



ESC Instruction Sheet

The Victory line of ESCs builds upon RC-Hydros.com's history of great features and record-setting performance in the SC3, SC5, and Penguin lines.

FEATURES

- Three-color LED shows OFF (red), PARTIAL throttle (yellow) and FULL POWER (green) operation
- No pots to fiddle with!
- Programmable functions with optional RS-232 or USB interface for expert tuning
- Available in Opto or BEC versions. *Not recommended for use with AM systems*
- Pre-wired for most standard receivers, easy to change for old Airtronics
- 12" servo leads for improved mounting options
- Fail-safe powers down on radio signal loss (but doesn't glitch)
- Safe-On feature prevents glitching on power-up and senses "off" for your transmitter
- SmartStart™ allows use with pistol or stick radios
- 12AWG Dean Ultra wire for minimum wiring resistance
- Only .0005 milliohms FET resistance!
- 90 Amps continuous current
- 1.5 x 2.625 x .75" (40 x 68 x 20mm) (10-32 cell version is slightly wider due to a capacitor)
- 2.6 ounces (64g)
- 6-12, 6-14, or 10 to 32 cells NiCd or NiMH or 2S-3S or 3S to 9S LiPoly (10-40V input)
- Programmable features include LVC, transmitter stick range, PWM frequency, and more.

CONNECTING TO THE BATTERY AND MOTOR

The underside of your ESC tells how many cells and/or volts your ESC will handle. Possible settings are . NEVER use more or less cells than your ESC is intended for – it can cause the unit to burn up on the bench, without doing anything to it!

All leads are color coded. The red and black leads which are found near the water cooling tubes (left side of photograph) attach to the battery pack. Red goes to plus, black goes to minus. The red and blue leads attach to the motor. Red goes to plus, blue goes to minus.

Connect **one** of the the provided Schottky diodes between the red and black motor leads with the stripe toward the red lead. If you are using multiple motors, use one Schottky on each motor. Attach the diode as close to the motor as possible. **DO NOT OPERATE YOUR ESC WITHOUT THE SCHOTTKY DIODE ON THE MOTOR.** If you normally use capacitors on your motor, you should continue to do so.

CONNECTING TO YOUR RECEIVER

The orange lead is the signal lead, the brown lead is the ground lead, and the red is the 5V power lead. Opto-isolated controls do not use the red lead. All controllers are shipped for use according to the industry-standard Futaba format with a standard JR style connector (most compatible plastic connector housing), with brown on one end and orange at the other. If your ESC does not work when shipped and you are using an old-style Airtronics receiver, move the brown wire at the connector into the center position and all should be fine. Do not worry – you can't break anything doing this!

ADJUSTING YOUR TRANSMITTER

With most radios, you will not need to make any adjustments to your transmitter, although doing so may improve the “feel” of the throttle. Adjust the end points (EPA) and trim to maximize travel with a servo across the normal forward range. Swap the ESC for the servo. Hook up your main power batteries (charged), ESC, radio and receiver battery; do NOT hook up the motor yet! Turn OFF the transmitter. The LED should blink red. If it does not, please check the wiring. Usually a wiring error keeps it from working.

Turn the transmitter on. The LED should blink green, then become solid red as the ESC emits two short beeps. When you pull the trigger the LED should first change to yellow, then turn green.

Now disconnect the main power battery and plug the motor into the ESC. Re-connect the main battery again. The LED should go through the same startup sequence, ending in solid red. If not, please contact us. When the LED turns green the motor is at full speed.

If you have any problems, please e-mail to support@montanadesign.com or call (5pm-9pm Mon-Fri, Sat 10AM-3PM 908-454-4611, **closed Sunday**) or write to the address below.

COOLING

For maximum efficiency and reliability, it is essential that you cool your ESC properly. There are many techniques to pick up water for your ESC. Our favorite is a J-tube which gets waste water off the top of the prop.

WATER PROOF

All RC-Hydros.com ESCs are waterproof. Submerging them while running will not cause any damage, nor will normal humid conditions in boats be a problem. *It is always prudent to allow all your electronics to adequately dry out before storage, and your Victory is no exception.* The more care you take of your equipment, the more reliable you can expect it to be next time you get ready to play.

Leaving an ESC submerged with batteries attached for extended periods (your boat sank and you can't retrieve it until a day or two later) may cause some components to be electrolyzed away, depending up voltage and water cleanliness. There's nothing we (nor anybody else) can do for that. Some owners have reported their units were fine after several days under water.

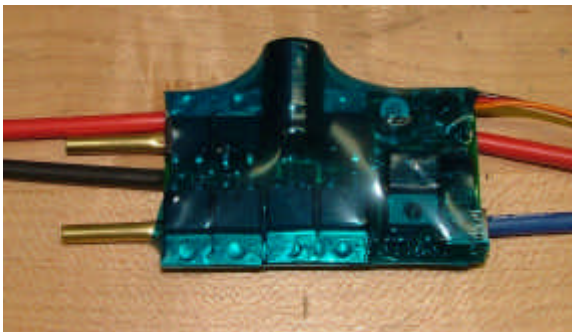


Photo 1: V90-1032/Opto

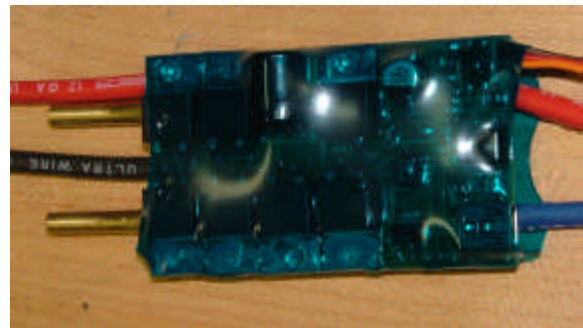


Photo 2: V90-614/Opto

PROGRAMMING

Your Victory controller automatically senses the “off” position of your transmitter. No programming is necessary in order to use your ESC. The computer-based programming requires an interface cable and special software – call or write for more information. **DO NOT PLUG ANYTHING IN TO THE CONNECTOR!**

THANK YOU VERY MUCH FOR YOUR PURCHASE. We always want to make you satisfied – please let us know what we can do to improve anything about our products, operations, or customer service.