

jWIN Electronics Corp.

SERVICE MANUAL

23"/27"/30"/32"/37" TFT-LCD TV/MONITOR

Model Number

JV-DTV23

JV-DTV27

JV-DTV30

JV-DTV32

JV-DTV37

March 2005

Version 1.0 English

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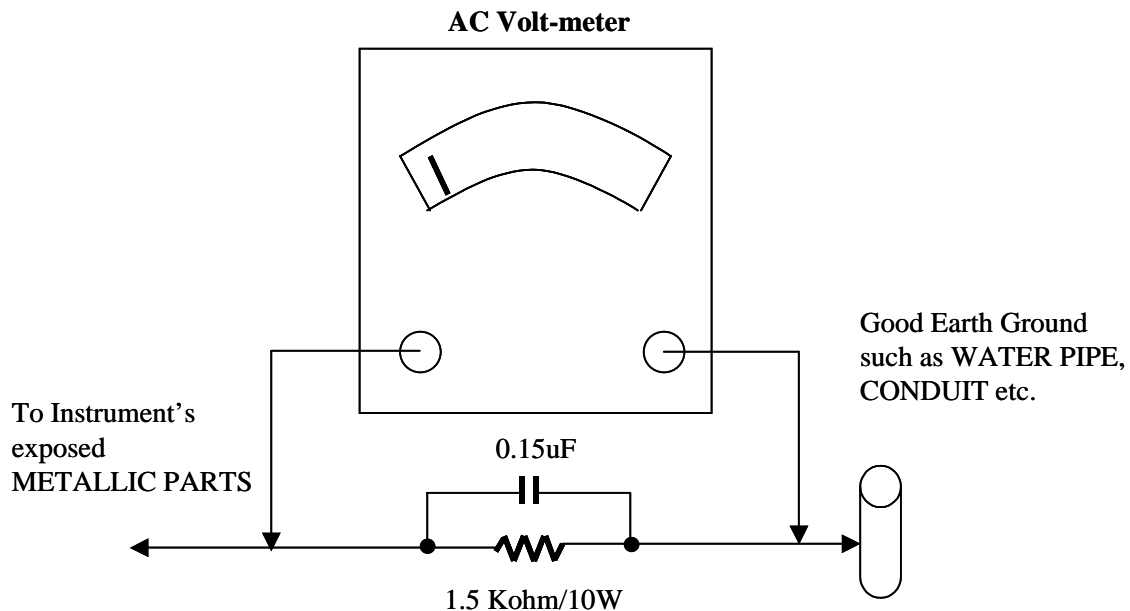
1. Safety Instructions

Important Safety Notice

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These parts are identified by in the Schematic Diagram and Replacement Parts List. It is essential that these special safety parts should be replaced with the same components as recommended in this manual to prevent Shock, Fire, or other Hazards. Do not modify the original design without permission of manufacturer.

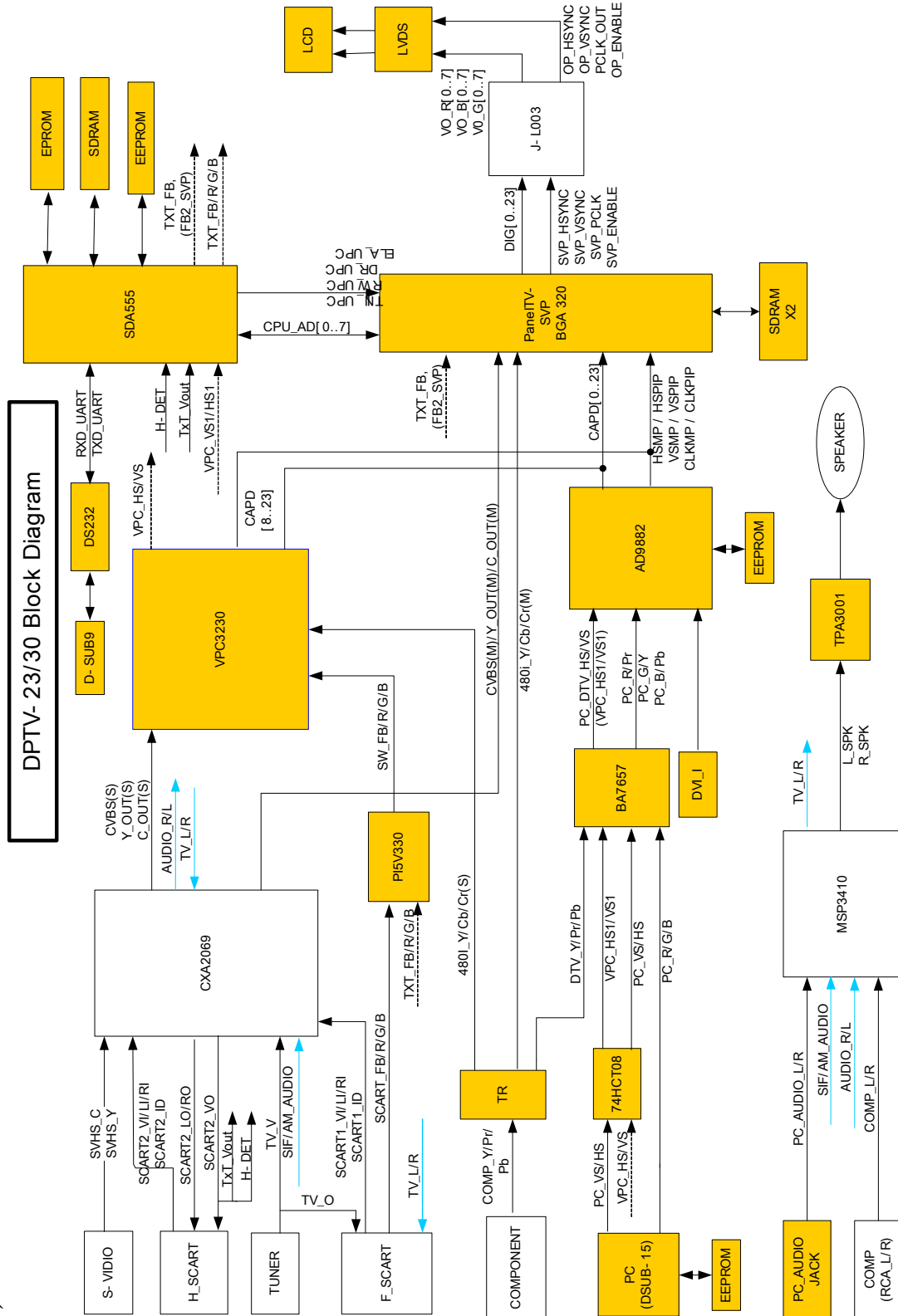
Leakage Current Hot Check (See below Figure)

Plug the AC cord directly into the AC outlet. Do not use a line Isolation Transformer during this check. Connect 1.5K/10watt resistor in parallel with a 0.15uF capacitor between a known good earth ground (Water Pipe, Conduit, etc) and the exposed metallic parts. Measure the AC voltage across the resistor using AC voltmeter with 1000 ohms/volt or more sensitivity. Reverse plug of the AC cord into the AC outlet and repeat AC voltage measurements for each exposed metallic part. Any voltage measured must not exceed 0.75 volt RMS, which is, corresponds to 0.5mA. In case any measurement is out of the limits specified, there is possibility of shock hazard and the set must be checked and repaired before it is returned to the customer.

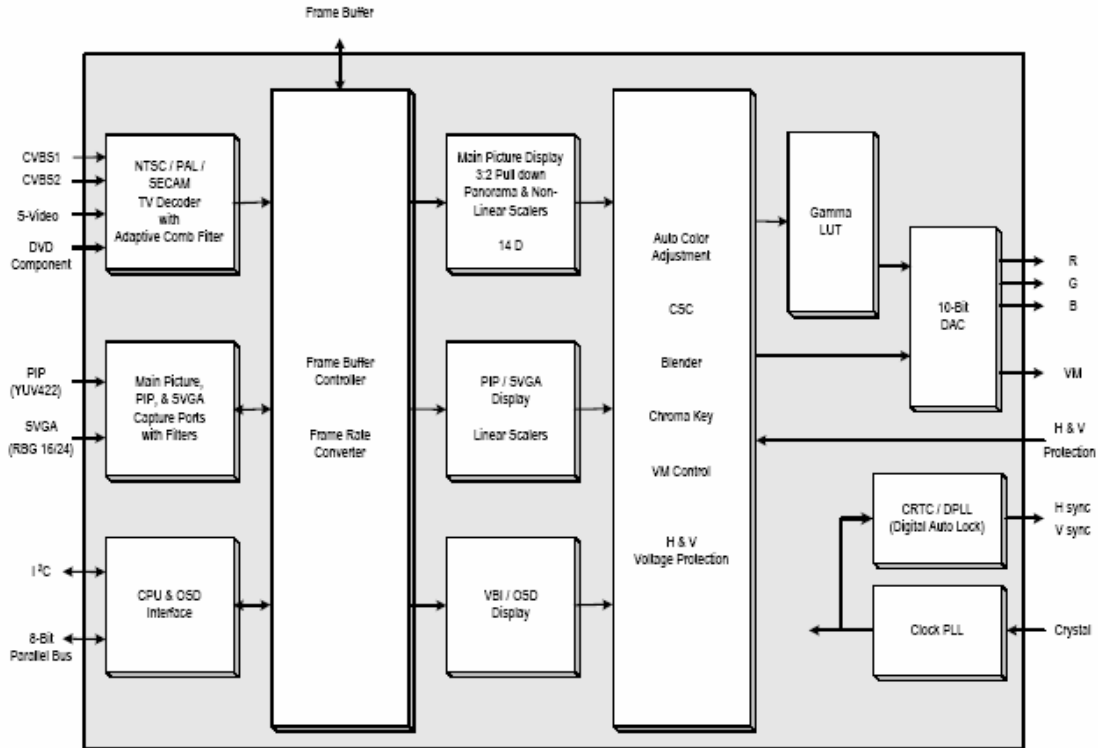


2. BLOCK DIAGRAM

■ BLOCK DIAGRAM



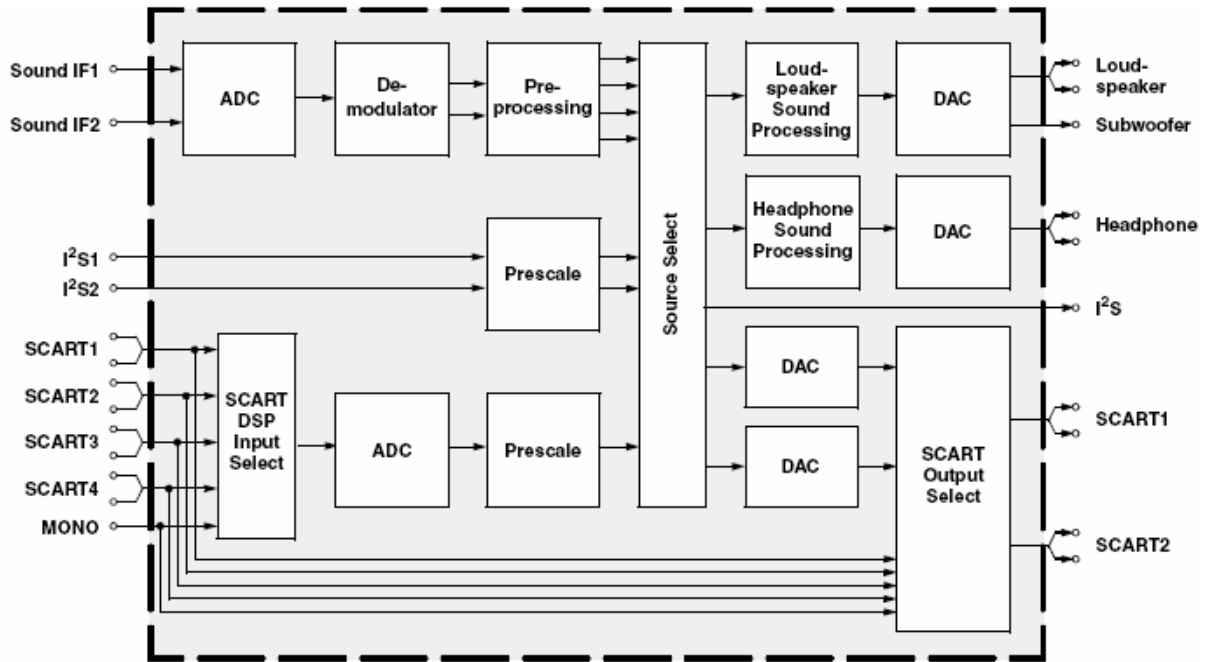
■ IC FUNCTIONAL BLOCK DIAGRAM (PanelTV-SVP)



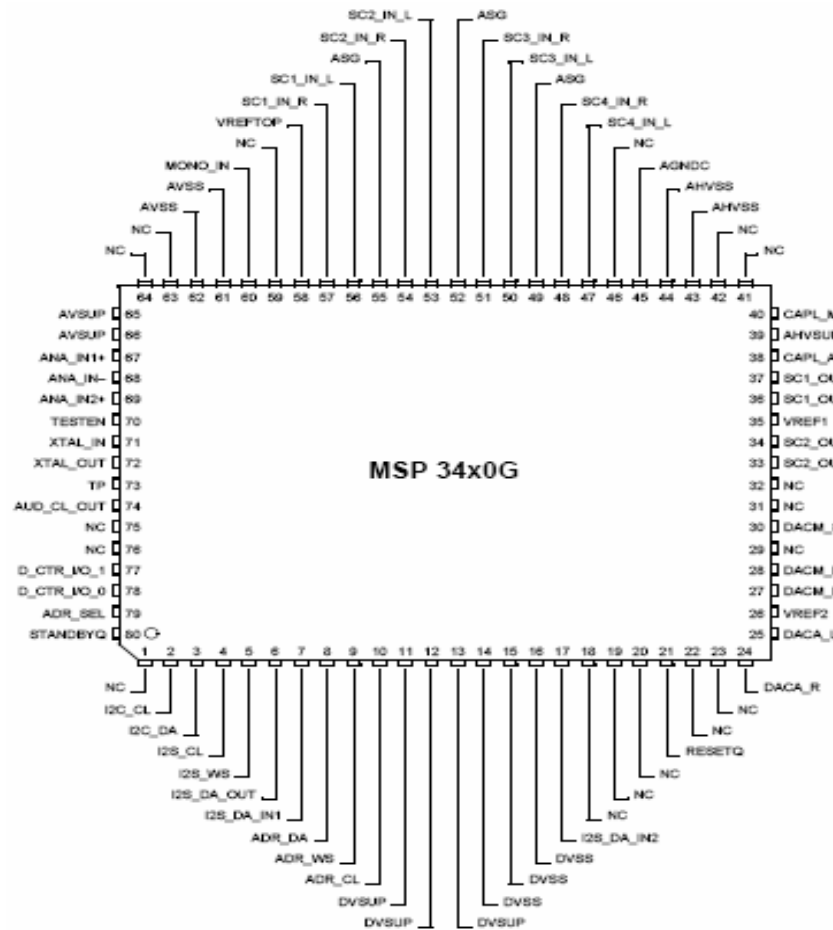
■ IC BALL ASSIGNMENT (PanelTV-SVP)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
A	VLF	MLF	AVSS1	DIO00	DIO02	DIO06	DIO10	MD61	MD57	MD53	MD50	MD47	VDDH	VSS	MD38	MD34	DQM5	BA	MAA8	MAA4	A	
B	AVDD_A	AVSS2	AVDD1	DIO01	DIO03	DIO07	DIO11	MD60	MD56	MD52	MD49	MD46	MD44	MD41	MD37	MD33	DQM5	MAA9	MAA5	MAA3	B	
C	AVDD_A	AVSS_A	AVDD2	ADVDD2	DIO04	DIO08	MD43	MD59	MD55	MD51	MD48	MD45	MD43	MD40	MD36	MD32	DQM4	MAA6	MAA2	MAA1	C	
D	GND_B_VCO	GND_B_VCO	AVSS_A	XTL1	DIO05	DIO09	MD62	MD58	MD54	VDDH	VDDH	VDD	MD42	MD39	MD35	DQM7	MAA7	MAA0	CAS_	WE_	D	
E	FILETR	FILTER	AVDD_D	XTLO	VDDH	VDDH	VDD	VDD					VDD	VDD	VDDH	VDDH	VDDH	C50_	C51_	RAS_	E	
F	AD7	AVSS_D	AVSS_D	AVDD_D	VDDH											VDDH	MCLK	DQM3	DQM2	DQM1	F	
G	AD3	AD4	AD5	AD6	VDD											VDD	MD1	MD0	DQM0	VSS	G	
H	PWM	AD6	AD1	AD2	VDD			VSS	VSS	VSS	VSS	VSS	VSS			VDD	MD4	MD3	MD2	VDDH	H	
J	SD	RD_	WR_	ALE_				VSS	VSS	VSS	VSS	VSS	VSS			VDDH	MD7	MD6	MD5	MD5	J	
K	AVSS1_ADC	AVDD1_ADC	INT	SC				VSS	VSS	VSS	VSS	VSS	VSS			VDD	MD10	MD9	MD8	MD8	K	
L	CVBS4	CVBS3	CVBS2	CVBS1				VSS	VSS	VSS	VSS	VSS	VSS			VDD	MD13	MD12	MD11	MD11	L	
M	OCLP1	CHROMA_A_OUT	CVBS_OUT	AVDD2_ADC				VSS	VSS	VSS	VSS	VSS	VSS				MD17	MD16	MD15	MD14	M	
N	VDD_ADC	AVSS2_ADC	AVSS2_ADC	AVDD2_ADC	VDD			VSS	VSS	VSS	VSS	VSS	VSS			VDD	MD20	MD19	MD18	VDDH	N	
P	VSS_ADC	AVDD3_ADC	AVSS3_ADC	C	VDD											VDD	MD23	MD22	MD21	VSS	P	
R	CR	OCLP2	AVDD4_ADC	AVSS4_ADC	VDDH											VDDH	MD27	MD26	MD25	MD24	R	
T	AVSS4_ADC	RB1	RT1	VSSP	VDDH	VDDH	VDD	VDD					VDD	VDD	VDDH	VDDH	VDDH	VDDH	MD30	MD29	MD28	T
U	RT2	RB2	OCLP3	PS	CAPD18	CAPD14	CAPD10	DVDD_D_B	ARE	ABI	AVSS_B_G	AVSS_B_G	HSYNC	CLKPP	HSYNC_MP	VDDH	DIO017	DIO014	DIO012	MD31	U	
V	AVDD_A_DC	CB	RESET	CAPD21	CAPD17	CAPD13	CAPD9	DVSS_D_B	AGD	AVSS_W	AVSS_B_G	AVDD_B_G	VSYNC	HSYNCP_IP	VSYNCP_MP	CAPD5	DIO023	DIO018	DIO015	DIO013	V	
W	AVSS_A_DC	CSEL	CAPD23	CAPD20	CAPD16	CAPD12	CAPD8	AVDD_MUX	AGD	VM	B	AVDD_B_G	HPLB	VSYNCP_IP	CAPD7	CAPD4	CAPD2	DIO022	DIO019	DIO016	W	
Y	TEST	INT2	CAPD22	CAPD19	CAPD15	CAPD11	PASTRELANK	ARD	ABO	R	G	IRSET	VPROT	CLKMP	CAPD6	CAPD3	CAPD1	CAPD0	DIO021	DIO020	Y	

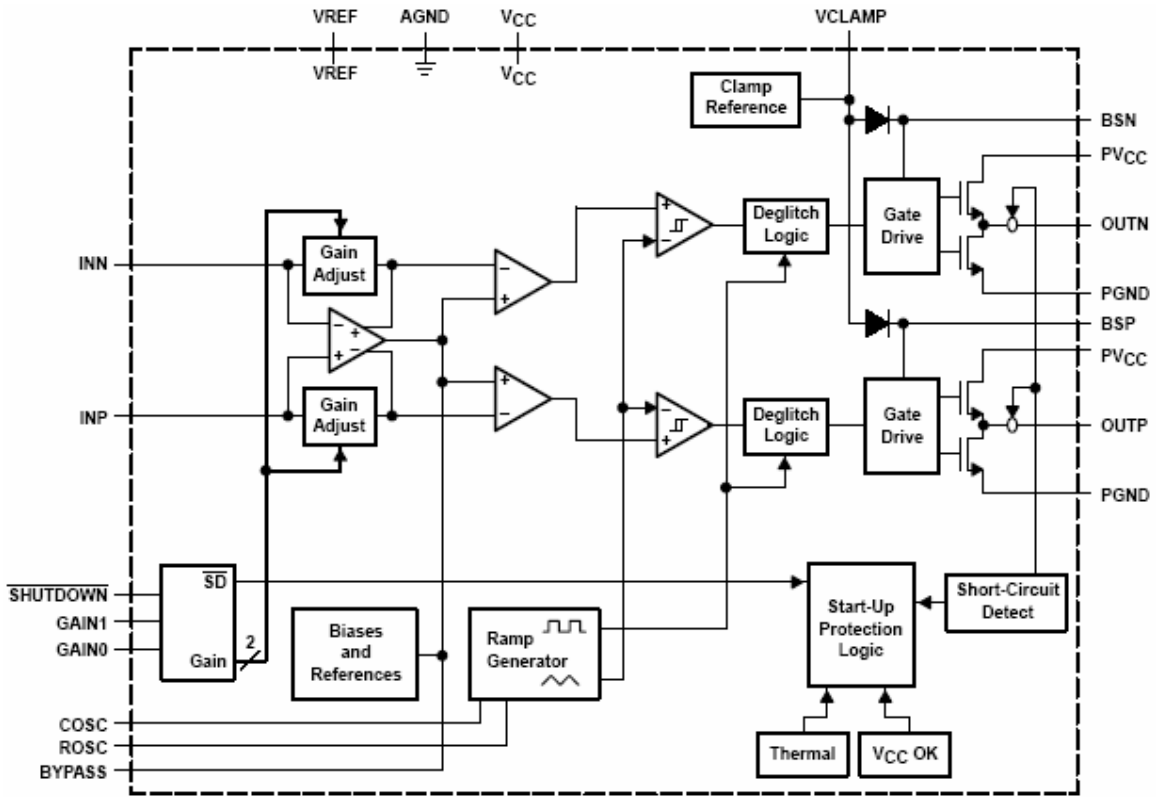
■ IC BLOCK DIAGRAM (MSP3410G)



