STEP 4–TRANSMITTER ADJUSTMENTS

For proper ESC operation, adjust transmitter as follows:

A. Set **HIGH ATV** or **EPA** to **maximum** setting.
[amount of throw at full throttle]

B. Set **LOW ATV, EPA**, or **ATL** to **maximum** setting.
[amount of throw at full brakes]

C. Set **EXPONENTIAL** to **zero** setting. *[throttle channel linearity]*

D. Set **THROTTLE CHANNEL REV. SWITCH** to **either** position.

E. Set **THROTTLE CHANNEL TRIM** to **middle** setting.
[adjusts neutral position/increases or decreases coast brakes]

F. Set **ELECTRONIC TRIGGER THROW ADJUSTMENT** to **70% throttle** and **30% brake** throw (or 7:3)--*best for reversible ESCs.*
[adjusts trigger throw electronic/digital pistol-grip transmitters]

G. Set **MECHANICAL TRIGGER THROW ADJUSTMENT** to position with **1/2 throttle** and **1/2 brake** throw.
[adjusts trigger throw on mechanical/analog pistol-grip transmitters]

•NOT ALL TRANSMITTERS HAVE THESE ADJUSTMENTS•

STEP 5–ONE-TOUCH PROGRAMMING

With ESC connected to (at least) a receiver & a charged battery pack:

1. **TURN ON THE TRANSMITTER'S POWER**
2. **PRESS & HOLD ESC'S ONE-TOUCH/SET BUTTON**
3. **TURN ON THE SPEED CONTROL'S POWER**
   With transmitter throttle at neutral, and still **pressing the SET button**, slide the ESC's **ON/OFF switch** *to ON position.*
4. **CONTINUE HOLDING SET BUTTON UNTIL RED LED COMES ON**
5. **RELEASE SET BUTTON AS SOON AS LED TURNS RED**
6. **PULL TRANSMITTER THROTTLE TO FULL-ON POSITION**
   Hold it there until the **green status LED** ***turns solid green***.
   Note: Motor will not run during programming even if connected.
7. **PUSH TRANSMITTER THROTTLE TO FULL-BRAKES**
   Hold it there until the **green status LED** ***blinks green***.
8. **RETURN TRANSMITTER THROTTLE TO NEUTRAL**
   Red status LED will ***turn solid red***, indicating that speed control is at neutral and that proper programming has been completed.
   NOTE: If transmitter settings are changed, One-Touch Programming must be repeated. If you experience any problems, turn off ESC & repeat One-Touch.

REMEMBER: Whenever One-Touch set-up is performed, ESC automatically reverts to factory default settings & the Throttle Profile reverts to #1 when in Brushless-Mode.

USING A RECEIVER BATTERY PACK

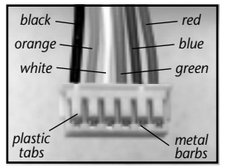
If you are planning to use an external receiver battery pack to power the electronics you need to do the following:

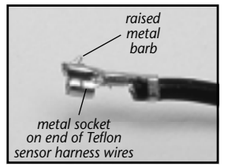
1. Plug the external 5 cell (1.2VDC/cell) receiver battery pack into the battery slot of the receiver.
2. Leave the **ESC's ON/OFF switch** in the ***OFF*** position, and **use receiver battery pack's ON/OFF switch** to turn the ***system power on and off***—Do not use the ESC's switch.

SENSOR HARNESS WIRING

Should any of the 26G Teflon wires pull out of the connector on the end of the motor's sensor harness, re-insert them in the appropriate slot in the connector as shown below. There is a small plastic tab that grabs a small raised barb on the back of the metal socket crimped onto the Teflon wire's end. The plastic tab should be checked to make sure it has not deformed excessively before inserting the metal socket into the plastic connector housing with the barb toward to plastic tabs.

If the motor's sensor harness gets damaged, please contact our Customer Service Dept.





