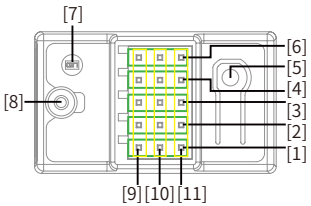
产品介绍 Introduction

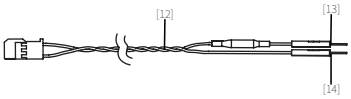
INr4-GYB 采用 AFHDS3（第三代自动跳频数字系统），外置单天线带回传功能，内置陀螺仪，设计小巧轻便，易于安装，可输出 PWM/PPM/i-bus/S.BUS/i-bus2 信号，支持 Newport 切换，支持所有 AFHDS3 发射机。

The INr4-GYB receiver adopts Flysky's third-generation automatic frequency hopping digital system (AFHDS 3).It uses a single-antenna bidirectional transmission system ,with built-in gyroscope and is uniquely designed to install and output PWM/PPM/i-bus/S.BUS/i-bus2 in signals. It supports all AFHDS3 transmitter.

接收机概览 Receiver overview



[1] CH1(NPD)
[2] CH2(NPC)
[3] CH3(NPB)
[4] CH4(NPA)
[5] 对码按键
[6] VCC/BVD（电池电压检测 / 供电接口）
[7] LED 灯
[8] 天线
[9] 信号脚
[10] +（电源正极）
[11] -（电源地）
[12] BVD 功能配件
[13] 接电池正极
[14] 接电池负极



[5] BIND
[6] VCC/BVD(Battery voltage detection / power supply interface)
[7] LED
[8] Antenna
[9]S（Signal Pin）
[10] +（Positive power terminal）
[11] -（Power ground）
[12] BVD harness
[13] Connect to battery positive pole
[14] Connect to battery negative pole

产品规格 Product specification

- 产品型号：INr4-GYB
- 适配发射机：所有支持 AFHDS3 的枪控发射机（NB4，NB4 Lite 等）
- 适合机种：车、船等
- PWM 通道：4
- 无线频率：2.4GHZ ISM
- 无线协议：AFHDS 3
- 天线类型：单天线
- 输入电源：3.5 ～ 9V
- 数据输出：PWM/PPM/i-bus/S.BUS/i-bus2
- 温度范围：-10℃—+60℃
- 湿度范围：20~95%
- 在线更新：是
- 外形尺寸：17*29*16.6mm
- 机身重量：6.5g
- 认证：CE，FCC ID:N4ZINR4GYB

- Product Model: INr4-GYB
- Adaptive transmitter: all transmitter supporting AFHDS3 (NB4,NB4 Lite，etc.)
- Model Type: Car/Boat ,ect.
- PWM Channels: 4
- RF: 2.4GHz ISM
- 2.4G Protocol: AFHDS 3
- Antenna: Single Antenna
- Input Power: 3.5~9V
- Data Output: PWM/PPM/i-bus/S.BUS/i-bus2
- Temperature Range: -10°C—+60°C
- Humidity Limit: 20%-95%
- Online Update: Yes
- Dimensions: 17*29*16.6mm
- Weight: 6.5g
- Certification: CE，FCC ID:N4ZINR4GYB

对码 Binding

1. 按住接收机对码按键同时上电后松开对码键或者先给接收机上电后，长按对码键 3 秒，接收机指示灯快闪进入对码状态；
2. 打开发射机并使其进入对码状态；
3. 当接收机指示灯变为常亮时，对码成功；
   - 当对码的发射机是单向模式进入对码状态时，接收机收到对码信息后指示灯慢闪；然后手动将发射机退出对码状态，接收机指示灯变为常亮表示对码成功；
4. 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。

对码 Binding

1. Press and hold the receiver BIND button [5] while powering on the receiver ,release the BIND button after receiver is powered on or powering on the receiver first, press and hold the BIND button 3 seconds , the LED [7] on the receiver will flash rapidly;
2. Put the transmitter into bind mode;
3. The binding process is complete when the LED on the receiver stops flashing and is on continuously.
   - If a transmitter that has had its radio frequency (RF Standard) set to “AFHDS3 1 way” (please refer to your transmitter user manual) enters bind mode, the receiver LED will instead flash slowly. Exit bind mode on the transmitter and if the receiver LED stops flashing and is on continuously, the binding process is complete.
4. Check to make sure the transmitter and receiver functions are working correctly, repeat steps 1 to 3 (binding process) if any problems arise.