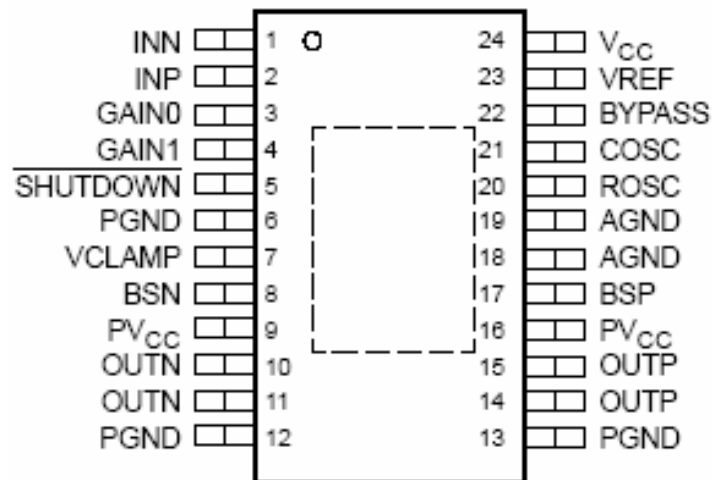
■ IC PIN OUT (MSP3410G)



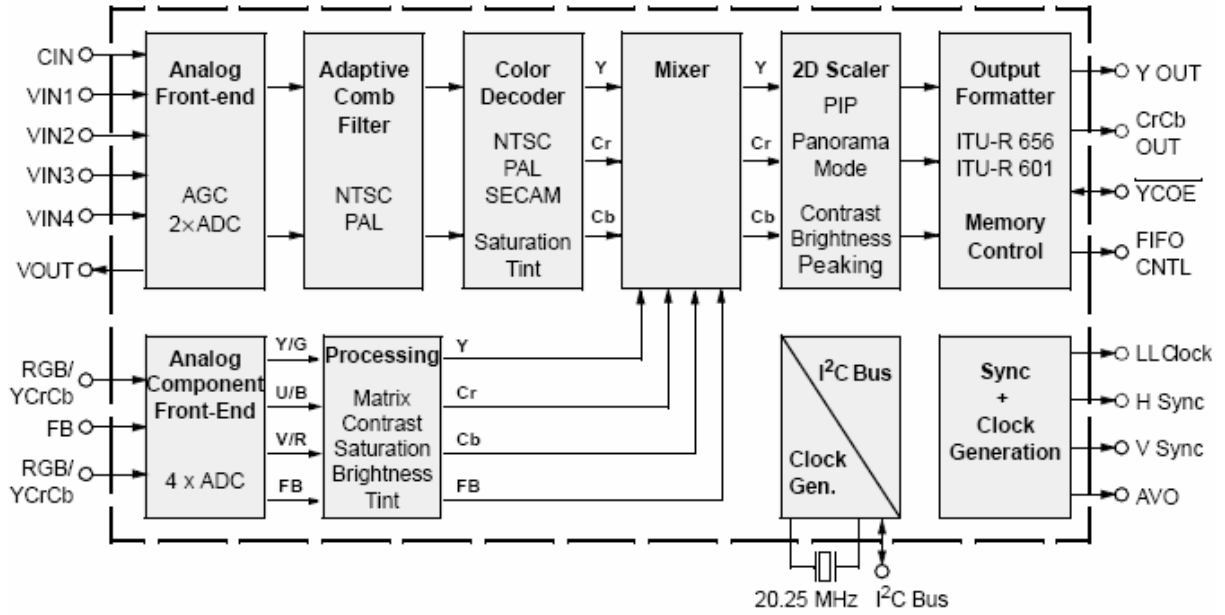
■ IC BLOCK DIAGRAM (TPA3001D2)



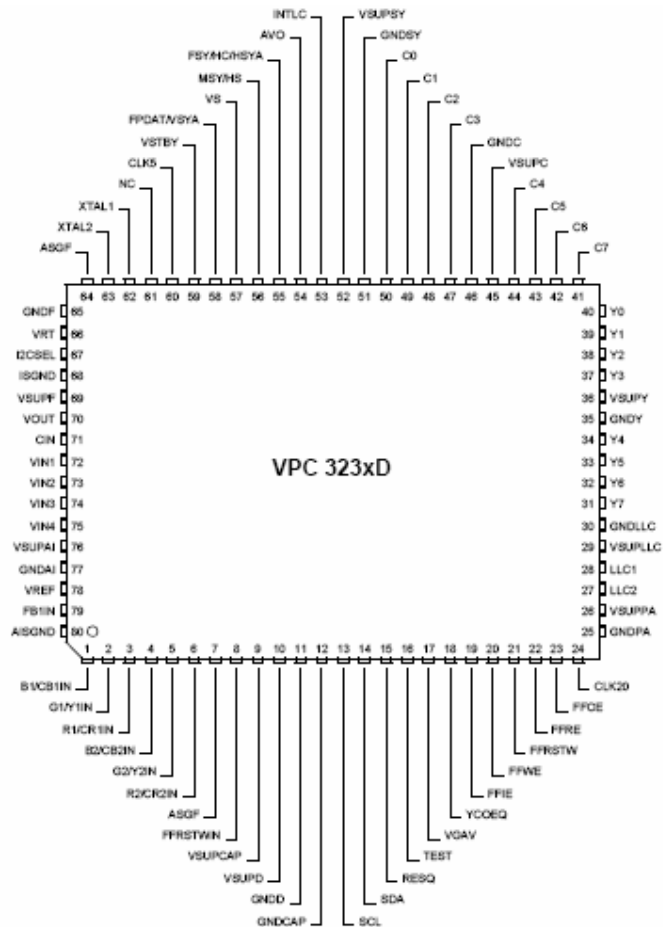
■ IC PIN OUT (TPA3001D2)



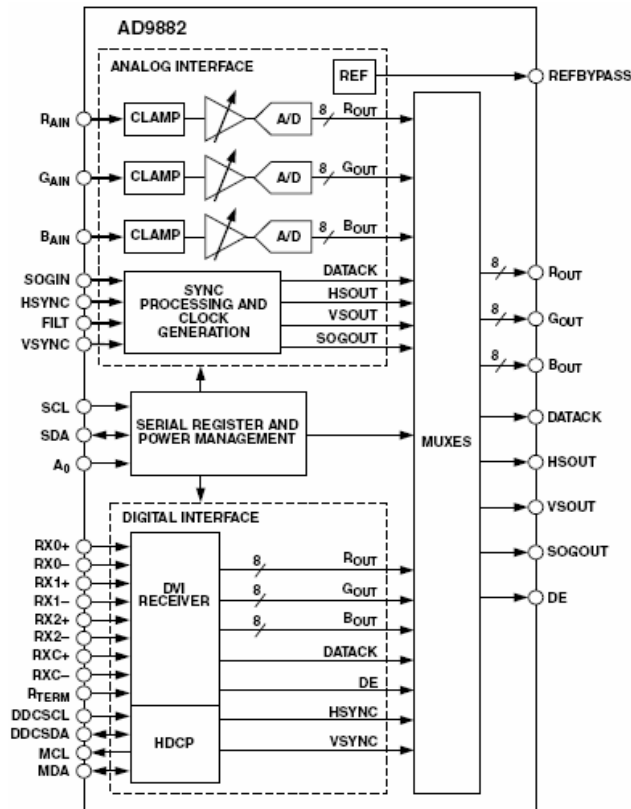
■ IC BLOCK DIAGRAM (VPC3202D-C5)



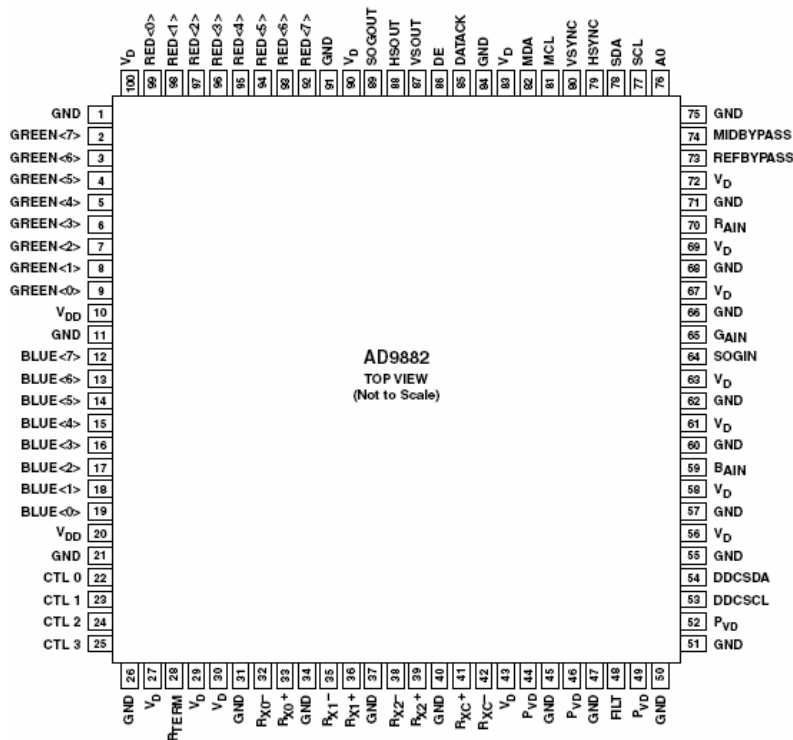
■ IC PIN OUT (VPC3202D-C5)



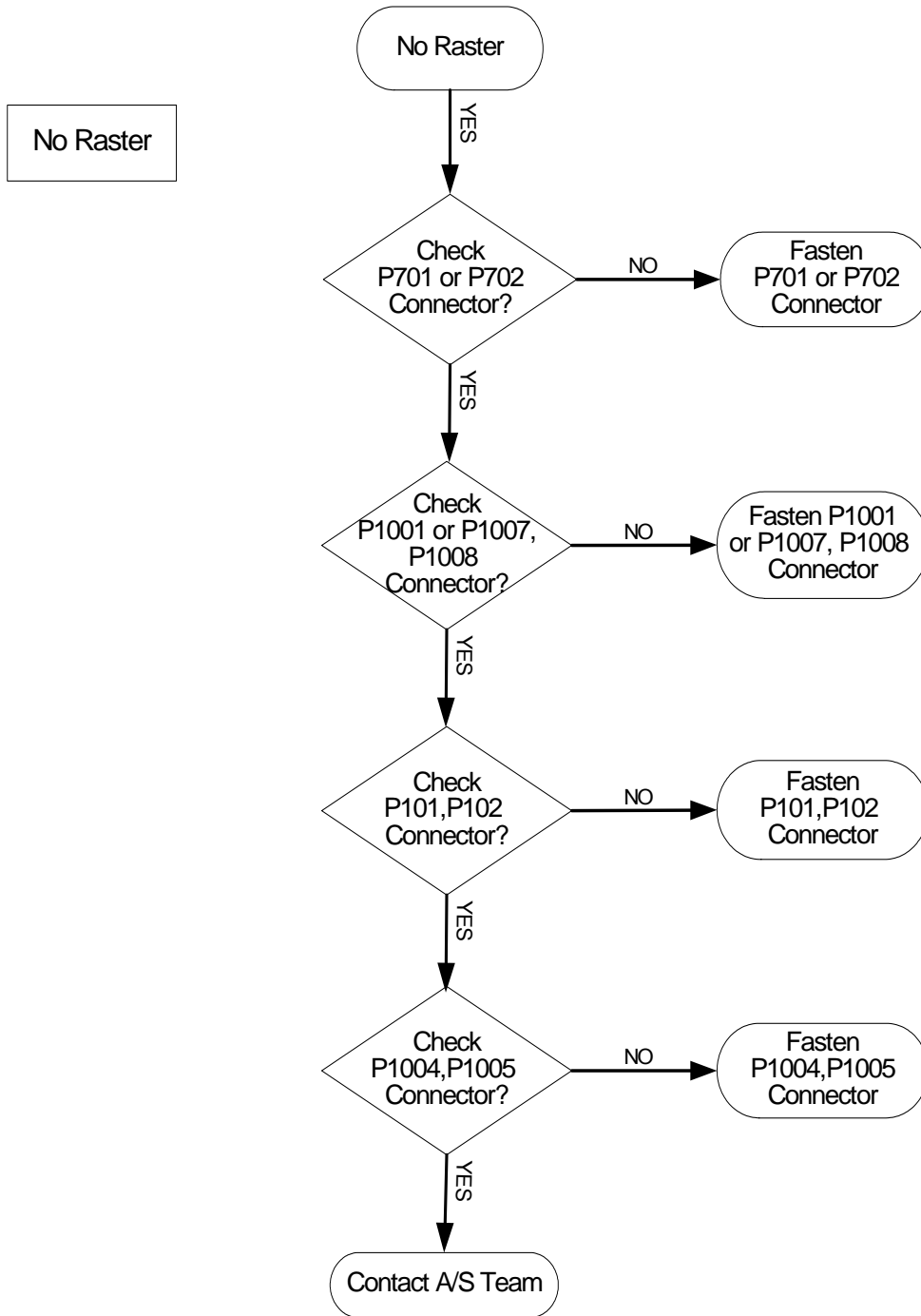
■ IC BLOCK DIAGRAM (AD9882)



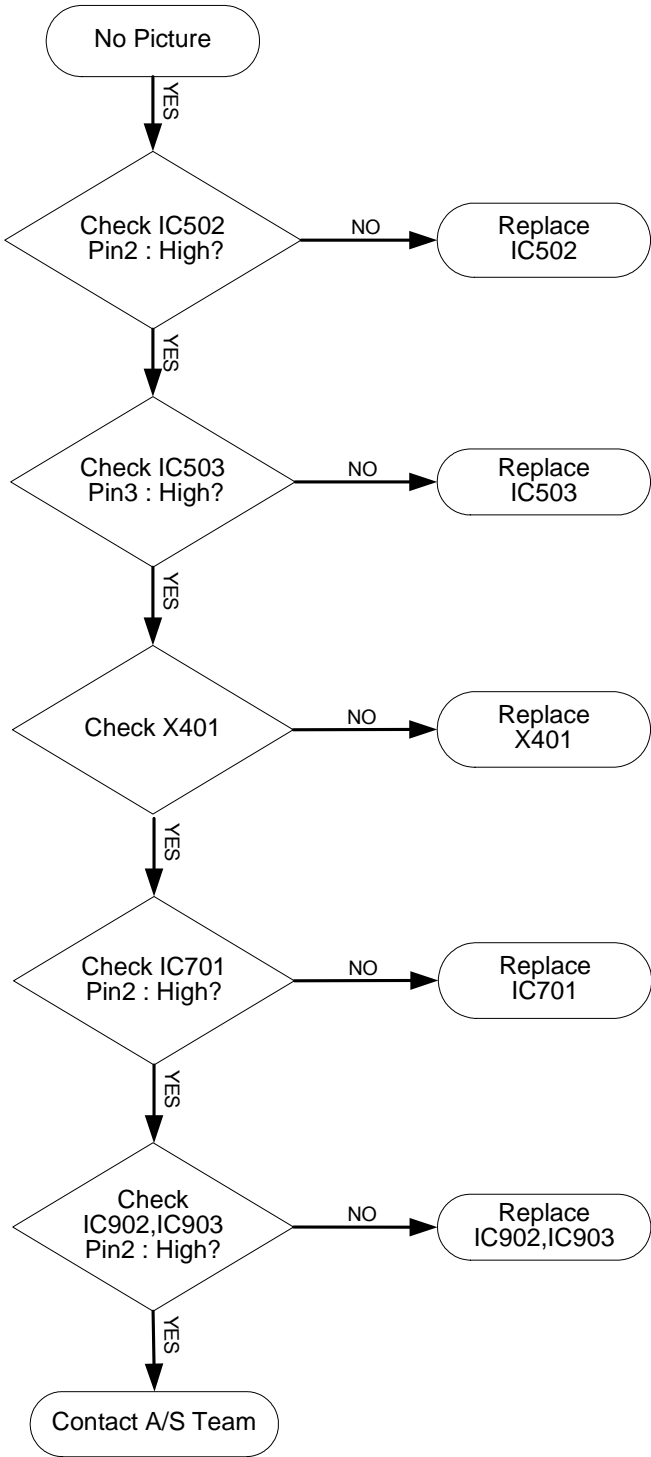
■ IC PIN OUT (AD9882)



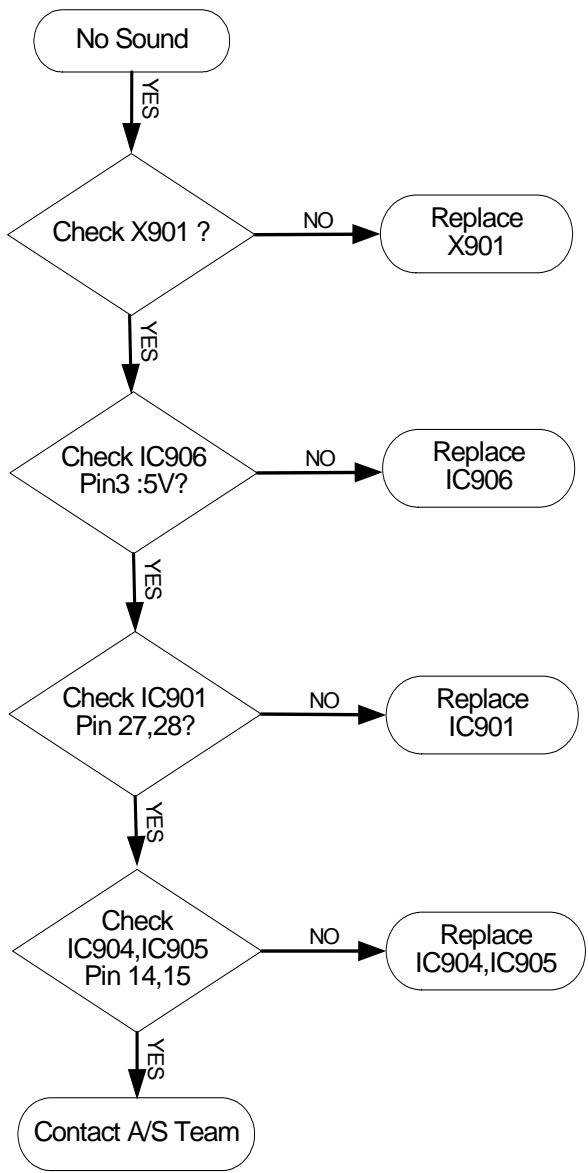
3. TROUBLESHOOTING



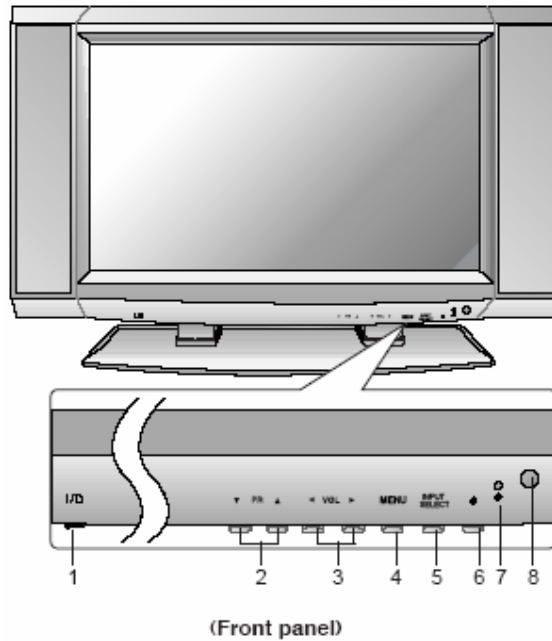
No Picture



No Sound



4. CONTROLS OF FRONT PANEL



1.MAIN POWER

switches the set on or off.

2.D / E (Programme Up/Down)

selects a programme or a menu item.

switches the set on from standby.

3.F / G (Volume Down/Up)

adjusts the volume.

adjusts menu settings.

4.MENU

selects a menu.

5. INPUT SELECT

selects TV, AV1, AV2, S-Video, Component,

RGB-DTV, RGB-PC, RGB-DVI mode.

switches the set on from standby.

6. POWER (I / r)

switches the set on from standby or off to standby.

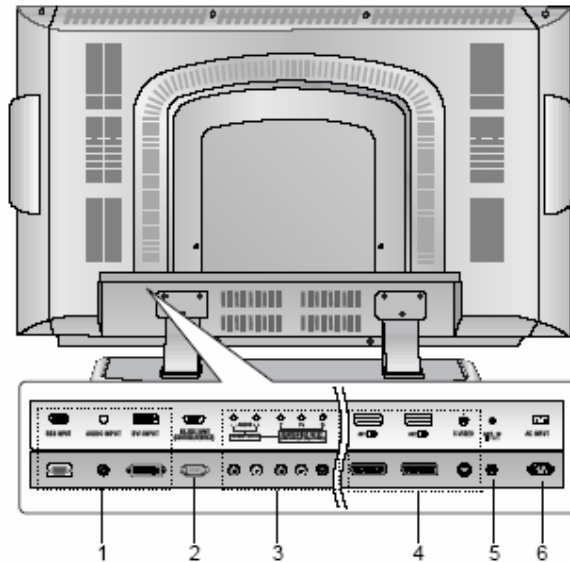
7.POWER/STANDBY INDICATOR (r)

illuminates red in standby mode.

illuminates green when the set is switched on.

8.REMOTE CONTROL SENSOR

5. CONNECTIONS OF BACK PANEL



1. RGB INPUT / AUDIO INPUT / DVI INPUT SOCKETS

Connect the set output socket of the PERSONAL COMPUTER to this socket.

2. RS-232C INPUT(CONTROL/SERVICE) PORT

Connect to the RS-232C port on a PC.

3. AUDIO INPUT / COMPONENT INPUT (480i/480p/720p/1080i) SOCKETS

4. S-VIDEO INPUT

connect video out from an S-VIDEO VCR to the SVIDEO input.

EURO SCART SOCKET

connect the euro scart socket of the VCR to these sockets.

