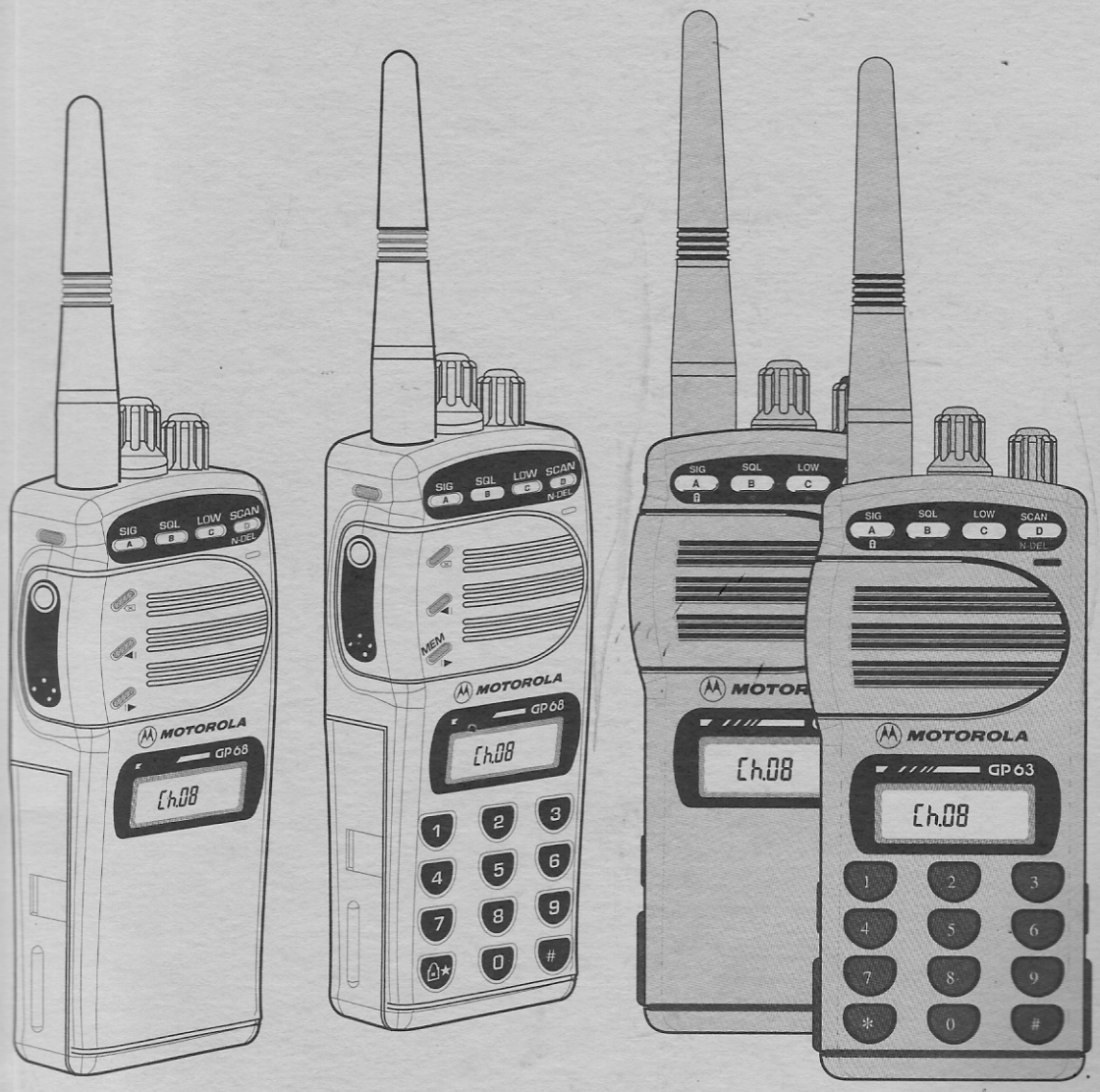
MOTOROLA

GP60 Series Portable Radios

Service Manual



6804370J41-D
September, 1997

The Motorola GP-68

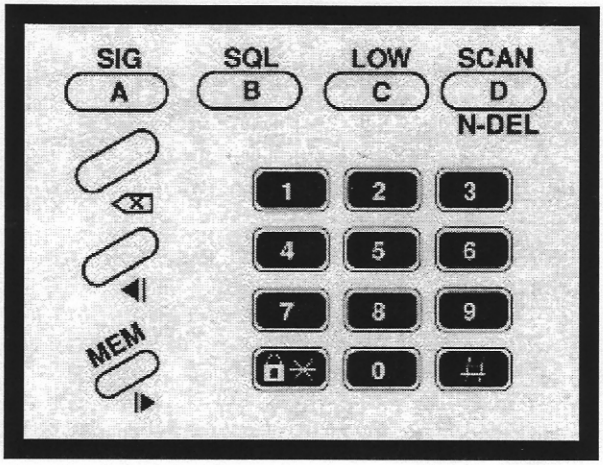
Quick Programming Instructions

[Detailed Programming Instructions]

1. In Channel Mode, use Channel Selector knob to go to desired channel.
2. Press "X" key to enter Frequency Display Mode.
3. Enter frequency via the keypad.
3. Press "left arrow" key to choose +, -, or NO repeater offset.
4. Press "B" key to set CTCSS/DCS. Channel Selector knob chooses.
5. Press and hold ENTER key for 3 seconds.
6. Press ENTER again to save.

