

JVC

REVISED

SERVICE MANUAL**REAR PROJECTION TELEVISION**

BASIC CHASSIS

KB

AV-6100_{/EE}

Supplementary

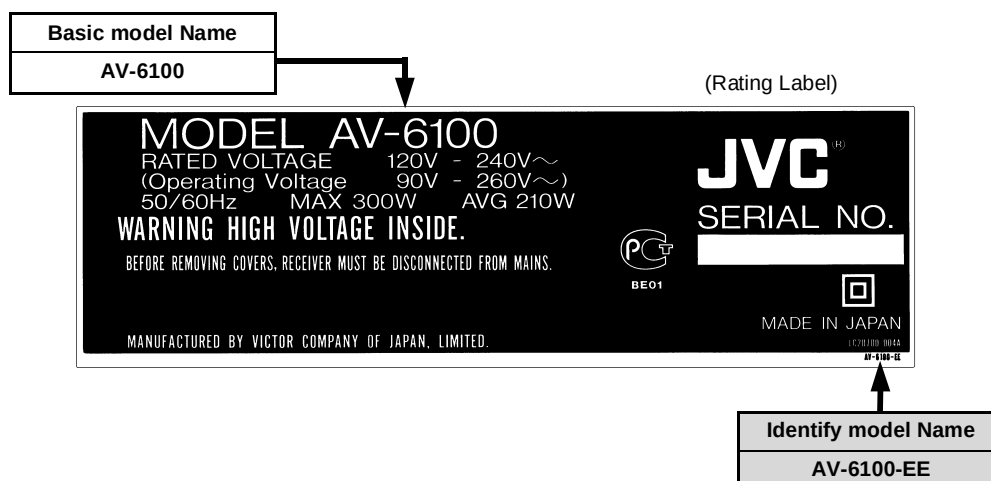
The following items for the AV-6100/EE model were changed from those of the AV-610PRO model. We are informing you of the new SERVICE MANUAL (Revised edition, No.51187B, Dec. 2000). This revised edition contains REVISED PARTS LIST and REVISED STANDARD CIRCUIT DIAGRAM. Please use this Revised service manual together with the previous SERVICE MANUAL (No.51187, Dec. 1996).

CONTENTS

■ MODEL IDENTIFICATION	1
■ MAIN DIFFERENCE LIST	2
★ STANDARD CIRCUIT DIAGRAM (APPENDIX)	2-1
★ PARTS LIST(APPENDIX)	3-1

MODEL IDENTIFICATION

- While referring to the illustration given below, identify model name on the rating label affixed to the back board.



■ MAIN DIFFERENCE LIST

● PW Board Ass'y No.

No.	PWB ASS'Y Name	PWB ASS'Y No.		Remarks
		AV-610PRO	AV-6100/EE	
1	SIGNAL PWB ASS'Y	SKB-1001A	SKB-1003A	Not Interchangeable
2	FRONT CONTROL PWB ASS'Y	SKB-8101A	←	Interchangeable
3	REMO-CON PWB ASS'Y	SKB-8102A	←	↑
4	AV TERMINAL PWB ASS'Y	SKB-1201A	SKB-1202A	Not Interchangeable
5	PIP/TEXT PWB ASS'Y	SKB-0T002A	SKB-0T003A	↑
6	3D Y/C SEP. MODULE	SKB-0Y001A	←	Interchangeable
7	G CRT SOCKET PWB ASS'Y	SKB-3001A	←	↑
8	B CRT SOCKET PWB ASS'Y	SKB-3002A	←	↑
9	R CRT SOCKET PWB ASS'Y	SKB-3003A	←	↑
10	AUDIO PWB ASS'Y	SKB-6001A	SKB-6002A	Not Interchangeable
11	PIN JACK PWB ASS'Y	SKB-06101A	←	Interchangeable
12	POWER PWB ASS'Y	SKB-9001A	←	↑
13	DEF. PWB ASS'Y	SKB-2001A	SKB-2002A	Not Interchangeable
14	CONVERGENCE PWB ASS'Y	SKB-8001A	←	Interchangeable
15	REMOTE CONTROL UNIT	RM-C995-2	RM-C895-1C	

● Main changed Parts List

△	Ref. No.	Parts No.		Parts Name	Remarks
		AV-610PRO	AV-6100/EE		
● EXPLODED VIEW PARTS LIST (page 3-3 / 3-4)					
	14	CN20359-A0A	LC20699-001A	SPK GRILL	Not Interchangeable (page 3-3)
△	54	CM22522-030(R)	LC20700-004A	RATING LABEL	↑ (page 3-4)
● PACKING PARTS LIST (page 3-29)					
	1	CP11519-003	CP11519-007	PACKING CASE	Not Interchangeable
△	10	CQ40358-001	LCT0929-001A	INST BOOK	↑
	14	CP30976-020(R)	CP30976-029(R)	POS, SERIAL LABEL	↑

<Note>

Major changes are mentioned above. For details, refer to the attached REVISED PARTS LIST and REVISED STANDARD CIRCUIT DIAGRAM.

Other than those described in this supplementary sheet, use SERVICE MANUAL for the AV-610PRO(No.51187, Dec. 1996).



JVC

VICTOR COMPANY OF JAPAN, LIMITED

HOME AV NETWORK BUSINESS UNIT 1106 Heta, Iwai-city, Ibaraki-prefecture, 306-0698, Japan

AV-6100-EE #4



Printed in Japan
VP 0012
DP1051

CONTENTS

■SEMICONDUCTOR SHAPES	2-2
■MAIN PARTS LOCATION AND ALIGNMENTS LOCATION	2-3
■WIRING DIAGRAM	2-5
■BLOCK DIAGRAM	2-7
■CIRCUIT DIAGRAMS	
SIGNAL / FRONT CONTROL / REMO-CON PWB CIRCUIT DIAGRAM	2-11
PIP/TEXT PWB CIRCUIT DIAGRAM	2-15
AUDIO PWB CIRCUIT DIAGRAM	2-21
POWER PWB CIRCUIT DIAGRAM	2-27
DEF. PWB CIRCUIT DIAGRAM	2-29
CONVERGENCE PWB CIRCUIT DIAGRAM	2-33
AV TERMINAL PWB CIRCUIT DIAGRAM	2-35
CRT SOCKET PWB CIRCUIT DIAGRAM	2-37
■PATTERN DIAGRAMS	
SIGNAL PWB PATTERN (SKB-1003A)	2-39
PIP/TEXT PWB PATTERN (SKB-0T003A)	2-41
AUDIO PWB PATTERN (SKB-6002A)	2-45
POWER PWB PATTERN (SKB-9001A)	2-49
DEF. PWB PATTERN (SKB-2002A)	2-51
CONVERGENCE PWB PATTERN (SKB-8001A)	2-53
AV TERMINAL PWB PATTERN (SKB-1202A)	2-55
REMO-CON PWB PATTERN (SKB-8102A)	2-56
PIN JACK PWB PATTERN (SKB-06101A)	2-56
FRONT CONTROL PWB PATTERN (SKB-8101A)	2-56
G CRT SOCKET PWB PATTERN (SKB-3001A)	2-57
B CRT SOCKET PWB PATTERN (SKB-3002A)	2-58
R CRT SOCKET PWB PATTERN (SKB-3003A)	2-58

SEMICONDUCTOR SHAPES

TRANSISTOR

BOTTOM VIEW	FRONT VIEW				TOP VIEW
					CHIP TR

IC

BOTTOM VIEW	FRONT VIEW			TOP VIEW

CHIP IC

TOP VIEW	

AV-6100/EE STANDARD CIRCUIT DIAGRAM

NOTE ON USING CIRCUIT DIAGRAMS

1. SAFETY

The components identified by the△ 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 ⇒ 20μs/div :V ⇒ 5ms/div :Others ⇒ 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→R209

4.INDICATIONS ON THE CIRCUIT DIAGRAM

(1)Resistors

●Resistance value

No unit	: [Ω]
K	: [kΩ]
M	: [MΩ]

●Rated allowable power

No indication	: 1/10[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	: [μF]

●Withstand voltage

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

*Electrolytic Capacitors

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

●Type

No indication	:Ceramic capacitor
MY	:Mylar 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	: [μH]
Others	: As specified

