

JVC

SCHEMATIC DIAGRAMS

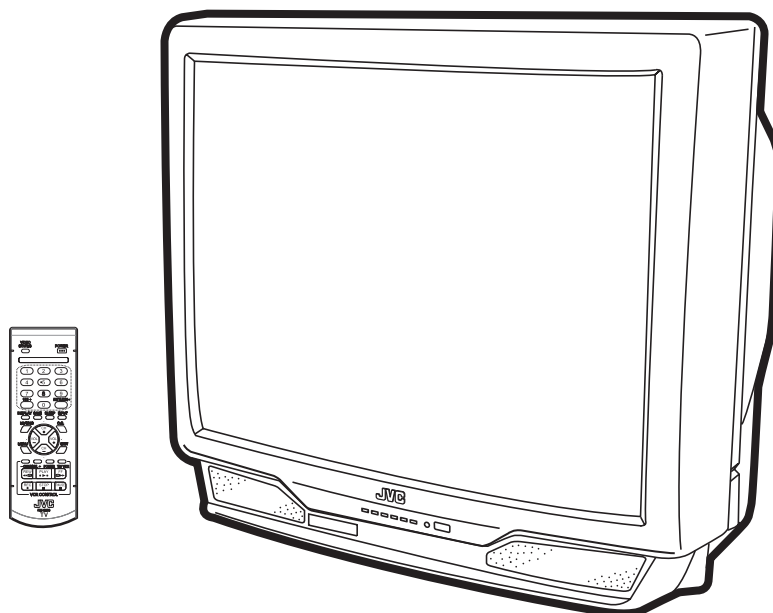
COLOR TELEVISION

AV-32430/M, AV-32432/M,
AV-32430/R, AV-32432/R,
AV-32430/Y, AV-32432/Y

BASIC CHASSIS

GE2

CD-ROM No.SML200306



AV-32430/MA, AV-32430/RA, AV-32430/YA AV-32432/MA, AV-32432/RA, AV-32432/YA 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 :R1209 \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

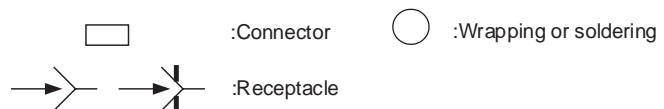


* Respective voltage values are indicated

(5)Test point



(6)Connecting method



(7)Ground symbol

\perp	: LIVE side ground
\perp with a horizontal line	: ISOLATED(NEUTRAL) side ground
\perp with a horizontal line and a vertical line	: 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 : (\perp) side GND and the ISOLATED(NEUTRAL) : (\perp with a horizontal line) side GND. Therefore, care must be taken for the following points.

- 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.
- 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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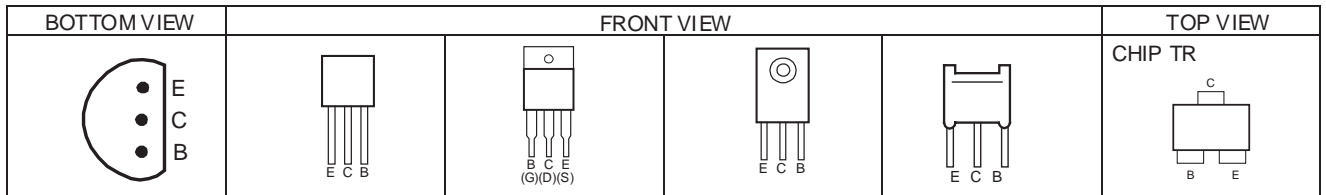
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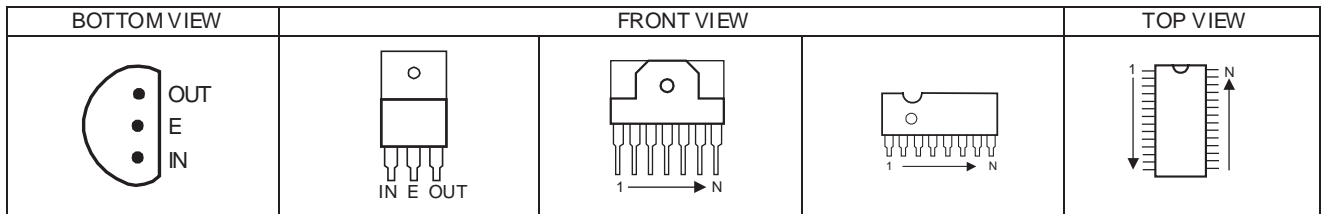
CHANNEL CHART (CA) 2-22

SEMICONDUCTOR SHAPES

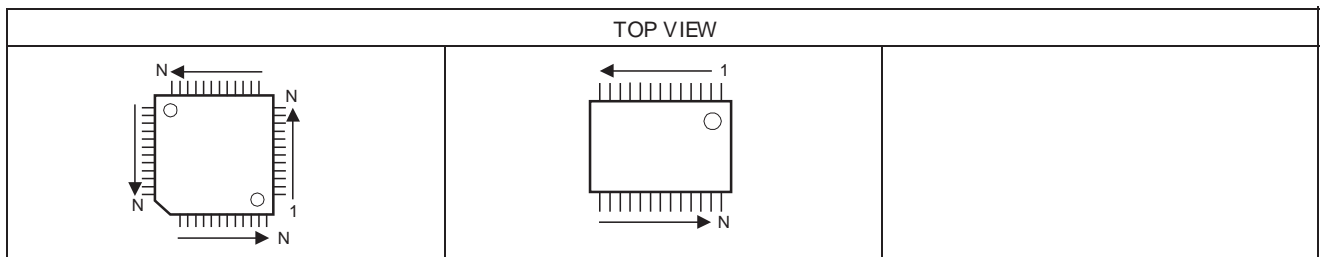
TRANSISTOR



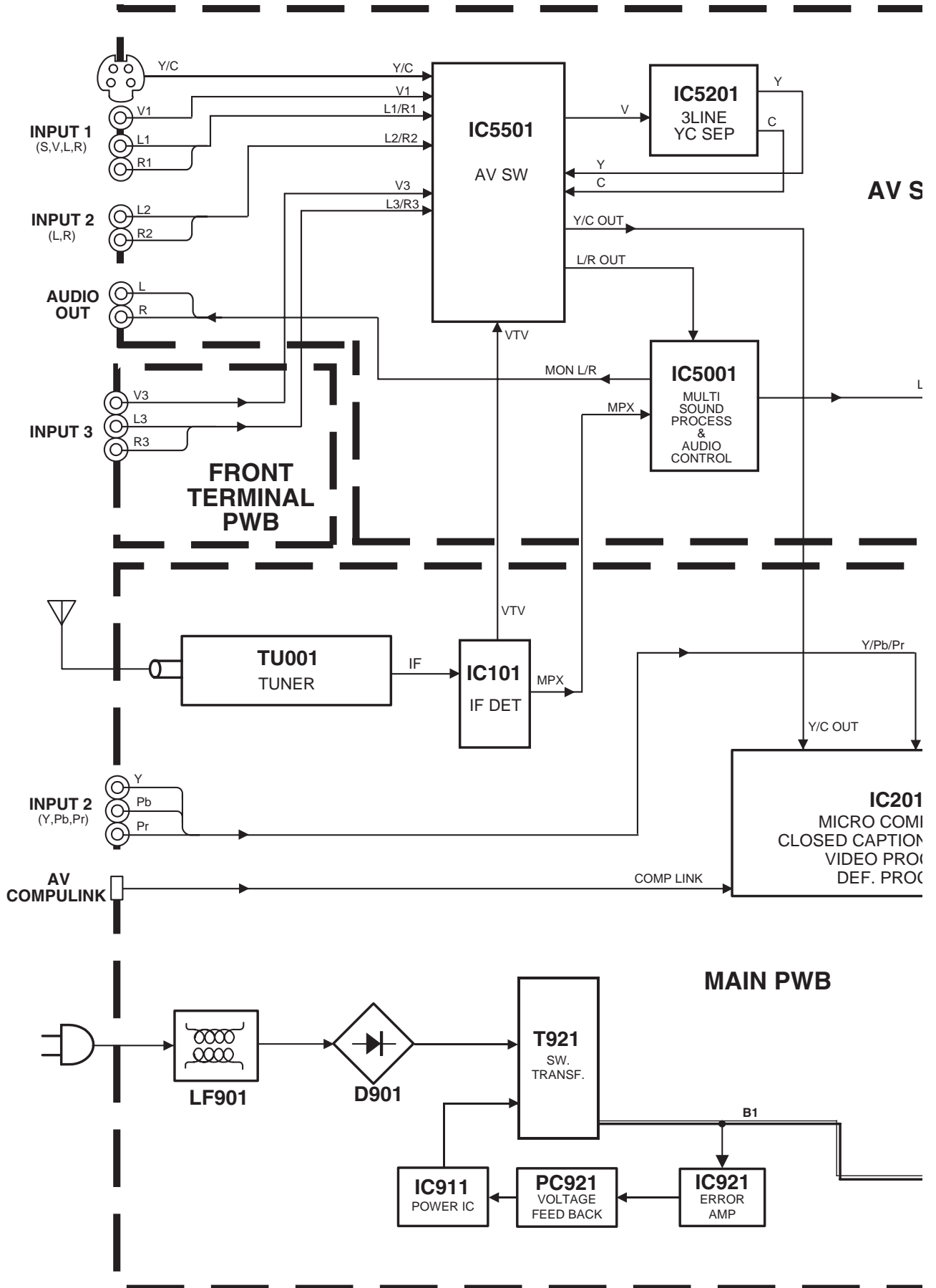
IC

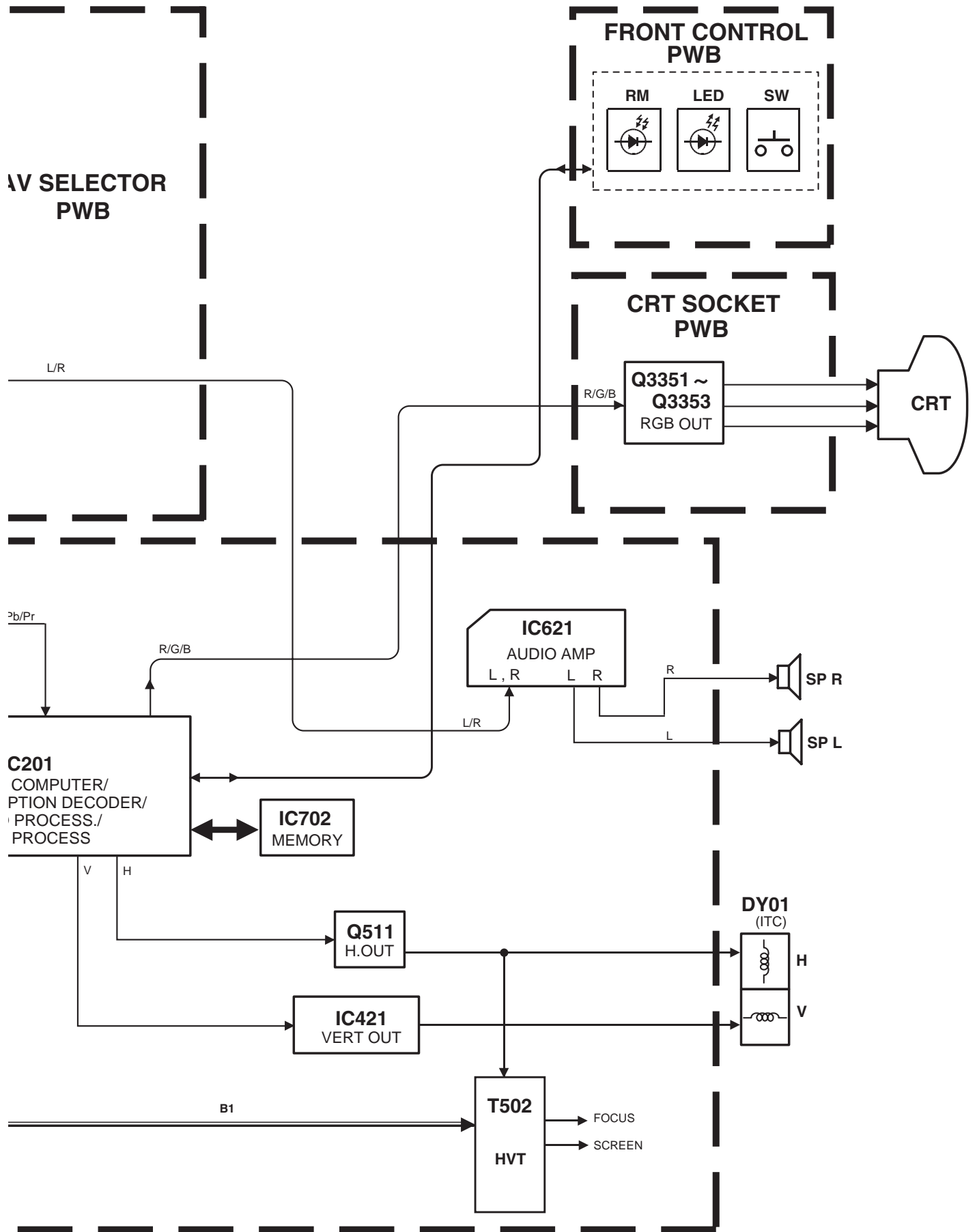


CHIP IC



BLOCK DIAGRAM

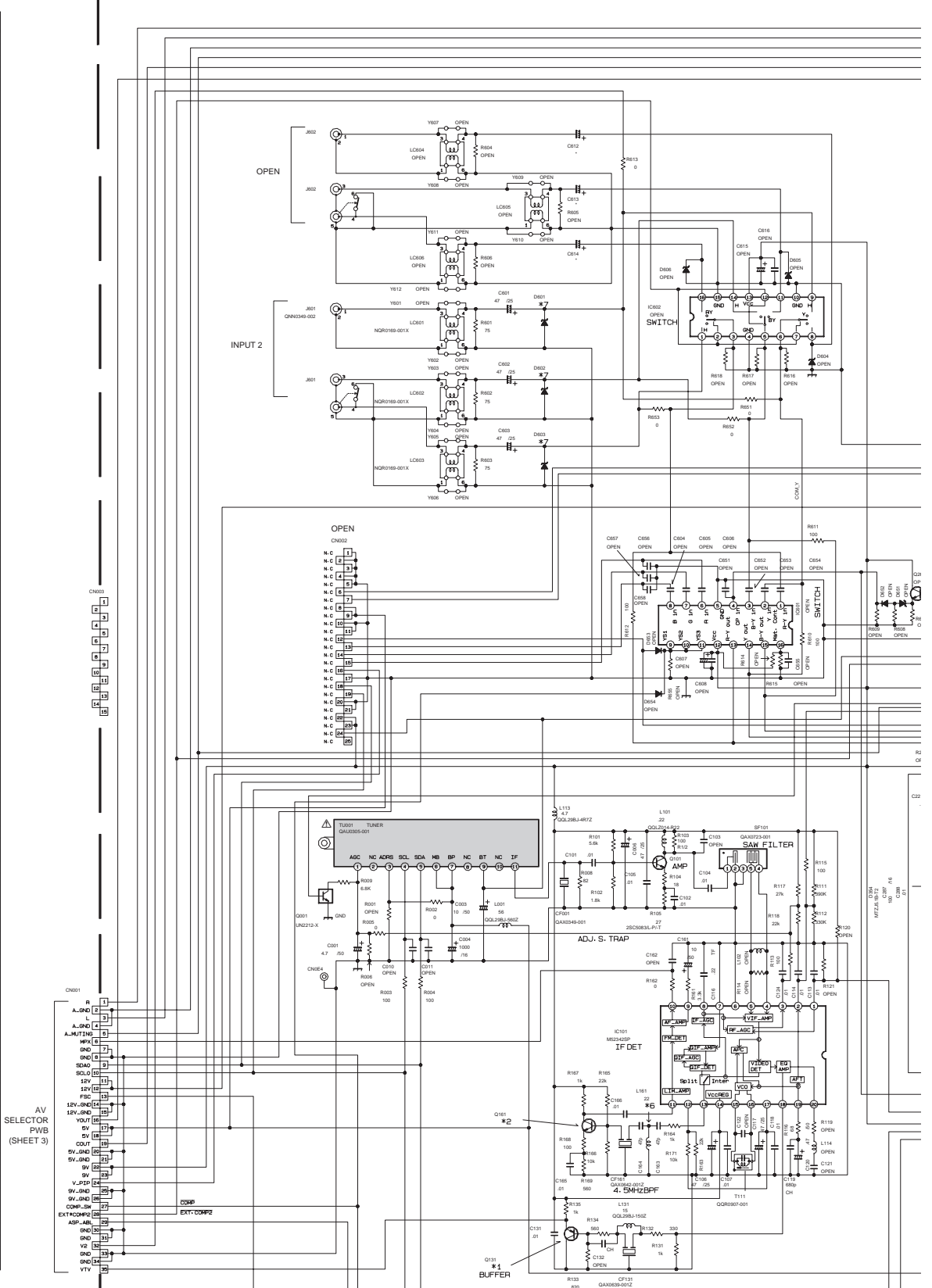




CIRCUIT DIAGRAMS

MAIN PWB CIRCUIT DIAGRAM (1/2) SHEET 1

PIN NO.	VOLTAGE (V)	PIN NO.	VOLTAGE (V)	
IC101				
1	2.5	28	0	
2	4.8	1	6.1	
3	1.4	2	6.1	
4	1.4	3	6.1	
5	0	4	0	
6	0	5	0	
7	0	6	6.1	
8	3.2	7	6.1	
9	2.3	8	6.1	
10	5.5	9	0	
11	2.1	10	0	
12	3.3	11	0	
13	2.1	12	9	
14	9	13	4.8	
15	3.9	14	0	
16	3.9	15	4.8	
17	4.8	16	2.9	
18	2	17	0	
19	3.4	1	1.2	
20	1.5	2	1.3	
IC201				
1	2.8	4	0	
2	2.1	5	0	
3	4.7	6	11	
4	0	7	22.2	
5	5	8	22.3	
6	2.2	9	1.8	
7	0	10	0	
8	0	11	10.6	
9	5	12	0	
10	0	13	10.6	
11	0	14	0	
12	0	1	0	
13	1.1	2	0	
14	1.9	3	0	
15	9	4	0	
16	6.6	5	4.7	
17	3.4	6	4.8	
18	4.1	7	0	
19	3.2	8	5	
20	0	9	0	
IC702				
21	0	1	5	
22	2.1	2	5	
23	2.2	3	0	
24	2	4	0	
IC703				
25	5.1	1	5	
26	2.1	2	11.5	
27	2	3	0	
IC704				
28	2.3	1	5	
IC852				
29	0	1	13.6	
30	2.1	2	9	
31	5.9	3	0	
IC853				
32	0.1	1	9.4	
33	2.5	2	4.8	
34	3.8	3	0	
TU001				
35	1.6	3	0	
36	2.5	1	1	
37	2.8	2	1	
38	4.7	3	4.7	
39	1.8	4	3.9	
40	1.9	5	4.2	
41	1.9	6	4.7	
42	9	7	4.7	
43	0	8	0	
44	0	9	31.3	
45	0	10	0	
46	5	11	0	
47	0	12	0	
48	0	13	0	
49	4.6	E	1.8	
50	4.6	C	9	
51	4.7	B	1	
52	2.5	Q131	E	1.6
53	4.8	E	1.6	
54	0	C	0	
55	4.9	B	0.9	
56	0.4	Q161	E	5.8
IC501				
1	2.3	C	2	
2	2.3	B	2.6	
3	0.8	C	9	
4	4.9	Q211	E	3.8
5	9	E	3.8	
6	2.2	C	9	
7	4.8	B	4.5	
8	0	Q232	E	0
9	11.5	E	0	
10	0	C	0	
11	3.3	B	0.5	
12	0.5	Q233	E	3.4
13	8.7	E	3.4	
14	3.7	C	9	
15	12	B	4	
16	4.7	Q701	E	3.6
17	4.7	E	3.6	
18	4	C	2.4	
19	0.6	B	3	
20	2.8	Q352	E	5.4
21	8	E	5.4	
22	2.4	C	9	
23	1.1	B	6	
24	7.1	Q623	E	0
25	11.7	E	0	
26	2.5	C	13.7	
27	0	B	0.1	

