

DivKid 'Mutes' DIY Build Guide



Hello and thanks a lot for choosing Mutes semi DIY kit!

This manual will guide you through the build of the Mutes module. First of all, please take your time to inspect all parts involved and get familiar with what's ahead of you.

Some steps are not obvious, so even if you're an experienced DIYer please read the steps thoroughly before starting. **The fact that SMD components are pre-soldered does not mean this is an easy one.** Please be careful and doublecheck all your steps.

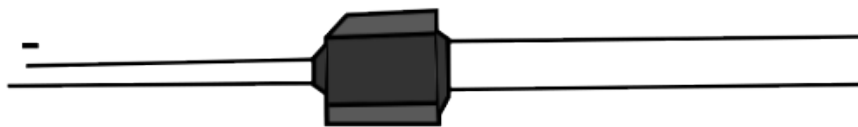
In this semi kit you get two boards with SMD pre-assembled, front panel and the rest of the mechanical components needed to finish a Mutes modules.

Once again thanks a lot for choosing Mutes!!

GOOD LUCK!

MAIN PCB

We will start assembling the Main PCB (smallest one) This board has main circuit components pre-soldered and we will just solder Vactrols, power connector and Female connectors.



Vactrols 'VTL5C1' (4)

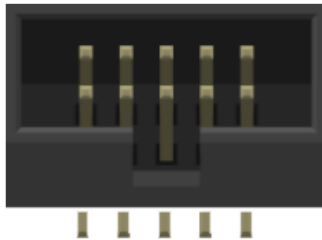
Description / Notes	Mind polarity when placing the Vactrol. Short leg for LED negative in silkscreen.
Solder points	LDR1, LDR2, LDR3, LDR4



2x4 Female Header (2)

Description / Notes	Place the female pin headers on the silkscreen side. Please make sure they are straight.
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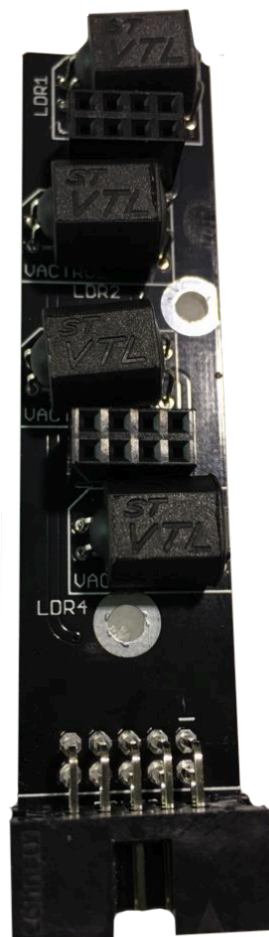
Solder points	JP2, JP4
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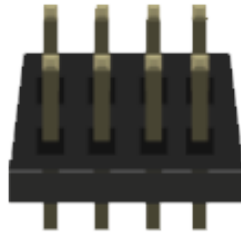
Power Connector (1)

Description / Notes	Place the power connector at “POWER” at silkscreen side, same side as Vactrols, ensuring it is facing out from the edge of the PCB.
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Solder points	2x5 “10 pin” at the bottom of the board, see image below.
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CONTROL PCB



2x4 Male Pin Headers (2)

Description / Notes	Place and solder the Male Pin Header on the opposite side of silkscreen. These will be placed at same side as SMD components. It is the shorter pins that you are soldering and long ones will connect the boards. Please make sure they are straight.
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Solder points	JP1, JP3
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Male/Female Spacers (2)

Description / Notes	Secure the two 12 mm male/female spacers (through the holes with silver outlines) with the main body of the spacer on the component side, and the nut on the opposite.
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WARNING: If you don't screw them now, you won't be able to do it later!!! Make sure they are tightly fastened, use a tool for this purpose.



FRONT PANEL COMPONENTS MOUNTING TIPS

Now we will proceed to mount mechanical parts.. this part of the assembly is CRITICAL. Please take your time and read the following instructions carefully.

These components must NOT be soldered until they are placed on the PCB and fully attached to the front panel.

There are two reasons for this:

- The height of the panel components are not all the same. Because of this, if not attached properly before soldering, they will not stay properly seated against the panel. This might cause mechanical stress reducing their life expectancy and in the worst case cause them to break.
- The second reason is that it is very difficult to align the components to the holes if the panel is not positioned prior to soldering.



LEDs (4)

Description / Notes	Place the LEDs onto the PCB minding their polarity, but <i>don't solder them until the front panel is in place</i> . This is the only way to solder them in the right position. The long leg is the positive and the short the negative. On the silkscreen for this one; the flat side indicates the negative pad.
Solder points	LED1, LED2, LED3, LED4

OPEN MECHANICALS BAG

MINI-JACKS

Place the mini-jacks on the PCB ensuring they are on the side with the silkscreen but don't solder them until the front panel is in place with all nuts screwed to it. This way it's easier to solder them in the right position. Keep in mind that the front panel holes are quite narrow and it is almost impossible to place it with all the components already soldered.

SWITCHES

Remove washers and nuts from the switches. ***DO NOT MIX SWITCH AND JACK NUTS - they're similar but different.***

Place them at MUTE1, MUTE2, MUTE3, MUTE4. These switches have orientation, make sure the momentary action is facing LEFT. But do not solder them yet!

FRONT PANEL

At this point we have all mechanical components in place and ready to attach front panel.

- Screw in the parts, first Mini-jacks then Switches
- Make sure everything is flush against the panel.
- Solder minijacks and switches.

BEWARE the minijack pins are close and may get bridged

- Place the LEDs at their right height and solder them.

BEWARE some resistors are close to the LED solder points. Be careful not to bridge them as this may cause a short.

- Doublecheck your soldering. Just in case.

WARRANTY DISCLAIMER

These pre-assembled boards are part of batch used for assembled modules that were tested right.

All the PCBs were checked with flying probe test. After assembly they all passed an automated optical inspection and x-ray inspection.