TROUBLE-SHOOTING GUIDE

Steering Channel Works But Motor Will Not Run

- ***Red status LED blinking when throttle is applied.*** Check motor sensor harness connection at ESC *(make sure all metal sockets are fully inserted into the connector's plastic housing)*—check for damaged wires.
- ***Red status LED on solid & Green LED blinking.*** Check input signal harness & motor sensor harness connections at ESC. Check input signal harness wiring sequence & connection at throttle channel of receiver. Check throttle channel operation with servo. Motor sensor harness connected while in Brush-Mode—disconnect sensor harness.
- ***Blue & Green status LEDs both blinking.*** Possible ESC shut-down due to locked rotor detection—return throttle to neutral position to regain motor control—check vehicle's drive train for free operation.
- ***Blue & Red status LEDs blinking.*** Possible ESC thermal shut-down—Check gear ratio & free operation of drive train for possible overloading/ESC is being severely over-loaded—allow system to cool & return throttle to neutral position to regain motor control. ***LEDs will continue to blink until system is cooled down.***
- ***Blue & Amber status LEDs blinking.*** Possible motor thermal shut-down—Check gear ratio & free operation of drive train for possible overloading/motor is being over-loaded—allow system to cool & return throttle to neutral position to regain motor control. ***LEDs will continue to blink until system is cooled down.***
- ***Blue & Green (Locked Rotor Detection), Blue & Red (ESC Thermal Shut-Down), or Blue & Amber (Motor Thermal Shut-Down) status LEDs blinking.*** ESC may have shut-down **& ESC's neutral point is too far off** to sense that transmitter throttle has been returned to neutral—Refer to Steps 4 & 5.
- Possible receiver damage—Check operation with a different receiver.
- Possible internal damage—Refer to Service Procedures.

Receiver Glitches/Throttle Stutters During Acceleration

- Receiver or antenna too close to ESC, power wires, battery, or motor.
- Bad connections—Check wiring, connectors, & sensor harness.
- External Power Capacitor damaged/not installed—Replace Power Capacitor.

Motor and Steering Servo Do Not Work

- Check wires, receiver signal harness wiring & color sequence, radio system, crystals, battery/motor connectors, & battery pack.
- Possible receiver damage—Check operation with a different receiver.
- Possible internal damage—Refer to Service Procedures.

Speed Control Runs Excessively Hot

- Gear ratio too low—Increase gear ratio *(see 'GEAR SELECTION').*

Model Runs Slowly/Slow Acceleration

- Gear ratio too high—Reduce gear ratio *(see 'GEAR SELECTION').*
- Check battery connectors—Replace if needed.
- Incorrect transmitter/ESC adjustment—Refer to Steps 4 & 5.
- External Power Capacitor damaged/not installed—Replace Power Capacitor.

ESC Is Melted Or Burnt/ESC Runs With Switch Off

- Internal damage—Refer to Service Procedures.

****For more assistance call our Customer Service Department or check our website.***

SERVICE PROCEDURES

Before sending your speed control or brushless motor system in for service, review Trouble-Shooting guide and instructions. System may appear to have failed when other problems exist.

After reviewing instructions, if you feel that your ESC/system requires service, please obtain the most current product service options and pricing by the following ways:

WEBSITE: Print a copy of the ***PRODUCT SERVICE FORM*** from the CUSTOMER SERVICE section of the website. Fill out the needed information on this form and return it with the Novak product that requires servicing.

PHONE/FAX: If you do not have access to the internet, please contact our customer service department by phone or fax as listed below.

WARRANTY SERVICE: For warranty work, you *MUST CLAIM WARRANTY* on ***PRODUCT SERVICE FORM*** & include a valid cash register receipt with purchase date and dealer name & phone# on it, or an invoice from previous service. If warranty provisions have been voided, there will be service charges.

•ESCs returned without a serial number will not be serviced under warranty•

ADDITIONAL NOTES:

- Dealers/distributors are not authorized to replace Novak products thought to be defective.
- If a hobby dealer returns your brushless system for service, submit a completed ***PRODUCT SERVICE FORM*** to the dealer and make sure it is included with the product.
- Novak Electronics, Inc. does not make any internal electronic components *(transistors, resistors, etc.)* available for sale.

