

# **SERVICE MANUAL**

## **VOX AC50CP2**



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**Issued: June 13, 2007**  
**Ver.1**

## ★ SPECIFICATION

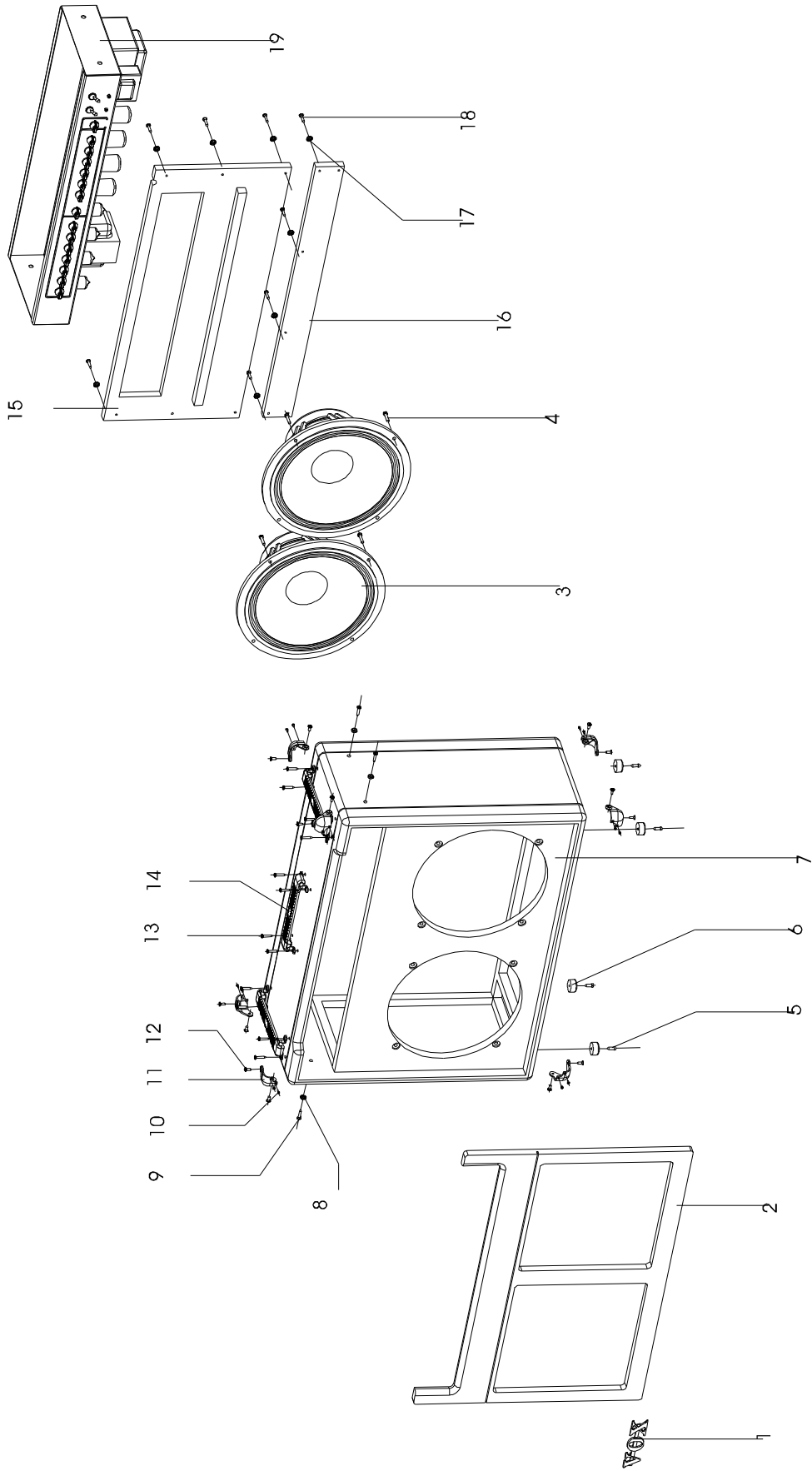
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Power Output:	50 Watts RMS into selectable 8 or 16 ohm loudspeaker load.
Loudspeaker complement:	2 off VOX/Wharfedale GSH1230 8 ohm loudspeakers wired in series for a total of 16 Ohm load.
Valve complement:	4*12AX7/ECC83 (note! V1 is low microphonic) and 2*EL34B.
Country Variants and Mains Fuse	100JP=100V 50/60Hz-Fuse T3.15AL 250V 120US=120V 50/60Hz-Fuse T3.15AL 250V 120EX=120V 50/60Hz-Fuse T3.15AL 250V 230GE=230V 50/60Hz-Fuse T1.6AL 250V 230UK=230V 50/60Hz-Fuse T1.6AL 250V 240AU=240V 50/60Hz-Fuse T1.6AL 250V
Dimensions (W*D*H):	702*265*540mm/27.6*10.4*21.3 inches
Weight:	35.8kg/78.9lbs.
Included items:	Power cable, VF002 footswitch

