How to manually program Memory Channels into Baofeng (Bŏw-oh-Fung) HT Radios

(UV-5R / UV-6R / BF-F8 / GT3 and all variants of the UV-5R including the BF-F8HP, UV-5X3 and UV-82 series)

These instructions ***begin*** with the **BuyTwoWayRadios.com** website content then my two cents on the subject.

Below Is A Link to The YouTube Video Recommended By BaoFeng Tech Support

https://www.youtube.com/watch?v=CrG0El1KkIM&feature=youtu.be

Link to miklor.com **Programming Flow Charts** - http://www.miklor.com/uv5r/UV5R-ProgFlow.html

Link to miklor.com **Change Channel Data Hint** - http://www.miklor.com/uv5r/UV5R-ProgHint.html

This work is a combination of information collected from multiple sources. This author does not hold any responsibility or liability for any damage or injury, direct, indirect or otherwise caused as a result of following the instructions and procedures herein.

UV-82HP (7W), High-Power +(3rd Gen) | UV-82C, Commercial, Employer Model | UV-5X3, Tribander Model | BF-F8HP (8W), High Power + (3rd Gen) | BF-F8+ Variants, (2nd Gen) | UV-5R & Variants (2nd Gen)

The Baofeng UV-5R is one of the most popular dual band handheld two way radios on the market worldwide. It's compact, feature packed, and *very* inexpensive. For many users who are new to programming portables, it is also one of the most challenging to program, primarily due to a poorly written user manual and an all but complete lack of support from its manufacturer, Baofeng.

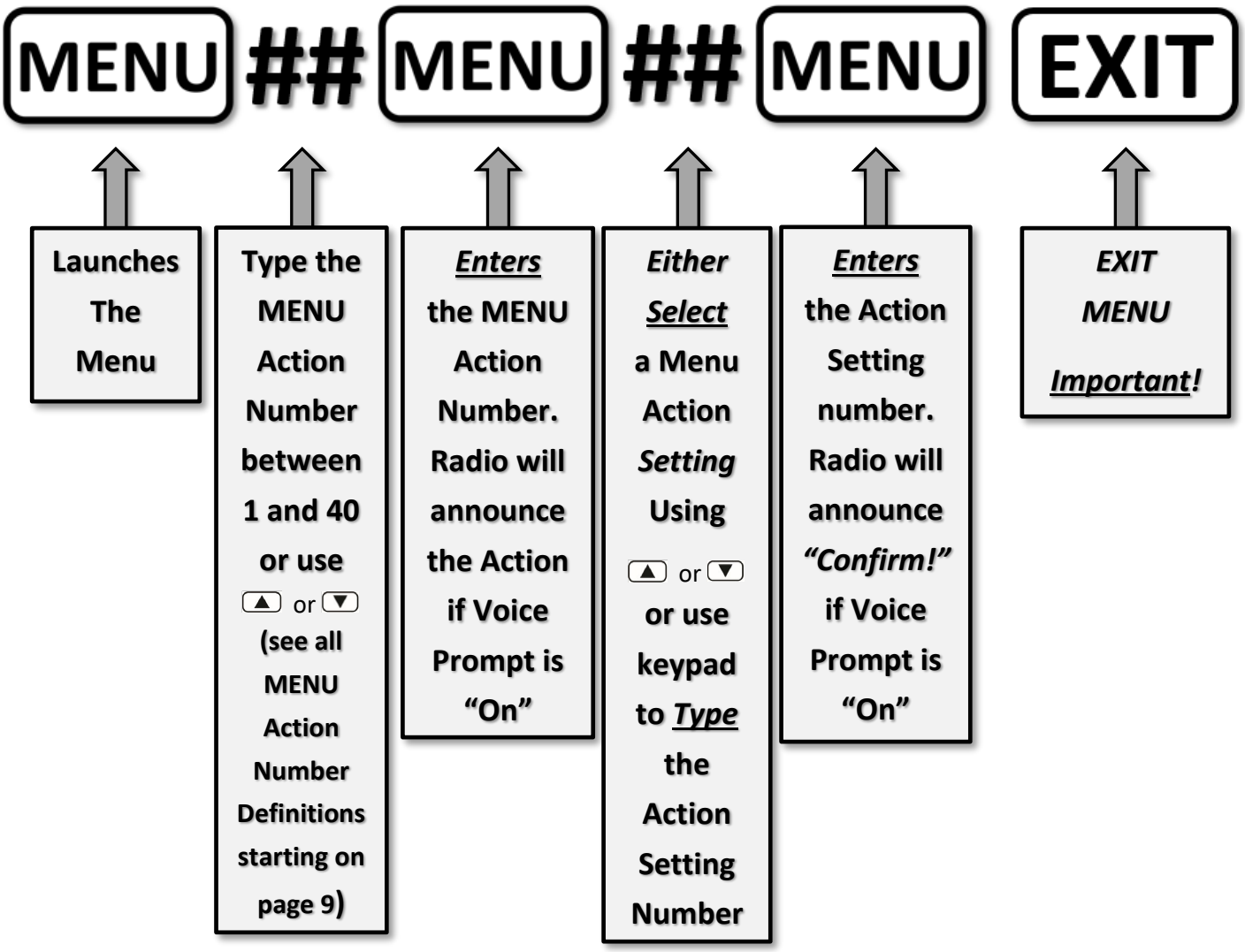
Fortunately, there are some helpful resources available from a global community of UV-5R enthusiasts, including an easier to read and understand owner's manual and an excellent software application designed to program the UV-5R from a computer. The programming software is called CHIRP, and it is freely available online.