To verify, select channel in Memory Mode. Press and hold ENTER key for three seconds.

*Note that the **ENTER** Key is on the side of the GP-68, very near the top.*



Section 4b
Programming the GP68 Radio

(1) TO ENTER PROGRAMMING MODE, HOLD "PTT"+"MON"+"SCAN" and TURN RADIO "ON"
TO LOCK RADIO, HOLD "PTT"+"MON"+"LIGHT" BUTTONS AND TURN "ON"

Operator Controls and Indicators

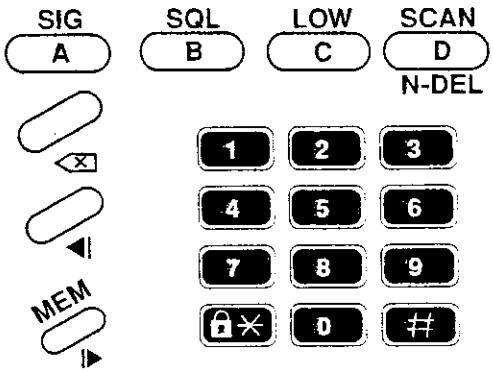


Figure 4b-1 Keypad Buttons used for programming the GP68 Radios.

NOTE
The GP68 Non-Keypad radios would not have the numeric keypad.

When programming is enabled, certain buttons have additional functions:

- SQL (B) - Used to program the squelch level (quick press) or PL/DPL code (long press). During DTMF dialing, or editing of phone number and IDs, this key specifies DTMF digit 'B'.
- LOW (C) -Toggles between High and Low transmit power levels (quick press); also used to program the frequency step size (long press). During DTMF dialing, or editing of phone number and IDs, this key specifies DTMF digit 'C'.
- ⌫ - Toggles between Megahertz(MHz) Mode (Frequency display) and Channel Mode (Channel display). When editing phone numbers and IDs, this key acts as a backspace (rubout) key.
- ◀ - Selects the TX (repeater) offset frequency type. When editing phone numbers and IDs, this key scrolls the display to the left.

Programming the Radio Parameters

All programming functions are performed while the radio is in the Megahertz (MHz) Mode (Frequency Display). If the radio is in Channel Mode (Channel Display), momentarily press ⌫ to enter the MHz mode.

To Program a Channel

There are twenty memory channels available. Each memory channel consists of a receive/transmit frequency pair, the type of TX offset, the offset frequency, the Receive PL/DPL Code, the Transmit PL/DPL Code, and the default Squelch Mode Setting (CSQ, CTCSS and Signalling Squelch).

1 If required, momentarily press ⌫ to enter the MHz mode.

2 Select the desired frequency, type of TX offset and offset frequency (see page 4b-3 onwards).

3 Press and hold the **Enter Button** for 3 seconds.

The LCD displays the following to prompt you to select the channel number (Figure 4b-2).

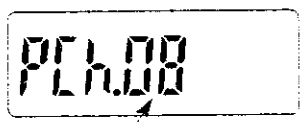


Figure 4b-2

The channel number flashes if it is unprogrammed, but lights continuously if it is programmed.

4 Use the **Channel Selector Knob** to select the desired channel number.

5 Momentarily press the **Enter Button** again to program the selected memory channel.

The radio remains in **MHz** mode after successful programming of the channel.

WARNING

If the selected memory channel was already programmed (channel number lit continuously), the new frequency information overwrites the previous information in memory.

To Verify a Programmed Channel

All the data for a programmed channel (receive and transmit frequencies, TX offset type, offset frequency, receive and transmit PL/DPL codes, and default Squelch Mode Setting) can be copied over into the MHz mode for verification.

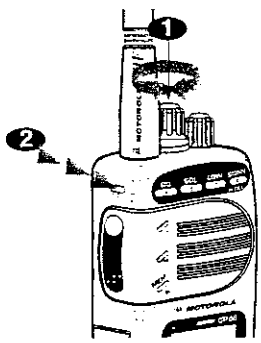


Figure 4b-3 Verifying a Programmed Channel.

