Macgyver - 2WD Frame Starter Pack

Assembly Difficulty: Medium

GK-KIT-005
**Parts List**

Please make sure that the following pieces are included in your kit!

<table>
<thead>
<tr>
<th>Component</th>
<th>Quantity</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrylic Frame</td>
<td>1</td>
<td>Use 1/16” Drill bit to make holes.</td>
</tr>
<tr>
<td>Wheel with Rubber Tire</td>
<td>2</td>
<td>2.51”, Low Grip Rubber Tires</td>
</tr>
<tr>
<td>6v AA Battery Holder</td>
<td>1</td>
<td>4x AA batteries not included</td>
</tr>
<tr>
<td>Plastic motor encoder</td>
<td>2</td>
<td>Optional black encoders for RPM, IR/Photoelectric Sensors needed.</td>
</tr>
<tr>
<td>Wheel Coaster</td>
<td>1</td>
<td>Metal base with plastic wheel goes in the back.</td>
</tr>
<tr>
<td>6v DC Motors with Gearing</td>
<td>2</td>
<td>Must solder or crimp wires.</td>
</tr>
<tr>
<td>Miscellaneous screw pack</td>
<td>1</td>
<td>Enough for mounting motor and third wheel.</td>
</tr>
</tbody>
</table>

**Recommend tools**

- **Needle Nose Plier**
- **Philips Screwdriver (+)**
- **Hobby Knife (Optional)**
- **TOL-08793 Glue (Optional)**
- **800-002 Soldering Iron (Optional)**
- **900-112 Brass Sponge (Optional)**
- **8334-3ML Wire Stripper (Optional)**
- **SI-9600 Double Side Tape (Optional)**
- **TOL-08964 60/40 Solder**
- **HT-1041**
- **TAPE-DSF-10MM**
- **S015-1/2LB**
Installation Guide

Step 1) Peel the protective adhesive off!

Step 2) Slide in the motor mounts.

Step 3) Slide in the long screw and fasten with nut, for the bottom push the mount towards the motor to create some space for the nut to go into. If that doesn’t work use a Philips screwdriver and fasten the screw with the needle nose holding the nut into place. White shaft must align with “+” shape cutout!

Step 4) This is what it would look like with both motors mounted into place. (Optional) If you want the motors to be positioned straight, align the motors as best as possible to be straight, flip the board and on the motor mounts insert in-between the gaps some glue. Allow to set into place.
Step 5) (Optional) Slide in the encoders and glue the ends to prevent the encoder from falling out. This is entirely optional as most kits do not use the encoder function.

Step 6) You can solder the cable with or without the plastic strap. It is recommended to remove the plastic guard using a needle nose plier to prevent accidental melting of the motor strap.

Step 7) Correctly Orient the wheel coaster in the position shown below in green. The long side must be facing towards the curve end of the frame.

Step 8) Insert the standoff as show in the image below. Place the wheel coaster over the standoff and use the small screws to fasten into place. Note: You may need to put the standoffs to align with the wheel coaster.

Step 9) Insert the Push Button into the square cutout, you may need to use glue to secure into place.

Step 10) Using the long screw and a Philips screwdriver, create a larger thread and fasten with a nut on the other side to the frame.