



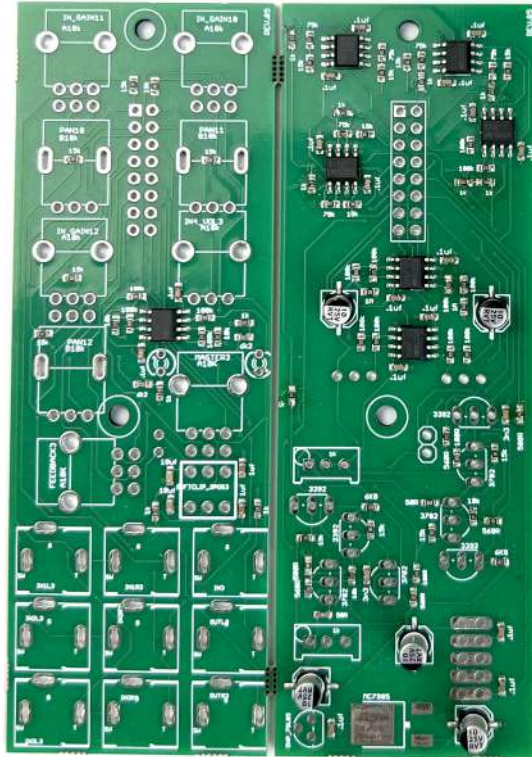
ADDAC713 STEREO DISCRETE MIXER
ASSEMBLY GUIDE

