HotRC CT-10B

HotRC CT-10B 10 Channel Radio Transmitter and F-10A 2.4GHz 10CH PWM Receiver User Manual

Model: CT-10B Transmitter, F-10A Receiver

1. Introduction

This manual provides detailed instructions for the setup, operation, and maintenance of your HotRC CT-10B 10 Channel Radio Transmitter and F-10A 2.4GHz 10CH PWM Receiver. Please read this manual thoroughly before using the product to ensure proper function and safety.
The HotRC CT-10B system is designed for controlling various remote-controlled models, including cars, boats, and tanks, offering a reliable 2.4GHz communication link with advanced features.

2. Package Contents

Verify that all items listed below are included in your package:

- 1x CT-10B 10CH Transmitter
- 1x F-10A Receiver
- 1x Charging Cable
- 1x Voltage Cable (for feedback)
- 1x Instruction Manual (this document)

Image: Standard package contents including the transmitter, receiver, cables, and manual.

3. Product Overview

The HotRC CT-10B transmitter features a compact design with a 2.4-inch color screen for real-time parameter display and adjustment. The F-10A receiver provides 10 channels and supports feedback functions.

Image: The HotRC CT-10B 10-channel radio transmitter shown alongside the F-10A receiver.

3.1 Transmitter Components

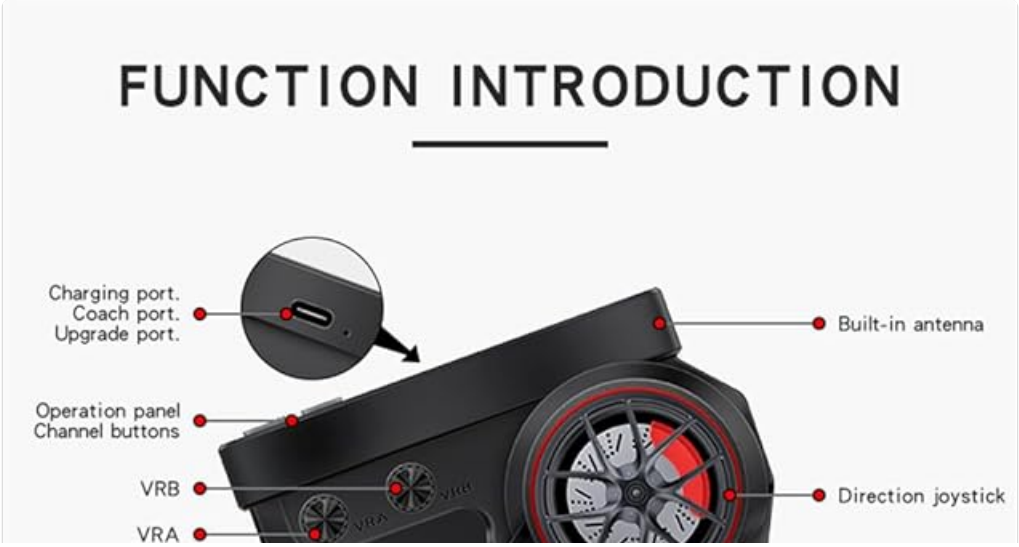

Image: Detailed diagram illustrating the various components and functions of the CT-10B transmitter, including the charging port, built-in antenna, VRB, VRA, SWB, SWA switches, direction joystick, one-handed control, throttle trigger, and 18650 battery compartment.

Key components include:

- **Charging Port:** USB port for charging the internal 18650 battery.
- **Built-in Antenna:** Integrated 2.4GHz antenna for signal transmission.
- **VRB** / **VRA:** Rotary potentiometers for auxiliary channel control.
- **SWB** / **SWA:** Two-position switches for auxiliary channel control.
- **Direction Joystick:** For steering control.
- **Throttle Trigger:** For throttle control (forward/reverse).
- **18650 Battery Compartment:** Houses the single 18650 battery (user-supplied).
- **Operation Panel** / **Channel Buttons (A, B, C, D):**Programmable buttons for various functions.
- **Scroll Wheel Button:** Used for menu navigation and selection.
- **Power Button:** Long press to turn on/off, short press for return/exit.

