

Bill of Materials for MonoWave[X] Main Component Kit Revision V1.2

Item	Description	Qty	Designator	Package
	CAPACITOR			
1	Capacitor - Do Not Fit	2	C802, C803	-
2	15pF 10% Ceramic	4	C401, C402, C701, C702	RAD-0.2N
3	18pF 5% Ceramic	2	C201, C202	RAD-0.2N
4	27pF 10% Ceramic	2	C1101, C1201	RAD-0.2N
5	100pF 5% Ceramic	1	C1203	RAD-0.2N
6	150pF 5% Ceramic	2	C302, C304	RAD-0.2N
7	100nF 63V Polyester	9	C301, C303, C901, C902, C903, C904, C1102, C1202, C1204	RAD-0.2
8	100nF Ceramic Capacitor	24	C8, C10, C12, C13, C203, C403, C404, C405, C501, C502, C601, C602, C705, C706, C804, C805, C909, C910, C1002, C1003, C1103, C1104, C1205, C1206	RAD-0.2N
9	220nF 63V Polyester	4	C503, C603, C703, C704	RAD-0.2
10	2.2uF Electrolytic	1	C905	RB-D5.0-P2.0
11	4u7 Ceramic X5R	4	C1, C3, C4, C7	0805
12	10uF 35V Tantalum	4	C9, C11, C801, C1001	RB-D7.5-P5.0
13	10uF 35V Electrolytic	3	C6, C907, C908	RB-D5.0-P2.0
14	100uF 25V Electrolytic	2	C2, C5	RB-D6.3-P2.5
15	220uF 50V Electrolytic	1	C906	RB-D10.0-P5.0
	CONNECTOR			
16	IDC40 Box Header	3	J101, J102, J103	2.54MM
17	1x1 Open Pin Header	5	TP1, TP2, TP401, TP801, TP1001	2.54MM
18	Crimp to suit 0.1inch Series MTA	9		-
19	8-pin IC Socket 0.3inch	6	U201, U401, U405, U704, U801, U1001	DIP-8
20	14-pin IC Socket 0.3inch	19	U204, U404, U406, U501, U502, U504, U601, U604, U701, U705, U802, U803, U901, U1002, U1003, U1101, U1102, U1201, U1202	DIP-14
21	16-pin IC Socket 0.3inch	7	U402, U403, U505, U605, U703, U707, U902	DIP-16
22	20-pin IC Socket 0.3inch	7	U203, U301, U302, U503, U506, U603, U606	DIP-20
23	28-pin IC Socket 0.6inch	2	U702, U706	DIP-28W
24	40-pin IC Socket 0.6inch	1	U205	DIP-40
25	2-way 0.1inch Straight - Locking Header	3	J1, J204, S1	2.54MM
26	2-way 0.1inch Crimp Housing	3	J1, J204, S1	2.54MM
27	3-way 0.1inch Straight - Locking Header	1	J206	2.54MM
28	3-way 0.1inch Crimp Housing	1	J206	2.54MM

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	CRYSTAL			
29	12MHz Oscillator	1	X501	DIL-8
30	Insulator for HC-18/U	1	X201	-
31	16MHz Crystal	1	X201	HC49/4H
	DIODE			
32	1N4004 200V 1A	4	D1, D2, D3, D4	DIODE-0.4
33	1N4148	5	D201, D801, D1001, D1101, D1201	DIODE-0.3
	HARDWARE			
34	M3 Nut	3	U2, U3, U4	-
35	M3 x 10mm Bolt PH	1	U4	-
36	HEATSINK - Mini Type 6073B	1	U4	-
37	M3 x 6mm Bolt PH	2	U2, U3	-
	LINEAR			
38	TLC7524 - 8-bit A/D Converter	4	U402, U403, U703, U707	DIP-16
39	LM13700 - Dual OTA	1	U902	DIP-16
40	TL082 Dual JFET Opamp	2	U801, U1001	DIP-8
41	TL084 Quad JFET Opamp	2	U1102, U1202	DIP-14
42	ATtiny2313	2	U503, U603	DIP-20
43	PTN78000A SMPS -3 to -15V @ 9W	1	U1	-
44	ATMEGA16-16PU	1	U205	DIP-40
45	ADC0803 - 8-bit A/D Converter	2	U301, U302	DIP-20
46	7912 -12V 1A Fixed Voltage Regulator	1	U3	TO-220
47	7812 +12V 1A Fixed Voltage Regulator	1	U2	TO-220
48	7805 +5V 1A Fixed Voltage Regulator	1	U4	TO-220
49	6N138 - Opto-coupler	1	U201	DIP-8
50	M27C512-15FP - 512K EEPROM	2	U702, U706	DIP-28
51	CA3140 Opamp	1	U401	DIP-8
52	OP295 - Dual, Rail-Rail Opamp	2	U405, U704	DIP-8

