

SERVICE MANUAL

VOX AC15C1



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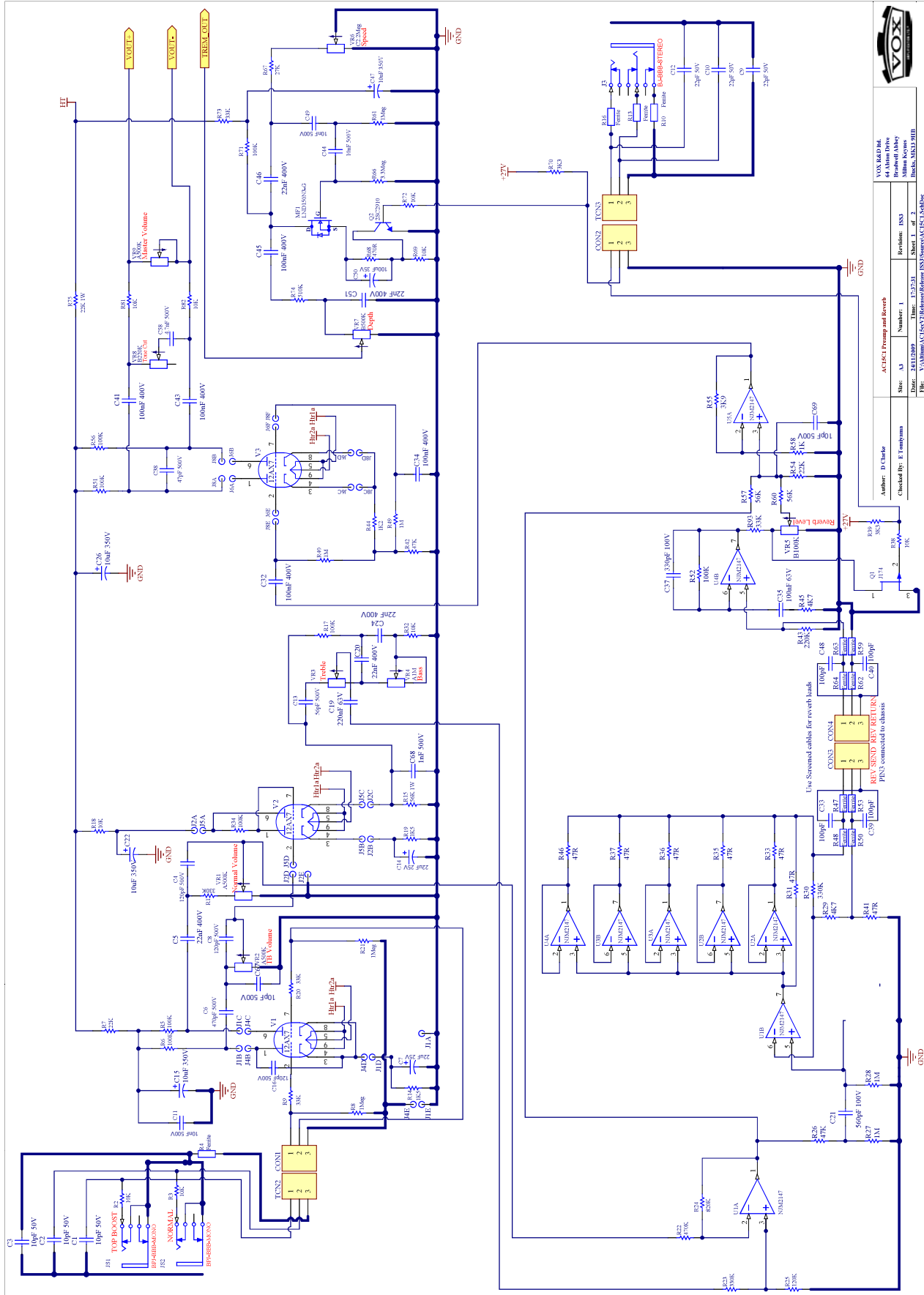


