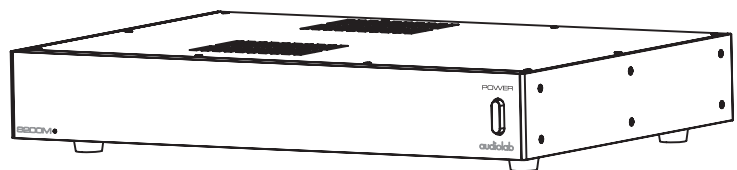


Service Manual

E l e c t r o n i c s

8200M



VERSION HISTORY

Rev	Date	Update Content
V01	2011.06.13	First Version

1. Introduction	1
2. Specification	2
3. Assembly Sketch	3
4. Schematic Diagram	4-6
5. Wiring Diagram	7
6. Silkscreen of Top/Bottom	8-9
7. Maintenance Alignment Procedure	10
8. Assembly Parts List	11-12
9. Electronic Parts List	13-17

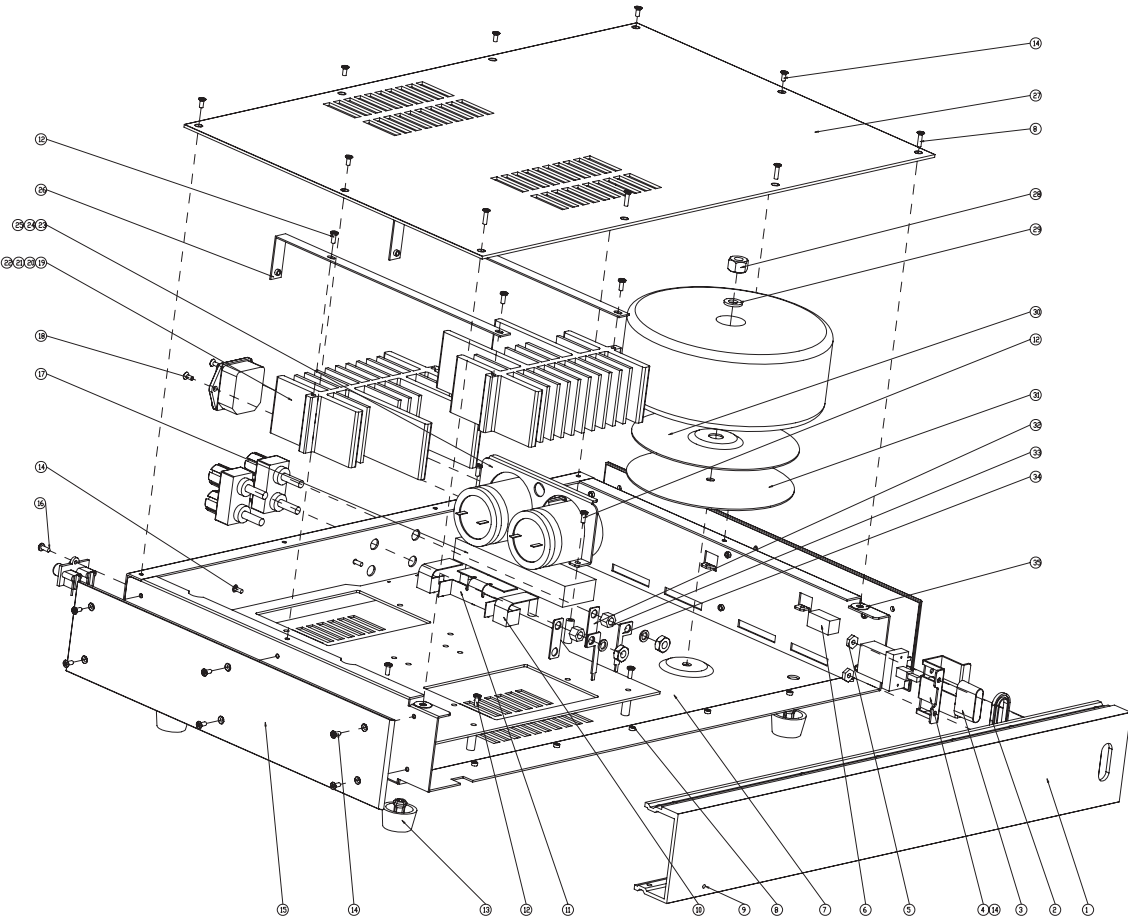
It is the responsibility of the user to ensure that all the information contained in this manual is current. Notification for new issues of this manual and minor updates will be given via the IAG web-site or on request.

This manual has been prepared with the greatest care, it is intended for information only and no liability shall be accepted for errors or changes to specification.

