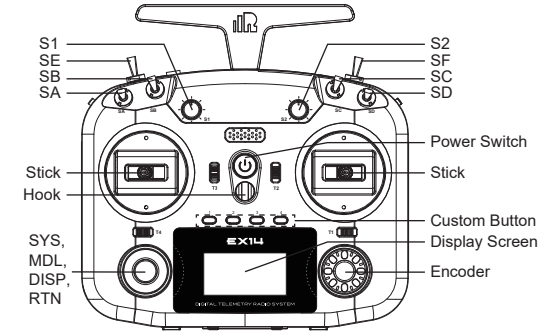
Introduction

Simplified Power with ECOS
The EX14 is the first FrSky radio to feature the all-new ECOS operating system. It's designed to provide a more intuitive learning curve and a faster, streamlined setup. While ECOS inherits the powerful look and feel of ETHOS, it achieves a significant level of simplification. This allows users new to RC – across various application scenarios to enjoy a complete and user-friendly experience while keeping both budget and the learning curve to a minimum.

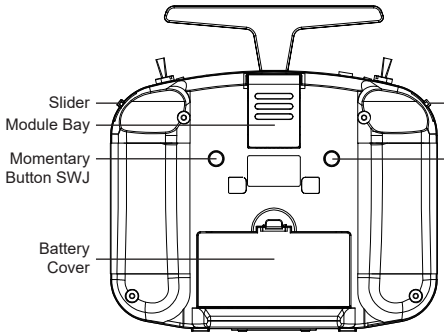
Robust Connectivity & Wide Expansion Options
The EX14 integrates a powerful 2.4GHz internal RF module, enabling direct pairing with ACCST D16 or ACCESS receivers. This ensures reliable, low-latency control performance right out of the box. Additionally, the back of the EX14 features a Lite-external module bay, giving users the flexibility to bind with a wide range of third-party receivers. They can build complex models with ease.

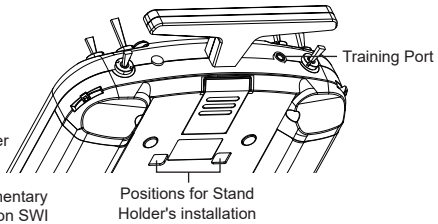
Portable Design & Versatile Options
Built to be lightweight and portable, the EX14 introduces an innovative attachable and foldable rear design. This design supports an optional stand holder accessory, allowing the radio to be positioned anywhere for hands-free operational flexibility. Combined with a comprehensive array of hardware inputs, including multi-position switches and momentary buttons, the EX14 fully meets the requirements of fundamental flight scenarios while offering broad expandability.

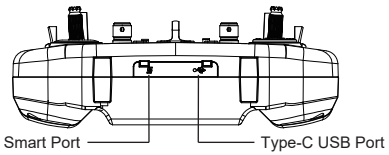
Overview



- SA: 3 positions; Short Lever
- SB: 3 positions; Long Lever
- SC: 3 positions; Long Lever
- SD: 3 positions; Short Lever
- SE: Momentary, Short Lever
- SF: 2 positions; Short Lever
- T1-T4: Stick Trims







Specifications

- Dimension: 192×193×72mm (L×W×H)
- Weight: 550g (Battery Excl.)
- Operating System: ECOS
- Internal RF Module: ISRM-L
- Screen Resolution: 128×64
- Number of Channels: Up to 24 Channels
- Operating Voltage Range: 6.5V ~ 8.4V (2S Li-Battery)
- Operating Current: 100mA@7.4V (typ.)
- Operating Temperature: -10℃ ~ 60℃ (14℉~140℉)
- Battery Bay Size: 69.5×38.5×20mm (L×W×H)
- USB Adaptor Voltage and Current: 5V+0.2V, ≥2.0A
- Compatibility: ACCST D16 / ACCESS

