Flysky FS-BS6

Flysky FS-BS6 6-Channel Receiver with Gyro Stabilization System User Manual

Model: FS-BS6

1. Introduction

This manual provides comprehensive instructions for the installation, operation, and maintenance of the Flysky FS-BS6 6-Channel Receiver with Gyro Stabilization System. The FS-BS6 is designed for use with various Flysky RC transmitters, including the FS-GT5, and is suitable for RC cars, trucks, crawlers, and boats. It features a built-in switchable gyroscope for enhanced stability and a Fail-Safe (F.SAFE) function for model protection.

Image 1.1: Flysky FS-BS6 receiver in context with RC vehicles.

2. Product Overview

The Flysky FS-BS6 is a compact and lightweight 6-channel receiver utilizing the AFHDS2A 2.4GHz system. It integrates a gyroscope for stabilization, offering improved control and handling, especially on challenging terrains. The receiver also supports advanced functions like CRAWL mode for climbing vehicles and SVC (Smart Vehicle Control) mode.

Key Features:

- **6 Channels:** Provides ample control options for various RC models.
- **Integrated Gyroscope:** Switchable gyro stabilization system to automatically correct accidental drift.
- **AFHDS2A 2.4GHz System:** Ensures reliable and stable signal transmission.
- **F.SAFE Function:** Fail-Safe protection to prevent runaway models in case of signal loss.
- **Compact Design:** Ultra-small and light, optimizing space and reducing vehicle load.
- **Compatibility:** Works with Flysky RC Transmitters including FS-GT2E, FS-GT2G, FS-GT2F, FS-IT4S, FS-GT5, FS-i4X, FS-i6, FS-i6X, FS-i6S, FS-TH9A, FS-TM10, FS-i8, FS-i10.

What's in the Box:

- 1x Flysky FS-BS6 RC Receiver
- 1x Bind Plug
- 1x Cable

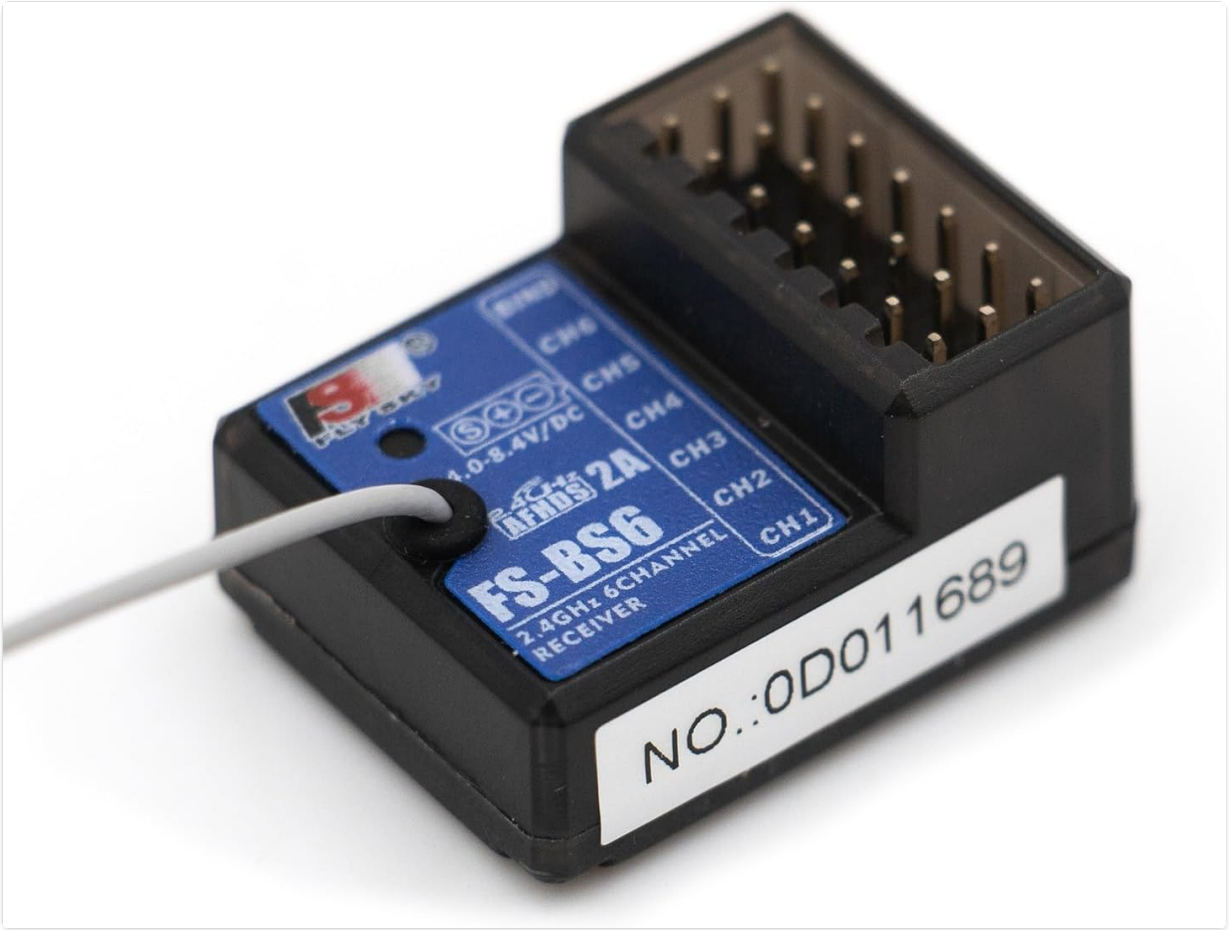


Image 2.1: Flysky FS-BS6 Receiver.

Image 2.2: Front view of FS-BS6 receiver ports.

3. Specifications

Specification	Value
Item Name	FS-BS6
Channels	6 Channels
2.4GHz System	AFHDS2A
Model Type	RC Car, Boat
Modulation Type	GFSK
RF Receiver Sensitivity	-92dBm
Frequency	2.4G
Power Input	4.0-8.4V DC

Specification	Value
Weight	10g (0.317 ounces)
Dimensions (L*W*H)	29 * 22 * 16mm (1.17 x 0.98 x 0.78 inches)

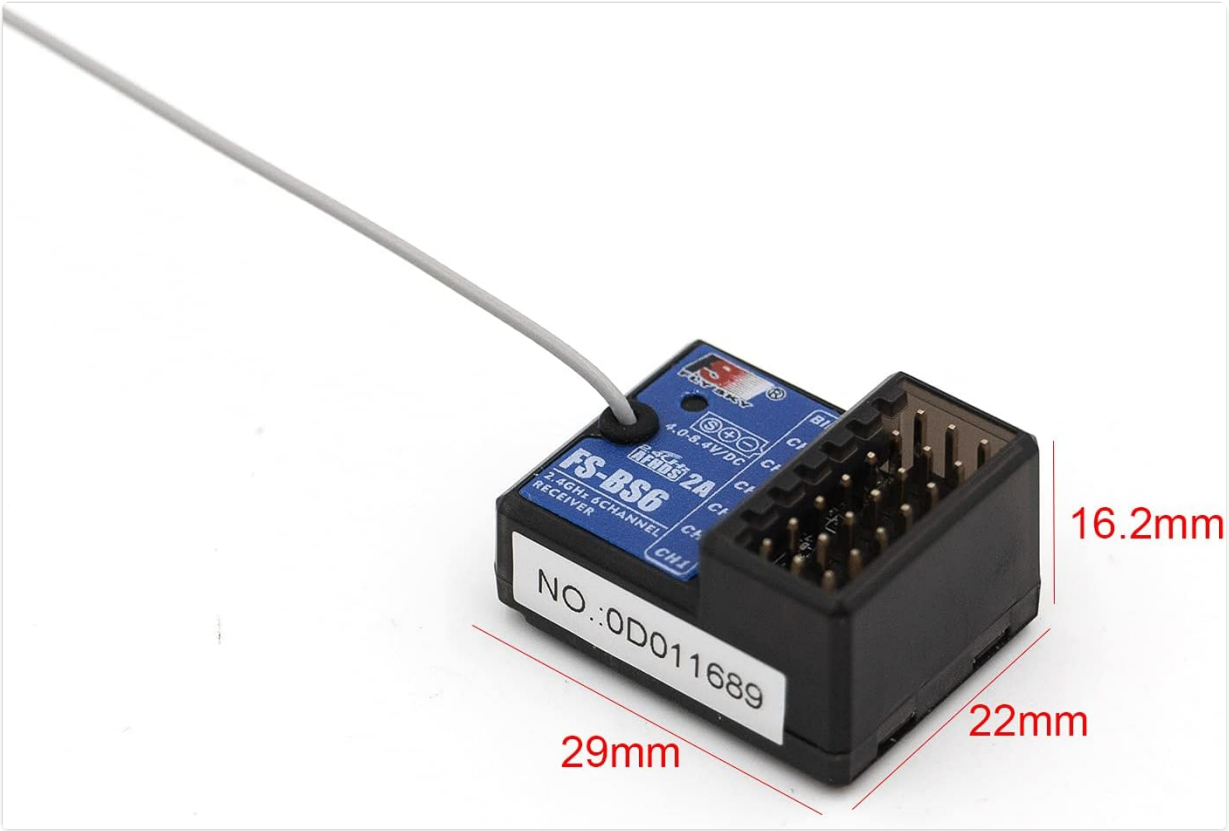


Image 3.1: FS-BS6 Receiver dimensions.