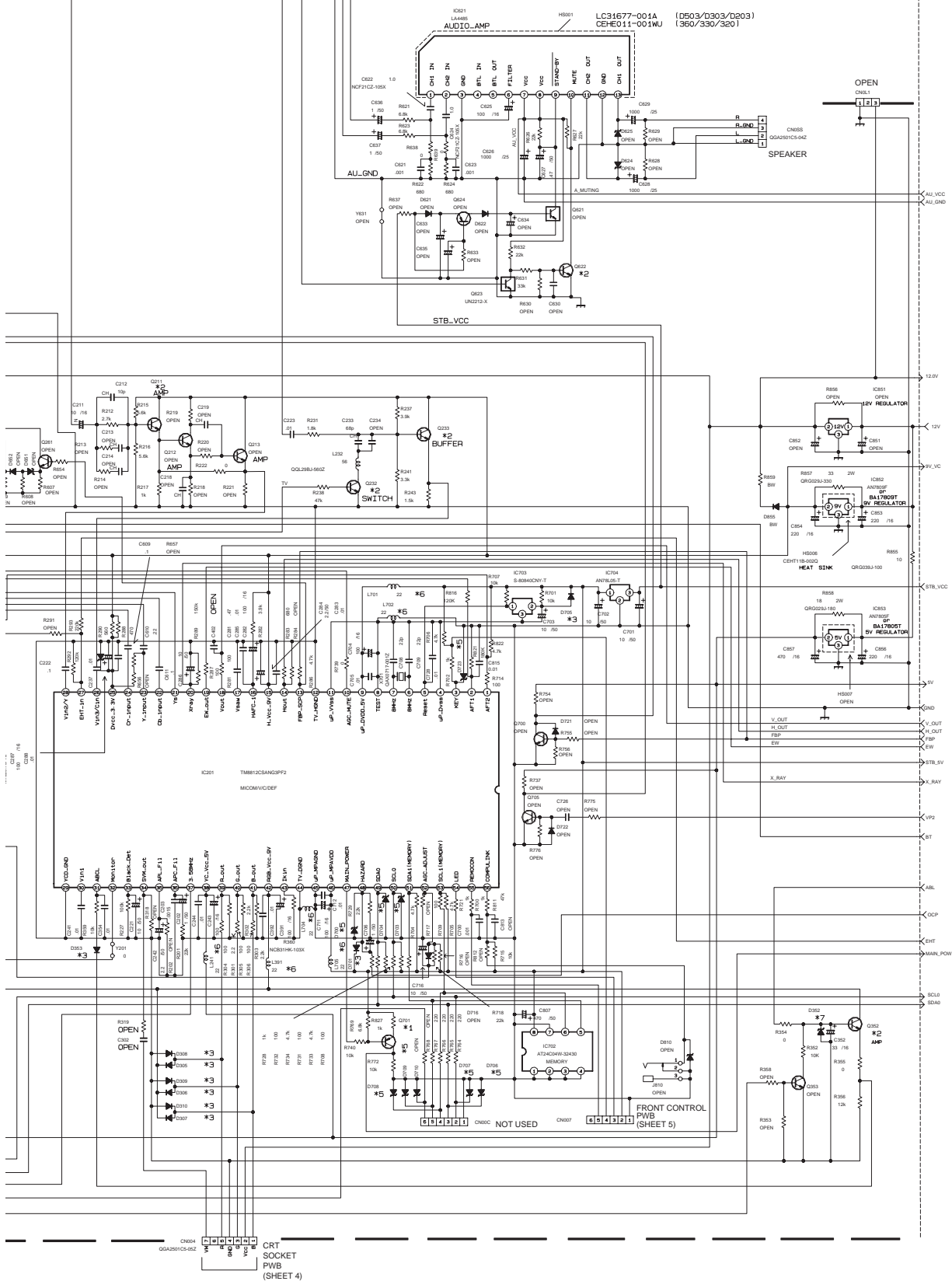


PARTS REFERENCE LIST

*1	2SB709A/QR/-X or 2SA1037AK/QR/-T
*2	2SD601A/QR/-X or 2SC2412K/QR/-T
*3	1SS133-T2
*4	GQR05B2-001Z
*5	MTZJ5.6B-T2
*6	QGL29BJ-220Z
*7	MTZJ9.1C-T2

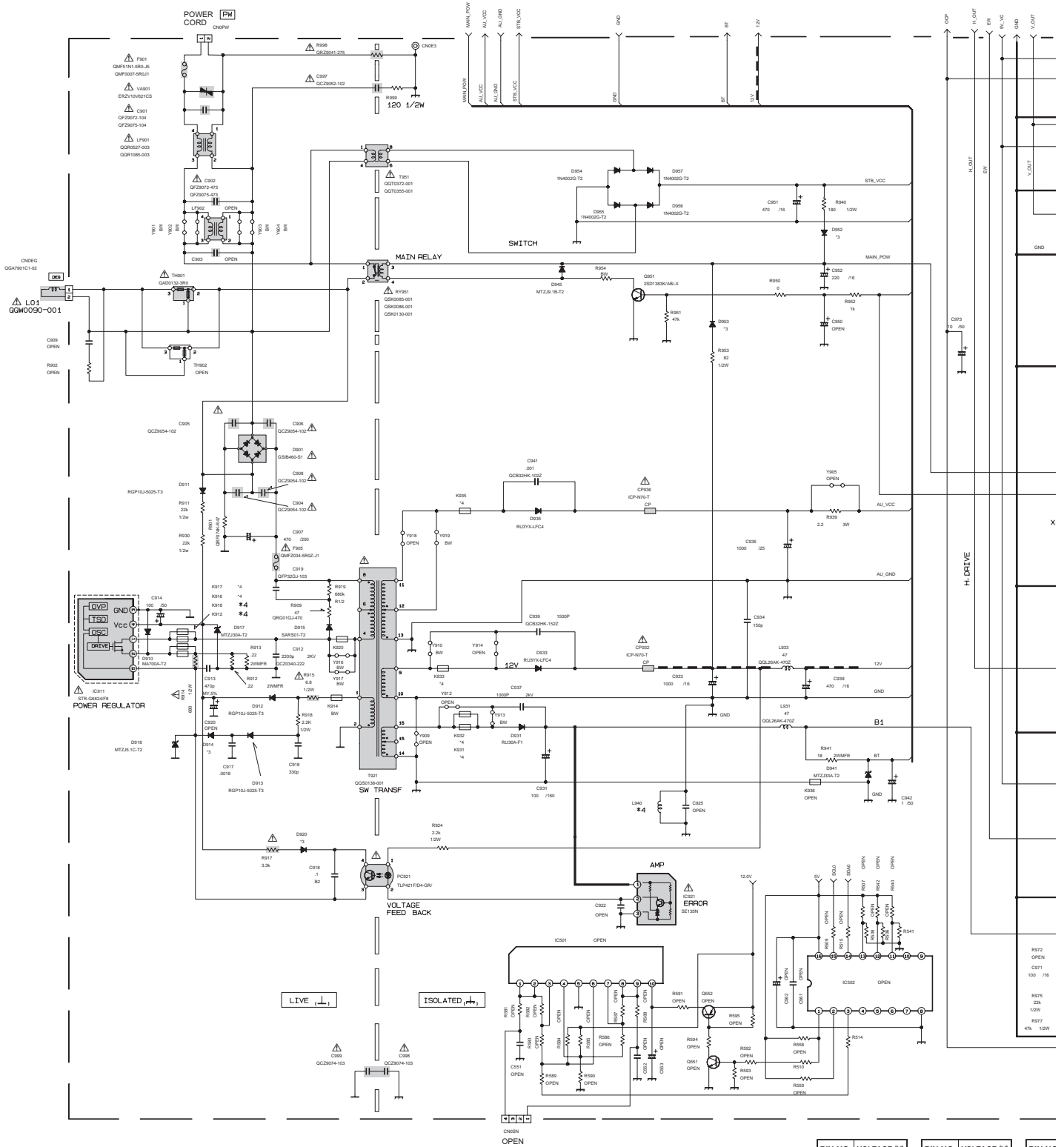
SGE-1061A-M2 : AV-32432/MA SGE-1064A-M2 : AV-32430/MA
SGE-1062A-M2 : AV-32432/YA SGE-1065A-M2 : AV-32430/YA
SGE-1063A-M2 : AV-32432/RA SGE-1066A-M2 : AV-32430/RA

MAIN PWB



- Q131 (E)
- IC101 (18)
- IC201 (14)
- IC201 (18)
- IC201 (28)
- IC201 (39)
- IC201 (40)
- IC201 (41)

MAIN PWB CIRCUIT DIAGRAM (2/2) SHEET 2



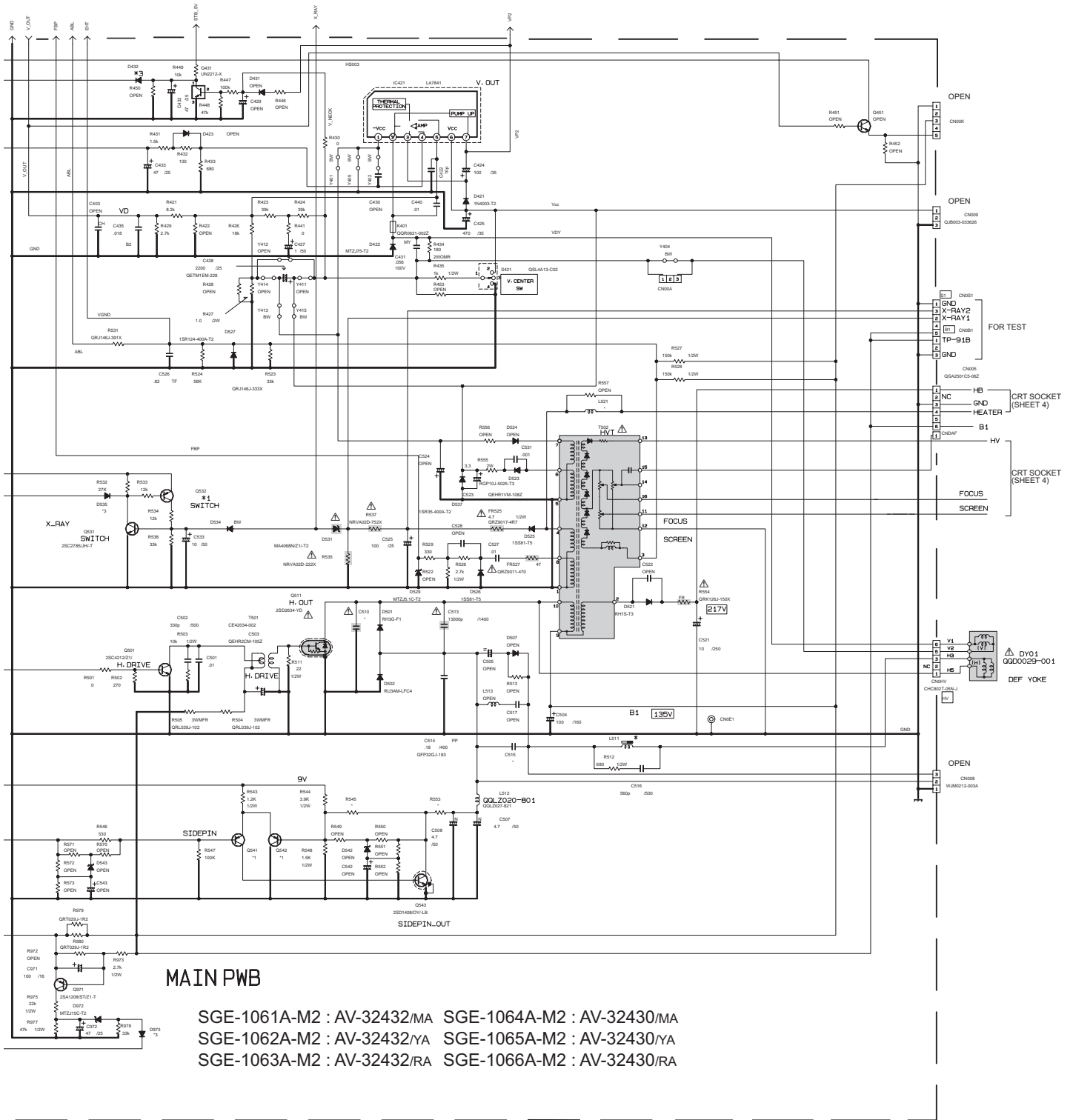
*DIFFERENCE PARTS LIST

MODEL	SGE-1061A	SGE-1062A	SGE-1066A
SYMBOL	SGE-1064A	SGE-1065A	SGE-1063A
C510	QFZ0200-532	QFZ0200-502	QFZ0200-532
	QFZ0196-532	QFZ0196-502	QFZ0196-532
	QFZ0197-564	QFZ0199-534	QFZ0197-564
C515	QFZ0199-564	QFZ0197-534	QFZ0199-564
	QFZ0199-564	QFZ0199-534	QFZ0199-564
R434	QRL029J-221	QRL029J-181	QRL029J-181
L521	QQLZ026-600	QQLZ026-121	QQLZ026-540
R545	QRE121J-153Y	QRE121J-822Y	QRE121J-822Y
R553	QRL039J-100	QRL039J-180	QRL039J-180
L511	QGR1027-003	QGR1027-003	CE41029-00A

PARTS REFERENCE LIST

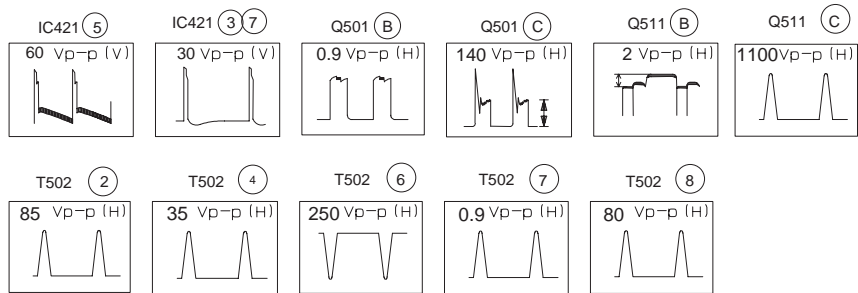
*1	2SB709A/QR/-X or 2SA1037AK/QR/-T
*2	2SD601A/QR/-X or 2SC2412K/QR/-T
*3	1SS133-T2
*4	QGR0582-001Z
*5	MTZJ5.6B-T2
*6	QQL29BJ-200Z
*7	MTZJ9.1C-T2

PIN NO.	VOLTAGE (V)	PIN NO.	VOLTAGE (V)	PIN NC
IC421		7	4.8	22
1	0	8	0	23
2	15.2	9	11.5	24
3	30.3	10	0	25
4	2.6	11	3.3	26
5	2.6	12	0.5	27
6	29.3	13	8.7	28
7	3.3	14	3.7	IC911
IC501		15	12	1
1	2.3	16	4.7	2
2	2.3	17	4.7	3
3	0.8	18	4	4
4	4.9	19	0.6	5
5	9	20	2.8	IC921
6	2.2	21	8	1

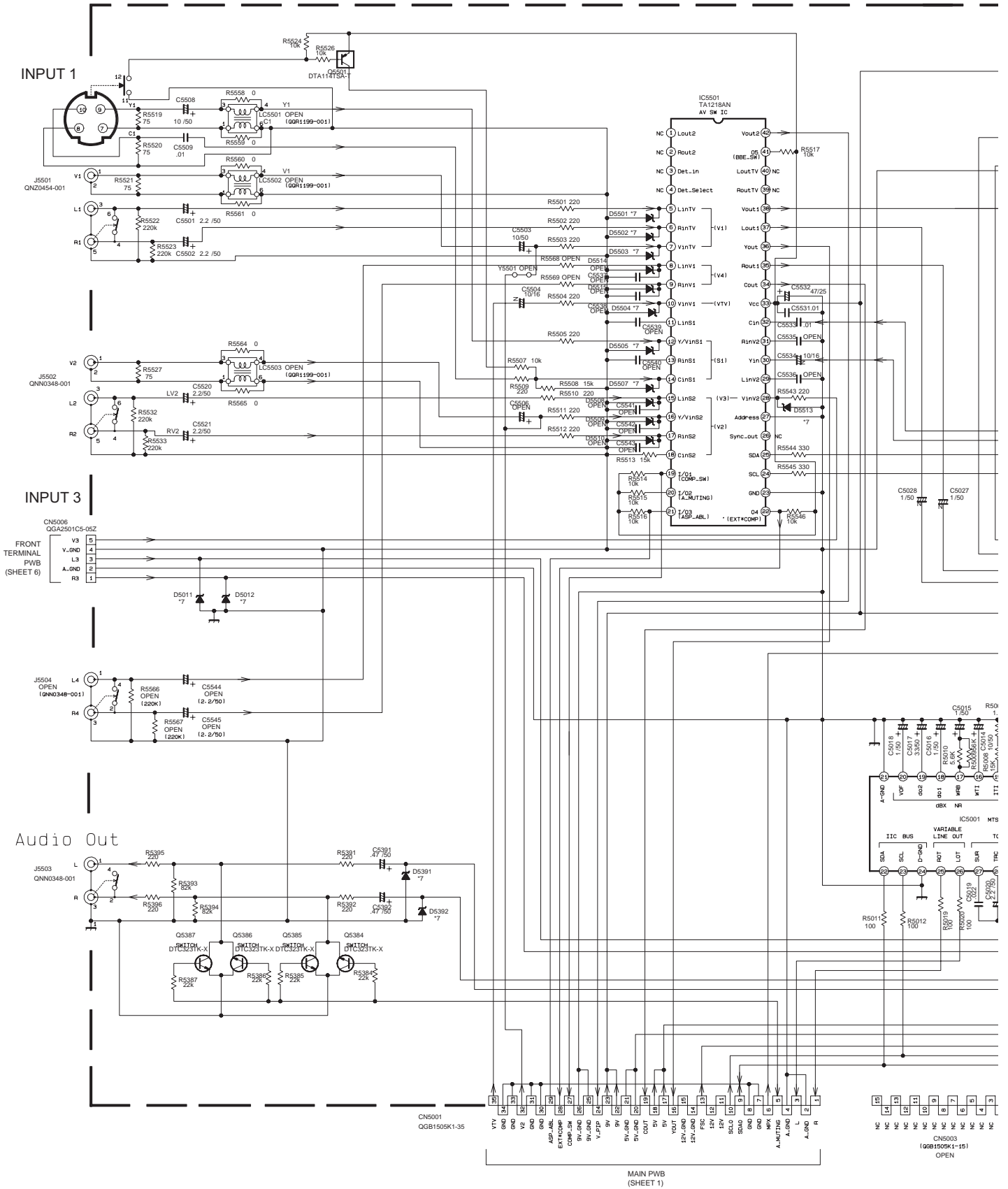


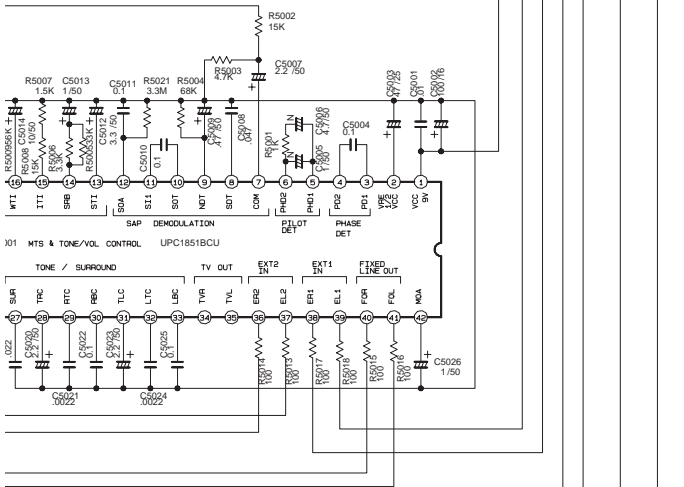
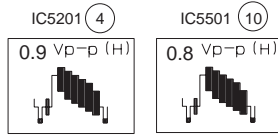
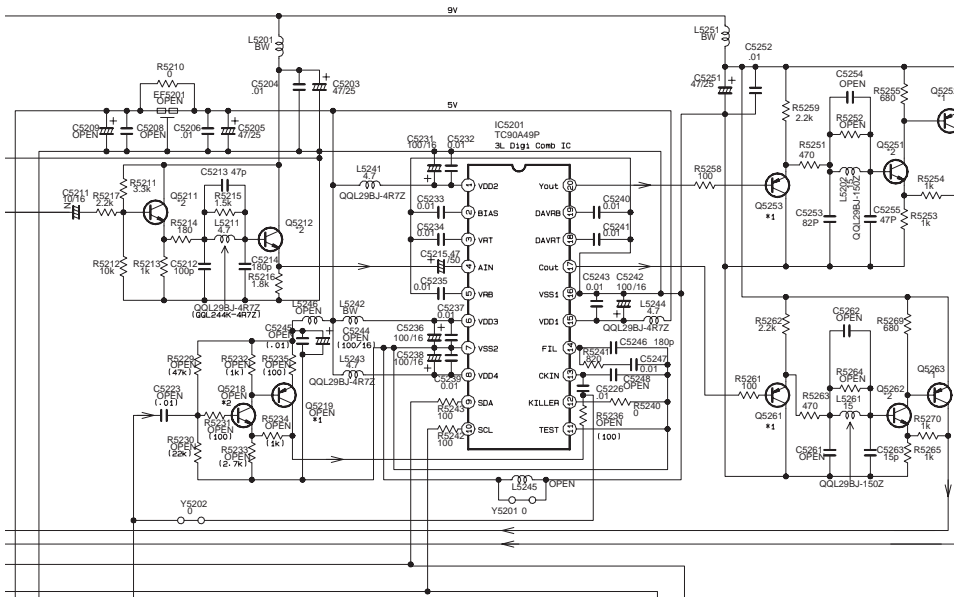
SGE-1061A-M2 : AV-32432/MA SGE-1064A-M2 : AV-32430/MA
 SGE-1062A-M2 : AV-32432/YA SGE-1065A-M2 : AV-32430/YA
 SGE-1063A-M2 : AV-32432/RA SGE-1066A-M2 : AV-32430/RA

