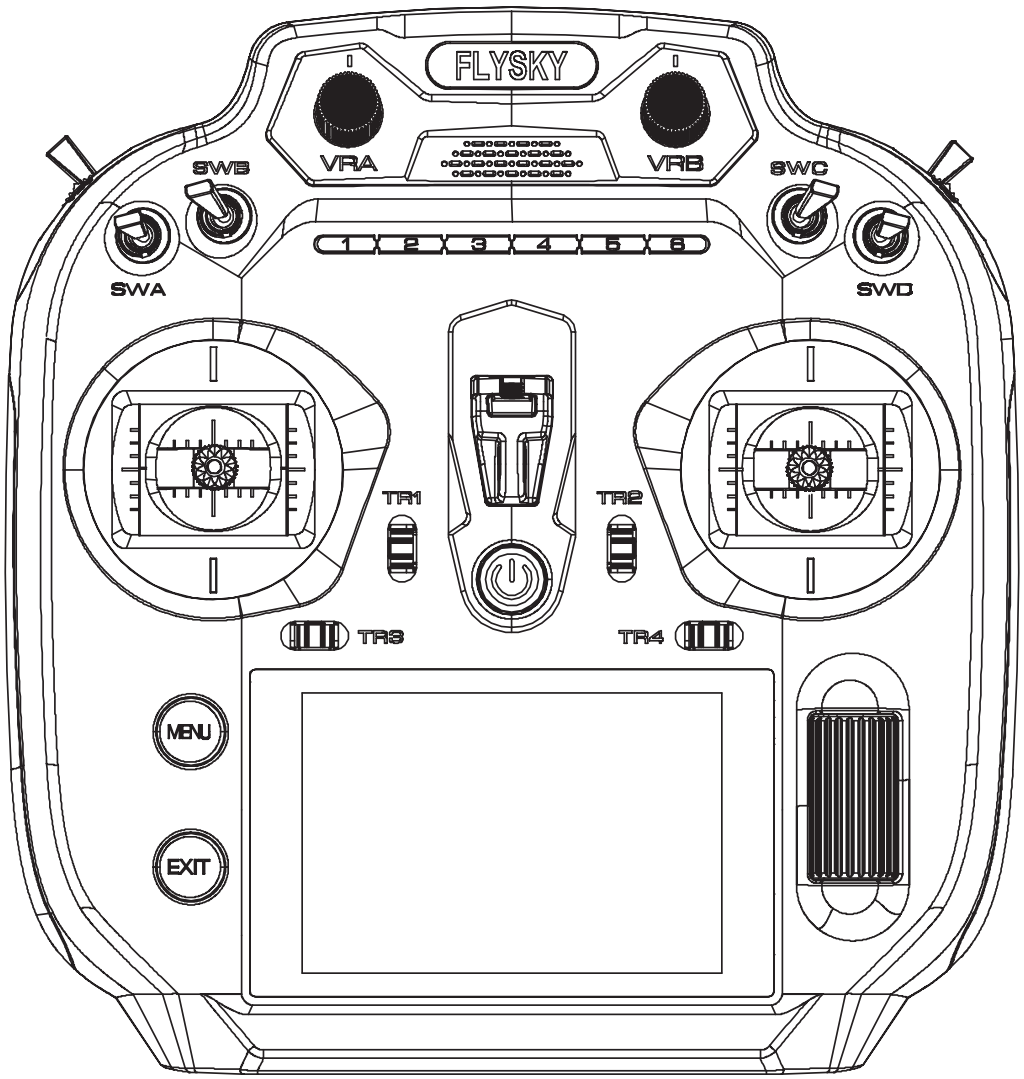
Quick Start Guide
快速操作指南

FS-ST16



Http://www.flysky-cn.com

Thank you for purchasing the products of Flysky! To find out more about our products, visit our website at www.flysky-cn.com. If you encounter any problems during using, please refer to the manual first. If the problem is still not resolved, contact your local dealer directly or contact the customer service staff via Flysky official website.

Precautions

Read the safety messages listed below before operation!

- Do not use the product at night or during bad weather conditions, like rain or thunderstorms. It can cause erratic operation or loss of control.
- Do not use the product when visibility is limited.
- Do not expose the product to rain or snow. Any exposure to moisture (water or snow) may cause erratic operation or loss of control.
- Interference may cause loss of control. To ensure the safety of you and others, do not operate in the following places:

Near any sites where other radio control activity may occur

Near people or roads

On any pond/ lake when passenger boats are present

Near power lines or communication broadcasting antennas

- Do not use this product when you are tired, uncomfortable, or under the influence of alcohol or drugs. Doing so may cause serious injury to yourself or others.
- The 2.4GHz radio band is limited to line of sight. Always keep your model in sight as a large can block the RF signal and lead to loss of control.
- Never grip the transmitter antenna during operation. It significantly degrades signal quality and strength and may cause loss of control.
- Do not touch any part of the model that may generate heat during operation, or immediately after use. The engine or motor, may be very hot and can cause serious burns.
- Misuse of this product may lead to serious injury or death. To ensure the safety of you and your equipment, read this manual and follow the

instructions carefully.

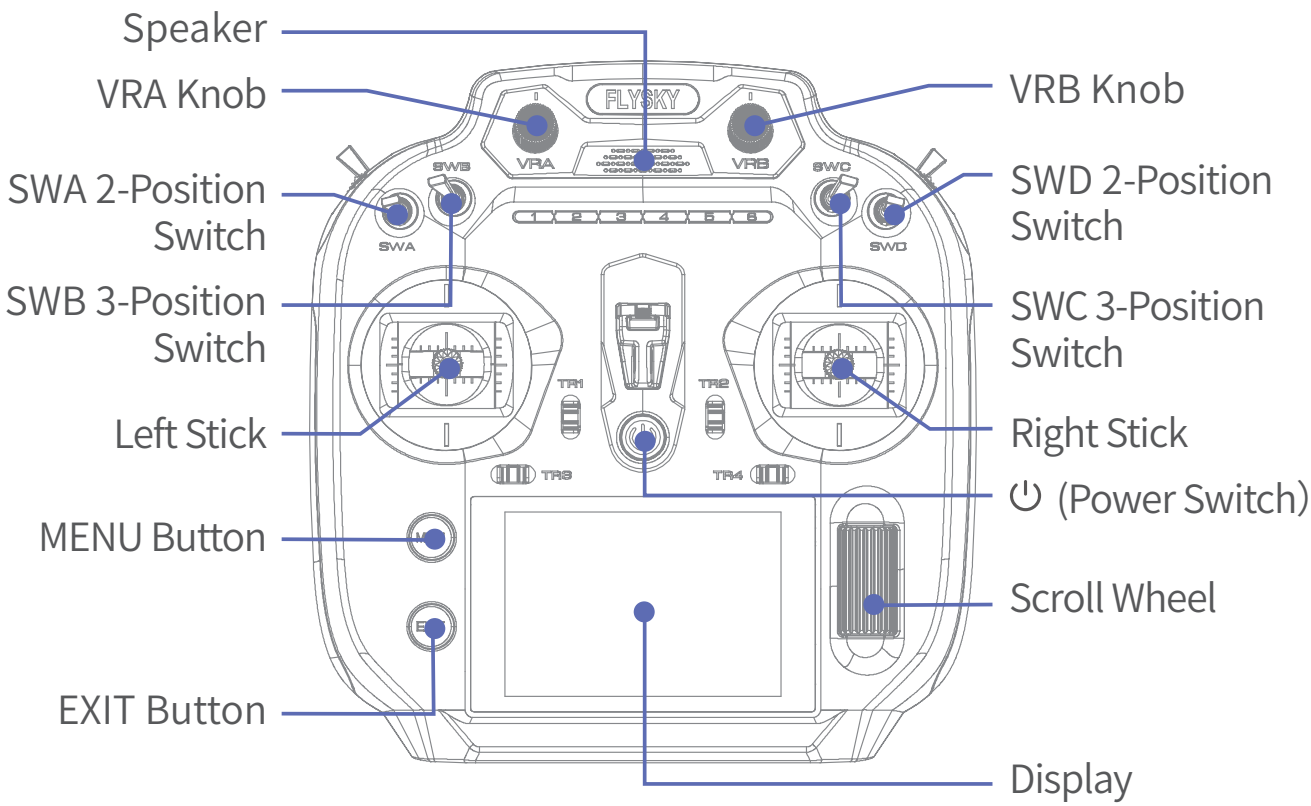
- Make sure the product is properly installed in your model. Failure to do so may result in serious injury.
- Make sure that the receiver's battery is disconnected before turning off the transmitter. Failure to do so may lead to unintended operation and cause an accident.
- Ensure that all servos operate in the correct direction. If not, adjust the direction first.
- Make sure that the model stays within range in order to prevent loss of control.
- The ce warns that the installation of the antenna used in this transmitter must be kept in distance from all the personnel and shall not be used or used with any other transmitter. The end user and the installer must provide antenna installation instructions and transmitter operating conditions to meet the requirements for rf exposure compliance.

