system behavior.
2. Use the instructions in Table 1-D (Section **400-096-301**) to clear this data.
3. **Program 92-9** does not affect Fixed Call Forward settings.
4. **Program 92-5** does not affect digital telephone handset receiver volume levels. To set off-hook handset receiver volume levels individually for each digital telephone, see **Program 30**, LEDs 12 and 13.
5. Power OFF and ON is required to clear telephone LCD Call Forward Displays and Call Forward button LEDs. Call Forward memory is cleared when **Program 92-9** is run, even if system power is not cycled.

WARNING!
Running this program will erase customer data.

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PROGRAM 03
FLEXIBLE PCB SLOT ASSIGNMENTS



To Store Data ¹⁰
 When Complete:
 POWER OFF
 for 5 sec., then
 POWER ON

SELECT = Slot Number
 See Note 6.

CARD = PCB Code
 See Reference Table

DK24/56

SLOT NO.	00	01 ⁵	02	03	04	05	06	07	08
PCB CODE									
PCB TYPE	PCTU ⁷	PEKU or PDKU ¹¹							
OPTIONS									
STA. PORT #s	—	00-07							
CO/TIE LINE#s	—								

NOTES:
 DK24, Slots 00 ~ 06 only
 DK56, Slots 00 ~ 08 only
 PCTU1, Ports 00 ~ 23
 PCTU(2), Ports 00 ~ 95
 PCTU(3), Ports 00 ~ 95
 PCTU(4), Ports 00 ~ 95

DK96
 (Top Shelf)

SLOT NO.	01	02	03	04	05	06	07	08
PCB CODE								
PCB TYPE	PEKU or PDKU ¹¹							
OPTIONS								
STA. PORT #s	00-07							
CO/TIE LINE#s								

PCB CODE
 Reference Table

PCB	CODE	PORTS/TYPE
PCTU ⁷	91	NONE
PCTU ⁷ CRCU4	92	NONE
PCTU ⁷ CRCU8	93	NONE
PIOU(S)/ PEPU	41	NONE
PDKU	61	8/STA.
PDKU w/OCA, DIU	62	8/STA.
PDKU w/DSS/ OCA/DIU	64	8/STA.
PEKU	21	8/STA.
PEKU EOCU	22	8/STA.
PEKU w/DSS	23	8/STA.
PEKU EOCU w/DSS	24	8/STA.
PESU	25	Note 6
PESU EOCU	26	Note 6
PSTU	31	8/STA.
PCOU	11	4/CO
PEMU	13	4/CO 4/STA.
NONE	00	NONE

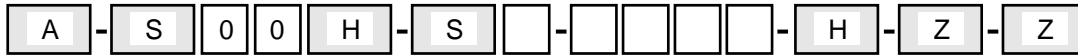
DK96
 (Bottom Shelf)

SLOT NO.	00	09	10	11 ⁹	12 ⁹	13 ⁹	14 ⁹
PCB CODE							
PCB TYPE	PCTU ⁸						
OPTIONS							
STA. PORT #s	—						
CO/TIE LINE#s	—						

NOTES:

- See Table 1-E (Section 400-096-301) to input the data from this record sheet.
- A PCTU or PCTUS (PCB Codes 91, 92 or 93) must be installed in Slot 00 (labeled PCTU).
- The programming station (205) must be connected to Circuit 6 of a PDKU, PEKU, or PESU in Slot 01.
- Initialized data reads Slot 00 = 91, Slot 01 = 21, Slots 02 ~ 14 = 00.
- System PCB slots are labeled PCTU, S01 ~ S14. For programming, these tables label the same slots 00 (PCTU) ~ 14.
- PESU circuits: 1 and 2, standard telephones; 3 and 4, not used; 5 ~ 8, electronic telephones. Total 8 station ports used in software; available with **Release 2** and higher.
- PCTU1, PCTU2, PCTU3, PCTU4 (PCTUS in DK24 only).
- PCTU1, PCTU2, PCTU3, PCTU4 only.
- OCA or PDIU-DI/PDIU-DS is not available with slots 11 ~ 14.
- System Power must **always** be cycled after running **Program 03**.
- PCTU3 or PCTU4 is required when a PDKU is installed.

PROGRAM 00
SOFTWARE CHECK/REMOTE MAINTENANCE SECURITY CODE ASSIGNMENTS



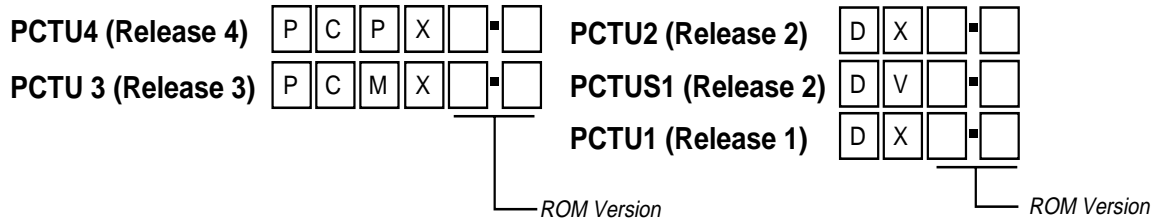
SELECT = Select Code
 Enter 0 to check software version.
 Enter 1 to change 1st level password.
 Enter 2 to change 2nd level password.
 Enter 8 to check software sum.
 Enter 9 to check counter.

Password Codes
 Enter the 4-digit password.
 See Note 3.

Select Code	Item	Password or S/W Check Codes
0	ROM Version	= [] [] [] [] [] See Note 4.
1	1st Level Password	= [] [] [] []
2	2nd Level Password	= [] [] [] []
8	Software RAM Checksum	= [] [] [] [] [] [] [] [] See Note 5.
9	Power Cycle Counter	= [] [] [] [] [] See Note 5.

NOTES:

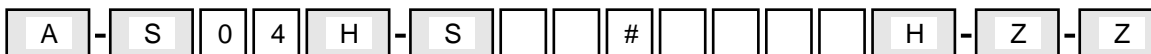
- See instructions in Table 1-F (Section 400-096-301) to program the system with this information.
- Initialized passwords are 0000.
- The LCD responds as follows, when a selection is made:
 0 Version =
 1 Password =
 2 Password =
 8 Sum =
 9 Counter =
- This selection is not programmable. It identifies the system's software version as follows:



- These selections are not programmable. They are for factory test purposes only. The Checksum and Counter vary as customer data is entered.

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PROGRAM 04
PORT/STATION NUMBER ASSIGNMENT



SELECT = Port Number

INT = Station Number

Slot	S01: PDKU/PEKU/PESU ¹⁵				S01: PDKU/PEKU/PESU ¹⁵											
Port	00	01	02 ¹⁰	03	04 ⁷	05 ⁶	06	07 ¹⁰	08	09 ¹²	10 ¹²	11	12 ⁷	13	14	15
INT (Sta No.)																
	16	17 ¹²	18 ¹²	19	20 ⁷	21	22	23 ¹³	24	25 ¹²	26 ¹²	27	28 ⁷	29	30	31
	32	33 ¹²	34 ¹²	35	36	37	38	39	40	41	42	43	44	45	46	47
	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95

NOTES:

1. Follow instructions in Table 1-G (Section **400-096-301**) to enter this data.
2. If a station number is assigned, and "ERROR" displays on the LCD, the station number has already been assigned to another port.
3. Station numbers default to 200 ~ 295. New station number assignments will not activate on individual station LCDs until the handset goes on-/off-hook.
4. If an assigned station number conflicts with a default feature access code, no error message is issued. The station's LCD reflects the conflicting number. When another station attempts to dial the number, the station will not ring. Instead, the feature activates.
5. If station numbers that conflict with feature access codes must be assigned, use **Program 05** to change the access codes first.
6. The station connected to Port 05 in Slot 01 has exclusive ability to program the system, this station must be in Slot 01.
7. PDKU/PEKU Ports 04, 12, 20 and 28 can support Door Phone Control Units (DDCBs or HDCBs). See **Program 77-1**.
8. Door phone and modem (IMDU) station numbers are pre-assigned as follows:
 - IMDU modem number: • Modem = 19
 - Door phone numbers: • Port 04 = 151, 152, 153; Port 12 = 154, 155, 156
 - Port 20 = 157, 158, 159; Port 28 = 161, 162, 163
9. To insert a blank, press LED 01; range programming is possible.
10. PEKU Circuit 3 or PESU Circuit 8 is the optional BGM connecting port circuit. This BGM PCB must be installed in Slot 01 in **Release 2**, but can be in any slot with **Release 3 and 4** (see **Program 19**). With **Release 4**, optional BGM can be connected to PSTU Circuit 3 or 8. DIUs cannot be connected to Circuit 8 of a PDKU1A, but can be connected to all circuits on a PDKU2A.
11. Port 99 = DISA COS port (**Release 2** and higher); DISA Port 99 is normally used in **Programs 30, 40, 41, and 48**.
12. May be used to connect two-CO line external conference amplifier (customer-supplied) to PEKU PCB (see **Program 10-3**).
13. Last port available when using PCTUS1 control PCB.
14. PDKU requires **Release 3** (PCTU3) and higher.
15. If a PESU is installed in Slot 01, the programming station (205) will be available, but Station 200 will have to be a standard telephone and will not be able to set the system time and date. The PESU does not support a DSS console.

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PROGRAM 05
FLEXIBLE ACCESS CODE NUMBERING



SELECT = Access Code 1-9
from the Table Below

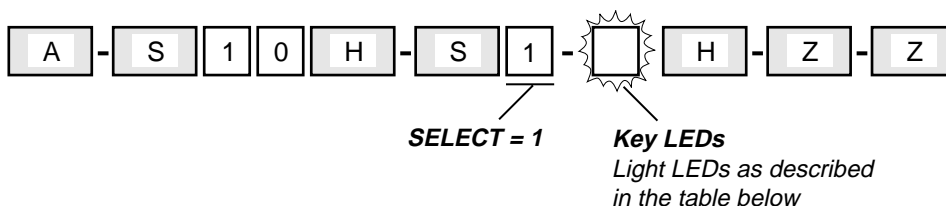
SPECIAL DIAL = New Access Codes
See Note 6 Below.

Access Code	Features Affected (N/A = Not Affected)	New Access Codes
0	Unused	
1	Voice First/Tone First (N/A)(1) Door Phones (151-163) IMDU Access (19)	Station LCD Messages (10-19) Station Speed Dial Set (10 ~ 49)
2	Busy Override (N/A) (2) Do Not Disturb Override (N/A) (2)	Station Numbers N/A 200 ~ 295 Off-hook Call Announce (N/A) (2)
3	Executive Override (N/A) (3) All Call Voice Page (30) All Call Voice Page with External Spkrs (39)	External Page (35-38) Group Page (Internal) (31-34)
4	Automatic Callback (N/A) (4) CO Line Queuing (N/A) (4) Station Number Display (401) Port Number Display (402) Hold/Park (41) Hold/Park Pickup (42) Automatic Busy Redial (44) Automatic Busy Redial Cancel (44) Message Waiting Answer (408)	Flash (45) Account Code Input (46) T.R. Override/T. Class Code Input (47) BGM Over Stations ON (481) BGM Over Stations OFF (480) BGM Over External Speakers ON (491) BGM Over External Speakers OFF (490) Cancel Message Waiting at Station (No Msg, MESSAGE, MW key) (409)
5	(R3 and higher) Voluntary Account Code (*50) (R2 and higher) Call Pickup Station (5+Station No.), Ringing CO Line (59), Telephone Page (530) (R2 and higher) Directed Pickup of CO Line on Hold (57□□, □□ = 01 ~ 36), External Page (531, 535 ~ 538)	
6	Call Forward (601, R2 and higher: 602, 603, 604) Timed Reminder (605-609) M/W for Voice Mail ON (63+Station No.) M/W for Voice Mail OFF (64+Station No.) Voice Mail ID Code Set (Call Fwd, 656) Voice Mail ID Code Set (Ans. MW, 657) LCD Message Set (68) (R3 and higher) DKT Mute Ring Adjust (6101) (R3 and higher) DKT Ring Level Adjust (6102)	Date Set (651) Time Set (652) Weekday Set (653) T.R. Override Code Change (654, 655) System Speed Dial/LCD Messages (60-99) (R2 and higher) LCD User Name (621-Set, 620-Reset) (R2 and higher) DISA Security Code Change (658) (R3 and higher) Verified Account Code Change (659) (R3 and higher) Traveling Class Code 1 ~ 4 Change (622 ~ 625)
7	CO Outgoing Calls (701-736) Message Waiting Set/Cancel (N/A) (7)/I (77)	
8	CO Group Outgoing Calls (81 ~ 88)	
9	Least Cost Routing or CO Group (9)	

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Be sure access code changes do not conflict with existing access code or station numbering schemes. Refer to **Program 04** – Port/Station Number Assignment.
3. To insert a blank, press programming LED/Button 01.
4. If access codes are being changed to a number that is currently assigned, change the currently assigned code to an unused code first. In the initialized state, the only unused code is zero (0).
5. The initialized station number sequence of 200 ~ 295 may not be globally changed through **Program 05**. Make changes through **Program 04**.
6. Access codes can be replaced by 2 digits. Standard Access codes are shown for reference.

PROGRAM 10-1
SYSTEM ASSIGNMENTS, PART 1 OF 2



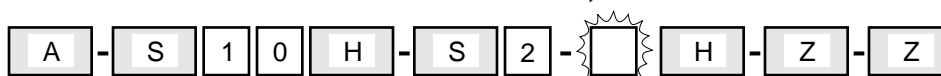
Key/LED	X	LED On	LED Off
20	2	Two CO Conference/Allowed ⁷	Not Allowed
19	2	Conference/Allowed	Not Allowed
(R2) 18	2	Ring Detect Time - Normal ⁶	Ring Detect Time – Short Rings
17		Intercom Volume PAD (-8 dB)	No Intercom PAD
16		–	–
15		–	–
14		–	–
13		–	–
12		ABR Cycles/10 times	15 times
11		ABR Redial time/30 sec.	1 min.
10		System Speed Dial Override, Toll Restriction	Restricted
09	2	Exclusive Hold/Allowed	Not Allowed
08	2	Alternate Point Answer	Transfer Privacy
07 ⁴	2	Ring Transfer of CO Lines Allowed	Not Allowed
06 ⁵		CO Repeat Ringing	Standard Ring
05		Incoming Call Abandon/8 sec.	6 sec.
04 ³		CO DTMF Signal Time/160 msec.	80 msec. ³
03		DP Make Ratio/33%	40%
(R2) 02 ⁸		0.45 or 1.5 sec. per Program 42-0	CO line re-seize guard time 0.45
01		Tone First (from DKTs and EKTs)	Voice First (DKTs from EKTs)

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data lights LEDs 07, 08, 09, 18, 19 and 20.
3. LED 04 DTMF Signal Time applies to manual and speed dial tones sent out of the system via CO or TIE lines. This applies when dialing from any Toshiba telephone, including the 2000-series Digital Telephone. LED 04 **does not** apply to Call Forward or Voice Mail ID DTMF tones sent to voice mail ports. (See **Program 10-2**, LED 06, for tones sent to Voice Mail ports.)
4. If Ring Transfer is allowed, set Ring Transfer Recall time in **Program 37**; if ring transfer is not allowed (LED 07 off), the station will recall immediately if transfer is attempted.
5. Standard ring pattern is 1 sec. on, 3 sec. off.
6. **Release 1** software detects short ring signals only.
7. Two CO conference must be allowed for DISA operation.
8. CO line guard time is the time interval the system requires to release a CO line and re-seize it. If LED 02 is off, all lines are set with 0.45 second guard time; if LED is on, guard time is 0.45 or 1.5 seconds per **Program 42-0**.

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PROGRAM 10-2
SYSTEM ASSIGNMENTS, PART 2 OF 2



SELECT = 2

Key LEDs

Light LEDs as defined by the table below.

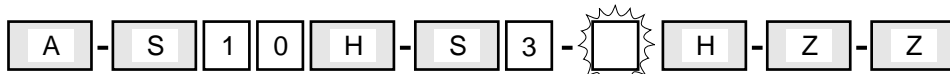
ALL LEDs with an "X" should be lit when you finish

BUTTON/LED	X	LED On	LED Off
20		—	—
19 ¹¹		Station External Amp Conference	No External Amplifier Connected
18		Two CO Line Conference	No Two CO Line Conference
(R4) 17		"TRNS" Soft Key—Immediate	"TRNS" Soft Key—Normal
16	2	Executive Override Warning Tone/ON	Executive Override Warning Tone/OFF
15 ⁷	2	External Page included with All Call Page	Not Included
14	2	Privacy Override Warning Tone/ON	Privacy Override Warning Tone/OFF
13		Send Auto Callback Camp-on Tone ³	No Callback Tone
12		CO Line 3 min Beep Tone	No Beep Tone
(R2) 11		No DTMF Tone Return ⁸	DTMF Tone Return
(R2, R4) 10 ⁴		BGM connected to PSTU ¹² /PESU, Circuit 8 ¹⁰	EKT connected to PESU, CKT 8
(R2, R4) 09 ⁴		BGM connected to PSTU ¹² /PEKU, Circuit 3 ¹⁰	EKT connected to PEKU, CKT 3
08		Display Dialed Number/1min.	Display Dialed Number/15 sec.
(R2) 07 ⁶		Standard Tel. CO Ring per Prog. 10-1, LED 06	Standard Tel. CO Ring Distinctive
(R2) 06 ⁵		VM ID Code DTMF Signal Time 80 ms	160 ms
(R3) 05		TIE/DISA Busy Tone, 0.5 second cadence ⁹	TIE/DISA Busy Tone, 0.25 second cadence
(R2) 04		MW cancel from VM; dial 6 4 & Station No.	MW cancel from VM: Automatic
03		Ringing Modes/3	Ringing Modes/2
02	2	Hunt/C.F. override from DSS console's phone	Hunt/C.F. override from DSS console
01		Tone First (from DSS Console)	Voice First (from DSS Console)

NOTES:

- For more information, see the instructions preceding the record sheets.
- Initialized data lights LEDs 02, 14, 15 and 16.
- Called party receives notification tone when calling party activates ACB.
- BGM connected to the PSTU, PEKU, or PESU will be sent to electronic and digital telephone speakers and external page (optional).
- VM ID code DTMF signal time is fixed at 160 ms for **Release 1** software. With **Release 2** and above, DTMF tones to VM ports can be 80 ms or 160 ms. Effective for all Toshiba telephones, including 2000-series Digital Telephones.
- The ring pattern for standard telephone, distinctive ring on incoming CO calls is: 0.2 sec. on/0.4 sec. off, 0.2 sec. on/3.4 sec. off; intercom ring is always 1 sec. on, 3 sec. off. This does not apply to VM Ports (**Program 31**, LED 17 on) which are always standard ring.
- External speakers and all electronic and digital telephones are paged by dialing: **Intercom (INT) 3 9**. The **AllCallPage (AC)** button is used to page all digital and electronic telephones only; external speakers are not included when using the button.
- Deletes DTMF tones returned to digital and electronic telephones when dialing from dialpad or speed dialing; also deletes auto dial digits from callers that are call forwarded to voice mail. This does not affect the actual DTMF tones sent out to the CO or voice mail.
- 0.5 second cadence, Bell Standard Busy Tone, should be enabled so outside callers are not confused by STRATA 0.25 second busy tone when calling busy number on DISA and TIE line calls
- PESU/PEKU must be in SLOT 01 if using **Release 2** software; PESU/PEKU can be in any universal slot assigned in **Program 19-1** if using **Release 3** and higher software.
- Important:** LED 19 should be OFF unless external amplifiers are used for two-CO line/station conference (see **Program 10-3**). If LED 19 is ON, the station may be unbalanced and receive HUM if external amplifier with Auto-Gain-Control is not connected. It is recommended to test conference with LED 19 ON; if there is no HUM noise, Keep LED 19 ON.
- With **Release 4**, the BGM can connect to PSTU Circuit 3 or 8.

PROGRAM 10-3
SYSTEM ASSIGNMENTS, PART 3 OF 3 (RELEASE 3 AND HIGHER)



SELECT = 3

Key LEDs

Light LEDs as defined by the table below.

ALL LEDs with an "X" should be lit when you finish.

KEY/LED	X	LED ON	LED OFF
20			
(R4) 19		Speed Dial Entry Timeout—3 Minutes	Speed Dial Entry Timeout—1 Minute
18			
17			
16			
15			
14			
13			
12			
11			
10			
09			
08			
07			
06			
05			
(R3) 04		PEKU Ports 33, 34 — Amp. 4 Connected	Ports 33, 34 — Stations Connected
(R3) 03		PEKU Ports 25, 26 — Amp. 3 Connected	Ports 25, 26 — Stations Connected
(R3) 02		PEKU Ports 17, 18 — Amp. 2 Connected	Ports 17, 18 — Stations Connected
(R3) 01		PEKU Ports 09, 10 — Amp. 1 Connected	Ports 09, 10 — Stations Connected

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data: all LEDs OFF.
3. See Section **400-096-208**, for connecting up to four two-way amplifiers for use on tandem, DISA, and conference telephone calls.
4. **Important:** Only enable the PEKU ports that are actually connected to amplifiers.
5. Amplifiers are switched into two-CO line calls automatically, one amplifier for each call, starting from the lowest ports enabled to the highest. Skipping ports is allowed. Two-CO line calls established after all amplifiers are in use will not be amplified.
6. See **Program 10-2**, LED 18 and 19; **Program 10-1**, LEDs 19 and 20; and **Program 15-5** for more information regarding two-CO line conference/tandem.

PROGRAM 12
SYSTEM ASSIGNMENTS - BASIC TIMING



SELECT = 3~9
 Enter program code,
 3 ~ 9, from table below.

SELECT CODE = Enter required
 code for the time listed in the
 table below. See Note 3.

Program Code	Function	Time	Required Code
3 ⁶	Pause Timing (Speed Dial)	<div style="display: inline-block; border: 1px solid black; padding: 2px;">1</div> 1.5 sec. <div style="display: inline-block; border: 1px solid black; padding: 2px;">2</div> 3.0 sec.	
4 ⁶	Flash Timing ⁴	<div style="display: inline-block; border: 1px solid black; padding: 2px;">1</div> 0.5 sec. <div style="display: inline-block; border: 1px solid black; padding: 2px;">2</div> 2.0 sec. (R2) <div style="display: inline-block; border: 1px solid black; padding: 2px;">4</div> 0.2 sec. ⁵	
5	Pause After Flash (Voice Path Delay)	<div style="display: inline-block; border: 1px solid black; padding: 2px;">0</div> no pause <div style="display: inline-block; border: 1px solid black; padding: 2px;">1</div> 1.5 sec. <div style="display: inline-block; border: 1px solid black; padding: 2px;">2</div> 3 sec.	
9	CRCU Inter-digital Release Time (Standard Phone)	<div style="display: inline-block; border: 1px solid black; padding: 2px;">1</div> 1 sec. through <div style="display: inline-block; border: 1px solid black; padding: 2px;">9</div> 9 sec.	

