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› Readytosky 40A ESC 2-4S Brushless Speed Controller User Manual

## Readytosky 40A ESC

# Readytosky 40A ESC 2-4S Brushless Speed Controller

USER MANUAL

## Introduction

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This manual provides essential information for the proper installation, operation, and maintenance of your Readytosky 40A ESC (Electronic Speed Controller). This ESC is designed for use with 2-4S LiPo batteries and features a 5V/3A BEC (Battery Eliminator Circuit). Please read this manual thoroughly before using the product to ensure safe and efficient operation.

## Safety Precautions

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- Always disconnect the battery from the ESC when not in use to prevent accidental motor activation.
- Ensure all connections are secure and properly insulated to avoid short circuits.
- Operate in a well-ventilated area. ESCs can generate heat during operation.
- Verify motor rotation direction and propeller attachment before flight.
- Keep hands and loose clothing away from rotating propellers.
- Do not exceed the specified voltage and current ratings of the ESC.

## Product Overview

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The Readytosky 40A ESC is a compact and reliable electronic speed controller suitable for various RC applications, including F450, 450mm, S500, and ZD550 quadcopters and helicopters. It integrates a 5V/3A BEC to power your receiver and servos.



Figure 1: Readytosky 40A ESC with power and signal wires.



Figure 2: Detailed view of the ESC label indicating 'Readytosky 40A 2-4S LIPO BEC:5V/3A'.

## Specifications

Feature	Specification
Current	40A
Battery Cells	2-4S LiPo
BEC Output	5V/3A
Dimensions	Approximately 4.6 x 4 x 1.4 inches (Package)
Weight	Approximately 5.6 ounces (Item)

## Setup

### 1. Wiring Connections

- **Motor Connection:** Connect the three motor wires to the three output wires of the ESC. The order of connection may affect motor rotation direction. If the motor spins in the wrong direction, swap any two of the three motor wires.
- **Battery Connection:** Connect the red (+) and black (-) power wires of the ESC to your LiPo battery. Ensure correct

polarity.

- **Receiver Connection:** Connect the signal cable (usually a three-wire servo connector: signal, positive, negative) from the ESC to the throttle channel of your RC receiver. The BEC output provides power to the receiver.



Figure 3: ESC with typical wiring connections.

## 2. ESC Calibration (Throttle Range)

Most ESCs require throttle range calibration to match the full throttle and idle signals from your transmitter. Follow these general steps:

1. Turn on your transmitter and set the throttle stick to its maximum position.
2. Connect the flight battery to the ESC. The ESC will emit a series of beeps.
3. When you hear a specific tone (refer to your flight controller or motor documentation for exact tones), move the throttle stick to its minimum position.
4. The ESC will emit another series of beeps, indicating successful calibration.
5. Disconnect the battery and then reconnect it to confirm the calibration is saved.

*Note: Specific calibration procedures may vary depending on your flight controller and motor setup. Consult your flight controller manual for detailed instructions.*

## Operating Instructions

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- Ensure all components are securely connected before powering on.
- Connect the flight battery to the ESC. The ESC will initialize and emit startup tones.

- Arm your flight controller (if applicable) according to its instructions.
- Slowly increase the throttle to begin motor rotation.
- Monitor motor and ESC temperatures during initial flights. Excessive heat can indicate an issue.
- After use, always disconnect the flight battery from the ESC.

## Maintenance

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- **Cleaning:** Keep the ESC free from dust, dirt, and moisture. Use a soft brush or compressed air for cleaning. Avoid using liquids.
- **Inspection:** Regularly inspect all wires and solder joints for signs of wear, damage, or corrosion. Ensure heat shrink tubing is intact.
- **Storage:** Store the ESC in a cool, dry place away from direct sunlight and extreme temperatures.
- **Firmware:** While this ESC typically does not require user-updatable firmware, ensure your flight controller's firmware is up-to-date for optimal compatibility.

## Troubleshooting

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### Common Issues and Solutions:

- **Motor Not Spinning / Irregular Operation:**
  - Check all motor and ESC connections for looseness or poor solder joints.
  - Verify throttle calibration.
  - Ensure the flight controller is armed correctly.
  - Inspect motor wires for damage.
- **ESC Gets Hot:**
  - Ensure adequate airflow around the ESC.
  - Check for propeller obstructions or motor binding, which can cause excessive load.
  - Verify that the motor and propeller combination is suitable for the ESC's current rating.
- **No Power to Receiver (BEC Issue):**
  - Check the signal cable connection to the receiver.
  - Ensure the main battery is connected and charged.
- **ESC Emits Smoke or Catches Fire:**
  - Immediately disconnect the battery.
  - This indicates a severe short circuit or component failure. Do not attempt to reuse the damaged ESC.
  - Review all wiring for correct polarity and insulation.

## Warranty and Support

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Readytosky products are manufactured to high standards. For any issues or technical support, please refer to the retailer where the product was purchased or visit the official Readytosky website for contact information. Please retain your proof of purchase for warranty claims.