Features

- Integrated ECOS Operating System with Built-in 2.4G ISRM internal RF module
  - Supports ACCST D16 / ACCESS protocols
    - Low-latency (＜4ms) supporting full telemetry
    - Less Latency Capability with High Reliability at a Faster Data Rate
- Ergonomic and Compact Lightweight Design with Comfortable Rounded Hand Grips
- Easy-to-reach Top Switches and Sliders
- 128×64 Resolution LED Backlight Monochrome Screen
- 4 Trims & 4 Quick-Mode Custom Buttons (Front) & 2 Momentary Buttons (Rear)
- GM7 Potentiometer Gimbals with an Acrylic Panel
- Lite Type External Module Bay
- Capable of Buzzer Alarm Alert
- Supports Recharge System for 2S Li Battery (USB Type-C Interface)
- Supports Wired Training System via DSC port
- CNC Aluminum Backshell Stand Holder (Optional)

2S Li-battery balance charging via USB-C

The Green LED indicator states:
Led on: in charging / Led off: end of charge / Flash: charge fault
Battery compartment size: 69.5*38.5*20mm (L*W*H)

Note: 1. Charge the battery with the USB adapter (Voltage: 5V+0.2V Current: ≥2.0A) when you use the USB charging function.
2. The lower the initial charging voltage, the better the charging effect is when the voltage difference cells exceed 50 mV between the two.

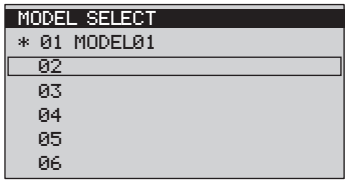
Navigation Controls

The left navigation control does RTN, SYS, MDL, DISP, and Page UP/Down. The right navigation control does scroll and enter.

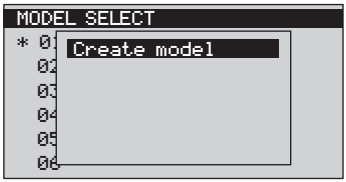
Page Down	Short Click
Page Up	Long Press

ECOS Operating System

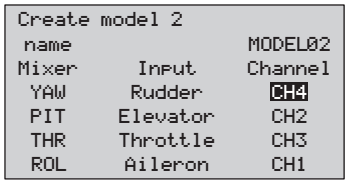
1. Create the model (MODEL SELECT Page)



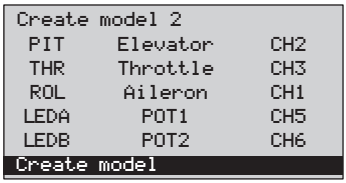
Step 1 Enter into the [Model Select] menu.



Step 2 Create a model and select a Model Type.

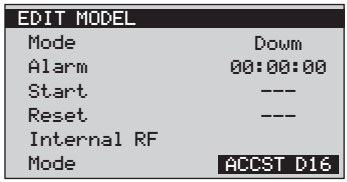


Step 3 Name this model and configure the inputs and output channels.

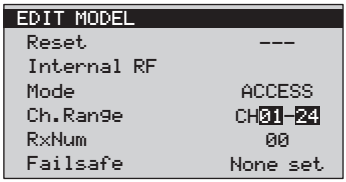


Step 4 Press [Create model] to complete the settings.

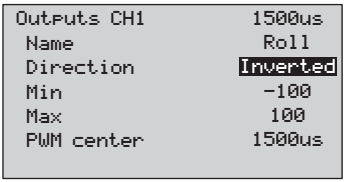
2. Edit Model (EDIT MODEL Page)



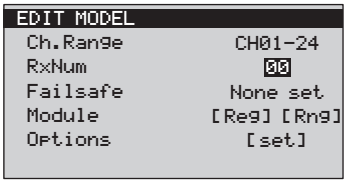
Step 1 Enable RF Module ▷ Scroll to the [Internal RF] section, then turn it On and select a required RF mode to standby.



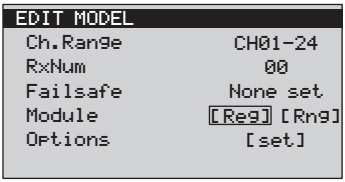
Step 2 Channel Range Setting ▷ The Internal RF module supports upto 24 channels (Channel range is programmable with flexiablity. CH1-8 / CH1-16 / CH1-24, etc.)



