

# **TRACE ELLIOT**

## **SERVICE MANUAL NO. SM00031**

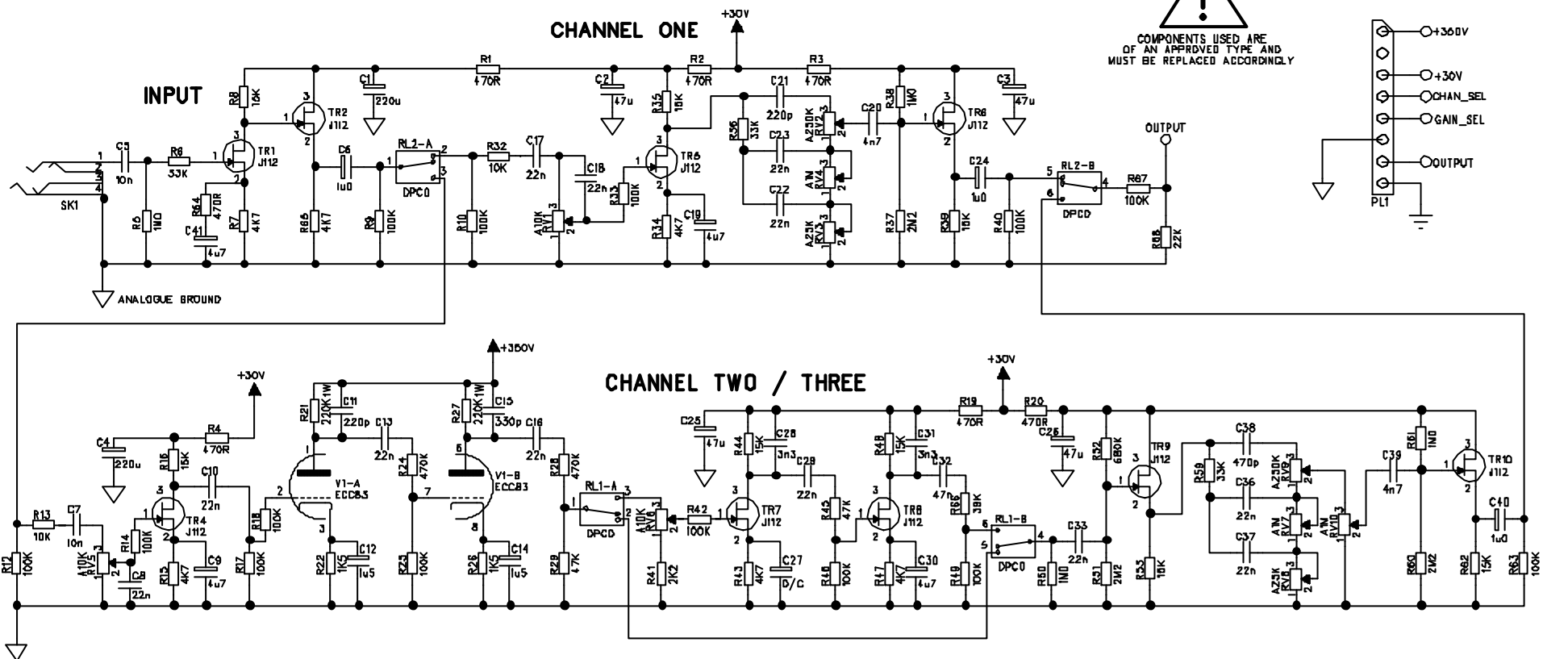
### **ISSUE 1**

**Date:** February 12, 1997  
**Product Code :** T3416  
**Model No :** Super Tramp Tube Twin  
Stereo Quad Chorus  
**Technical File No :** TE00031

