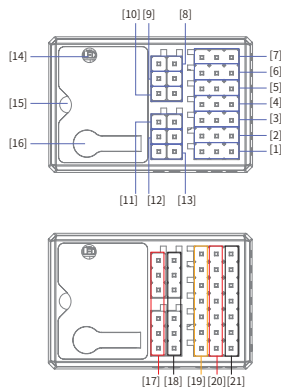


产品介绍 Introduction

FS-R7D 是一款采用 ANT 协议，提供 7 通道的灯组接收机，外置单天线，支持双向回传功能，可输出 PWM 信号和车灯控制信号，设计小巧紧凑，可适配多种车型使用。

FS-R7D is a light group receiver in compliance with the ANT protocol, providing 7 channels. It is equipped with a single antenna externally, supporting the 2-way transfer-back function. It can output PWM signals and light control signals, featuring the compact design. FS-R7D can be adapted to a variety of vehicle models.

接收机概览 Receiver Overview



- | | | |
|--------------------|-------------|-------------------|
| [1] CH1 通道接口 (PPM) | [8] 爆闪灯接口 | [15] 天线 |
| [2] CH2 通道接口 | [9] 倒车灯接口 | [16] 对码按键 |
| [3] CH3 通道接口 | [10] 后尾灯接口 | [17] + (车灯接口电源正极) |
| [4] CH4 通道接口 | [11] 前大灯接口 | [18] - (车灯接口电源负极) |
| [5] CH5 通道接口 | [12] 右转向灯接口 | [19] S (信号脚) |
| [6] CH6 通道接口 | [13] 左转向灯接口 | [20] + (通道接口电源正极) |
| [7] CH7 通道接口 | [14] LED 灯 | [21] - (通道接口电源负极) |

- | | |
|----------------------------|---|
| [1] CH1(PPM) | [12] Right Turn Signal Light Interface |
| [2] CH2 | [13] Left Turn Signal Light Interface |
| [3] CH3 | [14] LED |
| [4] CH4 | [15] Antenna |
| [5] CH5 | [16] Bind Button |
| [6] CH6 | [17] + (Power Anode of Light Interface) |
| [7] CH7 | [18] - (Power cathode of Light Interface) |
| [8] Flash Light Interface | [19] S (Signal Pin) |
| [9] Backup Light Interface | [20] + (Power Anode of Channel Interface) |
| [10] Tail Light Interface | [21] - (Power Cathode of Channel Interface) |
| [11] Headlight Interface | |

产品规格 Product Specifications

- 产品型号: FS-R7D
- 适配发射机: FS-G7P (支持 ANT 协议的枪控发射机)
- 适配模型: 车
- PWM 通道数: 7
- 车灯组数: 6
- 无线频率: 2.4GHz ISM
- 无线协议: ANT (蚂蚁版自动跳频数字系统)
- 天线类型: 外置单天线 (同轴)
- 输入电源: 3.5 ~ 9V/DC
- 工作电流: < 90mA/5V
- 数据输出: PWM 或 PPM
- 发射功率: 小于 20dBm
- 遥控距离: >300 米 (空旷无干扰地面距离)
- 在线更新: 支持
- 防水等级: IPX4
- 外观颜色: 黑色
- 温度范围: -10°C ~ +60°C
- 湿度范围: 20%~95%
- 外形尺寸: 35*23.3*13.3mm
- 机身重量: 8g
- 认证: CE, FCC ID: 2A2UNR7D00

- Product Model: FS-R7D
- Compatible Transmitters: FS-G7P(Surface Transmitters with ANT Protocol)
- Compatible Models: Cars
- Number of PWM Channels: 7
- Number of Light Interfaces: 6
- RF: 2.4GHz ISM
- 2.4G Protocol: ANT
- Antenna: Single External Antenna(Coaxial)
- Input Power: 3.5 ~ 9V/DC
- Working Current: < 90mA/5V
- Data Output: PWM or PPM
- Maximum Power: < 20dBm (e.i.r.p.) (EU)
- Distance: >300m(Ground Distance without Interference)
- Online Update: Yes
- Water Proof: IPX4
- Color: Black
- Temperature Range: -10°C ~ +60°C
- Humidity Range: 20%~95%
- Dimensions: 35*23.3*13.3mm
- Weight: 8g
- Certifications: CE, FCC ID: 2A2UNR7D00

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. 按下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；
 - 或通电后按键对码：接收机上电后未与发射机通信，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。

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. Set 2 WAY for RF standard of the transmitter, then put the transmitter into binding mode.
2. 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 binding mode. Then release the BIND button.
 - In Addition, 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 binding 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 binding 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. Set 1 WAY for RF standard of the transmitter, then put the transmitter into binding mode.
2. Put the receiver into binding mode (Refer to the description above for entering binding 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 binding 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 binding mode first, then put the receiver into binding mode.

车灯控制 Car Light Control

车灯控制主要是通过 CH1 和 CH2 通道值控制, 即通过手轮和扣机控制车灯的工作状态, 具体如下所述。

车灯名称	工作方式	触发条件	备注
左转向灯	慢闪	左转向	
右转向灯	慢闪	右转向	
前大灯	常亮	手轮顺时针快打三次	设置通道反向后, 为逆时针
爆闪灯	快闪	手轮逆时针快打三次	设置通道反向后, 为顺时针
后尾灯	常亮	刹车	
倒车灯	常亮	倒车	

注:

1. 接收机上电开机瞬间所有车灯自检, 亮 1S 后关闭;
2. 前大灯和爆闪灯默认关闭状态;
3. 方向 CH1 和油门 CH2 可自动识别中位。

The lights are mainly controlled by CH1 and CH2, i.e. the working status of the lights is controlled by steering wheel and throttle trigger. The details are as follows:

Name	Working Mode	Trigger Condition	Remarks
Left Turn Signal Light	Slow flash	Turn left	
Right Turn Signal Light	Slow flash	Turn right	
Headlight	Solid ON	Turn the steering wheel clockwise fast for three times	After setting the channel reverse, it is counterclockwise.
Flash Light	Fast Flash	Turn the steering wheel counterclockwise for three times	After setting the channel reverse, it is clockwise.
Tail Light	Solid ON	Brake	
Backup Light	Solid ON	Back up	

Notes:

1. After the receiver is powered on, all lights perform self-test immediately. After the lights are on for 1 second, they are off.
2. By default, the headlights and flash lights are off.
3. Steering CH1 and throttle CH2 can automatically identify the neutral position.

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。

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.
 - 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.

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] 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。

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。

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 i-BUS/PPM/PWM.

ON Outputs the failsafe values set for the interface of i-BUS/PPM/PWM.

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 rather than by OFF state. The subsequent devices gives 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 OFF state.

⚠ 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-R7D] is in compliance with RED 2014/53/EU. The full text of the EU DoC is available at the following internet address: www.flyskytech.com/info_detail/10.html

RF Exposure Compliance

This equipment complies with FCC/ISED RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

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: 2A2UNR7D00



微信公众号



Bilibili



Website



Facebook

Manufacturer: ShenZhen FLYSKY Technology Co., Ltd.

Address: 16F, Huafeng Building, No. 6006 Shennan Road, Futian District, Shenzhen, Guangdong, China

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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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