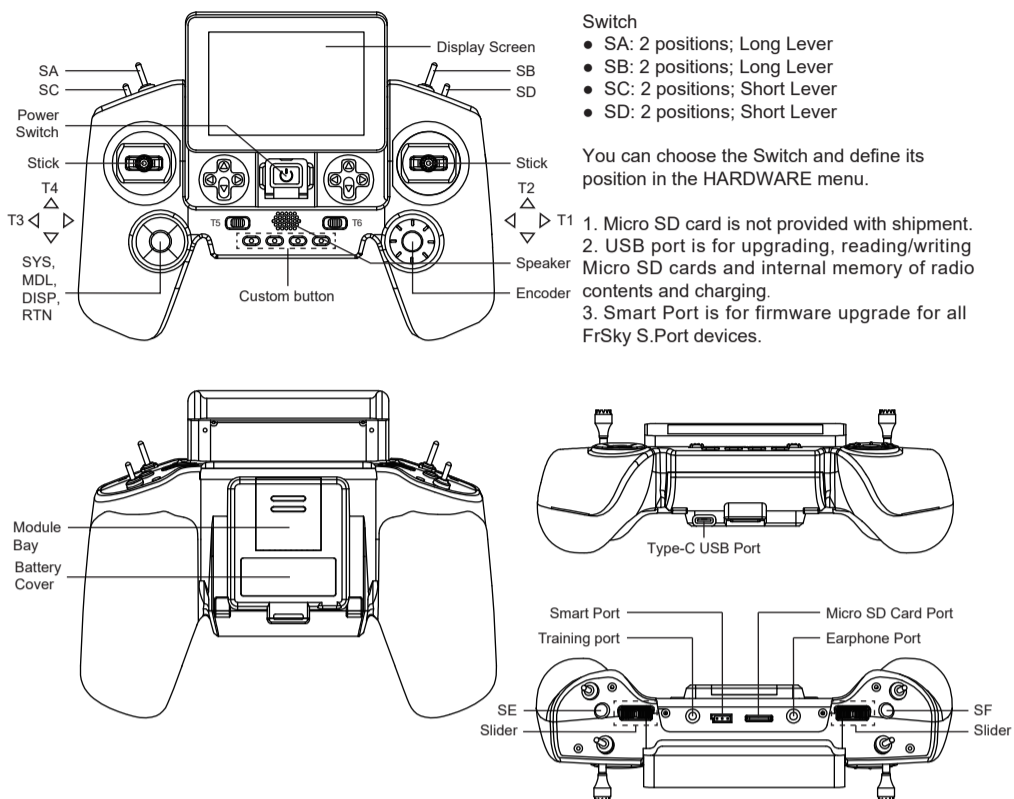


Introduction

The TWIN X Lite transmitter works with built-in dual 2.4GHz simultaneous working RF module and ETHOS radio system with touchable Screen. The transmitter includes easy-to-reach sliders and switches, 4 standard stick trims with additional 2 extra trims added to provide more flexibility with flight attitude adjustments while operating the radio.

Layout



- Switch**
- SA: 2 positions; Long Lever
 - SB: 2 positions; Long Lever
 - SC: 2 positions; Short Lever
 - SD: 2 positions; Short Lever
- You can choose the Switch and define its position in the HARDWARE menu.
1. Micro SD card is not provided with shipment.
 2. USB port is for upgrading, reading/writing Micro SD cards and internal memory of radio contents and charging.
 3. Smart Port is for firmware upgrade for all FrSky S.Port devices.