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Ver.1.0

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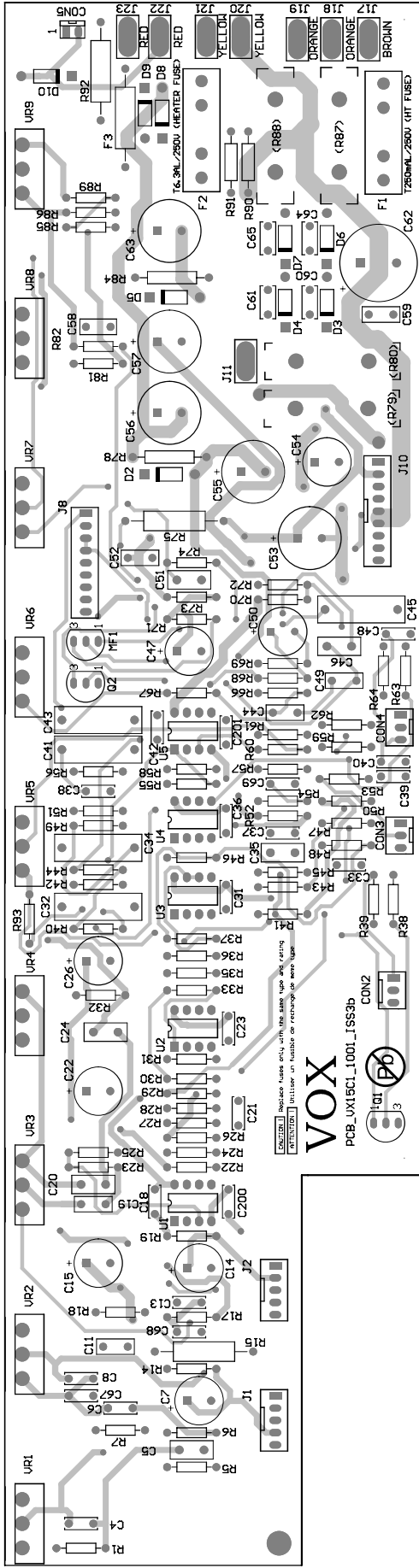
SCHEMATIC DIAGRAM



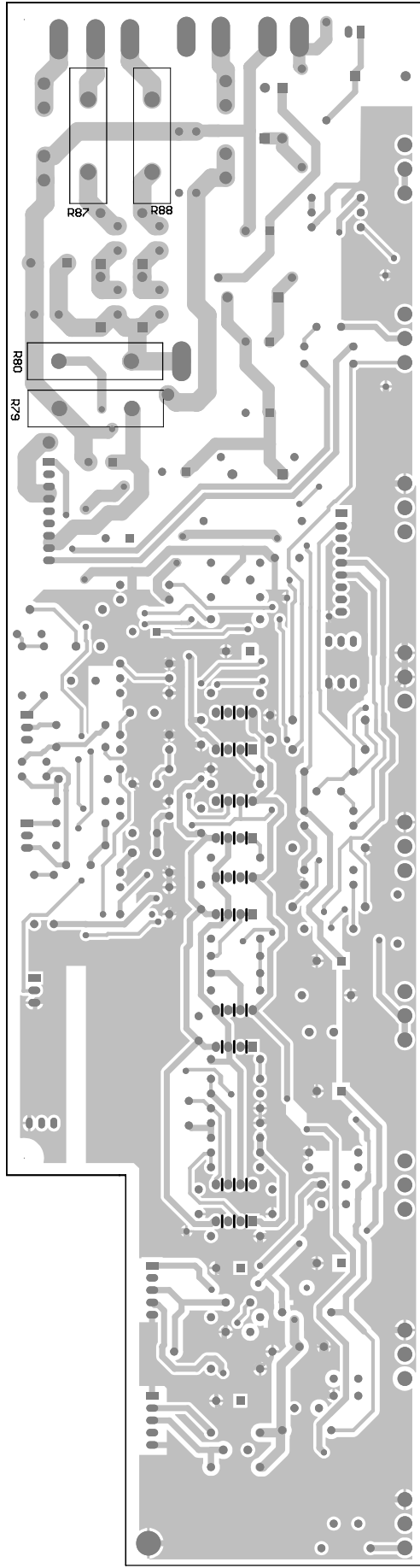
VOX Ltd Ltd 44 Alton Drive Widmore, Wiltshire Berkshire, MK31 3JH		
AC1851 Preamp and Revorb		
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PCB LAYOUT

