Jerking LED fix in 10000mAh Mi Power Bank 2S

Battery level LED jerking without charging in your power bank may be something more than dirty USB cable connector.

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INTRODUCTION

What to do if Xiaomi Mi Power Bank 2S suddenly does not charge phone nor charge itself and only action is faint battery level LED jerking? This may be answer.
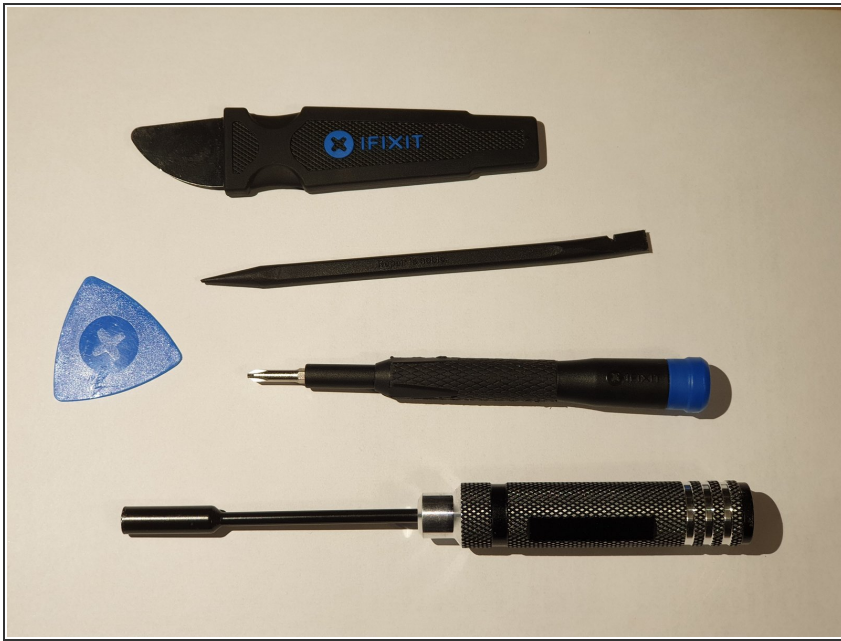
Kid complained about his USB power bank. It refused to charge phone nor charged itself. On cable connecting and button pressing power bank responded with faint random battery level LED jerking. No rattling inside or noticeable physical damage. Started to think about too discharged battery when charging controller can refuse to charge. The only option left was disassembling to see what happened.
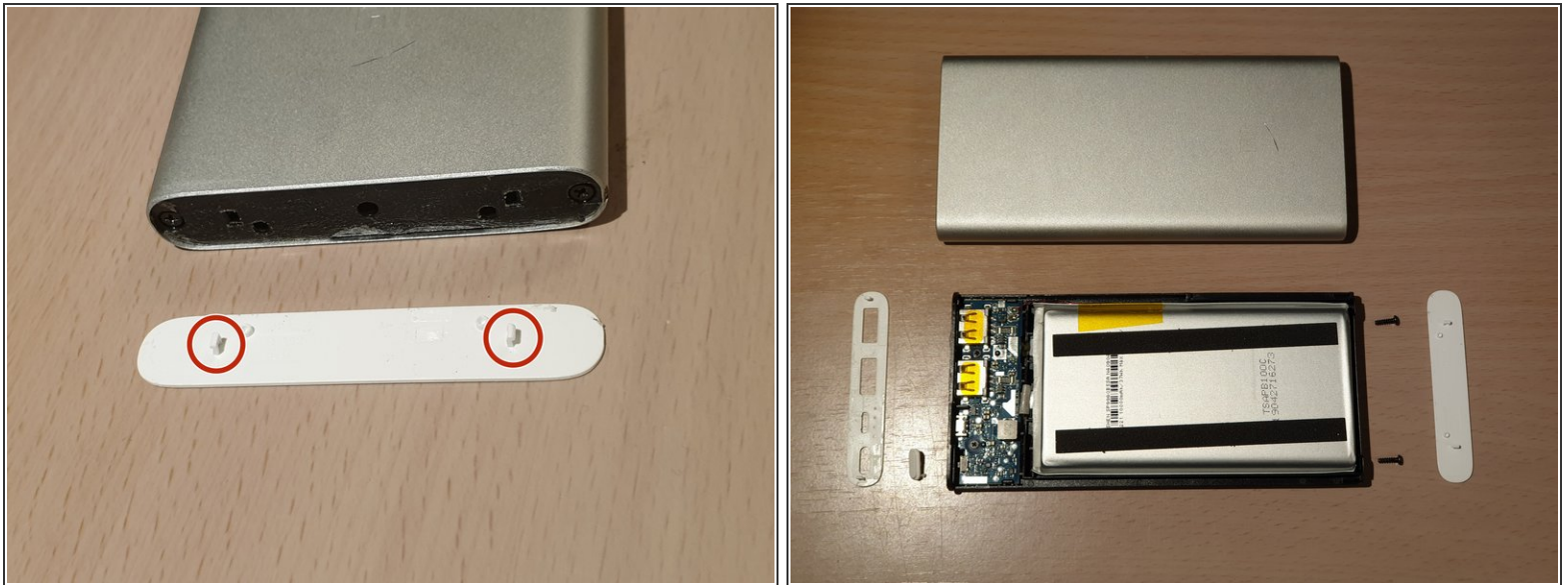
🔧 TOOLS:

- Essential Electronics Toolkit (1)
- TS100 Mini Soldering Iron (1)
- 60/40 Leaded Solder (1)
- Paste Flux (1)

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Step 1 — Tools used in disassembly

- Mi power bank disassembling require semi-soft and flat prying tool for back plate removal and Phillips #0 and Phillips #000 size screwdrivers. And some thin and flat metal strip to loose internal frame if needed. iFixit Essential Electronics Toolkit cover all these things.

- Nut driver in picture usually is not required. I used it to put bent aluminium case corner back in shape when internals was pulled out.

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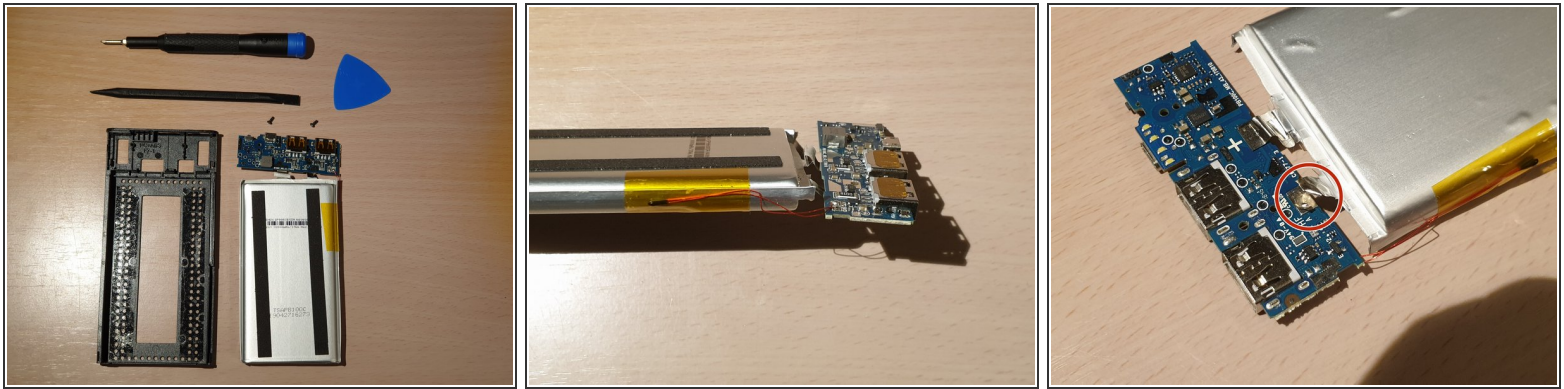
Step 2 — Disassembling

- Top and bottom covers are glued with double sided tape. Insert prying tool at middle of bottom cover with model name. Slide it around cover to loose glue.

⚠ Bottom cover have two small fixing pins at back side near both ends. Carefully press one of them with prying tool in center direction to free this cover side. Repeat the same in other cover side and remove cover.

- Remove two screws at corners with Philips #0 screwdriver.

- Turn power bank with sockets to bottom direction. Shake and pull internal frame out. If frame stuck, press several times at middle of case in all case length. Jimmy knife or thin metal stripe can be used carefully to free front side plate from outer case.

