

# Power Cable Relocation

2022 SeaPerch Season

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The original Pool Courses Build Guide shows the power cables tied off the front of the task frame, see Figure 1.

The power cables need to be tied off closer to the battery compartment to reduce tension on the cables. The cables should be tied to the frame and tucked behind the battery compartment panel as shown in Figure 2.

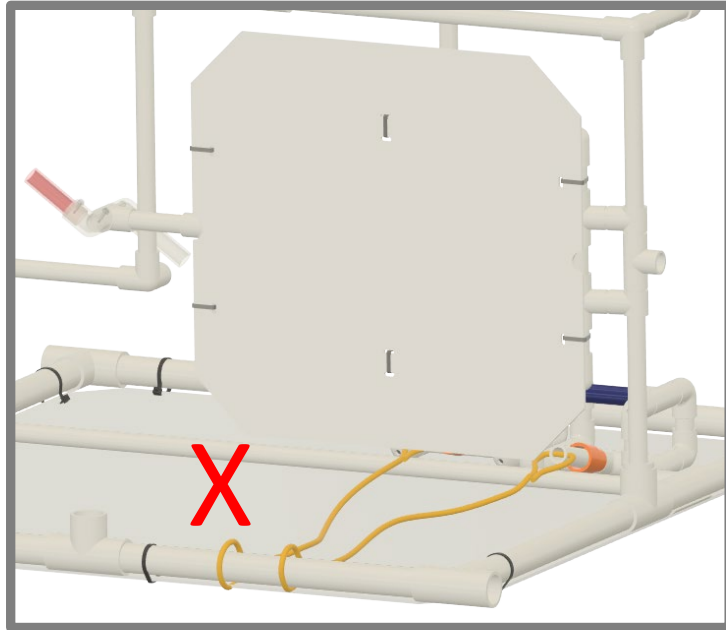
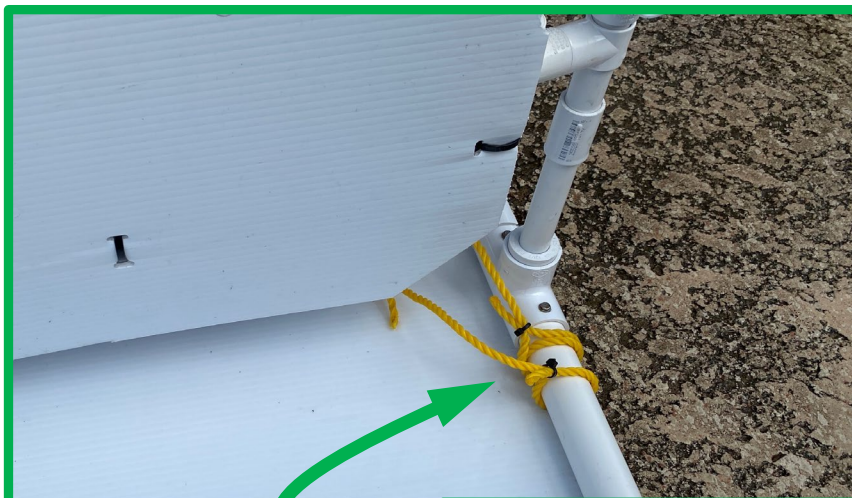


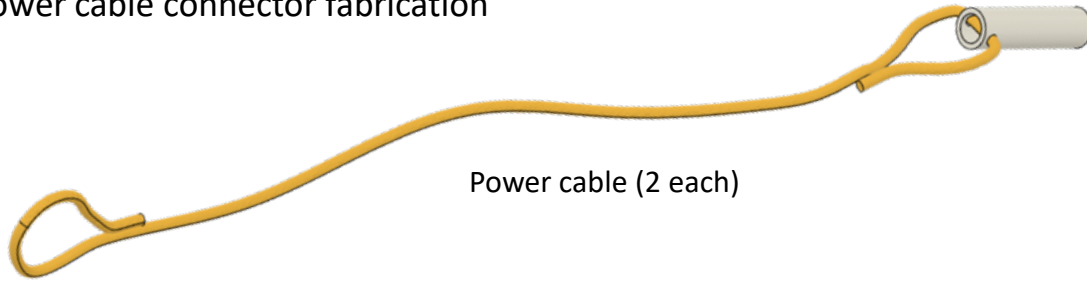
Figure 1 - Power cable tie off as shown in the build guide



Tie power cables to frame close to Battery Compartment as shown.  
The power cables will not stay connected to the batteries if they are tied off as shown in the manual.