4. Setup

4.1 Installation

1. **Placement:** Due to its ultra-small and light design, the FS-BS6 can be easily installed in most RC models. Choose a location that is protected from moisture, excessive vibration, and direct impact.
2. **Antenna Routing:** Ensure the receiver antenna is routed away from metal parts and other electronic components to maximize signal reception. The antenna should be as straight as possible and positioned for optimal line-of-sight with the transmitter.
3. **Power Connection:** Connect the receiver to a power source within the specified voltage range of 4.0-8.4V DC. This is typically done via the ESC (Electronic Speed Controller) or a dedicated receiver battery pack.
4. **Servo/ESC Connections:** Connect your servos and ESC to the corresponding channels (CH1-CH6) on the receiver. Refer to your model's specific requirements for channel assignments.

4.2 Binding Process

Binding is the process of linking the receiver to your Flysky transmitter, establishing a unique communication link. This must be done before first use.

1. **Power Off Transmitter:** Ensure your Flysky transmitter is powered off.
2. **Insert Bind Plug:** Insert the included bind plug into the 'BIND' port on the FS-BS6 receiver.

3. **Apply Power to Receiver:** Connect the receiver to a power source (e.g., ESC or battery). The receiver's LED should start flashing rapidly, indicating it is in binding mode.
4. **Enter Binding Mode on Transmitter:** Power on your transmitter while holding down its bind button (the exact procedure may vary by transmitter model; refer to your transmitter's manual). The transmitter's display should indicate it is in binding mode.
5. **Confirm Binding:** Once binding is successful, the receiver's LED will stop flashing and remain solid.
6. **Remove Bind Plug:** Power off the receiver, then remove the bind plug from the 'BIND' port.
7. **Test Connection:** Power on your transmitter first, then the receiver. Verify that all channels respond correctly to transmitter inputs.

Image 4.1: FS-BS6 receiver with bind plug inserted.

