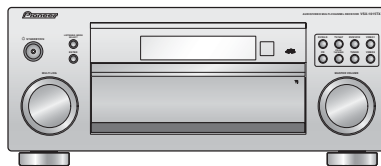


Service Manual



VSX-1015-K

ORDER NO.
RRV3138

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-1015-K VSX-1015-S

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	The voltage can be converted by the following method.
VSX-1015-K	HYXJ	AC220-230V	AC240V, *
VSX-1015-S	HYXJ	AC220-230V	AC240V, *

*:Alter the wiring of the power-supply block at the primary winding of Power transformer referring to the Line Voltage Selection described in this Service Manual ("4.18 TRANS 2-2, TRANS 1 and PRIMARY ASSYS").



For details, refer to "Important Check Points for Good Servicing".

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SAFETY INFORMATION



This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.

Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

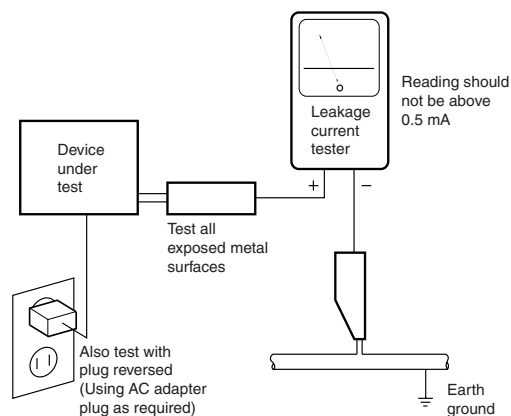
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety



Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

- ① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

- ② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification (addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

- ③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

- ④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

- ⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

- ⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

- ⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

- ⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

- ⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

- ⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments



To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts



Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning



For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws



To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

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1. SPECIFICATIONS

Amplifier section

Continuous Power Output (Stereo)

- A Front 150 W + 150 W (DIN 1 kHz, THD 1 %, 6 Ω)
120 W + 120 W (DIN 1 kHz, THD 1 %, 8 Ω)

Continuous Power Output (Multichannel)

- Front 150 W + 150 W (DIN 1 kHz, THD 1 %, 6 Ω)
120 W + 120 W (DIN 1 kHz, THD 1 %, 8 Ω)
Center 150 W (DIN 1 kHz, THD 1 %, 6 Ω)
120 W (DIN 1 kHz, THD 1 %, 8 Ω)
Surround 150 W + 150 W (DIN 1 kHz, THD 1 %, 6 Ω)
120 W + 120 W (DIN 1 kHz, THD 1 %, 8 Ω)
Surround back 150 W + 150 W (DIN 1 kHz, THD 1 %, 6 Ω)
120 W + 120 W (DIN 1 kHz, THD 1 %, 8 Ω)
Rated Power Output (Stereo) 140 W+140 W
(20 Hz–20 kHz, 0.09 %, 6 Ω)
B Rated Power Output 110 W+110 W
(20 Hz–20 kHz, 0.09 %, 8 Ω)

- The above specifications are applicable when the power supply is 230 V.

Audio Section

Input (Sensitivity/Impedance)

- LINE 335 mV/47 k Ω

Frequency Response

- LINE 5 Hz to 100,000 Hz ± 3 dB

Output (Level/Impedance)

- REC 335 mV/2.2 k Ω

Tone Control

- C BASS ± 6 dB (100 Hz)
TREBLE ± 6 dB (10 kHz)
LOUDNESS +4/+2 dB (100 Hz/10 kHz)
(at volume position –40 dB)

Signal-to-Noise Ratio (IHF, short circuited, A network)

- LINE 103 dB

Signal-to-Noise Ratio

- [DIN (continuous rated power output/50mW)]
LINE 92/65 dB

Composite Video / S-Video Section

Input (Sensitivity/Impedance) 1 Vp-p/75 Ω

Output (Level/Impedance) 1 Vp-p/75 Ω

- D Signal-to-Noise Ratio 65 dB

Frequency Response 5 Hz to 10 MHz ± 3 dB

Component Video Section

Input (Sensitivity/Impedance) 1 Vp-p/75 Ω

Output (Level/Impedance) 1 Vp-p/75 Ω

- Signal-to-Noise Ratio 65 dB

- Frequency Response 5 Hz to 100 MHz ± 3 dB

FM Tuner Section

Frequency Range 87.5 MHz to 108 MHz

Usable Sensitivity Mono: 15.2 dBf, IHF (1.6 μ V/75 Ω)

50 dB Quieting Sensitivity Mono: 20.2 dBf

- E Stereo: 41.2 dBf

Sensitivity (DIN) Mono: 1.1 μ V (S/N 26 dB)

- Stereo: 50 μ V (S/N 46 dB)

Signal-to-Noise Ratio Mono: 76 dB (at 85 dBf)

- Stereo: 72 dB (at 85 dBf)

Signal-to-Noise Ratio (DIN) Mono: 62 dB

- Stereo: 58 dB

Distortion Stereo: 0.6% (1 kHz)

- Alternate Channel Selectivity 70 dB (400 kHz)

Stereo Separation 40 dB (1 kHz)

- Frequency Response 30 Hz to 15 kHz ± 1 dB

- F Antenna Input 75 Ω unbalanced

AM Tuner Section

Frequency Range 531 kHz to 1,602 kHz (9 kHz step)

Sensitivity (IHF, Loop antenna) 350 μ V/m

Selectivity 30 dB

Signal-to-Noise Ratio 50 dB

Antenna Loop antenna

Miscellaneous

Power Requirements AC 220–230 V, 50/60 Hz

Power Consumption 430 W

In standby 0.52 W

AC Outlet (switched) 100 W MAX.

Dimensions 420 (W) x 173 (H) x 465 (D) mm

Weight (without package) 15.4 kg

Furnished Parts

Microphone (for Auto MCACC setup) 1

AA/LR6 dry cell batteries 2

Remote control 1

AM loop antenna 1

FM wire antenna 1

These operating instructions



Note

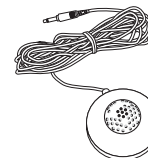
- Specifications and the design are subject to possible modifications without notice, due to improvements.

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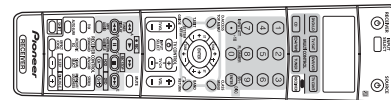
“DTS”, “DTS-ES”, “Neo:6” and “DTS 96/24” are trademarks of Digital Theater Systems, Inc.

Accessories

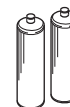
- Setup microphone (APM7006)



- Remote control unit (AXD7383)



- AA/IEC LR6 dry cell batteries x2



- AM loop antenna (ATB7013)



- FM wire antenna (ADH7030)



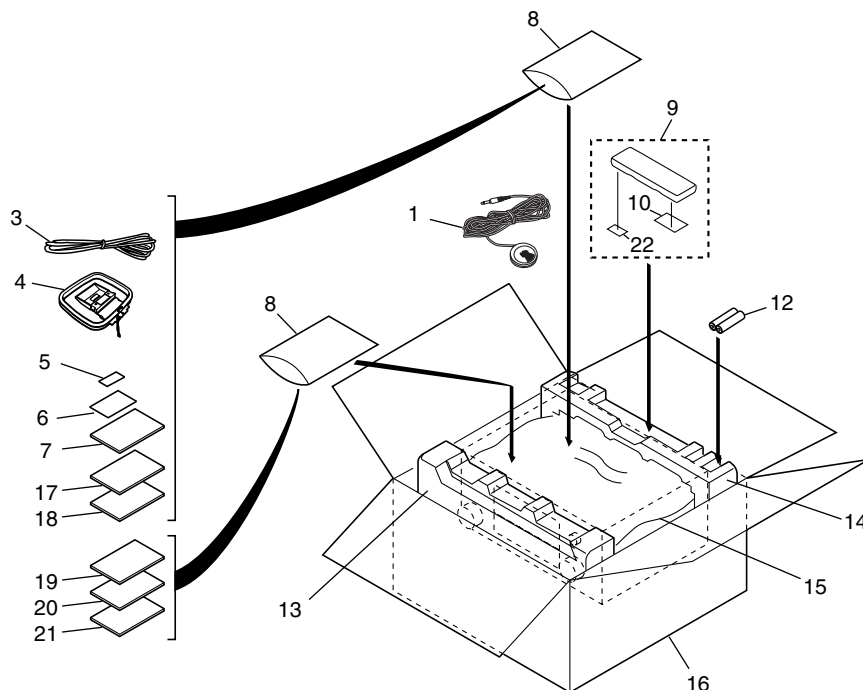
- Warranty card
- Operating instructions

2. EXPLODED VIEWS AND PARTS LIST

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The $\triangle$ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Screws adjacent to ∇ mark on product are used for disassembly.
- For the applying amount of lubricants or glue, follow the instructions in this manual.
(In the case of no amount instructions, apply as you think it appropriate.)

2.1 PACKING



(1) PACKING PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Setup Microphone	APM7006	NSP	12	AA/IEC LR6 Dry Cell Batteries	VEM1021
	2	•••••			13	Front Pad V2	AHA7442
	3	FM Wire Antenna	ADH7030		14	Rear Pad V2	AHA7443
	4	AM Loop Antenna	ATB7013		15	Packing Sheet	RHC1023
	5	Caution Sheet SP,E	ARM7083		16	Packing Case	See Contrast table (2)
NSP	6	Warranty Card	ARY7065		17	Operating Instructions (Spanish)	ARC7575
	7	Operating Instructions (English)	ARB7327		18	Operating Instructions (German)	ARC7573
NSP	8	Literature Bag	AHG7117		19	Operating Instructions (French)	ARC7574
	9	Remote Control Unit	AXD7383		20	Operating Instructions (Dutch)	ARC7576
	10	Battery Cover	XZN3140		21	Operating Instructions (Italian)	ARC7572
	11	•••••			22	Label (WEEE)	ARW7322

(2) CONTRAST TABLE

VSX-1015-K/HYXJ and VSX-1015-S/HYXJ are constructed the same except for the following:

Mark	No.	Symbol and Description	VSX-1015-K /HYXJ	VSX-1015-S /HYXJ
	16	Packing Case 1015/BY	AHD8330	Not used
	16	Packing Case 1015/SY	Not used	AHD8329

2.2 EXTERIOR SECTION

A

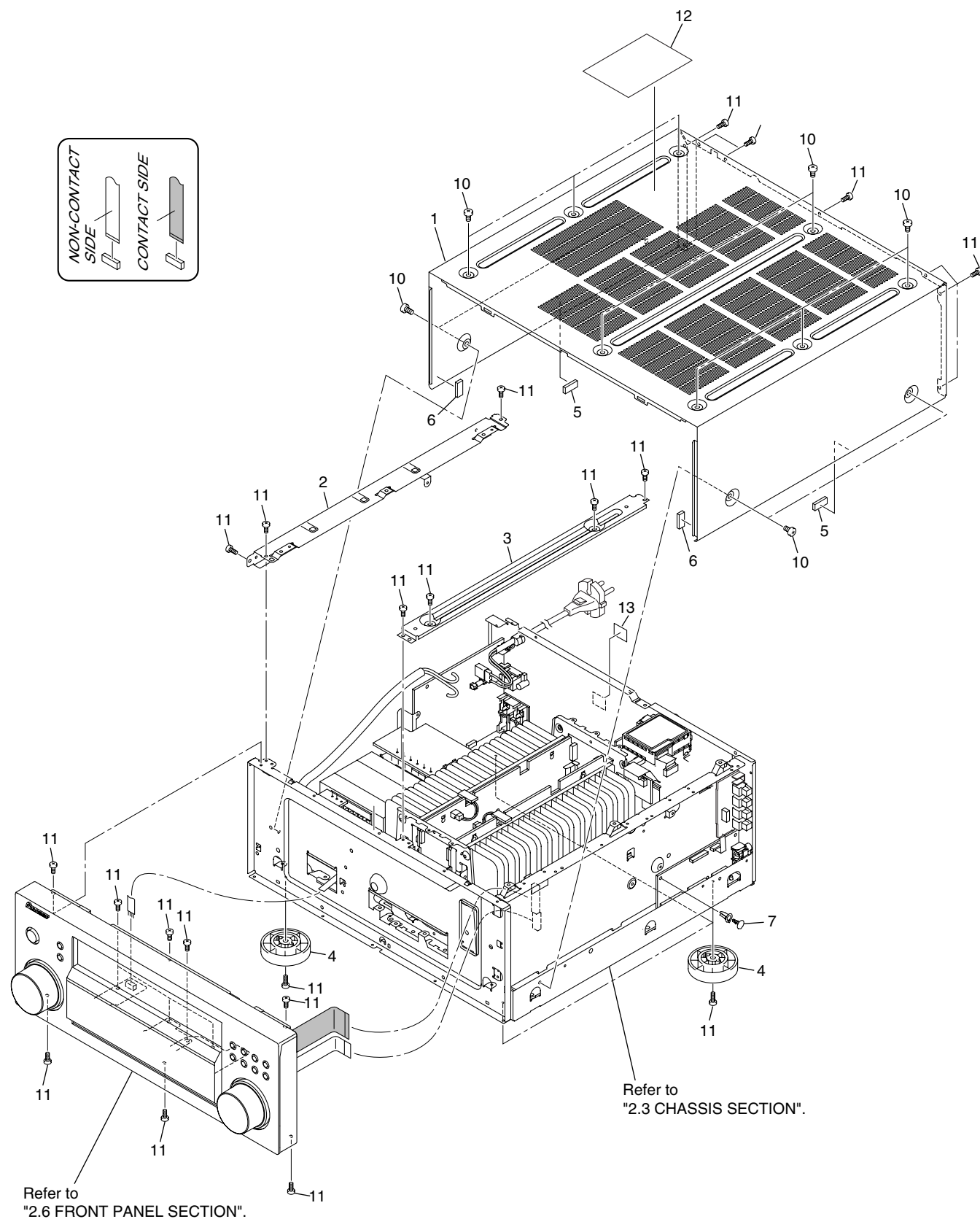
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E

F



(1) EXTERIOR SECTION PARTS LIST

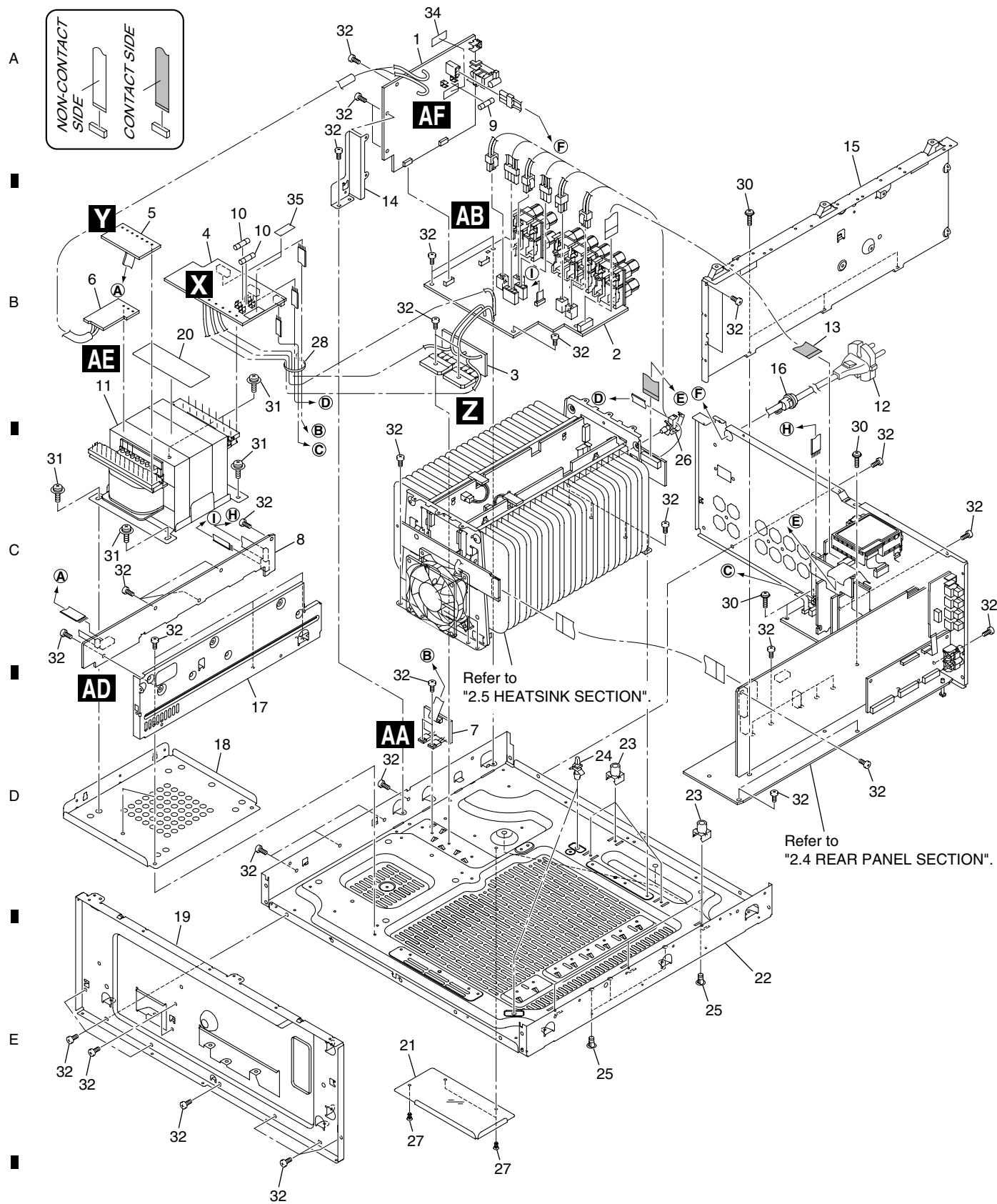
Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Bonnet Case	See Contrast table (2)	8	•••••	
2	Left Beam	ANG7401	9	•••••	
3	Center Beam	ANG7482	10	Screw	See Contrast table (2)
4	Insulator	PNW2766			
5	Spacer (4.5 x 10 x 20)	AEB7355	11	Screw	BBZ30P080FCC
			12	Label (DD/DTS/THX)	ARW7320
6	Spacer 45B (6 x 7 x 13)	AEB7264	13	Label (WEEE)	ARW7322
7	Nyron Rivet	AEC7408			

(2) CONTRAST TABLE

VSX-1015-K/HYXJ and VSX-1015-S/HYXJ are constructed the same except for the following:

Mark	No.	Symbol and Description	VSX-1015-K /HYXJ	VSX-1015-S /HYXJ
	1	Bonnet Case V1B	AZN7980	Not used
	1	Bonnet Case V1S	Not used	AZN7981
	10	Screw	BBZ40P080FTB	BBZ40P080FNI

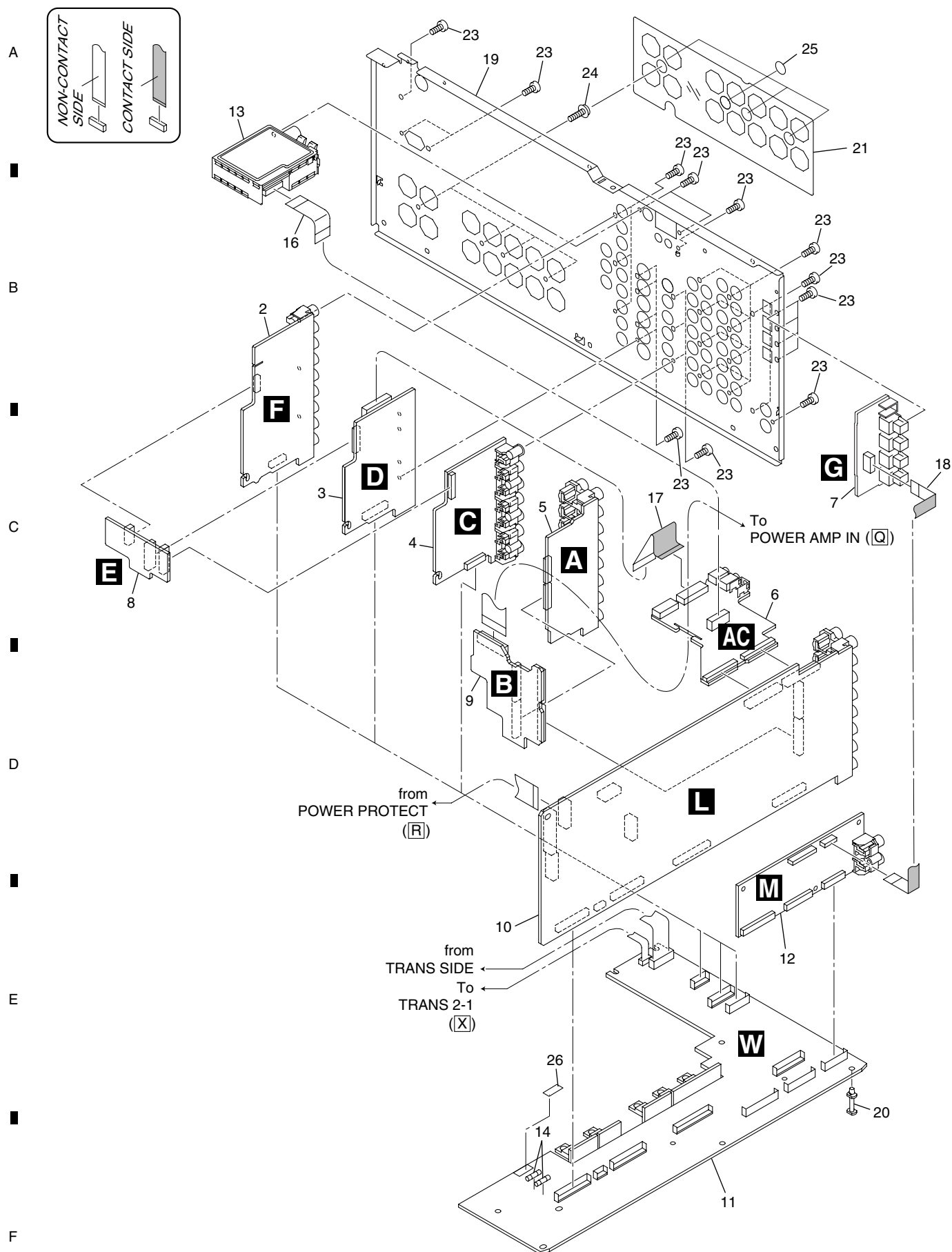
2.3 CHASSIS SECTION



(1) CHASSIS SECTION PARTS LIST

Mark No.	Description	Part No.
1	PRIMARY Assy	AWX8386
2	SP/PS Assy	AWX8375
NSP 3	DIODE Assy	AWX8376
4	TRANS 2-1 Assy	AWX8372
5	TRANS 2-2 Assy	AWX8371
6	TRANS 1 Assy	AWX8383
7	VH TR Assy	AWX8411
NSP 8	TRANS SIDE Assy	AWX8417
△ 9	Fuse (FU1 : T5A)	REK1029
△ 10	Fuse (FU4, 5 : T2A)	REK1025
△ 11	Power Transformer (T1501)	ATS7375
△ 12	Power Cable	VDG1080
13	Flexible Cable (12P)	ADD7477
14	Primary Angle 56	ANG7526
15	DSP Shield A V1	ANG7479
16	Cord Stopper	CM-22B
17	Under Beam V1	ANG7478
18	Trans. Frame 45	ANG7399
NSP 19	Panel Stay V1	AND7066
NSP 20	Trans. Label V1	AAX8052
21	Screw Cover 45A	AEC7414
NSP 22	Under Base	ANA7161
23	PCB Mold	AMR2534
24	Locking Card Spacer	PNW2917
25	Card Spacer	DNK2769
26	Wire Saddle 5S	AEC7500
27	Push Rivet	AEC7370
NSP 28	Binder (BK-1)	ZCA-BK1
29	•••••	
30	Screw	IBZ30P150FCC
31	Screw	ABA7109
32	Screw	BBZ30P080FCC
33	•••••	
NSP 34	Fuse Card	AAX7098
NSP 35	Fuse Card	AAX2357

2.4 REAR PANEL SECTION



(1) REAR PANEL SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	•••••		16	Flexible Cable (11P)	ADD7476
2	COMPONENT Assy	AWX8614	17	Flexible Cable (17P)	ADD7478
3	S VIDEO Assy	AWX8613	18	Flexible Cable (10P)	ADD7501
4	COMPOSITE V Assy	AWX8612	19	Rear Panel	See Contrast table (2)
5	MULTI CH I/O Assy	AWX8681	20	Card Spacer	AEC7502
6	REAR TOP Assy	AWX8399	21	Speaker Sheet V1	AAK8176
7	OPTICAL-IN Assy	AWX8682	22	•••••	
NSP 8	VIDEO SIDE Assy	AWX8609	23	Screw	BBZ30P080FCC
NSP 9	AUDIO CONNECT Assy	AWX8382	24	Screw	BBT30P100FCC
10	MAIN CONTROL Assy	AWX8611	25	Cushion Circle 14B	AED7081
11	REGULATOR Assy	AWX8679	NSP 26	Fuse Card	AAX2348
12	DSP Assy	AWX8572			
13	FM/AM TUNER Unit	AXX7170			
⚠ 14	Fuse (FU2501, 2502 : T1.25A)	REK1023			
15	•••••				

(2) CONTRAST TABLE

VSX-1015-K/HYXJ and VSX-1015-S/HYXJ are constructed the same except for the following:

Mark	No.	Symbol and Description	VSX-1015-K /HYXJ	VSX-1015-S /HYXJ
	19	Rear Panel 1015BY	ANC8318	Not used
	19	Rear Panel 1015SY	Not used	ANC8317

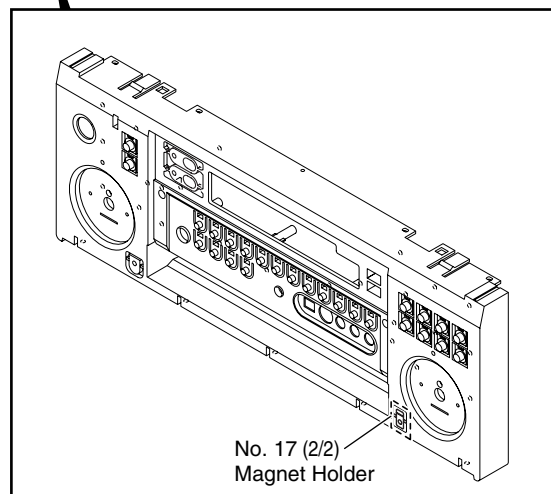
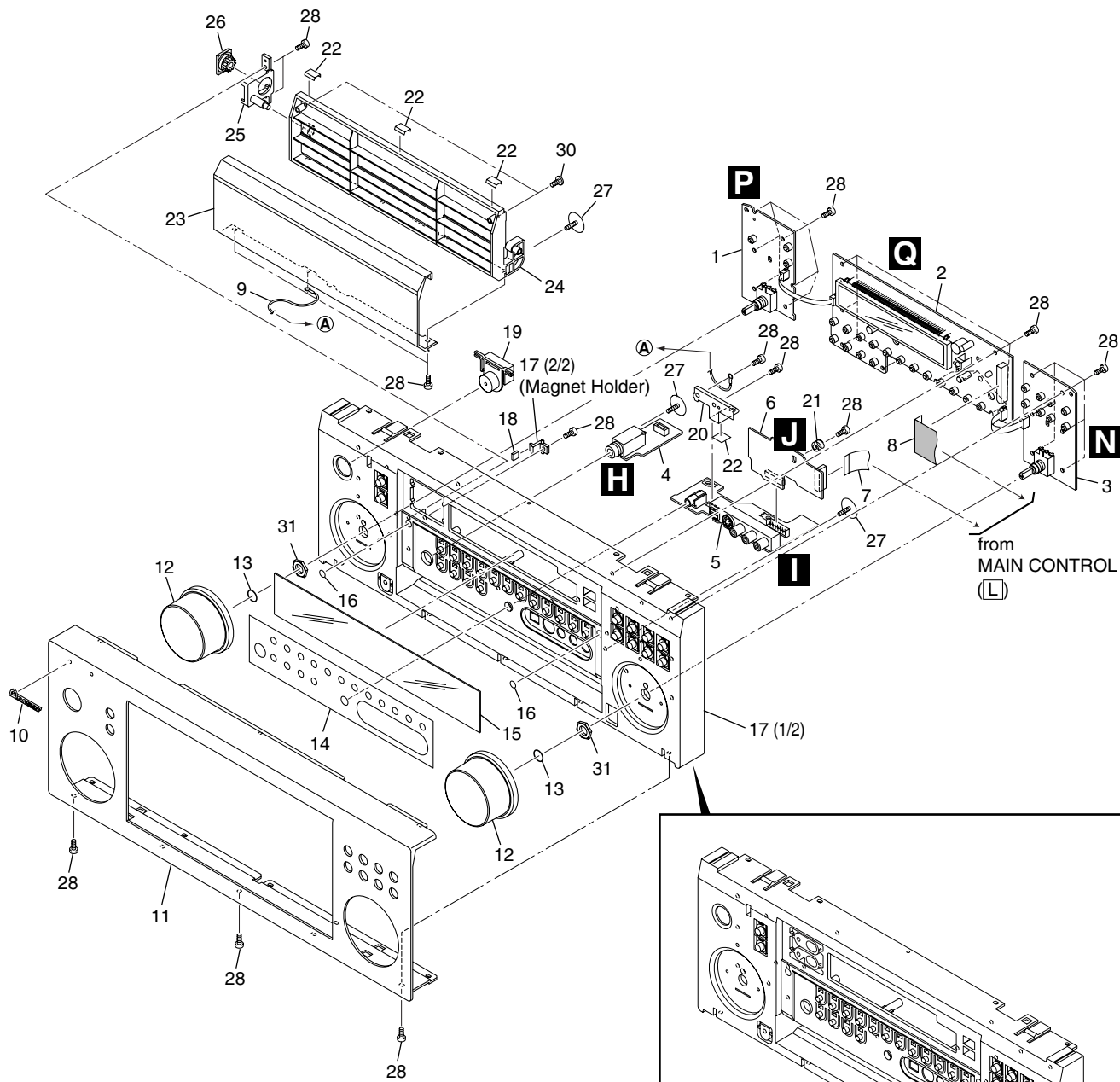
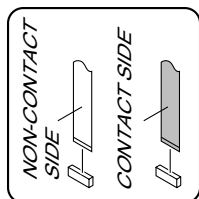
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(1) HEAT SINK SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	POWER AMP-L Assy	AWX8403
2	POWER AMP-R Assy	AWX8404
3	POWER AMP IN Assy	AWX8405
4	POWER PROTECT Assy	AWX8407
NSP 5	POSI 1 L Assy	AWX8536
NSP 6	POSI 1 R Assy	AWX8539
7	Flexible Cable (15P)	ADD7473
8	Flexible Cable (18P)	ADD7479
NSP 9	Heat Sink 45	ANH7152
10	H.S Angle V1	ANG7481
11	PCB Angle 45	ANG7406
12	Mica Sheet 45	AEE7047
NSP 13	Speed Clamp	AEC7445
14	Nyron Rivet	AEC7408
15	Screw	BBZ30P100FCC
16	Screw	ABA7085
 17	DC Fan Motor	AXM7029
18	Screw	BBZ30P300FTC
19	POSI 2 L ASSY	AWX8428

2.6 FRONT PANEL SECTION



(1) FRONT PANEL SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
NSP 1	MULTI JOG Assy	AWX8618	NSP 21	Earth Spring 35	ABH7193
2	DISPLAY Assy	AWX8616	22	Cushion 11 x 11	AED7088
NSP 3	VOLUME Assy	AWX8378	23	Door	See Contrast table (2)
NSP 4	HEADPHONE Assy	AWX8380	24	Door Base	See Contrast table (2)
5	FRONT-IN Assy	AWX8381	25	Door Shaft 35	AMR7295
NSP 6	FRONT-IN CONNECT Assy	AWX8416	26	Damper Assy (240)	AXA7136
7	Flexible Cable (15P)	ADD7473	27	Screw	ABA7110
8	Flexible Cable (26P)	ADD7474	28	Screw	BPZ30P100FTC
NSP 9	Earth Lead Wire	ADH7022	29	•••••	
10	Pioneer Badge	See Contrast table (2)	30	Deco Screw	ABA7060
11	F. Panel 1015KU	See Contrast table (2)	31	Nut	NK90FCC
12	Rotary Knob B	See Contrast table (2)			
13	Ring	ABH7213			
14	D. Sheet	See Contrast table (2)			
15	Window 1015 (PC)	AAK8299			
16	Cushion Circle	See Contrast table (2)			
17	Panel Base	See Contrast table (2)			
18	Magnet 35	AMF7007			
19	Standby Button	See Contrast table (2)			
20	Earth Plate A	ANG7484			

(2) CONTRAST TABLE

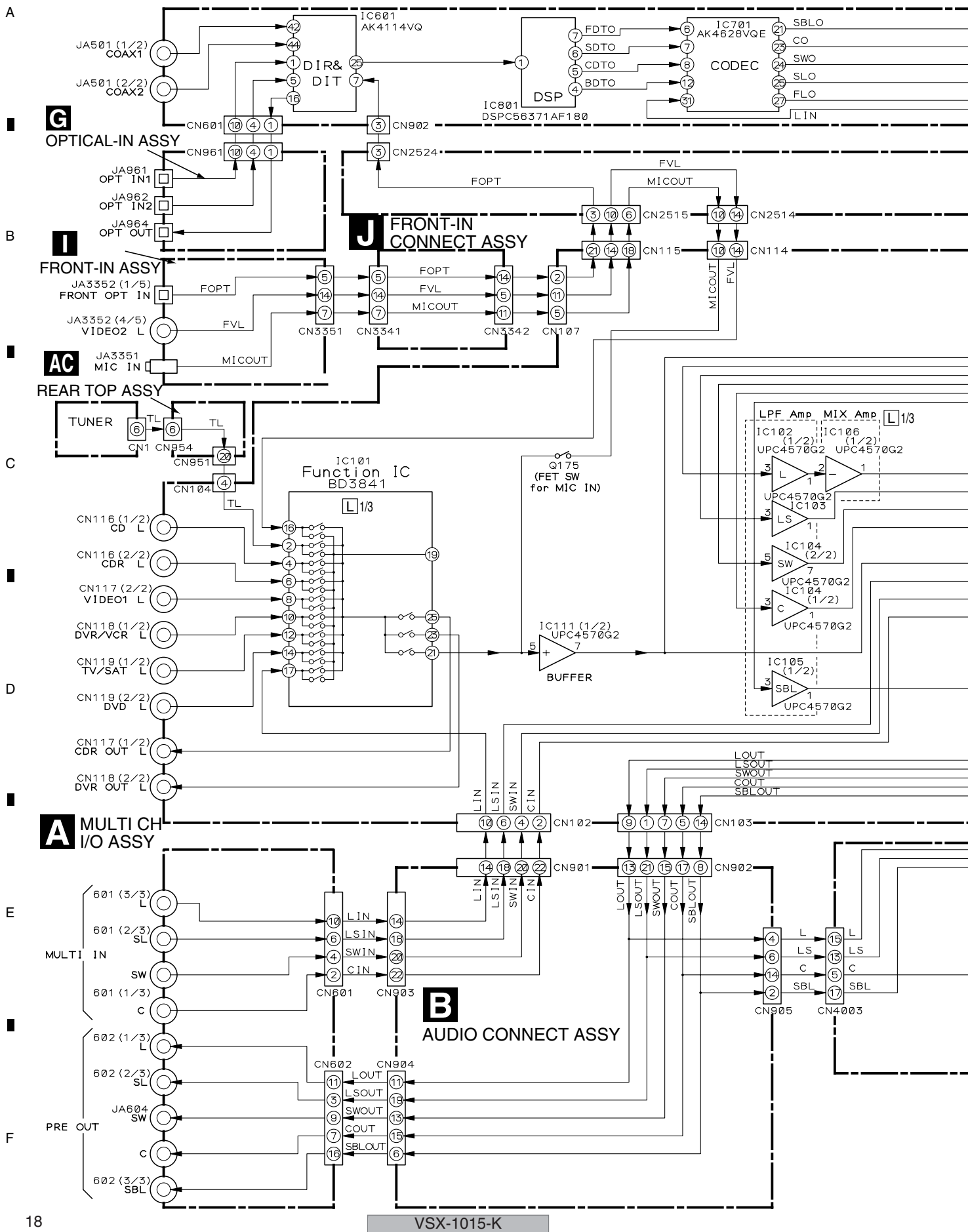
VSX-1015-K/HYXJ and VSX-1015-S/HYXJ are constructed the same except for the following:

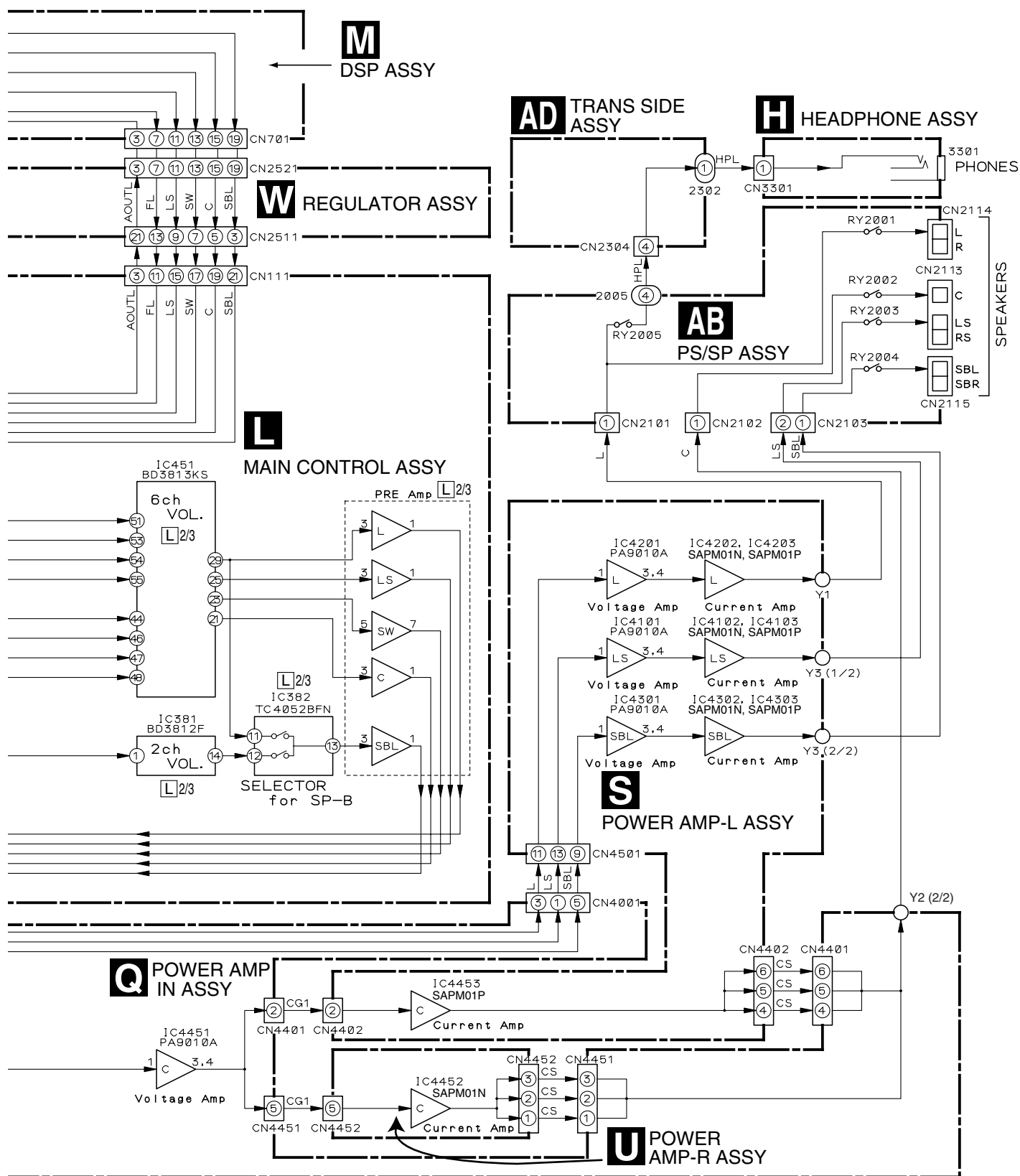
Mark	No.	Symbol and Description	VSX-1015-K /HYXJ	VSX-1015-S /HYXJ
	10	Pioneer Badge	AAN7218	VAM1124
	11	F. Panel 1015BY	ANB7366	Not used
	11	F. Panel 1015SY	Not used	ANB7360
	12	Rotary Knob B	AAA7024	Not used
	12	Rotary Knob S	Not used	AAA7025
	14	D. Sheet 1014BY	AAK8183	Not used
	14	D. Sheet 1014SY	Not used	AAK8182
	16	Cushion Circle 6B	AED7083	Not used
	16	Cushion Circle 6S	Not used	AED7080
	17	Panel Base V1B	AMB7870	Not used
	17	Panel Base V1S	Not used	AMB7871
	19	Standby Button 915K ASSY	XAD3216	Not used
	19	Standby Button 915P ASSY	Not used	XAD3217
	23	Door 1015BY	ANB7363	Not used
	23	Door 1015SY	Not used	ANB7362
	24	Door Base V1B	AMR7477	Not used
	24	Door Base V1S	Not used	AMR7478

