



Accu2 Petzl Disassembly

Disassembly, teardown of the Petzl Accu2 for Vario and Duo S headlamps, in order to replace Li-Ion batteries.

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INTRODUCTION

The Accu2 is build around two 18650 Li-Ion batteries. When they wear with time and the lighning timiing becomes too short, it's time to replace the batteries to get a new working Accu2.

Beware, the conception is very XXIth century compliant : you're not invited to get in. Despite this, with some patience and versatility you'll get it done.

Finally some advisory foreword : you're going to manipulate a device with powerful Li-Ion batteries inside which are not or very few limited in current intensity. This means that in case of a short, you may drain up to 30 A from on battery cell ! Enough to hurt you badly, be cautious!

Warning: Batteries can be dangerous. Exercise extreme caution when following this guide.

Step 1 — Disassembling the top



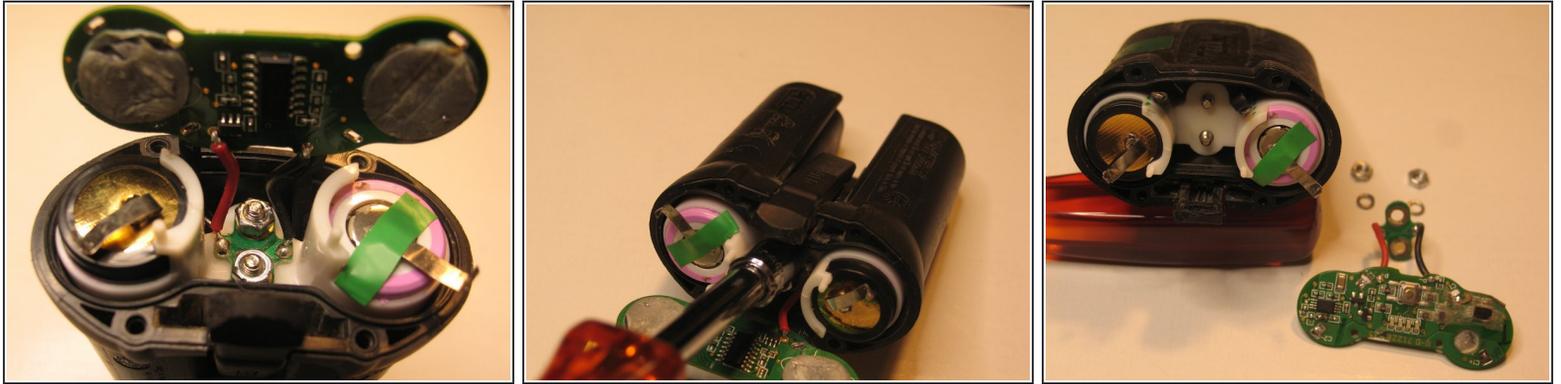
- The top is maintained by four slotted screws... with a nice central tip !
- To unscrew them, get an old slotted screwdriver in which you'll make a slot in the center of the blade (see picture 2).
- Open the lid carefully, taking care not to damage the seal.
- You can heat the cover a little with a hairdryer to soften the adhesive of the foam pads located between the motherboard inside the cover.

Step 2 — Unsoldering the mainboard



- Unsolder the four connections of the batteries wires, marked C1+, C1-, C2+ and C2- on the board.
- Be aware that they are soldered with a great amount of tin, you'll have to remove a good quantity of it. Beware not to heat too much the components around risking to unsolder them !
- The P+ and P- wires aren't to be unsoldered. You can do this if you want though.

Step 3 — Removing the board



- Lift up gently the main board from the opposite side of the wires to gain access to the two hex 6mm bolts that maintain the wires.
- Using a hexagonal socket unscrew the two nuts. Be careful to recover the two split washers

Step 4 — Removing the main body



- The body is maintained in the housing by the two wires that connect to the lamp.
- You'll have to unscrew them. Get the hex socket with its square only partially fitted in, so that the socket is long enough to unscrew.
- Don't unscrew totally, begin with only 4 to 5 millimeters (see picture 2)
- Heat the bottom of the housing to soften the glue which is at the bottom of the batteries. You may use an hairdryer for 3 to five minutes to achieve that.
- Now you can push on the wires, and pull on the bolts that you can have screwed back a little bit.

Step 5 — Remove the 18650 batteries from the body



- Take off gently the connecting strips along the batteries. You'll have to use some force to dismantle the electric soldering at the batteries ends. Try to keep the maximum length of the strings in order to facilitate the remounting process.
- Mark the routing of the strings and the polarity of the batteries on the body (one with the + on top on on the bottom)
- You can notice a small white box in the middle of the strings. It's a thermal protection with a switch inside that will open above 75°C.
- On the way back, prepare your new batteries in soldering the wires on them (mind the position on the batteries). Get the thermal paste back in place to ensure good contact.

To reassemble follow the instructions in reverse order

- To rebuild the welding strip connection to the batteries, the best is electrical soldering. If you can only iron solder, be really careful not to heat the battery for a too long time.
- When inserting the batteries block into the housing, make sur it fits well and the connection strings and the thermal switch fit well and do not block.
- Before closing the top, make sure all the protection foams are in place and that the gasket is clean. Finally tighten the screw without exagaration, remember the force you applied unscrewing them.