



Midiverse Modular

MVM020 – Skew LFO

Build Guide

Thanks for supporting Midiverse Modular! This guide provides basic instructions to build your MVM020 Skew LFO module.

Size: 4HP

Depth: 40mm

Draws 15mA from the +12V rail and 15mA 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
LFO Panel	1		
LFO Control Board	1		
LFO Main Board	1		BC847 SMD transistor pre-soldered
Control Board BOM			
R1	1	3.3K	1/4W 1% Metal film resistors
R2	1	20K	1/4W 1% Metal film resistors
D1, D2	2	1N4148	
C1	1	0.022uf	Multilayered ceramic capacitor
C2	1	1uf	Multilayered ceramic capacitor
LED	1		3mm red
FREQ	1	A100K	ALPHA 9mm potentiometer, vertical
SKEW	1	B1M	ALPHA 9mm potentiometer, vertical
SQR1, SQR2, TRI1, TRI2	4	3.5mm Jacks	THONKICONN (PJ398SM)
A, B	2	1x6 pin header	2.54mm 6 pin single row male header
S1	1		SPDT ON-OFF-ON
Knobs	2		White, Davies (1900H)
Switch cap	1		White
Main Board BOM			
R8, R9	2	10R	1/4W 1% Metal film resistors
R7, R12, R15	3	1K	1/4W 1% Metal film resistors
R4	1	1.2K	1/4W 1% Metal film resistors

R13	1	2.2K	1/4W 1% Metal film resistors
R3, R14	2	3.3K	1/4W 1% Metal film resistors
R2	1	10K	1/4W 1% Metal film resistors
R1	1	22K	1/4W 1% Metal film resistors
R5, R6, R10, R11	4	100K	1/4W 1% Metal film resistors
D1, D2	2	1N5817	
C1, C2, C3, C4	4	0.1uf	Multilayered ceramic capacitor
C5	1	0.01uf	Multilayered ceramic capacitor
IC1, IC2	2	LM358P	
IC Socket	2	8 pin Socket	8 Pin DIP IC Socket
A, B	2	1x6 pin header	2.54mm 6 pin single row female header
J1	1	2x5 pin header	2.54 mm 10 pin shrouded header
Screws	2		M3 Screw 6mm
Standoff	1		M3 Standoff 11mm

Build Instructions:

The main board will come with the SMD transistor pre-soldered. Populate and solder the resistors, diodes, capacitors, IC sockets, and power header. **DO NOT** solder the jacks, potentiometers, switch, and LED on the control board yet.

Once all the above-mentioned parts have been soldered on the control and main boards, connect the 6 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, potentiometers, switch, and LED, add the M3 screw and standoff, and attach the front panel. Now solder these components, reconnect the two boards, and secure the boards with the back screw.

