JVC

SERVICE MANUAL

REAR PROJECTION TELEVISION

AV-48WP34/AHA

BASIC CHASSIS
SB2

Supplementary

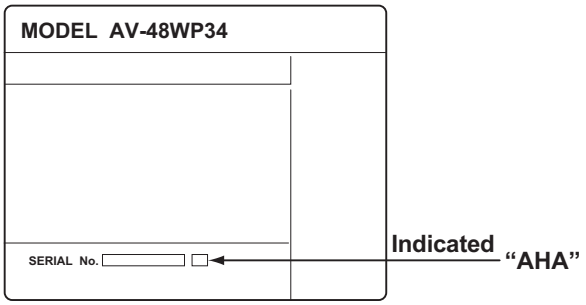
The following items for the AV-48WP34/AHA model were changed partly from AV-48WP34/HA model. Therefore, this service manual describes only the items which differ from those of the AV-48WP34/HA model service manual.
For details other than those described in this manual, please refer to the AV-48WP30 (No.51914, 2002/02),

OUTLINE

Since the mirror was changed, we have issued the SERVICE MANUAL for AV-48WP34/AHA.

HOW TO IDENTIFY MODELS

A suffix "AHA" is added to the serial No. after at the rating label.



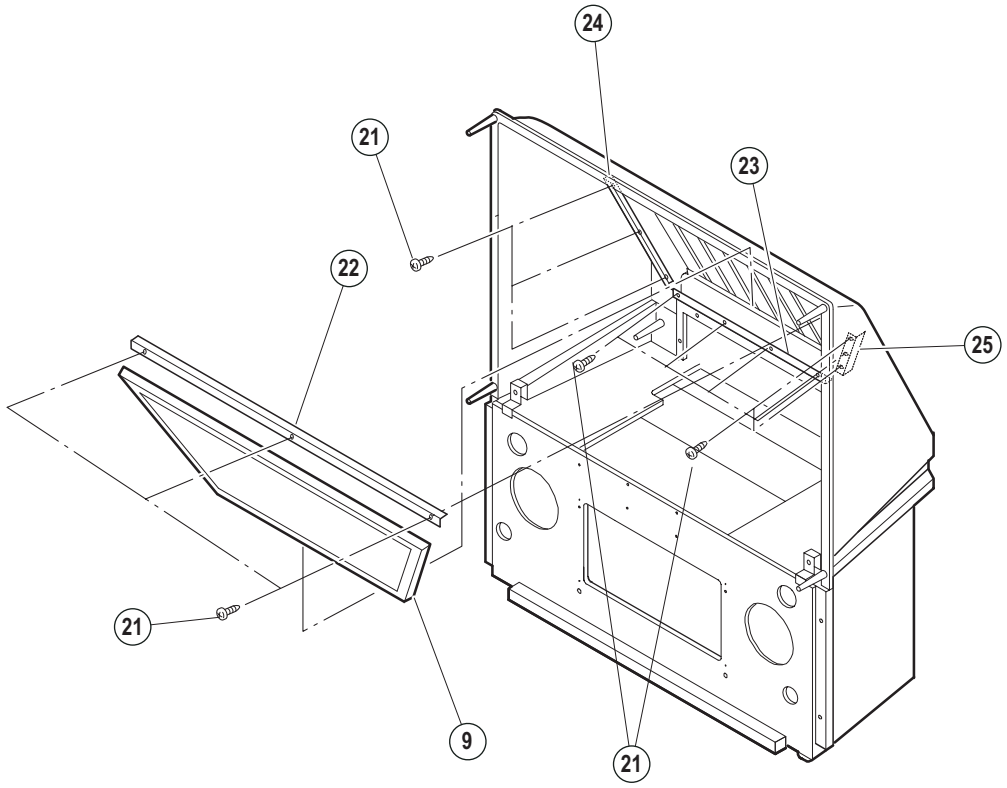
No.51914F
2003/6

DIFFERENCE LIST

EXPLODED VIEW PARTS LIST -I (Page 56)

⚠	Ref. No.	PARTS No.		PARTS NAME	DESCRIPTION
		AV-48WP34/HA	AV-48WP34/AHA		
	9	LC31733-001A-A	LC32173-003A-A	MIRROR	Glass
	21	----------	QYSBSF4012Z	TAP SCREW (X13)	Addition
	22	----------	LC21316-001A-A	MIRROR HOLDER TOP	Addition
	23	----------	LC21317-001A-A	MIRROR HOLDER BOTTOM	Addition
	24	----------	LC21311-001B-A	MIRROR HOLDER LEFT	Addition
	25	----------	LC21311-002B-A	MIRROR HOLDER RIGHT	Addition

EXPLODED VIEW -I



JVC
VICTOR COMPANY OF JAPAN, LIMITED
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(No.51914F)

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WPC

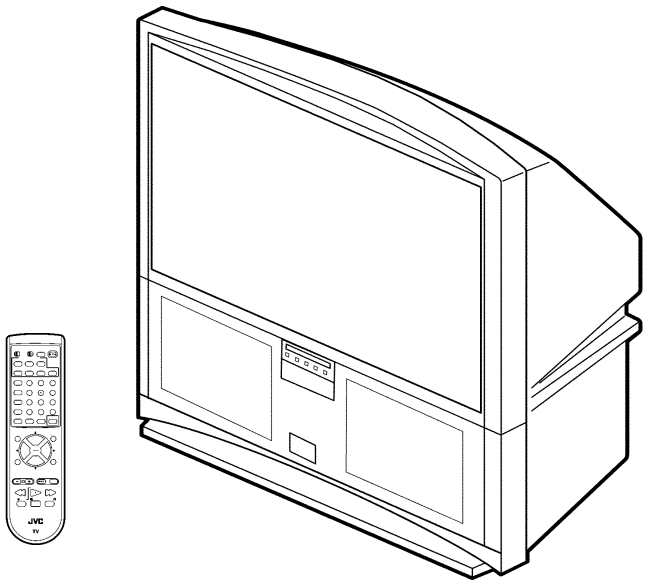
JVC

SERVICE MANUAL

REAR PROJECTION TELEVISION

BASIC CHASSIS
SB2

AV-48WP30



CONTENTS

No.51914
Feb. 2002

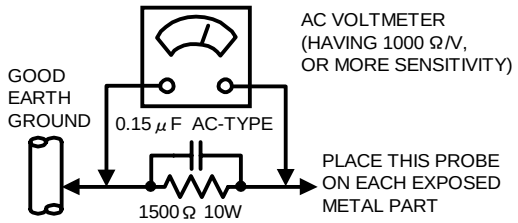
SPECIFICATIONS

Items	Contents
Dimensions (W × H × D)	120.0cm × 124.4cm × 60.9cm (47-1/4" × 49" × 24")
Mass	81.0 kg (179.0 lbs)
TV RF System	CCIR (M)
Color System	NTSC
Sound System	BTSC System (Multi Channel Sound)
TV Receiving Channels and Frequency	
VL Band	(02～06) 54MHz～88MHz
VH Band	(07～13) 174MHz～216MHz
UHF Band	(14～69) 470MHz～806MHz
CATV Receiving Channels and Frequency	
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) (54MHz～804MHz)
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
Antenna Terminal	75Ω (VHF/UHF) F-type connector
Intermediate Frequency	
Video IF Carrier	45.75MHz
Sound IF Carrier	41.25MHz (4.5MHz)
Color Sub Carrier	3.58MHz
Power Input	120V AC, 60Hz
Power Consumption	248W
Screen	Transparent screen (unitized fresnel lens / double lenticular lens)
Screen Size	48" (122cm) Measured diagonally, 16:9 ratio (W:106.3cm, H:59.8cm)
Projection Tube	17cm (6.7") tube × 3 (R / G / B)
High Voltage	31kV±1.0kV (at zero beam current)
Speaker	φ13cm round × 2, φ5.5cm round × 2
Audio Power Output	10W+10W
External Input	
Video Input	1Vp-p, 75Ω (RCA pin jack × 4)
Audio Input	500mVrms (-4dBs), high impedance (RCA pin jack × 8)
S-Video	Y: 1Vp-p positive (negative sync provided, when terminated with 75Ω) C: 0.286$V_{p\text{-}p}$ (burst signal, when terminated with 75Ω) Mini-DIN 4pin connector × 2
Component Input	P_B: ±0.35Vp-p,75Ω (RCA pin jack × 2) P_R: ±0.35Vp-p,75Ω (RCA pin jack × 2) Y: 1Vp-p,75Ω (RCA pin jack × 2) 1080i DTV (digital broadcast) ready
Audio Output	Fix : 500mVrms(-4dBs) low impedance (1kHz when modulated 100%)
Digital-Input	DVI-D signal link 19pin connector (Digital-input terminal is not compatible with computer signal.)
Speaker Input	45W 16Ω (maximum input)
AV Compulink Ⅲ	φ3.5mm mini jack
Remote Control Unit	RM-C322G (AA/R6/UM-3 battery × 2)

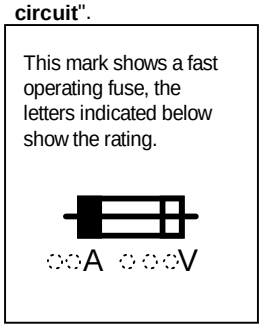
Design & specifications are subject to change without notice.

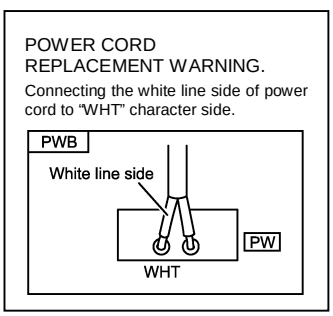
SAFETY PRECAUTIONS

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 (⚠) 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. 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).
7. 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.
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.
    (1) **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.
    (2) **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 1500Ω 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**".



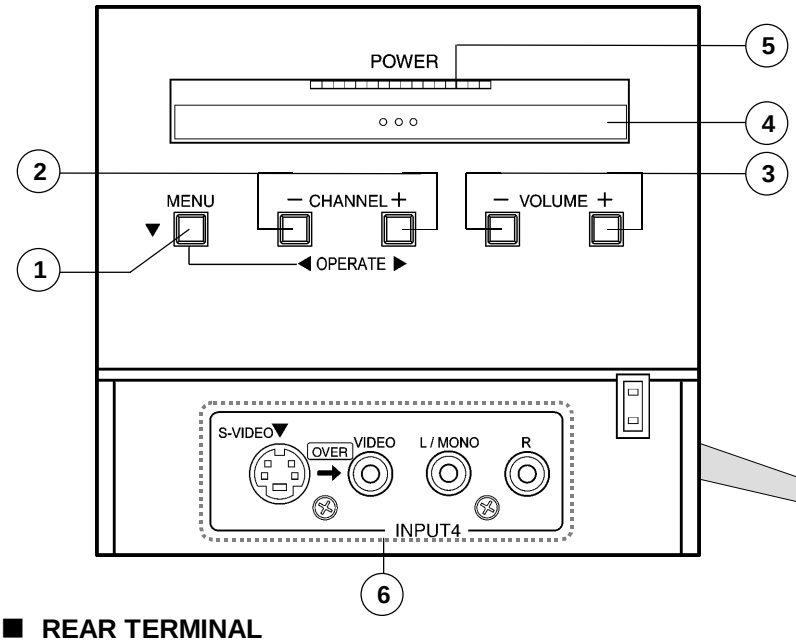


FEATURES

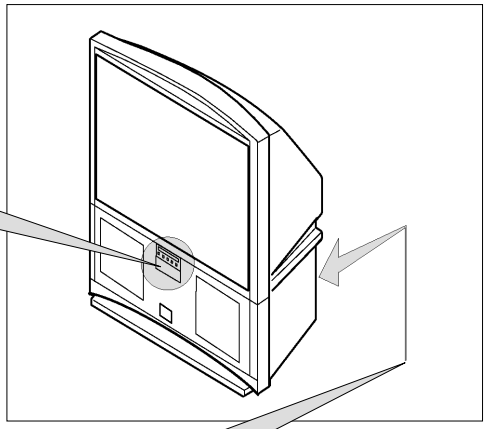
- New chassis design enable use of an interactive on screen control.
- 2-3PULL DOWN : You can enjoy DVD movies at the highest picture quality.
- MOTION COMPENSATION : With this function, the seamless reproduction of dynamic motion on the screen has been realized.
- Bullet-in DSD (Digital Supper Detail) circuit and 3 dimension Y/C separate circuit.
- Receive DTV broadcast (1080i / 720p / 480p / 480i)
- Built-in HDCP / Component (Y / P_B / P_R)
- Built-in Hyper Sound, BBE circuit.

FUNCTIONS

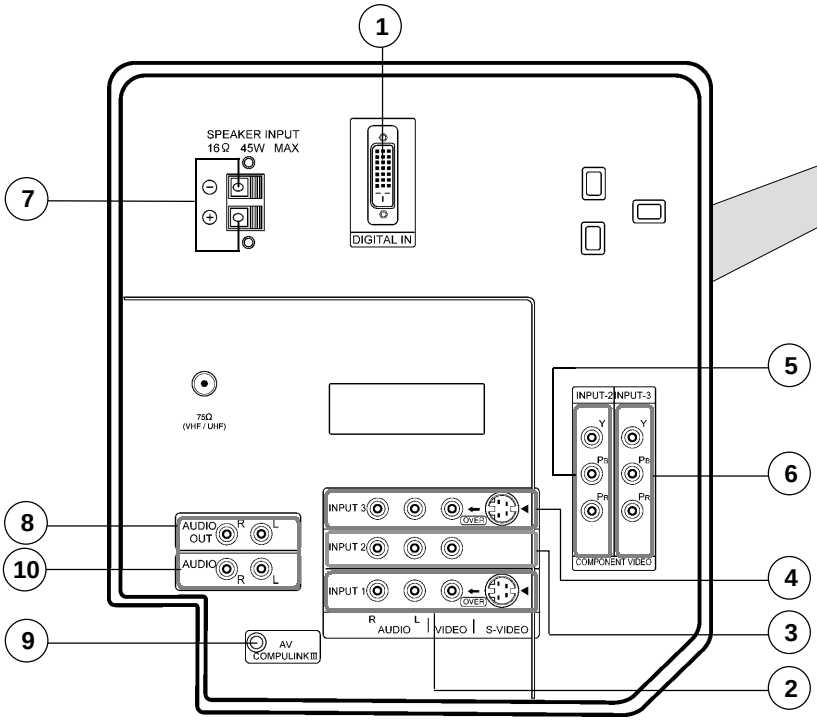
■ FRONT CONTROL KEY & TERMINAL



1	MENU Button (OPERATE ▼)
2	Channel -/+ Button (OPERATE ◀/▶)
3	VOLUME -/+ Button
4	MAIN POWER SW Button
5	POWER LAMP (BLUE)
6	INPUT4 (AUDIO / VIDEO / S-VIDEO)

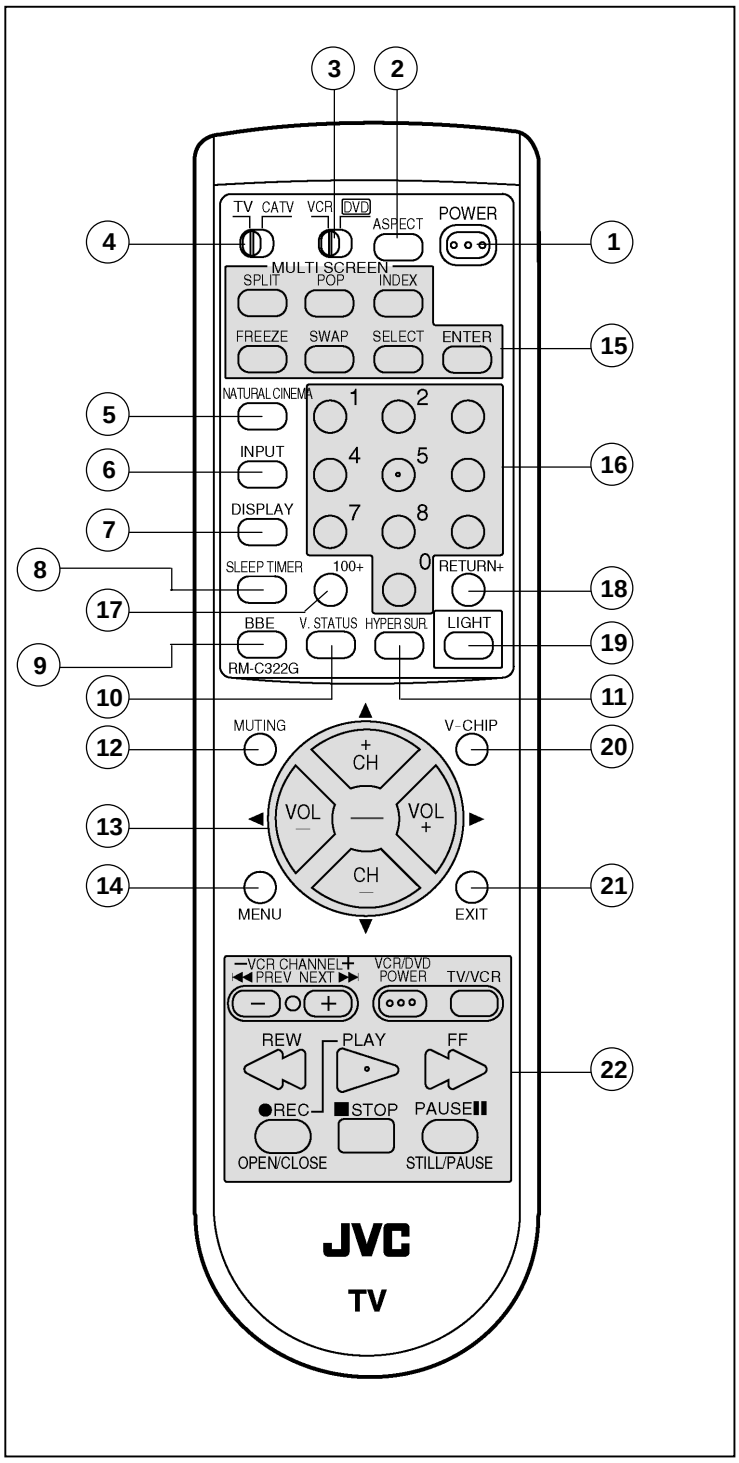


■ REAR TERMINAL



1	DIGITAL IN (DVI-D Signal Link 19pin)
2	INPUT 1 (AUDIO / VIDEO / S- VIDEO)
3	INPUT 2 (AUDIO / VIDEO)
4	INPUT 3 (AUDIO / VIDEO / S- VIDEO)
5	INPUT 2 (COMPONENT VIDEO)
6	INPUT 3 (COMPONENT VIDEO)
7	SPEAKER INPUT
8	AUDIO OUT
9	AV COMPULINK Ⅲ
A	AUDIO INPUT(For DIGITAL IN)

■ REMOTE CONTROL UNIT [RM-C322G]

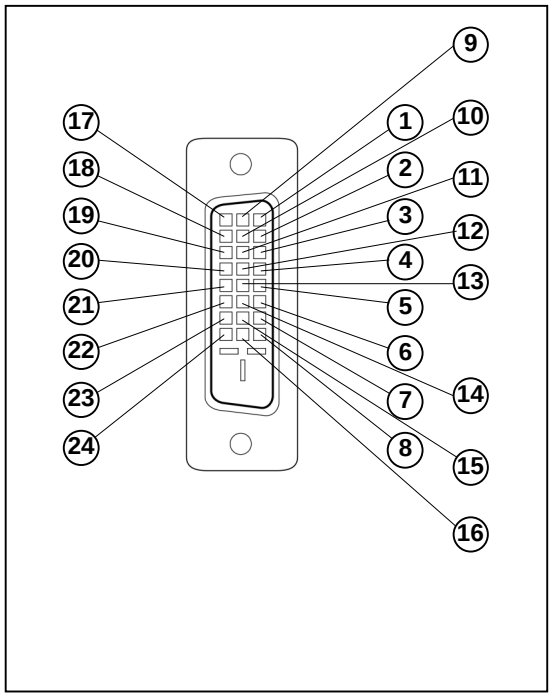


1	POWER Key
2	ASPECT Key
3	VCR / DVD Key
4	TV / CATV Key
5	NATURAL CINEMA Key
6	INPUT Key
7	DISPLAY Key
8	SLEEP TIMER Key
9	BBE Key
A	V.STATUS Key
B	HYPER SURROUND Key
C	MUTING Key (memory Key)
D	FUNCTION Key (▲ / ▼ / ▶ / ◀)
E	MENU Key
F	MULTI SCREEN Key
G	NUMBERS Key
H	100+ Key
I	RETURN+ Key
J	LIGHT Key
K	V-CHIP Key
L	EXIT Key
M	VCR / DVD Key

■ DIGITAL-IN TERMINAL FUNCTIONS

PIN No.	PIN NAME	PIN No.	PIN NAME
1	RX2-	13	RX3+
2	RX2+	14	5V
3	GND2/ 4	15	GND
4	RX4-	16	HTPLG
5	RX4+	17	RX0-
6	SCL	18	RX0+
7	SDA	19	GND0/5
8	NC	20	RX5-
9	RX1-	21	RX5+
10	RX1+	22	GNDC
11	GND1/3	23	TXC+
12	RX3-	24	TXC-

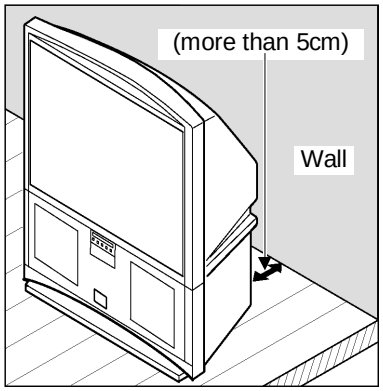
PIN ASSIGNMENT



INSTALLATION

1. INSTALLATION SITE

1. The rear of this set is provided with ventilation openings. Install the set more than 5 cm from a wall and in a location with good ventilation.
2. Avoid the following types of locations.
   (1) Unstable locations (location must be able to withstand heavy weight).
   (2) Locations subjected to direct sunlight.
   (3) Near stoves or other heating devices.
   (4) Locations subjected to humidity or oily smoke.
   (5) Dusty locations.
   (6) Locations with strong vibration.



VENTILATION OPENING

2. INSTALLATION ADJUSTMENT

When installing, moving or changing the orientation of the set, perform static convergence adjustment according to the following procedure.

1. Press the MENU key of the remote control unit.
2. Select the "CONVERGENCE" in the INITIAL SETUP menu with Function ▲/▼ key.
3. Press the Function ◀/▶ key, the convergence adjustment screen appears with crosses (+) displayed in 9 locations.
   Locations where the crosses appear in 3 colours:
   Convergence adjustment is required. Perform steps 4 to 5.
   Locations where the crosses are white:
   The convergence is adjusted correctly.
   ● If all the crosses are white, no convergence adjustment is needed.
4. The locations of the crosses correspond to the positions of the number keys on the remote control. A box appears around the selected cross.
5. Press the SELECT button to change the color of the box to the color of the cross you want to adjust (red or blue).
   ● You cannot adjust the green cross.
6. Use the ▲/▼ and ◀/▶ buttons to adjust the position of the cross.
   ● To cancel the adjustments before completing the procedure, press the EXIT button.
7. Press the ENTER button to end the convergence adjustment procedure.
   ● If you do not use the TV controls for roughly one minute, the convergence adjustment screen automatically disappears.

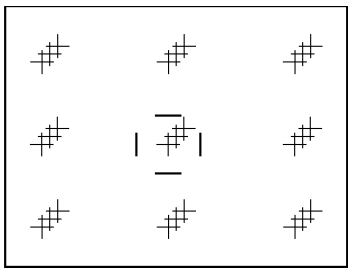


Fig.1

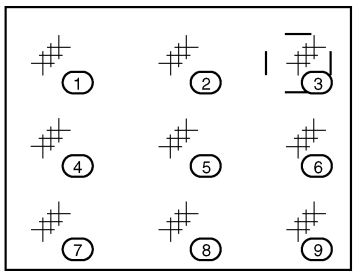


Fig.2

TECHNICAL INFORMATION

■ MAIN MICRO COMPUTER (CPU) FUNCTION

(MIN102H57K)

PIN No.	PIN NAME	I/O	FUNCTION
1	CONV. SW	O	CONVERGENCE SW
2	/VSYNC	I	V.SYNC IN for OSD
3	LB PRO	I	LOW B Protection
4	NC	—	NC
5	/RST	I	Micon Reset input
6	CONV. BUSY	O	CONV.
7	/TEST	I	+3.3V
8	YS	O	OSD YS OUT
9	NC	O	Micon test pin
10	NC	O	NC
11	A_MUTE	O	TV Sound Muting
12	/HSYNC	I	H.sync input for OSD
13	M_MUTE	O	Monitor Out Muting
14	OSDXI	—	————
15	OSDXO	—	————
16	SDA2	O	I²C BUS (SDA) for MTS
17	AC_IN	I	AC 50/60Hz in
18	SCL2	O	I²C BUS (SCL) for MTS
19	TU_POW	O	Tuner Power Control
20	VCOI	I	LPF input
21	PDO	O	LPF output
22	/IP_RESET	O	————
23	YM	O	OSD YM out
24	B	O	OSD Blue out
25	LED_POWER	O	LED for Power
26	G	O	OSD Green Out
27	R	O	OSD Red Out
28	VREF	I	————
29	IP_ERR	I	AMDP program load det.
30	IREF	I	————
31	COMP	I	————
32	AVDD	I	+3.3V
33	CLL	I	For Sub CCD
34	VREFLS	I	STD VOL in for Sub CCD
35	SUB_CCD	I	For Sub CCD
36	NC	—	NC
37	VSS	I	GND
38	MAIN_CCD	I	For main CCD
39	VREFHS	I	STD VOL in for CCD
40	CLH	I	For main CCD
41	VDD	O	+3.3V
42	LED_DATA	O	Front control Data

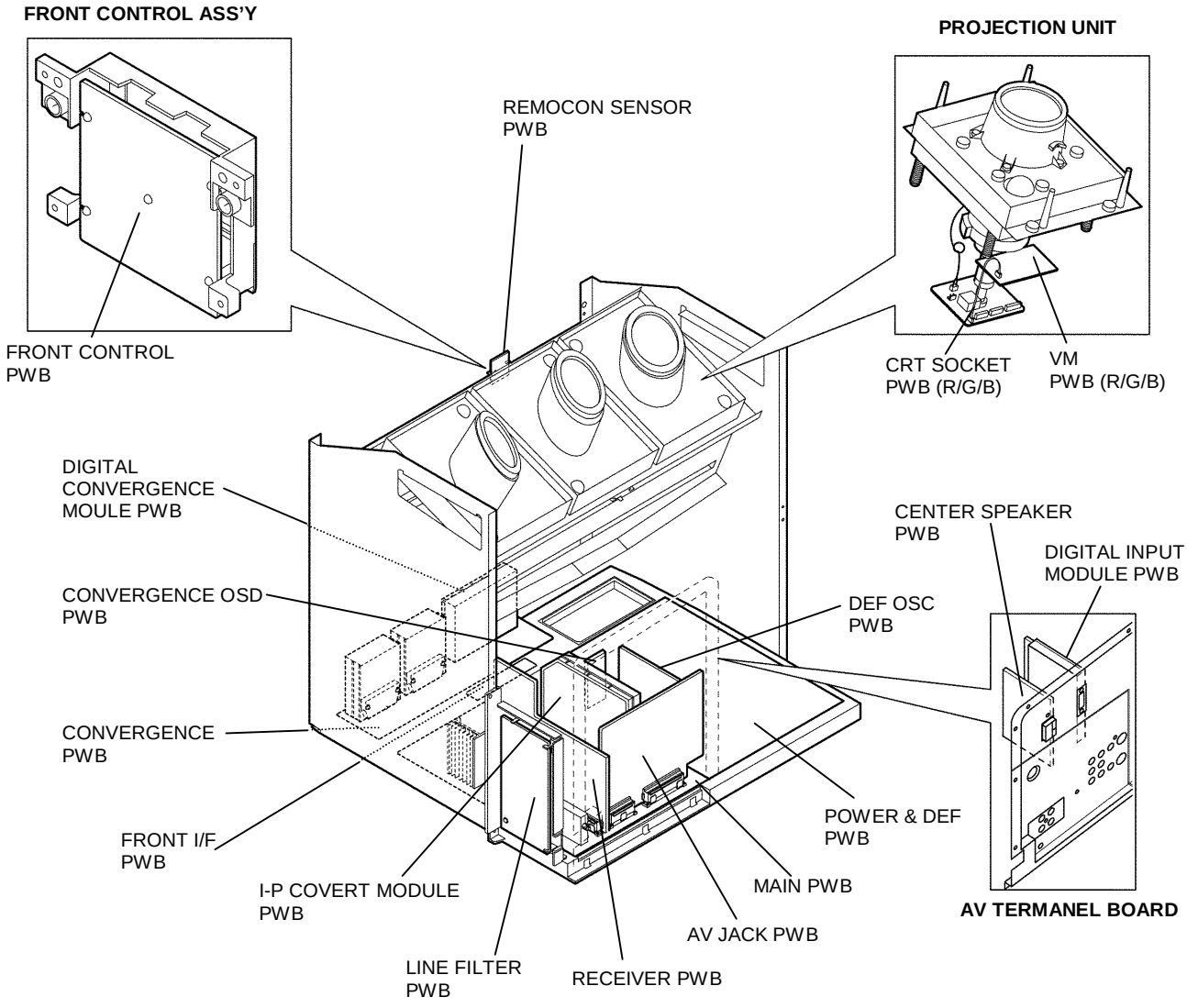
PIN No.	PIN NAME	I/O	FUNCTION
43	LED_CLOCK	O	F. LED CLK
44	LED_ON_TIMER	O	LED on timer
45	SBO0	—	————
46	SBD0	—	————
47	AP DATA	—	————
48	INC	—	————
49	ECO RST	O	Eco Reset
50	ROT COIL L	O	Picture rotation
51	ROT COIL R	O	Picture rotation
52	H BLK	O	H.BLK
53	SN COIL_R	O	Terrestrial Magnetism Sensor
54	SN COIL_L	O	↑
55	BS POW	O	BS power control
56	I²C STOP	O	I²C BUS STOP
57	NC	—	————
58	/LOB_POW	O	LOB power control
59	COMPULINK	I	AV CompulinkⅢ Input
60	/POWERGOOD	I	Power Condition Check
61	/MECA_ON	I	Machine SW Interrupt
62	/MAIN_POW	O	MAIN POWER CONTROL
63	NC	—	NC
64	/B1 POW	O	B1 POWER CONTROL
65	C / N	—	————
66	X-RAY	I	X-ray detection
67	EE CDS	—	————
68	KEY2	I	Front Key input 2
69	KEY1	I	Front Key input 1
70	SCL1	O	I²C BUS (CLK) for E²PROM
71	SDA1	I/O	I²C BUS (SDA) for E²PROM
72	REMO	I	Remocon IN
73	AP REQ	—	————
74	VSS	I	GND
75	OSC2	O	4MHz OSC
76	OSC1	I	4MHz OSC
77	VDD	I	+3.3V
78	SCL0	O	I²C BUS (CLK) for General
79	AP CLK	—	————
80	SDA0	I/O	I²C BUS (SDA) for General
81	NC	—	————
82	NC	—	————
83	NC	—	NC
84	P MUTE	O	Picture muting

MAIN PARTS LOCATION

■ PWB ASS'Y ARRANGEMENT

The PWB ASS'Y is indicated below.

- ●MAIN PWB ASS'Y (SSB-1051A-M2)
- ●POWER & DEF PWB ASS'Y (SSB-2051A-M2)
- ●R CRT SOCKET PWB ASS'Y (SSB-3151A-M2)
- ●G CRT SOCKET PWB ASS'Y (SSB-3251A-M2)
- ●B CRT SOCKET PWB ASS'Y (SSB-3351A-M2)
- ●R VM PWB ASS'Y (SSB-7151A-M2)
- ●G VM PWB ASS'Y (SSB-7251A-M2)
- ●B VM PWB ASS'Y (SSB-7351A-M2)
- ●FRONT CONTROL PWB ASS'Y (SSB0L051A-M2)
- ●REMOCON SENSOR PWB ASS'Y (SSB-8051A-M2)
- ●CONVERGENCE PWB ASS'Y (SSB-5051A-M2)
- ●CONVERGENCE OSD PWB ASS'Y (SSB0T051A-M2)
- ●CENTER SPEAKER PWB ASS'Y (SSB0A051A-M2)
- ●DIGITAL CONVERGENCE MODULE PWB ASS'Y (Included in CONVERGENCE PWB)
- ●LINE FILTER PWB ASS'Y (SSB-9051A-M2)
- ●DEF OSC PWB ASS'Y (SSB0H051A-M2)
- ●I-P CONVERT MODULE PWB ASS'Y (SSB0D051A-M2)
- ●FRONT I/F PWB ASS'Y (SSB0L251A-M2)
- ●AV JACK PWB ASS'Y (SSB0J051A-M2)
- ●RECEIVER PWB ASS'Y (SSB0R251A-M2)
- ●DIGITAL INPUT MODULE PWB ASS'Y (SSB-7851A-M2)



(This figure is only MAIN UNIT)

SPECIFIC SERVICE INSTRUCTIONS

SCREEN HANDLING CAUTIONS

■SCREEN STORAGE

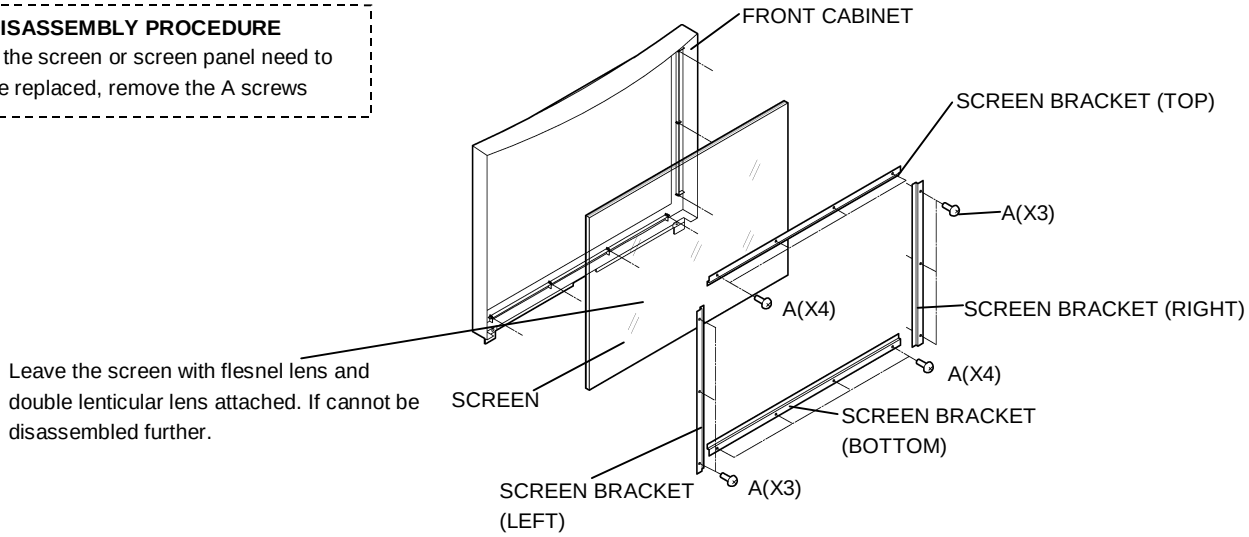
Store the SCREEN ASS'Y in a standing position in order to avoid deformation. If the screen is stored horizontally, there is risk of deforming the screen face.

When necessary to place the SCREEN ASS'Y horizontally, position the screen side upwards and sure to place spacers between the screen and resting site (floor or stand etc.) to prevent the screen from sagging.

■SCREEN SURFACE

Since the screen surface is easily scratched or soiled, use ample care when handling.

■ **DISASSEMBLY PROCEDURE**
If the screen or screen panel need to be replaced, remove the A screws



PROJECTION UNIT REPLACEMENT

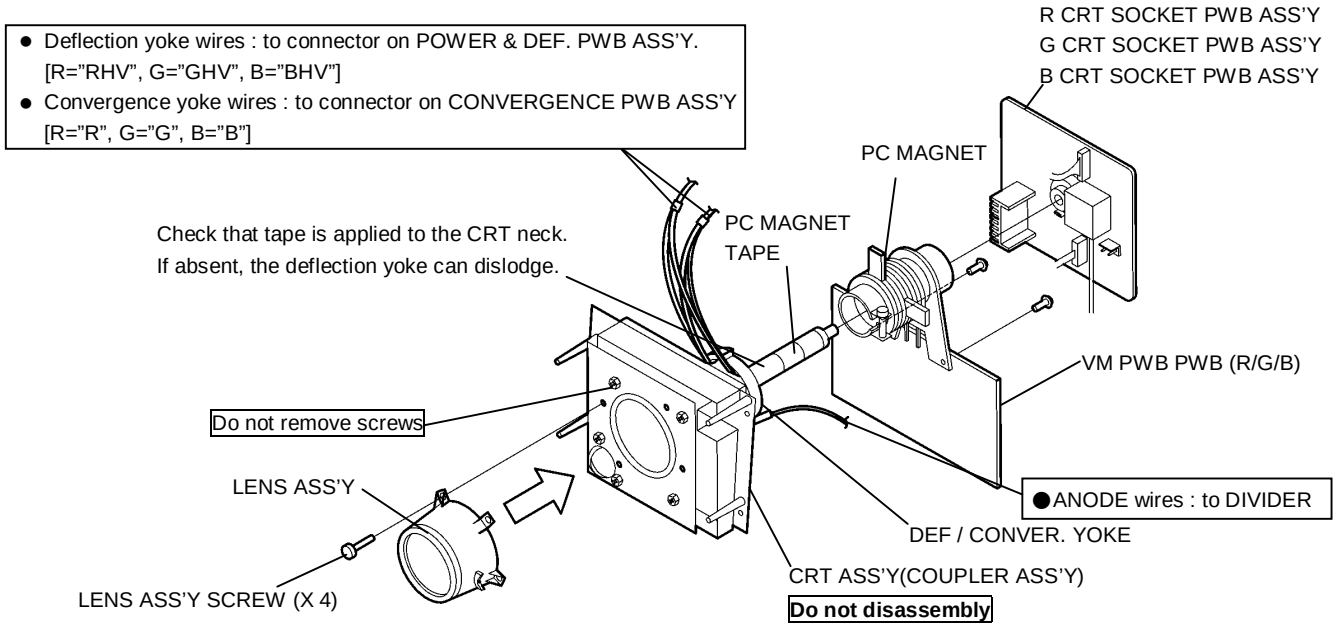
■ADJUSTMENT DURING REPLACEMENT

When replcing the three R, G and B projection units, first replace the R and B units and perform focus / screen / raster centering adjustments with reference to the G unit. Then replace the G unit and perform G focus / screen / convergence adjustment. Finally perform R & B . Convergence adjustments. **Use care to simultaneously removes all three-projection units.**

■DISASSEMBLY CAUTION

The projection units include locations that are not to be disassembled during service. When replacing projection unit parts, disassemble to the state indicated in the figure below.

The figure indicates screws and wires that are not to be removed. Use care not to remove these.



DISASSEMBLY PROCEDURE

■ SPEAKER GRILLE

1. Remove 4 screws **A** from rear side.
2. Remove the SPEAKER GRILLE.

■ SPEAKER (WOOFER)

- Remove the SPEAKER GRILLE

1. Remove 4 screws **B**.
2. Take out the WOOFER.
3. Disconnect the speaker wire from speaker terminal.

■ SPEAKER (TWEETER)

- Remove the SPEAKER GRILLE

1. Remove 2 screws **C**.
2. Take out the TWEETER.
3. Disconnect the speaker wire from speaker terminal.

■ FRONT BOARD

- Remove the SPEAKER GRILLE.

1. Remove 4 screws **D**.
2. Remove the FRONT BOARD.

■ FRONT CONTROL BOX

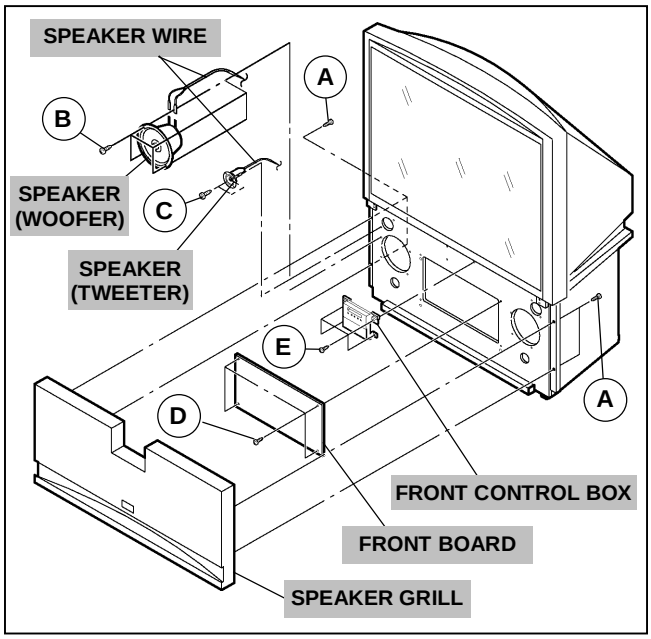
- Remove the SPEAKER GRILLE.

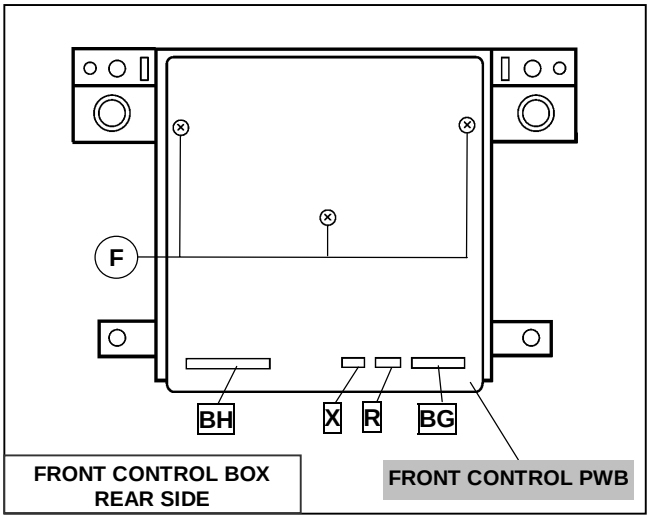
1. Remove 4 screws **E** attaching the FRONT CONTROL BOX.
2. Disconnect the connector BH , X, R, BG on the FRONT CONTROL PWB.
3. Remove the FRONT CONTROL BOX.

■ FRONT CONTROL PWB

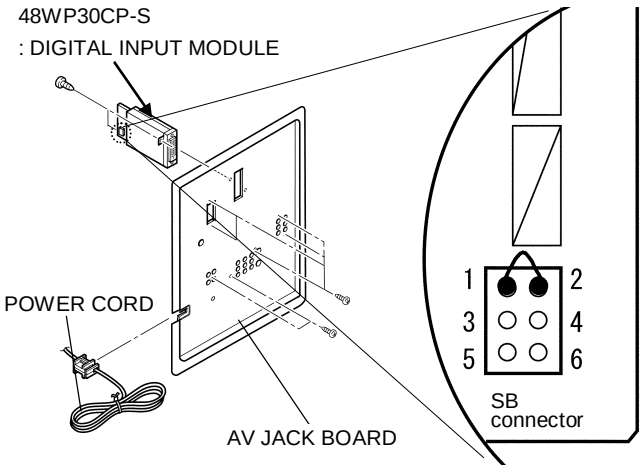
- Remove the SPEAKER GRILLE.
- Remove the FRONT CONTROL BOX.

1. Remove 3 screws **F** from rear side of FRONT CONTROL BOX.
2. Remove the FRONT CONTROL PWB.





CAUTION AT DISASSEMBLY



- Prior to disassembly, unplug the power code from the AC outlet without fail. (Turn the power “off”.)
- Short the SB connector (1) pin and (2) pin of the DIGITAL INPUT MODULE. (At the time of assembling)
- Before the rear panel is inserted into the cabinet, release the short-circuit between the SB connector (1) pin and (2) pin of the DIGITAL INPUT MODULE.
- After releasing the short-circuit between the SB connectors, do not turn the power on until the rear panel is inserted into the cabinet.

* Negligence in carrying out the above steps may cause the inactivation of the TV.

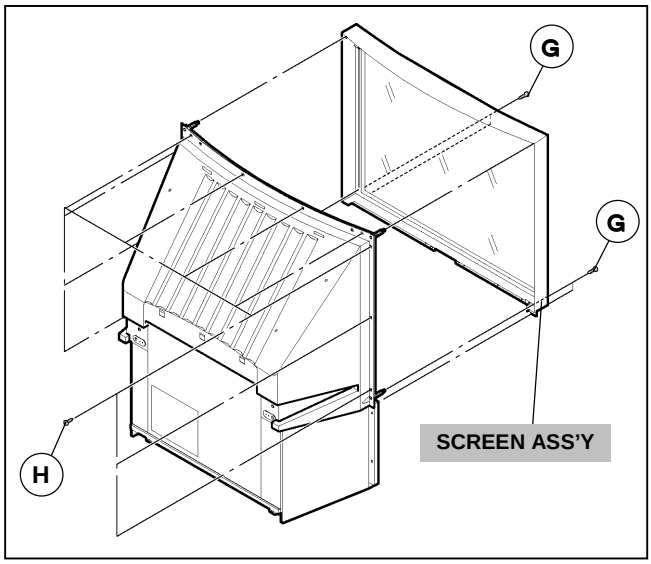
■ SCREEN ASS'Y

- Remove the SPEAKER GRILLE.
- Remove the FRONT CONTROL BOX.

1. Remove 4 screws **G** under the SCREEN ASS'Y from front side.
2. Remove 10 screws **H** from rear side.
3. Remove the SCREEN ASS'Y.

NOTE :

- Place the screen with face upwards on a flat stand.
- Because of the large size, at least two parsons are recommended for removal and reassemble.
- Use core not to scratch the screen during work.
- During assembly, be sure to engage the left and right tabs with the cabinet mounting positions.
- When than sporting the SCREEN ASS'Y, avoid grasping the top of the screen panel, instead grasp the left and right areas.



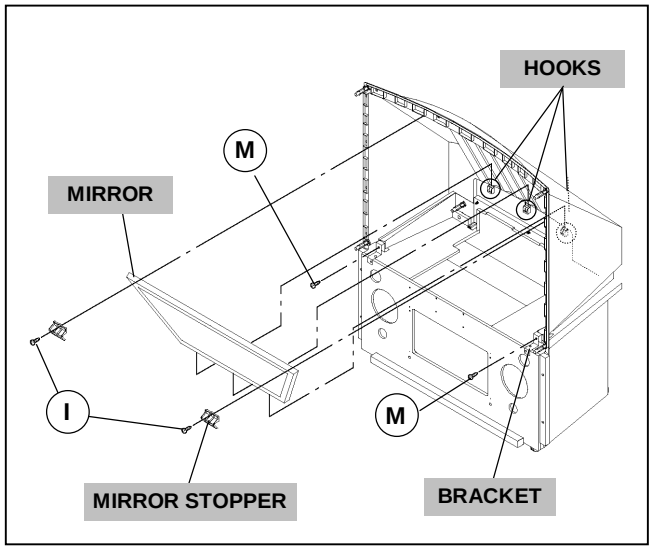
■ MIRROR

- Remove the SPEAKER GRILLE.
- Remove the FRONT CONTROL BOX.
- Remove the SCREEN ASS'Y.

1. Remove 2 screws **I** attaching the mirror stopper.
2. Raise slightly to disengage of the mirror from the hooks.
3. Remove the MIRROR.

NOTE :

- The MIRROR is front-coated. Do not touch the front of the MIRROR.
- At least 2 persons are recommended for removable and reassemble.



■ REAR PANEL

1. Loosen 7 screws **J.**
2. Remove 4 screws **K**.
3. Raise slightly REAR PANEL upward.
4. Remove the REAR PANEL.

NOTE :

- Before the rear panel is inserted into the cabinet, release the short-circuit between the SB connector (1) pin and (2) pin of the digital input unit
- After releasing the short-circuit between the SB connectors, do not turn the power on until the rear panel is inserted into the cabinet

■ PARTITION

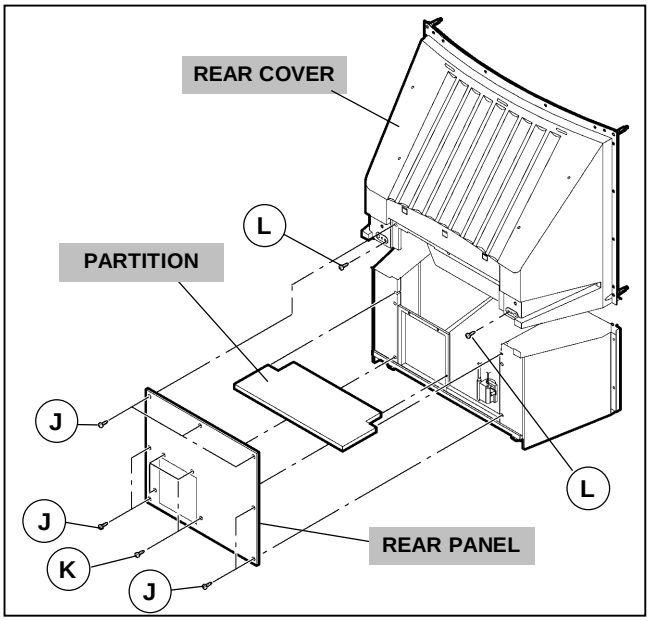
- Remove the REAR PANEL.

1. Pull out the PARTITION back ward.

■ REAR COVER

- Remove the SPEAKER GRILLE.
- Remove the FRONT CONTROL BOX.
- Remove the SCREEN ASS'Y.

1. Remove 2 screws **L**.
2. Remove 2 screws **M** from front side
3. Slightly pull for backside to disengage of the REAR COVER from hooks.
4. Remove the REAR COVER.



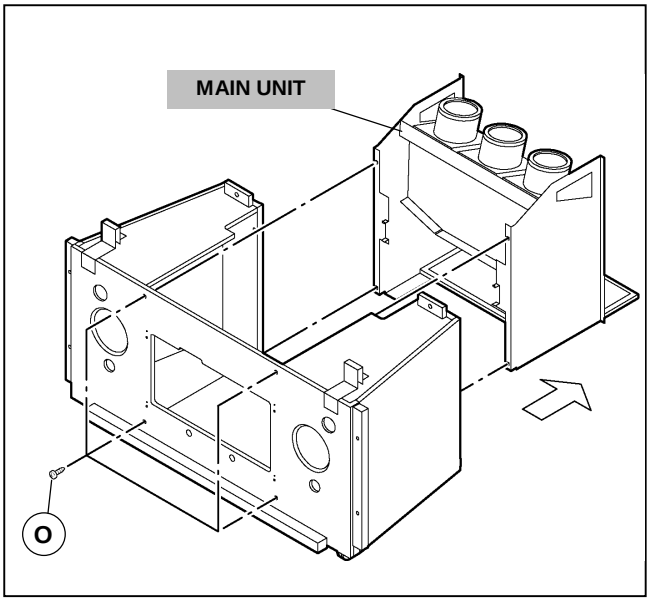
■ MAIN UNIT

- Remove the SPEAKER GRILLE.
- Remove the connector BH , X , R , BG on the FRONT CONTROL PWB.
- Remove the REAR PANEL.

1. Remove 4 screws **O** from front side.
2. Pull out the MAIN UNIT rear side.

NOTE :

- Except for confirmation of projection of images on the screen and audio output through the speakers, the removed main unit is still workable in the same state as if it is still built in the TV set. Therefore, the main unit can be removed, if necessary, for board diagnosis, electric testing, etc. apart from confirmation of screen images and audio output.
- When wire clamps are removed during work, use care to restore them precisely to their original positions. Performance can be affected if these are not returned to the original positions.
- Because of the large size, at least two persons are recommended for removal and reassemble.
- When carrying the main unit, use care not to drop, shock or shake it.
- Do not stain or damage the lens of the projection unit.
- Do not look through the projection unit.



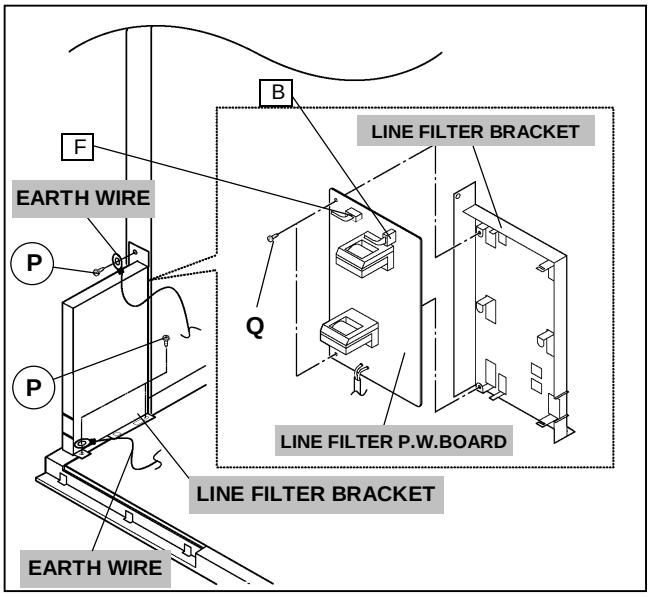
◆ CHECKING THE P.W. BOARD

When checking the MAIN PWB, POWER & DEF PWB, etc., raise the MAIN UNIT with the DIVIDER side down for the sake of convenience. You can checking the MAIN P.W.B.

■ LINE FILTER P.W. BOARD

- Remove the REAR PANEL.
- Remove the AV JACK BOARD.

1. Disconnect the connector B F on the LINE FILTER P.W. BOARD.
2. Remove 3 screws **P** attaching the LINE FILTER BRACKET and earth wire.
3. Remove 2 screws **Q** attaching LINE FILTER P.W. BOARD.
4. Remove the LINE FILTER P.W. BOARD.



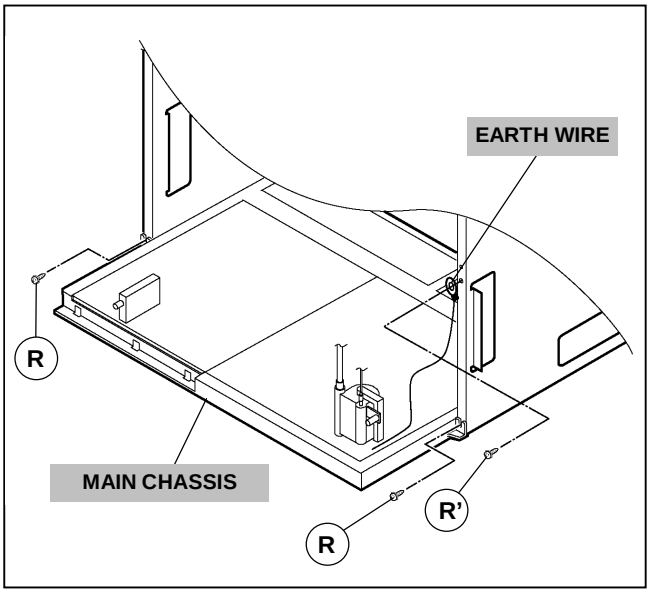
■ MAIN CHASSIS

- Remove the REAR PANEL.
- Remove the AV JACK BOARD.
- Remove the LINE FILTER BRACKET.

1. Remove 2 screws **R** both side of the MAIN CHASSIS.
2. Remove 1 screws **R'** attaching the earth wire.
3. Pull out the MAIN CHASSIS for back side.

NOTE :

- If necessary, remove the anode wires, connectors, respectively.



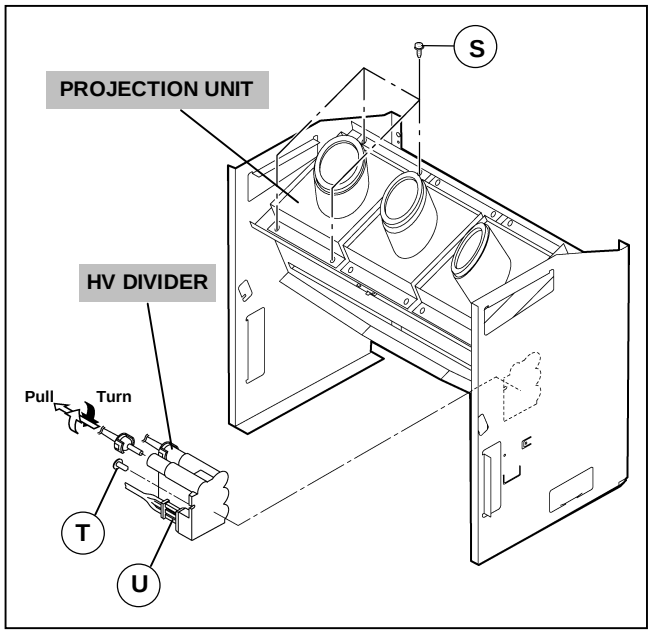
■ PROJECTION UNIT

- Remove the SPEAKER GRILLE
- Remove the FRONT CONTROL BOX
- Remove the REAR PANEL
- Remove the MAIN UNIT.

1. Remove the CRT SOCKET PWB.
2. Remove 4 screws **S** attaching the PROJECTION UNIT.
3. Pull out the PROJECTION UNIT, upward.

NOTE :

- Refer to “PROJECTION UNIT REPLACEMENT” on page 8 when taking out and replacing the PROJECTION UNIT.
- When wire clamps are removed during work, use care to restore them precisely to their original positions. Performance can be affected if these are not returned to the original positions.



■ HV DIVIDER

- Remove the REAR PANEL

1. Remove 1 screws **T** attaching the DIVIDER.
2. Remove the HV DIVIDER.

∗ Wires of the transformer (FBT) and CRT of each PROJECTION UNIT can be removed by turning the connector portions.

NOTE :

- If necessary, remove the anode wires, and replacing the HV DIVIDER, take care to correctly engage the **U** connector.

■ AV JACK BOARD

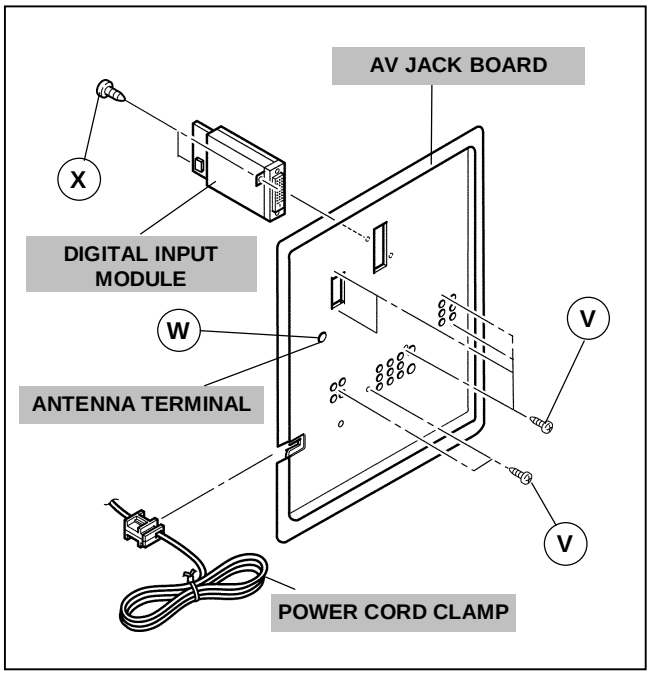
- Remove the REAR PANEL

1. Remove 7 screws **V**.
2. Pull out the POWER CORD CLAMP from AV JACK BOARD left side.
3. Remove nut **W** attaching the antenna terminal.
4. Remove the AV JACK BOARD.

