

# Service Manual

**Model: L-8** (8-CHANNEL MIXING CONSOLE  
WITH DIGITEL EFFECTS)



[www.altoproaudio.com](http://www.altoproaudio.com)

Version: 1.1

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## 8. TECHNICAL SPECIFICATION

### Mono input channels

Microphone input	electronically balanced, discrete input configuration
Frequency response	10Hz to 55kHz, +/- 3dB
Distortion (THD & N)	0.005% at +4dBu, 1kHz
Gain range	0dB to 60dB (MIC)
SNR (Signal to NoiseRatio)	115dB
Line input	electronically balanced
Frequency response	10Hz to 55kHz, +/- 3dB
Distortion (THD & N)	0.005% at +4dBu, 1kHz
Sensitivity range	+15dBu to -45dBu

### Stereo input channels

Line input	unbalanced
Frequency response	10Hz to 55kHz, +/- 3dB
Distortion (THD & N)	0.005% at +4dBu, 1kHz

### Impedances

Microphone input	1.4kOhm
Channel Insert return	2.5kOhm
All other inputs	10kOhm or greater
Tape out	1kOhm
All other output	120Ohm

### Equalization

Hi shelving	+/- 15dB @12kHz
Mid bell	+/- 12dB @2.5kHz
Low shelving	+/- 15dB @80Hz
Low Cut filter	75Hz, 18dB/oct.

### DSP SECTION

A/D and D/A converters	24 bit
DSP resolution	24 bit
Type of effects	Hall, Room, Vocal & Plate REVERBS Mono & Stereo DELAY (max DELAY TIME 500ms) Chorus, Flanger & Vibrato MODULATIONS REV+DELAY, REV+CHORUS, REV+FLANGER, REV+VIBRATO combinations
Presets	256
Controls	16-position PRESET BANK Selector 16-position VARIATION selector CLIP LED MUTE SWITCH with LED indicator

### Main Mix Section

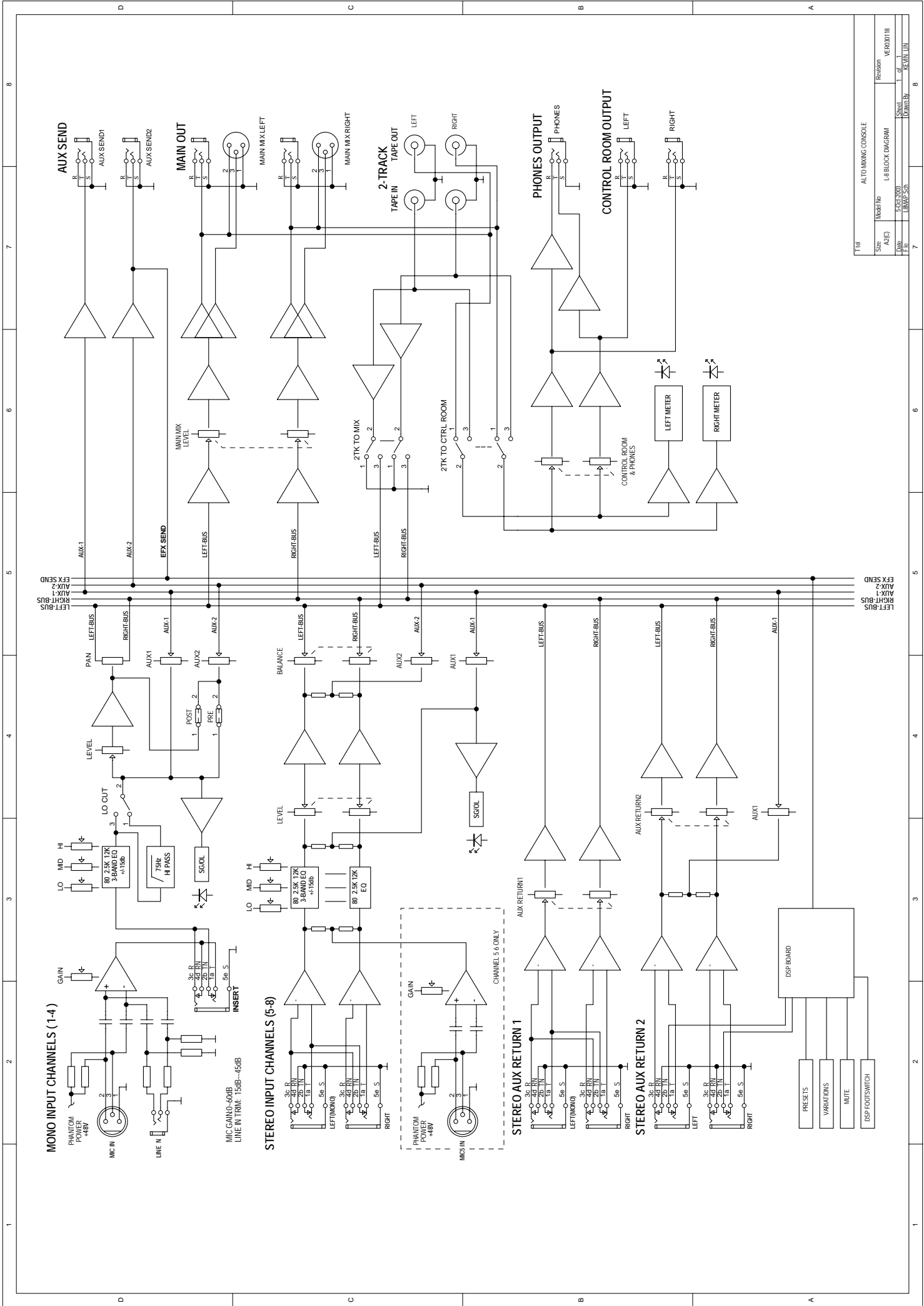
Noise (Bus noise)	Fader 0 dB, channels muted: - 100dBr (ref.:+4dBu) Fader 0dB, all input channels assigned and set to UNITY gain: - 90dBr (ref.:+4dBu)
Max output	+22dBu balanced XLR, +22dBu unbalanced, 1/4" jacks
AUX Return gain range	OFF to +20dB
AUX Sends max out	+22dBu

**Power supply**

Main voltage	USA/Canada	100 - 120V~, 60Hz
	Europe	210 - 230V~, 50Hz
	U.K./Australia	240V~, 50Hz
Power Consumption		25watts
Fuse		100- 120V~ : T500mAL
		210 - 240V~ : T250mAL
Main connection		Standard IEC receptacle

**Physical**

Dimension (W×D×H)	245mm×268mm×24/73mm (9.64"×10.54"×0.94"/2.87")
Net weight	2.4Kg (5.29lb)
Shipping weight	3.5Kg (7.72lb)



ALTO MIXING CONSOLE			
Rev	1	Rev	1
DATE	1/2007	DATE	1/2007
DESIGNER	ALTO	DESIGNER	ALTO
DRAWN BY	ALTO	DRAWN BY	ALTO
SCALE	1:1	SCALE	1:1
L8 BLOCK DIAGRAM		VER000118	
MOSBY No		REV0001	
PART No		REV0001	

**MONO INPUT CHANNELS (1-4)**

**STEREO INPUT CHANNELS (5-8)**

**STEREO AUX RETURN 1**

**STEREO AUX RETURN 2**

**DSP BOARD**

PRESETS

VARIATIONS

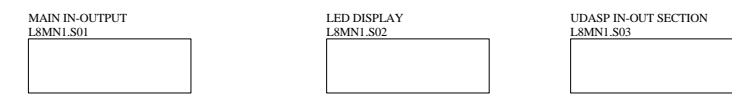
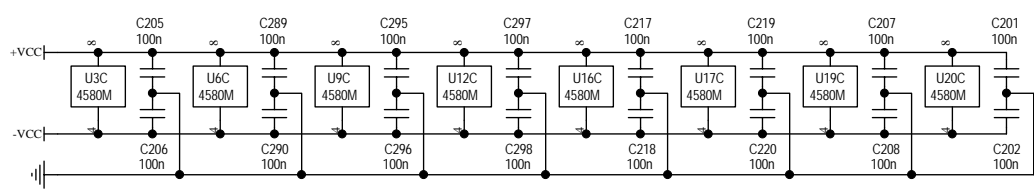
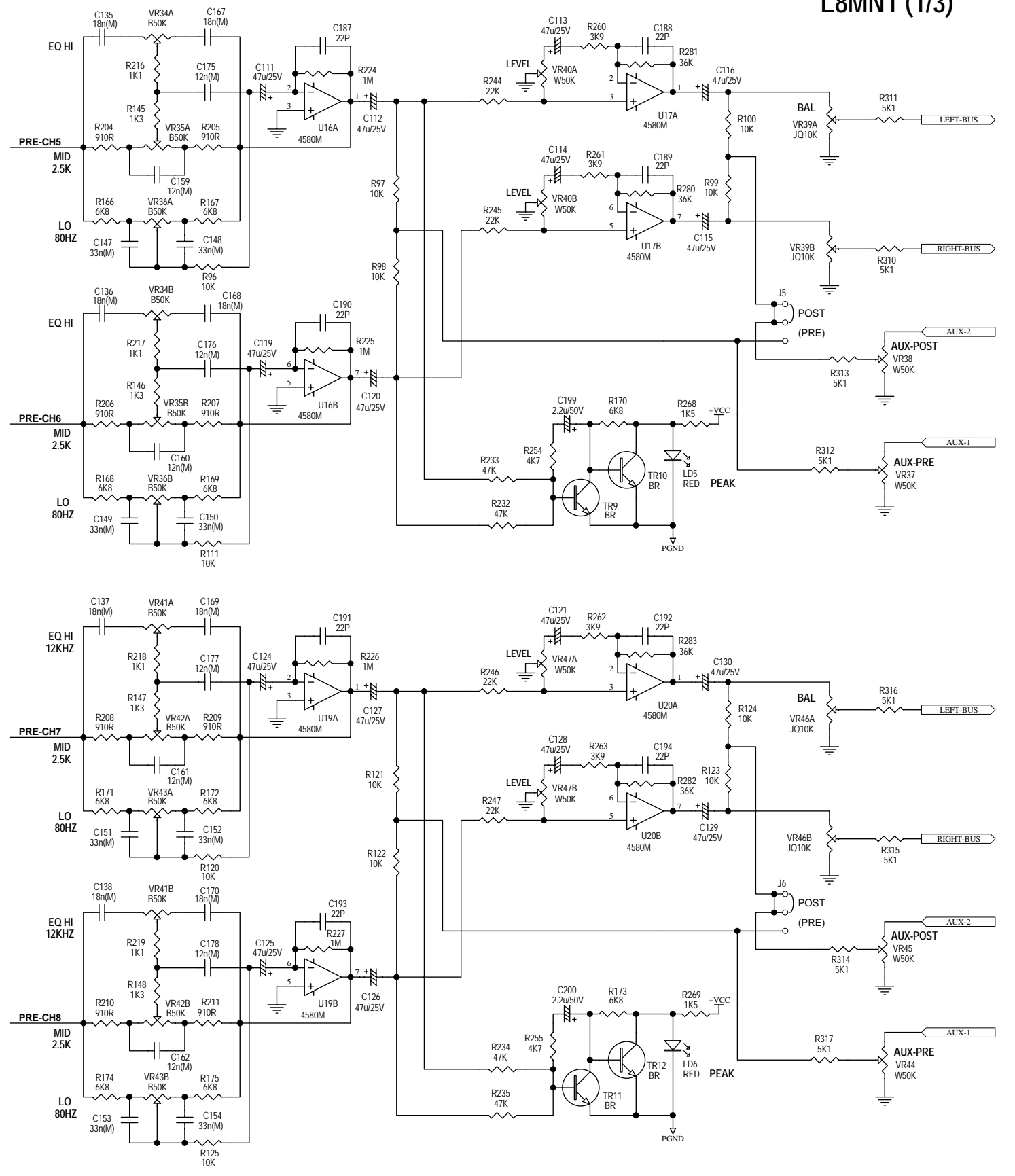
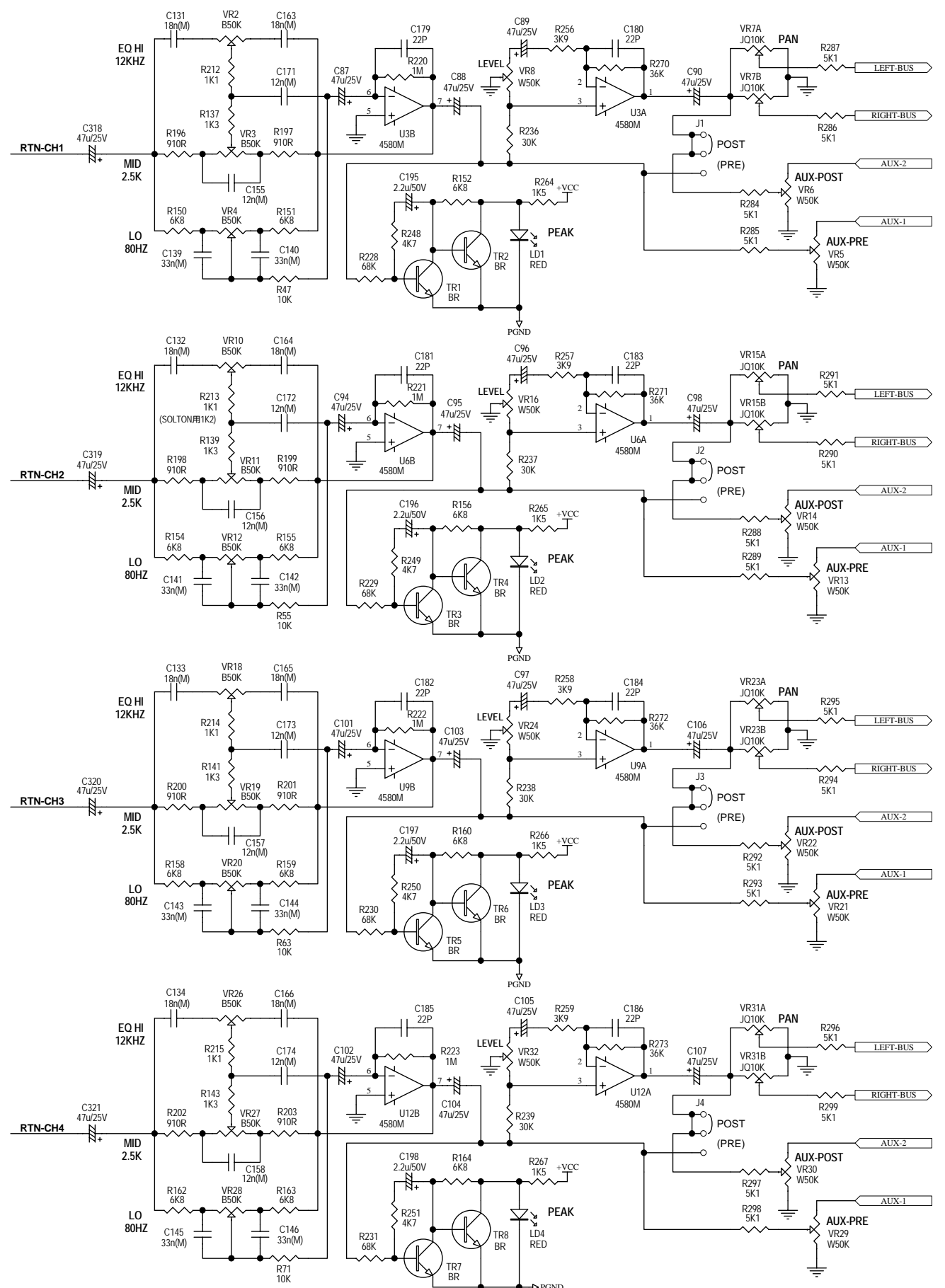
MUTE

DSP FOOTSWITCH

1 2 3 4 5 6 7 8

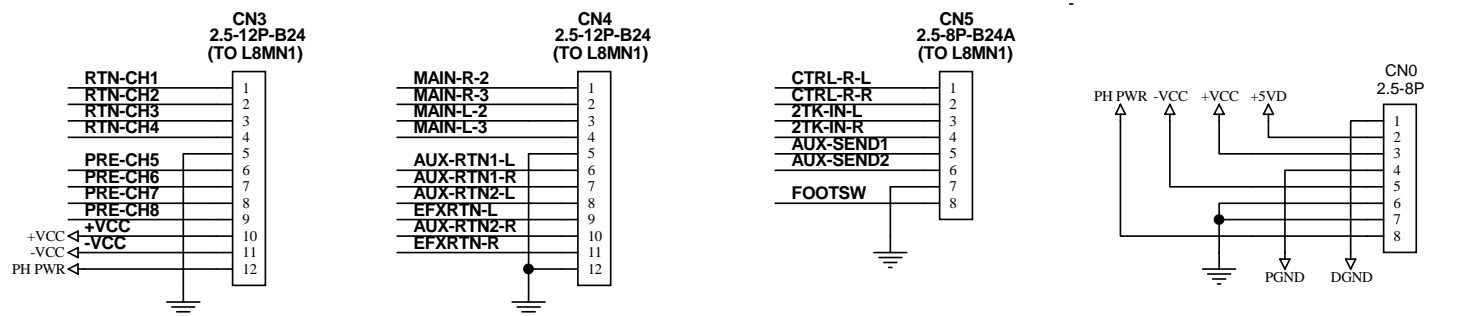
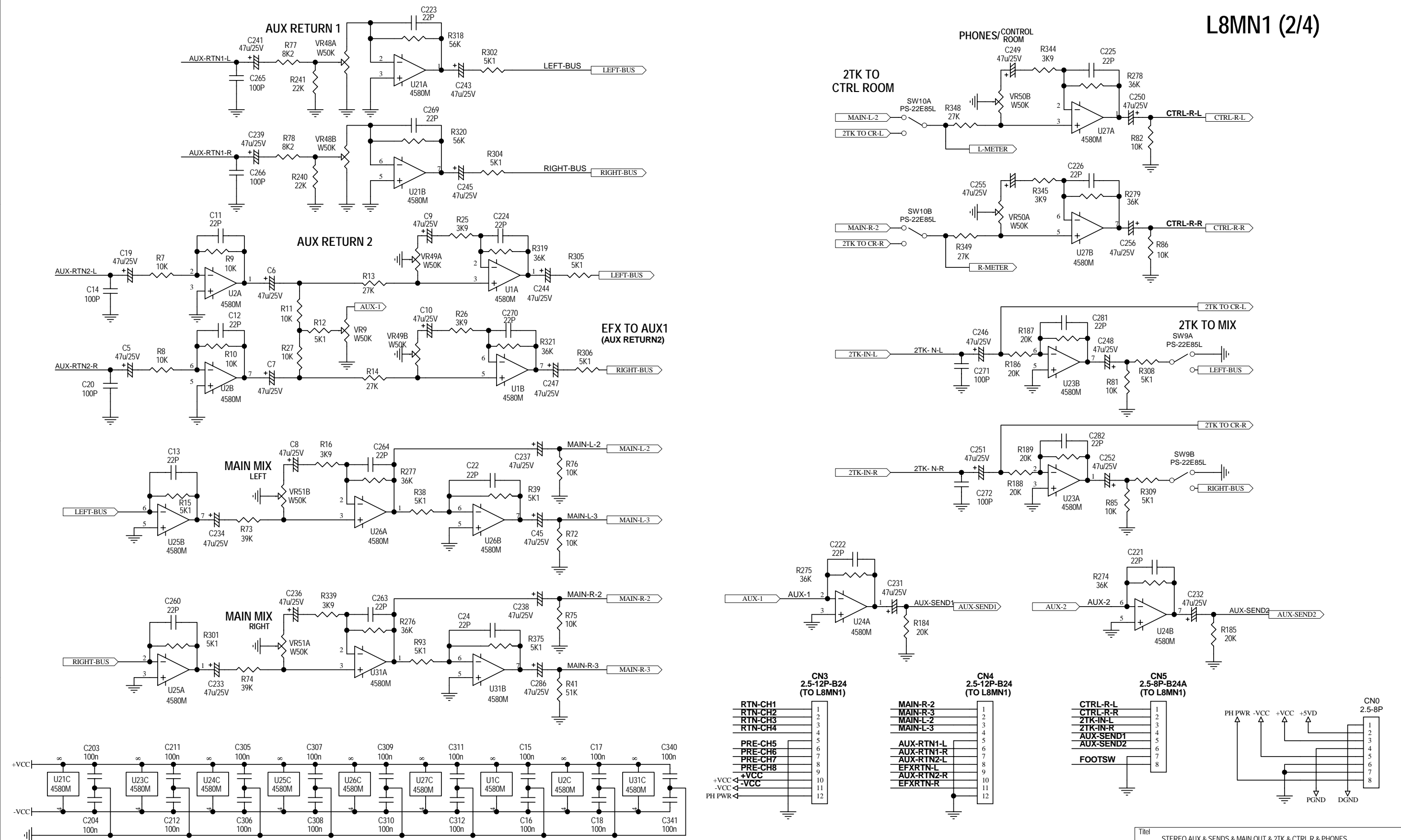
A B C D

# L8MN1 (1/3)



Title		INPUT STAGE PCB# L8MN1.PCB	
Size	A2	Model No.	ALTO L-8
Date:	5-Oct-2003	Revision	VER030113
File:	L8MN1.Sch	Sheet	1 of 4
		Drawn By:	KEVIN LIN