1 If required, momentarily press ⌫ to enter the Memory mode.

2 Rotate the **Channel Selector Knob** to the desired memory channel number.

3 Press and hold the **Enter Button** for 3 seconds.

*A valid **keypress** tone sounds when the memory channel data has been successfully copied over to the MHz mode.*

To Enable or Disable PTT ID Transmission

The radio transmits a programmable DTMF identification code (unit ID), indicating which portable is in operation. The PTT ID can be edited using the **Special Programming Mode** (see page 4b-8).

During a conversation, the code is normally sent only on the initial PTT press (unless PTT ID has been disabled). The 'TX' indicator lights for the duration of the PTT ID. If there is no PTT or receive activity for 7 seconds, or if you change the frequency or channel (or scan resumes), the PTT ID is once again transmitted on the next PTT press.

NOTE

PTT ID can be enabled/disabled by pressing and holding # . Upon pressing the button you will hear a beep; hold the button down until you hear a second beep, indicating that the PTT ID status has been changed, then release the button. When PTT ID is *disabled*, the "dot" indicator flashes on the display.

To Change the Default Squelch Modes

Carrier squelch (CSQ), Tone Private-Line (PL) and Digital Private-Line (DPL) operations are configurable on a per channel basis. If an option board is installed, Signalling squelch (SelCall) operation will also be configurable on a per channel basis. If the Squelch Mode is set in Megahertz mode, then it will become the channel's default squelch mode when the information is programmed into a channel.

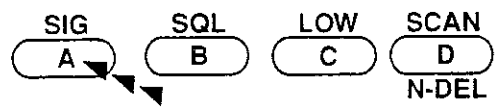


Figure 4b-4 Changing the Default Squelch Modes.

To change squelch modes temporarily for a channel:

1 Momentarily press SIG (A) to change between CSQ, Coded (PL/DPL) and Signalling squelch modes.

IMPORTANT

Squelch modes reset to the previous programmed values when the channel is changed. Squelch mode changes in MHz mode are permanent.

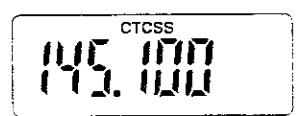


Figure 4b-5 LCD Display for Changing Default Squelch Modes.

When 'CTCSS' is off, the radio operates in CSQ mode. In this mode, you will hear all conversations on the selected receive channel.

When 'CTCSS' is on continuously, the radio operates in Coded (PL/DPL) squelch mode. In this mode, you will hear only those conversations on the selected receive channel which have the same PL/DPL code as your radio.

When 'CTCSS' is flashing (which requires that an option board is selected first via the Option Board

Setup Mode), the radio operates in Signalling squelch mode, and unmutes only after a valid Voice Selective Call (SelCall) has been decoded. The radio automatically enters CSQ mode for a period of time. If there is no receive activity, the radio resumes Signalling squelch mode and the LCD reverts to the appropriate receive mode display.

When transmitting in Signalling squelch mode, PL/DPL is transmitted if the Transmit PL/DPL code is non-zero (unless the Transmit PL/DPL is programmed for '000'). After PTT is released, the radio automatically enters CSQ mode for a period of time. If there is no receive activity, the radio resumes Signalling Squelch mode. No visual indication is given.

Refer to **Receiving a Voice Selective Call** in the **User's Manual** for more information on this squelch mode.

NOTE
A radio equipped with a Voice SelCall option operating in the PL/DPL mode unmutes for the correct PL/DPL code, or if a SelCall is decoded.

To Select the Frequency Step Size

The frequency step size determines the incremental steps that the receiver will take when you rotate the **Channel Selector Knob**, or when the radio is scanning the frequency band.

The available frequency step sizes are 5, 10, 12.5, 15, 20, and 25 KHz.

1 Press and hold LOW (C) until the display indicates the current frequency step size (takes about 3 seconds). For example, the following display (Figure 4b-6) represents a frequency step size of 12.5 KHz.

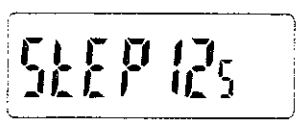


Figure 4b-6

2 Rotate the **Channel Selector Knob** to scroll through the available frequency steps until the desired frequency step size is displayed.

When the frequency step size passes the upper or lower limit, the radio loops to the opposite limit and sounds a ***wrap-around*** *tone.*

3 Momentarily press the **Enter Button** to enter the displayed frequency step size and return to normal operation (the radio automatically does this after 5 seconds of inactivity).

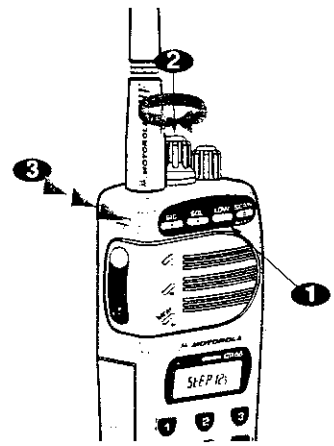


Figure 4b-7 Selecting the Frequency Step Size.

