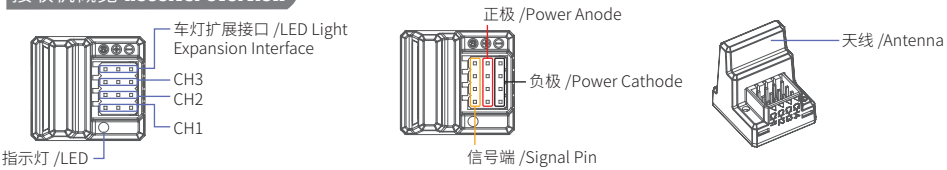
FLYSKY FS-FMS-R4P2-BS 接收机 Receiver

产品介绍 Introduction

FS-FMS-R4P2-BS 采用 2A-BS 协议，是一款带 LED 灯组控制的 4 通道接收机。它具有内置单天线，支持单向传输，采用通电自动对码技术，可输出 PWM 信号和车灯控制信号，可搭配车灯驱动板使用，可适配多种车型使用。

The FS-FMS-R4P2-BS uses the 2A-BS protocol and is a 4-channel receiver with LED light group control functionality. It features an internal single antenna, supports one-way transmission and automatic binding upon power-on. It can output PWM signals and LED light control signals, and can be used with an LED light unit. It is compatible with a variety of RC cars.

接收机概览 Receiver Overview



产品规格 Product Specifications

- 产品型号：FS-FMS-R4P2-BS
- 适配发射机：FS-FMS-MG44-BS
- 适配模型：车
- 通道个数：4
- 无线频率：2.4GHz ISM
- 无线协议：2A-BS
- 天线类型：内置单天线
- 遥控距离：> 150 米 (空旷无干扰地面距离)
- 车灯组数：6(车灯扩展接口连接 FS-FMS-DB01 车灯驱动板)
- 工作电压：3.5 ~ 8.4V/DC
- 数据输出：PWM
- 温度范围：-10°C ~ +60°C
- 湿度范围：20% ~ 95%
- 防水等级：PPX4
- 固件更新：不支持
- 外形尺寸：22.6*20.6*25.5mm
- 机身重量：6g
- 认证： CE, FCC

- Product Model: FS-FMS-R4P2-BS
- Compatible Transmitters: FS-FMS-MG44-BS
- Compatible RC Model: Cars
- Number of Channels: 4
- RF: 2.4GHz ISM
- RF Protocol: 2A-BS
- Antenna: One bulit-in antenna
- Distance: More than 150m (Ground Distance without Interference)
- Number of LED Lights: 6 (The FS-FMS-DB01 LED light unit connects to the LED light expansion interface)
- Operating Voltage: 3.5 ~ 8.4V/DC
- Data Output: PWM
- Temperature Range: -10°C ~ +60°C
- Humidity Range: 20% ~ 95%
- Waterproof: PPX4
- Firmware Update: Not Supported
- Dimensions: 22.6*20.6*25.5mm
- Weight: 6g
- Certifications: CE, FCC

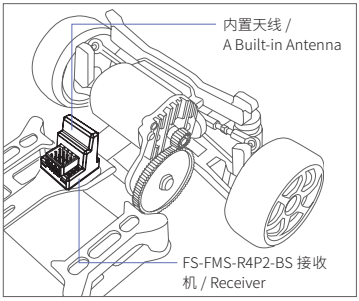
安装说明 Installation

本款接收机为内置天线，为保证信号强度，以免影响遥控距离，安装接收机时，需注意以下事项：

- 接收机天线须与模型机身保持垂直（如图所示）！
- 建议将接收机安装在模型机身位置较高的水平面上，且四周无金属遮挡。

The receiver has a built-in antenna. In order to ensure the signal strength and avoid the remote control distance affected, when installing the receiver, you need to pay attention to the followings:

- The receiver antenna must be kept perpendicular to the model body (as shown in the picture)!
- It is recommended to install the receiver on a high level surface of the model body without metal obstructions around the receiver.



