Strata XII_e & XX_e

RELEASE 2

PROGRAMMING PROCEDURES

Strata XIIe & XXe

PROGRAMMING PROCEDURES

TABLE of CONTENTS

ILLUSTRATION LIST

Strata XIIe & XXe

PROGRAMMING PROCEDURES

TABLE LIST

Strata XIIe & XXe

PROGRAMMING PROCEDURES

TABLE LIST (continued)

01 INTRODUCTION

01.00 General

01.01 Data governing overall system operation and feature execution for both systems are stored in read-only memory (ROM) and cannot be altered in the field. However, the data controlling operation of the various options, both system and station, are stored in random-access memory (RAM) and can easily be changed according to individual installation requirements.

01.02 All options are controlled by selections made in the system data tables. An initialization process is provided for verifying predetermined system assignments. The installer can then proceed with any necessary changes.

01.03 All system data changes indicated in this section are made via station 17 (as the input/output device), which may be equipped with either a 10-key or a 20-key EKT (although a 20-key LCD EKT is strongly recommended). Whenever the system is placed in the programming mode, the keys on station 17 are used to enter data while its LEDs display the current data. While station 17 is in the programming mode, the system may still be used in the usual fashion.

01.04 Internal battery power is provided to prevent loss of system data memory in the event of a power failure.

NOTE:
Whenever a system is installed for the first time or the HCAU is changed, the system must be initialized. See Paragraph **04.00**.

01.05 Remote and on-site programming procedures via a terminal are covered in Remote Administration/Maintenance, Section **500-020-600**, of this manual.

02 PROGRAMMING INFORMATION

02.00 General

02.01 A system must be in the programming mode before system data can be verified or altered. With the exception of station 17, normal system functions are not suspended while in the programming mode.

02.02 To aid in programming this system, an overlay has been provided with the installation documentation. Place the programming overlay over the designation strip of the 20-key EKT at station 17. This insures that the key/LEDs are correctly identified and matched with the information given in this section.

02.03 When the system is in the programming mode, station 17 is used to enter the system data in one of two ways:

IMPORTANT!
Station 17 may be equipped with either a 10-key or a 20-key EKT (a 20-key LCD EKT is strongly recommended). However, in all tables and procedures that follow, the overlay key designation (for a 20-key) is given.

- In the majority of programs (Type 1), the various keys are used to change "bits" of system data. The LEDs associated with keys 00 ~ 19 show their status before and after key depression. Each key/LED has a different meaning, depending upon the program number being used.
- In Type 2 programs, the dial pad is used to enter data. In this case, the system, using LEDs 00 ~ 19, verifies the entered data by displaying it in binary format. An LCD EKT also displays the data, if equipped.

02.04 The programming mode is activated by locking in the **SET** switch on the HCAU and then depressing the SPKR key on station 17. After the station has been activated, a program number is dialed on the station dial pad, and the system responds as follows:

Type 1 programs: Station 17 LEDs display the existing data in these categories.

Type 2 programs: LED 10 on station 17 flashes continuously. Actual data can be reviewed without alteration by multiple depressions of the # key.

02.05 Data can be altered while it is being displayed. To input new data via station 17, perform the following:

Type 1 programs: The state of an LED is altered by depressing its associated key. Depressing the key while the LED is "on" will turn it off and vice versa.

Type 2 programs: Data is entered via the dial pad. The LEDs display the data in binary for-

mat. An LCD EKT also displays the data.

02.06 Once the desired data is entered and displayed, it is written into memory by depressing the HOLD key on station 17.

- System and CO line options are written into temporary storage when the HOLD key is depressed. After **all** changes in these categories have been made, transfer the data into working memory per Paragraph **02.06**.
- Station option data (with the exception of CO line access assignments) are written into the main data memory; therefore, all changes are effective immediately after the HOLD key is depressed. However, it is recommended that the data transfer procedures per Paragraph **02.06** be utilized for added programming protection.

02.07 Data may be secured in working memory in one of two ways:

1) If the system is not in service, release the **SET** switch on the HCAU, and cycle (rock) the system power switch **OFF** (HPSU +5V and power LEDs must go off) and **ON** to transfer all data into the main data memory. Note: all calls are dropped when this occurs.
2) If the system is in service and calls should not be dropped, depress the following keys, in the order given here, on station 17: SPKR # * 9 00 01 04 05 08 09 12 13 HOLD. This code secures the data in working memory without cancelling any calls. Release the **SET** switch to exit programming mode.

02.10 Programming COs 18 ~ 21

02.11 Some Type 1 programs use the key/LEDs to represent CO lines. The EKT at station 17 has a maximum of 17 keys that represents CO lines. To program COs 18 ~ 21, it is necessary to dial * after the first digit of the program number. Key/LEDs 01 ~ 04 will then function as COs 18 ~ 21. For example:
For **Program 04**: Dial 0 * 4
For **Program 7XX**: Dial 7 * X X

02.20 Multiple Station Programming

02.21 **Programs 3XX** through **9XX** are used to select options for individual stations (where XX represents the station number of the station being programmed). To save time, it is possible to program *all* stations or groups of stations simultaneously.

02.22 Multiple station programming is accomplished by substituting a special group code for the station number part of the program number (XX). The codes are:

0 0: All stations
0 1: Stations 10 ~ 17
0 2: Stations 18 ~ 25
0 3: Stations 26 ~ 33
0 4: Stations 34 ~ 41
0 5: Stations 42 ~ 49
0 6: Stations 50 ~ 57
0 7: Stations 58 ~ 65

02.23 When the multiple station group code is entered, the LEDs display existing data as follows:

Steady LED: Data is the same for all stations in the dialed group.

Flashing LED: Data is selected for at least one, but not all stations in that group.

02.24 The state of an LED is altered by depressing its associated key. LEDs that are flashing can be cycled through three states (flashing, on, off) by multiple key depressions. Other LEDs cycle between on and off states only. Select data as follows:

LED ON: Selects LED "ON" for all the stations in the group.

LED OFF: Selects LED "OFF" for all the stations in the group.

LED flash: No change to any station in the group.

02.25 Once the proper data is selected, depress the HOLD key in the usual manner to write it into memory.

02.30 Programming With 10-key EKT

02.31 If station 17 is equipped with a 10-key EKT, the system must be so informed by setting LED 07 to "ON" in **Program 01**. This change is effective immediately after the HOLD key is depressed, making it easy to switch between EKTs.

02.32 Once the system recognizes a 10-key EKT, the handset hookswitch can be used as a shift signal to make the 10-key LEDs compatible with the 20-key programming format.

02.33 As shown in Figure 1, when in the programming mode, the key/LEDs represent 00 ~ 09 when the handset is on-hook and 10 ~ 19 when it's off-hook. It is possible to switch back and forth an unlimited number of times without disturbing the data.

NOTE:
This procedure is for programming purposes only! For normal operation, the station 17 EKT is set per **Program 4XX.**

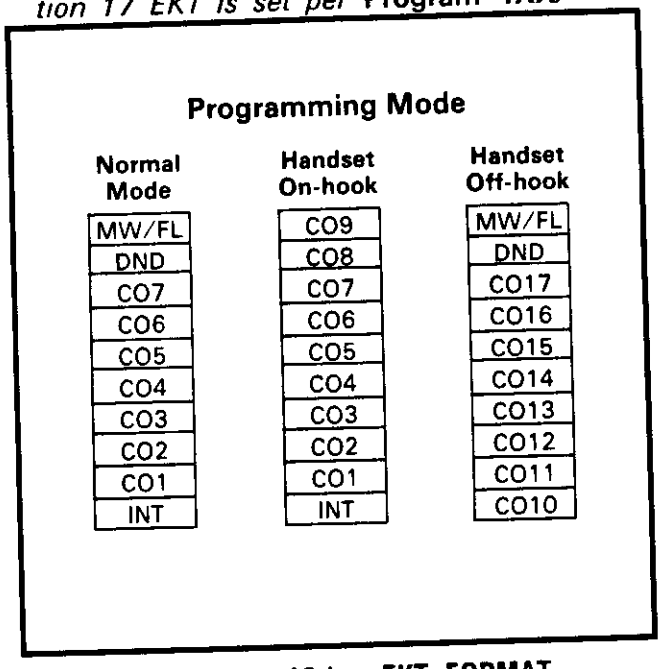

FIGURE 1—10-key EKT FORMAT

03 PREPARATION

03.00 General

03.01 Before system data can be programmed, option selections must be made and then indicated on the System Record Sheet (see Appendix 1). The record sheet, one of which accompanies each HKSU, serves as a programming guide and installation record.

03.02 Programming options are grouped according to the three categories listed below, with several program numbers associated with each category. A different program number is used for each option or group of options being selected.

03.10 Programming Options

03.11 System Assignments

01: System Assignments (Basic)
0#1: Door Phone Selection
02: System Assignments (Options)
0#2: Account Code Digit Length and TIE Line/OPX Selection
03: System Assignments (Options)
04: CO Line Outpulsing Selection
#4: CO Line Identification
05: Automatic Recall From Hold Timing
0#5: Camp-on Timeout
06: Automatic Release On Hold Enable
0#6: Trunk-to-Trunk Connection Enable
07: Automatic Release On Hold Timing
0#7: 1A2 Interface
08: Tenant Service Selection
0#8: Night Ringing Over External Page
09: Single CO Line (Dial 9) Group Selection
09X: CO Line (Dial 91 ~ 98) Group Assignments
0#9: Off-Premises Line Hunting
190: PBX Backup
19X: PBX Access Codes

03.12 Toll Restriction Assignments

100: Toll Restriction System Parameters
101: Toll Restriction Disable
102: Forced Account Code Check
103: Equal Access #1
104: OCC Authorization Code Length #1
105: Equal Access #2
106: OCC Authorization Code Length #2
108: Toll Restriction Override Code #1
109: Toll Restriction Override Code #2
1X0: Toll Restriction Class Parameters
1XY: Toll Restriction Class—Area Code Entry
1XZ: Toll Restriction Class—Office Code Entry
2XY: Toll Restriction Area/Office Code Exception Table
1X1: Toll Restriction Class Area/Office Code Exception Table Selection

03.13 Least Cost Routing (LCR) Assignments

1#00: LCR Home Area Code
1#0X: LCR Special Codes
1#06: LCR Parameters
1#07X: Select Long Distance Information Route
1#08X: Select Local Call Route
1#09: Dial Zero (0) Timeout
1#XY: LCR Area Code Table
1#X8Y: LCR Route Definition

1#X50 ~
53: Start Time A Schedule
1#X60 ~
63: Start Time B Schedule
1#X70 ~
73: Start Time C Schedule
1#9XY: Modified Digits Table
2#XY: LCR Area/Office Code Exception Table

03.14 Station Assignments

3XX: Station CO Line Access
3#XX: HOXB, HMDB, HTIB and HIOB Module Enable
4XX: Station Type Assignment
4#XX: Station Flexible Key Assignments
5XX: Station Class of Service #1
5#XX: Station Class of Service #2
6XX: Station Toll Restriction/LCR Classification
6#XX: Station-to-Station Hunting
7XX: Station Outgoing Call Restriction
81XX ~
83XX: CO Ringing Assignments-DAY
84XX ~
86XX: CO Ringing Assignments-DAY 2
87XX ~
89XX: CO Ringing Assignments-NIGHT
9#XX: Door Phone Ringing Assignments
*X#: Flexible Access Code Numbering
*XX: Flexible Intercom Numbering
#1XX*YY: Speed Dial (Optional)

03.15 The System Record Sheet is used to record the assignment of features for each program. For Type 1 programs, an "X" placed in the record indicates that the associated LED should be turned on (lit) during the programming process. For Type 2 programs, the actual data is recorded.

03.16 Make the system option selections per the following instructions, and record the various choices in the System Record Sheet. Use Tables 5 through 62 for detailed programming instructions.

03.20 System Assignments:

01 Program—System Assignments (Basic)

Fifteen options are selected with this program, using the various keys to change the status of their respective LEDs. For the options selected, mark an X as indicated.

1) Transfer Privacy—mark an X next to 17 if privacy is to be in effect on a transferred call. Leave blank if Alternate Point Answer of a transferred call is to be permitted.

2) Automatic Dialing Override Toll Restriction—mark an X next to 16 if System Automatic Dialing (addresses 60 ~ 99) is to override Toll Restriction. Leave blank if Toll Restriction is to remain in effect.

3) CO Line Groups—mark an X next to 15 if eight CO line groups (dial 91 ~ 98) are required. Leave blank if one group (dial 9) is sufficient.

4) Two CO Line Conferencing—mark an X next to 14 to inhibit two CO line conferencing. Leave blank if two CO line conferencing is to be permitted.

5) Least Cost Routing Access—mark an X next to 13 if Least Cost Routing will be used. Leave blank if LCR not used.

6) DP Make Ratio—mark an X next to 12 if a 33% make/break timing ratio is required. Leave blank if 40% (usual setting) is sufficient.

7) DTMF Signal Time—mark an X next to 11 if 160 ms DTMF signal time is required. Leave blank if signal time is to remain 80 ms.

8) Non-Privacy/Privacy—mark an X next to 09 if the system is to be non-private. Leave blank if the system is to be private.

9) Station 17 10/20-key EKT—mark an X next to 07 if station 17 is equipped with a 10-key EKT for programming purposes. Leave blank if a 20-key EKT is used.

10) Incoming Call Abandon Timeout—mark an X next to 06 if the system should wait for 8 seconds after the last ring to consider an incoming call abandoned. Leave blank if 6 seconds are sufficient.

11) Pause Timing (After Flash)—mark an X next to 05 if a 3-second pause (for dial tone delay) is required after a flash. Leave blank if a 1½-second pause is sufficient.

12) Pause After Flash—mark an X next to 04 if the system is to insert a pause (defined by 05, this program) between a flash and an automatically dialed number. Leave

blank if a pause is not required.

13) Pause Timing (MW/FL or PAU key)—mark an X next to 03 if a 3-second pause (for dial tone delay) is required. Leave blank if a 1½-second pause is sufficient.

14) Flash Timing—mark an X next to 02 if the line-open interval produced by the MW/FL key is to be ½-second. Leave blank if the 2-second open interval is required.

15) Tone First—mark an X next to 00 if intercom calls require tone ringing. Leave blank if they are to have one tone ring than voice announce.

NOTE:
If the system is to have the Off-hook Call Announce feature, voice first (LED 00, off) must be optioned.

0#1 Program—Door Phone Selection

Eighteen options are selected with this program using the various keys to change the status of their respective LEDs. For the options selected, mark an X as indicated.

1) Door Lock Timeout—mark an X next to 17 if the door lock is to operate for 6 seconds. Leave blank if 3 seconds are sufficient.

2) Door Phone 16B Lock—mark an X next to 16 if door phone 16B is to be a door lock output. Leave blank if it is to be a door phone.

3) Door Phone 16C Busy—mark an X next to 15 if the system is to busy-out door phone 16C. Leave blank if it is not to show busy.

4) Door Phone 16B Busy—mark an X next to 14 if the system is to busy-out door phone 16B. Leave blank if it is not to show busy.

5) Station 16 Door Phone/EKT—mark an X next to 13 if station 16 is to be a door phone output. Leave blank if an EKT is to be used at this station.

6) Door Phone 15B Lock—mark an X next to 12 if door phone 15B is to be a door lock output. Leave blank if it is to be a door phone.

7) Door Phone 15C Busy—mark an X next to 11 if the system is to busy-out door phone 15C. Leave blank if it is not to show busy.

8) Door Phone 15B Busy—mark an X next to 10 if the system is to busy-out door phone 15B. Leave blank if it is not to show busy.

9) Station 15 Door Phone/EKT—mark an X next to 09 if station 15 is to be a door phone output. Leave blank if an EKT is to be used at this station.

10) Door Phone 14B Door Lock—mark an X next to 08 if door phone 14B is to be a door lock output. Leave blank if it is to be a door phone.

11) Door Phone 14C Busy—mark an X next to 07 if the system is to busy-out door phone 14C. Leave blank if it is not to show busy.

12) Door Phone 14B Busy—mark an X next to 06 if the system is to busy-out door phone 14B. Leave blank if it is not to show busy.

13) Station 14 Door Phone/EKT—mark an X next to 05 if station 14 is to be a door phone output. Leave blank if an EKT is to be used at this station.

14) Door Phone Alarm (station 13 only)—mark an X next to 04 if door phone 13C is to be a door alarm input. Leave blank if it is to be a door phone.

15) Door Phone 13B Door Lock—mark an X next to 03 if door phone 13B is to be a door lock output. Leave blank if it is to be a door phone.

16) Door Phone 13C Busy—mark an X next to 02 if the system is to busy-out door phone 13C. Leave blank if it is not to show busy.

17) Door Phone 13B Busy—mark an X next to 01 if the system is to busy-out door phone 13B. Leave blank if it is not to show busy.

18) Station 13 Door Phone/EKT—mark an X next to 00 if station 13 is to be a door phone output. Leave blank if an EKT is to be used at this station.

NOTES:
1. *Door Lock keys are assigned to stations in* **Program 4#XX**, *Codes (71 ~ 74).*
2. *An Alarm (Reset) key is available on station 10 only. The Alarm key mode must be programmed as the first* AD *key (on station 10) in* **Program 4#XX**, *Code (*); LED 10 must be on* **Program 03**.

02 Program—System Assignments (Options)

Seven options are selected with this program using the various keys to change the status of their respective LEDs. For the options selected, mark an X as indicated.

