

TEX MIX

MODULAR EXPANDABLE MIXER



The TEX MIX concept is about building a mixer depending on your needs, number and type of channels.

KNOWN ISSUES

- Bleed: muted channels have some bleed, so when muted a small portion of the sound could remain, this is more noticeable in the 4StereoChannels module, and it will depend a lot on the signal plugged.
- Clicky mute: Keep in mind that in both 4StereoChannels and 4MonoChannels, “mute” is just the central position of a toggle switch, so muting could be clicky, especially with low pitched sine waves, like jungle basses and stuff.

To get a better signal to noise ratio I recommend to set the channel volumes as high as possible (at max for some channels) and use the master volume to adjust the final level so the signal does not distort the sound card input or whatever.

There are 4 audio buses:

Master (stereo, main output)

Cue (stereo, planned for monitoring purposes but can be used as a stereo group)

Send A (mono, switchable pre / post fader)

Send B (mono)

INDEX:

[Master Section](#)

[4 Mono Channels](#)

[4 Stereo Channels](#)

[Douts](#)

[Douts 3HP](#)

[Blinks](#)

[ASSEMBLY GUIDE](#)



FAQ - How many channel expanders (mono or stereo) can be connected to a single Master Section?

I don't really know the limit, but several customers asked for a quite big TexMix setup, for example here we have a mixer with 24 channels (16 mono and 8 stereo), so I'd say up to 6 channel expanders it's ok.





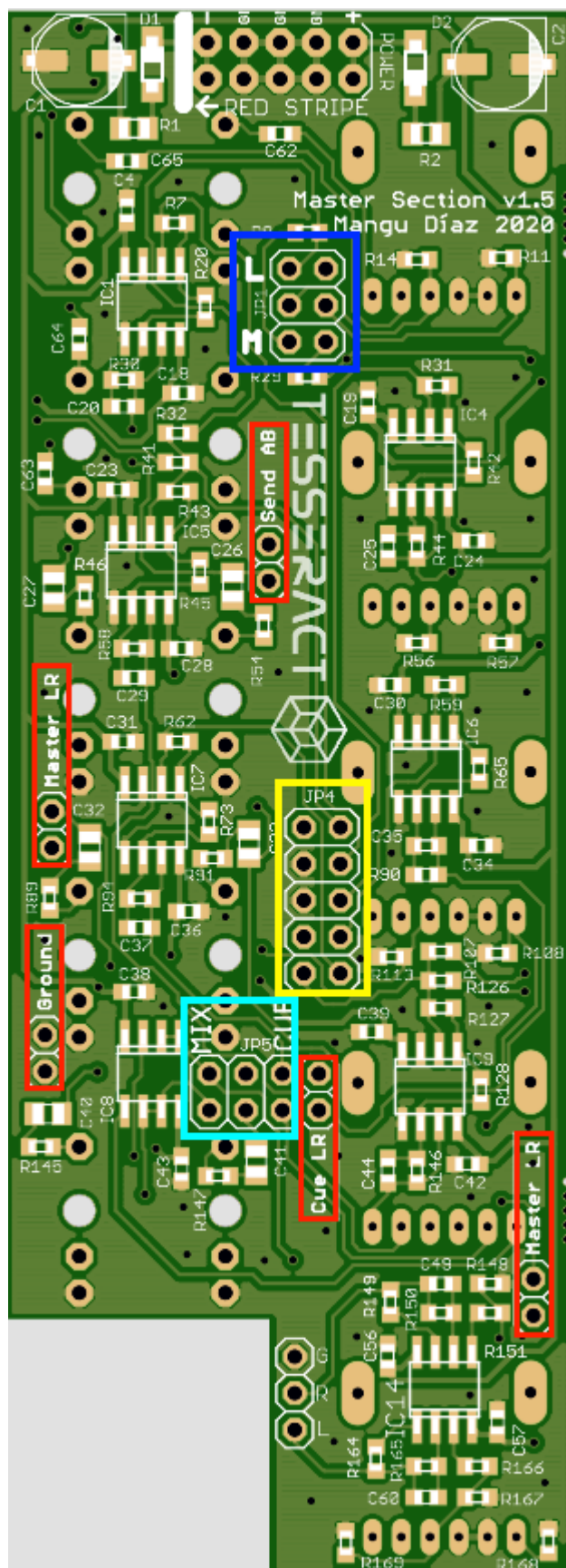
MASTER SECTION - 8 HP

This is the main module of the mixer and the only indispensable one, the only one that needs the eurorack power cable. It provides power to all the other modules and contains the summing circuit for all channels in every audio bus.

