Configurable – IG52-SB4-T, Custom Size 4WD All Terrain Robot

Assembly and Operation

This is a configurable robot kit with selectable options at the bottom of the page. The options are pre-selected to reflect our recommended configuration but can be changed to suit your needs.

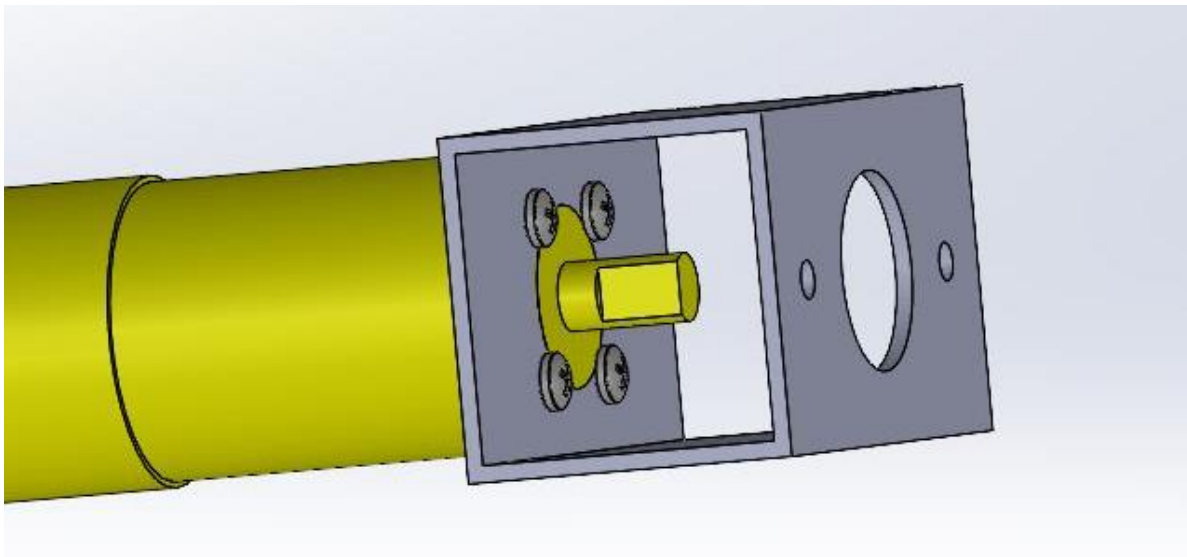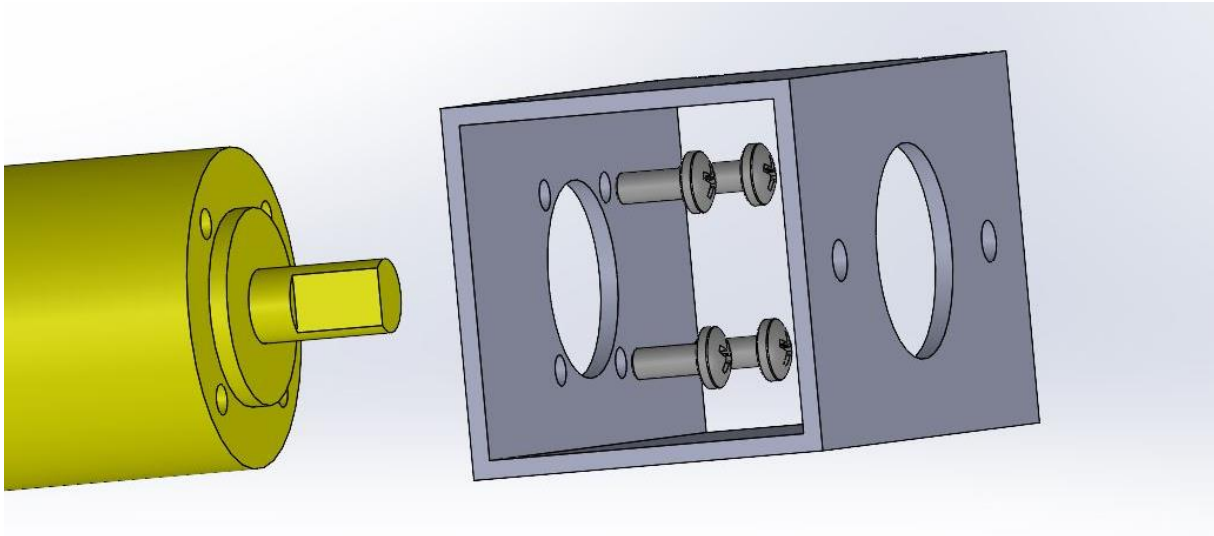*Images shown may not be an exact representation of the robot's features listed in this document*