(4)Power Supply

	:B1 (130V)
	:12V (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

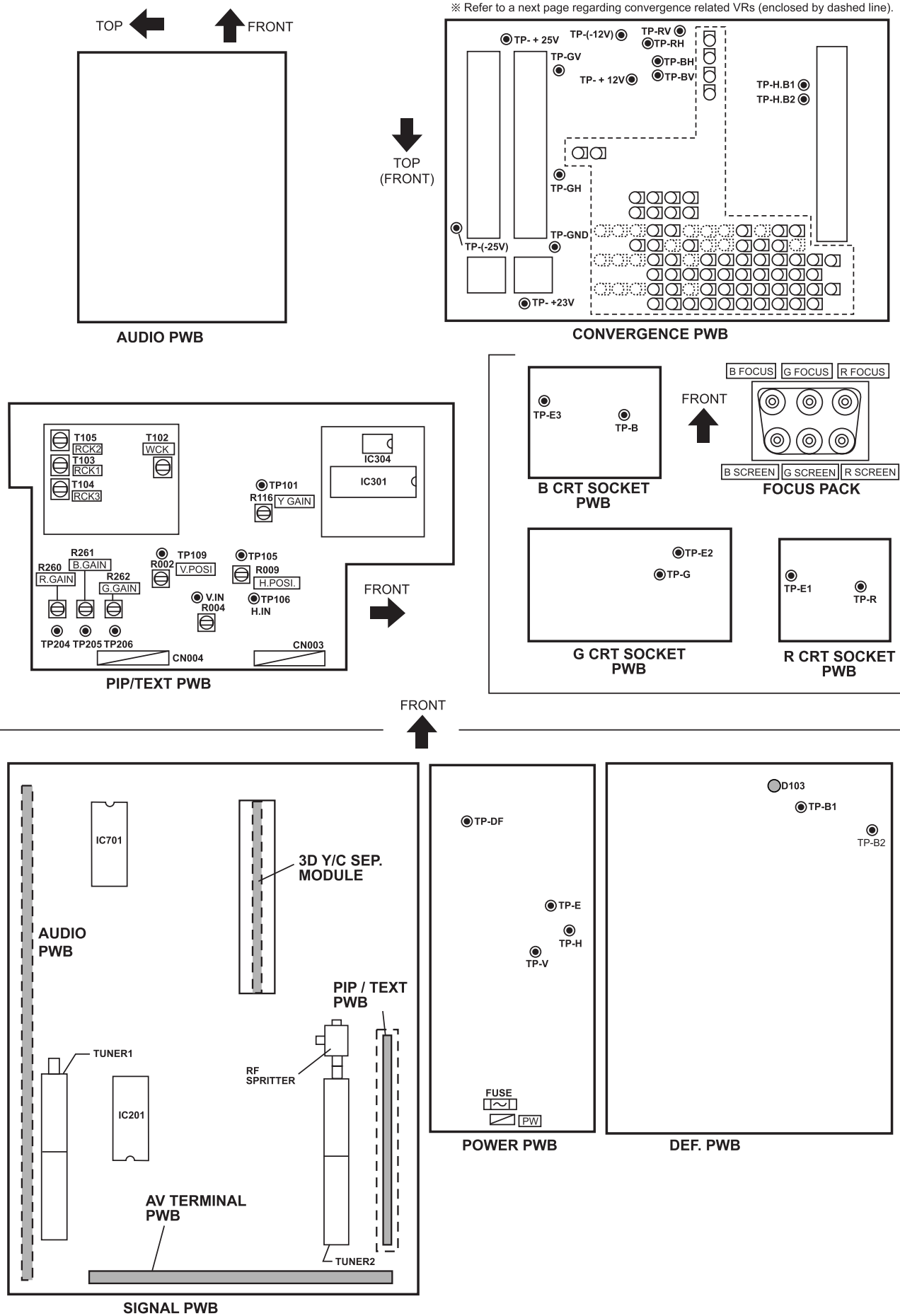
5.NOTE FOR REPAIRING SERVICE

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.

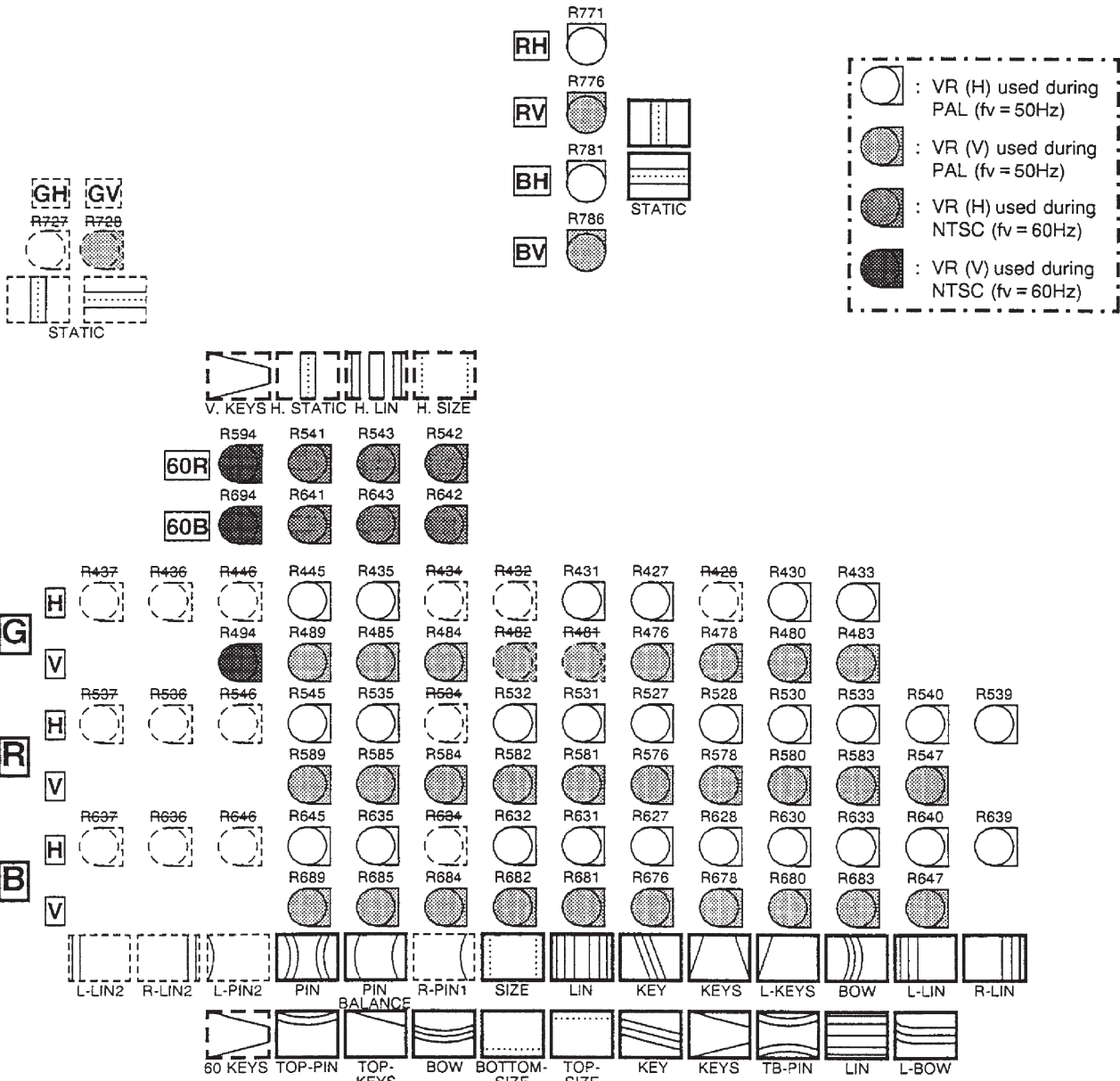
- (1)Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED(NEUTRAL) side GND simultaneously. If the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.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

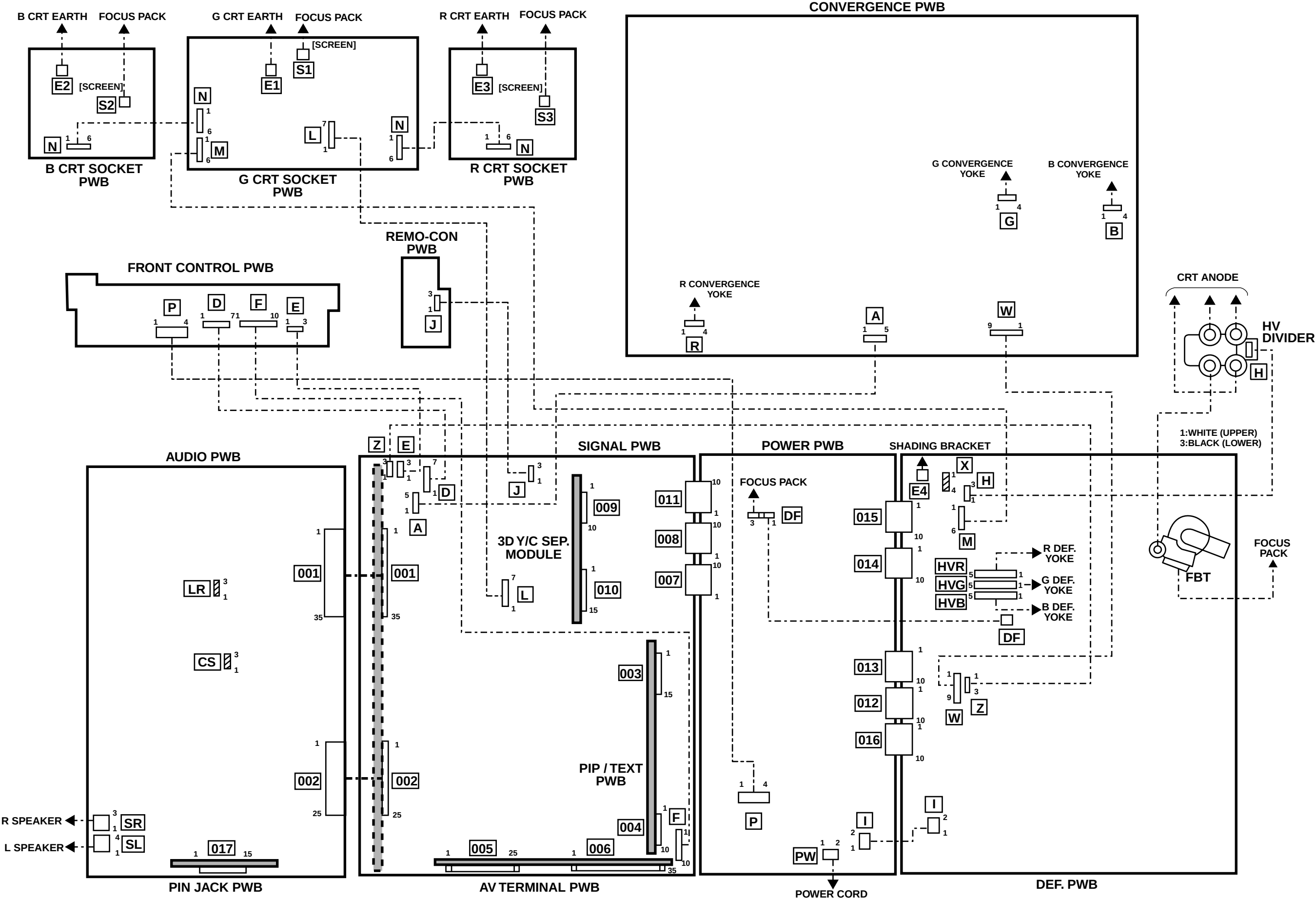
MAIN PARTS LOCATION AND ALIGNMENTS LOCATION



