



Castle Creations is excited to announce the **COPPERHEAD 10 PERFORMANCE 1:10 SENSORED ESC** for the R/C car market. The Copperhead 10 is a completely new design which rounds out our 1:10 scale offerings, positioned between the SIDEWINDER 4 as the entry-level upgrade and the MAMBA X as the extreme performance option. The COPPERHEAD 10 includes CRYO-DRIVE™ technology, sensed motor support and data logging with Castle's signature reliability and performance. Whether crawling the trails, bashing in the backyard or ripping up corners, COPPERHEAD 10's versatility will appeal to a wide variety of 1:10 scale enthusiasts.

#### KEY FEATURES:

#### COPPERHEAD 10 IS DESIGNED FOR 2S-4S USE IN 10<sup>TH</sup> SCALE VEHICLES



**CRYO-DRIVE™:** CRYO-DRIVE™ technology minimizes the amount of time the ESC's electrical components spend generating heat, resulting in improved thermal performance during partial throttle operation where the majority of driving occurs. COOLER TEMPS mean LONGER RUNS and MORE POWER in a COPPERHEAD 10 setup.

**DATA LOGGING LITE:** Battery Voltage, Battery Ripple, Controller Temperature, Motor RPM and Motor Temperature data points can be captured, downloaded and analyzed via Castle Link software. While not a full version of Data Logging capabilities that the MAMBA X EXTREME 1:10 SCALE ESC has, these critical parameters are excellent sources of information for maximizing performance and battery life of the COPPERHEAD 10.



**SMARTSENSE™ TECHNOLOGY:** SMARTSENSE uses the motor's sensors at startup to provide cog-free starts, excellent torque and low-speed drivability. Once the motor is turning, the ESC seamlessly transitions to Castle's ultra-efficient sensorless mode with electronic timing to advance timing automatically for peak performance in all driving conditions. (Requires use of Castle brushless motor to utilize)

**INTERNAL BEC (Battery Eliminator Circuit):** COPPERHEAD 10 features a selectable 5.5V or 7.5V (6A peak) internal BEC to supply power to many of today's high-torque servos, without requiring the use of an external BEC.



**DUAL USE FAN GUARD:** For crawler setups or others that do not require an ESC cooling fan, the fan is easily removed with four screws and the fan guard with the cool COPPERHEAD logo simply clicks back into place on the top of the ESC. It keeps the COPPERHEAD 10 looking mean and provides an extra measure of protection.

**APPLICATION SPECIFIC MOTOR COMBOS:** We've packaged the COPPERHEAD 10 with a dozen different 4-POLE 12-SLOT sensored motor options to eliminate the guesswork in finding the right brushless power upgrade for your basher, crawler, on road vehicle, short course or monster truck.

Side effects of OVERPOWERING YOUR R/C vehicle with COPPERHEAD 10 may include excessive grinning, fuss-free wheel time, and an incessant desire to acquire more R/C vehicles with Castle upgrades.


ORDER NOW! SHIPMENTS BEGIN APRIL 15!			
Item Number	Description		SKU
010-0166-00	COPPERHEAD 10, 16.8V, WP SENSORED ESC		819326012242
ESC Specifications			
Recommended Motors:	Castle 1406,1410,1412 (NEW!) and 1415 Series Sensored 4-Pole Brushless Motors		
Running Modes:	SMARTSENSE™, Sensored Only and Brushed motor operation		
Input Voltage Range:	2s-4s (16.8V)	BEC Specifications:	Selectable: 5.5V or 7.5V (6A peak)
Operating Environment:	Waterproof design, potted in durable injection molded case, allows or use in nearly any environment.		
Data Logging:	Yes, Data Log Lite with 5 data points. Sample frequency of 1 and 5 per second.		
Connector Type:	4mm female bullets for motor connection	On/Off Switch	Yes
Cooling Fan:	30mm removable fan included, operates from start up. Purchase also includes a dual use fan guard for use without fan.		
Size (L x W x H)	2.19" x 1.39" x 1.33" (with fan) 2.19" x 1.39" x .95" (w/o fan)	Weight:	70.9 g / 2.50 oz. (with fan)
Items Needed for Operation:	Compatible Brushless or Brushed motor, Battery Connector required; Castle 4mm polarized connectors, Dean's Ultra Plug, or Traxxas Power Connector recommended.		
Programmability	Fully programmable Castle feature set using Castle Link USB adapter ( <b>coupon for free Link included</b> ) and freely downloadable Castle Link Windows™ software, or wirelessly with the Castle Link iOS® or Android® app with B-LINK™ Bluetooth™ Adapter (sold separately).		
Telemetry Link Capable:	Yes, with Castle Creations Telemetry Link for S.BUS2 and Futaba T4PX and T7PX transmitters.		
*Product Use Statements:	<ul style="list-style-type: none"><li>Although COPPERHEAD 10 is waterproof, it is not intended for operation while completely submerged in liquid. They can corrode when exposed to corrosive materials, such as salt water. Always rinse the ESC with clean water after exposure to corrosives or dirt.</li><li>Remove cooling fan prior to driving in wet conditions, it is not waterproof.</li></ul>		