**AC50CP2**

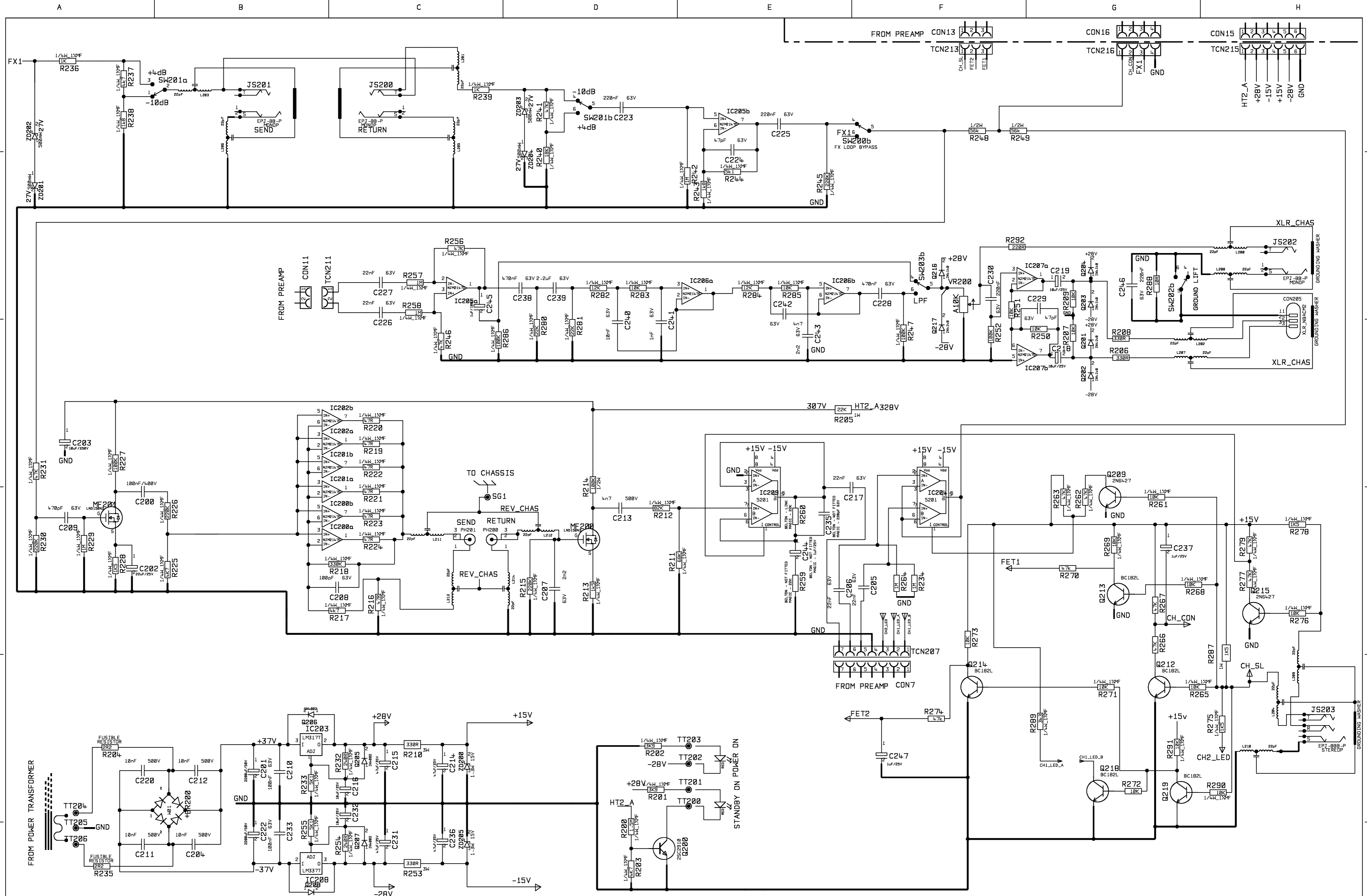
# ★ ASSEMBLY SKETCH

**AC50CP2**



**ASSEMBLY PARTS LIST**

<b>R/N</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Description</b>	<b>QTY</b>
1	530000000057	LOGO PLATE 217-1327000001		1
2	5300000000737	FRONT BAFFLE AC50CP2		1
3	5300000000468	WOOFER(V212BN)		2
4	-	MECHANICAL SCREW	M5*25	8
5	-	WOOD SCREW	M4*20	4
6	5300000000063	RUBBER FOOT 25*12.5 W CUSHION		4
7	5300000000742	CABINET AC50CP2		1
8	-	CUP WASHER	M6	4
9	-	MECHANICAL SCREW	M6*40	4
10	-	WOOD SCREW	M2*10	16
11	5300000000060	PLASTIC CORNER		8
12	-	WOOD SCREW	M4*13	16
13	-	MECHANICAL SCREW	M4*24	12
14	5300000000064	HANDLE AC15CC1		3
15	5300000000738	REAR UPPER BOARD AC50CP2		1
16	5300000000739	REAR LOWER BOARD AC50CP2		1
17	-	WASHER		10
18	-	WOOD SCREW	4*32	10
19	5300000000743	AC50CP2 AMPLIFIER		1