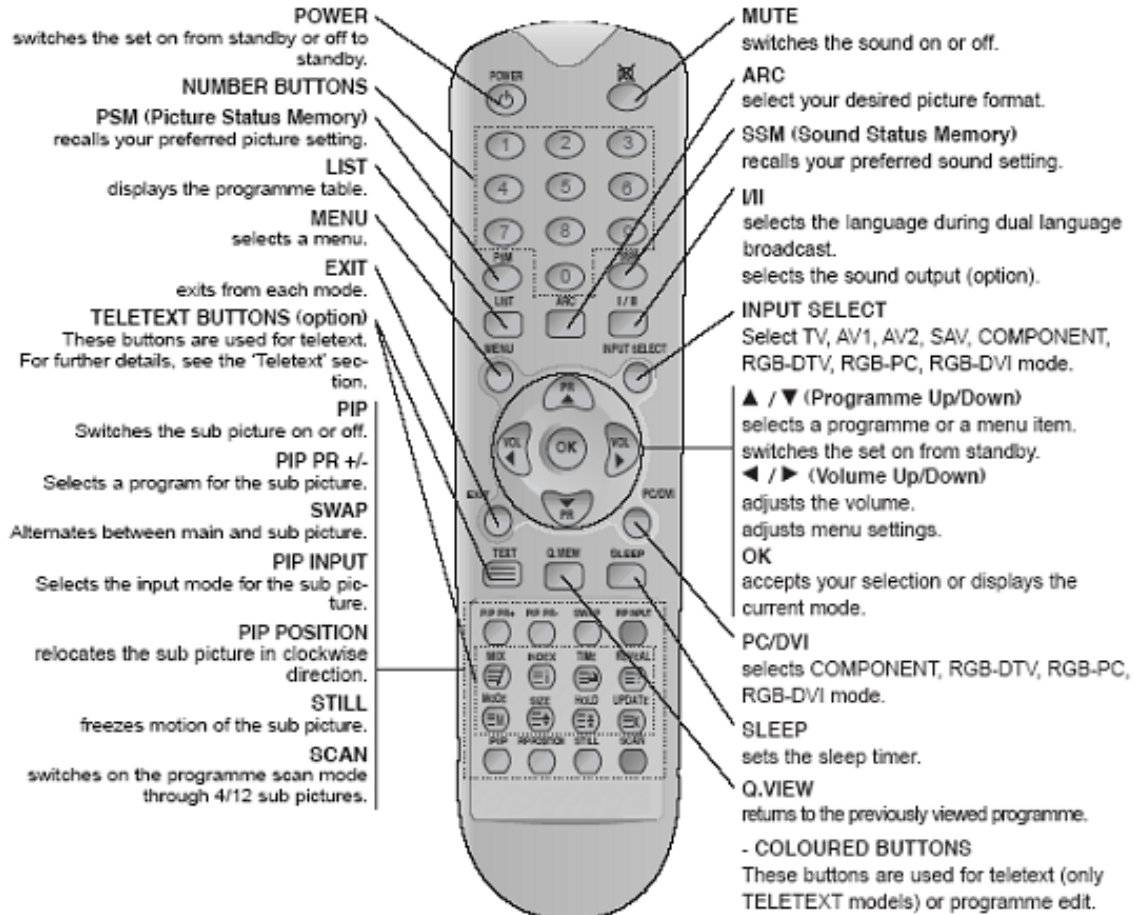
5. AERIAL SOCKET

6. POWER CORD SOCKET

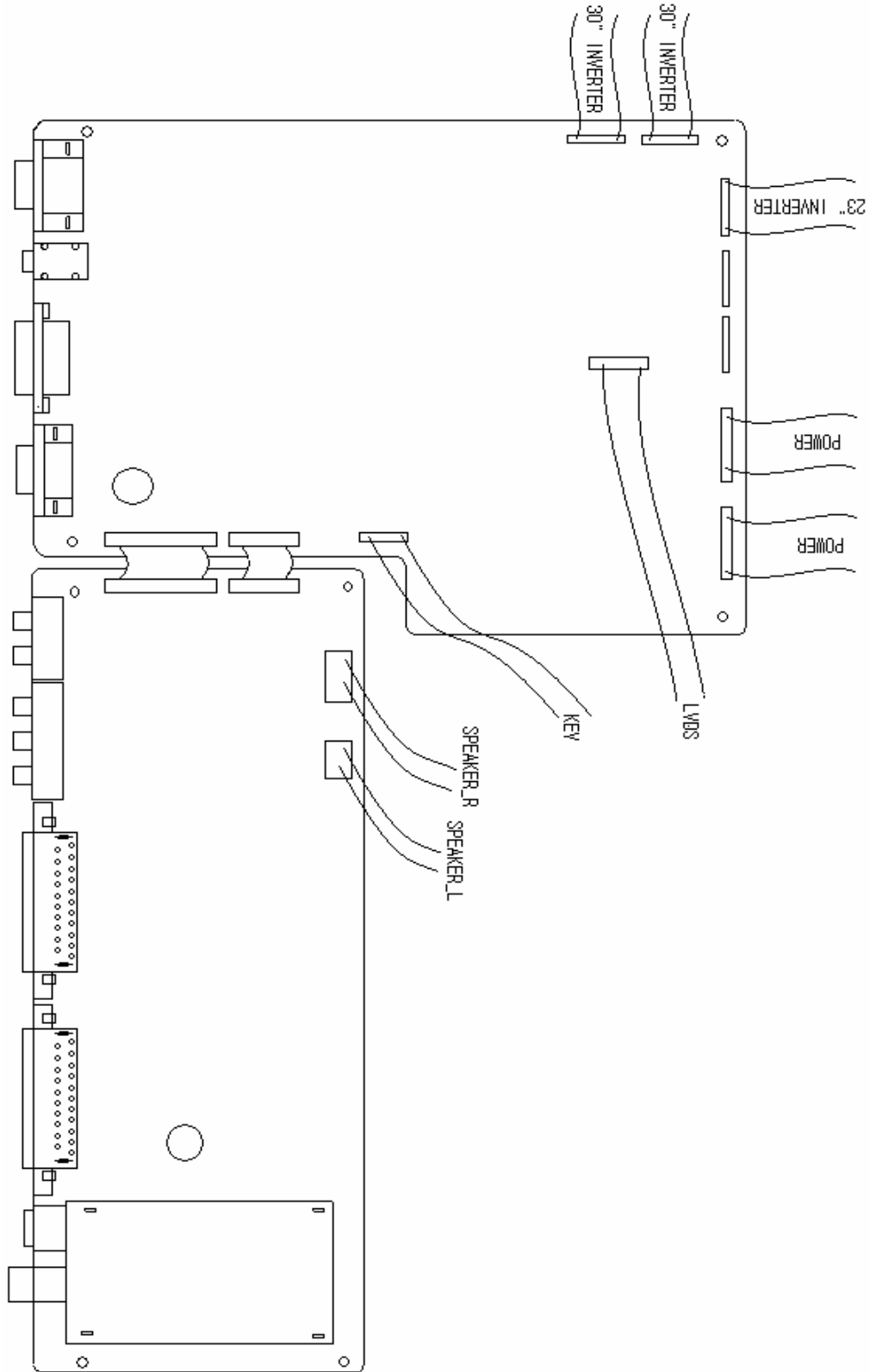
This set operates on an AC power. The voltage is indicated on the Specifications page. Never attempt to operate the set on DC power.

6. REMOTE CONTROL HANDSET

- All the functions can be controlled with the remote control handset.
- Some functions can also be adjusted with the buttons on the front panel of the set.

