

Service Manual

MODEL: MISTRAL900/1500



www.altoproaudio.com

Version 2.0

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1. Introduction

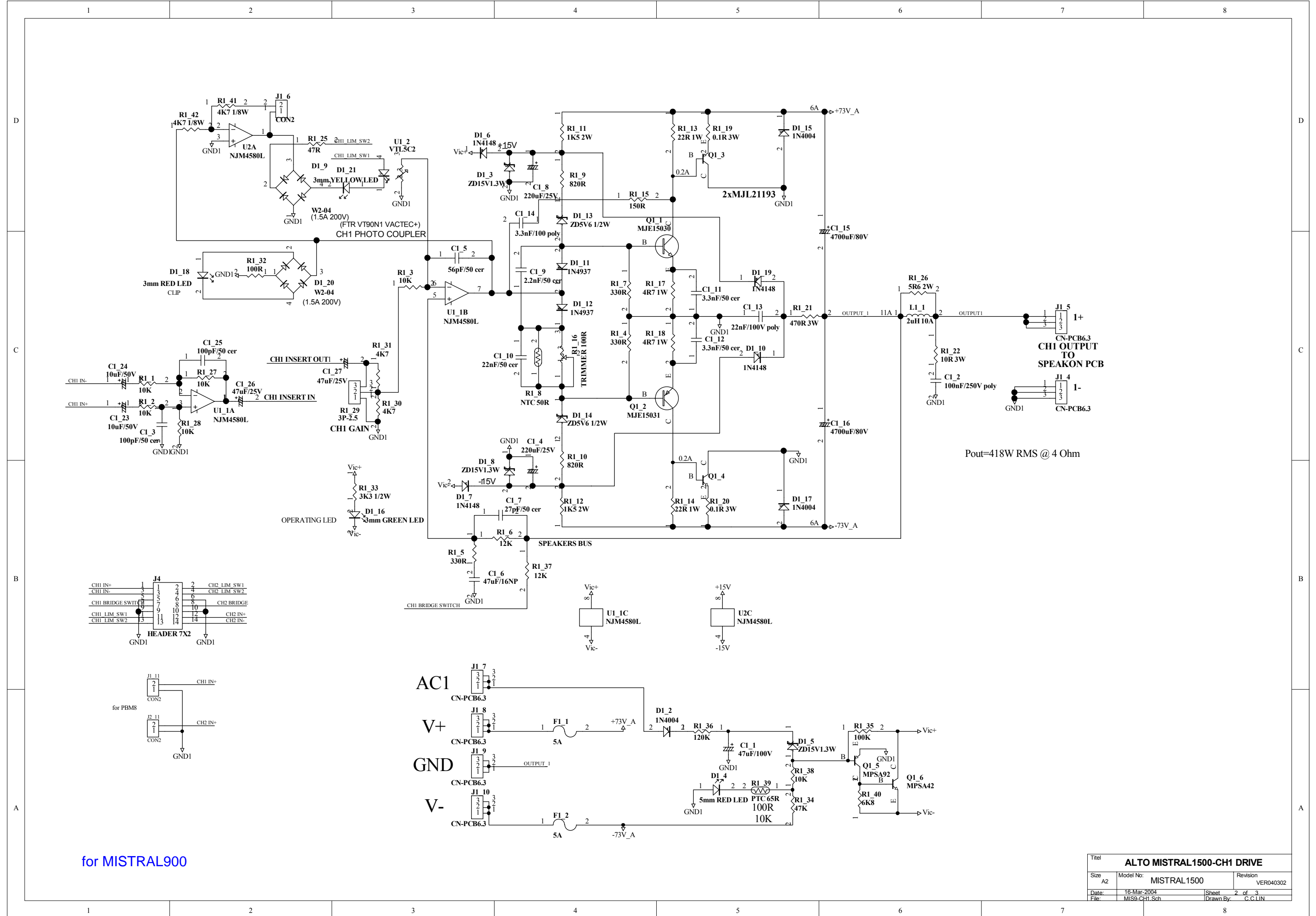
ALTO MISTRAL amplifiers are series of innovative design power amplifiers. This series work under high stability with great power supply in just 2-rack spaces. Airflow is from back to front panel to keep in a nice air circulation inside the Rack. The automatic fan, which affects the temperature of machine 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 20hms 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

	<i>MISTRAL900</i>	<i>MISTRAL1500</i>
Output Power		
20Hz~20KHz @0.1% THD, SCD MODE		
8 ohms per channel (EIAJ)	190W	300W
4 ohms per channel (EIAJ)	300W	500W
BRIDGE MONO MODE		
8 ohms , 1KHz, 0.1%THD	1400W	2000W
Distortion (SMPTE-IM)	<0.05%	
Frequency Response	20Hz-20kHz +/- 0.1dB, -3 dB points: 10Hz-60kHz	
Damping Factor, 1 kHz and below	>300 at 8 ohms	
Signal to Noise, 20 Hz-20 kHz	102 dB	
VOLTAGE GAIN	40x (32dB)	
Input Sensitivity @ 4 ohms	1Vrms	
Input Clipping	10 Vrms (+22 dB)	
Input Impedance	10 k ohms unbalanced, 20 k ohms balanced 56(36dB)	
Controls	FRONT: AC SWITCH, CH1 & CH2 GAIN KNOBS REAR: LIMITER, BRIDGE SELECTOR.	
Indicators (1 per 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 Speakon 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	15.9" (40 cm) deep (rack mounting to rear support ears) 19" (48.3 cm) rack mounting, 3.5" (8.9 cm) tall (2 rack spaces)	

3. Schematic Diagram

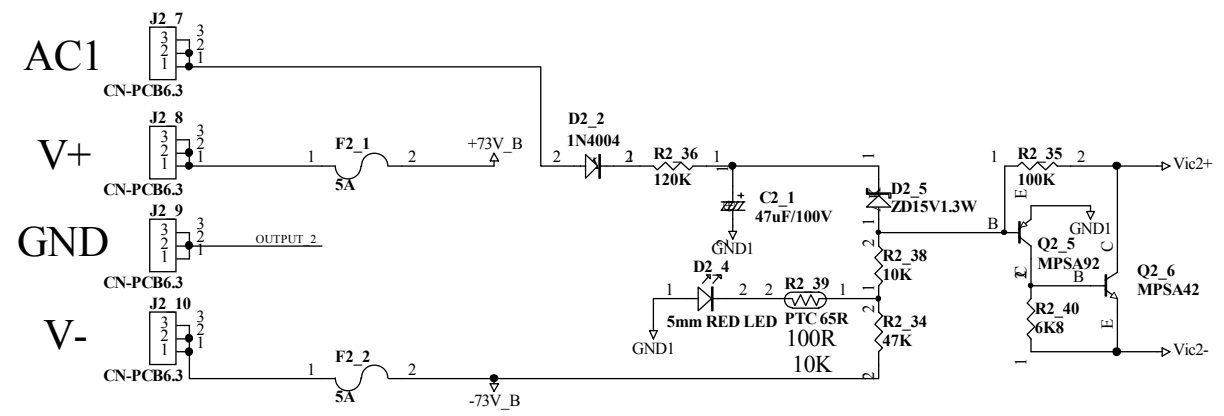
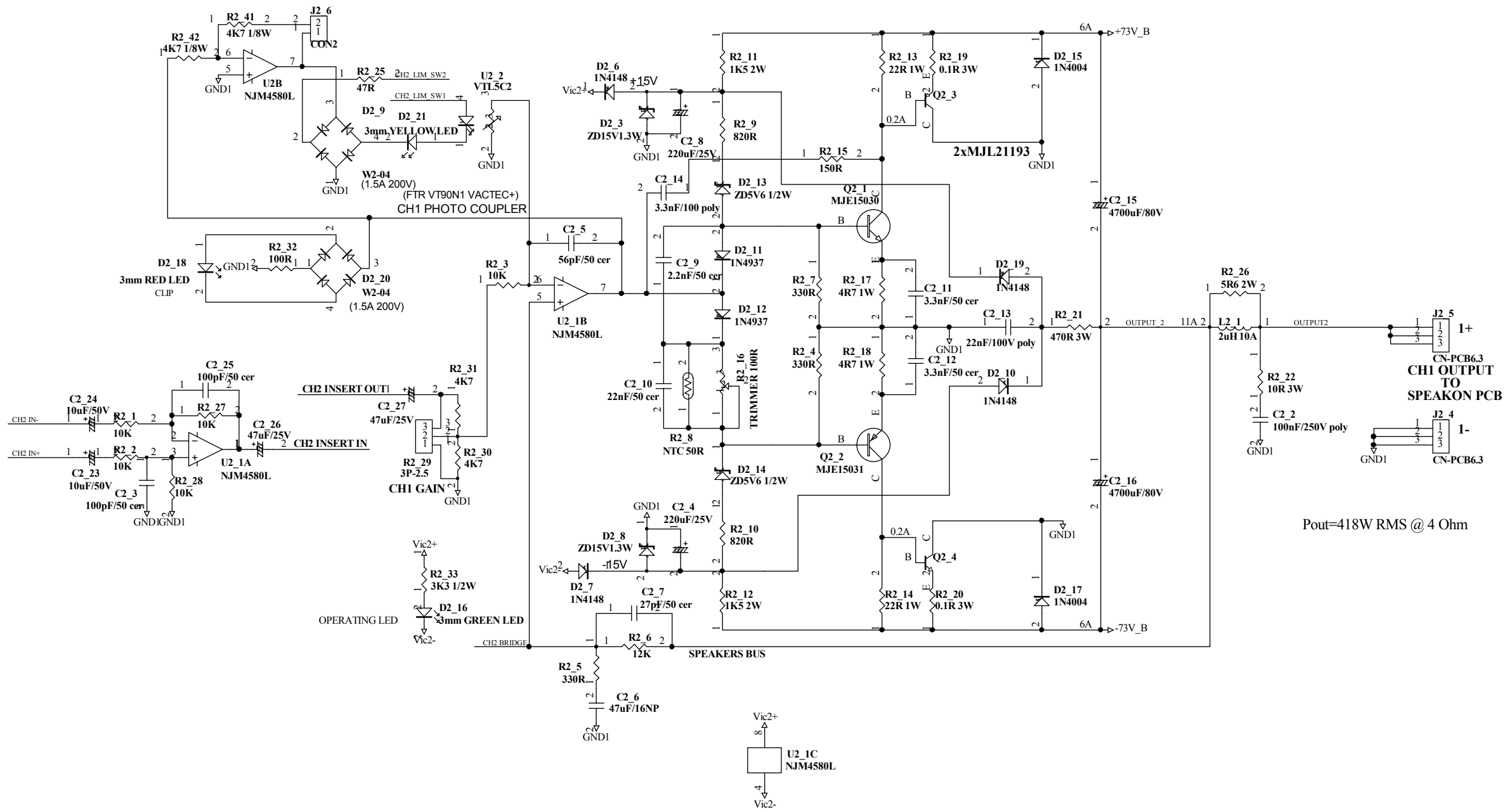