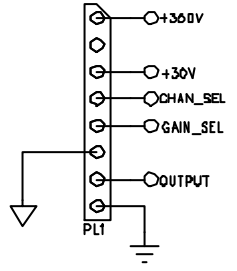
**Issued by:**

**Trace Elliot Limited.  
Blackwater Trading Estate  
The Causeway, Maldon  
Essex CM9 4GG.**

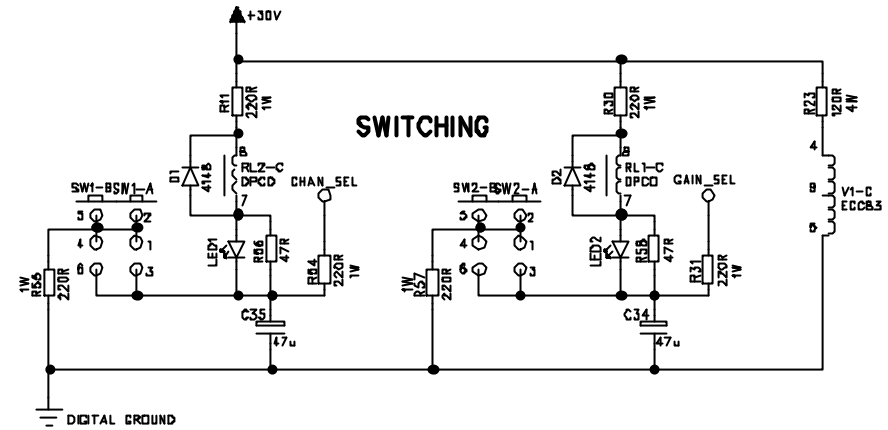
ISSUE CHANGE NOTE DATE	ISSUE CHANGE NOTE DATE	ISSUE CHANGE NOTE DATE
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**!**  
COMPONENTS USED ARE OF AN APPROVED TYPE AND MUST BE REPLACED ACCORDINGLY

