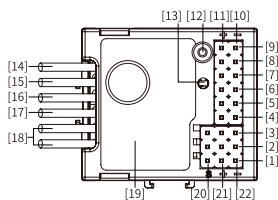


## 产品介绍 Introduction

FS-R4A 采用 ANT 协议，是一款电调、LED 灯组控制板三合一接收机，外置单天线，可输出 PWM 信号和车灯控制信号，能够实现双向传输，采用自动对码，设计小巧紧凑，可适配多种车型使用。

FS-R4A based on ANT protocol is a three-in-one receiver with ESC and LED light group control board. It has an external single antenna, can output PWM signal and light control signal, can implement two-way transmission, adopts automatic binding, and has a compact design, which can be adapted to various models.

## 接收机概览 Receiver overview



[1] CH1 通道接口	[7] 后尾灯接口	[13] LED 指示灯	[19] 贴纸
[2] CH3 通道接口	[8] 氛围灯接口	[14] 电池线 “-”	[20] 通道接口 “S” 端
[3] CH4 通道接口	[9] 车顶灯接口	[15] 电池线 “+”	[21] 通道接口 “+” 端
[4] 左转向灯接口	[10] 车灯接口 “-” 端	[16] 马达线 “M-”	[22] 通道接口 “-” 端
[5] 右转向灯接口	[11] 车灯接口 “+” 端	[17] 马达线 “M+”	
[6] 前大灯接口	[12] 接收机天线	[18] 电源开关线	
[1] CH1	[9] Roof Light	[17] Motor line “M+”	
[2] CH3	[10] Light port “-”	[18] Power switch line	
[3] CH4	[11] Light port “+”	[19] Stickers	
[4] Left Light port	[12] Antenna	[20] Channel port “S”	
[5] Right Light port	[13] LED	[21] Channel port “+”	
[6] Head Light port	[14] Battery line “-”	[22] Channel port “-”	
[7] Tail Light port	[15] Battery line “+”		
[8] Ambient Light port	[16] Motor line “M-”		

## 产品规格 Product specification

- 产品型号: FS-R4A
- 适配发射机: FS-MG41
- 适合机种: 车
- 通道个数: 4
- 车灯接口数: 6
- 无线频率: 2.4GHz ISM
- 无线协议: ANT (蚂蚁版自动调频数字系统)
- 天线类型: 单天线
- 输入电源: Lipo (2S) / NiMH(5-7Cell)
- BEC 输出: 6V/1A
- 持续 / 峰值电流: 10A/50A
- 数据输出: PWM
- 温度范围: -10°C—+60°C
- 湿度范围: 20%—95%
- 防水等级: IPX4
- 在线更新: 无
- 外形尺寸: 33mm\*29mm\*14mm
- 机身重量: 12.7g
- 认证: CE, FCC ID:N4ZR4A00

- Product Name: FS-R4A
- Adaptive transmitter: FS-MG41
- Model Type: Car
- Channels: 4
- Numbers of Light Interfaces: 6
- RF: 2.4GHz ISM
- 2.4G Protocol: ANT
- Antenna: Single Antenna
- Input Power: Lipo (2S) / NiMH(5-7Cell)
- BEC Output: 6V/1A
- Continuous / Peak Current: 10A/50A
- Data Output: PWM
- Temperature Range: -10°C—+60°C
- Humidity Limit: 20%—95%
- Waterproof: IPX4
- Online Update: No
- Dimensions: 33mm\*29mm\*14mm
- Weight: 12.7g
- Certification: CE, FCC ID:N4ZR4A00

## 对码 Binding

本款接收机上电即自动进入对码状态。

将发射机按住对码键开机进入对码状态，此时 G.LED 快闪，松开“BIND”键；

1. 接收机上电等待 1 秒没有连接将自动进入对码；

2. 对码成功后，接收机 LED 指示灯常亮；

注：（1）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，接收机指示灯进入慢闪状态；

（2）如果重新对码成功，车灯的所有设置将恢复默认值。

The receiver automatically enters the binding state once it is powered on.

1. Press the BIND key to turn on the transmitter and allow it to enter its binding state. Here, G.LED flashes quickly, and operator releases the BIND key.

