

GoolRC PL18

GoolRC Flysky Paladin PL18 Radio Transmitter User Manual

Model: PL18

1. INTRODUCTION

This manual provides detailed instructions for the safe and effective use of your GoolRC Flysky Paladin PL18 2.4GHz 18CH Radio Transmitter, including the FS-FTr10 and FTr16S receivers. Please read this manual thoroughly before operating the device to ensure proper setup, operation, and maintenance. This system is designed for controlling various RC models such as fixed-wing aircraft, gliders, helicopters, FPV drones, multi-copters, and engineering vehicles.



Image: The GoolRC Flysky Paladin PL18 Radio Transmitter shown with the FTr10 and FTr16S receivers.

2. SAFETY INFORMATION

Always operate your RC equipment responsibly. Failure to follow safety guidelines can result in injury or damage to property.

- **Battery Safety:** Do not short-circuit, disassemble, or expose the battery to extreme temperatures. Use only approved charging methods.
- **Operating Environment:** Operate in open areas, away from people, vehicles, and obstacles. Avoid operating near power lines, strong electromagnetic fields, or in adverse weather conditions.
- **Pre-Flight Checks:** Always perform a thorough pre-flight check of your model and radio system before each use.
- **Age Recommendation:** This product is recommended for users aged 14 years and up.
- **Interference:** Be aware of potential radio interference from other 2.4GHz devices.

3. PACKAGE CONTENTS

Verify that all items listed below are included in your package:

- 1 x PL18 Transmitter
- 1 x FTR10 Receiver
- 1 x FTR16S Receiver

- 1 x Sunshade Cover
- 2 x Big Hand Grips
- 1 x USB Cable



Image: All components included in the GoolRC Flysky Paladin PL18 package.

4. PRODUCT OVERVIEW

4.1 PL18 Transmitter

The PL18 is an 18-channel radio transmitter featuring a 3.5-inch HVGA TFT capacitive color touch screen (320*480 resolution) running FlyskyOS. It supports various model types including fixed-wing, glider, helicopter, FPV, multi-copter, and engineering vehicles. It incorporates AFHDS3 2.4GHz protocol for stable, low-latency communication and dual omnidirectional antennas for enhanced signal stability and range.

Flysky FS-PL18 Paladin 18CH Transmitter

with FTr10 & FTr16S Receiver

18CH



HALL Gimbal Base



4300mAh Battery



3rd Generation
RF



Dual Antennas



Full Color
Touch Screen



Image: Key features of the PL18 Transmitter.



Image: Front and rear views of the PL18 Transmitter.

4.2 FTr10 Receiver

The FTr10 is a 10-channel receiver utilizing the AFHDS 3 wireless protocol. It supports PWM, PPM, i.bus, s.bus, and UART data ports, offering versatile connectivity for various applications.



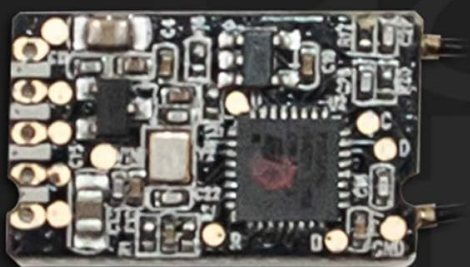
Receiver Overview



Image: FTr10 Receiver overview with connection diagram.

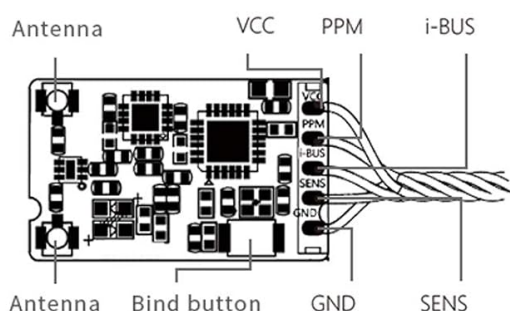
4.3 FTr16S Receiver

The FTr16S is a compact 16-channel receiver also based on the AFHDS 3 protocol. It provides i.bus/s.bus/PPM data ports and is ideal for applications requiring a smaller footprint.



FTTr16S

Receiver Overview



VCC	Voltage: 3.5 - 8.4v
PPM	Standard PPM output
i-BUS	i-bus and s-bus supported
SENS	Sensor
GND	Connect to ground

Image: FTTr16S Receiver overview with connection diagram.

5. SETUP

5.1 Charging the Transmitter

The PL18 transmitter has a built-in 4300mAh battery. Charge the transmitter using the provided Micro USB cable or via wireless charging. A full charge takes approximately 6 hours via USB or 7 hours via 2A wireless charging.

5.2 Connecting Receivers

Connect the FTTr10 or FTTr16S receiver to your model's flight controller or servos according to your model's specific wiring diagram. Ensure correct polarity for power connections.