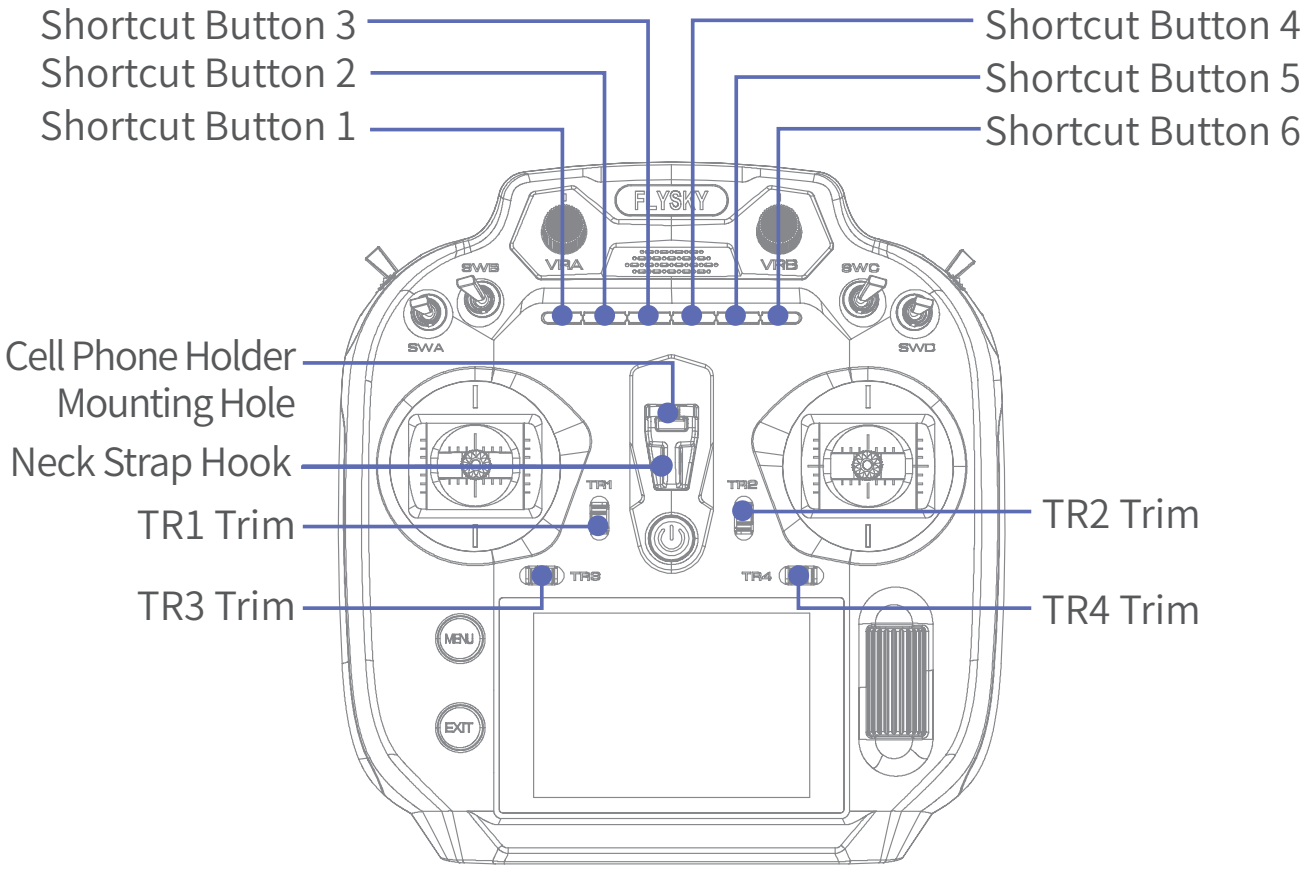
CAUTION!

- RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

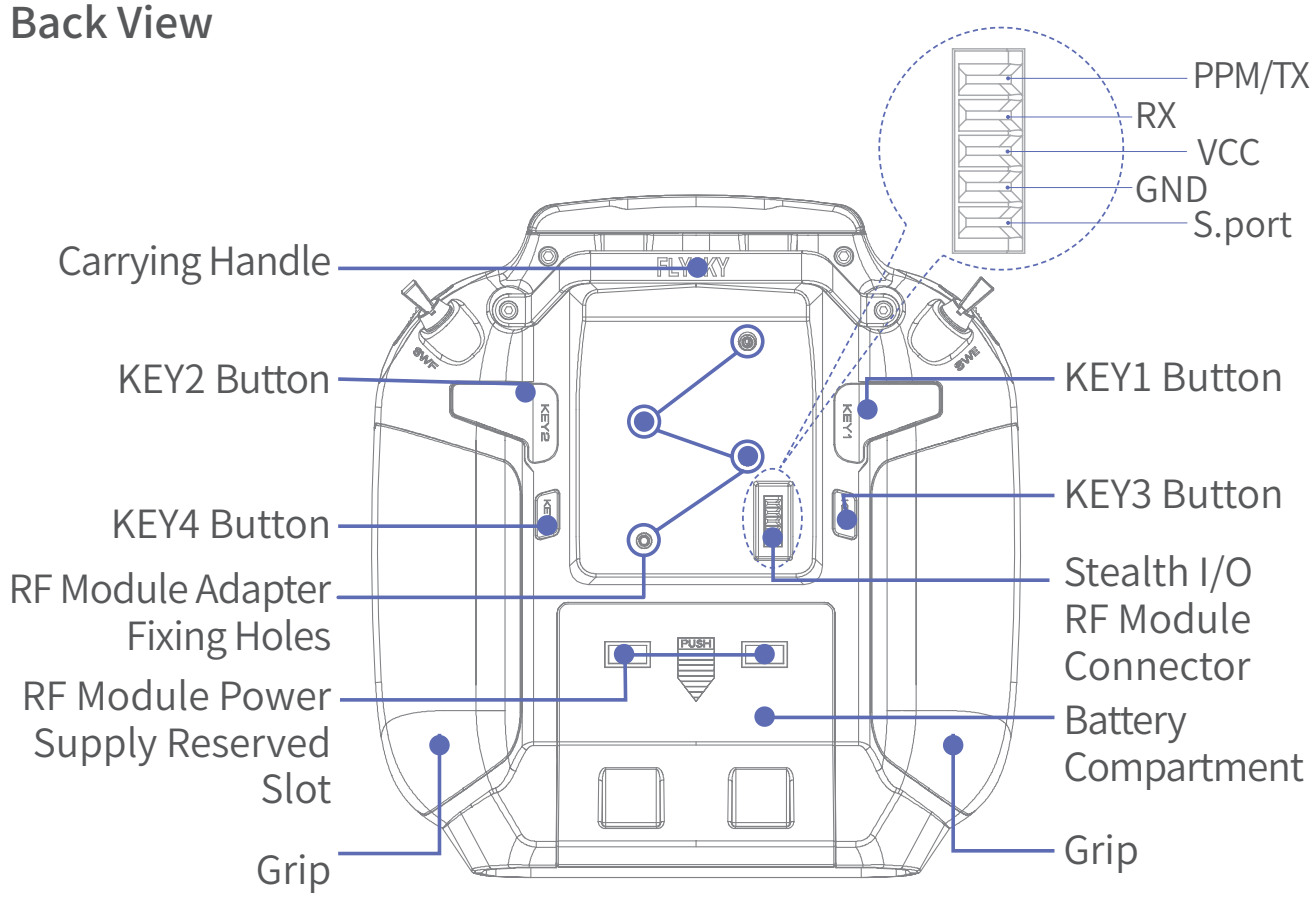
Transmitter Overview

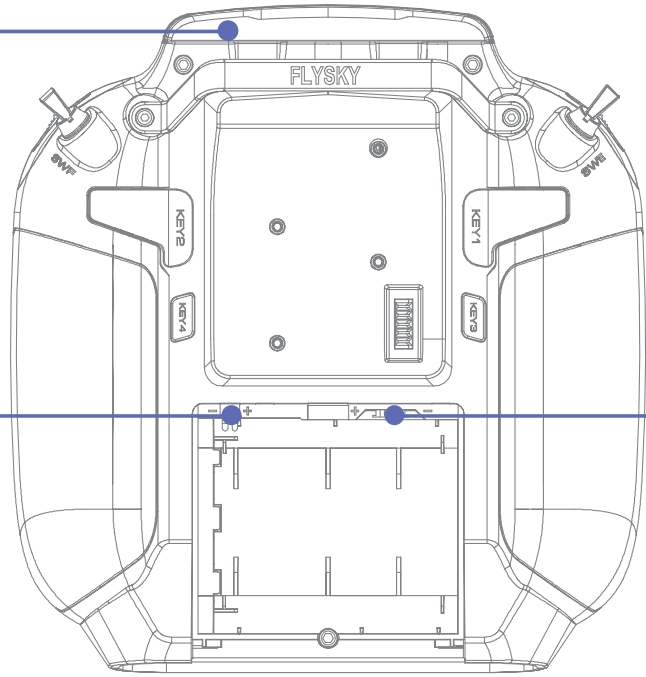
Front View



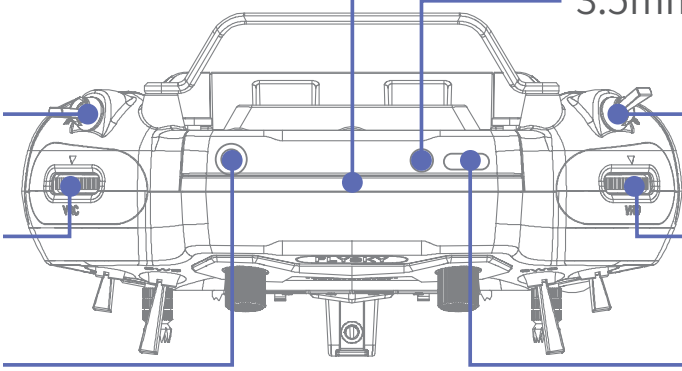

Shortcut Button 3
Shortcut Button 2
Shortcut Button 1
Shortcut Button 4
Shortcut Button 5
Shortcut Button 6
Cell Phone Holder Mounting Hole
Neck Strap Hook
TR1 Trim
TR3 Trim
TR2 Trim
TR4 Trim
FLYSKY
SWA
SWB
VRA
VRB
SWC
SWD
TR1
TR2
TR3
TR4
MENU
EXIT

