ANTUMBRA

MULT

BUILDING INSTRUCTIONS

PCB V1.0

01. BUILD NOTES

Before you start building look through the build manual so that you'll be familiar with the building process and you won't run into any surprises! :)

Good luck!

02. OPTIONS

For this build there are some options that you can choose from, the two main options are:

01: Passive multiple
Module won't draw power, 4x4 multiple.

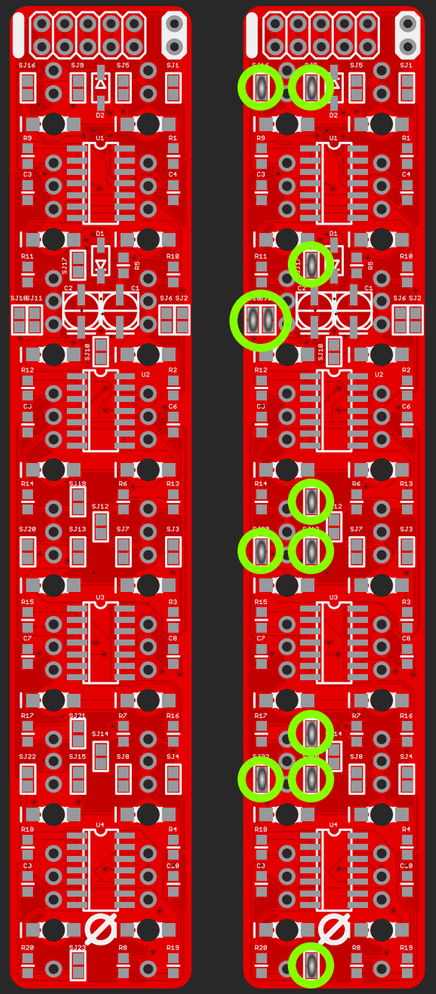
02: Buffered multiple
Multiples are buffered, ensuring that outputs are exact copies of the inputs.

Additional (optional) options:

