

## Section 4

# General Radio Programming Information

NOTE: This is an excerpt from Publication 6804370J41, \$ 8.82 in August 2013.

### Overview of the Programming Process

#### NOTE

This section and the sections that follow assumes that you have read the GP63, GP68, GP68 Plus or GP68-8 User Manuals, and have understood the basic operation of the radio that you will be programming.

To prepare properly programmed radios for your customers, you should

1. set your radio (Dealer's radio) into Dealer Programming Mode,
2. program your radio with all the necessary parameters, as required by your customers, and then
3. clone these parameters over to all your customers' radios (the User's radios)

### Setting the Radio to Dealer Programming Mode

#### NOTE

The steps outlined below are **NOT** valid for the GP68 Plus radio. Refer to **Setting the GP68 Plus Radio to Dealer Programming Mode** on page 4c-1 for instructions to set the GP68 Plus radio to Dealer Programming Mode.

To set the Dealer's radio to Dealer Programming Mode, remove jumper R417 (Figure 4-1). With this programming function enabled, the dealer can

- program all the required channel parameters, such as which channels should be on the scan list, and the received and transmit frequencies for a particular channel.
- clone the programmed settings over to a User's radio.

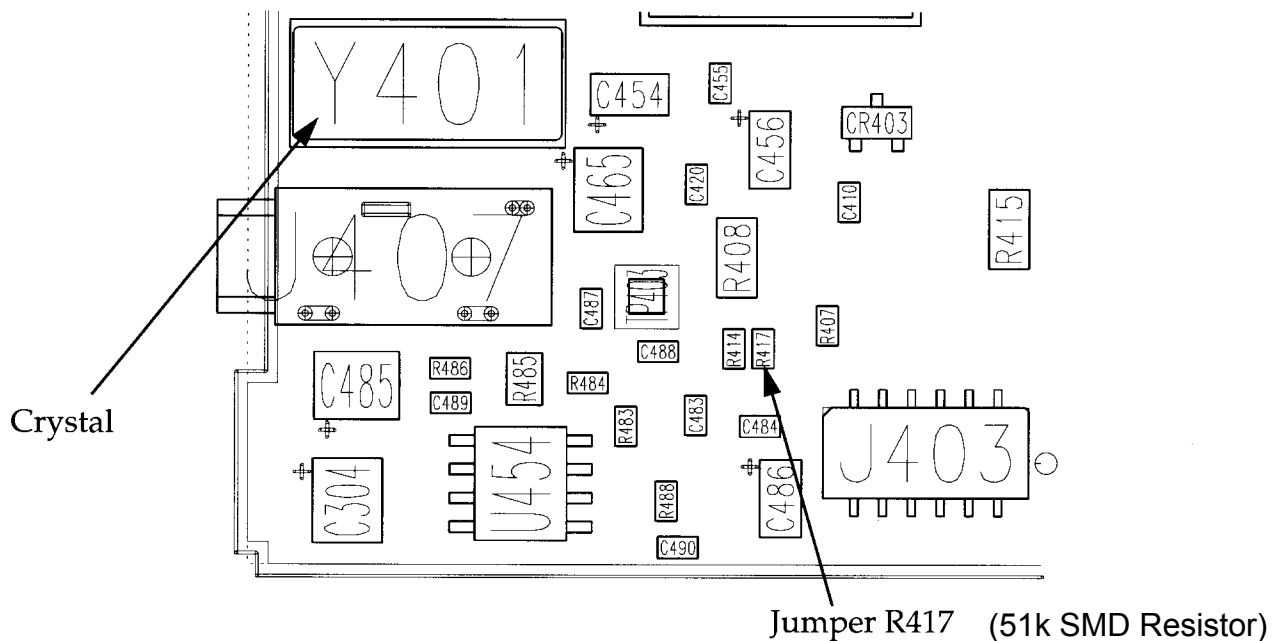


Figure 4-1 Location of the Jumper R417 on the GP60 Series Radio.

