

JVC

SCHEMATIC DIAGRAMS

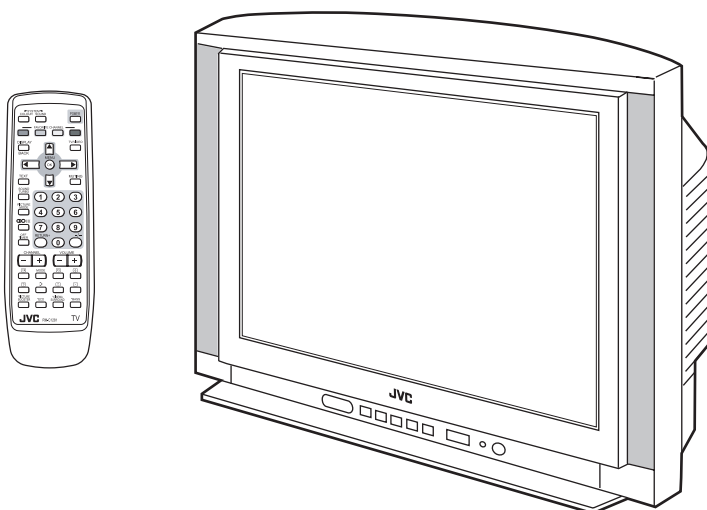
FLAT COLOUR TELEVISION

AV-21LX14/G,
AV-2144L/E,
AV-2154L/E

CD-ROM No.SML200410

BASIC CHASSIS

CW



AV-21LX14/G, AV-2144L/E, AV-2154L/E

STANDARD CIRCUIT DIAGRAM

■ NOTE ON USING CIRCUIT DIAGRAMS

1.SAFETY

The components identified by the $\triangle$ symbol and shading are critical for safety. For continued safety replace safety critical components only with manufactures recommended parts.

2.SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

- (1)Input signal : Colour bar signal
- (2)Setting positions of each knob/button and variable resistor : Original setting position when shipped
- (3)Internal resistance of tester : DC 20k Ω /V
- (4)Oscilloscope sweeping time : H $\Rightarrow$ 20 μ s / div
: V $\Rightarrow$ 5ms / div
: Others $\Rightarrow$ Sweeping time is specified
- (5)Voltage values : All DC voltage values

* Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

3.INDICATION OF PARTS SYMBOL [EXAMPLE]

- In the PW board : R209 $\rightarrow$ R209

4.INDICATIONS ON THE CIRCUIT DIAGRAM

(1)Resistors

● Resistance value

- No unit : [Ω]
- K : [k Ω]
- M : [M Ω]

● Rated allowable power

- No indication : 1/16 [W]
- Others : As specified

● Type

- No indication : Carbon resistor
- OMR : Oxide metal film resistor
- MFR : Metal film resistor
- MPR : Metal plate resistor
- UNFR : Uninflamable resistor
- FR : Fusible resistor

* Composition resistor 1/2 [W] is specified as 1/2S or Comp.

(2)Capacitors

● Capacitance value

- 1 or higher : [pF]
- less than 1 : [μ F]

● Withstand voltage

- No indication : DC50[V]
- Others : DC withstand voltage [V]
- AC indicated : AC withstand voltage [V]

* Electrolytic Capacitors

47/50[Example]: Capacitance value [μ F]/withstand voltage[V]

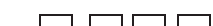
● Type

- No indication : Ceramic capacitor
- MM : Metalized mylar capacitor
- PP : Polypropylene capacitor
- MPP : Metalized polypropylene capacitor
- MF : Metalized film capacitor
- TF : Thin film capacitor
- BP : Bipolar electrolytic capacitor
- TAN : Tantalum capacitor

(3)Coils

- No unit : [μ H]
- Others : As specified

(4)Power Supply

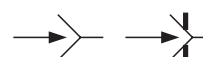
-  : B1
-  : B2 (12V)
-  : 9V
-  : 5V

* Respective voltage values are indicated

(5)Test point

-  : Test point
-  : Only test point display

(6)Connecting method

-  : Connector
-  : Wrapping or soldering
-  : Receptacle

(7)Ground symbol

-  : LIVE side ground
-  : ISOLATED(NEUTRAL) side ground
-  : EARTH ground
-  : DIGITAL ground

5.NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : () side GND and the ISOLATED(NEUTRAL) : () side GND. Therefore, care must be taken for the following points.