Pout=418W RMS @ 4 Ohm

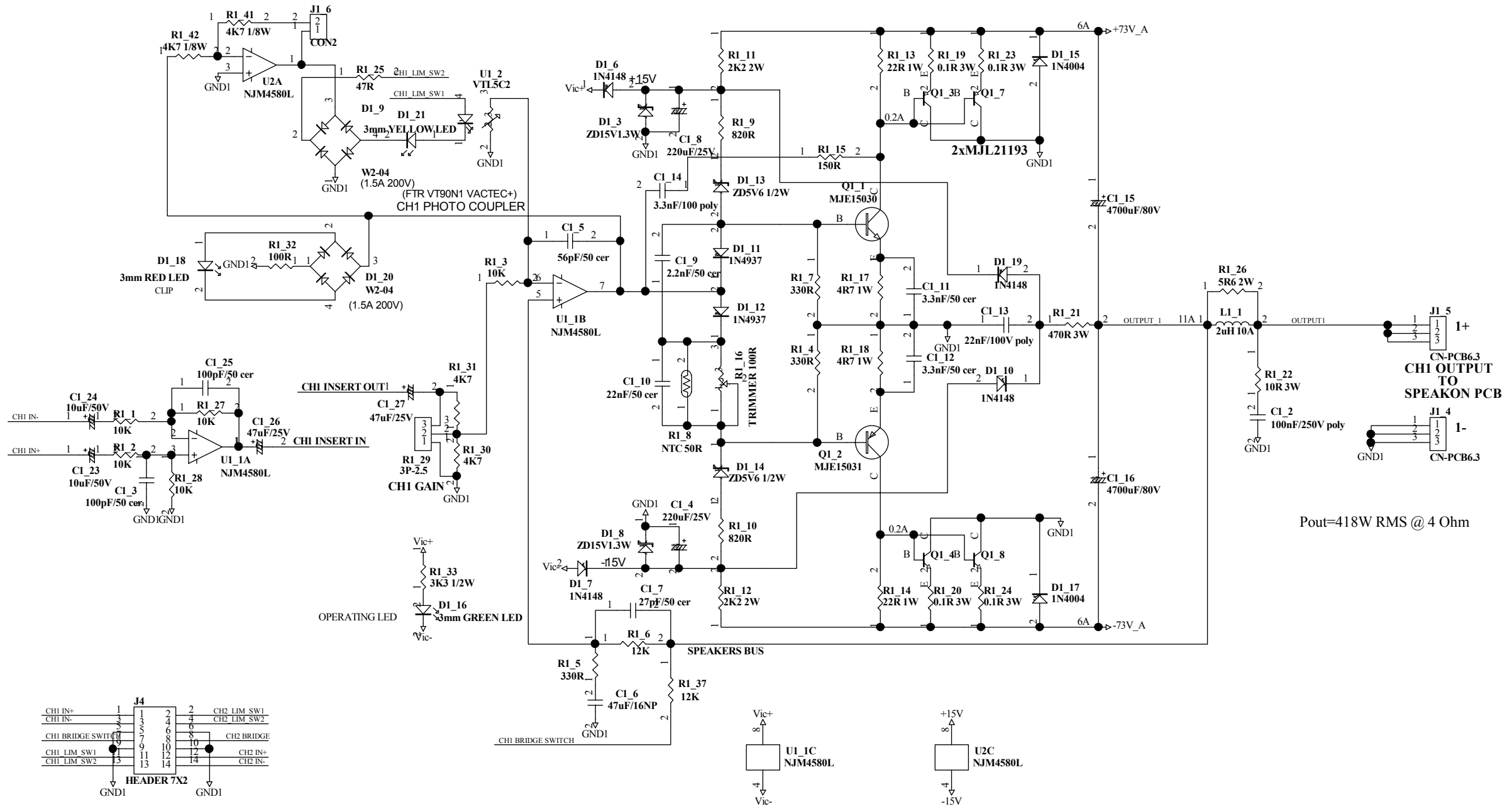
for MISTRAL900

Titel		
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

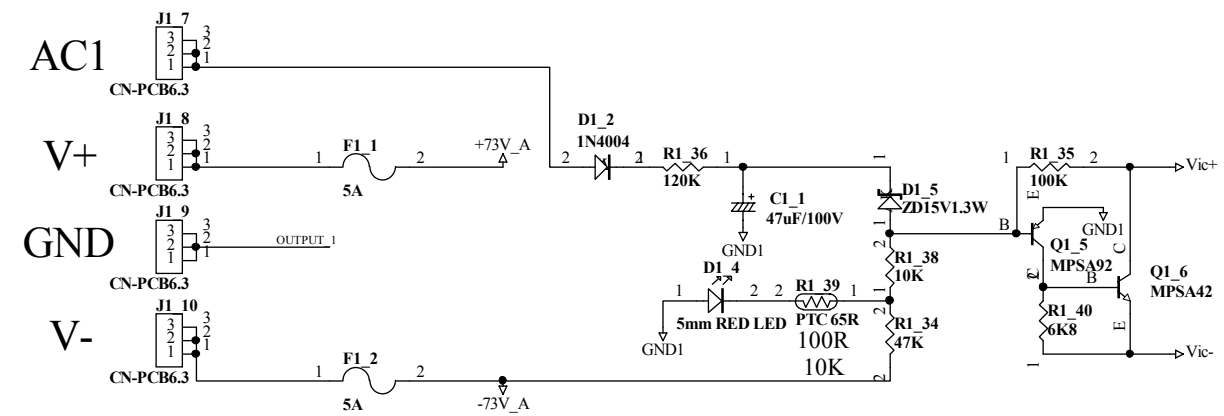
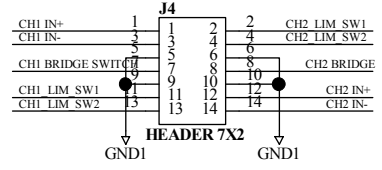
for MISTRAL900



Titel		
ALTO MISTRAL1500-CH1 DRIVE		
Size	Model No:	Revision
A2	MISTRAL1500	VER040302
Date:	16-Mar-2004	Sheet 3 of 3
File:	MIS9-CH2.Sch	Drawn By: C.C.LIN

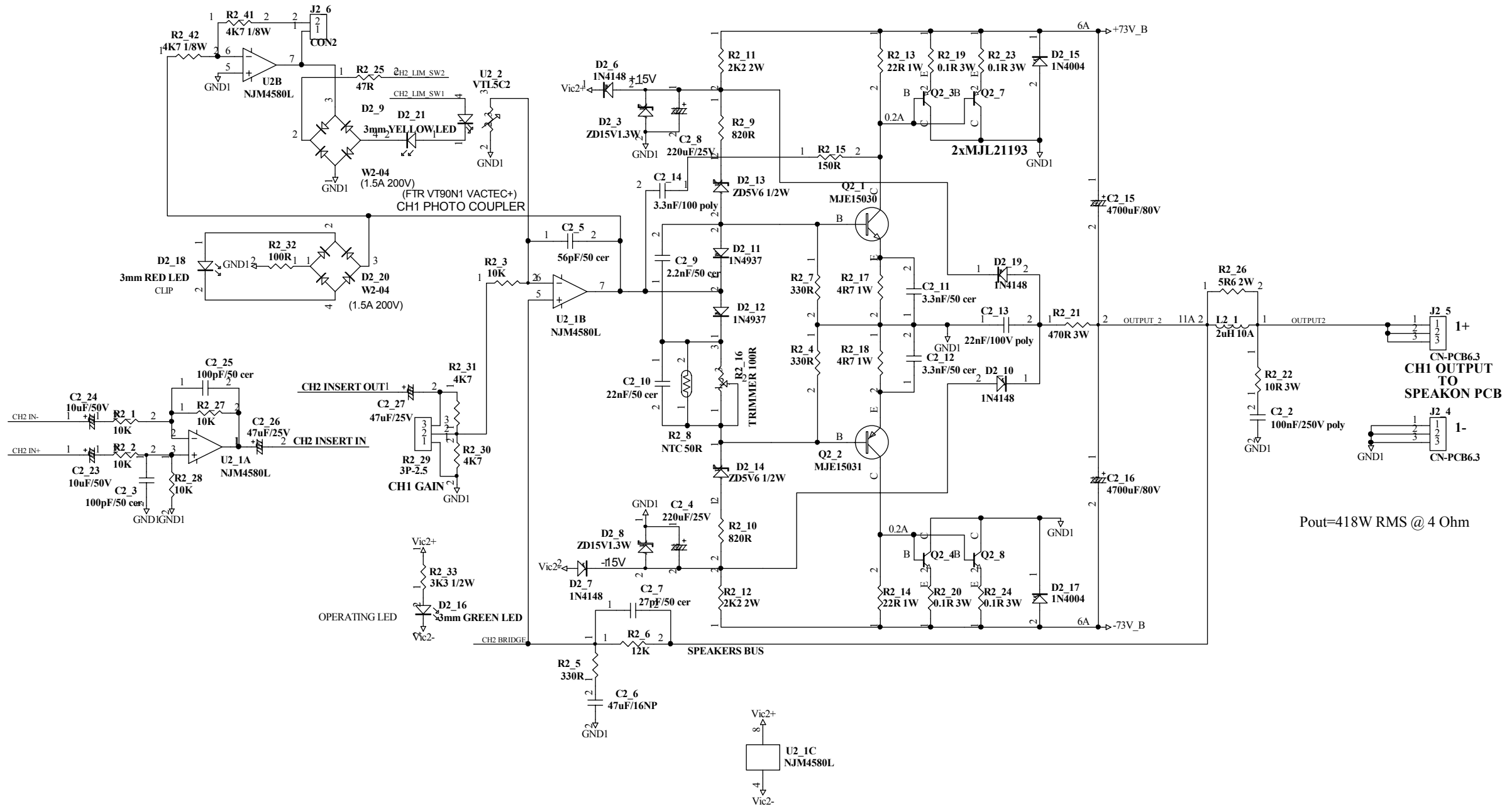


Pout=418W RMS @ 4 Ohm



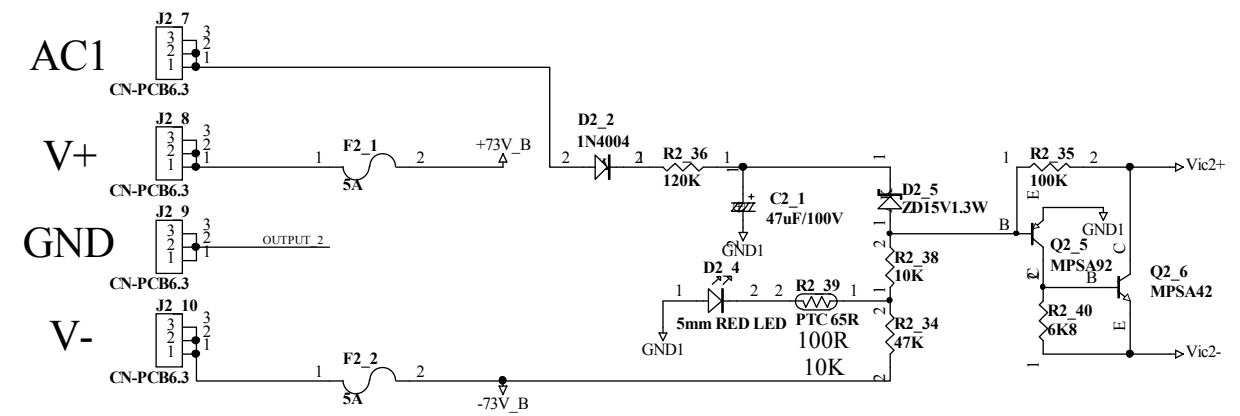
for MISTRAL1500

Titel			ALTO MISTRAL1500-CH1 DRIVE		
Size	Model No:	Revision		VER040302	
A2	MISTRAL1500				
Date:	2-Mar-2004	Sheet	2 of 3		
File:	MIS15-CH1.Sch	Drawn By:	C.C.LIN		