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data programs timing as follows: Code 3 = 1, Code 4 = 2, Code 5 = 0, and Code 9 = 4.
3. When programming Code 9, the LCD responds with *LINE TIME =* instead of *SELECT CODE =*.
4. The duration of time the PCOU circuit opens Tip & Ring when the **Flash (FLASH)** or **MW/FL** button is pressed, or hookflash code **Cnf/Trn (CONF/TRANS)4 5** is dialed.
5. This timing is not used in the United States.
6. This timing applies to voice calls originated from telephones and data calls originated by system Data Interface Units.

PROGRAM 13
DEFINING THE MESSAGE CENTER

A	-	S	1	3	H	-	S	1	-			H	-	Z	-	Z
---	---	---	---	---	---	---	---	---	---	--	--	---	---	---	---	---

SELECT = 1

PORT = Port Number
Enter the port number of the station to be defined as the Message Center.

**Port
Number**

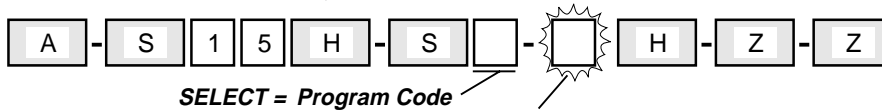
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NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Any electronic or digital telephone may receive (and store) up to 3 message waiting indications from any other electronic or digital telephone. A fourth message waiting indication may be set by the Message Center electronic or digital telephone only.
3. The Message Center is allowed to perform "Message Waiting," even if disallowed on all other stations.
4. Initialized data = no port assigned.
5. The message center feature should be assigned to the customer's main answering position: a station or the lowest port (in VM group) of the customer's voice mail device (see **Program 31** for VM group port assignment), whichever the customer specifies.

PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM RECORDS
SECTION 400-096-302
SEPTEMBER 1992

PROGRAM 15
ASSIGNING DP/DTMF, TENANT SERVICE TO INDIVIDUAL CO LINES



Key LEDs = CO Line

Specify CO lines by setting LED keys, as defined by the table below.
 All LEDs with an "X" should be lit when finished.

On-hook

Program Code	Program	LED Status		CO Lines 01 ~ 20 (LED Keys)																						
		ON	OFF	01 (01)	02 (02)	03 (03)	04 (04)	05 (05)	06 (06)	07 (07)	08 (08)	09 (09)	10 (10)	11 (11)	12 (12)	13 (13)	14 (14)	15 (15)	16 (16)	17 (17)	18 (18)	19 (19)	20 (20)			
0 (R3)	AR VM Calls ⁴	Detect	Ignore																							
1	CO Outgoing Signal	DP ⁶	DTMF																							
2	CO Dial Pulse Rate (Pulse per sec.)	20 PPS	10 PPS																							
3	AR Hold ⁴	Recognize	Ignore																							
4	AR Timing ⁴	Crossbar 95 msec.	ESS (Electronic) 450 msec.																							
5	Tandem CO Line Connection with Station Dropout	Equipped ⁵	Not Equipped																							
6	CO Line Tenant Assignment	Tenant 2	Tenant 1																							
7	Forced Account Code	Equipped	Not Equipped																							
8	Operation After Flash	No CRCU after flash	CRCU after flash																							

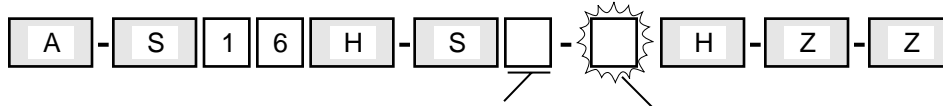
Off-hook

Program Code	Program	LED Status		CO Lines 21 ~ 36 (LED Keys)																						
		ON	OFF	21 (01)	22 (02)	23 (03)	24 (04)	25 (05)	26 (06)	27 (07)	28 (08)	29 (09)	30 (10)	31 (11)	32 (12)	33 (13)	34 (14)	35 (15)	36 (16)							
0 (R3)	AR VM Calls ⁴	Detect	Ignore																							
1	CO Outgoing Signal	DP ⁶	DTMF																							
2	CO Dial Pulse Rate (Pulse per sec.)	20 PPS	10 PPS																							
3	AR Hold ⁴	Recognize	Ignore																							
4	AR Timing ⁴	Crossbar 95 msec.	ESS (Electronic) 450 msec.																							
5	Tandem CO Line Connection with Station Dropout	Equipped ⁵	Not Equipped																							
6	CO Line Tenant Assignment	Tenant 2	Tenant 1																							
7	Forced Account Code	Equipped	Not Equipped																							
8	Operation After Flash	No CRCU after flash	CRCU after flash																							

NOTES:

- For more information, see the instructions preceding the record sheets.
- Initialized data is all LEDs OFF.
- Shaded areas indicate that the handset must be off-hook during programming.
 Program CO lines 01 through 20 with handset on-hook
 Program CO lines 21 through 36 with handset off-hook
- The Automatic Release (AR) signal is called Calling Party Control (CPC) or Supervised Loop Control. This signal consist of a momentary open of the CO line provided by some Central Office (CO)—the duration of the open depends on the CO. If a CO line is programmed (Programs 15-0 and 15-3) to detect the AR signal, the DK system will drop the line when the CO sends the signal (typically 1 ~ 15 seconds after the outside party hangs up). Release 3 and 4 systems will send D Tone to voice mail (VM) ports to drop the ports when AR is detected. The STRATA DK system will disconnect a CO line voice call anytime that the AR signal is detected and the CO line has Programs 15-0 and 15-3 enabled. "CO LINE HANG UP" will display on the station's LCD when this happens. Releases 1 and 2 systems detect AR signal only during the Hold and Transfer states, and do not send D Tone to VM ports.
- Tandem connection must be equipped for all DISA CO lines and all other lines used for two-CO line conference.
- Stations that must send DTMF tones over Dial Pulse CO lines must have a **ToneDialSelect (TONE)** button. See Program 39 for button assignments.

PROGRAM 16
ASSIGNING CO LINE GROUPS (DIAL 9 OR 81 ~ 88)



SELECT = CO Line Group
Only enter the last digit of the CO line group (1 ~ 8) to be defined, or enter 0 for Dial 9 group.

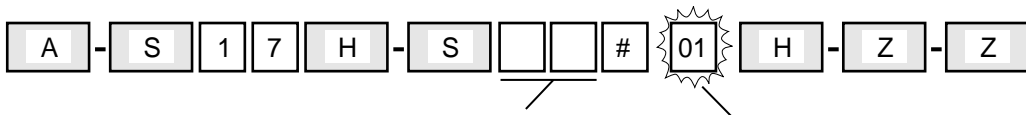
Key LEDs
Specify which CO lines are assigned to the group by setting LEDs as defined by the table below. All LEDs with an "X" should be lit when finished. See Note 2.

	Key LED	CO Line	CO Line Groups																	
			81 (1)	82 (2)	83 (3)	84 (4)	85 (5)	86 (6)	87 (7)	88 (8)	Dial 9 (0)									
Off-hook	16	(36)																		
	15	(35)																		
	14	(34)																		
	13	(33)																		
	12	(32)																		
	11	(31)																		
	10	(30)																		
	09	(29)																		
	08	(28)																		
	07	(27)																		
	06	(26)																		
	05	(25)																		
	04	(24)																		
	03	(23)																		
	02	(22)																		
	01	(21)																		
On-hook	20	(20)																		
	19	(19)																		
	18	(18)																		
	17	(17)																		
	16	(16)																		
	15	(15)																		
	14	(14)																		
	13	(13)																		
	12	(12)																		
	11	(11)																		
	10	(10)																		
	09	(09)																		
	08	(08)																		
	07	(07)																		
	06	(06)																		
	05	(05)																		
04	(04)																			
03	(03)																			
02	(02)																			
01	(01)																			

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Shaded areas indicate that the handset must be off-hook during programming.
Program CO lines 1~20 by setting LEDs 1~20 with the handset on-hook;
Program CO lines 21~36 by setting LEDs 1~16 with the handset off-hook;
3. Initialized data assigns all CO lines to the Dial 9 group.

PROGRAM 17
TIE LINE PAGE/HANDSFREE ANSWERBACK



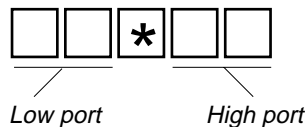
Select = TIE Line
 Enter the number of the
 CO line designated as a
 TIE line (01 ~ 36).
 See Notes 3 and 6.

Light Button/LED 01 to enable
 the Page/Handsfree Answerback
 Feature on the TIE line defined.
 See Note 4.

PEMU Slot No.	TIE Line Circuit	TIE Line (CO Line) 01 ~ 36	Button 01 LED Lit X = ON
PEMU 1 PCB Slot No. _____	1		
	2		
	3		
	4		
PEMU 2 PCB Slot No. _____	1		
	2		
	3		
	4		
PEMU 3 PCB Slot No. _____	1		
	2		
	3		
	4		

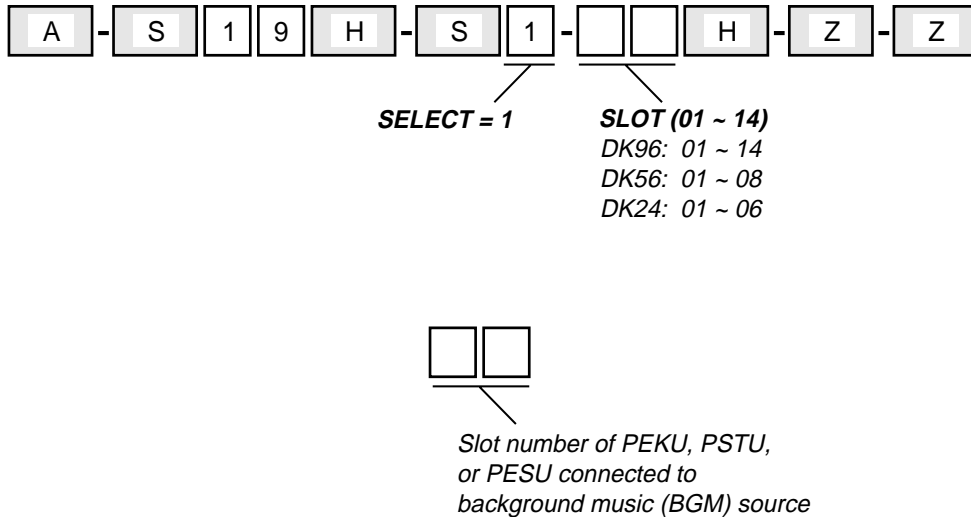
NOTES:

- For more information, see the instructions preceding the record sheets.
- System page access to external TIE line callers and handsfree answerback to stations receiving TIE line calls can be allowed with this program.
- Shaded areas of the table are for configuration purposes. Refer to **Program 03** to find the PEMU PCB slot numbers. **Program 03** must be completed prior to this program.
- Be sure to specify both digits of the CO line assigned as a TIE line. If the 0 before a single digit (01 ~ 09) is left out, the LCD displays what is entered, but LED 01 cannot be programmed.
- All 20 LEDs light if pressed, but only LED 01 has a programming function.
- Initialized data does not assign Page/Handsfree Answerback to any TIE line. LED 01 stays off for all CO lines.
- A range of TIE lines may be programmed by entering



- Maximum PEMU PCBs allowed because of power supply limits: DK24 = 1 PEMU, DK56 = 2 PEMUs, DK96 = 3 PEMUs.
- If PEMU is installed with PCTUS PCB, only 16 station ports are available.
- When a PEMU is installed, it is automatically assigned to the next consecutive CO line and station ports: if the system is equipped with a PCTU (1, 2, 3, or 4) the PEMU assumes four CO lines and four station ports; with a PCTUS it assumes four CO lines and eight station ports.

PROGRAM 19
BACKGROUND MUSIC SLOT IDENTIFICATION (RELEASE 3 AND HIGHER)

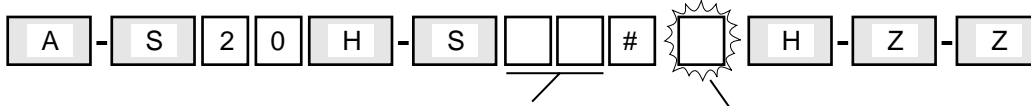


NOTES:

1. For more information, see the instructions preceding the record sheets.
 2. If PEKU, the BGM source must be wired to Circuit 3.
 3. If PESU, the BGM source must be wired to Circuit 8.
 4. If PSTU (**Release 4**), the BGM source must be wired to Circuit 3 or Circuit 8. An isolation transformer may be required if connecting the source to a PSTU. See Section **400-096-208** for isolation transformer installation instructions.
 5. LED 09 (PSTU or PEKU) or LED 10 (PSTU or PESU) in **Program 10-2** must be ON to enable the BGM connection
 6. BGM cannot be connected to the PDKU.
- Important 7. If BGM source is not connected to PEKU, PESU, or PSTU, assign Slot 01 as data in **Program 19-1**. This will insure that there is not a mis-operation of PSTU ports caused by corrupted data in RAM. Assigning BGM to Slot 01 will not affect the operation of EKT or DKT stations connected to PEKU or PDKU circuits in Slot 01.

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PROGRAM 20
PKDU DATA PORT CONFIGURATION (RELEASE 3 AND HIGHER)



Select = PDKU Port Number that is connected to PDIU-DS or to DKT with PDIU-DI.

LEDs 1 ~ 5 defines data port type;
 LEDs 17 ~ 20 assigns data port to security group.

PDKU Port Number <input type="checkbox"/> <input type="checkbox"/>				PDKU Port Number <input type="checkbox"/> <input type="checkbox"/>				PDKU Port Number <input type="checkbox"/> <input type="checkbox"/>			
LED	X	LED ON	LED OFF	LED	X	LED ON	LED OFF	LED	X	LED ON	LED OFF
20		Data Security Group 4	Not Included	20		Data Security Group 4	Not Included	20		Data Security Group 4	Not Included
19		Data Security Group 2	Not Included	19		Data Security Group 2	Not Included	19		Data Security Group 2	Not Included
18		Data Security Group 3	Not Included	18		Data Security Group 3	Not Included	18		Data Security Group 3	Not Included
17		Data Security Group 1	Not Included	17		Data Security Group 1	Not Included	17		Data Security Group 1	Not Included
16				16				16			
15				15				15			
14				14				14			
13				13				13			
12				12				12			
11				11				11			
10				10				10			
09				09				09			
08				08				08			
07				07				07			
06		DTR Pulse with Data Release (R4)	No DTR Pulse	06		DTR Pulse with Data Release (R4)	No DTR Pulse	06		DTR Pulse with Data Release (R4)	No DTR Pulse
05		Auto Pause ⁴ Behind PBX	No Auto Pause	05		Auto Pause ⁴ Behind PBX	No Auto Pause	05		Auto Pause ⁴ Behind PBX	No Auto Pause
04		PDIU-DS Connected	PDIU-DI Connected	04		DIU-DS Connected	DIU-DI Connected	04		DIU-DS Connected	DIU-DI Connected
03		PDIU-DS to Modem Connection	PDIU-DS to other type DCE or DTE	03		DIU-DS to Modem Connection	DIU-DS to other type DCE or DTE	03		DIU-DS to Modem Connection	DIU-DS to other type DCE or DTE
02		AT Commands and Result Codes	AT Commands Only	02		AT Commands and Result Codes	AT DIAL Command Only	02		AT Commands and Result Codes	AT DIAL Command Only
01		DIU Connected	No DIU Connected	01		DIU Connected	No DIU Connected	01		DIU Connected	No DIU Connected

NOTES:

- For more information, see the instructions preceding the record sheets.
- Initialized data: LED 17 ON, all others OFF.
- Copy this page if more than three DIUs are installed.
- Auto pause will be inserted after a Centrex or PBX access code is dialed by a DIU: CO line must be assigned in **Program 42-0**, and must have access code assigned in **Program 42** (1 ~ 8). Pause time is determined by **Program 12-3**. A pause will also be inserted after the DK CO line access code is dialed (by the DIU) in all cases if LED 05 is turned on.
- DIUs cannot be connected To PDKU1A Circuit 8, but can be connected to all PDKU2A circuits. DIUs cannot be connected to PDKUs in DK96 Slots 11 ~ 14.
- If a PDIU-DS is connected to a modem, turn LED 06 ON to cause the modem to disconnect the line when the user presses the **DataRelease (DRLS)** button. The modem should be sent AT command "AT & D2" so it can recognize DTR pulse, and the PDIU-DS SW1-2 switch must be OFF (in the up position). This feature is for outgoing modem calls only—DTR will not pulse on incoming modem calls. Always change the modem escape sequence from "+ + +" to some other character using the ATS2 = __ command to allow the modem to be put into the command mode while the DIU remains in the communication mode.

PROGRAM 21
MODEM POOL PORT ASSIGNMENTS (RELEASE 3 AND HIGHER)

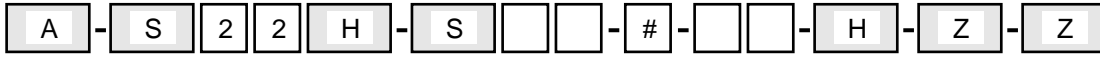
A	-	S	2	1	H	-	S			#			H	-	Z	-	Z
PDKU/PDIU-DS, Port Number										PSTU or PESU/Modem Port Number							
PDKU/PDIU-DS										PSTU or PESU /Modem							
Port Number										Port Number							
Assignment 1			—														
Assignment 2			—														
Assignment 3			—														
Assignment 4			—														
Assignment 5			—														
Assignment 6			—														
Assignment 7			—														
Assignment 8			—														
Assignment 9			—														
Assignment 10			—														

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data is blank.
3. Copy this page if more than 10 modems are assigned to modem pool.
4. This program is available with **Release 3** and higher software.
5. DIUs can be connected to any ports associated with PDKU circuits, except for ports associated with Circuit 8 on a PDKU1A. All PDKU2A circuits can support DIUs.

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PROGRAM 22
DATA INTERFACE UNIT (DIU) STATION HUNTING (DATA CALLS ONLY) (RELEASE 3 AND HIGHER)



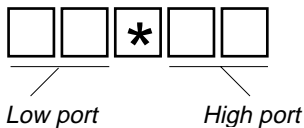
*SELECT = Port Number (00-95)
 Enter the PDKU/DIU
 port number of the "hunt-from"
 station. See Note 3 for
 entering a range of ports.*

*HUNT TO = (00-95)
 Enter the "hunt-to"
 PDKU/DIU port
 number. See Note 4.*

Port	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Hunt To																
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95

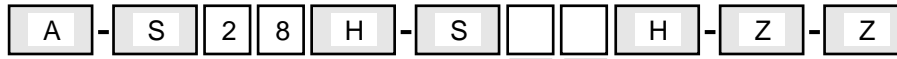
NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data does not assign "hunt-to" points to any port.
3. A range of ports may be assigned by pressing the following key sequence:



4. Press Button/LED 01 to delete a digit from "hunt-to" port.
5. **Program 22** applies to PDIU-DI and PDIU-DS data stations. If programming a PDIU-DI station, use the associated digital telephone port number; the PDIU-DS is programmed using its own unique port number.

PROGRAM 28
DSS CONSOLE/ATTENDANT TELEPHONE ASSIGNMENTS



SELECT = (1-4)
Enter the DSS console number.
See Note 3.

DSS ATT = (1-4)
Enter the attendant digital or electronic telephone number. See Notes 4 and 5.

DDSS PDKU/ HDSS PEKU PCBs (Lowest Slot to Highest)	DDSS/HDSS Console Number	Attendant Digital/ Electronic Telephone Number (1, 2, 3 or 4)
Low Slot Number:	1	
Slot Number:	2	
Slot Number:	3	
⁹ High Slot Number:	4	

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. A digital DSS console (DDSS console) can be assigned to an electronic telephone, and an electronic DSS console (HDSS console) can be assigned to a digital telephone. DDSS consoles are supported by PCTU3 and PCTU4 only; HDSS consoles are supported by PCTU1, PCTU2, PCTU3, PCTU4, and PCTUS.
3. Refer to **Program 03**, Flexible PCB Slot Assignments, for the PCB slots of PEKUs and PDKUs configured to support consoles.
4. The system automatically assigns the console supported by the PEKU or PDKU in the lowest-number PCB slot to be Console number 1. See Note 8.
5. The system automatically assigns the telephone connected to the first station port on a console PDKU or PEKU to be attendant number 1. See Note 8.
6. If more than one console is associated with one attendant telephone, then specify the same number attendant telephone for all consoles associated with it.
7. Shaded information is for configuration purposes only.
8. Initialized data assigns Console #1 to Attendant Telephone #1; Console #2 to Attendant Telephone #2; Console #3 to Attendant Telephone #3; and Console #4 to Attendant Telephone #4.
9. Console #4 is not available with PCTUS PCB.

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PROGRAM 29-1
DSS CONSOLE BUTTON ASSIGNMENTS
CONSOLE 1



SELECT = 1

DDSS/HDSS Number 1~4:

Each system can have up to four consoles. Enter the console to which buttons are being assigned (DDSS/HDSS Console 1).

DDSS/HDSS Button Group 1~3:

Each console has three groups of 20 LED buttons. Choose the group to be assigned.

No. 01 ~ No. 20

Press the LED that is in the same position as the console button being assigned. The LED lights and the LCD displays the console button's number.

Code:

Assign the appropriate Speed Dial, CO line access, or DSS access code to the button chosen. See Code Table below for the buttons to enter. See Notes 4 and 5.

Console 1					
Group No. 1		Group No. 2		Group No. 3	
Button/Code	Button/Code	Button/Code	Button/Code	Button/Code	Key/Code
10	20	10	20	10	20
09	19	09	19	09	19
08	18	08	18	08	18
07	17	07	17	07	17
06	16	06	16	06	16
05	15	05	15	05	15
04	14	04	14	04	14
03	13	03	13	03	13
02	12	02	12	02	12
01	11	01	11	01	11

Code Table

Button Type	Code
Station Speed Dial	*10 ~ *49
System Speed Dial	*60 ~ *99
CO Line Access	01 ~ 36
DSS (Station Access)	#00 ~ #95
All Call	89
Night Transfer 1	91
Night Transfer 2	92

NOTES:

- For more information, see the instructions preceding the record sheets.
- Initialized data associates the PDKU's or PEKU's console with the telephone connected to PDKU's or PEKU's first port. See **Program 28** to reassign consoles to other telephones.
- When assigning CO line access buttons (01 ~ 36), the associated telephone must be assigned access to the CO line also. See **Program 40**.
- The **NightTransfer (NT)** and **AllCallPage (AC)** buttons may be changed to **DSS, Line (CO)** or **SD** buttons, but they may not be reassigned to other button locations.
- Initialized key assignments are shown following the **Program 29** System Record Sheets.
- Important:** Only program **SD, Line (CO), DSS, AllCallPage (AC),** and **NightTransfer (NT)** buttons; programming other feature buttons on a console may cause system operation problems.

**PROGRAM 29-2
DSS CONSOLE BUTTON ASSIGNMENTS
CONSOLE 2**



SELECT = 2
DDSS/HDSS Number 1~4:
Each system can have up to four consoles.
Enter the console to which buttons are being assigned (DDSS/HDSS Console 2).

DDSS/HDSS Button Group 1~3:
Each console has three groups of 20 LEDs/buttons. Choose the group to be assigned.

