

Service Manual

MODEL: PS 4LA



www.altoproaudio.com

Version 1.0

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1. Function

This plastic box speaker is special design for performance on stage. The special design of handle shows unique Italian style. It contains a woofer of 12" 6Ω 110-220W and a tweeter of 15W 8Ω. Its tone quality is articulate. (PS 4LA LOW Output Power 150 Watt Class AB/HIGH Output Power 50Watt Class AB) can conform to any requirement of application.

A volume knob;

Φ6.3 stereo MIC socket

Balanced output socket

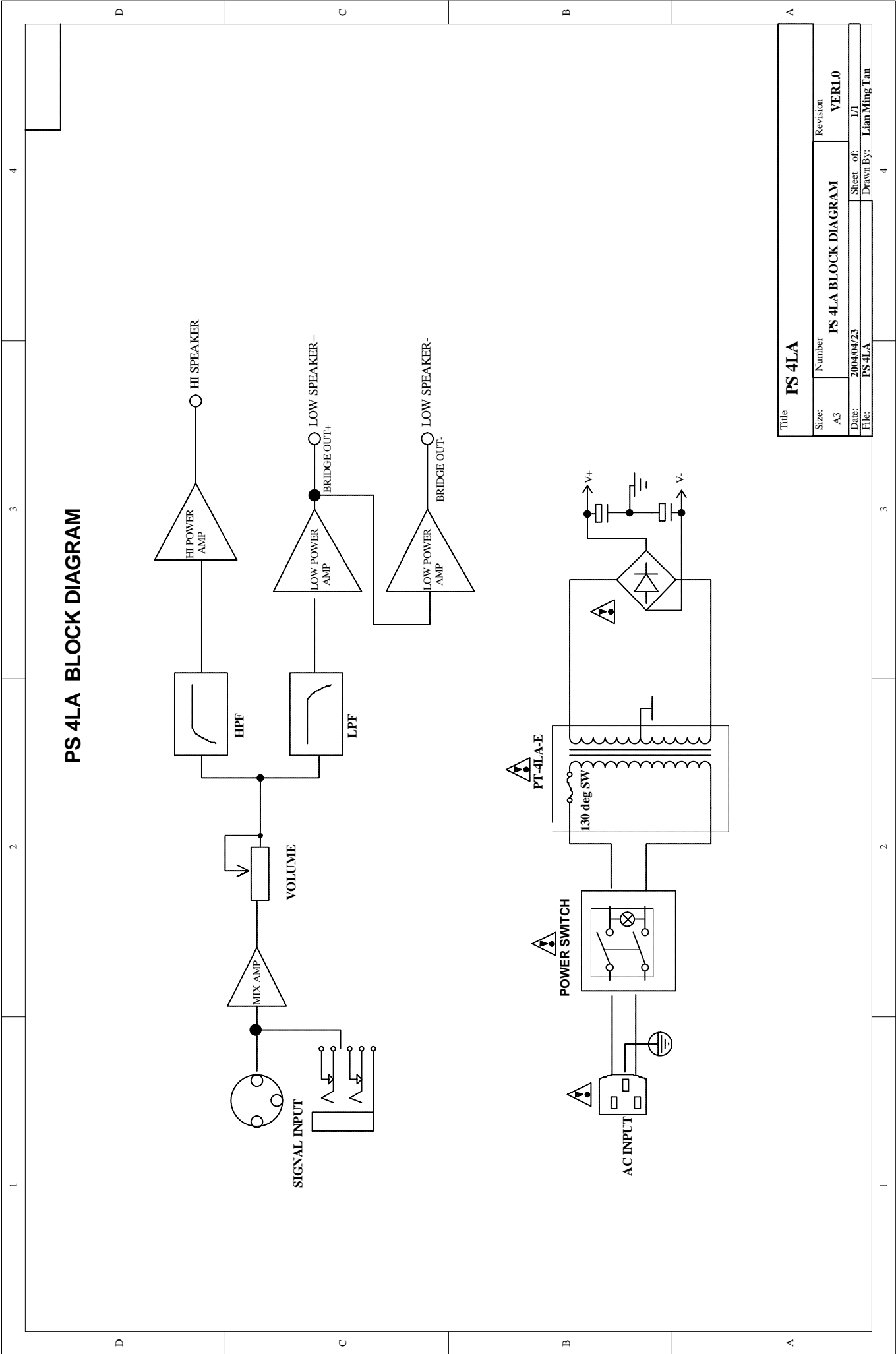
Clip indicator shows the signal strength;

Overload and overheat protection.

2. Specification

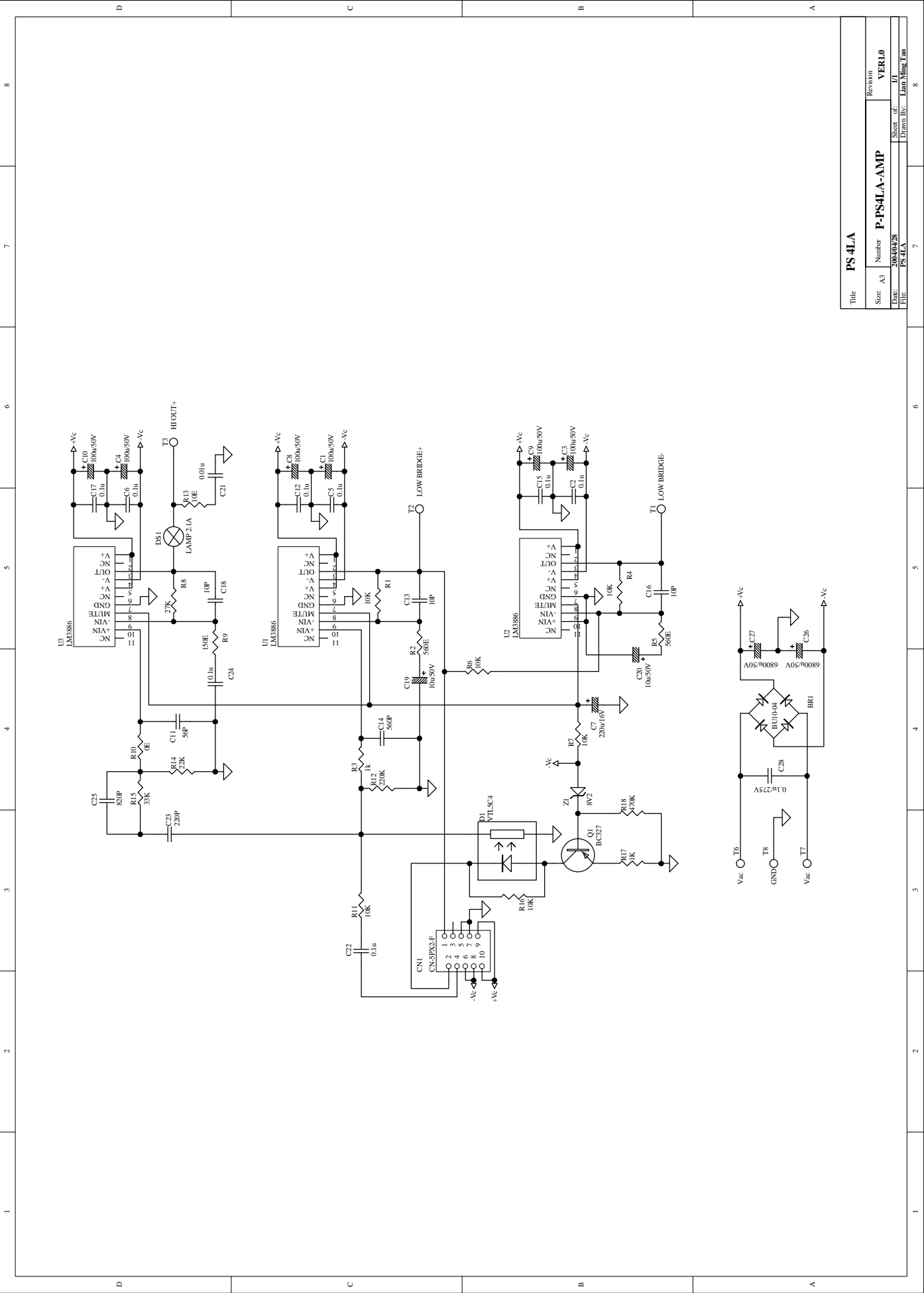
Descriptions	PS 4LA Active
Active System type	Bi-Amp with analog processor
LOW-RMS Output Power	150W RMS Class AB
HIGH-RMS Output Power	50W RMS Class AB
Max SPL at 1m	118.5dB SPL calculated
Frequency Response	55Hz/20kHz +/-10dB
Impedance Low-High	Low 4 Ohm – High 8 Ohm
Crossover Frequency	2500Hz 6/12dB/Oct.
Protection Low-High	Analog Limiter/Compressor
Low-Frequency	12"/318mm – 2" voice coil
High-Frequency	Aluminum Driver 1" Voice Coil
Horn Coverage H°×V°	90° H×45° V
Input Sensitivity	Line + 4dB/1.23V
Input impedance	30k Balanced –15k Unbalanced
Connectors	Input with Jack/Link with XLR
Plastic Reinforced Cabinet	Trapezoidal & Monitor shape
Hardware Suspension	Six suspension point
Amplifier Protections	Soft Start – Short Circuit – DC voltage – Thermal Protection
External Control	Volume – Clip – Ground Switch
Power Supply	230Volt/115Volt 50/60Hz
Dimensions H×W×D	660mm×396mm×384mm(26"×15.6"×15.1")
Net Weight lbs/kg	19.40kg/42.76lbs
Gross Weight lbs/kg	22.05kg/48.61lbs
Shipping Volume	4.83CFT