对码 Binding

本款接收机通电自动进入对码状态：

- 接收机上电即进入等待连接状态，等待与已对码的发射机建立通信；
- 若 2 秒 未与已对码的发射机建立通信，则自动进入对码状态，此状态持续 10 秒；
- 若与发射机对码成功，即进入正常通信状态；否则退出对码状态，回到等待连接状态。

注：对码时，接收机 LED 灯快闪；等待连接时，接收机 LED 灯慢闪；正常通信时，接收机 LED 灯常亮。

2.4GHz 2A-BS

对码 Binding

对码步骤如下：

1. 将发射机进入对码状态；
2. 接收机通电等待 2 秒没有连接后自动进入对码状态，此时接收机 LED 灯快闪；
3. 对码成功后 , 接收机 LED 灯常亮；
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 10 秒内对码没有完成，接收机 LED 灯进入慢闪状态。

This receiver is to automatically enter the binding mode upon power-on.

- The receiver will enter the waiting-for-connection status upon power-on, waiting for the connection to the bound transmitter.
- If the receiver does not connect the bound transmitter within 2 seconds, it will automatically enter the binding state. This state lasts for 10 seconds.
- If the binding with the transmitter is successful, it will enter the normal communication status, otherwise, it will exit the binding state and return to the waiting-for-connection status.

Note: In case of binding, the receiver LED flashes quickly. In case of waiting-for-connection, the receiver LED flashes slowly. In case of normal communication, the receiver LED is solid on.

The binding steps are as below.

1. Put the transmitter into binding mode.
2. Turn on the receiver, and it will wait 2 seconds for connection. If without connection, the receiver will enter the binding mode automatically. At this time, the receiver LED will be flashing fast.
3. After the binding is successful, the receiver LED is solid on.
4. Verify that the transmitter and receiver are working properly. If you need to re-bind, repeat the above steps.

Note: Set the transmitter to its binding state first, and then set the receiver to its binding status. If the binding is not finished within 10 seconds, the receiver LED will enter a slow flashing status.

车灯控制 LED Light Control

本接收机支持 6 组车灯：前左转灯、前右转灯、日行灯、前大灯、左刹车灯 / 后左转灯和右刹车灯 / 后右转灯。这 6 组车灯通过 FS-FMS-DB01 车灯驱动板与本接收机建立连接（注意左刹车灯和后左转灯复用同一组灯；右刹车灯和后右转灯复用同一组灯）。

车灯控制主要通过 FS-FMS-MG44-BS 发射机的设置实现车灯亮灯状态及亮灯模式的转换。此款接收机对模型车车灯的控制预设了三种模式：

- 模式切换：短按发射机上的 CH4 按键可切换控制模式，每按一次，切换一个模式（默认模式、模式 A 和模式 B 依次切换）；每次开机时，车灯控制模式为默认模式。
- 转向灯功能：左右转向灯（包括前左转灯、前右转灯、后左转灯、后右转灯）在转向灯功能开启状态下按预设模式工作，反之则为关闭状态。默认情况下，转向灯功能为开启状态，旋转手轮即可触发左右转向灯。在正常通信情况下，可顺时针旋转手轮至最大位置，然后同时长按 CH4 按键，以关闭转向灯功能。继续长按 CH4 按键，可开启或关闭转向灯功能。转向灯功能开启后，左右转向灯的亮灭状态由手轮控制。关机时，系统会保存当前设置。再次开机时，转向灯状态将与上次关机时保持一致。

6 组车灯工作状态具体如下所述：

车灯	默认模式	模式 A	模式 B	备注
前左转灯	左转时慢闪 (逆时针打手轮)			转向灯功能可设置为关闭。关闭时，转向灯不亮。
前右转灯	右转时慢闪（顺时针打手轮）			
日行灯	常灭	常灭	常亮	/
前大灯	常灭	常亮	常亮	/
右刹车灯 / 后右转灯	刹车时（前推扳机）高亮； 非刹车且右转向时高亮慢闪； 非刹车、非右转向时灭。	刹车时高亮； 非刹车且右转向时高亮慢闪； 非刹车、非右转向时低亮。		当电调运行模式设置为正转 / 反转模式时（无刹车），前推扳机刹车灯不亮。
左刹车灯 / 后左转灯	刹车时（前推扳机）高亮； 非刹车且左转向时高亮慢闪； 非刹车、非左转向时灭。	刹车时高亮； 非刹车且左转向时高亮慢闪； 非刹车、非左转向低亮。		

注：

1. 接收机开机后，所有车灯长亮 1 秒后灭；
2. 方向通道（CH1）和油门通道（CH2）具有自动识别中位的功能 , 当调过微调后，需重新给接收机上电以完成中位自动识别；
3. 方向通道设置反向后对左、右转向灯无影响。

The receiver supports six sets of LED lights: front turn signal left light, front turn signal right light, daytime running light, headlight, left brake light/rear turn signal left light, and right brake light/rear turn signal right light. And these six sets of LED lights are connected to this receiver through the FS-FMS-DB01 LED light unit. (Note: The left brake light and the rear turn signal left light share the same physical light; the right brake light and the rear turn signal right light share the same physical light).