## PACKAGED MOTOR AND ESC OFFERINGS FOR COPPERHEAD 10

BASHER	COPPERHEAD 10 1406-4600KV SENSORED COMBO	ITEM: 010-0166-01	2s-3s on 2WD buggies, stadium trucks and touring cars. 2s on 2WD SCTs	Vehicles weighing up to 5 lbs. ready- to-run.
		SKU: 819326012273		
	COPPERHEAD 10 1406-5700KV SENSORED COMBO	ITEM: 010-0166-02		
		SKU: 819326012280		
ON ROAD	COPPERHEAD 10 1406-6900KV SENSORED COMBO	ITEM: 010-0166-03	2s only on lightweight vehicles; 2WD buggies, stadium trucks and touring cars.	Vehicles weighing up to 4 lbs. ready- to-run.
		SKU: 819326012297		
	COPPERHEAD 10 1406-7700KV SENSORED COMBO	ITEM: 010-0166-04		
		SKU: 819326012303		
CRAWLER	COPPERHEAD 10 1406-1900KV SENSORED COMBO	ITEM: 010-0166-05	Rock crawlers on 2s-4s, and low speed setups on touring cars, stadium trucks or buggies.	
		SKU: 819326012310		
	COPPERHEAD 10 1406-2280KV SENSORED COMBO	ITEM: 010-0166-06	Rock crawlers, trail rigs, touring cars, stadium trucks, and buggies on 2s-4s	
		SKU: 819326012327		
	COPPERHEAD 10 1406-2850KV SENSORED COMBO	ITEM: 010-0166-07		
		SKU: 819326012334		
	COPPERHEAD 10 1406-3800KV SENSORED COMBO	ITEM: 010-0166-08	Rock crawlers, trail rigs, touring cars, stadium trucks, and buggies on 2s-3s	
		SKU: 819326012341		
SCT	COPPERHEAD 10 1410-3800KV SENSORED COMBO	ITEM: 010-0166-10	2s-3s on 2WD/4WD SC trucks and monster trucks. 3S with conservative gearing.	Vehicles weighing up to 6.5 lbs. ready- to-run.
		SKU: 819326012365		
	COPPERHEAD 10 1410-3800KV 5mm SHAFT SENSORED COMBO	ITEM: 010-0166-11		
		SKU: 819326012372		
SCT	COPPERHEAD 10 1412-3200KV SENSORED COMBO	ITEM: 010-0166-09	2s-4s on 2WD/4WD SC Trucks	Vehicles weighing up to 6.5 lbs. ready- to-run.
		SKU: 819326012358		
MT	COPPERHEAD 10 1415-2400KV SENSORED COMBO	ITEM: 010-0166-12	3s-4s on 4x4 Monster Trucks and SCTs	Vehicles weighing up to 6.5 lbs. ready- to-run.
		SKU: 819326012389		