Of course, CHIRP is a great solution, provided you have a computer, an easy to install programming cable and the time to input all the data for 128 channels. But, what if you are on the road or out in the field and don't have a computer handy? What if you need to add in a frequency or program a channel on the fly?

My Two Cents - So, here's how I learned to do it. Follow the instructions below to manually program your Baofeng HT radio (and a few other HT radios manufactured in China) using only the keypad on the radio. A .pdf file of this document is available from the Tri-County Amateur Radio Club website at WC5C.org under the "**Ham Radio**" tab.

Baofeng HT Radio
Manual Programming Pattern

See **Appendix B. – Menu Definitions** start on Page **9** below for all 40 **Menu Action Number** settings.



Note - One of our "Test Team" members highly recommended that the **Voice Prompt** be turned "**On**" before manual programming. Even though the Voice Prompt can be annoying during general use of BaoFeng HT radios, Randy (KF5RRF) highly recommended that the **Voice Prompt** be turned "**On**" before manual programming.

> "Without the voice activated, there is no feedback on what you're entering into a memory channel as to whether it is a receive frequency or a transmit frequency. That little bit of extra feedback while entering information into the radio could be the difference between getting a memory channel successfully programmed or not."

To manage the **Voice Prompt** (0=Off, 1=English, 2=Chinese)

Press MENU **14** MENU [**0**, **1** or **2**] MENU EXIT

How to manually program a Simplex channel

- **Step 1.** Press VFO/MR to enter **Frequency** mode (UV-82 Press MENU and turn the radio on).

- **Step 2.** Press A/B or EXIT/AB and/or otherwise choose the **A** Display (**upper** display). The **upper** display ***must*** be used to program channels into the radio. Programming data entered on the **B** Display (**lower** display) will **not** be saved. **Note –** This is ***not*** true for some models that ***can*** be programmed using the lower **B** Display.

- **Step 3.** Press **[BAND]** for the frequency band if the **BAND** key is on your radio (unnecessary for some variants). Toggle **[BAND]** to choose 136 MHz (VHF) or 470 MHz (UHF).
  If the incorrect band is chosen for the frequency entered in **Step 6**, the radio will cancel the operation.
  Note – This is ***not*** true for some models.

