



High bias integrated amplifier

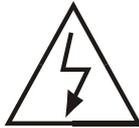
MAP-101

SERVICE MANUAL



SAFETY PRECAUTIONS & IMPORTANT NOTES

THESE SERVICING INSTRUCTIONS ARE OF USE BY QUALIFIED SERVICE PERSONNEL ONLY. TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO.



The lightning flash with arrowhead symbol, with an equilateral triangle, is intended to alert you to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



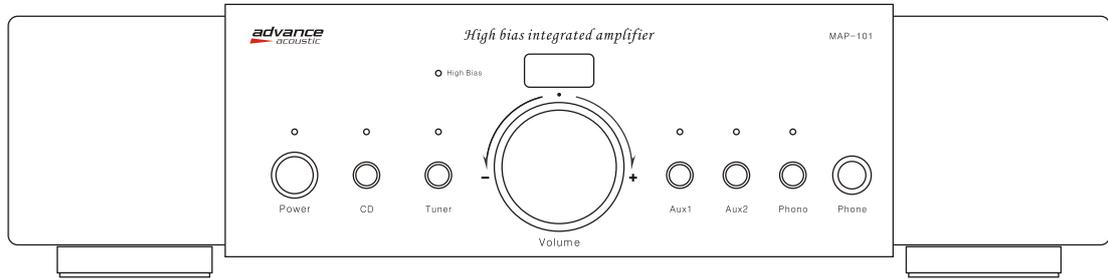
The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Voltages :230V AC,50Hz.

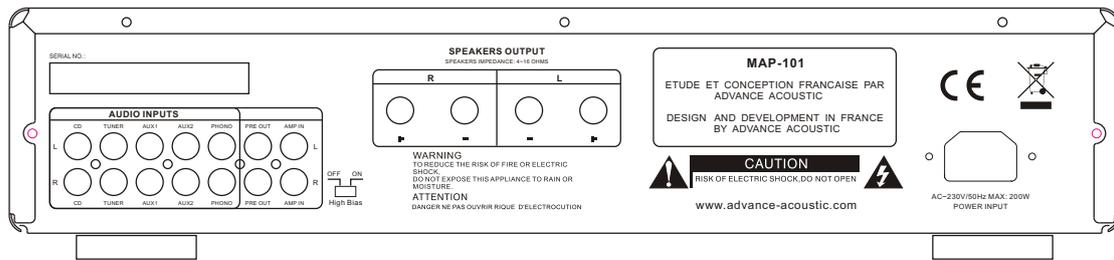
PERFORMANCE SPECIFICATIONS SPECIFICATIONS PERFORMANCE

POWER OUTPUT	60ms	250W
FREQUENCY RESPONSE	(3dB)	10±6Hz
DISortion		<0.1%
SNR		>90dB
CANAL SEPARATION		>90dB
INPUT IMPEDANCE		10Kohms
INPUT IMPEDANCE	PHONO	4Kohms/100ohms
INPUT LEVEL (CD)		<50mV
INPUT LEVEL (RIPPER)		<125V
INPUT LEVEL (ROOM)		25mV
AC INPUT		230V
POWER CONSUMPTION MAX		<200W
TRANSFORMER	1	
DIMENSIONS		H102x1.4xD325
NET WEIGHT / GROSS WEIGHT		69/81 kg