1) Trunk-to-Trunk Conference—mark an X next to 17, 16, 15, 14, 13 and/or 12 depending upon how many trunk-to-trunk conferences are to be allowed.

2) Amplified Conference—mark an X next to 11, 10, 09 and/or 08 if system is to have up to four Amplified Conference circuits. Leave blank if system will not have Amplified Conference.

   NOTE:
   Requires customer-supplied amplifier—also used for amplified trunk-to-trunk connections.

3) ACB Warning Tone—mark an X next to 06 if the destination station is to hear a warning tone when an automatic callback is initiated.

4) LCD Timer—mark an X next to 04 if the Dialed Number display on the LCD EKTs is on for 1 minute before changing to Elapsed Time. Leave blank if 15 seconds are sufficient.

5) Night Ringing Over External Page—mark an X next to 02 if Night Ringing Over External Page is required. Leave blank if no ringing is to be heard over External Page. Note: **Program 0#8** selects individual COs to ring.

6) Background Music (BGM) Over External Page —mark an X next to 01 if BGM is to be heard over the External Page circuit. Leave blank if BGM is not to be heard over the External Page circuit.

7) External Page with All Call Page—mark an X next to 00 if the External Page circuit is to be included in an All Call Page. Leave blank if All Call Page is not to be heard over the External Page circuit.

0#2 Program—Account Code Digit Length and TIE Line/OPX Selection

This program has three sections. The first defines the number of digits required in an account code (Forced Account Code feature). Enter the number of digits to be used (4 ~ 15). The second section is only required for TIE line operation; it assigns TIE line class of service and dedicated station circuits for use with an HTIB module (one HTIB requires two stations). And thirdly, HDTU modem speed, repeat ringing, and ABR retry timing.

1) Repeat Ringing—mark an X next to 17 if repeat ringing is required. Leave blank if standard ringing is required.

2) ABR Retry Time—mark an X next to 16 if redial will be every 30 seconds. Leave blank if retry will be every minute.

3) Modem Speed—mark an X next to 15 if the modem speed required is 1200 bps. Leave blank if 300 bps is required.

4) ABR Attempts—mark an X next to 14 if ABR is to occur 10 times. Leave blank if ABR will occur 15 times.

5) TIE Line Class of Service—mark an X next to 12 if TIE line stations 22/23 are to be allowed handsfree answerback to intercom. Leave blank if tone first.

6) TIE Line Class of Service—mark an X next to 11 if TIE line stations 20/21 are to be allowed handsfree answerback to intercom. Leave blank if tone first.

7) TIE Line Assignment—mark an X next to 09 if stations 22 and 23 are to be used for TIE line operation. Leave blank if these stations are to be used for off-premises extensions or EKTs.

8) TIE Line Assignment—mark an X next to 08 if stations 20 and 21 are to be used for TIE line operation. Leave blank if these stations are to be used for off-premises extensions or EKTs.

9) Binary Numbers—mark an X next to 00, 01, 02, 03 and/or 04 to indicate the binary number of the account code length.

   NOTE:
   *LED 01 must also be set for TIE lines (***Program 3#XX***).*

03 Program—System Assignments (Options)

Eleven options are selected with this program, using the various keys to change the status of their respective LEDs. For the options selected, mark an X as indicated.

1) Station 10 ALRM Key—mark an X next to 10 if the AD1 key on station 10 is to be an ALRM key. Leave blank if AD1 key is required.

2) Station 10 DND Key—mark an X next to 09 if the DND key on station 10 is to be a DND key. Leave blank if a NT key is required.

NOTE:
The NT key at station 10 is for a system without DSS 1.

3) Ringing Modes—mark an X next to 08 if three ringing modes (DAY, DAY 2, NIGHT) are used. Leave blank if two ringing modes (DAY, NIGHT) are required.

4) Tenant Service—mark an X next to 07 if the system is to be equipped with Tenant Service.

5) DSS Console Signalling—mark an X next to 06 if calls from a DSS console are to be preceded by a tone. Leave blank if a DSS console call is to be voice first.

6) DSS Console/Call Forward—mark an X next to 05 if the DSS console will recognize the called forward/hunt feature at a called station. Leave blank the DSS console will ignore the call forward/hunt feature.

7) Message Center-Station 12—mark an X next to 04 if station 12 is to be the Message Center.

8) Message Center-Station 11—mark an X next to 03 if station 11 is to be the Message Center.

9) Message Center-Station 10—mark an X next to 02 if station 10 is to be the Message Center.

NOTE:
Only one Message Center is permitted; if more than one station is chosen as a Message Center, the lowest numbered station will be registered.

10) DSS 2—mark an X next to 01 if the system is to be equipped with DSS 2.

11) DSS 1—mark an X next to 00 if the system is to be equipped with DSS 1.

NOTES:
1. *Only one station (10, 11 or 12) may be a Message Center.*
2. AD *keys are assigned in* **Program 4#XX**.

04 Program—CO Line Outpulsing Selection

Selects DTMF tone (MF) or rotary-dial pulse (DP) outpulsing.

- Mark an X next to the appropriate key/LED if DP is required. Leave blank if MF is required.

#4 Program—CO Line Identification

Assigns names to the CO lines for use at stations with LCD-equipped EKTs. Up to 16 characters may be used.

- Enter the required name(s) in the boxes next to the appropriate CO line(s).

05 Program—Automatic Recall from Hold Timing

Sets the timing for the Automatic Recall from Hold feature. (Used only if LEDs 10, 11 and 12 are OFF in **Program 5#XX**.)

1) If recall is desired, select a time period of 16 ~ 160 seconds and mark an X next to the appropriate key/LED in the System Record Sheet. The times **are not** accumulative—only one key/LED can be selected.

2) If no recall is required, mark an X next to 00.

0#5 Program—Camp-on Timeout

Sets the timing for the originating station to be recalled by a CO line that was camped on to a busy station and remains unanswered.

- Select a period of time (16 ~ 64 seconds) and mark an X next to the appropriate key/LED on the System Record Sheet. The times **are not** accumulative—only one key/LED can be selected.

06 Program—Automatic Release on Hold Enable

Selects whether or not the Automatic Release on Hold (AROH) feature is to function on a given CO line. This feature will also release trunk-to-trunk connections if enabled in **Programs 02** and **0#6**.

- Mark an X next to each CO line that **requires** AROH.

NOTE:
Do not enable AROH with TIE lines. If AROH is available, the CO will automati-

cally drop the lines when the outside party hangs up. However, if AROH is not available, the person who sets up the Trunk-to-Trunk Connection must occasionally monitor the call and disconnect the CO lines when the two parties hang up.

0#6 Program—Trunk-to-Trunk Connection Enable

Selects the CO lines to be used for trunk-to-trunk connections. LEDs 01 ~ 17 represent the CO lines (see Paragraph **02.10**).

- Mark an X next to CO lines to be used for trunk-to-trunk connections.

07 Program—Automatic Release on Hold Timing

Selects Cross Bar (XB) or ESS timing for the AROH time required for the CO to open line to enable call to be released from hold—XB greater than 95ms; ESS greater than 450ms. (Has no meaning if AROH was rejected in **Program 06**.)

- Mark an X next to each CO line that **requires** XB timing; leave blank if ESS timing is required.

NOTE:
Do not enable AROH with TIE lines.

0#7 Program—1A2 Interface

- Mark an X next to the CO lines to be bridged with the 1A2 system. Leave blank if they will not be bridged with the 1A2 system.

08 Program—Tenant Service Selection

Informs the system of the CO lines that are assigned to each tenant. Night ringing transfer of lines assigned to Tenants #1 and #2 are controlled by DSS 1 (station 10) and DSS 2 (station 11), respectively. Ringing CO lines assigned to Tenant #1 may be picked up with CPU1 key and Tenant #2 CO lines may be picked up with CPU2 key. LEDs 01 ~ 17 represent the CO lines (see Paragraph **02.10**). (Has no meaning if Tenant Service was not selected in **Program 03**.)

- Mark an X next to each CO line that is to belong to Tenant #2. Leave blank if the line is to belong to Tenant #1.

0#8 Program—Night Ringing Over External Page

Selects whether or not a CO line rings over external page. LEDs 01 ~ 17 represent the CO lines (see Paragraph **02.10**). (Has no meaning if LED 02 was not ON in **Program 02**.)

- Mark an X next to the CO lines that **ring** over external page.

09 Program—Single CO Line (Dial 9) Group Selection

Informs the system of the CO lines that should be considered for selection when a station dials 9. LEDs 01 ~ 17 represent the CO lines (see Paragraph **02.10**). (Used only if LED 15 in **Program 01** is OFF.)

- Mark an X next to each CO line that **is** to be **included** in the "Dial 9" group.

09X Program—CO Line (Dial 91 ~ 98) Group Assignments

Informs the system of the CO lines that should be considered for selection when a station dials 91, 92, 93, 94, 95, 96, 97 or 98. (Used only if LED 15 in **Program 01** is ON.)

- Mark an X next to each CO line/trunk group assignment.

NOTE:
Used only if LED 15 is on in **Program 01**.

0#9 Program—Off-Premises Line Hunting

Selects which CO lines ring the device connected to the "HUNT" output on the HOLB option module. LEDs 01 ~ 17 represent the CO lines (see Paragraph **02.10**). The "TEL" output always rings.

1) With no Off-Premises Line Hunting (LED off):
   - Call comes into CO1: TEL1 and hunt ring.
   - Call comes into CO2: TEL2 rings, no hunt.
   - Call comes into CO3: TEL3 rings, no hunt.

NOTE:
NIGHT mode has no effect whenever LED is off.

2) Off-Premises Line Hunting (LED on)
   - CO1: TEL1 rings (DAY mode): No hunt.
   - CO1: TEL1 rings (NIGHT mode): Hunt rings.
   - CO2 & CO3: TEL2 or 3 rings (DAY mode): No hunt.
   - CO2 & CO3: TEL2 or 3 rings (NIGHT mode): Hunt rings.

190 Program—PBX Backup

Assigns CO lines to behind-PBX operation.

The system recognizes PBX access codes on selected lines.

- Mark an X next to each CO key/LED that **is to be connected** to a PBX station line.

19X Program—PBX Access Codes

Assigns codes that are used to access CO lines connected to a PBX as determined in **Program 190**. The system recognizes the access codes and reacts appropriately for Toll Restriction, Automatic Dialing and Repeat Last Number Dialed.

- Enter the actual one- or two-digit access codes (maximum: 8).

NOTE:
If the access code is a single digit, enter "" in the second column. If all combinations following a particular first digit are to be considered access codes (e.g., 91, 92, 93, etc.), enter "D" (D = key 18 on station 17) in the second column.*

03.30 Toll Restriction Assignments

100 Program—Toll Restriction System Parameters

An entry in this program is required only if 3- or 6-digit toll restriction is desired. Informs the system of the dialing plan in the system home area code. Three types of dialing plans are available. Mark an X next to the LED that indicates the dialing plan area of the installation location.

02: 1 + AC + NXX (long-distance dialing outside home area code)
NXX* (toll dialing within home area code)

01: 1 + AC + NXX (long-distance dialing outside home area code)
1 + NXX (toll dialing within home area code)

00: AC + NXX (long-distance dialing outside home area code)
1 + NXX (toll dialing within home area code)

AC = Area Code
NXX = Office Code
N = 2 ~ 9
X = 0 ~ 9

**This dialing plan is required when the dialing plan area code has interchangeable codes (NXX). There are office codes that follow the area code format due to the unavailability of standard office codes.*

101 Program—Toll Restriction Disable

Assigns Toll Restriction to CO lines. LEDs 01 ~ 17 represent the CO lines (see Paragraph **02.10**).

- Mark an X next to each CO line to which Toll Restriction **will not** apply.

102 Program—Forced Account Code Check

This program applies forced account code to CO lines. Stations accessing these lines are then forced to enter account codes. See **Program 5#XX**, LED 14. (Note: Has no meaning if EKTs are not selected for Forced Account Code in **Program 5#XX**.)

- Mark an X next to the CO lines that **are to force** an account code for the EKTs selected in **Program 5#XX**. LEDs 01 ~ 17 represent the CO lines (see Paragraph **02.10**).

NOTES:
1. **Program 0#2***defines the number of digits in the account code.*
2. *Has no meaning if station are not selected for forced account code in* **Program 5#XX**.

103 Program—Equal Access (10XXX) or Other Common Carrier (OCC) #1

Informs the system of the first 5-digit code (Equal Access or OCC) that is ignored for Toll Restriction purposes.

- Enter the actual Equal Access or OCC digits to be recognized and ignored.

104 Program—OCC Authorization Code Length #1

Informs the system of the number of digits in the first OCC Authorization Code. These digits are also ignored for Toll Restriction purposes when an outgoing call is placed over an OCC.

- Enter the number of digits in the authorization code.

105 Program—Equal Access (10XXX) or Other Common Carrier (OCC) #2

Informs the system of the second 5-digit code (Equal Access or OCC) that is ignored for Toll Restriction purposes.

- Enter the actual Equal Access or OCC digits to be recognized and ignored.

106 Program—OCC Authorization Code Length #2

Informs the system of the number of digits in the second OCC Authorization Code. These digits are also ignored for Toll Restriction purposes when an outgoing call is made over an OCC.

- Enter the number of digits in the authorization code.

NOTES (these notes are appropriate for **Programs 103 ~ 106***:*

1. *Enter the equal access code or Other Common Carrier directory number (5 digits: 10XXX, X = 0 ~ 9).*
2. *Enter the number of digits in the OCC Authorization Code (00 ~ 99).*
3. *Caution: Do not program more digits than required because toll restriction may be defeated.*

108 Program—Toll Restriction Override Code #1

Registers the first of two codes that override toll restriction on outgoing calls.

- Enter the four digits of the first toll restriction override code.

109 Program—Toll Restriction Override Code #2

Registers the second of two codes that override toll restriction on outgoing calls.

- Enter the four digits of the second toll restriction override code.

1X0 Program—Toll Restriction Class Parameters (X = 1 ~ 4)

This program defines parameters for each class of toll restriction (X = 1 ~ 4). There are four classes of toll restriction available on a station-by-station basis. (See **Program 6XX** to select the station class of toll restriction.) This program is required only if 3- or 6-digit toll restriction is desired.

- Mark an X next to the LED for each parameter of each toll restriction class used.

  02: All restricted area codes plus the office code of 555 are allowed, including out-of-area directory assistance calls (e.g., 213 + 555 + 1212).

  01: Overseas operator or unassisted overseas calls are to be restricted (01/011).

  00: Operator or operator-assisted calls are used to be restricted (0).

1XY Program—Toll Restriction Class Area Code Entry (X = Class 1 ~ 4) [Y = allow (2), deny (3) or display (4)]

This program defines the area codes allowed or denied for each toll restriction class. This program is required only if 3- or 6-digit toll restriction is desired. Each class area code table can be defined as an allow (2) or deny (3) table. Initialized data allows all area codes for each class. All allowed area codes can be displayed (4) for each class. For Toll Restriction Class 1, enter all allowed area codes in the upper section of the record sheet and all denied area codes in the lower section. Make additional copies of the record sheet for Toll Restriction Classes 2, 3 and 4.

1XZ Program—Toll Restriction Class Office Code Entry (X = Class 1 ~ 4) [Z = allow (6), deny (7) or display (8)]

This program defines the office codes allowed or denied for each toll restriction class within the home area code. Entry to this program is required only if 3- or 6-digit toll restriction is desired. Each class office code table can be defined as an allow (6) or deny (7) table. Initialized data allows all office codes in the home area code for each class. All allowed office codes can be displayed (8) for each class. See the detailed programming chart for office code entry procedures.

2XY Program—Toll Restriction Area/Office Code Exception Table

Entry to this program is required only if 6-digit (area/office code) toll restriction is desired. There are eight area/office code exception tables available that are defined by X (1 ~ 8). Each table may have one area code and up to 800 office codes entered. The area code is entered when Y = 1 for each table, while office codes are added (Y = 2) or deleted (Y = 3) for each table. All office codes in the table are displayed when Y = 4. Each area/office exception table selected with **Program 1X1** will be an exception (opposite) to the allow (**Program 1X2**) or deny (**Program 1X3**) area code table for each

toll restriction class. See the detailed programming chart for area code and office code entry procedures. The examples below are provided for additional information.

1) Normal restriction for stations in Class 1 (allow all office codes within an area code).
   - **Program 1XY** is programmed to allow (**112**) area code 213. Class 1 stations are allowed to dial all office codes in area code 213.

2) Area/office code exception (allow all office codes within an area code except one) for stations in Class 1.
   - **Program 1XY** remains the same (**112**).
   - **Program 1X1** has area/office code exception Table 1 (INT) selected (**111**).
   - **Program 2XY** (**211** and **212**) are programmed for area code 213 (**212**) and office code 635 also (**211**). Class 1 stations are allowed to dial all office codes in area code 213 *except* 635.

1X1 Program—Toll Restriction Class Area/ Office Code Exception Table Selection (X = Class 1 ~ 4)

Entry to this program is required only if 6-digit (area/office code) toll restriction is desired. There are eight area/office code exception tables available. These exception tables are shared by all four classes of toll restriction. Each class may use any one or all exception code tables. When an exception code table is selected for a toll restriction class, the dialed area code and office code in that table will be an exception to the normal restriction of that area code. See the examples following **Program 2XY**.

- Mark an X next to the LED of each area/ office code exception table (1 ~ 8/00 ~ 07) to be selected for each toll restriction class.