Revision.01 February,2023

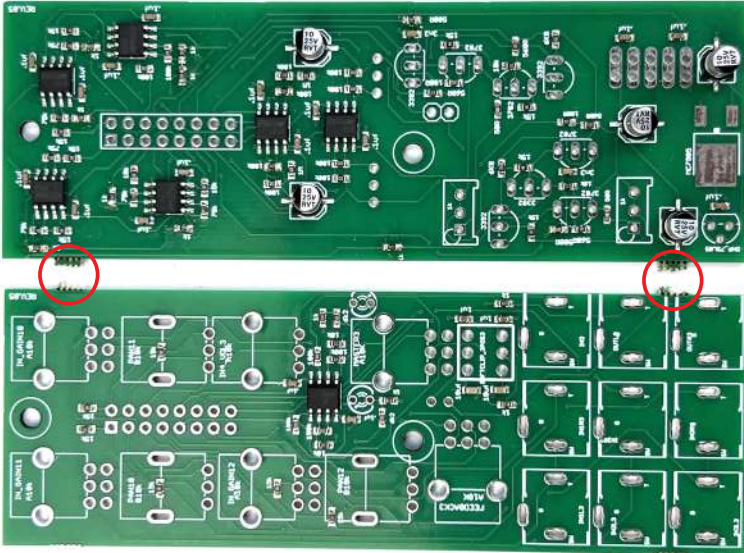
ADDAC System

ADDAC713 Assembly Guide

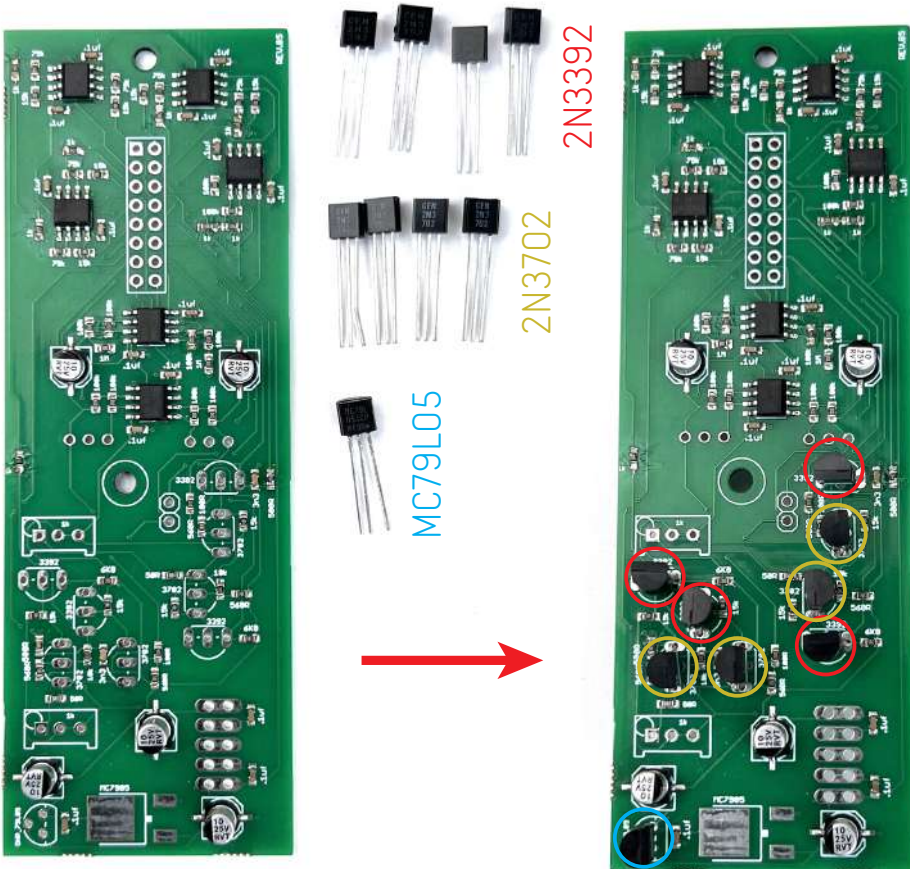
February, 2023



STEP 1:
Grab the pcb, gently brake it apart and trim the excess with a cutting plier.

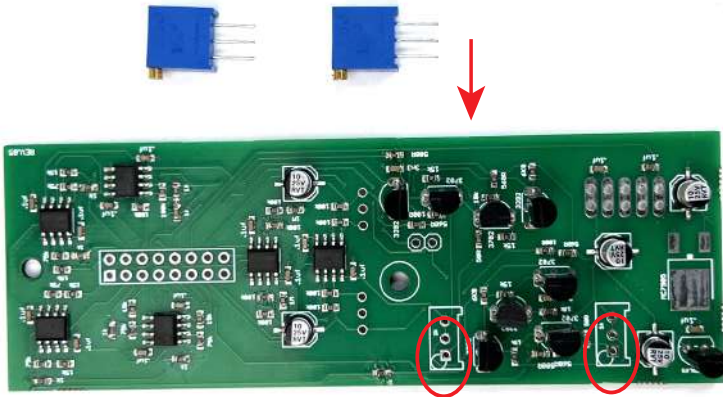


STEP 2:
Locate all T0-92 parts and separate them as shown here.

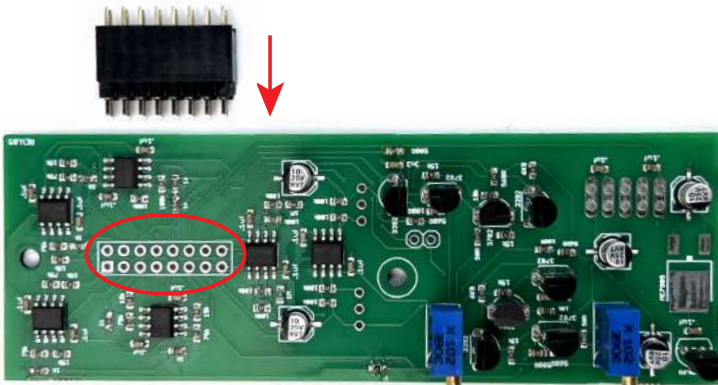


Notice the orientation of the part printed on the pcb and place them in their respective places. Proceed by soldering them and trim the excess legs.

