

BOM rev.1

#	Item Description	Qty	Notes / Function
1	8 Ω Speaker	1	Audio output
2	Clear Plastic Pushbuttons (N/O) - Keyboard type	13	Momentary inputs for user control
3	Red LEDs (onbeat)	8	Visual beat indicators
4	Orange/Yellow LEDs (offbeat)	8	Secondary timing indicators
5	Green LED (power)	1	Power indicator
6	Potentiometers	4	Control parameters (e.g. volume, filter, etc.)
7	LCD Display (20×4 or 20×5)	1	System display
8	Speaker Op-Amp	1	Amplifies speaker output
9	Fuses	8	Over-current protection
10	Jumpers (E-pin)	4	Debugging/isolation
11	Knobs	4	For potentiometer shafts
12	3.5 mm Jack	1	Audio I/O
13	Barrel Jack	1	DC power input
14	LED Driver	1	Controls LED brightness and sequencing
15	PS/MP Board (5 V / 3.3 V)	1	Power supply / main control board
16	SD Card Reader	1	External memory interface
17	ESP32	1	Main microcontroller