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### Castle Creations 010-0169-01

# Castle Creations Mamba Micro X2 16.8V Waterproof ESC with 0808-4100KV Motor Combo Instruction Manual

Brand: Castle Creations | Model: 010-0169-01

## INTRODUCTION

The Castle Creations Mamba Micro X2 is a high-performance, waterproof Electronic Speed Controller (ESC) designed for 1:18th scale RC vehicles. This combo includes the 0808-4100KV brushless motor, offering enhanced power and efficiency. The Micro X2 features advanced software technology, CRYO-DRIVE thermal cooling, and a durable anodized aluminum case for aggressive gearing and extended run times at higher input voltages. It also includes data logging capabilities for real-time performance monitoring and a programmable Auxiliary Wire for on-the-go adjustments.

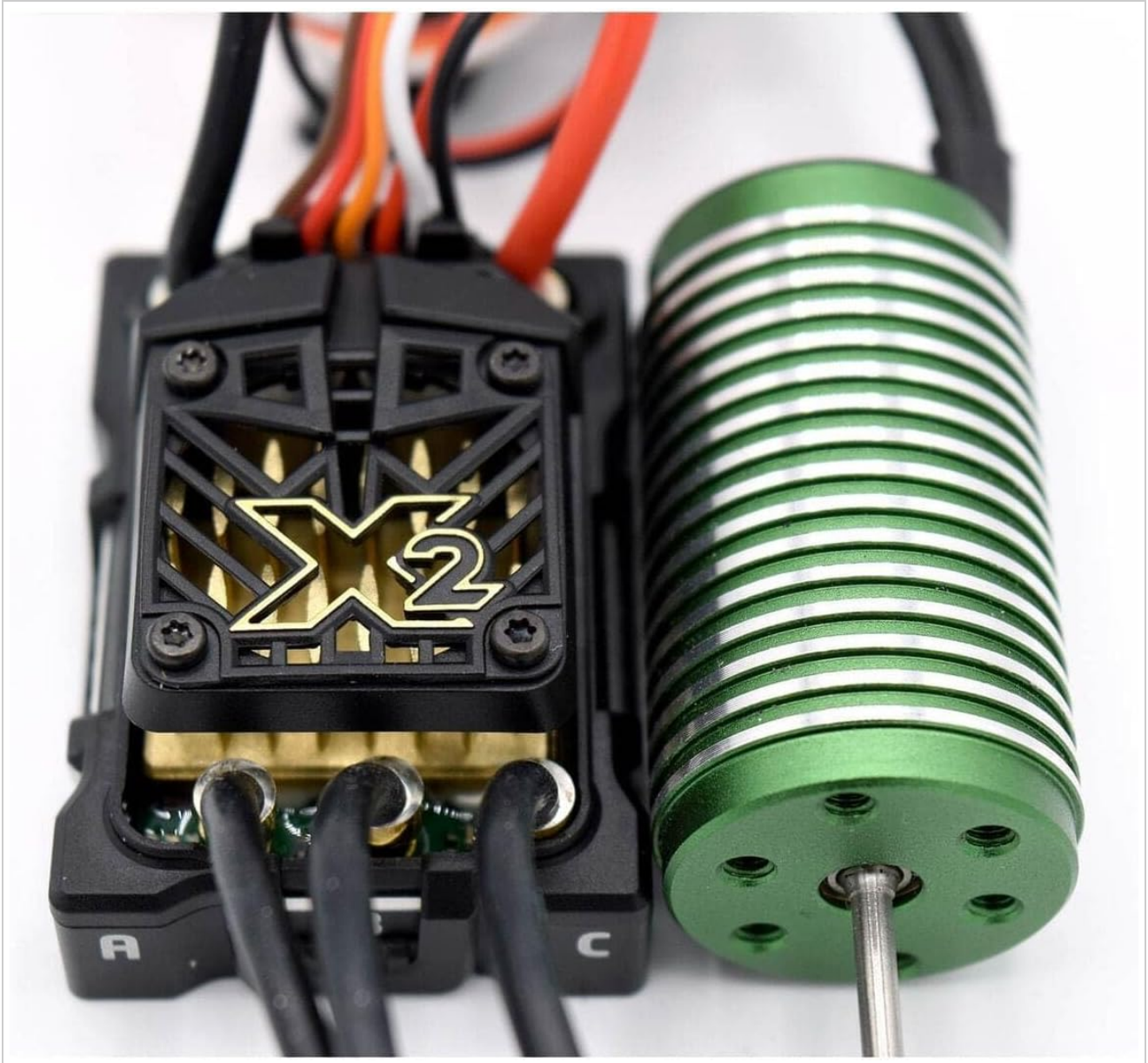


Image: The Mamba Micro X2 ESC and 0808-4100KV Motor Combo, showcasing its compact design and robust construction.

## SAFETY INFORMATION

This is a high-power product with the potential to be very dangerous. Please read all safety information before use. Always ensure the pinion is off the motor or the wheels are not in contact with any surface when initiating programming or calibration sequences to prevent unintended movement. For the complete operating manual and detailed safety guidelines, visit [castlecreations.com/microx2DEG](https://castlecreations.com/microx2DEG).

## WHAT'S IN THE BOX

- Mamba Micro X2 ESC
- Castle Creations external 10-amp CC BEC