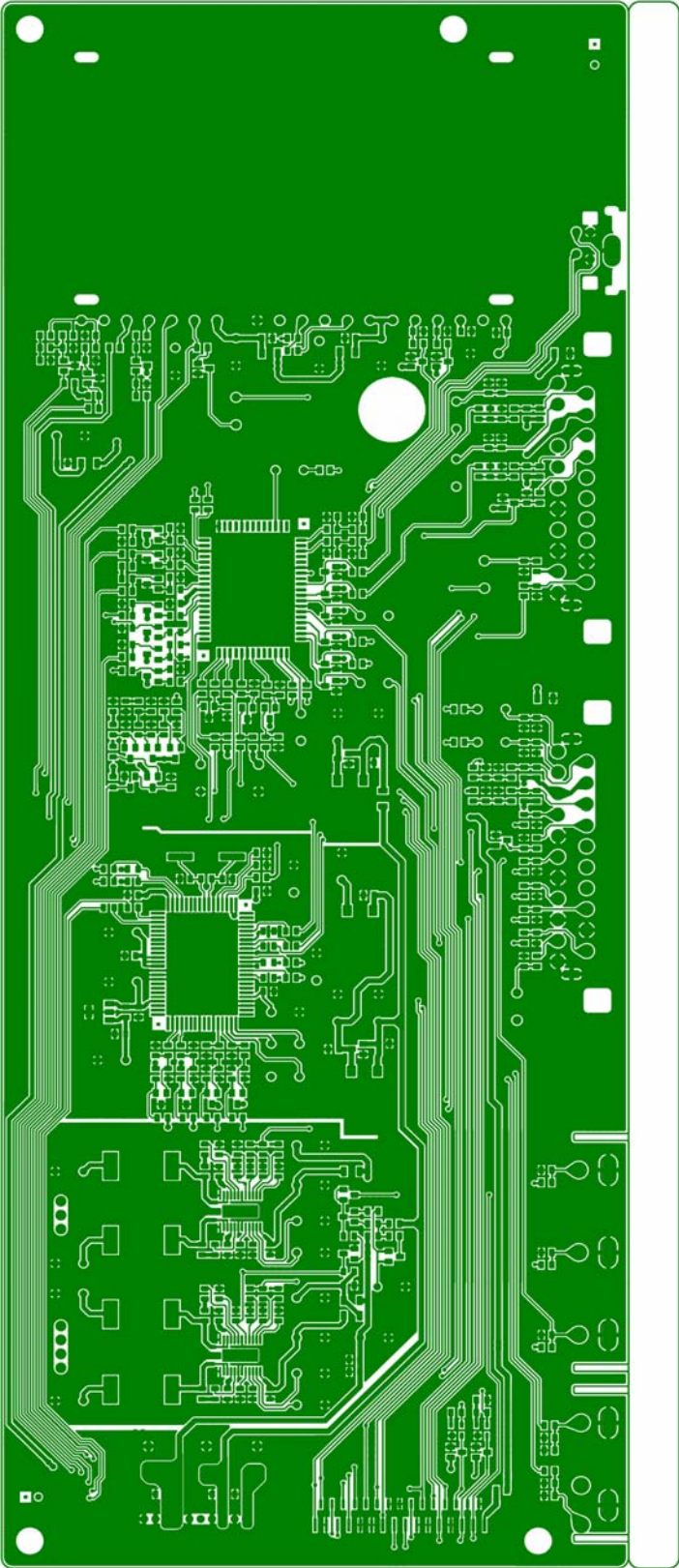


7. CONNECTING DIAGRAM

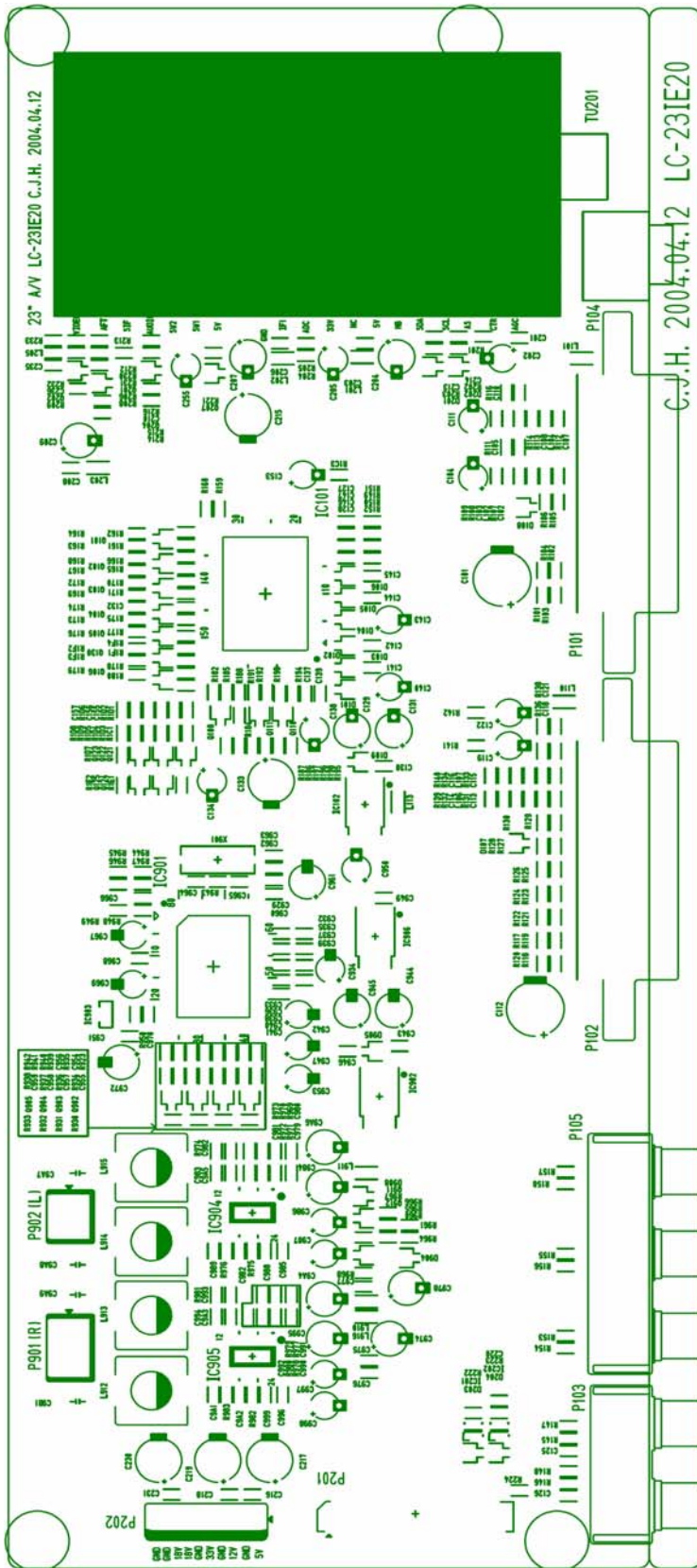


8. PCB LAYOUT

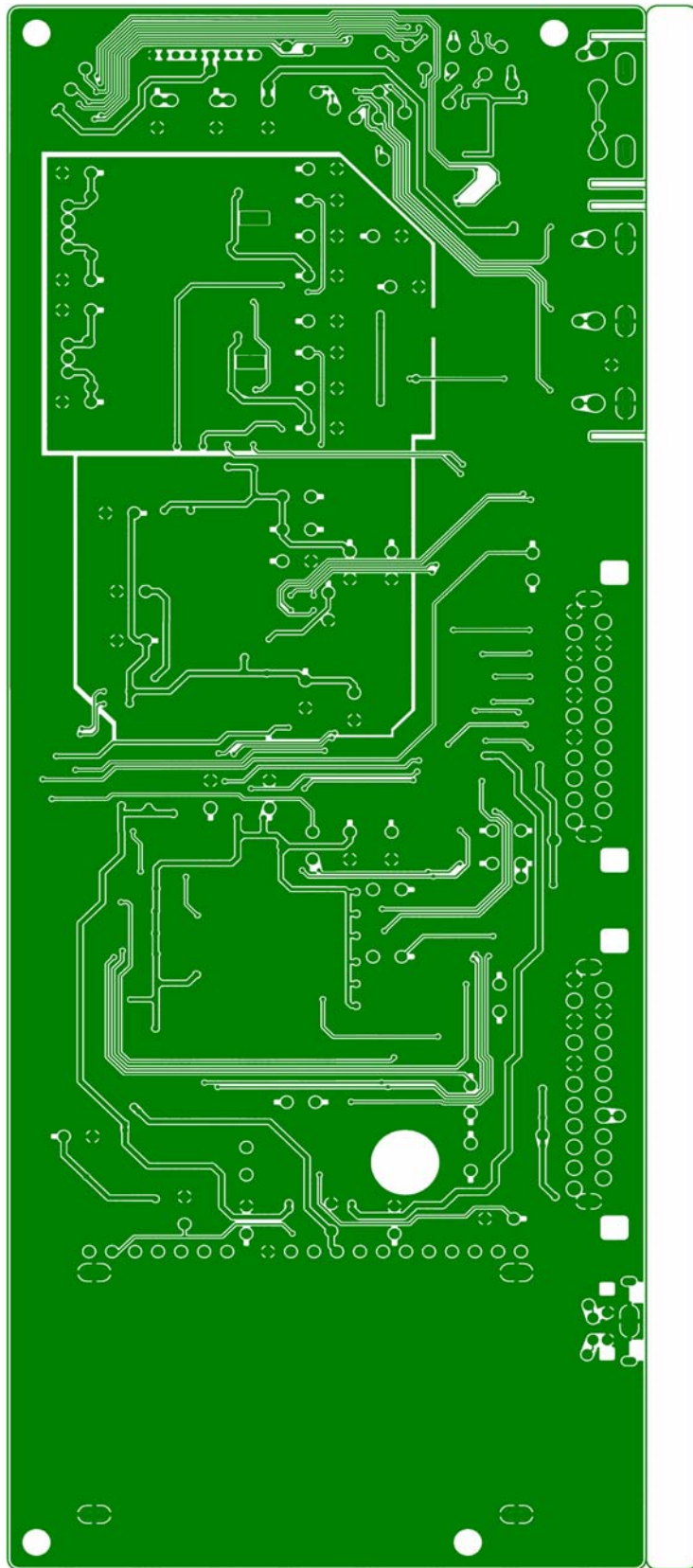
■AV TOP PATTEN



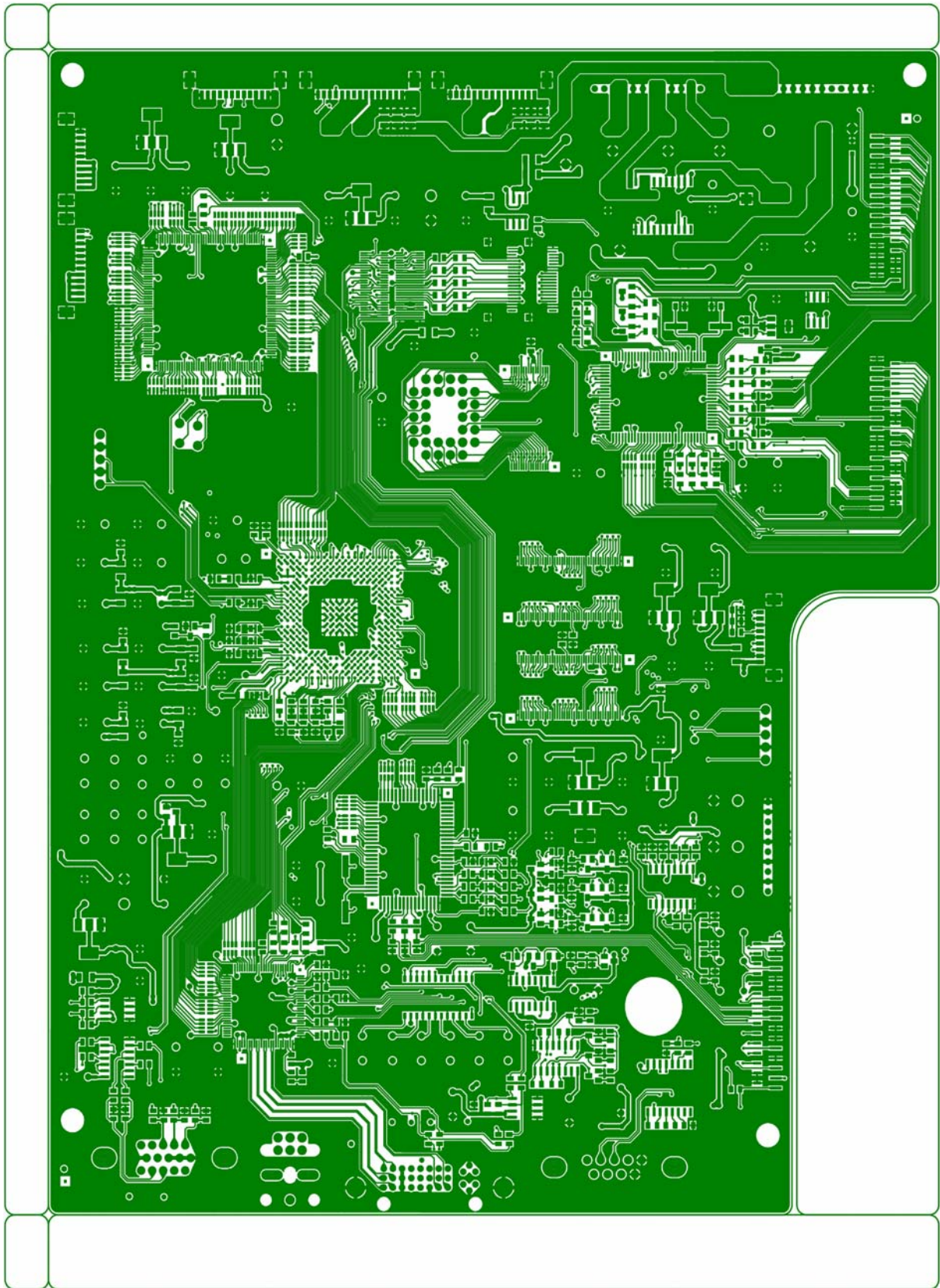
■AV TOP SILK



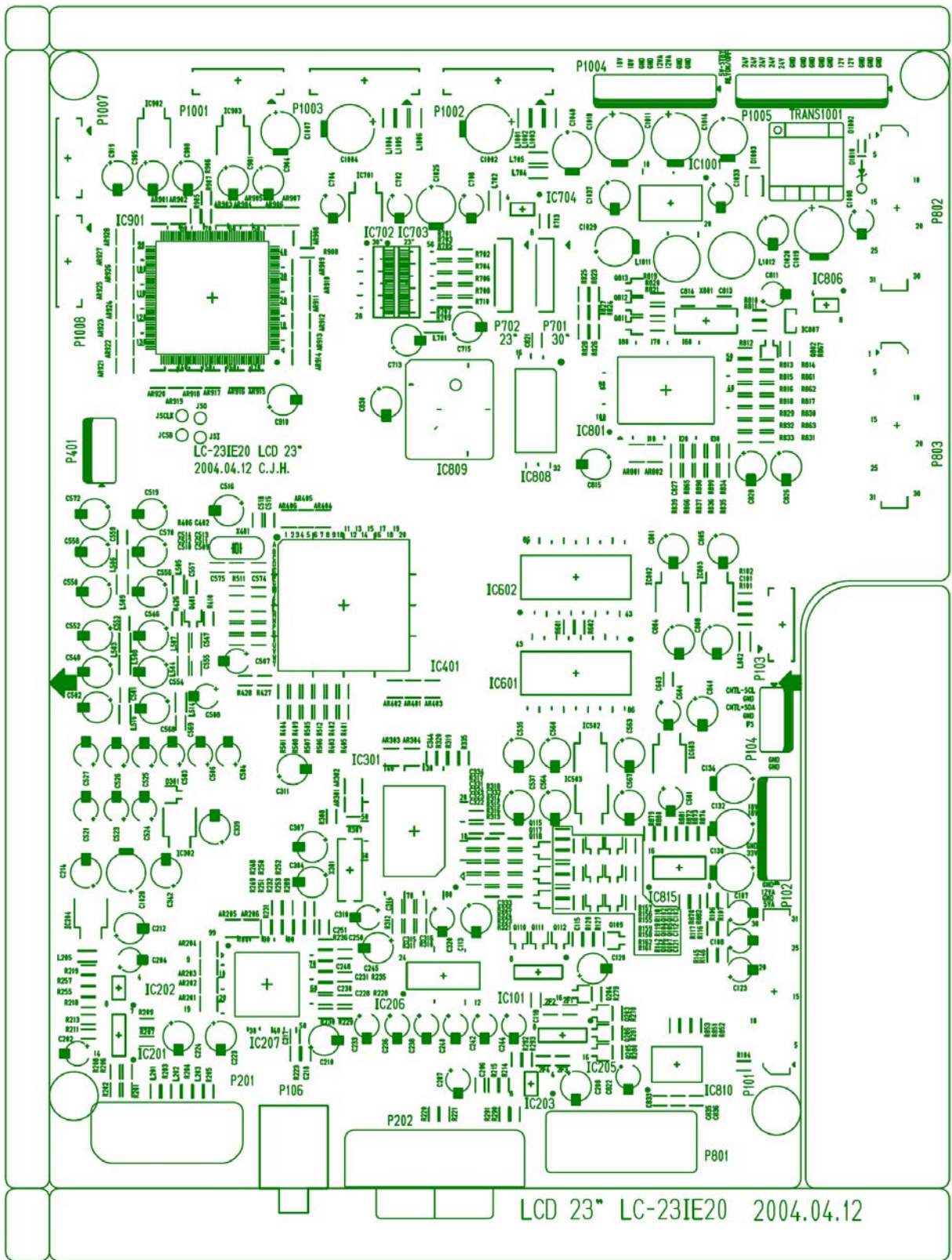
■ AV BOTTOM PATTEN



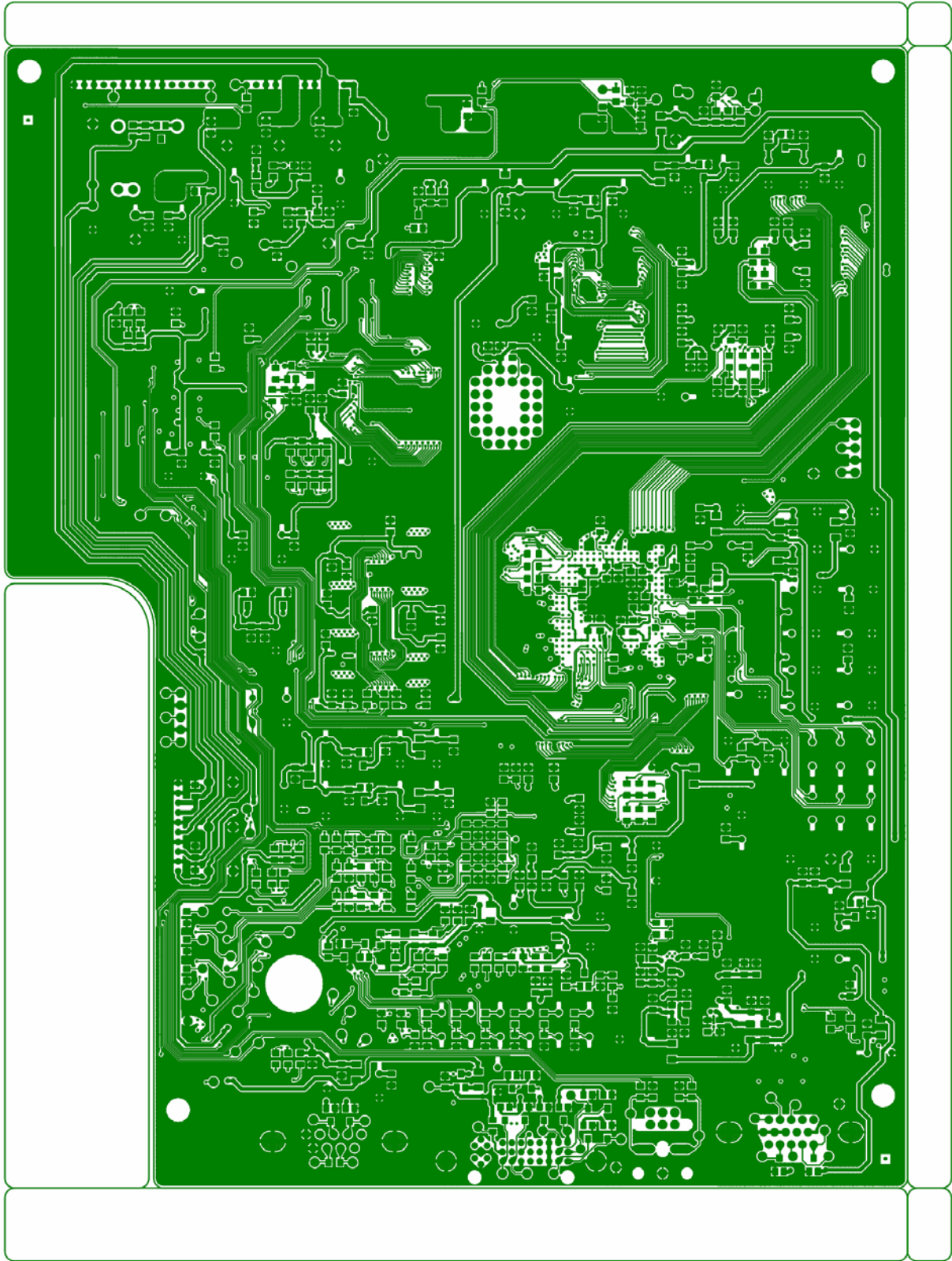
■ AV BOTTOM SILK



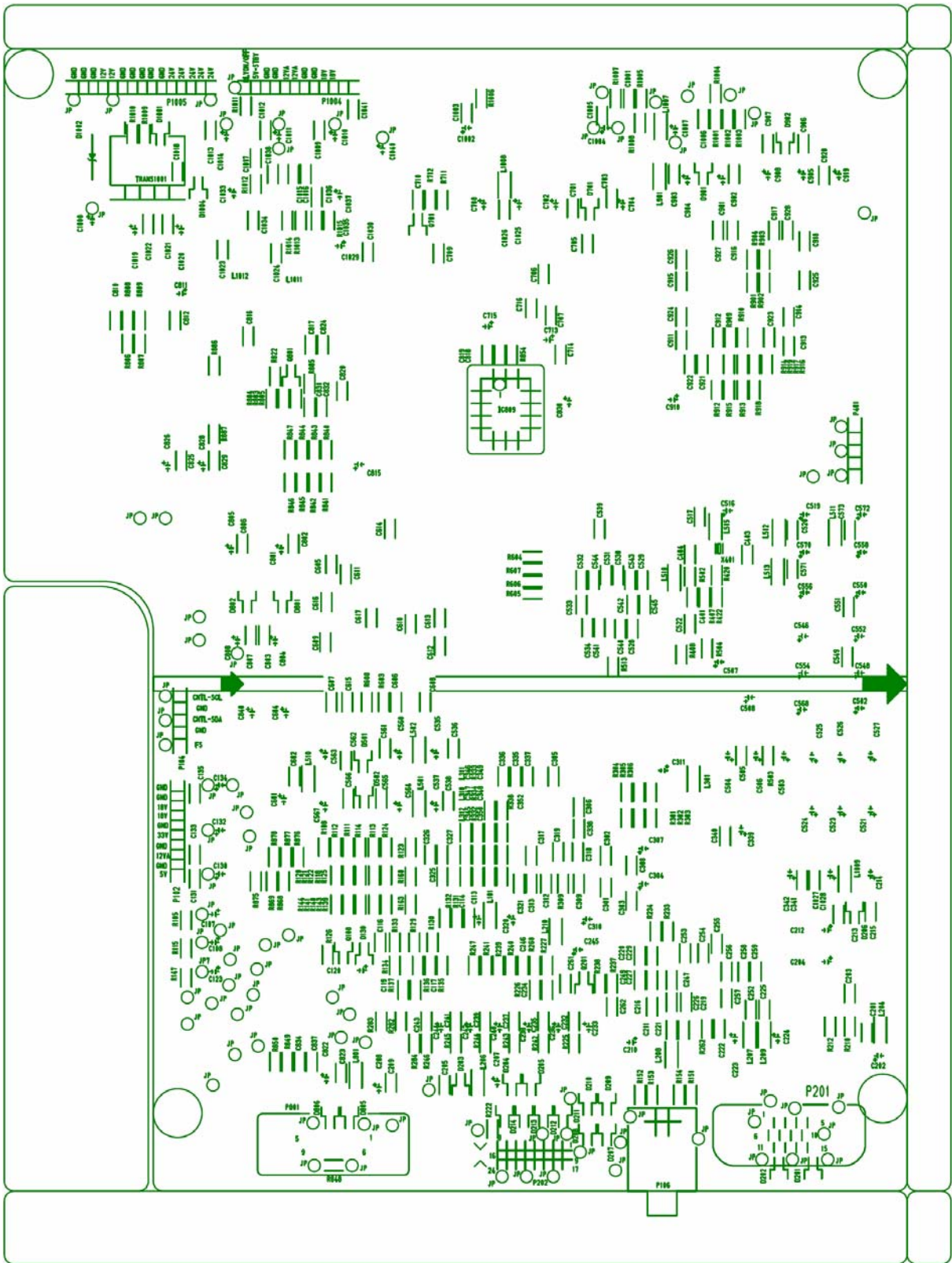
■ MAIN TOP SILK



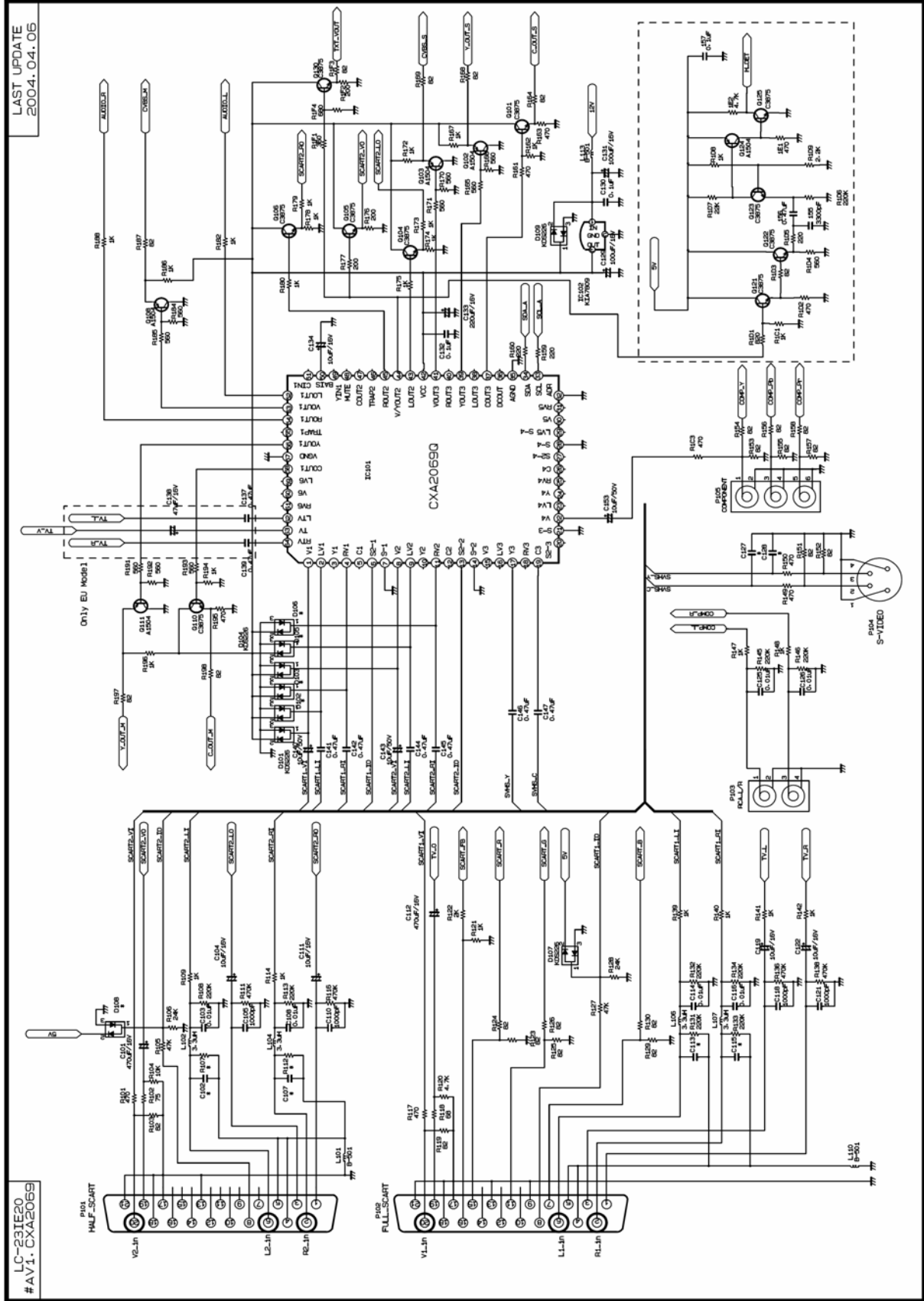
■ MAIN BOTTOM PATTEN

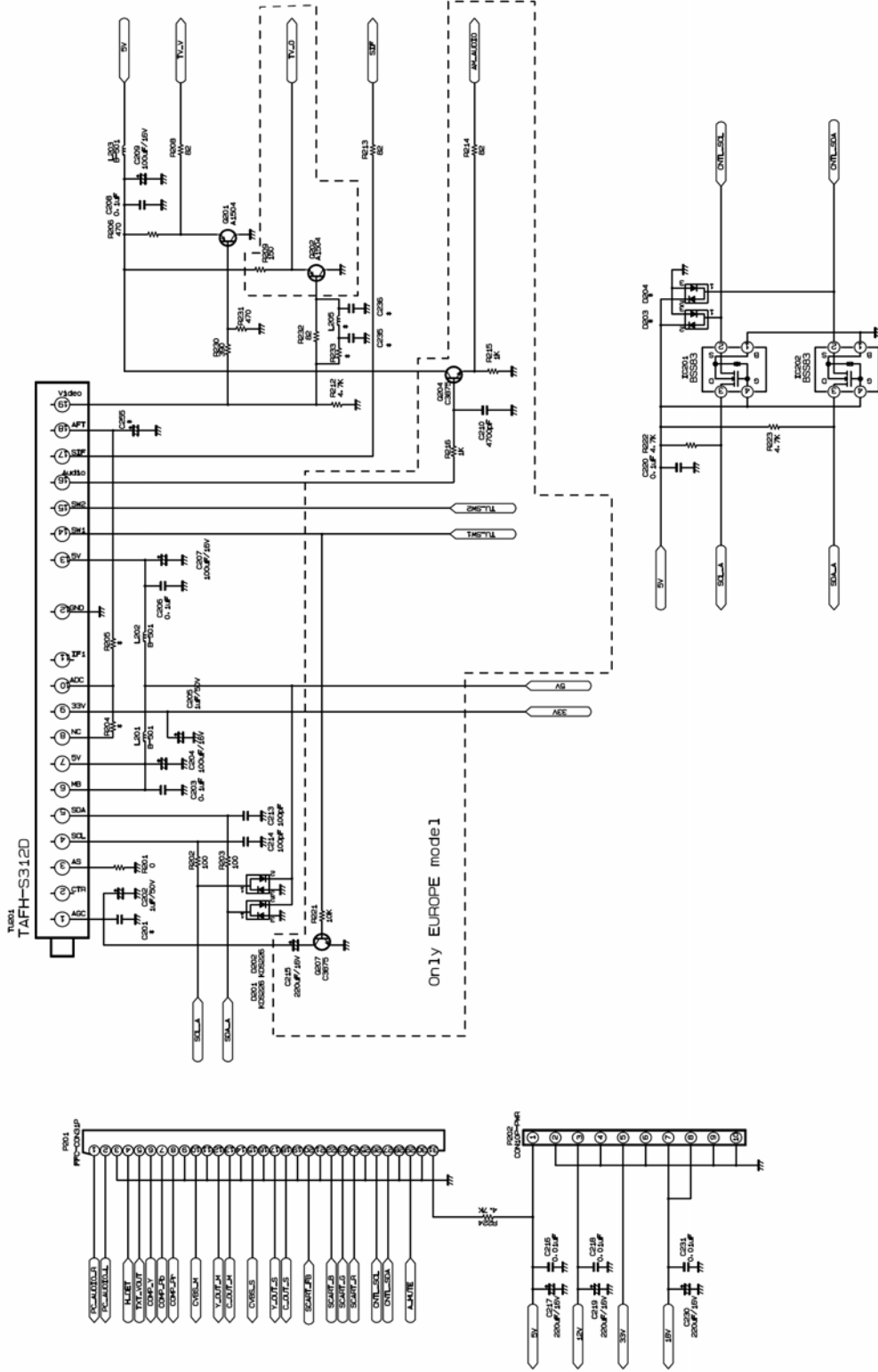


■ MAIN BOTTOM PATTEN



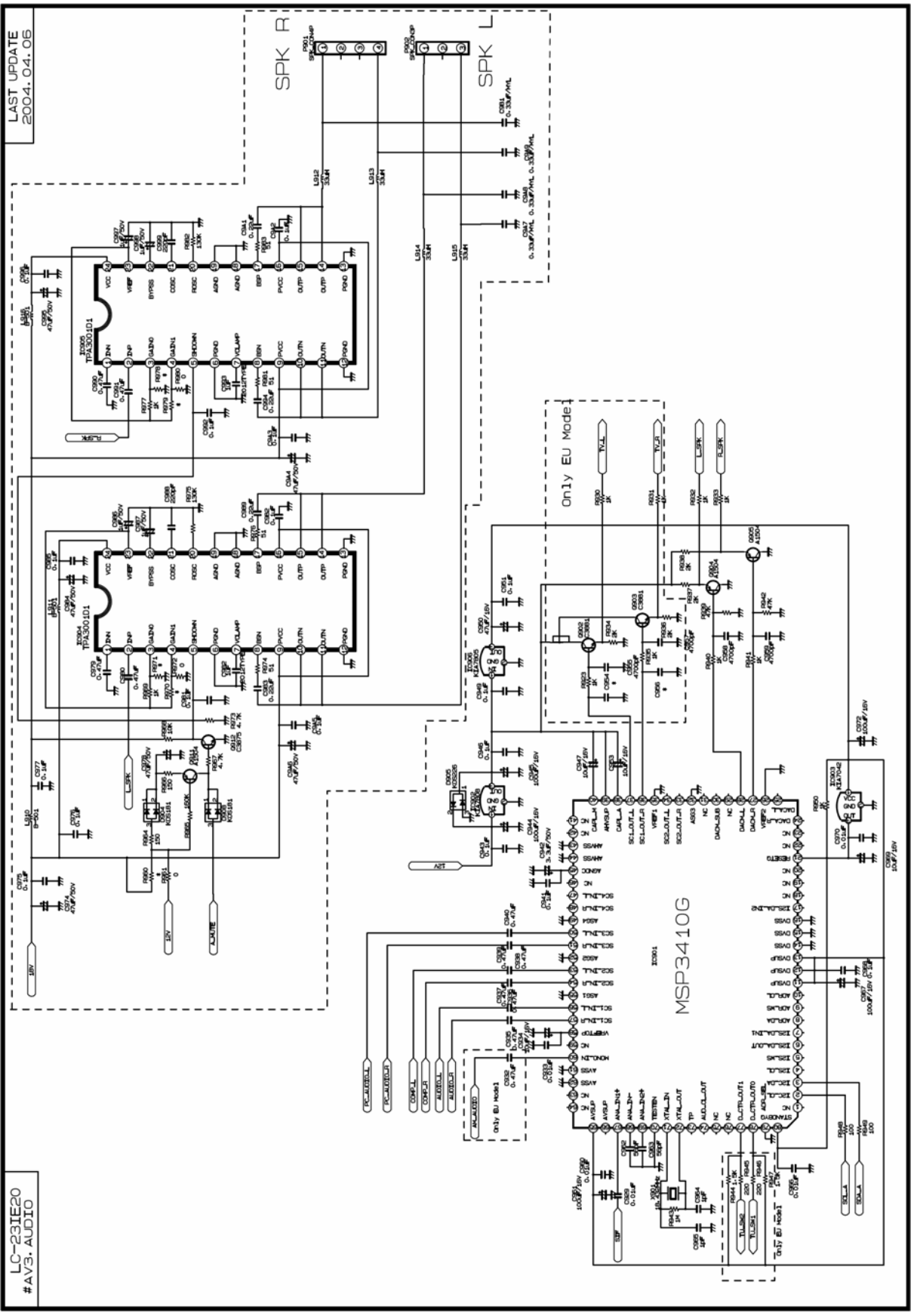