- (1)Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED(NEUTRAL) side GND simultaneously. if the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.
- (2)Do not short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or never measure with a measuring apparatus measure with a measuring apparatus (oscilloscope, etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND at the same time. If the above precaution is not respected, a fuse or any parts will be broken.

◆ Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.

NOTE

◆ Due improvement in performance, some part numbers show in the circuit diagram may not agree with those indicated in the part list.

When ordering parts, please use the numbers that appear in the Parts List.

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PATTERN DIAGRAMS

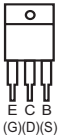
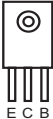
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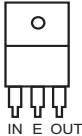
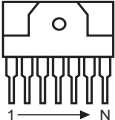
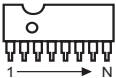
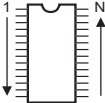
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SEMICONDUCTOR SHAPES

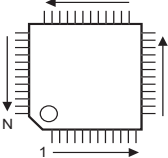
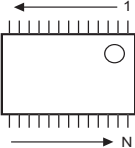
TRANSISTOR

BOTTOM VIEW	FRONT VIEW				TOP VIEW
					CHIP TR 

IC

BOTTOM VIEW	FRONT VIEW			TOP VIEW
				

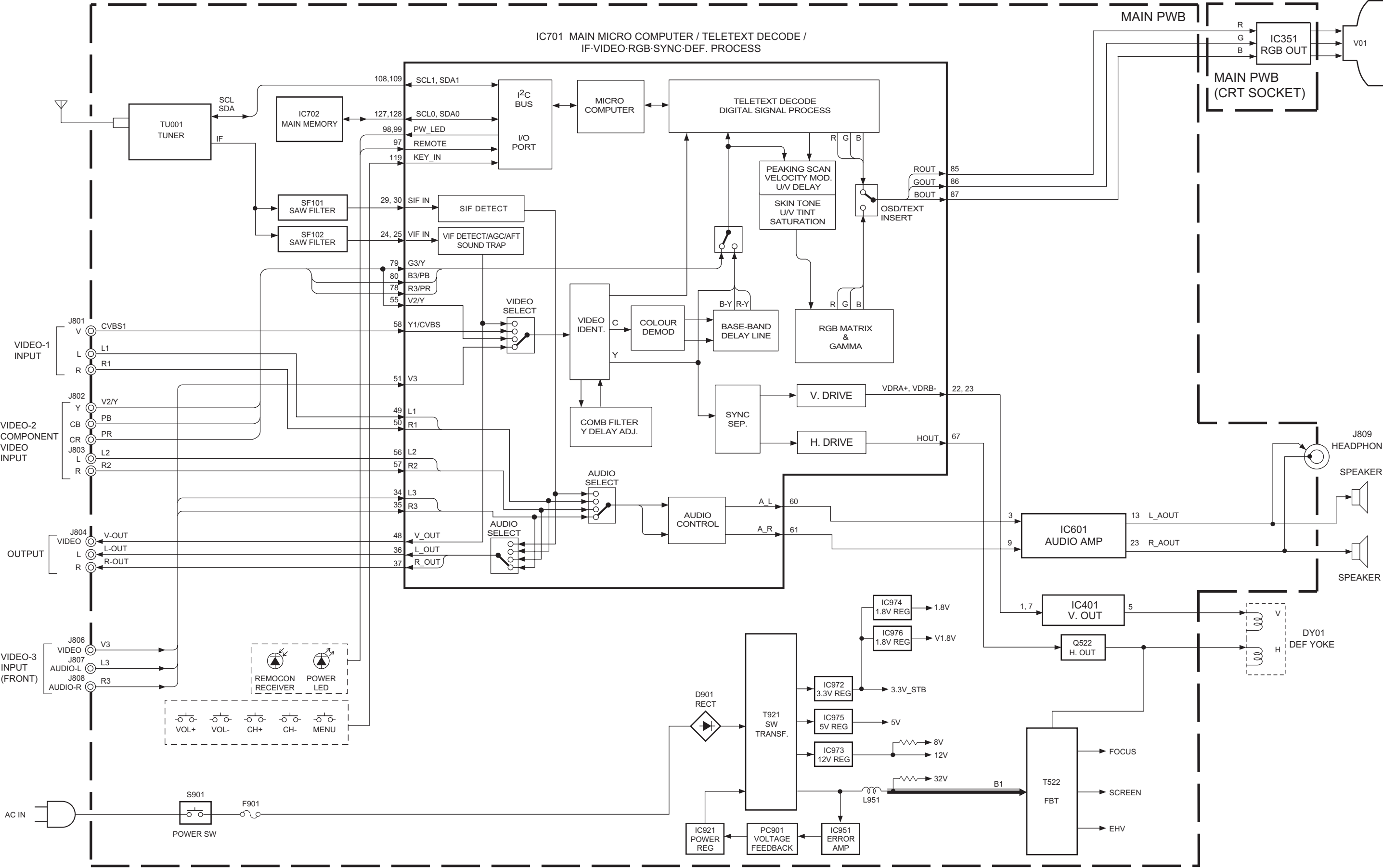
CHIP IC

TOP VIEW		
		

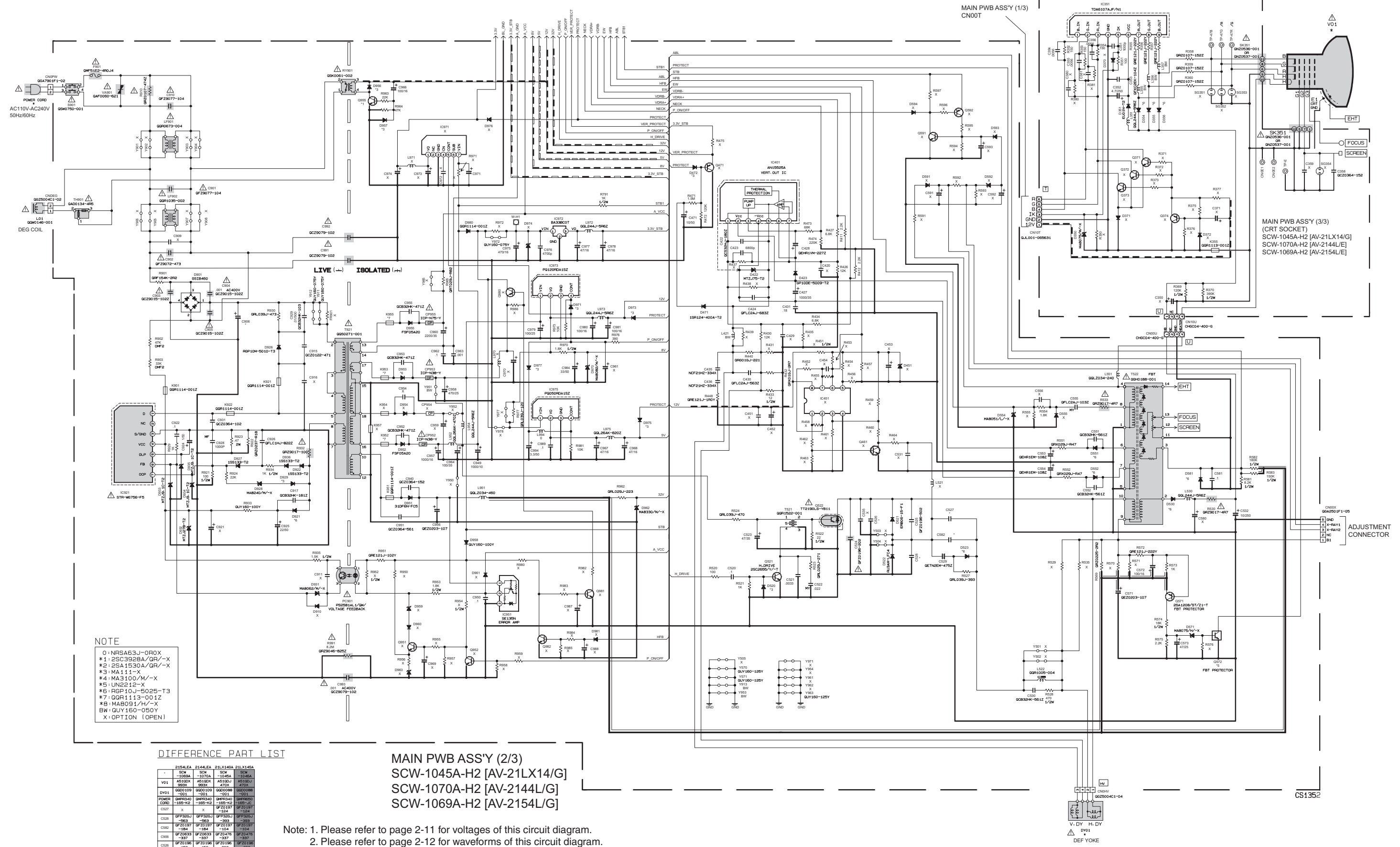
USING P.W.BOARD

P.W. BOARD ASS'Y NAME	AV-21LX14/G	AV-2144L/E	AV-2154L/E
MAIN P.W. BOARD	SCW-1045A-H2	SCW-1070A-H2	SCW-1069A-H2

BLOCK DIAGRAM



MAIN PWB CIRCUIT DIAGRAM (2/3),(3/3)



DIFFERENCE PART LIST				
	21544EA	2144EA	21L140A	21L145A
-	SCM	SCW	SCW	SCW
	1056A	1070A	1045A	1046A
V01	AS102X	AS105X	AS105X	AS105X
	993X	993X	993X	470X
DY01	GDD109	GDD109	GDD098R	GDD098R
	301	301	301	301
POWER	GHPR340	GHPR340	GHPR340	GHPR340
COND	165-62	165-62	165-62	165-62
C527	X	X	GFP3017	GFP3017
			194	194
C528	GFP326J3	GFP326J3	GFP326J3	GFP326J3