PIN NO.	VOLTAGE (V)	PIN NO.	VOLTAGE (V)
22	2.4	3	11.5
23	1.1	2	0
24	7.1		
25	11.7	1	12.5
26	2.5	2	11.5
27	0	3	1.5
28	0	4	16.1
IC911		Q501	
1	152.2	E	0
2	0	C	75.1
3	288	B	0.3
4	17.8	Q511	
5	1.5	E	0
IC921		C	130
1	135.2	B	-0.1



AV SELECTOR PWB CIRCUIT DIAGRAM SHEET 3





REFERENCE PARTS LIST

*1	2SB709A/QR/-X or 2SA1037AK/QR/-T
*2	2SD601A/QR/-X or 2SC2412K/QR/-T
*3	1SS133-T2
*4	QGR0582-001Z
*5	MTZJ5. 6B-T2
*6	GQL29BJ-220Z
*7	MTZJ9. 1C-T2

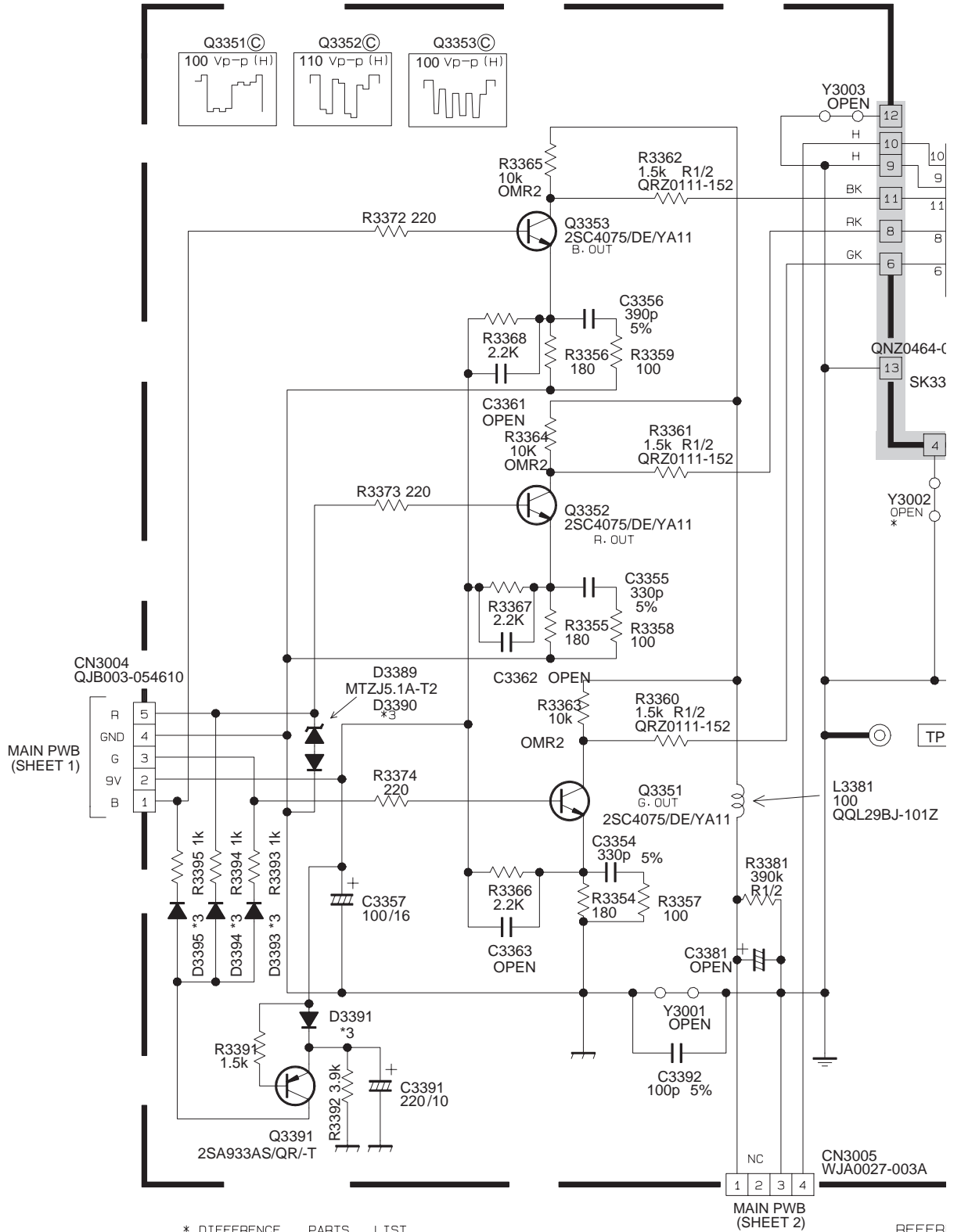
SGE-5061A-M2 : AV-32432/MA, AV-32432/RA, AV-32432/YA
SGE-5062A-M2 : AV-32430/MA, AV-32430/RA, AV-32430/YA

AV SELECTOR PWB

PIN NO.	VOLTAGE (V)	PIN NO.	VOLTAGE (V)
IC5001		34	3.7
1	4.1	35	3.9
2	4.1	36	3.7
3	4.1	37	3.9
4	4.1	38	4.4
5	4.1	39	
6	3.8	40	
7	0	41	0.1
8	4.1	42	4.4
9	3.9	IC5151	
10	4.1	1	4.5
11	4.1	2	4.5
12	4.5	3	4.5
13	4.1	4	4.5
14	1.2	5	4.5
15	1.2	6	4.5
16		7	4.5
17	0	8	9
18	3	9	9
19	9	10	0.1
20		11	0
21	4.1	12	9
22	4	13	4.5
23	4.7	14	4.5
24	3.8	15	4.4
25	4.1	16	4.5
26	4	17	4.5
27	4	18	4.5
28	2	19	4.5
29	4	20	4.5
30	4	IC5201	
31	2	1	4.8
32	4	2	1.3
33	4	3	3
34	4	4	2.3
35	0	5	1.4
36	4	6	4.8
37	4	7	0
38	4.1	8	4.8
39	4	9	4.2
40	4.1	10	3.6
41	4.1	11	0
42	0	12	0
43	4	13	2.4
44	4.1	14	1.6
45	4.1	15	4.8
46	0	16	0
47	4.1	17	2.3
48	4	18	3
IC5501		19	1.7
1		20	2.3
2		Q5211	
3		E	6
4		C	9
5	5.2	B	6.7
6	5.2	Q5212	
7	5.2	E	5.4
8	5.2	C	9
9	5.2	B	6
10	5.1	Q5251	
11	5.2	E	2.3
12	5.1	C	8.4
13	5.2	B	2.9
14	1.7	Q5252	
15	5.2	E	9
16	5.2	C	3.7
17	5.2	B	8.4
18	1.7	Q5253	
19	4.2	E	2.9
20	3.3	C	0
21	0.1	B	2.3
22	7.5	Q5261	
23	0	E	2.9
24	3.7	C	0
25	4.2	B	2.3
26		Q5262	
27	0	E	2.3
28	5.2	C	8.4
29	5.2	B	2.9
30	5.1	Q5263	
31	5.2	E	9
32	5.1	C	3.7
33	9	B	8.4

2 1
4 3
NC NC NC NC

CRT SOCKET PWB CIRCUIT DIAGRAM SHEET 4



* DIFFERENCE PARTS LIST

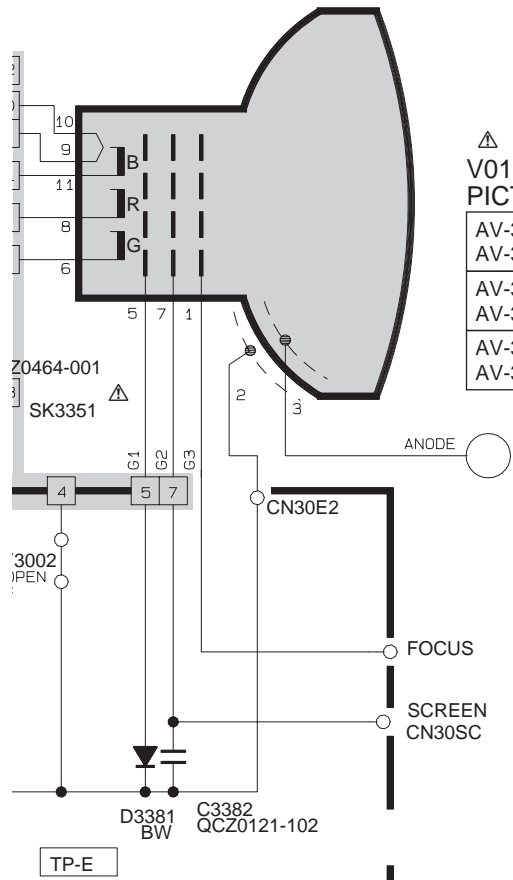
SYMBOL	SGE-3061A	SGE-3062A
Y3002	-----	QUY153-050Y

REFER

*1	2SB709A/
*2	2SD601A/
*3	1SS133-T
*4	QQR0582-
*5	MTZJ5.6B
*6	QLL29BJ-
*7	MTZJ9.1C

CRT SOCKET PWB ASS'Y

SGE-3061A-M2 : AV-32432/MA, AV-32432/RA
AV-32430/MA, AV-32430/RA
SGE-3062A-M2 : AV-32432/YA, AV-32430/YA



△
V01
PICTURE TUBE

AV-32430/MA AV-32432/MA	M80JUA061X06
AV-32430/RA AV-32432/RA	A80AEJ15X01
AV-32430/YA AV-32432/YA	A80AKB50X04

I-101Z

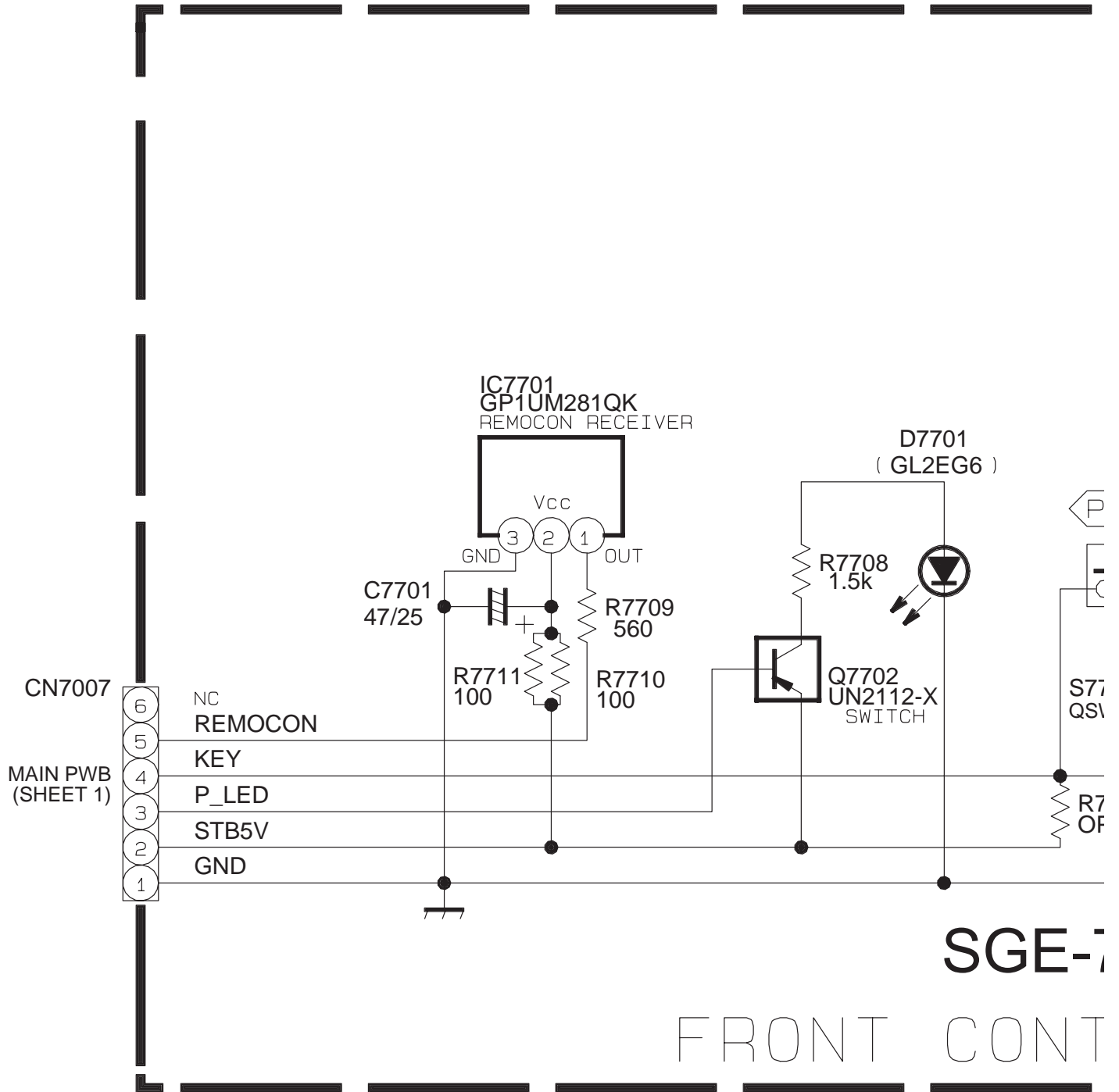
PIN NO.	VOLTAGE (V)
Q3353	
E	1.4
C	159.2
B	1.9
Q3352	
E	1.5
C	157.3
B	1.9
Q3351	
E	1.4
C	163.1
B	1.8
Q3391	
E	8.4
C	1.9
B	9