■ DIGITAL INPUT MODULE

- Remove the REAR PANEL

1. Remove 2 screws **X** from rear side of the AV JACK BOARD.
2. Remove the DIGITAL INPUT MODULE.



REPLACEMENT OF CHIP COMPONENT

■ 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.

■ SOLDERING IRON

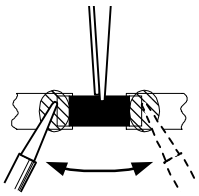
1. Use a high insulation soldering iron with a thin pointed end of it.
2. A 30w soldering iron is recommended for easily removing parts.

■ REPLACEMENT STEPS

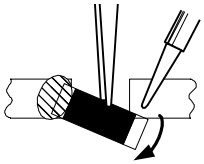
1. How to remove Chip parts

◆ **Resistors, capacitors, etc**

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

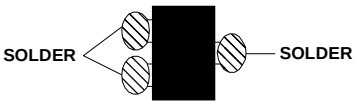


(2) Shift with tweezers and remove the chip part.

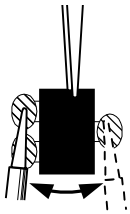


◆ **Transistors, diodes, variable resistors, etc**

(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.

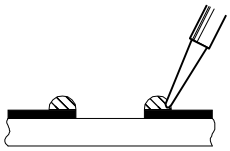


Note : After removing the part, remove remaining solder from the pattern.

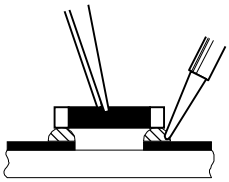
2. How to install Chip parts

◆ **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.

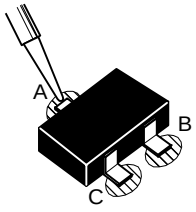


◆ **Transistors, diodes, variable resistors, etc**

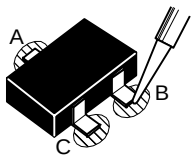
(1) Apply solder to the pattern as indicated in the figure.

(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**.



MEMORY IC REPLACEMENT

1. Memory IC

This model use a memory IC.
This memory IC stores data for proper operation of the video and deflection circuits.
When replacing, be sure to use an IC containing this (initial value) data.

2. Memory IC replacement procedure

(1) Power off

Switch off the power and disconnect the power cord from the wall outlet.

(2) Replace the memory IC

Initial value must be entered into the new IC.

(3) Power on

Connect the power cord to the wall outlet and switch on the power.

(4) SERVICE MENU setting

1) Press **SLEEP TIMER** key and, while the indication of **SLEEP TIMER 0 MIN** is being displayed, press **DISPLAY** key and **VIDEO STATUS** key on the remote control unit (Fig.2) simultaneously.
2) The SERVICE MENU screen of Fig.1 is displayed.
3) Verify what to set in the SERVICE MENU, and set whatever is necessary (Fig.1).
   Refer to the SERVICE ADJUSTMENT for setting.
4) Press the EXIT key twice to return normal screen.

(5) Receive channel setting

Refer to the OPERATING INSTRUCTIONS (USER'S GUIDE) and set the receive channels (Channels Preset) as described.

(6) User settings

Check the user setting items according to after page.
Where these do not agree, refer to the OPERATING INSTRUCTIONS (USER'S GUIDE) and set the items as described.

SERVICE MENU

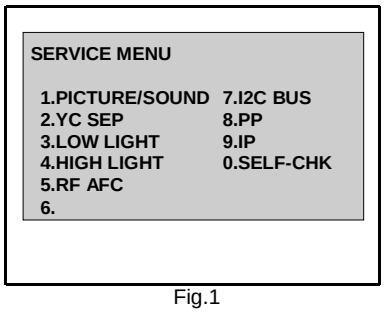


Fig.1

SERVICE MENU SELECT KEY

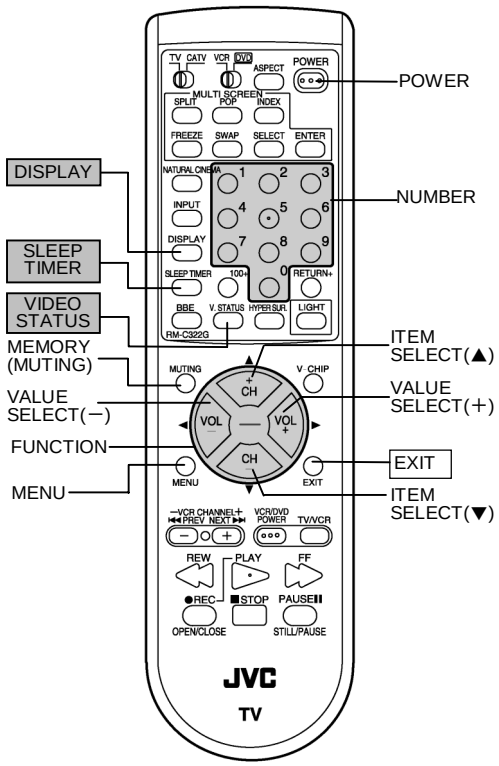


Fig.2

SHIPPING FACTORY SETTING

VIDEO STATUS MEMORY (NTSC / 480p)

Item	SETTING VALUE				
	TINT	COLOR	PICTURE	BRIGHT	DETAIL
STANDARD	00	00	00	00	00
THATER	00	00	00	00	00
DYNAMIC	00	00	+10	00	+1

(HD)

Item	SETTING VALUE				
	TINT	COLOR	PICTURE	BRIGHT	DETAIL
STANDARD	00	00	00	00	00
THATER	00	00	00	00	00
DYNAMIC	00	00	+2	00	00

CHANNEL SETTING (CHANNEL SUMMARY)

BAND	CH Display		Setting	BAND	CH Display		Setting
VHF_L	02		○	SUPER	N	27	
	03				O	28	○
	04		○		P	29	
	05		○		Q	30	
	06		○		R	31	○
VHF_H	07		○		S	32	○
	08				T	33	
	09		○		U	34	
	10				V	35	
	11		○		W	36	○
	12			SUBMID	A-7	93	
	13		○		A-6	394	
UHF	14		○		A-5	95	
	36		○		A-4	96	○
	41				A-3	97	○
	46				A-2	98	○
	63		○		A-1	99	
	69		○		A-8	01	
MID	A	14	○	HYPER	W+11	47	○
	B	15	○		W+12	48	○
	C	16	○		W+17	53	○
	D	17	○				
	E	18	○		W+23	59	○
	F	19					
	G	20		ULTRA	W+29		
	H	21	○				
	I	22			W+51		
SUPER	J	23					
	K	24	○		W+78		
	L	25					
	M	26			W+84		

SHIPPING FACTORY SETTING
(USER SETTING)

Setting item	Setting value	Setting item	Setting value
POWER	OFF	TINT / COLOR / PICTURE /BRIGHT / DETAIL	Refer to setting of Video status memory at shipping factory setting
CHANNEL	CABLE-02		
BBE	ON		
VOLUME	10		
INPUT	TV	COLOR TEMPERATURE	HIGH
		DIG. NOISE CLEAR	CENTER
DISPLAY	OFF	NOISE MUTING	ON
NATURAL CINEMA	AUTO	BASS / TREBLE / BALANCE	CENTER
SLEEP TIMER	0		
ASPECT	REGULAR		
VIDEO STATUS	DYNAMIC		
HYPER SURROUND	OFF	MTS	STEREO
SPLIT SOURCE	LEFT SIDE : CH 02 RIGHT SIDE : CH 04	SET CLOCK	Unnecessary to set
		ON / OFF TIMER	NO
		LANGUAGE	ENG
POP SOURCE	LEFT SIDE : CH 02 RIGHT UPPER : CH 04 RIGHT CENTER : CH 05 RIGHT BOTTOM : CH 07	CLOSED CAPTION	OFF (CC1 / T1)
		FRONT PANEL LOCK	OFF
		AUTO SHUT OFF	OFF
		AUTO TUNER SET UP	Unnecessary to set
		DIGITAL-IN (at 480p signal input)	SIZE 1
VERTICAL POSITION	CENTER	CHANNEL SUMMARY	Refer to Last memory (CH. summary)
CENTER CH INPUT	OFF		
XDS ID	ON	V-CHIP	OFF
CONVERGENCE	OPTIMUM CONDITION	SET LOCK CODE	Unnecessary to set
POWER INDICATOR	HIGH	AUTO DEMO	OFF

SERVICE ADJUSTMENTS

ADJUSTMENT PREPARATION

1. **You can make the necessary adjustments for this unit with either the Remote Control Unit or With the adjustment tools and parts as given below.**
2. **Adjustment with the Remote Control Unit is made on the basis of the initial setting values, however, the new setting values which set the screen to its optimum condition may differ from the initial settings.**
3. Make sure that AC power is turned on correctly.
4. Turn on the power for set and test equipment before use, and start the adjustment procedures after waiting at least 30 minutes.
5. Unless otherwise specified, prepare the most suitable reception or input signal for adjustment.
6. **Never touch any adjustment setting value which are not specified in the list for this adjustment.**
7. Presetting before adjustment
   Unless otherwise specified in the adjustment instructions, preset the following functions with the remote control unit:

ADJUSTMENT EQUIPMENT

1. DC voltmeter (or digital voltmeter)
2. Oscilloscope
3. Signal generator (Pattern generator)
   [NTSC / 480i / 480p / 720p / 1080i / HDCP]
4. Remote control unit
5. TV audio multiplex signal generator
6. Frequency counter

ADJUSTMENT ITEMS

Adjustment items	
1	Check (× 4)
2	FOCUS & BEAM SPOT adjustment
3	CONVERGENCE & DEFLECTION adjustment
4	VIDEO adjustment
5	MTS adjustment

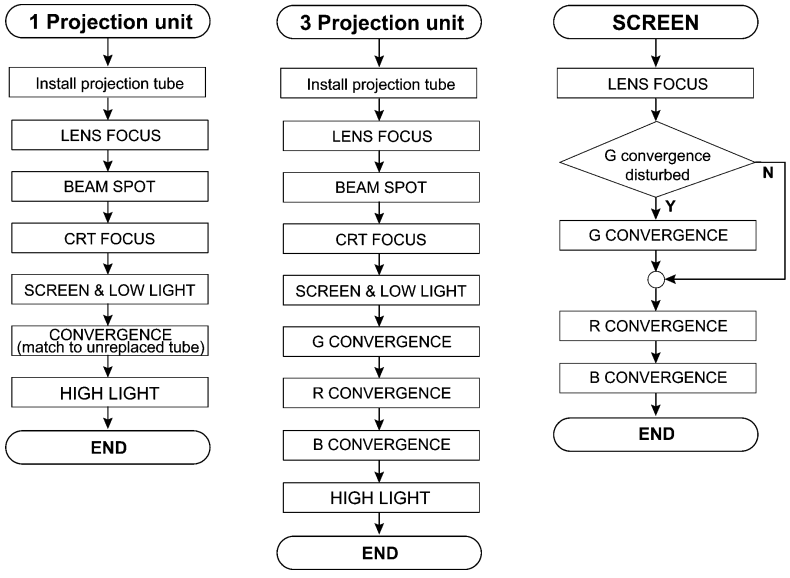
● SETTING POSITION

SETTING ITEM	SETTING POSITION	SETTING ITEM	SETTING POSITION
VIDEO STATUS	STANDARD	ASPECT	FULL
BASS, TREBLE, BALANCE	CENTER	VERTICAL POSITION	CENTER
HYPER SURROUND	OFF	BBE	ON
TINT, COLOR, PICTURE, BRIGHT, DETAIL	CENTER	ON/OFF TIMER	NO
COLOR TEMPERATURE	HIGH	AUTO SHUTOFF	OFF
DIGITAL NOISE CLEAR	CENTER		

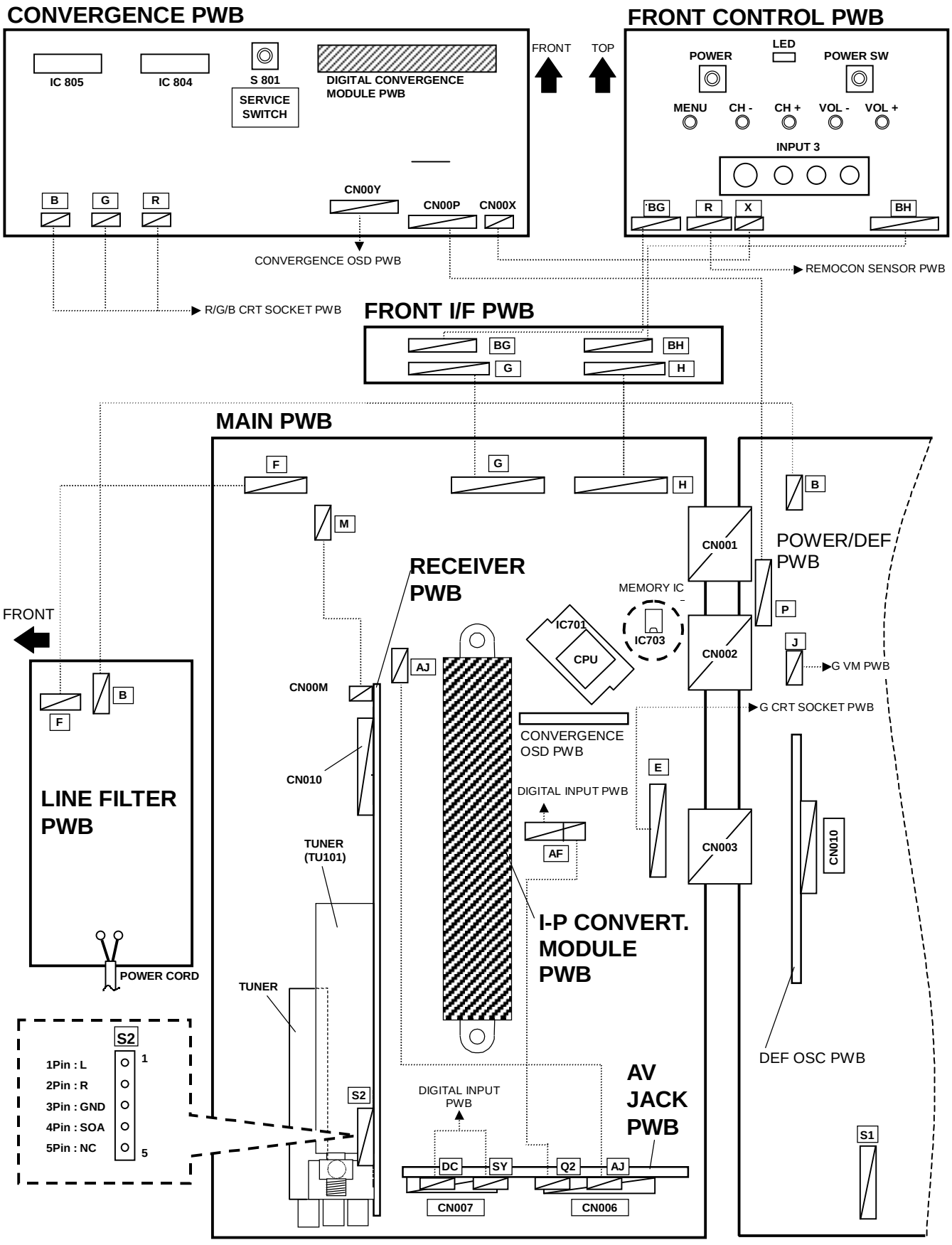
ADJUSTMENT FLOWCHART

WHEN REPLACING SCREEN AND PROJECTION UNIT

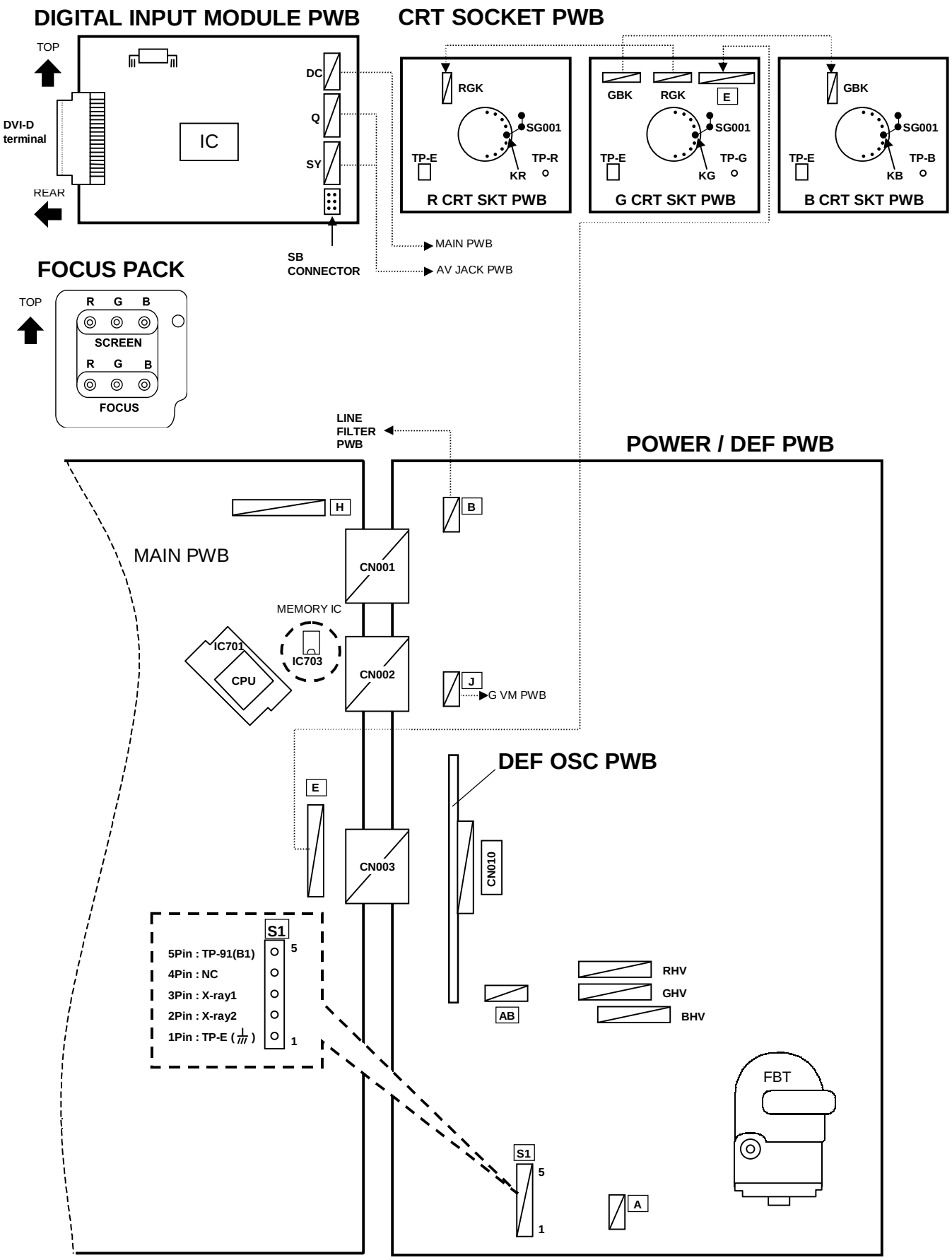
●Contains only the main adjustments. Also confirm other adjustments as required.



ADJUSTMENT LOCATION (1/2)



ADJUSTMENT LOCATION (2/2)



BASIC OPERATION OF SERVICE MENU

1. TOOL OF SERVICE MENU OPERATION

Operate the SERVICE MENU with the REMOTE CONTROL UNIT.

2. SERVICE MENU ITEMS

In general, basic setting (adjustments) items or verifications are performed in the SERVICE MENU.

1. PICTURE / SOUND ····· This sets the setting values of the VIDEO/CHROMA /AUDIO and DEFLECTION circuits.
2. YC SEP ····· This is used when the YC mode is adjusted. **[Do not adjust]**
3. LOW LIGHT····· This sets the setting values of the WHITE BALANCE circuit.
4. HIGH LIGHT ····· This sets the setting values of the WHITE BALANCE circuit.
5. RF AFC ····· This is used when the IF VCO is adjusted. **[Do not adjust]**
6. (BLANK)
7. I2C BUS ····· This is used when ON/OFF if the I^2C BUS control is stop. **[Do not adjust]**
8. PP ····· This sets the setting value of the output of P&P data.
9. IP····· This sets the setting value of the IP circuit. **[Do not adjust]**
0. SELF-CHK····· This sets the self checking of the TV circuit.

3. BASIC OPERATIONS OF THE SERVICE MENU

(1) How to enter the SERVICE MENU.

Press **SLEEP TIMER** key and, while the indication of "**SLEEP TIMER 0 MIN.**" is being displayed, press **DISPLAY** key and **VIDEO STATUS** key on the remote control unit simultaneously to enter the **SERVICE MENU** screen as shown in the fig.1.

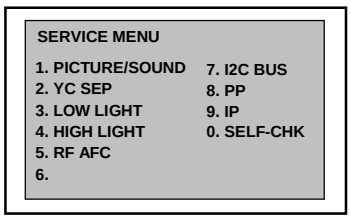


Fig. 1

(2) SERVICE MENU screen selection

Press the number key to select any of the following items.

1.PICTURE/SOUND	7.I2C BUS
2.YC SEP	8.PP
3.LOW LIGHT	9.IP
4.HIGH LIGHT	0.SELF-CHK
5.RF AFC	

(3) Enter the any setting mode

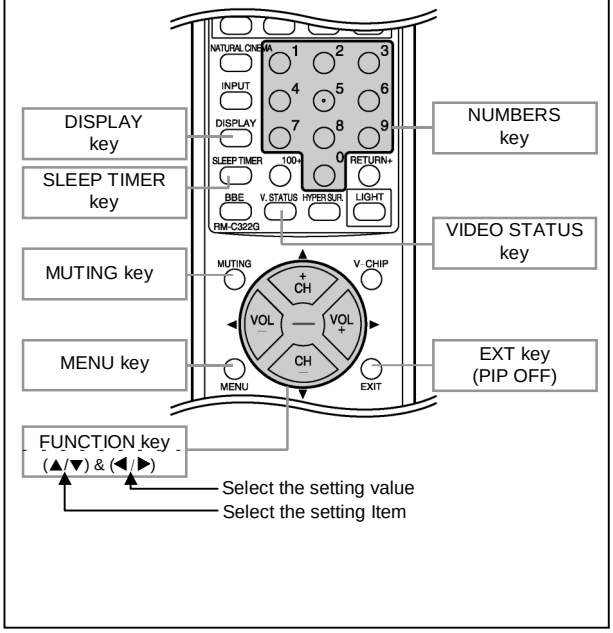
- **1. PICTURE / SOUND mode**

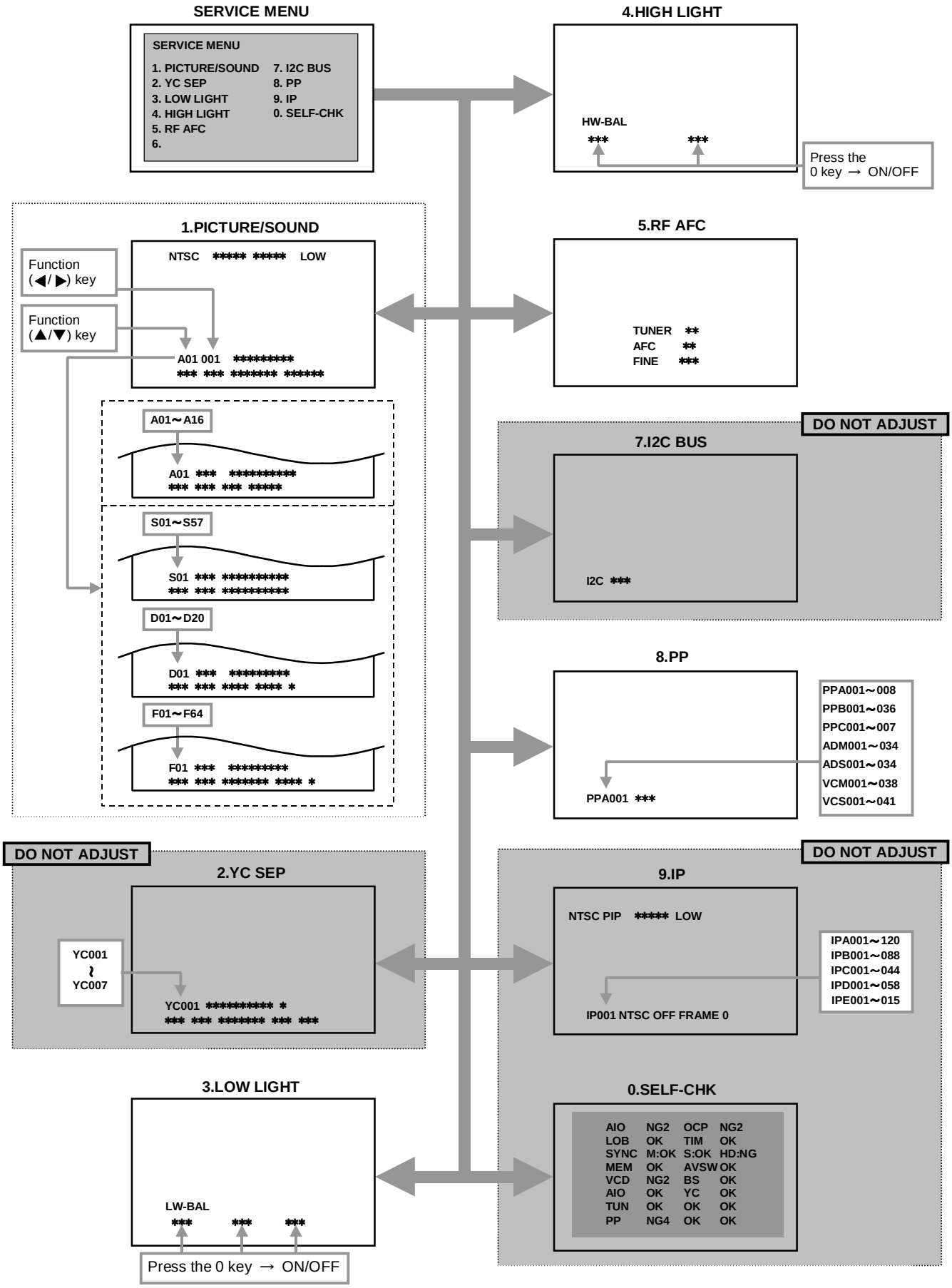
1) Select the 1. PICTURE / SOUND items with the number key, and the FUNCTION (▲/▼) key is pressed the 1. PICTURE / SOUND mode, the screen will be displayed as shown in figure page later.
2) Then the settings or verifications can be performed.

- **2.YC SEP, 3.LOW LIGHT, 4.HIGH LIGHT, 5.RF AFC, 7.I^2C BUS, 8.PP, 9.IP and 0.SELF-CHK mode**

1) If you select any of 2.YC SEP 3.LOW LIGHT 4.HIGH-LIGHT 5.RF AFC 7.I^2C BUS, 8.PP, 9.IP and 0.SELF-CHK mode items, and the numbers key is pressed from SERVICE MENU, the each screens will be displayed as shown in figure page later.
2) Then the settings or verifications can be performed.

KEY FUNCTION of SERVICEMENU



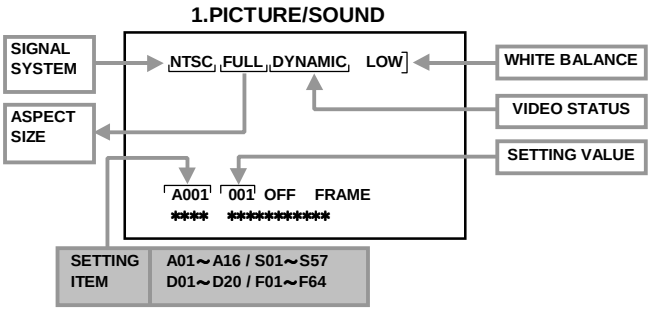

SERVICE MENU
SERVICE MENU
1. PICTURE/SOUND
2. YC SEP
3. LOW LIGHT
4. HIGH LIGHT
5. RF AFC
6.
7. I2C BUS
8. PP
9. IP
0. SELF-CHK
4.HIGH LIGHT
HW-BAL
*** ***
Press the 0 key → ON/OFF
1.PICTURE/SOUND
Function (◀/▶) key
Function (▲/▼) key
NTSC ***** ***** LOW
A01 001 *********
*** *** ******* ******
A01~A16
A01 *** **********
*** *** *** *****
S01~S57
S01 *** **********
*** *** **********
D01~D20
D01 *** *********
*** *** **** **** *
F01~F64
F01 *** *********
*** *** ******* **** *
5.RF AFC
TUNER **
AFC **
FINE ***
DO NOT ADJUST
7.I2C BUS
I2C ***
8.PP
PPA001 ***
PPA001~008
PPB001~036
PPC001~007
ADM001~034
ADS001~034
VCM001~038
VCS001~041
DO NOT ADJUST
2.YC SEP
YC001 ≀ YC007
YC001 ********** *
*** *** ******* *** ***
DO NOT ADJUST
9.IP
NTSC PIP ***** LOW
IP001 NTSC OFF FRAME 0
IPA001~120
IPB001~088
IPC001~044
IPD001~058
IPE001~015
3.LOW LIGHT
LW-BAL
*** *** ***
Press the 0 key → ON/OFF
0.SELF-CHK
AIO NG2 OCP NG2
LOB OK TIM OK
SYNC M:OK S:OK HD:NG
MEM OK AVSW OK
VCD NG2 BS OK
AIO OK YC OK
TUN OK OK OK
PP NG4 OK OK

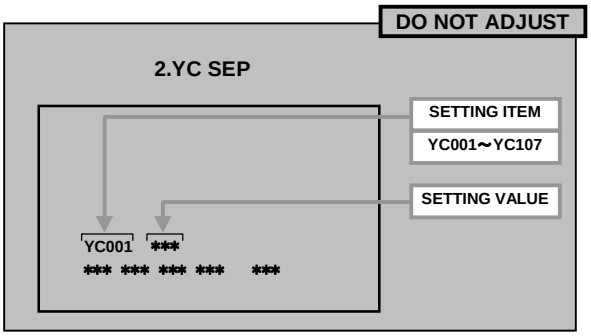
(4) Setting method

1) UP / DOWN (▲/▼) FUNCTION key
Select the SETTING ITEM.
2) LEFT / RIGHT (◀/▶) FUNCTION key
Setting (adjust) the setting value of the SETTING ITEM.
When the MUTING key is pressed the setting value will be stored (memorized).
3) EXIT key
Returns to the previous screen.

(5) Releasing SERVICE MENU

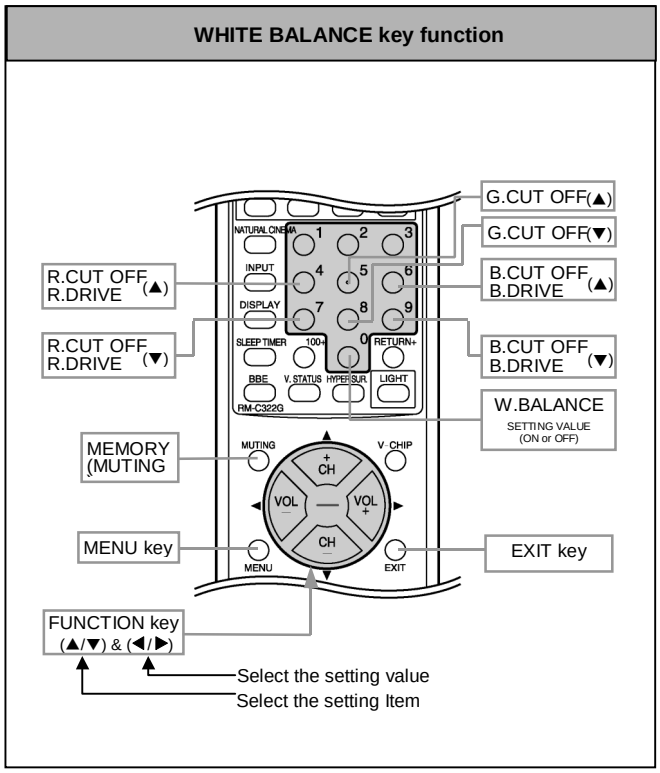
1) After returning to the SERVICE MENU upon completion of the setting work, press the EXIT key again.

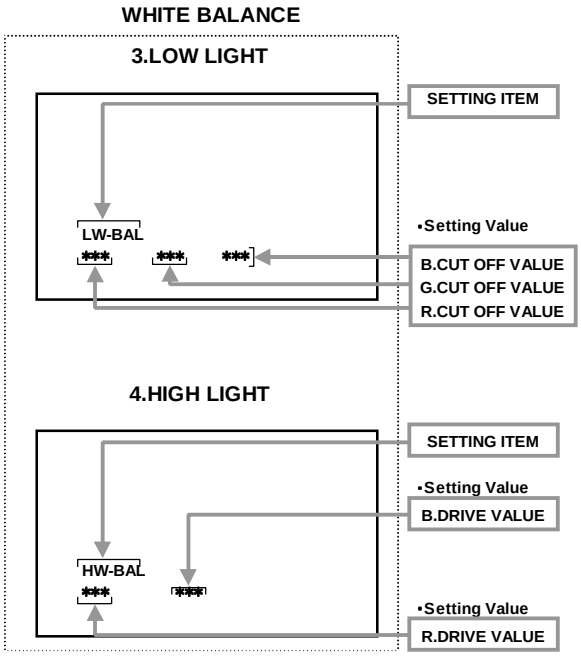


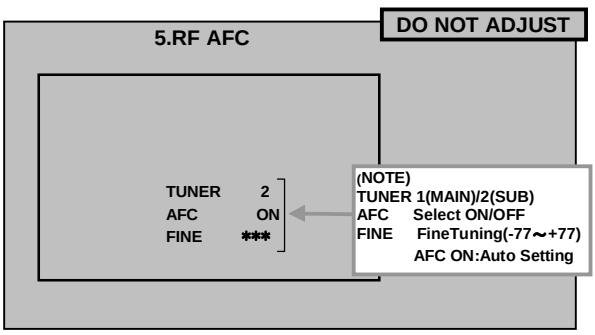


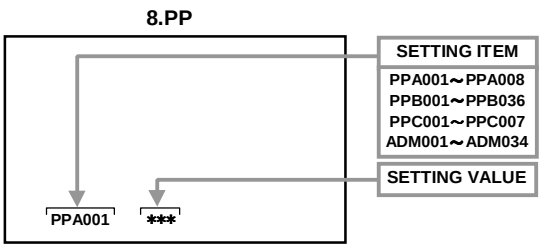
● **WHITE BALANCE setting**

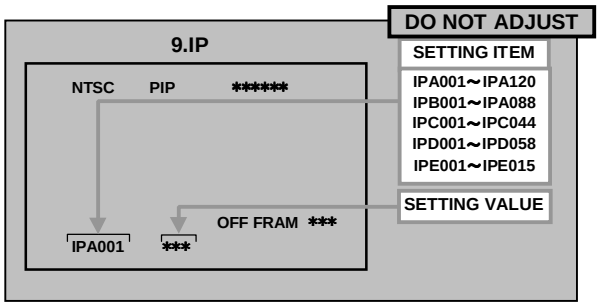
The setting for 3.LOW LIGHT and 4.HIGH LIGHT are described in the WHITE BALANCE page of ADJUSTMENT.









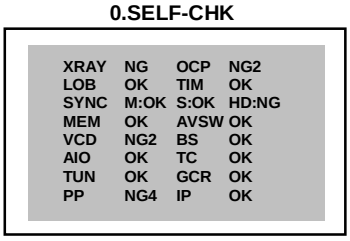


8.PP / 9.IP setting

1) FUNCTION(▲/▼) key····· Select the setting Item
2) FUNCTION (◀ /▶) key ····· Select the setting value.
3) SLEEP TIMER key ····· Skip the each setting Item.
4) MUTING Key ····· Setting value will be stored.
5) EXIT key ····· Returns to the service menu.
   * Press the EXIT key again, then releasing the service menu.

0.SELF-CHK DISPLAY

Press 0 key of remote control that checks the circuit operating status and in event of malfunction displays stores the data in memory. (shown in figure)



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 set the screen in its optimum condition may differ from the initial setting.
2. Do not change the initial setting values of the setting items NOT LISTED IN ADJUSTMENT.
3. The (∗1 or ∗2)marked items in following table, it is NO REQUIREMENT for adjustment. If values had change by the missing, set the initial values in the following table.

CAUTION

Never change the initial setting value any adjustments **except** for those that are designated in the adjustment procedures.

In case where you have made undesignated adjustments by mistake, never press the MUTING key on the remote control unit.

Whenever you had not pressed the MUTING key, you would be able to recover the initial value by switching the POWER SW (on/off) key.

1. PICTURE / SOUND

■SOUND SYSTEM

Item No.	Item name	Variable range	Initial setting value	Item No.	Item name	Variable range	Initial setting value
A01	NOISE DET.	0 / 1	000	A09	5TH MON	0 / 1	000
A02	INPUT LEVEL	0 ～ 63	027	A10	SAP VCO	0 ～ 63	035
A03	FH MONITOR	0 / 1	000	A11	INPUT GAIN	0 / 1	000
A04	STEREO VCO	0 ～ 63	035	A12	FIL OFFSET	-128 ～ +127	000
A05	PILOT CAN	0 / 1	000	A13	BBE BASS	-128 ～ +127	+007
A06	FILTER	0 ～ 63	032	A14	BBE TREBLE	-128 ～ +127	000
A07	LOW SEP	0 ～ 63	027	A15	BASS	-128 ～ +127	-012
A08	HI SEP	0 ～ 63	028	A16	TREBLE	-128 ～ +127	-008

■DEFLECTION SYSTEM

Item No.	Item name	Variable range	Initial setting value	Item No.	Item name	Variable range	Initial setting value
D01	V.HEIGHT	0～127	027	D11	H EHT	0～7	001
D02	EW PARABORA	0～63	022	D12	EHT GAIN	0～7	002
D03	H.WIDTH	0～63	051	D13	ADJUSTMENT	0～15	000
D04	V.S-CORR	0～63	040	D14	H CENTER	0～255	172
D05	V.LINEARITY	0～63	039	D15	HORI FREQ ADJUSTMENT	0～255	141
D06	V.CENTER	0～63	023	D16	H. BLK	0～255	080
D07	TRAPEZIUM	0～63	029	D17	OSD OFFSET	0～127	044
D08	EW CORNER LOWER	0～15	008	D18	COMPULSION TWIN SCREEN	0～7	000
D09	EW CORNER UPPER	0～15	008	D19	COMPULSION DEF RST OUTPUT	0 / 1	000
D10	V.EHT	0～7	003	D20	COMPULSION 1080i	0 / 1	000

■PICTURE SYSTEM

(NTSC / 480i / 480p) (1/2)

Item No.	Item name	Variable range	NTSC		480i		480p	
			Standard	Theater	Standard	Theater	Standard	Theater
S01	SUB COLOR	0～127	078	058	078	058	080	062
S02	SUB TINT	0～127	078	069	078	069	070	060

(720p / 1080i / HDCP) (2/2)

Item No.	Item name	Variable range	720p / 1080i		HDCP			
			Standard	Theater	480p		1080i / 720p	
					Standard	Theater	Standard	Theater
S01	SUB COLOR	0～127	065	060	070	069	059	058
S02	SUB TINT	0～127	078	063	070	074	070	066

(NTSC / 480i) (1/2)

Item No.	Item name	Variable range	NTSC		480i	
			Standard	Theater	Standard	Theater
S03	SUB BRIGHT	0～255	134	133	134	133
S04	SUB CONTRAST	0～127	079	045	079	045
S05	SUB BRIGHT OFFSET	-128～127	–	–	–	–
S06	SUB CONTRAST OFFSET	-128～127	–	–	–	–

(480p / 720p / 1080i / HDCP) (2/2)

Item No.	Item name	Variable range	480p / 720p / 1080i		HDCP		SPLIT / FREEZE	
			Standard	Theater	Standard	Theater	Standard	Theater
S03	SUB BRIGHT	0～255	132	134	–	–	–	–
S04	SUB CONTRAST	0～127	082	047	–	–	–	–
S05	SUB BRIGHT OFFSET	-128～127	–	–	000	000	000	000
S06	CUB CONTRAST OFFSET	-128～127	–	–	000	000	-010	000

(NTSC / 480i / 480p / 720p / 1080i / HDCP)

Item No.	Item name	Variable range	NTSC		480i		480p		720p / 1080i / HDCP	
			Standard	Theater	Standard	Theater	Standard	Theater	Standard	Theater
S07	B-Y DEMODURATION	0～63	005	002	005	002	020	048	011	020
S08	R-Y DEMODULATION	0～7	007	000	007	000	007	000	003	000
S09	G-Y MATRIX SW	0～3	001	003	001	003	003	003	002	003

(NTSC / 480i) (1/3)

Item No.	Item name	Variable range	NTSC				480i			
			Standard		Theater		Standard		Theater	
			High	Low	High	Low	High	Low	High	Low
S10	R DRIVE	0～255	—	080	—	—	—	080	—	—
S11	R DRIVE OFFSET	-128～+127	+003	000	000	+008	+003	000	000	+008
S12	B DRIVE	0～255	—	074	—	—	—	074	—	000
S13	B DRIVE OFFSET	-128～+127	+006	000	000	-025	+060	000	000	-025

(480p / 720p / 1080i) (2/3)

Item No.	Item name	Variable range	480p				720p / 1080i			
			Standard		Theater		Standard		Theater	
			High	Low	High	Low	High	Low	High	Low
S10	R DRIVE	0～255	—	—	—	—	—	145	—	—
S11	R DRIVE OFFSET	-128～+127	000	000	000	000	+004	000	000	+007
S12	B DRIVE	0～255	—	—	—	—	—	150	—	—
S13	B DRIVE OFFSET	-128～+127	000	000	000	000	+006	000	000	-008

(HDCP) (3/3)

Item No.	Item name	Variable range	HDCP			
			Standard		Theater	
			High	Low	High	Low
S10	R DRIVE	0～255	—	—	—	—
S11	R DRIVE OFFSET	-128～+127	+004	000	000	+005
S12	B DRIVE	0～255	—	—	—	—
S13	B DRIVE OFFSET	-128～+127	+005	000	-010	-023

(NTSC / 480i / 480p / 720p / 1080i)

Item No.	Item name	Variable range	NTSC		480i		480p / 720p / 1080i		HDCP	
			Standard	Theater	Standard	Theater	Standard	Theater	Standard	Theater
S14	R CUT OFF	0～255	211	—	211	—	215	—	—	—
S15	R CUT OFF OFFSET	-128～+127	000	+003	000	+003	000	-001	000	+007
S16	G CUT OFF	0～255	050	—	050	—	050	—	—	—
S17	G CUT OFF OFFSET	-128～127	000	000	000	000	000	000	000	000
S18	B CUT OFF	0～255	052	—	052	—	059	—	—	—
S19	B CUT OFF OFFSET	-128～+127	000	+004	000	+004	000	-003	000	+005
S20	R CUT OFF SW	0～3	000	—	000	—	000	—	—	—
S21	B CUT OFF SW	0～3	001	—	001	—	001	—	—	—

(NTSC / 480i / OTHERS SIGNAL)

Item No.	Item name	Variable range	NTSC	480i	OTHERS SIGNAL
S22	BLACK GRAD CORR START LEVEL	0～15	015	015	015
S23	BLACK GRAD CORR GAIN	0～15	008	008	008
S24	WHITE GRAD CORR START LEVEL	0～15	000	000	000
S25	WHITE GRAD CORR GAIN	0～15	015	015	015
S26	WHITE CHARA CORR START LEVEL	0～15	002	002	000
S27	WHITE CHARA CORR GAIN	0～15	000	000	000

Item No.	Item name	Variable range	Standard	Theater
S28	ABL GAIN	0～15	015	015
S29	ABC START	0～15	015	008
S30	ACL GAIN	0～15	015	000
S31	ACL START	0～15	000	015
S32	CONTRAST LINK	0 / 1	000	000
S33	BLACK GRADIATION CORRECTION OFF	0 / 1	000	001
S34	WHITE GRADIATION CORRECTION OFF	0 / 1	000	001

(NTSC / 480i / 480p / 720p / 1080i / HDCP)

Item No.	Item name	Variable range	NTSC / 480i	480p	720p / 1080i	HDCP	
						480p	720p / 1080i
S35	TINT HD / NTSC	0 / 1	001	001	001	001	001

Item No.	Item name	Variable range	Standard	Theater
S36	ABL OFF	0 / 1	000	000
S37	ACL OFF	0 / 1	000	000
S38	DC TRANSMIT POLARITY	0 / 1	001	000
S39	DC TRANSMIT CORR	0 / 1	000	000
S40	BLAKING ON / OFF	0 / 1	000	000

(NTSC / 480i / OTHERS)

Item No.	Item name	Variable range	NTSC		480i		OTHERS SIGNAL	
			Standard	Theater	Standard	Theater	Standard	Theater
S41	DC REPRODUCE RATE	0～255	160	140	160	140	160	72

Item No.	Item name	Variable range	SPLIT	Regular	Theater	OTHERS SIGNAL
S42	ACL CONTROL	0～255	160	072	072	072

Item No.	Item name	Variable range	Setting Value	
			Standard	Theater
S43	CONTRAST LOWER LIMIT	-128～+127	-070	-127
S44	CONTRAST UPPER LIMIT	-128～+127	+017	+127
S45	BRIGHT LOWER LIMIT	-128～+127	-020	-127

(NTSC / 480i / OTHERS)

Item No.	Item name	Variable range	NTSC	480i	OTHERS SIGNAL
S46	EE THEATER BRIGHT	-128～+127	000	000	000
S47	EE THEATER CONTRAST	-128～+127	000	000	000

(ALL SIGNAL)

Item No.	Item name	Variable range	Setting value
S48	BRIGHT EE CONT. CORRECTION	0～31	008
S49	REFRAIN EE CONT. CORRECTION	0～31	027
S50	REFRAIN EE BRIGH OFFSET CORR (MAX)	0～127	004
S51	BRIGHT EE ACL CORR. COEFF.	0～255	085
S52	REFRAIN EE ACL CORR. COEFF.	0～255	140
S53	No use	0 / 1	000
S54	No use	0 / 1	000
S55	No use	0 / 1	000
S56	No use	0 / 1	000
S57	No use	0 / 1	000

■OTHERS

Item No.	Item name	Variable Range	Setting Value	Item No.	Item name	Variable Range	Setting Value
F01	EEPROM Ver 1	0～255	051	F32	DIRECT SELECT 2 PIC.	0 / 1	000
F02	EEPROM Ver 2	0～255	001	F33	CAPTION OSD OSCSELECT	0～7	002
F03	H.LINE ON (BRIGHT)	0～255	133	F34	4 PIC. HIGH SPEED SEARCH	0～255	040
F04	H.LINE OFF (BRIGHT)	0～255	140	F35	4 PIC. AGC REFLESH	0～255	000
F05	H.LINE CONTRAST	0～127	000	F36	4 PIC. HIGH SPEED WAIT 1	0～255	040
F06	C38 / C41 SW	0 / 1	001	F37	4 PIC. HIGH SPEED WAIT 2	0～255	020
F07	MODEL SELECT	0～255	000	F38	4 PIC. HIGH SPEED WAIT 3	0～255	040
F08	————————	———	———	F39	VSM SHIPPING MODE	0 / 1	000
F09	AUTO SCROLL ADJUST 1	0～15	002	F40	DVD	0～3	000
F10	AUTO SCROLL ADJUST 2	0～15	004	F41	2 PICTURE 16:9 MODE	0 / 1	000
F11	AUTO SCROLL ADJUST 3	0～15	004	F42	V/C DECODE H.MASK SETTING	0 / 3	000
F12	AUTO SCROLL ADJUST 4	0～15	005	F43	POWER OFF WHITE	0 / 1	000
F13	AUTO SCROLL ADJUST 5	0～15	006	F44	WHITE BACK ON/OFF	0 / 1	000
F14	AUTO SCROLL ADJUST 6	0～15	007	F45	————————	———	———
F15	AUTO SCROLL ADJUST 7	0～15	007	F46	————————	———	———
F16	Not use	0 / 1	000	F47	————————	———	———
F17	Not use	0 / 1	000	F48	————————	———	———
F18	Not use	0 / 1	000	F49	————————	———	———
F19	Not use	0 / 1	000	F53	S / N (RF) CORR.WIDTH	0～255	000
F20	Not use	0 / 1	000	F54	S / N (RF) CORR.START	0～255	000
F21	Not use	0 / 1	000	F55	S / N (BS) CORR.WIDTH	0～255	000
F22	Not use	0 / 1	000	F56	S / N (BS) CORR.START	0～255	000
F23	Not use	0 / 1	000	F57	S / N (COMP.) CORR.WIDTH	0～255	000
F24	V-CHIP ON/OFF (CANADA)	0 / 1	000	F58	S / N (COMP.) CORR.START	0～255	000
F25	EARTH MAGNETIC CORR. PICTURE	0～127	127	F59	S / N (S) CORR.WIDTH	0～255	000
F26	OSD OFFSET (480p / 720p) (HDCP / 480p)	0～63	033	F60	S / N (S) START	0～255	000
F27	OSD OFFSET (1080i / HDCP1080i)	0～63	018	F61	OCD OFFSET (HORI.)	0～127	048
F28	CH.PROGRAM SEARCH CYCLE	0～255	011	F62	ATT GAIN	0 / 1	000
F29	PIP FUNCTION ON / OFF	0 / 1	000	F63	V.HEIGHT OFFSET	-128～+127	000
F30	PIP 2 PICTURE	0 / 1	000	F64	TEXT MODE CONT.CORR.	-128～+127	000
F31	V.CHIP ON OFF	0 / 1	001				

(1/2)

Item No.	Item name	Variable Range	Setting Value				
			NTSC	480i	480p	1080i	720p
F50	SEP.LEVEL	0～3	000	002	002	002	002
F51	CLAMP PLUS	0 / 1	000	000	000	000	000
F52	HD PHASE	0～63	038	035	026	039	024

(2/2)

Item No.	Item name	Variable Range	Setting Value			
			HDCP 480p SIZE 1	HDCP 480p SIZE 2	HDCP720p	HDCP1080i
F50	SEP.LEVEL	0～3	002	002	002	002
F51	CLAMP PLUS	0 / 1	000	000	000	000
F52	HD PHASE	0～63	042	017	047	044

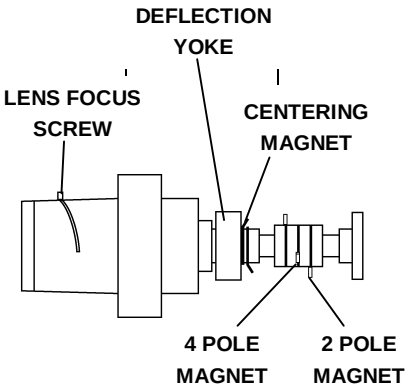
ADJUSTMENT

CHECK ITEMS

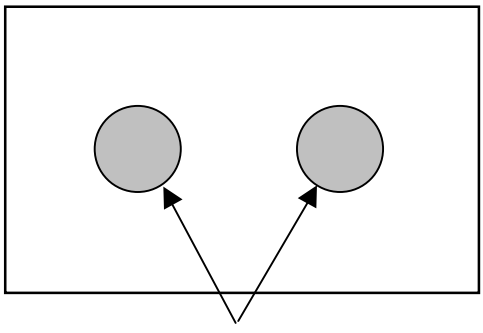
Item	Measuring Instrument	Test point	Adjustment Item	Description
B1 POWER SUPPLY check	**Signal generator** **DC Voltmeter**	**S1 connector** **5 pin:TP-91** **1 pin:TP-E(⏚)**		1. Receive a black and white signal (color off). 2. Connect the DC voltmeter to S1 connector 5 pin (TP-91) and TP-E(⏚) (S1 connector 1 pin). 3. Confirm that the voltage is DC140V±2V.
HIGH VOLTAGE check	**Signal generator** **High Voltage meter**	**CRT Anode**		1. Receive a white black signal. 2. Connect the high voltage meter between CRT anode and GND. 3. Check that the High Voltage DC 31.0kV ±1.0kV.
X-RAY PROTECTOR check	**Resistor** **6.8kΩ 1/6W** **±5%**	**S1 connector** **2 pin:X-Ray2** **3 pin:X-Ray1**		1. Connect resistor 6.8kΩ(1/6W, ±5%) between 2. 2 pin & 3 pin of the connector S1. 3. Confirm that the X-RAY protector functions operated.
H.FREQUENCY check	**Signal generator** **Remote control unit**		**D15 : H.FREQ.** **D19 : DEF.RST**	1. Receive the black & white signal. 2. Preset from 0 to 1 for D19＜DEF RST＞, to adjust D15: H.FREQ. and memorize data with MUTING key. 3. After adjustment, to preset from 1 to 0 for D19: DEF RST and Press the MUTING key to memorize data.

FOCUS & BEAM SPOT ADJUSTMENT

Item	Measuring instrument	Test point	Adjustment part	Description
FOCUS & BEAM SPOT adjustment	**Signal generator** **Similar adhesive (Securing adhesive)**		**G Def. Yoke (DY)** **R Def. Yoke (DY)** **B Def. Yoke (DY)** **[Projection unit]** **R LENS FOCUS screw** **G LENS FOCUS screw** **B LENS FOCUS screw** **[Projection unit (LENS ASS'Y)]** **R SCREEN VR** **G SCREEN VR** **B SCREEN VR** **[FOCUS PACK]** **4 pole magnet** **2 pole magnet** **[Projection unit (CRT neck)]** **R FOCUS VR** **G FOCUS VR** **B FOCUS VR** **[FOCUS PACK]**	1. Receive a cross-hatch signal. 2. Press the ASPECT and select the FULL mode. 3. If the picture tilted, adjust the R, G and B DY position to mark straight horizontal line. ■ **LENS FOCUS** 4. Makes a red single color. **NOTE** : When making a single color, It squeezes SCREEN VR in each one, or it does a lid to the lens in of the adjustment color and it makes it single color. 5. By turning the LENS FOCUS screw (in LENS ass'y), for optimum focus at the screen center. Check for absence of difference in the peripheral focus. If the peripheral focus is poor, slightly shift the center focus to obtain overall balanced focus. 6. In the same manner, produce green and blue single color and adjust their respective focus. 7. After adjustment, it fixes a screw. **NOTE** : There is not a difference in the focus in the top and the bottom, on either side, in the diagonal. When the difference of the focus is big, it removes a main lens, and it puts a washer between the main lens and the coupler and it adjusts it. ■ **BEAM SPOT** 8. Receive a dot pattern signal. 9. Makes a red single color. **NOTE** : When making a single color, It squeezes SCREEN VR in each one, or it does a lid to the lens in of the adjustment color and it makes it single color. 10. Turn the R FOCUS VR to set the dot diameter to about ϕ 30mm. 11. Turn the 4 pole magnet of the projection unit CRT neck and to where the dots at the screen center are nearly circular. 12. Return the R FOCUS VR to its original position (just focus). 13. Turn the 2 pole magnet of the CRT neck to minimize expansion of the dots. 14. Receive a crosshatch signal. 15. Adjust the overall screen focus. 16. In the same manner, adjust for the green and blue single color. focus. 17. Secure the 4 and 2 pole magnets with similar adhesive. ■ **CRT FOCUS** 18. Receive a crosshatch signal. 19. Makes a red single color. **NOTE** : When making a single color, It squeezes SCREEN VR in each one, or it does a lid to the lens in of the adjustment color and it makes it single color. 20. Adjust the R FOCUS VR for optimum focus at the position indicated in the figure. 21. In the same manner, adjust for the green and blue single color focus. 22. After adjustment, return the SCREEN VRs to their original positions. **NOTE** : **When moving screen VR, always return to original.**



PROJECTION UNIT & LENS ASS'Y
(CRT adjustment location)



CRT FOCUS adjustment point

CONVERGENCE & DEFLECTION ADJUSTMENT

- **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.**
- **At first the adjustment in FULL mode should be done, then the data for the other ASPECT mode is corrected in the respective value at the same time.**

FLOWCHART OF ADJUSTMENT

CAUTION

All adjustments of the DEF circuit for this model should be carried out under the status without convergence operation.
To enter the status without convergence operation turn the power on while pressing the service switch **S801** on the CONVERGENCE PWB.
As a result, you can get the screen as shown in Fig.1. Adjust the DEF circuit in order of the steps indicated by the downward arrows.

Note: When every adjustment of the DEF circuit has completed, start the adjustment of convergence.

