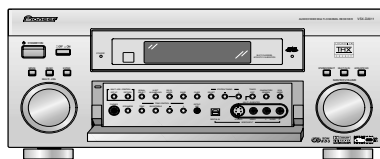


Service Manual



VSX-D2011-S

ORDER NO.
RRV2661

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-D2011-S

VSX-D1011-S

VSX-D1011-K

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-D2011-S	HYXJI	AC220-230V	AC240V, *
VSX-D1011-S	HYXJI	AC220-230V	AC240V, *
VSX-D1011-K	HYXJI	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 Service Manual.



For details, refer to "Important symbols for good services".

SAFTY 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.

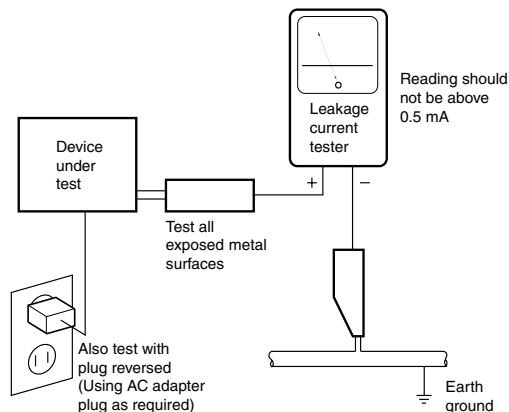
(FOR USA MODEL ONLY)

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 symbols for good services]

In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely. When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety



You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments



To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning



For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws



To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts



Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount. For replacement parts or tools, the prescribed ones should be used.

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1. SPECIFICATIONS

Amplifier Section

Continuous Power Output (DIN)

FRONT	100 W + 100 W (DIN 1 kHz, THD 1 %, 8 Ω)
CENTER	100 W (DIN 1 kHz, THD 1 %, 8 Ω)
SURROUND	100 W + 100 W (DIN 1 kHz, THD 1 %, 8 Ω)
SURROUND BACK	100 W + 100 W (DIN 1 kHz, THD 1 %, 8 Ω)
Rated Power Output	100 W + 100 W (20 Hz – 20 kHz, 0.09 %, 8 Ω)

Input (Sensitivity/Impedance)

PHONO MM (VSX-D2011).....	4.7 mV/47 kΩ
VCR 1/DVR, VCR 2, DVD/LD, TV/SAT, VIDEO, CD, CD-R/TAPE 1, MD/TAPE 2	335 mV/47 kΩ

Frequency Response

PHONO MM (VSX-D2011).....	20 Hz to 20,000 Hz ± 0.3 dB
VCR 1/DVR, VCR 2, DVD/LD, TV/SAT, VIDEO, CD, CD-R/TAPE 1, MD/TAPE 2	5 Hz to 100,000 Hz ⁺⁰ ₋₃ dB

Output (Level/Impedance)

VCR 1/DVR REC, VCR 2 REC, CD-R/TAPE 1 REC, MD/TAPE 2 REC	335 mV/2.2 kΩ
---	---------------

Tone Control

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

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

VCR 1/DVR, VCR 2, DVD/LD, TV/SAT, VIDEO, CD, CD-R/TAPE 1, MD/TAPE 2, MULTI CH IN	101 dB
---	--------

Signal-to-Noise Ratio

[DIN (Continuous rated power output/50 mW)] VCR 1/DVR, VCR 2, DVD/LD, TV/SAT, VIDEO, CD, CD-R/TAPE 1, MD/TAPE 2	92/65 dB
---	----------

VIDEO Section (S jack)

Input (Sensitivity/Impedance)

VCR 1/DVR, VCR 2, VIDEO, DVD/LD, TV/SAT	
Luminance signal (Y)	1 Vp-p/75 Ω
Chrominance signal (C)	0.286 Vp-p/75 Ω

Output (Level/Impedance)

VCR 1/DVR, VCR 2, MONITOR OUT	
Luminance signal (Y)	1 Vp-p/75 Ω
Chrominance signal (C)	0.286 Vp-p/75 Ω

Frequency Response

VCR 1/DVR, VCR 2, VIDEO, DVD/LD, TV/SAT	
Luminance signal (Y)	5 Hz to 10 MHz ⁺⁰ ₋₃ dB

Signal-to-Noise Ratio

Luminance signal (Y)	65 dB
----------------------------	-------

Component Video Section (VSX-D2011)

Input (Sensitivity)

Y	1 Vp-p/75 Ω
P _B /P _R	0.7 V/75 Ω

Output (Level/Impedance)

Y	1 Vp-p/75 Ω
P _B /P _R	0.7 V/75 Ω

Frequency Response

Y	5 Hz to 40 MHz ⁺⁰ ₋₃ dB
P _B /P _R	5 Hz to 40 MHz ⁺⁰ ₋₃ dB

VIDEO Section (Composite)

Input (Sensitivity/Impedance)

VCR 1/DVR, VCR 2, VIDEO, DVD/LD, TV/SAT	1 Vp-p/75 Ω
--	-------------

Output (Level/Impedance)

VCR 1/DVR, VCR 2, MONITOR OUT, MONITOR OUT2	1 Vp-p/75 Ω
--	-------------

Frequency Response

VCR 1/DVR, VCR 2, TV/SAT, DVD/LD VIDEO→MONITOR OUT,	5 Hz to 10 MHz ⁺⁰ ₋₃ dB
Signal-to-Noise Ratio	65 dB