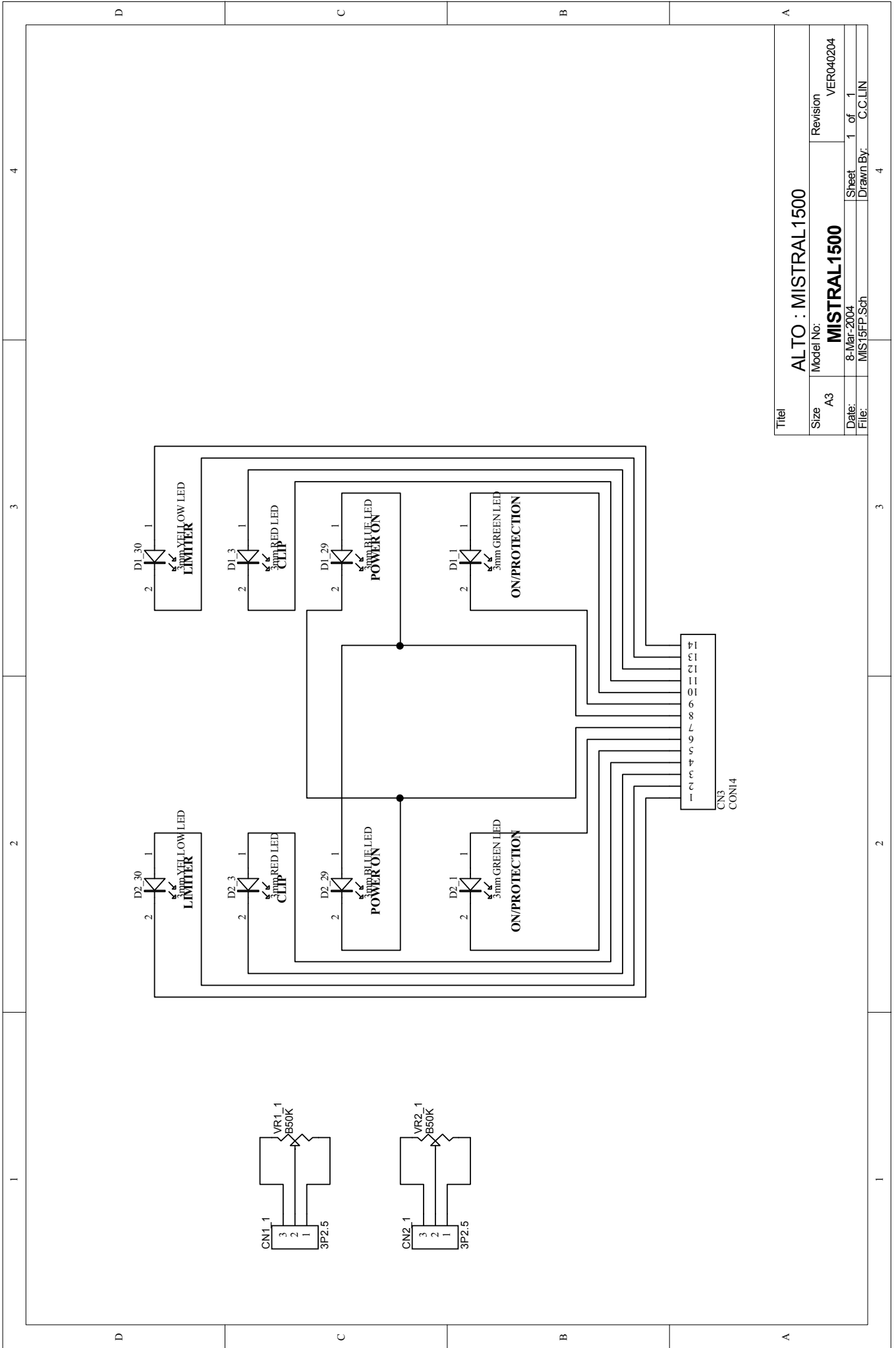


Pout=418W RMS @ 4 Ohm

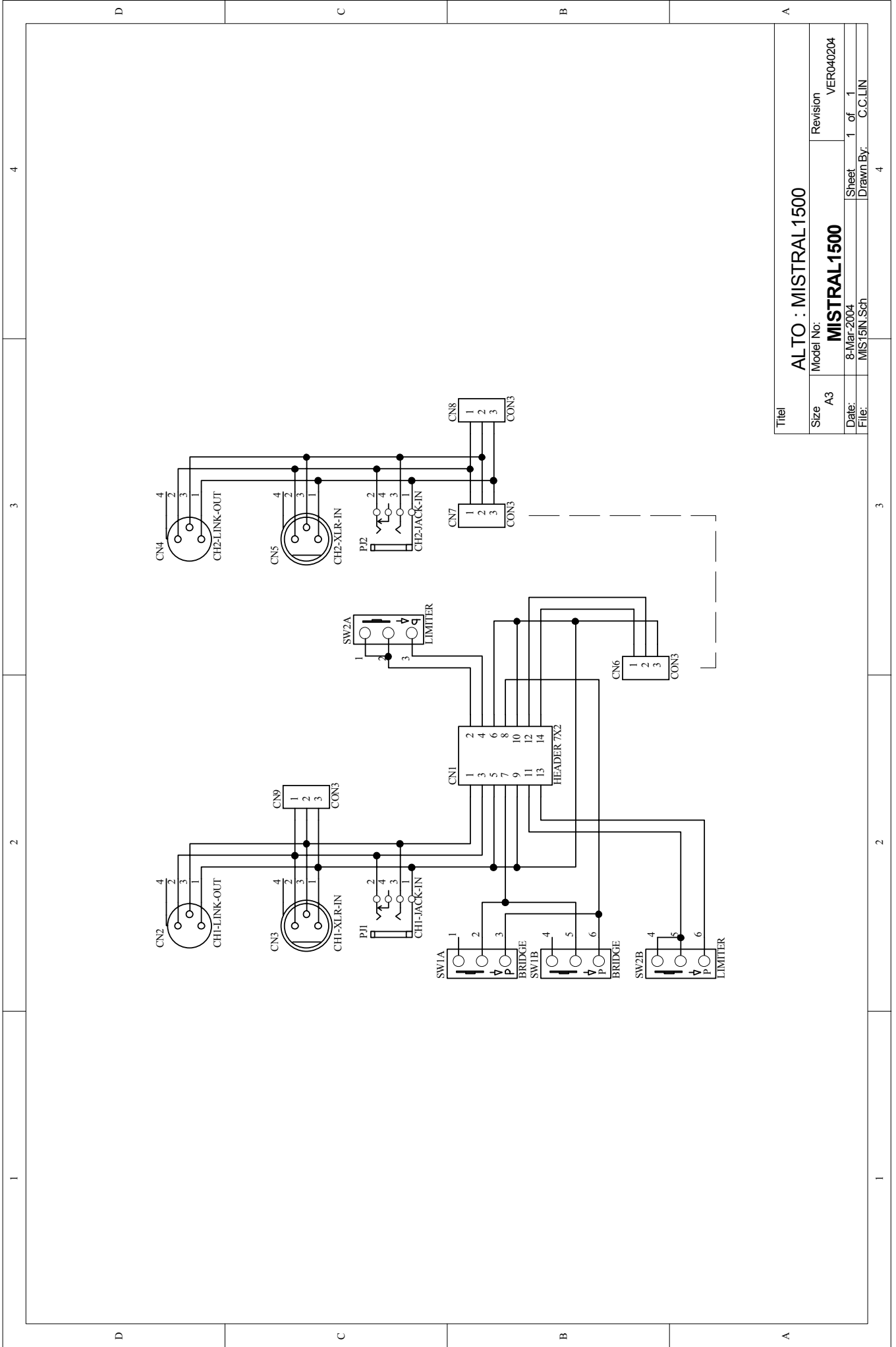
for MISTRAL1500



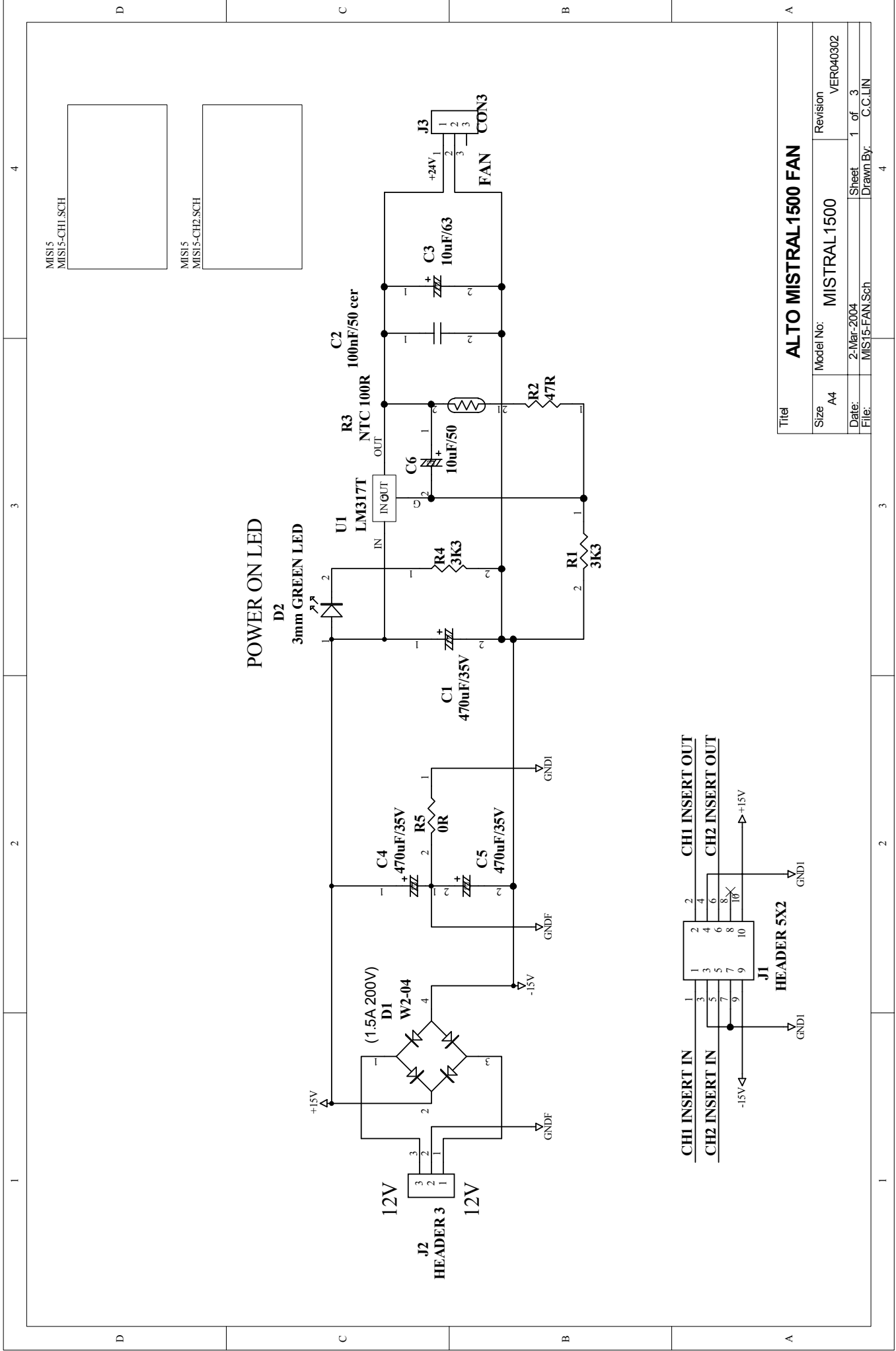
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Size	Model No:	MISTRAL1500		Revision	VER040302
Date:	2-Mar-2004	Sheet	3 of 3	Drawn By:	C.C.LIN
File:	MIS15-CH2.Sch				