SPECIFICATION

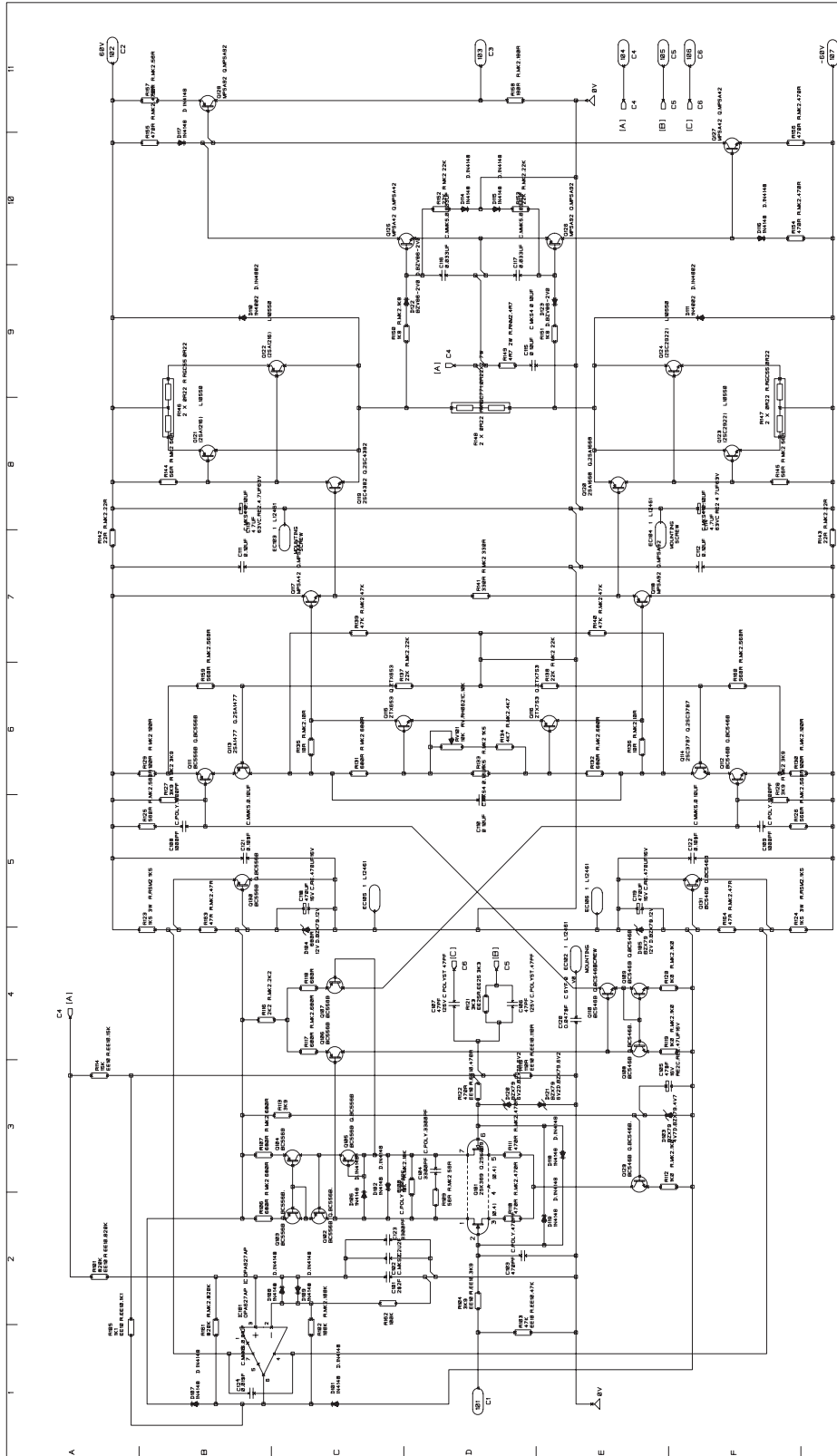
Rated Output Power	125W (21dBW) /Channel into 8 Ω , 20Hz - 20kHz
Inputs Sensitivity	1.12V rms for 120W into 8 Ω
	Input Impedance: 50k Ω
Load	Connected in parallel with INPUT
Gain	29.0 dB at1kHz
Signal To Noise Ratio (IHF, rel. 0.dBW)	Better than 96 dB
Frequency Response	20 Hz-20 kHz \pm 0.3 dB
	0.1Hz-75 kHz -3 dB.
Total Harmonic Distortion&Noise	Less than 0.05%
Polarity (Phase)	Non-Inverting
Muting	Muting controlled automatically
Operating Temperature Range	10-35 $^{\circ}$ C
Power Requirements (Depending on Region)	50-60Hz 100V, 110-120V, and 220-230V models available
	Maximum Power Consumption: 300 VA
Dimensions (W\timesH\timesD)	444 \times 78 \times 326mm
Weight	Net: 8.4 kg Shipping: 9.8 kg