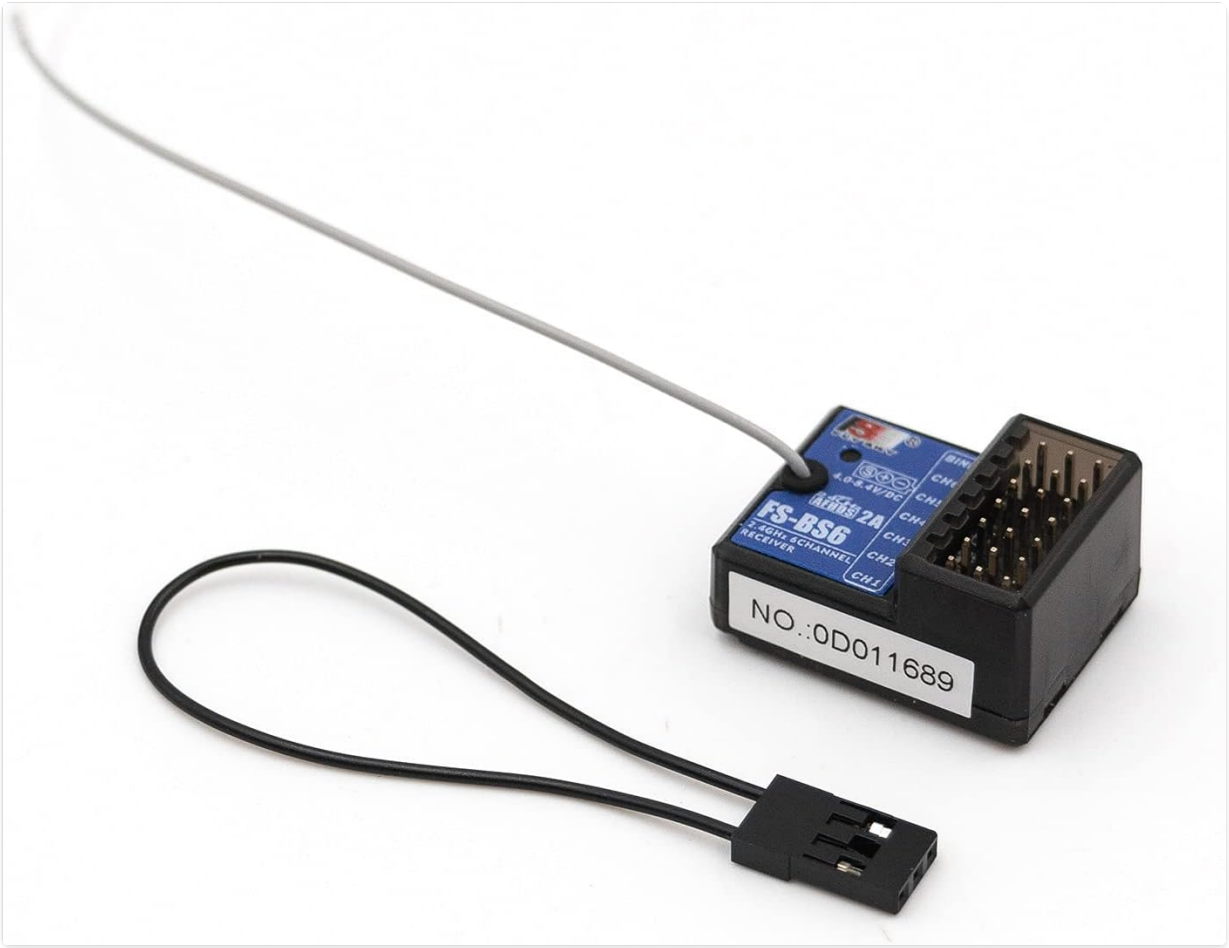


Image 4.2: FS-BS6 receiver with bind plug and antenna.

5. Operating Instructions

5.1 Gyro Stabilization System

The FS-BS6 features a built-in gyroscope that helps stabilize your RC model, particularly useful for improving handling on loose surfaces or at high speeds. The gyro function is switchable and its sensitivity can often be adjusted via your compatible Flysky transmitter (e.g., FS-GT5).

- **Activation/Deactivation:** Refer to your transmitter's manual for instructions on how to enable or disable the gyro stabilization function. This is typically assigned to a switch or dial on the transmitter.
- **Sensitivity Adjustment:** Adjust the gyro sensitivity to suit your driving style and vehicle characteristics. Higher sensitivity provides more assistance, while lower sensitivity allows for more direct control. Experiment in a safe area to find the optimal setting.

5.2 F.SAFE Function (Fail-Safe Protection)

The F.SAFE function is a critical safety feature that protects your model in the event of signal loss between the transmitter and receiver. When activated, it sets the throttle and other channels to pre-defined positions, preventing the model from running away or causing damage.

- **Setting Fail-Safe:** The Fail-Safe positions are usually set during the binding process or through your transmitter's menu. Typically, you set the throttle to neutral or brake, and steering to a safe position (e.g., straight ahead). Consult your transmitter's manual for detailed instructions on setting Fail-Safe values.
- **Operation:** If the receiver loses signal from the transmitter, it will automatically move the servos to the pre-set Fail-Safe positions until the signal is re-established.

5.3 CRAWL and SVC Functions

The FS-BS6 receiver supports CRAWL (climbing car mode) and SVC (smart car control mode) functions, which can be enabled and configured through compatible Flysky transmitters. These functions provide specialized control characteristics for specific RC applications.

- **CRAWL Function:** Optimizes throttle and steering response for slow-speed, high-torque crawling applications, enhancing control over rough terrain.
- **SVC Function:** Provides advanced vehicle control features, potentially including traction control or other stability enhancements, depending on the transmitter's capabilities.
- **Configuration:** Refer to your specific Flysky transmitter's manual for detailed instructions on how to activate and configure CRAWL and SVC modes.

6. Maintenance

Proper maintenance ensures the longevity and reliable performance of your FS-BS6 receiver.

- **Keep Clean:** Regularly clean the receiver and its connections to prevent dust, dirt, or moisture buildup. Use a soft, dry brush or compressed air.
- **Avoid Moisture:** Protect the receiver from water and excessive humidity. If operating in wet conditions, ensure the receiver is adequately waterproofed or housed in a water-resistant enclosure.
- **Check Connections:** Periodically inspect all wire connections for looseness, corrosion, or damage. Ensure servo and power leads are securely plugged into the receiver ports.
- **Antenna Integrity:** Ensure the antenna wire is not cut, kinked, or damaged, as this can severely impact signal range and reliability.
- **Storage:** When not in use, store the receiver in a dry, cool place, away from direct sunlight and extreme temperatures.

