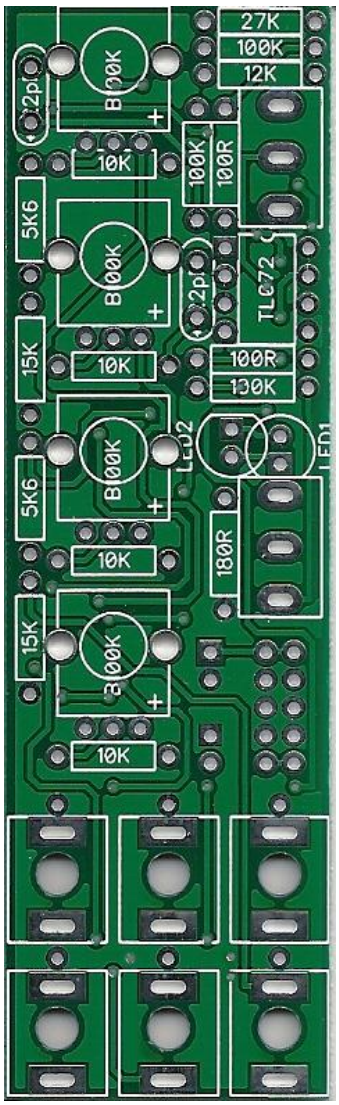
FREQUENCY CENTRAL

Build documentation for:

VOLTS PLATZ

- 4 input Audio and CV mixer
- selectable amplification ranges
- clipping option
- positive and negative offsets available
- normal and inverted outputs



A year or so ago I stopped selling System X CV Mixer. People keep asking for it, so I added a few features, changed its name, and now it's back!

Volts Platz has 4 inputs with attenuators. Input 3 is normalled to +ve for positive offsets, input 4 is normalled to -ve for negative offsets.

The first opamp stage now includes a switch to select x1, x2 or x10 amplification. You can take a direct (inverted) output from this stage.

The second opamp features switchable clipping diodes (LEDs) which clip anything above/below +/-5V. So 'normal' Euro signals go through unaffected. Flick the amplification switch and things gets dirty.

Patch a post-VCF signal into input 1. You can then use a combination of offsets at inputs 3 and 4, and CV into input 2 to explore modulated symmetric and asymmetric clipping.

Scale, offset, amplify, clip. Or just use it as a 4 input mixer.

Bill of Materials			
100R x 2 180R 5K6 x 2 10K x 4 15K x 2 12K x 1 27K x 1 100K x 3 All resistors ¼ watt metal film.	22pF x 2 47uF electrolytic x 2	TL072 x 1 3mm Red LED x 2* 8 pin IC socket x 1	B100K x 4 (or these)** 3.5mm socket x 6 Power header (cut to size) SPDT on/off/on (x1, x2, x10) SPDT on/on (clip)
* These LEDs are chosen for their forward voltage, other colours will change the clipping threshold. ** I prefer the Song Huei tall trimmers because they have a longer shaft and a white notch.			

PCB assembly – top side – part 1

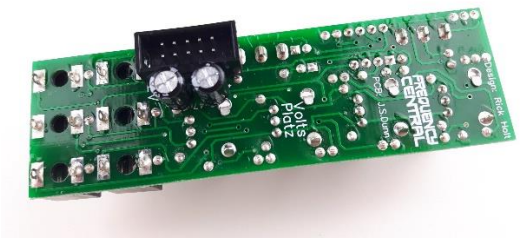
1. Solder all resistors
2. Solder IC socket
3. Solder both 22pF capacitors

PCB assembly – bottom side

1. Solder power header
2. Solder both 47uF capacitors

PCB assembly – top side – part 2

1. Place all sockets on the PCB, making sure the ground tabs line up with the PCB's ground pads, then place the panel over them. This will assure that the sockets are correctly positioned. Flip the whole lot over and solder the sockets into place.
2. Use cut off resistor legs to connect the sockets' ground tabs line up with the PCB's ground pads.



Note: Not all pots and sockets are equal in height. Providing you use the ones in the links provided, everything will line up perfectly.

There's no calibration to do!

Go ahead and mix, invert, offset, whatevs…

RDH 08/08/19

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