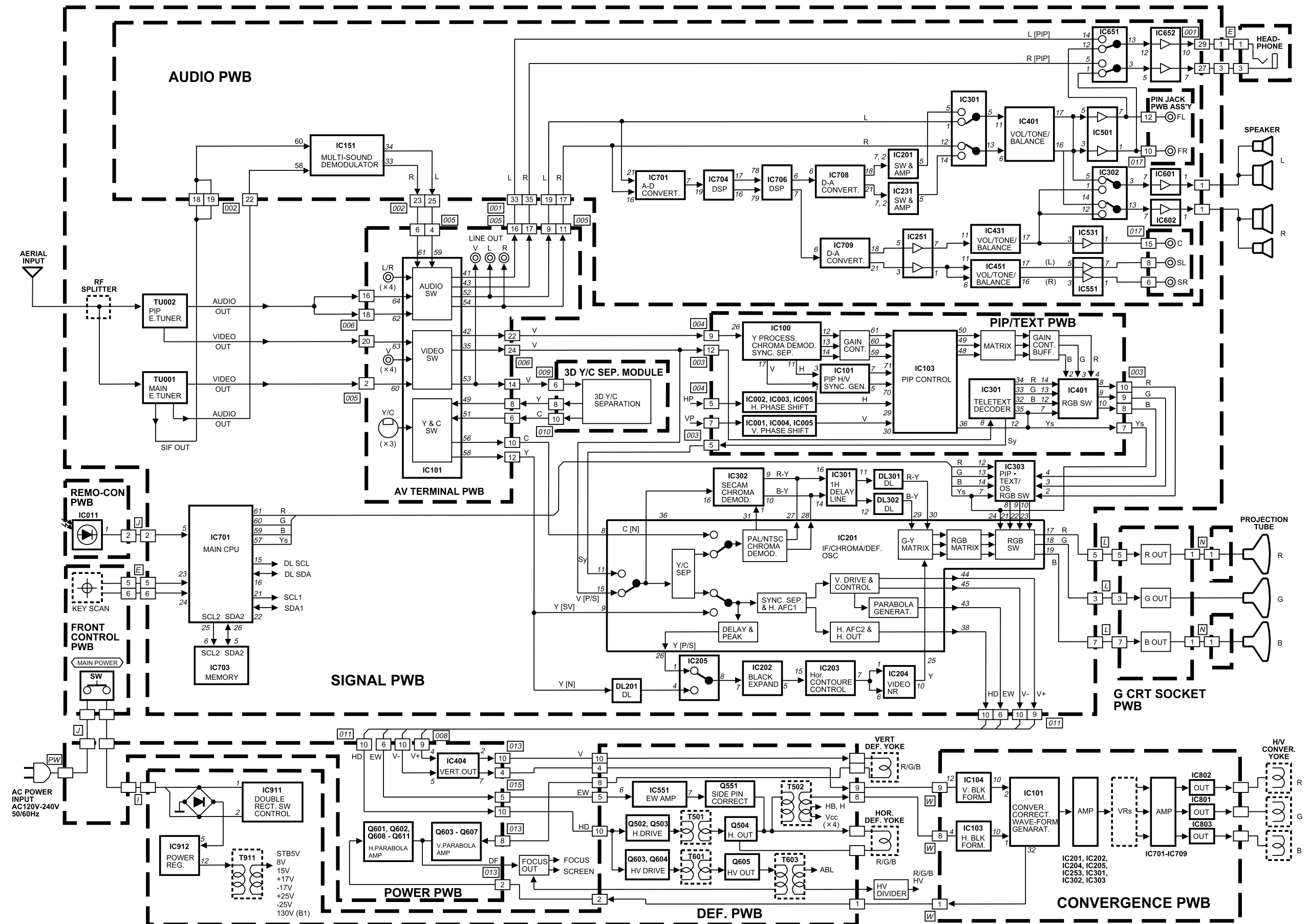
CONVERGENCE PWB VRs LOCATION



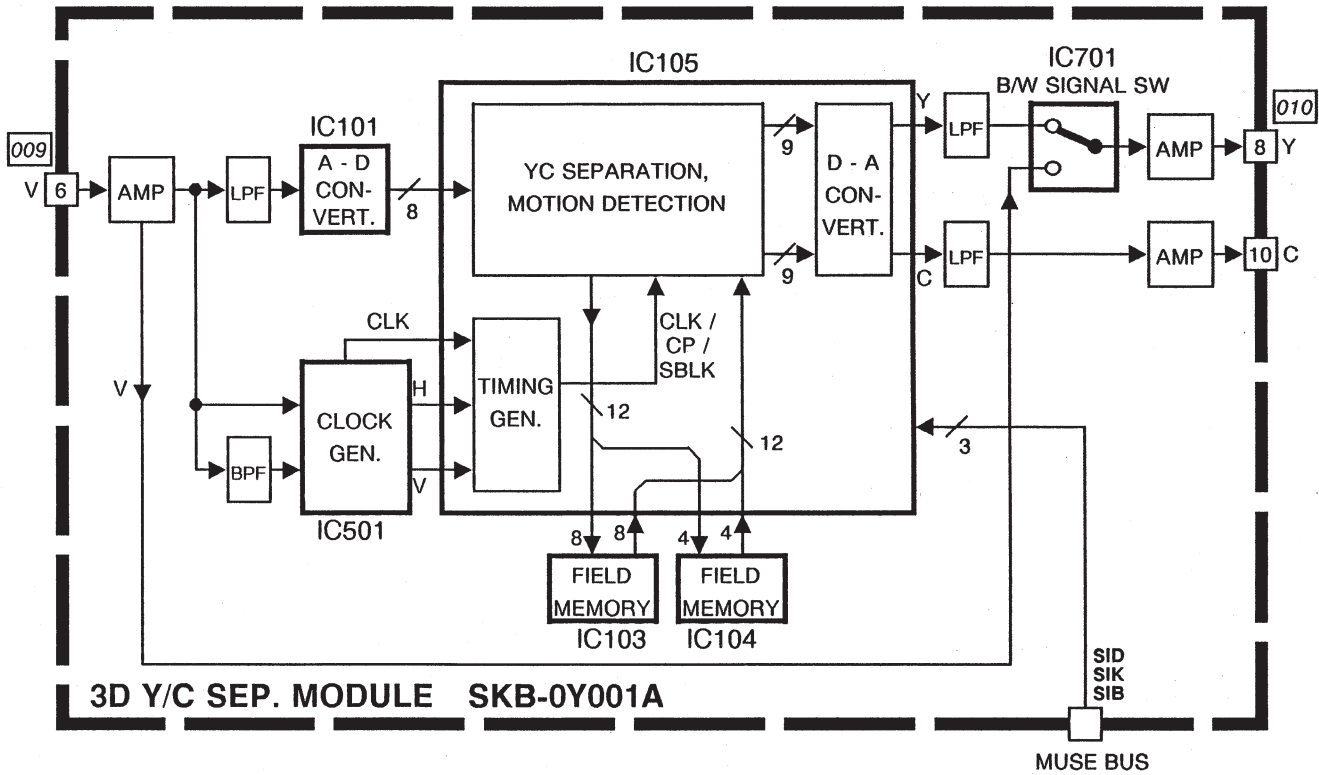
WIRING DIAGRAM



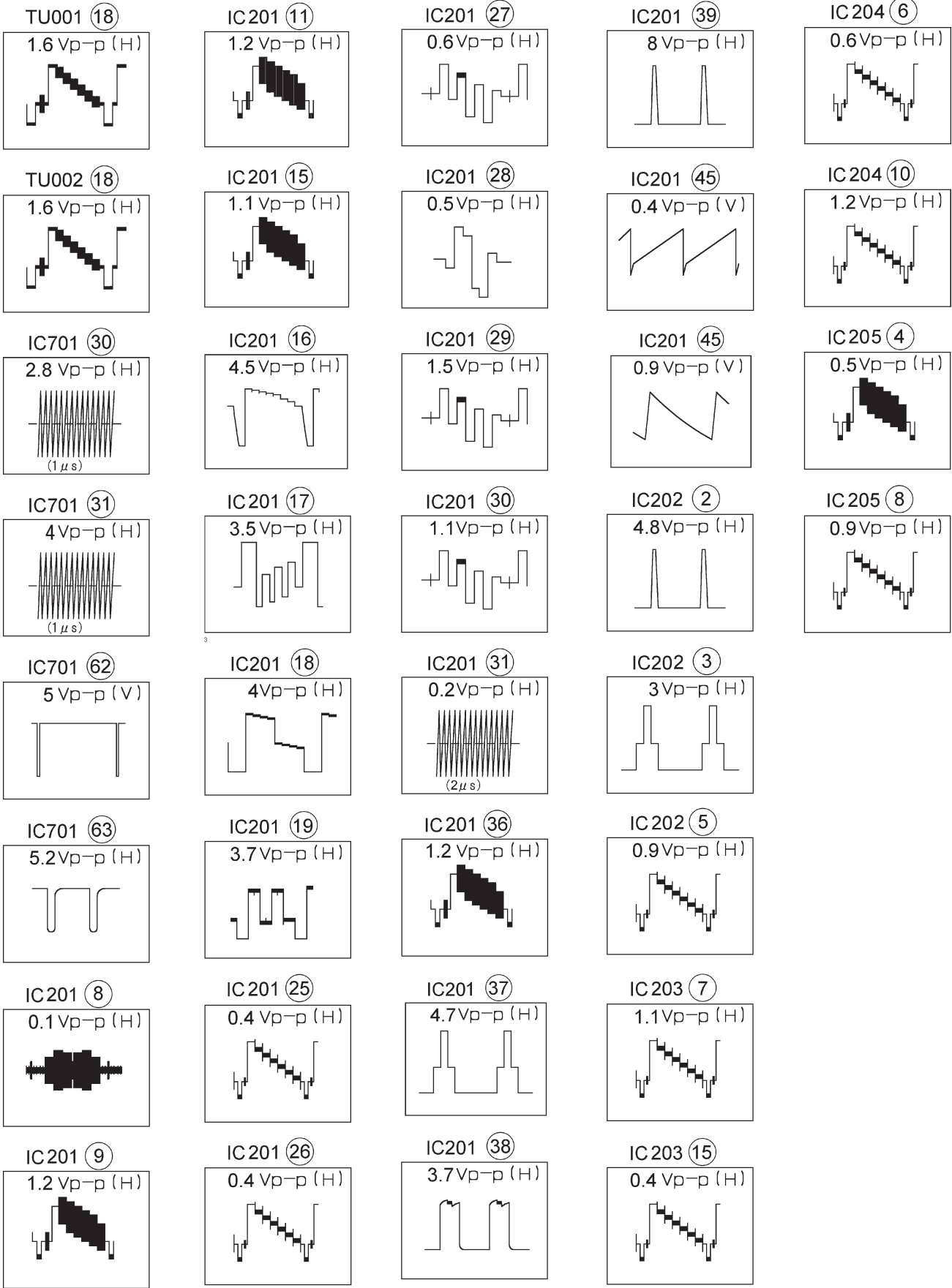
BLOCK DIAGRAM



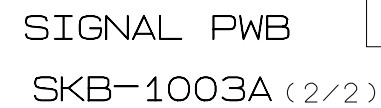
3D Y/C SEP. MODULE BLOCK DIAGRAM

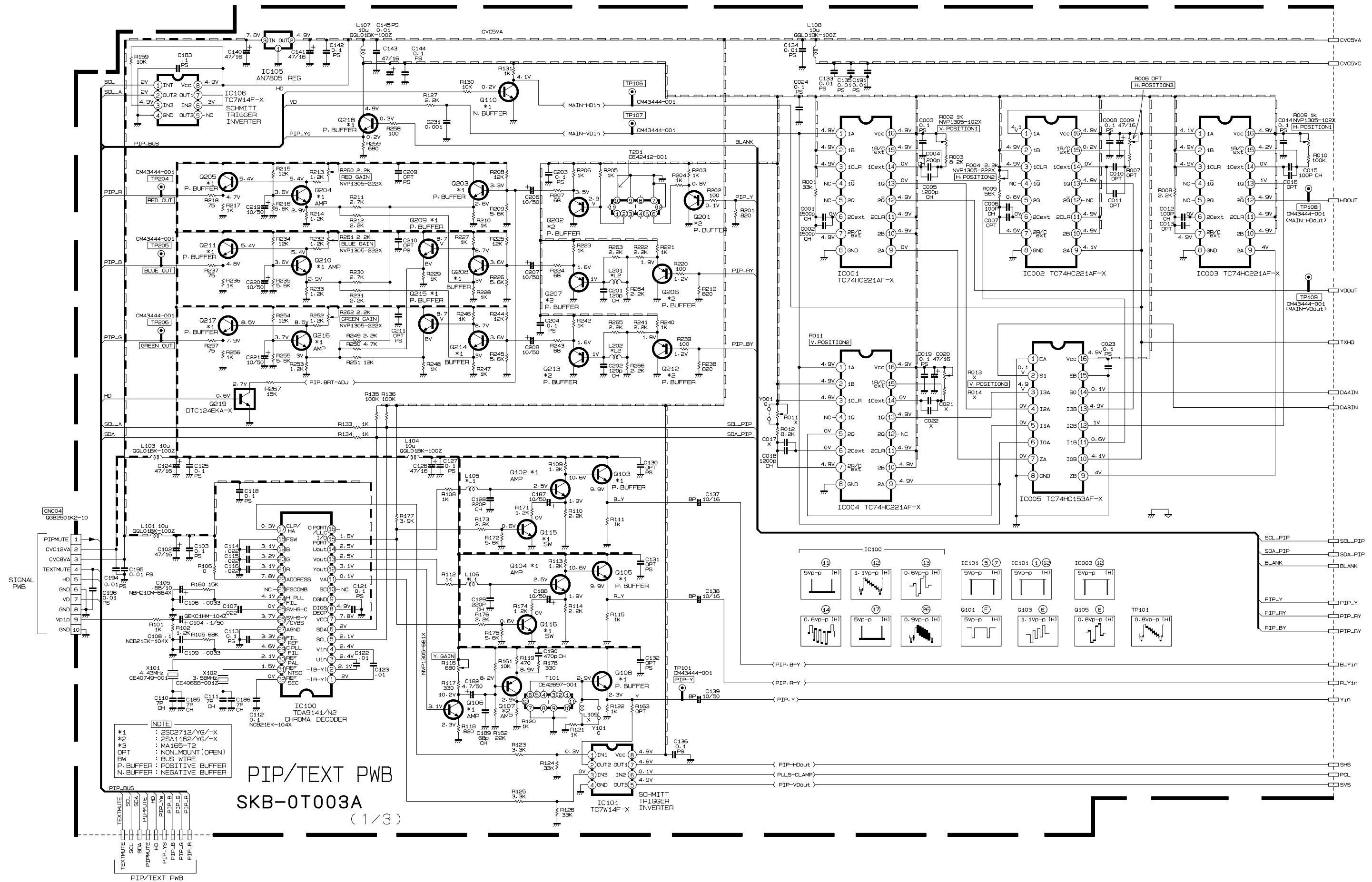


SIGNAL PWB CIRCUIT WAVEFORMS

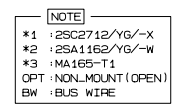


