YU Xiang 8530JJ5PW4N01335Q8Y8

YU Xiang F02S Flywolf RC Helicopter User Manual

Model: F02S

Introduction

This manual provides detailed instructions for the operation, maintenance, and troubleshooting of your YU Xiang F02S Flywolf RC Helicopter. Please read this manual thoroughly before operating the helicopter to ensure safe and optimal performance.

The F02S Airwolf GPS Smart 6G Flybarless Simulation Helicopter is a high-performance remote-controlled aircraft featuring advanced GPS and optical flow positioning for stable flight, 6G/3D flight modes, and an 8-channel high-precision remote control. Its robust design incorporates high-strength composite engineering material and dual brushless motors for durability and power.

Figure 1: The YU Xiang F02S Flywolf RC Helicopter, its remote control, and smart battery.

Figure 2: The F02S Flywolf helicopter, a 1:34 scale reproduction of the Airwolf armed helicopter.

Safety Precautions

Operating an RC helicopter requires caution. Please adhere to the following safety guidelines:

- **Read the Manual:** Always read the entire instruction manual before first use.
- **Age Recommendation:** This product is recommended for users aged 15 months and up. Adult supervision is advised for younger users.
- **Flight Environment:** Fly in open, clear areas away from people, animals, buildings, and power lines. Avoid flying in strong winds or adverse weather conditions.
- **Battery Safety:** Use only the provided smart battery and charging cable. Do not overcharge or short-circuit the battery. Discontinue use if the battery shows signs of damage or swelling.
- **Rotor Blades:** Keep hands, face, and loose clothing away from rotating blades. The blades can cause serious injury.
- **Pre-Flight Check:** Before each flight, ensure all parts are securely attached, the battery is fully charged, and the remote control is functioning correctly.
- **Emergency Stop:** Familiarize yourself with the emergency stop function on the remote control.

Package Contents

Verify that all components are present in the package:

- Aircraft ×1
- Remote Control ×1
- Instruction Manual ×1
- Dedicated USB Charging Cable ×1
- Main Blades ×2
- Tail Blade ×1
- Smart Battery ×1

Setup

1. Charging the Smart Battery

The F02S comes with a 7.4V 1200mAh 25C LI-POLY smart battery. Ensure the battery is fully charged before first use.

1. Connect the dedicated USB charging cable to a compatible USB power source (e.g., computer USB port, USB wall adapter).
2. Connect the smart battery to the charging cable.
3. The charging indicator on the cable or battery will show the charging status. Charging typically takes about 60 minutes.
4. Once fully charged, disconnect the battery from the charger.

Figure 3: The 7.4V 1200mAh Li-Po smart battery, designed for high discharge rates and extended flight time.

2. Remote Control Preparation

The 2.4GHz remote control requires batteries (not specified in package contents, assume user provides or it's internal rechargeable). Ensure it is powered on and ready for binding.

- Power on the remote control.
- Familiarize yourself with the controls and switches. The remote provides 1024-level operation precision and real-time telemetry.