Back View

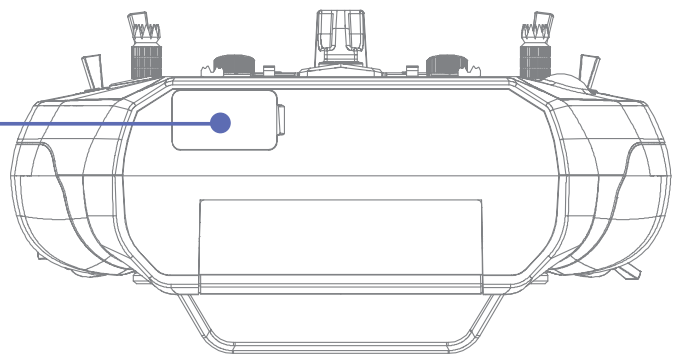

PPM/TX
RX
VCC
GND
S.port
Carrying Handle
KEY2 Button
KEY4 Button
RF Module Adapter Fixing Holes
RF Module Power Supply Reserved Slot
Grip
KEY1 Button
KEY3 Button
Stealth I/O RF Module Connector
Battery Compartment
Grip
FLYSKY
SWF
SWE
KEY2
KEY1
PUSH



Top View



Bottom View

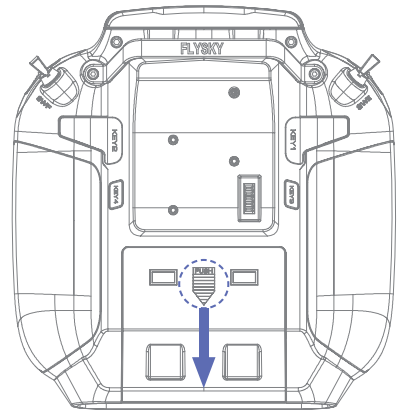


Basic Operations

Installing the 18650 Battery

Follow the steps below to install the 18650 battery:

1. Open the battery compartment cover as shown.
2. Insert 2 batteries into the compartment. Make sure that the batteries are well set according to the polarities marked on the battery compartment.
3. Close the battery compartment cover.



Press and slide to remove the battery compartment cover.

Installing the LiPo Battery

The transmitter supports LiPo batteries which are equipped one JST connector or one balanced charging connector of the battery wiring. Follow the steps below to install the LiPo batteries:

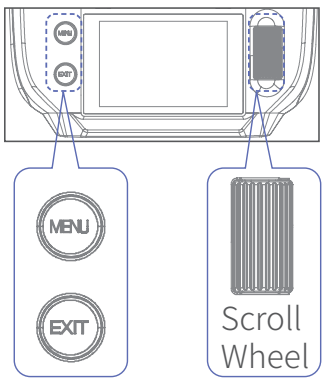
1. Open the battery compartment cover.
2. Use a phillips screwdriver to remove the two screws that secure the 18650 battery holder, and then remove the battery holder.
3. Insert 2S LiPo batteries into the compartment.
4. Plug the battery wiring of the LiPo battery into the JST port or balanced charging port accordingly.
5. Close the battery cover, pay attention to avoid pinching the battery wiring.

Notes:

1. Only the balanced charging port can be used for charging.
2. Once the transmitter has the battery installed, you can use a USB Type-C cable to connect to the transmitter's USB Type-C port for power supply.
3. Only the balanced charging port supports power supply to the external RF module.

Control(MENU Button/EXIT Button/Scroll Wheel)

The functions of the MENU button, EXIT button, and Scroll Wheel are described below.



MENU Button

- On the Home interface, short press the MENU button to enter the Main Menu interface;
- When not on the Home interface, Short press the MENU button to return to the Home, but it cannot be returned to the Home during a pop-up or firmware update.

EXIT Button

- On the Home interface, short press the EXIT button to enter the Home1 interface.
- On the Home interface, long press the EXIT button for 2s to lock the screen; long press it again to unlock the screen;
- When not on the Home interface, short press the EXIT button to return to the previous interface or exit the editing mode.

Scroll Wheel

- On the Home, Home2, main menu or functional interface, scroll the wheel to select the function item, and short press the scroll wheel to enter the function item;
- In the function item settings state, scroll the wheel to adjust the parameter; quickly scroll the wheel to adjust rapidly. Short press the scroll wheel to save and exit;
- In the function interface, long press the scroll wheel for 2S to reset all the data on the current page to default values;
- In the function settings state, if there are only two parameters, short press the scroll wheel to switch between them.

Powering On

Follow the steps below to turn on the transmitter:

1. Check to make sure that the batteries are fully charged and installed correctly.
2. Long press ⏻, and follow the prompts on the screen to successfully power on.
   - If the built-in RF module is not detected or needs to be updated, the system will prompt a pop-up window. Please follow the instructions in the pop-up window to proceed.
   - Whether the switch is in the safe position (If the control background is highlighted in red, it indicates that the position needs adjustment). Please check the position of the control according to the prompts and follow the prompts to adjust it to the correct position.
   - The system will pop up a window prompting whether the failsafe is set for the current model. To turn off the failsafe prompt, select No or turn off the Failsafe Prompt through System.
   - If the system is powered on using the USB Type-C port without a battery installed, a pop-up window will appear, "Please use after installing the battery!"

Powering Off

Follow the steps below to turn off the transmitter:

1. Turn off the receiver first.
2. Press and hold Power Switch until the screen turns off, indicating that the transmitter is powered off.

Make sure to disconnect the receiver power before turning off the transmitter. Failure to do so can result out of control. Unreasonable setting of the Failsafe may cause accidents.

LED

The transmitter LED includes the power indicator (located at the ⏻ button), the main ambient lights (located around the gimbal assemblies) and the secondary ambient lights (located at the shortcut 1-6 buttons).

Power Indicator

The power indicator can be set to on or off. It is set to on, by default.Setup:

1. On Home interface, short press the MENU button to enter the Main Menu interface.
2. Scroll the wheel to select [System Menu], and short press the scroll wheel to enter the System Menu interface.
3. Select [Setup], then short press the scroll wheel to enter the function item.
4. Select [Power Light], then short press the scroll wheel to switch between [On] and [Off].
5. Short press the EXIT button to return to the previous interface.

Main Ambient Lights

Set the colors and brightness levels of the main ambient lights. You can set whether to turn off the upper ambient lights, be as battery indicator or throttle indicator, and adjust the color types and brightness levels of the ambient lights.

- Battery Indicator: When the light is in green, it indicates that the battery voltage is greater than or equal to the alarm value; otherwise, it will be in red.
- Throttle Indicator: When the light is in blue, it indicates that the throttle stick is moved into the neutral range, others, the light will be fading from blue and red.
- Ambient Light Color: Red, Green, Blue, Yellow, Cyan, Purple, White or Dazzle optional.
- Brightness level: default to be 50%, and can be adjusted within the range of 10%~100%.

Setup:

1. Go to Home > Main Menu > [System Menu], and select [Main Ambient Light], and press the scroll wheel to enter.
2. Select the appropriate function item and press the scroll wheel to confirm, then short press the EXIT button to return to the previous interface.
3. Select the [Brightness] and short press the scroll wheel. Then scroll the wheel to set to a desired value, then press the scroll wheel.

Secondary Ambient Lights

The functions and settings are the same as the main ambient lights, refer to the description of Main Ambient Lights.

Calibration

Use this function to correct for the mechanical deviation of the controls (left/right stick, VRA and VRB knob, VRC and VRD self-centering dial). For example, deviation occurred in the self-centering or maximum/minimum travel. By default, the calibration is finished. If you need to calibrate again, follow the steps below:

1. Go to Home > Main Menu > [RX Menu], and select [Stick Calibration], then short press the scroll wheel, and select Yes on the pop-up interface, then short press the scroll wheel to enter the function interface.
2. Move the controls to its center positions according to the prompt, and short press the scroll wheel.
3. Move the controls to their Max/Min travels, and short press the wheel, the calibration interface is exited, indicating the calibration is successful.

   If the calibration fails, the system will pop up a prompt interface, scroll the wheel to select [NO] and short press the scroll wheel to recalibration; otherwise to cancel the calibration.

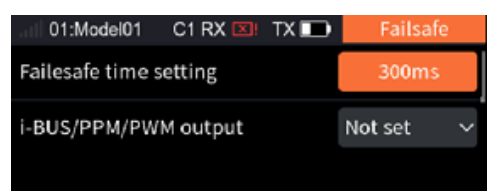
Failsafe

The failsafe function is used when the receiver loses radio signal and is out-of -control. The receiver performs channel output according to the set failsafe value to protect the safety of the model and personnel.

Failsafe time setting

Used to set the failsafe judgment time, the setting range is from 250ms to 1000ms. And the failsafe judgment time is 300ms by default.

Setup:



1. Go to Home > Main Menu > [RX Menu], and select [Failsafe], then short press the scroll wheel to enter.
2. Select [Failsafe time setting], then scroll

the wheel to set to a desired value, and then briefly press the scroll wheel to confirm.

For i-BUS/PPM/PWM signal. It can be set to No Set, No Output or Have Output.

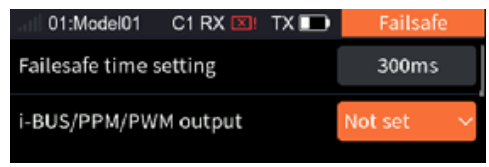
Not Set: The failsafe has not been set, and there is no output in case of out-of-control.

