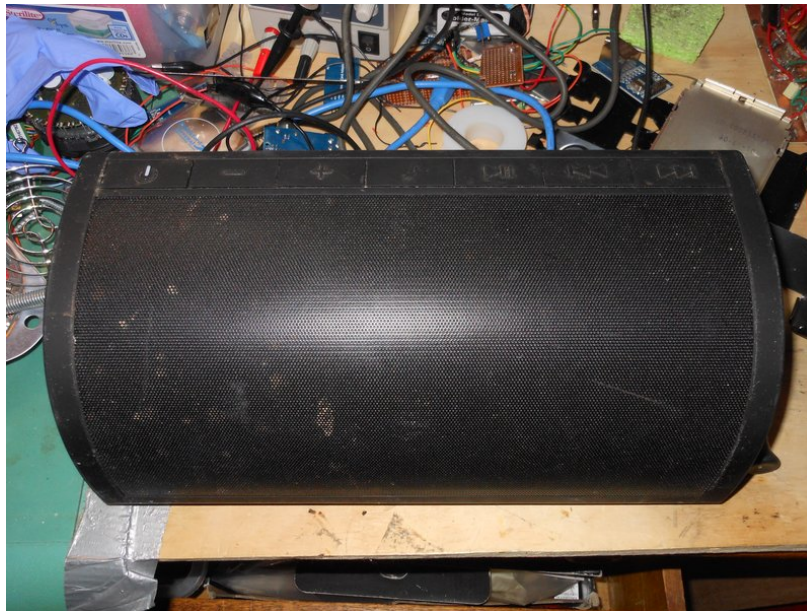


## NYNE Bass Bluetooth Speaker Repair

### 1 Overview

User reports Bluetooth speaker is broken. Unit powers on but is not responsive. Power light, will light up but nothing else. Unit was damaged apparently by rain.

### 2 Work Log



I dismantled device. You must remove the grate on the speakers to access all screws. I didn't do this at first, and just bashed through a few screw supports. It's OK, this repair is for family, not a stranger.

After opening device, I unscrewed all boards, and connectors. **I disconnected battery. After arranging board on table, I reconnected battery, and this seems to have fixed the speaker.** As the battery is internal, it appears that it was necessary to do a full power on/off of the device to get it working. As right after I powered it on, this second time, it made a sound. Before disconnecting the battery, no sound was made when powering (if my memory serves right). I connected aux audio in and it worked. bluetooth also works OK.

Some more waterproofing of the inside of this device is in order here. They market it to outdoor enthusiasts, but it can't handle water.

Capacitors are heating up on this board. There are four 220 caps near the speaker and sub outputs that have heated up. High ESR? I've never seen warm caps before... (<https://electronics.stackexchange.com/questions/51645/should-electrolytic-capacitors-get-hot> seems to say that caps only heat when current is going through them. So usually, they won't heat up, unless there is some ripple back and forth, alternately draining and powering the cap. These being AC speakers, I suppose that explains it.

*“As a point of general reference, it is possible for an electrolytic capacitor to heat up even during normal operation, if the capacitor is exposed to ripple currents. This is a situation where the capacitor is rapidly charged and discharged, either partially or completely. For example, on the output of a rectifier, or in a switching power supply. Electrolytic capacitors have ripple current specs for just this reason.”*

