HOBBYWING 30201500

Hobbywing FLYFUN-130A-HV-OPTO-V5 Electronic Speed Controller Instruction Manual

Model: 30201500

Introduction

The Hobbywing FLYFUN-130A-HV-OPTO-V5 is an advanced Electronic Speed Controller (ESC) designed for remote-controlled aircraft. It features soft start-ups, reverse brake functionality, and a high-power switch-mode BEC with adjustable voltage. This ESC incorporates DEO (Driving Efficiency Optimization) technology for improved throttle response, stability, and efficiency. Multiple protection features ensure reliable operation and extended service life.

Setup Instructions

Proper setup of your FLYFUN-130A-HV-OPTO-V5 ESC is crucial for optimal performance and safety. Follow these guidelines for installation and initial configuration.

Physical Installation

- Ensure the ESC is securely mounted in your aircraft, allowing for adequate airflow to prevent overheating.
- Connect the motor wires to the ESC's output terminals. Pay attention to the correct phasing for proper motor rotation. If the motor rotates in the wrong direction, swap any two of the three motor wires.
- Connect the battery to the ESC's input power leads. Ensure correct polarity to avoid damage.
- Connect the throttle signal cable from the ESC to the throttle channel of your receiver.
- The high-power switch-mode BEC provides adjustable voltage (5.2V, 6.0V, 7.4V) for your receiver and servos. Adjust as needed for your specific setup.

Figure 1: Top view of the Hobbywing FLYFUN-130A-HV-OPTO-V5 ESC, showing the main body with heat sink and connected power and signal wires.

Programming the ESC

The ESC can be programmed via your transmitter or an optional LED program card (purchased separately). For programming with the LED program card, ensure the card is connected to the ESC first, then power up the ESC. Do not connect an external power source directly to the program card.
Key programmable features include:

- Throttle range calibration
- Brake type (e.g., reverse brake)
- Motor timing
- BEC voltage output (5.2V, 6.0V, 7.4V)
- Protection thresholds (e.g., low voltage cutoff)

Refer to the detailed programming guide included with your LED program card or available on the Hobbywing website for specific parameter adjustments.

Operating Instructions

Once the ESC is installed and programmed, you are ready for operation. The FLYFUN-130A-HV-OPTO-V5 is designed to provide a responsive and stable flight experience.

Pre-Flight Checks

- Verify all connections are secure and free from damage.
- Ensure the battery is fully charged and properly connected.
- Perform a range check with your radio system.
- Confirm motor rotation direction is correct.

Flight Operation

The integrated DEO (Driving Efficiency Optimization) technology provides a rapider and smoother throttle response, contributing to better stability and flexibility during flight. This technology also enhances driving efficiency, potentially leading to longer flight times.
Always operate your aircraft in a safe and responsible manner, adhering to local regulations and guidelines.

Figure 2: Side view of the Hobbywing FLYFUN-130A-HV-OPTO-V5 ESC, showcasing the heat sink fins and the arrangement of input and output wires.

Maintenance

Regular maintenance helps ensure the longevity and reliable performance of your Hobbywing FLYFUN-130A-HV-OPTO-V5 ESC.

- **Cleaning:** Periodically inspect the ESC for dust, dirt, or debris. Gently clean the heat sink and casing with a soft brush or compressed air. Avoid using liquids.
- **Connection Checks:** Before each use, verify that all electrical connections (battery, motor, receiver) are secure and free from corrosion or damage. Loose connections can lead to intermittent power or signal loss.
- **Wire Inspection:** Check all wires for fraying, cuts, or insulation damage. Replace damaged wires immediately.
- **Temperature Monitoring:** While the DEO technology helps maintain lower ESC temperatures, always monitor the ESC temperature after flights. Excessive heat can indicate an issue with setup, motor, or propeller choice.
- **Storage:** Store the ESC in a dry, cool environment away from direct sunlight and extreme temperatures.

Figure 3: Top-down view of the Hobbywing FLYFUN-130A-HV-OPTO-V5 ESC, showing the heat sink and wire routing from above.

Troubleshooting

This section addresses common issues you might encounter with your ESC. The FLYFUN-130A-HV-OPTO-V5 includes multiple protection features such as start-up, over-current, ESC thermal, capacitor thermal, overload, throttle signal loss (or Fail Safe), and abnormal input voltage protection to prevent damage.

Common Issues and Solutions

- **Motor Not Responding or Delayed Response:**
  - Check all connections between the ESC, motor, receiver, and battery.
  - Ensure the throttle range is correctly calibrated.
  - Verify that the transmitter is powered on and bound to the receiver.
  - *Note:* There are known compatibility issues with some 14-pole motors (e.g., Dualsky). If experiencing significant throttle delay with such motors, consider adjusting motor timing settings

or consulting Hobbywing support for alternative solutions.

- **ESC Overheating:**
  - Ensure adequate airflow around the ESC.
  - Check for motor or propeller issues that might be causing excessive load.
  - Verify that the motor timing is set correctly for your motor.
- **Motor Stuttering or Irregular Operation:**
  - Check motor wire connections for looseness or damage.
  - Ensure the battery is fully charged and capable of delivering the required current.
  - Recalibrate the throttle range.
- **No Power to Receiver/Servos (BEC Issue):**
  - Verify the BEC voltage setting is appropriate for your receiver and servos.
  - Check the BEC output wire connection to the receiver.

If issues persist, contact Hobbywing customer service for further assistance.

Specifications

Below are the technical specifications for the Hobbywing FLYFUN-130A-HV-OPTO-V5 ESC (Model: 30201500).

Feature	Detail
Product Dimensions	4.33 x 1.31 x 1.98 inches
Item Weight	7.8 ounces
ASIN	B074MLBVCF
Item Model Number	30201500
Manufacturer Recommended Age	18 years and up
Manufacturer	Hobbywing Technology
BEC Output	8A continuous / 20A peak, adjustable 5.2V, 6.0V, 7.4V
Technology	DEO (Driving Efficiency Optimization) / Active Freewheeling
Protection Features	Start-up, Over-current, ESC Thermal, Capacitor Thermal, Overload, Throttle Signal Loss (Fail Safe), Abnormal Input Voltage

Figure 4: Another perspective of the Hobbywing FLYFUN-130A-HV-OPTO-V5 ESC, highlighting its compact design and robust heat sink.

Warranty Information

For information regarding product warranties, returns, and legal disclaimers, please refer to the official HobbywingDirect.com website. It is recommended to review their Return Policy for detailed terms and conditions.
Disclaimer: While efforts are made to provide current and accurate information, HobbywingDirect.com cannot be held responsible for typographical errors and assumes no responsibility for said errors on their website or product documentation.

Customer Support

Should you encounter any issues or require technical assistance with your Hobbywing FLYFUN-130A-HV-OPTO-V5 ESC, Hobbywing customer service is available to help. They are known for being responsive to inquiries.
For direct support, please visit the official Hobbywing website or contact their support channels as listed on their site. Having your product model number (30201500) and a detailed description of your issue ready will help expedite the support process.