ASSEMBLY SKETCH



SCHEMATIC DIAGRAM

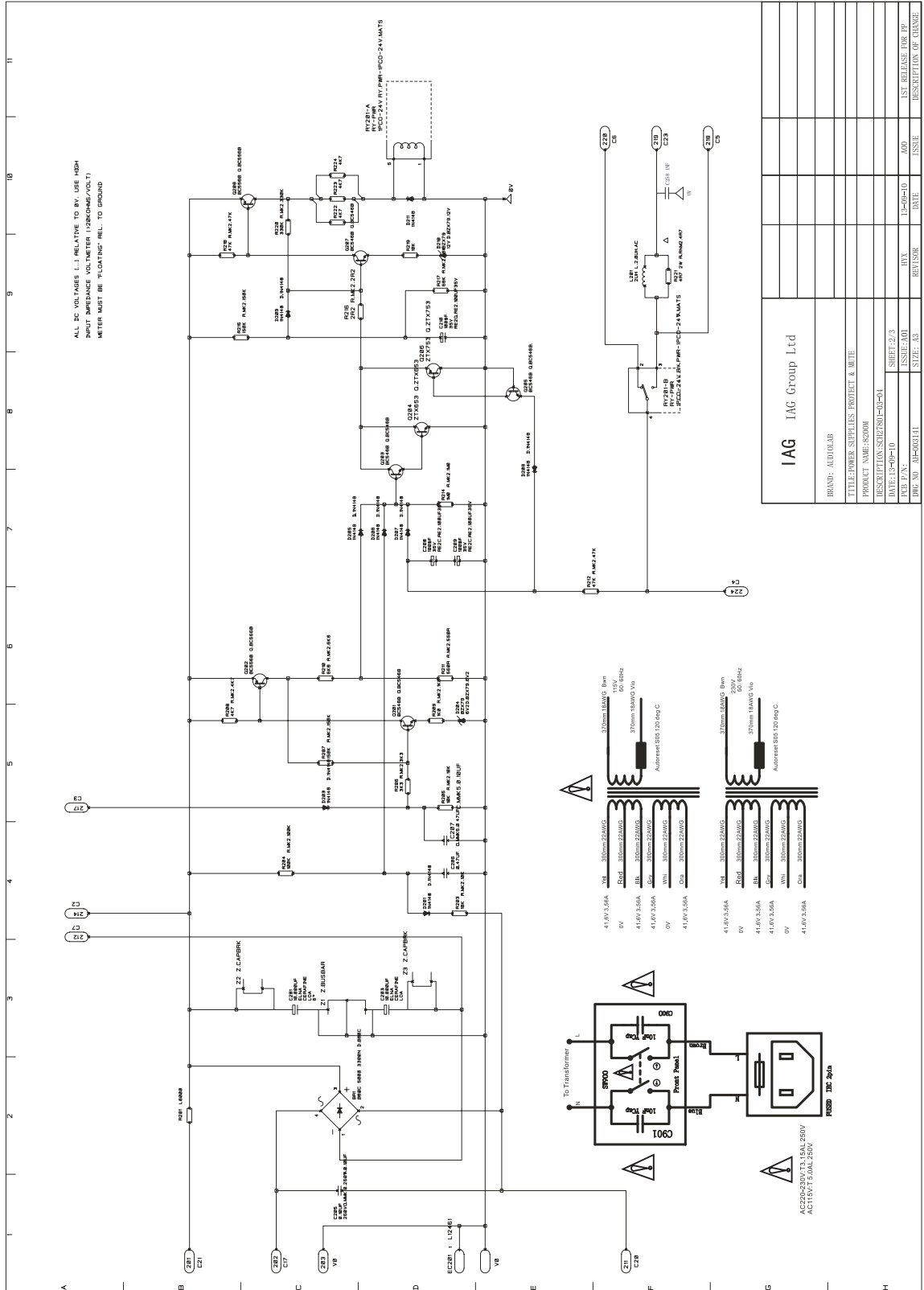
8200M-Mainboard-P1/3



IAG IAG Group Ltd		
BRAND:	AUDIOAB	
TITLE:	POWER AMPLIFIER	
PRODUCT NAME:	8200M	
DESCRIPTION:	SUB250-01-07	
DATE:	15-09-10	
REV. NO.:	01-0011	SIZE: A3
	REV. NO.	DATE
	ISSUE	ISSUE
		DESCRIPTION OF CHANGE