  It is highly advised to turn TDR off when manually programming directly with the radio.
- **Step 4.** Disable **TDR – DualWatch, Dual Reception**.
  Press MENU **7** MENU [type -0-] MENU EXIT.

- **Step 5. Delete** any existing data on the channel you plan to program. Menu item 28 deletes ***all*** information in a memory channel (i.e., empties all of the Channel's data). *Skip this step when setting up the channel for the first time.* http://www.miklor.com/uv5r/UV5R-ProgHint.html
  Press MENU **28** MENU [type the channel number XXX] MENU EXIT

- **Step 6.** Enter the frequency. Use the keypad to enter the frequency into the radio [XXXXXX].

- **Step 7.** *Optional* - Enter the **Receive** CTCSS code.
  - *CTCSS* – Receive Press MENU **11** MENU [enter/choose code XXXX] MENU EXIT.

- **Step 8.** *Optional* - Enter the **Transmit** CTCSS code.
  - *CTCSS* – Transmit Press MENU **13** MENU [enter/choose code XXXX] MENU EXIT.

- **Step 9.** Turn frequency **Offset Direction** Off (this will cause the radio to *ignore* any residual **Offset** frequency.
  Press MENU **25** MENU [type -0-] MENU EXIT.

- **Step 10.** Assign the frequency to a channel.
  Press MENU **27** MENU [enter channel number XXX] MENU EXIT.

- **Step 11.** Enter Channel mode
  Press VFO/MR to enter Channel mode (UV-82 - Press MENU and turn the radio on)**.**

> **Note –** CTCSS and DCS Tones are typically ***not*** used for **Simplex** HAM radio operation so (unless you want to use a Tone for Simplex operation) be sure to set them to **-0-** (Off) for **Simplex** channels just in case you programmed a **Duplex** channel with a CTCSS or DCS (Tx and/or Rx) Tone the last time you manually programmed your radio.

How to manually program a Duplex (repeater) channel

- **Step 1.** Press VFO/MR to enter **Frequency** mode (UV-82 Press MENU and turn the radio on).

- **Step 2.** Press A/B or EXIT/AB and/or otherwise choose the **A** Display (**upper** display).
  Like the simplex channels, the A side ***must*** be used to program the repeater channels into the radio. Programming data entered on the **B** Display (**lower** display) will not be saved. **Note –** This is ***not*** true for some models that ***can*** be programmed using the lower **B** Display.

- **Step 3.** Press **[BAND]** for the frequency band if the **BAND key** is on your radio (unnecessary for some models). Toggle **[BAND]** to choose 136 MHz (VHF) or 470 MHz (UHF).
  If incorrect band is chosen in **Step 6**, the radio will cancel it. **Note –** This is ***not*** true for some models.

  It is highly advised to turn TDR off when manually programming.
- **Step 4.** Disable **TDR – DualWatch, Dual Reception**.
  Press MENU **7** MENU [type -0-] MENU EXIT.

- **Step 5.** ***Highly*** recommended - **Delete** the channel to be added. Menu item 28 deletes ***all*** information in a memory channel (i.e., empties all of the Channel's data). *Skip this step when setting up the channel for the first time.* http://www.miklor.com/uv5r/UV5R-ProgHint.html
  Press MENU **28** MENU [enter the channel number XXX] MENU EXIT.

- **Step 6.** Enter the repeater **Output Frequency** Use the keypad to enter the frequency [XXXXXX].

- **Step 7.** ***Optional*** - Clear any **CTCSS/DCS** codes previously entered when the radio was last in Frequency Mode. If no previous codes exist or when setting up the channel for the first time and no codes are needed, set the menu items listed below to **OFF**.
  - ***RX DCS*** ---- MENU **10** MENU [enter **0** (OFF)] MENU EXIT.
  - ***RX CTCSS*** - MENU **11** MENU [enter **0** (OFF)] MENU EXIT.
  - ***TX DCS*** ---- MENU **12** MENU [enter **0** (OFF)] MENU EXIT.
  - ***TX CTCSS*** - MENU **13** MENU [enter **0** (OFF)] MENU EXIT.

