Brookstone Big Blue Party/360 Speaker Battery Replacement

Replacing factory battery with a new high capacity unit. Additional teardown.

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INTRODUCTION

Know your speaker and battery type!

Original Big Blue Party battery has 2 prong connector.

Big Blue 360 has three prong connector.

Replacement battery is no longer being sold due to the recall issued on the speaker by Brookstone. At this time, there is no information on the root cause of the recall.

More recall information: https://www.cpsc.gov/Recalls/2018/brooks...

TOOLS:

- Phillips #2 Screwdriver (1)
- Small Needle Nose Pliers (1)
- Wire cutters/side cutters (1)
- Utility Scissors (1)
- small piece of tape (masking, electrical) (1)
- Soldering Iron (1)

Optional

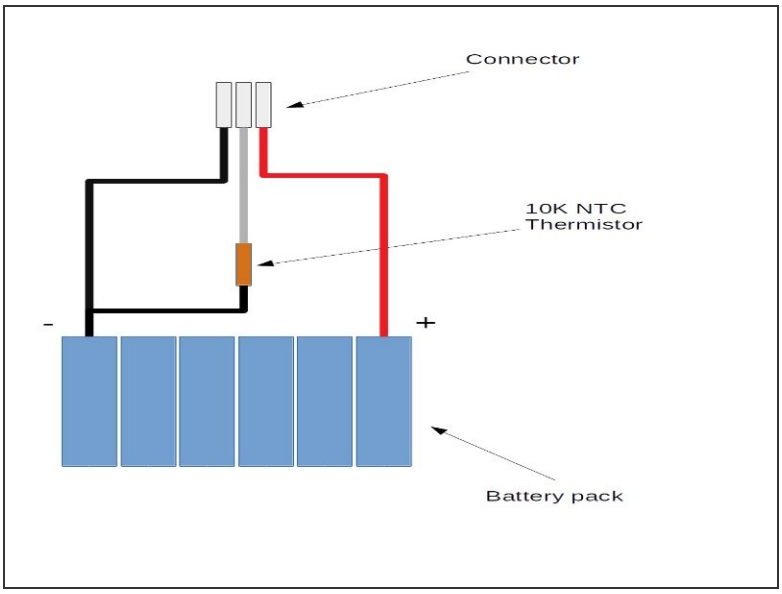
- Flathead Screwdriver (1)

PARTS:

- 11.1V 7000MAH 3S2P HIGH CAPACITY LI-ION BATTERY, PCB PROTECTED (1)
- THERMISTOR NTC 10KOHM (1)

360 model only

Step 1 — Battery description



- **The battery** used in these speakers is 11.1V 4400 mAh Lithium Ion 3S2P 18650 battery pack. It consists of 6 cells total. The battery pack is protected by an internal PCB board. You can build your own, but I highly recommend purchasing a pre-assembled pack made with high quality brand name cells. Here is one.
- **The original Big Blue Party connector** is 2 pin JST-XH 2.54mm 2P. There are many places where you can obtain one. You can even get it on eBay with attached wire leads. **Pay attention to the wire polarity!** Many vendors sell these connectors with wires attached in reverse from Big Blue battery. You can always reuse your old one though.
- **The original Big Blue Party connector** can be attached by simply soldering the wire leads to the battery wire lead. **Once again, pay attention to the polarity!**
- **The Big Blue Party 360 connector** is 3 pin JST-XH 2.54mm 3P. There are many places where you can obtain one. You can even get it on eBay with attached wire leads. **Pay attention to the wire polarity!** Many vendors sell these connectors with wires attached in reverse from Big Blue battery. You can always reuse your old one though.
- **The Big Blue Party 360 connector** is much more complicated. You will need 10K NTC thermistor in order to make it work like the original battery. The recommended one is an axial mount type. Once again, these are carried by many vendors, here is one of many. You will need to attach the connector to the battery pack as follows (see attached diagram):
  - Positive (red) wire on the connector will connect directly to the positive (red) wire on the battery pack.

