

T14 ELRS Radio User Manual



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Product Information

The T14 radio system is a simple yet versatile product designed specifically for FPV (First Person View) applications. It offers a wide range of features and functions to enhance your FPV experience.

Specifications

- Multi-protocol firmware
- Compatible with various FPV systems
- Easy to use and configure
- High-quality construction for durability
- Long battery life
- **Range:** up to 1.4 kilometres

Product Usage Instructions

Preparing the T14 Radio System

Before using the T14 radio system, ensure that you have completed the following steps:

1. Charge the battery fully using the provided charger.
2. Attach the antenna securely to the radio system.
3. Power on the radio system by pressing the power button.

Binding with FPV Systems

To bind the T14 radio system with your FPV system, follow these steps:

1. Put your FPV system into binding mode according to its user manual.

2. Press and hold the bind button on the T14 radio system until the LED indicator starts flashing rapidly.
3. The T14 radio system will automatically search and connect to your FPV system.
4. Once the binding is successful, the LED indicator will turn solid.

Configuring the T14 Radio System

To configure the T14 radio system, use the following steps:

1. Access the menu by pressing the menu button on the radiosystem.
2. Navigate through the menu using the navigation buttons.
3. Make adjustments to settings such as channel selection, sensitivity, and trim.
4. Save your changes and exit the menu.

Operating the T14 Radio System

Once the T14 radio system is prepared, bound, and configured, you can start using it for your FPV applications:

1. Hold the radio system securely and ensure a comfortable grip.
2. Use the control sticks to maneuver your FPV system.
3. Monitor the feedback from your FPV system on the radio system's display.
4. Make adjustments to controls and settings as needed during operation.

Introduction

Thank you for purchasing the Jumper T14 radio system. Please read this instruction manual carefully before use to ensure correct and safe use. Due to version upgrades, there have been changes. The information contained in this manual is subject to change without notice.

Many radio control models are equipped with powerful motors and sharp spinning propellers. Please exercise caution when working on models. Ensure power is disconnected from your models and remove propellers when performing maintenance.

Do not operate the T14 radio system under the following conditions.

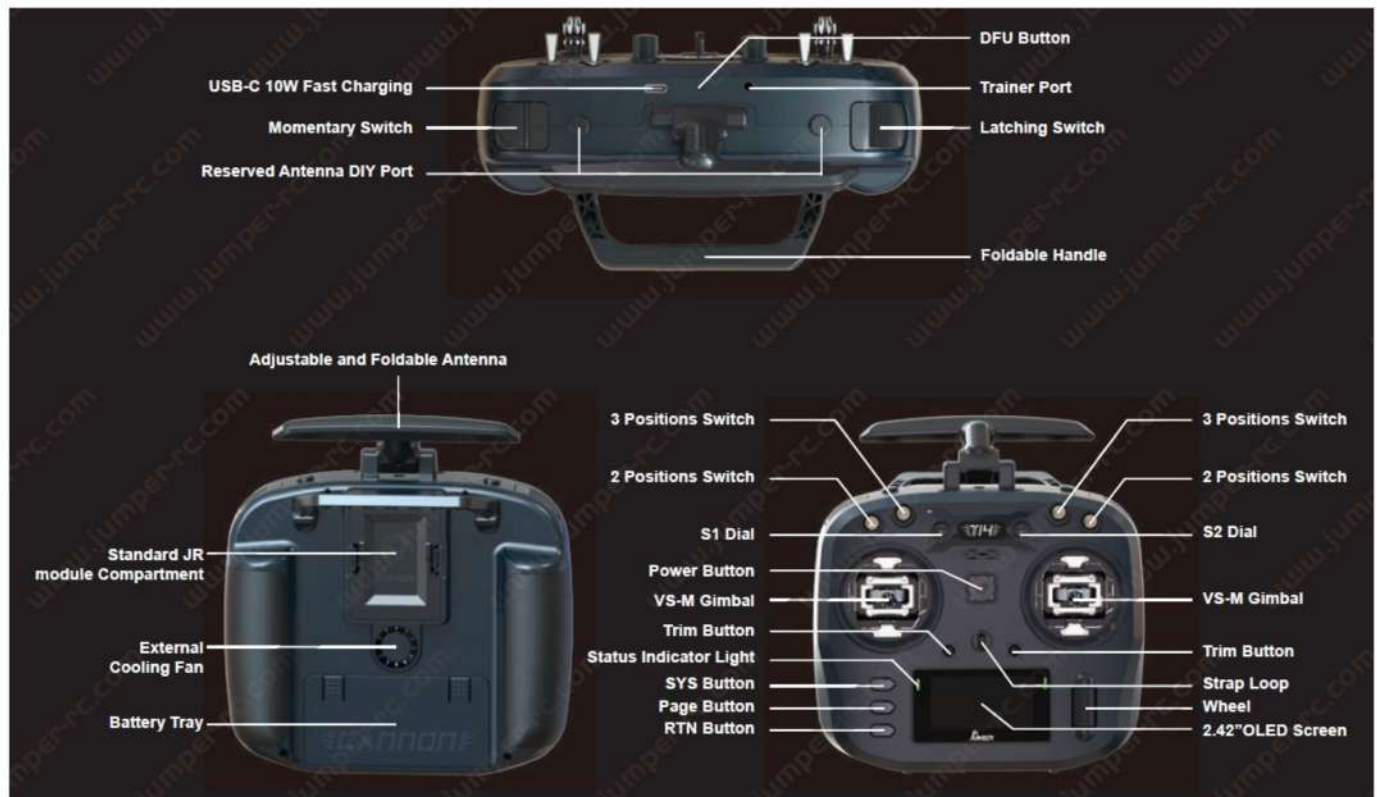
- During bad weather or high wind conditions such as rain, hail, snow, storms, or electromagnetic events.
- During any conditions of limited visibility.
- In areas where people, property, powerlines, roads, vehicles or animals may be present.
- If you are feeling tired or unwell or under the influence of drugs or alcohol.
- If the radio or model appears to be damaged or not functioning correctly.
- In areas of high 2.4ghz interference or in locations where the use of 2.4ghz radios is prohibited.
- When the battery is too low to function.

