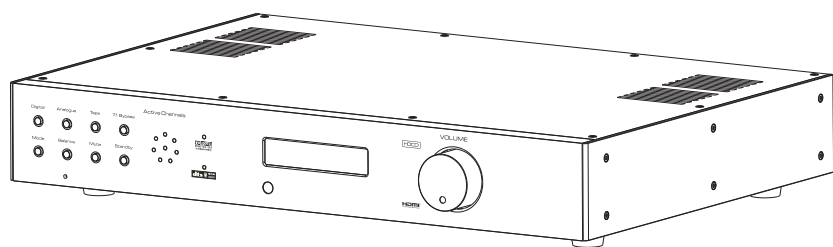


Service Manual

E l e c t r o n i c s

8200AP



1. Introduction	1
2. Specification	2
3. Assembly Sketch	3-4
4. Schematic Diagram	5-19
5. Wiring Diagram	20
6. Silkscreen of Top/Bottom	21-25
7. Maintenance Alignment Procedure	26
8. Assembly Parts List	27-28
9. Electronic Parts List	29-34
10. Product Version Deviation	35-36

INTRODUCTION

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

8200AP-Specification and Features-P1/1

Digital Inputs

Frequency Response	20Hz–20kHz (± 0.2 dB), 5Hz–75kHz (± 3 dB)
THD+N	less than 0.002% ⁽¹⁾
Signal to Noise	> 103dB
Dynamic Range	> 103dB

Analogue Inputs (DSP)

Input Sensitivity	0dBu (775mV) , Max 3.5V ⁽²⁾
Frequency Response	20Hz–20kHz (± 0.2 dB), 5Hz–24kHz (± 3 dB)
THD+N	less than 0.003% ⁽³⁾
Signal to Noise	> 98dB ⁽³⁾
Dynamic Range	> 100dB ⁽⁴⁾

Analogue Inputs (Direct)

Input Sensitivity	0dBu (775mV) , Max 3.5V ⁽²⁾
Frequency Response	20Hz–20kHz (± 0.2 dB), 5Hz–100kHz (± 3 dB)
THD+N	less than 0.001% ⁽³⁾
Signal to Noise	> 110dB
Dynamic Range	> 110dB

7.1-channel Bypass Inputs

Input Sensitivity	0dBu (775mV) , Max 3.5V ⁽²⁾
Frequency Response	20Hz–20kHz (± 0.2 dB), 5Hz– 100kHz (± 3 dB)
THD+N	less than 0.001% ⁽³⁾
Signal to Noise	> 110dB
Dynamic Range	> 110dB

Analogue Outputs

Output Level	0dBu (775mV), Max 3.5V
Volume Control	-90dB to +15dB in 1dB steps
Channel Balance	Better than ± 0.1 dB

Video Outputs

HDMI	HDMI 1.4a, Max res. 1080p/60Hz, 36bit Deep Colour, 3D pass through
OSD	1.5Vp-p, 75 ohm, PAL or NTSC

Power Supply

Mains Voltage	230VAC +/- 10%
Power consumption	15W, (< 2W in Standby)

Weight

	5.0 Kg (Net)
	6.8Kg (Gross)

(note) All Voltage levels are in Volts rms. unless otherwise stated.

(note 1) 0dBFS @ 1KHz, 16bit, Fs=44.1KHz, BW = 20Hz - 20KHz

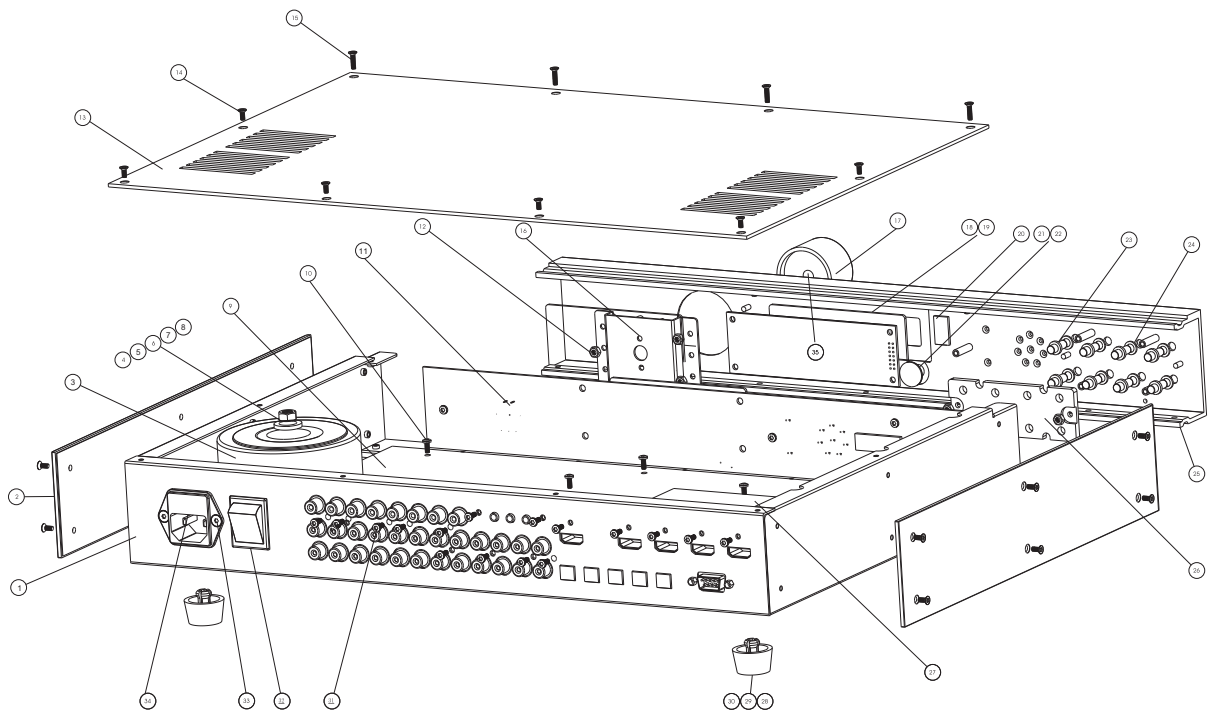
(note 2) Input to Output has a gain of 1 (0dB) when Volume control is set to 0dB

