Midiverse Modular

MVM019 – Quad Envelope Build Guide

Thanks for supporting Midiverse Modular! This guide provides basic instructions to build your MVM019 Quad Envelope module.

Size: 10HP
Depth: 40mm
Draws 25mA from the +12V rail and 8mA 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
Envelope Panel	1		
Envelope Control Board	1		
Envelope Main Board	1		BC847 SMD transistors pre-soldered
Control Board BOM			
R2	1	10K	1/4W 1% Metal film resistors
D1-D13	13	1N4148	
A1, A2, A3, A4, RL1, RL2, RL3, RL4	8	A1M	ALPHA 9mm potentiometer, vertical
ALL_GATE, GATE1, GATE2, GATE3, GATE4, OUT1, OUT2, OUT3, OUT4	9	3.5mm Jacks	THONKICONN (PJ398SM)
A, B	2	1x6 pin header	2.54mm 6 pin single row male header
C, D	2	1x5 pin header	2.54mm 5 pin single row male header
Knobs	8		White, Davies (1900H)
Main Board BOM			
R2, R4, R6, R8, R9, R13, R17, R21, R25	9	1K	1/4W 1% Metal film resistors
R11, R15, R19, R23	4	6.8K	1/4W 1% Metal film resistors
R1, R3, R5, R7, R10, R14, R18, R22	8	10K	1/4W 1% Metal film resistors
R12, R16, R20, R24	4	10M	1/4W 1% Metal film resistors
D1, D2	2	1N5817	

D3, D4, D5, D6	4	1N4148	
C1, C2	2	0.1uf	Multilayered ceramic capacitor
C3, C4, C5, C6	4	10uf	Polarized electrolytic, 35V
IC1	1	TL074CN	
IC Socket	1	14 pin Socket	14 Pin DIP IC Socket
A, B	2	1x6 pin header	2.54mm 6 pin single row female header
C, D	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:

The main board will come with the SMD transistors pre-soldered. 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 the 6 pin male and female headers together. Position them between the boards (A with A, B with B, etc.). 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.


QUAD ENVELOPE
1
2
3
4
ATTACK
RELEASE
GATE
OUT
1
2
3
4
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