Contents

Mechanical Assembly

1. Start by mounting the motors to the motor tubes. Use Loctite to keep the screws from vibrating loose. (Use Loctite on all screws that do not use locknuts).
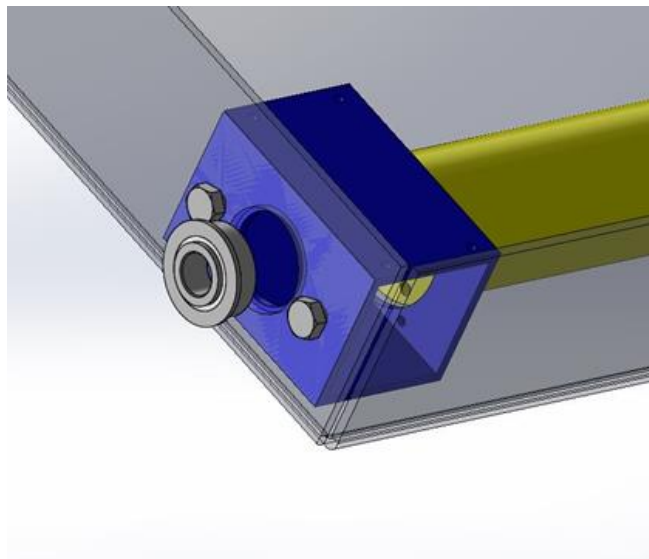
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2. Mount motor tube to chassis with provided hardware, (1/4-20 Screws/Nuts), using Loctite or locknuts.
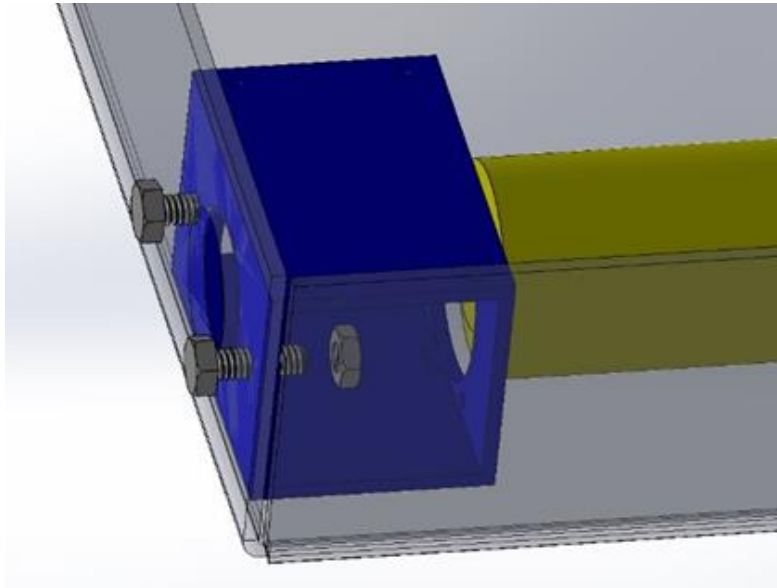

3. Insert ball bearing to support the wheel shaft. Additional filling may be needed to fit bearing through chassis into motor tube. Test fit each bearing to find the bearing that works best for each bearing hole.

4. Mount wheel to wheel shaft. Ensure air is let from tire until it is soft and easy to work with. Avoid pinching the inner tube when mounting. Use Loctite, locknuts, or jam nuts to secure the wheel to the shaft. Air up the tire according to the specifications on the side wall of the tire.
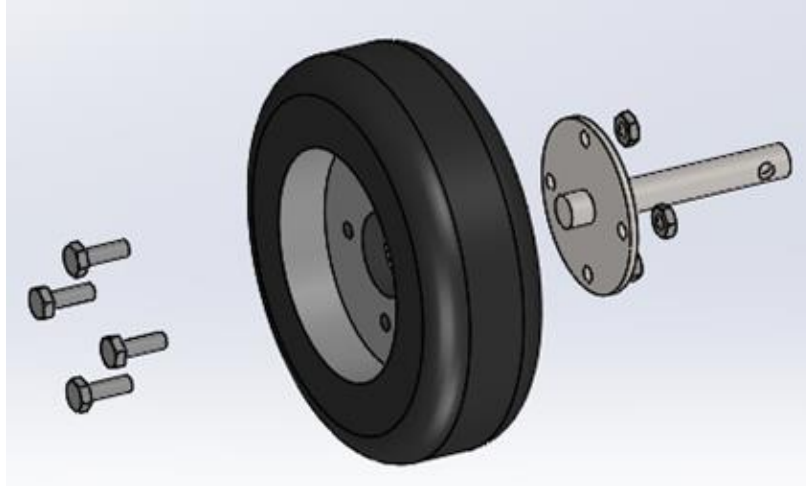
5. Mount wheel assembly to motor assembly. Slide a lock collar over the shaft before installation. Insert wheel shaft through ball bearing. Before sliding the wheel shaft onto the motor, slide on a second lock collar. Align the set screw holes on the wheel shaft and the lock collar to the flat spot on the motor shaft. Firmly press the wheel shaft inward against the motor and secure the set screw with Loctite.
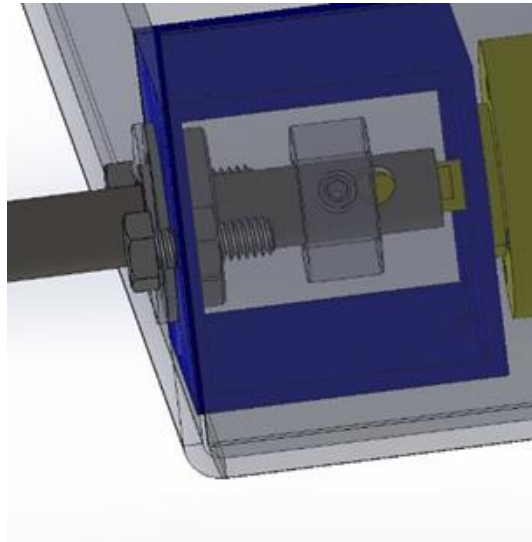
6. Slide the first lock collar up against the ball bearing on the outside of the chassis and secure with Loctite. This will keep the ball bearing from sliding out away from the chassis.