Novak Electronics, Inc.
(949) 833-8873 • FAX (949) 833-1631
Customer Service e-mail: ***cs@teamnovak.com***
Monday-Thursday: 8:00am-5:00pm (PST)
Friday: 8:00am-4:00pm *(closed every other Friday)*
www.teamnovak.com

SUPER SPORT PLUS--INSTRUCTIONS

#55-1705-1
2-2005

SPECIFICATIONS

Input Voltage	4-7 cells *(1.2 volts DC/cell)*
ESC Case Size	1.32"x1.75"x1.05" *[33.5x44.4x26.7mm]*
ESC Weight *(w/o wires)*	1.70 ounce *[48.2 grams]*
B.E.C. Voltage/Current	6.0 volts DC/3.0 amps
Power Wire *(Battery/Motor)*	14G Super-Flex Silicone
On-Resistance *(Brushless-Mode)*	0.0019Ω *@25°C trans.temp.*
On-Resistance *(Brush-Mode)*	0.0006Ω *@25°C trans.temp.*
Rated Current *(Brushless-Mode)*	160A *[Fwd & Rev.] @25°C trans.temp.*
Rated Current *(Brush-Mode)*	480A *[Fwd & Brakes] @25°C trans.temp.*
Motor Limit *(Brushless-Mode)*	225 watts *@25°C trans.temp.*
Motor Limit *(Brush-Mode)*	12-turn
Throttle Programs *(Brushless-Mode)*	5 *[3 w/Rev. & 2 Fwd/Brake]*
Throttle Program *(Brush-Mode)*	1 *[Fwd/Brake]*

Brush & brushless motor control and programmability all in one!

The Super Sport Plus programmable electronic speed control gives you the best of both worlds--brush & sensor-based brushless motor control. Combine this with on-board programming of Minimum Drive, Minimum Brake, Drag Brake, & Deadband, and you've got extreme versatility.

The Super Sport Plus is factory-loaded with 6 throttle programs to choose from *(including a limited reverse Marine Mode)*, Novak's Smart Braking II *(you don't go into reverse until you shift into reverse by returning the trigger to neutral and then back to reverse)*, ***Thermal Overload Protection, high-power B.E.C.*** for strong/fast servo response, ***Polar Drive & Digital Anti-Glitch circuitries*** for cool & smooth operation, and ***Radio Priority circuitry*** for the ultimate in control, right down to the end of the charge. Add to this the user-replaceable battery wires, power capacitor, & input harness, and the Super Sport Plus has it all*!*

To benefit from all of the technical features of the Super Sport Plus, PLEASE READ ALL INSTRUCTIONS

PRECAUTIONS

WATER & ELECTRONICS DON'T MIX*!*

Never allow water, moisture, or other foreign materials to get inside ESC, motor, or on the PC Boards. ***Water damage will void the warranty!***

NO SCHOTTKY IN BRUSHLESS-MODE*!*

Schottky diodes must NOT be used when using ESC in Brushless-Mode *(Schottky diodes are never used with reversible ESCs, including brushless).* ***Schottky diode usage in Brushless-Mode will damage ESC & void warranty.***

TAKE CARE WHEN SWITCHING ESC MODES

Severe ESC damage can occur if proper procedures are not followed when switching ESC between Brush-Mode & Brushless-Mode.
Refer to PROGRAMMING/GEARING sheet page 5 for detailed instructions.

DISCONNECT BATTERIES WHEN NOT IN USE

Always disconnect the battery pack from the speed control when not in use to avoid short circuits and possible fire hazard.

4 TO 7 CELLS ONLY

Never use fewer than 4 or more than 7 cells *(4.8-8.4VDC, 1.2VDC/cell)* in the vehicle's main battery pack(s).

NOVAK BRUSHLESS MOTORS ONLY

The Super Sport Plus ESC is specially designed for use with sensor-based Novak SS-Series Brushless Motors Only! You may replace motor with Novak sensored motor rated up to 225W *(ESC's rating).*

At the time of printing, there are no other brushless motor's available that work with the Super Sport Plus—check our website for further updates & compatibilities.

