JBL Charge 3 Battery Upgrade

Changing the oem battery into 18650 li-ion cell Upgrade the capacity

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INTRODUCTION

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Upgrade the capacity

TOOLS:

- Phillips #0 Screwdriver (1)
- Portable Soldering Iron (1)
- Voltmeter (1)
- Multipurpose Glue (1)

PARTS:

- JBL Charge 3 Replacement Battery (1)

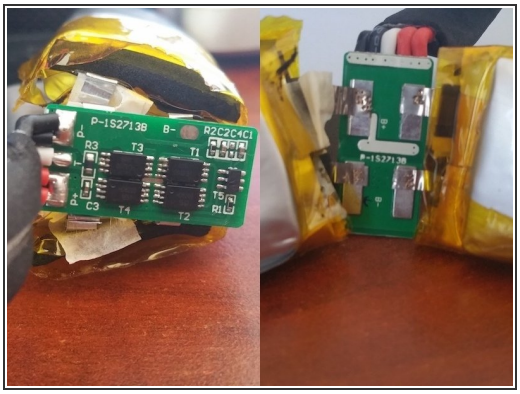
Step 1 — Disassemble the Charge 3 as shown in youtube

- Dissemble the JBL Charge 3 is relatively similar to the Xtreme and also by follow Youtube (just search keyword 'Charge 3 Dissemble')
- Can follow this link to get the basic disassembly!
- Note: no need to take out the two speaker tweeters.

Step 2 — Taking out the Bass Radiators

- To get the battery out, you have to take out the right side radiator.
- - Notice there is two plastic latches, you need to lift both up using some small metal part as the leverages
- - While both latches are up and hold the speakers, trying to turn the radiator anti-clockwise
- - This can be hard as first but no worry and there is no cable connect to the radiator
- - As you turn about 1.5cm (or can not turn further), just take out the radiator cap

Step 3 — Taking out the Battery Pack

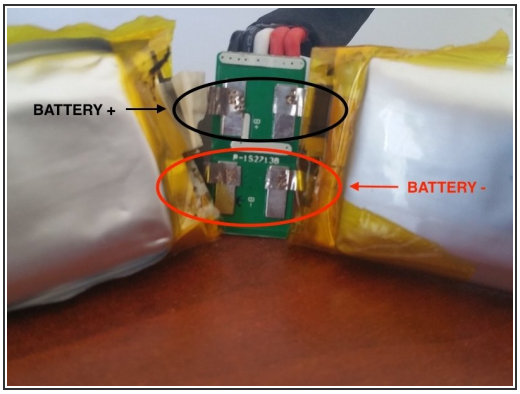


- Disconnect the cable connect to the battery to the board inside the speaker before taking out the battery
- The JBL battery is Lithium Polymer
- Brand: GreatPower
- Model: GSP1029102A
- Rating: 3.7V 6000mah 22.2 Wh

Step 4 — Replacing the battery (DECISION)

- **Option A**: is to purchase the exactly same battery then replace it. It is straight forward. No explain needed.
- **Option B (my choice)**: is to replace with the readily available Li-ion 18650 to save the time order from China and can be assured of the capacity.
- I decide to pick up 3 cells from Panasonic 3400mah NCR-18650B. Two un-protected and one protected.
- **WARNINGS:** make sure all the battery is same voltage before replacing in the speakers | CAREFUL not to short circuit them. Maybe balancing and equalize them.

Step 5 — Replacing the battery (OPTION B)



- You need to wire them in Parallel (i.e. 1s3p pack).
- Two unprotect will be wired to the JBL BMS board. I solder the black wire to the B+ and the red wire to the B-.
- For easier next time replacement, I only connect the battery by twist the color coded wires together and wrap with electrical tape
- One unprotected cell will be in the original battery compartment inside the cell holder (as shown) connect to one side of the BMS board.
- Two cell will be inside the speaker compartment behind the Bass Radiator. The unprotected one (right hand side radiator) will connect directly to the BMS board
- The protected one (after I open and rearrange the PCB of the battery for better fit into the speaker compartment) will connect parallel to the protected one from other side of the bass radiator.

Step 6 — Replacing the battery (Illustrated Pics)



- For your reference. After Finished!
- **NOTEs:**
- I put a few pink foam to make sure no rattle of wires, secured everything and heats isolation (if any :))
- The cell holder is glue to the battery compartment by silicon.
- The cells in the battery compartment is just right side and just barely fit so will stay in place without any glue.

Step 7 — Re-assembling the speakers and FINISHED !!!



- Putting everything back in reverse order.
- **Careful** with the screws, they can be easily stripped.
- For a peace of mind, I use plumping tape to ensure 100% waterproof as after all we may have temperer/opened the original speaker seals.
- **Note:** make sure everything complete seal, otherwise you will hear the rattles noise from the speakers when you play heavy bass songs.
- GOOD LUCK AND HAVE FUN !!!

To reassemble your device, follow these instructions in reverse order.