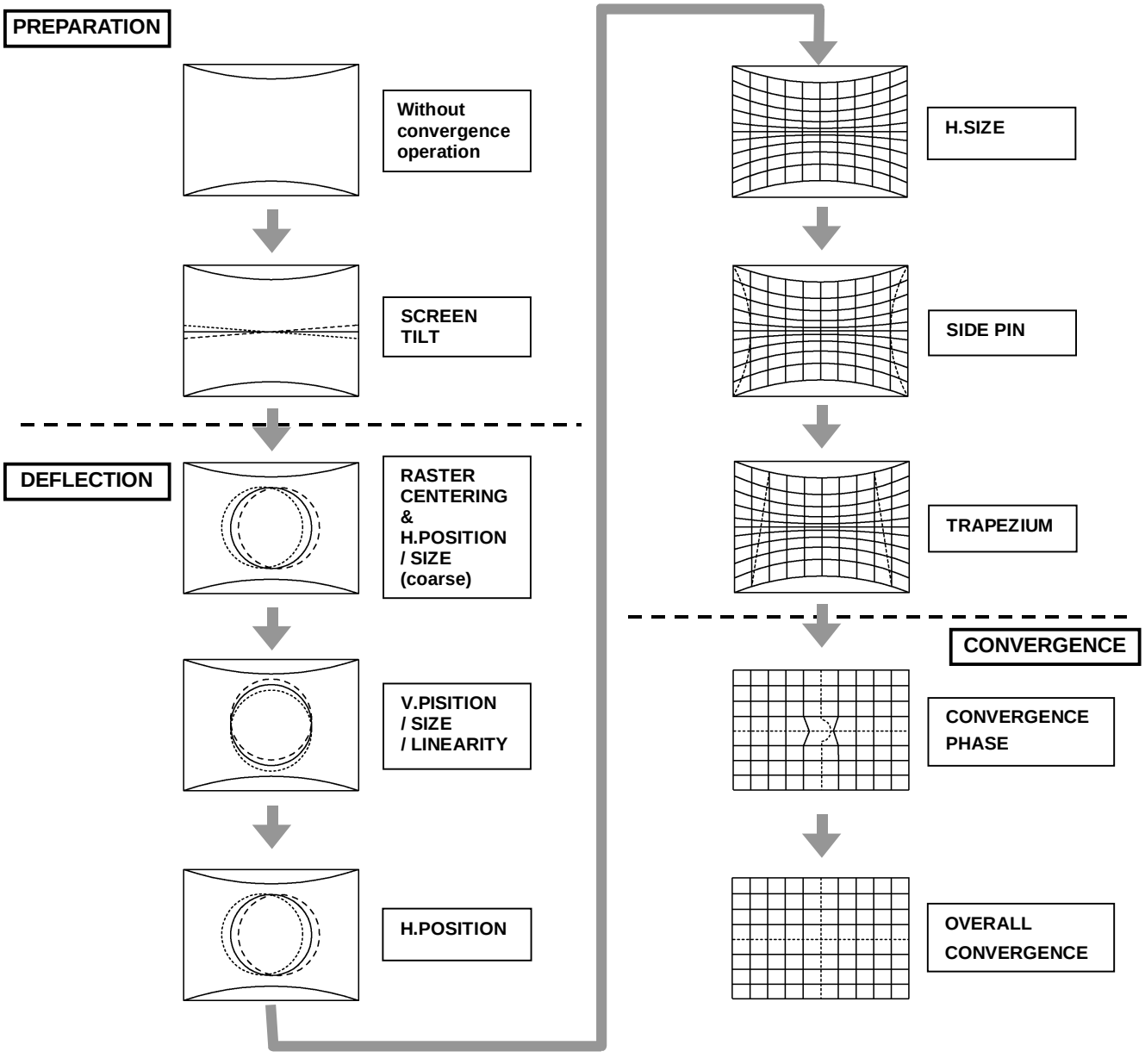
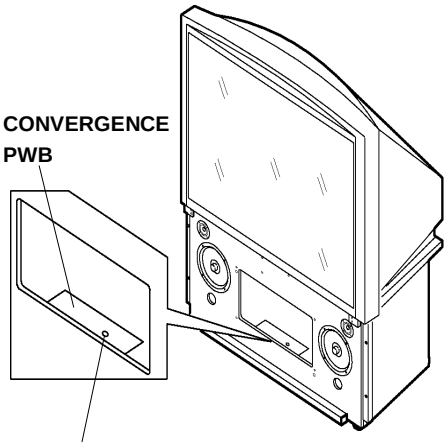
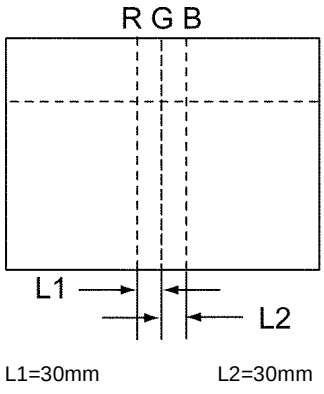


Fig.1

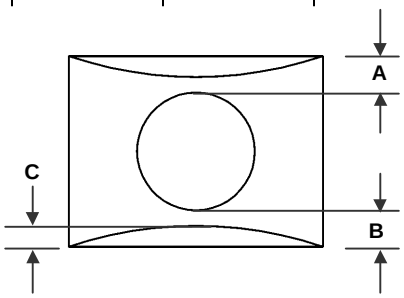
Item	Measuring instrument	Test point	Adjustment part	Description
SCREEN TILT adjustment	**Signal generator**		**SERVICE SW (S801) [CONVERGENCE PWB]** **G DEF. YOKE** **R DEF. YOKE** **B DEF. YOKE** **[PROJECTION UNIT]**	• Confirm correct FOCUS adjustment. 1. It pushes a power switch while pushing SERVICE SW **S801** on the CONVERGENCE PWB then it makes picture without convergence operation. 2. Receive a cross-hatch signal. 3. Makes a green single color. **NOTE** : When making a single color, It squeezes SCREEN VR in each one, or it does a lid to the lens in the adjustment color and it makes it single color. 4. Temporarily secure the G deflection yoke to the top of the neck and adjust the tilt of the deflection yoke so that the horizontal line at the center becomes flat. After adjustment, fasten the temporal screw. 5. Adjust the tilt of the R and B deflection yokes in the same manner as for green. **NOTE** : Make sure that the adjustment of CRT FOCUS is optimized at the center and at the fringe of the center in turn. If the proper adjustment has not been done, adjust FOCUS VR again.
RASTER CENTERING & H.POSITION / SIZE (coarse) adjustment	**Signal generator** **Remote control unit**		**SERVICE SW (S801) [CONVERGENCE PWB]** **G CENTERING magnet** **R CENTERING magnet** **B CENTERING magnet** **[DEF. YOKE]** **D03 : H-SIZE** **D14 : H-CENTER**	1. It pushes a power switch while pushing SERVICE SW **S801** on the CONVERGENCE PWB then it makes picture without convergence operation. 2. Receive a circle & cross-hatch signal. 3. Makes a green single color. **NOTE** : When making a single color, it squeezes SCREEN VR in each one, or it does a lid to the lens in the adjustment color and it makes it single color. 4. Select 1.PICTURE/SOUND from SERVICE MENU. 5. Select D03＜H-SIZE＞and shorten the level until and perpendicular amplitude of vibration with until the blanking in Left and Right and on either side can be seen. 6. Select D14＜H-CENTER＞and adjust H-CENTER to make the screen center and signal center. 7. Select D03＜H-SIZE＞and adjust H-SIZE to make screen picture approx. 92% of H-SIZE. 8. Press the MUTING key on the remote control unit and memorized all data. 9. Adjust the G CENTERING magnet to make horizontal and vertical line center as mechanical center of screen. 10. Red and blue color, too, are reflected by it. 11. Using R CENTERING magnet and B CENTERING magnet, adjusts for the line of the red and the blue to become the position of the left figure.

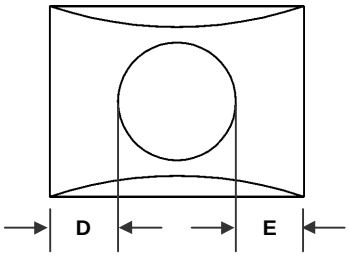


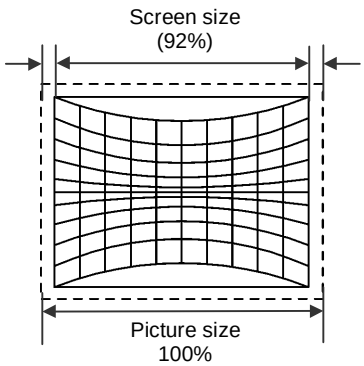


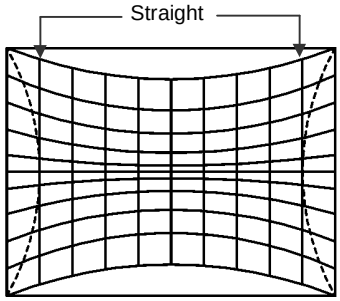
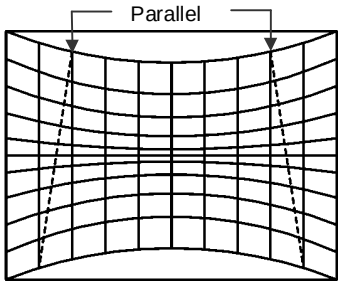
DEFLECTION CIRCUIT ADJUSTMENT

Item	Measuring instrument	Test point	Adjustment part	Description
V. POSITION / SIZE / LINEARITY adjustment	**Signal generator** **Remote control unit**		**D01 : V. SIZE** **D05 : V. LINEARITY** **D06 : V. CENTER** **SERVICE SW (S801) [CONVERGENCE PWB]**	1. It pushes a power switch while pushing SERVICE SW **S801** on the CONVERGENCE PWB then it makes picture without convergence operation. 2. Set the FULL mode. 3. Receive a circle pattern signal. 4. Select 1.PICTURE/SOUND from the SERVICE MENU. 5. Select D01＜V SIZE ＞, D05＜V LINEARITY＞, D06＜V CENTER＞ with the FUNCTION (▲/▼) key. 6. Adjust D06, D02 to make **A = B** (precision ±2mm), and adjust to make **C = 45mm** 7. Press the MUTING key and memorize the set value. **NOTE** : To memorize every time after finish adjustment on each mode. Do not adjust D04＜V. S-CORRECTION ＞ If it is different V position after adjust V linearity, to adjust V position.
H. POSITION adjustment			**D14 : H-CENTER**	8. Select D14＜H-CENTER＞ with FUNCTION (▲/▼) key. 9. Adjust D14 with FUNCTION (◀/▶) key and make **D = E** as shown figure. 10. Press the MUTING key and memorize the set value.
H. SIZE adjustment			**D03 : H-SIZE**	11. Receive a cross-hatch signal. 12. Select D03＜H-SIZE＞ with the FUNCTION (▲/▼) key. 13. Adjust D03 and make sure that the vertical screen size of the picture size is 92%. 14. Press the MUTING key and memorize the set value.







Item	Measuring instrument	Test point	Adjustment part	Description
SIDE PIN adjustment 			**D02: EW PARABOLA** **D08: EW CORNER LOWER** **D09: EW CORNER UPPER**	11. Select D02<EW PARABOLA>, D08<EW CORNER LOWER>, D09＜EW CORNER UPPER＞ with FUNCTION (▲/▼) key respectively. 16. Adjust D02, D08, D09 with FUNCTION (◀/▶) key and make the vertical lines at the left and right edges of the screen straight. 17. Press the MUTING key and memorize the set value.
TRAPEZIUM adjustment 			**D07: TRAPEZIUM**	18. Select D07＜TRAPEZIUM＞ with the FUNCTION (▲/▼) key. 19. Adjust D07 with (◀/▶)key and bring the vertical lines at the right and left edges of the screen parallel. 20. Press the MUTING key and memorize the set value.

CONVERGENCE ADJUSTMENT

Item	Measuring instrument	Test point	Adjustment part	Description
CONVERGENCE PHASE adjustment	**Signal generator** **Remote control unit**		**SERVICE SW (S801) [CONVERGENCE PWB]**	1. Press the SERVICE SW **S801** on the CONVERGENCE PWB to enter the dynamic adjustment mode. 2. Press the 100+ key on the remote control unit to select the green line. 3. Using the FUNCTION (▲) (CH+) key, intentionally expand the blinking horizontal green line as shown in the **Fig. 1**. 4. Press the SPLIT key on the remote control unit to enter the phase adjustment mode. 5. Using the FUNCTION (◀/▶) key, adjust the screen so that the point "**A**" is located between the cross-point of the dotted line and the vertical line on the left side as shown in the **Fig. 2**. 6. Press the SPLIT key again to return to the dynamic adjustment mode. 7. Press the 100+ key on the remote control unit to select the green line. 8. Return the point "**A**", which was intentionally expanded, to its original position. 9. Using the FUNCTION (◀) key, intentionally expand the vertical line as shown in the **Fig. 3**. 10. Press the SPLIT key to enter the phase adjustment mode. 11. Using the FUNCTION (▲/▼) key, adjust the screen so that the peak of the point "**B**" meets with the adjacent dotted line as shown in the **Fig. 4**. 12. Press the SPLIT key again to return to the dynamic adjustment mode. 13. Press the 100+ key to select the vertical green line. Then, using the FUNCTION (◀) key, return the point "**B**", which was intentionally expanded, to its original position. 14. Press the SPLIT key again to enter the phase adjustment mode. 15. Using the 2/5/4/6 key, adjust the screen so that the cross-point of the dotted line is positioned at the screen center on the screen. (**Fig. 5**) 16. Press the MUTING key and memorize the set value.

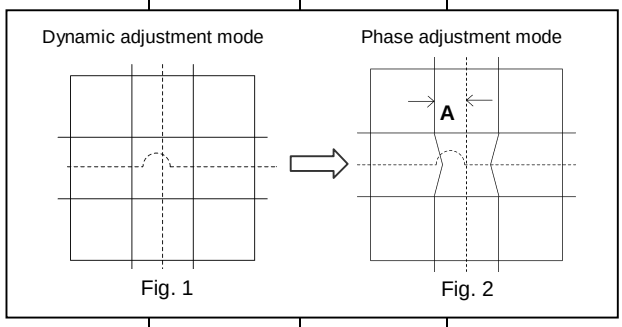


Fig. 1 Fig. 2

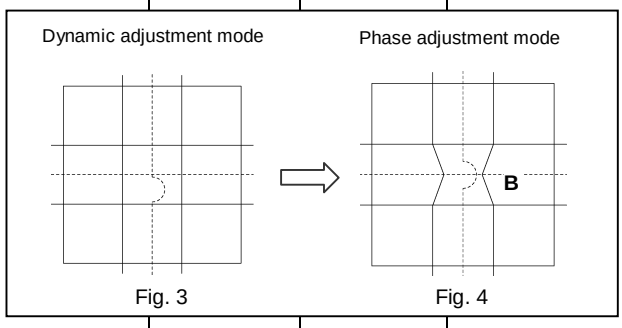
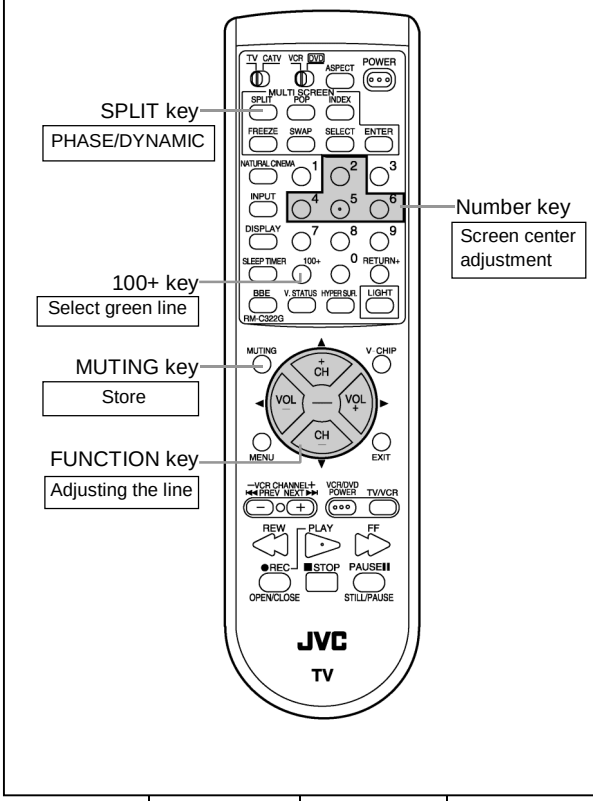


Fig. 3 Fig. 4

REMOTE CONTROL KEY POSITION



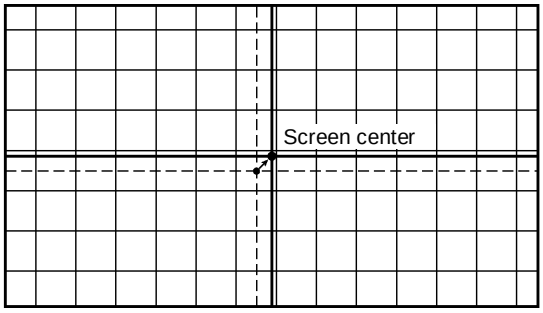


Fig. 5

Item	Measuring instrument	Test point	Adjustment part	Description
OVERALL CONVERGEN-CE adjustment	**Signal generator** **Remote control unit**		**SERVICE SW (S801) [CONVERGENCE PWB]**	1. Receive a NTSC signal. 2. Press the SERVICE SW **S801** on the CONVERGENCE PWB. 3. Appear the flashing cross-hatch pattern. 4. Press the 100+ key on the remote control unit to select green color. 5. Press MENU key to let green cross-hatch pattern to appear on screen. 6. Using the 2(up) / 4(left) / 5(down) / 6(right) of remote control key, move the flashing line. 7. Using the FUNCTION (▲/▼),(◀/▶) key, adjust the position on the screen as shown in Fig.1. 8. Sometime press INDEX key to do interpolation process. After finishing the adjustment press SELECT key twice to memorize. 9. Press 0 key on the remote control unit to select red color. 10. Repeat steps 5～8. 11. Press RETURN+ key on the remote control unit to select blue color. 12. Repeat steps 5～8. 13. When the adjustment has been completed, press the MUTING key and store the data on the memory. 14. Press 0 keys on the remote control unit five times and it changes a screen to the 7 × 5 adjustment point mode. 15. Repeat steps 4～13. 16. Press RETURN+ keys on the remote control unit five times and it changes a screen to the 13 × 7 adjustment point mode. 17. Repeat steps 4～13. 18. Press the SERVICE SW **S801** again.

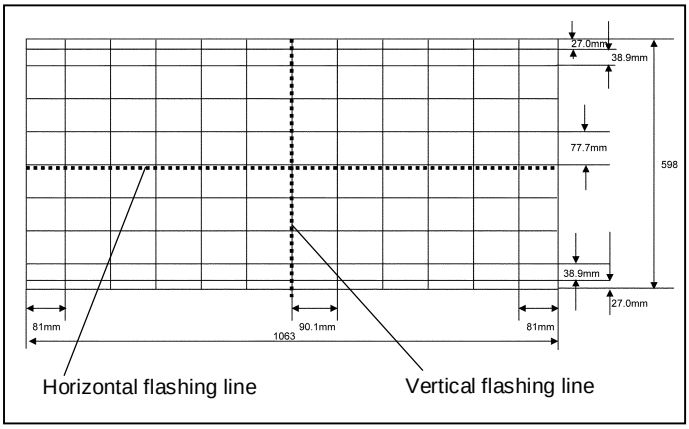
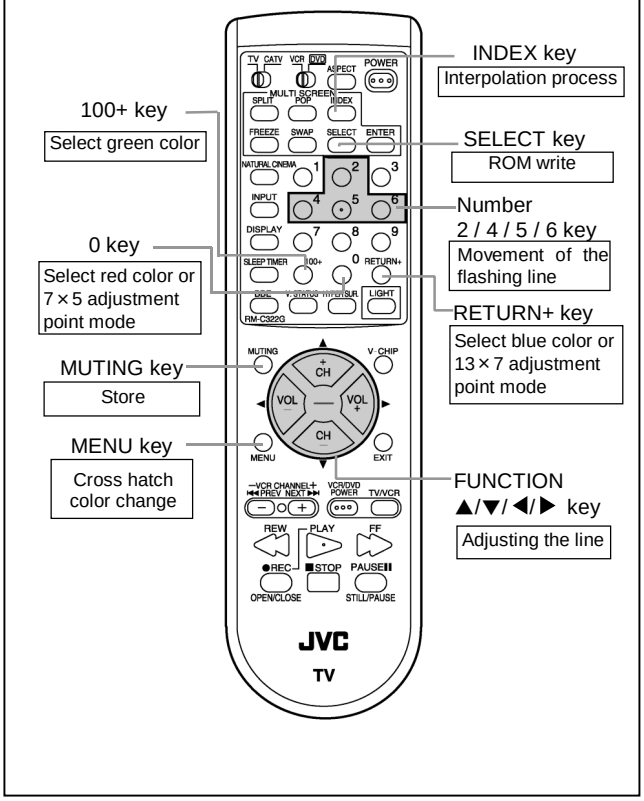


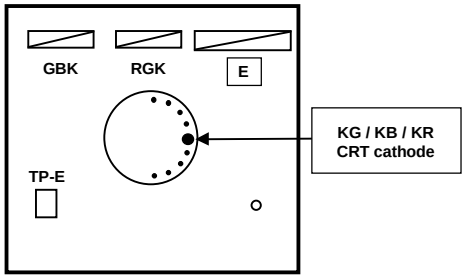
Fig.1

REMOTE CONTROL KEY POSITION

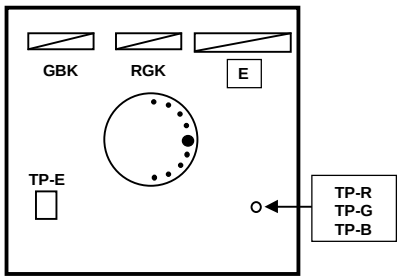


VIDEO ADJUSTMENT

<table>
<tr><th>Item</th><th>Measuring Instrument</th><th>Test point</th><th>Adjustment Item</th><th>Description</th></tr>
<tr><td>A-D CONVERTER OFFSET adjustment</td><td>Signal generator

Remote control unit</td><td>KG
[G CRT SOCKET PWB]
KB
[B CRT SOCKET PWB]
KR
[R CRT SOCKET PWB]</td><td>ADM013:
G OFFSET
ADM012:
R OFFSET
ADM014:
B OFFSET</td><td>∗ Select the STANDARD mode for the VIDEO STATUS.
1. Receive a whole black (0%) signal.
2. Select REGULAR mode of ASPECT mode.
3. Select that COLOR TEMP in set at the LOW mode.
4. Connect the oscilloscope to KG (G cathode) on the G CRT SOCKET PWB.
5. Select 8.PP from the SERVICE MENU.
6. Select ADM013＜G OFFSET＞.
7. Adjust ADM013 as 0% signal and outside from are set to same values.
8. Connect the oscilloscope to KB (B cathode) on the B CRT SOCKET PWB
9. Select ADM014＜B OFFSET＞.
10. Adjust ADM014＜B OFFSET＞ as 0% signal and outside from are set to same values.
11. Connect the oscilloscope to KR (R cathode) on the R CRT SOCKET PWB
12. Select ADM012＜R OFFSET＞.
13. Adjust ADM012＜R OFFSET＞ as 0% signal and outside from are set to same values.
14. Press the MUTING key to memorize.
15. After adjustment, data of ADM012, ADM013, ADM014 are used to adjustment of other signal.</td></tr>
<tr><td colspan="4"> 

CRT SOCKET PWB</td><td></td></tr>
<tr><td>RGB CUTOFF adjustment</td><td>Signal generator

Oscilloscope</td><td>TP-R
[R CRT SOCKET PWB]
TP-G
[G CRT SOCKET PWB]
TP-B
[B CRT SOCKET PWB]</td><td>S14: R CUTOFF
S16: G CUTOFF
S18: B CUTOFF</td><td>∗ Select the STANDARD mode for the VIDEO STATUS.
1. Receive half color bar signal (include -3%).
2. Select that COLOR TEMP in set at the LOW mode.
3. Connect the oscilloscope to TP-G.
4. Adjust S16＜G CUTOFF＞ to mach -3% DC level to 180V.
5. Press the MUTING key to memorize.
NOTE : Adjusting S16, change the only up. If DC level is low at the initial value of CUTOFF, adjust S03 (brightness).
6. Input 1080i black level pattern signal and input the value adjusted at NTSC to S16＜G CUTOFF＞.
7. Press the MUTING key to memorize.
8. Input 480i black level pattern signal and input the value adjusted at NTSC to S16＜G CUTOFF＞.
9. Press the MUTING key to memorize.
10. In case of TP-R, TP-B, repeat step 4.～6 above.
If the value of S14 or S18 is max or min, change S20＜R CUTOFF SW＞, S21＜B CUTOFF SW＞ and then adjust S14, S18.
11. Adjust each R / G / B screen VR on the FOCUS PACK, and glimmer +3% point of each R / G / B on the screen.</td></tr>
<tr><td colspan="4"> 

CRT SOCKET PWB</td><td></td></tr>
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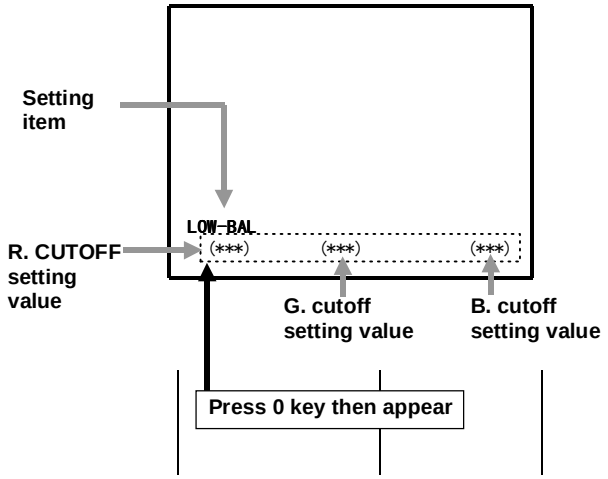
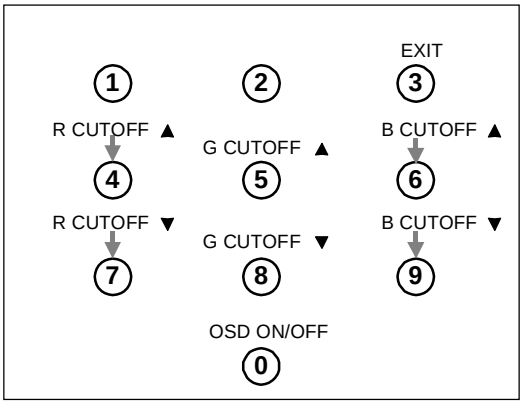
Item	Measuring Instrument	Test point	Adjustment Item	Description
WHITE BALANCE (Low Light) adjustment	**Signal generator** **Remote control unit**		**S14 : R CUTOFF** **S16 : G CUTOFF** **S18 : B CUTOFF** **S20 : R CUTOFF SW** **S21 : B CUTOFF SW**	∗ Select the STANDARD mode (all “000”) for the VIDEO STATUS. 1. Receive the NTSC black and white pattern signal (color off). 2. Select that COLOR TEMP is set at the LOW mode. 3. Set the initial setting values of the white balance (S14, S16, S18, S20, & S21 of Low Light) on the SERVICE MENU. 4. Select the 3.LOW LIGHT mode from the SERVICE MENU. 5. Press the 0 key, then setting values appear. 6. In crease the bright level to confirm low-light with FUNCTION key (▶). 7. Adjust low-light white balance with 4/7(R CUTOFF), 6/9 (B CUTOFF) key of number key. 8. Press the MUTING key for memorize. 9. Receive the 1080i black and white pattern signal. 10. Repeat steps 5.～8. above. 11. Receive the 480i black and white signal. 12. Repeat steps 5.～8. above.



REMOTE CONTROL UNIT



Setting item	Setting value		
	NTSC	480i	1080i
S14	211	211	215
S16	050	050	050
S18	052	052	059
S20	000	000	000
S21	001	001	001

Item	Measuring Instrument	Test point	Adjustment Item	Description
WHITE BALANCE (High Light) adjustment	**Signal generator** **Remote control unit**		**S10 : R DRIVE** **S12 : B DRIVE**	∗ Select the STANDARD mode (all "000") on the VIDEO STATUS. 1. Receive the NTSC black and white signal (color off). 2. Select that COLOR TEMP is set at the LOW mode. 3. Select the 4.HIGH-LIGHT, and set the initial setting values of the WHITE BALANCE (S10 & S12 of HIGH LIGHT) on the SERVICE MENU. 4. Press the 0 key, then setting values appear. 5. Make sure that the WHITE BALANCE tracking from the LOW-LIGHT through the HIGH-LIGHT has been properly done. (When the black and white signal (color off) is received, the natural white should be visible.) 6. Input the 1080i which and black signal. 7. Repeat steps 3.～5. above. 8. Input the 480i black and white signal. 9. Repeat steps 3.～5. above. 10. Press the MUTING key and memorize the set values.

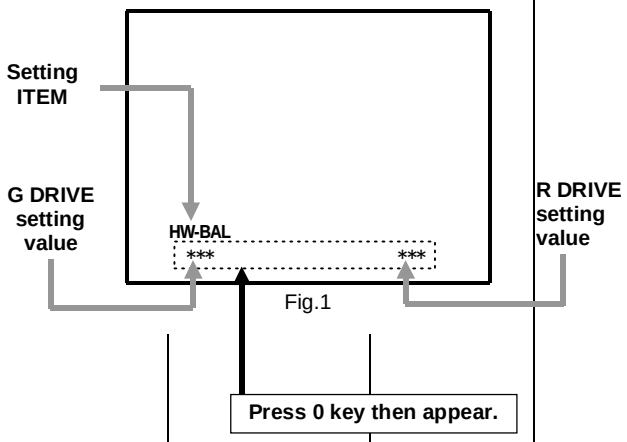


Fig.1

INITIAL SETTING VALUE

Item	Setting value (STANDARD LOW)		
	NTSC	480i	1080i
S10	080	080	078
S12	074	074	070

REMOTE CONTROL UNIT

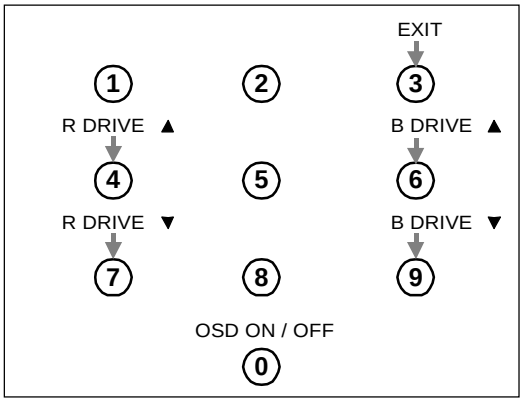


Fig.2

Item	Measuring Instrument	Test point	Adjustment Item	Description
SPLIT WHITE BALANCE (High Light) adjustment	**Signal generator** **Remote control unit**		**ADS012 : R OFFSET** **ADS014 : B OFFSET**	1. Select SPLIT mode. 2. Receive the NTSC black & white signal both the picture. 3. At first to adjust ADS012＜R OFFSET＞ and ADS014 ＜B OFFSET＞, next to adjust the white level on right picture same as left screen (Fig.1). 4. Press the MUTING key and memorize the set values.

TWIN PICTURE

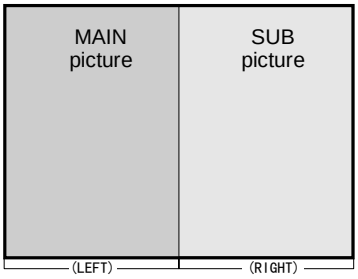


Fig.1

Item	Measuring Instrument	Test point	Adjustment Item	Description
SUB BRIGHT adjustment	**Remote control unit**		**S03 : SUB BRIGHT**	1. Receive the NTSC black & white signal. 2. Select 1.PICTURE/SOUND from SERVICE MENU. 3. Select S03＜SUB BRIGHT＞ with FUNCTION (▲/▼) key. 4. Set the initial setting value with the FUNCTION (◀/▶) key. (Table1) 5. Adjust S03, not to flash part of black on the screen. 6. Press the MUTING key and memorize the set values. 7. Select THEATER / LOW white balance, and then repeat steps 3～7 above. 8. Receive 1080i black and white and select STANDARD / LOW, and then repeat steps 3～7 above. 9. Receive 1080i black and white signal and select THEATER / LOW mode, and then repeat steps 3～7 above. 10. Input 480i black and white signal, and select STANDARD / LOW mode, and then repeat steps 3～7 above. 11. And then select THEATER / LOW mode, repeat steps 3～7 above.

S03:SUB BRIGHT

Item \ Signal	INITIAL SETTING VALUE					
	NTSC		480i		1080i	
	STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER
Setting value	134	133	134	133	132	134

Table1

Item	Measuring Instrument	Test point	Adjustment Item	Description
SUB CONTRAST adjustment	**Remote control unit**		**S04 : SUB CONT.**	1. Receive the NTSC black & white signal. 2. Enter the SERVICE MENU of 1.PICTURE/SOUND Item. 3. Select S04＜SUB CONT＞ with FUNCTION (▲/▼) key. 4. Set the Initial setting value with FUNCTION (◀/▶) key. (Table2) 5. If the contrast is not the best with the initial setting value, make fine adjustment of the S04＜SUB CONT.＞ until you get the optimum contrast. 6. Press the MUTING key and memorize the set values. 7. Select THEATER / LOW. 8. Receive the 1080i black and white signal and then repeat steps 3～7 above. 9. Input the 480p black and white signal and then repeat steps 3～7 above.

S04:SUB CONTRAST

Signal / Item	INITIAL SETTING VALUE					
	NTSC		480i		1080i	
	STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER
Setting value	078	045	079	045	082	047

Table2

Item	Measuring Instrument	Test point	Adjustment Item	Description
SPLIT SUB BRIGHT / SUB CONTRAST adjustment	**Remote control unit**		**ADS013 : SUB BRIGHT** **VCS008 : SUB CONTRAST**	1. Select SPLIT mode and then receive the NTSC black & white signal to both pictures. 2. Enter the SERVICE MENU of 1.PICTURE/SOUND Item. 3. Adjust ADS013＜SUB BRIGHT＞ to right picture is same as left picture. 4. Adjust VCS008＜SUB CONTRAST＞ to right picture is same as left picture. 5. Press the MUTING key and memorize the set values.

Item	Measuring Instrument	Test point	Adjustment Item	Description
SUB COLOR / SUB TINT / B-Y GAIN adjustment	**Signal generator** **Oscilloscope** **Remote control unit**	**TP-R** **TP-B** **TP-E(⏚)**	**S01 : SUB COLOR** **S02 : SUB TINT** **S07 : B-Y GAIN**	1. Input the 480i color bar from computer terminal. 2. Select STANDARD and FULL mode. 3. Enter the SERVICE mode of 1.PICTURE/SOUND. 4. Connect the Oscilloscope to TP-R. 5. Adjust S01＜SUB COLOR＞ and S02＜SUB TINT＞ to be following setting value **A**[V]. (Refer to the bellow table) 6. Select THEATER and then adjust S01＜SUB COLOR＞ and S02＜SUB TINT＞ to be following setting value **B**[V] same as above. (Refer to the bellow table) 7. Connect the Oscilloscope to TP-B. 8. Select STANDARD and then adjust S07＜B-Y GAIN＞ to be setting value **C**[V]. (Refer to the bellow table) 9. Select THEATER and then adjust S07＜B-Y GAIN＞ to be setting value **D**[V]. (Refer to the bellow table) 10. Receive 1080i color bar and then repeat steps 3.～8. above. 11. Receive 480p color bar and then repeat steps 3.～8. above. 12. Confirm that low-light is not different after adjusting color, Tint and B-Y Gain. If it is green or magenta, to adjust low-light again. If adjust again, to set offset value again. 13. Press the MUTING key and memorize the set values.

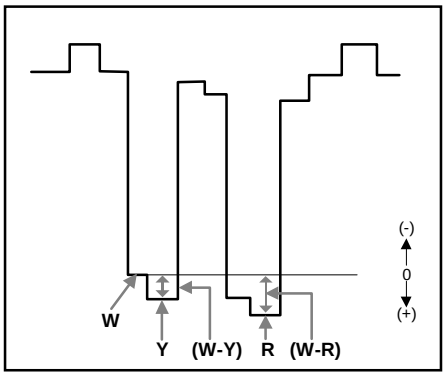


Fig.1

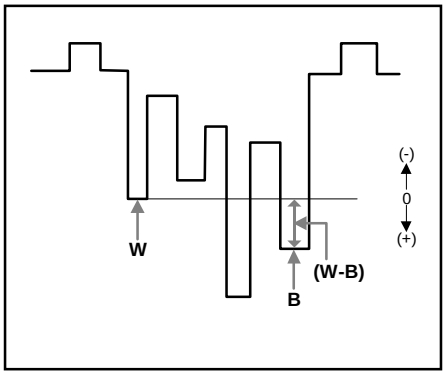


Fig.2

Setting item / Signal	Setting value A[V]		Setting value B[V]		Setting value C[V]	Setting value D[V]
	Standard		Theater		Standard	Theater
	S01(W-R)	S02(W-Y)	S01(W-R)	S02(W-Y)	S07(W-B)	S07(W-B)
NTSC	+28	+16	+19	+7	+7	+8
1080i	+7	+6	+5	+7	+7	-24
480i	+22	+13	+7	+1	+1	-24
480p	+19	+16	+11	+2	+2	-30

Table

1. Input the NTSC COLOR / TINT data is 480i COLOR / TINT data offset value (Standard and Theater).
2. Receive the NTSC COLOR BAR from antenna terminal and then select STANDARD mode.
3. Connect the Oscilloscope to TP-R.
4. Enter 8.PP from service menu.
5. Adjust VCM04＜SUB COLOR＞ and VCM01＜SUB TINT＞ to be following setting value **A**[V]. (Refer to the bellow table)
6. Select THEATER and then adjust S01＜SUB COLOR＞ and S02＜SUB TINT＞ to be following setting value **B**[V] same as above. (Refer to the bellow table)
7. Connect the Oscilloscope to TP-B.
8. Select standard and then adjust S07＜B-Y GAIN＞ to be setting value **C**[V]. (Refer to the bellow table)
9. Select theater and then adjust S07＜B-Y GAIN＞ to be setting value **D**[V]. (Refer to the bellow table)
10. Confirm that low-light is not different after adjusting COLOR, TINT and B-Y GAIN. If it is green or magenta, to adjust low-light again. If adjust again, to set offset value again.
11. Press the MUTING key and memorize the set values.

Item	Measuring Instrument	Test point	Adjustment Item	Description
DIGITAL INPUT (HDCP) SUB COLOR / SUB TINT/ B-Y GAIN adjustment	**Signal generator** **Remote control unit**	**TP-R** **TP-B** **TP-E(⏚)**	**S01:SUB COLOR** **S02:SUB TINT**	● COLOR, TINT,B-Y GAIN adjustment at 1080i and 480p should be finished. 1. Input HDCP (digital) 1080i signal. 2. Select STANDARD on VIDEO STATUS. 3. Enter to SERVICE MENU. 4. Input the same value adjusted at 1080i STANDARD to the setting value S01, S02. 5. Select THEATER on VIDEO STATUS. 6. Input the same value adjusted at 1080i THEATER to setting value S01, S02. 7. Input HDCP 480p 720×480 dots signal. 8. Select STANDARD on VIDEO STATUS. 9. Input the same value adjusted at 480p STANDARD to the setting value S01, S02. 10. Select THEATER on VIDEO STATUS. 11. Input the same value adjusted at 480p THEATER to the setting value S01, S02. 12. Press the MUTING key and memorize the set values.

Item	Measuring Instrument	Test point	Adjustment Item	Description
SPLIT SUB COLOR / SUB TINT ajustment	**Signal generator** **Oscilloscope** **Remote Control unit**	**TP-R**	**VCS004: SUB DECODER COLOR** **VCS001: SUB DECODER TINT**	1. Select SPLIT mode. 2. Receive COLOR BAR signal to sub (right) screen and PEDESTAL signal to main (left) screen (Fig.1). 3. Enter the SERVICE MENU of 8.PP Item. 4. Connect the oscilloscope to TP-R. 5. Adjust VCS004＜SUB DECODER COLOR＞, VCS001 ＜SUB DECODER TINT＞ to adjustment point **(A)**[V] (Fig.2). 6. Press the MUTING key and memorize the set values.

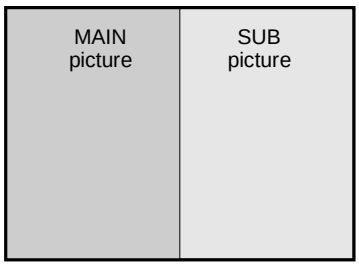
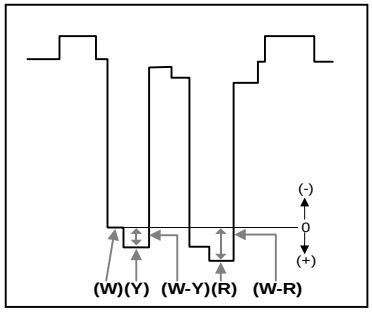


Fig.1



setting value

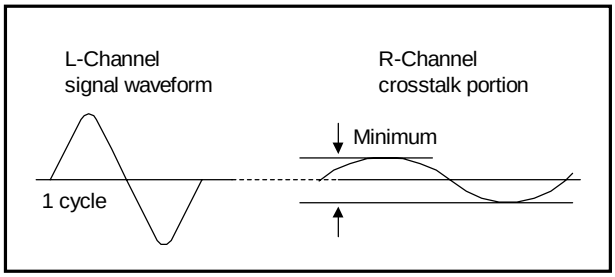
	Adjustment Point (A[V])	
(A)	**VCS004(W-R)**	**VCS001C(W-Y)**
	+37V	+7V

Fig.2

MTS adjustment

Item	Measuring Instrument	Test point	Adjustment Item	Description
MTS INPUT LEVEL check	**Remote control unit**		**A02 : IN LEVEL**	1. Select 1.PICTURE / SOUND from SERVICE MENU. 2. Select the A02＜IN LEVEL＞ with FUNCTION (▲/▼) key. 3. Verify that the A02＜IN LEVEL＞ is set at its initial setting value.
MTS STEREO VCO adjustment	**TV audio multiplex signal generator** **Frequency counter** **Remote control unit**	**AUDIO OUT R output**	**A03 : FH MONITOR** **A04 :STEREO VCO**	1. Receive the RF signal (non-modulated sound signal) from the antenna terminal. 2. Select the A03＜FH MONITOR＞ with FUNCTION (▲/▼) key, and change the setting value from 0 to 1. 3. Connect the frequency counter to R output pin of the AUDIO OUT. 4. Select the A04＜STEREO VCO＞ with FUNCTION (▲/▼) key. 5. Set the initial setting value of the No.4 STEREO VCO with the FUNCTION (◀/▶) key. 6. Adjust the A04＜STEREO VCO＞ so that the frequency counter will display 15.73kHz±0.1kHz. ∗ *The frequency counter indication should be stable.* 7. Select the A03＜FH MONITOR＞ with FUNCTION (▲/▼) key, and reset the setting value from 1 to 0.
MTS SAP VCO adjustment	**TV audio multiplex signal generator** **Frequency counter** **Remote control unit**	**S2 Connector 3-pin:GND 4-pin:SOA [RECEIVER PWB]** **AUDIO OUT R output**	**A09 : 5FH MON.** **A10 : SAP VCO**	1. Receive the RF signal (non-modulated sound signal) from the antenna terminal. 2. Connect between pin ④ of S2 connector and GND (Pin ③ of S2 connector) through 1MΩ resistor. 3. Select the A09＜5FH MON＞ with FUNCTION (▲/▼) key, and reset the setting value from 0 to 1. 4. Connect the frequency counter to R output pin of the AUDIO OUT. 5. Select the A10＜SAP VCO＞ with FUNCTION (▲/▼) key. 6. Set the initial setting value of A10＜SAP VCO＞ with of FUNCTION (◀/▶) key. 7. Adjust the A10＜SAP VCO＞ so that the frequency counter will display 78.67kHz±0.5kHz. ∗ *The frequency counter indication should be stable.* 8. Select the A09＜5FH MON＞ with FUNCTION (▲/▼) key, and reset the setting value from 1 to 0.
MTS FILTER check	**TV audio multiplex signal generator** **Oscilloscope** **Remote control unit**	**S2 Connector 2-pin:R [RECEIVER PWB]**	**A05 : PILOT** **A06 : FILTER**	1. Receive the RF signal (MTS pilot signal) from the antenna terminal. 2. Select the A05＜PILOT＞ with FUNCTION (▲/▼) key, and reset the setting value from 1 to 0. 3. Connect the oscilloscope to ② pin of S2 connector. 4. Select the A06＜FILTER＞ with FUNCTION (▲/▼) key. 5. Adjust the A06: FILTER so that the waveform will because minimum. 6. Select the A05＜PILOT＞ with FUNCTION (▲/▼) key, and reset the setting value from 1 to 0.

Item	Measuring Instrument	Test point	Adjustment Item	Description
MTS SEPARATION adjustment	**TV audio multiplex signal generator** **Oscilloscope** **Remote control unit**	**AUDIO OUT** **L output** **R output**	**A07 : LOW SEP.** **A08 : 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 L OUTPUT pin of the AUDIO OUT, and display one cycle portion of the 300Hz signal. 3. Change the connection of the oscilloscope to R OUTPUT pin of the AUDIO OUT, and enlarge the voltage axis. 4. Select the A07＜LOW SEP.＞ with FUNCTION (▲/▼)key. 5. Set the initial setting value of the A07＜LOW SEP.＞ with the FUNCTION (◀/▶) key. 6. Adjust the A07＜LOW SEP.＞ so that the stroke element of the 300Hz signal will become minimum. 7. Change the signal to 3kHz, and similarly adjust the A08 ＜HI SEP.＞.



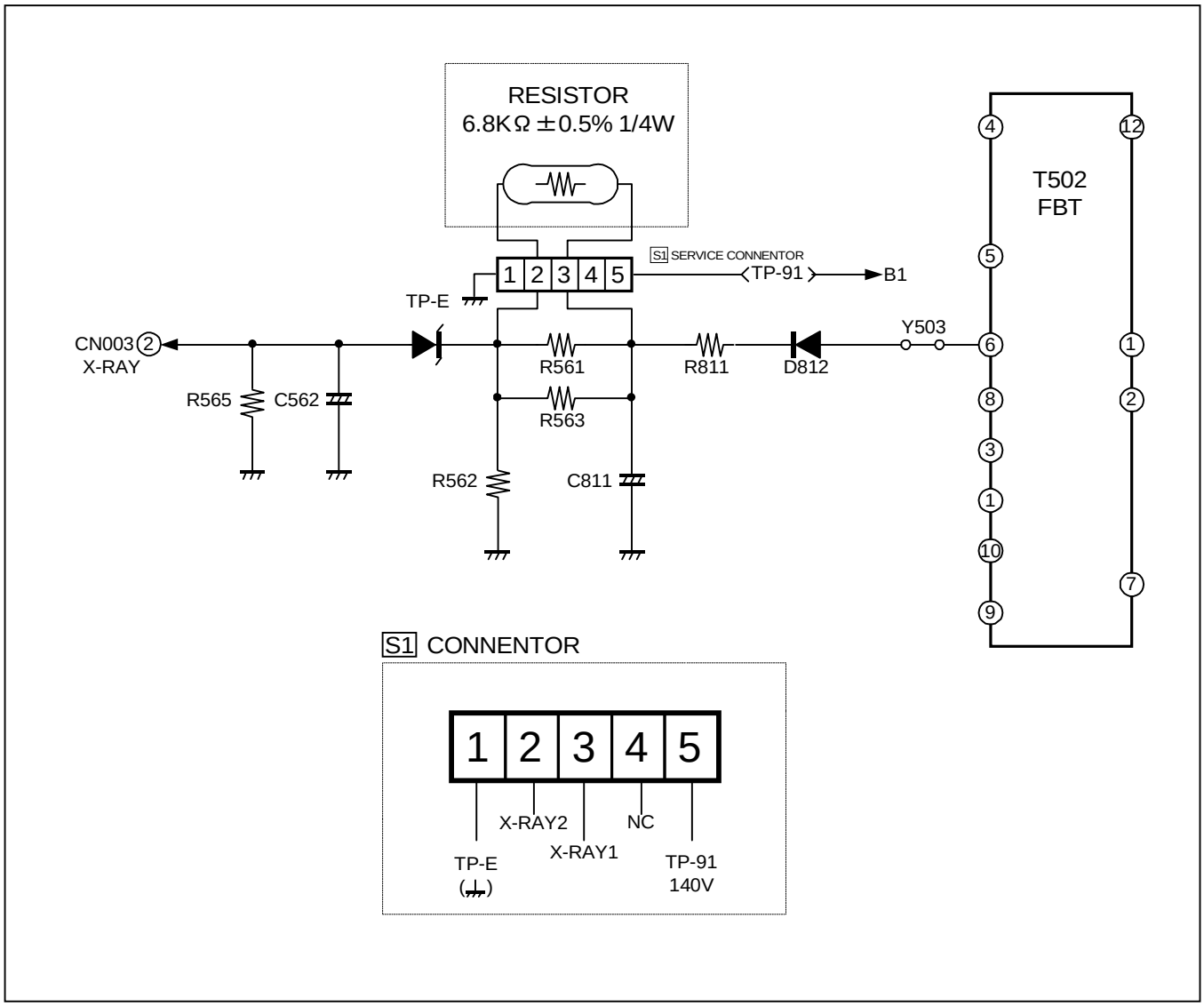
HOW TO CHECK THE HIGH VOLTAGE HOLD DOWN CIRCUIT

1. HIGH VOLTAGE HOLD DOWN CIRCUIT

After repairing the high voltage hold down circuit.
This circuit shall be checked to operate correctly.

2. CHECKING OF THE HIGH VOLTAGE HOLD DOWN CIRCUIT

(1) Turn the power sw ON.
(2) As shown in figure bellow, set the resistor (between **S2** connector **1** & **5**).
(3) Make sure that the screen picture disappears (no raster).
(4) Temporarily unplug the power cord.
(5) Remove the resistor (between **S2** connector **1** & **5**).
(6) Again plug the power cord, make sure that normal pictures is displayed on the screen.



TROUBLESHOOTING

SELF CHECK FUNCTIONS

This model has self-check functions that inform of the failure of the TV by detecting abnormality. Operational state is always monitored and the identified is memorized on the record.

How to enter the SELF-CHECK mode

1. During the stand-by mode, turn the power on while pressing the volume (▼) button on the TV set.

How to exit from the SELF-CHECK mode

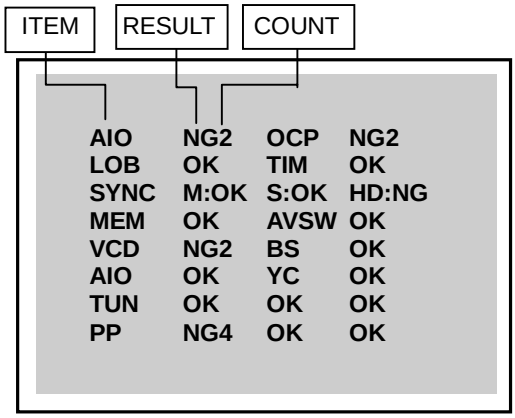
1. By using the remote control unit, turn the power off. At this time, the failure record is cleared.
2. Take off the AC plug from the wall outlet. At this time, the failure record is not cleared.

- **SELF CHECK DISPLAY**

  The self-check results are shown on the following display.
  Method of indication when the raster is not displayed (Fig.1).

  Each failure is shown by turning POWER LED on and off at specified intervals.

Item	POWER LED ON / OFF intervals
X-ray protection	Turning on and off 0.1-second intervals
B1 Over-current protection	Turning on and off 1-second intervals
Low B short protection	Turning on and off 2-second intervals



SELF-CHECK SCREEN

- Explanation **for activation of self-check functions**

  For X-ray protection, B1 over-current protection and low-B protection, the power of the TV is turned off if NG is detected.
  Immediately after the power is turned off, POWER LED will be turning on and off.
  When the power is turned off, you cannot turn the power on again until the AC plug is taken out and put in again.
- Because of the timing of Vcc start-up and shut-down of the IC connecting to the I^2C bus during which the power is turned on and off, the operation may be interpreted as an error.
  In order to avoid the misinterpretation, the self-check functions should be started at about 3 seconds after the power is turned on.
- The latest failure is stored on the record at the end.
  The failure record for each check item is counted to the number of 9 at the maximum, When more than 9 failures are stored on the record, the counter remains stopped at 9.

Indication	Check item	Details of detection	Method of detection
XRAY	X-ray protection	Operation of X-ray protection circuit.	At about 3 seconds after the power is turned on, the self-check function starts. If NG is detected for 200ms, the power is turned off automatically.
OCP	B1 Over-current protection	An B1 over-current is detected.	At about 3 seconds after the power is turned on, the self-check function starts. If NG is detected for 200ms, the power is turned off automatically.
LOB	Low B protection	Operation of low B short protection circuit.	At about 3 seconds after the power is turned on, the self-check function starts. If NG is detected for 200ms, the power is turned off automatically.
SYNC	Presence or absence of synchronized signal	Presence of synchronized signal. HD : HD system M : NTSC main S : NTSC sub	When entering the self-check mode, “OK” is shown. While running the mode with picture signal, if the synchronized signal is disappeared, “NG” is shown.
MEM	E^2PROM memory	ACK is returned when I^2C traffic is carried out.	The state is monitored every time when I^2C traffic is carried out. Then the state is counted as a failure if ACK is not returned.
AVSW	AV switch	Ditto, MM1519 and CXA2069Q	Ditto
VCD	Video chroma	Ditto, AN5392	Ditto
BS	BS tuner	Ditto, BS tuner module	Ditto
AIO	Audio	Ditto, BD3869	Ditto
YC	3DY/C	Ditto, upd64083	Ditto
TUN	RF tuner	Ditto, RF tuner	Ditto
PP	P & P	Ditto, AMDP2(TMX57128)	Ditto
IP	IP	Ditto, JCC5054	Ditto
GCR	GCR	Not used	Ditto
TIM	Timer	The power frequency is changed as follows : 50Hz→60Hz 60Hz→50Hz	Periodically check the power frequency by counting the AC pulse and monitor whether or not the frequency is changed except for the time immediately after resetting.

