## Heng Long TK-7.1 Multi-Function Main Board

# Heng Long TK-7.1 Multi-Function Main Board User Manual

Model: TK-7.1 | Brand: Heng Long

## 1. Introduction

This manual provides comprehensive instructions for the installation, operation, and maintenance of the Heng Long TK-7.1 Multi-Function Main Board, designed for 1/16 scale RC tanks. Adhering to these guidelines will ensure optimal performance and longevity of your product.

### 1.1 Product Overview




*Image 1.1: The Heng Long TK-7.1 Multi-Function Main Board, showing its various input/output ports and connected power/motor wires.*

The Heng Long TK-7.1 Multi-Function Main Board is an advanced control unit for 1/16 scale RC tanks, offering enhanced functionality and realistic sound effects. It is compatible with 7.0 and 7.1 radio controllers and includes a dedicated sound

module for authentic tank audio.

### 1.2 What's in the Box

- 1 x Heng Long TK-7.1 Multi-Function Main Board
- 1 x Tank Sound Module (compatible with German Leopard2A6 and US Abrams M1A2 tank sounds)

## 2. Specifications

| Feature | Detail |
|---|---|
| Model | TK-7.1 Multi-Function Main Board |
| Input Voltage | DC 7.4-12.6V |
| Current Rating | 180A |
| Compatibility | 1/16 RC Tanks (e.g., German Leopard2A6, US Abrams M1A2) |
| Product Dimensions (Package) | 10.4 x 9.2 x 5.6 inches |
| Item Weight (Package) | 1.32 pounds |
| Manufacturer | Heng Long (distributed by wheelfun) |

## 3. Setup and Installation

Proper installation of the TK-7.1 main board is crucial for optimal performance and safety. Always ensure the RC tank's power is disconnected before beginning installation.

### 3.1 Component Identification



*Image 3.1: Detailed view of the TK-7.1 board, highlighting input/output ports (CN1-CN16, M1, M2, LED, K1, K2) and their labels.*

Familiarize yourself with the various ports and connectors on the main board:

- **IN PUT (DC 7.4-12.6V):** Main power input for the board.
- **M1, M2:** Motor output connections for drive motors.
- **CN1, CN2:** Typically for track motor connections.
- **CN3, CN4, CN5, CN6:** Auxiliary control channels (e.g., turret rotation, gun elevation).
- **CN9:** Sound module connection.
- **CN10, CN11, CN12, CN13, CN14, CN15, CN16:** Various sensor or accessory connections (e.g., LED lights, smoke unit).
- **LED9, LED10:** Indicator lights for status.
- **K1, K2:** Potentially for external switches or programming.

### 3.2 Installation Steps

1. **Disconnect Power:** Ensure the RC tank's battery is completely disconnected before handling any components.
2. **Remove Old Board (if applicable):** Carefully disconnect all wires from the existing main board and remove it from the tank chassis. Document wiring if necessary.
3. **Mount New Board:** Securely mount the TK-7.1 main board in the designated location within the tank chassis. Ensure it is stable and protected from vibrations.
4. **Connect Motors:** Connect the tank's drive motors to the M1 and M2 outputs. Observe polarity (+/-) as indicated on the board.
5. **Connect Sound Module:** Plug the included tank sound module into the CN9 port.
6. **Connect Auxiliary Components:** Connect any other components such as turret motors, gun elevation motors, lights, or smoke units to their respective CN ports (CN3-CN6, CN10-CN16) as per your tank's wiring diagram.
7. **Connect Power:** Connect the tank's battery to the "IN PUT" port. Double-check polarity before connecting to prevent damage.
8. **Radio Controller Pairing:** Refer to your radio controller's manual for pairing instructions with the new main board. The TK-7.1 is compatible with 7.0 and 7.1 radio controllers.

