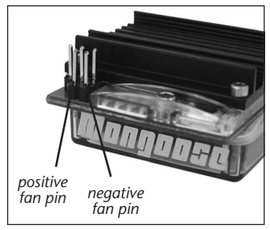
AUXILIARY POWER OUTPUT

The Mongoose ESC features a set of power output pins for running auxiliary cooling fans for motor or ESC cooling, or for detail items like scale lights, and they will switch on & off with the ESC's power switch. These pins output 6.0 VDC *(same as the BEC)*, so you will get maximum output from cooling fans without over-powering them by running directly from the battery pack's voltage.

There are the 2 pins on the front edge of the circuit board--Positive (+) is on the left, and Negative (–) is on the right.

The set of 3 pins behind them are for the user-replaceable input signal harness--The polarity of those is the same: Positive in the middle, Negative on the right, and the extra pin on the left is for the input signal.



The Novak 25x25mm cooling fan *(Novak kit #5647)* not only fits the size of the ESC's heat sink perfectly, it also comes with the connector already on it to match the pins on the ESC. Fans that do not have the proper connector on them will need a connector put on *(one end of an old receiver input harness would work well)*, or will need to be soldered to the pins--***Take extra care if attempting to solder to the fan power output pins***--Do not overheat the pins or circuit board, and do not allow any solder or wire strands to cause a short circuit with other pins.

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.

Novak Electronics, Inc.

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Irvine, CA 92614

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www.teamnovak.com

TROUBLE-SHOOTING GUIDE

Steering Channel Works But Motor Will Not Run

- LiPo Cut-Off Circuitry acitivated—Disconnect LiPo battery pack and re-charge.
- ***Red & Green status LEDs on solid***—Check input signal harness connections at ESC and receiver. Check input signal harness wiring sequence—Refer to Step 1.
- ***Red status LED on solid & Green LED blinking***—Check motor sensor harness connection. Possible internal motor damage.
- ***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 Step 4.
- Possible receiver damage—Check operation with a different receiver.
- Possible internal damage—Refer to Service Procedures.

Throttle Stutters or Receiver Glitches During Acceleration

- Dead Band too tight—Increase ESC's Dead Band adjustment *(see Progamming sheet)*.
- Receiver or antenna too close to ESC, power wires, battery, or motor.
- Bad connections—Check wiring, connectors, & sensor harness.
- Low voltage to receiver—Try Glitch Buster capacitor on receiver *(Novak part#5626)*.
- External Power Capacitor damaged/not installed—Replace Power Capacitor.
- Battery pack damaged or weak—Try a different battery pack.
- Motor's magnet has weakened or overheated—Replace rotor.

Motor and Steering Servo Do Not Work

- Check wires, receiver signal harness wiring & color sequence, radio system, crystals, battery/motor connectors, & battery pack.
- Power wires too close to signal wires—Do not bundle power & signal wires together.
- Possible receiver damage—Check operation with a different receiver.
- Possible internal damage—Refer to Service Procedures.

Brushless Motor Runs Backwards

- Reverse motor rotation direction—Refer to 'Custom Programming' sheet.

Speed Control Runs Excessively Hot

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

Model Runs Slowly/Slow Acceleration

- Gear ratio too high—Reduce gear ratio *(see 'PROPER GEAR SELECTION' section)*.
- Check battery & connectors—Try another battery; replace connectors/battery if needed.
- Incorrect transmitter/ESC adjustment—Refer to Step 4.
- 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 products thought to be defective.
- If a hobby dealer returns your product for service, submit a completed ***PRODUCT SERVICE FORM*** to the dealer and make sure it is included with product.
- Novak Electronics, Inc. does not make any internal electronic components *(transistors, resistors, etc.)* available for sale.

MONGOOSE BASIC SET-UP GUIDE

• See 'Programming/Gearing' sheet for Proper Gearing, Profile Selection, Custom Programming, & LiPo Cut-Off •

★ 120 DAY WARRANTY

#55-3050-1
4-2008

NOVAK

Mongoose

SPECIFICATIONS

Input Voltage	4-9 cells *(1.2 VDC/cell)*, 2-3 LiPo cells
ESC Footprint	1.15"x0.95" *[29.0x24.3mm]*
ESC Weight *(w/o wires)*	0.77 ounce *[22 grams]*
B.E.C. Voltage/Current	6.0 volts DC/2.0 amps
Power Wire *(Battery/Motor)*	16G Super-Flex Silicone
On-Resistance *(Brushless)*	0.0038Ω/phase *@25°C trans.temp.*
On-Resistance *(Brush-Mode)*	0.00038Ω/phase *@25°C trans.temp.*
Rated Current *(Brushless)*	40A *[per phase] @25°C trans.temp.*
Rated Current *(Brush-Mode)*	40A *[Fwd & Brakes] @25°C trans.temp.*
Motor Limit *(Brushless)*	any Three-80 Micro Pro Novak
Motor Limit *(Brush-Mode)*	any 380-size or smaller
Throttle Programs *(Brushless)*	3 *[2 w/Rev. & 1 Fwd/Brake]*
Throttle Program *(Brush-Mode)*	1 *[Fwd/Brake]*

Brushless & Brush Motor Control and Full Programmability!

