

OVERALL BILL OF MATERIALS

Part Description	Part / footprint	Quantity	
------------------	------------------	----------	--

ELECTROMECHANICAL

9mm vert potentiometer B100k	RD901F or similar	17	<input type="checkbox"/>	[1][2][3]
Forest green knob	Davies 1900h	17	<input type="checkbox"/>	[3]
Multi-turn trimmer 100Ω	Bourns 3296W-1-101	2	<input type="checkbox"/>	[1]
Tactile switch	TE 2-1825910-7	1	<input type="checkbox"/>	[1]

SEMICONDUCTORS

TL074 Quad FET op-amp + socket	DIP-14	6	<input type="checkbox"/>	[1]
LM13700 OTA + socket	DIP-16	2	<input type="checkbox"/>	[1]
MCP34063 + socket	DIP-8	1	<input type="checkbox"/>	[1]
Raspberry Pi Pico	Pico WH	1	<input type="checkbox"/>	[2]
L78L05 +5v Linear regulator	T0-92	2	<input type="checkbox"/>	[1]
L79L05 -5V Linear regulator	T0-92	2	<input type="checkbox"/>	[1]
2N3904 NPN Bipolar transistor	T0-92	7	<input type="checkbox"/>	[1]
2N3906 PNP Bipolar transistor	T0-92	3	<input type="checkbox"/>	[1]
2N7000 N-MOSFET transistor	T0-92	2	<input type="checkbox"/>	[1]
Schottky Power diode (1N5817)	D0-41	27	<input type="checkbox"/>	[1]
2mm LED	Kingbright L-13ID	6	<input type="checkbox"/>	[1]

RESISTORS

1Ω 1% metal film resistor	1/4 Watt axial	1	<input type="checkbox"/>	[1]
100Ω 1% metal film resistor	1/4 Watt axial	5	<input type="checkbox"/>	[1]
1kΩ 1% metal film resistor	1/4 Watt axial	28	<input type="checkbox"/>	[1]
1.5kΩ 1% metal film resistor	1/4 Watt axial	5	<input type="checkbox"/>	[1]
2.2kΩ 1% metal film resistor	1/4 Watt axial	5	<input type="checkbox"/>	[1]
10kΩ 1% metal film resistor	1/4 Watt axial	16	<input type="checkbox"/>	[1]
22kΩ 1% metal film resistor	1/4 Watt axial	9	<input type="checkbox"/>	[1]
100kΩ 1% metal film resistor	1/4 Watt axial	45	<input type="checkbox"/>	[1]
330kΩ 1% metal film resistor	1/4 Watt axial	6	<input type="checkbox"/>	[1]
1MΩ 1% metal film resistor	1/4 Watt axial	3	<input type="checkbox"/>	[1]

CAPACITORS

470pF MLCC X7R/X5R	5mm pitch	2	<input type="checkbox"/>	[1]
100n MLCC X7R/X5R/Y5V	5mm pitch	30	<input type="checkbox"/>	[1]
10n MLCC X7R/X5R	5mm pitch	1	<input type="checkbox"/>	[1]
100u Electrolytic 15V or more	2mm pith 5mm dia.	6	<input type="checkbox"/>	[1]
1nF MLCC NPO/COG	5mm pitch	2	<input type="checkbox"/>	[1]
220pF MLCC NPO/COG	5mm pitch	3	<input type="checkbox"/>	[1]

OTHER PASSIVES

Power Inductor 220uH	5mm pitch 12mm dia.	1	<input type="checkbox"/>	[1]
Polyfuses 300mA trip	5mm pitch	2	<input type="checkbox"/>	[1]

Part Description	Part / footprint	Quantity	
CONNECTORS			
Thonkiconn + Nut	PJ398SM	49	<input type="checkbox"/> [3]
DC jack socket 2.1mm vertical Socket	Korean Hroparts DC-012A-20A	1	<input type="checkbox"/> [1]
10 Pin IDC socket	02x05 2.54mm header	8	<input type="checkbox"/> [1]
16 Pin IDC socket	02x08 2.54mm header	18	<input type="checkbox"/> [1]
20 Pin SIL socket	01x20 2.54 socket	2	<input type="checkbox"/> [1]
CABLES			
16-10 IDC cable	150mm length	8	<input type="checkbox"/> [3]
16-16 IDC cable	170mm length	2	<input type="checkbox"/> [3]
USB panel mount cable	Included with book	1	<input type="checkbox"/> [1]
Stranded wire 10cm	Any wire	1	<input type="checkbox"/> [1]
HARDWARE			
M3 x 6mm screw	Pan head Phillips	32	<input type="checkbox"/> [1]
M3 x 8mm or 10mm screw	Pan head Phillips	12	<input type="checkbox"/> [1]
M2 x 4mm screw	Pan head Phillips	24	<input type="checkbox"/> [1]
M3 nut	Regular size	24	<input type="checkbox"/> [1]
Rubber feet	FF-28 for 8mm hole	8	<input type="checkbox"/> [1]
PCB pillar / spacer threaded	12mm height M3 both ends	4	<input type="checkbox"/> [1]
OTHER NON COMPONENTS			
Patch cables	Mono jack cables more than 150mm	15	<input type="checkbox"/> [3]
12V PSU	2.1mm DC jack, Tip positive, 1A PSU	1	<input type="checkbox"/> [1]

RECOMMENDED SUPPLIERS

If you are buying your own parts, you will need to buy from multiple suppliers. I have put numbers next to each part to indicate where you can buy them:

[1] General electronic distributors - parts like resistors
Mouser, Digikey, Farnell/Element14, RS Components, TME, Rapid Electronics, LCSC

[2] Hobbyist suppliers - For Raspberry Pi and other music bits
Pimoroni, Pi Hut, Adafruit, Tayda, Futurlec

[3] Synth specific - This is where you get pots, cables and jacks
Thonk (UK), Synthcube (USA), Exploding Shed (EU), Modular addict (USA)