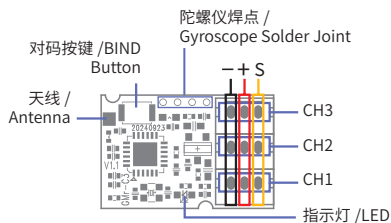## 产品介绍 Introduction

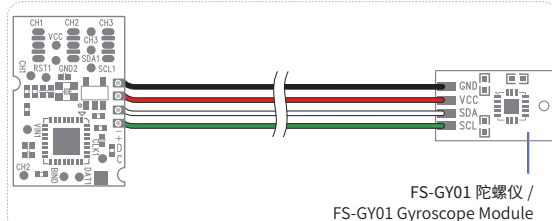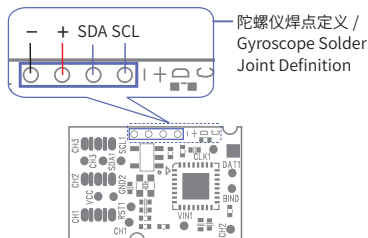GMr-C3 是一款采用 AFHDS 3（第三代自动跳频数字系统）协议 3 通道微型接收机。本接收机外置单天线，支持双向传输，支持 FS-GY01 陀螺仪，适配蚊车等模型。

The GMr-C3, in compliance with the AFHDS 3 (third-generation automatic frequency hopping digital system), is a 3-channel micro receiver, featuring single external antenna and bidirectional transmission. And it supports the FS-GY01 gyroscope and is compatible with RC cars, such as micro or mini RC cars.

接收机概览 Receiver Overview

GMr-C3 接收机正面 /Front View of GMr-C3 receiver

GMr-C3 接收机背面 / Back View of GMr-C3 receiver

对码按键 /BIND Button
陀螺仪焊点 / Gyroscope Solder Joint
天线 / Antenna
CH3
CH2
CH1
指示灯 /LED

陀螺仪焊点定义 / Gyroscope Solder Joint Definition

FS-GY01 陀螺仪 / FS-GY01 Gyroscope Module

陀螺仪焊接注意事项：

- 如图所示，建议将 FS-GY01 陀螺仪四根线的线芯从接收机正面四个焊点处穿过后，焊接在接收机背面（注：接收机天线所在面为正面）。
- 注意焊接时，接收机焊点信号与陀螺仪的信号须一一对应，也就是陀螺仪的 SCL 线（即陀螺仪上丝印 SCL 端引出的线）焊接到接收机标识"C"（SCL）的焊点；SDA 线焊接到标识为"D"（SDA) 的焊点，依次类推。
- 焊接后，建议在接收机正面的"陀螺仪焊点"位置打胶，以增强焊接端的牢固性。

Attention:

- As shown in the figure, it is recommended to cross the cores of the four wires of the FS-GY01 gyroscope through the four solder joints on the front of the receiver and then solder them to the back of the receiver (Note: the side where the receiver antenna is located is considered front).
- When soldering, pay attention to ensuring that the receiver solder joint signals correspond one-to-one with the FS-GY01 gyroscope signals. Specifically, the SCL line of the gyroscope (the line leading out of the SCL end silkscreened on the gyroscope) should be soldered to the solder joint marked 'C' (SCL) on the receiver; the SDA line should be soldered to the solder joint marked 'D' (SDA), and so on. Ensure that all four solder joints are well-soldered.
- After soldering, it is recommended to apply hot-melt adhesive to the position of the front "Gyroscope Solder Joint" to increase soldering performance.

产品规格 Product Specifications

- 产品型号：GMr-C3
- 适配发射机：Noble 等所有 AFHDS 3 发射机
- 适配模型：蚊车
- PWM 通道数：3
- 无线频率：2.4GHz ISM
- 无线协议：AFHDS 3
- 遥控距离：>50m（空旷无干扰地面距离）
- 通道分辨率：4096 级
- 天线类型：单天线（硅胶线天线）
- 工作电压：3.5 ～ 9V/DC
- 数据输出：PWM
- 温度范围：-15℃～ +60℃
- 湿度范围：20% ～ 95%
- 在线更新：是
- 外形尺寸：19.0*12.5*7.0mm
- 机身重量：1.3g
- 认证：CE，SRRC，FCC ID: 2A2UNGMR-C300

- Product Model: GMr-C3
- Compatible Transmitters: All AFHDS 3 transmitters, such as Noble
- Compatible RC Models: Micro/Mini cars
- Number of PWM Channels: 3
- RF: 2.4GHz ISM
- RF Protocol: AFHDS 3
- Distance: More than 50m (ground distance without interference)
- Resolution: 4096
- Antenna: Single antenna(silicone antenna)
- Operating Voltage: 3.5-9V/DC
- Data Output: PWM
- Temperature Range: -15℃~ +60℃
- Humidity Range: 20% ～ 95%
- Online Update: Yes
- Dimensions: 19.0*12.5*7.0mm
- Weight: 1.3g
- Certification: CE, SRRC, FCC ID: 2A2UNGMR-C300

对码 Binding

GMr-C3 接收机支持双向对码（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。

1. 发射机选择双向通信，然后进入对码状态；
2. 本接收机支持两种方式进入对码状态：按键对码和通电后按键对码
   - 按键对码：按下接收机对码按键且同时接通接收机电源，接收机 LED 灯快闪表示进入对码状态，然后松开对码键；
   - 通电后按键对码：接收机通电后未与发射机通信过，长按对码键 3 秒，接收机 LED 灯快闪表示进入对码状态，然后松开对码键。
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）；
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：若发射机设置为单向与接收机对码，则当接收机 LED 灯变为慢闪后将发射机退出对码状态，此时接收机 LED 灯常亮，表示对码成功。

The receiver supports the two-way binding (the transmitter will display the information returned from the receiver after the two-way binding is finished). Therefore, you need to set the one-way or two-way binding on the transmitter side before the binding. If you need to bind the receiver with the transmitter, the steps are as follows.