ⓘ My device had slightly bent corner at top side near button as result of falling damage. It blocked internal frame removal. It required glued front cover and button (have same fixing pins as bottom cover, be careful) removal too. Case shape was restored with nut driver. It finally freed internals and I managed to pull them out from case.
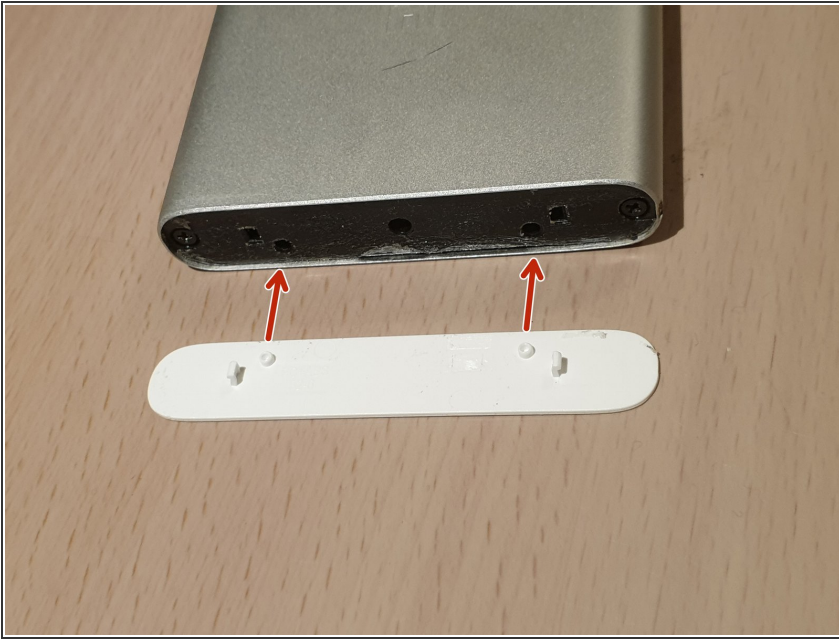
Step 3 — Separate components from frame

- Charging controller circuit board is locked to frame with two little screws and two frame fixing pins at sides. Remove screws with Philips #000 screwdriver. Carefully bend fixing pins aside to loose board.

- Battery is glued to frame with weak glue. Use prying tool or plastic card to loose battery from frame.

- ⚠ Pay attention to temperature sensor which is attached to one battery side with kapton tape. Don't tear it off on battery removal.

- ⓘ After component removal from frame failure cause became clear. Negative battery terminal teared from controller board. Probably got stressed on assembling and teared later on impact against pavement or hard floor. Battery still had 4.1V (nearly full).

Step 4 — Fix teared battery terminal

- Remove teared battery terminal piece from controller board battery pad. Or flatten it if removal is not possible. Put solder blob over pad.

- Put solder on end of battery terminal strip. Keep temperature between 250..270C degrees.

- ⚠ Lithium batteries degrade in heat. Put solder on battery terminal strip fast as possible.

- ⚠ Bend battery terminal strip with tweezers in slight "U" shape. It will put less stress on on strip while bouncing around.

- Solder battery terminal to controller board pad.

- ⓘ Soldering teared battery terminal back fixed jerking LED issue. Power bank now can charge phone and itself again.

Step 5 — Assembling

- Assemble power bank back in reverse order. Install controller plate and battery back in frame.

⚠️ On battery installing try to put it in position where terminal strips are not stressed. It may spare next device disassembly on accidental drop on the ground.

- Insert assembled internal frame in outer case. Screw it to with two #0 screws. Put back cover in place.

⚠️ Back cover have only one possible direction. It have two bumps at back side and outer case bottom have two holes for them. See the photo.

Xiaomi Mi Power Bank 2S appeared easy for basic repairs. Glued parts are easy to remove and they stick back just fine. Internals are fixed by screws. Other Mi USB power banks from 2 line (2c, 2i) are built in same way.

Described USB power bank have good charging capacity and is easy for everyday use. Keep in mind that design is not rugged and battery terminals inside are thin metal strips. Try to avoid dropping it on hard surfaces. Kid admitted that he droped his power bank several times - hard to hide dents at outer case corners :)

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