PARTS LIST

CAUTION

- The parts identified by the ⚠ 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
±1%	±2%	±5%	±10%	±20%	±30%	+30% -10%	+50% -10%	+80% -20%	+100% -0%

CONTENTS

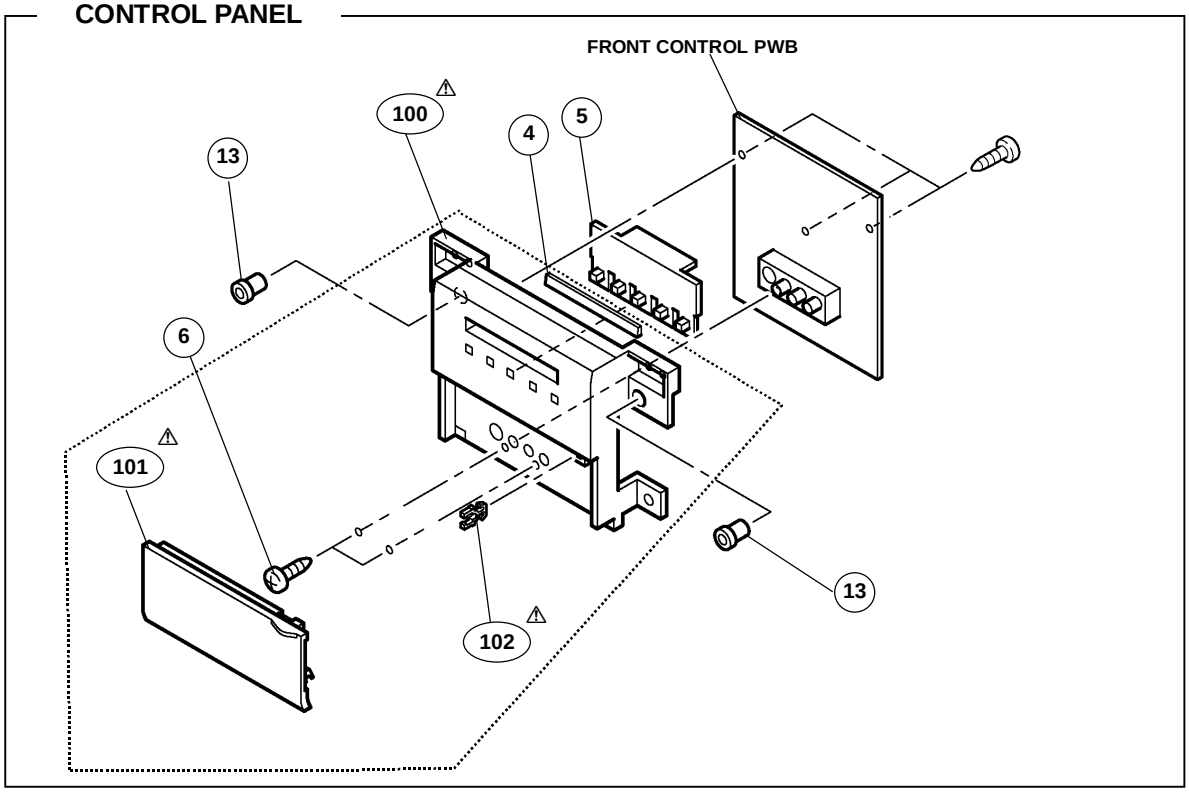
USING PW BOARD & REMOTE CONTROL UNIT

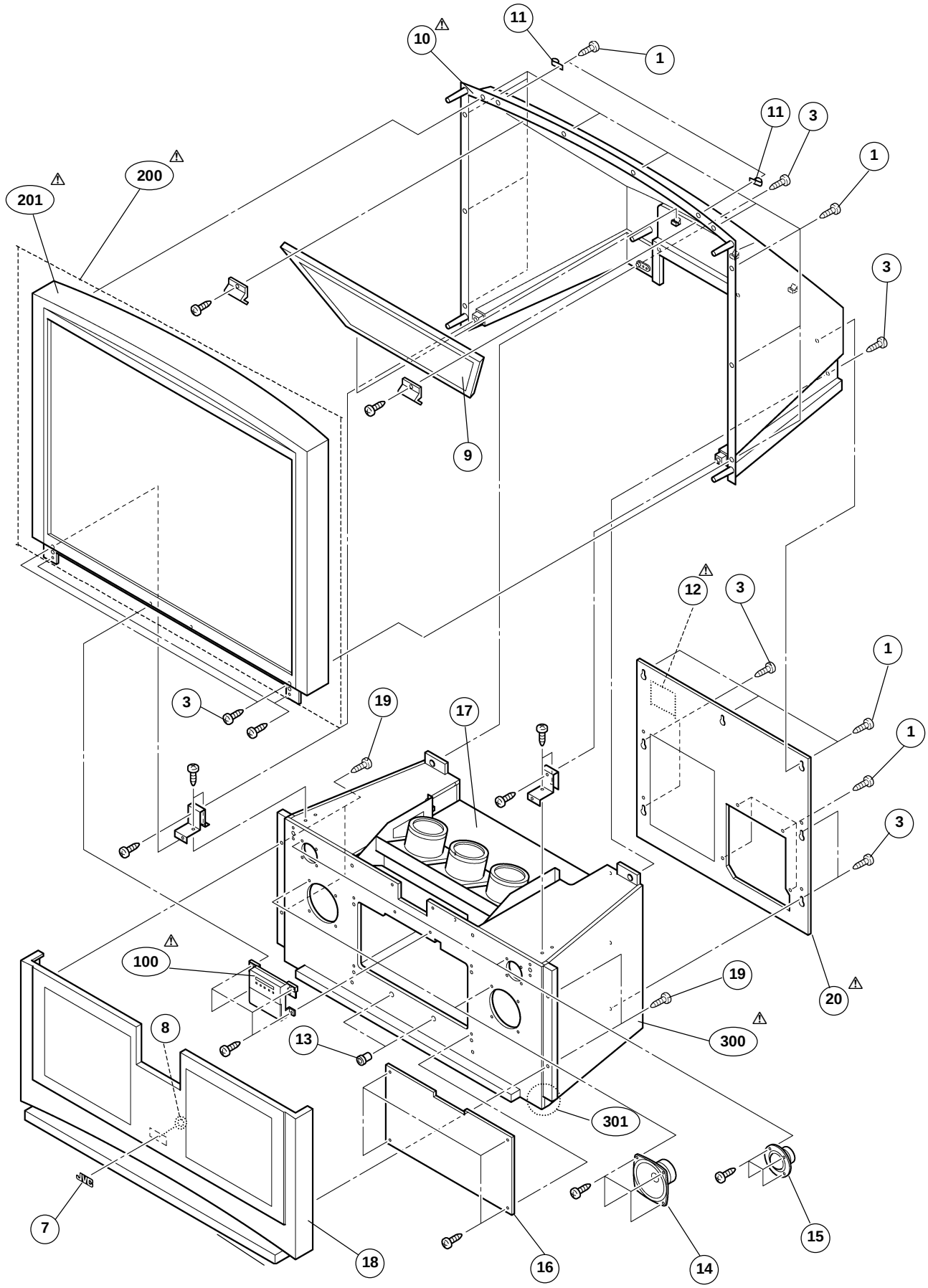
⚠	Model / PWB ASS'Y	AV-48WP30
	MAIN PWB ASSY	SSB-1051A-M2
	POWER&DEF. PWB ASSY	SSB-2051A-M2
	R CRT SOCKET PWB ASSY	SSB-3151A-M2
	G CRT SOCKET PWB ASSY	SSB-3251A-M2
	B CRT SOCKET PWB ASSY	SSB-3351A-M2
	CONVERGENCE PWB ASSY	SSB-5051A-M2
	R VM PWB ASSY	SSB-7151A-M2
	G VM PWB ASSY	SSB-7251A-M2
	B VM PWB ASSY	SSB-7351A-M2
	FRONT CONTROL PWB ASSY	SSB0L051A-M2
	FRONT I/F PWB ASSY	SSB0L251A-M2
	RECEIVER PWB ASSY	SSB0R251A-M2
	CENTER SPEAKER PWB ASSY	SSB0A051A-M2
	AV JACK PWB ASSY	SSB0J051A-M2
	LINE FILTER PWB ASSY	SSB-9051A-M2
	DEF. OSC. PWB ASSY	SSB0H051A-M2
	CONVERGENCE OSD PWB ASSY	SSB0T051A-M2
	REMOCON SENSOR PWB ASSY	SSB-8051A-M2
	DIGITAL INPUT MODULE PWB	SSB-7851A-M2
	I-P CONVERT MODULE PWB	SSB0D051A-M2
	REMOTE CONTROL UNIT	RM-C322G-1A

EXPLODED VIEW PARTS LIST (Ⅰ)

⚠	Ref.No.	Part No.	Part Name	Description
	1	QYSBSFG4016M	TAPPING SCREW	(x 19)
	3	QYSBSAG4018M	TAPPING SCREW	(x 8)
	4	LC31749-001A-A	LED LENS	
	5	LC31751-001A-A	KNOB	
	6	QYSBSF3012M	TAPPING SCREW	(x 2)
	7	CM47752-006	BRAND MARK	
	8	QYNSS3000P	PUSH NUT	
	9	LC31733-001A-A	MIRROR	
⚠	10	LC11247-001C-A	BACK COVER	
	11	LC40690-001A	CLAMP	(x 2)
⚠	12	LC31139-001A-A	RATING LABEL	
	13	LC41237-001A	RUBBER CATCH	(x 4)
	14	QAS0104-001	SPEAKER	(x 2) SP01-02
	15	QAS0105-001	SPEAKER	(x 2) SP03-04
	16	LC31757-001B-A	FRONT BOARD	
	17	LC20981-001B-A	SHADING BOARD	
	18	LC11251-001B-A	SPEAKER GRILL	
	19	QYSBSFG4020M	TAPPING SCREW	(x 4)
⚠	20	LC20982-001A-A	BACK BOARD	
⚠	100	LC31883-001B-A	CONTROL ASSY	Inc.No.101～102
⚠	101	LC31829-001C-A	DOOR	
⚠	102	PU60109	CATCHER	
⚠	200	48WP30-SC-SA	SCREEN ASSY	Inc.No.201 (SERVICE)
⚠	201	LC11245-001C-A	FRONT PANEL	
⚠	300	LC11248-001A-A	BODY	Inc.No.301
	301	CM36396-00B-A	CASTER	(x 4)

EXPLODED VIEW (Ⅰ)




10
11
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11
3
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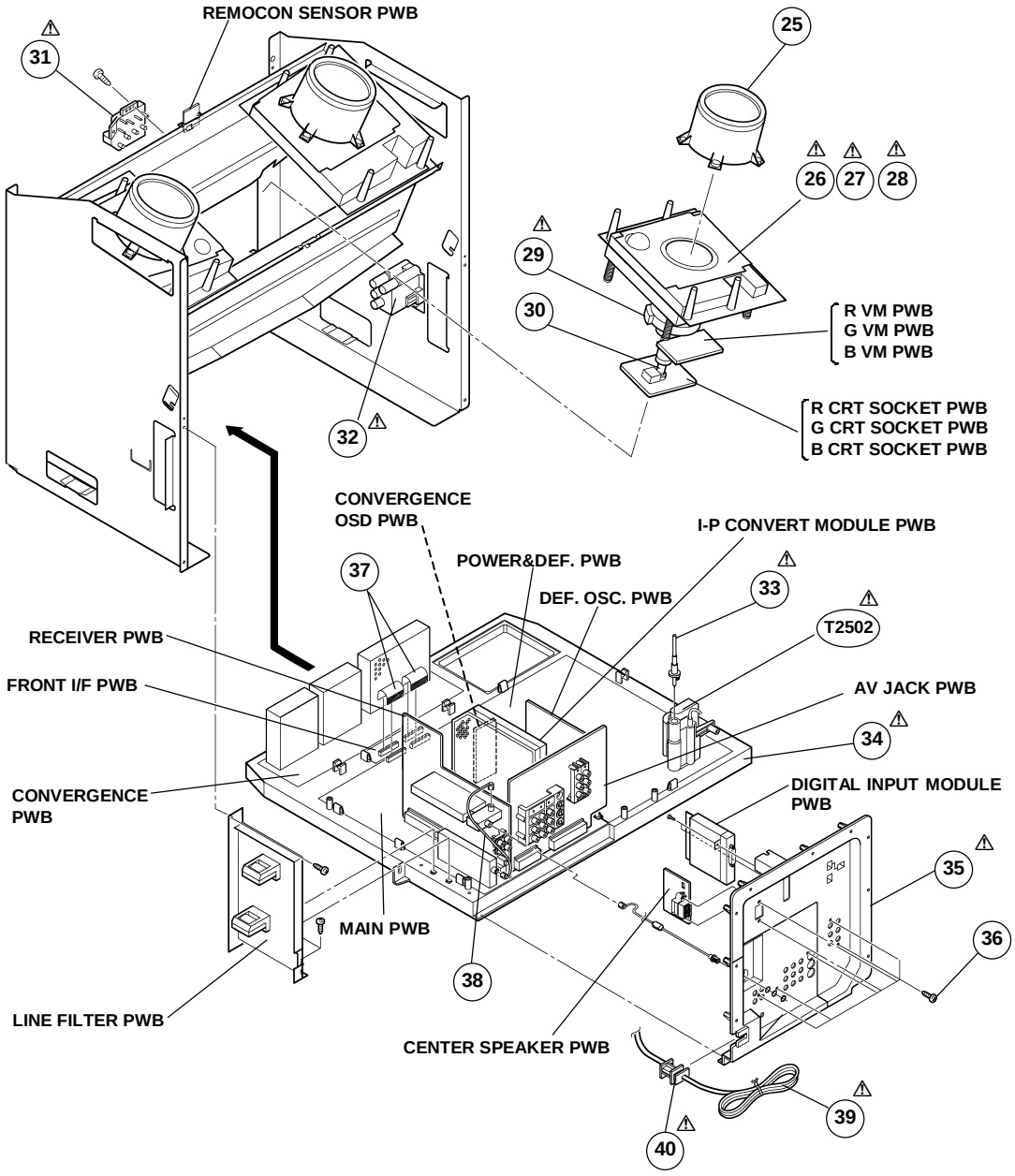
200
201
3
9
12
3
1
3
19
17
1
3
100
19
20
8
13
300
301
7
18
16
14
15

EXPLODED VIEW PARTS LIST (Ⅱ)

⚠	Ref.No.	Part No.	Part Name	Description
	25	LC31735-001A-A	PJ LENS D250	(x3)
⚠	26	R CRT SA-M2	R CRT ASSY	
⚠	27	G CRT SA-M2	G CRT ASSY	
⚠	28	B CRT SA-M2	B CRT ASSY	
⚠	29	QQD0069-001	DEF YOKE	(x3)
	30	QAL0398-001	PC MAGNET	(x3)
⚠	31	QAE0006-001	FOCUS PACK	
⚠	32	QAE0005-001	HV DIVIDER	
⚠	33	QNZ0563-001	ANODE WIRE ASSY	
⚠	34	LC11249-001A-A	CHASSIS BASE	
⚠	35	LC11250-001B-A	AV BOARD	
	36	QYSBSF3012M	TAPPING SCREW	(x7)
	37	CHFD125-06BD	FFC WIRE	(x2)
	38	WJX0014-001A	E-COAXIAL	
⚠	39	QMPD200-200-JC	POWER CORD	
⚠	40	LC20106-001D-A	CORD CLAMP	
⚠	T2502	QQH0113-001	FBT	

EXPLODED VIEW (Ⅱ)



PRINTED WIRING BOARD PARTS LIST

MAIN P.W. BOARD ASS'Y (SSB-1051A-M2)

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R1001	NRSA63J-222X	MG R	2.2kΩ 1/16W J
	R1004	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R1005-06	NRSA63J-473X	MG R	47kΩ 1/16W J
	R1007	NRSA63J-152X	MG R	1.5kΩ 1/16W J
	R1011	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1013	NRSA63J-101X	MG R	100Ω 1/16W J
	R1014	NRSA63J-223X	MG R	22kΩ 1/16W J
	R1020	NRSA63J-473X	MG R	47kΩ 1/16W J
	R1021	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1022-23	NRSA63J-101X	MG R	100Ω 1/16W J
	R1024	NRSA63J-391X	MG R	390Ω 1/16W J
	R1025	NRSA63J-182X	MG R	1.8kΩ 1/16W J
	R1050-52	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1101	NRSA63J-473X	MG R	47kΩ 1/16W J
	R1102-04	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1117	QRN143J-0R0X	C R	0.0Ω 1/4W J
	R1122	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1131	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1133	NRSA63J-121X	MG R	120Ω 1/16W J
	R1134	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1135	NRSA63J-121X	MG R	120Ω 1/16W J
	R1136	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1137	NRSA63J-121X	MG R	120Ω 1/16W J
	R1140-41	NRSA63J-222X	MG R	2.2kΩ 1/16W J
	R1143	NRSA63J-101X	MG R	100Ω 1/16W J
	R1144	NRSA63J-222X	MG R	2.2kΩ 1/16W J
	R1145	NRSA63J-471X	MG R	470Ω 1/16W J
	R1147	NRSA63J-681X	MG R	680Ω 1/16W J
	R1149	NRSA63J-681X	MG R	680Ω 1/16W J
	R1153-54	NRSA63J-221X	MG R	220Ω 1/16W J
	R1157	NRSA63J-470X	MG R	47Ω 1/16W J
	R1158-59	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1161	NRSA63J-222X	MG R	2.2kΩ 1/16W J
	R1163-65	NRSA63J-224X	MG R	220kΩ 1/16W J
	R1166	NRSA63J-471X	MG R	470Ω 1/16W J
	R1167	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1174	NRSA63J-101X	MG R	100Ω 1/16W J
	R1175-77	NRSA63J-224X	MG R	220kΩ 1/16W J
	R1179	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1180-82	NRSA63J-221X	MG R	220Ω 1/16W J
	R1183-86	NRSA63J-101X	MG R	100Ω 1/16W J
	R1187-89	NRSA63J-224X	MG R	220kΩ 1/16W J
	R1190	NRSA63J-101X	MG R	100Ω 1/16W J
	R1198	NRSA63J-271X	MG R	270Ω 1/16W J
	R1199	NRVA63D-102X	MF R	1.0kΩ 1/16W±0.5%
	R1202-03	NRSA63J-101X	MG R	100Ω 1/16W J
	R1213-14	NRSA63J-101X	MG R	100Ω 1/16W J
	R1218	NRSA63J-822X	MG R	8.2kΩ 1/16W J
	R1219	NRSA63J-331X	MG R	330Ω 1/16W J
	R1220-21	NRSA63J-101X	MG R	100Ω 1/16W J
	R1224-25	NRSA63J-101X	MG R	100Ω 1/16W J
	R1226-27	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1228	NRSA63J-222X	MG R	2.2kΩ 1/16W J
	R1229	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1230	NRSA63J-101X	MG R	100Ω 1/16W J
	R1231	NRSA63J-221X	MG R	220Ω 1/16W J
	R1232	NRSA63J-562X	MG R	5.6kΩ 1/16W J
	R1234	NRSA63J-562X	MG R	5.6kΩ 1/16W J
	R1235	NRSA63J-221X	MG R	220Ω 1/16W J
	R1236	NRSA63J-562X	MG R	5.6kΩ 1/16W J
	R1241-42	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1250	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R1251	NRSA63J-101X	MG R	100Ω 1/16W J
	R1252	NRSA63J-152X	MG R	1.5kΩ 1/16W J

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R1253	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1254	NRSA63J-393X	MG R	39kΩ 1/16W J
	R1258	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1260	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1264	NRSA63J-152X	MG R	1.5kΩ 1/16W J
	R1265	NRSA63J-153X	MG R	15kΩ 1/16W J
	R1268	NRSA63J-272X	MG R	2.7kΩ 1/16W J
	R1269	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R1270	NRSA63J-222X	MG R	2.2kΩ 1/16W J
	R1271	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R1272-73	NRSA63J-101X	MG R	100Ω 1/16W J
	R1274	NRSA02J-394X	MG R	390kΩ 1/10W J
	R1275-76	NRSA63J-101X	MG R	100Ω 1/16W J
	R1278	NRSA63J-471X	MG R	470Ω 1/16W J
	R1279	NRSA63J-331X	MG R	330Ω 1/16W J
	R1280	NRSA63J-101X	MG R	100Ω 1/16W J
	R1282	NRVA63D-103X	MF R	10kΩ 1/16W±0.5%
	R1283	NRSA63J-682X	MG R	6.8kΩ 1/16W J
	R1284	NRSA63J-391X	MG R	390Ω 1/16W J
	R1301	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1302	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R1303	NRSA63J-392X	MG R	3.9kΩ 1/16W J
	R1304	NRSA63J-101X	MG R	100Ω 1/16W J
	R1306	NRSA63J-105X	MG R	1MΩ 1/16W J
	R1307	NRSA63J-123X	MG R	12kΩ 1/16W J
	R1308	NRSA63J-222X	MG R	2.2kΩ 1/16W J
	R1309	NRSA63J-124X	MG R	120kΩ 1/16W J
	R1310	NRSA63J-272X	MG R	2.7kΩ 1/16W J
	R1311-12	NRSA63J-101X	MG R	100Ω 1/16W J
	R1313	NRSA63J-222X	MG R	2.2kΩ 1/16W J
	R1314	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1317	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1318	NRSA63J-821X	MG R	820Ω 1/16W J
	R1319-22	NRSA63J-222X	MG R	2.2kΩ 1/16W J
	R1323	NRSA63J-104X	MG R	100kΩ 1/16W J
	R1324-25	NRSA63J-221X	MG R	220Ω 1/16W J
	R1326	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1327	NRSA63J-221X	MG R	220Ω 1/16W J
	R1328-29	NRSA63J-101X	MG R	100Ω 1/16W J
	R1330	NRSA63J-182X	MG R	1.8kΩ 1/16W J
	R1331	NRSA63J-223X	MG R	22kΩ 1/16W J
	R1332	NRSA63J-182X	MG R	1.8kΩ 1/16W J
	R1333	NRSA63J-104X	MG R	100kΩ 1/16W J
	R1334-37	NRSA63J-151X	MG R	150Ω 1/16W J
	R1338	NRSA63J-182X	MG R	1.8kΩ 1/16W J
	R1339	NRSA63J-104X	MG R	100kΩ 1/16W J
	R1340-41	NRSA63J-151X	MG R	150Ω 1/16W J
	R1342	NRVA63D-102X	MF R	1.0kΩ 1/16W±0.5%
	R1343	NRVA63D-122X	MF R	1.2kΩ 1/16W±0.5%
	R1344-45	NRSA63J-471X	MG R	470Ω 1/16W J
	R1346-48	NRSA63J-680X	MG R	68Ω 1/16W J
	R1349	NRSA63J-471X	MG R	470Ω 1/16W J
	R1350	NRSA63J-563X	MG R	56kΩ 1/16W J
	R1352	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1353	NRSA63J-223X	MG R	22kΩ 1/16W J
	R1354	NRSA63J-471X	MG R	470Ω 1/16W J
	R1355	NRSA63J-562X	MG R	5.6kΩ 1/16W J
	R1359	NRSA63J-101X	MG R	100Ω 1/16W J
	R1363	NRSA63J-101X	MG R	100Ω 1/16W J
	R1364	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1365	NRSA63J-682X	MG R	6.8kΩ 1/16W J
	R1366	NRSA63J-471X	MG R	470Ω 1/16W J
	R1367	NRSA63J-222X	MG R	2.2kΩ 1/16W J
	R1368	NRSA63J-103X	MG R	10kΩ 1/16W J

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R1369	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1370	NRVA63D-182X	MF R	1.8kΩ 1/16W±0.5%
	R1371	NRSA63J-222X	MG R	2.2kΩ 1/16W J
	R1373	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R1374	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R1377	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1378	NRSA63J-152X	MG R	1.5kΩ 1/16W J
	R1379	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1380	NRSA63J-562X	MG R	5.6kΩ 1/16W J
⚠	R1381	NRVA63D-472X	MF R	4.7kΩ 1/16W±0.5%
	R1382	NRSA63J-151X	MG R	150Ω 1/16W J
	R1383	NRVA63D-332X	MF R	3.3kΩ 1/16W±0.5%
	R1384-86	NRSA63J-221X	MG R	220Ω 1/16W J
⚠	R1387	NRVA63D-472X	MF R	4.7kΩ 1/16W±0.5%
	R1388	NRSA63J-471X	MG R	470Ω 1/16W J
	R1389	NRVA63D-272X	MF R	2.7kΩ 1/16W±0.5%
	R1390	NRSA63J-153X	MG R	15kΩ 1/16W J
	R1391-92	NRSA63J-221X	MG R	220Ω 1/16W J
	R1395	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1396	NRSA63J-561X	MG R	560Ω 1/16W J
	R1397	NRSA63J-223X	MG R	22kΩ 1/16W J
	R1399	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R1401	NRSA63J-101X	MG R	100Ω 1/16W J
	R1408	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1415	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1430	NRSA63J-101X	MG R	100Ω 1/16W J
	R1432	NRSA63J-682X	MG R	6.8kΩ 1/16W J
	R1434	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1435	NRSA63J-473X	MG R	47kΩ 1/16W J
	R1441	NRSA63J-223X	MG R	22kΩ 1/16W J
	R1442	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1450	NRSA63J-221X	MG R	220Ω 1/16W J
	R1451	NRSA63J-182X	MG R	1.8kΩ 1/16W J
	R1452	NRSA63J-101X	MG R	100Ω 1/16W J
	R1453	NRSA63J-391X	MG R	390Ω 1/16W J
	R1454	NRSA63J-561X	MG R	560Ω 1/16W J
	R1455	NRSA63J-562X	MG R	5.6kΩ 1/16W J
	R1456	NRSA63J-223X	MG R	22kΩ 1/16W J
	R1463	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1464	NRSA63J-122X	MG R	1.2kΩ 1/16W J
	R1465	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1467	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1468	NRSA63J-101X	MG R	100Ω 1/16W J
	R1469	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R1470	NRSA63J-563X	MG R	56kΩ 1/16W J
	R1472	NRSA63J-101X	MG R	100Ω 1/16W J
	R1473	NRSA63J-152X	MG R	1.5kΩ 1/16W J
	R1474	NRSA63J-562X	MG R	5.6kΩ 1/16W J
	R1475	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1477	NRSA63J-562X	MG R	5.6kΩ 1/16W J
	R1478	NRSA63J-152X	MG R	1.5kΩ 1/16W J
	R1479	NRSA63J-101X	MG R	100Ω 1/16W J
	R1480	NRSA63J-223X	MG R	22kΩ 1/16W J
	R1481	NRSA63J-101X	MG R	100Ω 1/16W J
	R1482	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1483	NRSA63J-182X	MG R	1.8kΩ 1/16W J
	R1484	NRSA63J-221X	MG R	220Ω 1/16W J
	R1485	NRSA63J-391X	MG R	390Ω 1/16W J
	R1486	NRSA63J-561X	MG R	560Ω 1/16W J
	R1487	NRSA63J-562X	MG R	5.6kΩ 1/16W J
	R1488	NRSA63J-223X	MG R	22kΩ 1/16W J
	R1490	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1491	NRSA63J-122X	MG R	1.2kΩ 1/16W J
	R1492-93	NRSA63J-102X	MG R	1kΩ 1/16W J

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R1495	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1496	NRSA63J-101X	MG R	100Ω 1/16W J
	R1497	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R1498	NRSA63J-563X	MG R	56kΩ 1/16W J
	R1501-02	NRSA63J-221X	MG R	220Ω 1/16W J
	R1503	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1507-08	NRSA63J-101X	MG R	100Ω 1/16W J
	R1514	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1515	NRSA63J-221X	MG R	220Ω 1/16W J
	R1516	NRSA63J-682X	MG R	6.8kΩ 1/16W J
	R1517	NRSA63J-221X	MG R	220Ω 1/16W J
	R1518	NRSA63J-682X	MG R	6.8kΩ 1/16W J
	R1519	NRSA63J-221X	MG R	220Ω 1/16W J
	R1521-22	NRSA63J-221X	MG R	220Ω 1/16W J
	R1524	NRSA63J-221X	MG R	220Ω 1/16W J
	R1526	NRSA63J-682X	MG R	6.8kΩ 1/16W J
	R1527	NRSA63J-221X	MG R	220Ω 1/16W J
	R1528	NRSA63J-682X	MG R	6.8kΩ 1/16W J
	R1529	NRSA63J-221X	MG R	220Ω 1/16W J
	R1530	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1531	NRSA63J-101X	MG R	100Ω 1/16W J
	R1532	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1533	NRSA63J-221X	MG R	220Ω 1/16W J
	R1534	NRSA63J-682X	MG R	6.8kΩ 1/16W J
	R1535	NRSA63J-221X	MG R	220Ω 1/16W J
	R1536	NRSA63J-682X	MG R	6.8kΩ 1/16W J
	R1537-38	NRSA63J-221X	MG R	220Ω 1/16W J
	R1539	NRSA63J-682X	MG R	6.8kΩ 1/16W J
	R1547	NRSA63J-682X	MG R	6.8kΩ 1/16W J
	R1548	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1549	NRSA63J-682X	MG R	6.8kΩ 1/16W J
	R1551	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1554	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1555	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1556-57	NRSA63J-101X	MG R	100Ω 1/16W J
	R1560	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1561-62	NRSA63J-101X	MG R	100Ω 1/16W J
	R1570	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1571	NRVA63D-152X	MF R	1.5kΩ 1/16W±0.5%
	R1572	NRSA02F-471X	MG R	470Ω 1/10W F
	R1576	NRSA63J-273X	MG R	27kΩ 1/16W J
	R1577	NRSA63J-221X	MG R	220Ω 1/16W J
	R1578	NRSA63J-682X	MG R	6.8kΩ 1/16W J
	R1579	NRSA63J-221X	MG R	220Ω 1/16W J
	R1581	NRSA63J-101X	MG R	100Ω 1/16W J
	R1586-89	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1611-12	NRSA63J-563X	MG R	56kΩ 1/16W J
	R1613	NRSA63J-102X	MG R	1kΩ 1/16W J
	R1614	NRSA63J-104X	MG R	100kΩ 1/16W J
	R1615	NRSA63J-563X	MG R	56kΩ 1/16W J
	R1616	NRSA63J-153X	MG R	15kΩ 1/16W J
	R1618-19	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1634-35	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1638-39	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1644	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1654-56	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1658-59	NRSA63J-103X	MG R	10kΩ 1/16W J
	R1661	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1663	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R1665	NRSA63J-222X	MG R	2.2kΩ 1/16W J
	R1666	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R1667-68	NRSA63J-222X	MG R	2.2kΩ 1/16W J
	R1669	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R1670	NRSA63J-222X	MG R	2.2kΩ 1/16W J

⚠	Symbol No.	Part No.	Part Name	Description	
	RESISTOR				
⚠	R1671	QRJ146J-2R2X	C R	2.2Ω 1/4W	J
⚠	R1672	QRJ146J-2R2X	C R	2.2Ω 1/4W	J
⚠	R1673	QRK126J-102X	C R	1kΩ 1/2W	J
⚠	R1674	QRK126J-102X	C R	1kΩ 1/2W	J
	R1680	NRSA63J-822X	MG R	8.2kΩ 1/16W	J
	R1681	NRSA63J-473X	MG R	47kΩ 1/16W	J
	R1682	NRSA63J-103X	MG R	10kΩ 1/16W	J
	R1691	NRSA63J-104X	MG R	100kΩ 1/16W	J
	R1701	NRSA63J-104X	MG R	100kΩ 1/16W	J
	R1702	NRSA63J-103X	MG R	10kΩ 1/16W	J
	R1703	NRSA63J-0R0X	MG R	0.0Ω 1/16W	J
	R1704	NRSA63J-221X	MG R	220Ω 1/16W	J
	R1706	NRSA63J-104X	MG R	100kΩ 1/16W	J
	R1707	NRSA63J-0R0X	MG R	0.0Ω 1/16W	J
	R1709-10	NRSA63J-104X	MG R	100kΩ 1/16W	J
	R1712	NRSA63J-0R0X	MG R	0.0Ω 1/16W	J
	R1714	NRSA63J-103X	MG R	10kΩ 1/16W	J
	R1715-16	NRSA63J-101X	MG R	100Ω 1/16W	J
	R1719	NRSA63J-0R0X	MG R	0.0Ω 1/16W	J
	R1721	NRSA63J-102X	MG R	1kΩ 1/16W	J
	R1722	NRSA63J-0R0X	MG R	0.0Ω 1/16W	J
	R1724	NRSA63J-103X	MG R	10kΩ 1/16W	J
	R1725-26	NRSA63J-0R0X	MG R	0.0Ω 1/16W	J
	R1727	NRSA63J-103X	MG R	10kΩ 1/16W	J
	R1728	NRSA63J-102X	MG R	1kΩ 1/16W	J
	R1729	NRSA63J-101X	MG R	100Ω 1/16W	J
	R1730	NRSA63J-272X	MG R	2.7kΩ 1/16W	J
	R1731	NRSA63J-101X	MG R	100Ω 1/16W	J
	R1732	NRSA63J-272X	MG R	2.7kΩ 1/16W	J
	R1733	NRSA63J-102X	MG R	1kΩ 1/16W	J
	R1735	NRSA63J-104X	MG R	100kΩ 1/16W	J
	R1736	NRSA63J-333X	MG R	33kΩ 1/16W	J
	R1737	NRSA63J-101X	MG R	100Ω 1/16W	J
	R1738	NRSA63J-333X	MG R	33kΩ 1/16W	J
	R1744	NRSA63J-472X	MG R	4.7kΩ 1/16W	J
	R1746	NRSA63J-332X	MG R	3.3kΩ 1/16W	J
	R1747	NRSA63J-0R0X	MG R	0.0Ω 1/16W	J
	R1748	NRSA63J-102X	MG R	1kΩ 1/16W	J
	R1749	NRSA63J-124X	MG R	120kΩ 1/16W	J
	R1750	NRSA63J-104X	MG R	100kΩ 1/16W	J
	R1751	NRSA63J-473X	MG R	47kΩ 1/16W	J
	R1752-53	NRSA63J-333X	MG R	33kΩ 1/16W	J
	R1754	NRSA63J-0R0X	MG R	0.0Ω 1/16W	J
	R1756	NRSA63J-103X	MG R	10kΩ 1/16W	J
	R1760	NRSA63J-0R0X	MG R	0.0Ω 1/16W	J
	R1761	NRSA63J-102X	MG R	1kΩ 1/16W	J
	R1762	NRSA63J-124X	MG R	120kΩ 1/16W	J
	R1763-64	NRSA63J-333X	MG R	33kΩ 1/16W	J
	R1765	NRSA63J-102X	MG R	1kΩ 1/16W	J
	R1766	NRSA63J-332X	MG R	3.3kΩ 1/16W	J
	R1767	NRSA63J-151X	MG R	150Ω 1/16W	J
	R1768	NRSA63J-101X	MG R	100Ω 1/16W	J
	R1770	NRSA63J-101X	MG R	100Ω 1/16W	J
	R1775	NRSA63J-332X	MG R	3.3kΩ 1/16W	J
	R1776	NRSA63J-333X	MG R	33kΩ 1/16W	J
	R1777-78	NRSA63J-103X	MG R	10kΩ 1/16W	J
	R1779	NRSA63J-102X	MG R	1kΩ 1/16W	J
	R1780	NRSA63J-103X	MG R	10kΩ 1/16W	J
	R1781	NRSA63J-333X	MG R	33kΩ 1/16W	J
	R1782	NRSA63J-122X	MG R	1.2kΩ 1/16W	J
	R1783	NRSA63J-101X	MG R	100Ω 1/16W	J
	R1784	NRSA63J-682X	MG R	6.8kΩ 1/16W	J
	R1785	NRSA63J-103X	MG R	10kΩ 1/16W	J
	R1787	NRSA63J-562X	MG R	5.6kΩ 1/16W	J

⚠	Symbol No.	Part No.	Part Name	Description	
	RESISTOR				
	R1788-90	NRSA63J-560X	MG R	56Ω 1/16W	J
	R1791	NRSA63J-101X	MG R	100Ω 1/16W	J
	R1792	NRSA63J-102X	MG R	1kΩ 1/16W	J
	R1793	NRSA63J-104X	MG R	100kΩ 1/16W	J
	R1794	NRSA63J-101X	MG R	100Ω 1/16W	J
	R1802	NRSA63J-104X	MG R	100kΩ 1/16W	J
	R1803	NRSA63J-473X	MG R	47kΩ 1/16W	J
	R1804	NRSA63J-101X	MG R	100Ω 1/16W	J
	R1806	NRSA63J-101X	MG R	100Ω 1/16W	J
	R1808	NRSA63J-151X	MG R	150Ω 1/16W	J
	R1811	NRSA63J-101X	MG R	100Ω 1/16W	J
	R1814	NRSA63J-102X	MG R	1kΩ 1/16W	J
	R1815-16	NRSA63J-0R0X	MG R	0.0Ω 1/16W	J
	R1817	NRSA63J-101X	MG R	100Ω 1/16W	J
	R1818	NRSA63J-0R0X	MG R	0.0Ω 1/16W	J
	R1820	NRSA63J-393X	MG R	39kΩ 1/16W	J
	R1822	NRSA63J-472X	MG R	4.7kΩ 1/16W	J
	R1823	NRSA63J-124X	MG R	120kΩ 1/16W	J
	R1829	NRSA63J-103X	MG R	10kΩ 1/16W	J
	R1830-31	NRSA63J-102X	MG R	1kΩ 1/16W	J
	R1832	NRSA63J-103X	MG R	10kΩ 1/16W	J
	R1834	NRSA63J-102X	MG R	1kΩ 1/16W	J
	R1836	NRSA63J-101X	MG R	100Ω 1/16W	J
	R1837	NRSA63J-333X	MG R	33kΩ 1/16W	J
	R1838	NRSA63J-101X	MG R	100Ω 1/16W	J
	R1839	NRSA63J-333X	MG R	33kΩ 1/16W	J
	R1840	NRSA63J-102X	MG R	1kΩ 1/16W	J
	R1843-44	NRSA63J-103X	MG R	10kΩ 1/16W	J
	R1847	NRSA63J-101X	MG R	100Ω 1/16W	J
	R1850	NRSA63J-0R0X	MG R	0.0Ω 1/16W	J
	R1867	NRSA63J-474X	MG R	470kΩ 1/16W	J
	R1880	NRSA63J-102X	MG R	1kΩ 1/16W	J
	R1881	NRSA63J-221X	MG R	220Ω 1/16W	J
	R1882	NRSA63J-222X	MG R	2.2kΩ 1/16W	J
	R1883	NRSA63J-103X	MG R	10kΩ 1/16W	J
	R1884	NRSA63J-102X	MG R	1kΩ 1/16W	J
	R1887	NRSA63J-221X	MG R	220Ω 1/16W	J
	R1888	NRSA63J-222X	MG R	2.2kΩ 1/16W	J
	R1889	NRSA63J-103X	MG R	10kΩ 1/16W	J
	R1891-95	NRSA63J-221X	MG R	220Ω 1/16W	J
	R1896-97	NRSA63J-563X	MG R	56kΩ 1/16W	J
	R1901	NRSA63J-471X	MG R	470Ω 1/16W	J
	R1902	NRSA63J-182X	MG R	1.8kΩ 1/16W	J
	R1904-05	NRSA02F-222X	MG R	2.2kΩ 1/10W	F
	R1907	NRSA63J-0R0X	MG R	0.0Ω 1/16W	J
	R1908	NRSA63J-183X	MG R	18kΩ 1/16W	J
	R1931	NRSA63J-332X	MG R	3.3kΩ 1/16W	J
	R1932	NRSA63J-101X	MG R	100Ω 1/16W	J
	R1933	NRSA63J-683X	MG R	68kΩ 1/16W	J
	R1941	QRK126J-5R6X	C R	5.6Ω 1/2W	J
	R1942-43	NRSA63J-152X	MG R	1.5kΩ 1/16W	J
	R1944	QRK126J-220X	C R	22Ω 1/2W	J
	R1945-46	NRSA63J-102X	MG R	1kΩ 1/16W	J
	R1947	NRSA63J-152X	MG R	1.5kΩ 1/16W	J
	R1949	NRSA02F-122X	MG R	1.2kΩ 1/10W	F
	R1950	NRSA63J-822X	MG R	8.2kΩ 1/16W	J
	R1952	NRSA63J-0R0X	MG R	0.0Ω 1/16W	J
	R1953	NRSA63J-224X	MG R	220kΩ 1/16W	J
	R1954-55	NRSA63J-473X	MG R	47kΩ 1/16W	J
	R1959	NRSA02F-182X	MG R	1.8kΩ 1/10W	F
	R1961	NRSA63J-821X	MG R	820Ω 1/16W	J
	R1962	NRSA63J-682X	MG R	6.8kΩ 1/16W	J
	R1963	NRSA63J-182X	MG R	1.8kΩ 1/16W	J
	R1964	NRSA63J-223X	MG R	22kΩ 1/16W	J

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R1965	NRSA63J-821X	MG R	820Ω 1/16W J
	R1966	NRSA63J-123X	MG R	12kΩ 1/16W J
	R1967	NRSA63J-122X	MG R	1.2kΩ 1/16W J
	R1968-69	NRSA63J-821X	MG R	820Ω 1/16W J
	R1981	QRG01GJ-181	OM R	180Ω 1W J
	R1986	QRG01GJ-331	OM R	330Ω 1W J
	R1991	NRSA63J-273X	MG R	27kΩ 1/16W J
	R1992-93	NRSA63J-123X	MG R	12kΩ 1/16W J
	R1994	NRSA63J-333X	MG R	33kΩ 1/16W J
	R1996-98	NRSA63J-101X	MG R	100Ω 1/16W J
	CAPACITOR			
	C1001	QETN0JM-108Z	E CAP.	1000µF 6.3V M
	C1002-03	NCF31AZ-105X	C CAP.	1µF 10V Z
	C1011	NDC31HJ-100X	C CAP.	10pF 50V J
	C1012	NCF31CZ-104X	C CAP.	0.1µF 16V Z
	C1013	NDC31HJ-5R0X	C CAP.	5.0pF 50V J
	C1021	NCF11EZ-105X	C CAP.	1µF 25V Z
	C1102	QETN1CM-477Z	E CAP.	470µF 16V M
	C1103-04	QETN1HM-106Z	E CAP.	10µF 50V M
	C1108	QETN1HM-106Z	E CAP.	10µF 50V M
	C1131-33	QETN1EM-476Z	E CAP.	47µF 25V M
	C1134	NCF11EZ-105X	C CAP.	1µF 25V Z
	C1135-37	NCB11CK-105X	C CAP.	1µF 16V K
	C1138	QRN143J-0R0X	C R	0.0Ω 1/4W J
	C1139	QRN143J-0R0X	C R	0.0Ω 1/4W J
	C1140	QRN143J-0R0X	C R	0.0Ω 1/4W J
	C1148	NCB31EK-104X	C CAP.	0.1µF 25V K
	C1149	QETN1CM-107Z	E CAP.	100µF 16V M
	C1150-52	NCF21CZ-105X	C CAP.	1µF 16V Z
	C1160	QETN1CM-107Z	E CAP.	100µF 16V M
	C1162	NCB31EK-104X	C CAP.	0.1µF 25V K
	C1173-75	NCB11CK-105X	C CAP.	1µF 16V K
	C1176-78	NCB31HK-103X	C CAP.	0.01µF 50V K
	C1213	QETN1CM-107Z	E CAP.	100µF 16V M
	C1214	QETN1HM-225Z	E CAP.	2.2µF 50V M
	C1215	QFLC1HJ-103Z	M CAP.	0.01µF 50V J
	C1216	NCF11CZ-475X	C CAP.	4.7µF 16V Z
	C1218	QENC1HM-105Z	BP E CAP.	1.0µF 50V M
	C1219	NCF11CZ-475X	C CAP.	4.7µF 16V Z
	C1233	NDC31HJ-180X	C CAP.	18pF 50V J
	C1241-42	NCF31CZ-104X	C CAP.	0.1µF 16V Z
	C1243	QETN1CM-476Z	E CAP.	47µF 16V M
	C1244	NCF31CZ-104X	C CAP.	0.1µF 16V Z
	C1245	QETN1CM-476Z	E CAP.	47µF 16V M
	C1250-51	NCF31CZ-104X	C CAP.	0.1µF 16V Z
	C1252	QENC1EM-106Z	BP E CAP.	10µF 25V M
	C1253	NCB31HK-103X	C CAP.	0.01µF 50V K
	C1254	QETN1CM-227Z	E CAP.	220µF 16V M
	C1255	QETN1HM-474Z	E CAP.	0.47µF 50V M
	C1256	NCB11CK-105X	C CAP.	1µF 16V K
	C1259-60	NCF31CZ-104X	C CAP.	0.1µF 16V Z
	C1261	NDC31HJ-150X	C CAP.	15pF 50V J
	C1262	NDC31HJ-471X	C CAP.	470pF 50V J
	C1263	NCB31HK-103X	C CAP.	0.01µF 50V K
	C1264-65	NDC31HJ-101X	C CAP.	100pF 50V J
	C1266	NCF31CZ-104X	C CAP.	0.1µF 16V Z
	C1269	QETN1HM-475Z	E CAP.	4.7µF 50V M
	C1270-71	QETN1HM-474Z	E CAP.	0.47µF 50V M
	C1272	QETN1HM-105Z	E CAP.	1.0µF 50V M
	C1273	NCB31HK-472X	C CAP.	4700pF 50V K
	C1275	QETN1HM-105Z	E CAP.	1.0µF 50V M
	C1276	QETN1CM-227Z	E CAP.	220µF 16V M
	C1277-78	NCB31HK-103X	C CAP.	0.01µF 50V K

⚠	Symbol No.	Part No.	Part Name	Description
	CAPACITOR			
	C1301-03	QENC1HM-105Z	BP E CAP.	1.0µF 50V M
	C1304	QETN1HM-105Z	E CAP.	1.0µF 50V M
	C1305	NCF11CZ-475X	C CAP.	4.7µF 16V Z
	C1306	QETN1AM-477Z	E CAP.	470µF 10V M
	C1307	NCB31HK-472X	C CAP.	4700pF 50V K
	C1308-13	NCB31CK-104X	C CAP.	0.1µF 16V K
	C1315-16	NCB31HK-472X	C CAP.	4700pF 50V K
	C1317	QETN1CM-227Z	E CAP.	220µF 16V M
	C1318	QETN1HM-225Z	E CAP.	2.2µF 50V M
	C1319	QETN1HM-105Z	E CAP.	1.0µF 50V M
	C1320	QETN1HM-475Z	E CAP.	4.7µF 50V M
	C1321-23	QETN1HM-335Z	E CAP.	3.3µF 50V M
	C1325-27	NCB11CK-105X	C CAP.	1µF 16V K
	C1329	NCB31HK-103X	C CAP.	0.01µF 50V K
	C1332-34	NCB21AK-105X	CHIP CAP.	1µF 10V K
	C1335	QETN1EM-476Z	E CAP.	47µF 25V M
	C1336	NCB31HK-472X	C CAP.	4700pF 50V K
	C1339	NCF11CZ-475X	C CAP.	4.7µF 16V Z
	C1341-46	NCF11EZ-105X	C CAP.	1µF 25V Z
	C1351	NCF31AZ-105X	C CAP.	1µF 10V Z
	C1352	NDC31HJ-151X	C CAP.	150pF 50V J
	C1357	NCB31HK-102X	C CAP.	1000pF 50V K
	C1358	NDC31HJ-100X	C CAP.	10pF 50V J
	C1359	NCB31HK-472X	C CAP.	4700pF 50V K
	C1361	QETN1HM-226Z	E CAP.	22µF 50V M
	C1362	NCB31CK-563X	CHIP CAP.	0.056µF 16V K
	C1363	QETN1HM-226Z	E CAP.	22µF 50V M
	C1364	NCB31CK-104X	C CAP.	0.1µF 16V K
	C1366	NCF11EZ-105X	C CAP.	1µF 25V Z
	C1381-82	NCF11CZ-475X	C CAP.	4.7µF 16V Z
	C1386	NCF31AZ-105X	C CAP.	1µF 10V Z
	C1391	NCF31AZ-105X	C CAP.	1µF 10V Z
	C1401	QETN1AM-477Z	E CAP.	470µF 10V M
	C1402	QETN0JM-108Z	E CAP.	1000µF 6.3V M
	C1403	QETN1CM-107Z	E CAP.	100µF 16V M
	C1404	QETN1AM-108Z	E CAP.	1000µF 10V M
	C1405	QETN0JM-108Z	E CAP.	1000µF 6.3V M
	C1409	QETN1HM-106Z	E CAP.	10µF 50V M
	C1410-11	NCB31CK-104X	C CAP.	0.1µF 16V K
	C1413	NCB31HK-103X	C CAP.	0.01µF 50V K
	C1414	QETN1EM-476Z	E CAP.	47µF 25V M
	C1415	NCB31HK-103X	C CAP.	0.01µF 50V K
	C1416	QETN1EM-476Z	E CAP.	47µF 25V M
	C1417	NCB31HK-103X	C CAP.	0.01µF 50V K
	C1418	QETN1EM-476Z	E CAP.	47µF 25V M
	C1424-26	QETN1CM-336Z	E CAP.	33µF 16V M
	C1428	QRN143J-0R0X	C R	0.0Ω 1/4W J
	C1429	QRN143J-0R0X	C R	0.0Ω 1/4W J
	C1438	NCB31HK-103X	C CAP.	0.01µF 50V K
	C1442	NCB31HK-103X	C CAP.	0.01µF 50V K
	C1444	NCB11CK-225X	C CAP.	2.2µF 16V K
	C1445	NCB31HK-103X	C CAP.	0.01µF 50V K
	C1446	NCB31HK-102X	C CAP.	1000pF 50V K
	C1447	NDC31HJ-151X	C CAP.	150pF 50V J
	C1449	NDC31HJ-560X	C CAP.	56pF 50V J
	C1450-51	NCB31HK-103X	C CAP.	0.01µF 50V K
	C1452	NCB31HK-102X	C CAP.	1000pF 50V K
	C1453	NCB31AK-474X	CHIP CAP.	0.47µF 10V K
	C1454	NCB11CK-225X	C CAP.	2.2µF 16V K
	C1480-81	NCB31HK-103X	C CAP.	0.01µF 50V K
	C1482	NCB11CK-225X	C CAP.	2.2µF 16V K
	C1483-84	NCB31HK-103X	C CAP.	0.01µF 50V K
	C1485	NCB31HK-102X	C CAP.	1000pF 50V K
	C1486	NDC31HJ-151X	C CAP.	150pF 50V J

⚠	Symbol No.	Part No.	Part Name	Description
	CAPACITOR			
	C1487	NCB31HK-102X	C CAP.	1000pF 50V K
	C1488	NDC31HJ-7R0X	C CAP.	7.0pF 50V J
	C1489	NDC31HJ-560X	C CAP.	56pF 50V J
	C1490	NCB31HK-103X	C CAP.	0.01µF 50V K
	C1491	NCB11CK-225X	C CAP.	2.2µF 16V K
	C1501	NCB31EK-104X	C CAP.	0.1µF 25V K
	C1502	QETN1EM-476Z	E CAP.	47µF 25V M
	C1519	QETN1EM-476Z	E CAP.	47µF 25V M
	C1520	NDC31HJ-100X	C CAP.	10pF 50V J
	C1521	QENC1CM-336Z	BP E CAP.	33µF 16V M
	C1522	NCB31HK-103X	C CAP.	0.01µF 50V K
	C1532	QETN1HM-226Z	E CAP.	22µF 50V M
	C1539	QETN1HM-106Z	E CAP.	10µF 50V M
	C1560	NCF11EZ-105X	C CAP.	1µF 25V Z
	C1579	QETN1EM-476Z	E CAP.	47µF 25V M
	C1582	QENC1CM-336Z	BP E CAP.	33µF 16V M
	C1583	NCB11CK-225X	C CAP.	2.2µF 16V K
	C1663	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	C1665	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	C1667	QETN1HM-106Z	E CAP.	10µF 50V M
	C1668	NDC31HJ-101X	C CAP.	100pF 50V J
	C1669	NCB11CK-105X	C CAP.	1µF 16V K
	C1670	QETN1HM-106Z	E CAP.	10µF 50V M
	C1671	NDC31HJ-101X	C CAP.	100pF 50V J
	C1672	NCB11CK-105X	C CAP.	1µF 16V K
	C1673	QETN1HM-107Z	E CAP.	100µF 50V M
	C1674	QETM1VM-228	E CAP.	2200µF 35V M
	C1675-76	QFV71HJ-124Z	MF CAP.	0.12µF 50V J
	C1677-78	QETN1EM-108Z	E CAP.	1000µF 25V M
	C1679	QETN1HM-475Z	E CAP.	4.7µF 50V M
	C1680	QETN1HM-106Z	E CAP.	10µF 50V M
	C1696	QETN1HM-106Z	E CAP.	10µF 50V M
	C1697	QETN1EM-476Z	E CAP.	47µF 25V M
	C1701	NCB31EK-104X	C CAP.	0.1µF 25V K
	C1702	NCB11CK-225X	C CAP.	2.2µF 16V K
	C1703	QETN1EM-476Z	E CAP.	47µF 25V M
	C1704	NCB11CK-225X	C CAP.	2.2µF 16V K
	C1706	NCB11CK-105X	C CAP.	1µF 16V K
	C1708	NDC31HJ-470X	C CAP.	47pF 50V J
	C1709	NDC31HJ-101X	C CAP.	100pF 50V J
	C1710	NCB31EK-104X	C CAP.	0.1µF 25V K
	C1711	NCF31CZ-104X	C CAP.	0.1µF 16V Z
	C1712	QETN1HM-106Z	E CAP.	10µF 50V M
	C1715	NDC31HJ-102X	C CAP.	1000pF 50V J
	C1716	NCB31HK-103X	C CAP.	0.01µF 50V K
	C1717	NCF31CZ-104X	C CAP.	0.1µF 16V Z
	C1718	QETN1EM-476Z	E CAP.	47µF 25V M
	C1719	QETN1HM-475Z	E CAP.	4.7µF 50V M
	C1720	NDC31HJ-102X	C CAP.	1000pF 50V J
	C1721	NCB31HK-103X	C CAP.	0.01µF 50V K
	C1722	QETN1HM-475Z	E CAP.	4.7µF 50V M
	C1723	NCB31HK-152X	C CAP.	1500pF 50V K
	C1724	QETN1HM-105Z	E CAP.	1.0µF 50V M
	C1725	NDC31HJ-470X	C CAP.	47pF 50V J
	C1726-27	QETN1HM-105Z	E CAP.	1.0µF 50V M
	C1728	NCB21AK-105X	CHIP CAP.	1µF 10V K
	C1729	QETN1EM-476Z	E CAP.	47µF 25V M
	C1730-31	QETN1HM-105Z	E CAP.	1.0µF 50V M
	C1732	NCB31HK-103X	C CAP.	0.01µF 50V K
	C1733	QETN1HM-475Z	E CAP.	4.7µF 50V M
	C1734	NDC31HJ-470X	C CAP.	47pF 50V J
	C1735	NCB31HK-153X	C CAP.	0.015µF 50V K
	C1743	NDC31HJ-220X	C CAP.	22pF 50V J
	C1744	NDC31HJ-150X	C CAP.	15pF 50V J

⚠	Symbol No.	Part No.	Part Name	Description
	CAPACITOR			
	C1745	NCB31HK-153X	C CAP.	0.015µF 50V K
	C1752	NCB11CK-105X	C CAP.	1µF 16V K
	C1754	NCB31HK-122X	CHIP CAP.	1200pF 50V K
	C1755	QETN1HM-105Z	E CAP.	1.0µF 50V M
	C1756	NCB31HK-122X	CHIP CAP.	1200pF 50V K
	C1757	QETN1HM-105Z	E CAP.	1.0µF 50V M
	C1801	NDC31HJ-391X	C CAP.	390pF 50V J
	C1802	QETN1HM-106Z	E CAP.	10µF 50V M
	C1901	QETN1EM-107Z	E CAP.	100µF 25V M
	C1902	QETN1CM-107Z	E CAP.	100µF 16V M
	C1908-09	QETN1CM-107Z	E CAP.	100µF 16V M
	C1932	QETN1EM-476Z	E CAP.	47µF 25V M
	C1941	QETN1VM-108Z	E CAP.	1000µF 35V M
	C1942	QETN1CM-108Z	E CAP.	1000µF 16V M
	C1944	QETN1VM-108Z	E CAP.	1000µF 35V M
	C1945	QEZ0256-128	E CAP.	1200µF 10V M
	C1947-48	QETN1CM-477Z	E CAP.	470µF 16V M
	C1949-50	QETNOJM-108Z	E CAP.	1000µF 6.3V M
	C1951	QETN1VM-108Z	E CAP.	1000µF 35V M
	C1952	QEZ0256-128	E CAP.	1200µF 10V M
	C1953-54	QETNOJM-108Z	E CAP.	1000µF 6.3V M
	C1957	QETNOJM-108Z	E CAP.	1000µF 6.3V M
	C1958	QETNOJM-228Z	E CAP.	2200µF 6.3V M
	C1961	QETN1HM-105Z	E CAP.	1.0µF 50V M
	C1988	NCB31HK-222X	C CAP.	2200pF 50V K
	COIL			
	L1101	QRN143J-0R0X	C R	0.0Ω 1/4W J
	L1102	QRN143J-0R0X	C R	0.0Ω 1/4W J
	L1211	QQL25CK-100Z	COIL	10µH K
	L1243-44	NQL024J-100X	COIL	10µH
	L1401	QQL25CK-100Z	COIL	10µH K
	L1402	QQL26AK-100Z	CHOKE COIL	
	L1403	QRN143J-0R0X	C R	0.0Ω 1/4W J
	L1404	QRN143J-0R0X	C R	0.0Ω 1/4W J
	L1430-31	NQL085J-560X	INDUCTOR	
	L1481-82	NQL085J-560X	INDUCTOR	
	L1711	NQL085J-1R5X	CHIP INDUCTOR	
	L1712-14	NQL085J-3R3X	INDUCTOR	
	L1941	QQR1129-001	CHOKE COIL	
	L1942	QQR1127-001	CHOKE COIL	
	L1943	QQL50AK-330Z	CHOKE COIL	
	L1944	QQL26AK-330Z	COIL	33µH K
	L1945-46	QQL26AK-220Z	COIL	22µH K
	L1947	QQR1127-001	CHOKE COIL	
	L1948	QQL50AK-100Z	CHOKE COIL	
	L1949	QQL26AK-220Z	COIL	22µH K
	L1950	QQL26AK-820Z	COIL	82µH K
	DIODE			
	D1304	MA111-X	SI.DIODE	
	D1306	MA111-X	SI.DIODE	
	D1308	MA8100/M/-X	ZENER DIODE	
	D1309-10	MA111-X	SI.DIODE	
	D1352	MA111-X	SI.DIODE	
	D1353	MA8150/M/-X	ZENER DIODE	
	D1354	MA8030/H/-X	ZENER DIODE	
	D1431-32	MA111-X	SI.DIODE	
	D1481-82	MA111-X	SI.DIODE	
	D1662-63	MA3330/L/-X	ZENER DIODE	
	D1667-69	MA111-X	SI.DIODE	
	D1701	1SR35-400A-T5	SI.DIODE	
	D1702	MA111-X	SI.DIODE	
	D1704	MA111-X	SI.DIODE	
	D1708-09	MA111-X	SI.DIODE	

⚠	Symbol No.	Part No.	Part Name	Description
	DIODE			
	D1713-16	MA111-X	SI.DIODE	
	D1718	MA111-X	SI.DIODE	
	D1719	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	D1721-22	MA704A-X	SI.DIODE	
	D1891-92	UDZS8.2B-X	ZENER DIODE	
	D1893-95	UDZS5.1B-X	ZENER DIODE	
	D1901	1SR35-400A-T5	SI.DIODE	
	D1903	1SR35-400A-T5	SI.DIODE	
	D1931-32	MA111-X	SI.DIODE	
	D1933	UDZS5.1B-X	ZENER DIODE	
	D1941	RK34-LFC4	SI.DIODE	
	D1942-43	SF5S4	SI.DIODE	
	D1962	MA3030/H/-X	ZENER DIODE	
	D1964-65	MA111-X	SI.DIODE	
	D1967	PTZ11B-X	ZENER DIODE	
	D1968	PTZ6.8B-X	ZENER DIODE	
	D1969	PTZ11B-X	ZENER DIODE	
	D1970	MA111-X	SI.DIODE	
	TRANSISTOR			
	Q1001	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q1021	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q1151-53	2SC3837K/NP/-X	SI.TRANSISTOR	
	Q1232	2SA1037AK/QR/-X	SI.TRANSISTOR	
	Q1242-43	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q1246	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q1248-49	2SA1037AK/QR/-X	SI.TRANSISTOR	
	Q1301-03	2SA1022/BC/-X	SI.TRANSISTOR	
	Q1304-06	2SC3837K/NP/-X	SI.TRANSISTOR	
	Q1307	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q1321	IMX1-XW	SI.TRANSISTOR	
	Q1323	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q1324	2SA1022/BC/-X	SI.TRANSISTOR	
	Q1331-33	2SC3837K/NP/-X	SI.TRANSISTOR	
	Q1431	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q1432	2SA1037AK/QR/-X	SI.TRANSISTOR	
	Q1433	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q1436-38	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q1439	2SA1037AK/QR/-X	SI.TRANSISTOR	
	Q1481-84	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q1485	2SA1037AK/QR/-X	SI.TRANSISTOR	
	Q1505	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q1668	DTC144EKA-X	DIGI.TRANSISTOR	
	Q1669	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q1672	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q1673	2SA1037AK/QR/-X	SI.TRANSISTOR	
	Q1701	DTC144EKA-X	DIGI.TRANSISTOR	
	Q1702-05	2SA1037AK/QR/-X	SI.TRANSISTOR	
	Q1706-07	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q1710-11	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q1714	2SC2785/JH/-T	SI.TRANSISTOR	
	Q1715	2SA1037AK/QR/-X	SI.TRANSISTOR	
	Q1931	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q1961-62	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q1964-65	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q1981	2SC4682-T	SI.TRANSISTOR	
	Q1984	2SC4682-T	SI.TRANSISTOR	

⚠	Symbol No.	Part No.	Part Name	Description
	IC			
	IC1001	TC74HC02AF-X	I.C.(DIGI-MOS)	
	IC1002	TC74HC14AF-X	I.C.(DIGI-MOS)	
	IC1011	TC7W04F-X	I.C.(DIGI-MOS)	
	IC1021	TC4W66F-X	I.C.(DIGI-MOS)	
	IC1131	M52055FP-X	I.C.(MONO-ANA)	
	IC1151	MM1519XQ	I.C.(MONO-ANA)	
	IC1211	TA1318N	I.C.(M)	
	IC1212	TC7W08F-X	I.C.(ECL-LOGIC)	
	IC1241	CXA2019AQ	I.C.(MONO-ANA)	
	IC1242	TA78L09F-X	I.C.(MONO-ANA)	
	IC1301	AN5392FBQ	I.C.(MONO-ANA)	
	IC1302	CXA1875AM-X	I.C.(MONO-ANA)	
	IC1351	TC74HC4538AF-X	I.C.(DIGI-MOS)	
	IC1431	TC4W66F-X	I.C.(DIGI-MOS)	
	IC1501	CXA2069Q	I.C.(MONO-ANA)	
	IC1502	M62320FP-X	I.C.(M)	
	IC1511	PQ15RW11	I.C.(MONO-ANA)	
	IC1521	CE42599-002	COMB FILTER	
	IC1560	BU2098F-X	I.C.(DIGI-MOS)	
	IC1661	AN5277	I.C.(MONO-ANA)	
	IC1701	MN102H57KPB	IC	
	IC1702	S-80828ALNP-W	I.C.(MONO-ANA)	
	IC1703	AT24C32-48WP30	I.C.	(SERVICE)
	IC1704	TA48M033F-X	I.C.(M)	
	IC1852	S-80840ALNP-W	I.C.(MONO-ANA)	
	IC1901	PQ12RF1	I.C.	
	IC1903	BA17805T	I.C.(MONO-ANA)	
	IC1941	SI-8090S	I.C.(HYBRID)	
	IC1942	SI-8050S	I.C.(HYBRID)	
	IC1943	PQ1CG2032FZ	I.C.(MONO-ANA)	
	IC1944	PQ07XH02Z-W	I.C.(M)	
	OTHERS			
	CF1241	QAX0529-001	CER.RESONATOR	
	CN1007	QGB1505J1-25	CONNECTOR	
	K1151	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	K1703	NQR0199-004X	FERRITE BEADS	
	K1704-05	NQR0413-003X	BEADS CORE	
	K1941	QRN143J-0R0X	C R	0.0Ω 1/4W J
	K1942	QRN143J-0R0X	C R	0.0Ω 1/4W J
	K1943	CE42050-001Z	CORE	
	K1944	CE42050-001Z	CORE	
	SL1211	CSB503F30-T2	CER.RESONATOR	
	SL1701	QAX0248-001Z	CER.RESONATOR	
⚠	TU1101	QAU0206-001	TUNER	
	X1241	CE41651-001Z	CRYSTAL	

POWER & DEF. P.W. BOARD ASS'Y

(SSB-2051A-M2)

