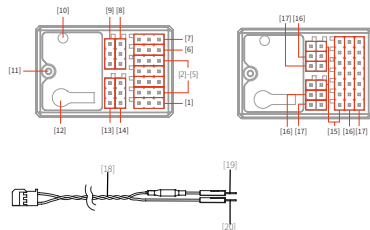


产品介绍 Introduction

FS-R7P 是一款采用 ANT 通信协议，提供 7 通道的接收机，外置单天线，输出 PWM 或 PPM/i-BUS/S.BUS 信号，设计小巧紧凑，可适配多种模型车和模型船使用。

FS-R7P based on ANT protocol is a receiver which provides seven channels. It has an external single antenna, can output PWM or PPM/i-BUS/S.BUS signal. It has a compact design. It can be adapted to various model cars or boats.

接收机概览 Overview



[1] CH1/P	[10] LED 指示灯	[16] + (电源正极)
[2]-[5] CH2- CH5	[11] 天线	[17] - (电源负极)
[6] 对码接口	[12] 对码按键	[18] BVD 功能配件
[7] BVD/VCC(电池电压检测 / 供电接口)	[13] 传感器接口	[19] 接电池正极
[8] CH7	[14] CH6	[20] 接电池负极
[9] SERVO	[15] 信号端	

注：BVD 电压检测范围：0-70V Note: BVD voltage detection range: 0-70V

产品规格 Specifications

- 产品型号：FS-R7P
- 适配发射机：FS-G7P (支持 ANT 协议发射机)
- 适配模型：车、船
- 通道个数：7
- 无线频率：2.4GHz ISM
- 发射功率：<20dBm
- 天线类型：单天线
- 遥控距离：≥ 300 米 (地面)
- 无线标准：ANT (蚂蚁版自动跳频数字系统)
- 通道分辨率：1024 级
- 数据输出：PWM/PPM/i-BUS/S.BUS
- 输入电源：3.5 ~ 9V/DC
- 工作电流：≤ 90mA/5V
- 在线更新：支持
- 温度范围：-10°C ~ +60°C
- 湿度范围：20% ~ 95%
- 防水等级：PPX4
- 外形尺寸：35.0mm*23.3mm*13.3mm
- 机身重量：8.0g
- 认证：CE, FCC ID: N4ZR7P00

- Product Name: FS-R7P
- Adaptive transmitter: FS-G7P (Adapts transmitters with ANT protocol)
- Adaptive Models: Cars or boats
- Numbers of Channels: 7
- RF: 2.4GHz ISM
- Maximum Power: <20dBm (e.i.r.p.) (EU)
- Antenna: Single antenna
- Distance: ≥ 300m (ground)
- 2.4G Protocol: ANT
- Resolution: 1024
- Data Output: PWM/PPM/i-BUS/S.BUS
- Input Power: 3.5 ~ 9V/DC
- Operating Current: ≤ 90mA/5V
- Online Update: Yes
- Temperature Range: -10°C ~ +60°C
- Humidity Limit: 20%-95%
- Waterproof: PPX4
- Dimensions: 35.0mm*23.3mm*13.3mm
- Weight: 8.0g
- Certification: CE, FCC ID: N4ZR7P00

接口介绍 Interface Introduction

CH1~CH7: 输出标准的 PWM 信号 (CH1 接口，还支持输出 PPM 信号)。连接舵机或其他各部件；
BVD/VCC: BVD 电压检测时用于连接 BVD 功能件，正常操作时用于连接电源线；
BIND: 对码时用于连接对码线；
SENS: 用于连接 i-BUS 传感器；
SERVO: 支持 i-BUS/S.BUS 信号输出，支持 i-BUS 通道扩展。

CH1~CH7: To output PWM signal (Additional, CH1 can output PPM signal). Can be connected to the servos, or other compatible components.

BVD/VCC: During the battery voltage detecting process, a BVD harness is connected here. During normal operation, the power is applied to this interface.

BIND interface: During the binding process, a bind cable is connected to this interface.

SENS interface: For connecting i-BUS sensors.

SERVO interface: To output i-BUS or S.BUS signal, and support channel expansion in i-BUS type.

对码 Binding

本款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。

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. 本接收机支持三种方式进入对码状态：按键对码、对码线对码和通电后按键对码
 - 按键对码：按住接收机对码按键同时上电，接收机 LED 灯快闪表示进入对码状态，松开对码键；
 - 对码线对码：Bind 接口连接对码线后上电，接收机 LED 灯快闪，进入对码状态。注意对码成功后需取下对码线；
 - 通电后按键对码：接收机上电后未与发射机通信过，长按对码键 3 秒，接收机指示灯快闪表示进入对码状态，松开对码键。
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。

对码 Binding

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. 本接收机进入对码状态 (进入对码状态的方式请参考双向对码时描述);
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, 若十秒内对码没有完成, 接收机 LED 指示灯进入慢闪状态。

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.

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

1. Select [ANT 2 WAY] for RF standard of the transmitter, then put the transmitter in bind mode.
2. The receiver supports three ways to enter bind mode: BIND button binding, bind cable binding and BIND button binding after power-on.
 - BIND button binding: Press and hold the BIND button of the receiver while powering on the receiver, the LED of the receiver should be flashing, indicating that the receiver is in bind mode. Then release the BIND button.
 - Bind cable binding: Insert the bind cable to the BIND interface of the receiver, then power on the receiver. The LED of the receiver should be flashing, indicating that the receiver is in bind mode. Note that you need to remove the bind cable from the receiver after the binding process is completed.
 - BIND button binding after power-on: The receiver has not been connected to the transmitter when it is powered on. Press and hold the BIND button for 3 seconds, the LED of the receiver should be flashing, indicating that the receiver is in bind mode. Then release the BIND button.
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. Select [ANT 1 WAY] for RF standard of the transmitter, then put the transmitter in bind mode.
2. Put the receiver in bind mode (Refer to the description above for entering bind mode).
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 in bind mode first, then put the receiver in 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有如下三种方式:
 - 按下对码按键, 上电十秒钟后接收机 LED 灯状态三闪一灭, 松开对码按键。
 - 先给接收机上电, 长按对码键十秒后接收机 LED 灯状态三闪一灭, 松开对码按键。
 - 先将对码线连接到接收机 CH4 和 CH6 信号端, 然后接通接收机电源。

The firmware of this receiver is 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 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.
 - 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 bind cable to the signal pins of the CH4 and CH6, 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 [No output] mode. The actual signal is held at the last output value when the channel is set to [No output] 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 [No output] mode in case of out of control. After setting to [No output] mode, regardless of the setting of the failsafe of each channel, each channel will be in [No output] 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 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, [Flysky Technology co., ltd] declares that the Radio Equipment [FS-R7P] 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: N4ZR7P00

Manufacturer: FLYSKY Technology Co., Ltd

Address: 16F, Huafeng Building, 6006 Shennan Road, Futian District, Shenzhen

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Figures and illustrations in this manual are provided for reference only and may differ from actual product appearance. Product design and specifications may be changed without notice.

<http://www.flysky-cn.com>

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