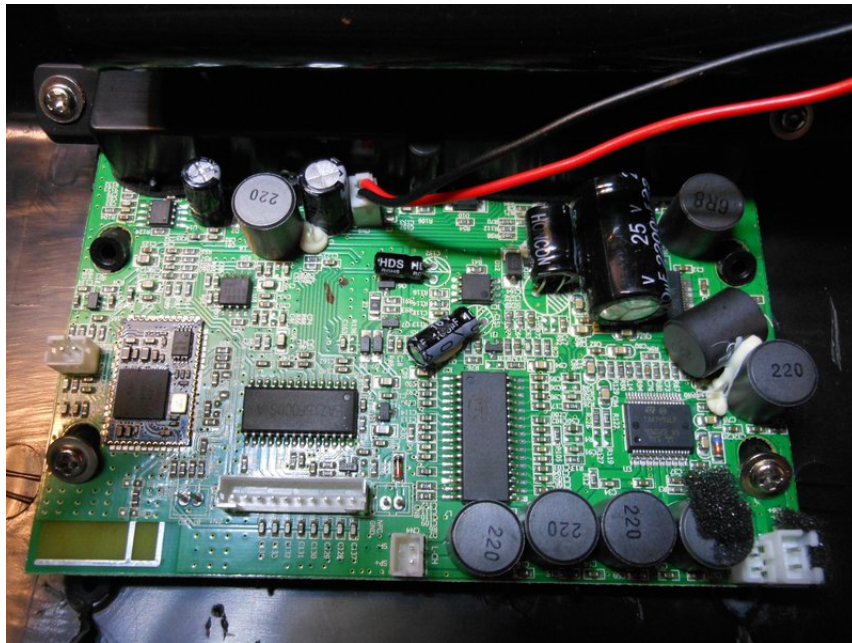


Figure 1: main board, note the rf module. The wire going off picture is for the 18650 Lithium Cells.

Cap brands on this board, are questionable. I would not shell out the \$150 this device demands new if they are going to stock no-name caps on the

board. Looking up Honcon now...(https://www.gmdu.net/corp-664938.html)  
Seems to be a small Hong Kong factory. Not giving me confidence about  
this speaker.

The sound quality is sub-par. I have a Bose Cinemate (original) next to  
me that I repaired this same week. That has a decent sound (although to  
be fair the price is a difference of 8:1 between the Bose and Nyne).

The quick user guide is 15MB. The datasheet is 1MB. Ha. Data sheet  
is a f'ing ad. Not a data sheet at all. What an insult. The quick start is  
the actual user manual. There is no real user manual. Oh, but there's a  
brochure. Shows up on bluetooth as NYNE Bass.

Some more pictures of the chips and I'm returning this back to the user.  
Simple fix.

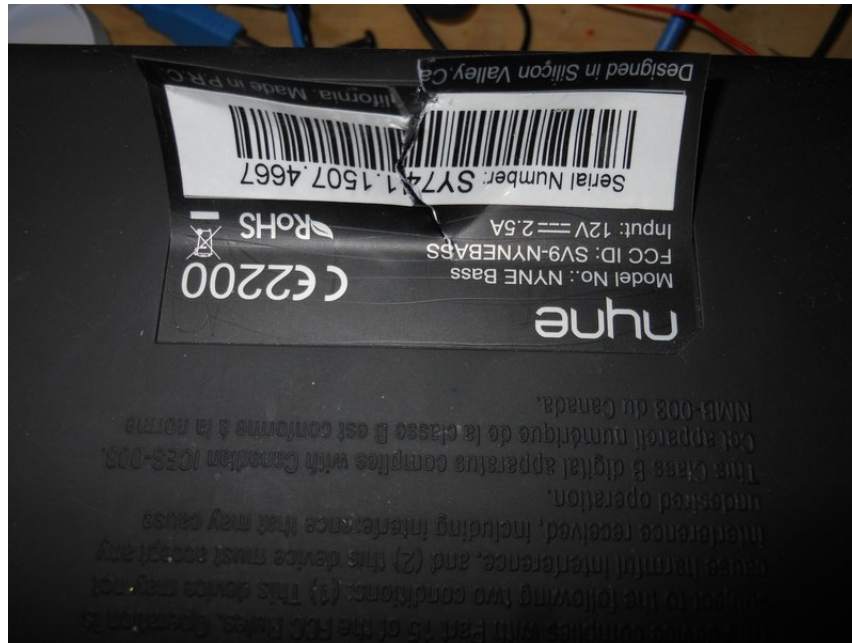


Figure 2: Imagine working your way to Silicon Valley just to design a blue-  
tooth speaker.