Features:

- **Returns A and B with dedicated volume control** (2 stereo inputs, L works as mono in)
- **SEND A aux out** (mono)
- **SEND B aux out** (mono)
- **Master output (stereo)**, is modular level BUT it has a dedicated volume pot, so it can be plugged directly to sound cards or PA systems, just turn down the master volume a little if the signal is too hot to avoid distortion).
- **Monitor output** (stereo, configurable for CUE only out or CUE/MASTER out with JP5 jumper on the back)
- **CUE/MASTER balance pot** (mix control for the headphones and, if so desired, the monitor out)
- **Headphones output with dedicated volume control**

The Master Section PCB has several headers:



The **Return A** can be configured for modular or line level (M / L) so you could use it with Strymon pedals or any non eurorack fx processor or synth. Place 2 jumpers in vertical (center top for Line, center bottom for Modular).

There are several headers that provide additional outs of all busses to connect with the Blinks module:

Send AB
Master LR (post fader)
Ground
Cue LR
Master LR (pre fader)

To configure which signal goes to the **monitor out**, place 2 jumpers horizontally in **JP5**. In the “MIX” position (center to left) monitor receives the balanced signal from cue/master pot (like the headphones). In the “CUE” position (center to right), monitor output receives only the cue signal (to use the CUE bus as a group).

JP4 is to plug the TexMix link ribbon cable, which will connect all 1TexMix modules.

More info about the jumpers [here](#)



4 MONO CHANNELS - 12 HP

Several of these modules can be added to provide more channels. Every channel features:

- **Mono input**

- **Linear VCA** (plug a CV into the CV IN to modulate the volume of a channel. When nothing is plugged in the CV IN, is normalised to fully open)

- **SEND A control** (switchable PRE/POST, in PRE mode the signal is present regardless to the channel volume control but only if the channel switch is in ON position)

- **SEND B control** (post-fader)

- **PAN control** (only affects the master bus)

- **VOLUME control** (affects the master, cue and POST sends, does not affect PRE-fader send)

- **ON/OFF/CUE switch:**

ON - channel is routed to the MASTER bus

OFF - channel is muted

CUE - channel is routed to the CUE bus

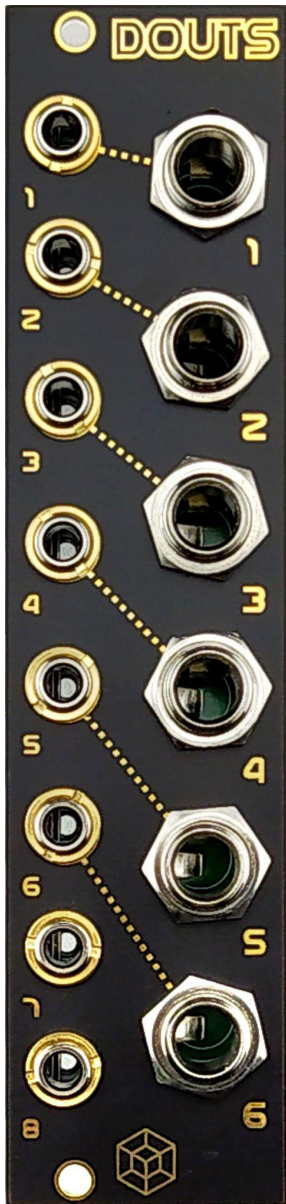


4 STEREO CHANNELS - 12 HP

Several of these modules can be added to get more stereo channels. Every channel features:

- **Stereo input** (L works as mono in)
- **SEND A control** (switchable PRE/POST, **unlike the 4MonoChannels**, in PRE mode, the signal is present regardless to the ON/OFF/CUE switch position and channel volume control)
- **SEND B control** (post-fader)
- **PAN control** (only affects the master bus)
- **VOLUME control** (affects the master, cue and POST sends)
- **ON/OFF/CUE switch:**
 - ON - channel is routed to the master bus
 - OFF - channel is muted
 - CUE - channel is routed to the cue bus

In this module only the left channel will be present in SEND A, and only the right channel in SEND B. This makes it possible to use both mono sends as a stereo one.