No.51187B

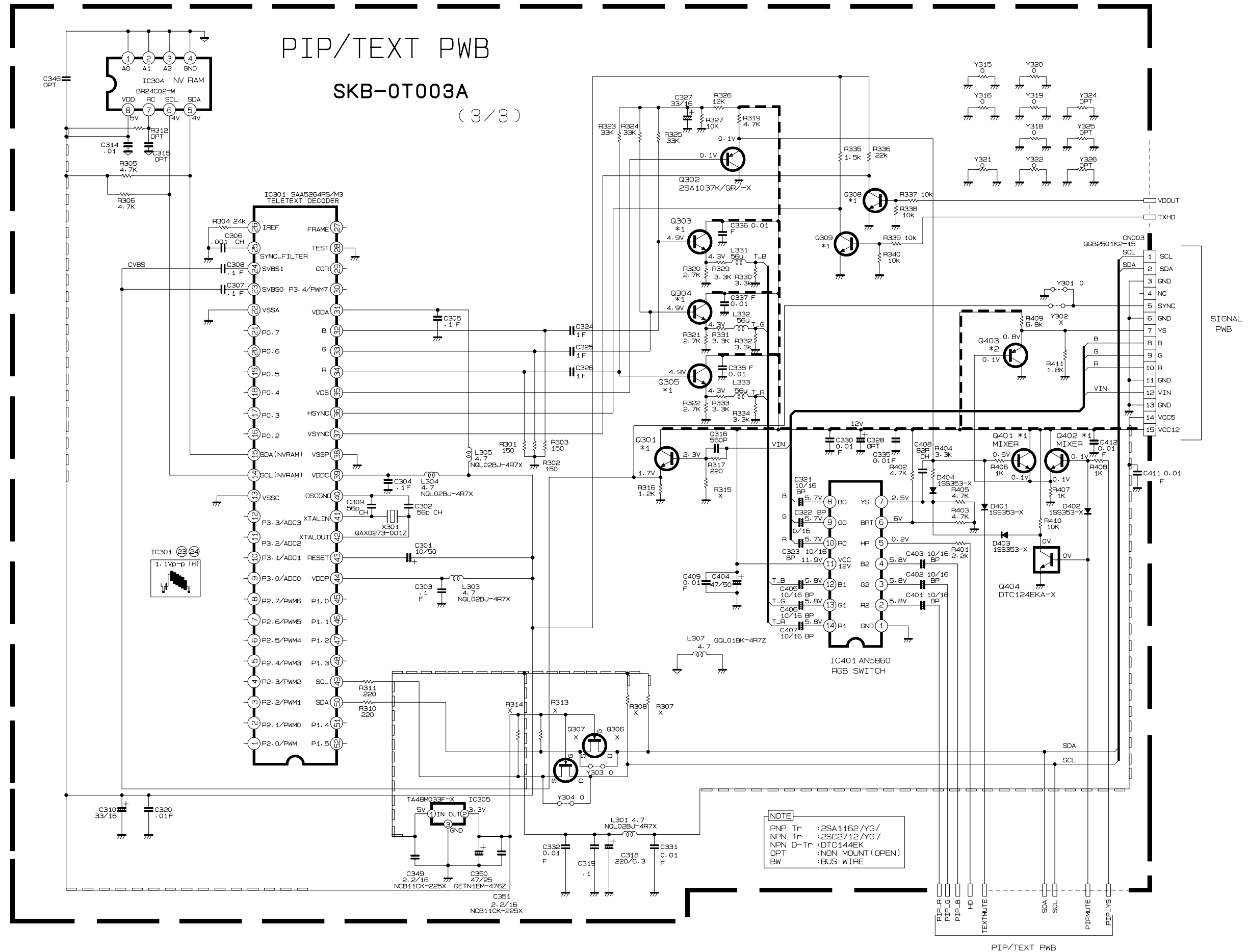




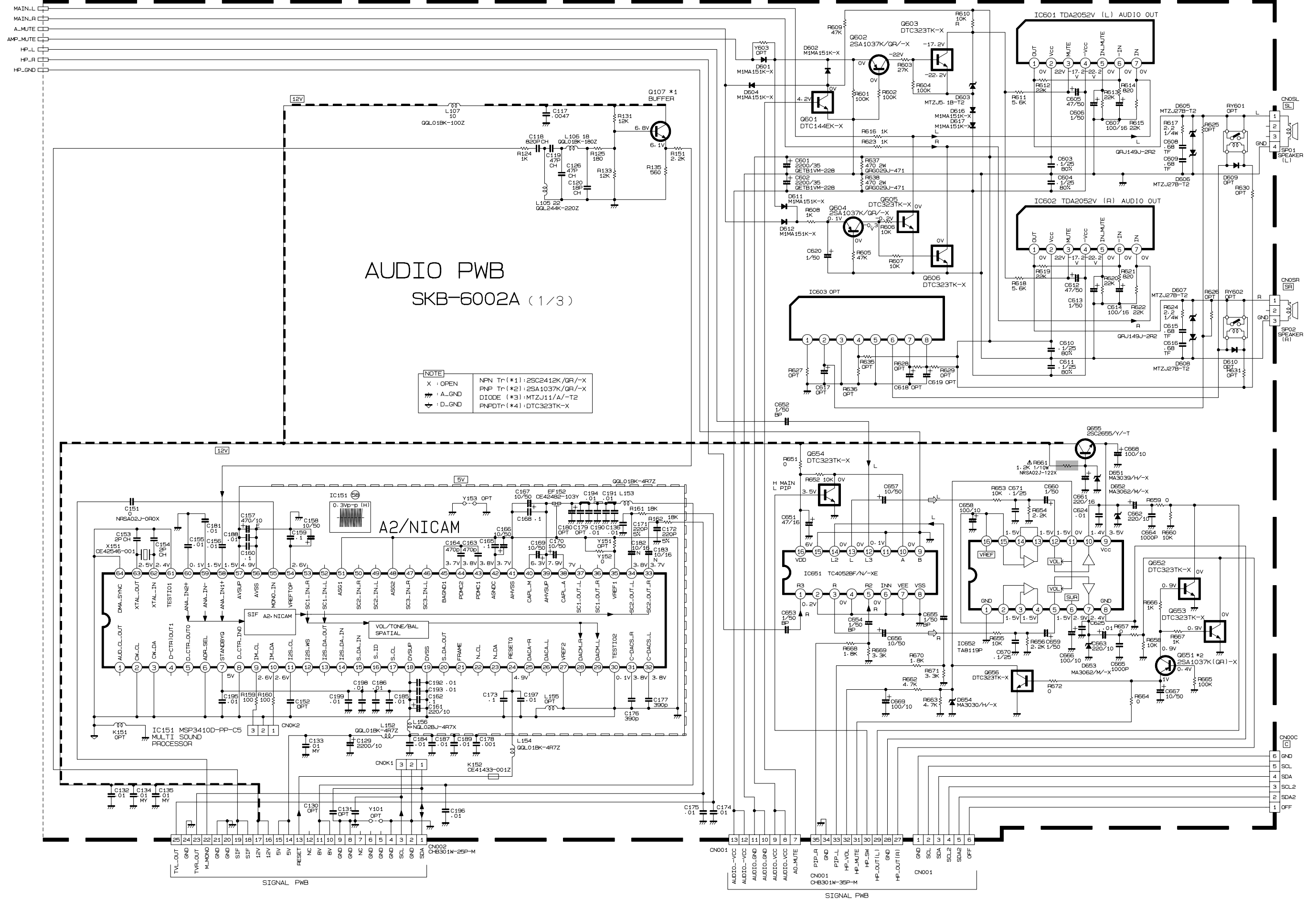
No.51187B



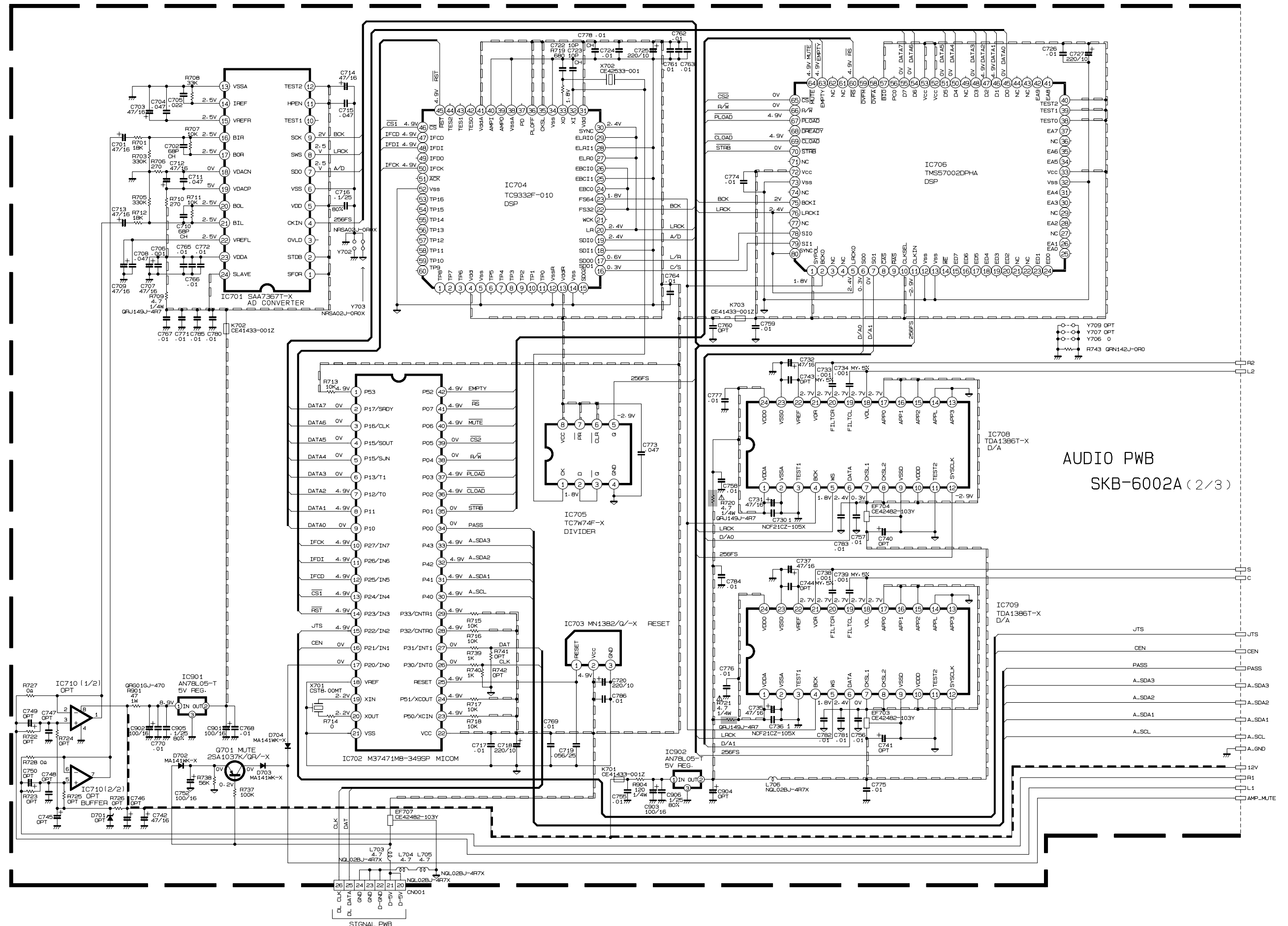
PIP/TEXT PWB CIRCUIT DIAGRAMS - 3/3



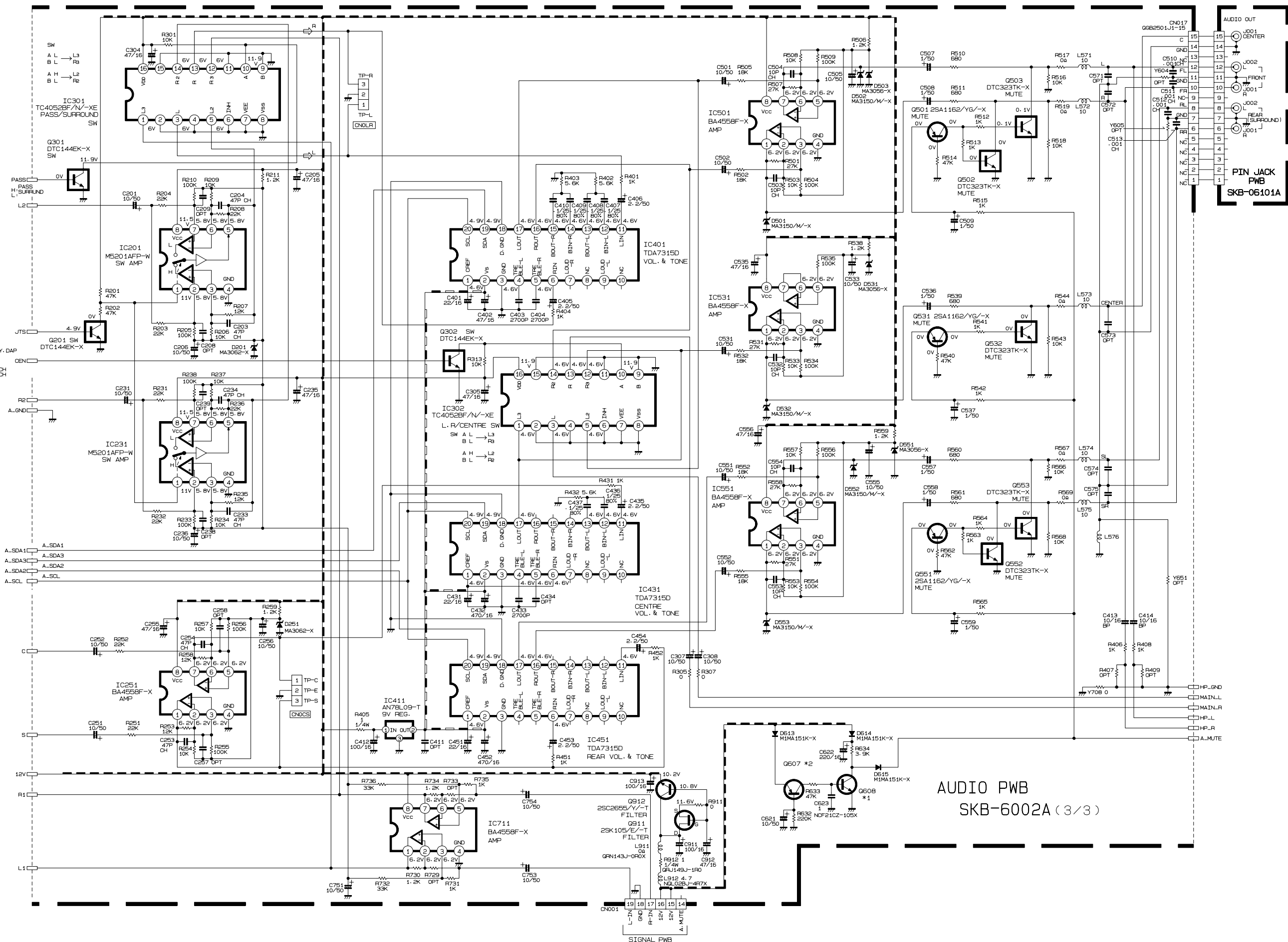
MAIN_L
MAIN_R
A_MUTE
AMP_MUTE
HP_L
HP_R
HP_GND



AUDIO PWB
SKB-6002A (2/3)



AUDIO PWB CIRCUIT DIAGRAMS -3/3



■ TRANSISTOR & DIODE PART NO.
 *1 : 2SC1740S/QR/-T
 *2 : 2SA933S/QR/-T
 *3 : 1SS133-T
 *4 :

POWER PWB
 SKB-9001A

DEF. PWB
SKB-2002A (1/2)

■ TRANSISTOR, DIODE
& RESISTOR PART NO.
*1 : 2SC1740S/QR/-T
*2 : 2SA933S/QR/-T
*3 : 1SS133-T2
*4 : GRK129J-1R0
*K1 : CE41724-00A
*K2 : CE42050-001Z

Legend for Focus and Screen components:
R FOCUS
G FOCUS
B FOCUS
R SCREEN
G SCREEN
B SCREEN

