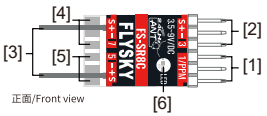
FLYSKY FS-SR8C 接收机 Receiver

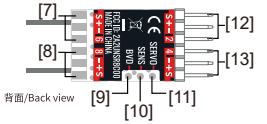
产品介绍 Introduction

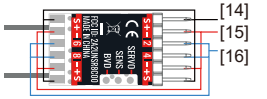
FS-SR8C 是一款采用 ANT 协议支持 8 个 PWM 通道信号输出的微型接收机。它具有扣式双天线，支持双向传输和回传功能，设计小巧，可适配多种模型使用。本款接收机还提供了 DIY 配件，以满足不同的需求。

FS-SR8C is a mini receiver in compliance with the ANT protocol, supporting the output of 8 PWM channels signals.It has two buckle-type antennas, supporting bi-directional transmission and transfer-back function. Featuring the compact design, FS-SR8C can be adapted for a variety of models. DIY accessories are available for the receiver, to meet user different needs.

接收机概览 Overview







[1] CH1 通道接口 /PPM
[2] CH3 通道接口
[3] 天线
[4] CH7 通道接口
[5] CH5 通道接口
[6] LED 灯
[7] CH6 通道接口
[8] CH8 通道接口
[9] BVD 线焊点
[10]SENS 信号端焊点
[11] SERVO/S.BUS 信号端焊点
[12] CH2 通道接口
[13] CH4 通道接口
[14] S(信号端)
[15] +(电源正极)
[16] - (电源负极)
[17] 焊接头
[18] BVD 线
[19] 接电池正极

[1] CH1/PPM
[2] CH3
[3] Antennas
[4] CH7
[5] CH5
[6] LED
[7] CH6
[8] CH8
[9] BVD cable welding point
[10] SENS signal welding joint
[11] SERVO signal welding joint
[12]CH2
[13] CH4[14] Signal pin
[15] + (Power anode)
[16] - (Power cathode)
[17] Welding joint
[18] BVD cable
[19] Connect to battery anode

DIY 配件介绍:

BVD 检测线：当需要使用 BVD 功能检测电压时，先将 BVD 线的焊接头端（左图 [17] 位置） 焊接到接收机的 BVD 焊点处（左图 [9] 位置） ， 即可使用 BVD 功能检测电压。

注：

1. 使用 BVD 功能时，需要将检测的电池负极与接收机电源负极（左图 [16] 位置）相连；
2. BVD 电压检测范围： 0~70V 。

两组通道接口插针（对应通道 5、6、7 和 8）：当需要使用 4 个以上通道时，将相应的插针焊接到接收机预留的通道位置处即可。

注：SENS 信号端焊点或 SERVO/S.BUS 信号端焊点：当需要使用 i-BUS 传感器或通过 i-BUS 总线信号扩展通道时，先将信号线焊接到接收机预留的位置处 [10]，再将电源线分别连接接收机电源正负极（左图 [15] 和 [16] 位置）。

请注意焊接完毕后，用新的热缩套管套住电路板，以防止使用过程中接触金属而造成短路！

DIY accessories:

BVD cable: When you need to use the BVD function to detect voltage, first weld the BVD cable welding joint end (in the left figure [17]) to the receiver's BVD welding point (in the left figure [9]). Then you can use the BVD function to detect voltage.

Notes:

1. When using the BVD function, connect the negative terminal of the detected battery to the receiver's power cathode (in the left figure [16]) .
2. BVD voltage detection range: 0 – 70 V.

Two sets of channel interface pins (corresponding to channels 5, 6, 7 and 8): When more than 4 channels need to be used, the corresponding pins can be welded to the reserved channel of the receiver.

Note：When it is necessary to use i-BUS sensors or extend channels through i-BUS bus, weld the signal wire to the reserved position in the receiver [10], and then connect the power cables to the anode and cathode on the receiver respectively [15] and [16] shown in the left figure.

It should be noted that you use a new heat-shrinkable sleeve to cover the circuit board to prevent from contacting with metal, so as to avoid a short circuit !