03: Linking parts

04: Normaling input to ground

05: Jack lights



00

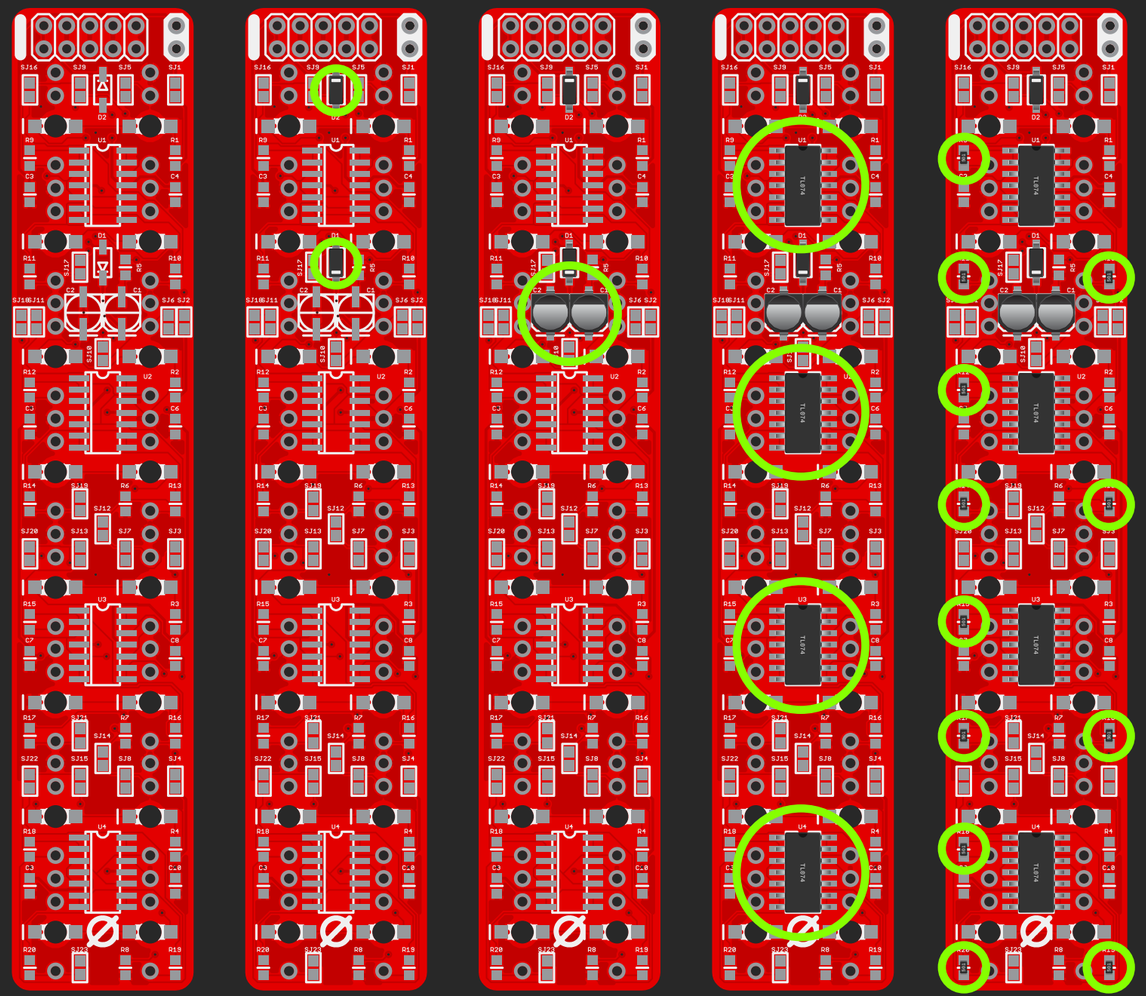
01

03. OPTION 1: PASSIVE MULT

00. Orient the PCB as seen on the left.

01. Connect the solder jumpers.

02. Go to the last part in the build documentation for the other side.



00 01 02 03 04

04. OPTION 2: BUFFERED MULT

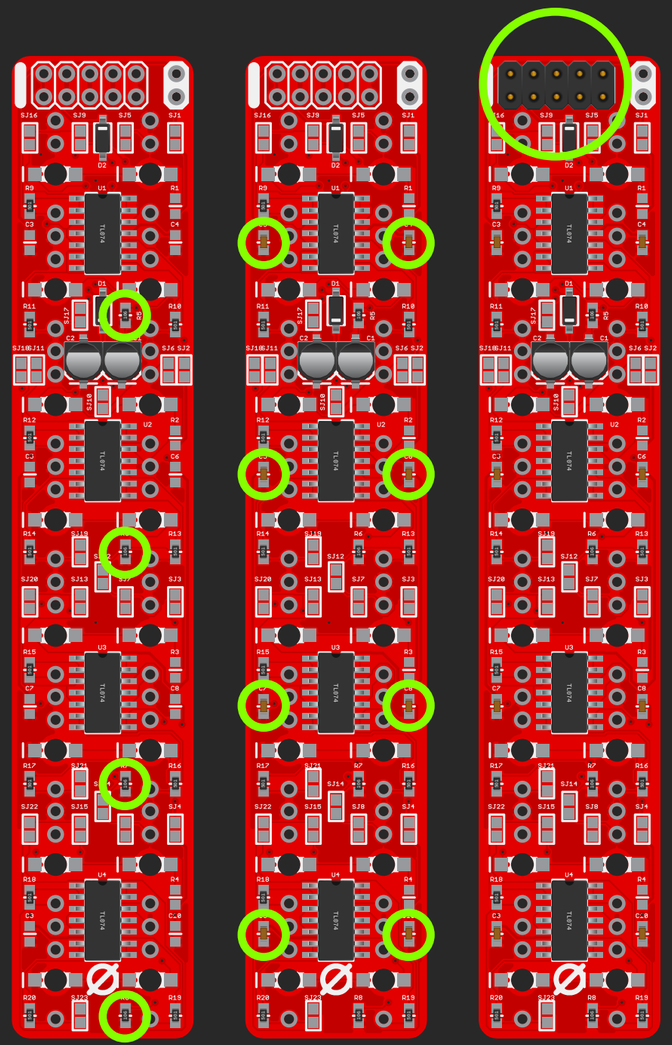
00. Orient the PCB as seen on the left.