WARNING
The user-defined TX frequency may be changed automatically without indication depending on the change in the frequency step size selected. To reset your user-defined TX frequency, see **To Select the TX Offset** on page 4b-4.

To Select a Receive Frequency

There are several ways to select a receive frequency:

- by entering the frequency directly via the numeric keypad,
- by using the **Channel Selector Knob**/keypad combination.

Using the Keypad only

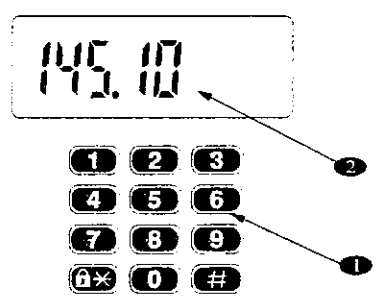


Figure 4b-8 Using the Keypad to Select a Receive Frequency.

1 Enter the desired frequency directly using the number buttons on the keypad.

2 The LCD is updated after each keypress.

NOTE
You have approximately 5 seconds between each number entry; otherwise, the radio reverts back to the previously selected frequency.

*With each number entry, a **valid keypress** tone sounds. When 6 digits are displayed, the receiver is set to the entered frequency.*

NOTE
If an invalid number is pressed, the valid number nearest the invalid keypress is entered such that the selected frequency will not be outside the allowed frequency band. Valid frequencies entered via the keypad are dependent on the frequency step size previously selected. The LCD only displays valid numbers.

Using the Channel Selector Knob and Keypad Together

1. Enter the first few digits of the desired frequency directly using the number buttons on the keypad. The LCD is updated after each keypress.

2. Press the **Enter Button** to commit the partially-entered frequency. Un-entered digits are coerced to the nearest valid frequency.

3. Rotate the **Channel Selector Knob** clockwise to increase, or counter-clockwise to decrease, the frequency (starting at the next available frequency) until the desired frequency is displayed. The frequency increments, or decrements, according to the selected frequency step size.

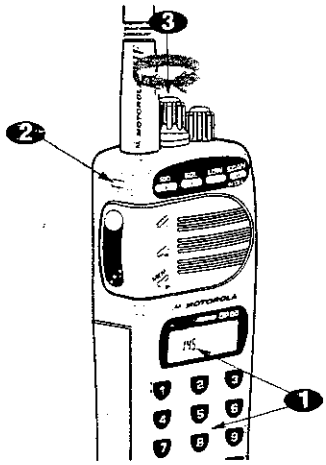


Figure 4b-9 Using the Channel Selector Knob and Keypad to Select a Receive Frequency.

*When the frequency selection passes the upper or lower limit, the radio loops to the opposite limit and sounds a **wrap-around** tone.*

To Select the TX Offset

For the GP68, the transmit frequency can be the same as the receive frequency (no offset), it can have a standard positive or negative offset, or it can be a user-defined TX frequency.

NOTE
The Tx Offsets are only visible on the Dealer Programmable GP68. The offsets are not shown on the User GP68.

1. Momentarily press ◁ to toggle between no offset, standard positive or negative offset, or user-defined TX frequency. The offset mode is set according to the table shown (Table 4b-1).

Table 4b-1 TX Offset Modes.

Indicator(s)	Offset Mode
None	No offset (simplex)
+	Standard Positive Offset
-	Standard Negative Offset
+ -	User-defined TX Frequency

The indicator(s) light according to which corresponding mode is currently selected, and the LCD displays the TX frequency whenever the radio is keyed (for example, see Figure 4b-10).

Figure 4b-10

To Program a User-Defined TX Frequency

1. Press and hold ◁ until the "+ –" indicators begin to flash (takes about 3 seconds). The LCD will display the current user-defined TX frequency.

2. You can now enter the desired TX frequency either directly via the numeric keypad or by rotating the **Channel Selector Knob** and scrolling through the available frequencies (according to the selected frequency step size).

3A. If using the keypad to enter a user-defined TX frequency, either completely key in the desired frequency or, to fill in trailing zeros, press the **Enter Button**. Once the frequency is fully entered, press the **Enter Button** again to exit the user-defined entry mode and commit the selected TX frequency.

NOTE
The radio automatically exits the user-defined entry mode after 5 seconds of inactivity and commits the selected TX frequency ONLY if you have completely keyed in the desired frequency (a partially-entered frequency is NOT stored by the radio).

3B If using the **Channel Selector Knob** to enter a user-defined TX frequency, press the **Enter Button** to commit the selected TX frequency and return to normal operating mode (the radio automatically does this after 3 seconds of inactivity).