(note 3) $V_{in} = 2V_{rms}$ @ 1KHz, BW = 20Hz - 20KHz

(note 4) $V_{in} = 2.5V_{rms}$ @ 1KHz, BW = 20Hz - 20KHz

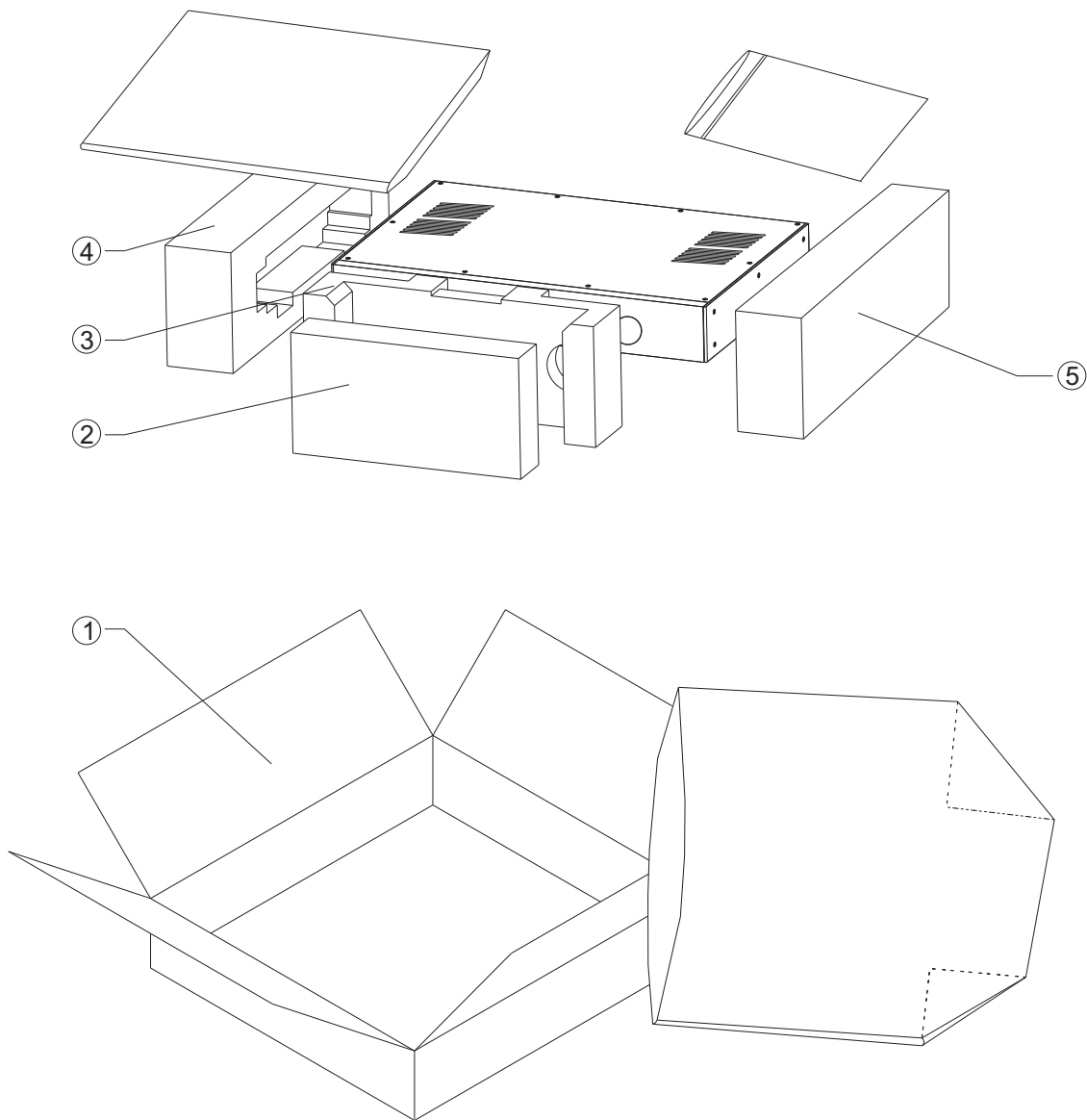
ASSEMBLY SKETCH

8200AP-Product Exploded Drawing-P1/1



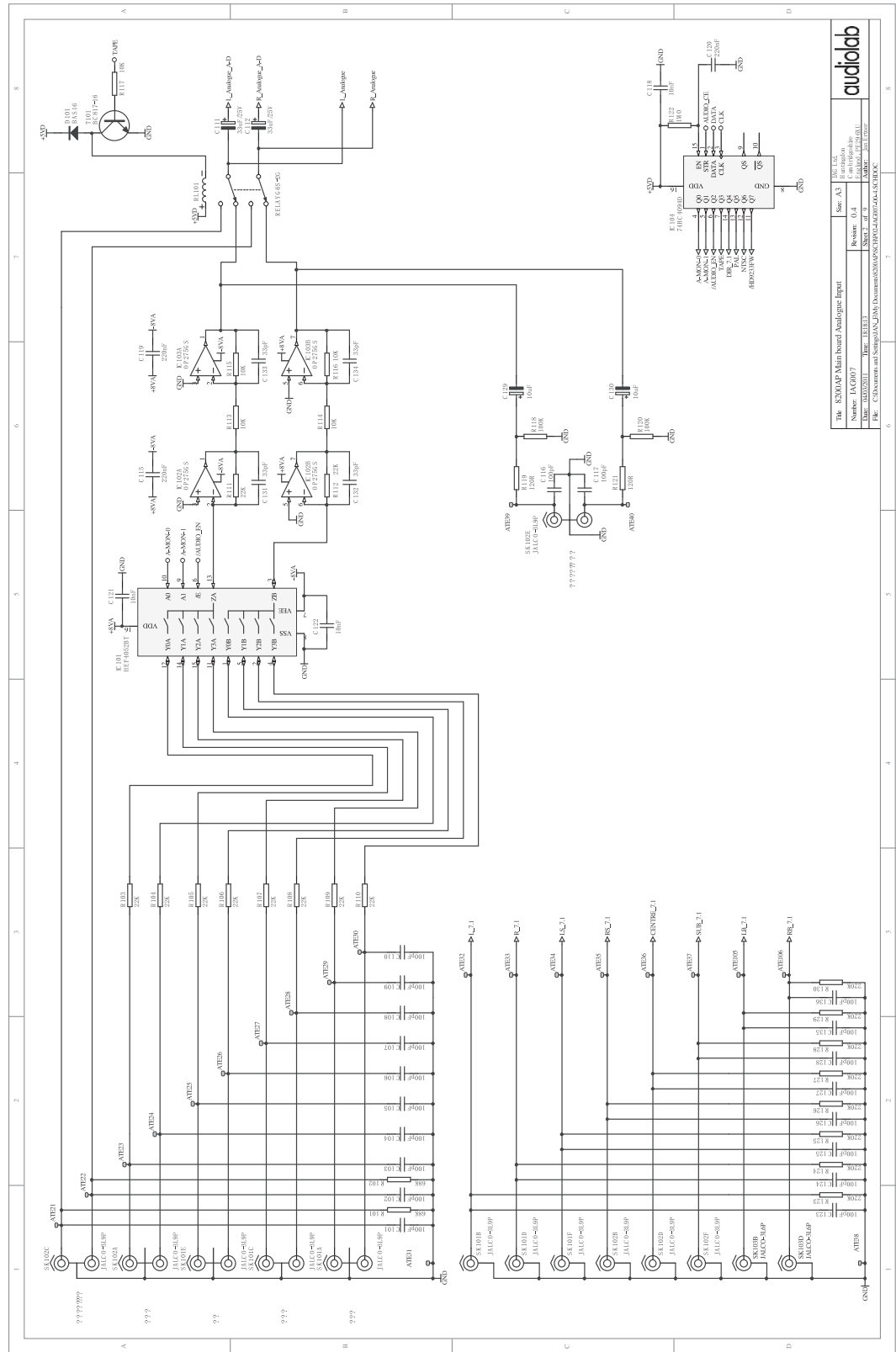
ASSEMBLY SKETCH

8200AP-Packing Exploded Drawing-P1/1



SCHEMATIC DIAGRAM

8200AP-Main Board-P1/8

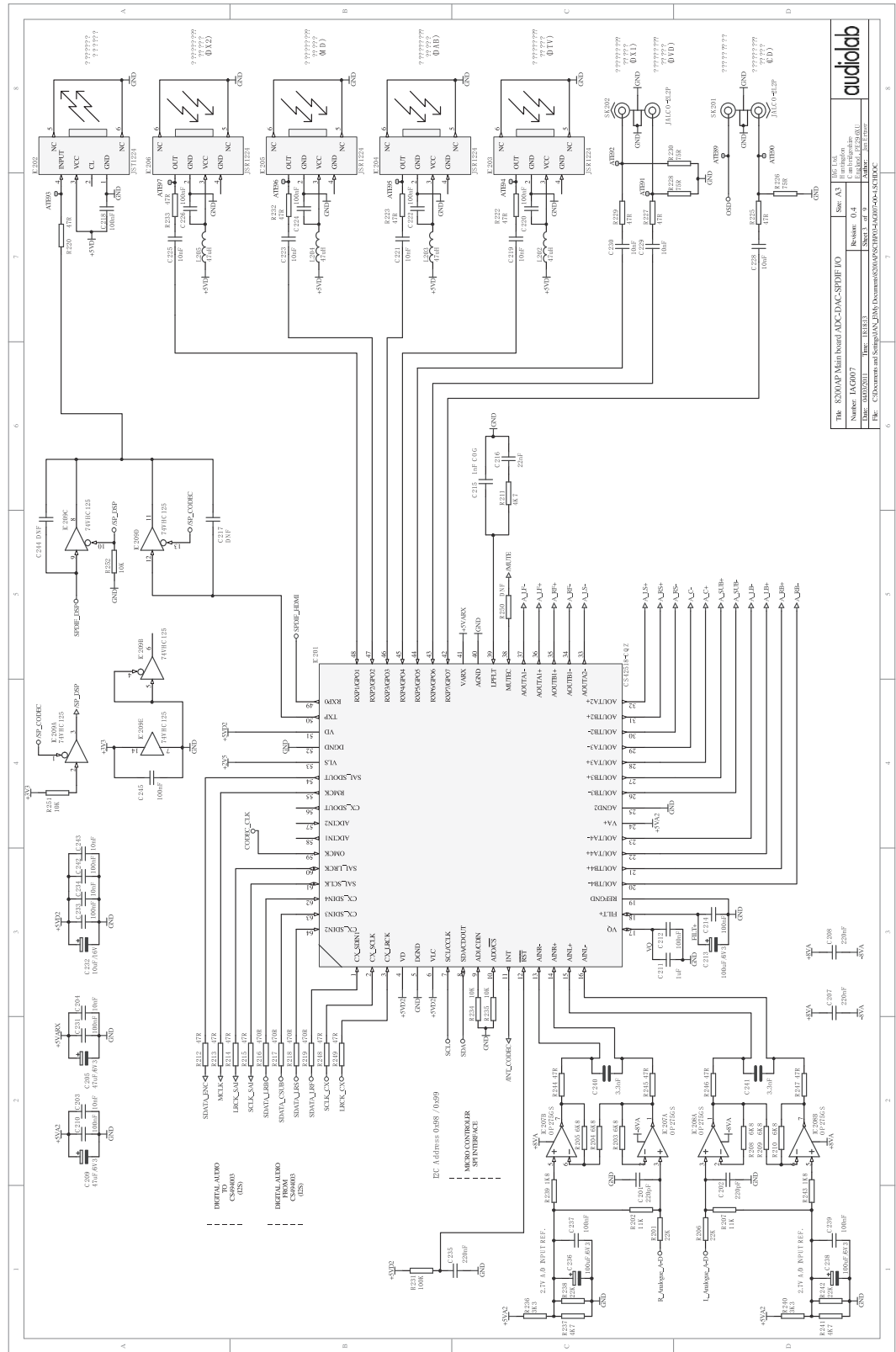


Title: 8200AP-Main board Audio Input		Rev: 1.3
Number: 82007	Scale: 0:1	Author: J. P. B. J.
Date: 01-03-03	Drawn: J. P. B. J.	Checked: J. P. B. J.
File: C:\Users\m\Documents\8200AP-Main Board Audio Input-SCH.DOC		Sheet: 25/25

audiolab

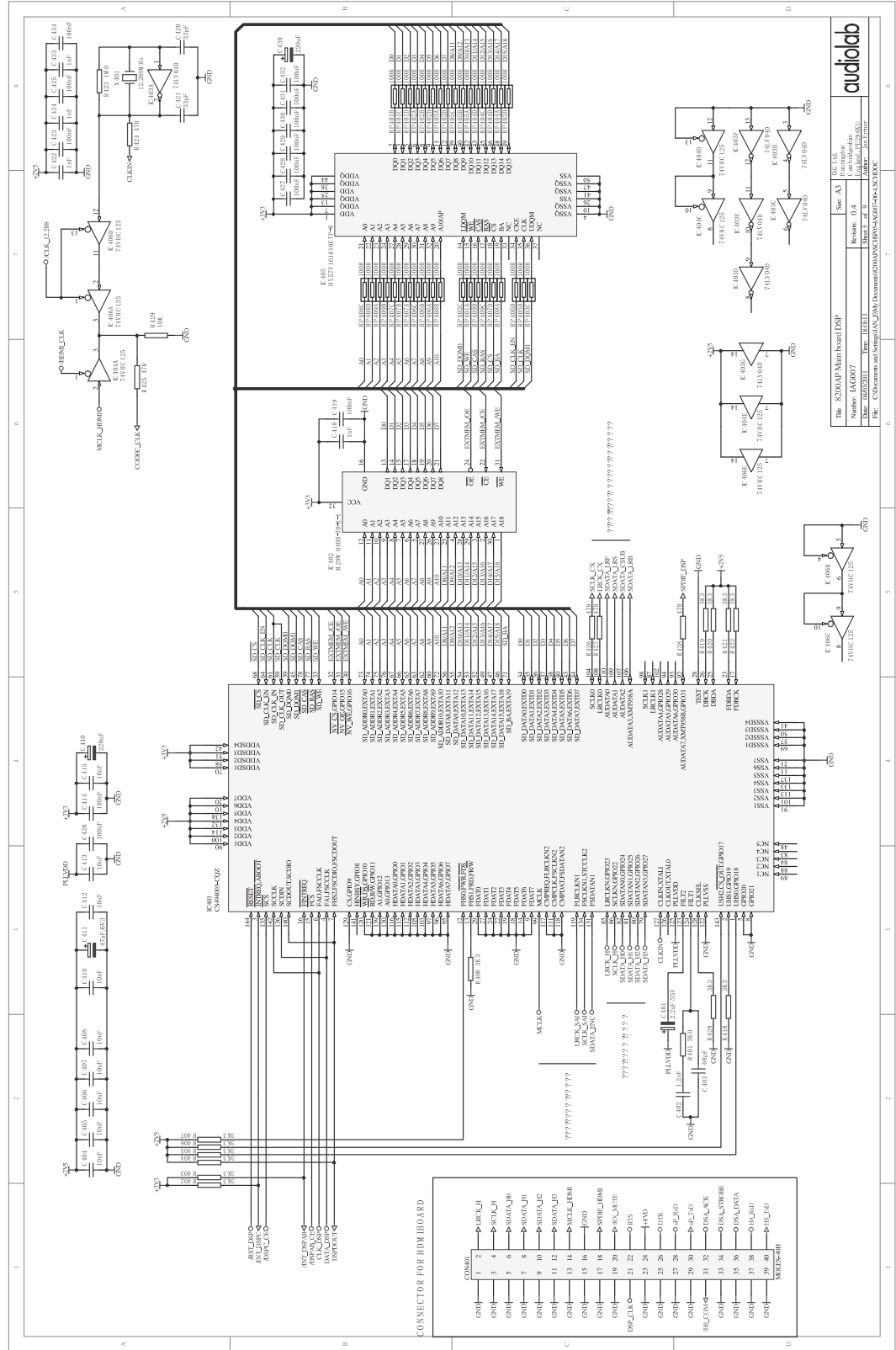
SCHEMATIC DIAGRAM

8200AP-Main Board-P2/8



SCHEMATIC DIAGRAM

8200AP-Main Board-P4/8



8200AP Main board DSP
 Rev: A3
 Release: 0.4
 Date: 03/03/03
 File: C:\Documents and Settings\ADMIN\My Documents\8200AP\8200AP-P4-8-SCHEM.DOC

