

GUITAR AMPLIFIER

AC10C1

SERVICE MANUAL

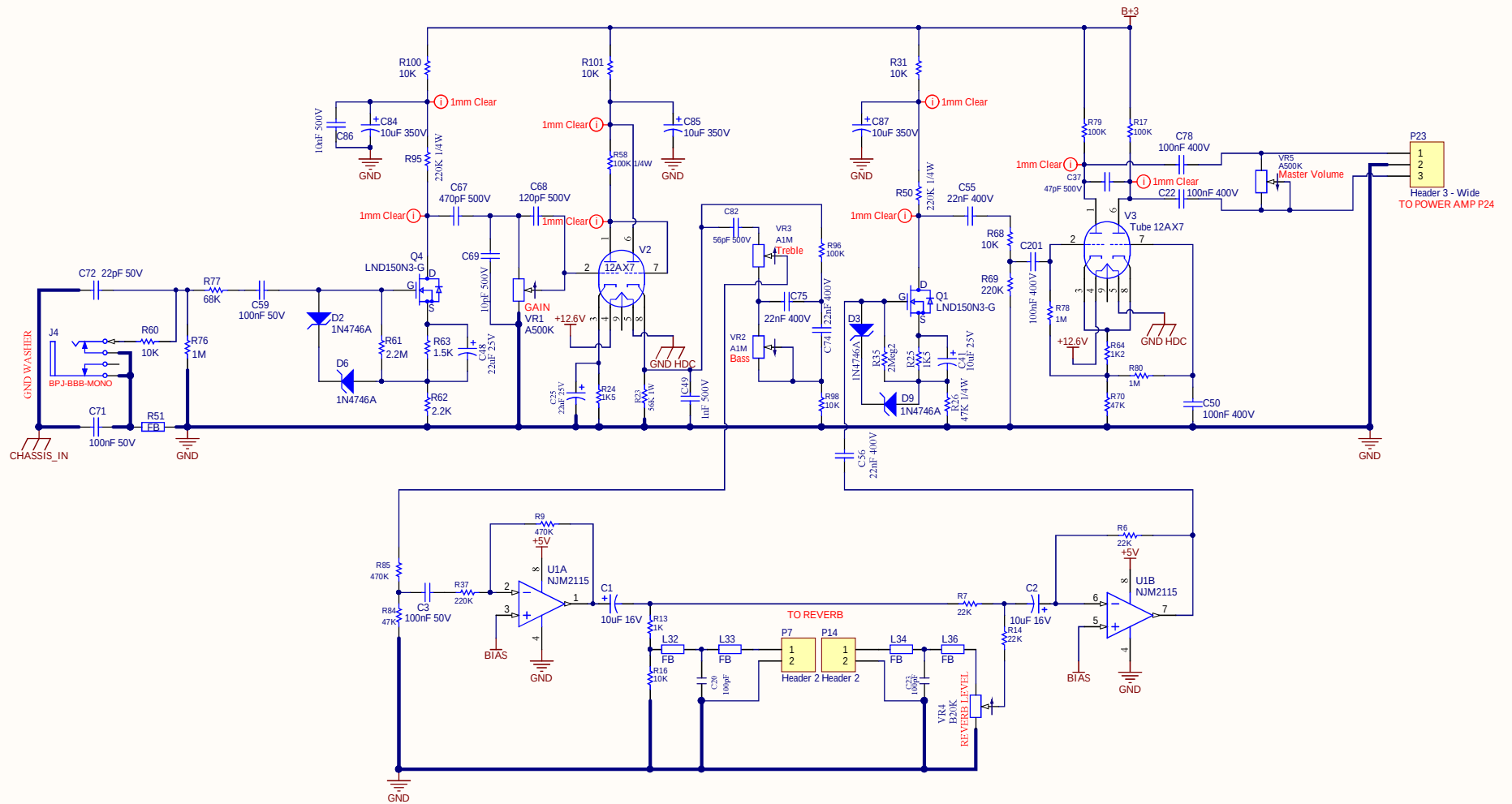


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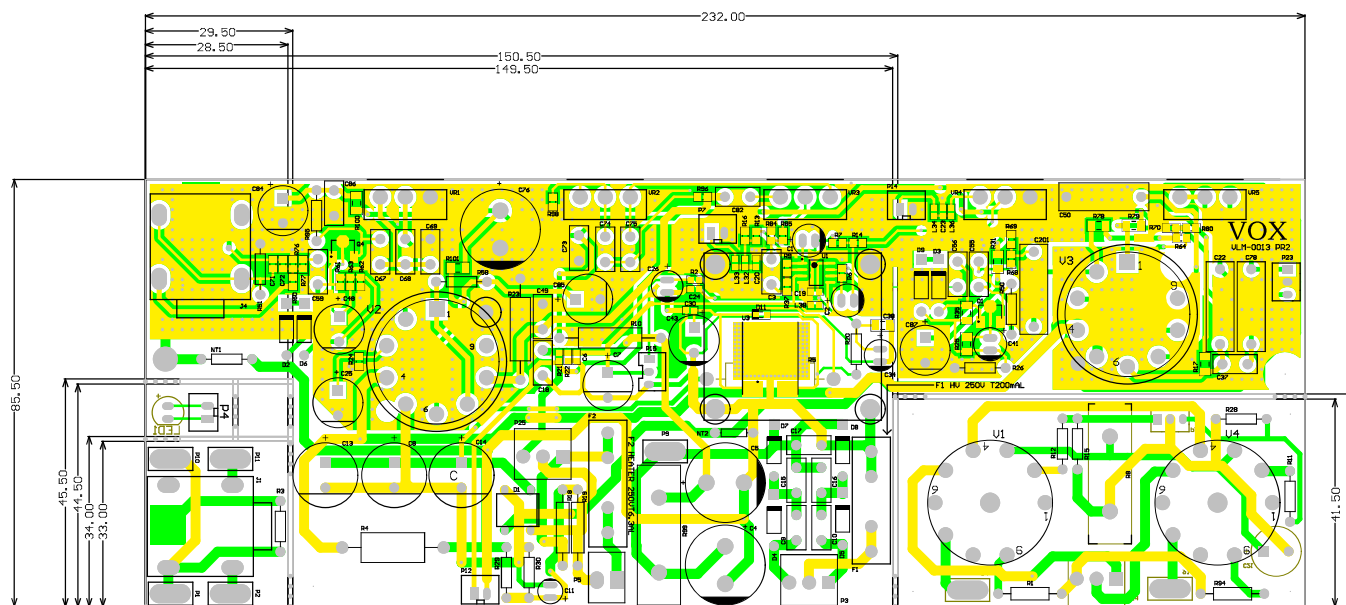
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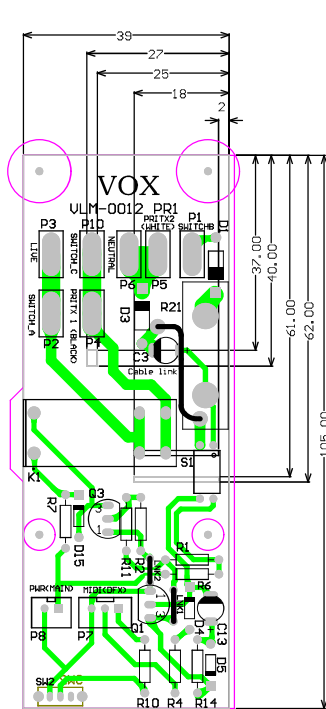
Drawing Number: VD-A30013				Designed By: P Scarffe	Checked By: D. Clarke	Date: 09/06/2015			
CHANGE HISTORY									
				VOX Amplification Ltd. 1 Harrison Close Knowlhill Milton Keynes Bucks, MK5 8PA					
Issue	Date	Change	Signed	Title AC10C1 Main Schematics		Revision: PR2		Sheet 1 of 2	



