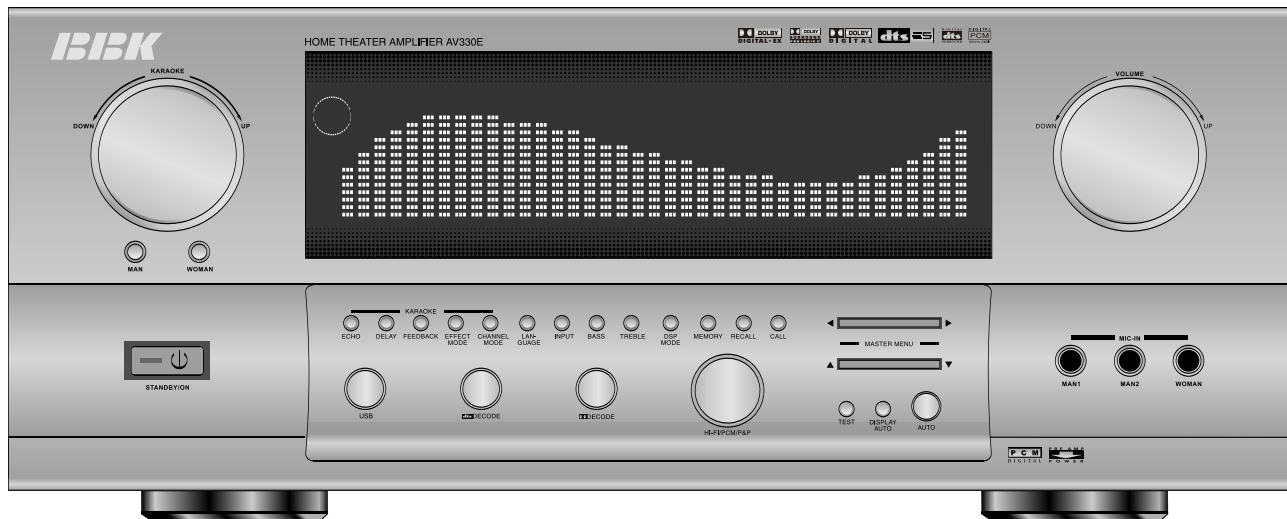




AV330E DIGITAL SURROUND HOME THEATRE AMPLIFIER

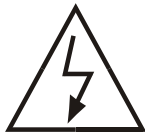
SERVICE MANUAL



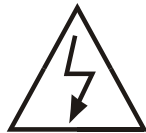
BBK ELECTRONICS CORP., LTD.

SM 001/04

SAFETY PRECAUTIONS & IMPORTANT NOTES!



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK) NO USER - SERVICEABLE PARTS INSIDE



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 :220V AC,50/60Hz.

AV330E HOME THEATRE AMPLIFIER

SPECIFICATIONS

Rated power(20Hz-20KHz,1%THD 4 Ω)

Main channel (Stereo mode)	120Wx2(RMS)
Main channel (DSP mode)	100Wx2(RMS)
Front center channel	100Wx2(RMS)
Rear channel	50Wx2(RMS)
Rear center channel	100Wx1(RMS)

The separation degree of stereo 70dB

S/N (A Weight) ≥ 90 dB

Input sensitivity/impedance

Microphone	0.5mV-100mV/2KOhm
Line in	0.707V/51KOhm
Audio	0.707V/1KOhm

Distortion of total harmonic

All channel	$< 1\%$ 1KHz 10W 8 Ω
Frequency response (All channel)	20Hz- 20KHz ± 0.5

Other

Power	AC~210-230V 50/60Hz
Max power consume	800W
Size	435(L)x170(H)x420(W)mm
Weight	12.0Kg

If the specification or parameter changed,don't tell you again.

AV330E Decoder board

NO	Name & Specification & Parameter Description	Qty	Components position no	Additional explanation
1	Carbon film resistor 100 1/6W Ftp=5mm	2	R143, R142	
2	Carbon film resistor 1 1/6W Ftp=5mm	1	R17	
3	SMT resistor 4 7 0805 Ftp=5mm	2	R177, R179	
4	SMT resistor 1 0805	2	R13, R18	
5	SMT resistor 1K5 0805	1	R137	
6	SMT resistor 100 0805	4	R28, R29, R90, R178	
7	SMT resistor 100K 0805	19	R92, R93, R94, R95, R96, R97, R101, R185, R187, R22, R23, R76, R77, R78, R79, R80, R81, R82, R83	
8	SMT resistor 10K 0805	32	R25, R27, R34, R36, R38, R103, R104, R105, R106, R107, R108, R109, R110, R116, R117, R121, R122, R169, R170, R171, R172, R173, R174, R175, R43, R44, R45, R46, R47, R48, R50, R183	
9	SMT resistor 33K 0805	1	R49	
10	SMT resistor 1K 0805	17	R86, R124, R125, R126, R127, R144, R145, R150, R151, R161, R162, R164, R165, R166, R167, R168, R163	
11	SMT resistor 1M 0805	3	R89, R184, R186	
12	SMT resistor 220 0805	3	R69, R70	
13	SMT resistor 22K 0805	24	R51, R52, R53, R54, R56, R57, R58, R59, R60, R61, R62, R63, R98, R111, R112, R113, R114, R115, R118, R119, R120, R176, R146, R55	
14	SMT resistor 8K2 0805	1	R139	
15	SMT resistor 2K7 0805	4	R182, R123 , R148, R149	
16	SMT resistor 2 2 0805	2	R4, R16, R14 (R14 without panel)(+3.3V R14 in use in power	
16	Carbon film resistor 2 2 1 / 6W	4	R15, R19, R20, R21	
17	SMT resistor 3 0805	1	R141	
18	SMT resistor 3K3 0805	2	R67, R68	
19	SMT resistor 330K 0805	2	R159, R160	
20	SMT resistor 150 0805	2	R156, R153 ,	
21	SMT resistor 470 0805	14	R71, R72, R128, R129, R130, R131, R132, R133, R134, R135, R136, R154, R155, R181	

22	SMT resistor 47K 0805	2	R157, R158	
23	SMT resistor 4K7 0805	12	R1, R2, R3, R5, R6, R7, R8, R9, R24, R147, R10, R11	
24	SMT resistor 22 0805	2	R152, R180	
25	SMT resistor 5K1 0805	1	R140	
27	SMT elect. Cap. 100U/16V 10016	4	C146, C147, C144, C145	
28	SMT elect. Cap. 100U/6V3 10016	10	C141, C112, C33, C35, C36, C37, C136, C137, C113, C163	
29	SMT elect. Cap. 10U/16V 1016	51	C34, C39, C40, C41, C42, C43, C44, C89, C107, C108, C92, C93, C94, C32, C45, C46, C47, C48, C49, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C88, C165, C106, C109, C110, C111, C158, C156, C157, C102, C164, C162	
30	SMT capacitance 101/50V 0805	5	C115, C120, C121, C134, C135	
31	SMT capacitance 102/50V 0805	2	C98, C99	
32	SMT capacitance 103/50V 0805	2	C128, C129	
33	SMT capacitance 104/50V 0805	40	C5, C8, C9, C11, C12, C13, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C155, C160 C4, C159, C161	
34	SMT capacitance 153/50V 0805	2	C132, C133	
35	SMT capacitance 20P/50V 0805	2	C103, C104	
36	SMT capacitance 220P/50V 0805	8	C50, C51, C52, C53, C54, C55, C153, C154	
37	SMT capacitance 22P/50V 805	2	C90, C91	
38	SMT capacitance 222/50V 0805	7	C114, C116, C118, C119, C122, C123, C124	
39	SMT capacitance 331/50V 0805	4	C117, C126, C127 , C125	
40	SMT capacitance 334/50V 0805	2	C130, C131	
41	SMT capacitance 470P/50V 0805	1	C138	
42	SMT capacitance 472/50V 0805	2	C139, C140	
43	SMT audio IN4148 D0805	12	D1, D2, D3, D4, D12, D13, D14, D15, D16, D17, D18, D19	
44	SMT audio IN4007 D7227	1	D11	
45	SMT audio 2N5401 SOT-23	2	Q7, Q8	
46	SMT audio S8050 SOT-23	2	Q5, Q6	
47	Median power SMT audio C8050 SOT-89Z	2	Q2, Q4	
48	Median power SMT audio A8550 SOT-89Z	1	Q3	

49	Constant voltage diode 7V5/0.5W Ftp=10mm	2	DZ1, DZ2	
50	SMT IC TL072 SOP8	11	U15, U16, U17, U18, U19, U20, U5, U6, U9, U10, U12	
51	SMT IC IC CD4053 SOP16	2	U7, U8,	
52	SMT CD4052 SOP16	1	U2	
53	SMT IC 74HCU04 SOP14	1	U3	
54	SMT IC AKM4529 QFP44	1	U13	can be replaced by AKM4628
55	SMT IC IS41C16256 SOJ40	1	U14	
56	Insert IC M62429 DIP8	1	U26	
57	SMT IC M62446FP SSOP42	1	U21	
58	SMT IC TL431 SOT-23	1	U22	
59	SMT IC YSS932 LQFP128	1	U23	
60	SMT crystal 24.576MHZ	1	XL1	
61	Wire socket 12P2.0(straight head)	1	CON2	
62	Wire socket 15P2.0(straight head)	1	CON3	
63	Wire socket 10P2.0(straight head)	1	CON5	
64	Wire socket 11P2.0(straight head)	1	CON4	
65	Wire socket 6P2.0(straight head)	1	CON1	
66	Wire socket 7P2.0(straight head)	1	CON6	
67				
68	SMT audio 9014 SOT-23	1	Q9	
69	Effect tube K30	1	Q1	
70	Constant voltage diode 5V1/0.5W	1	DZ3	
71	SMT capacitance 224/50V 0805	2	C166 , C167	
72	SMTIC PCM1801	1	U24	
73	Line board DOLBY&DTS DECODER_PCB	1	SN: 41703002 LG.A5	
74	Four connected sockets AV4-8.4-13 (blue on top and red on bottom)	1	BNC1	
75	Four connected sockets AV4-8.4-13 (yellow on the left top, green on the left bottom, brown on the right top, black on the right bottom)	1	BNC2	

