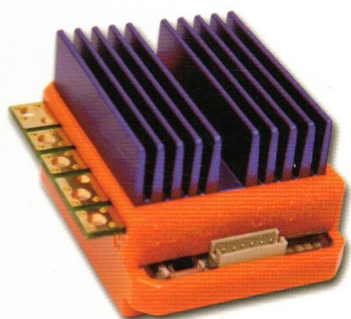


BRUSHLESS NOVAK USA

*Introducing the ideal system for
drivers of all skill levels*

SUPER SPORT



ESC

SMALL ESC FOOTPRINT

1.32" X 1.75" easily fits popular 1/10-scale electric r/c cars

VARIABLE THROTTLE STEP TECHNOLOGY

provides incredibly smooth throttle response

1-TOUCH SET-UP

makes setup as easy as any Novak ESC

SENSOR-BASED BRUSHLESS DESIGN

provides excellent starting torque and low speed driveability

BUILT-IN PROTECTION CIRCUITRY

including Locked Rotor Detection & Thermal Protection

6 THROTTLE PROGRAMS

for drivers of all skill levels & all applications

DIRECT-SOLDER WIRING TABS

for easy wire replacement

MOTOR

FACTORY-WIRED & READY TO INSTALL

so you'll be ready-to-run in no time

HIGH PERFORMANCE DESIGN

Kv=5,800 RPM/Volt; Kt=0.45 in-oz/amp; Power Output=196 watts

NEODYMIUM MAGNET/BALL BEARINGS

for high reliability, and smooth low-friction operation

STANDARD 540-SIZE CAR MOTOR

makes it easy to replace any standard size car motor

VIRTUALLY MAINTENANCE-FREE

thanks to no brushes, brush springs or commutator to true or wear out

IMPROVED POWER & EFFICIENCY

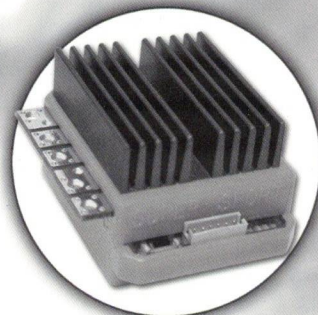
allows greater speed, torque, and 20% longer run times

www.teamnovak.com

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SUPER SPORT

The Super Sport Brushless Motor System is the first in a series of brushless motor systems from Novak. The system includes a mild-modified, sensor-based brushless motor, and a compact, programmable speed control. Designed by Novak specifically for R/C car applications, the brushless motor and speed control will provide approximately 20% longer run times and higher performance than similar brushed motor systems—with virtually no maintenance.



SUPER SPORT SPEED CONTROL ESC FEATURES

- ✦ 4-7 cell input voltage
- ✦ 6 user-selectable throttle programs
- ✦ Will handle a Novak motor up to 225 watts
- ✦ Fits in most popular 1/10 scale electric R/C cars
- ✦ Size: 1.32" x 1.75" x 1.05" (w/heat sink); Weight: 1.7 oz. (w/out power wire)
- ✦ Variable Throttle Step Technology for the smoothest performance
- ✦ The One-Touch/Programming Button, along with a series of four different colored LEDs, easily guides the user through the program selection
- ✦ Industry-first Transmitter Check Mode
- ✦ Locked Rotor Detection Circuitry prevents motor, battery, or ESC damage
- ✦ Direct-solder wiring tabs
- ✦ Replaceable input harness
- ✦ Heavy-duty BEC
- ✦ One-Touch Set-Up

6 THROTTLE PROGRAMS:

- ✦ **SS STANDARD** (w/reverse) — unlimited rpm/acceleration
- ✦ **SS STANDARD** (forward/brake) — unlimited rpm/acceleration
- ✦ **SS HIGH** (w/reverse) — **SS STD** w/higher minimum brake
- ✦ **SS HIGH** (forward/brake) — **SS STD** w/higher minimum brake
- ✦ **SPORTSMAN*** — w/reverse
- ✦ **SPORTSMAN*** — forward/brake only

*limited rpm/acceleration

SUPER SPORT BRUSHLESS MOTOR FEATURES:

- ✦ Virtually maintenance-free: no brushes, brush springs, or commutator to true or wear out
- ✦ Completely enclosed motor provides protection from the elements
- ✦ Sensor technology provides excellent starting torque and continuous synchronization for great, low-speed driveability, vehicle control, and consistent, accurate brakes
- ✦ Standard 540-size car motor with a 1/8" diameter hardened output shaft to accept all existing pinion gears
- ✦ High performance design: Kv=5,800 RPM/Volt; Kt=0.45 in-oz/amp; Power output: 196 watts (See below for definition of Kv and Kt)
- ✦ Pre-wired and ready to install
- ✦ Low cogging for smooth acceleration and smooth coasting (See below for definition)
- ✦ Ball bearings for smooth, low-friction operation
- ✦ Direct-solder wiring tabs for easy wire replacement
- ✦ One-piece, multi-pole cylindrical neodymium magnet for high reliability, and stationary windings for better heat conduction than typical brushed motors



Brushless motor technology has existed for quite some time. Since their inception, brushless motors have been rated by the following defined terms, which we have also applied to rate our **Super Sport Brushless Motor System**:

Kv: The motor voltage constant expressed in RPM/Volt. This indicates how fast the motor will turn for a given voltage (given there is no internal resistance). For example, the Super Sport's Kv rating is 5,800 RPM/Volt. Therefore, if a 6.0-volt battery pack is used, the Super Sport's RPM would be 34,800 (6.0 x 5,800). Comparatively, a typical 10-turn brushed motor's Kv rating is 5,400 RPM/Volt.

Kt: The motor torque constant expressed in inch-ounce of torque per amp of current. This indicates the amount of torque a motor would produce per amp of current draw. For example, the Super Sport's Kt rating is 0.45 in-oz/amp. Therefore, if the motor is drawing 5 amps, the Super Sport would produce 2.25 in-oz of torque (5 x 0.45). Comparatively, a typical 10-turn brushed motor's Kt rating is 0.33 in-oz/amp.

Cogging: Describes the non-uniform angular velocity of the rotation of the motor's rotor. The rotation occurs in jerks or increments rather than a smooth motion. The lower the cogging, the smoother the rotation, and the smoother the acceleration and coasting.

NOVAK

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