SCHEMATIC DIAGRAM

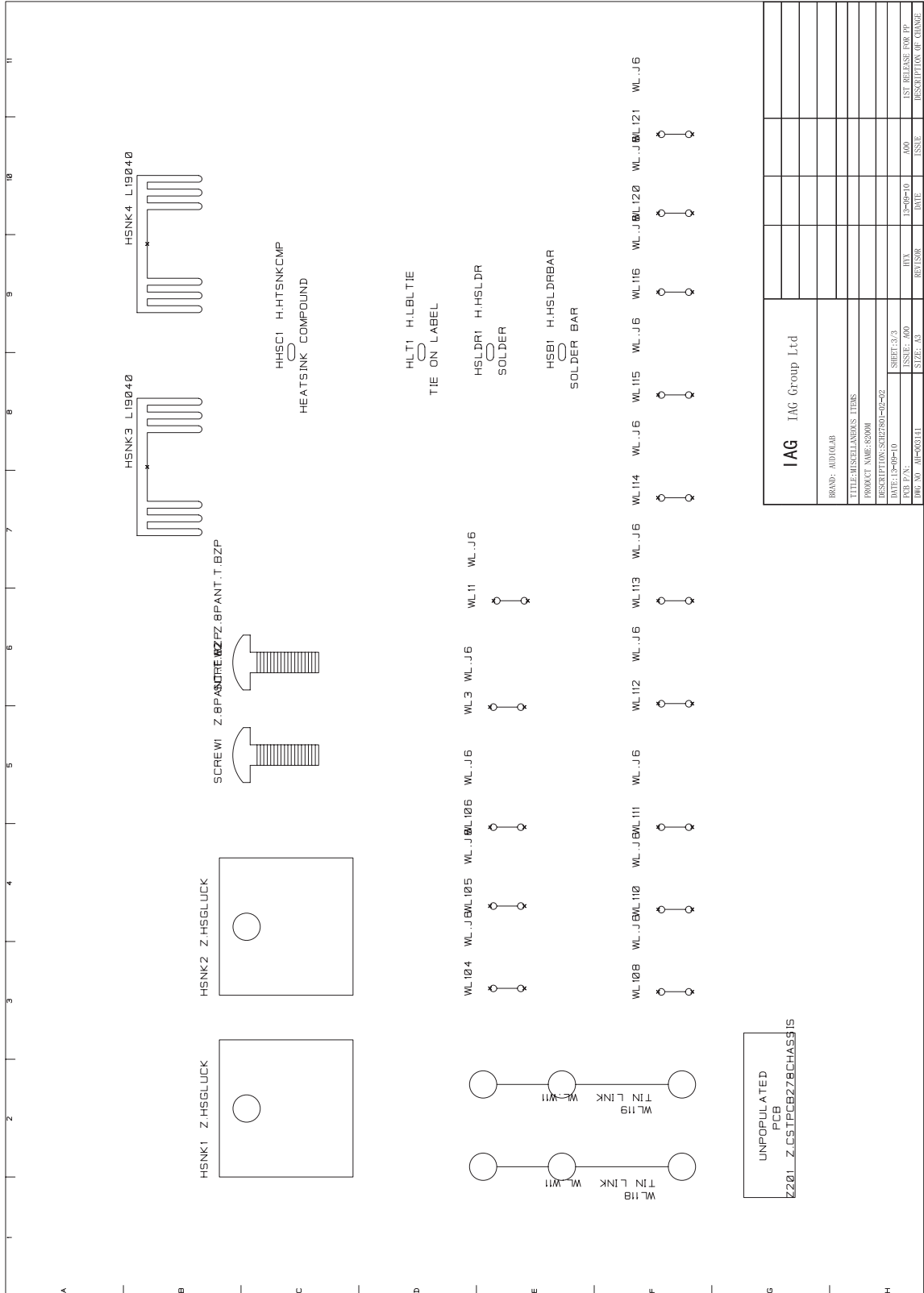
8200M-Mainboard-P2/3



IAG IAG Group Ltd	
BRNO: AUTO43B	
TITLE: POWER SUPPLIES PROTECT & MUTE	
PROJECT NAME: S200M	
DESCRIPTION: S200M-P2/3	
DATE: 15-04-10	SHEET 2/3
DESIGN: ...	ISSUE: 100
REV: P. 2	DATE: 12-04-10
REV: 1	DATE: 12-04-10
REV: 2	DATE: 12-04-10
REV: 3	DATE: 12-04-10
REV: 4	DATE: 12-04-10
REV: 5	DATE: 12-04-10
REV: 6	DATE: 12-04-10
REV: 7	DATE: 12-04-10
REV: 8	DATE: 12-04-10
REV: 9	DATE: 12-04-10
REV: 10	DATE: 12-04-10
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REV: 12	DATE: 12-04-10
REV: 13	DATE: 12-04-10
REV: 14	DATE: 12-04-10
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REV: 99	DATE: 12-04-10
REV: 100	DATE: 12-04-10

