

COMDIAL

Solo II Telephone System

INSTALLATION AND PROGRAMMING INSTRUCTIONS

This publication is applicable for the following
Solo II Telephone models:
5531-xx Manufacturing Code REV E and Later
5531S-xx Manufacturing Code REV F and Later
5432X-xx Manufacturing Code REV A and Later
5432S-xx Manufacturing Code REV A and Later

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CHAPTER 1

GENERAL INFORMATION

SECTION 1

INTRODUCTION

The Solo II telephone is a self-contained electronic key system. The circuitry provides all needed control and switching, and does not require a separate key service unit (KSU). The station provides line status indicators for hold, in-use, ringing, memory dialing features, hand-free call monitoring, and other useful operating features. A message waiting light is also available. This light can be turned on by a signal from a central answering service or by another Solo II telephone to alert the telephone user that a message is waiting, and turned off by the service once the message is delivered. A station can be operated individually, or in groups. Models are available which connect to 42 - 56 volt telephone lines. Connection to the line is via a single pair of wires for each line required. Station connections are made through an 8-pin modular plug and jack connection. Operating power is provided by the 117 VAC line through a step-down transformer cable-connected to the station locally, or through a customer provided remote 24 volt power supply on some models.

MODEL DESCRIPTIONS

Two different feature models are available in both monitor and speakerphone versions

- Three lines plus intercom with 90 volt message waiting programmable on any line, auxiliary jack on line 2, and separate power jack.

Same as above with speakerphone option.

- Three lines plus intercom with 90 volt message waiting programmable on any line, auxiliary jack on line 2, and separate jack for remote power supply, station status indication, and optional low voltage message waiting on a spare pair of the power jack.

Same as above with speakerphone option.

DATA PORT

Every Solo II telephone is equipped with an auxiliary jack. This jack is connected across tip and ring of directly connected line 2 and is not controlled by the hookswitch of the Solo II. The auxiliary jack allows the connection of adjunct devices such as modems, FAX machines, data terminals, etc. to the line along with the Solo II. Some adjunct devices can be operated on the line while the Solo II is off-hook while others cannot. Refer to the manual associated with the device for complete details.

POWER FAILURE

Should commercial power fail, the Solo II telephone can be easily equipped to provide emergency access to an outside line.

Every Solo II telephone is equipped with an auxiliary jack. This jack is wired per the standard RJ-11 configuration and is connected in parallel with line 2 of the system. This auxiliary jack can be used to provide emergency outside line access when the system is properly prepared.

Prepare the Solo II telephone for power failure operation as follows:

- Determine which outside line that the central office chooses first for ringing.
- Arrange the system wiring so that this first choice ringing line is connected as line 2.

Connect an industry-standard telephone, such as a Comdial model 2500-xx, to the Solo II telephone auxiliary jack to provide power failure operation when required.

SECTION 2 SPECIFICATIONS

SYSTEM CAPACITY

- Lines (CO/PBX): 3
- Stations (Intercom Signalling Capacity): 20
- Intercom Links: 1

NOTE: If heavy Intercom traffic is expected, a maximum of eight stations should share the Intercom link unless installed behind a host system.

DIMENSIONS AND WEIGHTS (Approx.)

- Width (inches): 7 3/4
- Height (inches): 4 1/4
- Depth (inches): 8
- Footprint (inches): 6 3/4 x 6 3/4
- Weight (lb.-oz.): 2-10

OPERATING ENVIRONMENT

- Temperature: 32-122F (0-50C)
- Humidity: 90% relative non-condensing

POWER REQUIREMENTS

- LOCAL POWER SUPPLY:
(Ground isolated transformer provided)
117 VAC +/- 10%
.04 amp @ 60 HZ
single phase
- REMOTE POWER SUPPLY:
(Customer provided)
24 VDC +/- 10% @
220 ma per station

MESSAGE WAITING VOLTAGE

- PBX (Supplied On Available Line): 90 VDC
- Low Voltage (Supplied On Spare Pair of Power Jack, when available): 40 VDC

SYSTEM ACCESS TIMING

(programmable and mutually exclusive)

- Timed hookswitch flash: 750 msec.
- Timed dial tone recall: approx. 2 sec

SIGNALLING (CO/PBX):

- DTMF Tone Only

SYSTEM CABLE REQUIREMENTS:

- 4-pair, twisted, non-shielded, 24 AWG, 1500 VAC breakdown

TERMINATION FOR STATION

- Line Jack: Industry Standard, 8-conductor Minijack, USOC RJ61X Configured
- Aux Jack: Industry Standard, 4-conductor Minijack, USOC RJ11 Configured (available on line 2)
- Power Jack (for models 5631X-xx and 5631S-xx): 4-conductor Minijack-power pair wired to 1 & 4
- Power Jack (for models 5432X-xx and 5432S-xx): Conductor Minijack wired per Figure 2-4.

TERMINATION FOR TELCO LINES

LINES	USOC JACK
1 line	RJ11C
1-2 lines	RJ14C
1-3 lines	RJ25C
1-25 lines	RJ21X

OPERATING LIMITS CO/PBX

- Loop voltage (open line):
48 volt models 42.0-56.5 VDC
- CO/PBX loop resistance from distribution frame: 1450 ohms maximum (Approx. 20,000 feet with #24 AWG wire).
- Distance between telephone and distribution frame: 850 feet maximum (Approx. 42.5 ohm loop resistance with #24 AWG wire).

INDUSTRY/REGULATORY STANDARDS

- FCC certified, part 15 class A
- FCC registered, part 68 subpart C (68.213)
- FCC Registration Number: CVW7WC-15193-KH-T
- Ringer Equivalence: 0.3B
- Service Order Code: 9.0Y
- Facility Interface Code: 02LS2
- UL listed
- Hearing aid compatible handset

MEMORY RETENTION AFTER POWER LOSS:

- Minimum 65 hours, typically greater than 200 hours

SECTION 3 COMPLIANCE INFORMATION

COMPLIANCE

The station fully complies with FCC rules and regulations Part 68, Subpart C. Installation is per the specifications set forth in FCC rule part 68.213 for other than "fully-protected" non-system premises wiring.

NOTIFICATION

When the station is being connected directly to the TELCO network, the telephone operating company can request that they be provided with the following information: (1) The location of the jack to which the premises wiring will be connected. (2) A statement that all applicable rules, building codes and electrical codes will be complied with. (3) The manufacturer's name, the brand name, and the model number of the wire used to interconnect the site. In addition, they can request that they be provided with the brand name, model number, FCC registration number, and the ringer equivalence number of the station as shown on the FCC registration label attached to the base of the station.

COMPATIBILITY WITH THE TELCO NETWORK

Any problem with this equipment that causes improper operation of the telephone network may require the telephone company to discontinue service to the trouble site. If possible, advance notice of the disconnect will be given. If advance notice is not practical, notice will be given as soon as possible. The telephone company will inform the user of the right to file a complaint with the FCC. The telephone company can temporarily discontinue service and make changes which could affect the operation of this equipment; however, they must provide advance notice of any change to give the user the opportunity to maintain uninterrupted telephone service.

RINGER EQUIVALENCE NUMBER

The ringer equivalence number (REN) is a measure of the load a telephone device will place on the ringing generator of a central office TELCO line. In general, a REN of 1 is equivalent to the load provided by one standard telephone ringer. FCC rules state that the total REN load on a line shall not exceed 5.

PREMISE WIRING

Site wiring is the responsibility of the telephone equipment owner. The equipment owner is responsible for consequences resulting from erroneous wiring procedures done by him or her or under their direction. Per FCC requirement, the insulation on the wire used to connect the station must have a 1500 VAC breakdown rating. (Most cable is labeled as to breakdown rating.) The installed station and the site wiring must pass the installation checkout test detailed in Chapter 2.

RADIO FREQUENCY INTERFERENCE

The station contains incidental radio frequency generating circuitry and, if not installed and used properly, may cause interference to radio and television reception. This equipment has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules. These limits are designed to provide reasonable protection against such interference when operated in a commercial environment.

Operation of this equipment in a residential area may cause interference to radio and television reception; in which case, the equipment owner is encouraged to take whatever measures may be required to correct the interference.

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, try to correct the interference by one or both of the following measures: Reorient the television or radio receiving antenna. Relocate the stations and the radio or TV with respect to each other.

If necessary, consult the manufacturer's technical assistance department or an experienced radio/television technician for additional suggestions. The following booklet prepared by the Federal Communications Commission may be helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the Government Printing Office, Washington D.C. 20402. Stock No. 004-000-00345-4.

CHAPTER 2 INSTALLATION

INSTALLATION PROCEDURE

The system interconnection and station wiring is illustrated by **Figures 2-4, 2-5, and 2-6** at the end of this chapter. Refer to them before and during the installation procedure.

1. Install the central connection point within 25 feet of the TELCO demarcation point connection jack.
2. Set the individual jacks and locate the stations as required.
3. Install the premise wiring for the station jacks. Refer to **Figures 2-1 and 2-4** as needed.

NOTE: Adhere to all applicable local electrical and building codes when installing the wiring. Consult with applicable local authorities as necessary. The wire used must have a breakdown rating of at least 1500 VAC per FCC requirement.

CAUTION

The intercom pair is polarity sensitive. Do not reverse tip and ring when parallel wiring several stations.

- a. Each station jack can be wired separately to the central connection point ("home run" wiring).
 - b. Alternately, each station jack can be parallel wired to a common run from the central connection point.
 - c. Connect the premise wiring to the central connection point.
 - d. Connect the central connection point to the TELCO demarcation point.
4. Connect the operating power to the Solo II telephone per the applicable details shown in **Figures 2-4, 2-5, and 2-6**.
 5. Connect the power supply to a non-switched 117 VAC outlet.
 6. Connect the line cord between the Solo II telephone and the station jack. Refer to **Figure 2-2** for line cord details.

SOLO LINE CORD COMPATIBILITY

The Solo II telephone is equipped with a standard 8-conductor modular line jack and is supplied with a standard 8-conductor line cord assembly. The modular jack and the plugs on the line cord are wired according to USOC RJ61X specifications as shown in ATT NWTJ supplement to Subpart F of Part 68 of the FCC Rules and Regulations. This wiring arrangement agrees with industry standard pin assignments for all customer premises equipment except certain types that have pin assignments similar to CCITT ISDN Recommendations.

An optional line cord is available that will adapt the Solo II telephone to the ISDN wiring arrangement. This optional line cord is available through normal distribution channels (Comdial part number 703509-535). Contact a local Comdial distributor for price and availability of this option.

The two end connectors of this adapter line cord are color coded. The end connector that is to be plugged into the telephone jack is clear. The end connector that is to be plugged into the CCITT ISDN arranged wall jack is colored. It is important that the correct end connectors are plugged into the proper jack locations; otherwise, the pairing will be incorrect.

The industry-standard line cord and the optional line cord are both illustrated in **Figure 2-2**.