5.3 Binding Process

To establish communication between the transmitter and receiver, a binding process is required. Refer to the detailed binding instructions in the separate Flysky AFHDS3 protocol manual for specific steps, as this may vary slightly depending on firmware versions.

5.4 Gimbal Adjustment

The high-precision Hall gimbals on the PL18 are adjustable for both left and right-handed users. You can adjust spring tension, dampening, and throw to suit your preference. Consult the transmitter's on-screen menu or a detailed setup guide for precise adjustment procedures.

6. OPERATION

6.1 Basic Controls

The PL18 features 18 channels, allowing for extensive control over complex models. The primary control sticks (gimbals) manage pitch, roll, yaw, and throttle. Various switches, knobs, and buttons provide additional control functions, which can be assigned and configured through the FlyskyOS.



Image: The PL18's screen displaying model configuration settings.

6.2 Model Configuration (FlyskyOS)

The PL18 runs on FlyskyOS, accessible via the touch screen. This operating system allows for

comprehensive model setup, including:

- **Model Type Selection:** Choose between fixed-wing, glider, helicopter, FPV, multi-copter, and engineering vehicle modes.
- **Channel Assignment:** Assign functions to specific channels, switches, and knobs.
- **Mixes:** Create custom mixes for advanced control.
- **Telemetry:** Monitor real-time data from compatible sensors (e.g., battery voltage, RSSI).
- **System Settings:** Adjust display brightness, language (Chinese/English), and other system preferences.

Detailed instructions for navigating FlyskyOS and configuring models are available within the transmitter's digital manual or on the official Flysky support website.

7. MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to clean the transmitter and receivers. Avoid using solvents or abrasive cleaners.
- **Storage:** Store the transmitter and receivers in a cool, dry place, away from direct sunlight and extreme temperatures. Remove the battery if storing for extended periods (though the PL18 has a built-in battery, ensure it's not fully discharged for long-term storage).
- **Firmware Updates:** Periodically check the official Flysky website for firmware updates to ensure optimal performance and access to new features. Updates can typically be performed via the USB data interface.
- **Battery Care:** Recharge the transmitter battery when the low voltage warning is triggered (<3.7V). Avoid completely draining the battery.

8. TROUBLESHOOTING

- **No Power:** Ensure the transmitter battery is charged. Check the power button.
- **No Signal/Binding Issues:** Verify that the receiver is correctly powered and bound to the transmitter. Ensure both devices are using the same protocol (AFHDS3). Try re-binding.
- **Intermittent Control:** Check for potential sources of 2.4GHz interference. Ensure antennas on both transmitter and receiver are properly positioned and undamaged.
- **Screen Unresponsive:** Try restarting the transmitter. If the issue persists, contact customer support.
- **Short Range:** Ensure antennas are not obstructed and are oriented correctly. Check for environmental interference.

9. SPECIFICATIONS

9.1 Paladin PL18 Radio Transmitter

Feature	Specification
Channels	18

Frequency	2.4GHz
RF Power	<20 dBm
2.4GHz Protocol	AFHDS3
Distance	>3km
Channel Resolution	4096
Battery	1S (3.7V) 4300mAh (built-in)
Charging Interface	Micro USB / wireless charging
Charging Time	6h@5V (USB) / 7h@2A (wireless)
Lifetime	> 8h
Low Voltage Warning	<3.7V
Antenna Type	Dual antenna
Display	HVGA 3.5" TFT, 320*480
Language	Chinese and English
Simulator	USB Simulator
Data Interface	USB, Non-standard interface (USART), PHJACK (PPM)
Temperature Range	-10 °C - +60 °C
Humidity Range	20%-95%
Online Update	Support
Color	Black
Dimensions (L x W x H)	214*86.5*192 mm
Bodyweight	946g

9.2 FTr16S Receiver

Feature	Specification
PWM Channel	None
Wireless Frequency	2.4GHz
Wireless Protocol	AFHDS 3
Range	3500m (air)
Antenna Type	Dual antenna (92.5mm * 2)
Power	3.5-8.4V
RSSI	Supported

Data Port	i.bus / s.bus / PPM
Temperature Range	-10 °C - +60 °C
Humidity Range	20% -95%
Online Update	Yes
Dimensions	20 * 12 * 3.1mm
Weight	2g

9.3 FTr10 Receiver

Feature	Specification
PWM Channel	10
Wireless Frequency	2.4GHz
Wireless Protocol	AFHDS 3
Range	> 3500m (air)
Antenna Type	Dual antenna (103mm * 2)
Power	3.5-12V
RSSI	Supported
Data Port	PWM / PPM / i.bus / s.bus / UART
Temperature Range	-10 °C - +60 °C
Humidity Range	20% -95%
Online Update	Yes
Dimensions	52 * 28 * 22mm
Weight	22g

10. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please refer to the official GoolRC or Flysky website, or contact your original point of purchase. Keep your proof of purchase for warranty claims.