

TRACE ELLIOT

SERVICE MANUAL NO. SM00014

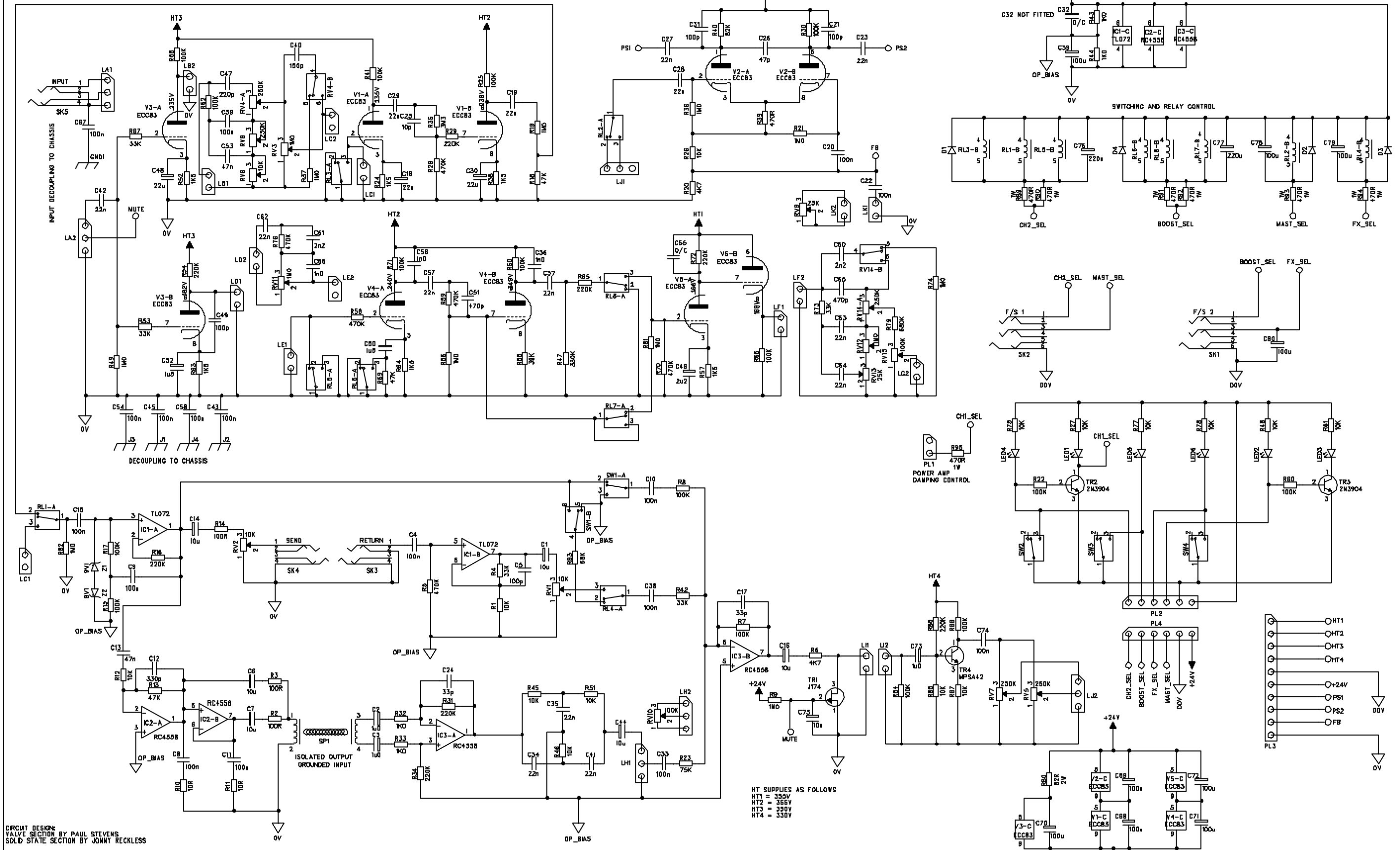
ISSUE 1

Date: October 28, 1996
Product Code : T3440/3441
Model No : Speedtwin RH100/C100
Technical File No : TE00014

Issued by:

**Trace Elliot Limited.
Blackwater Trading Estate
The Causeway, Maldon
Essex CM4 4GG.**

ISSUE CHANGE DATE	NOTE	ISSUE CHANGE DATE	NOTE	ISSUE CHANGE DATE	NOTE



CIRCUIT DESIGN: VALVE SECTION BY PAUL STEVENS
SOLID STATE SECTION BY JOHNNY RECKLESS

TITLE: MAIN PREAMP CIRCUIT
PROJECT: SPEED TWIN GUITAR AMP
DRAWING NO: 0000228
ISSUE: 2
DATE: 8/3/1999
DRAWN BY: J B RECKLESS