Specifications

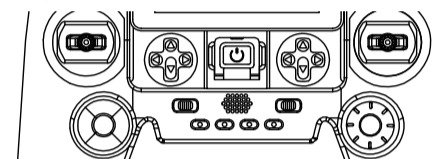
- Dimension: 197*131*68mm (L*W*H)
- Weight: 459g / 392g
- Operating System: ETHOS
- Internal RF Module: TANDEM
- Number of Channels: Up to 24 channels
- Rated Voltage Range: 7.4V
- Operating Temperature: -10°C~60°C (14°F~140°F)
- Charging Current: ≤1A ±200mA
- USB Adaptor Voltage: 5V+0.2V
- USB Adaptor Current: >2.0A
- Backlit touchable LCD resolution: 480*320
- Compatibility: TW & ACCST D16 & ACCESS & TD receivers
- RF parameters: Dual 2.4GHz ISM Power 100mw for 2.4GHz

Features

- A 3.5inch sliding touch screen, angled 5° towards the user for ease of use.
- Rounded hand grips with comfortable design
- 4 standard trims with 2 extra trims
- TWIN 2.4G RF module running on the ETHOS
- Supports 4 RF protocols
 - * ACCST D16
 - * ACCESS
 - * ELRS 2.4G (Compatible)
 - * TW Mode (ETHOS Radio Compatible)
 - Highly resilient RF Module providing dual 2.4 signals working simultaneously together
 - Long range control (>30KM)
 - Low latency (<4ms) supporting full telemetry
 - Compatible with upcoming dual 2.4G TW receivers
- Clear and Intuitive UI Design
- Supports Dual Operation Modes of Radio Display (Touch and Non-Touch)
- Supports Multi-Language Switching
- Hardware/Software Version and Factory Version Detection
- Supports running LUA Scripts

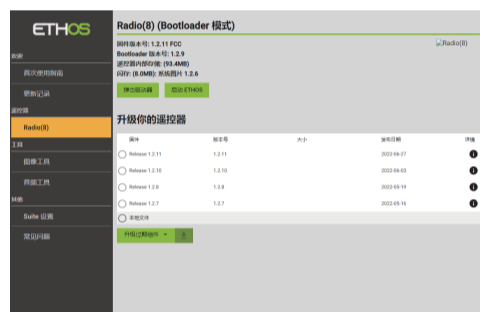
Navigation Controls

The left navigation control does RTN, SYS, MDL, DISP, and Page UP/Down. The right navigation control does scroll and enter. Both navigation controls and touch screen can be used to control the system.



Ethos Suite

With Ethos Suite, you can update the radio bootloader, firmware, SD card, flash, and also convert image format and audio format. Find and download the ETHOS Suite at www.frsky-rc.com.

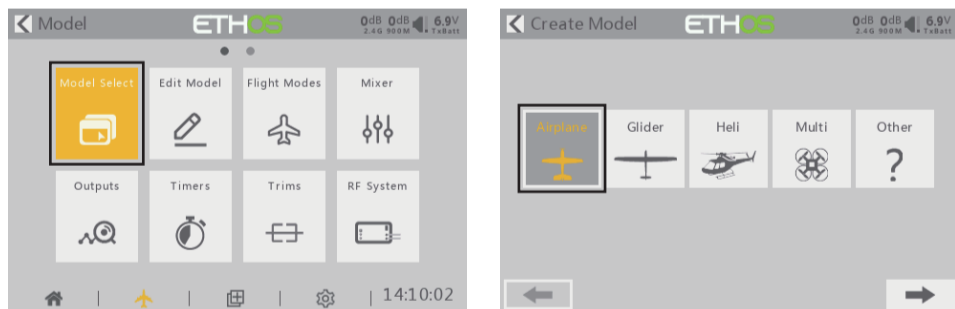


Note: To use the Ethos Suite application with a FrSky radio, the radio bootloader must be version 1.2.0 or newer.

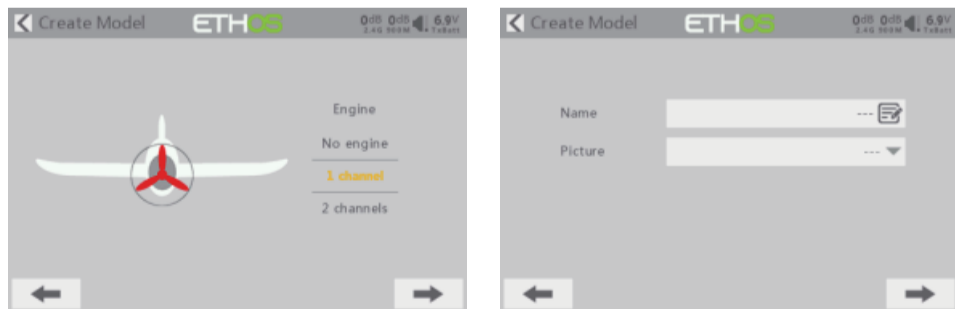
ETHOS Operating System

Create the model

Step 1: First go to System Settings, then click Model Select to select the model type.