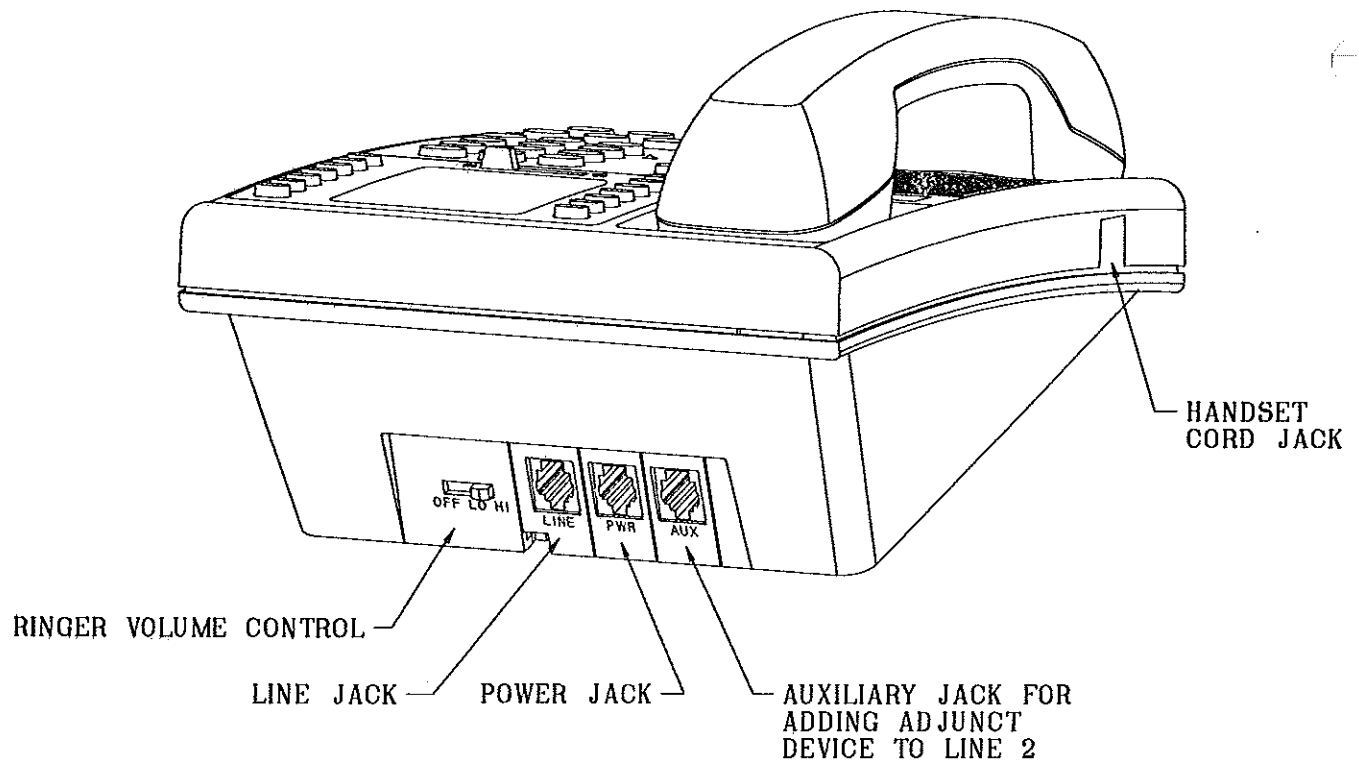


Figure 2-1. Solo II Telephone Connections

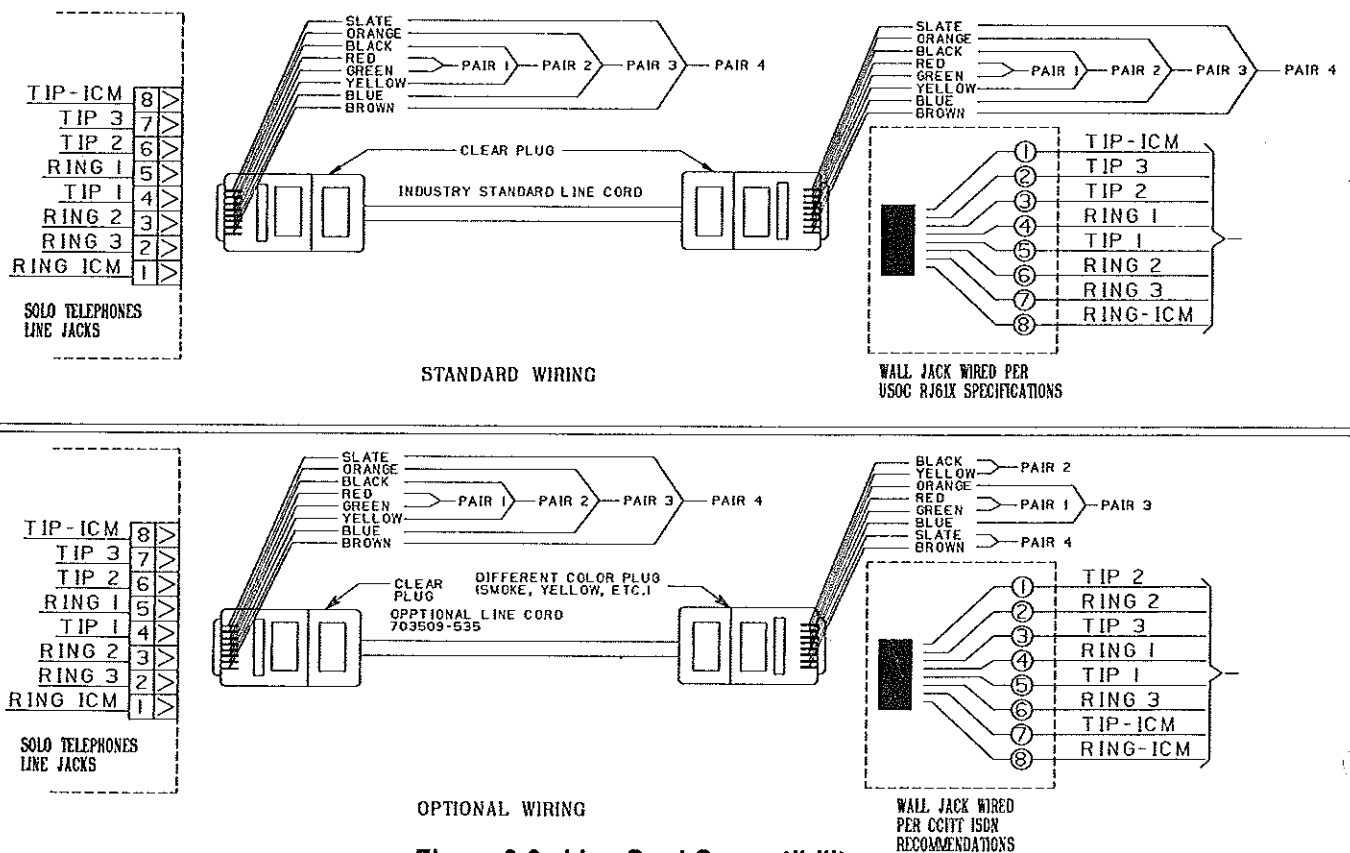


Figure 2-2. Line Cord Compatibility

DESK/WALL REVERSAL AND WALL MOUNTING

CONVERSION

To convert a station from a standard desk model to one which can be hung on the wall, follow the procedure outlined below.

1. Remove and discard the pull out directory.
2. Remove the lower housing of the station, and rotate it 180 degrees.

CAUTION

The PWB contains circuitry which is sensitive to static electricity discharge. Be sure that your body and the workplace are properly grounded to avoid any static electricity discharge while performing the desk/wall reversal.

3. Remove the knockouts from the desired mounting holes as illustrated in Figure 2-3.

4. Replace the lower housing. Make sure that all wires are clear.

WALL MOUNTING

Mount the station directly on the wall using two, #10, panhead screws (not provided--obtain locally), or mount it on a wall jack cover plate.

1. Thread the #10 screws into the wall within 1/8-inch of the surface. Refer to Figure 2-3 for the spacing dimensions.
2. Insure that the housing is converted properly for a wall mounting installation (see above instructions).
3. Connect the power supply cable plugs to the station.
4. Position the keyhole shaped holes in the bottom of the station over the #10 screws or the cover plate studs. Slide the station down until a slight click is felt.
5. To remove the station, lift to unsnap both screws or studs from the bottom housing, and lift the station away from the wall.

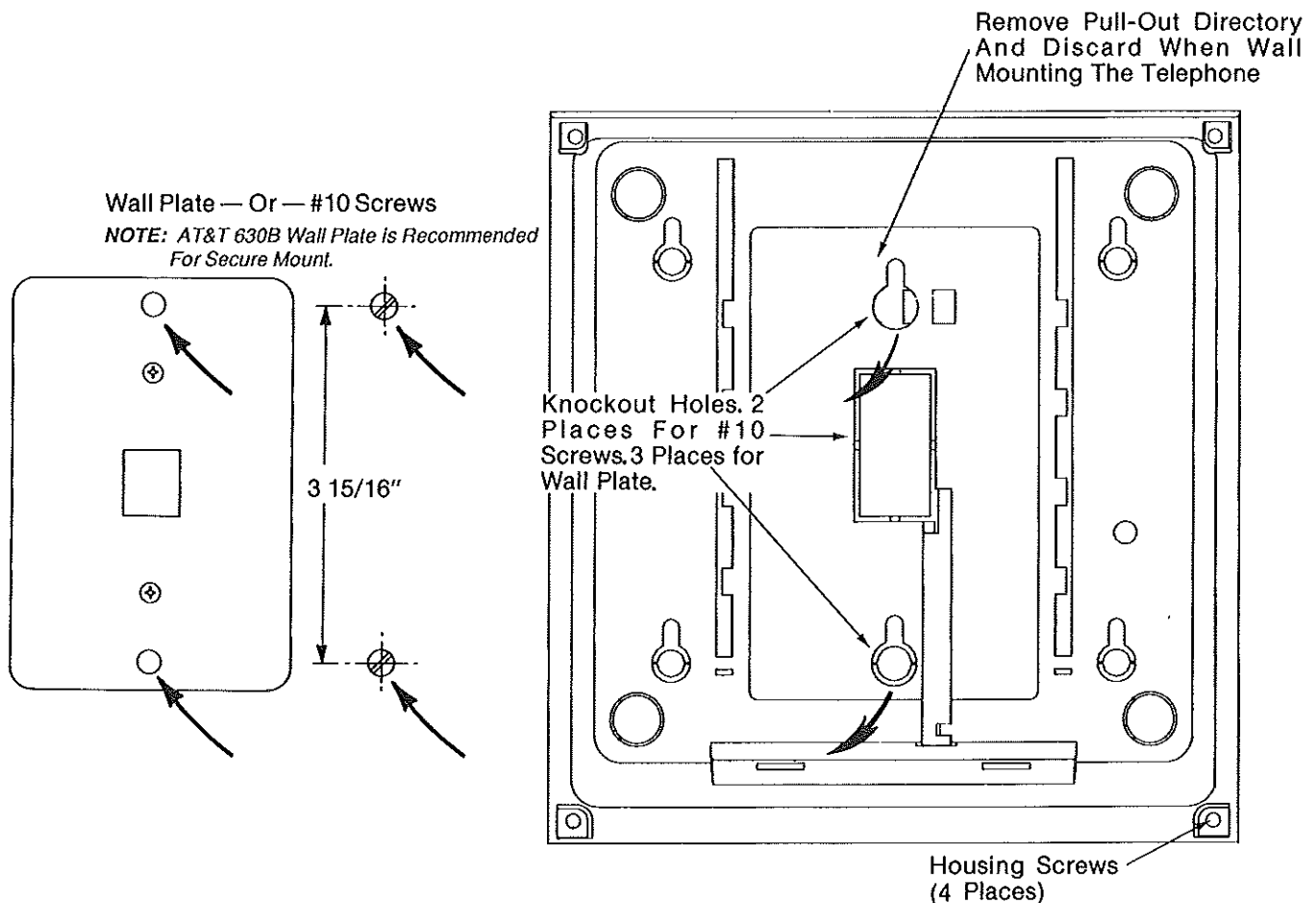


Figure 2-3. Wall Mounting

INSTALLATION CHECKOUT

After installation, perform the following acceptance test.