TRACE ELLIOT
TRACE ELLIOT LIMITED
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DC PREAMP VALVE HEATER CONNECTIONS

PARTS LIST FOR SPEED TWIN MAIN PCB

Description	Part Code	Qty	Where Used
PCB	PC00035x2	1	
RESISTORS			
10R 1/4W	72-RM10R	2	R10 R11
100R 1/4W	72-RM100R	3	R2 R3 R14
470R 1/4W	72-RM470R	1	R39
470R 1W	72-RM470K-1WATT	7	R89 R90 R91 R92 R93 R94 R95
1K0 1/4W	72-RM1K0	4	R32 R33 R43 R44
1K5 1/4W	72-RM1K5	6	R24 R38 R52 R57 R63 R64
4K7 1/4W	72-RM4K7	2	R6 R20
10K 1/4W	72-RM10K	14	R1 R12 R26 R27 R45 R46 R48 R51 R61 R75 R77 R78 R85 R87
33K 1/4W	72-RM33K	5	R4 R42 R53 R67 R73
39K 1/4W	72-RM39K	1	R55
47K 1/4W	72-RM47K	2	R18 R69
56K 1/4W	72-RM56K	1	R13
68K 1/4W	72-RM68K	1	R83
82K 1W	72-RM82K-1WATT	1	R40
100K 1/4W	72-RM100K	9	R7 R8 R15 R17 R22 R23 R60 R62 R84
100K 1W	72-RM100K-1WATT	8	R25 R30 R41 R50 R66 R68 R71 R88
220K 1/4W	72-RM220K	5	R16 R29 R31 R34 R65
220K 1W	72-RM220K-1WATT	3	R54 R72 R86
330K 1/4W	72-RM330K	1	R47
470K 1/4W	72-RM470K	6	R5 R28 R58 R59 R70 R76
680K 1/4W	72-RM680K	1	R79
1M0 1/4W	72-RM1M	9	R9 R19 R21 R36 R37 R49 R56 R74 R81 R82
3M9 1/4W	72-RM3M9	1	R35
82R 2.5W	72-RWW82R-2.5W	1	R80
SEMICONDUCTORS			
IN4148	72-D-IN4148	4	D1 D2 D3 D4
BZX55 C9V1 ZENER	72-D-BZX55C9V1	2	Z1 Z2
J175	72-FET-J-175	1	TR1
2N3904	72-T2N3904	2	TR2 TR3
MPSA42	72-TMPSA42	1	TR4
TL072 OPAMP	72-IL-TL072	1	IC1
RC4558 OPAMP	72-IC-RC4558P	2	IC2 IC3

CAPACITORS				
10p	500V ceramic	72-C10P-500VC	1	C25
33p	100V ceramic	72-C33P-100VC	2	C17 C24
47p	500V ceramic	72-C47P-500VCD	1	C26
100p	100V ceramic	72-C100P-100VCD	1	C5
100p	1KV ceramic	72-C100P-1KVCD	3	C21 C31 C49
150p	500V ceramic	72-C150P-CER-R	1	C40
220p	1KV ceramic	72-C220P-1KVCD	1	C47
330p	100V ceramic	72-C330P-100VCD	1	C12
470p	1KV ceramic	72-C470P-1KVCD	2	C51 C65
1n0	1KV ceramic	72-C1000P-1KVCD	3	C36 C56 C66
2n2	1KV ceramic	72-C2200P-1KVCD	2	C60 C61
1u0	35V tant	72-C1-35VT	3	C2 C3 C73
1u5	35V tant	72-C1.5-35VT	2	C50 C52
2u2	35V tant	72-C2.2-35VT	1	C46
10u	35V elect rad	72-C10-35VER	7	C1 C6 C7 C14 C16 C44 C75
22u	63V elect rad	72-C22-63VER	3	C18 C30 C48
100u	16V elect rad	72-C100-16VER	8	C39 C68 C69 C70 C71 C72 C78 C79
220u	25V elect rad	72-C220-25VER	3	C76 C77 C80
22n	100V poly box	72-C22N-100VP	3	C34 C35 C41
22n	400V poly box	72-C22N-400VPR	11	C19 C23 C27 C28 C29 C37 C42 C57 C62 C63 C64
47n	100V poly box	72-C47N-100VP	1	C13
47n	400V poly box	72-C47N-400VP	1	C53
100n	100V poly box	72-C100N-100VP	13	C4 C8 C9 C10 C11 C15 C33 C38 C43 C45 C54 C58 C67
100n	250V poly box	72-C100N-250VB	4	C20 C22 C74 C59
RELAYS				
Omron G5V-1 5V		73-RELAY-5V-SPCO	8	RL1-8
CONNECTORS				
2 way 0.1"		72-HEAD-2W	1	PL1
6 way 0.1"		72-HEAD-6W	2	PL2 PL4
10 way 0.1"		72-HEAD-10W	1	PL3
LEDS				
3mm GRN LED		72-LED-GRN-3mm	2	LED1 LED6

