TRAXXAS® XL-5 HV

Visite la página TRAXXAS.com/manuals para descargar el instructiones en su idioma.

Auf TRAXXAS.com/manuals können Sie anleitung in Ihrer Sprache downloaden.

Electronic Speed Control Instructions

Covers Part #3025

#3025

Thank you for purchasing the Traxxas XL-5 HV electronic speed control. The XL-5 HV delivers smooth, precise, full-proportional control over your speed in forward and reverse, combined with powerful and intuitive full-range braking control. The XL-5 HV comes with the peace-of-mind of the Traxxas Lifetime Electronics Warranty and unmatched Traxxas customer support. The XL-5 HV is not a toy. It is a sophisticated electronic device capable of delivering large amounts of current. Children under 14 years of age require adult supervision for installation, setup, and use of the XL-5 HV. If you have questions or need assistance call us at 1-888-TRAXXAS.*

Specifications:

Input Voltage	6-7 cells NiMH; 2s/3s LiPo
Case Size	1.23"W x 2.18"L x 1.11" H
Weight (#3025)	2.6 ounces / 74 grams
Motor Limit	12-turns (550 size) with 2s LiPo; 21-turns (550 size) with 3s LiPo
On Resistance Forward	0.004 Ohms
On Resistance Reverse	0.004 Ohms
Peak Current - Forward	100A
Peak Current - Reverse	100A
Braking Current	60A
Continuous Current	18A
BEC Voltage	6.0 VDC
BEC Current	1A
Power Wire	14 Gauge / 5"
Input Harness Wire	26 Gauge / 14.5"
Transistor Type	MOSFET
PWM Frequency	1700 Hz
Thermal Protection	Thermal Shutdown
Single Button Setup	Yes
Low-Voltage Detection	Yes (User Enabled)

Profile Selection:

Sport Mode (Profile #1):	100% Forward, 100% Brakes, 100% Reverse
Race Mode (Profile #2):	100% Forward, 100% Brakes, No Reverse
Training Mode (Profile #3):	50% Forward, 100% Brakes, 50% Reverse
Trail Mode (Profile #4):	100% Forward, 100% Brakes, 100% Reverse; Drag Brake at Neutral
Crawl Mode (Profile #5):	100% Forward, Hill Hold Brakes at Neutral, Immediate Reverse

Important Precautions

Your XL-5 HV is an extremely powerful electronic device capable of delivering high current. Please closely follow these precautions to prevent damage to the speed control or other components.

Motor Limits: The XL-5 HV has a 12-turn modified motor limit for 550 size motors when using 2s LiPo batteries and a 21-turn modified motor limit for 550 size motors when using 3s LiPo batteries, with 0 timing when the motor is properly geared. If the motor or speed control is overheating, try a smaller pinion gear. Do not attempt to use a more powerful motor (fewer turns) than the above mentioned motor limits or you could experience frequent thermal shutdown.

WARNING: MOTOR & ELECTRONICS DAMAGE!

Do not attempt to use Traxxas 12-turn 550 motors (part #3785) with 3s LiPo batteries (11.1 volts). This can result in severe damage to the motor and electronics.

- **Disconnect the Battery:** Always disconnect the battery from the speed control when not in use.
- **Insulate the Wires:** Always insulate exposed wiring with heat shrink tubing to prevent short circuits.
- **Water and Electronics Do Not Mix:** The XL-5 HV speed control is waterproof for use in mud, snow, puddles, and other wet conditions. Make certain the other components of your model are waterproof or have sufficient water resistance before driving in wet conditions.
- **Transmitter on First:** Switch on your transmitter first before switching on the speed control to prevent runaways and erratic performance.
- **6-7 NiMH cells or 2-3 LiPo cells (2s/3s) Only:** The XL-5 HV can accept a maximum input voltage of 8.4 volts (NiMH) or 11.1 volts (LiPo). Always adhere to the minimum and maximum limitations of the XL-5 HV as stated in the specifications table.
- **Use the Factory-Installed 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 XL-5 HV is not wired exactly as shown in the diagram, it can be damaged! Please note that modified speed controls can be subject to a rewiring fee when returned for service.
- **No Reverse Voltage:** The speed control is not protected against reverse polarity voltage. When changing the battery and/or motor, be sure to install the same type of connectors to avoid reverse polarity 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.
- **Motor Capacitors Required:** Three 0.1µF (50V) ceramic capacitors should be properly installed on every motor to prevent radio interference. Capacitors have been provided with the XL-5 HV.
- **No Schottky Diodes:** External schottky diodes are not compatible with reversing speed controls. Using a schottky diode with the XL-5 HV will damage the ESC and void the 30-day warranty.