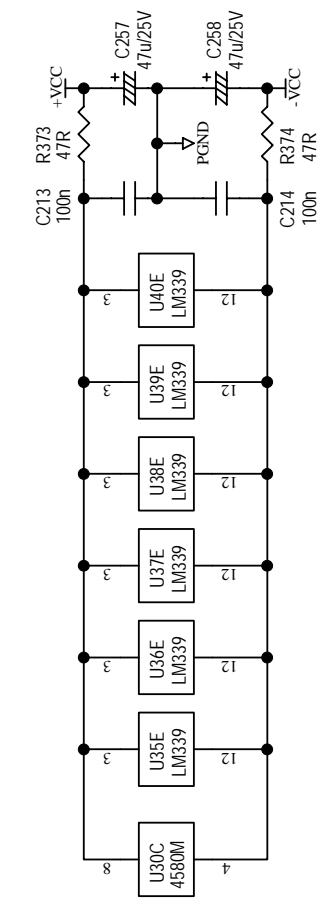
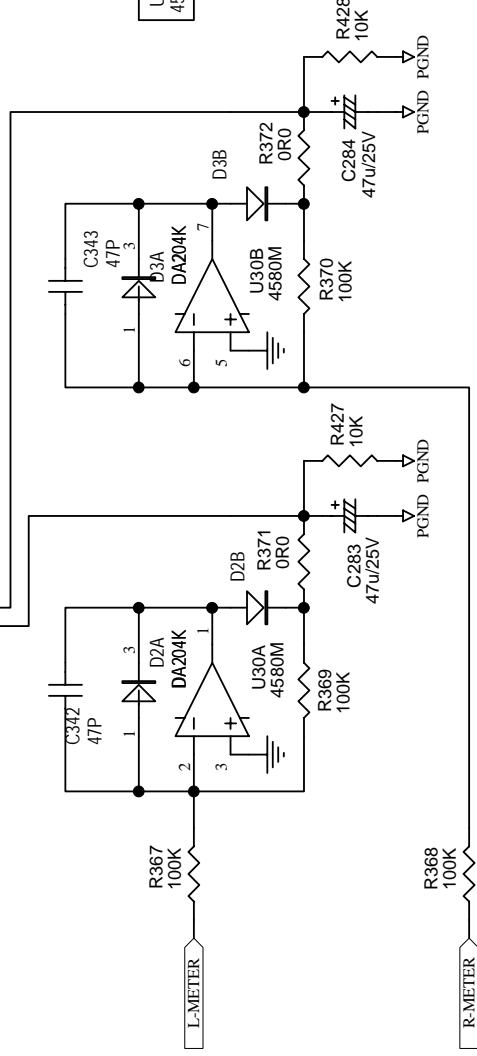
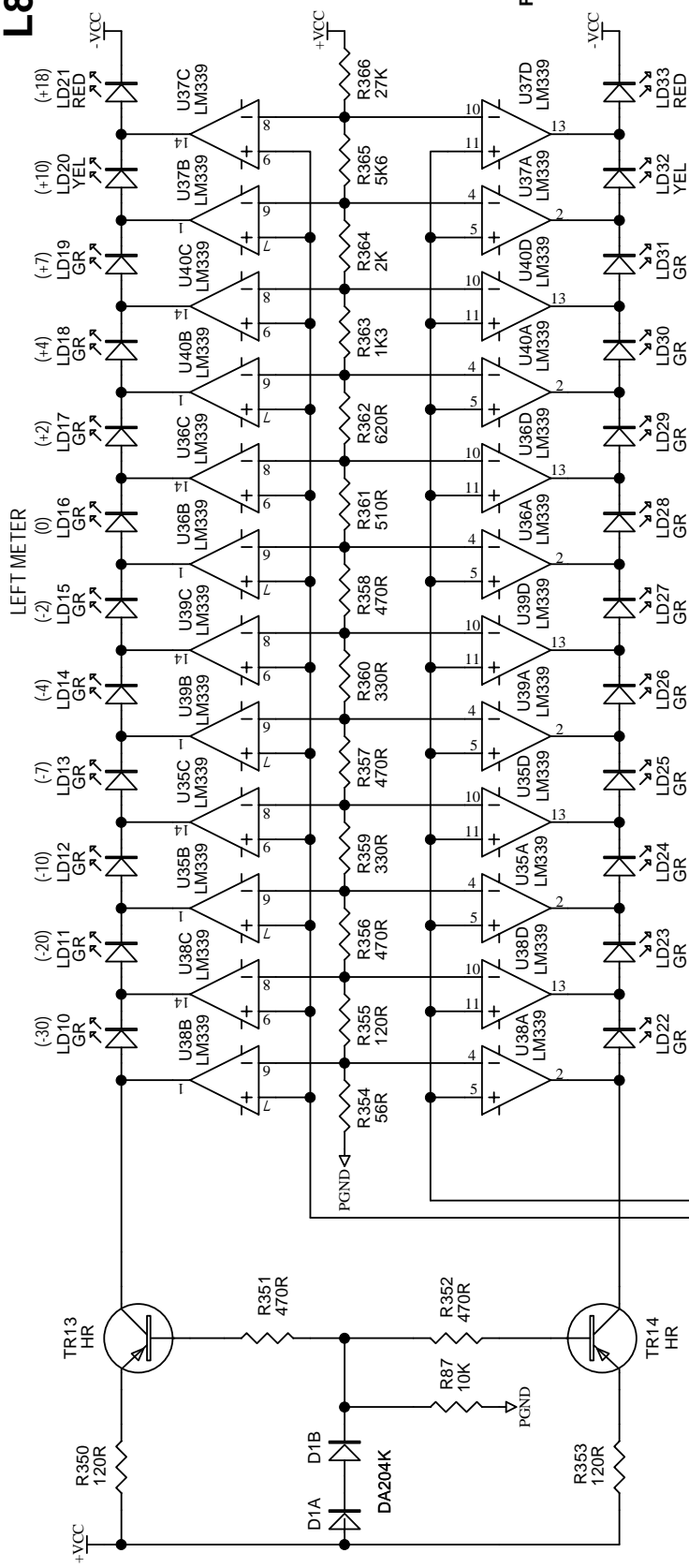
# L8MN1 (2/4)



Title STEREO AUX & SENDS & MAIN OUT & 2TK & CTRL R & PHONES		
Size A2(C)	Model No: ALTO L-8	Revision VER030120
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# L8MN1 (3/4)

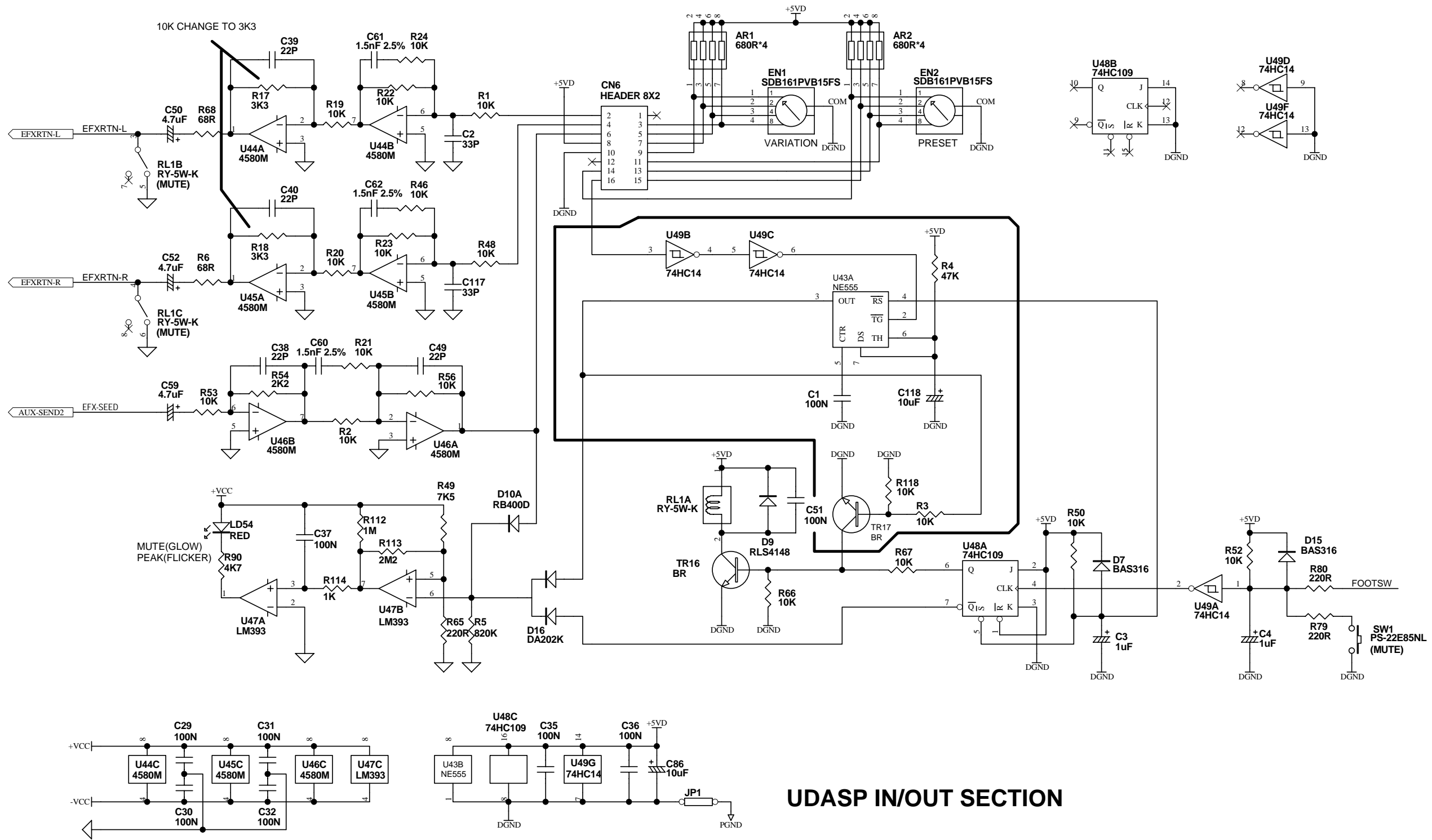
## LEFT METER



Title: DISPLAY STAGE

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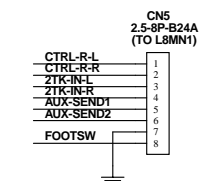
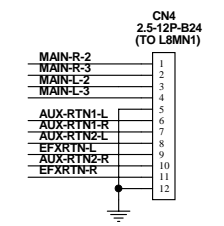
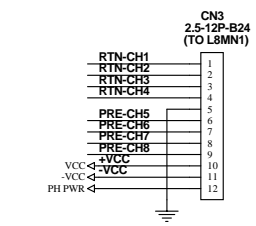
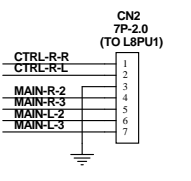
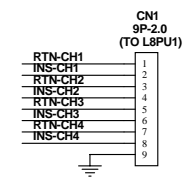
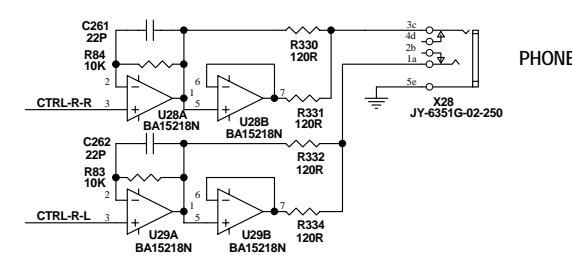
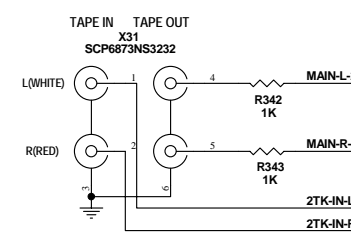
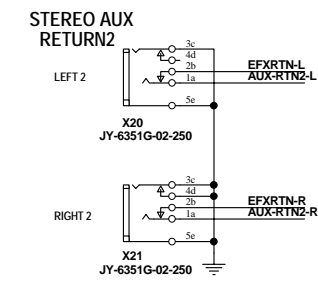
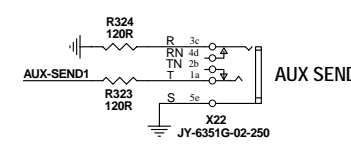
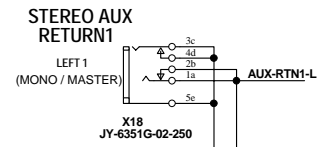
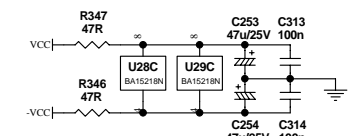
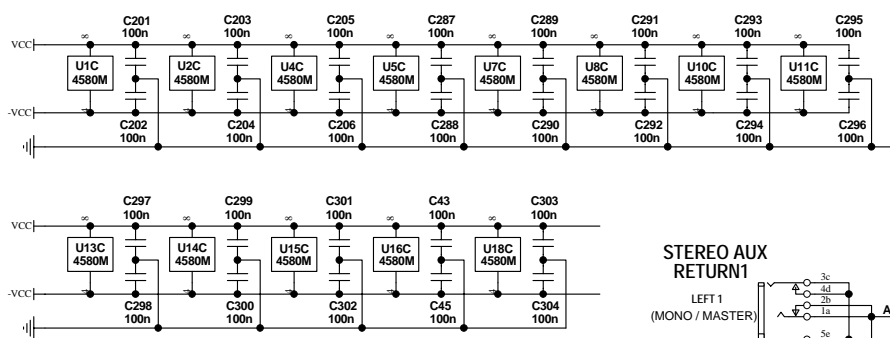
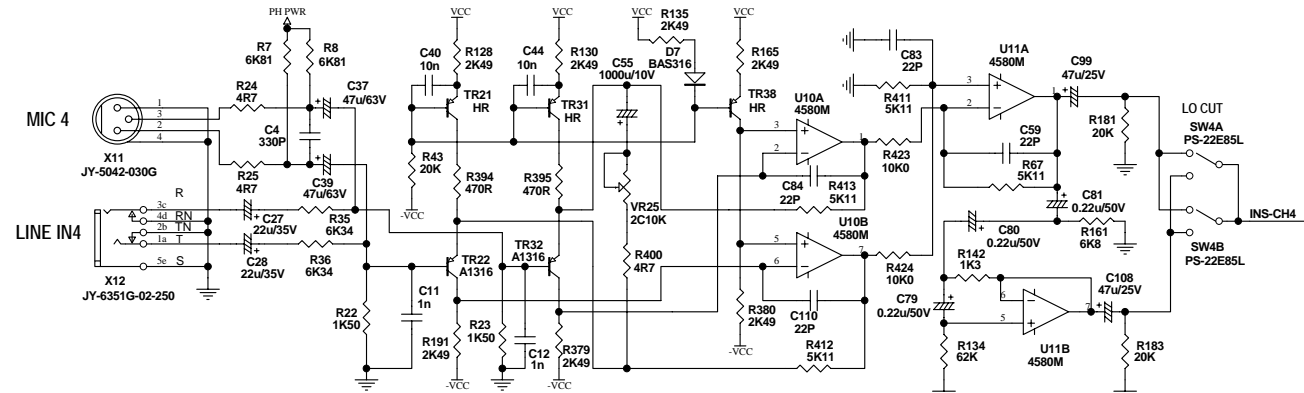
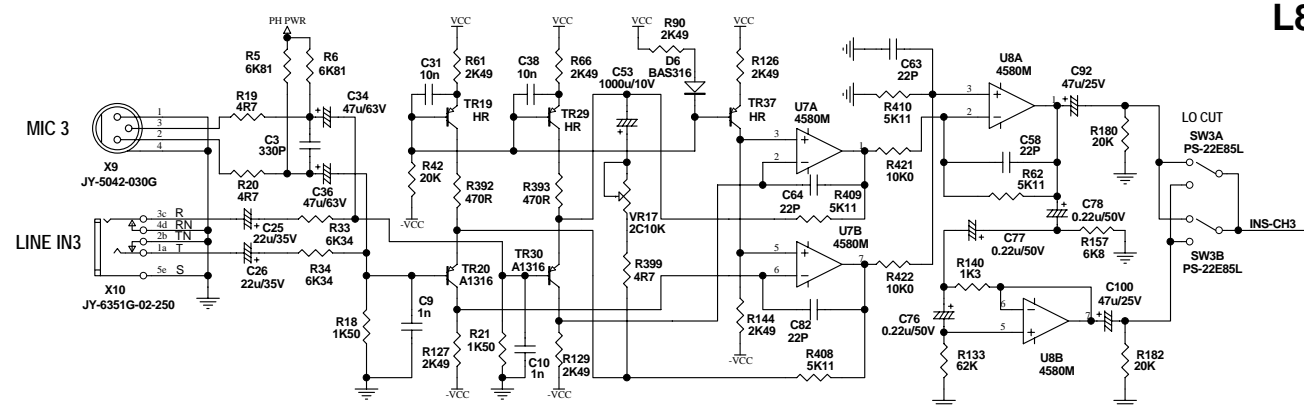
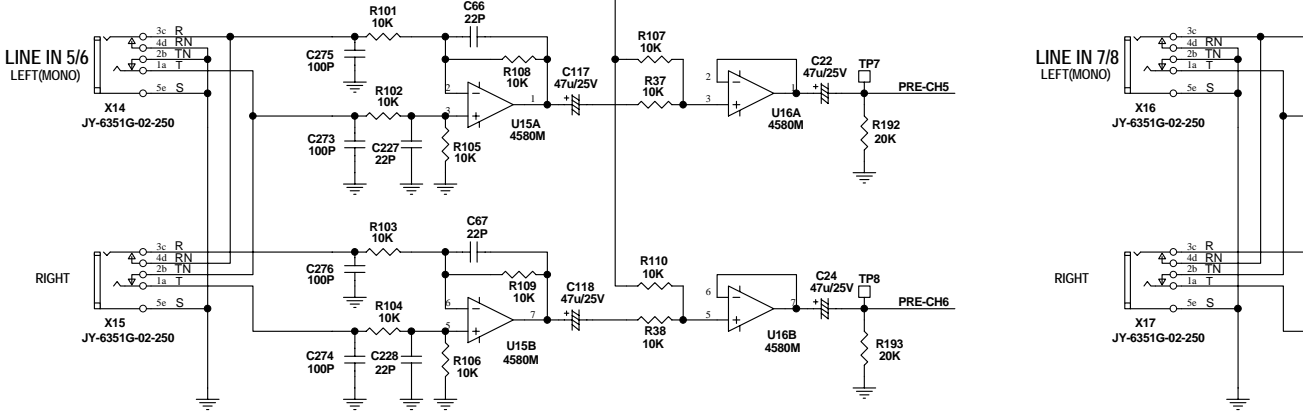
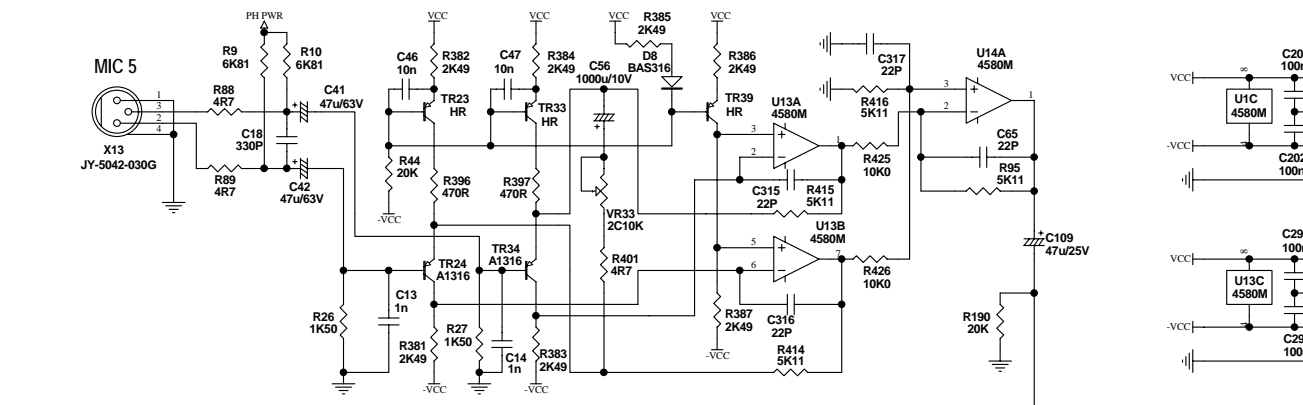
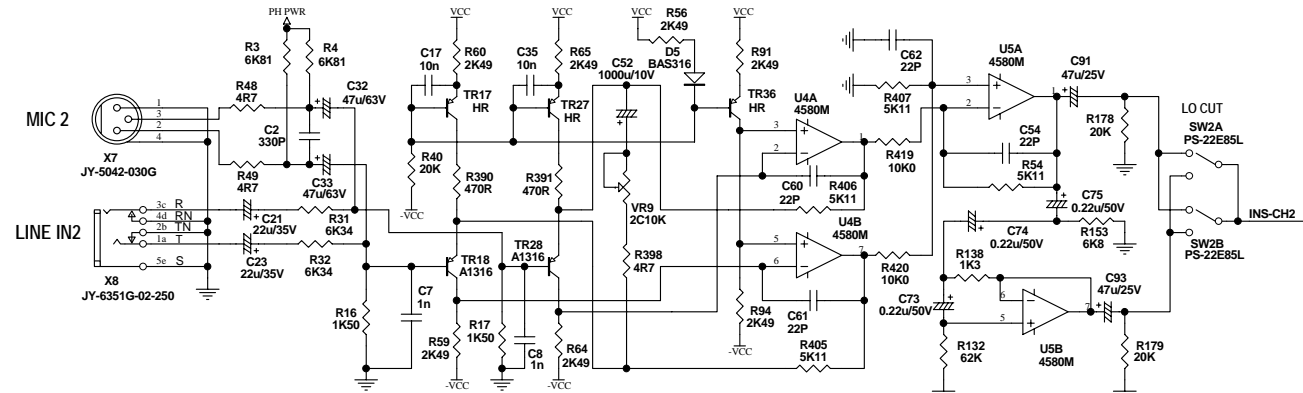
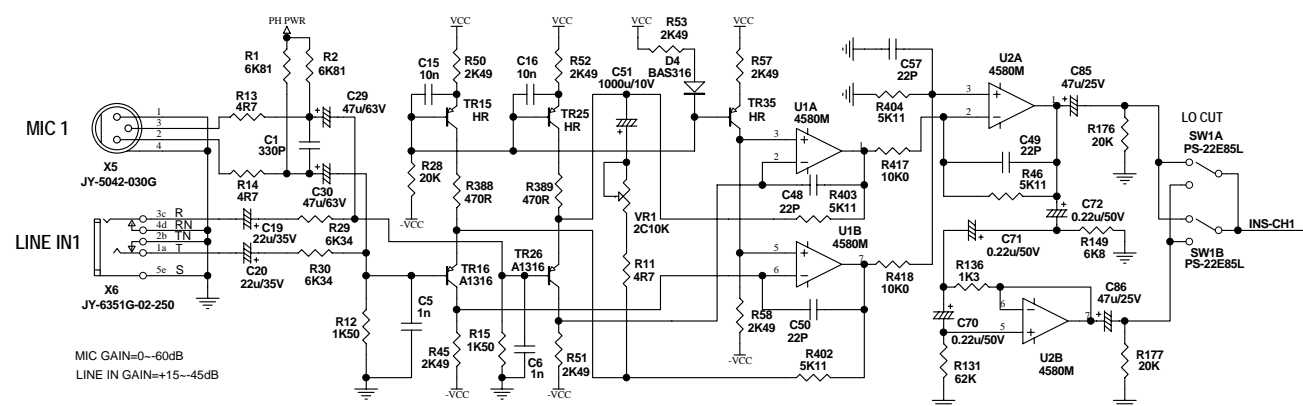