NO REVERSE VOLTAGE*!*

Reverse battery polarity can damage ESC & void warranty. Disconnect battery immediately if a reverse connection occurs.

POWER CAPACITOR REQUIRED

An external power capacitor is installed and ***MUST*** be used with your ESC. ***Failure to use Power Capacitor will result in higher ESC operating temperatures & possible thermal shut-down.***

TRANSMITTER ON FIRST

Always turn on the power of the transmitter first so that you will have control of the vehicle when you turn it on.

INSULATE WIRES

Always insulate exposed wiring with heat shrink tubing or electrical tape to prevent short circuits, which can damage ESC.

NO CA GLUE

Exposure to CA glue or its fumes can cause damage to internal components of the speed control and result in premature failure.

OPTIONAL ACCESSORIES

REPLACEMENT POWER CAPACITOR ***[Novak kit #5677]***
The Super Sport Plus comes with a factory-installed Power Capacitor, and ***MUST BE USED*** to maintain cool and smooth operation. *Direct-replacement Super Sport Plus Power Capacitor is available in Novak kit #5677.*

Note: We highly recommend using Novak Power Capacitors, as we have done extensive testing & research to find Power Capacitors with the very best quality factors—other capacitors with similar ratings will not provide equal protection.

SUPER-FLEX SILICONE 14G WIRE ***[Novak kits #5500 & 5508]***
Novak Super-Flex wire for power wiring. 14 gauge silicone wire in kit #5500 *(36"red & 36"black)* and kit #5508 *(2 each of 9"red/black/blue/yellow/orange).*

INPUT SIGNAL HARNESS ***[Novak kits #5315 & 5320]***
User-replaceable input signal harness is available in both short and long lengths. *4.5" harness in Novak kit#5315, and 9.0" harness in Novak kit #5320.*

SS-SERIES MOTOR END BELL & BEARING SET
After extensive use, the ball bearings in the end bells of your brushless motor may need to be replaced. *Replacement front end bell with bearing factory-installed & rear bearing are available in Novak kit #5905.*

PRODUCT WARRANTY

The Super Sport Plus Brushless ESC is guaranteed to be free from defects in materials or workmanship for a period of 120 days from the original date of purchase *(verified by dated, itemized sales receipt).* Warranty does not cover incorrect installation, components worn by use, damage to case or exposed circuit boards, damage from using fewer than 4 or more than 7 cells *(1.2 volts DC/cell)* input voltage, cross-connection of battery/motor power wires, overheating solder tabs, reverse voltage application, damage resulting from thermal overload or short-circuiting motor (or connecting a brushless motor sensor harness while operating in Brush-Mode), damage from incorrect installation of FET servo or receiver battery pack, not using or incorrect installation of a Power Capacitor on the ESC or from using a damaged Power Capacitor, using a Schottky diode in Brushless-Mode, using non-Novak Power Capacitor or motor, splices to input, ON/OFF switch, or sensor harnesses, damage from excessive force when using the One-Touch/SET button or from disassembling case, tampering with internal electronics, allowing water, moisture, or any other foreign material to enter ESC or get onto the PC board, incorrect installation/wiring of input plug plastic, allowing exposed wiring or solder tabs to short-circuit, or any damage caused by a crash, flooding, or act of God.

Because Novak Electronics, Inc. has no control over the connection & use of the speed control or other related electronics, no liability may be assumed nor will be accepted for any damage resulting from the use of this product. Every Novak speed control & motor is thoroughly tested & cycled before leaving our facility and is, therefore, considered operational. *By the act of connecting/operating speed control, user accepts all resulting liability.* In no case shall our liability exceed the product's original cost. We reserve the right to modify warranty provisions without notice.

