

BAOFENG

UV-5R



**A Complete, Quick Reference Guide to
Programming and Operating the Radio**

Willie M. Scott

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INTRODUCTION

The UV-5R is an easy-to-use handheld radio that can be quickly programmed to transmit on emergency frequencies. It is fairly easy to use and will grant you access to quick, secure, and reliable communication. Whatever your purpose of purchasing a Baofeng UV-5R, you have made a great choice.

However, remember that transmitting without a radio license is illegal under normal circumstances. Don't broadcast without a license unless it's an emergency.

Like all items, the Baofeng UV-5R requires a bit of a learning curve to truly master, but you don't have to worry because you shall master it in no time at all with this book's help.

From the basics to the more advanced topics, this book got you covered.

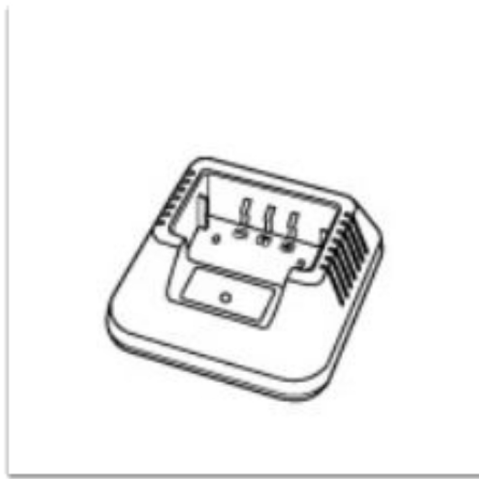
Jump to the first chapter, let's explore different frequencies!

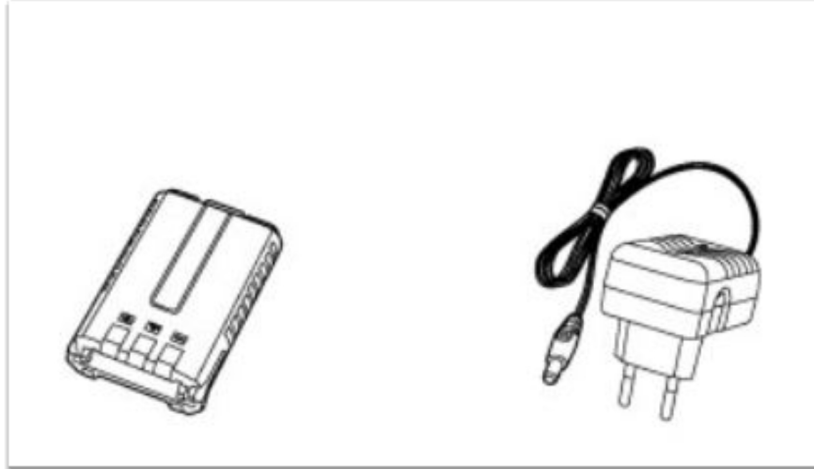
CHAPTER 1: GETTING STARTED

Unboxing

The package comes with:

- The main unit, i.e., radio
- a battery
- a belt clip
- A charging base
- an antenna
- an earpiece
- a user manual





Note : Items included in the package may differ depending on the country of purchase.

Installing the Accessories

Antenna:

Install the antenna by putting it in place and turning it clockwise until it stops. Check the image below.



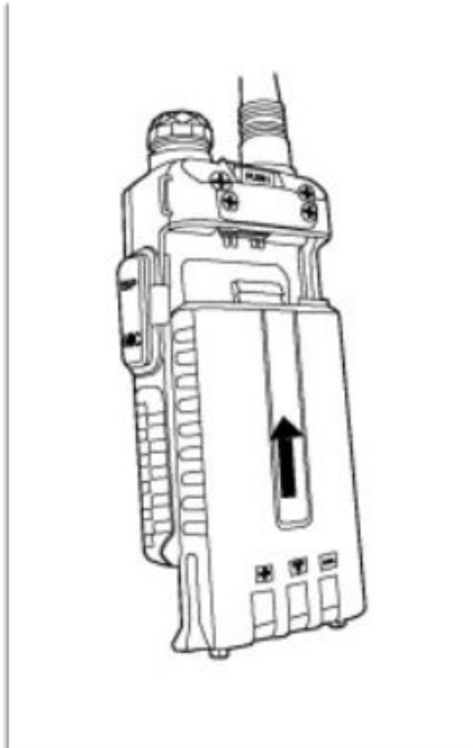
Caution:

- Never transmit without an antenna.
- Hold the antenna by the base and turn it when installing. Do not turn it by its top.

Battery:

Putting the battery.