Light control is managed through the settings on the FS-FMS-MG44-BS transmitter, which allows for the switching of the lighting

车灯控制 LED Light Control

state and lighting mode of the LED lights. This receiver features three preset modes for LED lights:

- Mode Switching: Briefly press the CH4 button on the transmitter to switch between control modes. Each press changes to the next mode in sequence: Default Mode, Mode A, and Mode B. Each time the system is powered on, the LED light control mode defaults to Default Mode.
- Turn Signal Function: If the turn signal function is enabled, all turn signals will operate in their preset mode; if the function is disabled, they remain off. The turn signal function is enabled by default. Rotating the steering wheel will activate the corresponding left or right turn signal. Under normal communication conditions, the turn signal function can be disabled by rotating the steering wheel fully clockwise and simultaneously pressing and holding the CH4 button. Continuing to press and hold the CH4 button will toggle the turn signal function between enabled and disabled states. When the turn signal function is enabled, the on/off state of the left and right turn signals is controlled by the steering wheel. The current setting is saved automatically upon power-off. When powered on again, the turn signal state will be restored to its pre-shutdown status.

The specific working states of the six sets of LED lights are described as follows:

LED Lights	Default Mode	Mode A	Mode B	Notes
Front Turn Signal Left Light	The light flashes slowly on a left turn. (Rotate steering wheel counterclockwise to trigger.)			The turn signal function can be set to disabled. When disabled, the turn signals remain off.
Front Turn Signal Right Light	The light flashes slowly on a right turn. (Rotate steering wheel clockwise to trigger.)			
Daytime Running Light	OFF	OFF	Solid ON	/
Headlight	OFF	Solid ON	Solid ON	/
Right Brake Light/ Rear Turn Signal Right Light	• Braking (trigger pushed): High brightness • Not braking & right turn inactive: Off • Not braking & right turn active: High brightness and slow flash	• Braking: High brightness • Not braking & right turn inactive: Low brightness • Not braking & right turn active: High brightness and slow flash		When the running mode of ESC is set to Forward/ Reverse mode (no brake), the Brake Light will not on when pushing the throttle trigger forward.
Left Brake Light/ Rear Turn Signal Left Light	• Braking (trigger pushed): High brightness • Not braking & left turn inactive: Off • Not braking & left turn active: High brightness and slow flash	• Braking: High brightness • Not braking & left turn inactive: Low brightness • Not braking & left turn active: High brightness and slow flash		

Notes:

1. After the receiver is turned on, all the LED lights will be on for one second and then go out.
2. The steering channel (CH1)and throttle channel (CH2) are capable of automatic neutral identifying, after the trim is adjusted, the receiver should be powered again to recognize the neutral positions of these two channels automatically.
3. If you have set the steering channel in reverse, the trigger condition for turn signal left light and turn signal right light will not be affected.

失控保护 Failsafe

此功能用于当接收机无法正常收到发射机的信号不受控制时，保护模型和操作人员的安全。

- 该接收机默认未设置，失控后，无论是否设置 CH2 始终无输出，接收机其他通道保持最后输出。若已在发射机端设置，则按照设置值输出。
- 失控后，左、右车灯（包括前左转灯、前右转灯、后左转灯、后右转灯）同步慢闪提示。

The failsafe function is used to protect the model and personnel when the receiver is out-of-control.

- By default, it is not set, after out-of-control, no matter whether is set or not, the CH2 has no output, for the other channels of the receiver will keep the last output. If it has been set at the transmitter side, the output will be according to the set value.
- When the receiver is out-of-control, all turn signal lights will flash slowly for prompt.

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。
- 为了一切正常，请养成先开发射机再接收机通电以及先接收机断电再关闭发射机的习惯。
- 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。

Attention:

- Make sure the product is installed and calibrated correctly, failure to do so may result in serious injury.
- Normally, you must power on the transmitter and then receiver, and power off the receiver and then the transmitter.
- 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, [ShenZhen FLYSKY Technology Co., Ltd.] declares that the Radio Equipment [FS-FMS-R4P2-BS] 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.

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

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.

http://www.flysky-cn.com

2.4GHz 2A-BS