DOUTS - 6 HP

Direct outs module with 8x 3,5 mm and 6 6,3mm jacks.

This is a breakout box for the direct outs of the TexMix.

The signal provided is post fader, and for the 4MonoChannels is post VCA and post fader.

Each module has 8 outputs so it could have 2 '4MonoChannels' connected or 1 '4StereoChannels'.

Without connecting the ribbon cable it's a 3,5 / 6,3 adapter.

The orientation of the 8 pin ribbon cable is marked by the 'DIRECT OUTS' legend on the PCB of the channel expanders (mono or stereo) and a white line in the DOUTS input header.

DOUTS has 3 headers on the back, 2 of them are for 4 Mono Channels, the other one, labeled STEREO, is for 4 Stereo Channels.

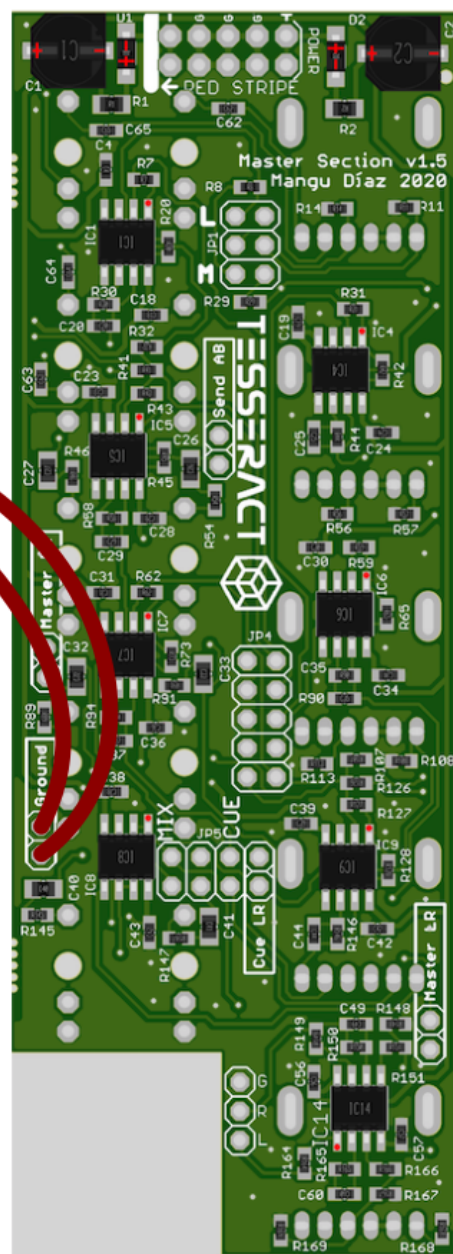
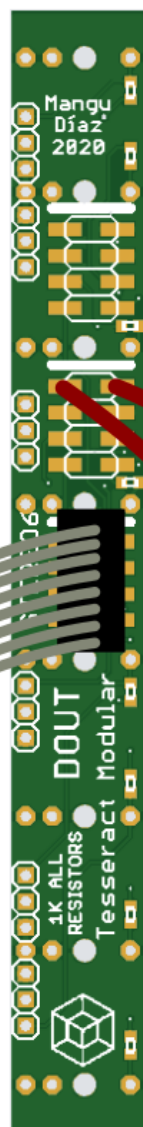
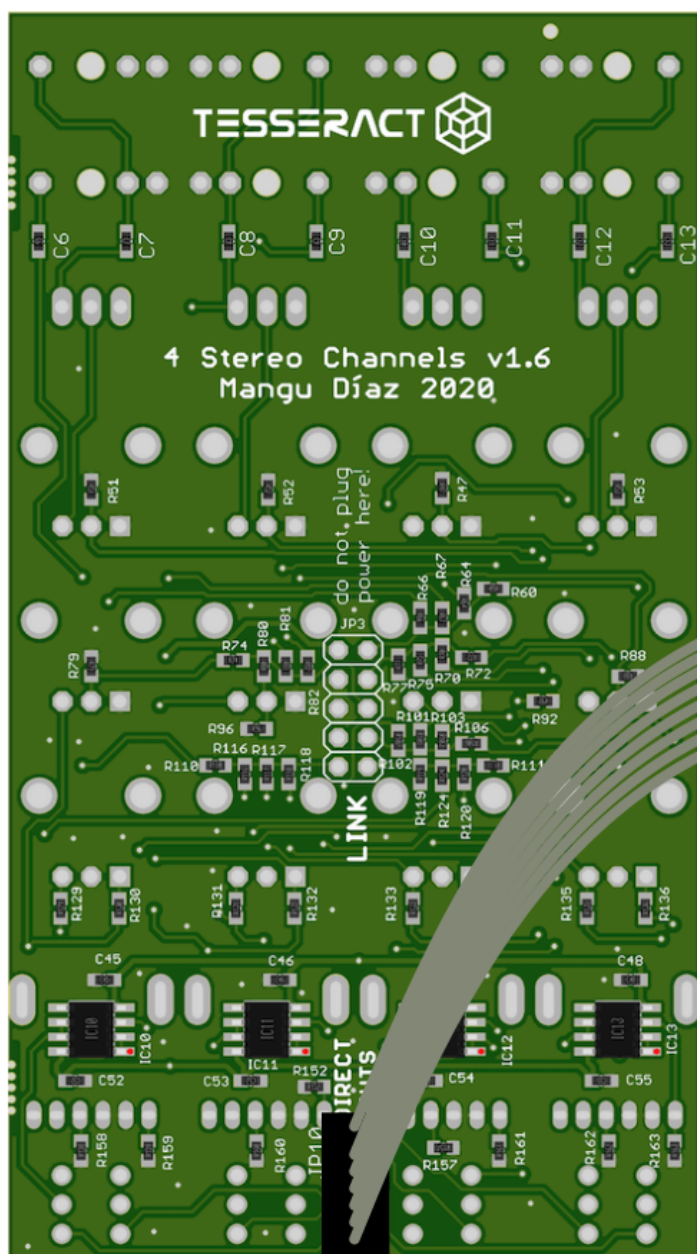
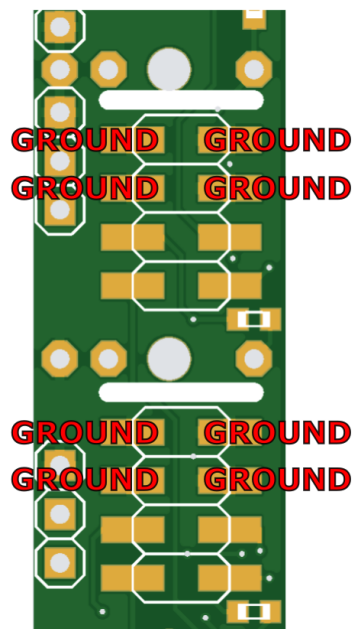
DOUTS 3HP - 3 HP ...pretty obvious, isn't it?

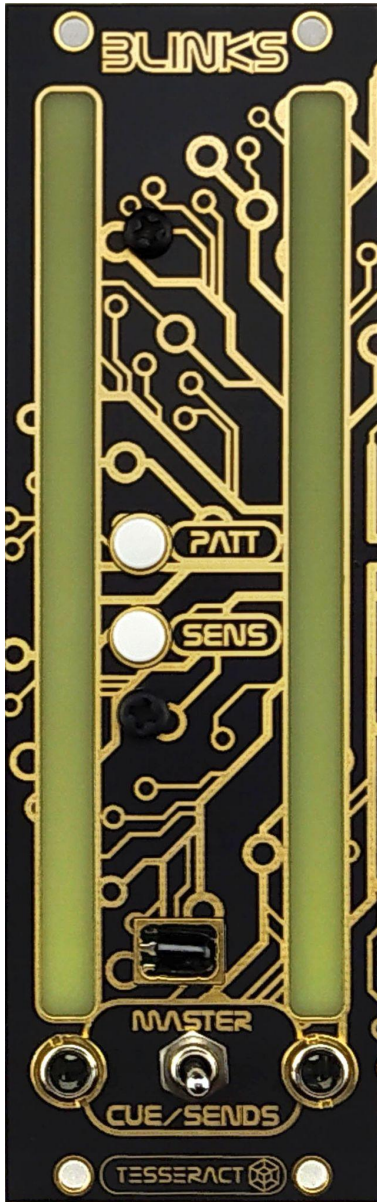
Direct outs version with only the 8x 3,5mm trs jacks.