3mm YEL LED	72-LED-YEL-3mm	2	LED4 LED3
3mm RED LED	72-LED-RED-3mm	2	LED5 LED2
SOCKETS			
1/4" STEREO JACK SK	73-SKT-JCKBBBG	2	SK1 SK2
1/4" MONO JACK SKT	73-SKT-JCKBNBG	3	SK3 SK4 SK5
SWITCHES			
Mini Toggle DPDT vert	73-SWT-M-TGL-VCO	1	SW1
Mini Toggle SPDT vert	73-SWT-M-TGL-PCB	3	SW2 SW3 SW4
POTENTIOMETERS			
10K	73-POT-A10K	3	RV1 RV2 RV6
25K	73-POT-A25K	1	RV13
25K LINEAR	73-POT-B25K	1	RV9
100K	73-POT-A100K	2	RV10 RV15
250K	73-POT-A250K	3	RV5 RV7 RV8
250K with Pull Switch	73-POT-A250K-PS	2	RV4 RV14
1M0	73-POT-A1M	3	RV3 RV11 RV12
VALVE BASES			
B9A PCB valve base	73-VAL-SOCKET	5	V1 V2 V3 V4 V5
TEST POINT			
WIRE LINKS			
A	45-WIR-16/02BRN	1	A - A 110mm
B	45-WIR-16/02RED	1	B - B 130mm
E	45-WIR-16/02ORN	1	E - E 160mm
F	45-WIR-16/02YEL	1	F - F 150mm
G	45-WIR-16/02GRN	1	G - G 210mm
H	45-WIR-16/02BLU	1	H - H 240mm
I	45-WIR-16/02VIO	1	I - I 350mm
K	45-WIR-16/02WHT	1	K - K 480mm
HEAD			
6 way ribbon cable	72-LEAD-54	1	PL2 - PL4
L	45-WIR-16/02WHT	1	L1 - L2 220mm
LA	45-WIR-SCRE-2	1	LA1-LA2 570mm
LB	45-WIR-SCRE-1R	1	LB1-LB2 450mm

LC	45-WIR-SCRE-1R	1	LC1-LC2 540mm
LD	45-WIR-SCRE-1R	1	LD1-LD2 350mm
LE	45-WIR-SCRE-1R	1	LE1-LE2 390mm
LF	45-WIR-SCRE-1R	1	LF1-LF2 180mm
LG	45-WIR-SCRE-1R	1	LG1-LG2 200mm
LH	45-WIR-SCRE-2	1	LH1-LH2 220mm
LI	45-WIR-SCRE-1R	1	LI1-LI2 200mm
LJ	45-WIR-SCRE-2	1	LJ1-LJ2 190mm
LK	45-WIR-SCRE-1R	1	LK1-LK2 260mm
COMBO			
6 way ribbon cable	72-LEAD-53	1	PL2 - PL4
L	45-WIR-16/02WHT	1	L1 - L2 380mm
LA	45-WIR-SCRE-2	1	LA1-LA2 220mm
LB	45-WIR-SCRE-1R	1	LB1-LB2 110mm
LC	45-WIR-SCRE-1R	1	LC1-LC2 190mm
LD	45-WIR-SCRE-1R	1	LD1-LD2 170mm
LE	45-WIR-SCRE-1R	1	LE1-LE2 180mm
LF	45-WIR-SCRE-1R	1	LF1-LF2 130mm
LG	45-WIR-SCRE-1R	1	LG1-LG2 280mm
LH	45-WIR-SCRE-2	1	LH1-LH2 490mm
LI	45-WIR-SCRE-1R	1	LI1-LI2 600mm
LJ	45-WIR-SCRE-2	1	LJ1-LJ2 530mm
LK	45-WIR-SCRE-1R	1	LK1-LK2 410mm