03.30 Least Cost Routing Assignments

1#00 Program—Home Area Code

1) Enter the system's 3-digit home area code.

1#0X Program—LCR Special Codes (X = 1 ~ 5)

Five special codes may be entered.

1) Enter each individual special code.
   Example: 911

1#06 Program—LCR Parameters (WNT, DT, LDI)

1) Mark an X next to 02 if a warning tone is required when the most expensive route is selected by the LCR software. Leave blank if not required.

2) Mark an X next to 01 if dial tone is required after dialing the access code. Leave blank if not required.

3) Mark an X next to 00 if long distance route information (555) will be allowed. Leave blank if not allowed.

1#07X Program—Select Long Distance Information Route (X = 1 ~ 8)

1) Enter the route table number (1 ~ 8) that the system must use for long distance information calls.

1#08X Program—Select Local Call Route (X = 1 ~ 8)

1) Enter the route table number (1 ~ 8) that the system must use for local calls.

1#09 Program—Dial "0" Timeout

Selects the timeout between 0 and the telephone number during dialing.

1) Mark an X next to 03 for 10 seconds delay.

2) Mark an X next to 02 for 8 seconds delay.

3) Mark an X next to 01 for 6 seconds delay.

4) Mark an X next to 00 for 4 seconds delay.

NOTE:
Only one choice is allowed.

1#XY Program—Area Code Table (X = Route Table 1 ~ 8) [Y = Set(2), Delete (3) or Display (4)]

This program defines the area codes to add or delete for each route table.

1) Enter all area codes to be added to Table X.

2) All area codes may be displayed with Y = 4. To step through the codes, depress the # key repeatedly.

1#X8Y Program—LCR Route Definition (X = Route Table 1 ~ 8) (Y = Route Definition 1 ~ 4)

1) Enter 2-digit number. The first digit is is a

trunk group 1 ~ 8 (refer to **Programs 091 ~ 098**). The second digit is the number of the modified digit table to be assigned to this program.

1#X50 ~ 53 Program—LCR Route Table, Start Time A Schedule

This program will define the following areas:

- Route Table Number
- Start Time
- Priority Class
- Route Definition

1) Enter the 4-digit start time (24-hour clock) for each route table (**Program 1#X50**).

NOTE:
Start Time "B" is the stop time for "A"
Start Time "C" is the stop time for "B"
Start Time "A" is the stop time for "C"

2) Select the priority class required (**Programs 1#X51 ~ 53**). Enter the route group numbers (1 ~ 4) required (refer to **Program 1#8XY**).

NOTE:
If a table is to be used 24 hours a day, the Schedule B Start Time must be the same as Schedule A Start Time.

1#X60 ~ 63 Program—LCR Route Table, Start Time B Schedule

This program will define the stop time for a previously selected start time and/or the start time for another period.

1) The procedure is the same as in **Program 1#X50 ~ 53**.

1#X70 ~ 73 Program—LCR Route Table, Start Time C Schedule

1) The information and procedure are the same as **Program 1#X50 ~ 53.**

1#XY Program—Modified Digits Table (X = Modified Digits Table 1 ~ 6) [Y = Delete Digits (0), Add Digits (1)]

1) Delete digits = 0 ~ 10. Add digits = 0 ~ 22.

NOTES:
1. *The quantity of digits that will be deleted from the digits dialed (deletion starts with the first digit).*
2. *A maximum of 22 digits may be added to the digits dialed via these tables. Pauses may also be inserted between digits added by depressing the appropriate keys (00 ~ 08) when the pause is required (a pause is counted as two digits).*
3. *Enter pauses in 2-second increments: 2 ~ 16.*

2) Enter the modified digits in the appropriate tables.

2#XY Program—LCR Area/Office Code Exception Table (X = Area/Office Code Exception Table 1 ~ 8) [Y = Route Table Number (0), Area Code (1), Office Code Allowed (2), Office Code Delete (3), Office Code Display (4)]

This table defines the route table that office codes in a specified area code will use.

1) Enter Area/Office Code Table number (1 ~ 8).

2) Enter the Route Table number required (1 ~ 8).

3) Enter the Area Code required (Y = 1).

4) Enter the Office Codes allowed (Y = 2).

5) Enter the Office Codes deleted (Y = 3).

6) Allowed Office Codes may be displayed (Y = 4).

03.40 Station Assignments

3XX Program—Station CO Line Access

The ability of an individual station to access any of the CO lines is determined by selections made using this program. A station denied access to a CO line by this program does not have key or LED functions for that CO line and cannot seize that line by dialing an access code.

- Selections must be repeated for all stations —mark an X next to each CO key/LED that is to be **accessed** by the station in question. LEDs 01 ~ 17 represent the CO lines (see Paragraph **02.10**).

3#XX Program—HOXB, HMDB, HTIB and HIOB Module Enable

Seven choices are enabled by this program.

1) Mark an X next to 07 if voice mail is connected to the HIOB. Leave blank if voice mail is not connected.

2) Mark an X next to 06 if the telephone or device connected to the HIOB is to use DTMF dialing. Leave blank if dialing is to be from rotary device (telephone).

3) Mark an X next to 04 if this station is to be a modem phone (HMDB). Leave blank if not equipped.

4) Mark an X next to 03 if this station is to be an HIOB module. Leave blank if not equipped.

5) Mark an X next to 02 if the unused OPX station is to show busy. Leave blank if it is not to show busy.

6) Mark an X next to 01 if an HOXB or HTIB is connected to the station. Leave blank if the station is not equipped with an HOXB or HTIB.

7) Mark an X next to 00 if the telephone or device connected to the HIOB is to have privacy. Leave blank if privacy is not required.

NOTES:

1. *For TIE lines, see* **Program 0#2.**
2. *TIE lines and OPXs are assigned in pairs (even/odd). Example: 18/19, 20/21, etc.*
3. *To assign an* ***even*** *OPX/TIE line, mark an X next to 01.*
4. *If an* ***odd*** *OPX/TIE line is not used, busy it out and mark an X next to 02.*

4XX Program—Station Type Assignment

NOTE:
When programming, ***always*** *do* **Program 4XX** *before* **Program 4#XX.** *If* **Program 4XX** *is programmed after* **4#XX,** *the stations' flexible key assignments will be reset to the default data.*

Informs the system of the EKT type being used at each station and the order of CO line appearance. The selections listed below must be repeated for each station. In all cases, mark an X where required.

1) Mark an X next to 16 if you want the first CO line number to be CO19 (location depends on the selection at 09).

2) Mark an X next to 15 if you want the first CO line number to be CO16 (location depends on the selection at 09).

3) Mark an X next to 14 if you want the first CO line number to be CO13 (location depends on the selection at 09).

4) Mark an X next to 13 if you want the first CO line number to be CO10 (location depends on the selection at 09).

5) Mark an X next to 12 if you want the first CO line number to be CO7 (location depends on the selection at 09).

6) Mark an X next to 11 if you want the first CO line number to be CO4 (location depends on the selection at 09).

7) Mark an X next to 10 if you want the first CO line number to be CO1 (location depends on the selection at 09).

8) Mark an X next to 09 if the CO lines are to be assigned from top to bottom (descending order). If 09 is left blank, CO lines are assigned bottom to top (ascending order).

9) Mark an X next to 07 if 20-key pattern C is desired (see Figure 2).

TOP TO BOTTOM

Start @ CO1	
09	MW/FL
10	DND
11	01
12	02
13	03
14	04
15	05
16	06
17	07
INT	08

Start @ CO4	
12	MW/FL
13	DND
14	04
15	05
16	06
17	07
18	08
19	09
20	10
INT	11

Start @ CO7	
15	MW/FL
16	DND
17	07
18	08
19	09
20	10
21	11
01	12
02	13
INT	14

Start @ CO10	
18	MW/FL
19	DND
20	10
21	11
01	12
02	13
03	14
04	15
05	16
INT	17

Start @ CO 13	
21	MW/FL
01	DND
02	13
03	14
04	15
05	16
06	17
07	18
08	19
INT	20

Start @ CO16	
03	MW/FL
04	DND
05	16
06	17
07	15
08	19
09	20
10	21
11	01
INT	02

Start @ CO19	
06	MW/FL
07	DND
08	19
09	20
10	21
11	01
12	02
13	03
14	04
INT	05

FIGURE 2—EKT KEY PATTERNS

10) Mark an X next to 06 if 20-key pattern B is desired (see Figure 2).

11) Mark an X next to 05 if 20-key pattern A is desired (see Figure 2).

12) Mark an X next to 03 if a single-line EKT (with or without MW LED) is equipped.

13) Mark an X next to 01 if a 10-key EKT or a single-line EKT with MW LED is equipped.

14) Mark an X next to 00 if a 20-key EKT is equipped.

4#XX Program—Station Flexible Key Assignments

NOTE:
Do this after **Program 4XX.**

Informs the system of the features that are assigned to the flexible keys at each station.

Any key (except INT) may be assigned a feature code (Figure 3). All assigned feature codes have priority over **Program 4XX** assignments. For each key on every station, write in the name or code for each feature to be assigned.

NOTES:
1. *A feature (code) may be assigned to one key only, except for Automatic Dialing (AD) keys. A feature will be rejected if you try to enter it at another key once its code has been entered. Rejected assignments will default to AD keys.*
2. *A locked AD key is assigned to a system auto-dial location (60 ~ 99). DSS key is assigned to a specific station (10 ~ 41 on XII$_E$; 10 ~ 65 on XX$_E$). A modem key is assigned to the station associated with a modem phone. The modem phone's assignment is station XX.*
3. *Example program sequence:*

4#	XX	Key	Code	Station
4#	10	02	#	13

(Assigns key 02 on station 10 to DSS 13 and assigns LED 02 on station 10 as station 13's busy lamp.)

5XX Program—Station Class of Service #1

Fifteen options are selected with this program, using the various keys to change the status of their respective LEDs. The selections listed below must be repeated for each station. In all cases, mark an X where required.

1) Privacy Override—mark an X next to 17 if the station **is allowed** the Privacy Override feature. Allows an override (break-in) when a CO key is depressed with the CO LED on steady. Both parties can hear an override tone.

NOTE:
A maximum of two stations are permitted to use the Privacy Override feature. If more than two are programmed, only the two lowest numbered stations are allowed to use this feature; the others are ignored.

CODE	DESCRIPTION	CODE	DESCRIPTION	CODE	DESCRIPTION	CODE	DESCRIPTION
01	CO1	15	CO15	67	Pooled Line Gp 7	85	SAVE key
02	CO2	16	CO16	68	Pooled Line Gp 8	87	CFD key
03	CO3	17	CO17	70	ABR key	88	MCO key
04	CO4	18	CO18	71	DL1 key	90	TONE key
05	CO5	19	CO19	72	DL2 key	93	PRV key
06	CO6	20	CO20	73	DL3 key	94	ACB key
07	CO7	21	CO21	74	DL4 key	95	PAU key
08	CO8	*	AD key	78	MM / MA key	96	RDL key
09	CO9	61	Pooled Line Gp 1	79	ANS / CALL key	97	REP key
10	CO10	62	Pooled Line Gp 2	80	MODM key	98	DND key
11	CO11	63	Pooled Line Gp 3	81	MSG key	99	MW/FL key
12	CO12	64	Pooled Line Gp 4	82	CPU2 key	#YY	DSS key
13	CO13	65	Pooled Line Gp 5	83	CPU1 key	*ZZ	Locked AD key
14	CO14	66	Pooled Line Gp 6	84	CPU key		

FIGURE 3—FLEXIBLE KEY ASSIGNMENTS

2) DND Override—mark an X next to 16 if the station **is allowed** the DND Override feature.

3) Executive Override (Dial 3)—mark an X next to 15 for stations that **are allowed** the Executive Override feature. (No limit to the number of stations.)

4) Off-hook Call Announce—mark an X next to 13 if off-hook call announce **is** to be **enabled**. Leave blank if it will not be enabled.

5) Off-Hook Call Announce Dial 2—mark an X next to 12 if dialing 2 is required for off-hook call announce. Leave blank if off-hook call announce is automatic.

NOTE:
LED 12 applies to the station originating OCA and LED 13 applies to the station receiving OCA.

6) Group Page 4—mark an X next to 09 if the station **is included** in Group Page 4.

7) Group Page 3—mark an X next to 08 if the station **is included** in Group Page 3.

8) Group Page 2—mark an X next to 07 if the station **is included** in Group Page 2.

9) Group Page 1—mark an X next to 06 if the station **is included** in Group Page 1.

10) All Call Page —mark an X next to 05 if the station **is included** in an All Call Page.

11) Warning Tone Disabled—mark an X next to 04 if no warning tone will be heard when dialing this station. Leave blank if a warning tone will be heard at the called station.

12) Handsfree Answerback Disabled—mark an X next to 03 if Handsfree Answerback is to be disabled at the station. Leave blank if it is not to be disabled (see MCO key feature).

13) MIC ON—mark an X next to 02 if the microphone and LED is to be ON at the start of a call. LED 01 (MIC key lock) must be on for this feature to function. Leave blank if the microphone on the EKT is to be OFF.

14) MIC Key Lock—mark an X next to 01 if the MIC key is to be operated in the push-on/push-off mode. Leave blank if momentary operation is required.

15) Speakerphone Enabled—mark an X next to 00 if the station **is allowed** to use the Speakerphone feature.

5#XX Program—Station Class of Service #2

Fifteen additional Class of Service features are selected with this program, using the various keys to change the status of their respective LEDs. The selections listed below must be repeated for each station. In all cases, mark an X where required.

1) 6000 LCD/2000 LCD—mark an X next to 17 if an alphanumeric (6000-series) LCD EKT is used. Leave blank if using a non-alphanumeric (2000-series) LCD EKT.

2) Station-to-Station Message Waiting with LCD Display—mark an X next to 16 if the station **is allowed** the Station-to-Station Message Waiting with LCD feature.

3) Speed Dial Memo—mark an X next to 15 if this station **is allowed** Speed Dial Memo. Leave blank if not allowed.

NOTE:
This feature is limited to 16 stations. The system initializes with this feature on stations 10 ~ 25.

4) Forced Account Code—mark an X next to 14 if this station **is required** to use an account code on CO lines programmed to forced account codes (see **Program 102**).

5) Toll Restriction Override Code—mark an X next to 13 if this station **is allowed** to change the Toll Restriction Override code. Leave blank if not allowed. (See Toll Restriction Access Code.)

6) Hold Recall Time—referring to Table 1, mark an X next to the combination of 12, 11 and 10 that corresponds to the recall time desired for each station. If all locations are left blank, the timing for that station will default to that set in **Program 05**.

TABLE 1
HOLD RECALL TIME CODE

KEY/LED	16 sec.	32 sec.	48 sec.	64 sec.	96 sec.	128 sec.	160 sec.
12				X	X	X	X
11		X	X			X	X
10	X		X		X		X

7) Automatic Busy Return Access Code—mark an X next to 09 if this station **is allowed** the Automatic Busy Return feature. Leave blank if it is not allowed.

8) Mark an X next to 07 if automatic off-hook selection is to be CO line Group 94* (defaults to 9 if Single CO Line Group was selected in **Program 01**).

9) Mark an X next to 06 if automatic off-hook selection is to be CO line Group 93* (defaults to 9 if Single CO Line Group was selected in **Program 01**).

10) Mark an X next to 05 if automatic off-hook selection is to be CO line Group 92* (defaults to 9 if Single CO Line Group was selected in **Program 01**).

11) Mark an X next to 04 if automatic off-hook selection is to be CO line Group 91* (defaults to 9 is Single CO Line Group was selected in **Program 01**).

**NOTE:*
If a line in a group is ringing on a station, that line will be selected.

12) Mark an X next to 03 if automatic off-hook selection is to be the CO line assigned to the 01 position.

13) Mark an X next to 02 if automatic off-hook selection is to be INT.

NOTE:
In **Program 01**, *if 15 is left blank, items 5, 6, 7 and 8 above will default to Dial 9. Item 9 has priority over items 5, 6, 7 and 8; item 10 has priority over items 5, 6, 7, 8 and 9.*

14) Ringing Line Preference—mark an X next to 01 if the station is allowed the Ringing Line Preference feature.

15) Automatic Dialing Allowed—mark an X next to 00 if the station is allowed the Automatic Dialing feature.

6XX Program—Station Toll Restriction Classification/LCR Priority Selection

Defines Toll Restriction and Least Cost Routing Priority Selection for individual stations. Selections must be made for each station, as follows:

1) Mark an X next to 12 if this station **is assigned** Least Cost Routing Class 3. (This allows LCR to choose the routes in class 3 only.)

2) Mark an X next to 11 if this station **is assigned** Least Cost Routing Class 2. (This allows LCR to choose the routes in classes 2 and 3.)

3) Mark an X next to 10 if this station **is assigned** Least Cost Routing Class 1. (This allows LCR to choose which of the three classes has the best route.)

4) Digit Free/Restrict—mark an X next to 07 if this station **is not restricted** as to the number of digits that may be dialed. Leave blank if digit restriction is in effect.

NOTE:
If digit restriction is in effect, the station will be allowed to dial the number of digits allowed by its toll restriction, and **NO** *additional digits.*

5) Mark an X next to 06 if Toll Restriction Class 4 **is in effect** at this station.

6) Mark an X next to 05 if Toll Restriction Class 3 **is in effect** at this station.

7) Mark an X next to 04 if Toll Restriction Class 2 **is in effect** at this station.

8) Mark an X next to 03 if Toll Restriction Class 1 **is in effect** at this station.