- ~~**Step 4. Input the repeater frequency offset.**~~
  ~~Press MENU **25** MENU [enter the offset for the repeater] MENU EXIT.~~
- ~~**Step 8. Enter the Transmit Frequency Shift.**~~
  ~~Press MENU **26** MENU [type **1** for + shift or **2** for - shift] MENU EXIT.~~

- **Step 8.** ***Optional*** - Enter the repeater's **CTCSS/DCS** code.
- *CTCSS* Transmit --- MENU **13** MENU [enter code XXXX] MENU EXIT.
- *CTCSS* Receive ---- MENU **11** MENU [enter code XXXX] MENU EXIT.
- *DCS* Transmit ------ MENU **12** MENU [choose code XXXXX] MENU EXIT.
- *DCS* Receive ------- MENU **10** MENU [choose code XXXXX] MENU EXIT.

Note – Most (not all) HAM Repeaters require a ***Transmit*** Tone from your radio but most (again, not all) do not require a ***Receive*** Tone on your radio.

Note – Several Baofeng Manuals have an error in "**Procedure 11.1 Repeater setup**" that reversed the **Step 4** [25] and **Step 8** [26] Menu values.
Also, if the ***Reverse*** button *SCAN is used as the User manual states, some **BF-F8 HP** and variant radios will ***erroneously add*** **.001550 MHz** to the Offset value entered using MENU **26** MENU.
So, instead of using **Steps 4** or **8** and the ***Reverse*** *SCAN button to enter the repeater Frequency **Offset** value, use **Steps 10** and **11** below to ***directly*** enter the repeater's **Input** frequency.

- **Step 9.** Assign the radio's **Receive** frequency to the channel number deleted (now empty) in **Step 5**.
  Press MENU **27** MENU [enter channel number XXX] MENU EXIT.

- **Step 10.** Enter the repeater's ***Input*** frequency [XXXXXX]. This will be equal to the repeater's **Output** frequency ***plus or minus*** the repeater's **Offset** frequency.
  If the repeater's **Offset Shift direction** is **+** then the repeater's **Offset** is ***added to*** its **Output** frequency
  or
  If the repeater's **Offset Shift direction** is **–** then the repeater's **Offset** is ***subtracted from*** its **Output** frequency.
  - **Example:**
    If the repeater's **Output** frequency is **147.160** and the repeater's **Shift** direction is **+** and the repeater's **Offset** is **0.600 MHZ** (i.e., 6.000 KHz default offset for 2M), then the **Transmit** frequency you would apply to your radio would be calculated as follows:
    147.160 + 0.600 = **147.760**. Use the keypad to enter the repeater's **Input** frequency to save as your radio's **Transmit** frequency [XXXXXX].

- **Step 11.** Assign the **Transmit** frequency to the Memory Channel.
  Press MENU **27** MENU [enter the ***same memory channel*** input in **Step 9**] MENU EXIT.
  (After returning to Channel Mode in **Step 12** below, go to the new Channel and punch the *SCAN button to activate ***Reverse Mode*** to display the **Transmit** frequency to verify that it is correct. Punch the *SCAN button again to exit ***Reverse Mode***.)

- **Step 12.** Press VFO/MR and/or otherwise enter ***Channel Mode*** to test your new Channel**.**

Done!

Channel Mode Display Option Settings
(i.e., display the Channel **Number**, **Name** or **Frequency**

Note – One of our "Test Team" members, Mike (KE5NCS), made a great suggestion to include the **Channel Mode Display** options.

- Channel Mode Display options: [**0**]=Channel **Number**, [**1**]=Channel **Name** and [**2**]=Channel **Frequency** (Channel **Names *cannot be manually programmed*** and can only be entered using software - CHIRP or the BaoFeng software).