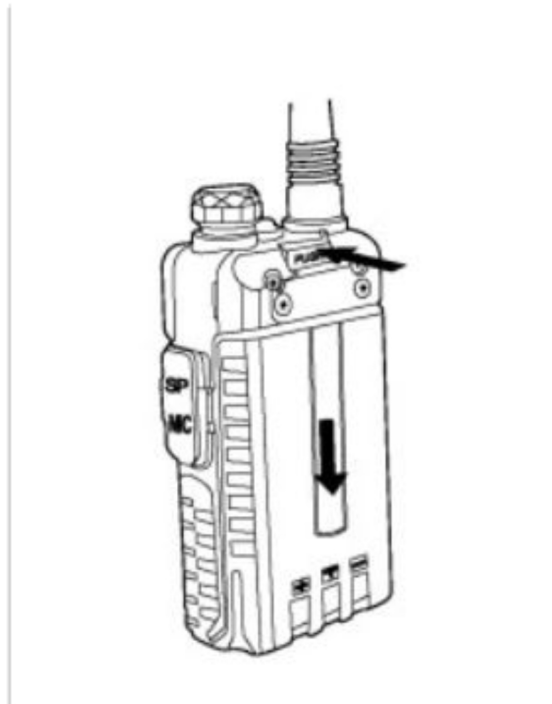
- Ensure that the battery is parallel and in good contact with the aluminum chassis of the radio. Let the bottom of the battery be about 1-2 centimeters below the bottom of the radio's body.
- Align the battery with the guide rails on the aluminum chassis and slide it upwards until you hear a 'click.'



Removing the battery.

- Always switch the radio OFF before removing the battery.
- Slide the battery latch, at the bottom of the radio's body in the direction
- indicated by the arrow in the image below.

- Slide the battery down about 1 - 2 centimeters, and then remove it from the radio's body.



Belt Clip:

Fix the belt clip at the back of the battery compartment cover, as shown in the figure below.



To avoid damaging the battery casing, never use any glue to fix the screw on the belt clip.

Headset:

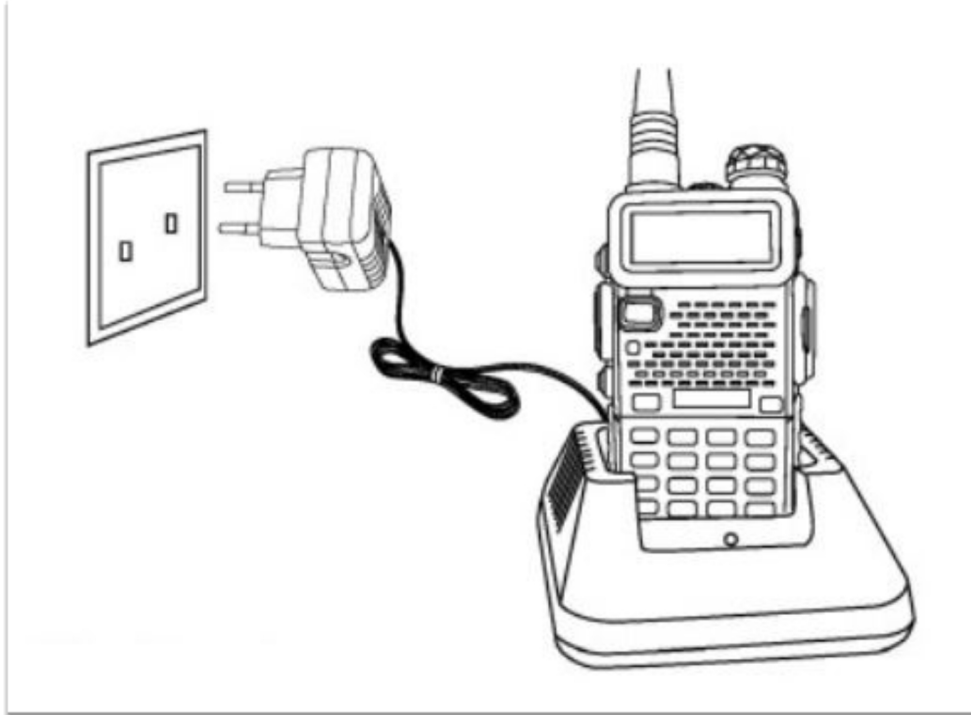
Plug the external micro-headset connector into the jack of 'SP. &MIC of your device, as shown in the figure below.



Charging Your Battery

Charge a new battery for five hours before initial use because new batteries are shipped uncharged. Always recharge your battery whenever it runs low.

- Plug the power cord into the adapter
- Plug the AC connector of the adapter into the AC outlet socket.
- Plug the DC connector of the adapter into the DC socket on the back of the charger.
- Place the radio with the battery attached, or the battery alone, in the charger.
- Ensure the battery is in good contact with the charging terminals. The charging process initiates when the red LED lights.
- The green LED lights about 4 hours later, indicating the battery is fully charged. Remove the radio with the battery attached or the battery alone from the charger.