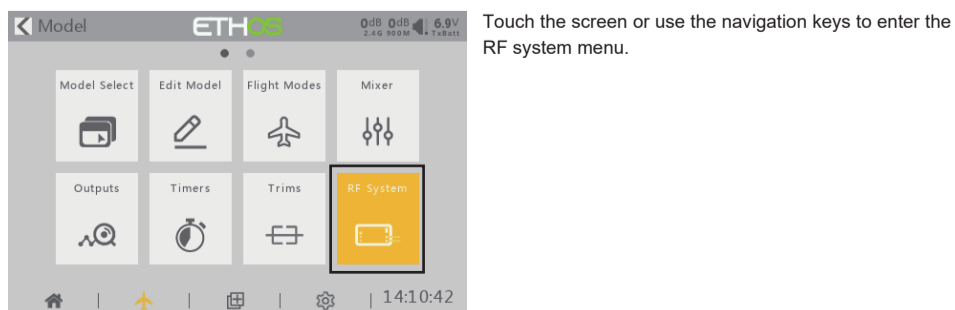


Step 2: Configure the model channel and create the model name.



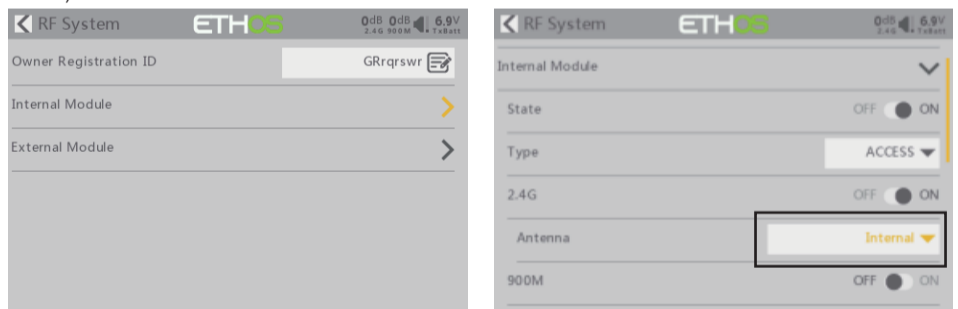
Model Setup Procedure-Internal Module

Step 1:



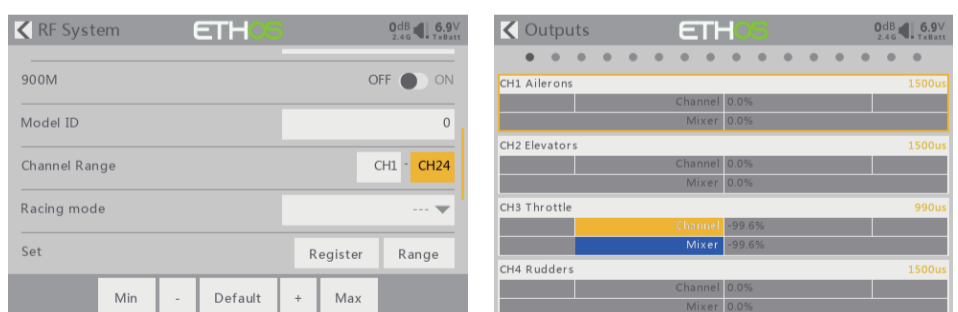
Touch the screen or use the navigation keys to enter the RF system menu.

Choose the INT MODULE. Then turn ON INTERNAL RF, select the OUTSIDE or INSIDE ANTENNA. Set the Mode for TWIN X Lite internal RF corresponding to your receiver (ACCESS, ACCST D16, ELRS, TW MODE).