Some tips about the connection with Douts:

- Never connect a mono and a stereo at the same time, only one stereo or 2 mono expanders.
- If using it with the 4 Stereo Channels it has to be connected to the header labeled STEREO.
- The Stereo connector does not have ground on it (8 wires for 8 audio signals) so an additional ground should be added, with female-female jumper wires and using any of the 4 upper pins of any of the 2 connectors for mono modules. The ground can be taken from the 'ground' pins at the Master Section.





BLINKS - 8 HP

VU meter

BLINKS is a VU meter for eurorack with 24 RGB leds per channel, function is pretty easy, it has 2 inputs, one for each led column (no output btw).

PATT button changes the led pattern (6 patterns to choose).

SENS button changes the input sensitivity, cycling in 7 steps.

Long pressing the **PATT** button enters the color scheme selection.

Long pressing **SENS** button enters the brightness adjustment. Most probably you'll prefer the lowest setting.

The module has a 5v regulator in case you don't have +5v in your eurorack PSU. A switch in the back select if the led board would be powered by the +5v rail or the internal regulator (which works with the +12v rail)

2 stereo signals can be connected to a buffered input using the rear headers.

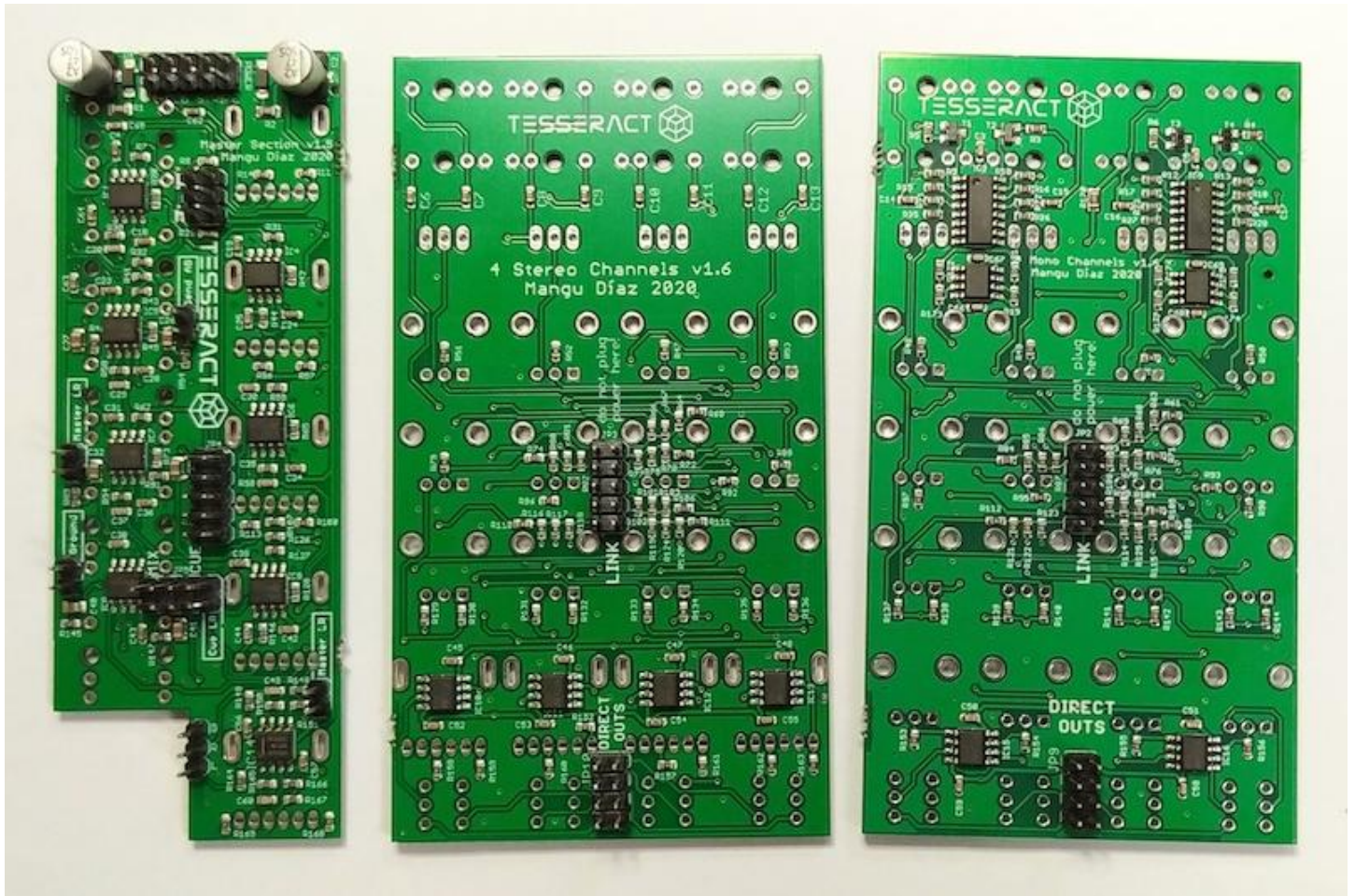
Easy DIY with only a few components, the led board is already assembled.