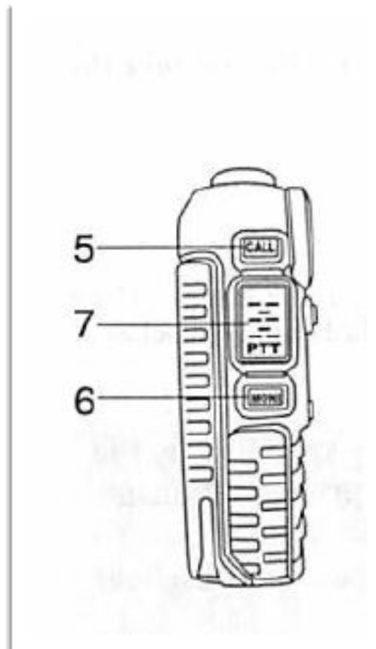
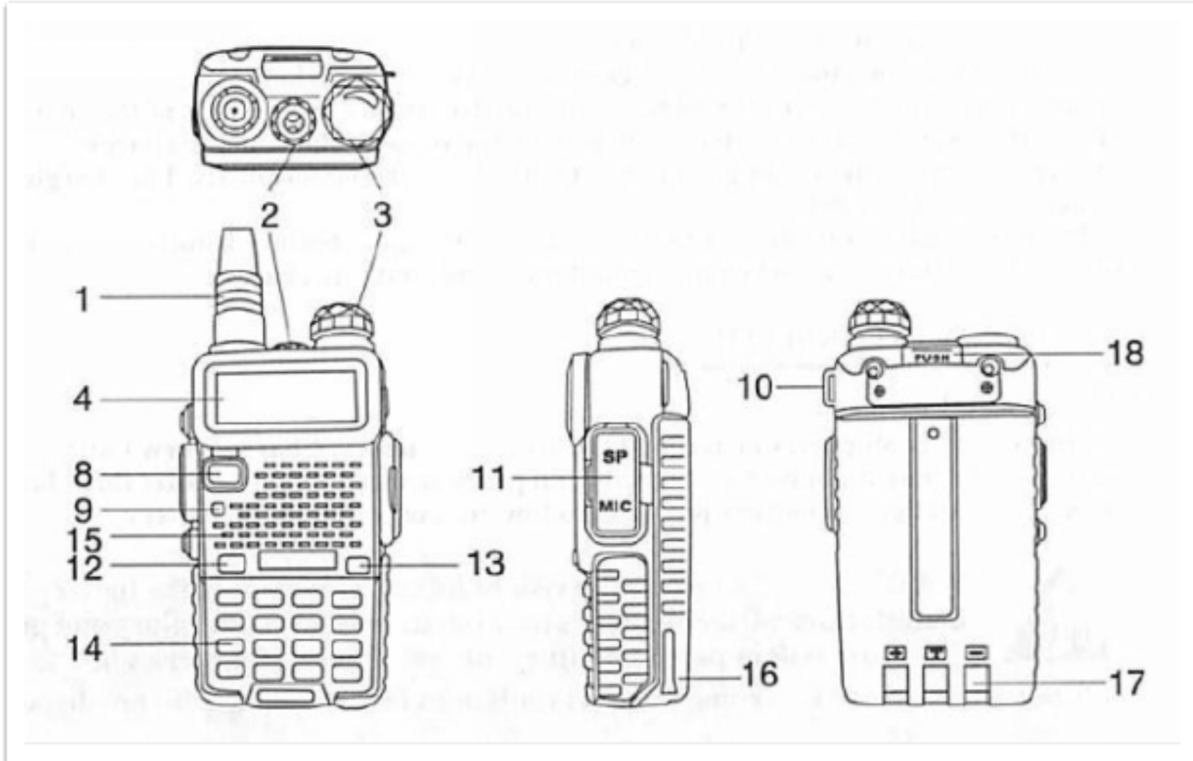


Below are the charger's LED indicators of the charging progress:

- Standby (no-load): Red LED flashes, while Green LED glows
- Charging: Red LED solidly glows
- Fully Charged: Green LED solidly glows
- Error: Red LED flashes, while Green LED glows

CHAPTER 2: PARTS OF THE RADIO

Identification of The Parts



1. The antenna

2. flashlight
3. knob (ON/OFF, volume)
4. LCD
5. SK-side key1/CALL (radio, alarm)
6. SK-side key2/MONI (flashlight, monitor)
7. PTT key (push-to-talk)
8. VFO/MR (frequency mode/channel mode)
9. LED indicator
10. strap buckle
11. accessory jack
12. A/B key (frequency display switches)
13. BAND key (band switches)
14. keypad
15. SP.&MIC.
16. battery pack
17. battery contacts
18. battery remove button

Key Functions

PTT (PUSH-TO-TALK):

Press and hold down the [PTT] button to talk to someone; release it to receive.

SK-SIDE KEY1 (CALL button):

Press the [CALL] button to switch ON the FM Radio; Press it again to switch OFF the FM Radio.

Press and hold on the CALL button to activate the alarm; Press and hold it again to deactivate the alarm function.

SK-SIDE KEY2 (MONI button):

1. Press the MONI button to turn ON the flashlight; Press it again to turn off.
2. Press and hold on the [MONI] button to monitor a signal:

The MONI button allows you to temporarily switch off squelch so that you can monitor a channel.

Let's say you're concerned that someone is broadcasting with a lower powered radio and your squelch is filtering them out. Push and hold the MONI button to temporarily take off your squelch so that you can monitor that channel with no squelch.

This way, you can hear the static and you can hear somebody else if they're broadcasting with a lower powered radio.

VFO/MR button:

Press the [VFO/MR] button to switch between frequency mode and channel mode.

A/B button:

Press the A/B button to switch frequency display.

The A/B button switches the "selector (arrow indicator)" between the primary and secondary frequencies. It is the frequency that has the "arrow indicator" that can be manually changed either by typing in a frequency or by using the arrow keys.