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

3.1.1 AUDIO SECTION





3.1.2 VIDEO and DISPLAY SECTIONS

Video Block

A

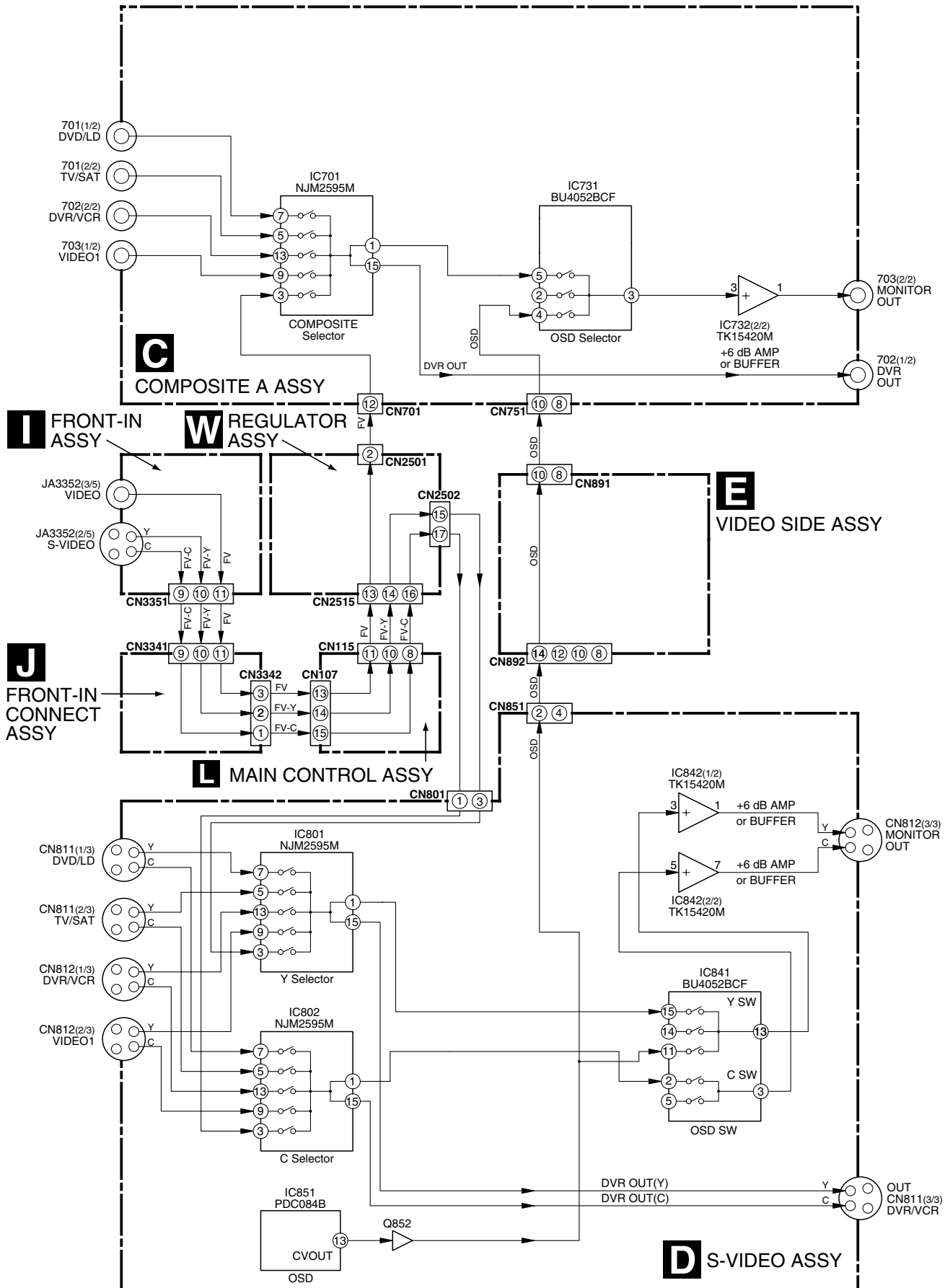
B

C

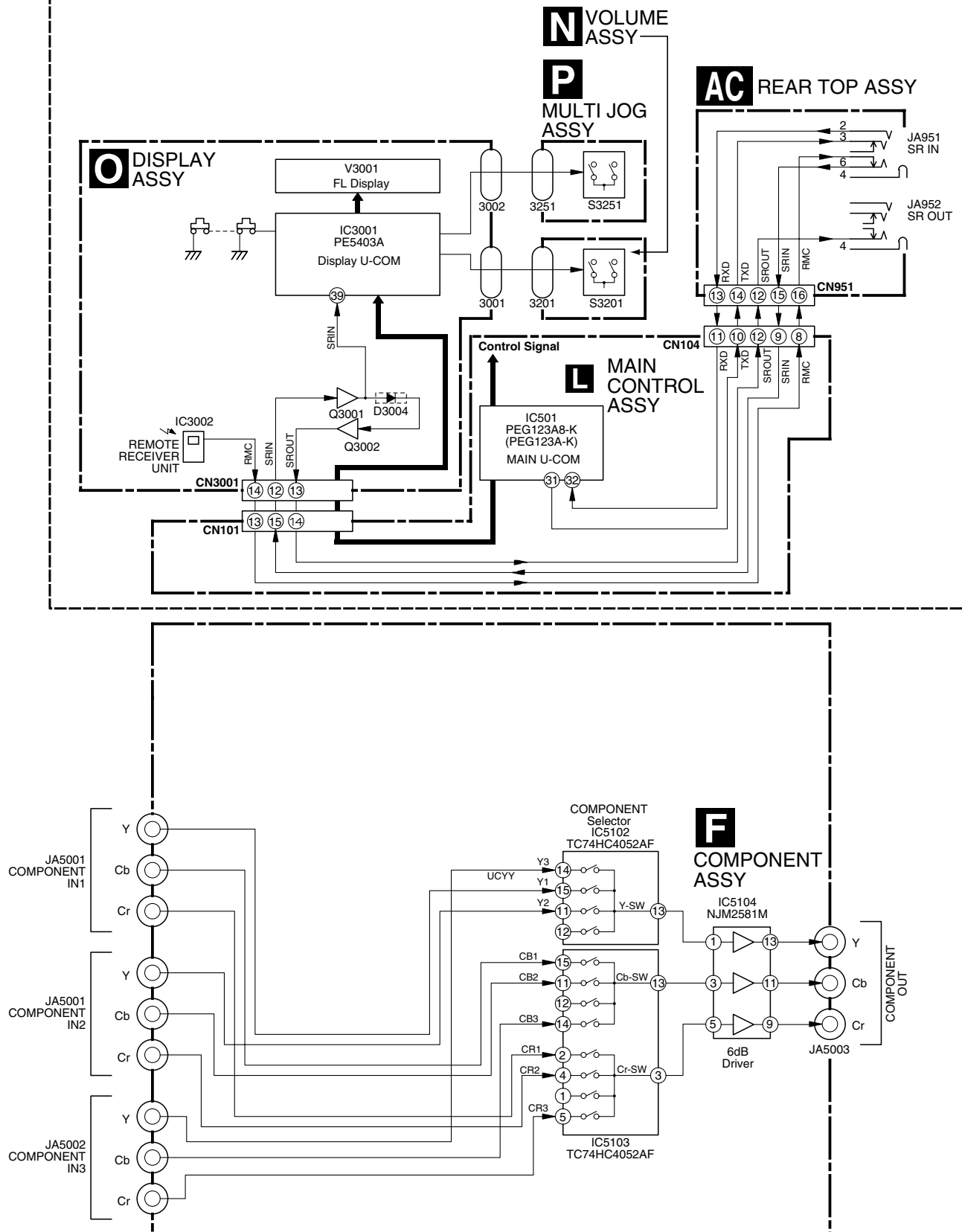
D

E

F



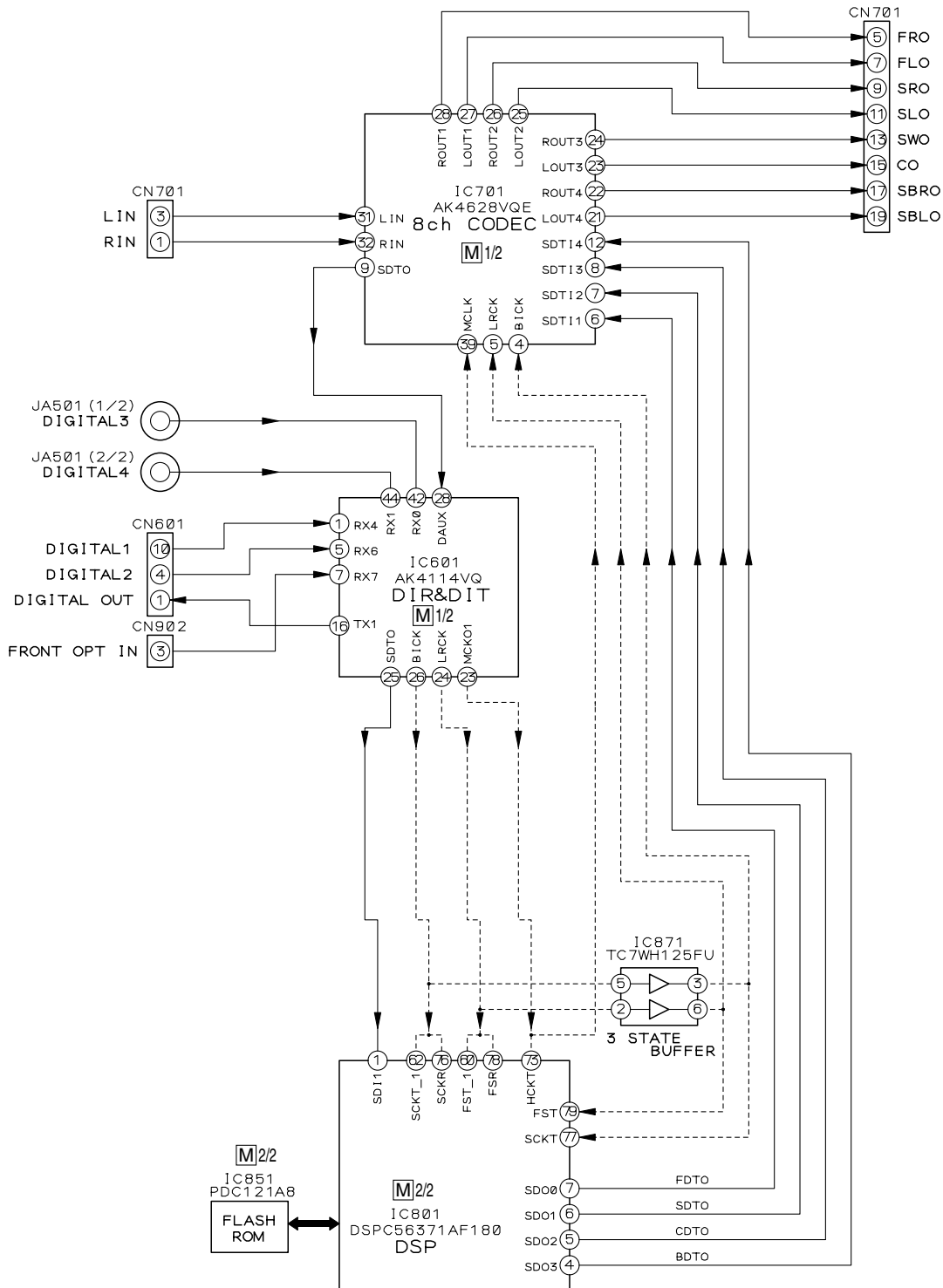
Display/SR Block



3.1.3 DSP SECTION

DSP Block

M DSP ASSY



■

5

■

6

■

7

■

8

■

A

■

B

■

C

■

D

■

E

■

F

VSX-1015-K

■

5

■

6

■

7

■

8

■

3.1.4 POWER SUPPLY SECTION

Power Supply Block

A

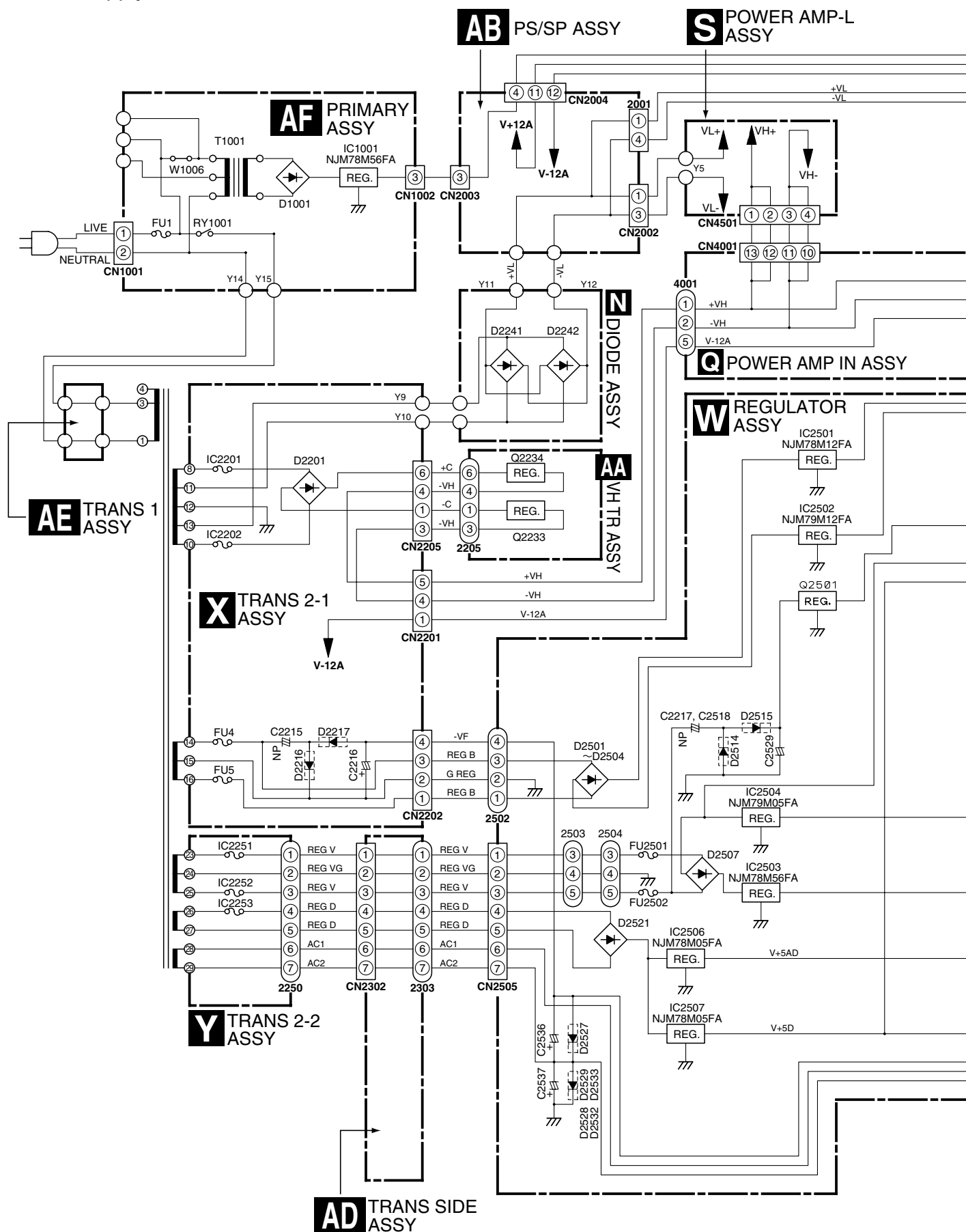
B

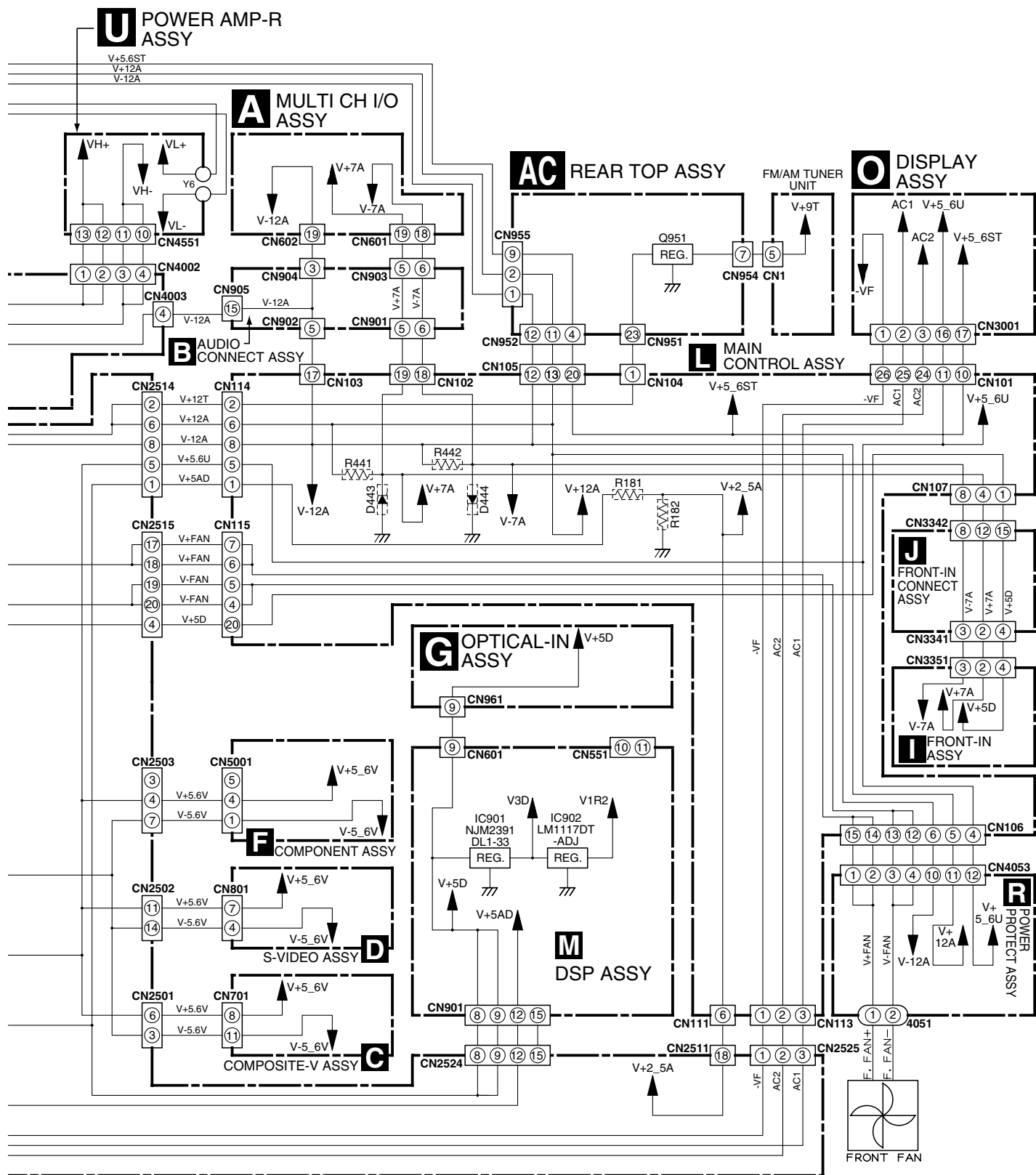
C

D

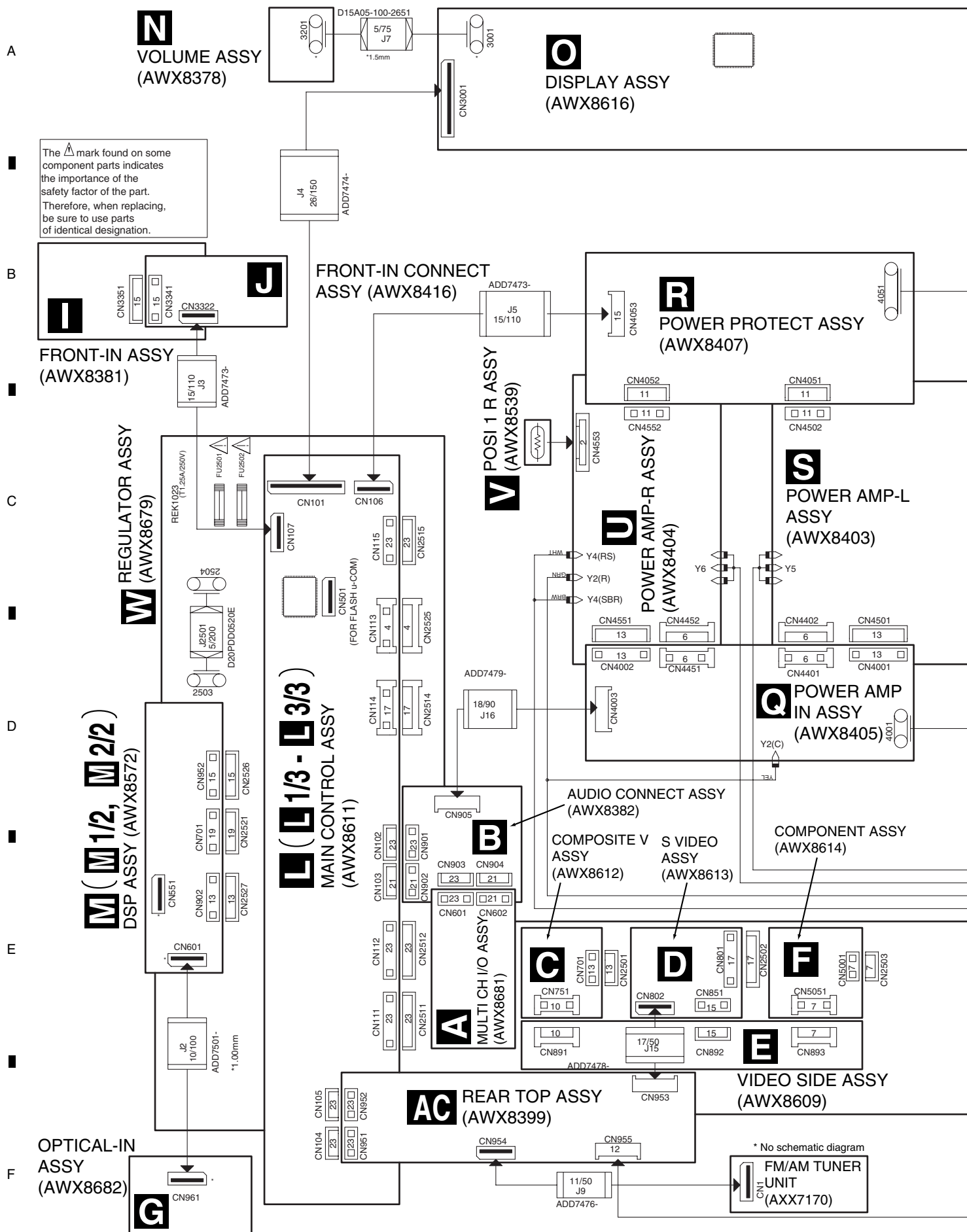
E

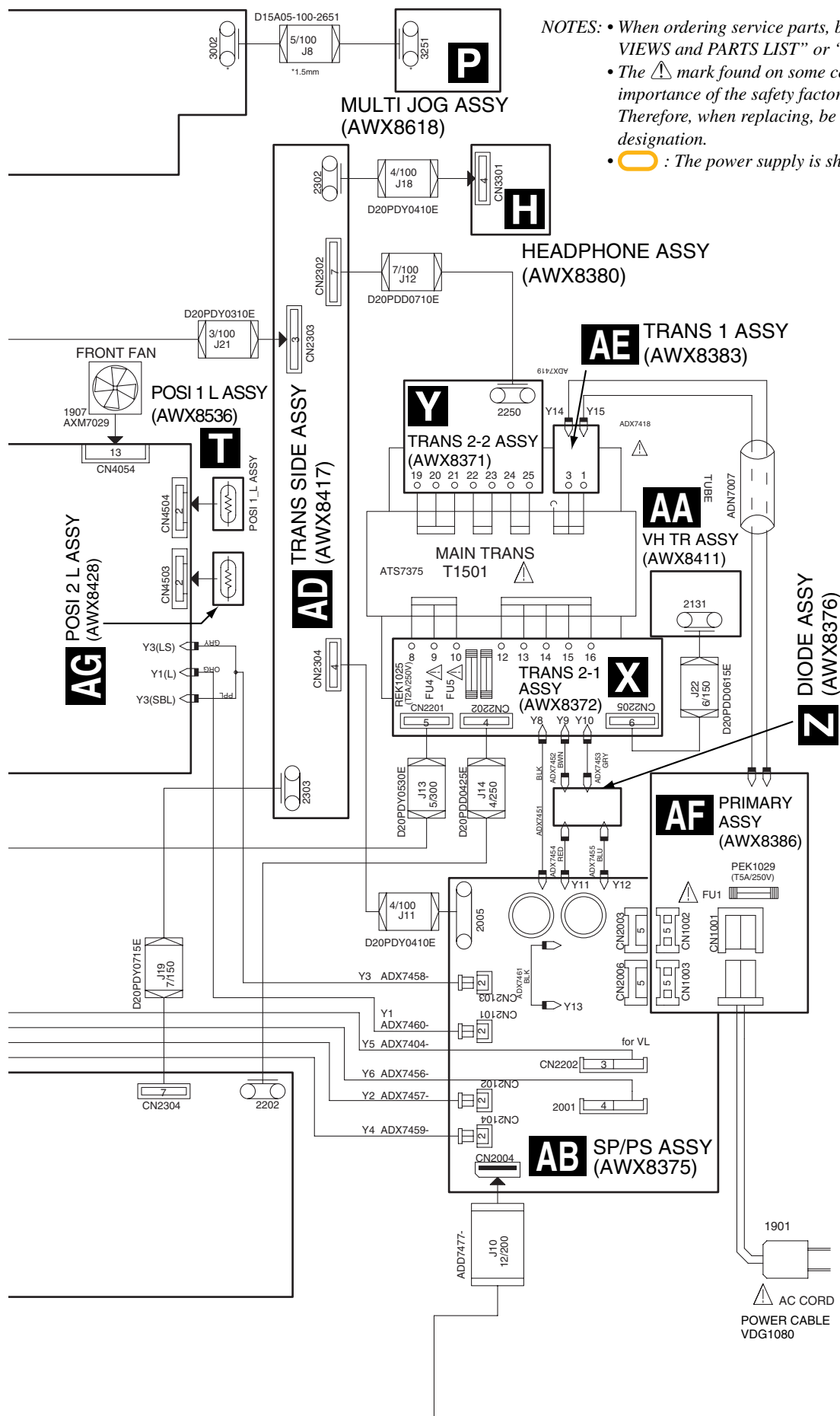
F





3.2 OVERALL WIRING DIAGRAM



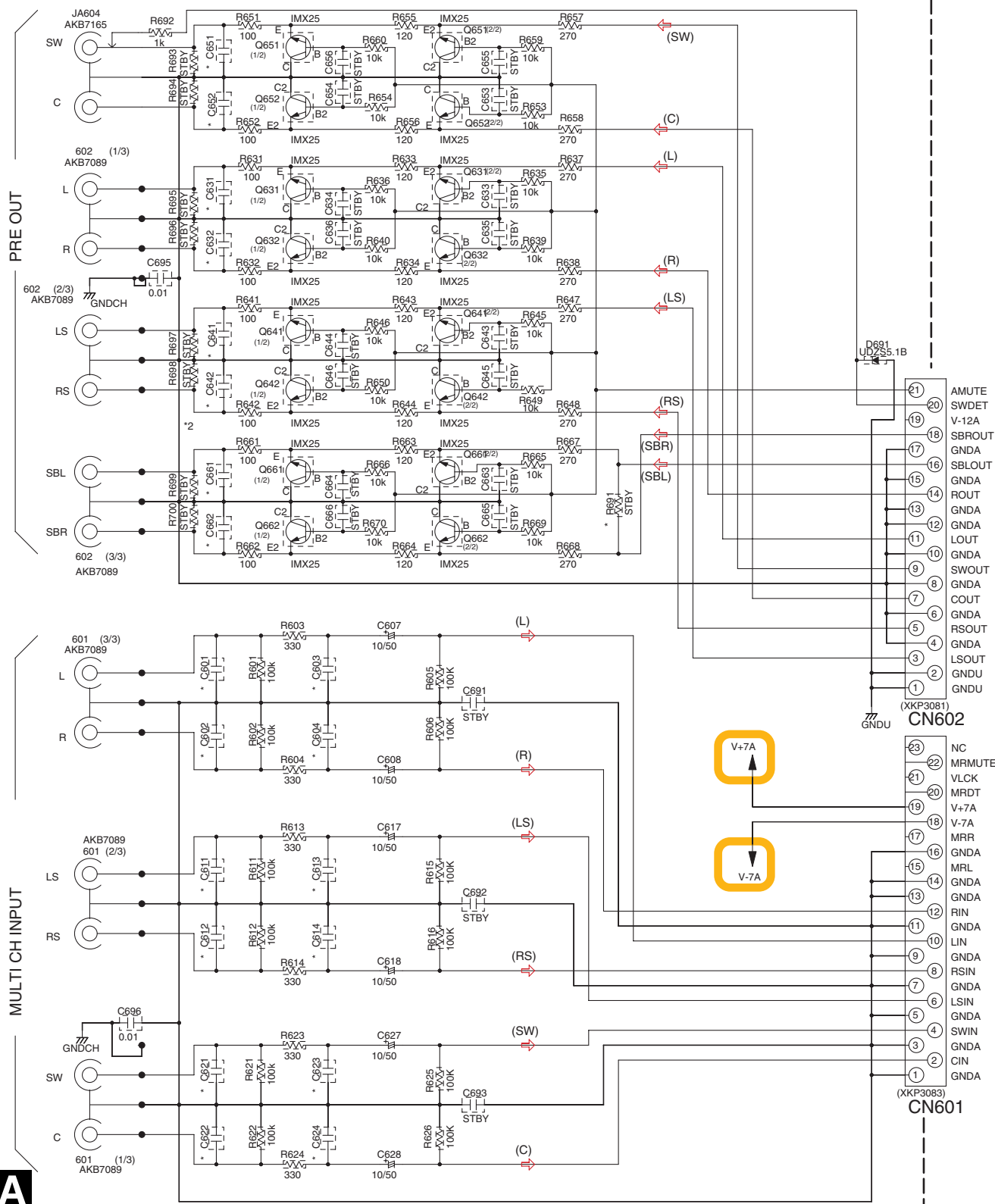


- NOTES:**
- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
 - The  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
 -  : The power supply is shown with the marked box.

	B'B-PH-K-S PH CONNECTOR
	1.25mm FFC
	(*)1.00mm FFC
	2.0mm FLAT CABLE
	(*)1.5mm FLAT CABLE
	BOARD IN
	1.25mm FFC CONNECTOR(L)
	1.25mm FFC CONNECTOR(I)
	(*)1.00mm FFC CONNECTOR
	2.0mm CABLE HOLDER
	(*)1.5mm CABLE HOLDER
	2.0mm WIRE TRAP
	XKP%-A 1.25mm BOARD to BOARD
	XKP%-A 1.25mm BOARD to BOARD
	KP250NA 2.5mm BOARD to BOARD
	2.5mm BOARD to BOARD
	ANOTHER TYPE CODE SOCKET
	ANOTHER TYPE CODE CONNECTOR

3.3 MULTI CH I/O and AUDIO CONNECT ASSYS

A MULTI CH
I/O ASSY
(AWX8681)



VSX-1015-K

AWX8681	VSX-1015	/HY	C631,C632,C641,C642, C651,C652,C661,C662	C601-C604, C611-C614, C621-C624
			330p,CH	100p,CH

NOTE

1.RESISTORS

Unit: k- Ω , M-M Ω or Ω unless otherwise noted.
 Rated power: 1/16W unless otherwise noted.
 Tolerance: (J) $\pm 5\%$ unless otherwise noted.

2.CAPACITORS

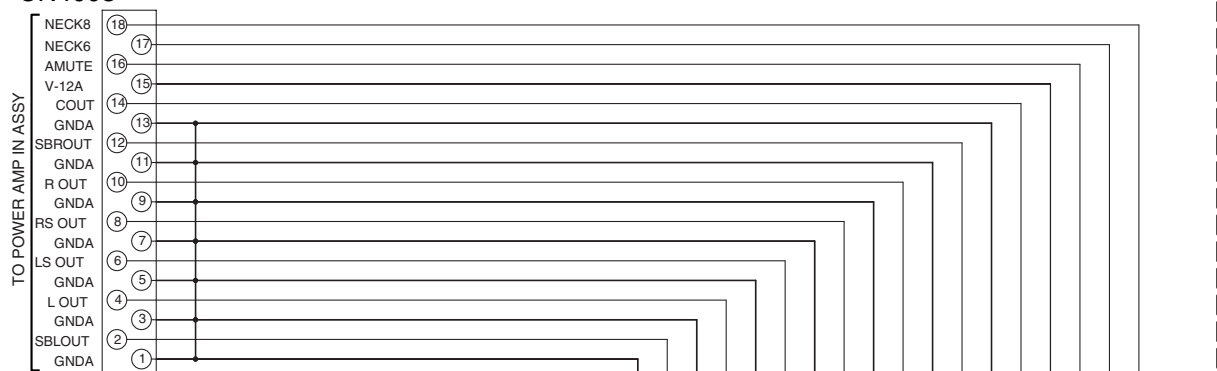
Unit: p-pF or μ F unless otherwise noted.
 Ratings: Capacity(μ F)/Voltage(V) unless otherwise noted.
 Rated Voltage: 50V expect for electrolytic capacitors.

⇒ : AUDIO SIGNAL FLOW

B AUDIO CONNECT ASSY (AWX8382)

Q

CN4003



CN905 52044-1845

CN904

(XKP3070)

AMUTE
SWDET
V-12A
SBROUT
GNDA
SBLOUT
GNDA
ROUT
GNDA
GNDA
LOUT
GNDA
SWOUT
GNDA
COUT
GNDA
RSOUT
GNDA
LSOUT
GNDU
GNDU

(SBR)

(SBL)

(R)

(L)

(SW)

(C)

(RS)

(LS)

CN902

(XKP3081)

NECK8
NECK6
AMUTE
SWDET
V-12A
SBROUT
GNDA
SBLOUT
GNDA
ROUT
GNDA
GNDA
LOUT
GNDA
SWOUT
GNDA
COUT
GNDA
RSOUT
GNDA
LSOUT

TO MAIN ASSY (2/3)

CN903

(XKP3071)

NC
MRMUTE
VLCK
MRDT
V+7A
V-7A
MRR
GNDA
MRL
GNDA
GNDA
RIN
GNDA
LIN
GNDA
RSIN
GNDA
LSIN
GNDA
SWIN
GNDA
CIN
GNDA

(R) ⇒

(L) ⇒

(RS) ⇒

(LS) ⇒

(SW) ⇒

(C) ⇒

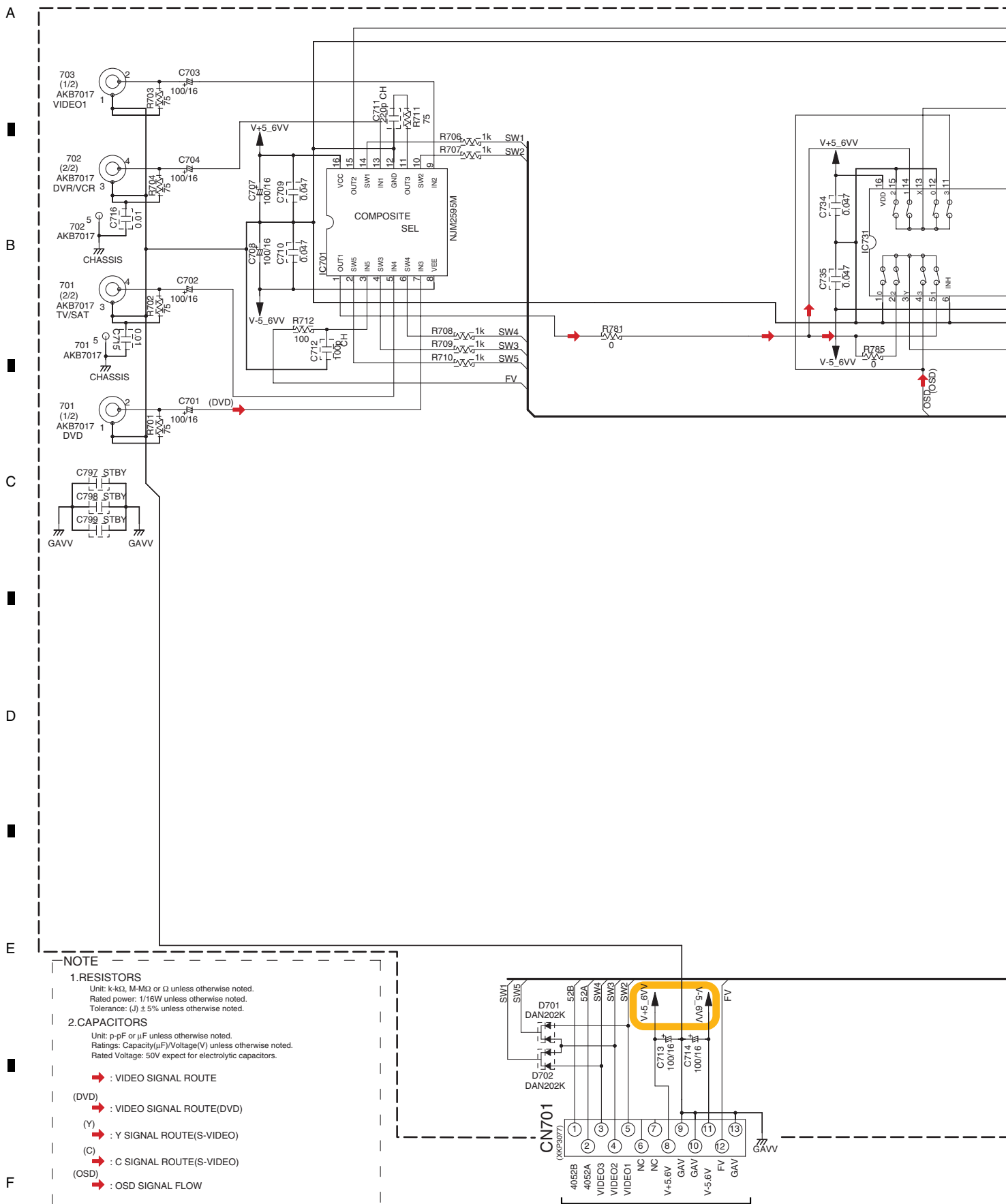
CN901

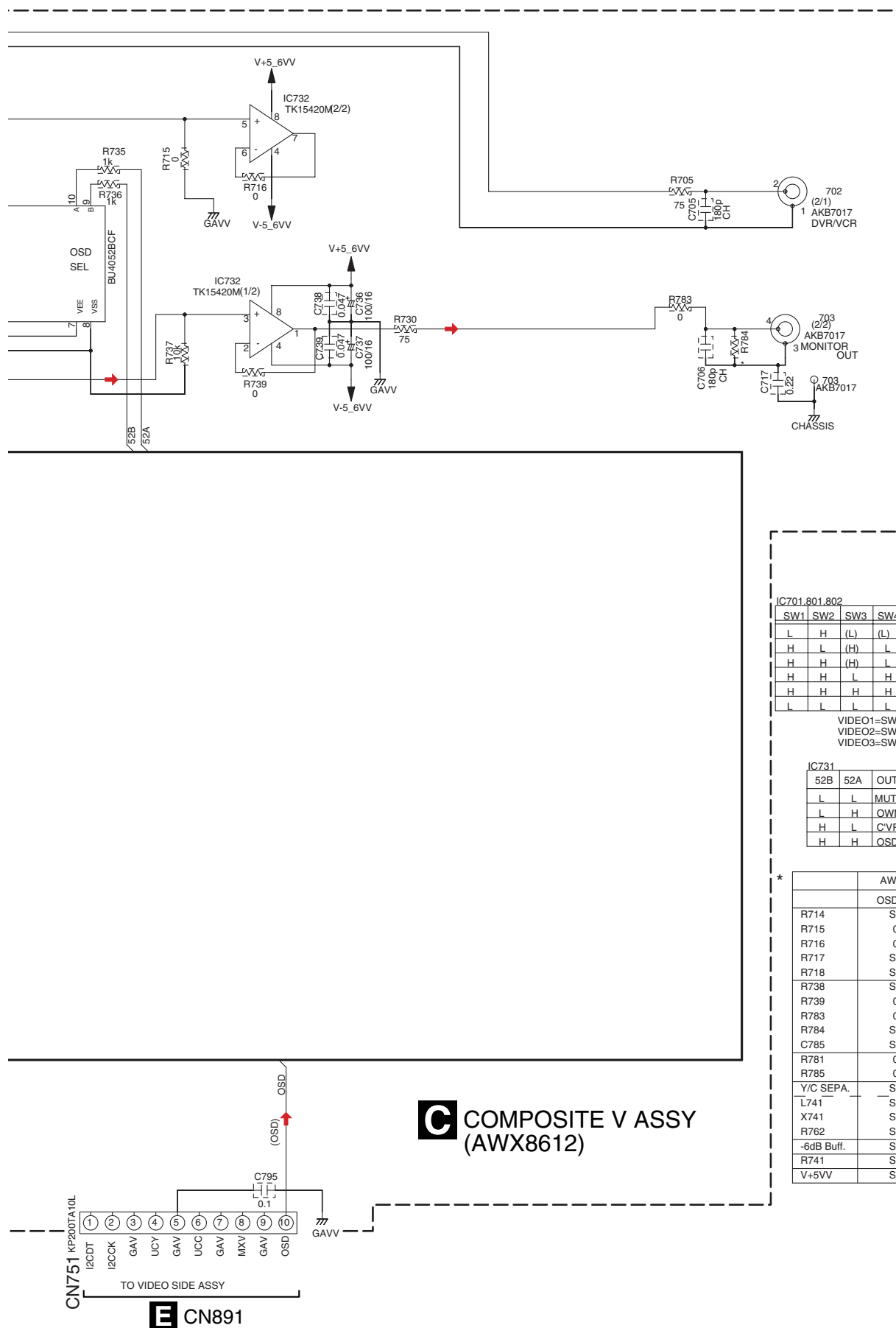
(XKP3083)

GNDU
MRMUTE
VLCK
MRDT
V+7A
V-7A
MRR
GNDA
MRL
GNDA
GNDA
RIN
GNDA
LIN
GNDA
RSIN
GNDA
LSIN
GNDA
SWIN
GNDA
CIN
GNDA

TO MAIN ASSY (2/3)

3.4 COMPOSITE V ASSY





A

B

C

D

E

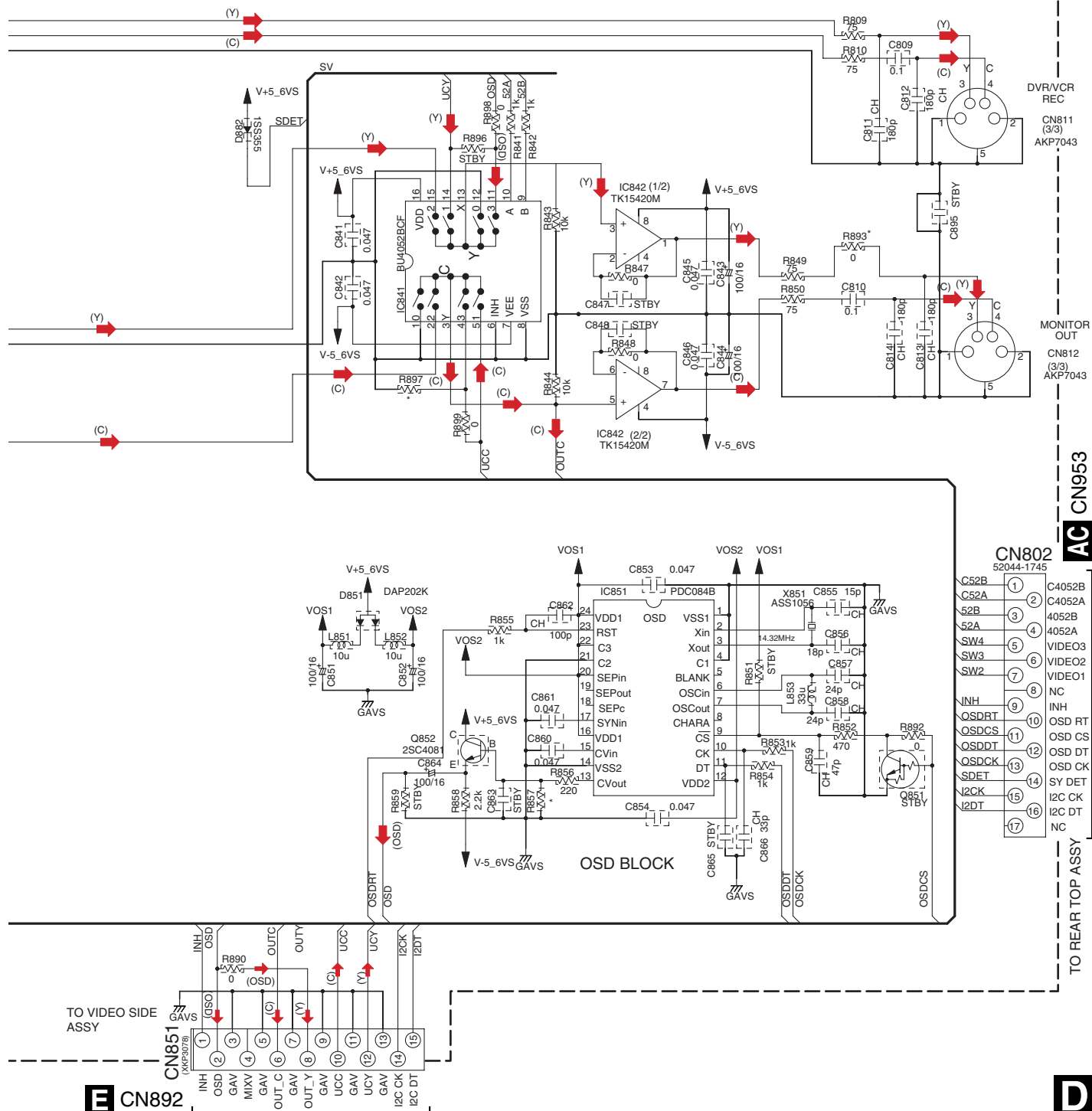
F

C

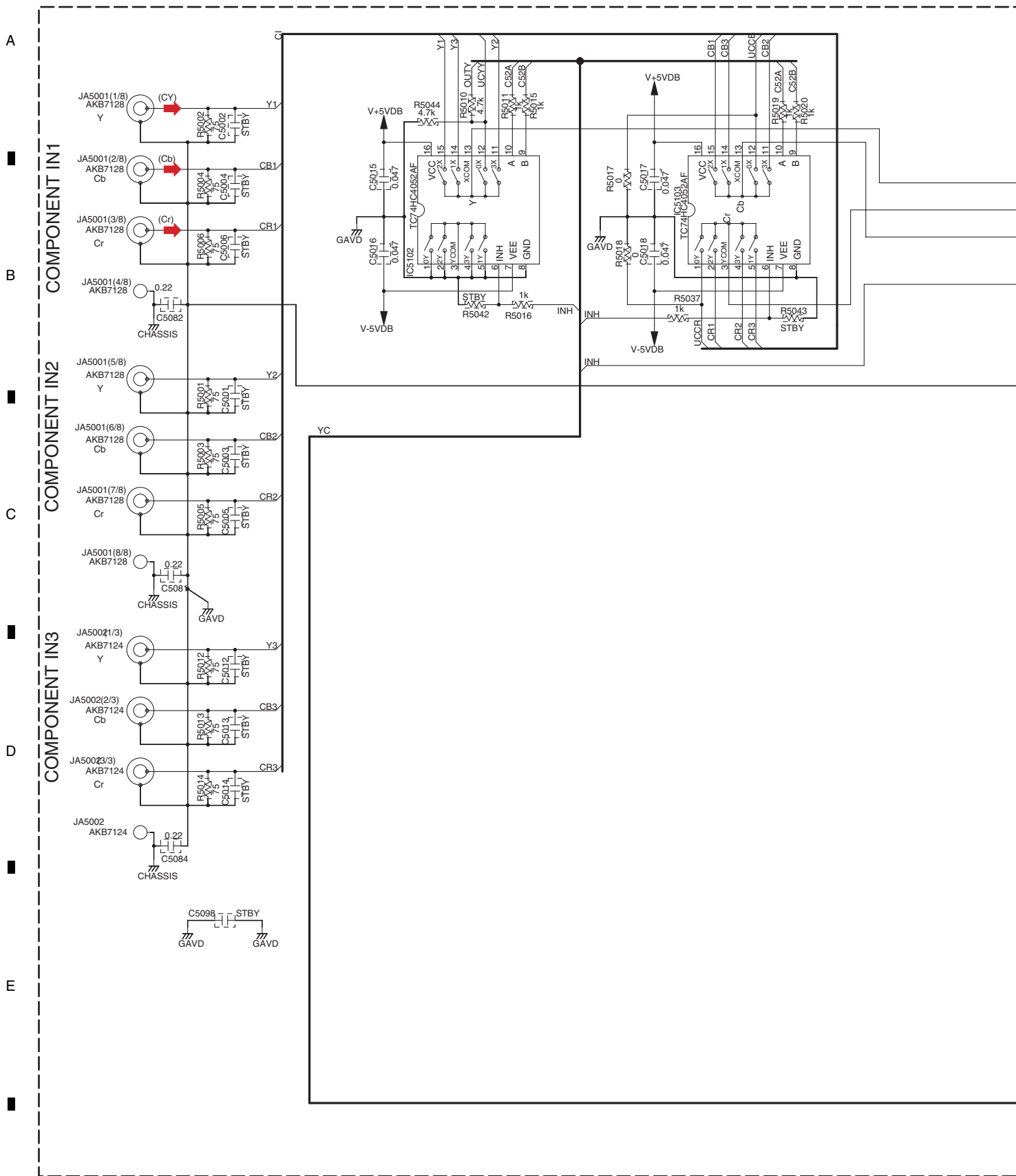
4



★		AWX8613
		OSD ONLY
	R845	STBY
	R846	STBY
	R847,R848	0Ω
	C884	STBY
	R893	0Ω
	R885,R886	STBY
	R894,R895	0Ω
	R899	0Ω
	R897	0Ω
	R890	0Ω
	R891	STBY
	R856	220
	R857	10k
	Y/C MIX	STBY
	-6dB Buff.	STBY
S_SYNC DET	STBY	



3.6 COMPONENT ASSY

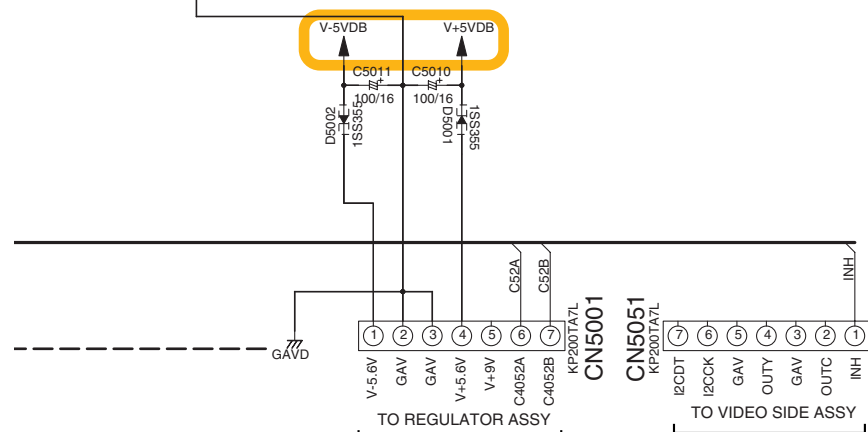


INH	C52B	C52A	OUT
L	L	L	0X.0Y (COMVERT or OSD)
L	L	H	1X.1Y (IN3)
L	H	L	2X.2Y (IN1)
L	H	H	3X.3Y (IN2)
H	*	*	NONE (MUTE)

L	H	H	3X.3Y	(IN2)
H	*	*	NONE	(MUTE)

Schematic diagram of the video output stage of the JVC HA-SX3000. The circuit features an IC5104 NJM2581M video driver with three channels (Vee1, Vee2, Vee3) and a REF pin. The input signals are STBY, STBY, and STBY, which are also connected to the driver's Vee pins. The driver's output pins (14, 13, 12, 11, 10, 9, 8) are connected to the video output lines (Y, Cb, Cr) through resistors R5075, R5007, R5008, and R5009. The output lines are connected to the video output jacks (JA5003 AKB7124) through capacitors C5069, C5070, C5072, and C5083. The circuit is powered by V-5VDB and V+5VDB. A table at the top left shows the pin connections for the video output stage.