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R2201	QRA14CF-1803Y	MF R	180kΩ 1/4W F
	R2202	QRA14CF-2703Y	MF R	270kΩ 1/4W F
	R2203	QRA14CF-2703Y	MF R	270kΩ 1/4W F
	R2401	QRE141J-562Y	C R	5.6kΩ 1/4W J
	R2402	QRE141J-103Y	C R	10kΩ 1/4W J
	R2403	QRE121J-180Y	C R	18Ω 1/2W J
	R2404	QRA14CF-6801Y	MF R	6.8kΩ 1/4W F
	R2405	QRA14CF-6801Y	MF R	6.8kΩ 1/4W F
	R2406	QRA14CF-1002Y	MF R	10kΩ 1/4W F
	R2407-08	QRA14CF-8200Y	MF R	820Ω 1/4W F
	R2409	QRL029J-221	OM R	220Ω 2W J
	R2410	QRT029J-2R2	MF R	2.2Ω 2W J
	R2411	QRE121J-8R2Y	C R	8.2Ω 1/2W J
	R2412	QRE141J-472Y	C R	4.7kΩ 1/4W J
	R2413	QRE141J-104Y	C R	100kΩ 1/4W J
	R2415	QRE141J-154Y	C R	150kΩ 1/4W J
	R2416	QRE141J-103Y	C R	10kΩ 1/4W J
	R2418	QRE141J-222Y	C R	2.2kΩ 1/4W J
	R2420	QRE141J-101Y	C R	100Ω 1/4W J
	R2421	QRE141J-682Y	C R	6.8kΩ 1/4W J
	R2430-32	QRE121J-101Y	C R	100Ω 1/2W J
	R2501	QRE141J-471Y	C R	470Ω 1/4W J
	R2502	QRE121J-123Y	C R	12kΩ 1/2W J
	R2503	QRE121J-152Y	C R	1.5kΩ 1/2W J
	R2504	QRL039J-272	OM R	2.7kΩ 3W J
	R2505	QRL039J-332	OM R	3.3kΩ 3W J
	R2506	QRE121J-5R6Y	C R	5.6Ω 1/2W J
	R2512	QRL029J-821	OM R	820Ω 2W J
	R2521	QRE141J-104Y	C R	100kΩ 1/4W J
	R2522	QRE141J-103Y	C R	10kΩ 1/4W J
	R2523	QRE141J-822Y	C R	8.2kΩ 1/4W J
	R2524	QRE141J-682Y	C R	6.8kΩ 1/4W J
	R2525	QRE141J-102Y	C R	1kΩ 1/4W J
	R2526	QRE141J-470Y	C R	47Ω 1/4W J
	R2531	QRL029J-102	OM R	1kΩ 2W J
	R2532-33	QRL029J-820	OM R	82Ω 2W J
	R2534	QRE141J-102Y	C R	1kΩ 1/4W J
	R2535-36	QRE141J-470Y	C R	47Ω 1/4W J
	R2561	QRA14CF-4701Y	MF R	4.7kΩ 1/4W F
	R2562	QRA14CF-5601Y	MF R	5.6kΩ 1/4W F
	R2565	QRE141J-223Y	C R	22kΩ 1/4W J
	R2591	QRF154K-3R3	UNF R	3.3Ω 15W K
	R2701	QRL01EJ-220X	OM R	22Ω 1W J
	R2702	QRE121J-123Y	C R	12kΩ 1/2W J
	R2703	QRZ0056-103Z	COMP R	10kΩ 1/2W K
	R2901	QRF154K-R51	UNF R	0.51Ω 15W K
	R2902	QRG01GJ-470	OM R	47Ω 1W J
	R2903	QRF154K-R51	UNF R	0.51Ω 15W K
	R2910	QRE121J-152Y	C R	1.5kΩ 1/2W J
	R2911	QRL029J-183	OM R	18kΩ 2W J
	R2912-13	QRT029J-R18	MF R	0.18Ω 2W J
⚠	R2914	QRK126J-681X	C R	680Ω 1/2W J
	R2916	QRT029J-R22	MF R	0.22Ω 2W J
⚠	R2917	QRK126J-332X	C R	3.3kΩ 1/2W J
	R2918	QRE121J-152Y	C R	1.5kΩ 1/2W J
	R2920	QRE121J-684Y	C R	680kΩ 1/2W J
	R2941	QRL039J-333	OM F	33kΩ 3W J
	R2944	QRE121J-222Y	C R	2.2kΩ 1/2W J
	R2951	QRE141J-473Y	C R	47kΩ 1/4W J
	R2952	QRE141J-222Y	C R	2.2kΩ 1/4W J
	R2953	QRE121J-181Y	C R	180Ω 1/2W J
	R2954	QRE121J-221Y	C R	220Ω 1/2W J
	R2959	QRE121J-121Y	C R	120Ω 1/2W J
	R2960	QRE141J-473Y	C R	47kΩ 1/4W J

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R2961	QRE141J-103Y	C R	10kΩ 1/4W J
	R2962	QRE141J-472Y	C R	4.7kΩ 1/4W J
	R2963	QRA14CF-4701Y	MF R	4.7kΩ 1/4W F
	R2964	QRA14CF-4701Y	MF R	4.7kΩ 1/4W F
	R2965	QRE141J-333Y	C R	33kΩ 1/4W J
	R2966	QRE141J-473Y	C R	47kΩ 1/4W J
	R2967	QRE141J-473Y	C R	47kΩ 1/4W J
	R2968	QRA14CF-1802Y	MF R	18kΩ 1/4W F
	R2972	QRA14CF-1101Y	MF R	1.1kΩ 1/4W F
	R2973	QRA14CF-7501Y	MF R	7.5kΩ 1/4W F
	R2975	QRE121J-223Y	C R	22kΩ 1/2W J
	R2977	QRE141J-473Y	C R	47kΩ 1/4W J
	R2978	QRE141J-333Y	C R	33kΩ 1/4W J
⚠	R2999	QRZ0111-685	C R	6.8MΩ1/2W K
	CAPACITOR			
	C2201	QFV71HJ-334Z	MF CAP.	0.33µF 50V J
	C2401	QETN1VM-108Z	E CAP.	1000µF 35V M
	C2402	QFN31HJ-152Z	M CAP.	1500pF 50V J
	C2403	QCS32HJ-180Z	C CAP.	18pF 500V J
	C2404	QFLC2AJ-104Z	M CAP.	0.1µF 100V J
	C2405	QFV71HJ-104Z	MF CAP.	0.1µF 50V J
	C2406	QETN1VM-107Z	E CAP.	100µF 35V M
	C2407	QETN1HM-105Z	E CAP.	1.0µF 50V M
	C2408	QFLC2AJ-104Z	M CAP.	0.1µF 100V J
	C2409	QETN1HM-106Z	E CAP.	10µF 50V M
	C2411	QCB31HK-222Z	C CAP.	2200pF 50V K
	C2412-13	QENC1CM-226Z	BP E CAP.	22µF 16V M
	C2416	QCB31HK-682Z	C CAP.	6800pF 50V K
	C2417	QETN1VM-107Z	E CAP.	100µF 35V M
	C2501	QCB32HK-331Z	C CAP.	330pF 500V K
	C2502	QFN32DK-103	M CAP.	0.01µF 200V K
	C2503	QFV71HJ-224Z	MF CAP.	0.22µF 50V J
⚠	C2506	QFZ0122-452	MPP CAP.	4500pF1.8kVH±3%
⚠	C2507	QFZ0122-392	MPP CAP.	3900pF1.8kVH±3%
	C2508	QFP32JJ-153	PP CAP.	0.015µF 630V J
⚠	C2509	QFZ0128-154	MPP CAP.	0.15µF 400V±3%
⚠	C2510	QFZ0197-154	MPP CAP.	0.15µF 250V J
⚠	C2511	QFZ0128-254	MPP CAP.	0.25µF 400V±3%
	C2513	QEZ0414-226	E CAP.	22µF 50V M
	C2514	QCS32HJ-561	C CAP.	560pF 500V J
	C2521-22	QCZ0122-681	C CAP.	680pF 2kV K
	C2523	QFN32AJ-682Z	M CAP.	6800pF 100V J
	C2524	QCS31HJ-470Z	C CAP.	47pF 50V J
	C2525	QCB31HK-682Z	C CAP.	6800pF 50V K
	C2527	QETN1EM-476Z	E CAP.	47µF 25V M
	C2533	QCS32HJ-561	C CAP.	560pF 500V J
	C2534	QFN32DK-222Z	M CAP.	2200pF 200V K
	C2536	QFN32DK-222Z	M CAP.	2200pF 200V K
	C2562	QETN1HM-475Z	E CAP.	4.7µF 50V M
	C2591	QEZ0203-107	E CAP.	100µF 160V M
	C2701	QFLC2AJ-273Z	M CAP.	0.027µF 100V J
	C2801-02	QETN1EM-108Z	E CAP.	1000µF 25V M
	C2803	QETM2EM-336	E CAP.	33µF 250V M
	C2811	QETN1VM-107Z	E CAP.	100µF 35V M
⚠	C2902	QFZ9072-104	MF CAP.	0.1µFAC275V K
⚠	C2904	QCZ9054-102	C CAP.	1000pFAC250V Z
⚠	C2905	QCZ9054-102	C CAP.	1000pFAC250V Z
⚠	C2906	QCZ9054-102	C CAP.	1000pFAC250V Z
	C2907	QEZ0572-128	E CAP.	1200µF 25V M
⚠	C2908	QCZ9054-102	C CAP.	1000pFAC250V Z
	C2912	QCZ0340-332	C CAP.	3300pF 2kV K
	C2913	QFLC1HJ-471Z	M CAP.	470pF 50V J

⚠	Symbol No.	Part No.	Part Name	Description
	CAPACITOR			
	C2914	QETN1HM-227Z	E CAP.	220µF 50V M
	C2916	QCS31HJ-331Z	C CAP.	330pF 50V J
	C2917	QFN31HJ-182Z	M CAP.	1800pF 50V J
	C2918	QFV71HJ-104Z	MF CAP.	0.1µF 50V J
	C2919	QFP32GJ-103Z	PP CAP.	0.01µF 400V J
	C2920	QCZ0115-151Z	C CAP.	150pF 2kV K
	C2930	QCS31HJ-181Z	C CAP.	180pF 50V J
	C2931	QEZ0203-227	E CAP.	220µF 160V M
	C2932	QETM1EM-228	E CAP.	2200µF 25V M
	C2934-35	QETM1VM-228	E CAP.	2200µF 35V M
	C2937	QCZ0131-821	C CAP.	820pF 2kV K
	C2942	QETN1HM-105Z	E CAP.	1.0µF 50V M
	C2943	QETN1CM-477Z	E CAP.	470µF 16V M
	C2944	QETN1CM-227Z	E CAP.	220µF 16V M
	C2945	QETM1VM-228	E CAP.	2200µF 35V M
	C2946	QETN1VM-227Z	E CAP.	220µF 35V M
	C2971	QETN1CM-107Z	E CAP.	100µF 16V M
	C2972	QETN1EM-476Z	E CAP.	47µF 25V M
	C2973	QETN1HM-106Z	E CAP.	10µF 50V M
⚠	C2993	QCZ9074-472	C CAP.	4700pFAC250V M
⚠	C2994	QCZ9074-472	C CAP.	4700pFAC250V M
⚠	C2995	QCZ9074-472	C CAP.	4700pFAC250V M
⚠	C2997	QCZ9074-472	C CAP.	4700pFAC250V M
⚠	C2998	QCZ9074-472	C CAP.	4700pFAC250V M
⚠	C2999	QCZ9074-472	C CAP.	4700pFAC250V M
	TRANSFORMER			
	T2501	QQR1111-001	DRIVE TRANSF.	
⚠	T2502	QQH0113-001	H.V.TRANSF.	
	T2701	QQR1096-001	DEF.TRANSF.	
⚠	T2921	QQS0133-001	SW TRANSF.	
	COIL			
	L2501	QQLZ025-180	CHOKE COIL	
	L2502	QQR1230-001	CHOKE COIL	
	L2504	QQR0915-003	LINEARITY COIL	
	L2531	QQL43AJ-222	COIL	2.2mH J
	L2701	QQL43AJ-222	COIL	2.2mH J
	L2801	QQLZ026-140	HEATER CHOKE	
	L2931	QQL26AK-470Z	COIL	47µH K
	L2933	QQL26AK-470Z	COIL	47µH K
	L2934	QQLZ018-220	HEATER CHOKE	
	L2935	QQL60AK-220	INDUCTOR	
	L2936	QQL26AK-220Z	COIL	22µH K
	DIODE			
	D2201	1SR35-400A-T2	SI.DIODE	
	D2401	MTZJ75-T2	ZENER DIODE	
	D2402	1SR35-400A-T2	SI.DIODE	
	D2403	1SS133-T2	SI.DIODE	
	D2404	MTZJ9.1B-T2	ZENER DIODE	
	D2405	1SS133-T2	SI.DIODE	
	D2406	MTZJ6.8C-T2	ZENER DIODE	
	D2407	1SR35-400A-T2	SI.DIODE	
	D2501	1SS81-T5	SI.DIODE	
	D2504	RG2A-LFC4	SI.DIODE	
	D2505	V11CA-C1	SI.DIODE	
	D2506	FMV-3FU-F1	SI.DIODE	
	D2521	MTZJ12C-T2	ZENER DIODE	
	D2522	1SS81-T5	SI.DIODE	
	D2531	RGP10J-5025-T3	SI.DIODE	
	D2561	MTZJ7.5S-T2	ZENER DIODE	
	D2562	MTZJ7.5S-T2	ZENER DIODE	
	D2583	1SS133-T2	SI.DIODE	
	D2801	EU2-T3	SI.DIODE	

⚠	Symbol No.	Part No.	Part Name	Description
	DIODE			
	D2802	EU2-T3	SI.DIODE	
	D2803	RU3OA-F1	SI.DIODE	
	D2811	1SR124-400A-T2	SI.DIODE	
⚠	D2901	RBV-606	SI.DIODE	
	D2910	MA700A-T2	SI.DIODE	
	D2911	RGP10J-5025-T3	SI.DIODE	
	D2912	AU01Z-T2	SI.DIODE	
	D2913	AU01Z-T2	SI.DIODE	
	D2914	1SS133-T2	SI.DIODE	
	D2915	SARS01-T2	SI.DIODE	
	D2916	1SS133-T2	SI.DIODE	
	D2917	MTZJ27B-T2	ZENER DIODE	
	D2918	MTZJ5.1B-T2	ZENER DIODE	
	D2920	1SS133-T2	SI.DIODE	
	D2931	RU4AM-F1	SI.DIODE	
	D2932	RU3OA-F1	SI.DIODE	
	D2934	RU4AM-F1	SI.DIODE	
	D2935	RU3YX-LFC4	SI.DIODE	
	D2936	FMX-G12S	SI.DIODE	
	D2937	EU2-T3	SI.DIODE	
	D2938	FMX-G12S	SI.DIODE	
	D2941	MTZJ33B-T2	ZENER DIODE	
	D2952	MTZJ12C-T2	ZENER DIODE	
	D2953	1SS244-T2	SI.DIODE	
	D2954	1SS133-T2	SI.DIODE	
	D2956	1SS133-T2	SI.DIODE	
	D2958	MTZJ6.8C-T2	ZENER DIODE	
	D2959	1SS133-T2	SI.DIODE	
	D2972	MTZJ15B-T2	ZENER DIODE	
	D2973	1SS133-T2	SI.DIODE	
	TRANSISTOR			
	Q2401-02	2SC3311A/QR/-T	SI.TRANSISTOR	
	Q2501	BSN304-T	F.E.T.	
⚠	Q2503	2SC5552-RL	SI.TRANSISTOR	H.OUT
	Q2521	2SC3311A/QR/-T	SI.TRANSISTOR	
	Q2531	IRFI620G	F.E.T.	
	Q2532	2SC1959/Y/-T	SI.TRANSISTOR	
	Q2533	2SA562TM/Y/-T	SI.TRANSISTOR	
	Q2951	2SC1627A/Y/-T	SI.TRANSISTOR	
	Q2952-54	2SC3311A/QR/-T	SI.TRANSISTOR	
	Q2971	2SA1208/ST/Z1-T	SI.TRANSISTOR	
	IC			
	IC2401	LA7876NZ	I.C.(MONO-ANA)	
	IC2911	STR-F6629B/F7	I C	
	IC2921	SE140N	I.C.(HYBRID)	
	OTHERS			
	CN2001-03	QGB1506M1-16	CONNECTOR	
	CN2010	QGB1505J1-35	RECEPTACLE	
⚠	CP2934	ICP-N70-T	I.C.PROTECT	
⚠	CP2936	ICP-N38-Y	I.C.PROTECT	
⚠	CP2941	ICP-N70-T	I.C.PROTECT	
⚠	CP2942	ICP-N70-T	I.C.PROTECT	
⚠	CP2943	ICP-N20-Y	I.C.PROTECT	
⚠	F2905	QMFZ034-5R0Z-J1	FUSE	5.0A
⚠	FR2801	QRZ9011-1R0	F R	1.0 Ω 1/2W J
⚠	FR2802	QRZ9011-1R0	F R	1.0 Ω 1/2W J
⚠	FR2811	QRZ9011-4R7	F R	4.7 Ω 1/2W J
⚠	FR2915	QRZ9017-330	FUSI.RESISTOR	33 Ω 1/4W J
	K2401	QQR0621-002Z	BEADS CORE	
	K2504-05	QQR0679-001	FERRITE BEADS	
	K2912	QQR0582-001Z	BEADS CORE	
	K2914	QQR0582-001Z	BEADS CORE	

⚠	Symbol No.	Part No.	Part Name	Description
	OTHERS			
	K2930	QQR0621-002Z	BEADS CORE	
	K2931	QQR0621-002Z	BEADS CORE	
	K2935	QQR0621-002Z	BEADS CORE	
	K2937	QQR0621-002Z	BEADS CORE	
	K2938	QQR0621-002Z	BEADS CORE	
⚠	RY2951	QSK0118-001	RELAY	
⚠	RY2952	QSK0083-001	RELAY	
⚠	PC2921	PC123F2	I.C.(PH.COUPLER)	

R CRT SOCKET P.W. BOARD ASS'Y (SSB-3151A-M2)

⚠	Symbol No.	Part No.	Part Name	Description	
	RESISTOR				
	R3005	QRE121J-105Y	C R	1MΩ 1/2W	J
	R3006	QRC121K-102Z	COMP.R	1kΩ 1/2W	K
	R3008	QRC121K-152Z	COMP.R	1.5kΩ 1/2W	K
	R3101	NRSA63J-681X	MG R	680Ω 1/16W	J
	R3103	NRSA63J-821X	MG R	820Ω 1/16W	J
	R3104	QRL039J-473	OM R	47kΩ 3W	J
	R3106	NRSA63J-0R0X	MG R	0.0Ω 1/16W	J
	R3107	NRSA63J-103X	MG R	10kΩ 1/16W	J
	R3108	QRC121K-561Z	COMP.R	560 Ω 1/2W	K
	R3110	NRSA63J-0R0X	MG R	0.0Ω 1/16W	J
	CAPACITOR				
	C3006	QFZ9027-472	MM CAP.	4700pF AC125V	K
	C3007	QETN2EM-106Z	E CAP.	10μF 250V	M
	C3101	QETN1HM-106Z	E CAP.	10μF 50V	M
	C3102	NCB31HK-103X	C CAP.	0.01μF 50V	K
	C3103	QETN1EM-476Z	E CAP.	47μF 25V	M
	C3106	QFK62EK-104Z	MM CAP.	0.1μF 250V	K
	C3107	NDC31HJ-561X	C CAP.	560pF 50V	J
	C3108	NDC31HJ-100X	C CAP.	10pF 50V	J
	COIL				
	L3002	QQL26AJ-102Z	COIL	1mH	J
	L3101	QQL244K-5R6Z	COIL	5.6μH	K
	L3102	QQL244K-4R7Z	COIL	4.7μH	K
	DIODE				
	D3001	RM2C-LFA1	SI.DIODE		
	D3101	EU01N-T2	SI.DIODE		
	D3102	1SR124-400A-T2	SI.DIODE		
	IC				
	IC3101	TDA6111Q	I.C.(MONO-ANA)		
	OTHERS				
	SG3001	CE42447-501	ARRESTOR		
⚠	SK3001	CE42535-001J1	C.R.T.SOCKET		

G CRT SOCKET P.W. BOARD ASS'Y (SSB-3251A-M2)

⚠	Symbol No.	Part No.	Part Name	Description	
	RESISTOR				
	R3001	NRVA63D-123X	MF R	12kΩ 1/16W±0.5%	
	R3002	NRVA63D-223X	CHIP MF R	22kΩ 1/16W±0.5%	
	R3003	NRVA63D-472X	MF R	4.7kΩ 1/16W±0.5%	
	R3005	QRE121J-105Y	C R	1MΩ 1/2W	J
	R3006	QRC121K-102Z	COMP.R	1kΩ 1/2W	K
	R3008	QRC121K-152Z	COMP.R	1.5kΩ 1/2W	K
	R3013-14	NRSA63J-0R0X	MG R	0.0Ω 1/16W	J
	R3101	NRSA63J-681X	MG R	680Ω 1/16W	J
	R3103	NRSA63J-821X	MG R	820Ω 1/16W	J
	R3104	QRL039J-473	OM R	47kΩ 3W	J
	R3106	NRSA63J-0R0X	MG R	0.0Ω 1/16W	J
	R3107	NRSA63J-103X	MG R	10kΩ 1/16W	J
	R3108	QRC121K-561Z	COMP.R	560 Ω 1/2W	K
	R3110	NRSA63J-0R0X	MG R	0.0Ω 1/16W	J
	CAPACITOR				
⚠	C3001	QETM2EM-336	E CAP.	33μF 250V	M
	C3002	QETN2EM-106Z	E CAP.	10μF 250V	M
	C3003	QFLC1HJ-223Z	M CAP.	0.022μF 50V	J
	C3006	QFZ9027-472	MM CAP.	4700pF AC125V	K
	C3007	QETN2EM-106Z	E CAP.	10μF 250V	M
	C3101	QETN1HM-106Z	E CAP.	10μF 50V	M
	C3102	NCB31HK-103X	C CAP.	0.01μF 50V	K
	C3103	QETN1EM-476Z	E CAP.	47μF 25V	M
	C3106	QFK62EK-104Z	MM CAP.	0.1μF 250V	K
	C3107	NDC31HJ-561X	C CAP.	560pF 50V	J
	C3108	NDC31HJ-100X	C CAP.	10pF 50V	J
	COIL				
	L3001-02	QQL26AJ-102Z	COIL	1mH	J
	L3101	QQL244K-5R6Z	COIL	5.6μH	K
	L3102	QQL244K-4R7Z	COIL	4.7μH	K
	DIODE				
	D3001	RM2C-LFA1	SI.DIODE		
	D3101	EU01N-T2	SI.DIODE		
	D3102	1SR124-400A-T2	SI.DIODE		
	IC				
	IC3101	TDA6111Q	I.C.(MONO-ANA)		
	OTHERS				
⚠	FR3007	QRZ9009-1R5	F R	1.5 Ω 1/2W	J
	SG3001	CE42447-501	ARRESTOR		
⚠	SK3001	CE42535-001J1	C.R.T.SOCKET		

B CRT SOCKET P.W. BOARD ASS'Y

(SSB-3351A-M2)

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R3005	QRE121J-105Y	C R	1MΩ 1/2W J
	R3006	QRC121K-102Z	COMP.R	1kΩ 1/2W K
	R3008	QRC121K-152Z	COMP.R	1.5kΩ 1/2W K
	R3031	NRVA63D-123X	MF R	12kΩ 1/16W±0.5%
	R3032	NRVA63D-562X	MF R	5.6kΩ 1/16W±0.5%
	R3033	NRVA63D-333X	CHIP MF R	33kΩ 1/16W±0.5%
	R3101	NRSA63J-681X	MG R	680Ω 1/16W J
	R3103	NRSA63J-821X	MG R	820Ω 1/16W J
	R3104	QRL039J-473	OM R	47kΩ 3W J
	R3105	NRSA63J-681X	MG R	680Ω 1/16W J
	R3106	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R3107	NRSA63J-103X	MG R	10kΩ 1/16W J
	R3108	QRC121K-561Z	COMP.R	560 Ω 1/2W K
	R3110	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	CAPACITOR			
	C3006	QFZ9027-472	MM CAP.	4700pF AC125V K
	C3007	QETN2EM-106Z	E CAP.	10μF 250V M
	C3101	QETN1HM-106Z	E CAP.	10μF 50V M
	C3102	NCB31HK-103X	C CAP.	0.01μF 50V K
	C3103	QETN1EM-476Z	E CAP.	47μF 25V M
	C3106	QFK62EK-104Z	MM CAP.	0.1μF 250V K
	C3107	NDC31HJ-561X	C CAP.	560pF 50V J
	C3108	NDC31HJ-100X	C CAP.	10pF 50V J
	COIL			
	L3002	QQL26AJ-102Z	COIL	1mH J
	L3101	QQL244K-5R6Z	COIL	5.6μH K
	L3102	QQL244K-4R7Z	COIL	4.7μH K
	DIODE			
	D3001	RM2C-LFA1	SI.DIODE	
	D3101	EU01N-T2	SI.DIODE	
	D3102	1SR124-400A-T2	SI.DIODE	
	D3103	MA111-X	SI.DIODE	
	TRANSISTOR			
	Q3031	2SA1037AK/QR/-X	SI.TRANSISTOR	
	IC			
	IC3101	TDA6111Q	I.C.(MONO-ANA)	
	OTHERS			
	SG3001	CE42447-501	ARRESTOR	
⚠	SK3001	CE42535-001J1	C.R.T.SOCKET	

CONVERGENCE P.W. BOARD ASS'Y

(SSB-5051A-M2)

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R5801-08	NRSA63J-272X	MG R	2.7kΩ 1/16W J
	R5809	QRE121J-471Y	C R	470Ω 1/2W J
	R5810	NRSA63J-122X	MG R	1.2kΩ 1/16W J
	R5812-13	NRSA63J-102X	MG R	1kΩ 1/16W J
	R5814	NRSA63J-333X	MG R	33kΩ 1/16W J
	R5815	NRSA63J-473X	MG R	47kΩ 1/16W J
	R5818	NRSA63J-101X	MG R	100Ω 1/16W J
	R5826	NRSA63J-473X	MG R	47kΩ 1/16W J
	R5827	NRSA63J-103X	MG R	10kΩ 1/16W J
	R5828-30	NRSA63J-101X	MG R	100Ω 1/16W J
	R5831-33	NRSA63J-102X	MG R	1kΩ 1/16W J
	R5834-39	NRSA63J-473X	MG R	47kΩ 1/16W J
	R5840	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R5842	QRX01GJ-2R2	MF R	2.2Ω 1W J
	R5843	QRL029J-221	OM R	220Ω 2W J
	R5844	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R5846	QRX01GJ-1R5	MF R	1.5Ω 1W J
	R5847	QRL029J-151	OM R	150Ω 2W J
	R5848	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R5850	QRX01GJ-2R2	MF R	2.2Ω 1W J
	R5851	QRL029J-221	OM R	220Ω 2W J
	R5852	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R5854	QRX01GJ-1R5	MF R	1.5Ω 1W J
	R5855	QRL029J-151	OM R	150Ω 2W J
	R5856	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R5858	QRX01GJ-3R3	MF R	3.3Ω 1W J
	R5859	QRL029J-221	OM R	220Ω 2W J
	R5860	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R5862	QRX01GJ-1R8	MF R	1.8Ω 1W J
	R5863	QRL029J-151	OM R	150Ω 2W J
	R5864	NRSA63J-101X	MG R	100Ω 1/16W J
	R5893	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	CAPACITOR			
	C5801-03	QETN1CM-107Z	E CAP.	100μF 16V M
	C5804	NCB31EK-104X	C CAP.	0.1μF 25V K
	C5805	QETN1CM-107Z	E CAP.	100μF 16V M
	C5806	NCB31EK-104X	C CAP.	0.1μF 25V K
	C5807	QETN1CM-107Z	E CAP.	100μF 16V M
	C5808-09	NCB31EK-104X	C CAP.	0.1μF 25V K
	C5810	QETN1EM-107Z	E CAP.	100μF 25V M
	C5813-14	NCB31EK-104X	C CAP.	0.1μF 25V K
	C5815	NCB31HK-102X	C CAP.	1000pF 50V K
	C5818-19	NCB31HK-103X	C CAP.	0.01μF 50V K
	C5820-25	NDC31HJ-151X	C CAP.	150pF 50V J
	C5827-28	QETN1HM-477Z	E CAP.	470μF 50V M
	C5829-34	NDC31HJ-151X	C CAP.	150pF 50V J
	C5838	NCB31EK-104X	C CAP.	0.1μF 25V K
	C5843	NCB31HK-103X	C CAP.	0.01μF 50V K
	DIODE			
	D5801	RK14-T3	SI.DIODE	
	D5804-05	1SR153-400-T2	SI.DIODE	
	D5816-27	RD33E/B2/-T2	ZENER DIODE	
	D5839	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	D5841-43	PTZ6.8B-X	ZENER DIODE	
	TRANSISTOR			
	Q5801	2SC3852A	SI.TRANSISTOR	
	Q5802-03	2SA673/C/-T	SI.TRANSISTOR	
	Q5806-08	2SD601A/QR/-X	SI.TRANSISTOR	
	Q5811	2SD601A/QR/-X	SI.TRANSISTOR	
	IC			
	IC5801	BA17805T	I.C.(MONO-ANA)	
	IC5803	BA17805T	I.C.(MONO-ANA)	
	IC5804-05	STK392-110	I.C.(HYBRID)	
	OTHERS			
	K5801	QQR0621-002Z	BEADS CORE	
	K5802	QQR0621-002Z	BEADS CORE	
	K5803	QQR0621-002Z	BEADS CORE	
	K5804	QQR0621-002Z	BEADS CORE	
	K5805	QQR0621-002Z	BEADS CORE	
	K5806	QQR0621-002Z	BEADS CORE	
	K5807	QQR0621-002Z	BEADS CORE	
	K5808	QQR0621-002Z	BEADS CORE	
	K5809	QQR0621-002Z	BEADS CORE	
	K5810	QQR0621-002Z	BEADS CORE	
	K5811	QQR0621-002Z	BEADS CORE	
	MD5001	QAL0382-001	CONVER MODULE	
	S5801	QSW0619-003Z	PUSH SWITCH	SERVICE SW

R VM P.W. BOARD ASS'Y (SSB-7151A-M2)

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R7101	NRSA63J-101X	MG R	100Ω 1/16W J
	R7102	NRSA63J-223X	MG R	22kΩ 1/16W J
	R7103-04	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R7105	NRSA63J-391X	MG R	390Ω 1/16W J
	R7106	NRSA63J-471X	MG R	470Ω 1/16W J
	R7107	NRSA63J-392X	MG R	3.9kΩ 1/16W J
⚠	R7110	QRJ146J-182X	C R	1.8kΩ 1/4W J
	R7111-12	NRSA63J-104X	MG R	100kΩ 1/16W J
⚠	R7113	QRJ146J-182X	C R	1.8kΩ 1/4W J
⚠	R7114	QRJ146J-470X	C R	47Ω 1/4W J
⚠	R7115	QRJ146J-470X	C R	47Ω 1/4W J
	R7116	QRG01GJ-150	OM R	15Ω 1W J
	R7117-18	NRSA63J-104X	MG R	100kΩ 1/16W J
	R7119	QRG01GJ-180	OM R	18Ω 1W J
	R7120-22	QRL039J-330	OM R	33Ω 3W J
	R7124	NRSA63J-101X	MG R	100Ω 1/16W J
	CAPACITOR			
	C7101	NCB31HK-102X	C CAP.	1000pF 50V K
	C7102	QETN1HM-106Z	E CAP.	10µF 50V M
	C7103	NCF21HZ-104X	C CAP.	0.1µF 50V Z
	C7104	NCB31HK-472X	C CAP.	4700pF 50V K
	C7107-08	QFN32DK-103	M CAP.	0.01µF 200V K
	C7109	QETN2CM-106Z	E CAP.	10µF 160V M
	C7110-11	QETN2CM-226Z	E CAP.	22µF 160V M
	C7112-13	QFN31HJ-222Z	M CAP.	2200pF 50V J
	C7116	QCS32HJ-330Z	C CAP.	33pF 500V J
	C7117-18	QFN32DK-103	M CAP.	0.01µF 200V K
	C7119	QCB32HK-103	C CAP.	0.01µF 500V K
	C7120	QCB32HK-102Z	C CAP.	1000pF 500V K
	DIODE			
	D7101	1SS355-X	SI.DIODE	
	D7102	RH1S-T3	SI.DIODE	
	D7103	RH1S-T3	SI.DIODE	
	TRANSISTOR			
	Q7101	2SC1906-T	SI.TRANSISTOR	
	Q7102	2SA1005/MLK/-T	SI.TRANSISTOR	
	Q7103	2SC1959/Y/-T	SI.TRANSISTOR	
	Q7104	2SA562TM/Y/-T	SI.TRANSISTOR	
	Q7105	2SJ403	F.E.T.	
	Q7106	IRFI620G	F.E.T.	
	OTHERS			
	K7101	CE41492-001Z	CHOKE COIL	

G VM P.W. BOARD ASS'Y (SSB-7251A-M2)

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R7101	NRSA63J-101X	MG R	100Ω 1/16W J
	R7102	NRSA63J-223X	MG R	22kΩ 1/16W J
	R7103-04	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R7105	NRSA63J-391X	MG R	390Ω 1/16W J
	R7106	NRSA63J-471X	MG R	470Ω 1/16W J
	R7107	NRSA63J-392X	MG R	3.9kΩ 1/16W J
⚠	R7110	QRJ146J-182X	C R	1.8kΩ 1/4W J
	R7111-12	NRSA63J-104X	MG R	100kΩ 1/16W J
⚠	R7113	QRJ146J-182X	C R	1.8kΩ 1/4W J
⚠	R7114	QRJ146J-470X	C R	47Ω 1/4W J
⚠	R7115	QRJ146J-470X	C R	47Ω 1/4W J
	R7116	QRG01GJ-150	OM R	15Ω 1W J
	R7117-18	NRSA63J-104X	MG R	100kΩ 1/16W J
	R7119	QRG01GJ-180	OM R	18Ω 1W J
	R7120-22	QRL039J-330	OM R	33Ω 3W J
	R7124	NRSA63J-101X	MG R	100Ω 1/16W J
	CAPACITOR			
	C7101	NCB31HK-102X	C CAP.	1000pF 50V K
	C7102	QETN1HM-106Z	E CAP.	10µF 50V M
	C7103	NCF21HZ-104X	C CAP.	0.1µF 50V Z
	C7104	NCB31HK-472X	C CAP.	4700pF 50V K
	C7107-08	QFN32DK-103	M CAP.	0.01µF 200V K
	C7109	QETN2CM-106Z	E CAP.	10µF 160V M
	C7110-11	QETN2CM-226Z	E CAP.	22µF 160V M
	C7112-13	QFN31HJ-222Z	M CAP.	2200pF 50V J
	C7116	QCS32HJ-330Z	C CAP.	33pF 500V J
	C7117-18	QFN32DK-103	M CAP.	0.01µF 200V K
	C7119	QCB32HK-103	C CAP.	0.01µF 500V K
	C7120	QCB32HK-102Z	C CAP.	1000pF 500V K
	DIODE			
	D7101	1SS355-X	SI.DIODE	
	D7102	RH1S-T3	SI.DIODE	
	D7103	RH1S-T3	SI.DIODE	
	TRANSISTOR			
	Q7101	2SC1906-T	SI.TRANSISTOR	
	Q7102	2SA1005/MLK/-T	SI.TRANSISTOR	
	Q7103	2SC1959/Y/-T	SI.TRANSISTOR	
	Q7104	2SA562TM/Y/-T	SI.TRANSISTOR	
	Q7105	2SJ403	F.E.T.	
	Q7106	IRFI620G	F.E.T.	
	OTHERS			
	K7101	CE41492-001Z	CHOKE COIL	

B VM P.W. BOARD ASS'Y (SSB-7351A-M2)

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R7101	NRSA63J-101X	MG R	100Ω 1/16W J
	R7102	NRSA63J-223X	MG R	22kΩ 1/16W J
	R7103-04	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R7105	NRSA63J-391X	MG R	390Ω 1/16W J
	R7106	NRSA63J-471X	MG R	470Ω 1/16W J
	R7107	NRSA63J-392X	MG R	3.9kΩ 1/16W J
⚠	R7110	QRJ146J-182X	C R	1.8kΩ 1/4W J
	R7111-12	NRSA63J-104X	MG R	100kΩ 1/16W J
⚠	R7113	QRJ146J-182X	C R	1.8kΩ 1/4W J
⚠	R7114	QRJ146J-470X	C R	47Ω 1/4W J
⚠	R7115	QRJ146J-470X	C R	47Ω 1/4W J
	R7116	QRG01GJ-150	OM R	15Ω 1W J
	R7117-18	NRSA63J-104X	MG R	100kΩ 1/16W J
	R7119	QRG01GJ-180	OM R	18Ω 1W J
	R7120-22	QRL039J-330	OM R	33Ω 3W J
	R7124	NRSA63J-101X	MG R	100Ω 1/16W J
	CAPACITOR			
	C7101	NCB31HK-102X	C CAP.	1000pF 50V K
	C7102	QETN1HM-106Z	E CAP.	10μF 50V M
	C7103	NCF21HZ-104X	C CAP.	0.1μF 50V Z
	C7104	NCB31HK-472X	C CAP.	4700pF 50V K
	C7107-08	QFN32DK-103	M CAP.	0.01μF 200V K
	C7109	QETN2CM-106Z	E CAP.	10μF 160V M
	C7110-11	QETN2CM-226Z	E CAP.	22μF 160V M
	C7112-13	QFN31HJ-222Z	M CAP.	2200pF 50V J
	C7116	QCS32HJ-330Z	C CAP.	33pF 500V J
	C7117-18	QFN32DK-103	M CAP.	0.01μF 200V K
	C7119	QCB32HK-103	C CAP.	0.01μF 500V K
	C7120	QCB32HK-102Z	C CAP.	1000pF 500V K
	DIODE			
	D7101	1SS355-X	SI.DIODE	
	D7102	RH1S-T3	SI.DIODE	
	D7103	RH1S-T3	SI.DIODE	
	TRANSISTOR			
	Q7101	2SC1906-T	SI.TRANSISTOR	
	Q7102	2SA1005/MLK/-T	SI.TRANSISTOR	
	Q7103	2SC1959/Y/-T	SI.TRANSISTOR	
	Q7104	2SA562TM/Y/-T	SI.TRANSISTOR	
	Q7105	2SJ403	F.E.T.	
	Q7106	IRFI620G	F.E.T.	
	OTHERS			
	K7101	CE41492-001Z	CHOKE COIL	

CENTER SPEAKER P.W. BOARD ASS'Y (SSB0A051A-M2)

⚠	Symbol No.	Part No.	Part Name	Description
	OTHERS			
	J0001	CEMT019-001	SPK TERMINAL	

LINE FILTER P.W. BOARD ASS'Y (SSB-9051A-M2)

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
⚠	R9901	QRZ9041-275	C R	2.7MΩ 1/2W K
	R9911	QRE121J-5R6Y	C R	5.6Ω 1/2W J
	CAPACITOR			
⚠	C9901	QFZ9072-104	M F CAP.	0.1μFAC275V K
⚠	C9902	QFZ9072-104	M F CAP.	0.1μFAC275V K
⚠	C9903	QFZ9072-104	M F CAP.	0.1μFAC275V K
	C9911	QETN1CM-108Z	E CAP.	1000μF 16V M
	C9921	QETM1HM-108	E CAP.	1000μF 50V M
	TRANSFORMER			
⚠	T9911	QQT0361-001	POWER TRANSF.	
	DIODE			
	D9911-14	1SR35-400A-T2	SI.DIODE	
	D9921	1SR35-400A-T2	SI.DIODE	
	OTHERS			
⚠		QMPD200-200-JC	POWER CORD	
		A49593	CONNECTOR CLIP	
⚠	F9901	QMF61U1-7R0-S	FUSE	7.0A
⚠	LF9901	QQR0972-002	LINE FILTER	
⚠	LF9902	QQR0972-002	LINE FILTER	
⚠	LF9903	QQR1281-001	LINE FILTER	
⚠	VA9901	ERZV10V621CS	VARISTOR	

REMOCON SENSOR P.W. BOARD ASS'Y (SSB-8051A-M2)

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R8001	NRSA63J-102X	MG R	1kΩ 1/16W J
	CAPACITOR			
	C8001	NCB31CK-104X	C CAP.	0.1μF 16V K
	C8002	QETN1EM-476Z	E CAP.	47μF 25V M
	DIODE			
	D8001	MA3068/M/-X	ZENER DIODE	
	IC			
	IC8001	GP1U281Q	IFR DETECT UNIT	

DEF. OSC. P.W. BOARD ASS'Y (SSB0H051A-M2)

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R0101	NRSA63J-102X	MG R	1kΩ 1/16W J
	R0103	NRSA63J-681X	MG R	680Ω 1/16W J
	R0104	NRSA63J-103X	MG R	10kΩ 1/16W J
	R0105	NRSA63J-473X	MG R	47kΩ 1/16W J
	R0106	NRSA63J-123X	MG R	12kΩ 1/16W J
	R0107	NRSA63J-103X	MG R	10kΩ 1/16W J
	R0109	NRSA63J-682X	MG R	6.8kΩ 1/16W J
	R0110	NRSA63J-223X	MG R	22kΩ 1/16W J
	R0111	NRVA63D-153X	MF R	15kΩ 1/16W±0.5%
	R0112	NRVA63D-182X	MF R	1.8kΩ 1/16W±0.5%
	R0113	NRVA63D-123X	MF R	12kΩ 1/16W±0.5%
	R0114	NRSA63J-222X	MG R	2.2kΩ 1/16W J
	R0116	NRVA63D-182X	MF R	1.8kΩ 1/16W±0.5%
	R0117	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R0120	NRSA63J-183X	MG R	18kΩ 1/16W J
	R0121	NRSA63J-152X	MG R	1.5kΩ 1/16W J
	R0122	QRG01GJ-470	OM R	47Ω 1W J
⚠	R0123	QRK126J-101X	C R	100Ω 1/2W J
	R0126-27	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R0129	NRVA63D-183X	MF R	18kΩ 1/16W±0.5%
	R0131	NRSA63J-102X	MG R	1kΩ 1/16W J
	R0133	NRSA63J-151X	MG R	150Ω 1/16W J
	R0134	NRSA63J-334X	MG R	330kΩ 1/16W J
	R0137	NRSA63J-103X	MG R	10kΩ 1/16W J
	R0139	NRSA63J-223X	MG R	22kΩ 1/16W J
	R0140	NRSA63J-103X	MG R	10kΩ 1/16W J
	R0141	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R0142	NRSA63J-103X	MG R	10kΩ 1/16W J
	R0143	NRSA63J-471X	MG R	470Ω 1/16W J
	R0161-62	NRSA63J-221X	MG R	220Ω 1/16W J
	R0163-64	NRSA63J-101X	MG R	100Ω 1/16W J
	R0167-68	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R0169	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R0170	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R0171	NRSA63J-223X	MG R	22kΩ 1/16W J
	R0172	NRSA63J-473X	MG R	47kΩ 1/16W J
	R0174-75	NRSA63J-102X	MG R	1kΩ 1/16W J
	R0176	NRSA63J-222X	MG R	2.2kΩ 1/16W J
	R0177	NRSA63J-123X	MG R	12kΩ 1/16W J
	R0178	NRSA63J-821X	MG R	820Ω 1/16W J
	R0179	NRVA63D-562X	MF R	5.6kΩ 1/16W±0.5%
	R0180	NRVA63D-152X	MF R	1.5kΩ 1/16W±0.5%
	R0182-83	NRSA63J-102X	MG R	1kΩ 1/16W J
	R0184	NRVA63D-473X	MF R	47kΩ 1/16W±0.5%
	R0185	NRVA63D-103X	MF R	10kΩ 1/16W±0.5%
	R0186	NRSA63J-103X	MG R	10kΩ 1/16W J
	R0187	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R0188	NRVA63D-101X	MF R	100Ω 1/16W±0.5%
	R0189	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0190	NRSA63J-181X	MG R	180Ω 1/16W J
	R0216-17	NRSA63J-221X	MG R	220Ω 1/16W J
	R0223-24	NRSA63J-101X	MG R	100Ω 1/16W J
	R0226	NRSA63J-101X	MG R	100Ω 1/16W J
	R0227	NRSA63J-102X	MG R	1kΩ 1/16W J
	R0230	NRSA63J-223X	MG R	22kΩ 1/16W J
	R0321	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0326-27	NRSA63J-224X	MG R	220kΩ 1/16W J
	R0328	NRSA63J-563X	MG R	56kΩ 1/16W J
	R0329	NRSA63J-224X	MG R	220kΩ 1/16W J
	R0330	NRSA63J-683X	MG R	68kΩ 1/16W J
	R0751	NRSA63J-183X	MG R	18kΩ 1/16W J
	R0752	NRSA63J-103X	MG R	10kΩ 1/16W J
	R0753	NRSA63J-822X	MG R	8.2kΩ 1/16W J
	R0754-55	NRSA63J-183X	MG R	18kΩ 1/16W J

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R0756	NRSA63J-392X	MG R	3.9kΩ 1/16W J
	R0757	NRSA63J-152X	MG R	1.5kΩ 1/16W J
	R0761-65	QRE121J-184Y	C R	180kΩ 1/2W J
	CAPACITOR			
	C0102-03	NCB31HK-103X	C CAP.	0.01µF 50V K
	C0104	NDC31HJ-561X	C CAP.	560pF 50V J
	C0106	NDC31HJ-102X	C CAP.	1000pF 50V J
	C0107	NDC21HJ-122X	C CAP.	1200pF 50V J
	C0108	QETN1HM-475Z	E CAP.	4.7µF 50V M
	C0109	NCB31HK-103X	C CAP.	0.01µF 50V K
	C0110	NCB31HK-102X	C CAP.	1000pF 50V K
	C0111-12	QETN1HM-225Z	E CAP.	2.2µF 50V M
	C0113	NDC21HJ-122X	C CAP.	1200pF 50V J
	C0114-15	NDC31HJ-102X	C CAP.	1000pF 50V J
	C0116	NCB31HK-103X	C CAP.	0.01µF 50V K
	C0117	QTMN1CM-477Z	E CAP.	470µF 16V M
	C0118	NCB31HK-103X	C CAP.	0.01µF 50V K
	C0119-20	QETN1EM-476Z	E CAP.	47µF 25V M
	C0121	QETN1CM-107Z	E CAP.	100µF 16V M
	C0122-24	NCB31HK-103X	C CAP.	0.01µF 50V K
	C0131	NDC31HJ-101X	C CAP.	100pF 50V J
	C0132	QETN1HM-105Z	E CAP.	1.0µF 50V M
	C0133	NCB31CK-104X	C CAP.	0.1µF 16V K
	C0134	NCB31EK-273X	CHIP CAP.	0.027µF 25V K
	C0135-37	NDC31HJ-102X	C CAP.	1000pF 50V J
	C0138	NDC31HJ-151X	C CAP.	150pF 50V J
	C0161	QETN1CM-108Z	E CAP.	1000µF 16V M
	C0162	NCB31HK-103X	C CAP.	0.01µF 50V K
	C0163	QETN1AM-477Z	E CAP.	470µF 10V M
	C0164	NCB31HK-103X	C CAP.	0.01µF 50V K
	C0165	NCB31CK-104X	C CAP.	0.1µF 16V K
	C0166	QETN1HM-106Z	E CAP.	10µF 50V M
	C0167	NCB31HK-332X	C CAP.	3300pF 50V K
	C0168	NCB31HK-103X	C CAP.	0.01µF 50V K
	C0169	NCB31CK-104X	C CAP.	0.1µF 16V K
	C0170	NCB31HK-103X	C CAP.	0.01µF 50V K
	C0171	QFV71HJ-184Z	MF CAP.	0.18µF 50V J
	C0172	QFV71HJ-394Z	MF CAP.	0.39µF 50V J
	C0173	NCB31HK-153X	C CAP.	0.015µF 50V K
	C0174	NCB31HK-272X	CHIP CAP.	2700pF 50V K
	C0175	NCB31HK-152X	C CAP.	1500pF 50V K
	C0176	QFV71HJ-104Z	MF CAP.	0.1µF 50V J
	C0178-82	NCB31CK-104X	C CAP.	0.1µF 16V K
	C0212	QETN1HM-106Z	E CAP.	10µF 50V M
	C0221	QETN1HM-105Z	E CAP.	1.0µF 50V M
	C0321	NCB31HK-102X	C CAP.	1000pF 50V K
	C0751	QFLC1HJ-563Z	M CAP.	0.056µF 50V J
	C0752	QETN1VM-476Z	E CAP.	47µF 35V M
⚠	C0753	QFZ0200-153	MPP CAP.	0.015µF1.5kVH±3%
⚠	C0761	QFZ0122-682	MPP CAP.	6800pF1.8kVH±3%
	C0762-63	QCZ0122-471	C CAP.	470pF 2kV K
	COIL			
	L0101	QQL01BK-470Z	COIL	47µH K
	L0103-04	NQL092K-100X	COIL	10µH
	L0105	QQL01BK-101Z	COIL	100µH K
	DIODE			
	D0164-65	1SS355-X	SI.DIODE	
	D0221	1SS355-X	SI.DIODE	
	D0321	1SS355-X	SI.DIODE	
	D0751-52	ES1F-LFG2	SI.DIODE	

⚠	Symbol No.	Part No.	Part Name	Description
	TRANSISTOR			
	Q0101-02	2SD601A/QR/-X	SI.TRANSISTOR	
	Q0131-32	2SD601A/QR/-X	SI.TRANSISTOR	
	Q0162	2SD601A/QR/-X	SI.TRANSISTOR	
	Q0167-68	2SD601A/QR/-X	SI.TRANSISTOR	
	Q0751-52	2SD601A/QR/-X	SI.TRANSISTOR	
	Q0753	2SC4632	SI.TRANSISTOR	
	IC			
	IC0101	LA7860M-X	I.C.(MONO-ANA)	
	IC0102	BA12FP-X	I.C.(MONO-ANA)	
	IC0161	AN5441SA-W	I.C.(MONO-ANA)	
	IC0162	BA10393F-XE	I.C.(MONO-ANA)	
	IC0212	CXA1875AM-X	I.C.(MONO-ANA)	
	OTHERS			
	CN0010	QGB1505K1-35	PLUG	

AV JACK P.W. BOARD ASS'Y (SSB0J051A-M2)

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R0101	NRSA63J-333X	MG R	33kΩ 1/16W J
	R0102-04	NRSA63J-750X	MG R	75Ω 1/16W J
	R0105-06	NRSA63J-224X	MG R	220kΩ 1/16W J
	R0107-08	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0125	NRSA63J-750X	MG R	75Ω 1/16W J
	R0126-27	NRSA63J-224X	MG R	220kΩ 1/16W J
	R0131-33	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0141	NRSA63J-333X	MG R	33kΩ 1/16W J
	R0142-44	NRSA63J-750X	MG R	75Ω 1/16W J
	R0145-46	NRSA63J-224X	MG R	220kΩ 1/16W J
	R0147-48	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0201-07	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0209	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0211	NRSA63J-151X	MG R	150Ω 1/16W J
	R0213	NRSA63J-151X	MG R	150Ω 1/16W J
	R0215-19	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0220	NRSA63J-151X	MG R	150Ω 1/16W J
	R0322	NRSA63J-750X	MG R	75Ω 1/16W J
	R0325	NRSA63J-750X	MG R	75Ω 1/16W J
	R0328	NRSA63J-750X	MG R	75Ω 1/16W J
	R0342	NRSA63J-750X	MG R	75Ω 1/16W J
	R0345	NRSA63J-750X	MG R	75Ω 1/16W J
	R0348	NRSA63J-750X	MG R	75Ω 1/16W J
	R0401-05	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0409-12	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0436	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0438-41	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0471	NRSA02J-221X	MG R	220Ω 1/10W J
	R0473	NRSA02J-121X	MG R	120Ω 1/10W J
	R0475	NRSA02J-221X	MG R	220Ω 1/10W J
	R0477	NRSA02J-121X	MG R	120Ω 1/10W J
	R0481-82	NRSA02J-101X	MG R	100Ω 1/10W J
	R0601	NRSA02J-0R0X	MG R	0.0Ω 1/10W J
	R0602	NRSA02J-103X	MG R	10kΩ 1/10W J
	R0603	NRSA02J-473X	MG R	47kΩ 1/10W J
	R0604	NRSA02J-393X	MG R	39kΩ 1/10W J
	R0605	NRSA02J-104X	MG R	100kΩ 1/10W J
	R0607	NRSA02J-333X	MG R	33kΩ 1/10W J
	R0608	NRSA02J-103X	MG R	10kΩ 1/10W J
	R0609	NRSA02J-0R0X	MG R	0.0Ω 1/10W J
	CAPACITOR			
	C0101	NCB11CK-105X	C CAP.	1μF 16V K
	C0102	NCB31HK-103X	C CAP.	0.01μF 50V K
	C0103-04	QETN1HM-106Z	E CAP.	10μF 50V M
	C0105-06	QETN1HM-105Z	E CAP.	1.0μF 50V M
	C0126	QETN1HM-106Z	E CAP.	10μF 50V M
	C0127-28	QETN1HM-105Z	E CAP.	1.0μF 50V M
	C0141	NCB11CK-105X	C CAP.	1μF 16V K
	C0142	NCB31HK-103X	C CAP.	0.01μF 50V K
	C0143-44	QETN1HM-106Z	E CAP.	10μF 50V M
	C0145-46	QETN1HM-105Z	E CAP.	1.0μF 50V M
	C0321-23	QETN1EM-476Z	E CAP.	47μF 25V M
	C0341-43	QETN1HM-105Z	E CAP.	1.0μF 50V M
	C0421	NCF11EZ-105X	C CAP.	1μF 25V Z
	C0431	NDC21HJ-221X	C CAP.	220pF 50V J
	C0432-33	QENC1HM-106Z	BP E CAP.	10μF 50V M
	C0434	NDC21HJ-221X	C CAP.	220pF 50V J
	C0435-36	QENC1HM-106Z	BP E CAP.	10μF 50V M
	C0601	NDC21HJ-680X	C CAP.	68pF 50V J
	C0602	QENC1HM-105Z	BP E CAP.	1.0μF 50V M
	C0603-04	QETN1EM-476Z	E CAP.	47μF 25V M
	C0605	QETN1HM-474Z	E CAP.	0.47μF 50V M
	C0606	NCB21HK-222X	C CAP.	2200pF 50V K
	C0607	NCB21HK-472X	C CAP.	4700pF 50V K
	C0608	NCB21HK-473X	C CAP.	0.047μF 50V K
	C0610	QETN1HM-474Z	E CAP.	0.47μF 50V M
	C0612	QETN1HM-475Z	E CAP.	4.7μF 50V M
	C0613	NDC21HJ-681X	C CAP.	680pF 50V J
	C0614	NCB21HK-153X	C CAP.	0.015μF 50V K
	C0615	NDC21HJ-102X	C CAP.	1000pF 50V J
	C0616	NDC21HJ-821X	C CAP.	820pF 50V J
	C0617	NDC21HJ-680X	C CAP.	68pF 50V J
	C0618	NDC21HJ-121X	C CAP.	120pF 50V J
	C0619-20	NCF11EZ-105X	C CAP.	1μF 25V Z
	C0621	NDC21HJ-100X	C CAP.	10pF 50V J
	C0622	NDC21HJ-331X	C CAP.	330pF 50V J
	COIL			
	L0431	QQL25CK-100Z	COIL	10μH K
	DIODE			
	D0101	UDZS10B-X	ZENER DIODE	
	D0141	UDZS10B-X	ZENER DIODE	
	D0201-04	UDZS10B-X	ZENER DIODE	
	D0207	UDZS10B-X	ZENER DIODE	
	D0209-13	UDZS10B-X	ZENER DIODE	
	D0215-20	UDZS10B-X	ZENER DIODE	
	D0401-06	UDZS9.1B-X	ZENER DIODE	
	D0471	MA153A-X	SI.DIODE	
	D0473	MA153A-X	SI.DIODE	
	IC			
	IC0601	M52001SP	I.C.(MONO-ANA)	
	OTHERS			
	CN0006	QGB1505K1-40	CONNECTOR	
	CN0007	QGB1505K1-25	CONNECTOR	
	J0101	QNZ0484-006	AV JACK	
	J0141	QNZ0484-004	AV JACK	
	J0321	QNN0463-001	JACK	
	J0341	QNN0463-001	JACK	
	LC0321-23	NQR0169-001X	EMI FILTER	
	LC0341-43	NQR0169-001X	EMI FILTER	

FRONT CONTROL P.W. BOARD ASS'Y (SSB0L051A-M2)

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R0201	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R0202	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0203	NRSA63J-822X	MG R	8.2kΩ 1/16W J
	R0204	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0401	NRSA63J-750X	MG R	75Ω 1/16W J
	R0402-03	NRSA63J-224X	MG R	220kΩ 1/16W J
	R0404-05	NRSA63J-750X	MG R	75Ω 1/16W J
	R0406	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0411-20	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0702-03	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0706	NRSA63J-101X	MG R	100Ω 1/16W J
	R0707	NRSA63J-103X	MG R	10kΩ 1/16W J
	R0708	NRSA63J-333X	MG R	33kΩ 1/16W J
	R0711	NRSA63J-102X	MG R	1kΩ 1/16W J
	R0712	NRSA63J-333X	MG R	33kΩ 1/16W J
	R0732	NRSA63J-333X	MG R	33kΩ 1/16W J
	R0748	NRSA63J-562X	MG R	5.6kΩ 1/16W J
	R0749	NRSA63J-153X	MG R	15kΩ 1/16W J
	R0750	NRSA63J-562X	MG R	5.6kΩ 1/16W J
	R0751	NRSA63J-153X	MG R	15kΩ 1/16W J
	CAPACITOR			
	C0442-43	QETN1HM-105Z	E CAP.	1.0µF 50V M
	C0444-45	QETN1HM-106Z	E CAP.	10µF 50V M
	C0446	QFLC1HJ-103Z	M CAP.	0.01µF 50V J
	C0711	QETN1CM-336Z	E CAP.	33µF 16V M
	C0712-13	NCB31CK-104X	C CAP.	0.1µF 16V K
	DIODE			
	D0402-06	UDZS10B-X	ZENER DIODE	
	D0701	SELU5E20C	L.E.D.	
	D0735	UDZS10B-X	ZENER DIODE	
	TRANSISTOR			
	Q0201	DTC124EKA-X	DIGI.TRANSISTOR	
	Q0701-02	2SC2412K/QR/-X	SI.TRANSISTOR	
	IC			
	IC0201	PC123F2	I.C.(PH.COUPLER)	
	IC0702	MM1437AF-X	I.C.(MONO-ANA)	
	OTHERS			
	J0401	QNZ0438-001	JACK	
	S0701	QSW0619-003Z	PUSH SWITCH	POWER
	S0702	QSW0619-003Z	PUSH SWITCH	MENU
	S0703	QSW0619-003Z	PUSH SWITCH	CH-
	S0704	QSW0619-003Z	PUSH SWITCH	CH+
	S0705	QSW0619-003Z	PUSH SWITCH	VOL-
	S0706	QSW0619-003Z	PUSH SWITCH	VOL+

