

BTECH UV-50X2

BTECH UV-50X2 Dual Band Mobile Radio Instruction Manual

MODEL: UV-50X2

Brand: BTECH

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1. INTRODUCTION

The BTECH UV-50X2 is a second-generation mobile 50-watt dual-band radio designed for VHF and UHF amateur (Ham) use. This radio offers robust communication capabilities for both mobile and base station applications. It features an upgraded audio I/O system, allowing compatibility with a wide range of aftermarket audio accessories through its RJ45 microphone port and included K1 audio adaptor. The UV-50X2 supports simultaneous monitoring of up to four frequencies (Quad Watch) and offers customizable display options. This manual provides essential information for the proper setup, operation, and maintenance of your UV-50X2 radio.

2. WHAT'S IN THE BOX

Carefully unpack your BTECH UV-50X2 radio and verify that all items listed below are included:

- BTECH UV-50X2 Radio Unit
- RJ45 to K1 Audio Adaptor
- Speaker Microphone
- DC Power Cable
- Radio Mounting Bracket
- Microphone Mounting Bracket

- Mounting Hardware (screws, fuse)
- User Guide (this document)



Image: All components included with the BTECH UV-50X2 radio, laid out for inspection. This includes the main radio unit, speaker microphone, DC power cable, RJ45 to K1 audio adapter, and mounting accessories.

3. SETUP

3.1. Mounting the Radio

The UV-50X2 can be installed in a vehicle or used as a base station. Use the provided radio mounting bracket and hardware to secure the unit in a stable location. Ensure adequate ventilation around the radio to prevent overheating.



Image: The BTECH UV-50X2 radio securely mounted on a vehicle's dashboard, demonstrating a typical mobile installation. The speaker microphone is connected and resting on top of the unit.

3.2. Power Connection

Connect the supplied DC power cable to the radio's power input and to a 13.8V DC power source. For mobile use, connect directly to your vehicle's battery (ensure proper fusing). For base station use, an optional RPS-30M power supply (not included) is recommended.

Your browser does not support the video tag.

Video: This video highlights key features of the BTECH UV-50X2, including its dual-band capability, 50W power output, and upgraded audio input/output options. It demonstrates the radio's versatility for both mobile and base station use.

3.3. Antenna Connection

Connect a suitable VHF/UHF antenna to the radio's antenna connector. Ensure the antenna is properly tuned for the operating frequencies to prevent damage to the radio.

3.4. Microphone and Audio Accessories

The speaker microphone connects to the RJ45 port. The included RJ45 to K1 Audio Adaptor allows for

connection of K1-type audio accessories, expanding compatibility.



Image: The RJ45 to K1 audio adapter, which allows the BTECH UV-50X2 to connect with a wide range of K1-type audio accessories, enhancing its versatility.

3.5. Computer Programming

For advanced programming and customization, connect the radio to a computer using a PC04 FTDI Cable (recommended, not included). Software and drivers are available on the BTECH website.



Image: The BTECH UV-50X2 radio connected to a laptop computer with a programming cable, illustrating the setup for software-based configuration and channel management.

4. OPERATING THE RADIO

4.1. Controls and Functions Overview

Familiarize yourself with the radio's front panel controls:

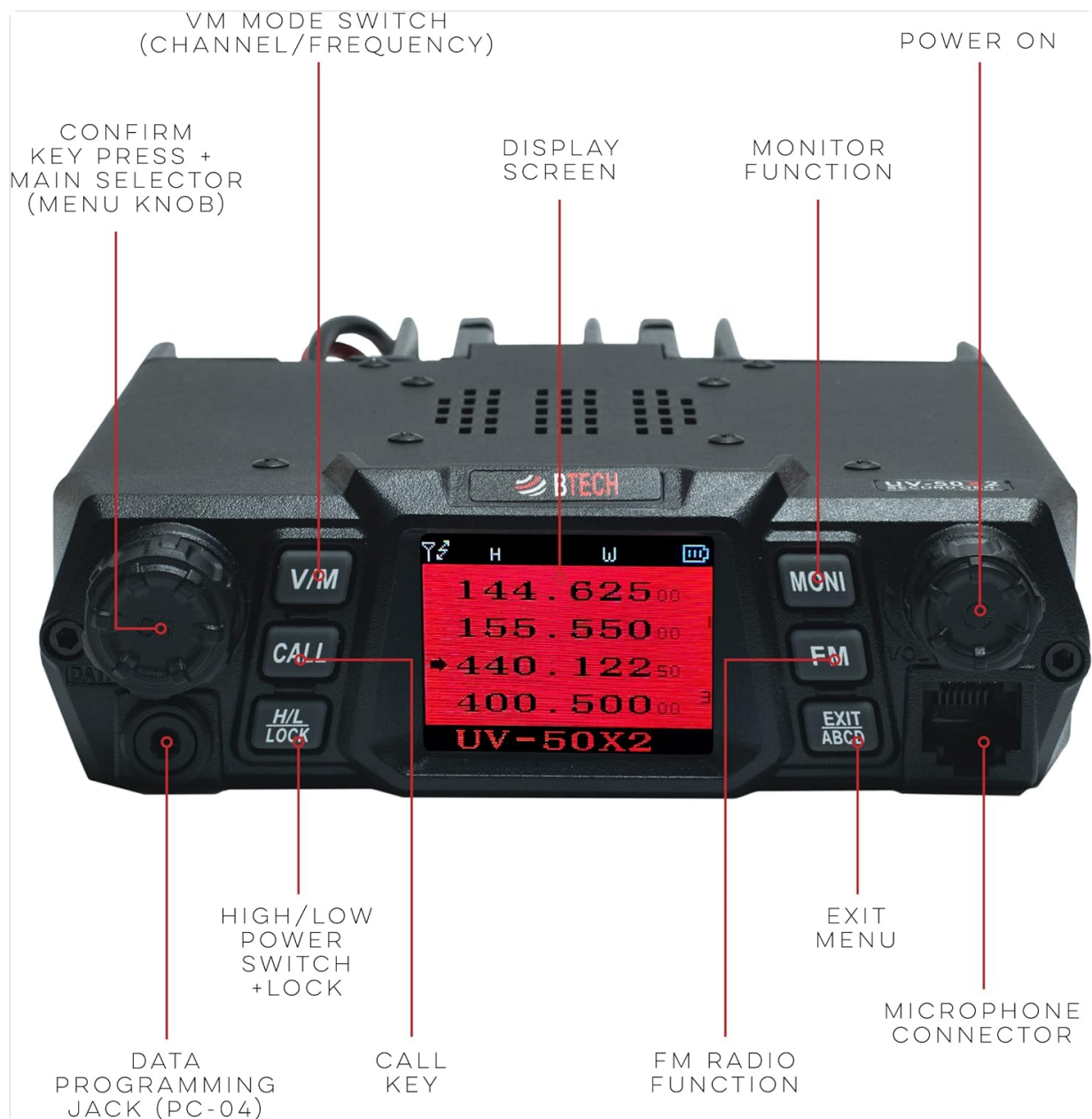


Image: A detailed view of the BTECH UV-50X2 front panel, highlighting the VM Mode Switch, Power On/Off, Display Screen, Monitor Function, FM Radio Function, Exit Menu, Microphone Connector, Data Programming Jack (PC-04), High/Low Power Switch + Lock, and Call Key.

- **V/M (Mode Switch):** Toggles between VFO (Frequency) mode and Memory (Channel) mode.
- **CALL:** Initiates a call or accesses a pre-programmed call channel.
- **H/L LOCK:** Toggles high/low power output and locks the keypad.
- **MONI (Monitor):** Opens the squelch to listen for weak signals.
- **FM:** Activates the FM broadcast radio receiver.
- **EXIT ABCD:** Exits menus or confirms selections.
- **Power Knob:** Turns the radio on/off and adjusts volume.
- **Display Screen:** Shows frequency, channel, and status information.
- **Microphone Connector:** RJ45 port for the speaker microphone.
- **Data Programming Jack (PC-04):** For connecting to a computer for programming.