Main PCB



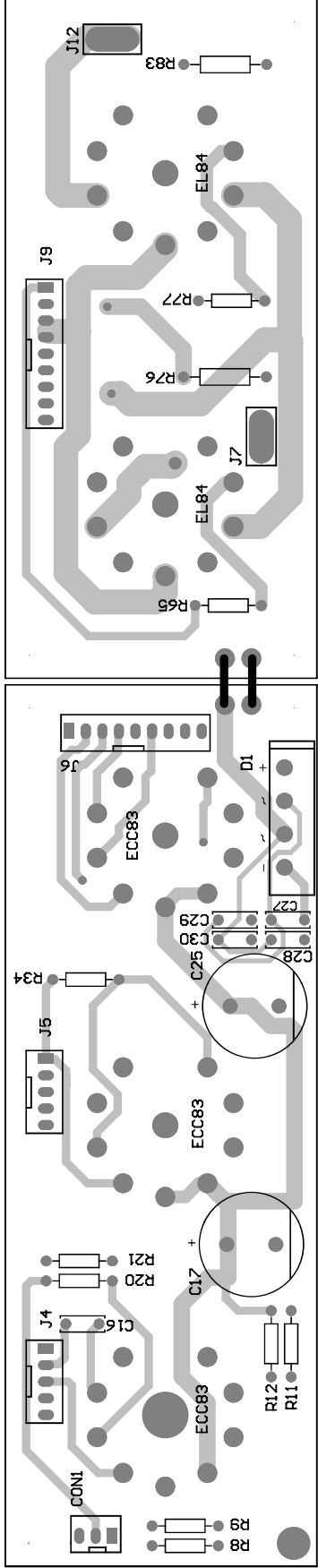
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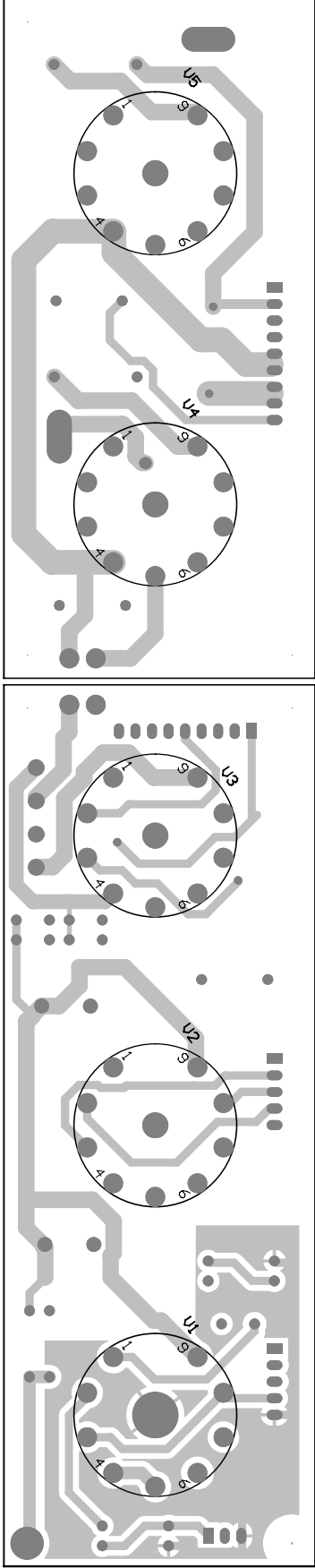
bottom side

PCB LAYOUT

TUBE PCB & TUBE2 PCB

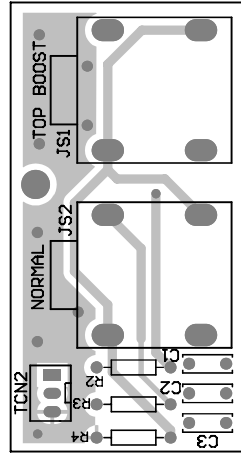


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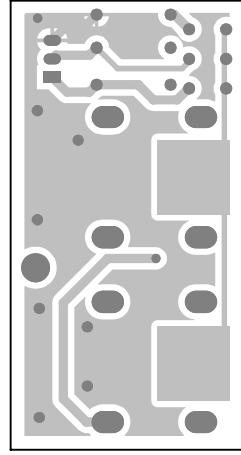


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INPUT PCB

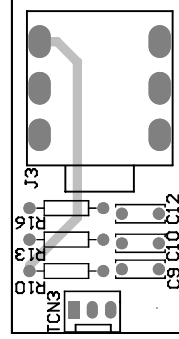


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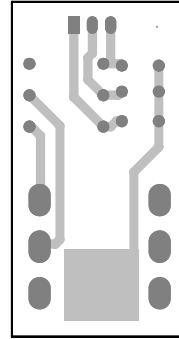