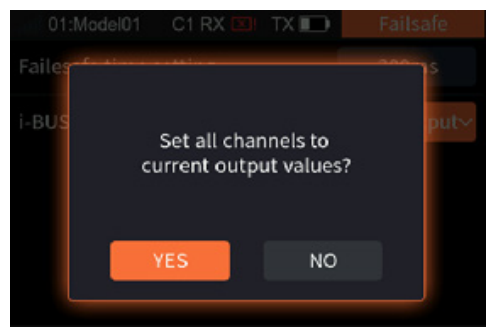
No Output: It is no output for i-BUS/PPM/PWM channel.

Have Output: i-BUS/PPM/PWM channel output respectively the set value. Namely, you can set a value respectively for each channel from 1 to 16. By default, this value is the reading of current channel output value.

Setup:

1. Go to Home > Main Menu > [RX Menu], and select [Failsafe], then short press the scroll wheel to enter.
2. Set all channels.
   - Select [Have output], short press the scroll wheel, and the system will pop up a prompt interface;
   - Adjust the corresponding controls to the desired positions and hold them if needed.
   - Select [YES] on the pop-up prompt interface, and short press the scroll wheel again, failsafe setting for all channels is completed.
3. Continue to set an individual channel if needed.
   - Select the channel to be set, short press the scroll wheel.
   - Select the appropriate value or adjust the corresponding control to the desired position and hold it. Short press the scroll wheel to save the settings.





Notes:

1. Because the S.BUS signal information contains failsafe flag bits, the failsafe information can be transmitted to the subsequent devices by the failsafe flag bits ruther than by No Output state. The subsequent devices give response according to the analysed information for the failsafe flag bits.
2. For the signal PWM/PPM/i-BUS without failsafe flag bits, it supports the setting of the output signal to OFF in case of failsafe, transmitting the failsafe information to the subsequent devices by No Output state.
3. It is Not Set by default, then the receiver will not output when RC signal is lost.

Binding

The transmitter and the receiver have been pre-bound before delivery. If you need to use other receivers, follow the steps below to bind the transmitter and the receiver. The transmitter supports both ANT 2 Way and ANT 1 Way binding, and ANT 2 Way binding is the default setting. The transmitter will display the information returned by the receiver after the ANT 2 Way binding is completed. Before binding, it is necessary to set RF System, RF Standard, Output, and Frequency according to the actual application scenario.

RF System Two modes are available: Routine and Fast. In Routine mode, it presents strong anti-interference performance against other devices, while Fast mode provides better coexistence with lower latency and power consumption.

RF Standard To select RF protocol, either ANT 2 Way or ANT 1 Way.

Output Two combined output options are available, including four output modes, namely PWM/S.BUS, PPM/i-BUS, PWM/i-BUS and PPM/S.BUS. Choose according to your needs. Using the FS-ST16 transmitter and FS-SR8/FS-SR8A receiver for binding as an example:

- When the [Output Mode] is set to PWM/S.BUS, connectors such as CH1 output PWM signals, and the SERVO connector outputs S.BUS signals.
- When the [Output Mode] is set to PPM/i-BUS, the CH1 connector

outputs PPM signals, other channel connectors have no output, and the SERVO interface outputs i.BUS signals.

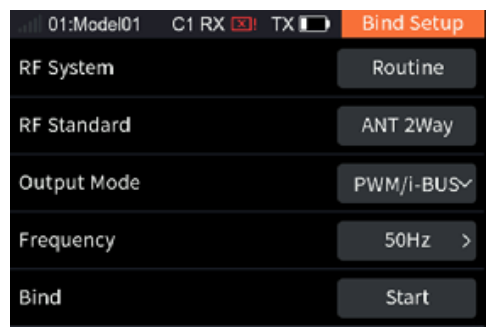
- When the [Output Mode] is set to PWM/i-BUS, connectors such as CH1 output PWM signals, and the SERVO connector outputs i.BUS signals.
- When the [Output Mode] is set to PPM/S.BUS, the CH1 connector outputs PPM signals, other channel connectors have no output, and the SERVO interface outputs S.BUS signals.

Note: Regardless of which type the receiver's [Output Mode] is set to, the SENS connector will output the i-BUS-in signal.

Frequency Set the frequency of channels. Options include Digital Servo, Analog Servo, and Other.

After the above settings, complete ANT 2 Way binding following the steps below:

Setup:



1. Select [Start], and short press the scroll wheel, the transmitter will enter binding state.
2. Put the receiver into binding state.
3. When the receiver LED is solid on, it indicates successful binding.
4. Check whether the transmitter and receiver are operating properly. For re-binding, please repeat the above steps.

Notes:

1. If the transmitter that has its RF standard set to ANT 1Way enters binding mode, put the transmitter to exit binding state when the status of the receiver LED changes to slow flash, and at the same time, the receiver LED is solid on, indicating that the binding is completed.
2. The binding mode may vary according to the receiver model. Visit the Flysky official website to check the receiver manual or other relevant information.

Firmware Update

To put the transmitter into updating state. In case of updating the firmware of the transmitter, use this function to put the transmitter into updating mode first, then upgrade the transmitter's firmware.

⚠ Warning	• Do not unplug the USB Type-C cable while the firmware is updating.

This firmware can be updated via the following two ways.

- The firmware of this transmitter can be updated through the Flysky Assistant (The firmware of Flysky Assistant is available on the Flysky official website www.flysky-cn.com).
- Or update it by following the steps below:
  1. Download and open the latest official firmware.
  2. Connect the transmitter to the computer via the USB Type-C cable.
  3. Go to Home > Main Menu >[System Menu], and select [Firmware Update], then short press the scroll wheel, a prompt screen will pop up, then select [YES], and short press the scroll wheel to enter updating state.
  4. After completing the above steps, click [Update] in firmware window on the computer to start the update.
  5. The transmitter will power on again when the updating process is finished. Then remove the USB Type-C cable and close the firmware.

⚠ Attention	• After a firmware update the receiver may not be connected. If this is the case the receiver firmware needs to be updated.

Receiver Firmware Update

FS-SR8/FS-SR8A receiver firmware update should be done through FlySkyAssistant (only supported by version 3.0 and later, FlySkyAssistant firmware can be got from the official website www.flysky-cn.com).

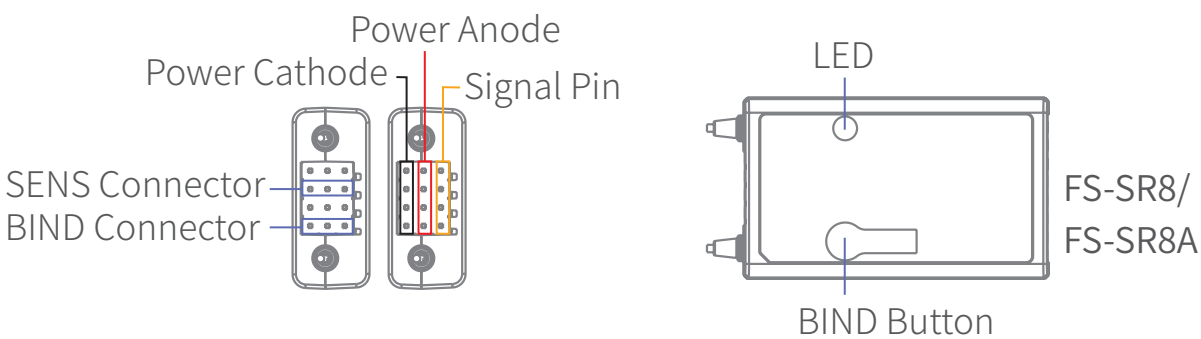
This receiver fimware can be updated via the following two ways:

Mode Ⅰ: After the binding between the transmitter and the receiver (the LED of the receiver is solid on), connect the transmitter to the computer, then open the FlyskyAssistant on the computer to update the firmware.

Mode Ⅱ: Connect the transmitter to the computer. Then put the receiver to enter the forced update mode by referring to the following three ways (The LED of the receiver operates in three-flash-one-off manner repeatedly). Afterwards, open the FlyskyAssistant on the computer to update the firmware.

There are three ways to put the receiver into the forced update state:

- Power on the receiver while pressing and holding the BIND button for more than ten seconds, until the LED of the receiver operates in three-flash-one-off manner repeatedly, then release the BIND button.
- Power on the receiver first, then press and hold the BIND button for more than ten seconds, when the LED of the receiver operates in three-flash-one-off manner repeatedly, then release the BIND button.
- Connect the signal pins of the BIND and SENS by using the binding cable, then power on the receiver.



Note: the way of entering the forced update state may vary for the receivers. Please refer to the manual of the specific receiver.

- For more information, please read the full user manual.

Specifications

- Product Model: FS-ST16
- Compatible Receiver: FS-SR8/FS-SR8A and other receivers with ANT protocol
- Number of Channels: 16
- RF: 2.4GHz ISM
- Maximum Power: < 20dBm (e.i.r.p.) （EU）
- RF Protocol: ANT
- Resolution: 4096
- Data Interface: USB Type-C, 3.5mm Audio Jack (DSC), SD card slot
- Antenna: Two antennas(One bulit-in antenna and one external folding antenna)
- Input Power: 6~9V/DC; 18650*2PCS/2S LiPo
- Display: 3.5 inch 320*480 full dot color non-touch IPS screen
- Firmware Update: Supported
- Temperature Range: -10°C ~ +60°C
- Humidity Range: 20% ~ 95%
- Color: Black
- Language: Chinese or English
- Dimensions: 224.1*180*101.3mm
- Weight: 665g
- Charging Jack: Yes (Type-C Port)
- Certifications: CE, FCC ID: 2A2UNST1600

Certifications

FCC Compliance Statement

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.

