

Service *Manual*

MODEL: DPA 900/1500



www.altoproaudio.com

Version 2.0

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1. Introduction

ALTO MISTRAL amplifiers are series of innovative design power amplifiers. This series work under high stability with great power supply in just 2-rack spaces. Air flow is from back to front panel to keep in a nice air circulation inside the Rack. The automatic fan, which affects machines' temperature includes various kinds of speed, therefore, this low-noise fan makes a good result in cooling the heat from machines.

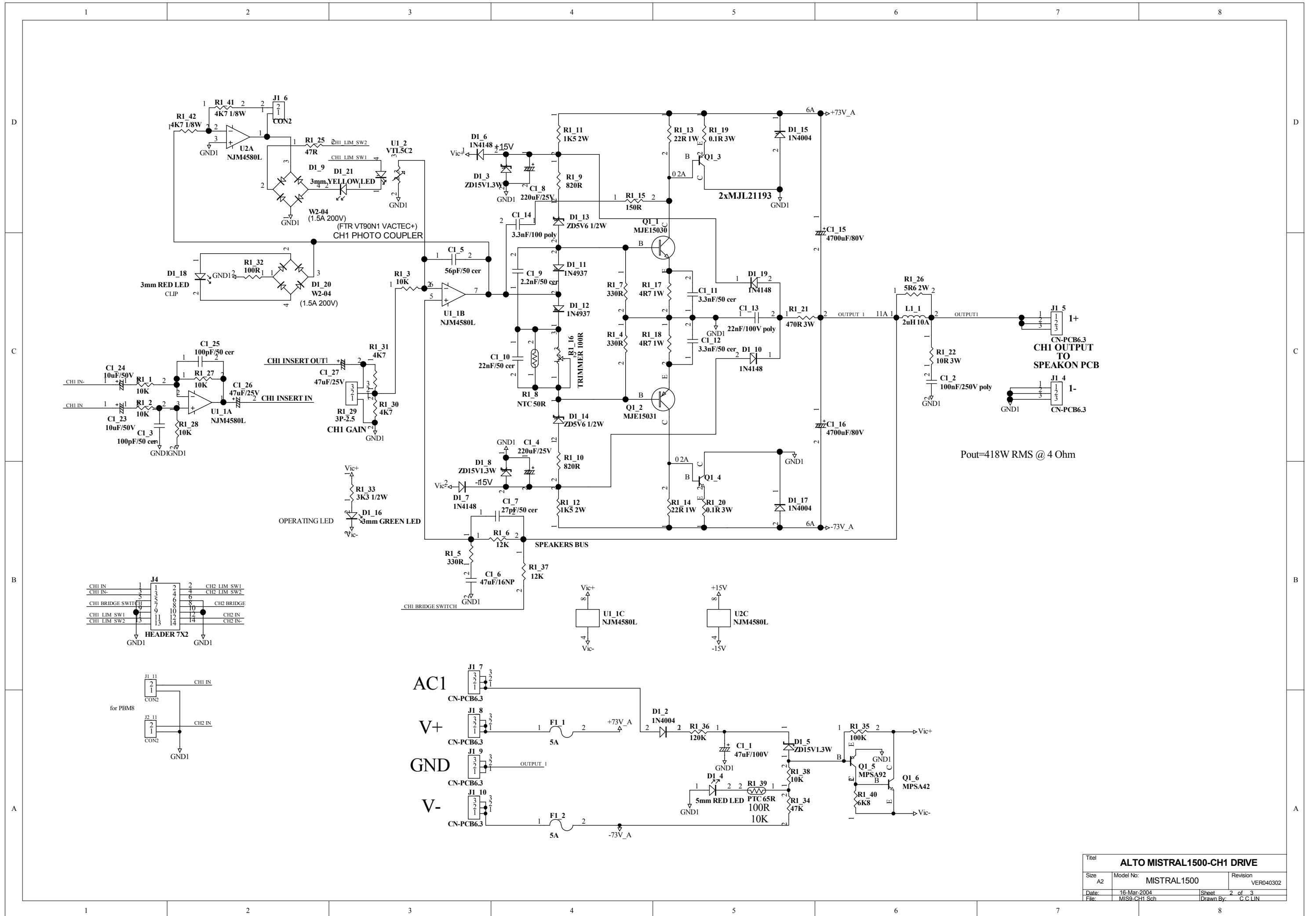
MISTRAL amplifiers include 2 independent channels with separate protection system and power supply. The independent protection system avoids opening circuit, short, wrong loading or over-heating. The special-designed protective system applies automatically restarting functions upon the default status and then goes back to normal.

All electronic inputs equip standard power connectors. And all inputs are electronic balanced, with hi-quality transformer, MISTRAL amplifiers provide an outstanding performance in any conditions.

- Innovative design and high stability power amplifiers.
- Fan-cooled AB class high power amplifier in 19"rack, 2Usize
- Rugged amplifiers in a strong, compact chassis.
- 2 independent channels with separate protection system and power supply
- smart-designed protection system for auto re-operation after fault.
- Auto-adjusting speed fan.
- 4LEDs for operation/protection, limit, power on and clip
- HIGH-CURRENT TOROIDAL TRANSFORMER DESIGNED FOR HIGH POWER AT 2 Ohms with low noise.
- Independent DC and thermal overload protection on each channel.
- IEC standard power connectors.
- Binding post and NEUTRIK® SPEAKON outputs power connectors.
- Balanced XLR inputs/ parallel outputs.

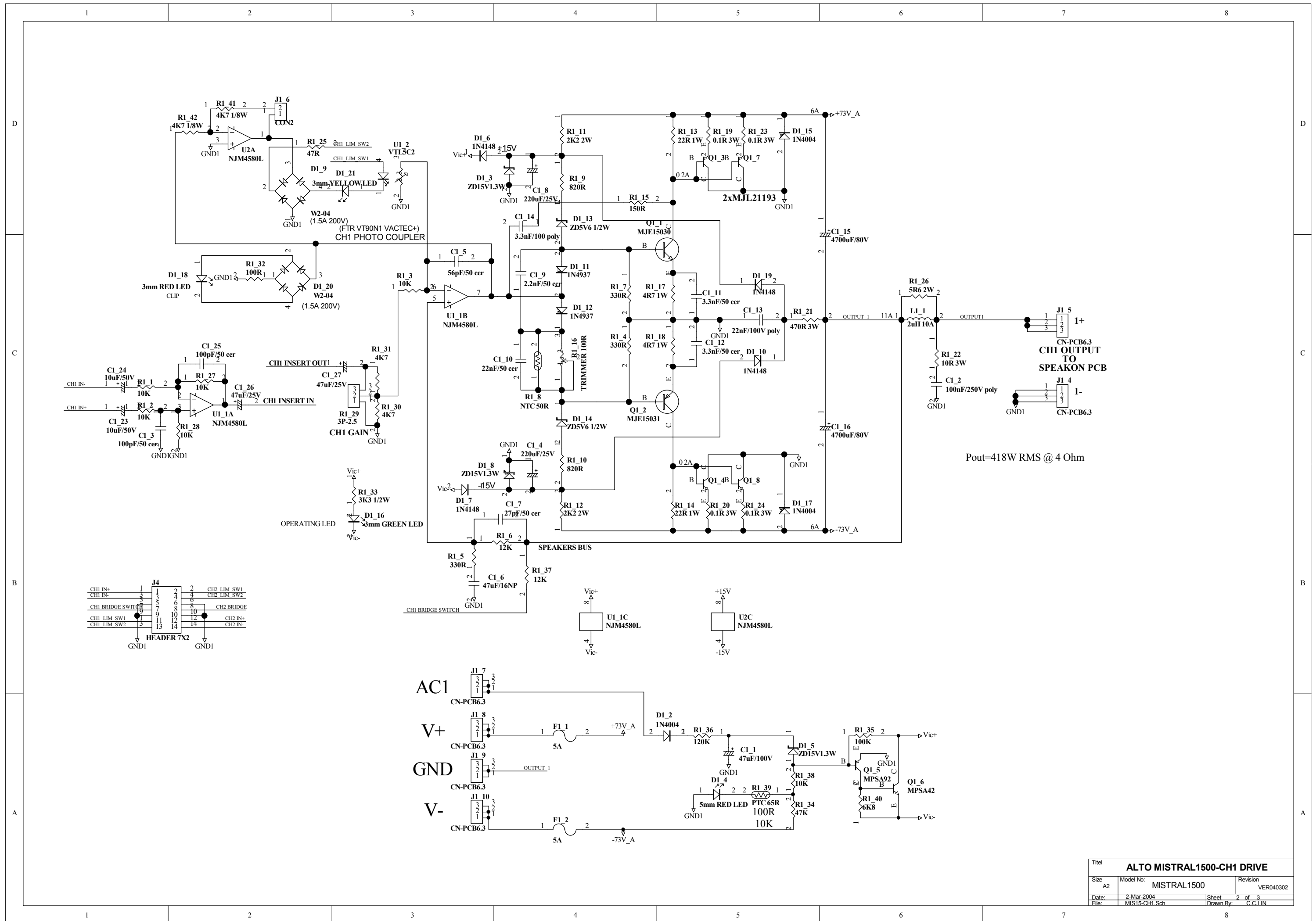
2. Specification

Output Power	DPA 900	DPA 1500
20Hz-20KHz @0.1% THD, SCD MODE		
8Ohms per channel(EIAJ)	190W	300W
4Ohms per channel (EIAJ)	300W	500W
Bridge MONO mode		
8Ohms ,1KHz, 0.1% THD	600W	1000W
Distortion (SMPTE-IM)	<0.05%	
Frequency response	20Hz-20KHz=/ \pm 0.1dB, -3dB points:10Hz-60Hz	
Damping factor ,1 kHz and below	>300 at 8 Ohms	
Signal to noise ,20Hz`20KHz	102dB	
Voltage Gain	40 X(32dB)	
Input sensitivity @4Ohms	1Vrms	
Input clipping	10Vrms(+22dB)	
Input impedance	10kOhms unbalanced, 20k Ohms balanced 56(36dB)	
Controls	Front :AC switch ,CH1&CH2 Gain knobs Rear :Limiter bridge selector	
Indicators (1per channel)	Power-on : Blue LED Operation/Protection: Dual Color(green/red LED) Limit: Red LED Clip: Red LED	
Connectors, each channel	Input: Active balanced XLR Parallel output: XLR Output: NEUTRIK speaker and binding posts	
Cooling	Continuously variable-speed fan, rear-to front air flow	
Load protection	On/off muting, DC-fault load grounding relay, internal fault fuses.	
Power requirements	200-240(100-120)VAC 50-60Hz	
Dimensions	19"(48.3cm) rack mounting, 3.5"(8.9cm) tall (2rackspaces) 15.9"(40cm)deep (rack mounting to rear support ears)	
weight	12.9kg (Net)	14.8kg (Net)

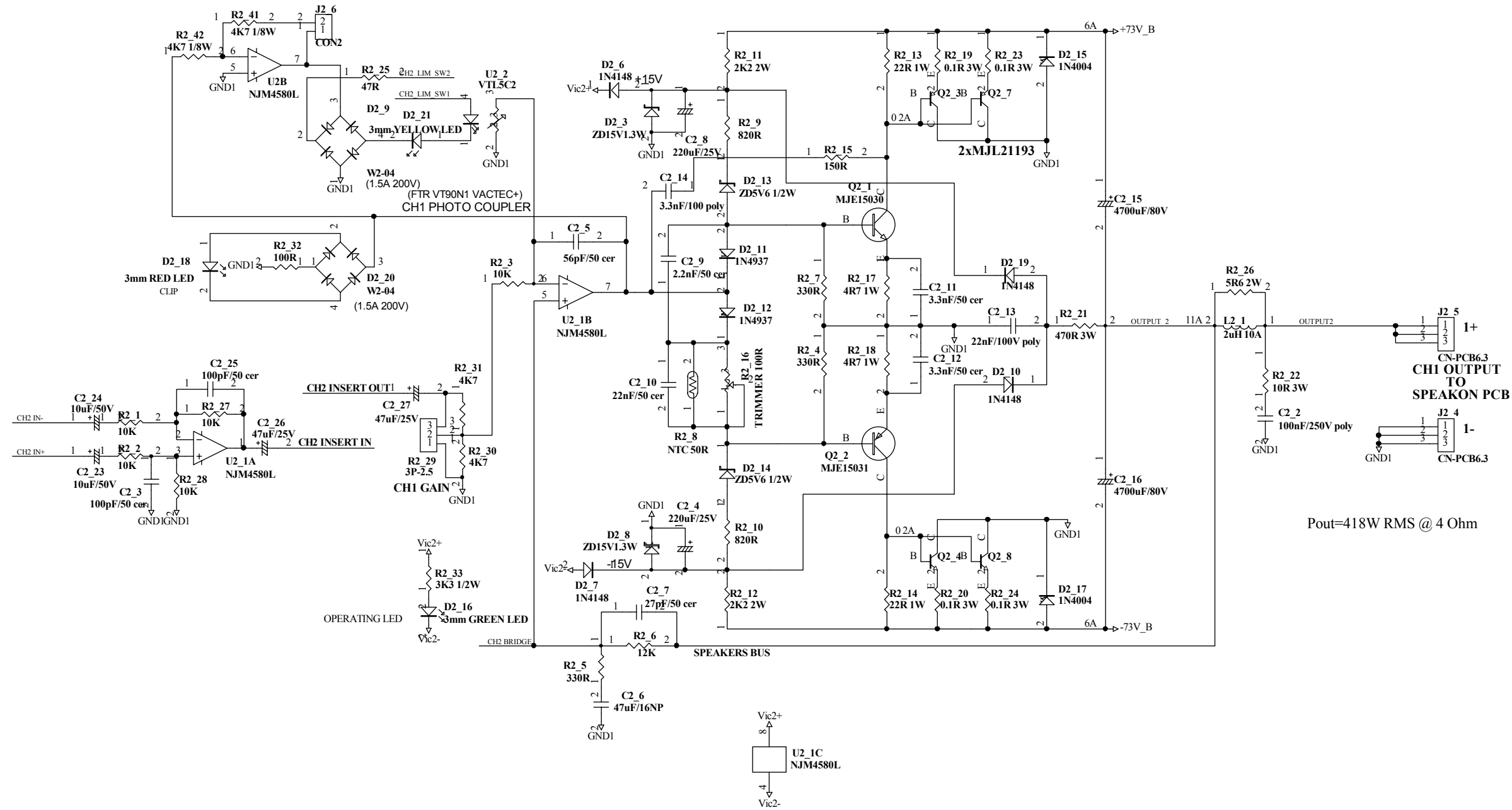


Pout=418W RMS @ 4 Ohm

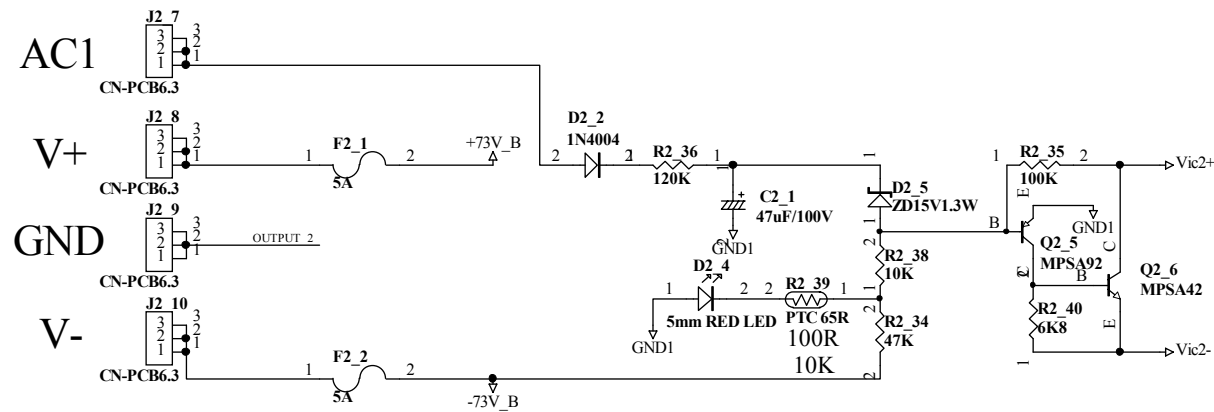
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ALTO MISTRAL1500-CH1 DRIVE		
Size	Model No:	Revision
A2	MISTRAL1500	VER040302
Date:	16-Mar-2004	Sheet 2 of 3
File:	MIS9-CH1 Sch	Drawn By: C.C.LIN