Power Amplifier Board				
NO	Name & Specification & Parameter Description	Qty	Components position no	Additional explanation
1	Jumper wire 5mm	15	96, A2, 123, 12, J205, J904, J204, J919, J920, J923, J931, J932, J909, J907, 114	
2	Jumper wire 7.5mm	26	GX8, 101, GX5, GX6, GX7, GX201, GX301, GX401, GX501, 126, 129, 131, 130, J203, J903, J910, J911, J912, J914, J918, J921, J927, J928, J913 D5 R819	
3	Jumper wire 10mm	27	4, 103, 104, 105, 110, 111, 112, 113, 85, 86, 98, 99, 100, 89, 95, 127, 128, J905, J906, J908, J915, J917, 15, 16, 17, 18, 46,	
4	Jumper wire 12mm	4	47, 48, 107, A14	
5	Jumper wire 15mm	22	13, 84, 124, 125, CN1, A3, A4, A5, A6, A7, A8, A9, 49, 93, 97, 108, J202, J206, J900, J916, J926, J930	
6	Jumper wire 20mm	11	8, 9, 11, 90, 94, 102, 106, 87, 88, 109 J929	
7	Jumper wire 25mm	1	83	
8	Carbon film resistor 1K5 1/6W Ftp=7.5mm	2	R957, R939	
9	Carbon film resistor 10 1/6W Ftp=7.5mm	19	R945, R946, R947, R213, R214, R219, R220, R313, R314, R319, R320, R413, R414, R419, R420, R513, R514, R519, R520	
10	Carbon film resistor 100K 1/6W Ftp=7.5mm	20	R913, R919, R960, R961, R93, R231, R817, R820, R909, R910, R911, R912, R914, R915, R916, R917, R918, R920, R921, R922	
11	Carbon film resistor 100 1/6W Ftp=7.5mm	2	R924, R925	
12	Carbon film resistor 10K 1/6W Ftp=7.5mm	14	R949, R204, R304, R404, R504, R530, R630, R730, R814, R818, R822, R823, R830, R845	
13	Carbon film resistor 150 1/6W Ftp=7.5mm	2	R956, R926	
14	Carbon film resistor 1K 1/6W Ftp=7.5mm	18	R954, R203, R217, R229, R303, R317, R329, R403, R417, R429, R503, R517, R529, R810, R848, R849, R850, R935	
15	Carbon film resistor 1K2 1/6W Ftp=7.5mm	1	R815	
16	Carbon film resistor1 1/6W Ftp=7.5mm	3	R936, R937, R938	
17	Carbon film resistor 200 1/6W Ftp=7.5mm	8	R212, R218, R312, R318, R412, R418, R512, R518	
18	Carbon film resistor 22K 1/6W	17	R206, R230, R235, R306, R330, R335, R406, R430,	

	Ftp=7.5mm			R435, R506, R535, R811, R812, R828, R844, R846, R847
19	Carbon film resistor 22 1/6W Ftp=7.5mm		3	R951, R927, R928
20	Carbon film resistor 2K 1/6W Ftp=7.5mm		4	R222, R322, R422, R522
21	Carbon film resistor 2K2 1/6W Ftp=7.5mm		10	R210, R211, R310, R311, R410, R411, R510, R511, R824, R825, R829
22	Carbon film resistor 33 K 1/6W Ftp=7.5mm		15	R227, R228, R327, R328, R427, R428, R527, R528, R821, R929, R930, R931, R932, R933, R934,
23	Carbon film resistor 3K3 1/6W Ftp=7.5mm		15	R201, R225, R226, R301, R325, R955, R958, R959, R326, R401, R425, R426, R501, R525, R526,
24	Carbon film resistor 150K 1/6W Ftp=7.5mm		1	R827
25	Carbon film resistor 470 1/6W Ftp=7.5mm		9	R900, R901, R902, R903, R904, R905, R906, R907, R953
26	Carbon film resistor 47K 1/6W Ftp=7.5mm		4	R202, R302, R402, R502
27	Carbon film resistor 47 1/6W Ftp=7.5mm		8	R207, R208, R307, R308, R407, R408, R507, R508
28	Carbon film resistor 4K7 1/6W Ftp=7.5mm		10	R205, R221, R305, R321, R405, R950, R421, R505, R521, R813
29	Carbon film resistor 560 1/6W Ftp=7.5mm		5	R209, R309, R409, R952, R509
30	Carbon film resistor 75 1/6W Ftp=7.5mm		4	R940, R941, R942, R943
31	Carbon film resistor 82K 1/6W Ftp=7.5mm		1	R826
31	Carbon film resistor 56K 1/6W Ftp=7.5mm		1	R827
32	Carbon film resistor 33K 1/4W Ftp=10mm		4	R234, R334, R434, R534
33	Carbon film resistor 100 1/4W Ftp=10mm		8	R223, R224, R323, R324, R423, R424, R523, R524
34	Carbon film resistor 1K 0.5W Ftp=10mm		1	R816
35	Line coiled resistor 180 2W Ftp=20mm		1	R833
36	Line coiled resistor 560 3W Ftp=20mm		2	R831, R832
37	Line coiled resistor 5 1 1W Ftp=15.5mm		6	R232, R332, R432, R532, R632, R732
38	Line coiled resistor 0.22 3W Ftp=20mm		8	R215, R216, R315, R316, R415, R416, R515, R516
39	Elect. Cap. 10000U/63V Ftp=23mm Dia=35mm		2	C801, C803
40	Elect. Cap. 100U/63V Ftp=4.5mm Dia=8mm		8	C202, C203, C302, C303, C402, C403, C502, C503
41	Elect. Cap. 100U/16V Ftp=2.5mm Dia=5mm		1	C810, C921, C922, C212, C312, C412, C512, CD900, CD901, CD902

42	Elect. Cap. 10U/50V Ftp=2.5mm Dia=5mm	11	C813, CD903, CD904, C929, C930, C900, C901, C931, C932, C927, C928,
43	Elect. Cap. 470U/16V Ftp=4.5mm Dia=10mm	1	C204
44	Elect. Cap. 22U/50V Ftp=2.5mm Dia=5mm	1	C811 C812
45	Elect. Cap. 2200U/25V Ftp=7mm Dia=15mm	2	C805, C807
46	Elect. Cap. 220U/16V Ftp=2.5mm Dia=7mm	3	C915, C916, C920
47	Elect. Cap. 220U/50V Ftp=4.5mm Dia=10mm	1	C814
48	Elect. Cap. 22U/16V Ftp=2.5mm Dia=5mm	9	C201, C301, C401, C501, C820, C823, C824, C826, C923
49	Elect. Cap. 22U/50V Ftp=2.5mm Dia=5mm	1	C812
50	Elect. Cap. 47U/16V Ftp=2.5mm Dia=5mm	2	C925, C926
51	Elect. Cap. 4U7/16V Ftp=2.5mm Dia=5mm	1	C815
52	Ceramic capacitance104/50V Ftp=5mm	8	C907, C908, C909, C904, C905, C906, C910, C912
53	Ceramic capacitance100P/50V Ftp=5mm	2	C902, C903
54	Ceramic capacitance103/50V Ftp=5mm	2	C917, C211
55	Ceramic capacitance104/100V Ftp=5mm	10	C208, C209, C308, C309, C408, C409, C508, C509, C802, C804
56	Ceramic capacitance22P/50V Ftp=5mm	2	C918, C919
57	Ceramic capacitance331/50V Ftp=5mm	6	C205, C305, C405, C505, C821, C825
58	Ceramic capacitance33P/50V Ftp=5mm	6	C206, C306, C406, C506, C829, C830
59	Ceramic capacitance47P/50V Ftp=5mm	2	C913, C914
60	terylene capacitance104/50V Ftp=5mm	1	C911
61	terylene capacitance103/100V Ftp=5mm	2	C828, C827
62	Diode IN4004 Ftp=10mm	17	D809, D810, D811, D812, D813, D814, D815, D816, D817, D201, D202, D301, D302, D401, D402, D501, D502
63	Diode IN4148 Ftp=7.5mm	29	D203, D204, D205, D207, D208, D210, D303, D304, D305, D403, D404, D405, D503, D504, D505, D818, D819, D820, D821, D822, D823, D824, D209, D6, D8, D206, D306, D406, D506
64	Diode IN5404 Ftp=24.5mm	8	D801, D802, D803, D804, D805, D806, D807, D808
65	Constant voltage diode 2V7/0.5W Ftp=7.5mm	1	ZD802
66	Constant voltage diode 30V/0.5W Ftp=7.5mm	1	ZD803
67	Constant voltage diode 3V9/0.5W Ftp=7.5mm	1	DZ900
68	Constant voltage diode 5V1/0.5W Ftp=7.5mm	1	ZD801

69	Colour circle inductance Ftp=7.5mm	2.2uH	1	L904	
70	Magnetism pearl inductance Ftp=7.5mm	47uH	4	L900, L901, L902, L903	
71	Empty inductance	0.1uH	Ftp=10mm	6	L201, L301, L401, L501, L601, L701
72	Audio 2N5401			12	Q212, Q214, Q215, Q312, Q314, Q315, Q412, Q414, Q415, Q512, Q514, Q515
73	Audio 2N5551			32	Q403, Q404, Q405, Q407, Q409, Q416, Q502, Q503, Q504, Q505, Q507, Q509, Q516, Q202, Q203, Q204, Q205, Q207, Q209, Q216, Q302, Q303, Q304, Q305, Q307, Q309, Q316, Q402, Q208, Q308, Q408, Q508
74	Audio 8050			5	Q801, Q201, Q301, Q401, Q501
75	Audio 9014			5	Q900, Q210, Q802, Q803, Q807
76	Audio 9015			6	Q211, Q311, Q411, Q511, Q805, Q806
77	Audio 9018			2	Q902, Q903
78	Line board	AMP_PCB		1	NO: 41703002 LG.A5
79	Ceramic capacitance	104/100V	Ftp=5mm	13	C210, C310, C410, C510, C610, C710, C822, C207, C307, C407, C507, C806, C808
80	IC CD4052	DIP16		2	U900, U903
81	IC JRC4558	DIP8		1	U901
82	IC UDA1321PS	DIP32		1	U902
83	Line 10P2.0	L=50mm		1	CON901 (TO decoding board CON5)
84	Line 11P2.0	L=50mm		1	CON900 (TO decoding board CON4)
85	Wire socket	5P2.0 (straight head)		1	CON902
86	Wire socket	6P3.96 (straight head)		1	CN801
87	Six connected socket	AV6-8.4-13B (yellow on top, white on middle, red on bottom)		2	B900, B901
88	Six wiring column	WP6-10A (red on top and black on bottom)		1	SPK3
89	Four wiring column	WP4-10A((red on top and black on bottom)		2	SPK1, SPK2
90	Relay	DC12V (4 couplets)		1	RELAY1
91	IC	LM4765		1	IC1
92	USB seat (horizontal)	112C-K1		1	A900
93	crystal	48MHz		1	Y900
94	Large radiator (wing slice)			1	(equipped with large power tube)
95	Small radiator (L mode)			1	(equipped with LM4765)
96	tapping screw	3*10 plating black nickel adding		7	Fixed LM4765 and L mode radiator -1PCS/fixe L mode

	rigidity BTB3*10-HNi		radiator and Large radiator -2PCS/fixed amplifier board and Large radiator -4	
97	tapping screw3*12 plating black nickel adding rigidity BTB3*12-HNi	8	Fixed power tube and Large radiator -8PCS	
98	3 flat cushion	8	Fixed amplifier tube	
99	3 flexible cushion	8	Fixed amplifier tube	
100	Sheet mica22*23	1	LM4765and L mode radiator	
101	Glue (3)	1	LM4765 and fixedLM4765 screw	
102	Sheet mica22*28	8	Power tube and Large radiator	
103	silicone grease	10g	power tube、 amplifier used	
104	Double head top-tin single line 18# L=60mm	1	between both solder point that AMP board SPK3 side is pointed in broken line arrowhead	
105	Power audio 2SA1943	4	Q213, Q313, Q4 13, Q513	
106	Power audio 2SC5200	4	Q206, Q306, Q406, Q506	

