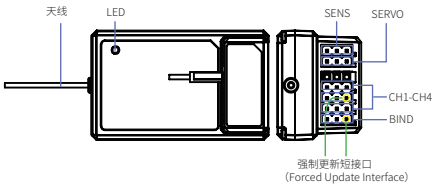
产品介绍 Introduction

FGr4 采用 AFHDS 3（第三代自动跳频数字系统），单天线双向传输，它独特设计可节省安装空间，可输出标准 PPM 信号和 i-BUS、S.BUS 信号。

FGr4 adopts AFHDS 3, Flysky's third-generation automatic frequency hopping digital system. It uses a single-antenna, supporting bidirectional transmission. And it is uniquely designed to save space and output standard PPM and i-BUS、S.BUS signals.

接收机概览 Receiver Overview



用于连接接收机与模型的各个部件。
SENS：连接各传感器。
SERVO：输出 i-BUS/S.BUS 信号，连接扩展模块。
CH1- CH4：连接舵机、电源或其他各部件。
BIND：连接对码线。

Ports used to connect the receiver to the various components.
SENS: Connects to sensors.
SERVO: Output i.BUS/S.BUS signal, connect expansion module.
CH 1 - CH 4: Connects the servos, power supply or other components.
BIND: For bind cable.

产品规格 Product Specifications

- PWM 通道数：4
- 适配模型：车、船
- 数据输出：PPM/i-BUS/S.BUS/PWM
- 无线频率：2.4GHz ISM
- 发射功率：<20dBm（EU）
- 无线协议：AFHDS 3
- 调制方式：GMSK, CSS
- 天线类型：单天线
- 输入电源：3.5V ～ 12V
- 显示方式：LED 指示
- 在线更新：是
- 外形尺寸：46 * 28 * 22 mm
- 机身重量：15g
- 认证：CE，FCC ID: N4ZFGR400

- Number of PWM Channels: 4
- Adaptive Models: Car, Boat
- Data Output: PPM/i-BUS/S.BUS/PWM
- RF: 2.4GHz ISM
- Maximum Power: <20dBm (e.i.rp.) (EU)
- 2.4GHz Protocol: AFHDS 3
- Modulation: GMSK, CSS
- Antenna: Single Antenna
- Input Power: 3.5V ～ 12V
- Display: LED Indicator
- Online Update: Yes
- Dimensions: 46 * 28 * 22 mm
- Weight: 15g
- Certifications: CE, FCC ID: N4ZFGR400

对码 Binding

1. 将对码线插入 BIND 接口；
2. 将电源线插入其他任意接口，接收机指示灯快闪表示进入对码状态；
3. 将发射机进入对码状态；（发射机进入对码状态的方式可能不同，请根据发射机的使用说明书进行操作）
4. 当接收机指示灯变为慢闪时，将对码线和电源线从接收机上取下；
5. 将电源线重新连接至接收机，接收机指示灯常亮表示对码成功；
6. 检查发射机、接收机、模型是否正常工作。如需重新对码，请重复以上步骤重新对码。

1. Insert the binding cable into the receivers BIND port.
2. Plug the power cable into any other port, and the the receiver's LED will start to flash indicating that it has entered binding mode.
3. Put the transmitter into binding mode; (See the transmitter's instruction manual for more information)
4. Binding is successful when the receiver's LED starts to flash slowly. Remove the power and bind cables from the receiver.
5. Reconnect the power cable to the receiver.
6. Check to make sure that the transmitter and receiver are working as expected, if there are any issues or unexpected operation follow the steps above to bind again.

强制更新 Forced Update

发射机在更新完后，如无法与接收机对码，需强制更新接收机。

1. 用对码线短接 BIND 和其相隔的信号脚；（接收机概览部分已经标注）
2. 接收机上电进入更新状态（LED 灯三闪一灭），拔掉对码线，在发射机端选择强制更新。
3. 接收机 LED 灯由 3 闪 1 灭变为慢闪，更新完成。

After the transmitter is updated, if the code cannot be matched with the receiver, it is necessary to update the receiver.

1. Short circuit bind and its separated signal pins with bind cable; (It has been signed in the Receiver Overview part)
2. Power on the receiver to enter the update mode (LED light of the receiver works in three-flash-one-off mode), unplug the bind cable, and select forced update at the transmitter.
3. The LED light of the receiver changes from three-flash-one-off mode to slow flash mode, the update is finished.

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。

本款接收机支持各通道单独设置失控保护，共支持三种失控保护模式：[无输出]、[保持]、[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 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 three failsafe modes: [No output], [Hold], and [Fixed value].

[No output] It is no output for the interface of PWM;

[Hold] Keeps the last output value;

[Fixed value] Outputs the failsafe values 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, [Flysky Technology Co., Ltd.] declares that the Radio Equipment [FGr4] 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： N4ZFGR400

微信公众号 Bilibili Website Facebook

Manufacturer：FLYSKY Technology Co., Ltd.
Address: 16F, Huafeng Building, 6006 Shennan Road, Futian District, Shenzhen