NOTE:
Programs 100, 1X1, 1XY, 1XZ *and* **2XY** *define and modify Toll Restriction classes and operation.*

9) Mark an X next to 02 if this station **will be restricted** from dialing 0 or 1 as the first or second digit. This entry overrides any Toll Restriction Class assigned to this station.

10) Mark an X next to 01 if the station **will be allowed** to dial 1 + 7-digit number. This entry overrides any Toll Restriction Class assigned to this station.

12) Mark an X next to 00 if this station **will not be restricted**. This entry overrides all other Toll Restriction programming.

6#XX Program—Station-to-Station Hunting

Defines the station hunt destination if the called station is busy.

- Enter the station number of the hunt destination next to the station number called.

7XX Program—Station Outgoing Call Restriction

Restricts a station from outgoing access to any number of CO lines, but leaves it free to answer these lines when they are ringing or on hold. Selections must be made for each station.

- Mark an X next to the CO line that **is** to have **restricted** access by each station.

81XX ~ 83XX Programs—CO Ringing Assignments-DAY

Selects which CO lines ring at a given station when the system is in the DAY mode. Mark an X next to each CO line that is to ring at the station during the DAY mode.

- **Program 81XX** selects immediate ringing.
- **Program 82XX** selects 12-second delayed ringing.
- **Program 83XX** selects 24-second delayed ringing.

84XX ~ 86XX Programs—CO Ringing Assignments-DAY 2

Selects which CO lines ring at a given station when the system is in the DAY 2 mode. Mark an X next to each CO line that is to ring at the station during the DAY 2 mode.

- **Program 84XX** selects immediate ringing.
- **Program 85XX** selects 12-second delayed ringing.
- **Program 86XX** selects 24-second delayed ringing.

87XX ~ 89XX Programs—CO Ringing Assignments-NIGHT

Selects which CO lines ring at a given station when the system is in the NIGHT mode. Mark an X next to each CO line that is to ring at the station during the NIGHT mode.

- **Program 87XX** selects immediate ringing.
- **Program 88XX** selects 12-second delayed ringing.
- **Program 89XX** selects 24-second delayed ringing.

NOTE:
If a CO line is to have the call forward feature, it must be programmed to ring on ***one station only*** *per ringing assignment program.*

9#XX Program—Door Phone Ringing Assignments

Selects which door phones ring at a given station. Selections must be made for each station.

1) Mark an X next to 11 if the door phone connected to door phone control box output 16C is to ring this station. Leave blank if the door phone will not ring this station.

2) Mark an X next to 10 if the door phone connected to door phone control box output 16B is to ring this station. Leave blank if the door phone will not ring this station.

3) Mark an X next to 09 if the door phone connected to door phone control box output 16A is to ring this station. Leave blank if the door phone will not ring this station.

4) Mark an X next to 08 if the door phone connected to door phone control box output 15C is to ring this station. Leave blank if the door phone will not ring this station.

5) Mark an X next to 07 if the door phone connected to door phone control box output 15B is to ring this station. Leave blank if the door phone will not ring this station.

6) Mark an X next to 06 if the door phone connected to door phone control box output 15A is to ring this station. Leave blank if the door phone will not ring this station.

7) Mark an X next to 05 if the door phone connected to door phone control box output 14C is to ring this station. Leave blank if the door phone will not ring this station.

8) Mark an X next to 04 if the door phone connected to door phone control box output 14B is to ring this station. Leave blank if the door phone will not ring this station.

9) Mark an X next to 03 if the door phone connected to door phone control box output 14A is to ring this station. Leave blank if the door phone will not ring this station.

10) Mark an X next to 02 if the door phone connected to door phone control box output 13C is to ring this station. Leave blank if the door phone will not ring this station.

11) Mark an X next to 01 if the door phone con-

nected to door phone control box output 13B is to ring this station. Leave blank if the door phone will not ring this station.

12) Mark an X next to 00 if the door phone connected to door phone control box output 13A is to ring this station. Leave blank if the door phone will not ring this station.

***X# Program—Flexible Access Code Numbering**

Allows the first digit of the following access codes to be changed to be compatible with a flexible numbering plan:

- Door Phone/Monitor Station—66 ~ 68, 661 ~ 673
- CO Line Dial Selection—7XX
- Paging—80 ~ 89
- Trunk Group—9, 91 ~ 98
- Least Cost Routing—9

Enter the new *first* digit of the access code to be changed as desired. Ensure there are no numbering plan conflicts for proper operation.

Example:
Entering [*] [6] [#] [4] *changes the Door Phone/Monitor Station access codes from 66, 67 and 68 to 46, 47 and 48, respectively.*

***XX Program—Flexible Intercom Numbering**

Changes the system intercom number (2-digit) to a new intercom number (1 ~ 4 digits). Enter the new intercom number in the New Intercom Number column next to the system intercom number to be changed. Ensure there are no numbering plan conflicts for proper operation.

Example:
Entering [*] [1] [2] [5] [0] [1] [2] *changes station 12's intercom number to 5012.*

#1XX*YY Program—Optional Programming

Using the system record sheets, record each speed dial number to be programmed in the system and station automatic dialing locations.

NOTES:
1. *Use one record sheet per station, so make enough copies to cover every station in the system.*
2. *Stations may program their individual auto dial numbers, while only station 10 can program system auto dial numbers.*

TABLE LIST

TABLE LIST (continued)

04 PROGRAMMING PROCEDURES

04.00 Initialization

04.01 A list of standard system data assignments (stored in ROM) can be entered any time by initializing the system. The system must be initialized when it is first installed or whenever the HCAU is changed. This allows the system to be tested and any faults corrected before time is spent on programming. Standard data assignments are listed in Table 2 in Paragraph 04.10. (However, if a system is initialized after user-

programmed data has been stored, all user data will be lost.)

04.02 To initialize the system data memory, temporaryily connect a 20-key EKT to the MDF at station 17 and perform the following:

NOTE:
Verify that the battery on the HCAU is connected to ensure that data entered after system initialization is not lost due to power failure. (The SET LED cannot function if the battery is not connected.)

1) Place the system power switch in the **ON** position.

2) Depress the **INT** switch on the HCAU, and hold it in.

3) Depress the **SET** switch and allow it to lock.
   - SET LED goes on.
   - Station 17: All LEDs (except SPKR & MIC) blink continuously.

4) Depress and release the **SET** switch again.
   - SET LED goes off.
   - Station 17: LEDs go off.

5) Release the **INT** switch.

6) Cycle the power switch **OFF** (the HPSU +5V and power LEDs must go out) and **ON**.

04.10 Clearing Automatic Dialing

04.11 The Automatic Dialing memory contains random numbers when the system is powered up initially. The memory, therefore, must be cleared to prevent meaningless numbers from being dialed.

IMPORTANT!
Station 17 may be equipped with either a 10- or a 20-key EKT. Prior to performing the procedure that follows, refer to Paragraph* 02.30, Programming Procedures, *Section* 500-020-300, *for instructions on using a 10-key EKT for programming.

04.12 To clear the Automatic Dialing (-System and -Station) memory (up to 40 numbers), proceed as follows:

1) Lock in the **SET** switch on the HCAU.
   - Station 17: LED 19 lights steadily.

2) To clear codes 10 ~ 33, depress the SPKR key and dial # ▮ 1.
   - SPKR LED flashes continuously.
   - Depress keys 01 05 09 13.
   - Depress the HOLD key.

3) To clear codes 34 ~ 57, depress the SPKR key and dial # ▮ 2.
   - SPKR LED flashes continuously.
   - Depress keys 02 06 10 14.
   - Depress the HOLD key.

4) To clear codes 58 ~ 99, depress the SPKR key and dial # ▮ 3.
   - SPKR LED flashes continuously.
   - Depress keys 03 07 11 15.
   - Depress the HOLD key.

5) Release the **SET** switch on the HCAU:
   - The SET LED and LED 19 on station 17 go off.

04.20 Alphanumeric Messaging Initialization

NOTE:
There are 40 messages available in system memory (60 ~ 99), and 10 available at each station (10 ~ 19).

04.21 To initialize system alphanumeric messages, follow these procedures:

1) Lock in the **SET** switch on the HCAU.
   - Station 17: LED 19 lights steadily.

2) To clear codes 60 ~ 99, depress the SPKR key and dial # ▮ 4.
   - SPKR LED flashes continuously.
   - Depress keys 00 04 08 12.
   - Depress the HOLD key.

04.22 To initialize station alphanumeric messages, follow these procedures:

1) Lock in the **SET** switch on the HCAU.
   - Station 17: LED 19 lights steadily.

2) To clear codes 10 ~ 19, depress the SPKR key and dial # ▮ 5.
   - SPKR LED flashes continuously.
   - Depress keys 01 05 09 13.
   - Depress the HOLD key.

NOTE:
System messages can only be programmed or changed at station 10. When the system is initialized, five messages are automatically stored in memory:
60: OUT TO LUNCH

61: IN A MEETING
62: CALL
63: BACK AT
64: RETURN ON

04.30 Timer Reminder Messaging Initialization

04.31 To clear Timer Reminder messages, follow these procedures:

1) Lock in the **SET** switch on the HCAU.
   - Station 17: LED 19 lights steadily.

2) To clear timer codes, depress the SPKR key and dial # * 7.
   - SPKR LED flashes continuously.
   - Depress keys 03 07 11 15.
   - Depress the HOLD key.

04.40 System Real-Time Clock/Calendar Adjustment

04.41 The following procedures detail how to set the date, time and day in the system.

NOTE:
This operation is possible from station 10 only.

1) Handset on-hook.

2) To set date:
   a) Dial # * 5 1 (or RDL REP 5 1).
   b) Dial in date (year/month/day) in the format YYMMDD. Enter a leading 0 for single-digit month and day.
   c) Depress the # (or RDL) key.

3) To set time:
   a) Dial # * 5 2 (or RDL REP 5 2).
   b) Dial in time (hour/minute/second) in 24-hour clock format HHMMSS. Enter a leading 0 for single digit.
   c) Depress the # (or RDL) key.

4) To set day:
   a) Dial # * 5 3 (or RDL REP 5 3).
   b) Dial in the day (1 represents Sunday, 2 Monday, etc., through 7 for Saturday).
   c) Depress the # (or RDL) key.

04.50 System Data Entry

04.51 System data is entered via station 17 while the system is in the programming mode.

04.52 The system is placed in the programming mode and data is entered as follows:

1) Depress the **SET** switch on the HCAU and allow it to lock.
   - SET LED lights.
   - 19 LED on station 17 goes on.

2) Refer to the System Record Sheet (Appendix 1) for data to be entered and/or changes that must be made.

3) Select the required program number.

4) Refer to the proper programming table for detailed procedures for using each different program.

NOTE:
Each program should be accomplished sequentially until all necessary changes are made.

TABLE 2

INITIALIZED DATA

SYSTEM ASSIGNMENTS

01 Program
System Assignments (Basic)

Alternate Point Answer of Transferred CO Line = Allowed
System Speed Dial Override of Toll Restriction = Not allowed
CO Line Groups = 1 (dial 9)
Two CO Line Conferencing = Allowed
DP Make Ratio = 40%
MF Signal Time = 80 ms
Privacy/Non-Privacy = Privacy
Station 17 = 20-key EKT
Incoming Call Abandon = 6 seconds
Pause Timing After Flash = 1.5 seconds
Pause After Flash = None
Pause Timing After PBX Access Code = 1.5 seconds
Flash Key Timing = 2 seconds
Intercom Signalling = Voice first

TABLE 2—INITIALIZED DATA (continued)

0#1 Program
Door Phone Selection

None Selected

02 Program
System Assignments (Options)

Tandem Switching = EKT 28 ~ 33 selected
Stations 18/19 Amplified Conference = No Amplified Conference
ACB Warning Tone = No time
Display Dialed Number Timeout = 15 seconds
Night Ringing = Excluded from External Page
Background Music = Excluded from External Page
External Page = Not included in All Call Page

0#2 Program
Account Code Digit Length and TIE Line/OPX Selection

Repeat Ring = Normal
ABR Ring Time = 1 minute
Modem Speed = 300 bps
Stations 22/23 = OPX
Stations 20/21 = OPX
Station 22/23 = Tone first
Station 20/21 = Tone first

03 Program
System Assignments (Options)

Station 10 Alarm Key = AD1
Station 10 DND/NT (Night) Key = NT key
Ringing Modes = 2
Tenant Service = Not equipped
Tone First/Voice First = Voice First
Message Center—Station 12 = Not equipped
Message Center—Station 11 = Not equipped
Message Center—Station 10 = Equipped
DSS 2 Station 11 = Not equipped
DSS 1 Station 10 = Not equipped

04 Program
CO Line Outpulsing Selection

DTMF = Equipped

#4 Program
CO Line Identification

None

05 Program
Automatic Recall From Hold Timing

32 Seconds

0#5 Program
Camp-on Timeout

32 Seconds

06 Program
Automatic Release On Hold Enable

Disabled = All CO lines

0#6 Program
CO Tandem Switching

CO Tandem Switching = Disable

07 Program
Automatic Release On Hold Timing

ESS Timing = All CO lines

0#7 Program
1A2 Interface

Not Assigned

08 Program
Tenant Service Selection

Tenant #1 = All CO lines

09, 09X Program
CO Line Group Selection

Dial 9 Group = All CO lines
Dial 91 Group = All CO lines

0#9 Program
Off-Premises Line Hunting

No Hunting Assigned

190 Program
PBX Backup

CO Operation = All CO lines unassigned

19X Program
PBX Access Codes

No Codes Assigned

TABLE 2—INITIALIZED DATA (continued)

TOLL RESTRICTION ASSIGNMENTS

100 Program
Toll Restriction

System Parameters (Dialing Plan)
AC + NNX 1 + O/C Selected

101 Program
Toll Restriction Disable

No Restriction = All CO lines

102 Program
Forced Account Code Check

No Check = All CO lines

103 Program
OCC or Equal Access #1

Blank

104 Program
OCC Authorization Code #1

Blank

105 Program
OCC or Equal Access #2

Blank

106 Program
OCC Authorization Code #2

Blank

108 Program
Toll Restriction Override Code #1

Blank

109 Program
Toll Restriction Override Code #2

Blank

1X0 Program
Toll Restriction Class Parameters

01 or 011 = Allowed
0 + = Allowed
AC + 555 = Not allowed

1XY Program
TR Class Area Code Entry

All Area Codes Allowed

1XZ Program
TR Class Office Code Entry

All Area Codes Allowed

2XY Program
Toll Restriction Area/Office Code Exception Table

Blank

1X1 Program—Toll Restriction Class Area/Office Code Exception Table Selection

None Selected

LEAST COST ROUTING ASSIGNMENTS

1#00 Program
LCR Home Area Code

Blank

1#0X Program
LCR Special Codes

Blank

1#06 Program
LCR Parameters

Blank

1#07X Program
Select Long Distance Information Route Table

Table Chosen = 8

1#08X Program
Select Local Call Route

Table Chosen = 8

1#09 Program
Dial Zero (0) Timeout

6 Seconds

1#XY Program
LCR Area Code Table

Blank

1#X8Y Program
LCR Select Trunk Group

Route Table = 1
Route Group = 1

TABLE 2—INITIALIZED DATA (continued)

1#X50 ~ 53 Program
Start Time A Schedule

Blank

1#X60 ~ 63 Program
Start Time B Schedule

Blank

1#X70 ~ 73 Program
Start Time C Schedule

Blank

1#9XY Program
Modified Digits Table

Table Chosen = P1

2#XY Program
Area/Office Code Route Table

Table Chosen = 8

STATION ASSIGNMENTS

3XX Program
Station CO Line Access

Access Allowed = All lines, all stations

3#XX Program
HOXB, HMDB, HTIB and HIOB
Module Enable

Blank

4XX Program
Station Type Assignment

20-key "A" Assigned = All stations
CO1 Start = All stations

4#XX Program
Station Flexible Key Assignment

Assignment = Basic keystrip

5XX Program
Station Class of Service #1

Privacy Override = Not allowed, all stations
DND Override = Not allowed, all stations
Executive Override= Not allowed, all stations
OCA = Disable
OCA Connection = Automatic
Group Page 84 = Not included
Group Page 83 = Not included
Group Page 82 = Not included
Group Page 81 = Not included
All Call Page = Allowed, all stations
Room Monitor = Warning tone, all stations
Handsfree Answerback = Not allowed, all stations
MIC ON/Idle Mode = OFF, all stations
MIC Key Lock = Momentary, all stations
Speakerphone = Allowed, all stations

5#XX Program
Station Class of Service #2

6000 LCD/2000 LCD = 6000 LCD
Station-to-Station Message Waiting with LCD = Allowed, all stations
Address Memo Memory = Enable
Forced Account Code = Not required, all stations
Toll Restriction Override Code = Not allowed, all stations
Hold Recall Time = Per **Program 05**
Automatic Off-Hook Selection = No selection, all stations
Ringing Line Preference = Selected, all stations
Automatic Dialing = Allowed, all stations

6XX Program
Station Toll Restriction Classification

No Restrictions = All stations

6#XX Program
Station-to-Station Hunting

No Selection = All stations

7XX Program
Station Outgoing Call Restrictions

No Restrictions = All stations

81XX ~ 83XX Program
CO Ringing Assignments-DAY

All Lines Ring Station 10

84XX ~ 86XX Program
CO Ringing Assignments-DAY 2

No CO Ringing Assigned

TABLE 2—INITIALIZED DATA (continued)

87XX ~ 89XX Program
CO Ringing Assignments-NIGHT

All Lines Ring Station 11

9#XX Program
Door Phone Ringing Assignments

Blank

***X# Program**
Flexible Access Code Numbering

Access Code = System

***XX Program**
Flexible Intercom Numbering

Blank

#1XX*YY Program
Optional Programming

Blank

05 SYSTEM DATA PRINTOUT

05.00 System Data Printout Via SMDR

05.01 If the system is equipped with Station Message Detail Recording (SMDR), it is possible to obtain a printout of the system data and speed dialing memory via a printer that is connected to the SMDR output port (HSMB module).