Title		ALTO : MISTRAL 1500	
Size	A3	Model No:	VER040204
Date:	8-Mar-2004	Revision	1 of 1
File:	MIS15FP.Sch	Drawn By:	C.C.LIN



Titel		ALTO : MISTRAL 1500	
Size	A3	Model No:	MISTRAL 1500
Date:	8-Mar-2004	Revision	VER040204
File:	MIS15IN.Sch	Sheet	1 of 1
		Drawn By:	C.C.LIN



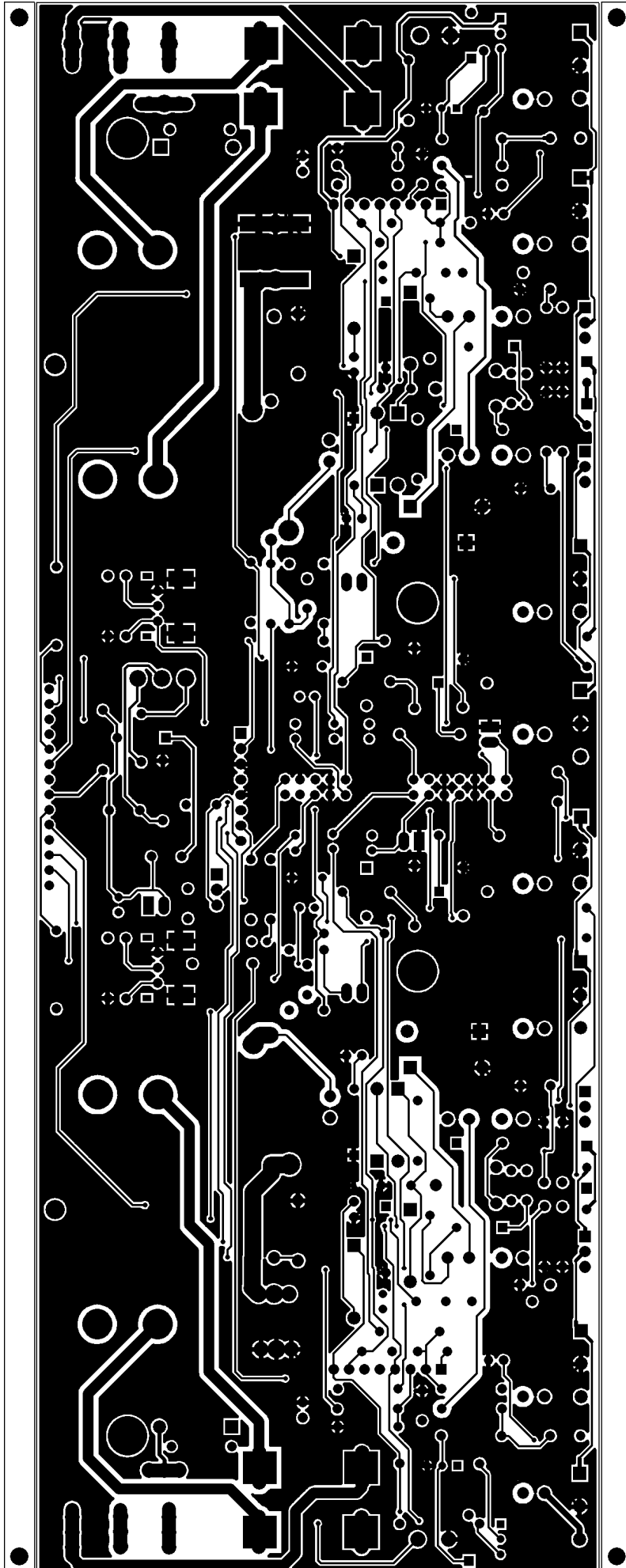
MIS15
MIS15-CH1.SCH

MIS15
MIS15-CH2.SCH

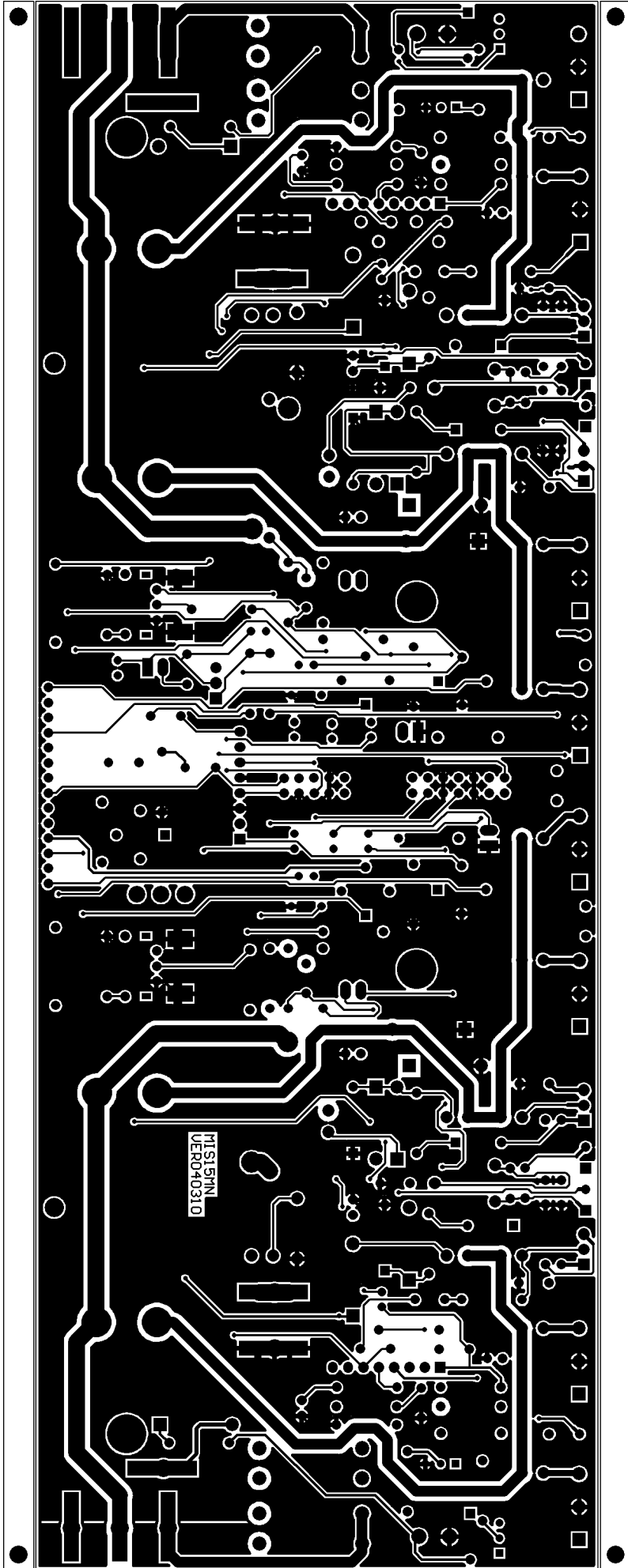
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Size	A4	Model No:	MISTRAL 1500
Date:	2-Mar-2004	Revision	VER040302
File:	MIS15-FAN.Sch	Sheet	1 of 3
		Drawn By:	C.C.LIN

4. PCB Layout

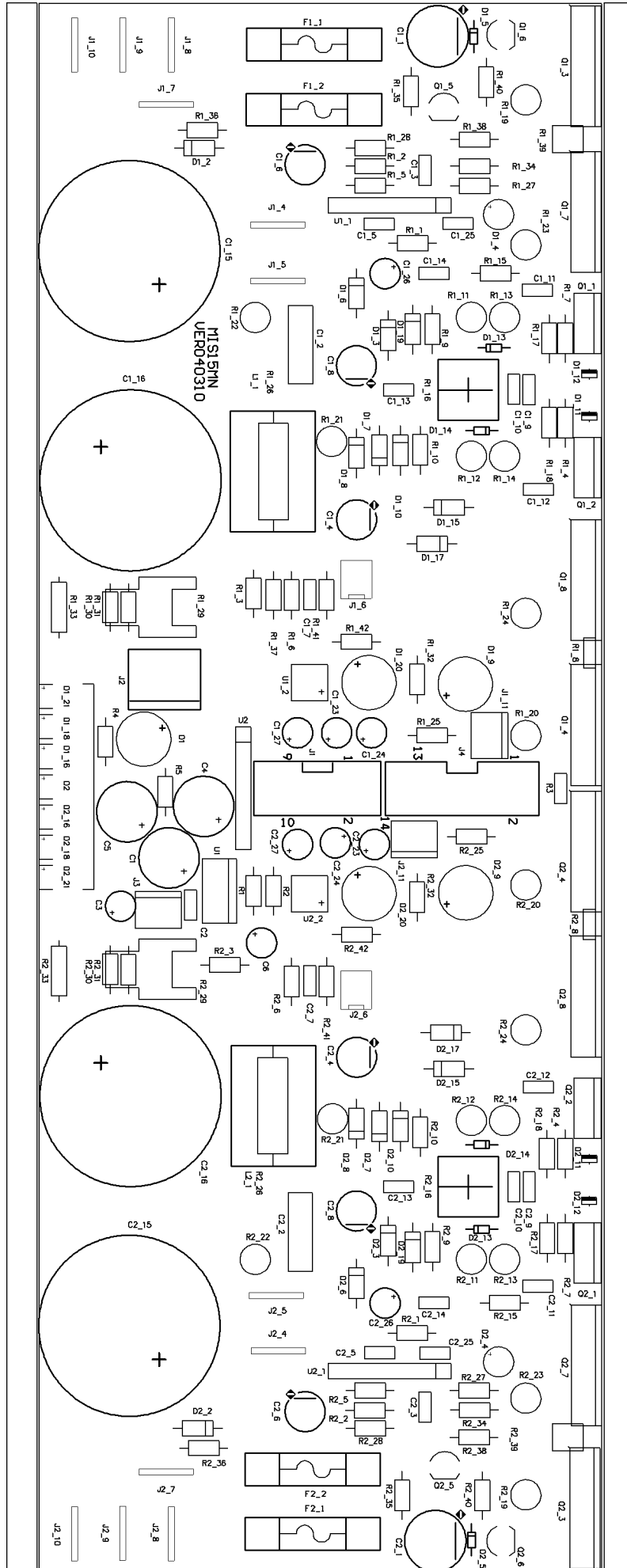
MIS15MN



Top Layer

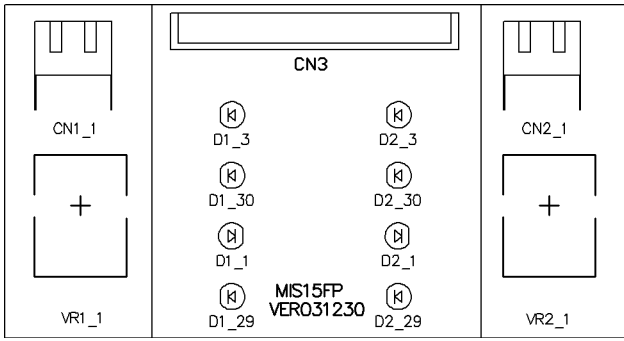


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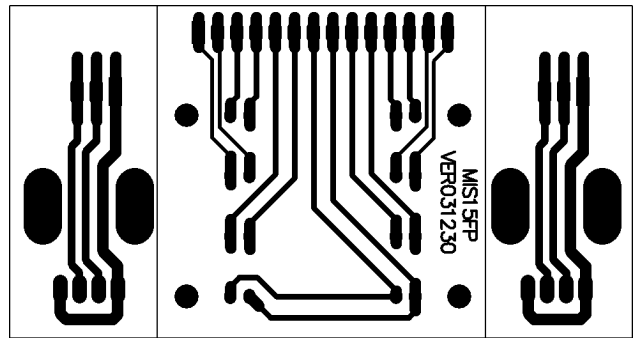