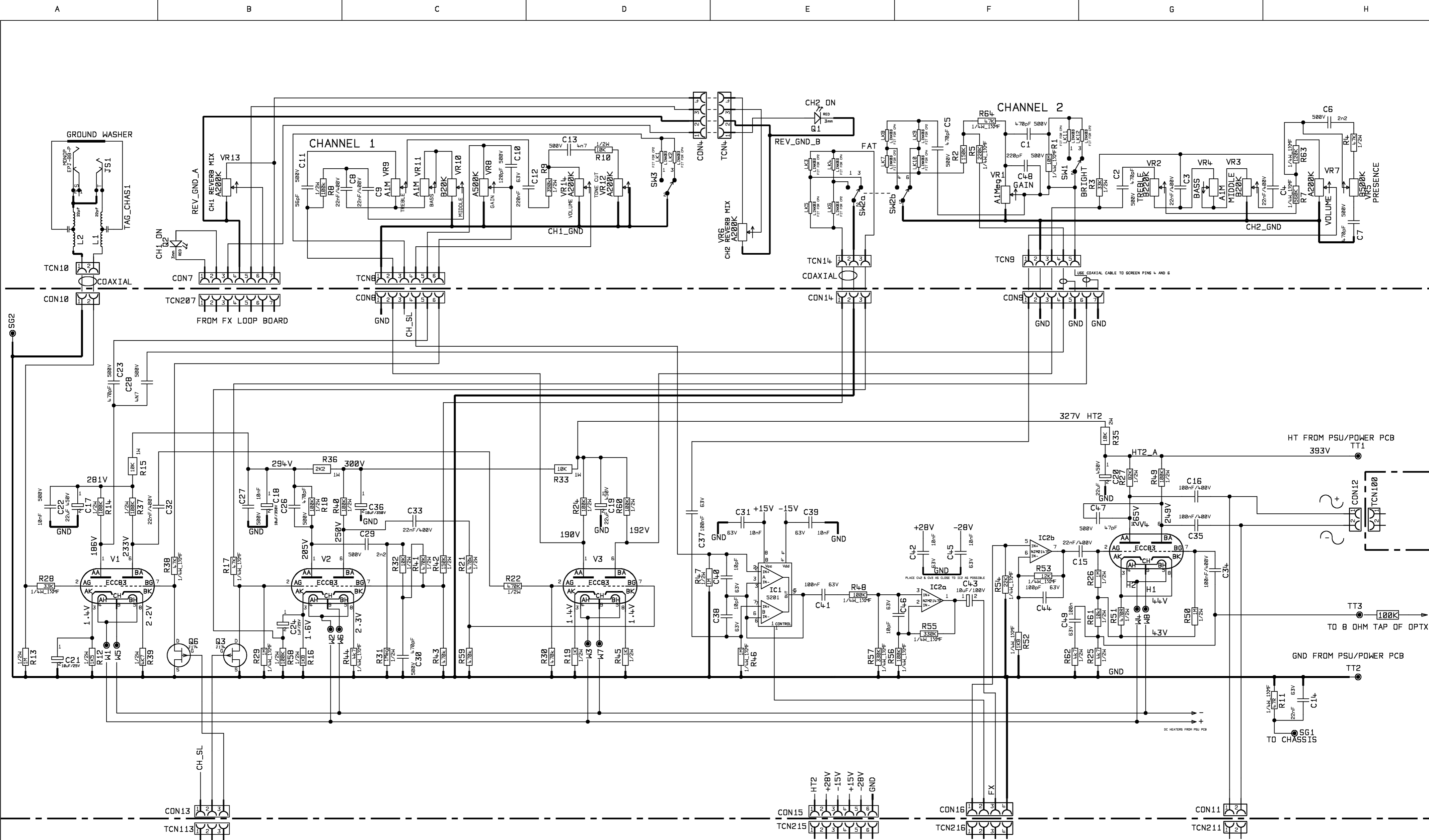
# VOX R&D UK

division of KORG EUROPE Ltd.

2b	20/06/06	CHANGE POWER RATING OF R210 & R253	DC
ISS	DATE	CHANGE	SIGNED

64 ALSTON DRIVE, BRADWELL ABBEY, MILTON KEYNES, MK13 9HB, ENGLAND. +44 (0) 1908 313511

MODEL	AC50 & AC100	TITLE	AC50 & AC100 REAR PANEL I/O SCHEMATIC
ISSUE	ISS3b	DRAWN	DC 26/09/06
CHECKED		DWG.No	
APPROVED			AC50_AC100_IO_ISS3b.DGM