05.02 The data should be printed during a low traffic period since this procedure interferes with normal SMDR output. Any call records generated during a printout will be lost.

05.03 Commands to print system data are entered by station 17 while it is in the programming mode. It is possible to print out all or parts of the system data and speed dial memory. The possible choices are:

System Data:
- All data
- **Programs 0XX ~ 0#XX**
- **Programs 1XX**
- **Program 2XY**
- **Program 3XX**
- **Program 4XX**
- **Program 4#XX**
- **Program 5XX**
- **Program 5#XX**
- **Program 6XX**
- **Program 6#XX**
- **Program 7XX**
- **Programs 81XX ~ 89XX**
- **Program 9#XX**
- **Program *XX**

Speed Dial Memory:
- All data
- System list
- Any individual station list

05.04 To request a printout.

1) Depress the **SET** switch on the HCAU.
   - SET LED goes on.
   - Station 17 LED 19 goes on.
2) Depress the SPKR key on station 17.
   - SPKR LED goes on.
3) Dial # #.
   - The SPKR LED begins to flash.
4) LEDs 00 ~ 08 switch on and off in response to operation of the associated keys. Refer to Tables 3 and 4 and set the appropriate LEDs to the proper pattern for the printout required.
5) Depress the HOLD key.
   - All station 17 LEDs (except 19) go off.
   - Printout begins (see Figures 4 ~ 9 for examples of the printout format).
6) Normal SMDR operation resumes when the printout is complete.
7) Repeat from step 2 until all desired printouts are completed.
8) Release the **SET** switch on the HCAU.

05.05 To stop a printout before it is complete.

1) Depress the SPKR key on station 17.
   - SPKR LED goes on.
2) Dial # #.
   - SPKR LED stays on.
   - LEDs 00 ~ 08 light.

3) Depress the appropriate keys necessary to extinguish all LEDs but the SPKR.

4) Depress the HOLD key.
   - SPKR LED goes off.
   - After a short delay, the printout stops.

5) Normal SMDR functions resume.

TABLE 3
SYSTEM DATA PRINTOUT SELECTION CODES

	PROGRAM NUMBER														
LED	01 ~ 0#9	100 ~ 19X	2XY	1#XY	2#XY	3XX	3#XX	4XX	4#XX	5XX	5#XX	6XX	6#XX	7XX	Print Out All
08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
05	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
04	O	O	O	X	X	O	X	O	X	O	X	O	X	O	O
03	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X
02	O	O	O	O	O	O	O	X	X	X	X	X	X	X	X
01	O	O	X	O	X	X	X	O	O	O	O	X	X	X	X
00	O	X	O	X	O	X	X	O	O	X	X	O	O	X	X

LED on = X LED off = O

TABLE 3
SYSTEM DATA PRINTOUT SELECTION CODES
(continued)

	PROGRAM NUMBER				
LED	81XX ~ 83XX	84XX ~ 86XX	87XX ~ 89XX	9#XX	*XX
08	X	X	X	X	X
07	X	X	X	X	X
06	X	X	X	X	X
05	O	O	O	O	O
04	O	X	O	X	X
03	X	X	X	X	X
02	O	O	O	O	O
01	O	O	O	O	X
00	O	O	X	X	X

LED on = X LED off = O

TABLE 4

AUTOMATIC DIALING MEMORY PRINTOUT SELECTION CODES

AUTO DIAL LISTS (System & Stations 10 ~ 19)

LED	SYS	10	11	12	13	14	15	16	17	18	19
08	X	X	X	X	X	X	X	X	X	X	X
07	O	O	O	O	O	O	O	O	O	O	O
06	X	O	O	O	O	O	O	O	O	O	O
05	X	O	O	O	O	O	O	O	O	O	O
04	X	X	X	X	X	X	X	X	X	X	X
03	O	O	O	O	O	O	O	O	O	X	X
02	O	O	O	O	O	X	X	X	X	O	O
01	O	O	O	X	X	O	O	X	X	O	O
00	O	O	X	O	X	O	X	O	X	O	X

AUTO DIAL LISTS (Stations 20 ~ 29)

LED	20	21	22	23	24	25	26	27	28	29
08	X	X	X	X	X	X	X	X	X	X
07	O	O	O	O	O	O	O	O	O	O
06	O	O	O	O	O	O	O	O	O	O
05	X	X	X	X	X	X	X	X	X	X
04	O	O	O	O	O	O	O	O	O	O
03	O	O	O	O	O	O	O	O	X	X
02	O	O	O	O	X	X	X	X	O	O
01	O	O	X	X	O	O	X	X	O	O
00	O	X	O	X	O	X	O	X	O	X

AUTO DIAL LISTS (Stations 30 ~ 39)

LED	30	31	32	33	34	35	36	37	38	39
08	X	X	X	X	X	X	X	X	X	X
07	O	O	O	O	O	O	O	O	O	O
06	O	O	O	O	O	O	O	O	O	O
05	X	X	X	X	X	X	X	X	X	X
04	X	X	X	X	X	X	X	X	X	X
03	O	O	O	O	O	O	O	O	X	X
02	O	O	O	O	X	X	X	X	O	O
01	O	O	X	X	O	O	X	X	O	O
00	O	X	O	X	O	X	O	X	O	X

TABLE 4

AUTOMATIC DIALING MEMORY PRINTOUT SELECTION CODES (continued)

AUTO DIAL LISTS (Stations 40 ~ 49)

LED	40	41	42	43	44	45	46	47	48	49
08	X	X	X	X	X	X	X	X	X	X
07	O	O	O	O	O	O	O	O	O	O
06	X	X	X	X	X	X	X	X	X	X
05	O	O	O	O	O	O	O	O	O	O
04	O	O	O	O	O	O	O	O	O	O
03	O	O	O	O	O	O	O	O	X	X
02	O	O	O	O	X	X	X	X	O	O
01	O	O	X	X	O	O	X	X	O	O
00	O	X	O	X	O	X	O	X	O	X

AUTO DIAL LISTS (Stations 50 ~ 59)

LED	50	51	52	53	54	55	56	57	58	59
08	X	X	X	X	X	X	X	X	X	X
07	O	O	O	O	O	O	O	O	O	O
06	X	X	X	X	X	X	X	X	X	X
05	O	O	O	O	O	O	O	O	O	O
04	X	X	X	X	X	X	X	X	X	X
03	O	O	O	O	O	O	O	O	X	X
02	O	O	O	O	X	X	X	X	O	O
01	O	O	X	X	O	O	X	X	O	O
00	O	X	O	X	O	X	O	X	O	X

AUTO DIAL LISTS (Stations 60 ~ 65)

LED	60	61	62	63	64	65	All Output
08	X	X	X	X	X	X	X
07	O	O	O	O	O	O	O
06	X	X	X	X	X	X	X
05	X	X	X	X	X	X	X
04	O	O	O	O	O	O	X
03	O	O	O	O	O	O	X
02	O	O	O	O	X	X	X
01	O	O	X	X	O	O	X
00	O	X	O	X	O	X	X

LED on = X LED off = O

```
##  SYSTEM PROGRAMMING     ##

                                                    1:SELECT(LED ON)
             21    16     15       8  7      1INT
0       1     000000      00000000   00000000
0       2     000000      00000000   00000000
0      #2     000000      00001000   00000110
0       3     000000      00010000   00000101
0       4     000000      00000000   01110000
0       5     000000      00000000   00000100
0      #5     000000      00000000   00000010
0       6     000000      00000000   00000000
0      #6     000000      00000000   00000000
0       7     000000      00000000   00000000
0       8     000000      00000000   00000000
0      #8     111111      11111111   11111110
0       9     111111      11111111   11111110
0      91     111111      11111111   11111110
0      92     000000      00000000   00000000
0      93     000000      00000000   00000000
0      94     000000      00000000   00000000
0      #9     000000      00000000   00000000

##  END OF PRINT           ##
```

FIGURE 4—SAMPLE PRINTOUT OF PROGRAMS 01 ~ 0#9

```
##  SYSTEM PROGRAMMING     ##

                                                    1:SELECT(LED ON)
                 21   16    15       8  7      1INT
1      00         000000     00000000  00000001
1      01         000000     00000000  00000000
1      02         000000     00000000  00000000

                        (DATA = DIAL NUMBER)
1      03          10515
1      04             12
1      05          10736
1      06              9
1      08           5555
1      09           3621

                                                    1:SELECT(LED ON)
                 21   16    15       8  7      1INT
1      10         000000     00000000  00000000
1      11         000000     00000000  00000000

1      14      000 ~ 999
1      18      000 ~ 999

.      .          .             .            .
.      .          .             .            .
.      .          .             .            .
                                                    1:SELECT(LED ON)
                21   16      15       8  7      1INT
1      90       000000        00000000  00000000

                        (DATA = DIAL NUMBER)
1      91          81
1      92          82
1      93          83
1      94          84
1      95          *8
1      96
1      97
1      98
##  END OF PRINT            ##
```

FIGURE 5—SAMPLE PRINTOUT OF PROGRAMS 100 ~ 19X

```
##  SYSTEM PROGRAMMING     ##

                        (DATA = DIAL NUMBER)

2     11          212

2     14                        472
                                495
                                669
                        (DATA = DIAL NUMBER)
2     21          317
2     24                        628
                                629
.      .           .            .
.      .           .            .
.      .           .            .
                        (DATA = DIAL NUMBER)
2     81
2     84

##  END OF PRINT           ##
```

FIGURE 6—SAMPLE PRINTOUT OF PROGRAM 2XY

```
##  SYSTEM PROGRAMMING     ##

                                                  1:SELECT(LED ON)
              21    16     15       8  7      1INT
3     10     111111      11111111  11111110
3     11     111111      11111111  11111110
3     12     111111      11111111  11111110
3     13     111111      11111111  11111110
3     14     111111      11111111  11111110
3     15     111111      11111111  11111110
3     16     111111      11111111  11111110
3     17     111111      11111111  11111110
3     18     111111      11111111  11111110
3     19     111111      11111111  11111110
3     20     111111      11111111  11111110
.      .       .           .              .
.      .       .           .              .
.      .       .           .              .
3     65     111111      11111111  11111110

##  END OF PRINT           ##
```

FIGURE 7—SAMPLE PRINTOUT OF PROGRAM 3XX (IDENTICAL TO 4XX, 5XX, 5#XX, 6XX, 6#XX, 7XX, 8XX, 8#XX, 9XX)

```
##   SYSTEM PROGRAMMING   ##

4#     10      10          20          CD10   CD20
                09          19           CD9   CD19
                08          18           CD8   CD18
                07          17           CD7   CD17
                06          16           CD6   CD16
                05          15           CD5   CD15
                04          14           CD4   CD14
                03          13           CD3   CD13
                02          12           CD2   CD12
                01          11           CD1   CD11
 .      .       .           .            .      .
 .      .       .           .            .      .
 .      .       .           .            .      .
4#     65       *           99           AD3   MW/FL
                *           98           AD2   DND
                *           97           AD1   REP
                06          96           CD6   RDL
                05          95           CD5   PAU
                04          94           CD4   ACB
                03          93           CD3   PRV
                02          88           CD2   MCD
                01          87           CD1   CFD
                00          85           INT   SAVE

##   END OF PRINT   ##
```

NOTE:
Columns 1 and 2 give the code for the feature assigned to each key; columns 3 and 4 give the actual features assigned (corresponding to the codes in columns 1 and 2).

FIGURE 8—SAMPLE PRINTOUT OF PROGRAM 4#XX

```
##  REPERTORY DIAL     ##

#00    *60         17147305000
#00    *61         19142731750
#00    *62         12135551212
#00    *63         17148531212
#00    *64         17145551212
#00    *65         17147305000
#00    *66         19142731750
#00    *67         12135551212
#00    *68         17148531212
#00    *69         17145551212
#00    *70         17147305000
#00    *71         19142731750
#00    *72         12135551212
#00    *73         17148531212
#00    *74         17145551212
#00    *75         17147305000
#00    *76         19142731750
#00    *77         12135551212
#00    *78         17148531212
#00    *79         17145551212
#00    *80         17147305000
#00    *81         19142731750
#00    *82         12135551212
#00    *83         17148531212
#00    *84         17145551212
#00    *85         17147305000
#00    *86         19142731750
#00    *87         12135551212
#00    *88         17148531212
#00    *89         17145551212
#00    *90         17147305000
#00    *91         19142731750
#00    *92         12135551212
#00    *93         17148531212
#00    *94         17145551212
#00    *95         17147305000
#00    *96         19142731750
#00    *97         12135551212
#00    *98         17148531212
#00    *99         17145551212
##  END OF PRINT  ##
```

FIGURE 9—SAMPLE PRINTOUT OF SPEED DIAL—SYSTEM

TABLE 5

PROGRAM 01
SYSTEM ASSIGNMENTS (BASIC)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 0 1 on the dial pad.	SPKR LED flashes continuously. The various LEDs indicate present data.
4) Refer to the System Record Sheet. Using the various keys, turn their associated LEDs on or off, as required. The detailed meaning of each key/LED is shown below. *NOTE:* *If any key/LED is not shown, it is not used.*	An X on the record sheet means the LED should be on. If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.

KEY/LED	LED ON	LED OFF
17	Transfer Privacy	Alternate point answer of transferred CO line
16	Automatic Dialing—Override Toll Restriction	Restricted
15*	CO Line Group(s)—Eight (91~98)	CO Line Group(s)—One (9)
14	Two CO Line Conferencing—Inhibit	Allowed
13	Least Cost Routing	No Least Cost Routing
12	DP Make Ratio—33%	40%
11	DTMF Signal Time—160 ms	80ms
09	Non-Privacy	Privacy
07	Station 17—10-key EKT	Station 17—20-key EKT
06	Incoming Call Abandon—8 seconds	6 seconds
05	Pause After Flash—3 seconds	1.5 second
04	Insert Pause After Flash	No Pause
03	Pause (MW/FL or PAU key)—3 seconds	1.5 second
02	Flash—0.5 second	2 seconds
00**	Tone First	Voice First

5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

If LED 15 is off in this program, see* **Program 09; *if LED 15 is on, see* **Program 09X**.
***Voice First is required if system is optioned for Off-hook Call Announce.*

TABLE 6

PROGRAM 0#1
DOOR PHONE SELECTION

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 0 # 1 on the dial pad.	SPKR LED flashes continuously. The various LEDs indicate present data.
4) Refer to the System Record Sheet. Using the various keys, turn their associated LEDs on or off, as required. The detailed meaning of each key/LED is shown below. *NOTE:* *If any key/LED is not shown, it is not used.*	An X on the record sheet means the LED should be on. If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.

KEY/LED	LED ON	LED OFF
17	Door Lock Timeout—6 seconds	3 seconds
16	Door Phone 16B—Door Lock	Door Phone
15	Door Phone 16C—Busy-out	No Busy Signal
14	Door Phone 16B—Busy-out	No Busy Signal
13	Station 16—Door Phone	EKT
12	Door Phone 15B—Door Lock	Door Phone
11	Door Phone 15C—Busy-out	No Busy Signal
10	Door Phone 15B—Busy-out	No Busy Signal
09	Station 15—Door Phone	EKT
08	Door Phone 14B—Door Lock	Door Phone
07	Door Phone 14C—Busy-out	No Busy Signal
06	Door Phone 14B—Busy-out	No Busy Signal
05	Station 14—Door Phone	EKT
04	Door Phone 13C—Alarm*	Door Phone
03	Door Phone 13B—Door Lock	Door Phone
02	Door Phone 13C—Busy-out	No Busy Signal
01	Door Phone 13B—Busy-out	No Busy Signal
00	Station 13—Door Phone	EKT

5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

**Station 13 only.*

TABLE 7

PROGRAM 02
SYSTEM ASSIGNMENTS (OPTIONS)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 0 2 on the dial pad.	SPKR LED flashes continuously. The various LEDs indicate present data.
4) Refer to the System Record Sheet. Using the various keys, turn their associated LEDs on or off, as required. The detailed meaning of each key/LED is shown below. *NOTE:* *If any key/LED is not shown, it is not used.*	An X on the record sheet means the LED should be on. If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.