3. Block Diagram

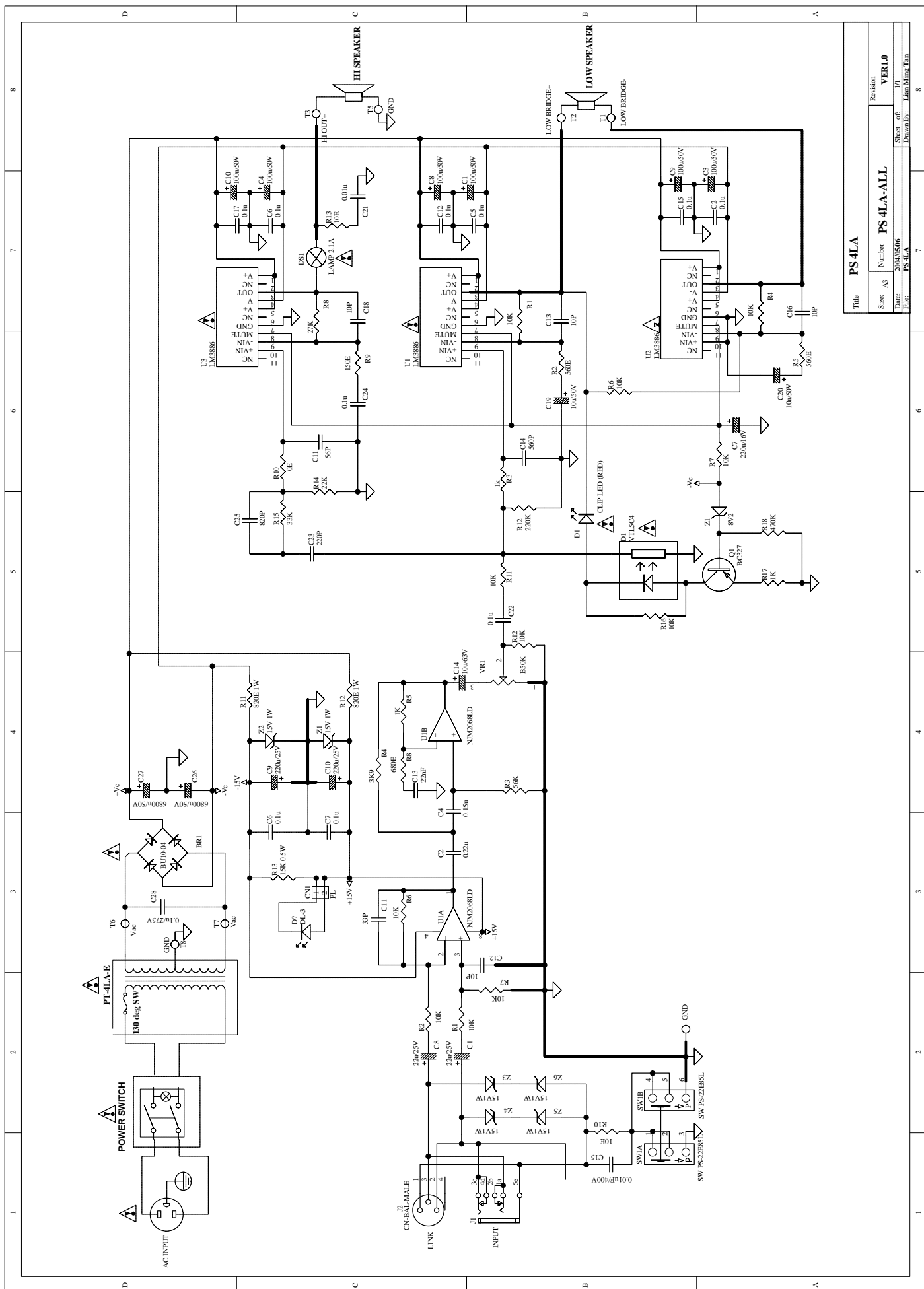


Title		PS 4LA	
Size:	Number	Revision	VER1.0
A3	PS 4LA BLOCK DIAGRAM	Sheet of	1/1
Date:	2004/04/23	Drawn By:	Lian Ming Tan
File:	PS 4LA		

4. Schematic Diagram



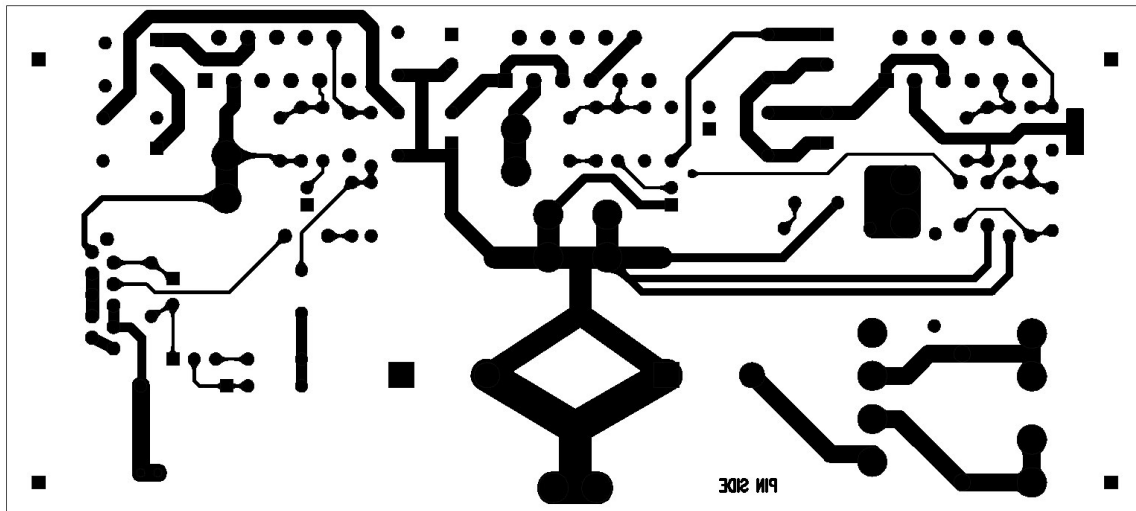
Title		PS 4LA		Revision	
Size	A3	Number	P-PS4LA-AMP	Sheet	VER1.0
Date	2004/04/28	Drawn By	Lian Ming Tan	Sheet	1/1
File	PS 4LA			Drawn By	Lian Ming Tan