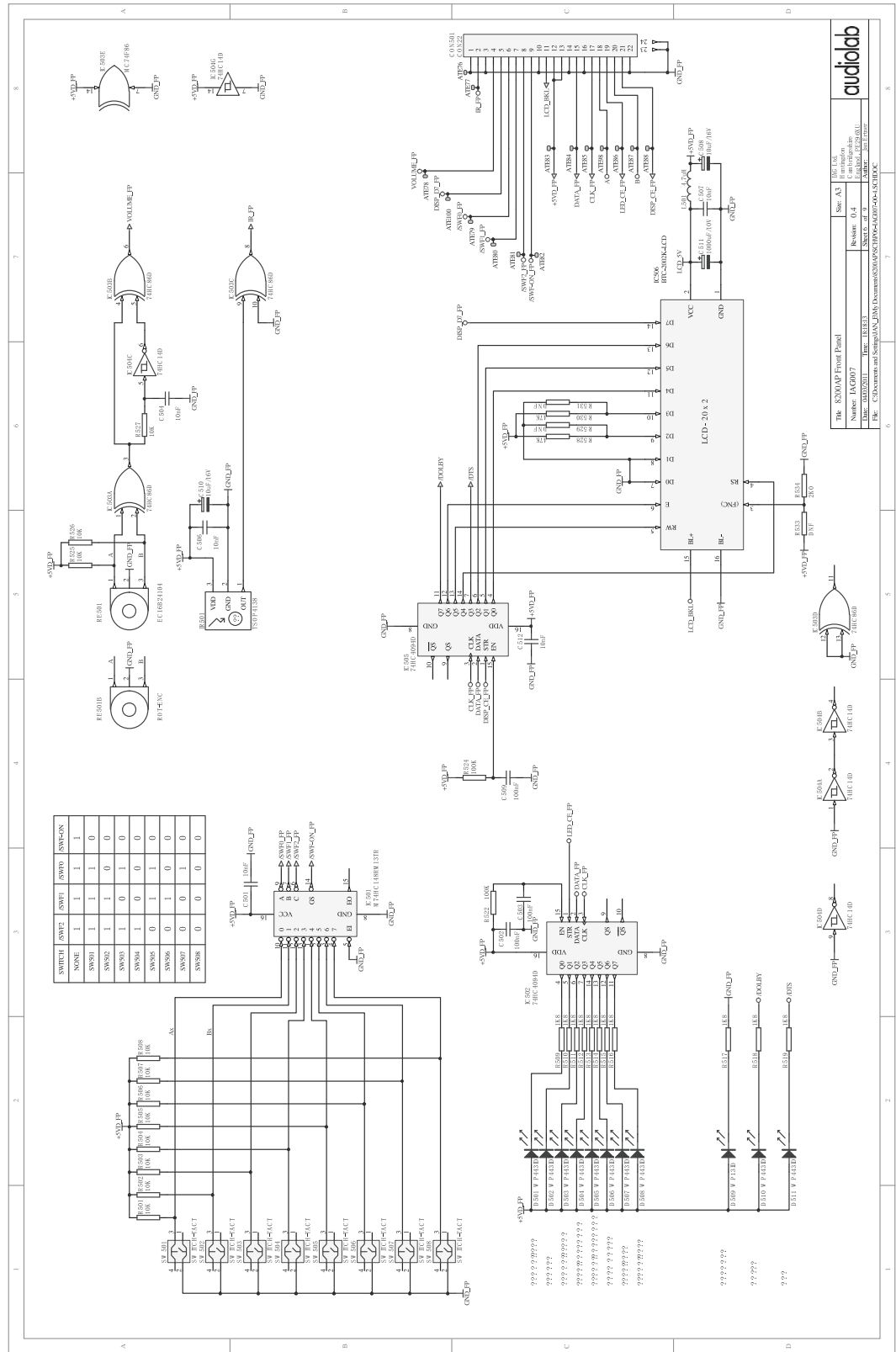
WT, LIA
 8200AP Main board DSP
 Rev: A3
 Release: 0.4
 Date: 03/03/03
 File: C:\Documents and Settings\ADMIN\My Documents\8200AP\8200AP-P4-8-SCHEM.DOC

WT, LIA
 8200AP Main board DSP
 Rev: A3
 Release: 0.4
 Date: 03/03/03
 File: C:\Documents and Settings\ADMIN\My Documents\8200AP\8200AP-P4-8-SCHEM.DOC

WT, LIA
 8200AP Main board DSP
 Rev: A3
 Release: 0.4
 Date: 03/03/03
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SCHEMATIC DIAGRAM

8200AP-Main Board-P5/8

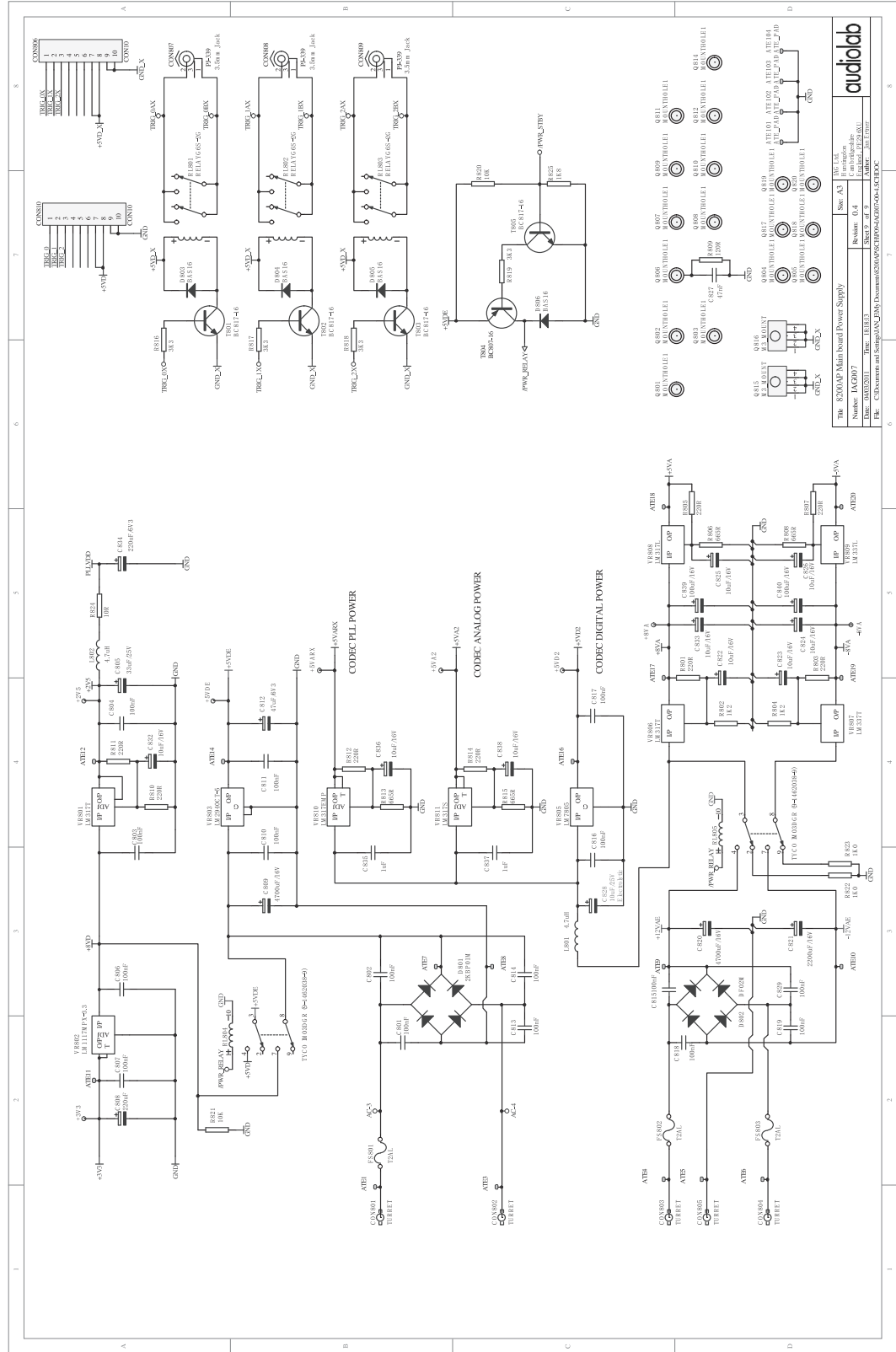


Rev. 1.0
 Date: 01.12.2000
 Drawn: S. K. S. (S. K. S.)
 Checked: S. K. S. (S. K. S.)
 Approved: S. K. S. (S. K. S.)
 File: C:\Documents and Settings\ADMINISTRATOR\My Documents\8200AP\8200AP-P5-8.SCH

audiobbb

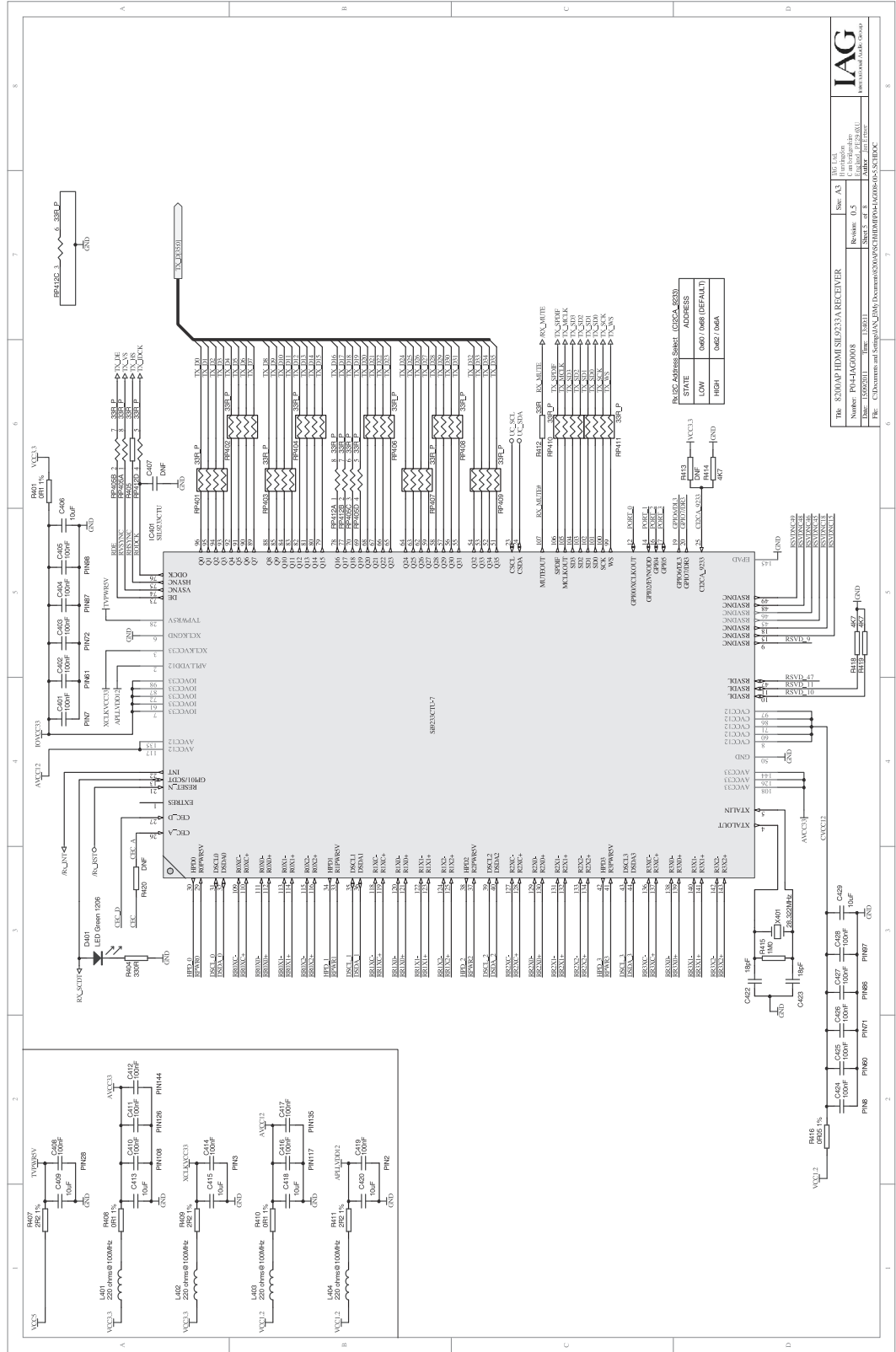
SCHEMATIC DIAGRAM

8200AP-Main Board-P7/8



SCHEMATIC DIAGRAM

8200AP-HDMI Borad-P4/7



STATE	LOW	HIGH
ADDRESS	0x00 (DEFAULT)	0x02 (0x0A)

