

INJORA[®]

MB100

BRUSHED MINI ESC 20A

USER MANUAL



- 1. Electrical Connection**
Before connecting the ESC to related components, ensure proper insulation of all wires and connectors. Short circuits can damage the ESC.
- 2. Power Compatibility**
Prior to using this ESC, carefully review the specifications of your power system and chassis. Ensure a rational power combination to avoid motor overload, preventing damage to the ESC.
- 3. Welding Considerations**
If welding is required for the ESC's input/output wires or connectors, use a welding device with a minimum power of 60W to ensure reliable connections.
- 4. Safety Testing**
For your safety and that of others, perform wiring tests with the vehicle suspended to avoid accidents.
- 5. Temperature Limits**
Avoid exceeding an external temperature of 90°C/194°F for the ESC. High temperatures can damage the ESC and potentially harm the motor.
- 6. Disconnecting Power**
After use, remember to disconnect the battery from the ESC. Failure to do so may result in energy consumption, leading to battery or ESC failure. We are not responsible for any damage caused by this.

01 Features

1. Waterproof Design

Fully waterproof design to adapt to various climate conditions. Note: After immersion, promptly clean and dry the ESC to prevent connector oxidation.

2. Efficient Heat Dissipation

The MOS on the internal power board and the surface cover are coated with high thermal conductive glue. This design facilitates rapid heat transfer to the integrated cover made of CNC-cut aluminum alloy, further enhancing heat dissipation.

3. Superior Low-Speed Performance

Delivers exceptional low-speed performance, drag braking, providing a unique driving experience for your RC vehicle.

4. Multiple Protection

Includes battery low-voltage protection, over-heat protection, throttle signal loss protection, BEC overcurrent protection, and short circuit protection.

5. DEO (Dynamic Electronic Overload)

DEO is an ESC feature that provides smoother power delivery, better control, and overload protection for improved performance in RC Crawlers and similar vehicles.

02 Begin to Use the New ESC

Specifications

Model: MB100

Continuous/Peak Current: 20A/100A

Motor Type Support: Brushed Motor (030/050/130/180/370)

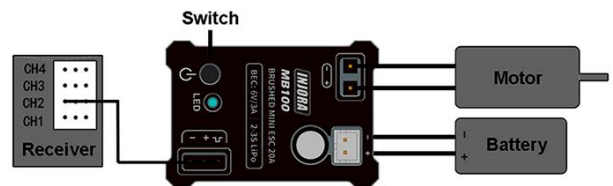
Main Applicable Scales: 1:18/1:24

Battery Cells: 2-3S LiPo

BEC Output: 6V @ 3A (liner Mode)

Size: 37mm*22mm*10mm Weight: 15g

Connections



03 Operating the ESC

1. Power On/Off Instructions

Short press the ON/OFF button to power on the ESC when it is in the off state. Long press the ON/OFF button to power off the ESC when it is in the on state.

2. Power-On Indication

When powered on, the ESC emits three short beeps, accompanied by LED flashing. After successful synchronization with the receiver, a short beep will be heard, and the LED will stay on continuously.

04 Operating Parameters

Operating Mode	Direct Forward and Reverse
Battery Type	Li-po
Low Voltage Protection Threshold 1st Stage	Automatic - Single Cell 3.5V, LED Slow Flash
Low Voltage Protection Threshold 2nd Stage	Automatic - Single Cell 3.3V, 50% Speed Reduction, Auto Shutdown after 10 Seconds
Forward Force	100%
Reverse Force	50%
Brake Force	100%
Drag Brake Force	100%
Throttle Neutral	1500 (±30)

05 ESC Alarm Status Notifications

1. Power-On Without Receiver Synchronization: LED rapidly flashes if not synchronized with the receiver after power-on.

2. Low Voltage Warning: LED slowly flashes when a single-cell voltage drops below 3.5V.

When voltage drops below 3.3V, there is a 50% speed reduction, and the ESC will shut down automatically after 10 seconds.

3. Over-heat Protection: Power output will be cut off, and brakes applied if the operating temperature exceeds the preset threshold.

4. Throttle Signal Loss Protection: Power and brakes will be immediately cut off if the ESC loses connection with the receiver during operation.

06 Troubleshooting

Troubles	Solution	Troubles	Solution
1.LED flashes rapidly after powering on, receiver connection is normal, no synchronization beep heard, and no response when attempting forward or reverse.	Check the remote control throttle neutral position configuration, set it to the middle range in the ESC parameter table, preferably around 1500.	3. During operation, applying forward throttle causes the vehicle to move backward, and applying reverse throttle causes it to move forward.	Swap the order of the motor output wires.
2.The vehicle starts moving on its own after power-up.	Check the remote control throttle neutral position configuration, set it to the middle range in the ESC parameter table, preferably around 1500.	4.Motor suddenly stops or significantly reduces power output during operation, and the vehicle comes to a halt.	1.Check if the ESC has entered low-voltage protection mode. 2.Check if the ESC has entered overtemperature protection mode.