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- › [FrSky](#) /
- › [FrSky Tandem X18R Radio Controller User Manual](#)

FrSky X18R

FrSky Tandem X18R Radio Controller User Manual

Model: X18R

INTRODUCTION

This manual provides comprehensive instructions for the setup, operation, and maintenance of your FrSky Tandem X18R Radio Controller. The X18R is a 24-channel radio system featuring a built-in TD-ISRM RS dual-band internal RF module, an 800x480 outdoor high brightness touchscreen, and MC18 high-precision Hall-sensor gimbals. Please read this manual thoroughly before using your device to ensure safe and optimal performance.



Figure 1: Front view of the FrSky Tandem X18R Radio Controller.

SAFETY PRECAUTIONS

- Always ensure the transmitter battery is fully charged before operation.
- Perform a range check before each flight session.
- Operate your radio controller in open areas, away from obstacles, people, and power lines.
- Do not operate the radio controller in adverse weather conditions (rain, strong winds).
- Keep the device away from water and moisture.
- Only use genuine FrSky replacement parts and accessories.

PACKAGE CONTENTS

Verify that all items are present in your package:

- FrSky Tandem X18R Radio Controller
- USB-C Cable
- Neck Strap (may vary by region)

- Quick Start Guide

PRODUCT OVERVIEW

The FrSky Tandem X18R is designed for precision control and advanced functionality. Key components include:

- **800x480 Touchscreen Display:** High-resolution screen for clear visibility and intuitive menu navigation.
- **MC18 Hall-Sensor Gimbals:** High-precision gimbals with 10 ball-bearings for smooth and accurate control.
- **Dual-Band RF Module (TD-ISRM RS):** Supports multiple RF modes for low-latency and long-range communication.
- **External LoRa Antenna Connectors:** For 900M/2.4G frequencies, enhancing signal reliability.
- **Customizable Buttons and Switches:** 2 knobs and 6 front custom buttons, along with various switches (SA, SB, SC, SD, SE, SF, SG, SH).
- **Connectivity:** USB Type-C for data and charging, Micro SD card slot, Training Port, Earphone Port, Smart Port.