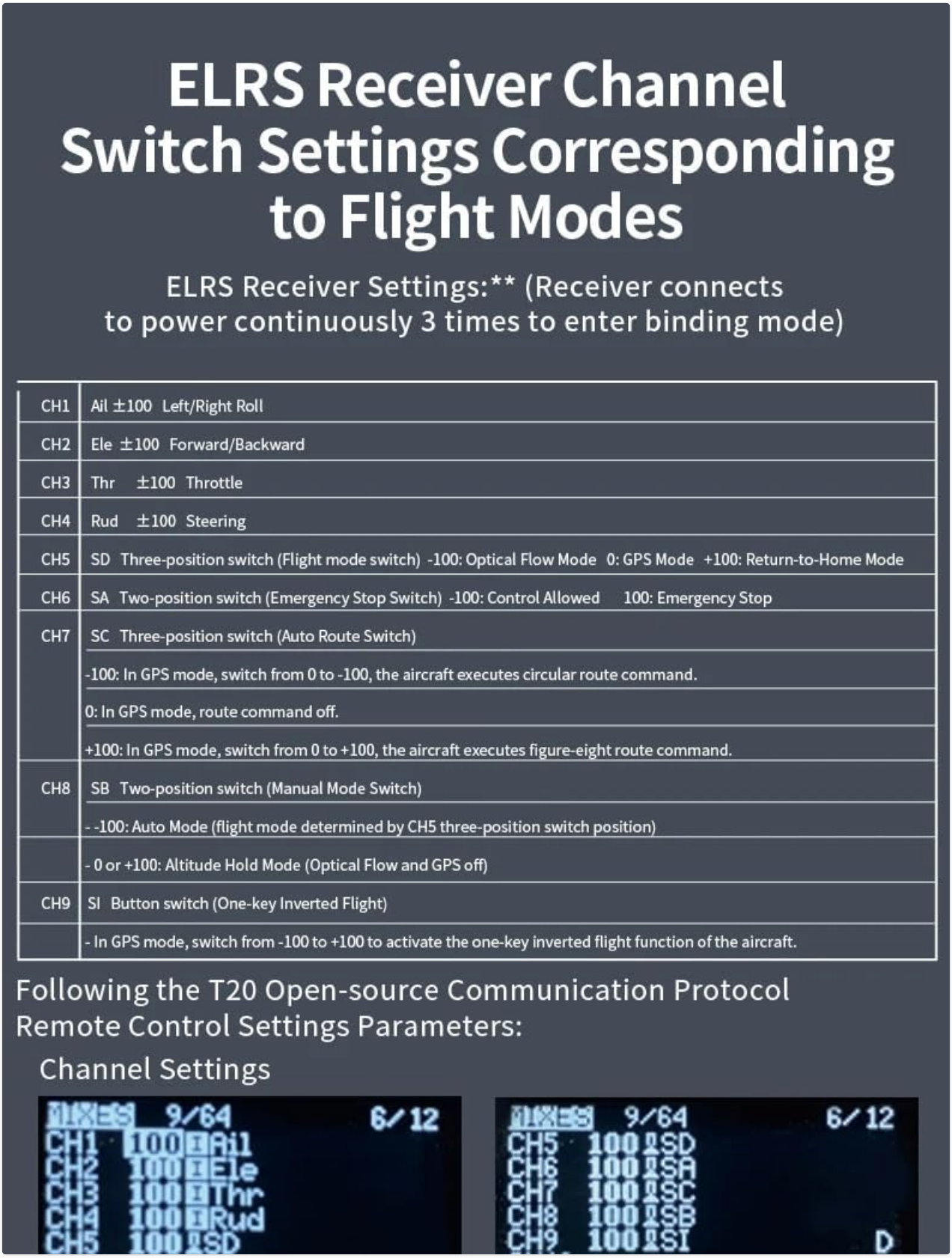

Figure 4: Remote control display showing communication frequency and mode settings. These settings are based on the T20 open-source protocol.

3. Binding the Helicopter to the Remote Control

To establish communication between the helicopter and the remote control, they must be bound. The ELRS Receiver enters binding mode by connecting power continuously 3 times.

1. Ensure both the helicopter and remote control are powered off.
2. Power on the remote control first.

3. Connect the helicopter's battery. Power the helicopter on and off three times consecutively to activate binding mode.
4. Observe the indicator lights on both devices. A solid light typically indicates a successful bind.
5. Once bound, perform a quick check of the controls (e.g., throttle, rudder) to ensure responsiveness before flight.

Operating Instructions

Flight Modes

The F02S supports two primary flight modes, switchable via the remote control:

- **6G Mode (Stability Mode):** Ideal for beginners, this mode provides stable flight with automatic stabilization, making it easier to control the helicopter. It utilizes GPS and optical flow for precise altitude hold and hovering.
- **3D Mode (Aerobatic Mode):** For experienced pilots, this mode allows for advanced aerobatic maneuvers. The helicopter's flight characteristics become more agile and responsive.

Advanced Positioning Systems

The F02S integrates multiple positioning technologies for enhanced flight stability and safety:

- **GPS Satellite Positioning:** Provides precise outdoor positioning, enabling features like one-button return-to-home, low battery return, loss of control return, and straight-line return.
- **Optical Flow + LIDAR TOF Altitude Hold:** For indoor or low-altitude flight, optical flow and LIDAR Time-of-Flight (TOF) sensors provide breakthrough altitude hold technology, ensuring precise position and balance maintenance.

Figure 5: GPS Satellite Positioning enables intelligent flight operations such as Low Battery Return, Loss of Control Return, Straight-Line Return, and One-Button Return-to-Home.

Figure 6: Optical Flow and LIDAR TOF provide precise altitude hold and balance maintenance, offering high precision and strong anti-interference capabilities.

Figure 7: The GPS Flight Control System enables automatic hovering and automatic return-to-home functions.

Remote Control Channel Switch Settings (ELRS Receiver)

The following table details the ELRS Receiver channel switch settings corresponding to various flight modes and functions. These settings are based on the T20 open-source communication protocol. For specific interface and parameter differences, refer to your remote control's instruction manual.

Channel	Function	Switch Position / Value	Description
CH1	Ail	±100	Left/Right Roll
CH2	Ele	±100	Forward/Backward
CH3	Thr	±100	Throttle
CH4	Rud	±100	Steering
CH5	SD (Three-position switch)	-100 / 0 / +100	Flight mode switch: -100: Optical Flow Mode, 0: GPS Mode, +100: Return-to-Home Mode
CH6	SA (Two-position switch)	-100 / +100	Emergency Stop switch: -100: Control Allowed, +100: Emergency Stop
CH7	SC (Three-position switch)	-100 / 0 / +100	Auto Route Switch: -100: In GPS mode, from 0 to -100, the aircraft executes circular route command. 0: In GPS mode, route command off. +100: In GPS mode, from 0 to +100, the aircraft executes figure-eight route command.
CH8	SB (Two-position switch)	-100 / 0 or +100	Manual Mode Switch: -100: Auto Mode (flight mode determined by CH5 three-position switch position). 0 or +100: Altitude Hold Mode (Optical Flow and GPS off).
CH9	SI (Button switch)	N/A	One-Key Inverted Flight: In GPS mode, switch from -100 to +100 to activate the one-key inverted flight function of the aircraft.