EdgeTX is an experimental firmware. No warranty or implied warranty is given as to the quality and reliability of this firmware.

- The RC model can cause serious injury or even death if not handled properly.
- If you choose to use EdgeTX firmware, you will be solely responsible for your model. The author of EdgeTX is not responsible for any injury or damage caused by the use of the EdgeTX firmware. Please use it with caution.

- The EdgeTX firmware can be found here: <https://edge-tx.org>
- ExpressLRS firmware at <https://www.expresslrs.org>
- Multi-protocol firmware at <https://downloads.multi-module.org>

Radio System Overview



Note: To prevent T14 from entering DFU mode during charging and to reduce the probability of firmware loss during charging, T14 is equipped with a separate Boot button. To enter DFU mode, shut down the radio, press and hold the Boot button, and then connect the USB cable.

First Boot:

Long press the power button. Before entering the main interface, the system will check the position of the throttle stick and switch and other startup conditions. If the startup conditions are not met, there will be a corresponding error prompt. The user needs to clear or press any key to Skip.

- **Eprom Warning:**

Bad EEprom data. Press any key to let the radio automatically format and store to create new remote control data files.

- **Switch Warning:**

This is a warning that a switch on the radio -control is not in the default position. (The default setting is that all switch directions are up)

- **Throttle Warning:**

This is a warning that the throttle is not at the lowest position when the radio is turned on. You can set the throttle stick to the lowest position or press any key to skip. You can also turn off the throttle state option in the MODEL SETUP menu.



- **Failsafe Not Set Warning**

This is a warning that the radio- control is not set for fail-safe.

- **Alarms Warning**

A similar warning will appear if the sound mode of the remote control settings page is set to mute.

- **SD card Warning**

This warning will appear if the version of the SD card file used does not match the firmware version. (SD card contents also need to be updated at the same time as upgrading firmware)

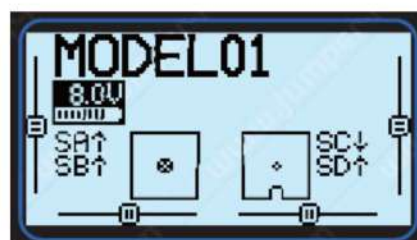
- **RSSI Warning**

This is a warning that the Disable alarms are set.



Main Screen Display:

The default screen is as below, and the user can press the (PAGE) key to display different interfaces.