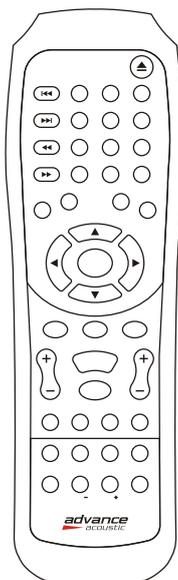
FRONT PANEL



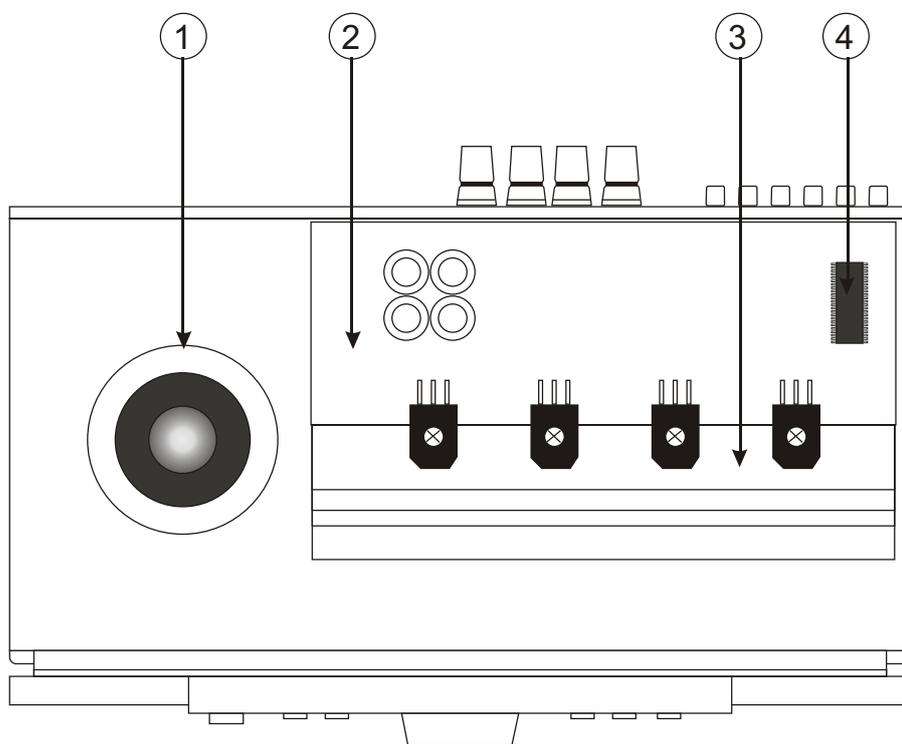
REAR PANEL



REMOTE CONTROL



■ INTERNAL VIEW



① POWER SWITCH TRANSFORMER

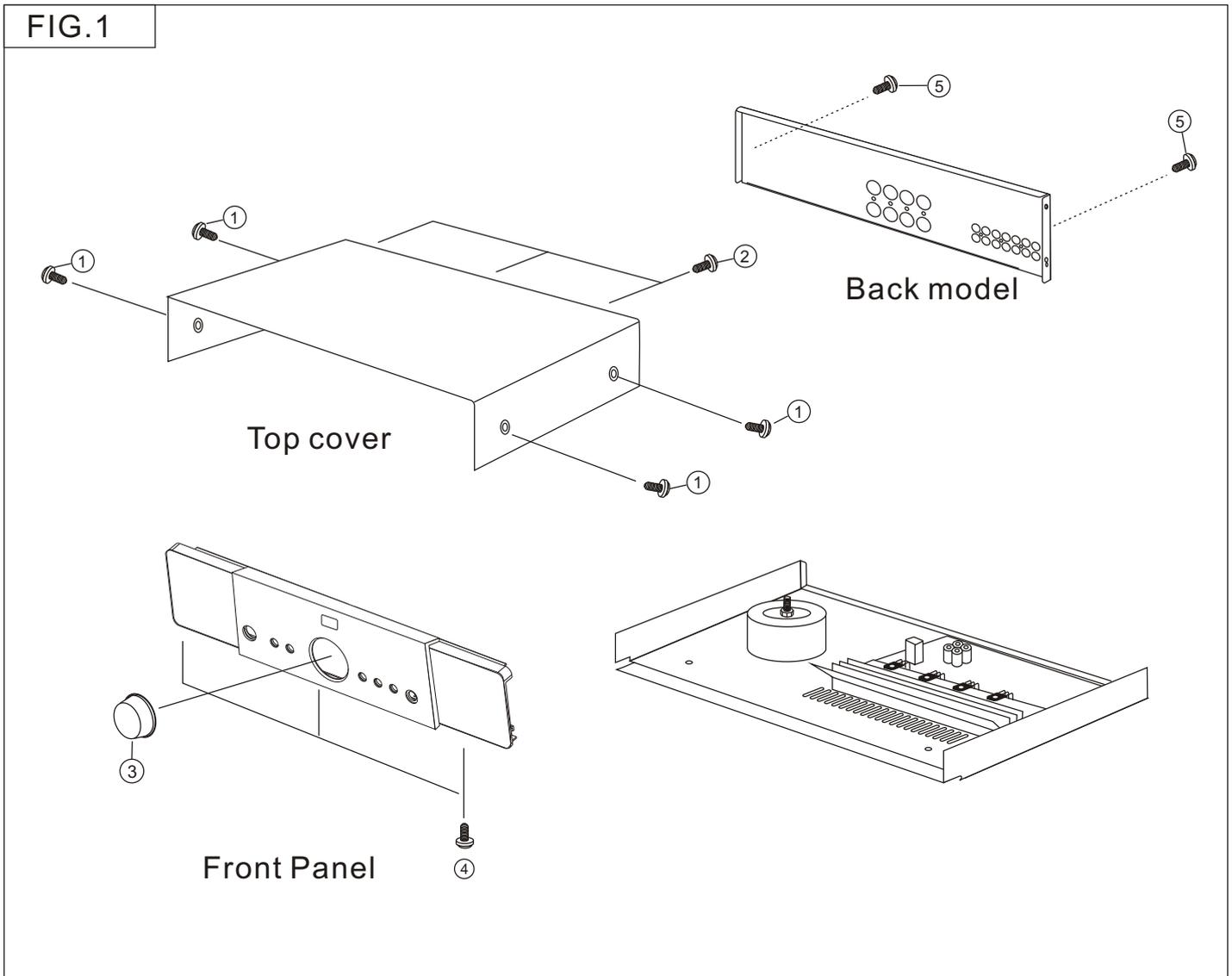
② P.C.B AMPLIFIER BOARD

③ RADIATOR

④ CPU

■ DISASSEMBLY PROCEDURES

(Remove parts in the order as numbered.)



1. Removal of Top Cover

Remove 4 screws (①), 3 screws (②) and then remove the Top Cover in fig.1.