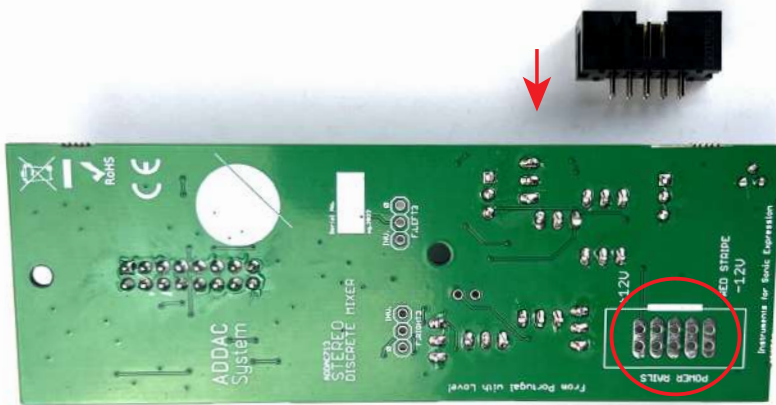
ADDAC713 Assembly Guide



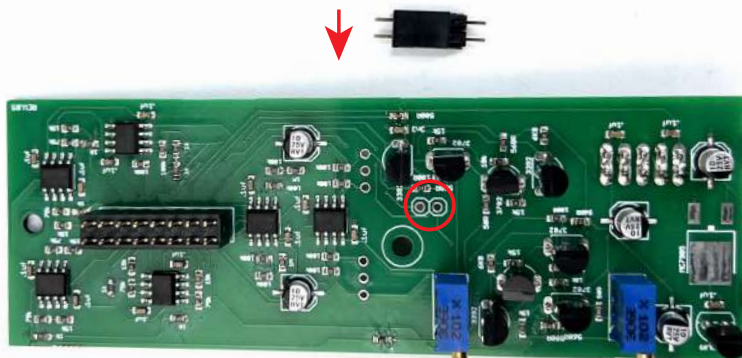
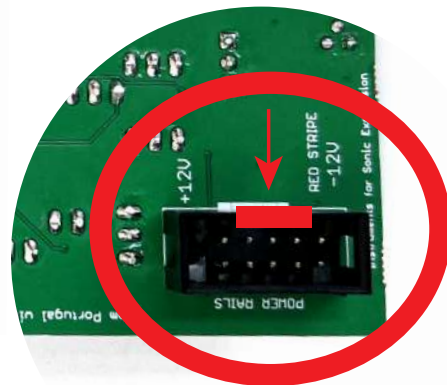
STEP 3:
Next place and solder the trimmers as shown, the golden dials should be facing outwards.



STEP 4:
Place and solder the 2x8 pinheader.



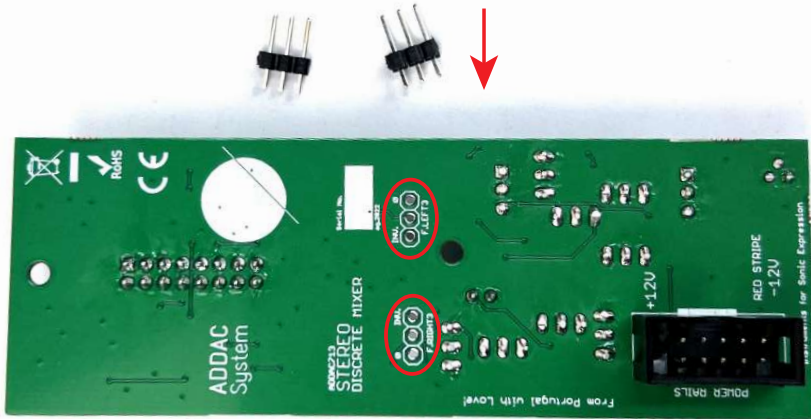
STEP 5:
Place and solder the 2x5 boxed pinheader. Notice the indent orientation.



STEP 6:
Place and solder the 2x1 pinheader.

! NOTICE !

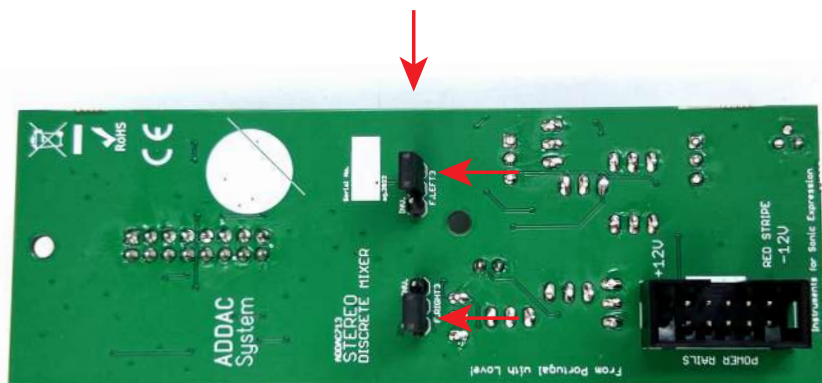
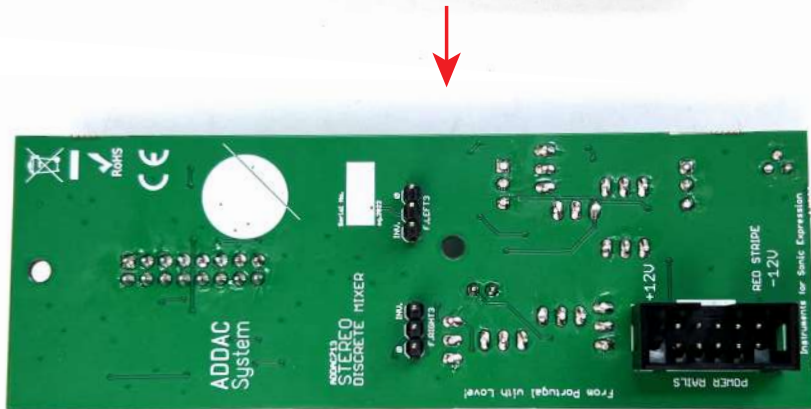
These steps are only necessary for the pcs that have the jumpers on the back, in newer revisions these jumpers were removed.