Model Setup and Selection

In the main interface, press the SYS button to get into the model and select the menu

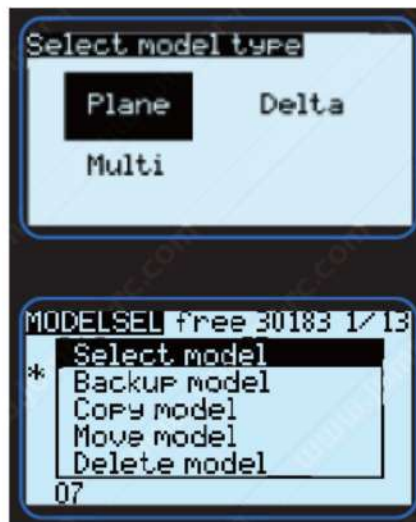
- The Model Select menu allows the user to select the active model and allows the user to create, copy, move or delete a model. By selecting the "Create model" option, the new model guide (the script required by the guide is in the SD card) will be launched. The user will be led through the basic control setup, if you choose not to use it,

just press the RTN Keys to manually set the model.

- To create a model, press and hold the ENT key to show the menu, select Create Model, press ENT.



- With the plane, delta, and multiaxial options, the guide will check with you questions about model configuration. And make basic settings for users. The final step of the guide confirms the channel assignment for the model. If the user prefers manual setup, press RTN to exit the guide.
- Use the menu wheel to select the one you want to make with the model, and long-press the ENT key to select the Select model to switch it.



Binding and Frequency Tuning:

Short press the SYS button, then use the scroll wheel to select 2/13

Internal RF:

- **Mode:** The transmission mode of the internal RF. It must be compatible with the receiver. Otherwise, it will not be able to bind.
- **OFF:** Select the type of protocol
- **Type:** Turn off the internal RF module
- **Subtype:** Select the subtype of the protocol



- **Status:** Display the status of the multi-protocol module. (Normally it shows the firmware version of the multi-protocol module)
- **Ch. Range:** Set up the channel range. (D16 mode transmits data at every 9ms, 8 channels at a time, 16 channels will take 18ms, so removing unnecessary channels can reduce the latency)
- **Receiver:** Normally it is the receiver model. It can be changed manually. If the model is moved or copied, it will not be changed. If the manual setting or copy/move steps cause the receiver with the same number to have 2 or more models, a warning window will pop up. It is up to the user to decide whether it needs to be modified



- **Freqtune:** Frequency tuning. Certain protocols require tuning for optimal performance. In some cases, tuning is required for the protocol to bind. Frequency Tuning is specific to each MULTI-Module and is due to very small variations in the

RF components.

Frequency Tuning is always recommended, but especially when:

- It is difficult to bind to the receiver, or the connection is weak or intermittent
- The control range is very short
- Telemetry data is not received (for telemetry-enabled receivers only)

Completing the Frequency Tuning Procedure ensures that the radio and receiver will have the strongest possible connection.

If you change the frequency tuning value it is best to re-bind the receivers)



- The default value of Freqtune is "0". If the receiver does not find it, we can change the value to either +30 or -30 and try to bind again. If binding is still unsuccessful, continue to try higher and lower values in steps of plus or minus 30 until the bind succeeds.
- Once the receiver is bound you can proceed with Fine Tuning.
- After the binding succeeds, keep the receiver 2 meters away from the radio and don't move any of them.
- Return to the RF Freq. fine-tune option. Lower the value until the radio loses the connection with the receiver. Record the value (TUNE_MIN). Raise the value so that the connection is restored, then continue to raise it until the radio loses the connection with the receiver again.
- Record the value (TUNE_MAX). Calculate the median between the two values $(TUNE_MIN + TUNE_MAX) / 2 = TUNE_MEDIAN$.
- Set RF Freq. fine-tune to the median value.



For example

- Connection is lost at 60 and -60, then the Freqtune number is $(-60+60) / 2=0$
- Connection is lost at 20 and -80, then the Freatune number is $(-80+20)/2=-30$

FAQ

Frequently Asked Questions

- **Q: Where can I find the multi-protocol firmware for the T14 radio system?**
 - A: You can download the multi-protocol firmware from the official website at <https://downloads.multi-module.org>.
 - **Q: What is the range of the T14 radio system?**
 - A: The T14 radio system has a range of up to 1.4 kilometres, providing you with a reliable connection for your FPV applications.
 - **Q: How long does the battery of the T14 radio system last?**
 - A: The battery of the T14 radio system has a long-lasting capacity, allowing for extended usage without frequent recharging. The exact battery life depends on various factors such as usage intensity and settings.
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