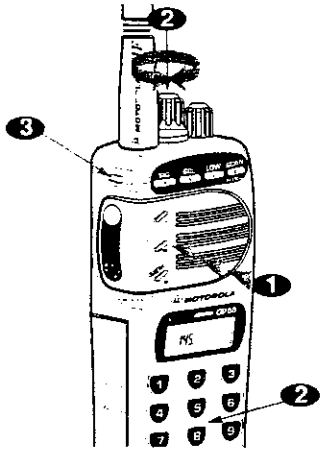


Figure 4b-11 Programming a User-Defined TX Frequency.

NOTE
When receiving in MHz mode, the radio displays the selected RX frequency; when transmitting, the radio displays the selected TX frequency.

To Select the Receive PL/DPL Code

There are 126 different Receive PL/DPL codes available, numbered from 001 to 126 (see Table 4b-2, **Receive and Transmit PL/DPL Codes**, on page 4b-6). Receive PL/DPL code '000' represents Carrier squelch.

1 Press and hold SQL (B) until the LCD displays 'rPL." followed by the active Receive PL code number (takes about 3 seconds). In the following example (Figure 4b-12), the Receive PL/DPL code is 014.

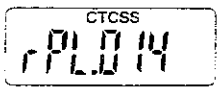


Figure 4b-12

2 Rotate the **Channel Selector Knob** clockwise to increase, or counter-clockwise to decrease, the active Receive PL/DPL code.

NOTE
If you reach the upper or lower limit of the PL/DPL codes, the displayed code wraps around to the opposite limit and starts to increment or decrement from that point.

3 Momentarily press any key to immediately adopt the selected Receive PL/DPL code and return to normal operating mode (the radio automatically does this after 3 seconds of inactivity).

The new Receive PL/DPL code is adopted.

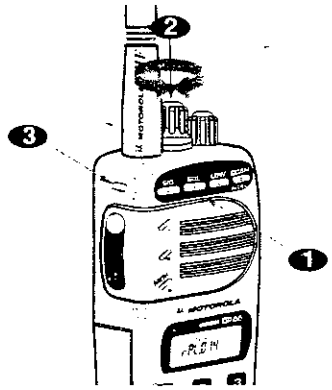


Figure 4b-13 Selecting the Receive PL/DPL Code.

To Select the Transmit PL/DPL Code

There are 126 different Transmit PL/DPL codes available, numbered from 001 to 126 (see **Receive and Transmit PL/DPL Codes** on page 4b-6). Transmit PL/DPL code '000' represents Carrier squelch.

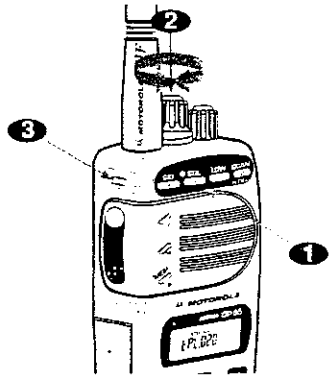


Figure 4b-14 Selecting the Transmit PL/DPL Code.

1 Press and hold SQL (B) until the LCD displays 'rPL." followed by the active Receive PL code number (takes about 3 seconds). Press SQL (B) momentarily to toggle the display to 'tPL." followed by the active

Transmit PL code number. You can toggle between editing of the Receive and Transmit PL/DPL by pressing SQL (B) momentarily. In the following example (Figure 4b-15), the Transmit PL/DPL code is 020.

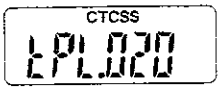


Figure 4b-15

2 Rotate the **Channel Selector Knob** clockwise to increase, or counter-clockwise to decrease, the active Transmit PL/DPL code.

NOTE

If you reach the upper or lower limit of the PL/DPL codes, the displayed code wraps around to the opposite limit and starts to increment or decrement from that point.

3 Momentarily press any key to immediately adopt the selected Transmit PL/DPL code and return to normal operating mode (the radio automatically does this after 3 seconds of inactivity).

The new Transmit PL/DPL code is adopted.

NOTE

If the Receive PL/DPL code is programmed for '**000**', then the Receive PL/DPL (Coded squelch) mode cannot be selected. To select the Receive PL/DPLmode, the Receive code must be changed to other than zero (see **To Select the Receive PL/DPL Code** on page 4b-5 and **Receive and Transmit PL/DPL Codes** on page 4b-6). For Transmit, PL/DPL codes are transmitted if the selected Transmit PL/DPL Code is non-zero.