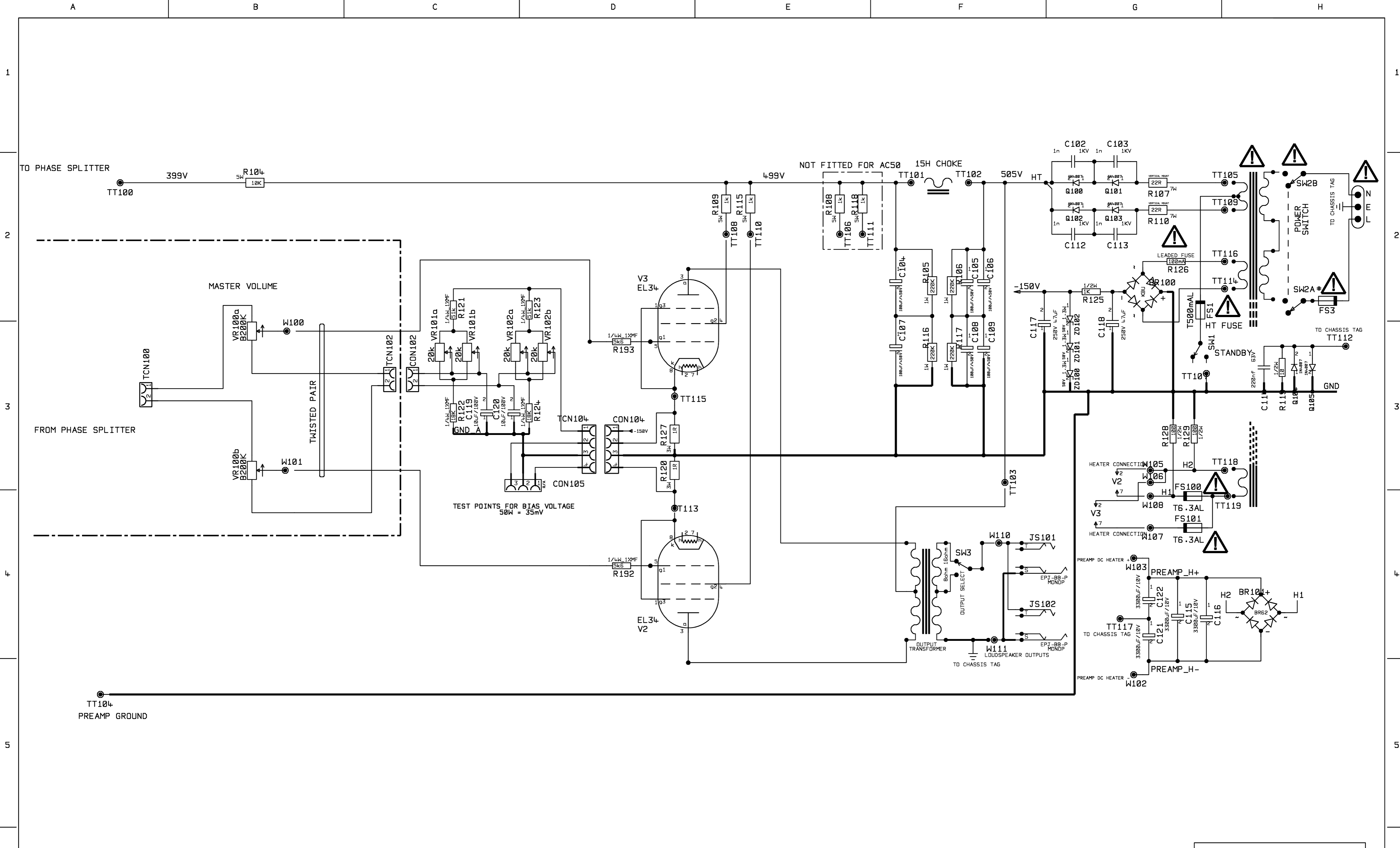


LV PWR, REVERB AND FX LOOP PCB

3	29/08/06	ADD LINKS FOR AC50CP2 COMPATIBILITY	DC
ISS	DATE	CHANGE	SIGNED

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MODEL	AC50 & AC100	TITLE	AC50 & 100 MODERN PREAMP
ISSUE	ISS3	DRAWN	DC 29/08/06
CHECKED		DWG.No	
APPROVED			AC50_100_PREAMP_ISS3.DGM