Warning: changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

EU DoC Declaration

Hereby, [ShenZhen FLYSKY Technology Co., Ltd.] declares that the radio equipment type [FS-ST16] is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address:
www.flyskytech.com/info_detail/10.html

Environmentally friendly disposal

Old electrical appliances must not be disposed of together with the residual waste, but have to be disposed of separately. The disposal at the communal collecting point via private persons is for free. The owner of old appliances is responsible to bring the appliances to these collecting points or to similar collection points. With this little personal effort, you contribute to recycle valuable raw materials and the treatment of toxic substances.

CAUTION
RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING TO THEINSTRUCTIONS

CE

RF Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

These requirements set a SAR limit of 4 W/kg averaged per ten gram of tissue. The highest SAR value reported under this standard during product certification for use when properly worn on the limbs..

CE SAR statement

This equipment complies with Directive 2014/53/EU radiation exposure limits set forth for an uncontrolled environment. End user must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The portable device is designed to meet the requirements for exposure to radio waves established by European Union market(France). These requirements set a SAR limit of 4W/kg averaged over ten gram of tissue. The highest SAR value 1.149W/kg reported under this standard during product certification for use when properly worn on the limbs.

FCC SAR statement

1.The radiated output power of this device is below the FCC radio frequency exposure limits. Nevertheless, the device should be used in such a manner that the potential for human contact is minimized during normal operation.

The exposure standard for wireless devices employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/Kg. Tests for SAR are conducted using standard operating positions accepted by the FCC with the device transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. This is because the device is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output. To avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna should be minimized.

For body worn operation, this model phone has been tested and meets the FCC RF exposure.Guidelines when used with an accessory designated for this product or when used with an accessory that Contains no metal and that positions the handset a minimum of 0mm from the body.

2. The maximum SAR value is 1.509W/kg when the phone used 0mm close to user.

CAUTION

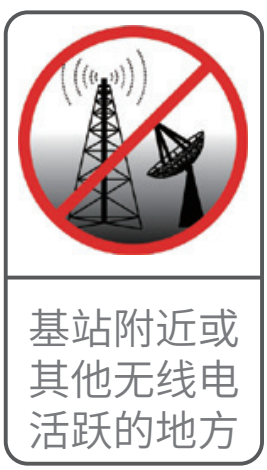
- replacement of a battery with an incorrect type that can defeat a safeguard (for example, in the case of some lithium battery types);
- disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion;
- leaving a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas; and
- a battery subjected to extremely low air pressure that may result in an explosion or the leakage of flammable liquid or gas.

感谢您购买富斯公司的产品!欲知更多产品信息,请浏览以下官方网站:www.flyskytech.com. 如果您在使用中遇到任何问题,请先查阅发射机使用说明书。如果问题仍未得到解决,请直接联系当地经销商或者访问官网联系客服人员。

注意事项!

开始操作前请务必阅读以下安全信息!

- 请不要在夜晚或雷雨天气使用本产品,恶劣的天气环境有可能导致遥控设备失灵。
- 请不要在能见度有限的情况下使用本产品。
- 请不要在雨雪或有水的地方使用本产品。如果有液体进入到系统内部,可能会导致运行不稳定或设备失灵。
- 信号干扰可能导致设备失控。为保证您和他人的安全,请不要在以下地点使用本产品:



基站附近或其他无线电活跃的地方

人多的地方或道路附近

有客船的水域

高压电线或通信广播天线附近

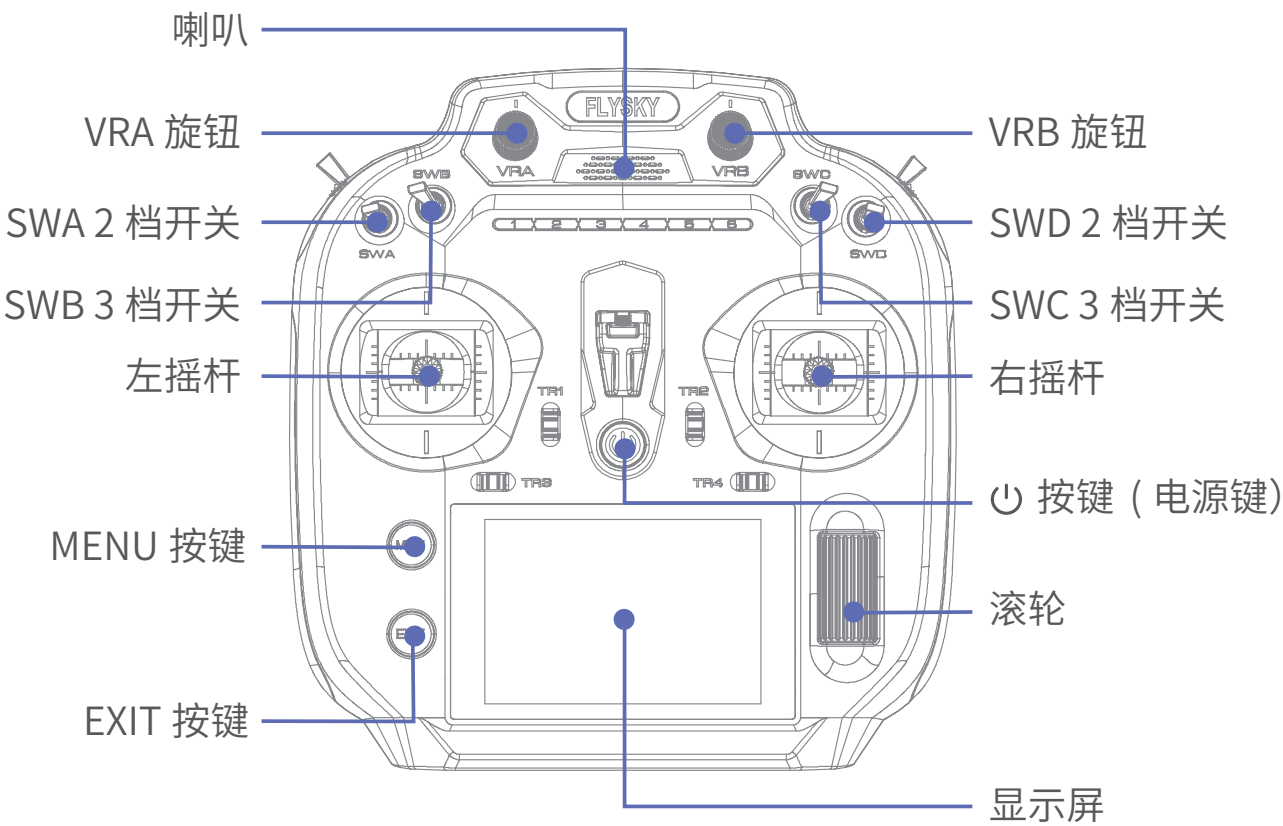
- 当你感到疲倦、不舒服，或在摄入酒精或服食导致麻醉或兴奋的药物后，不要操作本产品，否则可能对自己或他人造成严重的伤害。
- 2.4GHz 无线电波段完全不同于之前所使用的低频无线电波段。使用时请确保模型产品在您的视线范围内，大的障碍物将会阻断无线电频率信号从而导致遥控失灵模型失控。
- 在使用过程中，严禁紧握发射机天线，否则将会大大减弱无线电传播信号的质量和强度， 导致遥控失灵模型失控。
- 在操作或使用模型后，请勿触摸任何可能发热的部位，如发动机、电机等。这些部件可能非常热，容易造成严重的烧伤。
- 遥控设备使用不恰当可能导致操作者或他人严重受伤，甚至死亡。为保证您和设备的安全，请仔细阅读使用说明书并按照要求进行操作。

