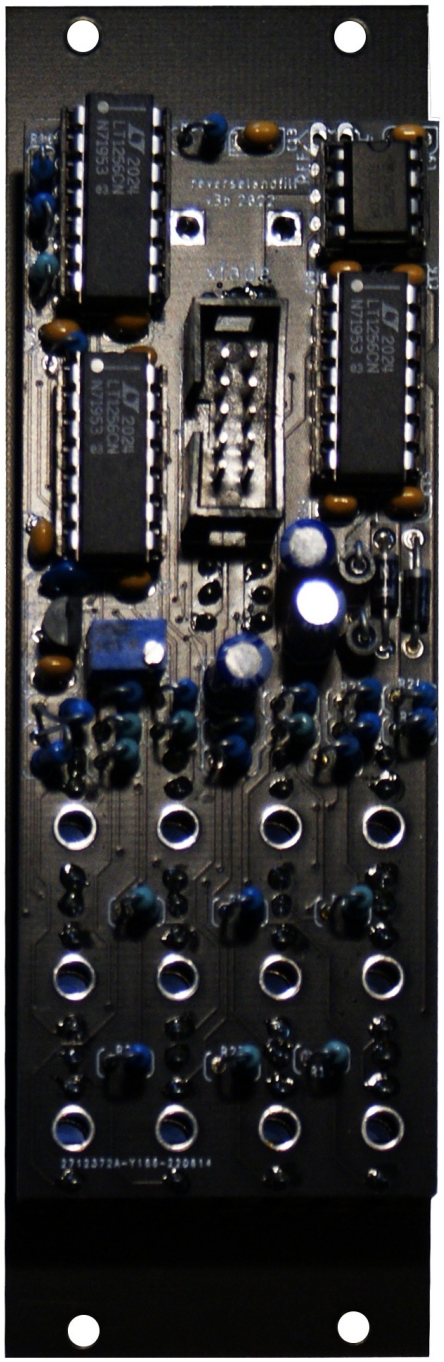
XFADE - Buildguide - v1 2023



Ferrite:
Solder the 2x Ferrite beads in f1 and f2.

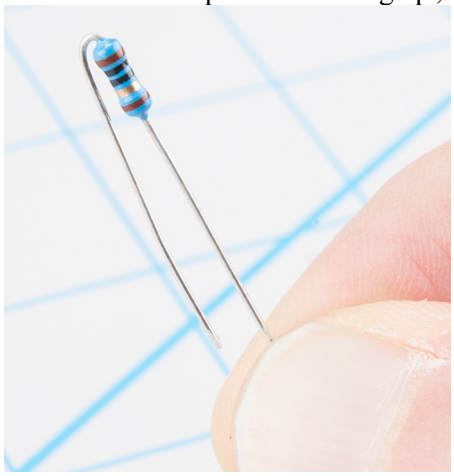
Diodes:
These parts have a polarity.
The black band should match the white marking on the pcb.
Solder d1 and d2.

IC Sockets:
Place the 3x 14pin and 1x 8pin sockets, make sure the notch matches the silkscreen.
First solder 2 pins diagonally from of each on each socket and see if they are aligned correctly.

If not, re-heat the solderpads while slightly pushing down on the socket.
They will click flat to the pcb. Now solder the remaining pins.
Don't place the ICs yet.

Capacitors:
Solder the 12x Ceramic 100nF capacitors to c2, c3, c4, c7, c9, c10, c11, c12, c13, c14, c15, c16
Then take the 330nF capacitor and place it in c6, then solder.
We'll do the Electrolythic capacitors later!

Resistors:
The resistors are placed 'standing up', like this:



Solder all resistors:
12x 499r → r2, r5, r6, r10, r12, r13, r17, r18, r20, r22, r26, r27
6x 1.5k → r8, r9, r15, r16, r24, r25
9x 100k → r1, r3, r4, r7, r11, r14, r19, r21, r23

Voltage regulator:
Solder the 7805 at IC1. Make sure the part orientation matches the silkscreen.

Power header:
Fit the 10pin shrouded header into place. Take care of the orientation.
First solder one pin and make sure the header is aligned to the PCB. Re-heat if needed.
Then solder the remaining pins.

Capacitors part 2:
Next are the Electrolytics, The longer leg goes in the hole with the + (PLUS) sign.
3x 10uF → c1, c5, c8

Trimmer:
Place the Trimpot at VR-1 and solder it into place.

ICs:
Bend the legs of the ICs so that they are at a 90 degree angle. You can use a flat surface to help with this, such as a tabletop.
Place the 3x LT1256 at LT1, LT2 and LT3, and place the TL072 at U1.
Make sure the notch on the LT1256 and the dot on the TL072 matches the silkscreen on the pcb.

Now take a short break!

Other side of the PCB:

Place the Potmeter, DPDT switch and 12x jacks
Remove the nuts and rings of the switch and then screw back one nut.
Place the frontpanel and secure it with one potmeter nut.
Now solder one pad of each part (jacks, potmeter and switch).
Check if the parts are aligned with the PCB, then solder all pads.

Place all nuts and screw them on tightly.

Turn the potmeter fully CCW and place the knob.

Checking:
Check if all polarised parts are in the correct position
(Electrolythis capacitors, Diodes, ICs, voltage regulator)
Check if the ICs are fitted correctly in the sockets and look if all parts are soldered in.

Power the module:
Place you finger on the ICs. If they get very hot, turn off the power and check your soldering.
Some heat is normal.

If all is okay, continue with setting the reference voltage:
Use a multimeter at the topleft REFERENCE pads to measure the REF voltage.
(left pad = red probe, right pad = black probe)
Adjust the trimpot until the voltage is 1 volt precisely.