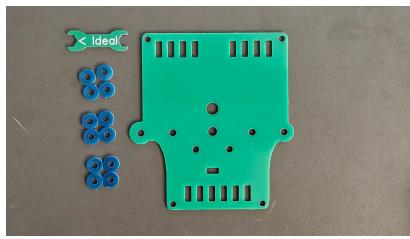
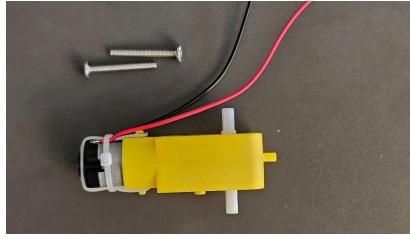


Broken Lightbulb Badge Assembly

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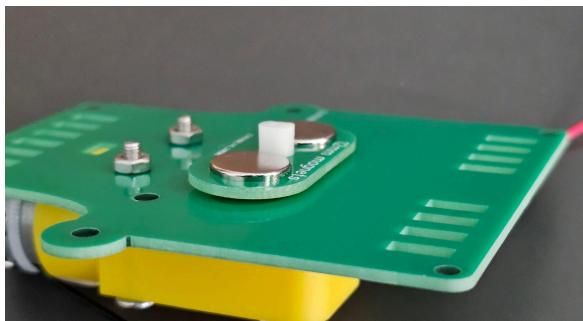
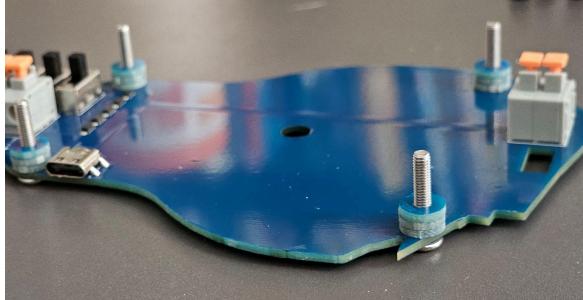
Parts:

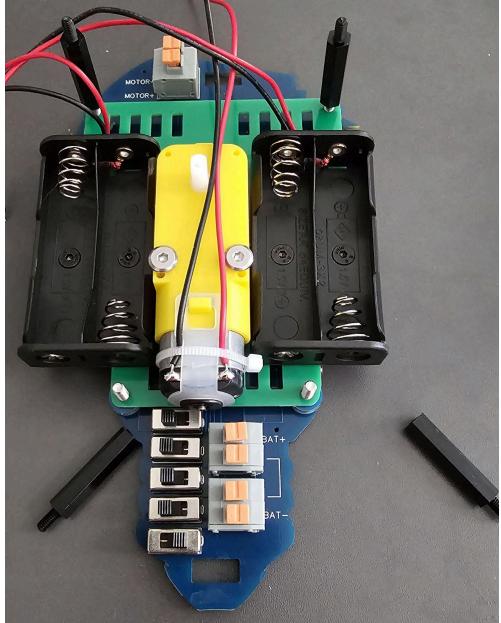
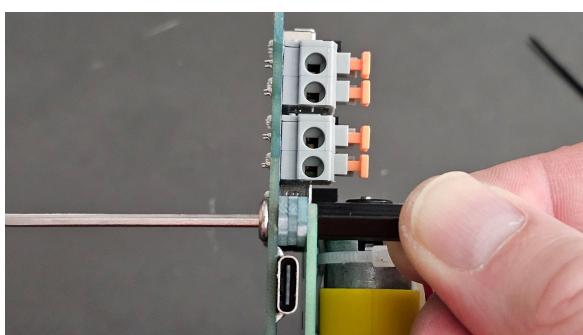
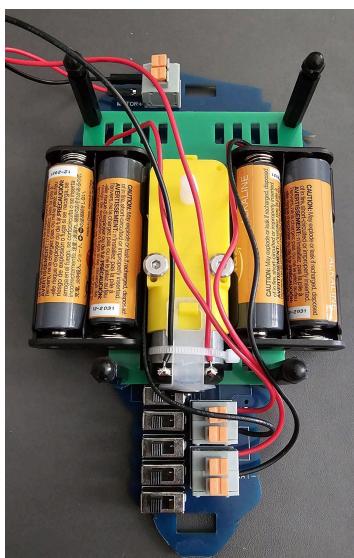
1	Broken lightbulb PCB Front and back shown	
1	Lanyard	
1	"12mm magnets" holder	
2	12mm disc magnets	
2	Battery holder	
4	AA batteries	

1	Motor mount with square and circle holes	
1	< Ideal wrench	
12	Fiber washers	
1	Yellow motor	
2	M3 x 25mm bolts	
1	Hex key	
6	Hex nuts	
4	M3 x 6 bolts	
4	Acorn nuts	
4	Standoffs	
4	M3 x 16mm bolts	
1	Magnetic stir rod	
2	Zip ties	

Assembly:

Step 1	Attach the motor to the mounting plate with the 25mm bolts. The axle will fit through a hole in the board. Install so the wires are away from the board. Match the picture because the board is not symmetrical.	
Step 2	Add bolts to the motor mounting screws. Tighten them with the included wrench and key. Do not over-tighten.	
Step 3	Install the battery holders. The wires should be toward the wide end of the board. Each holder uses two flathead M3 x 6mm bolts. Tighten the nuts the same way as Step 2.	

Step 4	<p>Lay the magnet holder on a hard flat surface and push the magnets into the round holes. This will require significant pressure. The magnets should have opposite poles facing up.</p>	
Step 5	<p>Add the magnet array to the motor's axle. Align this carefully before pushing the pieces together. The boards should be at least 1mm apart.</p>	
Step 6	<p>Add the M3 x 16mm bolts through the badge face and stack three fiber washers as shown. Do not try to pick up the board, as the bolts will fall out.</p>	

Step 7	<p>Place the motor mount so it aligns with the M3 x 16mm bolts and seat it fully down. If done correctly, the axle should stick through a hole in the badge's face. Add the standoffs to the exposed bolts, but do not worry about getting them tight. These are just here to keep the parts from flying off when we pick it up.</p>	
Step 8	<p>Tighten the standoffs with the hex key and your fingers. Do not over-tighten.</p>	
Step 9	<p>Run the motor wires to the spring-loaded wire connectors. • Red wires are positive (+) • Black wires are negative (-). Connect one battery holder to one of the spring-loaded connectors and the other battery holder to the other connector. Add the acorn nuts to the standoffs.</p>	

Step 10	<p>Install the batteries and flip the switches to ensure the motor moves. Add the lanyard to the top or bottom, depending on how you wish to wear it.</p>	
Step 11	<p>All done!</p>	