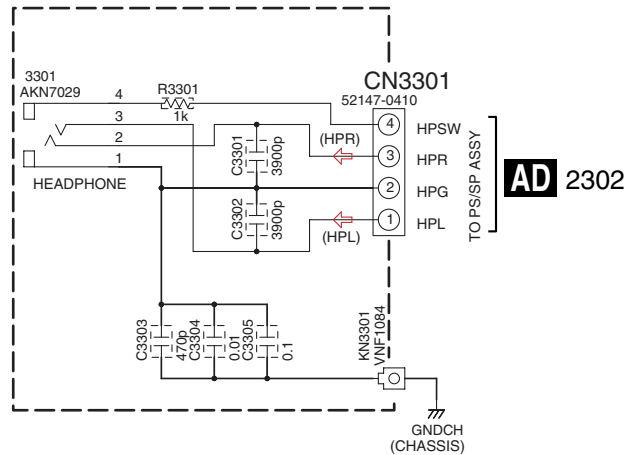
- (CY) → Y SIGNAL ROUTE (COMPONENT)
- (Cb) → Cb SIGNAL ROUTE (COMPONENT)
- (Cr) → Cr SIGNAL ROUTE (COMPONENT)
- (Y) → Y SIGNAL ROUTE (S-VIDEO)
- (C) → C SIGNAL ROUTE (S-VIDEO)
- (OSD) → OSD SIGNAL ROUTE



5001
VEF1040-A
PCB BINDER

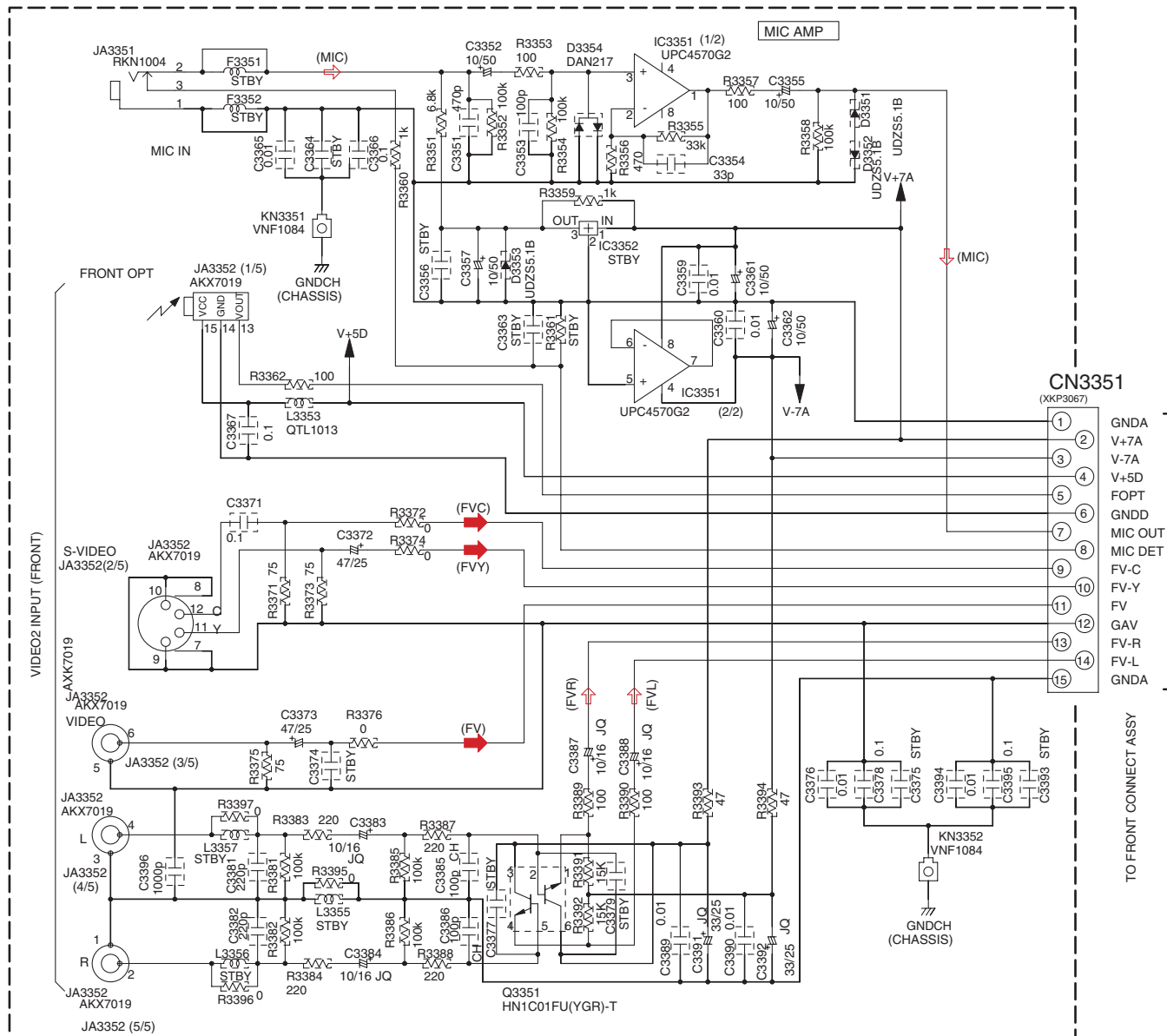
3.7 OPTICAL-IN,H.P,FRONT-IN,FRONT-IN CONNECT ASSYS

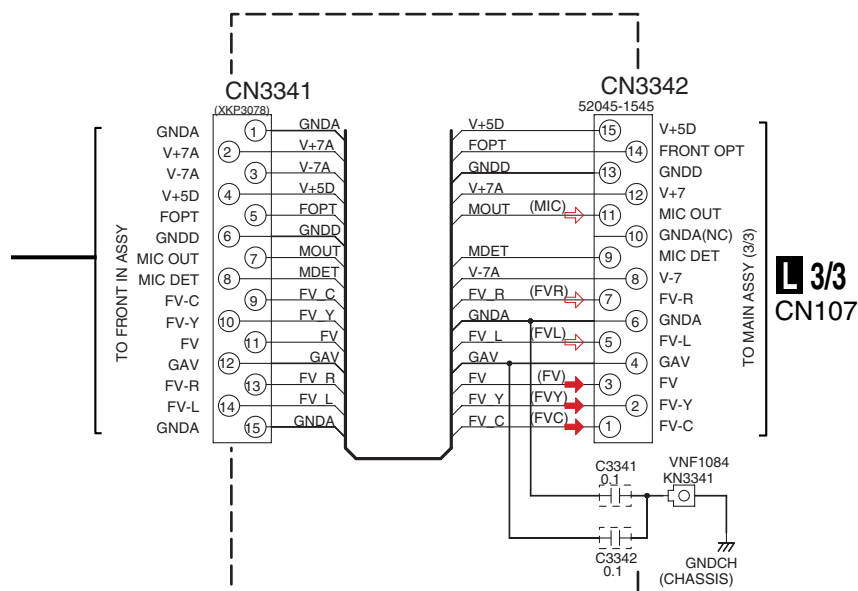
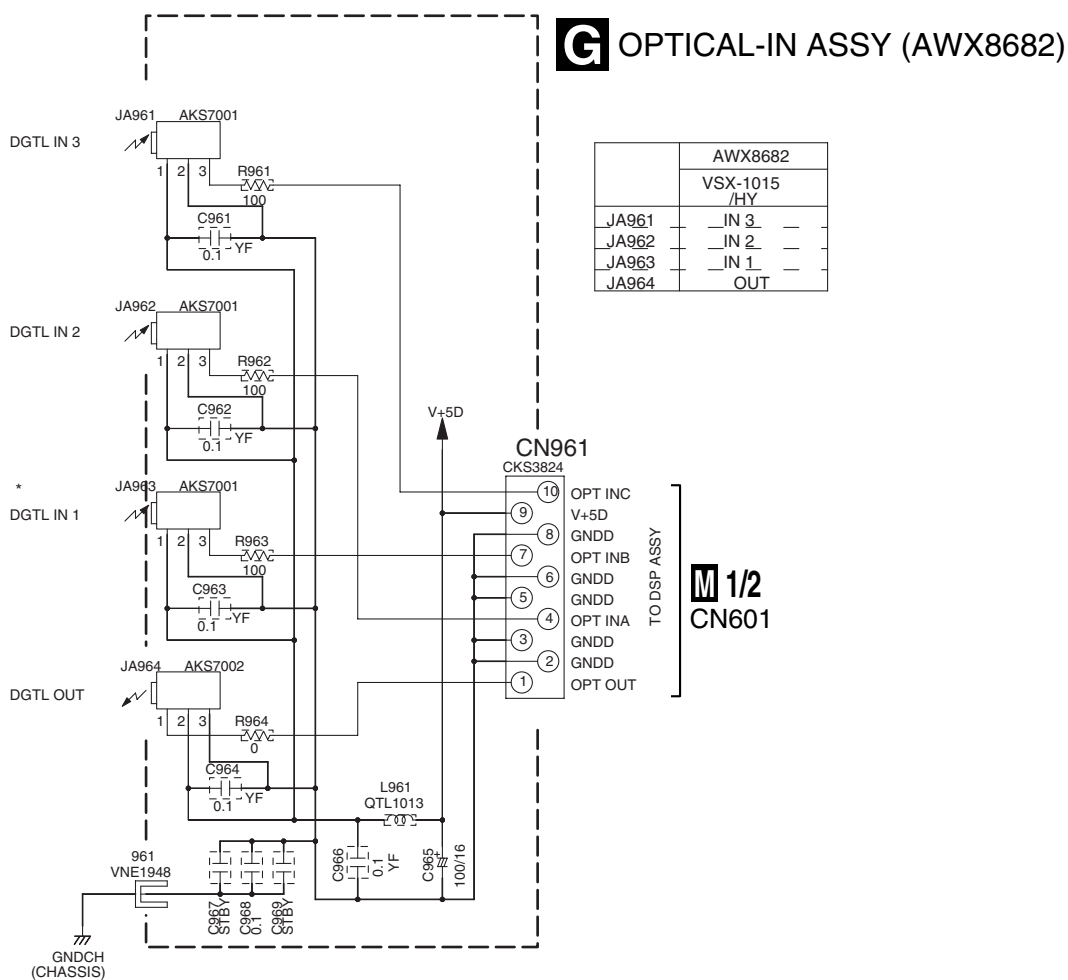
H HEADPHONE ASSY (AWX8380)



AD 2302

I FRONT-IN ASSY (AWX8381)





The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

NOTE

1. RESISTORS

Unit: k-k Ω , M-M Ω or Ω unless otherwise noted.
Rated power: 1/16W unless otherwise noted.
Tolerance: (J) $\pm 5\%$ unless otherwise noted.

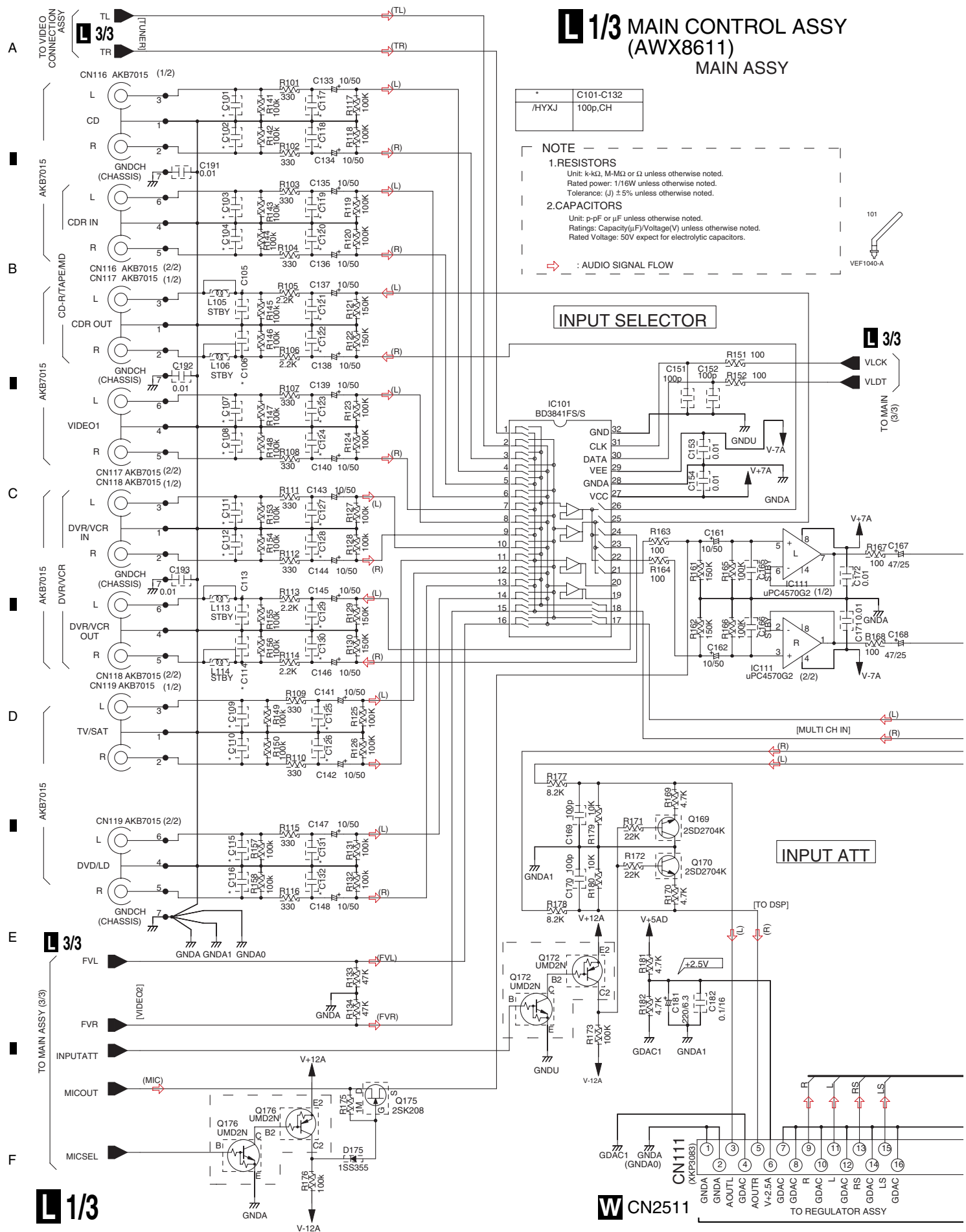
2. CAPACITORS

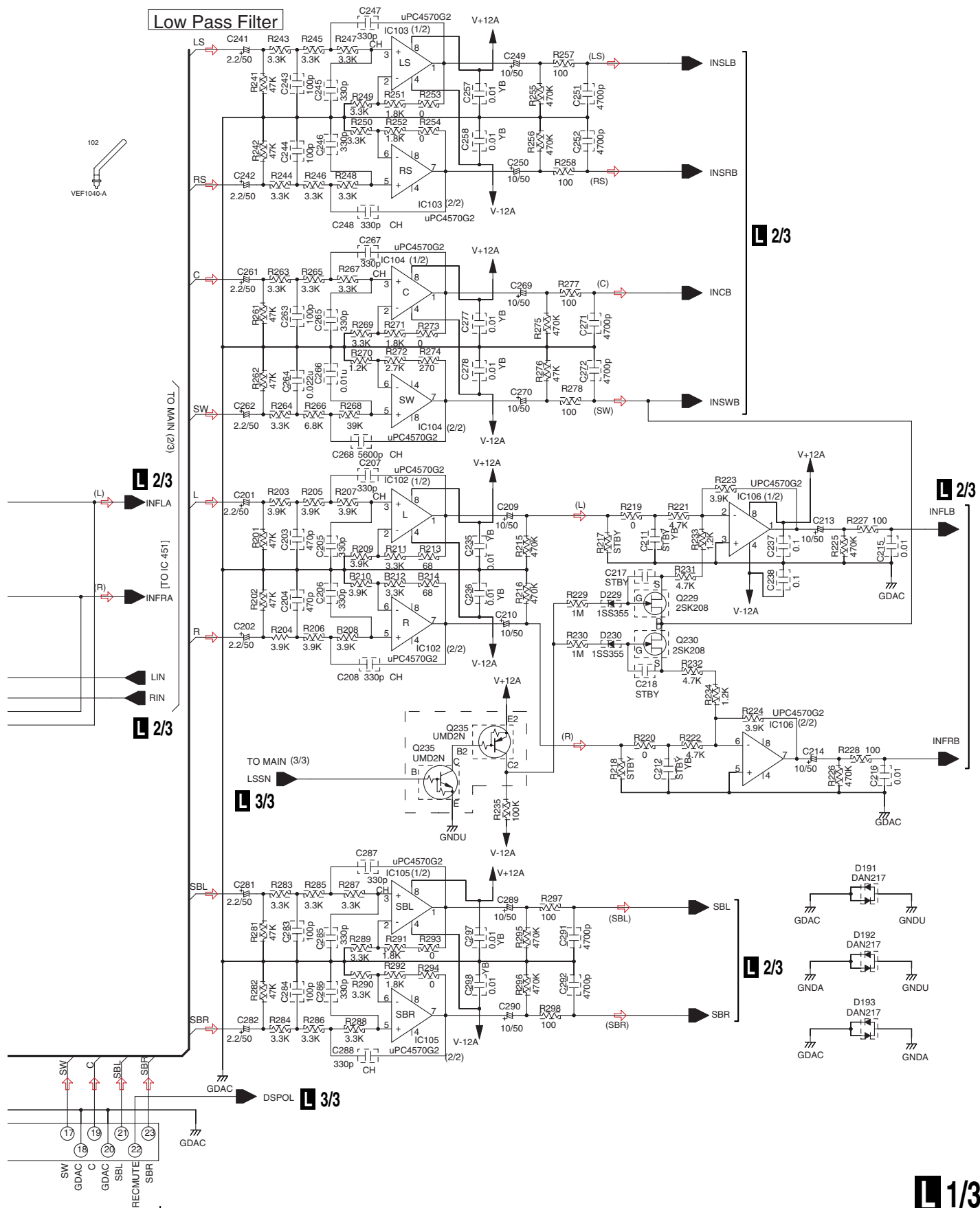
Unit: p-pF or μ F unless otherwise noted.
Ratings: Capacity(μ F)/Voltage(V) unless otherwise noted.
Rated Voltage: 50V expect for electrolytic capacitors.
JQ:CEJQ

$\Rightarrow$: AUDIO SIGNAL FLOW
 $\Rightarrow$: VIDEO SIGNAL FLOW

J FRONT-IN CONNECT ASSY (AWX8416)

3.8 MAIN CONTROL ASSY (1/3)



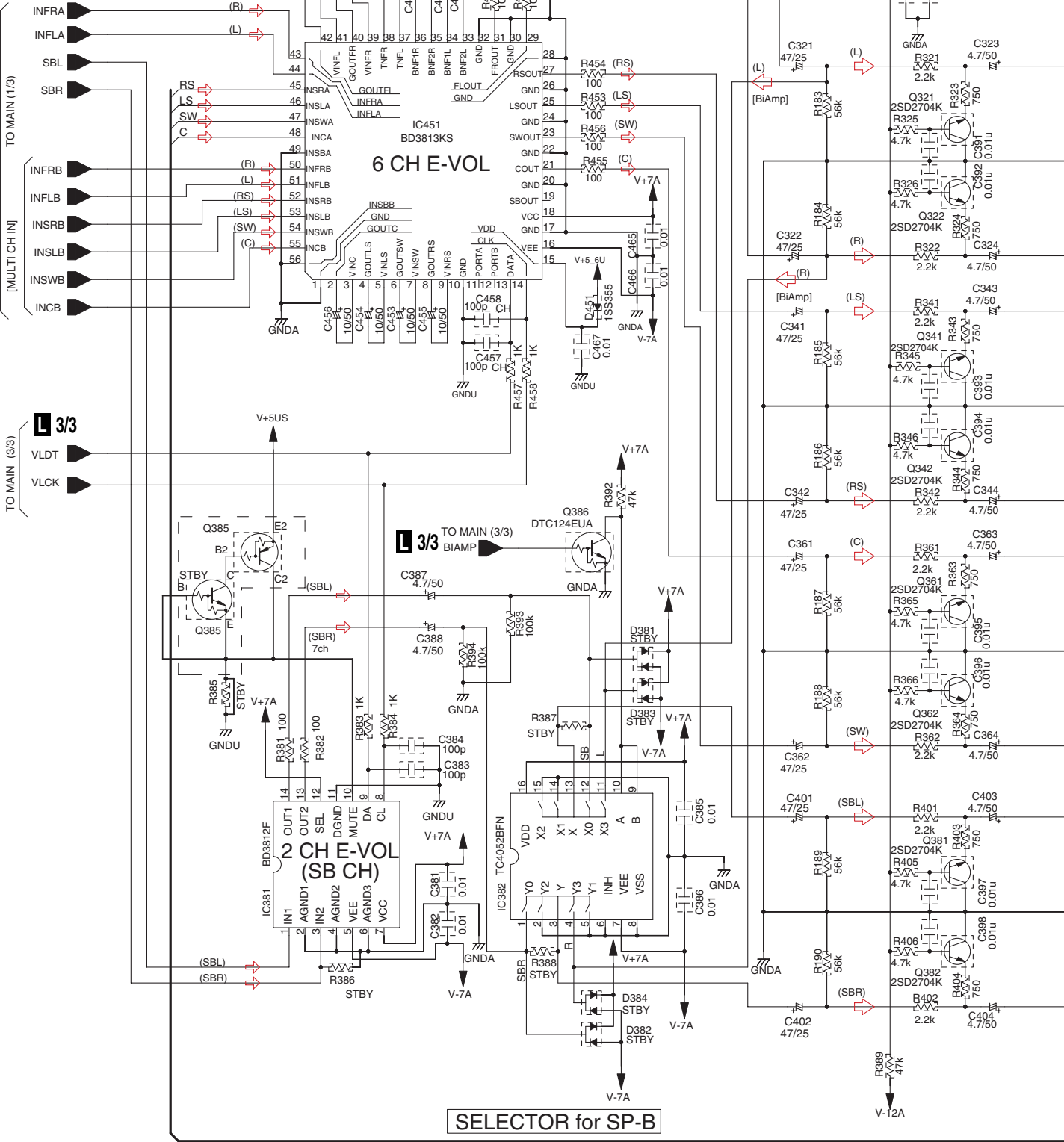


3.9 MAIN CONTROL ASSY (2/3)

2/3

MAIN CONTROL ASSY
(AWX8611)

1/3



2/3



 : AUDIO SIGNAL FLOW

B
CN901

L 2/3

L 3/3 MAIN CONTROL ASSY
(AWX8611)





3.11 DSP ASSY (1/2)

A

B

C

D

E

F

M 1/2

44

VSX-1015-K

NOTES:

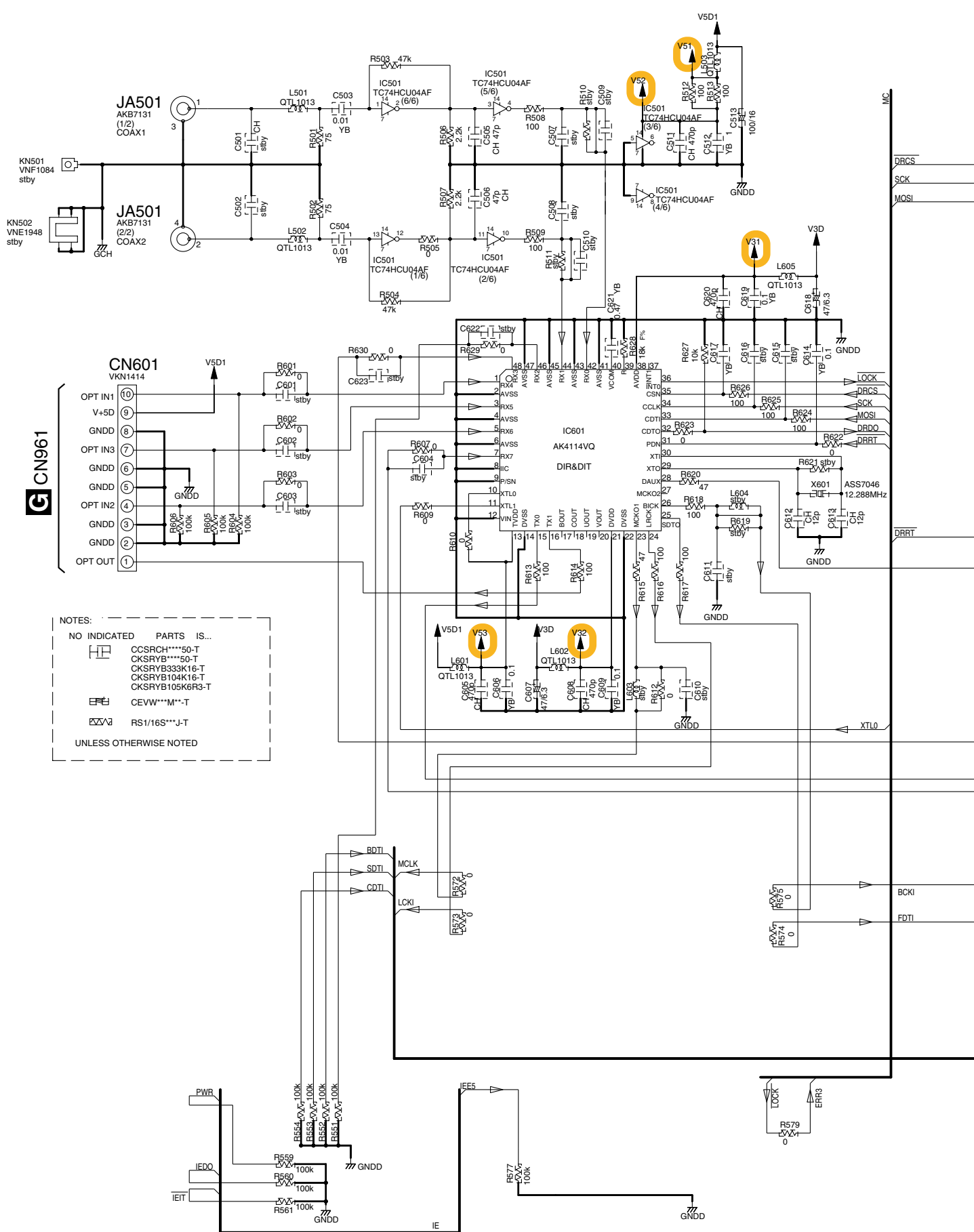
NO INDICATED PARTS IS...

CCSRCH***50-T
CKSRVB***50-T
CKSRVB333K16-T
CKSRVB104K16-T
CKSRVB105K6R3-T

CEVW***M**-T

RS1/16S***J-T

UNLESS OTHERWISE NOTED



44

VSX-1015-K

1

2

3

4

1 2 3 4

3.12 DSP ASSY (1/2)

A

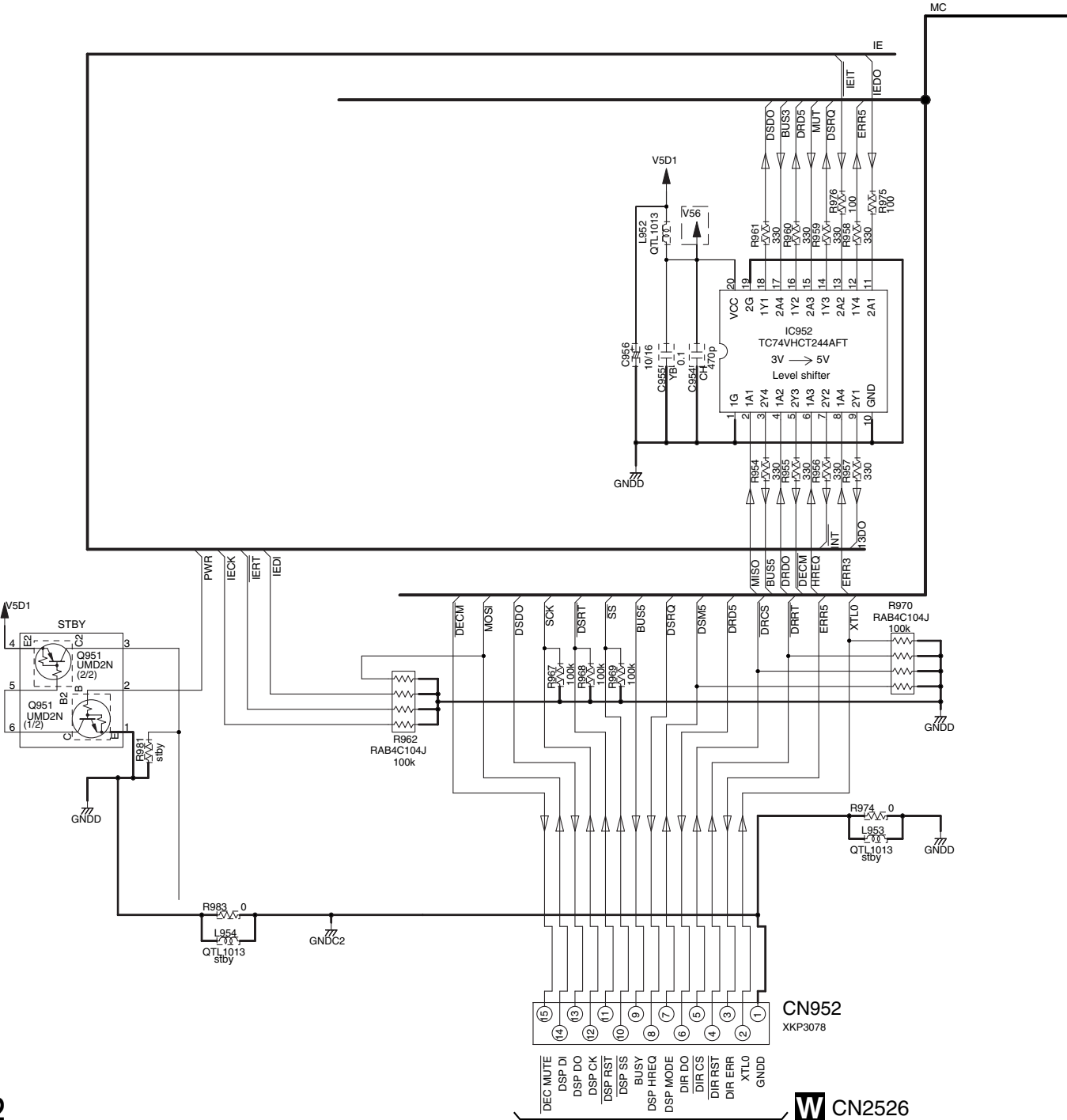
B

C

D

E

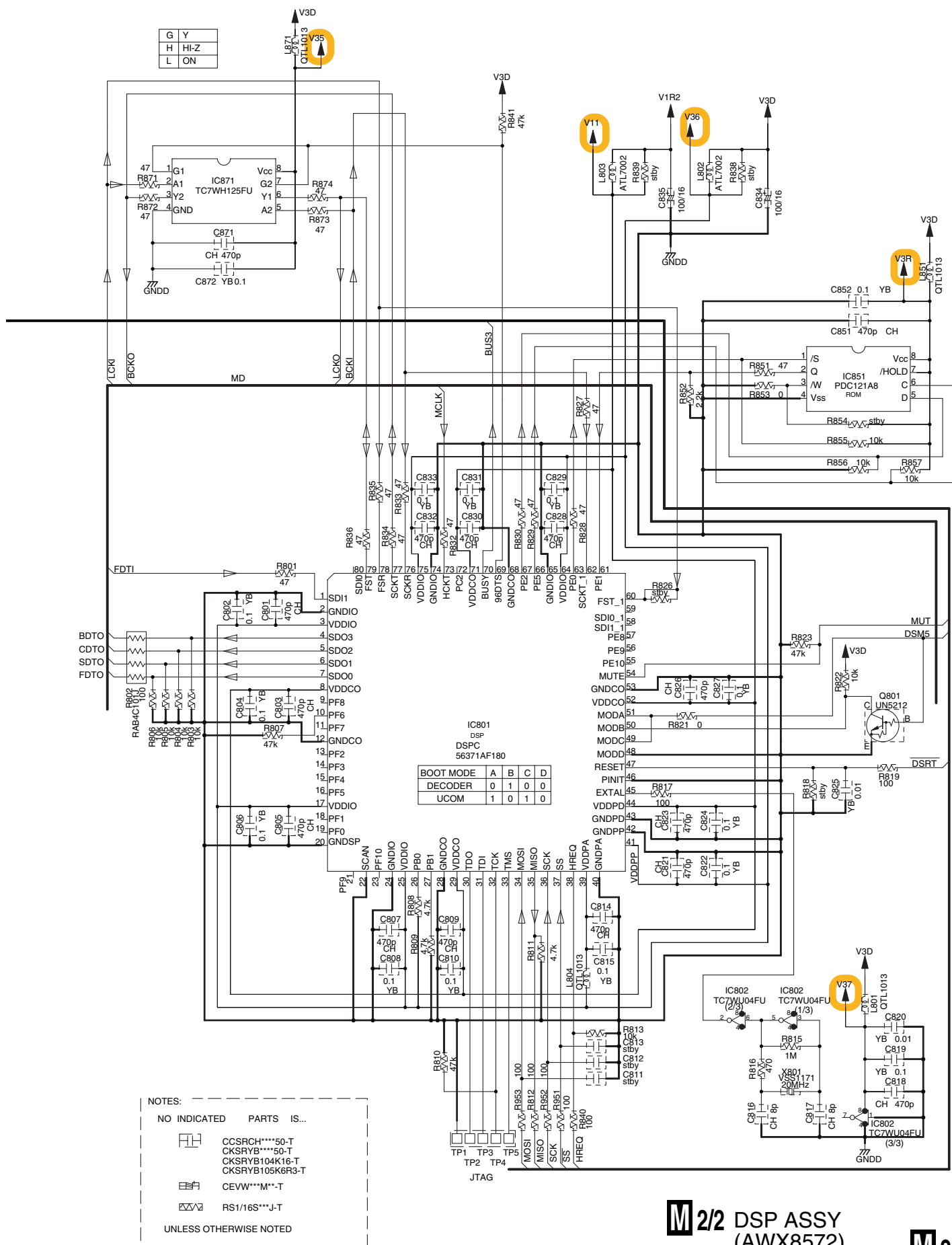
F



M 2/2

W CN2526

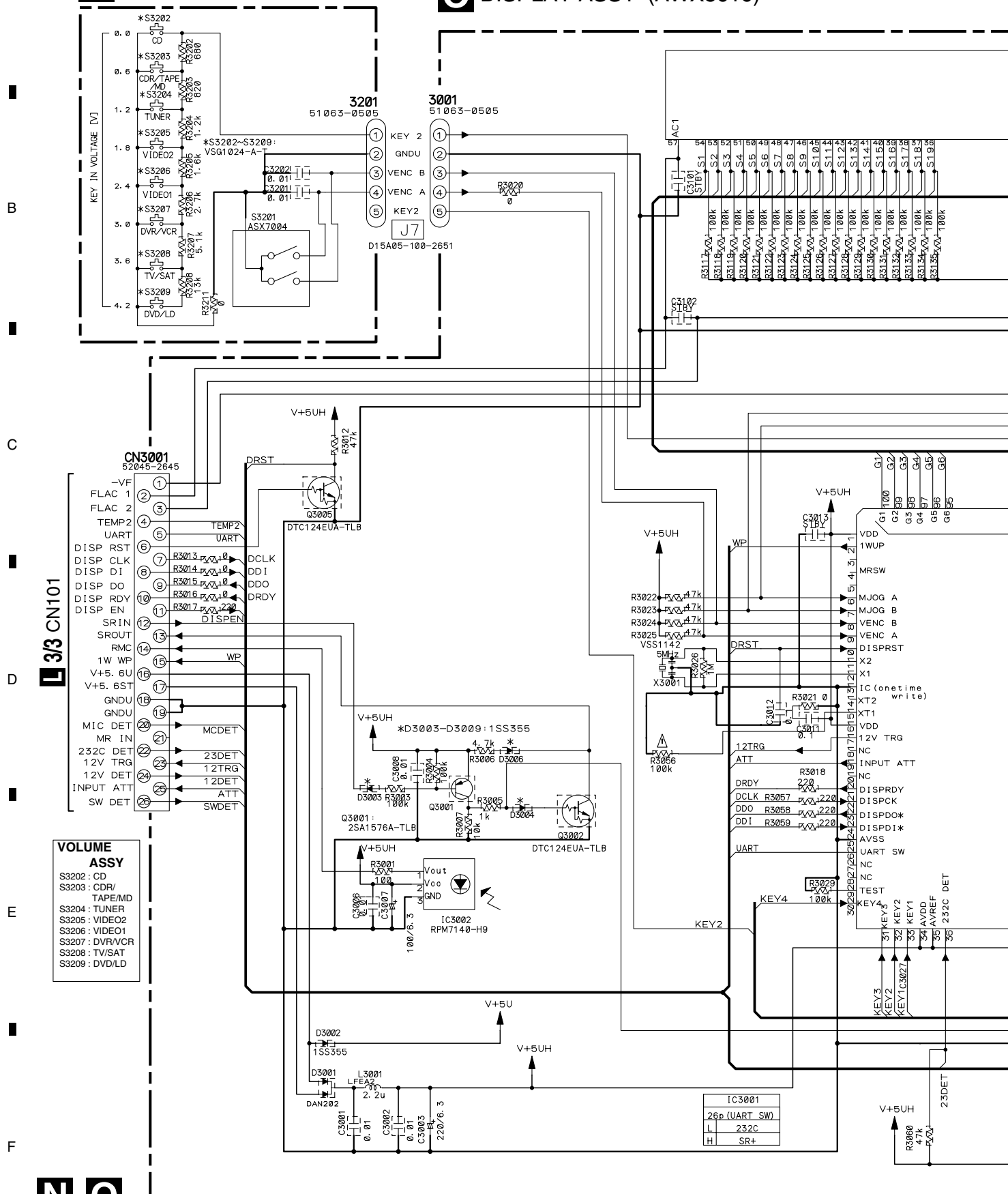
VSX-1015-K

A
B
C
D
E
F

3.13 VOLUME, DISPLAY and MULTI JOG ASSYS

N VOLUME ASSY (AWX8378)

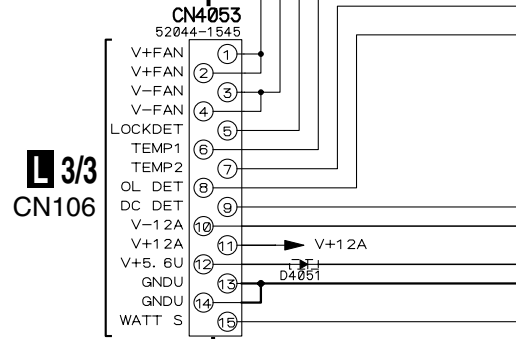
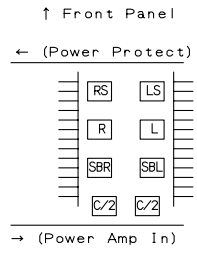
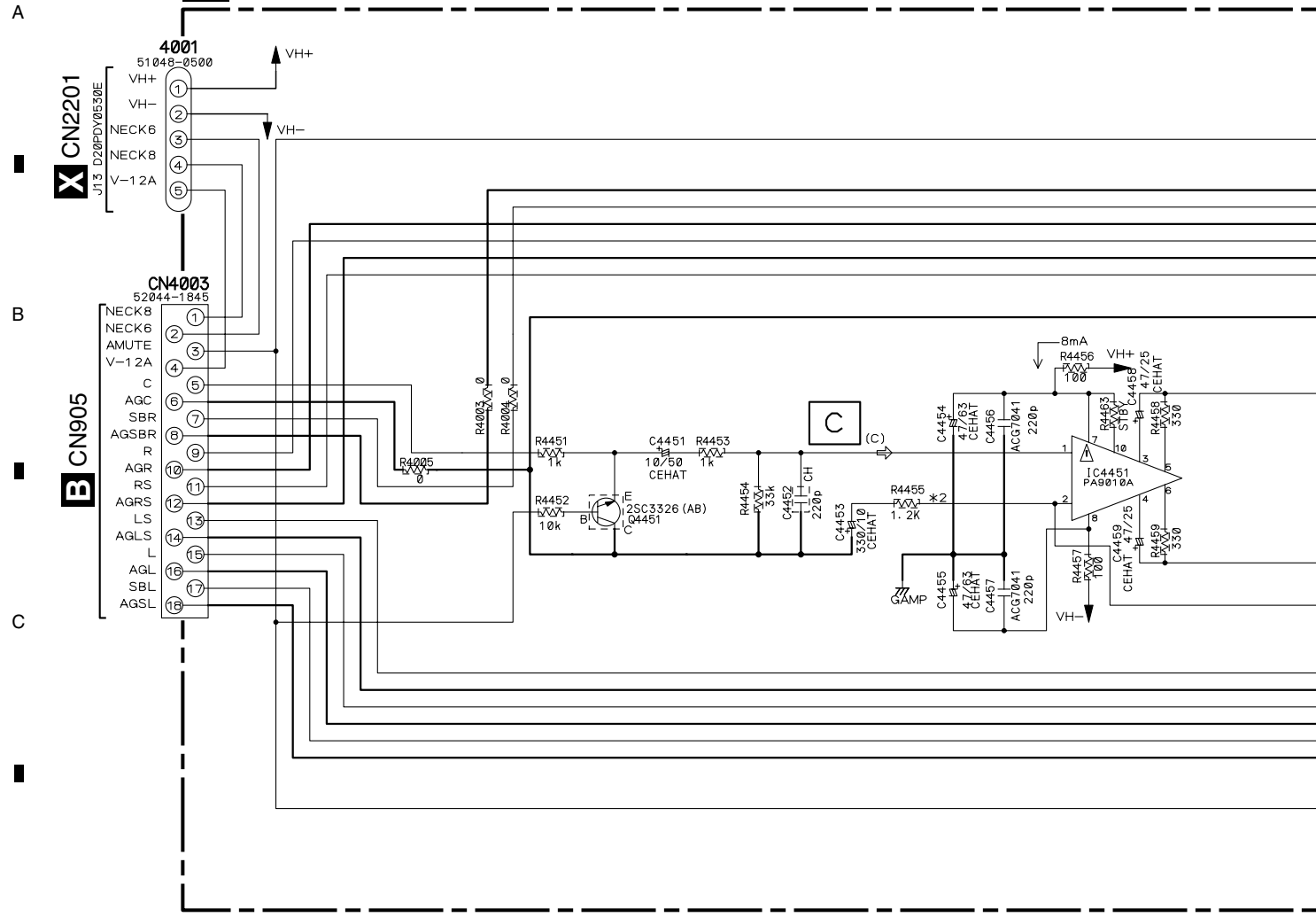
O DISPLAY ASSY (AWX8616)





3.14 POWER AMP IN and POWER PROTECT ASSYS

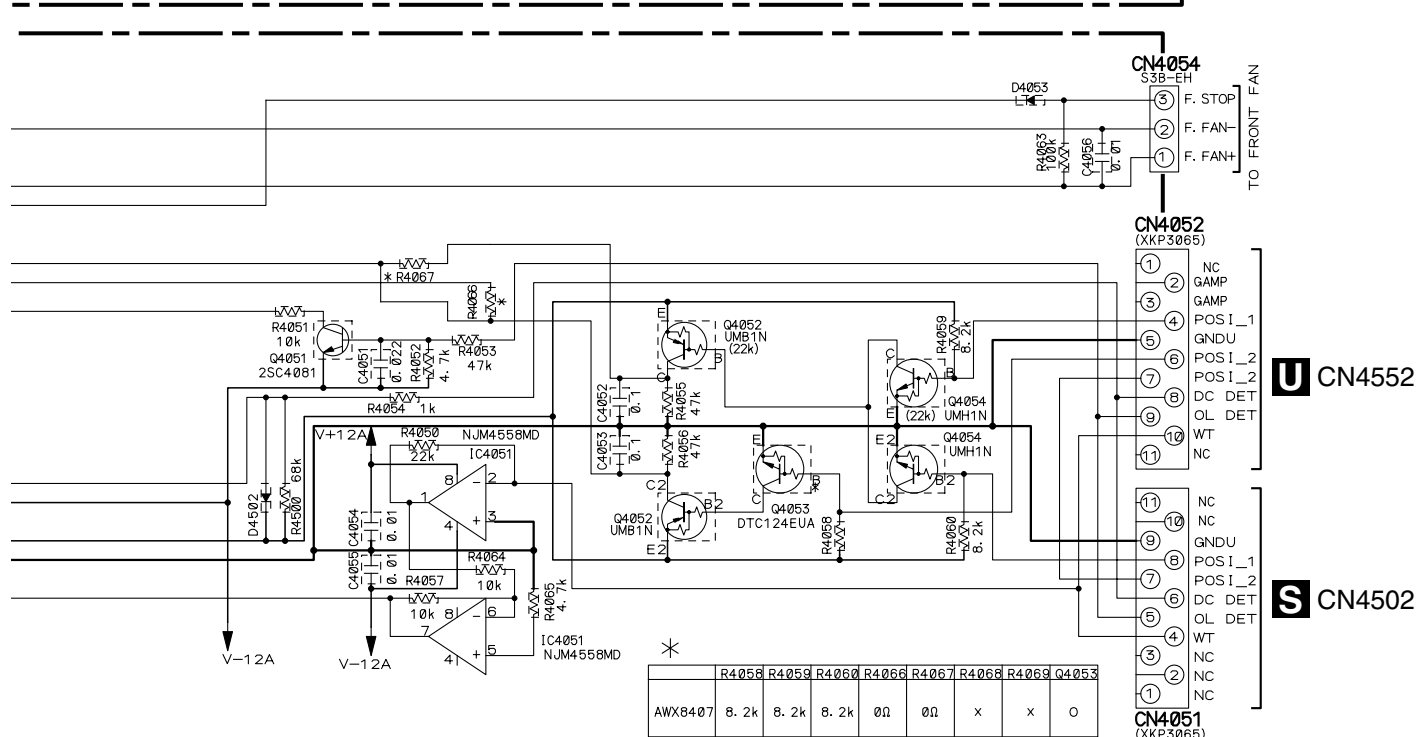
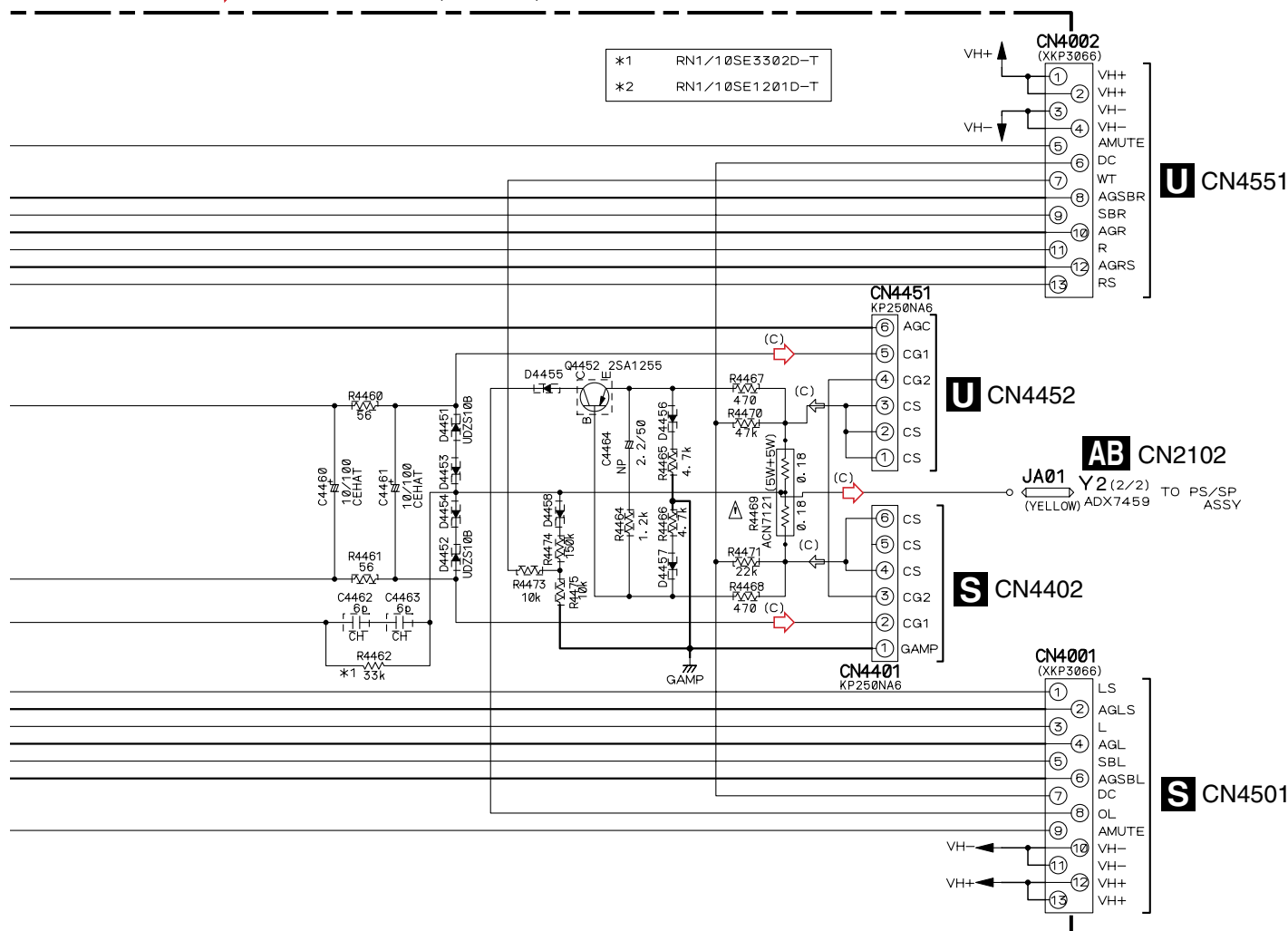
Q POWER AMP IN ASSY (AWX8405)



R POWER PROTECT ASSY (AWX8407)

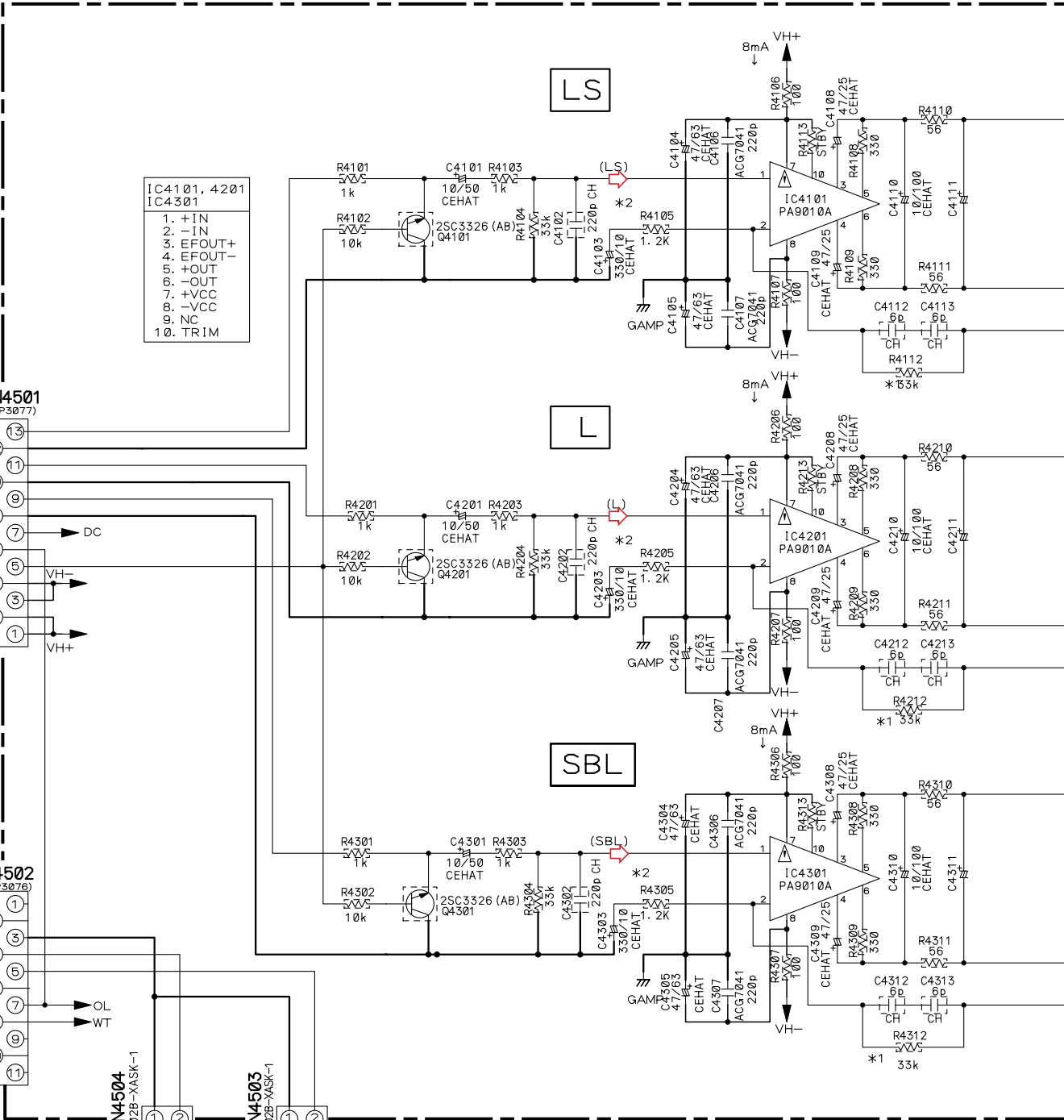
Q R

(C) : AUDIO SIGNAL ROUTE (CENTER ch)



3.15 POWER AMP-L, POSI 1 L and POSI 2 L ASSYS

POWER AMP-L ASSY (AWX8403)



POSI 1_L		POSI 2_L	
AWX	TH (4501)	AWX	TH (4502)
8536	PTFM04BH222Q2N34B0 (60°C)	8428	PTFM04BD222Q2N34B0 (100°C)

