ES24 - Programmer Extension Full Kit

Item	Description	Qty	Designator	Package
	HARDWARE			
1	M3 x 6mm Bolt PH	4		-
			NB: Doefper Compatible Rails	
2	M3 x 10mm Bolt PH	4		-
			NB: EuroSynth	
	KITS			
3	ES24 - Programmer Extension PCB/Panel Set V0.0	1		-
4	ES24 - Programmer Extension Hardware Kit V0.0	1		-
5	ES24 - Programmer Extension Component Kit V0.0	1		-

Stage 1 [ES24 - Programmer Extension Component Kit]

Item	Description	Qty	Designator	Package
	CAPACITOR			
1	470pF 10% Ceramic	1	C101	RAD-0.2N
2	10nF 63V Polyester	1	C102	RAD-0.2
3	22nF 63V Polyester	1	C103	RAD-0.2
	CONNECTOR			
4	1x4 Pin 16mm Header	2	S102, S103	-
5	1x3 Pin 16mm Header	1	S101	-
6	IDC20 RA Box Header	1	J201	-
	DIODE			
7	1N4148	5	D101, D102, D104, D105, D106	DIODE-0.3
	HARDWARE			
8	SLEEVING - 2.4mm Heatshrink [@ 1cm]	3	D103^3	-
9	Ferrule Terminal - DUCE7575	6	S102^3, S103^3	-
10	Equipment Wire 7/0.2 Black [@ 1cm]	4	D103^4	-
11	Equipment Wire 7/0.2 Red [@ 1cm]	4	D103^4	-
	OPTO-ELECTRONIC			
12	3mm HE-Yellow LED	1	D103	-
	POTENTIOMETER			
13	100KB LIN - 18T Spline	3	P101, P102, P103	ALPHA 16MM
	RESISTOR			
14	1K0 1% 0.5W Metal Film	1	R112	AXIAL-0.4
15	1K2 1% 0.5W Metal Film	1	R110	AXIAL-0.4
16	1K3 1% 0.5W Metal Film	1	R111	AXIAL-0.4
17	47K 1% 0.5W Metal Film	3	R101, R102, R109	AXIAL-0.4
18	100K 1% 0.5W Metal Film	1	R104	AXIAL-0.4
19	150K 1% 0.5W Metal Film	3	R105, R106, R108	AXIAL-0.4

Stage 1 [ES24 - Programmer Extension Component Kit]

Item	Description	Qty	Designator	Package
	RESISTOR - continued			
20	220K 1% 0.5W Metal Film	3	R113, R114, R115	AXIAL-0.4
21	470K 1% 0.5W Metal Film	1	R107	AXIAL-0.4
22	1M0 1% 0.5W Metal Film	1	R103	AXIAL-0.4
	SWITCH			
23	SPDT PCB RA [ON-OFF-ON]	2	S101, S102	7103
			NB: 102 - Remove front tabs	
24	SPDT PB PCB RA [ON-MOM]	1	S103	-
			NB: Remove front tabs	
	TRANSISTOR			
25	BC547B NPN Transistor	1	Q104	TO-92
26	BC557B PNP Transistor	3	Q101, Q102, Q103	TO-92

Stage2 [ES24 - Programmer Extension Component Kit]

Item	Description	Qty	Designator	Package
	CAPACITOR			
1	470pF 10% Ceramic	1	C101	RAD-0.2N
2	10nF 63V Polyester	1	C102	RAD-0.2
3	22nF 63V Polyester	1	C103	RAD-0.2
	CONNECTOR			
4	1x4 Pin 16mm Header	2	S102, S103	-
5	1x3 Pin 16mm Header	1	S101	-
6	IDC20 RA Box Header	1	J201	-
	DIODE			
7	1N4148	5	D101, D102, D104, D105, D106	DIODE-0.3
	HARDWARE			
8	SLEEVING - 2.4mm Heatshrink [@ 1cm]	3	D103^3	-
9	Ferrule Terminal - DUCE7575	6	S102^3, S103^3	-
10	Equipment Wire 7/0.2 Black [@ 1cm]	4	D103^4	-
11	Equipment Wire 7/0.2 Red [@ 1cm]	4	D103^4	-
	OPTO-ELECTRONIC			
12	3mm HE-Yellow LED	1	D103	-
	POTENTIOMETER			
13	100KB LIN - 18T Spline	3	P101, P102, P103	ALPHA 16MM
	RESISTOR			
14	1K0 1% 0.5W Metal Film	1	R112	AXIAL-0.4
15	1K2 1% 0.5W Metal Film	1	R110	AXIAL-0.4
16	1K3 1% 0.5W Metal Film	1	R111	AXIAL-0.4
17	47K 1% 0.5W Metal Film	3	R101, R102, R109	AXIAL-0.4
18	100K 1% 0.5W Metal Film	1	R104	AXIAL-0.4
19	150K 1% 0.5W Metal Film	3	R105, R106, R108	AXIAL-0.4