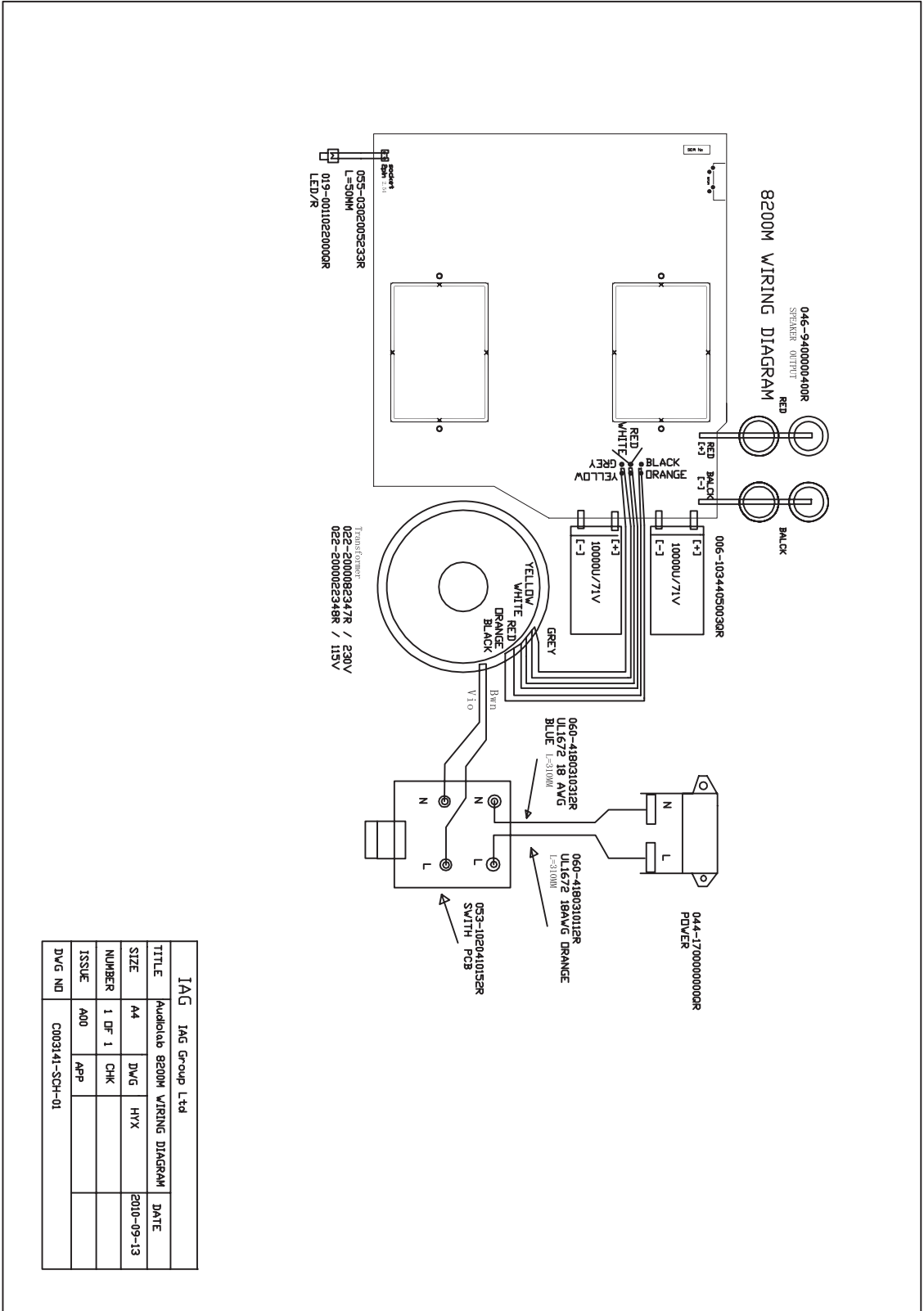
SCHEMATIC DIAGRAM

8200M-Mainboard-P3/3



WIRING DIAGRAM

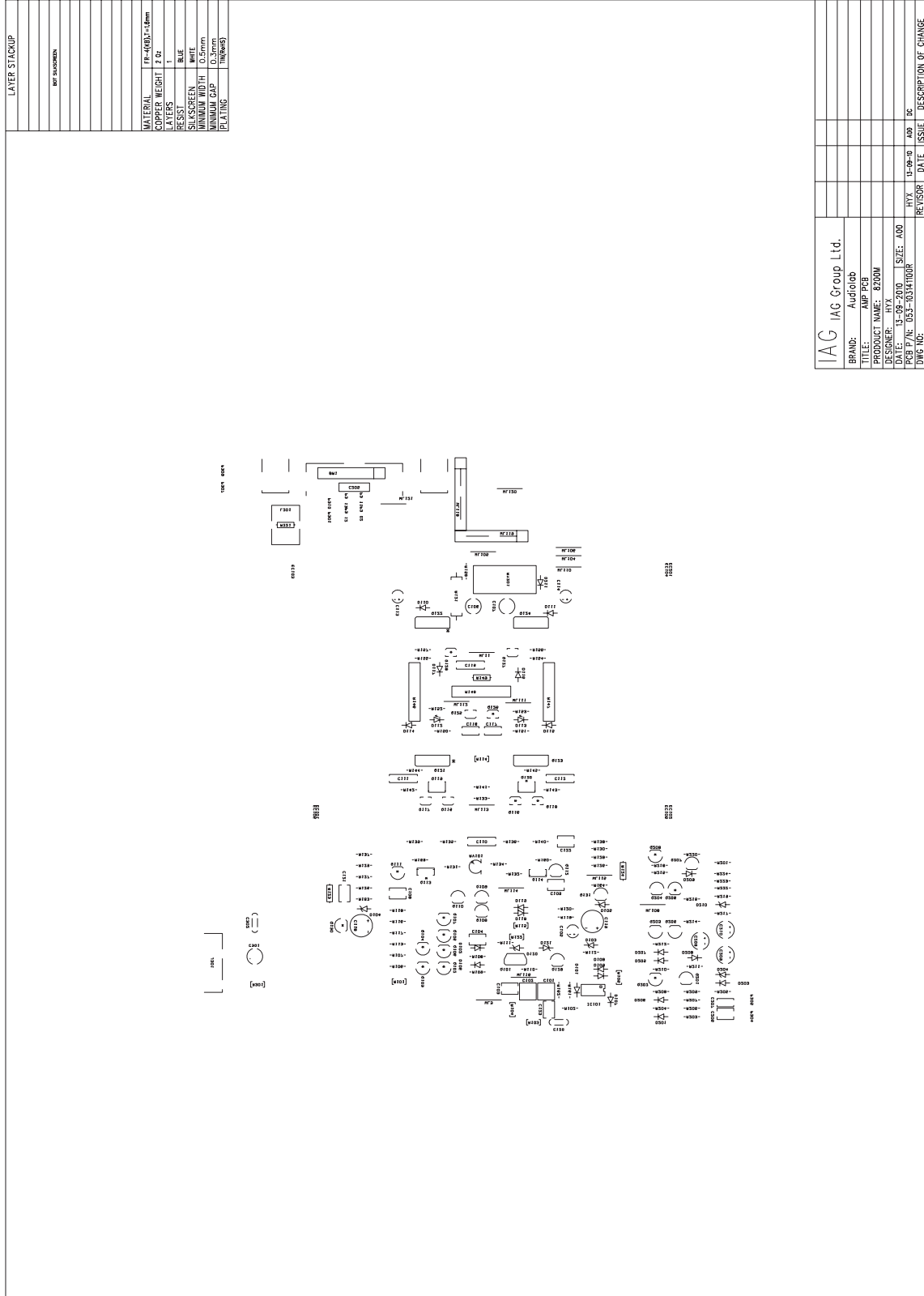
8200M-Wiring Diagram-P1/1



IAG IAG Group Ltd			
TITLE	Audiolab 8200M WIRING DIAGRAM	DATE	
SIZE	A4	DWG	HYX
NUMBER	1 OF 1	CHK	
ISSUE	A00	APP	
DWG NO	C003141-SCH-01		

SILKSCREEN OF TOP / BOTTOM

8200M-MainBoard-Bottom Silkscreen-P1/1



MAINTENANCE ALIGNMENT PROCEDURE

8200M -Bias Procedure And Ageing test step-P1/1

Audiolab 8200M Bias Procedure

This procedure must only be carried out after the unit has passed a full functional test .

- 1.Connect the unit to be biased to mains and switch on. The mains voltage should be set to 230VAC \pm 2% or 120VAC \pm 2% while the test is done.
- 2.Wait for the unit to power up.
- 3.Set bias as shown in table below.
- 4.The test continues until the bias is steady at the final value in the table.


For 8200M bias is measured across R148

All settings are mV dc.

Remarks: Also the test continues until the bias is steady at the final value in the table.

Product	Initial setting	After 15 mins	After 30 mins
8200M	60 –65	24 – 25	21.5 – 22.5