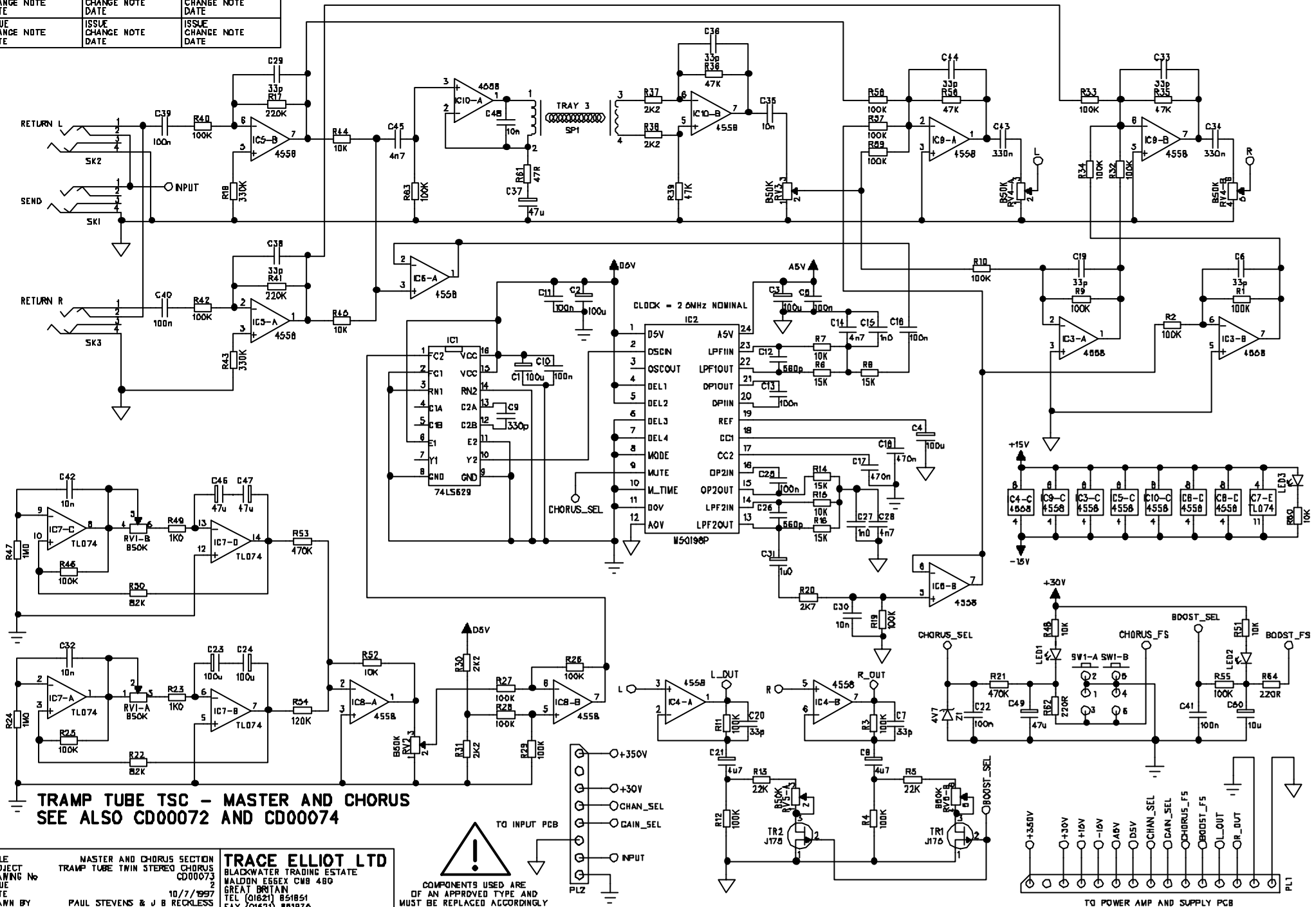


**TRAMP TUBE TWIN STEREO CHORUS - INPUT AND CHANNEL**  
SEE ALSO CD0073 AND CD0074



TITLE	INPUT AND CHANNEL SECTION	<b>TRACE ELLIOT LTD</b>
PROJECT	TRAMP TUBE TWIN STEREO CHORUS	BLACKWATER TRADING ESTATE
DRAWING No	CD00072	WALDON ESSEX CM9 4BG
ISSUE	3	GREAT BRITAIN
DATE	25 MARCH 1998	TEL (01621) 851851
DRAWN BY	G. BUTTON, P. STEVENS & J. RECKLESS	FAX (01621) 861976

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



**TRAMP TUBE TSC - MASTER AND CHORUS**  
**SEE ALSO CD00072 AND CD00074**

TITLE: MASTER AND CHORUS SECTION  
 PROJECT: TRAMP TUBE TWIN STEREO CHORUS  
 DRAWING No: CD00073  
 ISSUE: 2  
 DATE: 10/7/1997  
 DRAWN BY: PAUL STEVENS & J B RECKLESS

**TRACE ELLIOT LTD**  
 BLACKWATER TRADING ESTATE  
 WALTON ESSEX CM8 4BD  
 GREAT BRITAIN  
 TEL (01621) 851851  
 FAX (01621) 851976