BAND button:

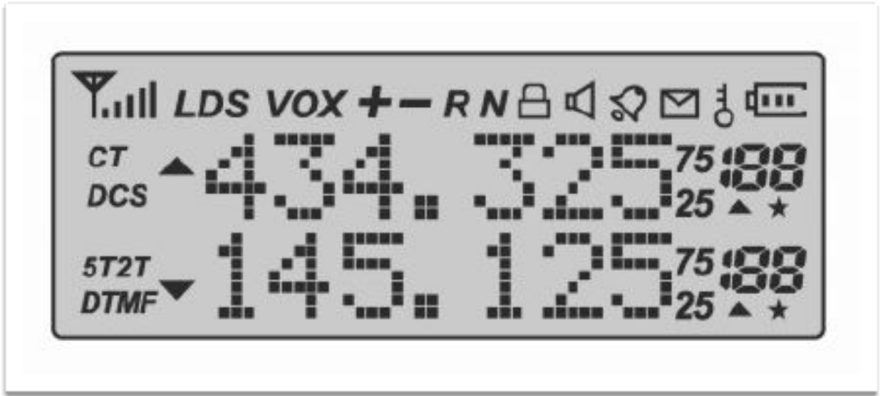
1. Press the BAND button to switch band display.
2. While in FM radio mode, press the BAND button to switch the band of FM radio (band 65- 75MHz/76-108MHz).















The Baofeng UV-5R radio is a dual-band transceiver, which means it operates in both VHF and UHF. The BAND button switches between VHF and UHF. The top frequency on display is called the "primary frequency," while the bottom frequency is called the "secondary frequency."

To change the band, press the BAND button. Let's say the top frequency is in 140.550, and the bottom frequency is in the 400.550. The 140.550 is VHF, and the 400.550 is UHF. Press the BAND button to switch them over from VHF to UHF and vice versa.

“LCD” Display:

Several icons appear on the display when certain operations or features are enabled. The image below explains what each icon represents.



Icon	Description
	Operating channel.
	Operating frequency.
	'CTCSS' activated.
	'DCS' activated.
	Frequency offset direction for accessing repeaters.
	Dual Watch/Dual Reception functions activated.
	Function 'VOX' enabled.
	Reverse function activated.
	Wide Band selected.
	Battery Level indicator
	Keypad lock function activated.
	Low transmit power.
	Operation frequency.
	Signal Strength Level.

CHAPTER 3: BASIC RADIO OPERATIONS

Turning the radio ON/OFF

- Turn the ON/OFF knob clockwise until it clicks to turn ON the radio.
- Turn the ON/OFF knob counterclockwise until it clicks to turn the radio OFF.

Adjusting the Volume

- Turn the volume knob **CLOCKWISE** to **INCREASE** the volume. The further clockwise you go, the more the volume goes **UP**.
- Turn the volume knob **COUNTERCLOCKWISE** to **DECREASE** the volume. The further anticlockwise you go, the more the volume goes **DOWN**.

Channels and Frequency Mode

You need to decide if you will manually enter a frequency or use a frequency that's already in the memory of the radio (channel mode).

- To switch between frequency and channel modes, press the VFO/MR button

In channel mode, at the right corner of the display, the memory slots (they are numbers) of the channels are displayed.

In frequency mode, memory slots are not displayed beside the frequencies.

Frequency Mode

In frequency mode, you can type in any frequency you want.

You can also use the up and down arrows of your radio to change frequencies manually.

A/B button

The A/B button switches the “selector (arrow indicator)” between the primary and secondary frequencies. It is the frequency that has the “arrow indicator” can be manually changed either by typing in a frequency or by using the arrow keys.

Channel Mode

In channel mode, you can select a channel in two ways.

- If you know the memory slot you want, say 50, press 050, and it will bring up the channel in memory slot 50.
- You can also use the UP and DOWN arrow buttons to scroll through your memory slots until you find the channel you want.

To alternate between the primary and secondary frequencies, press the A/B button.

Band

The Baofeng UV-5R radio is a dual-band transceiver, which means it operates in both VHF and UHF. The BAND button switches between VHF and UHF.

The top frequency on display is called the primary frequency, while the bottom frequency is called the secondary frequency.

To change the band, press the BAND button. Let’s say the top frequency is 140.550, and the bottom frequency is 400.550. The 140.550 is VHF, and the 400.550 is UHF. Press the BAND button to switch them over from VHF to UHF and vice versa.

Squelch (SQL)

Squelch suppresses unwanted noise when there isn’t a strong enough signal to understand. This setting should be as low as possible. In an area that doesn’t have a lot of noise, you can set it to 1.

Squelch is a filter that takes out the background noise and static that your radio is always going to be picking up.

- Press the MENU button
- Press the ZERO (0) button
- Press the MENU button again to drop the selector to the bottom line where you can edit the squelch.

Use the UP and DOWN arrow buttons to adjust the squelch. When you take the squelch up to a number you want (say 2), press MENU to confirm, then press the EXIT button.

Raise the volume to check if it is okay. If not, repeat the process until all noise/static is canceled.

Adjust the squelch UP one notch at a time until all background static disappears.