7. Install standoffs onto main chassis with provided hardware. Use Loctite to secure screw to standoff on the chassis.

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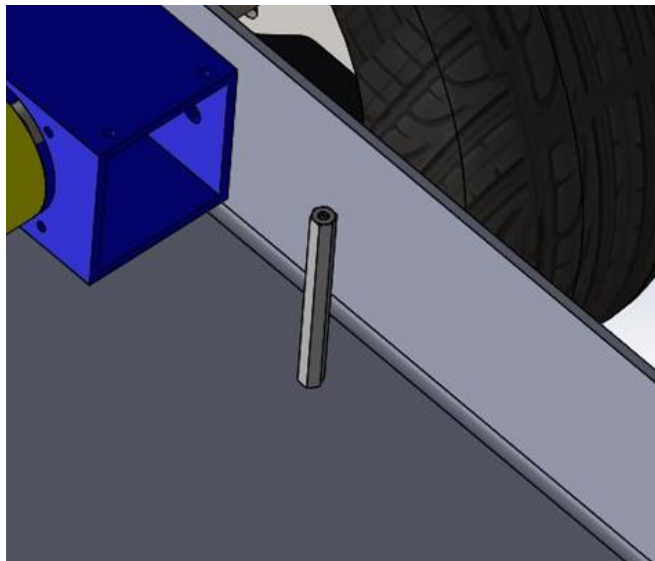
8. Once standoffs are secure to chassis, the chassis lid can be place on top and secured. DO NOT USE Loctite for lid screws. This will allow for easy access when working with the robot in the future. Before and after operation of the robot; check to make sure lid screws are lightly snug.
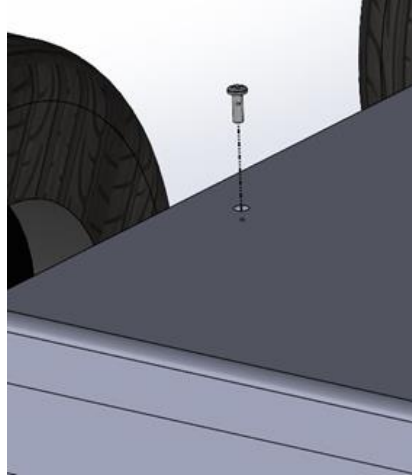

9. There are a variety of options for purchase when selecting your robot. If you have selected additional items that require additional mechanical assembly, please be safe doing so. Hardware will be provided to mount those items. Check both sides of the surface before beginning to work and hold the part in place to ensure that it will not interfere with any of the other components before drilling. Mark your holes with a pen or pencil and pilot drill holes with a 3/32" drill bit.

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Electrical Assembly

For electrical assembly please find the schematics for "Vectoring Robot" on our website:

Schematics

For additional support on wiring, soldering, and crimping, please read the following support pages:

Electric Motor Hookup Support

Electric Power Hookup Support

Soldering Tips

Crimping Wires

Operation

1. Before powering on the robot make sure it is up on blocks so the wheels can spin freely. Occasionally some or all the wheels start as soon as the motor controller gets power. In this case the settings of the motor controller need to be changed.
2. Make sure to use the correct DIP switch settings. If using a Sabertooth motor controller in R/C mode switch 1 should be DOWN (closest to the number) and all other switches should be UP. If using a different mode, see the manual for the motor controller you are using on Dimension Engineering's website.

Binding a Spektrum Remote

3. Insert the bind plug into the receiver and power on the robot.
4. While pressing the Bind button, power on the transmitter.
5. Release the Bind button after the receiver's LED stays illuminated. This indicates the receiver is bound to the transmitter.
6. While the robot and transmitter are still powered on, remove the bind plug from the receiver.
7. If the wheels are not moving as desired, it may be necessary to swap the Aileron and Elevator plugs or to reverse the channels on the transmitter. To reverse channels, see the instructions for "Servo Reversing" in the Spektrum documentation.

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2. SuperDroid Robots, Inc. makes no representations as to the fitness of its products for specific uses. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS HEREBY EXCLUDED.

3. Agreements shall be construed in accordance with the laws of the State of North Carolina, and the rights and obligations created hereby shall be governed by the laws of North Carolina.

4. In the event a dispute or controversy arises, such dispute or controversy (including claims of default) shall be brought in the courts of Wake County, North Carolina and the plaintiff hereby agrees to this choice of venue.

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