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9imod 80A ESC

9imod AM32 80A RC Crawler ESC Instruction Manual

Model: 80A ESC

1. Introduction

Thank you for choosing the 9imod AM32 80A RC Crawler ESC. This Electronic Speed Controller is designed for 1/8 and 1/10 scale RC crawler trucks, offering advanced features for precise control and reliable performance. It comes pre-installed with AM32 custom firmware, allowing for smooth and quiet operation. The adjustable BEC voltage and multiple protection features ensure a robust and adaptable solution for your RC vehicle.

2. Safety Precautions

- Always disconnect the battery from the ESC when not in use to prevent accidental operation.
- Ensure all connections are secure and properly insulated to avoid short circuits.
- Operate your RC vehicle in a safe environment, away from people, pets, and obstacles.
- Keep the ESC and all electronic components dry. While the product may feature some water resistance, prolonged exposure to moisture can cause damage.
- Monitor the ESC temperature during operation. Excessive heat can indicate an issue or improper setup.

3. Product Features

- **AM32 Custom Firmware:** Pre-installed for optimized, smooth, and quiet crawler performance.
- **Adjustable BEC Voltage:** Output 5.2V, 6.0V, 7.4V, or 8.2V via DIP switch, with a maximum current of 10A, suitable for high-torque servo applications.
- **Advanced Performance:** Excellent low-speed linearity and strong explosive power for both climbing and high-speed maneuvers.
- **Wide Compatibility:** Suitable for Axial SCX10, TRX4, TRX6, Redcat, RC4WD 1/10 RC crawlers and other 1/8, 1/10 scale RC trucks.
- **Programmable:** Settings can be adjusted via programming card or transmitter.
- **Enhanced Heat Dissipation:** Upgraded heatsink for improved performance during prolonged use.
- **Multiple Protections:** Includes Low Battery Protection, Overheat Protection, Startup Throttle Protection, Signal Loss Protection, and Abnormal Voltage Protection.

4. Package Contents

- 1x 9imod AM32 80A Brushless ESC
- 1x USB Linkable Programming Module

5. Setup

5.1. Connection Diagram

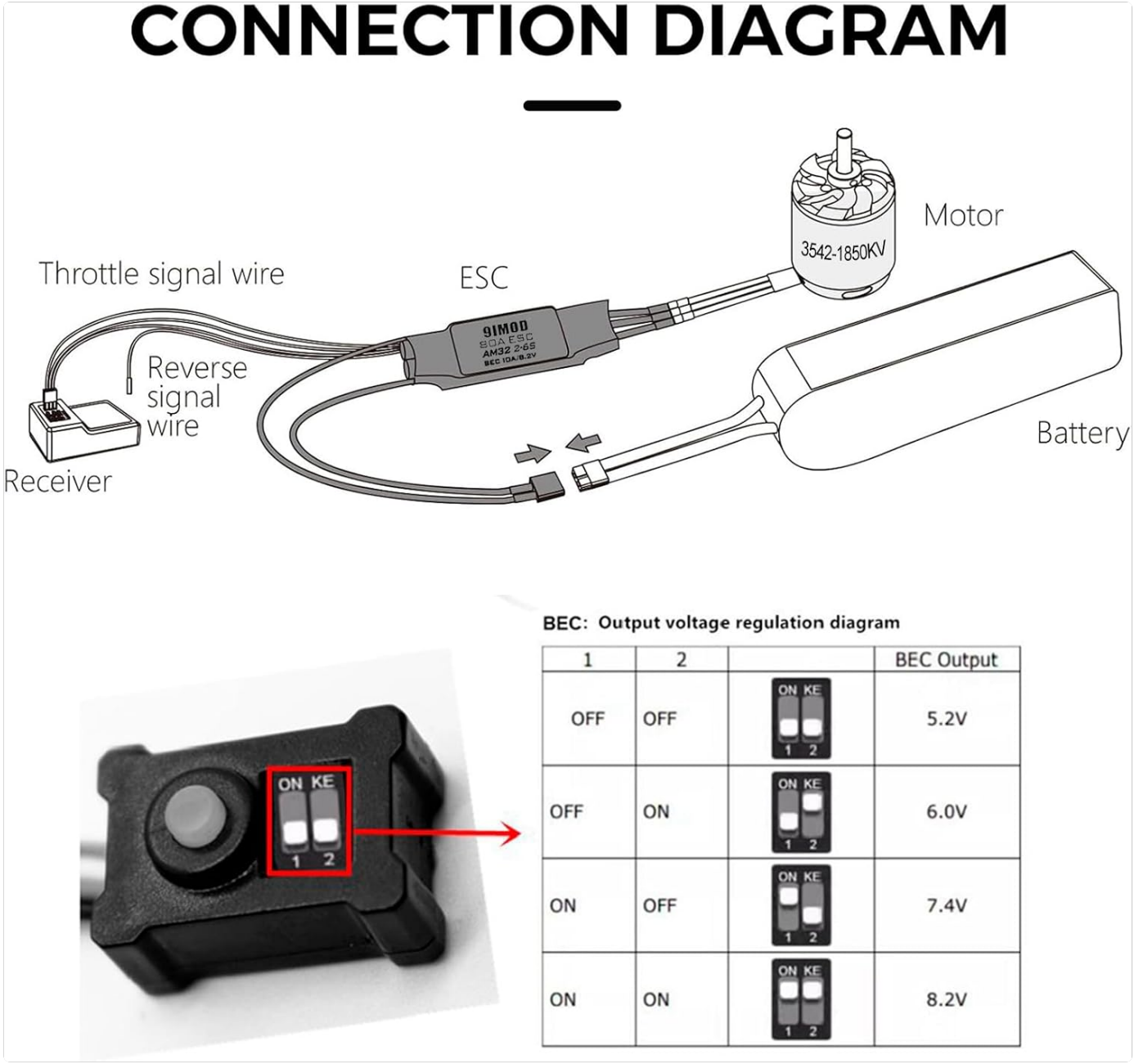
Refer to the diagram below for proper connection of the ESC to your motor, battery, and receiver.