1. Select [2 WAY] for RF standard of the transmitter, then put the transmitter into binding mode.
2. The receiver supports two ways to enter binding mode: BIND button 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 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 binding mode. Then release the BIND button.
3. The receiver LED is solid on after the binding is successful (the transmitter automatically exits the binding state after the successful binding).
4. Check to make sure the transmitter and receiver functions are working correctly, repeat steps above(binding process) if any problems arise.

Note: When the transmitter is set one-way to enter into binding state, after the receiver LED becomes slow flashing, then put the transmitter to exit the binding state. At this time, the receiver LED is solid on, indicating the binding is successful.

功能介绍 Functions Description

本接收机可通过 4 Pin 陀螺仪焊点与 FS-GY01 陀螺仪焊接后实现陀螺仪支持的相关功能（参考接收机概览处描述），如 SVC 功能。具体功能介绍参考相应发射机说明书资料。

This receiver can make the related functions supported by the gyros(refer to the description of Receiver Overview), such as SVC function, by welding the 4-pin gyroscope solder joint with the FS-GY01 gyroscope. For specific function introduction, please refer to the manual of the corresponding transmitter.

固件更新 Firmware Update

本接收机的固件更新需要通过富斯遥控管家（FlySkyAssistant）来完成。请注意，只有 3.0 及以上版本的富斯遥控管家支持此操作，相关固件可以从官网 www.flyskytech.com 下载。更新过程可以通过以下两种方式进行：

方式一：首先完成发射机与接收机的对码（接收机 LED 灯常亮），然后将发射机连接到电脑。在电脑端打开富斯遥控管家软件，通过该软件进行固件更新。

方式二：首先将发射机连接到电脑，然后按照以下步骤使接收机进入强制更新状态（接收机 LED 灯状态为三闪一灭）：
- 按下对码按键，上电后等待 10 秒直到指示灯三闪一灭，然后松开对码按键；
- 先给接收机上电，然后长按对码键 10 秒，直到指示灯三闪一灭，随后松开对码按键。
完成上述步骤后，在电脑端打开富斯遥控管家软件，通过该软件完成固件的强制更新。强制更新完成后，接收机的指示灯将由三闪一灭状态变为慢闪状态。

The firmware update for this receiver must be completed through FlySkyAssistant. Please note that only versions 3.0 and later of FlySkyAssistant support this operation, and the relevant firmware can be downloaded from the official website www.flysky-cn.com. The update process can be carried out in two ways:

Method Ⅰ: First, complete the binding between the transmitter and the receiver (the LED of the receiver is solid on), then connect the transmitter to the computer. Open FlySkyAssistant on the computer and perform the firmware update through the software.

Method Ⅱ: First, connect the transmitter to the computer, then follow these steps to put the receiver into forced update mode (the LED of the receiver will operate in a three-flash-one-off mode repeatedly):

固件更新 Firmware Update

- Press the BIND button, power on and wait for 10 seconds until the LED operates in a three-flash-one-off mode repeatedly, then release the BIND button.
- Power on the receiver first, then hold down the BIND button for 10 seconds until the LED operates in a three-flash-one-off mode repeatedly, then release the BIND button.

After completing the above steps, open FlySkyAssistant on your computer and complete the forced firmware update through the software. Once the forced update is completed, the LED of the receiver will change from the three-flash-one-off state to a slow flashing state.

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。

本款接收机共支持三种失控保护模式 : [无输出]、[保持] 和 [固定值]

[无输出]PWM 通道接口为无输出状态 ;

[保持] 输出失控前最后的通道值；

[固定值] 输出设置的通道值。

注：
1. 对于 PPM/i-BUS/S.BUS/i-BUS2 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/i-BUS2 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 when the receiver loses RC signal and is out -of -control. The receiver performs channel output according to the set failsafe value to protect the safety of the model and personnel.

This receiver supports three failsafe modes: **No output**, **Hold**, and **Fixed value**.

No output: No output for PWM channel.

Hold: Maintain the last output value.

Fixed value: Output the failsafe values that have been set for each channel.

Notes:
1. For bus signal types such as PPM/i-BUS/S.BUS/i-BUS2, 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/i-BUS2 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，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.
- Make sure the receiver's battery is disconnected before turning off the transmitter, failure to do so lead to lose 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, [ShenZhen FLYSKY Technology Co., Ltd.] declares that the Radio Equipment [GMr-C3] 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: 2A2UNGMR-C300

微信公众号	Bilibili	Website	Facebook

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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 specificatiions may be changed without notice.