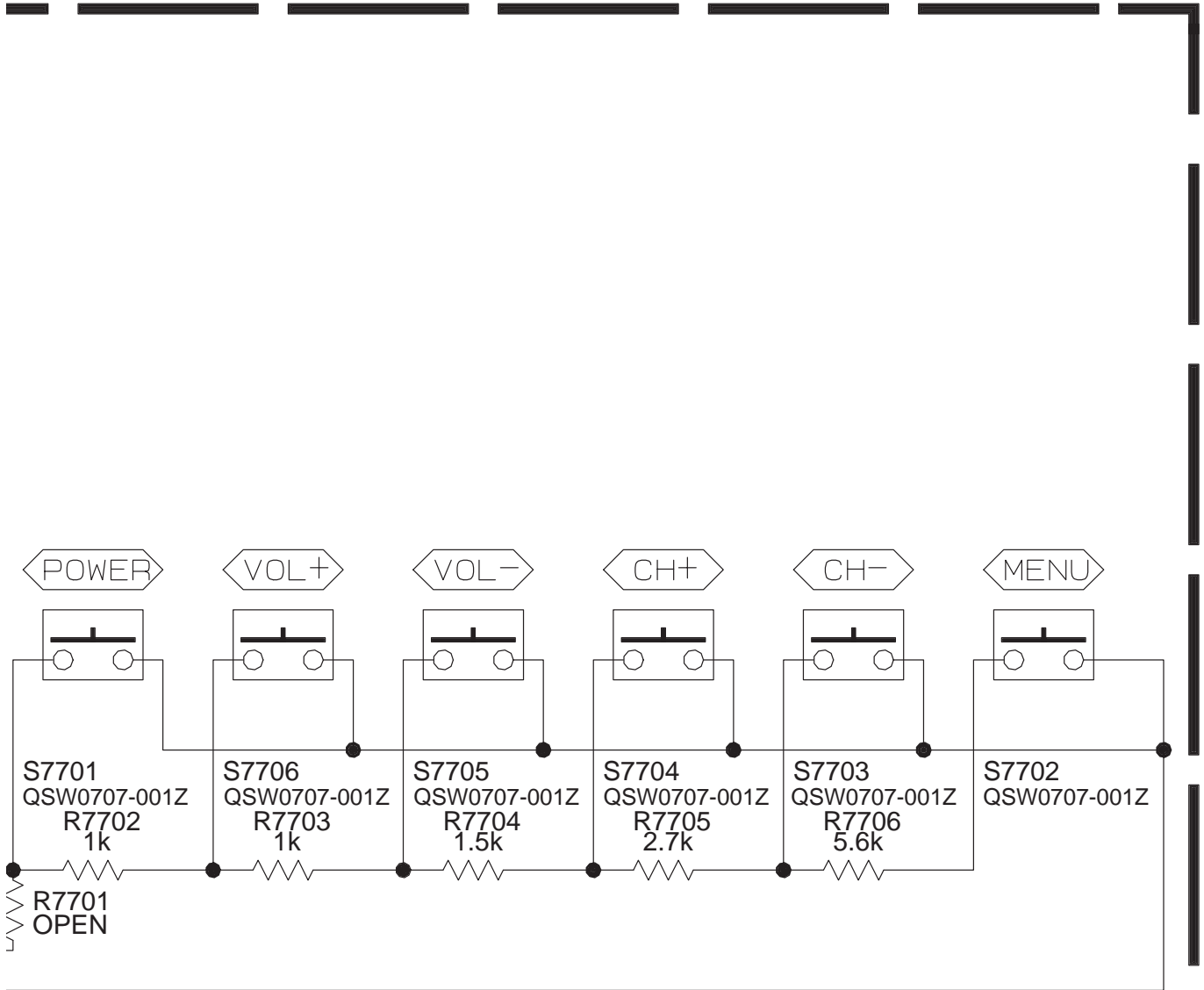
003A

REFERENCE PARTS LIST

1709A/QR/-X or 2SA1037AK/QR/-T
1601A/QR/-X or 2SC2412K/QR/-T
1133-T2
10582-001Z
1J5-6B-T2
129BJ-220Z
1J9-1C-T2

FRONT CONTROL PWB CIRCUIT DIAGRAM SHEET 5

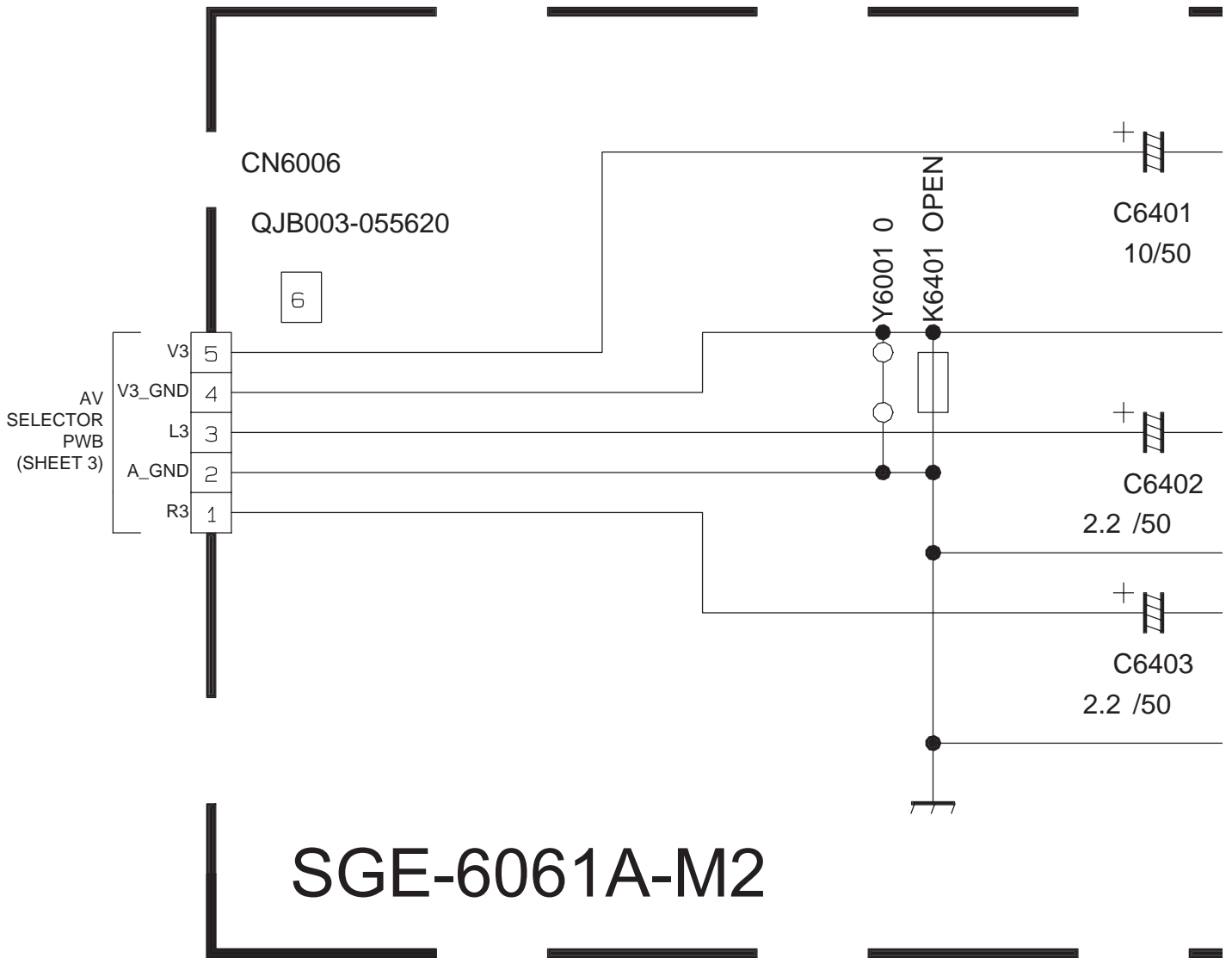




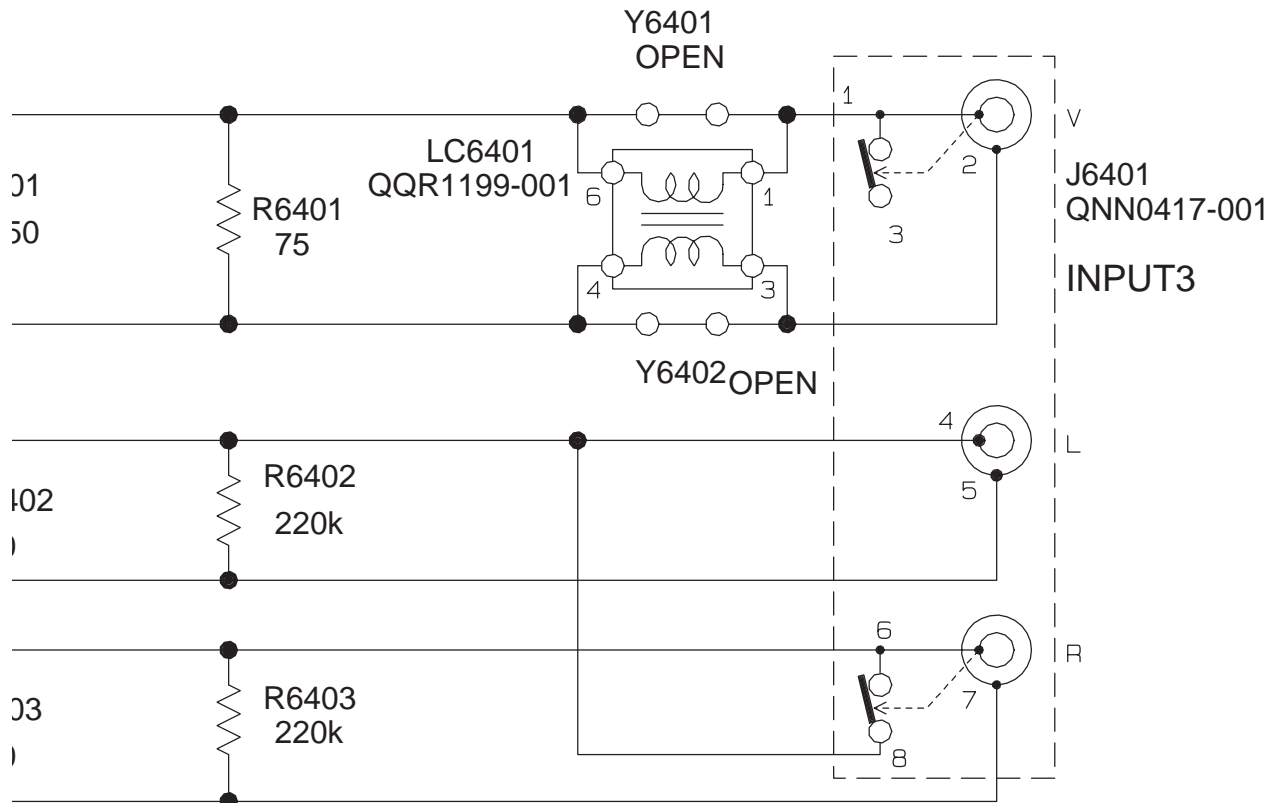
≡-7061A-M2

CONTROL PWB

FRONT TERMINAL PWB CIRCUIT DIAGRAM SHEET 6

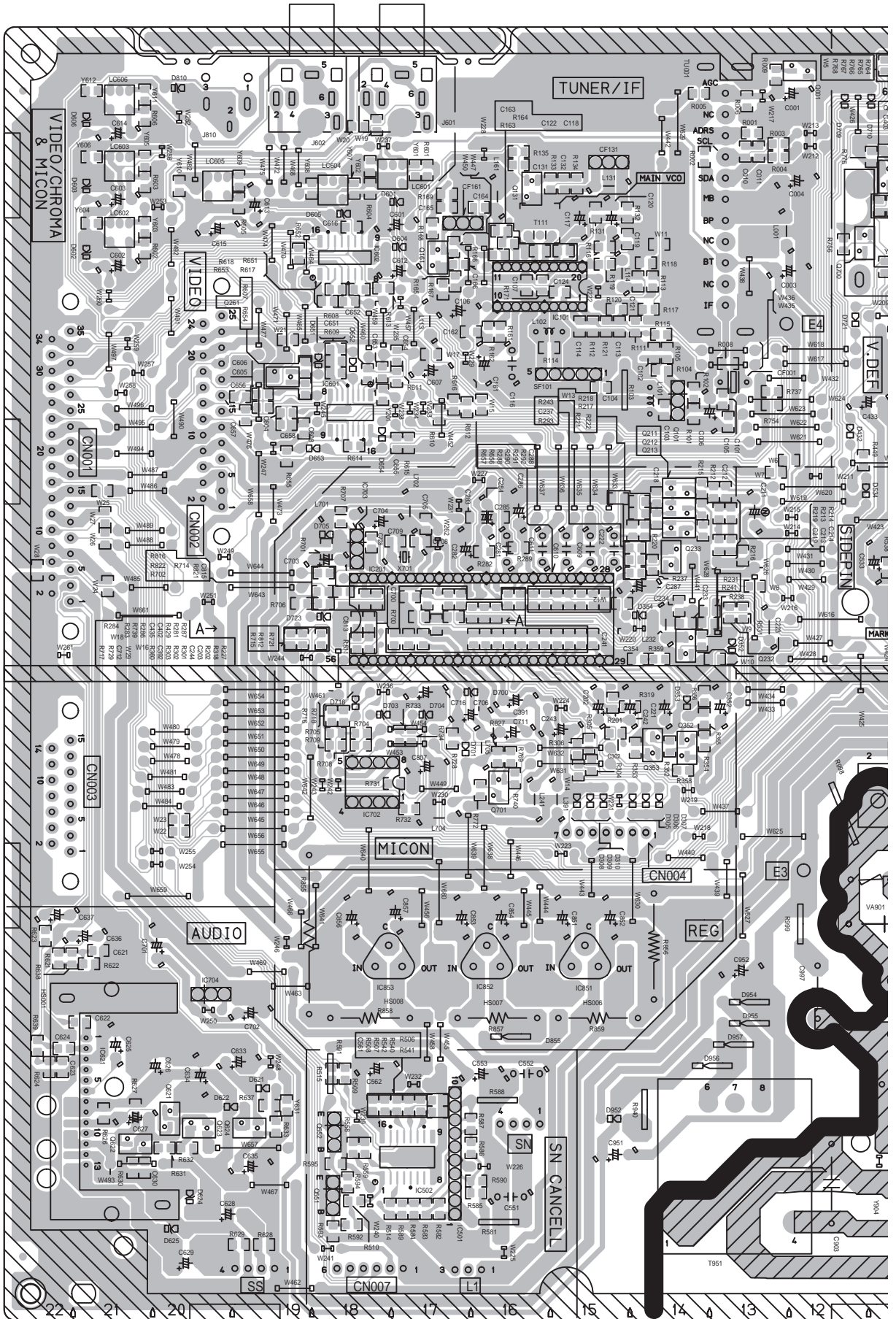


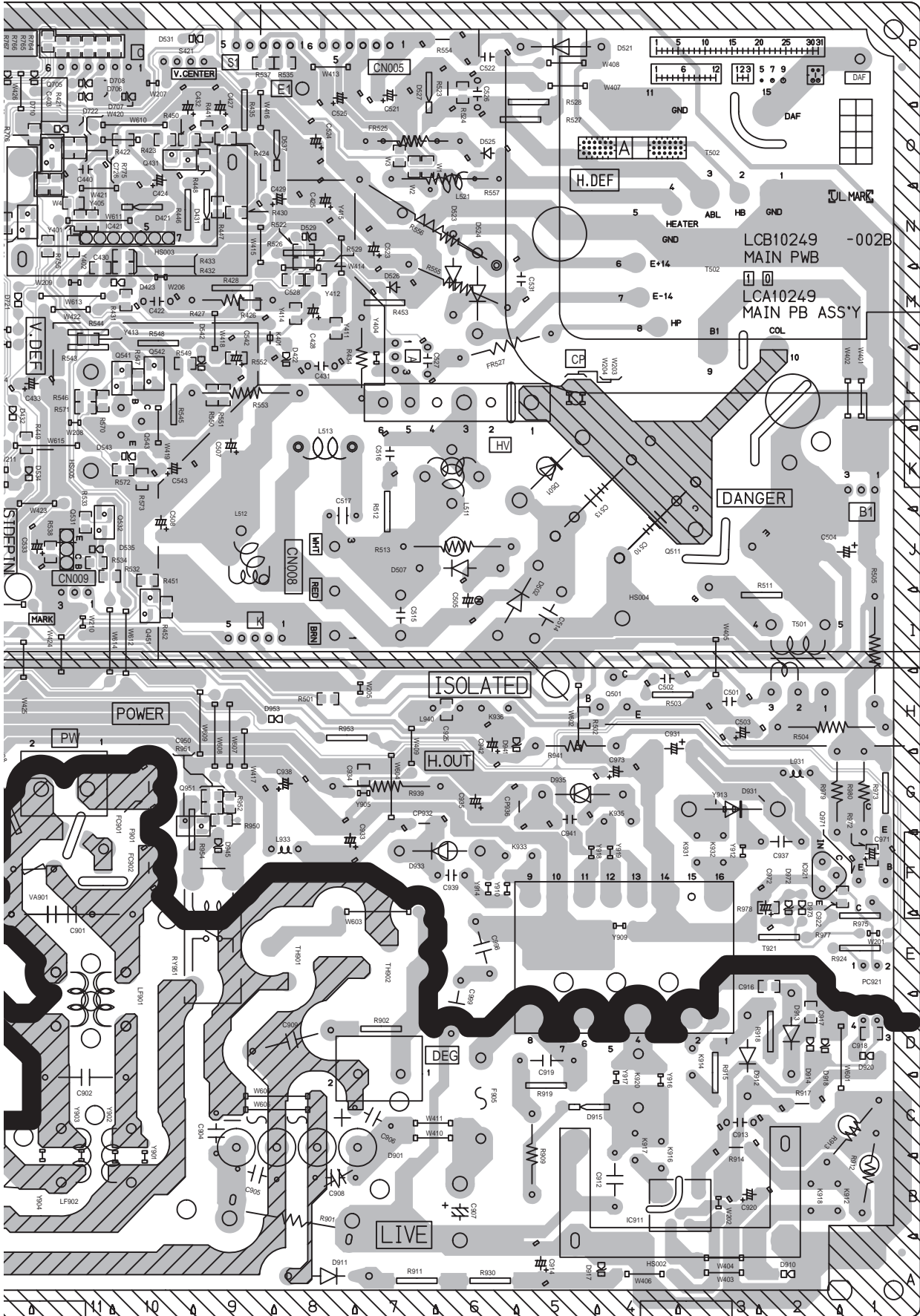
SGE-6061A-M2



FRONT TERMINAL PWB

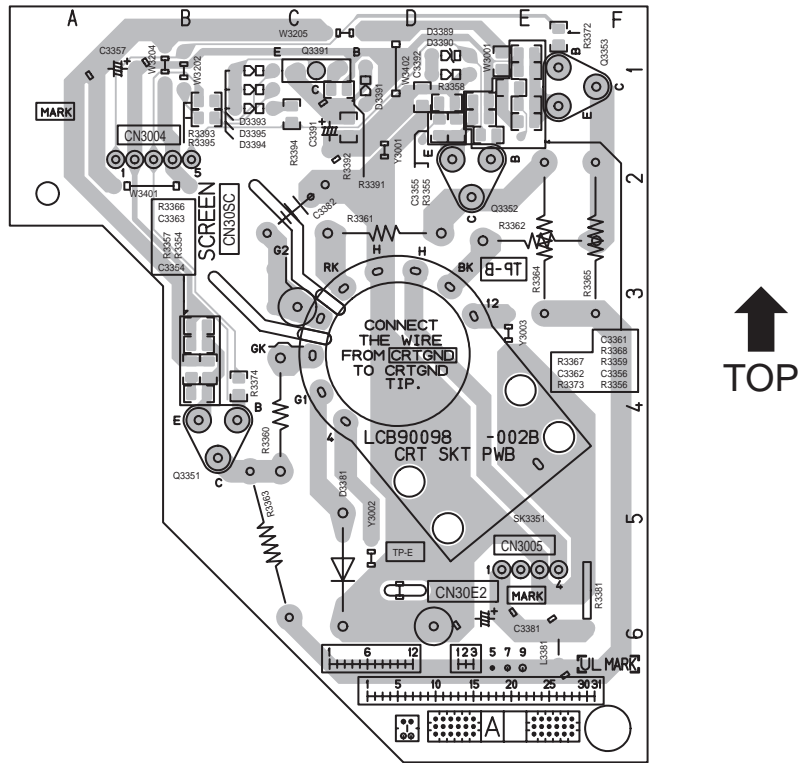
PATTERN DIAGRAMS MAIN PWB PATTERN



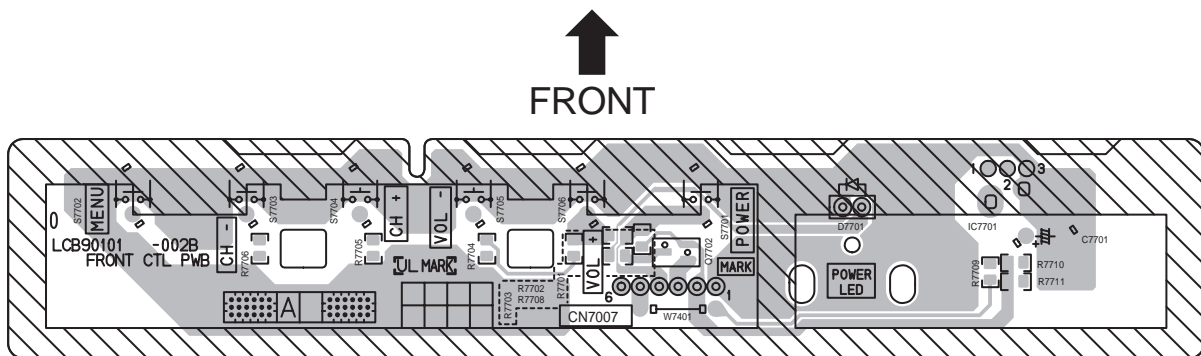


FRONT
↓

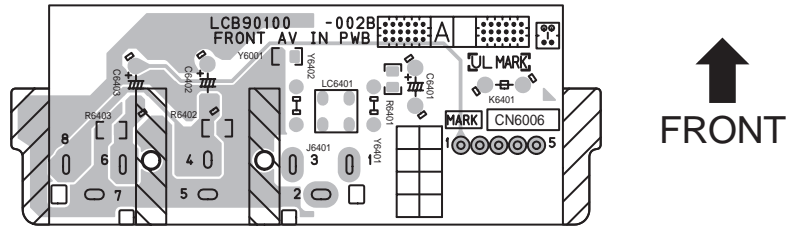
CRT SOCKET PWB PATTERN



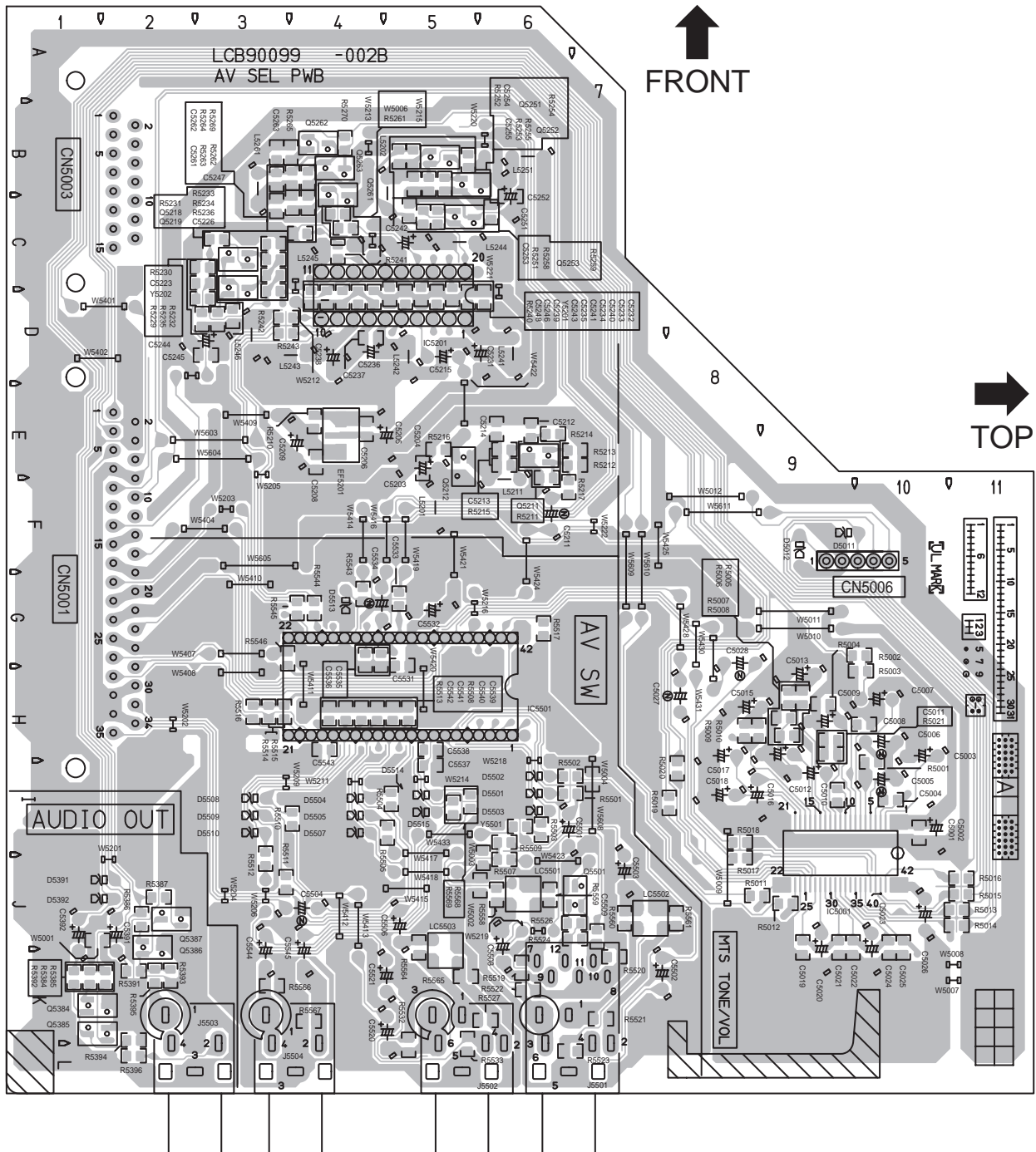
FRONT CONTROL PWB PATTERN



FRONT TERMINAL PWB PATTERN



AV SELECTOR PWB PATTERN



CHANNEL CHART (US)

MODE		BAND	CHANNEL		TUNER BAND	
TV	CATV		REAL	DISP.		
○	○	VL	02		I	
			03			
			04			
		05				
		06				
		07				
	VH	08		II		
		09				
		10				
		11				
		12				
		13				
		×	○		MID	A
B	15					
SUPER	C			16	II	
	D			17		
	E			18		
	F			19		
	G			20		
	H			21		
	I			22		
	J			23		
	K			24		
	L		25			
M	26					
N	27					
O	28					
P	29					
Q	30					
R	31					
S	32					
T	33					
U	34					
V	35					
W	36					
HYPER	W+1	37	IV			
	W+2	38				
	W+3	39				
	W+4	40				
	W+5	41				
	W+6	42				
	W+7	43				
	W+8	44				
	W+9	45				
	W+10	46				
	W+11	47				
ULTRA	W+12	48				
	W+13	49				
	W+14	50				
	W+15	51				
	W+16	52				
	W+17	53				
	W+18	54				
	W+19	55				
	W+20	56				
	W+21	57				
	W+22	58				
W+23	59					
W+24	60					
W+25	61					
W+26	62					
W+27	63					
W+28	64					
W+29	65					
W+30	66					
W+31	67					
W+32	68					
W+33	69					
W+34	70					

MODE		BAND	CHANNEL		TUNER BAND
TV	CATV		REAL	DISP.	
×	○	ULTRA	W+35	71	IV
			W+36	72	
			W+37	73	
			W+38	74	
			W+39	75	
			W+40	76	
			W+41	77	
			W+42	78	
			W+43	79	
			W+44	80	
			W+45	81	
			W+46	82	
			W+47	83	
			W+48	84	
			W+49	85	
			W+50	86	
			W+51	87	
			W+52	88	
			W+53	89	
			W+54	90	
			W+55	91	
			W+56	92	
W+57	93				
W+58	94				
W+59	100				
W+60	101				
W+61	102				
W+62	103				
W+63	104				
W+64	105				
W+65	106				
W+66	107				
W+67	108				
W+68	109				
W+69	110				
W+70	111				
W+71	112				
W+72	113				
W+73	114				
W+74	115				
W+75	116				
W+76	117				
W+77	118				
W+78	119				
W+79	120				
W+80	121				
W+81	122				
W+82	123				
W+83	124				
W+84	125				
○	×	SUB MID	A-8	01	I
			A-4	96	
			A-3	97	
			A-2	98	
			A-1	99	
○	×	UHF	14	69	IV
TOTAL 180CH { VHF 124CH { UHF 56CH					
NOTE: TO RECEIVE THE SUBSCRIPTION OR PREMIUM PROGRAMMING FROM CERTAIN CABLE COMPANIES. SPECIAL ADAPTERS MAY BE REQUIRED.					

