

Replacing the electronics panel and Beaglebone

When in doubt, don't proceed. Get in touch with Dutch & Dutch support via +3110 787 0863, ask for Sergio van Vliet.

Introduction

Replacing the electronics panel is a moderate task. Please be careful with your tools, sharp objects can easily damage the speaker. Start with an empty desk, have a soft cloth ready and be careful with belts, bracelets and rings.

Required tools

- A soft cloth
- Cordless drill or screwdriver bit holder
- Torx bit 25

Materials

- New electronics panel

Step-by-step guide

Part 1: Loosening the bottom panel

1. Prepare your table by putting a soft cloth on top of it. Make sure it is made out of a material that won't damage the baffle of the speaker.
2. Put the speaker on the cloth, with the baffle facing down.
3. Unscrew the 6 bolts with a Torx 25 bit that holds the bottom panel. Put the bolts or screws in a container to keep them safe.

Part 2: Removing the bottom panel

1. Carefully remove the bottom panel a little bit. Don't pull to hard, because the speaker is still connected to the panel. Pull it enough until you are able to put your hand through the created gap.
2. The panel is connected to the speaker with 3 cables:
 - a. LED cable
 - b. Middriver – Tweeter speaker cable
 - c. Subwoofer speaker cable
3. You can disconnect the cables by doing the following:
 - a. Both speaker cables are connected to the amplifiers with a connector that has a latch. It looks like the image below. Slightly press the latch and the cable should come off.
 - b. For the LED cable, you can just slightly pull the cable towards the opening of the connector (upwards) and it should come off.
4. When all 3 cables are disconnected, you should be able to remove the bottom panel safely. It should look something like Figure 2.