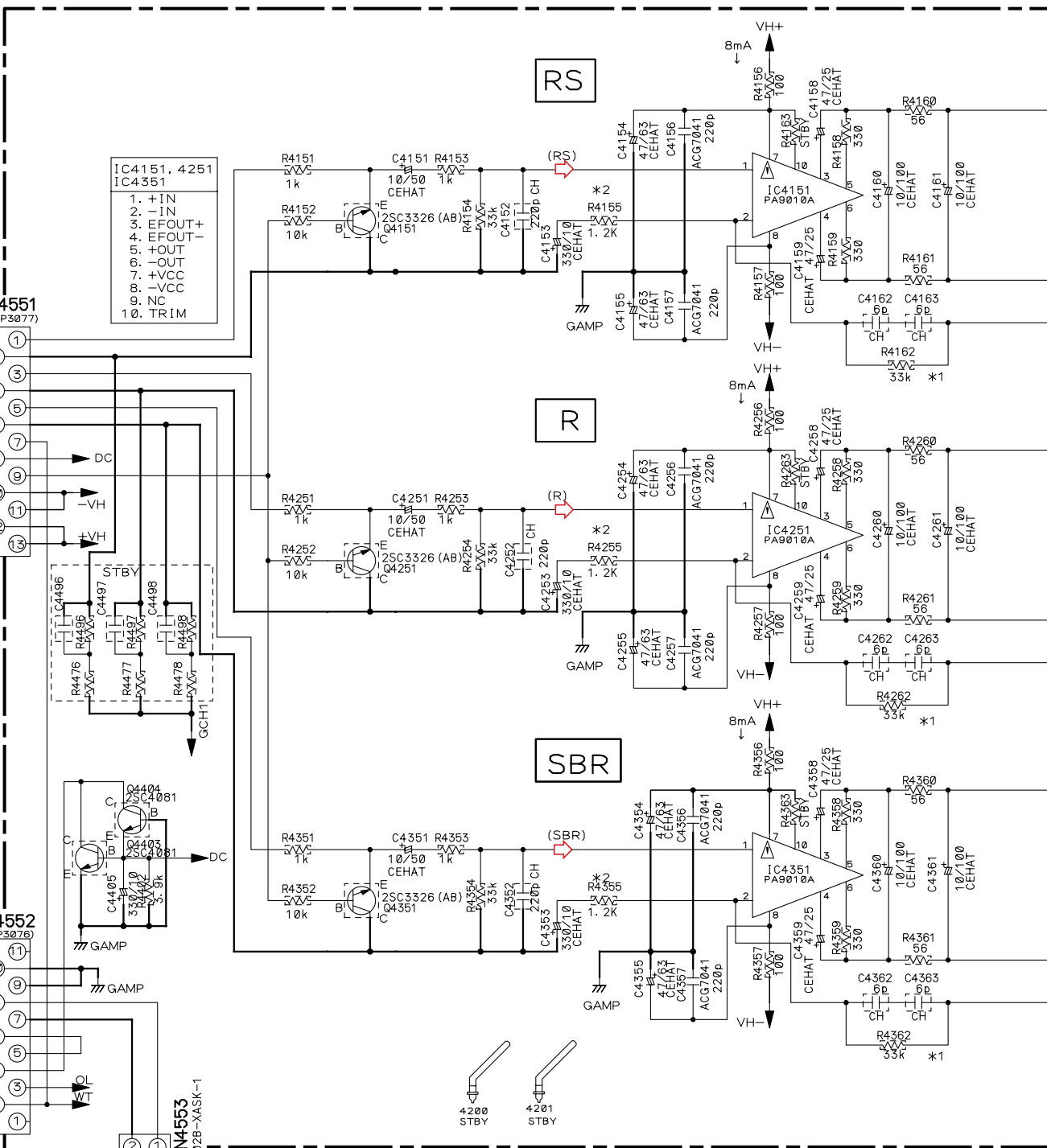
POSI 1 L ASSY (AWX8536)

POSI 2_L ASSY (AWX8428)

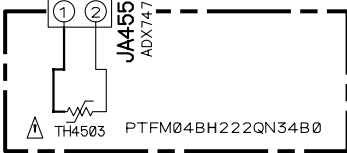
S T AG

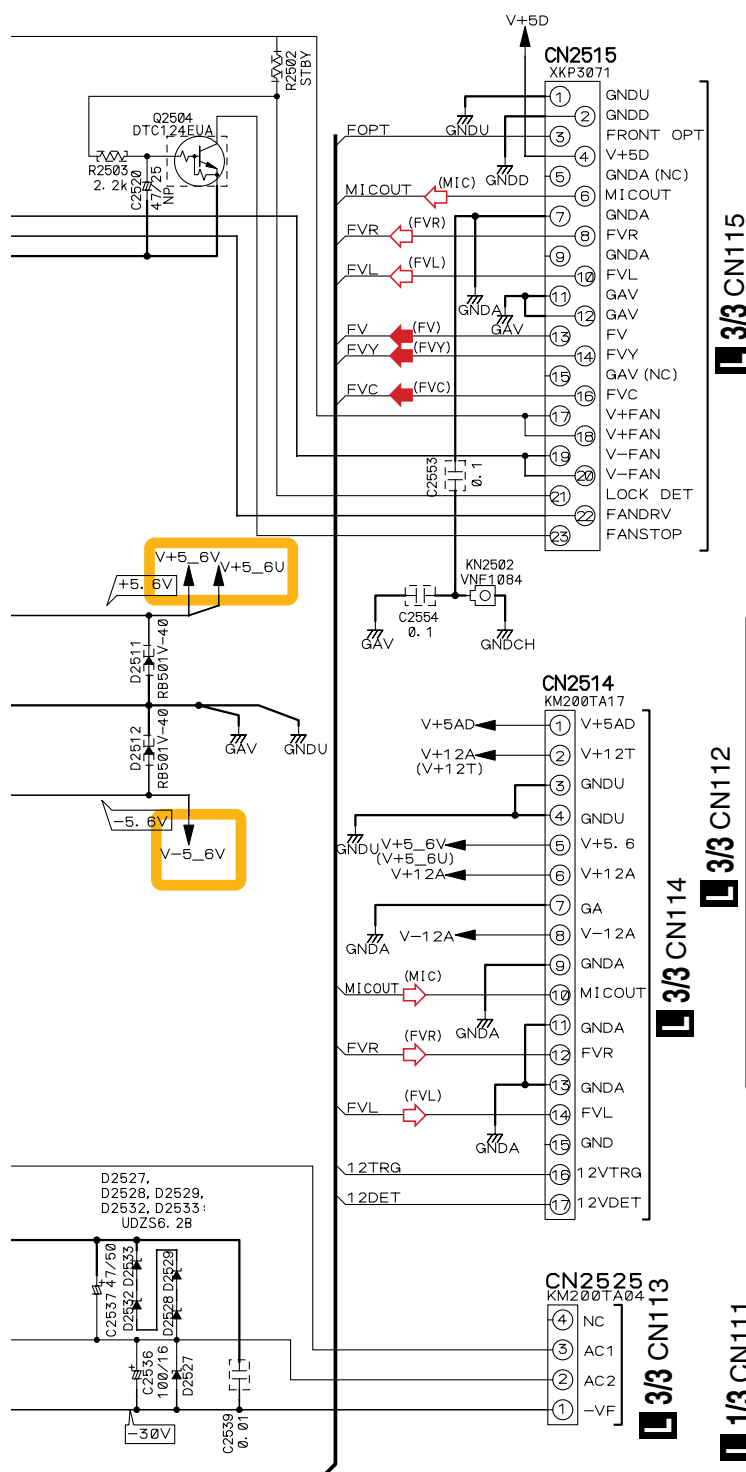
3.16 POWER AMP-R and POSI 1 R ASSYS

U POWER AMP-R ASSY (AWX8404)

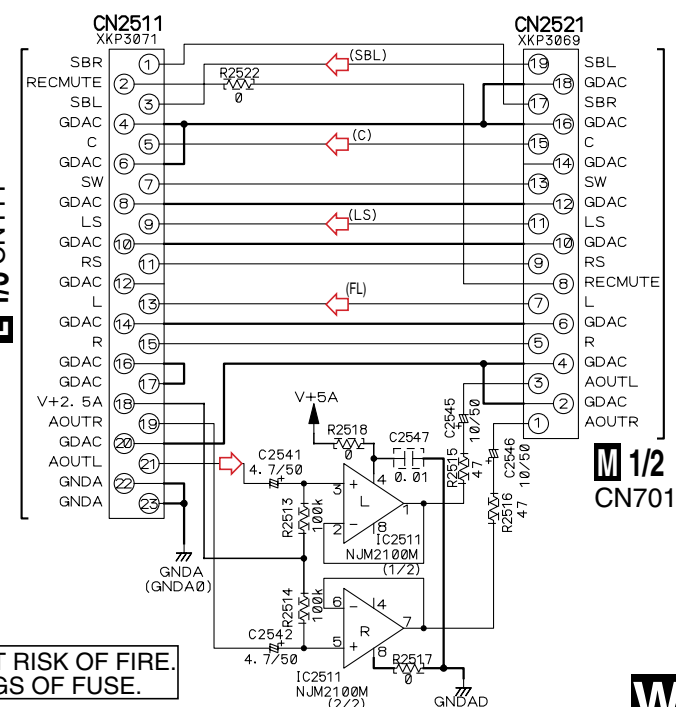
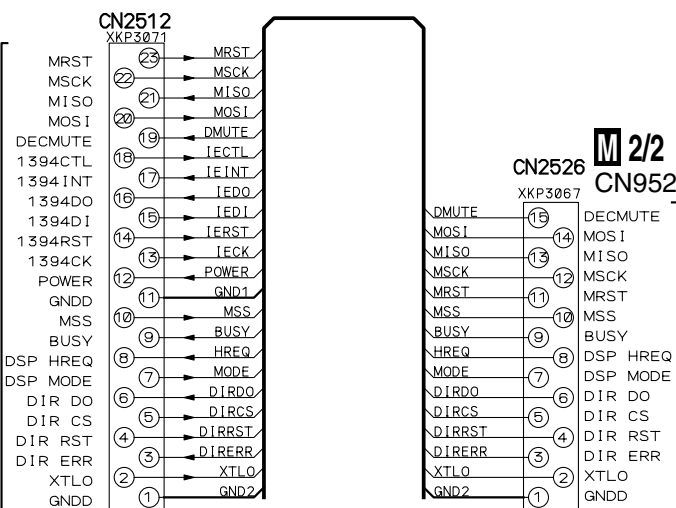


V POSI 1 R ASSY (AWX8539)





- ◇ : AUDIO SIGNAL ROUTE (Lch)
 (FL) ◇ : AUDIO SIGNAL ROUTE (FRONT Lch)
 (LS) ◇ : AUDIO SIGNAL ROUTE (SURROUND Lch)
 (SBL) ◇ : AUDIO SIGNAL ROUTE (SURROUND BACK Lch)
 (C) ◇ : AUDIO SIGNAL ROUTE (CENTER ch)
 ■ : VIDEO SIGNAL ROUTE



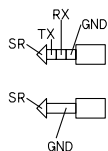
• NOTE FOR FUSE REPLACEMENT

CAUTION -FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
REPLACE WITH SAME TYPE AND RATINGS OF FUSE.



3.19 REAR TOP, TRANS SIDE, TRANS 1 and PRIMARY ASSYS

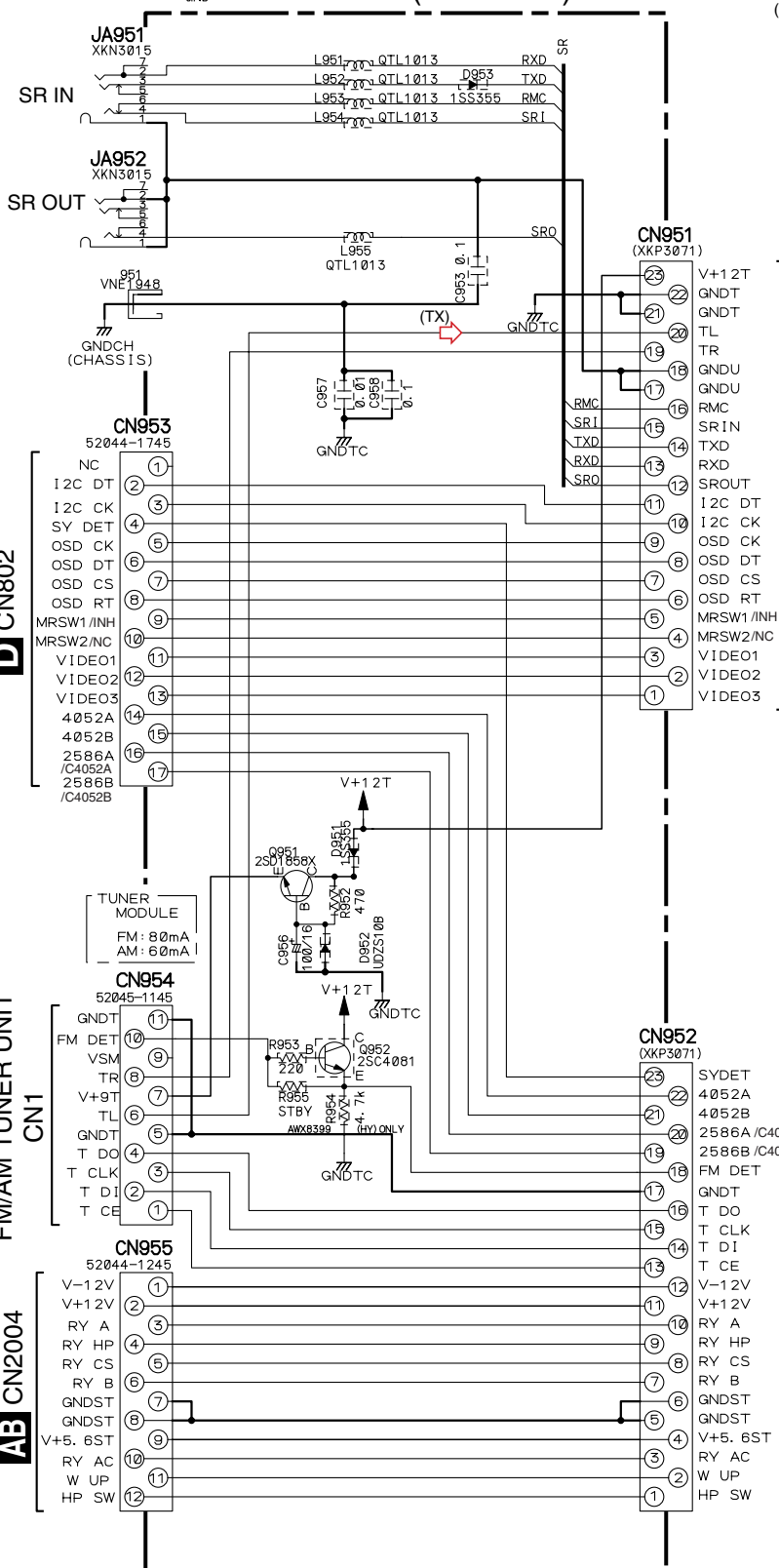
A



AC REAR TOP ASSY
(AWX8399)

(TX) : AUDIO SIGNAL ROUTE (TUNER Lch)

B



C

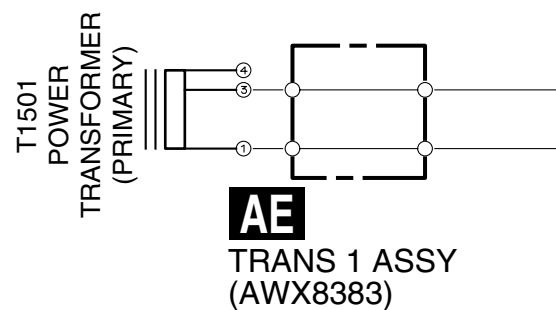
D

E

F

L 3/3 CN104

L 3/3 CN105



AE TRANS 1 ASSY
(AWX8383)

1234

4. PCB CONNECTION DIAGRAM

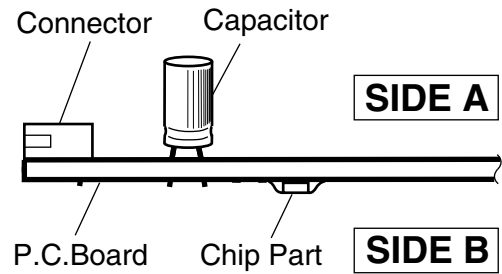
NOTE FOR PCB DIAGRAMS :

- A
1. Part numbers in PCB diagrams match those in the schematic diagrams.

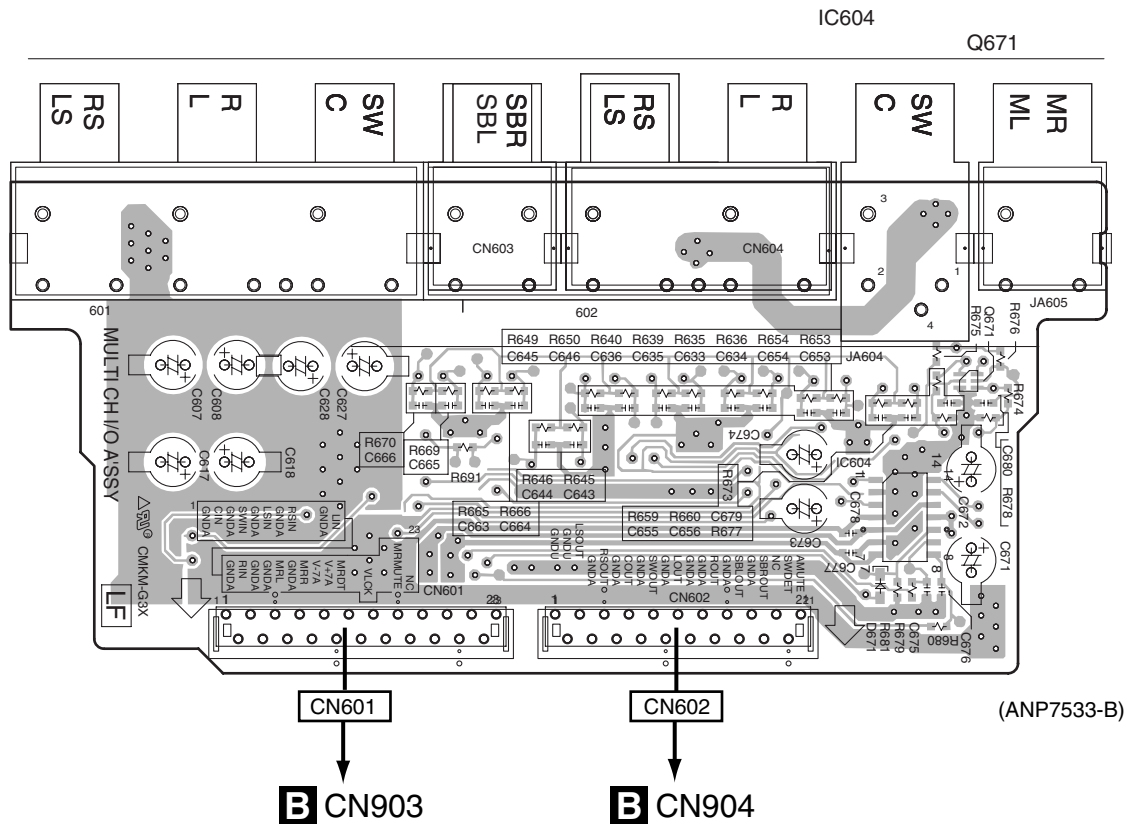
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

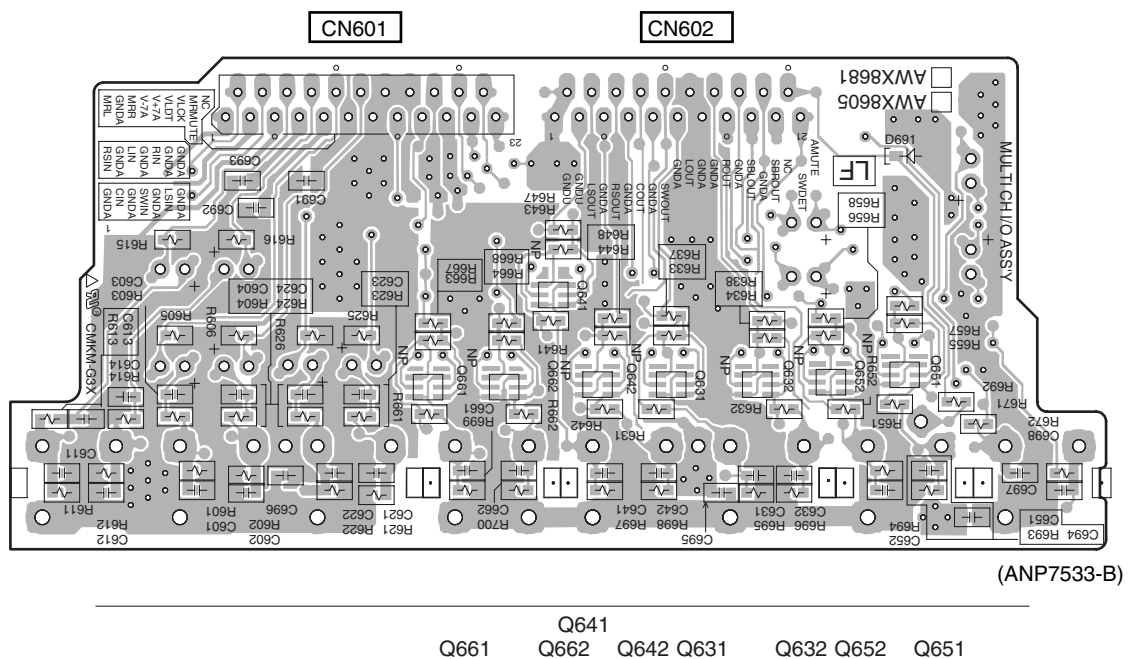
3. The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.



A MULTI CH I/O ASSY



A MULTI CH I/O ASSY

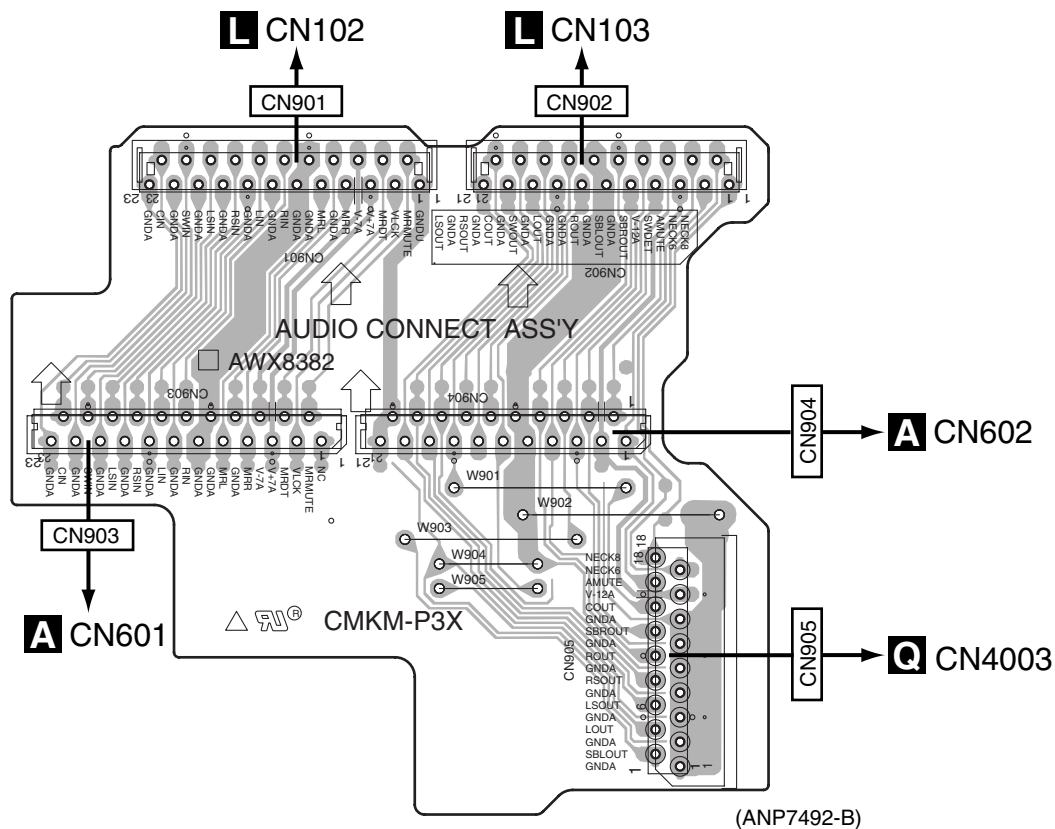


4.2 AUDIO CONNECT ASSY

SIDE A

SIDE A

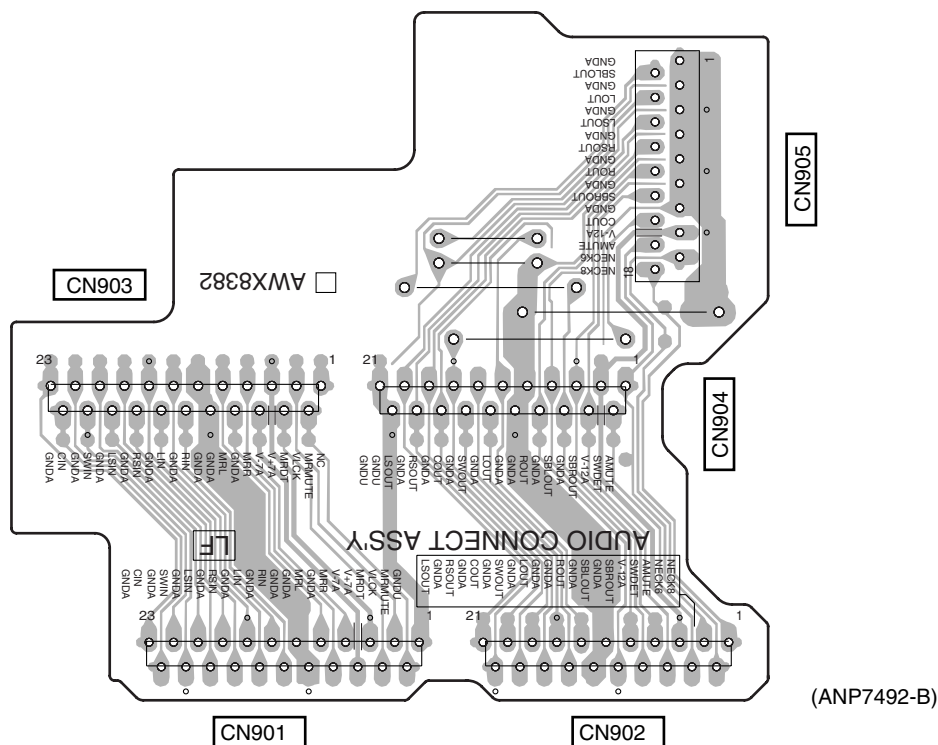
B AUDIO CONNECT ASSY



B AUDIO CONNECT ASSY

SIDE B

SIDE B



B

B

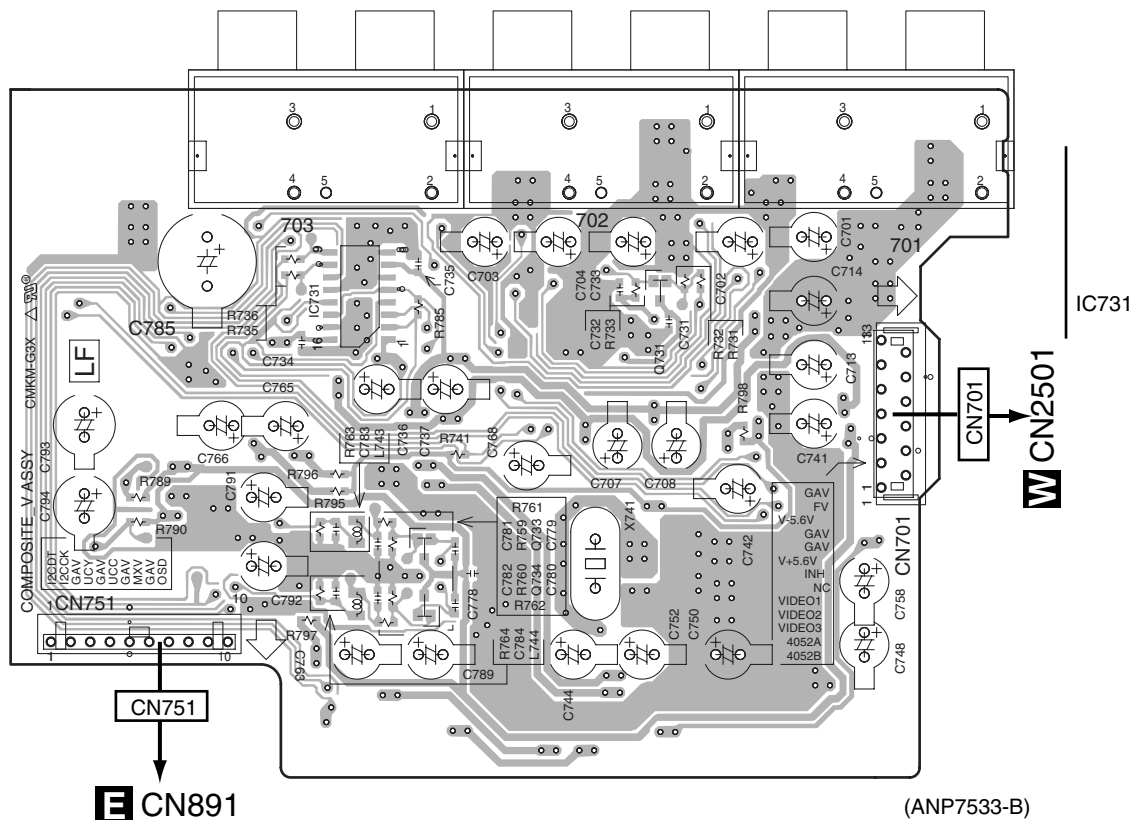
VSX-1015-K

4.3 COMPOSITE V ASSY

SIDE A

SIDE A

C COMPOSITE V ASSY



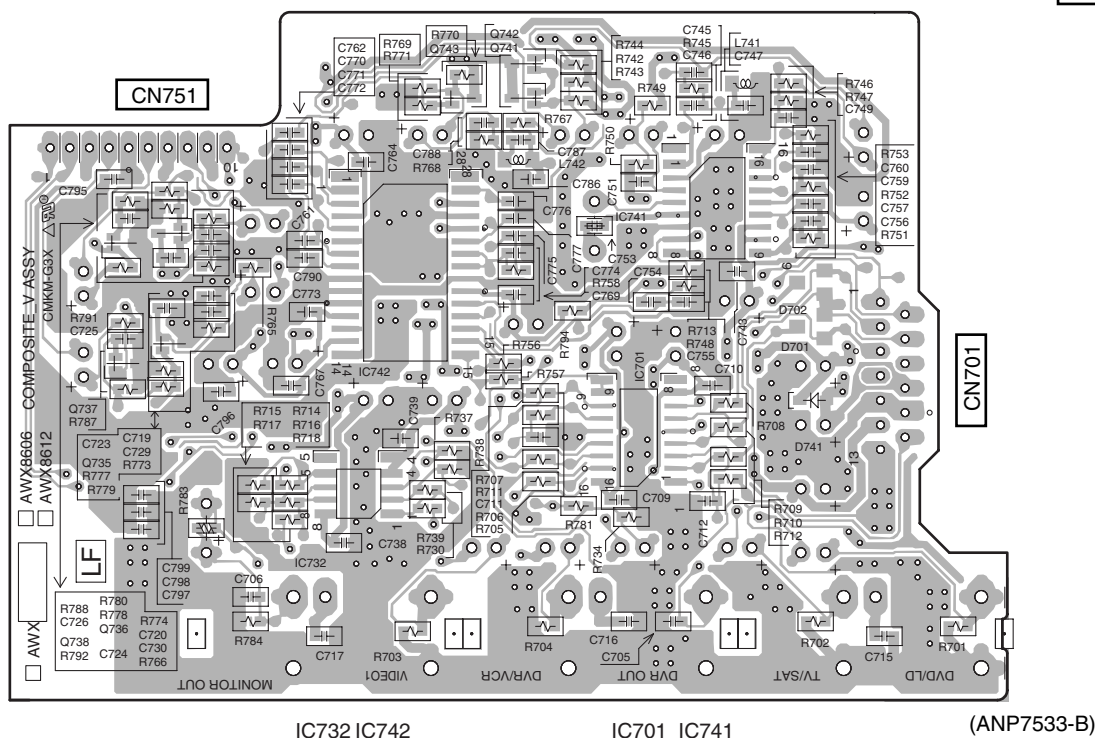
E CN891

(ANP7533-B)

SIDE B

C COMPOSITE V ASSY

SIDE B



IC732 IC742

IC701 IC741

(ANP7533-B)

Q737 Q736
Q738 Q735

Q743 Q742
Q741

C

C

VSX-1015-K

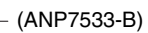
65

△

SIDE A

IC842
IC801
IC831
IC802
AC CN953
IC881
IC841
IC851
Q881
IC871
Q852

SIDE B



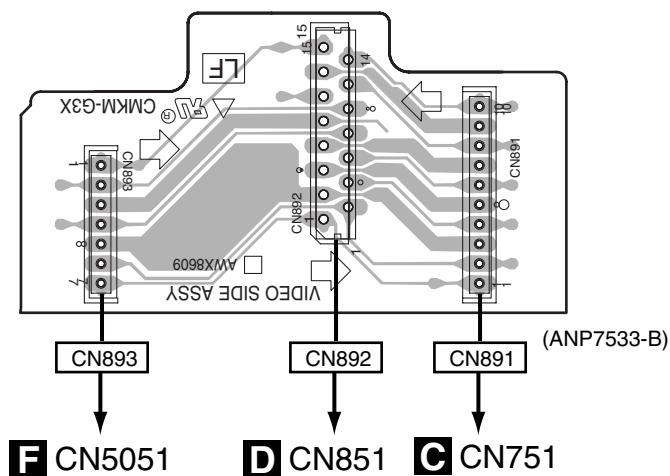
Q872 Q871

D

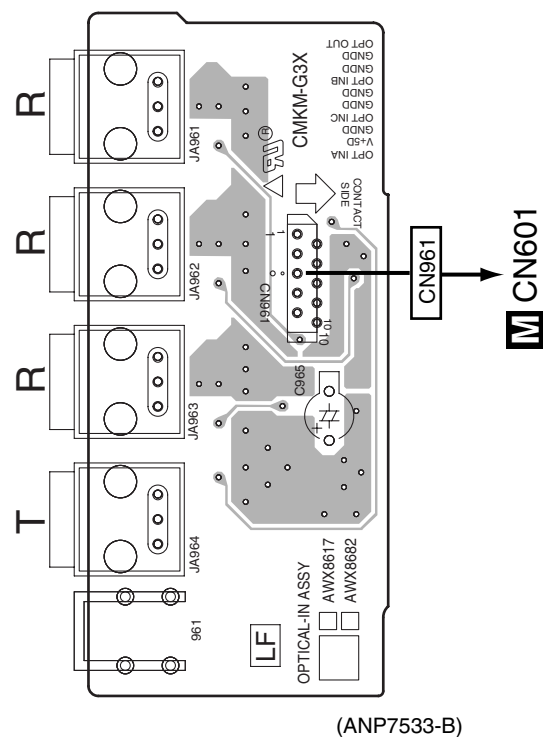
4.5 VIDEO SIDE and OPTICAL-IN ASSYS

SIDE A

E VIDEO SIDE ASSY

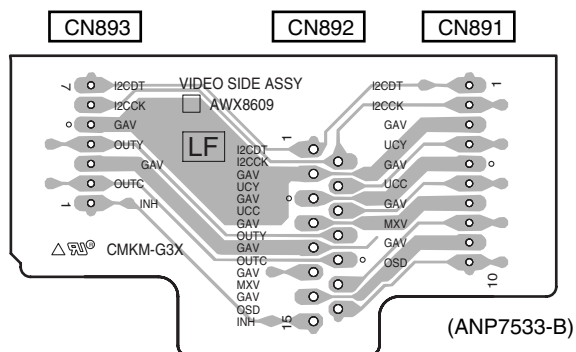


G OPTICAL-IN ASSY



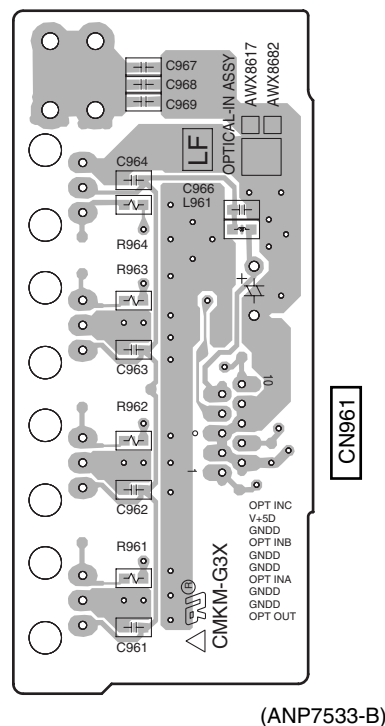
SIDE B

E VIDEO SIDE ASSY



G OPTICAL-IN ASSY

SIDE B



E G

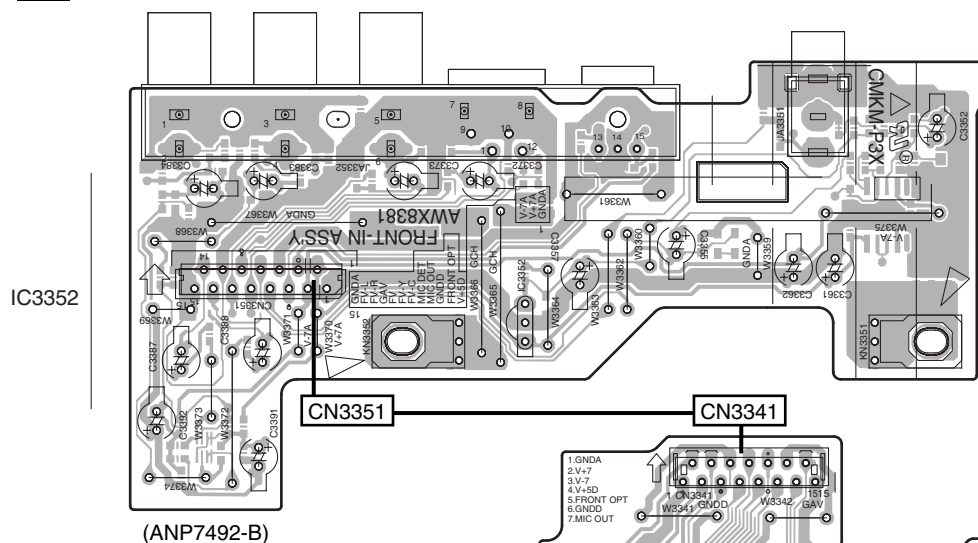
E G

4.7 FRONT IN and FRONT-IN CONNECT ASSYS

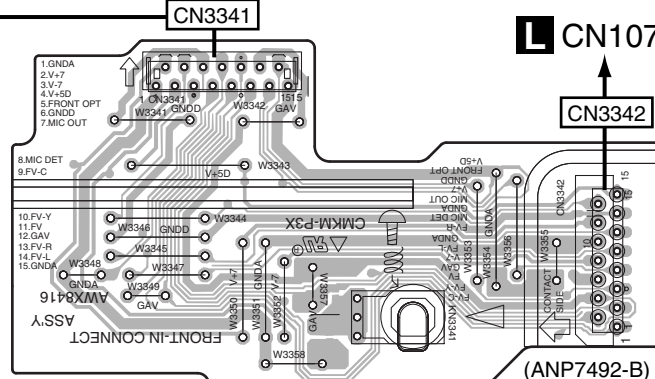
SIDE A

SIDE A

I FRONT IN ASSY



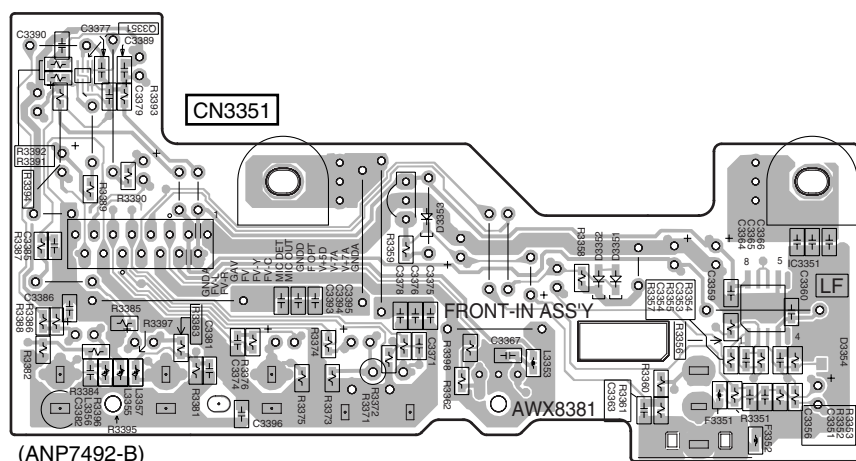
J FRONT-IN CONNECT ASSY



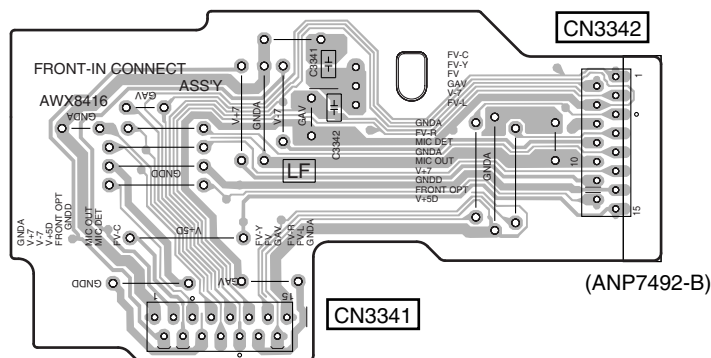
SIDE B

I FRONT IN ASSY

SIDE B



J FRONT-IN CONNECT ASSY



I J

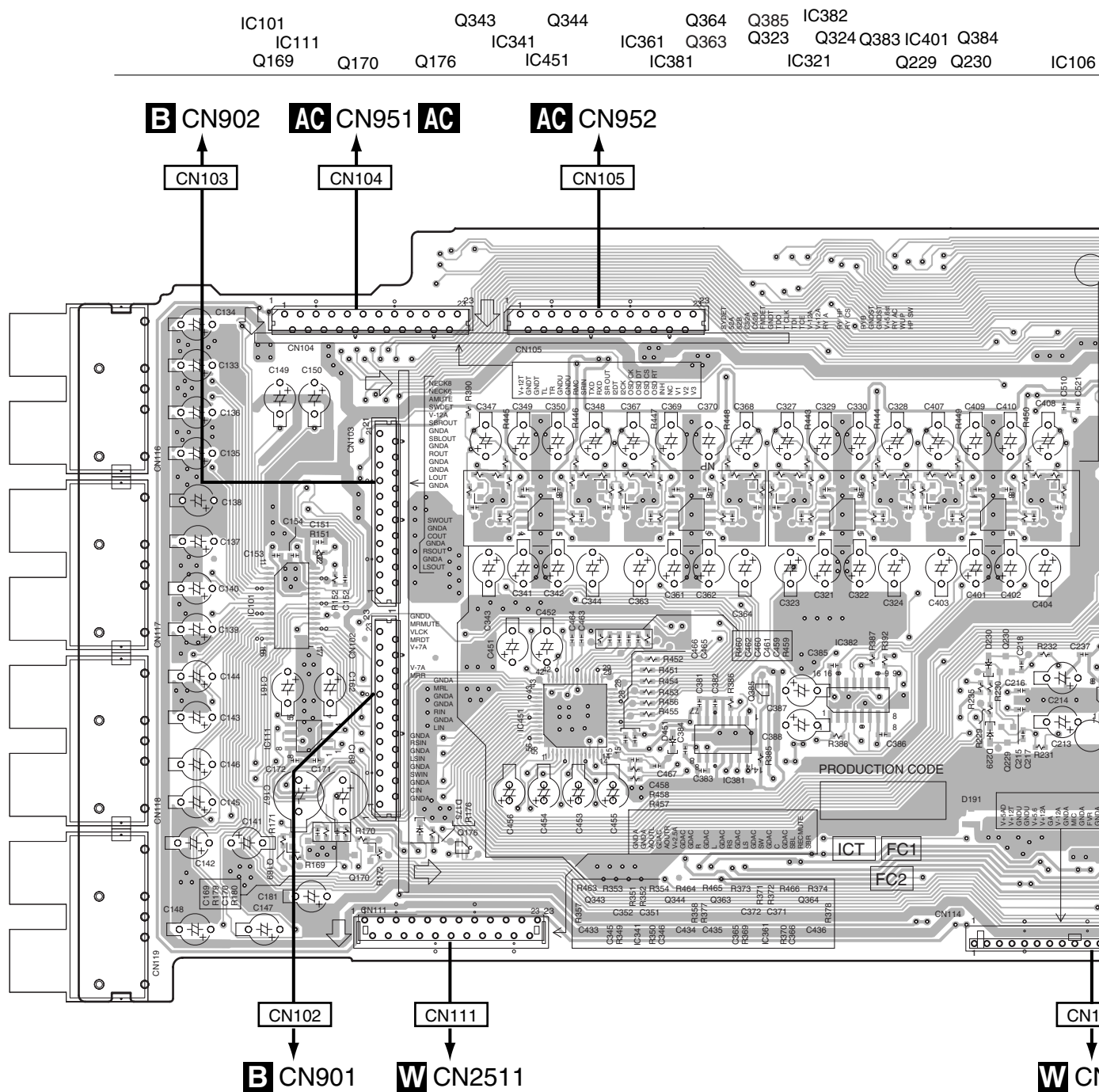
I J

VSX-1015-K

4.8 MAIN CONTROL ASSY

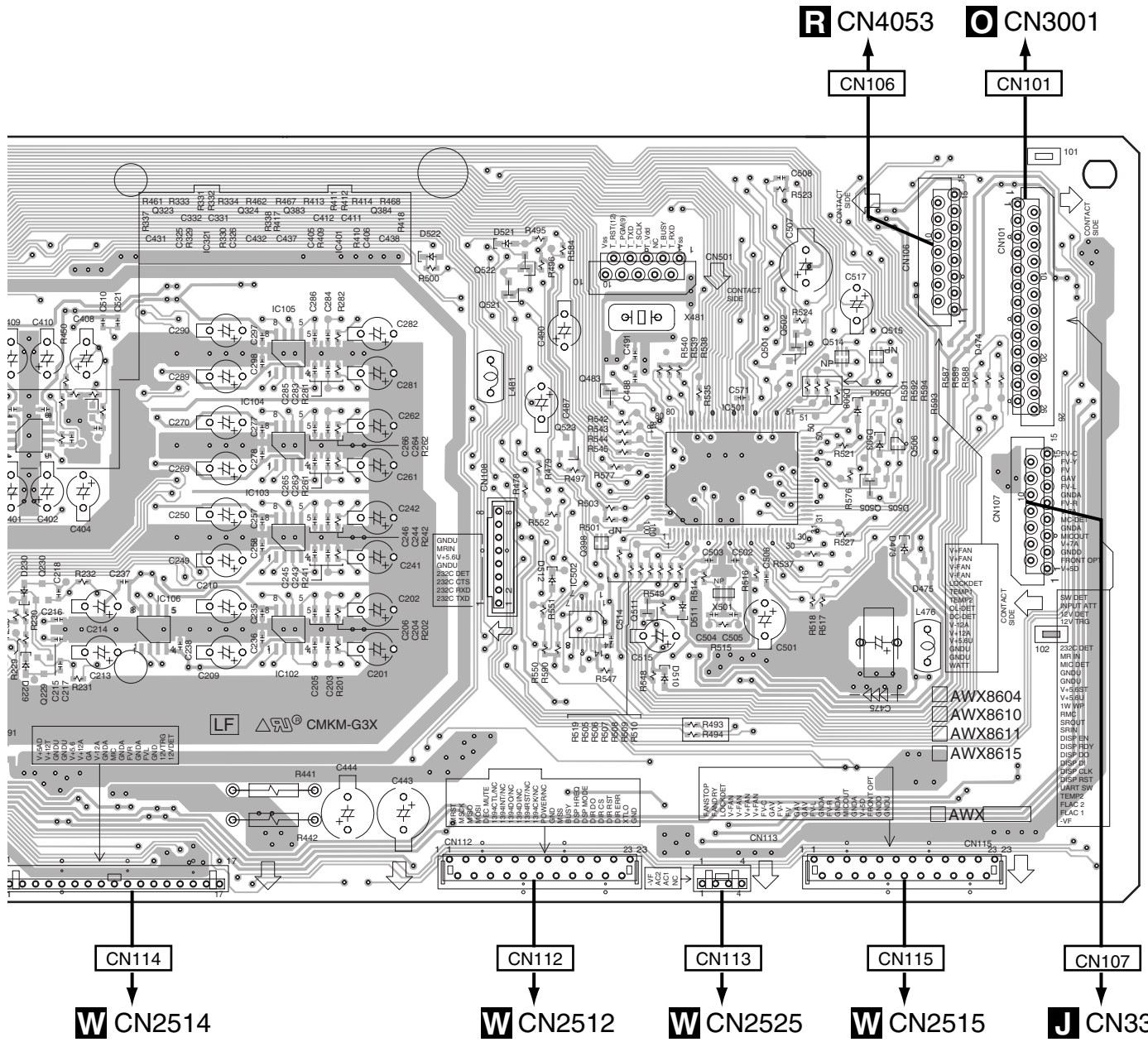
SIDE A

MAIN CONTROL ASSY



VSX-1015-K

384 IC103 IC105 Q521 Q398
30 IC106 IC102 IC104 Q522 Q523 Q511 Q514 Q515
IC502 Q483 IC501 Q501 Q502 Q505 Q506



(ANP7533-B)

SIDE B

A

Q381 Q322
Q382 Q235 Q386

Q321 Q362

Q361 Q342

Q341

Q175

CN105

CN104

CN103

CN102

CN111

V114

(ANP7533-B)

B

C

D

E

F

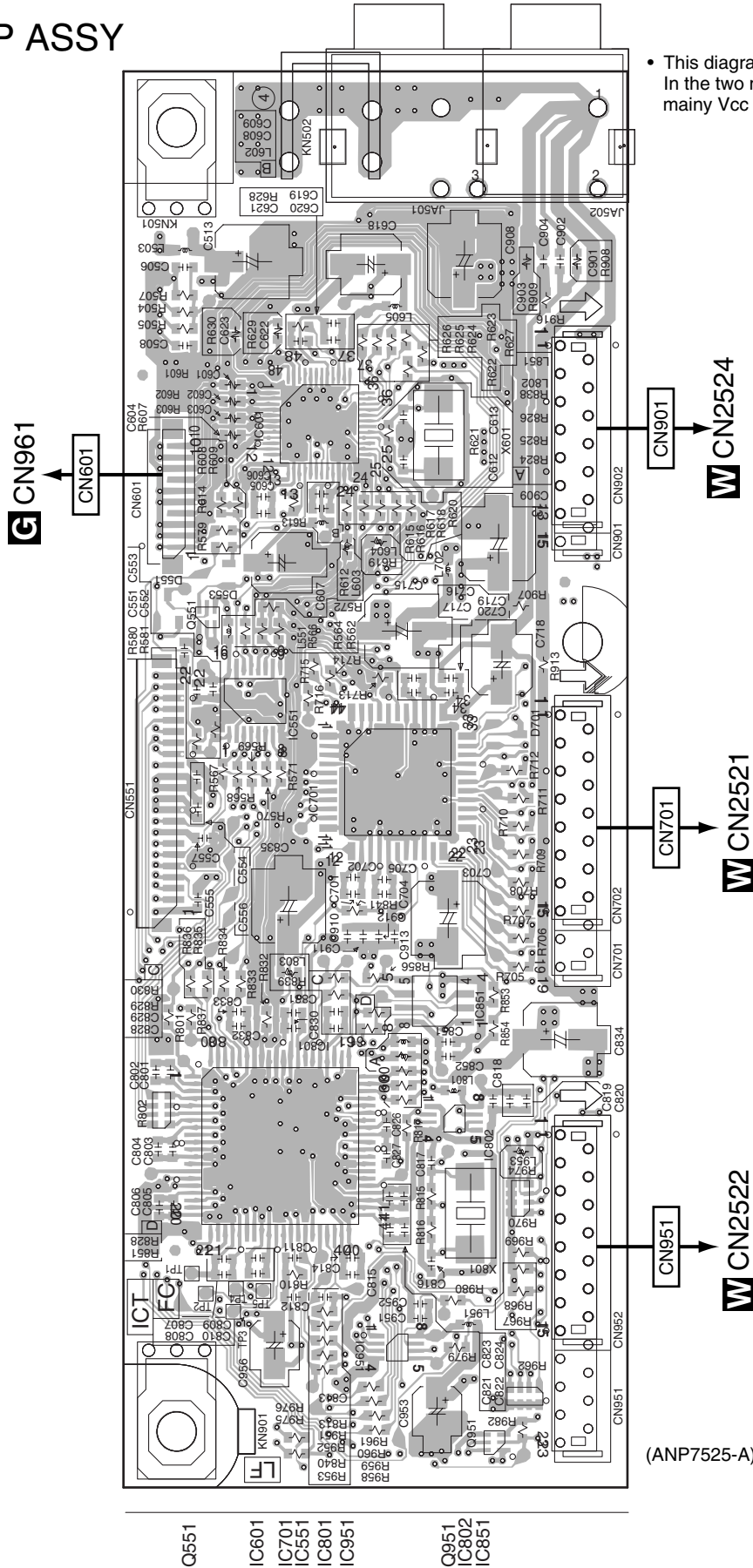
VSX-1015-K

4.9 DISPLAY ASSY

SIDE A

SIDE A

M DSP ASSY



- This diagram has four layers. In the two middle layers, mainy Vcc and GND are connected.

