FOX

LUMA (v1.4F)
DIY BUILD GUIDE

This build guide assumes the user has basic knowledge of through hole components, soldering skills and various tools required to Do-It-Yourself. Assemble at your own risk and have fun.

STEP BY STEP

1. Populate all resistors and ferrite beads. Solder and clip leads.

2. Populate all diodes, taking care to align the black band on the diode with the stripe shown on the PCB. Solder and clip leads.

3. Populate all of the ceramic capacitors. Solder and clip leads.

4. Populate all of the ICs, taking care that the notch at the top of the IC lines up with the notch shown on the PCB. Match the shape of the TL431 with the shape of the silkscreen on the PCB. Solder leads, clip if needed.

5. Populate the IDC power connector, taking care to line up the notch on the part with the notch shown on the PCB. Hold the connector in place while soldering

6. Populate the electrolytic capacitors, taking care to line up the black stripe on the caps with the outlined via on the PCB. Solder and clip leads.

7. Place each the of the jacks into the board and install the faceplate. Finger tighten each nut in place to ensure the jacks are straight. Solder them once you are satisfied.

8. Carefully check the solder of each component for bridges and any solder joints that may have been missed. Clean excess flux with alcohol.
You may now test out your work.

BILL OF MATERIALS

Resistors

☐ 6x	100K	R1, R2, R3, R5, R7, R9
☐ 1x	3.3K	R13
☐ 1x	8.2K	R14
☐ 1x	2.2K	R15
☐ 1x	7.5K	R16
☐ 1x	43R	R17
☐ 1x	560R	R18
☐ 1x	4.99K	R19
☐ 5x	1K	R20, R22, R24, R25, R26
☐ 1x	2K	R21
☐ 12x	499R	R4, R6, R8, R10, R11, R12, R23, R27, R28, R29, R30, R31

Ferrite Beads

☐ 2x	68R	FB1, FB2

Diodes

☐ 2x	1N4001	D1, D2

Ceramic Capacitors

☐ 7x	100n	C3, C4, C5, C6, C7, C8, C9

Integrated Circuits

☐ 1x	TL431	IC3
☐ 2x	LM6172	IC1, IC2, IC4

Electrolytic Capacitors

☐ 2x	10u 25v	C1, C2

Other Parts

☐ 8x	PJ302M Jacks
☐ 8x	3.5mm nuts
☐ 1x	2x5 Polarized IDC Power Header
☐ 1x	10-16 Ribbon Cable
☐ 1x	LUMA PCB
☐ 1x	LUMA Faceplate

LUMA
RGB 2 YRGB V1.4F
(C) 2021 FOX BURROUGHS