	-963	-963	-393	-393
C582	GFP2017	GFP2017	GFP2017	GFP2017
	-184	-184	-104	-104
C906	GFP2063	GFP2063	GFP2476	GFP2476
	-337	-337	-337	-337
C528	GFP2196	GFP2196	GFP2196	GFP2196

Note: 1. Please refer to page 2-11 for voltages of this circuit diagram.
2. Please refer to page 2-12 for waveforms of this circuit diagram.

MAIN PWB PATTERN



VOLTAGE CHARTS

<MAIN PWB>

PIN NO.	VOLTAGE[V]
IC401	
1	0.5
2	14.3
3	-11.9
4	-13.6
5	0
6	14.5
7	0.5
IC601	
1	0
2	0
3	19.0
4	0
5	0
6	0
7	9.4
8	2.2
9	0
10	20.1
11	13.7
12	9.4
IC701	
1	0.1
2	0.1
3	1.8
4	3.2
5	0.1
6	0.7
7	3.1
8	0.7
9	3.1
10	0.3
11	0.3
12	0.1
13	0.1
14	2.9
15	4.9
16	0.2
17	2.4
18	0
19	2.3
20	2.3
21	0.1
22	0.9
23	0.9
24	2.0
25	0.1
26	2.4
27	1.8
28	0.1
29	0.1
30	1.9
31	2.8
32	3.3
33	1.2
34	2.2
35	2.1
36	2.7
37	0.1
38	2.3
39	2.3
40	0
41	2.0
42	1.7
43	2.1
44	0
45	8.4
46	1.7
47	4.9
48	0
49	2.2
50	2.2
51	1.3
52	1.5
53	2.2
54	2.2
55	0
56	2.2
57	2.2
58	1.7
59	0
60	2.8
61	2.7
62	0
63	3.6
64	0
65	2.0
66	0
67	0
68	0
69	4.9
70	0
71	1.2
72	0
73	0