产品规格 Specifications

- 产品型号：FS-SR8C
- 适配发射机：ANT 协议发射机（如 FS-ST8）
- 适合机种：固定翼、三角翼、滑翔机或机器人等
- 通道个数：8
- 无线频率：2.4GHz ISM
- 发射功率：小于 20dBm
- 无线标准：ANT
- 通道分辨率：4096 级
- 天线类型：双天线 (ipex4)
- 遥控距离：> 800 米 (空旷无干扰空中距离)
- 输入电源：3.5~9V/DC
- 工作电流：70mA/5V
- 输出数据：PWM/PPM/i-BUS/S.BUS
- 在线更新：支持
- 温度范围：-10°C ～ +60°C
- 湿度范围：20% ～ 95%
- 外形尺寸：22*15*3mm（不含插针和天线）
- 机身重量：1g（不含插针和天线）
  2g（含 4*3Pin 插针和双天线）
- 认证：CE，FCC ID: 2A2UNSR8C00

- Product Name: FS-SR8C
- Compatible Transmitters: Adapts transmitters with ANT protocol, such as FS-ST8
- Compatible Models: Fixed-wing aircraft, delta-wing airplanes, gliders, or robots
- Numbers of Channel: 8
- RF: 2.4GHz ISM
- Maximum Power: < 20dBm (e.i.r.p.) （EU）
- 2.4G Protocol: ANT
- Resolution: 4096
- Antenna: Two antennas (ipex4)
- Distance: > 800m (Air distance without interference)
- Input Power: 3.5~9V/DC
- Working Current: 70mA/5V
- Data Output: PWM/PPM/i-BUS/S.BUS
- Online Update: Yes
- Temperature Range: -10°C ~ +60°C
- Humidity Limit: 20% ~ 95%
- Dimensions: 22*15*3mm (Excluding pins and antennas)
- Weight: 1g (Excluding pins and antennas)
  2g (Including 4*3 pins and two antennas)
- Certifications: CE, FCC ID: 2A2UNSR8C00

对码 Binding

本款接收机上电即自动进入对码状态，即每次上电后，接收机等待 1 秒，若与发射机没有建立连接，即进入对码状态，若接收机进入对码状态 10S 内未与发射机对码成功，则退出对码状态。如之前与发射机成功对码（建立连接），则退出对码状态后，继续等待与已对码的发射机建立连接。

- 当本接收机与发射机完成对码使用时，请先打开发射机再打开接收机，若先打开接收机，此时若有同类发射机处于对码状态，则可能会被错误对码，请小心避开！

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对码 Binding

接收机支持双向对码和单向对码（双向对码完成后发射机将显示接收机回传的信息），因此对码前需先在发射机端设置单向或双向对码。如需对码接收机与发射机，对码步骤如下所述。

双向对码步骤：

1. 发射机选择双向通信，然后进入对码状态；
2. 接收机上电进入对码状态，接收机 LED 灯快闪；
3. 接收机 LED 灯常亮，即对码成功，发射机对码成功后自动退出对码状态，对码完成；
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。

单向对码步骤：

1. 发射机选择单向通信，然后进入对码状态；
2. 接收机进入对码状态，此时接收机 LED 灯快闪；
3. 接收机 LED 灯慢闪，即对码成功。发射机则需手动将其退出对码状态，接收机 LED 灯常亮，对码完成；
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：对码时请先将发射机进入对码状态，再将接收机进入对码状态；若 10S 内对码没有完成，接收机退出对码状态，LED 灯进入慢闪状态。

The receiver automatically enters the bind state upon power-on. That is, the receiver waits for 1 second after power-on, it enters the binding state if no connection is established with the transmitter. If the receiver enters the binding state and fails to bind with the transmitter within 10 seconds, it exits the bind state. If the receiver has succeeded in binding with the transmitter earlier (established a connection), it will continue to wait for a connection with the transmitter after the exit of the bind state.

- When this receiver and the transmitter complete the binding, please turn on the transmitter and then the receiver. If you turn on the receiver first, there may be a wrong binding at this time when there is a similar transmitter in the bind state. Please bear this in mind.

The receiver supports two -way binding and one-way binding. The transmitter will display the information returned from the receiver after the two-way binding is completed. The receiver automatically enters the binding state once it is powered on, set to Two way or not at the transmitter side first before starting binding.

Follow the steps below to bind in two-way binding:

1. At the transmitter side, set Two way in Bind setting menu, then put the transmitter into bind mode.
2. After the receiver is powered on, it will automatically enter the binding mode if it is not connected to the transmitter in 1 second.
3. When the LED of the receiver is solid on, the binding process should be completed. The transmitter exits the bind mode automatically.
4. Check to make sure the transmitter and receiver functions are working correctly, repeat steps 1 to 3 (binding process) if any problems arise.

Follow the steps below to bind in one-way binding:

1. At the transmitter side, set One way in Bind setting menu, then put the transmitter into bind mode.
2. Put the receiver into bind mode (Refer to the description for Two way binding above).
3. When the LED of the receiver is in slow flashing state, the binding process should be completed. You need to manually put the transmitter to exit the bind mode. Then the LED of the receiver is solid on, indicating that the binding is completed.
4. Check to make sure the transmitter and receiver functions are working correctly, repeat steps 1 to 3 (binding process) if any problems arise.