CPU Board				
NO	Name & Specification & Parameter Description	Qty	Components position no	Additional explanation
1	Jumper wire 5mm	21	J2, J11, J46, J53, J5, J6, J7, J8, J14, J16, J17, J18, J19, J39, J40, J42, J43, J61, J63, J66, J72	
2	Jumper wire 7.5mm	32	J9, J15, J20, J21, J22, J23, J24, J25, J26, J27, J28, J29, J30, J31, J32, J33, J36, J37, J38, J44, J48, J49, J50, J57, J62, J64, J65, J67, J69	
3	Jumper wire 10mm	16	J4, J12, J52, J54, J55, J56, J68, J34, J100, J101, J102, J103, J104, J105, J106, J107	
4	Jumper wire 15mm	5	J35, J41, J47, J13, J58	
5	Jumper wire 20mm	1	J59	
6	Carbon film resistor 100 1/6W Ftp=7.5mm	3	R165, R119, R120	
7	Carbon film resistor 100K 1/6W Ftp=7.5mm	3	R181, R189, R191	
8	Carbon film resistor 10K 1/6W Ftp=7.5mm	26	R122, R123, R124, R126, R127, R128, R129, R130, R131, R132, R133, R134, R135, R136, R137, R138, R139, R140, R141, R142, R143, R192, R193, R196, R166, R167	
9	Carbon film resistor 15K 1/6W Ftp=7.5mm	2	R171, R172	
10	Carbon film resistor 180K 1/6W Ftp=7.5mm	1	R176	
11	Carbon film resistor 1K 1/6W Ftp=7.5mm	19	R104, R105, R106, R107, R108, R109, R110, R111, R112, R113, R114, R115, R116, R117, R118, R177, R178, R160, R194	
12	Carbon film resistor 1K5 1/6W Ftp=7.5mm	1	R173	
13	Carbon film resistor 20K 1/6W Ftp=7.5mm	1	R175	
14	Carbon film resistor 2K2 1/6W Ftp=7.5mm	7	R161, R168, R169, R170, R188, R190, R195	
15	Carbon film resistor 2 1/6W Ftp=7.5mm	2	R179, R180	
16	Carbon film resistor 33K 1/6W Ftp=7.5mm	1	R121	
17	Carbon film resistor 200 1/6W Ftp=7.5mm	1	R184	
18	Carbon film resistor 470K 1/6W Ftp=7.5mm	2	R144, R145	
19	Carbon film resistor 47K 1/6W Ftp=7.5mm	1	R185	
20	Carbon film resistor 4K3 1/6W Ftp=7.5mm	1	R174	
21	Carbon film resistor 4K7 1/6W Ftp=7.5mm	1	R183	
22	Carbon film resistor 5K6 1/6W Ftp=7.5mm	7	R146, R147, R148, R149, R150, R151, R152	

23	Carbon film resistor 680K 1/6W Ftp=7.5mm	0	R182 (without insert)	
24				
25	Carbon film resistor 2K 1/6W Ftp=7.5mm	7	R153, R154, R155, R156, R157, R158, R159	
26	Carbon film resistor 100 1/4W Ftp=10mm	2	R162, R163	
27	Carbon film resistor 1 1/4W Ftp=10mm	2	R186, R187	
28	Insurance resistor 1 0.5W Ftp=10mm	3	R100, R102, R101	
29	Insurance resistor 1 0.5W Ftp=10mm	1	R103	
30	Elect. Cap. 100U/16V Ftp=2.5mm Dia=5mm	10	C107, C108 , C123, C124, C125, C126 , C127, C128 , C171, C173	
31	Elect. Cap. 100U/50V Ftp=5mm Dia=7.5mm	1	C148	
32	Elect. Cap. 10U/50V Ftp=2.5mm Dia=5mm	8	C149 , C139 , C130, C131, C164, C165 , C153 , C177	
33	Elect. Cap. 470U/25V Ftp=5mm Dia=7.5mm	1	C150	
34	Elect. Cap. 2200U/25V Ftp=7.5mm Dia=15mm	2	C104 , C106	
35	Elect. Cap. 1000U/25V Ftp=5mm Dia=12mm	1	C105	
36	Elect. Cap. 2U2/50V Ftp=2.5mm Dia=5mm	8	C129, C132, C133, C134, C135, C136, C137, C138	
37	Elect. Cap. 4U7/50V Ftp=2.5mm Dia=5mm	2	C121, C122	
38	Elect. Cap. 47 U /50V Ftp=2.5mm Dia=5mm	1	C1761	
39	Ceramic capacitance 103/50V Ftp=5mm	3	C151, C152, C170	
40	Ceramic capacitance 104/50V Ftp=5mm	20	C100, C101, C102, C103 , C146, C147 , C109, C110, C111, C112, C113, C114, C116, C117, C118, C119, C120, C172, C174 , C175	
41	Ceramic capacitance 2P/50V Ftp=5mm	4	C154, C155, C156, C157	
42	Ceramic capacitance 471/50V Ftp=5mm	2	C144, C145	
43	Ceramic capacitance 681/50V Ftp=5mm	2	C166, C167	
44	terylene capacitance 152/50V Ftp=5mm	2	C168, C169	
45	terylene capacitance 154/50V Ftp=5mm	2	C140, C141	
46	terylene capacitance 223/50V Ftp=5mm	2	C160, C161	
47	terylene capacitance 272/50V Ftp=5mm	2	C162, C163	
48	terylene capacitance 682/50V Ftp=5mm	2	C158, C159	
49	terylene capacitance 683/50V Ftp=5mm	2	C142, C143	
50	High voltage capacitance 104/275V Ftp=22.5mm	2	C300, C301	
51	Diode IN4004 Ftp=10mm	11	D100, D101, D102, D103, D104, D105, D106, D107, D108, D109, D120	
52	Diode IN4148 Ftp=7.5mm	10	D124, D125, D112, D113, D114, D115, D116, D117, D118, D119	

53	Constant voltage diode 32V/0.5W Ftp=7.5mm	1	D121	
54	Constant voltage diode 3V3/0.5W Ftp=7.5mm	1	D123	
55	Constant voltage diode 5V/0.5W Ftp=7.5mm	2	D110, D111	
56	Constant voltage diode 7V5/0.5W Ftp=7.5mm	1	D122	
57	Triode 8550	1	Q100	
58	Audio 9014	2	Q101, Q102	
59	IC 24C04 DIP8	1	U106	
60	IC 324 DIP14	2	U107, U108	
61	IC CD4051 DIP16	2	U100, U101	
62	IC 74HC574 DIP16	1	U103	
63	IC (CPU) 78E516 DIP20	1	U105	
64	IC 4558 DIP8	2	U102, U109	
65	IC 74HC245 DIP20	1	U104	
66	Line board CPU_PCB	1	SN: 41703002 LG.A5	
67	Ceramic capacitance 104/100V Ftp=5mm	1	C115	
68	High voltage capacitance 472/275V Ftp=7.5mm	2	C303 , C302	
69	Anti-resistor 4K7*9	4	RJ100, RJ101, RJ102, RJ103	
70	Color circle inductance 47uH Ftp=10mm	2	L100, L101	
71	Carbon film resistor 470K/1W Ftp=10mm	1	R300	
72	Filtering-wave inductance (circular mode)	1	L300	
73	Insurance socket BLX-2	1	F300	
74	Wire socket 5P2.5 (straight head)	1	CON100	
75	Line 12P2.0 L=50mm	1	PIN101 (TO decoding board CON2)	
76	Line 15P2.0 L=50mm	1	PIN100 (TO decoding board CON3)	
77	Wire socket 13P2.0 (straight head)	1	CON104	
78	Wire socket 3P3.96 (short foot empty crooked head)	2	COM302, COM303	
79	Wire socket 5P2.0 (straight head)	2	CON102, CON103	
80	Shield wire 5P2.0 L=250mm	1	PIN400 (TO amplifier board CON902)	
81	Wire socket 4P2.5 (straight head)	1	CON101	
82	Screw 3*8 BTB3*8HNI	3	Fixed three small radiators and CPU board	
83	Small radiator 16*23.5*40 (aluminum)	3	fixed IC100、 IC101、 IC102	
84	silicone grease	3g	Make IC in constant voltage	

Display Board				
NO	Name & Specification & Parameter Description	Qty	Components position no	Additional explanation
1	Jumper wire 5mm	13	J168, J103, J104, J105, J106, J107, J114, J120, J121, J123, J132, J133, J137	
2	Jumper wire 7.5mm	39	J108, J110, J111, J112, J113, J115, J118, J125, J129, J131, J134, J135, J138, J140, J141, J142, J143, J144, J145, J146, J147, J148, J151, J152, J153, J154, J155, J156, J161, J162, J165, J166, J167, J169, J170, J171, J172, J173, J122	
3	Jumper wire 10mm	8	J100, J101, J102, J116, J117, J124, J130, J136	
4	Jumper wire 15mm	12	J108, J109, J119, J139, J149, J150, J157, J158, J159, J160, J163, J164	
5	Jumper wire 20mm	3	J126, J127, J128	
6	Carbon film resistor 100 1/6W Ftp=7.5mm	10	R4, R119, R125, R126, R107, R108, R109, R111, R112, R113	
7	Carbon film resistor 10K 1/6W Ftp=7.5mm	4	R103, R104, R105, R118	
8	Carbon film resistor 1K 1/6W Ftp=7.5mm	3	R1, R2, R3	
9	Carbon film resistor 22 1/6W Ftp=7.5mm	1	R106	
10	Carbon film resistor 2M2 1/6W Ftp=7.5mm	4	R120, R121, R122, R123	
11	Carbon film resistor 30K 1/6W Ftp=7.5mm	8	R114, R115, R116, R117	
12	Carbon film resistor 33K 1/6W Ftp=7.5mm	4	R131, R132, R133, R134	
13	Carbon film resistor 47K 1/6W Ftp=7.5mm	4	R127, R128, R129, R130	
14	Carbon film resistor 47 1/6W Ftp=7.5mm	4	R100, R101, R102, R110	
15	Carbon film resistor 4K7 1/6W Ftp=7.5mm	1	R124	
16	Color circle inductance 2uH Ftp=10mm	2	L100, L101	
17	Elect. Cap. 100U/16V Ftp=2.5mm Dia=5mm	4	C120, C100, C101, C102	
18	Elect. Cap. 100U/50V Ftp=5mm Dia=7.5mm	1	C111	
19	Elect. Cap 10U/50V Ftp=2.5mm Dia=5mm	1	C121	
20	Elect. Cap. 1U/50V Ftp=2.5mm Dia=5mm	4	C115, C116, C117, C118	
21	Elect. Cap. 47U/50V Ftp=2.5mm Dia=5mm	1	C110	
22	Ceramic capacitance 100P/50V Ftp=5mm	4	C106, C107, C108, C109	
23	Ceramic capacitance 104/50V Ftp=5mm	9	C1, C103, C104, C105, C119, C122, C123, C124, C125	
24	Ceramic capacitance 471/50V Ftp=5mm	3	C126, C127, C128	