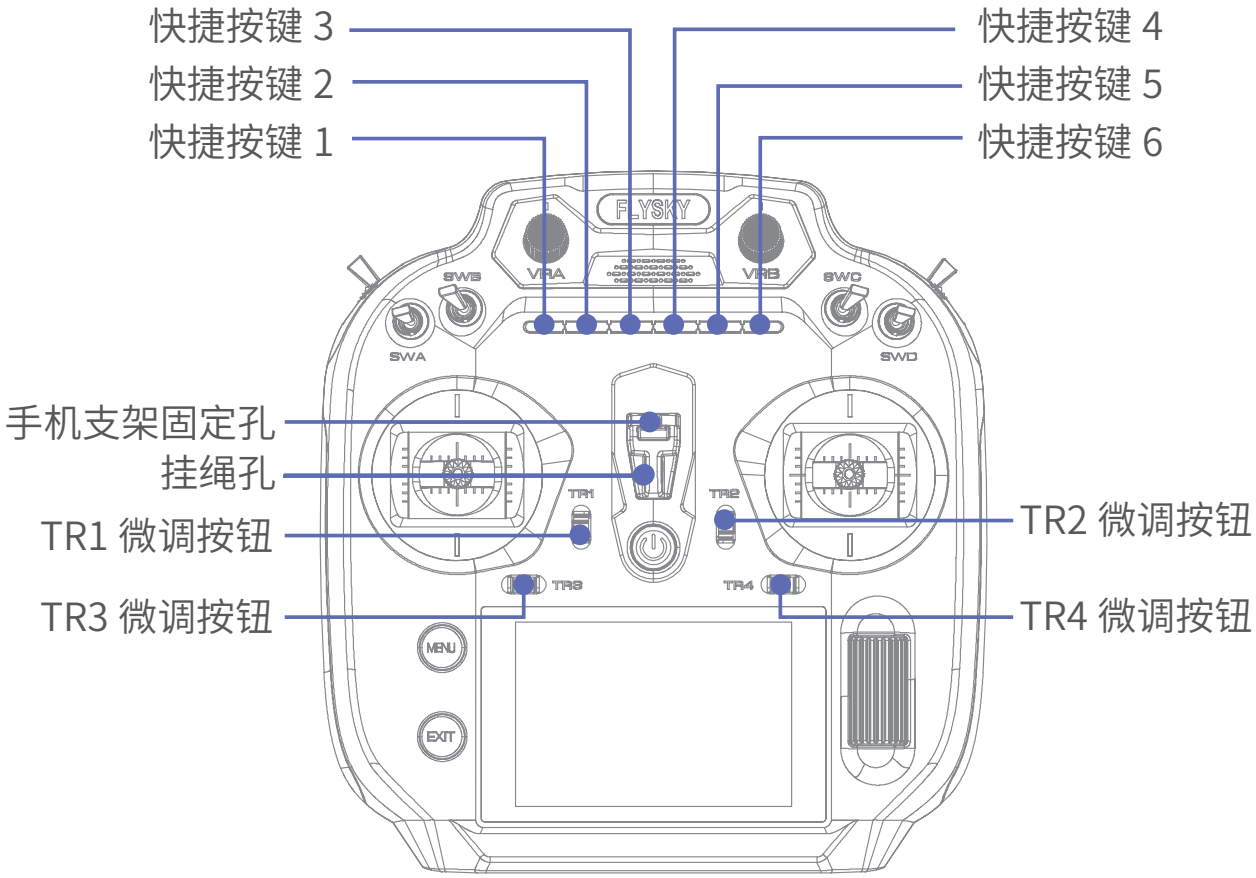
- 使用前必须确保本产品与模型安装正确，否则可能导致模型发生严重损坏。
- 关闭时，请务必先关闭接收机电源，然后关闭发射机。如果关闭发射机电源时接收机仍然在工作，将有可能导致遥控设备失控或者引擎继续工作而引发事故。
- 操控时，请先确认模型所有舵机的动作方向与操控方向一致。如果不一致，请调整好正确的方向。
- 当遥控距离持续较远时，有发生失控的可能。请适当缩短遥控的距离。

注意：使用类型不正确的电池可能发生爆炸风险，请妥善处理使用完的电池。

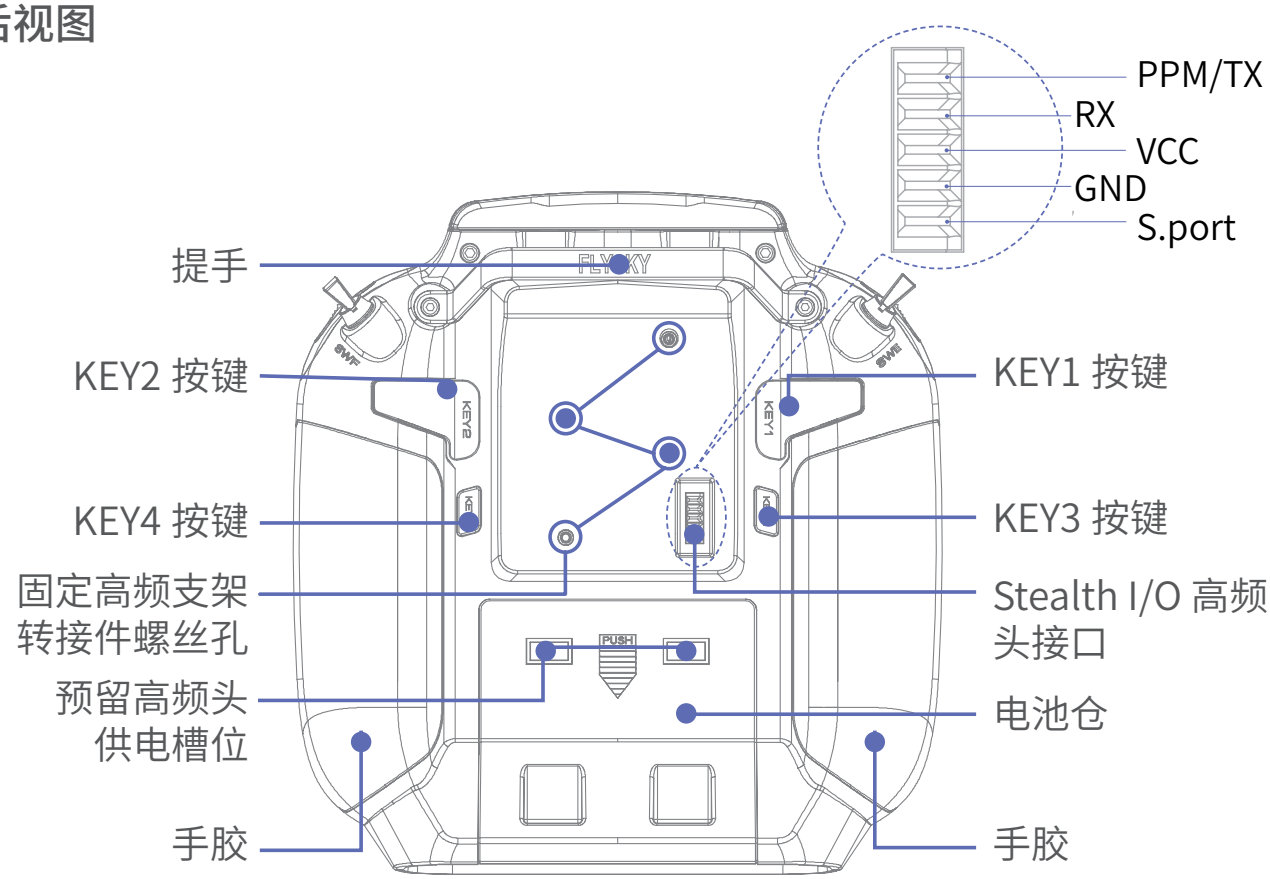
发射机概览

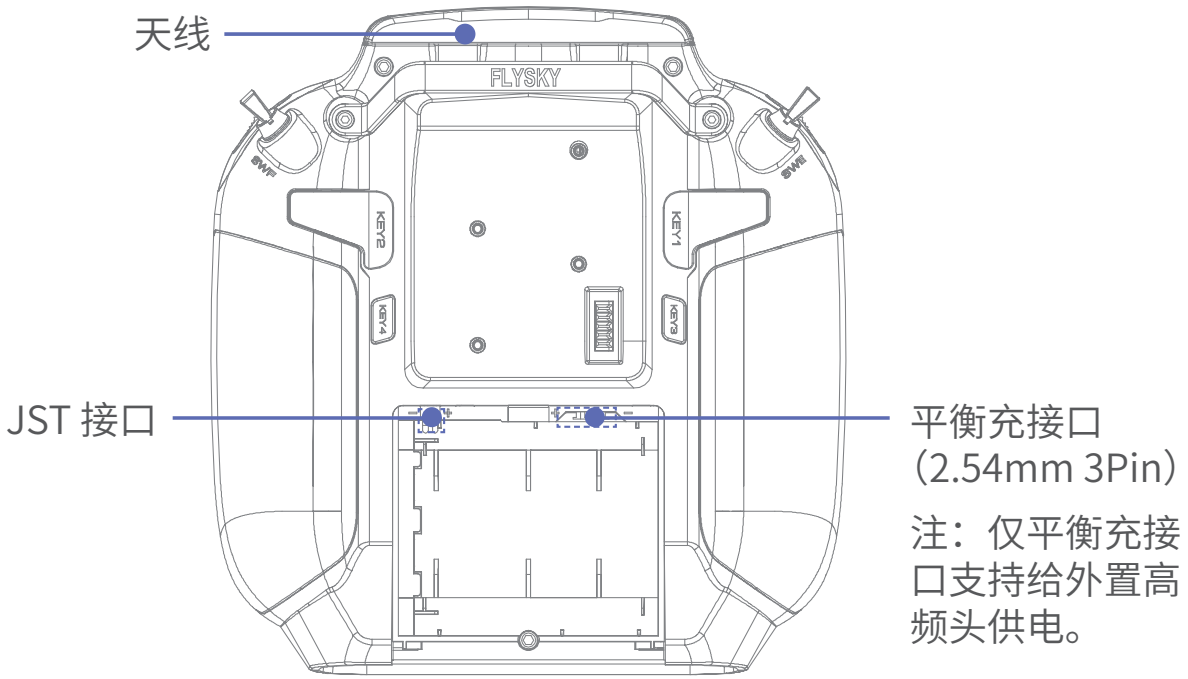
前视图



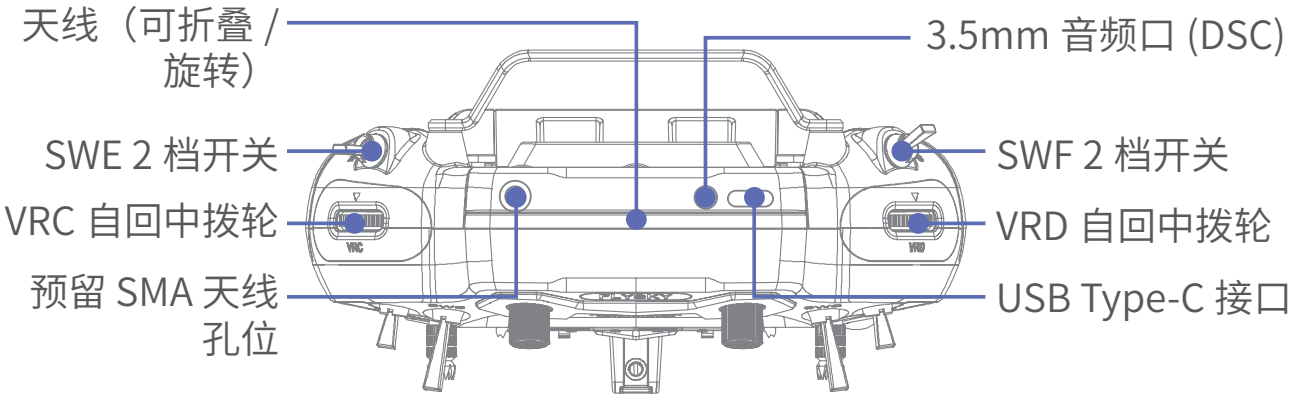

快捷按键 3
快捷按键 2
快捷按键 1
快捷按键 4
快捷按键 5
快捷按键 6
手机支架固定孔
挂绳孔
TR1 微调按钮
TR3 微调按钮
TR2 微调按钮
TR4 微调按钮
FLYSKY
VRA
VRB
SWA
SWB
SWC
SWD
TR1
TR2
TR3
TR4
MENU
EXIT