Receive and Transmit PL/DPL Code Tables

When selecting a Receive or Transmit PL/DPL code, Table 4b-2, **Receive and Transmit PL/DPL Codes,** on page 4b-6, gives the PL frequencies, equivalent PL codes (if applicable) and DPL codes corresponding to the display **rPL.XXX** or **tPL.XXX** where **XXX** is in the range 001 to 126. **rPL.000** and **tPL.000** represents Car-

Table 4b-2 Receive and Transmit PL/DPL Codes

rPL.XXX tPL.XXX	PL FREQ (Hz)	EQUIV. PL CODE	rPL.XXX tPL.XXX	PL FREQ (Hz)	EQUIV. PL CODE
000	CSQ	-	022	136.5	4Z
001	67.0	XZ	023	141.3	4A
002	69.3	WZ	024	146.2	4B
003	71.9	XA	025	151.4	5Z
004	74.4	WA	026	156.7	5A
005	77.0	XB	027	162.2	5B
006	79.7	WB	028	167.9	6Z
007	82.5	YZ	029	173.8	6A
008	85.4	YA	030	179.9	6B
009	88.5	YB	031	186.2	7Z
010	91.5	ZZ	032	192.8	7A
011	94.8	ZA	033	203.5	M1
012	97.4	ZB	034	206.5	8Z
013	100.0	1Z	035	210.7	M2
014	103.5	1A	036	218.1	M3
015	107.2	1B	037	225.7	M4
016	110.9	2Z	038	229.1	9Z
017	114.8	2A	039	233.6	M5
018	118.8	2B	040	241.8	M6
019	123.0	3Z	041	250.3	M7
020	127.3	3A	042	254.1	-
021	131.8	3B			

rPL.XXX tPL.XXX	EQUIV. DPL CODE	rPL.XXX tPL.XXX	EQUIV. DPL CODE	rPL.XXX tPL.XXX	EQUIV. DPL CODE	rPL.XXX tPL.XXX	EQUIV. DPL CODE
043	23	065	152	087	343	109	606
044	25	066	155	088	346	110	612
045	26	067	156	089	351	111	624
046	31	068	162	090	364	112	627
047	32	069	165	091	365	113	631
048	43	070	172	092	371	114	632
049	47	071	174	093	411	115	645
050	51	072	205	094	412	116	654
051	54	073	223	095	413	117	662
052	65	074	226	096	423	118	664
053	71	075	243	097	431	119	703
054	72	076	244	098	432	120	712
055	73	077	245	099	445	121	723
056	74	078	251	100	464	122	731
057	114	079	261	101	465	123	732
058	115	080	263	102	466	124	734
059	116	081	265	103	503	125	743
060	125	082	271	104	506	126	754
061	131	083	306	105	516		
062	132	084	311	106	532		
063	134	085	315	107	546		
064	143	086	331	108	565		

rier squelch (CSQ) for Receive and Transmit respectively.

Programming and Option Boards

Option Board Setup Mode

The Option Board Setting should be set to **OPTION OFF** (**'OPt.OFF'**) in the Dealer's radio while programming channels to avoid any interaction with pre-installed option boards. However, since the Signalling Squelch Mode can only be accessed if the option board setting is not **OPTION OFF** (not **'OPt.OFF'**), it is recommended that any option board be installed in the Dealer's radio only after all the user configuration is completed.

1. Turn the radio on while holding down ⏻, and keep holding ⏻ until the radio sounds a ringing Option Board Setup Mode start-up tone (takes about 3 seconds).

> NOTE
> At power-up, all display segments light for about 2 seconds, followed by a brief display of the software version which is installed in your radio.

2. If the battery voltage level is low, the display indicates LOBAT, the **'BATT'** indicator flashes and the radio sounds a low battery alert tone. You must turn off the radio and replace, or recharge, the batteries.

3. If the batteries are above the threshold level, the radio enters the Option Board Setup Mode and the LCD displays the current option board setting (**OPt.OFF, SEL.CAL, dECOdE, SEriAL**). You can scroll through the four options by using the ◀ and MEM ▶ keys.

4. See **Option Boards** on page 3-4 for more details.

> NOTE
> It is not necessary for a Dealer's radio to have an option board installed in order to perform the programming.

If no Option Boards were Installed in the Dealer's Radio

- Select the appropriate option board setting via the Option Board Setup Mode.
- Perform all necessary channel programming functions, including default radio settings, channel settings, and phone numbers.
- Perform any programming of DTMF Selective Call IDs (if necessary), and configure SPM defaults.
- Clone the programmed settings over to the user radios.

If an Option Board is Installed in the Dealer's Radio

> NOTE
> In this procedure, you would not be able to select Signalling Squelch Mode as a channel default. However, if you do need to do so, remove the Option Board and follow the steps outlined in **If no Option Boards were Installed in the Dealer's Radio**.

> NOTE
> You can use the procedure for **If no Option Boards were Installed in the Dealer's Radio** if the option board does not have any interaction with the programming procedure.