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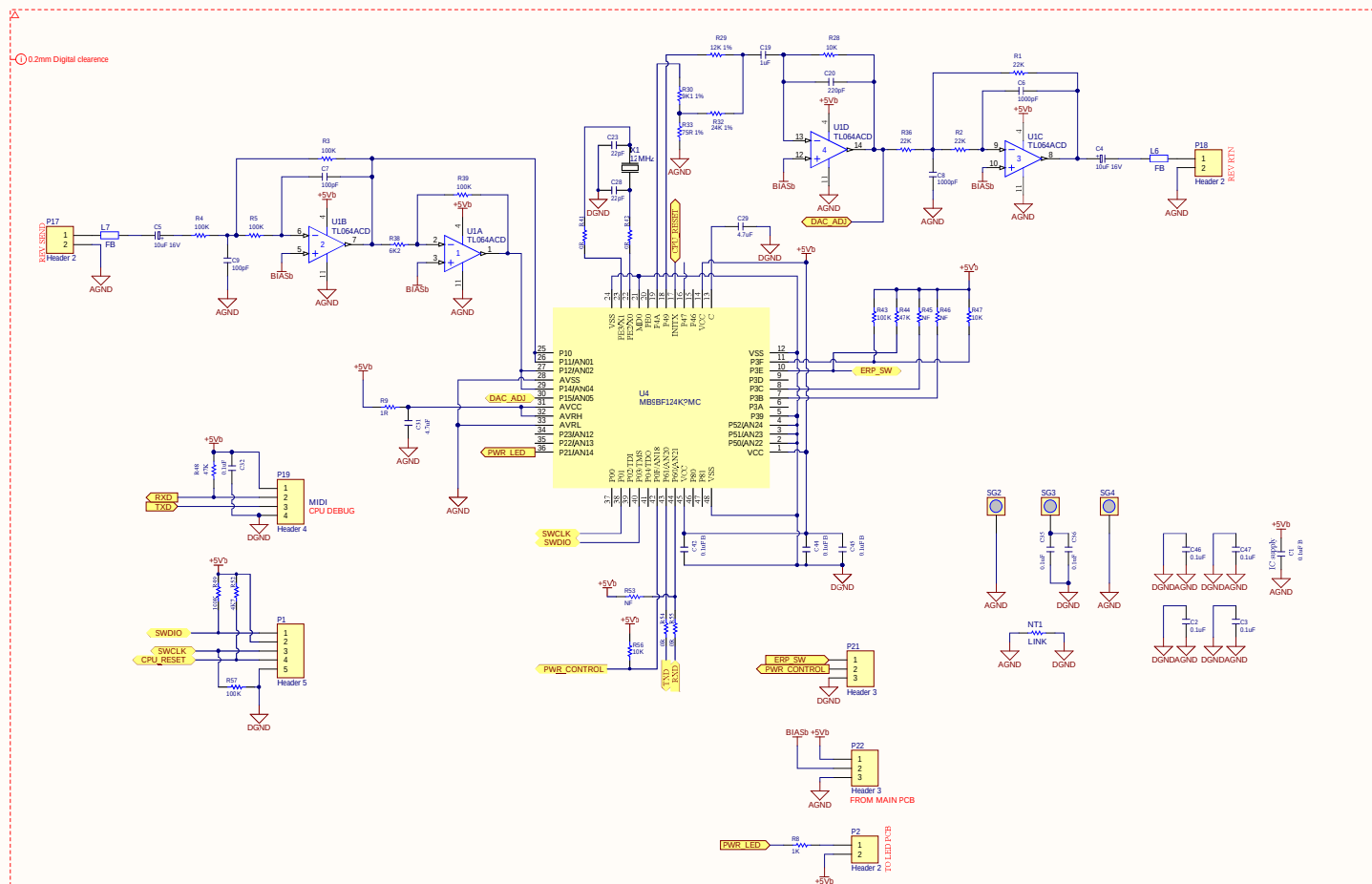
VOX Amplification Ltd
1 Harrison Close
Knowlhill
Milton Keynes
Bucks, MK5 8PA

ENGINEER: P. Scarffe	TITLE: AC10 Main PCB		
PCB DESIGNER: P. Scarffe			
DATE: 30/01/2015	PART NO:	REV: PR2	
FILE NAME: AC10.PcbDoc	DWG NO: ULM-0013	SCALE: 1:1	