9. SCHEMATIC DIAGRAM





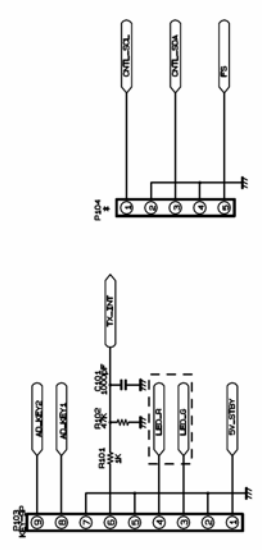
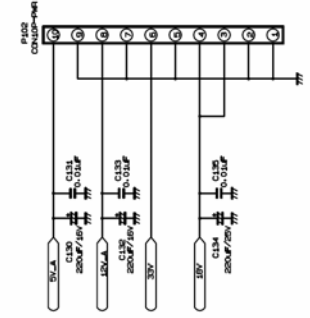
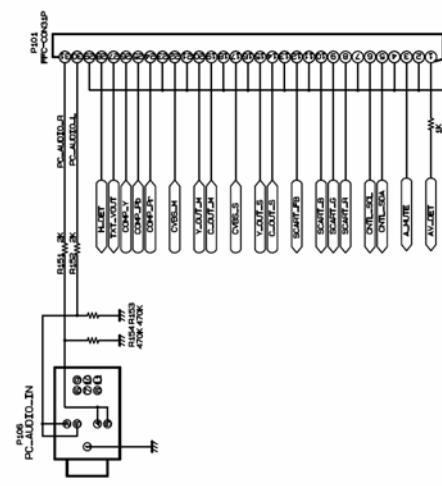
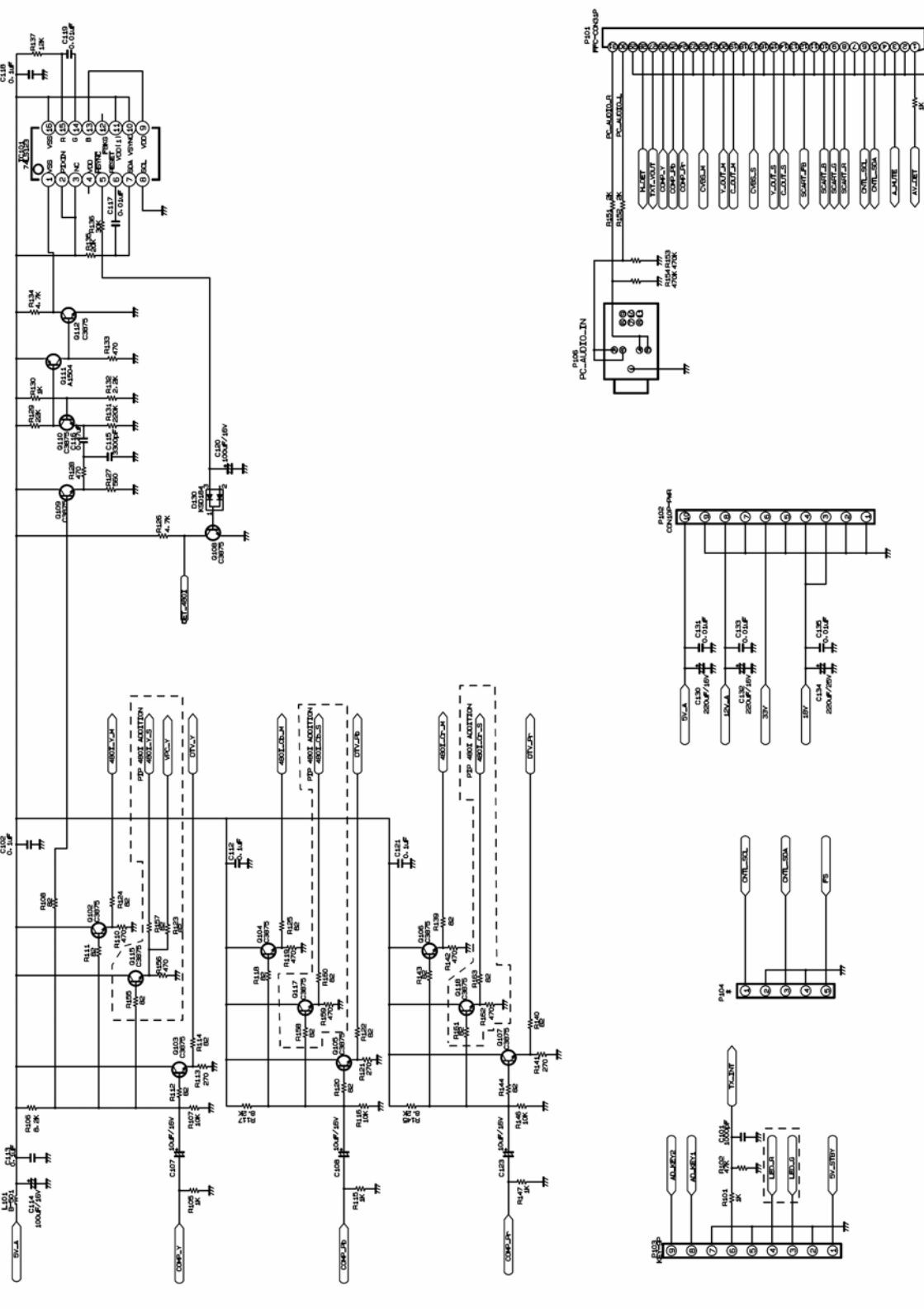
LC-23IE20
AV3. AUDIO

LAST UPDATE
2004.04.06



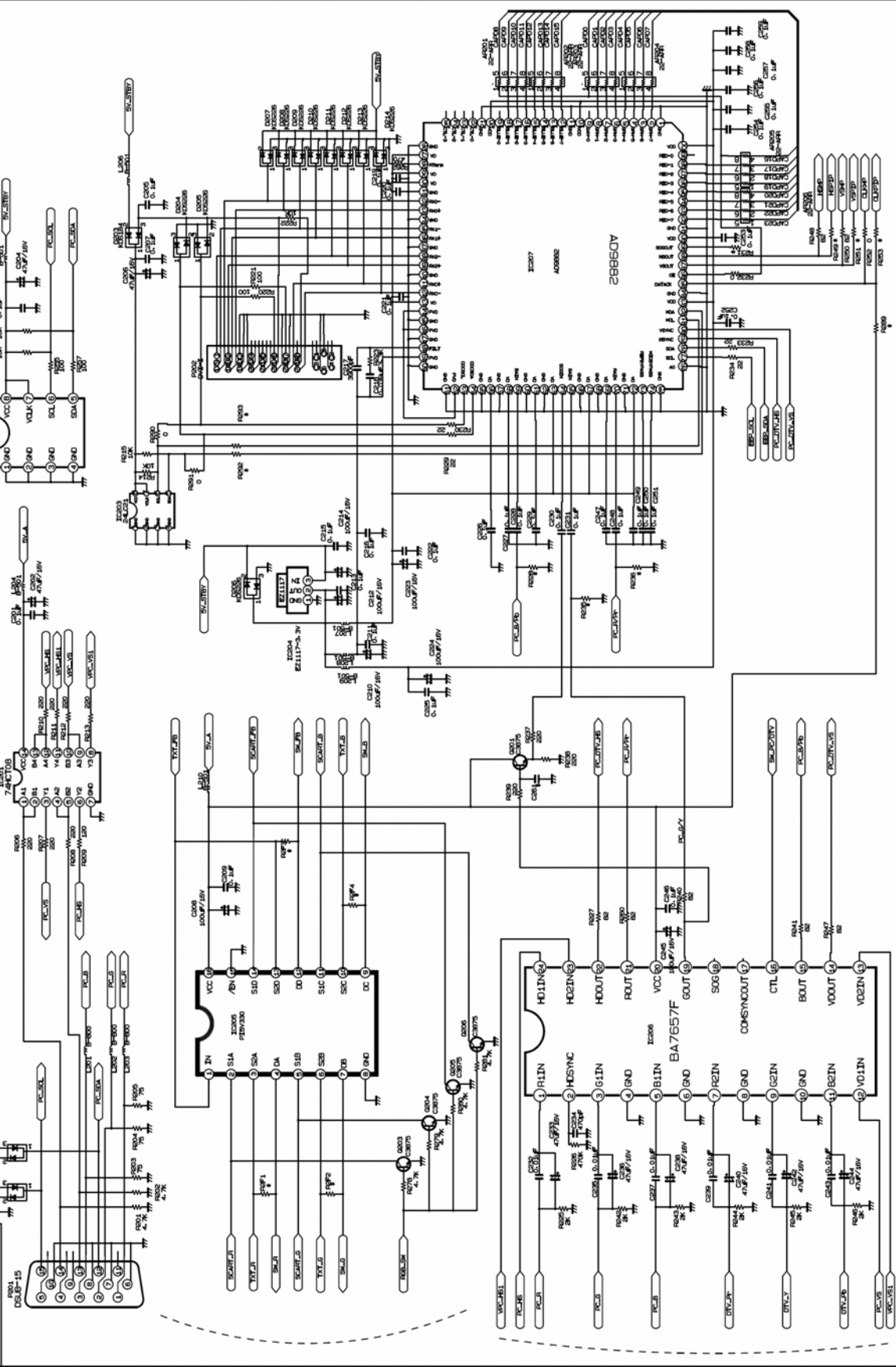
LC-231E20
#MAIN1. CONNECTOR

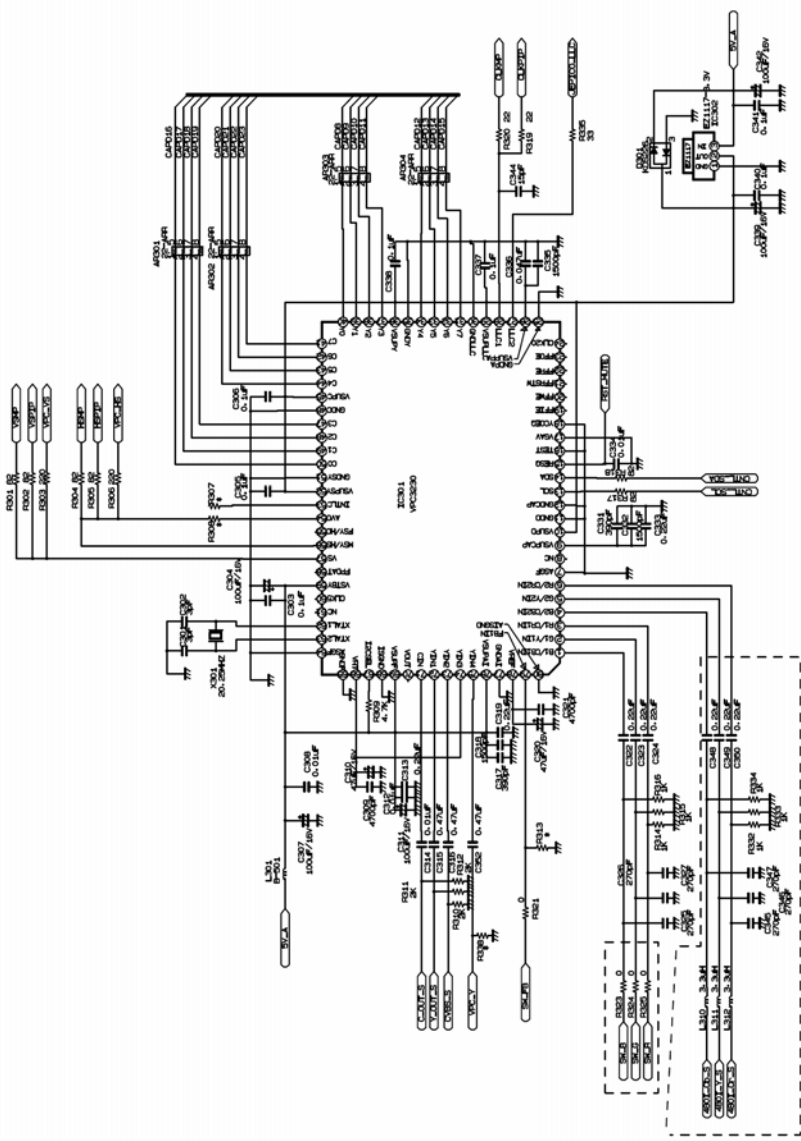
LAST UPDATE
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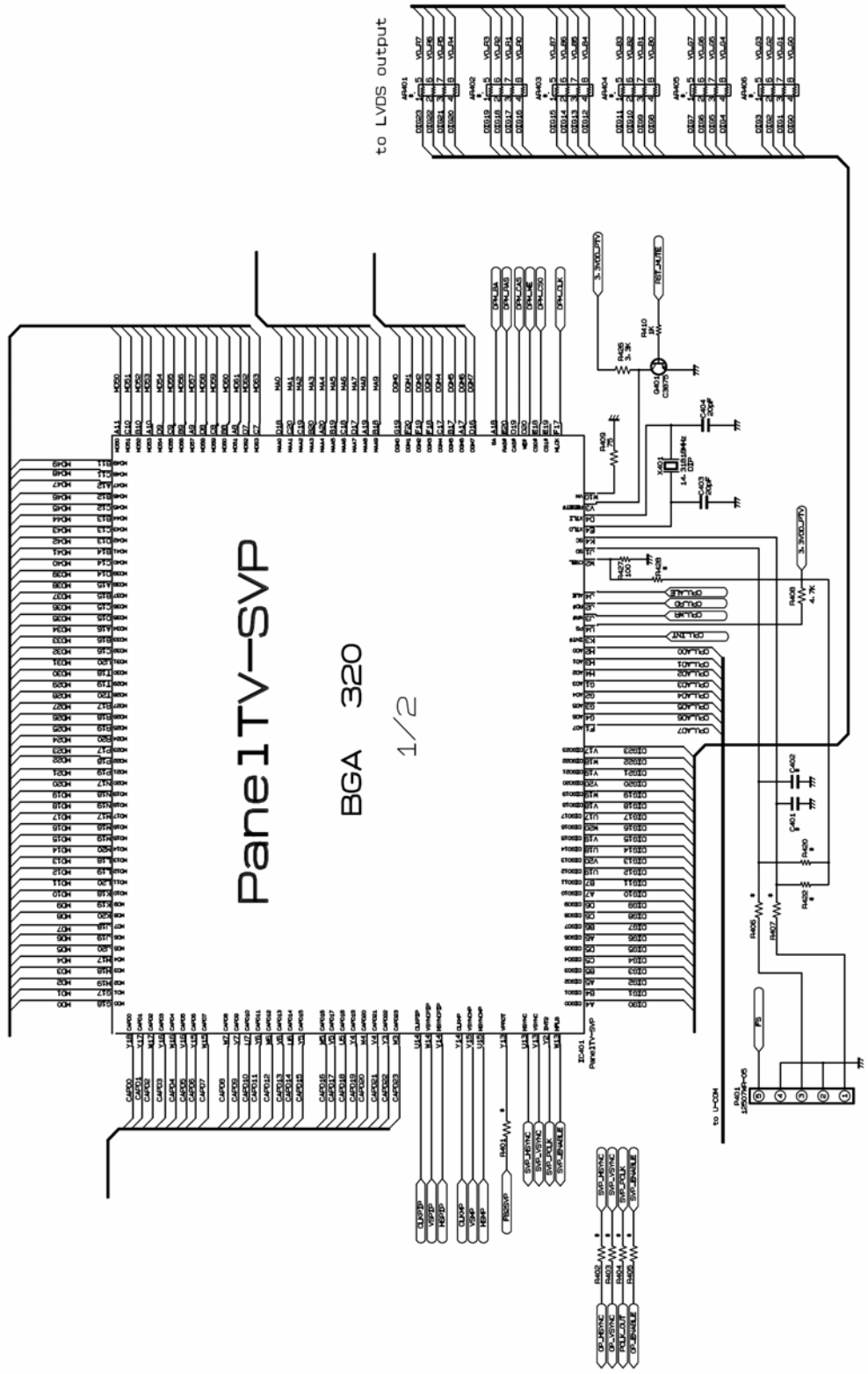


LAST UPDATE
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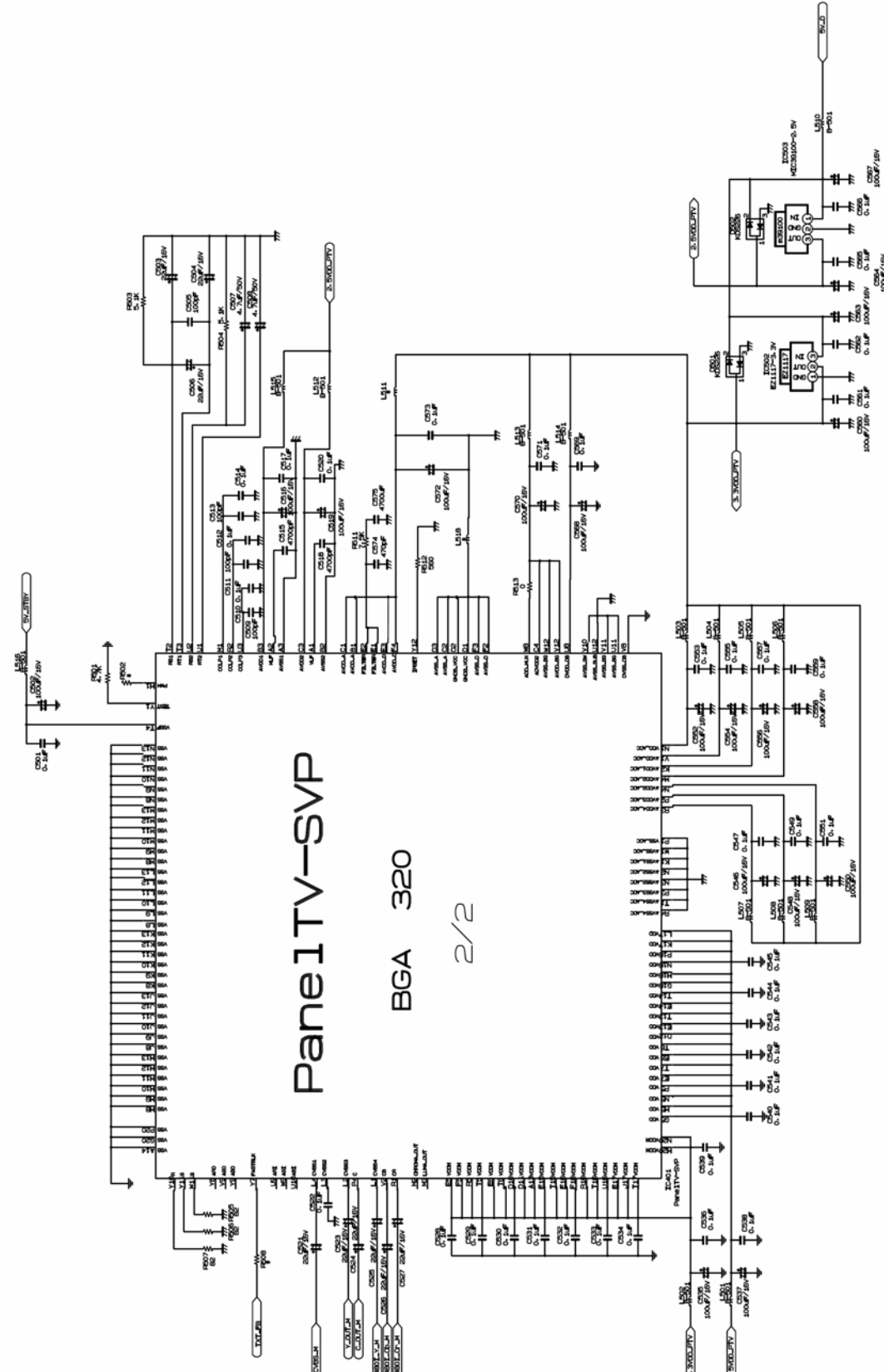
LC-23IE20
#MAIN2_ADS98B2