STEP A:

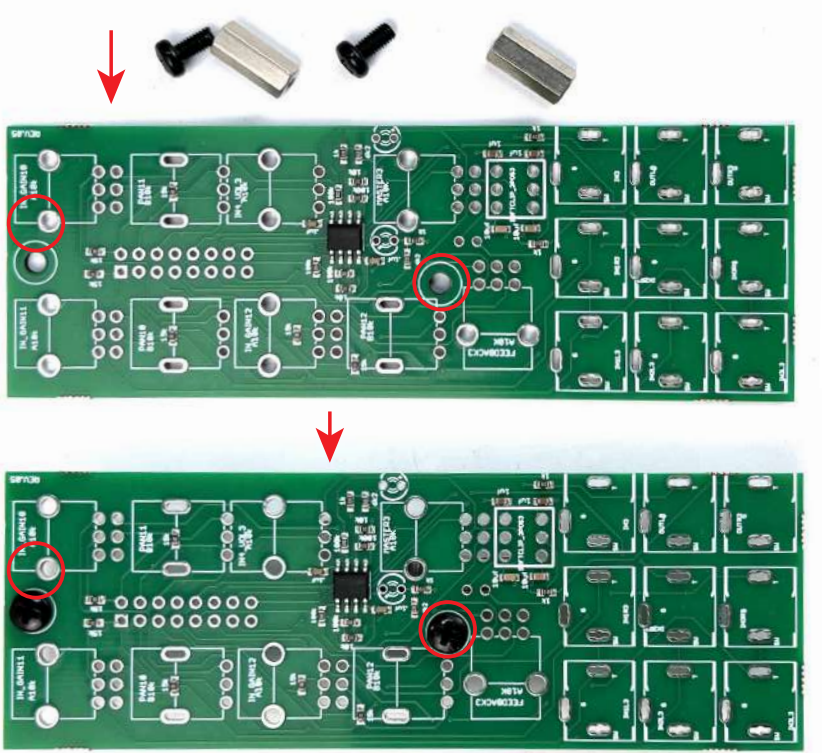
Place and solder the jumpers on the back of the pcb.

Notice the orientation marked on the pcb.

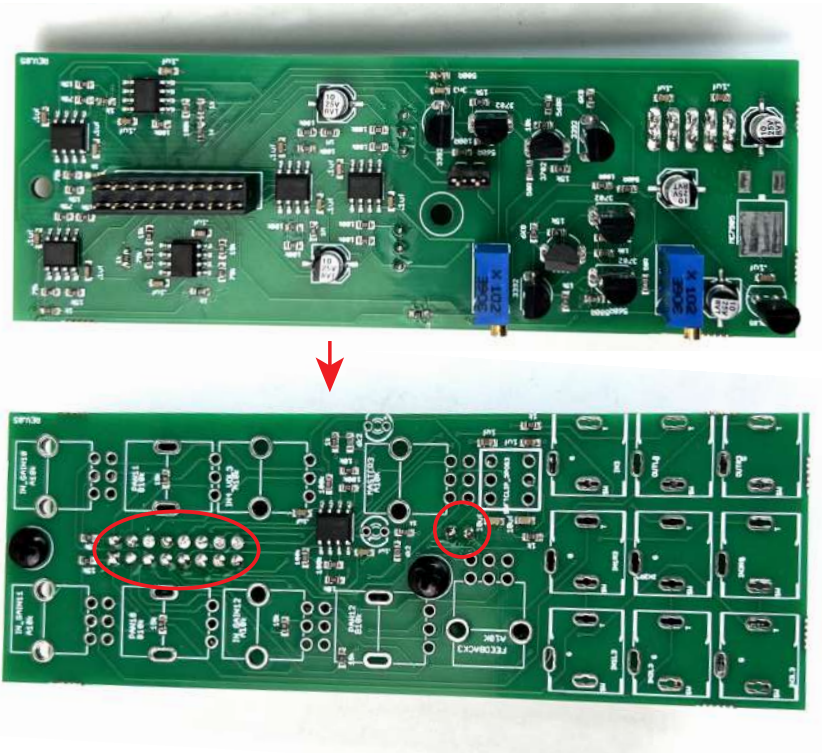


STEP B:

Place and jumper caps on the pinheaders facing the "Ø" marking on the pcb



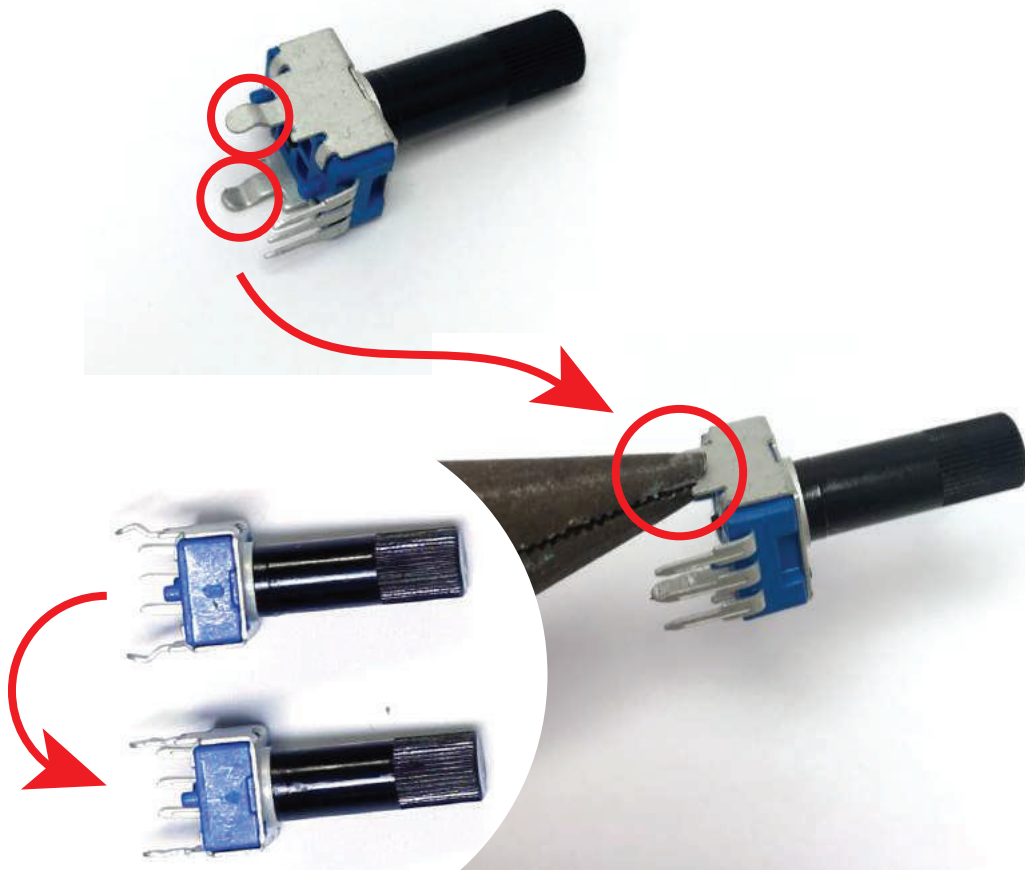
STEP 7:
Next attach the spacers as shown.



STEP 8:
Grab both pcbs align them together and solder the pinheaders on the top pcb.

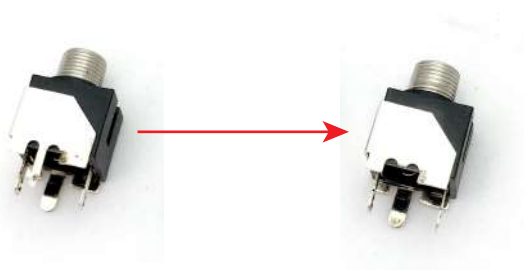
STEP 9:

Next we'll need to prepare some parts before placing them to the front panel.
Locate all trim pots and flatten out their legs with the help of some pliers, like shown below.



