



Operating Instructions Addendum

This sheet replaces the ADJUSTMENTS section of the Operating Instructions (pages 6-7). Instructions for installation are included here.

The EVX electronic speed control installed in your E-Maxx has been factory set and should not require any adjustments. This guide is for reference only. Refer to Step 1 of the E-Maxx Quick Start, or page 2 in the E-Maxx Operating Instructions, to begin running your E-Maxx.

Your Traxxas E-Maxx includes an improved model speed control. Novak Electronics, Inc.—the world leaders in electronic speed control technology—designed and manufactured the EVX speed control specifically for the E-Maxx. Improved features include brakes, thermal shutdown protection, and Novak's exclusive features such as One-Touch Set-Up™ for quick and easy programming of the speed control to match the transmitter's settings, Radio Priority Circuitry™ to maintain steering control even after the battery has discharged, Polar Drive Circuitry™ for cooler operation, and Reverse Disable Circuitry™ for forward-only operation.

The EVX is a reliable and rugged reversible speed control for use with two, 6-cell battery packs and the stock Traxxas E-Maxx motors.

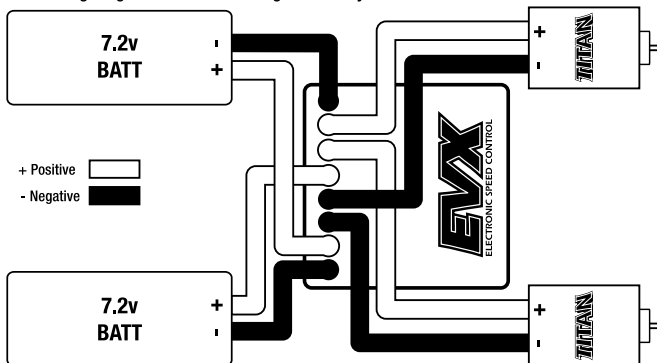
The EVX has three user-selectable throttle profiles:

PROFILE #1: Forward with brakes and reverse: Novak's Smart Braking Circuitry brings the model to a slow speed before engaging reverse to save your vehicle's gearbox and reduce speed control heating. Forward and reverse are proportional.

PROFILE #2: Forward-only with brakes: Novak's Reverse Disable Circuitry locks-out reverse for forward-only or racing use. Brakes are enabled.

PROFILE #3: Forward with 25% reverse: For applications where reduced speed in the reverse direction is desirable.

EVX Wiring Diagram - Follow this diagram exactly!



Precautions

Follow these safety precautions for your protection and to ensure long life for the EVX speed control.

- **WATER & ELECTRONICS DON'T MIX!** Do not operate model in or around water. Never allow water, moisture, or other foreign materials to get inside the speed control.
- **DISCONNECT THE BATTERIES.** Always disconnect the battery pack from the speed control when not in use.
- **TRANSMITTER ON FIRST.** Turn on your transmitter before the speed control so you will have control of the radio equipment.
- **DON'T GET BURNED!** The transistor tabs and the heat sinks can get extremely hot, so be careful not to touch them until they cool. Supply adequate airflow for cooling.
- **ALWAYS USE HEAT SINKS.** Three heat sinks are factory-installed on the speed control and must be used for maximum cooling and performance.

Additional precautions if the stock E-Maxx is modified: Please be aware that damage to the speed control caused by modification of the E-Maxx or the EVX will not be covered by the warranty. This includes changing the connectors.

- **12 CELLS ONLY!** Two, 6-cell battery packs in your E-Maxx are connected in series which provides 14.4 volts to the electronic system. Never use fewer or more than 12 cells (14.4V). This will damage the EVX speed control.
- **USE STOCK CONNECTORS.** If you decide to change the battery or motor connectors, only change one battery or motor connector at a time. This will prevent accidentally mis-wiring the speed control. **If the EVX is not wired exactly as shown in the diagram, it can be damaged!**
- **USE NEUTRALLY TIMED MOTORS.** The motors installed in the E-Maxx are neutrally timed. If you replace the motors, the motors must have 0° timing. Modified motors (with adjustable end bells) timed to 0° or Johnson/Mabuchi (closed end bell) motors are recommended. Using motors with other than 0° timing will draw excess current in reverse, and results in the speed control overheating and premature motor wear.
- **MOTOR CAPACITORS REQUIRED!** If the factory installed stock motors are replaced, three 0.1µF (50V) ceramic capacitors should be properly installed on every motor to prevent radio interference. These capacitors are available from your hobby dealer (Novak Kit #5620).
- **NO REVERSE VOLTAGE!** The speed control is not protected against reverse polarity voltage. If changing the battery and/or motor, be sure to install the same type of connectors to avoid reverse damage to the speed control. Removing the battery connectors on the speed control or using the same-gender connectors on the speed control will void the product's warranty.
- **DON'T LET THE TRANSISTOR TABS TOUCH!** Never allow the three separate transistor banks to touch each other or any exposed metal. This will create a short circuit and damage the speed control.
- **INSULATE THE WIRES.** Always insulate exposed wiring with heat shrink tubing to prevent short circuits.