LIMITED EDITION	<b>COPPERHEAD 10 LIMITED EDITION 1412-3200KV SENSORED COMBO</b>	ITEM: 010-0168-00	2s-4s on 2WD/4WD SC Trucks	Vehicles weighing up to 6.5 lbs. ready-to-run.
	(Includes Direct Connect Sensor Wire, Limited Edition decals and Limited Edition matte black motor) 	SKU: 819326012396		

<b>1:10 SCALE ESC COMPARISON</b>			
<b>PRICE</b>	<b>\$</b>	<b>\$\$</b>	<b>\$\$\$</b>
<b>APPLICATION</b>	<b>1/10<sup>TH</sup> SCALE VEHICLES WEIGHING UP TO 6.5 LBS (TOTAL VEHICLE WEIGHT).</b>	<b>1/10<sup>TH</sup> SCALE VEHICLES WEIGHING UP TO 7.5 LBS (TOTAL VEHICLE WEIGHT).</b>	<b>1/10<sup>TH</sup> SCALE VEHICLES AND 1/8<sup>TH</sup> SCALE OFF-ROAD BUGGIES WEIGHING UP TO 9 LBS (TOTAL VEHICLE WEIGHT).</b>
<b>SENSORED CAPABLE</b>	<b>N/A</b>	<b>YES</b>	<b>YES</b>
<b>DATA LOGGING</b>	<b>N/A</b>	<b>DATA LOGGING LITE BATTERY VOLTAGE, BATTERY RIPPLE, CONTROLLER TEMP, MOTOR RPM, MOTOR TEMP Sample frequency - 1 or 5 samples per/sec</b>	<b>FULL DATA LOGGING BATTERY VOLTAGE, BATTERY RIPPLE, BATTERY CURRENT, CONTROLLER TEMP, INPUT THROTTLE, MOTOR POWER OUTPUT, MOTOR RPM, AUX WIRE MODE, BEC VOLTAGE, MOTOR TEMP Sample frequency - 1, 2, 5 or 10 samples per/sec</b>
<b>AUXILIARY WIRE</b>	<b>N/A</b>	<b>N/A</b>	<b>YES</b>
<b>INPUT VOLTAGE</b>	<b>2S-3S</b>	<b>2S-4S</b>	<b>2S-6S</b>
<b>INTERNAL BEC</b>	<b>FIXED: 5.0 VOLTS (2A PEAK)</b>	<b>SELECTABLE: 5.5V OR 7.5V (6A PEAK)</b>	<b>ADJUSTABLE: 5.5V, 6.0V, 7.5V OR 8.0V (8A PEAK)</b>
<b>AUXILIARY WIRE</b>	<b>N/A</b>	<b>N/A</b>	<b>YES</b>
<b>CRYO-DRIVE™</b>	<b>YES</b>	<b>YES</b>	<b>N/A</b>
<b>PROGRAMMING OPTIONS</b>	<b>CASTLE LINK WINDOWS SOFTWARE AND CASTLE LINK USB ADAPTER, FIELD LINK CARD (LIMITED PROGRAMMING OPTIONS) OR WIRELESSLY WITH CASTLE B-LINK™ ADAPTER AND CASTLE LINK ANDROID OR IOS APP.</b>		
<b>COUPON INCLUDED?</b>	<b>N/A</b>	<b>YES, REDEEMABLE FOR FREE CASTLE LINK USB ADAPTER OR \$10 FIELD PROGRAMMING CARD</b>	
<b>SIZE (LxWxH) &amp; WEIGHT</b>	<b>2.08" x 1.50" x 1.28" 64 g / 2.26 oz</b>	<b>2.19" x 1.39" x 1.33" 70.9 g / 2.50 oz</b>	<b>2.14" x 1.39" x 1.18" 101 g / 3.56 oz</b>
<b>CONSTRUCTION</b>	<b>WATERPROOF DESIGN, POTTED IN DURABLE INJECTION MOLDED CASE WITH 30MM REMOVABLE FAN.</b>	<b>WATERPROOF DESIGN, POTTED IN DURABLE INJECTION MOLDED CASE WITH 30MM REMOVABLE FAN AND DUAL USE FAN GUARD.</b>	<b>WATERPROOF DESIGN, POTTED IN RUGGED CNC ALUMINIUM CASE WITH TEMPERATURE REGULATED 30MM REMOVABLE FAN.</b>
<b>RUNNING MODES*</b>	<b>SENSORLESS BRUSHLESS AND BRUSHED MOTOR OPERATION</b>	<b>SMARTSENSE™, SENSORED ONLY; AND BRUSHED MOTOR OPERATION</b>	