Locking the Keypad

Once you have your squelch and channel set, you can decide to lock the keypad.

- Press and hold the pound (#) key to lock your keypad.

A “key” will be displayed beside the battery icon on your screen to indicate that the keypad is locked.

However, the “push to talk” button and the “volume” button will still work.

Unlock the keypad

Press and hold the # button to unlock the keypad.

Monitoring

The MONI button allows you to temporarily switch off squelch so that you can monitor a channel. Let’s say you’re concerned that someone is broadcasting with a lower-powered radio, and your squelch is filtering them out.

- Push and hold the MONI button to temporarily takes off your squelch to monitor that channel with no squelch.

This way, you can hear the static, and you can hear somebody else if they're broadcasting with a lower-powered radio.

FM Radio Mode

- Press the CALL button (orange button at the side of the radio) to switch FM radio mode ON.
- Press the CALL button again to switch FM radio mode OFF.

Alarm

- Press, hold, and release the CALL button to switch on the alarm
- Press the CALL button again to switch the alarm off.

PTT (Push-to-Talk)

- Press and hold the “push-to-talk” button to talk to someone.

Flashlight

- Push the MONI button to turn the flashlight ON.
- Push the MONI button again to activate a flashing beacon mode.

CHAPTER 4: THE MENU SYSTEM

Some advanced features allow you to set up your transceiver to suit your preferences. You can perform these advanced operations from the MENU.

Forty different Menu Items affect how the radio functions. Some are essential only if you are licensed to transmit. Many of the default options will not need to be changed. And there are a few that can make a big difference for any user.

Pressing the MENU key once will enter the Menu Mode, allowing the UP and DOWN keys to scroll through the 40 menu option items. If no keys are pressed after five seconds, the radio exits from Menu Mode.

It's helpful to think of the MENU key as a "confirm" key. Pressing the MENU key once opens the menu. After that, the MENU key is used to confirm whatever changes you make.

Basic Operation

The basic operation of using the MENU key consists of the following:

- Press MENU once to enter Menu Mode
- Scroll up or down to desired menu item
- Press MENU to open that desired menu item
- Scroll up or down to change the setting for that item
- Press MENU to confirm the chosen setting
- Press EXIT to exit the Menu Mode

Once a menu item's settings have been confirmed by pressing the MENU key, you don't necessarily have to press EXIT. Instead, you can scroll up or down to another menu item, press MENU to open that item, make changes, press MENU to confirm, and repeat.

If you finish making changes and do NOT press EXIT, no worries...the Menu Mode will self-exit on its own after about five seconds.

If you do press EXIT, the radio will remember the most recent menu item you had opened. Pressing the MENU key will open that most recent menu item.

Menu Shortcut

There is a shortcut method of using the MENU key. After pressing the MENU key, enter the Option Number of the Menu Item you wish to change. There are 40 Menu Items, beginning with 0 and ending with 40.

For example, the Menu Item for Voice is 14. To open the Voice Menu Item to change from Chinese to English, you would follow this keypress sequence:

- press MENU
- enter 14
- press MENU
- Scroll up and down to see the choices. Choose the language (English)
- Press MENU to confirm

It is possible to open the Menu Items numbered less than ten by simply entering the single digit:

For example, you could follow this sequence:

- Press MENU
- Enter 8
- Make your choice and press MENU to confirm

But I recommend you make a habit of always entering two digits for the Menu Item Number (for example, enter 08 instead of 8). It will save you some frustration!

CHAPTER 5: RESET AND VOICE PROMPT

Reset

Upon first-time use of the radio, we should “zero out” or “reset” the radio to its default settings. This will ensure no pre-programmed settings can interfere with customizing the radio to our specific needs.

To reset the radio settings, we’ll use Menu Item #40.

Here’s the keypress sequence to enter Menu Mode:

- Switch radio ON
- press MENU
- Enter 40
- press MENU

Use the up or down arrows to select either “ALL” or “VFO.”

Reset ALL:

Selecting ALL will reset all options to the factory default settings, and it will delete any frequencies we’ve entered or stored in memory. Selecting to RESET VFO will reset all options, but it will NOT delete any frequencies we’ve entered or stored.

Remember that we can also access the RESET setting, or any of the MENU settings, by scrolling up or down:

- Press MENU
- Scroll up or down with the arrow keys.
- When you reach the Menu Item “RESET ALL,” press MENU to confirm your choice

The display restarts and the radio resets all options to factory default settings.

Reset VFO (only the frequencies):

Reset “VFO” implies that it resets only the frequencies which we’ve entered or saved to memory as a channel. But, that’s not completely accurate!

Using the “RESET VFO” option resets all settings, EXCEPT, for the frequencies we’ve entered or saved. In other words, “RESET ALL” and “RESET VFO” do essentially the same thing: they both reset the radio to factory defaults, including the pre-programmed channels.

The difference between the two is this:

- RESET ALL resets all settings and DELETES any frequencies that we’ve entered or saved.
- RESET VFO resets all settings, but it KEEPS the frequencies and channels we’ve entered or saved. If we’ve entered or saved frequencies and don’t want to lose them, we should RESET VFO.

