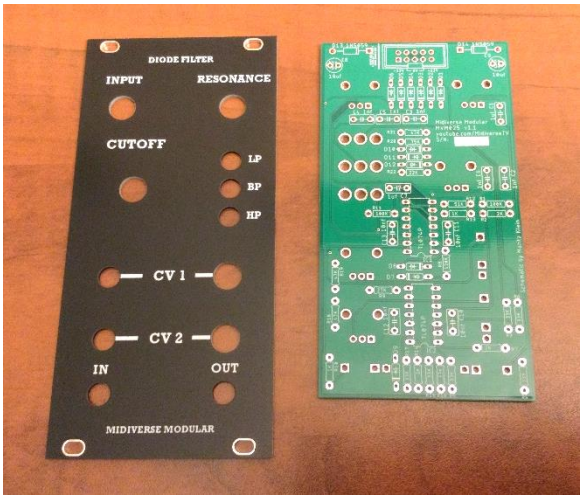
Midiverse Modular

MVM025 – Diode Filter Build Guide

Thanks for supporting Midiverse Modular! This guide provides basic instructions to build your MVM025 Diode Filter module.



Size: 12HP
Depth: 30mm
Draws 30mA from the +12V rail and 30mA from the -12V rail

This module is recommended for intermediate builders that have previous DIY experience. 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
Diode Filter Panel	1		
Diode Filter Board	1		
R10, R13	2	1K	1/4W 1% Metal film resistors
R2, R7, R14	3	2K	1/4W 1% Metal film resistors
R22	1	22K	1/4W 1% Metal film resistors
R9	1	27K	1/4W 1% Metal film resistors
R3, R4, R5, R6, R15, R16, R17	7	33K	1/4W 1% Metal film resistors
R18, R19, R21	3	47K	1/4W 1% Metal film resistors
R12	1	51K	1/4W 1% Metal film resistors
R20	1	75K	1/4W 1% Metal film resistors
R1, R11	2	100K	1/4W 1% Metal film resistors
R8	1	120K	1/4W 1% Metal film resistors
D13, D14	2	1N5059	
D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12	12	1N4148	
C8, C9	2	10uf	Polarized electrolytic, 35V
C1, C7	2	1uf	Multilayered ceramic capacitor
C2, C3, C4, C5, C6	5	1nf	Film box capacitor
C10, C11, C12, C13	4	10nf	Multilayered ceramic capacitor
IC Socket	2	14 pin Socket	14 Pin DIP IC Socket

IC1, IC2	2	TL074	
VR_CV1, VR_CV2, VR_IN, VR_RES, VR_CUTOFF	5	B100K	ALPHA 9mm potentiometer, vertical
LP, BP, HP	3		SPDT ON-ON
AUDIO_IN, AUDIO_OUT, CV1, CV2	4	3.5mm Jacks	THONKICONN (PJ398SM)
J1	1	2x5 pin header	2.54 mm 10 pin shrouded header
Knobs	4		White, Davies (1900H)
Knob	1		White, Davies (1510)
Switch caps	3		White

Build Instructions:

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

Be sure to pay attention to the orientation of the diodes, electrolytic capacitors, and the power header. The line on the diodes should align with the white line on the PCB. The long leg of the 10uf electrolytic capacitor should go through the pad with the + sign. The notch on the power connector should align with the white notch on the board (facing the line of diodes).

Once all the above-mentioned parts have been soldered on the board, reflow all the solder joints and make sure that all connections are good. Finally, populate the jacks, potentiometers, and switches, and attach the front panel. If there are anti-rotation tabs on the potentiometers, be sure to break those off now. Now, solder these components in place. The large Davies knob (1510) goes on the cutoff potentiometer.