FM Tuner Section

Frequency Range	87.5 MHz to 108 MHz
Usable Sensitivity	Mono: 15.2 dBf, IHF (1.6 μV/75 Ω)
50 dB Quieting Sensitivity	Mono: 20.2 dBf Stereo: 41.2 dBf

Sensitivity (DIN)	Mono: 1.1 μV (S/N 26 dB) Stereo: 50 μV (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)
--------------------------	--------------------------

Antenna Input	75 Ω unbalanced
---------------------	-----------------

AM Tuner Section

Frequency Range	531 kHz to 1,602 kHz
-----------------------	----------------------

Sensitivity (IHF, Loop antenna)	350 μV/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	600 W
-------------------------	-------

Power Consumption in Standby mode	0.7 W
---	-------

AC Outlets

SWITCHED	100 W (0.8A) MAX.
----------------	-------------------

Dimensions	420 (W) × 188 (H) × 464 (D) mm
------------------	--------------------------------

Weight (without package) (VSX-D2011)	19.6 kg
--	---------

Weight (without package) (VSX-D1011)	18.2 kg
--	---------

Furnished Parts

FM Wire Antenna	1
-----------------------	---

AM Loop Antenna	1
-----------------------	---

"AA" IEC LR6 batteries	4
------------------------------	---

Remote Control Unit	1
---------------------------	---

Microphone for Auto Surround Sound Setup	1
--	---

Microphone Stand for Auto Surround Sound Setup	1
--	---

Operating Instructions	1
------------------------------	---

NOTE:

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

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"DTS", "DTS-ES Extended Surround" and "Neo:6" are trademarks of Digital Theater Systems, Inc.

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.

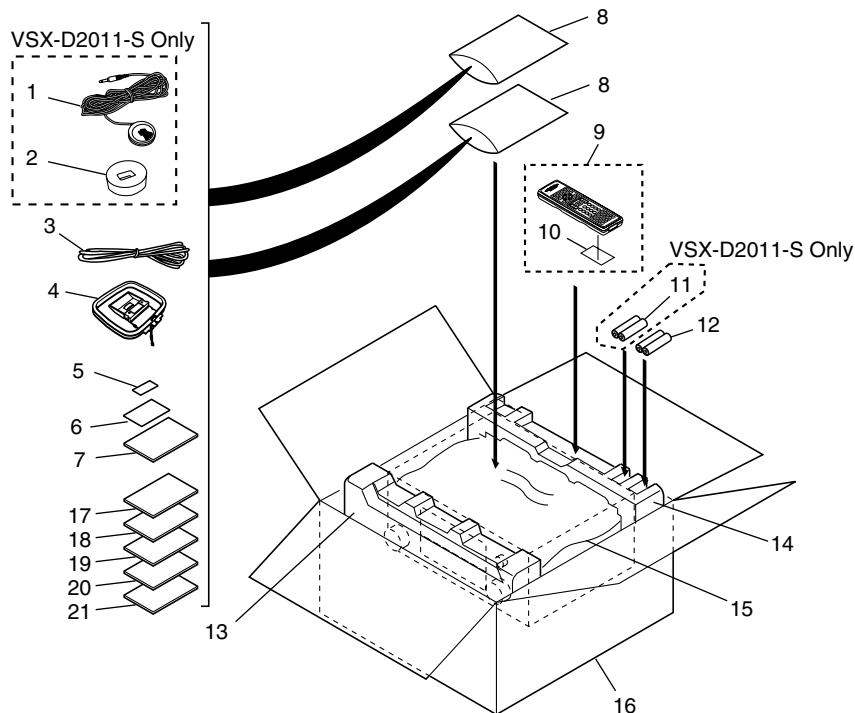
Therefore, when replacing, be sure to use parts of identical designation.

● 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.)

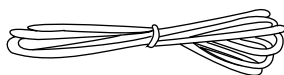
2.1 PACKING



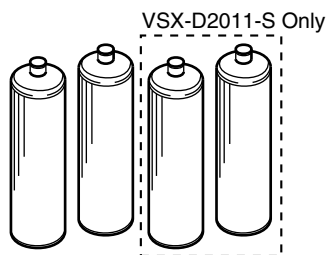
● Accessories



AM Loop Antenna
(ATB7009)



FM Wire Antenna
(ADH7030)



Dry Cell Battery
(LR6, AA)



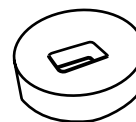
Remote Control Unit
(VSX-D2011 : AXD7326)



Remote Control Unit
(VSX-D1011 : AXD7329)



Microphone for Auto
Surround Sound Setup
(APM7004)



Microphone Stand for Auto
Surround Sound Setup
(AEB7269)