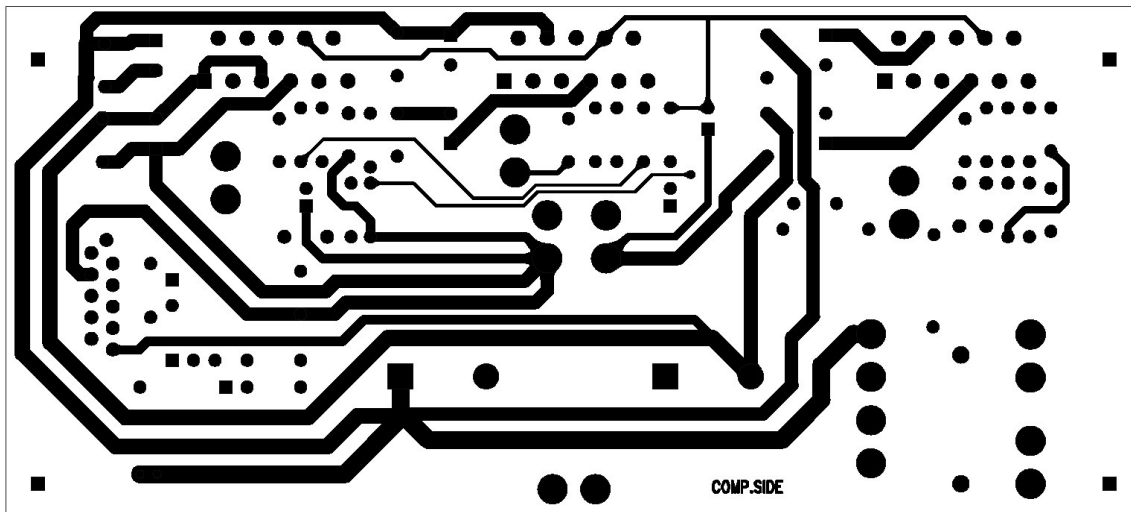
Title		PS 4LA
Size:	A3	Number
Date:	2004/05/06	Revision
File:	PS 4LA	VER1.0
Drawn By:		Lam Wing Fan
Sheet of:		VI
8		