IC: BR20000

Rev: A1

Rev: B.5

Rev: C.0

Rev: D.0

Rev: E.0

Rev: F.0

Rev: G.0

Rev: H.0

Rev: I.0

Rev: J.0

Rev: K.0

Rev: L.0

Rev: M.0

Rev: N.0

Rev: O.0

Rev: P.0

Rev: Q.0

Rev: R.0

Rev: S.0

Rev: T.0

Rev: U.0

Rev: V.0

Rev: W.0

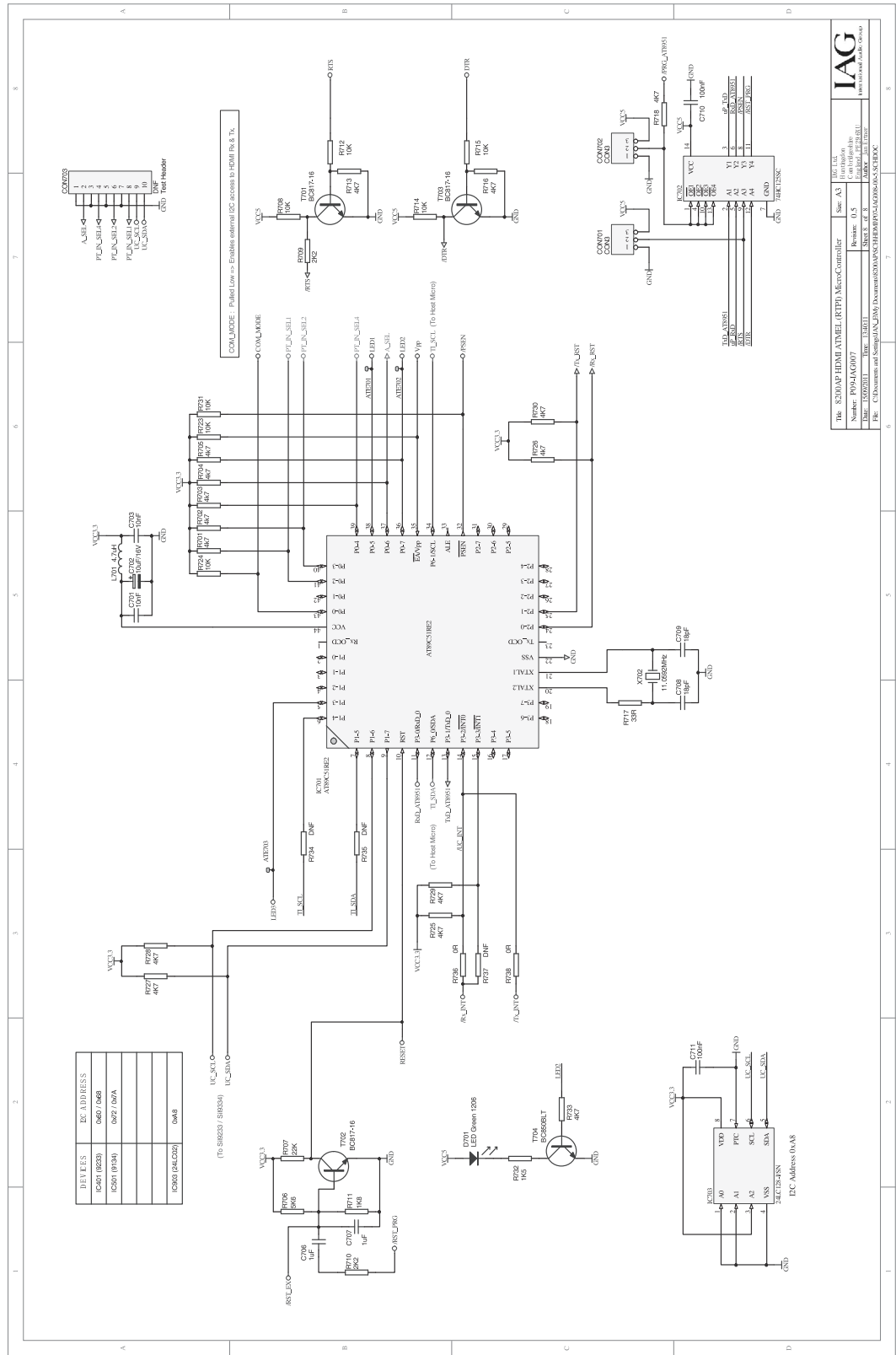
Rev: X.0

Rev: Y.0

Rev: Z.0

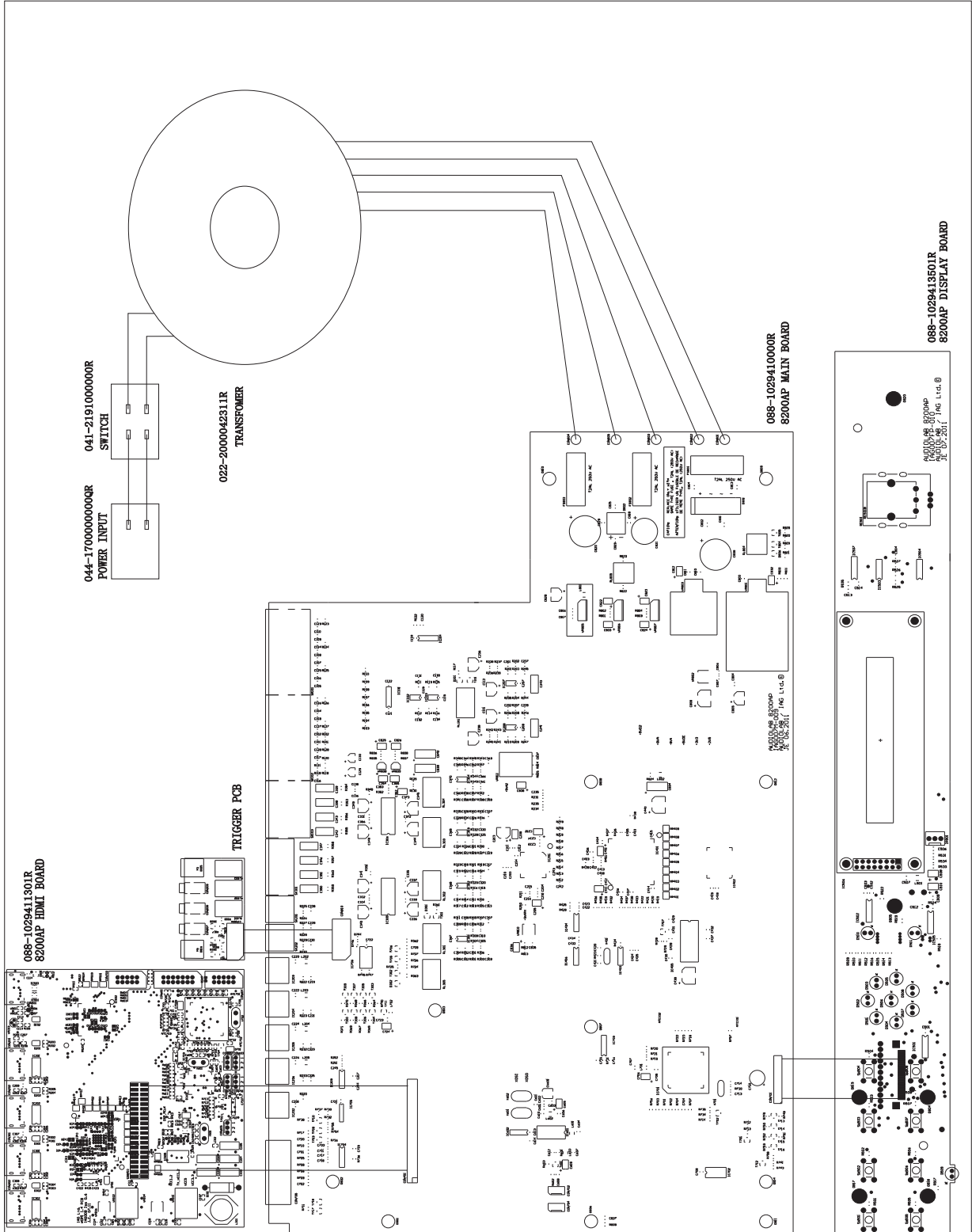
SCHEMATIC DIAGRAM

8200AP-HDMI Borad-P7/7



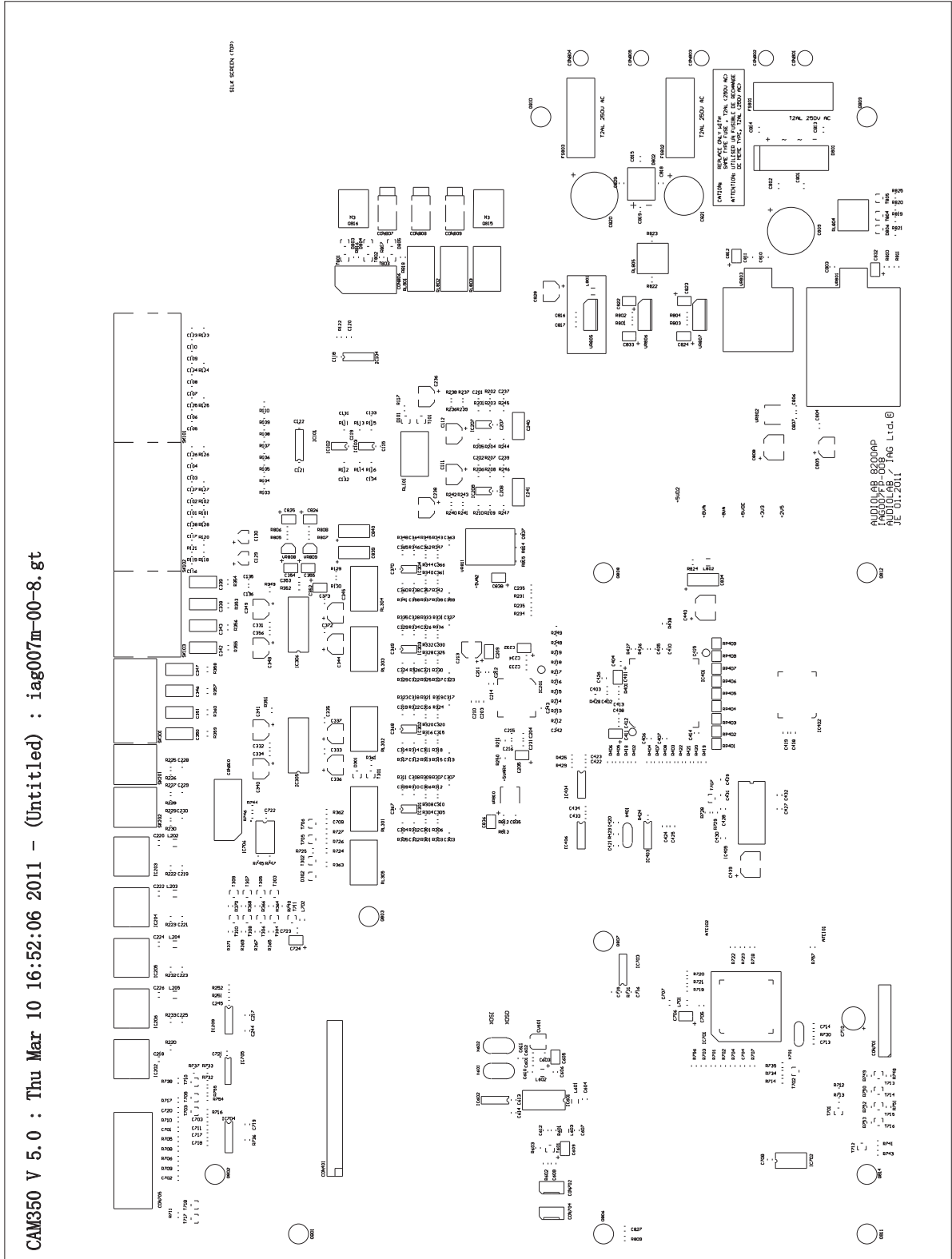
WIRING DIAGRAM

8200AP-Wiring Diagram-P1/1



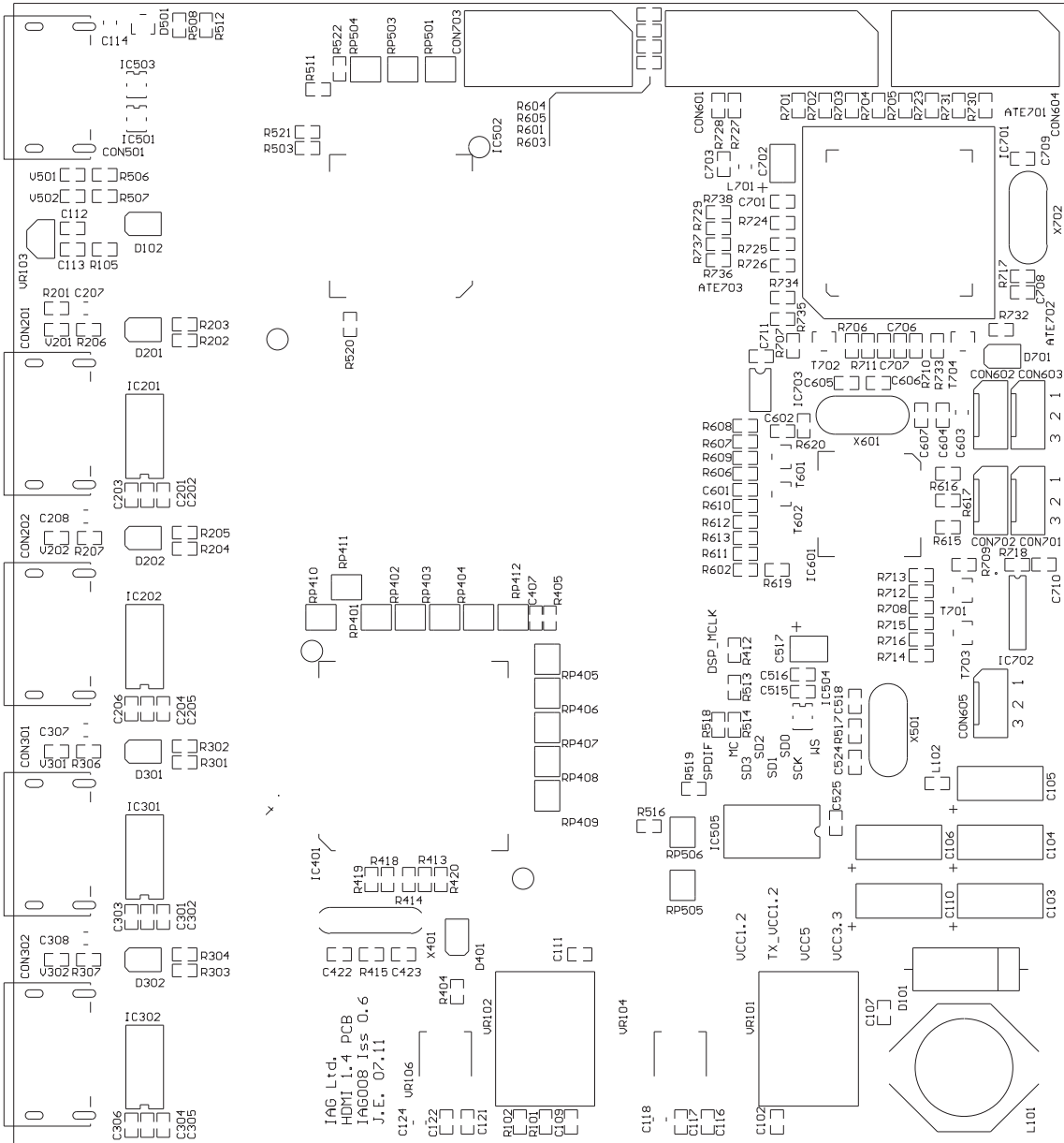
SILKSCREEN OF TOP/BOTTOM

8200AP-Main Board-Top-Silkscreen-P1/1



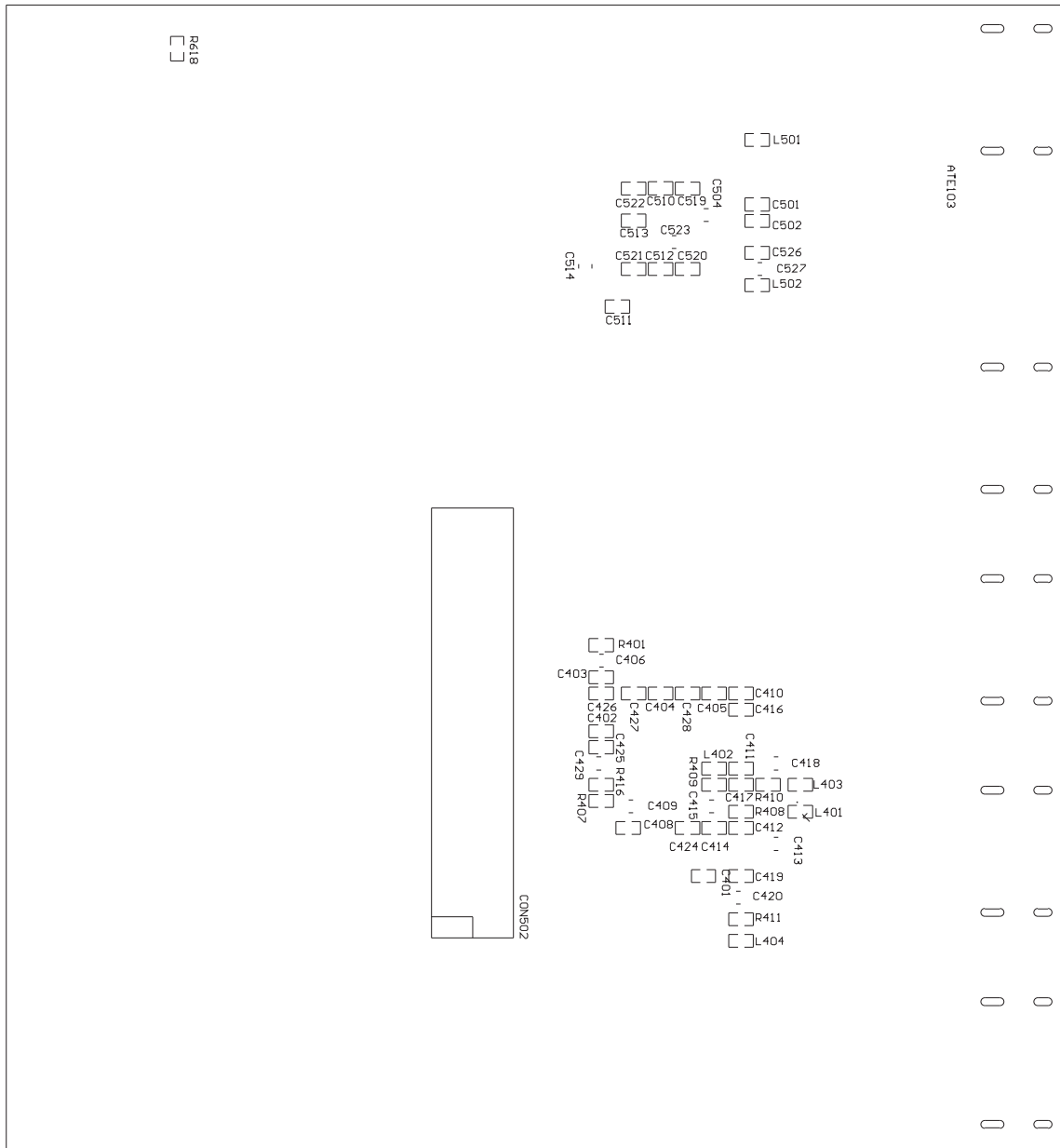
SILKSCREEN OF TOP / BOTTOM

8200AP-HDMI Board-Top-Silkscreen-P1/1




SILKSCREEN OF TOP / BOTTOM

8200AP-HDMI Board-Bottom-Silkscreen-P1/1



MAINTENANCE ALIGNMENT PROCEDURE

8200AP-Ageing Test Step-P1/1

Connection and Settings	Equipment and Tools								
<p>1) set the unit on the test bench</p> <p>2) Adjust the variac to the unit's rated voltage according to the table below .</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="padding: 2px;">Unit rated voltage</th> <th style="padding: 2px;">variac voltage</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">AC220,230V</td> <td style="padding: 2px;">AC240V</td> </tr> <tr> <td style="padding: 2px;">AC110V</td> <td style="padding: 2px;">AC120V</td> </tr> <tr> <td style="padding: 2px;">AC100V</td> <td style="padding: 2px;">AC110V</td> </tr> </tbody> </table> <p>3) Connect the signal generator's 2V 1KHz sine wave output to "VCR" input</p>	Unit rated voltage	variac voltage	AC220,230V	AC240V	AC110V	AC120V	AC100V	AC110V	<p>Singnal Generator Variac Multimeter</p>