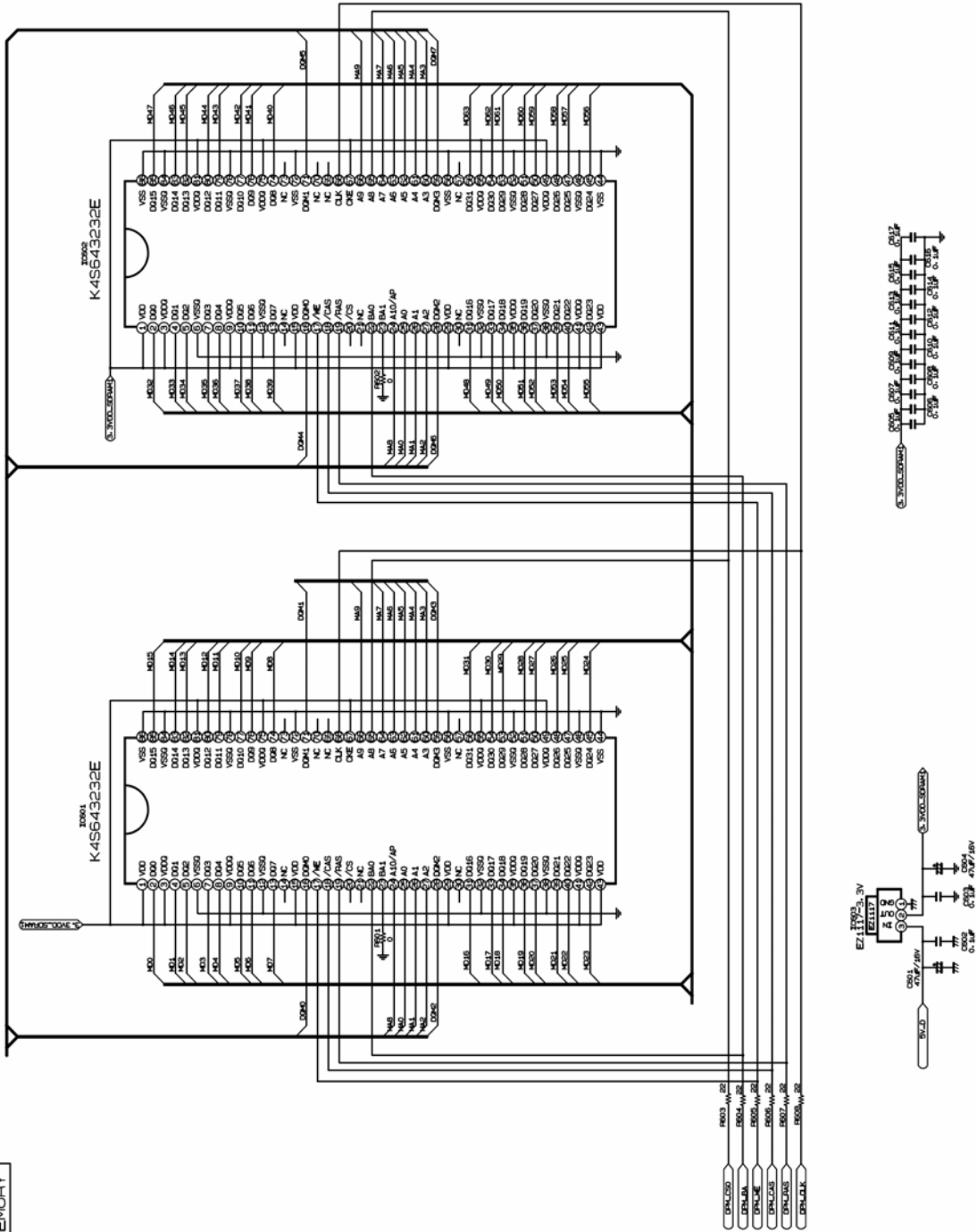


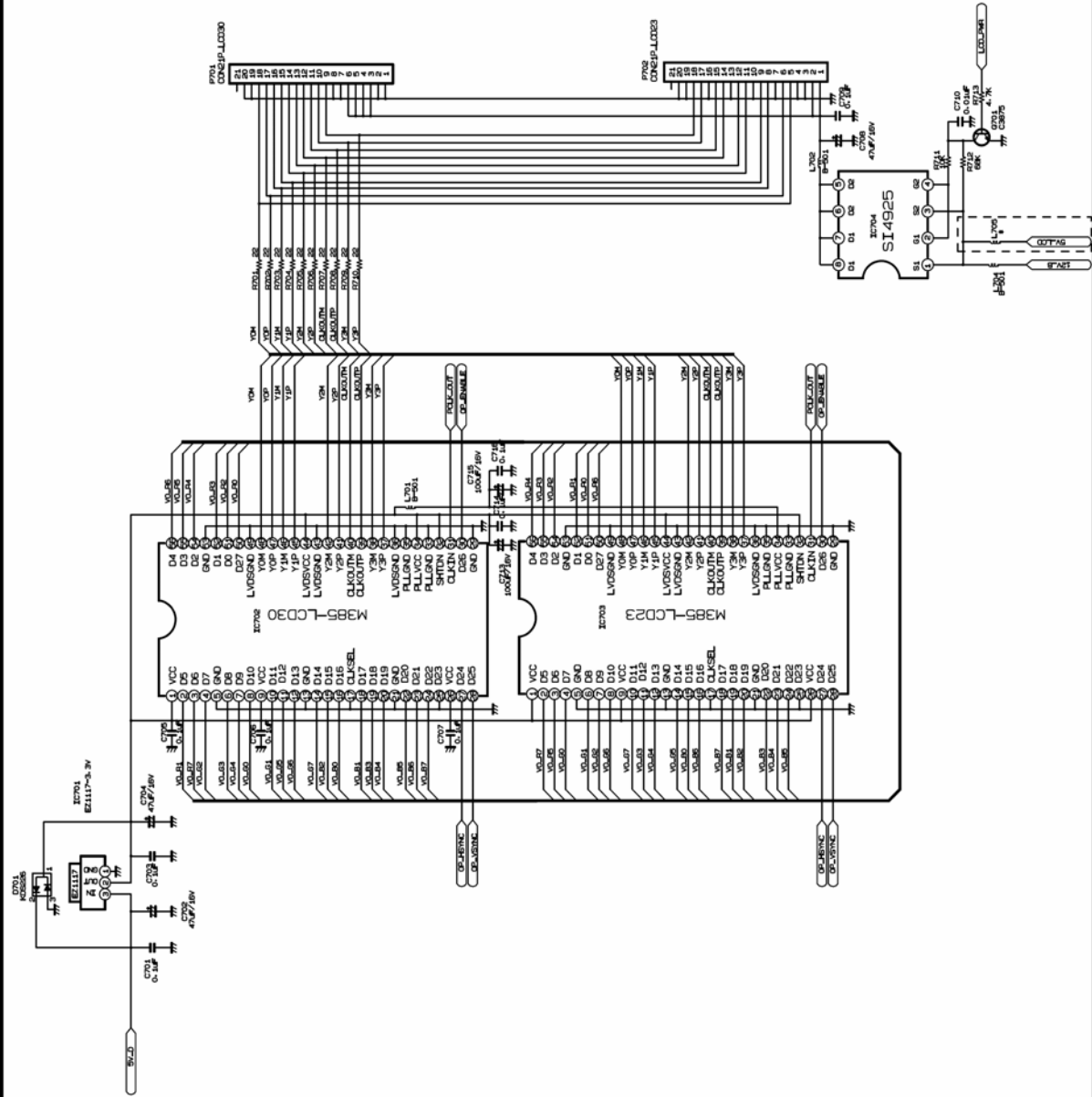


PanelTV-SVP
BGA 320
1/2



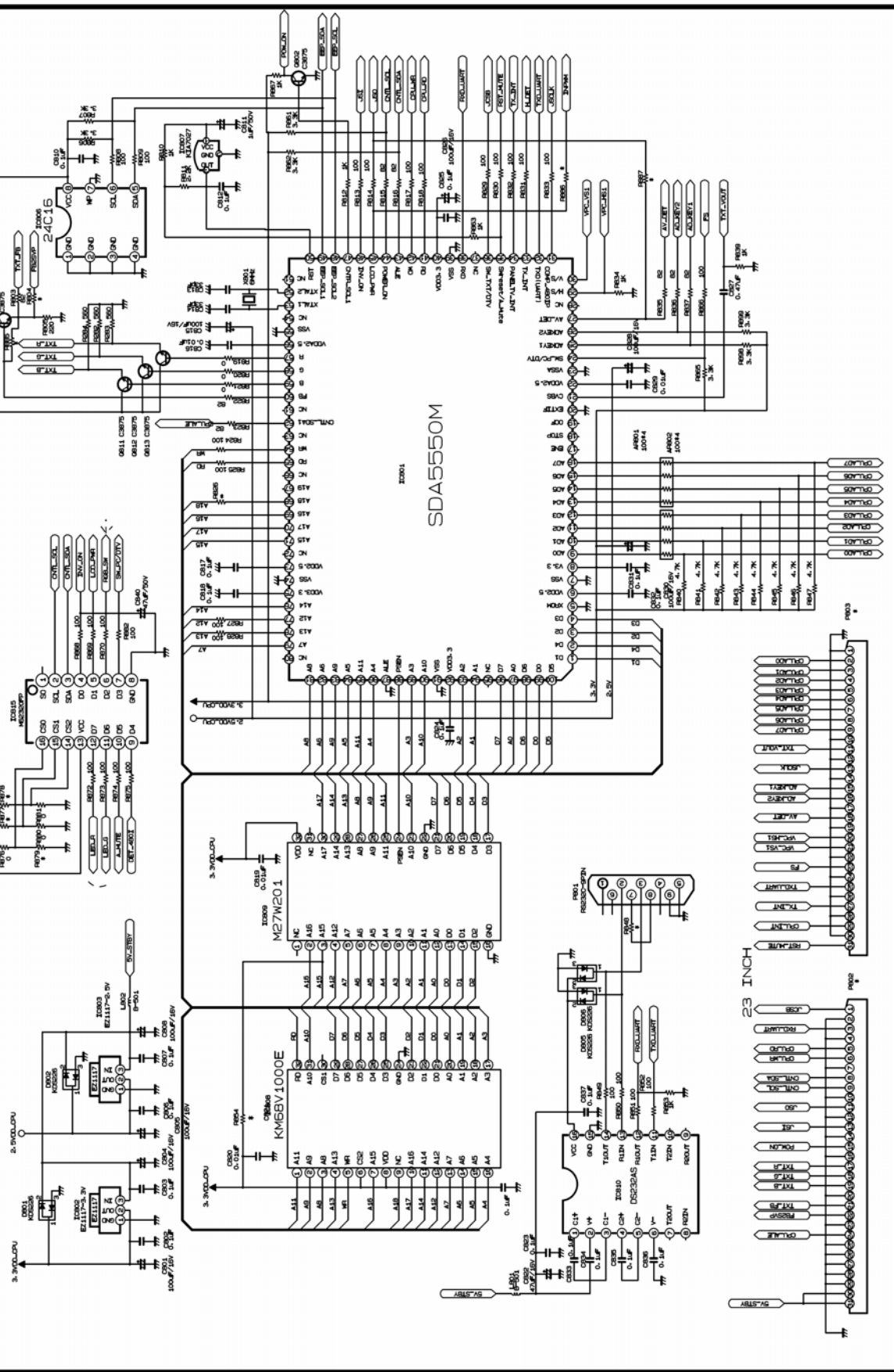
Panel TV-SVP
BGA 320
2/2

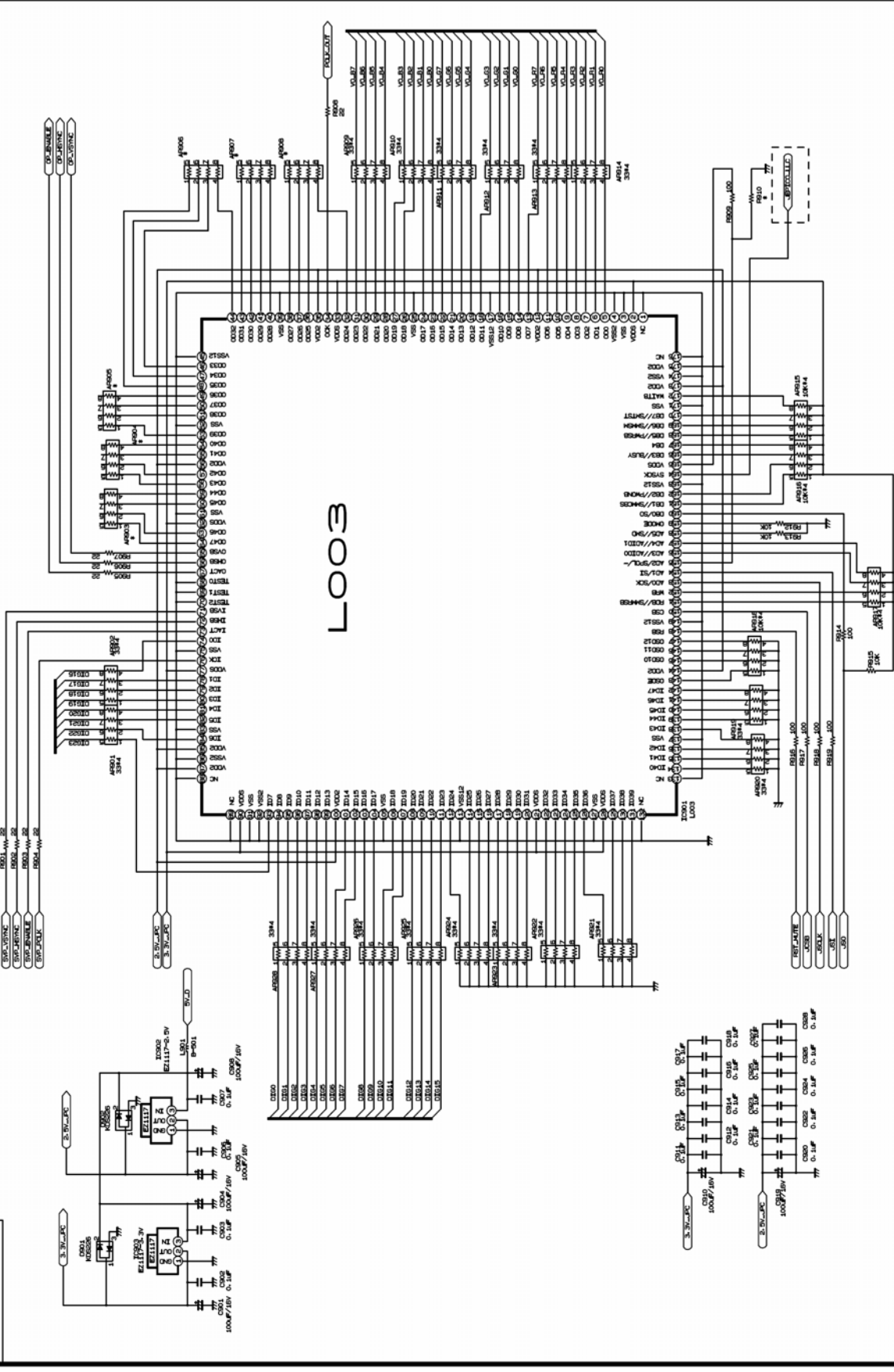




LC-231E20
#MAINB.MICOM

LAST UPDATE
2004.04.05





LC-23IE20
#MAIN10.POWER

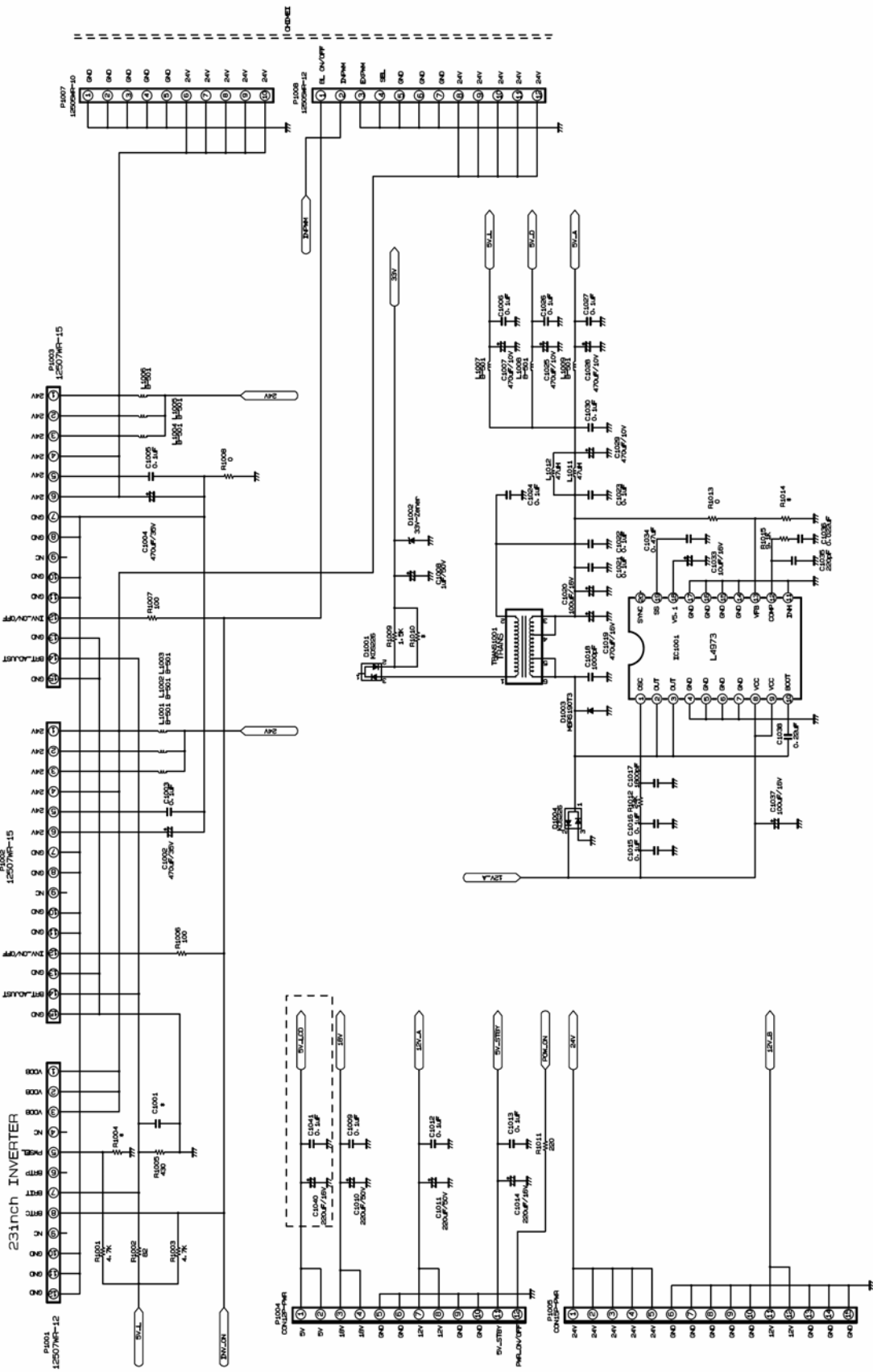
LAST UPDATE
2004.04.06

30inch INVERTER x 2EA

23inch INVERTER

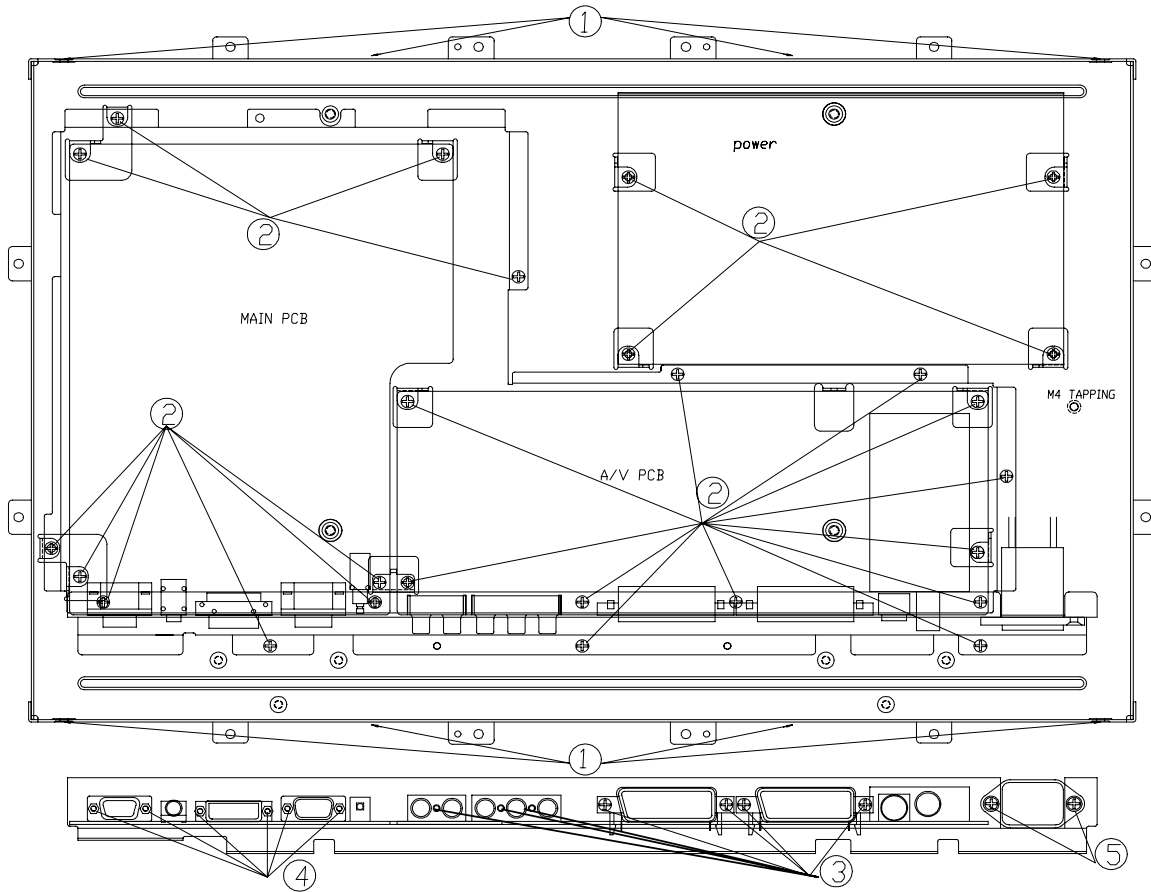
30inch INVERTER-15

30inch INVERTER-12



10. EXPLODED VIEW

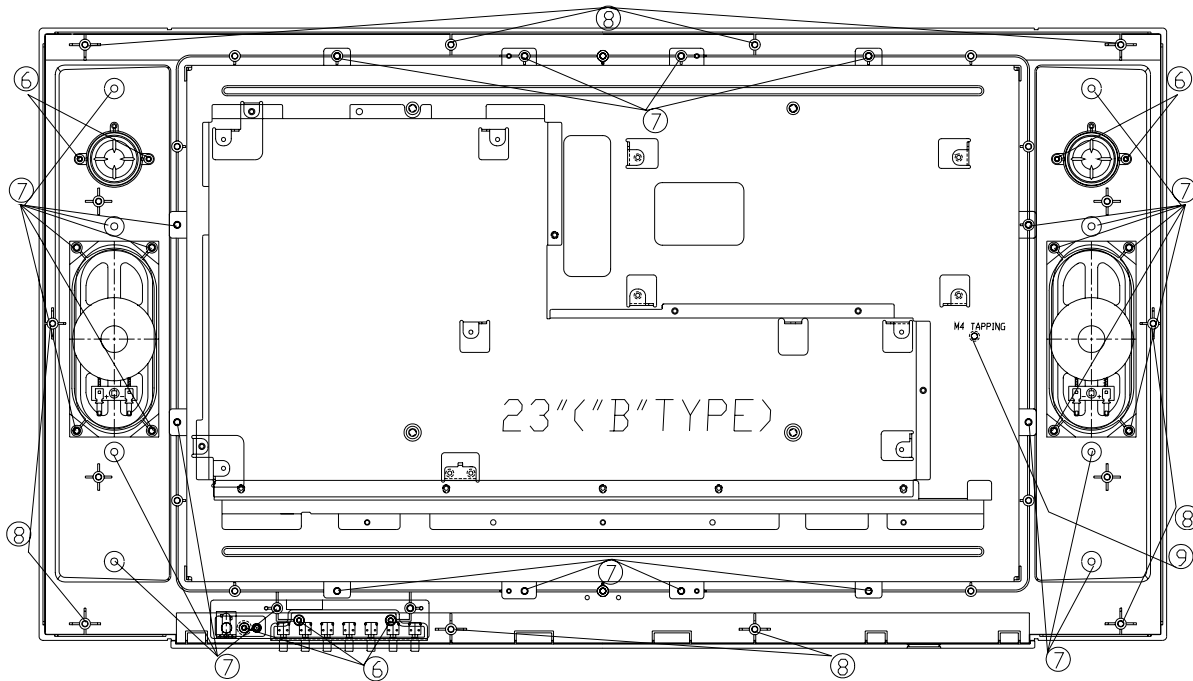
■ 23" LCD PANEL(LPL) + PCB + MAIN FRAME + A/V BKT + SHIELD CASE



NO	Desc.	Spec.	EA
1	LCD PANNEL+ FRAME	M3,D3*L10 BK	8
2	FRAME + MAIN PCB	D3*L6,"B"TYPE,BIND HEAD,SILVER	4
2	FRAME + POWER PCB	D3*L6,"B"TYPE,BIND HEAD,SILVER	4
2	FRAME + A/V PCB	D3*L6,"B"TYPE,BIND HEAD,SILVER	4
2	FRAME + SHIELD CASE	D3*L6,"B"TYPE,BIND HEAD,SILVER	6
2	FRAME + A/V BRACKET	D3*L6,"B"TYPE,BIND	3

		HEAD,SILVER	
2	SHIELD + A/V BRACKET	D3*L6,"B"TYPE,BIND HEAD,SILVER	5
3	A/V BKT+ AV JACK	D3*L10,"P"TYPE,TRUSS HEAD,BLACK	7
4	A/V BRACKET+ PC JACK	NUT	6
5	AC SOCKET+ A/V BKT	M3,D3*L8,BK,FLAT HEAD	2

