



PRESS RELEASE

For Immediate Release

#3224 – Timbuk2 Brushless System—Wraith Edition



BRUSHLESS POWER FOR YOUR AXIAL® WRAITH™

Irvine, CA – September 14, 2011 – The Axial® Wraith™ 4WD Rock Racer has taken the trails by storm, and Novak has developed a brushless combo to bring out the full potential of this unique, rock-racing vehicle—the **Timbuk2 Brushless System- Wraith Edition**. This combo is especially suited for the Axial Wraith and other vehicles with a reverse-rotation drive train, and provides faster speeds, higher torque, and more control compared to a standard brushed system. With the Novak Timbuk2 Brushless System—Wraith Edition, there is no need to modify the vehicle’s drive train or program the speed control—simply install and enjoy its newfound power right out of the box!

WRAITH-SPECIFIC SOFTWARE



The Wraith-Edition Timbuk2 ESC has been given its own set of default parameters that are suited for the vehicle’s unique drive train. Not only will the ESC rotate the brushless motor in the correct clockwise rotation, but also includes Novak’s exclusive **Rock-Boost™**. When the vehicle reaches full speed, Rock-Boost™ engages and electronic timing advance is applied to the motor. This allows you to have ultra-fine low-speed control, unstoppable torque, along with the top speed and higher RPMs of much faster motors. Up until now, motor timing was only available in standard rotation controllers. The Timbuk2 is the first ESC to offer electronic motor timing in BOTH clockwise and counter-clockwise motor rotation modes—another Novak first!

INCLUDED BEC MODULE

Since so many hardcore R/C enthusiasts own an Axial Wraith, Novak wanted to be sure the Timbuk2 system had the power you needed. The speed control’s internal heavy-duty 2-amp BEC works great with the stock components, and some heavy-duty servo upgrades. However, when the going gets tough, you may want a little extra juice for your servo and accessory lights. The Timbuk2 Wraith Edition combo also includes a super **heavy-duty 5-amp external BEC module**. You can run this module in combination with the Timbuk2’s internal BEC for a steering arm bending 7 amps of power!



Novak’s #5465 5A BEC Module is included in the cost-saving combo

MORE FEATURES

Like the standard Timbuk2 Crawling Brushless ESC (#1832), the Wraith-Edition is **extremely small and lightweight**. But, don’t let its small size fool you! This ESC is packed with features including **on-board ESC temperature diagnostics, thermal overload protection**, and Novak’s easy **One-Touch Set-Up™**. For those who need additional customization, the Timbuk2 ESC features **full, on-board programming** with an intuitive and easy-to-use interface. No PC or programming card needed.

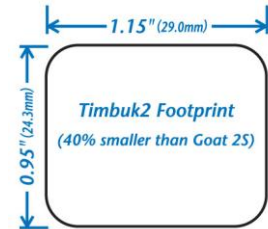
Novak’s Ballistic 13.5-turn brushless crawler motor is factory set to **0 degrees of timing**—the optimal setting for clockwise and counter-clockwise operation. Additionally, it features a **sensored design** for incredibly smooth acceleration and control, and faster speeds, higher torque and longer run times as compared to a brushed system. Each Ballistic motor is 100% rebuildable—all components including the rotor, wound stator, timing assembly, end bells and bearings can be easily replaced.

Whether your Axial® Wraith 4WD Rock Racer will be climbing over challenging terrain or jamming across open terrain, the Novak Timbuk2 Brushless System—Wraith Edition is the ideal choice to give your vehicle to the performance it deserves! *The Timbuk2 Brushless System—Wraith Edition (#3224) as well as Novak's other Timbuk2 Crawling Brushless Systems (#3223/13.5T & #3225/#18.5T) will be available in **October 2011**.*

TIMBUK2 BRUSHLESS ESC SPECIFICATIONS

Motor Compatibility	Sensored Brushless
Fwd/Brk/Rev.....	F / Drag Brake / R
Input Cells	2S LiPo/LiFe or 4-7 NiMH
Size	1.15" x 0.95" x 0.66" (29.0 x 24.3 x 16.8 mm)
Weight (w/o wires).....	0.69 oz. (19.5 g)
On-Resistance	0.00057 ohms @ 25°C trans. temp.
Motor Limit	540-size: 13.5T (Novak Crawling Brushless Motors only)
Wire Size.....	14G Super-Flex Copper-Strand Silicone Wire
BEC.....	6.0 volts DC / 2.0 amps (7.0 amps with use of included 5A BEC)
Battery/Motor Plug	Tamiya-style battery and gold-plated Bullet motor plugs factory installed
Status LEDs	5

For **Ballistic Crawler Motor-13.5T** specifications, please visit the Novak website: www.teamnovak.com



TIMBUK2 BRUSHLESS SYSTEM—WRAITH EDITION FEATURES

- ✓ Custom designed for the Axial Wraith™ and other vehicles with reverse-rotation (clockwise) drive trains
- ✓ Sensor-based motor for excellent torque and low-speed drivability
- ✓ Compact and lightweight design
- ✓ Novak's exclusive Rock Boost™ electronic timing advance to drastically increase motor RPM at full throttle
- ✓ Three distinct types of Hill/Drag Brake selections for significantly stronger brakes that can hold the heaviest rigs on the steepest inclines
- ✓ Water-resistant case with silicone gasket seal to help keep out the elements
- ✓ Built-In Voltage Cut-Off Circuitry prevents damage to LiPo/LiFe batteries
- ✓ Included ultra heavy-duty 5A BEC module for a total of 7 amps—enough to operate heavy-duty servos and added accessories
- ✓ Built-In 6V output for optional accessory fan or other detail items such as running lights
- ✓ User friendly One-Touch programming interface with 5 colored status LEDs to help personalize the ESC's settings
- ✓ 10 adjustable parameters: Hill/Drag Brake, Minimum Drive, Dead Band, Throttle Curve (Linear/Expo), Brake Frequency, Reverse End Point, Drive Frequency, Novak Rock Boost™, Motor Rotation and Voltage Cut-Off
- ✓ 100% rebuildable motor design—all components including rotor, stator, and bearings can be replaced
- ✓ Built-in diagnostic temperature monitoring that lets you quickly check the ESC's operating temperature at any time
- ✓ On-board Hall Sensor Test to easily and quickly verify that the motor's sensors are working properly
- ✓ Thermal Overload Protection circuitry to protect the ESC from overheating
- ✓ Novak's One-Touch Set-Up™ for quick, easy transmitter set-up
- ✓ Plug-and-Play: Factory wired with Tamiya®-style battery plug & gold-plated Bullet motor plugs
- ✓ Gold-plated direct-solder wiring tabs for flexible soldering options
- ✓ Factory installed power capacitor
- ✓ User-replaceable input harness
- ✓ Meets RoHS compliance and includes a 120-Day Warranty
- ✓ Designed, assembled and tested by Novak in Irvine, California, using globally sourced components

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