Figure 2

Power cable connector fabrication



Add a steel flat washer to the power cable connector.

Flat washer: 1/4" nominal ID x 3/4" OD x 1/16" thick

Example: <https://www.lowes.com/pd/Hillman-1-4-in-Zinc-Plated-Standard-SAE-Flat-Washer/3058557>

Place the flat washer on the end of the power connector (PVC pipe).

Place one piece of electrical tape over the washer and the end of the pipe.

Wrap 2 layers of electrical tape around the taped end of the pipe to help hold the tape and washer on the pipe.



# Battery Connector

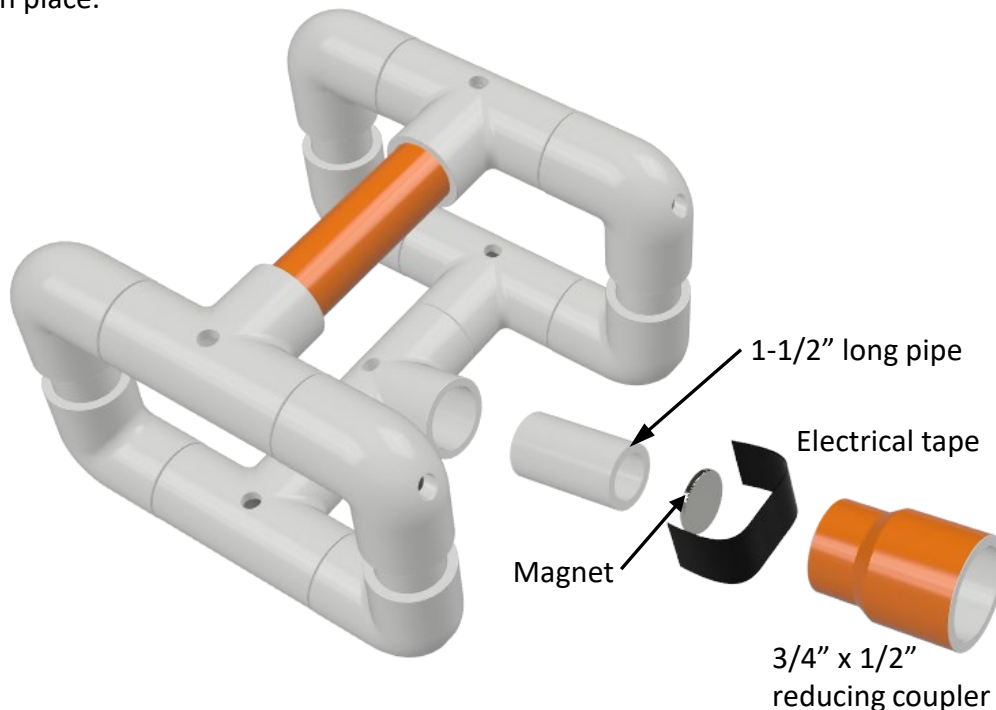
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20mm diameter x 2mm thick Neodymium magnet

<https://www.amazon.com/Powerful-Magnetic-20mmx2mm-Permanent-Neodymium/dp/B096SQKRNZ>

The force required to separate the power cable connector from the battery power connector depends on how far the magnet on the 1-1/2" long pipe is inserted into the 3/4" x 1/2" reducing coupler. Multiple magnets may be necessary to achieve the desired force to hold the connectors in place.



Using electrical tape, attach a magnet to the 1-1/2" long pipe that connects the 3/4" x 1/2" reducer coupler to the battery assembly. Insert the pipe (taped end) into the 3/4" x 1/2" reducer coupler and make sure the pipe is inserted completely. Insert the 1-1/2" long pipe into the tee fitting of the battery.

Push the power cable connector into the Battery Power Connector. Pull on the power cable to test the force required to disconnect the power cable connector from the battery. Use an additional magnet on the battery power connector if you want to require more force to disconnect the power connector.