Stage2 [ES24 - Programmer Extension Component Kit]

Item	Description	Qty	Designator	Package
	RESISTOR - continued			
20	220K 1% 0.5W Metal Film	3	R113, R114, R115	AXIAL-0.4
21	470K 1% 0.5W Metal Film	1	R107	AXIAL-0.4
22	1M0 1% 0.5W Metal Film	1	R103	AXIAL-0.4
	SWITCH			
23	SPDT PCB RA [ON-OFF-ON]	2	S101, S102	7103
			NB: 102 - Remove front tabs	
24	SPDT PB PCB RA [ON-MOM]	1	S103	-
			NB: Remove front tabs	
	TRANSISTOR			
25	BC547B NPN Transistor	1	Q104	TO-92
26	BC557B PNP Transistor	3	Q101, Q102, Q103	TO-92

Stage3 [ES24 - Programmer Extension Component Kit]

Item	Description	Qty	Designator	Package
	CAPACITOR			
1	470pF 10% Ceramic	1	C101	RAD-0.2N
2	10nF 63V Polyester	1	C102	RAD-0.2
3	22nF 63V Polyester	1	C103	RAD-0.2
	CONNECTOR			
4	1x4 Pin 16mm Header	2	S102, S103	-
5	1x3 Pin 16mm Header	1	S101	-
6	IDC20 RA Box Header	1	J210	-
	DIODE			
7	1N4148	5	D101, D102, D104, D105, D106	DIODE-0.3
	HARDWARE			
8	SLEEVING - 2.4mm Heatshrink [@ 1cm]	3	D103^3	-
9	Ferrule Terminal - DUCE7575	6	S102^3, S103^3	-
10	Equipment Wire 7/0.2 Black [@ 1cm]	4	D103^4	-
11	Equipment Wire 7/0.2 Red [@ 1cm]	4	D103^4	-
	OPTO-ELECTRONIC			
12	3mm HE-Yellow LED	1	D103	-
	POTENTIOMETER			
13	100KB LIN - 18T Spline	3	P101, P102, P103	ALPHA 16MM
	RESISTOR			
14	1K0 1% 0.5W Metal Film	1	R112	AXIAL-0.4
15	1K2 1% 0.5W Metal Film	1	R110	AXIAL-0.4
16	1K3 1% 0.5W Metal Film	1	R111	AXIAL-0.4
17	47K 1% 0.5W Metal Film	3	R101, R102, R109	AXIAL-0.4
18	100K 1% 0.5W Metal Film	1	R104	AXIAL-0.4
19	150K 1% 0.5W Metal Film	3	R105, R106, R108	AXIAL-0.4

Stage3 [ES24 - Programmer Extension Component Kit]

Item	Description	Qty	Designator	Package
	RESISTOR - continued			
20	220K 1% 0.5W Metal Film	3	R113, R114, R115	AXIAL-0.4
21	470K 1% 0.5W Metal Film	1	R107	AXIAL-0.4
22	1M0 1% 0.5W Metal Film	1	R103	AXIAL-0.4
	SWITCH			
23	SPDT PCB RA [ON-OFF-ON]	2	S101, S102	7103
			NB: 102 - Remove front tabs	
24	SPDT PB PCB RA [ON-MOM]	1	S103	-
			NB: Remove front tabs	
	TRANSISTOR			
25	BC547B NPN Transistor	1	Q104	TO-92
26	BC557B PNP Transistor	3	Q101, Q102, Q103	TO-92

Stage 4 [ES24 - Programmer Extension Component Kit]