STEP 1–CONNECT INPUT HARNESS

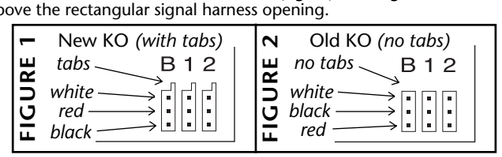
The Super Sport Plus has the industry-standard receiver input connector on a user-replaceable input harness & ***works with all major radio brand's new receivers***. However, some very old receivers must have the wiring sequence in the plastic 3-pin connector housing changed. ***This is important, because receiver & servo electronics may be damaged if the sequence is incorrect.***

CHANGING WIRING SEQUENCE @ RECEIVER END

JR ○ Hitec ○ Futaba ○ New KO ○ Airtronics Z

JR, Hitec, Futaba, new KO, & Airtronics Z receivers do not need input harness re-wiring. *Airtronics Z receivers have blue plastic cases & new KO cases have tabs on the input harness openings as in* ***Figure 1****.*

- Plug one end of the input signal harness into the *THROTTLE CHANNEL (#2)* of receiver with the ***BLACK wire toward the outside edge*** of receiver case.
- Plug the other end of the input harness into 3-pin header inside the ESC's case with the ***WHITE wire toward the 'S' (signal) marking*** on the ESC's case above the rectangular signal harness opening.

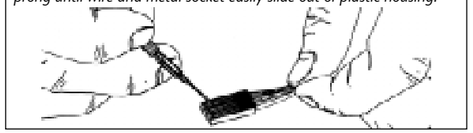


Old-style KO ○ Old-style Sanwa/Airtronics

If you have an older KO or Sanwa/Airtronics, you must change the sequence of the ESC's input harness wires--*Old Sanwa/Airtronics cases are black color & Old KO cases do not have tab openings, as in* ***Figure 2*** *above.*

- Using a small flat blade screwdriver, ***remove the red & black wires*** from the plastic housing at the receiver end of the input harness as in ***Figure 3*** below.
- ***Interchange the red and black wires*** in the plastic 3-pin connector housing at the receiver end of the input harness.
- Insert modified end of the harness into the *THROTTLE CHANNEL (#2)* of receiver with the ***RED wire toward the outside edge*** of receiver case.
- Plug the other end of the input harness into the ESC with the ***WHITE wire toward the 'S' (signal) marking*** on the ESC's case.

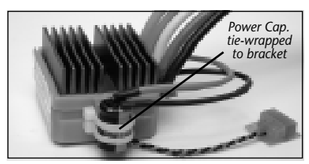
FIGURE 3 *With a small standard screwdriver, gently lift plastic prong until wire and metal socket easily slide out of plastic housing.*



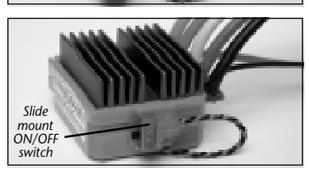
STEP 2–MOUNTING ESC

Mount ESC with power wires away from other electronics & moving parts. Select a location that allows airflow through heat sinks--***If the ESC gets air flow, it will run cooler; and that means it will be more efficient, and you will go faster!***

1. **MOUNT ESC IN VEHICLE** using included double-sided tape. *The slide-mount channel on the back of the ESC's case can be used to hold the ON/OFF switch or Power Capacitor.* ***Be sure receiver & antenna are mounted as far from ESC, power wires, battery, & servo as possible--these components all emit RF noise when throttle is applied. On graphite or aluminum chassis vehicles, it may help to place receiver on edge with crystal & antenna as far above chassis as possible.***
   Note: Mount antenna as close to receiver as possible--trail any excess wire off top of antenna mast (cutting or coiling excess antenna wire will reduce radio range).
2. **SECURE POWER CAPACITOR TO SLIDE-MOUNT BRACKET OR CHASSIS**
   Use included P.Cap bracket to mount Power Capacitor to the ESC's slide-mount channel or tape it to the chassis with the included double-sided tape *(Capacitor can also be tie-wrapped to the power wires).* ***To use slide mount channel, slide P.Cap bracket into channel on the ESC & secure Power Capacitor to the bracket with tie-wraps.***



3. **INSTALL ON/OFF SWITCH** using a screw or the included double-sided tape where it will be easy to access.
   The switch is also designed to be installed into the ESC's slide mount channel.