5. PCB Layout

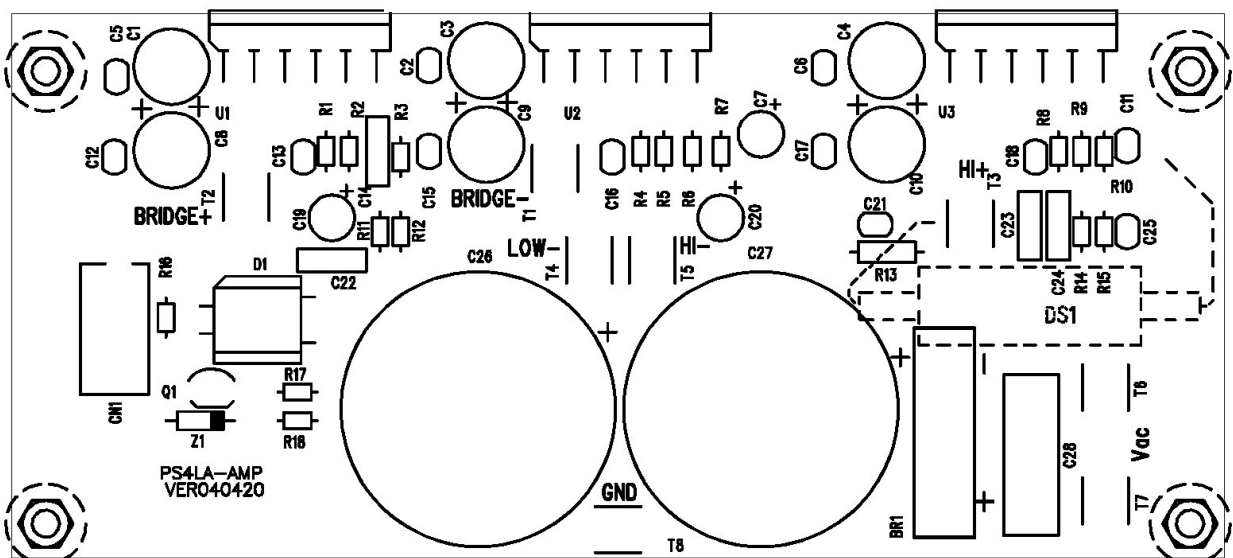
(1) P-PS 4LA-AMP



PS 4LA-AMP BOTTOM LAYER

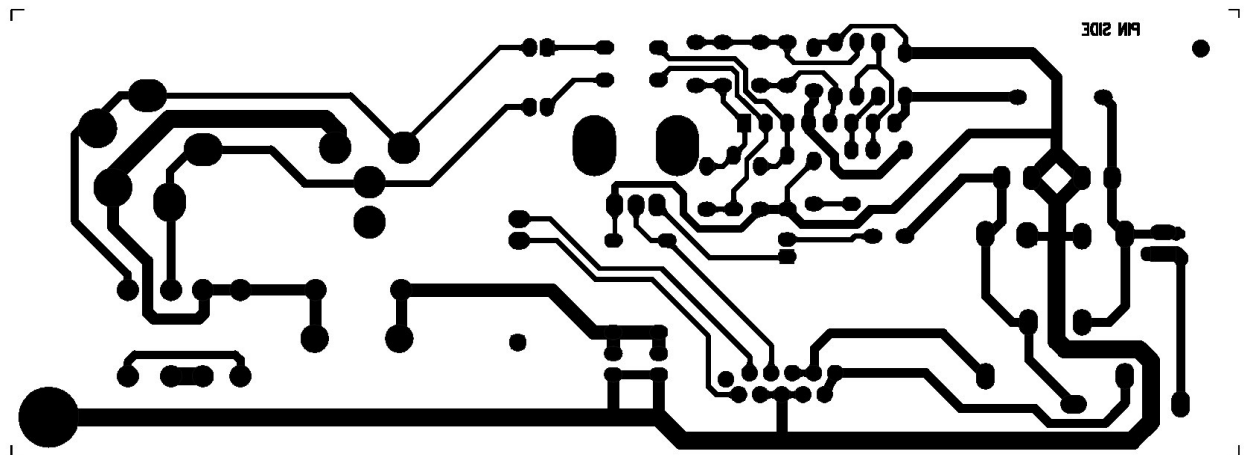


PS 4LA-AMP TOP LAYER

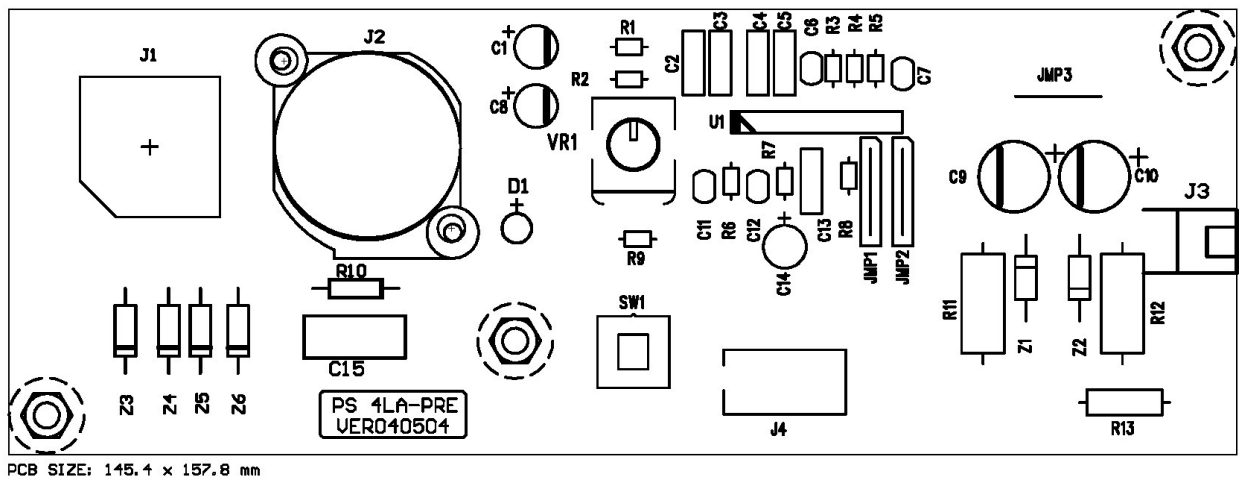


PS 4LA-AMP TOP OVERLAYER

(2) P-PS 4LA-PRE



PS 4LA-PRE BOTTOM LAYER



PS 4LA-PRE TOP LAYER

6. Test Procedure And Test Result

(1) P-PS4LA-PRE

a. The test specification of P-PS4LA-PRE:

Signal input: 1kHz @ 600Ω -0dBV BAL

Output: 1V±0.1V

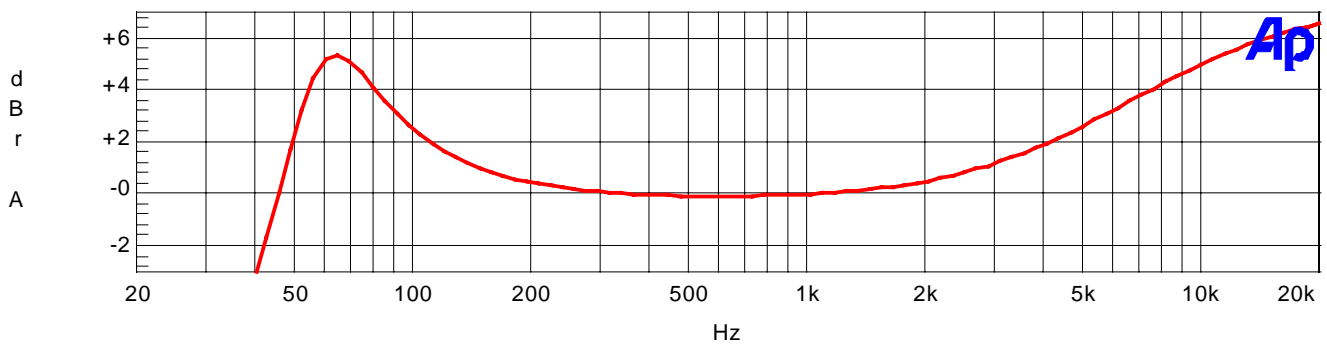
b. Test procedure

b-1. Check the appearance of PCB first;

b-2: Place the PCB on the instrument;

b-3 Input signal to input socket, check whether the wave shape and output signal voltage are normal;

b-4. Test is finished. Set power SW at OFF and remove the PCB from the instrument.



Sweep	Trace	Color	Line Style	Thick	Data	Axis	Comment
1	1	Red	Solid	1	Analyzer.Level A	Left	
2	1	Magenta	Solid	1	Analyzer.Level A	Left	

P-PS4LA-PRE TEST: (TEST FOR ATS-2) INPUT: 0dBV BAL @ 1kHz OUTPUT: 1V NO LOAD							
--	--	--	--	--	--	--	--

(2) P-PS4LA-AMP

a. The test specification of P-PS4LA-AMP:

Signal input: 1kHz @ 600Ω -1dBV (LOW)

10kHz @ 600Ω -10dBV (LOW)

Output: Low output: 30V±1.5V 8OHM

High output: 9.5V±1.0V 8OHM

b. Test procedure

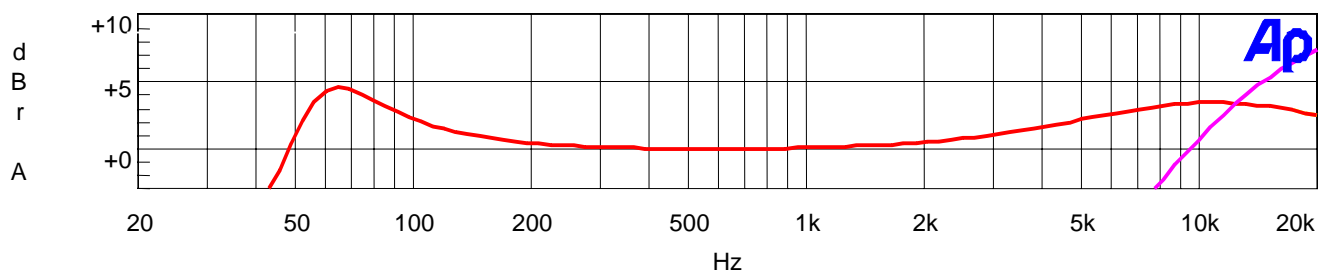
b-1. Check the appearance of PCB first;

b-2: Set power SW at OFF, place the PCB on the instrument;

b-3 Input signal to input socket, check whether the wave shape and output signal voltage of treble and bass are normal;

b-4 Function test of clip: increase the input signal from -1dB to +3Db, CLIP indicator on the instrument will light on. Bass output shouldn't vary with the input signal.