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. 接收机按下对码按键，上电十秒钟后指示灯三闪一灭，或者先给接收机上电，长按对码键 10 秒后指示灯三闪一灭，松开对码按键；
2. 在发射机端选择接收机更新并进入更新状态；
3. 更新完成指示灯慢闪。

If after a firmware update is performed and the transmitter is unable to bind to the receiver, the receiver may need to be put into forced update times.

1. Power on the receiver while pressing the BIND button [5] for then approximately ten seconds until the LED [7] flashes three times,Or power on the receiver first, press and hold the BIND button for 10 seconds, and then the LED [7] flashes three times ,release the BIND button.
2. Go to the RX Setup menu on your transmitter and select “RX Update”.
3. When the receiver LED flashes slowly, the update is successful.

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。

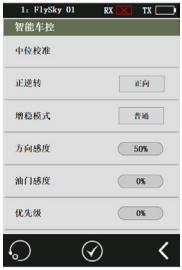
- 本款接收机共支持三种失控保护模式：" 无输出 "、" 保持 "、" 固定值 "；“无输出” 模式指在进入失控保护状态后 PWM、PPM、i-Bus out、i-Bus 2 转换器保持无输出信号通道值，S.BUS、i-Bus2、i-bus 转换器输出最后收到发射机的信号通道值，“保持” 模式指在进入失控保护状态后，保持输出最后收到发射机的信号通道值；“固定值” 模式指在进入失控保护状态后，保持设置的信号通道值进行输出信号。

The failsafe function is used to output the channel 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.

- This receiver supports three failsafe modes: "Free", "Hold", and "Fixed value"; "Free" mode refers to PWM, PPM, i-Bus out, i-Bus 2 converter entering the failsafe state keep the channel value of no output signal. The S.BUS, i-Bus2, and i-bus converters output the last received signal channel value of the transmitter. "Hold" mode means that after entering the failsafe state, keep the output of the last transmitter signal;the "Fixed value" mode means that after entering the out-of-control protection state, the set signal channel value is maintained to output the signal.

智能车控设置（NB4 界面）SVC Setting（NB4 interface）

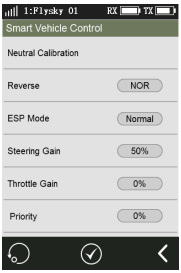
智能车控功能是依靠陀螺仪对车辆运动的方向进行自定义的偏差修正，帮助车辆拥有更加良好的行驶状态。其具体设置如下：



1. 智能车控的功能界面和默认设置，如右图所示；
2. 点击界面下方的 / 图标开启或关闭使用该功能；
3. 点击“中位校准”进入校准动画界面；
   - “中位校准”用于陀螺仪校准方向和油门中位，使车辆正常行驶时发挥最佳行驶状态。开启智能车控功能前需将车辆的方向舵量，中位微调，油门中位调至最佳行驶状态，完成后打开 S.V.C 进行中位校准。每次改变微调后都将进行中位校准，中位校准过程中方向油门需置中位静止，待完成方可操作。
4. 点击“正逆转”，可设置陀螺仪混控方向通道，在“正向 / 反向”中进行切换。
5. 点击“增稳模式”，可在“普通 / 锁定”中进行切换；
   - 普通：车辆偏航或转向时，陀螺仪自动根据所产生的角速度大小提供一个相反的补偿控制舵机使其保持稳定或防止甩尾；
   - 锁定：手轮回中保持的情况下，车辆偏航时陀螺仪会根据偏航角度反方向控制舵机使其回到预期方向行驶。
6. 点击“方向感度”、“油门感度”、“优先级”界面下方显示的 +/- 符号设置，设置值范围均为 0%-100%；
   - " 优先级 " 用于设置车辆转向时，手轮控制与陀螺仪间的控制比例，即转弯半径。当转动方向手轮转弯时，受陀螺仪混控影响会降低转向角度，当数值为 0% 时混控力度最大，即转弯半径最大，当数值为 100% 时混控力度为 0，转弯半径最小。
7. 陀螺仪校准用于第一次对码启用陀螺仪或更换陀螺仪，模型保持平稳静止状态，点击进入校准，接收机快闪 2 下，自动退出表示校准成功。

