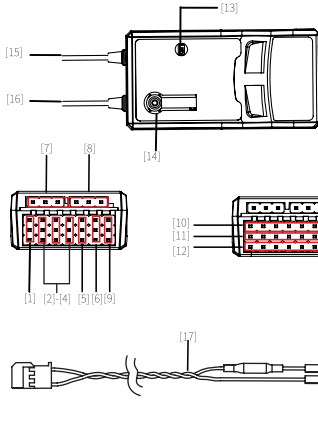## 产品介绍 Introduction

FTr8B 采用 AFHDS3（第三代自动跳频数字系统），具有双天线，支持双向传输，可以实现回传功能，支持 i-bus out/s.bus 切换和 CH1 接口 PWM/PPM 切换，支持所有 AFHDS3 发射机和高频头。

The FTr8B receiver adopts Flysky's third-generation automatic frequency hopping digital system (AFHDS 3), which features dual antennas and bidirectional data transmission commonly known as telemetry plus an i-bus out/s.bus terminal and PWM/PPM switching at Channel 1.Compatible with all AFHDS 3 transmitters and RF modules.

接收机概览 Receiver overview

[1]CH1(PWM/PPM)
[2]-[4] CH2-CH4
[5] CH5 (NPD)
[6] CH6 (NPC)
[7] CH7 (NPB)
[8] i-bus out/s.bus& CH8 (NPA)

[9] VCC/BVD(电池电压检测 / 供电接口)
[10] S（信号脚）
[11] +（电源正极）
[12] -（电源地）
[13] LED 灯

[14] 对码键
[15] 天线 1（右天线）
[16] 天线 2（左天线）
[17] BVD 功能配件
[18] 接电池正极
[19] 接电池负极

注:
(1) NPA/B/C/D 及 BVD 的新功能待 2020 年 9 月新程序开放后具备，其中产品内的 BVD 功能配件请妥善保管，功能升级后将借助该接线实现 BVD 功能；
(2) 1.0 版本的 [8] i-bus out/s.bus 功能在 2.0 版本后将由 CH8(NPA) 功能取代。

[9] VCC/BVD (Battery voltage detection / power supply interface)
[10] S（Signal Pin）
[11] +（Positive power terminal）
[12] -（Power ground）
[13] LED

[14] BIND
[15] Antenna 1（The right antenna）
[16] Antenna 2（The left antenna）
[17] BVD harness
[18] Connect to battery positive pole
[19] Connect to battery negative pole

Tips:
(1) The added new NPA/B/C/D and BVD functions will be available with the release of a new firmware update in September 2020. The BVD harness [17] will not function until the new firmware has been installed.
(2) The [8] i-bus/s.bus terminal will be replaced with the CH8 (NPA) function after the firmware upgrade.

产品规格 Product specification

- 产品型号：FTr8B
- 适配发射机：所有支持 AFHDS3 的发射机（PL18、NB4、NB4 Lite 等）
- 适合机种：固定翼、滑翔机、直升机、三角翼、工程车等
- PWM 通道：7(2.0 版本将升级为 8 通道)
- 无线频率：2.4G
- 无线协议：AFHDS 3
- 天线类型：双天线
- 输入电源：3.5 ～ 9V
- 数据输出：PWM\PPM\i-BUS out\s.bus
- 温度范围：-10℃—+60℃
- 湿度范围：20~95%
- 在线更新：无线更新
- 外形尺寸：46.5*23.8*14.8mm
- 机身重量： 11.3g
- 安规认证：CE，FCC ID:N4ZFTR8B

- Product Designation: FTr8B
- Compatible transmitters: all AFHDS 3 transmitters and RF Modules (PL18, NB4, NB4 Lite, etc.)
- Model Type: fixed wing, glider, helicopter, delta wing, engineering vehicle, etc
- PWM Channels: 7(Version 2.0 will be upgraded to 8 channels)
- RF: 2.4GHz
- 2.4G Protocol: AFHDS 3
- Antenna: Dual Antennas
- Input Power: 3.5-9V
- Data Output: PWM/PPM/i.BUS out/S.BUS
- Temperature Range: -10°C to +60°C
- Humidity Limit: 20%-95%
- Online Update: Yes
- Dimensions: 46*23.8*14.8mm
- Weight: 11.3g
- Certification: CE，FCC ID: N4ZFTR8B

对码 Binding

1. 按住接收机对码按键同时上电，松开对码键，接收机指示灯快闪；
2. 打开发射机，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 [14] while powering on the receiver, release the BIND button after receiver is powered on, the LED [13] 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，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 mode.
1. Power on the receiver while pressing the BIND button [14] for then approximately ten seconds until the LED [13] 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，保护模型及人员安全。
1. 若发射机未设置失控保护通道值输出，接收机在进入失控保护状态后将维持失控前输出；若发射机设置了失控保护，则按照发射机通道设置输出。

This function protects your vehicle by preventing unexpected behaviors in case of signal lost.
1. Users should always input Fail Safe parameters before operating their vehicles. If the Fail Safe function has not been set on the transmitter and signal lost occurs, the receiver will continue to operate and maintain all output value at the last received instructions from the transmitter. If the Fail Safe parameters on the transmitter has set been set, the receiver will set output values according to user parameters during signal lost.

兼容性 Compatibility

该接收机兼容所有 AFHDS3 的发射机和高频头（主要包括 PL18、NB4、NB4 Lite、FRM302 等）.

The FTr8B receiver is compatible with all AFHDS 3 transmitters and RF modules (including PL18, NB4, NB4 Lite, FRM302 etc.)

▶ **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 [FTr8B] 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 oroperating 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:N4ZFTR8B