RECEIVER P.W. BOARD ASS'Y (SSB0R251A-M2)

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R0101-02	NRSA63J-103X	MG R	10kΩ 1/16W J
	R0103	NRSA63J-333X	MG R	33kΩ 1/16W J
	R0104	NRSA63J-103X	MG R	10kΩ 1/16W J
	R0105-07	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0108	NRSA63J-473X	MG R	47kΩ 1/16W J
	R0109-11	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0113	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0125-26	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0201	NRSA63J-102X	MG R	1kΩ 1/16W J
	R0202	NRSA63J-682X	MG R	6.8kΩ 1/16W J
	R0203	NRSA63J-153X	MG R	15kΩ 1/16W J
	R0204	NRSA63J-332X	MG R	3.3kΩ 1/16W J
	R0205	NRVA02D-153X	MF R	15kΩ 1/10W D
	R0206	NRSA63J-333X	MG R	33kΩ 1/16W J
	R0207	NRSA63J-683X	MG R	68kΩ 1/16W J
	R0208	NRVA02D-152X	MF R	1.5kΩ 1/10W D
	R0209-10	NRSA63J-101X	MG R	100Ω 1/16W J
	R0211	NRSA63J-563X	MG R	56kΩ 1/16W J
	R0212	NRSA63J-562X	MG R	5.6kΩ 1/16W J
	R0213-14	NRSA63J-221X	MG R	220Ω 1/16W J
	R0217-18	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0531-32	NRSA63J-221X	MG R	220Ω 1/16W J
	R0533	NRSA63J-823X	MG R	82kΩ 1/16W J
	R0534-35	NRSA63J-221X	MG R	220Ω 1/16W J
	R0536	NRSA63J-823X	MG R	82kΩ 1/16W J
	R0537-40	NRSA63J-223X	MG R	22kΩ 1/16W J
	R0543	NRSA63J-153X	MG R	15kΩ 1/16W J
	R0551-52	NRSA63J-224X	MG R	220kΩ 1/16W J
	R0631	NRSA63J-102X	MG R	1kΩ 1/16W J
	R0632-33	NRSA63J-223X	MG R	22kΩ 1/16W J
	R0634	NRSA63J-102X	MG R	1kΩ 1/16W J
	R0635-36	NRSA63J-223X	MG R	22kΩ 1/16W J
	R0637	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0640	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0641	NRSA63J-103X	MG R	10kΩ 1/16W J
	R0651	NRSA63J-101X	MG R	100Ω 1/16W J
	R0653	NRSA63J-101X	MG R	100Ω 1/16W J
	R0654	NRSA63J-103X	MG R	10kΩ 1/16W J
	R0656-57	NRSA63J-101X	MG R	100Ω 1/16W J
	R0658	NRSA63J-103X	MG R	10kΩ 1/16W J
	R0659	NRSA63J-104X	MG R	100kΩ 1/16W J
	R0660	NRSA63J-103X	MG R	10kΩ 1/16W J
	R0661	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R0662	NRSA63J-562X	MG R	5.6kΩ 1/16W J
	R0663	NRSA63J-472X	MG R	4.7kΩ 1/16W J
	R0664	NRSA63J-562X	MG R	5.6kΩ 1/16W J
	R0666-67	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0669-70	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0701	NRSA63J-102X	MG R	1kΩ 1/16W J
	CAPACITOR			
	C0102	QETN1CM-477Z	E CAP.	470µF 16V M
	C0103-04	QETN1HM-106Z	E CAP.	10µF 50V M
	C0201	QETN1HM-105Z	E CAP.	1.0µF 50V M
	C0202	NCF31CZ-104X	C CAP.	0.1µF 16V Z
	C0203	QETN1CM-107Z	E CAP.	100µF 16V M
	C0204	QETN1EM-476Z	E CAP.	47µF 25V M
	C0207	QENC1HM-105Z	BP E CAP.	1.0µF 50V M
	C0208	NCB31HK-104X	CHIP CAP.	0.1µF 50V K
	C0209	QENC1HM-475Z	BP E CAP.	4.7µF 50V M
	C0210	NCB31HK-473X	CHIP CAP.	0.047µF 50V K
	C0211	QETN1HM-474Z	E CAP.	0.47µF 50V M

⚠	Symbol No.	Part No.	Part Name	Description
	CAPACITOR			
	C0212	QETN1HM-225Z	E CAP.	2.2µF 50V M
	C0213-14	NCB31HK-104X	CHIP CAP.	0.1µF 50V K
	C0215	QBTC1CK-335Z	TAN.CAP.	3.3µF 16V K
	C0216	QETN1HM-105Z	E CAP.	1.0µF 50V M
	C0217	QBTC1CK-106Z	TAN.CAP.	10µF 16V K
	C0218-19	QETN1HM-105Z	E CAP.	1.0µF 50V M
	C0220	QETN1HM-475Z	E CAP.	4.7µF 50V M
	C0221	QETN1HM-105Z	E CAP.	1.0µF 50V M
	C0531-32	QETN1HM-474Z	E CAP.	0.47µF 50V M
	C0551-52	QETN1HM-105Z	E CAP.	1.0µF 50V M
	C0601-02	QENC1HM-105Z	BP E CAP.	1.0µF 50V M
	C0605-06	QETN1HM-225Z	E CAP.	2.2µF 50V M
	C0607	NCB31HK-104X	CHIP CAP.	0.1µF 50V K
	C0608	NCB31HK-222X	C CAP.	2200pF 50V K
	C0609	NCB31HK-104X	CHIP CAP.	0.1µF 50V K
	C0610	NCB31HK-222X	C CAP.	2200pF 50V K
	C0611	NCB21HK-273X	C CAP.	0.027µF 50V K
	C0631-32	QENC1HM-106Z	BP E CAP.	10µF 50V M
	C0633	QETN1HM-226Z	E CAP.	22µF 50V M
	C0634	QFLC1HJ-153Z	M CAP.	0.015µF 50V J
	C0635	QFLC1HJ-473Z	M CAP.	0.047µF 50V J
	C0636	QFLC1HJ-153Z	M CAP.	0.015µF 50V J
	C0637	QFLC1HJ-473Z	M CAP.	0.047µF 50V J
	C0638	QETN1EM-476Z	E CAP.	47µF 25V M
	C0639	NCF31CZ-104X	C CAP.	0.1µF 16V Z
	C0640	QETN1HM-106Z	E CAP.	10µF 50V M
	C0651	NCF31CZ-104X	C CAP.	0.1µF 16V Z
	C0652	QETN1EM-476Z	E CAP.	47µF 25V M
	C0661-62	QEZ0206-335Z	E CAP.	3.3µF 50V M
	COIL			
	L0101	QRN143J-0R0X	C R	0.0Ω 1/4W J
	L0102	QRN143J-0R0X	C R	0.0Ω 1/4W J
	DIODE			
	D0213-14	UDZS8.2B-X	ZENER DIODE	
	D0531-32	UDZS10B-X	ZENER DIODE	
	D0533-34	MA111-X	SI.DIODE	
	D0551-52	UDZS9.1B-X	ZENER DIODE	
	D0661	1SS133-T2	SI.DIODE	
	D0662	1SS133-T2	SI.DIODE	
	D0701	UDZS8.2B-X	ZENER DIODE	
	TRANSISTOR			
	Q0101	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q0531-34	DTC323TK-X	DIGI.TRANSISTOR	
	Q0651	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q0652	2SA1037AK/QR/-X	SI.TRANSISTOR	
	Q0661-62	2SC3311A/QR/-T	SI.TRANSISTOR	
	IC			
	IC0201	UPC1851BCU	I.C.(MONO-ANA)	
	IC0631	NJM2150AD	I.C.(MONO-ANA)	
	IC0651	M62320FP-X	I.C.(M)	
	OTHERS			
	CN0005	QGB1505K1-40	CONNECTOR	
	CN0010	QGB1505K1-40	CONNECTOR	
	J0531	CEMN036-004	PIN JACK	
	J0701	QNS0001-001	JACK	
	RY0661	QSK0133-001	RELAY	
	RY0662	QSK0133-001	RELAY	
	UD0101	QAU0219-001	RF SPLITTER	
⚠	TU0101	QAU0206-001	TUNER	

CONVERGENCE OSD P.W. BOARD ASS'Y (SSB0T051A-M2)

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R0701	NRSA63J-562X	MG R	5.6kΩ 1/16W J
	R0702	NRSA63J-471X	MG R	470Ω 1/16W J
	R0703	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0704	NRSA63J-562X	MG R	5.6kΩ 1/16W J
	R0705	NRSA63J-471X	MG R	470Ω 1/16W J
	R0706-07	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0708	NRSA63J-471X	MG R	470Ω 1/16W J
	R0709	NRSA63J-562X	MG R	5.6kΩ 1/16W J
	R0713	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0714	NRSA63J-473X	MG R	47kΩ 1/16W J
	R0715	NRSA63J-102X	MG R	1kΩ 1/16W J
	R0716	NRSA63J-473X	MG R	47kΩ 1/16W J
	R0717	NRSA63J-102X	MG R	1kΩ 1/16W J
	R0718	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0721	NRSA63J-183X	MG R	18kΩ 1/16W J
	R0722	NRSA63J-333X	MG R	33kΩ 1/16W J
	R0731	NRSA63J-683X	MG R	68kΩ 1/16W J
	R0732	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0733	NRSA63J-683X	MG R	68kΩ 1/16W J
	R0735	NRSA63J-102X	MG R	1kΩ 1/16W J
	R0736-37	NRSA63J-683X	MG R	68kΩ 1/16W J
	R0738	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0740	NRSA63J-102X	MG R	1kΩ 1/16W J
	R0741-42	NRSA63J-683X	MG R	68kΩ 1/16W J
	R0743	NRSA63J-0R0X	MG R	0.0Ω 1/16W J
	R0745	NRSA63J-102X	MG R	1kΩ 1/16W J
	CAPACITOR			
	C0701	QETN1HM-106Z	E CAP.	10µF 50V M
	C0702	NCF31CZ-104X	C CAP.	0.1µF 16V Z
	C0707-09	NCB11CK-105X	C CAP.	1µF 16V K
	C0711	NCF31CZ-104X	C CAP.	0.1µF 16V Z
	C0714	NDC31HJ-181X	C CAP.	180pF 50V J
	COIL			
	L0701	NQL054J-100X	COIL	10µH
	TRANSISTOR			
	Q0701-05	2SC2412K/QR/-X	SI.TRANSISTOR	
	IC			
	IC0701	TC74HC4053AF-XE	I C	

DIGITAL INPUT MODULE P.W. BOARD ASS'Y

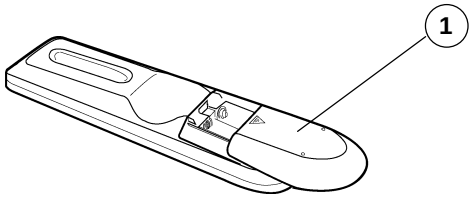
[48WP30CP-S] **(SSB-7851A-M2+WJJ024-001A)**

⚠	Symbol No.	Part No.	Part Name	Description
	OTHERS			
		48WP30CP-S	DIGITAL INPUT MODULE	

I-P CONVERT MODULE P.W. BOARD ASS'Y (SSB0D051A-M2)

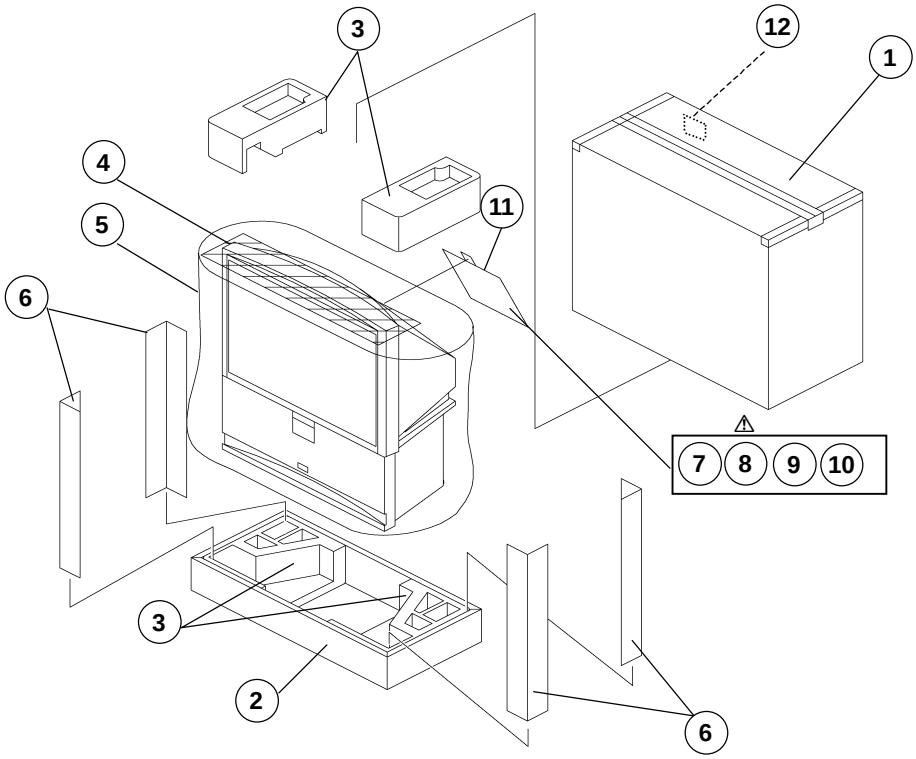
⚠	Symbol No.	Part No.	Part Name	Description
	OTHER			
		SSB0D051A-M2	I-P CONVERT MODULE	

REMOTE CONTROL UNIT PARTS LIST (RM-C322G-1A)



⚠ Ref.No.	Part No.	Part Name	Description
1	UR52EC1286C	BATTERY COVER	

PACKING



PACKING PARTS LIST

⚠ Ref.No.	Part No.	Part Name	Description
1	LC11252-001A	PACKING CASE	
2	LC31759-001A-A	BOTTOM CASE	
3	LC11254-001B	CUSHION ASSY	4pcs in 1set
4	CP30055-007-A	TOP COVER	
5	CP30056-007-A	POLY BAG	
6	LC31361-001A-A	PAD	(x4)
7	RM-C322G-1A	RC HAND PIECE	
⚠ 8	LCT1083-001A-A	INST BOOK	
9	BT-51028-1Q	REGISTRATION C	
10	BT-52004-1Q	WARRANTY CARD	
11	QPAO2503505	POLY BAG	
12	CM36616-001-A	CORNER LABEL	

JVC

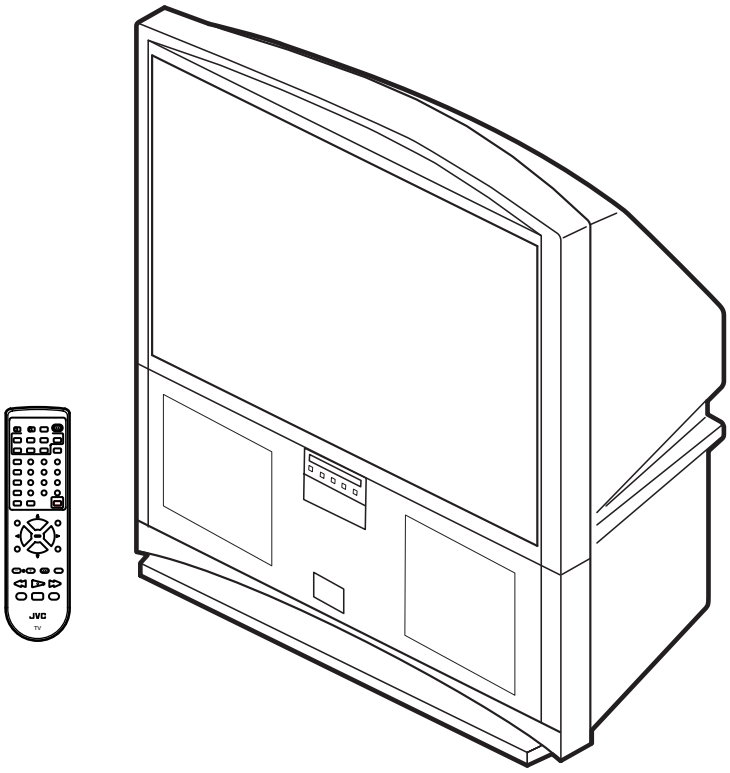
SCHEMATIC DIAGRAMS

REAR PROJECTION TELEVISION

AV-48WP30

BASIC CHASSIS
SB2

CD-ROM No.SML200202



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Feb. 2002

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SEMICONDUCTOR SHAPES

TRANSISTOR

BOTTOM VIEW	FRONT VIEW				TOP VIEW
E C B	E C B	B C E (G)(D)(S)	E C B	E C B	CHIP TR C B E

IC

BOTTOM VIEW	FRONT VIEW			TOP VIEW
OUT E IN	IN E OUT	1 → N	1 → N	1 N

CHIP IC

TOP VIEW		
N N N 1 N	1 N	

AV-48WP30
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	: Color bar signal
(2)Setting positions of each knob/button and variable resistor	: Original setting position when shipped
(3)Internal resistance of tester	:DC 20kΩ /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	:[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	:Uninflammable 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]
Others	:DC withstand voltage [V]
AC indicated	:AC withstand voltage [V]

∗ Electrolytic Capacitors
47/50[Example]:Capacitance value [μF]/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	:[μH]
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.

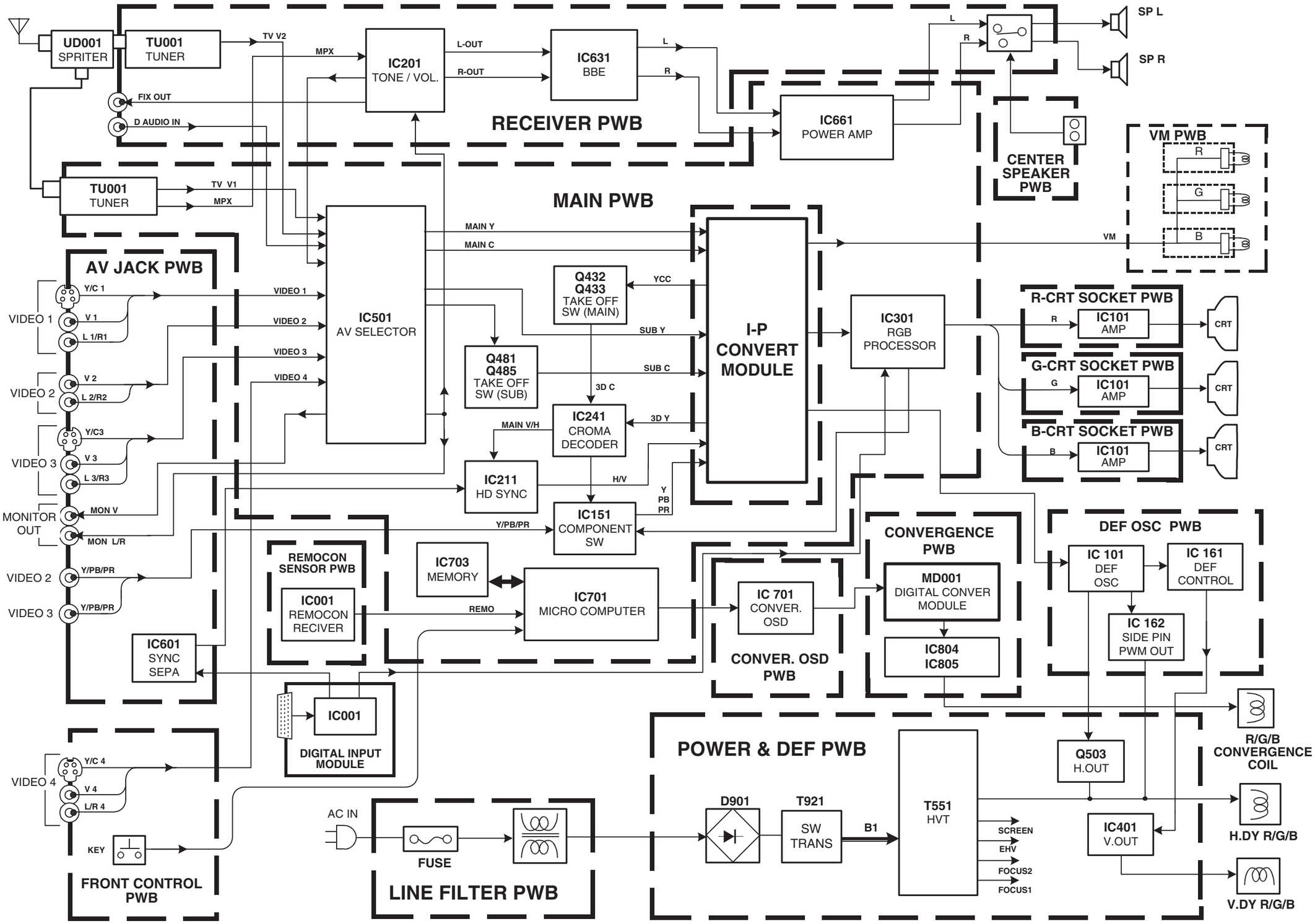
(2)Do not short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or never measure with a measuring apparatus measure with a measuring apparatus (oscilloscope, etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND at the same time. If the above precaution is not respected , a fuse or any parts 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.**

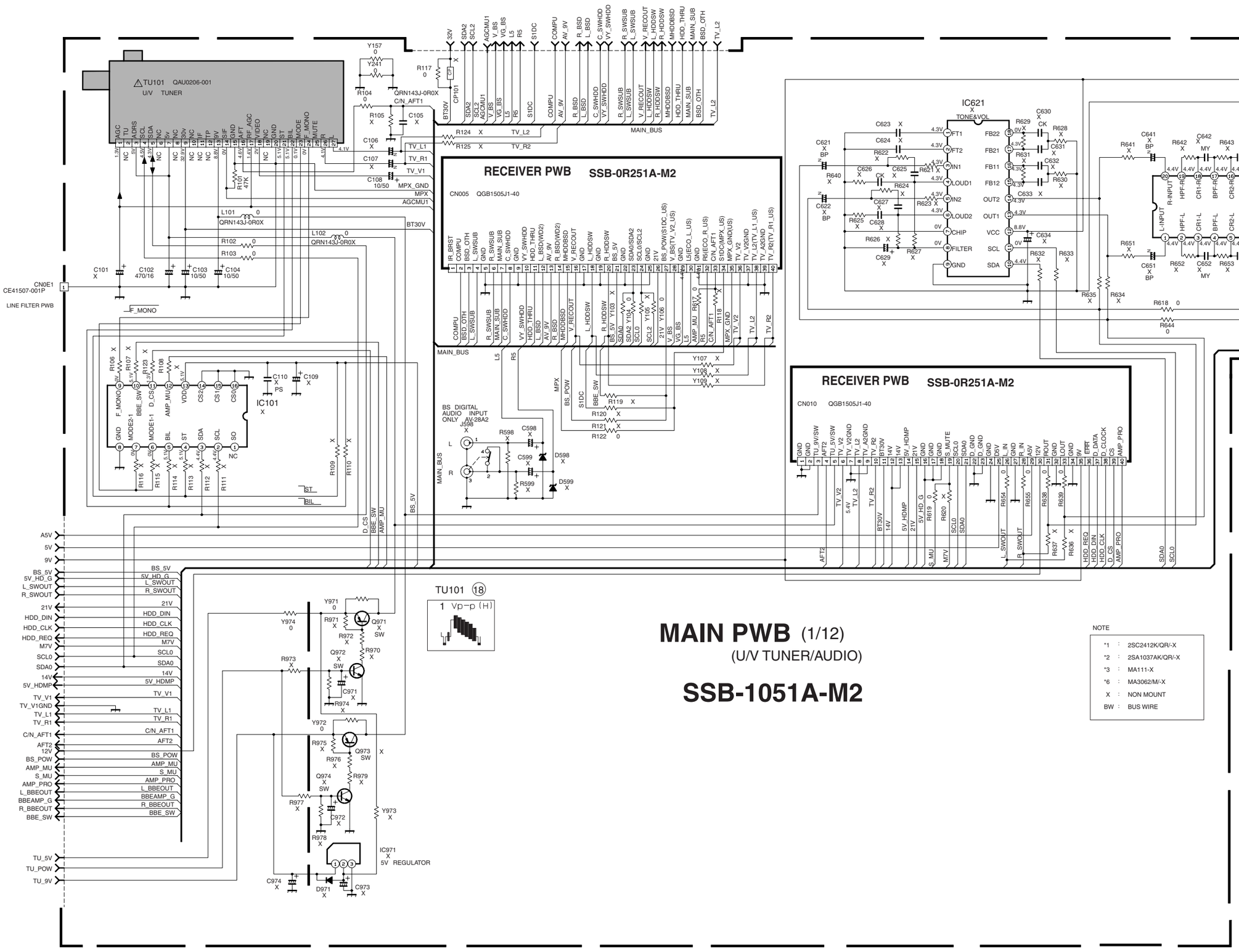
NOTE

◇ **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.

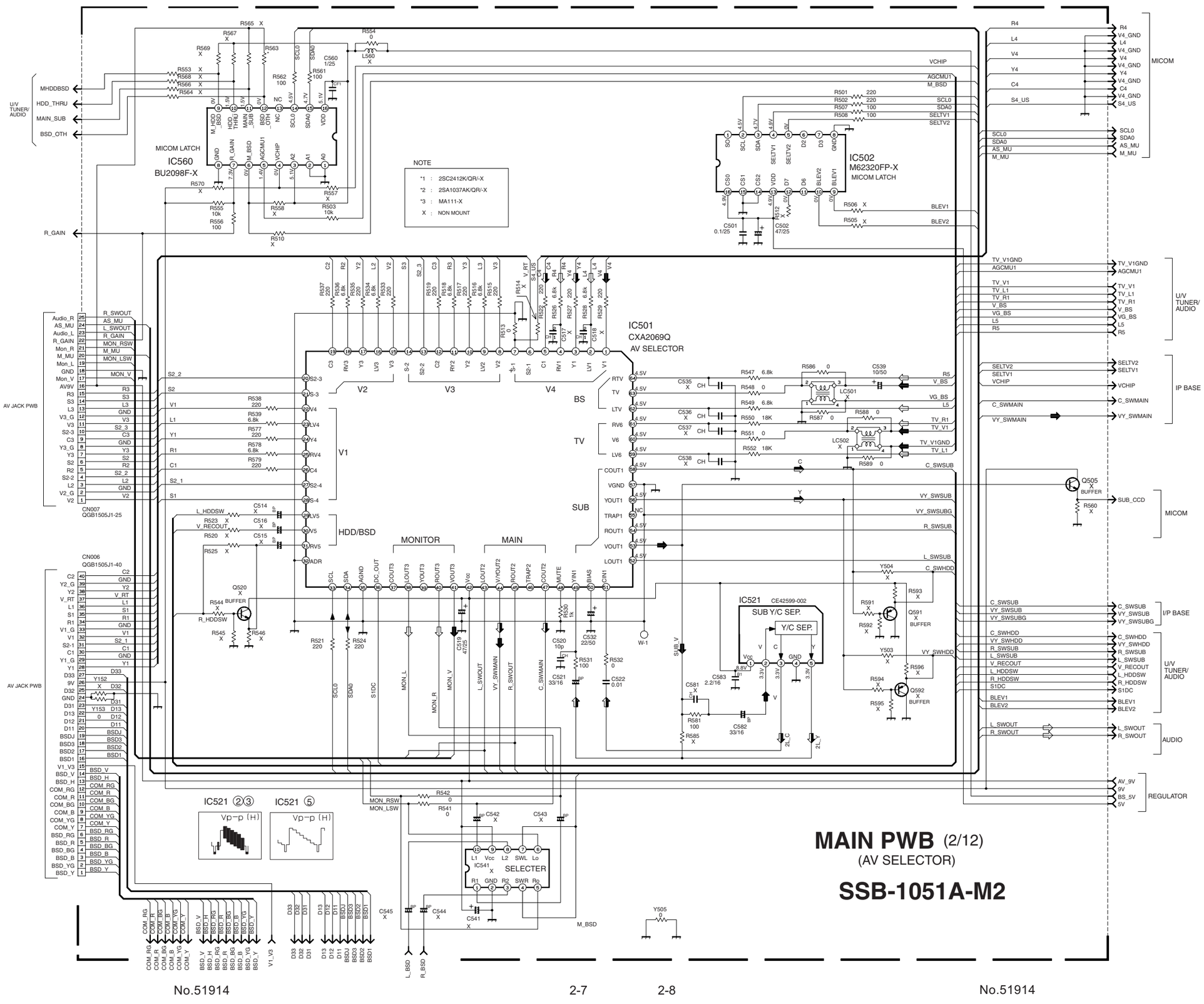
BLOCK DIAGRAM



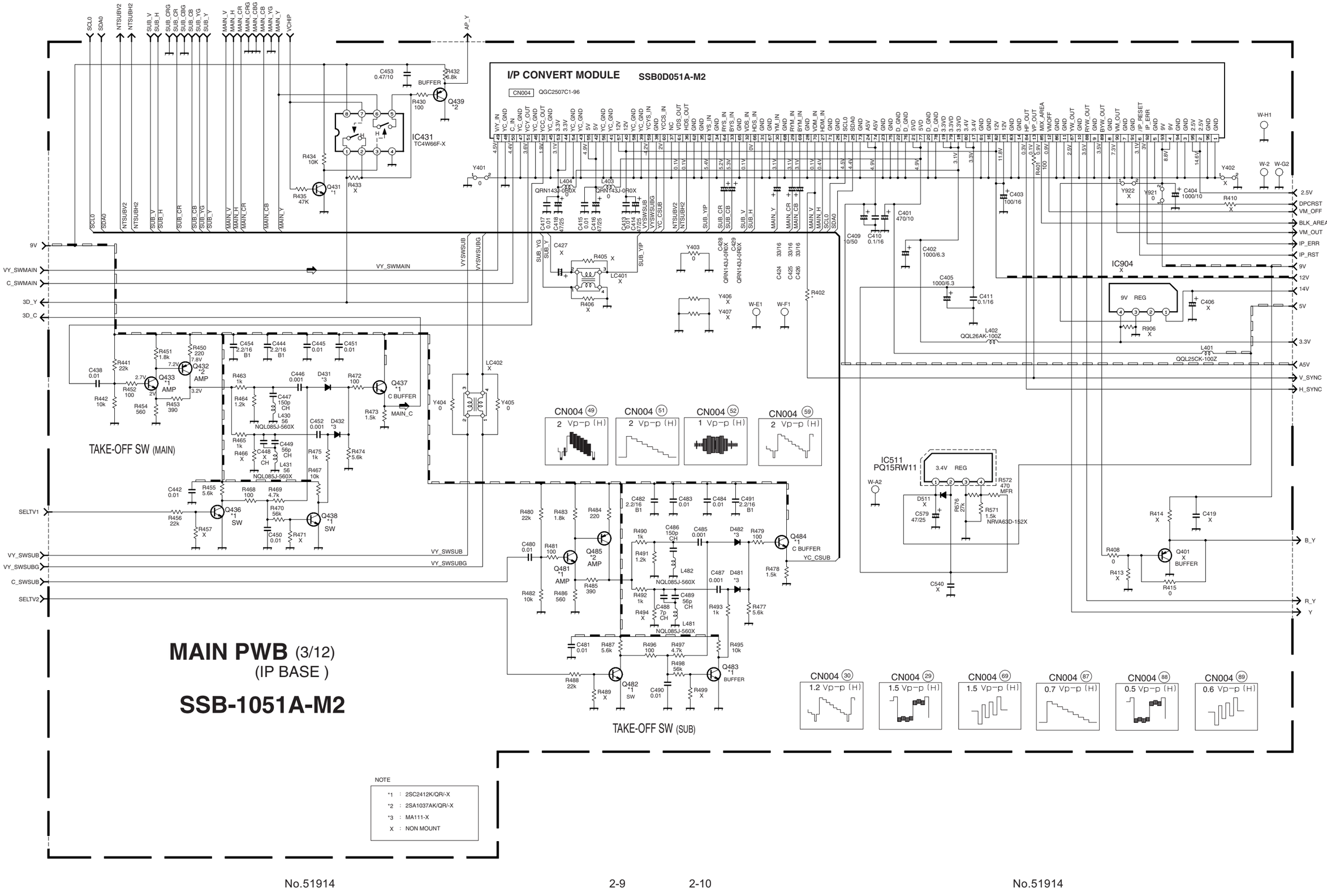
CIRCUIT DIAGRAMS *MAIN PWB CIRCUIT DIAGRAMS* [1/12]



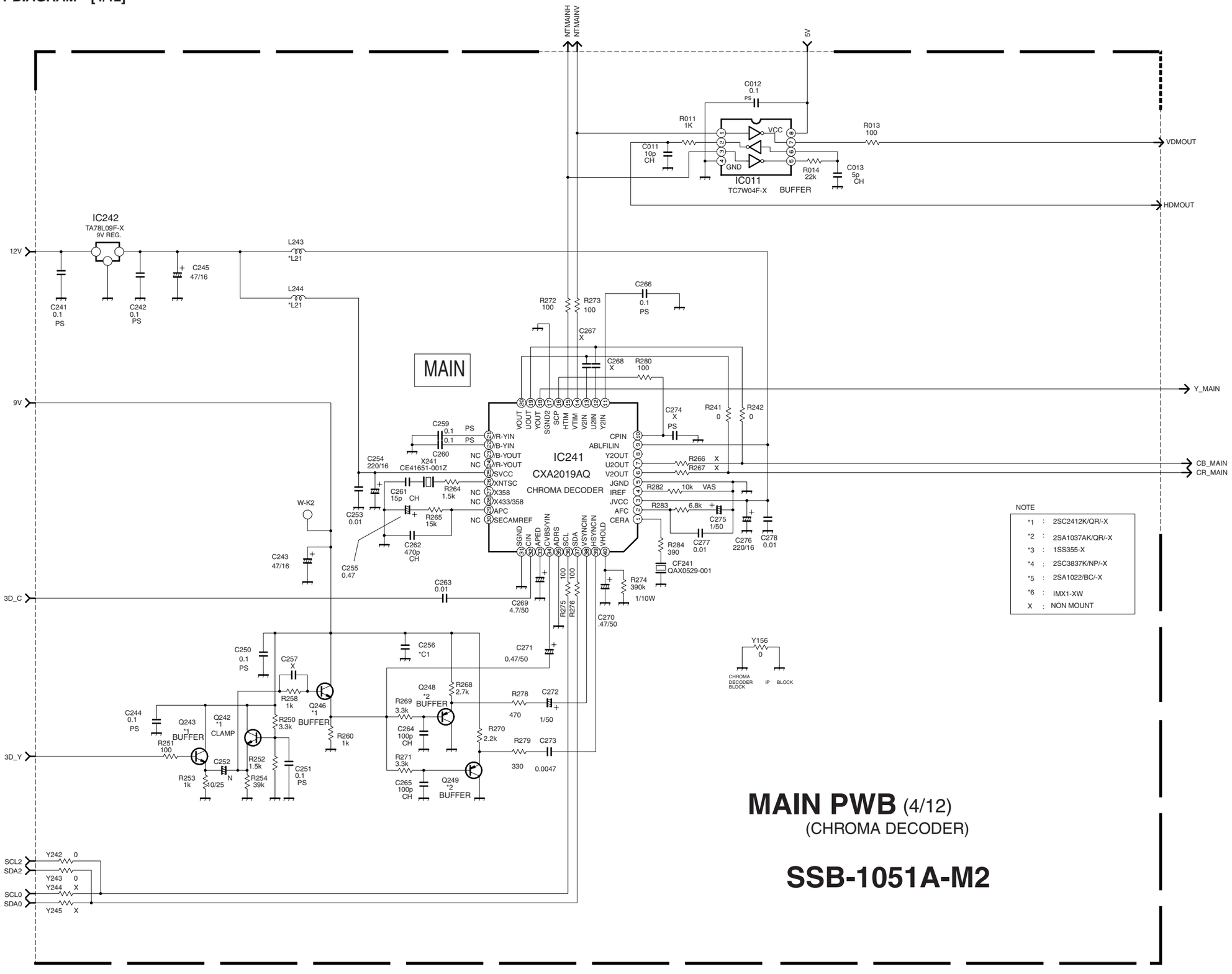
MAIN PWB CIRCUIT DIAGRAM [2/12]



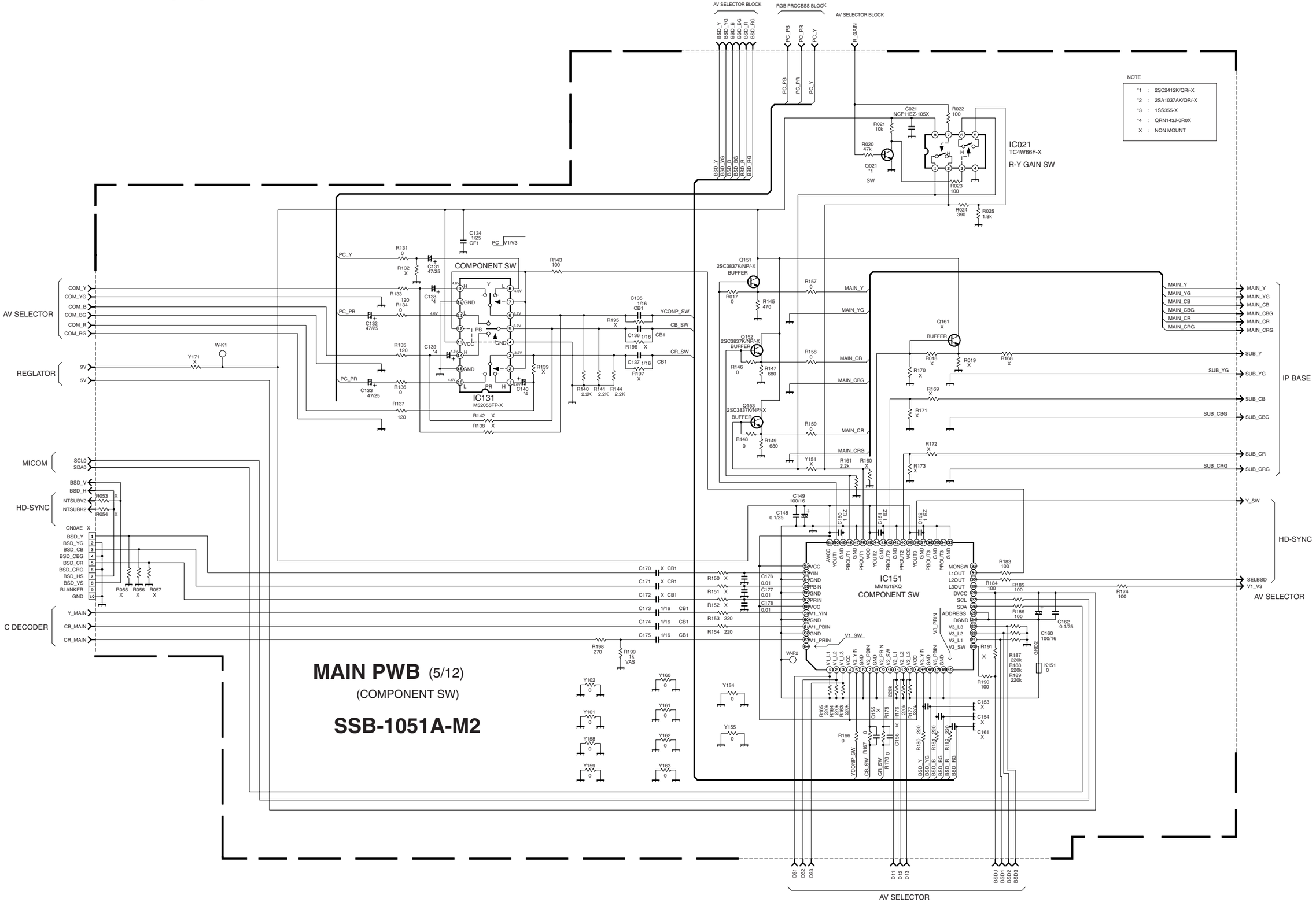
MAIN PWB CIRCUIT DIAGRAM [3/12]



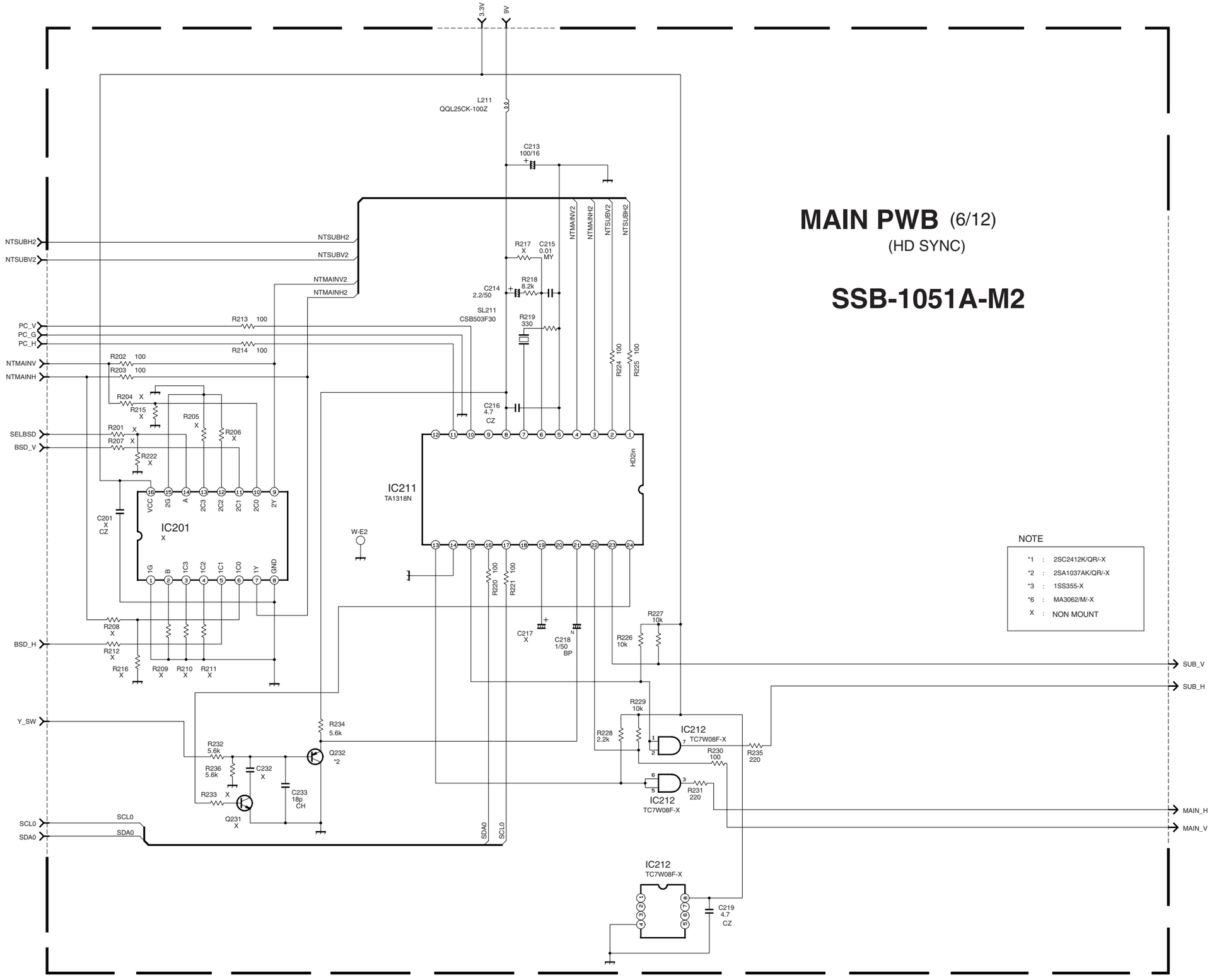
MAIN PWB CIRCUIT DIAGRAM **[4/12]**



MAIN PWB CIRCUIT DIAGRAM [5/12]



MAIN PWB CIRCUIT DIAGRAM **[6/12]**

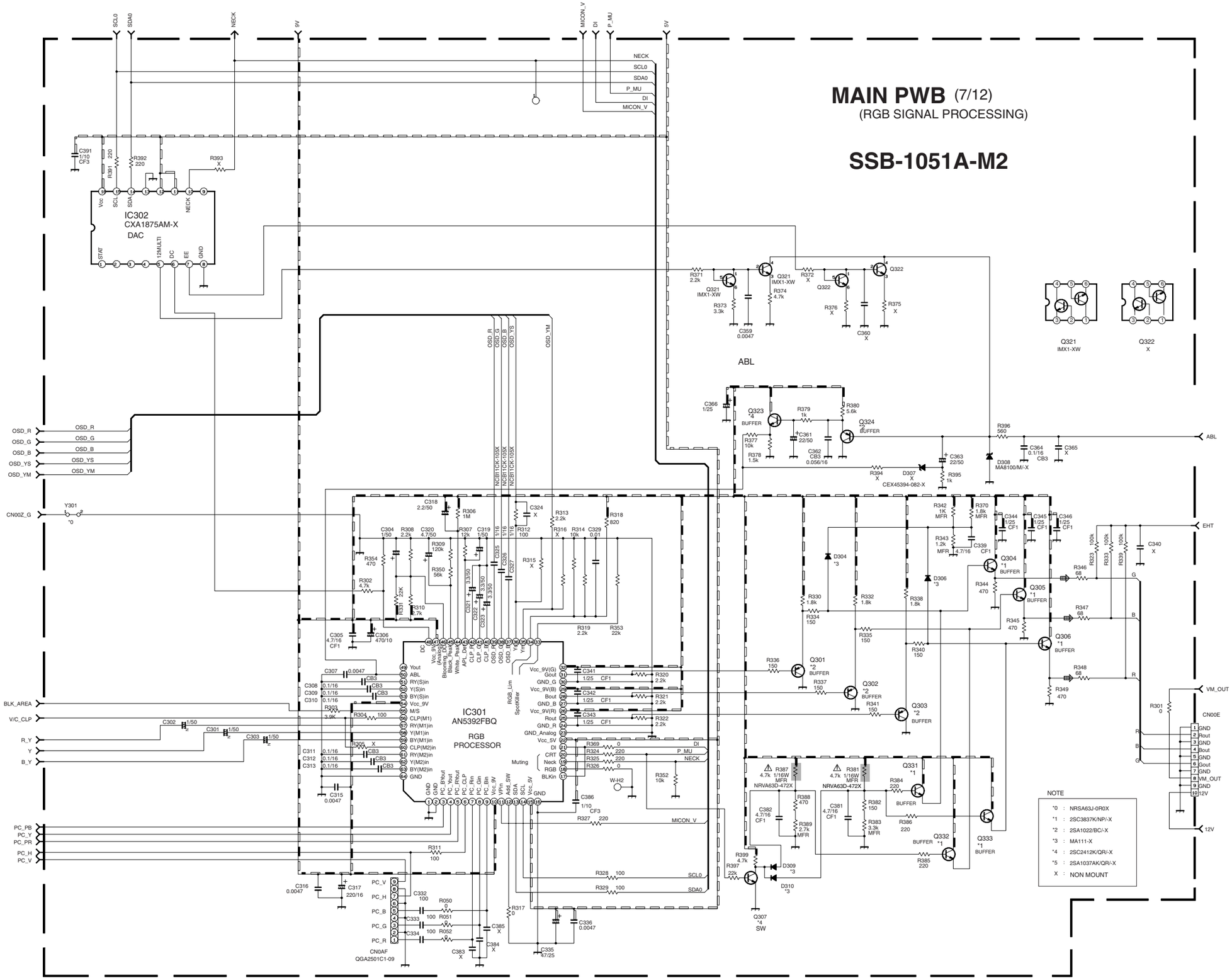


MAIN PWB (6/12)

(HD SYNC)

SSB-1051A-M2

MAIN PWB CIRCUIT DIAGRAM **[7/12]**

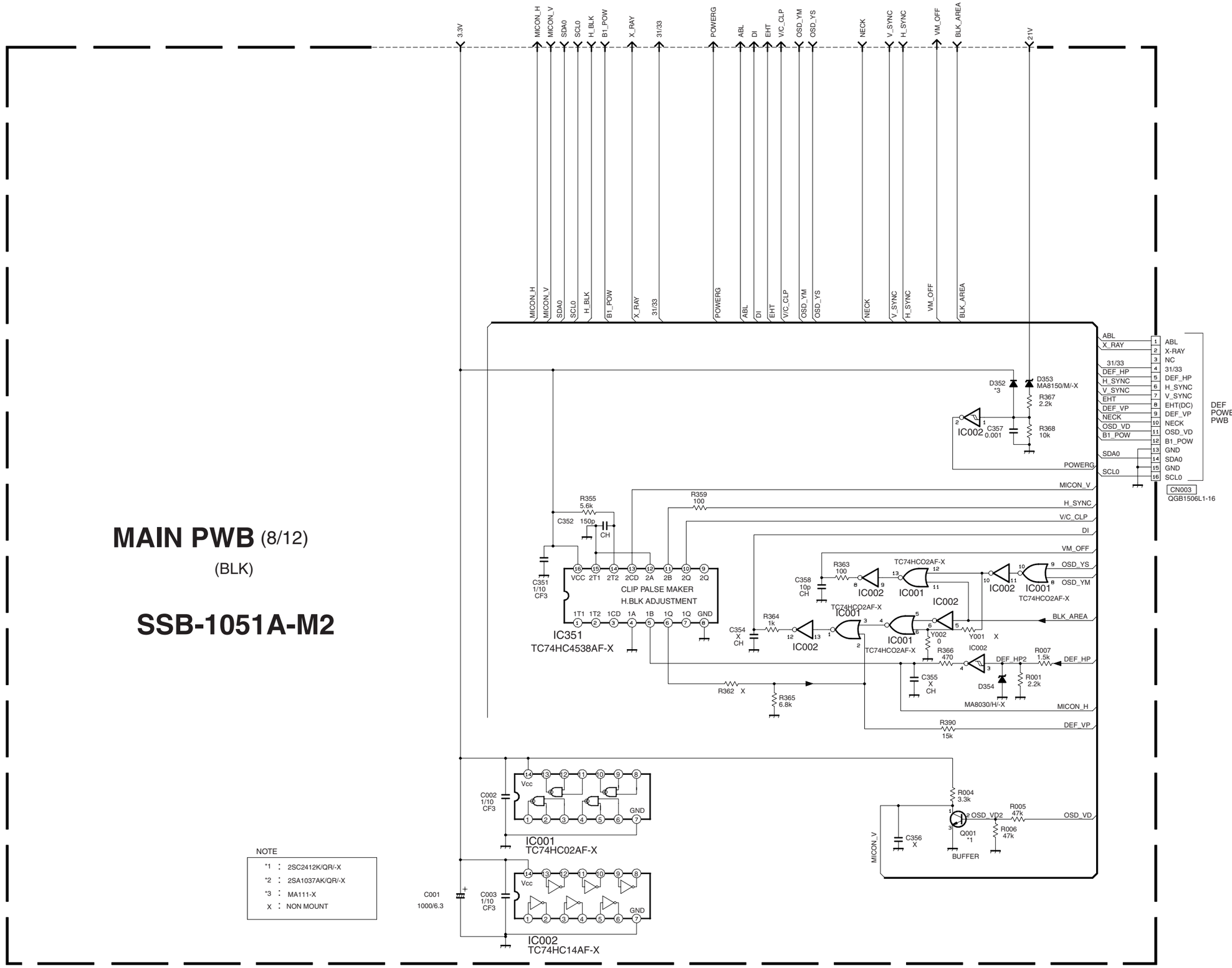


MAIN PWB CIRCUIT DIAGRAM **[8/12]**

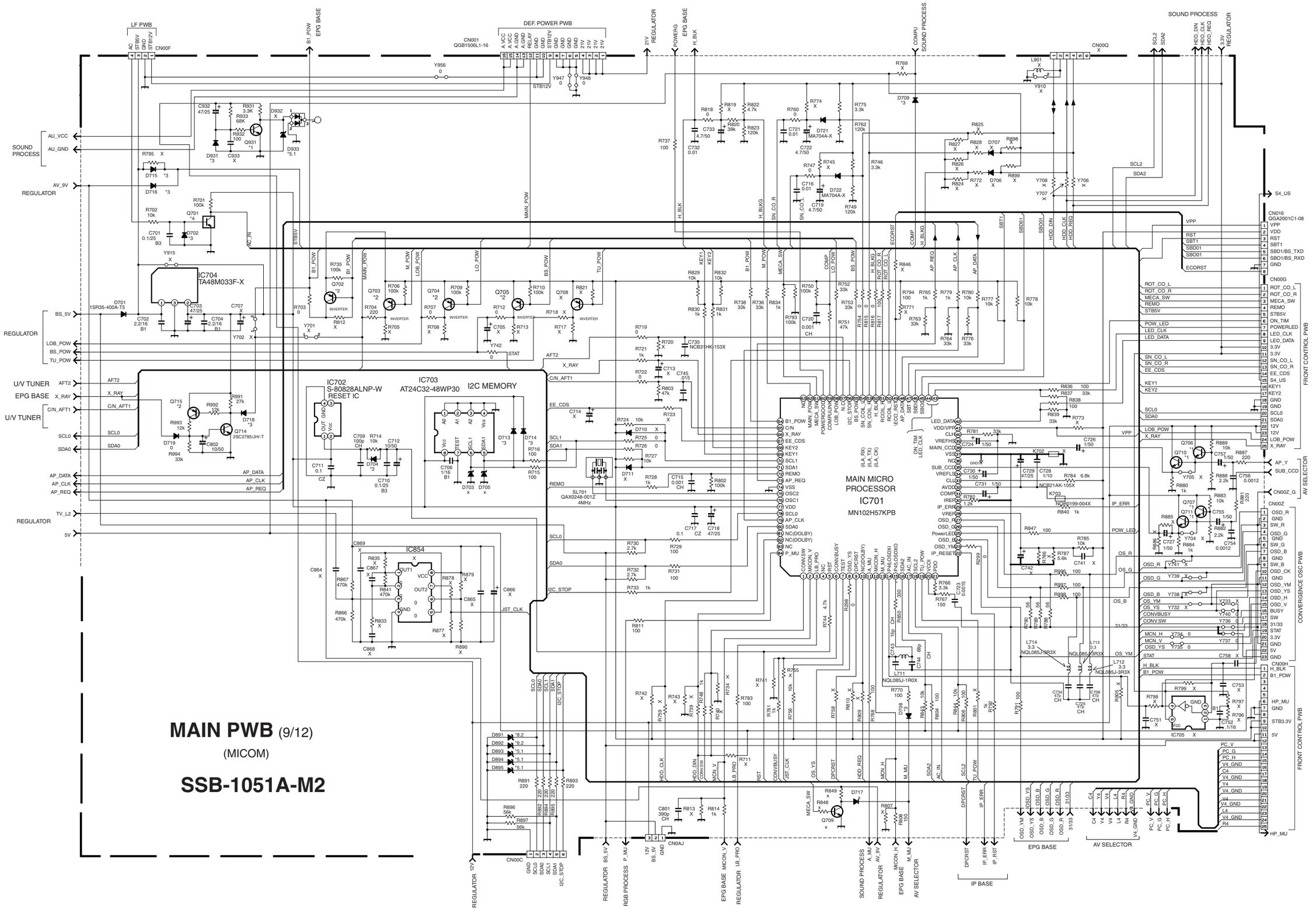
MAIN PWB (8/12)

(BLK)

SSB-1051A-M2



MAIN PWB CIRCUIT DIAGRAM [9/12]



MAIN PWB CIRCUIT DIAGRAM **[10/12]**

REGULATOR BLOCK

5V

MAIN PWB (10/12)

(AUTO WIDE)

SSB-1051A-M2

IC852
S-80840ALNP-W

CF851 X
R851 X
C853 X
D851 X
C852 X
NC Vdd OUT GND

IC851
X
AUTO WIDE

P21 P22 P23 P24 P25 P26 P27 Vss X1 X0 MOD1 MOD0 RST
P20 P17 P16 P15 P14 P13 P12 P11 P10 P07 P06 P05 P04 P03 P02 P01 P00 Vss P30
P64 INT3 INT2 INT1 INT0 AVss AVR AVcc P57 P56 P55 P54 P53 P52 P51 AN0 P47 P46 P45
P31 P32 P33 P34 P35 Vcc P36 P37 P40 P41 P42 P43 P44

D852 X
R855 X
R856 X
R857 X
AP_REQ
AP_CLK
D853 X
C854 X
R860 X
R858 X
R859 X
R865 X
R864 X
AP_DATA
C851 X
R852 X
R853 X
R861 X
C855 X
R854 X
R863 X
Q853 X
R868 X
R869 X
C857 X
R875 X
Q851 X
Q854 X
D854 X
R876 X
R871 X
R870 X
C861 X
R872 X
C858 X
R862 X
C859 X
R873 X

AP_REQ
AP_CLK
AP_DATA

AP_Y
HDMOUT
VDMOUT
IP BASE

NOTE

*1	:	2SC2412K/QR/-X
*2	:	2SA1037AK/QR/-X
*3	:	MA111-X
X	:	NION MOUNT

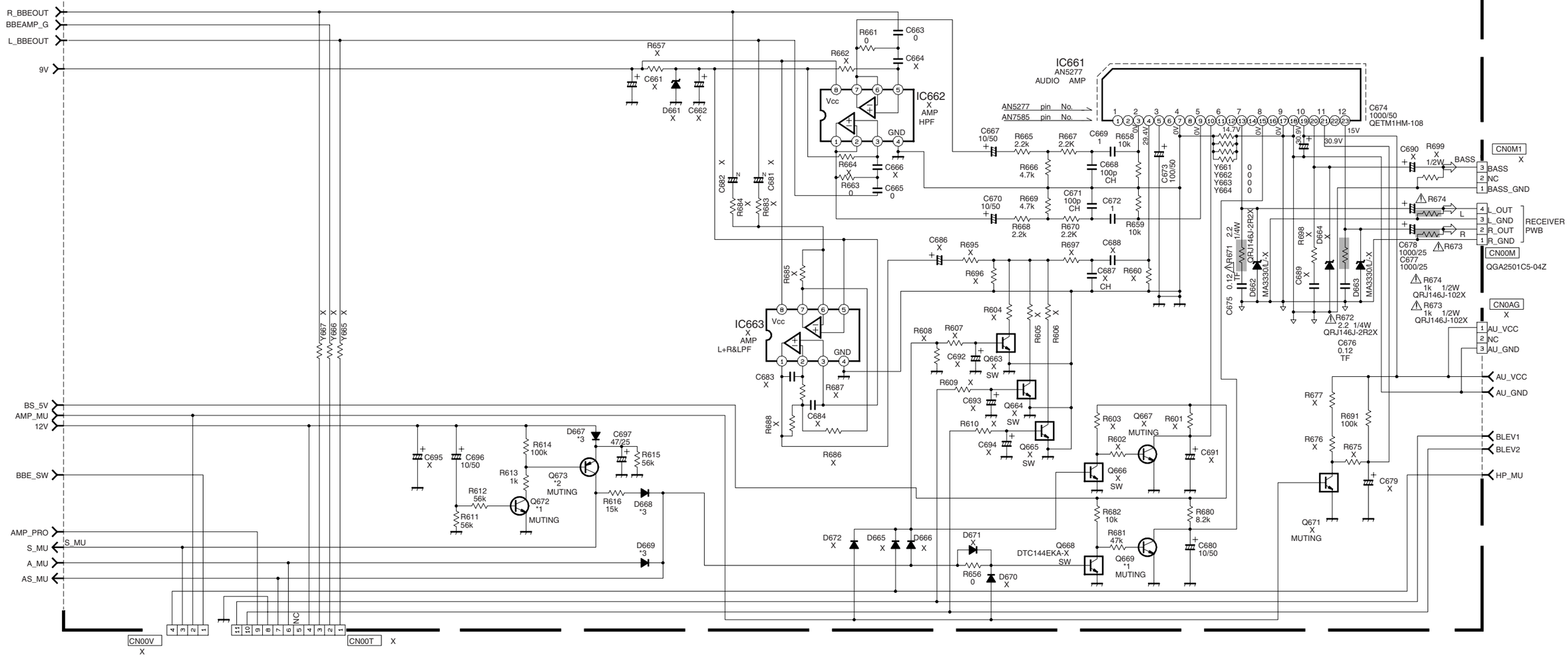
MAIN PWB CIRCUIT DIAGRAM **[11/12]**

MAIN PWB (11/12)
(SOUND PROCESS)