**Caution: Incorrect wiring can damage the main board or other components. If unsure, consult a qualified technician or refer to detailed wiring diagrams specific to your RC tank model.**

## 4. Operation

Once the TK-7.1 main board is installed and connected, follow these steps to operate your RC tank:

1. **Power On:** Connect the tank's battery and turn on the main power switch (if present on your tank). The board's indicator LEDs (LED9, LED10) should illuminate.
2. **Activate Radio Controller:** Turn on your 7.0 or 7.1 compatible radio controller. Ensure it is properly bound to the tank.
3. **Initial Checks:**
    - Verify motor response by gently moving the control sticks.
    - Check sound module functionality.
    - Test auxiliary functions (turret, gun, lights, etc.).
4. **Driving:** Use the radio controller's sticks to control the tank's movement (forward, backward, turning).

5. **Sound Functions:** The integrated sound module provides realistic tank sounds. Specific sound effects may be triggered by certain control inputs or switches on your radio controller.
6. **Auxiliary Functions:** Operate additional features like turret rotation, gun elevation, and lights using the corresponding channels on your radio controller.

**Note: Always operate your RC tank in a safe environment, away from obstacles, people, and water. Refer to your RC tank's specific operating manual for detailed driving techniques.**

## 5. Maintenance

Regular maintenance helps prolong the life and ensure the reliable performance of your Heng Long TK-7.1 Multi-Function Main Board.

- **Keep Clean:** Periodically inspect the board for dust, dirt, or debris. Use a soft brush or compressed air to gently clean the surface. Avoid using liquids or harsh chemicals.
- **Keep Dry:** The main board is not waterproof. Always protect it from moisture and humidity. If it gets wet, disconnect power immediately and allow it to dry completely before reconnecting.
- **Inspect Connections:** Regularly check all wire connections to ensure they are secure and free from corrosion or damage. Loose connections can lead to intermittent operation or component failure.
- **Avoid Static Discharge:** When handling the board, especially during installation or inspection, take precautions to avoid static electricity, which can damage sensitive electronic components.
- **Storage:** When not in use for extended periods, store the RC tank and its components in a cool, dry place, away from direct sunlight and extreme temperatures.

## 6. Troubleshooting

This section addresses common issues you might encounter with your TK-7.1 Multi-Function Main Board. If the problem persists after following these steps, please contact customer support.

### 6.1 Common Issues and Solutions

**No Power / Board Not Responding:**

- Check battery charge level.
- Ensure main power input (DC 7.4-12.6V) is correctly connected and polarity is observed.
- Verify the tank's main power switch (if applicable) is in the ON position.
- Inspect all power wires for breaks or loose connections.

**Motors Not Responding:**

- Confirm radio controller is powered on and properly bound to the tank.
- Check motor connections (M1, M2, CN1, CN2) for secure fit and correct polarity.
- Ensure motors are not jammed or obstructed.

**No Sound from Sound Module:**

- Verify the sound module is securely plugged into CN9.
- Check the sound module itself for any visible damage.
- Ensure volume settings on your radio controller or tank are not muted or too low.

**Damage Out of Box:**

If the item is damaged upon arrival, please contact customer support immediately. The manufacturer offers free

replacement parts for damaged items.

## 7. Warranty and Support

Heng Long and wheelfun are committed to providing high-quality products and excellent customer service.

### 7.1 Customer Support

For any queries, technical assistance, or if you are unsure about the correct item or installation, please feel free to ask before purchase or contact our support team after purchase.

We have a professional after-sales team and a technical maintenance team. Technicians can provide guidance in English through video or text for repairs.

You can reach out to the seller "Wheelfun RC Hobby" directly via their Amazon store page for assistance. Visit the Wheelfun Store on Amazon.

### 7.2 Returns and Replacements

If the item is damaged out of the box, a free replacement part can be resent. Please refer to Amazon's return policy for general returns, which typically allows for returns within 30 days.

### 7.3 Protection Plans

Extended protection plans may be available for purchase separately to cover your product beyond the standard warranty period. Please check the product listing on Amazon for details on 2-Year or 3-Year Protection Plans.

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