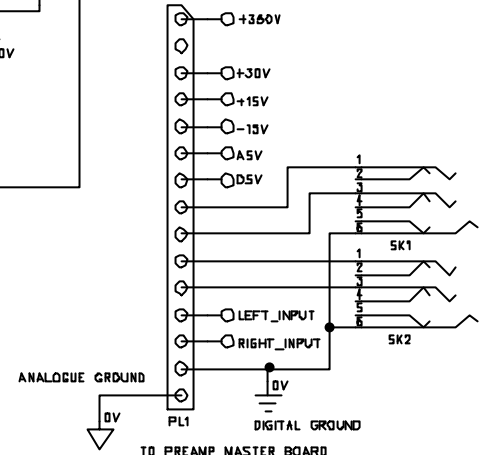
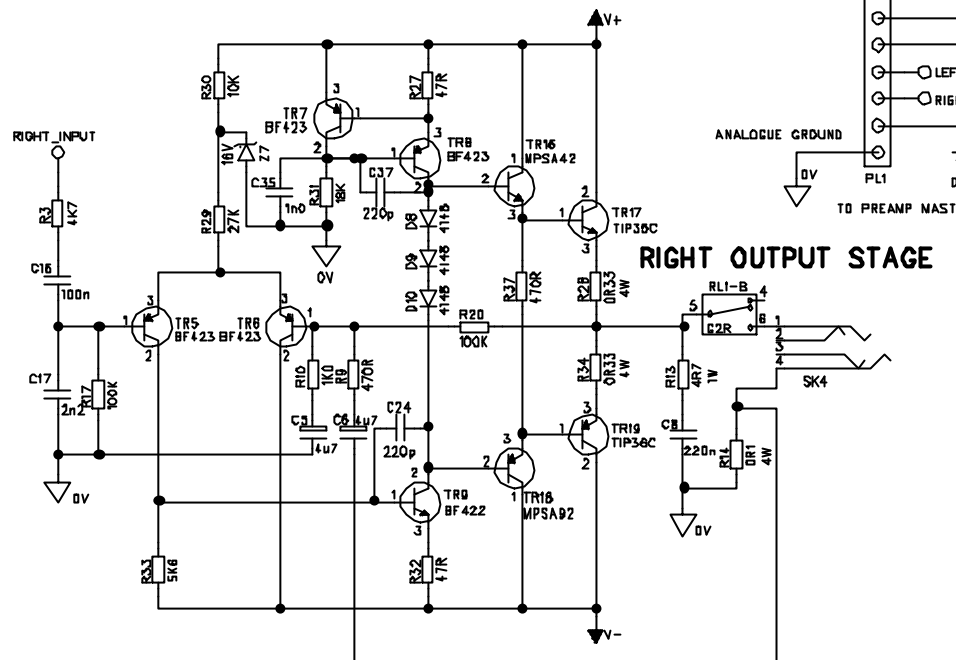
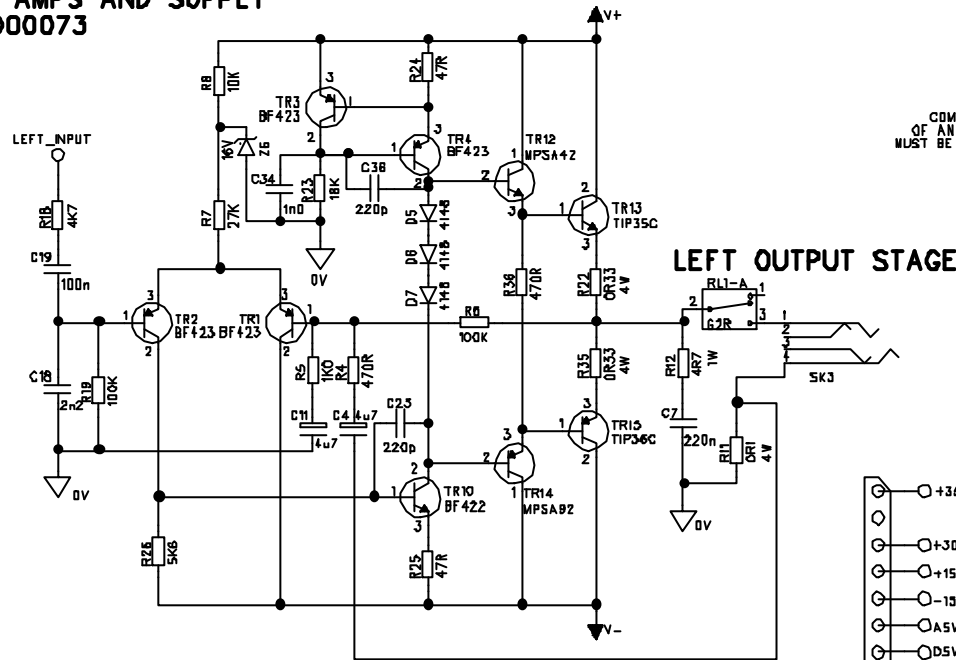
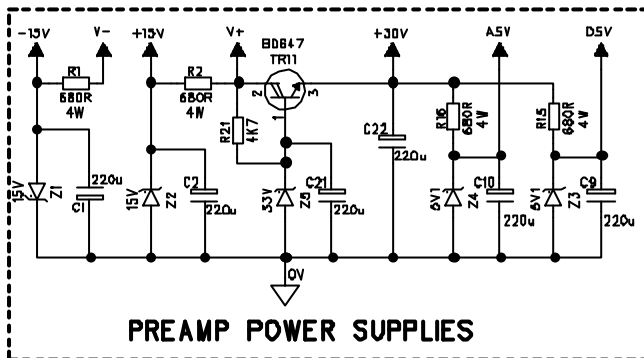
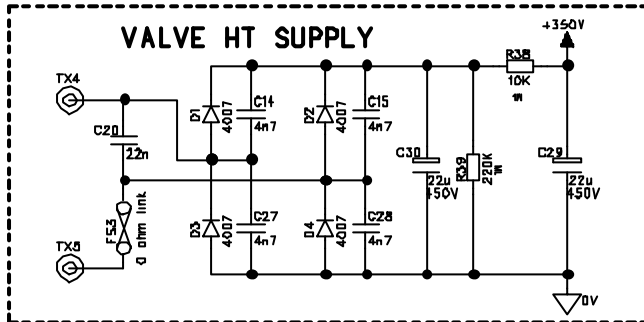
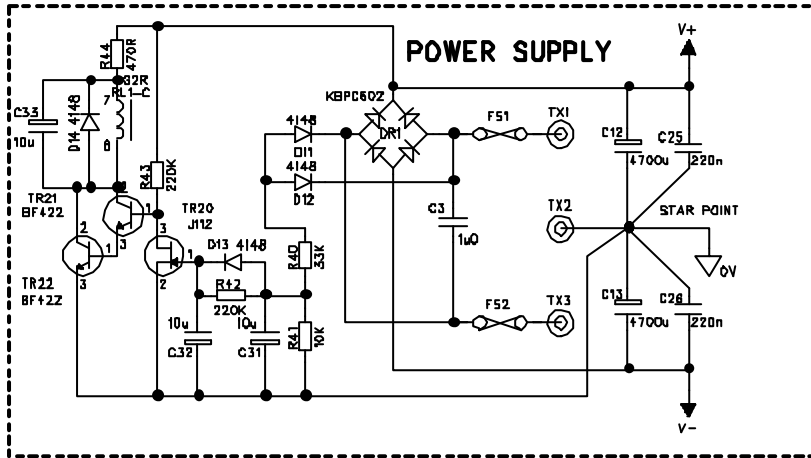
**!**  
 TO INPUT PCB  
 COMPONENTS USED ARE  
 OF AN APPROVED TYPE AND  
 MUST BE REPLACED ACCORDINGLY