3.2 Display Interface

The 2.4-inch color screen provides real-time information and access to settings. Key indicators and functions on the display include:

- **Model Number:** Current model profile.
- **RX V (Receiver Voltage):** Real-time receiver battery voltage feedback.
- **RSSI (Received Signal Strength Indicator):** Indicates signal strength.
- **TX V (Transmitter Voltage):** Real-time transmitter battery voltage.
- **Signal Strength:** Visual indicator of signal quality.
- **Remote Control Voltage:** Transmitter battery voltage.
- **Channels (CH1-CH10):** Displays current values and settings for each channel.
- **Timer:** For timing functions.
- **Coach Mode:** Indicates if trainer mode is active.
- **Constant Speed Function:** Indicates if cruise control is active.
- **Locking Function:** Status of channel locking.
- **Feedback Voltage:** Receiver voltage feedback.
- **Direction Travel:** Steering travel adjustment.
- **Throttle Travel:** Throttle travel adjustment.
- **Gyroscope:** Gyro stabilization settings (if applicable with compatible receiver).

4. Specifications

Parameter	Value	Parameter	Value
Model	CT-10B (Transmitter)	Standard Receiver	F-10A
Modulation Mode	GFSK	Spread Spectrum Mode	FHSS
Transmit Power	160MA-300MA	Frequency Range	2.4GHZ ISM
Transmitter Channels	10	Receiver Channels	10
Remote Control Distance (Ground)	Approx. 300m	Remote Control Distance (Air)	Approx. 800m
Response Speed (PWM)	≤20MS	Receiver Sensitivity	-96 dbm

Parameter	Value	Parameter	Value
Transmitter Power Supply	DC 3.7V-9V (18650 Battery*1, not included)	Receiver Power Supply	DC 3.5V-9V
Weight (Transmitter)	190g (6.7 ounces)	Product Dimensions	7.08 x 4.4 x 3.1 inches
Applicable Models	Model cars, ships, tanks, etc.	Manufacturer	Xiangtat

Note: Remote control distance is for reference only, and actual use may vary depending on different environments.

5. Setup

5.1 Transmitter Battery Installation

1. Locate the battery compartment on the handle of the CT-10B transmitter.
2. Open the battery compartment cover.
3. Insert one 18650 battery (not included) into the compartment, ensuring correct polarity.
4. Close the battery compartment cover securely.

The transmitter supports charging via the USB port using the provided charging cable. Connect the charging cable to the transmitter's charging port and a suitable USB power source.

5.2 Receiver Connection

Connect the F-10A receiver to your model's electronic speed controller (ESC), servos, and other components according to your model's specific wiring diagram. Ensure correct polarity for all connections.

- Connect the ESC to Channel 2 (throttle).
- Connect the steering servo to Channel 1.
- Connect other servos or accessories to Channels 3-10 as required.
- If using the feedback function, connect the provided voltage cable to the receiver's feedback port and to the main battery of your model.

5.3 Binding the Transmitter and Receiver

The CT-10B transmitter and F-10A receiver are typically pre-bound from the factory. If re-binding is necessary or if you are using a new receiver, follow these steps:

1. Ensure both the transmitter and receiver are powered off.
2. Connect a bind plug (not included, usually comes with the receiver or ESC) to the BIND/VCC port on the F-10A receiver.
3. Power on the receiver. The receiver's LED should flash rapidly, indicating it is in binding mode.
4. While holding down the BIND button on the CT-10B transmitter (refer to the diagram for location, usually near the power button or on the side), power on the transmitter.
5. The transmitter's screen should display a binding progress or confirmation message. The receiver's LED should turn solid, indicating successful binding.
6. Power off both the transmitter and receiver.
7. Remove the bind plug from the receiver.
8. Power on the transmitter first, then the receiver. Verify that the controls respond correctly.

6. Operation

6.1 Power On/Off

- **To Power On:** Long press the Power button on the transmitter until the screen illuminates.
- **To Power Off:** Long press the Power button until the screen shuts down.

6.2 Basic Controls

- **Steering:** Use the direction joystick (steering wheel) to control the left/right movement of your model.
- **Throttle:** Use the throttle trigger to control forward and reverse movement. Pull the trigger for forward, push for reverse/brake.
- **Auxiliary Channels:** Use the VRB, VRA potentiometers and SWB, SWA switches to control auxiliary functions on your model, such as lights, winches, or gear shifts, depending on your model's setup.