Batteries and Battery Charging

The XL-5 HV speed control uses rechargeable batteries that must be handled with care for safety and long battery life. **Make sure to read and follow all instructions and precautions that were provided with your battery packs and your charger.** It is your responsibility to charge and care for your battery backs properly. In addition to your battery and charger instructions, here are some more tips to keep in mind.

- Never leave batteries to charge unattended.
- Remove the batteries from the model while charging.
- Allow the battery packs to cool off between runs (before charging).
- Always unplug the battery from the electronic speed control when the model is not in use and when it is being stored or transported.
- Do not use battery packs that have been damaged in any way.
- Do not use battery packs that have damaged wiring, exposed wiring, or a damaged connector.
- Children should have responsible adult supervision when charging and handling batteries.

LiPo Batteries

WARNING: FIRE HAZARD!

The XL-5 HV ESC is compatible with LiPo batteries. Charging and discharging batteries has the potential for fire, explosion, serious injury, and property damage if not performed per the instructions. Before use, read and follow all manufacturer's instructions, warnings, and precautions. In addition, Lithium Polymer (LiPo) batteries pose a SEVERE risk of fire if not properly handled per the instructions and require special care and handling procedures for long life and safe operation. LiPo batteries are intended only for advanced users that are educated on the risks associated with LiPo battery use. Traxxas does not recommend that anyone under the age of 14 use or handle LiPo battery packs without the supervision of a knowledgeable and responsible adult. Dispose of used batteries according to the instructions.

Traxxas, 6250 Traxxas Way, McKinney, TX 75070, Phone: 972-549-3000, Fax: 972-549-3011, e-mail: support@Traxxas.com

*U.S. Customers Only

KC2528-R02 Rev 170809

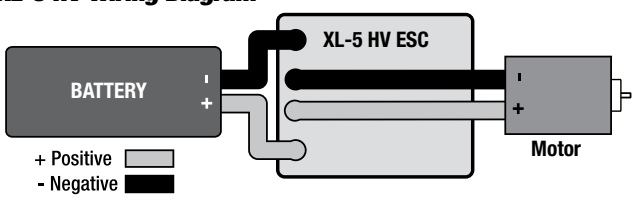
The XL-5 HV speed control is able to use LiPo batteries with nominal voltage not to exceed 11.1 volts (3s packs). LiPo batteries have a minimum safe discharge voltage threshold that should not be exceeded. The XL-5 HV is equipped with built-in Low-Voltage Detection that alerts the driver when LiPo batteries have reached their minimum voltage (discharge) threshold.

It is the driver's responsibility to stop immediately to prevent the battery pack from being discharged below its safe minimum threshold.

Low-Voltage Detection on the speed control is just one part of a comprehensive plan for safe LiPo battery use. **It is critical for you, the user, to follow all other instructions supplied by the battery manufacturer and the charger manufacturer for proper charging, use, and storage of LiPo batteries. Make sure you understand how to use your LiPo batteries.** Be aware that Traxxas shall not be liable for any special, indirect, incidental, or consequential damages arising out of the installation and/or use of LiPo batteries in Traxxas products.

If you have questions about LiPo battery usage, please consult with your local hobby dealer or contact the battery manufacturer.

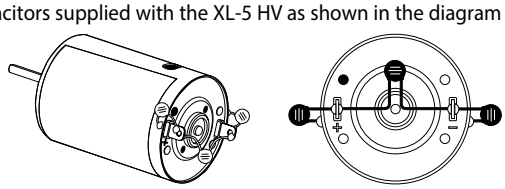
XL-5 HV Wiring Diagram



Installation

Here are some tips for choosing a location for the speed control:

- The XL-5 HV does not use a conventional on/off switch. Pressing the EZ-Set button on the speed control turns it on and off. It is not necessary to install an on/off switch into the wiring harness.
- Mount the speed control where it will be protected from crash damage. Also, protect the speed control from dirt and debris kicked up by the tires.
- Mount the speed control where you will have easy access to the plugs and the on/off (EZ-Set) button without having to remove the body.
- Mount the speed control so that none of the power components (wiring, motor, ESC) contacts any part of the radio system, particularly the antenna wire.
- Graphite or metal chassis have been known to transmit radio noise generated by the motor. If the receiver is to be mounted on the chassis, position it so the antenna is as far away from the chassis as possible. This may require you to mount the receiver on its side. This will reduce the chance of picking up radio interference from the motor.
- When mounting the speed control with double-sided servo tape, clean both application surfaces thoroughly with alcohol to remove any grease, dirt, oil, fingerprints, etc. The surfaces must be perfectly clean for maximum adhesion.
- The motor requires capacitors to reduce the possibility of radio interference. If your motor is not equipped with capacitors, install the capacitors supplied with the XL-5 HV as shown in the diagram below.



Transmitter Setup

Traxxas Radio Systems

Before attempting to program your XL-5 HV, it is important to make sure your transmitter is properly adjusted (set back to the factory defaults). Otherwise, you may not get the best performance from your speed control.

The transmitter should be adjusted as follows:

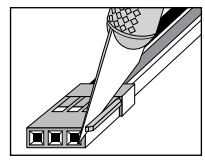
1. Set the throttle neutral switch to the 50/50 setting. This adjusts the transmitter's throttle trigger throw to 50% for throttle and 50% for braking and reverse. Experienced users may wish to use the 70/30 setting if more broad proportional control is desired in forward than with braking and reverse. This might be desirable in a racing environment where reverse is disabled.
2. Set the throttle trim control to the middle "0" setting.
3. Set the Channel 2 servo reversing switch to the left position. Do not change the position of any of the servo reversing switches after programming the XL-5 HV.
4. You are now ready to program your speed control.

Aftermarket (Non-Traxxas) Transmitters

The following instructions are provided as a general reference only for those who are using non-Traxxas transmitters. Consult your transmitter's instructions for information on how to change the settings.

1. Set the High ATV (adjustable travel volume) or EPA (end point adjustment to the maximum setting. This is the amount of servo throw at full throttle.
2. Set the Low ATV, EPA or ATL (low side only trim adjustment) to the maximum setting. This is the amount of servo throw at full brakes or reverse.
3. Set the throttle trim to the middle (neutral setting).
4. Set the throttle channel reversing switch to either position. Do not change the switch position after programming.
5. Set the trigger throw adjustment to 50% throttle and 50% brake (either mechanical or electronic).
6. Set the exponential setting (if equipped) to the zero or fully linear setting.

Aftermarket Receivers



The XL-5 HV is compatible with most aftermarket receivers. By removing the tab on the edge of the power connector, the XL-5 HV can be plugged directly into some models of Futaba,® Airtronics,® Hitec,® and JR® receivers. Please refer to the manufacturer's wiring diagrams that came with your receiver. On the XL-5 HV, the red wire is positive, the black wire is negative, and the white wire is the control wire. **WARNING**: On some older Airtronics® radio systems, the positive and negative terminals are opposite of the XL-5 HV and an adapter is required. Crossing the red (+) and black (-) wires could damage the receiver and the XL-5 HV. Study the manufacturer's wiring diagrams closely, or consult your hobby dealer.

Low-Voltage Detection Settings

The XL-5 HV speed control includes Low-Voltage Detection circuitry for use with LiPo batteries. DO NOT use Low-Voltage Detection with NiMH batteries or you will experience poor performance. The Low-Voltage Detection circuitry constantly monitors the battery voltage. When the battery voltage begins to reach the minimum recommended discharge voltage threshold for LiPo battery packs, the XL-5 HV will limit the power output to 50% throttle (Stage 1). Stop driving when the Low-Voltage Detection reaches Stage 1. When the battery voltage attempts to fall below the minimum threshold, the XL-5 HV will shut down all motor output (Stage 2). The LED on the speed control will slowly blink red, indicating a low-voltage shutdown. The XL-5 HV will stay in this mode until a fully charged battery is connected. Be certain Low-Voltage Detection is enabled if you install LiPo batteries in your model.

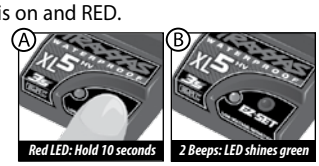
WARNING: FIRE HAZARD!
Do not use LiPo batteries while Low-Voltage Detection is disabled (red LED on the ESC).