The Mongoose electronic speed control gives you the best of everything--Sensor-based brushless motor control, world class brush motor performance with Auto-Detect Brush-Mode, & complete on-board programming of Minimum Drive, Minimum Brake, Drag Brake, Dead Band, LiPo Cut-Off, Motor Rotation, & Drive Frequency (in Brush Mode).....All in a micro size!

The Mongoose is factory-loaded with 4 throttle programs to choose from *(including a limited reverse 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, auxilliary fan power output, 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 Mongoose has it all*!*

To benefit from all of the technical features of the Mongoose, PLEASE READ ALL INSTRUCTIONS BEFORE OPERATION

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.

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 9 CELLS OR 2-3 CELL LiPo ONLY
If using Ni-Cd or Ni-MH batteries, ***NEVER*** use fewer than 4 or more than 9 cells *(1.2VDC/cell)* in the vehicle's main battery pack.
If using LiPo batteries, ***ONLY*** use a 2-cell (2S) or 3-cell (3S) pack for the vehicle's main battery & be sure the correct LiPo Cut-Off programming option is turned ***ON***.

NOVAK BRUSHLESS MOTORS ONLY
The Mongoose is designed for use with sensor-based Novak Brushless Motors. You may replace with any Novak Three-80 Micro Pro sensored motor.

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 on ESC & ***MUST*** be used. ***Failure to use Capacitor may result in higher temperatures & possible thermal shut-down or damage.***

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.

GOOD QUALITY TRANSMITTER SUGGESTED
With the higher performance of brushless systems, undesirable radio system noise may occur when used with lower quality transmitters *(like some RTR radios)*.

DO NOT BUNDLE POWER & SIGNAL WIRES TOGETHER
RF noise in the power wires can adversely effect radio system performance.

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

5200 1/8" Mod 0.6 Pinion Gear Set--*Anodized aluminum pinion gears (11T, 12T, & 13T).*
5201 1/8" Mod 0.6 Pinion Gear Set--*Anodized aluminum pinion gears (14T, 15T, & 16T).*
5202 1/8" Mod 0.6 Pinion Gear Set--*Anodized aluminum pinion gears (17T, 18T, & 19T).*

5210 1/8" Mod 0.5 Pinion Gear Set--*Anodized aluminum pinion gears (11T, 12T, & 13T).*
5211 1/8" Mod 0.5 Pinion Gear Set--*Anodized aluminum pinion gears (14T, 15T, & 16T).*
5212 1/8" Mod 0.5 Pinion Gear Set--*Anodized aluminum pinion gears (17T, 18T, & 19T).*

5304 Input Plug Harness--Mini--*Replacement Mongoose 2mm-to-JST input signal harness.*

5509 16GA Brushless Wire Set--*2 pieces each of 9" silicone blue, yellow, orange, black, & red.*

5600 ESC Switch Harness--*Replacement ON/OFF switch harness for speed controls.*
5647 Black Cooling Fan--25x25x10mm--*All purpose cooling fan with 2-pin JST connector.*
5683 Power Trans-Cap Module--Mongoose--*Replacement power capacitor module.*

5720 2mm Power Connectors--2 pair--*Gold plated low-loss 16-20G power connectors.*
5721 2mm Power Connectors--5 pair--*Gold plated low-loss 16-20G power connectors.*
5722 2mm Power Connectors--12 male--*Gold plated low-loss 16-20G power connectors.*
5723 2mm Power Connectors--12 female--*Gold plated low-loss 16-20G power connectors.*

5825 Micro Battery Cross Bars--7pcs--*Gold plated oxygen-free copper micro battery bars.*
5826 Micro Battery Cross Bars--28pcs--*Gold plated oxygen-free copper micro battery bars.*
5831 Lead-Free 3% Silver Racing Solder--6g--*Low-resistance, high-conductivity solder.*
5832 Lead-Free 3% Silver Racing Solder--15g--*Low-resistance, high-conductivity solder.*
5833 Lead-Free 3% Silver Racing Solder--100g--*Low-resistance, high-conductivity solder.*
5840 Double-Sided Mounting Tape--10pcs--*1"x1" high-performance clear mounting tape.*

5915 Three-80 Sintered Rotor--*Replacement sintered neodymium rotor for Three-80 motors.*
5916 Three-80 Front End Bell & Bearings--*Replacement front end bell & both bearings.*

PRODUCT WARRANTY

The Mongoose 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 9 cells *(1.2 volts DC/cell)* or more than 3 LiPo cells 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, 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 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. Designed by Novak Electronics, Inc. in Irvine, CA and assembled with globally sourced components.