For ***upper*** Display **A**, press MENU **21** MENU [0, 1 or 2] MENU EXIT
For ***lower*** Display **B**, press MENU **22** MENU [0, 1 or 2] MENU EXIT

Done!

Note – On my BF-F8 HP I set the ***upper* A** Display to **Name** and the ***lower* B** Display to **Frequency**. That way, if I need to see what frequency is assigned to a particular Channel, I can quickly jump to the **B** display, bring up that same Memory Channel number and the **B** Display will show me that channel's **Frequency**.

Compressed Instructions For Printing Wallet-Size Hard Copies To Laminate For Durability

Manually Programming A Baofeng HT Radio Simplex Channel

1. Enter ***Frequency*** mode ---------- VFO/MR (UV-82 press MENU turn radio on)
2. Activate the ***Upper*** display ------- A/B
3. Select the correct BAND [only if necessary for your radio]
4. Turn TDR off ---------- MENU **7** MENU --------- [-0-] -------- MENU EXIT
5. Delete channel ---------- MENU **28** MENU -- [number XXX] ---- MENU EXIT
6. Enter **Frequency** ---------- [XXXXXX]
7. **Receive** CTCSS tone -- MENU **11** MENU --------- [-0-] ---------- MENU EXIT
8. **Transmit** CTCSS tone MENU **13** MENU --------- [-0-] ---------- MENU EXIT
9. **Offset** direction Off ---- MENU **25** MENU --------- [-0-] ---------- MENU EXIT
10. Save to channel --------- MENU **27** MENU --- [number XXX] --- MENU EXIT
11. Enter ***Channel*** mode -- VFO/MR or (UV-82 press MENU turn radio on)

Note – CTCSS and DCS Tones are typically ***not*** used for **Simplex** HAM radio operation so (unless you want to use a Tone for Simplex operation) be sure to set them to **-0-** (Off) for **Simplex** channels just in case you programmed a **Duplex** channel with a CTCSS or DCS (Tx and/or Rx) Tone the last time you manually programmed your radio.

Manually Programming A Baofeng HT Radio Duplex (repeater) Channel

1. Enter ***Frequency*** mode ---- VFO/MR (UV-82 press MENU & turn radio on)
2. Activate ***Upper*** display ---- A/B
3. Select the correct BAND [only if necessary for your radio]
4. Turn TDR off ---- MENU **7** MENU --------- [-0-] ---------- MENU EXIT
5. Delete channel --- MENU **28** MENU ---- [number XXX] ---- MENU EXIT
6. Enter repeater **Output** frequency ------- [XXXXXX]
7. **Tx** CTCSS tone -- MENU **13** MENU --- [enter/select tone] -- MENU EXIT
8. **Rx** CTCSS tone -- MENU **11** MENU --- [enter/select tone] -- MENU EXIT
9. Save to channel -- MENU **27** MENU ---- [number XXX] ---- MENU EXIT
10. Enter repeater **Input** frequency ------- [XXXXXX] (**Output** + or – **Offset**)
11. Save to channel -- MENU **27** MENU ---- [number XXX] ---- MENU EXIT
12. Enter ***Channel*** mode -------- VFO/MR or (UV-82 press MENU turn radio on)

Step 8 is ***not*** necessary unless multiple repeaters using the same output frequency are nearby.