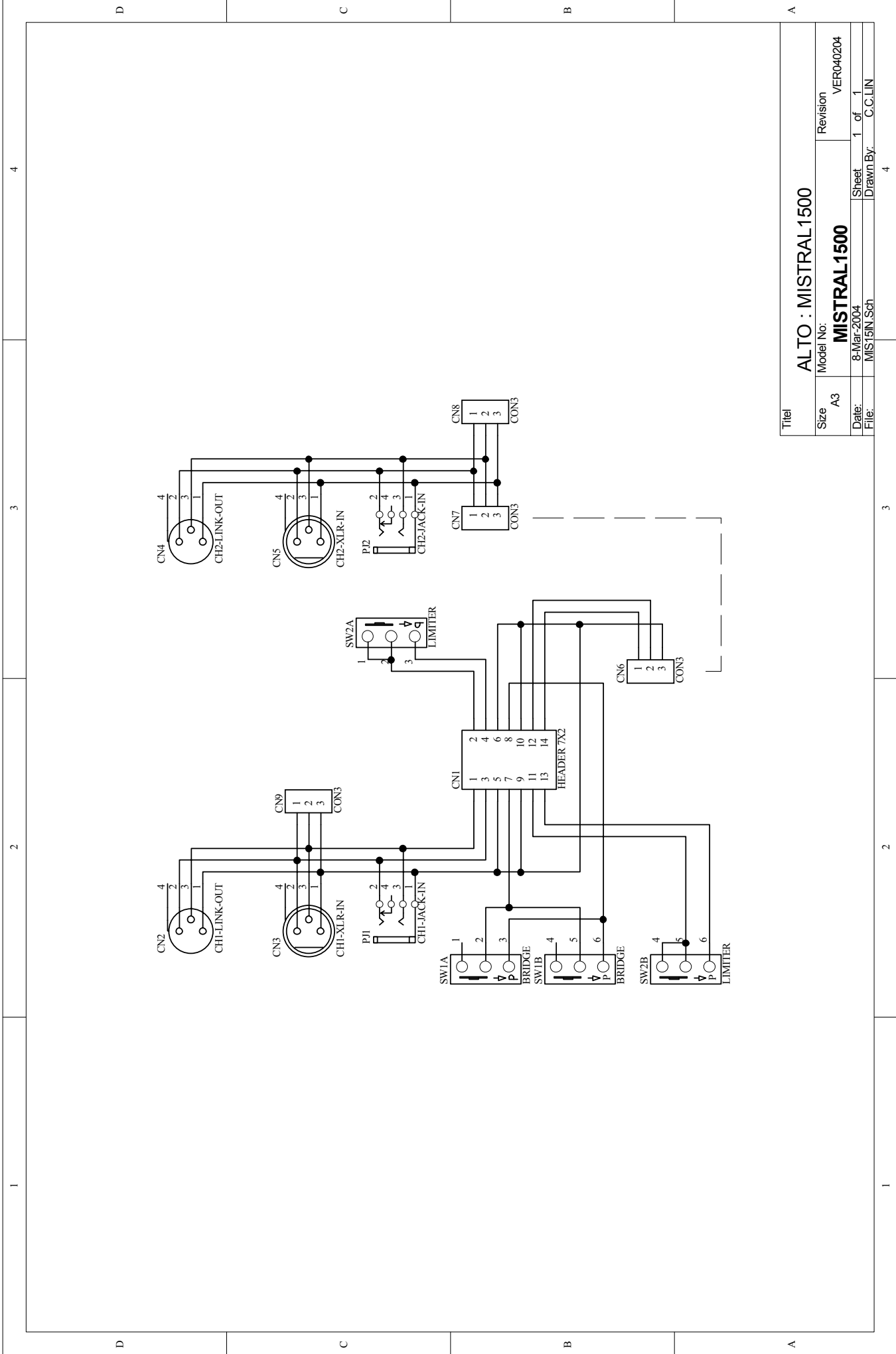
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File:	MIS15-CH1.Sch	Drawn By:	C.C.LIN		



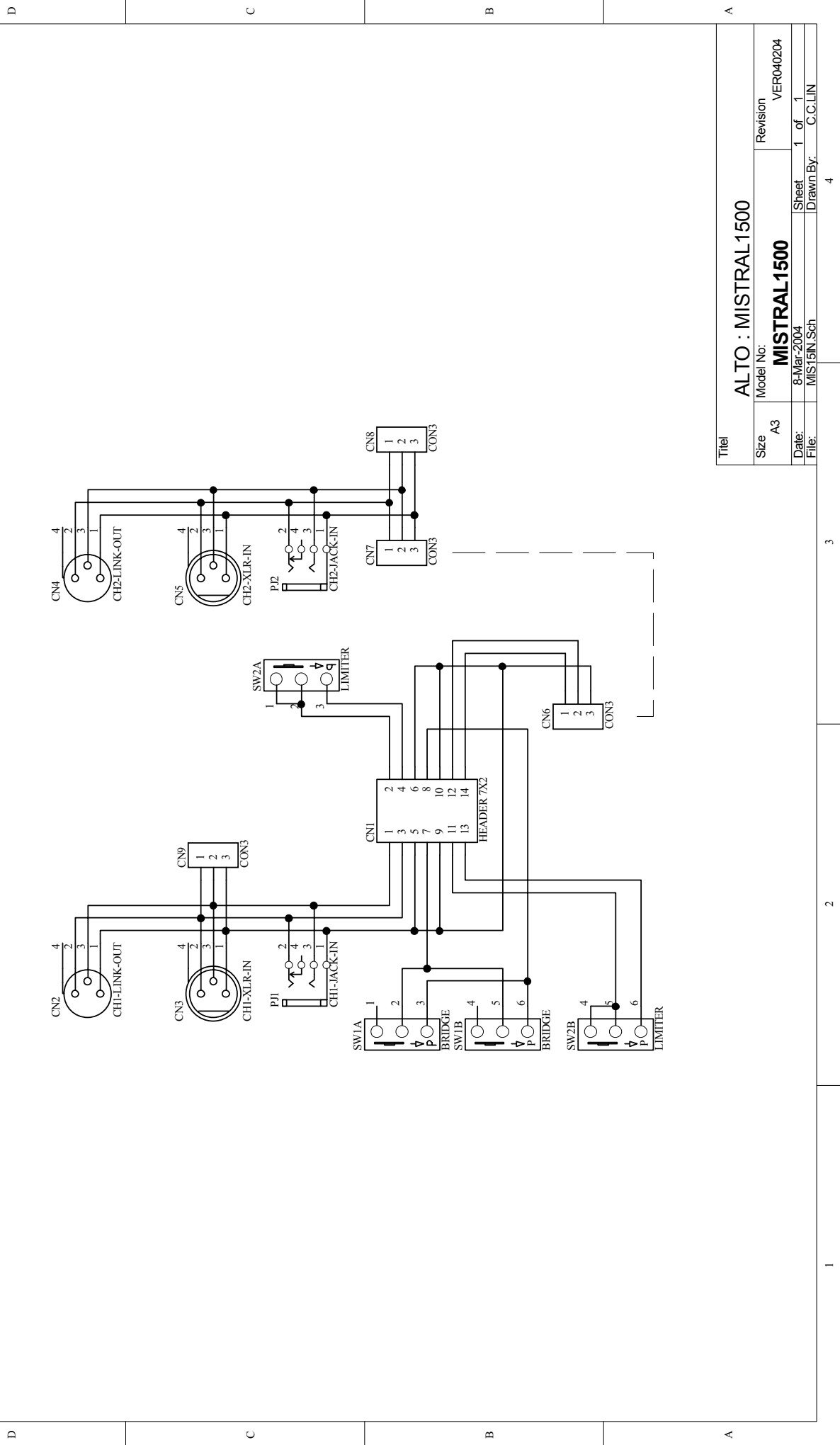
Pout=418W RMS @ 4 Ohm

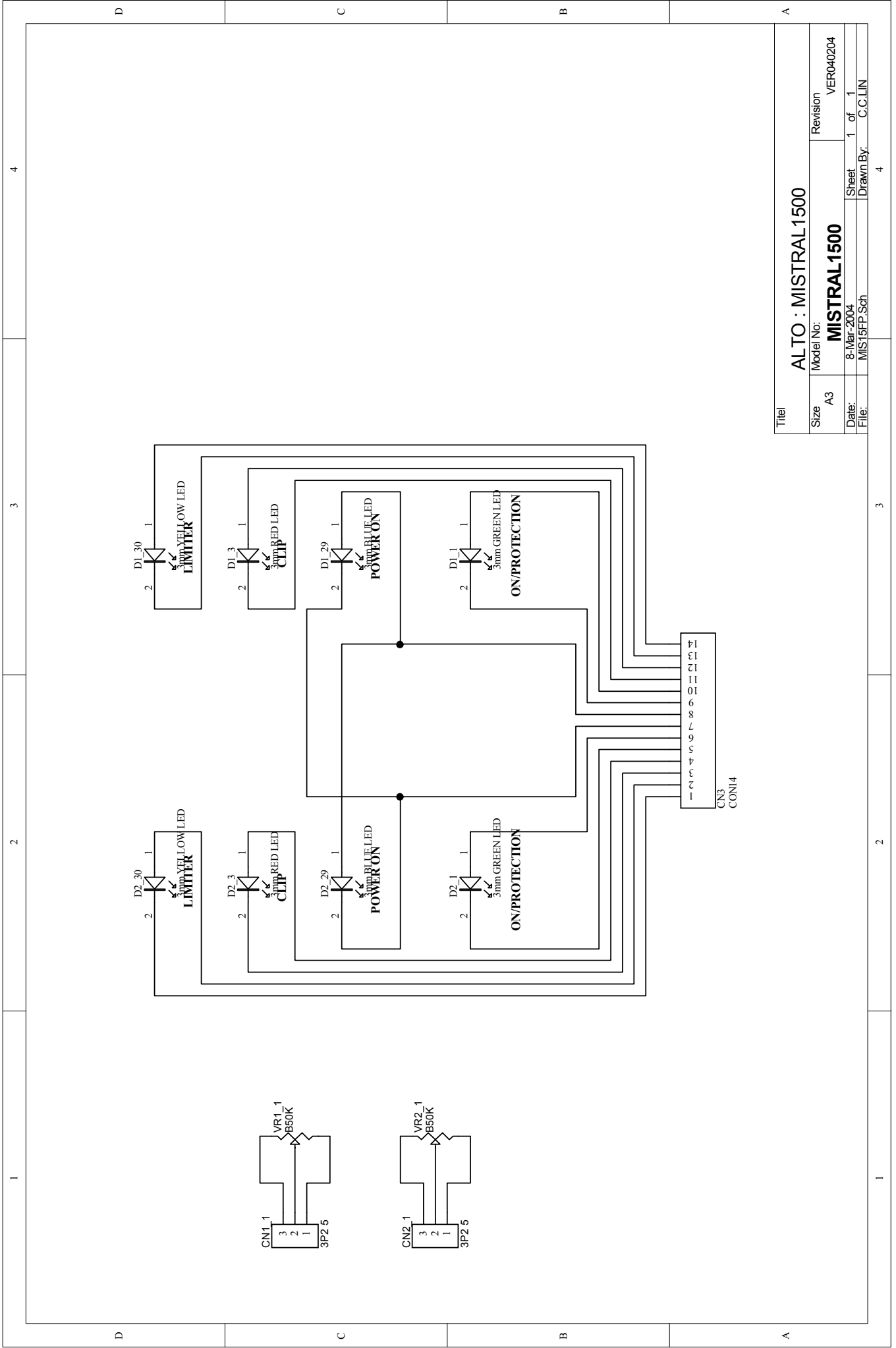


Titel		
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Date:	2-Mar-2004	Sheet 3 of 3
File:	MIS15-CH2.Sch	Drawn By: C.C.LIN

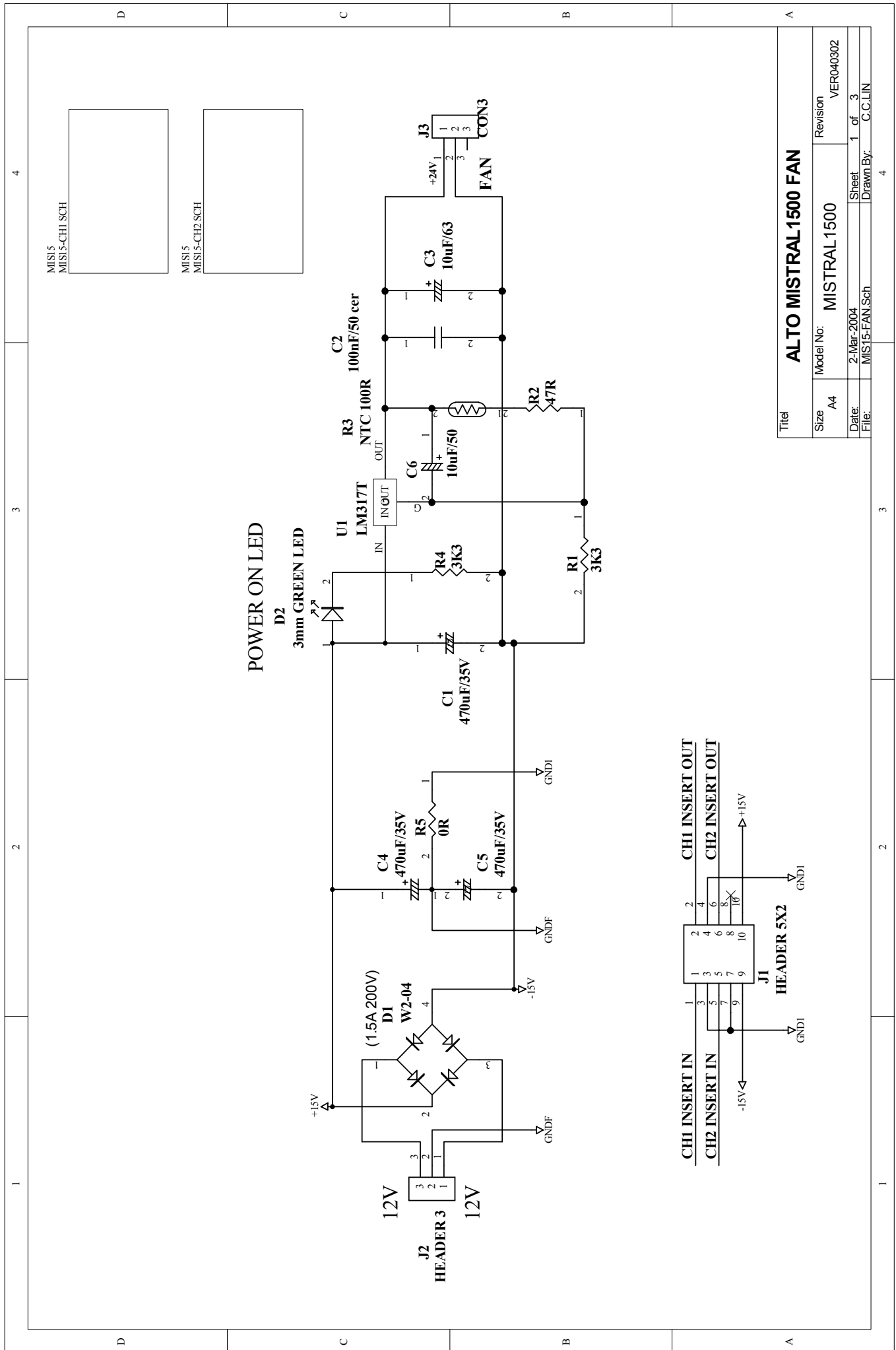


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		Drawn By:	C.C.LIN





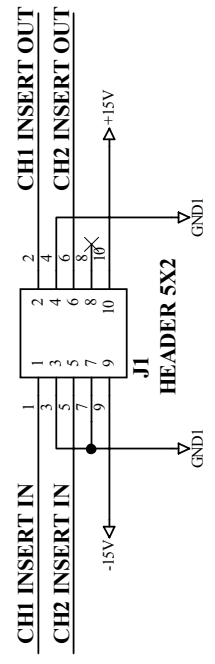
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Size	A3	Model No:	MISTRAL 1500
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		Drawn By:	C.C.LIN