bottom side

SWITCH PCB



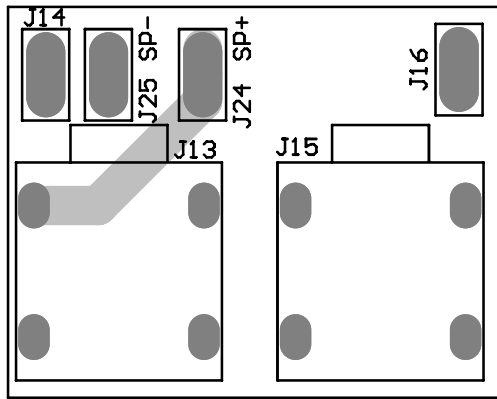
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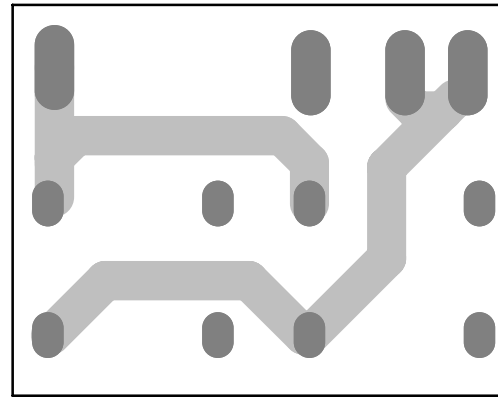
bottom side