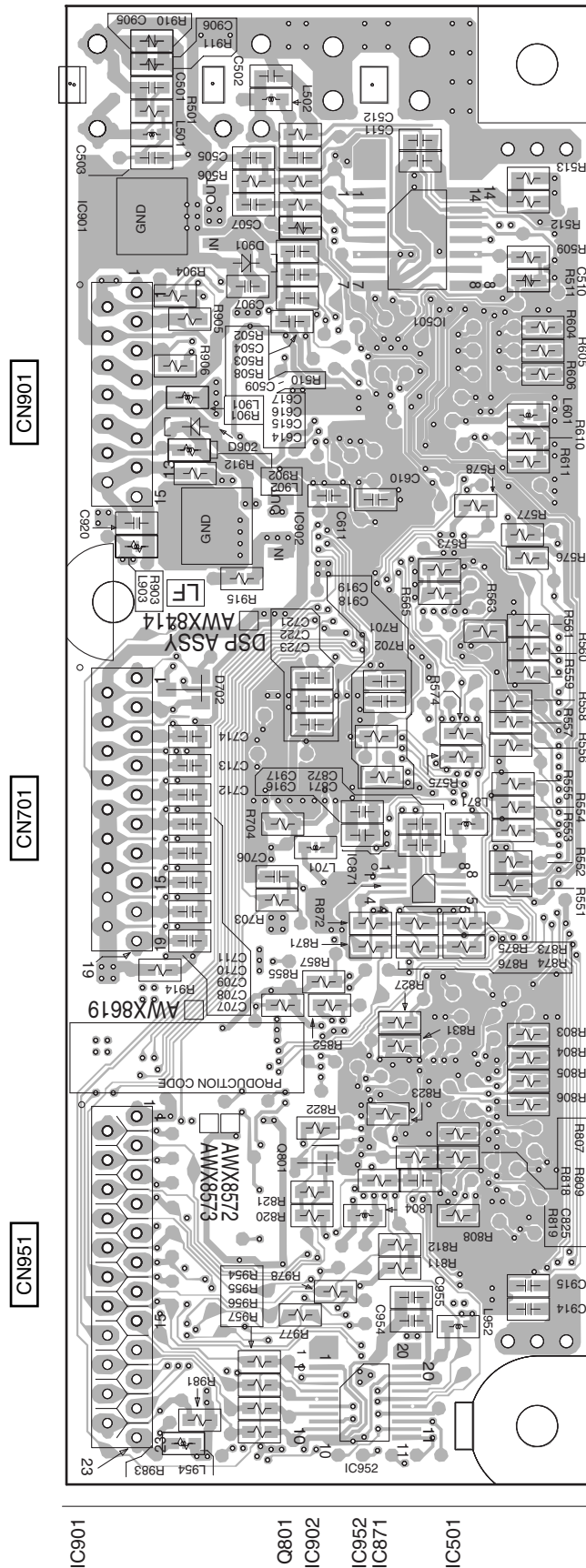
M

M

SIDE B

SIDE B

M DSP ASSY



- This diagram has four layers. In the two middle layers, mainy Vcc and GND are connected.

(ANP7525-A)

M

M

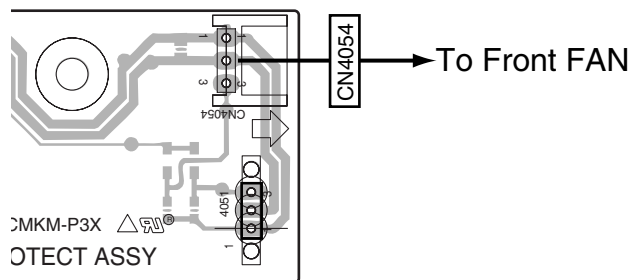
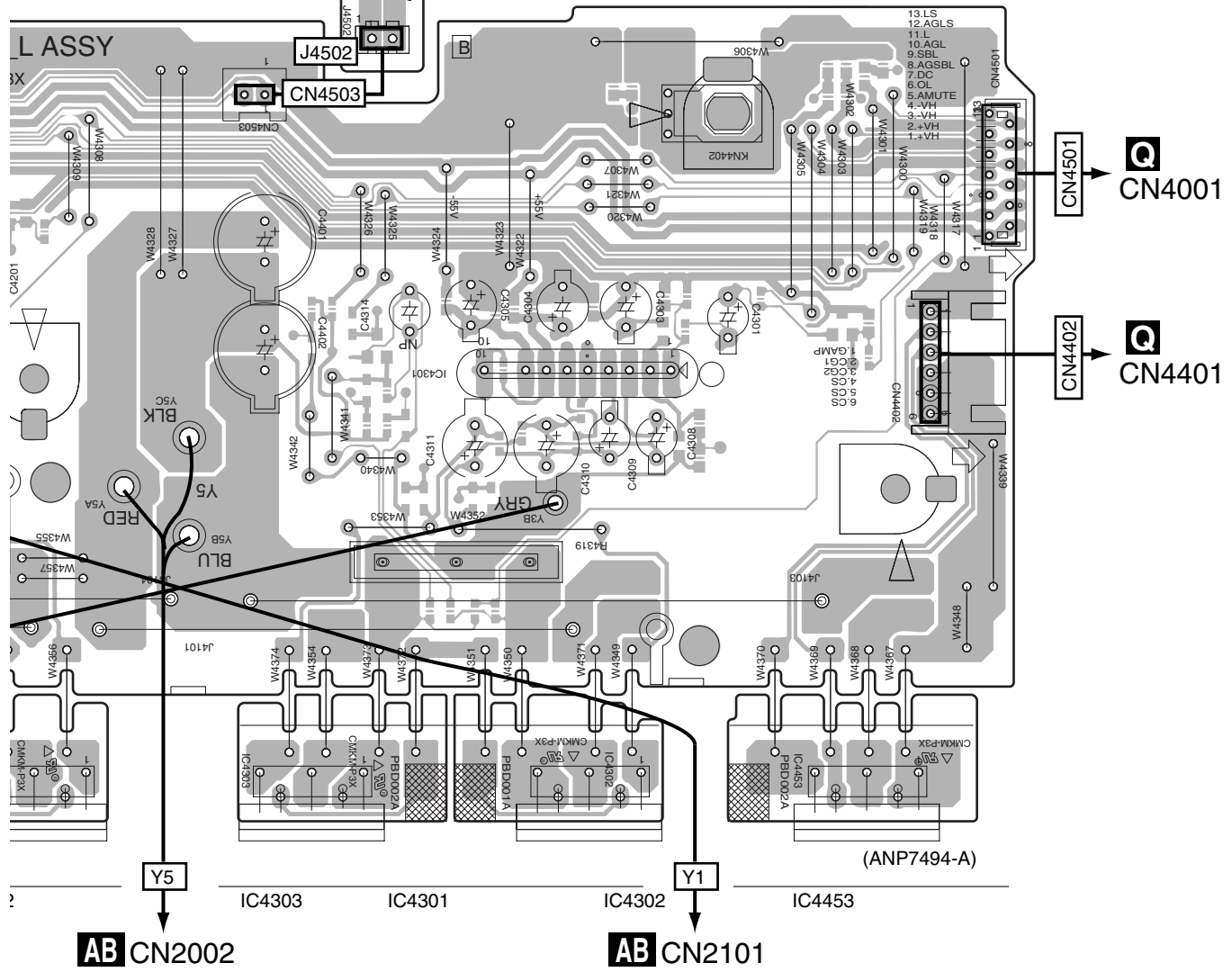
VSX-1015-K

75

SY

AG POSI2-L ASSY

(ANP7494-A)



1 2 3 4

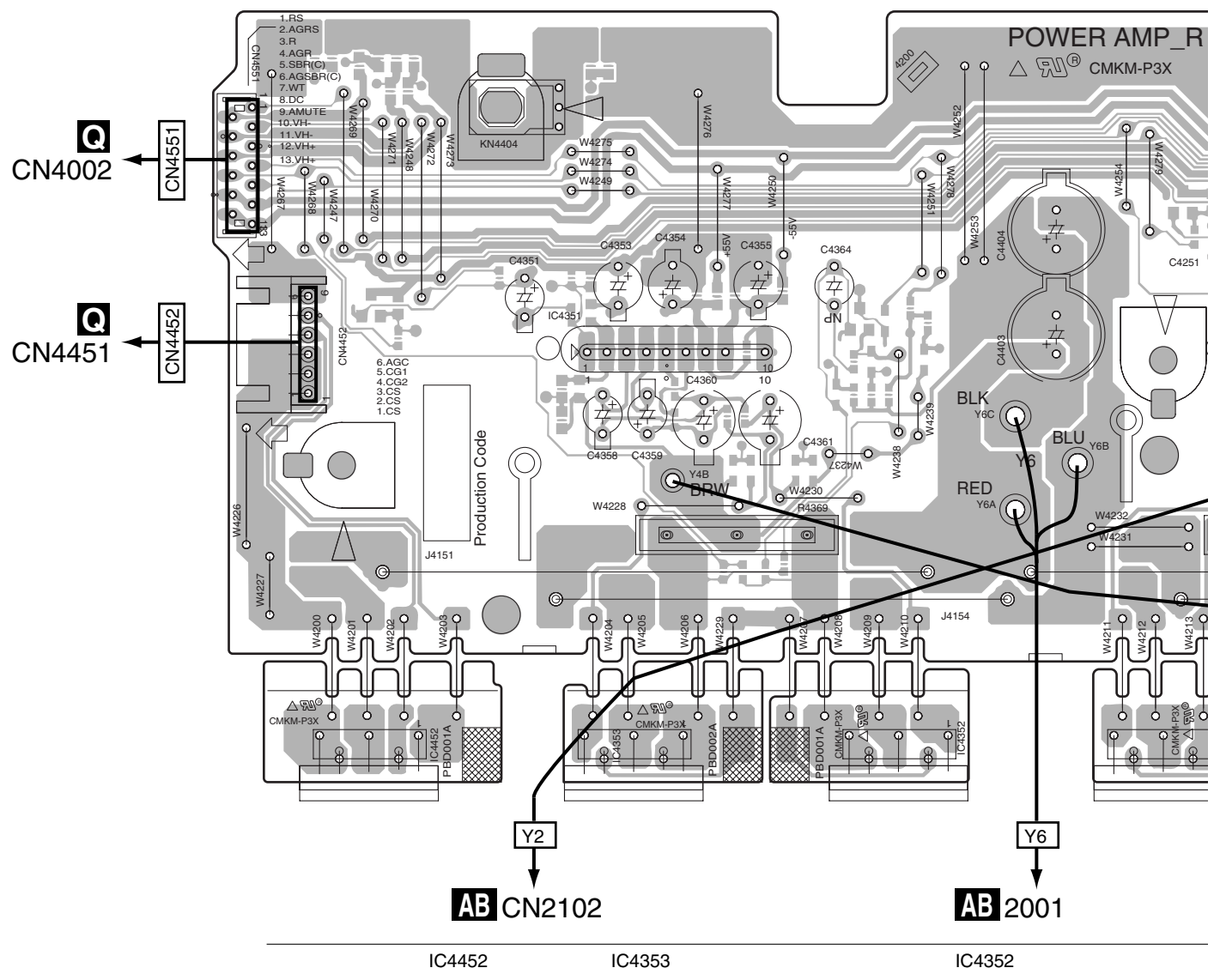
4.13 POWER AMP-R and POSI 1 R ASSYS

SIDE A

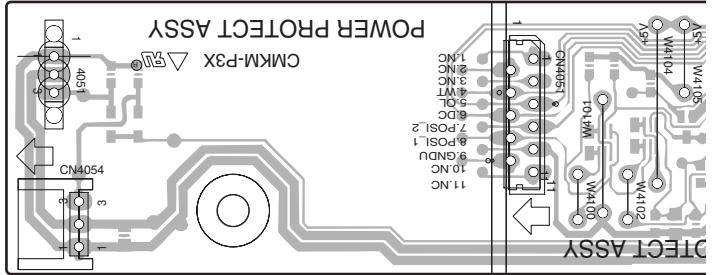
U POWER AMP-R ASSY

V F

A
B
C
D
E
F



R POWER PROTECT ASSY



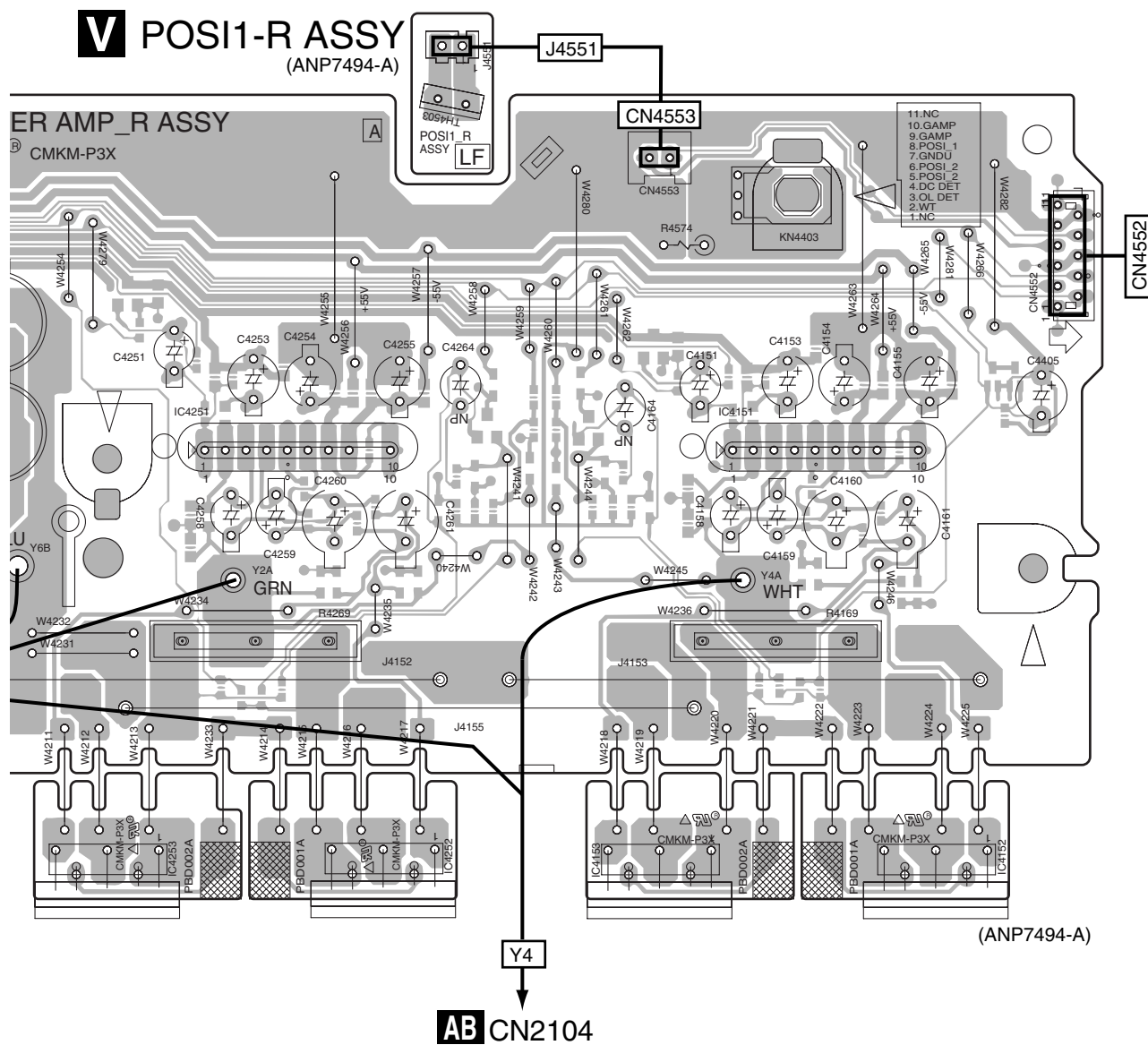
U V R

SIDE A

A

V POSI1-R ASSY

(ANP7494-A)



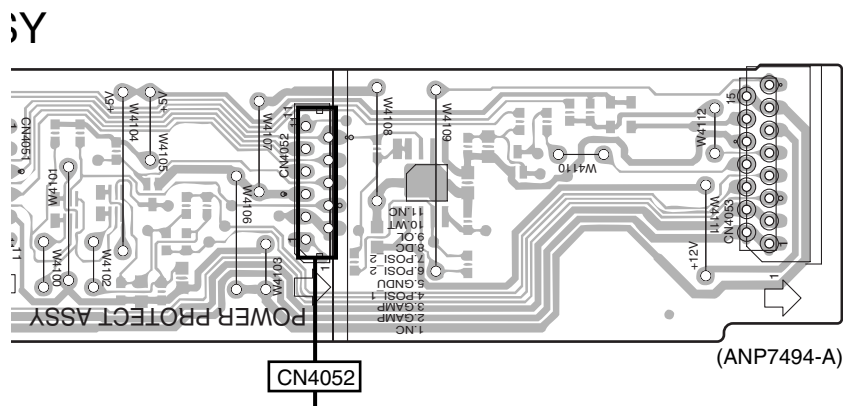
B

C

D

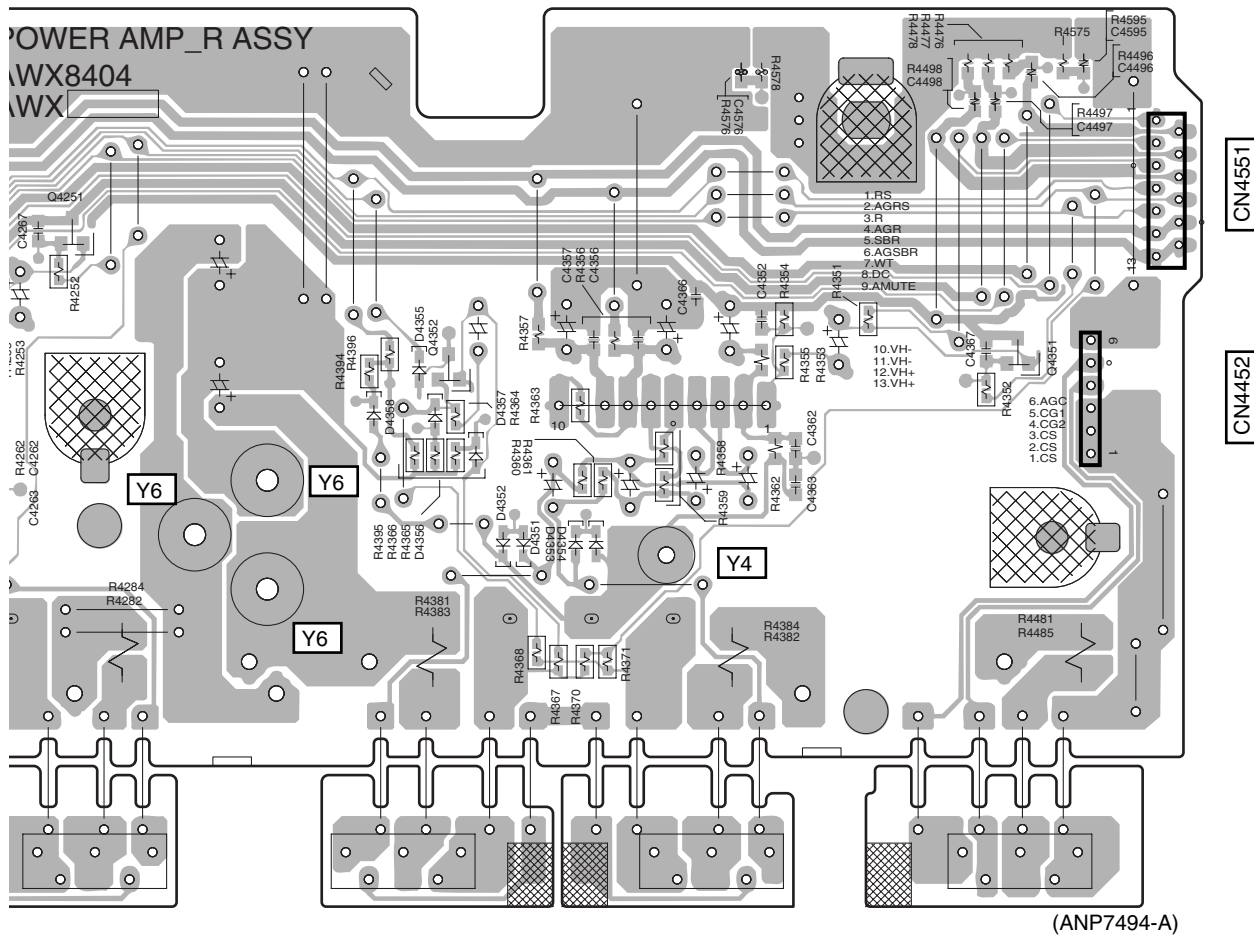
E

F

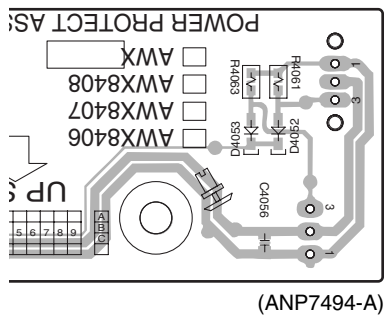


UVR

VSX-1015-K



Q4251 Q4352 Q4351



IC4051
Q4053
Q4051
Q4054

(ANP7494-A)

SIDE B

A

W REGULATOR ASSY

B

C

D

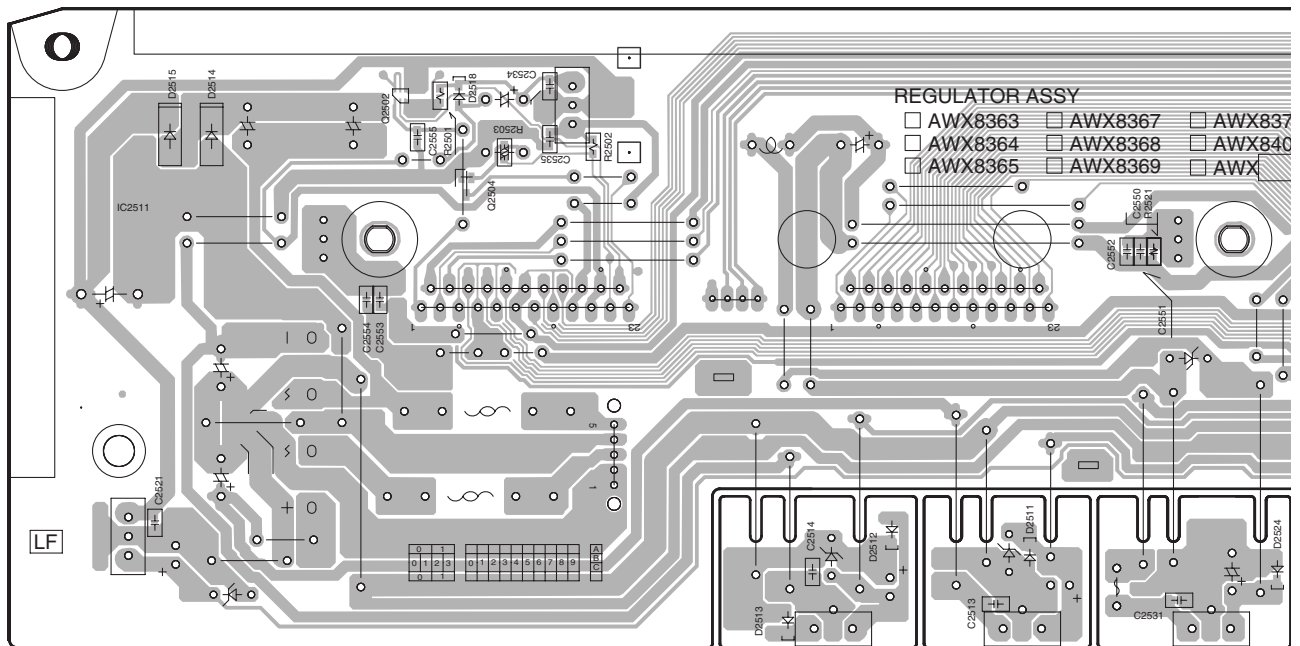
E

F

Q2502

IC2511

Q2504



(ANP7493-C)

CN2515**CN2525****CN2512****W**

△

SIDE A

F



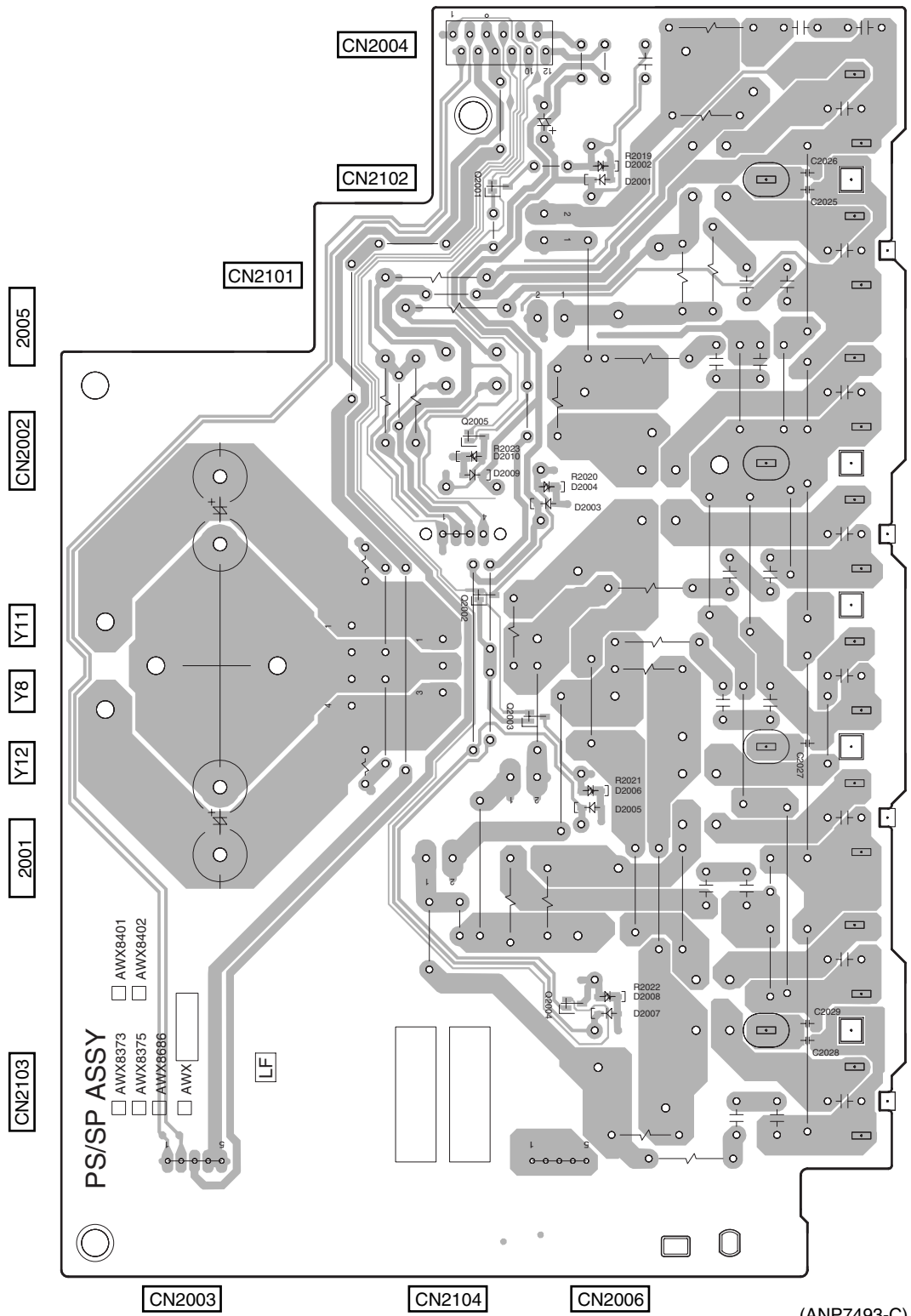
AB

92

SIDE B

SIDE B

AB SP/PS ASSY



Q2005
Q2002
Q2001
Q2003
Q2004

AB

AB

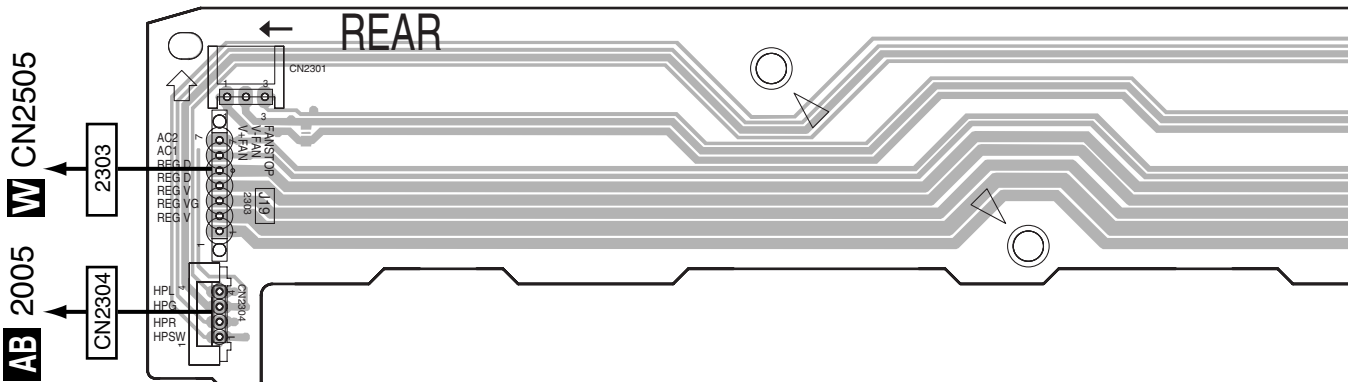
VXS-1015-K

1 2 3 4

4.17 TRANS SIDE ASSY

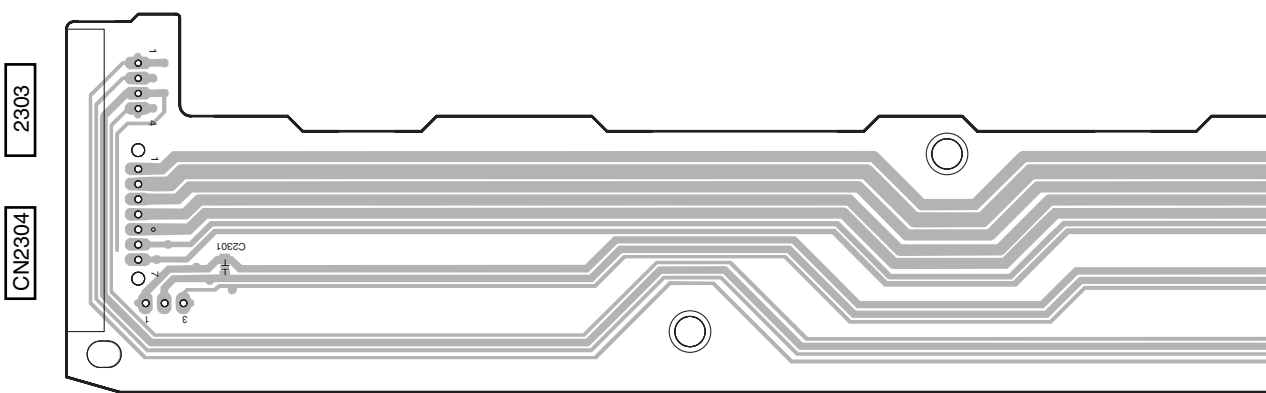
SIDE A

AD TRANS SIDE ASSY



SIDE B

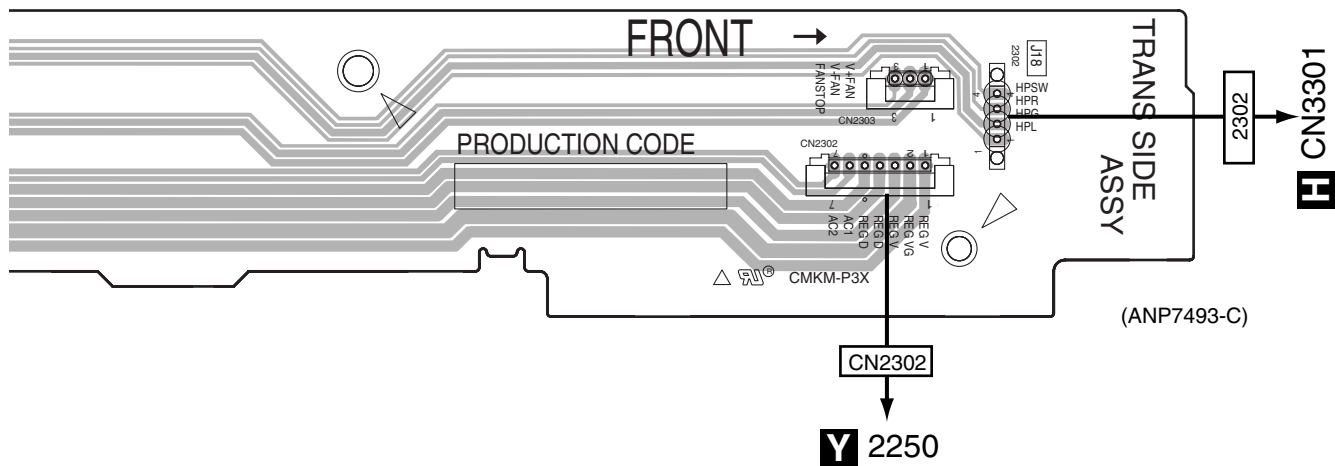
AD TRANS SIDE ASSY



AD

SIDE A

A

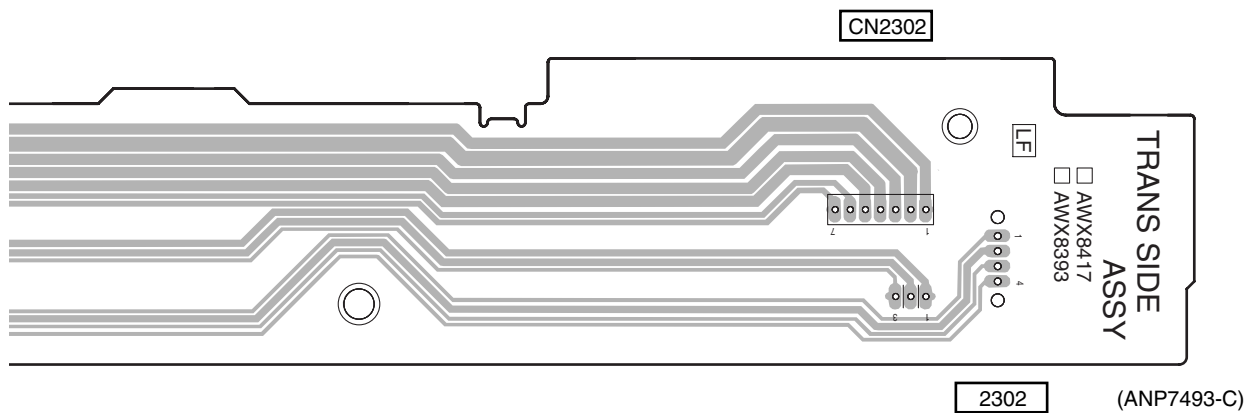


B

C

SIDE B

D



E

F

AD

SIDE B

SIDE B

● Line Voltage Selection

Line Voltage can be changed by the following modification:

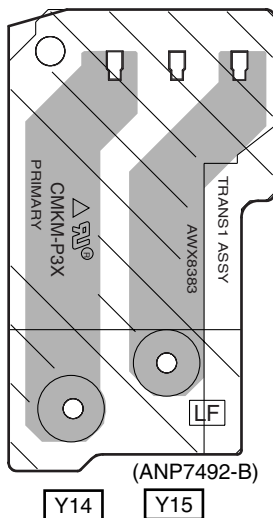
1. Disconnect the AC power cord.
2. Remove the cover.
3. Change the connection wire from TRANS 1 ASSY to PRIMARY ASSY (Terminal No. Y15) as follows.

Voltage	Terminal No.
220-230V	Y15 of TRANS 1 ASSY
240V	240V terminal of power transformer

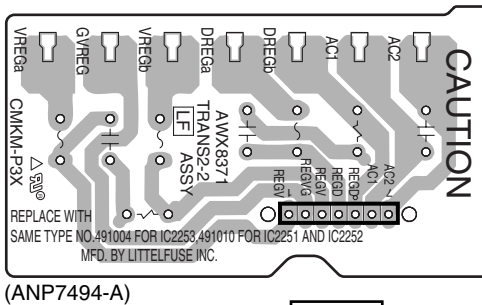
4. Stick a line voltage label on the rear panel.

Description	Part No.
220V label	AAX-193
240V label	AAX-192

AE TRANS 1 ASSY



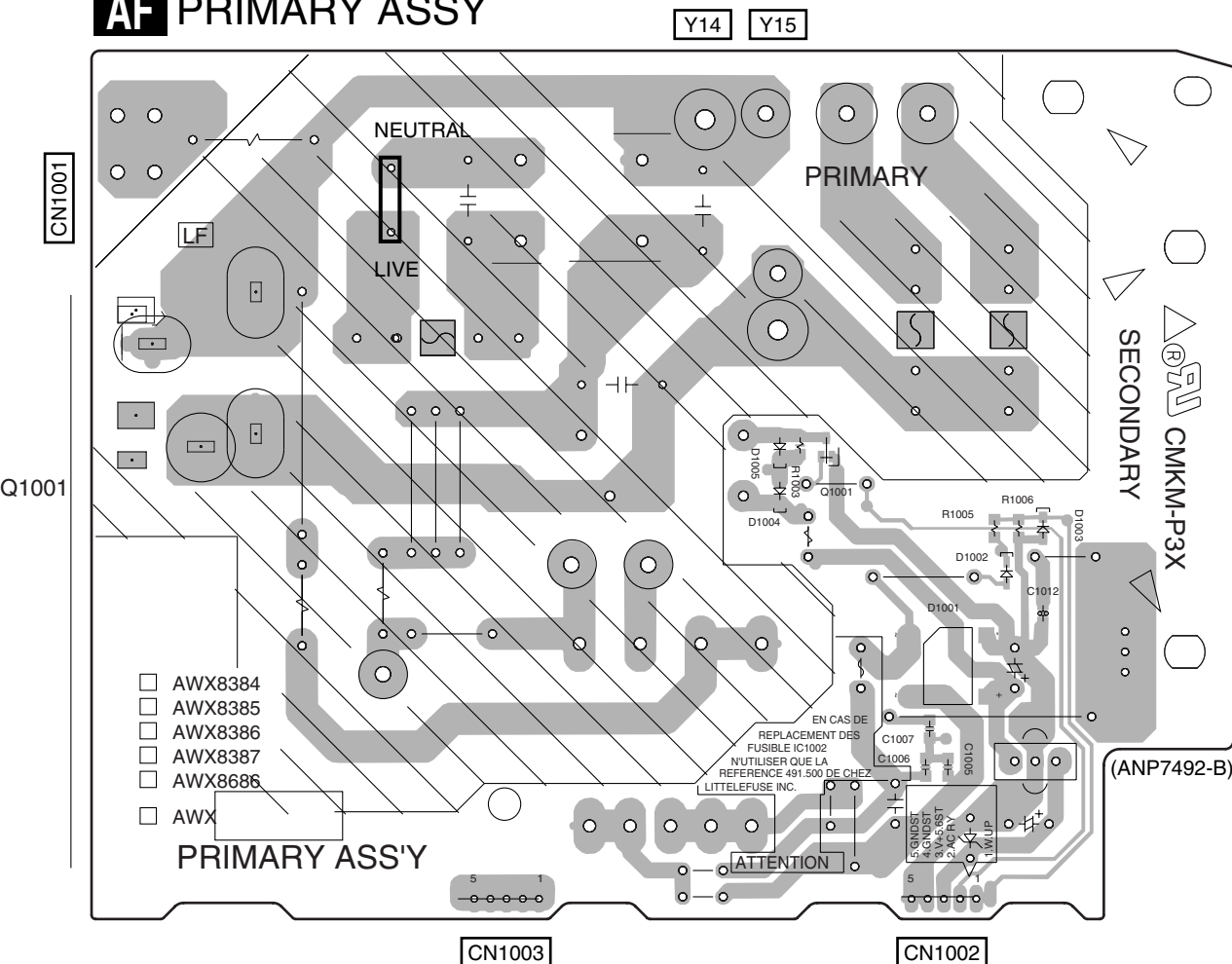
Y TRANS 2-2 ASSY



(ANP7494-A)

2250

AF PRIMARY ASSY



Y AE AF

Y AE AF

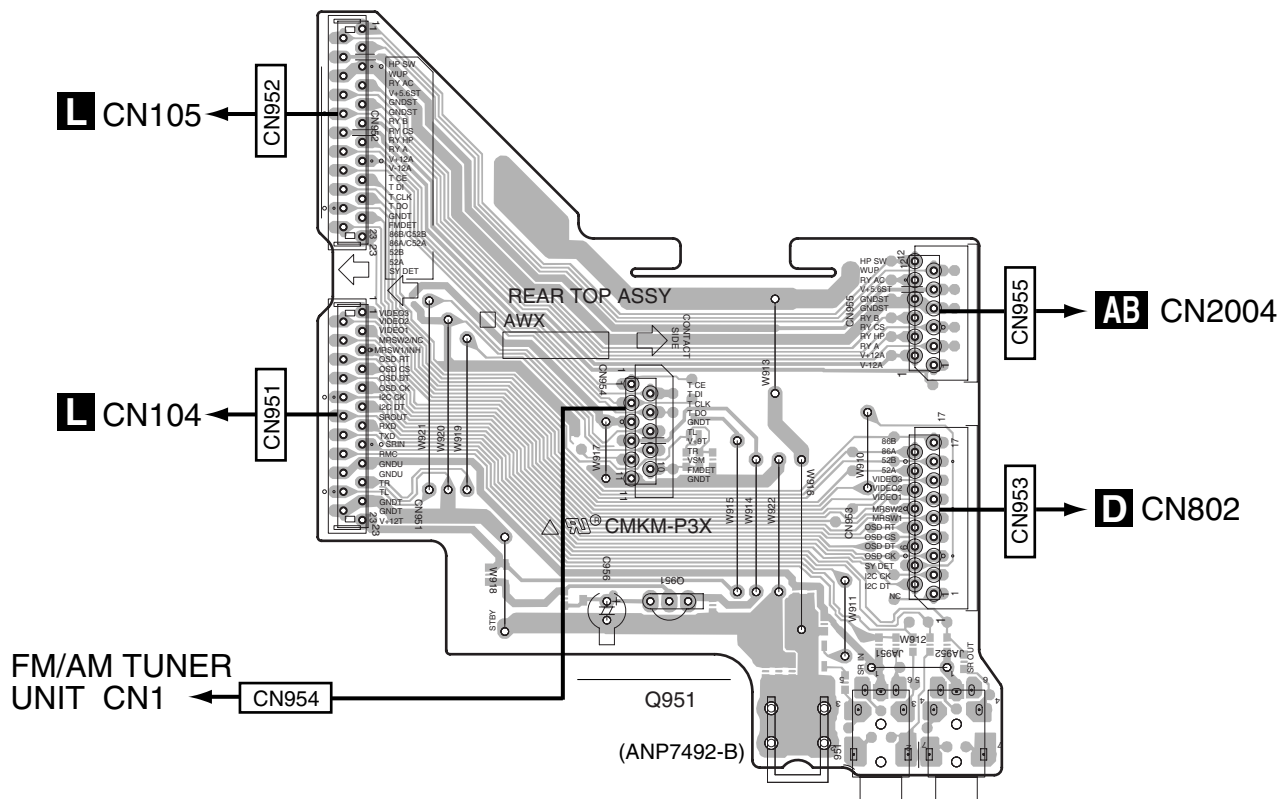
VSX-1015-K

4.19 REAR TOP ASSY

SIDE A

SIDE A

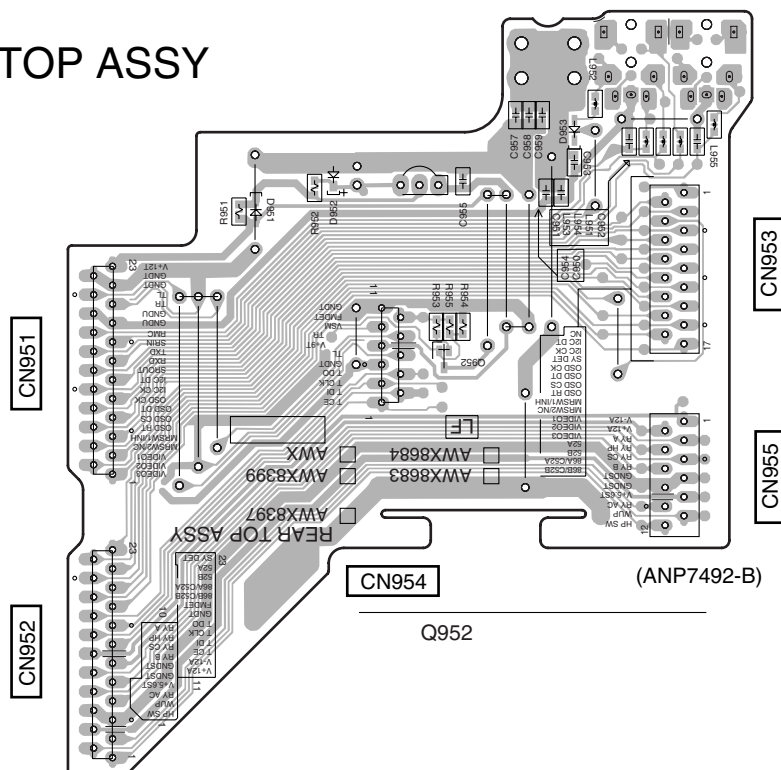
AC REAR TOP ASSY



SIDE B

SIDE B

AC REAR TOP ASSY



AC

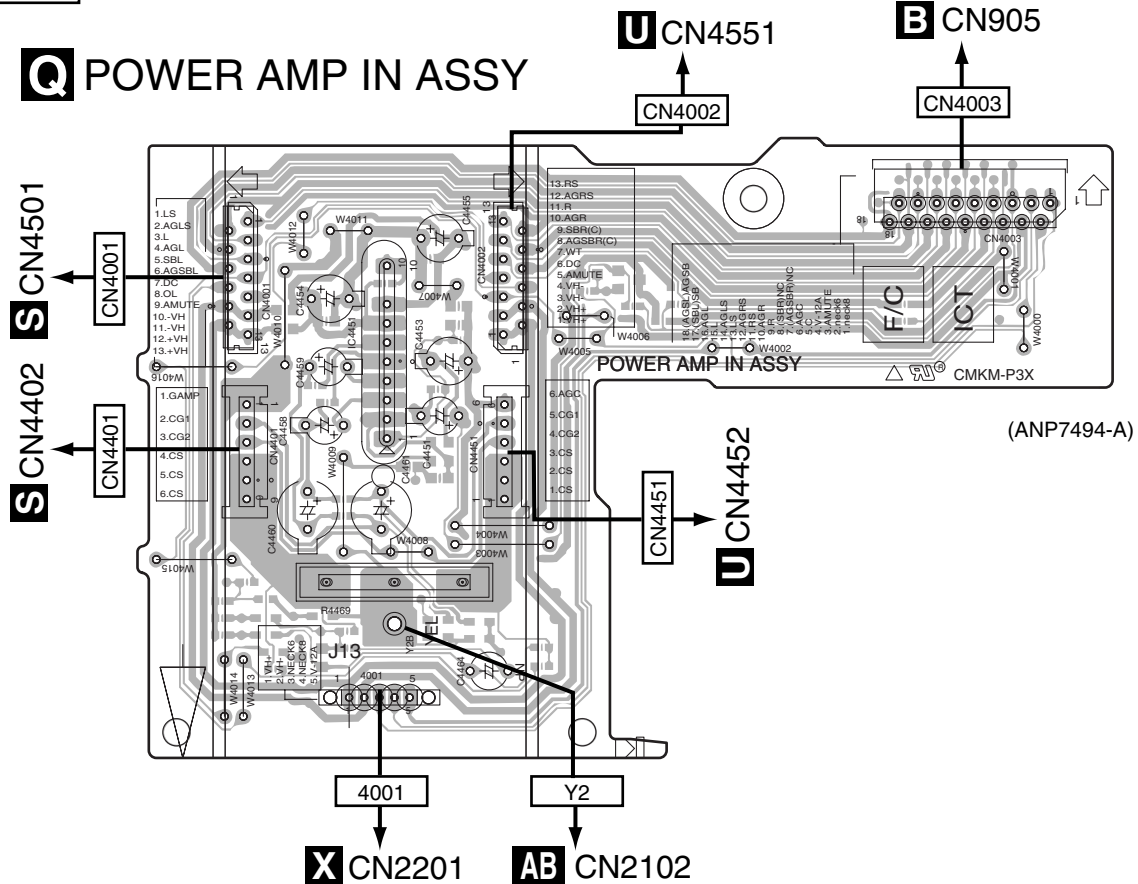
AC

4.20 POWER AMP IN ASSY

SIDE A

SIDE A

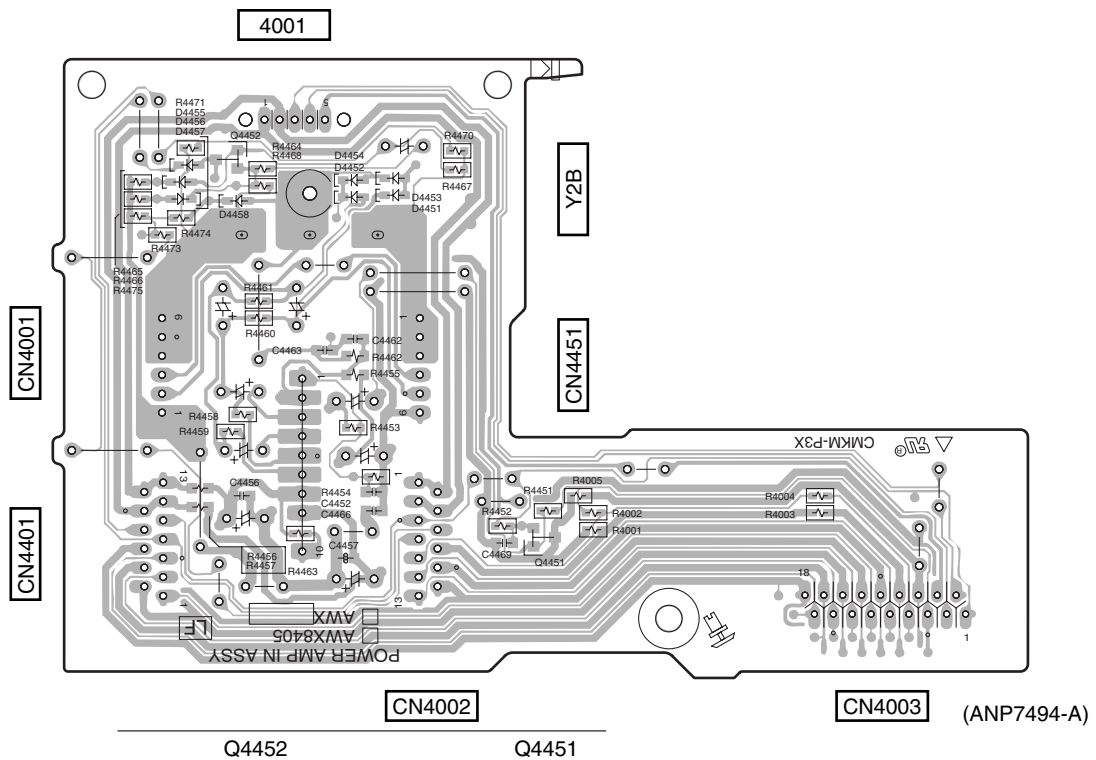
Q POWER AMP IN ASSY



SIDE B

SIDE B

Q POWER AMP IN ASSY



Q

Q

VSX-1015-K

101

5. PCB PARTS LIST

NOTES: ●Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.