- Middle (white) wire on the connector will connect to the one side (doesn't matter which one) of the NTC thermistor. Other side of the thermistor, will connect to the negative (black) wire on the battery pack.
- Negative (black) wire on the connector will connect directly to the negative (black) wire on the battery pack.

Step 2 — Tools

- Come prepared

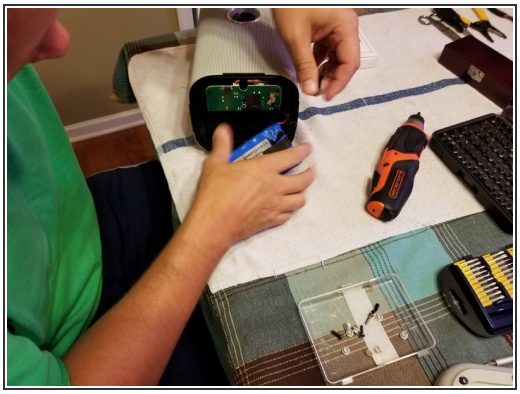
Step 3 — Remove screw covers

- Use a thin flat screwdriver to pry these out.

Step 4 — Remove 8 screws from the bottom cover

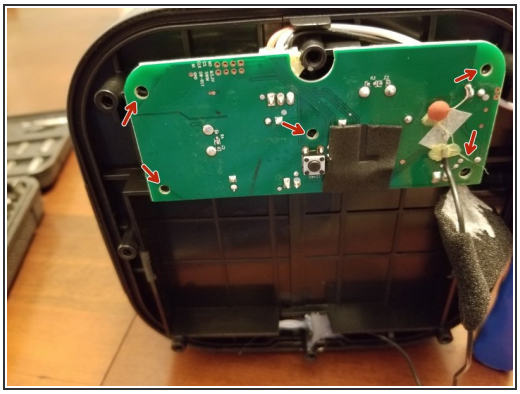
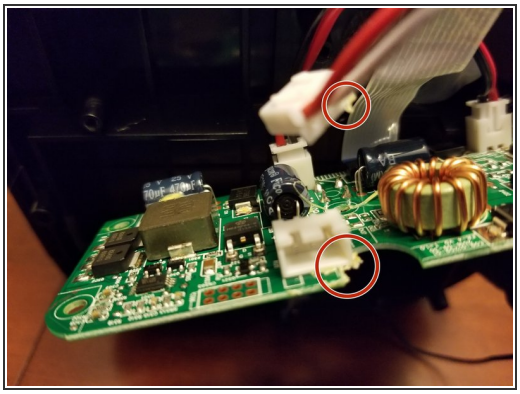
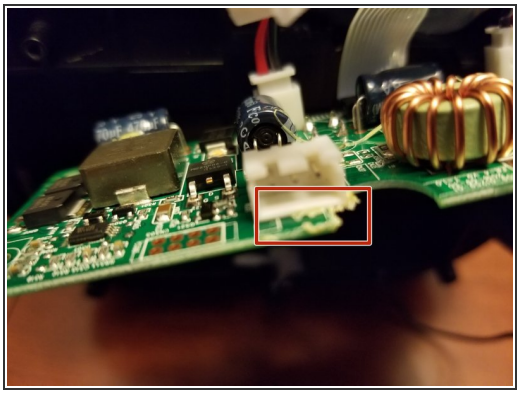
- Remove the screws.
- Pull the cover off

Step 5 — Remove old battery



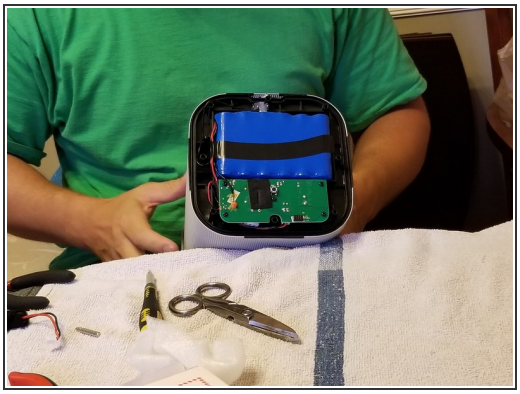
- Pull off the tape
- Remove the battery
- Use small pliers to unplug battery connector from the circuit board.
- Carefully guide the wire out from under the circuit board.