Unit rated voltage	variac voltage								
AC220,230V	AC240V								
AC110V	AC120V								
AC100V	AC110V								
<p>Aging Test</p> <p>1) Connect the unit to the adjusted voltage, switch on the unit and press the standby button</p> <p>2) Choose the "VCR" input channel</p> <p>3) Turn the volume knob to make the unit output +15dB</p> <p>4) Make sure the unit has output</p> <p>5) With the condition above ,age the unit for two hours</p> <p>6) switch off the unit if no fault is found</p>									
<p>Notes:</p> <p>1) During the aging, check whether the AC power supply is right as pointed in the table above every half an hour.</p> <p>2) During the aging, no smoke , electrolytic capacitor cracking , resistor broken , and no output etc, if there is ,switch off the unit at once and record the fault ,after fixing the problem, keep aging and make sure the aging time is enough.</p>									

ASSEMBLY PARTS LIST

8200AP-Packing Parts List-P1/1

No.	P/N	PART NAME	DESCRIPTION	QTY	UNIT
1	401-1020410000R	Carton	1C+1C 297*210, inside pages: 128G	1	PCS
2	409-1377000002R	Carton	K-K, inside dimension: 270*140*52MM	1	PCS
3	401-1020410001R	PE Foam	For remote control	1	PCS
4	401-1027410000-2R	PE Foam (left)	white foam 455*140*78mm	1	PCS
5	401-1027410001-2R	PE Foam (right)	white foam 455*140*78mm	1	PCS