Transmitter Adjustment (TQ-3)

Before attempting to program your EVX, it is important to make sure that your transmitter is properly adjusted (set back to the factory defaults). Otherwise, you may not get the best performance from your speed control.



The Traxxas TQ-3 transmitter should be adjusted as follows:

1. Set the THROTTLE NEUTRAL switch to the 50/50 setting. This adjusts the transmitter's throttle trigger throw to 1/2 throttle and 1/2 brake/reverse.
2. Set the THROTTLE TRIM to the middle "0" setting. This adjusts the neutral position of the throttle servo.
3. Set the CHANNEL 1 SERVO REVERSING SWITCH to the left position.
4. Set the CHANNEL 2 SERVO REVERSING SWITCH to the right position.
5. Set the CHANNEL 3 SERVO REVERSING SWITCH to the right position.
6. Do not change the position of any of the servo reversing switches after programming the EVX.

The following instructions are provided only for those who are using an aftermarket transmitter in place of their TQ-3:

1. Set the HIGH ATV or EPA to the maximum setting. This is the amount of throw at full throttle.
2. Set the LOW ATV, EPA, or ATL to the maximum setting. This is the amount of throw at full brakes.
3. Set the EXPONENTIAL to the zero setting. This adjusts the throttle channel linearity.
4. Set the THROTTLE CHANNEL TRIM to the middle setting. This adjusts the neutral position and increases or decreases the amount of coast braking.
5. Set the THROTTLE CHANNEL REVERSING SWITCH to either position. Do not change the switch position after programming.
6. Set the ELECTRONIC TRIGGER THROW ADJUSTMENT to 50% throttle and 50% brake throw (or 5:5). This adjusts the transmitter's throttle trigger throw on electronic/digital transmitters.
7. Set the MECHANICAL TRIGGER THROW ADJUSTMENT to a position with 1/2 throttle and 1/2 brake throw. This adjusts the transmitter's throttle trigger throw on mechanical/analog transmitters.

Speed Control Programming

To program the speed control, it should be connected to the receiver, and the transmitter should be adjusted as described in the previous section.

1. Disconnect the motors from the speed control.
2. Connect two fully charged battery packs to the speed control. Connect one JST/Tamiya plug (RED & BLACK wires) to one battery pack. Connect the other JST/Tamiya plug to the other battery pack.
3. Turn on the transmitter.
4. Turn on the speed control.
5. Press and hold the ESC SET button until the status LED turns solid red, and then release the button (with the transmitter throttle at neutral). You are now in programming mode.
6. Pull the transmitter throttle trigger to the full throttle position. Hold it there until the status LED turns solid green. NOTE: The motors will not run during programming even if they are connected to the speed control.
7. Push the transmitter throttle trigger to full reverse. Hold it there until the status LED blinks green.
8. Release the transmitter throttle trigger allowing it to return to neutral. The status LED will turn solid red, indicating that the throttle is at neutral and the programming has been completed.
9. Connect the motors to the speed control. Connect the red speed control wires to motor's red positive (+) leads. Connect the black speed control wires to motor's negative (-) leads. Make sure the bullet connectors snap together securely. Refer to the wiring diagram for assistance.

The EVX speed control is now programmed & ready to go!

- If the transmitter settings are changed, it will be necessary to complete the programming sequence again.
- If the SET button is released before the LED turns solid red in step 5, the LED will blink 7 times and then return to the normal operation mode.
- If you experience any problems during programming, turn off the speed control and repeat the programming steps.

Speed Control Throttle Profile Selection

The speed control is factory set to Profile #1 (forward/reverse/brake operation). To disable the reverse (Profile #2), or reduce the reverse speed to 25% (Profile #3), follow these steps. The speed control should be connected to the receiver and the transmitter adjusted as described above.