Step 6 — Optional - Big Blue 360 Update

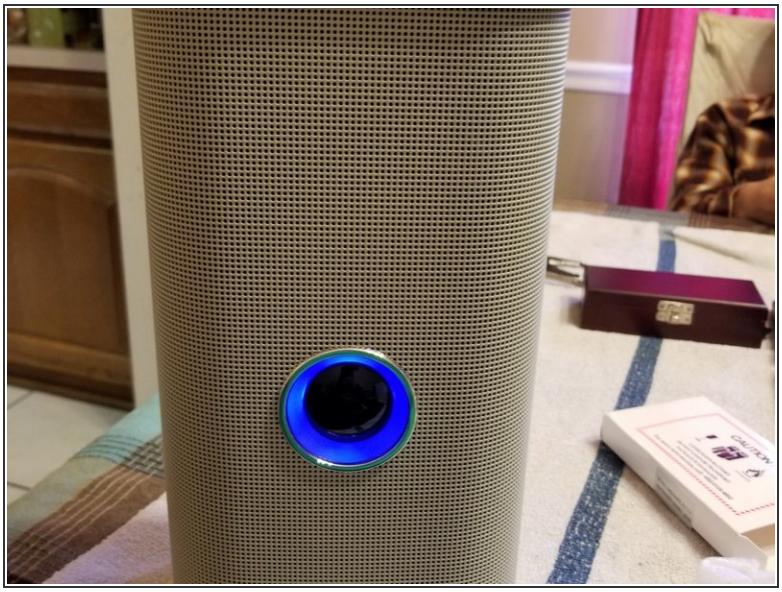
- 360 has a connector that may prove more difficult to remove
- Remove circuit board by removing 5 phillips screws.
- Pull the circuit board back.
- The connector is glued in place (Why????). I used a thin flat screwdriver blade to carefully scrape the glue off. But you may have to hit it with a heat gun if it doesn't loosen up.
- Note, that this connector has three prongs. You will need to get a battery specifically made for Big Blue 360.

Step 7 — Install new battery



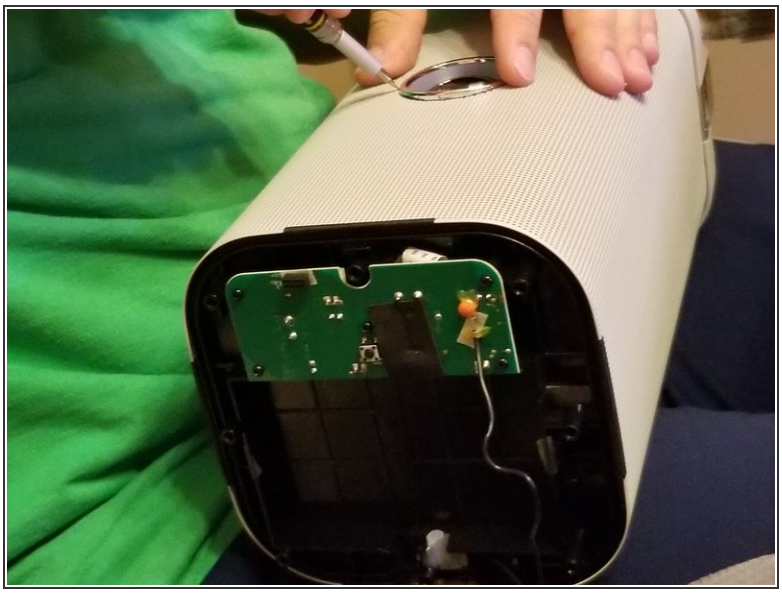
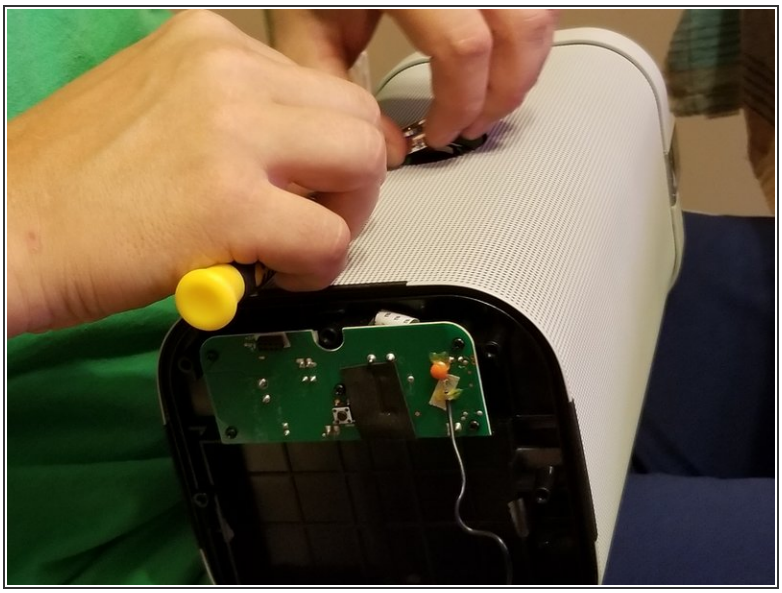
- Insert new battery into compartment
- Use electrical tape to hold it down
- Guide the wire under the circuit board to the connector
- Connect new battery to the circuit board.