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Item	Description	Qty	Designator	Package
	INDUCTOR			
53	Ferrite Bead - 0.45uH 7A	3	L1, L2, L3	-
	LOGIC			
54	CD4040 - 12 stage Ripple Counter	2	U505, U605	DIP-16
55	CD4011 - Quad 2-input NAND Gate	2	U802, U1002	DIP-14
56	CD4024 - 7-stage Binary Counter	2	U504, U604	DIP-14
57	74HC00 - Quad NAND Gate	7	U204, U404, U501, U502, U601, U701, U705	DIP-14
58	74HC374 - Tri-State Octal D-Type Flip-Flop	3	U203, U506, U606	DIP-20
59	74HC74 - Dual D-Type Edge Triggered Flip-Flop	1	U406	DIP-14
60	CD4016 - Quad Analogue switch	2	U803, U1003	DIP-14
	RESISTOR			
61	Wire Link	1	LK1	TO FIT
62	4 x 10K Commoned Resistor Network	2	RN201, RN202	SIP-5
63	0R Resistor	1	R807	AXIAL-0.4
64	22R 5W Wirewound	1	R2	-
65	100R 1% 0.5W Metal Film	1	R1	AXIAL-0.4
66	220R 1% 0.5W Metal Film	4	R201, R202, R206, R211	AXIAL-0.4
67	1K0 1% 0.5W Metal Film	24	R207, R209, R401, R402, R403, R501, R502, R601, R602, R702, R704, R801, R806, R902, R903, R904, R905, R910, R911, R913, R914, R924, R1001, R1006	AXIAL-0.4
68	1K5 1% 0.5W Metal Film	1	R205	AXIAL-0.4
69	2K7 1% 0.5W Metal Film	2	R901, R912	AXIAL-0.4
70	4K7 1% 0.5W Metal Film	1	R203	AXIAL-0.4
71	5K6 1% 0.5W Metal Film	2	R701, R703	AXIAL-0.4
72	10K 1% 0.5W Metal Film	4	R301, R302, R303, R304	AXIAL-0.4
73	12K 1% 0.5W Metal Film	1	R915	AXIAL-0.4
74	15K 1% 0.5W Metal Film	2	R210, R1101	AXIAL-0.4
75	22K 1% 0.5W Metal Film	4	R805, R1005, R1107, R1207	AXIAL-0.4
76	33K 1% 0.5W Metal Film	1	R204	AXIAL-0.4
77	39K 1% 0.5W Metal Film	2	R1112, R1212	AXIAL-0.4
78	47K 1% 0.5W Metal Film	10	R917, R919, R1104, R1105, R1106, R1108, R1204, R1205, R1206, R1208	AXIAL-0.4
79	68K 1% 0.5W Metal Film	3	R916, R1113, R1213	AXIAL-0.4

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Item	Description	Qty	Designator	Package
RESISTOR - continued				
80	100K 1% 0.5W Metal Film	15	R920, R921, R922, R923, R1102, R1103, R1109, R1110, R1111, R1201, R1202, R1203, R1209, R1210, R1211	AXIAL-0.4
81	390K 1% 0.5W Metal Film	6	R804, R906, R907, R908, R909, R1004	AXIAL-0.4
82	470K 1% 0.5W Metal Film	1	R918	AXIAL-0.4
83	1M0 1% 0.5W Metal Film	2	R803, R1003	AXIAL-0.4
84	2M2 1% 0.5W Metal Film	2	R802, R1002	AXIAL-0.4
TRANSISTOR				
85	2N3904 NPN Transistor	10	Q201, Q301, Q302, Q901, Q902, Q903, Q904, Q905, Q906, Q908	TO-92
86	2N3906 PNP Transistor	2	Q202, Q907	TO-92
87	CA3046 5 NPN Transistors	3	U901, U1101, U1201	DIP-14
TRIMPOT				
88	20K 25T Cermet VTrim	4	P401, P901, P1111, P1201	3296W
89	50K 25T Cermet VTrim	1	P902	3296W
90	100K 25T Cermet VTrim	2	P801, P1001	3296W
FIRMWARE				
91	MonoWave[X] Main CPU Software RevV1	1		-
92	MonoWave[X] PAO Software RevV1	2		-
93	MonoWave[X] EPROM Software	1		-