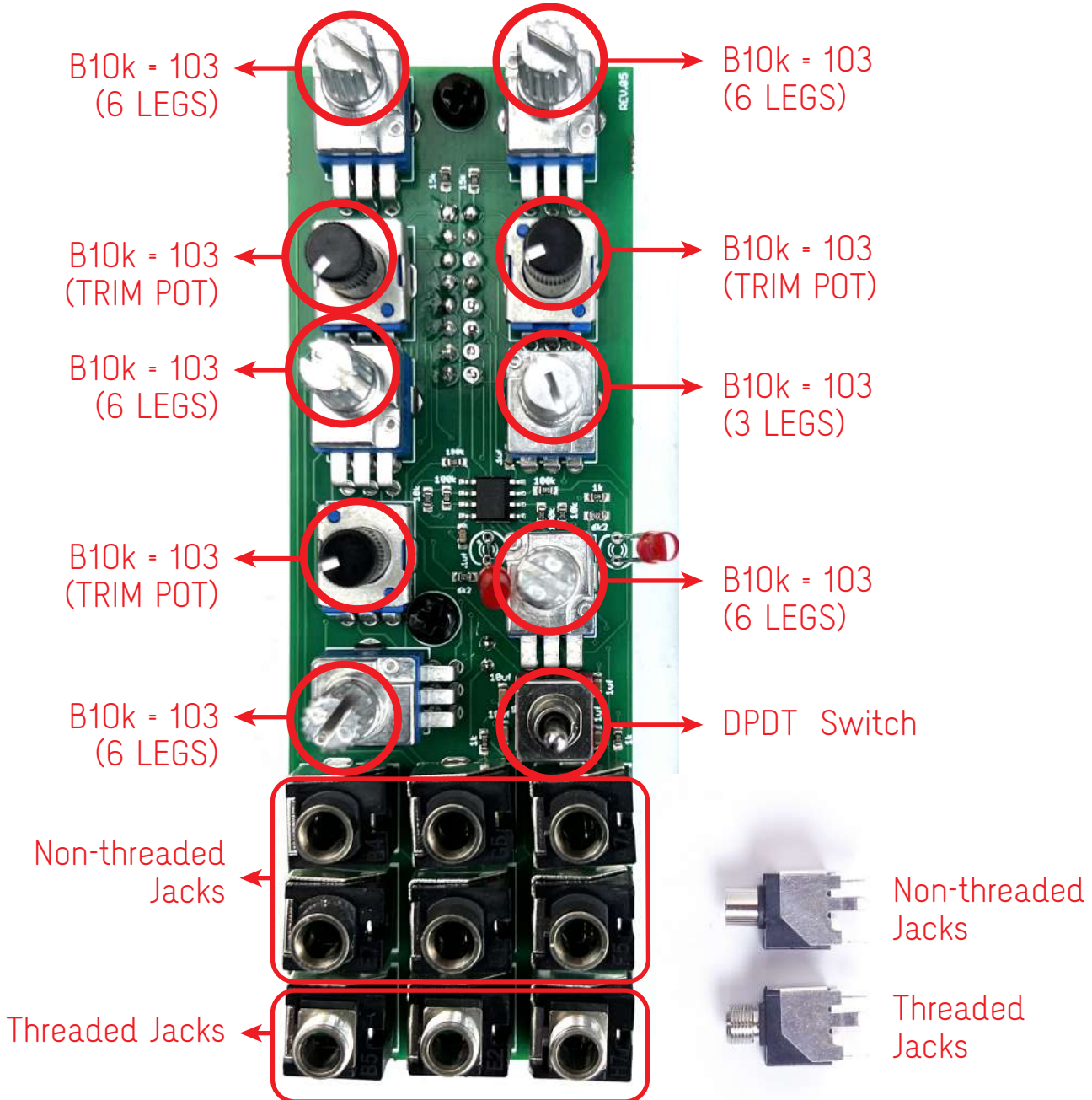
STEP 10:

Locate the jacks and cut the thinnest leg like shown below.