●The Δ mark found on some component parts indicates the importance of the safety factor of the part.

Therefore, when replacing, be sure to use parts of identical designation.

●When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω $\rightarrow$ 56 x 10¹ $\rightarrow$ 561 RD1/4PU561J

47k Ω $\rightarrow$ 47 x 10³ $\rightarrow$ 473 RD1/4PU473J

0.5 Ω $\rightarrow$ R50 RN2H R50K

1 Ω $\rightarrow$ 1R0 RS1P 1R0K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω $\rightarrow$ 562 x 10¹ $\rightarrow$ 5621 RN1/4PC5621F

Mark No. Description Part No.

LIST OF WHOLE PCB ASSEMBLIES

NSP 1..MAIN ASSY AWK7868
2..MAIN CONTROL ASSY AWX8611
2..MULTI I/O ASSY AWX8681
2..COMPOSITE V ASSY AWX8612
2..S VIDEO ASSY AWX8613
2..COMPONENT ASSY AWX8614
2..VIDEO SIDE ASSY AWX8609
2..OPTICAL-IN ASSY AWX8682

NSP 1..COMPLEX ASSY AWK7872
2..VOLUME ASSY AWX8378
2..HEADPHONE ASSY AWX8380
2..FRONT-IN ASSY AWX8381
2..AUDIO CONNECT ASSY AWX8382
2..TRANS 1 ASSY AWX8383
2..PRIMARY ASSY AWX8386
2..REAR TOP ASSY AWX8399

NSP 2..FRONT-IN CONNECT ASSY AWX8416
2..DISPLAY ASSY AWX8616
2..MULTI JOG ASSY AWX8618

NSP 1..SECONDARY ASSY AWK7880
2..TRANS 2-1 ASSY AWX8370
2..DIODE ASSY AWX8376
2..TRANS SIDE ASSY AWX8417
2..REGULATOR ASSY AWX8679
2..SP/PS ASSY AWX8375

NSP 1..POWER AMP ASSY AWK7828
2..TRANS 2-2 ASSY AWX8371
2..POWER AMP-R ASSY AWX8404
2..POWER AMP IN ASSY AWX8405
2..POWER PROTECT ASSY AWX8407
2..POWER AMP -L ASSY AWX8403
2..VH TR ASSY AWX8411
2..POS1 1 L ASSY AWX8536
2..POS1 1 R ASSY AWX8539

NSP 2..POS1 2 L ASSY AWX8428

1..DSP ASSY AWX8572

1..FM/AM TUNER UNIT AXX7170

Mark No. Description Part No.

COMPLEX ASSY

OTHERS

Y15 BOARD IN JUMPER ADX7418
Y14 BOARD IN JUMPER ADX7419
J7, J8 JUMPER WIRE D15A05-100-2651

Mark No. Description Part No.

SECONDARY ASSY

OTHERS

Y8 BOARD IN JUMPER ADX7451
Y9 BOARD IN JUMPER ADX7452
Y10 BOARD IN JUMPER ADX7453
Y11 BOARD IN JUMPER ADX7454
Y12 BOARD IN JUMPER ADX7455

Y13 BOARD IN JUMPER ADX7461
J2501 JUMPER WIRE 5P D20PDD0520E
J11, J18 JUMPER WIRE 4P D20PDY0410E
J14 JUMPER WIRE 4P D20PDY0425E
J19 JUMPER WIRE 7P D20PDY0715E

POWER AMP ASSY

OTHERS

Y5 BOARD IN JUMPER ADX7404
Y6 BOARD IN JUMPER ADX7456
Y1 BOARD IN JUMPER ADX7457
Y3 BOARD IN JUMPER ADX7458
Y2 BOARD IN JUMPER ADX7459

Y4 BOARD IN JUMPER ADX7460
J13 JUMPER WIRE 5P D20PDY0530E
J22 JUMPER WIRE 6P D20PDY0615E
J12 JUMPER WIRE 7P D20PDY0710E

A MULTI I/O ASSY SEMICONDUCTORS

Q631, Q632, Q641, Q642 IMX25
Q651, Q652, Q661, Q662 IMX25
D691 UDZSR1(B)

CAPACITORS

C601-C604, C611-C614 CCSRCH101J50
C621-C624 CCSRCH101J50
C631, C632, C641, C642, CCSRCH331J50
C651, C652, C661, C662 CCSRCH331J50
C607, C608, C617, C618 CEAT100M50

C627, C628 CEAT100M50
C695, C696 CKSRYB103K50

RESISTORS

All Resistors RS1/16S###J

OTHERS

601, 602 6P PIN JACK AKB7089

Mark No.	Description	Part No.
JA604	2P PIN JACK	AKB7165
CN602	21P SOCKET	XKP3081
CN601	23P SOCKET	XKP3083

B AUDIO CONNECT ASSY

OTHERS

CN905	18P FFC CONNECTOR	52044-1845
CN904	21P PLUG	XKP3070
CN903	23P PLUG	XKP3071
CN902	21P SOCKET	XKP3081
CN901	23P SOCKET	XKP3083

C COMPOSITE V ASSY

SEMICONDUCTORS

IC731	BU4052BCF
IC701	NJM2595M
IC732	TK15420M
D701, D702	DAN202K

CAPACITORS

C712	CCSRCH101J50
C705, C706	CCSRCH181J50
C711	CCSRCH221J50
C701-C704, C707, C708	CEAT101M16
C713, C714, C736, C737	CEAT101M16
C715, C716	CKSRYB103K50
C790, C795	CKSRYB104K25
C796	CKSRYB105K6R3
C717	CKSRYB224K16
C709, C710, C734, C735	CKSRYB473K25

C738, C739	CKSRYB473K25
------------	--------------

RESISTORS

All Resistors	RS1/16S###J
---------------	-------------

OTHERS

701-703	2P PIN JACK	AKB7017
CN751	10P SOCKET	KP200TA10L
CN701	13P SOCKET	XKP3077

D S VIDEO ASSY

SEMICONDUCTORS

IC841	BU4052BCF
IC801, IC802	NJM2595M
IC851	PDC084B
IC842	TK15420M
Q852	2SC4081
D882	1SS355
D801, D802	DAN202K
D851	DAP202K

COILS AND FILTERS

L851, L852	LCYA100J2520
L853	LCYA330J2520

CAPACITORS

C862	CCSRCH101J50
C855	CCSRCH150J50
C856	CCSRCH180J50
C811-C814	CCSRCH181J50
C857, C858	CCSRCH240J50

	7			8	
Mark No.	Description		Part No.		
C866			CCSRCH330J50		
C825, C826, C859			CCSRCH470J50		
C805–C808, C815–C820			CEAT101M16		A
C843, C844			CEAT101M16		
C851, C852, C864			CEAT101M16		

C891-C894	CKSRYB103K50
C801-C804, C809, C810	CKSRYB104K25
C829, C830	CKSRYB221K50
C821-C824	CKSRYB473K25
C841, C842, C845, C846	CKSRYB473K25
C853, C854, C860, C861	CKSRYB473K25

RESISTORS

All Resistors	RS1/16S###J
---------------	-------------

OTHERS

X851 CRYSTAL RESONATOR (14.32MHz)	ASS1056
CN802 17P FFC CONNECTOR	52044-1745
CN811, CN812 4P MINI DIN SOCKET	AKP7043
CN851 15P SOCKET	XKP3078
CN801 17P SOCKET	XKP3079

E VIDEO SIDE ASSY

OTHERS

CN891 10P PLUG	KM200TA10
CN893 7P PLUG	KM200TA7
CN892 15P PLUG	XKP3067

F COMPONENT ASSY

SEMICONDUCTORS

IC5104	NJM2581M
IC5102, IC5103	TC74HC4052AF
D5001, D5002	1SS355

CAPACITORS

C5010, C5011, C5019, C5020	CEAT101M16
C5066-C5070, C5072	CKSRYB103K50
C5081-C5084	CKSRYB224K16
C5015-C5018	CKSRYB473K25

RESISTORS

All Resistors	RS1/16S###J
---------------	-------------

OTHERS

JA5002, JA5003 3P PIN JACK	AKB7124
JA5001 6P RCA PINJACK	AKB7128
CN5001, CN5051 7P SOCKET	KP200TA7L
5001 PCB BINDER	VEF1040

G OPTICAL-IN ASSY

COILS AND FILTERS

L961 CHIP SOLID INDUCTOR	QTL1013
--------------------------	---------

CAPACITORS

C965	CEAT101M16
C968	CKSRYB104K25
C961-C964, C966	CKSRYF104Z25

RESISTORS

Mark No.	Description	Part No.
	All Resistors	RS1/16S###J

OTHERS

A	JA961, JA962, JA963 OPT. LINK IN JA964 OPT. LINK IN CN961 CONNECTOR 961 SCREW PLATE	AKS7001 AKS7002 VKN1186 VNE1948
---	--	--

**H HEADPHONE ASSY
CAPACITORS**

B	C3303 C3304 C3305 C3301, C3302	CCSRCH471J50 CKSRYB103K50 CKSRYB104K25 CKSRYB392K50
---	---	--

RESISTORS

	All Resistors	RS1/16S###J
--	---------------	-------------

OTHERS

	CN3301 4P JUMPER CONNECTOR 3301 PHONE JACK KN3301 WRAPPING TERMINAL	52147-0410 AKN7029 VNF1084
--	---	----------------------------------

**I FRONT-IN ASSY
SEMICONDUCTORS**

C	IC3351 Q3351 D3354 D3351-D3353	UPC4570G2-A HN1C01FU DAN217 UDZS5R1(B)
---	---	---

COILS AND FILTERS

	L3353 CHIP SOLID INDUCTOR	QTL1013
--	---------------------------	---------

CAPACITORS

D	C3353, C3385, C3386 C3381, C3382 C3354 C3351 C3352, C3355, C3357, C3361, C3362	CCSRCH101J50 CCSRCH221J50 CCSRCH330J50 CCSRCH471J50 CEAT100M50
---	--	--

	C3391, C3392 C3372, C3373 C3383, C3384, C3387, C3388 C3396 C3359, C3360, C3365, C3376	CEAT330M25 CEAT470M25 CEJQ100M16 CKSRYB102K50 CKSRYB103K50
--	---	--

	C3389, C3390, C3394 C3366, C3367, C3371, C3378, C3395	CKSRYB103K50 CKSRYB104K25
--	--	------------------------------

RESISTORS

E	All Resistors	RS1/16S###J
---	---------------	-------------

OTHERS

	CN3351 15P PLUG JA3352 FRONT AV INPUT JA3351 REMOTE CONTROL JACK KN3351, KN3352 WRAPPING TERMINAL	XKP3067 AKX7019 RKN1004 VNF1084
--	---	--

**J FRONT-IN CONNECT ASSY
CAPACITORS**

	C3341, C3342	CKSRYB104K25
--	--------------	--------------

Mark No.	Description	Part No.
----------	-------------	----------

OTHERS

CN3342 15P FFC CONNECTOR CN3341 15P SOCKET KN3341 WRAPPING TERMINAL	52045-1545 XKP3078 VNF1084
---	----------------------------------

**L MAIN CONTROL ASSY
SEMICONDUCTORS**

IC381 IC451 IC101 IC481 IC501	BD3812F BD3813KS BD3841FS BU1924FS PEG123A
---	--

IC382 IC502 IC504 IC102-IC106, IC111, IC321, IC341 IC361, IC401	TC4052BFN TC74VHC08FTS1 TC74VHCT125AFTS1 UPC4570G2-A UPC4570G2-A
---	--

Q482, Q523 Q169, Q170, Q321-Q324 Q341-Q344, Q361-Q364 Q381-Q384 Q175, Q229, Q230	2SA1037K 2SD2704K 2SD2704K 2SD2704K 2SK208
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Q483, Q503-Q505, Q516, Q517 Q386, Q522 Q511, Q521, Q524 Q501 Q398, Q507, Q514, Q515	DTC143EUA DTC124EUA DTC143EUA DTC143TK UMB1N
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Q172, Q176, Q235, Q506 D175, D229, D230, D441, D442 D451, D473, D501-D503 D506-D512, D516-D519, D521 D474, D475	UMD2N 1SS355 1SS355 1SS355 DAN202K
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D191-D193 D504, D505 D515 D443, D444	DAN217 DAP202K UDZS5R1(B) UDZS6R8(B)
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COILS AND FILTERS

L121, L475 CHIP FERRITE BEAD L476, L481 L471-L474 CHIP SOLID INDUCTOR	ATL7002 LFEA2R2J QTL1013
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CAPACITORS

C475 (0.33F/5.5V) C101-C120, C123-C128, C131, C132 C151, C152, C169, C170 C243, C244, C263, C283, C284 C325, C326, C345, C346, C365	ACH7189 CCSRCH101J50 CCSRCH101J50 CCSRCH101J50 CCSRCH101J50
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C383, C384, C405, C406 C457, C458 C121, C122, C129, C130 C492, C493 C205-C208, C245-C248, C265	CCSRCH101J50 CCSRCH101J50 CCSRCH220J50 CCSRCH270J50 CCSRCH331J50
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C267, C285-C288 C203, C204 C489 C370 C490	CCSRCH331J50 CCSRCH471J50 CCSRCH561J50 CEANP330M16 CEAT101M10
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C133-C148, C161, C162 C209, C210, C213, C214 C249, C250, C269, C270	CEAT100M50 CEAT100M50 CEAT100M50
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Mark No. Description

Part No.

C289, C290, C451–C456, C517
C327, C328, C347, C348

CEAT100M50
CEAT101M16

C367, C368, C407, C408
C507
C181

CEAT101M16
CEAT102M6R3
CEAT221M6R3
CEAT2R2M50
CEAT2R2M50

C201, C202, C241, C242, C487
C261, C262, C281, C282, C515

C501
C167, C168, C321, C322
C329, C330, C341, C342
C349, C350, C361, C362, C369
C401, C402, C409, C410

CEAT331M10
CEAT470M25
CEAT470M25
CEAT470M25
CEAT470M25

C443, C444
C323, C324, C343, C344
C363, C364, C387, C388
C403, C404
C491

CEAT471M10
CEAT4R7M50
CEAT4R7M50
CEAT4R7M50
CKSRYB102K50

C153, C154, C171, C172
C191–C193, C215, C216
C235, C236, C257, C258, C266
C277, C278, C297, C298
C331, C332, C351, C352

CKSRYB103K50
CKSRYB103K50
CKSRYB103K50
CKSRYB103K50
CKSRYB103K50

C371, C372, C381, C382
C385, C386, C391–C398
C411, C412, C441, C442
C465–C467, C471–C473, C476
C502

CKSRYB103K50
CKSRYB103K50
CKSRYB103K50
CKSRYB103K50
CKSRYB103K50

C182, C237, C238, C459–C462
C573
C503
C264
C431–C438

CKSRYB104K16
CKSRYB104K16
CKSRYB105K10
CKSRYB223K25
CKSRYB223K50

C572
C251, C252, C271, C272
C291, C292, C366, C463, C464, C485
C506, C509
C512, C513

CKSRYB224K16
CKSRYB472K50
CKSRYB472K50
CKSRYB472K50
CKSRYB473K16

C510
C268

CKSRYB473K25
CKSRYB562K50

RESISTORS

R441, R442
Other Resistors

RS1LMF101J
RS1/16S###J

OTHERS

X481 CERAMIC RESONATOR
(4.332 MHz)

ASS7004

X501 CERAMIC RESONATOR
(15.7 MHz)

XSS3004

CN106, CN107
15P FFC CONNECTOR

52045-1545

CN101 26P FFC CONNECTOR
CN116–CN119 4P PIN JACK
CN114 17P SOCKET
CN113 4P SOCKET
101, 102 PCB BINDER

52045-2645
AKB7015
KP200TA17L
KP200TA4L
VEF1040

CN103 21P PLUG
CN102, CN104, CN105 23P PLUG
CN111, CN112, CN115 23P SOCKET

XKP3070
XKP3071
XKP3083

Mark No. Description

Part No.

**M DSP ASSY
SEMICONDUCTORS**

IC601
IC701
IC801
⚠ IC902
⚠ IC901

AK4114VQ
AK4628VQE
DSPC56371AF180
LM1117DT-ADJ
NJM2391DL1-33

IC851
IC501
IC952
IC871
IC802

PDC121A8
TC74HCU04AF
TC74VHCT244AFTS1
TC7WH125FU
TC7WU04FU

Q801
D702
D701
D901, D902

UN5212
DAN202K
DAP202K
UDZS5R6(B)

COILS AND FILTERS

L802, L803, L901, L902
CHIP FERRITE BEAD
L501–L503, L601, L602, L605
CHIP SOLID INDUCTOR
L701, L702, L801, L804, L851
CHIP SOLID INDUCTOR

ATL7002

QTL1013

QTL1013

L871, L952
CHIP SOLID INDUCTOR

QTL1013

CAPACITORS

C705
C612, C613
C505, C506
C511, C605, C608, C620, C702
C707–C714, C717, C801, C803

CCSRCH101J50
CCSRCH120J50
CCSRCH470J50
CCSRCH471J50
CCSRCH471J50

C805, C807, C809, C814, C818
C821, C823, C826, C828, C830
C832, C851, C871, C916, C919
C954
C816, C817

CCSRCH471J50
CCSRCH471J50
CCSRCH471J50
CCSRCH471J50
CCSRCH8R0D50

C956
C513, C703, C715, C834, C835
C908, C909
C607, C618, C718
C617

CEVW100M16
CEVW101M16
CEVW101M16
CEVW470M6R3
CKSRYB102K50

C503, C504, C701, C820, C825
C917
C606, C609, C614, C619, C704
C706, C716, C720, C802, C804
C806, C808, C810, C815, C819

CKSRYB103K50
CKSRYB103K50
CKSRYB104K16
CKSRYB104K16
CKSRYB104K16

C822, C824, C827, C829, C831
C833, C852, C872, C907, C918
C955
C512
C621

CKSRYB104K16
CKSRYB104K16
CKSRYB104K16
CKSRYB105K6R3
CKSRYB474K10

RESISTORS

R802
R962, R970
R628
Other Resistors

RAB4C101J
RAB4C104J
RS1/16S1802F
RS1/16S###J

OTHERS

X601 CRYSTAL RESONATOR
(12.288MHz)

ASS7046

Mark No. Description

X801 CRYSTAL RESONATOR
(20MHz)
JA501 2P PIN JACK

CN601 10P FFC CONNECTOR
CN902 13P SOCKET
CN952 15P SOCKET
CN701 19P SOCKET

Part No.

VSS1171
AKB7131

VKN1414
XKP3077
XKP3078
XKP3080

Mark No. Description**SEMICONDUCTORS**

D3251

Part No.

SLR-343BBT(GHJ)

SWITCHES AND RELAYS

S3251
S3252-S3254

ASX7031
VSG1024

CAPACITORS

C3251, C3252

CKSRYB103K50

RESISTORS

All Resistors

RS1/16S###J

OTHERS

3251 5P CABLE HOLDER

51063-0505

**N VOLUME ASSY
SWITCHES AND RELAYS**

S3201
S3202-S3209

ASX7004
VSG1024

CAPACITORS

C3201, C3202

CKSRYB103K50

RESISTORS

All Resistors

RS1/16S###J

OTHERS

3201 5P CABLE HOLDER

51063-0505

**O DISPLAY ASSY
SEMICONDUCTORS**

IC3001
IC3002
Q3001
Q3002, Q3005
D3002-D3004, D3006

PE5403A
RPM7140-H9
2SA1576A
DTC124EUA
1SS355

D3001
D3010

DAN202K
SLI-343DCW(STU)

COILS AND FILTERS

L3001

LFEA2R2J

SWITCHES AND RELAYS

S3001-S3016

VSG1024

CAPACITORS

C3103-C3105, C3107
C3007
C3003
C3018
C3019-C3022

CCSRCH471J50
CEAT101M6R3
CEAT221M6R3
CEAT470M50
CKSRYB102K50

C3001, C3002, C3006, C3008
C3016, C3017, C3032
C3011, C3012
C3106 (221/35V)

CKSRYB103K50
CKSRYB103K50
CKSRYB104K25
XCH3011

RESISTORS

⚠ R3056
Other Resistors

RS1/16S104J
RS1/16S###J

OTHERS

X3001 CERAMIC RESONATOR
(5MHz)
3001, 3002 5P CABLE HOLDER
CN3001 26P FFC CONNECTOR
V3001 FL TUBE

VSS1142

51063-0505
52045-2645
AAV7108

**Q POWER AMP IN ASSY
SEMICONDUCTORS**

IC4451
Q4452
Q4451
D4453-D4458
D4451, D4452

PA9010A
2SA1255
2SC3326
1SS355
UDZS10(B)

CAPACITORS

C4456, C4457 (221/100V)
C4452
C4462, C4463
C4464
C4460, C4461

ACG7041
CCSRCH221J50
CCSRCH6R0D50
CEANP2R2M50
CEHAT100M2A

C4451
C4453
C4458, C4459
C4454, C4455

CEHAT100M50
CEHAT331M10
CEHAT470M25
CEHAT470M63

RESISTORS

R4469 (0.18Ω)
R4455
R4462
Other Resistors

ACN7121
RN1/10SE1201D
RN1/10SE3302D
RS1/16S###J

OTHERS

4001 5P CABLE HOLDER
CN4003 18P FFC CONNECTOR
CN4001, CN4002 13P PLUG
CN4401, CN4451 6P SOCKET

51048-0500
52044-1845
XKP3066
KP250NA6

**R POWER PROTECT ASSY
SEMICONDUCTORS**

IC4051
Q4051, D4053
Q4053
Q4052
Q4054

NJM4558MD
2SC4081
DTC124EUA
UMB1N
UMH1N

D4051, D4053

1SS355

CAPACITORS

C4054, C4055, C4056
C4052, C4053
C4051

CKSRYB103K50
CKSRYB104K25
CKSRYB223K50

RESISTORS

All Resistors

RS1/16S###J

P MULTI JOG ASSY

5	6
Mark No.	Description
Part No.	

OTHERS

CN4053	15P FFC CONNECTOR	52044-1545
CN4051, CN4052	11P PLUG	XKP3065
CN4054		S3B-EH

S POWER AMP-L ASSY SEMICONDUCTORS

△ IC4101, IC4201, IC4301	PA9010A
△ IC4102, IC4202, IC4302	SAPM01N
△ IC4103, IC4203, IC4303, IC4453	SAPM01P
Q4102, Q4202, Q4302	2SA1255
Q4101, Q4201, Q4301	2SC3326

D4102, D4104-D4108, D4202	1SS355
D4204-D4208, D4302, D4304-D4308	1SS355
D4101, D4103, D4201, D4203, D4301	UDZS10(B)
D4303	UDZS10(B)

CAPACITORS

C4106, C4107, C4206, C4207	ACG7041
(221/100V)	
C4306, C4307	ACG7041
(221/100V)	
C4102, C4202, C4302	CCSRCH221J50

C4112, C4113, C4212, C4213	CCSRCH6R0D50
C4312, C4313	CCSRCH6R0D50
C4114, C4214, C4314	CEANP2R2M50
C4401, C4402	CEAT331M2A
C4110, C4111, C4210, C4211	CEHAT100M2A

C4310, C4311	CEHAT100M2A
C4101, C4201, C4301	CEHAT100M50
C4103, C4203, C4303	CEHAT331M10
C4108, C4109, C4208, C4209	CEHAT470M25
C4308, C4309	CEHAT470M25

C4104, C4105, C4204, C4205	CEHAT470M63
C4304, C4305	CEHAT470M63

RESISTORS

△ R4119, R4219, R4319	ACN7121
(0.18 Ω)	
△ R4131, R4132, R4231, R4232	ACN7132
△ R4331, R4332, R4482	ACN7132
(0.047 Ω)	

R4573	RD1/2VM1R0J
R4105, R4205, R4305	RN1/10SE1201D
R4112, R4212, R4312	RN1/10SE3302D
Other Resistors	RS1/16S###J

OTHERS

CN4502	11P SOCKET	XKP3076
CN4501	13P SOCKET	XKP3077
CN4503, CN4504	2P CONNECTOR	B02B-XASK-1
CN4402	6P PLUG	KM250NA6L
KN4401, KN4402		VNF1084
	WRAPPING TERMINAL	

T POSI 1 L ASSY OTHERS

J4501	2P CONNECTOR ASSY	ADX7471
△ TH4501	POSISTOR	PTFM04BH222Q2N34B0

7	8
Mark No.	Description
Part No.	

U POWER AMP-R ASSY SEMICONDUCTORS

△ IC4151, IC4251, IC4351	PA9010A
△ IC4152, IC4252, IC4352, IC4452	SAPM01N
△ IC4153, IC4253, IC4353	SAPM01P
Q4152, Q4252, Q4352	2SA1255
Q4151, Q4251, Q4351	2SC3326

Q4403, Q4404	2SC4081
D4152, D4154-D4158, D4252	1SS355
D4254-D4258, D4352, D4354-D4358	1SS355
D4151, D4153, D4251, D4253, D4351	UDZS10(B)
D4353	UDZS10(B)

CAPACITORS

C4156, C4157, C4256, C4257	ACG7041
(221/100V)	
C4356, C4357 (221/100V)	ACG7041
C4152, C4252, C4352	CCSRCH221J50
C4162, C4163, C4262, C4263	CCSRCH6R0D50

C4362, C4363	CCSRCH6R0D50
C4164, C4264, C4364	CEANP2R2M50
C4405	CEAT331M10
C4403, C4404	CEAT331M2A
C4160, C4161, C4260, C4261	CEHAT100M2A

C4360, C4361	CEHAT100M2A
C4151, C4251, C4351	CEHAT100M50
C4153, C4253, C4353	CEHAT331M10
C4158, C4159, C4258, C4259	CEHAT470M25
C4358, C4359	CEHAT470M25

C4154, C4155, C4254, C4255	CEHAT470M63
C4354, C4355	CEHAT470M63

RESISTORS

△ R4169, R4269, R4369 (0.18 Ω/5W)	ACN7121
△ R4181, R4182, R4281, R4282	ACN7132
(0.047 Ω)	
△ R4381, R4382, R4481 (0.047 Ω)	ACN7132
R4574	RD1/2VM1R0J

R4155, R4255, R4355	RN1/10SE1201D
R4162, R4262, R4362	RN1/10SE3302D
Other Resistors	RS1/16S###J

OTHERS

CN4552	11P SOCKET	XKP3076
CN4551	13P SOCKET	XKP3077
CN4553	2P CONNECTOR	B02B-XASK-1
CN4452	6P PLUG	KM250NA6L
KN4403, KN4404		VNF1084
	WRAPPING TERMINAL	

V POSI 1 R ASSY OTHERS

J4551	2P CONNECTOR ASSY	ADX7471
△ TH4503	POSISTOR	PTFM04BH222Q2N34B0

W REGULATOR ASSY SEMICONDUCTORS

IC2511	NJM2100M
△ IC2506, IC2507	NJM78M05FA

Mark No. Description

⚠ IC2501
⚠ IC2503
⚠ IC2504

Part No.

NJM78M12FA
NJM78M56FA
NJM79M05FA

⚠ IC2502
Q2501
Q2502
Q2504

NJM79M12FA
2SC4793D1
UMD2N
DTC124EUA
1SR154-400

⚠ D2501-D2504, D2514, D2515

D2513

1SS355

⚠ D2507, D2521
D2505, D2506, D2511, D2512
D2527-D2529, D2532, D2533
D2518

D3SBA20(B)
RB501V-40
UDZS6R2(B)
UDZS27(B)

CAPACITORS

C2517, C2518
C2519, C2545, C2546
C2515, C2516, C2527, C2536
C2525
C2509, C2510

CEANP102M16
CEAT100M50
CEAT101M16
CEAT221M16
CEAT221M25

C2520
C2512
C2529
C2511
C2501, C2502

CEANP470M25
CEAT222M16
CEAT222M35
CEAT332M16
CEAT332M25

C2537
C2523
C2541, C2542
C2534

CEAT470M50
CEAT472M16
CEAT4R7M50
CKSRYB102K50
CKSRYB103K50

C2507, C2508, C2513, C2514, C2521

C2524, C2526, C2539, C2547, C2555
C2553, C2554

CKSRYB103K50
CKSRYB104K25

RESISTORS

All Resistors

RS1/16S###J

OTHERS

2502 4P CABLE HOLDER
2503, 2504 5P CABLE HOLDER
CN2505 7P JUMPER CONNECTOR
H2501-H2504 FUSE CLIP
CN2514 17P PLUG

51048-0400
51048-0500
52147-0710
AKR7001
KM200TA17

CN2525 4P PLUG
CN2503 7P PLUG
2507 PCB BINDER
KN2501, KN2502
WRAPPING TERMINAL

KM200TA4
KM200TA7
VEF1040
VNF1084

CN2501, CN2527 13P PLUG
CN2526 15P PLUG
CN2502 17P PLUG
CN2521 19P PLUG
CN2511, CN2512, CN2515 23P PLUG

XKP3066
XKP3067
XKP3068
XKP3069
XKP3071

**X TRANS 2-1 ASSY
SEMICONDUCTORS**

⚠ IC2201, IC2202 (7A)
Q2203
Q2204, Q2205
⚠ D2216, D2217
⚠ D2201

AEK7021
RN1901
UMD2N
1SR154-400
S1WB(A)60SD

D2203-D2206, D2207, D2208

UDZS10(B)

Mark No. Description

D2202, D2215
D2209, D2210
D2211-D2214

Part No.

UDZS13(B)
UDZS7R5(B)
UDZS9R1(B)

CAPACITORS

C2202, C2203 (0.1μF/100V)
C2215
C2209, C2210
C2213, C2214
C2216

ACE7037
CEANP470M50
CEAT101M63
CEAT221M63
CEAT470M50

C2207, C2208

CEAT471M2A

RESISTORS

⚠ R2207, R2208
⚠ R2202, R2203
R2210
⚠ R2205, R2206
Other Resistors

RD1/2LMF332J
RD1/4MUF4R7J
RD1/4MUF681J
RS1LMF472J
RS1/16S###J

OTHERS

CN2202 4P JUMPER CONNECTOR
CN2205 6P JUMPER CONNECTOR
H2201-H2204 FUSE CLIP

52147-0410
52147-0610
AKR7001

**Y TRANS 2-2 ASSY
SEMICONDUCTORS**

⚠ IC2253 (4A)
⚠ IC2251, IC2252 (10A)

AEK7018
AEK7022

CAPACITORS

C2251-C2253

CQMBA104J50

RESISTORS

⚠ R2251
⚠ R2252

RD1/4MUF100J
RD1/4MUF4R7J

OTHERS

2250 7P CABLE HOLDER

51048-0700

**Z DIODE ASSY
SEMICONDUCTORS**

⚠ D2241, D2242

D5SBA20(B)

**AA VH TR ASSY
SEMICONDUCTORS**

⚠ Q2231
⚠ Q2233
⚠ Q2232
⚠ Q2234
⚠ D2231, D2232

2SA1514K
2SA1837D1
2SC3906K
2SC4793D1
1SR154-400

RESISTORS

All Resistors

RS1/16S###J

OTHERS

2205 6P CABLE HOLDER

51048-0600

**AB SP/PS ASSY
SEMICONDUCTORS**

Q2001-Q2005

DTC114TUA

5	6
Mark No. Description	Part No.
D2001-D2010	1SS355
COILS AND FILTERS	
L2001-L2007 AF CHOKE COIL (1.5μH)	ATH1053
SWITCHES AND RELAYS	
RY2001-RY2005	XSR3002
CAPACITORS	
C2051, C2052 (15000μF/71V)	ACH7218
C2023	CEAT101M50
C2001-C2014	CFTLA224J50
C2025-C2029	CKSRYB102K50
C2015-C2019, C2021, C2022	CQMBA103J50

RESISTORS	
R2051, R2052	RD1/4MUF473J
⚠ R2008-R2014	RS1/2LMF4R7J
⚠ R2001-R2007	RS1LMF2R2J
⚠ R2015, R2016	RS2LMF331J
R2017, R2018	RS1LMF471J

OTHERS	
2005 4P CABLE HOLDER	51048-0400
CN2004 12P FFC CONNECTOR	52045-1245
CN2113 6P SPEAKER TERMINAL	AKE7108
CN2114, CN2115	AKE7110
4P SPEAKER TERMINAL	
CN2003, CN2006 5P PLUG	KM200TA5

AC REAR TOP ASSY	
SEMICONDUCTORS	
Q951	2SD1858X
Q952	2SC4081
D951, D953	1SS355
D952	UDZS10(B)

COILS AND FILTERS	
L951-L955 CHIP SOLID INDUCTOR	QTL1013

CAPACITORS	
C956	CEAT101M16
C957	CKSRYB103K50
C953, C958	CKSRYB104K25

RESISTORS	
All Resistors	RS1/16S###J

OTHERS	
CN955 12P FFC CONNECTOR	52044-1245
CN953 17P FFC CONNECTOR	52044-1745
CN954 11P FFC CONNECTOR	52045-1145
CN951, CN952 23P SOCKET	AKP7075
951 SCREW PLATE	VNE1948
JA951, JA952 4P MINI JACK + SW	XKN3015

AD TRANS SIDE ASSY	
OTHERS	
2302 4P CABLE HOLDER	51048-0400
2303 7P CABLE HOLDER	51048-0700
CN2304 4P JUMPER CONNECTOR	52147-0410
CN2302 7P JUMPER CONNECTOR	52147-0710

7	8
Mark No. Description	Part No.
AE TRANS 1 ASSY	
TRANS 1 Assy has no service parts.	

AF PRIMARY ASSY	
SEMICONDUCTORS	
⚠ IC1001	NJM78M56FA
Q1001	DTC143EUA
D1002, D1004, D1005	1SS355
⚠ D1001	S1WB(A)60SD
D1003	UDZS5R1(B)

COILS AND FILTERS	
⚠ L1001 LINE FILTER (0.3mH)	XTF3004
TRANSFORMERS	
⚠ T1001	ATT7040

SWITCHES AND RELAYS	
⚠ RY1001	XSR3003

CAPACITORS	
⚠ C1002 (0.01 μF/275V)	ACE7013
C1008	CEAT102M25
C1009	CEAT221M25
C1004	CQMBA103J50
⚠ C1003 (10000 pF/250V)	XCG3009

RESISTORS	
R1002	RD1/2VM221J
Other Resistors	RS1/16S###J

OTHERS	
⚠ CN1005 1P AC OUTLET	AKP1034
H1001, H1002 FUSE CLIP	AKR7001
CN1002, CN1003 5P SOCKET	KP200TA5L
⚠ CN1001 AC CORD SOCKET	RKP1751
KN1001 WRAPPING TERMINAL	VNF1084

AG POSI 2 L ASSY	
OTHERS	
J4502	ADX7471
TH4502	PTFM04BD222Q2N34B0

FM/AM TUNER UNIT	
FM/AM TUNER UNIT has no service part.	

6. ADJUSTMENT

There is no information to be shown in this chapter.

A

■

B

■

C

■

D

■

E

■

F

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 PROTECTION CIRCUIT CONTROL SPECIFICATION

Microcomputer-related ports

DC_PROT (pin 74 of IC501: MAIN CONTROL Assy)

Input port : For DC detection

OL_DET (pin 73 of IC501: MAIN CONTROL Assy)

Input port : To detect overloading at the amplifier
(Interrupt port)

FAN_STOP (pin 92 of IC501: MAIN CONTROL Assy)

Input port : To detect Fan forced stop

FAN_DRIVE (pin 91 of IC501: MAIN CONTROL Assy)

: For Fan on/off

TEMP2 (pin 44 of IC3001: DISPLAY Assy)

Input port : To detect temperature

The following control processes are activated immediately before the relay system is turned on upon power-on. The time is 4.8 seconds after power-on. (Control of the relay system is enabled 5.2 seconds after power-on.)

Only DC detection is enabled 2 seconds after power-on to activate it before other protection functions.

① DC detection (defect detection)

Only DC detection is enabled 2 seconds after power-on.

If there is a fault in the power amplifier or a high-level signal lower than 5 Hz is input, the DC_PROT port becomes "L"

Detecting "L" the microcomputer performs the following operations:

1. System muting on
2. Speaker relay off (Control with the display microcomputer)

The warning indication "AMP ERR" appears on the FL display.

If this status continues for more than 3 seconds, the power is turned off (for Standby mode).

Do not accept the key input afterward.

(Flash MCACC LED always till turns the primary side off.)

If the port becomes "H" within 3 seconds, the unit resets automatically.

DC_PROT port performs the chattering check for 1 msec.

In addition, there is the case that detection delays for maximum 20 msec because performs monitor of DC_PROT port with a main loop.

Even if turns the primary side off and turns on once again.

If detects DC once and turned the power off, do not accept the key input afterward.

However, power on is possible when the following key was pressed to be able to key input in the production line and service.

1. Test mode (remote control code : A55F)
2. When the ENTER key and VIDEO 2 key are both held pressed for 2 seconds.
(Be effective when turned the power off by DC detection regarding 2.)

② Overload detection (abnormality detection)

If the speaker terminals are short-circuited or low-load driving is detected, the OL_DET port becomes "L"

Detecting "L" edge interrupt in an interrupt process, the microcomputer performs the following operations:

1. System muting on
2. Speaker relay off (Control with the display microcomputer)
3. Power off (Standby mode)

③ Diagnostic mode

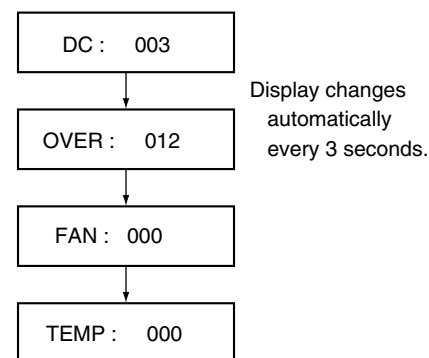
This mode is only for servicing and checking the circuit design, and not open to users.

When the VIDEO 1 key and ENTER key are both held pressed for 2 seconds in Standby mode, the power is turned on, and the number of times of each defect or Speaker relay off by abnormality detection is sequentially displayed on the FL display.

Displayed items:

- DC detection
- Overload detection
- Fan detection
- Temperature detection

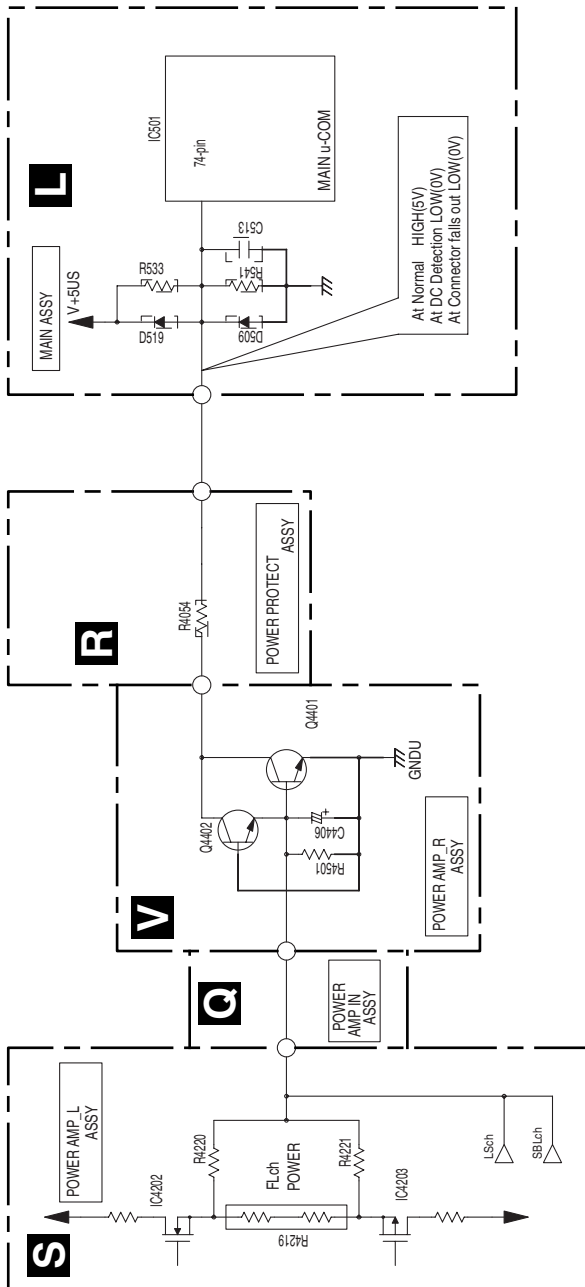
Hold the VIDEO 1 key and ENTER key pressed for 2 seconds in Standby mode.



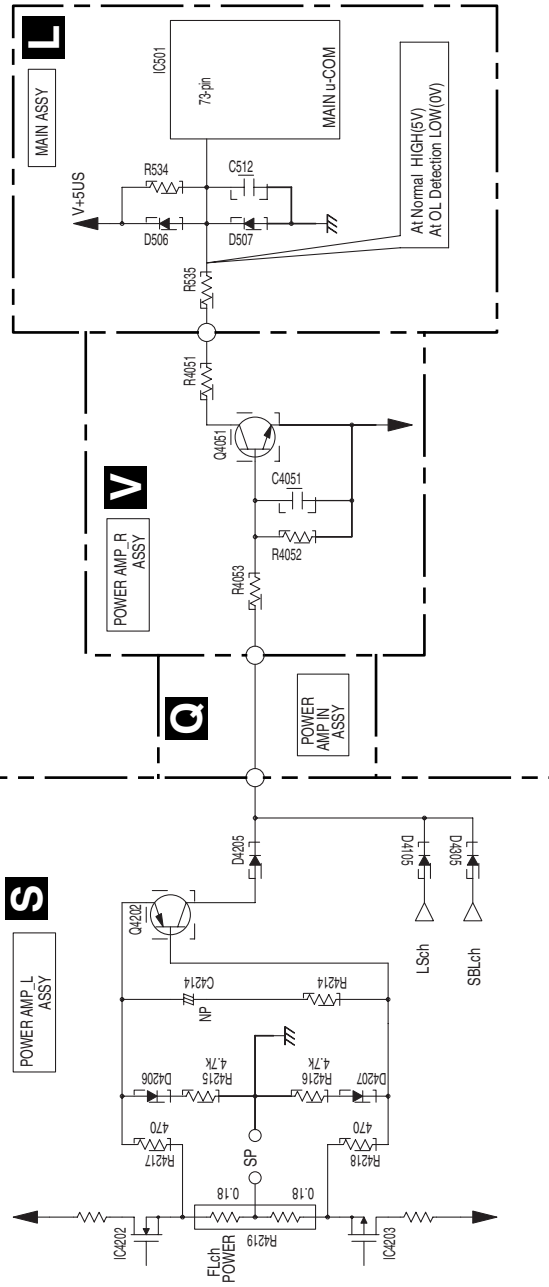
● Protection Process List

Item	Detection Method	Process	Warning Indication	Remarks
DC detection	Detects when the DC_PROT port becomes "L".	Turns muting on and speaker relay off, then turns off the power after 3 seconds.	Flashing "AMP ERR" for 3 seconds.	If the power is turned off, flashes the MCACC LED. Do not accept the POWER key. If the DC_DET port becomes "H" within 3 seconds, the unit resets automatically.
Overload detection	Detects when the OL_DET port becomes "L" (checks by interrupt).	Turns muting on and speaker relay off, and immediately turns off the power.	None	
Thermal shut down	Detects when the TEMP2 port becomes "H".	Turns muting on and speaker relay off, then turns off the power after 3 seconds.	Flashing "OVERHEAT" for 3 seconds	If the TEMP2 port becomes "L" within 3 seconds, the unit resets automatically. After the power off, the key input is possible once again.
Fan stop	Detects when the FAN_STOP port becomes "L".	Turns muting on and speaker relay off, then turns off the power after 3 seconds.	Flashing "FAN STOP" for 3 seconds	If the FAN_DET port becomes "H" within 3 seconds, the unit resets automatically. After the power off, the key input is possible once again.