2. When the receiver is powered on and waits for 1 second, it will automatically enter the binding state if it is not connected;

3. After the binding is successful, the LED indicator of the receiver is always on.

Notes: (1) Set the transmitter to its binding state first, and then set the receiver to its binding state. If the binding is not completed within 10s, the indicator light of the receiver will enter its slow flashing state.

(2) If re-binding is successful, all the settings of the car lights will be restored to their default values.

## 电调保护功能 ESC protection

本款接收机具有上电自检显示、过热报警提示、电压过低 / 高报警提示等多种提示功能。

- 自检显示: 接收机上电瞬间所有车灯长亮 1S;
- 过热报警: 检测到电调内部温度超过 110°C 时，马达无输出，所有车灯快闪提示；当温度低于 70°C 时恢复正常输出。
- 电压过低 / 高报警: 接收机进入电压过低保护时，马达无输出，所有车灯慢闪提示；接收机进入电压过高保护时，所有通道无输出，所有车灯快闪提示。

This receiver's have multiple prompt functions such as power-on self-check display, overheating alarm prompt, and low/high voltage alarm prompt.

- Self-check display: all car lights will be on for 1S when the receiver is powered on;
- Overheating alarm: When the internal temperature of the ESC is detected to exceed 110°C, motor has no output, all car lights flash promptly, and the normal output will be restored when the temperature is lower than 70°C;

## 电调保护功能 ESC protection

- Low/high voltage alarm: When the receiver enters the low voltage protection, motor has no output, and all the lights flash slowly; when the receiver enters the high voltage protection, all channels have no output. All car lights flash promptly.

## 车灯控制 Car light control

车灯控制主要是通过发射机的设置实现车灯亮状态及亮灯模式的转换。

### 1. 车灯开启与关闭的控制方式:

- 车灯控制分为四通道控制和两通道控制两种方式，打开发射机，手轮顺时针打到最大行程，打开接收机电源，可以实现两种控制方式的切换；
- 当切换为四通道控制时，CH3 最右为打开车灯，最左为关闭车灯；
- 当切换为两通道控制时，手轮快速顺时针打到最大行程两次，打开应急灯，重复动作则关闭；手轮逆时针打到最大行程打开示宽灯或者呼吸/爆闪灯，重复动作则关闭；

### 2. 车灯工作的四种模式状态:

- 普通模式：向左打转向，左转向灯慢闪，向右打转向，右转向灯慢闪；CH3 最右，前灯高亮，后灯低亮；刹车/后退，后灯高亮；按下 CH4，应急灯慢闪；
- 运动模式：向左打转向，左转向灯慢闪，向右打转向，右转向灯慢闪；前进，前灯高亮，刹车/后退，后灯高亮；按下 CH4，应急灯慢闪；
- 呼吸模式：所有车灯（含车顶灯、氛围灯）呼吸闪烁，CH3 最右打开所有车灯，CH3 最左关闭所有车灯；
- 爆闪模式：所有车灯（含车顶灯、氛围灯）爆闪，CH3 最右打开所有车灯，CH3 最左关闭所有车灯；
- 各工作模式切换方法：快速短按 CH4 两下切换模式；
- 以上方式使用 CH3 控制照明/示宽灯或者应急灯，关于手轮控制详见 1 说明。

### 3. 氛围灯和车顶灯的工作模式:

- 氛围灯和车顶灯包含单独模式和组合模式两种工作模式，在普通模式和运动模式下可以调节使用，在呼吸模式和爆闪模式中无法使用；单独模式下氛围灯和车顶灯各自单独操控，互不干扰；组合模式下氛围灯和车顶灯共同工作，可以统一控制。手轮快速顺时针打到最大行程 4 次可以切换两种工作模式。
- 组合模式下包含快闪、呼吸、关闭三种工作模式；手轮快速顺时针打到最大行程 3 次可以切换不同的闪烁方式。
- 单独模式下氛围灯有呼吸、爆闪、三快闪一长灭和关闭四种工作模式，手轮快速顺时针打到最大行程 3 次可以切换不同的模式；车顶灯有常亮、慢闪、关闭三种工作模式，手轮快速逆时针打到最大行程 3 次可以切换不同的工作模式。

- 注: (1) 若前后灯与实际控制相反时，需将前后灯控制方式进行交换，发射机开机状态下手轮保持逆时针打到最大行程，然后给接收机上电可以实现切换；若左右转向灯与实际控制相反时，则仅需在车灯接口处对调一下左右灯线；
- (2) 若 CH1 设置了通道反向，则以上手轮操作均进行反方向操作（顺时针变为逆时针，逆时针变为顺时针）；
- (3) 车灯控制的方向 CH1 和油门 CH2 具有自动识别中位的功能。

The car light control is mainly to implement the changover of lighting states and lighting modes by setting the transmitter. This receiver's car lights have multiple prompt functions such as power-on self-check, overheating alarm and low/high voltage alarm, etc.

