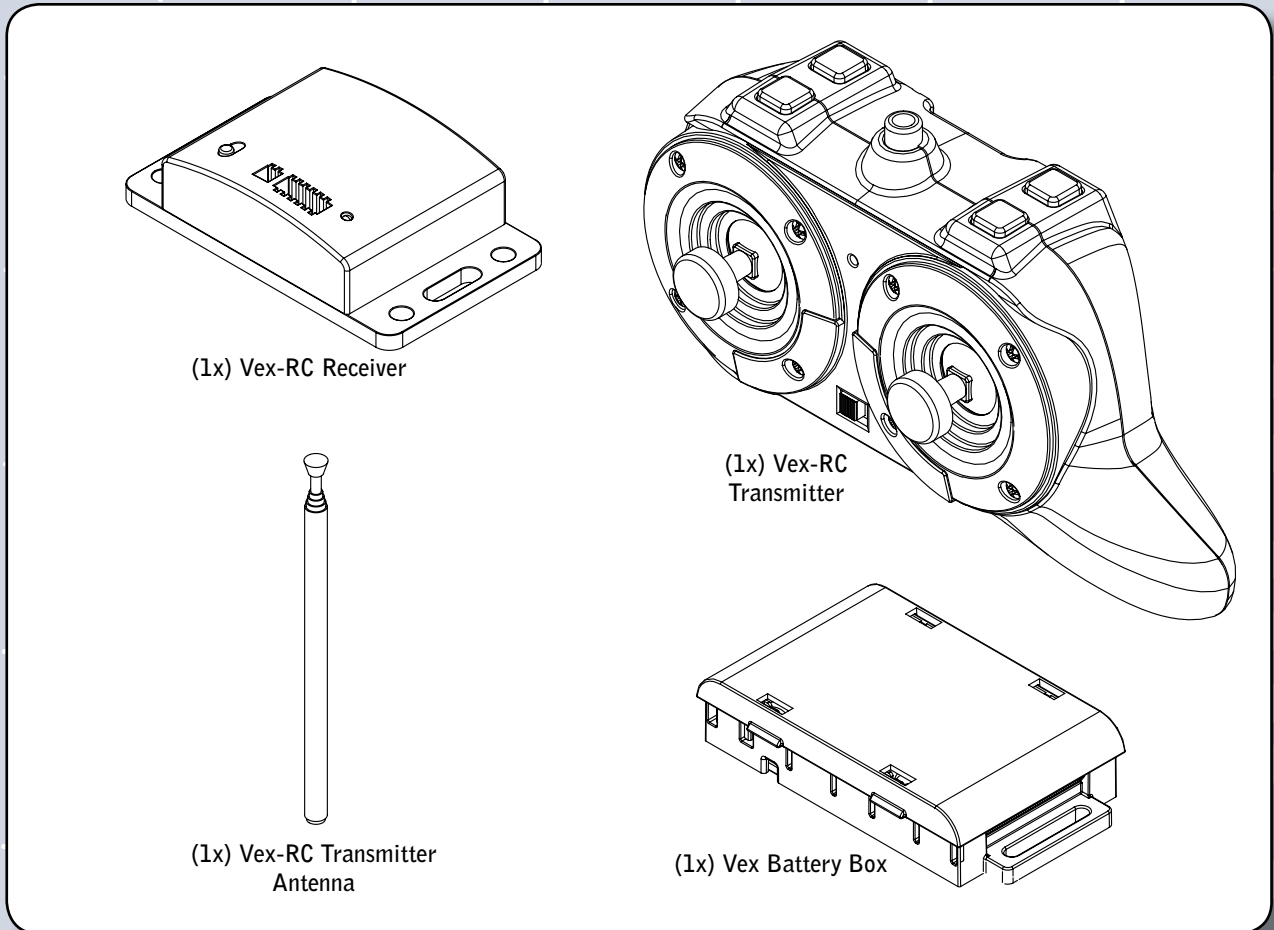


## Vex-RC Transmitter & Receiver Kit

The Transmitter & Receiver Kit provides the foundation for a new robot. Use this kit along with motion and structure components to create a remote-control robot. This transmitter & receiver pair is part of the Vex-RC "blue" product line. For more information on compatibility, refer to [www.VexRobotics.com](http://www.VexRobotics.com).