• DC Detection circuit



• Overload Detection circuit



7.1.2 HOW TO DIAGNOSE THE AMPLIFIER SECTION

When DC detection worked (MCACC LED flashes for a long time) in the protection circuit of foregoing section (or there is not the speaker output, probably only 1CH), failure (damage) of the power amplifier section is considered.

Because this receiver cannot diagnose the amplifier section by an electricity state by structure, please diagnose it in the following steps.

Caution:

When release the state of flashing "MCACC" LED before repair (see how to release "① DC detection" on page 111.), Because there is the case that the damage progresses when turns the power on once again, please be careful.

- According to a symptom, perform the following confirmation beforehand.

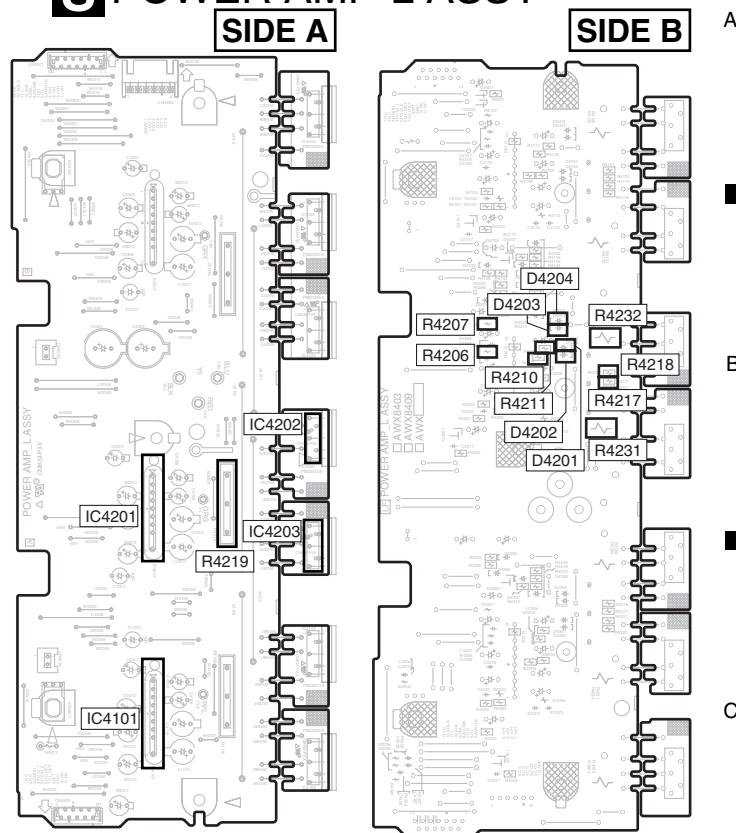
1. Are not Fuse and IC protector opening it?
- 2-a. When can turn on electricity, confirm that supply voltage of the point that can measure is appropriate.
- 2-b. Furthermore, confirm that voltage ((in a no signal) DC and the appropriate signal output) between GND and R2008-R2014 on the SP/PS Assy (Either of the amplifier side and the speaker terminal side is possible) (Or remove either of CN2101-2104) on the SP/PS Assy. And limit failure CH. If was able to limit failure CH, diagnose the CH in the following steps.

- Use the tester basically and check that each part is not damaged (resistance value / open / short circuit).

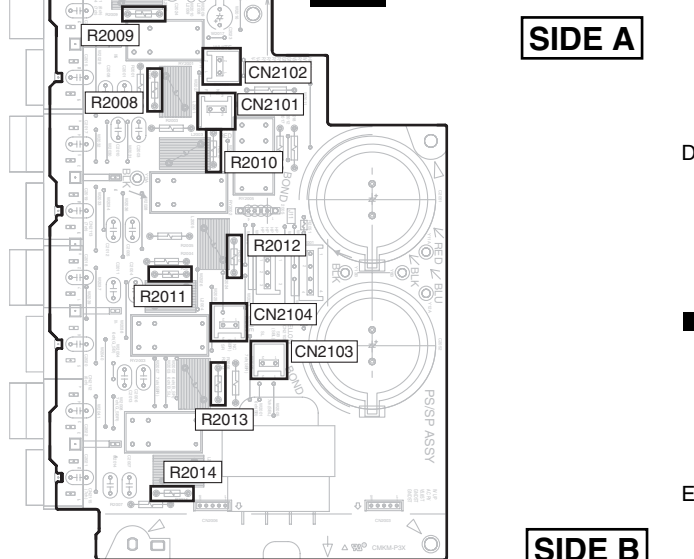
About parts with damaged possibility, explain FL ch to an example in order.

1. R4231, R4232 (ACN7132: 0.047 Ω , 0.5W chip drain resistor) IC 4202, IC4203 (SAPM01N: Nch, SAPM01P: Pch output POWER MOS Tr.) /POWER AMP-L Assy
2. R4219 (ACN7121: 0.18 Ω .5W $\times 2$ cement source resistor) R4217, R4218 (RS1/16S471J: 470 Ω chip resistor for protection circuit) D4201, D4203 (UDZS10B: 10V Zener diode for current limiting) D4202, D4204 (1SS355: Small signal diodes same as above) R4210, R4211 (RS1/16S560J: 56 Ω chip gate resistor) R4206, R4207 (RS1/16S101J: 100 Ω chip IC4101 power filter resistor) /POWER AMP-L Assy
3. IC4201 (PA9010A: Power amplifier with output current bias Voltage step HIC) /POWER AMP-L Assy
4. Q2231 (2SA1514K) /VH TR Assy
Q2232 (2SC3906K) /VH TR Assy
Q2233 (2SA1837D1) /VH TR Assy
Q2234 (2SC4793D1) /VH TR Assy

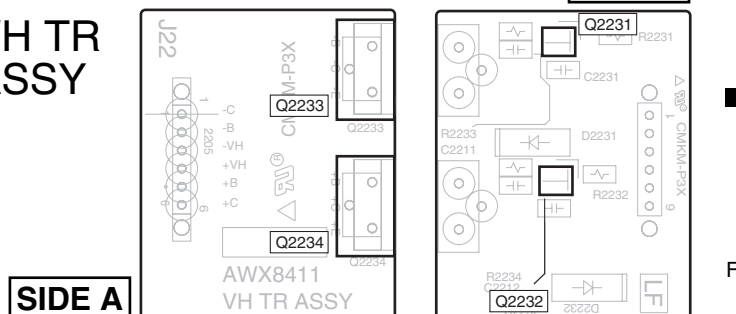
S POWER AMP-L ASSY



AB SP/PS ASSY



AA VH TR ASSY



1234

7.1.3 HOW TO DIAGNOSE THE UNIT WITH THE POWER AMPLIFIER SECTION REMOVED

Purpose:

When repairing this unit, the large Heat Sink Block obstructs access to some Assys.
If the Heat Sink Block is removed, as the posistor mounted on it is also disconnected, the protection circuit is activated, which disables failure diagnosis of these Assys while the unit is powered. With the method explained here, the Assys that cannot be diagnosed while the unit is powered because of the Heat Sink Block can be diagnosed by creating an artificial status of the posistor's being connected (by connecting a 100-ohm resistor under normal temperature).

Note: Use this method for diagnosing a failure other than possible failures inside the Heat Sink Block, such as those shown in the table below:

Symptoms that are highly suspected to be failures inside the Heat Sink Block	Possible causes
① No power with the MCACC LED flashing	DC detection has been activated to prevent further damage to the unit. Note: Refer to "7.1.2 How to diagnose the Amplifier Section" in the service manual.
② The unit turns itself off after "AMP ERR" was displayed on the FL display. Then it goes into state ① above.	
③ "OVERHEAT" is displayed on the FL display under normal temperature, then the unit turns itself off.	The peripheral circuits of the posistor inside the Power Amplifier Section are in failure. Note: A posistor is a kind of thermistor, and its resistance is approx. 100 ohms at normal room temperature.
④ The unit turns itself off without any indication on the FL	Overloaded amplifier, failure in the overload-detection circuit inside the Power Amplifier Section, etc.
⑤ "FAN STOP" is displayed on the FL display, then the unit turns itself off.	Disconnection of the Fan connector, failure in the fan. (Only for the models for Europe and those for other than North America and Japan)

Procedures:

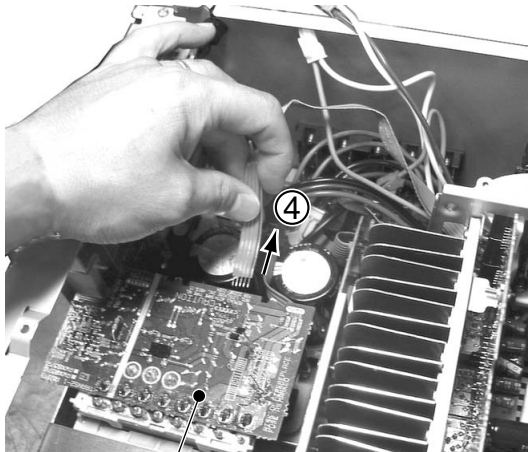
- ① Remove the bonnet and center beam.
- ② Remove all the wires from the wire saddle.
- ③ Disconnect all six connectors connected between the Amplifier Assy and the SP/PS Assy.

• Remove the wires.



• Disconnect the parallel wires.

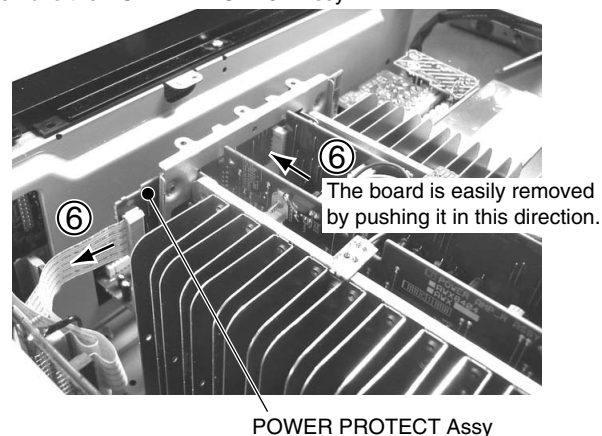
- ④ Disconnect the parallel wires from the connector CN2201. (If the wires are not easily disconnected, disconnect them with the connector attached, using a vacuum desoldering tool.)
- ⑤ Remove the eight screws that secure the Amplifier section.



TRANS 2-1 Assy

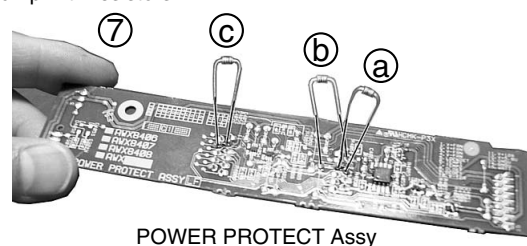
- ⑥ Remove the Power Amplifier, leaving the POWER PROTECT Assy intact.
- In this case, you can easily remove the Power Amplifier if the FFC cable connecting the POWER PROTECT Assy and the MAIN CONTROL Assy has been disconnected on either side.
 - When removing the POWER PROTECT Assy, pull out the Assy while pushing on the board at the center from the rear side, for easier removal with less stress on the connector.

- Remove the POWER PROTECT Assy.



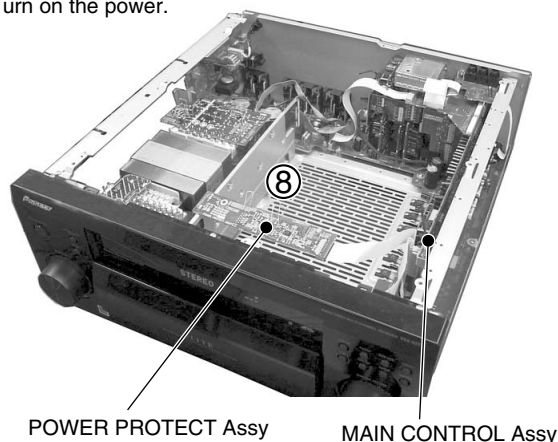
- ⑦ Jump with 100-ohm resistors in the following three places on the POWER PROTECT Assy:
- a Between Pin 4 and Pin 5 of CN4052
 - b Between Pin 5 and Pin 6 of CN4052
 - c Between Pin 8 and Pin 9 of CN4051

- Jump with resistors.



- ⑧ Secure the POWER PROTECT Assy so that it will not come into contact with metallic parts of the unit, such as the chassis. Then connect the POWER PROTECT Assy with the MAIN CONTROL Assy using an FFC cable and turn on the power. The unit will be turned on without the protection circuit activated.

- Turn on the power.



- ⑨ After finishing diagnoses, remove the three resistors inserted in Step ⑦, and before returning the Power Amplifier to its original position, discharge the electrolytic capacitors in the places shown in the table below.

- If connection is made without discharging the electrolytic capacitors, the resistors may be damaged by a surge of current.
- Discharge the electrolytic capacitor using a resistor, not by short-circuiting it. Using a tester, etc., completely discharge it until there is no remaining voltage.

Places to be discharged	Discharging methods
SP/PS Assy: C2051, C2052	Jump with a discharging resistor in CN2002 of the SP/PS Assy. (Photo 1)
POWER AMP L Assy: C4401, C4402	Jump with a discharging resistor on the connector side of CN2002 of the POWER AMP-L Assy. (Photo 2)
POWER AMP R Assy: C4403, C4404	While you still have CN2002 of the SP/PS Assy jumped with a discharging resistor, reconnect the connector to CN2001 of the SP/PS Assy. (Photo 2)
TRANS 2-1 Assy: C2213, C2214	Jump between each capacitor and ground. (Photos 3 and 4)

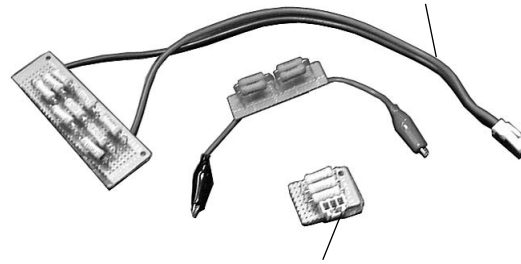
● Discharging resistors

In a case when one resistor is used

Wattage (W)	3	2	1
Recommended constant to be used (ohms)	3300	4700	10000
Miscellaneous			
Three-wire lead	ADX7404		
Three-core connector	RKP1751		

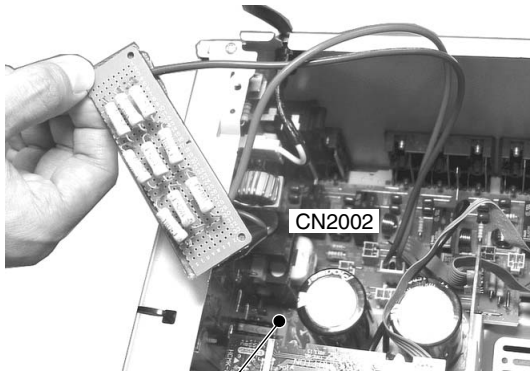
● Discharging resistors

Modified ADX7404 wire with 3-pin connector



Modified RKP1751 3-pin connector

Photo 1: Discharging $\pm$ VL (SP/PS Assy: C2051, C2052)



SP/PS Assy

Photo 2: Discharging $\pm$ VL inside the POWER AMP-L and R Assys
Discharging of C4403 and C4404 of the POWER AMP-R Assy is also possible by reconnecting the connector to CN2001 of the POWER AMP-R Assy while keeping the discharging resistor connected to CN2002 of the SP/PS Assy connected.

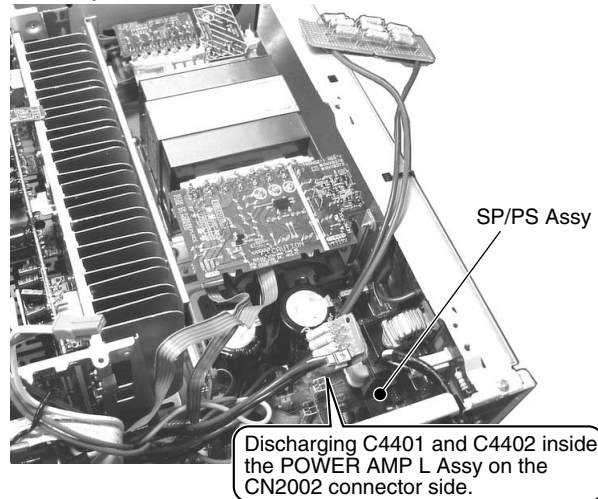
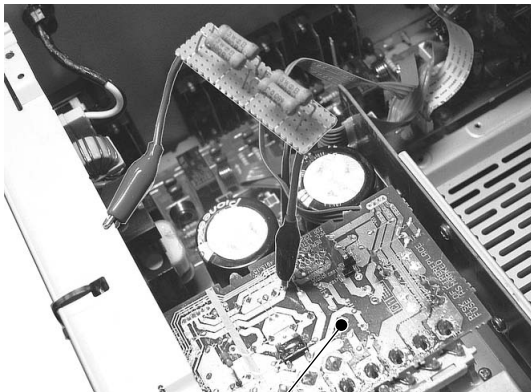
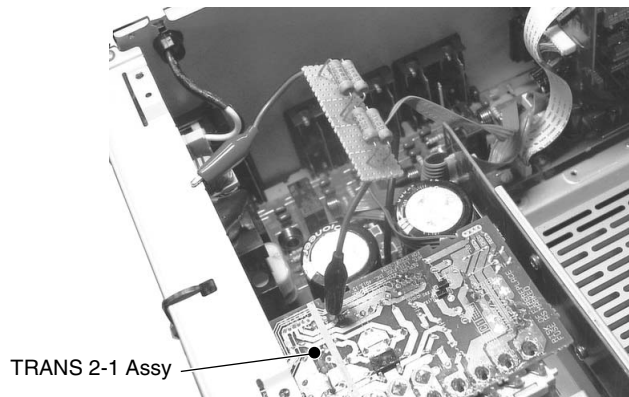


Photo 3: Discharging +VH (TRANS 2-1 Assy: C2213)



TRANS 2-1 Assy

Photo 4: Discharging -VH (TRANS 2-1 Assy: C2214)



TRANS 2-1 Assy

⑩ Reassemble the unit by following Steps ①-⑤ in reverse.

- When reconnecting the parallel wires to the connectors or reinserting the connectors, be careful of the direction. If a wire is connected to the wrong side of the connector, or if the five wires are not connected correctly, the resistors may be damaged.

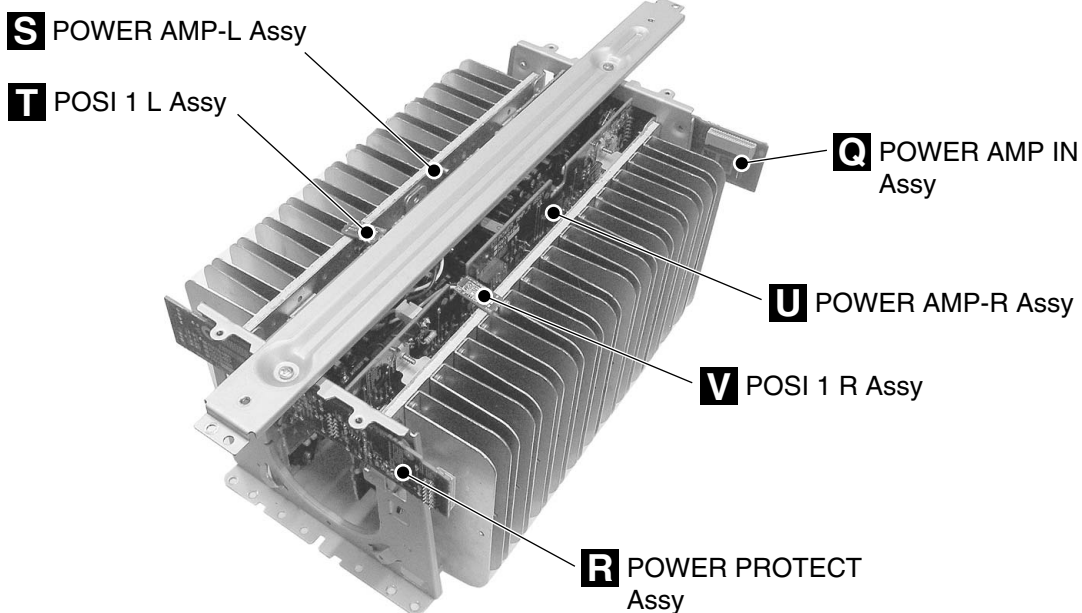
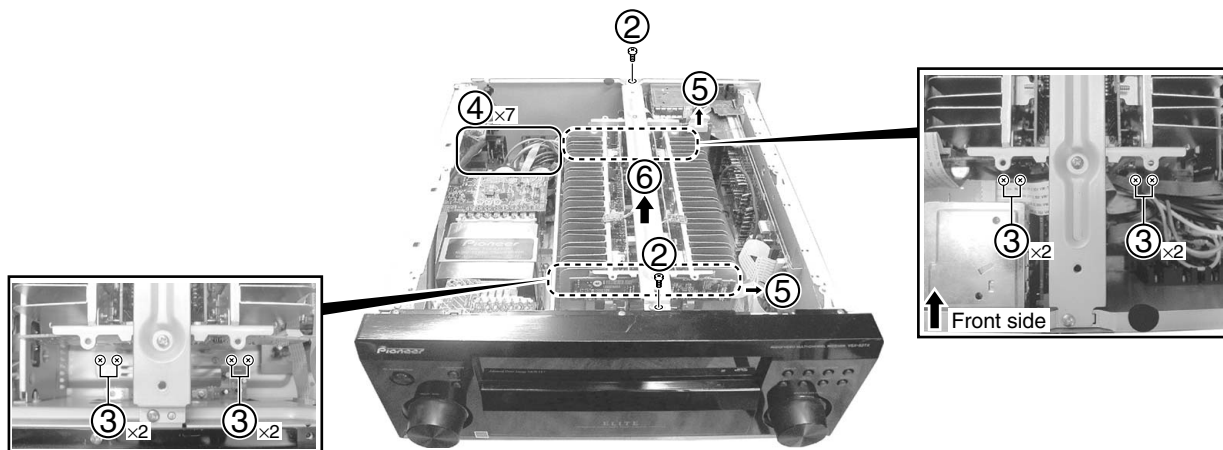
• Direction of wires



Note: Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

1 Bonnet Case V1B and Heatsink Section

- ① Remove the bonnet case V1B by removing the twenty screws.
- ② Remove the two screws.
- ③ Remove the eight screws.
- ④ Disconnect the seven connectors.
- ⑤ Disconnect the two flexible cables.
- ⑥ Remove the heatsink section.



2 Front Panel Section

① Remove the six screws.

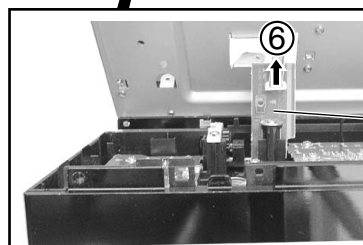
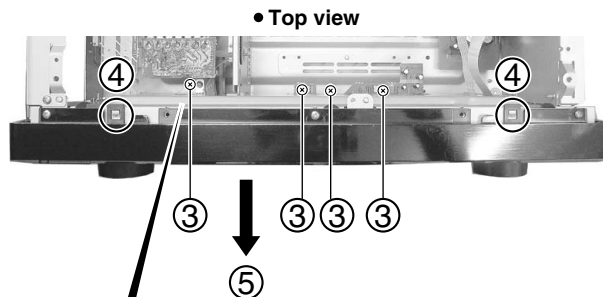
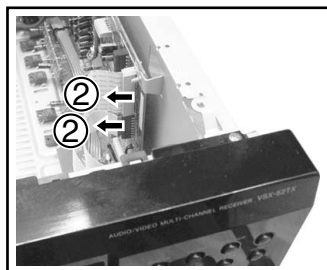
② Disconnect the two flexible cables.

③ Remove the four screws.

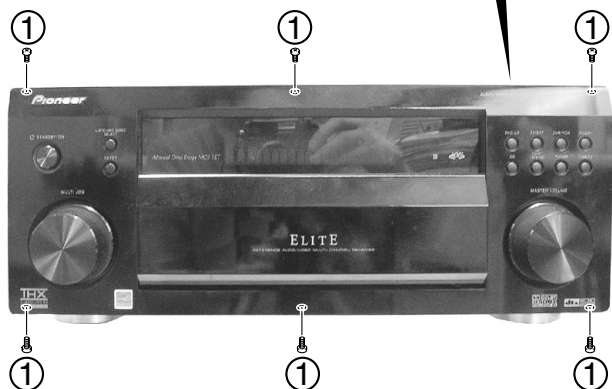
④ Unhook the two hooks.

⑤ Remove the front panel section.

⑥ Disconnect the one connector.



HEADPHONE
Assy



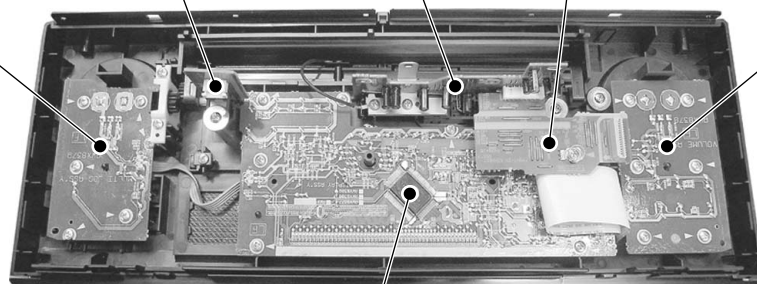
H HEADPHONE
Assy

I FRONT-IN
Assy

J FRONT-IN CONNECT
Assy

P MULTI JOG
Assy

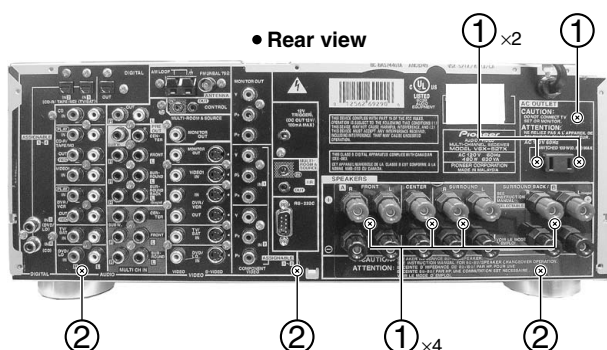
N VOLUME
Assy



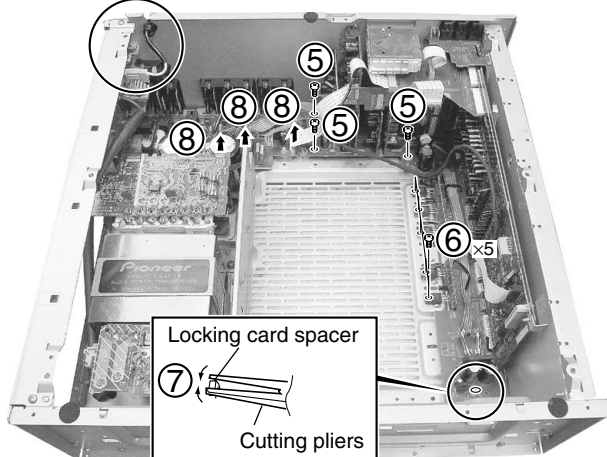
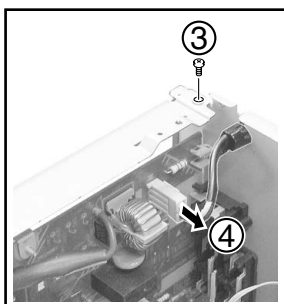
O DISPLAY Assy

3 Rear Panel and Main Sections

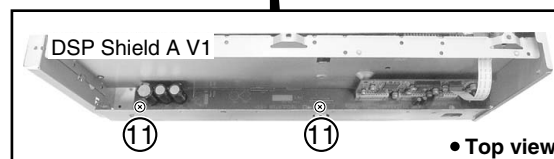
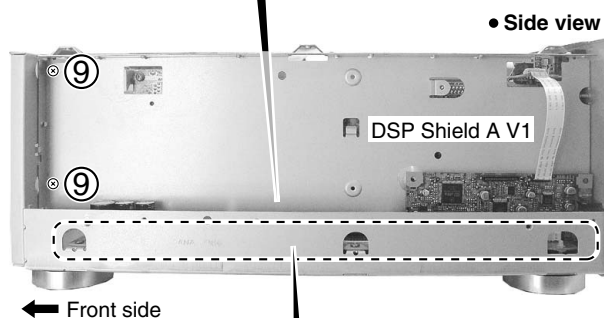
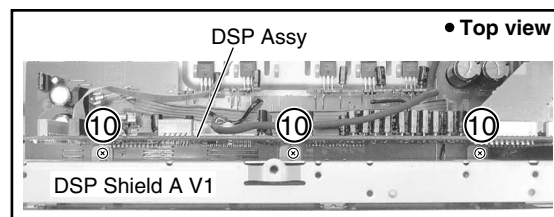
- ① Remove the seven screws.
- ② Remove the three screws.



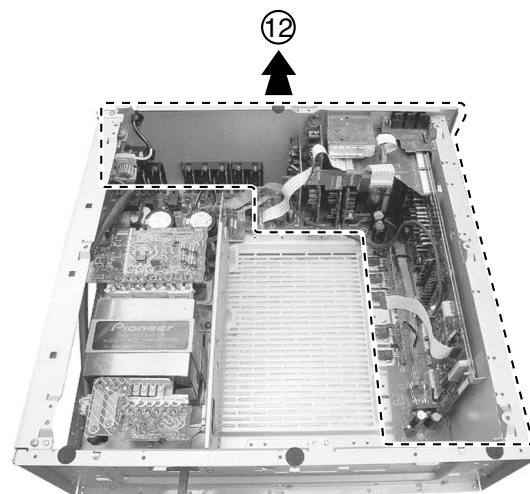
- ③ Remove the one screw.
- ④ Disconnect the one connector.
- ⑤ Remove the three screws.
- ⑥ Remove the five screws.
- ⑦ Remove the locking card spacer.
- ⑧ Disconnect the two connectors and the one flexible cable.

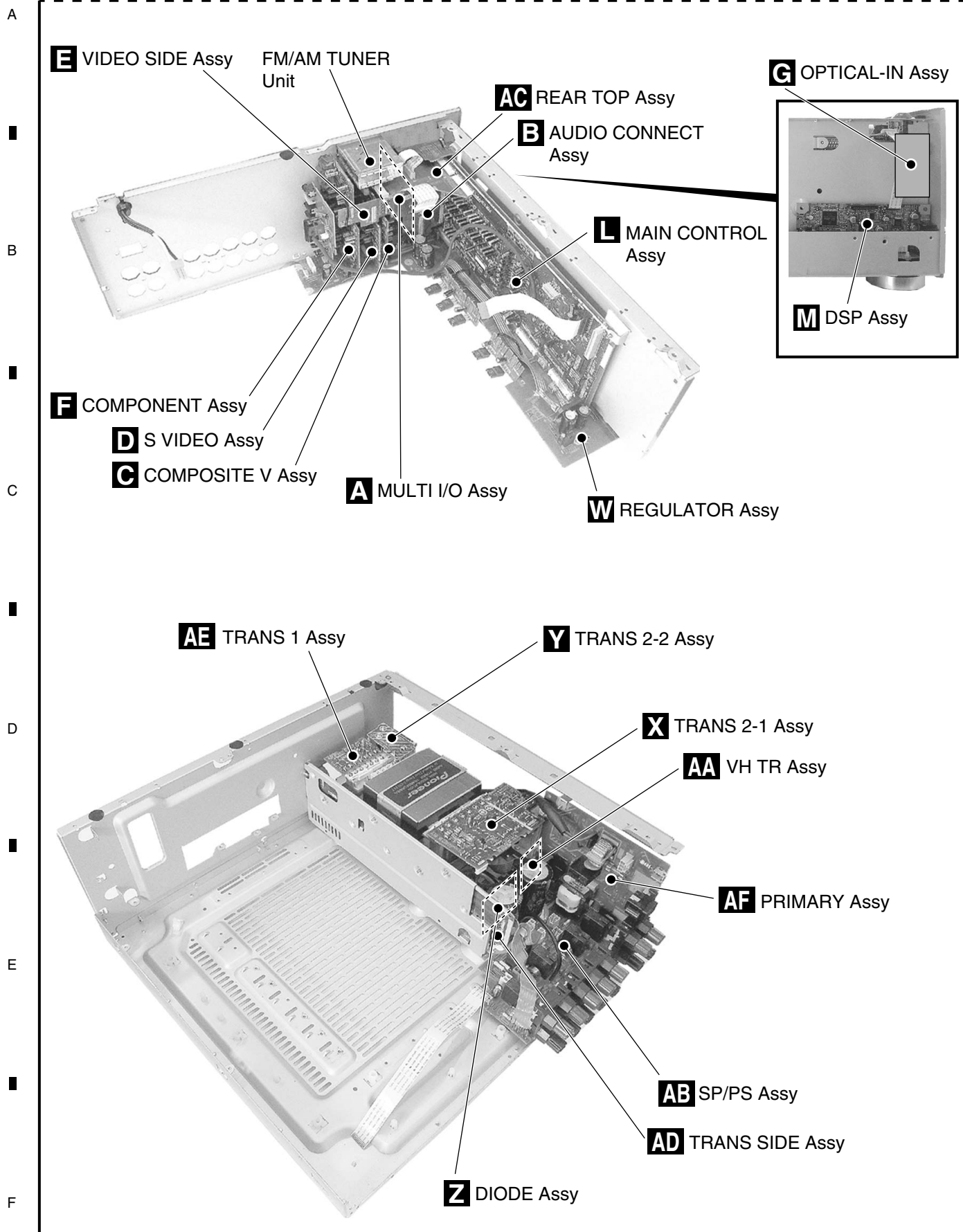


- ⑨ Remove the two screws.
- ⑩ Remove the three screws.
- ⑪ Remove the two screws.



- ⑫ Remove the rear panel section with the main section.





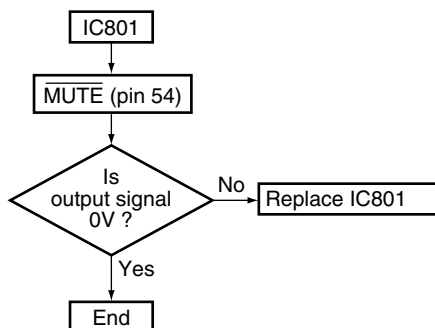
- When a sound is not out in the multi-channel signal playback or surround mode with the digital signal input.
(SurroundBack is not out with the setting.)
- Suppose CR to be poor contact and that is not damaged.
- This shows failure analysis of DSP Assy.

IC	Function
DIR&DIT (IC601)	Digital audio Interface Receiver and Digital audio Interface Transmitter
8ch CODEC (IC701)	2ch Analog/Digital converter + 8ch Digital/Analog converter
DSP (IC801)	Digital Surround Processor
FLASH ROM (IC851)	Memory of the surround program

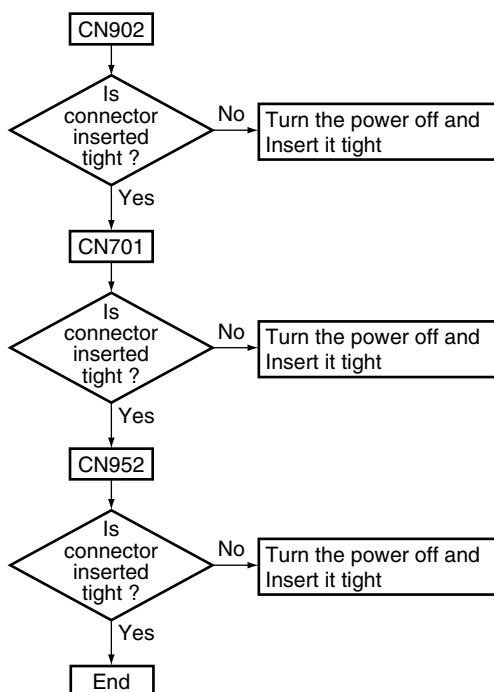
Step 0: Preliminary check

- Tighten the COAX Jack screws.
(GND of the DSP module floats from the chassis. And this unit may not work normally, because the electric potential becomes unstable.)

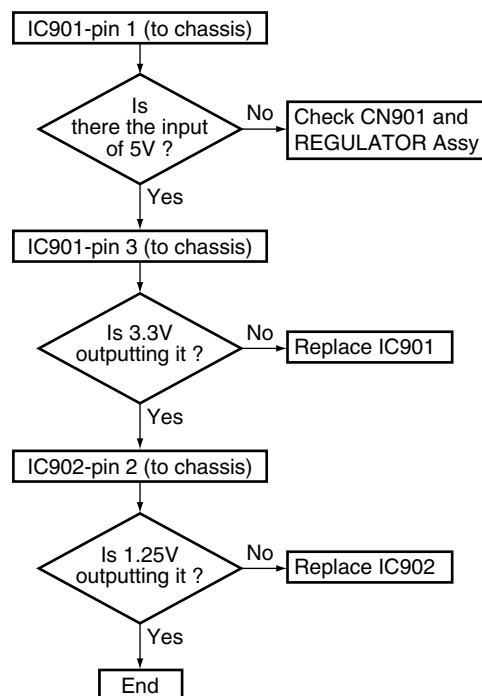
Step 1: Mute pin



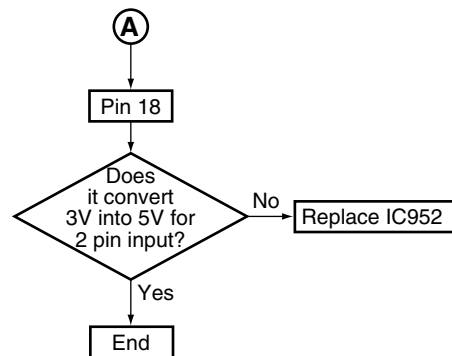
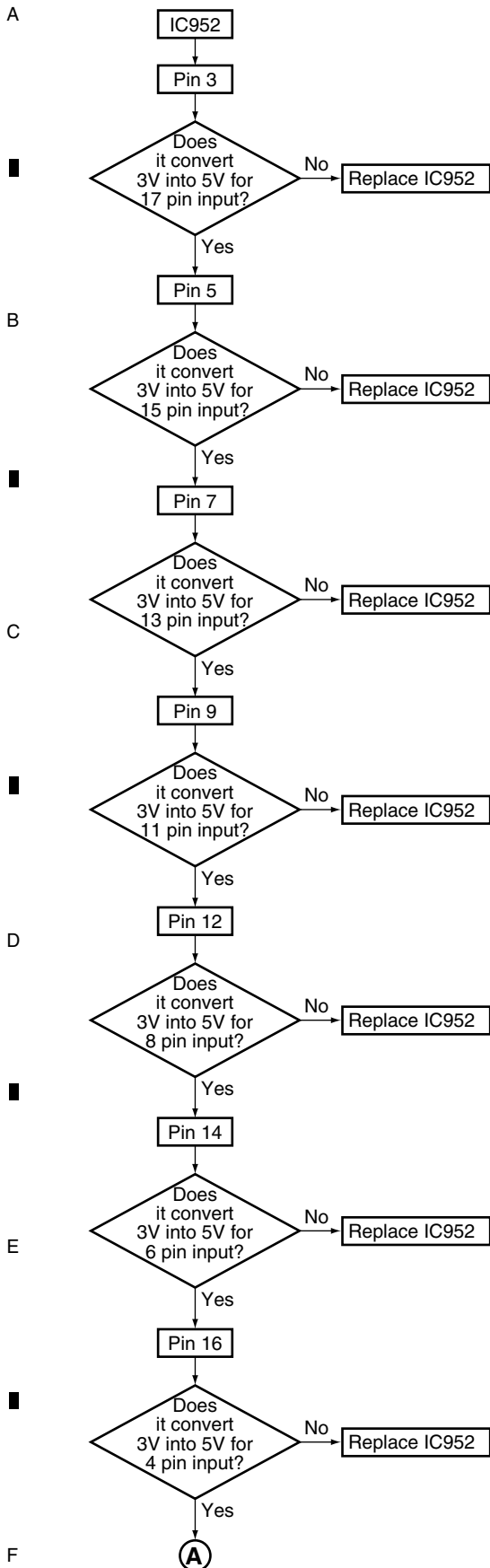
Step 2: B to B connector



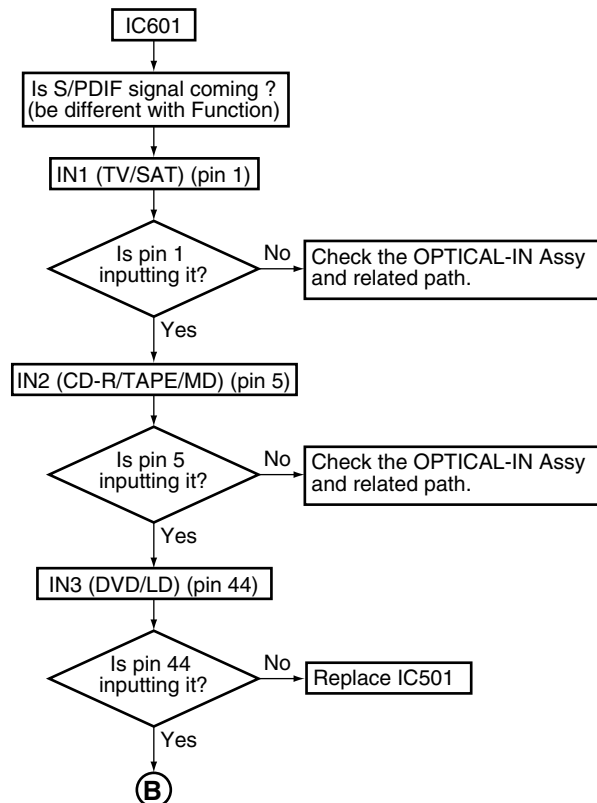
Step 3: Regulator IC

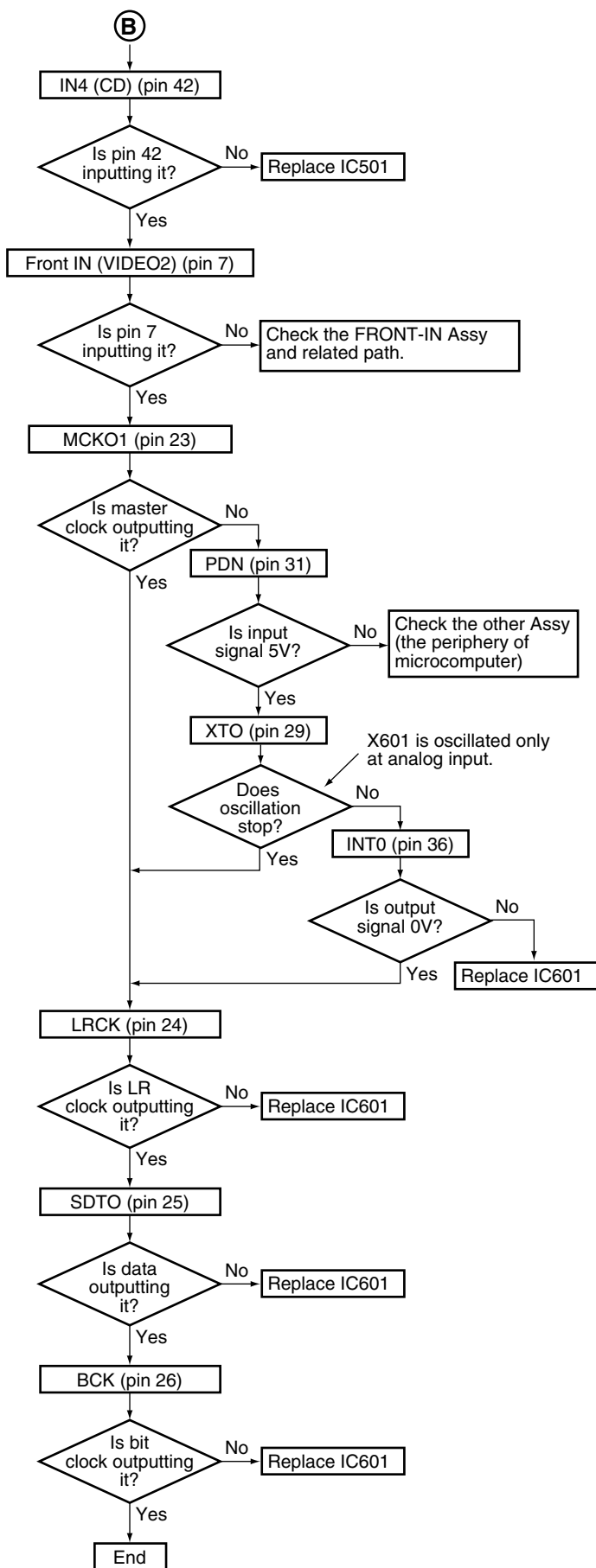


Step 4: 3 → 5V conversion

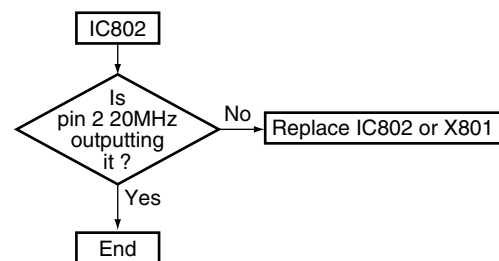


Step 5: DIR



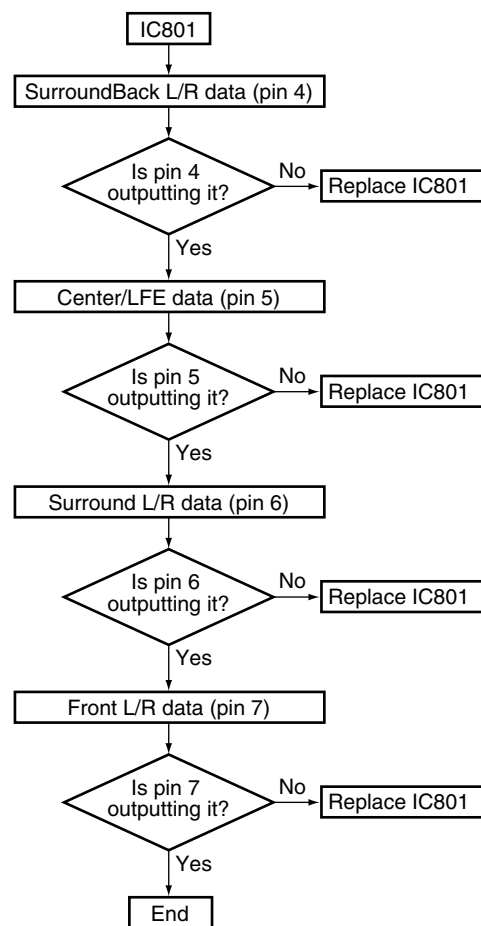


Step 6: X'tal

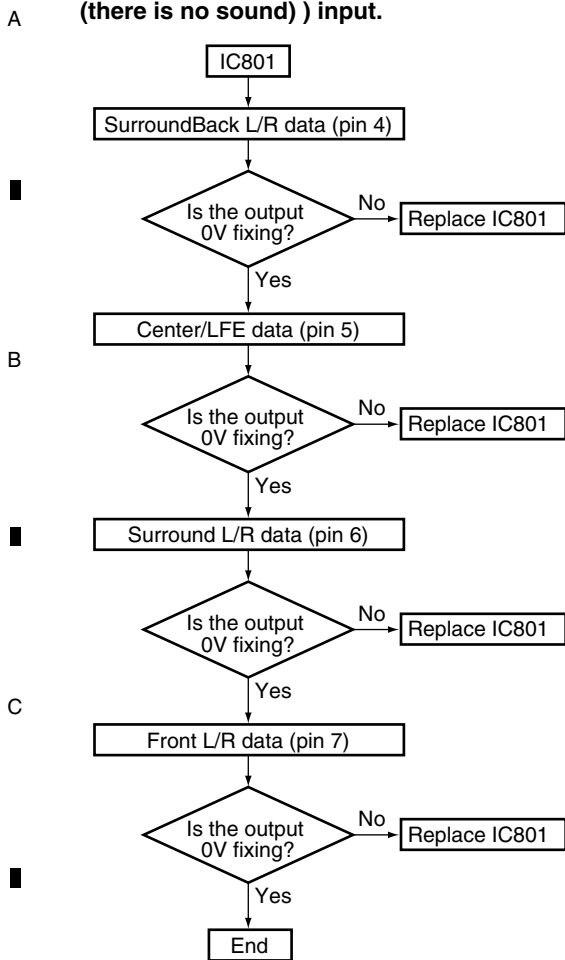


Step 7: DSP output (digital)

- Digital output of each channel in the digital signal (there is a sound) input.