8 MARCH 1996
Paul Stevens

PARTS LIST FOR PC00013STC SPEED TWIN HEAD/COMBO 100W POWER BOARD

ISSUE 3 (23/9/96) PS

Description	Part Code	Qty	Where Used
PCB	PC00013 issue 2	1	
RESISTORS			
0 Ohm Link	72-RCZERO	2	R17 R18 R20
1K5 1/4W	72-RM1K5	4	R5 R6 R7 R8
10K 1/4W	72-RM10K	3	R19 R30
12K 1/4W	72-RM12K	1	R21
56K 1/4W	72-RM56K	3	R22 R23 R24
100K 1/4W	72-RM100K	1	R25
180K 1/4W	72-RM180K	2	R9 R10
10K 1W	72-RM10K-1WATT	5	R16 R27 R28 R29 and across SW1
220K 2W	72-RC220K-2W	4	R11 R12 R13 R14
1K 4W	72-RWW1K-6W	4	R1 R2 R3 R4
6K8 4W	72-RWW6K8-4W	1	R15
DIODES			
1N4002	72-D-IN4002	5	D5 D6 D7 D8 D9
1N4007	72-D-IN4007	4	D1 D2 D3 D4
1N4148	72-D-IN4148	1	D10
CAPACITORS			
100n 250V poly box	72-C100N-250VB	6	C9 C12 C13 C14 C17 C18
22u 160V elect radial	72-C22-160VER	1	C15
47u 63V elect radial	72-C47-63VER	1	C16
220u 25V elect radial	72-C220-25VER	1	C11
2200u 35V elect radial	72-C2200-35VA	1	C10
47u 450V elect radial	73-CAP47450V	4	C5 C6 C7 C8
330u 250V elect radial	73-CAP-330250V	4	C1 C2 C3 C4
RELAY			
SPCO G5V-1	73-RELAY-5V-SPCO	1	RL1
CONNECTORS			

2 way 0.1"	72-HEAD-2W	2	PL2 PL3
3 way 0.1"	72-HEAD-3W2	1	PL4
10 way 0.1"	72-HEAD-10W	1	PL1
7 way 0.2"	72-HEAD-7W-2	1	T2
9 way 0.2"	72-HEAD-9W-2	1	T1
2 way wire terminal	73-TERM-PCB-2WAY	1	L1
SOCKETS			
1/4" MONO JACK PCB	73-SKT-JCKBNBG	2	SK1 SK2
SWITCHES			
Mini Toggle SPDT vertical	73-SWT-M-TGL-PCB	2	SW1 SW3
Large slide DPDT horiz	73-SWT-SLIDER-DP	2	SW2 SW4
POTENTIOMETERS			
47K vertical trimmer	72-PRESET-47K-V	2	RV1 RV2
1M0	73-POT-A1M	1	RV3
VALVE BASES			
Octal PCB valve base	73-VAL-SOCKET-2	4	V1 V2 V3 V4
WIRE LINKS			
A	45-WIR-16/02BR	1	A - A 90mm
B	45-WIR-16/02BR	1	B - B 60mm
C	45-WIR-16/02BR	1	C - C 125mm
D	45-WIR-16/02BL	1	D - D 90mm
E	45-WIR-16/02BL	1	E - E 90mm
F	45-WIR-16/02BL	1	F - F 90mm
G	45-WIR-16/02BL	1	G - G 90mm
H	45-WIR-16/02WT	1	H - H 90mm
I	45-WIR-16/02RD	1	I - I 125mm
J	45-WIR-16/02WT	1	J - J 165mm
K	45-WIR-16/02RD	1	K - K 90mm
L	45-WIR-16/02RD	1	L - L 90mm
M	45-WIR-16/02VT	1	M - M 60mm
N	45-WIR-16/02VT	1	N - N 125mm
O	45-WIR-16/02PK	1	O - O 90mm
P	45-WIR-16/02PK	1	P - P 125mm
Q	45-WIR-16/02OR	1	Q - Q 90mm
R	45-WIR-16/02YL	1	R - R 125mm
S	45-WIR-16/02GY	1	S - S 90mm
T	45-WIR-16/02GN	1	T - T 135mm

U & V twisted pair	45-WIR-16/02BU	4	U/V - U/V	90mm X 2
REGULATOR ASSY				
7824 24V REGULATOR	72-7824-REG	1	IC1	
LARGE T03 HEAT SINK	E13-HS-PC00013	1	IC1	
T03 SPACER/WASHER	73-MOS-PAD-T03P2	1	IC1	
SCREW M3x8	71-SCR-M3X8PP/TT	1	IC1	
WASHER M3	71-WAS-M3ABLK	1	IC1	
SHAKE PROOF M3	71-WAS-M3INTSP	1	IC1	
NUT M3	71-NUT-M3ZINC	1	IC1	
SCREW M3x40	71-SCR-M3X40PPB	1	IC1	
NYLON SPACER 34mm	71-SPA-34MM	1	IC1	