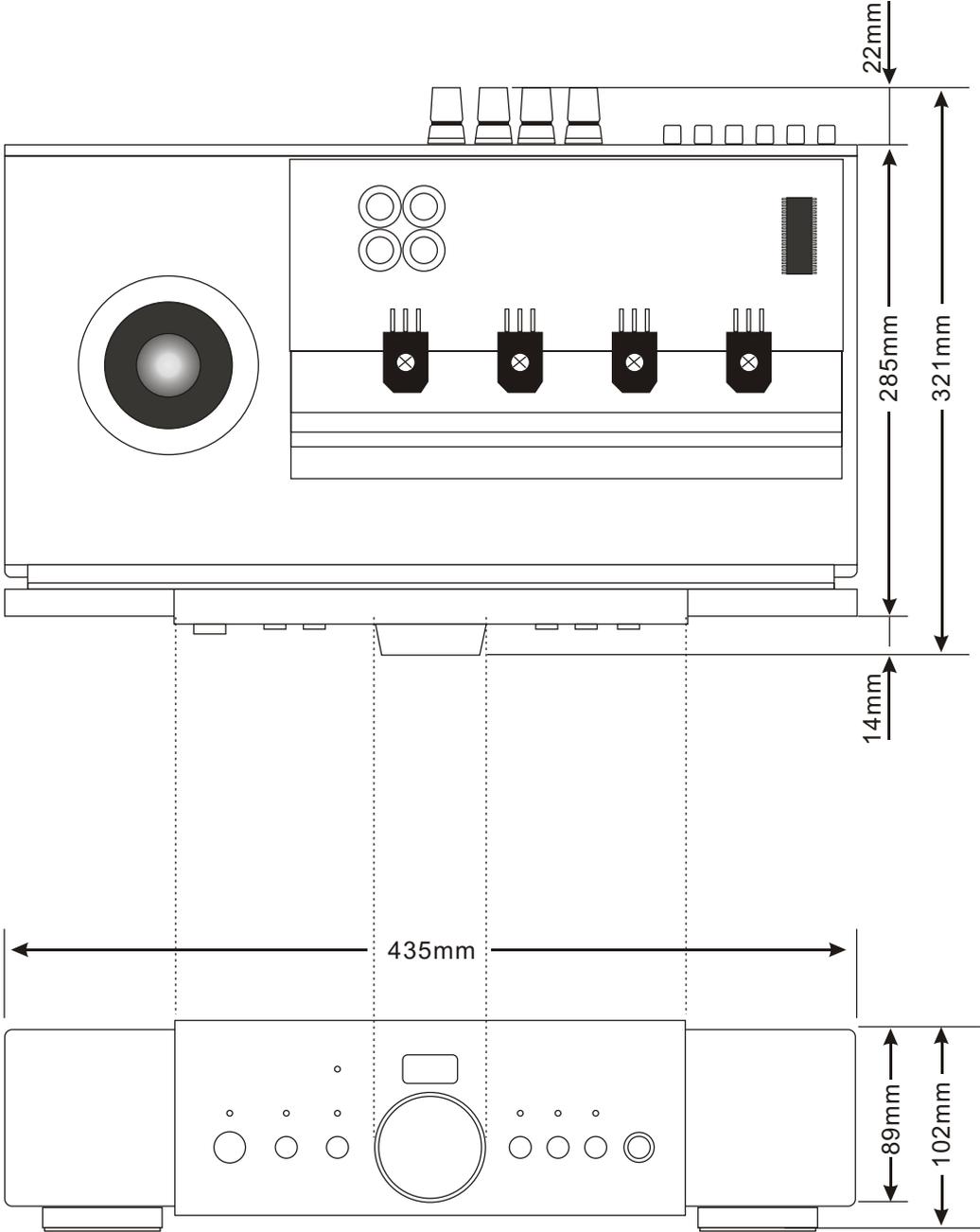
2. Removal of Front Panel

Remove 1 knobs (③) and 3 screws (④)

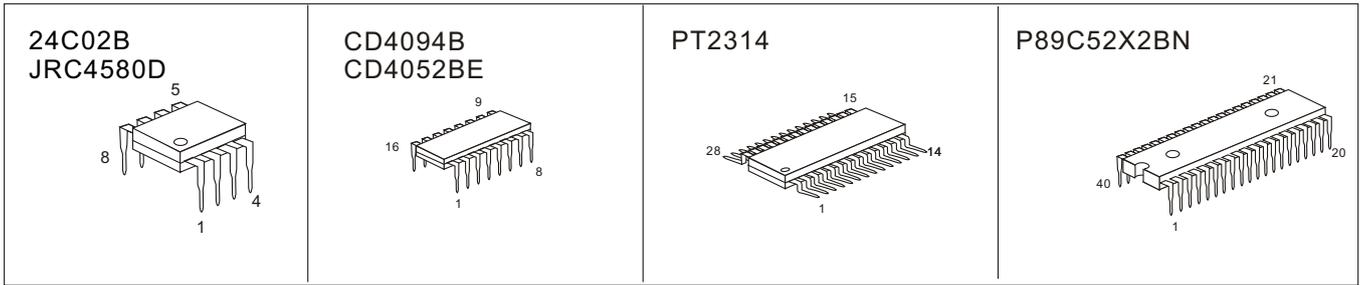
3. Removal of Back Panel

Remove 2 screws (⑤) then remove the Back Panel in fig.1.