Voice Prompt Customization

Voice prompt customization is menu item #14.

- Press MENU
- enter 14
- Press MENU
- Scroll up or down to display ENG (or any language of your choice)
- Press MENU to confirm
- Press EXIT

CHAPTER 6: PROGRAMMING CHANNELS

Saving Frequencies

Menu Item number 27 allows us to save frequencies into memory as a channel. However, we can save frequencies only to channel numbers that are empty, with no frequencies assigned.

We can scroll through all the channel numbers to see what channels have been assigned to specific frequencies:

- press MENU
- enter 27
- press MENU
- Scroll up or down to view each channel

Channel numbers that begin with “CH-” have frequencies already assigned to them. New frequencies must be saved to channel numbers that do not have “CH-” attached to them.

If we desire to replace a channel’s assigned frequency, we must first delete that frequency from memory.

To store a channel into memory as a channel:

- Toggle to Frequency Mode using the VFO/MR button
- Toggle to A frequency using the A/B button (the triangle should mark the top line of the display)
- Enter a new frequency, say: 150.555
- Press MENU
- Press 27
- Press MENU
- Scroll up or down to a channel that doesn’t have CH in front of it
- press MENU
- Press EXIT

To verify that the new frequency has been stored into memory as a channel:

- Toggle to Channel Mode using the VFO/MR button
- Scroll up or down to view all available channels

- You should see your saved channel

Deleting Channels

The radio ships with two pre-programmed channels: 136.025 is stored in memory as Channel 0, and 470.625 is stored in memory as Channel 127.

The delete option is menu #28.

To delete a saved channel, for example, channel 0:

- Press MENU
- Press 28
- Press MENU
- Scroll up or down to CH-0
- Press MENU to confirm
- Press EXIT

Frequency Step

In Frequency Mode, each press of the up or down arrow will slightly change the displayed frequency, allowing a tuning effect. The amount of change is determined by the Frequency Step Menu Item, #01. The default setting is 2.50K.

The Step setting also determines the scanning option:

- Press and hold the SCAN button, marked with an asterisk: “*.”

Observe the rate of change as the radio scans up through the band.

- Press EXIT to disable the scan function

The Step setting affects our ability to enter an exact frequency:

- Ensure Frequency Mode is ON
- Enter this 6-digit frequency: 147.000
- Press the UP arrow one time

Pressing the UP arrow increases the 6-digit frequency by the amount of the Step setting. If the Step setting is set to 2.5K, each press of the UP arrow increases the displayed frequency by 2.5K.

Note : the seventh digit will be displayed in a very small, subscript type!

Pressing the DOWN arrow reduces the frequency by that same Step.

If we need to enter an exact frequency with seven digits, ensure that the Step setting is 2.5K.

To change our Step setting to the highest level, 50.0K:

- Press MENU
- Press 01
- Press MENU
- Scroll up to 50.0K
- Press MENU to confirm
- Press EXIT

CHAPTER 7: SCANNING

The Baofeng UV-5R features a built-in scanner for the VHF and UHF bands. When in Frequency (VFO) mode, it will scan in steps according to your set frequency step. In Channel (MR) mode, it will scan your channels.

It is not the fastest scanner in the world, but this feature can be useful at times.

To enable the scanner:

- press and hold the * key for about two seconds.
- Press any key to exit scanning mode.

Scanning Modes

There are three modes of scanning: Time, carrier, or search. Your device can be configured to scan in any of these three modes.

How To Set Scanner Mode

- Press the MENU key
- Enter 18 on your numeric keypad to enter scanner mode.
- Press the MENU key to select.
- Use the UP and DOWN arrow keys to select scanning mode.
- Press the MENU key to confirm and save.
- Press the EXIT key to exit the menu

Time Operation (TO)

In Time Operation (TO) mode, the scanner stops when it detects a signal. In this mode, after a preset time out, it resumes scanning.

Carrier Operation (CO)

In Carrier Operation (CO) mode, the scanner stops when it detects a signal, and as soon as the signal goes away, it resumes scanning.

Search Operation (SE)

In Search Operation (SE) mode, the scanner stops when it detects a signal. Press and hold the * key again to resume scanning.

Tone Scanning

In frequency mode, you can scan for CTCSS tones and DCS codes on active frequencies.

To scan for CTCSS or DCS on active channels, follow these steps:

- Press the MENU key
- Enter one of the following on the numeric keypad:
 1. 10 to scan for DCS codes, or
 2. 11 to scan for CTCSS sub-tones.
- Press the MENU key to select.
- Press the * key momentarily, CT or DCS will start flashing in the display as the radio starts scanning. Once it finds a tone or code in use, it will beep and stop flashing, indicating that a tone or code has been found.
- Press the * key to confirm.
- Press the * key to exit.

CHAPTER 8: DUAL RECEIVE MODE

The Transmit Dual Receive function, or TDR, allows us to monitor two frequencies or two channels at the same time:

- Press MENU
- Enter 07
- Press MENU
- Scroll to ON
- Press MENU to confirm
- Press EXIT

The display now shows the letter “S” to the left of the display. This indicates the radio is in Standby Mode, monitoring both frequencies or channels. As soon as an active signal is received, the “S” is hidden, and a flashing triangle will indicate the active frequency or channel.

