## FIELD PROGRAMMING THE F1020

The F1020 has two programming modes that are user accessible in the field:

    A.  **NON-SET MODE**:  This involves things like the display dimmer, beep volume, squelch, etc.
No password is required for this mode.

    B. **SET MODE**:  This allows changing all the channel programming parameters, including the
display text, and most radio parameters.

**NON-SET MODE.**

This mode deals with the settings of the display dimmer, beep volume, squelch, etc.  No password is
required for this mode.

1.  Entering NON-SET MODE – Press both the UP and DOWN buttons while turning on the
radio.  The radio will function normally, except that a number will appear in the upper left
corner of the display.  This is the Section number and is in the bank number position, and
replaces the bank number if the radio is in bank mode.  The NON-SET MODE involves this
number and the P0 to P3 buttons.

2. The P0 button cycles the section number 1 -> 2 ->3 ->1 etc,  This is used to select the settings
as desired.

3. Section 1

    P1  -  Display Dimmer High / Low

    P2 -  Not used.

    P3  -  Display contrast – while P3 is pressed, the volume control becomes the adjustment
control.

4.  Section 2

    P1  -  Not used.

    P2  -  Squelch setting – while P2 is pressed, the volume control becomes the squelch control.

P3 - Volume minimum setting – while listening to a signal, press the button, adjust the volume control to the minimum desired volume setting and then release.

5. Section 3

P1 - Beep independent (beep) or linked (beep-beep) to the volume control.

P2 - Beep ON (beep-beep) or beep OFF (beep) except that start off beep is always on.

P3 - Beep volume cycles through 5 levels.

6. Turn the unit off to exit the NON-SET MODE.

**SET MODE.**

SET MODE allows changing all of the channel programming parameters, including the display text, and most of the radio parameters. A password is required to enter SET MODE. If the wrong password is used, the display does not change, and the unit must be turned off and on to try again.

This description assumes the radio is programmed in LMR mode. If the unit is in PMR mode, some of the sections have a few more parameters.

1, Entering Programming Mode - Press both the UP and P0 buttons while turning on the radio. This will give a display of "DEALER" and no starting beep. Enter the 6 digit password using the chart on page 6 of the user manual for number to button correlation. This is reproduced here:

| Key | P0 | P1 | P2 | P3 | DOWN |
|-----|-----|-----|-----|-----|------|
| Number | 0,5 | 1,6 | 2.7 | 3,8 | 4,9 |

On the F1020 radio this sequence equate to "P1, P0, Down arrow, P3, P0, P2.

On the F121 radio this sequence equates to "P1, P0, Power, P3, P0, P2.

The default password is "159357", the same as was used in the IC-H16 and U16. If successful, the display changes to "SET MODE". If unsuccessful, turn off the radio and try again. The radio will not function as radio while in SET MODE. Since we do not normally use the "Clone" mode proceed to para #3 below.

1.  While the display shows SET MODE, pressing P3 enters clone mode.  The display shows "CLONE".  This will be the master radio.  AFTER doing this, connect the two radios with the OPC-591 cloning cable.  Momentarily press the ON/OFF button the master radio to start the clone process.  This will count up and when done, shows "CLONE OK".  To repeat the process with another slave radio, press the ON/OFF button on the master radio again.  Turn off the master radio when done.  NOTE:  For cloning, both radios must be either 32 channel models or 160 channel models.  You cannot mix types.  Also cloning will not add the Priority A Channel upgrade of a 160 channel unit into another unit.

2.  P0 and P1 (in the reverse direction) cycle the unit through the programming sections:

    Ch 01 -> DTMF 1 -> Rxch 1 -> LIST 01 -> COMMON

    The unit cannot return to the SET MODE display for cloning without turning the unit off and re-entering SET MODE.

3.  Ch 01 -  Channel section.  This is where the individual channel settings are made.  The number will vary according to which channel is selected.

    -  Press P3 to start setting the channel number (which then flashes).  Use P1 to set the bank number (if used).  Use the UP and DOWN keys to set the channel number.  Press P3 again when the correct channel number is showing.