KEY/LED	LED ON	LED OFF
17	Station 33—Trunk-to-trunk Connection	EKT
16	Station 32—Trunk-to-trunk Connection	EKT
15	Station 31—Trunk-to-trunk Connection	EKT
14	Station 30—Trunk-to-trunk Connection	EKT
13	Station 29—Trunk-to-trunk Connection	EKT
12	Station 28—Trunk-to-trunk Connection	EKT
11	Stations 18 & 19—Amplified Conference	Not Amplified
10	Stations 24 & 25—Amplified Conference	Not Amplified
09	Stations 26 & 27—Amplified Conference	Not Amplified
08	Stations 34 & 35—Amplified Conference	Not Amplified
06	Automatic Callback—Warning Tone	No Warning Tone
04	LCD Display Dialed Number—1 minute	15 seconds
02	Night Ringing over External Page*—Allowed	Not Allowed
01	BGM over External Page—Allowed	Not Allowed
00	External Page with All Call Page—Included	Not Included

5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

***Program 0#8** *selects which individual CO(s) will ring.*

TABLE 8

PROGRAM 0#2
ACCOUNT CODE DIGIT LENGTH and TIE LINE/OPX SELECTION

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 0 # 2 on the dial pad.	SPKR LED flashes continuously. The various LEDs indicate present data.
4) Refer to the System Record Sheet. Using the various keys, turn their associated LEDs on or off, as required. The detailed meaning of each key/LED is shown below. This program also defines the length of the SMDR account code. Enter a number from 4 to 15 via the dial pad.	If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set. For account code length, as each digit is entered, the entry is verified by LEDs as shown.

KEY/LED	LED ON	LED OFF
17	Ringing Repeat	Standard Ring
16	ABR Retry—30 Seconds	1 Minute Retry
15	HDTU Modem Speed—1200 BPS	300 BPS
14	ABR—10 Attempts	ABR—15 Attempts
12	Stations 22/23 TIE Lines—Voice First	Tone First
11	Stations 20/21 TIE Lines—Voice First	Tone First
09	Stations 22/23—TIE Lines	Stations 22/23—OPXs
08	Stations 20/21—TIE Lines	Stations 20/21—OPXs
04 ~ 00	Account Code Digit Length	

X = Select (LED on) Initialized Data: LEDs 01 & 02 on; all other LEDs off.

NOTE:
LEDs 00 ~ 04 set the Account Code Digit Length (4 ~ 15 digits) in binary format per table.

X = LED on
All LEDs off = no data

Digit Length	4	5	6	7	8	9	10	11	12	13	14	15
04							X	X	X	X	X	X
03					X	X						
02	X	X	X	X							X	X
01			X	X					X	X		
00		X		X		X		X		X		X

5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06.**	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

NOTES:
1. *Depressing the # key displays the data without changing it.*
2. *To clear existing data without entering a new number, depress the * key two times.*

TABLE 9

PROGRAM 03
SYSTEM ASSIGNMENTS (OPTIONS)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 0 3 on the dial pad.	SPKR LED flashes continuously. The various LEDs indicate present data.
4) Refer to the System Record Sheet. Using the various keys, turn their associated LEDs on or off, as required. The detailed meaning of each key/LED is shown below. *NOTE:* *If any key/LED is not shown, it is not used.*	An X on the record sheet means the LED should be on. If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.

KEY/LED	LED ON	LED OFF
10	Station 10—ALARM key	AD1 key
09	Station 10—DND key	NT key
08	DSS Console Signalling—3-ring Mode	2-ring Mode
07	DSS Console—Tenant Service	Non-tenant
06	DSS Console Calls*—Tone First	Voice First
05	DSS Console Call Forward—Allowed	Not Allowed
04	Message Center—Station 12	Not Equipped
03	Message Center—Station 11	Not Equipped
02	Message Center—Station 10	Not Equipped
01	DSS 2	Not Equipped
00	DSS 1	Not Equipped

5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06.**	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased

**Voice First must be optioned for Off-hook Call Announce.*

TABLE 10

PROGRAM 04
CO LINE OUTPULSING SELECTION

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 0 4 on the dial pad.	SPKR LED flashes continuously. CO LEDs indicate present data.
4) Refer to the System Record Sheet. Each CO key/LED represents itself; depress the required keys. • LED OFF = DTMF tone operation. • LED ON = Dial Pulse (DP) operation.	An X on the record sheet means the LED should be on. If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06.**	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 11

PROGRAM #4—CO LINE IDENTIFICATION
(LCD EKT Required)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17. LCD is in program mode.
2) Depress the SPKR key on station 17.	SPKR LED steady on. LCD: Program No.?.
3) Dial # 4 on the dial pad	SPKR LED flashes continuously. LCD displays program number.
4) Refer to the System Record Sheet. Depress the required key, and enter the CO line name, as defined in the System Record Sheet, via the dial pad. a) Depress the # key to access alpha characters. b) Move the cursor to the desired position (the left edge of the display for a new message, two spaces to the right of the preprogrammed message to add information). c) Depress the key with a letter you wish to enter. Use the 0 key to shift from letter to letter on the key. For example: • If you press 3 , a D will be displayed. By pressing 0 , the D is changed to E. By pressing 0 again, the E is changed to F. Press 0 again and the F changes to D. • To enter spaces, press 1 . d) If want to enter a number, press the # key to change to numeric characters. Numbers are also entered on the dial pad. Press the # key again to return to alpha characters. e) The following special characters are set by pressing 1 and then pressing 0 to step through the available characters: Q, Z, :, -, +, /.	Cursor appears in LCD display. LCD displays characters as they are entered.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Return to Step 2 in order to continue with this program . . . or . . . 6B) Go to Step 2 in another program table . . . or . . . 6C) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 12

PROGRAM 05
AUTOMATIC RECALL FROM HOLD TIMING

(This program is used only if LEDs 10, 11 and 12 are ALL off in **Program 5#XX***.)*

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 0 5 on the dial pad.	SPKR LED flashes continuously. One LED indicates present data.
4) Refer to the System Record Sheet. Using the various keys, turn an associated LED on or off, as required. The detailed meaning of each key/LED is shown below. *NOTE:* *If any key/LED is not shown, it is not used.*	An X on the record sheet means the LED should be on. Only one LED is permitted to be on, depressing another key will turn that LED on and turn off the previous LED.

KEY/LED	LED ON
07	160 seconds
06	128 seconds
05	96 seconds
04	64 seconds
03	48 seconds
02	32 seconds
01	16 seconds
00	No Recall

5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06.**	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 13

PROGRAM 0#5
CAMP-ON TIMEOUT

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 0 # 5 on the dial pad.	SPKR LED flashes continuously. One LED indicates present data.
4) Refer to the System Record Sheet. Using the various keys, turn an associated LED on or off, as required. The detailed meaning of each key/LED is shown below. *NOTE:* *If any key/LED is not shown, it is not used..*	An X on the record sheet means the LED should be on. Only one LED is permitted to be on; depressing another key will turn that LED on and turn off the previous LED.

KEY/LED	LED ON
03	64 seconds
02	48 seconds
01	32 seconds
00	16 seconds

5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 14

PROGRAM 06
AUTOMATIC RELEASE ON HOLD ENABLE

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 0 6 on the dial pad.	SPKR LED flashes continuously. CO LEDs indicate present data.
4) Refer to the System Record Sheet. Using the various keys, turn their associated LEDs on or off, as required. Each CO key/LED represents itself—that is, if LED 01 is on, CO1 will have AROH during normal operation. If LED 01 is off, AROH will not function on that line. To program COs 18 ~ 21, see Paragraph **02.10**.	An X on the record sheet means the LED should be on (AROH enabled). If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

NOTES:

1. *Do not program AROH with TIE lines. This program is also used to release Trunk-to-Trunk connections if enabled with* **Programs 02** *and* **0#6**.
2. *If Automatic Release from Hold is available, the CO will automatically drop the lines when the outside party hangs up. However, if Automatic Release from Hold is not available, the person who set up the trunk-to-trunk connection must occasionally monitor the call and disconnect the CO lines when the two parties hang up.*

TABLE 15

PROGRAM 0#6
TRUNK-to-TRUNK CONNECTION ENABLE

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 0 # 6 on the dial pad.	SPKR LED flashes continuously. CO LEDs indicate present data.
4) Refer to the System Record Sheet. Using the various keys, turn their associated LEDs on or off, as required. Each CO key/LED represents itself—that is, if LED 01 is on, CO1 will be allowed trunk-to-trunk connection, if LED 01 is off, trunk-to-trunk connection will not be allowed on that line, etc. To program COs 18 ~ 21, see Paragraph **02.10**.	An X on the record sheet means the LED should be on. If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 16

PROGRAM 07
AUTOMATIC RELEASE ON HOLD TIMING

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 0 7 on the dial pad.	SPKR LED flashes continuously. CO LEDs indicate present data.
4) Refer to the System Record Sheet. Using the appropriate keys, turn their associated LEDs on or off, as required. Each CO key/LED represents itself—that is, if LED 01 is on, CO1 will have XB (crossbar) timing for AROH. If LED 01 is off, CO1 will have ESS (electronic) timing, etc. To program COs 18 ~ 21, see Paragraph **02.10**.	An X on the record sheet means the LED should be on. If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

NOTE:
Do not program AROH with TIE lines. This program affects only those CO lines enabled via **Program 06** *(AROH should be enabled for Trunk-to-Trunk connections).*

TABLE 17

PROGRAM 0#7
AUTOMATIC RELEASE ON HOLD TIMING

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 0 # 7 on the dial pad.	SPKR LED flashes continuously. CO LEDs indicate present data.
4) Refer to the System Record Sheet. Using the appropriate keys, turn their associated LEDs on or off, as required. Each CO key/LED represents itself—that is, if LED 01 is on, CO1 is bridged with the 1A2 system. If LED 01 is off, CO1 is not bridged, etc. To program COs 18 ~ 21, see Paragraph **02.10**.	An X on the record sheet means the LED should be on. If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 18

PROGRAM 08
TENANT SERVICE SELECTION

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 0 8 on the dial pad.	SPKR LED flashes continuously. CO LEDs indicate present data.
4) Refer to the System Record Sheet. Using the appropriate keys, turn their associated LEDs on or off, as required. Each CO key/LED represents itself—that is, if LED 01 is on, CO1 will belong to tenant #2. If LED 01 is off, CO1 will belong to tenant #1. To program COs 18 ~ 21, see Paragraph **02.10**.	An X on the record sheet means the LED should be on. If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

NOTE:
This program will have no meaning unless Tenant Service was selected in **Program 03**.

TABLE 19

PROGRAM 0#8
NIGHT RINGING OVER EXTERNAL PAGE

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 0 # 8 on the dial pad.	SPKR LED flashes continuously. CO LEDs indicate present data.
4) Refer to the System Record Sheet. Using the appropriate keys, turn their associated LEDs on or off, as required. Each CO key/LED represents itself—that is, if LED 01 is on, when the system is in night operation, incoming calls over that CO line will ring over the external page; if LED 01 is off, incoming calls over that CO line will not ring in night operation, etc. To program COs 18 ~ 21, see Paragraph **02.10**.	An X on the record sheet means the LED should be on. If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

NOTE:
Use this program only if LED 02 is on in **Program 02**.

TABLE 20

PROGRAM 09
SINGLE CO LINE (DIAL 9) GROUP SELECTION

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 09 on the dial pad.	SPKR LED flashes continuously. CO LEDs indicate present data.
4) Refer to the System Record Sheet. Using the appropriate keys, turn their associated LEDs on or off, as required. Each CO key/LED represents itself—that is, if LED 01 is on, CO1 will be included in the "Dial 9" group. To program COs 18 ~ 21, see Paragraph **02.10**.	An X on the record sheet means the LED should be on. If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

NOTE:
Use this program only if LED 15 is off in **Program 01**.

TABLE 21

PROGRAM 09X
CO LINE GROUPS (DIAL 91 ~ 98) ASSIGNMENTS

1) Lock in the SET switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 09X on the dial pad. (X = 1 ~ 8 depending upon the group being defined.) Dial 091 for "Dial 91" group; 092 for "Dial 92" group, etc.	SPKR LED flashes continuously. CO LEDs indicate present data.
4) Refer to the System Record Sheet. Using the appropriate keys, turn their associated LEDs on or off, as required. Each CO key/LED represents itself—that is, if LED 01 is on, CO1 will be included in the "Dial 9X" group. To program COs 18 ~ 21, see Paragraph **02.10**.	An X on the record sheet means the LED should be on. If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Return to Step 2 in order to continue with this program . . . or . . . 6B) Go to Step 2 in another program table . . . or . . . 6C) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

NOTE:
Use this program only if LED 15 is on in **Program 01.**

TABLE 22

PROGRAM 0#9
OFF-PREMISES LINE HUNTING

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 0 # 9 on the dial pad.	SPKR LED flashes continuously. CO LEDs indicate present data.
4) Refer to the System Record Sheet. Using using the appropriate keys, turn their associated LEDs on or off, as required. To program COs 18 ~ 21, see Paragraph **02.10**. • LED OFF: (DAY and NIGHT mode) Hunt rings with LINE1/TEL1 only. • LED ON (DAY mode): Hunt does not ring with any LINES/TELS. • LED ON (NIGHT mode): Hunt rings with **ALL** LINES/TELS.	An X on the record sheet means the LED should be on. If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 23

PROGRAM 190
PBX BACKUP

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 1 9 0 on the dial pad.	SPKR LED flashes continuously. CO LEDs indicate present data.
4) Refer to the System Record Sheet. Using the appropriate keys, turn their associated LEDs on or off, as required. Each CO key/LED represents itself—that is, if LED 01 is on, the system assumes that the CO1 line is connected to a PBX line and will cause features such as Toll Restriction and Automatic Dialing to function accordingly, etc. To program COs 18 ~ 21, see Paragraph **02.10**.	An X on the record sheet means the LED should be on. If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 24

PROGRAM 19X
PBX ACCESS CODES

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 1 9 X on the dial pad. X = 1 ~ 8 (corresponding to the access code being programmed). Dial 1 9 1 (X = 1) to program first access code, 1 9 2 (X = 2) to program second access code, etc.	SPKR LED flashes continuously. Various LEDs indicate present data.
4) Refer to the System Record Sheet. Using the dial pad, enter the required access code (two digits **must** be entered). • If the access code is a single digit, enter # as the second digit. • If all combinations following a particular first digit are to be considered access codes (e.g., 91, 92, 93, etc.), depress key 18 (= "D" on record sheet) for the second digit.	LEDs 00 ~ 03 indicate data in binary format. LED 10 or 11 indicates which digit is being displayed.

Key/LED	Start	1st Digit	2nd Digit
11			Steady
10	Flash	Steady	

NOTES:
1. *Depressing the # key displays the data without changing it. The first # will display the first digit; the second # will display the second digit, etc.*
2. *To clear existing data without entering a new number, depress the # key two times.*

X = LED on
All LEDs off = no data

Binary Numbers	1	2	3	4	5	6	7	8	9	0	D
03								X	X	X	X
02				X	X	X	X				X
01		X	X			X	X			X	
00	X		X		X		X		X		X

5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Return to Step 2 in order to continue with this program . . . or . . . 6B) Go to Step 2 in another program table . . . or . . . 6C) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 25

PROGRAM 100
TOLL RESTRICTION SYSTEM PARAMETERS
(DIALING PLAN)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 1 0 0 on the dial pad.	SPKR LED flashes continuously. An LED indicates present data.
4) Refer to the System Record Sheet. Turn the associated LED on for the dialing plan of the Home Area Code.	An X on the record sheet means the LED should be on. Only one LED may be on at one time. If the LED is already on, depressing the associated key will turn it off and vice versa.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06.**	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 26

PROGRAM 101
TOLL RESTRICTION DISABLE

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 1 0 1 on the dial pad.	SPKR LED flashes continuously. CO LEDs indicate present data.
4) Refer to the System Record Sheet. Using the appropriate keys, turn their associated LEDs on or off, as required. Each CO key/LED represents itself—that is, if LED 01 is on, toll restriction is not applied to that CO1 line; if LED 01 is off, toll restriction is applied to that CO1, etc. To program COs 18 ~ 21, see Paragraph **02.10**.	An X on the record sheet means the LED should be on. If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 27

PROGRAM 102
FORCED ACCOUNT CODE CHECK

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 1 0 2 on the dial pad.	SPKR LED flashes continuously. CO LEDs indicate present data.
4) Refer to the System Record Sheet. Using the appropriate keys, turn their LEDs on or off, as required. To program COs 18 ~ 21, see Paragraph **02.10**. • LED ON = Forced Account Codes are checked. • Each CO key/LED represents itself—that is, if the LED 01 is on, stations calling out over CO1 will be forced to enter an account code (if required by **Program 5#XX**).	An X on the record sheet means the LED should be on. If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 28

PROGRAM 103/105
OTHER COMMON CARRIER or EQUAL ACCESS #1 and #2

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 103 (105) on the dial pad.	SPKR LED flashes continuously. LEDs indicate present data.
4) Refer to the System Record Sheet. This program registers the 1st & 2nd equal access (OCC) numbers used by the system. These 5-digit numbers are entered via the dial pad.	As each digit is entered, the entry is verified by LEDs as shown below.

Key/LED	Start	1st Digit	2nd Digit	3rd Digit	4th Digit	5th Digit
12					Steady	Steady
11			Steady	Steady		
10	Flash	Steady		Steady		Steady

X = LED on
All LEDs off = no data

Binary Numbers:	1	2	3	4	5	6	7	8	9	0
03								X	X	X
02				X	X	X	X			
01		X	X			X	X			X
00	X		X		X		X		X	

5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off. New data is stored, previous data is erased.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off.

NOTE:
Program 105 *follows the same procedure as* **Program 103.**
Program 105 *is used to register the second OCC number used by the system.*

TABLE 29

PROGRAM 104/106
OTHER COMMON CARRIER AUTHORIZATION CODE LENGTHS #1 and #2

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 104 (106) n the dial pad.	SPKR LED flashes continuously. The various LEDs indicate present data.
4) Refer to the System Record Sheet. This program defines the lengths of the authorization codes for OCC #1 & #2. These 2-digit numbers are entered via the dial pad.	As each digit is entered, the entry is verified by LEDs as shown below.