UDASP IN/OUT SECTION

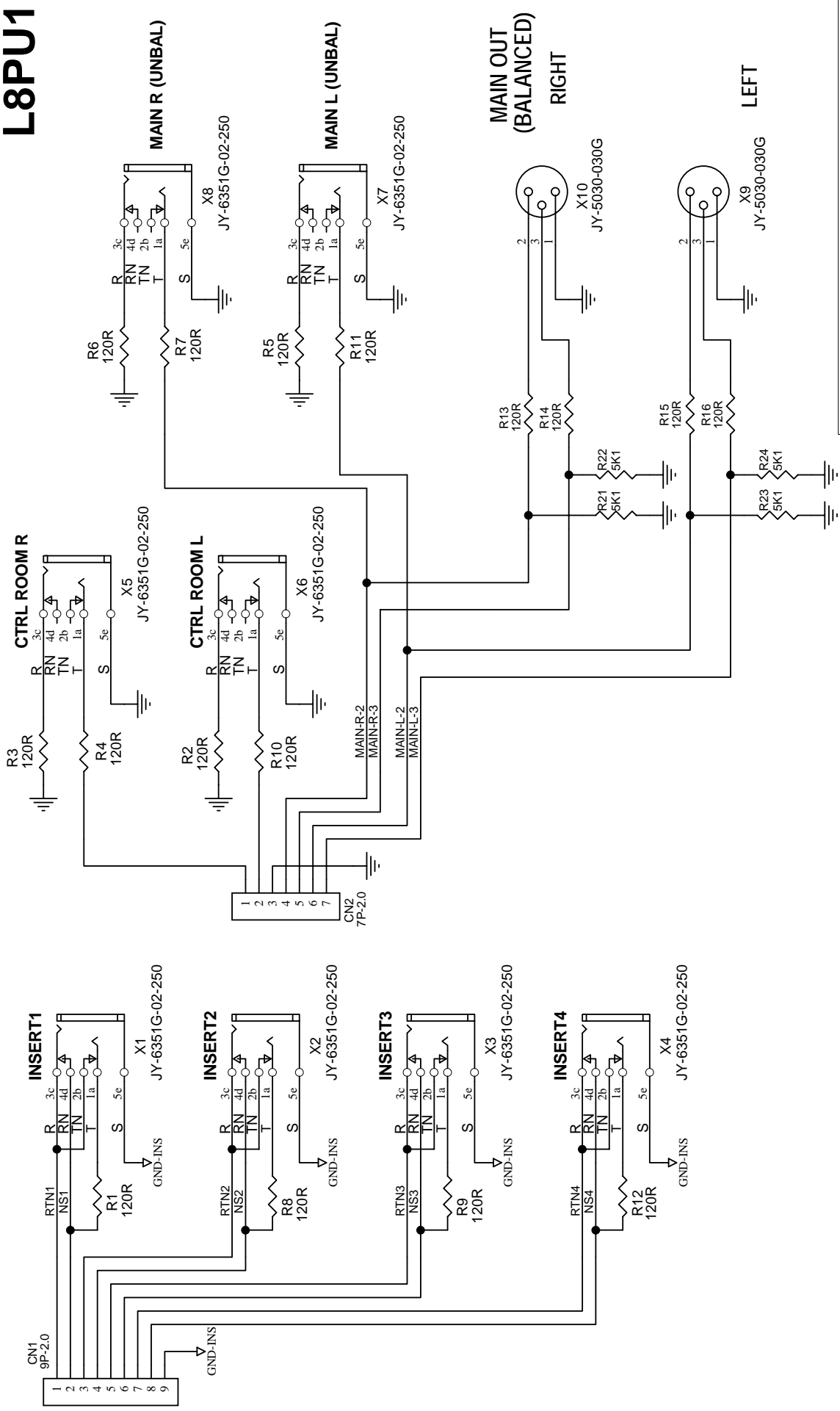
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File:	L8MNT.S03	Drawn By:	KEVIN LIN.		

# L8PU2

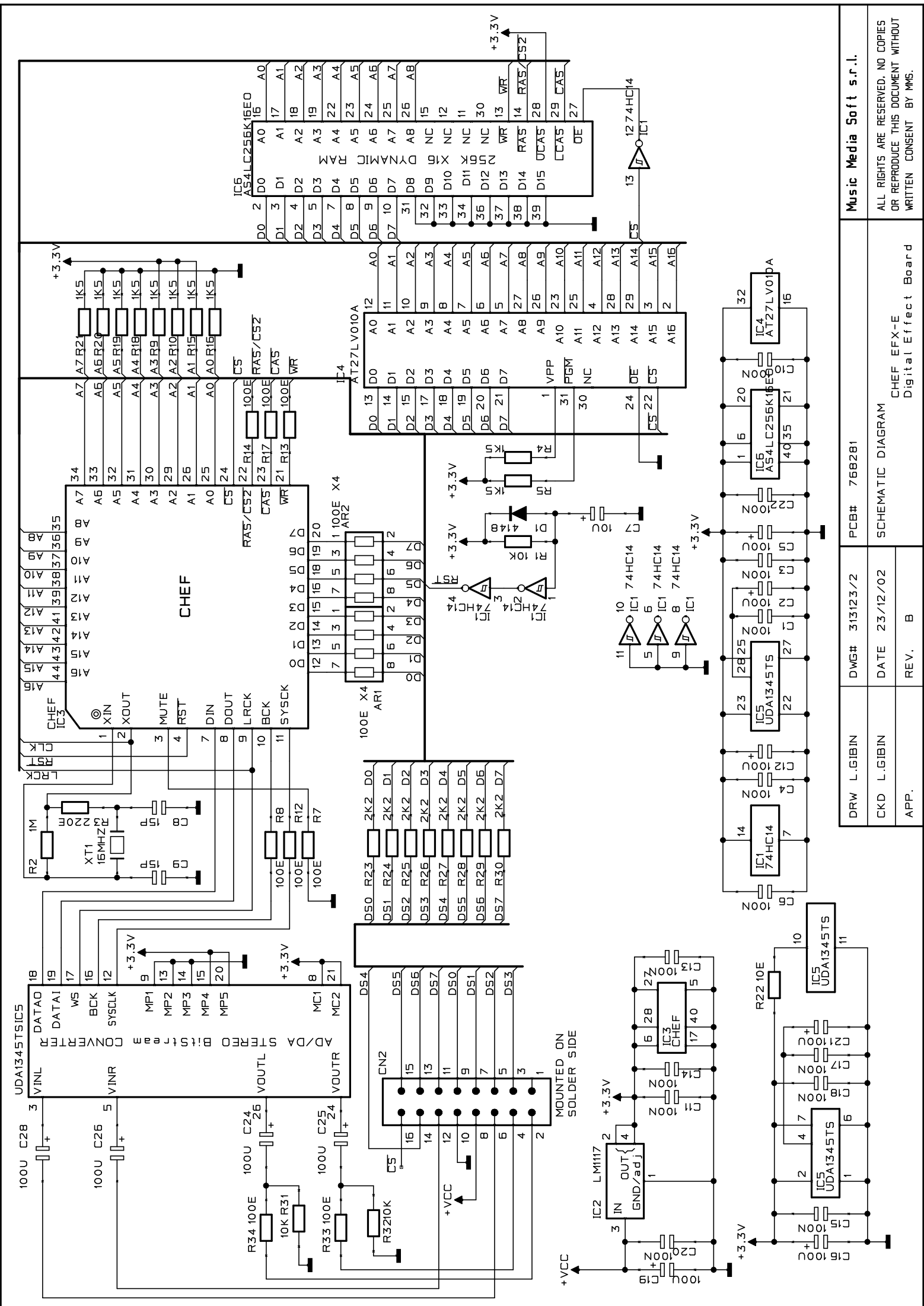


Titel	INPUT/OUTPUT STAGE	
Size	PCB# L8PU2.PCB	
A2(C)	Model No	Revision
	ALTO L-8	VER030120
Date	5-Oct-2003	Sheet 1 of 1
File	L8PU2.Sch	Drawn By KEVIN LIN

# L8PU1



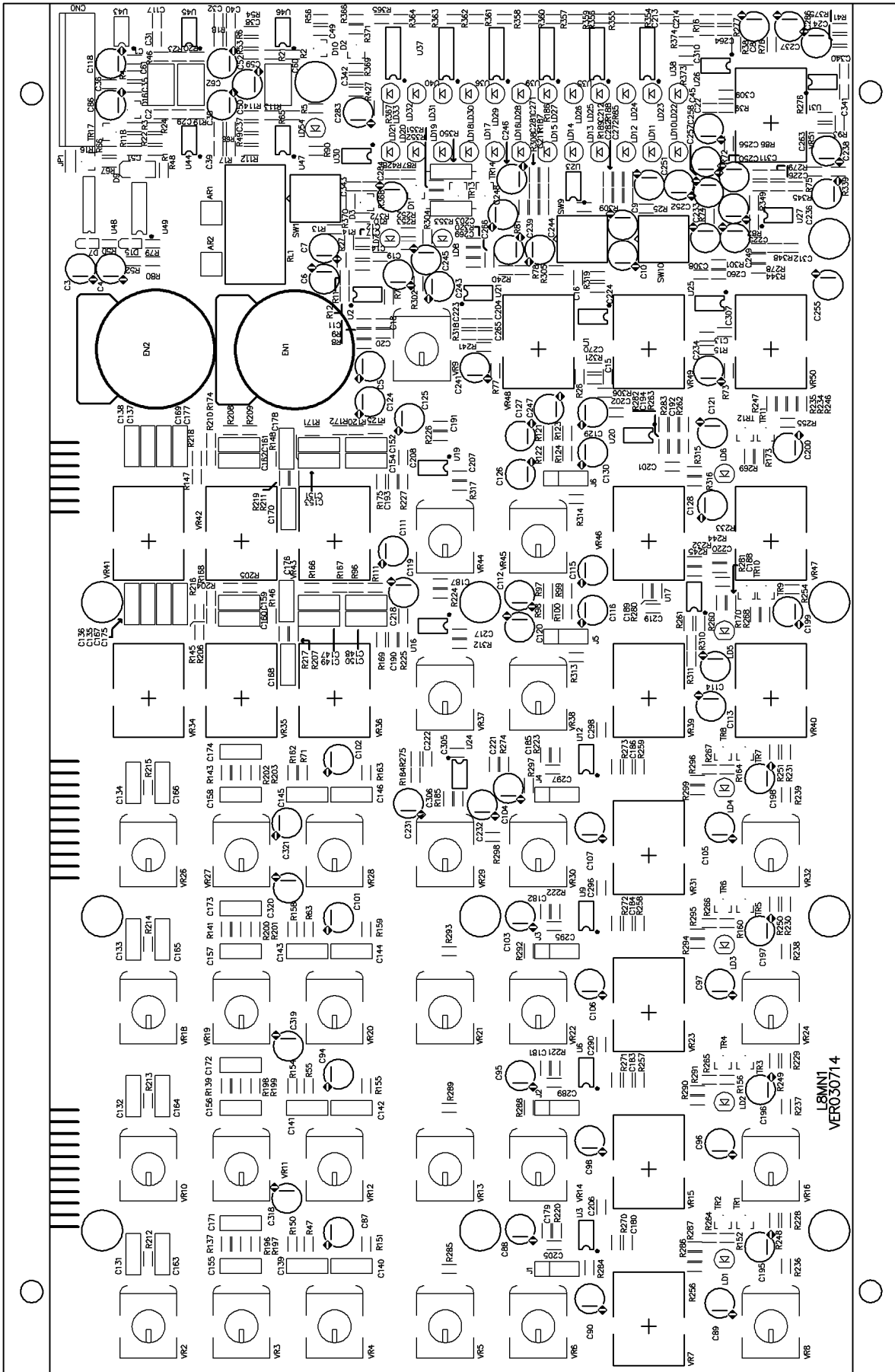
Title			
OUTPUT STAGE (INSERT & MAIN OUTPUT)			
PCB# L8PU1 PCB			
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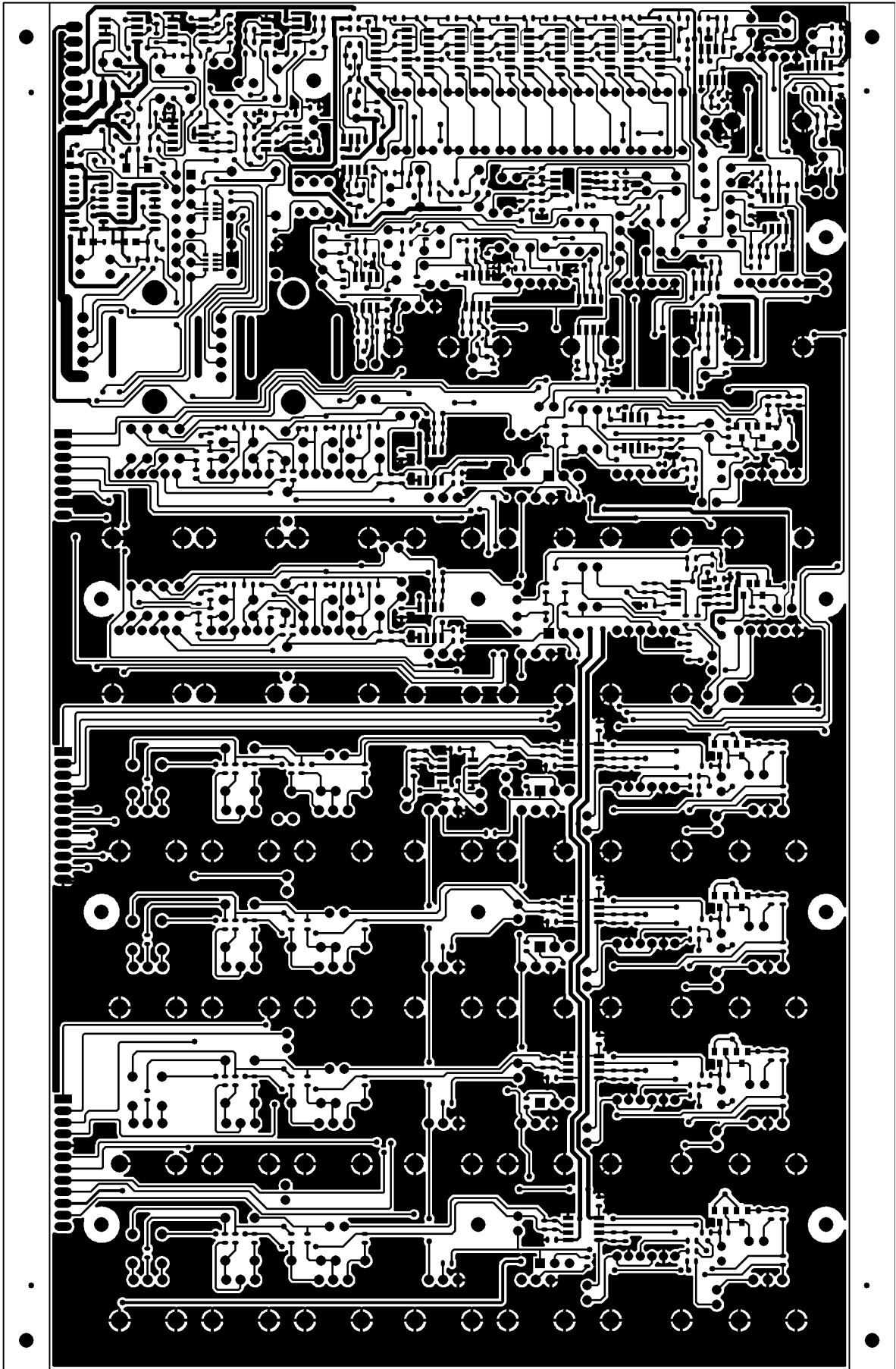
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 WRITTEN CONSENT BY MMS.

DRW L.GIBIN    DWG# 313123/2    PCB# 768281  
 CKD L.GIBIN    DATE 23/12/02    SCHEMATIC DIAGRAM  
 APP.    REV. B    CHEF EF-E  
 Digital Effect Board

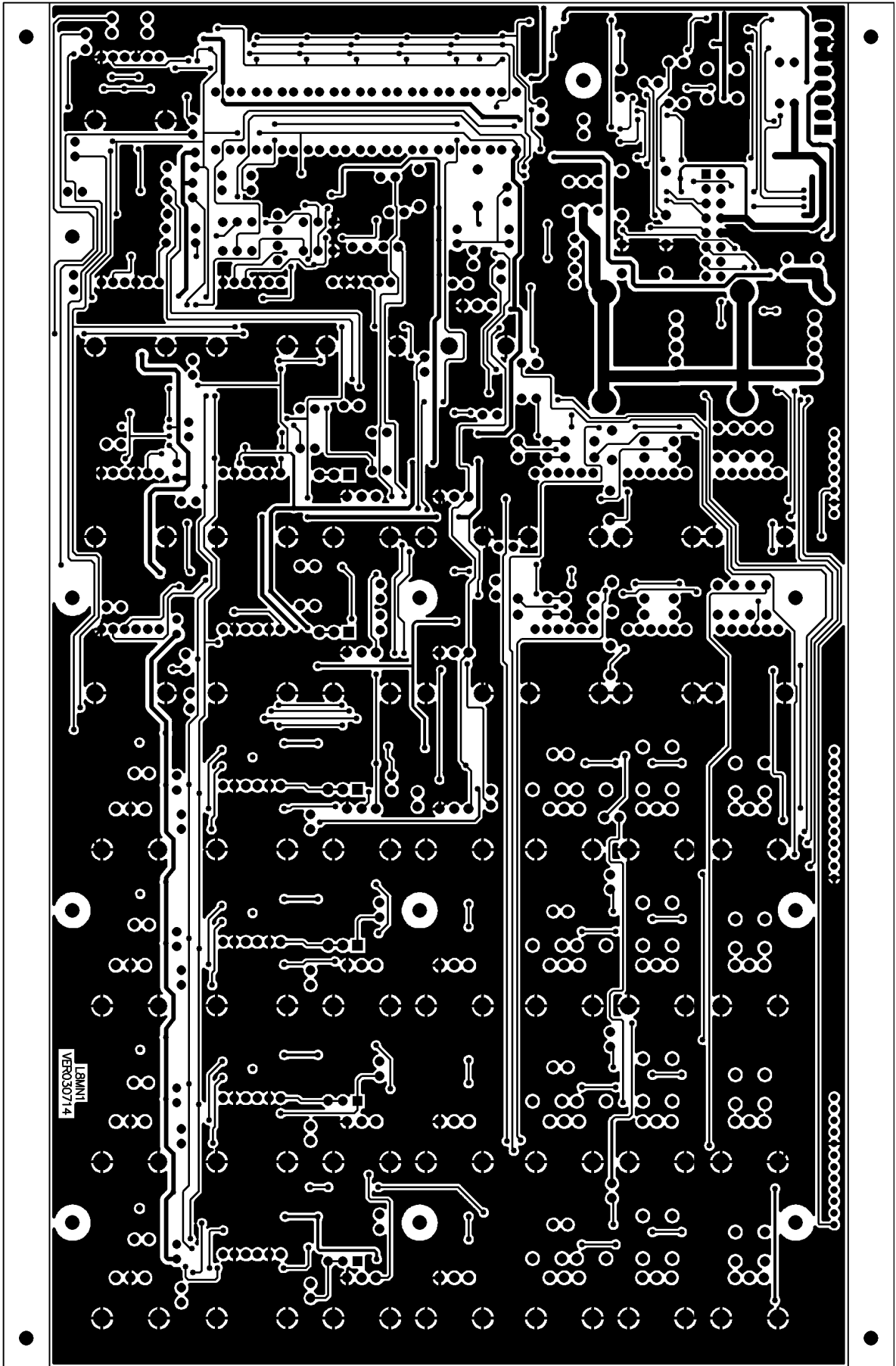
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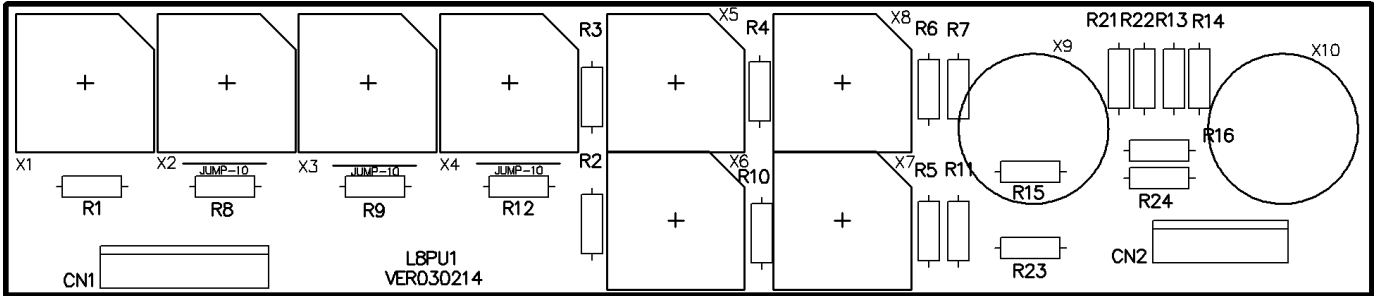
PCB : L8MN1 Top Overlay