后视图

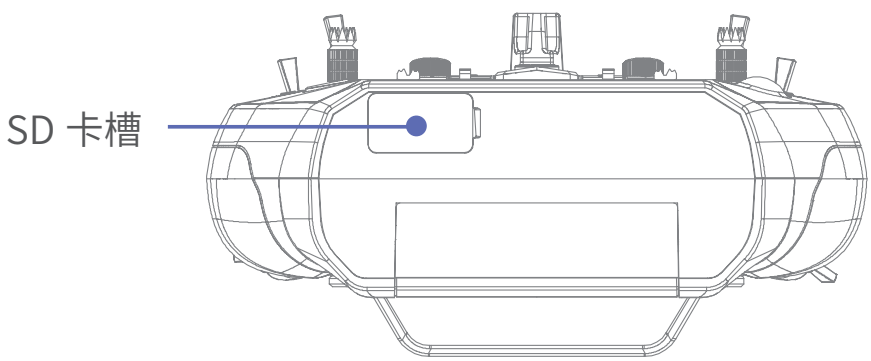

PPM/TX
RX
VCC
GND
S.port
提手
KEY2 按键
KEY4 按键
固定高频支架
转接件螺丝孔
预留高频头
供电槽位
手胶
KEY1 按键
KEY3 按键
Stealth I/O 高频
头接口
电池仓
手胶
FLYSKY
SWF
SWE
KEY2
KEY1
KEY4
KEY3
PUSH


天线
JST 接口
平衡充接口
(2.54mm 3Pin)
注：仅平衡充接口支持给外置高频头供电。

顶视图


天线（可折叠 / 旋转）
SWE 2 档开关
VRC 自回中拨轮
预留 SMA 天线孔位
3.5mm 音频口 (DSC)
SWF 2 档开关
VRD 自回中拨轮
USB Type-C 接口

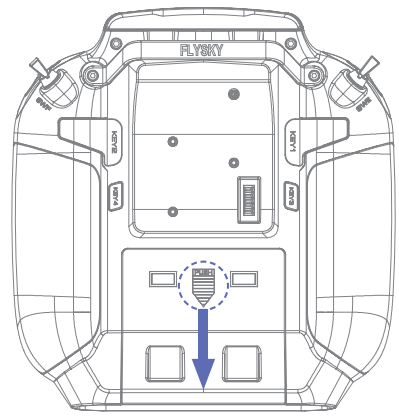
底视图


SD 卡槽

18650 电池安装

请按照以下步骤安装 18650 电池：

1. 打开电池仓盖（如图所示）；
2. 将 2 颗电池按标注的极性方向装入 18650 电池座内；
3. 盖好电池仓盖。



按住此处并沿箭头所示方向滑动，取下电池仓盖。

LiPo 锂电池安装

本发射机支持连接电池导线为 JST 接口或平衡充接口的 2S 锂电池，请按照以下步骤安装锂电池：

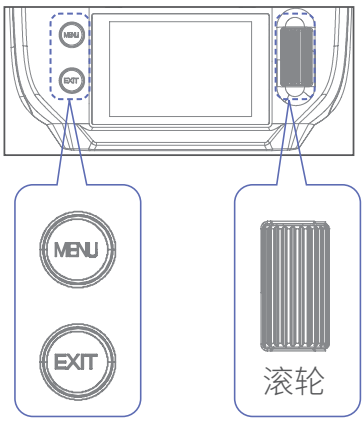
1. 打开电池仓盖；
2. 用十字螺丝刀取下固定 18650 电池座的两颗螺丝，然后取下电池座；
3. 将 2S 锂电池放入电池仓内；
4. 将电池导线接入 JST 接口或平衡充接口；
5. 盖好电池仓盖，注意避免夹到电池导线。

注：

1. 仅平衡充接口能够用于充电。
2. 当安装电池后，才能使用 USB Type-C 线连接发射机的 USB Type-C 接口供电。
3. 仅平衡充接口支持给外置高频头供电。

控件介绍（MENU 按键 /EXIT 按键 / 滚轮）

以下是 MENU 按键、EXIT 按键和滚轮相关功能介绍。



MENU 按键

- 首页下，短按 MENU 按键进入主菜单界面；
- 非首页下，短按 MENU 按键可返回首页，但弹窗状态或发射机固件更新过程中则不能返回首页。

EXIT 按键

- 首页下，短按 EXIT 按键进入副首页；
- 首页下，长按 EXIT 按键 2 秒锁住屏幕；再次长按 EXIT 按键即解除锁屏；
- 非首页下，短按 EXIT 按键返回到上一级界面或退出编辑状态。

滚轮

- 首页 / 副首页 / 主菜单 / 功能界面下，滚动滚轮选择功能项，短按滚轮进入功能项；
- 功能项设置状态下，滚动滚轮调节参数项；快速滚动滚轮可快速调节；短按滚轮保存设置并退出设置状态；
- 功能界面下，长按滚轮 2 秒复位当前页面功能的所有数据至默认值；
- 功能项设置状态下，若只有两个功能参数，短按滚轮可切换设置。

开机

请按照以下步骤开机：

1. 检查系统状态，确保电池电量充足且安装正确；
2. 长按 ⏻（电源键），依如下屏幕提示操作至开机成功。
   - 若内置高频模块未被检测到或需要更新，系统将提示弹窗。请根据弹窗提示操作即可。

- 开关是否位于安全位置 (控件红色底表示位置需调整)。请根据提示检查控件位置，并按照提示将其拨至正确位置；
- 系统会弹窗提示当前模型是否设置失控保护。若要关闭失控保护设置提示选 [否] 或通过 [系统设置] 关闭“失控保护提示”。
- 若未安装电池的状态下，使用 USB Type-C 接口供电开机，系统会弹窗提示“请安装电池后再使用遥控器！”

关机

请按照以下步骤开机：

1. 先断开接收机电源；
2. 长按 ⏻（电源键），直至屏幕熄灭，表示关机。

关闭发射机之前，请务必先断开接收机电源，然后关闭发射机。如果强行关闭发射机，将会导致遥控设备失控，失控保护设置不合理可能引起事故。

LED

本发射机 LED 有电源指示灯（位于 ⏻ 按键）、主氛围灯（位于总成座周围）及副氛围灯（位于快捷按键 1~6）。

电源指示灯

可设置发射机在正常开机状态下时，打开或关闭**电源指示灯**。默认开。

功能设置：

1. 首页下，短按 MENU 按键进入主菜单界面；
2. 滚动滚轮选择 [系统设置]，短按滚轮进入系统设置界面；
3. 选择 [设置]，短按滚轮进入设置界面；
4. 选择 [电源灯]，短按滚轮切换 [关] 或 [开]；
5. 短按 EXIT 按键返回上一级界面。

主氛围灯

设置主氛围灯颜色类型和亮度等级。可设置是否关闭主氛围灯、可设置为电量指示或油门指示，以及设置氛围灯颜色和亮度等级。

- 电量指示：灯为绿色时，代表电池电压≥报警值；低于报警值则为红色。
- 油门指示：灯为蓝色时，代表摇杆位于油门中位范围内， 其他位置为蓝色渐变红色。
- 氛围灯颜色：可设置为 [红色]、[绿色]、[蓝色]、[黄色]、[青色]、[紫色]、[白色] 或 [炫彩]。
- 亮度等级：默认 50%，调节范围 10%-100%。

功能设置：

1. 通过首页 > 主菜单 >[系统设置]>[设置] 选择 [主氛围灯]，短按滚轮进入下一级界面；
2. 选择合适的功能项 , 短按滚轮确认，短按 EXIT 按键返回上一级界面；
3. 选择亮度项 , 短按滚轮，然后滚动滚轮设置合适的数值，短按滚轮即保存设置。

副氛围灯

副氛围灯功能同主氛围灯的功能，相关功能描述请参考主氛围灯部分。

摇杆校准

当控件（左摇杆和右摇杆、VRA 和 VRB 旋钮、VRC 和 VRD 自回中拨轮）发生机械性偏离，如回中或最大 / 最小行程出现偏差时，使用此功能修正。出厂默认校准完成，当需要再次校准时，当需要再次校准，则按如下步骤：

1. 通过首页 > 主菜单 >[系统设置] 选择 [摇杆校准]，短按滚轮，在弹出的界面上选择 [是]， 短按滚轮即进入校准界面；
2. 按照提示将未在中心位置的控件移至中心位置，短按滚轮；
3. 将需要校准的控件分别打到最大 / 最小行程，短按滚轮退出校准界面即校准成功。