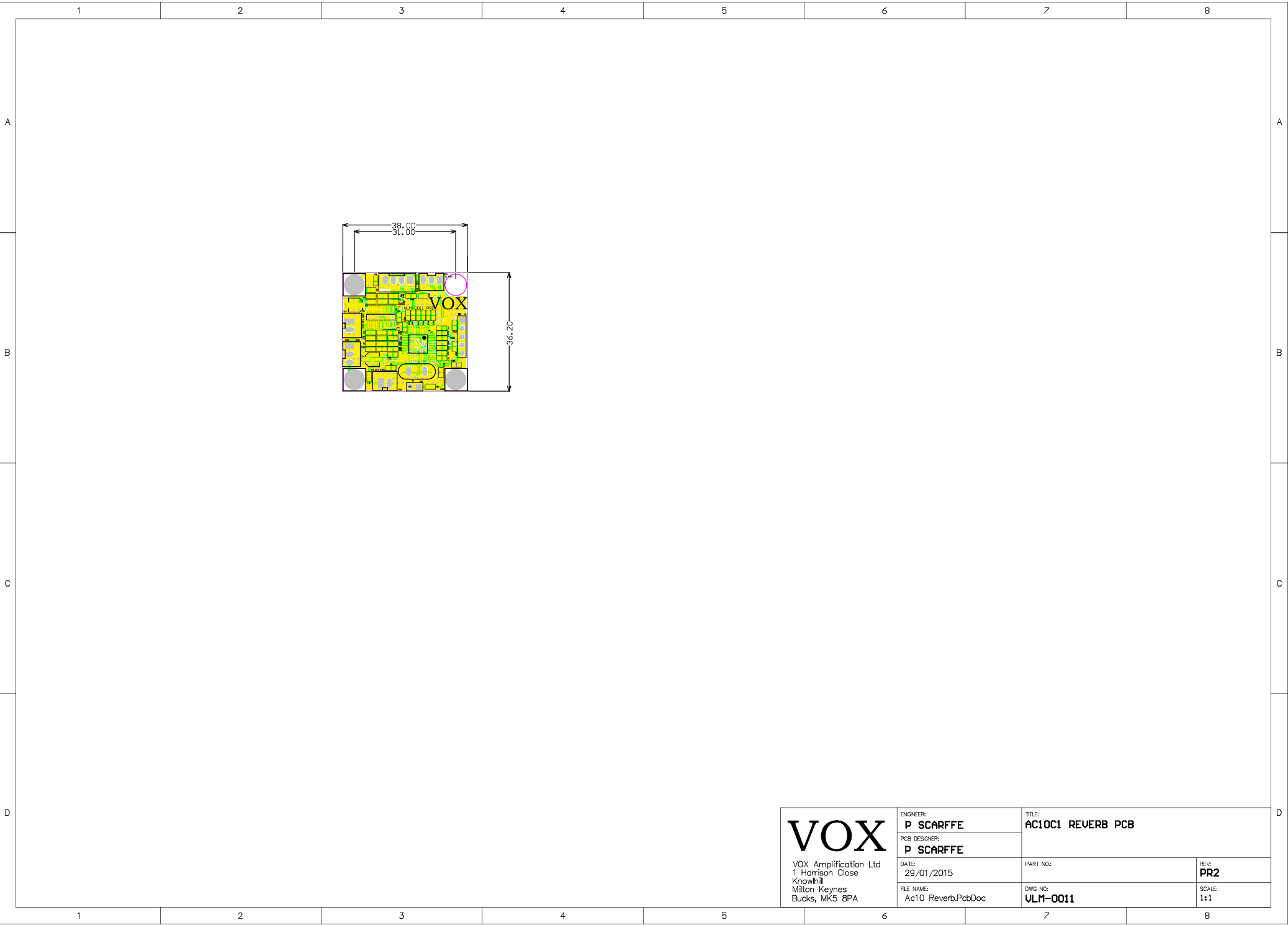
1.6mm single sided bakeboard
ALL DIMENSIONS IN MM

VOX VOX Amplification Ltd 1 Harrison Close Knowlhill Milton Keynes Bucks, MK5 8PA	ENGINEER: P SCARFFE	TITLE: AC10C1 ErP PCB	
	PCB DESIGNER: P SCARFFE	DATE: 30/01/2015	REV: PR2
	FILE NAME: AC10 ErP.PcbDoc	PART NO.:	SCALE:
		DWG NO: ULM-0012	