BF-F8 HP Radio's Offset For A Duplex (repeater) Channel (like the User Manual describes)

(**Note –** When using the **Reverse Mode** key [*SCAN] during manual programming, some models will add **.001550 MHz** to the **Offset Frequency** entered during the [MENU] 26 [MENU] process at **Step 9** below)

1. Enter ***Frequency*** mode -------- [VFO/MR] (UV-82 press [MENU] & turn radio on)
2. Activate the ***Upper*** display ---- [A/B]
3. Select the correct BAND [only if necessary for your radio]
4. TDR off ---------- [MENU] **7** [MENU] --------- [-0-] ---------- [MENU] [EXIT]
5. Delete channel ------ [MENU] **28** [MENU] ---- [number XXX] ---- [MENU] [EXIT]
6. Enter repeater **Output** frequency ------- [XXXXXX]
7. **Tx** CTCSS tone ----- [MENU] **13** [MENU] --- [enter/select tone] -- [MENU] [EXIT]
8. **Rx** CTCSS tone ----- [MENU] **11** [MENU] --- [enter/select tone] -- [MENU] [EXIT]
9. Offset ***frequency*** ---- [MENU] **26** [MENU] - [check/change offset] [MENU] [EXIT]
10. Offset ***direction*** ----- [MENU] **25** [MENU] [▲] --- [set + or –] --- [MENU] [EXIT]
11. Save Rx to channel - [MENU] **27** [MENU] ---- [number XXX] ---- [MENU] [EXIT]
12. Enter repeater **Input** frequency --------- [XXXXXX]
13. Save Tx to channel --[MENU] **27** [MENU] ---- [number XXX] ---- [MENU] [EXIT]
14. Enter ***Channel*** mode ---------- [VFO/MR] or (UV-82 press [MENU] turn radio on)

Step 8 is ***not*** necessary unless multiple repeaters using the same output frequency are nearby.

On my **BF-F8HP** radio, using the Reverse Mode key [*SCAN] during manual programming as the User Manual describes will incorrectly add **0.001550 MHz** to the **Offset Frequency** value that was entered during the [MENU] **26** [MENU] **Offset Frequency** in **Step 9**. This error is visible only after downloading the Radio's data into the CHIRP software that displays the **Offset Frequency** with six digits to the right of the decimal point. Set **Offset** to **000.000** in **Step 9**, skip **Step 10** and ***manually type the Repeater Input Frequency*** at **Step 12** instead.

Repeater Input Frequency = **Repeater Output Frequency +** or **–** the **Repeater Offset**.

Channel Mode Display Options
Channel Number [0], Name [1] or Frequency [2]

For ***upper*** Display **A**, press [MENU] **21** [MENU] [0, 1 or 2] [MENU] [EXIT]
For ***lower*** Display **B**, press [MENU] **22** [MENU] [0, 1 or 2] [MENU] [EXIT]

See Page 2 for the **Manual Programming Pattern** to apply to manually program the Menu options into the radio using the radio's keypad. Link to Menu Definitions - http://www.miklor.com/uv5r/UV5R-MenuDef.php

Appendix B. - Menu definitions

See Chapter 4, *Working the menu system* for more info about using the menu-system.

Menu	Name (Full Name)	Settings	Description
0	SQL - Squelch Level	[0 - 9] Setting the squelch to 0 will open up the squelch entirely.	- Squelch silences the receiver when there is no signal. - Sensitivity can be varied from .1 to .3 mV on UHF Sensitivity can be varied from .1 to .2 mV on VHF
1	STEP - Frequency Step	2.5K[0] | 5.0K[1] | 6.25K[2] | 10.0K[3] | 12.5K[4] | 20.0K[5] | 25.0K[6] | 50.0K[7]	Selects the amount of frequency change in VFO/Frequency mode when scanning or pressing the ▲ or ▼ keys.
2	TXP - Transmit Power	HIGH [0] | MID [1] | LOW [2]	Selects between HIGH, MID, and LOW transmitter power when in VFO/Frequency mode. Use the minimum transmitter power necessary to carry out the desired communications.
3	SAVE - Battery Save	OFF [0] | 1 | 2 | 3 | 4	Selects the ratio of sleep cycles to awake cycles (1:1, 2:1, 3:1, 4:1). The higher the number the longer the battery lasts. The higher number increases the RX sleep cycle, but you may miss the first few syllables before the RX opens.
4	VOX - Voice Operated TX	OFF [0] | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10	When enabled it is not necessary to push the [PTT] button on the transceiver. Adjust the gain level to an appropriate sensitivity to allow smooth transmission.
5	WN - Wideband / Narrowband	WIDE [0] | NARR [1]	Wideband (25 kHz bandwidth) or narrowband (12.5 kHz bandwidth).
6	6 ABR - Display Illumination Time	OFF [0] | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10	Time-out for the LCD backlight. (seconds)
7	TDR - Dual Watch, Dual Reception	OFF [0] | ON [1]	Monitor [A] and [B] at the same time. The display with the most recent activity ([A] or [B]) becomes the selected display.
8	BEEP - Keypad Beep	OFF [0] | ON [1]	Allows audible confirmation of a key press