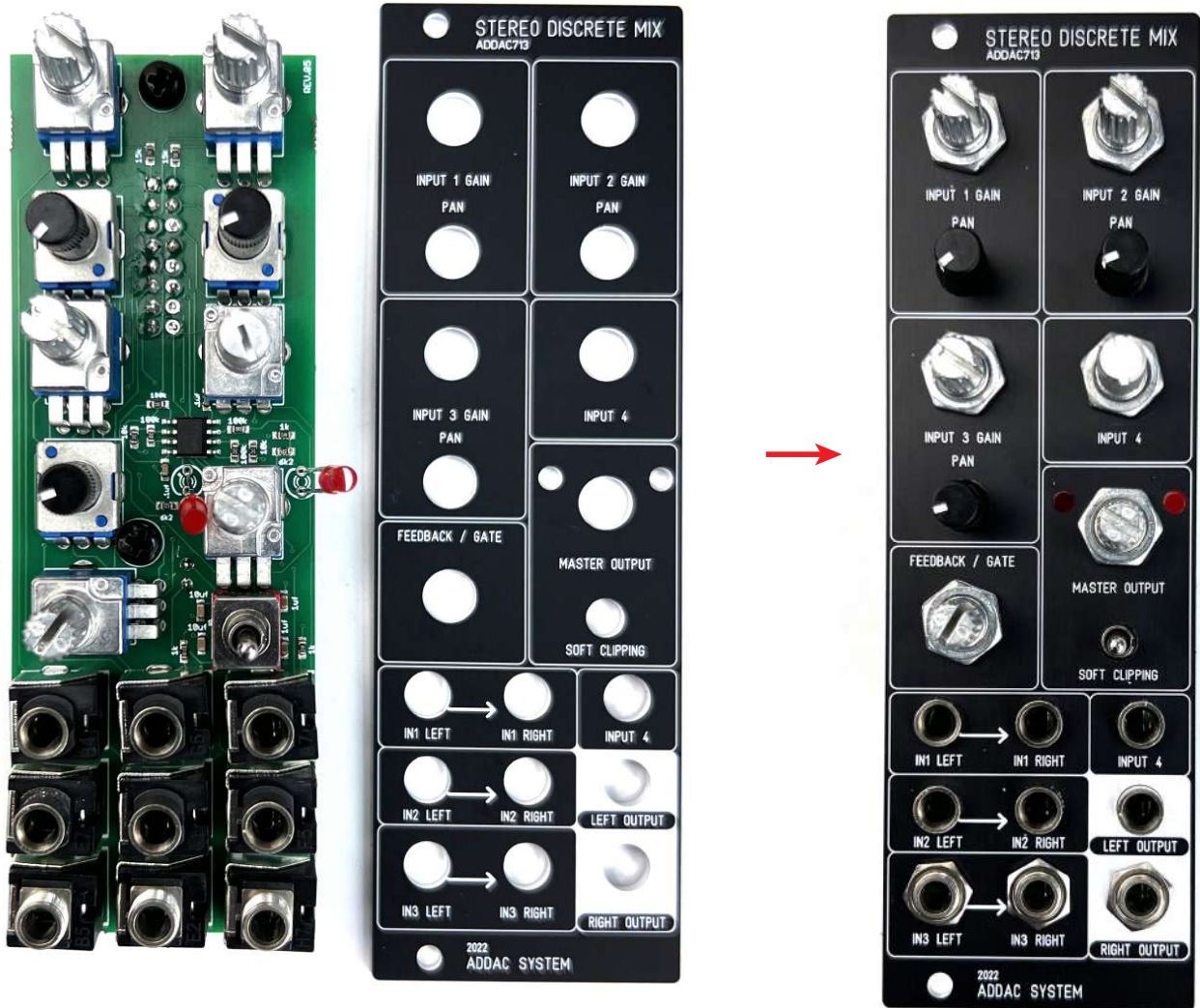


STEP 11:

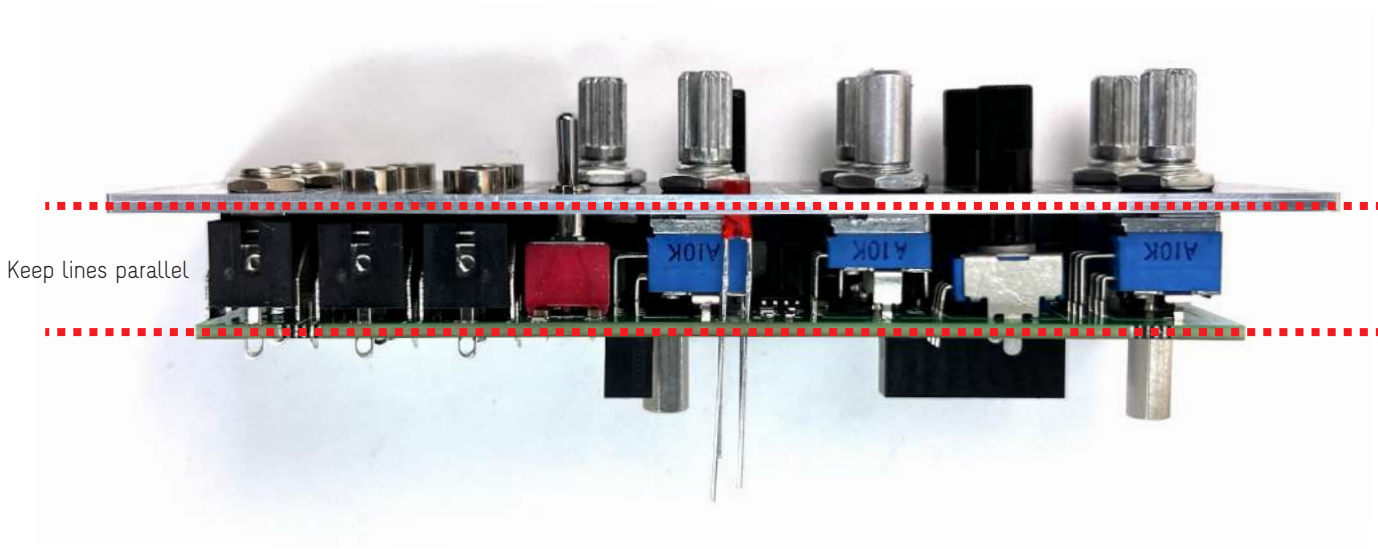
Next place all parts on the pcb, notice the values, orientation and jack types like shown below.