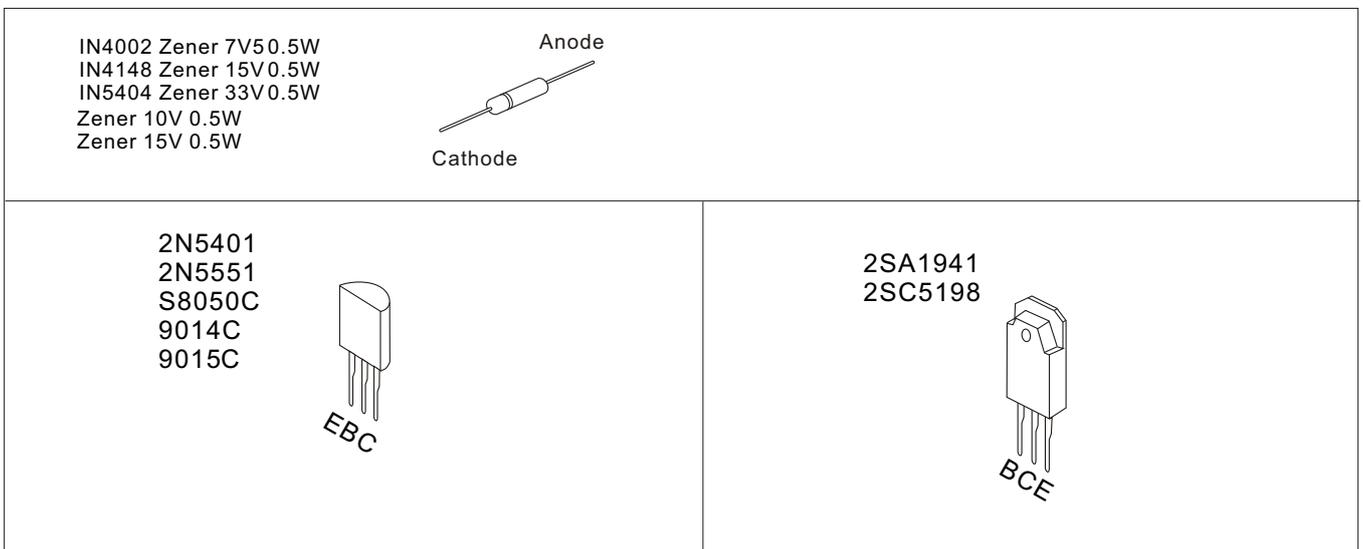
■ Figure Measurement



PIN CONNECTION DIAGRAM



Transistors and Diodes



IC date information(Voltage)

U101 P89C52X2BN		U202 PT2314		U201 CD4052BE	
Pin No	Stereo mode	Pin No	Stereo mode	Pin No	Stereo mode
1	5.100	1	9.51	1	0
2	5.100	2	0	2	0
3	5.110	3	4.7	3	0
4	5.110	4	4.71	4	0
5	0.002	5	4.72	5	0
6	3.698	6	4.74	6	0
7	3.690	7	4.75	7	-4.56
8	5.110	8	NC	8	0
9	0.010	9	NC	9	5.15
10	5.120	10	4.7	10	0.01
11	5.120	11	4.72	11	0
12	5.120	12	4.47	12	0
13	0.039	13	NC	13	0
14	4.740	14	NC	14	0
15	4.800	15	4.71	15	0
16	5.130	16	4.32	16	4.8
17	0.001	17	3.2		
18	2.283	18	2.81		
19	2.356	19	4.66		
20	0.000	20	4.7		
21	0.010	21	4.7		
22	5.140	22	4.7		
23	5.140	23	4.7		
24	0.010	24	4.7		
25	2.992	25	0		
26	0.050	26	5.06		
27	5.140	27	0.001		
28	2.173	28	4.65		
29	0.515				
30	1.712				
31	5.160				
32	5.160				
33	5.160				
34	0.050				
35	0.496				
36	0.501				
37	0.515				
38	0.2-0.514				
39	0.635-0.68				
40	5.150				

U301 JRC4580D	
Pin No	Stereo mode
1	2.242
2	0.003
3	0.003
4	-14.29
5	0.003
6	0.004
7	2.554
8	15.23

U102 24C02B	
Pin No	Stereo mode
1	0
2	0
3	0
4	0
5	5.16
6	0.01
7	0
8	5.16

POWER TRANSISTORS VOLTAGE(AMPLIFIER OUTPUT)

AMPLIFIER CHECK							
Channel	Item	Name of Component	Test point	Rating(DC) Non-signal	Rating(DC) with signal	Error	Remark
R	Q313	2SC5198	B-E	579	584	10-20mv	Volume:
	Q312	2SC5198	B-E	-555	-562		63db
L	Q412	2SA1941	B-E	-549	-555	10-20mv	Volume:
	Q413	2SA1941	B-E	561	564		63db