Blinks manual & build guide is [here](#)

ASSEMBLY GUIDE

B.O.M.

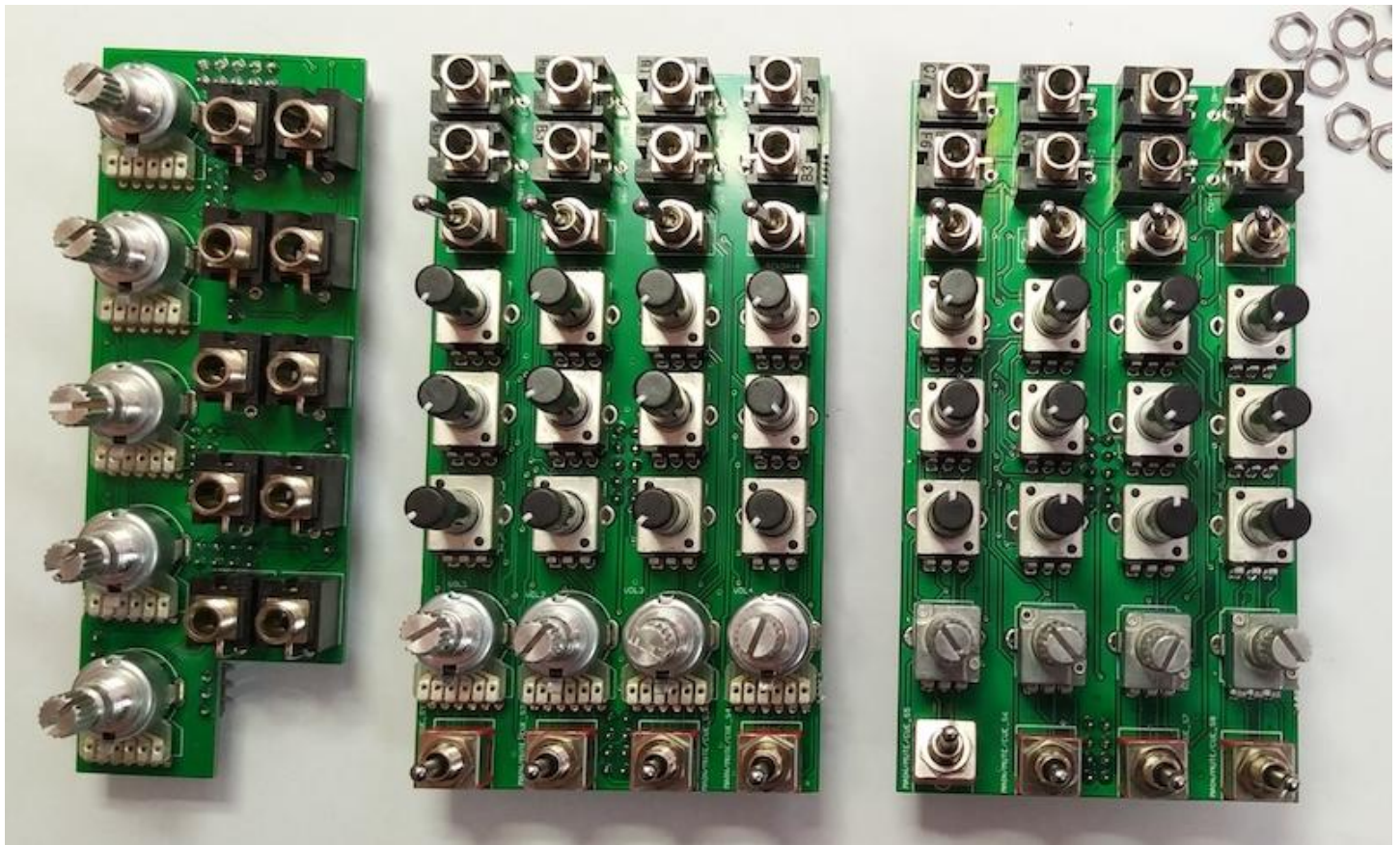
The build process is pretty straight forward as all SMD components are already soldered to the PCBA. To start solder all male headers, mono and stereo modules have one of 2x4 and one of 2x5 each, the master has two of 2x5, one of 2x4, one of 2x3, one of 1x3 and 4 of 1x2.