Verify that Low-Voltage Detection is ACTIVATED:

1. Turn on the transmitter (with the throttle at neutral).
2. Connect a fully charged battery pack to the XL-5 HV.
3. Press and release the EZ-Set button to turn the XL-5 HV on. If the LED is solid GREEN, then the Low-Voltage Detection is ACTIVATED. If the LED is solid RED, then STOP; Low-Voltage Detection is DISABLED (not safe to use LiPo batteries).

If Low-Voltage Detection is DISABLED:

1. Make sure the LED on the XL-5 HV is on and RED.
2. Press and hold the EZ-Set button (the LED will turn off) (A). After ten seconds, the motor will beep twice and the LED will shine GREEN. Release the button (B).



3. Low-Voltage Detection is now ACTIVATED.

For NiMH battery users, follow these steps to disable Low-Voltage Detection (NiMH setting):

1. Make sure the LED on the XL-5 HV is on and GREEN.
2. Press and hold the EZ-Set button (the LED will turn off) (A). After ten seconds, the motor will beep three times and the LED will shine RED. Release the button (B).

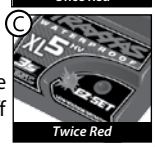
3. Low-Voltage Detection is now DISABLED.

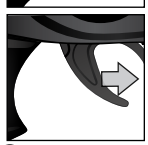
Setup Programming

The XL-5 HV must be programmed to work with the transmitter. The XL-5 HV has to learn where the neutral, full throttle, and full brake (reverse) points are located on the throttle trigger. Programming is accomplished by pressing the EZ-Set® button on the ESC in sequence with the signals from the flashing LED. Read through all of the programming steps before you begin. If you get lost during programming or receive unexpected results, simply unplug the battery, wait a few seconds, plug the battery back in, and start over. The default profile is Trail Mode (Profile #4), which has 100% forward, 100% brakes, 100% reverse, with added brake drag when the throttle trigger is a neutral. You can change the profile later after setup is complete.

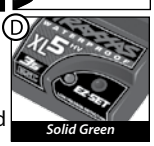
1. Disconnect one of the motor wires between the XL-5 HV and the motor. This is a precaution to prevent runaway when the speed control is turned on for the first time (before it is programmed). The motor does not run during the programming sequence. If the motor wires are soldered you may leave them connected, but make sure to enter the programming mode directly (step 4) to avoid a runaway.

2. Connect a fully charged battery pack to the XL-5 HV.
3. Turn on the transmitter (with the throttle at neutral as described above).
4. Press and hold the EZ-Set® button (A). The LED will first turn green and then red. Once the LED turns red, immediately release the EZ-Set button. The red LED will turn off after three seconds.





5. Next, the LED will blink RED ONCE. Pull the throttle trigger to the full throttle position and hold it there (B).
6. After three seconds, the LED will blink RED TWICE. Push the throttle trigger to the full reverse/brake position and hold it there (C).



Note: If you are calibrating to clear an error code on the ESC, then skip step 7 and proceed to step 8.

7. When the LED blinks GREEN ONCE, programming is complete. The LED will then shine green or red (depending on Low-Voltage Detection setting) indicating the XL-5 HV is on and at neutral (D).
8. When the LED blinks GREEN ONCE, continue holding the trigger in the reverse position and also press and hold the button on the ESC for about 10 seconds until the ESC beeps. This places the ESC in NiMH mode and clears any error codes.
9. To turn the XL-5 HV off, press the EZ-Set button until the LED turns off.

XL-5 HV Operation

To operate the speed control and test the programming, reconnect the motor wires and place the vehicle on a stable block or stand so that all of the driven wheels are off the ground.

Note that in steps 1-8 below, Low-Voltage Detection is ACTIVATED (factory default) and the LED shines green. If Low-Voltage Detection is DISABLED, the LED will shine red instead of green in steps 1-8 below.