PCB LAYOUT

OUTPUT PCB

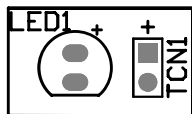


top side

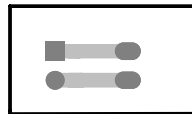


bottom side

LED PCB



top side

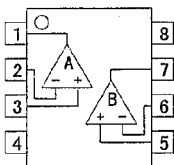


bottom side

IC BLOCK DIAGRAM

MAIN PCB

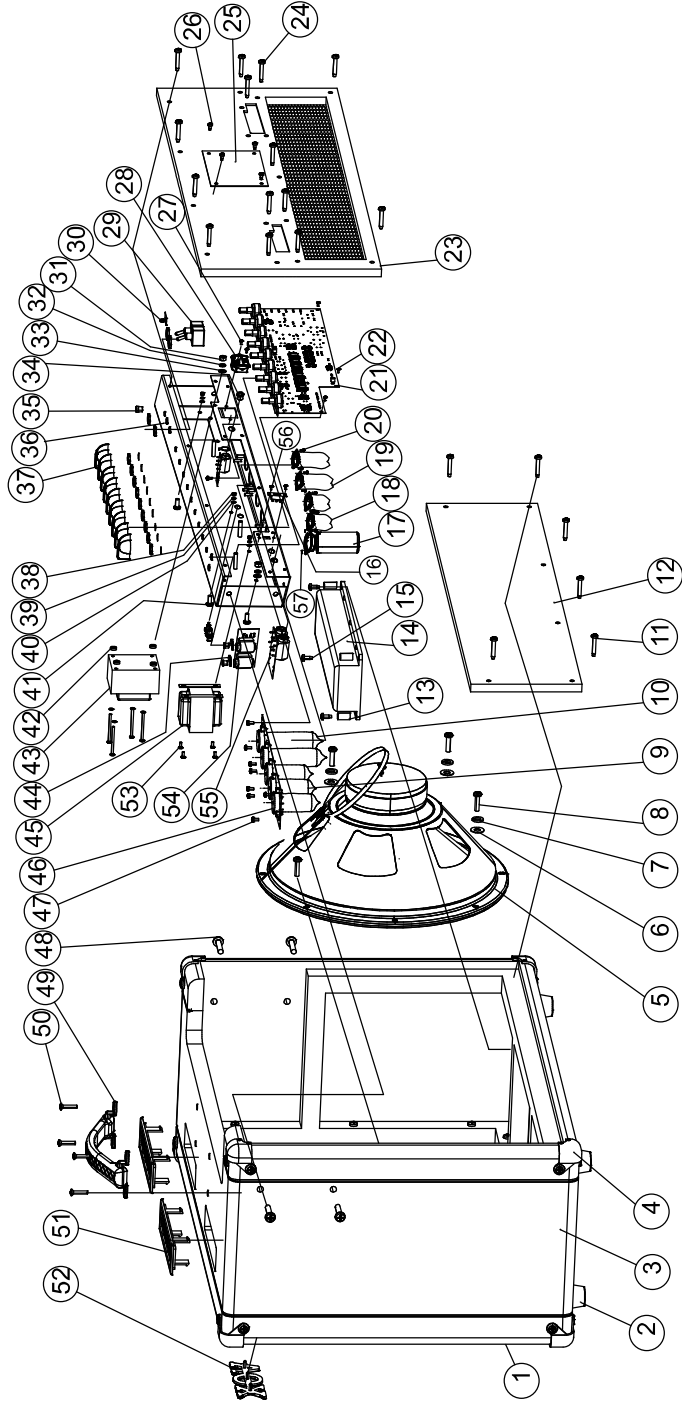
U1, U2, U3, U4, U5: NJM2147D#ZZZB

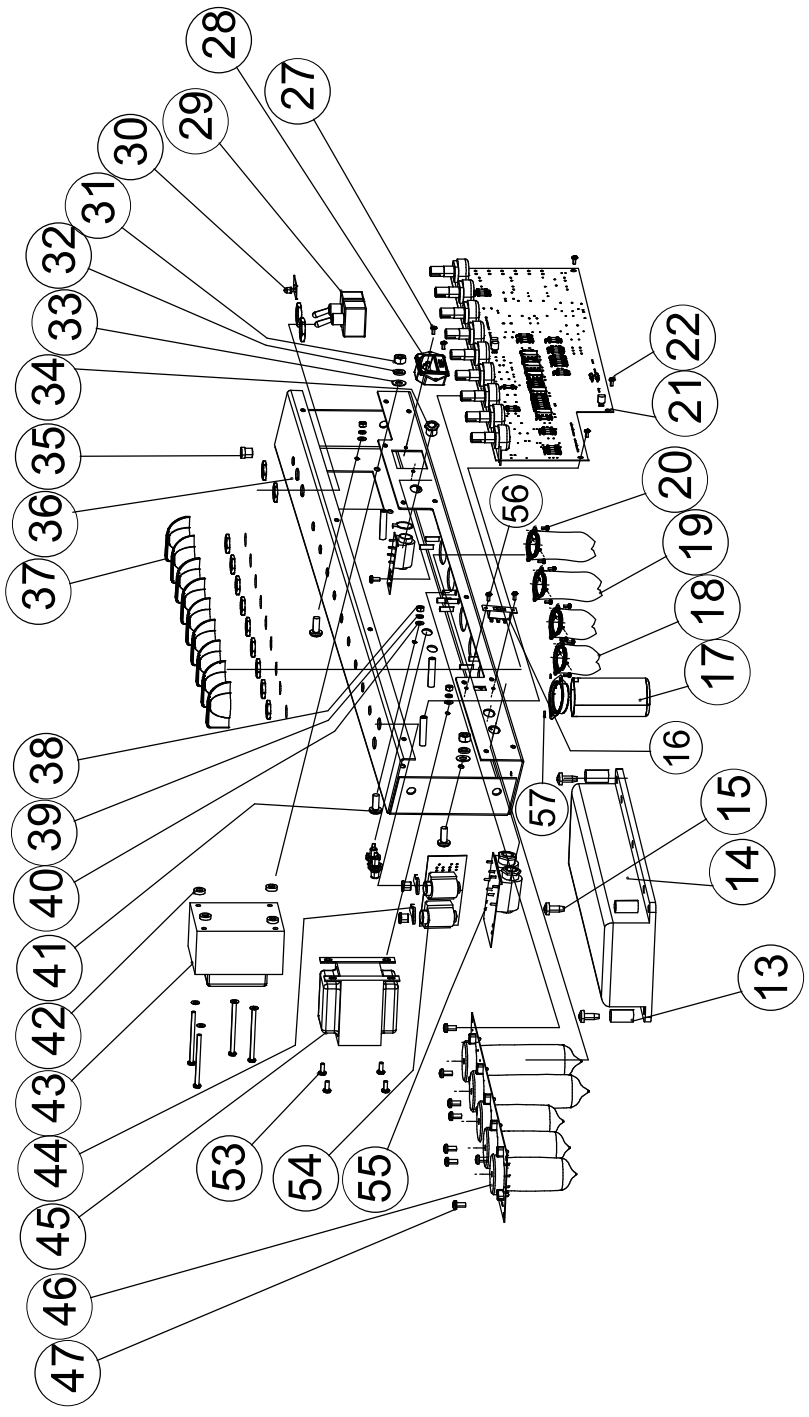


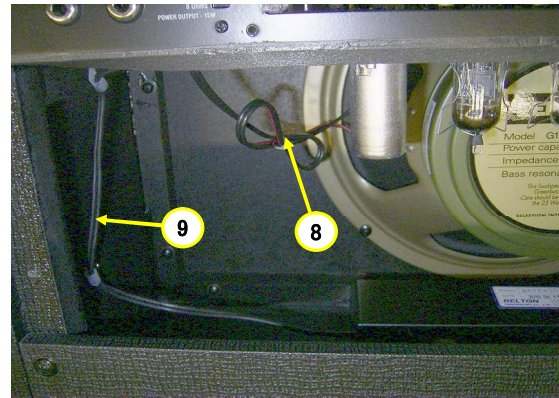
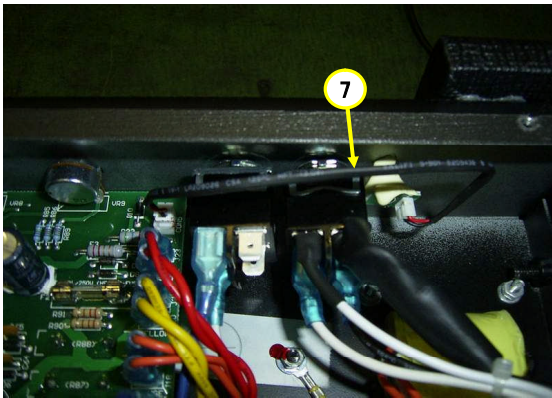
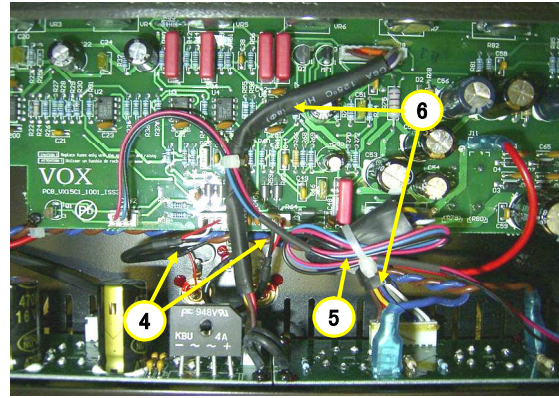
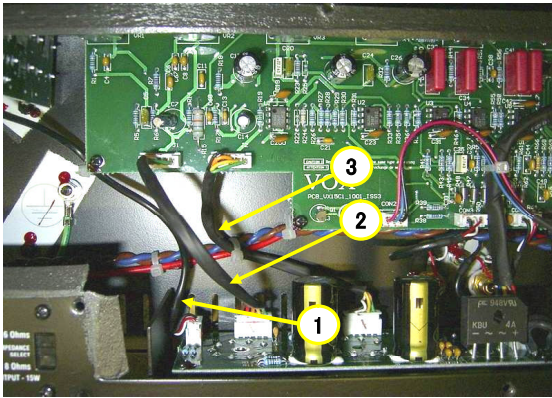
PIN FUNCTION

1. A OUTPUT
2. A -INPUT
3. A +INPUT
4. V⁻
5. B +INPUT
6. B -INPUT
7. B OUTPUT
8. V⁺

EXPLODED VIEW







Item	Part No.	Description	Q'ty
1	530000002109	WIRE-SHIELD 3P P2.5 #26	1
2	530000002114	WIRE-CONN 5P P2.5 #24	1
3	530000002117	WIRE-SHIELD 5P P2.5 #24	1
4	530000002111	WIRE-SHIELD 3P P2.5 #26	2
5	530000002103	CONN WIRE UL1007 #26 3PO	1
6	530000002108	WIRE-SHIELD 9P P2.54 #20	2
7	530000002116	WIRE-CONN 2P P2.5 #26	1
8	530000002112	CABLE SPEAKER 2P L=500	1
9	530000002133	WIRE-RCA 2P #26 UL2562 1000mm	1

KORG AC15C1 Parts List

△= SAFETY CRITICAL COMPONENT.

