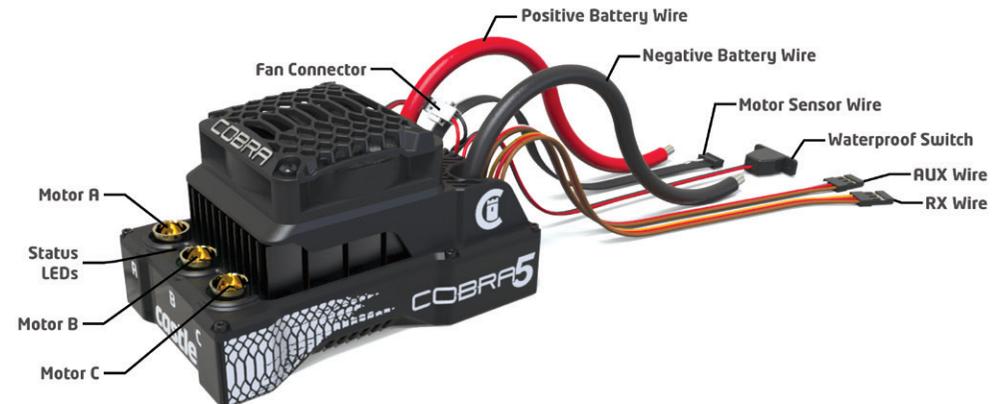## ABOUT COBRA 5

Motors	Please note that while the Cobra 5 is capable of handling incredible amounts of power, your motor must also be up for the task. Always run your motor within the manufacturer's specs. Monitor motor, battery, and controller temps carefully and never let the motor get above 200° F. Excessive heat in the motor can damage your motor, batteries and the Cobra 5.
Gearing	When you are tuning a car expect some modifications in gearing to get it exactly where you want it. The goal here is to not overheat the motor. Check your motor temps – never let the motor get above 200° F - invest in an infrared thermometer so you can monitor temps easily. If the motor gets too hot, reduce the pinion size, increase the spur size, or reduce the pack voltage.
Programming	The Cobra 5 features a fully programmable Castle feature set using the included **FREE** Castle Link V4 USB adapter and freely downloadable **NEW** Castle Link Windows™ software. (Windows 10+ required). It also offers convenient transmitter programming for six common adjustable settings including cut-off voltage and drag brake. During the optimization of your setup it is critical to check motor and ESC temperatures after making adjustment. We recommend the use of the data log as you progress with the feel and power of the vehicle.
AUX Wire	The AUX wire allows you to adjust a setting "on-the-fly" using an auxiliary channel on your receiver. The AUX wire function is disabled by default and is programmable via Castle Link. Plug this wire into the auxiliary (#3/#4) channel on your receiver. You **MUST** connect the AUX wire to an open channel on your receiver if running more than a single servo. If you have 2 servos, fans, and/or LEDs plugged into the receiver, you **MUST** connect the AUX wire to the receiver, even if you are not using the Auxiliary function. If only the ESC and a single servo are connected to the receiver, then you do not need to connect the AUX wire to the receiver. You **MUST** disconnect the AUX wire from your radio before connecting to Castle Link. Failure to do so may result in damage to your Castle Link and/or computer.
Data Logging	The Cobra 5 features data logging. You will be able to measure and record important power system information during your race, turn by turn. After your run, you can download and analyze this log using the Castle Link USB adapter. You will be able to inspect many parameters including battery voltage, motor RPM, ESC temperature, and more. Additional information about using data logging features can be found in the *Driver's Ed Guide ("Data- Logging").*

castlecreations.com

COBRA5
32-BIT 1:5 SCALE WATERPROOF ELECTRONIC SPEED CONTROL

QUICK START GUIDE

OVERPOWERING RC SINCE 1997

castle

GETTING STARTED

1. Solder a high quality battery connector to the ESC (see *Driver's Ed Guide "Connectors and Power Wiring"*).

2. Mount the ESC and motor into the vehicle.

3. Connect motor to the ESC (see *Driver's Ed Guide, "Motor Wiring"*).

4. Plug the RX wire and AUX wire in. (See RECEIVER CONNECTION section on the opposite side)

5. Calibrate your ESC to your radio. (See *Driver's Ed Guide, "How to Calibrate the ESC"*).

YOU ARE NOW READY TO GO!

Positive Battery Wire
Negative Battery Wire
Fan Connector
Motor Sensor Wire
Waterproof Switch
Motor A
AUX Wire
RX Wire
Status LEDs
Motor B
Motor C

COBRA 5 SPECIFICATIONS

Application Guidelines	Cobra 5 is designed for use in 1:5 scale RC hobby vehicles weighing up to 42 lbs.
Input Voltage Range	Min: 3S LiPo, Max: 8S LiPo 33.6 V
BEC Specifications	5.0V - 8.5V adj. in 0.1V incr. (20A Peak), default 5.5V
Waterproof*	Yes
Sensors	Yes, with pre-installed Direct Connect Sensor Wire.
Product Use Statement*	• Applying voltages higher than 33.6V will cause irreparable damage to your controller, voiding your warranty. • The Cobra 5 is a high-performance controller; you must use high-discharge cells in your high-performance application to ensure vehicle performance (*see Driver's Ed Guide, "A Word About Batteries"*). **MINIMUM** battery capacity is 5000mAh and **MINIMUM** of 50C continuous discharge for general use. • The Cobra 5 requires the use of connectors designed for 150+ amps continuous, such as Castle 6.5mm polarized or CC Bullet 8.0MM, QS8 8mm Anti Spark, or QS10 10mm Anti Spark. • The Cobra 5 is not intended for human or animal propulsion.

RECEIVER CONNECTION

RX Wire	Plug the RX wire into the throttle (#2) channel on your receiver.
AUX Wire	The AUX wire allows you to adjust a setting "on-the-fly" using an auxiliary channel on your receiver. The AUX wire function is disabled by default and is programmable via Castle Link. Plug this wire into the auxiliary (#3/#4) channel on your receiver.

*Not intended for operation while submerged in liquid. If unit is operated in wet conditions, rinse with fresh water to remove dirt or corrosives, then fully dry unit. The cooling fan must be removed prior to driving in wet conditions. It is not waterproof.

**Failure to adhere to the Product Use Statement constitutes a violation of the warranty agreement and will result in non-warranty service fees to repair or replace damaged products.

For more detailed information regarding Getting Started, Throttle Calibration, using Castle Link, or Transmitter Programming, please read the Driver's Ed Guide by visiting *https://www.castlecreations.com/cobra5*. You can also use your smart device's camera and this QR code to open the link.

TRANSMITTER PROGRAMMING REFERENCE

1.Brake/Reverse Type
• With Reverse*
• • Without Reverse
• • • Crawler Reverse

3. Brake Amount
• 25%
• • 50%*
• • • 75%
• • • • 100%

5. Motor Type
• Brushless*
• • Brushed Reversing

2.Voltage Cutoff
• Auto-Lipo*
• • None

4. Drag Brake
• Disabled*
• • 10%
• • • 20%
• • • • 30%
• • • • • Crawler Full On

6. Motor Direction
• Normal**
• • *Reverse*

*Default Setting

AUDIBLE ALERT REFERENCE

• •	Start Fail
• —	Low Voltage Cutoff
— •	Over-Current
• • •	Sensors Lost
• • —	Radio Glitch
• — •	Over-Temperature
• — —	Excessive Load
— • •	AUX Wire Radio Glitch
— • —	BEC Over-Temperature
— — •	Motor Over-Temperature

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