NOTE: TO BE USED FOR PARTS LIST PURPOSE ONLY

**!** SAFETY CRITICAL COMPONENT  
 REPLACE ONLY WITH SAME  
 TYPE & RATING  
 IF IN DOUBT CONTACT SUPPLIER

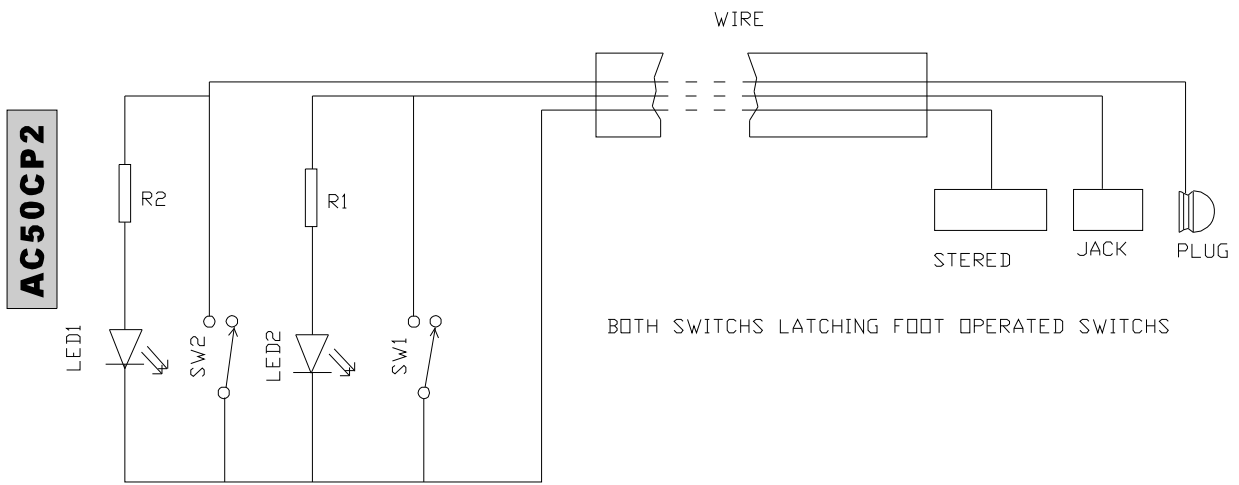
2c	01/09/06	CHANGE R125 TO 1K 1/2W, CHANGE R126 TO 100mA LEADED FUSE	DC
2b	24/05/06	ADD VOLTAGES AND WARNINGS	DC
2a	24/05/06	ADD VOLTAGES AND WARNINGS	DC
ISS	DATE	CHANGE	SIGNED

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MODEL	AC50	TITLE	AC50 POWER OUTPUT
ISSUE	ISS2c	DRAWN	DC 01/09/06
CHECKED		DWG.No	AC50_POWER_STAGE_ISS2c.DGM
APPROVED			

# ★ SCHEMATIC DIAGRAM(FOOTSWITCH)

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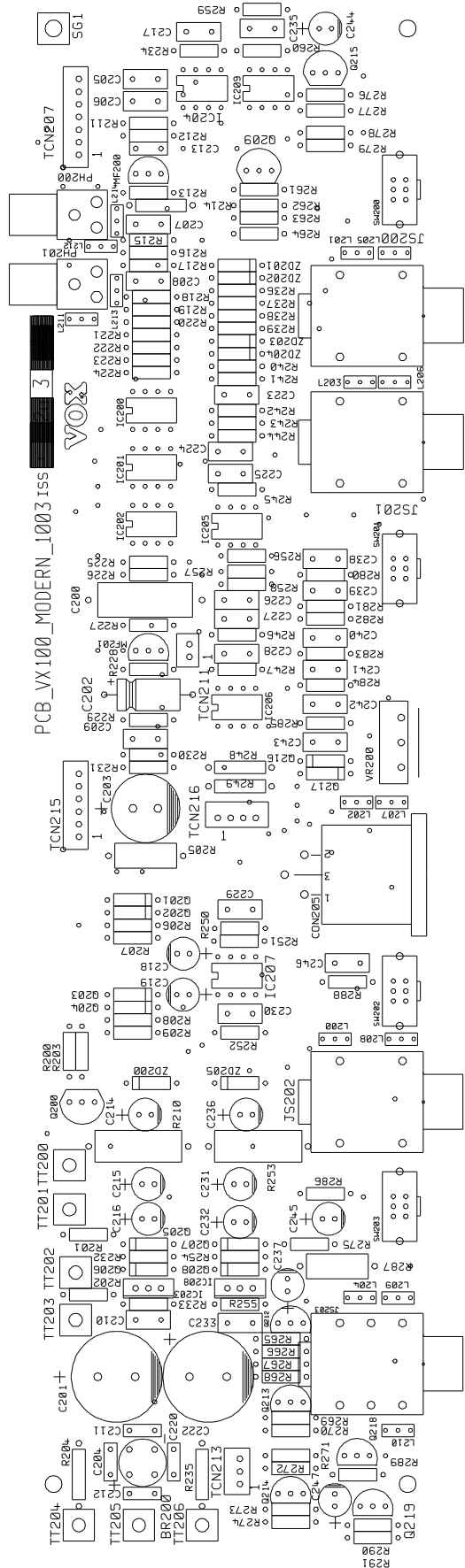