If there is an active transmission on either of these two frequencies, the green LED will light, and a flashing triangle will indicate which frequency is active. Even if you’ve toggled the A/B button to monitor the frequency on Display B, an active transmission on the Display A frequency will be heard and indicated with a flashing triangle.

When the active transmission ends, the green LED will go dark, and the flashing triangle will not be displayed.

Remember, only the active frequency or channel can transmit. Dual Watch Mode allows us to monitor both the A and B frequency or channel, but the A/B button determines which of the two can transmit. The Display Line marked with a small triangle is available for transmission.

What if we need to listen for signals on two different frequencies or channels, but we are licensed to transmit on only one of them?

- Toggle A/B button to select the frequency or channel to be used to transmit
- Press and hold the hashtag button until radio confirms audibly with “Lock.”

The keypad is locked out, and the transmit function is locked onto the frequency or channel we chose. The radio will continue to monitor both frequencies or channels, but any push of the PTT switch will transmit only on the locked frequency or channel.

The keypad can be unlocked the same way:

- Press and hold the hashtag button until the radio audibly confirms with “Unlock.”

Even if the other Display’s squelch is broken with an incoming signal, the radio will only transmit on the Display that was selected earlier as active.

Here’s the complication: this is NOT true for UV-5R radios built before 2014!

The older radio software included a Menu Item that could “lock” transmission to a specific frequency or channel, even when monitoring two different frequencies or channels with Dual Watch Mode. The older software featured a Menu Item #34: TDR-AB. The option allowed selection of either Display Line A or B as the transmitter frequency or channel.

The Menu Item #34, TDR-AB, does NOT function on UV-5R radios built after 2014! The newer UV-5R radios include Menu Item #34, but it DOES NOT WORK! I’ve tried it.

Here’s how the older, pre-2014 UV-5R radios work with TDR and TDR-AB:

First, the keypress for enabling TDR is the same:

- Press MENU
- Press 07
- Press MENU
- Scroll to ON
- Press MENU to confirm
- Press EXIT

Next, select the frequency or channel to be used to transmit:

- Press MENU
- Press 34
- Press MENU

- Select A or B
- Press MENU to confirm
- Press EXIT

On some radios, the Menu changes appear to be accepted. But it DOES NOT LOCK THE TRANSMITTER! You can still listen to two different frequencies or channels, but the transmitter frequency or channel depends upon the toggle switch A/B. Whichever Display Line is focused or made active using the A/B button, and marked with a small triangle, is the frequency or channel on which you will be transmitting.

If your radio seems to work using the TDR-AB Menu Option, great! If not, try selecting the Display Line on which you will always transmit, and then lock the radio with the hashtag button.

CHAPTER 9: SIMPLEX COMMUNICATION

Simplex communication is two radios talking to each other using the same frequency to transmit and receive. Simplex communication is the most basic function of these radios but also the least performing.

Since these radios operate on VHF and UHF frequencies, they are “line-of-sight.” This means that the curvature of the earth itself will block the signals as it curves away from you. This is what limits the range of these types of handhels to about seven miles or less.

Getting two radios to talk is quite simple. In frequency mode, just enter the same frequency into both radios. However, you need to save the frequency in the radio’s memory.

I’m going to assume that you have a GMRS license.

Let’s program the radio to 162.550 megahertz.

Simplex (Direct Radio to Radio) Manual Programming

What You Will Need to Program your Radio:

- **Receive/Transmit Frequency** : ex. 162.550
- Select **Memory Channel** to store the new Frequency

Step 1:

Set your display to “Frequency Mode” (No channel listed to the right of the display)

Step 2:

Ensure your display is set to “A.” The triangle to the left of the frequencies will be on the top line and pointing up. Press the A/B button if it’s not set to A.

Step 3:

Type in your Receive/Transmit Frequency

Step 4:

Set Offset/Frequency Direction to “OFF”

- Press MENU

- Enter 25
- Press MENU
- Use the UP and DOWN arrow keys to select OFF
- Press MENU
- Press EXIT

Step 5:

Assign Receive Frequency to Memory Channel [Receiving Memory]

- Press MENU
- Enter 27
- Press MENU
- Use UP and DOWN arrow keys to select a channel that doesn't have CH- in front of it, say 001
- Press MENU
- Press EXIT

You have just stored 162.550 megahertz to transmit and receive on memory channel 1.

Once you have added the first channel program, then you may continue adding other channels. The Baofeng has 128 memory channels.

Setting two radios to the same frequency channel will allow communication between them.

CHAPTER 10: REPEATER SETUP

Simplex communication is somewhat limited. It's great for communicating around your property, but what if you need to keep in contact over a greater distance?

This is where repeaters come in.

All over the world, thousands of repeaters are available for public use. Simply put, when you transmit using a repeater, they repeat your transmission.

Because most repeaters have antennas very high in the air, their radio horizon is much greater than two antennas near the ground. Using a repeater, it's possible to increase your Baofeng radios' range to anywhere between 20 and 100 or more miles depending on the terrain in your area and the repeater's location.

