QYT KT-7900D

QYT KT-7900D Quad Band Mini Mobile Transceiver User Manual

Model: KT-7900D | Brand: QYT

1. Introduction

The QYT KT-7900D is a compact and versatile quad-band mobile transceiver designed for amateur radio enthusiasts. It offers broad frequency coverage and a range of functions to enhance communication. This manual will guide you through the proper installation, operation, and maintenance of your device.

Key Features:

- Mini Size: Approximately 4.96 x 4.05 x 1.85 inches, weighing about 2.3 lbs.
- Frequency Range: VHF 136-174MHz (Rx/Tx), 220-270MHz (Rx/Tx), UHF 350-390MHz, 400-480MHz (Rx/Tx).
- Output Power: VHF 25 Watts, UHF 20 Watts.
- Functions: FM Radio, PTT ID, DTMF, Remote Stun, Remote Kill, Repeater, Alarm, Monitor, High/Low Power Settings.
- Programming: Supports PC04FTDI Programming Cable (compatible with Windows 10/XP).

2. What's in the Box

Verify that all items are present in your package:

- QYT KT-7900D Transceiver Unit
- Speaker Microphone (with DTMF function)
- 2.8 ft DC Cable with Cigarette Plug Connector
- Radio Bracket
- Microphone Bracket
- Mounting Hardware
- Programming Cable (PC04FTDI)

- User Manual (this document)

Figure 2.1: Included components of the KT-7900D package.

3. Setup

3.1 Mounting the Transceiver

Select a stable and secure location for the transceiver, ensuring adequate ventilation around the unit. Use the provided radio bracket and mounting hardware to secure the unit. Ensure the location allows for easy access to controls and connections.

Figure 3.1: Side view of the KT-7900D, highlighting the heat sink for proper ventilation.

3.2 Power Connection

Connect the DC power cable to the power input port on the rear of the transceiver. Ensure the polarity is correct (red to positive, black to negative). Connect the other end of the DC cable to a 13.8V DC power source, such as a vehicle's cigarette lighter socket or a regulated power supply. The cable includes a cigarette plug connector for convenience.

3.3 Antenna Connection

Connect a suitable antenna (not included) to the antenna connector on the rear of the transceiver. Use a coaxial cable with a compatible connector (typically SO-239 for the radio side). Ensure the antenna is properly tuned for the operating frequencies to prevent damage to the radio.

Figure 3.2: Rear view of the KT-7900D, showing the cooling fan and antenna port.

3.4 Microphone Connection

Plug the speaker microphone cable into the microphone port on the front of the transceiver. Ensure it clicks securely into place.

Figure 3.3: KT-7900D with the speaker microphone connected.

4. Operating the Transceiver

4.1 Power On/Off

To power on the transceiver, rotate the volume knob clockwise until you hear a click and the display illuminates. To power off, rotate the volume knob counter-clockwise until it clicks off.

Figure 4.1: Front panel of the KT-7900D with display and controls.

4.2 Volume Adjustment

Adjust the audio output level by rotating the volume knob (typically the left-most knob on the front panel).

4.3 Frequency/Channel Selection

Use the main tuning knob (right-most knob) to change frequencies or navigate through memory channels. The V/M button switches between VFO (Variable Frequency Oscillator) mode for direct frequency input and Memory mode for stored channels.

4.4 Transmitting (PTT)

To transmit, press and hold the Push-To-Talk (PTT) button on the side of the speaker microphone. Speak clearly into the microphone. Release the PTT button to receive.

4.5 Keypad Functions (Speaker Microphone)

The speaker microphone features a DTMF keypad for various functions:

- **MENU:** Access the radio's menu system.
- **UP/DOWN Arrows:** Navigate menu options or adjust settings.
- **EXIT/AB:** Exit menu or switch between A/B VFOs.
- ***/SCAN:** Initiate scanning.
- **#/LOCK:** Lock/unlock the keypad.
- **Numeric Keys (0-9):** Direct frequency input, DTMF tones, or menu selection.

Figure 4.2: Speaker Microphone Keypad.

4.6 Advanced Functions

Refer to the on-screen menu for advanced functions such as FM Radio, PTT ID, DTMF signaling, Remote Stun/Kill, Repeater settings, Alarm, Monitor, and High/Low Power settings. Detailed explanations for each function are typically found within the radio's internal menu system.

5. Maintenance

5.1 Cleaning

Wipe the transceiver with a soft, dry cloth. Do not use harsh chemicals or abrasive cleaners. For stubborn dirt, a slightly damp cloth can be used, followed by a dry cloth.

5.2 Environmental Considerations

Avoid exposing the radio to extreme temperatures, direct sunlight for prolonged periods, or excessive moisture. Ensure proper ventilation, especially during extended transmission, as the unit can generate heat. The built-in fan assists in cooling.

5.3 Firmware and Programming

Periodically check for firmware updates from the manufacturer's official website. Use the provided programming cable and compatible software (e.g., CHIRP or QYT's proprietary software) to update firmware or customize channel settings. Always back up your radio's configuration before making changes.

6. Troubleshooting

Problem	Possible Cause	Solution
Radio does not power on.	No power, incorrect power connection, blown fuse.	Check power cable connection and polarity. Verify power source. Check fuse in the DC cable.
No audio from speaker.	Volume too low, squelch set too high, speaker microphone not connected.	Increase volume. Adjust squelch level. Ensure speaker microphone is fully plugged in.
Cannot transmit or receive.	Antenna not connected, incorrect frequency/channel, high SWR.	Ensure antenna is securely connected. Verify correct frequency/channel. Check antenna SWR.
Programming cable not recognized by PC.	Incorrect or outdated driver, cable issue.	Install the correct FTDI driver for your operating system. Try a different USB port. Ensure the cable is fully inserted into the radio's programming port.
Low output power on certain bands.	Antenna mismatch, radio fault.	Verify antenna tuning for all operating bands. If issue persists, contact support.

7. Specifications

Feature	Detail
Brand	QYT
Model	KT-7900D
Frequency Range	VHF: 136-174MHz, 220-270MHz; UHF: 350-390MHz, 400-480MHz
Output Power	VHF: 25W, UHF: 20W
Frequency Stability	±2.5ppm
Memory Channels	200
Supply Voltage	13.8V DC ±15%
Squelch Setup	CARRIER/CTCSS/DCS/5 Tone/2 Tone/DTMF
Operation Temperature	-5°F to +140°F (-20°C to +60°C)
Dimensions (L*W*H)	12.5 x 9.9 x 4.5 cm (4.92 x 3.89 x 1.77 inches)
Item Weight	0.45 Kilograms (15.8 ounces)
Number of Channels	200
Talking Range Maximum	20 Kilometer (theoretical)
Water Resistance Level	Not Water Resistant

8. Warranty and Support

For warranty information and technical support, please refer to the documentation provided with your purchase or contact the QYT customer service directly. Keep your proof of purchase for warranty claims.
For software and driver downloads, including the programming software, please visit the official QYT website or contact their support team for the most up-to-date resources.