- Coupon for free Castle Link USB Adapter
- Quick Start Guide
- Decals
- 0808-4100Kv brushless motor

## KEY FEATURES

- **High Performance:** Designed for 1:18th scale 2WD/4WD vehicles up to 2.25 lbs, running 2s-3s LiPo (4-9 cell NiMH).
- **Advanced Cooling:** Features CRYO-DRIVE technology and a sleek, heat-conducting anodized aluminum case for cooler temperatures and longer runs.
- **Waterproof Design:** Allows for operation in wet conditions.
- **Data Logging:** Records real-time data such as motor RPM, battery ripple, ESC and motor temperature, and throttle input.
- **Programmable Auxiliary Wire:** Enables on-the-go adjustments to settings like torque control and max throttle directly from your transmitter.
- **Versatile Programming:** Optimized via Castle Link app (Windows PC with USB adapter or wirelessly with B-LINK Bluetooth Adapter, sold separately) or convenient transmitter programming.
- **Powerful Motor:** 0808 series motor utilizes 4-pole technology for increased efficiency and torque.

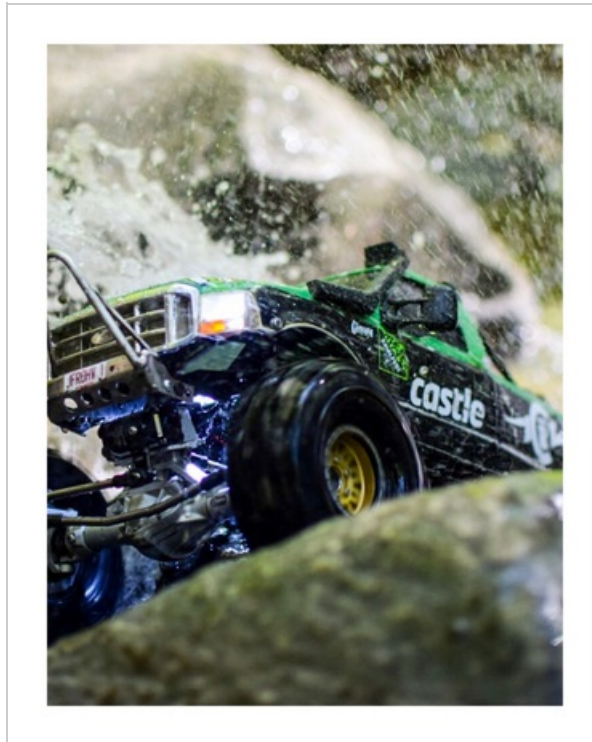


Image: An RC truck navigating through water, highlighting the waterproof design of the Mamba Micro X2 ESC.

## SETUP

### 1. Component Connection

Connect the Mamba Micro X2 ESC to your RC vehicle's motor, battery, and receiver. Ensure all connections are secure and correctly polarized. The included 10-amp CC BEC should be integrated as per your vehicle's requirements, as the Mamba Micro X2 does not contain an internal BEC.