PACKING parts List

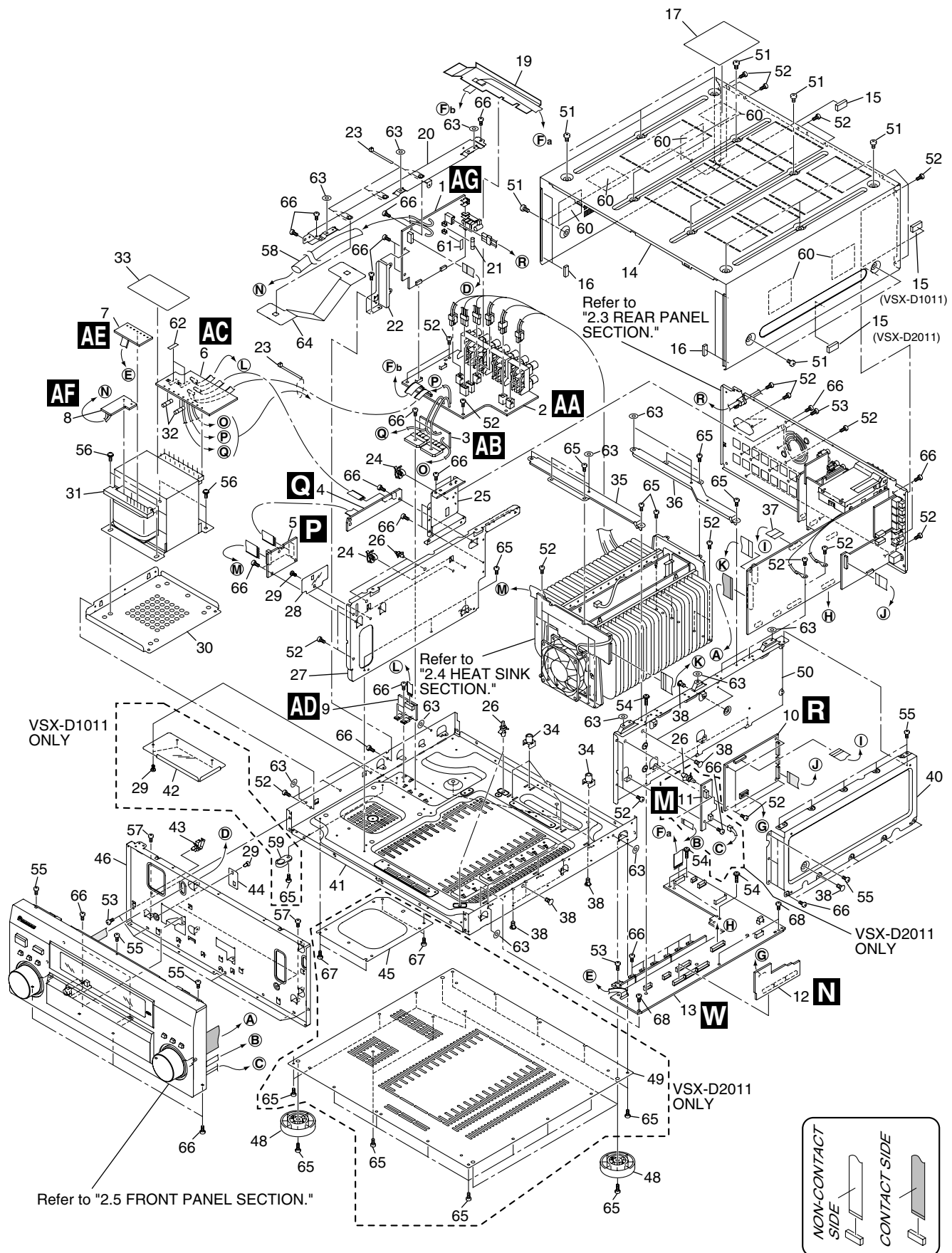
<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	MIC Assy	See Contrast table (2)	NSP 12	Alkaline Dry Cell Battery (LR6, AA)	VEM1021
2	MIC Stand 45	See Contrast table (2)			
3	FM Wire Antenna	ADH7030	13	Front Pad 45	AHA7374
4	AM Loop Antenna	ATB7009	14	Rear Pad 45	AHA7375
5	Caution Sheet SP,E	ARM7056	15	Packing Sheet	RHC1023
NSP 6	Warranty Card	ARY7022	16	Packing Case	See Contrast table (2)
7	Operating Instructions (English)	See Contrast table (2)	17	Operating Instructions (French)	See Contrast table (2)
NSP 8	Polyethylene Bag (0.03*230*340)	Z21-038	18	Operating Instructions (German)	See Contrast table (2)
9	Remote Control Unit	See Contrast table (2)	19	Operating Instructions (Italian)	See Contrast table (2)
10	Battery Cover	See Contrast table (2)	20	Operating Instructions (Spanish)	See Contrast table (2)
NSP 11	Alkaline Dry Cell Battery (LR6, AA)	See Contrast table (2)	21	Operating Instructions (Dutch)	See Contrast table (2)

(2) CONTRAST TABLE

VSX-D2011-S/HYXJI, VSX-D1011-S/HYXJI and VSX-D1011-K/HYXJI are constructed the same except for the following:

Mark	NO	Symbol and Description	VSX-D2011-S/ HYXJI	VSX-D1011-S/ HYXJI	VSX-D1011-K/ HYXJI
NSP	1	MIC Assy	APM7004	Not used	Not used
	2	MIC Stand 45	AEB7269	Not used	Not used
	7	Operating Instructions (English)	ARB7263	ARB7264	ARB7264
	9	Remote Control Unit	AXD7326	AXD7329	AXD7329
	10	Battery Cover	AZN7896	AZN7424	AZN7424
	11	Alkaline Dry Cell Battery (LR6, AA)	VEM1021	Not used	Not used
	16	Packing Case	AHD8079	AHD8081	AHD8080
	17	Operating Instructions (French)	ARC7388	ARC7395	ARC7395
	18	Operating Instructions (German)	ARC7389	ARC7396	ARC7396
	19	Operating Instructions (Italian)	ARC7390	ARC7397	ARC7397
	20	Operating Instructions (Spanish)	ARC7391	ARC7398	ARC7398
	21	Operating Instructions (Dutch)	ARC7392	ARC7399	ARC7399