**Warning:** Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Limited 90-day Warranty  
This product is warranted by Innovation First against manufacturing defects in material and workmanship under normal use for ninety (90) days from the date of purchase from authorized Innovation First dealers. For complete warranty details and exclusions, check with your dealer.

Innovation First, Inc.  
1519 IH 30 W  
Greenville, TX 75402

For More Information, and additional Parts & Pieces refer to:  
[www.VexRobotics.com](http://www.VexRobotics.com)

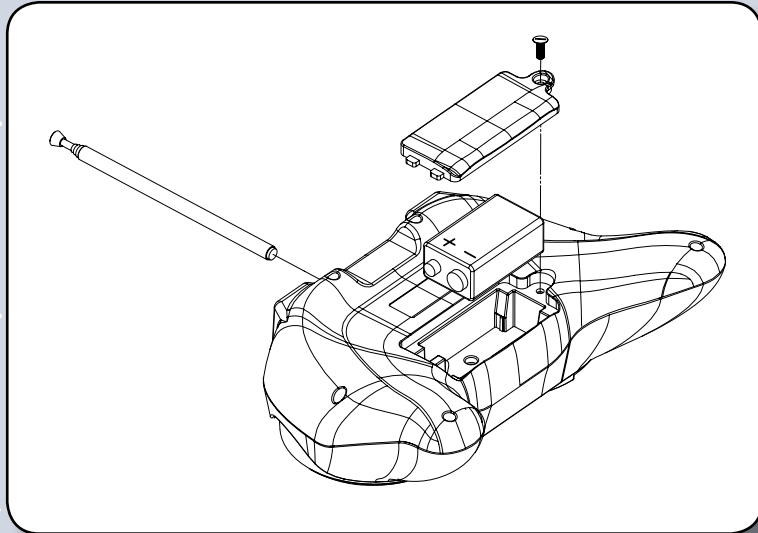
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### **Vex-RC Transmitter & Receiver Kit, continued**

Before the Transmitter (TX) and Receiver (RX) pair can be used, some prep work is required.

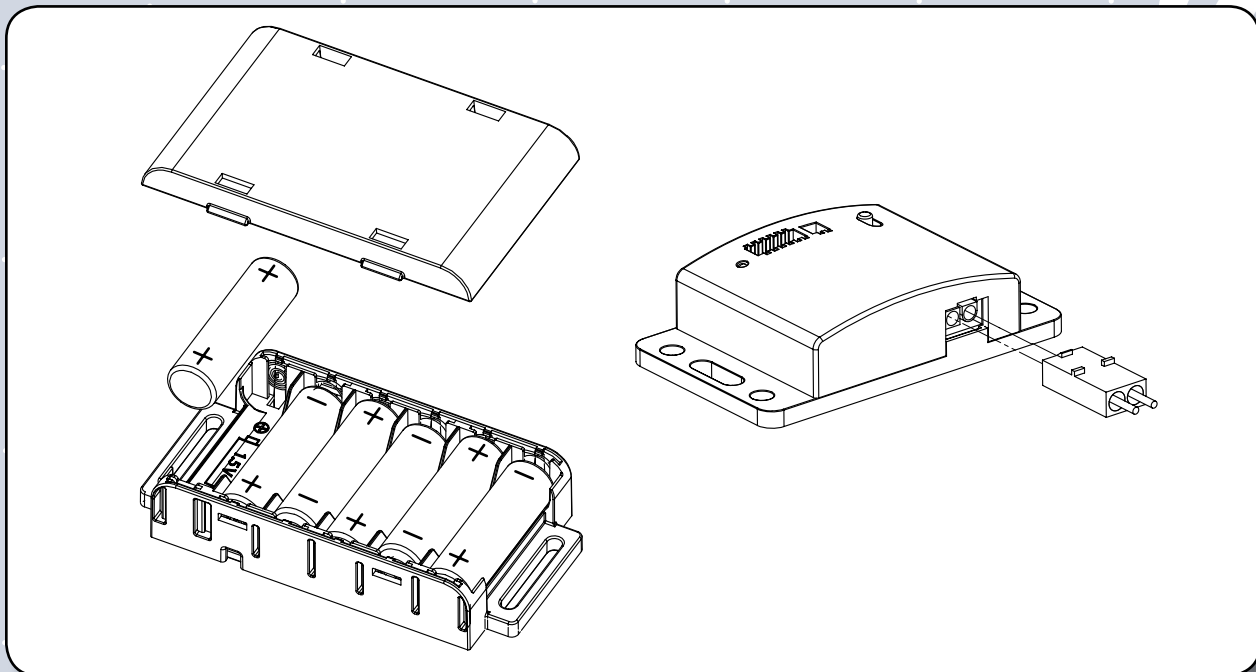
Install the antenna into the top of the Transmitter, and screw it into place by twisting it with your hand.