Image: A close-up view of the Mamba Micro X2 ESC installed within an RC buggy chassis, showing wiring connections.

## 2. ESC Calibration

Proper calibration of the ESC with your transmitter is crucial for correct operation. Follow these steps:

1. **Step 1:** Take the pinion off the motor, or ensure the wheels are not in contact with any surface to prevent unintended movement during calibration.
2. **Step 2:** Power on your radio and pull the throttle trigger to the full throttle position (squeeze it completely).
3. **Step 3:** Turn your vehicle ON (or plug in the battery if no power switch), keeping the radio trigger squeezed. The ESC will emit a series of beeps.
4. **Step 4:** Move the throttle trigger to the full reverse position (push it away completely in one fluid motion). The ESC will emit another series of beeps.
5. **Step 5:** Move the trigger to the neutral position and wait for the final audible confirmation. The ESC will arm, indicated by a green flash when throttle is applied.

If the motor direction is backwards when running sensorless, you can swap any two motor wires. If running sensed, use manual programming, Castle Link, or B-Link to reverse motor direction.

Your browser does not support the video tag.

Video: Demonstrates the required ESC calibration process for Castle Creations ESCs to operate correctly with a transmitter. This video is provided by Castle Creations.

## 3. Programming and Tuning

The Mamba Micro X2 ESC is ready to run out of the box, but can be tuned for specific driving preferences. Programming options include:

- **Castle Link USB Adapter:** Connect to a Windows PC for detailed programming via the free Castle Link software. A coupon for a free adapter is included.
- **Castle B-LINK Bluetooth Adapter (Sold Separately):** For wireless programming and tuning using the free Castle Link app on Google Play or Apple App Store.
- **Transmitter Programming:** Six common adjustable settings can be configured directly from your transmitter.

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Video: A demonstration of the E-series ESC setup and parameter adjustment using a mobile application. This video is provided by XC-Tec.

## OPERATING GUIDELINES

Once set up and calibrated, the Mamba Micro X2 combo is ready for operation. Always ensure your battery is fully charged and securely mounted. Monitor your vehicle's performance and temperatures, especially during initial runs or after making programming changes. The data logging feature can be used to optimize performance and battery life.

**Your browser does not support the video tag.**

Video: A general promotional video for the Castle Sidewinder 4 ESC, showcasing features like waterproof design, increased power, and thermal management. While not specific to the Mamba Micro X2, it illustrates general benefits of Castle Creations ESCs.

## MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Mamba Micro X2 ESC and motor. After each use, especially in wet or dirty conditions, clean the ESC and motor to remove any debris. Inspect all wires and connectors for damage or loose connections. Store the components in a dry, cool place. While the ESC is waterproof, it is not designed for prolonged submersion or operation in corrosive liquids.

## TROUBLESHOOTING

If you encounter issues with your Mamba Micro X2 combo, consider the following:

- **No Power:** Check battery connections, ensure the battery is charged, and verify the power switch (if applicable) is on.
- **Motor Not Responding:** Re-calibrate the ESC with your transmitter. Check motor wire connections.
- **Overheating:** Ensure proper ventilation around the ESC and motor. Adjust gearing or programming settings to reduce load if necessary. The CRYO-DRIVE technology helps manage heat, but extreme conditions can still lead to overheating.
- **Erratic Behavior:** Check for loose connections, interference, or incorrect programming settings.

For more detailed troubleshooting and support, please refer to the full operating manual on the Castle Creations website or contact their customer support.

## SPECIFICATIONS

Product Dimensions	1.64 x 1.16 x 0.84 inches
Item Weight	3.36 ounces
Item Model Number	010-0169-01
Manufacturer	Castle Creations
Recommended Age	15 years and up
Input Voltage	2s-3s LiPo (4-9 cell NiMH)
Motor KV	4100KV
BEC	External 10-amp CC BEC included

## WARRANTY AND SUPPORT

For warranty information, detailed support, and the full product manual, please visit the official Castle Creations website.  
The Mamba Micro X2 ESC is proudly designed, assembled, and supported in Olathe, KS, USA.  
Official Website: [www.castlecreations.com](http://www.castlecreations.com)

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