8200M Ageing test step

Ageing test step	Equipment and Tools										
Test condition: $V_{in} = 1V$, 1kHz sine wave(Load: 8ohm) 1/8 Output Power 1: Equipment and Set up 1):Set the "RECORD" and "INPUT" knob to CD. "GAIN" set to 0dB position. Volume set to Max. 2: Ageing test 1):Power ON the unit the "ON" LED will lit and the "PROTECT" LED also lit but will OFF after 5-10 second. 2):Add 5% of AC input for the test.	Anti-ESD bell Step transformer for AC mains Multimeter										
<table border="1" style="width: 80%; margin: auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">unit rated voltage</th> <th style="width: 60%;">variac voltage</th> </tr> </thead> <tbody> <tr> <td>AC240V</td> <td>AC250V\pm2%</td> </tr> <tr> <td>AC220、230V</td> <td>AC240V\pm2%</td> </tr> <tr> <td>AC110V</td> <td>AC120V\pm2%</td> </tr> <tr> <td>AC100V</td> <td>AC110V\pm2%</td> </tr> </tbody> </table>	unit rated voltage	variac voltage	AC240V	AC250V \pm 2%	AC220、230V	AC240V \pm 2%	AC110V	AC120V \pm 2%	AC100V	AC110V \pm 2%	
unit rated voltage	variac voltage										
AC240V	AC250V \pm 2%										
AC220、230V	AC240V \pm 2%										
AC110V	AC120V \pm 2%										
AC100V	AC110V \pm 2%										
3:Soak test with the condition above with 48 hours. 4. Check all the parameter within the spec.											
Notes: 1.If the Bias Okay, switch off the unit and put "PASSED" mark on the unit.											

ASSEMBLY PARTS LIST

8200M-Assembly Bom-P1/2

R/N	P/N	PART NAME	DESCRIPTION	QTY
1	300-1031410001R	Front Panel	finish and anodized	1
2	215-1027410001R	Button Cap	painted	1
3	215-1027410002R	Power Button	painted	1
4	215-1027410003R	Mains Switch Bracket	painted	1
5	215-1027410004R	Nut	M3 NI	11
6	215-1027410005R	EVA	20*10*10mm, EVA	1
7	215-1027410006R	Chassis	painted and silkscreen	1
8	215-1027410007R	Screw	M3*10	11
9	215-1027410008R	Insulation Post	φ7.5*3.1mm,nylon66(ul)	1
10	215-1027410009R	Bus Bar 2	gold plated	2
11	215-1027410010R	Bus Bar3	gold plated	1
12	215-1027410011R	Screw	M3*6	28
13	215-1027410012R	Foot	black	4
14	215-1027410013R	Screw	M3*6	20
15	215-1027410014R	Side Pannel	sand blast and anodized	2
16	215-1027410015R	Screw	M3*10	1
17	215-1027410016R	EVA lump	104*30*15mm EVA	1
18	215-1027410017R	Screw	M3*10	2
19	215-1027410018R	Main Radiator	anodized	2
20	215-1027410019R	Radiator(1)	anodized	2
21	215-1027410020R	Radiator(2)	anodized	2
22	215-1027410021R	Radiator(3)	anodized	4
23	215-1027410022R	Capacitor Bracket	black painted	1
24	215-1027410023R	Snap Bushing	φ7.6mm*φ9.5mm	1
25	215-1027410024R	Moveable Bushing	3.5mm*3.8mm	0.3
26	215-1027410025R	Radiator Bracket	black painted	2
27	215-1027410026R	Top Cover	sand blast and anodized	1
28	215-1027410027R	Nut	M6	1
29	215-1027410028R	Washer	φ6.4Xφ12X1.5 NI	1
30	215-1027410029R	Transformer Insulation Board	black painted	1
31	215-1027410030R	Rubber Washer	φ136*φ10*1	1
32	215-1027410031R	Terminal Connector	gold plated	2
33	215-1027410032R	Nut	gold plated	2
34	215-1027410033R	Pcb Terminal Connector	gold plated	2
35	215-1027410034R	PVC Washer	φ12.5*φ4.5*0.1mm,black	2

ASSEMBLY PARTS LIST

8200M-Assembly Bom-P2/2

Remark:Colour Difference Table

R/N	P/N	PART NAME	DESCRIPTION	QTY
1	300-1031410001R	Front Panel	screened, light grey(silver anodized)	1
	300-1031410002R		screened, light grey(black anodized)	1
2	215-1027410001R	Button Cap	silver painted,ABS757#	1
	215-1027420001R		black painted,ABS757#	1
3	215-1027410000R	Power Button	silver painted,ABS757#	1
	215-1027420000R		black painted,ABS757#	1
7	309-1031410000R	Chassis	silver painted	1
	309-1031410001R		black painted	1
8	534-3002100606R	Screw	M3*10NI	11
	534-3002100906R		M3*10black	11
14	534-3002061006R	Screw	M3*6NI	20
	534-3002060906R		M3*6black	20
15	319-1027410001R	Side Panel	sand blasting,anodized silver	2
	319-1027420001R		sand blasting,anodized black	2
16	588-3000106037R	Screw	M3*10NI	1
	527-3012100806R		M3*10black	1
27	302-1031420000R	Top Cover	sand blasting,anodized silver	1
	302-1031420001R		sand blasting,anodized black	1