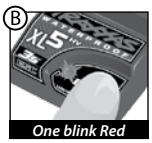
1. With the transmitter on, press and release the EZ-Set button. The LED will shine GREEN. This turns the XL-5 HV on. If you press and release too quickly, you may hear the steering servo jump but the LED may not stay on. Simply press the button again until the LED shines GREEN and then release.
2. Apply forward throttle. The LED will turn off until full throttle power is reached. At full throttle, the led will shine GREEN.
3. Move the trigger forward to apply the brakes. Note that braking control is fully proportional. The LED will turn off until full braking power is reached. At full brakes, the LED will shine GREEN.
4. Return the throttle trigger to neutral. The LED will shine GREEN.
5. Move the throttle trigger forward again to engage reverse (Profile #4). The LED will turn off. Once full reverse power is reached, the LED will shine GREEN.
6. To stop, return the throttle trigger to neutral. Note that there is no programmed delay when changing from reverse to forward. Use caution to avoid slamming the speed control from reverse to forward. On high-traction surfaces, this could result in transmission or driveline damage.
7. To turn the XL-5 HV off, press and hold the EZ-Set button for 1½ seconds or until the green LED turns off.
8. The XL-5 HV is equipped with thermal shutdown protection to guard against overheating caused by excessive current flow. If the operating temperature exceeds safe limits, the XL-5 HV will automatically shut down. The LED on the face of the XL-5 HV will rapidly blink red, even if the throttle trigger is moved back and forth. Once the temperature returns to a safe level, the XL-5 HV will once again function normally. See the Troubleshooting Guide for conditions that could cause the XL-5 HV to overheat.

Profile Selection

The speed control is factory set to Trail Mode (100% forward, brakes, and reverse; added brake drag when the throttle trigger is at neutral). To activate full power without the additional brake drag (Sport Mode), disable reverse (Race Mode), allow 50% power (patented Training Mode), or set immediate reverse (Crawl Mode), follow these steps. The speed control should be connected to the receiver and the transmitter adjusted as described previously. The profiles are selected by entering the programming mode.

Sport Mode (Profile #1: 100% Forward, 100% Brakes, 100% Reverse)

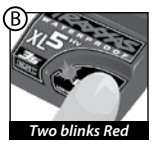
1. With the ESC off and the battery plugged in, turn on the transmitter with the throttle at neutral.
2. Press and hold the EZ-Set button. The LED will turn GREEN, then change to RED and then begin blinking red (indicating the Profile numbers). Continue holding the EZ-Set button (A).
3. When the LED blinks RED ONCE (B), release the EZ-Set button (C).

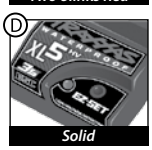


4. The LED will blink and then turn solid green (Low-Voltage Detection ACTIVE) or red (Low-Voltage Detection DISABLED). The model is ready to drive (D).

Race Mode (Profile #2: 100% Forward, 100% Brakes, No Reverse)

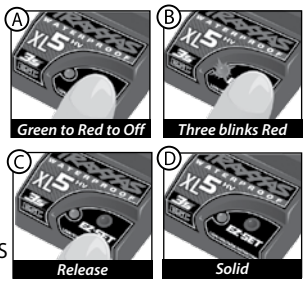
1. With the ESC off and the battery plugged in, turn on the transmitter with the throttle at neutral.
2. Press and hold the EZ-Set button. The LED will turn GREEN, then change to RED and then begin blinking red (indicating the Profile numbers). Continue holding the EZ-Set button (A).
3. When the LED blinks RED TWICE (B), release the EZ-Set button (C).





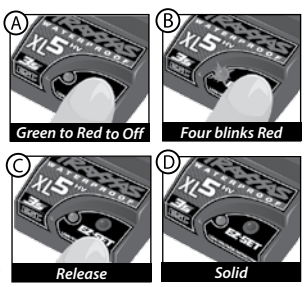
4. The LED will blink and then turn solid green (Low-Voltage Detection ACTIVE) or red (Low-Voltage Detection DISABLED). The model is ready to drive (D).

Training Mode† (Profile #3: 50% Forward, 100% Brakes, 50% Reverse)
This profile is provided to reduce the power output allowing beginning drivers to better control the model. As driving skills improve, simply change to profile #1, #2, #4, or #5 for full-power operation.



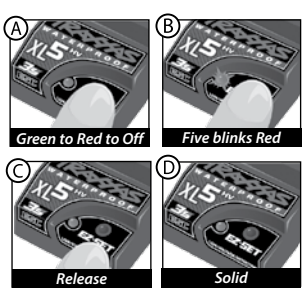
1. With the ESC off and the battery plugged in, turn on the transmitter with the throttle at neutral.
2. Press and hold the EZ-Set button. The LED will turn GREEN, then change to RED and then begin blinking red (indicating the Profile numbers). Continue holding the EZ-Set button (A).
3. When the LED blinks RED THREE TIMES (B), release the set button (C).
4. The LED will blink and then turn solid green (Low-Voltage Detection ACTIVE) or red (Low-Voltage Detection DISABLED). The model is ready to drive (D).