Top Layer

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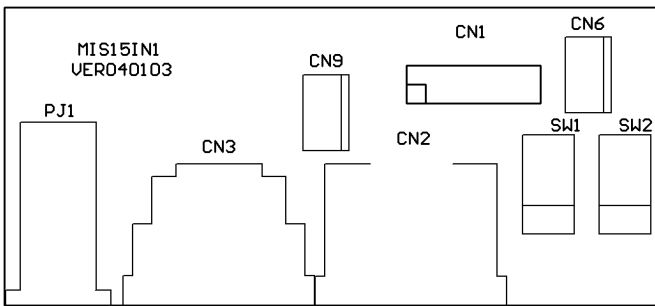


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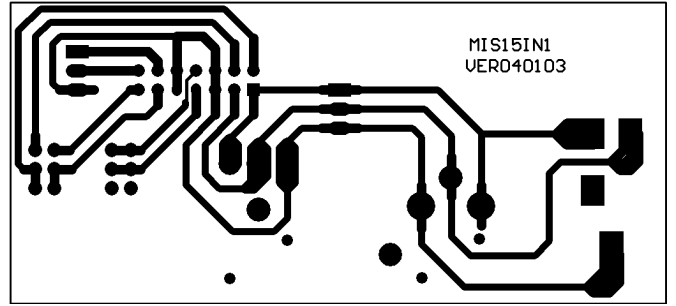


Bottom layer

MIS15IN1

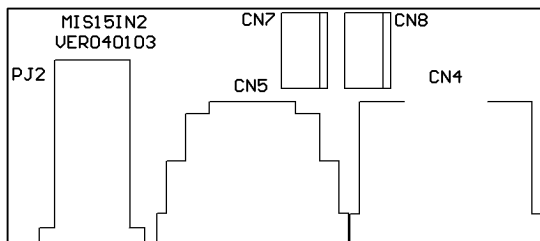


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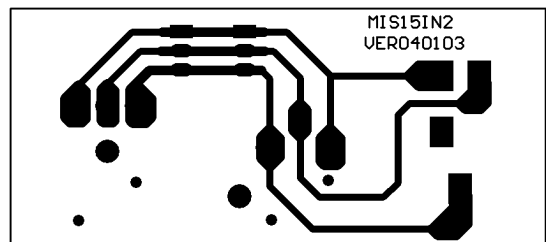


Bottom layer

MIS15N2



Top overlay



Bottom layer

5. Test Procedure

1) Test Equipment:

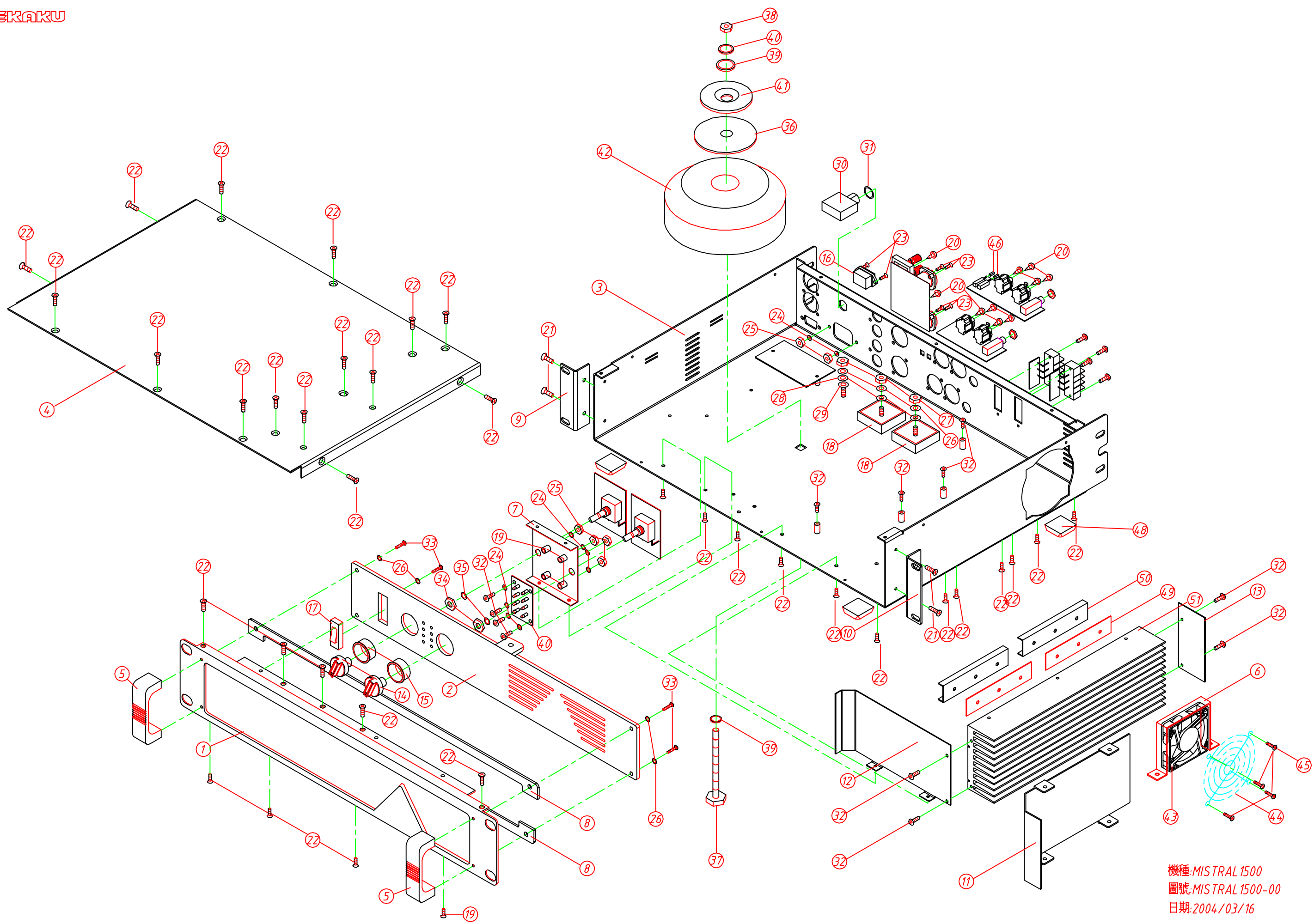
- 1.Frequency transformer
- 2.Digital voltage meter
- 3.AP (Audio precision)
- 4.Oscilloscope
- 5.Two 8 Ω (400W) load

2) Test procedures and specification

- 1.Set LIMITER and BRIDGE switches at 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 become green after 2-5 seconds or so.
2. Applied no signal, adjust R1-16(CH1) and R2-16(CH2) so that the voltage of R1-17/2-17 is $125\pm 2\text{mV}$ (MISTRAL900)/ $130\pm 2\text{mV}$. Connect a 4 Ω 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 shall be no crossover distortion.
3. Input a 1KHz, - 6dB signal, the output shall be $26\text{V}\pm 0.5\text{V}$ (for MISTRAL900) and $37\text{V}\pm 0.5\text{V}$ (for MISTRAL1500), and the distortion shall be less than 1%. Using the multifunctional meter to measure two pins of JP3, the voltage is about 12V at first, then using a heat blower to blow R3, the voltage will increase up to about 26V. Using a tweezers to short R1-38 (CH1) and R2-38(CH2), the overheat protection will start (no signal output).
- 4.To short the output terminal while the it reaches to maximum output level, the LIMITER on front panel is lit, the power consumption is less than 150W(MISTRAL900/1500) while in short protection.
- 5.S/N: larger than 90dB(A weighted is more than 100dB)
6. Compressor function test: LIMITER switch is set at ON, input a 1KHz / +10dB signal, the LIMITER LED is lit in yellow and there is no clipped signal.
- 7.Adjust the VR on front panel so that the output is $\pm 2\text{V}$ (4 Ω). The measured frequency response is more than 35Hz to 20 kHz $\pm 1\text{dB}$ (CH1/CH2)
- 8.Press the BRIDGE switch down, input a 1KHz signal into CH1(the level control of CH2 is turn to minimum), connect a 8 Ω load at output terminal, measure the bridged output voltage is more than about 50V(for MISTRAL900) and 70V (for MISTRAL1500), the distortion is less than 1%.
- 9.Turn off the input signal, the power consumption shall be less than 50W.
10. Done

6. Exploded Views & Mechanical Parts List

SEKAKU



機種:MISTRAL 1500
 圖號:MISTRAL 1500-00
 日期:2004/03/16

Mechanical Parts List

No.	Item Number	Description	Specification	Quantify
1	MA04096	ZC-panel	MISTRAL4000	1
2	MA00227	ZC-panel	MISTRAL1500 ALTO new_V1.0	1
3	MB03675	ZC-rear chassis	MISTRAL1500 new_V1.0	1
4	MC00517	ZC-cover	MISTRAL4000	1
5	MI01744	ZB-handle	MISTRAL4000 20*25.5*80	2
6	MI02356	ZD-fixing bracket	156.1*84.9*84*1.0t MISTRAL1500_V1.0	1
7	MI01746	ZD-panel	MISTRAL4000 14*81*89	1
8	MJ01227	ZB-cushion board	MISTRAL2500	2
9	MI02367	ZB-fixing bracket	MISTRAL1500(left) L type	1
10	MI02365	ZB-fixing bracket	MISTRAL1500(right) L type	1
11	MI02369	ZB-partition board	MISTRAL1500	1
12	MI02361	ZD-fixing bracket	197.3*84*27*1.0t MISTRAL1500_V1.0	1
13	NI02650	Plastical knob	18*18mm	2
14	NI02651	Knob sleeve	10* 22.5 black A600.2	2
15	HC00005	AC socket	AC-008	1
16	HI00031	Power switch	R415KKETOF	1
17	SA00011	Bridged rectifier	25A/200V	2
18	MG00247	Copper post	M3*10*0.5PH total 16	4
19	MG00061	Black plated screw	M3*10	10
20	MG00295	Black plated screw	M4*6	12
21	MG00025	Black plated screw	M3*6	34
22	MG00042	Black plated screw	M3*10	9
23	MF00037	Spring washer	3* 5*1t	12
24	ME00015	Color nut	3mm	6
25	MF00038	Spring washer	4* 7*1t	3
26	ME00016	Color nut	4mm	3
27	MF00018	Color washer	4* 10*1t	3
28	MF00048	Outer-tooth washer	4* 8*0.5t	1
29	HI00140	Manual reset switch	A0701HM-6A	1
30	NI00389	ZD-plastical washer	12* 16*0.5 white	2