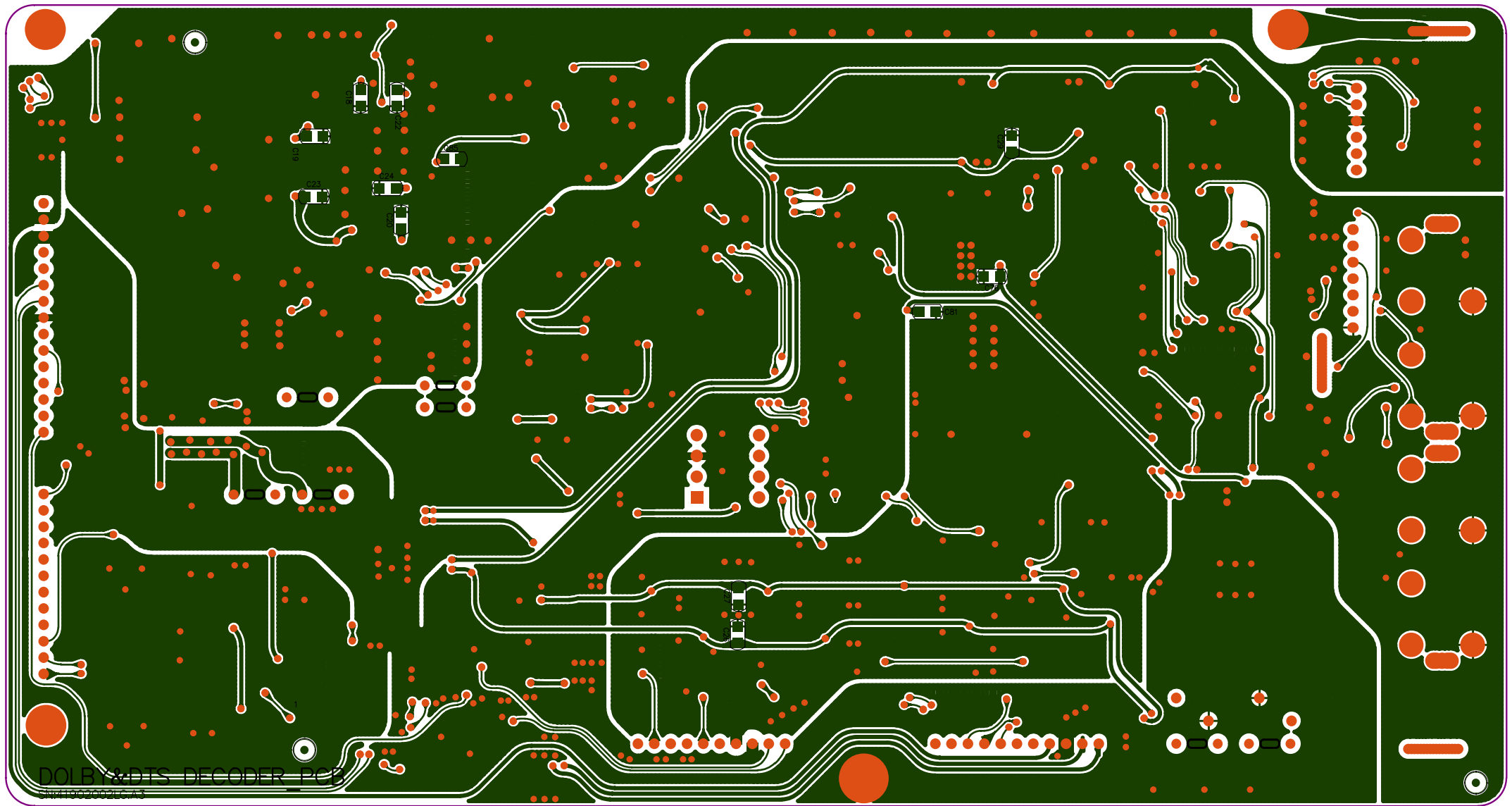
25	High voltage ceramic capacitance103/2KV Ftp=7.5mm&10.5mm	1	C200	
26	with 3.2connected line-ear single wire L=70mm(18#line)	1	Mi board grounding wire	
27	Ceramic capacitance104/100V Ftp=5mm	3	C112, C113, C114	
28	Line board VFD_PCB	1	SN: 72802002LG.A2	
29	Wire socket 3P3.96 (short foot empty crooked head)	2	CON200, CON201	
30	Press switch slightly6*6*5	12	SK100, SK103, SK104, SK105, SK106, SK107, SK113, SK114, SK115, SK116, SK117, SK125	
31	Press switch slightly6*6*9 head 3.5mm	15	SK101, SK102, SK108, SK109, SK110, SK111, SK112, SK118, SK119, SK120, SK121, SK122, SK123, SK124, SK126	
32	Blue bright LED 3mm H=3.5mm	5	LED100, LED101, LED102, LED103, LED105	
33	Diode IN4148 Ftp=7.5mm	11	D107, D108, D109, D110, D100, D101, D102, D103, D104, D105, D106	
34	20MM half axle decoding switch	2	SK127, SK128	
35	25 pin input socket	1	COM1	
36	Copper button stand (See sample)	4	P100, P101, P102, P103	
37	Wire socket 8P2.0 (crooked head)	1	CON100	
38	Line 7P2.0 L=100mm	1	CJ106 (TO decoding board CON6)	
39	Line 8P2.0 L=70mm	1	PIN100 (TO button board CON100)	
40	Wire socket 12P2.0 (crooked head)	1	CON101	
41	Line 12P2.0 L=70mm	1	PIN101 (TO button board CON101)	
42	Line 6P2.0 L=70mm	1	CJ107 (TO decoding board CON1)	
43	3Pdouble head top-tin Line L=50mm	2	(CON102 TO PIN104), (CON103 TO PIN105)	
44	Shield wire 5P2.0 L=50mm	1	PIN500 (TO CPU board CON102)	
45	Line 5P2.0 L=120mm	1	PIN102 (TO CPU board CON103)	
46	Optical fiber input socket	2	DVB, DVD	
47	Receiver head model no : 3380	1	U103	
48	IC 74HC04 SOP14	1	U104	
49	IC NEC16311 QFP52	3	U102, U100, U101	
50	Double color shinning diode 3mm	1	LED104	
51	Line 13P2.0 L=120mm	1	PIN103 (TO CPU board CON104)	
52	Monitor (VFD40-3901F)	1	VFD100	
53	Double sides sponge with glue cushion8*8*4	1	Cushion under the receiver	

Metals Material & Plastic Component & Assemblage Material				
NO	Name & Specification & Parameter Description	Qty	Components position no	Additional explanation
1	330E panel	1		
2	330E panel left baffle	1		
3	330E panel right baffle	1		
4	330E decorated board (controlled by key)	1		
5	330E decorated board left baffle	1		
6	330E decorated board right baffle	1		
7	330E mi socket layering	1		
8	330E display eyeglass	1		
9	330E glass stand	2		
10	330E knob (half axle)	2		
11	330E knob socket	2		
12	330E button head1 (small and middle button head)	1		
13	330E button head2 (middle button head)	3		
14	330E button head3 (small button head)	15		
15	330E button head4 (button head with cap)	2		
16	330E button head5 (large button head)	1		
17	330E button cover1	1		
18	330E button cover2	3		
19	330E button socket1	1		
20	330E button socket2	3		
21	330E button socket3	15		
22	330E power switch	1		
23	330E composing button	1		
24	330E-VFD stand (screen L-stand)	2		
25	330E panel left connected blade	1		
26	330E panel right connected blade	1		
27	330E top cover	1		
28	330E back board	1		
29	330E bottom board	1		