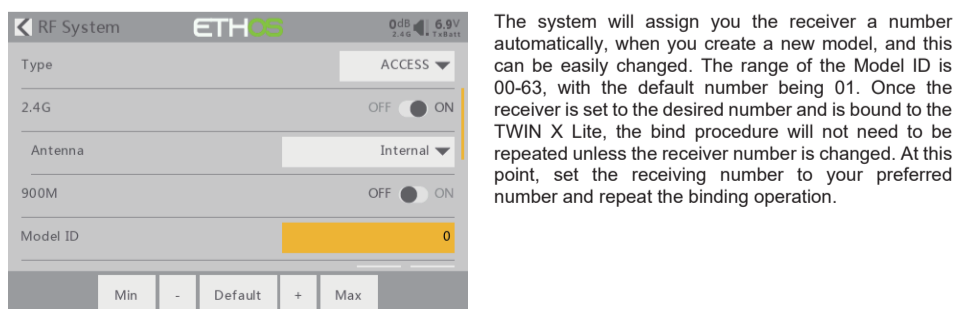


Step 2: Set the Channel Range

The RF module supports 24 channels, the channel range is configurable, and it needs to be double checked before use.



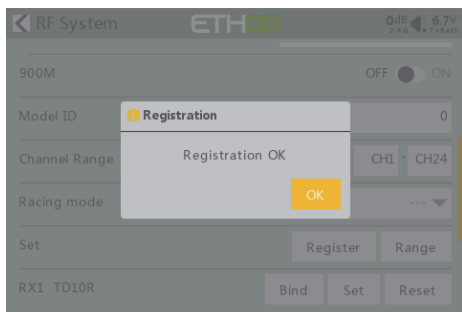
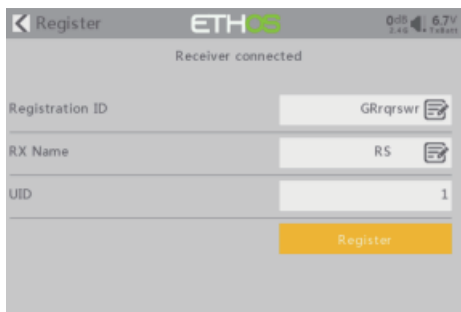
Step 3: Set the Receiver Number



The system will assign you the receiver a number automatically, when you create a new model, and this can be easily changed. The range of the Model ID is 00-63, with the default number being 01. Once the receiver is set to the desired number and is bound to the TWIN X Lite, the bind procedure will not need to be repeated unless the receiver number is changed. At this point, set the receiving number to your preferred number and repeat the binding operation.

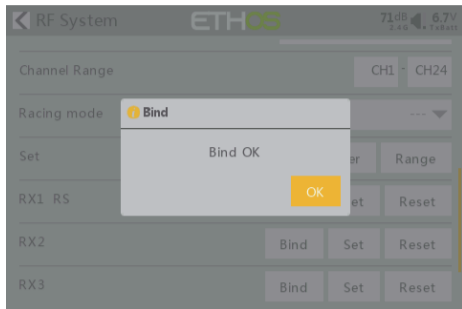
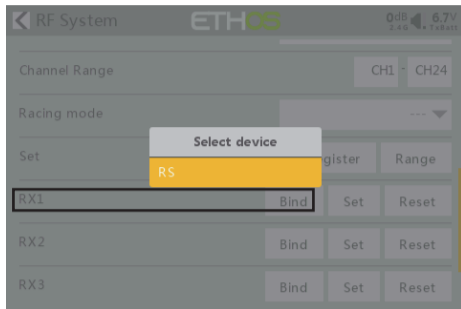
Step 4 : Registration

In ACCESS model, select the STATE [Register] into Registration status on radio side. Then Press the F/S button and power on your receiver, and select the "RX Name XX" and [REGISTER] to complete the Registration process then power down the receiver.