PIN NO.	VOLTAGE[V]
74	0
75	0
76	0
77	0
78	0
79	1.2
80	0
81	0
82	0
83	0.1
84	0
85	0
86	0
87	0
88	0
89	0
90	3.2
91	0
92	0
93	0
94	3.2
95	0
96	1.8
97	3.2
98	0
99	0
100	0
101	0.1
102	3.2
103	3.2
104	1.1
105	0
106	0
107	0
108	1.8
109	1.7
110	3.2
111	0
112	0
113	2.9
114	3.2
115	0
116	0
117	1.8
118	1.8
119	3.2
120	0.9
121	0
122	1.0
123	0
124	1.8
125	0
126	3.2
127	3.0
128	3.0
IC702	
1	0
2	0
3	0
4	0
5	3.0
6	3.0
7	0
8	3.2
IC801	
1	3.1
2	3.2
3	0
IC921	
1	301.1
3	0
4	20.1
5	0.2
6	1.3
7	0.9
IC951	
1	115.4
2	13.1
3	0
IC972	
1	0
2	6.1
3	3.3
IC973	
1	15.8
2	12.0
3	0
4	3.9
IC974	
1	1.8
2	0.5
3	0.5
4	0.5
5	2.9
6	0

PIN NO.	VOLTAGE[V]
7	3.2
IC975	
1	6.1
2	5.0
3	0
4	4.0
IC976	
1	1.8
2	0.4
3	0
4	0.5
5	2.9
6	0
7	3.2
Q101	
E	2.3
C	12.0
B	3.0
Q102	
E	0
C	0
B	3.0
Q103	
E	0
C	0
B	3.1
Q521	
E	0
C	10.8
B	0
Q522	
E	0
C	111
B	-0.1
Q571	
E	115.4
C	115.1
B	43.3
Q572	
E	0.1
C	3.2
B	0
Q601	
E	0
C	0.2
B	8.3
Q602	
E	0.2
C	-0.5
B	0
Q603	
E	0
C	0
B	-0.5
Q605	
E	0
C	0
B	-0.5
Q607	
E	0
C	0
B	0.6
Q608	
E	0
C	15.0
B	0
Q703	
E	3.2
C	0
B	3.2
Q705	
S	0
G	0.8
D	1.8
Q791	
E	0
C	4.8
B	0
Q801	
E	1.9
C	0
B	1.3
Q803	
E	0.1
C	0
B	-0.6
Q804	
E	0
C	0
B	-0.7
Q805	
E	0.2
C	-0.6
B	0