1. Lift the handset of the station, and check the lines.
 - a. Select a line, and listen to it.
 - b. Confirm that there is neither audible hum nor excessive noise on the line.
 - c. Confirm that dial tone is present.
2. Dial a number.
 - a. Confirm that dial tone is broken.
 - b. Confirm that there is neither audible hum or excessive noise on the line.
3. Perform a "ringback" test.
 - a. Make the station ring. (Use the procedure obtained from the telephone operating company or arrange for someone to call your number to cause ringing.)
 - b. Permit the station to ring for one minute.
 - c. Lift the handset to stop the ringing.
 - d. Keep it off hook for at least 5 seconds.
 - e. Hang up the handset for at least 5 seconds.
 - f. Lift it again, and confirm that dial tone is present.
4. Repeat steps 1 through 3 for each line connected to the station.
 - e. ITCM indicator turns on.
 - d. All indicators turn off in reverse sequence.
4. The station will then sound the tone ringer through the station speaker for 4 seconds.
 - a. Be sure ringer loudness control is set to HI position.
 - b. Ringer tone must be constant without distortion.
 - c. Verify loudness control adjustment range during ringer test.
5. The station will next perform a 4 second DTMF generator test through the station speaker.
 - a. DTMF tone must be constant without distortion
 - b. Lift handset and listen for tone in receiver
6. The station will revert to normal operation after performing the DTMF generator test.

RESET

In some cases, a telephone set may appear to ring and/or dial in an improper manner when the station self test is performed or it may not accept class of service programming. This condition may exist because the circuitry which maintains the memory has discharged during transportation and storage. Should a telephone set fail self test or fail to accept programming, perform the following reset procedure.

CAUTION

Do not arbitrarily perform the reset on an installed, operational Solo II telephone because it forces a default in the class of service programming conditions and in any stored memory dialing numbers.

The station can be placed in a self test mode per the following instructions. Although this self test is not a comprehensive test of every component, failure of any portion of it is indicative of a defective station.

1. Disconnect the power plug from the rear of the set.
2. Press and hold the **MUTE** key, and reconnect the power plug.
3. Observe the indicator light above the **HOLD** key. When it turns on, release the **MUTE** key. The station will execute the indicator light test sequence.
 - a. **LINE 1** indicator turns on.
 - b. **LINE 2** indicator turns on.
 - c. **LINE 3** indicator turns on.
 - d. **MNTR (SPKR)** indicator turns on.

1. Perform the station self test procedure.
2. When the line indicators begin sequencing as described in step 3 of that procedure, press and release the **SAVE** key.
3. The self test procedure will finish as described above. The indicator directly above the **HOLD** key will remain on until the self test completes to indicate that the reset and a memory test are being performed.

If a memory error is detected, the Solo II telephone will remain in the self test mode. If this occurs, repeat the reset procedure. If a memory error is still indicated, return the Solo II for repair.

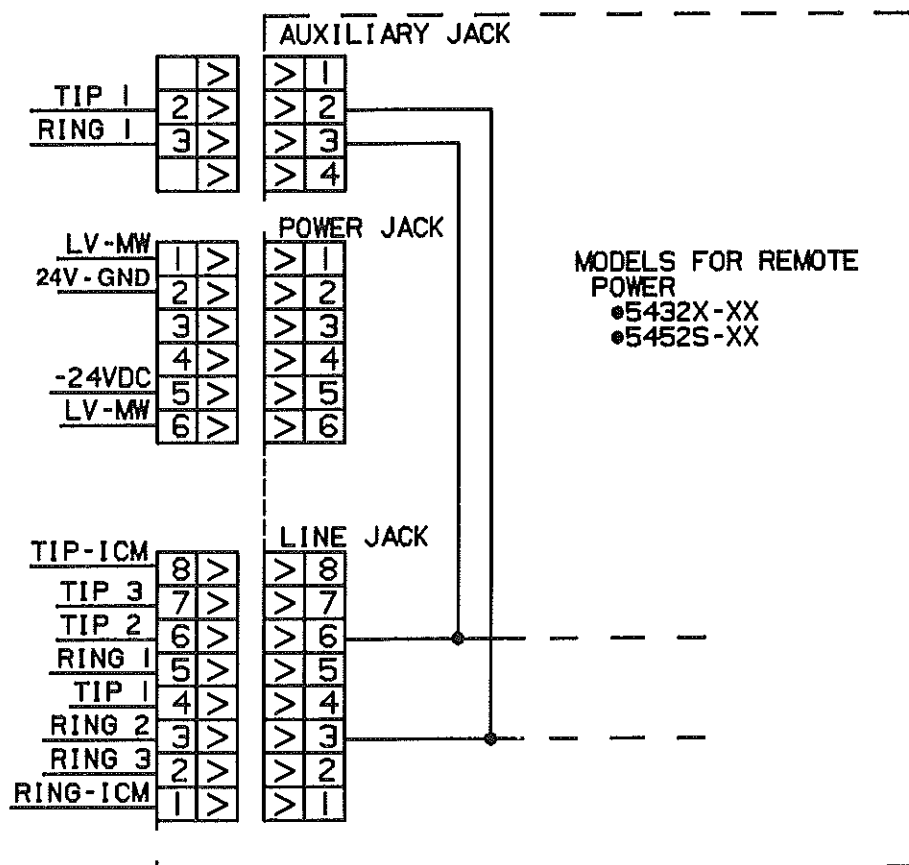
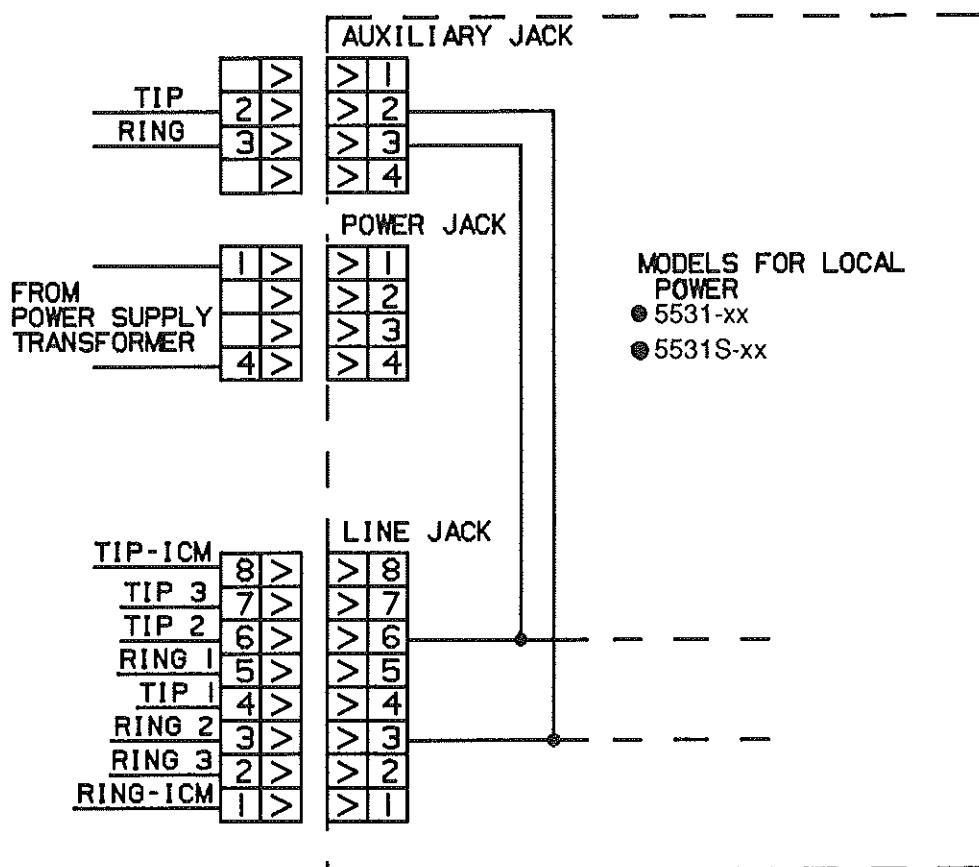