6.3 Menu Navigation and Settings

The CT-10B features a user-friendly interface for adjusting parameters. Use the scroll wheel button and the A, B, C, D buttons to navigate and modify settings.

- **Scroll Wheel Button:** Rotate to scroll through menu options. Press to select an option or confirm a setting.
- **Power Button (Short Press):** Acts as a "Return" or "Exit" button in menus.
- **A, B, C, D Buttons:** These are programmable buttons. Their functions may vary depending on the selected menu or model profile. Refer to the on-screen prompts for their current assignments.

The UI allows for real-time adjustment of parameters such as channel endpoints, sub-trim, reverse, and mixing functions. The screen displays real-time feedback like receiver voltage and signal strength.

6.4 Advanced Functions

- **Trainer Function:** The CT-10B supports a trainer mode, allowing two transmitters to control one model. This is ideal for teaching new users. A data connection line (not included) is required to link two CT-10B transmitters.
- **Speed Cruise Function:** Enables a constant speed setting for your model, reducing the need for continuous throttle input. Activate and adjust via the menu.
- **Fail-Safe Function:** Configures the receiver to move servos to a pre-set position (e.g., throttle to neutral, steering straight) in case of signal loss, preventing runaway models. Set fail-safe positions through the transmitter menu.
- **Receiver Feedback Function:** The F-10A receiver can transmit battery voltage and signal strength back to the transmitter, displayed on the screen. The feedback alarm voltage can be set in the transmitter's menu.
- **Gyro Stabilization:** For models requiring gyro stabilization, pair the CT-10B with a compatible receiver like the F-08AT (sold separately) for enhanced handling.

7. Maintenance

- **Cleaning:** Use a soft, dry cloth to clean the transmitter and receiver. Avoid using solvents or abrasive cleaners.
- **Storage:** Store the product in a cool, dry place away from direct sunlight and extreme temperatures. Remove the 18650 battery from the transmitter if storing for extended periods.
- **Battery Care:** Ensure the 18650 battery is charged regularly, even during storage, to maintain its

lifespan. Do not overcharge or deep discharge the battery.

- **Firmware Updates:** Check the manufacturer's website for any available firmware updates for improved performance or new features.

8. Troubleshooting

- **No Power to Transmitter:**
  - Ensure the 18650 battery is correctly installed with proper polarity.
  - Check if the battery is charged. Connect the charging cable and attempt to power on.
- **No Control Response from Model:**
  - Verify that the transmitter and receiver are properly bound. Re-bind if necessary (refer to Section 5.3).
  - Check all connections between the receiver, ESC, and servos.
  - Ensure both the transmitter and receiver are powered on.
  - Check the receiver's LED indicator; it should be solid after binding.
  - Confirm the model's battery is charged and connected.
- **Short Control Range or Signal Interference:**
  - Ensure the transmitter antenna is not obstructed.
  - Avoid operating in areas with strong electromagnetic interference.
  - Check for physical obstructions between the transmitter and receiver.
  - Ensure the receiver antenna is properly positioned and not damaged.
- **Incorrect Channel Response:**
  - Check channel assignments and reverse settings in the transmitter menu.
  - Ensure servos are connected to the correct receiver ports.

If you encounter issues not covered here, please contact customer support.

9. Safety Information

To ensure safe operation and prevent damage to the product or injury, please observe the following safety guidelines:

- Always operate your RC model in a safe and open area, away from people, pets, and obstacles.
- Never operate your RC model near public roads, power lines, or water bodies.
- Ensure the transmitter is powered on before powering on the receiver in your model. Power off the receiver before powering off the transmitter.
- Regularly inspect all components for damage. Do not use damaged equipment.
- Keep batteries away from heat sources and direct sunlight. Do not puncture or disassemble batteries.
- Adult supervision is recommended for users under 16 years of age.
- Do not modify the product in any way not specified in this manual.

10. Customer Support

For any questions, technical assistance, or support regarding your HotRC CT-10B system, please contact the manufacturer or your retailer. Efficient and professional after-sales service is available to ensure a satisfactory experience.
Manufacturer: Xiangtat