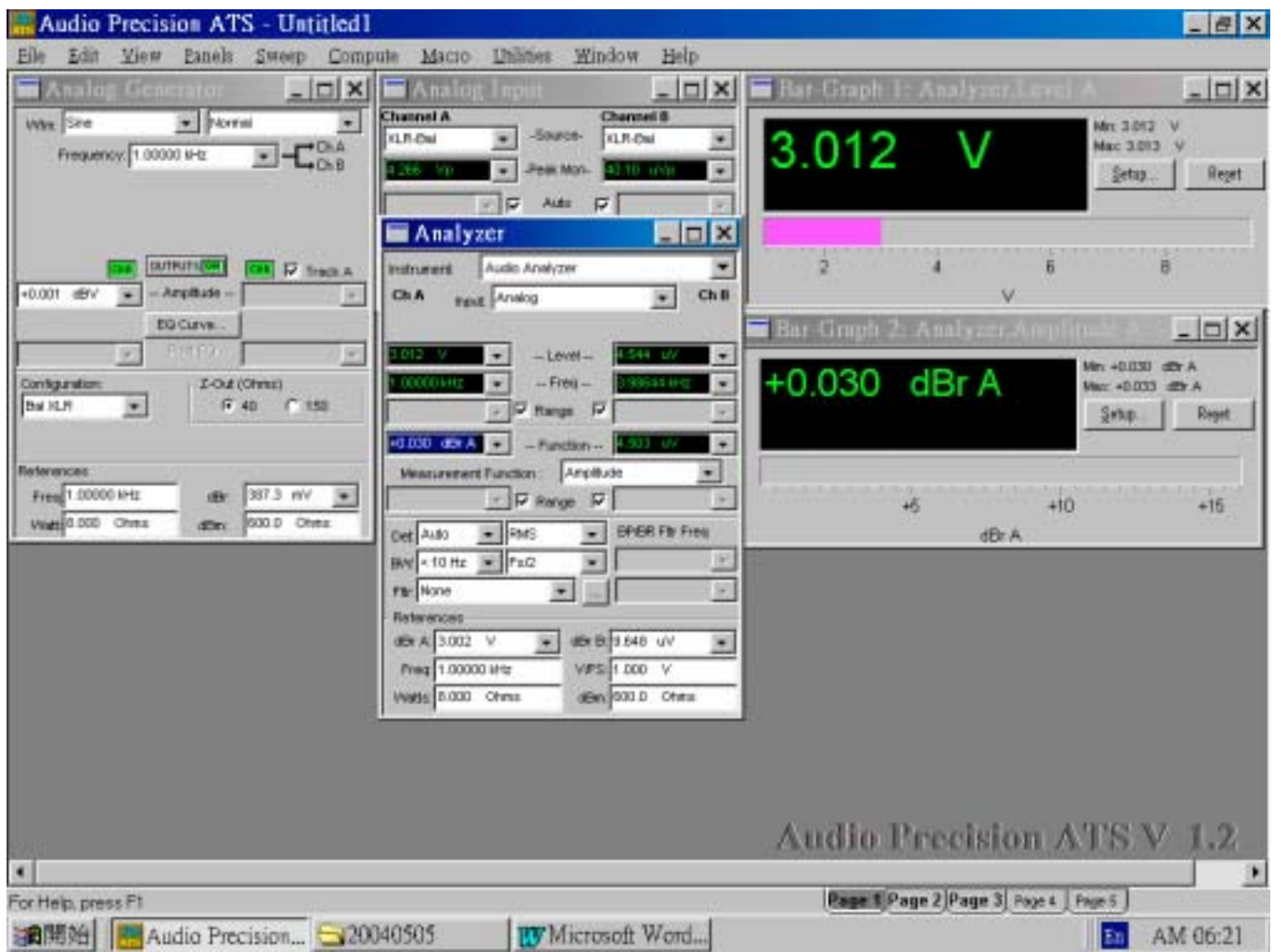
b-5. Test is finished. Set power SW at OFF and remove the PCB from the instrument.



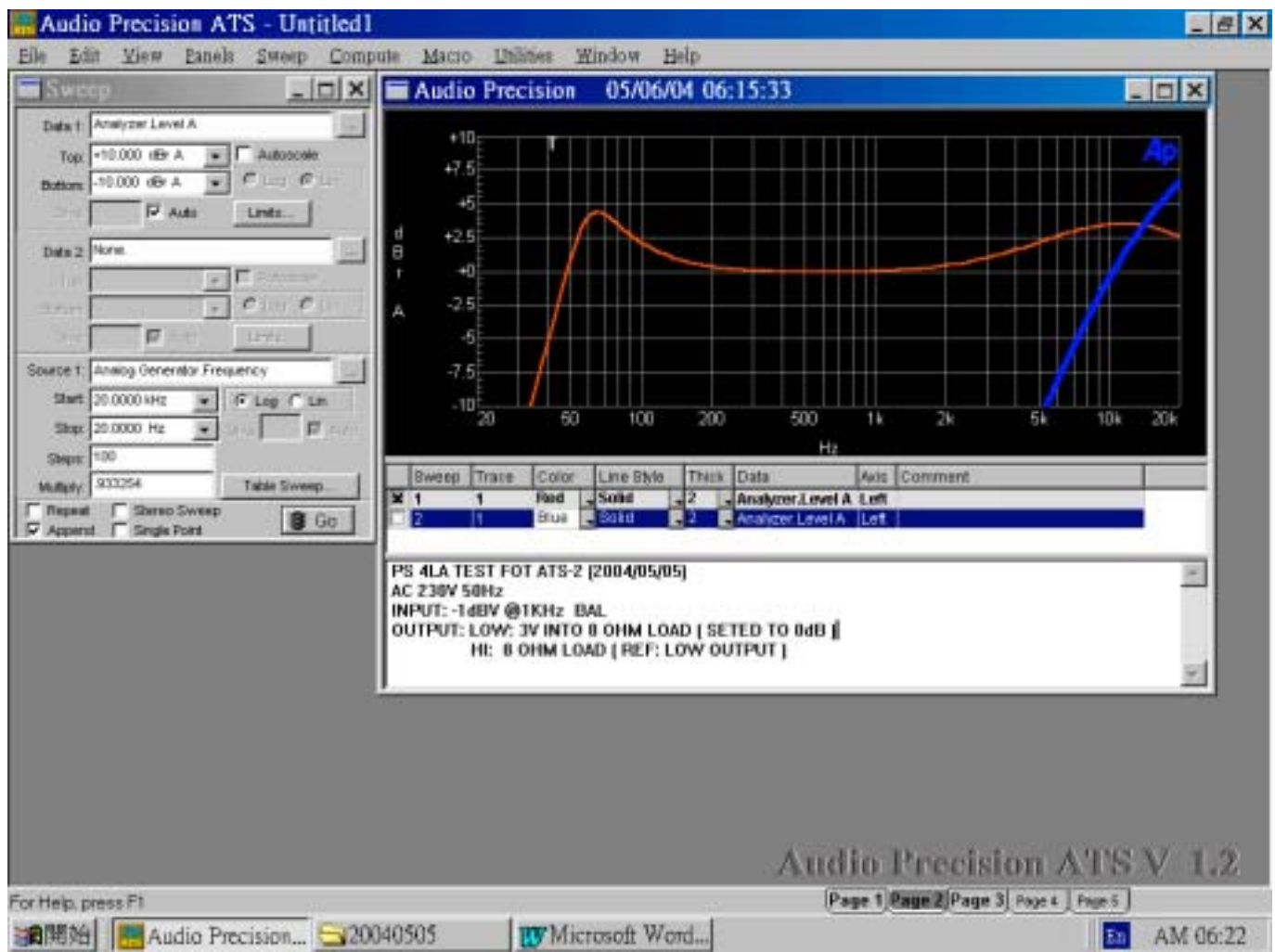
Sweep	Trace	Color	Line Style	Thick	Data	Axis	Comment
1	1	Yellow	Solid	1	Analyzer.Level A	Left	
2	1	Red	Solid	1	Analyzer.Level A	Left	
3	1	Magenta	Solid	1	Analyzer.Level A	Left	

PS4LA-AMP TEST: (TEST FOR ATS-2)							
INPUT: -1dBV BAL @1kHz							
OUTPUT: LOW: 3V INTO 8OHM LOADING							
HI OUTPUT: LOADING 8OHM (REF LOW OUTPUT)							

When test the unit, please set as follows:



The test diagram of frequency response:



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Test Result

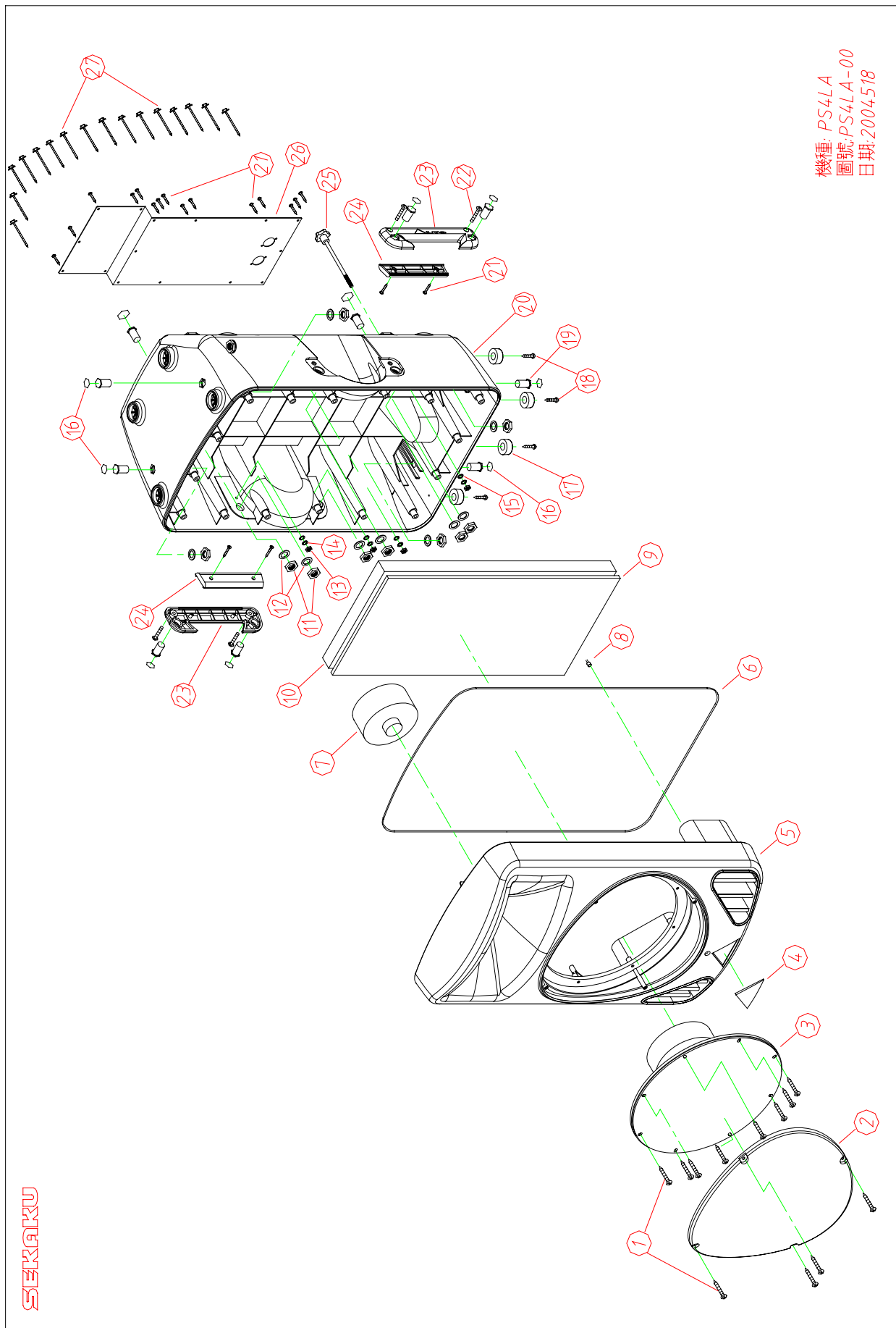
Model No: PS 4LA		Test Date: May, 05, 2004		Tester: LianMingTan	
Test Item		Test Conditions	Spec	Test Result	Remark
1	Power Source		AC: 230V ; 50 Hz		
2	Idle Current	AC _____ V No-Load	_____ mV	_____ mV	
3	Power Consumption	Rated Output. Aux At 1KHz	_____ 1.4 A _____ W	_____ A _____ W	FLAT
4	Rated Output	Low Load : 8	30~31.5 V THD:0.3__	_____ V	Aux At 1KHz FLAT. Rated W
		Hi Load : 8	9.5~12 V THD:0.3__	_____ V	
		Load 16	_____ V	_____ V	
		Load _____ (25V)	_____ V	_____ V	
		Load _____ (50V)	_____ V	_____ V	
		Load _____ (70V)	_____ V	_____ V	
		Load _____ (100V)	_____ V	_____ V	
5	Maximum at Output 10% THD	Aux 1KHz dB Load	_____ W	_____ W	FLAT
7	Hum or Noise	VR Max (Low)	_____ 1.2 mV	_____ mV	
		VR Max (Hi)	_____ 2 mV	_____ mV	
8	Tone control Response	Input From Aux Output At 1W	100HZ: _____ dB	100HZ: _____ dB	
			10KHZ: _____ dB	10KHZ: _____ dB	
9	Puncture Voltage	5mA , 5Sec	3750V	_____ V	
10	MONITOR	Aux 1KHz dB Load			FLAT
	MONITOR NO:	AUX,TAPE,TUNER,CD,MIC1,MIC2			
	CD PLAYER	1KHz 0dB			
	TUNER	AM/FM			
	PRIORITY	MIC1			
	TEL.PAGING	1KHz _____ dB Load _____ V	G-T _____ dB ; G-R _____ dB。	G-T _____ dB ; G-R _____ dB。	FLAT
	ZONE PAGING	100V	ALL/ Z1 , Z2 , Z3 , Z4		
	AC : OUTPUT				
	REMOTE	AC OUT or DC OUT			

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Test Result

Model No : PS 4LA		Test Date:			Tester : LianMingTan	
Test Item		1. Input Sensitivity	2. Signal/Noise	3. Distortion at 1W	4. Distortion at Rated	5. Frequency Response
Test Conditions		FLAT Rated Output 30V Load 8	FLAT Rated Output 30 V Load 8	FLAT Output at 3V Load 8	FLAT Rated Output 30V Load 8	FLAT Output at 3V REF-3 dB Load 8
Test Result						
LINE	Low OUT	-1 ±1 dBV	82 dB	0.35 %	0.03 %	50Hz~20KHz
	Hi OUT	-10 ±1 dBV	78 dB	0.25 %	0.35 %	9.8Hz~20KHz
	TUNER	dB	dB	%	%	
	CD	dB	dB	%	%	
AUX2	AUX	dB	dB	%	%	
	TAPE	dB	dB	%	%	
	TUNER	dB	dB	%	%	
	CD	dB	dB	%	%	
AUX3	AUX	dB	dB	%	%	
	TAPE	dB	dB	%	%	
	TUNER	dB	dB	%	%	
	CD	dB	dB	%	%	
MIC1	MIC	dB	dB	%	%	
	LINE	dB	dB	%	%	
	24V	dB	dB	%	%	
	UNBAL	dB	dB	%	%	
MIC-2	MIC	dB	dB	%	%	
	LINE	dB	dB	%	%	
	24V	dB	dB	%	%	
	UNBAL	dB	dB	%	%	
MIC-3	MIC	dB	dB	%	%	
	LINE	dB	dB	%	%	
	24V	dB	dB	%	%	
	UNBAL	dB	dB	%	%	
MIC-4	MIC	dB	dB	%	%	
	LINE	dB	dB	%	%	
	24V	dB	dB	%	%	
	UNBAL	dB	dB	%	%	