AMP BOARD BOM

Item	Component Name	Specification	Quantity	Disignator
1	Jump Wire	5mm	9	J504 J506 J507 J508 J509 J511 J517 J518 J746
2	Jump Wire	7.5mm	38	J501 J512 J513 J515 J516 J519 J702 J703 J704 J705 J708 J709 J710 J713 J714 J715 J716 J717 J720 J721 J725 J726 J727 J728 J729 J732 J733 J734 J735 J736 J737 J738 J740 J741 J743 J747 J749 D106
3	Jump Wire	10mm	27	J103 J105 J106 J107 J109 J110 J112 J113 J117 J118 J119 J120 J123 J124 J125 J126 J701 J706 J707 J718 J719 J722 J723 J724 J742 J744 J745
4	Jump Wire	12.5mm	12	J111 J114 J116 J712 J748 J1201 J1202 J1203 J1204 J1205 J1206 J1207
5	Jump Wire	15mm	2	J1501 J1502
6	Jump Wire	10mm Dia: 1 mm	2	L1
7	Carbon resistor	510K 1/8W Error:±5%	4	R303 R304 R403 R404
8	Carbon resistor	33R 1/8W Error:±5%	12	R311 R312 R324 R325 R326 R327 R411 R412 R424 R425 R426 R427
9	Metal resistor	39R 1/8W Error:±1%	2	R340 R440
10	Carbon resistor	220R 1/8W Error:±5%	2	R422 R322
11	Carbon resistor	100R 1/8W Error:±5%	7	R144 R145 R255 R317 R318 R417 R418
12	Carbon resistor	150R 1/8W Error:±5%	4	R305 R306 R405 R406
13	Carbon resistor	470R 1/8W Error:±5%	6	R301 R315 R316 R401 R415 R416
14	Carbon resistor	620R 1/8W Error:±5%	2	R245 R250
15	Metal resistor	1K 1/8W Error:±1%	11	R313 R314 R413 R414 R108 R224 R225 R234 R237 R248 R253
16	Carbon resistor	1K5 1/8W Error:±5%	2	R423 R323
17	Carbon resistor	2K 1/8W Error:±5%	2	R106 R116
18	Carbon resistor	2K2 1/8W Error:±5%	12	R010 R015 R201 R203 R205 R207 R209 R211 R213 R215 R221 R222
19	Carbon resistor	3K3 1/8W Error:±5%	6	R332 R333 R432 R433 R011 R149
20	Carbon resistor	4K7 1/8W Error:±5%	7	R012 R146 R147 R220 R223 R321 R421
21	Carbon resistor	5K6 1/8W Error: ±5%	2	R229 R230
22	Carbon resistor	10K 1/8W Error: ±5%	12	R014 R013 R102 R143 R236 R239 R240 R241 R242 R244 R302 R402
23	Carbon resistor	12K 1/8W Error: ±5%	1	R138
24	Carbon resistor	22K 1/8W Error: ±5%	12	R202 R204 R206 R208 R210 R212 R214 R216 R231 R232 R235 R238
25	Carbon resistor	27K 1/8W Error: ±5%	2	R247 R252
26	Carbon resistor	33K 1/8W Error: ±5%	15	R136 R137 R140 R141 R142 R307 R308 R335 R336 R342 R407 R408 R435 R436 R442
27	Carbon resistor	39K 1/8W Error: ±5%	2	R334 R434
28	Carbon resistor	47K 1/8W Error: ±5%	5	R139 R217 R218 R226 R227
29	Carbon resistor	100K 1/8W Error: ±5%	6	R249 R254 R319 R320 R419 R420
30	Carbon resistor	330K 1/8W Error: ±5%	2	R246 R251
31	Carbon resistor	1M 1/8W Error: ±5%	1	R101
32	Carbon resistor	0R5 1/4W Error: ±5%	2	R104 R105
33	Carbon resistor	10R 1/4W Error: ±5%	1	R107
34	Carbon resistor	5K6 1/4W Error: ±5%	6	R337 R338 R339 R437 R438 R439
35	Vertical Zener Diode	1/2W10V	1	DZ102
36	Vertical Zener Diode	1/2W15V	2	DZ302 DZ301
37	Vertical Zener Diode	1/2W6V2	1	DZ101