7. Troubleshooting

If you encounter issues with your FS-BS6 receiver, refer to the following troubleshooting guide:

Problem	Possible Cause	Solution
Receiver not binding	Incorrect binding procedure, transmitter not in bind mode, faulty bind plug.	Review Section 4.2 (Binding Process). Ensure bind plug is fully inserted. Confirm transmitter is in bind mode. Try a different bind plug if available.
No response from servos/ESC	Receiver not powered, not bound, incorrect servo/ESC connection, faulty component.	Check power supply to receiver. Re-bind the receiver. Verify servo/ESC connections to correct channels. Test components individually if possible.
Intermittent signal loss/poor range	Antenna obstruction/damage, interference, low transmitter/receiver battery.	Ensure antenna is clear and undamaged. Avoid operating near strong electrical interference sources. Check and charge transmitter and receiver batteries.
Gyro not functioning or erratic	Gyro disabled, incorrect sensitivity setting, receiver not calibrated.	Ensure gyro is enabled on your transmitter. Adjust gyro sensitivity. Some transmitters may require receiver calibration for gyro function; refer to transmitter manual.

Problem	Possible Cause	Solution
Fail-Safe not working	Fail-Safe not set, incorrect settings.	Ensure Fail-Safe positions are correctly set and activated on your transmitter. Test Fail-Safe by powering off the transmitter while the model is safely powered on.

8. Safety Information

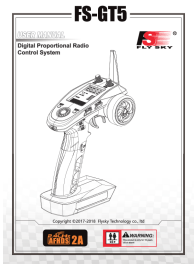
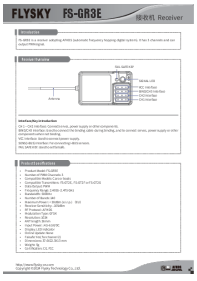
Please observe the following safety guidelines when using the Flysky FS-BS6 receiver:

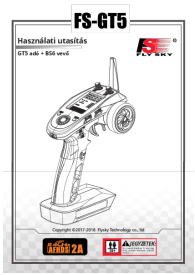
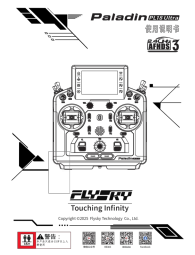
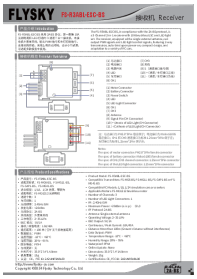
- Always operate RC models in a safe and open area, away from people, pets, and obstacles.
- Ensure all connections are secure before operation to prevent loss of control.
- Verify Fail-Safe settings are correctly configured to prevent runaway models.
- Do not expose the receiver to extreme temperatures, moisture, or corrosive substances.
- Disconnect power from the receiver and model when not in use.
- This product is recommended for users aged 18 years and up.

9. Warranty and Support

For warranty information and technical support, please contact the retailer or manufacturer directly. Keep your proof of purchase for any warranty claims. General support for Flysky products can often be found on the official Flysky website or through authorized distributors.

Related Documents - FS-BS6

	FlySky FS-GT5 Digital Proportional Radio Control System User Manual Comprehensive user manual for the FlySky FS-GT5 Digital Proportional Radio Control System, covering setup, operation, function settings, and product specifications. Learn how to use your RC system for cars, boats, and other models.
	Flysky FS-GR3E AFHDS 3-Channel RC Receiver User Manual User manual for the Flysky FS-GR3E AFHDS 3-channel RC receiver, covering introduction, specifications, binding, failsafe settings, and compliance information.

	FlySky FS-GT5 és FS-BS6 Rádióvezérlő Rendszer Használati Útmutató Ez a részletes útmutató a FlySky FS-GT5 rádióvezérlő adót és FS-BS6 vevőt ismerteti. Fedezze fel a biztonsági előírásokat, a rendszer funkcióit, a beállítást, a specifikációkat és a csomag tartalmát.
	Paladin PL18 Ultra | Flysky 18 Flysky Paladin PL18 Ultra 18 2.4GHz AFHDS 3 Paladin PL18 Ultra Paladin PL18 Ultra
	Flysky FS-ST8B & FS-Br01 Digital Proportional Radio Control System Manual Comprehensive user manual for the Flysky FS-ST8B transmitter and FS-Br01 receiver, detailing setup, functions, specifications, and operation for bait boat control.
	Flysky FS-R3ABL-ESC-BS Receiver: User Manual and Specifications Comprehensive guide to the Flysky FS-R3ABL-ESC-BS, a 3-channel 2-in-1 RC receiver with 10A brushless ESC and LED control, featuring 2A-BS protocol, binding, protection, and specifications.