7. Exploded Views & Mechanical Parts List



Model: PS4LA

Parts list

Figure: PS4LA-00

S/N	Part No.	Description	Specification	Qty	Material	Remark
1	MG00545	screw	M4*20	12		
2	MD00441	Iron net	PS4L;PS4H;PS4LA;PS4HA	1		
3	HK03075	Speaker	12*110W6ELVIS12; M(Z00773_LP318.5	1		
4		Nameplate	78.5*47mm	1		
5	NI02930	Panel	PS4HA black PP	1		
6	NI02840	Loop	2*1950	1		
7	HG00131	Speaker	PA-D599 P-AUDIO 8	1		
8	SA00155	LED	3.9V/20mA round blue 3mm	1		
9	ND00303	Dustproof cloth	700*430*2mm black	1		
10	ND00270	Suck radio sponge	700*430*50	1		
11	ME00116	Nut	M14*5*1.0PH_V1.3	10		
12	MF00070	Washer	28* 15*2t_V1.2	10		
13	ME00014	Nut	6*1.0	4		
14	MF00035	Washer	6.5* 11*0.5t	4		
15	MF00032	Washer	6.3* 13.1t	4		
16	NE12058	Label	0.3tPC	10		
17	NI02728	Rubber foot	29.5*14 black	4		
18	MG00031	Screw	M4*12	4		
19	MG00411	Screw	M14*26*1.0PH	10		
20	MI02931	Speaker cover	PS4HA black PP	1		
21	MG00063	Screw	M3*12	19		
22	MG000456	Screw	M6*22*10PH	4		
23	MI02732	Handle	13*56.94*218.23PS4HA black	2		
24	NI02733	Handle cover	10.8*34*147 PS4HA black	2		
25	MG00414	Screw	M6*18*1.0PH	1		
26	HK04204	Faceplate	PS4LA_ALTO)_230V	1		
27	MG00467	Screw	M4*50	16		

8. BOM

No.	Part No.	Description	Specification	Remark
1	MG00454	screw	M4*20	
2	MD00441	iron net	PS 4L;PS 4H;PS 4LA;PS 4HA	
3	MD00442	iron net	PS 4HA 1.2t* 4*5.6PH*60°	
4	MD00481	iron net	1.2t*390*370mm_V1.2	
5	HK03075	speaker	12" 110W 6 ELVIS 12;M(Z00773_LP318.50)	
6	HG00076	voice coil-RS	A0740A BA 50-36-250/12-5	
7	NH00242	paper	B0710B_CN 318.50T3 Z5 45HZ	
8	NH00243	cushion	C0810A_GR 318/6+2	
9	ND00215	SPIDER-RS	D0777A_CT 50-150/3 C5	
10	NH00241	cover	E0533A_CP 98/C	
11	HK03050	magnet circuit	F0741B_CM 50/1100.8 F18 V	
12	MH01567	T type middle pillar	H0722A_PN 50/1100.8 D18	
13	MH01568	WASHER	I0710A_PS 50/1100.8V_V1.2	
14	MH01566	magnet	G0425A D134*57*19	
15	MI01517	bracket	L0710B_CR 318/VN	
16	HC00426	terminal	M0021B_PT2.1	
17	HC00496	connect terminal	0.8*13*16.3mm	
18	HC00495	connect terminal	0.8*13*16.3mm	
19	NI02583	terminal block	3.5*24.5*3t	
20	MH01110	rivet	M0500A_OU-30	
21	HA02493	strand	TA4X4YKA42W*110mm	
22	HA02079	strand	TA4X4YKA42W*1M	
23	ND00227	sponge	S0721B_NYLON NET D35	
24	NE11169	label	HK 12 ALTO	
25	NH00012	bond paper	0.04*1M	
26	NI00014	membrane	0.035*1M	
27	HG00131	speaker	PA-D599 P-AUDIO 8	
28	HA02814	wire	2P 900mm UL1007 28AWG red black	
29	NI00246	sleeve	3*20mm	
30	NI00243	sleeve	3*1000mm	
31	SA00052	L.E.D	3 round(green)long foot 26	
32	NI02930	plastic panel	PS 4HA black PP	
33	NI02730	plastic panel	PS 4HA PP 3.938+0/0.1Kg_V1.2	
34	ME00157	nut	38*48_V1.0	
35	NI02931	rear cover	PS 4HA black PP	

No.	Part No.	Description	Specification	Remark
36	NI02731	rear cover	PS 4HA PP 6.288Kg+0/0.1kg_V.1.4	
37	ME00114	nut	12*19	
38	NI02840	O-shape loop	2*1950	
39	ND00387	Dustproof cloth	700*430*0.35mm black	
40	ND00270	absorb sound sponge	700*430*50	
41	HA02520	single terminal wiring	750mm UL1015 18AWG	
42	HA02320	single terminal wiring	800mm UL1015 18AWG	
43	NI03275	stopper	18.36*15.9*9.1 black_V1.0	
44	NE12058	label	0.3tPC	
45	NI02728	rubber foot	29.5*14 black	
46	MG00031	screw	M4*12	
47	MG00063	screw	M3*12	
48	MG00414	screw	M6*18*1.0PH	
49	NI02970	plastics head	30.5* 14*31.5mm black	
50	MG00412	screw	M6*134*1.0PH	
51	HK04204	faceplate	PS 4LA_ALTO_230V	
52	MA05053	panel	PS 4LA 220-240V ALTO_V1.1	
53	MA04658	panel	PS3A_V1.1	
54	MA04659	panel	PS 4LA 1.5t*466*179*21.5mm_V1.1	
55	MJ00088	single light board	1.5*2135*1220 30.67kg	
56	MI00316	connect terminal	PFM-15SA	
57	MJ00747	single light board	0.8t*21.6mm*100M 22.5kg	
58	ME00106	iron pillar	M3*24*0.5PH_V1.1	
59	TD00258	transformer	PT-4LA_230V	
60	HI00019	power switch	4P MSR-8	
61	HC00008	AC socket	3515 A TYPE(RF-2004-C-4.8)	
62	NI01862	key	5.5*5.5*12.8	
63	NI01863	key-RS	5.5*W10*7.5	
64	NI02386	knob	14*13mm	
65	NI00440	rubber coil	20* 105*2tB	
66	NI00442	rubber coil	20* 85*2tB	
67	MH00772	iron piece	8* 80*1.2	
68	MH00774	iron piece	8* 80*1.2_V1.1	
69	MJ00059	single light board	1.2*2135*1220 24.54kg	
70	MG00510	screw	M6*65*1.0PH	
71	ME00014	color nut	6*1.0	
72	MF00051	washer	6.3* 19*1t	

No.	Part No.	Description	Specification	Remark
73	MF00040	washer	6* 10*1.5t	
74	HA03308	wire	150mm UL1015 18AWG white	
75	HA01252	wire	80 green/yellow	
76	MG00024	screw	M3*7 0.5PH	
77	MG00042	screw	M3*10	
78	MG00327	screw	M3*10*0.5PH	
79	ME00060	MIC jack	JY-6351G-02-250	
80	MF00014	washer	3* 6.5*0.5t	
81	MF00061	MIC jack	9.6* 13*0.5t	
82	MJ00808	fixed clip	WL3-32T	
83	NI00218	cable tie	ALT-102SB	
84	HK04208	PC board	P-PS4LA-PRE	
85	HB01321	PCB	PS 4LA-PRE_VER041028	
86	RA00639	fixed resistor 1/8W	1.0K M type	R5,R8
87	RA00643	fixed resistor 1/8W	2.2K M type	R4
88	RA00651	fixed resistor 1/8W	10K M type	R1,R2,R6,R7,R9
89	RA00660	fixed resistor 1/8W	56K M type	R3
90	RA00159	fixed resistor 1/4W	10 M type	R10
91	RA00142	fixed resistor 1/2W	15K M type	R13
92	RA00061	metal-oxide-film resistor 3W	820 RSS P type	R11,R12
93	RC00323	potentiometer	B50K RV09BC-40-35F-B50K	VR1
94	CA00003	ceramic capacitor	10PF NPO	C12
95	CA00012	ceramic capacitor	33PF NPO	C11
96	CF00022	metal-film capacitor MSC	0.022uF/100V 5% CASE01	C13
97	CF00036	metal-film capacitor MSC	0.15uF/63V	C4,C2
98	CF00014	metal-film capacitor MEC	0.01uF/400V 10%	C15
99	CH00017	laminated capacitor	0.1uF/50V Y5V PH5	C6,C7
100	CB00185	electrolytic capacitor	10uF/63V 5*11mm	C14
101	CB00033	electrolytic capacitor	22uF/25V 6*7mm	C1,C8
102	CB00056	electrolytic capacitor	220uF/25V 8*11mm	C9,C10
103	SA00107	zener diode	1W 15V 1N4744	Z1,Z2,Z3,Z4,Z5,Z6
104	SA00072	L.E.D	3 red LI2340/A	
105	SD00010	integrated circuit	JRC NJM2068LD	U1
106	HC00065	connector(male)	2P 2.5mm 90°	J3
107	HA01925	jump	10mm	JMP1,JMP2,JMP3
108	HA02249	wire	0.6	
109	HI00162	push-button switch	2 paragraphs 6p PS-22E8552L	SW1