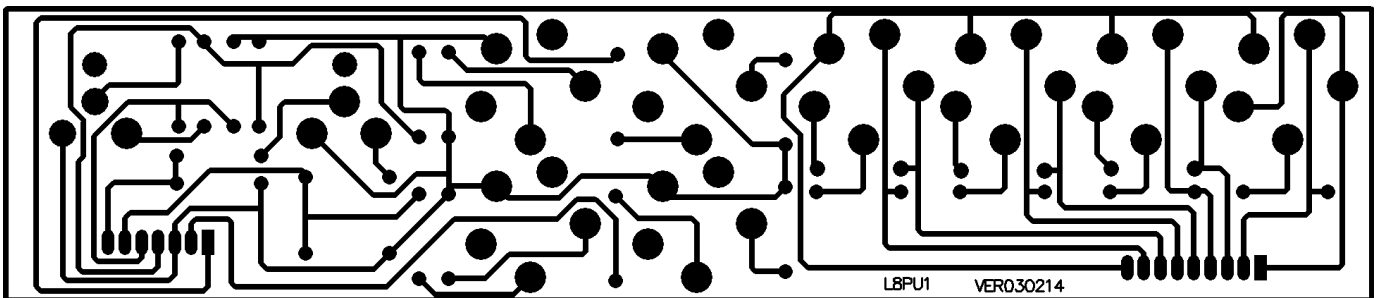
PCB : L8MN1 Top Layer



PCB : L8MN1 Bottom Layer

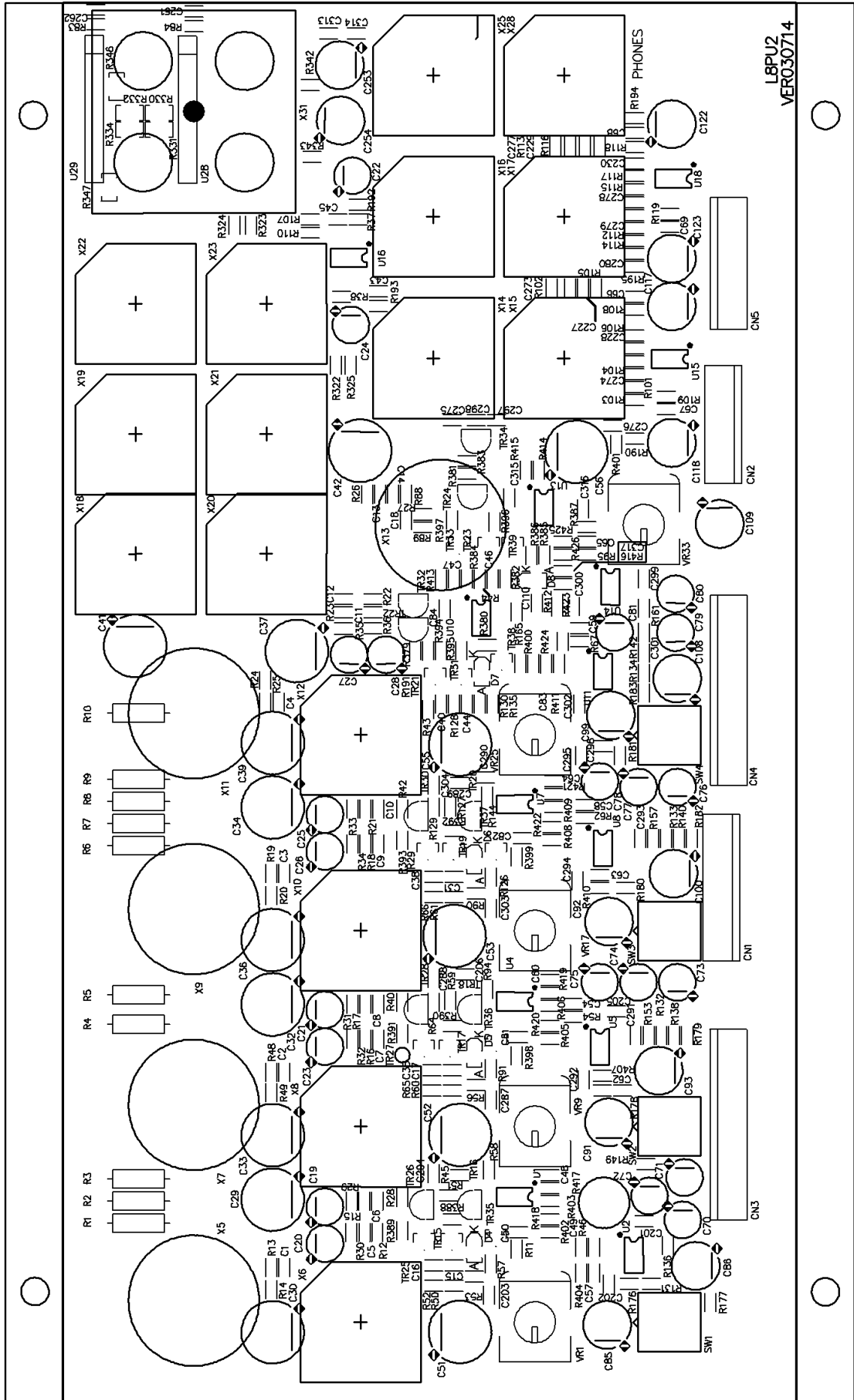


PCB : L8PU1 Top Overlay



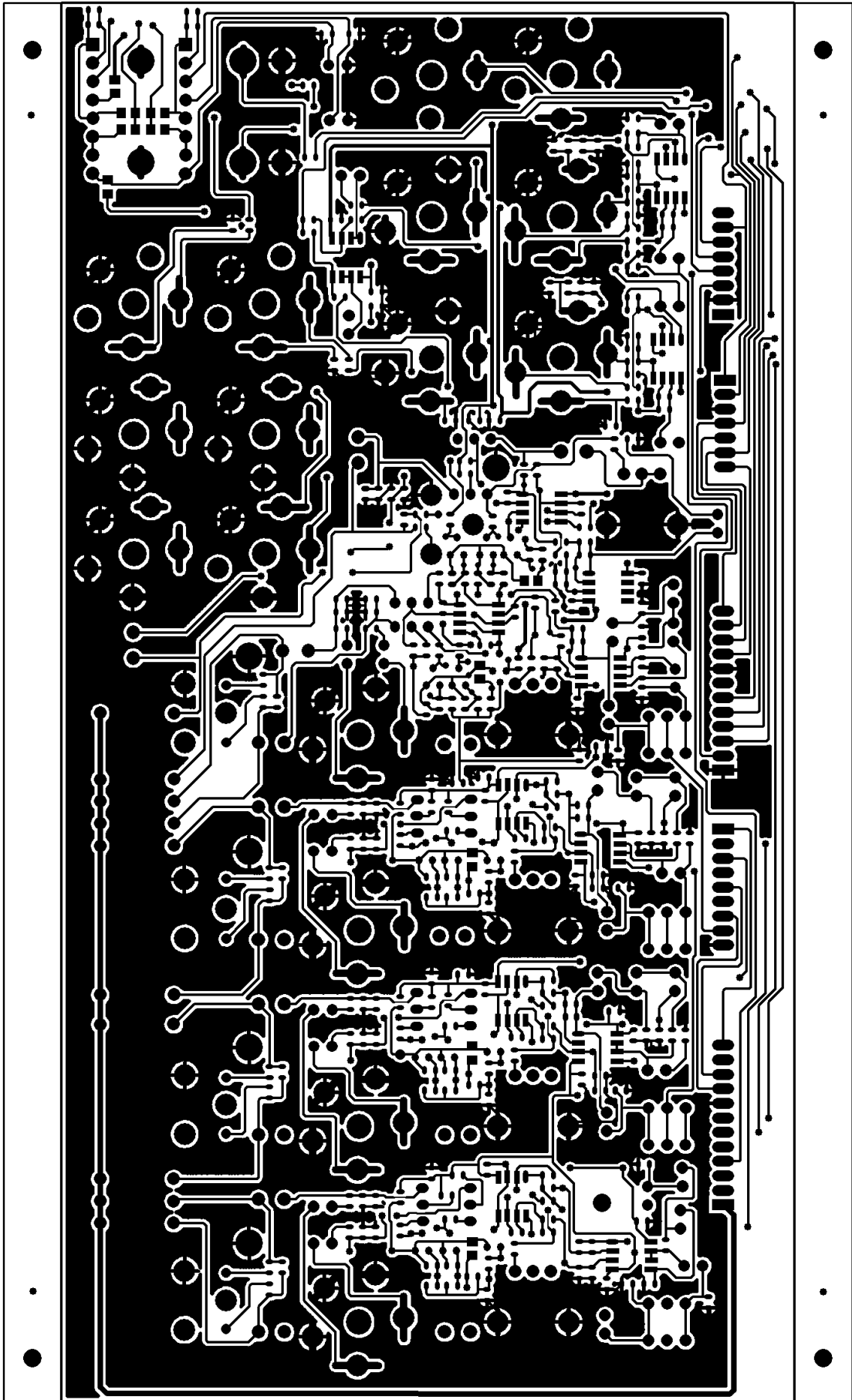
PCB : L8PU1 Bottom Layer



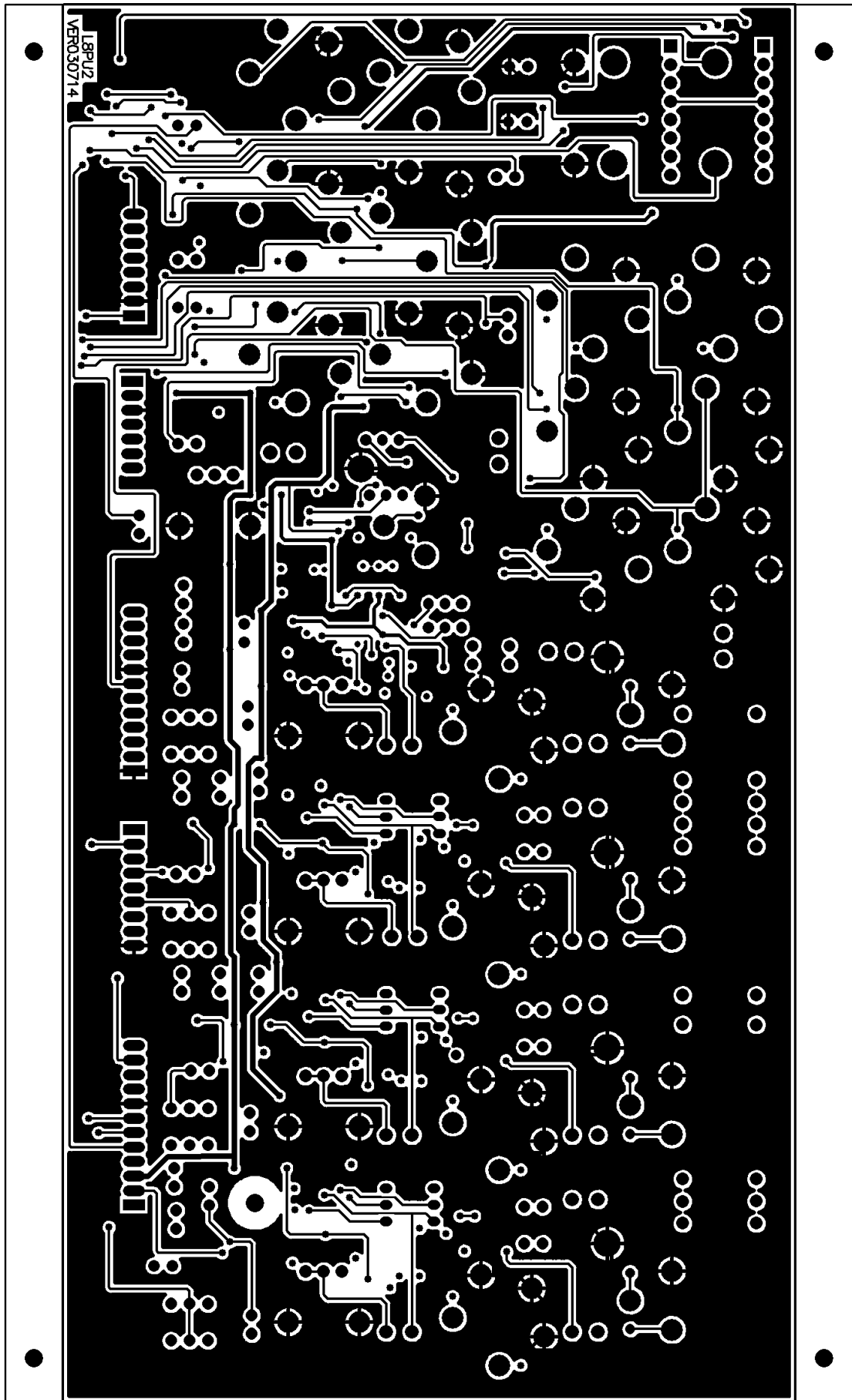


L8PU2  
VERO.30714

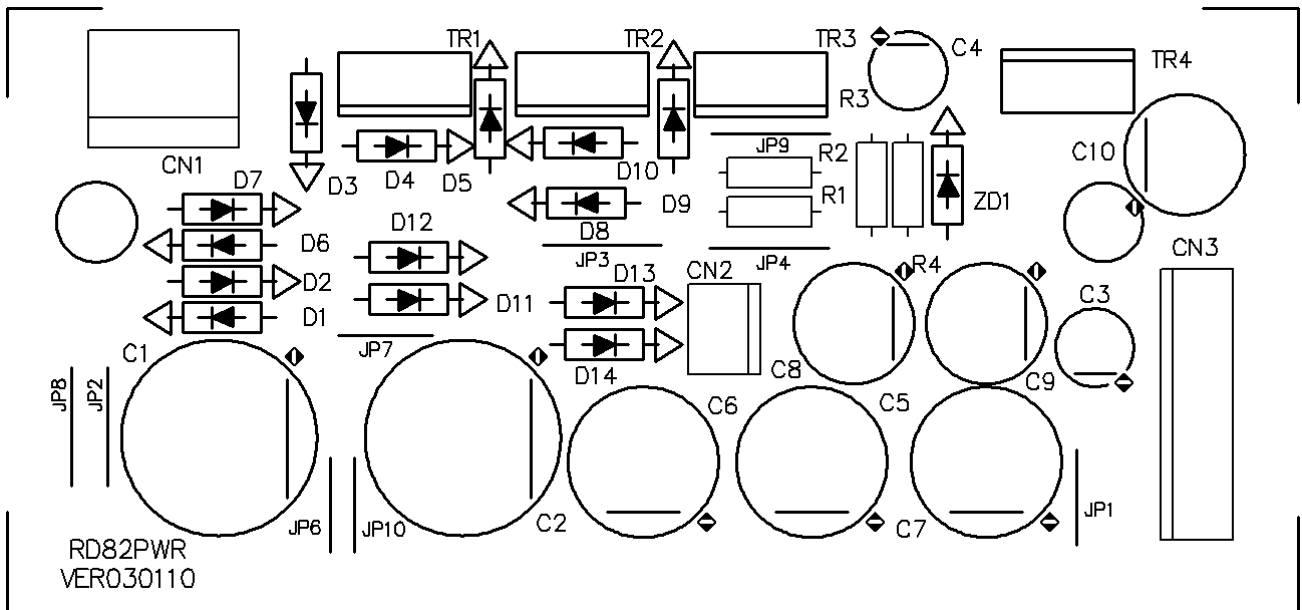
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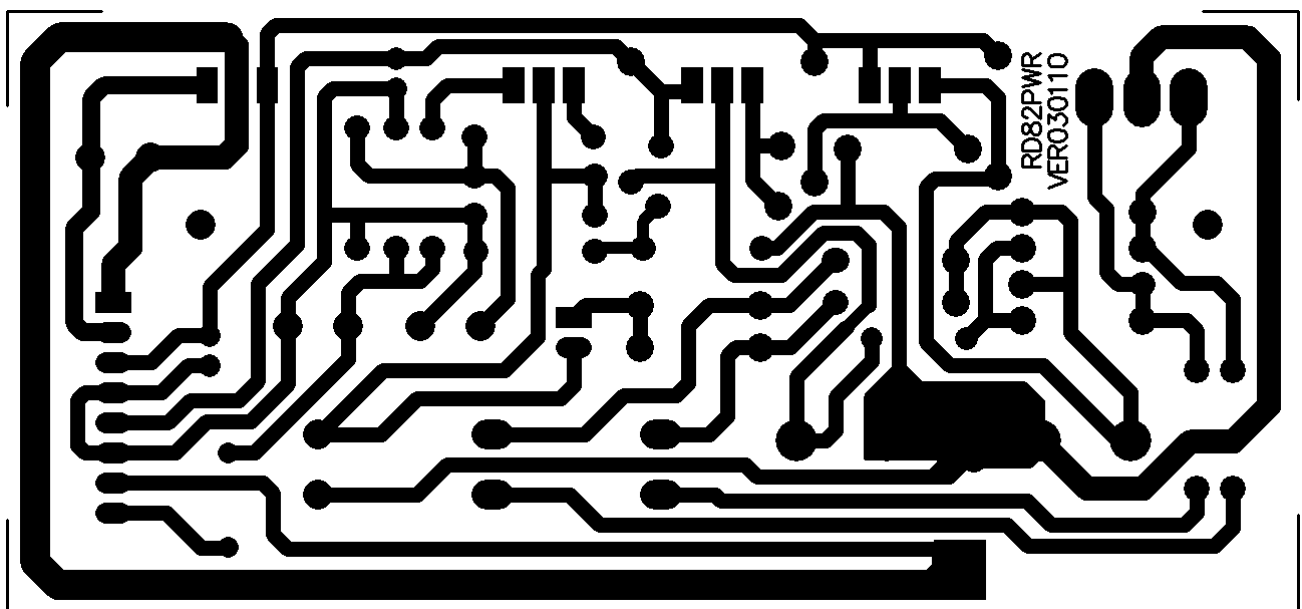
PCB : L8PU2 Top Layer