Bill of Materials for MonoWave [X] 2U Enclosure Kit Revision V1.0

Item	Description	Qty	Designator	Package
CONNECTOR				
1	5-PIN DIN Panel Socket	2	MIDIIN, MIDIOUT	-
2	6.35mm Stereo Socket with DPDT - Metal, Panel	1	AUDIO OUT	-
3	IDC40 Socket	6		2.54MM
ENCLOSURE				
4	Metal Rack - PF-19 2U	1		-
HARDWARE				
5	M3 x 10mm M/F Standoff	6	NB:.PCB	-
6	WIRE - 2-core Screened Audio [Unit=1cm]	40		-
7	M3 x 6mm Bolt PH	6	NB:.PCB	-
8	M3 Nut	10	NB:.PCB	-
9	M3 x 10mm Bolt PH	4		-
10	IDC Ribbon Cable 40-Way	90		-
11	Equipment 7/0.2 Green	28		-
12	Equipment 7/0.2 Yellow	58		-
13	Equipment 7/0.2 Red	46		-
14	Equipment 7/0.2 Black	60		-

Bill of Materials for MonoWave [X] 2U Hardware Kit Revision V1A

Item	Description	Qty	Designator	Package
CAPACITOR				
1	100nF Ceramic Capacitor	5	C1, C2, C3, C4, C7	RAD-0.2N
2	1uF 50V Electrolytic	3	C5, C6, C8	RB-D5.0-P2.0
CONNECTOR				
3	1x16 Pin 16mm Extended	1	LCD	2.54MM
4	Crimp to suit 0.1inch Series MTA	3		-
5	IDC40 Box Header	3	J101, J102, J1304	2.54MM
6	3-way 0.1inch Crimp Housing	1	J104	2.54MM
7	3-way 0.1inch Straight - Locking Header	1	J104	2.54MM
HARDWARE				
8	KNOB - Metal Insert - 18T - 16mm	21	P101, P102, P103, P104, P105, P106, P107, P108, P109, P110, P111, P112, P113, P114, P115, P116, P117, P118, P119, P120, P121	-
9	M3 x 8mm Nylon Spacer Threaded	4		-
			NB::LCD	
10	M3 Nut	4		-
			NB::LCD	
11	M3 x 16mm Bolt PH	4		-
			NB::LCD	
12	KNOB - To suit PCB Pushbutton Switch	8	S1303, S1304, S1305, S1306, S1307, S1308, S1309, S1310	-
13	KNOB - Metal Insert - D- 16mm	2	S1311, S1312	-
OPTO-ELECTRONIC				
14	2x16 Backlit LCD	1	LCD	-
15	5mm Red LED	3	D1301, D1302, D1303	-
16	5mm Low-profile White Lens Mount	3	D1301, D1302, D1303	-
POTENTIOMETER				
17	10KA LIN DUAL [LA16ECO - 18T Spline]	1	P120	LA16ECO-6.0MM 18-T
18	10KA LIN [LA16ECO - 18T Spline]	11	P101, P102, P104, P106, P107, P108, P109, P110, P114, P118, P121	LA16ECO-6.0MM 18T
19	10KA LIN with SPDT [LA16ECO - 18T Spline]	2	P103, P105	LA16ECO-6.0MM 18-T
20	47KA LIN [LA16ECO - 18T Spline]	1	P111	LA16ECO-6.0MM 18-T

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Item	Description	Qty	Designator	Package
	POTENTIOMETER - continued			
21	100KB LOG [LA16ECO - 18T Spline]	6	P112, P113, P115, P116, P117, P119	LA16ECO-6.0MM 18-T
	RESISTOR			
22	4R7 1% 0.5W Metal Film	1	R1304	AXIAL-0.4
23	330R 1% 0.5W Metal Film	2	R1301, R1302	AXIAL-0.4
24	1K8 1% 0.5W Metal Film	1	R1303	AXIAL-0.4
25	100K 1% 0.5W Metal Film	2	R101, R102	AXIAL-0.4
	SWITCH			
26	SPDT PB PCB with V-bracket [ON-MOM]	8	S1303, S1304, S1305, S1306, S1307, S1308, S1309, S1310	8125
27	1P12W - D-Shaft	2	S1311, S1312	-
	TRIMPOT			
28	10K 25T Cermet VTrim	1	P1301	3296W
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