AMP BOARD BOM

Item	Component Name	Specification	Quantity	Disignator
38	Vertical Zener Diode	1/2W9V1	1	DZ201
39	Vertical Ceramic Capacitor	22p/50V Error: ±20%	6	C102 C103 C307 C308 C407 C408
40	Vertical Ceramic Capacitor	221/50V Error: ±20%	4	C309 C310 C409 C410
41	Vertical Ceramic Capacitor	471/50V Error: ±20%	2	C302 C402
42	Vertical Ceramic Capacitor	103/50V Error: ±20%	1	C115
43	Vertical Ceramic Capacitor	104/50V Error: +80%-20%	9	C101 C137 C138 C105 C228 C229 C204 C203 C211
44	Vertical Ceramic Capacitor	104/150V Error: +80%-20%	4	C106 C107 C108 C109
45	Vertical Terylene Capacitor	CL21X-50V±5%-272	4	C208 C209 C227 C232
46	Vertical Terylene Capacitor	CL21X-50V±5%-123	2	C226 C231
47	Vertical Terylene Capacitor	CL21X-50V±5%-104	8	C206 C213 C215 C216 C313 C413 C207 C214
48	Diode	1N4148	15	D201 D202 D203 D204 D205 D206 D301 D302 D401 D402 D105 D112 D113 D114 D115
49	Triode	2N5401 β=80-160	11	Q116 Q302 Q303 Q306 Q308 Q309 Q402 Q403 Q406 Q408 Q409
50	Triode	2N5551 β=80-160	15	Q115 Q301 Q304 Q305 Q307 Q310 Q311 Q314 Q401 Q404 Q405 Q407 Q410 Q411 Q414
51	Triode	S8050C β=120-200	5	Q101 Q103 Q201 Q202 Q004
52	Triode	9014C β=200-600	4	Q003 Q102 Q117 Q204
53	Triode	9015C β=200-600	1	Q203
54	Carbon resistor	220R 1/2W Error: ±5%	4	R328 R329 R428 R429
55	Carbon resistor	10K 1/2W Error: ±5%	1	R243
56	Carbon resistor	150R 1W Error: ±5%	1	R119
57	Carbon resistor	10R 2W Error: ±5%	2	R341 R441
58	Carbon resistor	2K 2W Error: ±5%	2	R309 R310
59	Diode	1N4002	3	D107 D108 D001
60	Diode	1N5404	4	D101 D102 D103 D104
61	Wire Wound Resistor	0.22R3W Error: ±5%	4	R330 R331 R430 R431
62	Vertical Electrolytic Cap.	220uF/6V3 Error: ±20%	1	C135
63	Vertical Electrolytic Cap.	2.2uF/16V Error: ±20%	6	C201 C202 C205 C210 C217 C219
64	Vertical Electrolytic Cap.	10uF/16V Error: ±20%	11	C104 C119 C120 C221 C222 C224 C136 C311 C411 C301 C401
65	Vertical Electrolytic Cap.	22uF/16V Error: ±20%	5	C117 C118 C212 C303 C304
66	Vertical Electrolytic Cap.	10uF/35V Error: ±20%	1	C223
67	Vertical Electrolytic Cap.	1000uF/25V Error: ±20%	1	C116
68	Vertical Electrolytic Cap.	1000uF/6V3 Error: ±20%	2	C312 C412
69	Vertical Electrolytic Cap.	47uF/50V Error: ±20%	4	C305 C306 C405 C406

AMP BOARD BOM

Item	Component Name	Specification	Quantity	Disignator
70	Vertical Electrolytic Cap.	3300uF/50V Error: ±20%	4	C110 C111 C112 C113
71	AC X/Y Cap.	2KV4n7 Error: ±20%	1	C123
72	Vertical Crystal	12MHz	1	Y101
73	Transistor	2SA1941	2	Q312 Q412
74	Transistor	2SC5198	2	Q313 Q413
75	Inductance	Dia=1.0MM	2	L301 L401
76	Vertical IC	24C02B	1	U102
77	Vertical IC	CD4052BE	1	U201
78	Vertical IC	P89C52X2BN	1	U101
79	Vertical IC	JRC4580D	1	U301
80	SMT IC	PT2314	1	U202
81	Relay	12V UL Certificate	1	JZ001
82	Fuseable Switch	75°C BM-75°C 5A250V UL Certificate	1	RT002
83	RCA Jack	AV4-8.4-13	2	BNC2 BNC3
84	RCA Jack	AV6-8.4-13	1	BNC1
85	Fuse	T3.15A UL Certificate	1	FUSE1
86	Fuse holder	PTF/7/8 UL Certificate	1	FUSE1
87	Switch		1	SW001
88	Vertical connecting socket	2P 2.54pin span	1	RT001
89	Vertical connecting socket	10P 2.54pin span	1	PIN001
90	Vertical connecting socket	4P 3.96pin span	1	PIN3
91	Vertical connecting socket	3P 2.54pin span	1	PIN4
92	Vertical connecting socket	3P 3.96pin span	3	PIN5 PIN6 PIN7
93	Vertical connecting socket	14P2.0 pin span	1	PIN1
94	flat array	8*3.2*1(mm) black nickel plating	4	To fix the transistor
95	Curved array	F 3.2mm black nickel plating	4	To fix the transistor
96		L24*W20(mm)	4	To fix the transistor
97	B head rough self-tappin	BTB3*6-Hoj	4	To fix the AMP Board and main heatsink
98	B head rough self-tappin	BTB3*10-Hoj	4	To fix the transistor
99	B head trigonodont	STB3*6-Hoj black nickel plating	2	To fix the AMP Board
101	CPU jack	DIP40 [DIP40]	1	
102	Heatsink	oxide black	1	
103	Single line	22#	2	J1 J2
104	Wiring harness	2P3.96 L=250mm, single socket/ drop-out line 18# red	1	PIN7
105	Single-faced PCB	SN:P1-MAP-101.AMP225080A3	1	281*159*1.6mm double-faced Green and With white graphics