### 1. Control mode of the car light ON/OFF:

- The car light control is divided into four-channel control and two-channel control. Switching between the two control modes can be implemented by turning on the transmitter, turning the handwheel clockwise to the maximum stroke, and turning on the power supply of the receiver.
- When switching to four-channel control, the rightmost position of CH3 turns on the car lights, and the leftmost position turns off the car lights.
- When switching to two-channel control, turn the handwheel quickly to its maximum stroke twice clockwise to turn on the emergency light, and turn off by repeating the action; Turn the handwheel counterclockwise to its maximum stroke to turn on the width indicator light or breathing/flashing light, and turn it off by repeating the action.

### 2. Four modes/statuses of car light operation:

- Normal mode: Turn the handwheel to the left, left turn signal flashes slowly; Turn the handwheel to the right, right turn signal flashes slowly; Set CH3 to its rightmost position, the headlights enter into high-luminance state and the tail lights enter into their low-luminance state; When brake is applied/gearbox is shifted to reverse gear, tail lights enter into their high-luminance state; Press CH4, the emergency lights flash slowly.
- Sports mode: Turn the handwheel to the left, left turn signal flashes slowly; Turn the handwheel to the right, right turn signal flashes slowly; When gearbox is shifted to forward gear, the headlights enter into their high-luminance state; When brake is applied/gearbox is shifted to reverse gear, the tail lights enter into their low-luminance state; Press CH4, the emergency lights flash slowly.
- Breathing mode: All lights (including roof lights and ambient lights) breathe and flash; Set CH3 to its rightmost position to turn on all car lights, and set CH3 to its leftmost position to turn off all car lights.
- Sharp flash mode: All lights (including roof lights and ambient lights) flash; Set CH3 to its rightmost position to turn on all car lights, and set CH3 to its leftmost position to turn off all car lights.
- Switch Method: Quickly press CH4 twice to switch the modes.
- The above method is intended for using CH3 to control lighting/width light or emergency light. Please refer to 2 for details on handwheel control.

### 3. Working modes of ambient light and roof light:

- Ambient light and roof light include two working modes: single mode and combined mode, which can be adjusted and used in normal mode and sports mode, but can not be used in breathing mode and flash mode; In the separate mode, the ambient light and the roof light are independently controlled and do not interfere with each other; In the combined mode, the ambient light and the roof light work together and can be controlled uniformly. The two working modes can be switched when the handwheel is turned clockwise to its maximum stroke four times.
- The combined mode includes three working modes: quick flashing, breathing and OFF. Different flashing modes can be switched when the handwheel is turned clockwise to its maximum stroke three times.
- In the single mode, the ambient light has four working modes: breathing, sharp flashing, three quick flashing one long lighting-off and OFF. Different modes can be switched when the handwheel is turned clockwise to its maximum stroke three times; The roof light has three working modes: always on, slowly flashing, and OFF, and it can be switched to different modes when the handwheel is turned counterclockwise to its maximum stroke three times.

- Notes: (1) If the front and tail lights are contrary to the actual control, the control mode of the front and tail lights should be reversed. When the transmitter is turned on, turn and keep the hand wheel counterclockwise to its maximum stroke, and power on the receiver to conduct the switchover; If the left and right turn signals are contrary to the actual control, it is only necessary to exchange the left and right light wires at the car light interface.
- (2) If CH1 is set with channel reversal, all the above handwheel operations should be operated in the reverse direction (change clock wise for counterclockwise, and change counterclockwise for clockwise).
- (3) The direction CH1 and accelerator CH2 for car light control are capable of automatic neutral position identifying.