# PCB COMPONENTS LOCATOR DRAWING

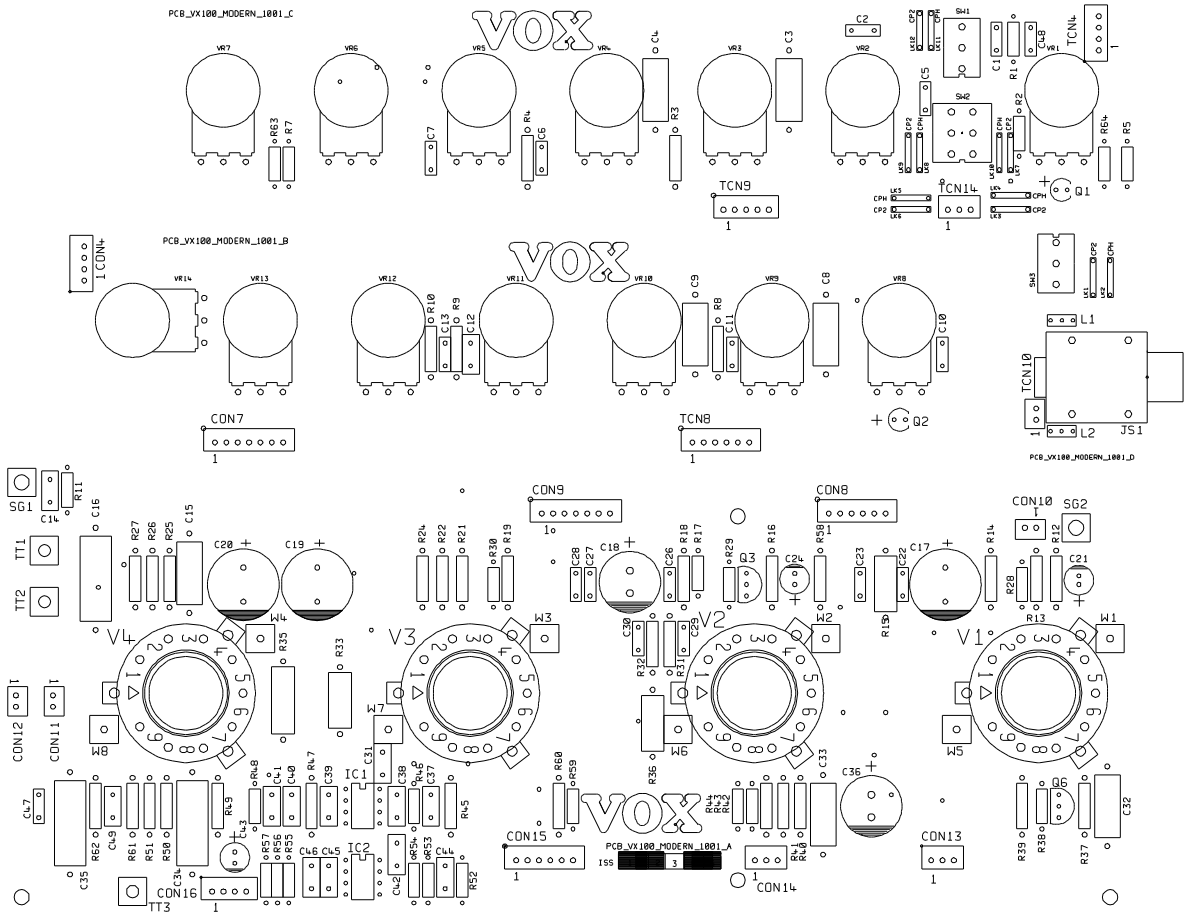
AC50CP2



# ★ PCB COMPONENTS LOCATON DRAWING

## LAYER 7 (SILK SCREEN ARTWORK) ISSUE - ISS3

**AC50CP2**

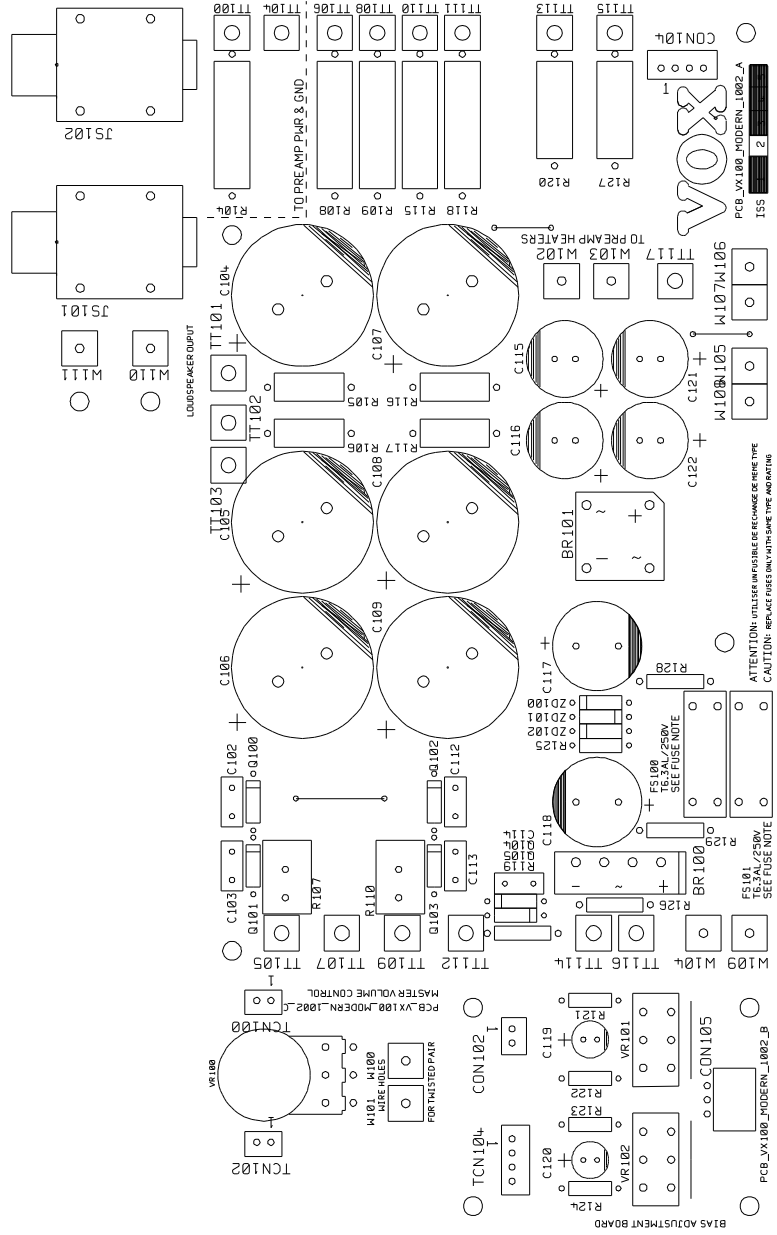




# PCB COMPONENTS LOCATOR DRAWING

**AC50CP2**

## LAYER 7 (SILK SCREEN ARTWORK) ISSUE - ISS2



**VOX AC50CP2 Parts List**

Part Number	Part Name	Note	QTY
530000000700	REVERB POP PCB AC50CP2		1
530000000113	PHONE SOCKET LS-2031-6	JS203	1
530000000692	PHONE JACK(SOCKET WHITE)	PH200	1
530000000691	PHONE JACK (SOCKET RED)	PH201	1
530000000112	PHONE SOCKET LS-2031-4	JS200,JS201, JS202	3
530000000688	MALE XLR (RIGHT PCB MOUNT)	CON205	1
530000000651	IC LM317T	IC203	1
530000000652	IC LM337T	IC208	1
530000000103	IC NJM2120D	IC204,209	2
530000000104	IC NJM2147D	IC200,201,202,205,206,207	6
530000000674	EMI FILTER DSS6NC52A271	L200-210	11
530000000685	SSW DPDT RA SV710100202	SW200-203	4
530000000579	FUSIBLE RESISTOR 2R2/1WATT	R204,235	2
530000000657	STRAIGHT POT MONO A10K	VR200	1
530000000684	BRIDGE RECTIFIER W01	BR200	1
530000000696	DIODE 1N4148	Q201,202,203,204,216,217	6
530000000697	DIODE 1N4002	Q205,206,207,208	4
530000000106	FET LND150N3	MF200, 201	2
530000000653	TRANSISTOR 2N6427	Q209,215	2
530000000105	TR 2SC2910 AUDION	Q200	1
530000000427	TR BC182L	Q212,213,214,218,219	5
530000000120	MANOSTAT IN4744A 15V-1W(ZENER DIODE)	ZD200,205	2
530000000121	MANOSTAT 27V 1/2W IN5254(ZENER DIODE)	ZD201,202,203,204	4
530000000116	CONNECTOR(TO JS-1001-02) (0.1P 2Way)	TCN211	1