STEP 3–MOTOR & BATTERY CONNECTION

NOVAK BRUSHLESS MOTORS *(Fig.5)*

1. **MOTOR CAPACITORS NOT NEEDED**
   Novak brushless motors do not require external motor capacitors.
2. **DO NOT USE SCHOTTKY DIODES IN BRUSHLESS-MODE**
   Schottky diodes must NOT be used with reversible ESCs (including brushless). Schottky diode usage will damage the ESC & void warranty.
3. **FACTORY-INSTALLED POWER CAPACITOR REQUIRED**
   The Super Sport Plus comes with a factory-installed Power Capacitor, and it MUST be used during both brushless & brush-type motor usage.
   If Power Cap. becomes dented or damaged, ESC failure can occur--replace immediately. Longer Power Capacitor wires will decrease performance.
4. **CHECK FOR PROPER GEARING**
   Refer to the *'GEAR SELECTION'* portion of the *PROGRAMMING/GEARING* Sheet (Pg.5) to determine proper gearing & avoid overheating.
5. **SOLDER MOTOR POWER WIRES TO MOTOR**
   - **A.** Cut the Super Sport Plus' ***BLUE, YELLOW, & ORANGE*** silicone motor power wires to the desired length, and strip 1/8-1/4" of insulation from the end of each wire. Tightly twist the exposed strands of wire.
   - **B.** Insert the ESC's ***BLUE Phase 'A'*** motor wire into the hole in the ***motor's 'A' solder tab*** & solder. Use a soldering iron to apply heat to exposed wire that extends through the PCB, and begin adding solder to tip of soldering iron and to the wire. Add just enough solder to form a clean & continuous joint from the plated area of the solder tab up onto the wire. Use side cutters to trim remaining (now soldered) wire extending beyond the solder tab (about 1/16" above PCB).
     ***IMPORTANT NOTE:* DO NOT OVERHEAT SOLDER TABS**
     Prolonged/excessive heating of solder tabs (motor or ESC) will damage PCB.
   - **C.** Solder the ESC's ***YELLOW Phase 'B'*** motor wire to the ***motor's 'B' solder tab*** as described in Step 5B above.
   - **D.** Solder the ESC's ***ORANGE Phase 'C'*** motor wire to the ***motor's 'C' solder tab*** as described in Step 5B above.

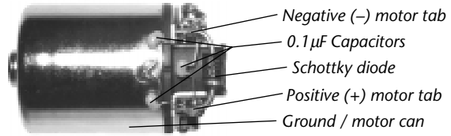
   Note: Make sure no wire strands have strayed to an adjacent solder tab, this will result in short-circuiting & severe ESC damage, which will void the warranty.
6. **PROTECT SENSOR WIRES WITH SPIRAL WRAP**
   Use the included spiral wrap to protect the 6 Teflon sensor harness wires between the ESC & motor.
7. **CONNECT SPEED CONTROL TO BATTERY PACK**
   Connect the speed control's Tamiya-style JST battery connector to a charged 4 to 7 cell *(1.2VDC/cell)* battery pack.

BRUSH-TYPE MOTORS--Note: You MUST switch ESC to Brush-Mode *(see Programming/Gearing sheet)*

1. **MOTOR CAPACITORS**
   Electric brush-type motors generate RF noise that causes interference. The included 0.1µF (50V) non-polarized, ceramic capacitors must be used on all motors to reduce motor noise & prevent ESC damage.
   Note: Some motors come with built-in capacitors. If your motor only has 2 capacitors, you need to install a capacitor between the positive & negative motor tabs—If you experience radio interference with built-in capacitors only, install external ones.
   Solder 0.1µF (50V) capacitors between:
   - POSITIVE (+) motor tab & NEGATIVE (–) motor tab.
   - POSITIVE (+) motor tab & GROUND tab*.
   - NEGATIVE (–) motor tab & GROUND tab*.

   **If motor has no ground tab (below), solder the capacitors to motor can.*

FIGURE 4



Extra 0.1µF capacitors are available in Novak kit #5620.