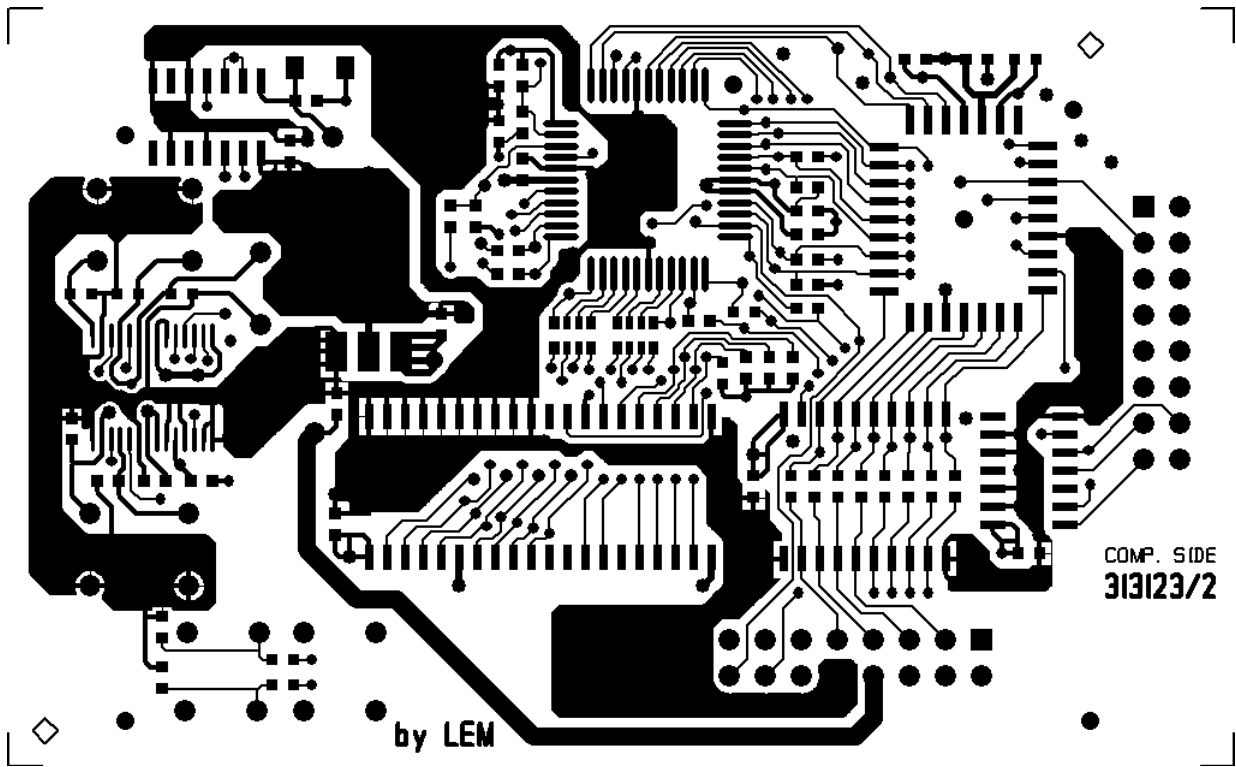
PCB : L8PU2 Bottom Layer



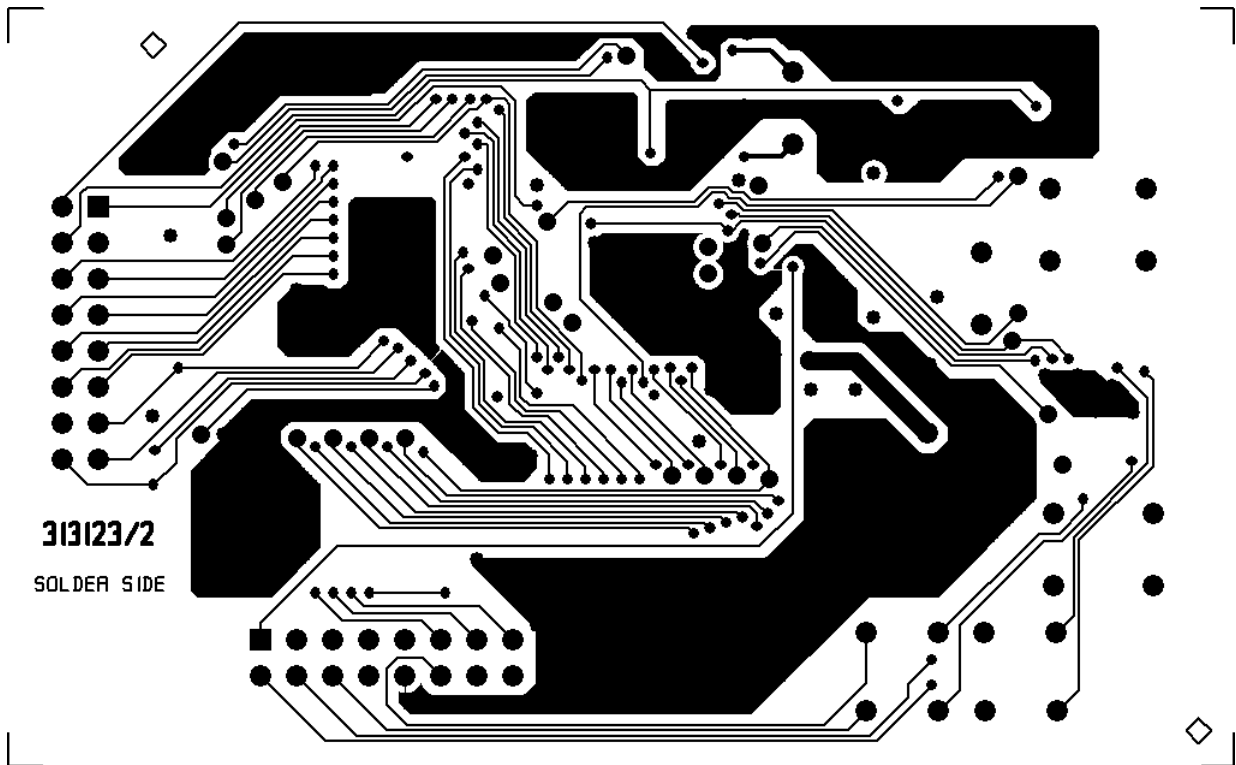
PCB : RD82PWR Top Overlay



PCB : RD82PWR Bottom Layer

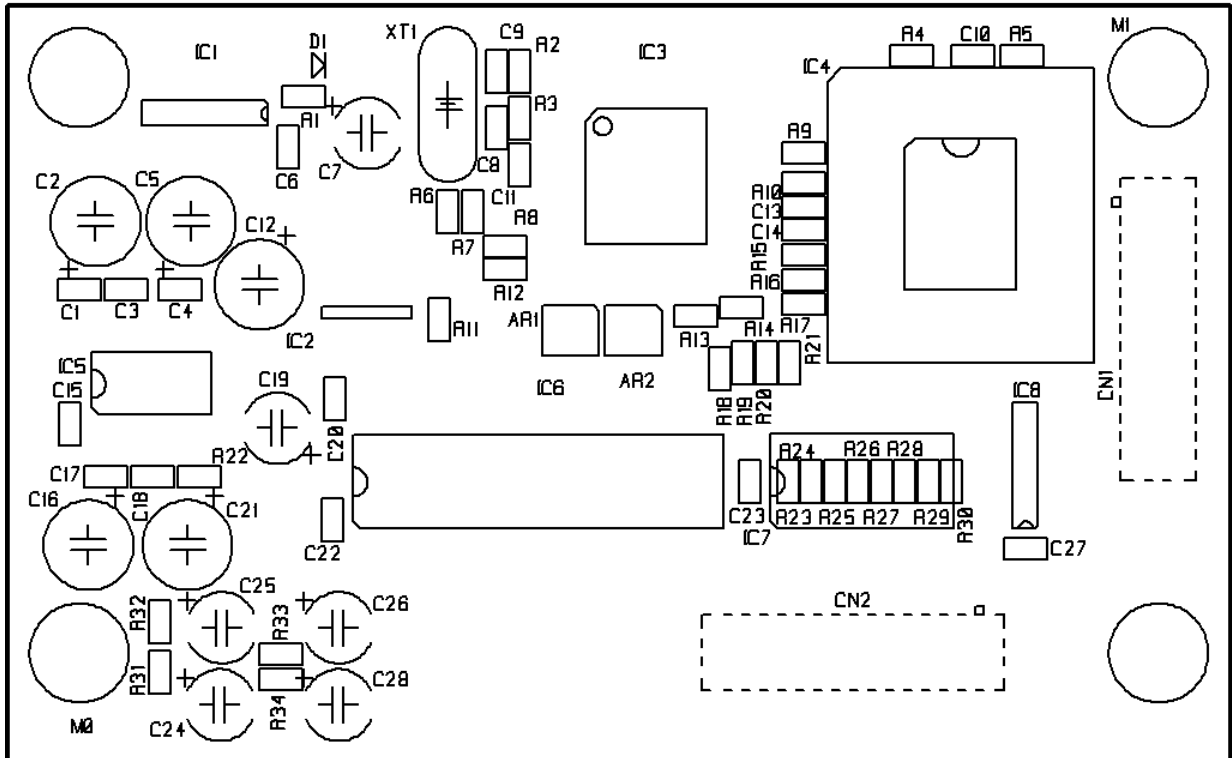


PCB : 313123/2 Top Layer



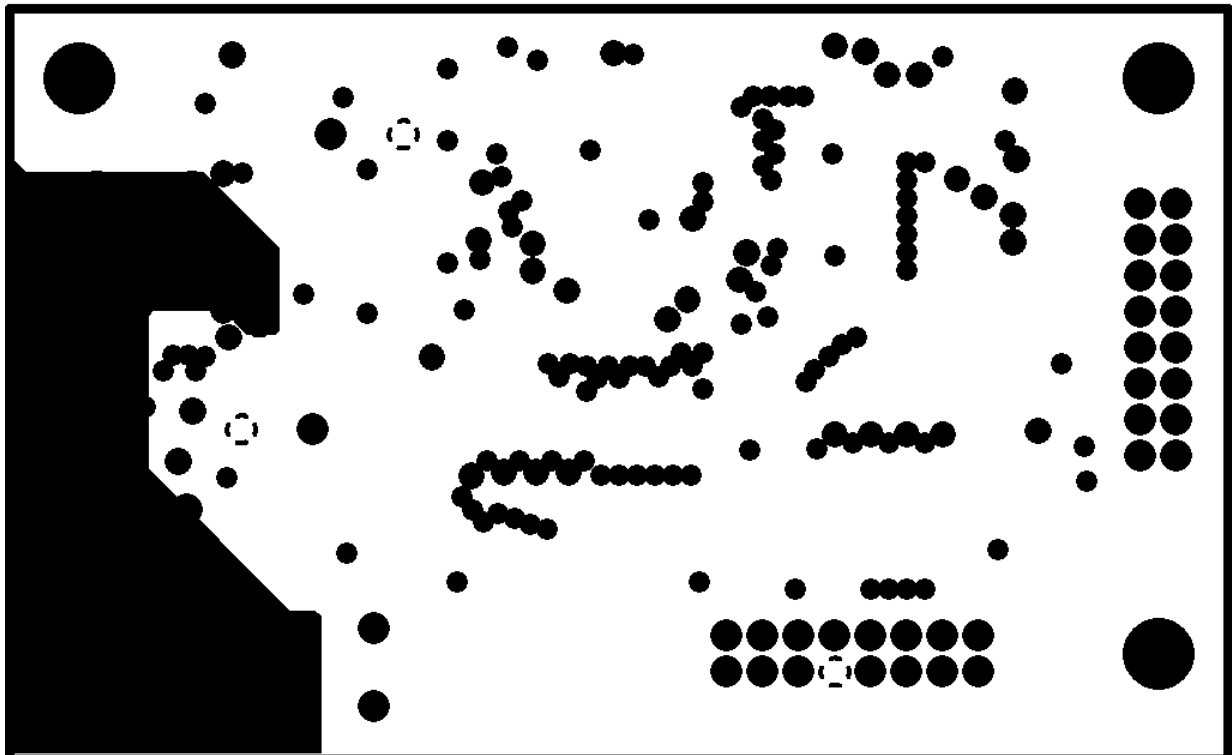
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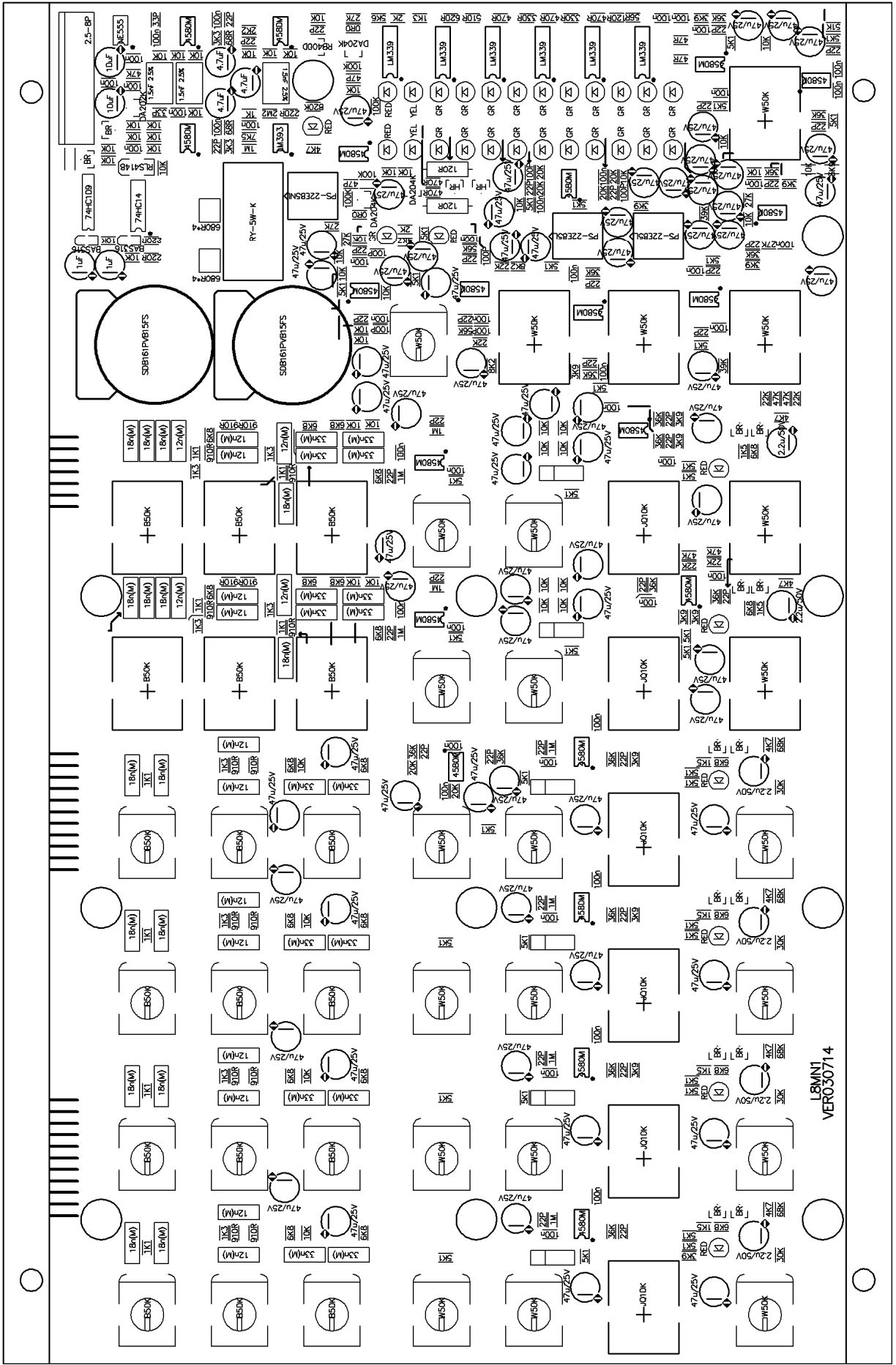
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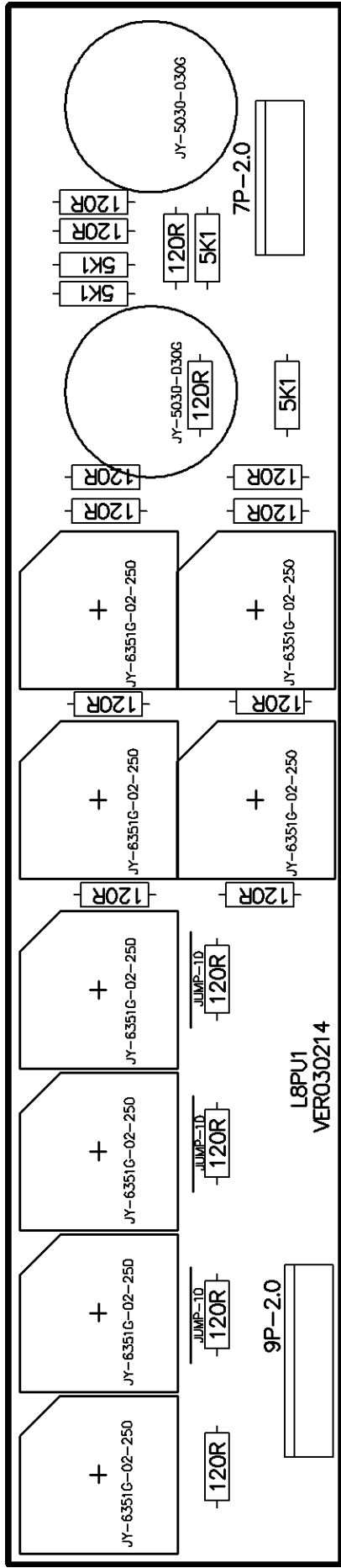
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313123/2 I\* INTERNAL LAYER GND