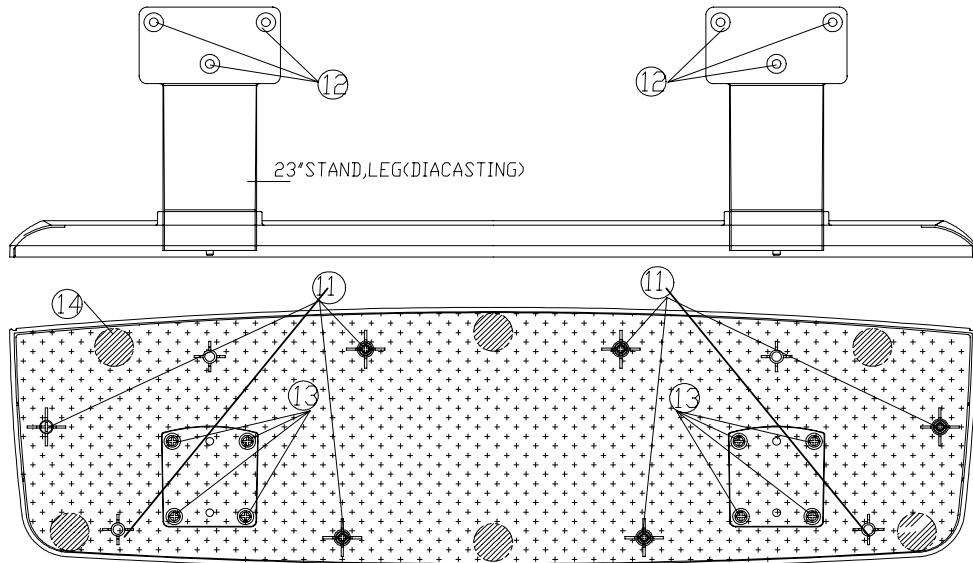
■ 23" FRONT + FRAME + SPEAKER + LENS + BUTTON + PCB + BACK COVER



NO	Desc.	Spec.	EA
6	FRONT +TWEETER SPK	D3*L10,"P"TYPE,TRUSS HEAD,BLACK	4
6	FRONT+CONTROL BUTTON	D3*L10,"P"TYPE,TRUSS HEAD,BLACK	2
6	FRONT + LENS	D3*L10,"P"TYPE,TRUSS HEAD,BLACK	1

7	FRONT+CONTROL PCB	D4*L12,"P"TYPE,TRUSS HEAD,BLACK	2
7	FRONT+ SPEAKER	D4*L12,"P"TYPE,TRUSS HEAD,BLACK	8
7	FRONT+SPK BRACKET	D4*L12,"P"TYPE,TRUSS HEAD,BLACK	8
7	FRONT+ FRAME	D4*L12,"P"TYPE,TRUSS HEAD,BLACK	12
8	FRONT+ B/COVER	D4*L14,"P"TYPE,TRUSS HEAD,BLACK	10
9	FRAME+ACSOCKET(Earth)	M4,D4*L8,SILVER,PVS WASHER	1

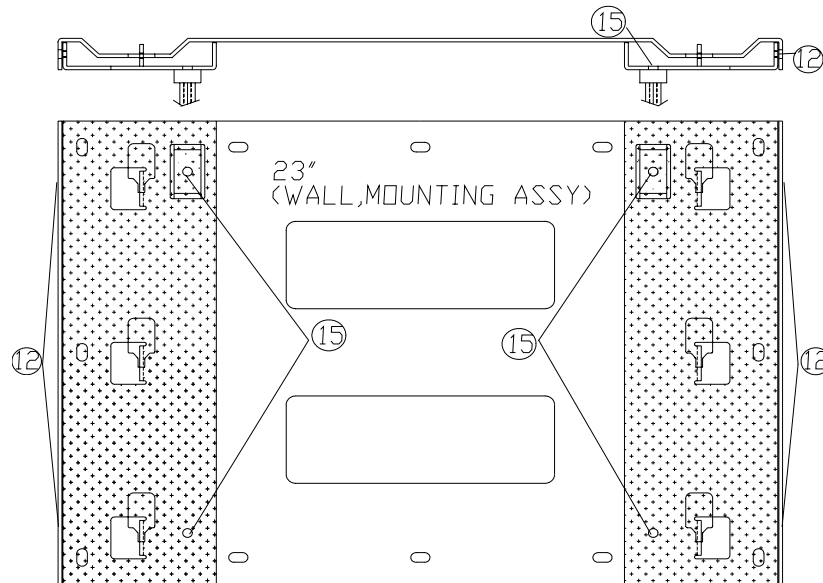
■ 23" STAND COVER + STAND BRACKET + STAND LEG



NO	Desc.	Spec.	EA
11	STAND COVER+BRACKET	D4*L10,SILVER,FLAT HEAD	8
12	STAND,LEG+BACK COVER	M4,D4*L8,BIND HEAD,BK	6

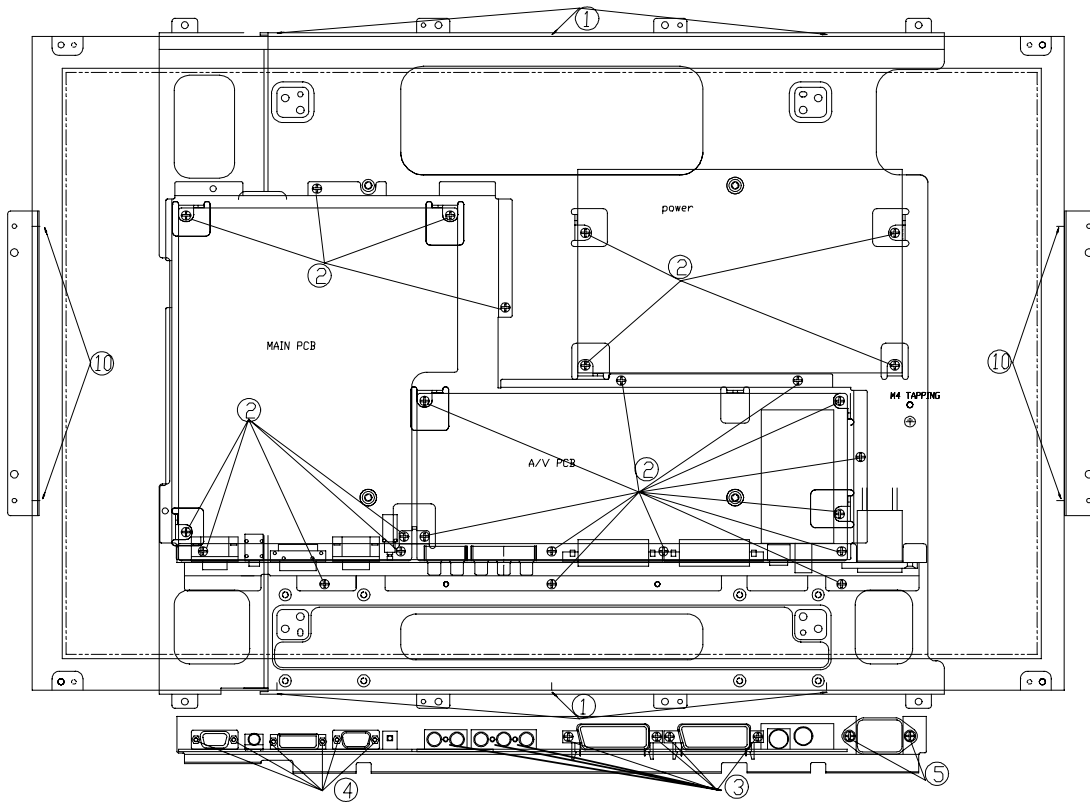
13	STAND,LEG+BRACKET	M4*L=12,SILVER,FLAT HEAD	8
----	-------------------	-----------------------------	---

■ 23" WALL MOUNTING ASS'Y



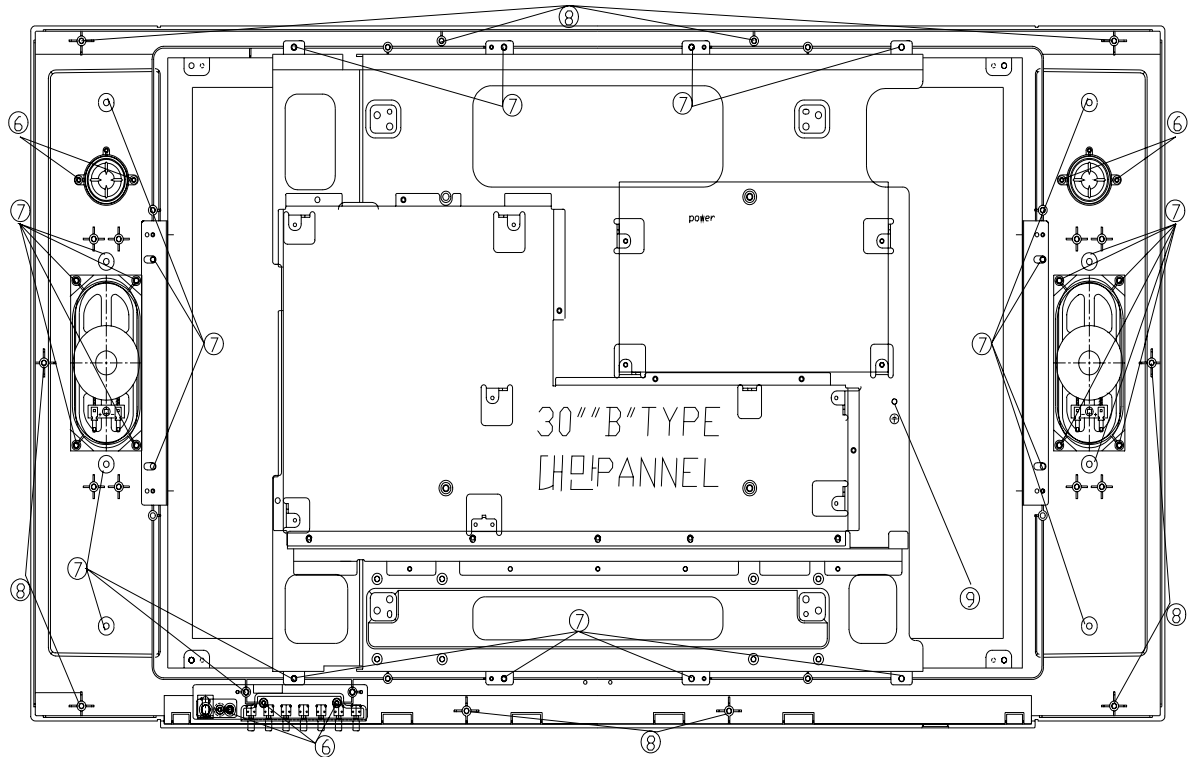
NO	Desc.	Spec.	EA
12	BKT(L/R)+SUPPORTER	M4,L=8	4
15	BKT(L/R)+BACK COVER	M4,L=12	4

■ 30" LCD(CHiMEi) PANEL + PCB + MAIN FRAME + AV BKT + SHIELD CASE



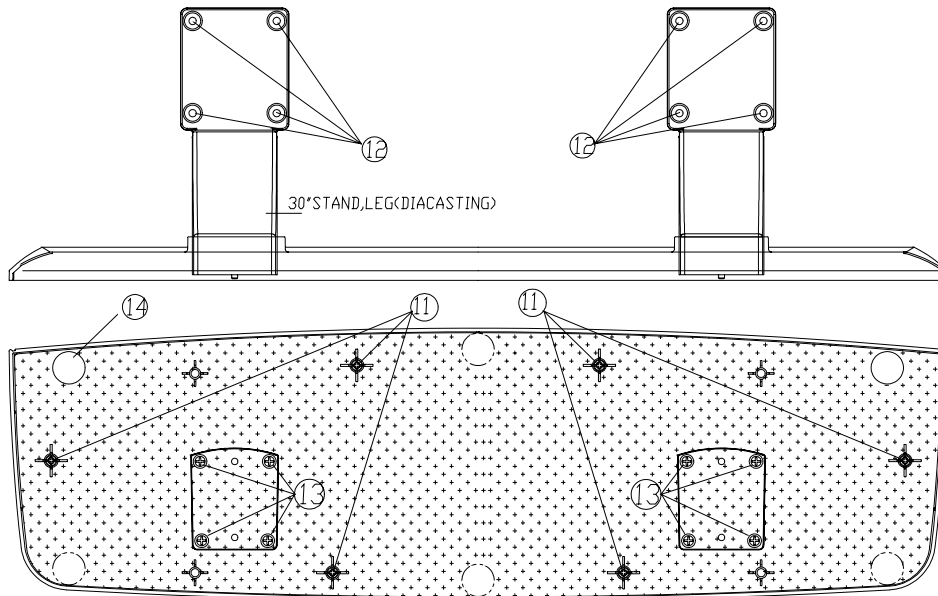
NO	Desc.	Spec.	EA
1	LCD PANNEL+ FRAME	4*6,SHJ0310-16-01	6
2	FRAME + MAIN PCB	D3*L6,"B"TYPE,BIND HEAD,SILVER	4
2	FRAME + POWER PCB	D3*L6,"B"TYPE,BIND HEAD,SILVER	4
2	FRAME + A/V PCB	D3*L6,"B"TYPE,BIND HEAD,SILVER	4
2	FRAME + SHIELD CASE	D3*L6,"B"TYPE,BIND HEAD,SILVER	5
2	FRAME + A/V BRACKET	D3*L6,"B"TYPE,BIND HEAD,SILVER	3
2	SHIELD+ A/V BRACKET	D3*L6,"B"TYPE,BIND HEAD,SILVER	5
3	A/V BKT+ AV JACK	D3*L10,"P"TYPE,TRUSS HEAD,BLACK	7
4	A/V BRACKET+ PC JACK	NUT	6
5	AC SOCKET+ A/V BKT	M3,D3*L8,BK,FLAT HEAD	2
10	LCD PANNEL + BRACKET	4*6,SHJ0310-16-01	4

■ 30" FRONT + FRAME + SPEAKER + LENS + BUTTON + PCB + BACK COVER



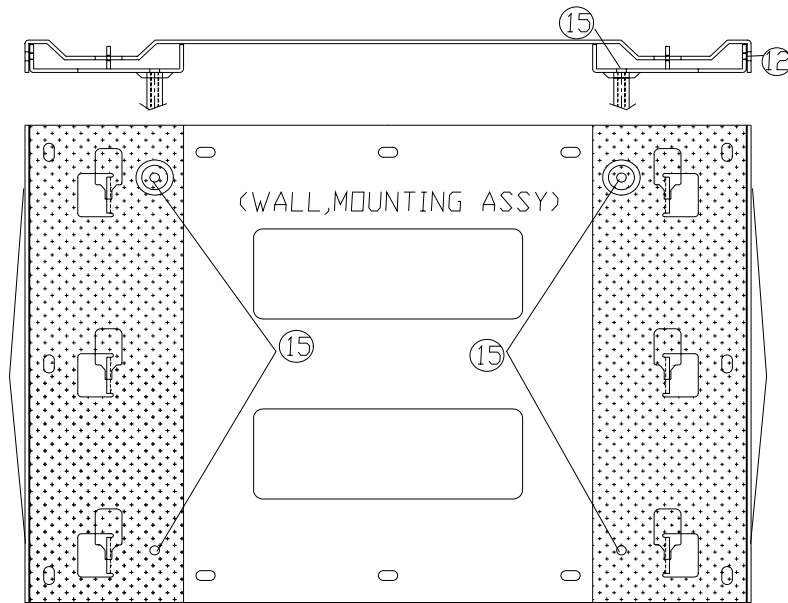
NO	Desc.	Spec.	EA
6	FRONT +TWEETER SPK	D3*L10,"P"TYPE,TRUSS HEAD,BLACK	4
6	FRONT+CONTROL BUTTON	D3*L10,"P"TYPE,TRUSS HEAD,BLACK	2
6	FRONT + LENS	D3*L10,"P"TYPE,TRUSS HEAD,BLACK	1
7	FRONT+CONTROL PCB	D4*L12,"P"TYPE,TRUSS HEAD,BLACK	2
7	FRONT+ SPEAKER	D4*L12,"P"TYPE,TRUSS HEAD,BLACK	8
7	FRONT+SPK BRACKET	D4*L12,"P"TYPE,TRUSS HEAD,BLACK	8
7	FRONT+ FRAME	D4*L12,"P"TYPE,TRUSS HEAD,BLACK	12
8	FRONT+ B/COVER	D4*L14,"P"TYPE,TRUSS HEAD,BLACK	10
9	FRAME+ACSOCKET(Earth)	M4,D4*L8,SILVER,PVS WASHER	1

■ 30" STAND COVER + STAND BRACKET + STAND LEG



NO	Desc.	Spec.	EA
11	STAND COVER+BRACKET	D4*L10,SILVER,FLAT HEAD	8
12	STAND,LEG+BACK COVER	M4,D4*L8,BIND HEAD,BK	8
13	STAND,LEG+BRACKET	M4*L=12,SILVER,FLAT HEAD	8

■ 30" WALL MOUNTING ASS'Y



NO	Desc.	Spec.	EA
12	BKT(L/R)+SUPPORTER	M4,L=8	4
15	BKT(L/R)+BACK COVER	M4,L=12	4

11. REPLACEMENT PARTS LIST

Item	Specification	Location
HLT-2310_MAIN PCB ASS'Y		
HLT-2310_MAIN (MANUAL INSERT)		
CONNECTOR	EARPHONE JACK (UEJ-CV-003)	P106
PLCC AMP (SOCKET)	822473-3 AMP 32PIN 2.54MM NIKEL PLCC	IC809
IC	M27W201-80K6 (ST)	IC809
CONNECTOR DVI	DVI CONNECTOR 440062-1 ==>AMP	P202
CONNECTOR D_SUB	D_SUB MALE 9P 2ROW R/A	P801
CHOCO COIL	CHOCO COIL CO2K(100UH)	L1011,L1012
TRANSFORMER,SMPS[COIL]	EPC1716 650UH +-15%, DC-DC CON.	TRANS1001
CONNECTOR D_SUB	D_SUB FEMALE 15P 3ROW R/A	P201
CONNECTOR	SMW200-15	P1005
CONNECTOR	SMW200-10	P102
CONNECTOR	SMW200-12	P1004
AL EL CAPACITORS	35V/470uF STD M TP5 (10X16 85°C)	C1002,C1004
CRYSTAL	HC49U RADIAL 14.31818MHz +/-30 PPM	X401
HLT-2310_MAIN (SMD_BOTTOM)		
CHIP RESISTOR	CHIP R 2012 5% (000) 0Ω	R513,R876,R1008,R1013
CHIP RESISTOR	CHIP R 2012 5% (152) 1.5kΩ	R1009
CHIP RESISTOR	CHIP R 2012 5% (101) 100Ω	R808,R809,R849,R850,R868,R869,R875,R909,R914,R916, R917,R918,R919,R1006,R1007
CHIP RESISTOR	CHIP R 2012 5% (103) 10kΩ	R222,R711,R912,R913,R915
CHIP RESISTOR	CHIP R 2012 5% (123) 12kΩ	R137
CHIP RESISTOR	CHIP R 2012 5% (220) 22Ω	R233,R234,R603,R604,R605,R606,R607,R608,R901,R902, R903,R904
CHIP RESISTOR	CHIP R 2012 5% (102) 1kΩ	R105,R115,R130,R147,R332,R333,R334
CHIP RESISTOR	CHIP R 2012 5% (222) 2.2kΩ	R132
CHIP RESISTOR	CHIP R 2012 5% (203) 20kΩ	R135
CHIP RESISTOR	CHIP R 2012 5% (221) 220Ω	R210,R212,R237,R238,R239,R303,R306,R805,R1011
CHIP RESISTOR	CHIP R 2012 5% (224) 220kΩ	R131
CHIP RESISTOR	CHIP R 2012 5% (223) 22kΩ	R129
CHIP RESISTOR	CHIP R 2012 5% (243) 24kΩ	R1012
CHIP RESISTOR	CHIP R 2012 5% (271) 270Ω	R113,R121,R141
CHIP RESISTOR	CHIP R 2012 5% (202) 2kΩ	R151,R152,R225,R242,R243,R244,R245,R246
CHIP RESISTOR	CHIP R 2012 5% (332) 3.3kΩ	R806,R807
CHIP RESISTOR	CHIP R 2012 5% (303) 30kΩ	R136

CHIP RESISTOR	CHIP R 2012 5% (472) 4.7k Ω	R126,R134,R309,R408,R840,R841,R842,R843,R844,R845, R846,R847,R1001,R1003
CHIP RESISTOR	CHIP R 2012 5% (431) 430 Ω	R1005
CHIP RESISTOR	CHIP R 2012 5% (471) 470 Ω	R133,R262,
CHIP RESISTOR	CHIP R 2012 5% (474) 470k Ω	R153,R154,R226
CHIP RESISTOR	CHIP R 2012 5% (512) 5.1k Ω	R503,R504
CHIP RESISTOR	CHIP R 2012 5% (683) 68k Ω	R712
CHIP RESISTOR	CHIP R 2012 5% (561) 560 Ω	R282,R283,R284
CHIP RESISTOR	CHIP R 2012 5% (820) 82 Ω	R108,R111,R112,R114,R118,R120,R122,R123,R124,R125 R139,R140,R143,R144,R160,,R163,R227,R240,R241,R247, R260,R301,R302,R304,R305,R803,R822,R1002
CHIP RESISTOR	CHIP R 2012 5% (912) 9.1k Ω	R1015
CHIP CAPACITORS	CHIP C 2012 50V 10% (103) 0.01 μ F	C117,C119,C131,C133,C135,C232,C235,C237,C239,C241 C243,C308,C312,C710,C816,C819,C820,C829
CHIP CAPACITORS	CHIP C 2012 50V 10% (223) 0.022 μ F	C1036
CHIP CAPACITORS	CHIP C 2012 50V 10% (473) 0.047 μ F	C336
CHIP CAPACITORS	CHIP C 2012 50V 10% (104) 0.1 μ F	C114,C201,C203,C205,C209,C211,C213,C215,C216,C219, C220,C221,C222,C225,C226,C227,C229,C246,C247,C249, C252,C253,C254,C255,C256,C257,C258,C259,C303,C305, C306,C337,C338,C340,C341,C517,C520,C522,C528,C529, C530,C531,C532,C533,C534,C536,C538,C539,C540,C541, C542,C543,C544,C545,C549,C551,C561,C562,C565,C566, C571,C573,C602,C605,C606,C607,C608,C609,C610,C611, C612,C613,C614,C615,C616,C617,C701,C703,C705,C706, C707,C709,C714,C716,C802,C803,C806,C807,C810,C812, C817,C818,C823,C824,C825,C831,C832,C834,C837,C902, C903,C906,C907,C911,C912,C913,C914,C915,C916,C917, C918,C920,C921,C922,C923,C924,C925,C926,C927,C928, C1003,C1005,C1006,C1009,C1012,C1013,C1015,C1016,C1021, C1023,C1024,C1026,C1027,C1030,C1041, C1022,
CHIP CAPACITORS	CHIP C 2012 50V 10% (224) 0.22 μ F	C313,C319,C348,C349,C350,C1038
CHIP CAPACITORS	CHIP C 2012 50V 10% (474) 0.47 μ F	C116,C352,C1034
CHIP CAPACITORS	CHIP C 2012 50V 10% (102) 1000pF	C1018
CHIP CAPACITORS	CHIP C 2012 50V 10% (101) 100pF	C505
CHIP CAPACITORS	CHIP C 2012 50V 10% (152) 1500pF	C318,C335
CHIP CAPACITORS	CHIP C 2012 50V 10% (182) 1800pF	C1017
CHIP CAPACITORS	CHIP C 2012 50V 10% (200) 20pF	C403,C404
CHIP CAPACITORS	CHIP C 2012 50V 10% (221) 220pF	C1035
CHIP CAPACITORS	CHIP C 2012 50V 10% (271) 270pF	C325,C326,C327,C345,C346,C347