#### NOTE

If the battery power is low, the radio, the radio would display *PLBATT*, to indicate that the battery needs to be recharged or replaced.

#### IMPORTANT

If the Dealer's radio is to be given to the customer, remember to replace R417 with a 51K resistor to disable the programming function.

#### NOTE

When cloning the GP68 Keypad Model, the Full Serial Option Board Configuration Data (if any, which are stored in Signalling System One or in Full Serial Option Board) is not cloned.

#### NOTE

Cloning will take approximately 3-5 seconds. If any of the radios is turned off while cloning, the other radio will display an error after 3 seconds (refer to Table 4-1, **Cloning Error Messages**, on page 4-3 for explanation of error messages).

## Cloning Radio Parameters to User Radios

Cloning duplicates the contents of Radio 1 (master radio) into Radio 2 (slave radio). Tuning and alignment information are not affected by cloning.

### Parameters which are cloned

When a Dealer Configuration GP60 Series radio is used as the master, the following parameters are cloned:

- Channel Settings: Rx and Tx frequencies, Offsets, Receive and Transmit PL/DPL Codes, Default Squelch Mode.
- Active User Parameters: High/Low Power Setting, Squelch Level, Current Channel Selection.
- SPM Parameters: All User Modifiable parameters.

Additionally, when cloning the GP68 radios, the following parameters are also cloned:

- Active User Parameters: PTT ID Transmit Enable/Disable
- Phone Memories.
- SPM Parameters: User Modifiable parameters like including Phone Access/De-access Codes, as well as all dealer configured DTMF IDs (PTT, Individual, Ack, Group, and All IDs).
- Option Board Setting configured through the Option Board Setup Mode.

### Parameters which are not cloned

- All hardware tuning and alignment parameters
- Unit Serial Number

### To Clone a Radio

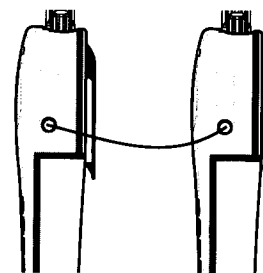


Figure 4-2 Cloning a Radio.

- 1 Connect both radios with the cloning cable through the SCI ports.
- 2 Turn on the slave radio.
- 3 Turn on the master radio while pressing **SIG A**.
- 4 The master radio will display the following message (Figure 4-3) if cloning can proceed, otherwise an error message will be shown (refer to Table 4-1, **Cloning Error Messages**, on page 4-3).

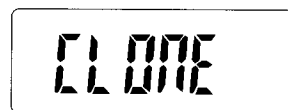


Figure 4-3 .

- 5 The slave radio displays the following message (Figure 4-4) while it is being programmed.

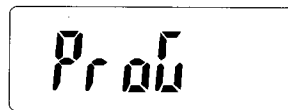


Figure 4-4 .

**NOTE**

If battery level is low, the slave radio will display *PLBATT*, and you will need to replace or recharge the battery before repeating the procedure.

- 6 When cloning is completed, both radios will reset automatically.
- 7 Disconnect radios from the cloning cable. They are now ready for operation.

**Error Conditions**

An error may occur when cloning a radio. When this happens, an error message is displayed. Table 4-1 lists the causes and the possible solutions for each error message.

**Table 4-1 Cloning Error Messages**

Error Message	Problem	Solution
Err.01	Incompatible software options error.	Cloning from the master radio to the slave radio cannot be performed.
Err.02	Timeout error a. The cloning cable connection is not properly connected or slave radio is not turned on. b. Communication between the two radios is disrupted during the cloning process.	a. Check the cloning cable connection and also verify that the slave radio is turned on. b. Check the cloning connection and all other connections.
Err.03	Master radio checksum error	Although the master radio may still function, it should be serviced by a dealer.
Err.04	No Programmed Channels Error	a. If this occurs on the slave radio, repeat cloning procedure. If it persists, the radio must be serviced by a dealer. b. If this occurs on the master radio, the radio must be serviced by a dealer.