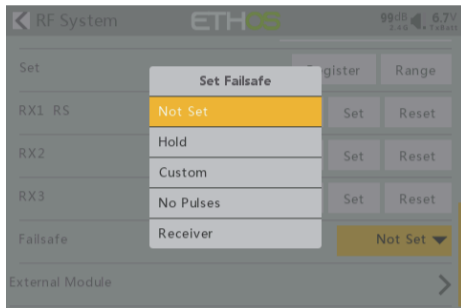
Step 5: Automatic binding (Smart Match)

Move the cursor to Rx1[BIND], and select it, power your receiver, select the RX, and complete the process, the system will confirm "Bind succeed". (Pressing the "F/S" button is not required in ACCESS to Bind. Please refer to the receivers manual for details).



Step 6: Set Failsafe mode

There are 3 failsafe modes when enable: No Pulse, Hold, Custom.



- No Pulse: on loss of signal the receiver produces no pulses on any channel. To use this type, select it in the menu and wait 9 seconds for the failsafe to take effect.
- Hold: the receiver continues to output the last positions before signal was lost. To use this type, select it in the menu and wait 9 seconds for the failsafe to take effect.
- Custom: pre-set to required positions on lost signal. Move the cursor to the failsafe mode of channel and press Encoder, then choose the Custom mode. Move the cursor to the channel you want to set failsafe on, and press Encoder.

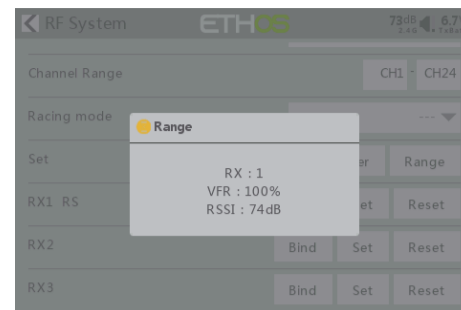
Then rotate the Encoder to set your failsafe for each channel and short press Encoder to finish the setting. Wait 9 seconds before the failsafe takes effect.

Notice:

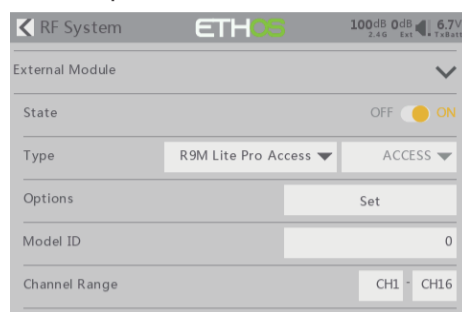
- When failsafe is disabled on TWIN X Lite side, the failsafe set on receiver side will be used.
- SBUS port does not support the No Pulse failsafe mode and always outputs. Set "Hold" or "Custom" for SBUS port.

Step 7: Range

Range refers to TWIN X Lite range check mode. A pre-flight range check should be done before each flying session. Move the cursor to "Set", scroll the Encoder to select "RANGE" mode and press Encoder. In range check mode, the effective distance will be decreased to 1/30. Press the Encoder again, turn to normal state.



Model Setup for TWIN X Lite External RF Module



The external RF module can be powered on or off by software. The setup process is the same as that for the internal RF. External modules should be closed when not in use.

FCC

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules

CE

The product may be used freely in these countries: Germany, Italy, Spain, Belgium, Netherlands, Portugal, Greece, Ireland, Denmark, Luxembourg, Austria, Finland, Sweden, Norway, France and Iceland.

FLYING SAFETY

Warning:

To ensure the safety of yourself and others, please observe the following precautions.

- ① **Have regular maintenance performed.** Although your TWIN X Lite protects the model memories with non-volatile EEPROM memory (which does not require periodic replacement) and of a battery, it still should have regular check-ups for wear and tear. We recommend sending your system to your FrSky Service Center annually during your non-flying-season for a complete check-up and service.

Where to Fly

We recommend that you fly at a recognized model airplane flying field. You can find model clubs and fields by asking your nearest hobby dealer.

- ① **Always pay particular attention to the flying field's rules**, as well as the presence and location of spectators, the wind direction, and any obstacles on the field. Be very careful flying in areas near power lines, tall buildings, or communication facilities as there may be radio interference in their vicinity.