Legend for CRT Socket components:
R CRT SOCKET FOCUS
G CRT SOCKET FOCUS
B CRT SOCKET FOCUS
R CRT SOCKET G2
G CRT SOCKET G2
B CRT SOCKET G2

Legend for HV Divider components:
R HV DIVIDER
G HV DIVIDER
B HV DIVIDER

Legend for HV Shut Down Tool components:
R HV SHUT DOWN TOOL
G HV SHUT DOWN TOOL
B HV SHUT DOWN TOOL

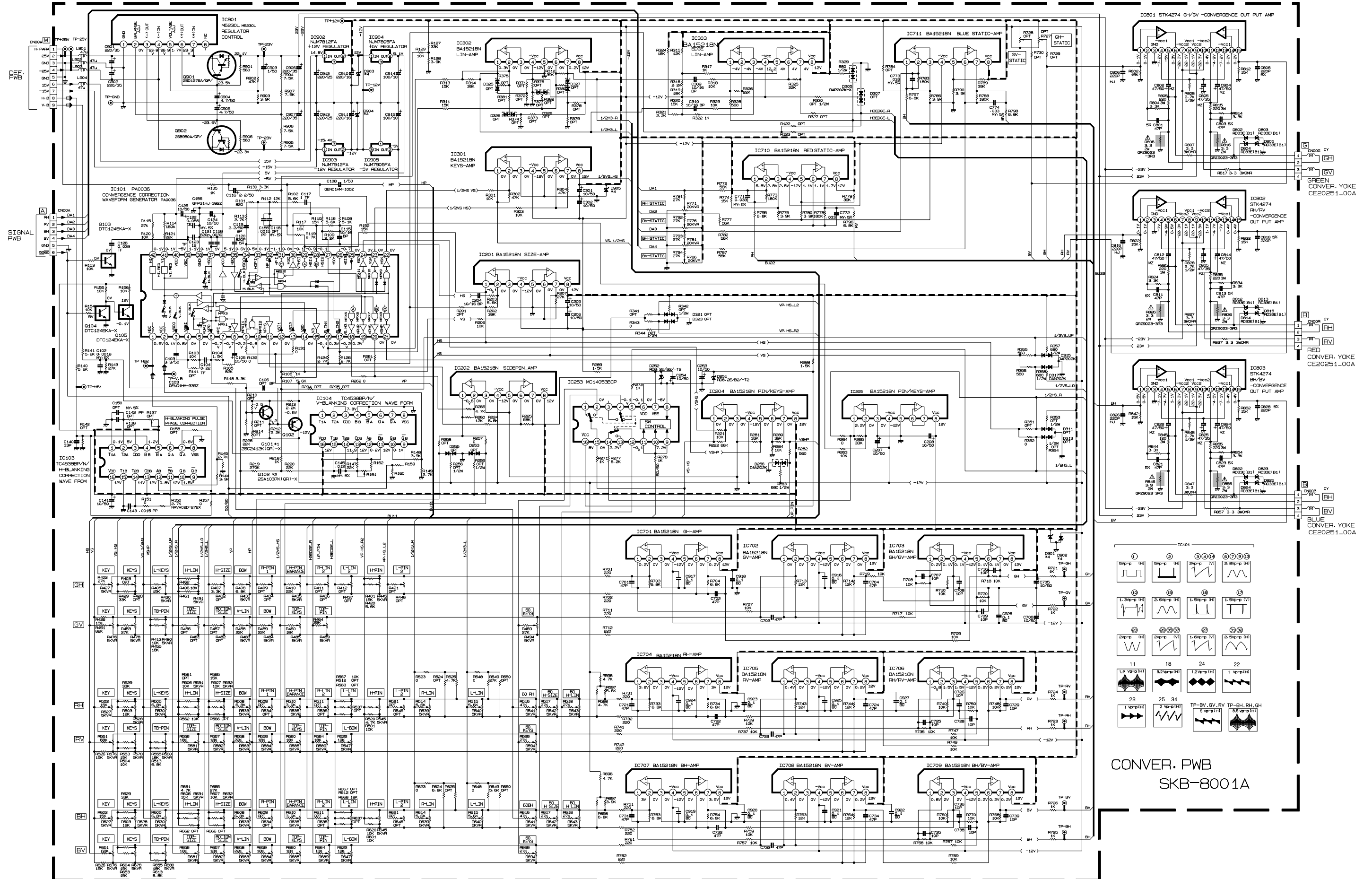
Legend for TO CRT EARTH components:
R TO CRT EARTH
G TO CRT EARTH
B TO CRT EARTH

DEF. PWB
SKB-2002A (2/2)

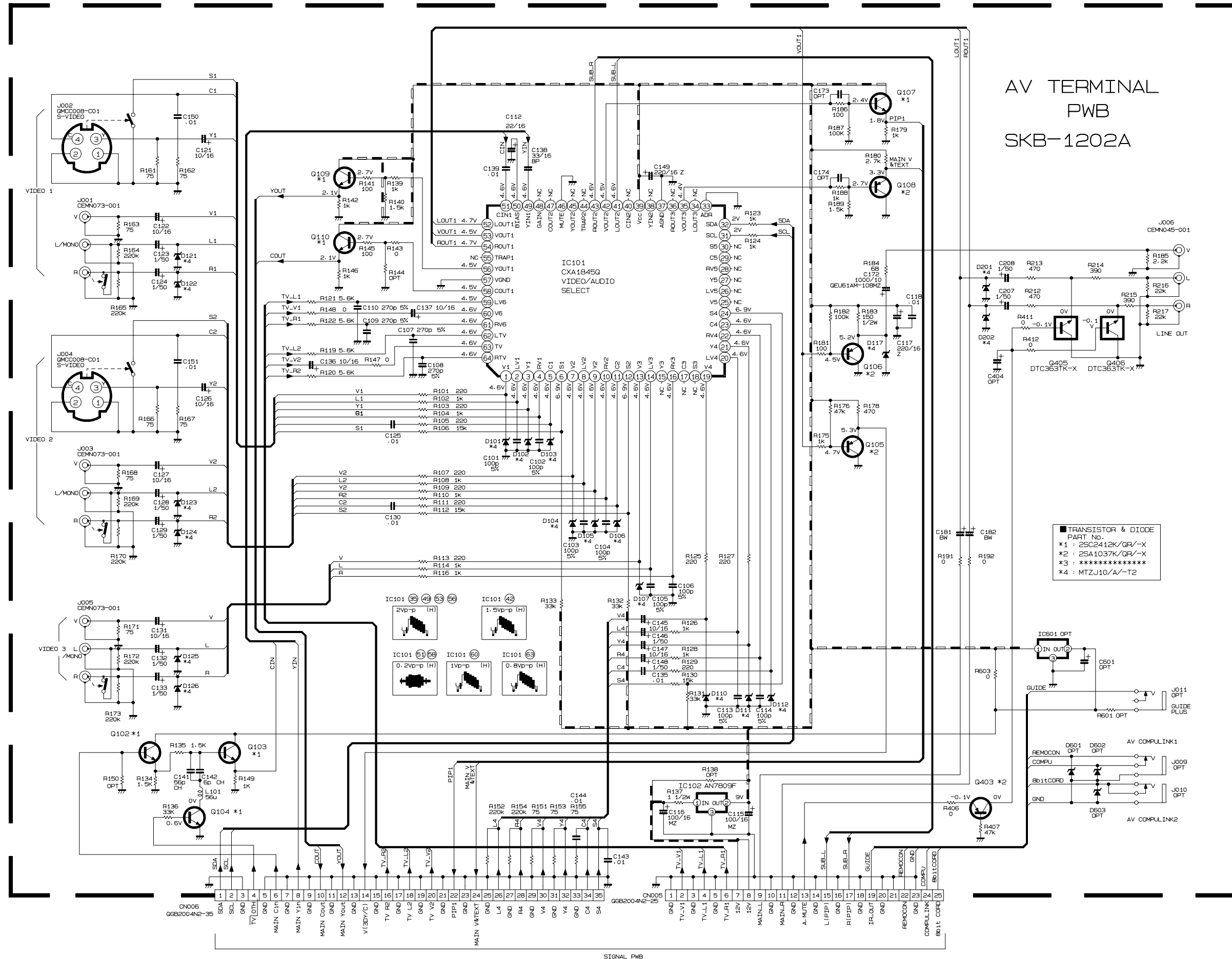
LIVE
()