2.2 EXTERIOR SECTION



EXTERIOR SECTION parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.	
1	PRIMARY Assy	AWX7998	36	Bridge Frame 45R	ANG7410	A
2	SP/PS Assy	See Contrast table (2)	37	J7 21P FFC/60V	ADD7355	
3	DIODE Assy	See Contrast table (2)	38	Card Spacer	DNK2769	
4	FAN CONNECTION Assy	AWX8005	39	•••••		
5	FAN DRIVE Assy	AWX8135	40	DSP Shield 45B	ANG7403	
6	TRANS 2-1 Assy	AWX7979	NSP 41	Under Base	See Contrast table (2)	
7	TRANS 2-2 Assy	AWX7970	42	Screw Cover 45A	See Contrast table (2)	
8	TRANS 1 Assy	AWX7969	NSP 43	Wire Saddle	DEC1450	
9	VH TR Assy	AWX8018	44	Styling Sheet	AEC7413	
10	DSP ASSY	AWX8016	45	Stabilizer 45	See Contrast table (2)	B
11	MIC AMP Assy	See Contrast table (2)	NSP 46	Panel Stay 45	AND7047	
12	DSP CONNECTION Assy	AWX8024	47	•••••		
13	REGULATOR Assy	AWX8020	48	Insulator	See Contrast table (2)	
14	Bonnet Case	See Contrast table (2)	49	Bottom Plate 45	See Contrast table (2)	
15	Spacer 45A	AEB7263	50	DSP Shield 45A	ANG7402	
16	Spacer 45B	AEB7264	51	Screw	See Contrast table (2)	
17	Label (DD/DTS/THX)	ARW7177	52	Screw	BBZ30P080FZK	
18	•••••		53	Screw	BBZ30P100FCC	
19	Barrier 45	AEC7444	54	Screw	IBZ30P150FCC	C
20	Left Beam 45	ANG7401	55	Screw	BBT30P080FCC	
⚠ 21	FU1 Fuse (4A)	REK-106	56	Screw	ABA7066	
22	Primary Angle 35	ANG7301	57	Screw	ABA7009	
NSP 23	Binder	ZCA-BK1	58	UL Tube	ADN7007	
NSP 24	Mini Clamp	VEC1597	59	Screw Cover		
25	Fan Box 45	ANG7413	See "2.5 FRONT PANEL SECTION" No. 19-3			
26	Locking Card Spacer	PNW2917	60	Bonnet Sheet	See Contrast table (2)	
27	Trans Shield 45	ANG7400	NSP 61	Fuse Card	AAX7099	
28	Styling Sheet B	AEC7437	NSP 62	Fuse Card	AAX7277	D
29	Push Rivet	AEC7370	63	Spacer Circle	See Contrast table (2)	
30	Trans Frame 45	ANG7399	64	FMEA Spacer	AEC7446	
⚠ 31	T1 Power Transformer	ATS7329	65	Screw	BBZ30P080FCC	
⚠ 32	FU4,FU5 Fuse (2.5A)	REK1026	66	Screw	IBZ30P080FCC	
NSP 33	Trans Label 45	AAX7957	67	Screw	IBZ30P100FCC	
34	PCB Mold	AMR2534				
35	Bridge Frame 45F	ANG7409				

(2) CONTRAST TABLE

VSX-D2011-S/HYXJI, VSX-D1011-S/HYXJI and VSX-D1011-K/HYXJI are constructed the same except for the following:

Mark	NO	Symbol and Description	VSX-D2011-S/ HYXJI	VSX-D1011-S/ HYXJI	VSX-D1011-K/ HYXJI
NSP	2	SP/PS Assy	AWX8039	AWX8040	AWX8040
	3	DIODE Assy	AWX8017	AWX8038	AWX8038
	11	MIC AMP Assy	AWX8004	Not used	Not used
	14	Bonnet Case	AZN7899	AZN7899	AZN7897
	41	Under Base	ANA7138	ANA7144	ANA7144
	42	Screw Cover 45A	Not used	AEC7414	AEC7414
	45	Stabilizer 45	ANG7408	Not used	Not used
	48	Insulator	VXA2368	PNW2766	PNW2766
	49	Bottom Plate 45	ANF7031	Not used	Not used
	51	Screw	BBZ40P080FCC	BBZ40P080FCC	BBZ40P080FZK
	60	Bonnet Sheet	AEB7265	Not used	Not used
	63	Spacer Circle	AEC7330	Not used	Not used

