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## DollaTek F540 3300KV Motor, 60A ESC

# DollaTek F540 3300KV Brushless Motor & 60A ESC Set User Manual

## 1. INTRODUCTION

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Welcome to the user manual for your DollaTek F540 3300KV Brushless Motor and 60A Electronic Speed Controller (ESC) Set. This manual provides essential information for the proper installation, operation, and maintenance of your new RC car power system. Please read this manual thoroughly before use to ensure optimal performance, safety, and longevity of your components.

This set is designed for 1/10 scale RC cars, offering a powerful and efficient upgrade or replacement for your vehicle's propulsion system. The components are engineered for reliability and performance in various conditions.

## 2. SAFETY PRECAUTIONS

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Always observe the following safety guidelines to prevent injury, damage to the product, or damage to other property:

- **Battery Safety:** Always use appropriate Li-Po or NiMH batteries as specified for the ESC. Incorrect battery types or improper handling can lead to fire, explosion, or severe injury. Never overcharge or over-discharge batteries.
- **Heat:** The motor and ESC can become very hot during operation. Avoid touching them immediately after use to prevent burns. Allow components to cool down before handling.
- **Water Resistance:** While the components are described as waterproof, this refers to splash and light rain resistance. Do not submerge the motor or ESC in water, as this can cause damage. Always dry components thoroughly after exposure to moisture.
- **Wiring:** Ensure all connections are secure and correctly polarized. Incorrect wiring can cause short circuits and damage to the components or battery.
- **Moving Parts:** Keep fingers, loose clothing, and other objects away from the rotating motor shaft and gears when the RC car is powered on.
- **Ventilation:** Ensure adequate airflow around the ESC, especially during operation, to prevent overheating.
- **Children:** This product is not a toy. Keep out of reach of small children. Adult supervision is required during

operation and maintenance.

### 3. PRODUCT OVERVIEW

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The DollaTek F540 3300KV Brushless Motor and 60A ESC are designed to provide robust and efficient power for your 1/10 scale RC vehicle.

#### 3.1 Motor Features

- 4-pole and 12-slot high torque motor design
- CNC Machined 6061 T6 Billet Aluminum Radiator Can
- High purity copper windings maximize efficiency
- ABEC5 Oversized High RPM Bearings
- Universal fit, fits all 1/10 brushless cars - multiple mounting system for M3 screws
- Precision balanced rotor, smoothness for improved reliability and maximum RPM
- Stator - Super Thin (0.35mm) Laminations
- Removable / replaceable rotor
- Precision engineered for maximum power conversion
- 3.175mm shaft diameter



Image: The DollaTek F540 3300KV Brushless Motor, showcasing its orange aluminum casing and gold banana plug connectors.

### 3.2 ESC Features

- Waterproof design for various conditions
- Continuous Current: 60A
- Burst Current: 320A
- Battery Compatibility: 2S Li-Po / 6 cells NiMH
- BEC Output: 5.8V/3A (NiMH)
- Power Plugs: T-male plug
- Motor Plugs: 4mm female banana plug



Image: The DollaTek 60A Waterproof Electronic Speed Controller (ESC) with its cooling fan and various connection wires.

### 3.3 Package Contents

Upon opening your package, you should find the following items:

- 1 x DollaTek F540 3300KV Brushless Motor
- 1 x DollaTek 60A Waterproof Electronic Speed Controller (ESC)
- 1 x User Manual (this document)



Image: The complete DollaTek F540 3300KV Brushless Motor and 60A ESC Set, as included in the package.

## 4. SETUP AND INSTALLATION

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Proper installation is crucial for the performance and safety of your RC vehicle. Follow these steps carefully:

### 4.1 Motor Installation

1. **Mounting:** Secure the F540 motor into your 1/10 scale RC car's motor mount using M3 screws. Ensure the motor is firmly attached to prevent movement during operation.
2. **Pinion Gear:** Install the appropriate pinion gear onto the motor shaft (3.175mm diameter). Ensure proper gear mesh with the spur gear to avoid excessive wear and noise.

### 4.2 ESC Installation and Wiring

1. **Mounting:** Find a suitable location in your RC car chassis to mount the 60A ESC. Use double-sided tape or zip ties to secure it, ensuring good airflow for cooling.
2. **Motor Connection:** Connect the three 4mm female banana plugs from the ESC to the corresponding 4mm gold banana plugs on the brushless motor. The order of connection may affect motor rotation direction; if the

motor spins in reverse, swap any two of the three wires.