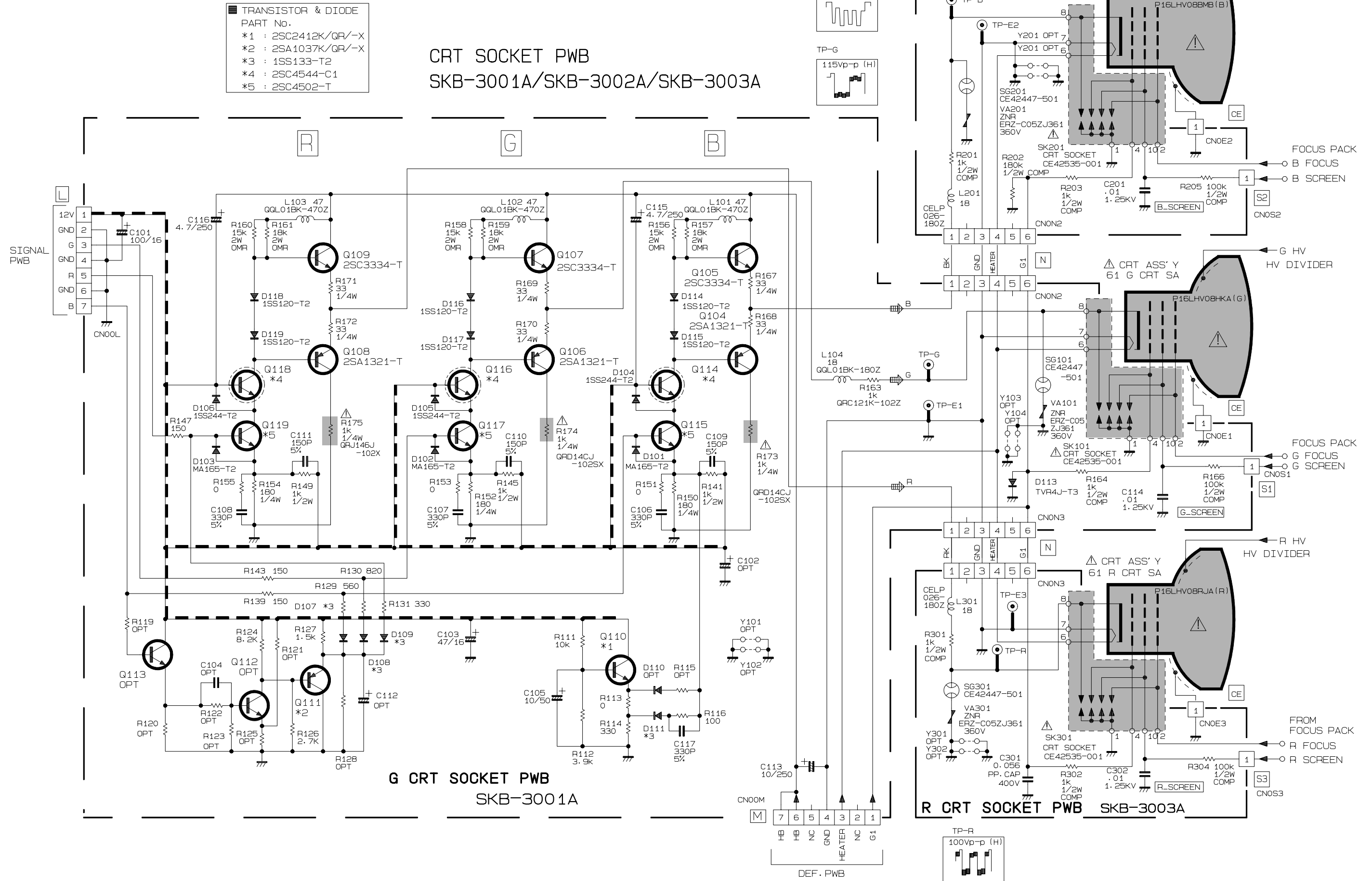
CONVERGENCE PWB CIRCUIT DIAGRAM



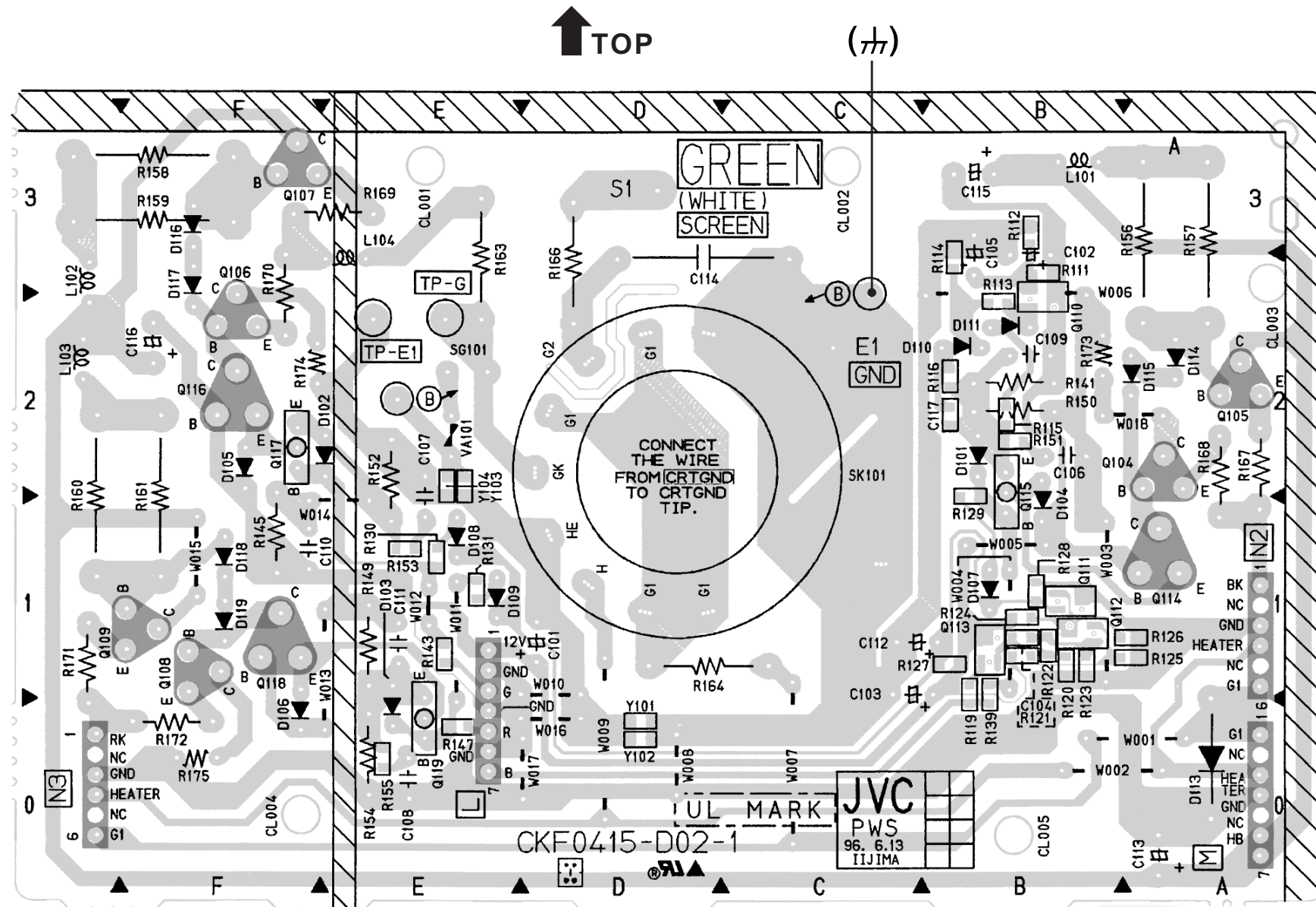
AV TERMINAL PWB CIRCUIT DIAGRAM



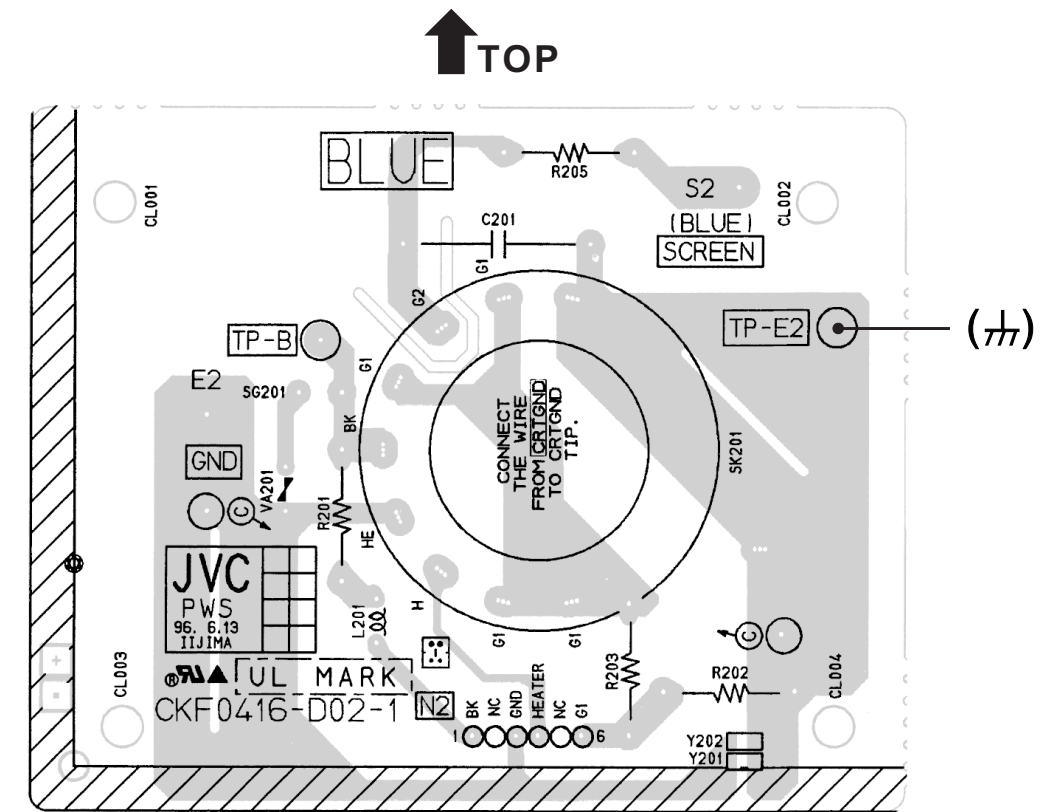
CRT SOCKET PWB
SKB-3001A/SKB-3002A/SKB-3003A