ELECTRONIC PARTS LIST

8200M-Electronic Bom-P1/5

R/N	P/N	PART NAME	DISCRIPTION	QTY	LOCATION
1	046-9400000400R	909 Terminal	red/black	2	
2	062-1220000200R	Mains Cable	2meter American	1	
3	041-1376000000QR	Mains Switch	SWITCH MAINS 2 P SDDSA 3289A	1	
4	071-1100000000R	Tie Wrap	100MM YJ-100	10	
5	044-1700000000QR	Mains Inlet	MAINS INLET 2 POLE 2 FUSE LOCS	1	
6	742-3501000000R	Heat Sink	Φ35 black	0.10	
7	060-4180310312R	Double Insulated Wire	UL1672 18 AWG blue L=310MM	1	
8	060-4180310112R	Double Insulated Wire	UL1672 18AWG brown L=310MM	1	
9	053-1020410152R	Mains Switch PCB	single layer PCB MAINS SWITCH 200 SERIES	1	
10	022-2000022348R	Transformer	115V 50/60HZ Noratel TI- 103410 500AV D=139 lss 1 SW/120°C	1	
11	031-2200813121HR	Fuse Tube	T5A/250V 213 5*20MM LITTELFUSE	2	
12	008-1003025005R	Cap	MKT 10NF/250V 10%	2	
13	053-1374001104QR	Mains Switch PCB	PCB MAINS SWITCH 200 SERIES	1	
14	019-0011022000QR	LED	LED RED	1	
15	742-0301000000R	Heat Sink	Φ3 /BLK	0.1	
16	742-1001000000R	Heat Sink	Φ10 / BLK	0.1	
17	742-0501000000R	Heat Sink	Φ5/ BLK	0.05	
18	742-1001000000R	Heat Sink	Φ10/ BLK	0.2	
19	006-1034405003QR	Electrolytic Cap	10000U 71V AUDIO 40*50	2	
20	055-0302015333R	Flat Wire	2P L=150MM UL1007 24#	1	
21	088-1031410000R	8200M AMP (Mono)	8200M PCBA	1	
22	001-1004205010QR	Resistor	100K 1/4W 1%	3	R102.R162.R204
23	001-6801205010QR	Resistor	680R 1/4W 1%	6	R106.107.117.11 8.131.132
24	001-2202205010QR	Resistor	2K2 1/4W 1%	1	R116
25	001-3902205010QR	Resistor	3K9 1/4W 1%	3	R113.127.128
26	001-4703205010QR	Resistor	47K 1/4W 1%	4	R139.140.212.21 8
27	001-4701205010QR	Resistor	470R 1/4W 1%	5	R110.111.155.15 4.156

ELECTRONIC PARTS LIST

8200M-Electronic Bom-P2/5

R/N	P/N	PART NAME	DISCRIPTION	QTY	LOCATION
28	001-5601205010QR	Resistor	560R 1/4W 1%	5	R125.159.126.160.211
29	001-3301205010QR	Resistor	330R 1/4W 1%	1	R141
30	001-2203205010QR	Resistor	22K 1/4W 1%	4	R137.138.152.153
31	001-1000205010QR	Resistor	10R 1/4W 1%	2	R135.136
32	001-1803205010QR	Resistor	18K 1/4W 1%	1	R108
33	001-1802205010QR	Resistor	1K8 1/4W 1%	2	R150.151
34	001-1005205010QR	Resistor	1M 1/4W 1%	1	R214
35	001-1504205010QR	Resistor	150K 1/4W 1%	2	R207.215
36	001-6803205010QR	Resistor	68K 1/4W 1%	1	R217
37	001-1003205010QR	Resistor	10K 1/4W 1%	3	R203.205.219
38	001-3304205010QR	Resistor	330K 1/4W 1%	1	R220
39	001-1001205010QR	Resistor	100R 1/4W 1%	2	R129.130
40	001-4700205010QR	Resistor	47R 1/4W 1%	2	R163.164
41	001-3302205010QR	Resistor	3K3 1/4W 1%	1	R206
42	001-8204205010QR	Resistor	820K 1/4W 1%	1	R161
43	001-6802205010QR	Resistor	6K8 1/4W 1%	1	R210
44	001-1801205010QR	Resistor	180R 1/4W 1%	1	R158
45	001-1002205010QR	Resistor	1K 1/4W 1%	4	R112.119.120.R209
46	001-5600205010QR	Resistor	56R 1/4W 1%	4	R109.144.145.157
47	001-2200205010QR	Resistor	22R 1/4W 1%	2	R142.143
48	001-2209205010QR	Resistor	2R2 1/4W 1%	1	R216
49	001-4701405010QR	Resistor	470R 1/4W 1%	2	R301.122
50	001-1102405010QR	Resistor	1k1 1/4W 1%	1	R105
51	001-3902405010QR	Resistor	3k9 1/4W 1%	1	R104
52	001-1503405010QR	Resistor	15k 1/4W 1%	1	R114
53	001-4703405010QR	Resistor	47k 1/4W 1%	1	R103
54	001-8204405010QR	Resistor	820k 1/4W 1%	1	R101
55	001-2208920100QR	Resistor	0R22 7W+7W 10%	3	R148 R146.147
56	001-1101405010QR	Resistor	110R 1/4W 1%	1	R115
57	001-0470308050R	Resistor	4.7Ω 2W J	2	R149.221
58	001-1502109050QR	Resistor	1K5 3W 5%	2	R123.124
59	006-4794051173HR	Electrolytic Cap	ELNA 4U7 20% 63V RE3-63V4.7ME3 5*11mm	2	C113.114
60	008-4703002517QR	Cap	0U047 +80/-20% 25V 5YF	2	C302.120
61	016-1041110001HR	Cap	0.1UF/100V 10% MKS4 10PCM WIMA WIMA	4	C110.111.112.115