Using a Phillips-Head Screwdriver, remove the battery door screw from the bottom of the Transmitter. Remove the battery door and insert a 9V battery (not included). Make sure you install the battery with the polarity in the correct orientation. Reinstall the battery door and screw.



Remove the cover from the Battery Box, and install (6x) AA-Batteries (not included). Make sure you install the batteries with the polarity in the correct orientation, follow the guide in the bottom of the Battery Box. Reinstall the cover.

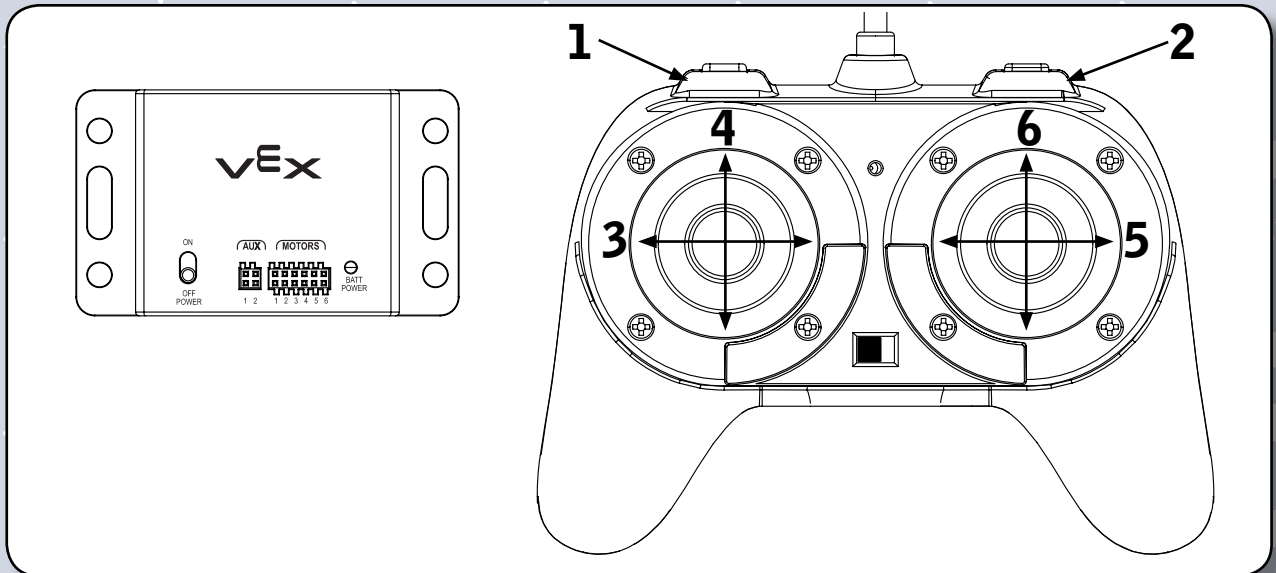
Connect the Battery Box to the Vex-RC Receiver by inserting the power connector into the socket, as shown. Note: The connector will only insert one-way, and should not connect incorrectly.