Figure 2-4. Station Jack Wiring

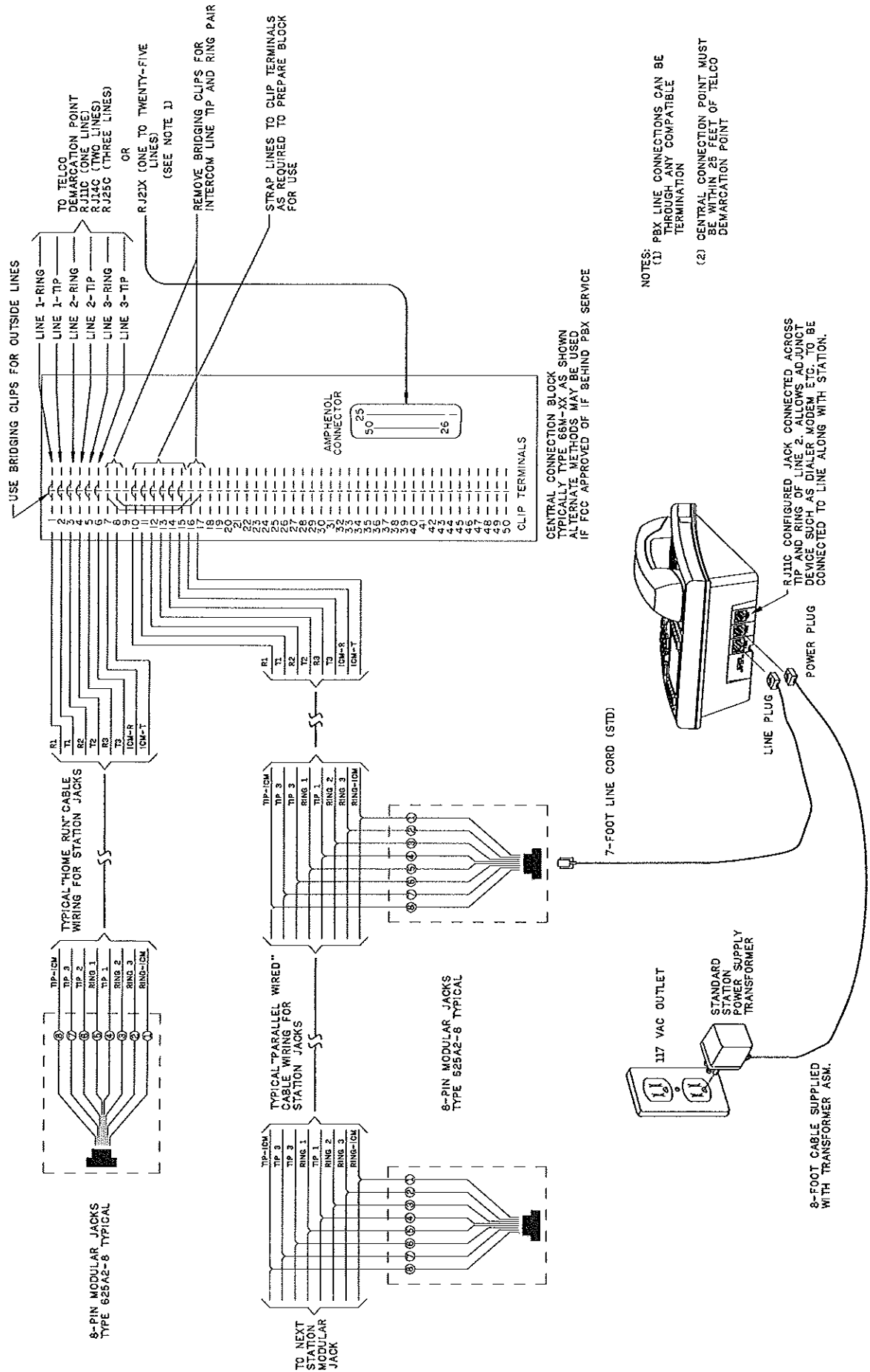


Figure 2-5. Interconnection Diagram - Local Power

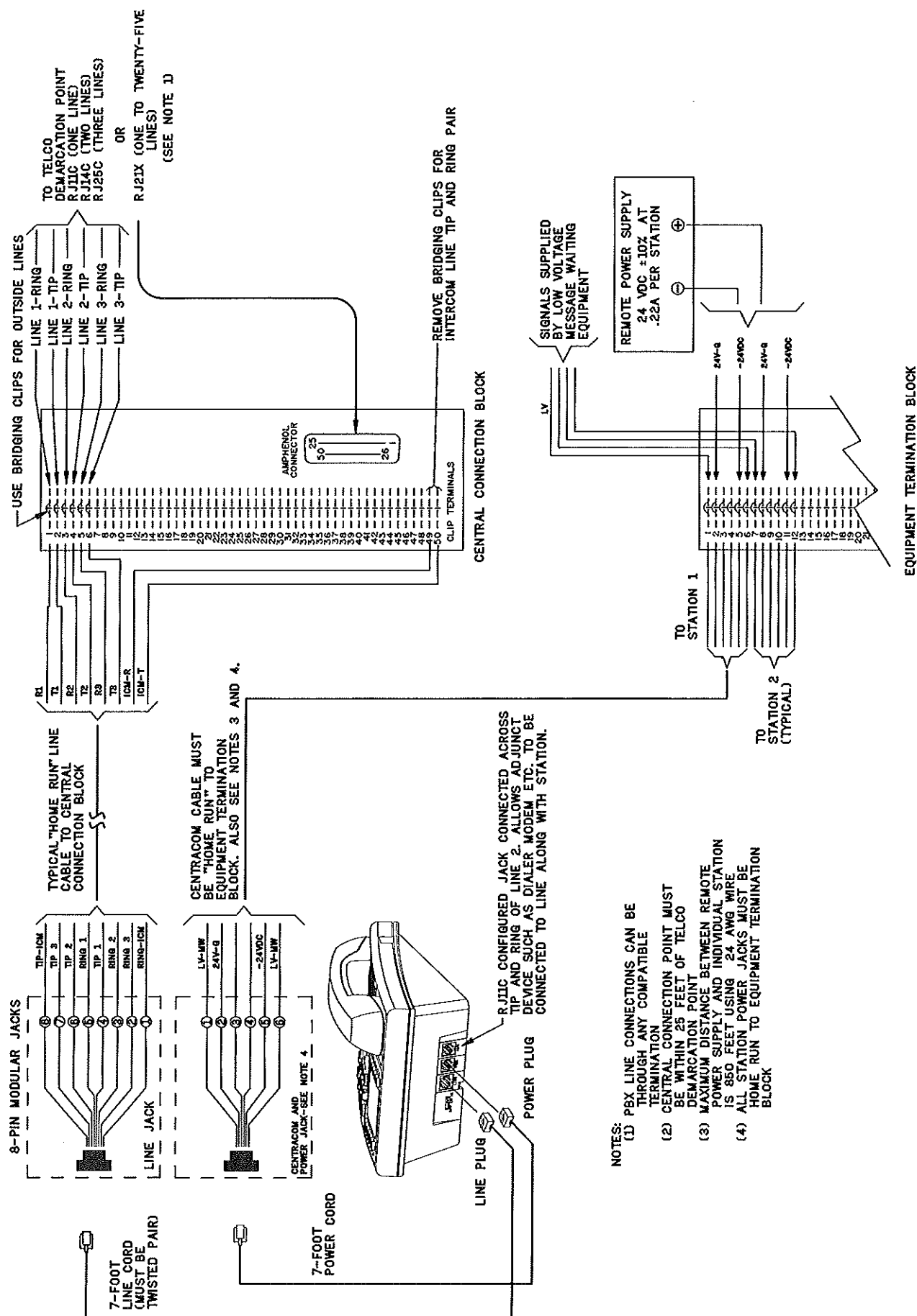


Figure 2-6. Interconnection Diagram - Remote Power

CHAPTER 3 OPERATION AND PROGRAMMING

SECTION 1 OPERATIONAL PROGRAMMING

INTRODUCTION

Class-of-service (COS) programming determines the operating features of the Solo II telephone. The operating features are as defined in the Glossary found at the end of this manual.

If several Solo II telephones are combined together to form a system, each station in the system must be programmed individually.

PUTTING THE SOLO II TELEPHONE INTO SERVICE

The Solo II telephone can be easily put into service in a fully operational condition per the steps given below. The provided features can be customized if required by the detailed procedures beginning on page 3-3.

1. Refer to the information provided in Chapter 2, Installation, and perform the following actions:
 - a. Verify that the site wiring is correct (see Figure 2-4 on pages 2-5 through 2-7).
 - b. Connect the Solo II telephone to the station jack with the provided line cord (see Figures 2-2, and 2-4 through 2-6).
 - c. Connect the operating power to the Solo II telephone power jack (see Figures 2-4 through 2-6 on pages 2-5 through 2-7).
2. A maximum of three outside lines may be connected. The indicator light for each connected line will be off. The indicator light for each unused line position will be on.
3. Turn off indicator for each unused line as follows:
 - Handset on-hook.
 - Dial # * 7 4 6 *.
 - Dial 15.
 - Press key associated with unused line position. LED will turn off. Press key again to enable if required. LED will turn on.
 - Repeat previous step for each unused line indicator.

- Press MNTR (SPKR) to end procedure.
4. Test each connected line as follows:
 - Press line key. Indicator will turn on, and dial tone will sound.
 - Dial a number.
 - When party answers, lift handset and ask them to wait.
 - Press HOLD. Indicator will flash.
 - Press line key and ask holding party to hang up and call you back.
 - Hang up. Indicator will turn off.
 - Hear ringing, lift handset, and answer call.
 - Hang up, and repeat procedure for next line.
 5. If all lines test properly, the Solo II telephone is basically operational.
 6. If a mistake was made during the above procedure, it may be erased by repeating step 3.
 7. Press MNTR (SPKR) to end procedure.

If several Solo II telephones are to be installed and linked together over an intercom line, the following steps must be performed to prepare the intercom for use.

1. Dial # * 7 4 6 *.
2. Dial 18.
3. Press a memory key. This key becomes the intercom selection key for this station. The memory keys are located on the upper portion of the faceplate as shown in Figure 3-1 on page 3-2.
 - This action returns the Solo II telephone to factory set operational conditions (known as default).

Application note: Each Solo II telephone that shares the intercom line will have DSS appearance at the same key location on all Solo II telephones. For example, a Solo II telephone identified under DSS key 1 will appear under DSS key 1 at all Solo II telephones. Therefore, the second Solo II telephone must be programmed under DSS key number 2 and so on for the third, the fourth, etc..

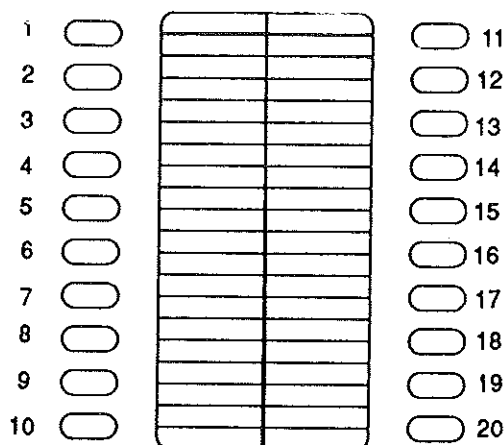


Figure 3-1. Memory Key Field

4. Press **MTNR (SPKR)** to end procedure.
5. Go to another Solo II telephone, and test the intercom.
 - Lift the handset.
 - From this telephone, press the same memory key number that was pressed in step 3 on the programmed telephone. Some sounds will be heard in the handset receiver to indicate that dialing is taking place.
 - Speak into the handset. Your voice will be heard through the speaker at the called Solo II telephone (the one programmed in Step 3).
6. Steps 1 through 5 must be performed at every installed station.
7. If a mistake was made during the above procedure, it may be erased by repeating steps 1 - 5.

If the installed lines are CENTREX or other special featured lines from the telephone company or from a host system that require hookswitch action, the **TAP** key should provide a timed hookflash when pressed. If the installed lines are standard central office (CO) lines, the **TAP** key should provide a dial tone recall when pressed.

Currently produced Solo II telephones provide timed hookflash as a station default. To re-program the **TAP** key to provide dial tone recall, perform the following steps.

1. Dial **# * 7 4 6 ***.

2. Dial **24**.
3. Press **HOLD** key for dial tone recall action. (HOLD LED will turn on.)
4. Press **HOLD** again for timed hookswitch action. (HOLD LED will turn off.)