CHANNEL CHART (CA)

MODE		BAND	CHANNEL		TUNER BAND
TV	CATV		REAL	DISP.	
○	○	VL	02	I	
			03		
			04		
			05		
			06		
			07		
	VH	08			
		09			
		10			
		11			
		12			
		13			
		MID	A	14	II
B					
C					
D					
E					
F					
G					
H					
I					
J	23				
	K				
	L				
	M				
	N				
	O				
	SUPER		P	29	
			Q	30	
			R	31	
S		32			
T		33			
U		34			
V		35			
W		36			
HYPER		W+1	37		
	W+2	38			
	W+3	39			
	W+4	40			
	W+5	41			
	W+6	42			
	W+7	43			
	W+8	44			
	W+9	45			
	W+10	46			
	W+11	47			
	W+12	48			
	W+13	49			
	W+14	50			
	W+15	51			
	W+16	52			
	W+17	53			
	W+18	54			
W+19	55				
W+20	56				
W+21	57				
W+22	58				
W+23	59				
W+24	60				
W+25	61				
W+26	62				
W+27	63				
W+28	64				
ULTRA	W+29	65			
	W+30	66			
	W+31	67			
	W+32	68			
	W+33	69			
	W+34	70			

MODE		BAND	CHANNEL		TUNER BAND
TV	CATV		REAL	DISP.	
×	○	ULTRA	W+35	71	IV
			W+36	72	
			W+37	73	
			W+38	74	
			W+39	75	
			W+40	76	
			W+41	77	
			W+42	78	
			W+43	79	
			W+44	80	
			W+45	81	
			W+46	82	
			W+47	83	
			W+48	84	
			W+49	85	
			W+50	86	
			W+51	87	
			W+52	88	
W+53	89				
W+54	90				
W+55	91				
W+56	92				
W+57	93				
W+58	94				
W+59	100				
W+60	101				
W+61	102				
W+62	103				
W+63	104				
W+64	105				
W+65	106				
W+66	107				
W+67	108				
W+68	109				
W+69	110				
W+70	111				
W+71	112				
W+72	113				
W+73	114				
W+74	115				
W+75	116				
W+76	117				
W+77	118				
W+78	119				
W+79	120				
W+80	121				
W+81	122				
W+82	123				
W+83	124				
W+84	125				
SUB MID	A-8	01	I		
	A-4	96			
	A-3	97			
	A-2	98			
I	A-1	99	II		
○	×	UHF	14 { 69	IV	
TOTAL 180CH { VHF 124CH { UHF 56CH					
<p>NOTE: TO RECEIVE THE SUBSCRIPTION OR PREMIUM PROGRAMMING FROM CERTAIN CABLE COMPANIES. SPECIAL ADAPTERS MAY BE REQUIRED.</p>					

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JVC

SERVICE MANUAL

COLOR TELEVISION

**AV-32430/M, AV-32432/M,
AV-32430/R, AV-32432/R,
AV-32430/Y, AV-32432/Y**

BASIC CHASSIS

GE2

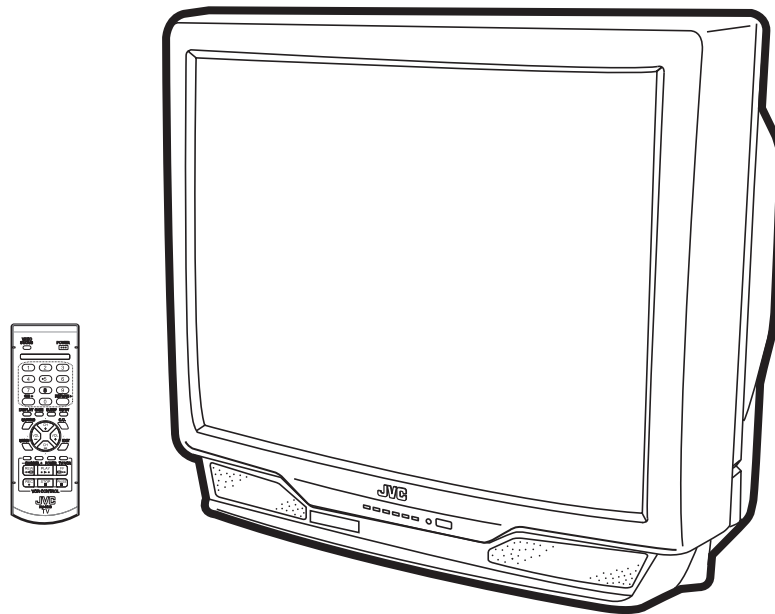


TABLE OF CONTENTS

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2	SPECIFIC SERVICE INSTRUCTIONS	1-4
3	ADJUSTMENT	1-12

SPECIFICATION

Items	Contents
Dimensions (W x H x D)	76.8cm x 66.7cm x 54.7cm (30-1/4" x 26-1/4" x 21-1/2")
Mass	51.0kg (112.2 lbs)
TV RF System	CCIR (M)
Color Sound System	NTSC, BTSC System (Multi Channel Sound)
TV Receiving Channels and Frequency	VHF LOW 02ch~06ch : 54MHz~88MHz VHF HIGH 07ch~13ch : 174MHz~216MHz UHF 14ch~69ch : 470MHz~806MHz CATV 54MHz~804MHz Low Band : 02~06, A-8 by 02~06&01 High Band : 07~13 by 07~13 Mid Band : A~1 by 14~22 Super Band : J~W by 23~36 Hyper Band : W+1~W+28 by 37~64 Ultra Band : W+29~W+84 by 65~125 Sub Mid Band : A8, A4~A1 by 01, 96~99
TV/CATV Total Channel	180 Channels
Intermediate Frequency	Video IF Carrier 45.75MHz Sound IF Carrier 41.25MHz (4.5MHz)
Color Sub Carrier	3.58MHz
Power Input	AC 120V, 60Hz
Power Consumption	128W
Picture Tube	32" (80cm) Measured diagonally H:65.6cm x V:49.6cm
High Voltage	31kV±1.3kV (at zero beam current)
Speaker	8 x 12cm (3-1/4" x 4-3/4") Oval type x 2
Audio Power Output	3W + 3W
Antenna Terminal (VHF/UHF)	F-type connector, 75ohm
Video / Audio Input (1 / 2 / 3)	Video (1 / 3) 1V(p-p), 75ohm (RCA pin jack x 2) Audio (1 / 2 / 3) 500mV(rms) (-4dBs), high impedance (RCA pin jack x 8) S-Video (1) Mini DIN 4pin x 1 Y : 1V(p-p) positive (negative sync provided, when terminated with 75ohm) C : 0.286V(p-p) (burst signal when terminated with 75ohm) Component video (2) RCA pin jack x 3 Y : 1V(p-p) positive (negative sync provided, when terminated with 75ohm) Pb/Pr : 0.7V(p-p) 75ohm
Audio Output (Fix)	500mV(rms), low impedance, (1kHz when modulated 100%) (RCA pin jack x 2)
AV Compulink III	3.5mm mini jack x 1
Remote Control Unit	RM-C203 (Lithium cell battery x 1)

Design & specifications are subject to change without notice.

SECTION 1 PRECAUTIONS

1.1 SAFETY PRECAUTIONS

- (1) The design of this product contains special hardware, many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
- (2) Alterations of the design or circuitry of the products should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
- (3) Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in the parts list of Service manual. **Electrical components having such features are identified by shading on the schematics and by (Δ) on the parts list in Service manual.** The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of Service manual may cause shock, fire, or other hazards.
- (4) **Use isolation transformer when hot chassis.**
The chassis and any sub-chassis contained in some products are connected to one side of the AC power line. An isolation transformer of adequate capacity should be inserted between the product and the AC power supply point while performing any service on some products when the HOT chassis is exposed.
- (5) **Don't short between the LIVE side ground and ISOLATED (NEUTRAL) side ground or EARTH side ground when repairing.** Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (⊥) side GND, the ISOLATED(NEUTRAL) : (↗) side GND and EARTH : (⊕) side GND. Don't short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND and never measure with a measuring apparatus (oscilloscope etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND at the same time.
If above note will not be kept, a fuse or any parts will be broken.
- (6) The high voltage applied to the picture tube must conform with that specified in Service manual. Excessive high voltage can cause an increase in X-Ray emission, arcing and possible component damage, therefore operation under excessive high voltage conditions should be kept to a minimum, or should be prevented. If severe arcing occurs, remove the AC power immediately and determine the cause by visual inspection (incorrect installation, cracked or melted high voltage harness, poor soldering, etc.). To maintain the proper minimum level of soft X-Ray emission, components in the high voltage circuitry including the picture tube must be the exact replacements or alternatives approved by the manufacturer of the complete product.
- (7) If any repair has been made to the chassis, it is recommended that the B1 setting should be checked or adjusted (See ADJUSTMENT OF B1 POWER SUPPLY).
- (8) Do not check high voltage by drawing an arc. Use a high voltage meter or a high voltage probe with a VTVM. Discharge the picture tube before attempting meter connection, by connecting a clip lead to the ground frame and connecting the other end of the lead through a 10kΩ 2W resistor to the anode button.
- (9) When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.

(10) Isolation Check

(Safety for Electrical Shock Hazard)After re-assembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, video/audio input and output terminals, Control knobs, metal cabinet, screwheads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

a) Dielectric Strength Test

The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 1100V AC (r.m.s.) for a period of one second.

(. . . Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated up to 120V, and 3000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.)

This method of test requires test equipment not generally found in the service trade.

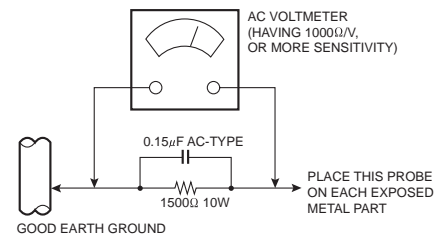
b) Leakage Current Check

Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5mA AC (r.m.s.). However, in tropical area, this must not exceed 0.2mA AC (r.m.s.).

• Alternate Check Method

Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1000 ohms per volt or more sensitivity in the following manner. Connect a 1500ohm 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.). Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.).

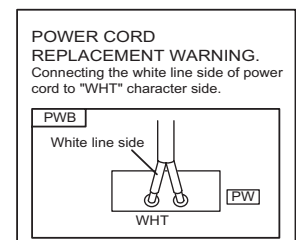
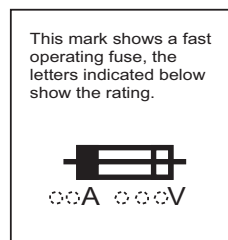
However, in tropical area, this must not exceed 0.3V AC (r.m.s.). This corresponds to 0.2mA AC (r.m.s.).



(11) High voltage hold down circuit check.

After repair of the high voltage hold down circuit, this circuit shall be checked to operate correctly.

See item "How to check the high voltage hold down circuit".



SECTION 2 SPECIFIC SERVICE INSTRUCTIONS

2.1 FEATURES

TELETEXT (CLOSED CAPTION)	Title TELETEXT broadcast of C1~C4 and T1~T4 formula is receivable.
DIGITAL COMB FILTER	By the three-line digital comb filter, the refreshed image can be seen.
VIDEO STATUS	Expression of a favorite screen can be chosen by the VIDEO STATUS function (STANDARD / DYNAMIC / SPORTS / GAME).
V-CHIP	Since the V chip is built in, it can choose, view and listen to a healthy program.
COMPONENT VIDEO INPUT TERMINAL	Since the component signal input terminal is equipped, it reappears direct without deteriorating the signal from DVD.
MTS STEREO SYSTEM	The voice multiplex function of the MTS system is built in. (MTS = Multi channel TV Sound system)
EZ SURF	By the EZ SURF function, channel ID and a program name are displayed in the screen automatically.
RETURN PLUS	you program a specific channel to return to while scanning through the channels using the CH+ and CH- buttons.
AV COMPULINK III	By the AV COMPULINK III function, operation interlocked with the DVD deck can be performed from remote control.
ON / OFF & SLEEP TIMER	The on/off timer lets you program your television to turn itself on or off. You can use it as an alarm to wake up, to help you remember important programs, or as a decoy when you're not home.
HYPER SCAN	A quick favorite program can be looked for by the HYPER SCAN function.
FRONT PANEL LOCK	This allows you to lock the keys on the front of the TV, so that a child may not accidentally change your viewing preferences.
NOISE MUTING	This feature inserts a blank blue screen over channels which are not broadcasting or are too weak to be received clearly.

2.2 MAIN DIFFERENCE LIST

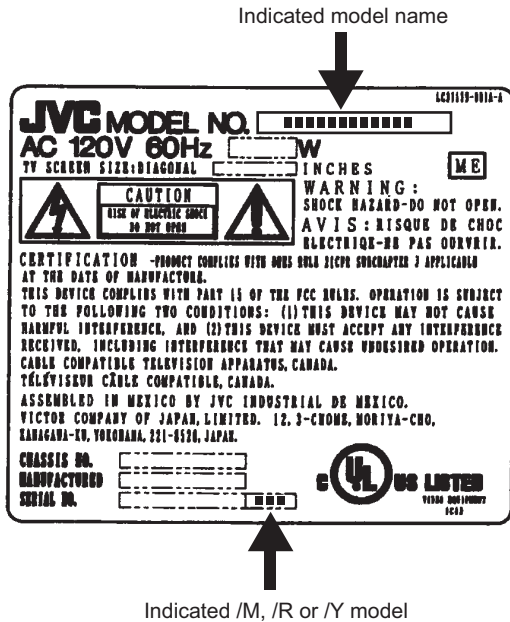
- The difference between MA models, RA model, and YA models is in the PICTURE TUBE. As the result of the difference in PICTURE TUBE, the MAIN PWB also differ.
- The difference between AV-32430 series models and AV-32432 series models are in the FRONT CABINET color.

△	PART NAME	AV-32430/MA	AV-32430/RA	AV-32430/YA
△	FRONT CABINET (BLACK)	CM12914-010-MA	←	←
△	MAIN P.W.B. ASSY	SGE-1064A-M2	SGE-1066A-M2	SGE-1065A-M2
△	CRT SOCKET P.W.B. ASSY	SGE-3061A-M2	←	SGE-3062A-M2
△	AV SELECT P.W.B. ASSY	SGE-5062A-M2	←	←
△	PICTURE TUBE (ITC)	M80JUA061X06	A80AEJ15X01	A80AKB50X04

△	PART NAME	AV-32432/MA	AV-32432/RA	AV-32432/YA
△	FRONT CABINET (SILVER)	CM12914-012-MA	←	←
△	MAIN P.W.B. ASSY	SGE-1061A-M2	SGE-1063A-M2	SGE-1062A-M2
△	CRT SOCKET P.W.B. ASSY	SGE-3061A-M2	←	SGE-3062A-M2
△	AV SELECT P.W.B. ASSY	SGE-5061A-M2	←	←
△	PICTURE TUBE (ITC)	M80JUA061X06	A80AEJ15X01	A80AKB50X04

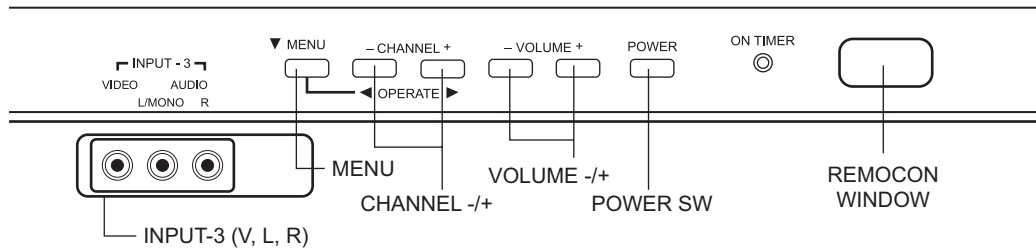
2.3 HOW TO IDENTIFY MODELS

How to recognize from the appearance of the model concerned is written below.
Please distinguish from several contents printed on the rating label.

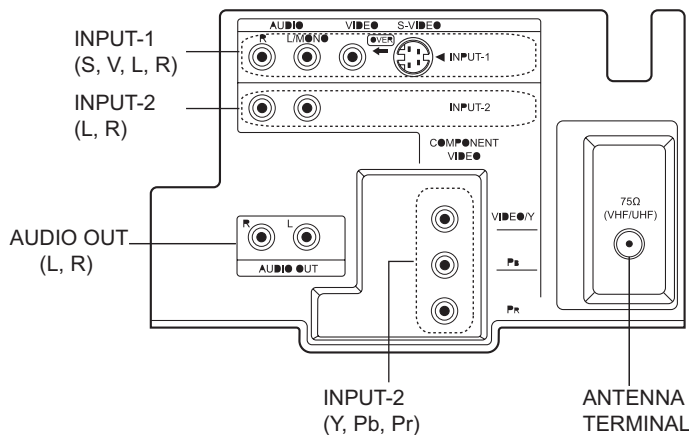


2.4 FUNCTIONS

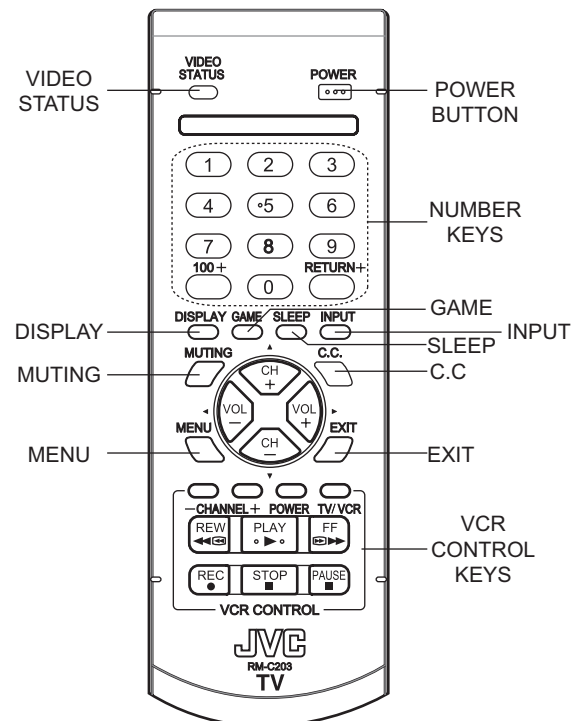
FRONT CONTROL PANEL



REAR TERMINAL



REMOTE CONTROL UNIT



2.5 DISASSEMBLY PROCEDURE

2.5.1 REMOVING THE REAR COVER

- Unplug the power plug.
 - (1) Remove the 11 screws [A], as shown in Fig.1.
 - (2) Remove the rear cover toward you.