TO POWER AMP AND SUPPLY PCB

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

# TRAMP TUBE TSC - POWER AMPS AND SUPPLY

SEE ALSO CD00072 AND CD00073



PLEASE NOTE, C36 & C37 ADDED TO CIRCUIT DIAGRAM, NOT YET ADDED TO PCB

TITLE	POWER AMPS AND SUPPLY	<b>TRACE ELLIOT LTD</b>
PROJECT	TRAMP TUBE TWIN STEREO CHORUS	BLACKWATER TRADING ESTATE
DRAWING No	CD00074	MALDEN ESSEX CM8 4BD
ISSUE	B	GREAT BRITAIN
DATE	6/11/1998	TEL (01821) 851851
DRAWN BY	G. BUTTON, P. STEVENS & J. RECKLESS	FAX (01821) 881978

# C32-PC00076x6.

## TRAMP TUBE TWIN STEREO CHORUS MAIN PREAMP.

CB 22/11/1997 UP-ISSUED PINK J112'S ANDY EWEN 21/5/98

UP-ISSUED R41 from 1K to 2K2 ANDY EWEN 3/6/9 R45 (470K to 47K) C27

REMOVED.ISSUE 5 25/11/98 PL1 TO 8W-2. ISSUE 6 PS 31/8/99 (GOLD JACK)