STEP 1–CONNECT INPUT HARNESS

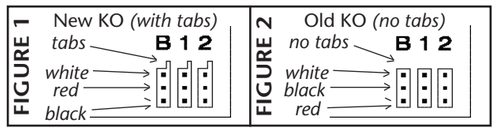
The Mongoose has a user-replaceable input harness with the industry-standard receiver connector on it & ***works with all major radio brand's new receivers***. However, some very old receivers must have the wiring sequence in the plastic 3-pin JST connector housing changed on the receiver end. ***This is important, as the 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 the larger JST 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 end of the input harness with the smaller 2mm connector into 3-pin header on the speed control's PC board with the ***WHITE wire toward the left edge*** of the ESC's case.

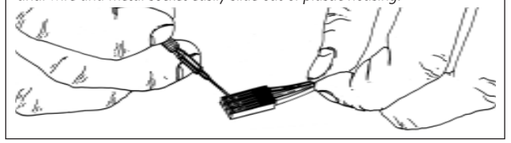


Old-style KO • Old-style Sanwa/Airtronics

If you have an older KO or Sanwa/Airtronics, you must change the sequence of the ESC's input harness wires on the receiver end--*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 JST connector 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 left edge*** of 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–ESC MOUNTING

Mount the speed control so that the power wires are as far from other electronics as possible. Make sure that the speed control or the power wires will not interfere with any moving parts in the vehicle. Select a location that has good cooling and allows airflow through heat sinks.

If the ESC gets air flow, it will run cooler; and that means it will be more efficient!

1. MOUNT SPEED CONTROL IN VEHICLE

Use the included double-sided tape to mount the speed control in vehicle *(do not use glue). Avoid contact with side walls or other chassis components to avoid vibration damage.*

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 CHASSIS

Use included double-sided tape, or a tie-wrap, to mount Power Capacitor to the vehicle's chassis or shock tower. *Capacitor can also be tie-wrapped along the power wires--this requires less space on the chassis and provides good isolation from vibration.*

3. INSTALL ON/OFF SWITCH

Use a screw or a piece of the included double-sided tape, and mount the switch where it will be easy to access--be sure to select a position where it will not get damaged or get switched OFF in a crash or during a roll-over.

STEP 3–WIRING SPEED CONTROL, MOTOR, & BATTERY

NOVAK BRUSHLESS MOTORS *(Fig.4)*

Amber LED flashes 4 times at start-up when transmitter signal is present

1. MOTOR CAPACITORS NOT NEEDED

Novak brushless motors do not require external motor capacitors.

2. DO NOT USE SCHOTTKY DIODES

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 factory-installed Power Capacitor MUST be used with brushless & brush-type motors. ***If Power Capacitor becomes dented or damaged, ESC failure can occur--replace immediately. Longer Power Capacitor wires will decrease performance.***

4. CONNECT ESC'S MOTOR PHASE WIRES TO MOTOR

The Mongoose comes with high quality 2mm low-loss power connectors on the motor wires. Connect the ESC's power phase wires to the matching color motor power wires.

A. Connect the ***BLUE*** ESC power wire to the ***BLUE*** motor wire.
B. Connect the ***YELLOW*** ESC power wire to the ***YELLOW*** motor wire.
C. Connect the ***ORANGE*** ESC power wire to the ***ORANGE*** motor wire.

Additional 2mm power connectors available in Novak accessory kits.

5. CONNECT MOTOR'S SENSOR HARNESS TO ESC

Insert the 6-pin connector on the end of the motor's Teflon sensor wires into ESC's sensor harness socket--the connector is keyed and will only go together in one direction.

