

Bill of Materials for ES31 - Stereo Output Module [4mm] Full Kit V0.0

Item	Description	Qty	Designator	Package
	HARDWARE			
1	M3 Thumbscrew	4		-
			NB: Construct-A-Rack	
2	M3 x 6mm Bolt PH	4		-
			NB: Doefper Compatible Rails	
	PANEL			
3	ES31 - Stereo Output Front Panel A	1		-
	KITS			
4	ES31 - Stereo Output Module PCB Set V0.0	1		-
5	ES30 - Stereo Panner Mixer [4mm] Hardware Kit V0.0	1		-
6	ES30 - Stereo Panner Mixer Component Kit V0.0	1		-
7	ES31 - Stereo Output Module [4mm] Hardware Kit V0.0	1		-
8	ES31 - Stereo Output Module Component Kit V0.0	1		-
9	ES30 - Stereo Panner Mixer PCB Set V0.0	1		-

Bill of Materials for ES30 - Stereo Panner Mixer Component Kit V0.0 - Column 1

Item	Description	Qty	Designator	Package
CAPACITOR				
1	100nF Ceramic Capacitor	2	C201, C202	RAD-0.2N
CONNECTOR				
2	1x4 Pin 9mm Header	1	J102	2.54MM
3	IDC16 RA Box Header	1	J201	2.54MM
4	1x4 Pin 20mm Header	1	J202	-
5	8-pin IC Socket 0.3inch	3	Q1, Q2, Q3	DIP-8
6	14-pin IC Socket 0.3inch	1	U101	DIP-14
DIODE				
7	1N4148	1	D101	DIODE-0.3
HARDWARE				
8	9mm Earth Tag	1	PANEL_GND	-
LINEAR				
9	LM3900 - Quad Norton Amplifier	1	U101	DIP-14
POTENTIOMETER				
10	50KB LIN - 18T Spline	3	P101, P102, P105	ALPHA 16MM
RESISTOR				
11	1M87	1	R104	0805
12	5K11 1% 0.5W Metal Film	4	R110, R112, R116, R118	AXIAL-0.4
13	16K2 1% 0.5W Metal Film	1	R123	AXIAL-0.4
14	33K 1% 0.5W Metal Film	1	R124	AXIAL-0.4
15	37K4 1% 0.5W Metal Film	2	R107, R113	AXIAL-0.4
16	57K6 1% 0.5W Metal Film	2	R109, R115	AXIAL-0.4
17	63K4 1% 0.5W Metal Film	1	R108	AXIAL-0.4
18	200K 1% 0.5W Metal Film	2	R119, R121	AXIAL-0.4
19	240K 1% 0.5W Metal Film	2	R120, R122	AXIAL-0.4
20	402K 1% 0.5W Metal Film	1	R103	AXIAL-0.4

Bill of Materials for ES30 - Stereo Panner Mixer Component Kit V0.0 - Column 1

Item	Description	Qty	Designator	Package
	RESISTOR - continued			
21	470K 1% 0.5W Metal Film	2	R111, R117	AXIAL-0.4
22	806K 1% 0.5W Metal Film	1	R102	AXIAL-0.4
23	1M5 1% 0.5W Metal Film	1	R106	AXIAL-0.4
24	10M 1% 0.5W Metal Film	3	R101, R105, R114	AXIAL-0.4
	TRIMPOT			
25	50K 25T Cermet HTrim	2	P103, P104	3269X
	UNITS			
26	Matched PNP Assembly	3	Q1, Q2, Q3	-

Bill of Materials for ES30 - Stereo Panner Mixer Component Kit V0.0 - Column 2

Item	Description	Qty	Designator	Package
CAPACITOR				
1	100nF Ceramic Capacitor	2	C201, C202	RAD-0.2N
CONNECTOR				
2	1x4 Pin 9mm Header	1	J102	2.54MM
3	IDC16 RA Box Header	1	J201	2.54MM
4	1x4 Pin 20mm Header	1	J202	-
5	8-pin IC Socket 0.3inch	3	Q1, Q2, Q3	DIP-8
6	14-pin IC Socket 0.3inch	1	U101	DIP-14
DIODE				
7	1N4148	1	D101	DIODE-0.3
LINEAR				
8	LM3900 - Quad Norton Amplifier	1	U101	DIP-14
POTENTIOMETER				
9	50KB LIN - 18T Spline	3	P101, P102, P105	ALPHA 16MM
RESISTOR				
10	1M87	1	R104	0805
11	5K11 1% 0.5W Metal Film	4	R110, R112, R116, R118	AXIAL-0.4
12	16K2 1% 0.5W Metal Film	1	R123	AXIAL-0.4
13	33K 1% 0.5W Metal Film	1	R124	AXIAL-0.4
14	37K4 1% 0.5W Metal Film	2	R107, R113	AXIAL-0.4
15	57K6 1% 0.5W Metal Film	2	R109, R115	AXIAL-0.4
16	63K4 1% 0.5W Metal Film	1	R108	AXIAL-0.4
17	200K 1% 0.5W Metal Film	2	R119, R121	AXIAL-0.4
18	240K 1% 0.5W Metal Film	2	R120, R122	AXIAL-0.4
19	402K 1% 0.5W Metal Film	1	R103	AXIAL-0.4
20	470K 1% 0.5W Metal Film	2	R111, R117	AXIAL-0.4
21	806K 1% 0.5W Metal Film	1	R102	AXIAL-0.4
22	1M5 1% 0.5W Metal Film	1	R106	AXIAL-0.4