For More Information, and additional Parts & Pieces refer to:  
[www.VexRobotics.com](http://www.VexRobotics.com)

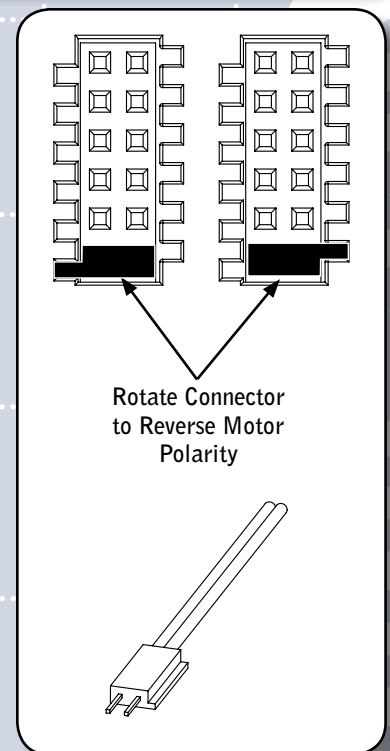
### Vex-RC Transmitter & Receiver Kit, continued

The Transmitter has six channels on which it can send commands to the Receiver. These channels each correspond to a matching motor port on the Receiver. Channel 1 on the Transmitter, controls the motor plugged into Motor Port #1 on the Receiver. These motor ports are clearly labeled "1-6" on the Receiver. You can change the "control scheme" for your robot, by choosing where you plug in your motors.



There are also (2x) "auxiliary" ports on the Receiver; these ports are labeled "AUX". These ports are not controlled by the Transmitter, and will provide the same voltage as the battery whenever the Receiver is switched on. These ports are intended to be used for passive accessories that need a power supply; the Vex Color Camera (276-2211), and the Vex Flashlight (276-2210) both utilize these AUX ports. If you plug a motor into an AUX port, it will run continuously, whenever the robot is turned on.

The Vex-RC system uses the VB-1 Motor Module (not included in this kit), which includes a 2-prong power cable & connector. These 2-prong cables can be used to flip motor polarity. By plugging the cable in "upside down" you can reverse the direction of the motor. Say you want Channel 1 to control your arm motor, but when you move the joystick up, the arm goes down. Simply reverse the motor plug and now up on the joystick will move the arm up. If a motor runs "backwards" from the desired direction, reverse the motor plug. Note, "AUX" ports cannot be reversed.



For More Information, and additional Parts & Pieces refer to:  
[www.VexRobotics.com](http://www.VexRobotics.com)

### **Vex-RC Transmitter & Receiver Kit, continued**

#### **Transmitter & Receiver Troubleshooting Guide:**

Problem:

**Motor does not operate, or works intermittently.**

Possible Solutions:

- Check that the batteries are properly installed.
- Check that connections to the Receiver are securely plugged in.
- Check that the power switches on both the Receiver and Transmitter are in the "ON" position.
- Let the unit sit without operating for a few minutes, and see if problem persists.
  - Motors have internal protection which will shut down the motor to protect it from overload.

Problem:

**One motor is running opposite of the desired direction**

Solution:

- Reverse the direction of the motor plug that connects to the Receiver. (See previous page.)

Problem:

**System has limited signal range (less than 150 feet).**

Possible Solutions:

- Check that the Transmitter Antenna is completely extended and secured tightly into the Transmitter.
- Check that batteries in Transmitter and Receiver are sufficiently charged.
  - Low batteries can result in intermittent/reduced performance!
- Check for objects (walls, doors, appliances, heating ducts, etc) that could block radio transmissions between the Transmitter and the Receiver.
  - Metal objects will cause the most signal block, but other objects will degrade the signal as well.

For More Information, and additional Parts & Pieces refer to:

[www.VexRobotics.com](http://www.VexRobotics.com)