530000000117	CONNECTOR DJ2802-3P(0.1P 3Way)	TCN213	1
530000000693	0.1" PITCH CONNECTOR 4WAY	TCN216	1
530000000694	0.1" PITCH CONNECTOR 6WAY	TCN215	1
530000000115	GROUP PIN 7P 2.5mm(0.1P 7Way)	TCN207	1
530000000728	PREAMP POP PCB		(1)
530000000112	PHONE SOCKET LS-2031-4	JS1	1
530000000103	IC NJM2120D	IC1	1
530000000104	IC NJM2147D	IC2	1
530000000687	PCB TOGGLE SWITCH DPDT00B1N01	SW2	1
530000000686	PCB TOGGLE SWITCH SPDT00B1N01	SW1,SW3	2
530000000426	FET J174	Q3,Q6	2
530000000654	LED 234HD RED	Q1	1
530000000655	LED 234GD/E-A GREEN	Q2	1
530000000723	VT9 PCB MOUNT VALVE BASE	V1,V2,V3,V4	5
530000000108	POTENTIOMETER A1M AC30	VR1,VR4,VR9,VR11	4
530000000661	POT RA ALPHA RV16A 41#A200K	VR7,VR12,VR14,V6,V13	5
530000000110	POTENTIOMETER A500K AC30	VR8	1
530000000663	POT RA ALPHA RV16A 41#B500K	VR5	1
530000000659	POT RA MONO ALPHA RV16A41#B20K	VR3,VR10	2
530000000662	POT RA ALPHA RV16A 41#B220K	VR2	1
530000000116	CONNECTOR (TO JS-1001-02)(0.1P 2Way)	CON10,CON11,CON12	3
530000000117	CONNECTOR DJ2802-3P(0.1P 3Way)	CON13,CON14	2
530000000693	0.1" PITCH CONNECTOR 4WAY	CON16,CON4	2
530000000694	0.1" PITCH CONNECTOR 6WAY	CON8,CON15	2
530000000115	GROUP PIN 7P 2.5mm(0.1P 7Way)	CON9	1
530000000702	POWER POP PCB AC50CP2		(1)
530000000112	PHONE SOCKET LS-2031-4	JS101,JS102	2
530000000114	FUSE BASE (#20)	FS100,101	4
530000000680	FUSE WIRE T6.3A/250V	FS100,101	2
530000000729	METALOXIDE FILM RESISTOR 1R/3W	R120,127	2
530000000730	AXIAL RESISTOR 22R/7W	R107,110	2
530000000731	CEMENT RESISTOR 1K/5W	R109,115	2