Bill of Materials for ES30 - Stereo Panner Mixer Component Kit V0.0 - Column 2

Item	Description	Qty	Designator	Package
	RESISTOR - continued			
23	10M 1% 0.5W Metal Film	3	R101, R105, R114	AXIAL-0.4
	TRIMPOT			
24	50K 25T Cermet HTrim	2	P103, P104	3269X
	UNITS			
25	Matched PNP Assembly	3	Q1, Q2, Q3	-

Bill of Materials for ES30 - Stereo Panner Mixer Component Kit V0.0 - Main

Item	Description	Qty	Designator	Package
CAPACITOR				
1	82pF 5% Ceramic	4	C103, C106, C203, C206	RAD-0.2N
2	33nF 63V Polyester	4	C102, C105, C202, C205	RAD-0.2
3	100nF Ceramic Capacitor	6	C303, C304, C305, C306, C307, C308	RAD-0.2N
4	330nF 63V Polyester	4	C101, C104, C201, C204	RAD-0.2
5	10uF 35V Electrolytic	2	C301, C302	RB-D5.0-P2.0
CONNECTOR				
6	IDC16 Receptacle	2	J102, J201	-
7	IDC16 Box Header	2	J101, J202	2.54MM
8	8-pin IC Socket 0.3inch	2	U102, U202	DIP-8
9	14-pin IC Socket 0.3inch	1	U102	DIP-14
10	16-pin IC Socket 0.3inch	2	U101, U201	DIP-16
LINEAR				
11	TL074 Quad JFET Opamp	1	U102	DIP-14
12	LM13700 - Dual OTA	2	U101, U201	DIP-16
INDUCTOR				
13	Ferrite Bead - 0.45uH 7A	2	L301, L302	-
RESISTOR				
14	330R 1% 0.5W Metal Film	2	R207, R214	AXIAL-0.4
15	22K 1% 0.5W Metal Film	8	R102, R104, R108, R110, R202, R204, R209, R211	AXIAL-0.4
16	47K5 1% 0.5W Metal Film	4	R101, R107, R201, R208	AXIAL-0.4
17	68K 1% 0.5W Metal Film	8	R105, R106, R111, R112, R205, R206, R212, R213	AXIAL-0.4
18	10M 1% 0.5W Metal Film	4	R103, R109, R203, R210	AXIAL-0.4
TRIMPOT				
19	2K 25T Cermet VTrim	4	P101, P102, P201, P202	3296W

Bill of Materials for ES31 - Stereo Output Module Component Kit V0.0 - Output Board

Item	Description	Qty	Designator	Package
CAPACITOR				
1	1nF 5% C0G Ceramic,	1	C2	RAD-0.2N
2	100nF Ceramic Capacitor	1	C1	RAD-0.2N
CONNECTOR				
3	FASTON 6.3mm x 0.8mm PCB TAB	1	J4	-
4	1x3 Open Pin Header	1	JP1	2.54MM
RESISTOR				
5	100R 1% 0.5W Metal Film	1	R1	AXIAL-0.4

Bill of Materials for ES30 - Stereo Panner Mixer [4mm] Hardware Kit V0.0

Item	Description	Qty	Designator	Package
	CONNECTOR			
1	4mm PCB Socket c/w Nut - Blue	2		-
2	4mm PCB Socket c/w Nut - Black	1		-
	HARDWARE			
3	KNOB - Panther Hi-contrast Blue	3		18T SPLINE

Bill of Materials for ES31 - Stereo Output Module PCB Set V0.0

Item	Description	Qty	Designator	Package
	PCB			
1	ES31 - Stereo Output Module PCB V0.0	1		-
2	Panther Carrier PCB V1A	5		-

Bill of Materials for ES30 - Stereo Panner Mixer PCB Set V0.0

Item	Description	Qty	Designator	Package
	PCB			
1	ES30 - Stereo Panner Mixer Set PCB V0.0	1		-
2	Panther Carrier PCB V1A	4		-
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