The Solo II telephone is now fully operational and interconnected with other Solo II telephones into an operational system. It can be customized by following the detailed programming procedures provided in Section 2 or operated as is.

The automatic and speed dial features of the Solo II telephone can be programmed for use by following the instructions provided in publication *GCA 70-122, Solo II Telephone User's Guide*.

DEFAULT CONDITIONS

At initial installation and whenever the memory backup power is exhausted, a default class-of-service is set. Remember, the default conditions provide basic operating features without any further programming. The default conditions are as follows:

PASS-CODE DEFAULT

- Program entry pass-code digits = 746
(as in **# * 7 4 6 ***)

LINE DEFAULTS

- Toll restriction for all lines = disabled
- Status indicators for all lines = enabled
- Ringing on all line = enabled
- Idle line preference = disabled
- Origination denied = disabled
- Executive override = disabled
- Message waiting = disabled
- Delayed ring = disabled

STATION INTERCOM NUMBER

- None assigned

STATION DEFAULTS

- BLF ring delay = 16 seconds
- Ring warble rate = 8 Hz
- Ring frequencies = 625/521 Hz
- Hold release time = 50 milliseconds
- Hold recall time = 30 seconds

- Intercom executive override = disabled
- Toll restriction parameters = disabled
- Ringing line preference = disabled
- Originate message waiting = disabled
- Hookswitch flash = 750 msec.

Default conditions can be reset, if desired, whenever the intercom line is idle. All default conditions are set at

once per the following procedure.

- Dial # * 7 4 6 * (or current pass-code digits).
- Dial 18.
- Press LINE keys 1, 2, and 3.
- Press any memory key (see Figure 3-1)
- Press MNTR (SPKR) to end procedure.

SECTION 2

CLASS OF SERVICE PROGRAMMING

Class of service programming allows the Solo II telephone features to be customized to meet special system requirements. Figure 3-3 on page 3-11 provides an overview of the programming features.

Perform class of service programming as follow:

- Mark the desired selections in the right hand column of the following charts to record the programming needs.
- Enter the base level programming mode (# * 7 4 6 *).

- Dial a feature code.
NOTE: A current program setting is indicated by a lighted LED next to the applicable programming key. When a toggle (on/off) action is provided by the same programming key, the lighted LED indicates when the feature is active.
- Dial * at any time to return to the base level mode.
- Press MNTR (SPKR) to end the programming procedure.

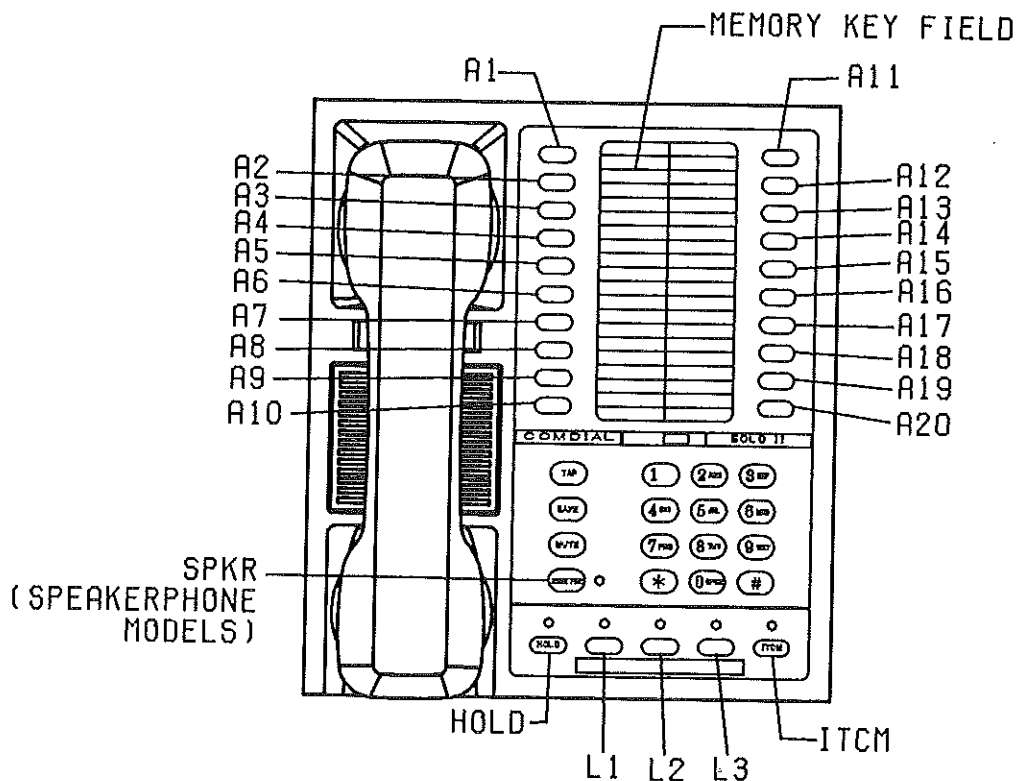


Figure 3-2. Program Key Locations

DETAILED PROGRAMMING PROCEDURE FOR SOLO II TELEPHONE

- Mark the desired selections in the charts to record programming needs.
 - Dial the feature code and then press the proper programming key (HOLD, L1, L2, L3, ITCM from left to right along bottom of Solo II telephone) to program the selection. The memory keys are located in the upper right area of the telephone and are designated A1 through A10 on the left and A11 through A20 on the right.
- NOTE:** A current program setting is indicated by a lighted LED next to the programming key for that selection.
When a toggle (on/off) action is provided by a single key, the lighted LED indicates when the feature is active.

FEATURE DESCRIPTION	ENTRY CODE	REFERENCE RECORD																																																
Base Level: The first step in the programming sequence is to enter the base level mode. Once in this mode, any desired configuration can be set.	Dial # * 7 4 6 *.																																																	
Default: The programmable features, described in the following procedures, can be defaulted to a standard set of values. These values will provide satisfactory performance in a broad range of site applications.	Dial 18. Press program keys L1, L2, and L3 to default lines 1-3. Press any memory key (A1 - A20) to default station features. (This action also assigns that memory key to this station for intercom purposes.) Dial * for next feature. NOTE: If several Solo II telephones are linked by the intercom line, press a different memory key at each telephone to establish the intercom calling number for each station.	<table><tr><th>MEM. KEY</th><th>STATION ID</th><th>MEM. KEY</th><th>STATION ID</th></tr><tr><td>A1</td><td></td><td>A11</td><td></td></tr><tr><td>A2</td><td></td><td>A12</td><td></td></tr><tr><td>A3</td><td></td><td>A13</td><td></td></tr><tr><td>A4</td><td></td><td>A14</td><td></td></tr><tr><td>A5</td><td></td><td>A15</td><td></td></tr><tr><td>A6</td><td></td><td>A16</td><td></td></tr><tr><td>A7</td><td></td><td>A17</td><td></td></tr><tr><td>A8</td><td></td><td>A18</td><td></td></tr><tr><td>A9</td><td></td><td>A19</td><td></td></tr><tr><td>A10</td><td></td><td>A20</td><td></td></tr><tr><td colspan="4">DEFAULT = NONE ASSIGNED</td></tr></table>	MEM. KEY	STATION ID	MEM. KEY	STATION ID	A1		A11		A2		A12		A3		A13		A4		A14		A5		A15		A6		A16		A7		A17		A8		A18		A9		A19		A10		A20		DEFAULT = NONE ASSIGNED			
MEM. KEY	STATION ID	MEM. KEY	STATION ID																																															
A1		A11																																																
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A7		A17																																																
A8		A18																																																
A9		A19																																																
A10		A20																																																
DEFAULT = NONE ASSIGNED																																																		

FEATURE DESCRIPTION	ENTRY CODE	REFERENCE RECORD																				
Flexible Ringing Assignment: Ringing assignments are programmable on a per line basis. Direct, or immediate, ringing can be enabled for some lines while delayed ringing can be enabled for other lines.																						
Direct Ringing:	Dial 10. Select desired lines. - Press L1 - L3 to select lines 1-3. LED on = direct ringing enabled. Dial * for next feature.	<table><tr><td>L1</td><td>L2</td><td>L3</td></tr><tr><td>LINE 1</td><td>LINE 2</td><td>LINE 3</td></tr><tr><td>DIRECT</td><td></td><td></td></tr><tr><td>DELAYED</td><td></td><td></td></tr><tr><td colspan="3">DEFAULT = ALL LINES DIRECT RINGING</td></tr></table>	L1	L2	L3	LINE 1	LINE 2	LINE 3	DIRECT			DELAYED			DEFAULT = ALL LINES DIRECT RINGING							
L1	L2	L3																				
LINE 1	LINE 2	LINE 3																				
DIRECT																						
DELAYED																						
DEFAULT = ALL LINES DIRECT RINGING																						
Delayed Ringing:	Dial 11. Select desired lines. - Press L1 - L3 to select lines 1-3. LED on = delayed ring enabled. Dial * for next feature.	<table><tr><td>L1</td><td>L2</td><td>L3</td></tr><tr><td>LINE 1</td><td>LINE 2</td><td>LINE 3</td></tr><tr><td>DIRECT</td><td></td><td></td></tr><tr><td>DELAYED</td><td></td><td></td></tr><tr><td colspan="3">DEFAULT = ALL LINES DIRECT RINGING</td></tr></table>	L1	L2	L3	LINE 1	LINE 2	LINE 3	DIRECT			DELAYED			DEFAULT = ALL LINES DIRECT RINGING							
L1	L2	L3																				
LINE 1	LINE 2	LINE 3																				
DIRECT																						
DELAYED																						
DEFAULT = ALL LINES DIRECT RINGING																						
Originating Denied: The ability to originate calls on a line can be denied. This feature is programmed for each desired line.	Dial 12. Select desired lines. - Press L1 - L3 to select lines 1-3. LED on = outside calls cannot be made. Dial * for next feature.	<table><tr><td>L1</td><td>L2</td><td>L3</td></tr><tr><td>LINE 1</td><td>LINE 2</td><td>LINE 3</td></tr><tr><td>DIRECT</td><td></td><td></td></tr><tr><td>DELAYED</td><td></td><td></td></tr><tr><td colspan="3">DEFAULT = DISABLED</td></tr></table>	L1	L2	L3	LINE 1	LINE 2	LINE 3	DIRECT			DELAYED			DEFAULT = DISABLED							
L1	L2	L3																				
LINE 1	LINE 2	LINE 3																				
DIRECT																						
DELAYED																						
DEFAULT = DISABLED																						
Idle Line Preference: Going off-hook automatically selects an idle line for use. Lines available to be selected are assigned by programming.	Dial 14. Select desired lines. - Press L1 - L3 to select line 1-3. LED on = feature enabled. Dial * for next feature.	<table><tr><td>L1</td><td>L2</td><td>L3</td></tr><tr><td>LINE 1</td><td>LINE 2</td><td>LINE 3</td></tr><tr><td>DIRECT</td><td></td><td></td></tr><tr><td>DELAYED</td><td></td><td></td></tr><tr><td colspan="3">DEFAULT = DISABLED</td></tr></table>	L1	L2	L3	LINE 1	LINE 2	LINE 3	DIRECT			DELAYED			DEFAULT = DISABLED							
L1	L2	L3																				
LINE 1	LINE 2	LINE 3																				
DIRECT																						
DELAYED																						
DEFAULT = DISABLED																						
Line Status Indicator: A maximum of three outside lines and one intercom line may be connected to a station. The indicator light for each connected line will be off. The indicator light for each unused line will be on. The indicator for each unused line can be turned off.	Dial 15. Press program key for unused line (B1, B2, B3 or ITCM). LED next to key will turn off. Dial * for next feature.	<table><tr><td>L1</td><td>L2</td><td>L3</td><td>ITCM</td></tr><tr><td>LINE 1</td><td>LINE 2</td><td>LINE 3</td><td>ITCM</td></tr><tr><td>ENABLED</td><td></td><td></td><td></td></tr><tr><td>DISABLED</td><td></td><td></td><td></td></tr><tr><td colspan="4">DEFAULT = ALL INDICATORS ENABLED</td></tr></table>	L1	L2	L3	ITCM	LINE 1	LINE 2	LINE 3	ITCM	ENABLED				DISABLED				DEFAULT = ALL INDICATORS ENABLED			
L1	L2	L3	ITCM																			
LINE 1	LINE 2	LINE 3	ITCM																			
ENABLED																						
DISABLED																						
DEFAULT = ALL INDICATORS ENABLED																						