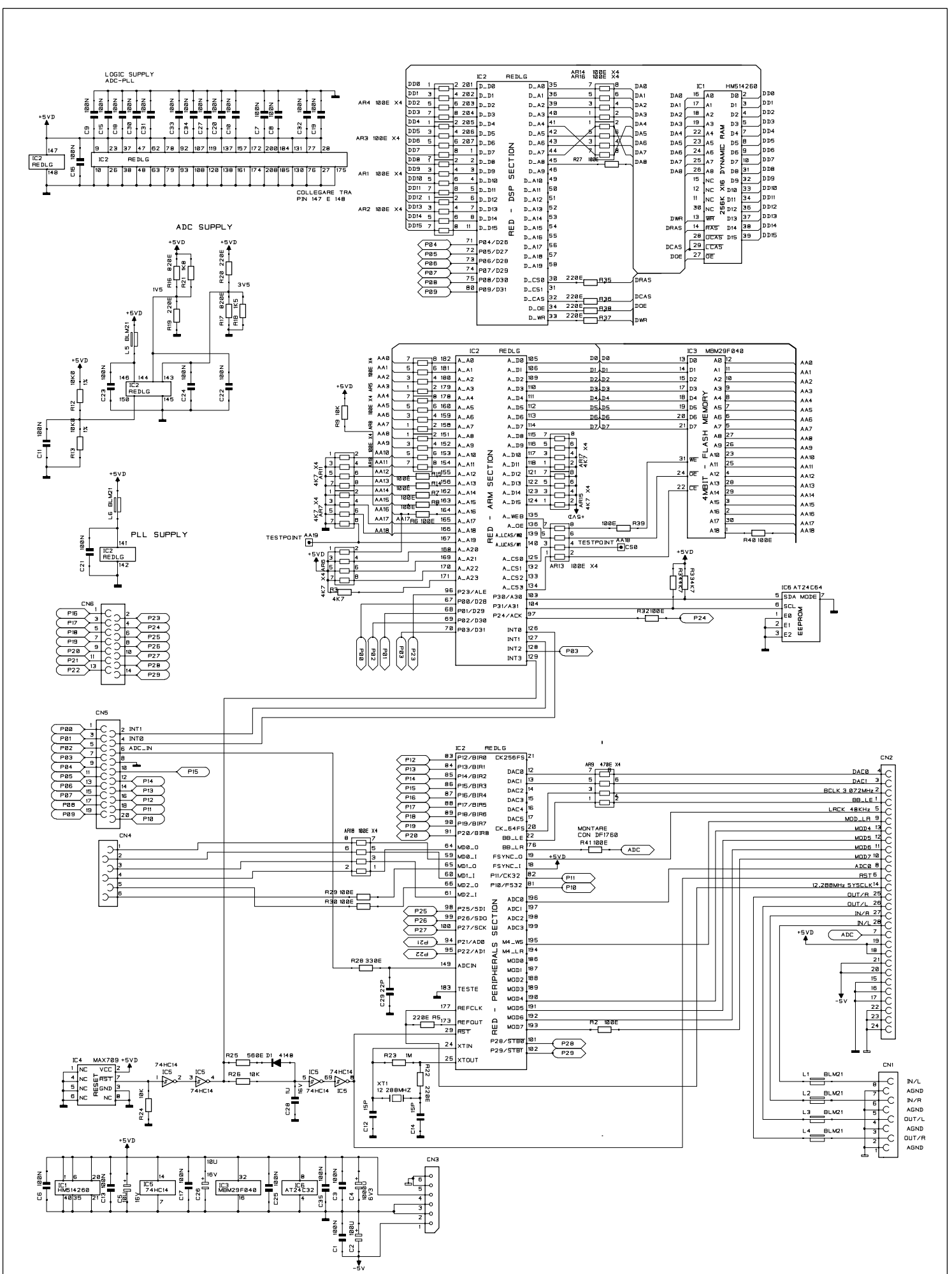


MIS15
MIS15-CH1 SCH

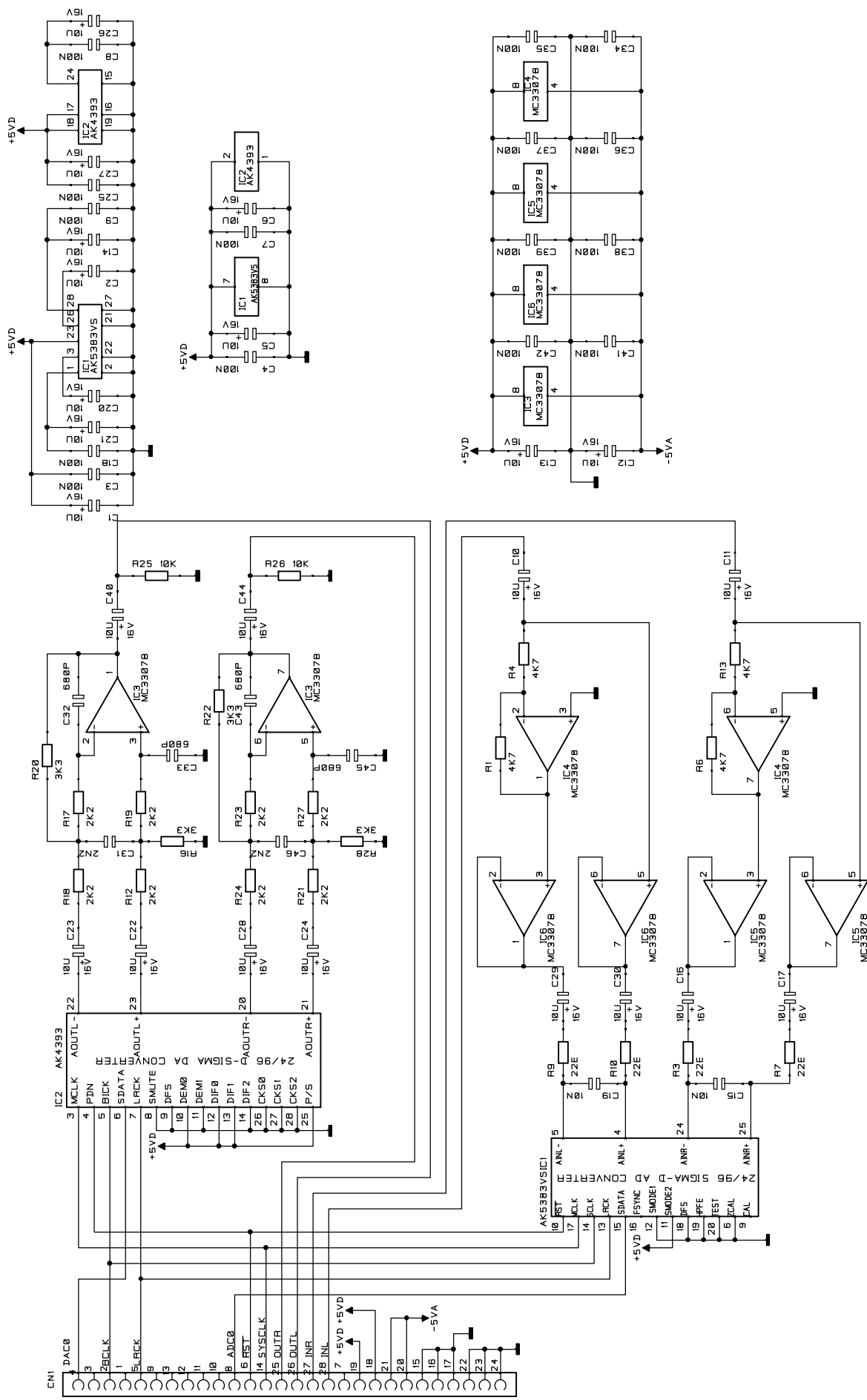
MIS15
MIS15-CH2 SCH

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Date:	2-Mar-2004	Revision	VER040302
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		Drawn By:	C.C.LIN





DRW G RICCI	DWG# 768263	PCB#	313089	Music Media Soft s.r.l.
CKD L. GIBIN	DATE 17/09/01	SCHEMATIC DIAGRAM		ALL RIGHTS ARE RESERVED. NO COPIES OR REPRODUCE THIS DOCUMENT WITHOUT WRITTEN CONSENT BY M.S.
APP. F. GAZZILLI	REV. B	PEGASUS/PROMASTER DX BOARD		

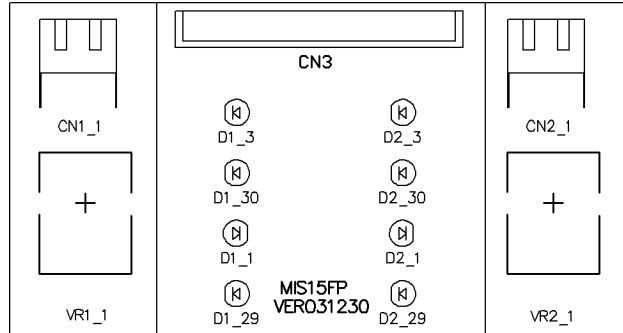


DRW	L.GIBIN	DWG#	768264	PCBR#	313111	Music Media Soft s.r.l.
CKD	L.GIBIN	DATE	03/12/01	SCHEMATIC DIAGRAM		
APP.	B	REV.	B	AD-DA BOARD HIGH CON AKM CONV.		

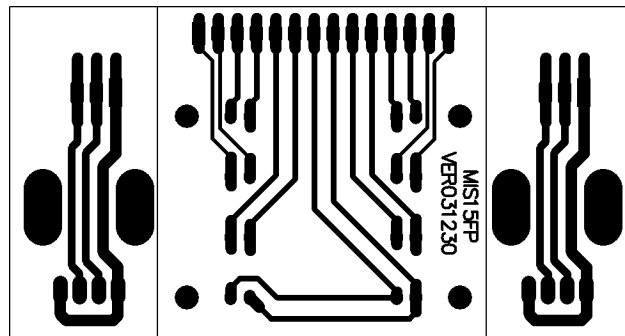
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4.PCB Layout

MIS15FP

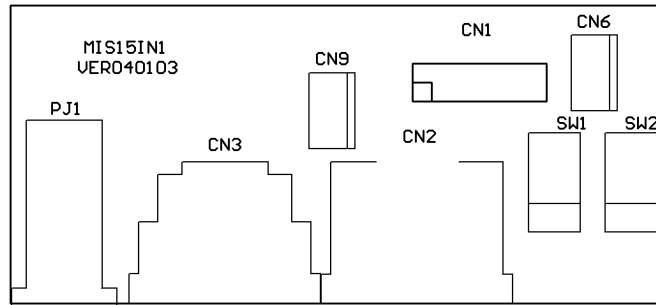


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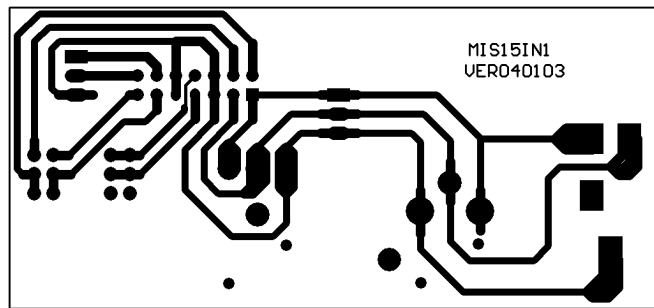


Bottom layer

MIS151N1

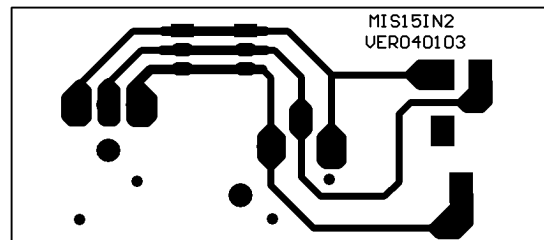
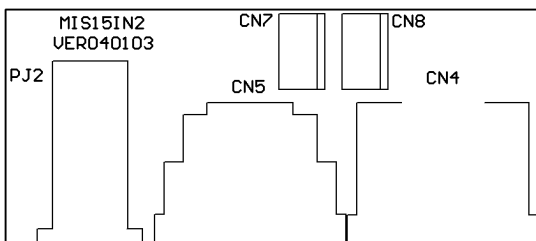


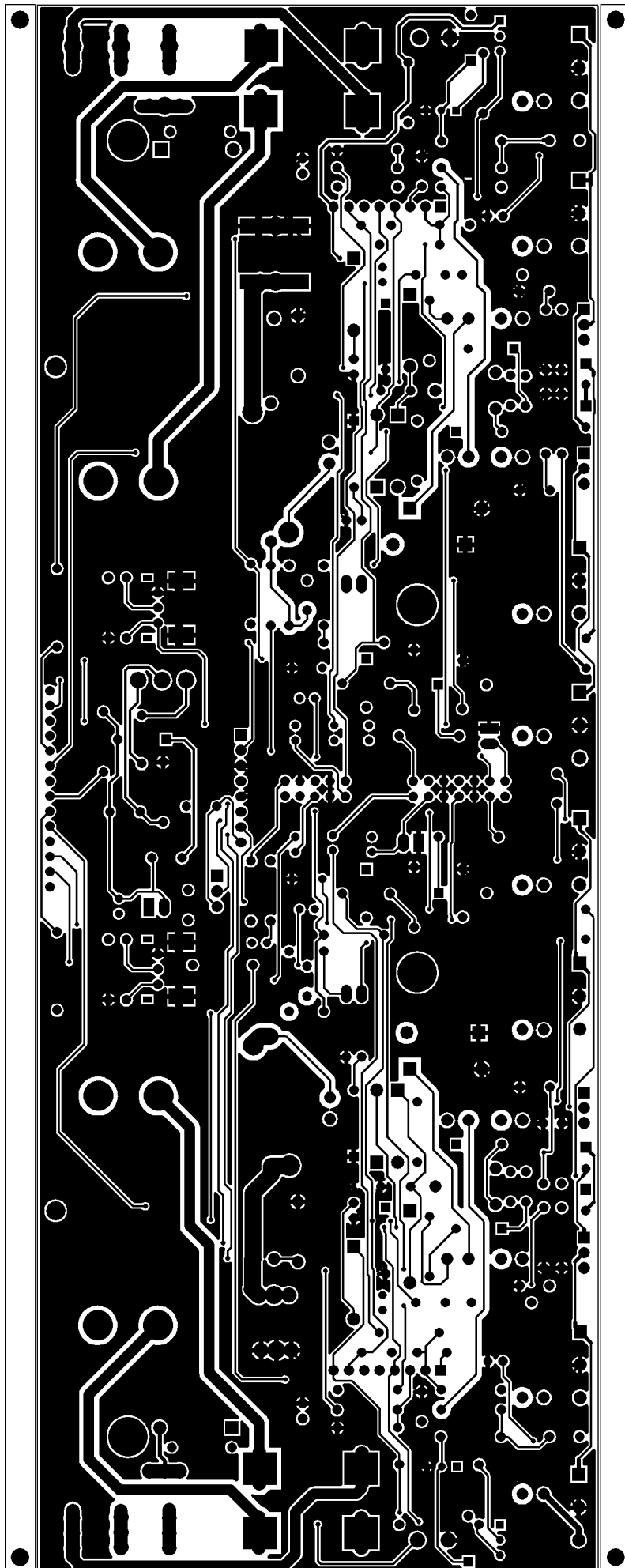
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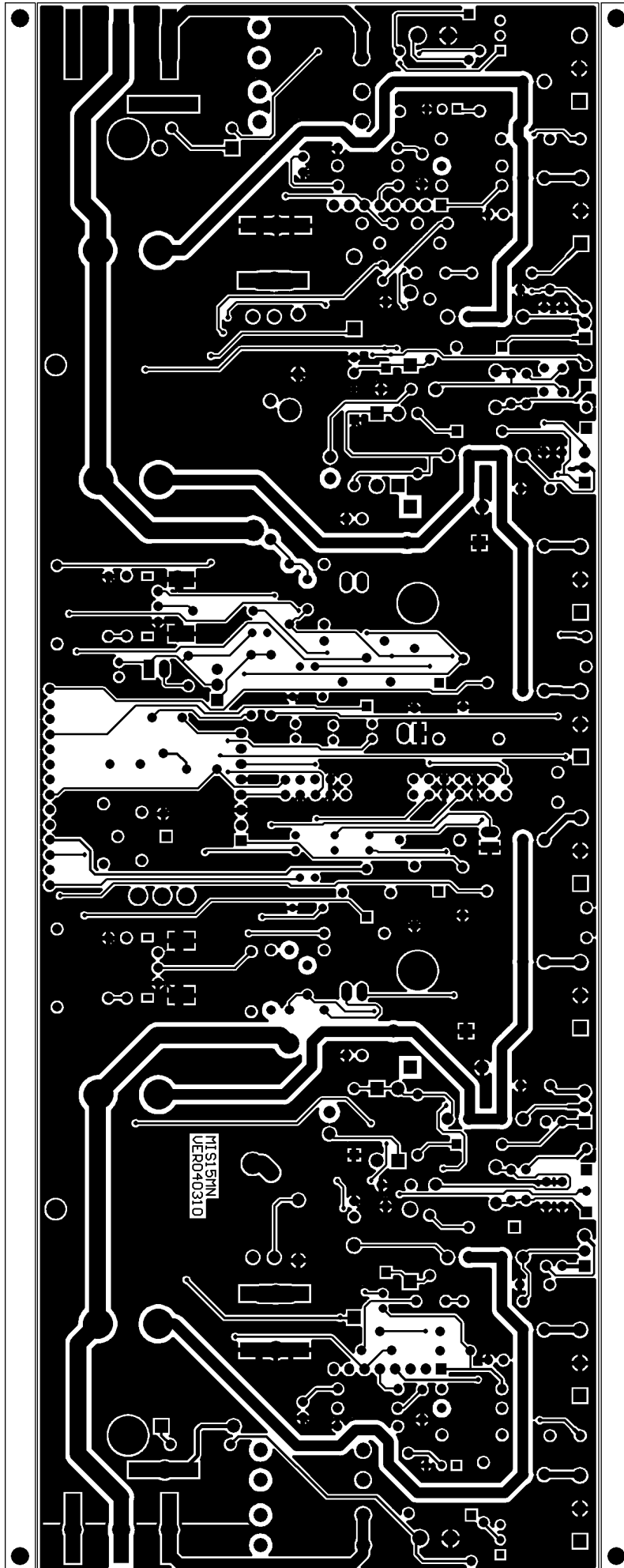


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MIS151N2







5. Test Procedure & Test Result

DPA900/1500 TEST PROCEDURE

DSP Test

Instruments

1. DMM
2. Audio Analyze unit (VP-7724)
3. Oscillograph
4. PC with RS232 port

Test Procedure

Step1: Visual check

Visually check if the cosmetic of the amplifier and assembly are OK.