At the flying field

- ① To prevent possible damage to your radio gear, turn the power switches on and off in the proper sequence:
 1. Pull throttle stick to idle position, or otherwise disarm your motor/engine.
 2. Turn on the transmitter power and allow your transmitter to reach its home screen.
 3. Confirm the proper model memory has been selected.
 4. Turn on your receiver power.
 5. Test all controls. If a servo operates abnormally, don't attempt to fly until you determine the cause of the problem.
 6. Start your engine.
 7. Complete a full range check.
 8. After flying, bring the throttle stick to idle position, engage any kill switches or otherwise disarm your motor/engine.

If you do not turn on your system on and off in this order, you may damage your servos or control surfaces, flood your engine, or in the case of electric-powered or gasoline-powered models, the engine may unexpectedly turn on and cause a severe injury.

- ① **Make sure your transmitter can't tip it over.** If it is knocked over, the throttle stick may be accidentally moved, causing the engine to speed up. Also, damage to your transmitter may occur.

- ① In order to maintain complete control of your aircraft it is important that it remains visible at all times. Flying behind large objects such as buildings, grain bins, etc. must be avoided. Doing so may interrupt the radio frequency link to the model, resulting in loss of control.

- ⊗ Do not grasp the transmitter's antenna during flight. Doing so may degrade the quality of the radio frequency transmission and could result in loss of control.

- ⊗ As with all radio frequency transmissions, the strongest area of signal transmission is from the sides of the transmitter's antenna. As such, the antenna should not be pointed directly at the model. If your flying style creates this situation, easily move the antenna to correct this situation.

- ① **Don't fly in the rain!** Water or moisture may enter the transmitter through the antenna or stick openings and cause erratic operation or loss of control. If you must fly in wet weather during a contest, be sure to cover your transmitter with a plastic bag or waterproof barrier. Never fly if lightning is expected.

Updates

FrSky is continuously adding features and improvements to our radio systems. Updating (via USB Port or the Micro SD card) is easy and free. To get the most from your new transmitter, please check the download section of the FrSky website for the latest update firmware and guide for adjusting your sticks. (www.frsky-rc.com)

FrSky is continuously adding features and improvements to our products. To get the most from your product, please check the download section of the FrSky website www.frsky-rc.com for the latest update firmware and manuals

Specific Absorption Rate (SAR) Information:
 This TWIN Digital Radio System meets government requirements for exposure to radio waves. Guidelines are based on standards developed by independent scientific bodies. Evaluate the organization through regular and thorough scientific research. These standards include substantial safety margins designed to keep everyone safe. Regardless of age or health.

FCC Radio Frequency Exposure Information and Statement:
 The SAR in the United States (FCC) is below the limit of 1g 1.6 W/kg. Device Type: Smart Handheld Terminal (FCC ID: XYFTWINXLITE) has also been tested against this SAR limit. During product certification, when properly worn on the body, the maximum SAR value reported in accordance with this standard is less than 1.6 W/kg. The device has been tested for typical body-worn operation and has a back.
 The TWIN Digital Radio System is kept 0 cm from the body. To maintain compliance with FCC RF exposure requirements, use accessories that maintain a 0 cm distance between the user's body and the back of the device. The use of belt clips, holsters and similar accessories should not include metal parts in their assembly. Use of accessories that do not meet these requirements may not meet FCC RF exposure requirements and should be avoided.

FCC SAR Values(MAX):
 Body: 1.448 W/Kg

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution: The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CE

Frequency bands: 2402.5-2483.5MHz

Max Power: <=20dBm eirp

SPECIFIC ABSORPTION RATE (SAR)

This device complies with the directives relating to radio frequency exposure, when it is used near the head at a minimum distance of 5mm from the body. According to CNIRP guidelines, the SAR limit is 2.0watts/kg for head and body, and 4.0watts/kg for limb on average for 10g of cellular tissue absorbing the majority of frequencies.

Body SAR: 0.236W/kg