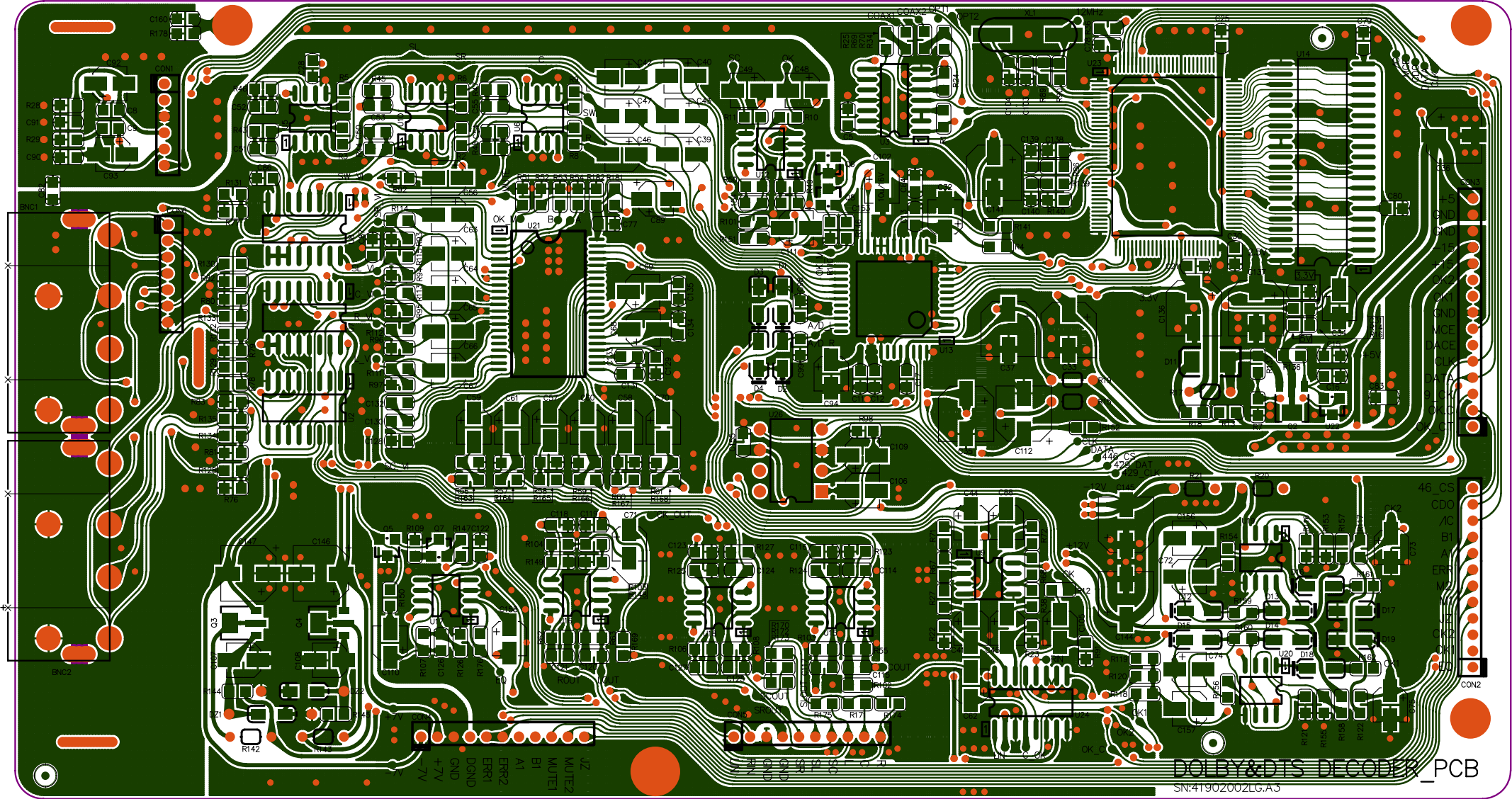
30	330E decorated board baffle knob	4		
31	330E decoding board shielded cover	1		
32	Shortcut insert	2		
33	330E transformer strengthen cushion	1		
34	White plastic glue column(6* 2.5*19)	2	Fixed power board and black board	
35	Black plastic glue column L=25.5	11		
36	Foot (high foot)	4		
37	sponge glue cushion (single side glue) 60*5*3	2	Stuck decorated board left-right side baffle	
38	sponge glue cushion (double side glue) 75*6*0.5	2	Stuck glass stand and glass	
39	330E switch board PVC cover	1		
40	330E power board PVC cover	1		
41	Double head plane stand (3*2.5)	4	Fixed power board and switch board PVC cover	
42	330E transformer	1		
43	330E transformer fixed screw (8mm)	1		
44	330E flexible cushion (8mm)	1		
45	330E flat cushion (8mm)	1		
46	330E female screw (M8)	1		
47	330E transformer knob	1		
48	330E transformer protecting soft cushion (one large, one small)	2		
49	330E glass PVC SMT	1		
50	BBK brand	1		
51	triangle thread 3*32 plating black nickel adding rigidity MB3*32-HNi	3	Fixed amplifier board\radiator and bottom board	
52	triangle thread 3*30 plating black nickel adding rigidity MB3*30-HNi	8	fixed CPU board、 amplifier board and bottom board	
53	triangle thread 3*6 plating black nickel adding rigidity SB3*6-HNi	20	Fixed panel left (right) side connected blade and bottom board-4/fixededcoding board shield cover and back board-2 fixed CPU board、 amplifier board and bottom board , decoding board -5/fixed back board and bottom board-5 Fixed L-stand and screen board and panel-4	
54	ordinary thread 3*10 plating black nickel MB3*10-Ni	12	Fixed screen board and panel-8/fixedpanel ft (right) side connected blade and panel-4	
55	triangle thread 3*8 plating black nickel adding rigidity SB3*8-HNi	8	fixed panel and bottom board-4/fixed foot and bottom board-4	

56	triangle thread 3*10 plating black nickel adding rigidity SB3*10-HNi	2	fixed large radiator 、 amplifier board and bottom board-2	
57	tapping screws 3*8 plating black nickel adding rigidity BTB3*8-HNi	25	Fixed amplifier board and back board-11/fixed glass stand and screen board-4/fixed decoding board and back board-2/fixed optical fiber and back board-3/fixed input and output board and back board-1/fixed decorated board baffle and knob-4	
58	tapping screws 3*6 plating black nickel adding rigidity BTB3*6-HNi	8	Fixed button board and decorated board -8	
59	triangle thread 4*8 golden and hard SB4*8-HAu	4	Fixed cover and bottom board-4	
60	triangle thread 3*6 golden and hard SB3*6-HAu	3	fixed cover and bottom board-3	
61	tapping screws 3*6 plating black nickel BTB3*6-HNi	4	Fixed power board and bottom board	
62	3 paper 介	6		
63	chamfer head screw galvanization screw MF3*6-HZn	4	Fixed button socket and button head	
64	acumination tapping screws 2*6 galvanization TPW2*6A-Zn	4	Fixed button socket and button stand	
65	Coder cushion	2		
66	Coder female screw	2		
67	Wire clamp (square)	1		
68	Power wire(equipped with 3P empty VH3.96 glue head)	1	(Europe standard)	
69	Flat boat type switch AC10A/250V (size)	1	SW200	
70	Unit power assisted socket (Europe standard)	2	COM300, COM301	
71	330E in/out package	1		
72	330E out package	0.5		
73	PE Packing bag	1		
74	Foam (SN: 517020B)	1group		
75	330E remote control machine	1		
76	Button battery CR2025 (3V)	1		
77	USB line L=1.8M	1		
78	Lotus line (black four heads line)	1		
79	Cleaning cloth	1		
80	Glove	Pair		
81	#18 line (with receiving ear 3.2both ends)	L 1	one end fixed with small panel left-angle screw (fixed decorated board baffle screw) , another fixed with screw in mi-socket	

	= 60mm			
82	3P3.96VH double sockets Line (18#red and double insulation line) L=600mm	1	Power input board and power switch board	
83	330E instructions	1		
84	Maintenance certificate	1		
85	binding 3*80	5		
86	Insurance tube AC5A/250V delay	1	F300	
87	Instructions glue bag	1		
88	Linear number paper	4		
89	Random card	1		
90	adhesive tape	2.3m		
91	Small transparent glue	0.15m		
92	Crepe glue paper			
93	Red glue	Proper	Fixed plastic parts	