Step2: Set up

- Turn off power
- Set the output sine wave signal of the VP-7724 is 0.775V(0dB)/1KHz, then connect output of VP-7724 with input of CH1 of amplifier.
- Connect the DMM with output of CH1 of amplifier
- Connect the CH1 of oscillograph with CH1 of amplifier, connect the CH2 of oscillograph with CH2 of amplifier
- Connect the 4 Ohm load with CH1 and CH2 of amplifier respectively.
- Turn the volume knob counter clockwise fully.

Step 3: Power supply test

- Plug the amplifier into mains, turn on the amplifier
- Make sure all the voltage values are correct, then turn off power.

Step 4: DSP Test

4.1 press the "ENTER" and "SEL" at the same time. The unit will enter the test modal and check as following:

- a. All LEDs will light up in sequence.
- b. The display will show "8.8" .

4.2 Press the "ENTER" and "SEL" at the same time.

- a. Press "UP", the display will show "1".
- b. Press "DOWN", the display will show "2".
- c. Press "ENTER", the display will show "3".
- d. Press "SEL", the display will show "4".

Step5: Test EEPROM

1. Press "ENTER" and "SEL" again, the LED (HUM CANCEL) should be light up. After wait about 50 seconds, check as following:
 - a. If the display show "01", the test is ok
 - b. If the display show "E1", the test fails.

Step6: Test RAM

1. Press "ENTER" and "SEL" at the same time again, the LED(NOISE GATE) will light up, wait a few seconds, check as following:
 - a. If the display show "02", the test is ok.
 - b. If the display show "E2", the test fails .

Step7. RS232 Port Test

1. Turn off the unit, then connect the computer and the amplifier via RS232 port, then turn on the unit.
2. If the panel shows"56", the Connection is ok.
3. Done.

PCB Test

Instruments

1. DMM
2. Audio Analyzer unit
3. Oscillograph
4. $8\Omega(400W)$ load

1) Test procedures and specification

- 1.Set LIMITER and BRIDGE switches in the position OFF. Turn VR of CH1 and CH2 to maximum, then turn on the power switch and the blue power LED lights up, and OPERATING/PROTECTION LED shows red, then it turns green after 2-5 seconds or so.
2. Without signal input, adjust R1-16(CH1) and R2-16(CH2) so that the voltage of R1-17/2-17 is $125\pm 2mV(DPA900)/130\pm 2mV$. Connect a 4Ω load at output. Input a 5KHz signal into CH1 or CH2. Adjust the signal so that the output is 5VP-P (about 2VRMS). Verify the curve on oscilloscope and there should be no crossover distortion.
3. Input a 1KHz, - 6dB signal. The output should be $26V\pm 0.5V$ (for DPA900) and $37V\pm 0.5V$ (for DPA1500), and the distortion should be less than 1%. Using the multifunctional meter to measure two pins of JP3, the voltage is about 12V at first, then use a heat blower to blow R3. The voltage will increase up to about 26V. Using a tweezers to short-circuit R1-38 (CH1) and R2-38(CH2). The overheat protection will start (no signal output).
4. Short-circuit the output terminal while it reaches maximum output level. The LIMITER on

front panel is lit up, the power consumption is less than 150W(DPA900/1500) while it is in short protection.

5.S/N: larger than 90dB(A weighted is more than 100dB).

6. Compressor function test: Turn on LIMITER switch. Input a 1KHz / +10dB signal, the LIMITER LED is lit yellow and there is no clipped signal.

7.Adjust the VR on front panel so that the output is :2V(4). The measured frequency response is more than 35Hz to 20 kHz+/-1dB (CH1/CH2)

8.Release the BRIDGE switch. Input a 1KHz signal into CH1(the level control of CH2 is turn to minimum). Connect a 8 load with output terminal. Measure the bridged output voltage is more than about 50V(for DPA900) and 70V (for DPA1500), the distortion is less than 1%.

9.Turn off the input signal, the power consumption shall be less than 50W.

10. Done.

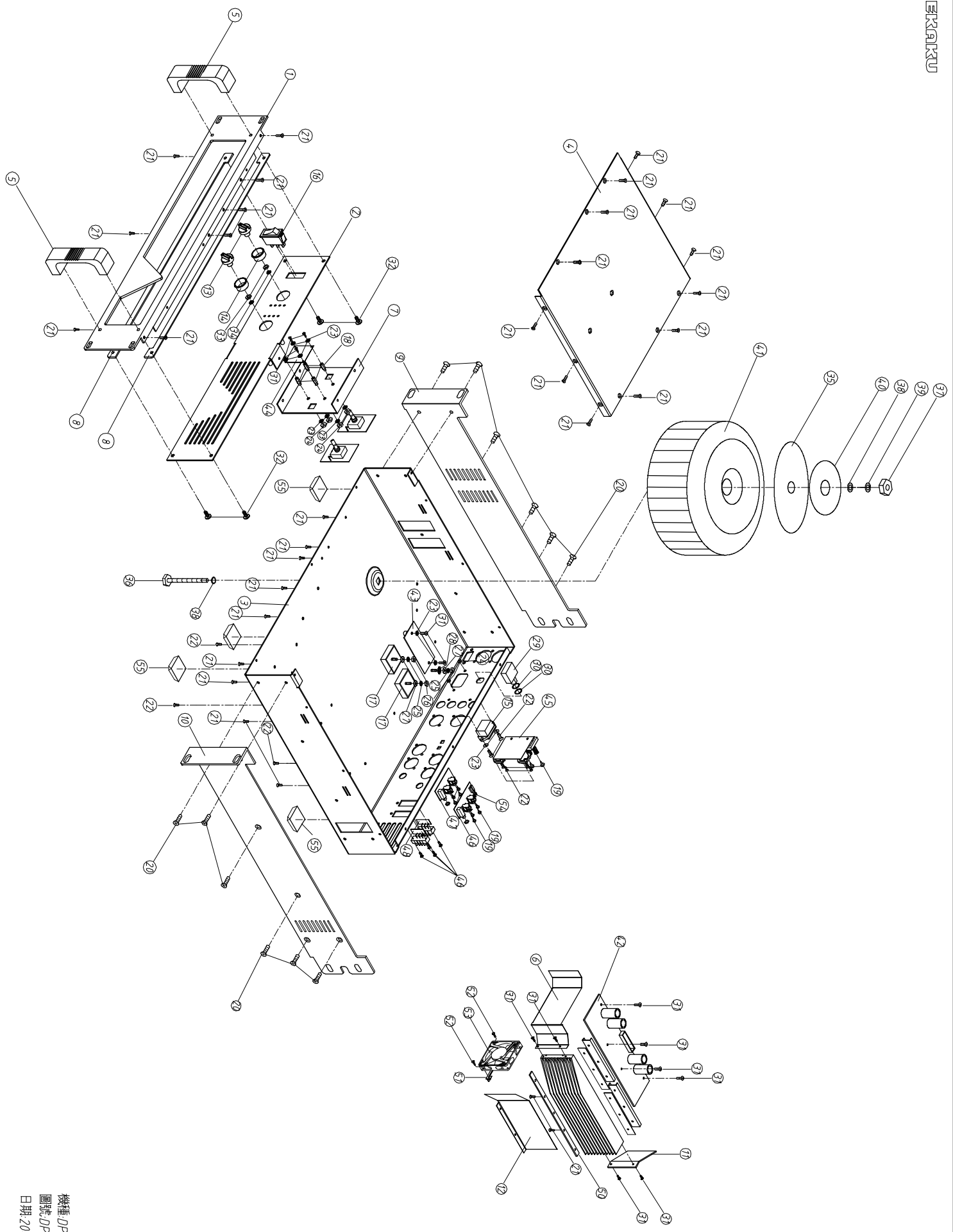
Test Result

SEKAKU ELECTRON INDUSTRY CO., LTD.

Model No DPA900 (Amplifier) USER OF VP-7724A					
Test Item		Test Conditions	Spec	Test Result	Remark
1	Power Source		AC: 115/120/230/240V	AC: V	
2	Motionless State Current	Load 4	R-17(CH1)R2-17(CH2):125±2mV	%	R1-16(CH1)/R2-16(CH2)
3	Power Consumption	Rated Output. Input at 1KHz,6dBV	3.2A	A	VR MAX(CLIP ON)
			736W	W	
4	Rated Output	Load 4 (CHA,B)	25V+25V	V	INPUT 1KHz (CLIP ON)
		Load 8	V	V	
5	Signal/Noise	Input 1KHz 6dB Load 4	90dB 102dB (A)	dB	VR MAX (CLIP ON)
6	Hum or Noise	VR Max	2mV	mV	VR MAX
7	Distortion	Input 1KHz 6dB	0.3% (10W)	%	
			0.2% (100W)		
				%	
8	INPUT SENSITIVITY	BAL	-6±1dB	dB	CHA,CHB
9	BRIDGED	SW AT BRIDGED	50V (8)	V	
10	OUTPUT SHORT TEST	IN 1khz/0dB	<150W		CHA CHB
11	PUNCTURE VOLTAGE	5mA 5Sec	1800V		
12	FREQUENCY RESPONSE	Input -6dB , 1KHz Load 4 (BAL OR STEREO)	< 35Hz- > 20KHz	Hz	OUTPUT 6.8V(10W)

SEKAKU ELECTRON INDUSTRY CO., LTD.

Model No DPA1500 (Amplifier) USER OF VP-7724A					
Test Item	Test Conditions	Spec	Test Result	Remark	
1	Power Source	AC: 115/120/230/240V	AC: V		
2	Motionless State Current	Load 4	R-17(CH1)R2-17(CH2):130±2mV	% R1-16(CH1)/R2-16(CH2)	
3	Power Consumption	Rated Output. Input at 1KHz,6dBV	5.6A	A	VR MAX(CLIP ON)
			1288W	W	
4	Rated Output	Load 4 (CHA,B)	33V+33V	V	INPUT 1KHz (CLIP ON)
		Load 8	V	V	
5	Signal/Noise	Input 1KHz 6dB Load 4	90dB 102dB (A)	dB	VR MAX (CLIP ON)
6	Hum or Noise	VR Max	2mV	mV	VR MAX
7	Distortion	Input 1KHz 6dB	0.2% (10W)	%	
			0.15% (100W)		
			0.5% (300W)	%	
8	INPUT SENSITIVITY	BAL	-6±1dB	dB	CHA,CHB
9	BRIDGED	SW AT BRIDGED	70V (8)	V	
10	OUTPUT SHORT TEST	IN 1khz/0dB	<150W		CHA CHB
11	PUNCTURE VOLTAGE	5mA 5Sec	1800V		
12	FREQUENCY RESPONSE	Input -6dB , 1KHz Load 4 (BAL OR STEREO)	< 35Hz- > 20KHz	Hz	OUTPUT 6.8V(10W)



機種 DP4-1500
圖號 DP41500-00
日期 2004/09/06

DPA900

No.	Part No.	Descriptions	Specification	Qty
1	MA04096	panel	MISTRAL4000	1
2	MA04165	panel	MISTRAL900 ALTO	1
3	MB03071	chassis	MISTRAL900	1
4	MC00559	Top	DPA1500	1
5	MI01744	Handle	MISTRAL40000 20*25.5*80	2
6	MI01900	Fixed DPA1500-05	DPA1500 1.0t* 112*81*15mm	1
7	MI01746	Rear board	MISTRAL4000 14*81*89	1
8	MJ01227	cushion	MISTRAL2500	2
9	MI02025	Fixed panel	MISTRAL900(left)	1
10	MI02027	Fixed panel	MISTRAL900(right)	1
11	MI02029	Barrier board	1.0t*176.5*15*16*83mm	1
12	MI02030	Barrier board	1.0t*144.4*15*9*83mm	1
13	MJ00031	Barrier board	1.0t*83*40mm	1
14	NI02650	Plastic knob	18*18mm	2
15	NI02651	Knob glove	10* 22.5 A600.2	2
16	HC00005	AC jack	AC-008	1
17	HI00031	Power switch	R415KKETOF	1
18	SA00011	Bridge rectifier	25A/200v	2
19	MG00247	cropper	M3*10*0.5PH	4
20	MG00061	screw	M3*10	10
21	MG00295	screw	M4*6	4
22	MG00042	screw	M3*6	34
23	MG00042	screw	M3*10	6
24	MF00037	Spring washer	3* 5*1t	12
25	ME00015	Color nut	3mm	6
26	MF00038	washer	4* 7*1t	7
27	ME00016	Color nut	4mm	3
28	MF00018	Color washer	4* 10*1t	3
29	MF00048	washer	4* 8*0.5t	1
30	HI00140	switch	A0701HM-6A	1
31	NI00389	Plastic washer	12* 16*0.5	1
32	MG00041	screw	M3*6	12
33	MG00075	screw	M4*16	4
34	ME00006	Nut	9	2
35	MF00004	Color washer	9* 14*0.5t	1
36	NI00437	rubber	20* 120*2tB	1
37	MG00215	screw	M8*80	1
38	ME00026	Nut	M8	1
39	MF00026	Color washer	8* 18*1.5t	2
40	MF0041	washer	8* 13.5*2t	1
41	MH00766	Iron	11* 90*2	1
42	TD00182	transformer	PT-MIS900-E	1
43	HE00010	fan	DC24V/0.16A 80*80*25mm200mm	1
44	MD00444	Fan cover	80*80mm	1
45	MG00065	screw	M5*10	4
46	NI00312	Switch knob	5*5*9	2
47	HA00871	wire	LT-312+1.5*3C	1
48	NI01867	cushion	20.5*14*7.6mm	4
49	NC00182	Insulation	1.6*130*16	2
50	MI01956	Fixed frame	130*5*6*1.5	2
51	MI02014	Heat sink	9*83*40*260	1

DPA1500

No.	Part No.	Descriptions	Specification	Qty
1	MA04096	panel	MISTRAL4000	1
2	MA04165	panel	MISTRAL1500 ALTO	1
3	MB03071	chassis	MISTRAL1500	1
4	MC00559	Top	DPA1500	1
5	MI01744	Handle	MISTRAL40000 20*25.5*80	2
6	MI01900	Fixed DPA1500-05	DPA1500 1.0t* 112*81*15mm	1
7	MI01746	Rear board	MISTRAL4000 14*81*89	1
8	MJ01227	cushion	MISTRAL2500	2
9	MI02025	Fixed panel	MISTRAL900(left)	1
10	MI02027	Fixed panel	MISTRAL900(right)	1
11	MI02029	Barrier board	1.0t*176.5*15*16*83mm	1
12	MI02030	Barrier board	1.0t*144.4*15*9*83mm	1
13	MJ00031	Barrier board	1.0t*83*40mm	1
14	NI02650	Plastic knob	18*18mm	2
15	NI02651	Knob glove	10* 22.5 A600.2	2
16	HC00005	AC jack	AC-008	1
17	HI00031	Power switch	R415KKETOF	1
18	SA00011	Bridge rectifier	25A/240v	2
19	MG00247	cropper	M3*10*0.5PH	4
20	MG00061	screw	M3*10	10
21	MG00295	screw	M4*6	4
22	MG00042	screw	M3*6	34
23	MG00042	screw	M3*10	6
24	MF00037	Spring washer	3* 5*1t	12
25	ME00015	Color nut	3mm	6
26	MF00038	washer	4* 7*1t	7
27	ME00016	Color nut	4mm	3
28	MF00018	Color washer	4* 10*1t	3
29	MF00048	washer	4* 8*0.5t	1
30	HI00140	switch	A0701HM-6A	1
31	NI00389	Plastic washer	12* 16*0.5	1
32	MG00041	screw	M3*6	12
33	MG00075	screw	M4*16	4
34	ME00006	Nut	9	2
35	MF00004	Color washer	9* 14*0.5t	1
36	NI00437	rubber	20* 120*2tB	1
37	MG00215	screw	M8*80	1
38	ME00026	Nut	M8	1
39	MF00026	Color washer	8* 18*1.5t	2
40	MF0041	washer	8* 13.5*2t	1
41	MH00766	Iron	11* 90*2	1
42	TD00182	transformer	PT-MIS1500-E	1
43	HE00010	fan	DC24V/0.16A 80*80*25mm200mm	1
44	MD00444	Fan cover	80*80mm	1
45	MG00065	screw	M5*10	4
46	NI00312	Switch knob	5*5*9	2
47	HA00871	wire	LT-312+1.5*3C	1
48	NI01867	cushion	20.5*14*7.6mm	4
49	NC00182	Insulation	1.6*130*16	2
50	MI01956	Fixed frame	130*5*6*1.5	2
51	MI02014	Heat sink	9*83*40*260	1