Author: P. Scarttle	Title: AC10C1	Revision: PR2	1 of 1
Checked By: D. Clarke	Size: A2	Number: VD-A2001	Time: 17.11.22
Step 1	Removed C39 and C40 Shorted to GND	Region for change	Date: 04.12.2014
Author: P. Scarttle	Title: AC10C1	Revision: PR2	1 of 1
Checked By: D. Clarke	Size: A2	Number: VD-A2001	Time: 17.11.22
Step 1	Removed C39 and C40 Shorted to GND	Region for change	Date: 04.12.2014
Author: P. Scarttle	Title: AC10C1	Revision: PR2	1 of 1
Checked By: D. Clarke	Size: A2	Number: VD-A2001	Time: 17.11.22
Step 1	Removed C39 and C40 Shorted to GND	Region for change	Date: 04.12.2014





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VOX Amplification Ltd
1 Harrison Close
Knowlhill
Milton Keynes
Bucks, MK5 8PA

ENGINEER:

P SCARFFE

PCB DESIGNER:

P SCARFFE

DATE:

29/01/2015

FILE NAME:

Ac10 Reverb.PcbDoc

TITLE:

AC10C1 REVERB PCB

PART NO.:

ULM-0011

REV:

PR2

SCALE:

1:1

AC10C1 Audio Test

Load: 16ohm resistance

ITEM	Check Point	Knob Positions					Input conditions	Filters			SLOW	Value
		GAIN	BASS	TREBLE	REVERB	VOLUME		80k	20k	AUDIO		
	* EXTERNAL SPEAKER (16ohm)	MAX	MIN	MIN	MIN	MAX	1kHz/-50dBm	o				15dBm ~ 21dBm
	Internal speaker (16ohm)	↓	↓	↓	↓	↓						
1	GAIN – min	MIN	↓	↓	↓	↓	1kHz/-50dBm			o	o	-50dBm ~ -30dBm
2	GAIN – max	MAX	↓	↓	↓	↓	1kHz/-50dBm	o				15dBm ~ 21dBm
3	BASS – min	↓	↓	↓	↓	↓	100Hz/-50dBm	o			o	0dBm ~ 8dBm
4	BASS – max	↓	MAX	↓	↓	↓	100Hz/-50dBm	o			o	16dBm ~ 22dBm
5	TREBLE – min	↓	MIN	↓	↓	↓	10kHz/-60dBm	o				3dBm ~ 9dBm
6	TREBLE – max	↓	↓	MAX	↓	↓	10kHz/-60dBm	o				19dBm ~ 25dBm
7	adjusting GAIN (+24.3dBm out)	Adjust	↓	MIN	↓	↓	1K/- 30dBm	o				Set Level to + dBm (+24.2dBm~+24.4dBm)
8	DISTORTION	↓	↓	↓	↓	↓	1K/- 30dBm		o		o	≤ 15 %
9	CHECK REVERB (remove INPUT jack and observe decay)				MAX							
10	VOLUME – min	MAX	↓	↓	MIN	MIN	1K/- 30dBm			o	o	< -15dBm
11	ALL MAX NOISE	↓	MAX	MAX	MAX	MAX	OSC OFF			o	o	-15dBm ~ -22dBm
12	Remove Input Plug	↓	↓	↓	↓	↓	No Input			o	o	-15dBm ~ -22dBm