01. Solder the two 1n5819 diodes.
    Orientation matters!

02. Solder the two 10uF capacitors.
    Orientation matters! Match the PCB drawing with the components' shape.

03. Solder the four TL074 op amps.
    Orientation matters! They should be oriented up.

04. Solder the 12x 51R resistors



05 06 07

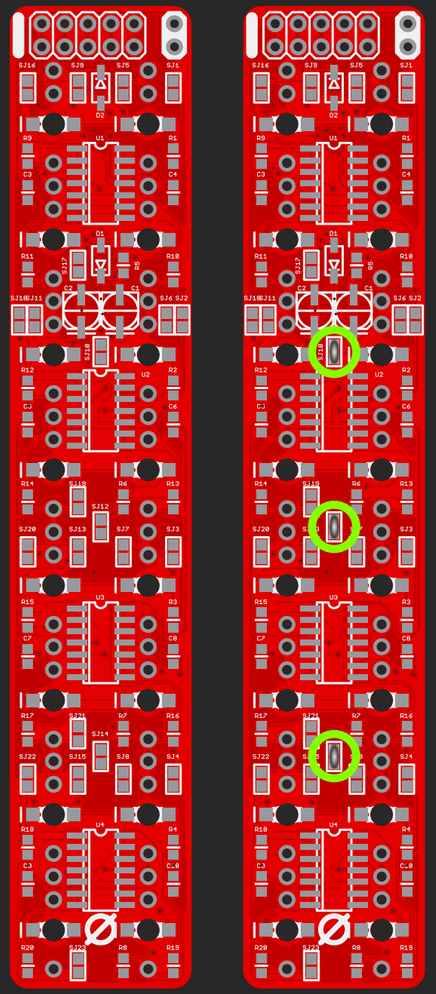
04. OPTION 2: BUFFERED MULT

05. Solder the four 10M resistors.

06. Solder the eight 100nF capacitors

07. Solder the 2x5 pin header.

08. Go to the last part for the other side.



00

01

Part 1 -> Part 2

Part 2 -> Part 3

Part 3 -> Part 4

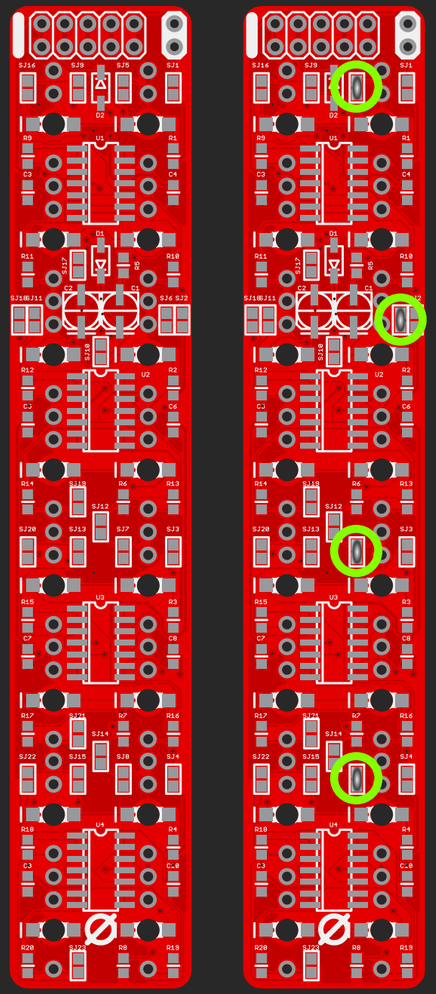
05. OPTION 3: LINKING PARTS

This option enables you to link the four parts (or specific parts) together. Meaning that the first jack of each part will be normalized to the previous part, so if you don't connect anything to the first jack, the 3 outputs of that part will output the input of the previous part. This allows you to split a single signal to 12 outputs maximum.

This is an available addition to both the passive and the buffered options.

