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› E-flite 40A ESC: Ultimate 2 Instruction Manual

## E-flite EFLA1040U

# E-flite 40A ESC: Ultimate 2 Instruction Manual

Model: EFLA1040U

## INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your E-flite 40A Electronic Speed Controller (ESC) for the Ultimate 2. Please read this manual thoroughly before use to ensure safe and efficient operation of your RC aircraft.



Image 1: E-flite 40A ESC: Ultimate 2. This image shows the compact design of the Electronic Speed Controller with its various connectors.

## SAFETY INFORMATION

Always observe the following safety precautions to prevent injury or damage to the product and surrounding property:

- **Battery Safety:** Always disconnect the battery from the ESC when not in use. Never short circuit battery terminals. Use only compatible battery types and voltages as specified for your ESC.
- **Motor Connection:** Ensure motor connections are secure and insulated to prevent short circuits.
- **Propeller Safety:** Always remove the propeller from the motor before performing any setup or maintenance on the ESC or motor to prevent accidental startup.
- **Heat:** ESCs can generate significant heat during operation. Ensure adequate airflow for cooling. Avoid touching the ESC immediately after use.
- **Water and Moisture:** Keep the ESC away from water and moisture unless it is specifically rated as waterproof.
- **Voltage Compatibility:** Verify that the input voltage from your battery matches the operating voltage range of the ESC.

## SETUP

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Follow these steps for proper installation and connection of your E-flite 40A ESC:

1. **Motor Connection:** Connect the three motor wires from the ESC to the three wires of your brushless motor. The E-flite 40A ESC comes with factory-installed bullet connectors for easy connection. If the motor spins in the wrong direction, swap any two of the three motor wires.
2. **Receiver Connection:** Plug the throttle lead (usually black, red, white or brown, red, orange) from the ESC into the throttle channel of your receiver. Ensure correct polarity.
3. **Battery Connection:** Connect the battery connector (EC3) from the ESC to your compatible LiPo battery. Ensure the battery is fully charged and has the correct voltage (e.g., 3S or 4S LiPo, depending on your motor and aircraft requirements).
4. **Throttle Range Calibration:**
  - Turn on your transmitter and set the throttle stick to its maximum position.
  - Connect the flight battery to the ESC. The ESC will emit a series of beeps.
  - Once the beeps indicate the maximum throttle position has been learned, move the throttle stick to its minimum position.
  - The ESC will emit another series of beeps, confirming the minimum throttle position has been learned.
  - Disconnect the battery. The ESC is now calibrated.

## OPERATING

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Once the ESC is properly installed and calibrated, you can begin operating your RC aircraft:

- **Power On Sequence:** Always turn on your transmitter first, then connect the flight battery to the ESC.
- **Pre-Flight Check:** Before each flight, verify that the motor responds correctly to throttle inputs and that all control surfaces are functioning properly.
- **Throttle Control:** Gradually increase the throttle to spin up the motor. Avoid sudden, full-throttle inputs, especially during initial takeoff.
- **Power Off Sequence:** Disconnect the flight battery from the ESC first, then turn off your transmitter.

## MAINTENANCE

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

- **Inspection:** Periodically inspect the ESC for any signs of physical damage, such as cracked casing, frayed wires, or burnt components.
- **Cleaning:** Keep the ESC clean and free from dust, dirt, and debris. Use a soft brush or compressed air to gently clean the unit. Avoid using liquids.
- **Connector Check:** Ensure all connectors (motor, battery, receiver) are clean, secure, and free from corrosion. Replace any damaged connectors.
- **Storage:** Store the ESC in a cool, dry place away from direct sunlight and extreme temperatures.

## TROUBLESHOOTING

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If you encounter issues with your E-flite 40A ESC, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Motor does not spin or stutters.	Incorrect motor wiring, uncalibrated throttle, low battery voltage, damaged motor/ESC.	Check motor wire connections. Perform throttle range calibration. Check battery charge. Inspect motor and ESC for damage.
ESC gets excessively hot.	Overloading (too large propeller, wrong motor), insufficient airflow, short circuit.	Ensure proper propeller size for motor/ESC. Improve airflow around ESC. Check for short circuits.
Motor spins in the wrong direction.	Incorrect motor wire connection.	Swap any two of the three motor wires.
No response from ESC.	No power, incorrect receiver connection, damaged ESC.	Check battery connection and charge. Verify receiver connection and polarity. Contact support if ESC is damaged.

## SPECIFICATIONS

Key specifications for the E-flite 40A ESC: Ultimate 2 (Model EFLA1040U):

- **Brand:** E-flite
- **Model Number:** EFLA1040U
- **Current Rating:** 40 Amps
- **Operation Mode:** Manual
- **Material:** Plastic
- **Item Dimensions (L x W x H):** 11.4 x 4 x 0.52 inches (28.96 x 10.16 x 1.32 cm)
- **Item Weight:** 0.06 Kilograms (0.13 lbs)
- **Manufacturer:** Horizon Hobby
- **GTIN/UPC:** 605482586839

## WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries regarding your E-flite 40A ESC, please contact Horizon Hobby, the manufacturer. Refer to their official website for the most current contact details and warranty policies.

**Manufacturer:** Horizon Hobby

*Note: Product specifications and features are subject to change without notice.*