

Disclaimer!

You do this at your Own Risk!

How to make a 12v to 7.4v battery conversion for a Canon EOS DSLR Camera. This allows you to power your EOS using a 12v source such as a Skywatcher Powertank/Leisure battery, and ensures there's no need for battery swaps mid-imaging run. If you buy a pre-made one then these are ~£40 from Astronomiser etc.

Parts, Tools and Instructions are detailed below.

Note: I've put Maplin codes, links and prices for some of the parts for reference, but they can probably be obtained elsewhere cheaper. e.g. eBay, Farnell, RS Components etc.

Note 2: This is a guide only and I take no responsibility for people breaking their camera!

Parts List:

- Velleman K1823 1A PSU (Maplin VE58N) £9.99
- Plastic Enclosure 75x51x25 (Maplin KC92A) £2.99
- 12v Switch (Maplin N84JZ) £1.99
- 3mm 12v Red LED (Maplin CJ66W) £0.74
- 3mm LED holder (Maplin N85AX) £1.34
- 20mm fuseholder (Maplin CT90X) £1.05
- 20mm fuse 1A (Maplin GJ90X) £0.21
- TO220 Heatsink (Maplin KU50E) £1.14
- Canon 1000D LP-E5 Battery (eBay) £2.19
- 12v Cigarette Lighter Plug & Lead (eBay) £2.75
- Wire ~£0
- Zip ties ~£0
- TOTAL: £24.39

Tools:

- Soldering iron
- Solder
- Glue gun
- Drill
- Stanley knife
- Wirecutters
- Small philips screwdriver
- Multimeter

Instructions:

- Open K1823 kit and complete using enclosed instructions, apart from lying the large capacitor down on its side - so it fits into the case.
- Place heatsink onto TM317, will have to bend the component back slightly so it fits in the case.
- Drill one hole in either end of the plastic enclosure for wires in & out.
- Make holes in enclosure lid for led holder, fuse holder and switch.
- Fit items into lid.
- Cut end off cig plug.
- Measure & cut wires, solder up according to wiring diagram.
- Carefully open LP-E5 battery case & remove battery, but retain contacts. (Can cut down small pcb just to leave contacts, if easier)
- Make a small hole in the battery case for wire to come out of.
- Solder up output wires from K1823 to contacts inside battery case.
- Check everything including all soldered joints.
- Insert fuse into fuse holder.
- Insert cig plug into a 12v source (e.g. Powertank).
- Use multimeter to check output voltage.
- Adjust potentiometer on K1823 board to get correct 7.4v.
- Switch everything off.
- Glue K1823 board into enclosure.
- Fit tie-wraps both sides of wires coming out of enclosure for strain relief.
- Glue battery case back together.
- Switch everything back on & re-check output voltage.
- Screw lid onto enclosure.
- If ok, then insert battery into camera and turn on.

NB for soldering try Mechanic Solder Paste it is a low temp melting solder so goes on easier and looks much neater wink emoticon