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› [BTECH DMR-6X2 DMR & Analog Dual Band Two-Way Radio User Manual](#)

BTECH DMR-6X2



BTECH DMR-6X2 DMR & Analog Dual Band Two-Way Radio User Manual

Model: DMR-6X2 | Brand: BTECH

1. INTRODUCTION AND OVERVIEW

The BTECH DMR-6X2 is an advanced dual-band two-way radio designed for versatile communication across both Analog and Digital Mobile Radio (DMR) networks. It supports DMR Tier 1 and Tier 2 standards, offering compatibility with MOTOTRBO systems. This radio integrates features such as Talker Alias for caller identification, Analog and Digital APRS (TX Only) for location tracking, and military-grade AES256 encryption for secure communications. Its robust design and proprietary BTECH firmware ensure enhanced customization, stable performance, and continuous feature improvements.

Key features include:

- **Advanced Communication Compatibility:** Supports Analog and DMR Tier 1 & 2 networks, MOTOTRBO compatibility, and Talker Alias.
- **Analog and Digital APRS (TX Only):** Enables effective data sharing and real-time location tracking.
- **Exclusive BTECH Firmware:** Enhances user experience, performance stability, and allows for easy firmware updates.
- **Large Database Support:** Manages over 4000 channels, 10,000 talk groups, and 200,000 contacts with a clear TFT color display.
- **Unmatched Security:** Features AES256 encryption for private and secure conversations.

2. WHAT'S IN THE BOX

Upon unboxing your BTECH DMR-6X2, please ensure all the following items are present:

- BTECH DMR-6X2 Two-Way Radio Unit
- 3100 mAh High Capacity Battery
- 2100 mAh Standard Battery
- 2 Belt Clips
- Programming Cable
- Charger Base
- Charger Transformer
- Earpiece Kit

- 6" Dual Band Antenna
- Wrist Strap
- User's Manual (this document)



Figure 2.1: Contents of the BTECH DMR-6X2 package, including the radio, two batteries, belt clips, programming cable, charger, earpiece, antenna, and wrist strap.

3. SETUP

3.1 Initial Charging and Battery Installation

Before first use, fully charge the battery. The DMR-6X2 includes two batteries: a 3100 mAh high-capacity battery and a 2100 mAh standard battery. The QB-44HL battery also supports USB-C charging directly.

1. Attach the antenna by screwing it clockwise onto the connector at the top of the radio.
2. Insert the battery into the back of the radio, ensuring it clicks securely into place.
3. Connect the Charger Transformer to the Charger Base, then plug the transformer into a power outlet.
4. Place the radio (with battery installed) into the Charger Base. The indicator light on the charger will show charging status (e.g., red for charging, green for fully charged).
5. Alternatively, for the QB-44HL battery, connect a USB-C cable directly to the battery's USB-C port for charging. An indicator light on the battery will show charging status (red when charging, green when charged).