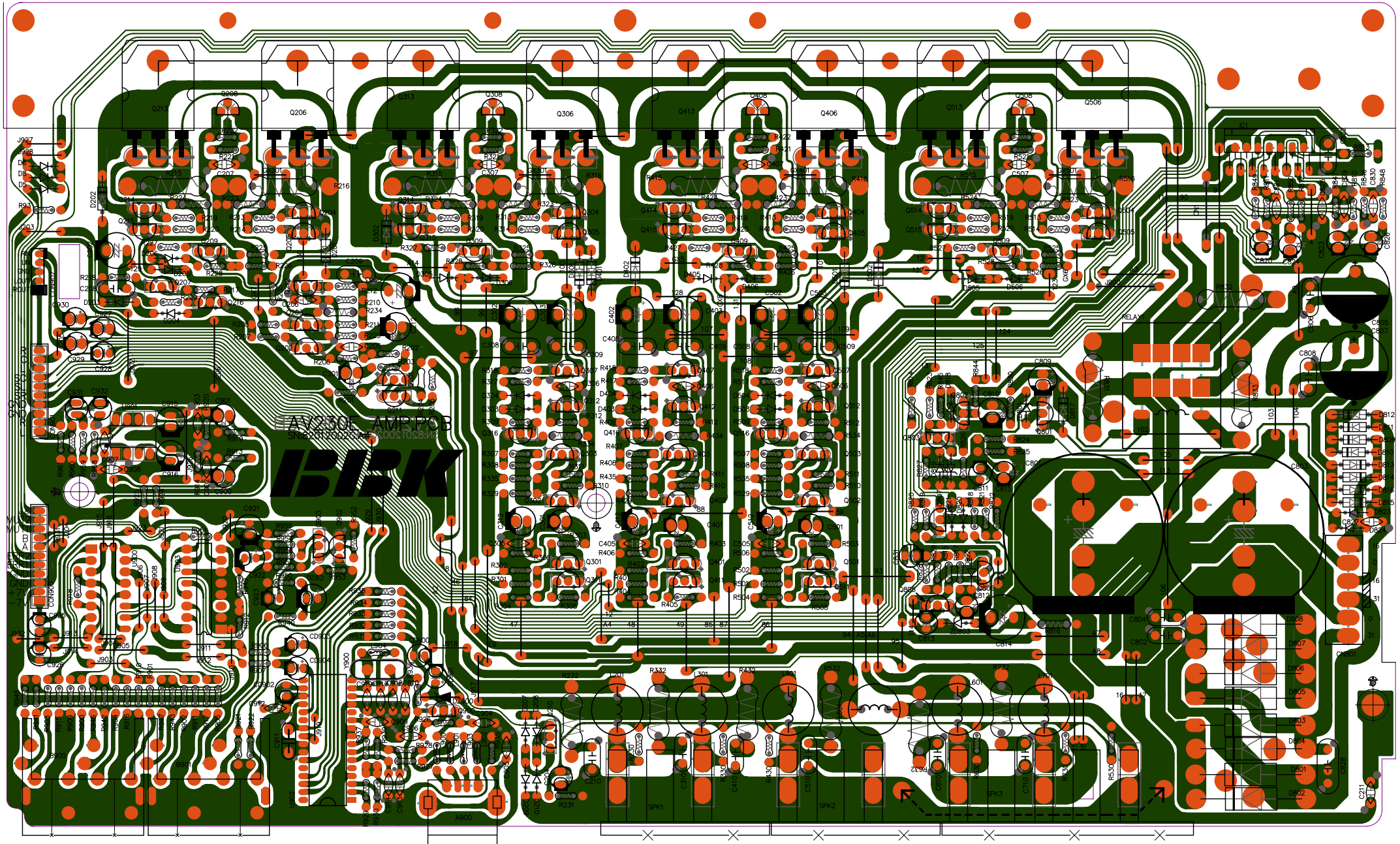


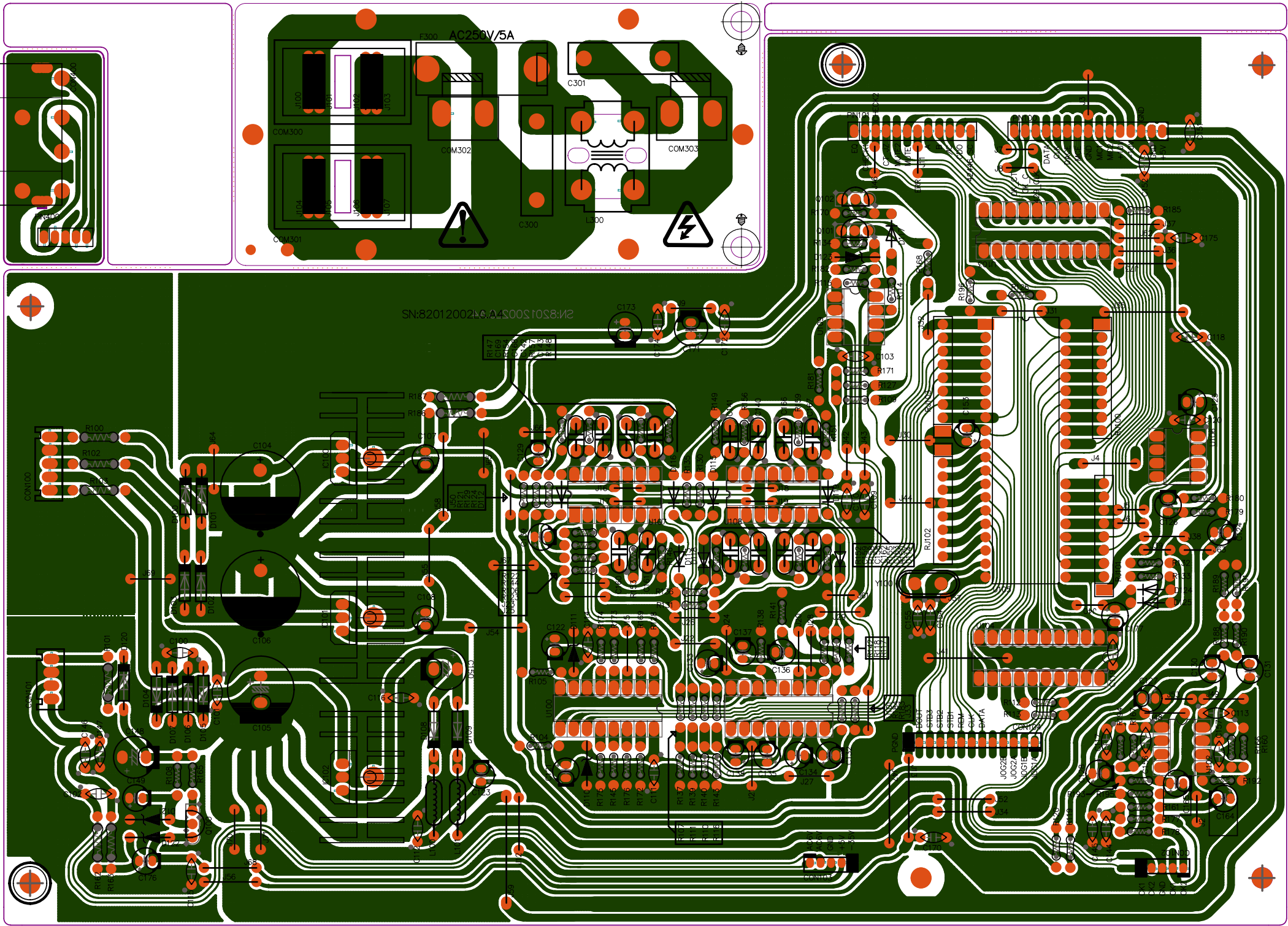
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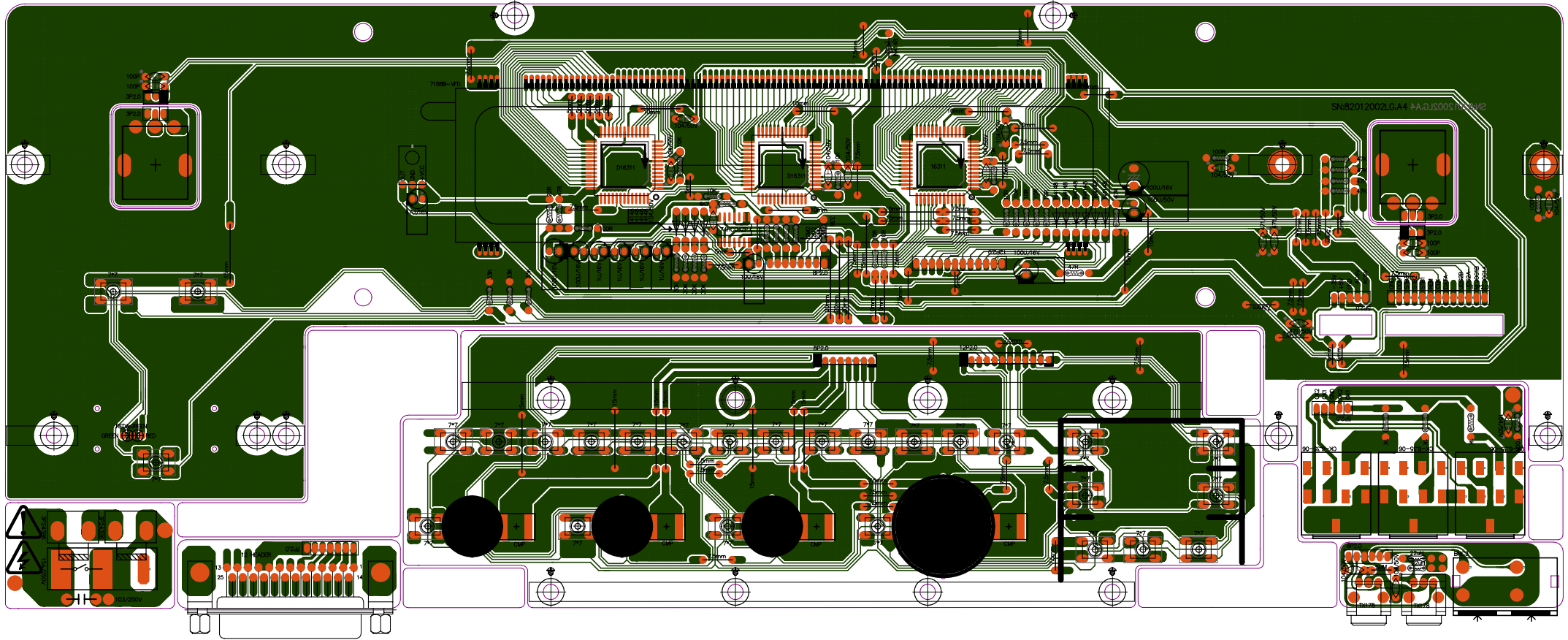


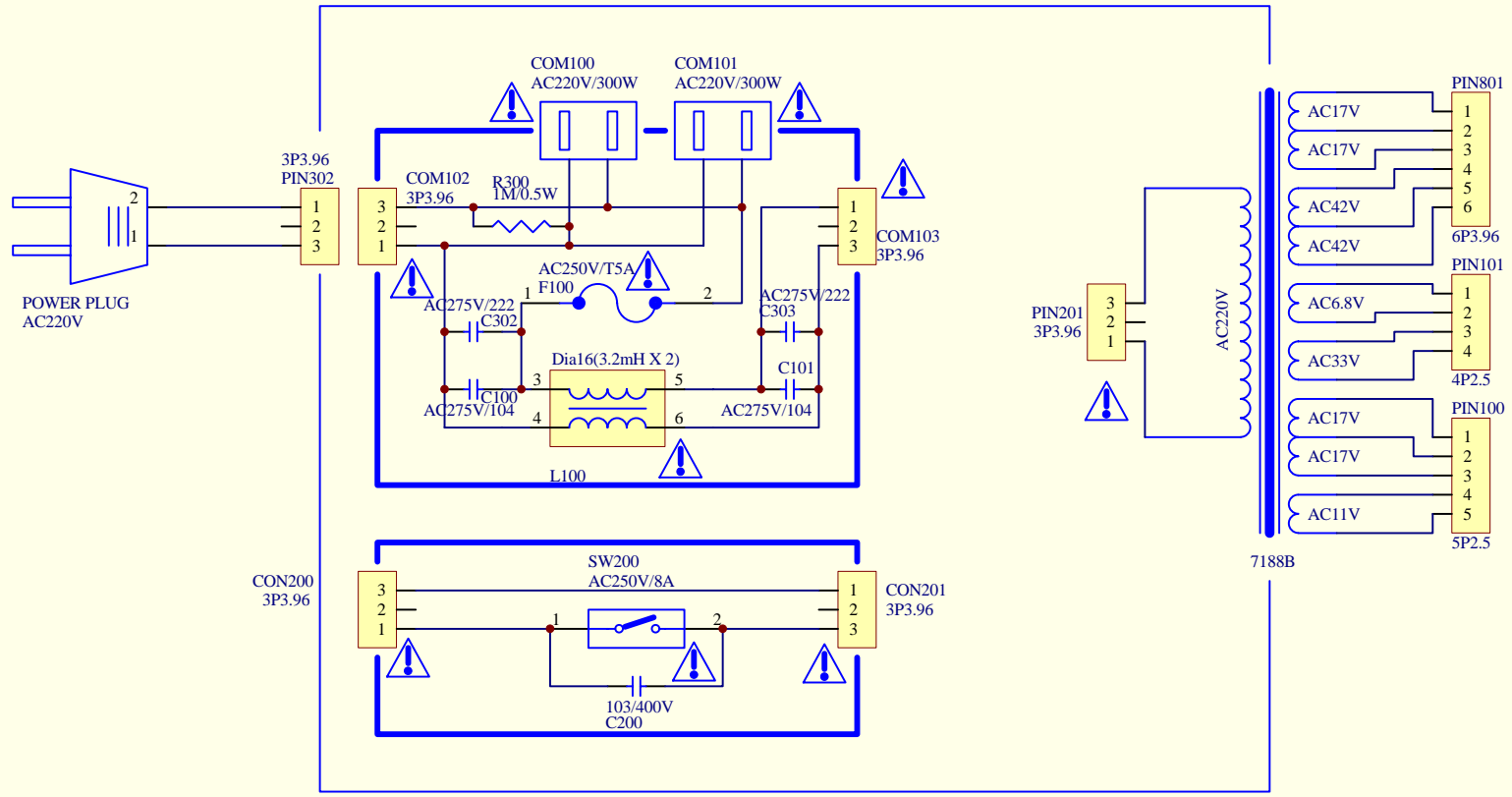
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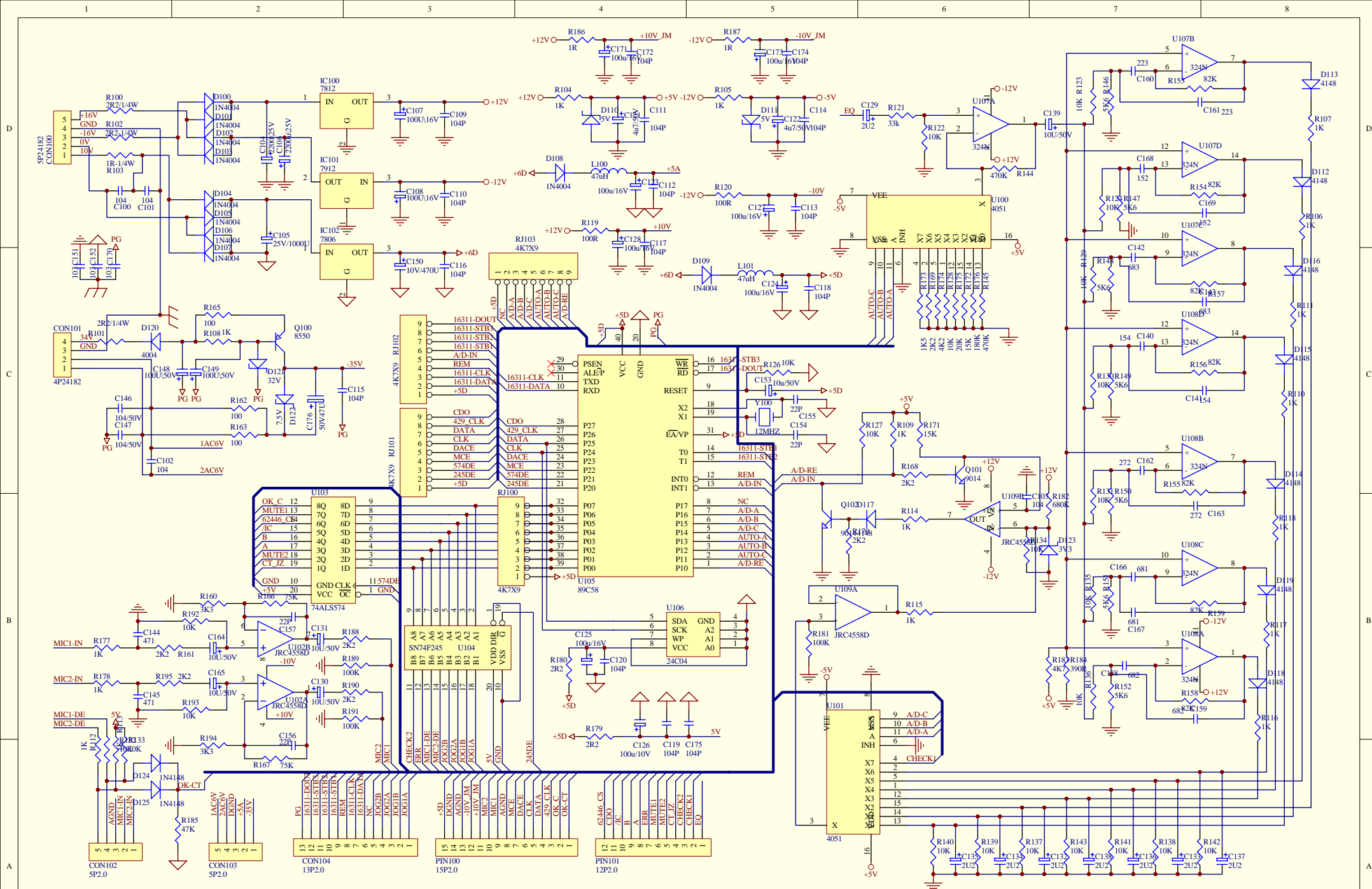