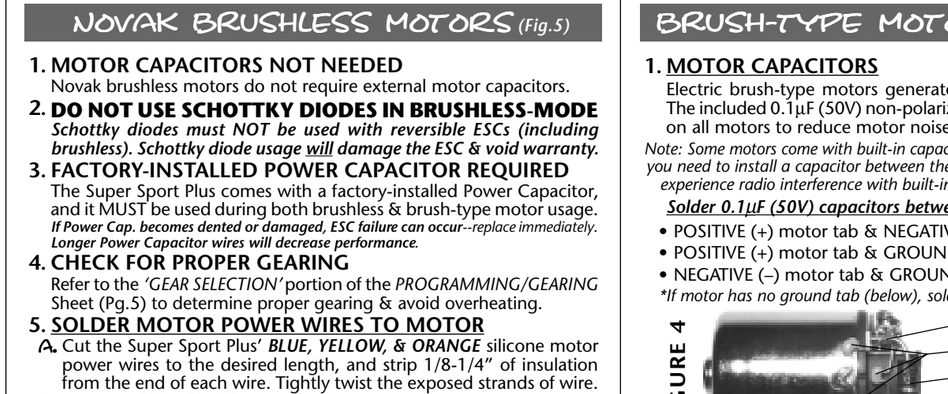
2. **INSTALLING OPTIONAL SCHOTTKY DIODE *(Brush-Mode Only)***
   The Super Sport Plus does not require an external Schottky diode under most brush motor conditions. Note that an external Schottky will optimize the ESC's braking and motor performance in applications with heavy or repeated braking *(lap after lap)*, or when using lower turn modified motors.
   - If using an axial lead Schottky diode as shown in the photo above *(older Novak style--35V/8A min.)*, solder lead ***CLOSEST to the silver stripe*** on the Schottky diode's body to the ***POSITIVE (+) motor tab***. Solder the lead ***OPPOSITE the silver stripe*** on the body to the ***NEGATIVE (–) motor tab***.
   - If using the Novak Racing Schottky Motor Module *(this is the best performing Schottky diode available)*, solder the ***RED wire*** from the module to the ***POSITIVE (+) motor tab***. Solder the ***BLACK wire*** from the Schottky module to the ***NEGATIVE (–) motor tab***.

   If Schottky diode is installed backwards it will be destroyed. Replace only with Schottky diodes with a minimum rating of 35 volts/8 amps.
   Racing Schottky Motor Modules are available in Novak kit #5636.
3. **PREP & SOLDER SPEED CONTROL'S RED WIRE**
   To use the Super Sport Plus with brush-type motors, the ***RED*** power wire must go to both ***battery POSITIVE (+)*** & the ***POSITIVE (+) motor tab***.

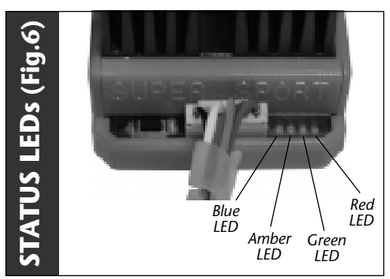
   ### USING A "Y" WIRING METHOD: *(Fig.8)*
   - **A.** Strip 1/4-3/8" piece of insulation from the mid-section of the ESC's ***RED*** silicone power wire where you want to split and go to the motor & battery. Tin the exposed section of wire with solder.
   - **B.** Slide the supplied piece of heat shrink tubing over the ESC's ***RED*** power wire, and slide it all the way to the ESC.
   - **C.** Strip 1/4" of insulation from the end of another piece of ***RED*** silicone power wire. Twist & tin the wire, then solder it to the tinned section along the ESC's ***RED*** power wire & shrink the tubing over the solder joint with a heat gun *(a lighter or match also works well)*.
   - **D.** Strip & tin the end of the ESC's ***RED*** power wire *(after the "Y")*, and solder it to the ***POSITIVE (+) motor tab***.
   - **E.** Cut the other ***RED*** power wire *(after the "Y")*, to the proper length so it will reach ***battery pack POSITIVE (+)***. Strip & tin the end of the wire and solder it to battery pack POSITIVE (+).