No. 01 ~ No. 20
Press the LED that is in the same position as the console button being assigned. The LED lights and the LCD displays the console button's number.

Code:
Assign the appropriate Speed Dial, CO line access, or DSS access code to the key chosen. See Code Table below for the buttons to enter. See Notes 4 and 5.

Console 2					
Group No. 1		Group No. 2		Group No. 3	
Button/Code	Button/Code	Button/Code	Button/Code	Button/Code	Button/Code
10	20	10	20	10	20
09	19	09	19	09	19
08	18	08	18	08	18
07	17	07	17	07	17
06	16	06	16	06	16
05	15	05	15	05	15
04	14	04	14	04	14
03	13	03	13	03	13
02	12	02	12	02	12
01	11	01	11	01	11

Code Table

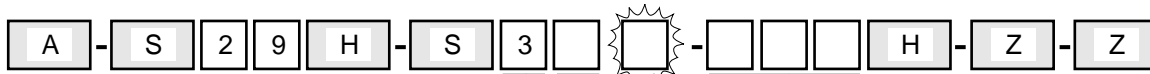
Button Type	Code
Station Speed Dial	*10 ~ *49
System Speed Dial	*60 ~ *99
CO Line Access	01 ~ 36
DSS (Station Access)	#00 ~ #95
All Call	89
Night Transfer 1	91
Night Transfer 2	92

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data associates the PDKU's or PEKU's console with the telephone connected to PDKU's or PEKU's first port. See **Program 28** to reassign consoles to other telephones.
3. When assigning CO line access buttons (01 ~ 36), the associated telephone must be assigned access to the CO line also. See **Program 40**.
4. The **Night Transfer (NT)** and **All Call Page (AC)** buttons may be changed to **DSS**, **Line (CO)** or **SD** buttons, but they may not be reassigned to other button locations.
5. Initialized key assignments are shown following the **Program 29** System Record Sheets.
6. **Important:** Only program **SD**, **Line (CO)**, **DSS**, **All Call Page (AC)**, and **Night Transfer (NT)** buttons; programming other feature buttons on a console may cause system operation problems.

PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM RECORDS
SECTION 400-096-302
SEPTEMBER 1992

PROGRAM 29-3
DSS CONSOLE BUTTON ASSIGNMENTS
CONSOLE 3



SELECT = 3

DDSS/HDSS Number 1-4:

Each system can have up to four consoles.
 Enter the console to which buttons are being assigned (DDSS/HDSS Console 2).

DDSS/HDSS Button Group 1-3:

Each console has three groups of 20 LEDs/buttons. Choose the group to be assigned.

No. 01 ~ No. 20

Press the LED that is in the same position as the console button being assigned. The LED lights and the LCD displays the console button's number.

Code:

Assign the appropriate Speed Dial, CO line access, or DSS access code to the button chosen. See Code Table below for the buttons to enter. See Notes 4 and 5.

Console 3					
Group No. 1		Group No. 2		Group No. 3	
Button/Code	Button/Code	Button/Code	Button/Code	Button/Code	Button/Code
10	20	10	20	10	20
09	19	09	19	09	19
08	18	08	18	08	18
07	17	07	17	07	17
06	16	06	16	06	16
05	15	05	15	05	15
04	14	04	14	04	14
03	13	03	13	03	13
02	12	02	12	02	12
01	11	01	11	01	11

Code Table

Button Type	Code
Station Speed Dial	*10 ~ *49
System Speed Dial	*60 ~ *99
CO Line Access	01 ~ 36
DSS (Station Access)	#00 ~ #95
All Call	89
Night Transfer 1	91
Night Transfer 2	92

NOTES:

- For more information, see the instructions preceding the record sheets.
- Initialized data associates the PDKU's or PEKU's console with the telephone connected to PDKU's or PEKU's first port. See **Program 28** to reassign consoles to other telephones.
- When assigning CO line access buttons (01 ~ 36), the associated telephone must be assigned access to the CO line also. See **Program 40**.
- The **Night Transfer (NT)** and **All Call Page (AC)** buttons may be changed to **DSS**, **Line (CO)** or **SD** buttons, but they may not be reassigned to other button locations.
- Initialized key assignments are shown following the **Program 29** System Record Sheets.
- Important:** Only program **SD**, **Line (CO)**, **DSS**, **All Call Page (AC)**, and **Night Transfer (NT)** buttons; programming other feature buttons on a console may cause system operation problems.

PROGRAM 29-4
DSS CONSOLE BUTTON ASSIGNMENTS
CONSOLE 4



SELECT = 4

DDSS/HDSS Number 1~4:

Each system can have up to four consoles. Enter the console to which buttons are being assigned (DDSS/HDSS Console 2).

DDSS/DSS Button Group 1~3:

Each console has three groups of 20 LEDs/buttons. Choose the group to be assigned.

No. 01 ~ No. 20

Press the LED that is in the same position as the console button being assigned. The LED lights and the LCD displays the console button's number.

Code:

Assign the appropriate Speed Dial, CO line access, or DSS access code to the key chosen. See Code Table below for the buttons to enter. See Notes 4 and 5.

Console 4					
Group No. 1		Group No. 2		Group No. 3	
Button/Code	Button/Code	Button/Code	Button/Code	Button/Code	Button/Code
10	20	10	20	10	20
09	19	09	19	09	19
08	18	08	18	08	18
07	17	07	17	07	17
06	16	06	16	06	16
05	15	05	15	05	15
04	14	04	14	04	14
03	13	03	13	03	13
02	12	02	12	02	12
01	11	01	11	01	11

Code Table

Button Type	Code
Station Speed Dial	*10 ~ *49
System Speed Dial	*60 ~ *99
CO Line Access	01 ~ 36
DSS (Station Access)	#00 ~ #95
All Call	89
Night Transfer 1	91
Night Transfer 2	92

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data associates the PDKU's or PEKU's console with the telephone connected to PDKU's or PEKU's first port. See **Program 28** to reassign consoles to other telephones.
3. When assigning CO line access buttons (01 ~ 36), the associated telephone must be assigned access to the CO line also. See **Program 40**.
4. The **Night Transfer (NT)** and **All Call Page (AC)** buttons may be changed to **DSS**, **Line (CO)** or **SD** buttons, but they may not be reassigned to other button locations.
5. Initialized key assignments are shown following the **Program 29** System Record Sheets.
6. **Important:** Only program **SD**, **Line (CO)**, **DSS**, **All Call Page (AC)**, and **Night Transfer (NT)** buttons; programming other feature buttons on a console may cause system operation problems.
7. Console 4 is not available with PCTUS.

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PROGRAM 29
INITIALIZED DSS CONSOLE BUTTON ASSIGNMENTS

PCTU (1, 2, 3, or 4)					
#09	#19	#29	#39	#49	NT 1(91)
#08	#18	#28	#38	#48	AC (89)
#07	#17	#27	#37	#47	#57
#06	#16	#26	#36	#46	#56
#05	#15	#25	#35	#45	#55
#04	#14	#24	#34	#44	#54
#03	#13	#23	#33	#43	#53
#02	#12	#22	#32	#42	#52
#01	#11	#21	#31	#41	#51
#00	#10	#20	#30	#40	#50

PCTUS1					
#09	#19	*15	*25	*35	NT 1(91)
#08	#18	14	24	34	AC(89)
#07	#17	13	23	33	*43
#06	#16	12	22	32	42
#05	#15	11	21	31	41
#04	#14	*10	20	30	40
#03	#13	#23	19	29	39
#02	#12	#22	18	28	38
#01	#11	#21	17	27	37
#00	#10	#20	*16	*26	*36

PROGRAM 30
STATION CLASS OF SERVICE
(PORTS 00 ~ 31)



SELECT = Port Number(s)
 Enter the port number(s) to which class of service must be assigned. See Note 4 for entering a range of ports.

Buttons/LEDs
 Light LEDs for the port specified in the last step. All LEDs marked with an "X" in the table below should be lit.

Feature	LED	Port Numbers 00~31																																	
		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
	20																																		
Priv. Override Allowed ⁷	19																																		
Exec. Override Allowed ⁷	18																																		
DND Override Allowed ⁷	17																																		
Change T.C.O. Code (R3) ¹⁰	16																																		
Change Verified A.C. (R3) ¹¹	15																																		
Account Codes Verified (R3)	14																																		
Digital Tele. Recv. Vol. (R3) ¹⁴	13																																		
Digital Tele. Recv. Vol. (R3) ¹⁴	12																																		
Dial Pulse/(DTMF Off) ⁹	11																																		
Change DISA Security Code ⁸ (R2)	10																																		
Change TR Override Code ¹²	09																																		
Forced Acc't Code	08																																		
OCA/Busy Override Automatic ⁵	07																																		
ABR Access Enabled	06																																		
Speed Dial Allowed	05																																		
	04																																		
MIC on at Start of Call ¹³	03																																		
MIC Key Lock Enabled ¹³	02																																		
Speakerphone Enabled	01																																		

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data reads LEDs 01, 05, 07, and 12 ON for all ports.
3. Ports 32 ~ 95 on next page. The same notes apply to all ports.
4. A range of ports may be specified by entering

		*		
--	--	---	--	--

Low port in range
High port in range
5. If this LED is turned OFF, OCA and Busy Override must be accessed manually by dialing 2. If kept ON, ACB and Executive Override cannot be accessed.
6. If all stations are allowed Privacy Override, (the system will be non-private), allowing up to three telephones to talk on the same CO line.
7. See **Program 10-2** to enable/disable Priv./Exec./DND Override warning tones.
8. Change DISA security code is available with **Release 2** and higher software only. To change DISA code from selected stations: Dial Intercom (INT) 6 5 8 + code + Redial (REDIAL).
9. DP or DTMF is specified for standard telephones only, PSTU or PESU (Circuits 1 and 2).
10. To change a 4-digit Traveling Class Override (T.C.O.) code: Dial Intercom (INT) + ω + code + Redial (REDIAL).
 ω = 6 2 2 - Class 1, 6 2 3 - Class 2, 6 2 4 - Class 3, 6 2 5 - Class 4.
11. To change verified account codes from selected stations: Dial Intercom (INT) + 6 5 9 + Code Number (000 ~ 299) + code (1 ~ 15 digits) + Redial (REDIAL). Note that the total account code digit length is set in **Program 60-4**; all digits do not have to be verified.
12. To change the 4-digit T. R. override codes (1 or 2) from selected stations: Dial Intercom (INT) + 6 5 4 + code + Redial (REDIAL); or dial Intercom (INT) + 6 5 5 + code + Redial (REDIAL).
13. Mic (MIC) ON/OFF at start of call (LED 03 ON = Mic ON, LED 03 OFF = Mic OFF) is only in effect if Mic (MIC) button lock is enabled (LED 02 = ON).
14. There are nine digital telephone handset receiver volume levels, 1 ~ 9 (9 being the highest). The initial off-hook level can be set anywhere from level 2 to 5. Set the initial level with one of the following combinations: Level 2 = 12 OFF/13 OFF; Level 3 = 12 ON/13 OFF (default level); Level 4 = 12 OFF/13 ON; Level 5 = 12 ON/13 ON. It is not required to cycle system power for the data to take effect.
15. Light LEDs 08 and 14 for Port 99 to require DISA callers to dial Verified Forced Account Codes before accessing outgoing CO lines.

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PROGRAM 30
STATION CLASS OF SERVICE
(PORTS 32 ~ 95)

Feature	Key LED	Port Numbers 32-63																																				
		32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63					
	20																																					
Priv. Override Allowed ⁷	19																																					
Exec. Override Allowed ⁷	18																																					
DND Override Allowed ⁷	17																																					
Change T.C.O. Code (R3) ¹⁰	16																																					
Change Verified A.C. (R3) ¹¹	15																																					
Account Codes Verified (R3)	14																																					
Digital Tele. Recv. Vol. (R3) ¹⁴	13																																					
Digital Tele. Recv. Vol. (R3) ¹⁴	12																																					
Dial Pulse (DTMF Off) ⁹	11																																					
Change DISA Security Code (R2) ⁸	10																																					
Change TR Override Code ¹²	09																																					
Forced Account Code	08																																					
OCA/Busy Override Automatic ⁵	07																																					
ABR Access Enabled	06																																					
Speed Dial Allowed	05																																					
	04																																					
MIC on at Start of Call ¹³	03																																					
MIC Key Lock Enabled ¹³	02																																					
Speakerphone Enabled	01																																					

Feature	Key LED	Port Numbers 64-95																																				
		64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	99				
	20																																					
Priv. Override Allowed ⁷	19																																					
Exec. Override Allowed ⁷	18																																					
DND Override Allowed ⁷	17																																					
Change T.C.O. Code (R3) ¹⁰	16																																					
Change Verified A.C. (R3) ¹¹	15																																					
Account Codes Verified (R3)	14																																					
Digital Tele. Recv. Vol. (R3) ¹⁴	13																																					
Digital Tele. Recv. Vol. (R3) ¹⁴	12																																					
Dial Pulse (DTMF Off) ⁹	11																																					
Change DISA Security Code (R2) ⁸	10																																					
Change TR Override Code ¹²	09																																					
Forced Acc't Code	08																																					
OCA/Busy Override Automatic ⁵	07																																					
ABR Access Enabled	06																																					
Speed Dial Allowed	05																																					
	04																																					
MIC on at Start of Call ¹³	03																																					
MIC Key Lock Enabled ¹³	02																																					
Speakerphone Enabled	01																																					

Notes from page 2-76 apply.

PROGRAM 31
STATION CLASS OF SERVICE
(PORTS 00 ~ 31)



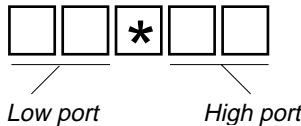
SELECT = Port Number(s)
 Enter the port number(s)
 to which class of service
 must be assigned.
 See Note 4 for entering
 a range of ports.

Buttons/LEDs
 Light LEDs for the port specified in
 the last step. All buttons/LEDs marked with
 an "X" in the table below should be lit.

Feature	LED	Port Numbers 00~31																																			
		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
Toshiba VP ⁸ (B + Station No.)	20																																				
Toshiba VP ⁸ (B No Station)	19																																				
Block Exec./Priv. Ovr. ⁷	18																																				
End/End Signal Rcv (VM)	17																																				
Receive VM ID Code	16																																				
Toshiba VP ⁸ Integration (A/D)	15																																				
Group Page 4 - EKTs/DKTs	14																																				
Group Page 3 - EKTs/DKTs	13																																				
Group Page 2 - EKTs/DKTs	12																																				
Group Page 1 - EKTs/DKTs	11																																				
All Call Page Allowed - EKTs/DKTs	10																																				
VM (No Conference)	09																																				
VM Group 4	08																																				
VM Group 3	07																																				
VM Group 2	06																																				
VM Group 1	05																																				
VM to VM Call Blocking (R3) ⁶	04																																				
OCA Enabled (Receive)	03																																				
Handsfree No Warning	02																																				
Handsfree Disabled	01																																				

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data reads LED 10 ON for all ports.
3. Ports 32 ~ 95 on next page. The same notes apply.
4. A range of ports may be specified by entering:



5. If LED 15 is lit, LED 17 must be lit.
 If LED 19 is lit, LED 17 must be lit.
 If LED 20 is lit, LEDs 17 and 19 must both be lit.
6. VM to VM call block should be ON for all VM (PSTU/PESU) ports if the VM/auto attendant machine does supervised and/or screened transfer.
7. Block Exec./Priv. Override (LED 18 ON) prevents Privacy Override to the selected station unless the **Privacy/Release (PRV/RLS)** button is ON at that station; this option (LED 18 ON) prevents executive override to the station under all conditions.
8. Also for INTOUCH systems operating with Release **B.06** and higher.

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PROGRAM 31
STATION CLASS OF SERVICE
(PORTS 32 ~ 95)

Feature	Key LED	Port Numbers 32 ~ 63																																		
		32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63			
Toshiba VP ⁸ (B + Station No.)	20																																			
Toshiba VP ⁸ (B No Station)	19																																			
Block Exec./Priv. Ovr. ⁷	18																																			
End/End Signal Rcv. (VM)	17																																			
Receive VM ID Code	16																																			
Toshiba VP ⁸ Integration (A/D)	15																																			
Group Page 4 - EKTs/DKTs	14																																			
Group Page 3 - EKTs/DKTs	13																																			
Group Page 2 - EKTs/DKTs	12																																			
Group Page 1 - EKTs/DKTs	11																																			
All Call Page Allowed - EKTs/DKTs	10																																			
VM (No Conference)	09																																			
VM Group 4	08																																			
VM Group 3	07																																			
VM Group 2	06																																			
VM Group 1	05																																			
VM to VM Call Blocking (R3) ⁶	04																																			
OCA Enabled (Receive)	03																																			
Handsfree No Warning	02																																			
Handsfree Disabled	01																																			

Feature	Key LED	Port Numbers 64 ~ 95																																		
		64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95			
Toshiba VP ⁸ (B + Station No.)	20																																			
Toshiba VP ⁸ (B No Station)	19																																			
Block Exec./Priv. Ovr. ⁷	18																																			
End/End Signal Rcv. (VM)	17																																			
Receive VM ID Code	16																																			
Toshiba VP ⁷ Integration (A/D)	15																																			
Group Page 4 - EKTs/DKTs	14																																			
Group Page 3 - EKTs/DKTs	13																																			
Group Page 2 - EKTs/DKTs	12																																			
Group Page 1 - EKTs/DKTs	11																																			
All Call Page Allowed - EKTs/DKTs	10																																			
VM (No Conference)	09																																			
VM Group 4	08																																			
VM Group 3	07																																			
VM Group 2	06																																			
VM Group 1	05																																			
VM to VM Call Blocking (R3) ⁶	04																																			
OCA Enabled (Receive)	03																																			
Handsfree No Warning	02																																			
Handsfree Disabled	01																																			

Notes from page 2-79 apply.

**PROGRAM 32
AUTOMATIC PREFERENCE**



SELECT = Port Number
Enter the port number of the station having preference defined. See Note 3 below for entering a range of ports.

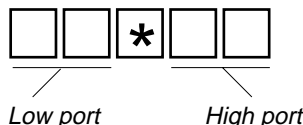
DATA = Ringing Code
Enter 0 to disable Ringing Line Preference.
Enter 1 to enable Ringing Line Preference.

Automatic Preference Code:
Enter 00 for no selection.
Enter 01 for intercom.
Enter 02 for lowest CO line.
Enter 11 ~ 18 for Line Groups 1~ 8.

Port Number	Ringing Code (0 or 1)	Automatic Preference Code	Port Number	Ringing Code (0 or 1)	Automatic Preference Code	Port Number	Ringing Code (0 or 1)	Automatic Preference Code
00			32			64		
01			33			65		
02			34			66		
03			35			67		
04			36			68		
05			37			69		
06			38			70		
07			39			71		
08			40			72		
09			41			73		
10			42			74		
11			43			75		
12			44			76		
13			45			77		
14			46			78		
15			47			79		
16			48			80		
17			49			81		
18			50			82		
19			51			83		
20			52			84		
21			53			85		
22			54			86		
23			55			87		
24			56			88		
25			57			89		
26			58			90		
27			59			91		
28			60			92		
29			61			93		
30			62			94		
31			63			95		

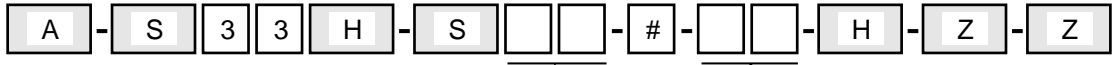
NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data assigns Ringing Code 1 and Automatic Off-hook (Preference) Code 00 for all ports. Power up sequence assigns Automatic Off-hook (Preference) Code 01 to programming Port 05.
3. To enter a range of ports dial the following key sequence:
4. Automatic Preference applies to going off-hook and pressing the **Spkr (SPEAKER)** button.
5. This program applies to electronic and digital telephones only; standard telephones always select the system intercom path when going off-hook.



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PROGRAM 33
STATION HUNTING (VOICE CALLS ONLY)



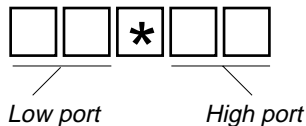
SELECT = Port Number (00-95)
 Enter the port number
 of the "hunt-from" station.
 See Note 3 for entering
 a range of ports.

HUNT TO = (00-95)
 Enter the "hunt-to"
 port number.
 See Note 4.

Port	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Hunt To																
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data does not assign "hunt-to" points to any port.
3. A range of ports may be assigned by pressing the following key sequence:



4. Press button LED 01 to delete a digit from the "hunt-to" port.
5. If a hunt station is in Call Forward mode, calls will be directed to the forwarded destination.
6. CO lines will hunt if they are programmed to ring at the hunt station only; CO lines that ring at more than one station in any given ring program (81-89) will not hunt.

**PROGRAM 34
HOLD/PARK RECALL TIMING**

A - S 3 4 H - S # H - Z - Z

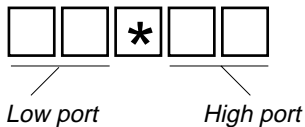
SELECT = Port Number (00~95)
Enter the port number having its Hold/Park Recall Time defined. See Note 4 for entering a range of ports.

HOLD TIME = Seconds
Enter the number of seconds the system will wait. Use three digits. Acceptable range is 000 or 011~160. See Note 3.

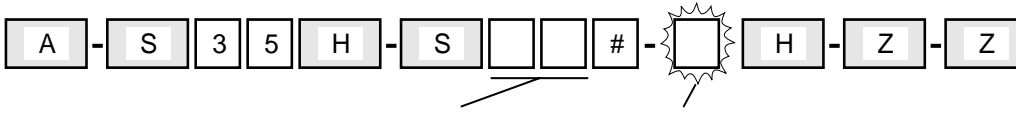
Port	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Seconds																
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data assigns a Hold /Park Recall Time of 032 seconds to all ports.
3. Enter 000 for no Hold Recall. Enter 011~160 for 11 to 160 seconds.
4. Enter a range of ports by keying in the following sequence:



PROGRAM 35
STATION CLASS OF SERVICE
(PORTS 00 ~ 31)



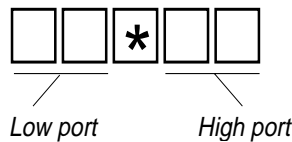
SELECT = Port Number (00~95)
 Enter the port number(s) being defined. See Note 3 for entering a range of ports.

LED
 Select LEDs to light for the port specified in the last step. All LEDs marked with an "X" in the table below should be lit.