Step 8 — Install the cover



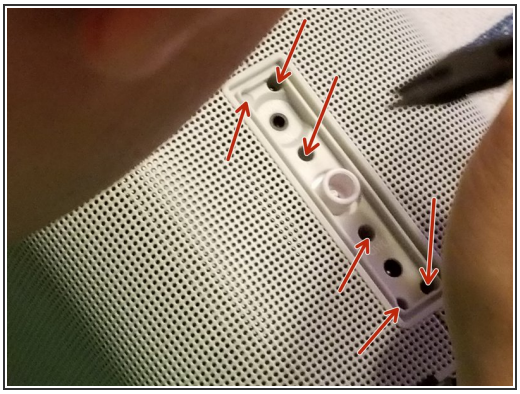
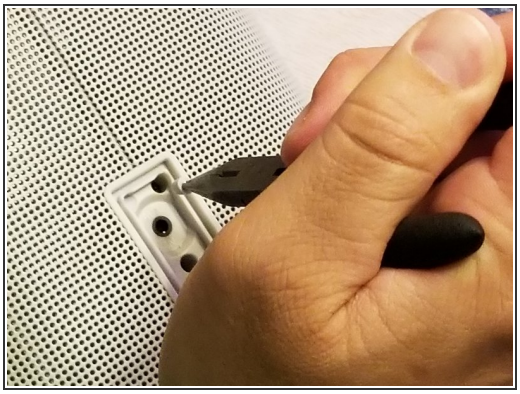
- Install the bottom cover
- Secure with the screws
- Put the rubber plugs back in
- Turn the speaker on to test it

Step 9 — Optional - further tear down

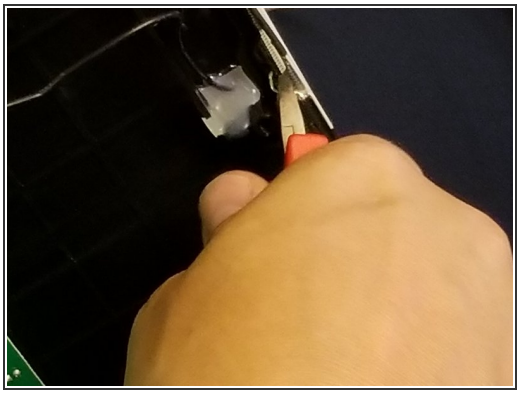
- Complete steps 1 - 4
- Remove the power button bezel by prying it off with a small flat head screwdriver