No.	Part No.	Description	Specification	Remark
110	HC00392	balance MIC jack	JY-5030-030G 180°	J2
111	HC00371	MIC jack	SCJ-0658-1-Y	J1
112	NI02532	LED spacer support	LEDS-22 22mm	DL1
113	CF00030	metal-film capacitor MSC	0.1uF/63V 5% CASE01	C3,C5
114	HA03180	wire	3130-10P female 250mm	
115	NI02516	cushion	4*8mm PW-2	
116	AC00002	solder wire	63/37%	
117	HK04209	PC board	P-PS4LA-AMP(4LA)	
118	HB01259	PCB	PS 4LA-AMP_VER040707	
119	RA00672	fixed resistor 1/8W	150 M type	R9
120	RA00636	fixed resistor 1/8W	560 M type	R2,R5
121	RA00639	fixed resistor 1/8W	1.0K M type	R3,R17
122	RA00651	fixed resistor 1/8W	10K M type	R1,R4,R6,R7,R11,R16
123	RA00656	fixed resistor 1/8W	27K M type	R14
124	RA00657	fixed resistor 1/8W	33K M type	R15,R8
125	RA00665	fixed resistor 1/8W	220K M type	R12
126	RA01107	fixed resistor 1/8W	470K M type	R18
127	RA00159	fixed resistor 1/4W	10 M type	R13
128	CA00003	ceramic capacitor	10PF NPO	C13,C16,C18
129	CA00073	ceramic capacitor	56PF NPO	C11
130	CA00029	ceramic capacitor	220PF Y5E	C23,C25
131	CA00092	ceramic capacitor	560PF Y5E	C14
132	CA00074	ceramic capacitor	0.01uF/25V Z5V	C21
133	CF00030	metal-film capacitor MSC	0.1uF/63V 5% CASE01	C22,C24
134	CH00017	laminated capacitor	0.1uF/50V Y5V PH5	C2,C5,C6,C12,C15,C17
135	CF00035	metal-film capacitor MPX	0.1uF/275V	C28
136	CB00025	electrolytic capacitor	10uF/50V 6*7mm	C19,C20
137	CB00050	electrolytic capacitor	100uF/50V 8*11mm	C1,C3,C4,C8,C9,C10
138	CB00056	electrolytic capacitor	220uF/25V 8*11mm	C7
139	CB00095	electrolytic capacitor	6800uF/50V 25*40mm	C26,C27
140	SA00120	zener diode	1/2W 8.2V 9A2	Z1
141	SB00059	transistor	BC327-25	Q1
142	SD00035	integrated circuit	LM3886TF(NS)	U1,U2,U3
143	HC00324	connect terminal	6.5m/m (PC250)	T1,T2,T3,T5,T6,T7,T8
144	HC00504	connector(male)	10P 2.54mm 180°	CN1
145	SA00009	bridge rectifier	BU10-04 10A/400V	BR1
146	HA01920	jump	6mm	R10

No.	Part No.	Description	Specification	Remark
147	HA02249	wire	0.6	
148	NI00218	cable tie	ALT-102SB	
149	MI00208	heat-sink(black)	26.5*28*9	
150	MG00027	screw	M3*12	
151	ME00015	color nut	3m/m	
152	MF00030	washer	3.5* 8*0.8t	
153	MF00037	washer	3.2* 5.5*1t	
154	HK02231	Photodiode	P-photosensitive resistance	5LLED
155	RH00020	photosensitive resistance	VT90N1	
156	SA00201	L.E.D	5 red(LI3330/A)	
157	NI02779	sleeve	9*30mm	
158	NI00274	sleeve	9*1000mm	
159	AC00002	solder wire	63/37%	
160	HD00028	glass tube fuse	2A 250V 5.2*20mm CSA/S/UL/VDE	
161	HH00036	lamp	SK3/CWT 12.8V 2.1A	
162	MI02685	heat-sink	PS-4LA 4.5*162*40*160_V1.0	
163	MI02076	heat-sink	4.5*162*40*160 PS 4LA_V1.1	
164	MI02457	heat sink	162*40*4070 ±5 23.729kg_V1.0	
165	MI00527	fixed bracket	SCA-200	
166	MJ00061	iron board	1*2135*1220 20.45kg	
167	MF00030	washer	3.5* 8*0.8t	
168	MF00037	washer	3.2* 5.5*1t	
169	MG00027	screw	M3*12	
170	MG00467	screw	M4*50	
171	HA00861	power cord Europe 3P	LT-312+LT-501	
172	NI02250	MIC jack	17* 23.5*9	
173	NF00061	assurance card	ALTO	
174	NE11750	label	ALTO PC	
175	NH00334	cone paper	0.04*1m	
176	NE12936	label	PS 4LA_V1.0	
177	NH00012	bond paper	0.04*1M	
178	NI00014	membrane	0.035*1M	
179	NB02786	box	PS 4H;4HA 4L;4LA;3;3A ALTO_V1.9	
180	NA00192	bag	0.05t*1200*800mm	
181	ND00339	sponge	25*25*25mm	
182	NE04372	label	red	
183	NI02598	membrane	125mm	

No.	Part No.	Description	Specification	Remark
184	NH00252	paper	130mm	
185	NF01969	instruction	PS 4L;4LA ALTO_V1.1	
186	NH00149	paper	889*640mm	
187	NB02953	cardboard	PS 4H;4HA;4L;4LA_V1.0	
188	NB02954	cardboard	PS 4H;4HA;4L;4LA_V1.0	
189	NB02955	barrier	PS 4H;4HA;4L;4LA_V1.0	
190	NI03180	drop glue nameplate	PS4L;4LA ALTO 3005C_V1.0	
191	NA00279	clip-chain bag	0.04t*100*150mm_V1.0	
192	AD00012	twin adhesive	90*120mm_V1.0	
193	MF00089	washer	PS 4HA_V1.2	
194	MF00070	washer	28* 15*2t_V1.2	
195	MJ01154	single light board	2.0t*1850*950mm 27.6kg	
196	MG00411	screw	M14*26*1.0PH	
197	ME00116	nut	M14*5*1.0PH_V1.3	
198	MG00456	screw	M6*22*1.0PH	
199	ME00014	color nut	6*1.0	
200	MF00035	washer	6.5* 11*0.5t	
201	MF00032	washer	6.3* 13*1t_V1.0	
202	MF00107	washer	6.3* 13*1t_V1.0	
203	MJ00058	single light board	1*2135*1220 20.45kg	
204	NI02732	handle	13*56.94*218.23 PS 4HA black	
205	NI02733	handle cover	10.8*34*147 PS 4HA black	
206	MG00582	screw	M3*12	
207	NE12810	label	PS 4LA ALTO_V1.1	