3. **Battery Connection:** Connect your 2S Li-Po or 6-cell NiMH battery to the T-male plug on the ESC. Ensure correct polarity (red to positive, black to negative).
4. **Receiver Connection:** Plug the BEC output cable (usually a three-wire servo connector) from the ESC into the throttle channel (CH2) of your RC receiver.
5. **Power Switch:** Position the ESC's power switch in an easily accessible location on your chassis.



Image: An example installation of the DollaTek F540 Motor and 60A ESC within an RC car chassis. Note: The RC car chassis is not included with the motor and ESC set.



Image: Close-up view of the DollaTek 60A ESC, highlighting the T-male battery connector, 4mm female motor connectors, and the BEC receiver plug.

## 5. OPERATING INSTRUCTIONS

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Once the motor and ESC are correctly installed and wired, follow these steps to operate your RC car:

1. **Transmitter On:** Always turn on your RC transmitter first.

2. **Connect Battery:** Connect the battery to the ESC's T-male plug.
3. **ESC On:** Turn on the power switch on the ESC. The ESC will emit a series of beeps, indicating it has detected the battery cells and is ready.
4. **Throttle Calibration (if needed):** If the throttle response is incorrect, refer to your ESC's specific calibration procedure (usually involves holding full throttle, then full brake, then neutral on the transmitter while powering on the ESC).
5. **Operation:** You can now operate your RC car. Start with gentle throttle inputs to familiarize yourself with the new power system.
6. **Power Off:** Always turn off the ESC first, then disconnect the battery, and finally turn off your transmitter.

## 6. MAINTENANCE

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Regular maintenance will help ensure the longevity and optimal performance of your DollaTek motor and ESC set:

- **Cleaning:** After each use, especially in dusty or dirty conditions, clean the motor and ESC with a soft brush or compressed air to remove debris.
- **Inspection:** Periodically inspect all wires and connectors for signs of wear, fraying, or corrosion. Ensure all connections are secure.
- **Motor Bearings:** While the motor uses sealed ABEC5 bearings, extreme conditions may require occasional inspection or replacement if noise or resistance is detected.
- **Cooling:** Ensure the ESC's cooling fan (if present and functional) is free from obstructions and operating correctly.
- **Storage:** Store the components in a dry, cool place away from direct sunlight and extreme temperatures.

## 7. TROUBLESHOOTING

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If you encounter issues, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Motor not spinning / No power	Battery not connected or discharged; ESC not powered on; Loose connections; Faulty motor/ESC.	Check battery connection and charge level; Ensure ESC switch is ON; Verify all wiring is secure; Test components individually if possible.
Motor spins in wrong direction	Incorrect motor wire connection order.	Swap any two of the three motor-to-ESC wires.
ESC overheats	Poor ventilation; Overgearing; Excessive load; Faulty component.	Ensure adequate airflow; Check gear ratio; Reduce load; Inspect ESC for damage.
Erratic throttle response	ESC not calibrated; Interference; Loose receiver connection.	Perform ESC throttle calibration; Check for sources of interference; Secure receiver connection.

If the problem persists after attempting these solutions, please contact customer support.

## 8. SPECIFICATIONS

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## 8.1 F540 3300KV Brushless Motor

Feature	Detail
Model	F540
KV (RPM/Volt)	3300KV
Max RPM	50000
Watts	820 W
Max Voltage	<17 V
Max Amps	47A
Diameter (with fins)	36 mm
Length	50 mm
Extension Shaft Length	15 mm
Shaft Diameter	3.17 mm
Plug Type	4 mm Gold Banana Plug
Recommended Model	1/10 RC Car
Material	Metal, Copper

## 8.2 60A Waterproof ESC

Feature	Detail
Item Name	ESC Waterproof
Continuous Current	60A
Burst Current	320A
Battery	2S Li-Po / 6 cells NiMH
BEC Output	5.8 V/3 A (NIMH)
Power Plugs	T-male plug
Motor Plugs	4 mm Female Banana Plug

## 9. WARRANTY AND SUPPORT

DollaTek products are manufactured to high-quality standards. For specific warranty information, please refer to the documentation provided at the time of purchase or contact your retailer. If you experience any issues or have questions regarding your DollaTek F540 3300KV Brushless Motor and 60A ESC Set, please reach out to the seller or DollaTek customer support for assistance.

Please have your product model number (F540 3300KV Motor, 60A ESC) and purchase details ready when contacting support.