- Disable any installed option boards via the Option Board Setup Mode by selecting **'OPt.OFF'**.
- Perform all necessary programming functions, including default radio settings, channel settings, and phone numbers.
- Select the appropriate option board setting for the User's radio via the Option Board Setup Mode.
- Perform any programming of DTMF Selective Call IDs (if necessary), and configure SPM defaults.
- Clone the programmed settings over to the user radios.

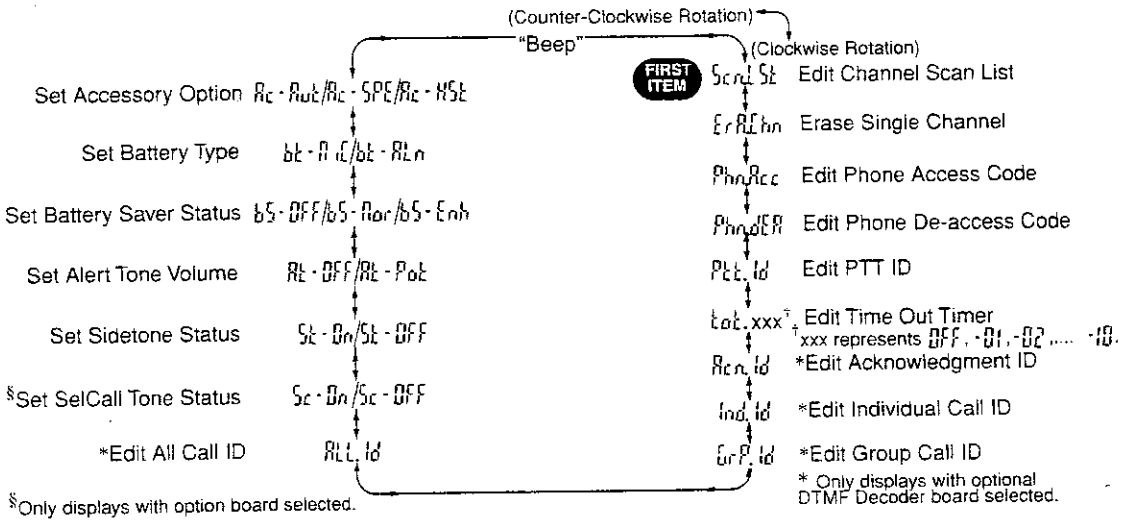


Figure 4b-16 Special Programming Mode Options.

Special Programming Mode (SPM)

NOTE

In addition to the parameters accessible by the user, the Dealer's Radio allows you to access additional parameters of the radio. These are: Erase Single Channel, Edit PTT ID, *Edit Acknowledgment ID, *Edit Individual Call ID, *Edit Group Call ID, and *Edit All Call ID. (* Only if DTMF Option Board is selected in Option Board Setup Mode). The Special Programming mode also provides a Factory Reset feature which allows you to return certain user-modifiable parameters in the radio to the factory-default values (IDs and access/de-access codes are unaffected by this programming feature).

Edit the Channel Scan List

1 Rotate the **Channel Selector Knob** to select the Scnl St menu item.

2 Use ◀ or MEM ▶ to scroll through the channels (01 to 20).

*An **invalid keypress** tone sounds when you have reached the upper or lower limit of the channel scan list.*

A flashing channel number indicates that the channel is *excluded* from the scan list. A channel number that lights continuously indicates the channel is *included* in the scan list. For example, a display showing SCh 18 with flashing digits indicates that channel 18 is *excluded* from the scan list.

3 Press the **Enter Button** to toggle the state of a channel in the scan list from included to excluded, or from excluded to included.

*A **valid keypress** tone sounds when the new setting is stored.*

4 To exit the scan list edit mode, select another menu item by turning the **Channel Selector Knob**.

NOTE

In a Full Serial Option Board Configured Radio, the Channel Scan List can be configured to exclude Full Serial Channels from the Scan List so that conventional channel scan can function correctly.

Erase a Single Channel from Memory

1 Rotate the **Channel Selector Knob** to select the ErASChn menu item.

2 Use the ◀ or the MEM ▶ to scroll through the channels (01 to 20).

A flashing channel number indicates that the particular channel is unprogrammed (erased). For example, a display showing EErA 10 with flashing digits indicates that channel 10 is *erased*.

3 To erase a programmed channel (non-flashing channel numbers), press the **Enter Button**.

*A **valid keypress** tone sounds when the channel has been successfully erased.*

NOTE
Pressing the **Enter Button** for an unprogrammed channel (flashing channel numbers) results in an *invalid keypress* tone, and the keypress is ignored.

4 To exit this edit mode, select another menu item by turning the **Channel Selector Knob**.

Edit Time Out Timer

This menu item allows you to select the Time Out Timer length.