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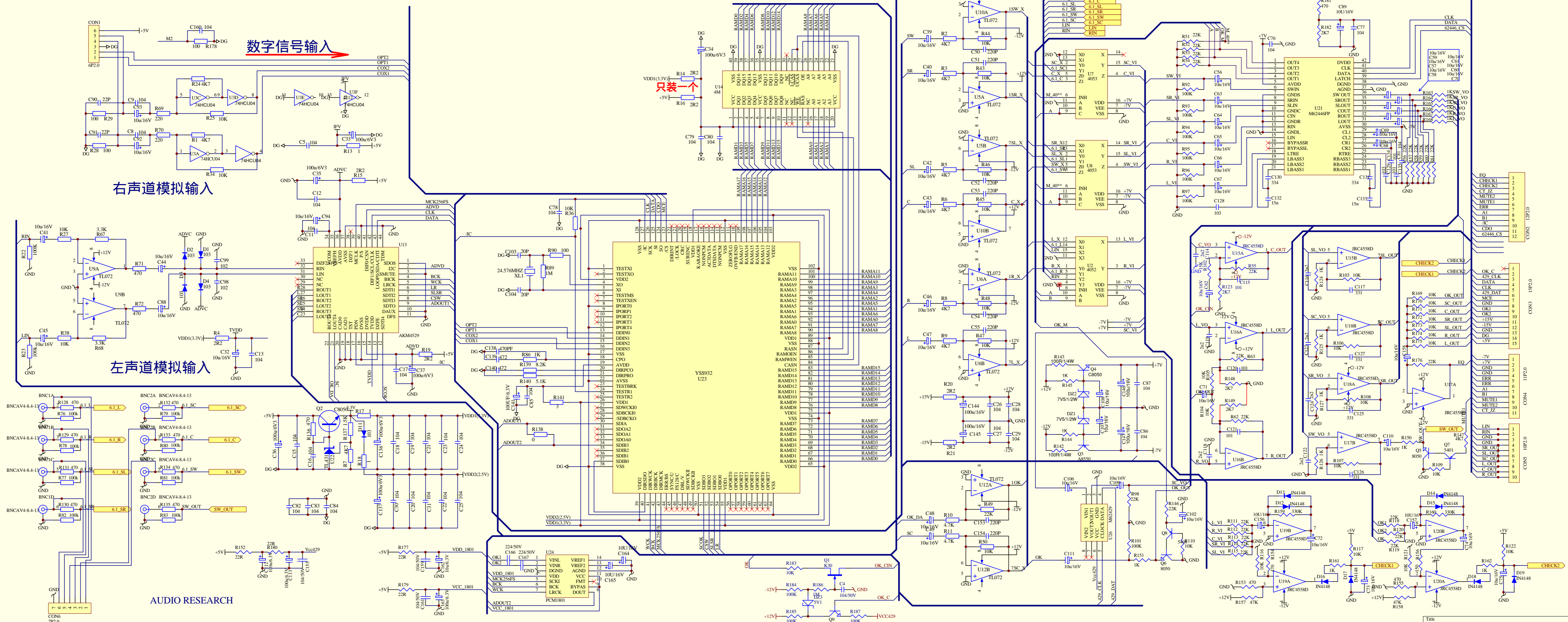
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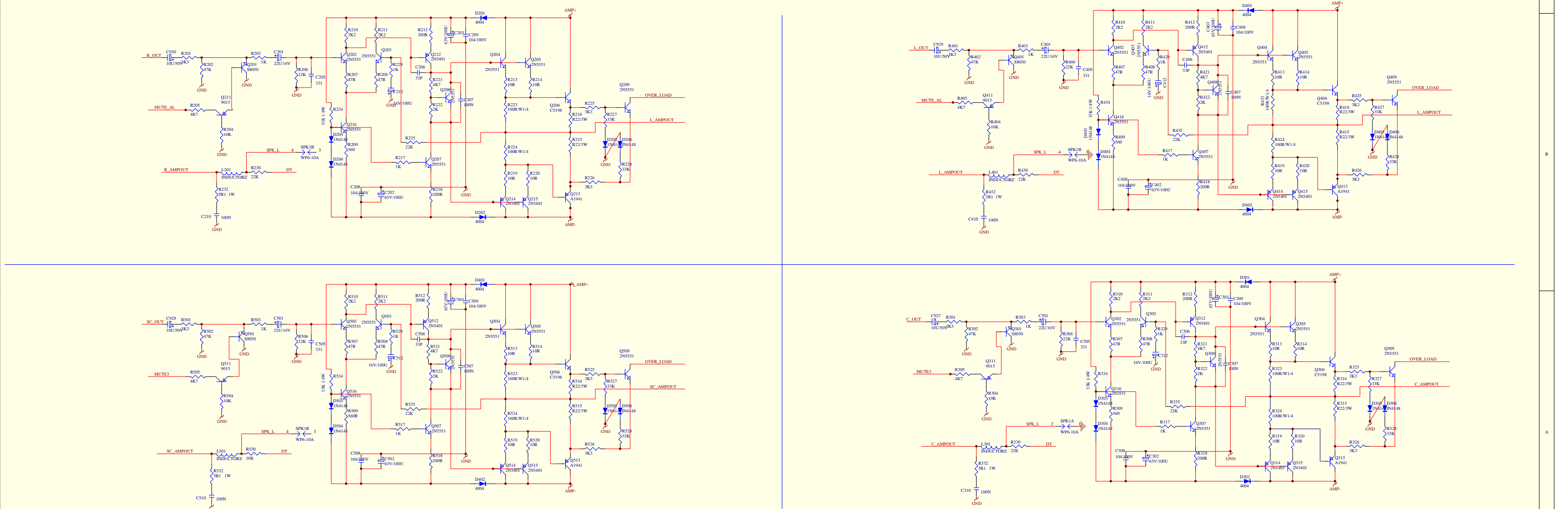
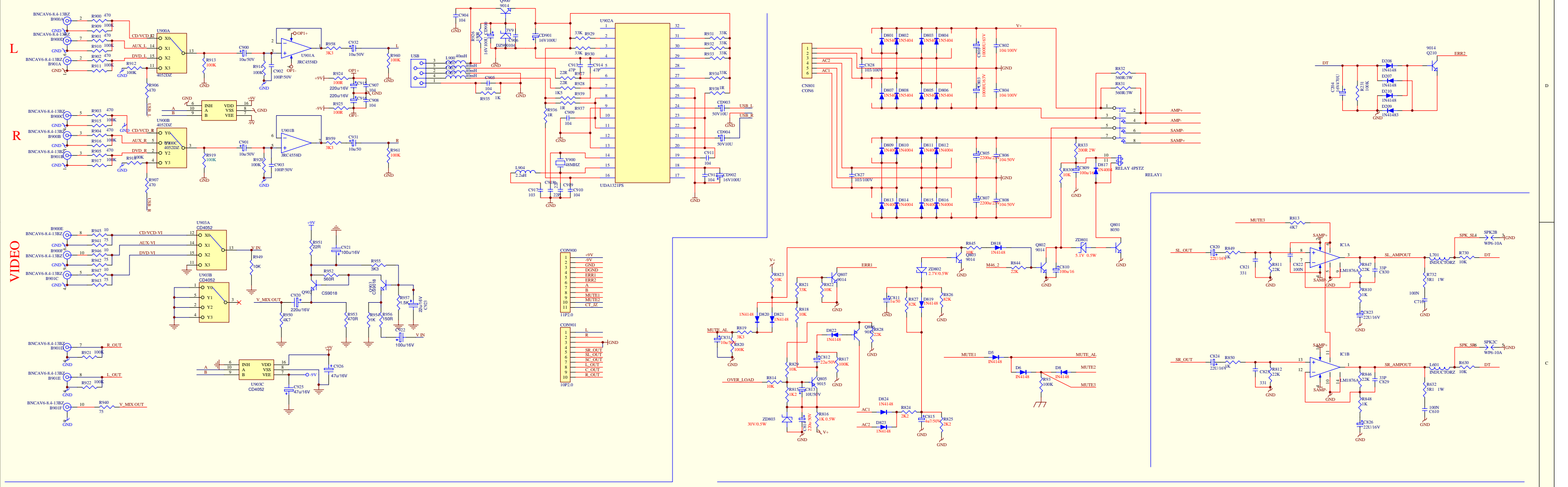
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AUDIO RESEARCH