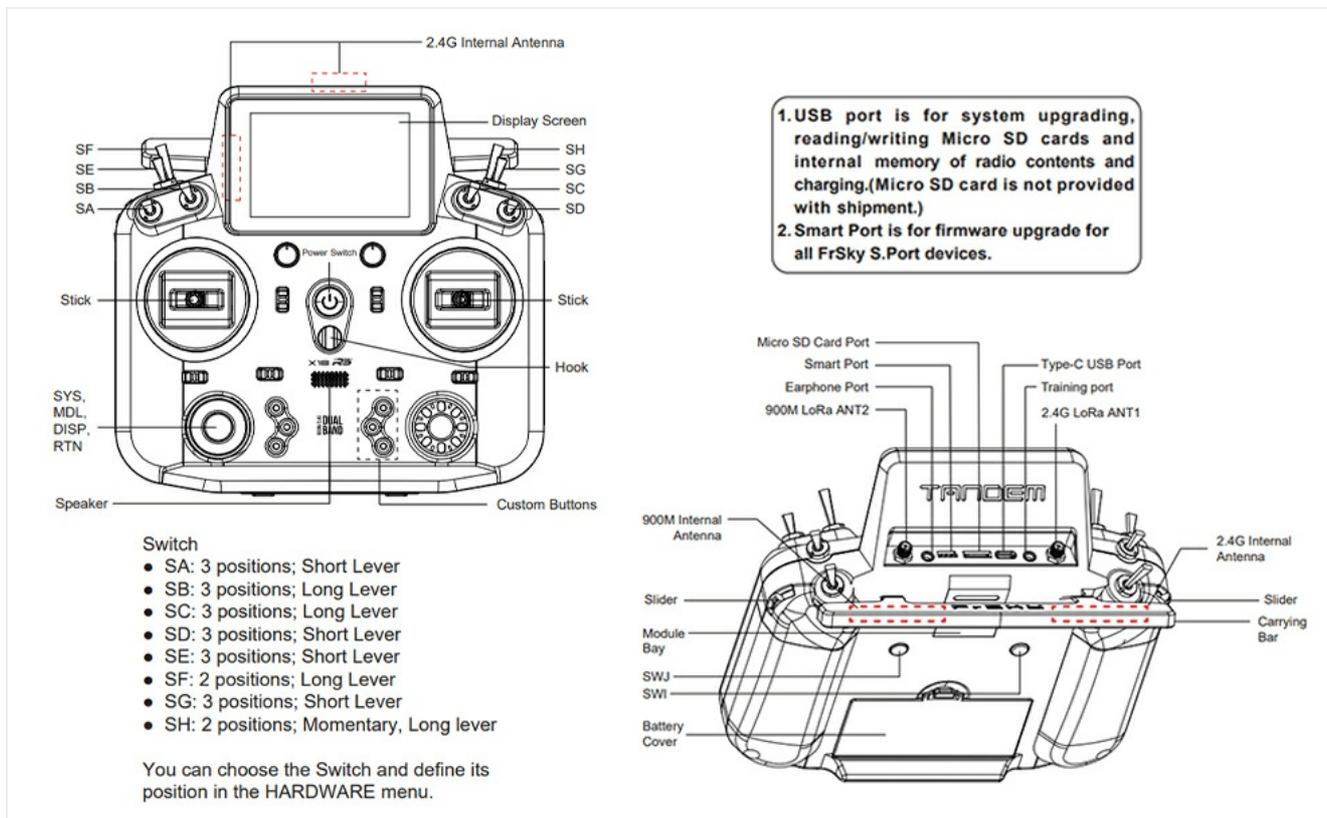


Figure 2: Detailed diagram illustrating the front controls and rear ports of the X18R.



Figure 3: Rear view of the FrSky Tandem X18R, showing the module bay and battery compartment.

SETUP

1. Battery Installation

The X18R uses an internal battery. To access the battery compartment:

1. Locate the battery cover on the back of the transmitter (refer to Figure 3).
2. Slide the latch to open the cover.
3. Carefully connect the battery to the designated connector inside the compartment.
4. Place the battery securely and close the cover.



Figure 4: View of the battery compartment with the cover removed.



Figure 5: Example of the internal battery for the X18R.

2. Charging the Battery

Connect the supplied USB Type-C cable to the USB-C port on the transmitter and to a suitable USB power adapter (not included). The charging indicator will show the charging status.

3. Powering On/Off

Press and hold the power button located on the front panel to turn the transmitter on or off. The touchscreen will illuminate upon power-on.

4. External Antenna Installation (Optional)

For enhanced 900M/2.4G LoRa mode performance, external antennas can be connected:

1. Locate the external LoRa antenna connectors on the top rear of the transmitter.
2. Carefully screw the external antennas onto the connectors.



Figure 6: Close-up view of the 900M/2.4G external antenna interfaces.

OPERATING INSTRUCTIONS

1. Touchscreen Navigation

The 800x480 touchscreen allows for intuitive interaction with the operating system. Tap icons to select, swipe to navigate menus, and use the physical buttons (SYS, MDL, DISP, RTN) for quick access to common functions.

2. Gimbal Control

The MC18 Hall-sensor gimbals provide precise control. These gimbals feature 10 ball-bearings for smooth movement. The vertical travel limit switch is adjustable from 45° to 60° range.



Figure 7: Illustration of the MC18 Hall-Effect Joystick with adjustable vertical travel.