Figure 8: Detailed ELRS Receiver channel switch settings for various flight modes and functions.

Maintenance

Regular maintenance ensures the longevity and optimal performance of your F02S helicopter.

- **Cleaning:** Gently wipe the helicopter's body with a soft, dry cloth after each use to remove dust and debris. Avoid using harsh chemicals or solvents.
- **Blade Inspection:** Regularly inspect the main and tail blades for any cracks, chips, or damage. Replace damaged blades immediately using the provided spares or genuine replacement parts.
- **Motor Check:** Ensure the brushless motors are free from obstructions and spin smoothly.
- **Battery Care:** Store the smart battery in a cool, dry place away from direct sunlight. Do not store fully charged or completely depleted for extended periods. Charge to approximately 50% for long-term storage.
- **Storage:** When not in use, store the helicopter and remote control in a safe place, away from extreme temperatures and moisture.

Troubleshooting

This section addresses common issues you might encounter with your F02S helicopter.

Problem	Possible Cause	Solution
Helicopter does not respond to remote control.	Not bound; low battery in remote or helicopter; interference.	Re-bind the helicopter and remote control. Charge both batteries. Move to an area with less interference.
Short flight time.	Battery not fully charged; aging battery; aggressive flying.	Ensure battery is fully charged. Consider replacing the battery if it's old. Fly more conservatively.
Helicopter drifts or is unstable.	Uncalibrated sensors; damaged blades; strong wind.	Perform sensor calibration (refer to remote control manual). Check and replace damaged blades. Fly in calmer conditions.
Blades not spinning.	Motor obstruction; loose wiring; motor failure.	Check for obstructions. Inspect wiring connections. If motors are faulty, contact support.
Return-to-Home function not working.	Weak GPS signal; not enough satellites locked.	Ensure flight is in an open area with clear sky view for strong GPS signal. Wait for sufficient satellite lock before takeoff.

Specifications

Detailed technical specifications for the YU Xiang F02S Flywolf RC Helicopter:

- **Item Number:** F02S
- **Name:** F02S Airwolf GPS Smart 6G Flybarless Simulation Helicopter
- **Product Dimensions:** Rotor diameter 375mm, fuselage length 415mm, height 118mm
- **Remote Control Mode:** 2.4G Remote Control
- **Remote Control Distance:** More than 120 meters
- **Product Material:** High-strength composite engineering material
- **Single Unit Weight:** 310g (including battery)
- **Body Battery:** 7.4V (1200MAH) 25C LI-POLY smart battery
- **Charging Time:** Approximately 60 minutes
- **Usage Time:** 10 - 12 minutes
- **ASIN:** B0F9P635ZK
- **Item Model Number:** 8530JJ5PW4N01335Q8Y8
- **Manufacturer Recommended Age:** 15 months and up
- **Manufacturer:** Generic

Figure 9: Key dimensions of the F02S helicopter, showing a fuselage length of 415mm and height of 118mm.

Warranty and Support

For warranty information, technical support, or replacement parts, please contact the retailer or manufacturer directly. Keep your purchase receipt as proof of purchase.

For further assistance, refer to the official YU Xiang website or contact their customer service department. Contact details are typically found on the product packaging or the manufacturer's official website.

Related Documents - 8530JJ5PW4N01335Q8Y8

	Yu Xiang F180v2-S RC Helicopter User Manual This user manual provides comprehensive instructions for operating the Yu Xiang F180v2-S RC helicopter, covering setup, flight modes, safety precautions, calibration, troubleshooting, and advanced features.
	F02S Simulation Helicopter User Manual Comprehensive user manual for the F02S Simulation Helicopter by Yu Xiang, covering introduction, safety precautions, helicopter parameters, remote control functions, flight modes, troubleshooting, and FCC warnings.
	Yu Xiang EC135 Scale Helicopter User Manual User manual for the Yu Xiang EC135 Scale Helicopter (F06 model), providing detailed instructions on operation, safety, maintenance, and troubleshooting.
	Yu Xiang F09-S Helicopter User Manual | Operation and Safety Guide Comprehensive user manual for the Yu Xiang F09-S helicopter drone. Learn about setup, operation, safety precautions, flight modes, troubleshooting, and maintenance.
	Yu Xiang F09-S UH-60 Black Hawk Helicopter User Manual Comprehensive user manual for the Yu Xiang F09-S UH-60 Black Hawk RC helicopter. Covers introduction, accessories, safety precautions, helicopter parameters, remote control functions, flight modes, calibration, troubleshooting, and more.