00. Orient the PCB as seen on the left.

01. Bridge the solder jumpers



00

01

Part 1

Part 2

Part 3

Part 4

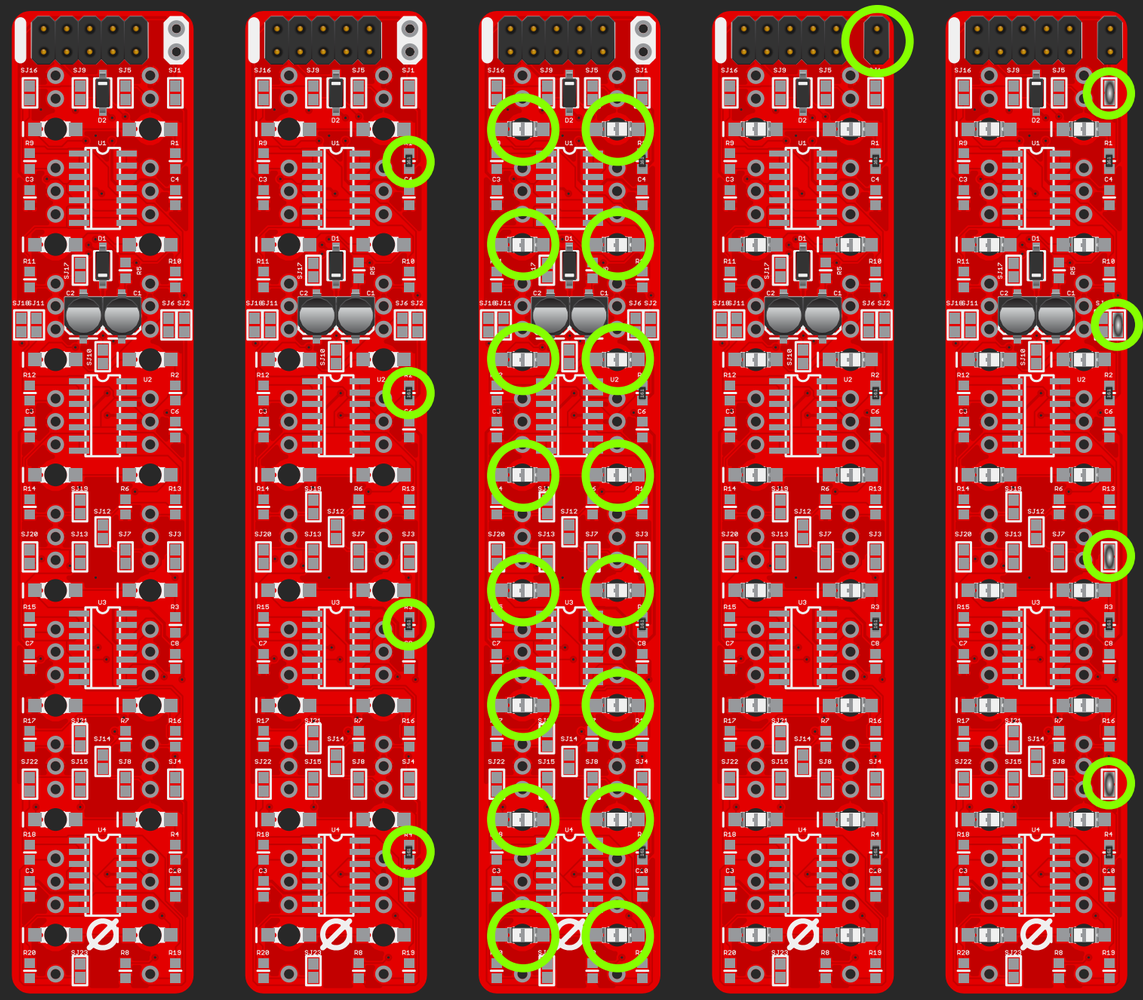
06. OPTION 4: NORMALIZE TO GND

This option enables you to normalize inputs to ground, so that outputs are not floating when an input is not connected.

Don’t use this option if you chose to link parts! Or then just do this for the first part of each linked parts.

00. Orient the PCB as seen on the left.

01. Bridge the solder jumpers



00 01 02 03 04

07. OPTION 5: JACK LIGHTS

If you want to add illumination to the jacks, add the following componets (add components from the buffered mult option: 01, 02, 07). This can be done even if you want a passive multiple, though like this it'll draw a considerable amount of current from the +12 rail.

00. Orient the PCB as seen on the left.

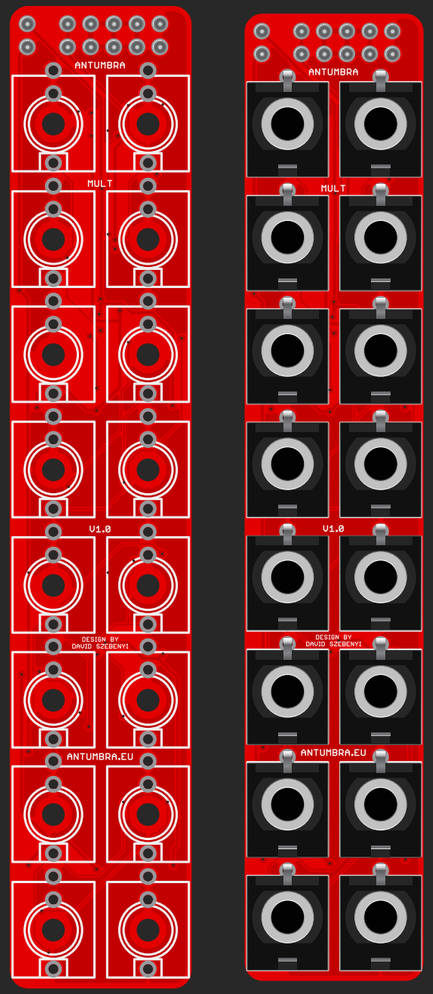
01. Solder the four 160R resistors.

02. Solder the 16x SMD LEDs

Ű Orientation matters! The markings should face the lines on the PCB.

03. Solder 1x2 pin header and add jumper.

04. Bridge the four solder jumpers.



01

02

08. FRONT

Regardless of what options you chose, you have to solder the 16 jacks on the front.

The panel has two sides, one for the passive and one for the buffered option.

Place the jacks, place the panel, add the nuts, then solder!

You are now finished with building the module, congratulations for your new awesome MULT!

MULT is designed by David Szebenyi under Antumbra.

www.antumbra.eu

Manual by David Szebenyi (www.aman.hu)