FEATURE DESCRIPTION	ENTRY CODE	REFERENCE RECORD																				
Executive Override: This feature allows the telephone user to access an existing conversation on a busy outside line or intercom line. Override is programmable on a per line basis.	Dial 16. - Press L1 - L3 or ITCM for lines 1-3 or intercom line. LED on = override enabled. Dial * for next feature.	<table><tr><td>L1</td><td>L2</td><td>L3</td><td>ITCM</td></tr><tr><td>LINE 1</td><td>LINE 2</td><td>LINE 3</td><td>ITCM</td></tr><tr><td>ENABLED</td><td></td><td></td><td></td></tr><tr><td>DISABLED</td><td></td><td></td><td></td></tr><tr><td colspan="4">DEFAULT = DISABLED</td></tr></table>	L1	L2	L3	ITCM	LINE 1	LINE 2	LINE 3	ITCM	ENABLED				DISABLED				DEFAULT = DISABLED			
L1	L2	L3	ITCM																			
LINE 1	LINE 2	LINE 3	ITCM																			
ENABLED																						
DISABLED																						
DEFAULT = DISABLED																						
Message Waiting: The message waiting light at any Solo II telephone can be activated by another Solo II telephone that has been programmed to do so, or by action taken at the host system message desk. The Solo II telephone to Solo II telephone message waiting signal is supplied over the intercom line. Signals from a conventional PBX/CENTREX host system using 90 volt signalling is supplied over line 1, 2, or 3. The particular line to be used is programmable.																						
Solo II Telephone Message Center:	Dial 24. Press L2 to toggle between feature on and feature off. LED on = message originate enabled. Dial * for next feature.	<table><tr><td colspan="4">MESSAGE WAITING LINE =</td></tr><tr><td colspan="4">DEFAULT = NO MESSAGE DESK ASSIGNED</td></tr><tr><td colspan="4">NO MESSAGE LINE ASSIGNED</td></tr></table>	MESSAGE WAITING LINE =				DEFAULT = NO MESSAGE DESK ASSIGNED				NO MESSAGE LINE ASSIGNED											
MESSAGE WAITING LINE =																						
DEFAULT = NO MESSAGE DESK ASSIGNED																						
NO MESSAGE LINE ASSIGNED																						
Message Waiting Line:	Dial 17. Press L1 - L3 for 90 volt message waiting on either line 1, 2, or 3. LED on = 90 volt message waiting assigned to line. Press HOLD for low voltage message waiting on power jack pair. LED on = LV messaging assigned. Dial * for next feature.																					
Timed Hold Recall: After a call has been on hold for a programmed length of time, the Solo II telephone will remind the user that a caller is holding. The time delay before reminder is programmable in seconds.	Dial 20. Press key to select recall time. LED on = programmed delay time. - HOLD = 30 sec. - L1 = 60 sec. - L2 = 90 sec. - L3 = 180 sec. - ITCM = Never recalls Dial * for next feature.	<table><tr><td>HOLD</td><td>L1</td><td>L2</td><td>L3</td><td>ITCM</td></tr><tr><td>30</td><td>60</td><td>90</td><td>180</td><td>NEVER</td></tr><tr><td colspan="5">DEFAULT = 30 SEC.</td></tr></table>	HOLD	L1	L2	L3	ITCM	30	60	90	180	NEVER	DEFAULT = 30 SEC.									
HOLD	L1	L2	L3	ITCM																		
30	60	90	180	NEVER																		
DEFAULT = 30 SEC.																						

FEATURE DESCRIPTION	ENTRY CODE	REFERENCE RECORD																				
Personal Ringing Tones: A Solo II telephone can be programmed to ring in one of four distinctive tone pairs presented at one of two different warble rates.	Dial 22. Press HOLD to toggle between warble rates of 8 or 16 Hz. LED on = 16 Hz. Press program key to choose ring tone pair. LED on = selected pair. - L1 = 781/625 Hz. - L2 = 625/521 Hz. - L3 = 521/447 Hz. - ITCM = 447/391 Hz. Dial * for next feature.	<table><tr><td>HOLD</td><td>L1</td><td>L2</td><td>L3</td><td>ITCM</td></tr><tr><td>RING TYPE 1 (8 HZ)</td><td></td><td>TONE 2</td><td>TONE 3</td><td></td></tr><tr><td>RING TYPE 2 (16 HZ)</td><td></td><td></td><td></td><td></td></tr><tr><td>DEFAULT = 8 HZ & 625/521 HZ PAIR</td><td></td><td></td><td></td><td></td></tr></table>	HOLD	L1	L2	L3	ITCM	RING TYPE 1 (8 HZ)		TONE 2	TONE 3		RING TYPE 2 (16 HZ)					DEFAULT = 8 HZ & 625/521 HZ PAIR				
HOLD	L1	L2	L3	ITCM																		
RING TYPE 1 (8 HZ)		TONE 2	TONE 3																			
RING TYPE 2 (16 HZ)																						
DEFAULT = 8 HZ & 625/521 HZ PAIR																						
Recall/TAP: A 2 sec. line disconnect (recall) or a 750 msec. PBX/CENTREX feature select signal (TAP) can be generated by a Solo II telephone depending upon the programmed time.	Dial 24. Press HOLD to toggle between 2 sec (Recall) and 750 msec. (TAP). LED on = recall time of 2 sec. Dial * for next feature.	<table><tr><td>HOLD</td><td>L1</td><td>L2</td><td>L3</td><td>ITCM</td></tr><tr><td>TAP (750 MSEC)</td><td>RECALL (2 SEC)</td><td></td><td></td><td></td></tr><tr><td>DEFAULT = TAP, LED ON = RECALL</td><td></td><td></td><td></td><td></td></tr></table>	HOLD	L1	L2	L3	ITCM	TAP (750 MSEC)	RECALL (2 SEC)				DEFAULT = TAP, LED ON = RECALL									
HOLD	L1	L2	L3	ITCM																		
TAP (750 MSEC)	RECALL (2 SEC)																					
DEFAULT = TAP, LED ON = RECALL																						
Abandoned Hold Release: When a distant party abandons a hold condition and disconnects, the central office will send a forward disconnect signal to the Solo II telephone. The forward disconnect signal may be either 50 msec. or 350 msec. in length. Program the Solo II telephone to match the central office time.	Dial 24. Press L1 to toggle between 50 msec. and 350 msec. LED on = 350 msec. Dial * for next feature.	<table><tr><td>HOLD</td><td>L1</td><td>L2</td><td>L3</td><td>ITCM</td></tr><tr><td></td><td>SHORT (50 MSEC)</td><td>LONG (350 MSEC)</td><td></td><td></td></tr><tr><td></td><td>DEFAULT = SHORT, LED ON = LONG</td><td></td><td></td><td></td></tr></table>	HOLD	L1	L2	L3	ITCM		SHORT (50 MSEC)	LONG (350 MSEC)				DEFAULT = SHORT, LED ON = LONG								
HOLD	L1	L2	L3	ITCM																		
	SHORT (50 MSEC)	LONG (350 MSEC)																				
	DEFAULT = SHORT, LED ON = LONG																					
Ringing Line Preference: A ringing line will automatically be answered when a Solo II telephone is taken off-hook.	Dial 24. Press program key L3 to toggle between enable and disable. LED on = feature enabled. Dial * for next feature.	<table><tr><td>HOLD</td><td>L1</td><td>L2</td><td>L3</td><td>ITCM</td></tr><tr><td></td><td></td><td></td><td>ENABLED</td><td>DISABLED</td></tr><tr><td></td><td></td><td></td><td>DEFAULT = DISABLED</td><td></td></tr><tr><td></td><td></td><td></td><td>LED ON = ENABLED</td><td></td></tr></table>	HOLD	L1	L2	L3	ITCM				ENABLED	DISABLED				DEFAULT = DISABLED					LED ON = ENABLED	
HOLD	L1	L2	L3	ITCM																		
			ENABLED	DISABLED																		
			DEFAULT = DISABLED																			
			LED ON = ENABLED																			