Trail Mode (Profile #4: 100% Forward, 100% Brakes, 100% Reverse; Drag Brake at Neutral)



1. With the ESC off and the battery plugged in, turn on the transmitter with the throttle at neutral.
2. Press and hold the EZ-Set button. The LED will turn GREEN, then change to RED and then begin blinking red (indicating the Profile numbers). Continue holding the EZ-Set button (A).
3. When the LED blinks RED FOUR TIMES (B), release the EZ-Set button (C).
4. The LED will blink and then turn solid green (Low-Voltage Detection ACTIVE) or red (Low-Voltage Detection DISABLED). The model is ready to drive (D).

Crawl Mode (Profile #5: 100% Forward, Hill Hold Brakes at Neutral, Immediate Reverse)



1. With the ESC off and the battery plugged in, turn on the transmitter with the throttle at neutral.
2. Press and hold the EZ-Set button. The LED will turn GREEN, then change to RED and then begin blinking red (indicating the Profile numbers). Continue holding the EZ-Set button (A).
3. When the LED blinks RED FIVE TIMES (B), release the EZ-Set button (C).
4. The LED will blink and then turn solid green (Low-Voltage Detection ACTIVE) or red (Low-Voltage Detection DISABLED). The model is ready to drive (D).

LED Codes and Protection Modes

- **Solid Green:** XL-5 HV power-on light. Low-Voltage Detection is ACTIVATED (LiPo setting).
- **Solid Red:** XL-5 HV power-on light. Low-Voltage Detection is DISABLED (NiMH setting).
- **Fast Blinking Red:** Overtemp. The XL-5 HV is equipped with thermal shutdown protection to guard against overheating caused by excessive current flow. If the operating temperature exceeds safe limits, the XL-5 HV will automatically shut down. Let the XL-5 HV cool before continuing. The ESC can get too hot in situations such as climbing and crawling in high gear, which increases load on the system. Use low gear for climbing and crawling.
- **Slow Blinking Red (when Low-Voltage Detection is activated):** The XL-5 HV has entered Low-Voltage Protection. When the battery voltage begins to reach the minimum recommended discharge voltage threshold for LiPo battery packs, the XL-5 HV will limit the power output to 50% throttle. When the battery voltage attempts to fall below the minimum threshold, the XL-5 HV will shut down all motor output. The LED on the speed control will slowly blink red, indicating a low-voltage shutdown. The XL-5 HV will stay in this mode until a fully charged battery is connected. If you see this code because a NiMH battery was connected to an ESC with Low-Voltage Detection turned on, then follow the calibration steps from the previous page to release the code and change the ESC to NiMH mode.
- **Fast Blinking Red and Green:** Overvoltage. This code can appear when a fully charged NiMH battery is connected to the XL-5 HV ESC with Low-Voltage Detection turned on. Follow the calibration steps from the previous page to release the code and change the ESC to NiMH mode.
- **Fast Blinking Green:** The XL-5 HV's LED will blink fast green if the speed control is not receiving a signal. Make certain the speed control is properly plugged into the receiver and the transmitter is switched on.

Throttle Neutral Protection
The XL-5 HV speed control features Throttle Neutral Protection. If the transmitter's throttle trim setting is changed while the speed control is switched off, Throttle Neutral Protection prevents the speed control from activating the motor until the throttle trim is corrected. Throttle Neutral Protection also prevents the model from suddenly accelerating if the speed control is switched on while the transmitter's trigger is being held. When the trigger is returned to neutral, the XL-5 HV will operate properly.

Troubleshooting Guide

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

Steering channel works, but the motor will not run:
- The motor could be bad or have a damaged brush. Check the motor and motor connections by supplying power directly to the motor. **Note:** Disconnect the motor from the ESC before testing. Remove the pinion gear from the motor or elevate the driving wheels to avoid a runaway and damage to the vehicle.
- The speed control has thermally shut down (look for a rapidly blinking red LED). Allow the speed control to cool down. See the overheating section.
- Make sure the XL-5 HV's power cable is plugged into the throttle channel of the receiver (Channel 2). Check the operation of the radio system's throttle channel with a servo.
- Possible internal damage. Return the XL-5 HV to Traxxas for service.