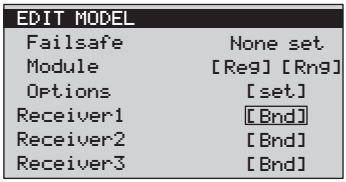
Step 3 More configurations of each channel can be set through **[OUTPUTS] page**, such as Channel Name, Direction, Min, Max and Center point.



Step 4 RxNum (Model ID) Setting ▷ The system assigns the receiver a number for the creating model (Model ID) automatically, users can set the same ID for another model if the same receiver and receiver setup can be applied to that model. (The RxNum can be set from 00 to 63, with the defaut Num being 00.)



Step 5 Receiver Registration ▷ For ACCESS mode as an example, move to the Module [Reg] function, enter it for getting the radio into Registration status standby, then hold the button on the receiver and power it on to complete the Register process.

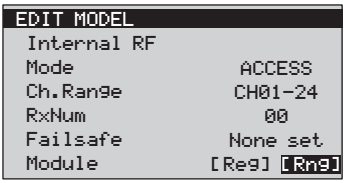


Step 6 Receiver Binding ▷ Select a Receiver slot (1/2/3) and press [Bind], then repower the receiver to complete the automatic binding.

Reset: Registration process is not required to repeat anymore after the receiver was once registered even though the receiver is deleted.

3. Range Check (EDIT MODEL Page)

A pre-flight range check should be done before every flight, in case the signal loss is caused by the reflection of the signal by the nearby metal fence or concrete, and the shading of the signal by buildings or trees during the actual flight. Under normal circumstances, in Range Check mode, the RSSI at 150m is about 45-50.



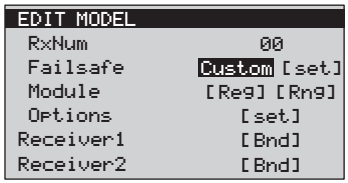
Step 1 Place the model at least 60cm (2 feet) above the non-metal contaminated ground (such as on a wooden bench). The receiving antenna should be in a vertical position.

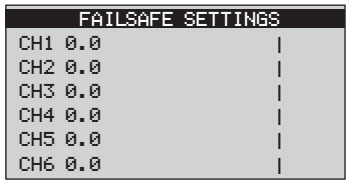
Step 2 Enter ECOS system and turn to [EDIT MODEL] page, then scroll down to the [Module] section and excute the [Rng] function. In Range Check mode, the effective distance will be decreased to 1/30.

4. Failsafe Settings (EDIT MODEL Page)

There are 3 failsafe modes when the setting is enabled: No Pulse, Hold, and Custom mode.

- No Pulses Mode: On loss of signal, the receiver produces no pulses on any channel. To use this mode, select it in the menu and wait 9 seconds for the failsafe to take effect.
- Hold Mode: The receiver continues to output the last positions before the signal was lost. To use this mode, select it in the menu and wait 9 seconds for the failsafe to take effect.
- Custom Mode: Pre-set to required positions on the lost signal. Move the cursor to the failsafe mode of the 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 the Encoder to finish the setting. Wait 9 seconds for the failsafe to take effect.





Note:

- **If the failsafe is not set, the model will always work with the last working status before the signal is lost. That could cause potential damage.**
- **When the failsafe is disabled on the RF module side, the failsafe set on the receiver side will be applied.**
- **SBUS port does not support the failsafe setting in No Pulses mode and always outputs signal. Please set "Hold" or "Custom" mode for the SBUS port.**

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, UK, Italy, Spain, Belgium, Netherlands, Portugal, Greece, Ireland, Denmark, Luxembourg, Austria, Finland, Sweden, Norway, Switzerland, France and Iceland.

FLYING SAFETY

⚠ Warning:

Battery

ⓘ Using a fully charged battery (DC 6.5~8.4V). A low battery will soon die, causing loss of control and a crash. When you begin your flying session, reset your transmitter's built-in timer, and during the session pay attention to the duration of usage. Also, if your model used a separate receiver battery, make sure it is fully charged before each flying session.

ⓘ **Stop flying long before your batteries become over discharged. Do not rely on your radio's low battery warning systems, intended only as a precaution, to tell you when to recharge. Always check your transmitter and receiver batteries prior to each flight.**

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.

ⓘ **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

ⓘ 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.

ⓘ **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.

ⓘ 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.

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