FEATURE DESCRIPTION	ENTRY CODE	REFERENCE RECORD																																								
<p>Flexible Toll Restriction: This feature restricts Solo II telephones from dialing a range of number combinations while allowing specific exceptions. The restrictions are specified by entries on a deny table while the exceptions are specified by entries on an allow table. Allow entries always override deny entries when these tables are used to restrict calls. A maximum of four digits per line entry with five entries per table are allowed. The following number combinations can always be dialed regardless of any restrictions which may be in effect: 1+800, 911, and 1+911.</p> <ul style="list-style-type: none"> - Deny tables provide five specific four-digit dialing code restrictions. Examples of such restrictions are: 957, 1957, 011, etc. - Allow tables provide five specific four-digit dialing code restriction overrides. Examples of such overrides are: 1900, 1555, etc. <p>Dialing can also be restricted with 1/0 + digits toll restriction as well as with the deny and allow tables. Also, 1 + 7-digit dialing and 411 dialing can be enabled along with the other toll restriction assignments. Allow and deny tables are automatically assigned to the Solo II telephone if they are programmed, while the other toll restriction assignments must be enabled independently. Regardless of the toll restriction assigned to a telephone, a line must be programmed to be a toll restricted line before any assigned toll restriction programming will apply to calls made over that line.</p> <p>NOTE: Toll Restriction may be defeated if telephone is misused.</p>																																										
0/1 Toll Restriction Programming	<p>Dial 23. Press program key to toggle desired toll restriction features on or off.</p> <ul style="list-style-type: none"> - L1 = 0/1 restriction. LED on = feature enabled. - L2 = 1+7-digit dialing allowed. LED on = feature enabled. - L3 = 411 dialing allowed. LED on = feature enabled. <p>Dial * for next feature.</p>	<table border="1"> <tr> <td>1/0 TOLL RESTRICTION</td><td>ENABLED</td><td>DISABLED</td></tr> <tr> <td>1+7-DIGIT DIALING ALLOWED</td><td>ENABLED</td><td>DISABLED</td></tr> <tr> <td>411 DIALING ALLOWED</td><td>ENABLED</td><td>DISABLED</td></tr> <tr> <td colspan="3">DEFAULT = ALL TOLL REST. FEATURES DISABLED</td></tr> </table>	1/0 TOLL RESTRICTION	ENABLED	DISABLED	1+7-DIGIT DIALING ALLOWED	ENABLED	DISABLED	411 DIALING ALLOWED	ENABLED	DISABLED	DEFAULT = ALL TOLL REST. FEATURES DISABLED																														
1/0 TOLL RESTRICTION	ENABLED	DISABLED																																								
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411 DIALING ALLOWED	ENABLED	DISABLED																																								
DEFAULT = ALL TOLL REST. FEATURES DISABLED																																										
Allow Table Programming	<p>Dial 25. Press program key to select entry. Pressing programming key will clear current restriction number for that entry. LED for program key indicates current entry condition. Steady-On = entry is programmed Flashing = entry being programmed</p> <ul style="list-style-type: none"> - HOLD = entry 1 - L1 = entry 2 - L2 = entry 3 - L3 = entry 4 - ITCM = entry 5 <p>Continued on next page.</p>	<table border="1"> <tr> <th colspan="5">ALLOW TABLE</th></tr> <tr> <th>KEY</th><th>ENTRY</th><th>1</th><th>2</th><th>3 4</th></tr> <tr> <td>HOLD</td><td>1</td><td></td><td></td><td></td></tr> <tr> <td>L1</td><td>2</td><td></td><td></td><td></td></tr> <tr> <td>L2</td><td>3</td><td></td><td></td><td></td></tr> <tr> <td>L3</td><td>4</td><td></td><td></td><td></td></tr> <tr> <td>ITCM</td><td>5</td><td></td><td></td><td></td></tr> <tr> <td colspan="5">DEFAULT = NO ENTRIES</td></tr> </table>	ALLOW TABLE					KEY	ENTRY	1	2	3 4	HOLD	1				L1	2				L2	3				L3	4				ITCM	5				DEFAULT = NO ENTRIES				
ALLOW TABLE																																										
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FEATURE DESCRIPTION	ENTRY CODE	REFERENCE RECORD																																																			
	Dial allowed number (4 digit limit). Select next entry and dial that allowed number. Repeat this last step until all allow entries are programmed. Dial * for next feature.																																																				
<u>Deny Table Programming</u>	Dial 26. Press program key to select entry. Pressing programming key will clear current restriction number for that entry. LED for program key indicates current entry condition. Steady-On = entry is programmed Flashing = entry being programmed - HOLD = entry 1 - L1 = entry 2 - L2 = entry 3 - L3 = entry 4 - ITCM = entry 5 Dial restriction number (4 digit limit). Select next entry and dial that restriction number. Repeat this last step until all deny entries are programmed. Dial * for next feature.	<table><tr><th colspan="5">DENY TABLE</th></tr><tr><th rowspan="2">KEY</th><th rowspan="2">ENTRY</th><th colspan="4">DIGITS</th></tr><tr><th>1</th><th>2</th><th>3</th><th>4</th></tr><tr><td>HOLD</td><td>1</td><td></td><td></td><td></td><td></td></tr><tr><td>L1</td><td>2</td><td></td><td></td><td></td><td></td></tr><tr><td>L2</td><td>3</td><td></td><td></td><td></td><td></td></tr><tr><td>L3</td><td>4</td><td></td><td></td><td></td><td></td></tr><tr><td>ITCM</td><td>5</td><td></td><td></td><td></td><td></td></tr><tr><td colspan="6">DEFAULT = NO ENTRIES</td></tr></table>	DENY TABLE					KEY	ENTRY	DIGITS				1	2	3	4	HOLD	1					L1	2					L2	3					L3	4					ITCM	5					DEFAULT = NO ENTRIES					
DENY TABLE																																																					
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DEFAULT = NO ENTRIES																																																					
Flexible Toll Restriction Programming - continued on next page																																																					

FEATURE DESCRIPTION	ENTRY CODE	REFERENCE RECORD															
Flexible Toll Restriction Programming - continued																	
Enable Toll Restriction On Line	Dial 13. Select all desired lines. - Press L1 - L3 to select lines 1-3. LED on = toll restriction assigned. Dial * for next feature.	<table><tr><th>LINE</th><th>ENABLED</th><th>DISABLED</th></tr><tr><td>L1</td><td></td><td></td></tr><tr><td>L2</td><td></td><td></td></tr><tr><td>L3</td><td></td><td></td></tr><tr><td colspan="3">DEFAULT = DISABLED</td></tr></table>	LINE	ENABLED	DISABLED	L1			L2			L3			DEFAULT = DISABLED		
LINE	ENABLED	DISABLED															
L1																	
L2																	
L3																	
DEFAULT = DISABLED																	
Password Programming: Password programming is an option, and in many cases is not required. Changing the programming password away from 746 means that all future programming effort must be entered via the newly created code. If the new code is unknown, programming is prohibited. It is a good practice to permanently record the new code somewhere for future reference.	Dial # * 7 4 6 * if not already in Base Level mode. From Base Level mode, Dial 27. Dial 647. Dial #. Dial new three-digit code. Dial * to return to base level. Press MNTR (SPKR) to end programming.	<table><tr><th>PASSWORD DIGITS</th></tr><tr><td>DEFAULT = 746</td></tr></table>	PASSWORD DIGITS	DEFAULT = 746													
PASSWORD DIGITS																	
DEFAULT = 746																	