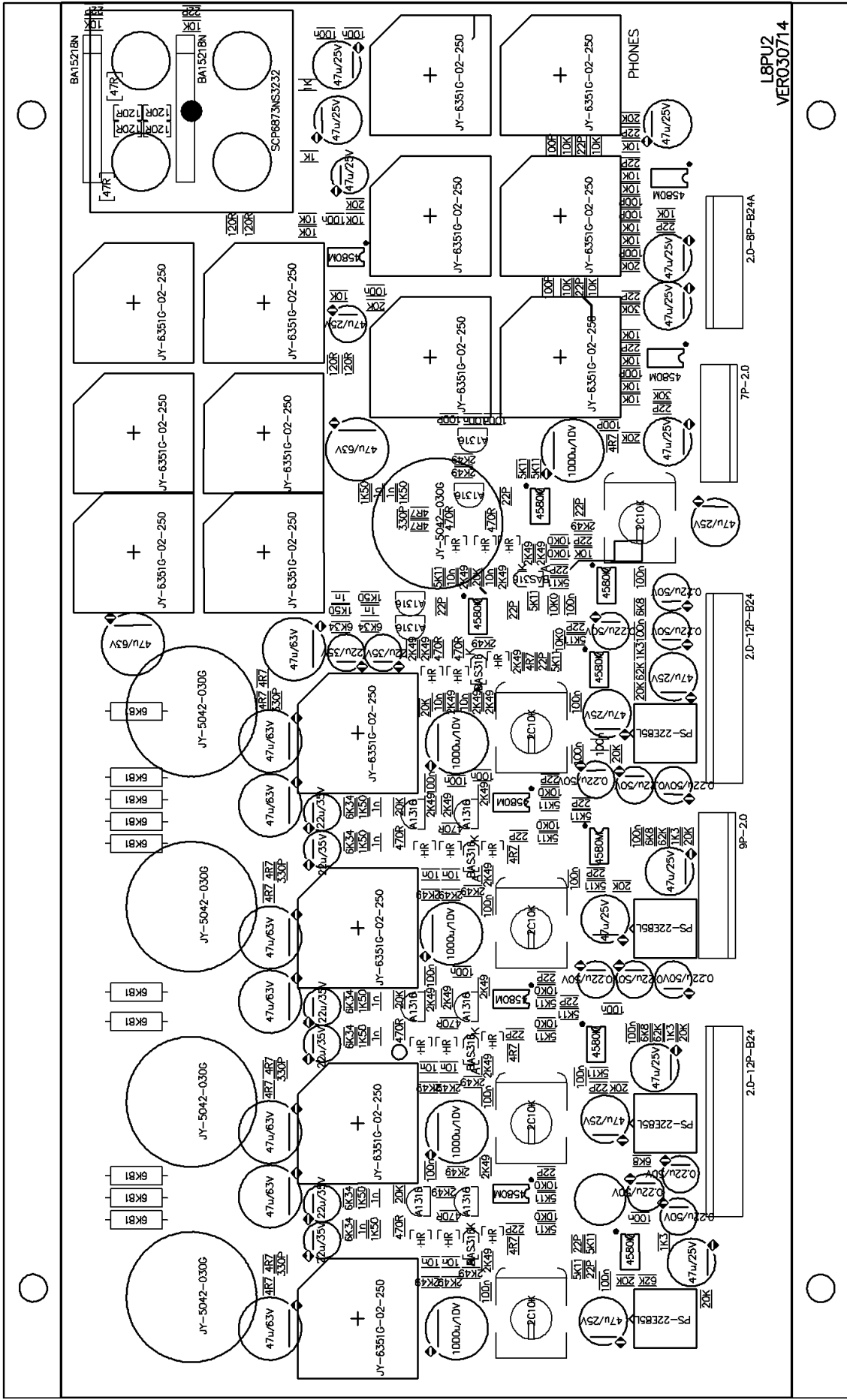




L8MN1  
VERO.30714







L8PU2  
VER030714

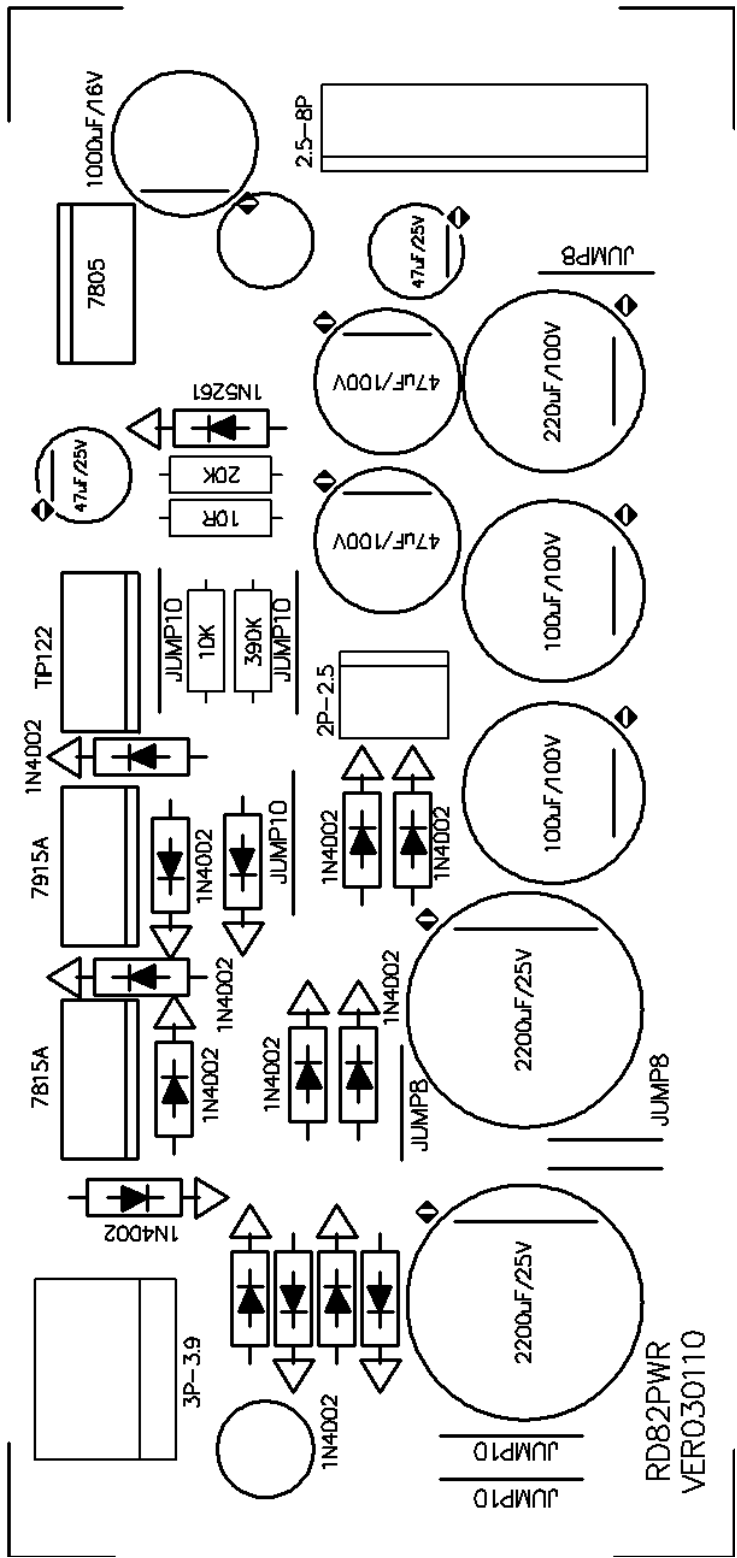
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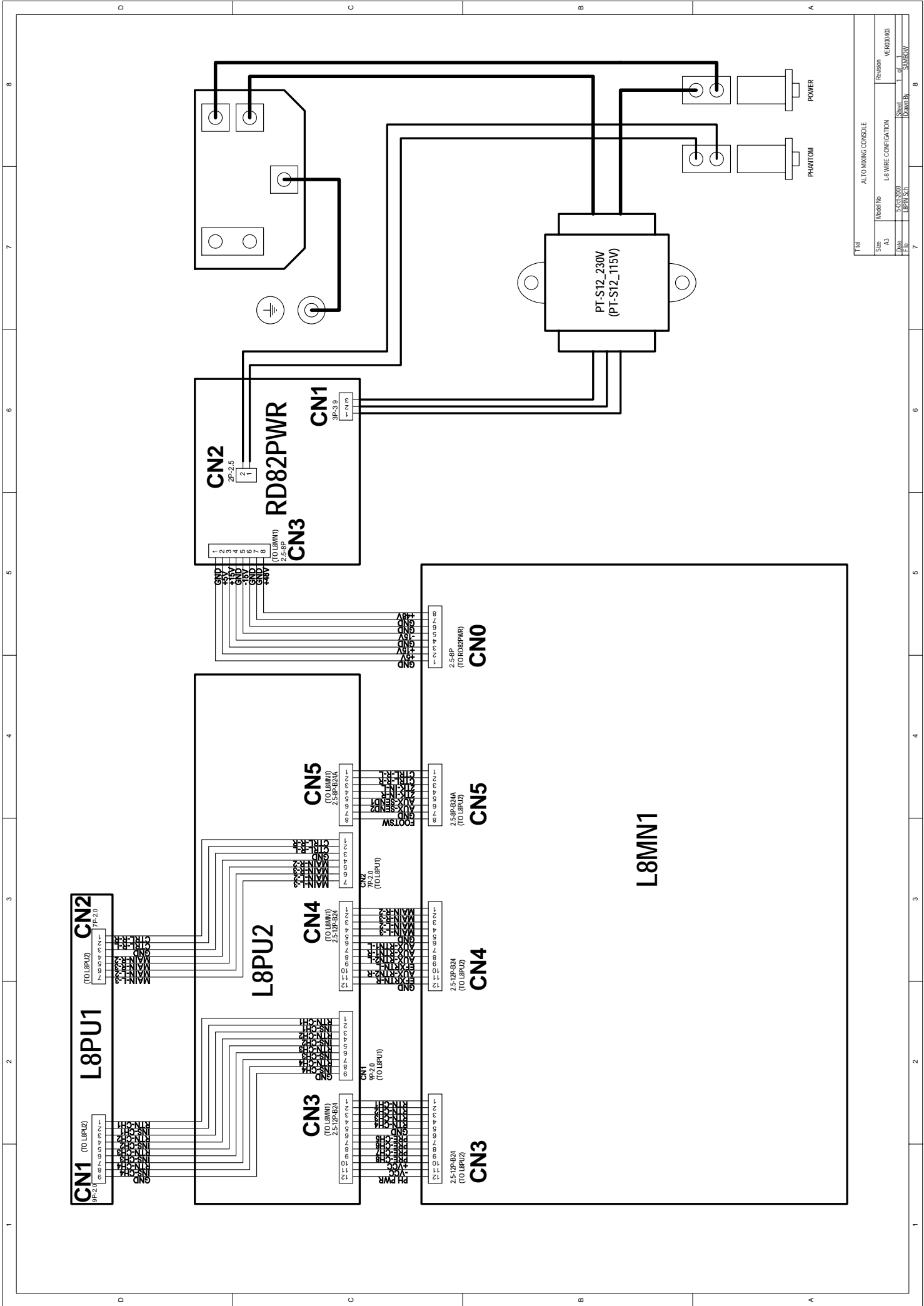
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9P-2.0

2.0-12P-B24





108 ALTO MIXING CONSOLE

Model No	L8 WIRE CONFIGURATION	Revision	VER03/03
Size	A3	Sheet	1 of 1
Date	15/05/2003	Scale	1:1
By	LIBRA S2B	Drawn By	SABREW

7 8

Multi-Level BOM Structure Listing

Report No.: IEB0\_P02  
 Prepared by JG970003[蔡忠憲]

Date 2003/10/05  
 Page No.: 1 / 19

Item No. PF01225  
 DESCRIPTION: L-8  
 L-8 ALTO 230V

Version

UNIT: PCS  
 Date: 2003/04/29

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer
					Attrition	Rate
0001-----	MA04065 panel			PCS	1.0000 1	2003/04/29 N
	L-8 ALTO				0.00 %	
0001-----	MA04066 panel			PCS	1.0000 1	2003/04/24 N
	L-8				0.00 %	
0001-----	MA04067 panel			PCS	1.0000 1	2003/04/24 N
	L-8				0.00 %	
0001-----	MJ01186 hot gradual zinc			PCS	1.0000 15	2003/04/24 N
	1.0t*2135*1220mm 20.45kg			KG	0.00 %	
0002-----	ME00097 screw			PCS	1.0000 1	2003/07/11 N
	M3*10*0.5PH				0.00 %	
0002-----	MB02799 rear board			PCS	1.0000 1	2003/04/29 N
	L8				0.00 %	
0001-----	MB02800 rear board			PCS	1.0000 1	2003/04/24 N
	L-8				0.00 %	
0001-----	MJ00058 iron board			PCS	1.0000 20	2003/04/24 N
	1*2135*1220 20.45kg			KG	0.00 %	
0002-----	ME00032 iron pillar			PCS	2.0000 1	2003/08/24 N
	hexagon6.35*M3*5.2				0.00 %	
0003-----	ME00004 screw			PCS	2.0000 1	2003/08/24 N
	M3*10*0.5PH				0.00 %	
0003-----	MJ01189 partitions			PCS	1.0000 1	2003/04/29 N
	L-8				0.00 %	
0001-----	MJ00061 Zn-plated board			PCS	1.0000 221	2003/04/24 N
	1*2135*1220 20.45kg			KG	0.00 %	
0002-----	ME00066 iron pillar			PCS	3.0000 1	2003/04/24 N
	M3*7				0.00 %	
0004-----	HI00026 power switch			PCS	1.0000 1	2003/04/29 N
	RA12KKATOF 2P				0.00 %	
0005-----	HI00171 power switch			PCS	1.0000 1	2003/04/29 N
	R612KKATOF1				0.00 %	
0006-----	HC00008 AC outlet			PCS	1.0000 1	2003/04/29 N
	3515 A TYPE(RF-2004-C-4.8)				0.00 %	
0007-----	HD00054 fuse			PCS	1.0000 1	2003/04/29 N
	250mA 250V 5.2*20mm CSA/S/UL/VDE				0.00 %	
0008-----	MG00304 copper pole			PCS	8.0000 1	2003/04/29 N
	M3*14*0.5PH				0.00 %	
0009-----	MG00363 bare			PCS	3.0000 1	2003/04/29 N
	M3*14*0.5PH				0.00 %	
0010-----	MG00305 copper pole			PCS	1.0000 1	2003/04/29 N
	M3*24*0.5PH				0.00 %	
0011-----	NI01862 key			PCS	4.0000 1	2003/04/29 N
	5.5*5.5*14.5				0.00 %	
0012-----	NI01863 key			PCS	7.0000 1	2003/04/29 N
	5.5*W10*7.5				0.00 %	

Multi-Level BOM Structure Listing

Report No.: IEB0\_P02  
 Prepared by JG970003[蔡忠憲]

Date 2003/10/05  
 Page No.: 2 / 19

Item No. PF01225 Version  
 DESCRIPTION: L-8  
 L-8 ALTO 230V

UNIT: PCS  
 Date: 2003/04/29

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer
					Attrition	Rate
0013-----	NI02083 knob 10.5*18			PCS	18.0000 1 0.00 %	2003/04/29 N
0014-----	NI02081 knob 10.5*18			PCS	12.0000 1 0.00 %	2003/04/29 N
0015-----	NI02082 knob 10.5*18			PCS	6.0000 1 0.00 %	2003/04/29 N
0016-----	NI02084 knob 10.5*18			PCS	5.0000 1 0.00 %	2003/04/29 N
0017-----	NI02386 konb 14*13mm			PCS	2.0000 1 0.00 %	2003/04/29 N
0018-----	MG00041 screw M3*6			PCS	37.0000 1 0.00 %	2003/06/24 N
0019-----	MG00042 screw M3*10			PCS	2.0000 1 0.00 %	2003/04/29 N
0020-----	MG00061 screw M3*10			PCS	15.0000 1 0.00 %	2003/04/29 N
0021-----	MG00102 screw M4*8			PCS	2.0000 1 0.00 %	2003/04/29 N
0022-----	MF00038 washer 4* 7*1t			PCS	1.0000 1 0.00 %	2003/04/29 N
0023-----	MF00048 washer 4* 8*0.5t			PCS	1.0000 1 0.00 %	2003/04/29 N
0024-----	ME00060 socket nut JY-6351G-02-250			PCS	24.0000 1 0.00 %	2003/04/29 N
0025-----	MF00061 washer JY-6351G-02-250			PCS	24.0000 1 0.00 %	2003/04/29 N
0026-----	HA01174 single terminal wiring CF:W146 80 green/yellow			PCS	1.0000 1 0.00 %	2003/04/29 N
0027-----	HA01835 P.V.C single wave wired UL1617 80 brown			PCS	1.0000 1 0.00 %	2003/04/29 N
0028-----	HA01392 row-wire connector wiring 2P 150			PCS	1.0000 1 0.00 %	2003/04/29 N
0029-----	HA02355 wire 8P-8P 200mm UL1007 22AWG			PCS	1.0000 1 0.00 %	2003/04/29 N
0030-----	HA00861 power cord Europe 3P LT-312+LT-501			PCS	1.0000 1 0.00 %	2003/04/29 N
0031-----	NI00218 cable tie-black ALT-102SB			PCS	2.0000 1 0.00 %	2003/04/29 N
0032-----	@NI00252 sleeve 4*20mm			PCS	7.0000 1 0.00 %	2003/04/29 N
0001-----	NI00248 sleeve 4*1000mm			M	20.0000 1000 0.00 %	2002/06/04 N
0033-----	NI00501 foot cushion 12.7*9*3t(SF-004)			PCS	4.0000 1 0.00 %	2003/04/29 N

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 Prepared by JG970003[蔡忠憲]

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Item No. PF01225 Version  
 DESCRIPTION: L-8  
 L-8 ALTO 230V

UNIT: PCS  
 Date: 2003/04/29

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer
					Attrition	Rate
0034-----	NA00123 PE bag 0.04t*580*300mm			PCS KG	1.0000 1 0.00 %	2003/04/29 N
0035-----	HJ00006 desiccant 30g			PCS	1.0000 1 0.00 %	2003/04/29 N
0036-----	TC00160 transformer PT-DJM3_230V			PCS	1.0000 1 0.00 %	2003/04/29 N
0037-----	MI01629 separating shade S-12			PCS	1.0000 1 0.00 %	2003/04/29 N
0001-----	MJ00090 iron board 0.3*200*3000 1.431kg			PCS KG	1.0000 119 0.00 %	2003/02/08 N
0038-----	MJ01145 heat sink RD82			PCS	1.0000 1 0.00 %	2003/04/29 N
0001-----	MJ01142 radiator RD82			PCS	1.0000 1 0.00 %	2002/11/25 N
0001-----	MJ00070 AL board 4*2440*1220 32.40kg			PCS KG	1.0000 880 0.00 %	2003/02/22 N
0039-----	NI02249 caushion TW-1(TO-220)			PCS	4.0000 1 0.00 %	2003/04/29 N
0040-----	NC00022 insulation 0.3t*18*45mm S-8			PCS	1.0000 1 0.00 %	2003/04/29 N
0041-----	NC00005 silicone insulator TO-220 square type			PCS	1.0000 1 0.00 %	2003/04/29 N
0042-----	MG00162 screw M3*8			PCS	4.0000 1 0.00 %	2003/04/29 N
0043-----	ME00015 colour nut 3m/m			PCS	3.0000 1 0.00 %	2003/07/28 N
0044-----	MF00037 washer 3* 5*1t			PCS	6.0000 1 0.00 %	2003/04/29 N
0045-----	MF00030 washer 3* 8*0.8t			PCS	2.0000 1 0.00 %	2003/04/29 N
0046-----	NF00061 assurance card ALTO			PCS	1.0000 1 0.00 %	2003/04/29 N
0047-----	NE05004 label ALTO			PCS	4.0000 1 0.00 %	2003/04/29 N
0048-----	NI02620 insulation board 1*86.5*53 L-8			PCS	1.0000 1 0.00 %	2003/04/29 N
0049-----	NI02633 knob 10.5*18			PCS	3.0000 1 0.00 %	2003/04/29 N
0050-----	NI00826 knob 12*18 double color			PCS	8.0000 1 0.00 %	2003/04/29 N
0051-----	NF01355 instruction L-8 ALTO			PCS	1.0000 1 0.00 %	2003/04/29 N
0001-----	NH00149 paper 889*640mm			張 令	2.0000 1 0.00 %	2003/09/09 N

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Item No. PF01225 Version  
 DESCRIPTION: L-8  
 L-8 ALTO 230V

UNIT: PCS  
 Date: 2003/04/29

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate @:Phantom Layer	Attrition Rate
0052-----	NB02249 colour box L-8 ALTO			PCS	1.0000 1	2003/04/29 N
0053-----	NE11348 label L-8 ALTO			PCS	4.0000 1	2003/04/29 N
0001-----	NH00012 bond paper 0.04*1M			M	1.0000 80	2003/05/31 N
0002-----	NI00014 membrane 0.035*1M			M	1.0000 80	2003/05/31 N
0054-----	NI01272 handle for wireless coloful box			PCS	1.0000 1	2003/04/29 N
0055-----	NB01568 barrier S8			PCS	1.0000 1	2003/04/29 N
0056-----	NB01625 barrier S8			PCS	1.0000 1	2003/04/29 N
0057-----	NB02354 box L-8			PCS	1.0000 4	2003/05/30 N
0058-----	HK03835 K-PC board P-L8MN1-DIP			PCS	1.0000 1	2003/04/29 N
0001-----	RA00185 fixed resistor 1/4W 120 M type R350,R353			PCS	2.0000 1	2003/04/29 N
0002-----	CB00009 electrolytic capacitor 1uF/50V 4*7mm C3,C4			PCS	2.0000 1	2003/04/29 N
0003-----	CB00011 electrolytic capacitor 2.2uF/50V 5*11mm C195,C196,C197,C198,C199,C200			PCS	6.0000 1	2003/04/29 N
0004-----	CB00018 electrolytic capacitor 4.7uF/25V 4*7mm C50,C52,C59			PCS	3.0000 1	2003/04/29 N
0005-----	CB00024 electrolytic capacitor 10uF/16V 4*7mm C86,C118			PCS	2.0000 1	2003/04/29 N
0006-----	CB00175 electrolytic capacitor 47uF/25V SLL 5*11mm C5,C6,C7,C8,C9,C10,C19,C45,C87,C88,C89,C90,C94,C95, C96,C97,C98,C101,C102,C103,C104,C105,C106,C107,C111, C112,C113,C114,C115,C116,C119,C120,C121,C124,C125, C126,C127,C128,C129,C130,C231,C232,C233,C234,C236, C237,C238,C239,C241,C243,C244,C245,C246,C247,C248, C249,C250,C251,C252,C255,C256,C257,C258,C283,C284, C286,C318,C319,C320,C321			PCS	70.0000 1	2003/06/13 N
0007-----	CF00054 metal-film capacitor MSC 0.012uF/63V ±5% CASE01 C155,C156,C157,C158,C159,C160,C161,C162,C171,C172,			PCS	16.0000 1	2003/04/29 N

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 Prepared by JG970003[蔡忠憲]

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Item No. PF01225 Version  
 DESCRIPTION: L-8  
 L-8 ALTO 230V

UNIT: PCS  
 Date: 2003/04/29

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer Attrition Rate
	C173, C174, C175, C176, C177, C178					
0008-----	CF00021 metal-film capacitor MSC 0.018uF/63V 5% CASE01 C131, C132, C133, C134, C135, C136, C137, C138, C163, C164, C165, C166, C167, C168, C169, C170			PCS	16.0000 1 0.00 %	2003/04/29 N
0009-----	CF00023 metal-film capacitor MSC 0.033uF/63V 5% CASE01 C139, C140, C141, C142, C143, C144, C145, C146, C147, C148, C149, C150, C151, C152, C153, C154			PCS	16.0000 1 0.00 %	2003/04/29 N
0010-----	CF00070 metal-film capacitor FKP 0.0015uF/63V 2.5% (PFR5 152H63J11L4) C60, C61, C62			PCS	3.0000 1 0.00 %	2003/04/29 N
0011-----	HC00261 row-wire header 12P 2.0mm 180° CN3, CN4			PCS	2.0000 1 0.00 %	2003/06/24 N
0012-----	HC00259 row-wire header 8P 2.0mm 180° CN5			PCS	1.0000 1 0.00 %	2003/06/24 N
0013-----	HC00072 row-wire header 8P 2.5mm 90° CNO			PCS	1.0000 1 0.00 %	2003/04/29 N
0014-----	HC00511 row-pin header(single)#2804 2.54 180° 2*8P(gold-plated) 5.7mm CN6			PCS	1.0000 1 0.00 %	2003/04/29 N
0015-----	HI00162 push-button switch 2 paragraphs 6p PS-22E8552L SW9, SW10			PCS	2.0000 1 0.00 %	2003/04/29 N
0016-----	HI00177 push-button switch 2段 6P PS-22E8552N(3.3*3.3)NO LOCK SW1			PCS	1.0000 1 0.00 %	2003/04/29 N
0017-----	SA00052 L.E.D high intensity 3m/m round(green)long foot 26 LD7, LD10, LD11, LD12, LD13, LD14, LD15, LD16, LD17, LD18, LD19, LD22, LD23, LD24, LD25, LD26, LD27, LD28, LD29, LD30, LD31			PCS	21.0000 1 0.00 %	2003/04/29 N
0018-----	SA00053 L.E.D high intensity 3m/m round(red)long foot 26mm LD1, LD2, LD3, LD4, LD5, LD6, LD8, LD21, LD33, LD54			PCS	10.0000 1 0.00 %	2003/04/29 N
0019-----	SA00054 L.E.D high intensity 3m/m round(yellow)long foot 26 LD20, LD32			PCS	2.0000 1 0.00 %	2003/04/29 N



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Item No. PF01225  
 DESCRIPTION: L-8  
 L-8 ALTO 230V