ELECTRONIC PARTS LIST

8200AP-Electronic Bom-P1/5

No.	LEVEL	P/N	PART NAME	DESCRIPTION	QTY	UNIT	LOCATION
1	1	088-1029410000R	8200AP Main Board	8200AP main board PCB with components	1	PCS	
2	2	014-3320100028R	Capacitor	MKS2 3.3nF 100V 5%	2	PCS	C240 C241
3	2	013-8220210505R	Capacitor	8200P 5% 63V WIMA PH5MM	8	PCS	C338 C339 C342 C343 C346 C347 C350 C351
4	2	006-2211122473R	Capacitor	220µF/63V 105°C	1	PCS	C710
5	2	006-2224203033QR	Capacitor	2200U 20% 16V RE2-F	1	PCS	C821
6	2	059-1200001113R	Crystal	HC-49S 12MHz	1	PCS	X701
7	2	059-1228806117QR	Crystal	CRYSTAL12.288MHZ	1	PCS	X401
8	2	059-1431818000QR	Crystal	CRYSTAL 14.318180MHZ HC49 3195	1	PCS	X602
9	2	059-1773447000QR	Crystal	CRYSTAL 17.73447MHZ HC49 3298	1	PCS	X601
10	2	323-1117000331R	Crystal Pad	4.4*10.8*1.0	4	PCS	
11	2	034-3442000108R	Rectifier	DF02M	1	PCS	D802
12	2	034-1111000406R	Rectifier	KBU4B-E4/51 VISHAY	1	PCS	D801
13	2	017-9000000000R	IC	24LC16B DIP8 Microchip	1	PCS	IC702
14	2	017-1760000000R	IC	LM2940CT-5.0/NOPB NS	1	PCS	VR803
15	2	017-7500000000R	IC	L7805CV +5v TO220 ST	1	PCS	VR805
16	2	017-0240000000R	IC	LM317LZ/NOPB TO-92 NS	1	PCS	VR808
17	2	017-1380000000R	IC	LM317T(1.5A) TO-220 (ST)	2	PCS	VR801 VR806
18	2	017-0350000000R	IC	LM337LZ TO-92 NS	1	PCS	VR809
19	2	017-1390000000R	IC	LM337T(1.5A) TO-220 Fairchild	1	PCS	VR807
20	2	044-6250000000R	Optical Receiver	JSR1124 Solteam	4	PCS	IC203 IC204 IC205 IC206
21	2	044-6260000000R	Optical Transmitter	JST1124 Solteam	1	PCS	IC202
22	2	051-6500000000R	Connector	2pin red/whiteYKC21-4122V JALCO	2	PCS	SK201 SK202
23	2	051-6800000000R	Socket	YK21-3885V 4pin red/white	1	PCS	SK301
24	2	057-2541021031R	Single Pin	3P M20-9990305 HARWIN	2	PCS	CON702 CON704
25	2	056-4110221144R	Socket	10-PIN 2.54mm	2	PCS	CON806 CON810
26	2	044-3340000000R	FVN Socket	22pin pitch=1mm L=24mm H=5.1mm	1	PCS	CON701
27	2	044-2550000000R	Socket	9pin D kind	1	PCS	CON705
28	2	057-2542022401R	Pin	2*20pin pitch=2.54mm H=20mm	1	PCS	CON401
29	2	044-6540000000R	Socket	PJ-339-EP	3	PCS	CON807 CON808 CON809
30	2	031-2200507121HR	Fuse	T2A/250V 213 5*20MM LITTELFUSE	3	PCS	FS801 FS802 FS803
31	2	086-1500000000R	Connector	H2071Z01	5	PCS	CON801 CON802 CON803 CON804 CON805
32	2	349-1006000011R	Connector	PCB-2	2	PCS	Q815 Q816
33	2	306-1403000000R	Heatsink	black	1	PCS	HS801
34	2	306-1119000002R	Heatsink	TV5	1	PCS	HS803
35	2	306-1398000000R	Heatsink	17.5*12*13.5mm	1	PCS	HS805
36	2	055-4322005555R	FFC	1.0-22P-50MM(A)	1	PCS	CABLE102
37	2	006-4724162533HR	Capacitor	4700UF 16V 20% PANASONIC 16*25MM 85C pitch=7.5MM ECA1CM472	2	PCS	C809.C820
38	2	050-0100070211R	Fuse Holder	FUC-2	6	PCS	FS801, FS802, FS803
39	2	051-7000000003R	Socket	9pin black/white/red CHUNSHENG	2	PCS	SK101,SK102
40	2	051-6900000003R	Socket	6pin black/white/red CHUNSHENG	1	PCS	SK103
41	2	088-1029410001R	8200AP Main Board	8200AP main board with paster	1	PCS	
42	3	053-1029410000R	8200AP Main Board	FR4 4 layers 1 ounce 1.6MM blue	1	PCS	
43	3	007-1000052160R	Capacitor	10PF?% 50V 0805 GOG(NPO) smd	1	PCS	C611
44	3	007-1500052060R	Capacitor	15PF 50V 5% NPO 0805 smd	1	PCS	C601
45	3	007-2700052060QR	Capacitor	27P 5% NPO SMD smd	1	PCS	C603
46	3	007-3300052060R	Capacitor	33pF 50V NPO 5% 0805 smd	8	PCS	C131 C132 C133 C134 C420 C421 C713 C714
47	3	007-6800052060R	Capacitor	68pF/50V 5% X7R 0805	1	PCS	C403
48	3	007-1001052060R	Capacitor	100PF50V 5% NPO 0805	25	PCS	C101 C102 C103 C104 C105 C106 C107 C108 C109 C110 C116 C117 C123 C124 C125 C126 C127 C128 C135 C136
49	3	007-2201052060QR	Capacitor	220P/50V 5% smd	2	PCS	C201 C202
50	3	007-2701052060R	Capacitor	270P 50V 5% 0805	16	PCS	C304 C305 C309 C310 C314 C315 C319 C320 C324 C325 C329 C330 C360 C361 C365 C366

ELECTRONIC PARTS LIST

8200AP-Electronic Bom-P2/5

No.	LEVEL	P/N	PART NAME	DESCRIPTION	QTY	UNIT	LOCATION
51	3	007-4701052060QR	Capacitor	470PF 50V 5% NPO	24	PCS	C301 C302 C303 C306 C307 C308 C311 C312 C313 C316 C317 C318 C321 C322 C323
52	3	007-1002052060QR	Capacitor	1nF 50V 5% 0805	5	PCS	C215 C418 C422 C424 C433
53	3	007-1202062070R	Capacitor	1.2NF/50V 0805 10%	1	PCS	C402
54	3	007-1002052050R	Capacitor	10nF/50V 5% X7R 0805	28	PCS	C118 C121 C122 C203 C204 C219 C221 C223 C225 C228 C229 C230 C234 C243 C404 C405 C406 C407 C408 C410
55	3	007-2203052060QR	Capacitor	22nF 50V 10% 0805	1	PCS	C216
56	3	007-4703052060QR	Capacitor	47nF 50V 10% 0805	1	PCS	C827
57	3	007-1004052060R	Capacitor	100nF 50V 5% 0805	54	PCS	C210 C212 C214 C218 C220 C222 C224 C226 C231 C233 C237 C239 C242 C245 C331 C332 C333 C334 C335 C356
58	3	007-2204062060R	Capacitor	220nF 50V 10% 0805	14	PCS	C115 C119 C120 C207 C208 C235 C353 C367 C368 C369 C370 C604 C606 C716
59	3	007-1005062090R	Capacitor	1UF/25V 0805 10%	10	PCS	C211 C610 C703 C704 C709 C711 C717 C718 C835 C837
60	3	010-2242001000R	Capacitor	2.2uF/20V 10% TANT-B	1	PCS	C401
61	3	007-1006062060R	Capacitor	10uF VS Series CAPSMD4.0	2	PCS	C129 C130
62	3	010-1062502050QR	Capacitor	10UJ/25V 20%B	17	PCS	C232 C352 C354 C355 C605 C609 C706 C724 C822 C823 C824 C825 C826 C832 C833 C836 C838
63	3	010-2200632220R	Capacitor	220uF 6.3V 20% case D	1	PCS	C834
64	3	007-3306062040R	Capacitor	33uF/25V VS Series CAPSMD6.3	11	PCS	C111 C112 C336 C337 C340 C341 C344 C345 C348 C349 C805
65	3	010-4706063100R	Capacitor	47uF/6V3 10% TANT-BX	4	PCS	C205 C209 C411 C812
66	3	007-1007062010R	Capacitor	100uF/6V3 VS Series CAPSMD6.3	3	PCS	C213 C236 C238
67	3	007-2207079010R	Capacitor	220uF 6.3V CASE=E	3	PCS	C439 C440 C808
68	3	002-0000032100R	Resistor	0R?% 1/8W 0805	2	PCS	R743 R756
69	3	002-1000032010R	Resistor	10Ω 1/8W 1% 0805	2	PCS	R352 R824
70	3	002-4700032010R	Resistor	47Ω 1/8W 1% 0805	23	PCS	R212 R213 R214 R215 R220 R222 R223 R225 R227 R229 R232 R233 R244 R245 R246 R247 R248 R249 R424 R425
71	3	002-6800032010R	Resistor	68R 1/8W 1%	1	PCS	R603
72	3	002-7500032010R	Resistor	75Ω 1/8W 1% 0805	3	PCS	R226 R228 R230
73	3	003-1000164205R	Resistor	100R/50V 5% 1206	9	PCS	RP401 RP402 RP403 RP404 RP405 RP406 RP407 RP408 RP409
74	3	002-1201032010R	Resistor	120Ω 1/8W 1% 0805	11	PCS	R119 R121 R353 R354 R355 R356 R357 R358 R359 R360 R809
75	3	002-2701032010R	Resistor	270Ω 1/8W 1% 0805	3	PCS	R602 R701 R702
76	3	002-4701032010R	Resistor	470Ω 1/8W 1% 0805	4	PCS	R216 R217 R218 R219
77	3	002-5601022005QR	Resistor	560R 0.1W 0.5%	2	PCS	R708 R709
78	3	002-6651032010QR	Resistor	665R 1/8W 0805 1%	4	PCS	R806 R808 R813 R815
79	3	002-1002032010R	Resistor	1K 1/8W 1% 0805	2	PCS	R822 R823
80	3	002-1202032010R	Resistor	1.2K 1/8W 1% 0805	2	PCS	R802 R804
81	3	002-1802032010R	Resistor	1.8K 1/8W 1% 0805	4	PCS	R239 R243 R725 R825
82	3	002-2002032010R	Resistor	2KΩ 1/8W 1% 0805	8	PCS	R364 R365 R366 R367 R368 R369 R370 R371
83	3	002-3002032010R	Resistor	0805 3K 1/8W ±1%	1	PCS	R401
84	3	002-3302032010R	Resistor	3.3K 1/8W 1% 0805	30	PCS	R236 R240 R361 R363 R402 R403 R404 R405 R406 R407 R408 R418 R419 R420 R421 R422 R428 R719 R720 R721
85	3	002-5102032010R	Resistor	5.1KΩ 1/8W 1% 0805	16	PCS	R301 R303 R307 R309 R313 R315 R319 R321 R325 R327 R331 R333 R337 R339 R343 R345