9	TOT - Transmission Time-out-Timer	15[0] - 600[39] in 15 second steps (TIMEOUT-15)/15=[n]	This feature provides a safety switch that limits transmission time to a programmed value. This will promote battery conservation by not allowing you to make excessively long transmissions, and in the event of a stuck PTT switch it can prevent interference to other users as well as battery depletion.
10	R-DCS - Receiver DCS	OFF [0] | see DCS Table in Appendix C	Mutes the speaker of the transceiver in the absence of a specific low-level digital signal. If the station you are listening to does not transmit this specific signal, you will not hear anything.
11	R-CTCS - Receiver CTCSS	OFF [0] | see CTCSS Table in Appendix C	Mutes the speaker of the transceiver in the absence of a specific and continuous sub-audible signal. If the station you are listening to does not transmit this specific and continuous signal, you will not hear anything.
12	T-DCS - Transmitter DCS	OFF [0] | see DCS Table in Appendix C	Transmits a specific low-level digital signal to unlock the squelch of a distant receiver (usually a repeater).
13	T-CTCS - Transmitter CTCSS	OFF [0] | see CTCSS Table in Appendix C	Transmits a specific and continuous sub-audible signal to unlock the squelch of a distant receiver (usually a repeater).
14	VOICE - Voice Prompt	OFF [0] | ENG [1] | CHI [2]	Allows audible voice confirmation of a key press
15	ANI-ID - Automatic Number ID		Displays the ANI code that has been set by software. This menu cannot be used to change it. The ANI-ID is sent when the alarm is activated and menu 32 = CODE
16	DTMFST – DTMF-Side Tone of transmit code	OFF [0]: No DTMF Side Tones are heard DT-ST [1]: Side Tones are heard only from manually keyed DTMF codes ANI-ST [2]: Side Tones are heard only from automatically keyed DTMF codes DT+ANI [3]: All DTMF Side Tones are heard	Determines when DTMF Side Tones can be heard from the transceiver speaker.

17	S-CODE - Signal Code	1[0] | 2[1] | 3[2] | 4[3] | 5[4] | 6[5] | 7[6] | 8[9] | 9[8] | 10[9] | 11[10] | 12[11] | 13[12] | 14[13] | 15[14]	Selects 1 of 15 DTMF codes. The DTMF codes are programmed with software and are up to 5 digits each.
18	SC-REV - Scanner Resume Method	TO [0]: Time Operation - scanning will resume after a fixed time has passed CO [1]: Carrier Operation - scanning will resume after the signal disappears SE [2]: Search Operation - scanning will not resume	Scanning Resume Method
19	PTT-ID - When to send the PTT-ID	OFF [0]: No ID is sent BOT [1]: The selected S-CODE is sent at the beginning EOT [2]: The selected S-CODE is sent at the ending BOTH [3]: The selected S-CODE is sent at the beginning and ending	When to Send PTT-ID Codes are sent during either the beginning or ending of a transmission.
20	PTT-LT - Signal code sending delay	0 - 50ms	PTT-ID Delay (milliseconds)
21	MDF-A - Channel Mode A Display	CH [0]: Displays the channel number NAME [1]: Displays the channel name. FREQ [2]: Displays programmed Frequency	[A] MR/Channel Mode Display Format Note: Names must be entered using software.
22	MDF-B - Channel Mode B Display	CH [0]: Displays the channel number NAME [1]: Displays the channel name. FREQ [2]: Displays programmed Frequency	[B] MR/Channel Mode Display Format Note: Names must be entered using software.
23	BCL - Busy Channel Lock-out	OFF [0] | ON [1]	Disables the [PTT] button on a channel that is already in use. The transceiver will sound a beep tone and will not transmit if the [PTT] button is pressed when a channel is already in use.