Version

UNIT: PCS  
 Date: 2003/04/29

Version	Item No	Loss %	Ver.	Unit	Cardinal Usage Rate	Effective Date @:Phantom Layer Attrition Rate
0020-----	NI01782 LED spacer support LEDS-11 11mm			PCS	33.0000 1	2003/04/29 N
0021-----	RC00259 potentiometer J/Q10K RV112BC-40-30A-J/Q10K-OC VR7, VR15, VR23, VR31, VR39, VR46			PCS	6.0000 1	2003/04/29 N
0022-----	RC00235 potentiometer W50K RV09BC-40-30F-W50K-OC VR5, VR6, VR8, VR9, VR13, VR14, VR16, VR21, VR22, VR24, VR29, VR30, VR32, VR37, VR38, VR44, VR45			PCS	17.0000 1	2003/04/29 N
0023-----	RC00237 potentiometer W50K RV112BC-40-30A-W50K-OC VR40, VR47, VR48, VR49, VR50, VR51			PCS	6.0000 1	2003/04/29 N
0024-----	RC00233 potentiometer B50K RV09BC-40-30F-B50K-OC VR2, VR3, VR4, VR10, VR11, VR12, VR18, VR19, VR20, VR26, VR27, VR28			PCS	12.0000 1	2003/04/29 N
0025-----	RC00236 potentiometer B50K RV112BC-40-30A-B50K-OC VR34, VR35, VR36, VR41, VR42, VR43			PCS	6.0000 1	2003/04/29 N
0026-----	HI00161 relay RY-5W-K, 5V RL1			PCS	1.0000 1	2003/04/29 N
0027-----	HI00195 switch SDB161PVB15.5F-1-4-16-16PC EN1, EN2			PCS	2.0000 1	2003/04/29 N
0028-----	HK03834 K-PC board P-L8MN1-SMD			PCS	1.0000 1	2003/04/29 N
0001-----	HB00917 pc board L8MN1_VER030714			PCS	1.0000 1	2003/04/29 N
0002-----	RD00059 SMD fixed resistor 1/10W 0.0 ±5% 0603 R371, R372			PCS	2.0000 1	2003/04/29 N
0003-----	RD00065 SMD fixed resistor 1/10W 47 ±5% 0603 R373, R374			PCS	2.0000 1	2003/04/29 N
0004-----	RD00346 SMD fixed resistor 1/10W 56 ±5% 0603 R354			PCS	1.0000 1	2003/04/29 N
0005-----	RD00066 SMD fixed resistor 1/10W 68 ±5% 0603 R6, R68			PCS	2.0000 1	2003/04/29 N

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Item No. PF01225  
 DESCRIPTION: L-8  
 L-8 ALTO 230V

Version

UNIT: PCS  
 Date: 2003/04/29

Version	Item No	Loss %	Ver.	Unit	Cardinal Usage Rate	Effective Date @:Phantom Layer Attrition Rate
0006-----	RD00069 SMD fixed resistor 1/10W 120 ±5% 0603 R355			PCS	1.0000 1 0.00 %	2003/04/29 N
0007-----	RD00073 SMD fixed resistor 1/10W 220 ±5% 0603 R65, R79, R80			PCS	3.0000 1 0.00 %	2003/04/29 N
0008-----	RD00076 SMD fixed resistor 1/10W 330 ±5% 0603 R359, R360			PCS	2.0000 1 0.00 %	2003/04/29 N
0009-----	RD00078 SMD fixed resistor 1/10W 470 ±5% 0603 R351, R352, R356, R357, R358			PCS	5.0000 1 0.00 %	2003/04/29 N
0010-----	RD00347 SMD fixed resistor 1/10W 510 ±5% 0603 R361			PCS	1.0000 1 0.00 %	2003/04/29 N
0011-----	RD00348 SMD fixed resistor 1/10W 620 ±5% 0603 R362			PCS	1.0000 1 0.00 %	2003/04/29 N
0012-----	RD00349 SMD fixed resistor 1/10W 910 ±5% 0603 R196, R197, R198, R199, R200, R201, R202, R203, R204, R205, R206, R207, R208, R209, R210, R211			PCS	16.0000 1 0.00 %	2003/04/29 N
0013-----	RD00083 SMD fixed resistor 1/10W 1.0K ±5% 0603 R114			PCS	1.0000 1 0.00 %	2003/04/29 N
0014-----	RD00350 SMD fixed resistor 1/10W 1.1K ±5% 0603 R212, R213, R214, R215, R216, R217, R218, R219			PCS	8.0000 1 0.00 %	2003/04/29 N
0015-----	RD00351 SMD fixed resistor 1/10W 1.3K ±5% 0603 R137, R139, R141, R143, R145, R363, R146, R147, R148			PCS	9.0000 1 0.00 %	2003/04/29 N
0016-----	RD00085 SMD fixed resistor 1/10W 1.5K ±5% 0603 R264, R265, R266, R267, R268, R269			PCS	6.0000 1 0.00 %	2003/04/29 N
0017-----	RD00087 SMD fixed resistor 1/10W 2.0K ±5% 0603 R252, R364			PCS	2.0000 1 0.00 %	2003/04/29 N
0018-----	RD00088 SMD fixed resistor 1/10W 2.2K ±5% 0603 R54			PCS	1.0000 1 0.00 %	2003/04/29 N

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Item No. PF01225  
 DESCRIPTION: L-8  
 L-8 ALTO 230V

Version

UNIT: PCS  
 Date: 2003/04/29

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer Attrition Rate
0019-----	RD00092 SMD fixed resistor 1/10W 3.9K ±5% 0603 R16, R339, R344, R345, R256, R257, R258, R259, R260, R261, R262, R263			PCS	12.0000 1 0.00 %	2003/08/26 N
0020-----	RD00093 SMD fixed resistor 1/10W 4.7K ±5% 0603 R90, R248, R249, R250, R251, R253, R254, R255			PCS	8.0000 1 0.00 %	2003/04/29 N
0021-----	RD00094 SMD fixed resistor 1/10W 5.1K ±5% 0603 R375, R287, R288, R289, R290, R291, R292, R293, R294, R295, R296, R297, R298, R299, R301, R302, R304, R305, R306, R308, R309, R310, R311, R312, R313, R314, R315, R316, R317, R12, R15, R38, R39, R284, R285, R286, R93			PCS	37.0000 1 0.00 %	2003/06/07 N
0022-----	RD00095 SMD fixed resistor 1/10W 5.6K ±5% 0603 R365			PCS	1.0000 1 0.00 %	2003/04/29 N
0023-----	RD00097 SMD fixed resistor 1/10W 6.8K ±5% 0603 R150, R151, R152, R154, R155, R156, R158, R159, R160, R162, R163, R164, R166, R167, R168, R169, R170, R171, R172, R173, R174, R175			PCS	22.0000 1 0.00 %	2003/04/29 N
0024-----	RD00098 SMD fixed resistor 1/10W 7.5K ±5% 0603 R49			PCS	1.0000 1 0.00 %	2003/04/29 N
0025-----	RD00099 SMD fixed resistor 1/10W 8.2K ±5% 0603 R77, R78			PCS	2.0000 1 0.00 %	2003/04/29 N
0026-----	RD00101 SMD fixed resistor 1/10W 10K ±5% 0603 R1, R2, R3, R7, R8, R9, R10, R11, R19, R20, R21, R22, R23, R24, R27, R46, R47, R48, R50, R52, R53, R55, R56, R63, R66, R67, R71, R72, R75, R76, R81, R82, R85, R86, R87, R96, R97, R98, R99, R100, R111, R118, R120, R121, R122, R123, R124, R125, R427, R428			PCS	50.0000 1 0.00 %	2003/04/29 N
0027-----	RD00306 SMD fixed resistor 1/10W 20K ±5% 0603 R184, R185, R186, R187, R188, R189			PCS	6.0000 1 0.00 %	2003/04/29 N
0028-----	RD00105 SMD fixed resistor 1/10W 22K ±5% 0603 R240, R241, R244, R245, R246, R247, R319, R321			PCS	8.0000 1 0.00 %	2003/08/26 N
0029-----	RD00106 SMD fixed resistor 1/10W 27K ±5% 0603 R348, R349, R366			PCS	3.0000 1 0.00 %	2003/08/26 N
0030-----	RD00107 SMD fixed resistor 1/10W 30K ±5% 0603			PCS	4.0000 1 0.00 %	2003/04/29 N

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Item No. PF01225 Version  
 DESCRIPTION: L-8  
 L-8 ALTO 230V

UNIT: PCS  
 Date: 2003/04/29

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate @:	Phantom Layer Attrition Rate
	R236, R237, R238, R239					
0031-----	RD00353				14.0000	2003/08/26
	SMD fixed resistor 1/10W			PCS	1	N
	36K ±5% 0603				0.00	%
	R270, R271, R272, R273, R274, R275, R276, R277, R278, R279, R280, R281, R282, R283					
0032-----	RD00109				2.0000	2003/04/29
	SMD fixed resistor 1/10W			PCS	1	N
	39K ±5% 0603				0.00	%
	R73, R74					
0033-----	RD00111				5.0000	2003/04/29
	SMD fixed resistor 1/10W			PCS	1	N
	47K ±5% 0603				0.00	%
	R4, R232, R233, R234, R235					
0034-----	RD00354				1.0000	2003/04/29
	SMD fixed resistor 1/10W			PCS	1	N
	51K ±5% 0603				0.00	%
	R41					
0035-----	RD00112				2.0000	2003/04/29
	SMD fixed resistor 1/10W			PCS	1	N
	56K ±5% 0603				0.00	%
	R318, R320					
0036-----	RD00114				4.0000	2003/04/29
	SMD fixed resistor 1/10W			PCS	1	N
	68K ±5% 0603				0.00	%
	R228, R229, R230, R231					
0037-----	RD00116				4.0000	2003/04/29
	SMD fixed resistor 1/10W			PCS	1	N
	100K ±5% 0603				0.00	%
	R367, R368, R369, R370					
0038-----	RD00124				1.0000	2003/04/29
	SMD fixed resistor 1/10W			PCS	1	N
	820K ±5% 0603				0.00	%
	R5					
0039-----	RD00125				9.0000	2003/04/29
	SMD fixed resistor 1/10W			PCS	1	N
	1.0M ±5% 0603				0.00	%
	R112, R220, R221, R222, R223, R224, R225, R226, R227					
0040-----	RD00126				1.0000	2003/04/29
	SMD fixed resistor 1/10W			PCS	1	N
	2.2M ±5% 0603				0.00	%
	R113					
0041-----	CI00051				38.0000	2003/04/29
	SMD ceramic capacitor 0603			PCS	1	N
	22PF/50V NPO ±5%				0.00	%
	C11, C12, C13, C22, C24, C38, C39, C40, C49, C179, C180, C181, C182, C183, C184, C185, C186, C187, C188, C189, C190, C191, C192, C193, C194, C221, C222, C223, C224, C225, C226, C260, C263, C264, C269, C270, C281, C282					
0042-----	CI00053				2.0000	2003/04/29
	SMD ceramic capacitor 0603			PCS	1	N
	33PF/50V NPO ±5%				0.00	%
	C2, C117					

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Item No. PF01225 Version  
 DESCRIPTION: L-8  
 L-8 ALTO 230V

UNIT: PCS  
 Date: 2003/04/29

Version	Item No Item Descri	Loss %	Ver.	Unit	Cardinal Usage Rate @: Attrition Rate	Effective Date Phantom Layer Rate
0043-----	CI00055 SMD ceramic capacitor 0603 47PF/50V NPO ±5% C342,C343			PCS	2.0000 1 0.00 %	2003/04/29 N
0044-----	CI00059 SMD ceramic capacitor 0603 100PF/50V NPO ±5% C14,C20,C265,C266,C271,C272			PCS	6.0000 1 0.00 %	2003/04/29 N
0045-----	CI00075 SMD ceramic capacitor 0603 0.1uF/50V Y5V +80,-20% C1,C29,C30,C31,C32,C35,C36,C51,C15,C16,C17,C18,C37, C201,C202,C203,C204,C205,C206,C207,C208,C211,C212, C213,C214,C217,C218,C219,C220,C289,C290,C295,C296, C297,C298,C305,C306,C307,C308,C309,C310,C311,C312, C340,C341			PCS	45.0000 1 0.00 %	2003/04/29 N
0046-----	RE00011 resistor 680 *4 ±5% 8P 0603 AR1,AR2			PCS	2.0000 1 0.00 %	2003/04/29 N
0047-----	SE00028 diode BAS316,115 D7,D15			PCS	2.0000 1 0.00 %	2003/04/29 N
0048-----	SE00008 SMD rectifier diode DA204K/T-146 D1,D2,D3			PCS	3.0000 1 0.00 %	2003/04/29 N
0049-----	SE00009 SMD rectifier diode DAN202K/T-146 D16			PCS	1.0000 1 0.00 %	2003/04/29 N
0050-----	SE00007 SMD rectifier diode RB400D(D3A) D10			PCS	1.0000 1 0.00 %	2003/04/29 N
0051-----	SE00011 SMD rectifier diode RLS4148 0.5A (LL-34) D9			PCS	1.0000 1 0.00 %	2003/04/29 N
0052-----	SF00004 SMD transistor 2SA1036K(R) (MMBT3906LT1) TR13,TR14			PCS	2.0000 1 0.00 %	2003/04/29 N
0053-----	SF00010 SMD transistor 2SC2412K(R) (MMBT3904LT1) TR1,TR2,TR3,TR4,TR5,TR6,TR7,TR8,TR9,TR10,TR11,TR12, TR16,TR17			PCS	14.0000 1 0.00 %	2003/04/29 N
0054-----	SG00032 SMD integrated circuit LM339DR/(TI) U35,U36,U37,U38,U39,U40			PCS	6.0000 1 0.00 %	2003/04/29 N

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Item No. PF01225  
 DESCRIPTION: L-8  
 L-8 ALTO 230V

Version

UNIT: PCS  
 Date: 2003/04/29

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer Attrition Rate
0055-----	SG00122 SMD integrated circuit NJM4580M-TE3 U1,U2,U3,U6,U9,U12,U16,U17,U19,U20,U21,U23,U24,U25, U26,U27,U30,U31,U44,U45,U46			PCS	21.0000 1 0.00 %	2003/04/29 N
0056-----	SG00068 SMD integrated circuit 74HC14DT U49			PCS	1.0000 1 0.00 %	2003/04/29 N
0057-----	SG00164 integrated circuit 74HC109D U48			PCS	1.0000 1 0.00 %	2003/04/29 N
0058-----	SG00005 SMD integrated circuit BA10393F U47			PCS	1.0000 1 0.00 %	2003/04/29 N
0059-----	SG00094 SMD integrated circuit NE555DT U43			PCS	1.0000 1 0.00 %	2003/04/29 N
0060-----	RD00091 SMD fixed resistor 1/10W 3.3K ±5% 0603 R17,R18			PCS	2.0000 1 0.00 %	2003/04/29 N
0061-----	RD00096 SMD fixed resistor 1/10W 6.2K ±5% 0603 R25,R26			PCS	2.0000 1 0.00 %	2003/08/27 N
0062-----	RD00102 SMD fixed resistor 1/10W 12K ±5% 0603 R13,R14			PCS	2.0000 1 0.00 %	2003/08/27 N
0059-----	HK03838 K-PC board P-L8PU2-DIP			PCS	1.0000 1 0.00 %	2003/04/29 N
0001-----	RA00505 precise resistor 1/4W 6.81K M type R1,R2,R3,R4,R5,R6,R7,R8,R9,R10			PCS	10.0000 1 0.00 %	2003/04/29 N
0002-----	CB00074 electrolytic capacitor 1000uF/10V 8*11mm C51,C52,C53,C55,C56			PCS	5.0000 1 0.00 %	2003/04/29 N
0003-----	CB00003 electrolytic capacitor 0.22uF/50V 5*11mm C70,C71,C72,C73,C74,C75,C76,C77,C78,C79,C80,C81			PCS	12.0000 1 0.00 %	2003/04/29 N
0004-----	CB00029 electrolytic capacitor 22uF/35V 5*11mm C19,C20,C21,C23,C25,C26,C27,C28			PCS	8.0000 1 0.00 %	2003/04/29 N
0005-----	CB00175 electrolytic capacitor 47uF/25V SLL 5*11mm			PCS	17.0000 1 0.00 %	2003/06/13 N

Multi-Level BOM Structure Listing

Report No.: IEB0\_P02  
 Prepared by JG970003[蔡忠憲]

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Item No. PF01225 Version  
 DESCRIPTION: L-8  
 L-8 ALTO 230V

UNIT: PCS  
 Date: 2003/04/29

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate @:Phantom Layer	Attrition Rate
	C22, C24, C85, C86, C91, C92, C93, C99, C100, C108, C109, C117, C118, C122, C123, C253, C254					
0006-----	CB00042 electrolytic capacitor 47uF/63V 105 LZ 8*11mm C29, C30, C32, C33, C34, C36, C37, C39, C41, C42			PCS	10.0000 1 0.00 %	2003/04/29 N
0007-----	SB00050 transistor 2SA1316-GR TR16, TR18, TR20, TR22, TR24, TR26, TR28, TR30, TR32, TR34			PCS	10.0000 1 0.00 %	2003/04/29 N
0008-----	SD00007 integrated circuit BA15218N (M5218L substitute) U28, U29			PCS	2.0000 1 0.00 %	2003/04/29 N
0009-----	HC00125 MIC jack JY-6351G-02-250 X6, X8, X10, X12, X14, X15, X16, X17, X18, X19, X20, X21, X22, X23, X25, X28			PCS	16.0000 1 0.00 %	2003/04/29 N
0010-----	HI00162 push-button switch 2 paragraphs 6p PS-22E8552L SW1, SW2, SW3, SW4			PCS	4.0000 1 0.00 %	2003/04/29 N
0011-----	RC00296 potentiometer 010K RV09BC-40-30F-02C10K VR1, VR9, VR17, VR25, VR33			PCS	5.0000 1 0.00 %	2003/04/29 N
0012-----	HC00126 MIC jack for balance JY-5042-030G female plug 180° X5, X7, X9, X11, X13			PCS	5.0000 1 0.00 %	2003/04/29 N
0013-----	HC00403 rca SCP6873NS3232T2 4P X31			PCS	1.0000 1 0.00 %	2003/04/29 N
0014-----	HA01583 header wiring 12P-12P 40 CN3, CN4			PCS	2.0000 1 0.00 %	2003/06/24 N
0015-----	HA01580 row-wire connector wiring 8P(male)-8P(female) 40mm UL1007 28AWG CN5			PCS	1.0000 1 0.00 %	2003/06/24 N
0016-----	HA01507 row-wire connector wiring 7P(male)-7P(parent) 140 CN2			PCS	1.0000 1 0.00 %	2003/04/29 N
0017-----	HA01506 header wiring AF:W267 9P(male)-9P(parent) 140 CN1			PCS	1.0000 1 0.00 %	2003/04/29 N
0018-----	HK03837 K-PC board P-L8PU2-SMD			PCS	1.0000 1 0.00 %	2003/04/29 N

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Item No. PF01225 Version  
 DESCRIPTION: L-8  
 L-8 ALTO 230V

UNIT: PCS  
 Date: 2003/04/29

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer
					Attrition	Rate
0001-----	HB00916 pc board			PCS	1.0000	2003/04/29
	L8PU2_VER030714				1	N
0002-----	RD00355			PCS	15.0000	2003/04/29
	SMD fixed resistor 1/10W				1	N
	4.7 ±5% 0603				0.00	%
	R11, R13, R14, R19, R20, R24, R25, R48, R49, R88, R89, R398, R399, R400, R401					
0003-----	RD00069			PCS	4.0000	2003/04/29
	SMD fixed resistor 1/10W				1	N
	120 ±5% 0603				0.00	%
	R322, R323, R324, R325					
0004-----	RD00078			PCS	10.0000	2003/04/29
	SMD fixed resistor 1/10W				1	N
	470 ±5% 0603				0.00	%
	R388, R389, R390, R391, R392, R393, R394, R395, R396, R397					
0005-----	RD00083			PCS	2.0000	2003/04/29
	SMD fixed resistor 1/10W				1	N
	1.0K ±5% 0603				0.00	%
	R342, R343					
0006-----	RD00351			PCS	4.0000	2003/04/29
	SMD fixed resistor 1/10W				1	N
	1.3K ±5% 0603				0.00	%
	R136, R138, R140, R142					
0007-----	RD00097			PCS	4.0000	2003/04/29
	SMD fixed resistor 1/10W				1	N
	6.8K ±5% 0603				0.00	%
	R149, R153, R157, R161					
0008-----	RD00101			PCS	21.0000	2003/04/29
	SMD fixed resistor 1/10W				1	N
	10K ±5% 0603				0.00	%
	R37, R38, R83, R84, R101, R102, R103, R104, R105, R106, R107, R95, R110, R112, R113, R114, R115, R116, R117, R118, R119					
0009-----	RD00306			PCS	18.0000	2003/04/29
	SMD fixed resistor 1/10W				1	N
	20K ±5% 0603				0.00	%
	R28, R40, R42, R43, R44, R176, R177, R178, R179, R180, R181, R182, R183, R190, R192, R193, R194, R195					
0010-----	RD00113			PCS	4.0000	2003/04/29
	SMD fixed resistor 1/10W				1	N
	62K ±5% 0603				0.00	%
	R131, R132, R133, R134					
0011-----	RD00201			PCS	10.0000	2003/04/29
	SMD precise resistor 1/10W				1	N
	1.50K ±1% 0603				0.00	%
	R12, R15, R16, R17, R18, R21, R22, R23, R26, R27					
0012-----	RD00204			PCS	35.0000	2003/04/29
	SMD precise resistor 1/10W				1	N
	2.49K ±1% 0603				0.00	%
	R45, R50, R51, R52, R53, R56, R57, R58, R59, R60, R61, R64, R65, R66, R90, R91, R94, R126, R127, R128, R129, R130, R135, R144, R165, R191, R379, R380, R381, R382, R383, R384, R385, R386, R387					
0013-----	RD00210			PCS	19.0000	2003/04/29
	SMD precise resistor 1/10W				1	N
	5.11K ±1% 0603				0.00	%
	R46, R54, R62, R67, R402, R403, R404, R405, R406, R407, R408,					



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Item No. PF01225 Version  
 DESCRIPTION: L-8  
 L-8 ALTO 230V