4.2. Dual Band and Quad Watch Operation

The UV-50X2 operates on both VHF (144 MHz) and UHF (430 MHz) bands. It can simultaneously monitor up to four frequencies or channels, allowing you to keep track of multiple conversations. You can configure

the radio for simultaneous VHF-VHF or UHF-UHF operation as well.



Image: The BTECH UV-50X2 radio's display showing four different frequencies being monitored simultaneously, demonstrating its Quad Watch capability.

4.3. Audio Input/Output (I/O)

The radio's RJ45 microphone port supports the included speaker mic and, with the K1 audio adaptor, allows for a wide range of K1-compatible audio accessories. This provides flexibility for various operating environments and preferences.

4.4. Screen Customization

The UV-50X2 allows you to customize the display screen colors to improve visibility in different lighting conditions. Refer to the full user guide for detailed instructions on accessing and changing these settings.

4.5. VOX (Voice Operated Exchange)

The VOX function enables hands-free transmission by detecting your voice. This feature is useful in situations where manual PTT (Push-To-Talk) operation is inconvenient or unsafe.

5. MAINTENANCE

To ensure the longevity and optimal performance of your BTECH UV-50X2 radio, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the radio's exterior. Avoid using harsh chemicals or abrasive cleaners.
- **Environmental Protection:** The UV-50X2 is not water resistant. Protect it from moisture, rain, and extreme temperatures. Avoid prolonged exposure to direct sunlight.
- **Connections:** Periodically check all cable connections (power, antenna, microphone) to ensure they are secure and free from damage.
- **Firmware Updates:** Check the BTECH website for any available firmware updates to ensure your radio has the latest features and performance enhancements.

6. TROUBLESHOOTING

If you encounter issues with your BTECH UV-50X2, refer to the following common troubleshooting steps:

- **No Power:** Ensure the DC power cable is securely connected and the power source (vehicle battery or power supply) is providing 13.8V DC. Check the inline fuse on the DC power cable.
- **No Transmission/Reception:** Verify the antenna is properly connected and tuned. Check that the correct frequency or channel is selected. Ensure the squelch level is not set too high.
- **Poor Audio Quality:** Check microphone connection. Ensure microphone gain settings are appropriate (if adjustable).
- **Keypad/Buttons Unresponsive:** Check if the keypad lock (H/L LOCK) is engaged.
- **Programming Issues:** Ensure the correct programming cable (PC04 FTDI Cable) and software are being used. Verify drivers are installed correctly on your computer.

For more detailed troubleshooting or issues not covered here, please consult the comprehensive user manual available on the BTECH website or contact BTECH support.

7. SPECIFICATIONS

Feature	Detail
Brand	BTECH
Model Number	UV-50X2
Number of Channels	200
Frequency Range	FM, VHF, UHF
Talking Range Maximum	100 Miles (dependent on conditions)
Voltage	13.8 Volts (DC)
Water Resistance Level	Not Water Resistant (IPX2)
Product Dimensions (D x W x H)	7.5" x 5.7" x 1.85"
Connectivity Protocol	VHF, UHF

Feature	Detail
Tuner Type	FM, VHF, UHF
UPC	722589229794

8. WARRANTY AND SUPPORT

BTECH radios are designed in the USA and backed by full US support. For warranty information, detailed user guides, software downloads, and additional support resources, please visit the official BTECH website:

- **Product Information & Software:** <https://baofengtech.com/uv-50x2>
- **YouTube Tutorials:** <https://www.youtube.com/c/Baofengtechradio>

Contact BTECH customer service for any technical assistance or warranty claims.