Feature	LED	Port Numbers (00~31)																																		
		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Busy Station Transfer (R4) ⁷	20																																			
Busy Station Ringing (R4) ⁸	19																																			
Automatic Hold (R4)	18																																			
	17																																			
No CF/NA Handsfree (R4)	16																																			
	15																																			
	14																																			
	13																																			
	12																																			
	11																																			
	10																																			
	09																																			
	08																																			
	07																																			
	06																																			
LCD Indiv. Message ⁴	05																																			
Message Waiting (RCV)	04																																			
	03																																			
LCD Type/32-ON/12-OFF ⁵	02																																			
LCD Display ⁵	01																																			

NOTES:

- For more information, see the instructions preceding the record sheets.
- Initialized data reads LED 05 lit for Ports 00~15 with PCTU (1, 2, 3, or 4) and Ports 00 ~ 05 with PCTUS; and LEDs 01, 02, and 04 lit for ports 00~95.
- Enter a range of ports by keying in the following sequence:



- The maximum number of LCD stations that may be assigned personal message/speed dial memos/timed reminder memos is 16 with PCTU (1, 2, 3, or 4), and 6 with PCTUS. Initialized data assigns the lowest port numbers: 00 ~ 15 with PCTU; 00 ~ 05 with PCTUS.
- LEDs 01, 02, and 04 should be lit for all stations that use voice mail to allow proper voice mail integration. LEDs 01 and 02 should be lit for all stations (even nonLCD), unless it is desired to disable the LCD and message waiting indication.
- Ports 32 ~ 95 are found on the next page. The same notes apply.
- This applies to ports — typically voice mail/auto attendant ones — that transfer CO line calls.
- This applies to ports that must be available to receive calls when they are busy.

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PROGRAM 35
STATION CLASS OF SERVICE
(PORTS 32 ~ 95)

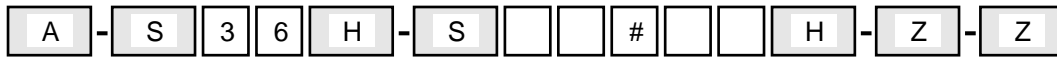
Feature	LED	Port Numbers (32-63)																																			
		32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63				
Busy Station Transfer (R4) ⁷	20																																				
Busy Station Ringing (R4) ⁸	19																																				
Auto Hold (R4)	18																																				
	17																																				
No CF/NA Handsfree (R4)	16																																				
	15																																				
	14																																				
	13																																				
	12																																				
	11																																				
	10																																				
	09																																				
	08																																				
	07																																				
	06																																				
LCD Indiv. Message ⁴	05																																				
Message Waiting (RCV)	04																																				
	03																																				
LCD Type/32-ON/12-OFF ⁵	02																																				
LCD Display ⁵	01																																				

Feature	LED	Port Numbers (64-95)																																				
		64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95					
Busy Station Transfer (R4) ⁷	20																																					
Busy Station Ringing (R4) ⁸	19																																					
Auto Hold (R4)	18																																					
	17																																					
No CF/NA Handsfree (R4)	16																																					
	15																																					
	14																																					
	13																																					
	12																																					
	11																																					
	10																																					
	09																																					
	08																																					
	07																																					
	06																																					
LCD Indiv. Message ⁴	05																																					
Message Waiting (RCV)	04																																					
	03																																					
LCD Type/32-ON/12-OFF ⁵	02																																					
LCD Display ⁵	01																																					

Notes from page 2-84 apply.

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PROGRAM 36
FIXED CALL FORWARD (VOICE CALLS ONLY)



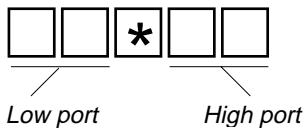
SELECT = Port Number (00~95)
 Enter the port number of the station that needs a Fixed Call Forward location assigned. See Note 3 for a range of ports.

FORWARD TEL = Port Number (00~95)
 Enter the port number of the station or VM port that will be call forwarded to when the Fixed Call Forward button is pressed.

Port	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Foward Tel																
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data does not assign a Fixed Call Forward location to any port.
3. To enter a range of ports, key in the following sequence:



4. Press Button/LED 01 to enter blanks.
5. See **Program 39**, Code 86, to assign Fixed Call Forward buttons on digital and electronic telephones.
6. Fixed Call Forward will forward all calls to the designated port.
7. Stations that have Fixed Call Forward set will not ring.
8. **Program 92-9** does not clear Fixed Call Forward memory.

PROGRAM 37
RING TRANSFER (CAMP-ON) RECALL TIME



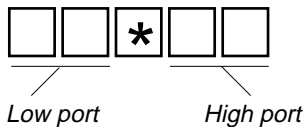
SELECT = Port Number (00~95)
Enter the number of the port that needs a Ring Transfer Recall time assigned. See Note 3 for entering a range of ports.

HOLD TIME = Ring Transfer Recall Time
Enter the Ring Transfer Recall Time (in seconds). The acceptable range is 011 ~ 999 seconds. Use three digits.

Port	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Hold Time																
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data assigns a Ring Transfer Recall Time of 032 seconds to all ports.
3. To enter a range of ports, key in the sequence:



4. Ring Transfer Recall Time is the time it takes to recall a station **that originates** an unanswered or busy (camped-on) transferred call.
5. Ring Transfer must be allowed (**Program 10-1**, LED 07 ON) for Transfer Recall to function; otherwise Recall will be immediate.
6. Ring Transfer to stations in the Do Not Disturb (DND) mode is not allowed, and stations that attempt to do so will be recalled immediately, no matter what time is set with this program.

PROGRAM 38
DIGITAL AND ELECTRONIC TELEPHONE KEYSTRIP TYPE



SELECT = Port Number (00-95)
 Enter the port number of the station that needs a keystrip defined. See Note 4 for entering a range of ports.

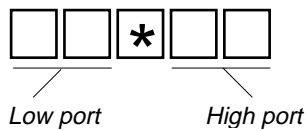
KEY MENU = Code
 Enter the appropriate code as follows:

Telephone Type	Code
10-button	21
20-button (A)	31
20-button (B)	32
20-button (C)	33

Port	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Key Menu																
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data assigns Code 31 to all ports.
3. Always complete **Program 38** before proceeding to **Program 39**.
4. To enter a range of ports, key in the sequence:



PROGRAM 38 (continued)
ELECTRONIC AND DIGITAL TELEPHONE KEYSTRIP TYPE

5. The **Release 4** code assignments for 2000-series Digital Telephone keystrips are as follows:

Speed Dial
Do Not Disturb
Line 7
Line 6
Line 5
Line 4
Line 3
Line 2
Line 1
Intercom

Code 21
10-button

Line 9	Speed Dial
Line 8	Do Not Disturb
Line 7	Line 17
Line 6	Line 16
Line 5	Line 15
Line 4	Line 14
Line 3	Line 13
Line 2	Line 12
Line 1	Line 11
Intercom	Line 10

Code 31(Default)
20-button (A)

Line 9	Speed Dial
Line 8	Do Not Disturb
Line 7	SD 14
Line 6	SD 13
Line 5	SD 12
Line 4	SD 11
Line 3	SD 10
Line 2	Line 12
Line 1	Line 11
Intercom	Line 10

Code 32
20-button (B)

SD 10	Flash
Line 8	Do Not Disturb
Line 7	Speed Dial
Line 6	Redial
Line 5	Spd Dial Pause
Line 4	SD 15
Line 3	SD 14
Line 2	SD 13
Line 1	SD 12
Intercom	SD 11

Code 33
20-button (C)
(Keystrip not provided, but can be assigned)

NOTE: The Speed Dial button is the same as the SDS or REP buttons in previous STRATA systems (Program 39, Code 97).

6. The **Release 4** code assignments for 1000-series digital telephone keystrips are as follows:

CO15	CO16	CO17	DND	SDS
CO10	CO11	CO12	CO13	CO14
CO5	CO6	CO7	CO8	CO9
INT	CO1	CO2	CO3	CO4

Code 31 (Default)
20-key (A)

SD12	SD13	SD14	DND	SDS
CO10	CO11	CO12	SD10	SD11
CO5	CO6	CO7	CO8	CO9
INT	CO1	CO2	CO3	CO4

Code 32
20-key (B)

PAU	RDL	SDS	DND	FLASH
SD11	SD12	SD13	SD14	SD15
CO5	CO6	CO7	CO8	SD10
INT	CO1	CO2	CO3	CO4

Code 33
20-key (C)

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PROGRAM 38 (continued)
ELECTRONIC AND DIGITAL TELEPHONE KEYSTRIP TYPE

7. The **Release 3** code assignments for 2000-series digital telephone keystrips are as follows:

Flash
Do Not Disturb
Line 7
Line 6
Line 5
Line 4
Line 3
Line 2
Line 1
Intercom

Code 21
10-button

Line 9	Flash
Line 8	Do Not Disturb
Line 7	Line 17
Line 6	Line 16
Line 5	Line 15
Line 4	Line 14
Line 3	Line 13
Line 2	Line 12
Line 1	Line 11
Intercom	Line 10

Code 31 (Default)
20-button (A)

Line 9	Flash
Line 8	Do Not Disturb
Line 7	SD 14
Line 6	SD 13
Line 5	SD 12
Line 4	SD 11
Line 3	SD 10
Line 2	Line 12
Line 1	Line 11
Intercom	Line 10

Code 32
20-button (B)

SD 10	Flash
Line 8	Do Not Disturb
Line 7	SD Select
Line 6	Redial
Line 5	Spd Dial Pause
Line 4	SD 15
Line 3	SD 14
Line 2	SD 13
Line 1	SD 12
Intercom	SD 11

Code 33
20-button (C)

(Keystrip not provided, but can be assigned)

8. The **Release 3** code assignments for 1000-series digital telephone keystrips are as follows:

CO15	CO16	CO17	DND	FLASH
CO10	CO11	CO12	CO13	CO14
CO5	CO6	CO7	CO8	CO9
INT	CO1	CO2	CO3	CO4

Code 31 (Default)
20-key (A)

SD12	SD13	SD14	DND	FLASH
CO10	CO11	CO12	SD10	SD11
CO5	CO6	CO7	CO8	CO9
INT	CO1	CO2	CO3	CO4

Code 32
20-key (B)

PAU	RDL	SDS	DND	FLASH
SD11	SD12	SD13	SD14	SD15
CO5	CO6	CO7	CO8	SD10
INT	CO1	CO2	CO3	CO4

Code 33
20-key (C)

PROGRAM 38 (continued)
ELECTRONIC AND DIGITAL TELEPHONE KEYSRIP TYPE

9. The electronic telephone keystrip code assignments for **Releases 1 ~ 4** are as follows:

MW/FL	CO9	MW/FL	CO9	MW/FL	SD10	MW/FL
DND	CO8	DND	CO8	DND	CO8	DND
CO7	CO7	CO17	CO7	SD14	CO7	SDS
CO6	CO6	CO16	CO6	SD13	CO6	RDL
CO5	CO5	CO15	CO5	SD12	CO5	PAU
CO4	CO4	CO14	CO4	SD11	CO4	SD15
CO3	CO3	CO13	CO3	SD10	CO3	SD14
CO2	CO2	CO12	CO2	CO12	CO2	SD13
CO1	CO1	CO11	CO1	CO11	CO1	SD12
INT	INT	CO10	INT	CO10	INT	SD11
Code 21 10-key	Code 31 (Default) 20-key (A)		Code 32 20-key (B)		Code 33 20-key (C)	

10. The programming templates are as follows:

10	20
09	19
08	18
07	17
06	16
05	15
04	14
03	13
02	12
01	11

2000-Series Digital Telephone
6500-Series Electronic Telephone

16	17	18	19	20
11	12	13	14	15
06	07	08	09	10
01	02	03	04	05

1000-Series Digital Telephone

**PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM RECORDS
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**PROGRAM 39
FLEXIBLE KEY ASSIGNMENT REFERENCE GUIDE**



SELECT = Port Number
or range. See Note 4.

Press LED/button to
be defined. See tables
on the following pages.

Code:

Enter the appropriate code that corresponds
to the feature to be assigned. See the
feature code reference table below.

Button Function	Button Labels	Code	Notes
Account Code (R3)	Account Code or ACCOUNT	50	Allows a Voluntary Account Code to be entered
Alarm	Alarm Reset or ALRM	77	Resets alarm condition system wide
All Call Voice Page	All Call Page or AC	89	Pages all idle electronic/digital telephones over speaker
Automatic Busy Redial	Auto Busy Redial or ABR	70	Sets ABR of busy outgoing number
Automatic Callback Busy	Auto Callback or ACB	94	Sets ACB for station recalled by busy line
Background Music	Tel Set Music or BGM	78	Turns BGM ON or OFF through station speaker
Call Forward All Calls	Call Frwd All Calls or CFAC	87	All calls forward to selected station
Call Forward A.C. Fixed	Call Frwd to: or CFF	86	Forwards all calls to pre-defined destination. See Prog. 36
Call Forward Busy (R2)	Call Frwd Busy or CFB	59	Forwards calls to selected station if station is busy
Call Forward Busy/No Answer (R2)	Call Frwd Busy/ NAns or CFB/NA	57	Forwards calls to selected station if station is busy or does not answer
Call Forward No Answer (R2)	Call Frwd No Answer or CFNA	58	Forwards calls to selected station if station does not answer
Call Pickup	Directed Pickup or PKUP	84	Picks up ringing or held intercom, CO calls, and page
Call Pickup Tenant 1	PKUP1	83	Picks up tenant 1 ringing CO calls
Call Pickup Tenant 2	PKUP2	82	Picks up tenant 2 ringing CO calls
CO Line Appearance	Line 1 ~ 36 or CO 01 ~ CO 36	01 ~ 36	CO line access of appearing calls
Data (R3)	Data Call or DATA	56	Used to place data call
Data Release (R3)	Data Release or DRLS	54	Releases data call
Direct Station Selection	DSS	#00 ~ #95	Assigns DSS hotline keys to port number
Do Not Disturb	Do Not Disturb or DND	98	Prevents calls to station
Door Lock 0	Unlock Door 0 or DRLK 0	71	Momentarily unlocks door (3 or 6 sec.) PIOUS/PIOU/PEPU

Button Function	Button Labels	Code	Notes
Door Lock 1 thru Door Lock 4 (HDCB 1 ~ 4, R2) (DDCB 1 ~ 4, R4)	Unlock Door 1 or DRLK 1	72	Momentarily unlocks door (3 or 6 sec.). See Prog. 77-1 and 77-2.
	Unlock Door 2 or DRLK 2	73	
	Unlock Door 3 or DRLK 3	74	
	Unlock Door 4 or DRLK 4	75	
Intercom	Intercom or INT	00	Intercom line access key
LCD Message	MSG	81	Begins LCD message selection
Message Waiting and Flash	Flash or MW/FL	99	Provides message waiting LED for EKT and Flash key
Microphone Cut-off	Microphn Cut-off or MCO	88	Sets microphone on/off for incoming handsfree intercom calls
Modem (R3)	Modem or MODEM	55	Used to reserve modem in modem pool
Night Transfer Tenant 1	Night Transfer 1 or NT1	91	Sets Tenant 1 CO DAY/NIGHT ringing mode
Night Transfer Tenant 2	Night Transfer 2 or NT2	92	Sets Tenant 2 CO DAY/NIGHT ringing mode
Pause	Spd Dial Pause or PAU	95	Sets a pause in Speed Dial. See Program 12-3
Pause (Long)	Spd Dial Lng Pause or PAU/L	93	Sets a 10-second pause in Speed Dial
Pooled Line	Pooled Line Grp or PL	61 ~ 68	Multiple CO lines may appear under one key
Privacy (R3)	Privacy On Line or PRIVACY	53	Prevents Privacy Override (not Exc. Over.)
Privacy Release	Privacy Release or PRV RLS	79	Changes station Privacy mode to Non-private for COs
Redial Last Number (# key)	RDL (EKT only)	96	Redials the last number
Release (R2)	Release Call or RLS	76	Releases current call and makes station idle
Save Last Number	Save Last Number or SAVE	85	Saves last number dialed for future speed dial
Speed Dial Select (* key)	Speed Dial or SDS	97	Begins speed dial selection
Station Speed Dial Codes	SD	*10 ~ *49	Reserves key for station speed dial
System Speed Dial Codes	SD	*60 ~ *99	Speed dial number set by station port #00
Tone	Tone Dial Select or TONE	90	CO dial signals set to tone or pulse

NOTES:

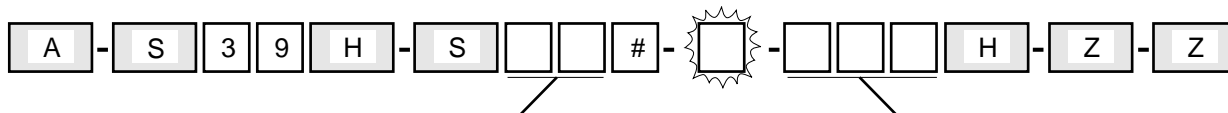
- For more information, see the instructions preceding the record sheets.
- Complete **Program 38** before **Program 39**.
- Initialized data assigns the keypad pattern associated with Code 31 from **Program 38**.
- Specify a range of ports by keying in

		*		
--	--	---	--	--



- Flash (FLASH) (MW/FL):** Sets pauses in Speed Dial if telephone does not have a pause button. Sets flashes in Speed Dial numbers if telephone has a pause button.
- Redial (REDIAL or RDL) and Speed Dial (Speed Dial Select):** Both buttons must be programmed on telephones; not allowed separately. Recommended on all stations using voice mail, since they allow easy access of * and # DTMF buttons.
- Pooled Line Grp (PL):** Codes 61 ~ 68 represent CO line groups 81 ~ 88. Maximum four **Pooled Line Grp (PL)** buttons per pooled line group on each station.
- Redial** is a fixed button on 2000-series Digital Telephones and **REDIAL** is a fixed button on 1000-series Digital telephones. Do not assign these buttons as flexible buttons on these telephones.

PROGRAM 39
FLEXIBLE KEY ASSIGNMENT FOR PORTS ____ TO ____



Port Number LED/Button Code SLOT NO. _____

BUTTON	CODE
Account Code (ACCOUNT)	50
Alarm Reset (ALRM)	77
All Call Page (AC)	89
Auto Busy Redial (ABR)	70
Auto Callback (ACB)	94
Tel Set Music (BGM)	78
Call Frwd All Calls (CFAC)	87
Call Frwd to _ (CFF)	86
Call Frwd Busy (CFB)	59
Call Frwd Busy/NAns (CFB/NA)	57
Call Frwd No Answer (CFNA)	58
Directed Pickup (PKUP)	84

BUTTON	CODE
PKUP1	83
PKUP2	82
Line 1 ~ 36 CO 01 ~ CO 36	01 ~ 36
Data Call (DATA)	56
Data Release (DRLS)	54
DSS	#00 ~ #95
Do Not Disturb (DND)	98
Unlock Door 0 (DRLK 0)	71
Unlock Door 1 (DRLK 1)	72
Unlock Door 2 (DRLK 2)	73
Unlock Door 3 (DRLK 3)	74

BUTTON	CODE
Unlock Door 4 (DRLK 4)	75
Intercom (INT)	00
LCD MSG Select	81
Flash (MW/FL)	99
Microphn Cut-off (MCO)	88
Modem (MODEM)	55
Night Transfer 1 (NT1)	91
Night Transfer 2 (NT2)	92
Spd Dial Pause (PAU)	95
Spd Dial Lng Pause (PAU/L)	93
Pooled Line Grp (PL)	61 ~ 68
Privacy On Line (PRIVACY)	53

BUTTON	CODE
Privacy Release (PRV RLS)	79
RDL (Redial) ³	96
Release Call (RLS)	76
Save Last Number (SAVE)	85
Speed Dial (SDS)	97
(SD) Stations	* 10 ~ * 49
SD System	* 60 ~ * 99
Tone Dial Select (TONE)	90

PORT NO. ____ 10 LCD
20 DIU

LOCATION:

Button	Code	Button	Code
10		20	
09		19	
08		18	
07		17	
06		16	
05		15	
04		14	
03		13	
02		12	
01		11	

PORT NO. ____ 10 LCD
20 DIU

LOCATION:

Button	Code	Button	Code
10		20	
09		19	
08		18	
07		17	
06		16	
05		15	
04		14	
03		13	
02		12	
01		11	

PORT NO. ____ 10 LCD
20 DIU

LOCATION:

Button	Code	Button	Code
10		20	
09		19	
08		18	
07		17	
06		16	
05		15	
04		14	
03		13	
02		12	
01		11	

PORT NO. ____ 10 LCD
20 DIU

LOCATION:

Button	Code	Button	Code
10		20	
09		19	
08		18	
07		17	
06		16	
05		15	
04		14	
03		13	
02		12	
01		11	

PORT NO. ____ 10 LCD
20 DIU

LOCATION:

Button	Code	Button	Code
10		20	
09		19	
08		18	
07		17	
06		16	
05		15	
04		14	
03		13	
02		12	
01		11	

PORT NO. ____ 10 LCD
20 DIU

LOCATION:

Button	Code	Button	Code
10		20	
09		19	
08		18	
07		17	
06		16	
05		15	
04		14	
03		13	
02		12	
01		11	

PORT NO. ____ 10 LCD
20 DIU

LOCATION:

Button	Code	Button	Code
10		20	
09		19	
08		18	
07		17	
06		16	
05		15	
04		14	
03		13	
02		12	
01		11	

PORT NO. ____ 10 LCD
20 DIU

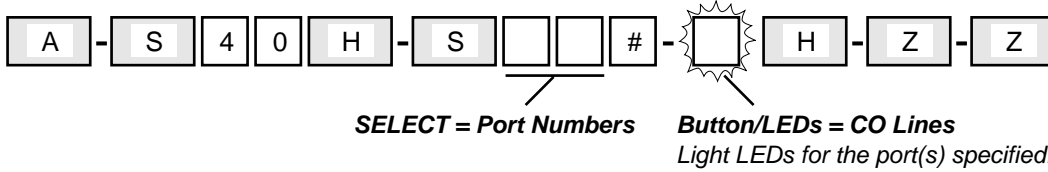
LOCATION:

Button	Code	Button	Code
10		20	
09		19	
08		18	
07		17	
06		16	
05		15	
04		14	
03		13	
02		12	
01		11	

- NOTES: 1. **DSS** buttons are used for voice calls only; **SD** buttons are used for voice and/or data calls.
 2. To allow a station to set * and # DTMF tones in speed dial numbers, the station must have the **SpeediDial (SDS)** and **Redial (REDIAL) (RDL)** buttons. Digital telephones only require the **SpeediDial (SDS)** button, because the **Redial (REDIAL)** button is fixed on them. Digital telephones in **Release 4** systems initialize with the **SpeediDial (SDS)** button (see **Program 38**).
 3. The **Redial (REDIAL)** button is fixed on digital telephones; do not assign this button as a flexible button on digital telephones.

PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM RECORDS
SECTION 400-096-302
SEPTEMBER 1992

PROGRAM 40
STATION CO LINE ACCESS
(PORTS 00 ~ 35)



Button		Port Numbers 00~35																																										
CO LED		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35							
Off-hook	36 16																																											
	35 15																																											
	34 14																																											
	33 13																																											
	32 12																																											
	31 11																																											
	30 10																																											
	29 09																																											
	28 08																																											
	27 07																																											
	26 06																																											
25 05																																												
24 04																																												
23 03																																												
22 02																																												
21 01																																												
On-hook	20 20																																											
	19 19																																											
	18 18																																											
	17 17																																											
	16 16																																											
	15 15																																											
	14 14																																											
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07 07																																												
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03 03																																												
02 02																																												
01 01																																												

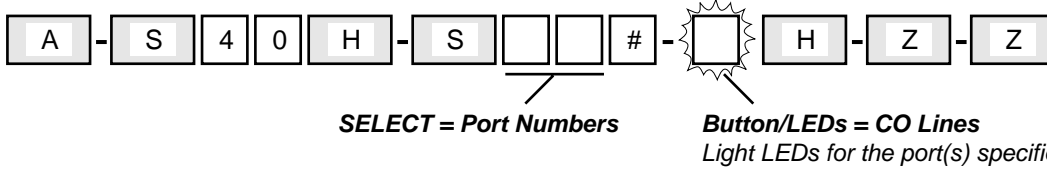
NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Ports 36 ~ 71 on next page. The same notes apply.
3. Initialized data reads all LEDs ON for all CO lines. Complete CO line access is allowed on all ports.
4. Denying access in this program applies to **all** access options, including LCR.
5. This program also denies Pickup CO line access.
6. A range of ports may be entered by keying in:



Low port in range — — High port in range

**PROGRAM 40
STATION CO LINE ACCESS
(PORTS 36 ~ 71)**

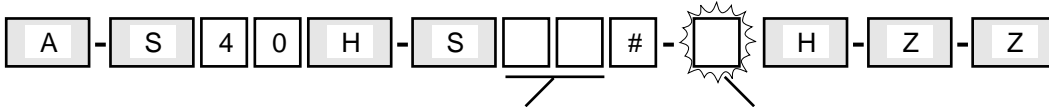


Button		Port Numbers 36~71																																						
CO	LED	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71			
Off-hook	36	16																																						
	35	15																																						
	34	14																																						
	33	13																																						
	32	12																																						
	31	11																																						
	30	10																																						
	29	09																																						
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	25	05																																						
24	04																																							
23	03																																							
22	02																																							
21	01																																							
On-hook	20	20																																						
	19	19																																						
	18	18																																						
	17	17																																						
	16	16																																						
	15	15																																						
	14	14																																						
	13	13																																						
	12	12																																						
	11	11																																						
	10	10																																						
	09	09																																						
08	08																																							
07	07																																							
06	06																																							
05	05																																							
04	04																																							
03	03																																							
02	02																																							
01	01																																							

NOTE: Ports 72 ~ 95 and 99 on next page. The same notes apply.

PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM RECORDS
SECTION 400-096-302
SEPTEMBER 1992

PROGRAM 40
STATION CO LINE ACCESS
(PORTS 72 ~ 95, AND 99)



SELECT = Port Numbers Button/LEDs = CO Lines
Light LEDs for the port(s) specified.

Button CO LED		Port Numbers 72~95																											
		72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	99			
Off-hook	36	16																											
	35	15																											
	34	14																											
	33	13																											
	32	12																											
	31	11																											
	30	10																											
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	26	06																											
	25	05																											
	24	04																											
23	03																												
22	02																												
21	01																												
On-hook	20	20																											
	19	19																											
	18	18																											
	17	17																											
	16	16																											
	15	15																											
	14	14																											
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03	03																												
02	02																												
01	01																												

PROGRAM 41
STATION OUTGOING CALL RESTRICTION
(PORTS 00 ~ 35)



SELECT = Port Numbers

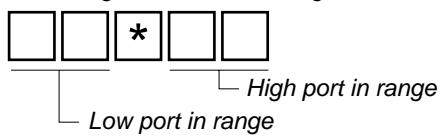
Button/LEDs = CO Lines

Light LEDs for the port(s) to be restricted.

Button		Port Numbers 00~35																																						
CO	LED	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35			
Off-hook	36	16																																						
	35	15																																						
	34	14																																						
	33	13																																						
	32	12																																						
	31	11																																						
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23	03																																							
22	02																																							
21	01																																							
On-hook	20	20																																						
	19	19																																						
	18	18																																						
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	16	16																																						
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05	05																																							
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03	03																																							
02	02																																							
01	01																																							

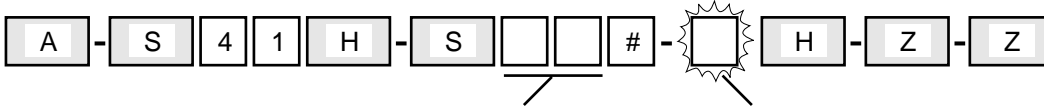
NOTES:

- For more information, see the instructions preceding the record sheets.
- Ports 36 ~ 71 on next page. The same notes apply to all ports.
- Initialized data reads all LEDs OFF for all CO lines (all stations allowed outgoing access to all CO lines).
- This program denies all outgoing calls, except when using Least Cost Routing.
- A range of ports may be entered by keying in:
- With **Release 1** software, CO lines restricted (LED ON) in **Program 41** may not be accessed for ABR calls; with **Release 2** and higher, restricted CO lines may be accessed for ABR calls.



PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM RECORDS
SECTION 400-096-302
SEPTEMBER 1992

PROGRAM 41
STATION OUTGOING CALL RESTRICTION
(PORTS 36 ~ 71)



SELECT = Port Numbers

Button/LEDs = CO Lines

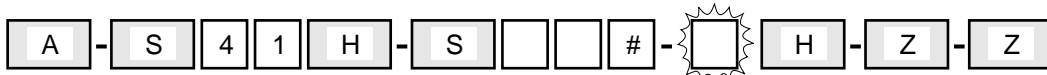
Light LEDs for the port(s) to be restricted.

Button		Port Numbers 36~71																																						
CO	LED	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71			
Off-hook	36	16																																						
	35	15																																						
	34	14																																						
	33	13																																						
	32	12																																						
	31	11																																						
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	28	08																																						
	27	07																																						
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24	04																																							
23	03																																							
22	02																																							
21	01																																							
On-hook	20	20																																						
	19	19																																						
	18	18																																						
	17	17																																						
	16	16																																						
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04	04																																							
03	03																																							
02	02																																							
01	01																																							

NOTE: Ports 72 ~ 95 and 99 on next page. The same notes apply.

PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM RECORDS
SECTION 400-096-302
SEPTEMBER 1992

PROGRAM 41
STATION OUTGOING CALL RESTRICTION
(PORTS 72 ~ 95, AND 99)

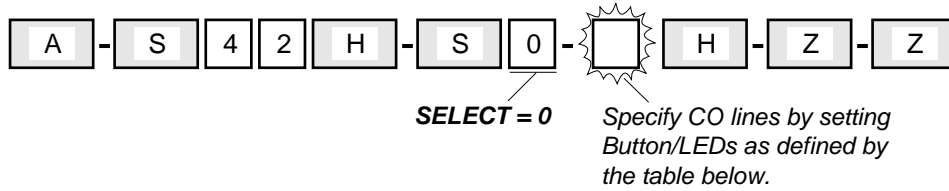


SELECT = Port Numbers **Button/LEDs = CO Lines**
Light LEDs for the port(s) to be restricted.

CO	Key LED	Port Numbers 72-95																											
		72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	99			
Off-hook	36	16																											
	35	15																											
	34	14																											
	33	13																											
	32	12																											
	31	11																											
	30	10																											
	29	09																											
	28	08																											
	27	07																											
	26	06																											
	25	05																											
24	04																												
23	03																												
22	02																												
21	01																												
On-hook	20	20																											
	19	19																											
	18	18																											
	17	17																											
	16	16																											
	15	15																											
	14	14																											
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07	07																												
06	06																												
05	05																												
04	04																												
03	03																												
02	02																												
01	01																												

NOTE: Port 99 is used to restrict DISA access to CO lines for outgoing calls through the system.

PROGRAM 42-0
CO LINE TO PBX/CENTREX CONNECTION

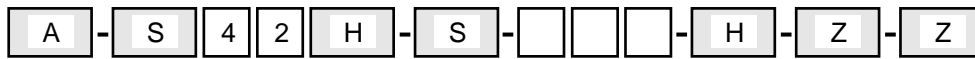


	Button (CO LED Line)	Set Button LEDs	
		CENTREX/PBX Connection (LED ON)	Normal (LED OFF)
Off-hook	16 (36)		
	15 (35)		
	14 (34)		
	13 (33)		
	12 (32)		
	11 (31)		
	10 (30)		
	09 (29)		
	08 (28)		
	07 (27)		
	06 (26)		
	05 (25)		
	04 (24)		
	03 (23)		
	02 (22)		
01 (21)			
On-hook	20 (20)		
	19 (19)		
	18 (18)		
	17 (17)		
	16 (16)		
	15 (15)		
	14 (14)		
	13 (13)		
	12 (12)		
	11 (11)		
	10 (10)		
	09 (09)		
	08 (08)		
	07 (07)		
	06 (06)		
05 (05)			
04 (04)			
03 (03)			
02 (02)			
01 (01)			

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data reads all LEDs OFF for all CO lines.
3. This program must be utilized to allow CENTREX/PBX (after flash) features to operate.
4. If CO line is programmed for behind CENTREX/PBX (LED ON), reseed guard time is 1.5 seconds. If CO line is programmed for normal operation guard time is 0.45 seconds. See **Program 10-1, Button/LED 02 (Release 2 and higher)**.

**PROGRAM 42-1 ~ 8
PBX/CENTREX ACCESS CODES**



SELECT = 1-8
PBX Access Code Group
Enter the PBX Group
Number 1 ~ 8 that needs
an access code assigned.

ACCESS CODE =
Enter a 2-digit access
code for the group,
as defined by the table
below. See Note 3.

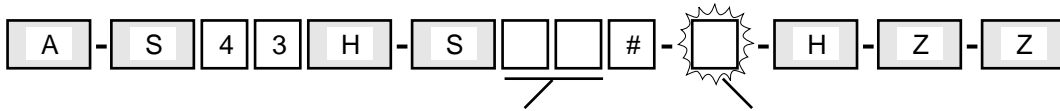
PBX/CENTREX Access Code Number	PBX/CENTREX Outgoing Trunk Access Code(s)	
	1st digit	2nd digit
1		
2		
3		
4		
5		
6		
7		
8		

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data assigns no access codes to PBX groups.
3.
 - If access code is single digit, enter the first digit and press Button/LED 01 as second digit.
 - Press Button//LED 01 to delete a digit.
 - Press Button/LED 02 for don't care. For example, pressing **8** + Button/LED 02 allows 80 ~ 89.
4. This program must be utilized to allow correct Toll Restriction and CENTREX/PBX transfer operation.

PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM RECORDS
SECTION 400-096-302
SEPTEMBER 1992

PROGRAM 43
STATION/CO LINE CREDIT CARD CALL ALLOWED (RELEASE 3 AND HIGHER)
(PORTS 00 ~ 35)



SELECT = Station Port Numbers **Buttons/LEDs = CO Lines**
Assigned to allow dial 0+ calls with selected stations

CO LED		Port Numbers 00~35																																					
		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35		
Off-hook	36	16																																					
	35	15																																					
	34	14																																					
	33	13																																					
	32	12																																					
	31	11																																					
	30	10																																					
	29	09																																					
	28	08																																					
	27	07																																					
	26	06																																					
25	05																																						
24	04																																						
23	03																																						
22	02																																						
21	01																																						
On-hook	20	20																																					
	19	19																																					
	18	18																																					
	17	17																																					
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03	03																																						
02	02																																						
01	01																																						

- NOTES:
1. For more information, see the instructions preceding the record sheets.
 2. For Stations and CO lines enabled in this program: 0+ calls override system toll restriction, and calls will disconnect automatically if the number of digits set in **Program 60-7** is not dialed when "0" is dialed as the first digit. This restricts the operator from placing calls that would be charged back to the telephone line.

PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM RECORDS
SECTION 400-096-302
SEPTEMBER 1992

PROGRAM 43
STATION/CO LINE CREDIT CARD CALL ALLOWED
(PORTS 36 ~ 71)



SELECT = Station Port Numbers

Button/LEDs = CO Lines

Assigned to allow dial 0+ calls with selected stations

CO		Port Numbers 36~71																																						
		LED	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71		
Off-hook	36	16																																						
	35	15																																						
	34	14																																						
	33	13																																						
	32	12																																						
	31	11																																						
	30	10																																						
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23	03																																							
22	02																																							
21	01																																							
On-hook	20	20																																						
	19	19																																						
	18	18																																						
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02	02																																							
01	01																																							

NOTE: Ports 72 ~ 95 and 99 on next page. The same notes apply.

PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM RECORDS
SECTION 400-096-302
SEPTEMBER 1992

PROGRAM 43
STATION/CO LINE CREDIT CARD CALL ALLOWED
(PORTS 72 ~ 95)



SELECT = Station Port Numbers

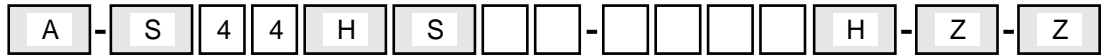
Buttons/LEDs = CO Lines

Assigned to allow dial 0+ calls with selected stations.

	CO	LED	Port Numbers 72~95																											
			72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	99			
Off-hook	36	16																												
	35	15																												
	34	14																												
	33	13																												
	32	12																												
	31	11																												
	30	10																												
	29	09																												
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24	04																													
23	03																													
22	02																													
21	01																													
On-hook	20	20																												
	19	19																												
	18	18																												
	17	17																												
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03	03																													
02	02																													
01	01																													

NOTE: Notes from page 2-102 apply.

PROGRAM 44A
EMERGENCY BYPASS OF FORCED/VERIFIED ACCOUNT CODES (RELEASE 3 AND HIGHER)



SELECT = 51, 52, or 53
to set Emergency
Number 1, 2 or 3

DATA = 3- or 4-digit emergency
telephone number

To enter blanks,
Press: Button/LED 01

Example

Emergency Number 1:

911 = Initialized Data

Emergency Number 2:

9911 (Note 2)

Emergency Number 3:

SELECT =

DATA = 3- or 4-digit telephone number

NOTES:

1. The emergency telephone numbers assigned in this program will be sent out the CO line immediately when dialed; they will bypass the Forced/Verified Account Code dialing restriction.
2. If CO lines are behind PBX or CENTREX, program the PBX/CENTREX outside trunk access code: Example: "9". A pause is automatically inserted following the first 9. See **Programs 42-0** and **42-1** to assign the CO line and access code for behind PBX/CENTREX operation. Also, if the system CO lines are behind CENTREX/PBX, the CENTREX/PBX trunk access codes must be programmed in front of the emergency telephone number. Example: If the CENTREX/PBX access code is '9', then enter 9911 in **Program 44-51**.
3. If Verified Account Codes assigned in **Program 69** conflict (are the same) with emergency telephone numbers assigned in **Program 44A**; **Program 44A** has priority.
4. This feature is for use with Forced (Verified or Nonverified) Account Codes, but not with ABR and DISA. It also does not override Toll Restriction; emergency numbers must be allowed using system Toll Restriction tables per normal Toll Restriction programming procedures.
5. **Program 44B** is related to Toll Restriction and is placed with the other Toll Restriction programs in this chapter.

Programs 44B through **48** can be found in the
Toll Restriction System Record section.

Programs 50 through **56** can be found in the
Least Cost Routing System Record section.

PROGRAM 60
SMDR OUTPUT/ACCOUNT CODE DIGIT LENGTH



SELECT = 3 ~ 6 (Item)
 Make a selection to indicate which item is being assigned. Select 2 for SMDR Threshold Time. Select 3 for SMDR output. Select 4 to assign Forced/Voluntary Account Code digit length, etc.

For "3" SMDR COR = 0 or 1 (Data)
 Enter one digit to indicate SMDR output operation.
 0 = No Incoming Record
 1 = Incoming and Outgoing Record
For "4" ACCOUNT = 04 ~ 15
 Enter the number of digits allowed for Forced/Voluntary Account Codes. The range is 04 ~ 15. Enter two digits.
For "5" TOLL DIAL
 Enter one digit (the range is 0 ~ 5).
For "6" DATA = DISA security code; 1 ~ 15 digits.
For "7" CREDIT = Credit Card Digits; 1 ~ 30 digits

Item	Description	Data
(R4) 2	SMDR Threshold Time ¹² 0 = 1 second 1 = 10 seconds	TIME <input type="text"/>
3	SMDR Output when a call is completed. 0 = Outgoing Only 1 = Incoming and Outgoing	(SMDR COR) <input type="text"/>
4	¹⁰ Forced/Voluntary Account Code Digit Length 04 ~ 15. (Digits are verified per Prog. 30 , Button/LED 14, and Prog. 69)	(ACCOUNT) <input type="text"/> <input type="text"/>
(R2) 5	SMDR Printout options Toll Dial = <input type="text"/> 0 All Calls (Note 7) = <input type="text"/> 1 Dial "0" calls only = <input type="text"/> 2 Dial "1" calls only = <input type="text"/> 3 Dial "00" calls only = <input type="text"/> 4 Dial "1", "0", calls only = <input type="text"/> 5 Dial "1" or "00" calls only	(TOLL DIAL DATA) <input type="text"/>
(R2) 6	DISA Security Code ⁹ (01 ~ 15 digits, may be changed from station, per Program 30)	DATA <input type="text"/> ~ <input type="text"/>
(R3) 7	Credit card call digit length, 01 ~ 30 digits (see Program 43)	CREDIT ¹¹ <input type="text"/> <input type="text"/>

NOTES:

- For more information, see the instructions preceding the record sheets.
- For Selection 3, initialized data assigns SMDR output to be enabled for incoming calls that are answered.
- For Selection 4, initialized data assigns a 6-digit length to all Forced/Voluntary Account Codes.
- If PBX code is dialed, numbers dialed after the code will be checked.
- If A/C, O/C or SPCC code begins with "0", "1", or "00", that call will print out.
- When accessing LCR feature, all digits sent to CO will be output.
- Selection 3 (printout outgoing call only) is still available.
- Button/LED 1 = blank, Button/LED 2 = don't care.
- If a security code is not programmed, outgoing CO line access via DISA will not require a security code when dialing.
- See **Program 69** for Verified Account Codes (**Release 3** and higher).
- Number of digits required when "0" is the first digit dialed; if this number of digits is not dialed, the system will disconnect the call after 20 seconds. "0" is counted as a digit. **Example:** 0 + 1 + 714 + 583 - 3700 = 12 digits; 12 should be programmed as a minimum in this case.
- Default is 10 seconds.

PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM RECORDS

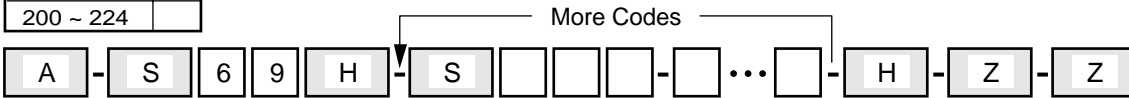
SECTION 400-096-302

SEPTEMBER 1992

PROGRAM 69

VERIFIED ACCOUNT CODES (RELEASE 3 AND HIGHER)

000 ~ 024	
100 ~ 124	
200 ~ 224	



SELECT = Verified Account Code Number (VACN) **Verified Account Code (1 ~ 15 digits)**

NAME	VACN (3-Digit)	VERIFIED ACCOUNT CODE (1 ~ 15 DIGITS)														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	_00															
	_01															
	_02															
	_03															
	_04															
	_05															
	_06															
	_07															
	_08															
	_09															
	_10															
	_11															
	_12															
	_13															
	_14															
	_15															
	_16															
	_17															
	_18															
	_19															
	_20															
	_21															
	_22															
	_23															
	_24															

NOTES:

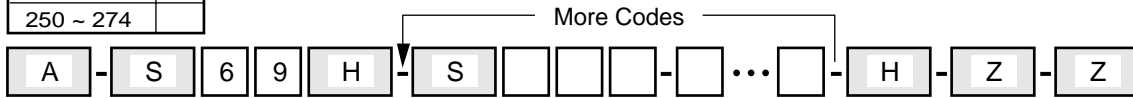
- Account code format
 - Account Code digit length is defined in **Program 60-4** (4 ~ 15 digits).
 - To dial an Account Code, station users must always dial the quantity of digits defined in **Program 60-4**.
 - If the quantity of digits in a Verified Account Code is the same as the Account Code digit length in **Program 60-4**, then all digits will be Verified; if the quantity of digits are less, then only those digits will be verified.
- Account Codes may not conflict (be the same as) emergency numbers in **Program 44A**.
- Copy as required.

PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM RECORDS
SECTION 400-096-302
SEPTEMBER 1992

PROGRAM 69

VERIFIED ACCOUNT CODES (RELEASE 3 AND HIGHER)

050 ~ 074	
150 ~ 174	
250 ~ 274	



SELECT = Verified Account Code Number (VACN) _____ Verified Account Code (1 ~ 15 digits)

NAME	VACN (3-Digit)	VERIFIED ACCOUNT CODE (1 ~ 15 DIGITS)														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	_50															
	_51															
	_52															
	_53															
	_54															
	_55															
	_56															
	_57															
	_58															
	_59															
	_60															
	_61															
	_62															
	_63															
	_64															
	_65															
	_66															
	_67															
	_68															
	_69															
	_70															
	_71															
	_72															
	_73															
	_74															

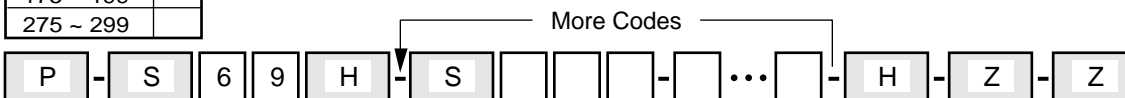
NOTES:

- Account code format
 - Account Code digit length is defined in **Program 60-4** (4 ~ 15 digits).
 - To dial an Account Code, station users must always dial the quantity of digits defined in **Program 60-4**.
 - If the quantity of digits in a Verified Account Code is the same as the Account Code digit length in **Program 60-4**, then all digits will be Verified; if the quantity of digits are less, then only those digits will be verified.
- Account Codes may not conflict (be the same as) emergency numbers in **Program 44A**.
- Copy as required.

PROGRAM 69

VERIFIED ACCOUNT CODES (RELEASE 3 AND HIGHER)

075 ~ 099	
175 ~ 199	
275 ~ 299	



SELECT = Verified Account Code Number (VACN) Verified Account Code (1 ~ 15 digits)

NAME	VACN (3-Digit)	VERIFIED ACCOUNT CODE (1 ~ 15 DIGITS)														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	_75															
	_76															
	_77															
	_78															
	_79															
	_80															
	_81															
	_82															
	_83															
	_84															
	_85															
	_86															
	_87															
	_88															
	_89															
	_90															
	_91															
	_92															
	_93															
	_94															
	_95															
	_96															
	_97															
	_98															
	_99															

NOTES:

- Account code format
 - Account Code digit length is defined in **Program 60-4** (4 ~ 15 digits).
 - To dial an Account Code, station users must always dial the quantity of digits defined in **Program 60-4**.
 - If the quantity of digits in a Verified Account Code is the same as the Account Code digit length in **Program 60-4**, then all digits will be Verified; if the quantity of digits are less, then only those digits will be verified.
- Account Codes may not conflict (be the same as) emergency numbers in **Program 44A**.
- Copy as required.

PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM RECORDS
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PROGRAM 70
VERIFIED ACCOUNT CODE TOLL RESTRICTION ASSIGNMENTS (RELEASE 3 AND HIGHER)
(VAC 000 ~ 099)



SELECT = Verified Account Code Number (VACN)
000 ~ 299

DATA = VAC Digit Restriction Code 0 or 1
 Enter 0 for no digit restriction.
 Enter 1 for digit restriction.