7.BOM

DPA900 part list

No.	Part No.	Descriptions	Specification	Remark
1	MA04096	panel	MISTRAL4000	
2	MA04097	panel	MISTRAL4000	
3	MA04098	panel	MISTRAL4000 3.1*88.8*25.5*483	
4	MI01309	panel	3.1*88.8*25.5*483	
5	MA04400	panel	DPA900 ALTO_V1.0	
6	MA04395	panel	DPA4000	
7	MA04396	panel	DPA4000 1.5*22.4*81.4*422	
8	MJ00088	single light board	1.5*2135*1220 30.67kg	
9	MB03068	rear board	DPA1500_V1.0	
10	MB03069	rear board	DPA1500_V1.1	
11	MB03070	rear board	DPA1500 430*70*85.5*1.5t_V1.1	
12	MJ00088	single light board	1.5*2135*1220 30.67kg	
13	ME00051	iron pillar	M3*12	
14	ME00001	screw pillar	M4*10*0.7PH	
15	ME00002	screw pillar	M4*20*0.7PH	
16	MI02534	fixed board	MISTRAL 1500 30* 160*1.5t_V1.0	
17	MJ00088	single light board	1.5*2135*1220 30.67kg	
18	MC00517	top cover	MISTRAL4000_V1.0	
19	MC00622	top cover	MISTRAL2500_V1.0	
20	MC00621	top cover	MISTRAL2500_V1.0	
21	MJ00088	single light board	1.5*2135*1220 30.67kg	
22	MI01744	handle	MISTRAL4000 20*25.5*80	
23	MI01745	handle	MISTRAL4000 20*25.5*80	
24	MI02356	fixed bracket	156.1*84.9*84*1.0t MISTRAL1500_V1.0	
25	MJ00061	Zn-plated board	1*2135*1220 20.45kg	
26	MI01746	front board	MISTRAL4000 14*81*89	
27	MJ00061	Zn-plated board	1*2135*1220 20.45kg	
28	MJ01227	cushion	MISTRAL2500	
29	MJ01228	cushion	MISTRAL2500 2.0*422*15	
30	MJ01154	single light board	2.0*1850*950mm 27.6kg	
31	MI02367	fixed bracket	MISTRAL1500 left	
32	MI02366	fixed bracket	MISTRAL1500(left)_V1.0	
33	MJ01154	single light board	2.0*1850*950mm 27.6kg	
34	MI02365	fixed bracket	MISTRAL1500 right	
35	MI02364	fixed bracket	MISTRAL1500_V1.0	
36	MJ01154	single light board	2.0*1850*950mm 27.6kg	
37	MI02369	barrier	MISTRAL1500	
38	MI02368	barrier	MISTRAL1500_V1.0	
39	MJ00067	single light board	1.0*2440*1220 18.69kg	
40	MI02361	fixed bracket	197.3*84*27*1.0t MISTRAL1500_V1.0	

No.	Part No.	Descriptions	Specification	Remark
41	MJ00061	Zn-plated board	1*2135*1220 20.45kg	
42	NI02650	knob	18*18mm	
43	NI02651	knob fix sheath	10* 22.5	
44	HC00005	AC socket	AC-008	
45	HI00031	power switch	R415KKETOF	
46	HA01243	wire	300mm UL1015 14AWG brown	
47	HA01333	single terminal wiringCF:W76	150mm UL1015 18AWG green/yellow	
48	HA01247	single terminal wiring	180mm UL1015 14AWG blue	
49	HA01248	single terminal wiring	150mm UL1015 14AWG brown	
50	HA02891	wire	3P-3P 400mm UL2547 28AWG	
51	HA02892	wire	3P-3P 250mm UL2547 28AWG	
52	HA02856	wire	3P-3P 160mm UL1007 24AWG	
53	HA01394	row-wire connector wiring	3P-3P 120	
54	HA02328	wire	300mm UL1015 14AWG black	
55	HA02329	wire	300mm UL1015 14AWG red	
56	HA01198	wire	180mm UL1015 14AWG black	
57	HA01251	wire	200mm UL1015 14AWG red	
58	NI00252	sleeve	4*20mm	
59	NI00248	sleeve	4*1000mm	
60	SA00011	bridge rectifier	25A/200V	
61	MG00247	copper pillar	M3*10*0.5PHsingle length16	
62	MG00061	screw	M3*10	
63	MG00295	screw	M4*6	
64	MG00025	screw	M3*6	
65	MG00042	screw	M3*10	
66	MF00037	washer	3* 5*1t	
67	ME00015	nut	3m/m	
68	MF00038	washer	4* 7*1t	
69	ME00016	nut	4m/m	
70	MF00018	washer	4* 10*1t	
71	MF00048	washer	4* 8*0.5t	
72	HI00268	manual reposition switch	A0701HM-3A	
73	NI00389	washer	12* 16*0.5	
74	NI00375	film	45*60.5*0.5mm	
75	MG00041	screw	M3*6	
76	MG00030	screw	M4*12	
77	ME00006	nut	9	
78	MF00004	washer	9* 14*0.5t	
79	NI00437	rubber coil	20* 120*2tB	
80	MG00569	screw	M8*75*1.25PH_V1.0	
81	ME00026	nut	8m/m	
82	MF00026	washer	8* 18*1.5t	

No.	Part No.	Descriptions	Specification	Remark
83	MF00041	washer	8* 13.5*2t	
84	MH00766	iron piece	11* 90*2_V1.1	
85	MH00768	iron piece	11* 90*2_V1.1	
86	MJ01154	single light board	2.0t*1850*950mm 27.6kg	
87	TD00275	loop transformer	PT-DPA900_115/230V	
88	HE00049	fan	24V/0.21A 80*80*25mm 360mm JST2P	
89	NI00312	power switch button	square 5*5*9 hole 2.8*2.8 black	
90	HA00861	power cord Europe 3P	LT-312+LT-501	
91	NI00218	cable tie-black	ALT-102SB	
92	NA00116	PE bag	0.04t*170*100mm	
93	NI01867	self-adhere foot cushion	20.5*14*7.6mm(SF-006)	
94	HJ00006	desiccant	30g	
95	NA00135	PE bag	0.05t*610*500mm	
96	NE13894	label	DPA900 220-240V/50Hz_V1.0	
97	NI00044	adhesive label	0.085*1M	
98	NI00022	membrane	0.08*1M	
99	NF00061	assurance card	ALTO	
100	NE05044	label	DPA900_V1.0	
101	NH00012	bond paper	0.04*1M	
102	NI00014	membrane	0.035*1M	
103	NE11347	label	ALTO PI	
104	NH00334	cone paper	0.040*1m	
105	NB02086	box	MACRO	
106	NB01944	barrier	PSA-3000_V1.1	
107	MG00027	screw	M3*12	
108	HA01658	header wiring	FL-0464A 6P-6P PH1.27 65	
109	HA01659	header wiring	FL-0464A 8P-8P PH1.27 75	
110	HA01660	header wiring	FL-0464A 14P-14P PH1.27mm 65mm	
111	HA01661	header wiring	FL-0464A 20P-20P PH1.27 65	
112	HA01502	header wiring	6P-6P 120	
113	HA02660	wire	14P-14P 460mm UL2651 28AWG PH1.27mm	
114	HA03080	wire	10P-10P 380mm UL2651 28AWG PH1.27mm	
115	HA02659	wire	8P-8P 160mm UL2651 28AWG PH1.27mm	
116	HA02661	wire	20P-20P 460mm UL2651 28AWG PH1.27mm	
117	HK02095	PC board	P-MIS15MN(MISTRAL900)	
118	HB01189	PCB	MIS15MN_VER040310	
119	RA00157	fixed resistor 1/4W	0.0	R5
120	RA00322	fixed resistor 1/4W	4.7 M type	R1-17,R1-18,R2-17,R2-18
121	RA00174	fixed resistor 1/4W	47 M type	R1-25,R2-25,R2
122	RA00184	fixed resistor 1/4W	100 M type	R1-32,R2-32
123	RA00189	fixed resistor 1/4W	150 M type	R1-15,R2-15
124	RA00200	fixed resistor 1/4W	330 M type	R1-5,R2-5

No.	Part No.	Descriptions	Specification	Remark
125	RA00211	fixed resistor 1/4W	820 M type	R1-9,R2-9,R1-10,R2-10
126	RA00227	fixed resistor 1/4W	3.3K M type	R1,R4
127	RA00231	fixed resistor 1/4W	4.7K M type	R1-41,R1-42,R2-41,R2-42
128	RA00236	fixed resistor 1/4W	6.8K M type	R1-40,R2-40,R1-27,R2-27
129	RA00242	fixed resistor 1/4W	10K M type	R1-1,R1-2,R1-3,R2-1,R22, R2-3,R1-28,R2-28
130	RA00244	fixed resistor 1/4W	12K M type	R1-6,R2-6,R1-37,R1-38, R2-38
131	RA00266	fixed resistor 1/4W	47K M type	R1-34,R2-34
132	RA00282	fixed resistor 1/4W	100K M type	R1-35,R2-35
133	RA00284	fixed resistor 1/4W	120K M type	R1-36,R2-36
134	RA00138	fixed resistor 1/2W	3.3K M type	R1-33,R2-33
135	RA00007	metal-oxide-film resistor 1W	22 P type	R1-13,R1-14,R2-13,R2-14
136	RA00051	metal-oxide-film resistor 2W	5.6 P type	R1-26,R2-26
137	RA00045	metal-oxide-film resistor 2W	1.5K P type	R1-11,R1-12,R2-11,R2-12
138	RA00071	metal-oxide-film resistor 3W	0.1 RSS P type	R1-23,R1-24,R2-23,R2-24
139	RA00031	metal-oxide-film resistor 2W	10 P type	R1-22,R2-22
140	RA00722	metal-oxide-film resistor 3W	500 P type	R1-21,R2-21
141	CA00010	ceramic capacitor	27PF NPO	C1-7,C2-7
142	CA00018	ceramic capacitor	56PF NPO	C1-5,C2-5
143	CA00024	ceramic capacitor	100PF SL	C1-3,C2-3,C1-25,C2-25
144	CA00043	ceramic capacitor	0.0033uF	C1-11,C1-12,C2-11,C2-12
145	CA00070	ceramic capacitor	0.022uF/50V±20% Y5U	C1-10,C2-10
146	CA00053	ceramic capacitor	0.1uF SL	C2
147	CB00025	electrolytic capacitor	10uF/50V 6*7mm	C1-23,C1-24,C2-23,C2-24, C6
148	CB00185	electrolytic capacitor	10uF/63V 5*11mm	C3
149	CB00169	electrolytic capacitor	47uF/16V NP 6.3*11mm	C1-6,C2-6
150	CB00039	electrolytic capacitor	47uF/25V 5*11mm	C1-26,C2-26
151	CB00043	electrolytic capacitor	47uF/100V 10*12mm	C1-1,C2-1
152	CB00055	electrolytic capacitor	220uF/16V 8*11mm	C1-4,C1-8,C2-4,C2-8
153	CB00067	electrolytic capacitor	470uF/35V 10*20mm	C4,C5
154	CB00093	electrolytic capacitor	4700uF/80V LCM 25*50mm	C1-15,C1-16,C2-15,C2-16
155	CF00005	metal-film capacitor MSC	0.0022uF/63V 5% CASE01	C1-9,C2-9
156	CF00022	metal-film capacitor MSC	0.022uF/100V 5% CASE01	C1-13,C2-13
157	CF00006	metal-film capacitor MSC	0.0033uF/100V 5% CASE01	C1-14,C2-14
158	CF00033	metal-film capacitor MEF	0.1uF/250V	C1-2,C2-2
159	SA00167	bridge rectifier	2A W2-04	D1,D1-9,D2-9,D1-20,D2-20
160	SA00093	rectifier diode	1N4148 0.5A	D1-6,D1-7,D2-6,D27,D110, D1-19,D2-10,D2-19
161	SA00098	rectifier diode	1A/400V IN4004	D12,D22,D115,D117,D215, D2-17
162	SA00107	zener diode	1W 15V 1N4744	D1-3,D1-5,D1-8,D2-3,D25, D2-8
163	SA00026	L.E.D	5 circle red B1115	D1-4,D2-4
164	SA00002	high speed diode	1A/600V 1N4937	D1-11,D1-12,D2-11,D2-12
165	SA00205	zener diode	1/2W 3.9V	D1-13,D1-14,D2-13,D2-14

No.	Part No.	Descriptions	Specification	Remark
166	HC00504	row-wire header	10P 2.54mm 180°	J1
167	HC00172	row-wire header	3P 3.96mm 180°	J2
168	HC00365	row-wire header	14P 2.54mm 180°(C03-14AG1)	J4
169	HC00625	row-wire header	14P 2.5mm 180°	
170	HC00076	row-wire header	2P 2.5mm 180°	J1-6,J2-6,J3
171	HC00077	row-wire header	3P 2.5mm 180°	R1-29,R2-29
172	HC00324	terminal	6.5m/m (PC250)	J1-4,J1-5,J2-4,J2-5,J17, J1-8,J1-9,J110,J27,J28,
173	CN00060	fixed inductance	2uH 10A(CSAF-302824)(1.5mm*12 1/2T)	L1-1,L2-1
174	SB00042	transistor	MJE15032	Q1-1,Q2-1
175	SB00044	transistor	MJE15033	Q1-2,Q2-2
176	SB00023	power transistor	2SA1943-O	Q1-7,Q2-7
177	SB00021	power transistor	2SC5200	Q1-8,Q2-8
178	SB00129	transistor	MPSA92(TO92)/(PHI)	Q1-5,Q2-5
179	SB00130	transistor	MPSA42(PHILIPS)	Q1-6,Q2-6
180	RH00021	thermistor	500 (TDC5C150L)	R3
181	RH00017	thermistor	50 (TDC05A050J)	R1-8,R2-8
182	RH00018	thermistor	100 (PDBS8101MS)	R1-39,R2-39
183	RC00319	semi-fixed resistor	B100 PT1030-V1B101-C1-H10	R1-16,R2-16
184	SD00032	integrated circuit	LM317T	U1
185	SD00173	integrated circuit	NJM4580L(JRC)	U2,U1-1,U2-1
186	HC00064	FUSE holder	JEF-503B (5.2mm)	F1-1,F1-2,F2-1,F2-2
187	HD00079	ceramic tube fuse	4A250V 5.2*20mm CSA/S/T/UL/VDE	
188	NC00005	silicone insulator	TO-220 square type	
189	MF00030	washer	3* 8*0.8t	
190	MF00037	washer	3* 5*1t	
191	MG00171	screw	M3*14	
192	MI02363	heat-sink	9*83*40*270 MISTRAL1500_V1.0	
193	NC00182	insulator	MISTRAL900 1.6t*130*16mm	
194	NC00041	red foil white board	1.6t*0.65M*70M	
195	MJ01200	spacer	MISTRAL4000 14.5*30.5*2t	
196	MJ01201	spacer	MISTRAL4000 14.5*30.5*2t	
197	MJ01154	single light board	2.0t*1850*950mm 27.6kg	
198	HC00034	short circuit connector	NO.2700 2.54mm/6mm OPEN	
199	MI01956	fixed bracket	MISTRAL900 1.5t*130*5*16mm left	
200	MJ00069	iron board	1.5*2135*1220 30.67kg	
201	HK02231	Photodiode	P-photosensitive resistance 5LLED	
202	RH00020	photosensitive resistance	VT90N1	
203	SA00201	L.E.D	5 red(LI3330/A)	
204	NI02779	sleeve	9*30mm	
205	NI00274	sleeve	9*1000mm	
206	CB00217	electrolytic capacitor	470uF/50V 10*20mm	C1
207	RA00198	fixed resistor 1/4W	300 M type	R1-4,R1-7,R2-4,R2-7