VOX AC10C1 Parts List

⚠ : SAFETY CRITICAL COMPONENT.
EXP=EXPLODED VIEW Item No

Code	Part Name	Location	EXP	Reference	QTY
530000003368	PCB ASSY JACK COM AC10C1	JACK			1
530000002888	JACK SOCKET(MONO)	JACK		J1	1
530000002069	SPECIAL WASHER 18.9X18X	JACK		J1 INPUT	1
530000003369	PCB ASSY LED COM AC10C1	LED			1
530000003370	LED HOLDER D9.25X13.4 ME	LED		LED HOLD	1
530000003371	LED CY 5X8.6X16 RD	LED		LED1	1
530000003372	PCB ASSY MAIN COM AC10C1	MAIN			1
530000003373	DIODE DB101-C 50V 1A	MAIN		D1	1
530000003374	DZ 1W 18V 5% 1N5931B AT	MAIN		D2, D3, D6, D9	4
530000002089	DIODE IN4007-F AT	MAIN		D4, D5, D7, D8	4
530000003375	RCF 2W 6.8R 5% ATW	MAIN		R4	1
530000003376	RMF 3W 33R 5% AT	MAIN		R5	1
530000002633	RWR 5W 1K 5% SQZ RL	MAIN		R99	1
530000002438	⚠ FUSE 200MA 250V EU/UK/AUS/SKOR	MAIN		F1	1
530000002094	⚠ FUSE T6.3A 250V 5X20 UL	MAIN		F2	1
530000003377	VR ROTARY A500KX1 20% V	MAIN		VR1	1
530000002631	VR ROTARY A1MX1 30% V	MAIN		VR2, VR3	2
530000001882	VR Rotary B20KX1 20% V	MAIN		VR4	1
530000002083	VR ROTARY A500KX1 20% V	MAIN		VR5	1
530000002448	SPECIAL WASHER 23.8X18X	MAIN		J2 INPUT	1
530000003378	PHONE JACK F 4P 6.4X16.5	MAIN		J4	1
530000003379	MOSFET N-CH 500V LND150N	MAIN		Q1, Q4	2
530000003380	IC ASIC NJM2115M DMP8	MAIN		U1	1
530000003381	IC REGULATOR LM2940CS-5.	MAIN		U3	1
530000003382	SOCKET 9PIN 500V WHITE	MAIN		V2, V3	2
530000003383	PCB ASSY TUBE COM AC10C1	TUBE			1
530000003179	RWR 5W 120R 5% SQZ RL	TUBE		R8	1
530000002060	SOCKET 9PIN 500V D=22	TUBE		V1, V4	2
530000003384	PCB ASSY ERP EU UK AC10C	EU UK			1
530000002089	DIODE IN4007-F AT	EU UK		D1, D3	2
530000002636	DIODE 1N4148T AT	EU UK		D4, D15	2
530000003385	TR 2N3904TA RLT	EU UK		Q1, Q3	2
530000003178	RWR 5W 47K 5% SQZ RL	EU UK		R21	1
530000003386	⚠ RELAY 5V 80MA SPST BRT3-	EU UK		K1	1
530000003180	⚠ PHOTOCOUPLER EL817	EU UK		S1	1
530000003387	SW SLIDE SPDT 12V 0.1A	EU UK		SW2	1
530000003388	PCB ASSY REVERB COM AC10 (DATA)	REVERB			
530000003389	CRYSTAL 12.000MHZ HC-49U	REVERB		X1	1
530000003390	IC ASIC TL064ACD SO16	REVERB		U1	1
530000001874	Logo 45X11		1		1
530000002046	⚠ VENT-LARGE PP BLK 94V0		2		1
530000003392	SCREW MACH O-CS 4X20 CR LCS NI		3		4
530000002076	HANDLE-TOP 187X25.8X15.8		4		1
530000002445	T5706 VOX 10 16OHM[OIC]		6		1
530000003394	WOOD CAB 520X210X365 MDF+PB		14		1
530000002067	CLIP TUBE 34X27X68 METAL		15		2
530000002081	VACUUM TUBE COMPACTRON EL84		17		2

Code	Part Name	Location	EXP	Reference	QTY
530000003395	TRANS AUDIO 173.2/12.6V 10W0.06A		20		1
530000003396	SCREW M4X12 PH BK		30		6
530000003397	TRANS PWR 240/250-12.6V/AUS		31		1
530000003398	TRANS PWR 230/250-12.6V/EU/UK/ARG		31		
530000003399	TRANS PWR 120/250-12.6V/US/120V		31		
530000003400	TRANS PWR 100/250-12.6V/JP		31		
530000001921	FUSE T630MA 250V EU/UK/AUS		32		1
530000001920	FUSE T1.25A 250V JP/US		32		1
530000002611	AC INLET M 3P 250V 10A(NT50H)		33		1
530000003401	LENS PC SHEET 80X40 PC BK/EU/UK /ARG		39		1
530000002080	VALVE COMPACTRON 12AX7B		41		2
530000003184	SWITCH POWER TOGGLE SPDT		43	(* for 230V only)	1
530000002641	SWITCH POWER SPST 250V		43		
530000003370	LED HOLDER D9.25X13.4 ME		44		1
530000002923	KNOB-CHICKENHEAD AC4C1		45		5