## 电调功能使用说明 ESC function instructions

### 1. 连接相关设备:

- 连接前请确认电调开关处于关闭 (OFF) 状态，将电机与电调的 M+/M- 相连接，舵机接到电调 3Pin 排针接口上 ("—" "—" "S" 相对应)，电池与电调输入正负极相对应。

## 电调功能使用说明 ESC function instructions



### 2. 正常开机，识别油门中点：

- 上面第一步相关设备连接好后，先打开遥控器，并将遥控器油门扳机置于中点位置（自然状态）。最后一步打开电调开关，接收机重新上电自动识别电池类型后方可运行。

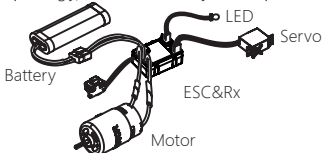
注意：

- 电调开机后必须等到自检完成后方可运行（大约3秒），否则可能无法正常工作；
- 若开机后无动力输出，请查看遥控器油门微调是否置于“0”位置，接收机重启可自动识别微调油门中点；
- 若运行时发现电机转向不对，将电调接电机的两根线互换位置即可；
- 为了一切正常，请养成先打开遥控器最后打开电调开关以及先关闭电调开关最后关闭遥控器的习惯。

注：关于电调的电池类型、拖刹力度和运行模式的设置详见相关配套发射机说明书相关章节。

### 1. Connect related equipment:

- Make sure the ESC is off before connection. Connect the motor with M+ and M- of ESC. Connect the steering servo to the 3Pin interface marked with "S" of ESC (- + S connected correspondingly). Connect the battery with the positive and negative poles of ESC correspondingly.



### 2. Normal boot, identification throttle midpoint:

- After connecting related equipment as step 1, turn on the radio first, move the throttle trigger to the neutral position. Turn on the switch of ESC at last. The receiver will automatically recognize the battery type when it is powered on again, then can run it.

Note:

- The ESC can be run after completing self-inspection (about 3 seconds) if power on, otherwise it cannot be operated normally.
- If there is no power output and the red light of ESC flashes quickly after power on, please check whether the throttle trim of the transmitter is set to the "0" position, the receiver will automatically recognize the midpoint of the trim throttle after restarting;
- If the rotation direction is not correct during running, exchange the two wires connecting motor and ESC.
- To make sure everything is ok, please turn on the radio first and finally turn on the ESC, turn off the ESC first and finally turn off the radio.

Note: Please refer to the relevant sections for details about the battery type, drag brake force and running mode of the ESC.

## 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。该接收机默认为油门通道固定为失控进入刹车状态，其他通道失控后接收机无信号输出，如若在发射机上进行设置，则按照设置值输出。

This function is used to protect the safety of the model and the operator when the receiver cannot normally receive the signal from the transmitter and is out of control. The receiver defaults that the throttle channel is fixed to be out of control and enters the brake state, other channels have no signal output. If you set it on the transmitter, it will output according to the set value.

### ► 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。
- 请查看各动力设备以及车架说明书，确保动力搭配合理，避免因错误的搭配导致动力系统损坏。
- 勿使系统的外部温度超过 90°C / 194 °F，高温将会毁坏动力系统。
- 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。
- 使用完毕后，若长时间不玩车，切记断开电池与电调的连接。如电池未断开，即使电调开关处于关闭状态，电调也会一直消耗电能（只是非常小），长时间连接电池最终会被过放，进而导致电池或电调出现故障。我们不对因此而造成的任何损害负责！
- 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。

### ► Attention:

- Make sure the product is installed and calibrated correctly, failure to do so may result in serious injury.
- Please carefully check each power device and car frame instructions to ensure the power matching is reasonable before use. Avoid damaging power system due to incorrect matching.
- Do not let the external temperature of the system exceed 90°C / 194 °F, because high temperature will damage the power system.
- Make sure the receiver's battery is disconnected before turning off the transmitter, failure to do so may lead to unintended operation or loss of control.
- After use, remember to disconnect the battery and the ESC. If the battery isn't disconnected, the ESC will consume electric energy all the time even if it is off. It will discharge completely if connect the battery for a long time, thus resulting in the failure of the battery or the ESC. We are not responsible for any damage caused by this!
- Make sure the receiver is mounted away from motors 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-R4A] 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](http://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:N4ZR4A00