EXP=EXPLODED VIEW Item No

Part Number	Category	Part Name	Location	EXP	Reference	QTY
530000002137		PCB ASSY SET AC15C1			PCB ASSY SET	1
530000001903		3 PIN ST. WAFER	INPUT		TCN2	1
530000001870		JACK MONO 4P P6.4X16.5(3343)	INPUT		JS1, JS2	2
530000002116	Cable	WIRE-CONN 2P P2.5 #26	LED		TCN1	1
530000002092	DIODE	DZ 1.3W 27V 7% AT	MAIN		D2, D5	2
530000002089	DIODE	DIODE IN4007-F AT	MAIN		D10, D3, D4, D6, D7, D8, D9	7
530000001903		3 PIN ST. WAFER	MAIN		CON2, CON3, CON4	3
530000001901		2P ST.WAFER	MAIN		CON5	1
530000002054		5P ST.WAFER	MAIN		J1,J2	2
530000001900		SPADE TERMINAL 6.3X0.8	MAIN		J11, J17, J18, J19,J20, J21,J22,J23	8
530000001917	COIL	FERRITE BEAD INDUCTOR	MAIN		R47, R48, R50, R53, R59, R62, R63, R64	8
530000002082		RMOF 1W 2R2 5% AT	MAIN		F3	1
530000002064	IC	IC NJM2147D#ZZZB	MAIN		U1, U2, U3, U4, U5	5
530000002083	VR	VR ROTARY A500KX1 20% V	MAIN		VR1, VR2,VR9	3
530000002084	VR	VR ROTARY A1MX1 20% V	MAIN		VR3, VR4	2
530000002085	VR	VR ROTARY B100KX1 20% V	MAIN		VR5	1
530000002086	VR	VR ROTARY C2.2MX1 20% V	MAIN		VR6	1
530000002087	VR	VR ROTARY B500KX1 20% V	MAIN		VR7	1
530000002088	VR	VR ROTARY B220KX1 20% V	MAIN		VR8	1
530000002066		FUSE HOLDER	MAIN		F1, F2	2
530000002108	CABLE	WIRE-SHIELD 9P P2.54 #20	MAIN		J10, J8	2
530000002093	FET	MOSFET N-CH 500V 0.001A	MAIN		MF1	1
530000001914	FET	FET J174_NL P-CHANNEL	MAIN		Q1	1
530000001904	TR	2SC2910 HFE200	MAIN		Q2	1
530000001900		SPADE TERMINAL 6.3X0.8	OUTPUT		J14, J16, J24, J25	4
530000001870		JACK MONO 4P P6.4X16.5(3343)	OUTPUT		J13, J15	2
530000001903		3 PIN ST. WAFER	SWITCH		TCN3	1
530000001917	COIL	FERRITE BEAD INDUCTOR	SWITCH		R10, R13, R16	3
530000001872		JACK STEREO 6P P6.4X16.5	SWITCH		J3	1
530000001900		SPADE TERMINAL 6.3X0.8	TUBE2		J12, J7	2
530000002056		9-PIN WAFER	TUBE2		J9	1
530000002060		SOCKET 9PIN 500V D=22	TUBE2		V4, V5	2
530000001903		3 PIN ST. WAFER	TUBE		CON1	1
530000002054		5P ST.WAFER	TUBE		J4, J5	2
530000002056		9-PIN WAFER	TUBE		J6	1
530000002090		DIODE BRIDGE 50V 4A	TUBE		D1	1
530000002059		SOCKET VALVE 9P 500V	TUBE		V1	1
530000002060		SOCKET 9PIN 500V D=22	TUBE		V2, V3	2
530000002133		WIRE-RCA 2P #26 UL2562 1000MM	CASING		REVERB	1
530000002103		CONN WIRE UL1007 #26 3PO	CASING		3P FOOT	1
530000002105		WIRE-GND 1P #18 UL1015	CASING		1P GND	1
530000002104		WIRE-CONN 1P #18 UL1015	CASING		250 G	1
530000002111		WIRE-SHIELD 3P P2.5 #26	CASING		3P REVERB	2
530000002109		WIRE-SHIELD 3P P2.5 #26	CASING		3P WIRE	1
530000002114		WIRE-CONN 5P P2.5 #24	CASING		5P WIRE	1
530000002117		WIRE-SHIELD 5P P2.5 #24	CASING		5P WIRE S	1
530000001922 △		AC INLET 3PINS 250V 10A	CASING	28	AC INLET	1
530000002127 △		TRANS AUDIO 173.2V/10.4-	CASING	45	AUDIO TR	1
530000002123		WOOD BAFFLE 555.6X381X20	CASING	1	BAFFLE	1
530000002136		MODULE REVERB TANK	CASING	14	REVERB	1
530000002124		WOODEN FRAME 602*427*262	CASING	3	CABINET	1
530000002140		WOOD COVER LOWER 560X100/X18	CASING	12		1
530000002141		WOOD COVER UPPER 580X272X18	CASING	23		1
530000002100 △		SWITCH TOGGLE DPDT 250V	CASING	29		2