Key/LED	Start	1st Digit	2nd Digit
11			Steady
10	Flash	Steady	

X = LED on
All LEDs off = no data

Binary Numbers:	1	2	3	4	5	6	7	8	9	0
03								X	X	X
02				X	X	X	X			
01		X	X			X	X			X
00	X		X		X		X		X	

5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off. New data is stored, previous data is erased.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off.

NOTE:
Program 106 *follows the same procedure as* **Program 104.**
Program 106 *defines the length of OCC#2 authorization code.*

TABLE 30

PROGRAM 108/109
TOLL RESTRICTION OVERRIDE CODES #1 and #2

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 108 (109) on the dial pad.	SPKR LED flashes continuously. LEDs indicate present data.
4) Refer to the System Record Sheet. Enter the 4-digit Toll Restriction Override Codes via the dial pad.	As each digit is entered, the entry is verified by LEDs as shown below.

Key/LED	Start	1st Digit	2nd Digit	3rd Digit	4th Digit
12					Steady
11			Steady	Steady	
10	Flash	Steady		Steady	

X = LED on
All LEDs off = no data

Binary Numbers:	1	2	3	4	5	6	7	8	9	0
03								X	X	X
02				X	X	X	X			
01		X	X			X	X			X
00	X		X		X		X		X	

5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off. New data is stored, previous data is erased.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06.**	SET LED goes off. Station 17 LED 19 goes off.

NOTE:
Program 5#XX, *LED 13 enables stations to use Toll Restriction Override Codes 1 & 2.*

TABLE 31

PROGRAM 1X0
TOLL RESTRICTION CLASS PARAMETERS

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 1 X 0 on the dial pad.	SPKR LED flashes continuously. An LED indicates present data.
4) Refer to the System Record Sheet. Using the various keys, turn their associated LEDs on or off, as required. The detailed meaning of each key/LED is shown below.	An X on the record sheet means the LED should be on. If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.

NOTE:
If any key/LED is not shown, it is not used.

KEY/LED	LED ON	LED OFF
02	Area code + 555 + XXXX—Allowed	Not Allowed
01	01 or 011 Overseas Restricted	Allowed
00	0 + Restricted	Allowed

5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 32

PROGRAM 1XY
TOLL RESTRICTION CLASS AREA CODE ENTRY
(LCD TELEPHONE REQUIRED)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17. LCD is blank.
2) Depress the SPKR key on station 17.	SPKR LED steady on. LCD is blank.
3) Dial 1X2 (Allow), 1X3 (Deny) or 1X4 (Display) as required. (X = Restriction class 1 ~ 4.)	SPKR LED flashes continuously. LCD displays dialed number.
4) Press # key.	1 X 2 = LCD is blank. 1 X 3 = LCD is blank. 1 X 4 = LCD displays all allowed codes.
5) Enter first area code in range sequence (start).	LCD displays code entered.
6) Depress * key.*	LCD shifts left to provide space for next code.
7) Enter final area code in range sequence (stop).*	LCD displays code entered.
8) Depress # key.	LCD is blank.
9) Return to Step 5 to enter additional area codes.	
10) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
11A) Return to Step 2 in order to continue with this program . . . or . . . 11B) Go to Step 2 in another program table . . . or . . . 11C) Transfer data into working memory per Paragraph **02.06.**	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

**Skip Steps 6 and 7 if only one area code in sequence is being entered.*

TABLE 33

PROGRAM 1XZ
TOLL RESTRICTION CLASS OFFICE CODE ENTRY
(LCD TELEPHONE REQUIRED)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17. LCD is blank.
2) Depress the SPKR key on station 17.	SPKR LED steady on. LCD is blank.
3) Dial 1X6 (Allow), 1X7 (Deny) or 1X8 (Display) as required. (X = Restriction class 1 ~ 4.)	SPKR LED flashes continuously. LCD displays dialed number.
4) Press # key.	1 X 6 = LCD is blank. 1 X 7 = LCD is blank. 1 X 8 = LCD displays all allowed codes.
5) Enter first office code in range sequence (start).	LCD displays code entered.
6) Depress * key.*	LCD shifts left to provide space for next code.
7) Enter final office code in range sequence (stop).*	LCD displays code entered.
8) Depress # key.	LCD is blank.
9) Return to Step 5 to enter additional office codes.	
10) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
11A) Return to Step 2 in order to continue with this program . . . or . . . 11B) Go to Step 2 in another program table . . . or . . . 11C) Transfer data into working memory per Paragraph **02.06.**	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

**Skip Steps 6 and 7 if only one office code in sequence is being entered.*

TABLE 34

PROGRAM 2XY
TOLL RESTRICTION AREA/OFFICE CODE EXCEPTION TABLE
(LCD TELEPHONE REQUIRED)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17. LCD is blank.
2) Depress the SPKR key on station 17.	SPKR LED steady on. LCD is blank.
3) Dial 2 X 1 (X = Table 1 ~ 8).	LCD displays dialed number, then shifts left to provide space for next entry (or displays current area code).
4) Enter area code.	LCD clears and displays area code entered. Binary data is shown on LEDs 00 ~ 03.
5) Depress the HOLD key.	LCD is blank.
6) Depress the SPKR key.	SPKR LED steady on. LCD is blank.
7) Dial 2 X 2 (Allow), 2 X 3 (Deny) or 2 X 4 (Display) as required. (X = Restriction class 1 ~ 8.)	SPKR LED flashes continuously. LCD displays dialed number.
8) Press # key.	2 X 2 = LCD is blank. 2 X 3 = LCD is blank. 2 X 4 = LCD displays all allowed codes.
9) Enter first office code in range sequence (start).	LCD displays code entered.
10) Depress * key.*	LCD shifts left to provide space for next code.
11) Enter final office code in range sequence (stop).*	LCD displays code entered.
12) Depress # key.	LCD is blank.
13) Return to Step 5 to enter additional office codes.	
14) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
15A) Return to Step 2 in order to continue with this program . . . or . . . 15B) Go to Step 2 in another program table . . . or . . . 15C) Transfer data into working memory per Paragraph **02.06.**	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

**Skip Steps 10 and 11 if only one office code in sequence is being entered.*

TABLE 35

PROGRAM 1X1
TOLL RESTRICTION CLASS AREA/OFFICE CODE EXCEPTION TABLE SELECTION

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 1X1 on the dial pad. (X = Restriction class 1 ~ 4, as defined in **Program 6XX**.)	SPKR LED flashes continuously. The various LEDs indicate present data.
4) Refer to the System Record Sheet. Using the various keys, turn their associated LEDs on or off, as required. The detailed meaning of each key/LED is shown below. *NOTE:* *If any key/LED is not shown, it is not used.*	An X on the record sheet means the LED should be on. If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.

KEY/LED	LED ON	LED OFF
07	Area/Office Code Table 8 Selected	Not Selected
06	Area/Office Code Table 7 Selected	Not Selected
05	Area/Office Code Table 6 Selected	Not Selected
04	Area/Office Code Table 5 Selected	Not Selected
03	Area/Office Code Table 4 Selected	Not Selected
02	Area/Office Code Table 3 Selected	Not Selected
01	Area/Office Code Table 2 Selected	Not Selected
00	Area/Office Code Table 1 Selected	Not Selected

5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Return to Step 2 in order to continue with this program . . . or . . . 6B) Go to Step 2 in another program table . . . or . . . 6C) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 36
PROGRAM 1#00
LEAST COST ROUTING HOME AREA CODE ENTRY
(LCD EKT REQUIRED)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17. LCD: PROGRAM MODE
2) Depress the SPKR key on station 17.	SPKR LED steady on. LCD: PROGRAM NO.?
3) Dial 1 # 0 0 on the dial pad.	SPKR LED flashes continuously. LCD: DATA = (indicates present data)
4) Refer to the System Record Sheet. Using the dial pad, enter the system's home area code. *NOTE:* *To clear existing data without entering a new number, depress the ▮ key once for each digit.*	LCD: (displays code entered)
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06.**	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 37

PROGRAM 1#0X
LEAST COST ROUTING SPECIAL CODES
(LCD EKT REQUIRED)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17. LCD: PROGRAM MODE
2) Depress the SPKR key on station 17.	SPKR LED steady on. LCD: PROGRAM NO.?
3) Dial 1 # 0 X on the dial pad. X = 1 ~ 5 corresponds to five different special codes that may be entered.	SPKR LED flashes continuously. LCD: DATA = (indicates present data)
4) Refer to the System Record Sheet. Using the dial pad, enter the special code number.	LCD displays code entered.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 38

PROGRAM 1#06
LEAST COST ROUTING PARAMETERS
(LCD EKT REQUIRED)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17. LCD: PROGRAM MODE
2) Depress the SPKR key on station 17.	SPKR LED steady on. LCD: PROGRAM NO.?
3) Dial 1 # 0 6 on the dial pad.	SPKR LED flashes continuously. LCD: (displays program number) Various LEDs indicate present data.
4) Refer to the System Record Sheet. Using keys 00 ~ 02, turn their associated LEDs ON or OFF, as required.	LCD displays code entered.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06.**	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 39

PROGRAM 1#07X
SELECT LONG DISTANCE INFORMATION (LDI) ROUTE
(LCD EKT REQUIRED)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17. LCD: PROGRAM MODE
2) Depress the SPKR key on station 17.	SPKR LED steady on. LCD: PROGRAM NO.?
3) Dial 1 # 0 7 on the dial pad.	SPKR LED flashes continuously. LCD: DATA = 8
4) Refer to the System Record Sheet. Using the dial pad, enter X (X = 1 ~ 8, corresponding to one of eight route table numbers).	LCD displays code entered.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06.**	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 40

PROGRAM 1#08X
SELECT LOCAL CALL ROUTE
(LCD EKT REQUIRED)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17. LCD: PROGRAM MODE
2) Depress the SPKR key on station 17.	SPKR LED steady on. LCD: PROGRAM NO.?.
3) Dial 1 # 0 8 on the dial pad.	SPKR LED flashes continuously. LCD: DATA = 8
4) Refer to the System Record Sheet. Using the dial pad enter X. X = 1 ~ 8, corresponding to one of eight route table numbers.	LCD displays code entered.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06.**	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 41

PROGRAM 1#09
DIAL ZERO (0) TIMEOUT
(LCD EKT REQUIRED)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17. LCD: PROGRAM MODE
2) Depress the SPKR key on station 17.	SPKR LED steady on. LCD: PROGRAM NO.?
3) Dial 1 # 0 9 on the dial pad.	SPKR LED flashes continuously. LCD: (displays dialed number) An LED indicates present data.
4) Refer to the System Record Sheet. Using one key (00 ~ 03), turn its associated LED ON or OFF as required. *NOTE:* *Only one LED may be on at a time.*	An X on the record sheet means the LED should be on. Only one LED is permitted to be on; depressing another key will turn that LED on and turn off the previous LED.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 42

PROGRAM 1#XY
LEAST COST ROUTING AREA CODE TABLE
(LCD TELEPHONE REQUIRED)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17. LCD: PROGRAM MODE
2) Depress the SPKR key on station 17.	SPKR LED steady on. LCD: PROGRAM NO.?
3) Dial 1 # X 2 (Allow), 1 # X 3 (Delete) or 1 # X 4 (Display) as required. (X = Route Table 1 ~ 8.)	SPKR LED flashes continuously. LCD: (displays dialed number)
4) Press # key.	1 # X 2 LCD: DATA = 1 # X 3 LCD: DATA = 1 # X 4 LCD: (displays all allowed codes)
5) Enter first area code in range sequence (start).	LCD: (displays code entered)
6) Depress * key.*	LCD: (shifts left to provide space for next code)
7) Enter final area code in range sequence (stop).*	LCD: (displays code entered)
8) Depress # key.	Number temporarily stored.
9) Return to Step 5 to enter additional area codes.	
10) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
11A) Return to Step 2 in order to continue with this program . . . or . . . 11B) Go to Step 2 in another program table . . . or . . . 11C) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

**Skip Steps 6 and 7 if only one area code in sequence is being entered.*

TABLE 43

PROGRAM 1#X8Y
LEAST COST ROUTE DEFINITION
(LCD EKT REQUIRED)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17. LCD: PROGRAM MODE
2) Depress the SPKR key on station 17.	SPKR LED steady on. LCD: PROGRAM NO.?.
3) Dial 1 # X 8 Y on the dial pad. X = Route Table 1 ~ 8; Y = Route Definition 1 ~ 4.	SPKR LED flashes continuously. LCD: DATA =
4) Refer to the System Record Sheet. Using the dial pad, enter the Route Definition number and Modified Digits Table number.	LEDs 00, 01, 02 & 03 show data in binary format. LEDs 10 & 11 indicate which digits are being displayed.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 44

PROGRAM 1#X50 ~ 53
START TIME A SCHEDULE
(LCD EKT REQUIRED)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17. LCD: PROGRAM MODE
2) Depress the SPKR key on station 17.	SPKR LED steady on. LCD: PROGRAM NO.?
3) Dial 1#X50 ~ 53 on the dial pad. X = Route Table 1 ~ 8.	SPKR LED flashes continuously. LCD: (displays dialed number)
4) Refer to the System Record Sheet. Enter the required data for 50 ~ 53 via the dial pad.	LCD: (displays code entered)
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Return to Step 2 in order to continue with this program . . . or . . . 6B) Go to Step 2 in another program table . . . or . . . 6C) Transfer data into working memory per Paragraph **02.06.**	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 45

PROGRAM 1#X60 ~ 63
START TIME B SCHEDULE
(LCD EKT REQUIRED)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17. LCD: PROGRAM MODE
2) Depress the SPKR key on station 17.	SPKR LED steady on. LCD: PROGRAM NO.?
3) Dial 1#X60 ~ 63 on the dial pad. X = Route Table 1 ~ 8.	SPKR LED flashes continuously. LCD: (displays dialed number)
4) Refer to the System Record Sheet. Enter the required data for 60 ~ 63 via the dial pad.	LCD: (displays code entered)
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Return to Step 2 in order to continue with this program . . . or . . . 6B) Go to Step 2 in another program table . . . or . . . 6C) Transfer data into working memory per Paragraph **02.06.**	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 46

PROGRAM 1#X70 ~ 73
START TIME C SCHEDULE
(LCD EKT REQUIRED)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17. LCD: PROGRAM MODE
2) Depress the SPKR key on station 17.	SPKR LED steady on. LCD: PROGRAM NO.?
3) Dial 1#X70 ~ 73 on the dial pad. X = Route Table 1 ~ 8.	SPKR LED flashes continuously. LCD: (displays dialed number)
4) Refer to the System Record Sheet. Enter the required data for 70 ~ 73 via the dial pad.	LCD: (displays code entered)
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Return to Step 2 in order to continue with this program . . . or . . . 6B) Go to Step 2 in another program table . . . or . . . 6C) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 47

PROGRAM 1#9XY
MODIFIED DIGITS TABLE
(LCD EKT REQUIRED)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17. LCD: PROGRAM MODE
2) Depress the SPKR key on station 17.	SPKR LED steady on. LCD: PROGRAM NO.?
3) Dial 1 # 9 X Y on the dial pad. X = Modified Digits Table 1 ~ 6, Y = (0) delete, (1) add.	SPKR LED flashes continuously. LCD: (displays dialed number) Various LEDs indicate present data.
4) Refer to the System Record Sheet. Using the dial pad: A) Delete Table: Enter the quantity of digits to be deleted from the dialed number. B) Add Table: Enter the required modified digits to be added to the dialed number. To insert pauses (see table for duration in seconds) while adding digits, press the appropriate key when pause is required. *NOTE:* *Digits may be added or deleted in the same Modified Digits Table.*	LCD: (displays digits entered)
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Return to Step 2 in order to continue with this program . . . or . . . 6B) Go to Step 2 in another program table . . . or . . . 6C) Transfer data into working memory per Paragraph **02.06.**	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

KEY/LED	PAUSE
08	16
07	14
06	12
05	10
04	8
03	6
02	4
01	2

TABLE 48

PROGRAM 2#XY
LEAST COST ROUTING AREA/OFFICE CODE EXCEPTION TABLE
(LCD EKT REQUIRED)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. Normal functions halt on station 17. LCD: PROGRAM MODE
2) Depress the SPKR key on station 17.	SPKR LED steady on. LCD: PROGRAM NO.?
3) Dial 2 # X 0 on the dial pad. X = Area/Office Code Table 1 ~ 8.	SPKR LED & LED 10 flash continuously.
4) Refer to System Record Sheet. Enter Route Table number (1 ~ 8).	LCD: (displays table number)
5) Depress the HOLD key.	
6) Depress the SPKR key on station 17.	SPKR LED steady on. LCD: PROGRAM NO.?
7) Dial 2 # X 1 on the dial pad. X = Area/Office Code Table 1 ~ 8.	LCD: (displays dialed number) then . . . DATA =
8) Enter Area Code via the dial pad.	LCD: (displays area code entered)
9) Depress the HOLD key.	
10) Depress the SPKR key.	SPKR LED steady on. LCD: PROGRAM NO.?
11) Dial 2#X2 (Add), 2#X3 (Delete), or 2#X4 (Display). X = Area/Office Code Table 1 ~ 8.	SPKR LED flashes continuously. LCD: (displays dialed number)
12) Depress # key.	2 # X 2 LCD: DATA = 2 # X 3 LCD: DATA = 2 # X 4 LCD: (displays all currently programmed office codes)
13) Enter first Area Code in range sequence (start).	LCD: (displays code entered)
14) Depress * key.*	LCD: (shifts left to provide space for next code)
15) Enter final Area Code in range sequence (stop).*	LCD: (displays code entered)
16) Depress # key.	
17) Return to Step 10 to enter additional Area Codes.	
18) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
19A) Go to step 2 in another program table . . . or . . . 19B) Transfer data into working memory per Paragraph **02.06.**	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

**Skip Steps 14 and 15 if only one area code in sequence is being entered.*

TABLE 49

PROGRAM 3XX
STATION CO LINE ACCESS

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 3XX on the dial pad (XX = the number of the station(s) to be programmed).	SPKR LED flashes continuously. The CO LEDs indicate present data.
4) Refer to the System Record Sheet. Using the appropriate keys, turn their associated LEDs on or off, as required. • LED ON = Access allowed. • Each CO key/LED represents itself—that is, if LED 01 is on, then the station being programmed (XX) is allowed access to CO1, etc.	An X on the record sheet means the LED should be on. If the LED is already on, depressing its associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Return to Step 2 in order to continue with this program . . . or . . . 6B) Go to Step 2 in another program table . . . or . . . 6C) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

NOTES:
1. *For programming COs 18 ~ 21, see Paragraph* **02.10**.
2. *For multiple station programming, refer to Paragraph* **02.20**.