DISPLAY BOARD BOM

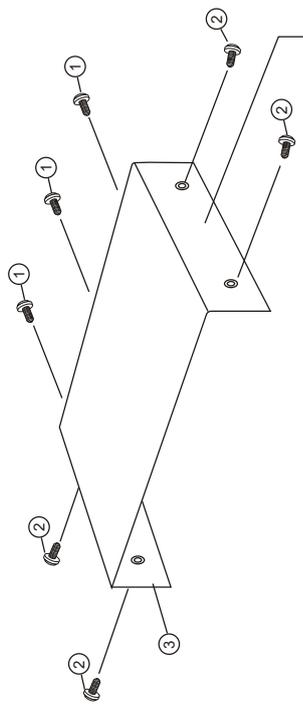
Item	Component Name	Specification	Quantity	Disignator
1	Jump Wire	7.5mm	5	J014 J015 J016 J007 J011
2	Jump Wire	10mm	4	J004 J005 J006 J008
3	Jump Wire	12.5mm	1	J012
4	Jump Wire	15mm	4	J001 J002 J003 J010
5	Jump Wire	5mm	2	J013 J017
6	Carbon resistor	22R 1/8W Error:±5%	1	R114
7	Carbon resistor	100R 1/8W Error:±5%	2	R115 RG1
8	Carbon resistor	2K 1/8W Error:±5%	13	R107 R108 R109 R110 R111 R112 R117 R118 R119 R120 R121 R122 R123
9	Carbon resistor	4K7 1/8W Error:±5%	6	R100 R101 R102 R103 R105 R124
10	Carbon resistor	6K8 1/8W Error:±5%	1	R112
11	Carbon resistor	10K 1/8W Error:±5%	3	R104 R106 R125
12	Carbon resistor	15K 1/8W Error:±5%	1	R113
13	Ceramic resistor	101 50V Error:±20%	1	C102
14	Ceramic resistor	104 50V Error:+80%-20%	2	CG1 C101
15	Electrolyte Capacitor	10uF 16V Error:±20%	2	C100 C103
16	Diode	1N4148	5	D101 D102 D103 D104 D105
17	Triode	S9015-C β=200-600	3	Q101 Q102 Q103
18	Buttons	6 * 6 *12	5	SK100 SK101 SK102 SK103 SK104
19	F 2 LED	F = 2mm Bule round head	7	LED1 LED2 LED3 LED4 LED5 LED6 LED7
20	Double 8 digital tube		1	LCD1
21	Encoder	24 digit floral axis 20mm Equipped with galvanized tray	1	SW100
22	Vertical IC	CD4094B	1	U1
23	LED isolated pole	F =5 L=12mm	7	LED1 LED2 LED3 LED4 LED5 LED6 LED7
24	IR sensor		1	RMT1
25	Double-faced Sponge adhensive tray	10*7*5mm	1	placed at the bottom of receiver
26	Double-faced Sponge adhensive tray	15*7*5mm	1	Placed at the bottom of LED
27	Wiring harness	14P2.0 L=400mm single socket/ drop-out line 26# Black	1	PIN1
28	Single-layer PCB	P1-MAP-101.DISP720180A4	1	207*65*1.6mm double-faced Green and With white graphics

PHONE Board BOM

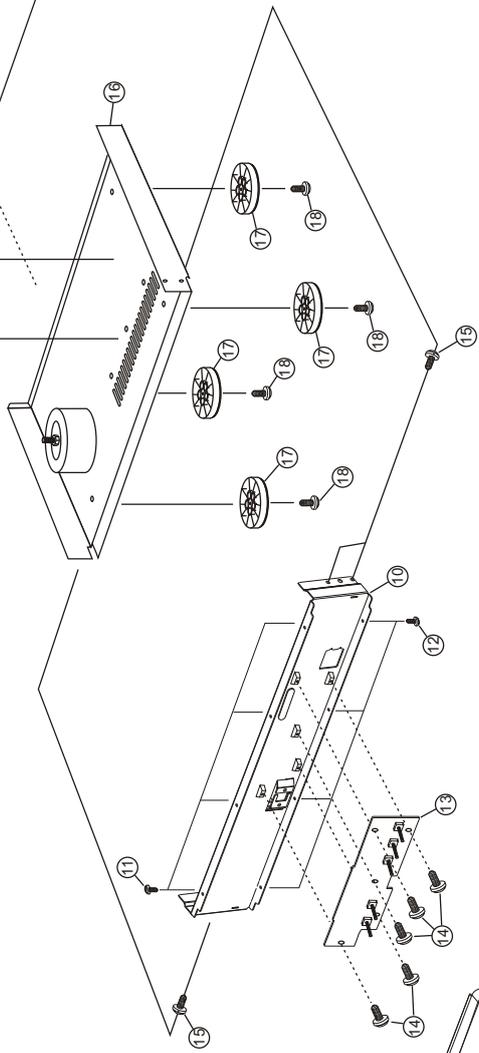
Item	Component Name	Specification	Quantity	Disignator
1	Jump Wire	5mm	2	J001 J004
2	Jump Wire	7.5mm	1	J002
3	Carbon resistor	47R 1/4W Error:±5%	2	R003 R004
4	Carbon resistor	470R 3W Error:±5%	2	R001 R006
5	Terylene Capacitor	CL21X-50V±5%-102	2	C001 C002
6	6.35mm MIC Jack	9 pin Gold Mouth ≤ 10.4mm Equipped with galvanized	1	MIC1
7	Wiring harness	10P2.54 L=450mm single socket/ drop-out line 22#	1	PIN001
8	Wiring harness	2P3.96 L=250mm, double socket/ drop-out line 18# red	1	CON1
9	Power switch	5A/80A/AC250V	1	SW1
10	Single-layer PCB	SN:P1-MAP-101.PINMIC225080A2	1/6	116.6*109.7*1.6mm double-faced Green and With white graphics