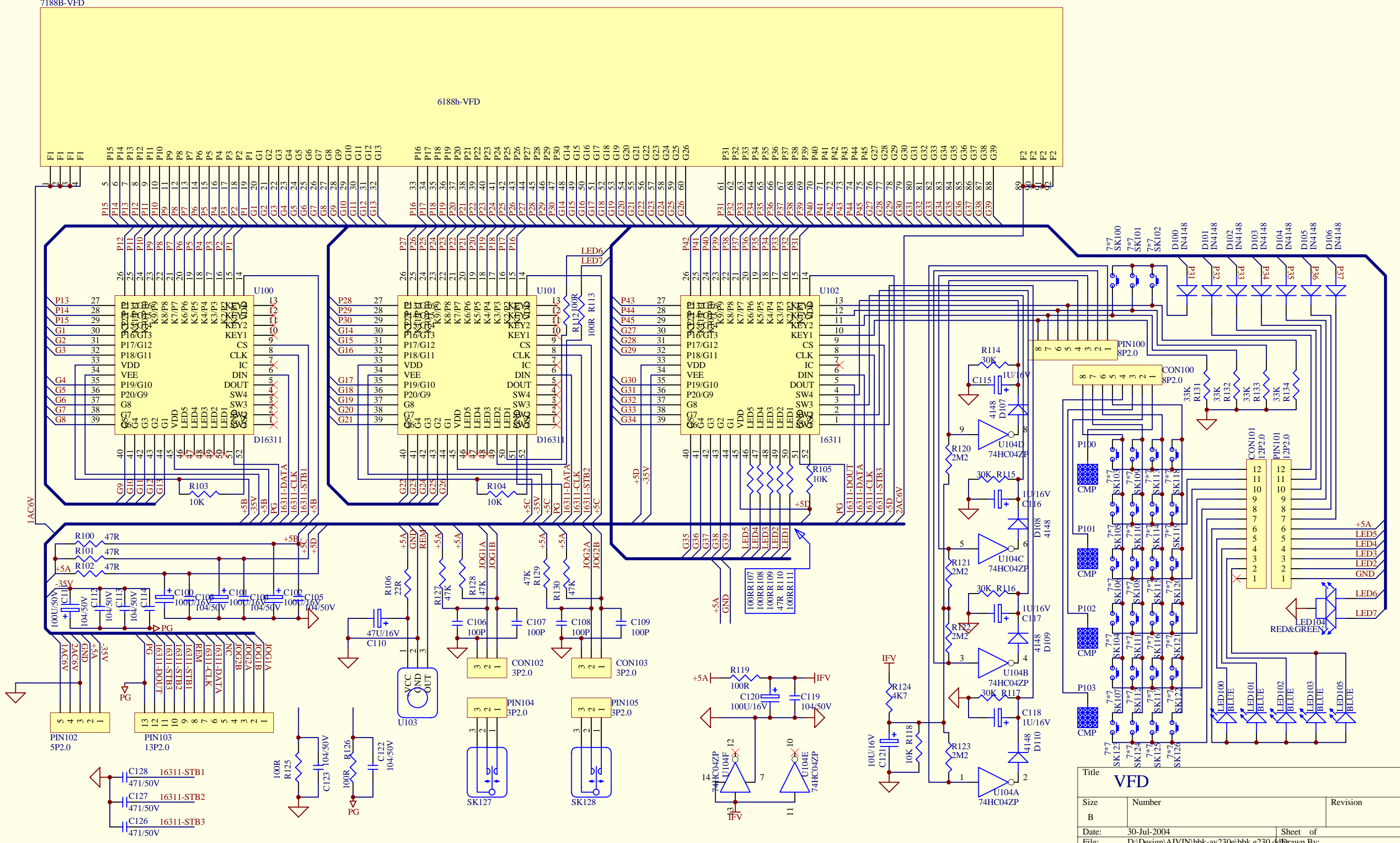
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VFD100
7188B-VFD

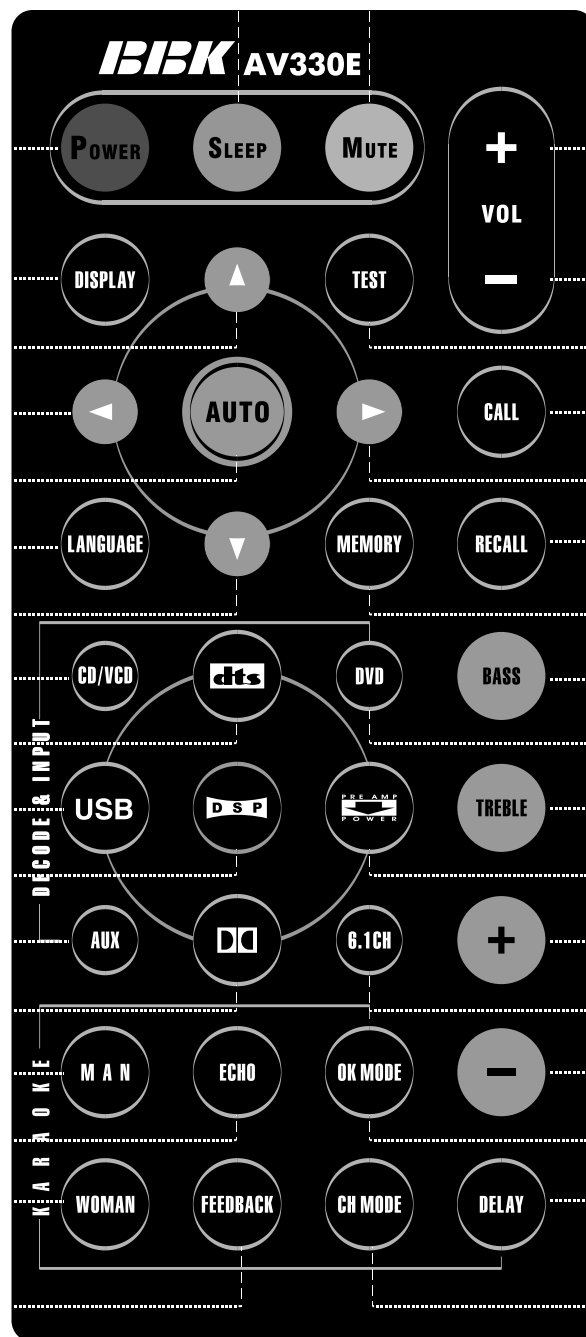
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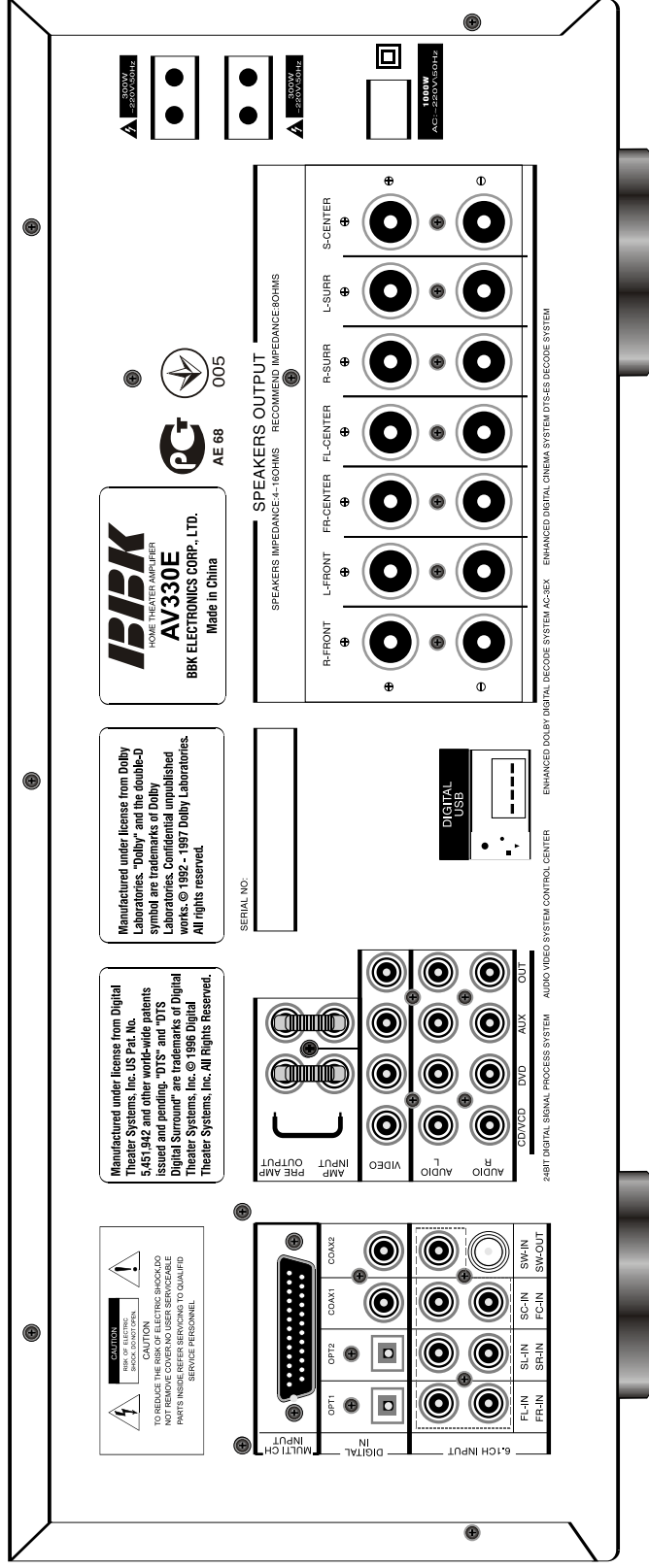
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AV330E PANEL



AV330E REMOTE CONTROLLER



CAUTION
 TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT OPEN THE COVER.
 NOT REMOVE COVER. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

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 HOME THEATER AMPLIFIER
AV330E
 BBK ELECTRONICS CORP., LTD.
 Made in China

PG
 AE 68
 005

6.1CH INPUT
 OPT1
 OPT2
 COAX1
 COAX2

PRE AMP INPUT
VIDEO
AUDIO L
AUDIO R
 DVD
 AUX
 OUT

DIGITAL USB

SPEAKERS OUTPUT
 SPEAKERS IMPEDANCE: 4-16 OHMS RECOMMEND IMPEDANCE: 8 OHMS

R-FRONT L-FRONT FR-CENTER FL-CENTER R-SURR L-SURR S-CENTER

300W
250V AC

300W
250V AC

1000W
AC 220V 50/60Hz

24BIT DIGITAL SIGNAL PROCESS SYSTEM AUDIO VIDEO SYSTEM CONTROL CENTER ENHANCED DOLBY DIGITAL DECODE SYSTEM AC-BX ENHANCED DIGITAL CINEMA SYSTEM DTS-ES DECODE SYSTEM

AV330E REAR PANEL