ELECTRONIC PARTS LIST

8200M-Electronic Bom-P3/5

R/N	P/N	PART NAME	DISCRIPTION	QTY	LOCATION
62	016-4710832201R	Cap	470pF 63V 2.5%	1	C103
63	013-2250120505QR	Cap	2U2 10% 50V MSK2 WIMA	2	C101.102
64	080-0315000010QR	Inductor	1.5UH	1	L201
65	067-3300086000QR	ZENER DIODE	DIODE BZV86-2V0 STABLSTOR	2	D112.113
66	067-1104148000R	DIODE	IN4148	20	D101-102.106- 109.114- 119.201.203.205- 209.211
67	067-2204002000R	DIODE	IN4002	2	D110.111
68	067-3379479000QR	ZENER DIODE	DIODE BZX79C 4V7 ZENER	1	D103
69	067-3307912000QR	ZENER DIODE	DIODE BZX79C 12V ZENER	3	D104.105.210
70	067-3379629000QR	ZENER DIODE	DIODE BZX79C 6V2 ZENER TC	3	D120.121.204
71	018-3200653115R	Transistor	ZTX653 TO-92	2	Q115.204
72	018-3200753115R	Transistor	ZTX753 TO-92	2	Q116.206
73	018-0101668111QR	Transistor	TRAN 2SA1668 PNP TO- 220F SANKEN	1	Q120
74	018-0304382111QR	Transistor	2SC4382 NPN TO-220F SANKEN	1	Q119
75	018-2700042115QR	Transistor	TRAN ZTX457 NPN TO-92	3	Q117.125.127
76	018-2700092115QR	Transistor	TRAN ZTX757 PNP E-Line	3	Q118.128.126
77	018-0302922110QR	Transistor	TRAN 2SC2922 NPN MT- 200 SANKEN	2	Q123.124
78	018-0101216110QR	Transistor	TRAN 2SA1216 PNP MT- 200 SANKEN	2	Q121.122
79	018-0101477113QR	Transistor	2SA1477 PNP TO-126ML SANYO	1	Q113
80	018-0303787113QR	Transistor	2SC3787 NPN TP-126ML SANYO	1	Q114
81	017-4570000000QR	IC	OPA134PA DIP08 BB	1	IC101
82	049-3002114034QR	SOCKET	PHONO SOCKET 2W T6165	1	J301
83	001-3002207010R	Resistor	H-FM 2WS 3K3 ±1% size 11*4.5*0.8MM	1	R121
84	001-0000105050QR	Resistor	0R 1/4W 5%	15	WL3.11.104- 106.108.110- 116.120-121
85	016-1021132201QR	Cap	FKP2 1000PF/100V 2.5% WIMA PCM5	2	C108.109
86	009-1031008110QR	Cap	10NF/100V 20%	1	IC101(PIN4&7)

ELECTRONIC PARTS LIST

8200M-Electronic Bom-P4/5

R/N	P/N	PART NAME	DISCRIPTION	QTY	LOCATION
87	001-1002205014QR	Resistor	1K 1/4W 1%	1	R209
88	001-3303205010R	Resistor	33K 1/4W F	1	R201
89	324-0380250101QR	Insulation	38*25MM	4	Q121~Q124
90	071-2480000000QR	Tie Wrap	YJ-330	2	
91	001-4702205010QR	Resistor	4K7 1/4W 1%	5	R134.208.222.22 3.224
92	836-4700012505QR	Cap	47P 10% 125V POLYSTYRENE	1	C301
93	013-1010310507R	Cap	100pF 100V 5%	2	C106,C107
94	020-5022121317R	Potentiometer	5K 25% BOURNS 3329H- 1-502LF	1	RV101
95	001-2002205010QR	Resistor	2K 1/4W 1%	2	R133.R134
96	018-0500369115R	Effect Transistor	2SK369GR TO-92 TOSHIBA ("matched pairs")	2	Q101
97	016-3320800001R	Cap	3300P 5% 63V FKP2 WIMA PH5MM	2	C104.123
98	024-2030071054HR	Relay	JW1FSN-DC24V AJW4212 NAIS	1	BY201
99	016-4740810001R	Cap	0U47 10% 63V MKS2 WIMA PH5MM	1	C206
100	016-1041300001R	Cap	0.10uf 250v 5% PH=10MM WIMA	1	C205
101	016-3331100001R	Cap	0U033 5% 100V MKS2 WIMA PH5MM	2	C116.117
102	016-1041100001R	Cap	0U1 5% 100V MKS2 wima ph5mm	3	C121.122.207
103	006-4704051133HR	Electrolytic Cap	ELNA 47U 20% 16V RE3- 16V470ME3 5*11mm	1	C105
104	006-1014162552QR	Electrolytic Cap	ELNA RE3-35V-101M F3 100UF 35V	3	C208.209.210
105	006-4714081133HR	Electrolytic Cap	ELNA 470U 20% 16V RE3- 16V471MG3 8*11.5mm	2	C118.119
106	056-4102220000R	Conector	JS-1001-02	1	JN1
107	086-0500000001R	Conector	PC250	3	
108	331-1031410001R	Connector Socket B	gilding	2	
109	306-1003770013R	Heat Sink	anodized	2	
110	306-1003770001QR	Heat Sink 1	anodized	2	
111	306-1003770002QR	Heat Sink 2	anodized	2	
112	306-1003770003QR	HeatSink 3	anodized	4	
113	306-1027410005R	Heat Sink 5	anodized,black	2	
114	306-1027410003R	Heat Sink	anodized,black	1	

ELECTRONIC PARTS LIST

8200M-Electronic Bom-P5/5

R/N	P/N	PART NAME	DISCRIPTION	QTY	LOCATION
115	812-1376000001R	Connector Socket 1	gilding	2	WL118,WL119
116	812-1376000002R	Connector Socket 2	gilding	2	
117	812-1376000003R	Connector Socket 3	gilding	1	
118	588-3000066037R	Screw	M3*6	10	
119	588-3000186037R	Screw	M3*18	8	
120	513-3007050080R	Washer	φ3*φ7*0.5 Zn	8	
121	517-3008080130AR	Washer M3 OB	Φ3.1*Φ4.7*0.8	8	
122	500-3050240300AR	Nut	M3 NI	8	
123	018-1400556115-1R	Transistor	BC556B PNP TO-92 Fairchild	10	Q130.111.102- 107.202.208
124	018-1400546115-1R	Transistor	BC546BRL1G TO-92 ON	10	Q108~110.131.11 2.203.205.207.12 9.201
125	053-103141A000R	8200M AMP ISS5	single layer FR4 KB 20Z blue / OSP 277*245.5*1.6MM	1	
126	034-1115003307-1R	Rectifier	DIODE B80C5000A BRIDGE 80V/5A DIOTEC	1	BR1