EXPLODED VIEW

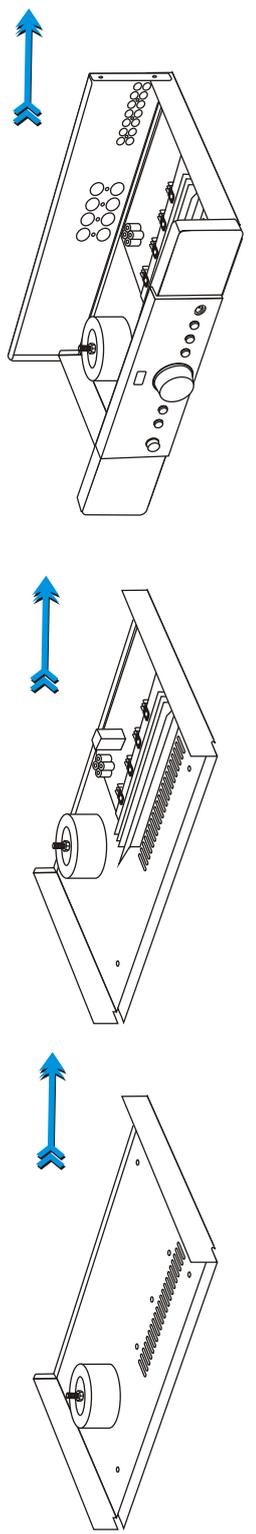
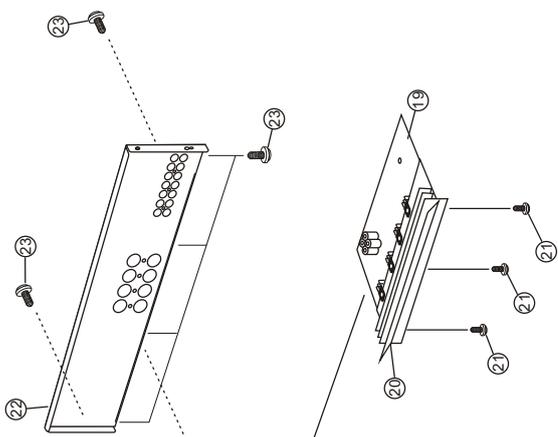
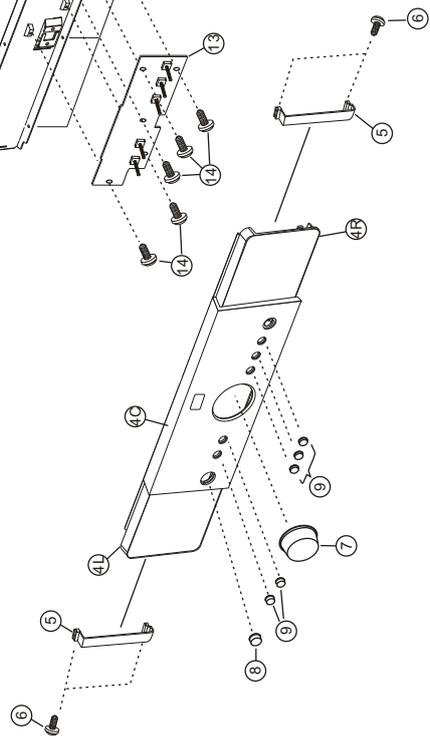
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2



4



Components list of exploded view

Item	Component Name	Specification	Quantity
1	Countersunk self-tapping trigonodont	black nickel plating STB4*8-Hoj	4
2	B head self-tapping trigonodont	black nickel plating BTB3*6-Hoj	4
3	Top cover	black	1
4L	Left panel	black	1
4R	Right panel	black	1
4C	Middle panel	black	1
5	Side bar	Aluminum:AIVIN060306-026 black	2
6	B head self-tapping trigonodont	black nickel plating BTB3*6-Hoj	4
7	43MM Knob	black	1
8	14MM button cap	black	1
9	8MM round button cap	black	5
10	Sub panel	0.8MM black	1
11	B head trigonodont	black nickel plating STB3*6-Hoj	3
12	B head trigonodont	black nickel plating STB3*6-Hoj	3
13	Display board		1
14	B head trigonodont	black nickel plating STB3*6-Hoj	5
15	B head trigonodont	black nickel plating STB3*6-Hoj	4
16	Bottom	0.8MM(Cool-grey)	1
17	Feet	58×12mm	4
18	Gimlet point self-tapping trigonodont	black nickel plating BTPW3*8-Hoj	4
19	AMP BOARD		1
20	Seat sink		1
21	Gimlet point self-tapping trigonodont	black nickel plating BTPW3*8-Hoj	3
22	Rear pannel		1
23	B head trigonodont	black nickel plating STB3*6-Hoj	3