No.	Item Number	Description	Specification	Quantify
31	MG00041	Black plated screw	M3*6	12
32	MG00030	Black plated screw	M4*12	4
33	ME00006	For nut-R.S	9	1
34	MF00004	For color washer-R.S	9* 14*0.5t	1
35	NI00437	Rubber ring	20* 120*2tB	1
36	MG00215	Zinc screw	For M8*80 loop PT	1
37	ME00026	Zinc nut	M8	1
38	MF00026	Color washer	8* 18*1.5t	2
39	MF00041	Spring washer	8* 13.5*2t	1
40	MH00766	ZB-steel plate	11* 90*2	1
41	TD00324	Loop transformer	PT-MIS1500-700W_115V(230V)	1
42	HK00622	K-PCB	P-MIS15MN(MISTRAL1500)	1
43	HK03958	K-PCB	P-MIS40PWR	1
44	HK02069	K-PCB	P-MIS15FP	1
45	HK04015	K-PCB	P-MIS40SP	1
46	HK02070	K-PCB	P-MIS15IN1	1
47	HK02071	K-PCB	P-MIS15IN2	1
48	HK00793	K-PCB	P-MIS2500-INPUT(terminal stage)	2
49	MG00027	Black plated screw	M3*12	4
50	MJ01252	ZD-cushion plate	250*8*1.0t MISTRAL1500_V1.0	1
51	MI00427	ZD-fixing bracket	PSA-3000 L type	1
52	MG00111	Color screw	M4*30	2
53	HE00049	Fan JF0825S2UR000C827	DC24V/0.21A 80*80*25mm 360mm JST2P	1
54	NI00312	Power switch	Square 5*5*9 hole 2.8*2.8 black	2
55	NI01867	Adhesive rubber foot	20.5*14*7.6mm(SF-006)	4

7. BOM

MISTRAL900 Parts List

No.	Part No.	Description	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	MA00204	panel	MISTRAL900 ALTO new_V1.0	
6	MA04436	panel	CPA 1000	
7	MA05424	panel	MISTRAL1500_V1.0	
8	MJ00088	iron board	1.5*2135*1220 30.67kg	
9	MB03675	rear board	MISTRAL1500 new_V1.0	
10	MB03072	rear board	MISTRAL1500_V1.1	
11	MB03673	bottom rear board	MISTRAL1500_V1.1	
12	MJ00088	iron board	1.5*2135*1220 30.67kg	
13	ME00051	iron pillar	M3*12	
14	ME00002	screw pillar	M4*20*0.7PH	
15	ME00001	screw pillar	M4*10*0.7PH	
16	MI02534	fixed board	MISTRAL 1500 30* 160*1.5t_V1.0	
17	MJ00088	iron board	1.5*2135*1220 30.67kg	
18	MC00517	top cover	MISTRAL4000	
19	MC00622	top cover	MISTRAL2500_V1.0	
20	MC00621	top cover	MISTRAL2500_V1.0	
21	MJ00088	iron 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	iron board	2.0t*1850*950mm 27.6kg	
31	MI02367	fixed bracket	MISTRAL1500 left	
32	MI02366	fixed bracket	MISTRAL1500(left)_V1.0	
33	MJ01154	iron board	2.0t*1850*950mm 27.6kg	
34	MI02365	fixed bracket	MISTRAL1500 right	
35	MI02364	fixed bracket	MISTRAL1500_V1.0	

MISTRAL900 Parts List

No.	Part No.	Description	Specification	Remark
36	MJ01154	iron board	2.0t*1850*950mm 27.6kg	
37	MI02369	barrier	MISTRAL1500	
38	MI02368	barrier	MISTRAL1500_V1.0	
39	MJ00067	iron board	0.8*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	
43	NI02651	knob fix sheath	10* 22.5	
44	HC00005	AC socket	AC-008	
45	HI00031	power switch	R415KKETOF	
46	HA01241	wire	480mm UL1015 14AWG brown	
47	HA01333	single terminal wiring CF:W76	150mm UL1015 18AWG green/yellow	
48	HA01247	wire	180mm UL1015 14AWG blue	
49	HA01248	wire	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	

MISTRAL900 Parts List

No.	Part No.	Description	Specification	Remark
71	MF00048	washer	4* 8*0.5t	
72	HI00268	manual reposition switch	A0701HM-3A	
73	NI00389	plastic 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 R.S	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	
86	MJ01154	iron board	2.0t*1850*950mm 27.6kg	
87	TD00181	loop transformer	PT-MIS900_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	NF01713	instruction	MISTRAL900/1500 ALTO_V1.1	
97	NH00149	paper	889*640mm	
98	NB02499	color box	MISTRAL900 ALTO_V1.1	
99	NE11545	label	APS-1480 220-240V	
100	NI00037	adhesive label	0.05*1M	
101	NI00034	membrane	0.045*1M	
102	NF00061	assurance card	ALTO	
103	NE11621	label	MISTRAL900	
104	NH00012	bond paper	0.04*1M	
105	NI00014	membrane	0.035*1M	

MISTRAL900 Parts List

No.	Part No.	Description	Specification	Remark
106	NE11347	label	ALTO PI	
107	NH00334	cone paper	0.040*1m	
108	HK02095	PC board	P-MIS15MN(MISTRAL900)	
109	HB01189	PCB	MIS15MN_VER040310	
110	RA00157	fixed resistor 1/4W	0.0	R5
111	RA00322	fixed resistor 1/4W	4.7 M type	R1-17,R1-18,R2-17,R2-18
112	RA00174	fixed resistor 1/4W	47 M type	R1-25,R2-25,R2
113	RA00184	fixed resistor 1/4W	100 M type	R1-32,R2-32
114	RA00189	fixed resistor 1/4W	150 M type	R1-15,R2-15
115	RA00200	fixed resistor 1/4W	330 M type	R1-5,R2-5
116	RA00211	fixed resistor 1/4W	820 M type	R1-9,R2-9,R1-10,R2-10
117	RA00227	fixed resistor 1/4W	3.3K M type	R1,R4
118	RA00231	fixed resistor 1/4W	4.7K M type	R1-41,R1-42,R2-41,R2-42
119	RA00236	fixed resistor 1/4W	6.8K M type	R1-40,R2-40,R1-27,R2-27
120	RA00242	fixed resistor 1/4W	10K M type	R1-1,R1-2,R1-3,R2-1,R2-2,R2-3,R1-28,R2-28
121	RA00244	fixed resistor 1/4W	12K M type	R1-6,R2-6,R1-37,R1-38,R2-38
122	RA00266	fixed resistor 1/4W	47K M type	R1-34,R2-34
123	RA00282	fixed resistor 1/4W	100K M type	R1-35,R2-35
124	RA00284	fixed resistor 1/4W	120K M type	R1-36,R2-36
125	RA00138	fixed resistor 1/2W	3.3K M type	R1-33,R2-33
126	RA00007	metal-oxide-film resistor 1W	22 P type	R1-13,R1-14,R2-13,R2-14
127	RA00051	metal-oxide-film resistor 2W	5.6 P type	R1-26,R2-26
128	RA00045	metal-oxide-film resistor 2W	1.5K P type	R1-11,R1-12,R2-11,R2-12
129	RA00071	metal-oxide-film resistor 3W	0.1 RSS P type	R1-23,R1-24,R2-23,R2-24
130	RA00031	metal-oxide-film resistor 2W	10 P type	R1-22,R2-22
131	RA00722	metal-oxide-film resistor 3W	500 P type	R1-21,R2-21
132	CA00010	ceramic capacitor	27PF NPO	C1-7,C2-7
133	CA00018	ceramic capacitor	56PF NPO	C1-5,C2-5
134	CA00024	ceramic capacitor	100PF SL	C1-3,C2-3,C1-25,C2-25
135	CA00043	ceramic capacitor	0.0033uF	C1-11,C1-12,C2-11,C2-12
136	CA00070	ceramic capacitor	0.022uF/50V±20% Y5U	C1-10,C2-10
137	CA00053	ceramic capacitor	0.1uF SL	C2
138	CB00025	electrolytic capacitor	10uF/50V 6*7mm	C1-23,C1-24,C2-23,C2-24,C6
139	CB00185	electrolytic capacitor	10uF/63V 5*11mm	C3
140	CB00169	electrolytic capacitor	47uF/16V NP 6.3*11mm	C1-6,C2-6

MISTRAL900 Parts List

No.	Part No.	Description	Specification	Remark
141	CB00039	electrolytic capacitor	47uF/25V 5*11mm	C1-26,C1-27,C2-26,C2-27
142	CB00043	electrolytic capacitor	47uF/100V 10*12mm	C1-1,C2-1
143	CB00055	electrolytic capacitor	220uF/16V 8*11mm	C1-4,C1-8,C2-4,C2-8
144	CB00067	electrolytic capacitor	470uF/35V 10*20mm	C4,C5
145	CB00093	electrolytic capacitor	4700uF/80V LCM 25*50mm	C1-15,C1-16,C2-15,C2-16
146	CF00005	metal-film capacitor MSC	0.0022uF/63V 5% CASE01	C1-9,C2-9
147	CF00022	metal-film capacitor MSC	0.022uF/100V 5% CASE01	C1-13,C2-13
148	CF00006	metal-film capacitor MSC	0.0033uF/100V 5% CASE01	C1-14,C2-14
149	CF00033	metal-film capacitor MEF	0.1uF/250V	C1-2,C2-2
150	SA00167	bridge rectifier	2A W2-04	D1,D1-9,D2-9,D1-20,D2-20
151	SA00093	rectifier diode	1N4148 0.5A	D1-6,D1-7,D2-6,D2-7,D1-10,D1-19,D2-10,D2-19
152	SA00098	rectifier diode	1A/400V IN4004	D1-2,D2-2,D1-15,D1-17,D2-15,D2-17
153	SA00107	zener diode	1W 15V 1N4744	D1-3,D1-5,D1-8,D2-3,D2-5,D2-8
154	SA00026	L.E.D	5m/m circle red B1115	D1-4,D2-4
155	SA00002	high speed diode	1A/600V 1N4937	D1-11,D1-12,D2-11,D2-12
156	SA00205	zener diode	1/2W 3.9V	D1-13,D1-14,D2-13,D2-14
157	HC00504	row-wire header(male)	10P 2.54mm 180°	J1
158	HC00172	row-wire header(male)	3P 3.96mm 180°	J2
159	HC00365	row-wire header(male)	14P 2.54mm 180°(C03-14AG1)	J4
160	HC00625	row-wire header(male)	14P 2.5mm 180°	
161	HC00076	row-wire header(male)	2P 2.5mm 180°	J1-6,J2-6,J3
162	HC00077	row-wire header(male)	3P 2.5mm 180°	R1-29,R2-29
163	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
164	CN00060	fixed inductance	2uH 10A(CSAF-302824)(1.5mm*12 1/2T)	L1-1,L2-1
165	SB00042	transistor	MJE15032	Q1-1,Q2-1
166	SB00044	transistor	MJE15033	Q1-2,Q2-2
167	SB00023	power transistor	2SA1943-O	Q1-7,Q2-7
168	SB00021	power transistor	2SC5200	Q1-8,Q2-8
169	SB00129	transistor	MPSA92(TO92)/(PHI)	Q1-5,Q2-5
170	SB00130	transistor	MPSA42/(PHILIPS)	Q1-6,Q2-6
171	RH00021	thermal resistor	500 (TDC5C150L)	R3
172	RH00017	thermal resistor	50 (TDC05A050J)	R1-8,R2-8
173	RH00018	thermal resistor	100 (PDBS8101MS)	R1-39,R2-39
174	RC00319	resistor	B100 PT1030-V1B101-C1-H10	R1-16,R2-16
175	SD00032	integrated circuit	LM317T	U1