6. CONNECT SPEED CONTROL TO BATTERY PACK

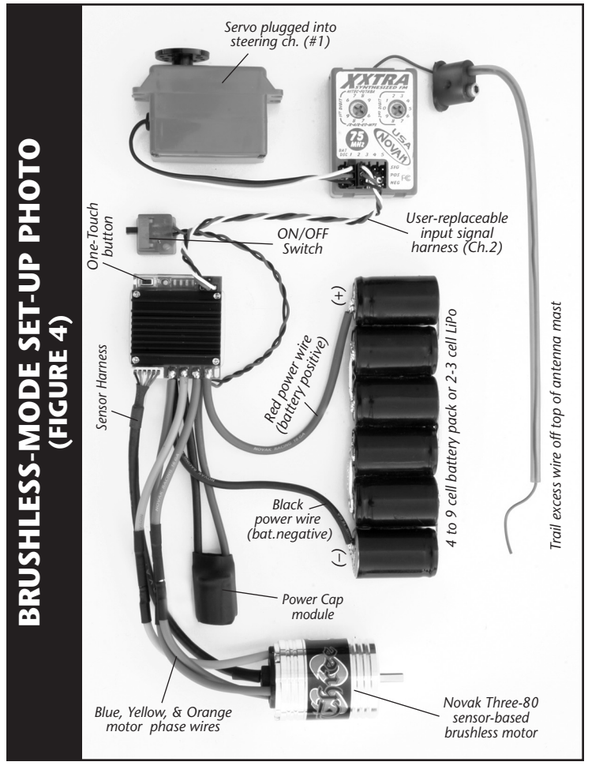
Connect the speed control's ***BLACK*** and ***RED*** power wires to a charged 4 to 9 cell *(1.2VDC/cell)* or 2-3 cell LiPo battery pack. Connect the ***RED*** to battery pack ***POSITIVE (+)*** and the ***BLACK*** to battery pack ***NEGATIVE (-)***.

CHECK FOR PROPER GEARING

Proper brushless motor gearing is determined by motor & ESC temperatures during and at the end of the run.

Refer to the *'PROPER GEAR SELECTION'* portion of the *CUSTOM PROGRAMMING* Sheet (Pg.5) to determine proper gearing & avoid overheating.

BRUSHLESS-MODE SET-UP PHOTO (FIGURE 4)



BRUSH-TYPE MOTORS *(Fig.5-6)*

Red LED flashes 4x at start-up when ESC is is Brush-Mode (trans.on)

1. DISCONNECT BRUSHLESS MOTOR SENSOR HARNESS

The Mongoose automatically switches to Brush-Mode when the ESC power is switched ON and no brushless sensor harness is connected.

2. MOTOR CAPACITORS

Electric brush-type motors generate RF noise that causes interference. Three 0.1µF (50V) non-polarized, ceramic capacitors must be used on all motors to reduce motor noise & prevent ESC damage *(3 included with ESC).*

Note: Some motors come with factory-installed capacitors. If your motor only has 2 capacitors, you need to install a capacitor between the positive & negative motor tabs.

Solder 0.1µF (50V) capacitors between:

- POSITIVE (+) & NEGATIVE (–) motor tabs.
- POSITIVE (+) motor tab & GROUND tab*.
- NEGATIVE (–) motor tab & GROUND tab*.

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

FIGURE 5

DO NOT USE SCHOTTKY DIODES

3. CONNECT ESC'S BLUE & YELLOW WIRES TO MOTOR

With brush-type motors, the ESC's *BLUE* power wire goes to the *NEGATIVE (–) Motor Tab* & the *YELLOW* power wire goes to the *POSITIVE (+) Motor Tab.*

A. Connect the ***BLUE*** ESC power wire to the ***NEGATIVE (–) Motor Tab***.
B. Connect the ***YELLOW*** ESC power wire to the ***POSITIVE (+) Motor Tab***.

Additional Novak 2mm low-loss power connectors available from www.teamnovak.com

4. CONNECT SPEED CONTROL TO BATTERY PACK

Connect the speed control's ***BLACK*** and ***RED*** power wires to a charged 4 to 9 cell *(1.2VDC/cell)* or 2-3 cell LiPo battery pack. Connect the ***RED*** to battery pack ***POSITIVE (+)*** and the ***BLACK*** to battery pack ***NEGATIVE (-)***.

BRUSH-MODE SET-UP PHOTO (FIGURE 6)

STEP 4–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-BRAKE/REVERSE**
   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 the One-Touch set-up is performed, the speed control will automatically revert back to the factory default settings & the Throttle Profile will revert to #1 when in Brushless-Mode.

TRANSMITTER ADJUSTMENTS

If you have any problems with Step 4, adjust transmitter as follows and then repeat the One-Touch programming in Step 4:

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 **50% throttle** and **50% brake** throw--*best for reversible ESCs.*
[adjusts trigger throw electronic/digital pistol-grip transmitters]

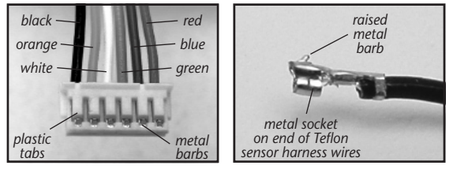
G. Set **MECHANICAL TRIGGER THROW ADJUSTMENT** to position with **1/2 throttle** and **1/2 brake** throw.

•NOT ALL TRANSMITTERS HAVE THESE ADJUSTMENTS•

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.



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