No.	Part No.	Descriptions	Specification	Remark
208	CB00009	electrolytic capacitor	1uF/50V 4*7mm	R1
209	RA00713	fixed resistor 1/4W	1.0K F type	C1-27,C2-27
210	AC00002	solder wire	63/37%	
211	HK03958	PC board	P-MIS40PWR	
212	HB00946	PCB	MIS40PWR_VER030710	
213	HC00324	terminal	6.5m/m (PC250)	P1,P2,P3,P4,P5,P6,P7,P8
214	CG00044	metal oxide varistors	NP35L-Y2	K2-2
215	AC00002	solder wire	63/37%	
216	HK02069	PC board	P-MIS15FP	
217	HB01168	PCB	MIS15FP(2*4)_VER040204	
218	SA00053	L.E.D	3 round(red)long foot 26mm	D1-3,D2-3
219	SA00054	L.E.D	3m/m round(yellow)long foot 26	D1-1,D2-1,D1-30,D2-30
220	SA00194	L.E.D	3	D1-29,D2-29
221	NI01765	LED spacer support	LEDS-10 10mm	
222	HC00066	row-wire header	3P 2.5mm 90°	CN1-1,CN2-1
223	RC00209	PPBC239	A10K RV110-40E1-225A-A14	VR1-1,VR2-1
224	HA03320	wire	14P-14P 400mm UL1007 24AWG	CN3
225	AC00002	solder wire	63/37%	
226	HK04608	PC board	P-MIS60SP	
227	HC00442	speaker socket	NL4MP (NEUTRIK)	SPK1,SPK2
228	MJ00942	fixed bracket	CS12/600	
229	MJ00061	Zn-plated board	1*2135*1220 20.45kg	
230	HA01239	single terminal wiring CF:W209	180mm UL1015 14AWG white	JP5
231	HA01237	single terminal wiring CF:W207	200mm UL1015 14AWG gray	JP2
232	HA02471	single terminal wiring	360mm UL1015 14AWG white	JP7
233	HA01258	single terminal wiring	380mm UL1015 14AWG gray	JP8
234	HA03432	single terminal wiring	100mm UL1015 14AWG	JP1,JP3
235	HA03433	single terminal wiring	100mm UL1015 14AWG	JP6,JP4
236	HB01396	PCB	MIS60SP(2*4)_VER040922	
237	AC00002	solder wire	63/37%	
238	HK02070	PC board	P-MIS15IN1	
239	HB01169	PCB	MIS15 IN1(2*4)_VER040205	
240	HC00110	MIC jack	JY-6314-02-340	PJ1
241	HC00112	balance MIC jack	99M-107SP-1-2 90° PUSH	CN2
242	HC00111	balance MIC jack	99M-108SP1	CN3
243	HA02893	wire	14P-14P 280mm UL2651 28AWG PH1.27mm	CN1
244	HC00077	row-wire header	3P 2.5mm 180°	CN6,CN9
245	HI00039	push-button switch	SP70300-0202-11F1-N	SW1,SW2
246	HA02055	wire	320mm RG-174/U 50	
247	AC00002	solder wire	63/37%	
248	HK02071	PC board	P-MIS15IN2	
249	HB01170	PCB	MIS15 IN2(2*4)_VER040103	

No.	Part No.	Descriptions	Specification	Remark
250	HC00110	MIC jack	JY-6314-02-340	PJ2
251	HC00112	balance MIC jack	99M-107SP-1-2 90° PUSH	CN4
252	HC00111	balance MIC jack	99M-108SP1	CN5
253	HC00077	row-wire header	3P 2.5mm 180°	CN7,CN8
254	AC00002	solder wire	63/37%	
255	HK00793	PC board	P-MIS2500-INPUT	
256	HB01105	PCB	MIS40IN-1_VER031206	
257	HC00297	terminal block	DT-55-A14W-03(3PH)	CN1
258	HC00077	row-wire header	3P 2.5mm 180°	CN3
259	HC00079	row-wire header	5P 2.5mm 180°	CN4
260	AC00002	solder wire	63/37%	
261	HK03847	PC board	P-DPA2500-RS-DIP	
262	HK00603	PC board	P-DPA2500-RS-SMD	
263	HB01073	PCB	DPA-RS_VER031103	
264	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C1,C2,C4,C5,C6,C7,C8
265	RD00372	SMD precise resistor 1/8W	10.7 ±1% 0805	R3,R4
266	SG00047	SMD integrated circuit	MAX485EESA	IC1
267	CO00006	SMD chip inductance	BLM21A102SPT/(MURATA)	L1,L2,L3,L4,L5
268	AE00221	tin soldering paste	SJ-617	
269	HC00324	terminal	6.5m/m (PC250)	
270	CB00040	electrolytic capacitor	47uF/25V 5*11mm	C3
271	SA00101	zener diode	1W 6.8V 1N4736	D1,D2
272	SA00104	zener diode	1W 10V 1N4740	D3,D4
273	SD00019	integrated circuit	MAX202ECPE	IC2
274	HA02503	wire	9P-10P 50mm UL2651 28AWG PH1.27mm	CN1
275	HC00048	row-wire header	8PIN A28b-8B.T.6	CN2
276	HC00111	balance MIC jack	99M-108SP1	S1
277	HC00112	balance MIC jack	99M-107SP-1-2 90° PUSH	S2
278	AC00002	solder wire	63/37%	
279	HK03846	PC board	P-DPA2500-DISPLAY	
280	HB01071	PCB	DPA-DIS-1(2*2)_VER050120	
281	CH00017	laminated capacitor	0.1uF/50V Y5V PH5	C1
282	CB00026	electrolytic capacitor	10uF/50V 6*7mm	C2
283	RA00647	fixed resistor 1/8W	4.7K M type	R1,R2
284	RA00651	fixed resistor 1/8W	10K M type	R3,R4,R5,R6,R7,R8
285	HB01070	PCB	DPA-DIS-2_VER030916	
286	HH00005	seven paragraph monitor	LSD3561-10	DL2,DL3
287	HC00435	row pin (single)#1100	2.54 180° 5P6/11.6mm	CN3,CN4
288	SA00051	L.E.D	3 orange, green BOG303b	DL11
289	SA00072	L.E.D	3 red LI2340/A	DL1,DL4,DL5,DL6,DL7,DL8, DL9,DL10
290	SB00072	transistor	BC559C,126	TR1,TR2
291	HI00238	push-button switch	2 stage 6P PS-9226A(NON-LOCK)	SW1,SW2,SW3,SW4

No.	Part No.	Descriptions	Specification	Remark
292	HC00050	row-wire header	14PIN A28b-14B.T.6	CN1
293	HC00051	row-wire header	20PIN A28b-20B.T.6	CN2
294	HA01919	jumper wire	5mm	J1,J2,J3,J6,J9
295	HA02249	wire	0.6	
296	HA01917	jumper wire	3mm	J4,J8,J10
297	HA01920	jumper wire	6mm	J5,J7,J3
298	HA02249	wire	0.6	
299	NI01771	LED spacer support	LEDS-5 5mm	DL1,DL10,DL11,DL4,DL5, DL6,DL7,DL8,DL9
300	MG00269	screw	M3*6	
301	NI01876	LED spacer support	7.6*4.5*184	
302	AC00002	solder wire	63/37%	
303	HK03845	PC board	P-DPA2500-PWR-DIP	
304	CB00024	electrolytic capacitor	10uF/16V 4*7mm	C1,C3,C10,C11
305	CB00072	electrolytic capacitor	1000uF/25V 10*20mm	C9,C8
306	SD00074	integrated circuit	L7805CV(TO-220)(ST)	U3
307	SD00169	integrated circuit	L7905CV(TO-220)(ST)	U4
308	HC00066	row-wire header	3P 2.5mm 90°	CN2
309	HC00560	row pin (single)#2200	2.54 180° 2*5P 6/11.6mm	CN1
310	HC00070	row-wire header	6P 2.5mm 90°	CN3
311	HI00161	relay	RY-5W-K,5V	REL1
312	HC00047	row-wire header	6PIN A28b-6B.T.6	J7
313	HC00048	row-wire header	8PIN A28b-8B.T.6	J1,J6
314	HC00051	row-wire header	20PIN A28b-20B.T.6	J2,J3
315	HC00050	row-wire header	14PIN A28b-14B.T.6	J5,J4
316	NC00005	silicone insulator	TO-220 square type	
317	NI00863	insulate bean	TO220B	
318	MG00270	screw	M3*10	
319	MI01820	fixed bracket	DPA4000 2.5*42.5*83.8*102.5	
320	MJ00093	AL plate	2.5*2000*1000 13.6kg	
321	MG00252	copper pole	M3*6.2*0.5PHsingle,length12	
322	MG00363	copper pillar	M3*14*0.5PH	
323	MG00269	screw	M3*6	
324	HK00602	PC board	P-DPA2500-PWR-SMD	
325	HB01072	PCB	DPA-PWR_VER030916	
326	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C7,C12,C13,C14,C15
327	CI00051	SMD ceramic capacitor 0603	22PF/50V NPO ±5%	C2,C4,C5,C6
328	RD00101	SMD fixed resistor 1/10W	10K ±5% 0603	R1,R3,R6,R8,R10,R11
329	RD00081	SMD fixed resistor 1/10W	750 ±5% 0603	R2,R4
330	RD00085	SMD fixed resistor 1/10W	1.5K ±5% 0603	R12,R13,R14,R15,R16,R17, R18,R19,R20,R21,R22,R23, R24,R25,R26,R27,R28,R29
331	RD00059	SMD fixed resistor 1/10W	0.0 ±5% 0603	R30,R9
332	SE00011	SMD rectifier diode	RLS4148 0.5A (LL-34)	D1
333	SF00056	transistor	MMBT3904(SOT-23)/(PHI)	Q2

No.	Part No.	Descriptions	Specification	Remark
334	SG00040	SMD integrated circuit	MC33078DT(ST)MC33078D(ON)	U1,U2
335	SE00030	SMD rectifier diode	SFS1B	D2,D3,D4,D5
336	RD00088	SMD fixed resistor 1/10W	2.2K ±5% 0603	R5,R7
337	AE00221	tin soldering paste	SJ-617	
338	AC00002	solder wire	63/37%	
339	HK03830	PC board	P-313089-4-DIP	
340	CB00048	electrolytic capacitor	100uF/25V 6*11mm	C2
341	CB00069	electrolytic capacitor	1000uF/6.3V 8*11mm	C4
342	RA00515	precise resistor 1/4W	10.0K M type	R12,R13
343	HC00080	row-wire header	6P 2.5mm 180°	
344	HC00047	row-wire header	6PIN A28b-6B.T.6	CN4
345	HC00048	row-wire header	8PIN A28b-8B.T.6	CN1
346	HC00050	row-wire header	14PIN A28b-14B.T.6	CN6
347	HC00051	row-wire header	20PIN A28b-20B.T.6	CN5
348	SC00319	crystal oscillator	12.288MHZ	XT1
349	HC00162	row pin (single)#6100	1.27 180°14P(gold-plated))6.0/11.54mm	CN2,CN7
350	ND00098	EV bubble sponge	40*14*5	
351	HK03831	PC board	P-313089-4-SMD	
352	HB00400	PCB	313089 (90*77.5)_VER020507	
353	CI00046	SMD ceramic capacitor 1206	1uF/16V Y5V-1206(3216)	C28
354	CI00049	SMD ceramic capacitor 0603	15PF/50V NPO ±5%	C12,C14
355	CI00051	SMD ceramic capacitor 0603	22PF/50V NPO ±5%	C29
356	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C1,C10,C11,C13,C15,C17, C16,C18,C19,C20,C21,C22, C23,C24,C25,C27,C3,C30, C31,C32,C33,C34,C35,C6, C7,C8,C9
357	CL00006	SMD tantalum capacitor	10uF/16V case B2	C26,C5
358	RD00068	SMD fixed resistor 1/10W	100 ±5% 0603	R14,R15,R2,R27,R29,R30, R32,R39,R40,R6,R7,R8
359	RD00073	SMD fixed resistor 1/10W	220 ±5% 0603	R19,R20,R22,R35,R36,R37, R38,R5
360	RD00076	SMD fixed resistor 1/10W	330 ±5% 0603	R28
361	RD00079	SMD fixed resistor 1/10W	560 ±5% 0603	R25
362	RD00082	SMD fixed resistor 1/10W	820 ±5% 0603	R16,R17
363	RD00085	SMD fixed resistor 1/10W	1.5K ±5% 0603	R18
364	RD00086	SMD fixed resistor 1/10W	1.8K ±5% 0603	R21
365	RD00093	SMD fixed resistor 1/10W	4.7K ±5% 0603	R3,R33,R34
366	RD00101	SMD fixed resistor 1/10W	10K ±5% 0603	R11,R24,R26,R9
367	RD00125	SMD fixed resistor 1/10W	1.0M ±5% 0603	R23
368	RE00006	SMD resistor networks 1/16W	100 *4 ±5% 8P 0603	AR1,AR10,AR13,AR14,AR16, AR18,AR2,AR3,AR4,AR5, AR8
369	RE00008	SMD resistor networks 1/16W	4.7K *4 ±5% 8P 0603	AR11,AR15,AR17,AR6,AR7
370	RE00007	SMD resistor networks 1/16W	470 *4 ±5% 8P 0603	AR9
371	SE00011	SMD rectifier diode	RLS4148 0.5A (LL-34)	D1
372	SG00068	SMD integrated circuit	74HC14DT(SO-14)/(PHI)	IC5
373	SG00049	SMD integrated circuit	AS4C256K16F0-60JC	IC1

No.	Part No.	Descriptions	Specification	Remark
374	SG00025	SMD integrated circuit	24LC64I/SN	IC6
375	SG00184	SMD integrated circuit	EN29F040A-70JC/DPA	IC3
376	SG00217	SMD integrated circuit	EN29F040A-70JC(PL032)/(E-ON)	
377	SG00335	SMD integrated circuit	TY-1 ALTO(LEM NO#105008)_V1.1	IC2
378	SG00128	SMD integrated circuit	RED 208(LEM NO#105008)	
379	SG00069	SMD integrated circuit	MAX709L-CSA	IC4
380	CO00006	SMD chip inductance	BLM21A102SPT/(MURATA)	L1,L2,L3,L4,L5,L6
381	HC00233	IC socket (PCB)	PLCC32 (D03-32T.A.4)	IC3
382	AE00221	tin soldering paste	SJ-617	
383	HK01289	PC board	P-313111-SMD	
384	HB00401	PCB	313111 (37*75)_VER020507	
385	CI00064	SMD ceramic capacitor 0603	680PF/50V NPO ±5 %	C32,C33,C43,C45
386	CI00067	SMD ceramic capacitor 0603	0.0022uF/50V X7R ±10%	C31,C46
387	CI00071	SMD ceramic capacitor 0603	0.01uF/50V X7R ±10%	C15,C19
388	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C18,C25,C3,C34,C35,C36, C37,C38,C39,C4,C41,C42, C7,C8,C9
389	CL00006	SMD tantalum capacitor	10uF/16V case B2	C26,C27,C28,C29,C30, C4 0,C44,C5,C6
390	RD00063	SMD fixed resistor 1/10W	22 ±5% 0603	R10,R3,R7,R9
391	RD00088	SMD fixed resistor 1/10W	2.2K ±5% 0603	R12,R17,R18,R19,R21,R23, R24,R27
392	RD00091	SMD fixed resistor 1/10W	3.3K ±5% 0603	R16,R20,R22,R28
393	RD00093	SMD fixed resistor 1/10W	4.7K ±5% 0603	R1,R13,R4,R6
394	RD00101	SMD fixed resistor 1/10W	10K ±5% 0603	R25,R26
395	SG00054	SMD integrated circuit	AK4393VF AKM	IC2
396	SG00061	SMD integrated circuit	AK5383VS AKM	IC1
397	SG00040	SMD integrated circuit	MC33078DT(ST)MC33078D(ON)	IC3,IC4,IC5,IC6
398	AE00221	tin soldering paste	SJ-617	
399	AC00002	solder wire	63/37%	
400	MJ01252	cushion	250*8*1.0t MISTRAL1500_V1.0	
401	MJ00061	Zn-plated board	1*2135*1220 20.45kg	
402	MI00427	fixed bracket	PSA-3000	
403	MJ00058	single light board	1*2135*1220 20.45kg	
404	MG00111	screw	pill 4*30	
405	NA00279	clip-chain bag	0.04t*100*150mm_V1.0	
406	AD00011	twin adhesive	90*120mm_V1.0	
407	HC00295	terminal	JS205-110	
408	MF00020	washer	5* 12*1t	
409	MF00039	washer	5* 8*1t	
410	NB03039	box	DPA900 ALTO_V1.1	
411	MG00128	screw	M3*16	
412	MI00237	heat-sink	FX22 4*34.5*16.5*34.5mm	
413	MI00409	fixed piece	FX22	

No.	Part No.	Descriptions	Specification	Remark
414	NI02245	heat conduction rubber	25*25*0.25 white (3M #9890)	
415	HA02621	computer connect wire	9P(female)-9P(female) UL2464 28AWG 5000m	
416	NI01863	key	5.5*W10*7.5	
417	NF01981	instruction	DPA900/1500 ALTO_V1.0	
418	NH00231	paper	889*554mm	
419	MG00588	screw	4.75*11.8mm	
420	NI02145	acrylic panel	DPA series ALTO_V1.1	
421	NI02146	acrylic panel	DPA4000 (3t*40*47mm)	
422	NE02717	label	MADE IN CHINA	
423	NH00038	paper	0.115*1M	
424	NI00028	membrane	0.110*1M	