MISTRAL900 Parts List

No.	Part No.	Description	Specification	Remark
176	SD00173	integrated circuit	NJM4580L(JRC)	U2,U1-1,U2-1
177	HC00064	FUSE holder	JEF-503B (5.2mm)	F1-1,F1-2,F2-1,F2-2
178	HD00079	ceramic tube fuse	4A250V 5.2*20mm CSA/S/T/UL/VDE	
179	NC00005	silicone insulator	TO-220 square type	
180	MF00030	washer	3* 8*0.8t	
181	MF00037	washer	3* 5*1t	
182	MG00171	screw	M3*14	
183	MI02363	heat-sink	9*83*40*270 MISTRAL1500_V1.0	
184	NC00182	insulator	MISTRAL900 1.6t*130*16mm	
185	NC00041	red foil white board	1.6t*0.65M*70M	
186	MJ01200	spacer	MISTRAL4000 14.5*30.5*2t	
187	MJ01201	spacer	MISTRAL4000 14.5*30.5*2t	
188	MJ01154	iron board	2.0t*1850*950mm 27.6kg	
189	HC00034	connector	NO.2700 2.54mm/6mm OPEN	
190	MI01956	fixed bracket	MISTRAL900 1.5t*130*5*16mm left	
191	MJ00069	iron board	1.5*2135*1220 30.67kg	
192	HK02231	coupling	P-photosensitive resistance 5LLED	
193	RH00020	photosensitive resistance	VT90N1	
194	SA00201	L.E.D	5 red(LI3330/A)	
195	NI02779	sleeve	9*30mm	
196	NI00274	sleeve	9*1000mm	
197	CB00217	electrolytic capacitor	470uF/50V 10*20mm	C1
198	RA00198	fixed resistor 1/4W	300 M type	R1-4,R1-7,R2-4,R2-7
199	CB00009	electrolytic capacitor	1uF/50V 4*7mm	R1
200	HK04765	PC board	P-MIS15PWR	
201	HB01464	PCB	MIS15PWR_VER041103	
202	HI00007	relay	942H-2C-24DS(8 foots)	K1
203	RA00954	cement resistor 10W	2.7K SQM type	
204	HC00324	terminal	6.5m/m (PC250)	P1,P2,P3,P4,P5,P6,P7,P8,P9,P10,P11,P12
205	SA00098	rectifier diode	1A/400V IN4004	D1
206	CB00134	electrolytic capacitor	1000uF/35V 105 SH 12*21mm	
207	CG00044	metal oxide varistor	NP35L-Y2	R1
208	HK02069	PC board	P-MIS15FP	
209	HB01168	PCB	MIS15FP(2*4)_VER040204	
210	SA00053	L.E.D high intensity	3m/m round(red)long foot 26mm	D1-3,D2-3

MISTRAL900 Parts List

No.	Part No.	Description	Specification	Remark
211	SA00054	L.E.D high intensity	3m/m round(yellow)long foot 26	D1-1,D2-1,D1-30,D2-30
212	SA00194	L.E.D	3	D1-29,D2-29
213	NI01765	LED spacer support	LEDS-10 10mm	
214	HC00066	row-wire header(male)	3P 2.5mm 90°	CN1-1,CN2-1
215	RC00209	PPBC239	A10K RV110-40E1-225A-A14	VR1-1,VR2-1
216	HA03320	wire	14P-14P 400mm UL1007 24AWG	CN3
217	HK04015	PC board	P-MIS40SP	
218	HB00962	PCB	MIS40SP_VER030522	
219	HC00442	speaker holder	NL4MP (NEUTRIK)	
220	HC00522	terminal	4P black/red/red/black A414B-BL	
221	MJ00942	fixed board	CS12/600	
222	MJ00061	Zn-plated board	1*2135*1220 20.45kg	
223	HA01239	single terminal wiring CF:W209	180mm UL1015 14AWG white	
224	HA01237	single terminal wiring CF:W207	200mm UL1015 14AWG grey	
225	HA02471	wire	360mm UL1015 14AWG white	
226	HA01258	quick terminal wiring	380mm UL1015 14AWG grey	
227	HK02070	PC board	P-MIS15IN1	
228	HB01169	PCB	MIS15 IN1(2*4)_VER040205	
229	HC00110	MIC jack	JY-6314-02-340	PJ1
230	HC00112	XLR MIC jack	99M-107SP-1-2 90° PUSH	CN2
231	HC00111	XLR MIC jack	99M-108SP1	CN3
232	HA02893	wire	14P-14P 280mm UL2651 28AWG PH1.27mm	CN1
233	HC00077	row-wire header(male)	3P 2.5mm 180°	CN6,CN9
234	HI00039	push-button switch	SP70300-0202-11F1-N	SW1,SW2
235	HK02071	PC board	P-MIS15IN2	
236	HB01170	PCB	MIS15 IN2(2*4)_VER040103	
237	HC00110	MIC jack	JY-6314-02-340	PJ2
238	HC00112	XLR MIC jack	99M-107SP-1-2 90° PUSH	CN4
239	HC00111	XLR MIC jack	99M-108SP1	CN5
240	HC00077	row-wire header(male)	3P 2.5mm 180°	CN7,CN8
241	HK00793	PC board	P-MIS2500-INPUT	
242	HB01105	PCB	MIS40IN-1_VER031206	
243	HC00297	terminal block	DT-55-A14W-03(3PH)	CN1
244	HC00077	row-wire header(male)	3P 2.5mm 180°	CN3
245	HC00079	row-wire header(male)	5P 2.5mm 180°	CN4

MISTRAL900 Parts List

No.	Part No.	Description	Specification	Remark
246	NB02086	box	MACRO	
247	NB01944	barrier	PSA-3000_V1.1	
248	MG00027	screw	M3*12	
249	MJ01252	cushion	250*8*1.0t MISTRAL1500_V1.0	
250	MJ00061	Zn-plated board	1*2135*1220 20.45kg	
251	MI00427	fixed bracket	PSA-3000	
252	MJ00058	iron board	1*2135*1220 20.45kg	
253	MG00111	screw	pill 4*30	
254	NA00279	clip-chain bag	0.04t*100*150mm_V1.0	
255	AD00012	twin adhesive	90*120mm_V1.0	
256	HA01265	wire	400mm UL1015 14AWG green	
257	NI00219	cable tie	CV-075 white (AST-145-K)	

MISTRAL1500 Parts List

No.	Part No.	Description	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	MA00227	panel	MISTRAL1500 ALTO new_V1.0	
6	MA04436	panel	CPA 1000	
7	MA05424	panel	MISTRAL1500_V1.0	
8	MJ00088	iron board	1.5*2135*1220 30.67kg	
9	MB03675	rear board	MISTRAL1500 new_V1.0	
10	MB03072	rear board	MISTRAL1500_V1.1	
11	MB03673	bottom rear board	MISTRAL1500_V1.1	
12	MJ00088	iron board	1.5*2135*1220 30.67kg	
13	ME00051	iron pillar	M3*12	
14	ME00002	screw pillar	M4*20*0.7PH	
15	ME00001	screw pillar	M4*10*0.7PH	
16	MI02534	fixed board	MISTRAL 1500 30* 160*1.5t_V1.0	
17	MJ00088	iron board	1.5*2135*1220 30.67kg	
18	MC00517	top cover	MISTRAL4000	
19	MC00622	top cover	MISTRAL2500_V1.0	
20	MC00621	top cover	MISTRAL2500_V1.0	
21	MJ00088	iron 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	iron board	2.0t*1850*950mm 27.6kg	
31	MI02367	fixed bracket	MISTRAL1500 left	
32	MI02366	fixed bracket	MISTRAL1500(left)_V1.0	
33	MJ01154	iron board	2.0t*1850*950mm 27.6kg	
34	MI02365	fixed bracket	MISTRAL1500 right	
35	MI02364	fixed bracket	MISTRAL1500_V1.0	

MISTRAL1500 Parts List

No.	Part No.	Description	Specification	Remark
36	MJ01154	iron board	2.0t*1850*950mm 27.6kg	
37	MI02369	barrier	MISTRAL1500	
38	MI02368	barrier	MISTRAL1500_V1.0	
39	MJ00067	iron board	0.8*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	
43	NI02651	knob fix sheath	10* 22.5	
44	HC00005	AC socket	AC-008	
45	HI00031	power switch	R415KKETOF	
46	HA01241	wire	480mm UL1015 14AWG brown	
47	HA01333	single terminal wiring CF:W76	150mm UL1015 18AWG green/yellow	
48	HA01247	wire	180mm UL1015 14AWG blue	
49	HA01248	wire	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	

MISTRAL1500 Parts List

No.	Part No.	Description	Specification	Remark
71	MF00048	washer	4* 8*0.5t	
72	HI00140	manual reposition switch	A0701HM-6A	
73	NI00389	plastic 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 R.S	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	
86	MJ01154	iron board	2.0t*1850*950mm 27.6kg	
87	TD00324	transformer	PT-MIS1500-700W_115V(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(European 3P)	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	NF01713	instruction	MISTRAL900/1500 ALTO_V1.1	
97	NH00149	paper	889*640mm	
98	NB02475	box	MISTRAL1500 ALTO_V1.1	
99	NE11547	label	APS-1600 220-240V	
100	NI00037	adhesive label	0.05*1M	
101	NI00034	membrane	0.045*1M	
102	NF00061	assurance card	ALTO	
103	NE11515	label	MISTRAL1500	
104	NH00012	bond paper	0.04*1M	
105	NI00014	membrane	0.035*1M	