Item	Description	Qty	Designator	Package
	CAPACITOR			
1	470pF 10% Ceramic	1	C101	RAD-0.2N
2	10nF 63V Polyester	1	C102	RAD-0.2
3	22nF 63V Polyester	1	C103	RAD-0.2
	CONNECTOR			
4	1x4 Pin 16mm Header	2	S102, S103	-
5	1x3 Pin 16mm Header	1	S101	-
6	IDC20 RA Box Header	1	J201	-
	DIODE			
7	1N4148	5	D101, D102, D104, D105, D106	DIODE-0.3
	HARDWARE			
8	SLEEVING - 2.4mm Heatshrink [@ 1cm]	3	D103^3	-
9	Ferrule Terminal - DUCE7575	6	S102^3, S103^3	-
10	Equipment Wire 7/0.2 Black [@ 1cm]	4	D103^4	-
11	Equipment Wire 7/0.2 Red [@ 1cm]	4	D103^4	-
	OPTO-ELECTRONIC			
12	3mm HE-Yellow LED	1	D103	-
	POTENTIOMETER			
13	100KB LIN - 18T Spline	3	P101, P102, P103	ALPHA 16MM
	RESISTOR			
14	1K0 1% 0.5W Metal Film	1	R112	AXIAL-0.4
15	1K2 1% 0.5W Metal Film	1	R110	AXIAL-0.4
16	1K3 1% 0.5W Metal Film	1	R111	AXIAL-0.4
17	47K 1% 0.5W Metal Film	3	R101, R102, R109	AXIAL-0.4
18	100K 1% 0.5W Metal Film	1	R104	AXIAL-0.4
19	150K 1% 0.5W Metal Film	3	R105, R106, R108	AXIAL-0.4

Stage 4 [ES24 - Programmer Extension Component Kit]

Item	Description	Qty	Designator	Package
	RESISTOR - continued			
20	220K 1% 0.5W Metal Film	3	R113, R114, R115	AXIAL-0.4
21	470K 1% 0.5W Metal Film	1	R107	AXIAL-0.4
22	1M0 1% 0.5W Metal Film	1	R103	AXIAL-0.4
	SWITCH			
23	SPDT PCB RA [ON-OFF-ON]	2	S101, S102	7103
			NB: 102 - Remove front tabs	
24	SPDT PB PCB RA [ON-MOM]	1	S103	-
			NB: Remove front tabs	
	TRANSISTOR			
25	BC547B NPN Transistor	1	Q104	TO-92
26	BC557B PNP Transistor	3	Q101, Q102, Q103	TO-92

Back Board [ES24 - Programmer Extension Component Kit]

Item	Description	Qty	Designator	Package
	CONNECTOR			
1	1x2 Pin 9mm Header	2	JP1, JP2	2.54MM
2	IDC20 Box Header	2	J5, J6	2.54MM
3	IDC20 Receptacle	4	J1, J2, J3, J4	2.54MM
	UNITS			
4	Panther - IDC20 - 08cm	1	J5	-

Stage 1 [ES24 - Programmer Extension Hardware Kit]

Item	Description	Qty	Designator	Package
	CONNECTOR			
1	3.5mm Mono PCB Socket - Red	1	J101	-
2	3.5mm Mono PCB Socket - Yellow	1	J102	-
	HARDWARE			
3	KNOB - EuroSynth	2	P101, P102	18T SPLINE
	OPTO-ELECTRONIC			
4	3mm Clear Lens Mount	1	D103	-

Stage2 [ES24 - Programmer Extension Hardware Kit]

Item	Description	Qty	Designator	Package
	CONNECTOR			
1	3.5mm Mono PCB Socket - Red	1	J101	-
2	3.5mm Mono PCB Socket - Yellow	1	J102	-
	HARDWARE			
3	KNOB - EuroSynth	3	P101, P102, P103	18T SPLINE
	OPTO-ELECTRONIC			
4	3mm Clear Lens Mount	1	D103	-

Stage3 [ES24 - Programmer Extension Hardware Kit]

Item	Description	Qty	Designator	Package
	CONNECTOR			
1	3.5mm Mono PCB Socket - Red	1	J101	-
2	3.5mm Mono PCB Socket - Yellow	1	J103	-
	HARDWARE			
3	KNOB - EuroSynth	3	P101, P102, P103	18T SPLINE
	OPTO-ELECTRONIC			
4	3mm Clear Lens Mount	1	D103	-

Stage 4 [ES24 - Programmer Extension Hardware Kit]

Item	Description	Qty	Designator	Package
	CONNECTOR			
1	3.5mm Mono PCB Socket - Red	1	J101	-
2	3.5mm Mono PCB Socket - Yellow	1	J102	-
	HARDWARE			
3	KNOB - EuroSynth	4	P101, P102, P103, P103	18T SPLINE
	OPTO-ELECTRONIC			
4	3mm Clear Lens Mount	1	D103	-

ES24 - Programmer Extension PCB/Panel Set

Item	Description	Qty	Designator	Package
	PANEL			
1	ES24 - Programmer Extension Front Panel A	1		-
	PCB			
2	ES24 - Programmer Extension BackBoard PCB V0.0	1		-
3	ES24 - Programmer Extension Stage PCB V0.2	4		-
4	Panther Carrier PCB - JACK-SPDT V1.3	8		-
	End of document			