DPA1500 part list

No.	Part No.	Descriptions	Specification	Remark
1	MA04096	panel	MISTRAL4000	
2	MA04097	panel	MISTRAL4000	
3	MA04098	panel	MISTRAL4000 3.1*88.8*25.5*483	
4	MI01309	panel	3.1*88.8*25.5*483	
5	MA04397	panel	DPA1500 ALTO_V1.0	
6	MA04395	panel	DPA4000	
7	MA04396	panel	DPA4000 1.5*22.4*81.4*422	
8	MJ00088	single light board	1.5*2135*1220 30.67kg	
9	MB03068	rear board	DPA1500_V1.0	
10	MB03069	rear board	DPA1500_V1.1	
11	MB03070	rear board	DPA1500 430*70*85.5*1.5t_V1.1	
12	MJ00088	single light board	1.5*2135*1220 30.67kg	
13	ME00051	iron pillar	M3*12	
14	ME00001	screw pillar	M4*10*0.7PH	
15	ME00002	screw pillar	M4*20*0.7PH	
16	MI02534	fixed board	MISTRAL 1500 30* 160*1.5t_V1.0	
17	MJ00088	single light board	1.5*2135*1220 30.67kg	
18	MC00517	top cover	MISTRAL4000_V1.0	
19	MC00622	top cover	MISTRAL2500_V1.0	
20	MC00621	top cover	MISTRAL2500_V1.0	
21	MJ00088	single light board	1.5*2135*1220 30.67kg	
22	MI01744	handle	MISTRAL4000 20*25.5*80	
23	MI01745	handle	MISTRAL4000 20*25.5*80	
24	MI02356	fixed bracket	156.1*84.9*84*1.0t MISTRAL1500_V1.0	
25	MJ00061	Zn-plated board	1*2135*1220 20.45kg	
26	MI01746	front board	MISTRAL4000 14*81*89	
27	MJ00061	Zn-plated board	1*2135*1220 20.45kg	
28	MJ01227	cushion	MISTRAL2500	
29	MJ01228	cushion	MISTRAL2500 2.0t*422*15	
30	MJ01154	single light board	2.0t*1850*950mm 27.6kg	
31	MI02367	fixed bracket	MISTRAL1500 left	
32	MI02366	fixed bracket	MISTRAL1500(left)_V1.0	
33	MJ01154	single light board	2.0t*1850*950mm 27.6kg	
34	MI02365	fixed bracket	MISTRAL1500 right	
35	MI02364	fixed bracket	MISTRAL1500_V1.0	
36	MJ01154	single light board	2.0t*1850*950mm 27.6kg	
37	MI02369	barrier	MISTRAL1500	
38	MI02368	barrier	MISTRAL1500_V1.0	
39	MJ00067	single light board	1.0t*2440*1220 18.69kg	
40	MI02361	fixed bracket	197.3*84*27*1.0t MISTRAL1500_V1.0	
41	MJ00061	Zn-plated board	1*2135*1220 20.45kg	
42	NI02650	knob	18*18mm	

No.	Part No.	Descriptions	Specification	Remark
43	NI02651	knob fix sheath	10* 22.5	
44	HC00005	AC socket	AC-008	
45	HI00031	power switch	R415KKETOF	
46	HA01243	wire	300mm UL1015 14AWG brown	
47	HA01333	Single terminal wiring	150mm UL1015 18AWG green/yellow	
48	HA01247	Single terminal wiring	180mm UL1015 14AWG blue	
49	HA01248	single terminal wiring	150mm UL1015 14AWG brown	
50	HA02891	wire	3P-3P 400mm UL2547 28AWG	
51	HA02892	wire	3P-3P 250mm UL2547 28AWG	
52	HA02856	wire	3P-3P 160mm UL1007 24AWG	
53	HA01394	row-wire connector wiring	3P-3P 120	
54	HA02328	wire	300mm UL1015 14AWG black	
55	HA02329	wire	300mm UL1015 14AWG red	
56	HA01198	wire	180mm UL1015 14AWG black	
57	HA01251	wire	200mm UL1015 14AWG red	
58	NI00252	sleeve	4*20mm	
59	NI00248	sleeve	4*1000mm	
60	SA00011	bridge rectifier	25A/200V	
61	MG00247	copper pillar	M3*10*0.5PHsingle length16	
62	MG00061	screw	M3*10	
63	MG00295	screw	M4*6	
64	MG00025	screw	M3*6	
65	MG00042	screw	M3*10	
66	MF00037	washer	3* 5*1t	
67	ME00015	nut	3m/m	
68	MF00038	washer	4* 7*1t	
69	ME00016	nut	4m/m	
70	MF00018	washer	4* 10*1t	
71	MF00048	washer	4* 8*0.5t	
72	HI00140	manual reposition switch	A0701HM-6A	
73	NI00389	washer	12* 16*0.5	
74	NI00375	film	45*60.5*0.5mm	
75	MG00041	screw	M3*6	
76	MG00030	screw	M4*12	
77	ME00006	nut	9	
78	MF00004	washer	9* 14*0.5t	
79	NI00437	rubber coil	20* 120*2tB	
80	MG00569	screw	M8*75*1.25PH_V1.0	
81	ME00026	nut	8m/m	
82	MF00026	washer	8* 18*1.5t	
83	MF00041	washer	8* 13.5*2t	
84	MH00766	iron piece	11* 90*2_V1.1	
85	MH00768	iron piece	11* 90*2_V1.1	

No.	Part No.	Descriptions	Specification	Remark
86	MJ01154	single light board	2.0t*1850*950mm 27.6kg	
87	TD00274	loop transformer	PT-DPA1500_115/230V	
88	HE00049	fan	24V/0.21A 80*80*25mm 360mm JST2P	
89	NI00312	power switch button	square 5*5*9 hole 2.8*2.8 black	
90	HA00871	power cord(Europe3P)	LT-322+1.5*3C(H05VV-F) 6FT+LT-501	
91	NI00218	cable tie-black	ALT-102SB	
92	NA00116	PE bag	0.04t*170*100mm	
93	NI01867	self-adhere foot cushion	20.5*14*7.6mm(SF-006)	
94	HJ00006	desiccant	30g	
95	NA00135	PE bag	0.05t*610*500mm	
96	NE13893	label	DPA1500 220-240V/50Hz_V1.0	
97	NI00044	adhesive label	0.085*1M	
98	NI00022	membrane	0.08*1M	
99	NF00061	assurance card	ALTO	
100	NE11347	label	ALTO PI	
101	NH00334	cone paper	0.040*1m	
102	NB02086	box	MACRO	
103	NB01944	barrier	PSA-3000_V1.1	
104	MG00027	screw	M3*12	
105	HA01658	header wiring	FL-0464A 6P-6P PH1.27 65	
106	HA01659	header wiring	FL-0464A 8P-8P PH1.27 75	
107	HA01660	header wiring	FL-0464A 14P-14P PH1.27mm 65mm	
108	HA01661	header wiring	FL-0464A 20P-20P PH1.27 65	
109	HA01502	header wiring	6P-6P 120	
110	HA02659	wire	8P-8P 160mm UL2651 28AWG PH1.27mm	
111	HA02661	wire	20P-20P 460mm UL2651 28AWG PH1.27mm	
112	HA02660	wire	14P-14P 460mm UL2651 28AWG PH1.27mm	
113	HA03080	wire	10P-10P 380mm UL2651 28AWG PH1.27mm	
114	HK00622	PC board	P-MIS15MN(MISTRAL 1500)	
115	HB01189	PCB	MIS15MN_VER040310	
116	RA00157	fixed resistor 1/4W	0.0	R5
117	RA00322	fixed resistor 1/4W	4.7 M type	R1-17,R1-18,R2-17,R2-18
118	RA00174	fixed resistor 1/4W	47 M type	R1-25,R2-25,R2
119	RA00184	fixed resistor 1/4W	100 M type	R1-32,R2-32
120	RA00189	fixed resistor 1/4W	150 M type	R1-15,R2-15
121	RA00200	fixed resistor 1/4W	330 M type	R1-5,R2-5
122	RA00211	fixed resistor 1/4W	820 M type	R1-9,R2-9,R1-10,R2-10
123	RA00227	fixed resistor 1/4W	3.3K M type	R1,R4
124	RA00231	fixed resistor 1/4W	4.7K M type	R1-41,R1-42,R2-41,R2-42
125	RA00236	fixed resistor 1/4W	6.8K M type	R1-40,R2-40
126	RA00242	fixed resistor 1/4W	10K M type	R1-1,R1-2,R1-3,R2-1R22, R2-3,R1-28,R1-38,R2-28, R2-38,R1-27,R2-27

No.	Part No.	Descriptions	Specification	Remark
127	RA00244	fixed resistor 1/4W	12K M type	R1-6,R2-6,R1-37
128	RA00266	fixed resistor 1/4W	47K M type	R1-34,R2-34
129	RA00282	fixed resistor 1/4W	100K M type	R1-35,R2-35
130	RA00284	fixed resistor 1/4W	120K M type	R1-36,R2-36
131	RA00138	fixed resistor 1/2W	3.3K M type	R1-33,R2-33
132	RA00007	metal-oxide-film resistor 1W	22 P type	R1-13,R1-14,R2-13,R2-14
133	RA00051	metal-oxide-film resistor 2W	5.6 P type	R1-26,R2-26
134	RA00046	metal-oxide-film resistor 2W	2.2K P type	R1-11,R1-12,R2-11,R2-12
135	RA00071	metal-oxide-film resistor 3W	0.1 RSS P type	R1-19,R1-20,R123,R124, R2-19,R2-20,R2-23,R2-24
136	RA00031	metal-oxide-film resistor 2W	10 P type	R1-22,R2-22
137	RA00722	metal-oxide-film resistor 3W	500 P type	R1-21,R2-21
138	CA00010	ceramic capacitor	27PF NPO	C1-7,C2-7
139	CA00018	ceramic capacitor	56PF NPO	C1-5,C2-5
140	CA00024	ceramic capacitor	100PF SL	C1-3,C2-3,C1-25,C2-25
141	CA00043	ceramic capacitor	0.0033uF	C1-11,C1-12,C2-11,C2-12
142	CA00070	ceramic capacitor	0.022uF/50V±20% Y5U	C1-10,C2-10
143	CA00053	ceramic capacitor	0.1uF SL	C2
144	CB00025	electrolytic capacitor	10uF/50V 6*7mm	C1-23,C1-24,C2-23,C224,C6
145	CB00185	electrolytic capacitor	10uF/63V 5*11mm	C3
146	CB00169	electrolytic capacitor	47uF/16V NP 6.3*11mm	C1-6,C2-6
147	CB00039	electrolytic capacitor	47uF/25V 5*11mm	C1-26,C2-26
148	CB00043	electrolytic capacitor	47uF/100V 10*12mm	C1-1,C2-1
149	CB00055	electrolytic capacitor	220uF/16V 8*11mm	C1-4,C1-8,C2-4,C2-8
150	CB00067	electrolytic capacitor	470uF/35V 10*20mm	C4,C5
151	CB00093	electrolytic capacitor	4700uF/80V LCM 25*50mm	C1-15,C1-16,C2-15,C2-16
152	CF00005	metal-film capacitor MSC	0.0022uF/63V 5% CASE01	C1-9,C2-9
153	CF00022	metal-film capacitor MSC	0.022uF/100V 5% CASE01	C1-13,C2-13
154	CF00006	metal-film capacitor MSC	0.0033uF/100V 5% CASE01	C1-14,C2-14
155	CF00033	metal-film capacitor MEF	0.1uF/250V	C1-2,C2-2
156	SA00167	bridge rectifier	2A W2-04	D1,D1-9,D2-9,D1-20,D2-20
157	SA00093	rectifier diode	1N4148 0.5A	D1-6,D17,D26,D27,D110, D1-19,D2-10,D2-19
158	SA00098	rectifier diode	1A/400V IN4004	D1-2,D2-2,D115,D117, D2-15,D2-17
159	SA00107	zener diode	1W 15V 1N4744	D1-3,D1-5,D1-8,D23,D25, D2-8
160	SA00026	L.E.D	5 circle red B1115	D1-4,D2-4
161	SA00002	high speed diode	1A/600V 1N4937	D1-11,D1-12,D2-11,D2-12
162	SA00205	zener diode	1/2W 3.9V	D1-13,D1-14,D2-13,D2-14
163	HC00504	row-wire header	10P 2.54mm 180°	J1
164	HC00172	row-wire header	3P 3.96mm 180°	J2
165	HC00625	row-wire header	14P 2.5mm 180°	
166	HC00365	row-wire header	14P 2.54mm 180°(C03-14AG1)	J4

No.	Part No.	Descriptions	Specification	Remark
167	HC00076	row-wire header	2P 2.5mm 180°	J1-6,J2-6,J3
168	HC00077	row-wire header	3P 2.5mm 180°	R1-29,R2-29
169	HC00324	terminal	6.5m/m (PC250)	J1-4,J1-5,J2-4,J2-5,J1-7, J1-8,J1-9,J1-10,J2-7,J2-8, J2-9,J2-10
170	CN00060	fixed inductance	2uH 10A(CSAF-302824)(1.5mm*12 1/2T)	L1-1,L2-1
171	SB00042	transistor	MJE15032	Q1-1,Q2-1
172	SB00044	transistor	MJE15033	Q1-2,Q2-2
173	SB00023	power transistor	2SA1943-O	Q1-3,Q1-7,Q2-3,Q2-7
174	SB00021	power transistor	2SC5200	Q1-4,Q1-8,Q2-4,Q2-8
175	SB00129	transistor	MPSA92(TO92)/(PHI)	Q1-5,Q2-5
176	SB00130	transistor	MPSA42(PHILIPS)	Q1-6,Q2-6
177	RH00021	thermistor	500 (TDC5C150L)	R3
178	RH00017	thermistor	50 (TDC05A050J)	R1-8,R2-8
179	RH00018	thermistor	100 (PDBS8101MS)	R1-39,R2-39
180	RC00319	semi-fixed resistor	B100 PT1030-V1B101-C1-H10	R1-16,R2-16
181	SD00032	integrated circuit	LM317T	U1
182	SD00173	integrated circuit	NJM4580L(JRC)	U2,U1-1,U2-1
183	HC00064	FUSE holder	JEF-503B (5.2mm)	F1-1,F1-2,F2-1,F2-2
184	HD00070	ceramic tube fuse	5A 250V 5.2*20mm CSA/S/T/UL/VDE	
185	NC00005	silicone insulator	TO-220 square type	
186	MF00030	washer	3* 8*0.8t	
187	MF00037	washer	3* 5*1t	
188	MG00171	screw	M3*14	
189	MI02363	heat-sink	9*83*40*270 MISTRAL1500_V1.0	
190	MI01956	fixed bracket	MISTRAL900 1.5t*130*5*16mm left	
191	MJ00069	iron board	1.5*2135*1220 30.67kg	
192	NC00182	insulator	MISTRAL900 1.6t*130*16mm	
193	NC00041	red foil white board	1.6t*0.65M*70M	
194	MJ01200	spacer	MISTRAL4000 14.5*30.5*2t	
195	MJ01201	spacer	MISTRAL4000 14.5*30.5*2t	
196	MJ01154	single light board	2.0t*1850*950mm 27.6kg	
197	HC00034	short circuit connector	NO.2700 2.54mm/6mm OPEN	
198	HK02231	Photodiode	P-photosensitive resistance 5LLED	
199	RH00020	photosensitive resistance	VT90N1	
200	SA00201	L.E.D	5 red(LI3330/A)	
201	NI02779	sleeve	9*30mm	
202	NI00274	sleeve	9*1000mm	
203	CB00217	electrolytic capacitor	470uF/50V 10*20mm	C1
204	RA00198	fixed resistor 1/4W	300 M type	R1-4,R1-7,R2-4,R2-7
205	CB00009	electrolytic capacitor	1uF/50V 4*7mm	R1
206	RA00713	fixed resistor 1/4W	1.0K F type	C1-27,C2-27
207	AC00002	solder wire	63/37%	
208	HK03958	PC board	P-MIS40PWR	