<b>RECOMMENDED MOTORS**</b>	<b>14 SERIES (1406, 1410, 1412, 1415)</b>	<b>14 SERIES (1406,1410,1412, 1415)</b>	<b>14 SERIES (1406,1410,1412,1415) 15 SERIES (1515-2200, 1512-1800)</b>
<b>MOTOR CONNECTORS</b>	<b>4MM bullets</b>	<b>4MM bullets</b>	<b>4MM bullets</b>
<b>TELEMETRY COMPATIBLE</b>	<b>YES, REQUIRES PURCHASE OF TELEMETRY LINK FOR S.BUS2 (ITEM # 010-0152-00) AND COMPATIBLE FUTABA TRANSMITTER</b>		
<b>SERVICABLE ITEMS</b>	<b>ESC COOLING FAN</b>	<b>ESC COOLING FAN, RECEIVER HARNESS, SENSOR HARNESS</b>	<b>ESC COOLING FAN, RECEIVER HARNESS, WIRE HARNESS RETAINER, SENSOR HARNESS</b>
<b>ESC HIGHLIGHTS</b>	<p>The SIDEWINDER 4 SPORT 1:10 SCALE ESC builds upon Castle's most popular product family, SIDEWINDER 1:10 SCALE SERIES. The SIDEWINDER 4 (SW4) is a solid upgrade for a wide variety of 10th scale vehicles and is the first of its kind to include Castle's CRYO-DRIVE™ technology with cutting-edge hardware and software advancements to increase thermal performance with COOLER TEMPS, LONGER RUNS and MORE POWER. SW4 offers a waterproof design, brushless and brushed motor support, and numerous programmable settings including throttle, brake curve, enhanced drag brake, punch control and more. Like every Castle ESC, the SIDEWINDER 4 is proudly designed and manufactured in the USA with American-made quality and Castle's "make-it-right" customer support!</p>	<p>The all-new COPPERHEAD 10 PERFORMANCE 1:10 SCALE ESC is ideal for those who want sensored motor support, data logging, a 6A peak selectable internal BEC (5.5V or 7.5V) and Castle's signature reliability and performance in the meanest looking ESC around! COPPERHEAD 10 will transform 1:10 scale stockers from dull to dangerously fun with buttery smooth starts, CRYO-DRIVE enabled performance and up to 4S power in a compact, easy-to-install footprint.</p> <p>The COPPERHEAD 10 will be offered with a dozen different Castle 4-POLE 12-SLOT brushless sensored motors to overpower most every application from crawling to bashing, on road and more!</p>	<p>The MAMBA X EXTREME 1:10 SCALE ESC, our flagship 1:10 scale ESC, is an incredibly robust and high-performance 2S-6S sensored controller. Encapsulated in a rugged, yet lightweight CNC aluminum case, the MAMBA X is ready for a wide variety of applications which demand premium features and the highest possible performance.</p> <p>The MAMBA X includes a programmable auxiliary wire for adjusting driving parameters on-the-fly such as rock race / crawler mode, max power, torque control, drag brake, reverse and more. The MAMBA X also includes full data logging which measures up to ten different parameters up to ten times per second and has an internal 8A peak fully adjustable BEC (5.5V, 6.0V, 7.5V. or 8.0V).</p> <p>These rich features combined with the smallest possible footprint enable the MAMBA X to offer the ultimate in versatility, reliability and pro-level performance!</p>
<p>* SMARTSENSE™ MODE FOR USE WITH A CASTLE SENSORED MOTOR AND ESC</p> <p>** APPROPRIATE GEARING AND INPUT VOLTAGE REQUIRED!</p>			