VAC Restrict Code (0 ~ 6)
 Enter 0 for No Station Toll Restriction.
 Enter 1 for Area Code Toll Restriction.
 Enter 2 for Area Code Toll Restriction and 0 or 1 as 1st or 2nd digit.
 Enter 3 for Class 1 Toll Restriction.
 Enter 4 for Class 2 Toll Restriction.
 Enter 5 for Class 3 Toll Restriction.
 Enter 6 for Class 4 Toll Restriction.

000 ~ 099	
100 ~ 199	
200 ~ 299	

VACN	VAC Digit Restrict Code	VAC Restrict Code
_00		
_01		
_02		
_03		
_04		
_05		
_06		
_07		
_08		
_09		
_10		
_11		
_12		
_13		
_14		
_15		
_16		
_17		
_18		
_19		
_20		
_21		
_22		
_23		
_24		
_25		
_26		
_27		
_28		
_29		
_30		
_31		

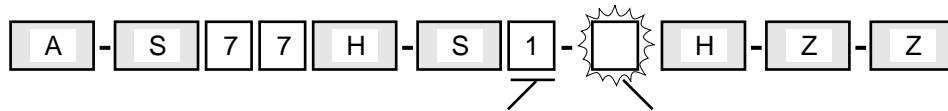
VACN	VAC Digit Restrict Code	VAC Restrict Code
_32		
_33		
_34		
_35		
_36		
_37		
_38		
_39		
_40		
_41		
_42		
_43		
_44		
_45		
_46		
_47		
_48		
_49		
_50		
_51		
_52		
_53		
_54		
_55		
_56		
_57		
_58		
_59		
_60		
_61		
_62		
_63		

VACN	VAC Digit Restrict Code	VAC Restrict Code
_64		
_65		
_66		
_67		
_68		
_69		
_70		
_71		
_72		
_73		
_74		
_75		
_76		
_77		
_78		
_79		
_80		
_81		
_82		
_83		
_84		
_85		
_86		
_87		
_88		
_89		
_90		
_91		
_92		
_93		
_94		
_95		
_99		

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data reads 00 for all VACNs.
3. This restriction overrides the normal station restriction assigned in **Program 48** when a VAC is entered at the station. The station resumes its **Program 48** restriction after the call is disconnected.
4. Range programming is not available.
5. Copy as required.

PROGRAM 77-1
PERIPHERAL OPTIONS
(DOOR PHONES/IMDU/PIOU/PIOUS/PEPU)



SELECT = 1

LED/Button

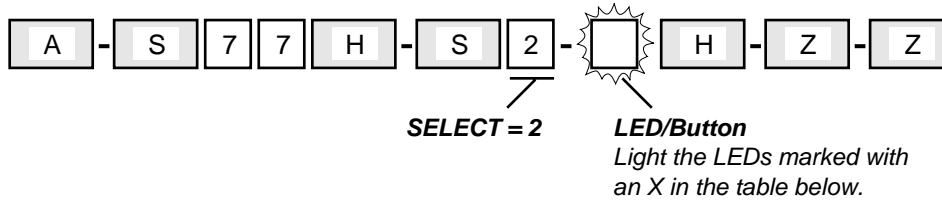
Light the Buttons/LEDs that are marked with an X in the table below.

LED/ Button	X	LED ON	LED OFF
20		Door Lock Time/6 sec.	Door Lock Time/3 sec.
19 ³		Port 28/DDCB4 or ³ HDCB 4	Port 28/Telephone ⁷
18 ³		Port 20/DDCB3 or ³ HDCB 3	Port 20/Telephone
17 ³		Port 12/DDCB2 or ³ HDCB 2	Port 12/Telephone
16 ³		Port 04/DDCB1 or ³ HDCB 1	Port 04/Telephone
15		—	—
14		IMDU Modem (Station 19)/Enabled ⁴	IMDU Modem (Station 19)/Disabled
13 (R3) ⁸		Tenant 2 (NT2) CO lines-K4/Zone 4	Tenant 1 (NT1) CO lines-K4/Zone 4
12 (R3) ⁸		Tenant 2 (NT2) CO lines-K3/Zone 3	Tenant 1 (NT1) CO lines-K3/Zone 3
11 (R3) ⁸		Tenant 2 (NT2) CO lines-K2/Zone 2	Tenant 1 (NT1) CO lines-K2/Zone 2
10 (R3) ⁸		Tenant 2 (NT2) CO lines-K1/Zone 1	Tenant 1 (NT1) CO lines-K1/Zone 1
09			
08		Door Phone Ring on Ext Page ⁵	No Ring over Ext Page
07		Door Lock Relay Enabled ⁶	External Page Relay Enabled ⁶
06		NT Relay with NT1 or NT2 Button and ringing CO line.	NT Relay Steady with NT1 Button
05		MOH Relay Enabled	NT Relay Enabled
04		—	—
03		—	—
02		—	—
01		—	—

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data leaves all LEDs OFF.
3. DDCB/HDCB = Door Phone/Lock Control Unit. Up to four DDCBs/HDCBs may be installed in a system. They must be assigned a PDKU, PEKU or PESU port number to operate (DDCB to PDKU, and HDCB to PEKU or PESU).
4. If a modem unit (IMDU) is installed on a PIOU or PIOUS, it can be accessed by dialing Station 19.
5. The door phone will ring over external page if the DK system is in the NIGHT mode.
6. This option applies to the PIOU/PIOUS/PEPU Door Lock Control 0 assigned to electronic or digital telephone buttons using Code 71 in **Program 39**; it does not apply to HDCB Door Lock Control.
7. HDCB4 is available with PCTU (1, 2, 3, and 4), but not with PCTUS DDCB is only available with PCTU4.
8. Assigns Tenants 1 and 2 CO lines to night ring over PIOU external paging zones 1 ~ 4. (See the Installation Section , **400-096-208**, for more information regarding night ringing over selected paging zones.)

PROGRAM 77-2
DOOR PHONE BUSY SIGNAL/DOOR LOCK ASIGNMENTS



LED Key	X	LED ON	LED OFF
20 (R4)		One Door Phone Ring	Five Door Phone Rings
19		—	—
18		—	—
17		—	—
16 (R2)		DDCB4/HDCB4 B-jack is Lock Control #4 ⁴	B is connected to Door Phone 4B
15		Door phone 4C Busy Out	No Busy Signal
14		Door phone 4B Busy Out	No Busy Signal
13		Door phone 4A Busy Out	No Busy Signal
12 (R2)		DDCB3/HDCB3 B-jack is Lock Control #3	B is connected to Door Phone 3B
11		Door phone 3C Busy Out	No Busy Signal
10		Door phone 3B Busy Out	No Busy Signal
09		Door phone 3A Busy Out	No Busy Signal
08 (R2)		DDCB2/HDCB2 B-jack is Lock Control #2	B is connected to Door Phone 2B
07		Door phone 2C Busy Out	No Busy Signal
06		Door phone 2B Busy Out	No Busy Signal
05		Door phone 2A Busy Out	No Busy Signal
04 (R2)		DDCB1/HDCB1 B-jack is Lock Control #1	B is connected to Door Phone 1B
03		Door phone 1C Busy Out	No Busy Signal
02		Door phone 1B Busy Out	No Busy Signal
01		Door phone 1A Busy Out	No Busy Signal

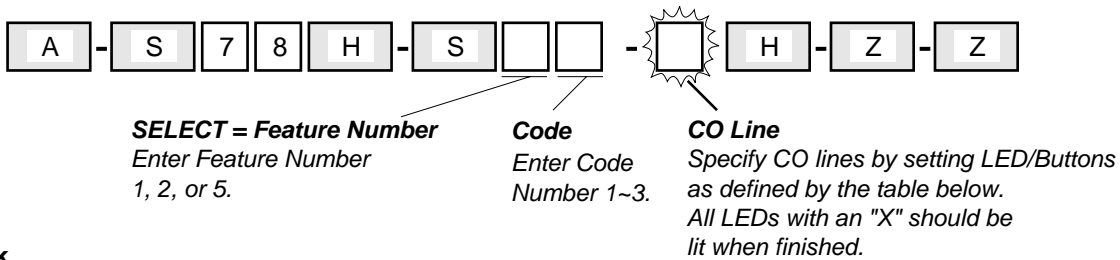
NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data reads all LEDs OFF.
3. HDCB Door Lock Control is available with **Release 2** and higher.
4. HDCB4 is not available with PCTUS. DDCB is available only with PCTU4.
5. DDCBs and HDCBs cannot be connected to PSTU ports.

DDCB⁴ and HDCB Port Assignments

DDCB/HDCB	Port No.
1	04
2	12
3	20
4	28

**PROGRAM 78
CO LINE SPECIAL RINGING ASSIGNMENTS
DISA/IMDU/NIGHT RINGING OVER EXTERNAL PAGE**



On-hook

Feature Number	Code	Feature Description	CO Lines 01 ~ 20 (LED/Buttons)																			
			01 (01)	02 (02)	03 (03)	04 (04)	05 (05)	06 (06)	07 (07)	08 (08)	09 (09)	10 (10)	11 (11)	12 (12)	13 (13)	14 (14)	15 (15)	16 (16)	17 (17)	18 (18)	19 (19)	20 (20)
1	3	Ring Over External Page ⁴ during NIGHT mode																				
2	1	DISA/DISC CO Line during DAY Mode ^{5 & 6}																				
	2	DISA/DISC CO Line during DAY2 Mode ^{5 & 6}																				
	3	DISA/DISC CO Line during NIGHT Mode ^{5 & 6}																				
5	1	Ring IMDU Maint. Modem during DAY Mode																				
	2	Ring IMDU Maint. Modem during DAY2 Mode																				
	3	Ring IMDU Maint. Modem during NIGHT Mode																				

Off-hook

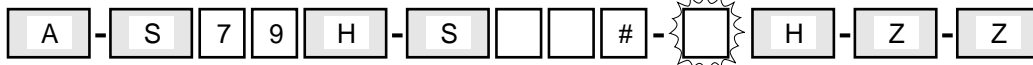
Feature Number	Code	Feature Description	CO Lines 21 ~ 36 (LED/Buttons)															
			21 (01)	22 (02)	23 (03)	24 (04)	25 (05)	26 (06)	27 (07)	28 (08)	29 (09)	30 (10)	31 (11)	32 (12)	33 (13)	34 (14)	35 (15)	36 (16)
1	3	Ring Over External Page ⁴ during NIGHT mode																
2	1	DISA/DISC CO Line during DAY Mode ^{5 & 6}																
	2	DISA/DISC CO Line during DAY2 Mode ^{5 & 6}																
	3	DISA/DISC CO Line during NIGHT Mode ^{5 & 6}																
5	1	Ring IMDU Maint. Modem during DAY Mode																
	2	Ring IMDU Maint. Modem during DAY2 Mode																
	3	Ring IMDU Maint. Modem during NIGHT Mode																

NOTES:

- For more information, see the instructions preceding the record sheets.
- Initialized data leaves all LEDs off.
- Shaded table indicates that the handset must be set off-hook during programming.
 - Program CO lines 01 through 20 with handset on-hook.
 - Program CO lines 21 through 36 with handset off-hook.
- See **Program 77-1** for night ringing configuration.
- Release 1** provides Direct Inward System Calling (DISC) which enables outside parties to call in on CO lines selected with this program and dial stations without going through an attendant or operator. **Release 2** and higher software provides Direct Inward System Access (DISA) which enables outside parties to call in on CO lines selected in this program and access outgoing CO lines, in addition to DISC direct station access. A CRCU must be installed on the PCTU or PCTUS to support DISA or DISC. See **Programs 10-1, 15, 60, 40, 41, 48, and 03** (Code 92 or 93).
- DISA lines are assigned to Port 99 in **Program 30** (Account Codes) and **Program 41** (outgoing CO line restriction).

PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM RECORDS
SECTION 400-096-302
SEPTEMBER 1992

PROGRAM 79
DOOR PHONE RINGING
(PORTS 00 ~ 31)



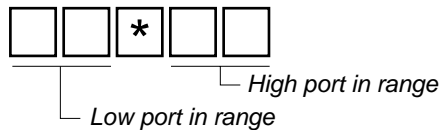
SELECT = Port Number
 Enter the port number having
 Door Phone Ringing
 assigned.

Buttons/LEDs
 Select buttons indicated in the
 table below.

Feature	LED	Port Numbers 00~31																																
		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Muted ring to busy EKT/DKT ⁶	20																																	
	19																																	
	18																																	
	17																																	
	16																																	
	15																																	
	14																																	
	13																																	
Door phone 4C Ring	12																																	
Door phone 4B Ring	11																																	
Door phone 4A Ring	10																																	
Door phone 3C Ring	09																																	
Door phone 3B Ring	08																																	
Door phone 3A Ring	07																																	
Door phone 2C Ring	06																																	
Door phone 2B Ring	05																																	
Door phone 2A Ring	04																																	
Door phone 1C Ring	03																																	
Door phone 1B Ring	02																																	
Door phone 1A Ring	01																																	

NOTES:

- For more information, see the instructions preceding the record sheets.
- Ports 32 ~ 95 on next page. The same notes apply to all ports.
- Initialized data does not assign door phone ringing to any station port. All LEDs are OFF.
- A range of ports may be entered by keying in the following:



- Door phones can ring any number of electronic and digital telephones, but do not ring standard telephones or other devices connected to PESU or PSTU station ports. Standard telephones, though, can pick up door phone calls ringing digital and electronic telephones.
- Only the **lowest** port in a ringing group will receive muted ring tone if all digital telephones (DKTs) and electronic telephones (EKTs) in the ringing group are busy.

PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM RECORDS
SECTION 400-096-302
SEPTEMBER 1992

PROGRAM 79
DOOR PHONE RINGING
(PORTS 32 ~ 95)

Feature	LED	Port Numbers 32-63																																	
		32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63		
Muted ring to busy EKT/DKT ⁶	20																																		
	19																																		
	18																																		
	17																																		
	16																																		
	15																																		
	14																																		
	13																																		
Door phone 4C Ring	12																																		
Door phone 4B Ring	11																																		
Door phone 4A Ring	10																																		
Door phone 3C Ring	09																																		
Door phone 3B Ring	08																																		
Door phone 3A Ring	07																																		
Door phone 2C Ring	06																																		
Door phone 2B Ring	05																																		
Door phone 2A Ring	04																																		
Door phone 1C Ring	03																																		
Door phone 1B Ring	02																																		
Door phone 1A Ring	01																																		

Feature	LED	Port Numbers 64-95																																		
		64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95			
Muted ring to busy EKT/DKT ⁶	20																																			
	19																																			
	18																																			
	17																																			
	16																																			
	15																																			
	14																																			
	13																																			
Door phone 4C Ring	12																																			
Door phone 4B Ring	11																																			
Door phone 4A Ring	10																																			
Door phone 3C Ring	09																																			
Door phone 3B Ring	08																																			
Door phone 3A Ring	07																																			
Door phone 2C Ring	06																																			
Door phone 2B Ring	05																																			
Door phone 2A Ring	04																																			
Door phone 1C Ring	03																																			
Door phone 1B Ring	02																																			
Door phone 1A Ring	01																																			

Notes from page 2-116 apply.

PROGRAM 80
ELECTRONIC AND DIGITAL TELEPHONE RINGING TONES (CO LINE CALLS)



SELECT = Port Number
 Enter number of port
 having its ringing tone
 defined. See Note 4 for
 entering a range of ports.

Ringing Tone Code
 Enter 1 for Tone 1 (500/640 Hz).
 Enter 2 for Tone 2 (600/800 Hz).

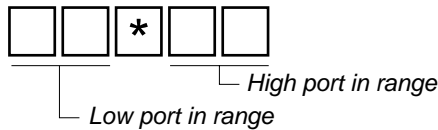
Ringing Tone (Code)	Port Numbers 00~31																																
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Tone 1 (1)																																	
Tone 2 (2)																																	

Ringing Tone (Code)	Port Numbers 32~63																															
	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
Tone 1 (1)																																
Tone 2 (2)																																

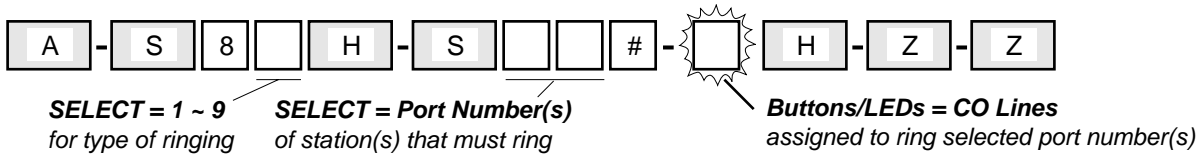
Ringing Tone (Code)	Port Numbers 64~95																															
	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
Tone 1 (1)																																
Tone 2 (2)																																

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data assigns Tone 1 to all station ports.
3. Tone 1 is 500 Hz modulated with 640 Hz.
Tone 2 is 600 Hz modulated with 800 Hz.
4. A range of ports may be specified by entering:



PROGRAM 8 (1 ~ 9)
 CO LINE/STATION RINGING ASSIGNMENTS
 (Ports 00 ~ 35)



Selected CO lines ring selected station ports per ringing program options as follows:

- | | | | | | |
|--------------------------|--|----------------------------|--|----------------------------|--|
| <input type="text"/> DAY | 8 <input type="text"/> 1 Immediate | <input type="text"/> DAY 2 | 8 <input type="text"/> 4 Immediate | <input type="text"/> NIGHT | 8 <input type="text"/> 7 Immediate |
| | 8 <input type="text"/> 2 12-second delay | | 8 <input type="text"/> 5 12-second delay | | 8 <input type="text"/> 8 12-second delay |
| | 8 <input type="text"/> 3 24-second delay | | 8 <input type="text"/> 6 24-second delay | | 8 <input type="text"/> 9 24-second delay |

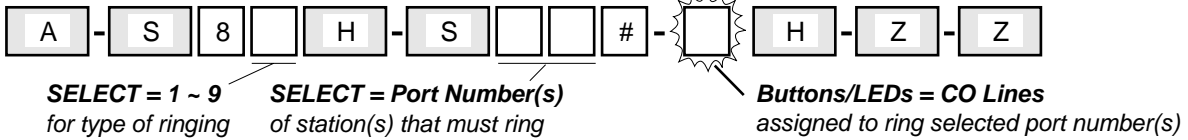
CO LED		Port Numbers 00~35																																					
		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35		
Off-hook	36 16																																						
	35 15																																						
	34 14																																						
	33 13																																						
	32 12																																						
	31 11																																						
	30 10																																						
	29 09																																						
	28 08																																						
	27 07																																						
	26 06																																						
25 05																																							
24 04																																							
23 03																																							
22 02																																							
21 01																																							
On-hook	20 20																																						
	19 19																																						
	18 18																																						
	17 17																																						
	16 16																																						
	15 15																																						
	14 14																																						
	13 13																																						
	12 12																																						
	11 11																																						
	10 10																																						
09 09																																							
08 08																																							
07 07																																							
06 06																																							
05 05																																							
04 04																																							
03 03																																							
02 02																																							
01 01																																							

NOTES:

- For more information, see the instructions preceding the record sheets.
- Ports 36 ~ 71 on next page.
- Initialized data reads all LEDs ON for Port 00 in **Program 81** and port 01 in **Program 87**; all other LEDs are OFF.
- If a CO line must call forward or hunt from a station, the line must be assigned to ring at that station only.
- A range of ports may be selected.

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PROGRAM 8 (1 ~ 9)
CO LINE/STATION RINGING ASSIGNMENTS
(Ports 72 ~ 95)



Selected CO lines ring selected station ports per ringing program options as follows:

- | | | | | | | | | | | | | | | |
|---|------------------------------------|--|--|--|---|-------|------------------------------------|--|--|---|-------|------------------------------------|--|--|
| <table style="width: 100%;"> <tr> <td style="border: 1px solid black; padding: 2px;">DAY</td> <td style="padding: 2px;">8 <input type="text"/>1 Immediate</td> <td style="padding: 2px;">8 <input type="text"/>2 12-second delay</td> <td style="padding: 2px;">8 <input type="text"/>3 24-second delay</td> </tr> </table> | DAY | 8 <input type="text"/> 1 Immediate | 8 <input type="text"/> 2 12-second delay | 8 <input type="text"/> 3 24-second delay | <table style="width: 100%;"> <tr> <td style="border: 1px solid black; padding: 2px;">DAY 2</td> <td style="padding: 2px;">8 <input type="text"/>4 Immediate</td> <td style="padding: 2px;">8 <input type="text"/>5 12-second delay</td> <td style="padding: 2px;">8 <input type="text"/>6 24-second delay</td> </tr> </table> | DAY 2 | 8 <input type="text"/> 4 Immediate | 8 <input type="text"/> 5 12-second delay | 8 <input type="text"/> 6 24-second delay | <table style="width: 100%;"> <tr> <td style="border: 1px solid black; padding: 2px;">NIGHT</td> <td style="padding: 2px;">8 <input type="text"/>7 Immediate</td> <td style="padding: 2px;">8 <input type="text"/>8 12-second delay</td> <td style="padding: 2px;">8 <input type="text"/>9 24-second delay</td> </tr> </table> | NIGHT | 8 <input type="text"/> 7 Immediate | 8 <input type="text"/> 8 12-second delay | 8 <input type="text"/> 9 24-second delay |
| DAY | 8 <input type="text"/> 1 Immediate | 8 <input type="text"/> 2 12-second delay | 8 <input type="text"/> 3 24-second delay | | | | | | | | | | | |
| DAY 2 | 8 <input type="text"/> 4 Immediate | 8 <input type="text"/> 5 12-second delay | 8 <input type="text"/> 6 24-second delay | | | | | | | | | | | |
| NIGHT | 8 <input type="text"/> 7 Immediate | 8 <input type="text"/> 8 12-second delay | 8 <input type="text"/> 9 24-second delay | | | | | | | | | | | |

CO LED		Port Numbers 72~95																							
		72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
Off-hook	36	16																							
	35	15																							
	34	14																							
	33	13																							
	32	12																							
	31	11																							
	30	10																							
	29	09																							
	28	08																							
	27	07																							
	26	06																							
	25	05																							
24	04																								
23	03																								
22	02																								
21	01																								
On-hook	20	20																							
	19	19																							
	18	18																							
	17	17																							
	16	16																							
	15	15																							
	14	14																							
	13	13																							
	12	12																							
	11	11																							
	10	10																							
	09	09																							
08	08																								
07	07																								
06	06																								
05	05																								
04	04																								
03	03																								
02	02																								
01	01																								

NOTE:
Initialized data reads all LEDs OFF.

System Record Sheets for **Programs 90** and **92** are in the beginning of this section because they must be executed before any other programs.