3. Switches and Knobs

The X18R is equipped with various switches and two rotary knobs (S1, S2) for auxiliary functions. The switches include:

- **SA:** 3 positions; Short Lever
- **SB:** 3 positions; Long Lever
- **SC:** 3 positions; Long Lever
- **SD:** 3 positions; Short Lever
- **SE:** 3 positions; Short Lever
- **SF:** 2 positions; Long Lever
- **SG:** 3 positions; Short Lever
- **SH:** 2 positions; Momentary, Long Lever

You can customize the function and position of these switches within the HARDWARE menu of the radio's operating system.

4. Internal RF Module (TD-ISRM RS)

The built-in TD-ISRM RS module supports multiple RF modes, providing super low-latency and long-range control. Ensure your receiver is compatible with the selected RF mode. Refer to the receiver's manual for binding procedures.

5. External Module Bay

The X18R includes an external module bay on the rear, allowing for the use of additional RF modules or other compatible accessories.



Figure 8: Close-up of the external module bay.

6. Connectivity Ports

The bottom of the transmitter features several ports:

- **Micro SD Card Port:** For expanding storage and firmware updates. (Micro SD card not provided)
- **Type-C USB Port:** For data transmission, system upgrading, reading/writing Micro SD card contents, internal memory access, and charging.
- **Training Port:** For connecting to another transmitter for training purposes.
- **Earphone Port:** For audio output, including voice speech outputs.
- **Smart Port:** For firmware upgrades of FrSky S.Port devices.



Figure 9: Illustration of the various connectivity ports.

MAINTENANCE

1. Cleaning

Wipe the transmitter with a soft, dry cloth. Do not use solvents or abrasive cleaners. For the touchscreen, use a

screen-specific cleaning solution and a microfiber cloth.

2. Firmware Updates

Regularly check the official FrSky website for the latest firmware updates. Firmware updates can be performed via the USB Type-C port or by loading files onto a Micro SD card and updating through the system menu.

3. Battery Care

To prolong battery life, avoid fully discharging the battery. Store the transmitter in a cool, dry place when not in use for extended periods. Do not expose the battery to extreme temperatures.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Transmitter does not power on.	Low or discharged battery; incorrect battery installation.	Charge the battery using the USB-C cable. Verify battery is correctly connected.
No control response from model.	Receiver not bound; incorrect RF mode; out of range.	Ensure receiver is properly bound to the transmitter. Check RF mode settings. Perform a range check.
Touchscreen unresponsive.	Temporary software glitch; screen protector interference.	Restart the transmitter. Ensure screen is clean and free of debris. If a screen protector is used, ensure it is properly applied.
Voice alerts or haptic feedback not working.	Settings disabled; volume too low.	Check system settings for voice and haptic feedback options. Adjust volume levels.

For further assistance, please visit the official FrSky support website or contact their customer service.

SPECIFICATIONS

- **Model:** Tandem X18R
- **Channels:** 24 Channels
- **Operating Voltage Range:** 6.5-8.4V (2S Li-Po)
- **Operating Current:** 240mA@7.4V (typ)
- **Display:** 800x480 Color Touchscreen
- **Internal RF Module:** TD-ISRM RS Dual-Band (900M/2.4G)
- **Gimbals:** MC18 All CNC High-Precision Hall-Sensor with 10 Ball-Bearings
- **Flash Storage:** 512MB
- **Sensors:** 6-axis Gyroscope
- **Alerts:** Haptic Vibration, Voice Speech Outputs
- **Connectivity:** USB Type-C, Micro SD Card Slot, Training Port, Earphone Port, Smart Port, External LoRa Antenna Connectors (900M/2.4G)
- **Dimensions:** Approximately 3 x 3 x 3 inches (Note: This dimension is typically for packaging; actual product dimensions may vary.)

WARRANTY AND SUPPORT

FrSky products are typically covered by a limited warranty against manufacturing defects. Please refer to the warranty card included with your product or visit the official FrSky website for detailed warranty terms and conditions. For technical support, firmware downloads, and FAQs, please visit the FrSky support page:
Official FrSky Website: www.frsky-rc.com