24	AUTOLK – Automatic Keypad Lock	OFF [0] | ON [1]	When ON, the keypad will be locked if not used in 8 seconds. Pressing the [#╓O] key for 2 seconds will unlock the keypad.
25	SFT-D - Frequency Shift Direction	OFF [0]: TX = RX (simplex) + [1]: TX will be shifted higher in frequency than RX - [2]: TX will be shifted lower in frequency than RX	Enables access of repeaters in VFO/Frequency Mode
26	OFFSET - Frequency shift amount	00.000 - 69.990 in 10 kHz steps	Specifies the difference between the TX and RX frequencies
27	MEM-CH - Store a Memory Channel	000 - 127	This menu is used to either create new or modify existing channels (0 through 127) so that they can be accessed from MR/Channel Mode.
28	DEL-CH - Delete a memory channel	000 - 127	This menu is used to delete the programmed information from the specified channel (0 through 127) so that it can either be programmed again or be left empty.
29	WT-LED - Display backlight color, Standby	OFF [0] | BLUE [1] | ORANGE [2] | PURPLE [3]	Default: PURPLE
30	RX-LED - Display backlight color-Receive	OFF [0] | BLUE [1] | ORANGE [2] | PURPLE [3]	Default: BLUE
31	TX-LED - Display backlight color-Transmit	OFF [0] | BLUE [1] | ORANGE [2] | PURPLE [3]	Default: ORANGE
32	AL-MOD - Alarm Mode	SITE [0]: Sounds alarm through your radio speaker only TONE [1]: Transmits a cycling tone over-the-air CODE [2]: Transmits '119' (911 in reverse?) followed by the ANI code over-the-air	SITE: Sounds alarm through your radio speaker only TONE: Transmits a cycling tone over-the-air CODE: Transmits '119' (911 in reverse?) followed by the ANI code over-the-air
33	BAND - Band Selection	VHF [0] | UHF [1]	In VFO/Frequency mode, sets [A] or [B] to the VHF or UHF band.
34	TDR-AB - Transmit selection while in Dual Watch mode	OFF [0] | A [1] | B [2]	When enabled, priority is returned to selected display once the signal in the other display disappears.

35	STE - Squelch Tail Elimination	OFF [0] | ON [1]	This function is used eliminate squelch tail noise between BaoFeng handhelds that are communicating directly (no repeater). Reception of a 55 Hz or 134.4 Hz tone burst mutes the audio long enough to prevent hearing any squelch tail noise.
36	RP-STE - Squelch Tail Elimination	OFF [0] | 1 - 10	This function is used eliminate squelch tail noise when communicating through a repeater.
37	RPT-RL - Delay the squelch tail of repeater	OFF [0] | 1 - 10	Delay the Tail Tone of Repeater (X100 milliseconds)
38	PONMSG - Power On Message	FULL [0]: Performs an LCD screen test at power-on MSG [1]: Displays a 2-line power-on message	Controls the behavior of the display when the transceiver is turned on.
39	ROGER - Roger Beep	OFF [0] | ON [1]	Sends an end-of-transmission tone to indicate to other stations that the transmission has ended.
40	RESET - Restore defaults	VFO [0] | ALL [1]	Resets the radio to factory defaults, with some exceptions.