REAR PANEL SECTION parts List

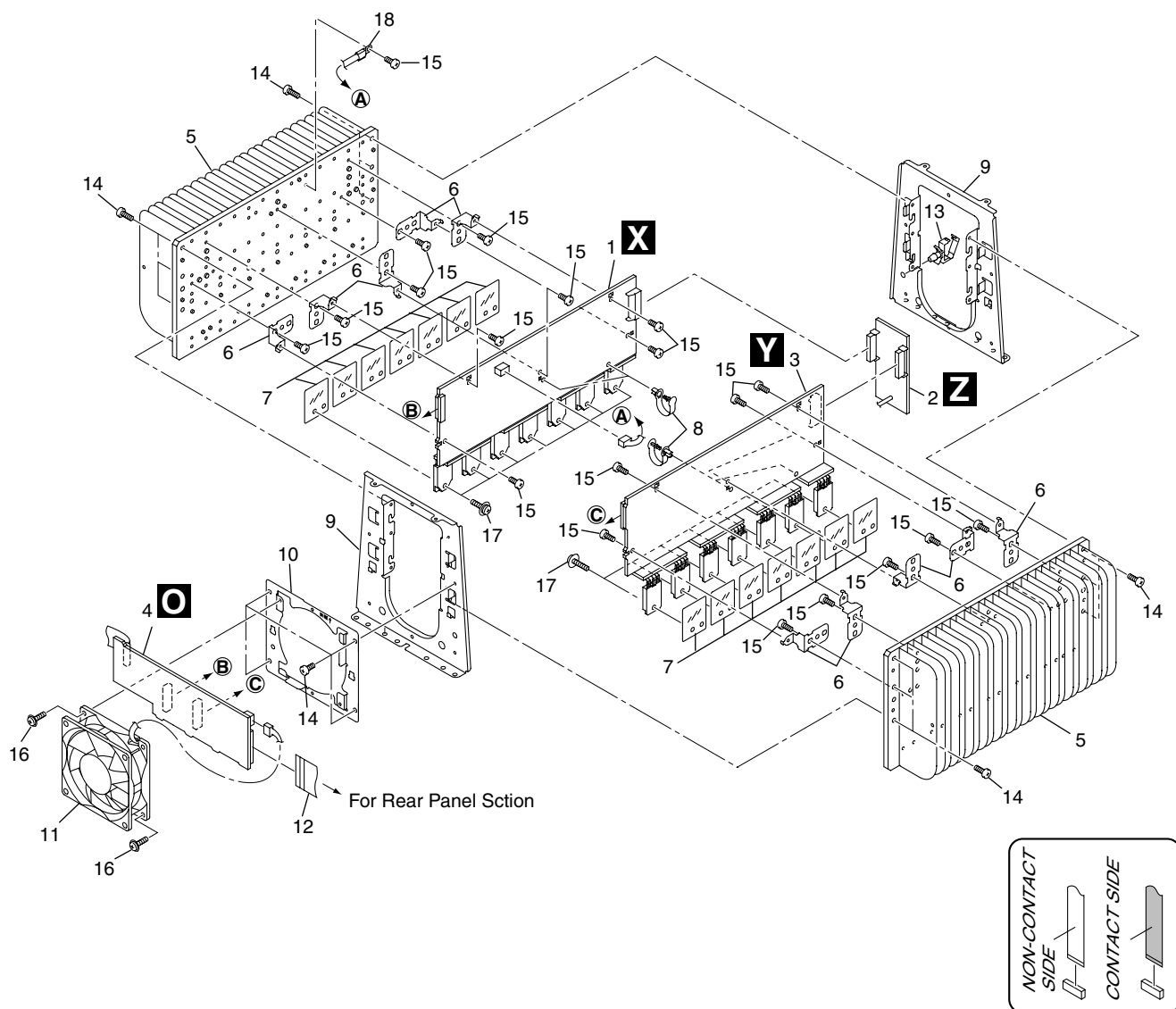
Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	•••••		16	Screw with Terminal	See Contrast table (2)
2	COMPONENT Assy	See Contrast table (2)	17	J8 13P FFC/60V	ADD7356
3	7.1CH I/O Assy	AWX7973	18	•••••	
4	VIDEO Assy	See Contrast table (2)	19	J5 9P FFC/60V	ADD7353
5	V-AUDIO IN Assy	AWX7991	20	J6 20P FFC/60V	ADD7354
6	INPUT CONNECT Assy	AWX8041	21	Screw	BBZ30P080FZK
7	MAIN CONTROL Assy	See Contrast table (2)	22	Screw	IBZ30P100FCC
8	FM/AM TUNER Module	AXQ7232	23	•••••	
9	OPTICAL IN Assy	AWX7978	24	Screw	VPZ30P080FZK
10	COAXIAL IN Assy	See Contrast table (2)	25	Screw	See Contrast table (2)
11	Rear Panel	See Contrast table (2)	26	Fan Motor	AXM7020
12	Cord Stopper	CM-22B	27	Fan Plate	ANG7153
⚠ 13	AC Power Cord	VDG1080	28	Screw	BBZ30P200FZK
14	Speaker Sheet	AAK8016	29	Screw	IBZ30P080FCC
15	Cushion Circle 16B	AED7052			

(2) CONTRAST TABLE

VSX-D2011-S/HYXJI, VSX-D1011-S/HYXJI and VSX-D1011-K/HYXJI are constructed the same except for the following:

Mark	NO	Symbol and Description	VSX-D2011-S/ HYXJI	VSX-D1011-S/ HYXJI	VSX-D1011-K/ HYXJI
	2	COMPONENT Assy	AWX7963	Not used	Not used
	4	VIDEO Assy	AWX8001	AWX8002	AWX8002
	7	MAIN CONTROL Assy	AWX7997	AWX8010	AWX8010
	10	COAXIAL IN Assy	AWX7965	AWX8013	AWX8013
	11	Rear Panel	ANC8064	ANC8090	ANC8088
	16	Screw with Terminal	AKE-031	Not used	Not used
	25	Screw	PMZ30P060FCC	Not used	Not used