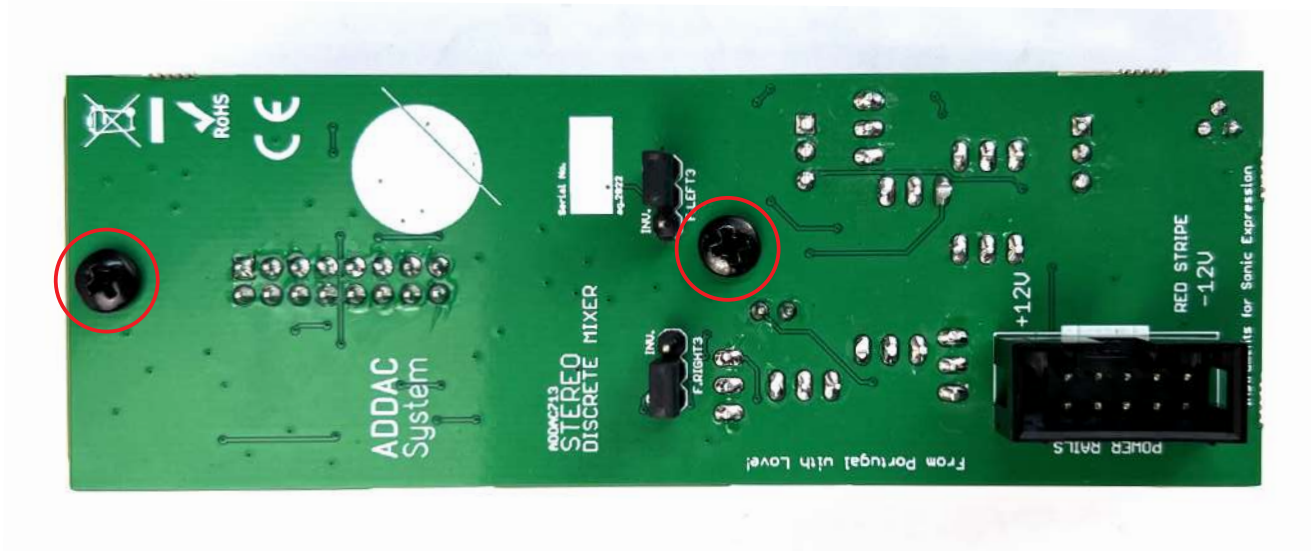
STEP 12:
Place the frontpanel and tighten all nuts.



STEP 13:
Adjust the height of the pcb keeping it parallel to the front panel and proceed to solder all parts.



STEP 14:
Place the 2 back screws.



Finish it by placing the knobs and you've finished the assembly process!

Proceed to the calibration method.



Calibration

TUNING THE BIAS:

An oscilloscope is required to precisely adjust the bias.

1. Start by turning all Inputs and the Feedback/Gate knobs fully counter-clockwise and set the MASTER OUTPUT at 12 o'clock.
2. Plug a Triangle waveform into INPUT 1 LEFT and connect the LEFT OUTPUT to the oscilloscope.
3. Raise the INPUT 1 GAIN knob until you can see clipping occur on the oscilloscope, notice the clipping will appear at one of the rails first, meaning the audio bias is not centered at 0v, rotating the Left Channel Trimmer will adjust the bias until a "balance" is achieved, the clipping should occur at both at the top and bottom rail where the positive waveform mirrors the negative waveform.
4. Repeat the procedure for the Right Channel.

These trimmers can also be used to change the timbre of the distortion effect as non-mirrored clipping will have a strong impact on the new harmonics generated.



Mods

INPUTS GAIN MODIFICATIONS:

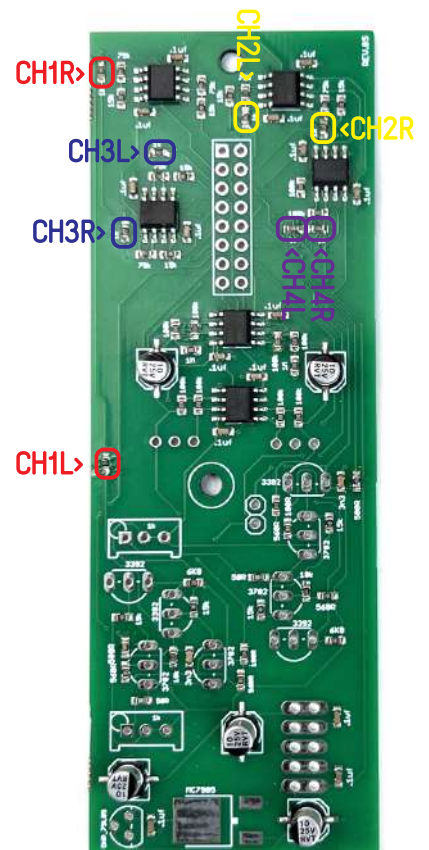
By default we calibrated the inputs to have a large range of amplification. This default value is what we thought of as a good compromise however other values were possible. We decided to leave it up for the user if further adjustment is preferred.

Experience soldering smd 0603 resistors required, we take no responsibility if the user permanently damages the pcb in this process!

The default value for all resistors is 1K
 Lower values resistors (up to 100R) will increase the maximum gain. At higher volume levels this will add more grit and higher harmonics, at lower volume levels you'll notice an increase in background noise as well as channel bleeding.

Higher values will reduce the maximum gain, by reducing the max gain the gain knobs will travel longer until the signal starts clipping allowing for better control of clean signals.

Resistor positions shown here.



For feedback, comments or problems please contact us at:
addac@addacsystem.com