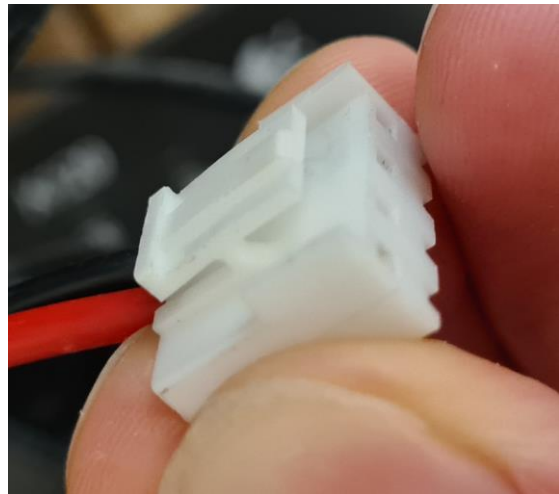


Figure 1 - Speaker connector

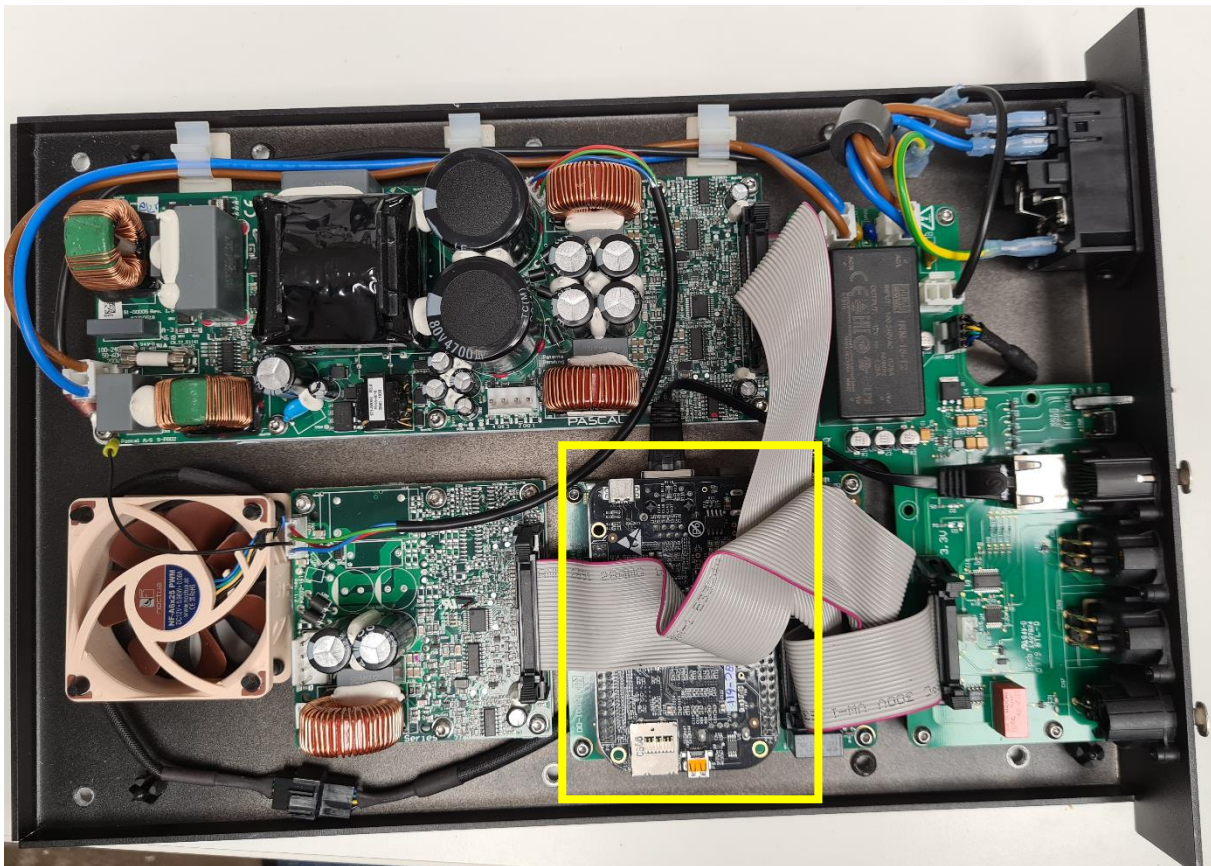


Figure 2 - Electronics panel

Part 3: Replacing the Beaglebone Black

1. The Beaglebone Black is the module that is connected with a ethernet-patch cable (indicated in yellow in Figure 2). It is located on the DSP PCB (the square looking PCB). Before you can remove the Beaglebone, you would have to disconnect a few cables:
 - a. The ethernet-patch cable (on the Beaglebone end only)
 - b. The ribbon cable connected to the small amplifier
2. After disconnecting those 2 cables, your electronics panel should look like the image in Figure 3.
3. Now, removing the Beaglebone Black can be a little tricky. It is firmly connected to the PCB and it will require some patience and small amounts of force.