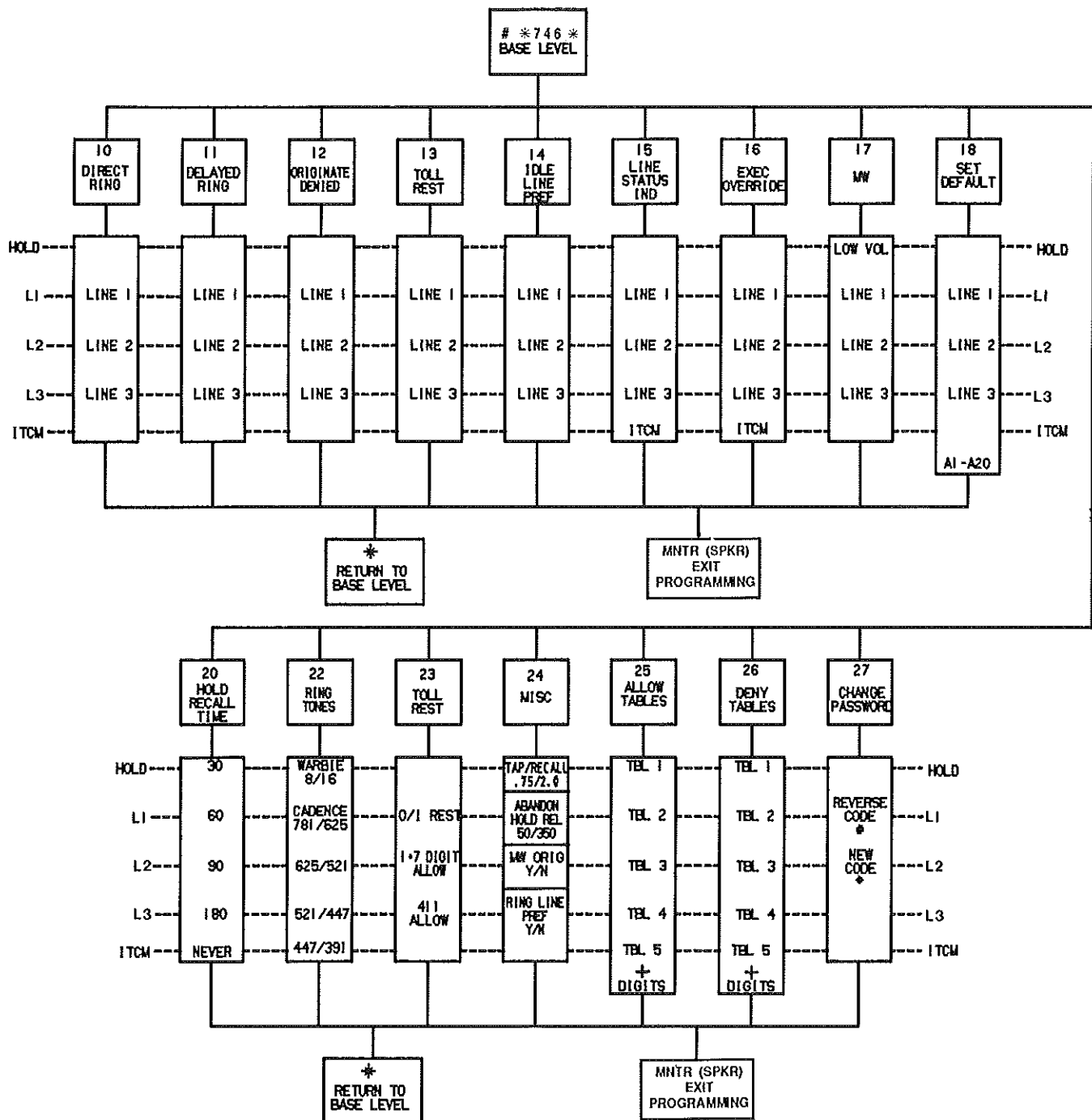


Figure 3-3. Class Of Service Programming Overview

SECTION 3 OPERATION

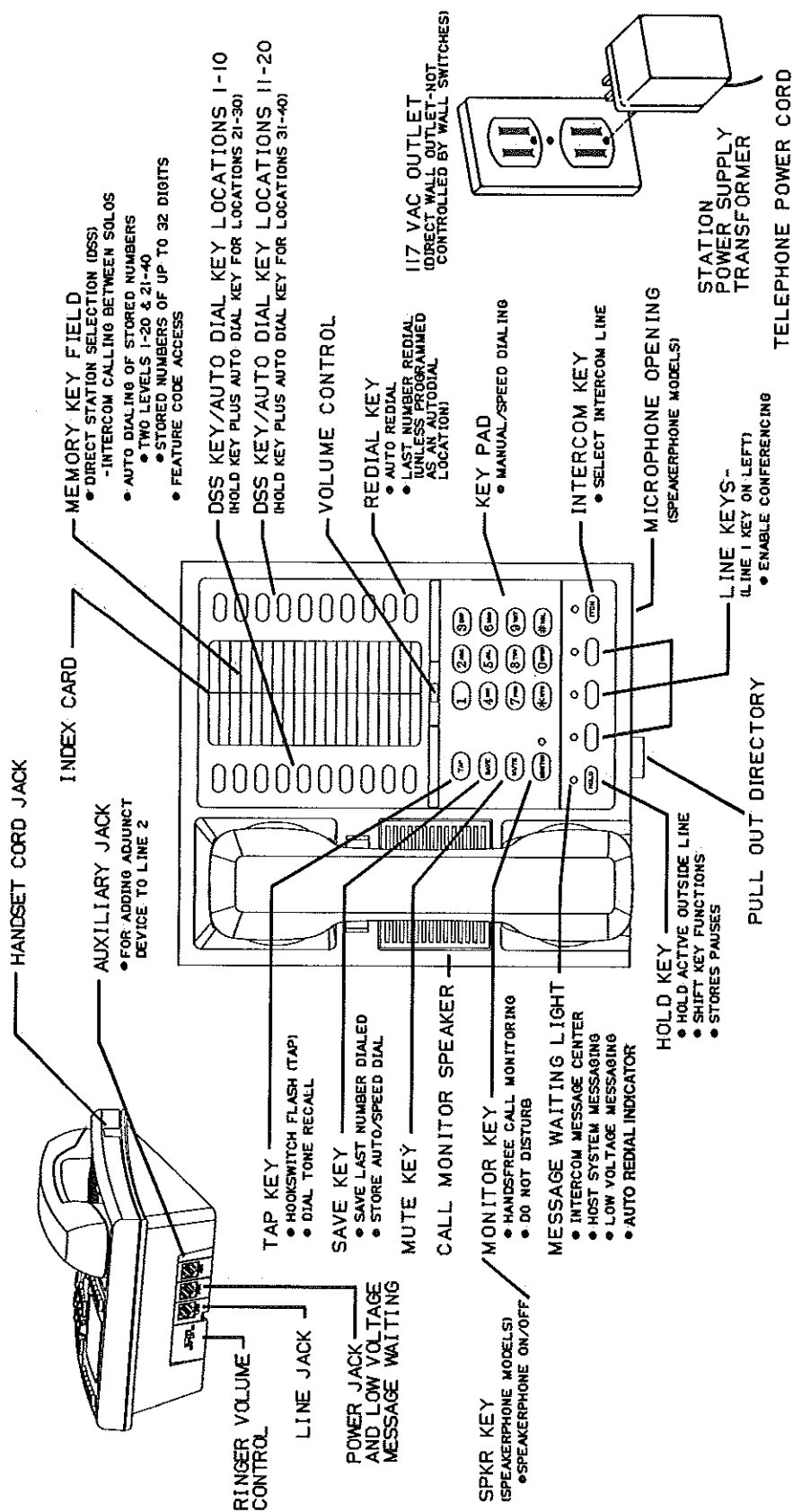


Figure 3-4. Control and Indicator Locations

AUDIBLE SIGNALS**RINGING PATTERNS**

- **CO/PBX Ring:** The ring pattern provided by the host system.
- **Intercom Tone Signalling:** The tone signalling ring pattern is two tone bursts sounded every four seconds.
- **Intercom Voice Signalling:** A voice signalling ring pattern is one tone burst sounded once, followed by a voice announcement.
- **Timed Hold Recall:** The timed hold recall ring pattern is three tone bursts sounded at the end of each recall period at the station that put the call on hold.
- **Subdued Ringing:** Subdued ringing (reduced volume ringing) is supplied when an outside line rings at a station that is busy on the inter-

com line or when the intercom line rings at a station that is busy on an outside line.

DISTINCTIVE RINGING

The ringing cadence and warble rate of the station lines can be changed by COS programming. Refer to Chapter 4, Station Programming (page 4-1) for complete details.

RINGER CONTROL

The loudness of the station ringer is controlled by a switch located at the rear edge of the station housing. The appropriate settings are marked on the housing.

VISUAL INDICATORS**OPERATING INSTRUCTIONS**




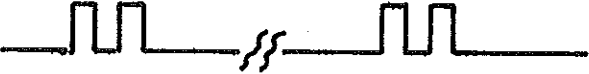





Operating instructions for the Solo II telephone are provided in the Solo II Telephone User's Guide.

INDICATOR	CALL STATUS	INDICATION
STATION LINES	Idle	Dark
	Busy - your station	On with short wink off every 2 sec.
	Busy - other station	On steady
	On hold - your station	Fast flash with wink off every 2 sec.
	On hold - other station	Fast flash
	Ringing	Flashing
	Recall (held call timeout)	Flutter
INTERCOM	Idle	Dark
	Busy - your station	On with short wink off every 2 sec.
	Busy - other station	On steady
	Ringing	Flashing
CALL MONITOR	Idle	Dark
	On line and speaker on (microphone also on if not muted)	On steady
	Mute active	Flutter
	Mute active in monitor mode	Flutter will wink on every second.
MESSAGE WAITING	Message is waiting	On
	Auto redial is active	Flutter (overrides message waiting indication if active)

CALL PROGRESS TONES

(Heard through handset receiver or over monitor speaker)

These tones are shown for reference only and may vary somewhat from telephone to telephone.

Busy Tone	553 msec. tone burst sounded continuously	
Dial Tone	Continuous on	
Base level program entry		
Memory key storage entry mode		
Class of service program entry mode		
Called station ring-back	553 msec. tone burst sounded twice every 4 sec.	
Calling station in do-not-disturb mode	123 msec. tone burst sounded twice every 1.2 sec.	
Voice signalling alert - not busy	One 184 msec. tone burst	
Voice signalling alert - busy	Two 184 msec. tone bursts	
Memory key storage dial entry confirmation	One 61 msec. tone burst	
Memory key storage exit	Two 123 msec. tone bursts	
Class of service programming exit		
Class of service programming error tone	Three 61 msec. tone bursts	

CHAPTER 4

SERVICE

TROUBLESHOOTING

If a service problem occurs, first try to determine if the trouble is in the on-site system or in the telephone company equipment. Disconnect all equipment not owned by the telephone company. If this corrects the problem, reconnect the stations one at a time until the faulty one is isolated. The faulty station must not be reconnected to the system until the problem has been corrected. Any trouble that causes improper operation of the telephone network may require the telephone company to discontinue service to the trouble site after they notify the user of the reason.

REPAIR

FCC regulations do not permit repair of customer owned equipment by anyone except the manufacturer or their authorized agent. Furthermore, this station is not warranted as a field repairable item. Defective equipment must be shipped to Comdial for repair and return.

TECHNICAL ASSISTANCE

Should you experience difficulty with installation, checkout, or programming, and have made an attempt to isolate the problem using information provided herein; or should you encounter problems at a later date which cannot be resolved by referring to this manual, call the Comdial Technical Services staff. Call the number listed below between the hours of 8:00 AM and 8:00 PM Eastern Time, Monday through Friday.

Technical Services
1-800-366-8224

When calling for technical assistance, you should be at the job site and you should have in your possession, as a minimum, an accurate volt-ohm meter and a copy of this manual.

REPAIR SERVICE

If a station needs repair it may be returned to Comdial for servicing. Comdial will, at their option, either repair the defective equipment or replace it with a re-manufactured unit. Out of warranty repair will be done for a fixed charge. For information on this charge, please call or write to the address given below.

Comdial
P.O. Box 7266
Charlottesville, VA 22906
Attention: Repair Department
(800) 978-2400
1-800-877-4448

When returning a station for repair or exchange, please be sure to pack it carefully to prevent damage. Any damages during shipment will be the responsibility of the purchaser. The station should be shipped freight or postage prepaid. The shipping address is:

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

GLOSSARY OF TERMS FOR SOLO II TELEPHONE

ALL-CALL PAGING: Solo II telephones can receive voice announcements through the telephone speaker.

AUTOMATIC DIALING: Memory keys can be programmed to store numbers for automatic dialing purposes.

AUTOMATIC REDIAL: The last number previously dialed can be automatically redialed by a Solo II telephone. Redial occurs once a minute for ten minutes or until answered.

DATAPORT/AUXILIARY JACK: A standard RJ11 configured modular jack is connected directly across the number 2 line. It is used to connect adjunct devices such as autodialers, modems, and data terminals to the telephone line. The dataport is not controlled by the telephone hookswitch.

DIRECT AND DELAYED RINGING: Ringing assignments are programmable. A station can be programmed to provide immediate ringing on some lines while providing delayed ringing on other lines.

DO NOT DISTURB: Incoming call ringing and intercom calling are disabled.

EXECUTIVE OVERRIDE: A calling Solo II telephone can break into a conversation at a busy called station.

HOLD RECALL: A held call will automatically sound three tone bursts at the station which placed it on hold after a programmed period of time.

HOLD RELEASE: If the host system provides disconnect supervision, when a held party abandons a call the line automatically returns to an idle state after a preprogrammed length of time.

IDLE LINE PREFERENCE: Taking the handset off-hook will automatically connect the station to any assigned line that is idle.

LAST NUMBER REDIAL: The last number previously dialed can be automatically redialed.

LINE MONITORING: Monitoring of dialing and call progress with the handset on-hook.

LVMW: Low voltage message waiting signal from a messaging source supplied on a special pair of wires.

MESSAGE CENTER: One Solo II telephone can be arranged for exclusive messaging waiting control. This station can then control message waiting lights and deliver messages to and from all other stations in the system.

MESSAGE WAITING: A light can be activated at a Solo II telephone by a message center station to indicate that a message awaits pick-up.

MUTE: A user's voice can be blocked to the distant party during a call.

ORIGINATION DENIED: The ability to originate calls on certain lines can be denied through programming. Origination denied does not prevent a user from answering a ringing line, retrieving a held call or receiving a transferred call.

RECALL/FLASH: Either a recall (line disconnect or hang-up) or flash (PBX feature select signal) can be generated.

RINGING TONES: A Solo II telephone can be arranged to ring in one of four distinctive tones and with one of two different warble rates.

SAVED NUMBER REDIAL: The last number previously dialed can be saved and automatically redialed later.

SCREENED TRANSFER: Transferred call is identified before transfer is made.

STATION SPEED DIALING: A personal list of numbers can be programmed for automatic dialing by a user.

TOLL RESTRICTION: Programming can be performed which will prohibit the calling of any number prefixed with a 1 or a 0. Additionally, 1+7-digit and 411 dialing as well as certain individual number exceptions can be allowed or denied by programming action.

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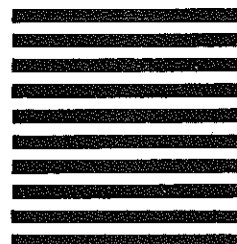
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If the Magnuson-Moss Act should be held to apply to the sale of the Equipment by a court of competent jurisdiction, the implied warranty of fitness for a particular purpose shall extend for one year from the date of manufacture.

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