注：若使用板控遥控器如 PL18 等，只能进行基础的使用，SVC 功能无法实现。

智能车控设置（NB4 界面）SVC Setting（NB4 interface）



The SVC function relies on the gyroscope to perform custom deviation correction on the direction of the vehicle's movement, helping the vehicle to have a better driving state. The specific settings are as follows:

1. Function interface and default settings of smart vehicle control are shown in the right figure;
2. Click the / icon at the bottom of the interface to turn this function on or off;
3. Click "Neutral Calibration" to access the calibration animation interface;

- "Neutral calibration" is used to calibrate the direction and throttle median with the gyroscope, enabling the vehicle to get into the best state when driving normally. Before turning on the smart vehicle control function, it is necessary to fine-tune the steering gear quantity and median of the vehicle, and adjust the throttle median to the best driving state. After that, turn on the SVC to carry out median calibration. Every time the fine adjustment is changed, the median calibration will be carried out. During the median calibration, the handwheel and throttle should be set to their median positions and kept still before the calibration is completed;

4. Click "Reserve" to switch between "Normal/Reverse".it can set the gyroscope mixing direction channel;
5. Click "ESP Mode" to switch between "Normal/Lock";

- Normal: When the vehicle yaws or turns, the gyroscope automatically provides an opposite compensation according to the angular velocity generated to control the steering gear to keep it stable or prevent drifting;
- Lock: When the handwheel returns to and is kept at its median position, the gyroscope will control the steering gear in the opposite direction according to the yaw angle to make it return to the expected direction;

6. Click the "+/-" symbol settings displayed at the bottom of the "Steering Gain", "Throttle Gain" and "Priority" interfaces, and the setting values range from 0% to 100%;

- "Priority" is used to set the control ratio (turning radius) between handwheel control and gyroscope when the vehicle turns. When turning the vehicle with the handwheel, the steering angle will be reduced under the hybrid gyroscope control. When the value is 0%, the hybrid force is the largest, that is, the turning radius is the largest. When the value is 100%, the hybrid force is 0 and the turning radius is the smallest.

7. Gyroscope calibration is used to enable the gyroscope or change the gyroscope for the first time with the code. The model stays in a stable and static state,Click to calibrate and the receiver flashes 2 times and automatically exits, indicating that the calibration is successful.

Note: If you use a air transmitter such as PL18, it can only be used for basic purposes, and the SVC function cannot be realized.

兼容性 Compatibility

该接收机兼容所有 AFHDS3 的枪控发射机。（目前适用于 NB4 2.0.93 和 NB4 lite 1.0.10 及之后的版本固件使用的高频库为 3.0 版本的发射机。）

The INr4-GYB receiver is compatible with all AFHDS 3 surface transmitters (Note: It is currently applicable to NB4 2.0.93 and NB4 lite 1.0.10 and later versions. The high-frequency library used by the firmware is version 3.0.)

► 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，将有可能导致遥控设备失控或者引擎继续工作而引发事故。
- 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 may lead to unintended operation or loss of control.
- 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 [INr4-GYB] 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.

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:N4ZINR4GYB