Note: Put the transmitter into bind mode first, then put the receiver into bind mode. If the binding is not completed within ten seconds, the LED of the receiver will enter its slow flashing state.

固件更新 Firmware update

本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.flysky-cn.com 获取）。

本接收机可以通过以下两种方式进入更新：

1. 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；
2. 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如下：

   - 先将接收机 CH3 和 CH4 通道的信号端相连接，然后给接收机通电。

The firmware of this receiver can be updated through the FlyskyAssistant (Only version 3.0 or above is supported. The firmware of FlyskyAssistant is available on the Flysky official website).

This receiver can be updated via the following two ways:

1. 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.
2. Connect the transmitter to the computer. Then put the receiver to enter the forced update mode by referring to the following way (The LED of the receiver operates in three-flash-one-off manner repeatedly). Afterwards, open the FlyskyAssistant on the computer to update the firmware.

- Connect the signal pin of the CH3 to the signal pin of the CH4 first, then power on the receiver.

失控保护 Failsafe

失控保护功能用于在接收机失去信号不受控制后，接收机按设置好的失控保护值进行通道输出以保护模型及人员安全。

本款接收机共支持两种失控保护模式：[无输出] 和 [有输出]

[无输出] PWM 通道接口为无输出状态；

[有输出] 输出设置的固定值。

注：1. 对于 PPM/i-BUS/S.BUS 等总线信号类型不允许单个或其中几个通道为 [无输出] 模式，通道设置为 [无输出] 模式时，实际信号是保持最后输出值；

2. 因 S.BUS 信号信息包含失控标志位，各通道失控保护设置被失控标志位传达给后续设备，若连接的设备支持失控标志位解析，则失控后，输出各通道设置的失控保护值；

3. 对于无失控标志位的信号 PPM/i-BUS，支持设置失控时信号 [无输出] 模式。设置为 [无输出] 模式后，不管各通道失控保护如何设置，失控后各通道均为 [无输出] 模式。

The failsafe function is used to output the channel value according to the out-of-control protection value set by the user after the receiver loses its signal and is out of control to protect the model and personnel.

It can also be set failsafe for each channel respectively. This receiver supports two failsafe modes: **ON** and **OFF**

OFF It is no output for the interface of PWM.

ON Outputs the failsafe values set for each channel.

Notes:

1. For bus signal types such as PPM/i-BUS/S.BUS, a single or several of these channels are not allowed to be in **OFF** mode. The actual signal is held at the last output value when the channel is set to **OFF** mode.
2. Because the S.BUS signal information contains failsafe flag bits, the failsafe settings of each channel are communicated to subsequent devices by the failsafe flag bits. If the connected devices support the failsafe flag bit analysis, the failsafe values set for each channel are output after out of control.
3. For the signal PPM/i-BUS without failsafe flag bits, it supports the setting of the signal to **OFF** mode in case of out of control. After setting to **OFF** mode, regardless of the setting of the failsafe of each channel, each channel will be in **OFF** mode after out of control.

注意事项：

- 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，将会导致遥控设备失控。失控保护设置不合理可能引起事故。
- 确保接收机安装在远离电机，电子调速器或电子噪声过多的区域。
- 接收机天线需远离导电材料，例如金属棒和碳物质。为了避免影响正常工作，请确保接收机天线和导电材料之间至少有 1 厘米以上的距离。
- 准备过程中，请勿连接接收机电源，避免造成不必要的损失。

Attentions:

- Make sure the product is installed and calibrated correctly, failure to do so may result in serious injury.
- Make sure the receiver's battery is disconnected before turning off the transmitter, failure to do so can result out of control. Unreasonable setting of the Failsafe may cause accidents.
- Make sure the receiver is mounted away from motors, electronic speed controllers or any device that emits excessive electrical noise.
- Keep the receiver's antenna at least 1cm away from conductive materials such as carbon or metal.
- Do not power on the receiver during the setup process to prevent loss of control.

认证相关 Certification

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, [Flysky Technology co., ltd] declares that the Radio Equipment [FS-SR8C] is in compliance with RED 2014/53/EU.
The full text of the EU DoC is available at the following internet address: www.flysky-cn.com.

RF Exposure Compliance

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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.

FCC ID: 2A2UNSR8C00

本说明书中的图片和插图仅供参考，可能与实际产品外观有所不同。 产品设计和规格可能会有所更改，恕不另行通知。
Figures and illustrations in this manual are provided for reference only and may differ from actual product appearance. Product design and specificatiions may be changed without notice.

Manufacturer：ShenZhen FLYSKY Technology Co.,Ltd
Address: 16F, Huafeng Building, No. 6006 Shennan Road, Futian District, Shenzhen, Guangdong, China

http://www.flysky-cn.com