NOTE:

When reinstalling the REAR COVER, carefully push it inward after inserting the chassis into the rear cover groove.

2.5.2 REMOVING THE TERMINAL BOARD

- Remove the REAR COVER.
 - (1) Remove the 4 screws [E] as shown in Fig.2.
 - (2) When you pull out the TERMINAL BOARD, it can be removed.

2.5.3 REMOVING THE MAIN PWB

- Remove the REAR COVER.
 - (1) Slightly raise the both sides of the CHASSIS BASE by hand, and remove the 2 claws [B] (Fig.1 and Fig.2) under the both sides of the chassis from the chassis rail.
 - (2) Draw the CHASSIS BASE backward along the chassis rail [C] in the arrow direction [D] as shown in Fig.1 and Fig.2. (If necessary, detach the wire clamp, connector's etc.)

NOTE:

When conducting a check with power supplied, be sure to confirm that the CRT earth wire is connected to the CRT SOCKET PWB and the MAIN PWB.

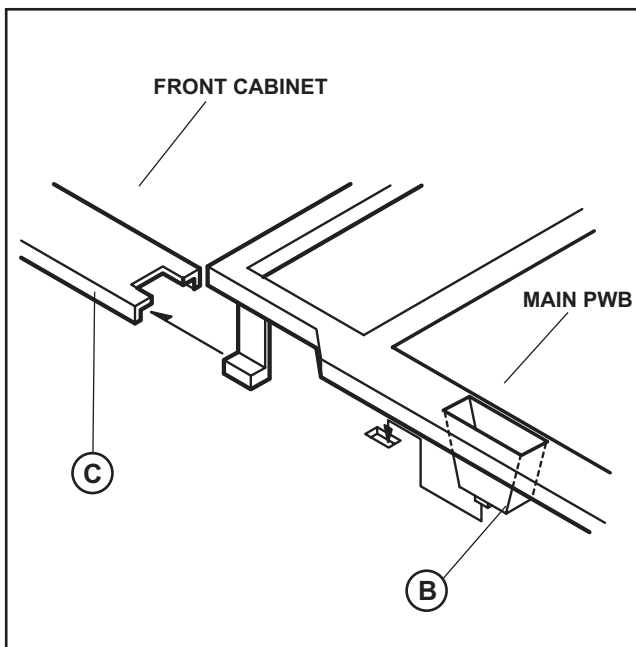


Fig.1

2.5.4 REMOVING THE FRONT CONTROL PWB

- Remove the REAR COVER.
- Remove the MAIN PWB.
 - (1) Remove the 2 screws [F] attached the FRONT CONTROL PWB with the front cabinet as shown in Fig.2.
 - (2) Then remove the FRONT CONTROL PWB.

2.5.5 REMOVING THE FRONT TERMINAL PWB

- Remove the REAR COVER.
- Remove the CHASSIS BASE.
 - (1) Remove the 2 screws [G], as shown in Fig.2.
 - (2) Then remove the FRONT AV IN PWB.

2.5.6 REMOVING THE SPEAKER

- Remove the REAR COVER.
- Remove the CHASSIS BASE.
 - (1) Remove the 2 screws [H], as shown in Fig.2.
 - (2) Follow the same steps when removing the other hand speaker.

2.5.7 CHECKING THE MAIN PWB

- (1) Pull out the CHASSIS BASE. (Refer to REMOVING THE CHASSIS BASE).
- (2) Erect the chassis vertically so that you can easily check from the backside of the MAIN PWB.

2.5.8 CAUTION

- (1) When erecting the chassis, be careful so that there will be no contacting with other PWB.
- (2) Before turning on power, make sure that the CRT earth wire and other connectors are properly connected.

2.5.9 WIRE CLAMPING AND CABLE TYING

- (1) Be sure to clamp the wire.
- (2) Never remove the cable tie used for tying the wires together. Should it be inadvertently removed, be sure to tie the wires with a new cable tie.

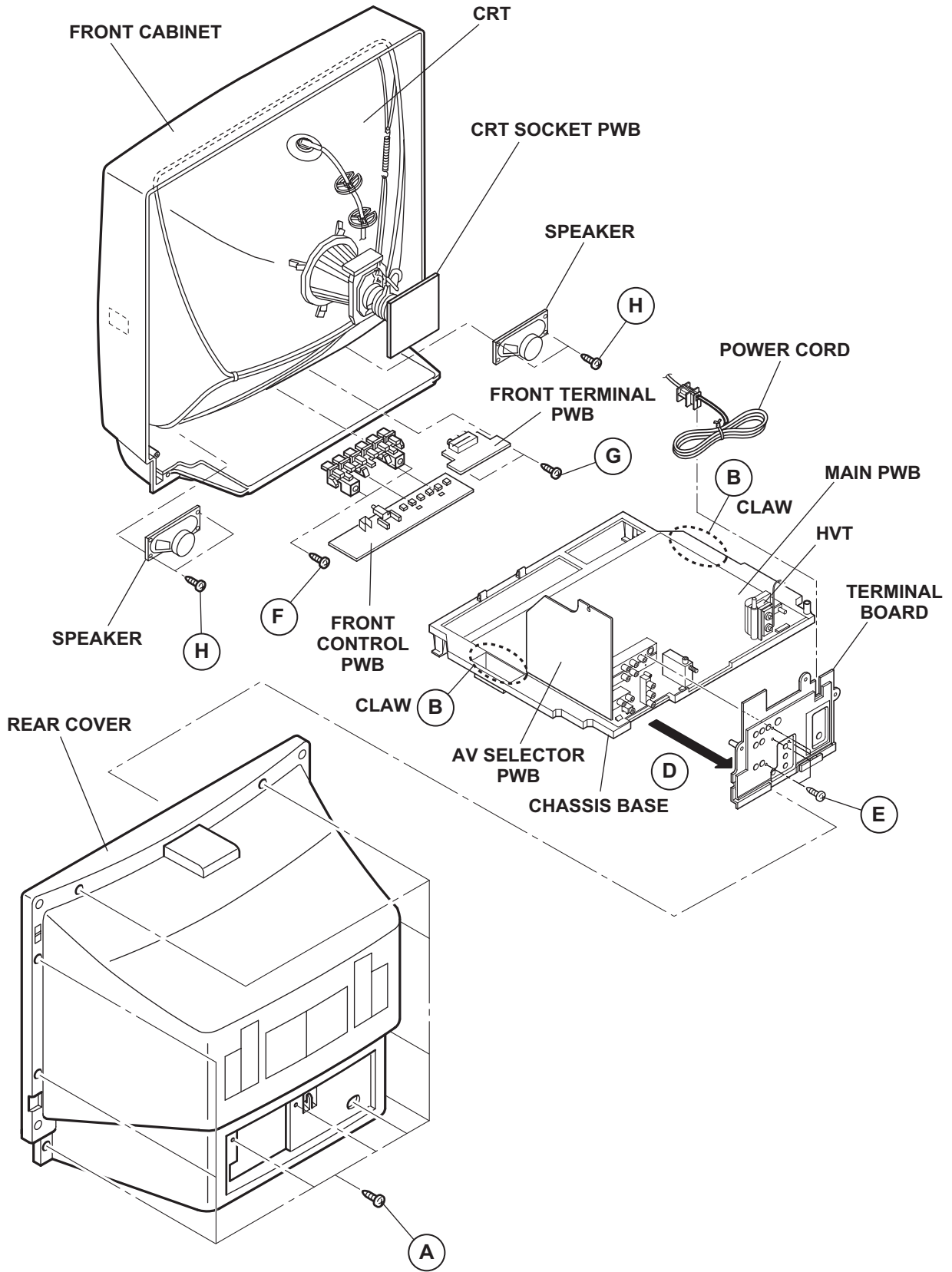


Fig.2

2.6 REMOVING THE CRT

NOTE:

- Replacement of the CRT should be performed by 2 or more persons.
 - After removing the REAR COVER, CHASSIS etc.,
- (1) Putting the CRT change table on soft cloth, the CRT change table should also be covered with such soft cloth (shown in Fig. 3).
 - (2) While keeping the surface of CRT down, mount the TV set on the CRT change table balanced will as shown in Fig. 3.
 - (3) Remove 4 screws marked by arrows with a box type screw-driver as shown in Fig. 4.

NOTE:

Since the cabinet will drop when screws have been removed, be sure to support the cabinet with hands.

- (4) After 4 screws have been removed, put the cabinet slowly on cloth (At this time, be carefully so as not to damage the front surface of the cabinet) shown in Fig. 5.

NOTE:

- The CRT should be assembled according to the opposite sequence of its dismantling steps.
- The CRT change table should preferably be smaller than the CRT surface, and its height be about 35cm.

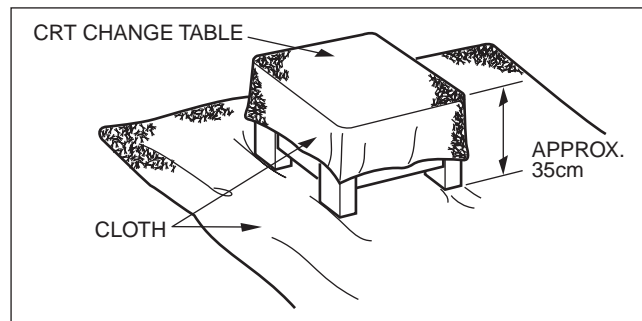


Fig.3

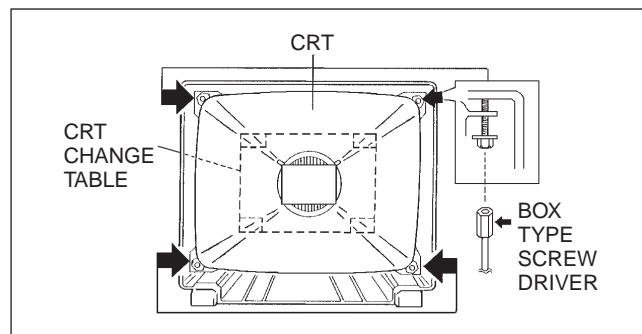


Fig.4

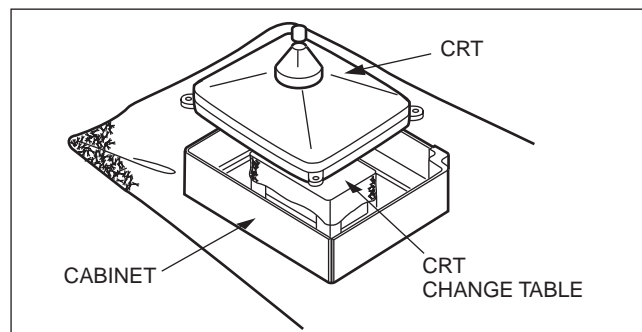


Fig.5

COATING OF SILICON GREASE FOR ELECTRICAL INSULATION ON THE CRT ANODE CAP SECTION.

Subsequent to replacement of the CRT and HV transformer or repair of the anode cap, etc. by dismantling them, be sure to coat silicon grease for electrical insulation as shown in Fig.6. Wipe around the anode button with clean and dry cloth. (Fig.6) Coat silicon grease on the section around the anode button. At this time, take care so that any silicon greases dose not sticks to the anode button. (Fig.7)

Silicon grease product No. KS - 650N

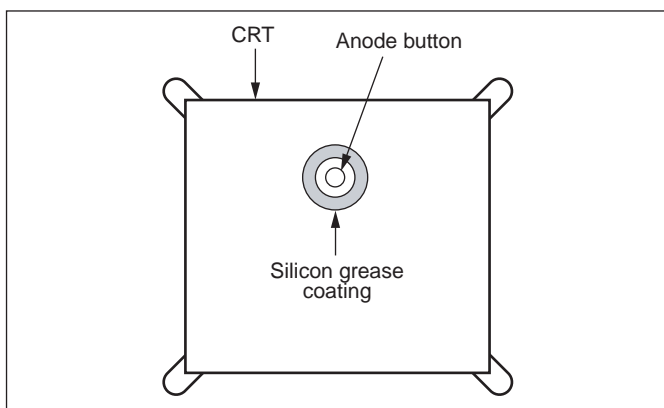


Fig.6

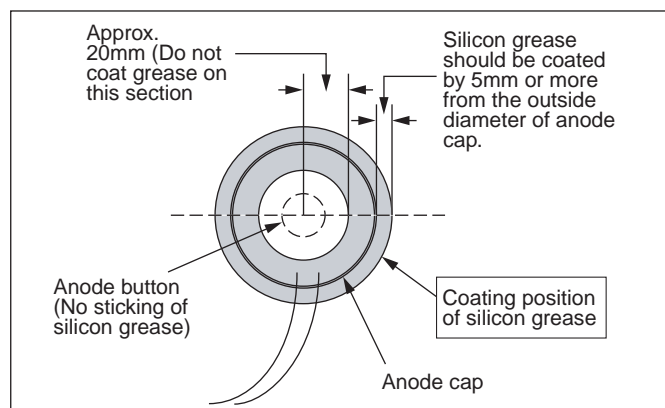


Fig.7

2.7 MEMORY IC REPLACEMENT

2.7.1 MEMORY IC

This TV use memory IC.

In the memory IC, there are memorized data for correctly operating the video and deflection circuits. When replacing the memory IC, be sure to use IC written with the initial values of data.

2.7.2 PROCEDURE FOR REPLACING MEMORY IC

(1) Power off

Switch the power off and unplug the power plug.

(2) Replace IC

Be sure to use a memory IC written with the initial setting data.

(3) Power on

Connect the power plug and switch the power on.

(4) Setting of receive channels

Set the receive channels. For setting, refer to the OPERATING INSTRUCTIONS.

(6) User settings

Check the user setting items according to TABLE 2, and if these are different, set the correct value.

(7) SERVICE MENU setting

Verify what to set in the SERVICE MENU, and set whatever is necessary. Refer to the SERVICE ADJUSTMENT for setting.

SERVICE MENU

SERVICE MENU	
1.V/C(S)	2.DEF(D)
3.SOUND(A)	4.OTHERS(F)
7.LOW LIGHT	8.HIGH LIGHT
9.VCO	
11.I2C BUS	
SELECT BY	▲ ▼
OPERATE BY	◀ ▶
	EXIT BY [EXIT]

2.7.3 USER SETTING VALUES

Setting item	Setting value	Setting item	Setting value
REMOTE CONTROL UNIT KEY			
POWER	OFF	DISPLAY	OFF
CHANNEL	CH-02	VIDEO STATUS	DYNAMIC
VOLUME	15	SLEEP TIMER	0
TV/VIDEO	TV		
SETTING OF MENU			
PICTURE MODE		INITIAL SETUP MODE	
TINT	Center	LANGUAGE	ENG
COLOR	Center	FRONT PANEL LOCK	OFF
PICTURE	+8	V2 COMPONENT-IN	NO
BRIGHT	Center	AUTO SHUT OFF	OFF
DETAIL	+10	CLOSED CAPTION	OFF
NOISE MUTING	ON	AUTO TUNER SETUP	AIR
SOUND MODE		CHANNEL SUMMARY	Unnecessary to set
BASS	Center	V-CHIP	OFF
TREBLE	Center	SET LOCK CODE	(0000) Unnecessary to set
BALANCE	Center	XDS ID	ON
MTS	STEREO		
CLOCK / TIMERS MODE			
SET CLOCK	MANUAL		
	TIME ZONE : PACIFIC		
	D.S.T. : OFF		
ON / OFF TIMER	OFF		

TABLE 2

2.8 REPLACEMENT OF CHIP COMPONENT

2.8.1 CAUTIONS

- (1) Avoid heating for more than 3 seconds.
- (2) Do not rub the electrodes and the resist parts of the pattern.
- (3) When removing a chip part, melt the solder adequately.
- (4) Do not reuse a chip part after removing it.

2.8.2 SOLDERING IRON

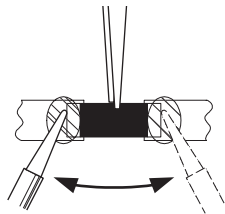
- (1) Use a high insulation soldering iron with a thin pointed end of it.
- (2) A 30w soldering iron is recommended for easily removing parts.

2.8.3 REPLACEMENT STEPS

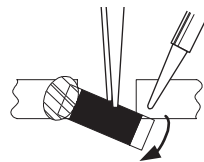
1. How to remove Chip parts

[Resistors, capacitors, etc.]

- (1) As shown in the figure, push the part with tweezers and alternately melt the solder at each end.



- (2) Shift with the tweezers and remove the chip part.

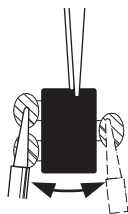


[Transistors, diodes, variable resistors, etc.]

- (1) Apply extra solder to each lead.



- (2) As shown in the figure, push the part with tweezers and alternately melt the solder at each lead. Shift and remove the chip part.



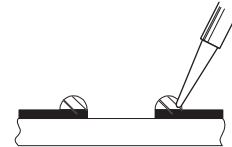
Note :

After removing the part, remove remaining solder from the pattern.

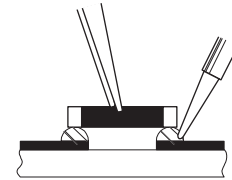
2. How to install Chip parts

[Resistors, capacitors, etc.]

- (1) Apply solder to the pattern as indicated in the figure.

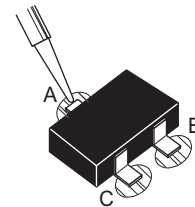


- (2) Grasp the chip part with tweezers and place it on the solder. Then heat and melt the solder at both ends of the chip part.

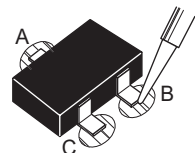


[Transistors, diodes, variable resistors, etc.]

- (1) Apply solder to the pattern as indicated in the figure.
- (2) Grasp the chip part with tweezers and place it on the solder.
- (3) First solder lead **A** as indicated in the figure.



- (4) Then solder leads **B** and **C**.