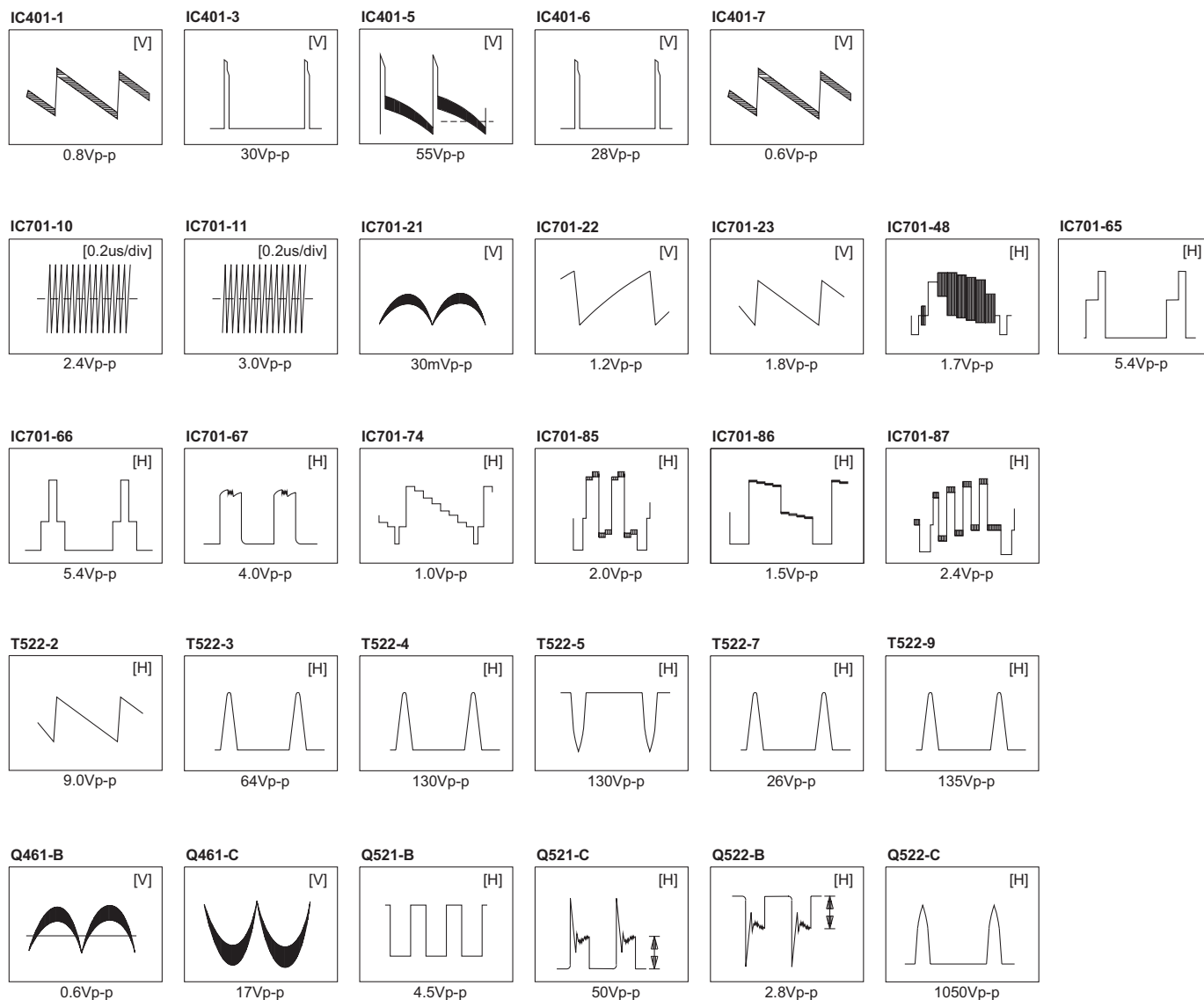
PIN NO.	VOLTAGE[V]
Q955	
E	0
C	12.0
B	0
TU001	
1 (ACC)	2.9
2	0
3	0
4	2.0
5	1.9
6	4.9
7	4.9
8	0
9	33.8
11	0

<MAIN PWB (CRT SOCKET)>

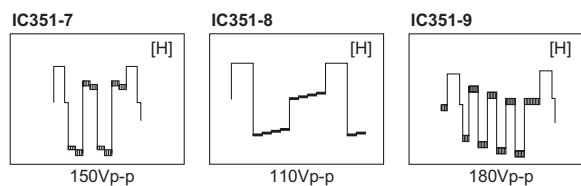
PIN NO.	VOLTAGE[V]
IC351	
1	1.8
2	1.8
3	1.8
4	0
5	4.1
6	209.3
7	142.3
8	144.8
9	145.6

WAVEFORMS

-MAIN PWB-



-CRT SOCKET PWB-





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