2.4 HEAT SINK SECTION



HEAT SINK SECTION parts List

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	POWER AMP-L Assy	AWX7984
2	POWER AMP-C Assy	AWX7986
3	POWER AMP-R Assy	AWX7985
4	POWER AMP IN Assy	AWX7982
NSP 5	Heat Sink 45	ANH7152
6	PCB Angle 45	ANG7406
7	Mica Sheet 45	AEE7047
NSP 8	Speed Clamp	AEC7445
9	H.S Angle 45	ANG7404
10	Fan Holder 80	ANG7407
⚠ 11	Fan Motor	AXM7023
12	J14 24P FFC/60V	ADD7357
NSP 13	Wire Saddle	DEC1450
14	Screw	BBZ30P100FCC
15	Screw	BBZ30P080FZK
16	Screw	BBZ30P300FMC
17	Screw	ABA7085
⚠ 18	TH1 Thermistor	AEX7004

FRONT PANEL SECTION parts List

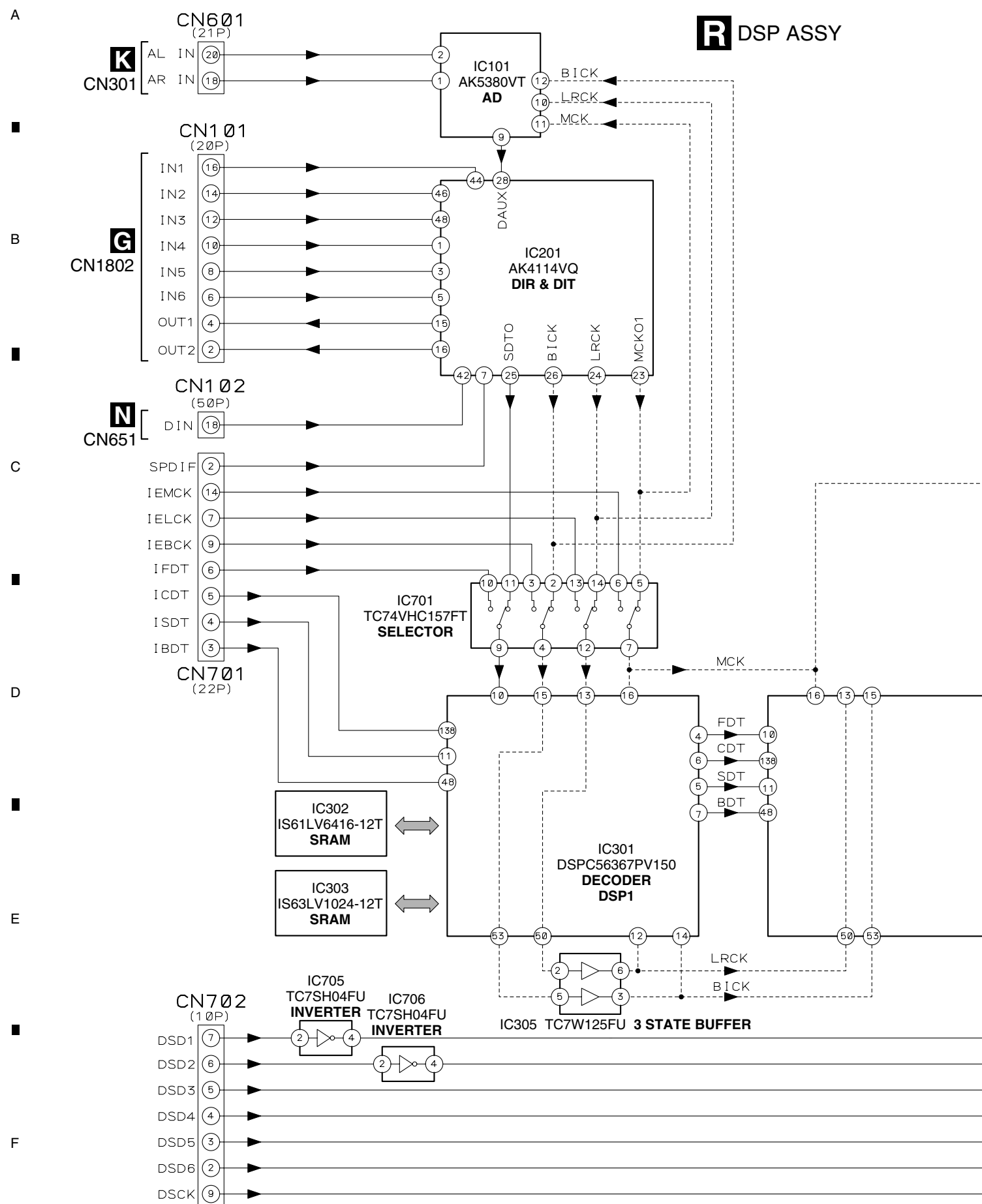
Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	MULTI JOG Assy	AWX8015	22	Rotary Knob L	See Contrast table (2)
2	MIC & F.OPT IN Assy	See Contrast table (2)	23	D.Sheet	See Contrast table (2)
3	DISPLAY Assy	See Contrast table (2)	24	Window	See Contrast table (2)
4	HEADPHONE Assy	AWX7980	25	Pionner Badge B	See Contrast table (2)
5	VOLUME Assy	AWX7971			
			26	F.Panel	See Contrast table (2)
6	FRONT IN Assy	AWX8186	27	•••••	
7	STYLING Assy	•••••	28	J4 7P FFC/60V	ADD7352
8	Door	See Contrast table (2)	29	J1 32P FFC/60V	ADD7349
9	Spacer 45A	AEB7263	30	Earth Plate A	ANG7411
10	Door Stay	See Contrast table (2)			
			NSP 31	Speed Clamp	AEC7445
11	Door Shaft 35	AMR7295	32	J1901 Connector Assy (3P)	See Contrast table (2)
12	Damper Assy (200)	AXA7088	33	J15 3P FFC/60V	ADD7371
13	Door Hinge L	See Contrast table (2)	34	J2 11P FFC/60V	ADD7350
14	Door Hinge R	See Contrast table (2)	35	J3 4P FFC/60V	See Contrast table (2)
NSP 15	Earth Lead Wire	ADH7022			
			NSP 36	Wire Clip (A)	See Contrast table (2)
16	Earth Plate B	ANG7412	37	Screw	BPZ30P100FMC
17	Magnet 35	AMF7007	38	Screw	BBZ30P080FZK
18	FL Sheet	See Contrast table (2)	39	Screw	ABA7009
19-1	Panel Base	See Contrast table (2)	40	MECHA SW Assy	AWX7995
19-2	Magnet Holder				
19-3	Screw Cover		41	Power Button	See Contrast table (2)
20	Cushion Circle	See Contrast table (2)	42	Screw	IPZ30P100FCC
21	Nut	NK90FUC			