1 Rotate the **Channel Selector Knob** to select the '**Edit Time Out Timer**' menu item. The menu will display the current setting: tot.xxx, where xxx represents one of OFF, -01, -02 ..... -10. The default display of tot.-01 shows the time out timer setting of one minute.

2 Use the ◁ or the MEM ▷ to change the current status.

3 Select another menu item by turning the **Channel Selector Knob** to commit this new setting.

Edit PTT ID

1 Rotate the **Channel Selector Knob** to select the PtT.Id menu item.

2 Press any key (except the **Enter Button**) to enter the PTT ID edit mode. The LCD displays the currently programmed PTT ID. For an ID which exceeds the length of the 6-digit display, the rightmost digit flashes to indicate more digits exist on the right.

You can now change or enter numbers as required, up to a maximum of 8, using any of the numeric keys, as well as the *, #, A, B, C, and D keys. The flashing cursor indicates the position of the next digit to be entered. You can also enter a pause between the digits of the ID by first pressing 6 *, immediately followed by #. However, any pauses entered at the *end* of the ID are not stored.

Two medium-pitched "beeps" sound when a pause is successfully entered, and the display changes from 'A' to '–' to visually represent the pause

3 Use ◁ or MEM ▷ to scroll through the existing ID's digits. To change the PTT ID, use ⌫ to erase the unwanted digits, and then enter the new digits. The display shows the new digits as they are being entered. When the flashing cursor is under a digit, the maximum number has been entered.

*If you attempt to add more than 8 digits, an **invalid keypress** tone sounds and the keypress is ignored.*

4a Press the **Enter Button** to store the new PTT ID and return to the SPM browse menu.

*A **valid keypress** tone sounds when the ID has been successfully stored.*

4b To abort the data entry, select another menu item by turning the **Channel Selector Knob**, or wait until the edit mode times-out (after 5 seconds of inactivity).

Edit Selective Call IDs

NOTE
To support Selective Call operation, the Option Board-Setting must be set to '**dECOdE**' for Simple Decoder in order to access the ID parameters.

1 Rotate the **Channel Selector Knob** to select the appropriate menu item (AcK.Id = Acknowledgment ID, Ind.Id = Individual Call ID, GrP.Id = Group Call ID and ALL.Id = All Call ID).

2 Press any key (except the **Enter Button**) to enter the appropriate edit mode. The **LCD Screen** displays the currently programmed ID number. For an ID which exceeds the length of the 6-digit display, the rightmost digit flashes to indicate more digits exist on the right.

You can now enter or change digits as required, up to a maximum of 8, using any of the numeric keys, as well as the *, #, **A**, **B**, **C**, and **D** keys. The flashing cursor indicates the position of the next digit to be entered.

NOTE
Pause digits *cannot* be entered with Selective Call ID numbers. Therefore, a '*' must not be immediately followed by a '#', but they are valid in combination with all other digits.

3 Use ◁ or MEM ▷ to scroll through the existing ID's digits. To change the selected ID, use ⌫ to erase the unwanted digits, and then enter the new digits. The display shows the new digits as they are being entered. When the flashing cursor is under a digit, the maximum number of digits has been entered.

*If you attempt to add more than 8 digits, an **invalid***

keypress tone sounds and the keypress is ignored.

4a Press the **Enter Button** to store the ID number and return to the SPM browse menu.

*A **valid keypress** tone sounds when the ID has been successfully stored.*

4b To abort the data entry, select another menu item by turning the **Channel Selector Knob**, or wait until the edit mode times-out (after 5 seconds of inactivity).

Factory Reset Feature

This feature is intended to allow you to erase certain programmable parameters and restore the radio to the factory default settings. The radio, upon reset, clears all memory channels stored in the non-volatile memory area, clears all phone number storage locations, and restores the default settings to the different user-modifiable parameters (coded squelch type, squelch level, channel-step size, etc.).

NOTE
The Factory Reset feature does not clear the IDs or access/de-access codes, nor does it change the Option Board Setup setting.

1 With the radio in Special Programming Mode, press and hold the **PTT Button**.

2 While holding PTT, press **1**, **3**, **5**, **7**, **9** in sequence.

As the sequence is entered, the **LCD Screen** (which is initially cleared) displays an '**o**' for each digit entered.

*Any incorrect digit entered results in an **invalid keypress** tone, the **LCD Screen** is cleared again and you must reenter the sequence, starting with the first digit.*

Once the sequence has been entered successfully, the **LCD Screen** displays the prompt ErASE?, indicating that the reset procedure is ready to be activated.

3 Press the **Enter Button** to confirm the reset process. Pressing any other key or releasing the **PTT Button** cancels the process and returns the radio to the SPM Browse menu.

The display blanks when the reset is in progress.

*When the process is successfully completed, the **LCD Screen** displays -dONE- and a ringing reset tone sequence sounds.*