Motor and steering servo do not work:
- Check the wires, radio system, battery and motor connectors, and the battery packs.
- Possible internal damage; return the XL-5 HV to Traxxas for service.

XL-5 HV will not go into programming mode:
- Make sure the XL-5 HV 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.
- Be sure the XL-5 HV is turned off before trying to program or select a profile.
- Unplug battery, reconnect, and repeat programming instructions.

Motor runs backwards:
- Motor wired backwards: check the wiring and correct.
- Backwards motor timing: reverse the motor end bell.

Receiver glitches/throttle stutters during acceleration:
- Motor capacitors broken or missing; check and replace the capacitors.
- The receiver or antenna is too close to power wires or batteries.
- Bad connections; check the wiring and connectors.
- Motor worn; replace the motor.
- Excessive current to the motor; use a milder motor or a smaller pinion gear.

Model runs slowly/slow acceleration:
- Check the motor and battery connectors.
- Check to see if XL-5 HV is in Profile #3 (50% throttle)
- Bad battery or motor: check the operation with known good batteries (freshly charged) and motor.

†*patented*

- Incorrect transmitter or speed control adjustment. Reprogram the XL-5 HV.
- Motor is improperly geared: use a milder motor or a smaller pinion gear.
- Check the drivetrain for binding or restrictions.
- Check for motor damage caused by improper gearing, overvoltage (using 3s LiPo batteries with a 12-turn 550 motor), excessive wear, dirt or foreign objects inside the motor, or abusive driving.

XL-5 HV overheats and shuts down:
- Overloading the motor (running through tall grass, binding in the drivetrain).
- Motor may exceed maximum specifications. The XL-5 HV has a 12-turn modified motor limit for 550 size motors when using 2s LiPo batteries and a 21-turn modified motor limit for 550 size motors when using 3s LiPo batteries, with 0 timing when the motor is properly geared.
- Motor is improperly geared. Use a milder motor or a smaller pinion gear.
- Check the drivetrain for restrictions.

Short run time with NiMH battery, unrelated to overheating:
- Make certain Low-Voltage Detection is disabled. ***Remember to enable Low-Voltage Detection if you install a LiPo battery.***

XL-5 HV Warranty Information

Traxxas warrants your Traxxas electronic component to be free from defects in materials or workmanship for a period of thirty (30) days from the date of purchase. Before returning any product for warranty service, please contact our service department **(1-888-TRAXXAS)*** to discuss the problem you are having with the product. After contacting Traxxas, send the defective unit along with your proof of purchase indicating the date purchased, your return address, e-mail, a daytime phone number, and a brief description of the problem to:

Traxxas, 6250 Traxxas Way, McKinney, TX 75070

If the component is found to be defective, it will be repaired or replaced at no charge. The warranty does not cover damage caused by the following:
- Allowing foreign material to enter speed control or get onto PC board.
- Using other than 6-7 NiMH cells, 2s/3s LiPo cells (8.4 - 11.1 volts DC) input voltage.
- Removing the stock battery connectors.
- Using the same gender connectors on the speed control's motor and battery connections.
- Cross-connection of the battery/motor.
- Reverse voltage application.
- Using a motor with fewer than 12 turns (550 size) with 2s LiPo batteries or 21 turns (550 size) with 3s LiPo batteries.
- Incorrect installation or wiring.
- Components worn by use.
- Removing the capacitors from the stock motor.
- Not installing capacitors on new motors (recommended: three 0.1µF [50V]).
- Splices to the input wire harness.
- Disassembling the case.
- Tampering with moisture seals.
- Excessive force when using the EZ-Set button.
- Tampering with the internal electronics.
- Incorrect wiring of an FET servo.
- Allowing exposed wiring to short-circuit.
- Any damage caused by crash, flooding, or act of God.

In no case shall our liability exceed the product's original cost. Traxxas makes no other warranties expressed or implied. This warranty gives you specific legal rights which vary from state to state. After the expiration of the standard 30-day warranty, use the Traxxas Lifetime Electronics Warranty to cover service and repairs. Documents and forms are provided with your XL-5 HV.

If you have questions or need technical assistance, call Traxxas at

1-888-TRAXXAS

(1-888-872-9927) (U.S. residents only)

*U.S. Customers Only

Traxxas, 6250 Traxxas Way, McKinney, TX 75070, Phone: 972-549-3000, Fax: 972-549-3011, e-mail: support@Traxxas.com