Part Number	Part Name	Note	QTY
530000000732	CEMENT RESISTOR 10K/5W	R104	1
530000000675	FUSE WIRE T100MA 205V	R126	1
530000000660	POT RA ST ALPHA RV16A 41#B200K	VR100	1
530000000658	STRAIGHT STEREO POT B20K	VR101,102	2
530000000689	0.1" PITCH CONNECTOR 3WAY	CON105	1
530000000683	BRIDGE RECTIFIRE BR62(KBPC602)	BR101	1
530000000682	BRIDGE RECTIFIRE KBU(KBU8D)	BR100	1
530000000119	DIODE IN4007	Q100-105	6
530000000698	ZENER DIODE 51V1.3W	ZD100, 101, 102	3
530000000116	CONNECTOR (TO JS-1001-02)(0.1P 2Way)	CON102	1
530000000693	0.1" PITCH CONNECTOR 4WAY	TCN104,CON104	2
530000000699	CHOKE COIL 15H		1
530000000664	OUTPUT TRANSFORMER		1
530000000089	FUSE BASE R3-11 5*20		1
530000000642	SW 6021-K1C1T2(100/230/240V)		2
530000000599	FUSE T500MAL	inside the safety tube	1
530000000681	FUSE T1.6AL/250	power outlet 230V,240V	1
530000000073	RED LED 333HD/E-A	POWER lamp	1
530000000656	LED GREEN 333GD/E-A	STANDBY lamp	1
530000000604	VALVE BASE(GZ34) VT8-ST	EL34 to panel	2
530000000721	VALVE EL34	V102,V103	2
530000000097	VALVE ECC83 (12AX7)	V1,V2,V3,V4	4
530000000690	POWER SOCKET	at main frame power output	1
530000000733	MAIN CHASSIS AC50CP2		1
530000000734	ANODISED PANEL AC50CP2		1
530000000720	ADJUSTMENT PLATE		1
530000000704	VOX MINI KNOB		18
530000000705	EVA SPONGE 15.0W*2.0T		1
530000000712	TAPPED METAL SPACER(M3×5.5)	Support preamp PCB、Power PCB	10
530000000711	TAPPED METAL SPACER(M3×6)	Support adjustment PCB	4
530000000713	TAPPED METAL SPACER(M3×40)	Support reverb board	4
530000000719	SPRING FINGER	Touch aluminum foil	2
530000000735	SPEAKER PLUG	GCD071/N	1
530000000574	GOLDEN STRINGS	Set in the cabinet	4.8
530000000645	REVERB PRVL3EB2C1B LONG SPRING	PRVL3EB2C1B,Long 3 Spring,RUBY	1
530000000736	AUDIO CORD L1400MM	Φ3.8mm,L=1400mm	1
530000000057	LOGO PLATE 217-1327000001	golden "VOX"	1
530000000063	RUBBER FOOT 25*12.5 W CUSHION	Φ25×12.5,with steel washer inside	4
530000000705	EVA SPONGE 15.0W*2.0T	self adhesive 15.0W*2.0T	5
530000000737	FRONT BAFFLE AC50CP2	diamond veneer、PU paint、white piping	1
530000000738	REAR UPPER BOARD AC50CP2	VOX vinyl, black sprayed inside	1
530000000739	REAR LOWER BOARD AC50CP2	VOX vinyl, black sprayed inside	1
530000000740	SUPPORT BOARD AC50CP2		1
530000000741	REAR STEEL GRILLE AC50CP2	black sprayed inside	1
530000000064	HANDLE AC15CC1	PVC&Al-alloy	3
530000000742	CABINET AC50CP2	VOX vinyl, black sprayed inside	1
530000000060	PLASTIC CORNER 406-1308000000	be made from Nylon6	8
530000000072	FOOT SWITCH VF002	VF002	1
530000000743	AC50CP2 AMPLIFIER		1
530000000468	WOOFER(V212BN)		2
530000000676	FUSE WIRE (US)	US,EX,JP	(1)
530000000681	FUSE T1.6AL/250	UK ,GE,AU	(1)
530000000666	TRANSFORMER022-1114042284R(US)	US,EX,	(1)
530000000667	TRANSFORMER022-1114042285R(UK)	UK ,GE,	(1)
530000000668	TRANSFORMER022-1114042286R(AU)	AU	(1)
530000000665	TRANSFORMER022-1114042283R(JP)	JP	(1)
530000000611	POWER CABLE (120V US/EX)	US,EX	(1)

Part Number	Part Name	Note	QTY
530000000081	POWER CABLE AC15 (230V UK)	UK	(1)
530000000695	POWER CORD (AU)	AU	(1)
530000000080	POWER CABLE AC15 (230V GE)	GE	(1)
530000000078	POWER CABLE AC15 (100V)	JP	(1)