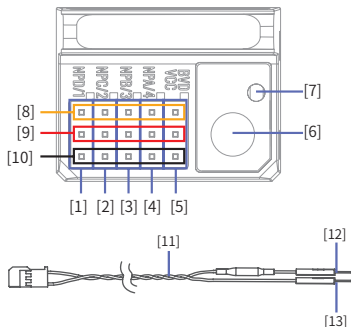


产品介绍 Introduction

FGr4D 是一款采用 AFHDS 3 (第三代自动跳频数字系统) 协议的四通道双向接收机。本款接收机内置双天线、PPX6 纳米防水、设计小巧轻便、支持 4 个 Newport 功能接口 (Newport 接口可自定义输入或输出的信号类型: i-BUS2/S.BUS/i-BUS/PPM 等)、可作为 PWM 转换器使用、可适配模型车或模型船使用。

The FGr4D is a four-channel two-way receiver based on AFHDS 3 (Third-Generation Automatic Frequency Hopping Digital System) protocol. This receiver features dual antennas, PPX6 nano waterproof, compact and lightweight design. It supports 4 Newport function interfaces (Newport can be customized with input or output signal types: i-BUS2/S.BUS/i-BUS/PPM). The FGr4D can be used as a PWM converter, adaptable to a model car or model boat.

接收机概览 Receiver Overview



- [1] CH1(NPD)
- [2] CH2(NPC)
- [3] CH3(NPB)
- [4] CH4(NPA)
- [5] BVD/VCC (电池电压检测 / 供电接口)
- [6] 对码按键
- [7] LED 灯

- [8] 信号脚
- [9] + (电源正极)
- [10] - (电源负极)
- [11] BVD 功能配件
- [12] 接电池正极
- [13] 接电池负极

- [1] CH1(NPD)
- [2] CH2(NPC)
- [3] CH3(NPB)
- [4] CH4(NPA)
- [5] BVD/VCC (Battery Voltage Detection / Power Supply Interface)
- [6] BIND Button

- [7] LED
- [8] S (Signal Pin)
- [9] + (Power Anode)
- [10] - (Power Cathode)
- [11] BVD Harness
- [12] Connect to Battery Anode
- [13] Connect to Battery Cathode

BVD 电压检测范围: 0~70V

BVD voltage detection range: 0~70V

产品规格 Product Specifications

- 产品型号: FGr4D
- 适配发射机: 所有支持 AFHDS 3 的发射机
- 适配模型: 车、船等
- PWM 通道数: 4
- 无线频率: 2.4GHz ISM
- 无线协议: AFHDS 3
- 发射功率: 小于 20dBm
- 天线类型: 内置双天线
- 通道分辨率: 4096
- 工作电压: 3.5 ~ 9V/DC
- 数据输出: PWM/PPM/i-BUS2/S.BUS/i-BUS
- 温度范围: -10°C ~ +60°C
- 湿度范围: 20% ~ 95%
- 防水等级: PPX6
- 固件更新: 支持
- 外形尺寸: 30.3X25.8X20mm
- 机身重量: 7.2g
- 认证: CE, FCC ID: 2A2UNFGR4D

- Product Model: FGr4D
- Compatible Transmitters: All Transmitters with AFHDS 3 Protocol
- Compatible RC Models: Cars or Boats, ect.
- Number of PWM Channels: 4
- RF: 2.4GHz ISM
- RF Protocol: AFHDS 3
- Maximum Power: < 20dBm (e.i.r.p.) (EU)
- Antenna: Two Built-in Antennas
- Resolution: 4096
- Operating Voltage: 3.5~9V/DC
- Data Output: PWM/PPM/i-BUS2/S.BUS/i-BUS
- Temperature Range: -10°C ~ +60°C
- Humidity Range: 20% ~ 95%
- Waterproof: PPX6
- Firmware Update: Supported
- Dimensions: 30.3X25.8X20mm
- Weight: 7.2g
- Certification: CE, FCC ID: 2A2UNFGR4D

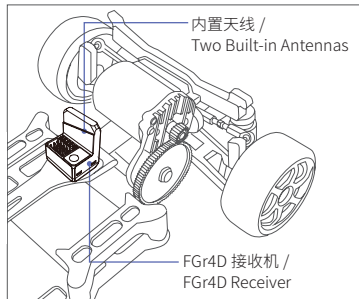
安装说明 Installation

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 two built-in antennas. 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

本款接收机支持双向对码和单向对码（发射机端设置），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. 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：按住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。
 - 通电后按键对码：接收机上电后未与发射机通信过，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。

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. 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；
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：本款接收机可作为 PWM 转换器使用，需在发射机端完成配置。当接收机作为 PWM 转换器使用时，若 LED 灯状态为 1 闪 1 长亮 1 长灭，则表示未收到 i-BUS2 信号；若收到 i-BUS2 信号，则 LED 灯状态为 1 闪 1 长亮。

The receiver supports two-way binding and one-way binding, and can be set at the transmitter side. 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. Select **Two WAY** for RF standard of the transmitter, then put the transmitter in bind mode.
2. The receiver supports two ways to enter bind 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 bind mode. Then release the BIND button.
3. When the LED of the receiver is solid on, the binding process should be finished. The transmitter exits the bind 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. Select **One WAY** for RF standard of the transmitter, then put the transmitter in bind mode.
2. Put the receiver in bind mode (Refer to the description above for entering bind mode).
3. 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.
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: When this receiver is used as a PWM converter, it is necessary to finish configurations at the transmitter side. In this case, if the LED works in Flash-once, ON-once, and OFF-once state, it indicates that no i-BUS2 signal is received; if i-BUS2 signal is received, the LED works in Flash-once and ON-once state.

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.flyskytech.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有如下两种方式：
 - 按下对码按键，上电十秒钟后接收机 LED 灯状态三闪一灭，松开对码按键。
 - 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。

固件更新 Firmware Update

The firmware of this receiver can be updated via the FlyskyAssistant (Only version 3.0 or later is supported. The firmware of FlyskyAssistant is available on the Flysky official website: www.flysky-cn.com).

This receiver can be updated through 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 two ways (The LED of the receiver works in three-flash-one-off mode repeatedly). Afterwards, open the FlyskyAssistant on the computer to update the firmware.
 - Power on the receiver while pressing and holding the BIND button for more than ten seconds, until the LED of the receiver works in three-flash-one-off mode repeatedly, then release the BIND button.
 - Power on the receiver first, then press and hold the BIND button for more than ten seconds, when the LED of the receiver works in three-flash-one-off mode 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。
- 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 Certifications

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 [FGr4D] 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 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: 2A2UNFGR4D



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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