Midiverse Modular

MVM021 – Utility Mixer Build Guide

Thanks for supporting Midiverse Modular! This guide provides basic instructions to build your MVM021 Utility Mixer module.

Size: 8HP
Depth: 40mm
Draws 10mA from the +12V rail and 10mA from the -12V rail

This module is recommended for experienced builders only. You must have previous experience with building DIY modules. This guide provides a list of the parts needed to complete the build and some key instructions for success.

Parts needed to complete the build:

Reference	Qty	Value	Notes
Mixer Panel	1		
Mixer Control Board	1		
Mixer Main Board	1		
Control Board BOM			
R2, R3, R4	3	1K	1/4W 1% Metal film resistors
R1	1	22K	1/4W 1% Metal film resistors
VR1, VR2, VR3, VR4	4	B100K	ALPHA 9mm potentiometer, vertical
IN1, OUT1, IN2, OUT2, IN3, OUT3, IN4, AUX, DIFF12, DIFF34, MIX	11	3.5mm Jacks	THONKICONN (PJ398SM)
A, B	2	1x5 pin header	2.54mm 5 pin single row male header
Knobs	4		White, Davies (1900H)
Main Board BOM			
R1-R15	15	100K	1/4W 1% Metal film resistors
D1, D2	2	1N5817	
C1, C2, C3, C4	4	0.1uf	Multilayered ceramic capacitor
IC1, IC2	2	TL072CP	
IC Socket	2	8 pin Socket	8 Pin DIP IC Socket
A, B	2	1x5 pin header	2.54mm 5 pin single row female header
J1	1	2x5 pin header	2.54 mm 10 pin shrouded header
Screws	4		M3 Screw 6mm

Standoff	2		M3 Standoff 11mm

Build Instructions:

Populate and solder the resistors, diodes, capacitors, IC sockets, and power header. **DO NOT** solder the jacks and potentiometers on the control board yet.

Once all the above-mentioned parts have been soldered on the control and main boards, connect the 5 pin male and female headers together, and then position them between the boards (A with A, B with B). Carefully solder in the connectors, making sure that the boards are connected evenly. I usually solder in one pin on all connectors, double check the positioning, and if everything looks good, solder in the remaining pins.

If there are anti-rotation tabs on the potentiometers, be sure to break those off now. Pull apart the two boards, populate the control board with the jacks and potentiometers, add the M3 screws and standoffs, and attach the front panel. Now solder these components, reconnect the two boards, and secure the boards with the back screws.