Type	Qty	Part Code	Value	Reference
<b>Axial Capacitors</b>				
1	2	72-C10N-100VCA	10n	C5 C7
1	1	72-C220P-100VCA	220p	C21
1	10	72-C22N-100VCA	22n	C8 C10 C17 C18 C22 C23 C29 C33 C36 C37
1	2	72-C3N3-100VCA	3n3	C28 C31
1	1	72-C470P-100VCA	470p	C38
1	1	72-C47N-100VCA	47n	C32
1	2	72-C4N7-100VCA	4n7	C20 C39
<b>Axial Diodes</b>				
1	2	72-D-1N4148	4148	D1 D2
<b>Zero Ohm Links</b>				
1	75	72-RCZERO	0W	AS SHOWN ON PCB
<b>Axial Resistors</b>				
1	14	72-RM100K	100K	R9 R10 R12 R14 R17 R18 R25 R33 R40 R42 R46 R49 R63 R67
1	2	72-RM10K	10K	R13 R32
1	8	72-RM15K	15K	R8 R16 R35 R39 R44 R48 R53 R62
1	1	72-RM2K2	2K2	R41
1	2	72-RM1K5	1K5	R22 R26
1	4	72-RM1M	1M0	R5 R38 R50 R61
1	2	72-RM220K-1WATT	220K	R21 R27
1	6	72-RM220R-1WATT	220R	R11 R30 R31 R54 R55 R57
1	3	72-RM2M2	2M2	R37 R51 R60
1	1	72-RM22K	22K	R68
1	3	72-RM33K	33K	R6 R36 R59
1	1	72-RM39K	39K	R66
1	2	72-RM47R	47R	R56 R58
1	2	72-RM470K	470K	R24 R28
1	7	72-RM470R	470R	R1 R2 R3 R4 R19 R20 R64
1	2	72-RM47K	47K	R29 R45
1	6	72-RM4K7	4K7	R7 R15 R34 R43 R47 R65
1	1	72-RM680K	680K	R52
<b>Non Axial Components</b>				
2	2	72-C1.5-35VT	1u5	C12 C14
2	3	72-C1-35VT	1u0	C6 C24 C40
2	2	72-C220-35VER	220u	C1 C4
2	1	72-C220P-1KVCD	220p	C11
2	2	72-C22N-400VP	22n	C13 C16
2	1	72-C330P-1KVCD	330p	C15
2	4	72-C4.7-35VT	4u7	C9 C19 C30 C41
2	6	72-C47-63VER	47u	C2 C3 C25 C26 C34 C35
2	9	72-FET-J-112P	J112	TR1 T R2 TR4 TR5 TR6

				TR7	TR8	TR9	TR10
2	1	72-HEAD-8W-2		PL1			
2	2	72-LED-RED-3MM		LED1	LED2		
2	2	72-RELAY-47W	47W	RL1	RL2		
2	1	72-RWW120R-6W	120R	R23 Please raise off PCB with kink in legs.			
2	2	73-SWT-F2UEE		SW1	SW2		
<b>Second Stage Components</b>							
3	1	72-SKT-JCKBNBG		SK1			
3	3	73-POT-A10K	A10K	RV1	RV5	RV6	
3	3	73-POT-A1M	A1M	RV4	RV7	RV10	
3	2	73-POT-A250K	A250K	RV2	RV9		
3	2	73-POT-A25K	A25K	RV3	RV8		
3	1	73-VAL-SOCKET	ECC83	V1			

**ALL J112'S TO BE PINK.**

73-PCB-PC00076x1

# C32-PC00077x5.

Andy Ewen 20/5/1998 (R35&56 to 100K).26/10/98 IC holders removed  
 ISSUE 4 PARTS LIST. ISSUE 1 PCB.  
 ISSUE 5 PS 31/8/99 (GOLD JACKS)

