



Affordable

DC GENERATORS

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DIY PowerBox Component List





The DIY Power Box can be built to any of your needs. I wanted things like lights and a radio which not everyone may want so your components and cost to assemble can vary from mine. I also built mine around a Group 26 sealed lead acid starting battery. Not exactly the right fit for the job but I have many good used ones on hand. I would recommend a deep cycle at minimum if buying a new one.

This is a guide and not a detailed step by step instruction. The end user is responsible for everything and Affordable DC Generators expresses no responsibility or warranties.

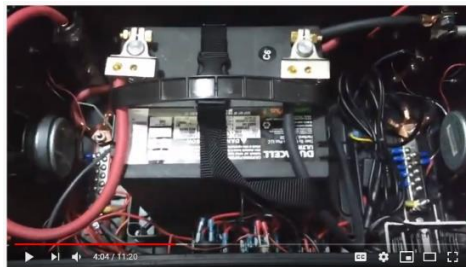


DIY Power Box PART 1 for work, camping, home backup, or off-grid

<https://www.youtube.com/watch?v=l8tnUUz7rRs>

In Part 1, I will walk through the basics of choosing what accessories I wanted, sourcing an appropriate tool box, mounting of the components, and the basic functionality of how it all is going to work. This power box will not only function on it's own but will also have the capability to jump start a vehicle, run off and charge from a vehicle, provide power for a larger secondary inverter, and charge from solar or the Affordable DC Generator.

The goal for this build is to have a modular system that can be built one box at a time, and is done with all off the shelf components. This means that the average person can build what they need at a fraction of the price of a Goal Zero Yeti or similar product that is serviceable and expandable down the road.



DIY Power Box PART 2 for work, camping, home backup, or off-grid

<https://www.youtube.com/watch?v=AgC3UfwU7kY>

In Part 2, I will walk through the basics of internal wiring, laying out the components, and how to connect them. This is a very basic guide to what is necessary in order to get your home built powerbox to work.

Note not mentioned in the video, the wire used to go from the battery meter to the shunt needs to be shielded. I was getting useless current readings probably from interference. I used 22-2 alarm wire from Home Depot at 20 cents a foot. Cheap solution to make this work. Just ground the insulation to the negative bus bar.



DIY Power Box PART 3 for work, camping, home backup, or off-grid

<https://www.youtube.com/watch?v=lcx0iV9cWRA>

In Part 3, I will walk through the functionality of the powerbox out in the field doing some remote camping. I utilize the powerbox to power my radio, electronics, and DC refrigerator. All of this being powered off of the internal battery, solar, and the Affordable DC Generator.

Tool Box	1	\$ 39.00	https://www.homedepot.com/p/RIDGID-22-in-Pro-Tool-Box-Black-222570/205440481
Antenna	1	\$ 12.99	https://www.amazon.com/gp/product/B000Q8WIS0/ref=ppx_yo_dt_b_asin_title_o02_s00?ie=UTF8&psc=1
2 Gauge Cable 15'	1	\$ 62.80	https://www.amazon.com/gp/product/B0167K786A/ref=ppx_yo_dt_b_asin_title_o03_s00?ie=UTF8&psc=1
Cable Tie Mounts	1	\$ 6.99	https://www.amazon.com/gp/product/B07NWX8JYX3/ref=ppx_yo_dt_b_asin_title_o06_s00?ie=UTF8&psc=1
Battery Box	1	\$ 8.99	https://www.amazon.com/gp/product/B00E3ALEYO/ref=ppx_yo_dt_b_asin_title_o06_s02?ie=UTF8&psc=1
Spade Connector	1	\$ 5.29	https://www.amazon.com/gp/product/B01962MW2G/ref=ppx_yo_dt_b_asin_title_o07_s00?ie=UTF8&psc=1
Fuse Holder	1	\$ 13.99	https://www.amazon.com/gp/product/B01MYGIR2C/ref=ppx_yo_dt_b_asin_title_o08_s00?ie=UTF8&psc=1
Spade Connector 2	1	\$ 5.92	https://www.amazon.com/gp/product/B06ZY2SZXS/ref=ppx_yo_dt_b_asin_title_o09_s00?ie=UTF8&psc=1
2 Gauge Lugs	1	\$ 12.29	https://www.amazon.com/gp/product/B073Y6DJVL/ref=ppx_yo_dt_b_asin_title_o00_s00?ie=UTF8&psc=1
Bus Bar	1	\$ 35.99	https://www.amazon.com/gp/product/B07FPN71NL/ref=ppx_yo_dt_b_asin_title_o00_s01?ie=UTF8&psc=1
Power Meter	1	\$ 22.99	https://www.amazon.com/gp/product/B07T9LV66P/ref=ppx_yo_dt_b_asin_title_o01_s00?ie=UTF8&psc=1
Push Buttons	1	\$ 14.09	https://www.amazon.com/gp/product/B07D338MDL/ref=ppx_yo_dt_b_asin_title_o02_s00?ie=UTF8&psc=1
LED's	1	\$ 14.99	https://www.amazon.com/gp/product/B073TFJXM8/ref=ppx_yo_dt_b_asin_title_o05_s00?ie=UTF8&psc=1
Speakers	1	\$ 35.93	https://www.amazon.com/gp/product/B00BF6HX9E/ref=ppx_yo_dt_b_asin_title_o05_s00?ie=UTF8&psc=1
30A Quick Connects	1	\$ 13.60	https://www.amazon.com/gp/product/B07H81ZSNS/ref=ppx_yo_dt_b_asin_title_o06_s01?ie=UTF8&psc=1
Radio	1	\$ 60.99	https://www.amazon.com/gp/product/B00V6Y7O2/ref=ppx_yo_dt_b_asin_title_o06_s03?ie=UTF8&psc=1
Inverter	1	\$ 66.60	https://www.amazon.com/gp/product/B0007911Y8/ref=ppx_yo_dt_b_asin_title_o06_s03?ie=UTF8&psc=1
PowerPole Connector	1	\$ 23.99	https://www.amazon.com/gp/product/B077VWXXYG/ref=ppx_yo_dt_b_asin_title_o06_s03?ie=UTF8&psc=1
2-4 Gauge Quick Connector	1	\$ 13.99	https://www.amazon.com/gp/product/B01KHQR0K4/ref=ppx_yo_dt_b_asin_title_o09_s01?ie=UTF8&psc=1
Power Strip	1	\$ 23.99	https://www.amazon.com/gp/product/B01N7IPGHL/ref=ppx_yo_dt_b_asin_title_o03_s01?ie=UTF8&psc=1
Switch Plate	1	\$ 45.99	https://www.amazon.com/gp/product/B076P596P5/ref=ppx_yo_dt_b_asin_title_o09_s01?ie=UTF8&psc=1
Battery Clamps	1	\$ 15.95	https://www.amazon.com/gp/product/B00NQ7U982/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&psc=1
22-2 Shielded Cable	5	\$ 0.18	https://www.homedepot.com/p/Southwire-By-the-Foot-22-2-Gray-Stranded-CU-CL3R-Shielded-Security-Cable-57572199/204725140