QB-44HL USB-C BATTERY

FOR DMR-X2-PRO AND DMR-6X2

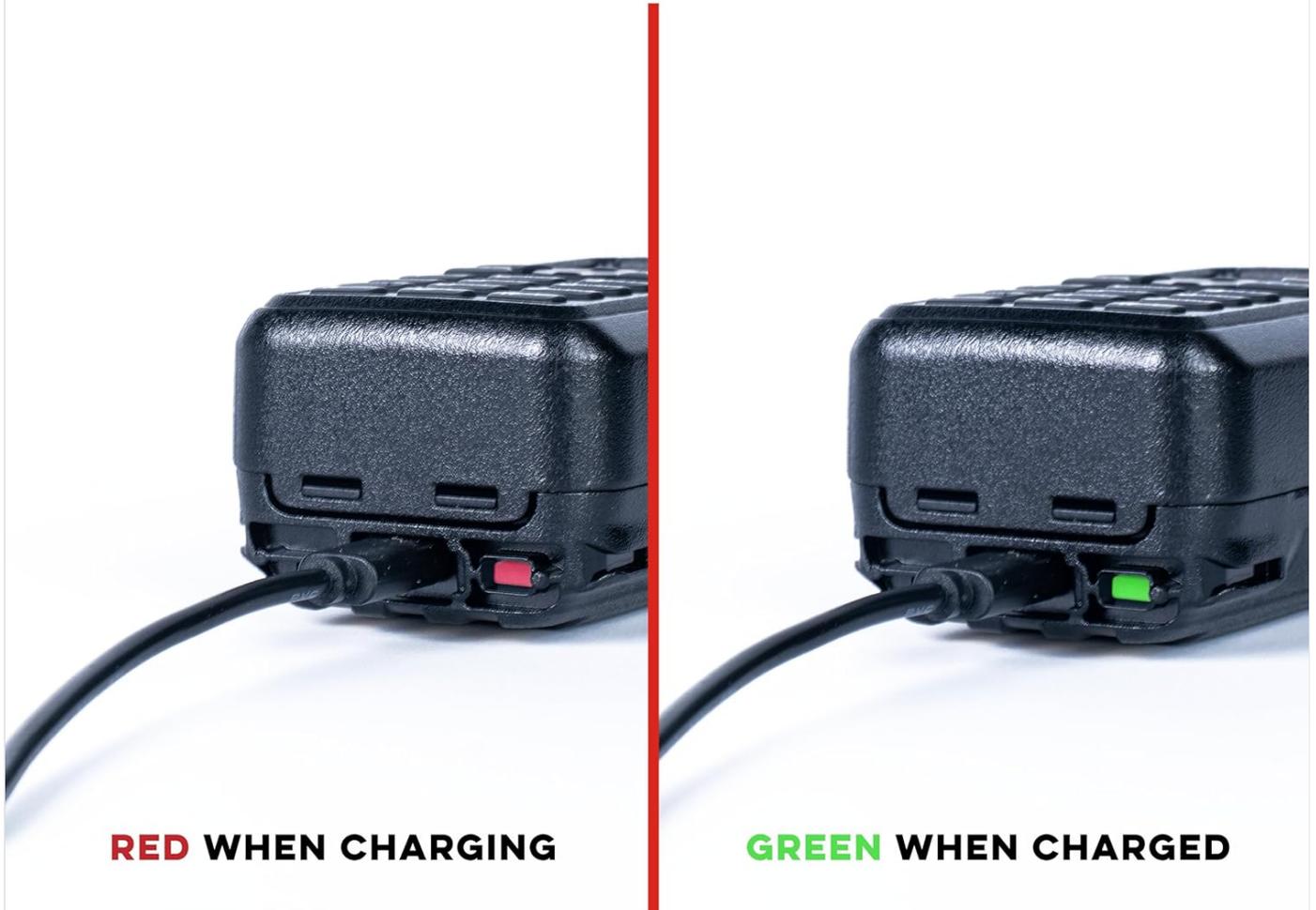


Figure 3.1: The BTECH DMR-6X2 placed in its charging base.



Figure 3.2: The QB-44HL USB-C battery with indicators for charging (red) and charged (green).

3.2 Programming Software (CPS) and Drivers

The BTECH DMR-6X2 requires dedicated programming software (CPS) for advanced configuration and channel management. Drivers for the programming cable are also necessary for your computer to recognize the radio.

- Download the latest CPS and drivers from the official BTECH website: baofengtech.com/dmr-6x2.
- Install the drivers before connecting the radio to your computer.
- Install the CPS and launch it to begin programming.

For visual guidance on programming, refer to the official YouTube tutorials: youtube.com/c/Baofengtechradio.

Video 3.1: BTECH DMR-6X2 PRO Feature Highlights. This video provides an overview of key functionalities and user interface elements of the radio.

4. OPERATING INSTRUCTIONS

4.1 Basic Operation

The DMR-6X2 features a user-friendly interface with a TFT color display and a full keypad for direct input and menu navigation.

- **Power On/Off:** Rotate the top knob clockwise to power on, counter-clockwise to power off.
- **Volume Control:** Adjust the same top knob to control the audio volume.
- **Channel/Frequency Selection:** Use the up/down arrow keys or the rotary encoder to change channels or frequencies.
- **Push-to-Talk (PTT):** Press the large button on the left side of the radio to transmit. Release to receive.

4.2 Analog and DMR Modes

The radio supports seamless switching between Analog and DMR (Digital Mobile Radio) modes, allowing communication across various networks.

- **Mode Selection:** Configure channels in the CPS to operate in either Analog or Digital mode.
- **DMR Tier 1 & 2:** Compatible with both tiers, including MOTOTRBO systems.

4.3 Talker Alias and Contacts

Talker Alias displays the identity of the speaker on your device, enhancing communication clarity. The radio supports a large contact database.

- **Talker Alias:** Enabled via menu settings or CPS.
- **Contact Management:** Store up to 200,000 contacts, 4000 channels, and 10,000 talk groups.

4.4 APRS (Automatic Packet Reporting System)

The DMR-6X2 supports Analog and Digital APRS (TX Only) for transmitting your location and other data.

- **APRS Configuration:** Set up APRS parameters via the radio's menu or CPS.
- **Location Tracking:** Utilize GPS functionality for real-time position reporting.



Figure 4.1: The radio's display showing Advanced APRS and GPS data.