In an emergency, common modes of communication may fail. Using a repeater in an emergency can be of great benefit. Most of the repeaters are backed up by battery. Even if your area's power is down, communications can still be possible using the repeater.

Duplex (Using a Repeater) Manual Programming Guide

Using a web browser, enter your area and type "repeaters" after it in the Google search bar.

Typically, the first link that pops up is repeaterbook.com. Click on the link, and it will take you to a page that lists all the local repeaters in your area. Pick the repeater you want and click on the frequency link.

Take note of the listen frequency, the offset, and the tone (also known as the PL tone)

What You Will Need to Program your Radio:

- **Receive Frequency** : ex. 146.720 or 449.375
- **Transmit PL Tone** : ex. 100.0 Hz or 88.5 Hz
- **Offset Direction** : Off, + or – (See Step 6)
- **Offset Value** : 600 kHz or 5 MHz (See Step 7)
- Select **Memory Channel** to store the new Frequency

Step 1:

Set your display to “Frequency Mode.”

Step 2:

Ensure your display is set to “A.” The triangle to the left of the frequencies will be on the top line and pointing up. Press the A/B button if it’s not set to A.

Step 3:

Type in your Receive Frequency

Step 4:

Set Transmit CTCSS Tone [PL Tone assigned to the desired repeater]

- Press MENU
- Enter 13
- Press MENU
- Use up and down arrow keys to select the Tone Frequency
- Press MENU
- Press EXIT

Step 5:

Set Offset Frequency Direction (For 2 Meter Repeater: Minus < 147.0 > Plus), [70cm: Plus < 445.0 > Minus)

- Press MENU
- Enter 25
- Press MENU
- Use the up and down arrow keys to select + or –
- Press MENU
- Press EXIT

Step 6:

Set Offset Frequency Value (Standard Offset 2M [144-148 MHz] = 600 kHz and 70cm [420-450 MHz] = 5 MHz)

- Press MENU
- Enter 26
- Press MENU

- Enter 000.600 OR 005.000
- Press MENU
- Press EXIT

Step 7:

Assign Receive Frequency to Memory Channel (Receiving Memory)

- Press MENU
- Enter 27
- Press MENU
- Use up and down arrow keys to select a memory channel
- Press MENU
- Press EXIT

Step 8:

Assign Transmit Frequency to Memory Channel (Transmitting Memory)

- Press the * button
- Press MENU
- Enter 27
- Press MENU
- Use up and down arrow keys to select a memory channel
- Press MENU
- Press EXIT
- Press the * button

Repeater Computer Programming

Programming a repeater is a little more in-depth than simplex communications, and there are a few more required settings. To program in a local repeater, we're going to connect the Baofeng to a computer using the USB cable and program it using chirp software.

I will assume that you've already installed the chirp software.

- Plug in your radio with the USB cable and turn it ON.
- On your computer, click START, then "Devices and Printers" and look for your adapter to know what com port the USB serial adapter is using

- Open the chirp software, select “File” then “New.”

Note that the first time you open a new file, you will have to download from the radio first.

- Click on the “radio” button at the top of the page and download from the radio, ensuring that your port, vendor, and make are correct.

You will notice that the transmit light will begin to flash as it’s downloading. Once this is complete, you can begin programming.

The first field is the frequency the repeater will receive on, for example, 147.000 megahertz.

- Enter the repeater input frequency on the first field
- Enter the channel name in the second field. The channel name you type in will appear in the channel mode on the radio. Let’s use “Repeater 1.”

Most repeaters use a continuous tone code squelch system or CTCSS. They require your radio to transmit a tone to begin using it. In the CTCSS field, select tone.

- Enter the repeater PL tone. Say, 131.7 Hertz

Head over to the right; you’ll see columns labeled “duplex” and “offset.”

- Enter the values of both parameters into the columns.

To upload the new programming into the radio:

- Click “radio” and then “upload to radio,” ensuring your port, vendor, and model are correct and click OK.

This time, the radio should flash green as it’s uploading.

Repeaters listen on one frequency and retransmit on another. Say we are in the 2-meter band, the standard offset is plus or minus 600 kilohertz.

If the repeater is +600 kilohertz, for example, it means that the repeater will transmit on 147.000 megahertz, and your radio is going to transmit to the receiver on a 147.600 megahertz.

Just like in manual programming, we'll set the second memory location to a GMRS channel. Since we'll be operating in simplex mode, we only need to enter the frequency and channel name.

After unplugging your radio, enter channel mode, and as you hit the up and down arrows, you should see the channels you just programmed in.

Note:

Go to <https://www.repeaterbook.com>, and you'll find all of the repeaters in your area, their frequencies, and tone codes. Remember that repeaters may be the only form of communication in a disaster. I suggest that you program in all of the repeaters anywhere near your area of operations and a few simplex GMRS channels. This way, you'll be ready to go in a disaster.

Conclusion

Before you go, I'd like to say "thank you" for purchasing my guide.

I know you could have picked from dozens of books on Baofeng UV-5R, but you took a chance with my system.

If you enjoyed this book, found it useful, or otherwise, then I'd appreciate it if you would post a **SHORT REVIEW** for the book.

I do read all the reviews so that I can continually write what people are wanting.

Thanks for your huge support!