CHIP CAPACITORS	CHIP C 2012 50V 10% (391) 390pF	C317
CHIP CAPACITORS	CHIP C 2012 50V 10% (030) 3pF	C301,C302
CHIP CAPACITORS	CHIP C 2012 50V 10% (472) 4700pF	C309,C321
CHIP CAPACITORS	CHIP C 2012 50V 10% (471) 470pF	C234,C262
CHIP INDUCTOR	FI-B2012-332KJT (3.3uH)	L310,L311,L312
CHIP BEAD	HH-1M3216-501J 500Ω	L101,L204,L206,L207,L208,L209,L210,L301,L501,L502, L510,L512,L513,L515,L801,L901,L1007,L1008,L1009
CHIP TR	2SC3875S Y RTK (SOT-23) KEC	Q108,Q201,Q701,Q801
CHIP DIODE	KDS184RTK (SOT-23) KEC	D130,D203
CHIP DIODE	KDS226RTK (SOT-23) KEC	D201,D202,D204,D205,D206,D207,D208,D209,D210,D211 D212,D213,D214,D501,D502,D701,D801,D802,D805,D806, D901,D902,D1001,D1004
HLT-2310_MAIN (AUTO INSERT_RADIAL)		
AL EL CAPACITORS	16V/10uF STD M TP5 (5X11 85°C)	C107,C108,C123,C1033
AL EL CAPACITORS	16V/47uF STD M TP5 (5X11 85°C)	C202,C204,C207,C233,C236,C238,C240,C242,C244,C310 C320,C601,C604,C702,C704,C708,C822
AL EL CAPACITORS	50V/47uF STD M TP5 (6.3X11 85°C)	C840
AL EL CAPACITORS	50V/4.7uF STD M TP5 (5X11 85°C)	C507,C508
AL EL CAPACITORS	50V/1uF STD M TP5 (5X11 85°C)	C811,C1008
AL EL CAPACITORS	16V/100uF STD M TP5 (6.3X11 85°C)	C113,C208,C210,C212,C214,C223,C224,C245,C304,C307 C311,C339,C342,C502,C516,C519,C535,C537,C546,C548 C550,C552,C554,C556,C558,C560,C563,C564,C567,C568 C570,C572,C713,C715,C801,C804,C805,C808,C815,C826 C828,C830,C901,C904,C905,C908,C910,C919,C1020,C1037 C120
AL EL CAPACITORS	16V/220uF STD M TP5 (8X11 85°C)	C130,C132,C1014,C1040
AL EL CAPACITORS	16V/470uF STD M TP5 (8X11 85°C)	C1019,C1007,C1025,C1028,C1029
AL EL CAPACITORS	50V/220uF STD M TP5	C1010,C1011
AL EL CAPACITORS	25V/220uF STD M TP5	C134
AL EL CAPACITORS	50V/22uF STD M TP5	C503,C504,C506,C521,C523,C524,C525,C526,C527
HLT-2310_MAIN (SMD_TOP)		
PCB	LCD 23" LC-23IE20 2004.04.12 C.J.H	
CHIP RESISTOR	CHIP R 2012 5% (000) 0Ω	R252,R321,R323,R324,R325,R601,R602,R880,R881,R819, R820,R821,R290,R291,R232
CHIP RESISTOR	CHIP R 2012 5% (101) 100Ω	R220,R221,R255,R257,R427,R813,R814,R817,R818,R824, R825,R827,R828,R829,R830,R831,R832,R833,R851,R852, R870,R872,R873,R874,R882,R866
CHIP RESISTOR	CHIP R 2012 5% (103) 10kΩ	R107,R116,R146,R214,R215,R218,R219
CHIP RESISTOR	CHIP R 2012 5% (220) 22Ω	R229,R230,R319,R320,R701,R702,R703,R704,R705,R706,

		R707,R708,R709,R710,R905,R906,R907,R908
CHIP RESISTOR	CHIP R 2012 5% (102) 1kΩ	R101,R104,R314,R315,R316,R410,R810,R812,R834,R839, R853,R863,R867
CHIP RESISTOR	CHIP R 2012 5% (222) 2.2kΩ	R811
CHIP RESISTOR	CHIP R 2012 5% (221) 220Ω	R206,R207,R208,R211R213
CHIP RESISTOR	CHIP R 2012 5% (202) 2kΩ	R310,R311,R312
CHIP RESISTOR	CHIP R 2012 5% (330) 33Ω	R335
CHIP RESISTOR	CHIP R 2012 5% (332) 3.3kΩ	R223,R426,R861,R862,R865,R898,R899
CHIP RESISTOR	CHIP R 2012 5% (472) 4.7kΩ	R201,R202,,R278,R279,R280,R281,R501,R713
CHIP RESISTOR	CHIP R 2012 5% (471) 470Ω	R110,R119,R128,R142,R156,R159,R162
CHIP RESISTOR	CHIP R 2012 5% (750) 75Ω	R203,R204,R205,R409
CHIP RESISTOR	CHIP R 2012 5% (820) 82Ω	R155,R157,R158,R248,R250,R317,R318,R505,R506,R507, R815,R816,R823,R835,R836,R837,R161
CHIP RESISTOR	CHIP R 2012 5% (121) 120Ω	R209
CHIP RESISTOR	CHIP R 2012 5% (473) 47kΩ	R102
CHIP RESISTOR	CHIP R 2012 5% (561) 560Ω	R127,R512
CHIP RESISTOR	CHIP R 2012 5% (752) 7.5kΩ	R511
CHIP RESISTOR	CHIP R 2012 5% (822) 8.2kΩ	R106,R117,R145
CHIP CAPACITORS	CHIP C 2012 50V 10% (103) 0.01μF	C314,C334
CHIP CAPACITORS	CHIP C 2012 50V 10% (104) 0.1μF	C102,C112,C118,C121,C206,C228,C231,C248,C250,C251, C501,C510,C512,C514,C547,C553,C555,C557,C559,C569, C603,C821,C833,C835,C836
CHIP CAPACITORS	CHIP C 2012 50V 10% (224) 0.22μF	C322,C323,C324,C333
CHIP CAPACITORS	CHIP C 2012 50V 10% (474) 0.47μF	C315,C316,C827
CHIP CAPACITORS	CHIP C 2012 50V 10% (102) 1000pF	C101,C230
CHIP CAPACITORS	CHIP C 2012 50V 10% (101) 100pF	C509,C511,C513
CHIP CAPACITORS	CHIP C 2012 50V 10% (152) 1500pF	C332
CHIP CAPACITORS	CHIP C 2012 50V 10% (391) 390pF	C331
CHIP CAPACITORS	CHIP C 2012 50V 10% (472) 4700pF	C515,C518,C575
CHIP CAPACITORS	CHIP C 2012 50V 10% (471) 470pF	C574
CHIP CAPACITORS	CHIP C 2012 50V 10% (393) 0.039μF	C218
CHIP CAPACITORS	CHIP C 2012 50V 10% (150) 15pF	C344
CHIP CAPACITORS	CHIP C 2012 50V 10% (332) 3300pF	C115
CHIP CAPACITORS	CHIP C 2012 50V 10% (330) 33pF	C813,C814
CHIP CAPACITORS	CHIP C 2012 50V 10% (392) 3900pF	C217
CHIP BEAD	HH-1M3216-501J 500Ω	L205,L503,L504,L505,L506,L507,L508,L509,L514,L516, L701,L702,L704,L802,L1001,L1002,L1003,L1004,L1005,L1006
CHIP TR	2SC3875S Y RTK (SOT-23) KEC	Q102,Q103,Q104,Q105,Q106,Q107,Q109,Q110,Q112,Q115, Q117,Q118,Q203,Q204,Q205,Q206,Q401,Q802,Q811,Q812,

		Q813
CHIP BEAD	HB-1M2012-800JT 80Ω	L201,L202,L203
CHIP ARRAY RESISTOR	ARRAY R164 5% (220) 22Ω	AR201,AR202,AR203,AR204,AR205,AR206,AR301,AR302,AR303,AR304,
CHIP ARRAY RESISTOR	ARRAY R164 5% (330) 33Ω	AR901,AR902,AR909,AR910,AR911,AR912,AR913,AR914,AR919,AR920,
		AR921,AR922,AR923,AR924,AR925,AR926,AR927,AR928
CHIP ARRAY RESISTOR	ARRAY R164 5% (101) 100Ω	AR801,AR802
CHIP ARRAY RESISTOR	ARRAY R164 5% (103) 10kΩ	AR915,AR916,AR917,AR918
WAFER	12505WR-12	P1001
CONNECTOR	FI-TWE21P-VF(JAE) 21P 1.25MM	P702
WAFER	10022HS-31A02 31P 1.0MM FFC	P101
WAFER	12505WR-09A	P103
CRYSTAL	SX-1 20.250000MHZ +/-30 PPM 16PF TA	X301
CRYSTAL	SX-1 6.0000000MHZ +/-30 PPM 16PF TA	X801
ZENER DIODE	UDZS 33B E5 33V SOD-323 ROHM	D1010
IC EEPROM	24C16B I/SN (SOP8) ATMEL	IC806
IC EEPROM	24LC21A I/SN (SOP8) Microchip	IC202,IC203
IC TTL	74HCT08D (SO14) PHILIPS	IC201
IC TTL	HD74LS123RPEL (SOP/JEDEC)	IC101
CHIP TR	KIA1504S Y RTK (SOT-23) KEC	Q111
CHIP DIODE	KDS226RTK (SOT-23) KEC	D301
IC	AD9882KST140 (ST-100) AD	IC207
IC	BA7657F-E2	IC206
IC	MAX232CWE	IC810
IC REG	LM1117S-2.5V (SOT-223) HTC	IC803,IC902
IC REG	LM1117S-3.3V (SOT-223) HTC	IC204,IC302,IC502,IC603,IC701,IC802,IC903
IC SDRAM	K4S643232E-TC60(TSOP86) or HY57V64322	IC601,IC602
IC Voltage Detector	KIA7027AF(SOT-89) KEC	IC807
IC 1M L/SRAM	HY62V8100BLLT1-70 or K6X1008	IC808
IC Switching Regulator	L4973D5.1(SO20) ST	IC1001
IC LVDS Transmitter	M385 (TSSOP56) MRT	IC703
CHIP DIODE	MBRS190T3(SMB 403A)	D1003
IC	PanelTV-SVP 320LD BGA TRIDENT	IC401
IC	PI5V330W	IC205
IC TVText Processor	SDA5550 (MQFP100) MICRONAS	IC801

TR(Dual P-Channel MOSFET)	SI4925DY(SO-8) Vishay Siliconix	IC704
IC	VPC3230D-C5 (PQFP80) MICRONAS	IC301
IC	J-L003	IC901
IC	M62320FP,I/O EXPANDER 16P SOP	IC815
IC	MIC39100-2.5V	IC503
HLT-2310_AV PCB ASS'Y		
HLT-2310_AV BOARD (MANUAL INSERT)		
S-VIDEO JACK	PJ6046G	P104
CONNECTOR	RCA_L/R (PPJ137A)	P103
CONNECTOR SCART	UPJ-R1-023	P101,P102
CONNECTOR	SMW250-03	P902
CONNECTOR	SMW250-04	P901
CONNECTOR ASS'Y	10P 2.0mm 50mm H-B UL1007 AWG24	P202
TUNER	6700PF0002A TAFH-S312D	TU201
JACK, RCA	PPJ128A-1 A/V 3P WITH S/W GR-BU-RD	P105
CAPACITOR, FIXED FILM	0.33uF S 100V PCX2 337 BULK	C9A7,C9A8,C9A9,C9B1
HLT-2310_AV BOARD (AUTO INSERT)		
AL EL CAPACITORS	16V/100uF STD M TP5 (6.3X11 105°C)	C129,C131,C204,C207,C209,C944,C945,C961,C967,C972
AL EL CAPACITORS	16V/10uF STD M TP5 (5X11 85°C)	C104,C111,C119,C122,C134,C934,C947,C953,C969
AL EL CAPACITORS	50V/1uF STD M TP5 (5X11 85°C)	C202,C205,C986,C987,C997,C998
AL EL CAPACITORS	16V/220uF STD M TP5 (8X11 85°C)	C133,C215,C217,C219,C230
AL EL CAPACITORS	16V/470uF STD M TP5 (8X11 85°C)	C101,C112
AL EL CAPACITORS	16V/47uF STD M TP5	C138,C950
AL EL CAPACITORS	50V/3.3uF STD M TP5	C942
AL EL CAPACITORS	50V/47uF STD M TP5	C974,C978,C984,C995,C9A4,C9A6
AL EL CAPACITORS	50V/10uF STD M TP5	C140,C143,C153
HLT-2310_AV BOARD (SMD_TOP)		
PCB	23" A/V LC-23IE20 C.J.H. 2004.04.12	
CHIP CAPACITORS	CHIP C 2012 50V 10% (103) 0.01µF	C103,C108,C114,C1 AR92116,C125,C126,C216,C218,C231,C929
		C933,C960,C966,C970
CHIP CAPACITORS	CHIP C 2012 50V 10% (104) 0.1µF	C130,C132,C157,C203,C206,C208,C220,C941,C943,C946
		C949,C951,C968,C975,C976,C977,C981,C985,C992,C996
		C9A2,C9A3,C9A5,C9B2
CHIP CAPACITORS	CHIP C 2012 50V 10% (224) 0.22µF	C983,C989,C994,C9A1
CHIP CAPACITORS	CHIP C 2012 50V 10% (474) 0.47µF	C137,C139,C141,C142,C144,C145,C146,C147,C156,C932
		C935,C936,C937,C938,C939,C940,C979,C980,C990,C991
CHIP CAPACITORS	CHIP C 2012 50V 10% (102) 1000pF	C105,C110,C118,C121
CHIP CAPACITORS	CHIP C 2012 50V 10% (101) 100pF	C213,C214

CHIP CAPACITORS	CHIP C 2012 50V 10% (472) 4700pF	C210,C955,C957,C958,C959
CHIP CAPACITORS	CHIP C 2012 50V 10% (105) 1μF	C982,C993
CHIP CAPACITORS	CHIP C 2012 50V 10% (010) 1pF	C964,C965
CHIP CAPACITORS	CHIP C 2012 50V 10% (560) 56pF	C962,C963
CHIP CAPACITORS	CHIP C 2012 50V 10% (221) 220pF	C988,C999
CHIP CAPACITORS	CHIP C 2012 50V 10% (332) 3300pF	C155
CHIP RESISTOR	CHIP R 2012 5% (000) 0Ω	R201,R961,R972,R980
CHIP RESISTOR	CHIP R 2012 5% (101) 100Ω	R202,R203,R948,R949
CHIP RESISTOR	CHIP R 2012 5% (103) 10kΩ	R104,R221,R968
CHIP RESISTOR	CHIP R 2012 5% (102) 1kΩ	R109,R114,R121,R139,R140,R141,R142,R147,R148,R162
		R167,R172,R173,R174,R175,R178,R179,R180,R182,R186
		R188,R194,R196,R215,R216,R923,R930,R931,R932,R933
		R935,R940,R941,R950,R969,R977,R1C1,R1D8
CHIP RESISTOR	CHIP R 2012 5% (224) 220kΩ	R108,R113,R131,R132,R133,R134,R145,R146,R1D6
CHIP RESISTOR	CHIP R 2012 5% (243) 24kΩ	R106,R128
CHIP RESISTOR	CHIP R 2012 5% (202) 2kΩ	R122,R934,R936,R937,R938
CHIP RESISTOR	CHIP R 2012 5% (222) 2.2kΩ	R1D9
CHIP RESISTOR	CHIP R 2012 5% (472) 4.7kΩ	R120,R212,R222,R223,R224,R967,R973,R1E2
CHIP RESISTOR	CHIP R 2012 5% (223) 22kΩ	R1D7
CHIP RESISTOR	CHIP R 2012 5% (680) 68Ω	R118
CHIP RESISTOR	CHIP R 2012 5% (750) 75Ω	R102
CHIP RESISTOR	CHIP R 2012 5% (820) 82Ω	R103,R119,R123,R124,R125,R126,R129,R130,R151,R152
		R153,R154,R155,R156,R157,R158,R164,R168,R169,R187
		R197,R198,R208,R213,R214,R232,R1D3,R1F3
CHIP RESISTOR	CHIP R 2012 5% (151) 150Ω	R209,R964,R966
CHIP RESISTOR	CHIP R 2012 5% (201) 200Ω	R176,R177,R1F2
CHIP RESISTOR	CHIP R 2012 5% (221) 220Ω	R159,R160,R945,R946,R1D5
CHIP RESISTOR	CHIP R 2012 5% (361) 360Ω	R1F1
CHIP RESISTOR	CHIP R 2012 5% (471) 470Ω	R101,R117,R149,R150,R161,R163,R195,R206,R231,R1C3
		R1D2,R1E1
CHIP RESISTOR	CHIP R 2012 5% (681) 680Ω	R1F4
CHIP RESISTOR	CHIP R 2012 5% (821) 820Ω	R1D1
CHIP RESISTOR	CHIP R 2012 5% (474) 470kΩ	R111,R116,R136,R138
CHIP RESISTOR	CHIP R 2012 5% (473) 47kΩ	R105,R127,R939,R942
CHIP RESISTOR	CHIP R 2012 5% (561) 560Ω	R165,R166,R170,R171,R184,R185,R191,R192,R193,R1D4
CHIP RESISTOR	CHIP R 2012 5% (152) 1.5kΩ	R944,R947
CHIP RESISTOR	CHIP R 2012 5% (164) 160kΩ	R965
CHIP RESISTOR	CHIP R 2012 5% (134) 130kΩ	R975,R982
CHIP RESISTOR	CHIP R 2012 5% (105) 1MΩ	R943

CHIP RESISTOR	CHIP R 2012 5% (391) 390Ω	R230
CHIP RESISTOR	CHIP R 2012 5% (510) 51Ω	R974,R976,R981,R983
CRYSTAL	SX-1 18.432000MHZ +/-30 PPM 16PF TA	X901
CHIP INDUCTOR	FI-B2012-332KJT (3.3uH)	L102,L104,L106,L107
INDUCTOR	POWER INDUCTOR (SB1260-330 GET 33UH)	L912,L913,L914,L915
CHIP TR	KIA1504S Y RTK (SOT-23) KEC	Q102,Q103,Q108,Q111,Q124,Q201,Q202,Q904,Q905,Q911
CHIP BEAD	HH-1M3216-501J 500Ω	L101,L110,L113,L201,L202,L203,L910,L911,L916
TR(FET)	BSS83(SOT143B) PHILIPS	IC201,IC202
CHIP TR	2SC3875S Y RTK (SOT-23) KEC	Q101,Q104,Q105,Q106,Q110,Q121,Q122,Q123,Q125,Q130
		Q204,Q207,Q912
CHIP TR	KTC3881S (SOT-23) KEC	Q902,Q903
IC	CXA2069Q QFP64	IC101
WAFER	10022HS-31C 31P 1.0MM FFC	P201
CHIP DIODE	KDS226RTK (SOT-23) KEC	D101,D104,D107,D109,D201,D202,D905
CHIP DIODE	KDS181RTK (SOT-23) KEC	D904,D908
IC Voltage Detector	KIA7042AF(SOT-89) KEC	IC903
IC REG	KIA7809AF(DPAK) KEC	IC102
IC REG	KIA7805AF(DPAK) KEC	IC906
IC REG	KIA7808AF(DPAK) KEC	IC902
IC Sound Processor	MSP3410G (PQFP80) MICRONAS	IC901
IC AUDIO AMPLIFIER	TPA3001D1PWPR TI	IC904,IC905
HLT-2310_KEY PCB ASS'Y		
HLT-2310_KEY (MANUAL INSERT)		
IR Receiver Modules	TSOP1238RF1 (VISHAY)	I901
LED	WAM5270	D901
TACT_SW	TP-1145(AMEGATECH)	SW901,SW902,SW903,SW904,SW905,SW906,SW907
HLT-2310_KEY (SMD)		
PCB	23"/30" KEY B/D(B/C TYPE) 2004.04.12 C.J.H	
CHIP BEAD	HH-1M3216-501J 500Ω	L902
CHIP RESISTOR	CHIP R 2012 5% (182) 1.8kΩ	R903
CHIP RESISTOR	CHIP R 2012 5% (911) 910Ω	R904
CHIP RESISTOR	CHIP R 2012 5% (681) 680Ω	R905,R911
CHIP RESISTOR	CHIP R 2012 5% (222) 2.2kΩ	R906
CHIP RESISTOR	CHIP R 2012 5% (162) 1.6kΩ	R907
CHIP RESISTOR	CHIP R 2012 5% (000) 0Ω	R908
CHIP RESISTOR	CHIP R 2012 5% (472) 4.7kΩ	R909
CHIP RESISTOR	CHIP R 2012 5% (471) 470Ω	R910,R912,R913,R914
CHIP TR	2SC3875S Y RTK (SOT-23) KEC	Q901,Q902

WAFER	12505WR-09A	P901
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■ Differential Part List Of Each Product.

Location	23" EU(LPL)	30" EU(LPL)	30" EU(CMO)
IC702	x	M385 (TSSOP56) MRT	x
IC703	M385 (TSSOP56) MRT	x	M385 (TSSOP56) MRT
P701	x	21P 1.25MM	x
P702	21P 1.25MM	x	21P 1.25MM
L704	HH-1M3216-501J	HH-1M3216-501J	x
L705	x	x	HH-1M3216-501J
P1001	12505WR-12	x	x
P1002	x	12505WR-15	x
P1003	x	12505WR-15	x
P1007	x	x	12505WR-10
P1008	x	x	12505WR-12
R1001	CHIP R 2012 5% (472) 4.7K Ω	CHIP R 2012 5% (472) 4.7K Ω	x
R886	x	x	CHIP R 2012 5% (820) 82 Ω
R887	x	x	CHIP R 2012 5% (820) 82 Ω
R814	CHIP R 2012 5% (101) 100 Ω	CHIP R 2012 5% (101) 100 Ω	x
R835	CHIP R 2012 5% (820) 82 Ω	CHIP R 2012 5% (820) 82 Ω	x