UNIT: PCS  
 Date: 2003/04/29

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer
					Attrition	Rate
	R409,R410,R411,R412,R413,R414,R415,R416					
0014-----	RD00287				8.0000	2003/04/29
	SMD precise resistor 1/10W			PCS	1	N
	6.34K ±1% 0603				0.00	%
	R29,R30,R31,R32,R33,R34,R35,R36					
0015-----	RD00214				10.0000	2003/04/29
	SMD precise resistor 1/10W			PCS	1	N
	10.0K ±1% 0603				0.00	%
	R417,R418,R419,R420,R421,R422,R423,R424,R425,R426					
0016-----	CI00051				30.0000	2003/04/29
	SMD ceramic capacitor 0603			PCS	1	N
	22PF/50V NPO ±5%				0.00	%
	C48,C49,C50,C54,C57,C58,C59,C60,C61,C62,C63,C64,C65, C66,C67,C68,C69,C82,C83,C84,C110,C227,C228,C229,C230, C261,C262,C315,C316,C317					
0017-----	CI00059				8.0000	2003/04/29
	SMD ceramic capacitor 0603			PCS	1	N
	100PF/50V NPO ±5%				0.00	%
	C273,C274,C275,C276,C277,C278,C279,C280					
0018-----	CI00062				5.0000	2003/04/29
	SMD ceramic capacitor 0603			PCS	1	N
	330PF/50V NPO ±5%				0.00	%
	C1,C2,C3,C4,C18					
0019-----	CI00065				10.0000	2003/04/29
	SMD ceramic capacitor 0603			PCS	1	N
	0.001uF/50V X7R ±10%				0.00	%
	C5,C6,C7,C8,C9,C10,C11,C12,C13,C14					
0020-----	CI00071				10.0000	2003/04/29
	SMD ceramic capacitor 0603			PCS	1	N
	0.01uF/50V X7R ±10%				0.00	%
	C15,C16,C17,C31,C35,C38,C40,C44,C46,C47					
0021-----	CI00075				28.0000	2003/04/29
	SMD ceramic capacitor 0603			PCS	1	N
	0.1uF/50V Y5V +80,-20%				0.00	%
	C43,C45,C201,C202,C203,C204,C205,C206,C287,C288,C289, C290,C291,C292,C293,C294,C295,C296,C297,C298,C299, C300,C301,C302,C303,C304,C313,C314					
0022-----	RD00004				2.0000	2003/04/29
	SMD fixed resistor 1/10W			PCS	1	N
	47 ±5% 0805				0.00	%
	R346,R347					
0023-----	RD00007				4.0000	2003/04/29
	SMD fixed resistor 1/10W			PCS	1	N
	120 ±5% 0805				0.00	%
	R330,R331,R332,R334					
0024-----	SG00122				13.0000	2003/05/26
	SMD integrated circuit			PCS	1	N
	NJM4580M-TE3				0.00	%
	U1,U2,U4,U5,U7,U8,U10,U11,U13,U14,U15,U16,U18					
0025-----	SF00004				15.0000	2003/04/29
	SMD transistor			PCS	1	N
	2SA1036K(R) (MMBT3906LT1)				0.00	%
	TR15,TR17,TR19,TR21,TR23,TR25,TR27,TR29,TR31,TR33, TR35,TR37,TR38,TR39,TR36					

Multi-Level BOM Structure Listing

Report No.: IEBO\_P02  
 Prepared by JG970003[蔡忠憲]

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Item No. PF01225 Version  
 DESCRIPTION: L-8  
 L-8 ALTO 230V

UNIT: PCS  
 Date: 2003/04/29

Version	Item No	Loss %	Ver.	Unit	Cardinal Usage Rate	Effective Date @:Phantom Layer Attrition Rate
0026-----	SE00028 diode BAS316,115 D4,D5,D6,D7,D8			PCS	5.0000 1 0.00 %	2003/04/29 N
0027-----	RD00107 SMD fixed resistor 1/10W 30K ±5% 0603 R108,R109			PCS	2.0000 1 0.00 %	2003/04/29 N
0060-----	HK03836 K-PC board P-L8PU1			PCS	1.0000 1 0.00 %	2003/04/29 N
0001-----	HB00915 pc board L8PU1(1*4)_VER030214			PCS	1.0000 1 0.00 %	2003/04/29 N
0002-----	RA00185 fixed resistor 1/4W 120 M type			PCS	16.0000 1 0.00 %	2003/04/29 N
0003-----	RA00232 fixed resistor 1/4W 5.1K M type R21,R22,R23,R24			PCS	4.0000 1 0.00 %	2003/04/29 N
0004-----	HC00392 shape male JY-5030-030G 180° X9,X10			PCS	2.0000 1 0.00 %	2003/04/29 N
0005-----	HA01925 jumper wire 10mm JP1,JP2,JP3			PCS	3.0000 1 0.00 %	2003/04/29 N
0001-----	HA02249 wire 0.6			M KG	0.0200 1 0.00 %	2002/09/19 N
0006-----	HC00125 MIC jack JY-6351G-02-250 X1,X2,X3,X4,X5,X6,X7,X8			PCS	8.0000 1 0.00 %	2003/04/29 N
0007-----	HC00258 row-wire header 7P 2.0mm 180° CN2			PCS	1.0000 1 0.00 %	2003/04/29 N
0008-----	HC00260 row wire header 9P 2.0mm 180° CN1			PCS	1.0000 1 0.00 %	2003/04/29 N
0061-----	HK03648 K-PCb P-RD82PWR(RD82FX)			PCS	1.0000 1 0.00 %	2003/04/29 N
0001-----	HB00879 pc board RD82PWR_VER030110			PCS	1.0000 1 0.00 %	2003/03/12 N
0002-----	RA00242 fixed resistor 1/4W 10K M type R2			PCS	1.0000 1 0.00 %	2003/03/12 N
0003-----	RA00159 fixed resistor 1/4W 10 Mr type R3			PCS	1.0000 1 0.00 %	2003/03/12 N

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Item No. PF01225 Version  
 DESCRIPTION: L-8  
 L-8 ALTO 230V

UNIT: PCS  
 Date: 2003/04/29

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer
					Attrition	Rate
0004-----	SA00094 rectifier diode 1N4002/100V D1, D2, D3, D4, D5, D6, D7, D9, D10, D11, D12, D13, D14, D8			PCS	14.0000 1 0.00 %	2003/03/12 N
0005-----	SA00127 zener diode 1/2W 47V 1N5261 ZD1			PCS	1.0000 1 0.00 %	2003/03/12 N
0006-----	RA00250 fixed resistor 1/4W 20K M type R4			PCS	1.0000 1 0.00 %	2003/03/12 N
0007-----	RA00301 fixed resistor 1/4W 390K M type R1			PCS	1.0000 1 0.00 %	2003/03/12 N
0008-----	CB00039 electrolytic capacitor 47uF/25V 5*11mm C3, C4			PCS	2.0000 1 0.00 %	2003/03/12 N
0009-----	CB00043 electrolytic capacitor 47uF/100V 10*12mm C8, C9			PCS	2.0000 1 0.00 %	2003/03/12 N
0010-----	CB00052 electrolytic capacitor 100uF/100V 13*20mm C5, C6			PCS	2.0000 1 0.00 %	2003/03/12 N
0011-----	CB00061 electrolytic capacitor 220uF/100V 12*25mm C7			PCS	1.0000 1 0.00 %	2003/03/12 N
0012-----	CB00082 electrolytic capacitor 2200uF/25V 16*20mm C1, C2			PCS	2.0000 1 0.00 %	2003/03/12 N
0013-----	SD00077 integrated circuit 7815(TO-220) TR1			PCS	1.0000 1 0.00 %	2003/03/12 N
0014-----	SD00079 integrated circuit 7915(TO-220) TR2			PCS	1.0000 1 0.00 %	2003/03/12 N
0015-----	SB00043 transistor TIP122(ST) TR3			PCS	1.0000 1 0.00 %	2003/03/12 N
0016-----	HC00076 row-wire header 2P 2.5mm 180° CN2			PCS	1.0000 1 0.00 %	2003/03/12 N

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Item No. PF01225  
 DESCRIPTION: L-8  
 L-8 ALTO 230V

Version

UNIT: PCS  
 Date: 2003/04/29

Version	Item No Item Descri	Loss %	Ver.	Unit	Cardinal Usage Rate Attrition Rate	Effective Date @:Phantom Layer Rate
0017-----	HC00082 row-wire header 8P 2.5mm 180° CN3			PCS	1.0000 1 0.00 %	2003/03/12 N
0018-----	HC00089 row-wire header 3P 3.9mm 180° CN1			PCS	1.0000 1 0.00 %	2003/03/12 N
0019-----	HA01922 jumper wire 8mm JP1,JP6,JP7,JP10			PCS	4.0000 1 0.00 %	2003/03/12 N
0001-----	HA02249 wire 0.6			M KG	0.0180 1 0.00 %	2002/09/19 N
0020-----	HA01925 jumper wire 10mm JP2,JP3,JP4,JP8,JP9			PCS	5.0000 1 0.00 %	2003/03/12 N
0001-----	HA02249 wire 0.6			M KG	0.0200 1 0.00 %	2002/09/19 N
0021-----	SD00074 integrated circuit 7805(TO-220) TR4			PCS	1.0000 1 0.00 %	2003/03/12 N
0022-----	CB00070 electrolytic capacitor 1000uF/16V 10*16mm C10			PCS	1.0000 1 0.00 %	2003/03/12 N
0062-----	HK03893 PC board P-313123-DIP(L-8)			PCS	1.0000 1 0.00 %	2003/04/29 N
0001-----	SC00004 quartz crystalloid 16.00MHZ LP-3.5S(HC-49US) XT1			PCS	1.0000 1 0.00 %	2003/04/29 N
0002-----	HC00499 row pin 2.54mm 180°2*8P CN2			PCS	1.0000 1 0.00 %	2003/06/24 N
0003-----	SG00193 integrated ciucire AT27LV010A-90JC/L-8 IC4			PCS	1.0000 1 0.00 %	2003/05/31 N
0001-----	SG00139 integrated ciucire AT27LV010A-90JC			PCS	1.0000 1 0.00 %	2003/05/30 N
0004-----	HK04041 PC board P-313123-AI(L-8)			PCS	1.0000 1 0.00 %	2003/06/19 N
0001-----	CB00165 electrolytic capacitor 10uF/16V 4*5mm C7			PCS	1.0000 1 0.00 %	2003/06/18 N

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Report No.: IEB0\_P02  
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Item No. PF01225 Version  
 DESCRIPTION: L-8  
 L-8 ALTO 230V

UNIT: PCS  
 Date: 2003/04/29

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer Attrition Rate
0002-----	CB00166 electrolytic capacitor 100uF/16V 6*5mm C19,C12,C5,C24,C21,C25,C26,C28,C2,C16			PCS	10.0000 1 0.00 %	2003/06/18 N
0003-----	HK03894 PC board P-313123-SMD(L-8)			PCS	1.0000 1 0.00 %	2003/06/18 N
0001-----	HB00895 pc board 313123/2(1*6)			PCS	1.0000 1 0.00 %	2003/04/29 N
0002-----	CI00049 SMD ceramic capacitor 0603 15PF/50V NPO ±5% C8,C9			PCS	2.0000 1 0.00 %	2003/04/29 N
0003-----	CI00075 SMD ceramic capacitor 0603 0.1uF/50V Y5V +80,-20% C17,C15,C18,C6,C10,C22,C20,C13,C14,C1,C3,C4,C11			PCS	13.0000 1 0.00 %	2003/04/29 N
0004-----	RD00061 SMD fixed resistor 1/10W 10 ±5% 0603 R22			PCS	1.0000 1 0.00 %	2003/04/29 N
0005-----	RD00068 SMD fixed resistor 1/10W 100 ±5% 0603 R12,R14,R7,R8,R34,R17,R13,R33			PCS	8.0000 1 0.00 %	2003/04/29 N
0006-----	RD00073 SMD fixed resistor 1/10W 220 ±5% 0603 R3			PCS	1.0000 1 0.00 %	2003/04/29 N
0007-----	RD00085 SMD fixed resistor 1/10W 1.5K ±5% 0603 R16,R15,R21,R20,R4,R19,R10,R18,R9,R5			PCS	10.0000 1 0.00 %	2003/04/29 N
0008-----	RD00088 SMD fixed resistor 1/10W 2.2K ±5% 0603 R28,R27,R23,R24,R29,R30,R25,R26			PCS	8.0000 1 0.00 %	2003/04/29 N
0009-----	RD00101 SMD fixed resistor 1/10W 10K ±5% 0603 R32,R31,R1			PCS	3.0000 1 0.00 %	2003/04/29 N
0010-----	RD00125 SMD fixed resistor 1/10W 1.0M ±5% 0603 R2			PCS	1.0000 1 0.00 %	2003/04/29 N
0011-----	RE00006 SMD row resistor 1/16W 100 *4 ±5% 8P 0603 AR1,AR2			PCS	2.0000 1 0.00 %	2003/04/29 N
0012-----	SE00011 SMD rectifier diode RLS4148 0.5A (LL-34) D1			PCS	1.0000 1 0.00 %	2003/04/29 N

Multi-Level BOM Structure Listing

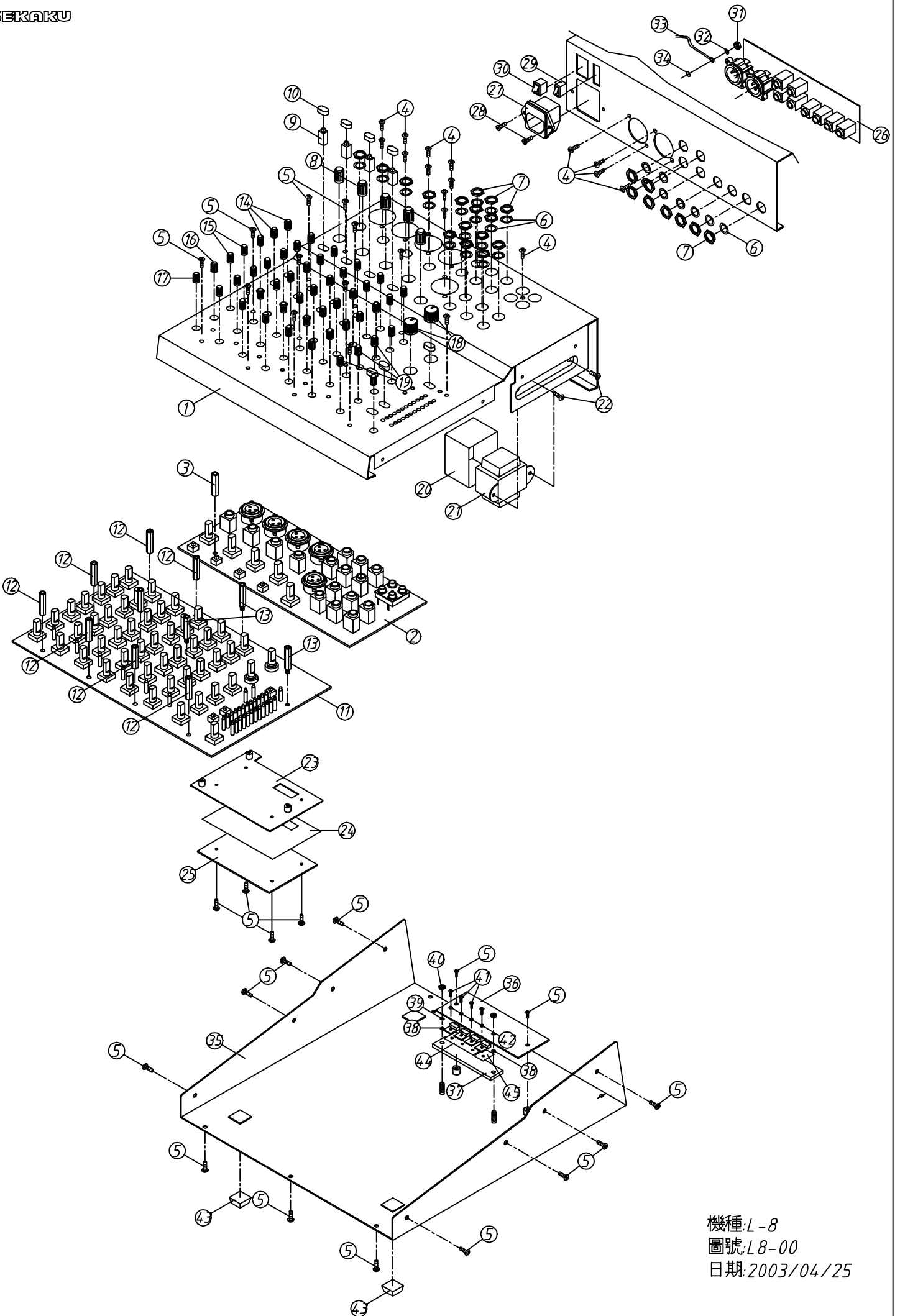
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 Prepared by JG970003[蔡忠憲]

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Item No. PF01225 Version  
 DESCRIPTION: L-8  
 L-8 ALTO 230V

UNIT: PCS  
 Date: 2003/04/29

Version	Item No Item Descri	Loss %	Ver.	Unit	Cardinal Usage Rate Attrition Rate	Effective Date @:Phantom Layer Rate
0013-----	SG00068 SMD integrated circuit 74HC14DT IC1			PCS	1.0000 1 0.00 %	2003/04/29 N
0014-----	SG00138 integrated ciucrt AS4LC256K16E0-60JC IC6			PCS	1.0000 1 0.00 %	2003/04/29 N
0015-----	SG00166 integrated circuit TY-2 ALTO(GMCODE:105022) IC3			PCS	1.0000 1 0.00 %	2003/04/29 N
0001-----	SG00147 integrated circut CHEF DSP(GMCODE:105022)			PCS	1.0000 1 0.00 %	2003/05/10 N
0016-----	SG00037 SMD integrated circuit LD1117DT33C IC2			PCS	1.0000 1 0.00 %	2003/04/29 N
0017-----	HC00233 IC jack (SMD) PLCC32 (D03-32T.A.4) IC4			PCS	1.0000 1 0.00 %	2003/04/29 N
0018-----	SG00016 SMD integrated circuit UDA1345TS (Philips) IC5			PCS	1.0000 1 0.00 %	2003/04/29 N
0005-----	NE11475 label L-8			PCS	1.0000 1 0.00 %	2003/06/23 N
0001-----	NH00035 bond paper 0.06*1M			M	1.0000 410 0.00 %	2003/06/26 N
0002-----	NI00017 membrane 0.055*1M			M	1.0000 410 0.00 %	2003/06/26 N
0063-----	NC00080 wood washer 3.17* 8.2*1			PCS	4.0000 1 0.00 %	2003/05/16 N
0001-----	NC00079 insulation 8.2*1			KG	1.0000 1 0.00 %	2003/02/25 N
0001-----	NC00014 insulator 0.65M*60M*1t			KG	68.0000 39000000 0.00 %	2002/04/04 N
0064-----	NI00863 insulate bean T0220B			PCS	4.0000 1 0.00 %	2003/06/24 N
0065-----	MG00020 screw M3*8			PCS	4.0000 1 0.00 %	2003/06/24 N



機種:L-8  
圖號:L8-00  
日期:2003/04/25

		Mechanical Parts List		
Model No.		ALTO L-8		
NO	Item No	Item Description		pcs
1	MA04065	panel	L-8 ALTO	1
2	HK03838	K-PC board	P-L8PU2-DIP	1
3	MG00305	copper pole	M3*24*0.5PH	1
4	MG00061	screw	M3*10	15
5	MG00041	screw	M3*6	37
6	MF00061	washer	JY-6351G-02-250	24
7	ME00060	socket nut	JY-6351G-02-250	24
8	NI02084	knob	10.5*18	5
9	NI01862	key	5.5*5.5*14.5	4
10	NI01863	key	5.5*W10*7.5	7
11	HK03835	K-PC board	P-L8MN1-DIP	1
12	MG00304	copper pole	M3*14*0.5PH	8
13	MG00363	bare	M3*14*0.5PH	3
14	NI02083	knob	10.5*18	18
15	NI02081	knob	10.5*18	12
16	NI02082	knob	10.5*18	6
17	NI00826	knob	12*18 double color	8
18	NI02386	konb	14*13mm	2
19	NI02633	knob	10.5*18	3
20	MI01629	separating shade	S-12	1
21	TC00160	transformer	PT-S12_230V	1
22	MG00102	screw	M4*8	2
23	MJ01189	partitions	L-8	1
24	NI02620	insulation board	1*86.5*53 L-8	1
25	HK03893	PC board	P-313123-DIP(L-8)	1
26	HK03836	K-PC board	P-L8PU1	1
27	HC00008	AC outlet	3515 A TYPE(RF-2004-C-4.8)	1
28	MG00042	screw	M3*10	2
29	HI00171	power switch	R612KKAT0F1	1
30	HI00026	power switch	RA12KKATOF 2P	1
31	ME00016	colour nut	4m/m	1
32	MF00038	washer	4* 7*1t	1
33	HA01174	signle terminal wiring CF:W146	80 green/yellow	1
34	MF00048	washer	4* 8*0.5t	1
35	MB02799	rear board	L8	1
36	HK03648	K-PCb	P-RD82PWR(RD82FX)	1
37	MJ01145	heat sink	RD82	1
38	MF00037	washer	3* 5*1t	2
39	MF00030	washer	3* 8*0.8t	2
40	ME00015	colour nut	3m/m	2
41	MG00162	screw	M3*8	4
42	NI02249	caushion	TW-1(TO-220)	4
43	NI00501	foot cushion	12.7*9*3t(SF-004)	4
44	NC00022	insulation	0.3t*18*45mm S-8	1
45	NC00005	silicone insulator	TO-220 square type	1