

TYT TH 7900

TYT TH-7900 Dual Band Mobile Transceiver User Manual

Model: TH-7900 | Brand: TYT

1. INTRODUCTION

The TYT TH-7900 is a high-performance dual-band mobile transceiver designed for amateur radio enthusiasts. It operates on both VHF (144-148MHz) and UHF (420-450MHz) bands, offering robust communication capabilities with features such as 800 memory channels, cross-band repeater functionality, and a removable front panel for flexible installation. This manual provides detailed instructions for the proper setup, operation, and maintenance of your TH-7900 transceiver.



Figure 1.1: TYT TH-7900 Mobile Transceiver with included microphone and programming cables.

2. SAFETY INFORMATION

Please read and understand all safety precautions before operating the transceiver. Failure to do so may result in injury or damage to the equipment.

- Do not operate the radio in explosive atmospheres or near flammable materials.
- Ensure proper ventilation around the transceiver to prevent overheating.
- Use only the specified power supply (13.8V DC) and ensure correct polarity.
- Avoid touching the antenna during transmission.
- Keep the transceiver away from water and moisture.
- Do not attempt to disassemble or modify the transceiver. Refer all servicing to qualified personnel.
- Comply with all local and national regulations regarding radio operation.

3. PACKAGE CONTENTS

Verify that all items listed below are included in your package. If any items are missing or damaged, please contact your dealer.

- 1 x TYT TH-7900 Radio unit
- 1 x Keypad DTMF microphone
- 1 x Radio body mounting bracket
- 1 x DC power cable with fuse holder
- 1 x Front controller separation cable (4 meters)
- 1 x Front controller mounting bracket
- 1 x Screw packs & Protection fuses
- 1 x User manual



Figure 3.1: All components included in the TYT TH-7900 package.

4. PRODUCT OVERVIEW

4.1 Front Panel

The front panel houses the main display, control knobs, and function buttons for operating the transceiver. It features a dual display for simultaneous monitoring of two frequencies.



Figure 4.1: Front panel of the TH-7900 with approximate dimensions (1.6 inches height, 5.6 inches width).

4.2 Rear Panel

The rear panel includes the antenna connector, power input, and cooling fan.



Figure 4.2: Rear view of the TH-7900, highlighting the antenna port, cooling fan, and DC power input.



Figure 4.3: Bottom view of the TH-7900, displaying the product label with Model: TH-7900, Power: UHF 40W/VHF 50W, Frequency: 144-148MHz/420-450MHz, FCC ID: PODTH-9800, and S/N: 2106A02020.

4.3 Microphone

The included DTMF keypad microphone allows for direct frequency entry, channel selection, and access to various functions.

4.4 Removable Front Panel

The TH-7900 features a removable front panel, allowing for flexible installation options in vehicles or base stations. The included 4-meter separation cable facilitates remote mounting of the control head.

Removable front panel

The supplied remote controller mounting bracket and 4 meters separation cable can be used for installation.



Figure 4.4: The TH-7900 with its removable front panel separated from the main unit, connected by the 4-meter cable.

5. SETUP

5.1 Mounting the Transceiver

Use the provided mounting bracket to secure the main radio unit in a stable location. If using the removable front panel feature, mount the control head in a convenient location using its dedicated bracket and connect it to the main unit with the separation cable.

5.2 Power Connection

Connect the supplied DC power cable to the transceiver's power input. Ensure the red wire connects to the positive (+) terminal and the black wire to the negative (-) terminal of a 13.8V DC power source (e.g., vehicle battery or regulated power supply). The cable includes an inline fuse holder for protection.

5.3 Antenna Connection

Connect a suitable VHF/UHF dual-band antenna to the SO-239 connector on the rear of the transceiver. Ensure the antenna is properly tuned for the operating frequencies to prevent damage to the radio.

5.4 Microphone Connection

Plug the DTMF microphone's RJ-45 connector into the microphone jack on the front panel of the transceiver or the remote control head.

6. OPERATING INSTRUCTIONS

6.1 Powering On/Off

Press and hold the power button (usually located on the front panel) to turn the transceiver on or off.

6.2 Frequency Selection (VFO Mode)

In VFO (Variable Frequency Oscillator) mode, you can directly input frequencies. Use the main tuning knob or the keypad on the microphone to enter the desired frequency. Press the V/M button to switch between VFO and Memory modes.

