

Baofeng Radios

Hints, Tips and Kinks for your UV-5R and Variants

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March 17, 2022



Baofeng UV-5R and Variants

- Widely used, inexpensive radios
- Large number of variants sold as BaoFeng and Pofung (e.g. UV-5R, -5RE, -5R+Plus; BF-F8, -F8HP)
- Designed as commercial radios (Part 90), so
 - Tunable to frequencies outside amateur bands
 - Tunable to FRS, GMRS and MURS frequencies
 - Tunable to first-responder frequencies

FRS, GMRS, MURS, PMR446



You may be tempted to use FRS, GMRS, MURS (in the USA) or PMR446 (in Europe) frequencies. Do note however that there are restrictions on these bands that make this transceiver illegal for use.



Before We Start

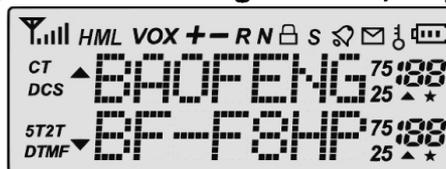
- Most of what I will say is available
 - In the BF-F8HP manual and other newer manuals
 - On the distributor's website, baofengtech.com
 - On the radio support website miklor.com
- As the tech support folks say, RTFM



Some Baofeng Basics

The main display

Figure 2.2. BaoFeng BF-F8HP, display



The transceiver is fitted with a seven character by two line dot matrix alphanumeric LCD, with auxiliary icons for miscellaneous features.

Table 2.1. LCD icon summary

Icon	Description	Icon	Description
188	Memory channel	R	Reverse function enabled
25, 75	Least significant modifiers.	N	Narrowband enabled
CT	CTCSS enabled		Battery level indicator
DCS	DCS enabled		Keypad lock enabled
+, -	Frequency shift direction if enabled in VFO	H, M, L	Transmit power level indicator According to Power (High, Mid, Low)
+-	Frequency shift direction if enabled in MR		Indicates active band or channel
S	Dual watch enabled		Squelch Open/ Close Indicator
VOX	VOX enabled		



Some Baofeng Basics

- Orange Side Key "CALL"
 - Short press starts/stops FM broadcast
 - Press and hold flashes LED and sends out alarm sound on selected frequency
- Black Side Key "MONI"
 - Short press: LED; 2nd press: flashing LED
 - Press and hold opens squelch for weak signal monitoring



Some Baofeng Basics

- Orange VFO/MR Mode Key
 - Switches between frequency (VFO) mode and memory (MR) mode (channel mode)
- Blue A/B Select Key
 - Switches between A (upper) and B (lower) frequency or channel.
 - If listening to broadcast FM, switches between 65-75 and 76-108 MHz



Some Baofeng Basics

- Numeric Keypad
 - # key: in any mode short press changes power temporarily; long press locks/unlocks keypad
 - * key: short press enables reverse function for repeaters; long press enables scanner
 - Blue notations on the keys are shortcuts to menu functions.



Hardware Hints

■ Antennas

- The stock antenna is not bad.
- Length is tradeoff between awkwardness and gain. Use what works for you.
- Nagoya NA-771 and Diamond SRJ77CA are popular compromises.
- Remember to get the right connector.



Hardware Hints

- Headsets
 - Useful in both noisy AND quiet environments
 - Stock earpiece has poor quality PTT
 - Needs Kenwood style connector
 - I use a Heil HTH-K headset



Hardware Hints

- Antenna Adaptors
 - For attaching external antennas, use a cable adaptor, not a one-piece
 - Typically SMA female to SO-239 UHF
- Get extra batteries for extended deployments



Menu Tips: Scanning

- Scan either band in Frequency or Channel Mode by pressing the *** SCAN** key.
- In Frequency Mode scans entire band in 12.5 KHz steps by default
- In Channel Mode scans all channels in band
- Dual Watch is not operational while scanning
- Three scan modes:
 - Time Operation (TO) Mode
 - Carrier Operation (CO) Mode
 - Search Operation (SE) Mode



Scanning Modes

- In Time Operation (TO) mode, the scanner stops when it detects a signal, and, after a factory pre-set time out, resumes scanning.
- In Carrier Operation (CO) mode, the scanner stops when it detects a signal, and, after a factory pre-set time with no signal, it resumes scanning.
- In Search Operation (SE) mode, the scanner stops when it detects a signal. To restart scanning, press the  key again (I think this one is most useful)



Setting Scanner Mode

1. Press the **MENU** key to enter the menus.
2. Enter "1 8" on the numeric keypad to come to scanner mode.
3. Press the **MENU** key to select.
4. Use the **▲** and **▼** to select scanning mode.
5. Press the **MENU** key to confirm and save.
6. Press the **EXIT** key to exit the menus.



Dual Watch

- Enables monitoring two different frequencies with only one receiver.
- However, Baofeng default is to transmit on most recent active channel.
- Default can be changed to lock transmit frequency to one of the two channels monitored.



Dual Watch

Enabling/Disabling

1. Press the  key to enter the menus.
2. Enter "7" on the numeric keypad to go to Dual Watch.
3. Press the  key to select.
4. Use the  and  to enable or disable.
5. Press the  key to confirm and save.
6. Press the  key to exit the menus.



Dual Watch

Locking the Transmit Channel

1. Press the **MENU** key to enter the menus.
2. Enter "3 4" on the numeric keypad to get to TDR-AB
3. Press the **MENU** key to select.
4. Use the **▲** and **▼** to select the A (upper) or B (lower) display.
5. Press the **MENU** key to confirm and save.
6. Press the **EXIT** key to exit the menus.



Other Menu Tips

- VOX (Voice Operated TX), Menu 4: Unless you are unable to use PTT or are in a very quiet place, NOT RECOMMENDED.
- TOT (TX Time-out Timer), Menu 9: Sets time to turn off TX in 15 s increments. Recommend 60 to 90 seconds to prevent issues with stuck PTT.



Manual Programming

- **Enter VFO mode (UV82: Turn radio OFF, then Press/Hold MENU button during Power ON.)**
- **Turn off Dual Watch: Press <Menu> 7 <Menu>; OFF; <Menu> <Exit>**
- **Enter the frequency you want to try**
- **<Menu> <13> <Menu> (enter tone, if req'd) <Menu> <Exit>**
- **<Menu> <26> <Menu> (chk/chng offset MHz) <Menu> <Exit>**
- **<Menu> <25> <Menu> (chk/chng offset dir.) <Menu> <Exit>**
- **<Menu> <2> <Menu> (chk/chng power) <Menu> <Exit>**



Programming Exercise

- **Enter VFO mode (UV82: Turn radio OFF, then Press/Hold MENU button during Power ON.)**
- **Turn off Dual Watch: Press <Menu> 7 <Menu>; OFF; <Menu> <Exit>**
- **Enter the frequency you want to try (444.500)**
- **<Menu> <13> <Menu> (enter tone, if req'd) <Menu> <Exit> (100)**
- **<Menu> <26> <Menu> (offset MHz) <Menu> <Exit> (005.000)**
- **<Menu> <25> <Menu> (offset dir.) <Menu> <Exit> (+)**
- **<Menu> <2> <Menu> (power) <Menu> <Exit> (M)**