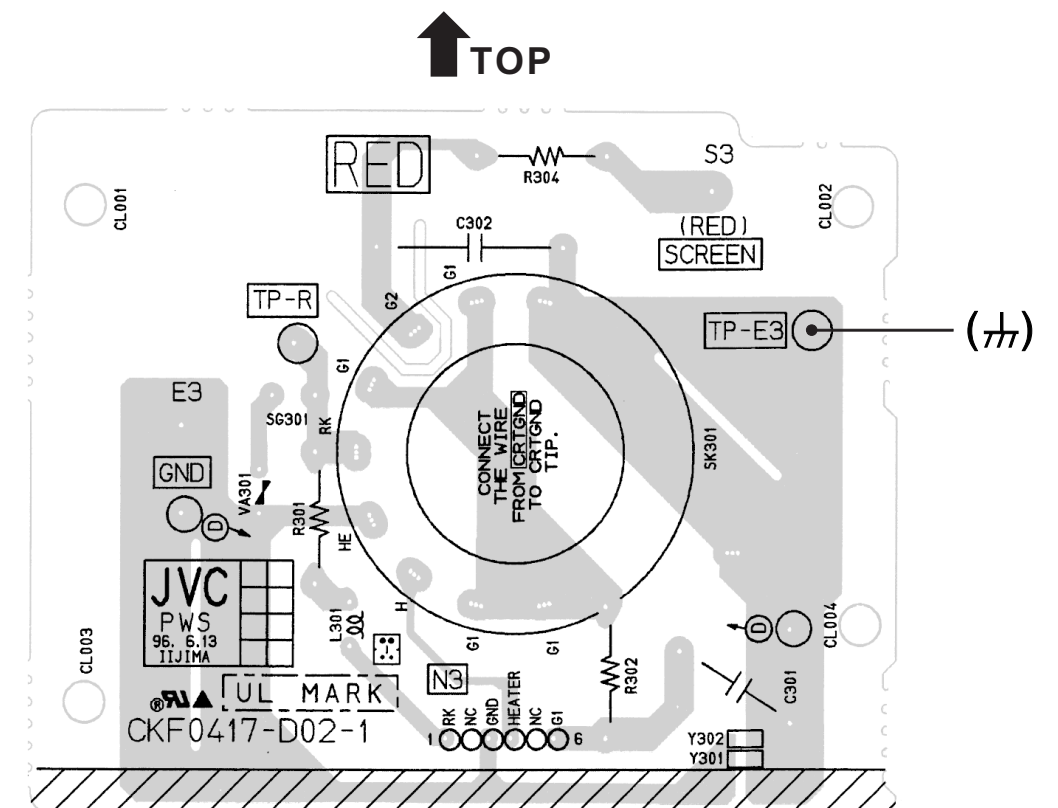
G CRT SOCKET PWB PATTERN



B CRT SOCKET PWB PATTERN



R CRT SOCKET PWB PATTERN



REVISED

PARTS LIST

CAUTION

- The parts identified by the $\triangle$ symbol are important for the safety. Whenever replacing these parts, be sure to use specified ones to secure the safety.
- The parts not indicated in this Parts List and those which are filled with lines — in the Parts No. columns will not be supplied.
- P. W. Board Ass'y will not be supplied, but those which are filled with the Parts No. in the Parts No. columns will be supplied.

ABBREVIATIONS OF RESISTORS, CAPACITORS AND TOLERANCES

RESISTORS		CAPACITORS	
C R	Carbon Resistor	C CAP.	Ceramic Capacitor
F R	Fusible Resistor	E CAP.	Electrolytic Capacitor
P R	Plate Resistor	M CAP.	Mylar Capacitor
V R	Variable Resistor	HV CAP.	High Voltage Capacitor
HV R	High Voltage Resistor	MF CAP.	Metalized Film Capacitor
MF R	Metal Film Resistor	MM CAP.	Metalized Mylar Capacitor
MG R	Metal Glazed Resistor	MP CAP.	Metalized Polystyrol Capacitor
MP R	Metal Plate Resistor	PP CAP.	Polypropylene Capacitor
OM R	Metal Oxide Film Resistor	PS CAP.	Polystyrol Capacitor
CMF R	Coating Metal Film Resistor	TF CAP.	Thin Film Capacitor
UNF R	Non-Flammable Resistor	MPP CAP.	Metalized Polypropylene Capacitor
CH V R	Chip Variable Resistor	TAN. CAP.	Tantalum Capacitor
CH MG R	Chip Metal Glazed Resistor	CH C CAP.	Chip Ceramic Capacitor
COMP. R	Composition Resistor	BP E CAP.	Bi-Polar Electrolytic Capacitor
LPTC R	Linear Positive Temperature Coefficient Resistor	CH AL E CAP.	Chip Aluminum Electrolytic Capacitor
		CH AL BP CAP.	Chip Aluminum Bi-Polar Capacitor
		CH TAN. E CAP.	Chip Tantalum Electrolytic Capacitor
		CH AL BP E CAP.	Chip Tantalum Bi-Polar Electrolytic Capacitor

TOLERANCES									
F	G	J	K	M	N	R	H	Z	P
$\pm 1\%$	$\pm 2\%$	$\pm 5\%$	$\pm 10\%$	$\pm 20\%$	$\pm 30\%$	+30% -10%	+50% -10%	+80% -20%	+100% -0%

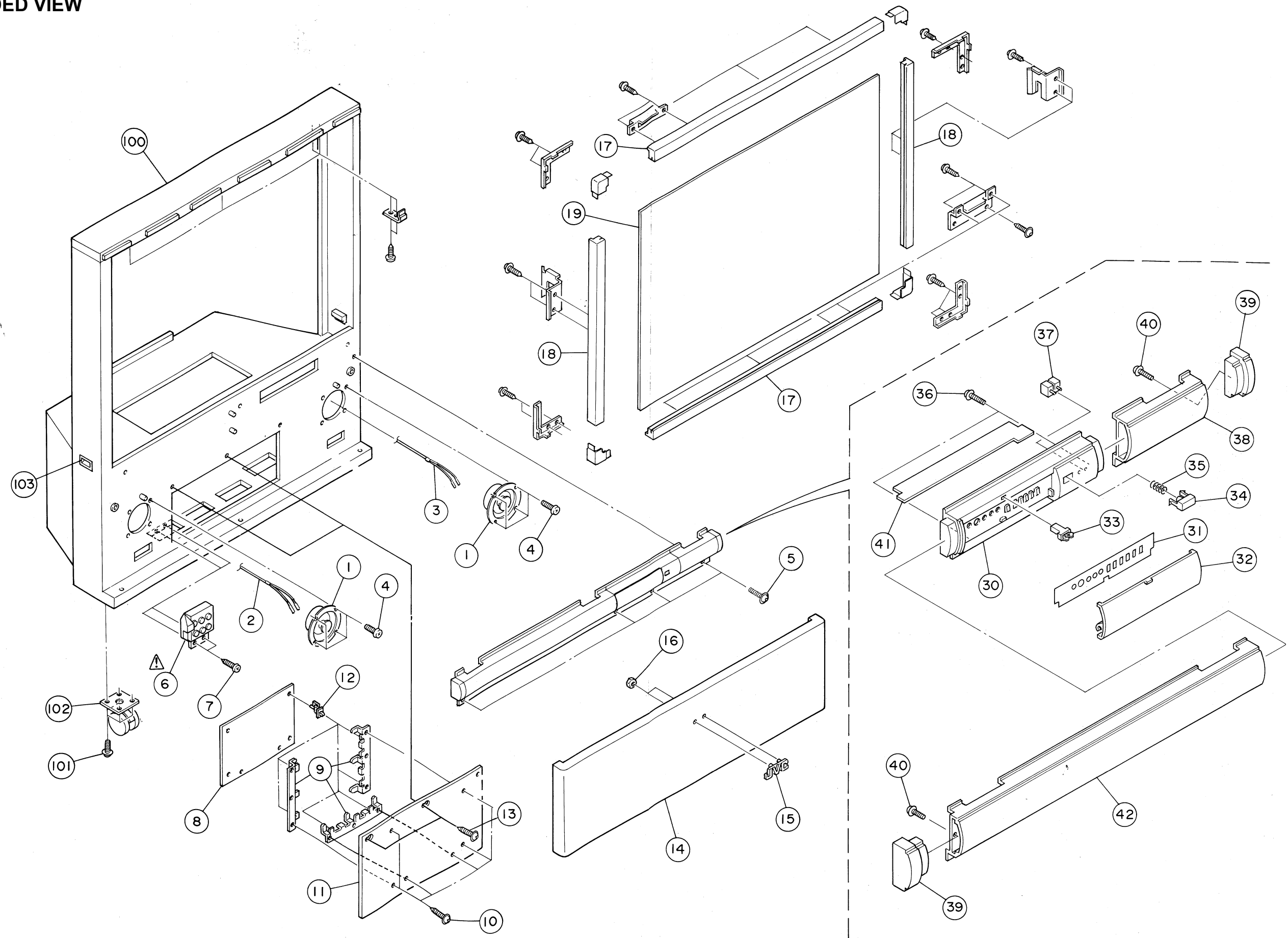
CONTENTS

■ M1 EXPLODED VIEW	3-3
■ M1 EXPLODED VIEW PARTS LIST	3-5~3-6
■ M2 EXPLODED VIEW	3-4
■ M2 EXPLODED VIEW PARTS LIST	3-7~3-8
■ PRINTED WIRING BOARD PARTS LIST	
● SIGNAL PW BOARD ASS'Y (SKB-1003A)	3-9
● AV TERMINAL PW BOARD ASS'Y (SKB-1202A)	3-11
● DEF. PW BOARD ASS'Y (SKB-2002A)	3-12
● G CRT SOCKET PW BOARD ASS'Y (SKB-3001A)	3-14
● B CRT SOCKET PW BOARD ASS'Y (SKB-3002A)	3-15
● R CRT SOCKET PW BOARD ASS'Y (SKB-3003A)	3-15
● AUDIO PW BOARD ASS'Y (SKB-6002A)	3-15
● CONVERGENCE PW BOARD ASS'Y (SKB-8001A)	3-18
● FRONT CONTROL PW BOARD ASS'Y (SKB-8101A)	3-21
● REMO-CON PW BOARD ASS'Y (SKB-8102A)	3-21
● POWER PW BOARD ASS'Y (SKB-9001A)	3-21
● PIN JACK PW BOARD ASS'Y (SKB-06101A)	3-22
● PIP/TEXT PW BOARD ASS'Y (SKB-0T003A)	3-23
● 3D Y/C SEP. MODULE (SKB-0Y001A)	3-24
■ REMOTE CONTROL UNIT PARTS LIST	3-25
■ PACKING	3-25
■ PACKING PARTS LIST	3-25

USING P.W. BOARD & REMOTE CONTROL UNIT

P.W.B ASS'Y	Model
	AV-6100-EE
SIGNAL PW BOARD ASS'Y	SKB-1003A
AV TERMINAL PW BOARD ASS'Y	SKB-1202A
DEF. PW BOARD ASS'Y	SKB-2002A
G CRT SOCKET PW BOARD ASS'Y	SKB-3001A
B CRT SOCKET PW BOARD ASS'Y	SKB-3002A
R CRT SOCKET PW BOARD ASS'Y	SKB-3003A
AUDIO PW BOARD ASS'Y	SKB-6002A
CONVERGENCE PW BOARD ASS'Y	SKB-8001A
FRONT CONTROL PW BOARD ASS'Y	SKB-8101A
REMO-CON PW BOARD ASS'Y	SKB-8102A
POWER PW BOARD ASS'Y	SKB-9001A
PIN JACK PW BOARD ASS'Y	SKB-06101A
PIP/TEXT PW BOARD ASS'Y	SKB-0T003A
3D Y/C SEP. MODULE	SKB-0Y001A
REMOTE CONTROL UNIT	RM-C895-1C

M1 EXPLODED VIEW



M2 EXPLODED VIEW