Qty	Part Code	Value	Reference							
<b>Axial Capacitors</b>										
10	72-C100N-100VCA	100n	C5 C39	C10 C40	C11 C41	C13	C16	C22	C25	
5	72-C10N-100VCA	10n	C30	C32	C35	C42	C48			
2	72-C1N-100VCA	1n0	C27	C15						
2	72-C330N-50VCA	330n	C43	C34						
1	72-C330P-100VCA	330p	C9							
9	72-C33P-100VCA	33p	C6 C38	C19 C44	C20	C7	C29	C33	C36	
3	72-C4N7-100VCA	4n7	C14	C28	C45					
2	72-C560P-100VCA	560p	C12	C26						
<b>Axial Diodes</b>										
1	72-D-BZX85C4V7	4V7	Z1							
<b>Axial Resistors</b>										
27	72-RM100K	100K	R1 R12 R32 R55	R2 R19 R33 R56	R3 R25 R34 R57	R4 R26 R35 R58	R9 R27 R40 R59	R10 R28 R42 R63	R11 R29 R46	
8	72-RM10K	10K	R7 R60	R15	R44	R45	R48	R51	R52	
1	72-RM120K	120K	R54							
4	72-RM15K	15K	R16	R6	R8	R14				
2	72-RM1K	1K0	R23	R49						
3	72-RM1M	1M0	R21	R24	R47					
2	72-RM220R	220R	R62	R64						
4	72-RM2K2	2K2	R30	R31	R37	R38				
2	72-RM22K	22K	R5	R13						
2	72-RM-220K	220K	R17	R41						
1	72-RM2K7	2K7	R20							
2	72-RM330K	330K	R18	R43						
1	72-RM47R	47R	R61							
1	72-RM470K	470K	R53							
2	72-RM47K	47K	R36	R39						
2	72-RM82K	82K	R22	R50						
<b>Non Axial Components</b>										
6	72-C100-16VER	100u	C1	C2	C3	C4	C23	C24		
1	72-C1-35VT	1u0	C31							
1	72-C10-63VER	10u	C50							
2	72-C4.7-35VT	4u7	C8	C21						
2	72-C470N-63VP	470n	C17	C18						
4	72-C47-63VER	47u	C37	C46	C47	C49				
2	72-FET-J-175	J175	TR1	TR2						
1	72-HEAD-15W		PL1							
1	72-HEAD-8W-2		PL2							
7	72-IC-RC4558P	RC4558P	IC3	IC4	IC5	IC6	IC8	IC9	IC10	
1	72-IC-74LS629N	74LS629	IC1							
1	72-IC-M50198P	M50198P	IC2							
1	72-IC-TL074	TL074	IC7							

3	72-LED-RED-3MM		LED1 LED2 LED3 (FIT OVER EDGE OF PCB)
<b>Second Stage Components</b>			
1	SEE DRAWING	REVERB	SP1 (1.5m LEADS, SOLDERED INTO PCB)
3	72-SKT-JCKBNBG		SK1 SK2 SK3
3	73-POT-50K-DG	B50K	RV1 RV4 RV5
2	73-POT-50KB	B50K	RV2 RV3
1	73-SWT-F2UEE	DPCO	SW1 (FIT UNDERNEATH PCB)
1	73-PCB-PC00077x1		



# C32-PC00078x8.

## TRAMP TUBE STEREO CHORUS OUTPUT BOARD.

AE 5/11/98

ISSUE 8 LIST. ISSUE 2 PCB.

