STASRC Skywalker 80A V2

Hobbywing Skywalker 80A V2 ESC Electric Speed Controller User Manual

Model: Skywalker 80A V2

Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the Hobbywing Skywalker 80A V2 Electric Speed Controller (ESC). Designed for fixed-wing aircraft, this ESC offers reliable performance and advanced features to enhance your flying experience. Please read this manual thoroughly before using the product to ensure proper function and safety.

Safety Information

Always prioritize safety when working with electronic components and remote-controlled aircraft. Adhere to the following guidelines:

- Ensure all connections are secure and correct before powering on the ESC. Incorrect wiring can cause damage or injury.
- Operate the ESC within its specified voltage and current limits (3-6S LiPo, 11.1-18s Ni-MH, 80A Cont./100A Peak). Exceeding these limits can lead to overheating and failure.
- Keep the ESC away from water and moisture unless explicitly stated as waterproof.
- Regularly inspect the ESC and associated wiring for any signs of damage or wear.
- Disconnect the battery immediately after use and before performing any maintenance or adjustments.
- No specific warnings applicable beyond general electronic component handling.

What's in the Box

Upon opening the package, you should find the following components:

- 1 x Hobbywing Skywalker 80A V2 ESC



Image: The Hobbywing Skywalker 80A V2 ESC, a compact black unit with red and black power wires and thinner signal wires. The label "HOBBYWING SKYWALKER 80A V2-UBEC 3-6S LiPo SBEC 5V/7A" is visible on the top surface.

Specifications

Feature	Detail
Cont./Peak Current	80A/100A
Input Voltage	3-6S LiPo, 11.1-18s Ni-MH
BEC Output	Switch Mode--5V, 7A
Product Dimensions	3.35 x 1.41 x 0.35 inches
Manufacturer	Hobbywing

Setup

Proper setup is crucial for the optimal performance and longevity of your ESC. Follow these steps carefully:

1. **Mounting:** Securely mount the ESC in a well-ventilated area of your aircraft, away from excessive heat sources. Use double-sided tape or zip ties if necessary.
2. **Motor Connection:** Connect the three motor wires from the ESC to the corresponding motor phases. If the motor spins in the wrong direction, swap any two of the three wires.
3. **Battery Connection:** Connect the ESC's power input wires (red for positive, black for negative) to your LiPo or Ni-MH battery. Ensure correct polarity.
4. **Receiver Connection:** Plug the ESC's signal cable (usually a three-wire servo connector) into the throttle channel of your receiver (typically channel 3).
5. **Throttle Range Calibration:**

- Turn on your transmitter and set the throttle stick to its maximum position.
- Connect the battery to the ESC. The ESC will emit a series of beeps.
- When you hear a specific tone (refer to ESC's detailed manual for exact tone), move the throttle stick to its minimum position.
- The ESC will emit another tone indicating successful calibration. Disconnect the battery.

6. **Programming (Optional):** If you have a program card (e.g., HOBBYWING ESC LED Program Card), you can adjust various parameters such as brake type, cutoff voltage, and start mode. Refer to the program card's manual for specific instructions.

Operating Instructions

Once the ESC is set up, you can begin operation. Always ensure a clear and safe operating environment.

1. **Power On:** Turn on your transmitter first, then connect the battery to the ESC. Wait for the ESC to initialize (indicated by beeps).
2. **Throttle Control:** Slowly advance the throttle stick on your transmitter to control the motor speed.
3. **Reverse Brake Function:** The Skywalker 80A V2 ESC supports a Reverse Brake and Linear Reverse Brakes mode. When enabled, this feature allows for effective shortening of the aircraft's landing distance, simulating the landing of a real aircraft. This function is typically activated by moving the throttle stick to the reverse position after reaching zero throttle.
4. **Power Off:** Always disconnect the battery from the ESC first, then turn off your transmitter.

Maintenance

Regular maintenance helps ensure the longevity and reliable performance of your ESC.

- **Cleaning:** Keep the ESC clean and free from dust, dirt, and debris. Use a soft brush or compressed air to remove any buildup.
- **Inspection:** Periodically inspect all wires, connectors, and the ESC casing for any signs of damage, fraying, or corrosion. Replace damaged components immediately.
- **Storage:** When not in use, store the ESC in a dry, cool place, away from direct sunlight and extreme temperatures.
- **Firmware Updates:** Check the Hobbywing official website periodically for any available firmware updates for your ESC model.

Troubleshooting

This section addresses common issues you might encounter with your ESC.

Problem	Possible Cause	Solution
Motor does not spin or stutters.	Incorrect throttle calibration, loose motor wires, low battery voltage, ESC thermal protection activated.	Recalibrate throttle range. Check motor wire connections. Charge battery. Allow ESC to cool down.
ESC beeps continuously.	Throttle signal loss (Fail Safe), abnormal input voltage, low voltage cutoff.	Check receiver connection and transmitter. Verify battery voltage. Charge or replace battery.

Problem	Possible Cause	Solution
Motor spins in wrong direction.	Incorrect motor wire connection.	Swap any two of the three motor wires between the ESC and motor.
ESC gets excessively hot.	Overloading, poor ventilation, incorrect propeller size, short circuit.	Reduce load. Improve airflow around ESC. Use appropriate propeller. Check for short circuits.

The ESC includes multiple protection features such as abnormal input voltage, ESC thermal, throttle signal loss (or Fail Safe), and low voltage cutoff. These features are designed to prolong the life of the ESC by preventing damage under adverse conditions.

Warranty and Support

For warranty information and technical support, please refer to the official Hobbywing website or contact your local distributor. Keep your purchase receipt as proof of purchase for any warranty claims.
Manufacturer: Hobbywing

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