No.	Part No.	Descriptions	Specification	Remark
209	HB00946	PCB	MIS40PWR_VER030710	
210	HC00324	terminal	6.5m/m (PC250)	P1,P2,P3,P4,P5,P6,P7, P8
211	CG00044	metal oxide varistors	NP35L-Y2	K2-2
212	AC00002	solder wire	63/37%	
213	HK02069	PC board	P-MIS15FP	
214	HB01168	PCB	MIS15FP(2*4)_VER040204	
215	SA00053	L.E.D	3 round(red)long foot 26mm	D1-3,D2-3
216	SA00054	L.E.D	3m/m round(yellow)long foot 26	D1-1,D2-1,D1-30,D2- 30
217	SA00194	L.E.D	3	D1-29,D2-29
218	NI01765	LED spacer support	LEDS-10 10mm	
219	HC00066	row-wire header	3P 2.5mm 90°	CN1-1,CN2-1
220	RC00209	PPBC239	A10K RV110-40E1-225A-A14	VR1-1,VR2-1
221	HA03320	wire	14P-14P 400mm UL1007 24AWG	CN3
222	AC00002	solder wire	63/37%	
223	HK04608	PC board	P-MIS60SP	
224	HC00442	speaker socket	NL4MP (NEUTRIK)	SPK1,SPK2
225	MJ00942	fixed bracket	CS12/600	
226	MJ00061	Zn-plated board	1*2135*1220 20.45kg	
227	HA01239	single terminal wiringCF:W209	180mm UL1015 14AWG white	JP5
228	HA01237	single terminal wiringCF:W207	200mm UL1015 14AWG Grey	JP2
229	HA02471	single terminal wiring	360mm UL1015 14AWG white	JP7
230	HA01258	single terminal wiring	380mm UL1015 14AWG Grey	JP8
231	HA03432	single terminal wiring	100mm UL1015 14AWG	JP1,JP3
232	HA03433	single terminal wiring	100mm UL1015 14AWG	JP6,JP4
233	HB01396	PCB	MIS60SP(2*4)_VER040922	
234	AC00002	solder wire	63/37%	
235	HK02070	PC board	P-MIS15IN1	
236	HB01169	PCB	MIS15 IN1(2*4)_VER040205	
237	HC00110	MIC jack	JY-6314-02-340	PJ1
238	HC00112	balance MIC jack	99M-107SP-1-2 90° PUSH	CN2
239	HC00111	balance MIC jack	99M-108SP1	CN3
240	HA02893	wire	14P-14P 280mm UL2651 28AWG PH1.27mm	CN1
241	HC00077	row-wire header	3P 2.5mm 180°	CN6,CN9
242	HI00039	push-button switch	SP70300-0202-11F1-N	SW1,SW2
243	HA02055	wire	320mm RG-174/U 50	
244	AC00002	solder wire	63/37%	
245	HK02071	PC board	P-MIS15IN2	
246	HB01170	PCB	MIS15 IN2(2*4)_VER040103	
247	HC00110	MIC jack	JY-6314-02-340	PJ2
248	HC00112	balance MIC jack	99M-107SP-1-2 90° PUSH	CN4
249	HC00111	balance MIC jack	99M-108SP1	CN5
250	HC00077	row-wire header	3P 2.5mm 180°	CN7,CN8

No.	Part No.	Descriptions	Specification	Remark
251	AC00002	solder wire	63/37%	
252	HK00793	PC board	P-MIS2500-INPUT	
253	HB01105	PCB	MIS40IN-1_VER031206	
254	HC00297	terminal block	DT-55-A14W-03(3PH)	CN1
255	HC00077	row-wire header	3P 2.5mm 180°	CN3
256	HC00079	row-wire header	5P 2.5mm 180°	CN4
257	AC00002	solder wire	63/37%	
258	HK03847	PC board	P-DPA2500-RS-DIP	
259	HK00603	PC board	P-DPA2500-RS-SMD	
260	HB01073	PCB	DPA-RS_VER031103	
261	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C1,C2,C4,C5,C6,C7,C
262	RD00372	SMD precise resistor 1/8W	10.7 ±1% 0805	R3,R4
263	SG00047	SMD integrated circuit	MAX485EESA	IC1
264	CO00006	SMD chip inductance	BLM21A102SPT/(MURATA)	L1,L2,L3,L4,L5
265	AE00221	tin soldering paste	SJ-617	
266	HC00324	terminal	6.5m/m (PC250)	
267	CB00040	electrolytic capacitor	47uF/25V 5*11mm	C3
268	SA00101	zener diode	1W 6.8V 1N4736	D1,D2
269	SA00104	zener diode	1W 10V 1N4740	D3,D4
270	SD00019	integrated circuit	MAX202ECPE	IC2
271	HA02503	wire	9P-10P 50mm UL2651 28AWG	CN1
272	HC00048	row-wire header	8PIN A28b-8B.T.6	CN2
273	HC00111	balance MIC jack	99M-108SP1	S1
274	HC00112	balance MIC jack	99M-107SP-1-2 90° PUSH	S2
275	AC00002	solder wire	63/37%	
276	HK03846	PC board	P-DPA2500-DISPLAY	
277	HB01071	PCB	DPA-DIS-1(2*2)_VER050120	
278	CH00017	laminated capacitor	0.1uF/50V Y5V PH5	C1
279	CB00026	electrolytic capacitor	10uF/50V 6*7mm	C2
280	RA00647	fixed resistor 1/8W	4.7K M type	R1,R2
281	RA00651	fixed resistor 1/8W	10K M type	R3,R4,R5,R6,R7,R8
282	HB01070	PCB	DPA-DIS-2_VER030916	
283	HH00005	seven paragraph monitor	LSD3561-10	DL2,DL3
284	HC00435	row pin (single)#1100	2.54 180° 5P6/11.6mm	CN3,CN4
285	SA00051	L.E.D	3 orange, green BOG303b	DL11
286	SA00072	L.E.D	3 red LI2340/A	DL1,DL4,DL5,DL6,DL7,DL8, DL9,DL10
287	SB00072	transistor	BC559C, 126	TR1,TR2
288	HI00238	push-button switch	2 stage 6P PS-9226A(NON-LOCK)	SW1,SW2,SW3,SW4
289	HC00050	row-wire header	14PIN A28b-14B.T.6	CN1
290	HC00051	row-wire header	20PIN A28b-20B.T.6	CN2
291	HA01919	jumper wire	5mm	J1,J2,J3,J6,J9

No.	Part No.	Descriptions	Specification	Remark
292	HA02249	wire	0.6	
293	HA01917	jumper wire	3mm	J4,J8,J10
294	HA01920	jumper wire	6mm	J5,J7,J3
295	HA02249	wire	0.6	
296	NI01771	LED spacer support	LEDS-5 5mm	DL1,DL10,DL11,DL4,DL5,DL6,DL7,DL8,DL9
297	MG00269	screw	M3*6	
298	NI01876	LED spacer support	7.6*4.5*184	
299	AC00002	solder wire	63/37%	
300	HK03845	PC board	P-DPA2500-PWR-DIP	
301	CB00024	electrolytic capacitor	10uF/16V 4*7mm	C1,C3,C10,C11
302	CB00072	electrolytic capacitor	1000uF/25V 10*20mm	C9,C8
303	SD00074	integrated circuit	L7805CV(TO-220)(ST)	U3
304	SD00169	integrated circuit	L7905CV(TO-220)(ST)	U4
305	HC00066	row-wire header	3P 2.5mm 90°	CN2
306	HC00560	row pin (single)#2200	2.54 180° 2*5P 6/11.6mm	CN1
307	HC00070	row-wire header	6P 2.5mm 90°	CN3
308	HI00161	relay	RY-5W-K,5V	REL1
309	HC00047	row-wire header	6PIN A28b-6B.T.6	J7
310	HC00048	row-wire header	8PIN A28b-8B.T.6	J1,J6
311	HC00051	row-wire header	20PIN A28b-20B.T.6	J2,J3
312	HC00050	row-wire header	14PIN A28b-14B.T.6	J5,J4
313	NC00005	silicone insulator	TO-220 square type	
314	NI00863	insulate bean	TO220B	
315	MG00270	screw	M3*10	
316	MI01820	fixed bracket	DPA4000 2.5*42.5*83.8*102.5	
317	MJ00093	AL plate	2.5*2000*1000 13.6kg	
318	MG00252	copper pole	M3*6.2*0.5PHsingle,length12	
319	MG00363	copper pillar	M3*14*0.5PH	
320	MG00269	screw	M3*6	
321	HK00602	PC board	P-DPA2500-PWR-SMD	
322	HB01072	PCB	DPA-PWR_VER030916	
323	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C7,C12,C13,C14,C15
324	CI00051	SMD ceramic capacitor 0603	22PF/50V NPO ±5%	C2,C4,C5,C6
325	RD00101	SMD fixed resistor 1/10W	10K ±5% 0603	R1,R3,R6,R8,R10,R11
326	RD00081	SMD fixed resistor 1/10W	750 ±5% 0603	R2,R4
327	RD00085	SMD fixed resistor 1/10W	1.5K ±5% 0603	R12,R13,R14,R15,R16,R17,R18,R19,R20,R21,R22,R23,R24,R25,R26,R27,R28,R29
328	RD00059	SMD fixed resistor 1/10W	0.0 ±5% 0603	R30,R9
329	SE00011	SMD rectifier diode	RLS4148 0.5A (LL-34)	D1
330	SF00056	transistor	MMBT3904(SOT-23)/(PHI)	Q2
331	SG00040	SMD integrated circuit	MC33078DT(ST)MC33078D(ON)	U1,U2
332	SE00030	SMD rectifier diode	SFS1B	D2,D3,D4,D5
333	RD00088	SMD fixed resistor 1/10W	2.2K ±5% 0603	R5,R7

No.	Part No.	Descriptions	Specification	Remark
334	AE00221	tin soldering paste	SJ-617	
335	AC00002	solder wire	63/37%	
336	HK03830	PC board	P-313089-4-DIP	
337	CB00048	electrolytic capacitor	100uF/25V 6*11mm	C2
338	CB00069	electrolytic capacitor	1000uF/6.3V 8*11mm	C4
339	RA00515	precise resistor 1/4W	10.0K M type	R12,R13
340	HC00080	row-wire header	6P 2.5mm 180°	
341	HC00047	row-wire header	6PIN A28b-6B.T.6	CN4
342	HC00048	row-wire header	8PIN A28b-8B.T.6	CN1
343	HC00050	row-wire header	14PIN A28b-14B.T.6	CN6
344	HC00051	row-wire header	20PIN A28b-20B.T.6	CN5
345	SC00319	crystal oscillator	12.288MHZ	XT1
346	HC00162	row pin (single)#6100	1.27 180°14P(gold-plated))6.0/11.54mm	CN2,CN7
347	ND00098	EV bubble sponge	40*14*5	
348	HK03831	PC board	P-313089-4-SMD	
349	HB00400	PCB	313089 (90*77.5)_VER020507	
350	CI00046	SMD ceramic capacitor 1206	1uF/16V Y5V-1206(3216)	C28
351	CI00049	SMD ceramic capacitor 0603	15PF/50V NPO ±5%	C12,C14
352	CI00051	SMD ceramic capacitor 0603	22PF/50V NPO ±5%	C29
353	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C1,C10,C11,C13,C15,C17, C16,C18,C19,C20,C21,C22, C23,C24,C25,C27,C3,C30, C31,C32,C33,C34,C35,C6, C7,C8,C9
354	CL00006	SMD tantalum capacitor	10uF/16V case B2	C26,C5
355	RD00068	SMD fixed resistor 1/10W	100 ±5% 0603	R14,R15,R2,R27,R29,R30, R32,R39,R40,R6,R7,R8
356	RD00073	SMD fixed resistor 1/10W	220 ±5% 0603	R19,R20,R22,R35,R36, R37,R38,R5
357	RD00076	SMD fixed resistor 1/10W	330 ±5% 0603	R28
358	RD00079	SMD fixed resistor 1/10W	560 ±5% 0603	R25
359	RD00082	SMD fixed resistor 1/10W	820 ±5% 0603	R16,R17
360	RD00085	SMD fixed resistor 1/10W	1.5K ±5% 0603	R18
361	RD00086	SMD fixed resistor 1/10W	1.8K ±5% 0603	R21
362	RD00093	SMD fixed resistor 1/10W	4.7K ±5% 0603	R3,R33,R34
363	RD00101	SMD fixed resistor 1/10W	10K ±5% 0603	R11,R24,R26,R9
364	RD00125	SMD fixed resistor 1/10W	1.0M ±5% 0603	R23
365	RE00006	SMD resistor networks 1/16W	100 *4 ±5% 8P 0603	AR1,AR10,AR13,AR14, AR16,AR18,AR2,AR3, AR4,AR5,AR8
366	RE00008	SMD resistor networks 1/16W	4.7K *4 ±5% 8P 0603	AR11,AR15,AR17,AR6, AR7
367	RE00007	SMD resistor networks 1/16W	470 *4 ±5% 8P 0603	AR9
368	SE00011	SMD rectifier diode	RLS4148 0.5A (LL-34)	D1
369	SG00068	SMD integrated circuit	74HC14DT(SO-14)/(PHI)	IC5
370	SG00049	SMD integrated circuit	AS4C256K16F0-60JC	IC1
371	SG00025	SMD integrated circuit	24LC64I/SN	IC6
372	SG00184	SMD integrated circuit	EN29F040A-70JC/DPA	IC3

No.	Part No.	Descriptions	Specification	Remark
373	SG00217	SMD integrated circuit	EN29F040A-70JC(PL032)/(E-ON)	
374	SG00335	SMD integrated circuit	TY-1 ALTO(LEM NO#105008)_V1.1	IC2
375	SG00128	SMD integrated circuit	RED 208(LEM NO#105008)	
376	SG00069	SMD integrated circuit	MAX709L-CSA	IC4
377	CO00006	SMD chip inductance	BLM21A102SPT/(MURATA)	L1,L2,L3,L4,L5,L6
378	HC00233	IC socket (PCB)	PLCC32 (D03-32T.A.4)	IC3
379	AE00221	tin soldering paste	SJ-617	
380	HK01289	PC board	P-313111-SMD	
381	HB00401	PCB	313111 (37*75)_VER020507	
382	CI00064	SMD ceramic capacitor 0603	680PF/50V NPO ±5 %	C32,C33,C43,C45
383	CI00067	SMD ceramic capacitor 0603	0.0022uF/50V X7R ±10%	C31,C46
384	CI00071	SMD ceramic capacitor 0603	0.01uF/50V X7R ±10%	C15,C19
385	CI00075	SMD ceramic capacitor 0603	0.1uF/50V Y5V +80,-20%	C18,C25,C3,C34,C35,C36, C37,C38,C39,C4,C41,C42, C7,C8,C9
386	CL00006	SMD tantalum capacitor	10uF/16V case B2	C1,C10,C11,C12,C13,C14, C16,C17,C2,C20,C21,C22, C23,C24,C26,C27,C28,C29, C30,C40,C44,C5,C6
387	RD00063	SMD fixed resistor 1/10W	22 ±5% 0603	R10,R3,R7,R9
388	RD00088	SMD fixed resistor 1/10W	2.2K ±5% 0603	R12,R17,R18,R19,R21,R23, R24,R27
389	RD00091	SMD fixed resistor 1/10W	3.3K ±5% 0603	R16,R20,R22,R28
390	RD00093	SMD fixed resistor 1/10W	4.7K ±5% 0603	R1,R13,R4,R6
391	RD00101	SMD fixed resistor 1/10W	10K ±5% 0603	R25,R26
392	SG00054	SMD integrated circuit	AK4393VF AKM	IC2
393	SG00061	SMD integrated circuit	AK5383VS AKM	IC1
394	SG00040	SMD integrated circuit	MC33078DT(ST)MC33078D(ON)	IC3,IC4,IC5,IC6
395	AE00221	tin soldering paste	SJ-617	
396	AC00002	solder wire	63/37%	
397	NB03038	box	DPA1500 ALTO_V1.1	
398	MJ01252	cushion	250*8*1.0t MISTRAL1500_V1.0	
399	MJ00061	Zn-plated board	1*2135*1220 20.45kg	
400	MI00427	fixed bracket	PSA-3000	
401	MJ00058	single light board	1*2135*1220 20.45kg	
402	MG00111	screw	pill 4*30	
403	NA00279	clip-chain bag	0.04t*100*150mm_V1.0	
404	AD00011	twin adhesive	90*120mm_V1.0	
405	HC00295	terminal	JS205-110	
406	MF00020	washer	5* 12*1t	
407	MF00039	washer	5* 8*1t	
408	MG00128	screw	M3*16	
409	MI00237	heat-sink	FX22 4*34.5*16.5*34.5mm	
410	MI00409	fixed piece	FX22	
411	NI02245	heat conduction rubber	25*25*0.25 white (3M #9890)	
412	HA02621	computer connect wire	9P(female)-9P(female) UL2464 28AWG 5000m	
413	NE11197	label	DPA1500_V1.0	

No.	Part No.	Descriptions	Specification	Remark
414	NH00012	bond paper	0.04*1M	
415	NI00014	membrane	0.035*1M	
416	NI01863	key	5.5*W10*7.5	
417	NF01981	instruction	DPA900/1500 ALTO_V1.0	
418	NH00231	paper	889*554mm	
419	MG00588	screw	4.75*11.8mm	
420	NI02145	acrylic panel	DPA series ALTO_V1.1	
421	NI02146	acrylic panel	DPA4000 (3t*40*47mm)	