Step 10 — Connector panel removal

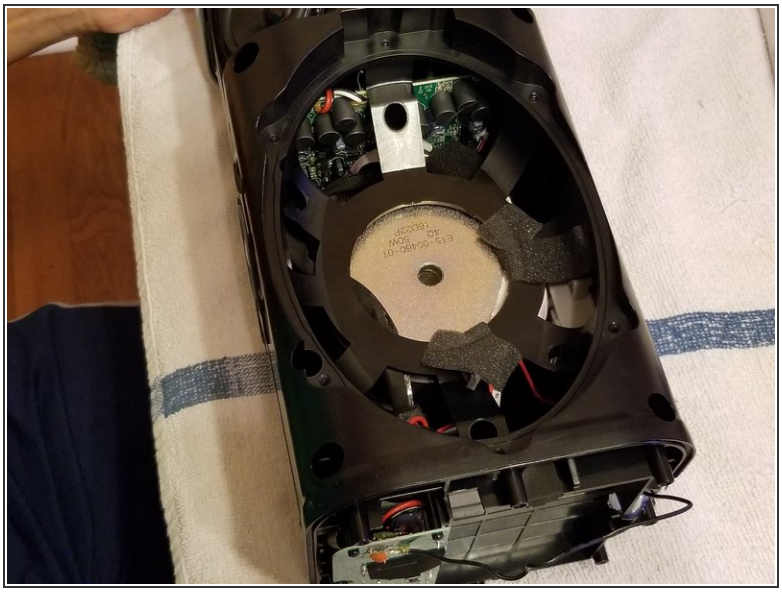

- Remove 6 screw covers from connector panel. Note that 2 covers in the center are longer than those in the corners.
- Remove 6 screws holding the connector panel with a small phillips screwdriver.
- Remove the cover.

Step 11 — Remove the grill



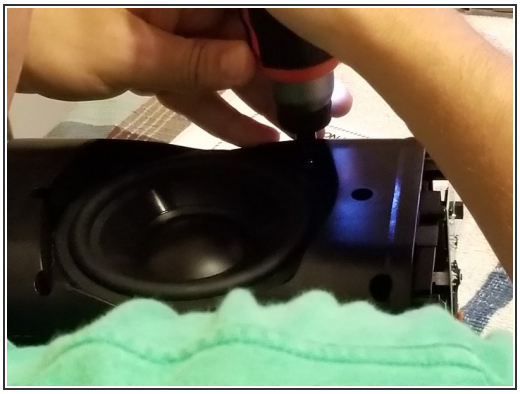
- There is a wire soldered to the grill on the bottom. You will need to cut or desolder that wire in order to remove the grill
- Slide the grill off
- Wear it on you head

Step 12 — Remove woofer membrane

- Remove 6 phillips screws holding the membrane
- Pop it out

Step 13 — Remove the subwoofer

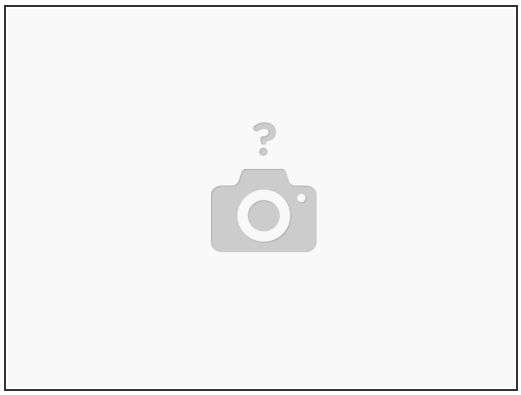


- Remove 4 phillips screws holding the subwoofer in place.
- Push it out from the back.
- Unplug it from the amplifier board.

Step 14 — Removing tweeter (optional)

- 4 tweeters are all wired together and soldered to the amplifier board. You will need to cut or desolder the wire if you need to remove them.
- Remove 4 phillips screws holding the speaker in place.
- Remove the speaker.
- Note that the speaker mount has cutouts to provide screw clearance. So they go in only one way.

Step 15



- You can continue the tear down on your own from here. Rest of the screws are exposed and easily accessible.
- When putting the grill back on, you will need to solder the wire that was disconnected during dissassembly back on.

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