SECTION 3 ADJUSTMENT

3.1 ADJUSTMENT PREPARATION

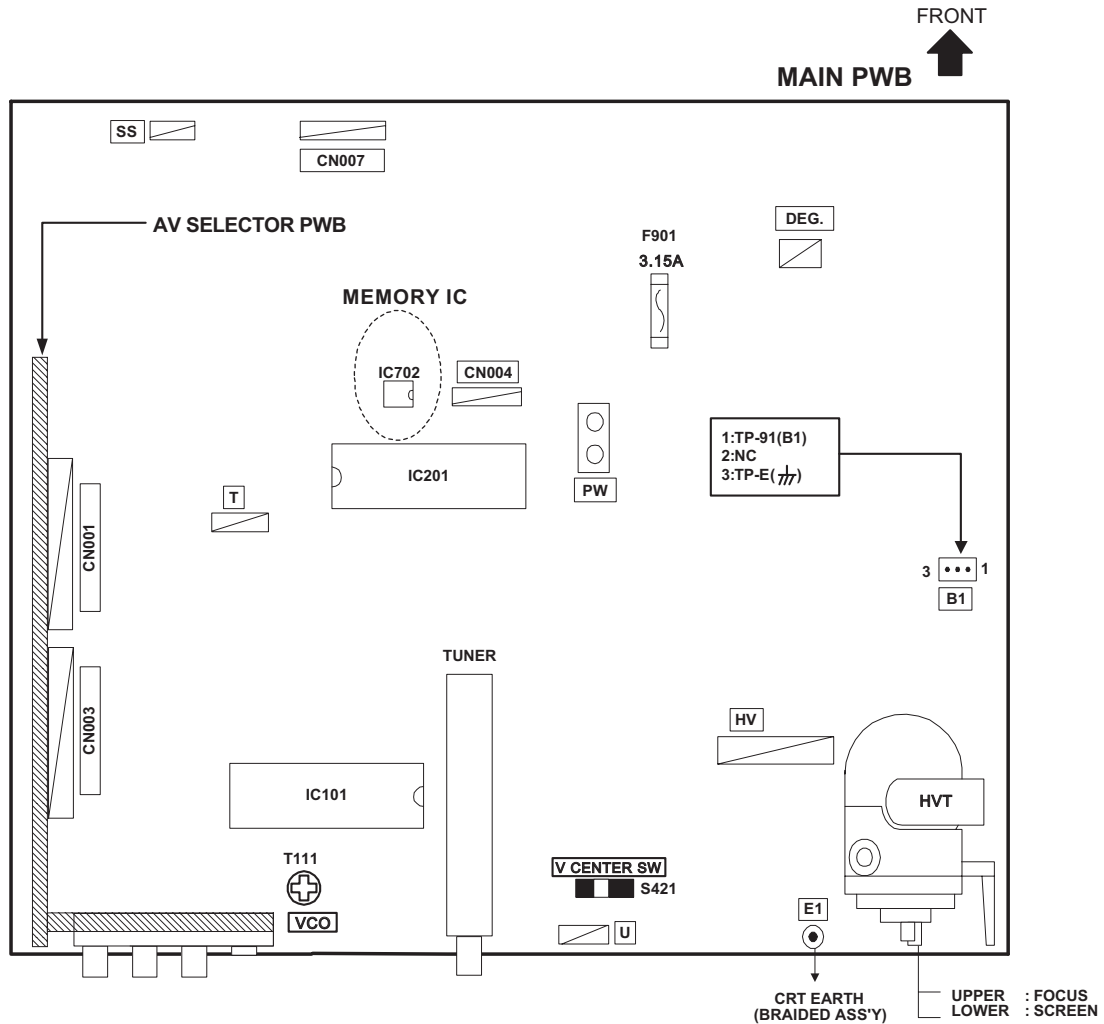
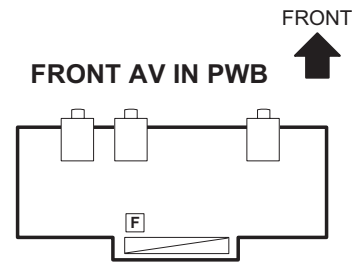
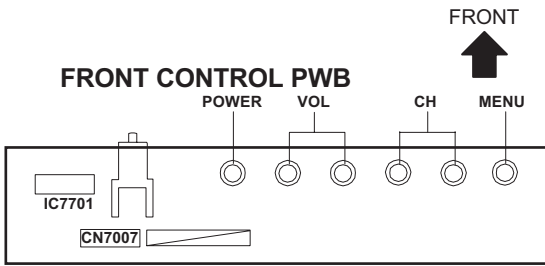
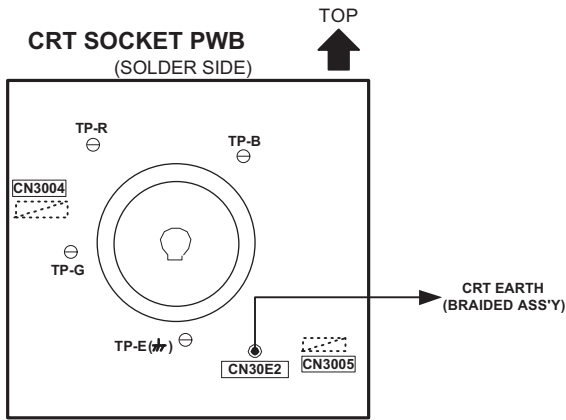
- (1) There are 2 ways of adjusting this TV : One is with the REMOTE CONTROL UNIT and the other is the conventional method using adjustment parts and components.
- (2) The adjustment using the REMOTE CONTROL UNIT is made on the basis of the initial setting values. The setting values which adjust the screen to the optimum condition can be different from the initial setting values.
- (3) Make sure that connection is correctly made AC to AC power source.
- (4) Turn on the power of the TV and measuring instruments for warming up for at least 30 minutes before starting adjustments.
- (5) If the receive or input signal is not specified, use the most appropriate signal for adjustment.
- (6) Never touch the parts (such as variable resistors, transformers and condensers) not shown in the adjustment items of this service adjustment.
- (7) Preparation for adjustment. Unless otherwise specified in the adjustment items, preset the following functions with the REMOTE CONTROL UNIT.

Item	Preset value
VIDEO STATUS	DYNAMIC
TINT, COLOR, PICTURE, BRIGHT, DETAIL	Center
NOISE MUTING	OFF
BASS, TREBLE, BALANCE	Center
MTS	STEREO

3.2 MEASURING INSTRUMENT AND FIXTURES

- (1) DC voltmeter (or digital voltmeter)
- (2) Oscilloscope
- (3) Frequency counter
- (4) Signal generator (Pattern generator) [NTSC]
- (5) TV audio multiplex signal generator
- (6) Remote control unit

3.3 ADJUSTMENT LOCATIONS



3.4 BASIC OPERATION OF SERVICE MENU

3.4.1 TOOL OF SERVICE MENU OPERATION

Operate the SERVICE MENU with the REMOTE CONTROL UNIT.

3.4.2 SERVICE MENU ITEMS

With the SERVICE MENU, various adjustments can be made, and they are broadly classified in the following items of settings.

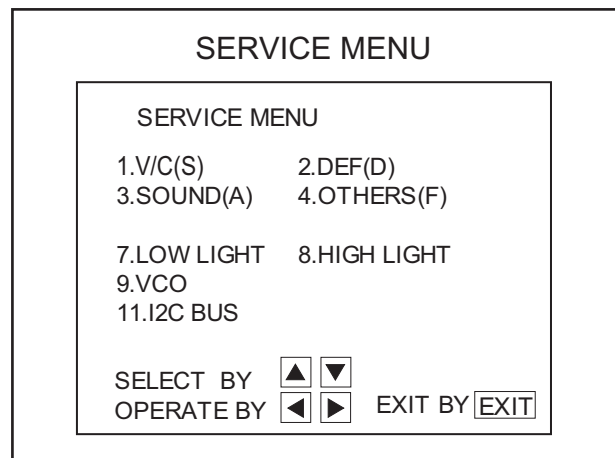
(1) V/C (S)	This mode adjusts the VIDEO and CHROMA control circuit.
(2) DEF (D)	This mode adjusts the DEFLECTION control circuit.
(3) SOUND (A)	This mode adjusts the SOUND control circuit.
(4) OTHERS (F)	This mode adjusts the display setting and the other settings (Do not change the values).
(7) LOW LIGHT	This mode adjusts the WHITE BALANCE (LOW LIGHT) control circuit.
(8) HIGH LIGHT	This mode adjusts the WHITE BALANCE (HIGH LIGHT) control circuit.
(9) VCO	This mode adjusts the VCO control circuit.
(11) I2C BUS	This mode adjusts the I ² C BUS control circuit (They are fixed).

3.4.3 BASIC OPERATION IN SERVICE MENU

3.4.3.1 HOW TO ENTER THE SERVICE MENU

Press the [SLEEP TIMER] key and set the SLEEP TIMER for "0 MIN".

Then press the [DISPLAY] key and [VIDEO STATUS] key of the remote control unit at the same time to enter the SERVICE MENU screen.

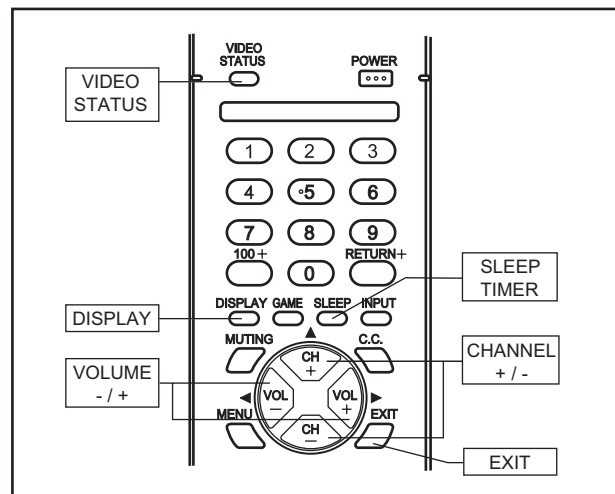


3.4.3.2 SUB MENU SCREEN SELECTION

Press [VOLUME (-/+)] keys of the REMOTE CONTROL UNIT, and select the SUB MENU SCREEN from SERVICE MENU.

In SERVICE MENU, press the [CHANNEL (-/+)] key to select any of the SUB MENU items. The letters of the selected items are displayed in yellow.

- 1.V/C(S)
- 2.DEF(D)
- 3.SOUND(A)
- 4.OTHERS(F)
- 7.LOW LIGHT
- 8.HIGH LIGHT
- 9.VCO
- 11.I2C BUS



3.4.3.3 SETTING METHOD

[1.VC(S), 2.DEF(D) AND 3.SOUND(A) ADJUSTMENT MODE]

- 1) Press the [CHANNEL (-/+)] keys to select the one of setting item from S01 BRIGHT to S21 AGC ADJ.
- 2) Press the [VOLUME (-/+)] keys to change the setting value. The setting value will be stored automatically when release the REMOTE CONTROL UNIT keys.
It can adjust the items 2.DEF(D) and 3.SOUND(A) in the same procedure.

[7.LOW LIGHT, 8.HIGH LIGHT AND 9.VCO ADJUSTMENT MODE]

Since the key operation in this mode is peculiar, please refer to the clause of the "ADJUSTMENT PROCEDURE".

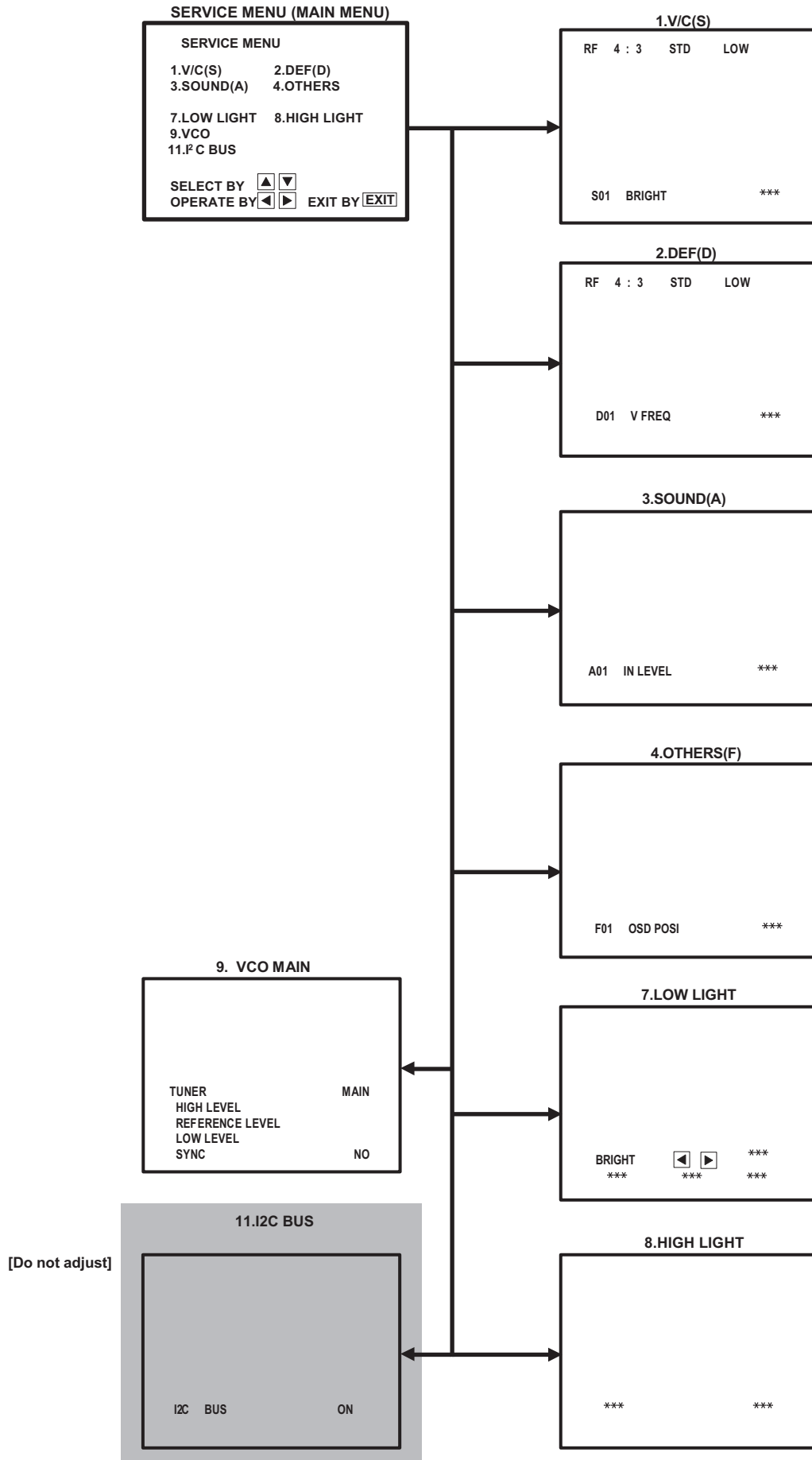
[4.OTHERS AND 11.I2C BUS ADJUSTMENT MODE]

These are no requirement for adjustment. Don't change these values.

3.4.3.4 Release of SERVICE MENU

When adjustment is completed, press the [EXIT] key twice. Then return to the normal screen.

3.4.4 SERVICE MENU FLOW CHART



3.5 INITIAL SETTING VALUE OF SERVICE MENU

- (1) Adjustment of the SERVICE MENU is made on the basis of the initial setting values. However, the new setting values which displays on the screen in its optimum condition may differ from the initial setting value.
- (2) Do not change the initial setting values of the items not listed in "ADJUSTMENT PROCEDURE".
- (3) "---" is impossible to adjust.

3.5.1 [1.V / C]

No.	Setting item	Variable range	Initial setting value					
			RF		EXTERNAL (SV,CV)		COMPONENT	
			STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER
S01	BRIGHT	0~127	64	---	---	---	---	---
S02	PICTURE	0~127	55	---	---	---	---	---
S03	COLOR	0~127	50	---	---	---	55	---
S04	TINT	0~127	60	---	---	---	78	---
S05	DETAIL	0~63	37	---	35	---	40	---
S06	BRIGHT +-	-128~+127	---	1	-2	---	0	---
S07	PICT+-	-128~+127	---	-10	0	---	0	---
S08	COLOR +-	-128~+127	---	-3	-2	---	---	---
S09	TINT+-	-128~+127	---	-3	2	---	---	---
S10	DETAIL+-	-128~+127	---	0	---	---	---	---

No.	Setting item	Variable range	Initial setting value							
			RF/EXT (SV,CV)				COMPONENT			
			STANDARD		THEATER		STANDARD		THEATER	
			LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
S11	R CUT OFF	0~255	30	---	---	---	---	---	---	---
S12	G CUT OFF	0~255	30	---	---	---	---	---	---	---
S13	B CUT OFF	0~255	30	---	---	---	---	---	---	---
S14	R DRIVE	0~127	64	---	---	---	---	---	---	---
S15	B DRIVE	0~127	64	---	---	---	---	---	---	---
S16	R CUT+-	-128~+127	---	0	0	0	-10	---	---	---
S17	G CUT+-	-128~+127	---	0	0	0	0	---	---	---
S18	B CUT+-	-128~+127	---	0	0	0	-10	---	---	---
S19	R DRV+-	-128~+127	---	0	7	7	0	---	---	---
S20	B DRV+-	-128~+127	---	0	-9	-9	0	---	---	---

No.	Setting item	Variable range	Initial setting value
S21	AGC ADJUST	0~127	80

3.5.2 [2.DEF]

No.	Setting item	Variable range	Initial setting value					
			AV-32430 /M AV-32432 /M		AV-32430 /Y AV-32432 /Y		AV-32430 /R AV-32432 /R	
			RF	EXTERNAL (SV, CV)	RF	EXTERNAL (SV, CV)	RF	EXTERNAL (SV, CV)
D01	AFC GAIN	0~3	0	2	0	2	0	2
D02	H POSI	0~31	20	20	20	20	20	20
D03	V SIZE	0~125	63	63	70	70	70	70
D04	V S CORR	0~15	5	5	5	5	5	5
D05	V LIN	0~15	12	12	12	12	12	12
D06	H SIZE	0~63	17	17	26	26	27	27
D07	WVMT TOP	0~3	0	0	0	0	0	0
D08	WVMT BTM	0~3	0	0	0	0	0	0
D09	EWCR TOP	0~31	12	12	12	12	12	12
D10	EWCR BTM	0~31	15	15	15	15	15	15
D11	EW PARA	0~63	30	30	36	36	36	36
D12	BLANK SW	0~1	0	0	0	0	0	0

3.5.3 [3.SOUND]

No.	Setting item	Variable range	Initial setting value
A01	IN LEVEL	0~63	36
A02	FH MON	0~1	0
A03	ST VCO	0~63	43
A04	PIL CAN	0~1	0
A05	FILTER	0~63	35
A06	LOW SEP	0~63	8
A07	HI SEP	0~63	26
A08	5FH MON	0~1	0
A09	SAP VCO	0~63	44

3.5.4 [4.OTHERS]

No.	Setting item	Variable range	Initial setting value
F01	OSD POSI	0~255	40
F02	OSD PREQ	0~255	90
F03	CCD POSI	0~63	47
F04	CCD FREQ	0~255	93
F05	CCD CONT	0~63	7
F06	PUR CONT	0~255	2
F07	VNR CHK	0~255	3
F08	VCSN TM	0~255	5
F09	CCD PCHK	0~1	1

3.5.5 [7.LOW LIGHT]

No.	Setting item	Variable range	Initial setting value
1	RED	0~255	30
2	GREEN	0~255	30
3	BLUE	0~255	30

3.5.6 [8.HIGH LIGHT]

No.	Setting item	Variable range	Initial setting value
1	RED	0~255	64
2	BLUE	0~255	64

3.6 ADJUSTMENT PROCEDURE

3.6.1 CHECK ITEM

Item	Measuring instrument	Test point	Adjustment part	Description
B1 POWER SUPPLY check	DC voltmeter Signal generator	B1 Connector TP-91, TP-E [MAIN PWB]		(1) Receive the black-and-white signal. (color off) (2) Connect the DC voltmeter to TP-91 (B1 connector 1 pin) and TP-E (B1 connector 3 pin). (3) Confirm that the voltage is DC134V±2V.

3.6.2 IF VCO

Item	Measuring instrument	Test point	Adjustment part	Description												
IF VCO	Remote control unit		[9.VCO] CW transf. (T111) [MAIN PWB]	<ul style="list-style-type: none"> It must not adjust without inputting the RF signal. <ol style="list-style-type: none"> Receive a broadcast. Select 9.VCO. Change the [AFC] to OFF and [FINE] to 0. Confirm that the color change from "TOO HIGH" to "TOO LOW" by CW transf. on MAIN PWB, and check the [SYNC] is YES. Adjust CW transf. until "GOOD" letters turns green. And then confirm that the [SYNC] is YES again. Adjustment can be done in this statement. It return the [AFC] to ON. Push the [EXIT] key to exit the [9.VCO] mode. 												
<table border="1" style="margin: auto;"> <tr> <td style="padding: 5px;">TOO HIGH</td> <td style="padding: 5px;">GOOD</td> <td style="padding: 5px;">TOO LOW</td> </tr> <tr> <td style="padding: 5px;">SYNC:</td> <td style="padding: 5px;">YES</td> <td></td> </tr> <tr> <td style="padding: 5px;">AFC</td> <td style="padding: 5px;">ON</td> <td></td> </tr> <tr> <td style="padding: 5px;">FINE</td> <td style="padding: 5px;">±0</td> <td></td> </tr> </table>				TOO HIGH	GOOD	TOO LOW	SYNC:	YES		AFC	ON		FINE	±0		
TOO HIGH	GOOD	TOO LOW														
SYNC:	YES															
AFC	ON															
FINE	±0															

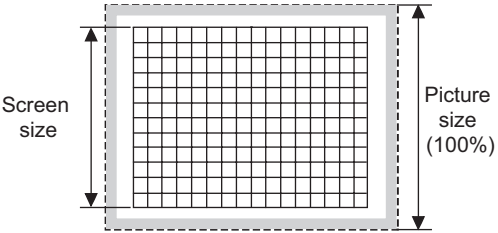
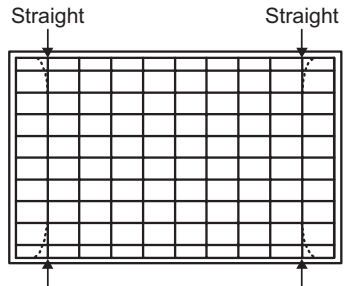
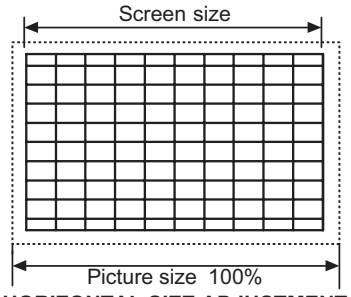
3.6.3 RF AGC

Item	Measuring instrument	Test point	Adjustment part	Description								
RF AGC	Signal generator Remote control unit		[1.V/C(S)] S21 : AGC ADJ	<ol style="list-style-type: none"> Receive a black-and-white signal (colour off). Select 1.V/C. Select <S21>(AGC ADJ). Press the [MUTING] key and turn the picture color off. With the [VOLUME (-)] key to get the noise in the screen picture (zero side of setting value). Press the [VOLUME (+)] key several times and step when noise disappears from the screen (at that time, not to increase the value too much). Change to other channels and make sure that there is no irregularity. Press the [MUTING] key and get color out. 								
<table border="1" style="margin: auto;"> <thead> <tr> <th>No.</th> <th>Setting item</th> <th>Variable range</th> <th>Initial setting value</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">S21</td> <td style="text-align: center;">AGC ADJ</td> <td style="text-align: center;">0~127</td> <td style="text-align: center;">80</td> </tr> </tbody> </table>				No.	Setting item	Variable range	Initial setting value	S21	AGC ADJ	0~127	80	
No.	Setting item	Variable range	Initial setting value									
S21	AGC ADJ	0~127	80									

3.6.4 FOCUS

Item	Measuring instrument	Test point	Adjustment part	Description
FOCUS	Signal generator		FOCUS VR [In HVT]	<ol style="list-style-type: none"> Receive the crosshatch signal. While looking at the screen, adjust the FOCUS VR to the vertical and horizontal lines will be clear and in fine detail. Make sure that the picture is in focus even when the screen gets darkened.