TABLE 50
PROGRAM 3#XX
HOXB, HMDB, HTIB and HIOB ENABLE

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 3 # X X on the dial pad (XX = the number of the station(s) to be programmed).	SPKR LED flashes continuously. The various LEDs indicate present data.
4) Refer to the System Record Sheet. Using the appropriate keys, turn their associated LEDs on or off, as required. The detailed meaning of each key/LED is shown below (if any key/LED is not shown, it is not used).	An X on the record sheet means the LED should be on. If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.

KEY/LED	FEATURE	LED ON	LED OFF
07	HIOB	Voice Mail	Normal
06	HIOB Outgoing Signals	DTMF	DP
04	HMDB	Equipped	Not Equipped
03	HIOB	Equipped	Not Equipped
02	OPX	Busy-out	No Busy Signal
01	OPX/TIE Line	Equipped	Not Equipped
00	HIOB Circuit	Privacy	Privacy Override

5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Return to Step 2 in order to continue with this program . . . or . . . 6B) Go to Step 2 in another program table . . . or . . . 6C) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

NOTE:
For multiple station programming, refer to Paragraph **02.20.**

TABLE 51

PROGRAM 4XX
STATION TYPE ASSIGNMENT

(This program must be completed before **Program 4#XX***.)*

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 4XX on the dial pad (XX = the number of the station(s) to be programmed).	SPKR LED flashes continuously. The CO LEDs indicate present data.
4) Refer to the System Record Sheet. Using the appropriate keys, turn their associated LEDs on or off, as required.	An X on the record sheet means the LED should be on. If the LED is already on, depressing its associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Return to Step 2 in order to continue with this program . . . or . . . 6B) Go to Step 2 in another program table . . . or . . . 6C) Transfer data into working memory per Paragraph **02.06.**	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

NOTE:
For multiple station programming, refer to Paragraph **02.20.**

KEY/LED	FEATURE
16	Start at CO19
15	Start at CO16
14	Start at CO13
13	Start at CO10
12	Start at CO7
11	Start at CO4
10	Start at CO1
09	Top to bottom
07	20-key pattern C
06	20-key pattern B
05	20-key pattern A
03	Single-line EKT
01	10-key EKT
00	20-key EKT

TABLE 52

PROGRAM 4#XX
STATION FLEXIBLE KEY ASSIGNMENTS
(IMPORTANT! LCD EKT HIGHLY RECOMMENDED)

(Do **Program 4XX** *for all stations before this program.)*

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 4 # X X on the dial pad (XX = the number of the station(s) to be programmed).	SPKR LED flashes continuously.
4) Refer to the System Record Sheet. Depress the key to be programmed.	The feature currently assigned to the code number for that key is displayed by the LCD (see table below).
5) Dial in the new feature's number. The meaning of each feature code is shown below.	The new feature's number is displayed on the LCD (see table below).
6) Continue returning to Step 4 until all desired features for the chosen station(s) are programmed.	
7) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
8A) Return to Step 2 in order to continue with this program . . . or . . . 8B) Go to Step 2 in another program table . . . or . . . 8C) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

NOTES:

1. *For multiple station programming, refer to Paragraph* **02.20**.
2. *All codes can be assigned only once per EKT. If assigned more than once, keys become AD keys. XX = Direct Station Selection (DSS) EKT distinction.*

CODE	DESCRIPTION	CODE	DESCRIPTION	CODE	DESCRIPTION
01	CO1	20	CO20	80	Modem Key
02	CO2	21	CO21	81	MSG
03	CO3	*	AD Key	82	CPU2
04	CO4	61	Pooled Line Group 1	83	CPU1
05	CO5	62	Pooled Line Group 2	84	CPU
06	CO6	63	Pooled Line Group 3	85	SAVE
07	CO7	64	Pooled Line Group 4	87	CFD
08	CO8	65	Pooled Line Group 5	88	MCO
09	CO9	66	Pooled Line Group 6	90	TONE
10	CO10	67	Pooled Line Group 7	93	PRV
11	CO11	68	Pooled Line Group 8	94	ACB
12	CO12	70	ABR	95	PAU
13	CO13	71	DP1 (Door Lock)	96	RDL
14	CO14	72	DP2 (Door Lock)	97	REP
15	CO15	73	DP3 (Door Lock)	98	DND
16	CO16	74	DP4 (Door Lock)	99	MW/FL
17	CO17	78	Modem MM/MA	#YY	DSS/BLF
18	CO18	79	Modem Ans/Call	*ZZ	Locked AD Key
19	CO19				

TABLE 53
PROGRAM 5XX
STATION CLASS OF SERVICE #1

425 1311

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 5XX on the dial pad (XX = the number of the station(s) to be programmed).	SPKR LED flashes continuously. The various LEDs indicates present data.
4) Refer to the System Record Sheet. Using the appropriate keys, turn their associated LEDs on or off, as required.	An X on the record sheet means the LED should be on. If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.

KEY/LED	FEATURE	LED ON	LED OFF
17	Privacy Override	Allowed	Not Allowed
16	DND Override	Allowed	Not Allowed
15	Executive Override	Allowed	Not Allowed
13	OCA Receive	Enabled	Disabled
12	Off-hook Call Announce	Dial 2	Automatic
09	Group Page 4	Included	Not Included
08	Group Page 3	Included	Not Included
07	Group Page 2	Included	Not Included
06	Group Page 1	Included	Not Included
05	All Call Page	Allowed	Not Allowed
04	Auto.Callback Warning Tone	Not Allowed	Allowed
03	Handsfree Answerback	Disabled	Enabled
02	MIC on at start of call	On	Off
01	MIC key lock	Allowed	Not Allowed
00	Speakerphone	Enabled	Disabled

5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Return to Step 2 in order to continue with this program . . . or . . . 6B) Go to Step 2 in another program table . . . or . . . 6C) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

1ST Then

NOTE:
For multiple station programming, refer to Paragraph **02.20.**

SPKr # * 9 00 01 04 05 08 09 12 13 Hold

TABLE 54
PROGRAM 5#XX
STATION CLASS OF SERVICE #2

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 5 # X X on the dial pad (XX = the number of station(s) to be programmed).	SPKR LED flashes continuously. The various LEDs indicate present data.
4) Refer to the System Record Sheet. Using the appropriate keys, turn their associated LEDs on or off, as required. If a key/LED is not shown, it is not used.	An X on the record sheet means the LED should be on. If the LED is already on, depressing the associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.

KEY/LED	FEATURE	LED ON	LED OFF
17	Alphanumeric LCD	Equipped	Not Equipped
16	Station-to-station Message Waiting w/LCD	Allowed	Not Allowed
15	LCD Message Memory	Assigned	Not Assigned
14	Forced Account Code	Required	Not Required
13	Toll Restriction Override Code Change	Allowed	Not Allowed
12 ~ 10	Hold Recall Time Code	—	—
09	Automatic Busy Redial Access	Enable	Disabled
07 ~ 04	Automatic Off-hook Selection (94 ~ 91)	Enable	Disabled
03	Automatic Off-hook Selection (CO1)	Enable	Disabled
02	Automatic Off-hook Selection (INT)	Enable	Disabled
01	Ringing Line Preference	Enable	Disabled
00	Automatic Dialing	Allowed	Not Allowed

5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Return to Step 2 in order to continue with this program . . . or . . . 6B) Go to Step 2 in another program table . . . or . . . 6C) Transfer data into working memory per Paragraph **02.06.**	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

NOTES:
1. *For multiple station programming, refer to Paragraph* **02.20**.
2. *If a station is programmed to automatically select a trunk group (9 or 91 ~ 94), it will select the last available line in that group unless a line in that group is ringing—it will select the ringing line.*

TABLE 55
PROGRAM 6XX
STATION TOLL RESTRICTION/LCR CLASSIFICATION

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 6 X X on the dial pad (XX = the number of the station(s) to be programmed).	SPKR LED flashes continuously. An LED indicates present data.
4) Refer to the System Record Sheet. Using the various keys, turn an associated LED on or off, as required. The detailed meaning of each key/LED is shown below.	An X on the record sheet means the LED should be on. Only one LED may be on; depressing another key will turn that LED on and turn off the previous LED.

KEY/LED	FEATURE	LED ON	LED OFF
12	LCR Class 3	Selected	None
11	LCR Class 2	Selected	None
10	LCR Class 1	Selected	None
07	Digit-Free	Selected	None
06	Class 4*	Selected	None
05	Class 3*	Selected	None
04	Class 2*	Selected	None
03	Class 1*	Selected	None
02	Restrict 0 or 1 as 1st and 2nd digit	Selected	None
01	Allow 1 + Office Code only	Selected	None
00	No Restriction	Selected	—

5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Return to Step 2 in order to continue with this program . . . or . . . 6B) Go to Step 2 in another program table . . . or . . . 6C) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

**NOTES:*
1. *For multiple station programming, refer to Paragraph* **02.20**.
2. *See Toll Restriction;* **Programs 100, 1X1, 1XY, 1XZ,** *and* **2XY**.

TABLE 56

PROGRAM 6#XX
STATION-TO-STATION HUNTING

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 6 # X X on the dial pad (XX = the number of the station(s) to be programmed).	SPKR LED flashes continuously. The various LEDs indicate present data.
4) Refer to the System Record Sheet. This program defines the station hunt destination. Dial the 2-digit number using the dial pad.	As each digit is entered, the entry is verified by LEDs as shown below.

Key/LED	Start	1st Digit	2nd Digit
11			Steady
10	Flash	Steady	

X = LED on
All LEDs off = no data

Binary Numbers:	1	2	3	4	5	6	7	8	9	0
03								X	X	X
02				X	X	X	X			
01		X	X			X	X			X
00	X		X		X		X		X	

5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off. New data is stored, previous data is erased.
6A) Return to Step 2 in order to continue with this program . . . or . . . 6B) Go to Step 2 in another program table . . . or . . . 6C) Transfer data into working memory per Paragraph **02.06.**	SET LED goes off. Station 17 LED 19 goes off.

NOTE:
For multiple station programming, refer to Paragraph **02.20.**

TABLE 57

PROGRAM 7XX
STATION OUTGOING CALL RESTRICTION

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 7XX on the dial pad (XX = the number of the station(s) to be programmed).	SPKR LED flashes continuously. CO LEDs indicate present data.
4) Refer to the System Record Sheet. Using the appropriate keys, turn their associated LEDs on or off, as required. • LED ON = Restricted outgoing calls. • Each CO key/LED represents itself—that is, if the LED 01 is on, then the station being programmed (XX) is restricted from outgoing calls on CO1, etc.	An X on the record sheet means the LED should be on. If the LED is already on, depressing its associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Return to Step 2 in order to continue with this program . . . or . . . 6B) Go to Step 2 in another program table . . . or . . . 6C) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

NOTES:
1. *For multiple station programming, refer to Paragraph* **02.20**.
2. *For programming COs 18 ~ 21, refer to Paragraph* **02.10**.

TABLE 58
PROGRAM 81XX ~ 89XX
CO RINGING ASSIGNMENTS (DAY/DAY2/NIGHT)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 8 Y X X on the dial pad (Y = 1 ~ 9*; XX = the number of station(s) to be programmed).	SPKR LED flashes continuously. CO LEDs indicate present data.
4) Refer to the System Record Sheet. Using the appropriate keys, turn their associated LEDs on or off, as required. • LED ON = Ringing assigned. • Each CO key/LED represents itself—that is, if LED 01 is on, then the station being programmed (XX) is allowed access to CO1, etc.	An X on the record sheet means the LED should be on. If the LED is already on, depressing its associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Return to Step 2 in order to continue with this program . . . or . . . 6B) Go to Step 2 in another program table . . . or . . . 6C) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

*1 = DAY—immediate	4 = DAY 2—immediate	7 = NIGHT—immediate
2 = DAY—12-seconds delay	5 = DAY 2—12-seconds delay	8 = NIGHT—12-seconds delay
3 = DAY—24-seconds delay	6 = DAY 2—24-seconds delay	9 = NIGHT—24-seconds delay

NOTES:
1. *For multiple station programming, refer to Paragraph* **02.20**.
2. *For programming COs 18 ~ 21, refer to Paragraph* **02.10**.

ON XXe ISSUE 1 software
8XX only cannot select
Type of ringing

TABLE 59

PROGRAM 9#XX
DOOR PHONE ASSIGNMENTS

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial 9 # X X on the dial pad (XX = the number of the station(s) to be programmed).	SPKR LED flashes continuously. CO LEDs indicate present data.
4) Refer to the System Record Sheet. Using the appropriate keys, turn their associated LEDs on or off, as required. • LED ON = Access allowed. • Each CO key/LED represents itself—that is, if LED 01 is on, then the station being programmed (XX) is allowed access to CO1, etc.	An X on the record sheet means the LED should be on. If the LED is already on, depressing its associated key will turn it off and vice versa. LEDs may be turned off and on until the desired pattern is set.
5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Return to Step 2 in order to continue with this program . . . or . . . 6B) Go to Step 2 in another program table . . . or . . . 6C) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

NOTES:
1. *For multiple station programming, refer to Paragraph* **02.20**.
2. *For programming COs 18 ~ 21, refer to Paragraph* **02.10**.

TABLE 60

PROGRAM *X#
FLEXIBLE ACCESS CODE NUMBERING

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial * X # on the dial pad. (X = feature access code number).	SPKR LED flashes continuously. LEDs indicate present data.
4) Using the dial pad, enter the new digits of the access code.	As each digit is entered, the entry is verified by LEDs as shown below.

Key/LED	Start	1st Digit	2nd Digit
11			Steady
10	Flash	Steady	

X = LED on
All LEDs off = no data

Binary Numbers:	1	2	3	4	5	6	7	8	9	0
03								X	X	X
02				X	X	X	X			
01		X	X			X	X			X
00	X		X		X		X		X	

5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06.**	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.

TABLE 61

PROGRAM *XX
FLEXIBLE INTERCOM NUMBERING

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17.
2) Depress the SPKR key on station 17.	SPKR LED steady on.
3) Dial * X X on the dial pad (XX = the system intercom number).	SPKR LED and LED 10 flash continuously.
4) Refer to the System Record Sheet. Enter the 4-digit Toll Restriction Override Codes via the dial pad.	As each digit is entered, the entry is verified by LEDs as shown below.

Key/LED	Start	1st Digit	2nd Digit	3rd Digit	4th Digit
12					Steady
11			Steady	Steady	
10	Flash	Steady		Steady	

X = LED on
All LEDs off = no data

Binary Numbers:	1	2	3	4	5	6	7	8	9	0
03								X	X	X
02				X	X	X	X			
01		X	X			X	X			X
00	X		X		X		X		X	

5) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off. New data is stored, previous data is erased.
6A) Go to Step 2 in another program table . . . or . . . 6B) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off.

TABLE 62

PROGRAM #1XX*YY
AUTOMATIC DIALING PROGRAMMING FROM STATION 17
(Requires LCD EKT)

1) Lock in the **SET** switch on the HCAU.	SET LED on. Station 17 LED 19 on. System is in program mode. Normal functions halt on station 17. LCD: PROGRAM MODE
2) Depress the SPKR key on station 17.	SPKR LED steady on. LCD: PROGRAM NO.?.
3) Dial # 1 X X on the dial pad. XX = the number of the station(s) to be programmed (XX must = 10 for System Auto Dial).	LCD: (displays dialed digits)
4) Depress the # key.	LCD: (displays dialed digits)
5) Refer to the System Record Sheet. Dial YY (YY = Auto dial code: 10 ~ 49, personal; 60 ~ 99, system).	LCD: (displays dialed digits) DATA =
6) Depress the auto dial digits (insert pauses via key 16 and flashes via key 17.	LCD: (displays dialed digits)
7) Depress the HOLD key to place new data in memory.	All station 17 LEDs (except 19) go off. LCD: DATA PROGRAMMED
8A) Return to Step 2 in order to continue with this program . . . or . . . 8B) Go to Step 2 in another program table . . . or . . . 8C) Transfer data into working memory per Paragraph **02.06**.	SET LED goes off. Station 17 LED 19 goes off. New data is stored, previous data is erased.