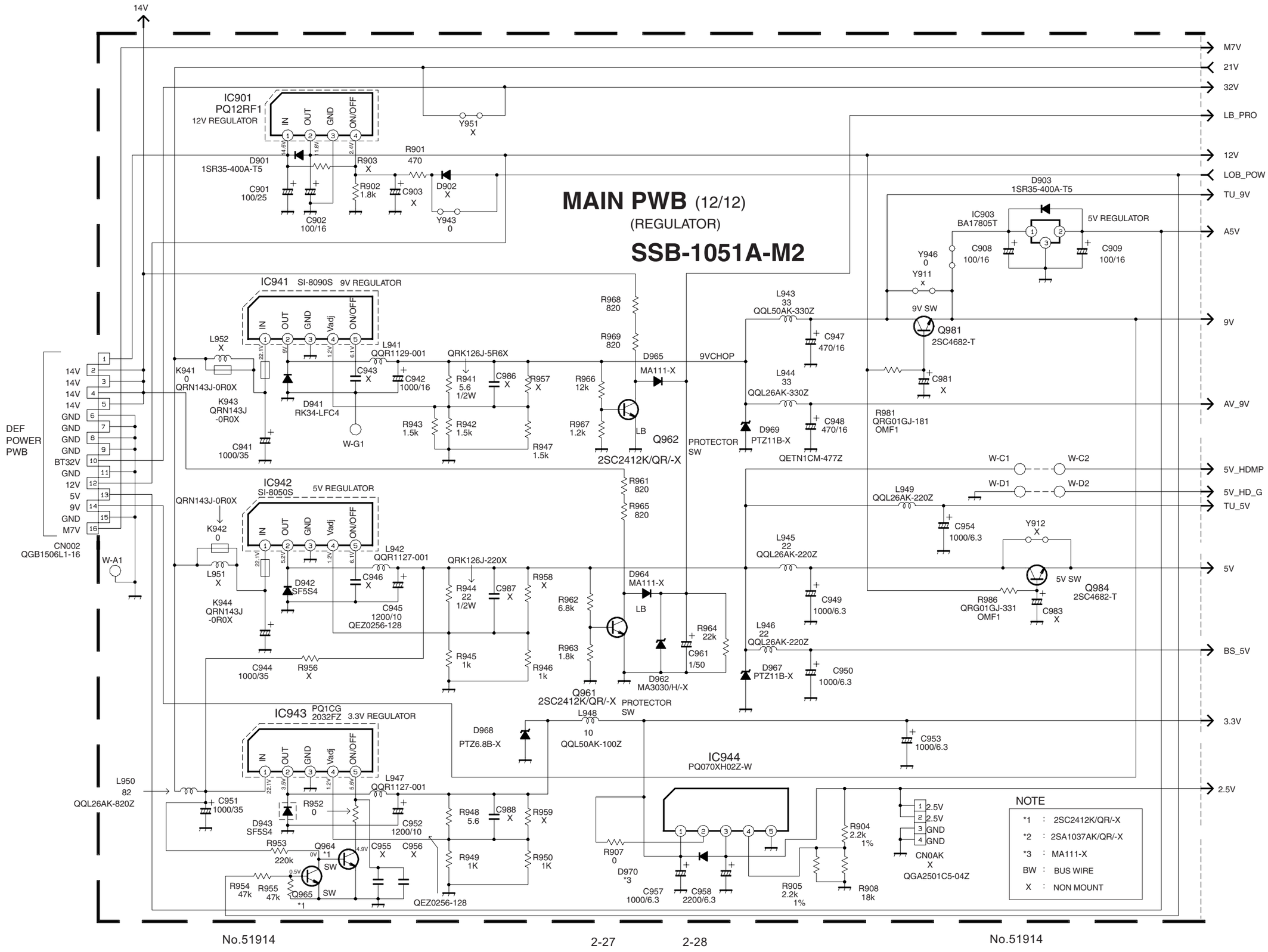
SSB-1051A-M2

NOTE

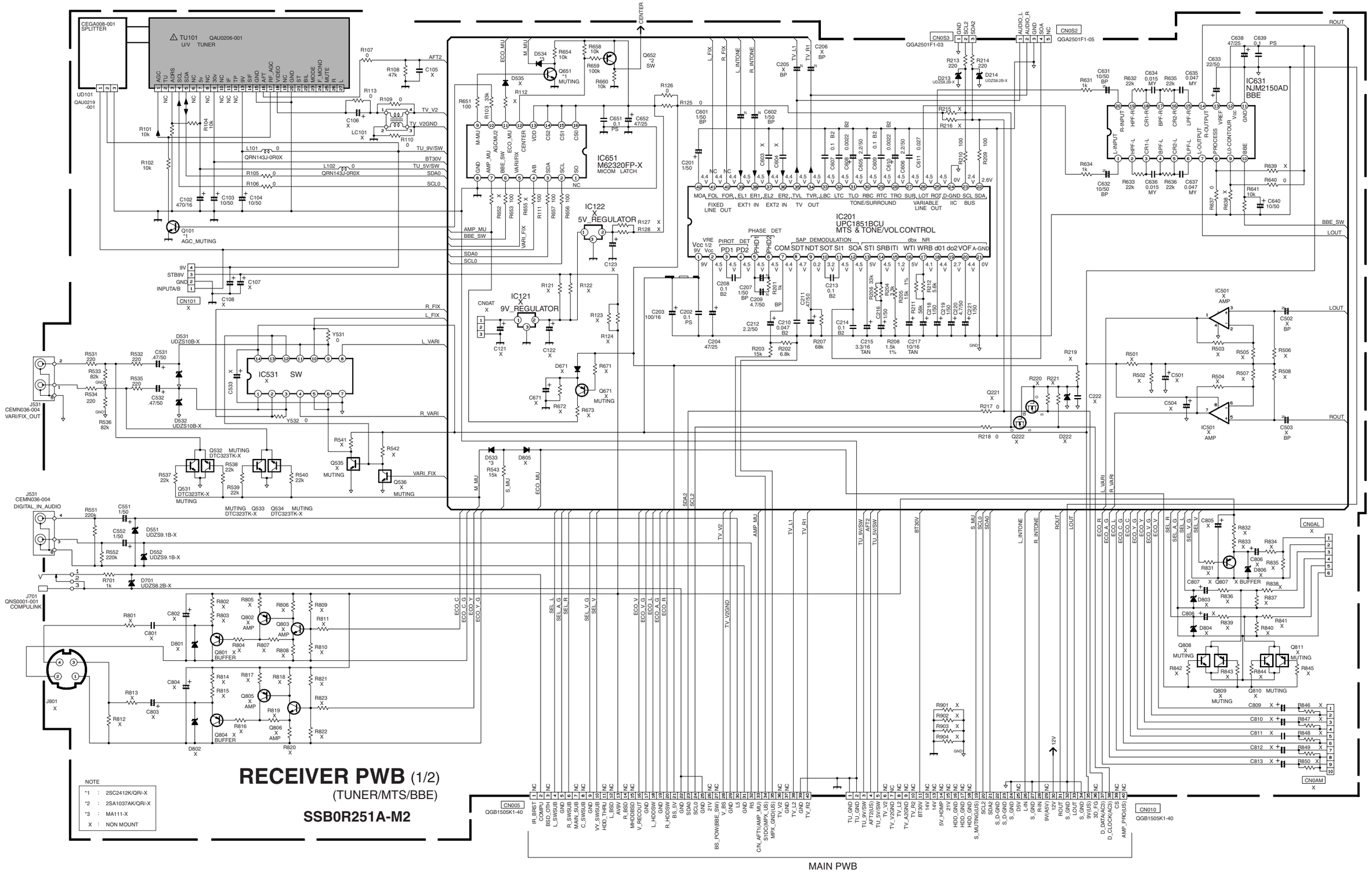
*1	:	2SC2412K/QR/-X
*2	:	2SA1037AK/QR/-X
*3	:	MA111-X
*6	:	MA3062/M/-X
X	:	NON MOUNT
BW	:	BUS WIRE



MAIN PWB CIRCUIT DIAGRAM **[12/12]**



RECEIVER PWB CIRCUIT DIAGRAM [1/2]



RECEIVER PWB (1/2)

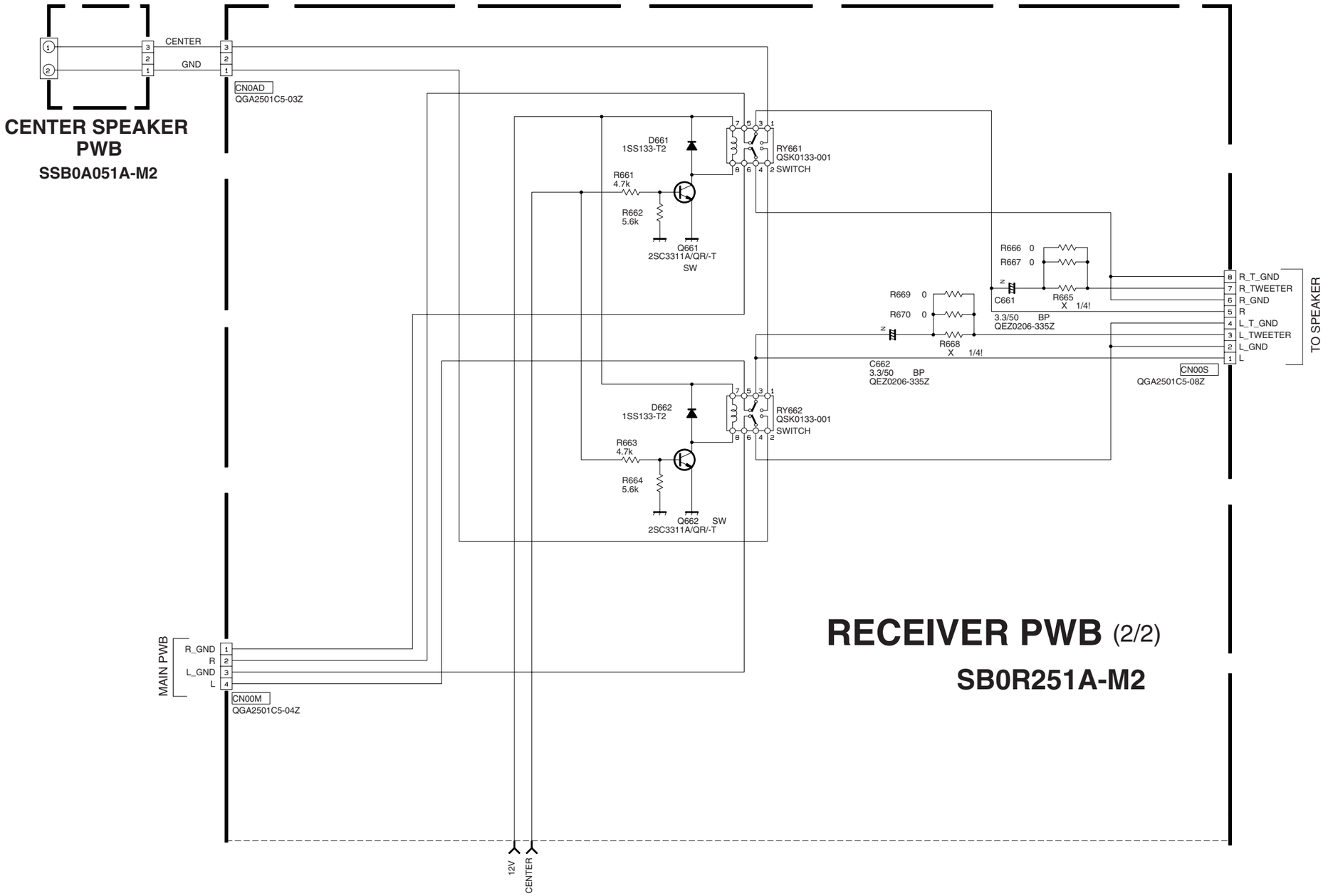
(TUNER/MTS/BBE)

SSB0R251A-M2

NOTE

*1	:	2SC2412K/QR/-X
*2	:	2SA1037AK/QR/-X
*3	:	MA111-X
X	:	NON MOUNT

RECEIVER PWB* [2/2] *& CENTER SPEAKER PWB CIRCUIT DIAGRAM

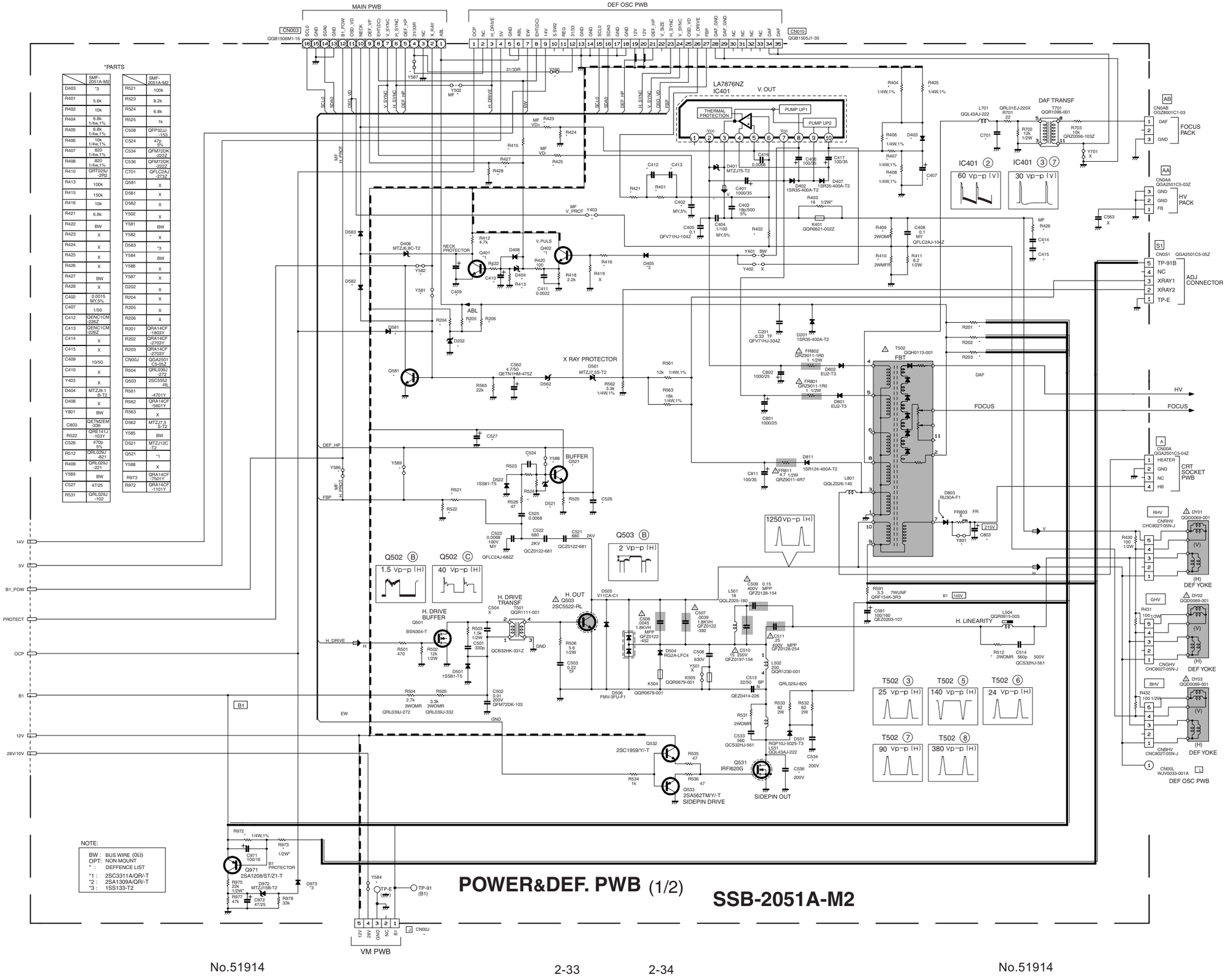


POWER & DEF. PWB CIRCUIT DIAGRAM [1/2]

*PARTS

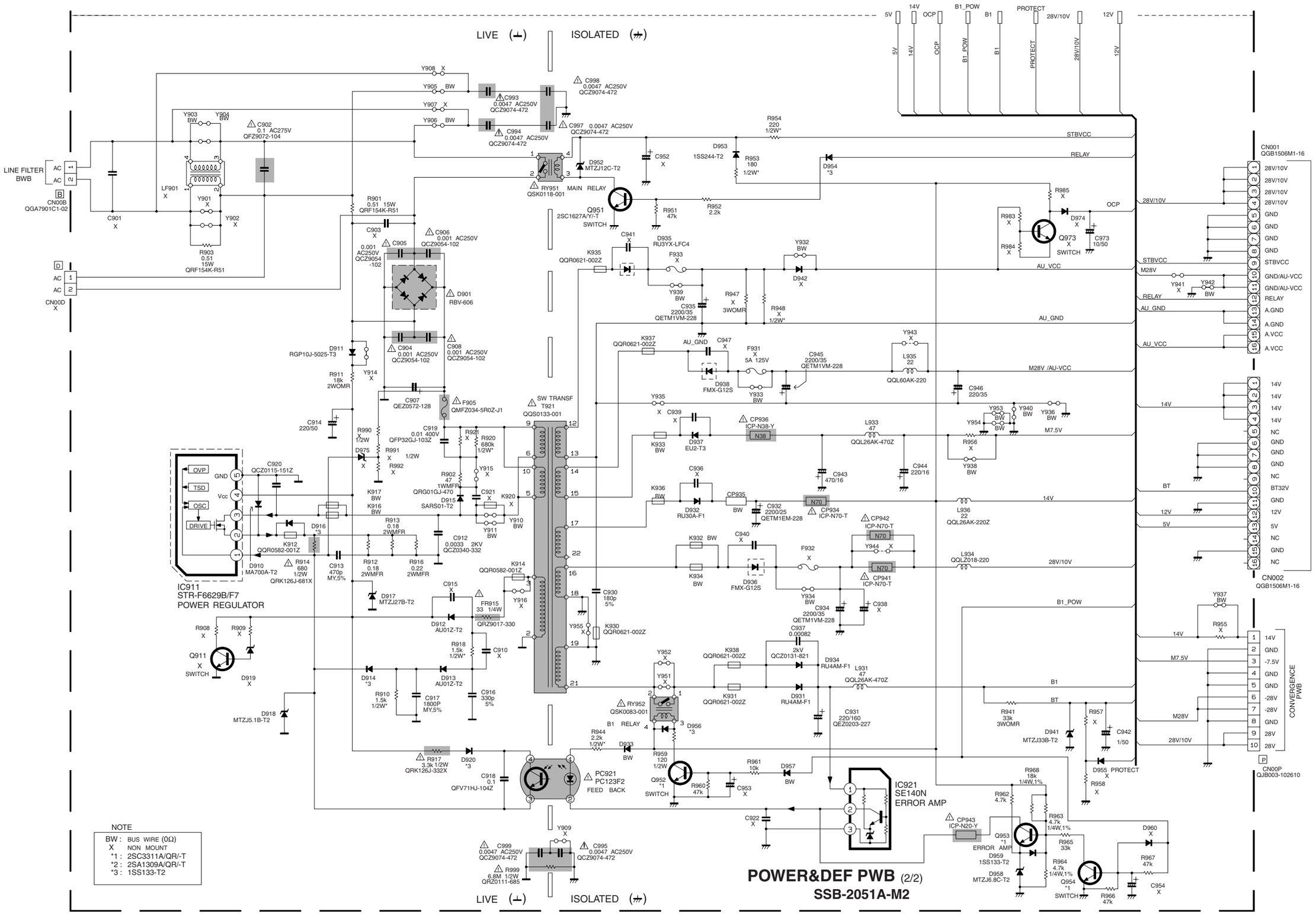
	SMF-2051A-M2
D403	*3
R401	5.6k
R402	10k
R404	6.8k 1/4w,1%
R405	6.8k 1/4w,1%
R406	10k 1/4w,1%
R407	820 1/4w,1%
R408	820 1/4w,1%
R410	QRT029J -2R2
R413	100k
R415	150k
R416	10k
R421	6.8k
R422	BW
R423	X
R424	X
R425	X
R426	X
R427	BW
R428	X
C402	0.0015 MY,5%
C407	1/50
C412	QENC1CM -226Z
C413	QENC1CM -226Z
C414	X
C415	X
C409	10/50
C410	X
Y403	X
D404	MTZJ9.1 B-T2
D408	X
Y801	BW
C803	QETM2EM -336
R522	QRE141J -103Y
C526	470p 5%
R512	QRL029J -821
R409	QRL029J -221
Y589	BW
C527	47/25
R531	QRL029J -102

	SMF-2051A-M2
R521	100k
R523	8.2k
R524	6.8k
R525	1k
C508	QFP32JJ -153
C524	47p 5%
C534	QFM72DK -222Z
C536	QFM72DK -222Z
C701	QFLC2AJ -273Z
Q581	X
D581	X
D582	X
Y502	X
Y581	BW
Y582	X
D583	*3
Y584	BW
Y586	X
Y587	X
D202	X
R204	X
R205	X
R206	X
R201	QRA14CF -1803Y
R202	QRA14CF -2703Y
R203	QRA14CF -2703Y
CN00J	QGA2501 C5-05Z
R504	QRL039J -272
Q503	2SC5552 -RL
R561	-4701Y
R562	QRA14CF -5601Y
R563	X
D562	MTZJ7.5 S-T2
Y585	BW
D521	MTZJ12C -T2
Q521	*1
Y588	X
R973	QRA14CF -7501Y
R972	QRA14CF -1101Y

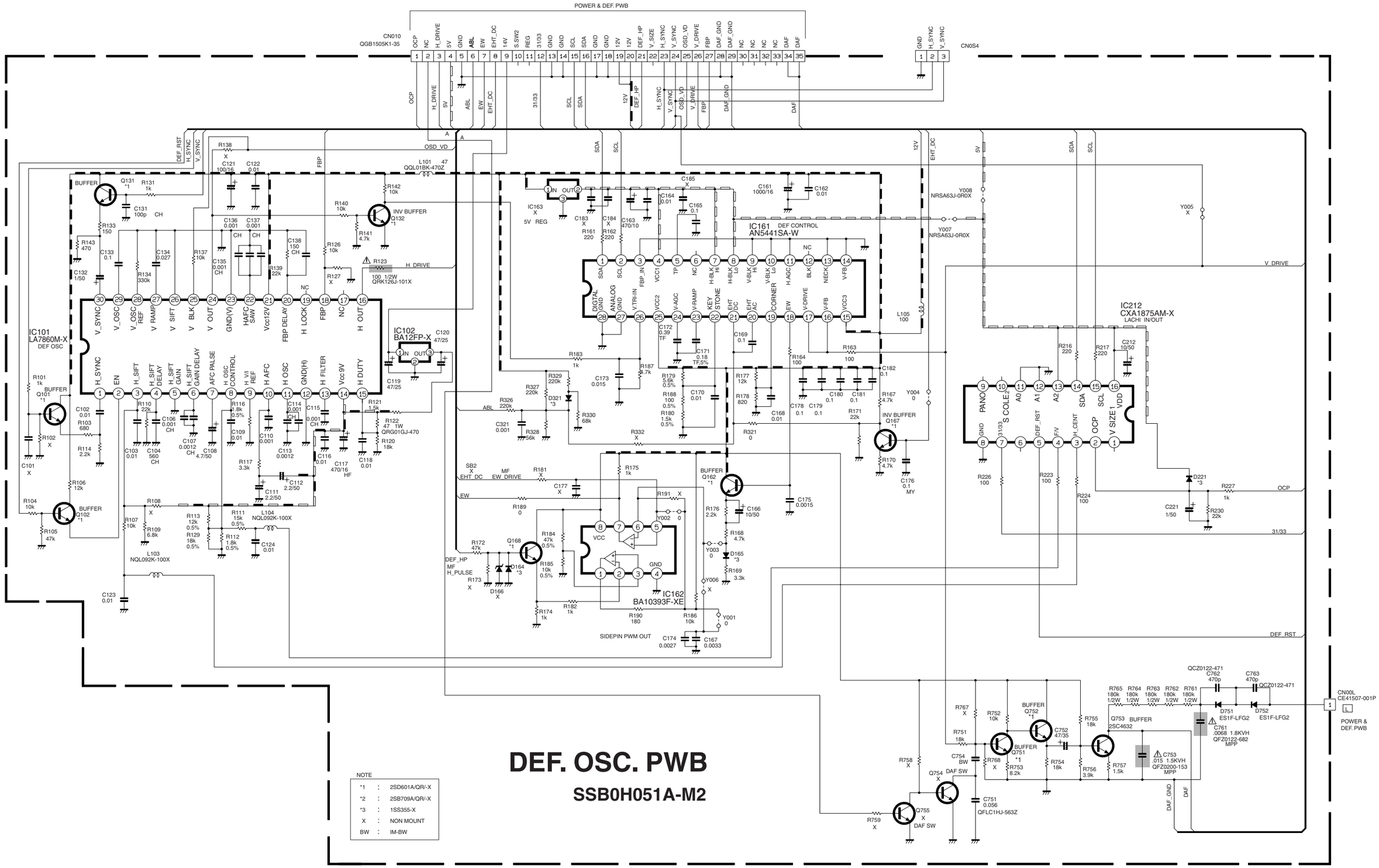


POWER&DEF. PWB (1/2) **SSB-2051A-M2**

POWER & DEF. PWB CIRCUIT DIAGRAM [2/2]



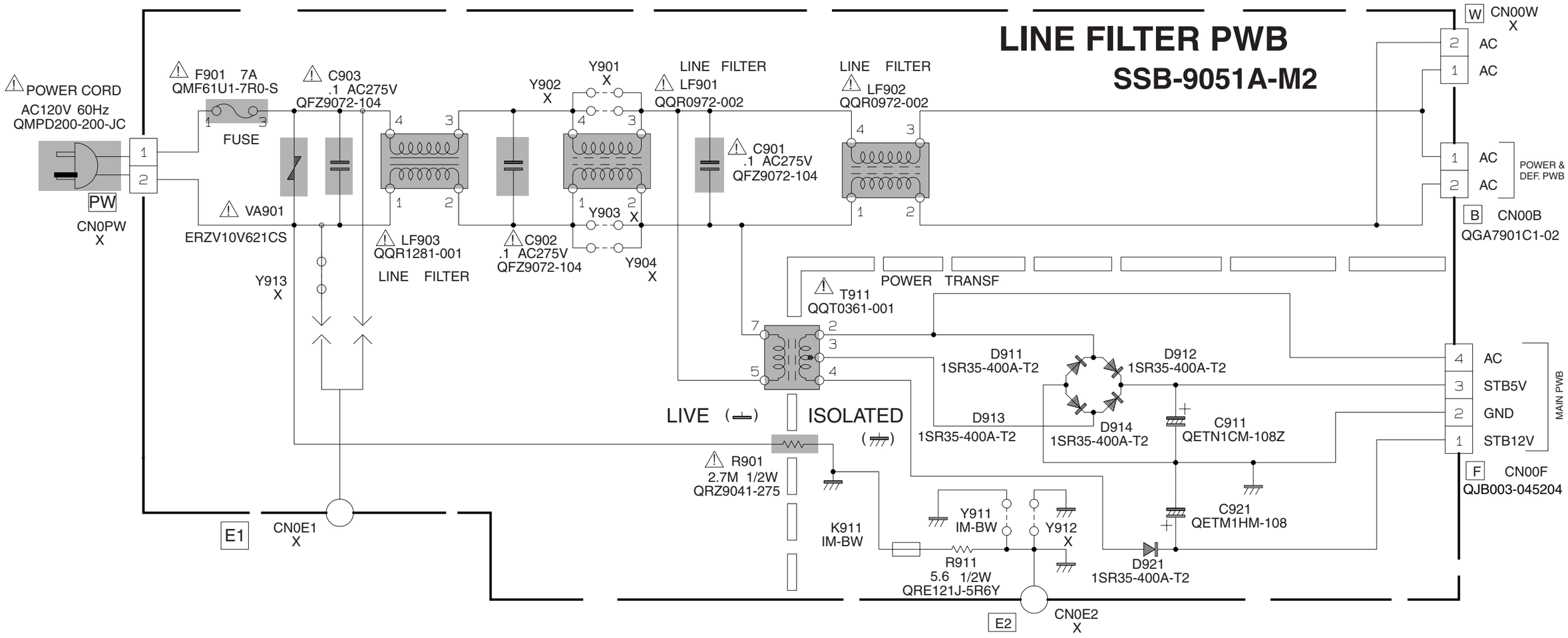
DEF OSC PWB CIRCUIT DIAGRAM



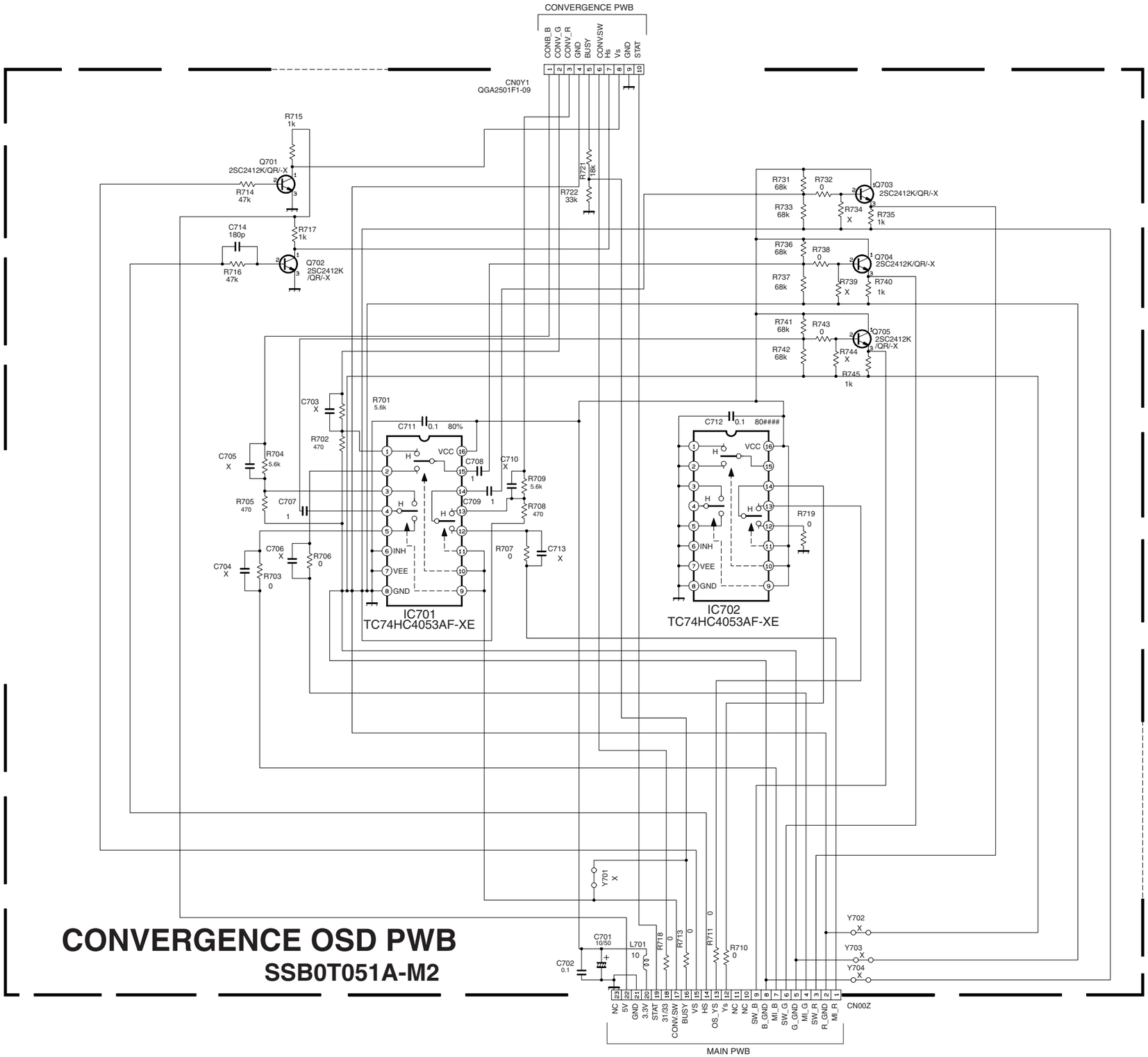
NOTE

*1	:	2SD601A/QR/-X
*2	:	2SB709A/QR/-X
*3	:	1SS355-X
X	:	NON MOUNT
BW	:	IM-BW

LINE FILTER PWB CIRCUIT DIAGRAM



CONVERGENCE OSD PWB CIRCUIT DIAGRAM

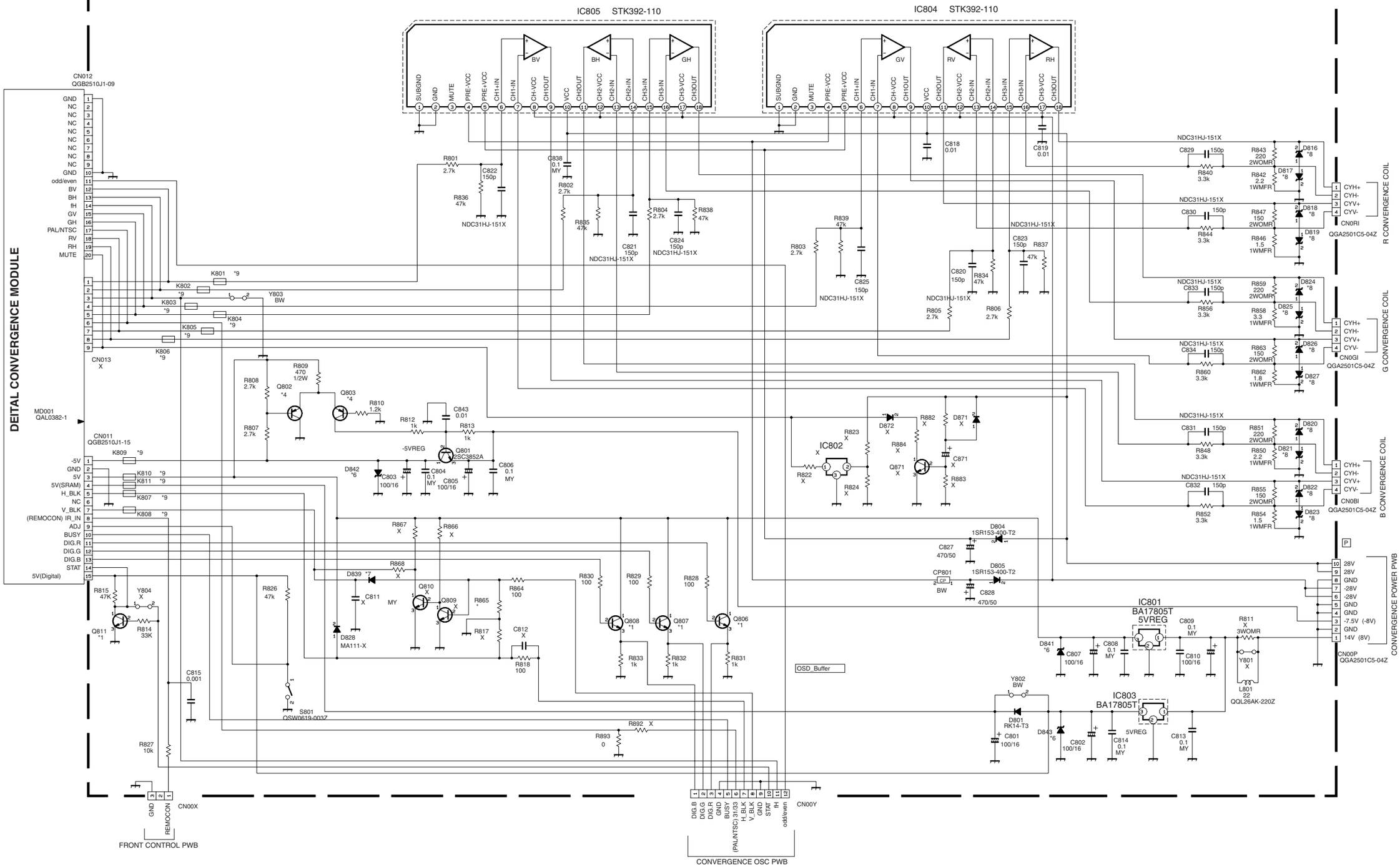


CONVERGENCE OSD PWB
SSB0T051A-M2

CONVRGENCE PWB CIRCUIT DIAGRAM

CONVERGENCE PWB

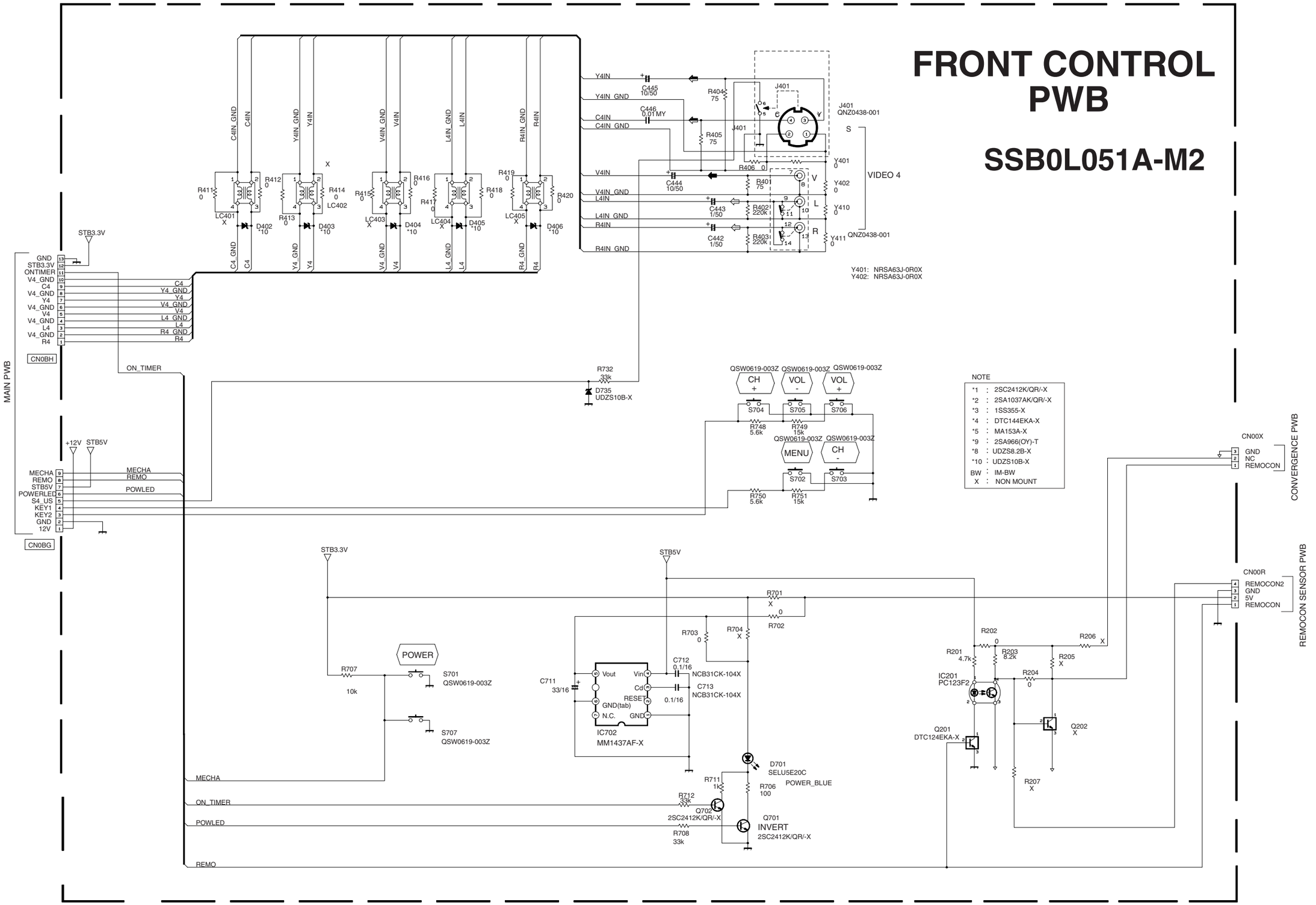
SSB-5051A-M2



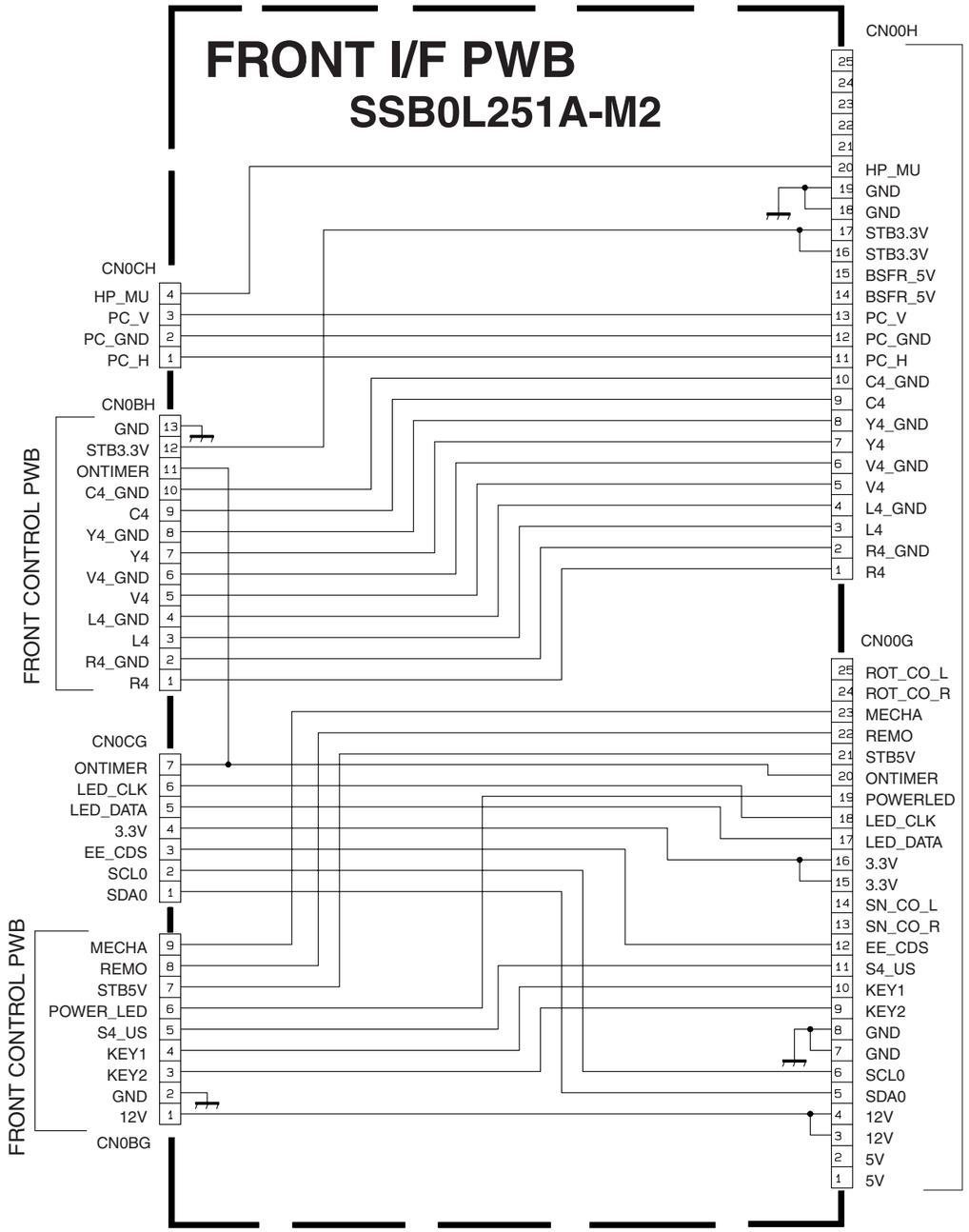
FRONT CONTROL PWB CIRCUIT DIAGRAM

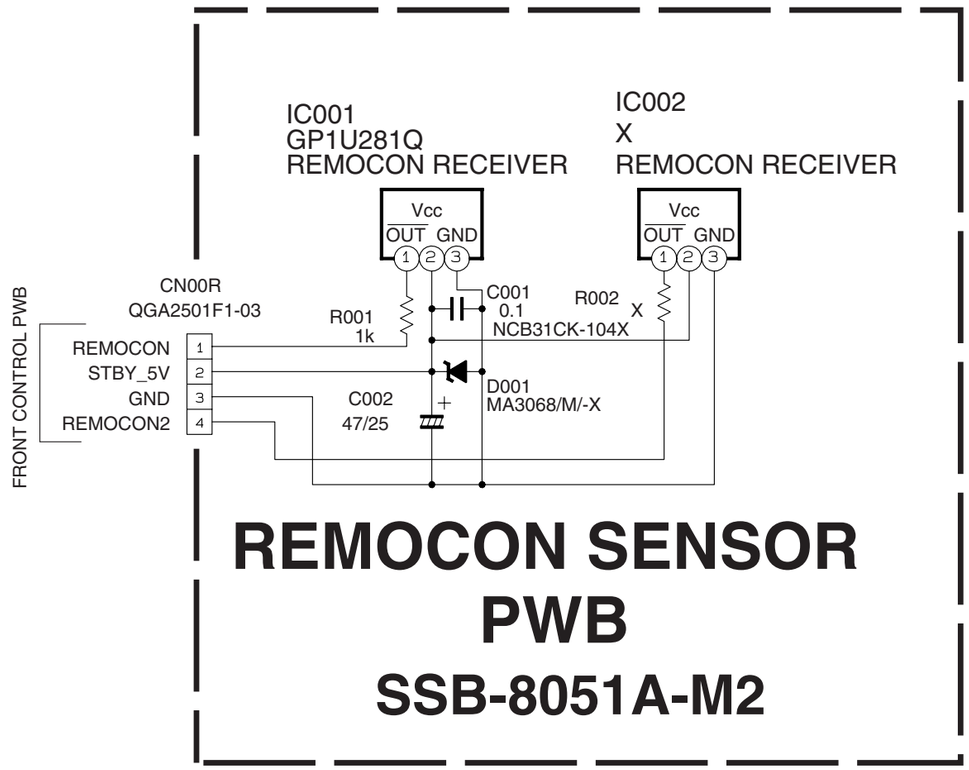
FRONT CONTROL PWB

SSB0L051A-M2



FRONT I/F PWB & REMOCON SENSOR PWB CIRCUIT DIAGRAM





AV JACK PWB CIRCUIT DIAGRAM [1/3]

AV JACK PWB (1/3)

(COMPOSITE VIDEO INPUT BLOCK)

SSB0J051A-M2

COMPONENT VIDEO INPUT BLOCK

MAIN PWB

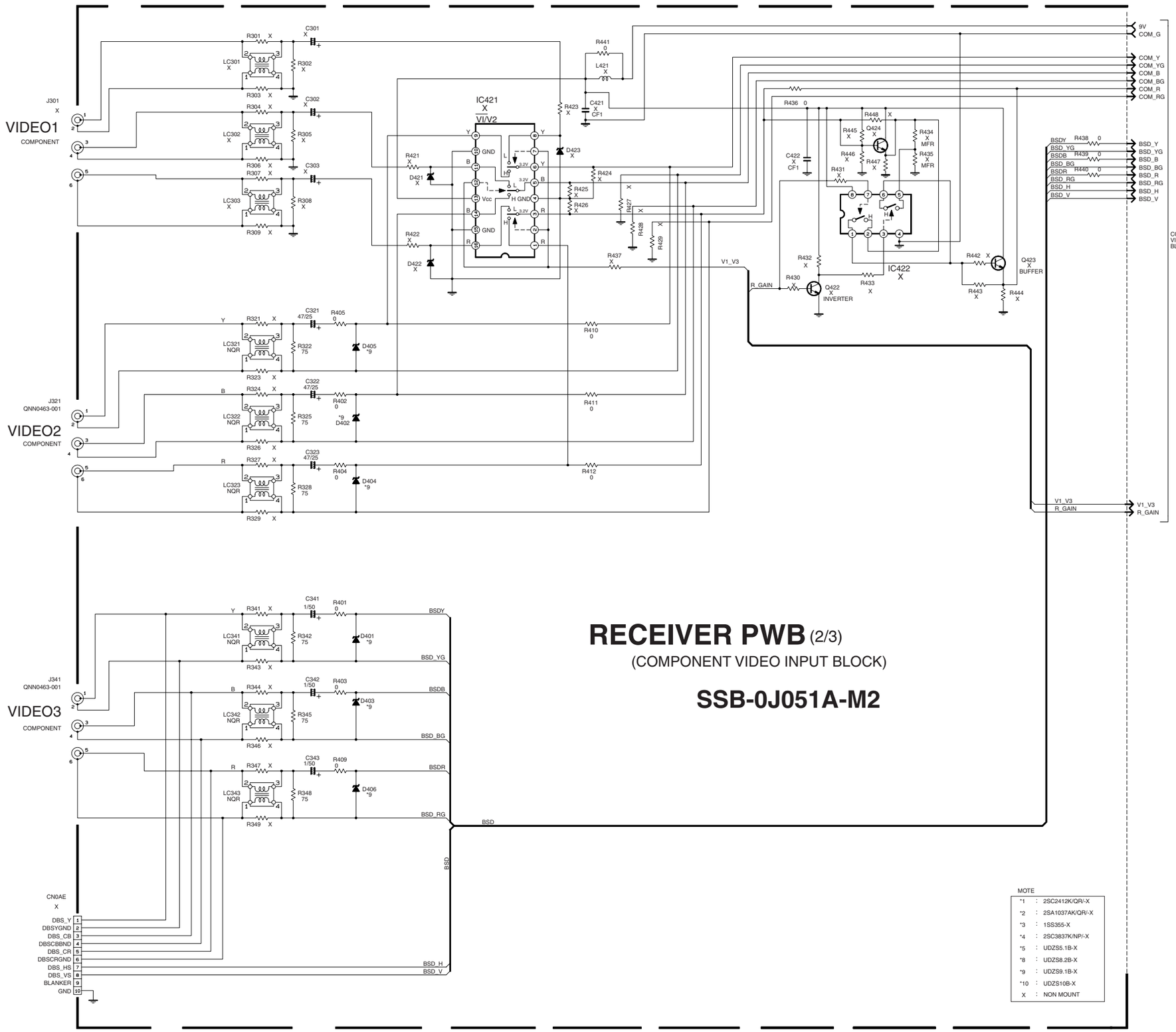
CN006 QGB1505K1-40

CN007 QGB1505K1-25

NOTE

*1	:	2SC2412K/QR/-X
*2	:	2SA1037AK/QR/-X
*3	:	1SS355-X
*4	:	2SC3837K/NP/-X
*5	:	UDZS5.1B-X
*8	:	UDZS8.2B-X
*9	:	UDZS9.1B-X
*10	:	UDZS10B-X
X	:	NON MOUNT

AV JACK PWB CIRCUIT DIAGRAM [2/3]



RECEIVER PWB (2/3)

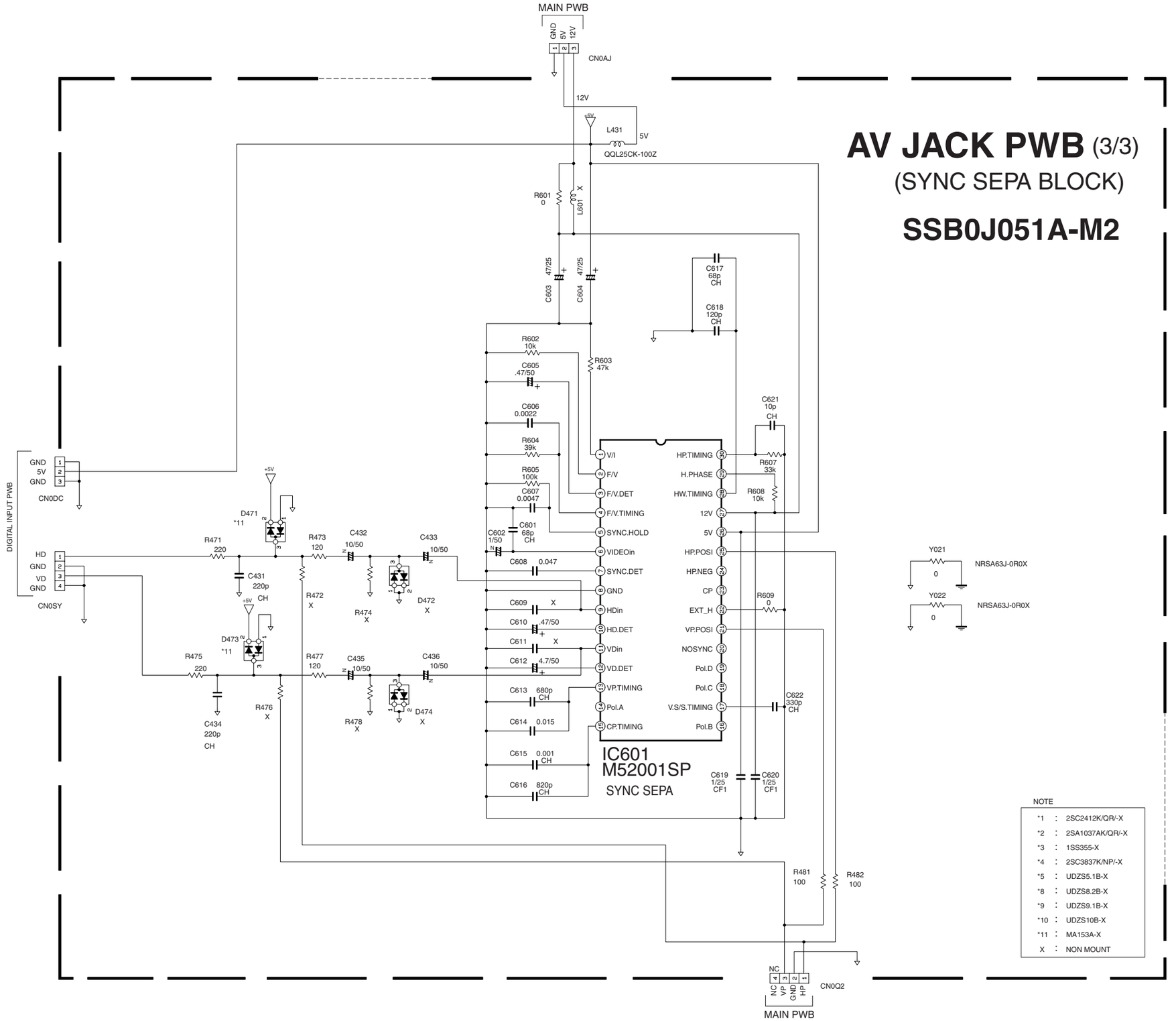
(COMPONENT VIDEO INPUT BLOCK)

SSB-0J051A-M2

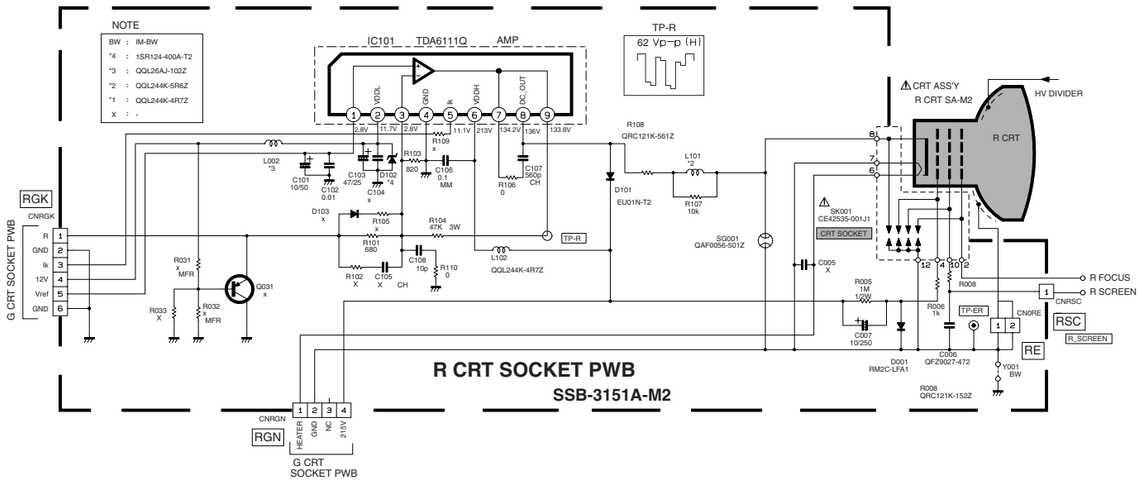
MOTE

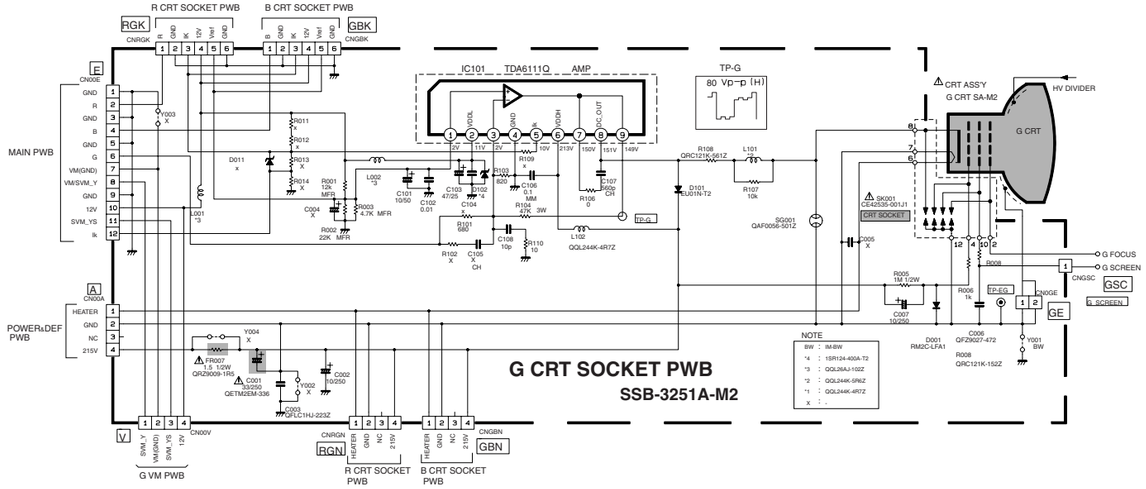
*1	:	2SC2412K/QR/-X
*2	:	2SA1037AK/QR/-X
*3	:	1SS355-X
*4	:	2SC3837K/NP/-X
*5	:	UDZS5.1B-X
*8	:	UDZS8.2B-X
*9	:	UDZS9.1B-X
*10	:	UDZS10B-X
X	:	NON MOUNT