   若校准失败，系统弹出校准失败提示界面，滚动滚轮选 [否] 后，短按滚轮可重新校准；选 [是]，短按滚轮退出摇杆校准。

失控保护

当接收机无法正常收到发射机的信号时，接收机按设置好的失控保护值进行通道输出以保护模型和操作人员的安全。

失控保护判断时间

用于设置失控保护判断时间。设置范围为 250ms~1000ms。默认 300ms。

功能设置：

1. 通过首页 > 主菜单 >[接收机设置] 选择 [失控保护]，短按滚轮进入失控保护界面；
2. 选择 [失控保护判断时间]，根据需要设置合适的数值，短按滚轮确认。

对于 i-BUS/PPM/PWM 信号，可将失控保护设置为 [未设置]、[无输出] 或 [有输出]。

[未设置]：表示未设置失控保护值，失控后无信号输出。

[无输出]： i-BUS/PPM/PWM 通道接口为无输出状态；

[有输出]：i-BUS/PPM/PWM 通道接口输出设置的固定值。 即通道 1~16 分别设置一个失控保护的固定值，默认为读取当前通道的输出值。

功能设置：

1. 通过首页 > 主菜单 >[接收机设置] 选择 [失控保护]，短按滚轮进入失控保护界面；
2. 选择 [i-BUS/PPM/PWM 输出]；
3. 设置所有通道失控保护值；
   - 选择 [有输出] ，短按滚轮，系统弹出提示界面；

- 然后将所有通道所对应的控件拨到需要的位置并保持；
- 选择 [是]，短按滚轮，所有通道失控保护设置完成。

4. 若需要继续设置单独通道失控保护值；
   - 选择要设置的通道，短按滚轮；
   - 选择合适的数值或将对应的控件拨到需要的位置并保持，短按滚轮，即保存设置。

注：

1. 因为 S.BUS 信号包含失控标志位，所以接收机可通过失控标志位将“失控状态”信息传递到后续设备，而无需通过 [无输出] 状态传递（后续设备通过解析失控标志位信息做出相应地应对即可）；
2. 对于无失控标志位的信号 PWM/PPM/i-BUS，支持设置失控时信号 [无输出]，通过 [无输出] 状态将“失控状态”信息传递给后续设备；
3. 失控保护出厂默认 [未设置]，失控后的接收机无有效信号输出。

对码

本发射机和接收机在出厂前已对码成功。若需使用其他的接收机，请按照如下步骤进行对码。本发射机支持双向对码与单向对码，默认双向，双向对码完成后发射机将显示接收机回传的信息。对码前需先根据实际应用场景设置 [RF 系统]、[高频标准]、[输出模式] 和 [响应速度]。

[RF 系统]：提供两种模式，包括 Routine 与 Fast。对于 [Routine]，抗他机干扰性能强。而 [Fast]，抗本机共存性能强 , 延时更低，且功耗低。

[高频标准]：选择 RF 协议，可选 [ANT 单向] 或 [ANT 双向]。

[输出模式]：提供两种组合输出模式，分别是 PWM/S.BUS，PPM/i-BUS，PWM/i-BUS，PPM/S.BUS 四种输出模式，根据需要做选择即可。

以 FS-ST16 发射机与 FS-SR8/FS-SR8A 接收机对码为例：

- 当 [输出模式] 设置为 PWM/S.BUS 时，CH1 等接口输出 PWM 信号，SERVO 接口输出 S.BUS 信号。
- 当 [输出模式] 设置为 PPM/i-BUS 时，CH1 接口输出 PPM 信号，其他通道接口无输出，SERVO 接口输出 i.BUS 信号。
- 当 [输出模式] 设置为 PWM/i-BUS 时，CH1 等接口输出 PWM 信号，SERVO 接口输出 i.BUS 信号。
- 当 [输出模式] 设置为 PPM/S.BUS 时，CH1 接口输出 PPM 信号，其他通道接口无输出，SERVO 接口输出 S.BUS 信号。

注：无论接收机 [输出模式] 被设置为哪种类型，SENS 接口将输出 i-BUS-in 信号。

[响应速度]：设置通道输出控制舵机频率，可选 [数字舵机]、[模拟舵机] 和 [其它]。

以上设置后，依以下步骤完双向对码：

1. 选择 [开始]，短按滚轮，发射机即进入对码状态；
2. 使接收机进入对码状态；
3. 当接收机 LED 灯变为常亮时，表示对码成功；
4. 检查发射机、接收机是否正常工作。如需重新对码，请重复以上步骤。

注：

1. 当发射机是 ANT 单向模式进入对码状态时，接收机 LED 灯变为慢闪后将发射机退出对码状态，此时接收机 LED 灯常亮，表示对码成功。
2. 不同的接收机对码方式不同，具体对码方式请访问 FLYSKY 官网查询接收机说明书或其他相关资料。

▸ 固件更新

让发射机进入固件更新状态。当使用固件更新程序更新时，需要先通过此功能，让发射机进入更新状态后，然后通过固件更新程序执行更新。

⚠警告	• 当固件正在更新时请勿断开 USB Type-C 线。

固件更新可通过如下两个途径完成。

- 可使用“遥控管家”进行更新（富斯遥控管家固件可从官网 www.flyskytech.com 获取）；
- 或通过如下步骤更新：

1. 下载并打开最新的官方固件；
2. 将发射机通过 USB Type-C 线与电脑连接；
3. 选择首页 > 主菜单 >[系统设置] 选择 [固件更新]，短按滚轮，界面弹出提示更新提示界面，选择 [是]，短按滚轮即可进入更新状态，此时电源指示灯快闪；
4. 完成以上步骤后，在电脑端，点击 [Update] 后开始更新；
5. 更新完成后，发射机将会自动退出更新状态，重新开机。（断开 USB Type-C 线连接，并关闭电脑端固件）。

⚠注意	• 系统更新完成后可能会导致接收机无法连接，此时需要更新接收机固件。

更新接收机固件

FS-SR8/FS-SR8A 接收机固件更新需通过富斯遥控管家（FlySkyAssistant）完成（仅 3.0 及以上版本支持，富斯遥控管家固件可从官网 www.flyskytech.com 获取）。

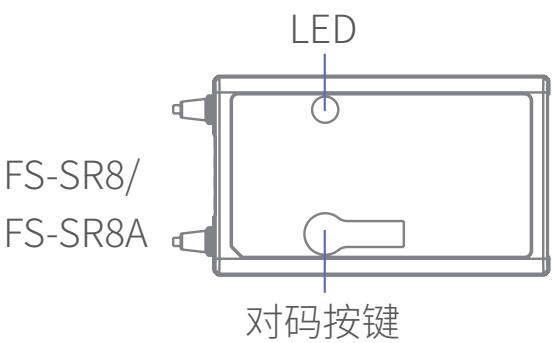
本接收机可以通过以下两种方式进入更新：

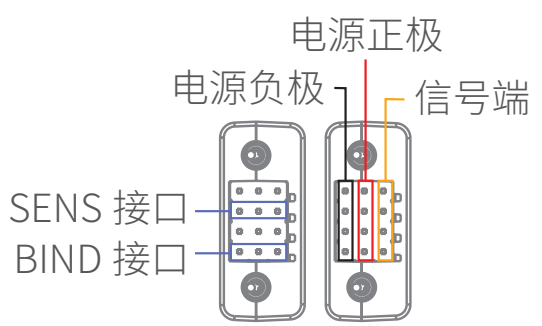
方式一：先将发射机与接收机对码后（接收机 LED 灯常亮），再将发射机与电脑连接，然后在电脑端打开富斯遥控管家，通过富斯遥控管家进行固件更新；

方式二：将发射机与电脑连接，参考如下方式使接收机进入强制更新状态（接收机 LED 灯状态三闪一灭），然后在电脑端打开富斯遥控管家，通过富斯遥控管家进行固件更新。

进入强制更新状态的操作方式有如下三种方式：

- 按下对码按键，接收机通电，十秒钟后接收机 LED 灯状态三闪一灭，然后松开对码按键 。
- 先给接收机通电，长按对码键十秒后接收机 LED 灯状态三闪一灭，然后松开对码按键。
- 先将接收机 BIND 接口信号端和 SENS 接口信号端相连接，然后接通接收机电源。





注：不同接收机进入强制更新状态方式不同，请参考具体接收机的说明书。

- **关于 FS-ST16 发射机的更多操作请阅读使用说明书。**

产品规格

- 产品型号：FS-ST16
- 适配接收机：FS-SR8/FS-SR8A 等 ANT 协议接收机
- 通道个数：16
- 无线频率：2.4GHz ISM
- 发射功率：小于 20dBm
- 无线协议：ANT
- 通道分辨率：4096 级
- 数据接口：USB Type-C、3.5mm 音频口 (DSC）、SD 卡槽
- 天线类型：双天线（内置单天线 + 外置折叠天线）
- 输入电源：6~9V/DC；18650*2PCS/2S LiPo
- 显示方式：3.5 英寸 320*480 全点阵彩色非触摸 IPS 显示屏
- 固件更新：支持
- 温度范围：-10°C ～ +60°C
- 湿度范围：20% ～ 95%
- 机身颜色：黑色
- 系统语言：中文或英文
- 外形尺寸：224.1*180*101.3mm
- 机身重量：665g
- 充电接口：有（USB Type-C 接口）
- 认证：CE，FCCID: 2A2UNST1600

FLYSKY

微信公众号

Bilibili

Website

Facebook

Http://www.flysky-cn.com

Release date: 2025-09-20

FCC ID: 2A2UNST1600

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