Before the next step place a nut on every subminiature switch (that nut will stay under the panel) **do not mix the nuts, they are different for each type of switch**. Also bend the bend that metal part of the stereo potentiometers:



Place all components. The center detent tall trimmers are for the PAN control, rest of tall trimmers are for sends A and B.



Put the panel and nuts before soldering the components, this will reduce the mechanical stress.



Solder all components except the tall trimmers. Once everything is soldered check the alignment of the tall trimmers before soldering them, or you can solder the center leg of all them, then check the position and rectify if necessary by heating that soldering point. The lateral legs of the metal pots don't need to be soldered as the potentiometers are attached to the front panel with a nut, for the tall trimmers, soldering the lateral legs is necessary.

Place the 6,3 mm jack (headphones) with the flat corner facing outside, put the female 1x3 header on the 1x3 male header next to it and the small PCB with the tesseract logo facing up and solder it.





The small knobs are hard to remove once they're placed, for that reason, I recommend to check the orientation before pressing them to the shaft of the potentiometers, as reference, the white line of the tall trimmers can be used.

Place the jumpers on the Master Section.



Those 2 will set the gain for the return A

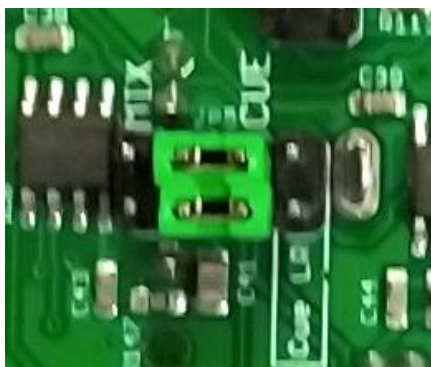
L (center to top) means Line level

M (center to bottom) means Modular level



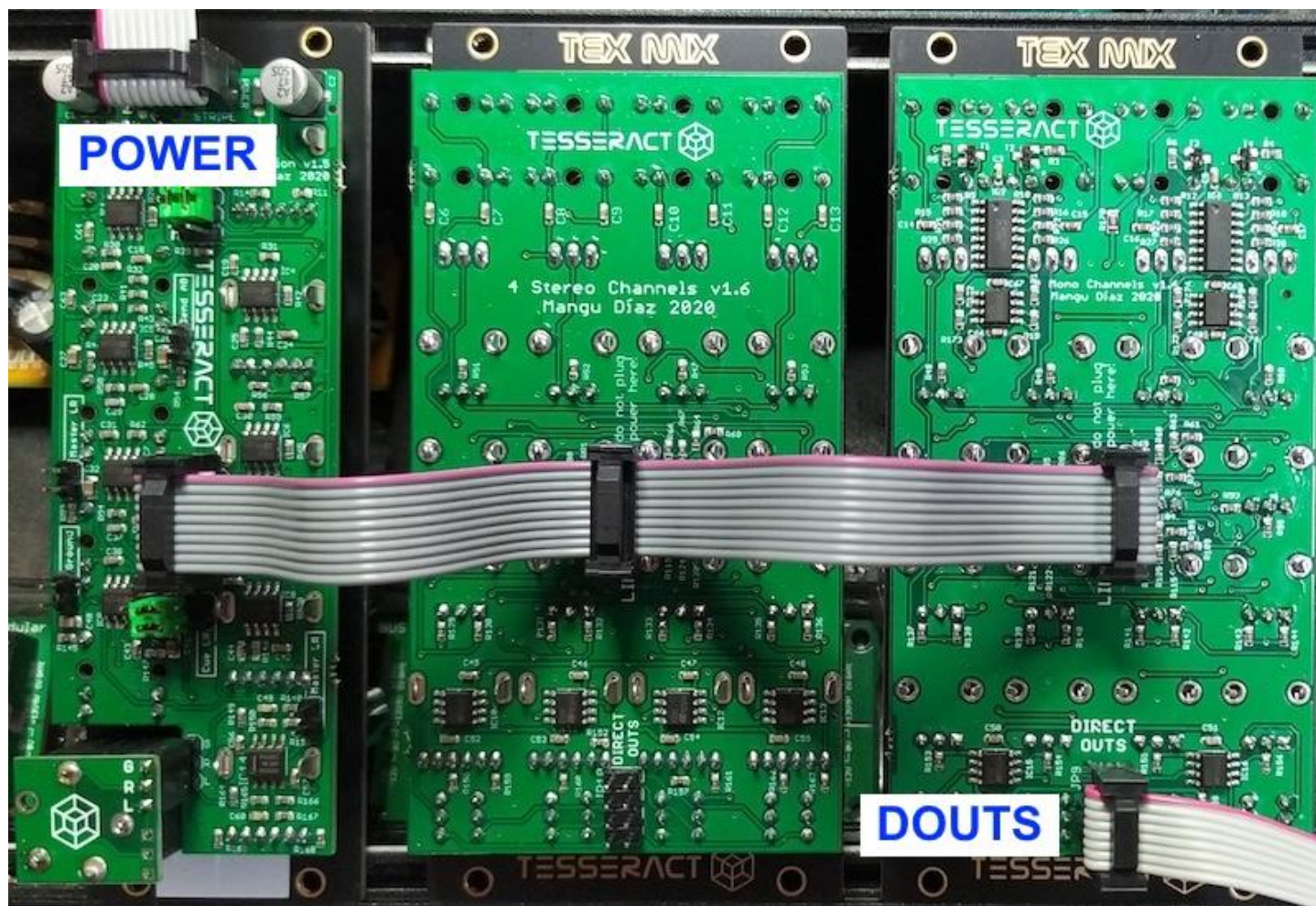
Those will set the signal present on the monitor L & R output

jumpers in MIX will set the monitor to send the same mixed signal as it will be in the headphones



in CUE position only the CUE bus will be present at the monitor outputs, useful to use the monitor out as a group for audio processing

Connect the cables. All TexMix modules in the configuration have to be linked by a 10p ribbon cable using the center vertical header. Red stripe does not have a particular position but it has to be the same for all modules (so all with the red stripe up or all with it down)



Power cable has to be connected to the horizontal header on top of the Master Section. Lower vertical 2x4 headers on the stereo and mono modules are for the direct out modules (DOUTS and DOUTS 3HP).

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