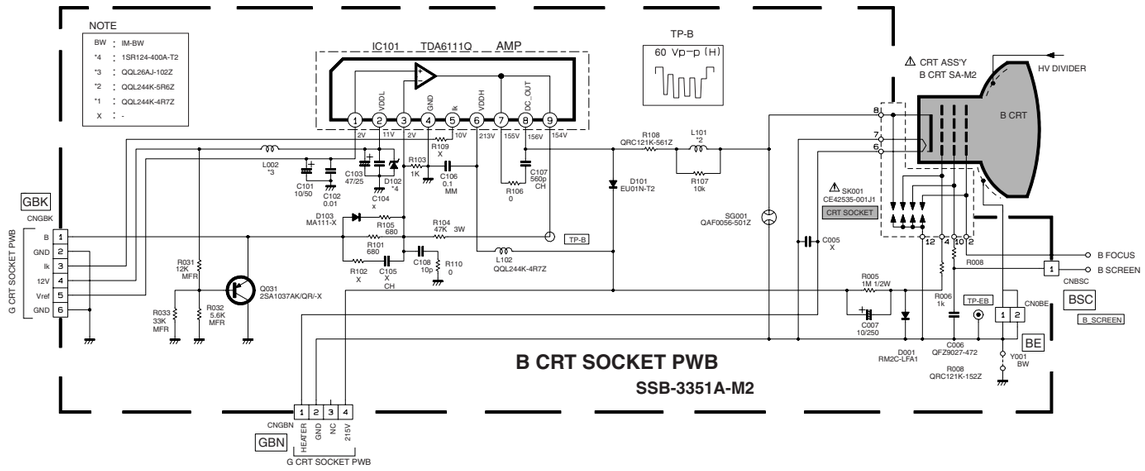
AV JACK PWB CIRCUIT DIAGRAM **[3/3]**



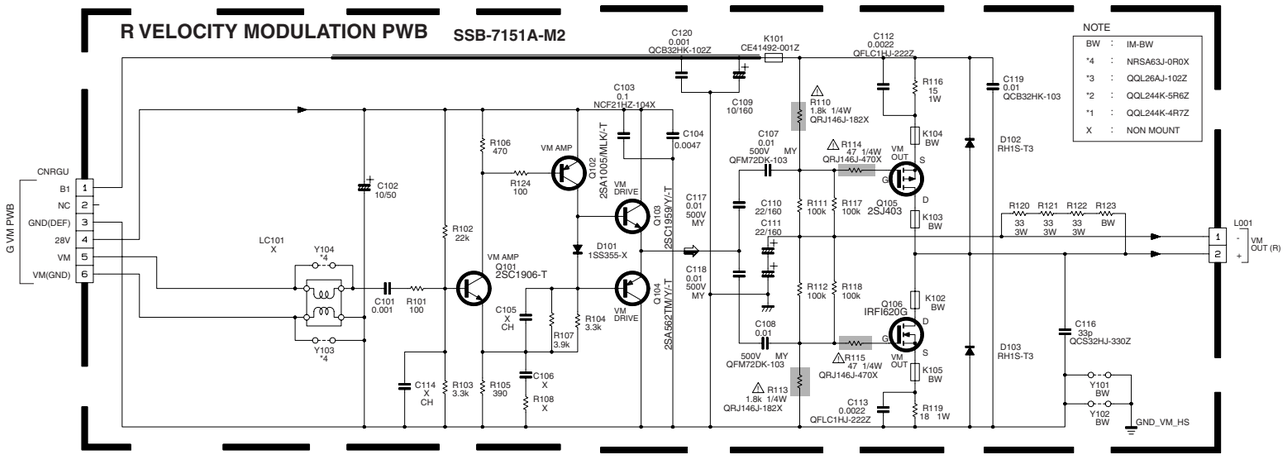
R/G/B CRT SOCKET PWB CIRCUIT DIAGRAM

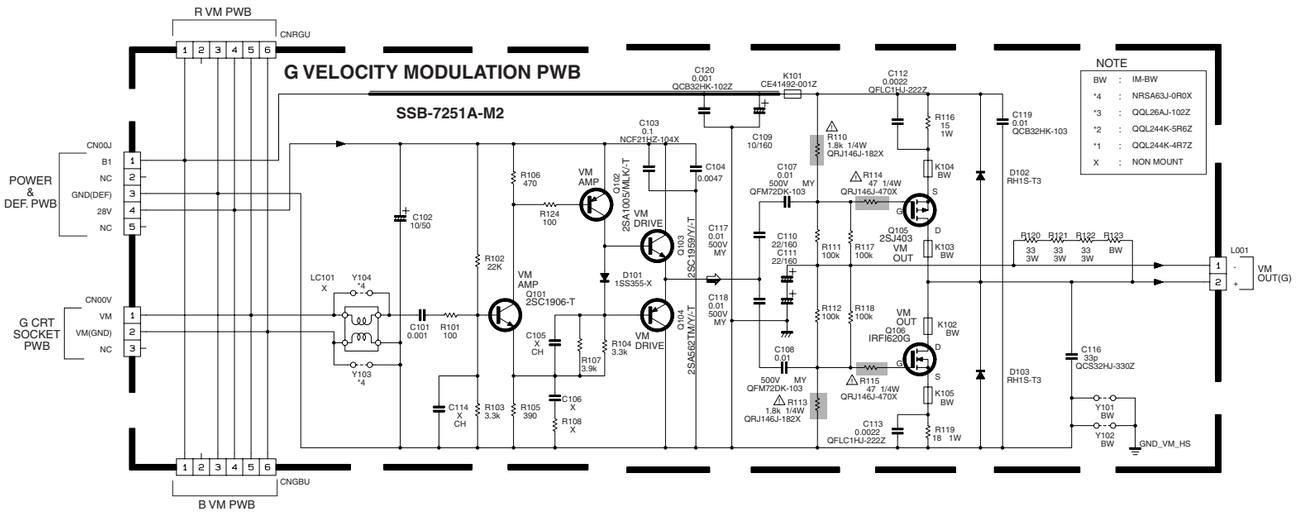


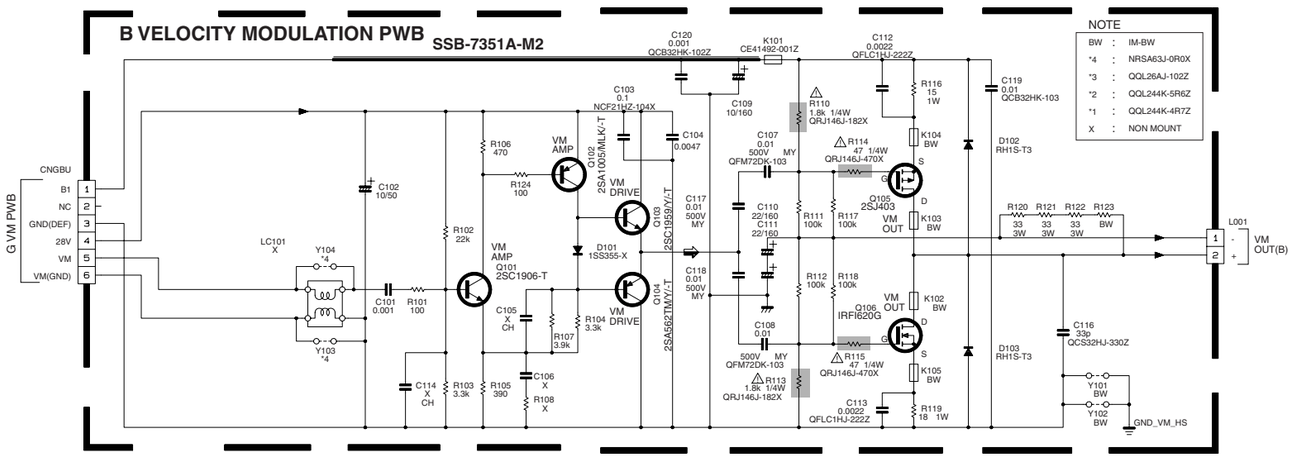




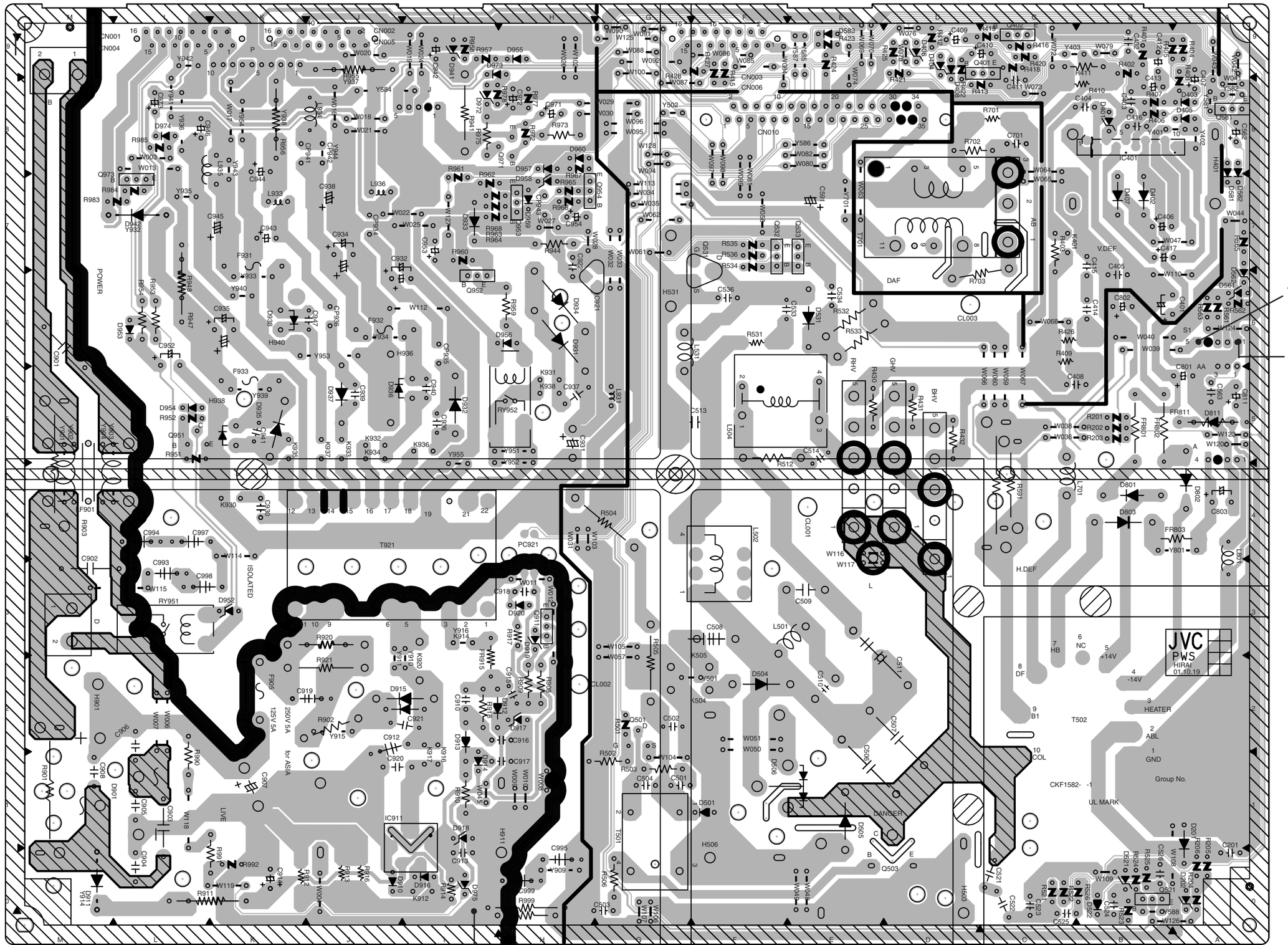
R/G/B VM PWB CIRCUIT DIAGRAM



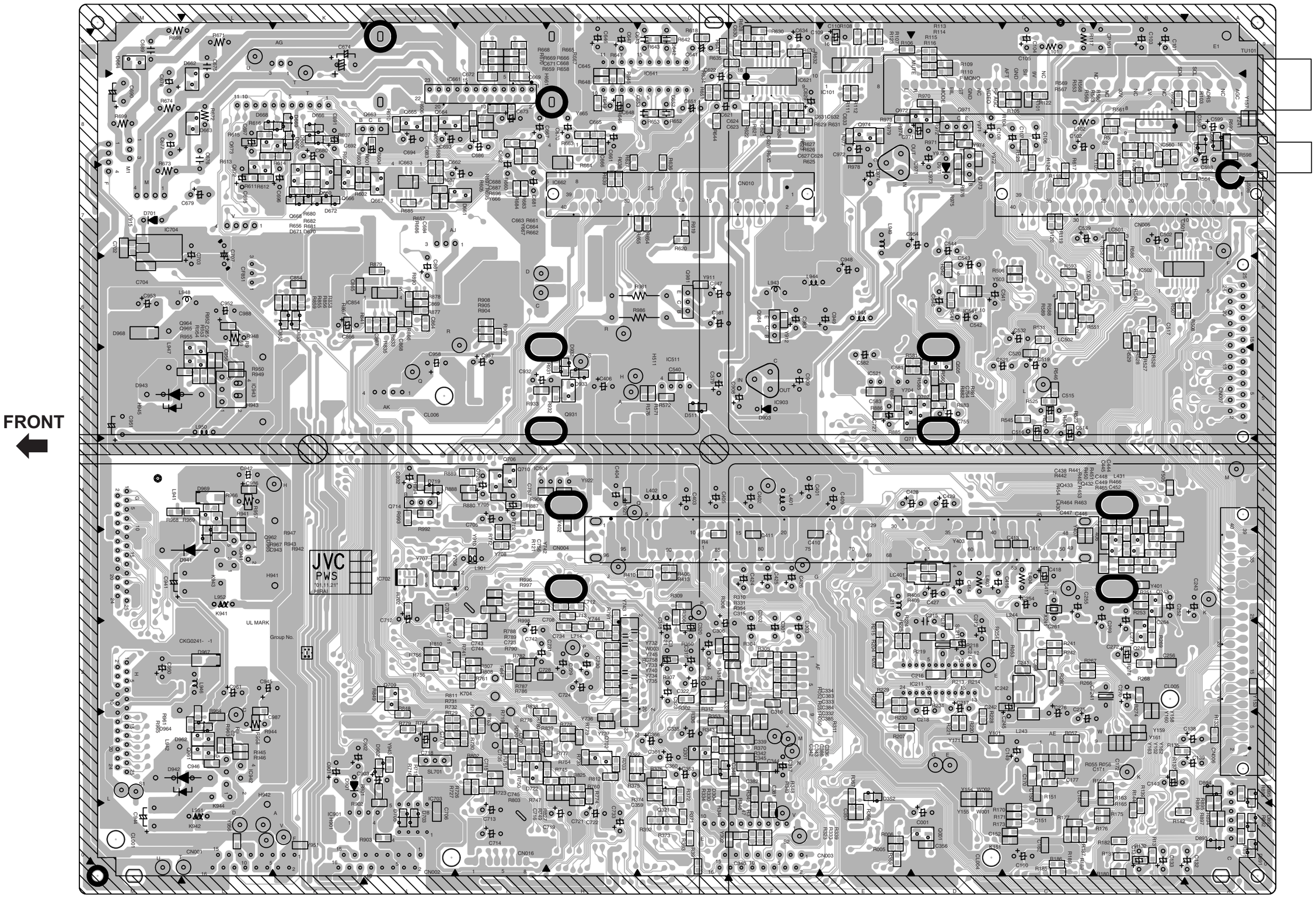




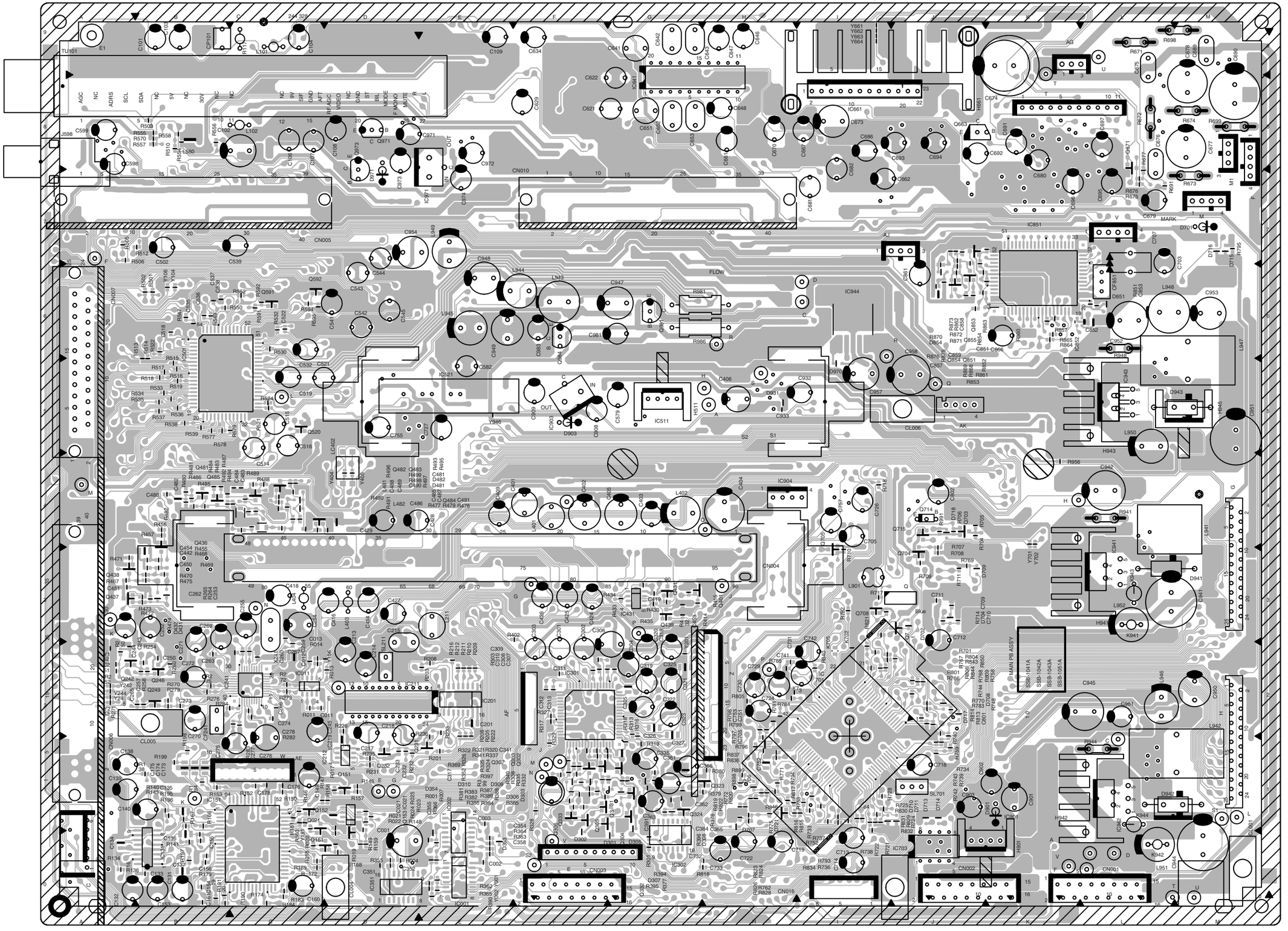
PATTERN DIAGRAMS *POWER & DEF. PWB PATTERN*



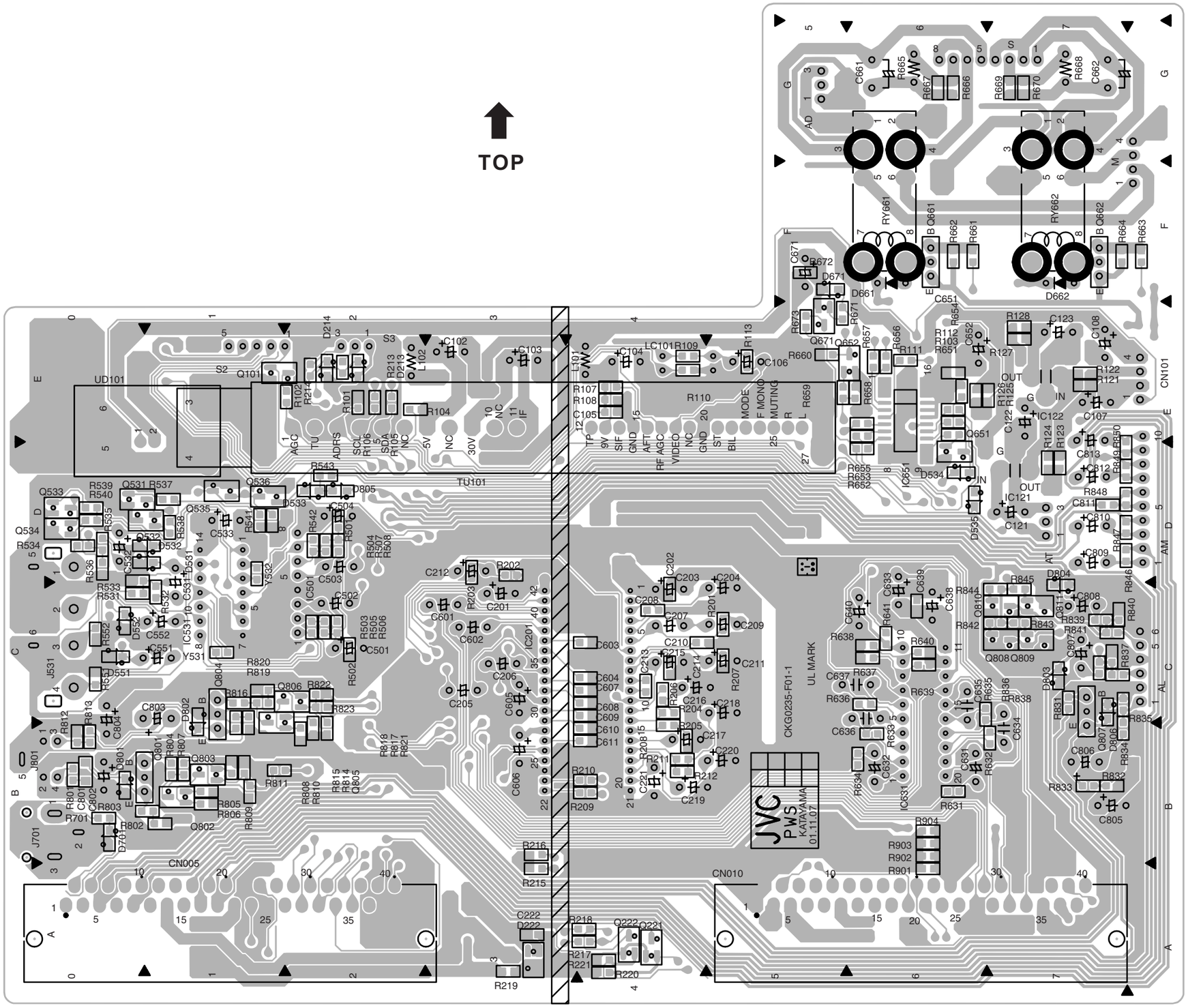
MAIN PWB PATTERN **[SOLDER SIDE]**



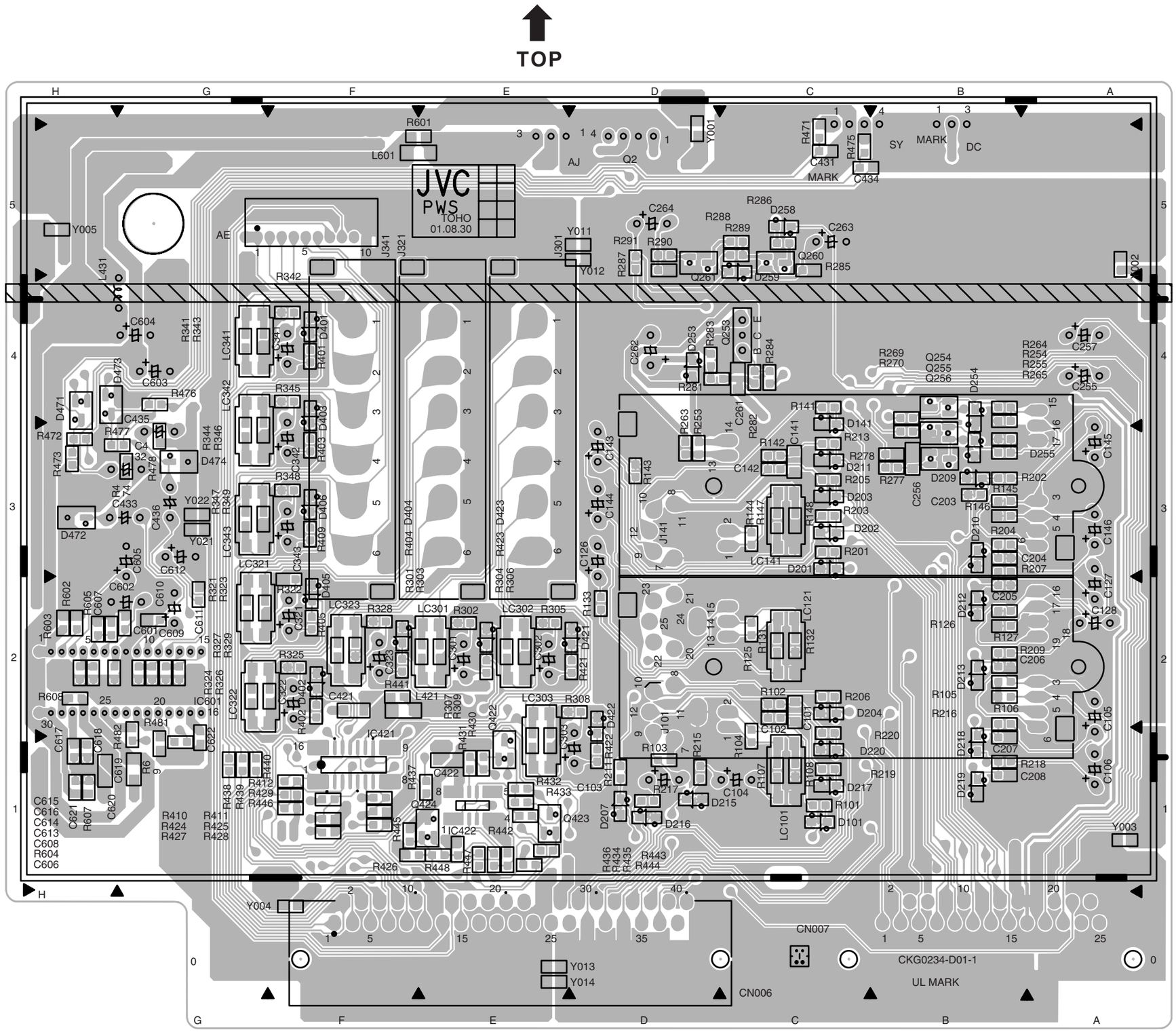
MAIN PWB PATTERN **[PARTS SIDE]**



RECEIVER PWB PATTERN

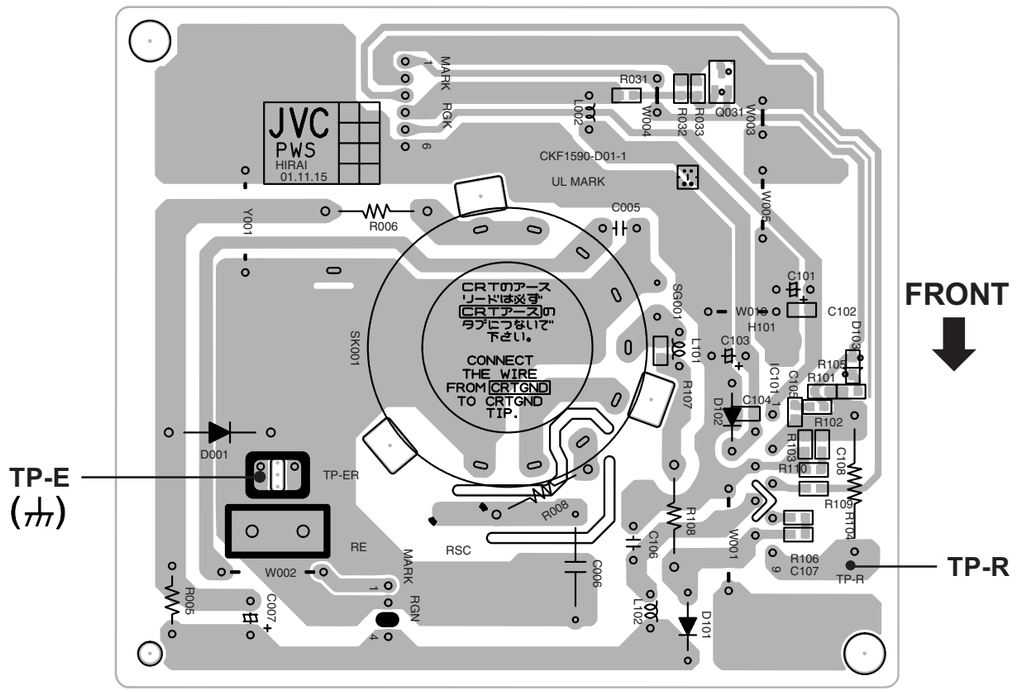


AV JACK PWB PATTERN

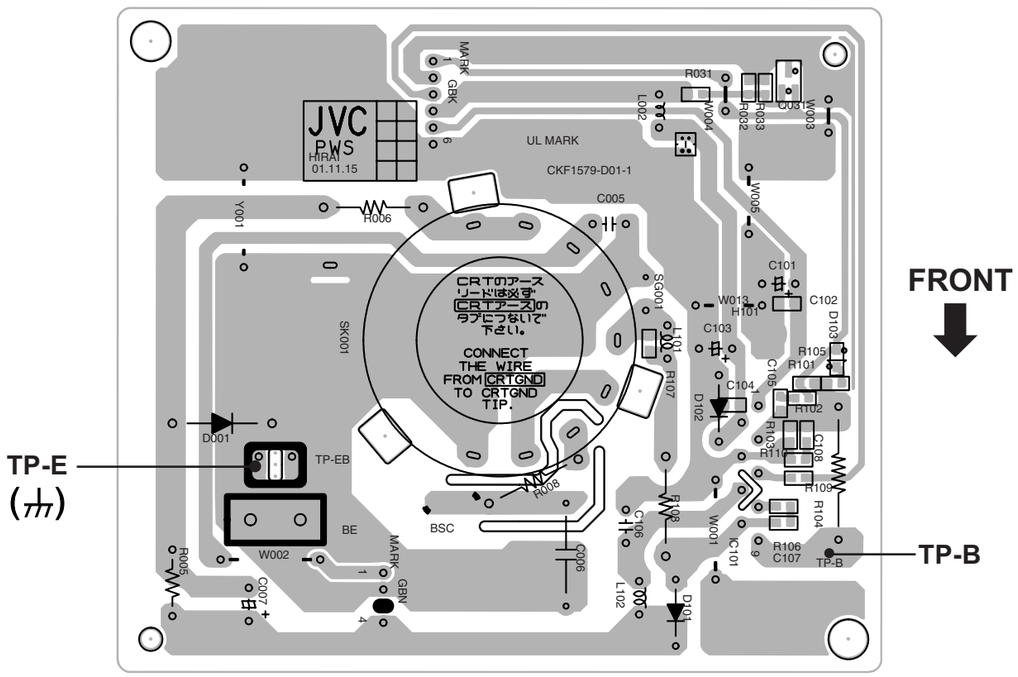


R/G/B CRT SOCKET PWB PATTERN

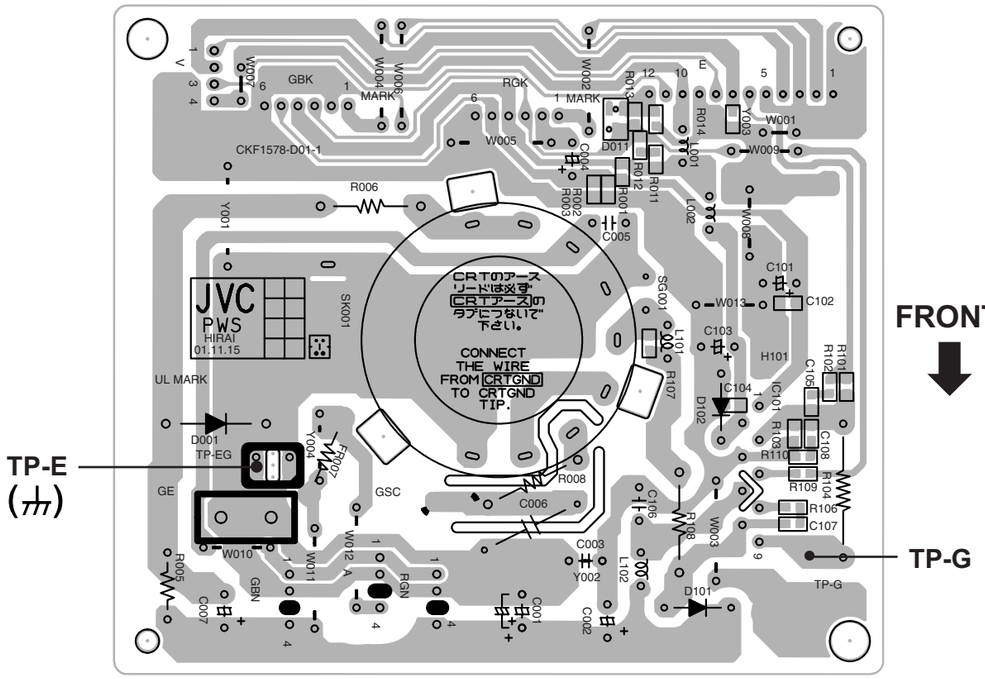
[RCRT SOCKET PWB]



[BCRT SOCKET PWB]



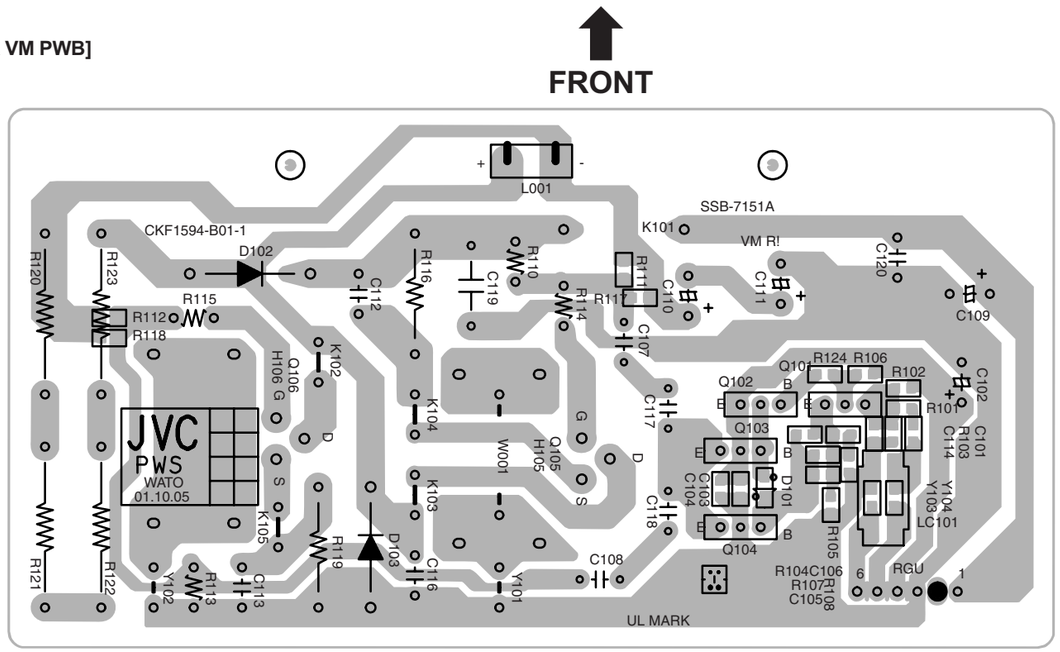
[G CRT SOCKET PWB]



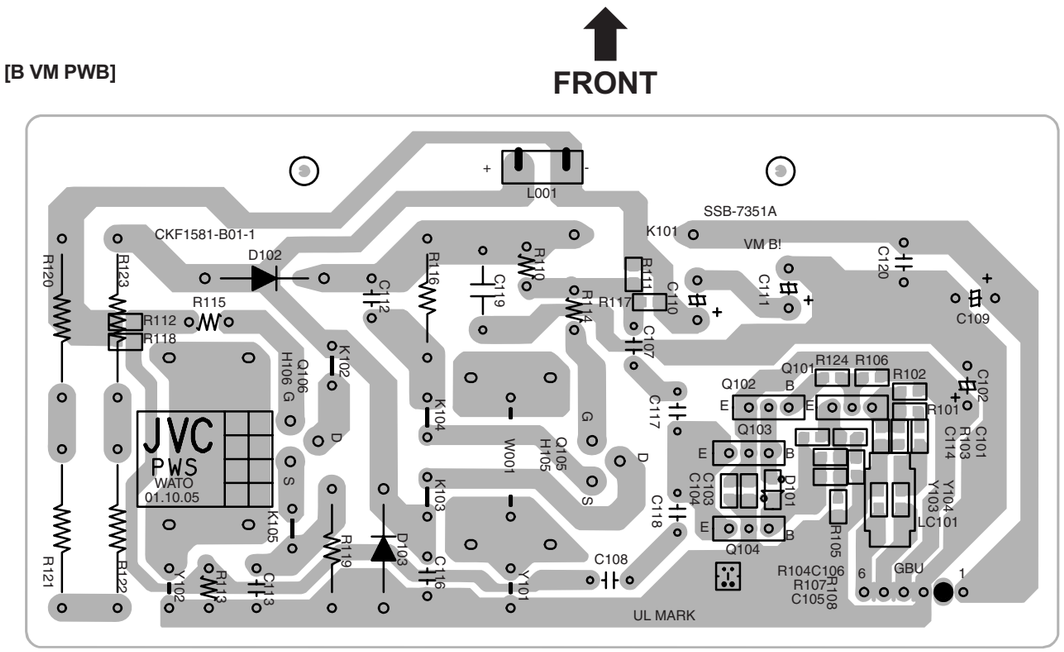
AV-48WP30

R/G/B VM PWB PATTERN

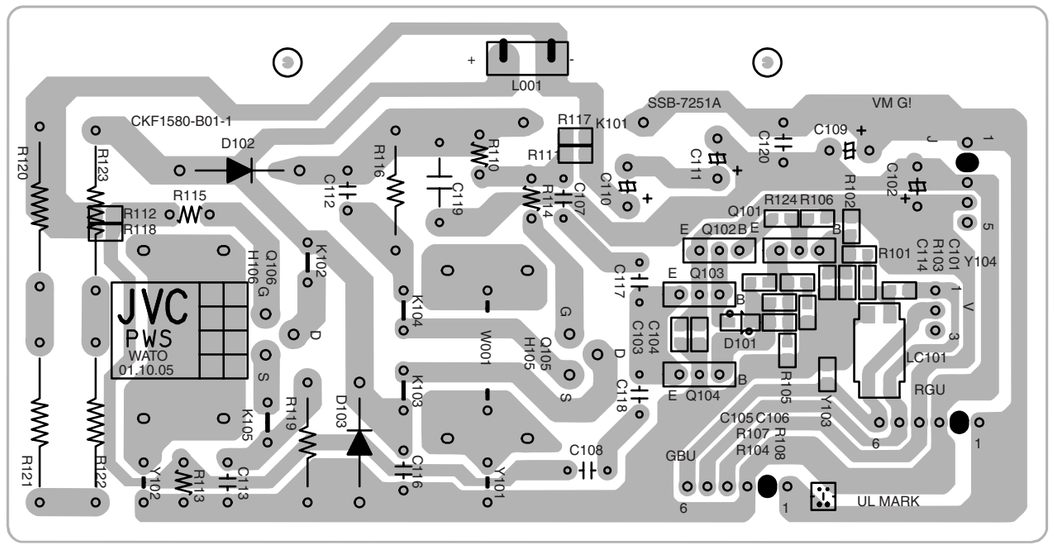
[R VM PWB]



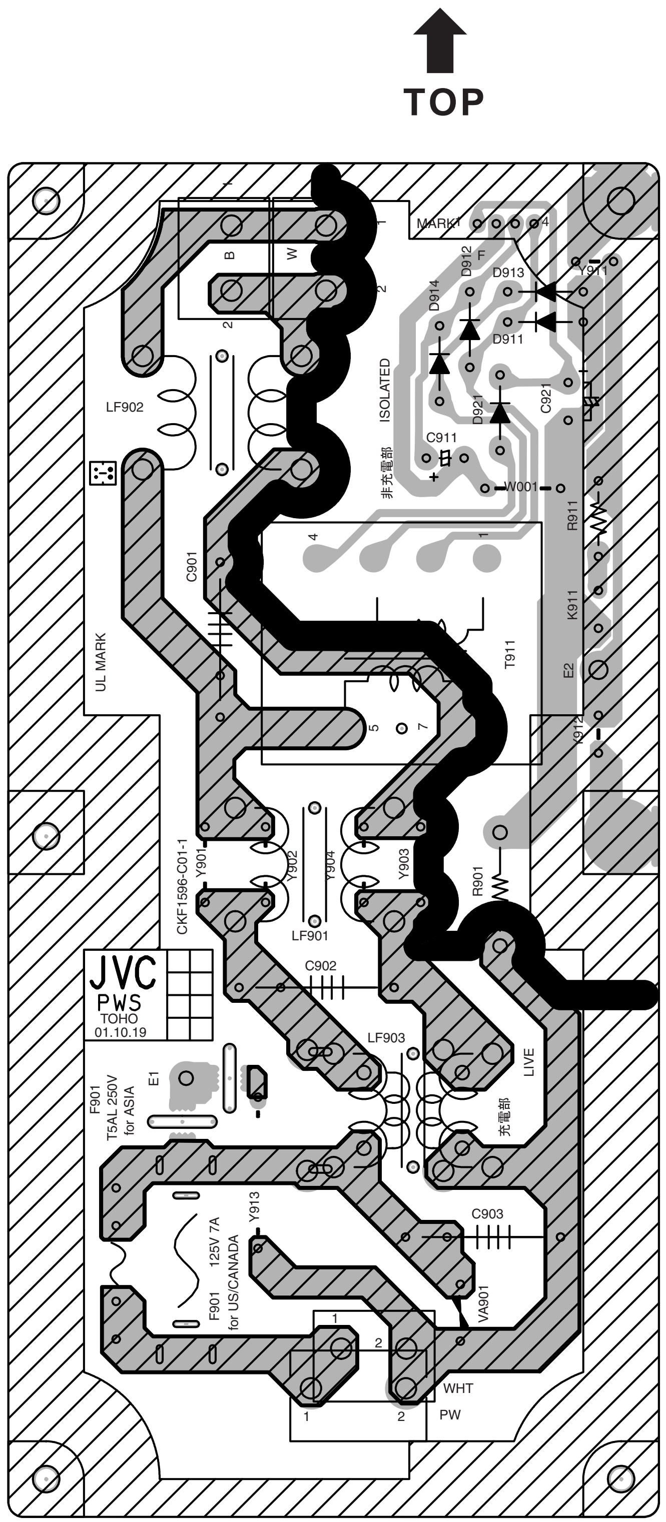
[B VM PWB]



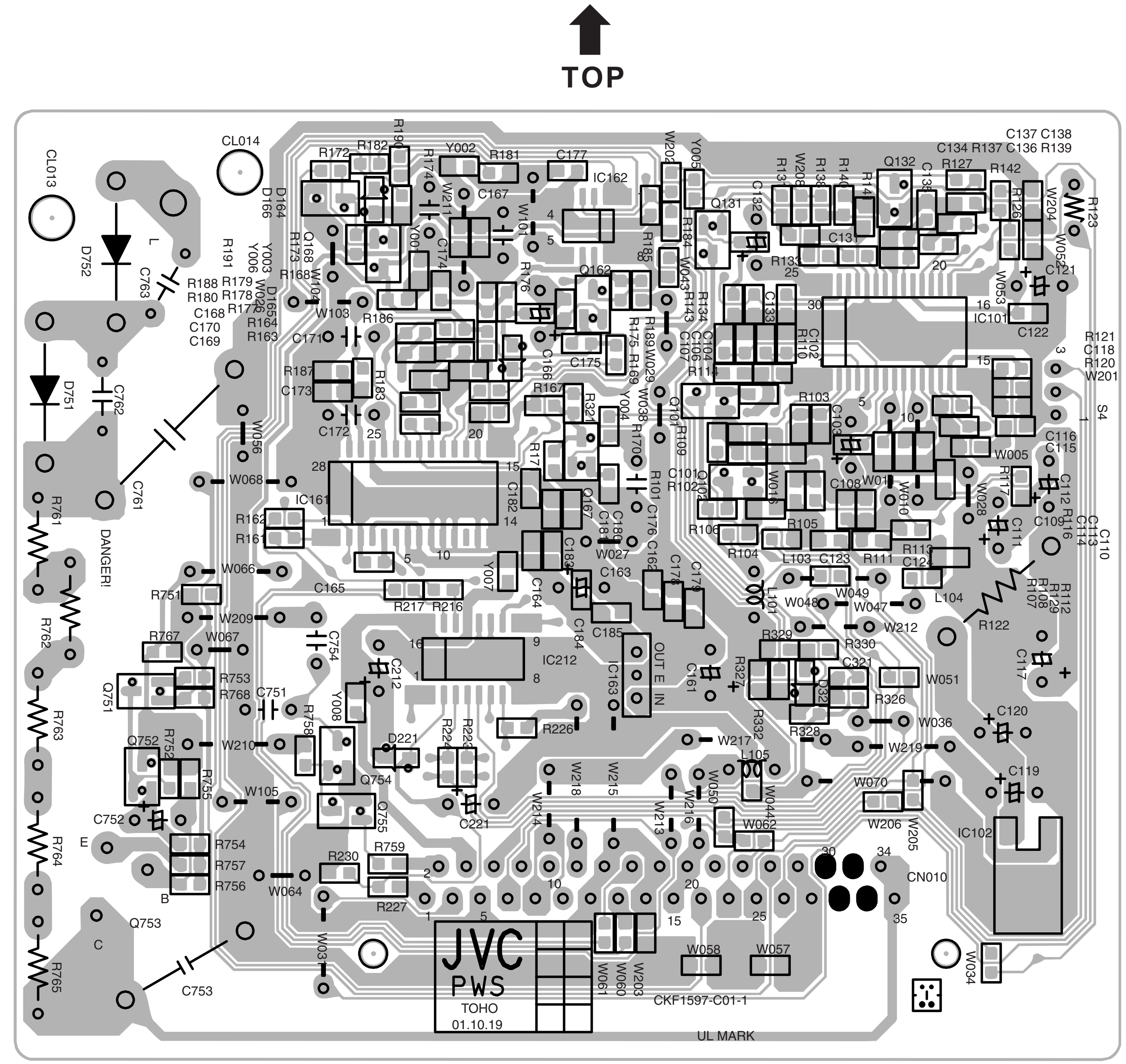
[G VM PWB]



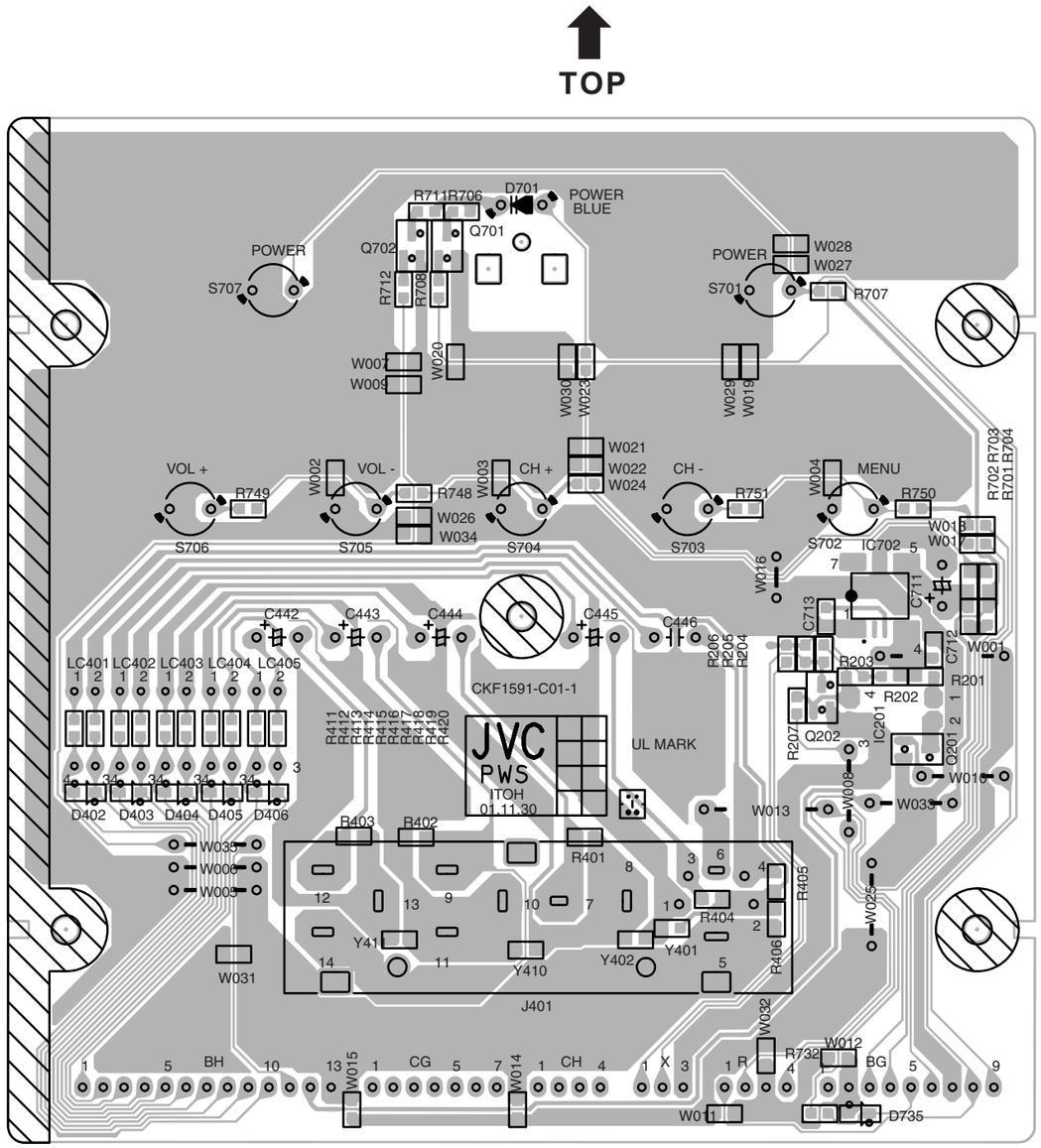
LINE FILTER PWB PATTERN



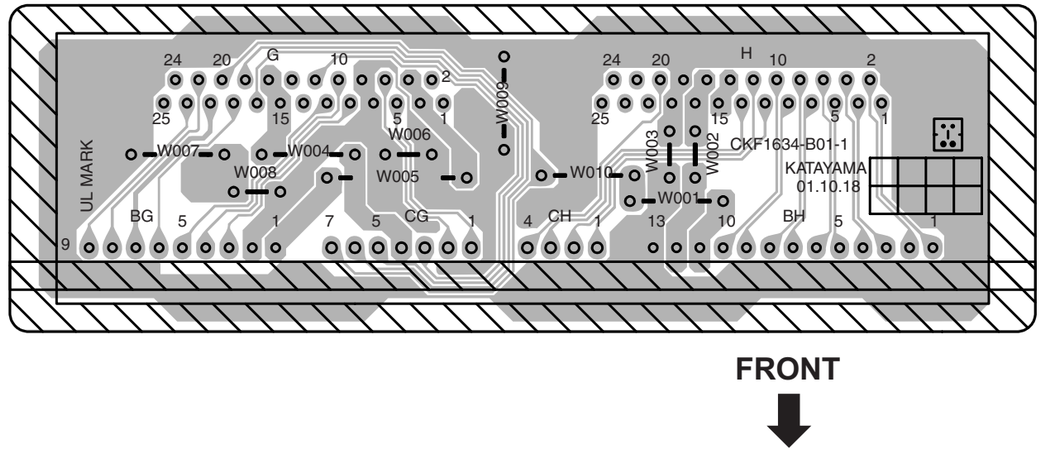
DEF OSC PWB PATTERN



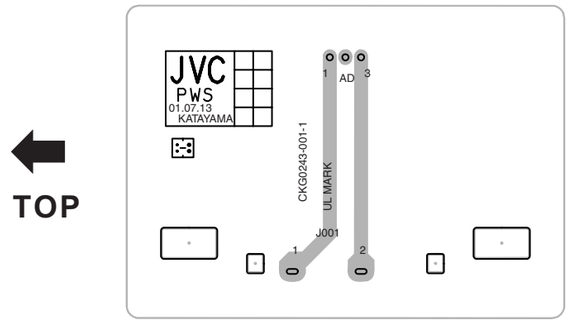
FRONT CONTROL PWB PATTERN



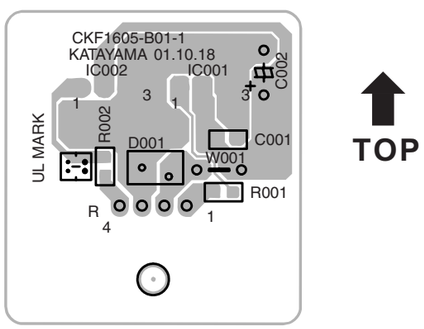
FRONT I/F PWB PATTERN



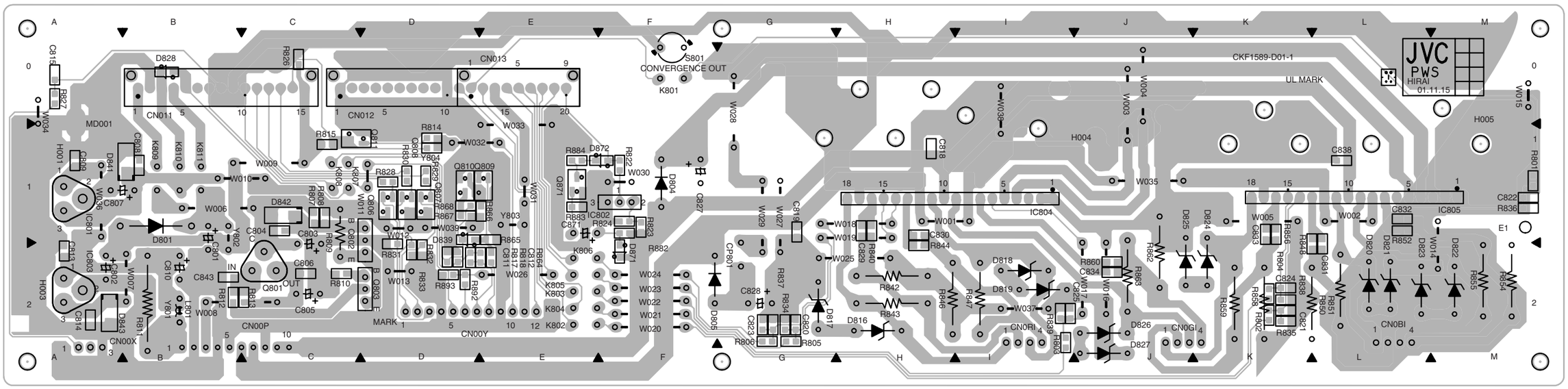
CENTER SPEAKER PWB PATTERN



REMOCON SENSOR PWB PATTERN



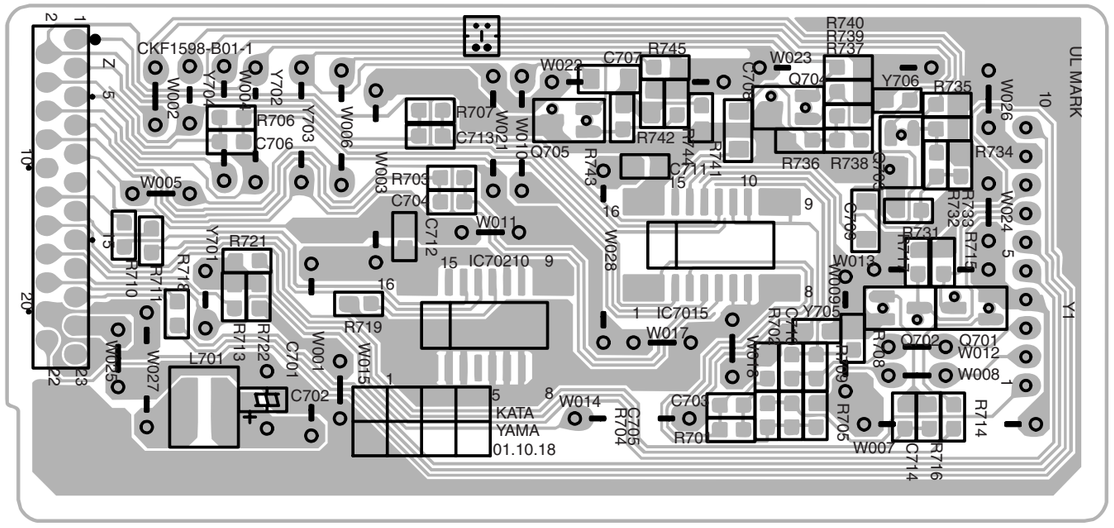
CONVERGENCE PWB PATTERN



FRONT

TOP

CONVERGENCE OSD PWB PATTERN



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