530000002076		HANDLE-TOP 187X25.8X15.8	CASING	49		1
530000002095		SCREW MACH O-CS 4X25 CR	CASING	24	CABINET	14
530000001918		SCREW TA-C1 O-CS 4X32 CR LCS	CASING	11	CABINET	8
530000002074		PLASTIC BUSHING	CASING		cabie	1
530000002112		CABLE SPEAKER 2P L=500	CASING		CABLE 2P	1
530000002072		GASKET PE 600*10*1.0MM	CASING		chassis	1
530000002079		CLOTH VINYL BROWN	CASING		CLOTH	1
530000001926		CORNER PLASTIC	CASING	4	CORNER	4
530000002057		JACK RCA 1P WHITE	CASING		REVERB	1
530000002058		JACK RCA 1P RED	CASING		REVERB	1
530000002134		GRILLE-REAR 510X98X1	CASING		GRILLE	1
530000002069		SPECIAL WASHER 18.9X18X	CASING	44	INPUT	3
530000002025		KNOB ABS (CHIKEN HEAD)	CASING		KNOB	1
530000002099		SWITCH SLIDE SPDT 125V	CASING	16	Impedance Selector	1
530000001933		LED HOLDER 8X14.6	CASING	35	LED HOLDER	1
530000001932		LED CY 5.0X8.6X25 RD	CASING	30	LED1	1
530000001874		LOGO 45X11	CASING	52	LOGO	1
530000002101	⚠	THERMISTOR NTC 10R 20%	CASING		Surge Guard	1
530000002107	⚠	WIRE-GND 1P #16 UL1015	CASING		AC INLET GND	1
530000002075		SPACER REVERB	CASING	13	REVERB	4
530000001925		RUBBER FOOT D32X16.5	CASING	2	rubber foot	4
530000002074		PLASTIC BUSHING	CASING		transformer	1
530000002073		RUBBER SPACER ID5*OD20*4	CASING	57	TUBE	1
530000002077		RUBBER FOOT 14.5X14.5X1	CASING		TUBE	1
530000002106		WIRE-CONN 1P #18 UL1672	CASING		TX OUT	1
530000002071		SHIELD TUBE 35X27X55 AL	CASING	17	V1 T	1
530000002080		VALVE COMPACTRON 12AX7B	CASING	9	V1 T, V2 T, V3 T	3
530000002081		VACUUM TUBE COMPACTRON EL84	CASING	10	V4 T, V5 T	2
530000002067		CLIP TUBE 34X27X68 METAL	CASING	19	VALVE	2
530000002068		CLIP-TUBE SECC T=1 WHT	CASING	18	VALVE	2
530000002046		VENT-LARGE PP BLK 94V0	CASING	51		2
530000002047	⚠	AC INLET WHITE	CASING		AC INLET WHITE	1
530000002125		CHASSIS-MAIN AC15C1(EU/UK/AUS)	CASING	36	CHASSIS(EU/UK/AUS)	(1)
530000002126		CHASSIS-MAIN AC15C1(JP/US)	CASING	36	CHASSIS(JP/US)	(1)
530000002128	⚠ Transformer	TRANSFORMER PWR 230V	CASING	43	POWER TR(EU/UA)	(1)
530000002129	⚠ Transformer	TRANSFORMER PWR 100V	CASING	43	POWER TR(JP)	(1)
530000002130	⚠ Transformer	TRANSFORMER PWR 120V	CASING	43	POWER TR(US)	(1)
530000002131	⚠ Transformer	TRANSFORMER PWR 240V	CASING	43	POWER TR(AUS)	(1)
530000002139	SPEAKER	T1221 G12M25W 16 OHM	CASING	5	SPEAKER	1
530000002142		REAR LABEL FOR T1221A	CASING		SPEAKER-LABEL	1
530000002053	EMI	EMI CORE GSRC-110-B	CASING		EMI Core	1
530000002061	⚠	AC INLET POWER PLUG 12.7	CASING		JP AC	1
530000002094	⚠	FUSE T6.3A 250V	CASING		F2	1
530000002135	⚠	FUSE T250MA 250V	CASING		F1	1
530000001921	⚠	FUSE T630MA 250V EU/UK/AUS	CASING		F4 (GE/UK/AU)	(1)
530000001920	⚠	FUSE T1.25A 250V	CASING		F4 (JP/US/EX)	(1)
530000001887	⚠	CORD-AC POWER UK 3X0.75	CASING		CORD-AC (UK)	(1)
530000001888	⚠	CORD-AC UL/CSA 125V 10A	CASING		CORD-AC(US)	(1)
530000001889	⚠	POWER CORD 10A AUSTRALIA	CASING		CORD-AC(AUS)	(1)
530000001890	⚠	CORD-AC CE 250V 10A	CASING		CORD-AC(EU)	(1)
530000001891	⚠	CORD-AC JAP 100V 12A	CASING		CORD-AC(JP)	(1)

VOX AC15C1

1st stage Tube Oscillation Test knobs setting:



Knob Positions								
MASTER		TREMOLO		REVERB	TOP BOOST			NORMAL
VOLUME	TONE CUT	DEPTH	SPEED	LEVEL	BASS	TREBLE	VOLUME	VOLUME
Max	Min	Min	Min	Min	Min	3 O'clock	Max	Max

- Input: Not connected.
- Confirm there is no oscillation, with this setting.
- When there is an oscillation, replace 1st stage tube with 2nd or 3rd stage tubes. If it doesn't solve, try another 12AX7 tubes.



Reverb Oscillation Test knobs setting:

Knob Positions								
MASTER		TREMOLO		REVERB	TOP BOOST			NORMAL
VOLUME	TONE CUT	DEPTH	SPEED	LEVEL	BASS	TREBLE	VOLUME	VOLUME
Max	Min	Min	Min	Max	Min	Min	Min	Min

- Input: Not connected.
- Confirm there is no oscillation, with this setting.