Figure 1: Connection diagram for the 9imod AM32 80A ESC. It illustrates the XT60 battery connector, receiver plug, 4.0mm motor plugs, and the USB Link for programming.

5.2. BEC Voltage Adjustment

The BEC output voltage can be adjusted using the DIP switches on the ESC. Select the desired voltage (5.2V, 6.0V, 7.4V, or 8.2V) according to your servo requirements.



BEC: Output voltage regulation diagram

1	2		BEC Output
OFF	OFF		5.2V
OFF	ON		6.0V
ON	OFF		7.4V
ON	ON		8.2V

Figure 2: BEC output voltage regulation diagram. Use the DIP switches (labeled 1 and 2) to select between 5.2V, 6.0V, 7.4V, and 8.2V.

5.3. Firmware Upgrade and Programming

The ESC supports firmware upgrades and parameter adjustments via a USB Link module connected to a computer. Ensure the remote control is in the neutral position before connecting.

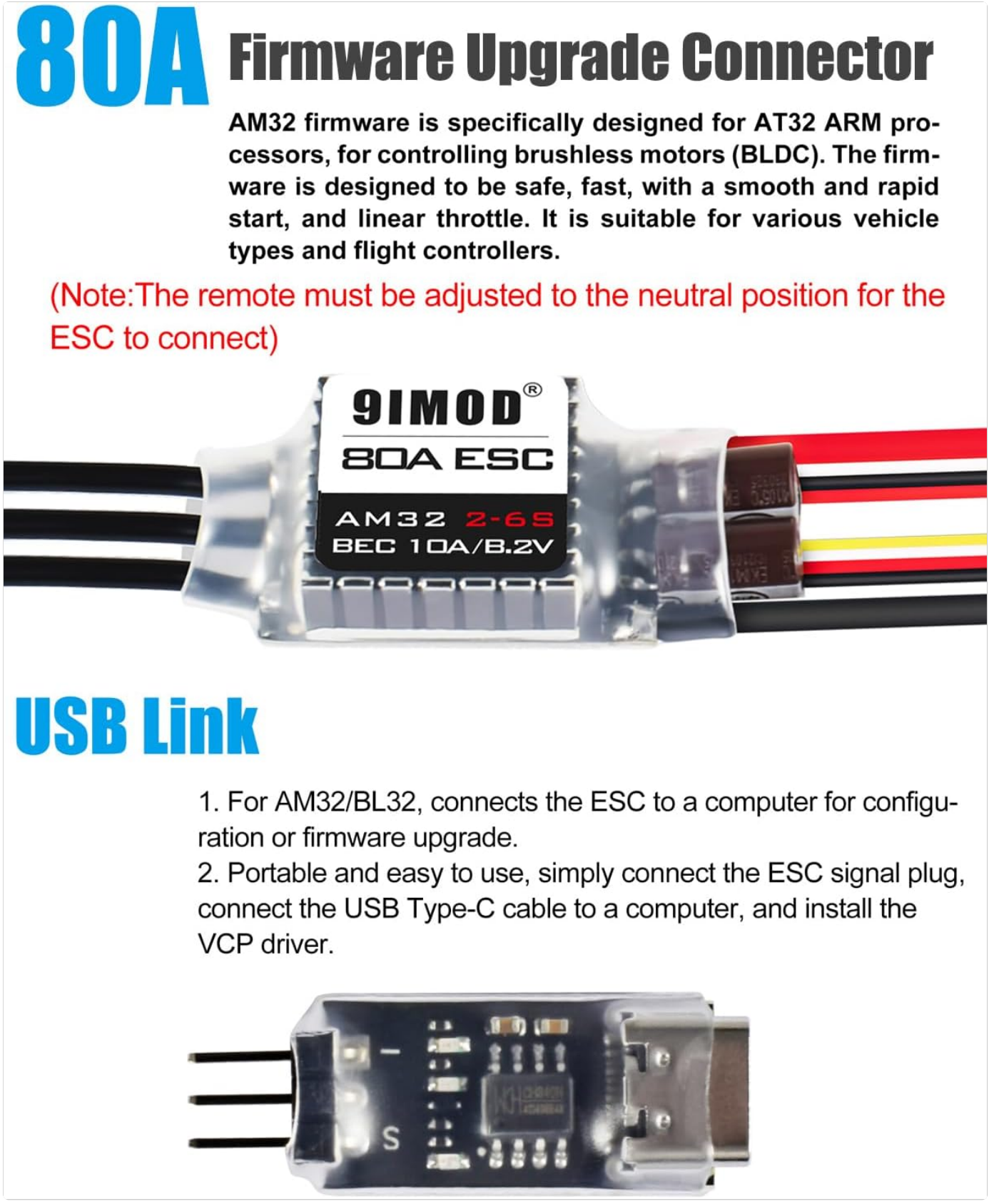


Figure 3: Firmware Upgrade Connector and USB Link. Connect the ESC to a computer for configuration or firmware upgrade. Install the VCP driver if needed.

5.4. Visual Setup Guide

Watch the following video for a visual guide on connecting the ESC and flashing firmware.

Video 1: This video demonstrates the process of connecting the 9imod AM32 80A ESC to a PC for firmware flashing and settings adjustment using a graphical user interface (GUI).

This video demonstrates the connections and waterproof capabilities of a similar ESC, providing insight into robust

design.

Video 2: This video showcases the DashRC Waterproof 40A Brushless ESC, demonstrating its connections and waterproof features, which are also relevant to the 9imod AM32 80A ESC's design principles.

Another video showing connections and waterproof testing for a crawler ESC.

Video 3: This video demonstrates the RHINIOESC Crawler CAR ESC, highlighting its connections and waterproof capabilities, offering a practical view of ESC installation and durability.

A further demonstration of a crawler ESC's connections and waterproof features.

Video 4: This video features the RHINOESC Crawler 40A ESC, illustrating its connections and waterproof testing, which can be helpful for understanding the installation and resilience of the 9imod AM32 80A ESC.

6. Operating Modes and Settings

The 9imod AM32 80A ESC offers various operating modes and settings configurable via jumper caps. Refer to the table below for detailed configurations.



Figure 4: Programmable Parameters. This table shows how to configure different functions (Normal, Brake, Racing, Climbing modes), battery types (Lithium, Non-lithium), and BEC output voltages (5.5V, 7.5V) using jumper caps.

