DMR SERIES QUICK START GUIDE

INTRODUCTION

Thank you for your purchase of Castle Creations DMR ESCs. Please read the full instruction manual located at ***www.castlecreations.com/dmrguide*** before installing and operating this product. This guide will help you get started by explaining some of the most common tasks you'll need to get the most out of your DMR ESCs.

IMPORTANT WARNINGS

- *Castle Creations is not responsible for your use of this product or for any damage or injuries you may cause or sustain as a result of its usage.*
- *Always remove all propellers when working on a power system with the battery connected.*
- *Please observe all local and federal laws regarding the flying of remote control aircraft.*
- *Castle DMR ESCs come programmed with default settings optimized for Multi-Rotors using direct drive outrunner motors. Using the Multi-Rotor settings in applications other than Multi-Rotor platforms can be potentially harmful to the ESC.*
- *Low voltage cutoff is DISABLED by default on all DMR ESCs. You must use an external device to monitor battery voltage or manually enable low voltage cutoff to avoid damage to your batteries.*
- *Do not drive a motor with DMR ESCs powered by a DC power supply without first disabling Active Braking and Idle Brake. Voltage spikes from sudden braking may cause damage to the supply and ESC.*

FIRST-FLIGHT SETUP

Once all ESCs are wired to power, the flight controller, and their respective motors, they must be configured before flight. The following procedure will calibrate the ESCs to the flight controller's throttle signals and program the direction of motor rotation.

1. Remove propellers from all motors.
2. Configure the flight controller to produce a full throttle signal.
3. Connect a battery or power supply to the ESC.
4. The motor should chime and begin to repeatedly beep indicating the ESC has recognized the full throttle endpoint.
5. Reduce the throttle signal to the minimum.
6. The motor will chime again. The start endpoint will be set to 5% above the minimum signal.
7. Throttle calibration data has now been saved. Continue to step 8 to program the direction of rotation. Otherwise disconnect power from the ESC.
8. Briefly spin motor in the desired direction of rotation.
9. The motor will beep twice when the ESC has detected motor rotation.
10. Spin the motor in the same direction to confirm the direction.
11. The motor will beep four times confirming the setting.
12. Disconnect power from the ESC to exit calibration.

Always perform a range check at full, half, and zero throttle before flying with any new speed controller! Consult your radio transmitter's manual for more information.

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OPERATIONAL TONES AND ERROR CODES

In the event of a pullback or shutdown the ESC will produce an error code for trouble shooting. The ESC uses the motor to produce audible error codes. The red LED will also blink out the error codes. Refer to the following table for error code meanings. ***NOTE: A dot (•) stands for a short beep and a dash (–) stands for a long beep.***

TONE	MEANING	DESCRIPTION
•	ESC ready to run motor	ESC beeps motor every 20 seconds to remind user that power is connected to the ESC (disabled by default).
• •	Start Fail	ESC was unable to start the motor.
• –	Low Voltage Cutoff	Main battery voltage dropped below the cutoff value (disabled by default).
• • •	Propeller Strike/ Motor Anomaly/ Motor Desync Detected	ESC detected a sudden mechanical interruption of the motor's rotation.
• • –	Radio Glitch	ESC detected unusual signals or loss of signal on receiver lead.
• – •	Over-Temperature	ESC reached an over-temperature condition when operated under too high a load, or operated without proper cooling airflow.

CONTACT AND WARRANTY INFO

Technical Support

You may contact our technical support department via e-mail anytime or by phone. Please visit Castle Creations website for technical support hours.

Website: www.castlecreations.com/support
E-mail: support@castlecreations.com
Phone: (913) 390-6939, option #1

Warranty

All Castle Creations ESCs are warranted for one (1) year* from date of purchase to be free from manufacturing and component defects. This warranty does not cover damages caused to the controller from abuse. Abuse includes, but is not limited to: exceeding specifications listed in the user manual, incorrect wiring, over-voltage, overloading, improper motor and/or propeller selection, incorrect controller settings, insufficient batteries, or inadequate connectors.

Non-Warranty Repairs

Never throw away a damaged Castle Creations product! You may send it to Castle Creations and take advantage of our flat price replacement offer. Please check our website for specific pricing. If you have any questions, comments, or wish to return your Castle Creations DMR ESC for warranty or non-warranty repair or replacement, please visit www.castlecreations.com/support before contacting us directly.

KNOW BEFORE YOU FLY

Castle Creations, Inc. is a proud supporter of the "Know Before You Fly" campaign. More information can be found at www.KnowBeforeYouFly.com

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