

12 Volt Battery Case with Anderson Powerpoles®

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This article describes a battery case which has been outfitted with Anderson Powerpoles® and a self-resetting fuse. It is a simple project with easy to obtain parts and can be put together in an evening.

This list of parts required is as follows:

1	12 V Deep Discharge Battery	Marine batteries cost \$90-\$180
1	Vented Battery Box	Group 24 (CT:79-0312-2) or 28 (CT:79-0314-8)
1	Self-resetting fuse or circuit breaker	20 or 30 Amp \$7-\$20 (Canadian Tire)
1	Fuse holder	Not needed for circuit breaker (Canadian Tire)
6'	Heavy duty stranded wire	
10	Anderson Powerpoles®	30 Amp connectors (EMRG)
1	Heavy duty 5-way binding post	Canadian Tire or Radio Shack
4	Ring connectors	Battery connection(Canadian Tire or Radio Shack)
6	Tie wraps	
	Solder	
	Hardware	

The parts can be found at either Canadian Tire or Radio Shack. You might want to try Princess Auto or Active Electronics as well. Use tie wraps inside to neaten up the wires; after all, you'll be showing your project to all sorts of fellow hams soon!

DESCRIPTION



The battery case as shown is a group 24 (car size) marine deep discharge battery. The case has 4 sets of powerpoles mounted, although only 2 can be clearly seen in the picture.

The case also features a heavy duty binding post. Inside the case is a 2 foot wire with powerpoles direct connected to the battery. I use this mostly for charging. It really should have a fuse on it, but none is installed currently.



The previous picture with the binding post in the center, is a case with the self-resetting fuse. The case on the left has the binding post offset from the center and uses a heavy duty circuit breaker. The circuit breaker mounting screws can be seen in the center-line.

Regular fuse in the holder with a self-resetting fuse in front. >

If the fuse option is chosen, you will have to bring the connections together from the powerpoles and solder them together. It is a lot of wire and will require a fair amount of heat to solder. Afterwards, wrap electrical tape around generously. Remember, what is in the box is out of site and a poor job can be disastrous!

If a heavy-duty circuit breaker is chosen, ring terminals can be used inside the box and bolted to the circuit breaker on one side and the 5-way binding post on the other.



Inside view with fuse holder in upper middle



Inside view with circuit breaker in upper middle

CONSTRUCTION

Start by deciding on the connector layout for your box. The only downside I can see to my choice is the fact that the connector faces up and could trap dirt and debris over time.

Use an electric drill with a sharp bit on slow speed to drill wire and mounting holes. Use the template on the package as a guide to mount the binding posts. If using the circuit breaker, you can use the device to mark the centers.

Solder about one foot of heavy duty wire to each of the four powerpole connectors. Pay attention to polarity of your wire; at least be consistent.

Each of the powerpoles will need a larger hole for the wire feed and two smaller holes for accept the plastic wire wrap. You may want to drill one and try out the mounting before drilling all the holes. That way you can adjust bit size or placement as required. Mount the binding post and if chosen, the circuit breaker. Finish up by mounting the remaining powerpoles.

Trim the wires, but not too tight. The only wire that really needs to be a bit long is the wire(s) from the battery to the top of the case. If it's too short, you'll swear every time you need to take of the cover. The wires from the powerpoles to the binding post and circuit breaker can be shorter. Make them too short and you'll have difficulty getting them all together.

Dress the wires with ring connectors as appropriate and make the final connections. If you are soldering really pay attention to polarity; it's harder to fix!