6.1. Mode Switch

- **Normal Mode:** Remove Jumper Cap 1, Remove Jumper Cap 2.
- **Brake Mode:** Insert Jumper Cap 1, Remove Jumper Cap 2.
- **Racing Mode:** Remove Jumper Cap 1, Insert Jumper Cap 2.
- **Climbing Mode:** Insert Jumper Cap 1, Insert Jumper Cap 2.

6.2. Battery Type

- **Non-lithium Battery:** Remove Jumper Cap 3.
- **Lithium Battery:** Insert Jumper Cap 3.

6.3. BEC Output

- **5.5V Output:** Remove Jumper Cap 4.
- **7.5V Output:** Insert Jumper Cap 4.

7. Specifications

Attribute	Value
Brand	9imod
Model Number	80A ESC
Battery Compatibility	2-6S Lipo
BEC Output	5.2V/6.0V/7.4V/8.2V (adjustable), Max 10A
MCU	32-bit
Material	Metal
Item Weight	2.4 ounces
Package Dimensions	0.2 x 0.1 x 0.1 inches



AM32 80A				
Battery	BEC	MCU	Motor	Signal wire
2~6S Lipo	5.2/6.0/7.4/8.2V	32-bit	Not included	200mm
BEC	Fan	Power wire	Motor end	Electronic switch
Max 10A	Included	14AWGx150mm	14AWGx100mm	125mm

Figure 5: Detailed specifications of the 9imod AM32 80A ESC.



Figure 6: Physical dimensions of the 9imod AM32 80A ESC.

8. Maintenance

- Regularly inspect all wires and connectors for signs of wear or damage. Replace any damaged components immediately.
- Keep the ESC clean and free from dirt, dust, and debris. Use a soft brush or compressed air for cleaning.
- Ensure the heatsink is clear of obstructions to allow for proper airflow and cooling.
- Store the ESC in a dry, cool environment when not in use.

9. Troubleshooting

9.1. Common Issues and Solutions

- **Motor Not Responding:**

- Check all connections to the motor, battery, and receiver.
- Ensure the battery is charged and properly connected.
- Verify that the remote control is powered on and bound to the receiver.
- Recalibrate the throttle range if necessary.

- **ESC Overheating:**
  - Ensure adequate airflow around the ESC heatsink.
  - Check for excessive load on the motor or drivetrain.
  - Consider using a motor with a lower KV rating or a smaller pinion gear.
- **Erratic Motor Behavior:**
  - Check for loose motor wires or damaged connectors.
  - Verify that the motor timing settings are appropriate for your motor.
  - Ensure no interference from other electronic devices.
- **Low Battery Protection Triggered:**
  - Recharge the battery.
  - Ensure the correct battery type is selected via jumper caps (Lithium vs. Non-lithium).

10. Warranty and Support

For warranty information and technical support, please refer to the product packaging or contact 9imod customer service directly. Keep your purchase receipt as proof of purchase.

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