Type	Qty	Part Code	Value	Reference
<b>Axial Capacitors</b>				
1	2	72-C100N-100VCA	100n	C16 C19
1	2	72-C220N-50VCA	220n	C7 C8
1	2	72-C220P-100VCA	220p	C23 C24
1	2	72-C2N2-100VCA	2n2	C18 C17
<b>Axial Diodes</b>				
1	4	72-D-1N4007	4007	D1 D2 D3 D4
1	10	72-D-1N4148	4148	D5 D6 D7 D8 D9 D10 D11 D12 D13 D14
1	2	72-D-BZX55C15V	15V	Z1 Z2
1	2	72-D-BZX55C16V	16V	Z6 Z7
1	1	72-D-BZX55C33V	33V	Z5
1	2	72-D-BZX55C5V1	5V1	Z3 Z4
<b>Zero ohm links</b>				
1	53	72-RCZERO	0W	FS3 and as shown on pcb legend
<b>Axial Resistors</b>				
1	4	72-RM100K	100K	R6 R17 R19 R20
1	3	72-RM10K	10K	R8 R30 R41
1	1	72-RM10K-1WATT	10K	R38
1	2	72-RM18K	18K	R31 R23
1	2	72-C1000P-1KVCD	1000pF	One across R31 and one across R23 See Tramp mods memo issue1 5/11/98
1	2	72-RM1K	1K0	R10 R5
1	2	72-RM220K	220K	R42 R43
1	1	72-RM220K-1WATT	220K	R39
1	3	72-RM27K	27K	R29 R7 R40
1	5	72-RM470R	470R	R4 R9 R37 R36 R44
1	4	72-RM47R	47R	R24 R25 R27 R32
1	3	72-RM4K7	4K7	R3 R18 R21
1	2	72-RM4R7-1WATT	4R7	R12 R13
1	2	72-RM5K6	5K6	R33 R26
<b>Non Axial Components</b>				
2	1	72-HEAD-15W		PL1
2	1	72-BRIDGE-2	KBPC602	DR1
2	1	72-C1-250VP	1u0	C3
2	3	72-C10-63VER	10u	C31 C32 C33
2	4	72-C220-25VER	220u	C1 C2 C9 C10
2	2	72-C220-35VER	220u	C21 C22
2	2	72-C220N-250VP	220n	C25 C26
2	2	72-C220P-100VCD2	220pF	Fit between R23 & link and R31 and link. See Tramp mods issue 1 for more details.
2	2	72-C22-450VER	22u/450V	C29 C30
2	1	72-C22N-400VP	22n	C20
2	4	72-C4.7-35VT	4u7	C4 C5 C6 C11
2	4	72-C4700P-1KVCD	4n7	C14 C15 C27 C28
2	5	72-CRIMP-PCB-TAB		TX1 TX2 TX3 TX4 TX5

2	1	72-CRIMP-PCB-TAB		GND1
2	4	PCB FUSE CLIP	T5A	FS1 FS2
2	2	72-RWW0R1-4W	0R1	R11 R14
2	4	72-RWW0R33-4W	0R33	R22 R28 R34 R35
2	4	72-RWW680R-4W	680R	R1 R2 R15 R16
2	1	72-FET-J-112	J112	TR20
2	4	72-TBF422	BF422	TR9 TR10 TR21 TR22
2	8	72-TBF423	BF423	TR1 TR2 TR3 TR4 TR5 TR6 TR7 TR8
2	2	72-TMPSA42	MPSA42	TR12 TR16
2	2	72-TMPSA92	MPSA92	TR14 TR18
<b>Second Stage Components</b>				
3	2	72-CAP-470063V	4700u	C12 C13
3	2	72-SKT-JCKBBBS		SK1 SK2
3	2	72-SKT-JCKBNBS		SK3 SK4
3	1	72-TBD647	BD647	TR11
3	2	72-TIP35C	TIP35C	TR13 TR17
3	2	72-TIP36C	TIP36C	TR15 TR19
3	3	73-TERM-SCREW-M3		J1 J2 J3
3	4	72-MOS-PAD-TO3P2		FOR OUTPUT DEVICES
3	1	72-MOS-PAD-TO220		FOR BD647
3	1	G13-HS-ST-TSC		IN-HOUSE MADE HEATSINK
3	8	71-SCR-M3X12PPB		O/P Devices, Heatsink & BD647
3	5	71-NUT-M3ZINC		O/P Devices & BD647
3	5	71-WAS-M3INTSP		O/P Devices & BD647
3	1	73-REL-QUAD-CHOR	RELAY 48v DPCO G2R	RL1

## 73-PCB-PC00078 issue 2

**USE GREEN 24/0.2mm WIRE TO LINK J8 TO J9 ON PCB.**

### SCREENED CABLE TO 'CHORUS' PCB

Connect 'Left Input' to TX6 on PCB ( L\_IN )

Connect 'Right Input' to TX7 on PCB ( R\_IN )

Connect 'Screen' to TX8 on PCB ( A0V )

**N.B. ISSUE 7 change is removal of the zero ohm link on the left of TR5 &TR6. Changenote ID00205.**

**N.B.2 Please see Tramp mods memo issue 1 for details of where the capacitors are fitted to suppress radiated emissions.**