1. Connect two fully charged battery packs to the speed control. Connect one JST/Tamiya plug (RED & BLACK wires) to one battery pack. Connect the other JST/Tamiya plug to the other battery pack.
2. Turn on the transmitter.
3. Turn on the speed control.
4. Press and hold the ESC SET button until the status LED turns from solid red to solid green. Immediately release the ESC SET button when it changes to green.
5. The LED will now flash red. The number of red flashes indicates the active throttle profile.

Profile #	Description	Number of Flashes
1*	Forward/Reverse/Brakes	1
2	Forward only/Brakes	2
3	Forward/25% Reverse/Brakes	3

*Default Profile

6. Press the ESC SET button to select the throttle profile. Each press will advance the setting to the next profile. Note: To change the profile you must press the ESC SET button immediately after the LED flashes the current setting.
7. Once the LED flashes the desired setting number, wait and the LED will turn green and the EVX will exit the programming mode.

Troubleshooting Guide

This section describes possible speed control problems, causes, and simple solutions. Check these items before contacting Traxxas.

Steering channel works but the motors will not run

- The speed control has thermally shut down. Allow the speed control to cool down. Use a milder motor or a smaller pinion gear. Check the drive train for restrictions. Check the motor connections. Check the motors.
- One motor is wired backwards. Check the wiring and correct.
- Make sure the speed control is plugged into the throttle channel of the receiver. Check operation of the throttle channel with a servo.
- Possible internal damage. Return the EVX to Traxxas for service.

EVX will not go into programming mode

- Make sure the EVX is plugged into channel 2 (the throttle channel) on the receiver. If it is plugged into channel 3 or the battery terminal, it will not go into programming mode.

Receiver glitches/throttle stutters during acceleration

- Motor capacitors broken or missing—Check & replace capacitors.
- The receiver or antenna is too close to power wires or the batteries.
- Bad connections—Check the wiring and connectors.
- Motor(s) worn—Replace the motors.
- Excessive current to motor—Use a milder motor or a smaller pinion gear.

Motor and steering servo do not work

- Check the wires, radio system, crystals, battery and motor connectors, and the battery packs.
- Possible internal damage. Return the EVX to Traxxas for service.

Model runs slowly / slow acceleration

- Check the motor and battery connectors.
- Bad battery or motor(s). Check the operation with known good batteries and motors.
- Incorrect transmitter or speed control adjustment. Refer to the "Transmitter Adjustment" and "Speed Control Programming" sections.

Motor runs backwards

- Both motors wired backwards—Check the wiring and correct.
- Backwards motor timing. Reverse the motor end bell.

ESC is melted or burned/ESC runs with the switch off

- Internal damage. Return the EVX to Traxxas for service

Questions and Support

DO NOT CONTACT NOVAK ELECTRONICS!

All EVX Service and support is only available from Traxxas Corporation. If you call Novak Electronics, they are instructed to direct you back to Traxxas. If you require assistance with your EVX speed control, then contact Traxxas customer support at 1-888-TRAXXAS. Hours of operation are Monday-Friday, 8:30am to 9:00pm central time. E-mail technical support is also available at support@Traxxas.com.

A separate card outlining warranty procedures and the Lifetime Electronics Warranty has been included with your EVX package. Please refer to it for specific coverages, costs, and procedures. This information is also available from our website at www.TRAXXAS.com.

Specifications

Input Voltage (1.2VDC/cell)	.....12 cells (14.4 volts DC)
Case Width	.....1.75 inches
Case Depth	.....2.17 inches
Case Height	.....0.85 inches
Weight (w/o heat sinks)	.....3.5 ounces
Motor Limit	.....19 turns minimum (550 size)
On-Resistance—Forward (@Trans)	.....0.006 Ω
On-Resistance—Reverse (@Trans)	.....0.006 Ω
Rated Current—Forward	.....160 amps
Rated Current—Reverse	.....160 amps
Braking Current	.....320 amps
Continuous Current (@100°F amb.)	.....30 Amps
Reverse Delay (after Smart Braking)	.....Zero Seconds
BEC Voltage	.....5.0 volts DC
BEC Current	.....1.5 amps
Power Wire	.....14G / 9"
Input Harness	.....26G / 9"
Switch Harness	.....26G / 6"
Transistor Type	.....HYPERFET III
PWM Frequency	.....1000 Hertz
Protection	.....Thermal Shutdown

For technical assistance regarding your EVX, call 888-TRAXXAS or 800-323-0069 (U.S. residents only).

For orders, calls outside the U.S., and other information, call 972-265-8000, or fax at 972-265-8011.

E-Mail Traxxas at support@Traxxas.com

www.TRAXXAS.com

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