**PROGRAM 93 (continued)
CO LINE IDENTIFICATION ALPHA/NUMERIC ENTRY**

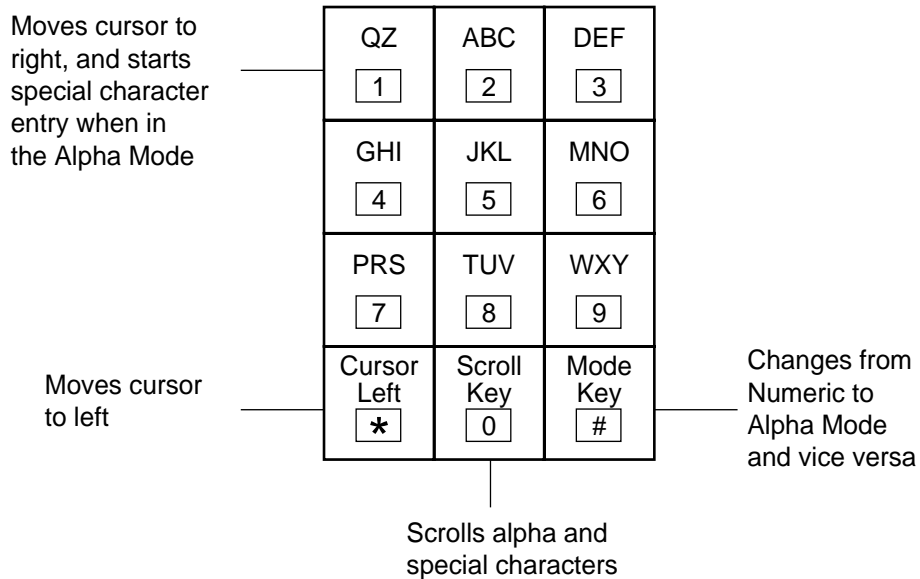
- 1) Enter **Program 93** and select the desired CO line.
- 2) Use the guide below to enter CO line identification information.

Numeric Mode

“0” to “9” are treated as numerals.

*NOTE: Dialpad starts out in **Numeric Mode**.
Use # key to switch to **Alpha Mode**.*

Alpha Mode



Alpha Entry (Example):

A → 2
 B → 2 0
 C → 2 0 0

Alpha Character	Entry Sequence		

Special Character Entry:

“Q” → 1 0
 “Z” → 1 0 0
 “.” → 1 0 0 0
 “_” → 1 0 0 0 0
 “+” → 1 0 0 0 0 0
 “/” → 1 0 0 0 0 0 0

Special Character	Entry Sequence					

PROGRAM 97
PRINTING PROGRAM DATA THROUGH SMDR



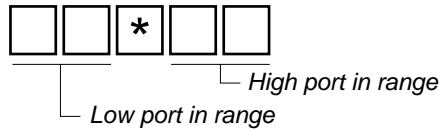
SELECT = Program number
to be printed on SMDR.
See Note 2 for entering
a range of programs.

DATA PRINT
Printout begins.

Spkr # # Hold
Cancels printout
at any time.

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Enter a range of programs by keying:

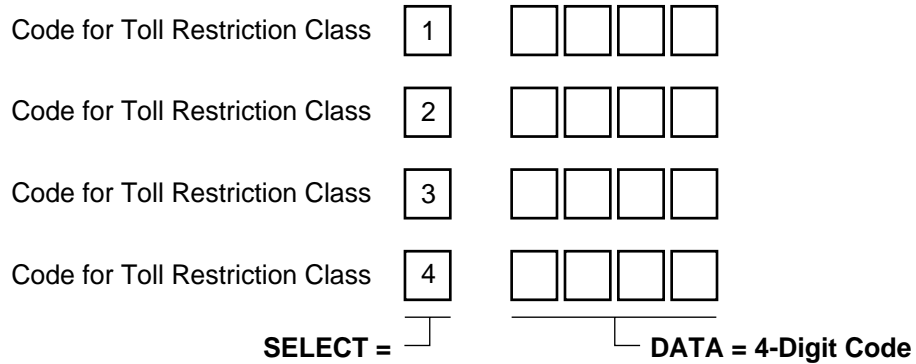
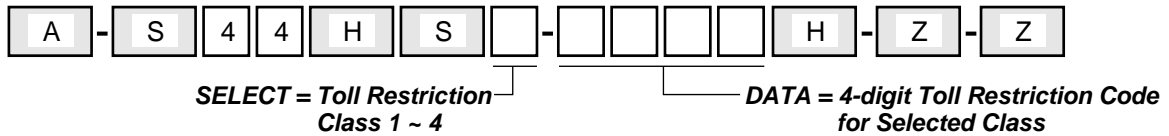


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PROGRAMMING PROCEDURES
TOLL RESTRICTION SYSTEM RECORD SECTION
Programs 44B ~ 48

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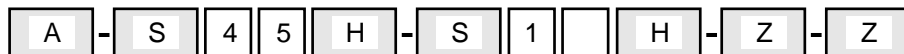
PROGRAM 44B
TOLL RESTRICTION CLASS (1 ~ 4) OVERRIDE CODES (RELEASE 3 AND HIGHER)



NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Classes 1 ~ 4 are defined in **Program 46**.
3. When the Toll Restriction Override code is dialed, the station's class defined in **Program 48** will change to the class assigned to the code in **Program 44B**.
4. Do not use same codes set in **Program 45** (8 and 9).
5. Stations enabled in **Program 30**, Button/LED 16 ON, are allowed to enter and change Toll Restriction Class (1 ~ 4) override codes.

PROGRAM 45-1
LCR/TOLL RESTRICTION DIAL PLAN



SELECT = 1

DATA = Plan 1 ~ 5

Enter Codes 1 ~ 5 to indicate the dial plan for the system.

Releases 1 and 2

X	Plan	Toll Restriction/LCR Dial Plans
	5	0+ (Note 6)
	4	Universal (Note 6)
	3	1+AC+NXX/NNX
	2	1+AC+NNX/1+NNX
	1	AC+NNX/1+NNX

Releases 3 and 4

X	Plan	Toll Restriction/LCR Dial Plans
	5	0+ (Note 6)
	4	Universal (Note 6)
	3	1+AC+NXX/NNX
	2	1+AC+NXX/1+NNX
	1	AC+NXX/1+NNX

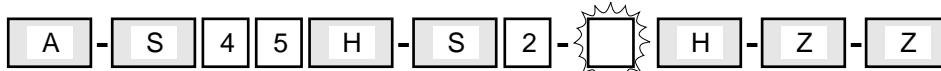
IMPORTANT: The correct Dial Plan must be assigned to allow system LCR and/or Toll Restriction to function properly.

NOTES:

1. Initialized data assigns Dial Plan Code 1 to the system.
2. In NXX and NNX, X = 0 ~ 9, N = 2 ~ 9.
3. NXX = Office code (interchangeable; second digit can be 1 or 0).
4. NNX = Office code (**not** interchangeable; second digit **cannot** be 1 or 0).
5. AC = Area Code.
6. 0+, and universal (Codes 5 and 4) are not used in USA.
7. 1+ NNX indicates 1 may be dialed before office codes.

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PROGRAM 45-2
TOLL RESTRICTION DISABLE



SELECT = 2

LEDs/Buttons

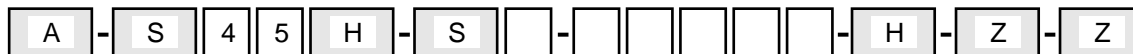
Specify CO lines by setting buttons/LEDs as defined by the table below. All LEDs with an "X" should be lit when finished. ON = Disable Toll Restriction

	LED	CO Line	X
Off-hook	16	36	
	15	35	
	14	34	
	13	33	
	12	32	
	11	31	
	10	30	
	09	29	
	08	28	
	07	27	
	06	26	
	05	25	
	04	24	
	03	23	
	02	22	
	01	21	
On-hook	20	20	
	19	19	
	18	18	
	17	17	
	16	16	
	15	15	
	14	14	
	13	13	
	12	12	
	11	11	
	10	10	
	09	09	
	08	08	
	07	07	
	06	06	
	05	05	
	04	04	
	03	03	
	02	02	
	01	01	

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Program CO lines 01 ~ 20 by setting LEDs 01 ~ 20 with the handset on-hook.
 Program CO lines 21 ~ 36 by setting LEDs 01 ~ 16 with the handset off-hook.
3. Initialized data reads all LEDs OFF for all CO lines.

**PROGRAM 45-3 ~ 6
SPECIAL COMMON CARRIER (SPCC) NUMBERS AND AUTHORIZATION CODE DIGIT LENGTH**



SELECT = Item 3-6
Enter Item number
3-6 from table below.

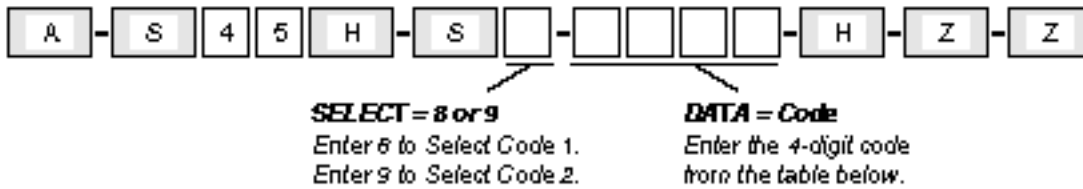
DATA =
First five digits of the
SPCC Number, or digit
length specified in the
table below. See Note 3.

Item	Description	1st five digits of SPCC Data = Number or Digit Length
3	SPCC1 Number	[] [] [] [] []
4	Authorization Code 1 Digit Length (00 ~ 99)	[] []
5	SPCC2	[] [] [] [] []
6	Authorization Code 2 Digit Length (00 ~ 99)	[] []

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data assigns "00" data to Items 4 and 6, and assigns blank data to Items 3 and 5.
3. When editing,
 - Press # to move cursor.
 - Press button/LED 01 to delete or leave a blank.
 - Press button/LED 02 for don't care.
4. Do not enter a digit length greater than necessary or Toll Restriction may be able to be defeated.
5. This program is designed for the following special Common Carrier access dialing sequence: SPCC Number + Authorization Code + Telephone Number. This program requires only the first five digits of the SPCC Number (950XXXX). SMDR will print out the following: SPCC Number + ---- + Telephone Number. (The Authorization Code will not print out, and four dashes will be in its place.) Toll Restriction will start on the first digit of the Telephone Number.

PROGRAM 45-8, 9
 TOLL RESTRICTION OVERRIDE CODE



Select =		Code (4 digits)
8	Code 1	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
9	Code 2	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. When editing the data field, use Button/LED 01 to delete a digit; Button/ LED 02 for don't care.
3. Initialized data leaves code assignments blank.
4. Codes may be revised by station users specified in **Program 30**, Button/LED 09.
5. Do not use same 4-digit codes set in **Program 44B**, Toll Restriction/Traveling Class (1 ~ 4) Override codes. **Program 45** (8 ~ 9) overrides **Program 44B** (1 ~ 4) if same codes are used.

PROGRAM 46-2 ~ 4
TOLL RESTRICTION ALLOWED/DENIED AREA CODES ASSIGNED BY CLASS



SELECT = Class Number
Enter Toll Restriction class number 1 ~ 4.

2, 3 or 4
Enter one of the following numbers:
2 = add to memory, 3 = delete from memory, 4# = display allowed codes in memory.

DATA = Area Codes
Enter or display area codes.
See Notes 3 and 4.

Class	<input type="text" value="1"/>	Allowed	<input type="checkbox"/>	Denied	<input type="checkbox"/>	(Check one)
Area Codes						

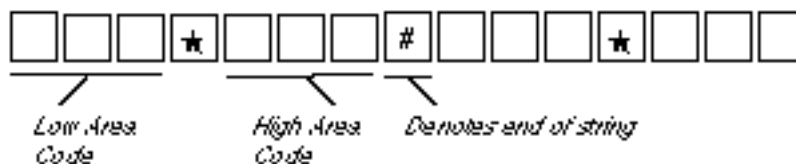
Class	<input type="text" value="2"/>	Allowed	<input type="checkbox"/>	Denied	<input type="checkbox"/>	(Check one)
Area Codes						

Class	<input type="text" value="3"/>	Allowed	<input type="checkbox"/>	Denied	<input type="checkbox"/>	(Check one)
Area Codes						

Class	<input type="text" value="4"/>	Allowed	<input type="checkbox"/>	Denied	<input type="checkbox"/>	(Check one)
Area Codes						

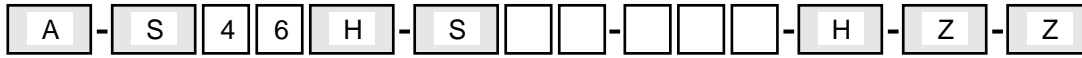
NOTES:

- For more information, see the instructions preceding the record sheets.
- Initialized data includes all area codes in all classes.
- A range of area codes can be entered by pressing:
- Several ranges or individual area codes may be entered by separating them with the # button.
- Tables with deny box checked do not represent memory. All area codes in memory are allowed.



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PROGRAM 46-6 ~ 8
TOLL RESTRICTION ALLOWED/DENIED OFFICE CODES ASSIGNED BY CLASS



SELECT = Class Number
 Enter Toll Restriction
 Class 1 ~ 4.

6, 7 or 8
 Enter one of the following
 numbers: 6 = add to memory,
 7 = delete from memory,
 8# = display allowed codes
 in memory.

DATA = Office Codes
 Enter or display
 office codes.
 See Notes 3 and 4.

Class	1	Allowed	<input type="checkbox"/>	Denied	<input type="checkbox"/>	(Check one)
Office Codes						

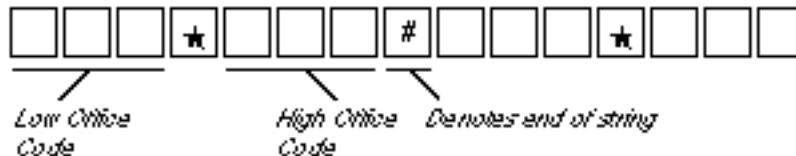
Class	2	Allowed	<input type="checkbox"/>	Denied	<input type="checkbox"/>	(Check one)
Office Codes						

Class	3	Allowed	<input type="checkbox"/>	Denied	<input type="checkbox"/>	(Check one)
Office Codes						

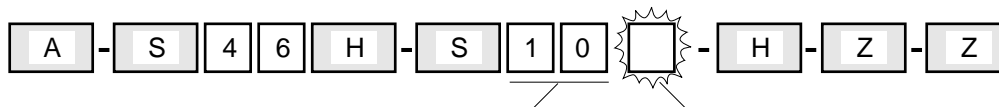
Class	4	Allowed	<input type="checkbox"/>	Denied	<input type="checkbox"/>	(Check one)
Office Codes						

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data allows all office codes in all classes.
3. A range of office codes can be entered by pressing:
4. Several ranges or individual office codes may be entered by separating them with a # button.
5. Tables with the denied box checked do not represent memory. All office codes in memory are allowed.



**PROGRAM 46-10
TOLL RESTRICTION CLASS 1 PARAMETERS**



SELECT = 10
Enter 10 on the dialpad for Class 1.

Buttons/LEDs
Light every button/LED marked with an X in the table below.

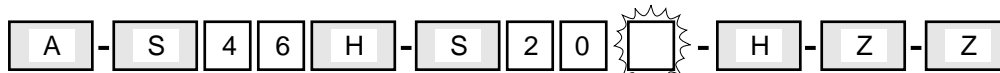
LED	X	LED ON	LED OFF
20			
19			
18		Table 8 Area/Office Exception	Not Selected
17		Table 7 Area/Office Exception	Not Selected
16		Table 6 Area/Office Exception	Not Selected
15		Table 5 Area/Office Exception	Not Selected
14		Table 4 Area/Office Exception	Not Selected
13		Table 3 Area/Office Exception	Not Selected
12		Table 2 Area/Office Exception	Not Selected
11		Table 1 Area/Office Exception	Not Selected
10			
09			
08			
07			
06			
05			
04			
03		1 + A/C + 555/AC + 555 Allowed	Per Area Code Restriction
02		01 Restricted	Allowed
01		0 Restricted	Allowed

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data leaves all LEDs OFF.

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PROGRAM 46-20
TOLL RESTRICTION CLASS 2 PARAMETERS



SELECT = 20
 Enter 20 on the dialpad for Class 2.

Buttons/LEDs
 Light every button/LED marked with an X in the table below.

LED	X	LED ON	LED OFF
20			
19			
18		Table 8 Area/Office Exception	Not Selected
17		Table 7 Area/Office Exception	Not Selected
16		Table 6 Area/Office Exception	Not Selected
15		Table 5 Area/Office Exception	Not Selected
14		Table 4 Area/Office Exception	Not Selected
13		Table 3 Area/Office Exception	Not Selected
12		Table 2 Area/Office Exception	Not Selected
11		Table 1 Area/Office Exception	Not Selected
10			
09			
08			
07			
06			
05			
04			
03		1 + A/C + 555/AC + 555 Allowed	Per Area Code Restriction
02		01 Restricted	Allowed
01		0 Restricted	Allowed

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data leaves all LEDs OFF.

PROGRAM 46-30
TOLL RESTRICTION CLASS 3 PARAMETERS



SELECT = 30
Enter 30 on the dialpad for Class 3.

Buttons/LEDs
Light every button/LED marked with an X in the table below.

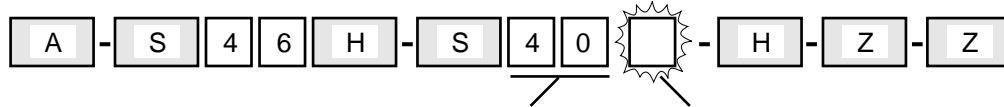
LED	X	LED ON	LED OFF
20			
19			
18		Table 8 Area/Office Exception	Not Selected
17		Table 7 Area/Office Exception	Not Selected
16		Table 6 Area/Office Exception	Not Selected
15		Table 5 Area/Office Exception	Not Selected
14		Table 4 Area/Office Exception	Not Selected
13		Table 3 Area/Office Exception	Not Selected
12		Table 2 Area/Office Exception	Not Selected
11		Table 1 Area/Office Exception	Not Selected
10			
09			
08			
07			
06			
05			
04			
03		1 + A/C + 555/AC + 555 Allowed	Per Area Code Restriction
02		01 Restricted	Allowed
01		0 Restricted	Allowed

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data leaves all LEDs OFF.

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PROGRAM 46-40
TOLL RESTRICTION CLASS 4 PARAMETERS



SELECT = 40
 Enter 4 on the dialpad for Class 4.

Buttons/LEDs
 Light every button/LED marked with an X in the table below.

LED	X	LED ON	LED OFF
20			
19			
18		Table 8 Area/Office Exception	Not Selected
17		Table 7 Area/Office Exception	Not Selected
16		Table 6 Area/Office Exception	Not Selected
15		Table 5 Area/Office Exception	Not Selected
14		Table 4 Area/Office Exception	Not Selected
13		Table 3 Area/Office Exception	Not Selected
12		Table 2 Area/Office Exception	Not Selected
11		Table 1 Area/Office Exception	Not Selected
10			
09			
08			
07			
06			
05			
04			
03		1 + A/C + 555/AC + 555 Allowed	Per Area Code Restriction
02		01 Restricted	Allowed
01		0 Restricted	Allowed

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data leaves all LEDs OFF.

PROGRAM 48
STATION TOLL RESTRICTION CLASSIFICATION



SELECT = Port Number(s)
 Enter the port number(s) of the station(s) being defined.
 See Note 4 for entering a range.

DATA = Digit Restriction Code 0 or 1
 Enter 0 for no digit restriction.
 Enter 1 for digit restriction.

Station Restriction Code (0 - 6)
 Enter 0 for No Station Toll Restriction.
 Enter 1 for Area Code Toll Restriction.
 Enter 2 for Area Code Toll Restriction and 0 or 1 as 1st or 2nd digit.
 Enter 3 for Class 1 Toll Restriction.
 Enter 4 for Class 2 Toll Restriction.
 Enter 5 for Class 3 Toll Restriction.
 Enter 6 for Class 4 Toll Restriction.

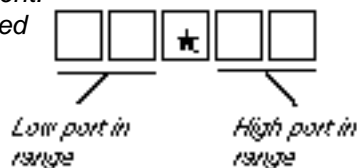
Port Number	Digit Restrict Code	Station Restrict Code
00		
01		
02		
03		
04		
05		
06		
07		
08		
09		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		

Port Number	Digit Restrict Code	Station Restrict Code
32		
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		
51		
52		
53		
54		
55		
56		
57		
58		
59		
60		
61		
62		
63		

Port Number	Digit Restrict Code	Station Restrict Code
64		
65		
66		
67		
68		
69		
70		
71		
72		
73		
74		
75		
76		
77		
78		
79		
80		
81		
82		
83		
84		
85		
86		
87		
88		
89		
90		
91		
92		
93		
94		
95		
99*		

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data reads "10" for all ports.
3. Port 99 is DISA COS assignment.
4. A range of ports may be entered



PROGRAMMING PROCEDURES
LEAST COST ROUTING SYSTEM RECORD SECTION
Programs 50~ 56

PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM RECORDS

SECTION 400-096-302

SEPTEMBER 1992

LCR CO LINE PROGRAMING

1) Use **Program 16** to assign CO lines in groups per the reference chart below.

CO Line Group Reference Chart

Line Group	CO Lines in Group (1 ~ 36)	CO Line Type/Comments
1 (81)		
2 (82)		
3 (83)		
4 (84)		
5 (85)		
6 (86)		
7 (87)		
8 (88)		

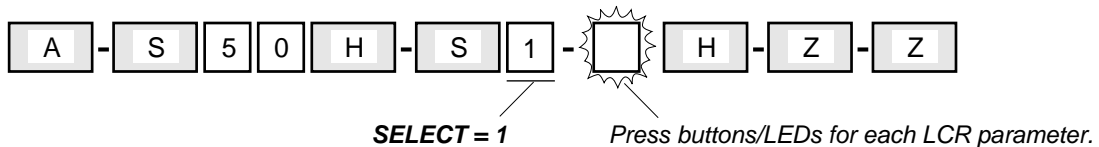
2) Use **Program 40** to allow CO lines access to stations using LCR for outgoing calls.

3) Use **Program 41** to deny outgoing CO line access, except for LCR access.

Important: Area code and office code structure must be defined by **Program 45-1** (Toll Restriction Dial Plan) for LCR to work properly.

4) Use **Program 45-1** to enable the dial plan that is appropriate for the area where LCR calls will originate.

**PROGRAM 50-1
LCR PARAMETERS**



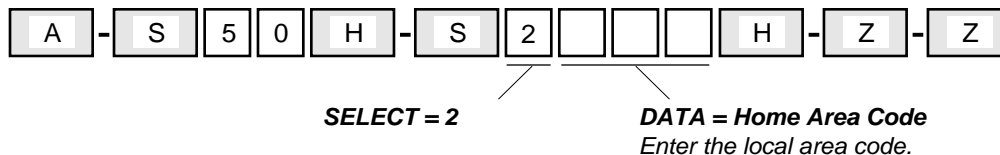
LED	X	LED ON	LED OFF
1		Enable System LCR	No LCR
2		Not Used	Not Used
3		555 LDI Route Per Program 50-4	Per Area Code Table
4		Dial Tone After LCR Access	Silent
5		Warning Tone Last Choice Route No.	No Warning Tone

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. **Program 40** denies CO line access via LCR and denies all other access methods.
3. **Program 41** allows CO line access via LCR, but denies all other outgoing access methods: (701 ~ 736, 81 ~ 88, CO button).
4. Initialized data: All LEDs OFF.
5. Toll Restricted standard telephones should be forced to dial outgoing calls via LCR. This is to prevent Toll Restriction defeat when the CRCU times out.

PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM
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PROGRAM 50-2
LCR HOME AREA CODE



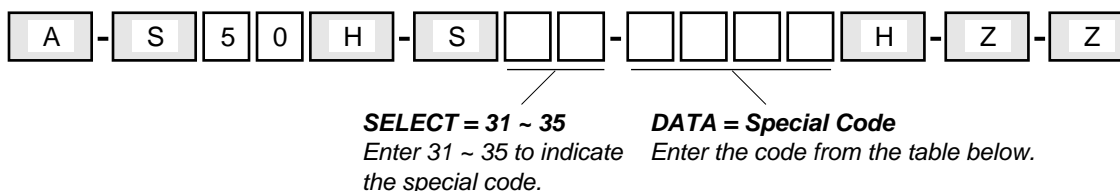
LCR Home Area Code

--	--	--

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Typically this code is entered in **Program 51** table for the LCR route plan number defined for the local calls in **Program 50-5**.
3. Initialized data leaves the home area code blank.

PROGRAM 50-31 ~ 35
LCR SPECIAL CODES



	Special Code	Examples				
31	<table border="1" style="display: inline-table;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>					1-411
32	<table border="1" style="display: inline-table;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>					911
33	<table border="1" style="display: inline-table;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>					611
34	<table border="1" style="display: inline-table;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>					
35	<table border="1" style="display: inline-table;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>					

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data leaves all codes blank.
3. Press Button/LED 01 to erase data; and leave blank.
4. These calls follow the local call route defined in **Program 50-5**.

PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM RECORDS
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PROGRAM 50-4
LCR LONG DISTANCE INFORMATION (LDI) PLAN NUMBER



SELECT = 4

DATA = LDI Route Plan (1 ~ 8)
 Identify the LDI Route Plan by entering 1 ~ 8.

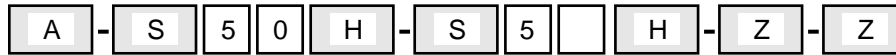
LDI Plan Number:

(1 ~ 8)

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data assigns LDI Plan Number 8.
3. Typically, LDI Plan Number = Local Call Plan Number.

PROGRAM 50-5
LCR LOCAL CALL PLAN NUMBER



SELECT = 5

DATA = Local Route Plan (1 ~ 8)
 Identify the Local Route Plan by entering 1 ~ 8.

Local Call Plan Number:

(1 ~ 8)

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data assigns Plan 8 to be the local call plan.
3. The local plan handles special codes and operator calls.

PROGRAM 50-6
LCR DIAL ZERO TIME-OUT



SELECT = 6

DATA = Time-out Value
 Enter a time-out value from 04 ~ 10 seconds long.

Dial Zero Time-out:

(04 ~ 10 seconds)

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data assigns an LCR Dial Zero Time-out value of 06.
3. This value determines pause time before sending a call on to an operator, etc.

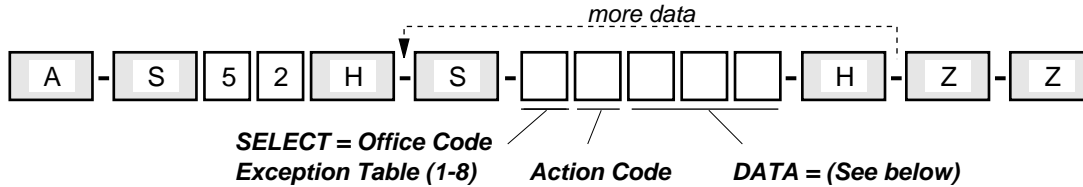
PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM RECORDS

SECTION 400-096-302

SEPTEMBER 1992

**PROGRAM 52
LCR OFFICE CODE EXCEPTIONS FOR SPECIFIED AREA CODE**

To assign Office Code Exception Table (5 ~ 8) to an LCR Plan:



Action Code Function	Action Codes	DATA =
Assign Exception Table to LCR Plan	0	 LCR Plan 1 ~ 8
Assign Area Code to LCR Plan	1	 3-digit Area Code
Add Office Codes to Exception Table	2	 3-digit Office Code
Delete Office Codes from Exception Table	3	 3-digit Office Code
Display Office Codes in Exception Table	4 # more #	 3-digit Office Code

Office Code Exception Table 5 for Area Code

Assign to LCR Route Plan Number Office Codes:

Office Code Exception Table 6 for Area Code

Assign to LCR Route Plan Number Office Codes:

Office Code Exception Table 7 for Area Code

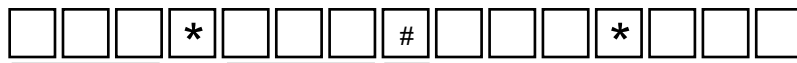
Assign to LCR Route Plan Number Office Codes:

Office Code Exception Table 8 for Area Code

Assign to LCR Route Plan Number Office Codes:

NOTES:

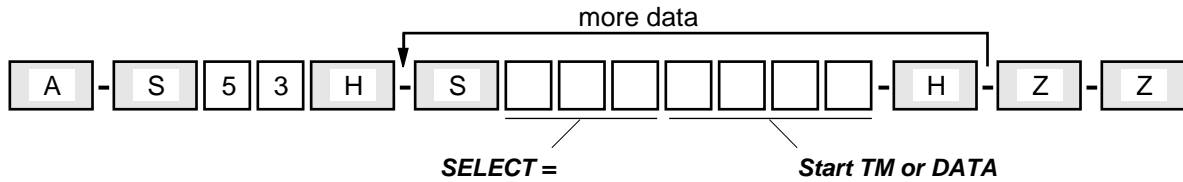
1. For more information, see the instructions preceding the record sheets.
2. Initialized data leaves all codes blank.
3. To enter a range of office codes, press



Low Office Code
High Office Code
Designates end of String

4. Several ranges or individual codes can be expressed at once by separating them with the # button.

PROGRAM 53
LCR SCHEDULE ASSIGNMENTS
FOR LCR PLAN NO. 1 AND 2



	SELECT			Start TM			
Start TM	1	1	0				
Schedule (1 ~ 3)	1	2	0				
Plan <u>1</u>	1	3	0				
LCR Plan				H	H	M	M
Schedule (1 ~ 3)				(HH = 00 ~ 23 MM = 00 ~ 59)			
Action Code							

	SELECT			Start TM			
Start TM	2	1	0				
Schedule (1 ~ 3)	2	2	0				
Plan <u>2</u>	2	3	0				
LCR Plan				H	H	M	M
Schedule (1 ~ 3)				(HH = 00 ~ 23 MM = 00 ~ 59)			
Action Code							

	SELECT			DATA (Route Choices)			
Schedule 1 Route Choices For Plan <u>1</u>	1	1	1				
	1	1	2				
	1	1	3				
	1	1	4				
Schedule 2 Route Choices For Plan <u>1</u>	1	2	1				
	1	2	2				
	1	2	3				
	1	2	4				
Schedule 3 Route Choices For Plan <u>1</u>	1	3	1				
	1	3	2				
	1	3	3				
	1	3	4				
LCR Plan				1st	2nd	3rd	Last
Schedule (1 ~ 3)				(Route Definition No's (1 ~ 4) From Program 54)			
LCR Station Group No. (1 ~ 4) (see Program 56)							

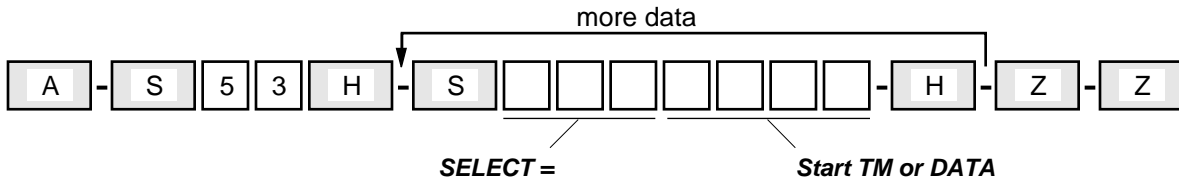
	SELECT			DATA (Route Choices)			
Schedule 1 Route Choices For Plan <u>2</u>	2	1	1				
	2	1	2				
	2	1	3				
	2	1	4				
Schedule 2 Route Choices For Plan <u>2</u>	2	2	1				
	2	2	2				
	2	2	3				
	2	2	4				
Schedule 3 Route Choices For Plan <u>2</u>	2	3	1				
	2	3	2				
	2	3	3				
	2	3	4				
LCR Plan				1st	2nd	3rd	Last
Schedule (1 ~ 3)				(Route Definition No's (1 ~ 4) From Program 54)			
LCR Station Group No. (1 ~ 4) (see Program 56)							

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data assigns starting time as 0000 and Route Definitions as blank for all schedules.
3. If Schedules 1 & 2 start at the same time, then Time of Day schedule change does not occur, and data only needs to be entered for Schedule 1.
4. Press Button/LED 01 to erase data (LED does not light).

PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM RECORDS
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PROGRAM 53
LCR SCHEDULE ASSIGNMENTS
FOR LCR PLAN NO. 3 AND 4



SELECT			Start TM			
3	1	0				
3	2	0				
3	3	0				

Start TM Schedule (1 ~ 3) Plan 3

LCR Plan _____

Schedule (1 ~ 3) _____

Action Code _____

H H M M
 (HH = 00 ~ 23
 MM = 00 ~ 59)

SELECT			Start TM			
4	1	0				
4	2	0				
4	3	0				

Start TM Schedule (1 ~ 3) Plan 4

LCR Plan _____

Schedule (1 ~ 3) _____

Action Code _____

H H M M
 (HH = 00 ~ 23
 MM = 00 ~ 59)

SELECT			DATA (Route Choices)			
3	1	1				
3	1	2				
3	1	3				
3	1	4				

Schedule 1
Route Choices For Plan 3

SELECT			DATA (Route Choices)			
3	2	1				
3	2	2				
3	2	3				
3	2	4				

Schedule 2
Route Choices For Plan 3

SELECT			DATA (Route Choices)			
3	3	1				
3	3	2				
3	3	3				
3	3	4				

Schedule 3
Route Choices For Plan 3

LCR Plan _____

Schedule (1 ~ 3) _____

LCR Station Group No. (1 ~ 4) (see **Program 56**)

1st 2nd 3rd Last
 (Route Definition No's (1 ~ 4) From **Program 54**)

SELECT			DATA (Route Choices)			
4	1	1				
4	1	2				
4	1	3				
4	1	4				

Schedule 1
Route Choices For Plan 4

SELECT			DATA (Route Choices)			
4	2	1				
4	2	2				
4	2	3				
4	2	4				

Schedule 2
Route Choices For Plan 4

SELECT			DATA (Route Choices)			
4	3	1				
4	3	2				
4	3	3				
4	3	4				

Schedule 3
Route Choices For Plan 4

LCR Plan _____

Schedule (1 ~ 3) _____

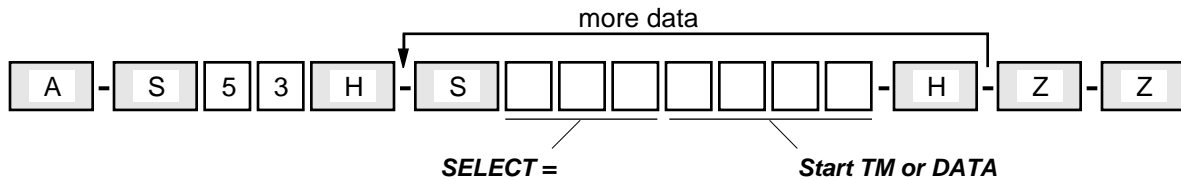
LCR Station Group No. (1 ~ 4) (see **Program 56**)

1st 2nd 3rd Last
 (Route Definition No's (1 ~ 4) From **Program 54**)

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data assigns starting time as 0000 and Route Definitions as blank for all schedules.
3. If Schedules 1 & 2 start at the same time, then Time of Day schedule change does not occur, and data only needs to be entered for Schedule 1.
4. Press Button/LED 01 to erase data (LED does not light).

PROGRAM 53
LCR SCHEDULE ASSIGNMENTS
FOR LCR PLAN NO. 5 AND 6



	SELECT			Start TM			
Start TM	5	1	0				
Schedule (1 ~ 3)	5	2	0				
Plan <u>5</u>	5	3	0				
LCR Plan				H	H	M	M
Schedule (1 ~ 3)				(HH = 00 ~ 23 MM = 00 ~ 59)			
Action Code							

	SELECT			Start TM			
Start TM	6	1	0				
Schedule (1 ~ 3)	6	2	0				
Plan <u>6</u>	6	3	0				
LCR Plan				H	H	M	M
Schedule (1 ~ 3)				(HH = 00 ~ 23 MM = 00 ~ 59)			
Action Code							

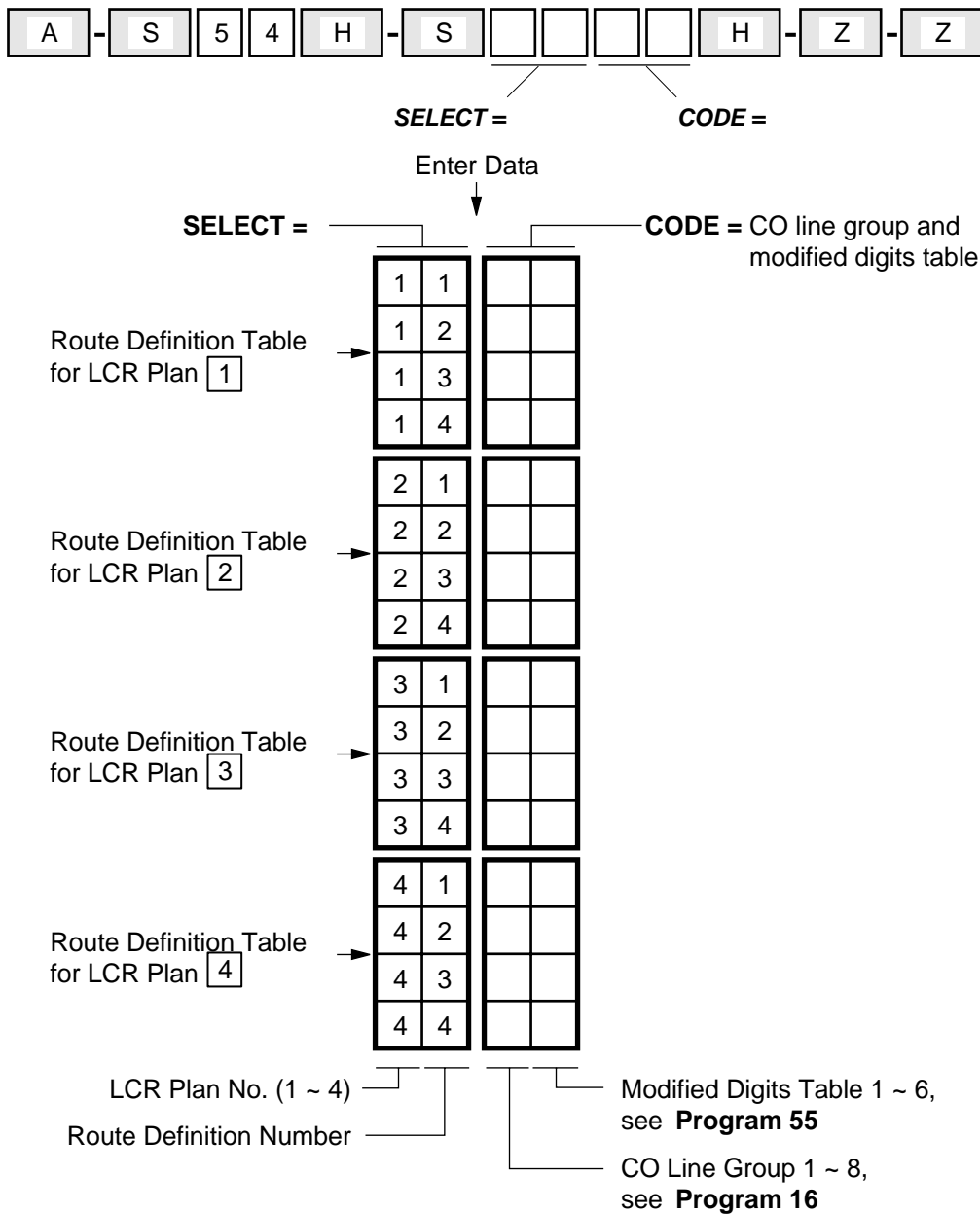
	SELECT DATA (Route Choices)								
Schedule 1 Route Choices For Plan <u>5</u>	5	1	1						
	5	1	2						
	5	1	3						
	5	1	4						
Schedule 2 Route Choices For Plan <u>5</u>	5	2	1						
	5	2	2						
	5	2	3						
	5	2	4						
Schedule 3 Route Choices For Plan <u>5</u>	5	3	1						
	5	3	2						
	5	3	3						
	5	3	4						
LCR Plan				1st	2nd	3rd	Last		
Schedule (1 ~ 3)				(Route Definition No's (1 ~ 4) From Program 54)					
LCR Station Group No. (1 ~ 4) (see Program 56)									

	SELECT DATA (Route Choices)								
Schedule 1 Route Choices For Plan <u>6</u>	6	1	1						
	6	1	2						
	6	1	3						
	6	1	4						
Schedule 2 Route Choices For Plan <u>6</u>	6	2	1						
	6	2	2						
	6	2	3						
	6	2	4						
Schedule 3 Route Choices For Plan <u>6</u>	6	3	1						
	6	3	2						
	6	3	3						
	6	3	4						
LCR Plan				1st	2nd	3rd	Last		
Schedule (1 ~ 3)				(Route Definition No's (1 ~ 4) From Program 54)					
LCR Station Group No. (1 ~ 4) (see Program 56)									

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data assigns starting time as 0000 and Route Definitions as blank for all schedules.
3. If Schedules 1 & 2 start at the same time, then Time of Day schedule change does not occur, and data only needs to be entered for Schedule 1.
4. Press Button/LED 01 to erase data (LED does not light).

PROGRAM 54
LCR ROUTE DEFINITION TABLES (1 ~ 4)



NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data is "11".

PROGRAM 55
LCR MODIFIED DIGITS TABLES

PROGRAM 55-0 LCR MODIFIED DIGITS – DELETE FROM FRONT



SELECT = Modified Digits
Table 1 ~ 6 (six available)

FIGURE = Quantity of Digits
(00 ~ 10) to be deleted.

PROGRAM 55-1 and 2 LCR MODIFIED DIGITS – ADD



SELECT = Modified Digits Table (1 ~ 6)

CODE = Digits added (up to 22). Enter the digits to be added. Pauses may be coded as described in the pause entry reference table below.

Enter 1 to add digits in front of number dialed
Enter 2 to add digits at end of number dialed

DELETE DIGITS TABLES

Table No.	Quantity of Digits
1	
2	
3	
4	
5	
6	

Quantity 10 Max. (00 ~ 10)

PAUSE ENTRY REFERENCE
(Program 55-1, 55-2)

LED	Pause (Seconds)	Record Entry
08	16	P8
07	14	P7
06	12	P6
05	10	P5
04	8	P4
03	6	P3
02	4	P2
01	2	P1

Special Buttons

Button/LED

11 – Clear

10 – Convert DP to DTMF

ADD DIGIT TABLES

Add to FRONT of Dialed Number (Program 55-1)

Table No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Comments	
1																								
2																								
3																								
4																								
5																								
6																								

Add to END of Dialed Number (Program 55-2)

Table No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Comments	
1																								
2																								
3																								
4																								
5																								
6																								

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data leaves all tables blank except Delete Digits, which are all 00.

PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM RECORDS

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**PROGRAM 56
LCR STATION GROUP ASSIGNMENT**



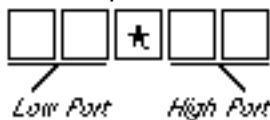
SELECT = Port number(s)
Enter port numbers of stations being assigned. See Note 3 for entering a range of ports.

Enter LCR station Group (1 ~ 4)

Port Number	LCR Station Group No. (1 ~ 4)	Port Number	LCR Station Group No. (1 ~ 4)	Port Number	LCR Station Group No. (1 ~ 4)	Port Number	LCR Station Group No. (1 ~ 4)
00		24		48		72	
01		25		49		73	
02		26		50		74	
03		27		51		75	
04		28		52		76	
05		29		53		77	
06		30		54		78	
07		31		55		79	
08		32		56		80	
09		33		57		81	
10		34		58		82	
11		35		59		83	
12		36		60		84	
13		37		61		85	
14		38		62		86	
15		39		63		87	
16		40		64		88	
17		41		65		89	
18		42		66		90	
19		43		67		91	
20		44		68		92	
21		45		69		93	
22		46		70		94	
23		47		71		95	

NOTES:

1. For more information, see the instructions preceding the record sheets.
2. Initialized data assigns all stations to Group 1.
3. To enter a range of ports, press
4. Refer to **Program 53**.



**PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM
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This table below shows the program options for stations and CO lines for Verified, Forced and Voluntary Account Code dialing.

**TABLE 2-B
ACCOUNT CODE PROGRAM OPTION MATRIX**

Account Code Dial Plan	Account Code Program Options		
	Station		CO Line
	Verified Program 30 LED 14	Forced Program 30 LED 08	Forced Program 15-7 CO LED
Verified (Forced)	On	On	On
Verified (Voluntary)	On	On	Off
Verified (Voluntary)	On	Off	On
Verified (Voluntary)	On	Off	Off
Not Verified (Forced)	Off	On	On
Not Verified (Voluntary)	Off	On	Off
Not Verified (Voluntary)	Off	Off	On
Not Verified (Voluntary)	Off	Off	Off

← System Initialization

PROGRAMMING PROCEDURES-INSTRUCTIONS/SYSTEM RECORDS
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TABLE 2-C
OVERRIDE OPTION MATRIX

Station A May Override Station B ¹		Privacy Override Station A Options Program 30 ³ LED 19	Privacy Override Block Station B Options Program 31 LED 18	Station B Button Options (Program 39)	
Executive ³	Privacy			Privacy ² Button	Privacy Release ² Button
Yes	No	Off	Off	Off	Off
Yes	Yes	Off	Off	Off	On
Yes	No	Off	Off	On	Off
Yes	Yes	Off	Off	On	On
No	No	Off	On	Off	Off
No	Yes	Off	On	Off	On
No	No	Off	On	On	Off
No	Yes	Off	On	On	On
Yes	Yes	On	Off	Off	Off
Yes	Yes	On	Off	Off	On
Yes	No	On	Off	On	Off
Yes	Yes	On	Off	On	On
No	No	On	On	Off	Off
No	Yes	On	On	Off	On
No	No	On	On	On	Off
No	Yes	On	On	On	On

NOTES:

- Station A** attempts to override (Executive or Privacy) **Station B**.
- Normally either just a **Privacy** (PRIVACY) or a **PrivacyRelease** (PRVRLS) is assigned to a telephone (**Program 39**) depending on how it should operate with Privacy Override.
- Program 30**, Button/LED 18 is ON for **Station A**, allowing **Station A** to have executive override to **Station B** for some possibilities in this table. If **Program 30**, LED 18 is OFF for Station A, then it can never executive override any station.