ELECTRONIC PARTS LIST

8200AP-Electronic Bom-P3/5

No.	LEVEL	P/N	PART NAME	DESCRIPTION	QTY	UNIT	LOCATION
86	3	002-6202032010R	Resistor	6.2KΩ 1/8W 1% 0805	16	PCS	R305 R306 R311 R312 R317 R318 R323 R324 R329 R330 R335 R336 R341 R342 R347 R348
87	3	002-6802032010R	Resistor	6.8KΩ 1/8W 1% 0805	6	PCS	R203 R204 R205 R208 R209 R210
88	3	002-1103032011R	Resistor	11K 1/8W 0805 1%	2	PCS	R202 R207
89	3	002-1503032010R	Resistor	15K 1/8W 1% 0805	2	PCS	R710 R711
90	3	002-2203032010R	Resistor	22K 1/8W 1% 0805	14	PCS	R103 R104 R105 R106 R107 R108 R109 R110 R111 R112 R201 R206 R238 R242
91	3	002-4703032010R	Resistor	47KΩ 1/8W 1% 0805	5	PCS	R707 R713 R717 R733 R736
92	3	002-6803032010R	Resistor	68K 1/8W 1% 0805	2	PCS	R101 R102
93	3	002-1004032010R	Resistor	100KΩ 1/8W 1% 0805	5	PCS	R118 R120 R231 R349 R351
94	3	002-2203032011R	Resistor	220K 1/8W 0805 1%	8	PCS	R123 R124 R125 R126 R127 R128 R129 R130
95	3	002-1005032010QR	Resistor	1M 1/8W 1% 0805	4	PCS	R122 R423 R730 R731
96	3	027-4794144000QR	Inductor	4.7uH 10% 380LB-4R7K=P2	3	PCS	L601 L801 L802
97	3	027-4795122000R	Inductor	4.7uH 0805 20% KEMET - L0805C4R7MDWIT	2	PCS	L701 L702
98	3	027-1004144000R	Inductor	10uH 10% 1210	1	PCS	L603
99	3	027-3904044000R	Inductor	39uH CM32 Series 1210	1	PCS	L602
100	3	027-4704144000R	Inductor	47uH 10% 1210	4	PCS	L202 L203 L204 L205
101	3	067-1100016110R	Diode	BAS16 SOT-23 FAIRCHILD	7	PCS	D101 D301 D302 D803 D804 D805 D806
102	3	018-1410817227R	Transistor	BC817-16 NPN 50V SOT-23 NXP	22	PCS	T101 T301 T302 T303 T304 T305 T306 T307 T308 T309 T310 T702 T703 T707 T709 T710 T717 T718 T801
103	3	018-1400850227R	Transistor	BC850B NPN 50V SOT-23 Philips	3	PCS	T601 T705 T706
104	3	017-8440000000R	IC	CS42518-CQZ LQFP64 cirrus Logic	1	PCS	IC201
105	3	017-8450000000R	IC	CS494003-CQZ LQFP144-2cirrus Logic	1	PCS	IC401
106	3	017-8490000000R	IC	74LV04D SO14 Philips	1	PCS	IC403
107	3	017-8530000000R	IC	74VHC125M SO14 FAIRCHILD	4	PCS	IC209 IC404 IC406 IC705
108	3	017-8360000000R	IC	74HCT4066D.118 SO14 PHILIPS	1	PCS	IC602
109	3	017-7170000000R	IC	74HC4094D.653 SO-16 PHILIPS	2	PCS	IC104 IC703
110	3	017-8350000000R	IC	HEF4052BT.653 SO16 Philips	1	PCS	IC101
111	3	017-3530000000R	IC	LM1117MPX3.3/NOPB NS	1	PCS	VR802
112	3	017-8540000000R	IC	LM317S/NOPB TO263-3 NS	1	PCS	VR811
113	3	017-8550000000R	IC	LM317EMP/NOPB SOT223 NS	1	PCS	VR810
114	3	017-8370000000R	IC	MAX32DR SO16 TI	1	PCS	IC704
115	3	017-0340000001R	IC	OP275GSZ- ADI	8	PCS	IC102 IC103 IC207 IC208 IC301 IC302 IC303 IC304
116	3	017-8500000000R	IC	PGA4311U SOIC28 TI	2	PCS	IC305 IC306
117	3	017-1156000000R	IC	PCF8574T/SO-16 NXP	1	PCS	IC706
118	3	017-8080000000R	IC	uPD6465GT-101-A SO24 NEC	1	PCS	IC601
119	3	017-1396000000R	IC	HY57V161610ETP-8 TSOP-50 Hynix	1	PCS	IC405
120	3	024-1050102007R	Relay	G6S-2G-TR-5VDC	9	PCS	RL101 RL301 RL302 RL303 RL304 RL305 RL801 RL802 RL803
121	3	024-2050102052R	Relay	RELAY IM-D-G-5V(9-1462038-9) Tyco	2	PCS	RL804 RL805
122	3	017-8380000000QR	IC	P89V51RD2FA PLCC44 PHILIPS (8200AP)	1	PCS	IC701
123	3	006-1000050550R	Capacitor	10UF/35V 5*5.5MM K	1	PCS	C828
124	3	006-1014060555R	Capacitor	100U/35V 20% φ6.5*8mm	2	PCS	C839.840
125	3	002-2201032010R	Resistor	220Ω 1/8W 1% 0805	9	PCS	R601, R801, R803, R805.R807.R810, R811, R812, R814
126	3	002-6801032010R	Resistor	680Ω 1/8W 1% 0805	17	PCS	R302, R304, R308, R310, R314.R316, R320, R322, R326, R328.R332, R334, R338, R340, R344.R346.R758
127	86	002-4702022005QR	Resistor	4.7K 0.1W 0.5%	12	PCS	R211.R237, R241.R732.R734.R735 .R737, R738, R740.R741.R754.R755

ELECTRONIC PARTS LIST

8200AP-Electronic Bom-P4/5

No.	LEVEL	P/N	PART NAME	DESCRIPTION	QTY	UNIT	LOCATION
128	87	002-1003032010R	Resistor	10KΩ 1/8W 1% 0805	24	PCS	R113,R114,R115,R116,R117, R234,R235,R251,R252,R429,R703, R704, R712, R714, R716, R718,R724, R726, R72
129	88	018-1410807227R	Transistor	BC807-16 PNP 50V SOT-23 PHILIPS	4	PCS	T701, T711, T712, T804
130	89	017-1044000000R	IC	M29W040B-70-K-1	1	PCS	IC402
131	1	088-1029411301R	8200AP HDMI Board	8200AP HDMI board PCB with components	1	PCS	
132	2	059-1105921113R	Crystal	11.0592MHz 50ppm 18pF HC49S EUROQUARTZ	1	PCS	X702
133	2	059-98304011110R	Crystal	9.8304MHz/50ppm/18pF HC49/4H	1	PCS	X601
134	2	059-1200001113R	Crystal	HC-49S 12MHz	1	PCS	X501
135	2	019-0576032000R	Diode	1N5821 30V 3A DIODE0.7 Fairchild	1	PCS	D101
136	2	017-9310000000R	IC	LE50ABZ 5V 1A Tø92 ST	1	PCS	VR103
137	2	057-2541021031R	Pin	3P M20-9990305 HARWIN	5	PCS	CON602 CON603 CON605 CON701 CON702
138	2	056-4110221144R	Socket	10-PIN pitch=2.54mm	1	PCS	CON604
139	2	044-2360000000R	Socket	14PIN pitch=2.54mm	1	PCS	CON601
140	2	805-2540200000R	Jumper	2PIN2.54MM 2700-G68	1	PCS	
141	2	088-1029411300R	8200AP HDMI Board	8200AP HDMI board with paster	1	PCS	
142	3	053-1029410013R	8200AP HDMI Board	FR4 4layer 1ounce 1.6MM blue	1	PCS	
143	3	007-0180051063R	Capacitor	18pF 0603 50v 5% COG	8	PCS	C422 C423 C518 C524 C605 C606 C708 C709
144	3	007-1002051063R	Capacitor	1nF 0603 50v 5% COG	1	PCS	C515
145	3	007-1000061060R	Capacitor	10NF 50V X7R 0603 1/16W 10%	2	PCS	C701 C703
146	3	007-1001051060R	Capacitor	100NF 0603 10% Murata 25V	57	PCS	C102 C107 C109 C111 C112 C113 C116 C117 C121 C122 C201 C202 C203 C204 C205 C206 C301 C302 C303 C304
147	3	007-1005051060R	Capacitor	1uF 0603 25v 10% X7R Murata	3	PCS	C602 C706 C707
148	3	007-1006072014R	Capacitor	10uF 0805 6.3V 20% X5R	18	PCS	C114 C118 C124 C207 C208 C307 C308 C406 C409 C413 C415 C418 C420 C429 C504 C514 C523 C603
149	3	010-1001600000R	Capacitor	10UF/16V 3.5*2.8 B	1	PCS	C702
150	3	010-4706063100R	Capacitor	47uF/6V3 10% TANT-BX	1	PCS	C517
151	3	010-2200632220R	Capacitor	220uF 6.3V 20% case D	5	PCS	C103 C104 C105 C106 C110
152	3	002-0000011050R	Resistor	0R 0603 5% 50V	4	PCS	R514 R619 R736 R738
153	3	002-0059071010R	Resistor	0R05 1% 0603 1/16W	1	PCS	R416
154	3	002-0108071010R	Resistor	0R1 1% 0603 1/16W	3	PCS	R401 R408 R410
155	3	002-0220011010R	Resistor	2R2 1% 0603 1/16W	3	PCS	R407 R409 R411
156	3	002-3300011010QR	Resistor	33R 1/16W 1%	4	PCS	R405 R412 R513 R717
157	3	003-0330082105R	Resistor	33R 4*0603 50V 5%	14	PCS	RP401 RP402 RP403 RP404 RP405 RP406 RP407 RP408 RP409 RP410 RP411 RP412 RP505 RP506
158	3	002-2201021010R	Resistor	220R 0603 1/10W 1%	1	PCS	R101
159	3	002-6651071010R	Resistor	665R 1% 0603 1/16W	1	PCS	R102
160	3	002-1802031050R	Resistor	1K8 0603 50V 5%	4	PCS	R506 R507 R609 R711
161	3	002-2201031050R	Resistor	2K2 0603 50V 5%	3	PCS	R610 R709 R710
162	3	002-4702011005R	Resistor	0603 4K7 1/16W 0.5%	26	PCS	R414 R418 R419 R503 R511 R612 R613 R615 R616 R617 R701 R702 R703 R704 R705 R707 R713 R716 R718 R725
163	3	002-5602021010R	Resistor	5K6 0603 1% 50V 1/10W	1	PCS	R706
164	3	002-1000011010R	Resistor	10K 1% 0603 50V	12	PCS	R508 R519 R606 R607 R608 R708 R712 R714 R715 R723 R724 R731
165	3	002-2202031010R	Resistor	22K 0603 50V 1%	6	PCS	R601 R602 R603 R604 R605 R611
166	3	002-4703021010R	Resistor	47K 1/8W 1% 0603	12	PCS	R202 R203 R204 R205 R301 R302 R303 R304 R512 R520 R521 R522
167	3	003-4702080005R	Resistor	47K 8pin 1/16W ±5%(RC-ML08W473JC)	3	PCS	RP501 RP503 RP504
168	3	002-1005031050R	Resistor	1M 0603 50V 5%	2	PCS	R415 R517