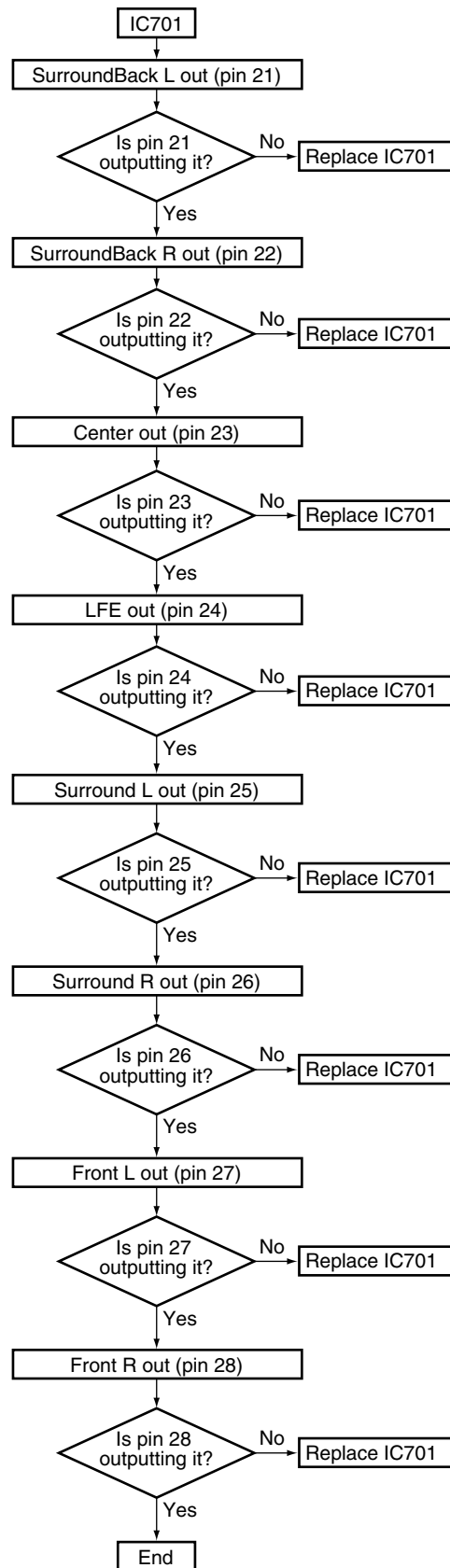


- Each channel output in the digital signal ($-\infty$ dB (there is no sound)) input.

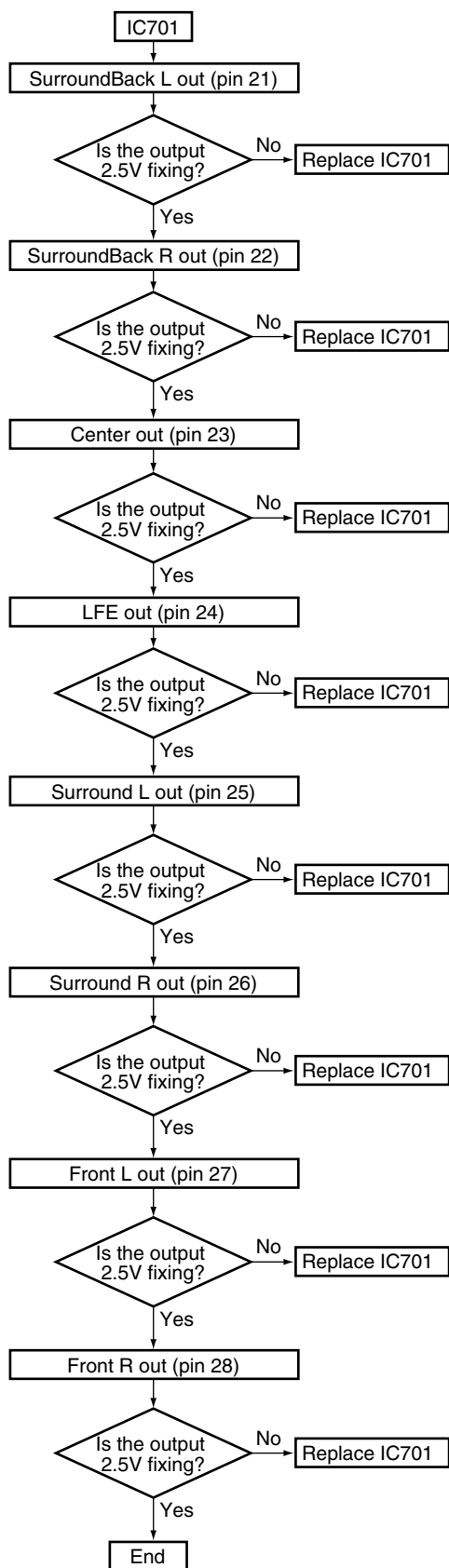


Step 8: Codec output (analog)

- Analog output of each channel in the digital signal (there is a sound) input.



- Each channel output in the digital signal ($-\infty$ dB (there is no sound)) input.



• When MCACC is turned to ON

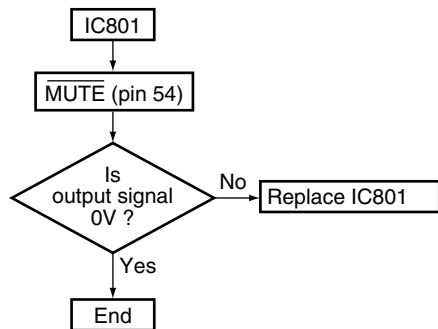
(SurroundBack is not out with the setting.)

- Suppose CR to be poor contact and that is not damaged.
- This shows failure analysis of DSP Assy.

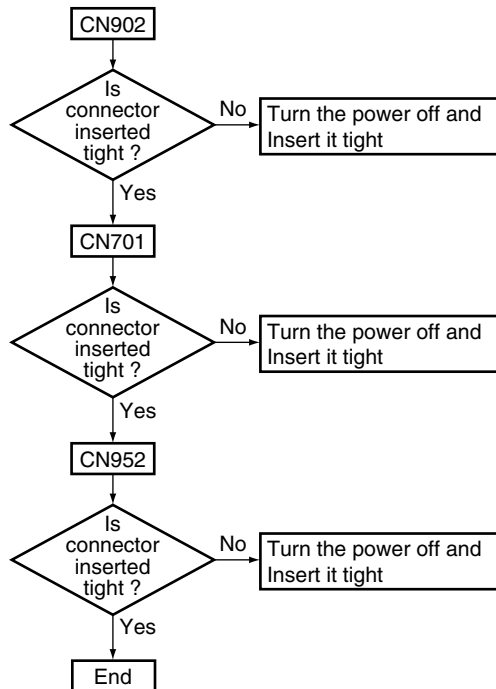
Step 0: Preliminary check

- Tighten the COAX Jack screws.
(GND of the DSP module floats from the chassis. And this unit may not work normally, because the electric potential becomes unstable.)

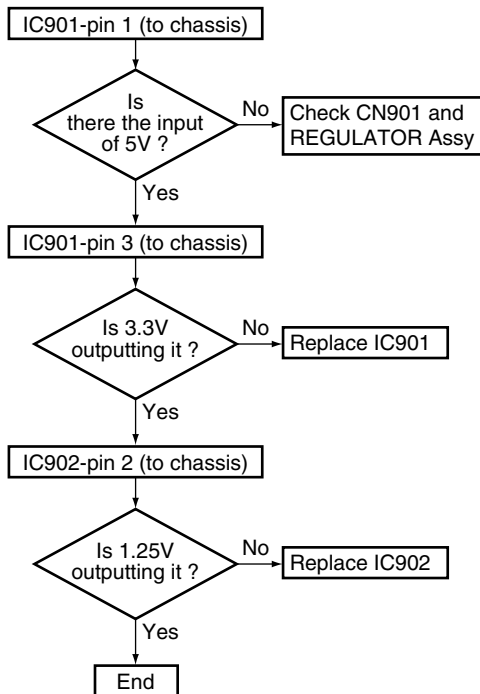
Step 1: Mute pin



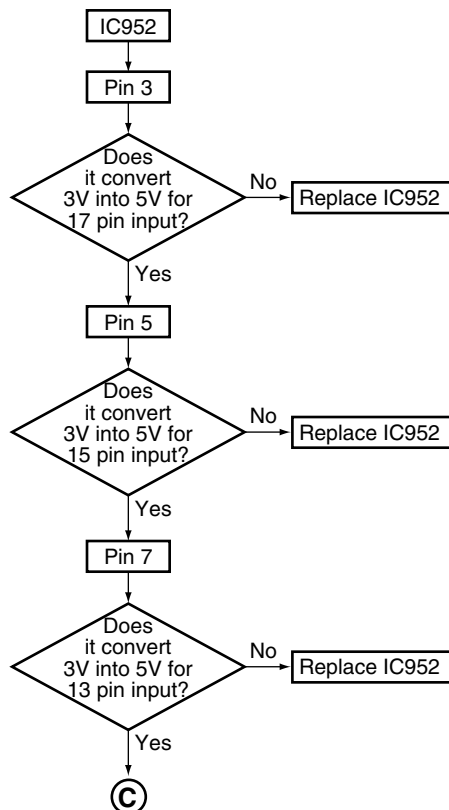
Step 2: B to B connector

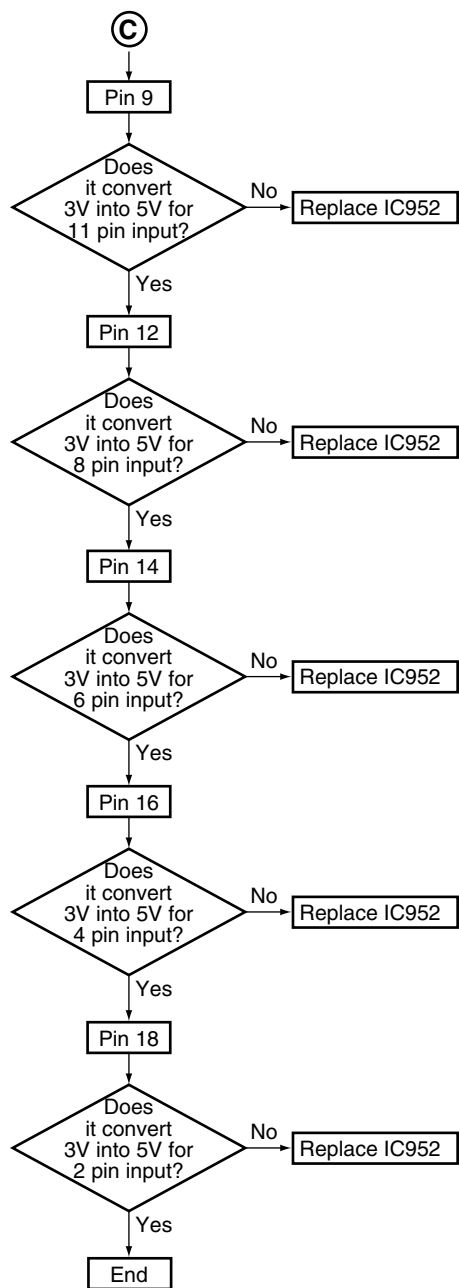


Step 3: Regulator IC

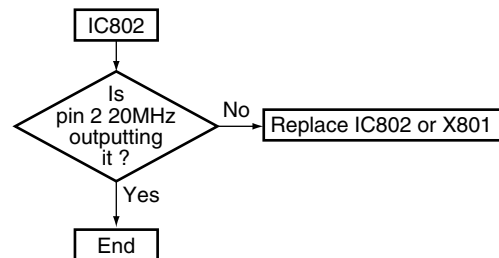


Step 4: 3 → 5V conversion

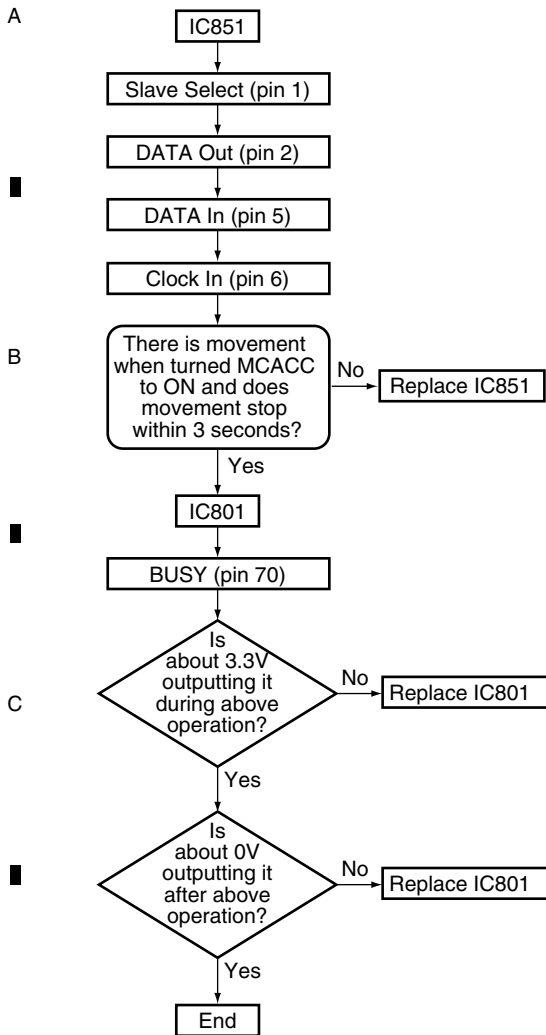




Step 5: X'tal

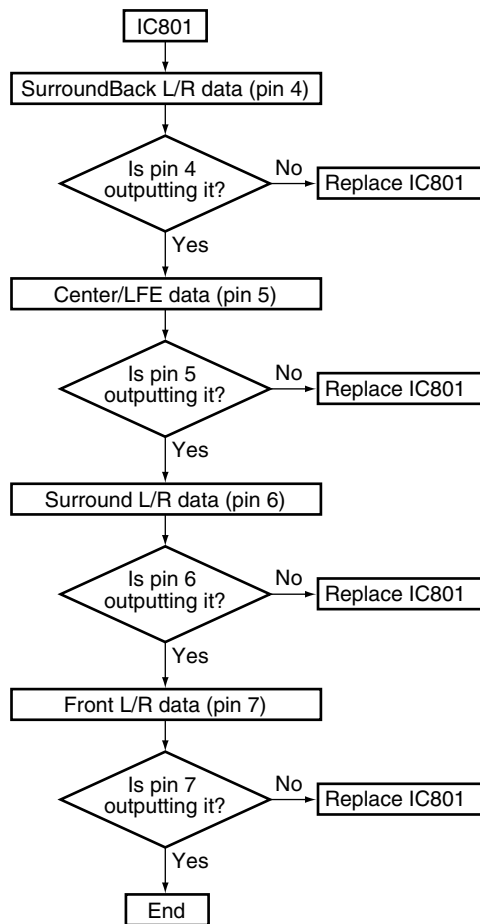


Step 6: ROM



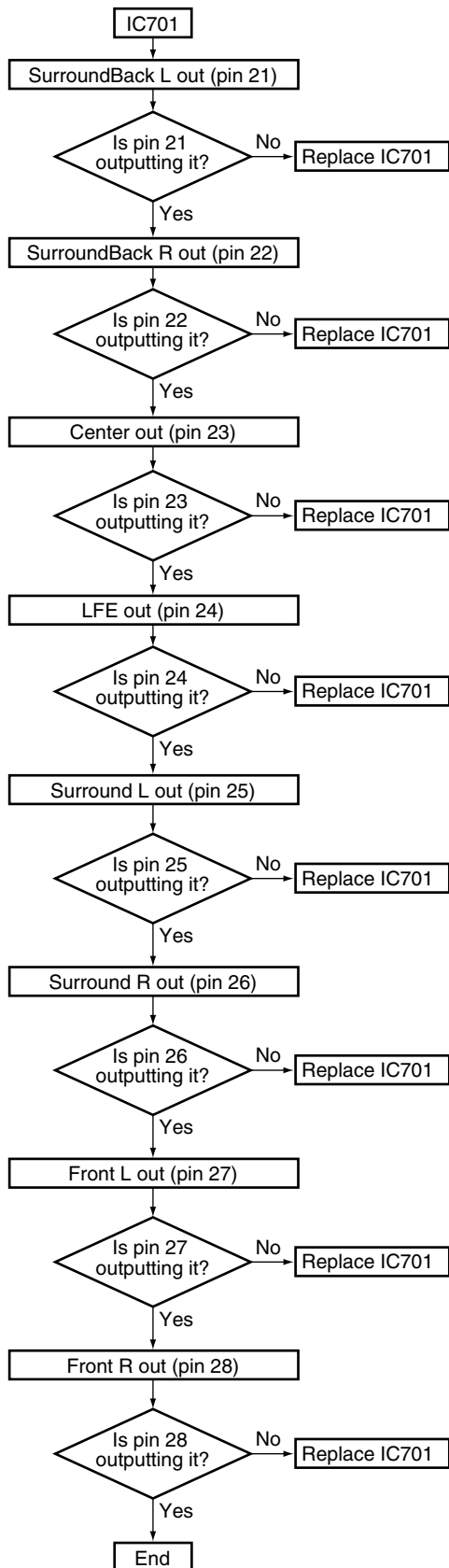
Step 7: DSP output (digital)

• Digital output when indicating each channel



Step 8: Codec output (analog)

• Analog output when indicating each channel



7.2 PARTS
7.2.1 IC

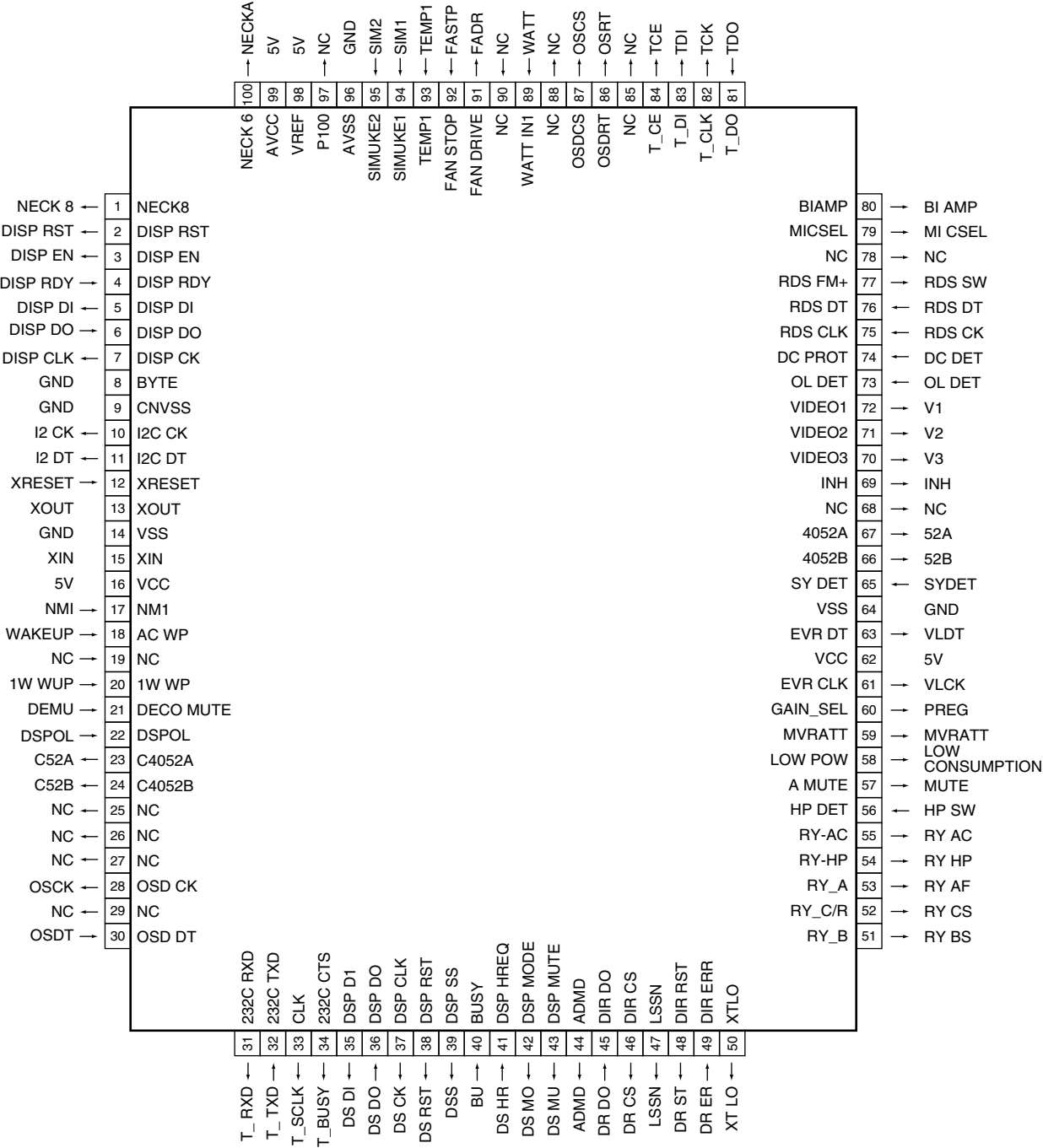
The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

List of IC
PEG123A

PEG123A (MAIN CONTROL ASSY: IC501)

Main Microcomputer

Pin Assignment (Top view)



● Pin Function

No.	Pin Name	I/O	Pin Function	Active
1	NECK 8	O	Limiter control	H
2	DISP RST	O	Display microcomputer reset signal L: reset, H: release reset (pulldown)	L
3	DISP EN	O	Communication enabling signal to the display microcomputer	H
4	DISP RDY	I	Communication enabling signal from the display microcomputer	H
5	DISP DI	O	Communication data out signal with the display microcomputer (N ch open drain: pullup)	—
6	DISP DO	I	Communication data in signal with the display microcomputer (N ch open drain)	—
7	DISP CLK	O	Communication clock signal with the display microcomputer	—
8	GND	—	Ground	—
9	CNVSS	—	5.1kΩ pulldown	—
10	I2C CK	O	Communication clock signal with VIDEO CONVERTER IC (Y/C SEPARATOR IC, CHROMA DECODER IC)	—
11	I2C DT	O	Communication data signal with VIDEO CONVERTER IC (Y/C SEPARATOR IC, CHROMA DECODER IC)	—
12	XRESET	—	Reset	—
13	XOUT	—	Oscillator	—
14	GND	—	Ground	—
15	XIN	—	Oscillator	—
16	5V	—	5V power supply	—
17	NMI	I	Cannot use it as usual input port (100kΩ pullup)	—
18	WAKEUP	I	Wakeup	H
19	NC	—	NC	—
20	1W WUP	I	Wakeup signal at standby (from the display microcomputer) (pulldown)	H
21	DECO MUTE	I	Boot success detecting port of DSP	L
22	DSP OL	I	Communication enabling signal to the display microcomputer	H
23	C4052A	O	VIDEO Component SW Control	—
24	C4052B	O	VIDEO Component SW Control	—
25	NC	—	NC	—
26	NC	—	NC	—
27	NC	—	NC	—
28	OSD CK	O	Clock signal for OSD IC Control	—
29	NC	—	NC	—
30	OSD DT	O	Data signal for OSD IC Control	—
31	232C RXD	O	For 232C rewriting (data output)	—
32	232C TXD	I	For 232C rewriting (data input)	—
33	CLK	-	Not used (For rewriting)	—
34	232C CTS	O	For 232C rewriting (communication permission)	—
35	DSP DI	O	Communication data out signal with DSP, DIR	—
36	DSP DO	I	Communication data in signal with DSP	—
37	DSP CLK	O	Communication clock signal with the DSP, DIR	—
38	DSP RST	O	DSP reset signal L: reset, H: release reset	L
39	DSP SS	O	Slave select signal to DSP	L
40	BUSY	I	MCACC used	H
41	DSP HREQ	I	Error detection signal of DSP	H
42	DSP MODE	O	Mode selection of DSP (ROM/RAM) H: ROM mode, L: RAM (PPP) mode	H
43	DSP MUTE	O	DSP Assy mute	H
44	ADMD	O	DSP Analog/Digital select signal H: Digital, L: Analog	H
45	DIR DO	I	Communication data in signal with the DIR/DAC	—
46	DIR CS	O	Communication chip select signal with the DIR/DAC	L
47	LSSN	O	DSP SP Config : LSSN Setting	H
48	DIR RST	O	DIR reset signal	L
49	DIR ERR	I	Lock/Unlock signal from DIR	H
50	XTLO	O	Selection X'tal to DIR	L

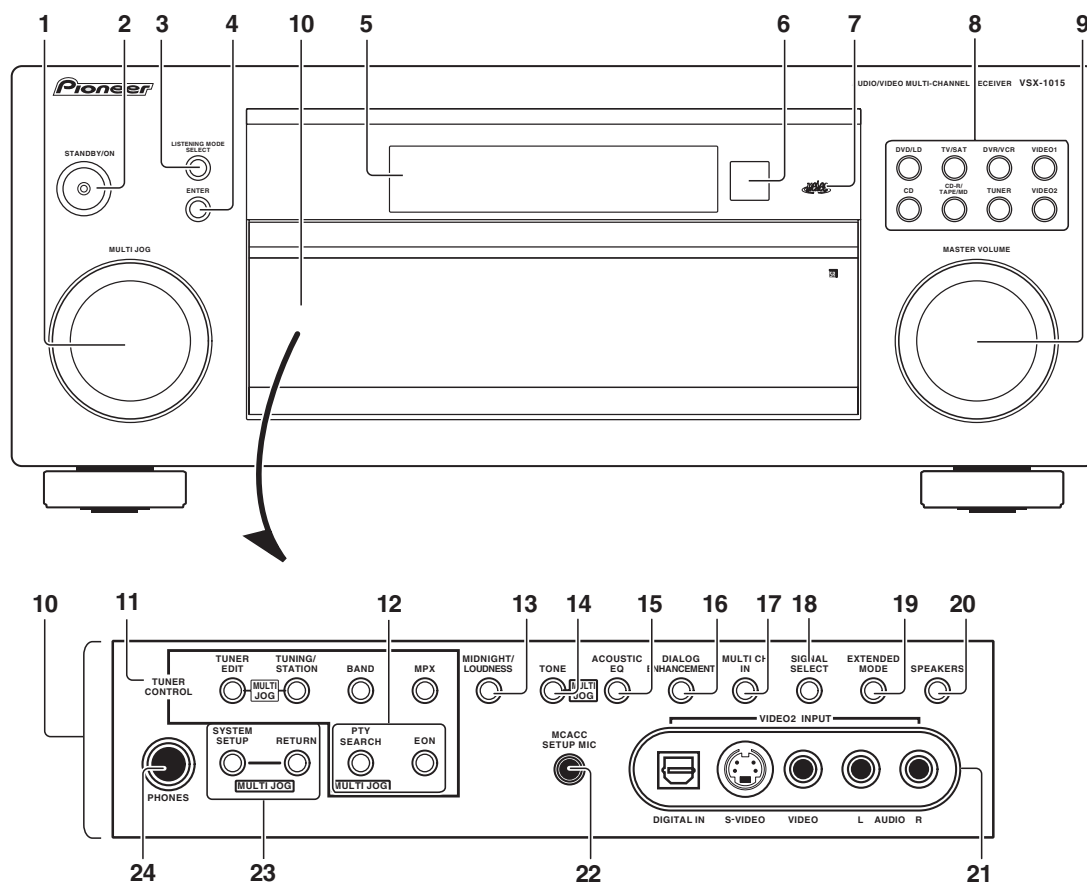
A

No.	Pin Name	I/O	Pin Function	Active
51	RY BS	O	Speaker relay B ON/OFF	H
52	RY C/R	O	Rear / Center relay ON / OFF	H
53	RY A	O	Speaker relay A ON/OFF	H
54	RY- HP	O	Headphone relay ON / OFF	H
55	RY- AC	O	AC relay ON / OFF	H
56	HP DET	I	Headphone detection L: detected.	L
57	A MUTE	O	System mute L: Mute ON	L
58	LOW CONSUMPTION	O	Power supply control for system mute	L
59	MVR ATT	O	Master volume ATT control	L
60	GAIN SEL	O	Pregain select signal	H
61	EVR CLK	O	Clock signal for electronic volume and function SW	—
62	5V	—	5V power supply	—
63	EVR DT	O	Data signal for electronic volume and function SW	—
64	GND	—	Ground	—
65	SY DET	I	SYNC detection (S-VIDEO detection)	H
66	4052B	O	Output switching control signal of S-VIDEO and composite Video	—
67	4052A	O	Output switching control signal of S-VIDEO and composite Video	—
68	NC	—	NC	—
69	INH	O	Video component SW control	—
70	VIDEO3	O	Video input selector control	—
71	VIDEO2	O	Video input selector control	—
72	VIDEO1	O	Video input selector control	—
73	OL DET	I	Amp. overload detection L: Detection	L
74	DC PROT	I	DC detection L: Detection	L
75	RDS CLK	I	Clock signal from RDS IC	—
76	RDS DT	I	Data signal from RDS IC	—
77	RDS FM+	O	Power supply control for RDS IC	—
78	NC	—	NC	—
79	MICSEL	O	MIC select	H
80	BIAMP	O	Output switching control of surround back ch L : BiAMP, H : Normal	L
81	TUNED DO	I	Data input signal of tuner control	H
82	TUNER CLK	O	Clock signal of tuner control	H
83	TUNER DI	O	Data output signal of tuner control	L
84	TUNER CE	O	Chip select signal of tuner control	L
85	NC	—	NC	—
86	OSDRST	O	OSD-IC reset signal L: reset H: release reset	L
87	OSDCS	O	OSD-IC chip select signal	—
88	NC	—	NC	—
89	WATT IN1	I	Wattage detection Level detection with A/D	A/D
90	NC	—	Not used	—
91	FAN DRIVE	O	FAN Control	—
92	FAN STOP	I	Fan forced stop detection	—
93	TEMP1	I	Temperature detection H : abnormal	H
94	SIMUKE1	I	Destination read 1	A/D
95	SIMUKE2	I	Destination read 2	A/D
96	AVSS	—	Connect to VSS (Ground)	—
97	NC	—	NC	—
98	VREF	—	Connect to VCC	—
99	AVCC	—	Connect to VCC	—
100	NECK_6	O	ATT Control of VH (Power supply for Voltage Amplifier)	L

F

8. PANEL FACILITIES

Front panel



1 MULTI JOG dial

Use the **MULTI JOG** dial to select various settings and menu options.

2 STANDBY/ON

Switches the receiver between on and standby. Power indicator lights when the receiver is on.

3 LISTENING MODE SELECT

Use with the **MULTI JOG** dial to select the various listening modes.

4 ENTER

5 Character display

See Display.

6 Remote sensor

Receives the signals from the remote control.

7 MCACC indicator

Lights when Acoustic Calibration EQ is on (Acoustic Calibration EQ is automatically set to **ALL CH ADJUST** after the Auto MCACC Setup or EQ Auto Setting is complete).

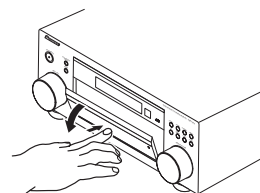
8 Input select buttons

Press to select an input source.

9 MASTER VOLUME dial

10 Front panel controls

To access the front panel controls, push gently on the lower third portion of the panel with your finger.



11 TUNER CONTROL

TUNER EDIT

Use with the **MULTI JOG** dial to memorize and name stations for recall.

TUNING/STATION

Use with the **MULTI JOG** dial to select station presets and radio frequencies.

BAND

Switches between AM and FM radio bands.

MPX

Press to receive a radio broadcast in mono.

12 PTY SEARCH

Use this button to search for RDS program types.

EON

- A Use to search for programs that are broadcasting traffic or news information.

13 MIDNIGHT/LOUDNESS

Use Midnight when listening to movie soundtracks at low volume.
Use Loudness to boost the bass and treble at low volume.

14 TONE

When the **STEREO** mode is selected, press this button to access the bass and treble controls, which you can then adjust with the **MULTI JOG** dial.

15 ACOUSTIC EQ

- B Press to select an Acoustic Calibration EQ setting.

16 DIALOG ENHANCEMENT

Use to make dialog stand out when watching TV or a movie.

17 MULTI CH IN

Press to select the component connected to the **MULTI CH IN** terminals (for example, a DVD-Audio player).

18 SIGNAL SELECT

Use to select an input signal.

19 EXTENDED MODE

Selects the surround back channel mode or virtual surround back mode.

20 SPEAKERS

Use to change the speaker system.

21 VIDEO2 INPUT

22 MCACC SETUP MIC jack

Use to connect the supplied microphone.

23 System Setup menu controls

SYSTEM SETUP

Use with the **MULTI JOG** dial to access the System Setup menu.

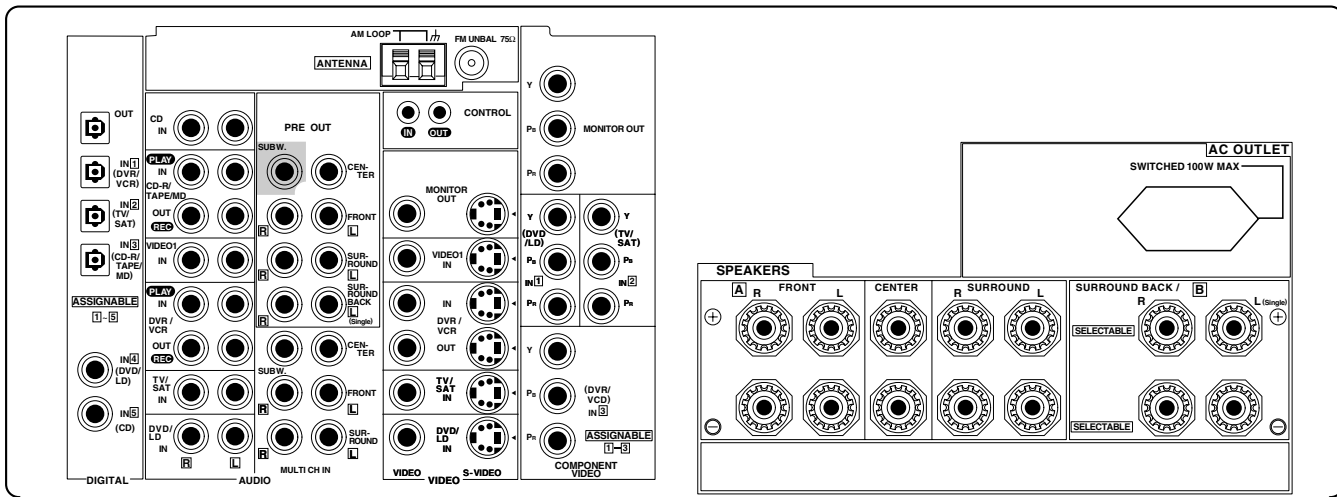
RETURN

Press to confirm and exit the current menu screen.

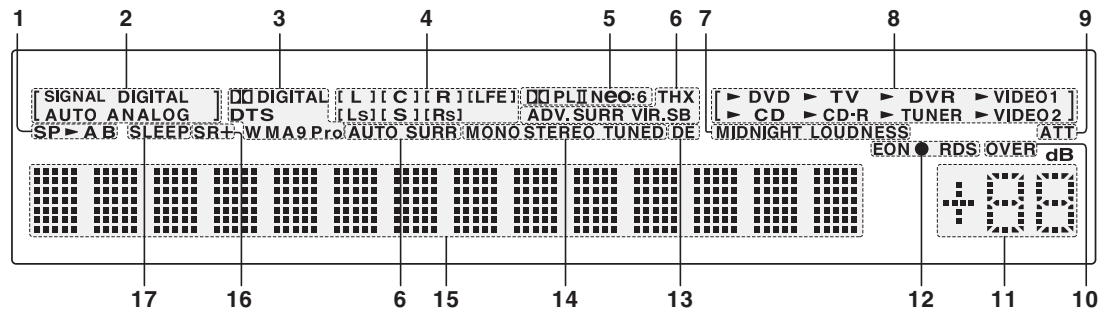
24 PHONES jack

Use to connect headphones. When the headphones are connected, there is no sound output from the speakers.

Rear panel



Display



1 Speaker indicators

Lights to indicate the current speaker system, **A** and/or **B**.

2 SIGNAL SELECT indicators

Lights to indicate the type of input signal assigned for the current component:

AUTO

Lights when **AUTO** signal select is on.

DIGITAL

Lights when a digital audio signal is detected.

ANALOG

Lights when an analog signal is detected.

3 Digital format indicators

DIGITAL

Lights when a Dolby Digital encoded signal is detected.

DTS

Lights when a DTS encoded signal is detected.

WMA9 Pro

Lights to indicate decoding of a WMA9 Pro signal.

4 Program format indicators

These change according to which channels are active in Dolby and DTS encoded sources. **LS**, **S** and **RS** will light at the same time to indicate 6.1 channel sources.

- **L** – Left front channel
- **C** – Center channel
- **R** – Right front channel
- **LS** – Left surround channel
- **S** – Surround channel (mono) or surround back channel
- **RS** – Right surround channel
- **LFE** – Low frequency effects channel

5 Matrix decoding format indicators

PLII

This lights to indicate Pro Logic II / Pro Logic IIx decoding.

Neo:6

When one of the Neo:6 modes of the receiver is on, this lights to indicate Neo:6 processing.

6 Listening mode indicators

THX

Lights when one of the Home THX modes is selected.

VIR.SB

Lights during Virtual surround back processing.

ADV.SURR

Lights when one of the Advanced Surround modes has been selected.

AUTO SURR

Lights when the Auto Surround feature is switched on.

7 MIDNIGHT / LOUDNESS

When Midnight or Loudness listening is switched on, the corresponding indicator shows in the display.

8 Input source indicators

Light to indicate the input source you have selected.

9 ATT

Lights when **INPUT ATT** is used to attenuate (reduce) the level of the analog input signal.

10 OVER

Lights to indicate that the level of an analog source is too high. Use the attenuator (**INPUT ATT**) to reduce it.

11 Master volume level

Shows the overall volume level. **-80dB** indicates the minimum level, and **+12dB** indicates the maximum level.

12 EON / RDS indicators

EON ●

EON lights when the EON mode is set, and flashes during reception of an EON broadcast. The **●** indicator lights when the current station carries the EON service.

RDS

Lights when an RDS broadcast is received.

13 DE

Lights when Dialog Enhancement (**DIALOG E**) is switched on.

14 TUNER indicators

STEREO

Lights when a stereo FM broadcast is being received in auto stereo mode.

MONO

Lights when the mono mode is set using the **MPX** button.

TUNED

Lights when a broadcast is being received.

15 Character display

Displays various system information (for example, the reason an operation is not possible may flash in the display).

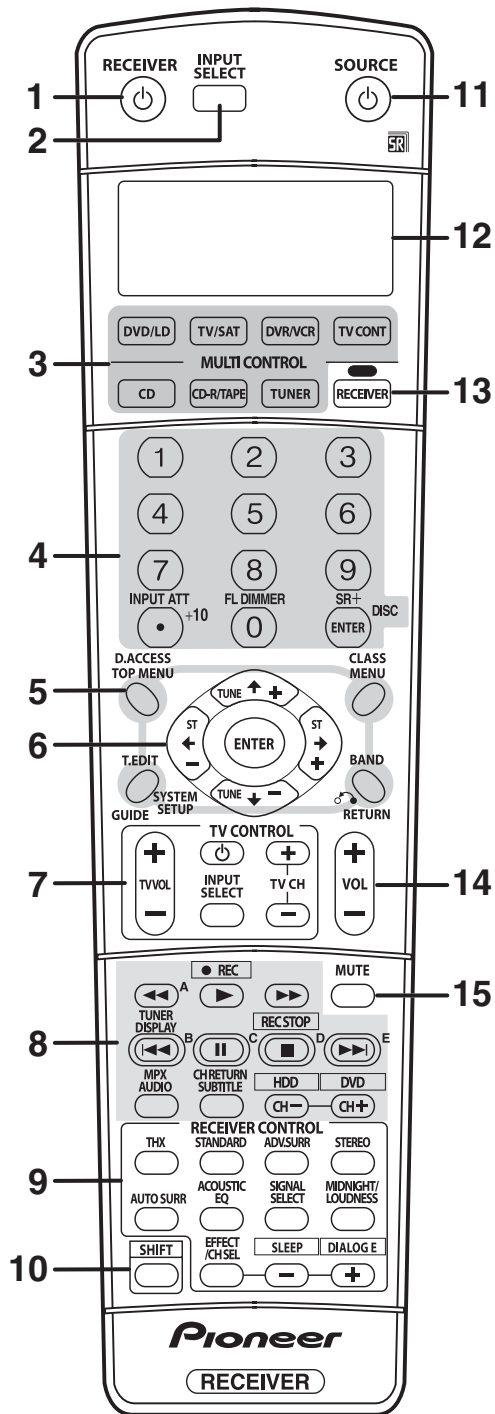
16 SR+

Lights when the SR+ control mode has been switched on.

17 SLEEP

Lights when the receiver is in sleep mode.

Remote control



1 RECEIVER

This switches between standby and on for this receiver.

2 INPUT SELECT

Use to select the input source.

3 MULTI CONTROL buttons

Press to select control of other components.

4 Number buttons and other receiver/component controls

Use the number buttons to directly select a radio frequency or the tracks on a CD, DVD, etc.

DISC (ENTER) can be used to enter commands for TV and can also be used to select a disc in a multi-CD player. The following are accessed by pressing the **RECEIVER** button first:

INPUT ATT

Attenuates (lowers) the level of an analog input signal to prevent distortion.

FL DIMMER

Dims or brightens the display. Switching the dimmer to lowest setting will also switch off the MCACC indicator.

SR+

Switches the SR+ mode on/off.

5 Tuner/component control buttons/SYSTEM SETUP

The following button controls (except **SYSTEM SETUP**) can be accessed after you have selected the corresponding **MULTI CONTROL** button (**TUNER**, **DVD/LD**, **TV/SAT**, etc.)

D. ACCESS

After pressing, you can access a radio station directly using the number buttons.

TOP MENU

Displays the disc 'top' menu of a DVD.

T. EDIT

Press to memorize and name a station for recall.

GUIDE

Displays the guides on a digital TV.

SYSTEM SETUP

(Press **RECEIVER** first to access)

Use to access the System Setup menu.

CLASS

Switches between the three banks (classes) of radio station presets.

MENU

Displays the disc menu of DVD-Video discs. It also displays TV menus.

BAND

Switches between the tuner AM and FM bands.

RETURN

Press to confirm and exit the current menu screen (also use to return to the previous menu with DVDs).

6 ⇐⇒↓↑ (TUNE/ST +/-) /ENTER

Use the arrow buttons when setting up your surround sound system. Also used to control DVD menus/options and for deck 1 of a double cassette deck player. Use the **TUNE +/-** buttons to find radio frequencies and use **ST +/-** to find preset stations.

7 TV CONTROL buttons

These buttons are dedicated to control the TV assigned to the **TV CONT** button. Thus if you only have one TV to hook up to this system assign it to the **TV CONT MULTI CONTROL** button. If you have two TVs, assign the main TV to the **TV CONT** button.

TV ⏻

Use to turn on/off the power of the TV.

TV VOL +/-

Use to adjust the volume on your TV.

INPUT SELECT

Use to select the TV input signal.

TV CH +/-

Use to select channels.

8 Component control buttons

The main buttons (▶, ■, etc.) are used to control a component after you have selected it using the **MULTI CONTROL** buttons. The controls above these buttons can be accessed after you have selected the corresponding **MULTI CONTROL** button (for example **DVD/LD**, **DVR/VCR** or **TV/SAT**).

TUNER DISPLAY

Switches between named station presets, radio frequencies and RDS information.

MPX

Switches between stereo and mono reception of FM broadcasts. If the signal is weak then switching to mono will improve the sound quality.

AUDIO

Changes the audio language or channel on DVD discs.

CH RETURN

Returns to the last channel selected with SAT and some TVs.

SUBTITLE

Displays/changes the subtitles included in multilingual DVD-Video discs.

CH +/-

Use to select channels when using a TV, VCR, DVR, etc.

The following DVR controls can be accessed by pressing **SHIFT**:

● REC

Starts recording.

REC STOP

Stops recording.

HDD/DVD

These buttons switch between the hard disk and DVD controls for DVD/HDD recorders.

9 RECEIVER CONTROL buttons

THX

Press to select a Home THX listening mode.

STANDARD

Press for Standard decoding and to switch between the various Pro Logic IIx and Neo:6 options.

ADV. SURR

Use to switch between the various surround modes.

STEREO

Switches between direct and stereo playback. Direct playback bypasses the tone controls and any other signal processing for the most accurate reproduction of a source.

AUTO SURR

Press to have the receiver automatically detect what kind of source you're playing and select multichannel or stereo playback as necessary.

ACOUSTIC EQ

Press to select an Acoustic Calibration EQ setting.

SIGNAL SELECT

Use to select an input signal.

MIDNIGHT/LOUDNESS

Use Midnight when listening to movie soundtracks at low volume. Use Loudness to boost the bass and treble at low volume.

EFFECT/CH SEL

Press repeatedly to select a channel, then use +/- to adjust the level. Also adjusts the level of the Advanced Surround effects as well as Dolby Pro Logic IIx Music and Neo:6 Music parameters. You can then use the + and - buttons to make these adjustments.

+/-

Use to adjust the effect and channel levels, as well as to change Dolby Pro Logic IIx and Neo:6 Music parameter settings.

SLEEP (SHIFT & -)

Use to put the receiver in sleep mode and select the amount of time before the receiver turns off.

DIALOG E (SHIFT & +)

Use to make dialog stand out when watching TV or a movie.

10 SHIFT

Press to access the DVR controls (above the component control buttons) as well as some **RECEIVER** controls.

11 ⏻ SOURCE

Press to turn on/off other components connected to the receiver.

12 Character display (LCD)

This display shows information when transmitting control signals.

The following commands are shown when you're setting the remote to control other components :

SETUP

Indicates the setup mode, from which you choose the options below.

PRESET

LEARN

DIRECT F

ERASE

RESET

READ ID

13 RECEIVER

Switches the remote to control the receiver (used to select the green commands above the number buttons (**INPUT ATT**, etc)). Also use this button to set up surround sound.

14 VOL +/-

Use to set the listening volume.

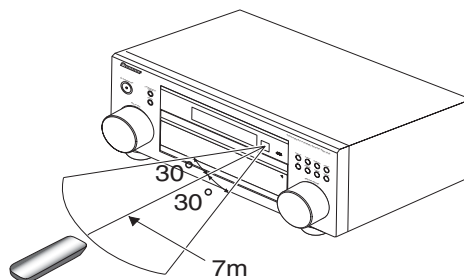
15 MUTE

Mutes the sound or restores the sound if it has been muted (adjusting the volume also restores the sound).

Operating range of remote control unit

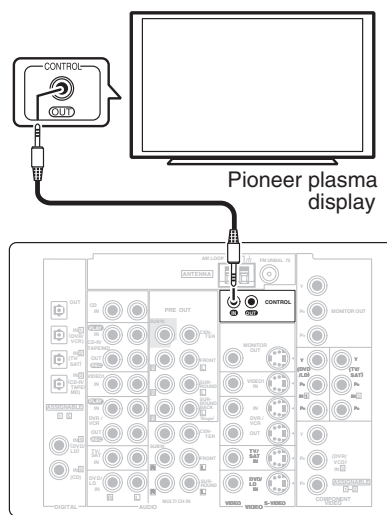
The remote control may not work properly if:

- There are obstacles between the remote control and the receiver's remote sensor.
- Direct sunlight or fluorescent light is shining onto the remote sensor.
- The receiver is located near a device that is emitting infrared rays.
- The receiver is operated simultaneously with another infrared remote control unit.



Using this receiver with a Pioneer plasma display

If you have a Pioneer plasma display, you can use an SR+ cable (see note below) to connect it to this unit and take advantage of various convenient features, such as automatic video input switching of the plasma display when the input is changed.

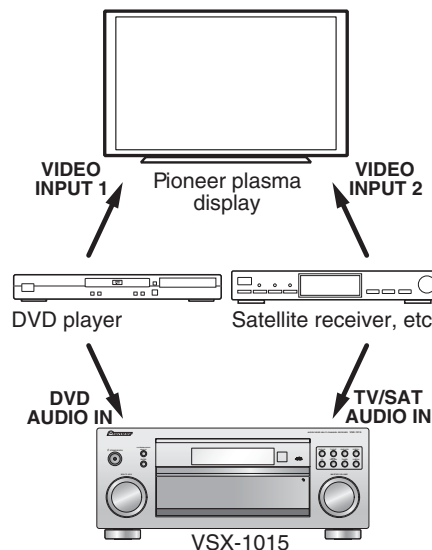


Important

- If you connect to a Pioneer plasma display using an SR+ cable, you will need to point the remote control at the plasma display remote sensor to control the receiver. In this case, you won't be able to control the receiver using the remote control if you switch the plasma display off.

- Use a 3-ringed miniplug SR+ cable to connect the **CONTROL IN** jack of this receiver with the **CONTROL OUT** jack of your plasma display.

Before you can use the extra SR+ features, you need to make a few settings in the receiver.



To make the most of the SR+ features, you should connect your source components (DVD player, etc.) in a slightly different way to that described in this chapter. For each component, connect the video output directly to the plasma display, and just connect the audio (analog and/or digital) to this receiver.

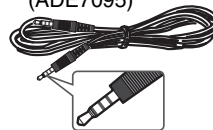


Note

- This receiver is compatible with all SR+ equipped Pioneer plasma displays from 2003 onward.
- The 3-ringed SR+ cable from Pioneer is commercially available under the part number ADE7095. Contact the Pioneer Customer Support division for more information on obtaining an SR+ cable (you can also use a commercially available 3-ringed mini phone plug for the connection).

SERVICE PARTS

- SR+ cable (ADE7095)



CLEANING



A

Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

Position to be cleaned	Cleaning tools
Fans	Cleaning paper : GED-008

B

C

D

E

F