6.3 Memory Channel Operation

The TH-7900 supports 800 memory channels. To recall a stored channel, switch to Memory mode (V/M button) and use the tuning knob or microphone up/down buttons to select the desired channel. Refer to the full user manual for detailed instructions on storing and deleting channels.

6.4 Dual Band Operation

The transceiver can display and operate on two different bands simultaneously. Use the A/B button to switch the active band for transmission or tuning. The dual display allows for monitoring one band while transmitting on another, or monitoring two different frequencies within the same band.

6.5 CTCSS/DCS Tones

CTCSS (Continuous Tone-Coded Squelch System) and DCS (Digital Coded Squelch) tones are used to filter out unwanted signals and allow private communication within a group. The TH-7900 supports 50 CTCSS tones and 104 DCS codes. Access these settings through the menu system to configure transmit and receive tones.

6.6 Scan Function

The scan function allows the radio to automatically search for active signals across frequencies or memory channels. Various scan modes are available, including VFO scan, memory scan, and CTCSS/DCS scan. Activate scan mode via the SCN button or menu.

6.7 Cross-Band Repeater

The TH-7900 features a built-in V+U cross-band repeater. This function allows the radio to receive a signal on one band (e.g., VHF) and retransmit it on the other band (e.g., UHF), extending the communication range for handheld radios. Configuration details are available in the advanced settings menu.

6.8 DTMF/2-Tone/5-Tone Signaling

The transceiver supports DTMF (Dual-Tone Multi-Frequency), 2-Tone, and 5-Tone selective calling. These features enable specific radios to be called or activated, useful in professional or group communication scenarios. Programming these functions is done via the menu or programming software.

7. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your TH-7900 transceiver.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the radio. Do not use abrasive cleaners or solvents.
- **Antenna Connection:** Periodically check the antenna connection for tightness and corrosion.
- **Power Cable:** Inspect the power cable and fuse holder for any signs of wear or damage.
- **Storage:** When not in use for extended periods, store the transceiver in a cool, dry place, away from direct sunlight and extreme temperatures.

8. TROUBLESHOOTING

If you encounter issues with your TH-7900, refer to the table below for common problems and their solutions.

Problem	Possible Cause	Solution
Radio does not power on.	No power, blown fuse, incorrect wiring.	Check power cable connections, verify power source, replace fuse if necessary.
No audio from speaker.	Volume too low, squelch too high, external speaker disconnected.	Increase volume, adjust squelch level, check external speaker connection.
Cannot transmit or low power output.	Antenna not connected, high SWR, incorrect frequency/mode.	Connect antenna, check SWR, verify frequency and operating mode.
Display is dim or flickering.	Backlight setting, power issue.	Adjust backlight brightness in menu, check power supply stability.
Microphone not responding.	Microphone not fully plugged in, damaged cable.	Ensure microphone is securely connected. Try another microphone if available.

9. SPECIFICATIONS

Detailed technical specifications for the TYT TH-7900 Dual Band Mobile Transceiver.

Feature	Specification
Model Number	TH-7900
Frequency Range	VHF: 144-148MHz, UHF: 420-450MHz
Output Power	VHF: 50/20/10/5W, UHF: 35/20/10/5W
Number of Channels	800 (809 listed in specs)
CTCSS Tones	50
DCS Codes	104
Dimensions (H x W x D)	1.63 x 5.51 x 6.61 inches (4.14 x 14.00 x 16.79 cm)

Feature	Specification
Item Weight	2.2 pounds (1 kg)
FCC ID	PODTH-9800
Special Features	Dual Band, Removable Front Panel, Cross-Band Repeater, Full Duplex, DTMF/2-Tone/5-Tone, Squelch Setting
Country of Origin	China

TH-7900 VHF and UHF Dual Band Mobile Transceiver

E-commerce exclusive supply

USA Version: 144-148MHz, 420-450MHz (FCC Compliant)

☆☆☆FCC ID: PODTH-9800☆☆☆

NOTE: Please operate the radio in the range allowed by FCC rules.



Figure 9.1: Official branding and FCC ID for the TYT TH-7900.

10. WARRANTY AND SUPPORT

The TYT TH-7900 Mobile Transceiver comes with a **90-day warranty** from the date of purchase. This warranty covers manufacturing defects under normal use. Please retain your proof of purchase for warranty claims. For technical support, troubleshooting assistance, or warranty inquiries, please contact your authorized dealer or the manufacturer's customer service. Refer to the contact information provided with your purchase documentation.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question