ELECTRONIC PARTS LIST

8200AP-Electronic Bom-P5/5

No.	LEVEL	P/N	PART NAME	DESCRIPTION	QTY	UNIT	LOCATION
169	3	027-4795122000R	Inductor	4.7uH 0805 20% KEMET - L0805C4R7MDWIT	1	PCS	L701
170	3	027-6805920000R	Inductor	68uH Rdc = 0.1ohm 20% I=2.2A WUERTH ELEKTRONIK - 74459168	1	PCS	L101
171	3	059-2832202336R	Crystal	28.322MHz/50ppm/20pF HC-49S/SMD	1	PCS	X401
172	3	067-7700099112R	Diode	BAV99 DUAL SOT-23 Philips/nxp	1	PCS	D501
173	3	004-8846020000R	Resistor	AVR-M1608C270M_ABB typ:27V 15pF TDK	6	PCS	V201 V202 V301 V302 V501 V502
174	3	018-1410817227R	Transistor	BC817-16 NPN 50V SOT-23 NXP	5	PCS	T601 T602 T701 T702 T703
175	3	018-1400850227R	Transistor	BC850B NPN 50V SOT-23 Philips	1	PCS	T704
176	3	017-8540000000R	IC	LM317S/NOPB TO263-3 NS	1	PCS	VR102
177	3	017-9260000000R	IC	HD64F3694FX LQFP-48 Renesas	1	PCS	IC601
178	3	017-1392000000R	IC	74AC244SC SO-20W FAIRCHILD	1	PCS	IC505
179	3	017-9030000000R	IC	CM2021-00TR TSSOP-38 CMD	4	PCS	IC201 IC202 IC301 IC302
180	3	017-1397000000R	IC	CS2000-CP MSOP-10L CIRRUS LOGIC	1	PCS	IC504
181	3	017-1398000000R	IC	FAN1112SX SOT-223 FAIRCHILD	2	PCS	VR104 VR106
182	3	019-0025030111R	LED	1206 KP-3216SGC kingbright green	7	PCS	D102 D201 D202 D301 D302 D401 D701
183	3	017-1399000000R	IC	LM2576S-3.3 TO-263-5 NATIONAL SEMICONDUCTOR	1	PCS	VR101
184	3	017-9300000000R	IC	RCLAMP0514M MSOP-10L Semtech	2	PCS	IC501 IC503
185	3	017-1395000000R	IC	SIL9334CTU LQFP100 SILICON IMAGE	1	PCS	IC502
186	3	017-1277000000R	IC	Sil9233ACTU silicon image	1	PCS	IC401
187	3	044-6050000000R	Socket	40PIN 2x20 PITCH=2.54mm smd	1	PCS	CON502
188	3	056-4120441004R	Connector	HDMI connector Molex 47151-1002	5	PCS	CON201 CON202 CON301 CON302 CON501
189	3	002-3301061010R	Resistor	330R, 1%, 0603, 1/10W	1	PCS	R404
190	3	017-1416000000R	IC	24LC128-I/SN SO-8 MICROCHIP	1	PCS	IC703
191	3	017-2350000002R	IC	AT89C51RE2 PLCC44-2 ATMEL (8200AP)	1	PCS	IC701
192	3	035-2201131041R	Inductor	220 ohm/100MHz 1.4A 0603 BLM18PG221SN1D Murata	6	PCS	L102, L401, L402, L403, L404, L501,
193	3	017-8530000000R	IC	74VHC125M SO14 FAIRCHILD	1	PCS	IC702
194	3	002-1802011010R	Resistor	0603 1.8K F 1/16W	6	PCS	R105, R206, R207, R306, R307, R732
195	1	088-1029413501R	8200AP Display Board	8200AP display board PCB with components	1	PCS	
196	2	006-1024081423R	Capacitor	1000uF 10V 20% 8*14	1	PCS	C511
197	2	019-0311132011R	Diode	WP4431DT kingbright	11	PCS	D501 D502 D503 D504 D505 D506 D507 D508 D509 D510 D511
198	2	020-1042229012R	Potentiometer	ASSY 281 ENCODER	1	PCS	RE501B
199	2	039-3000000000R	Switch	TC-17XA 7.8*7.8*5	8	PCS	SW501 SW502 SW503 SW504 SW505 SW506 SW507 SW508
200	2	277-0120000000R	Socket	RCEA-5 NYLON66 (UL) 94V2 .black	2	PCS	
201	2	052-2300000000R	IC	TSOP34438 VISHAY	1	PCS	IR501
202	2	030-7300000000R	OLED Display	UC-2002ASWAS10	1	PCS	IC506
203	2	057-2541920325R	Pin	16pin PH=2.54mm L=19MM	1	PCS	IC506
204	2	307-1300600121R	Post	M3*12	4	PCS	IC506
205	2	088-1029413500R	8200AP Display Board	8200AP display board with paster	1	PCS	
206	3	053-1029410035R	8200AP Display Board	FR4 4layers 1ounce blue	1	PCS	
207	3	010-1062502050QR	Capacitor	10U/25V 20%B	2	PCS	C508 C510
208	3	002-1802032010R	Resistor	1.8K 1/8W 1% 0805	11	PCS	R509 R510 R511 R512 R513 R514 R515 R516 R517 R518 R519
209	3	002-2002032010R	Resistor	2KΩ 1/8W 1% 0805	1	PCS	R534
210	3	002-1003032010R	Resistor	10KΩ 1/8W 1% 0805	11	PCS	R501 R502 R503 R504 R505 R506 R507 R508 R525 R526 R527
211	3	027-4794144000QR	Inductor	4.7uH 10% 380LB-4R7K=P2	1	PCS	L501
212	3	017-9290000000R	IC	M74HC148RM13TR ST	1	PCS	IC501
213	3	017-5380000002R	IC	74HC14D (SO-14) PHILIP	1	PCS	IC504
214	3	017-2070000000R	IC	74HC86D SO-14 4*10 PHILIPS	1	PCS	IC503
215	3	056-9122550000R	Socket	22PIN PIN=1MM	1	PCS	CON501

ELECTRONIC PARTS LIST

8200AP-Electronic Bom-P5/5

No.	LEVEL	P/N	PART NAME	DESCRIPTION	QTY	UNIT	LOCATION
216	3	007-1002052050R	Capacitor	10nF/50V 5% X7R 0805	6	PCS	C501,C504, C506, C507, C512, C514
217	3	007-1004052060R	Capacitor	100nF 50V 5% 0805	4	PCS	C502, C503 ,C509, C513
218	3	002-1004032010R	Resistor	100KΩ 1/8W 1% 0805	3	PCS	R522, R524,R535
219	3	017-7170000000R	IC	74HC4094D.653 SO-16 PHILIPS	3	PCS	IC502, IC505,IC507
220	1	032-1029410000R	Remote Control	AUDIOLAB 8200AP	1	PCS	
221	1	036-1307015000R	Batteries	1.5V 7size AAA	2	PCS	
222	1	041-2191000000R	Switch	6A250V~ T85 EATON MEXICO	1	PCS	
223	1	044-1700000000QR	Socket(QUAD)	MAINS INLET 2 POLE 2 FUSE LOCS	1	PCS	
224	1		Fuse	Refer to Country Deviation BOM	2	PCS	
225	1	022-2000042311R	Transformer	Ti-053085 Φ85*33mm Toroid (120V/230V)	1	PCS	
226	1		Mains Cable	Refer to Country Deviation BOM	1	PCS	
227	1	055-4310007228R	Connect Wire	10PIN 28AWG gray L=70MM	1	PCS	
228	1	060-0180070100R	Wire	1015#18 L=70mm brown	1	PCS	
229	1	060-0180070300R	Wire	1015#18 L=70mm blue	1	PCS	
230	1	742-3501000000R	Heat Shrink	Φ35 black	0.05	M	
231	1	742-0501000000R	Heat Shrink	Φ5 black	0.12	M	
232	1	071-1100000000R	Tie Wrap	100MM YJ-100	5	PCS	

PRODUCT VERSION DEVIATION

8200AP-Color Deviation-P1/1

No.	P/N	PART NAME	DESCRIPTION	PRODUCT LIST LOCATION	QTY	UNIT
1	309-1029410000-1R	Main chassis	silver painted	1	1	PCS
	309-1029410001R		black painted	1	1	PCS
2	319-1027410001R	Side panel	silver painted	2	1	PCS
	319-1027420001R		black painted	2	1	PCS
4	302-1029410000R	Top cover	sand blasting ,anodized silver	13	1	PCS
	302-1029420000R		sand blasting ,anodized black	13	1	PCS
5	534-3002061006R	Screw	M3*6NI	14	18	PCS
	534-3002060906R		M3*6 BLACK	14	18	PCS
6	534-3002100606R	Screw	M3*10NI	15	13	PCS
	534-3002100906R		M3*10 BLACK	15	13	PCS
9	340-1030410000-1R	Knob	silver painted	17	1	PCS
	340-1030410001-1R		black painted	17	1	PCS
3	340-1020410000R	Function button	silver painted	23	8	PCS
	340-1020410001R		black painted	23	8	PCS
7	300-1029410000-1R	Front panel	sand blasting ,anodized silver	25	1	PCS
	300-1029420000-1R		sand blasting ,anodized black	25	1	PCS
8	588-3000106037R	Screw	M3*10NI	31	9	PCS
	527-3012100806R		M3*10 BLACK	31	9	PCS

PRODUCT VERSION DEVIATION

8200AP-Country Deviation-P1/1

No.	UNIT CODE	COUNTRY	P/N	PART NAME	DESCRIPTION	PRODUCT LIST LOCATION	ELECTRONIC LIST LOCATION	QTY	UNIT
1	AH-002941-01A	CHN	062-6118000220R	mains cable	PHP-H03VVH2-F 0.75MM2	---	224	1	PCS
			031-2200504121HR	fuse	T1A/250V 5*20MM LITTELFUSE	---	226	2	PCS
2	AH-002941-02A	USA	062-1118000220R	mains cable	mains cable PHP-301 2PIN at the end	---	224	1	PCS
			031-2200527121HR	fuse	T1.6A/250V 5*20MM LITTELFUSE	---	226	2	PCS
3	AH-002941-03A	UK	062-9118000220R	mains cable	H03VV-F3G0.75MM2	---	224	1	PCS
			031-2200504121HR	fuse	T1A/250V 5*20MM LITTELFUSE	---	226	2	PCS
4	AH-002941-05A	AUS	062-6318000111R	mains cable	VDEH05VV- F3*0.75MM L=1.8M	---	224	1	PCS
			031-2200504121HR	fuse	T1A/250V 5*20MM LITTELFUSE	---	226	2	PCS
5	AH-002941-07A	FG	062-2118000220R	mains cable	H05VV-F2G0.75MM2	---	224	1	PCS
			031-2200504121HR	fuse	T1A/250V 5*20MM LITTELFUSE	---	226	2	PCS
6	AH-002942-01A	CHA	062-6118000220R	mains cable	PHP-H03VVH2-F 0.75MM2	---	224	1	PCS
			031-2200504121HR	fuse	T1A/250V 5*20MM LITTELFUSE	---	226	2	PCS
7	AH-002942-02A	USA	062-1118000220R	mains cable	mains cable PHP-301 2PIN at the end	---	224	1	PCS
			031-2200527121HR	fuse	T1.6A/250V 5*20MM LITTELFUSE	---	226	2	PCS
8	AH-002942-03A	UK	062-9118000220R	mains cable	H03VV-F3G0.75MM2	---	224	1	PCS
			031-2200504121HR	fuse	T1A/250V 5*20MM LITTELFUSE	---	226	2	PCS
9	AH-002942-05A	AUS	062-6318000111R	mains cable	VDEH05VV- F3*0.75MM L=1.8M	---	224	1	PCS
			031-2200504121HR	fuse	T1A/250V 5*20MM LITTELFUSE	---	226	2	PCS
10	AH-002942-07A	FG	062-2118000220R	mains cable	H05VV-F2G0.75MM2	---	224	1	PCS
			031-2200504121HR	fuse	T1A/250V 5*20MM LITTELFUSE	---	226	2	PCS