3.6.5 DEFLECTION CIRCUIT

Item	Measuring instrument	Test point	Adjustment part	Description								
V. SIZE & V. CENTER	Signal generator		[2.DEF(D)] D03 : V SIZE	(1) Receive the crosshatch signal. (2) Select 2.DEF(D). (3) Select the <D03>(V SIZE). (4) Adjust the <D03> so that the vertical screen size becomes 92.0%. (5) Adjust the V. CENTER SW to agree the vertical center with display center.								
	Remote control unit		V. CENTER SW(S421) [MAIN PWB]									
 <table border="1" data-bbox="170 714 755 934"> <thead> <tr> <th>Model Name</th> <th>D03 V SIZE Initial setting value</th> </tr> </thead> <tbody> <tr> <td>AV-32430 /M AV-32432 /M</td> <td>63</td> </tr> <tr> <td>AV-32430 /Y AV-32432 /Y</td> <td>70</td> </tr> <tr> <td>AV-32430 /R AV-32432 /R</td> <td>70</td> </tr> </tbody> </table>				Model Name	D03 V SIZE Initial setting value	AV-32430 /M AV-32432 /M	63	AV-32430 /Y AV-32432 /Y	70	AV-32430 /R AV-32432 /R	70	
Model Name	D03 V SIZE Initial setting value											
AV-32430 /M AV-32432 /M	63											
AV-32430 /Y AV-32432 /Y	70											
AV-32430 /R AV-32432 /R	70											
H. SIZE / H. CENTER / SIDE PIN	Signal generator		[2.DEF(D)] D02 : H POSI D06 : H SIZE D16 : EW PARA D09 : EWCR TOP D10 : EWCR BTM	(1) Receive the crosshatch signal. (2) Select 2.DEF(D). (3) Select <D02>(H POSI). (4) Adjust <D02> so that left width and right width of the crosshatch screen becomes equal. (5) Adjust <D06>(H SIZE) so that screen horizontal width becomes 92.0%. (6) Adjust <D16>(EW PARA) so that vertical line becomes straight at both top and bottom edge. (7) When vertical lines of four corner does not turn into straight, adjust with <D09>(EWCR TOP) and <D10>(EWCR BTM) to correctly.								
	Remote control unit											
 <p style="text-align: center;">SIDE PINCUSHION ADJUSTMENT</p>  <p style="text-align: center;">HORIZONTAL SIZE ADJUSTMENT</p>												

3.6.6 VIDEO CIRCUIT

Item	Measuring instrument	Test point	Adjustment part	Description																			
WHITE BALANCE (LOW LIGHT)	Signal generator Remote control unit		[7.LOW LIGHT] [1.V/C(S)] S11 : R CUTOFF S12 : G CUTOFF S13 : B CUTOFF S01 : BRIGHT SCREEN VR [in HVT]	<ol style="list-style-type: none"> (1) Receive the black-and-white signal (color off). (2) Select 7.LOW LIGHT. (3) Set the initial setting value of <S11>(R CUTOFF), <S12>(G CUTOFF), <S13>(B CUTOFF) and <S01>(BRIGHT). (4) Display a single horizontal line by pressing the [1] key. (5) Turn the SCREEN VR all the way to the left. (6) Turn the SCREEN VR gradually to the right from the left until either one of the red, blue or green color appears faintly. (7) Adjust the two colors which did not appear until the single horizontal line that is displayed becomes white using the [4] to [9] keys. (8) Turn the SCREEN VR until the single horizontal line is displayed faintly. (9) Press the [2] key to cancel the single horizontal line mode. (10) Adjust the <S01> level to become the black component shines white slightly by [VOLUME (-/+)] key. (11) Confirm that whether the color ingredient of R,G,or B is visible to the black component, which shines white slightly. (12) When the color ingredient can be seen, two colors other than a visible color is adjusted, and it is made to look white. (13) Return the value of <S01> to initial setting value. <p>If [3] key is pressed, it can escape from WHITE BALANCE adjustment mode.</p>																			
<div style="text-align: center;"> </div> <table border="1" data-bbox="248 961 831 1199"> <thead> <tr> <th>No.</th> <th>Setting item</th> <th>Variable range</th> <th>Initial setting value</th> </tr> </thead> <tbody> <tr> <td>S11</td> <td>R CUT OFF</td> <td>0~255</td> <td>30</td> </tr> <tr> <td>S12</td> <td>G CUT OFF</td> <td>0~255</td> <td>30</td> </tr> <tr> <td>S13</td> <td>B CUT OFF</td> <td>0~255</td> <td>30</td> </tr> <tr> <td>S01</td> <td>BRIGHT</td> <td>0~127</td> <td>64</td> </tr> </tbody> </table>				No.	Setting item	Variable range	Initial setting value	S11	R CUT OFF	0~255	30	S12	G CUT OFF	0~255	30	S13	B CUT OFF	0~255	30	S01	BRIGHT	0~127	64
No.	Setting item	Variable range	Initial setting value																				
S11	R CUT OFF	0~255	30																				
S12	G CUT OFF	0~255	30																				
S13	B CUT OFF	0~255	30																				
S01	BRIGHT	0~127	64																				
WHITE BALANCE (HIGH LIGHT)	Signal generator Remote control unit		[8.HIGH LIGHT] S14 : R DRIVE S15 : B DRIVE	<ol style="list-style-type: none"> (1) Receive the black-and-white signal (color off). (2) Select the 8.HIGH LIGHT. (3) Set the initial setting value of <S14>(R DRIVE) and <S15>(B DRIVE) with the [4], [6], [7] and [9] keys of the remote control unit. (4) Adjust the screen until it becomes white using the [4], [6], [7] and [9] keys of the remote control unit. <p>If [3] key is pressed, it can escape from WHITE BALANCE adjustment mode.</p>																			
<div style="text-align: center;"> </div> <table border="1" data-bbox="248 1808 831 1961"> <thead> <tr> <th>No.</th> <th>Setting item</th> <th>Variable range</th> <th>Initial setting value</th> </tr> </thead> <tbody> <tr> <td>S14</td> <td>R DRIVE</td> <td>0~127</td> <td>64</td> </tr> <tr> <td>S15</td> <td>G DRIVE</td> <td>0~127</td> <td>64</td> </tr> </tbody> </table>				No.	Setting item	Variable range	Initial setting value	S14	R DRIVE	0~127	64	S15	G DRIVE	0~127	64								
No.	Setting item	Variable range	Initial setting value																				
S14	R DRIVE	0~127	64																				
S15	G DRIVE	0~127	64																				

Item	Measuring instrument	Test point	Adjustment part	Description					
SUB BRIGHT	Remote control unit		[1.V/C(S)] S01 : BRIGHT	(1) Receive the broadcast. (2) Select 1.V/C(S). (3) Select <S01>(BRIGHT). (4) Set the initial setting value of the <S01> with the [VOLUME (-/+)] key. (5) If the brightness is not the best with the initial setting value, make fine adjustment of the <S01> until you get the optimum brightness.					
					<table border="1"> <thead> <tr> <th>No.</th> <th>Setting item</th> <th>Variable range</th> <th>Initial setting value</th> </tr> </thead> <tbody> <tr> <td>S01</td> <td>BRIGHT</td> <td>0~127</td> <td>64</td> </tr> </tbody> </table>	No.	Setting item	Variable range	Initial setting value
No.	Setting item	Variable range	Initial setting value						
S01	BRIGHT	0~127	64						
SUB CONTRAST	Remote control unit		[1.V/C(S)] S02 : PICTURE	(1) Receive the broadcast. (2) Select 1.V/C(S). (3) Select <S02>(PICTURE). (4) Set the initial setting value of the <S02> with the [VOLUME (-/+)] key. (5) If the contrast is not the best with the initial setting value, make fine adjustment of the <S02> until you get the optimum contrast.					
					<table border="1"> <thead> <tr> <th>No.</th> <th>Setting item</th> <th>Variable range</th> <th>Initial setting value</th> </tr> </thead> <tbody> <tr> <td>S02</td> <td>PICTURE</td> <td>0~127</td> <td>65</td> </tr> </tbody> </table>	No.	Setting item	Variable range	Initial setting value
No.	Setting item	Variable range	Initial setting value						
S02	PICTURE	0~127	65						
SUB COLOR	Signal generator		[1.V/C(S)] S03 : COLOR	(1) Receive the broadcast. (2) Select 1.V/C(S). (3) Select <S03>(COLOR). (4) Set the initial setting value of the <S03> with the [VOLUME (-/+)] key. If the color is not the best with the Initial setting value, make fine adjustment of the <S03> until you get the optimum color.					
	Remote control unit				<table border="1"> <thead> <tr> <th>No.</th> <th>Setting item</th> <th>Variable range</th> <th>Initial setting value</th> </tr> </thead> <tbody> <tr> <td>S03</td> <td>COLOR</td> <td>0~127</td> <td>50</td> </tr> </tbody> </table>	No.	Setting item	Variable range	Initial setting value
No.	Setting item	Variable range	Initial setting value						
S03	COLOR	0~127	50						
SUB TINT	Signal generator		[1.V/C(S)] S04 : TINT	(1) Receive the broadcast. (2) Select 1.V/C(S). (3) Select <S04>(TINT). (4) Set the initial setting value of the <S04> with the [VOLUME (-/+)] key. If the tint is not the best with the Initial setting value, make fine adjustment of the <S04> until you get the optimum tint.					
	Remote control unit				<table border="1"> <thead> <tr> <th>No.</th> <th>Setting item</th> <th>Variable range</th> <th>Initial setting value</th> </tr> </thead> <tbody> <tr> <td>S04</td> <td>TINT</td> <td>0~127</td> <td>60</td> </tr> </tbody> </table>	No.	Setting item	Variable range	Initial setting value
No.	Setting item	Variable range	Initial setting value						
S04	TINT	0~127	60						

3.6.7 MTS CIRCUIT

Item	Measuring instrument	Test point	Adjustment part	Description												
MTS INPUT LEVEL check	Remote control unit		[3.SOUND(A)] A01 : IN LEVEL	(1) Select the <A01>(IN LEVEL). (2) Verify that the <A01> is set at its initial setting value.												
	<table border="1"> <thead> <tr> <th>No.</th> <th>Setting item</th> <th>Variable range</th> <th>Initial setting value</th> </tr> </thead> <tbody> <tr> <td>A01</td> <td>IN LEVEL</td> <td>0~63</td> <td>036</td> </tr> </tbody> </table>				No.	Setting item	Variable range	Initial setting value	A01	IN LEVEL	0~63	036				
No.	Setting item	Variable range	Initial setting value													
A01	IN LEVEL	0~63	036													
MTS STEREO VCO	Frequency counter	R OUT [AUDIO OUT]	[3. SOUND(A)] A02 : FH MON A03 : ST VCO	(1) Receive the RF signal (no modulated sound signal) from the antenna terminal. (2) Select 3.SOUND(A). (3) Select the <A02>(FH MON) and change the setting value from 0 to 1. (4) Connect the frequency counter to R OUT of the AUDIO OUT. (5) Select the <A03>(ST VCO). (6) Set the initial setting value of the <A03>. (7) Adjust the <A03> so that the frequency counter will display 15.73kHz±0.1kHz. (8) Select the <A02> of the SOUND mode, and reset the setting value from 1 to 0.												
	Signal generator															
	Remote control unit															
<table border="1"> <thead> <tr> <th>No.</th> <th>Setting item</th> <th>Variable range</th> <th>Initial setting value</th> </tr> </thead> <tbody> <tr> <td>A02</td> <td>FH MON</td> <td>0~63</td> <td>0</td> </tr> <tr> <td>A03</td> <td>ST VCO</td> <td>0~63</td> <td>043</td> </tr> </tbody> </table>					No.	Setting item	Variable range	Initial setting value	A02	FH MON	0~63	0	A03	ST VCO	0~63	043
No.	Setting item	Variable range	Initial setting value													
A02	FH MON	0~63	0													
A03	ST VCO	0~63	043													
MTS SAP VCO	Frequency counter	R OUT [AUDIO OUT]	[3. SOUND(A)] A08 : 5FH MON A09 : SAP VCO	(1) Receive the RF signal (non modulated sound signal) from the antenna terminal. (2) Select 3.SOUND(A). (3) Select the <A08> (SFH MON) and reset the setting value from 0 to 1. (4) Connect the frequency counter to R out of the AUDIO OUT. (5) Select the <A09> (SAP VCO). (6) Set the initial setting value of <A09>. (7) Adjust the <A09> so that the frequency counter will display 78.67kHz±0.5kHz. (8) Select the <A08>, and reset the setting value from 1 to 0.												
	Signal generator															
	Remote control unit															
<table border="1"> <thead> <tr> <th>No.</th> <th>Setting item</th> <th>Variable range</th> <th>Initial setting value</th> </tr> </thead> <tbody> <tr> <td>A08</td> <td>5FH MON</td> <td>0~1</td> <td>0</td> </tr> <tr> <td>A09</td> <td>SAP VCO</td> <td>0~63</td> <td>044</td> </tr> </tbody> </table>					No.	Setting item	Variable range	Initial setting value	A08	5FH MON	0~1	0	A09	SAP VCO	0~63	044
No.	Setting item	Variable range	Initial setting value													
A08	5FH MON	0~1	0													
A09	SAP VCO	0~63	044													
MTS FILTER	Remote control unit		[3. SOUND(A)] A04 : PILOT CAN A05 : FILTER	(1) Select 3.SOUND(A). (2) Select the <A05> (FILTER). (3) Select the <A04> (PILOT CAN) and reset the setting value from 0 to 1. (4) Verify that the <A05> is set at its initial setting value.												
	<table border="1"> <thead> <tr> <th>No.</th> <th>Setting item</th> <th>Variable range</th> <th>Initial setting value</th> </tr> </thead> <tbody> <tr> <td>A04</td> <td>PIL CAN</td> <td>0~1</td> <td>0</td> </tr> <tr> <td>A05</td> <td>FILTER</td> <td>0~63</td> <td>035</td> </tr> </tbody> </table>				No.	Setting item	Variable range	Initial setting value	A04	PIL CAN	0~1	0	A05	FILTER	0~63	035
No.	Setting item	Variable range	Initial setting value													
A04	PIL CAN	0~1	0													
A05	FILTER	0~63	035													

Item	Measuring instrument	Test point	Adjustment part	Description											
MTS SEPARATION	TV audio multiplex signal generator Oscilloscope Remote control unit	R OUT L OUT [AUDIO OUT]	[3.SOUND(A)] A06 : LOW SEP A07 : HI SEP	(1) Input the stereo L signal (300Hz) from the TV audio multiplex signal generator to the antenna terminal. (2) Connect an oscilloscope to R OUT pin of the AUDIO OUT, and display one cycle portion of the 300Hz signal. (3) Select 3.SOUND(A). (4) Select the <A06> (LOW SEP). (5) Set the initial setting value of the <A06> with the [VOLUME (-/+)] key. (6) Adjust the <A06> so that the stroke element of the 300Hz signal will become minimum. (7) Change the connection of the oscilloscope to L OUT pin of the AUDIO OUT, and enlarge the voltage axis. (8) Change the signal to 3kHz, and similarly adjust the <A07> (HI SEP).											
<div data-bbox="175 537 753 793" style="border: 1px solid black; padding: 10px; margin-bottom: 10px;"> </div> <table border="1" data-bbox="175 831 753 1033"> <thead> <tr> <th>No.</th> <th>Setting item</th> <th>Variable range</th> <th>Initial setting value</th> </tr> </thead> <tbody> <tr> <td>A06</td> <td>LOW SEP</td> <td>0~63</td> <td>008</td> </tr> <tr> <td>A07</td> <td>HI SEP</td> <td>0~63</td> <td>026</td> </tr> </tbody> </table>				No.	Setting item	Variable range	Initial setting value	A06	LOW SEP	0~63	008	A07	HI SEP	0~63	026
No.	Setting item	Variable range	Initial setting value												
A06	LOW SEP	0~63	008												
A07	HI SEP	0~63	026												

3.6.8 HOW TO CHECK THE HIGH VOLTAGE HOLD DOWN CIRCUIT

3.6.8.1 HIGH VOLTAGE HOLD DOWN CIRCUIT

After repairing the high voltage hold down circuit.

This circuit shall be checked to operate correctly.

3.6.8.2 CHECKING OF THE HIGH VOLTAGE HOLD DOWN CIRCUIT

- (1) Turn the power switch to on.
- (2) Refer to the following figure, set the resistor between X connector 1 and 3 .
- (3) Make sure that the screen picture disappears.
- (4) Temporarily unplug the power plug.
- (5) Remove the resistor replaced X connector 1 and 3 .
- (6) Again plug the power plug, make sure that the normal picture is displayed on the screen.

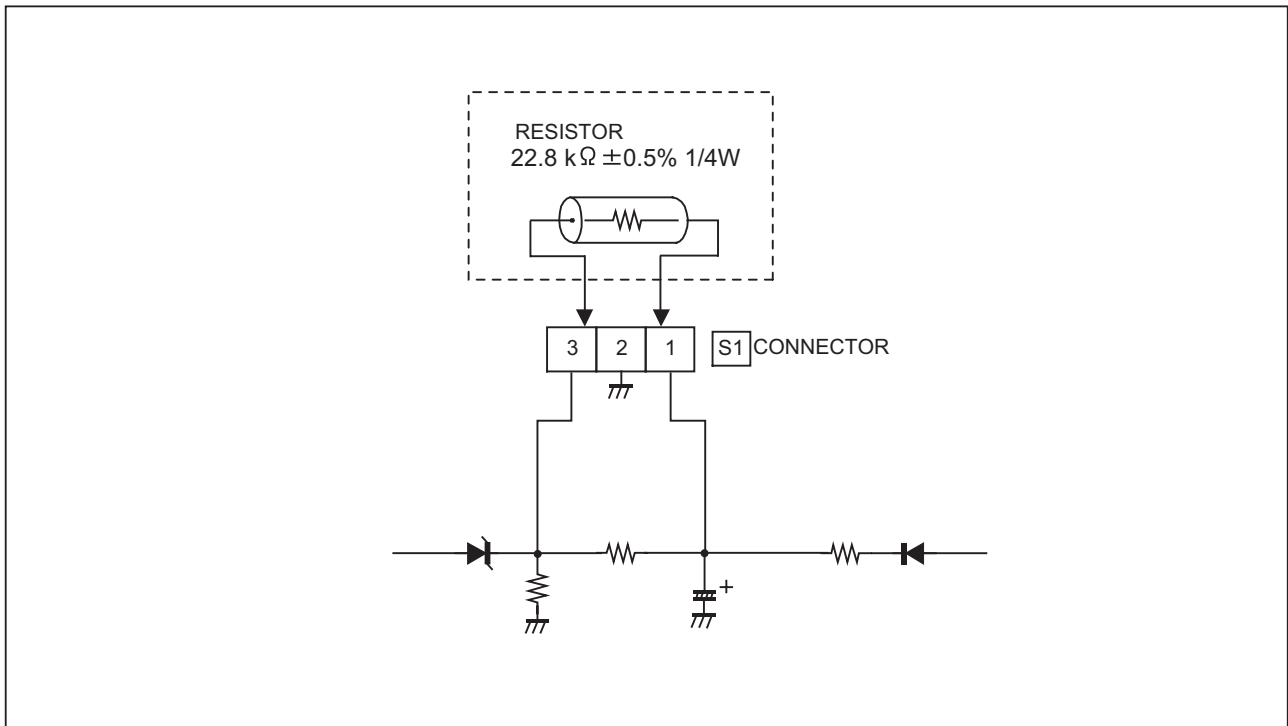


Fig.3-5-9

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