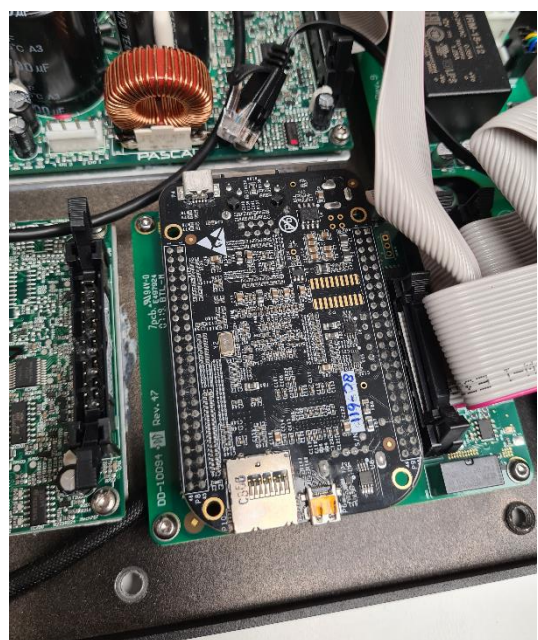
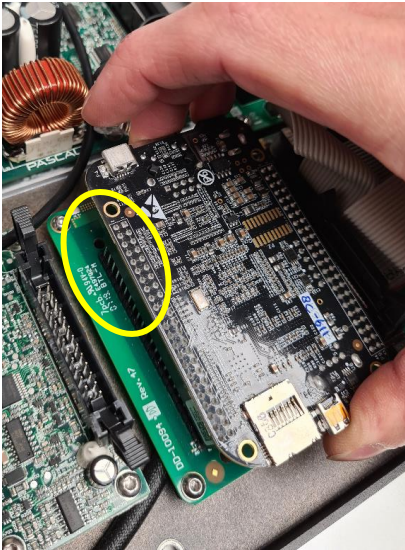
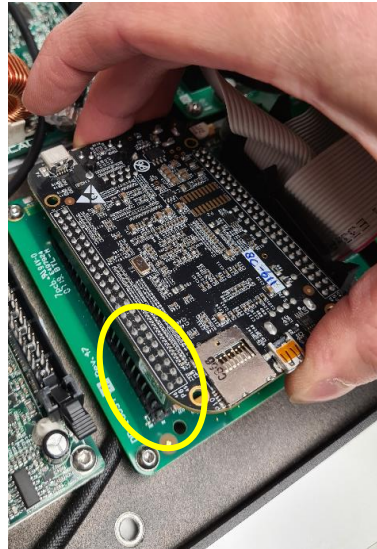
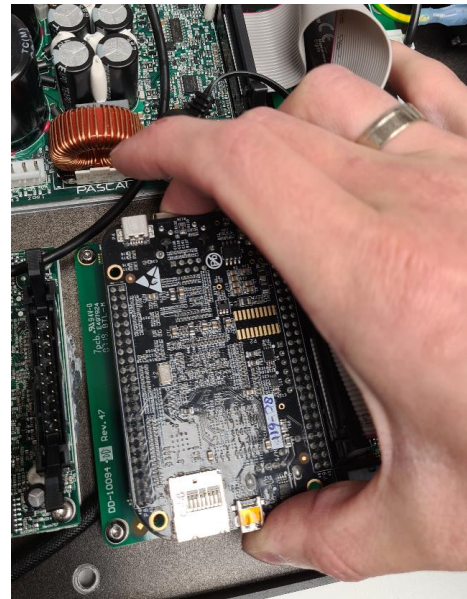
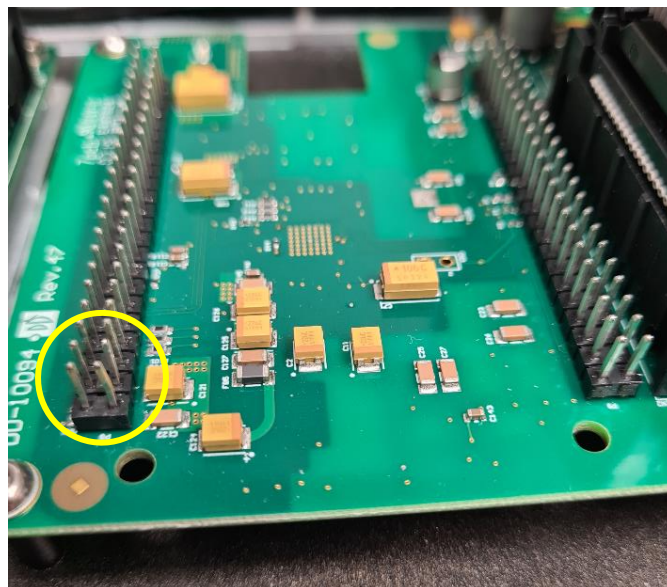


Figure 3 - Disconnected cables

- Grab the Beaglebone the way that is shown in Figure 4. Wiggle the Beaglebone from side to side until you feel that the Beaglebone is coming off (Figure 5a + b).

**Figure 5a** - Wiggle Beaglebone**Figure 5b** - Wiggle Beaglebone**Figure 4** - Grabbing the Beaglebone

- Wiggle carefully until the Beaglebone is removed. After removal it is possible that some of the pins are bent, as is shown in Figure 6. If you are returning the electronics panel to the manufacturer, you won't have to worry about it. If you are planning to re-use the panel, try to bent the connectors back to their original position.

**Figure 6** - Bent pin-connector

- Place the Beaglebone on the new electronic panel.

Part 4: Connecting the cables and closing the speaker

1. Basically it is all the steps, but then backwards.
 - a. Reconnect the ethernet-patch cable to the Beaglebone
 - b. Reconnect the ribbon cable to the small amplifier. Make sure that the cable is connected and fully latched.
2. Place the panel close enough to the speaker to reconnect the speaker cables and LED cable.
3. Close the panel with the 6 screws.
4. Test if the speaker works as intended.

Troubleshooting

If you are having trouble anywhere between the steps, please feel free to contact the support office of Dutch & Dutch Headquarters. They are available between 8 AM till 5 PM (CEST) from Monday to Friday and are reachable at support@dutchdutch.com or +3110 787 0863.