4.5 AES256 Encryption

Ensure the privacy of your communications with military-grade AES256 encryption.

- **Encryption Activation:** Enable AES256 encryption through the radio's menu or CPS for digital transmissions.



Figure 4.2: The radio's display showing the AES256 Digital Encryption menu options.

Video 4.1: BAOFENG RD-5R: A Little Fun DMR Radio! This video demonstrates general DMR radio usage and features, which can be applied to understanding the DMR-6X2's digital capabilities.

5. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your BTECH DMR-6X2 radio.

- **Cleaning:** Use a soft, damp cloth to clean the radio's exterior. Avoid harsh chemicals or abrasive materials.
- **Battery Care:** Store batteries in a cool, dry place. Avoid overcharging or fully discharging the battery frequently to prolong its lifespan.
- **Environmental Protection:** The radio is Water Resistant (IP54). While it can withstand splashes, avoid submerging it in water. Keep it away from extreme temperatures and direct sunlight.



Figure 5.1: The BTECH DMR-6X2 demonstrating its IP54 weatherproof rating.

6. TROUBLESHOOTING

If you encounter issues with your DMR-6X2, consider the following common solutions:

- **Programming Issues:** Ensure the correct drivers are installed for your programming cable. Always download the latest CPS and firmware from the official BTECH website. Mismatched firmware and CPS versions can cause problems.
- **Radio Not Recognized by Computer:** Power off the radio before connecting the programming cable. Power it on after connection is complete.
- **Audio Problems:** Check microphone gain settings. Some repeaters may experience audio issues with Talker Alias transmission; try enabling Talker Alias only for receive.
- **Screen Timeout/Text Messages:** Some firmware quirks might affect text message reception when the screen is timed out. Ensure firmware is up-to-date.
- **General Programming Tip:** Never transmit while the radio is connected to the computer to avoid potential damage. Always turn off the radio before disconnecting the programming cable.

7. SPECIFICATIONS

Feature	Specification
Item Weight	9.9 ounces
Product Dimensions	2 x 1.5 x 5 inches
Item Model Number	DMR-6X2
Batteries	1 Lithium Ion batteries required (included)
Number of Channels	4000
Frequency Range	136 - 174 MHz (VHF), 400 - 480 MHz (UHF)
Talking Range Maximum	5 Mile
Voltage	7.4 Volts
Water Resistance Level	Water Resistant (IP54)

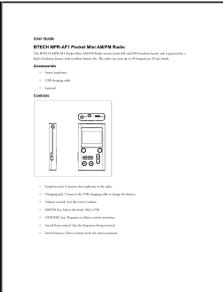
8. WARRANTY & SUPPORT

The BTECH DMR-6X2 comes with a **1-Year Warranty** from the manufacturer.

For additional support, software downloads, and tutorials, please visit the official BTECH website:

- Product Information & Software: baofengtech.com/dmr-6x2
- YouTube Tutorials: youtube.com/c/Baofengtechradio

Related Documents - DMR-6X2

	<p>BTECH MPR-AF1 Pocket Mini AM/FM Radio User Guide</p> <p>Comprehensive user guide for the BTECH MPR-AF1 Pocket Mini AM/FM Radio. Learn about its features, controls, operation, tuning, memory programming, battery charging, and specifications.</p>
	<p>BTECH GMRS-PRO GMRS Radio Operate Manual</p> <p>Comprehensive operate manual for the BTECH GMRS-PRO GMRS radio, covering FCC statements, app introduction, device settings, radio operation, keypad functions, icon meanings, electronic compass, frequency settings, menu options, Bluetooth connectivity, NOAA weather alerts, GPS search, and reset procedures.</p>
	<p>BTECH UV-25X2, UV-25X4, UV-50X2 User Manual</p> <p>Comprehensive user manual for BTECH UV-25X2, UV-25X4, and UV-50X2 multi-band mobile radios. Covers setup, operation, programming, and technical specifications for reliable communication.</p>



[BTECH BF-F8HP PRO Instruction Manual](#)

Comprehensive instruction manual for the BTECH BF-F8HP PRO Amateur Radio, covering operation, features, safety, and troubleshooting for this dual-band, dual-display, dual-watch device.



[BTECH BS-22 Wireless Speaker Microphone Instruction Manual](#)

Comprehensive instruction manual for the BTECH BS-22 Wireless Speaker Microphone, covering setup, pairing, operation, specifications, and troubleshooting.



[BTECH BF-F8HP PRO Amateur Radio Instruction Manual](#)

Comprehensive instruction manual for the BTECH BF-F8HP PRO dual-band amateur radio. Learn about its features, operation, programming, safety guidelines, and troubleshooting for reliable communication.