   ### USING A SINGLE WIRE METHOD: *(Fig.7)*
   - **A.** Strip 1/4-3/8" piece of insulation from the mid-section of the ESC's ***RED*** silicone power wire where you will solder it to either ***battery pack POSITIVE (+)*** or the ***POSITIVE (+) motor tab*** *(whatever component is in the middle)*. Tin the exposed section of wire with solder.
   - **B.** Solder the exposed section of the ESC's power wire to ***battery pack POSITIVE (+)*** or the ***POSITIVE (+) motor tab***.
   - **C.** Strip & tin the end of the ESC's ***RED*** power wire *(after the first connection)*, and solder it to the final component--either ***battery pack positive (+)*** or the ***positive (+) motor tab***.
4. **SOLDER ESC'S BLACK WIRE TO BATTERY PACK NEGATIVE *(–)***
5. **PREP & SOLDER ESC'S BLUE, YELLOW, & ORANGE WIRES**
   With brush-type motors, the Super Sport Plus's ***BLUE, YELLOW, & ORANGE*** motor phase power wires must all go to the ***NEGATIVE (–) motor tab***.
   - **A.** Strip 1/8-1/4" of insulation from the end of the ***BLUE, YELLOW, & ORANGE*** motor phase wires. Twist & tin the end of each of the wires.
   - **B.** Solder all of the motor phase wires (***BLUE, YELLOW, & ORANGE)*** to the ***NEGATIVE (–) motor tab***.

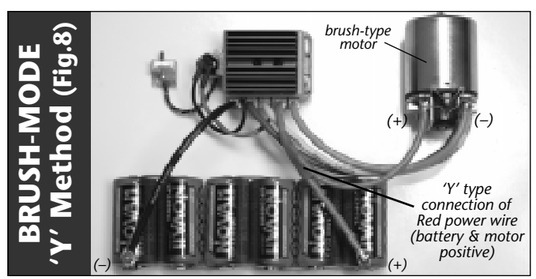
BRUSHLESS-MODE SET-UP PHOTO (FIGURE 5)



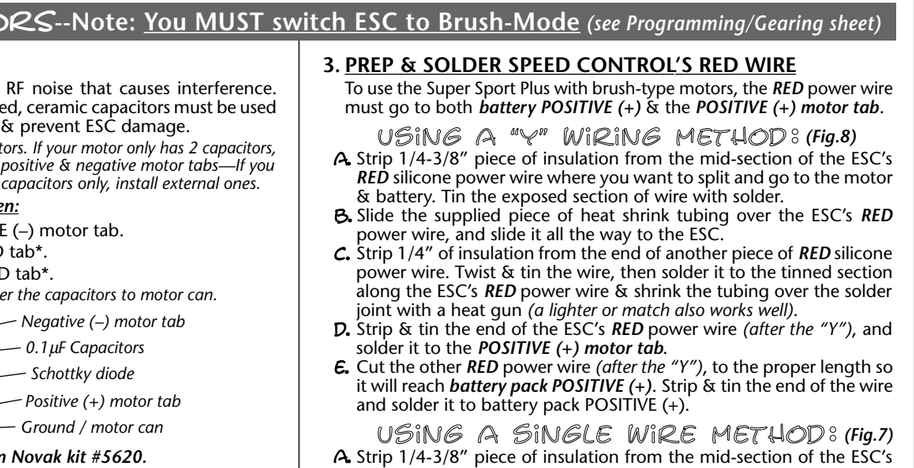
STATUS LEDs (Fig.6)



BRUSH-MODE 'Y' Method (Fig.8)



BRUSH-MODE SET-UP PHOTO Single Wire Method (FIGURE 7)



CONNECTOR USAGE

If you are going to use connectors, we suggest Dean's Ultra or other low-loss connectors--do not use crimp types. To prevent possible cross-connection of motor phase wires, we do not recommend using connectors on the motor power wires of sensor-based brushless motors.

- Use connectors that cannot be plugged in backwards. Reverse voltage will damage the ESC and void warranty.
- Use a female connector on battery packs to avoid shorting.

For additional information on connector usage, visit our website.

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