    -  The UP and DOWN keys cycle the display through the various channel settings:

    | Setting | Options |
    | --- | --- |
    | Ch 01 | Any valid channel number |
    | R 154,4900 | INH or a frequency |
    | T 154,4900 | INH or a frequency |
    | RC   1230 | RC (CTCSS), RD (DTCS) or RC OFF |
    | TC   1230 | TC (CTCSS), TD (DTCS) or TC OFF |

| | |
|---|---|
| CHANNAME | This is the channel name, as desired. |
| TOT   OFF | ON or OFF |
| PWR   H | H, L02 or L01 (45, 25 and 4.5 watts) |
| 2TD   OFF | 2 Tone Decode (if installed), OFF or 1.2 or 3 |
| LOG _ _ _ _ _ | IN, OFF, BOTH OR  _ _ _ _ _(meaning no ID) |

- The above values are typical.

- In the PMR mode, the bottom two entries are replaced by six entries for use with the UT-96.

- To program a channel, select a setting using the UP and DOWN keys, then press P2 to change to the desired option if necessary.  When the option then requires a number entry, press P3 to start the entry.  The first digit will flash.  Using the UP and DOWN keys, set the display as required and press P3 again to advance to the next digit or end the entry after the last digit.

- For some entries, such as for tones, and the last 3 digits of frequency entries, more than 2 digits will flash, and the display will cycle through the acceptable values with the UP and DOWN keys.

- When selecting CTCSS tones for RC or TC, the display has no decimal point, so the values are shown without decimal points, e.g. 127.3 shows as 1273.

- When selecting a DTCS code for RD or TD, pushing P1 while any digit is flashing will toggle the code between normal and inverse.

- When entering alphanumeric values, it takes quite a few UP or DOWN presses to get to the A to Z characters.  Press UP until you find the numbers 0 to 9, and then press up 8 more times.

4.   COMMON SECTION  -  The UP and DOWN keys cycle the display through the various common settings, using P2 to select the desired option:

|               Setting | Options |
|---|---|

| | |
|---|---|
| PRA xx | Priority channel A, xx = channel number |
| PRB xx | Priority channel B, xx = channel number |
| EMR OFF | Emergency channel, OFF or channel number |
| STARTMSG | The startup display message, as desired.  If blank, |

there is no start up beep.

The channel numbers are adjusted as described above in section 4.  Use P3 and the UP and

DOWN keys to set the channel number.  Use P1 to set the bank number (if used).

5.   LIST xx section -  These are the scanning settings, for choosing the scanning list, setting

channels on or off, and naming the list.

-  The UP and DOWN keys cycle the display through the various scanning settings, using P2 to

select the desired option.

| Setting | Options |
|---|---|
| LIST  xx | Scan list selection, 01 to 05 (32 channels) or 01 to 10 (160 |

channels).

| | |
|---|---|
| Xx OFF | In LIST xx, all channels can be set ON or OFF |
| SCAN 1 | The scan list name, for LIST xx, as desired |

-  Set the desired list number first, using P3 and the UP and DOWN keys.  The other two

entries will then show the appropriate data for the chosen scan list.

-  For the xx OFF settings, which are the channel numbe3rs and the scan status, pressing P3

starts the number flashing, and then the channel can be set using the UP and DOWN and P1

keys.  The ON or OFF status is toggled with the P2 key while the number is flashing.

Pressing P3 again ends the entry.  These entries are the individual channel status on that

scan list for each channel on the radio.

6.   RXch x  -  UT-80 two tone decoder unit code channel selection.

The UP and DOWN keys cycle the display through the various code channels, using P2 to select the desired channel:

| Setting | Options |
|---------|---------|
| RXch  x | The desired code channel, RXch 1,2,3, or * |
| CALL  1 | This is the RXch channel name, as desired. |

- These are adjusted using P3 and the UP and DOWN keys in the same manner as described above in section 4.

- In PMR mode, there is also a section for the receive code, of up to 7 digits.  This is adjusted using P3 and the UP/DOWN keys.  Also, there is also an entire new section, TX ch x, which is used to set the transmit codes for the UT-96 in a similar manner.

7.   DTMF x – Autodialer section.  There are 7 autodialer numbers.  Numbers 1-5 are for normal use, 6  is for the emergency number, and 7 is for the log in / log out number.  The UP and DOWN keys cycle the display through the various autodialer sections.

| Setting | Options |
|---------|---------|
| DTMF  x | The desired entry, 1 to 7, selected with P3 |
| @ _ _ _ _ _ _ | The phone number desired , up to 16 digits. |

The phone number is set using P3 and the UP/DOWN keys in the same manner as described above in section 4.  The digits in the phone number appear 6 at a time due to the size of the display.  Extra blanks will usually be left at the end of the number, and entering a blank will end the entry and clear any following digits.  The digits can be 0-9, A-F, where E is * and F is #.

8.   When done, turn the unit off to exit SET MODE.