

Programming Notes for Yaesu FT-4X

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July 9, 2018

The following will explain how to program a repeater pair into the FT-4X radio, with appropriate offset and tone, as well as an appropriate label. I will also quickly explain how to set the radio to scan the channels programmed into memory.

Programming a repeater

I'm going to show you how to program a repeater that you might find documented as follows:

Freq. 146.080

Offset +0.6 MHz

Tone: 88.5

Callsign: WD5GIC

The following steps will program the above example into your radio. Before we get started, there are a few things I'd like to point out to help you program your radio:

[*V/M] – This is the VFO/Memory button, located in the lower-left corner of the radio keypad

[F] – This is the Function Key, it is located on the left side of the radio, the lowest button on the side.

[Up/Down] – These are the Up/Down arrow keys on the upper-right side of the keypad.

To enter letters and numbers when adding a label to a programmed channel, you will use a technique called T9, where you repeatedly press number keys to cycle through the characters on the numeric keys (you might remember doing this on early smartphones).



Turn on the radio by turning the volume knob clockwise until the radio turns on.

Program the frequency:

1. Press the [*V/M] repeatedly until the radio is in VFO mode, as indicated by an [A] in the display.
2. Enter the frequency of the repeater, in this case [1][4][6][0][8][0]

(Note: The repeater offset was set automatically because menu item "29 RPT.ARS", the Automatic Repeater Shift function is set to "ARS.ON", which sets the offset based on repeater frequency.)

Program the tone:

3. Press the "F" button for an extended period, to enter menu mode
4. Use the [Up/Down] keys until the display shows menu item "36 SQL TYP"
5. Press the "F" button briefly, the display will show "SET" and a value, like "SET OFF"

6. Use the [Up/Down] keys to select "T-TONE"
7. Press the "F" button briefly to save the setting, the display will show "36 SQL TYP"
8. Use the [Up/Down] keys until the display shows menu item "38 TN FREQ"
9. Press the "F" button briefly to set the tone frequency, the display will show a receive tone value like "100.0 R" (we don't want to use a receive tone in this example).
10. Press the [*V/M] button briefly to switch to the transmit tone – the display will show a transmit tone value like "100.0 T"
11. Use the [Up/Down] keys to adjust the transmit tone, in this example "88.5 T"
12. Press the "F" button briefly to save the setting
13. Press the "F" button for an extended period to exit menu mode – the display will show the entered frequency, a [T] and a [+] to indicate that [T]one squelch and a [+] offset are set.

Test that the radio is programmed correctly

14. If within range of the entered repeater, test the settings before proceeding
(Note: Don't simply "ker-chunk" the repeater, wait for the repeater to be idle, then say "Break for a radio check" and then announce your callsign. When you unkey the radio, you should hear a "squelch tail" from the repeater, continuing to transmit after you end your transmission.)

Save the channel in memory with a label:

15. Press the [*V/M] button for an extended period, the display will change to a flashing channel number in the upper-left corner of the display and six underscores, with the first one flashing.
16. The channel number in the upper-left corner of the display is a suggested empty (unprogrammed) channel, you can use the [Up/Down] keys to select any of the 200 memory channels in the radio.
17. To enter a label, press the key that contains the digit/letter you want in the blinking position on the display, for example pressing the [9WXYZ] key twice will put a capital "W" in the first position, pressing it a third time will put a capital "X" in the first position and so on, cycling through the digit on the key, then the letters on the key alphabetically, first as capital letters, then as lower case (sort of) and then cycle back around to the digit on the key, and so on.
18. When you have the digit/letter you want in the blinking position on the display, press the "F" button briefly to advance to the next position of the label and repeat steps 17 and 18 until you have the label completed.
19. When you have the memory channel label you want, press the [*V/M] button for an extended period, the display will change and briefly display "MEM-IN", indicating the channel has been written/saved.

Scan programmed memory channels

After programming several channels into the radio, you can have the radio scan them.

1. Press the [*V/M] button until the radio is in “MEMORY” mode, as the display briefly displays “MEMORY” and then shows the label for one of the previously programmed channels.
2. To start scanning the programmed channels, press one of the [Up/Down] keys and the radio will start scanning the programmed channels either in ascending [Up] or descending [Down] order.
3. To change how the radio reacts when activity is detected while scanning, explore the various options for menu option “34 SCN.RSM” (Scan Resume).
4. To stop the radio from scanning, press either of the [Up/Down] keys, or press the PTT switch on the side.

To select various channels, in memory mode, either use the [Up/Down] keys or enter the digits for the channel you want (for example, [2][0] will select channel 20, [1][1][4] will select channel 114, etc.)