MISTRAL1500 Parts List

No.	Part No.	Description	Specification	Remark
106	NE11347	label	ALTO PI	
107	NH00334	cone paper	0.040*1m	
108	HK00622	PC board	P-MIS15MN(MISTRAL1500)	
109	HB01189	PCB	MIS15MN_VER040310	
110	RA00157	fixed resistor 1/4W	0.0	R5
111	RA00322	fixed resistor 1/4W	4.7 M type	R1-17,R1-18,R2-17,R2-18
112	RA00174	fixed resistor 1/4W	47 M type	R1-25,R2-25,R2
113	RA00184	fixed resistor 1/4W	100 M type	R1-32,R2-32
114	RA00189	fixed resistor 1/4W	150 M type	R1-15,R2-15
115	RA00200	fixed resistor 1/4W	330 M type	R1-5,R2-5
116	RA00211	fixed resistor 1/4W	820 M type	R1-9,R2-9,R1-10,R2-10
117	RA00227	fixed resistor 1/4W	3.3K M type	R1,R4
118	RA00231	fixed resistor 1/4W	4.7K M type	R1-41,R1-42,R2-41,R2-42
119	RA00236	fixed resistor 1/4W	6.8K M type	R1-40,R2-40
120	RA00242	fixed resistor 1/4W	10K M type	R1-1,R1-2,R1-3,R2-1,R2-2,R2-3,R1-28,R1-38,R2-28,R2-38,R1-27,R2-27
121	RA00244	fixed resistor 1/4W	12K M type	R1-6,R2-6,R1-37
122	RA00266	fixed resistor 1/4W	47K M type	R1-34,R2-34
123	RA00282	fixed resistor 1/4W	100K M type	R1-35,R2-35
124	RA00284	fixed resistor 1/4W	120K M type	R1-36,R2-36
125	RA00138	fixed resistor 1/2W	3.3K M type	R1-33,R2-33
126	RA00007	metal-oxide-film resistor 1W	22 P type	R1-13,R1-14,R2-13,R2-14
127	RA00051	metal-oxide-film resistor 2W	5.6 P type	R1-26,R2-26
128	RA00046	metal-oxide-film resistor 2W	2.2K P type	R1-11,R1-12,R2-11,R2-12
129	RA00071	metal-oxide-film resistor 3W	0.1 RSS P type	R1-19,R1-20,R1-23,R1-24,R2-19,R2-20,R2-23,R2-24
130	RA00031	metal-oxide-film resistor 2W	10 P type	R1-22,R2-22
131	RA00722	metal-oxide-film resistor 3W	500 P type	R1-21,R2-21
132	CA00010	ceramic capacitor	27PF NPO	C1-7,C2-7
133	CA00018	ceramic capacitor	56PF NPO	C1-5,C2-5
134	CA00024	ceramic capacitor	100PF SL	C1-3,C2-3,C1-25,C2-25
135	CA00043	ceramic capacitor	0.0033uF	C1-11,C1-12,C2-11,C2-12
136	CA00070	ceramic capacitor	0.022uF/50V±20% Y5U	C1-10,C2-10
137	CA00053	ceramic capacitor	0.1uF SL	C2
138	CB00025	electrolytic capacitor	10uF/50V 6*7mm	C1-23,C1-24,C2-23,C2-24,C6
139	CB00185	electrolytic capacitor	10uF/63V 5*11mm	C3
140	CB00169	electrolytic capacitor	47uF/16V NP 6.3*11mm	C1-6,C2-6

MISTRAL1500 Parts List

No.	Part No.	Description	Specification	Remark
141	CB00039	electrolytic capacitor	47uF/25V 5*11mm	C1-26,C1-27,C2-26,C2-27
142	CB00043	electrolytic capacitor	47uF/100V 10*12mm	C1-1,C2-1
143	CB00055	electrolytic capacitor	220uF/16V 8*11mm	C1-4,C1-8,C2-4,C2-8
144	CB00067	electrolytic capacitor	470uF/35V 10*20mm	C4,C5
145	CB00093	electrolytic capacitor	4700uF/80V LCM 25*50mm	C1-15,C1-16,C2-15,C2-16
146	CF00005	metal-film capacitor MSC	0.0022uF/63V 5% CASE01	C1-9,C2-9
147	CF00022	metal-film capacitor MSC	0.022uF/100V 5% CASE01	C1-13,C2-13
148	CF00006	metal-film capacitor MSC	0.0033uF/100V 5% CASE01	C1-14,C2-14
149	CF00033	metal-film capacitor MEF	0.1uF/250V	C1-2,C2-2
150	SA00167	bridge rectifier	2A W2-04	D1,D1-9,D2-9,D1-20,D2-20
151	SA00093	rectifier diode	1N4148 0.5A	D1-6,D1-7,D2-6,D2-7,D1-10,D1-19,D2-10,D2-19
152	SA00098	rectifier diode	1A/400V IN4004	D1-2,D2-2,D1-15,D1-17,D2-15,D2-17
153	SA00107	zener diode	1W 15V 1N4744	D1-3,D1-5,D1-8,D2-3,D2-5,D2-8
154	SA00026	L.E.D	5m/m circle red B1115	D1-4,D2-4
155	SA00002	high speed diode	1A/600V 1N4937	D1-11,D1-12,D2-11,D2-12
156	SA00205	zener diode	1/2W 3.9V	D1-13,D1-14,D2-13,D2-14
157	HC00504	row-wire header(male)	10P 2.54mm 180°	J1
158	HC00172	row-wire header(male)	3P 3.96mm 180°	J2
159	HC00625	row-wire header(male)	14P 2.5mm 180°	
160	HC00365	row-wire header(male)	14P 2.54mm 180°(C03-14AG1)	J4
161	HC00076	row-wire header(male)	2P 2.5mm 180°	J1-6,J2-6,J3
162	HC00077	row-wire header(male)	3P 2.5mm 180°	R1-29,R2-29
163	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
164	CN00060	fixed inductance	2uH 10A(CSAF-302824)(1.5mm*12 1/2T)	L1-1,L2-1
165	SB00042	transistor	MJE15032	Q1-1,Q2-1
166	SB00044	transistor	MJE15033	Q1-2,Q2-2
167	SB00023	power transistor	2SA1943-O	Q1-3,Q1-7,Q2-3,Q2-7
168	SB00021	power transistor	2SC5200	Q1-4,Q1-8,Q2-4,Q2-8
169	SB00129	transistor	MPSA92(TO92)/(PHI)	Q1-5,Q2-5
170	SB00130	transistor	MPSA42/(PHILIPS)	Q1-6,Q2-6
171	RH00021	thermal resistor	500 (TDC5C150L)	R3
172	RH00017	thermal resistor	50 (TDC05A050J)	R1-8,R2-8
173	RH00018	thermal resistor	100 (PDBS8101MS)	R1-39,R2-39
174	RC00319	resistor	B100 PT1030-V1B101-C1-H10	R1-16,R2-16
175	SD00032	integrated circuit	LM317T	U1

MISTRAL1500 Parts List

No.	Part No.	Description	Specification	Remark
176	SD00173	integrated circuit	NJM4580L(JRC)	U2,U1-1,U2-1
177	HC00064	FUSE holder	JEF-503B (5.2mm)	F1-1,F1-2,F2-1,F2-2
178	HD00070	ceramic tube fuse	5A 250V 5.2*20mm CSA/S/T/UL/VDE	
179	NC00005	silicone insulator	TO-220 square type	
180	MF00030	washer	3* 8*0.8t	
181	MF00037	washer	3* 5*1t	
182	MG00171	screw	M3*14	
183	MI02363	heat-sink	9*83*40*270 MISTRAL1500_V1.0	
184	MI01956	fixed bracket	MISTRAL900 1.5t*130*5*16mm left	
185	MJ00069	iron board	1.5*2135*1220 30.67kg	
186	NC00182	insulator	MISTRAL900 1.6t*130*16mm	
187	NC00041	red foil white board	1.6t*0.65M*70M	
188	MJ01200	spacer	MISTRAL4000 14.5*30.5*2t	
189	MJ01201	spacer	MISTRAL4000 14.5*30.5*2t	
190	MJ01154	iron board	2.0t*1850*950mm 27.6kg	
191	HC00034	connector	NO.2700 2.54mm/6mm OPEN	
192	HK02231	coupling	P-photosensitive resistance 5LLED	
193	RH00020	photosensitive resistance	VT90N1	
194	SA00201	L.E.D	5 red(LI3330/A)	
195	NI02779	sleeve	9*30mm	
196	NI00274	sleeve	9*1000mm	
197	CB00217	electrolytic capacitor	470uF/50V 10*20mm	C1
198	RA00198	fixed resistor 1/4W	300 M type	R1-4,R1-7,R2-4,R2-7
199	CB00009	electrolytic capacitor	1uF/50V 4*7mm	R1
200	HK04765	PC board	P-MIS15PWR	
201	HB01464	PCB	MIS15PWR_VER041103	
202	HI00007	relay	942H-2C-24DS(8 foots)	K1
203	RA00954	cement resistor 10W	2.7K SQM type	
204	HC00324	terminal	6.5m/m (PC250)	P1,P2,P3,P4,P5,P6,P7,P8,P9,P10,P11,P12
205	SA00098	rectifier diode	1A/400V IN4004	D1
206	CB00134	electrolytic capacitor	1000uF/35V 105 SH 12*21mm	
207	CG00044	metal oxide varistor	NP35L-Y2	R1
208	HK02069	PC board	P-MIS15FP	
209	HB01168	PCB	MIS15FP(2*4)_VER040204	
210	SA00053	L.E.D high intensity	3m/m round(red)long foot 26mm	D1-3,D2-3

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No.	Part No.	Description	Specification	Remark
211	SA00054	L.E.D high intensity	3m/m round(yellow)long foot 26	D1-1,D2-1,D1-30,D2-30
212	SA00194	L.E.D	3	D1-29,D2-29
213	NI01765	LED spacer support	LEDS-10 10mm	
214	HC00066	row-wire header(male)	3P 2.5mm 90°	CN1-1,CN2-1
215	RC00209	PPBC239	A10K RV110-40E1-225A-A14	VR1-1,VR2-1
216	HA03320	wire	14P-14P 400mm UL1007 24AWG	CN3
217	HK04015	PC board	P-MIS40SP	
218	HB00962	PCB	MIS40SP_VER030522	
219	HC00442	speaker holder	NL4MP (NEUTRIK)	
220	HC00522	terminal	4P black/red/red/black A414B-BL	
221	MJ00942	fixed board	CS12/600	
222	MJ00061	Zn-plated board	1*2135*1220 20.45kg	
223	HA01239	single terminal wiring CF:W209	180mm UL1015 14AWG white	
224	HA01237	single terminal wiring CF:W207	200mm UL1015 14AWG grey	
225	HA02471	wire	360mm UL1015 14AWG white	
226	HA01258	quick terminal wiring	380mm UL1015 14AWG grey	
227	HK02070	PC board	P-MIS15IN1	
228	HB01169	PCB	MIS15 IN1(2*4)_VER040205	
229	HC00110	MIC jack	JY-6314-02-340	PJ1
230	HC00112	XLR MIC jack	99M-107SP-1-2 90° PUSH	CN2
231	HC00111	XLR MIC jack	99M-108SP1	CN3
232	HA02893	wire	14P-14P 280mm UL2651 28AWG PH1.27mm	CN1
233	HC00077	row-wire header(male)	3P 2.5mm 180°	CN6,CN9
234	HI00039	push-button switch	SP70300-0202-11F1-N	SW1,SW2
235	HK02071	PC board	P-MIS15IN2	
236	HB01170	PCB	MIS15 IN2(2*4)_VER040103	
237	HC00110	MIC jack	JY-6314-02-340	PJ2
238	HC00112	XLR MIC jack	99M-107SP-1-2 90° PUSH	CN4
239	HC00111	XLR MIC jack	99M-108SP1	CN5
240	HC00077	row-wire header(male)	3P 2.5mm 180°	CN7,CN8
241	HK00793	PC board	P-MIS2500-INPUT	
242	HB01105	PCB	MIS40IN-1_VER031206	
243	HC00297	terminal block	DT-55-A14W-03(3PH)	CN1
244	HC00077	row-wire header(male)	3P 2.5mm 180°	CN3
245	HC00079	row-wire header(male)	5P 2.5mm 180°	CN4

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No.	Part No.	Description	Specification	Remark
246	NB02086	box	MACRO	
247	NB01944	barrier	PSA-3000_V1.1	
248	MG00027	screw	M3*12	
249	MJ01252	cushion	250*8*1.0t MISTRAL1500_V1.0	
250	MJ00061	Zn-plated board	1*2135*1220 20.45kg	
251	MI00427	fixed bracket	PSA-3000	
252	MJ00058	iron board	1*2135*1220 20.45kg	
253	MG00111	screw	pill 4*30	
254	NA00279	clip-chain bag	0.04t*100*150mm_V1.0	
255	AD00012	twin adhesive	90*120mm_V1.0	
256	HA01265	wire	400mm UL1015 14AWG green	
257	NI00219	cable tie	CV-075 white (AST-145-K)	