(2) CONTRAST TABLE

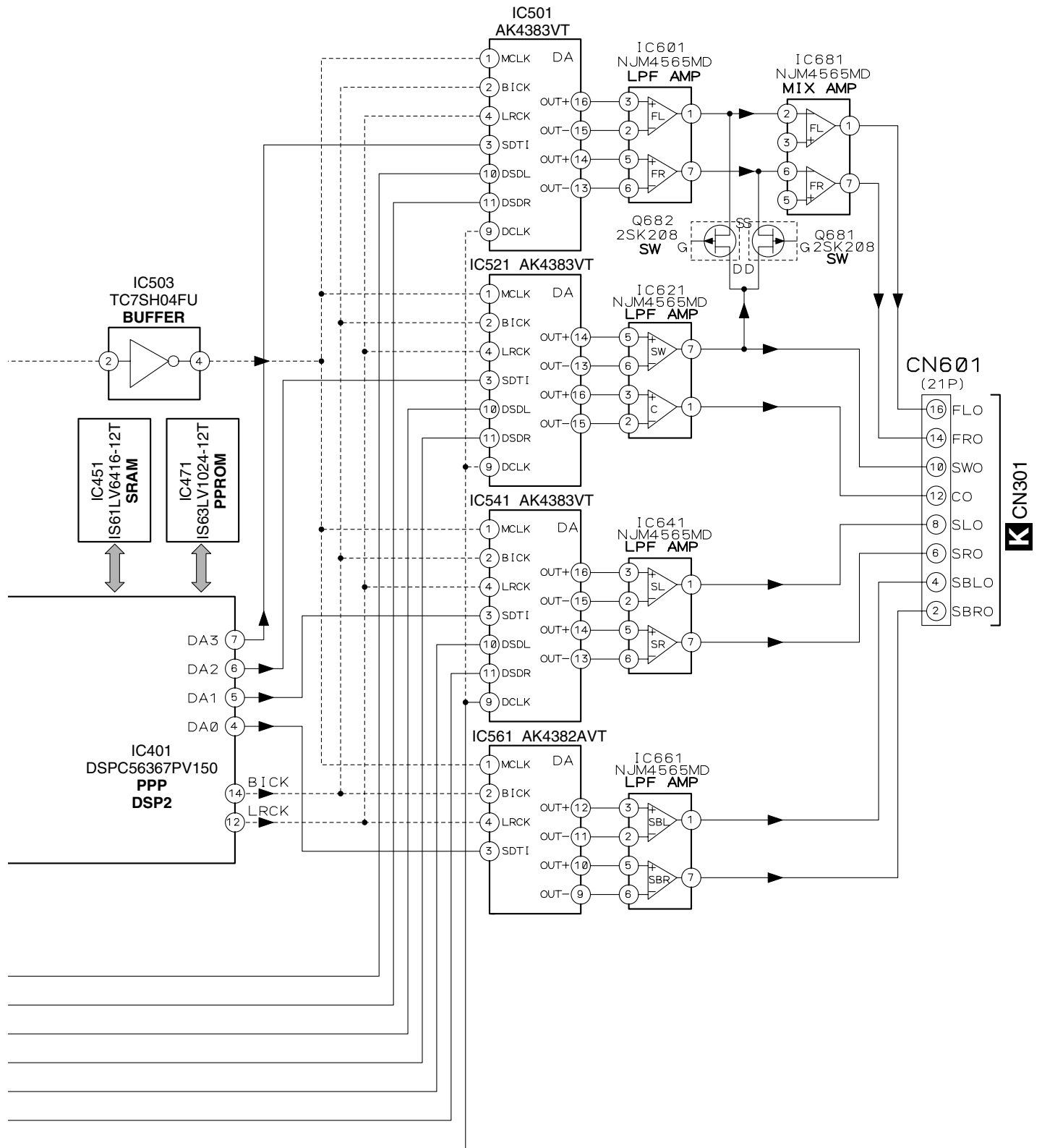
VSX-D2011-S/HYXJI, VSX-D1011-S/HYXJI and VSX-D1011-K/HYXJI are constructed the same except for the following:

Mark	NO	Symbol and Description	VSX-D2011-S/ HYXJI	VSX-D1011-S/ HYXJI	VSX-D1011-K/ HYXJI
	2	MIC & F.OPT IN Assy	AWX7981	Not used	Not used
	3	DISPLAY Assy	AWX8147	AWX8011	AWX8011
	8	Door	ANB7280	ANB7280	ANB7275
	10	Door Stay	AAH7097	AAH7097	AAH7089
	13	Door Hinge L	AMR7424	AMR7424	AMR7386
	14	Door Hinge R	AMR7425	AMR7425	AMR7387
	18	FL Sheet	AAK7956	AAK7956	Not used
	19-1	Panel Base	AMB7820	AMB7820	AMB7803
	20	Cushion Circle	AED7045	AED7045	AED7044
	22	Rotary Knob L	AAA7017	AAA7017	Not used
	22	VOL Knob	Not used	Not used	AAB7249
	23	D.Sheet	AAK8023	AAK8025	AAK8024
	24	Window	AAK8034	AAK8036	AAK8071
	25	Pionner Badge B	VAN1124	VAN1124	AAN7218
	26	F.Panel	ANB7283	ANB7285	ANB7284
	32	J1901 Connector Assy (3P)	ADE7084	Not used	Not used
	35	J3 4P FFC/60V	ADD7351	Not used	Not used
NSP	36	Wire Clip (A)	VEC1355	Not used	Not used
	41	Power Button	AAD7675	AAD7675	AAD7647

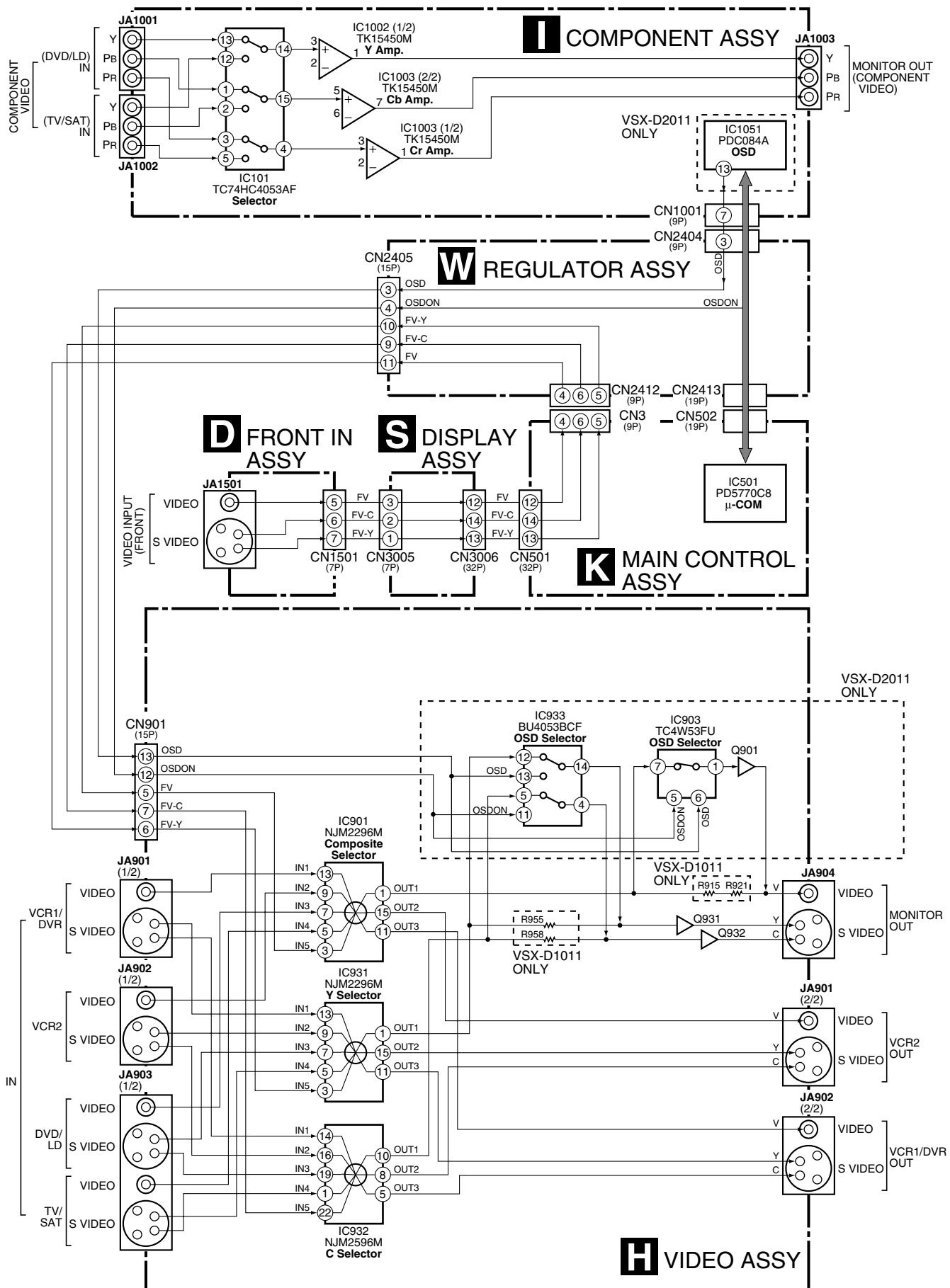
3.2 DSP BLOCK DIAGRAM



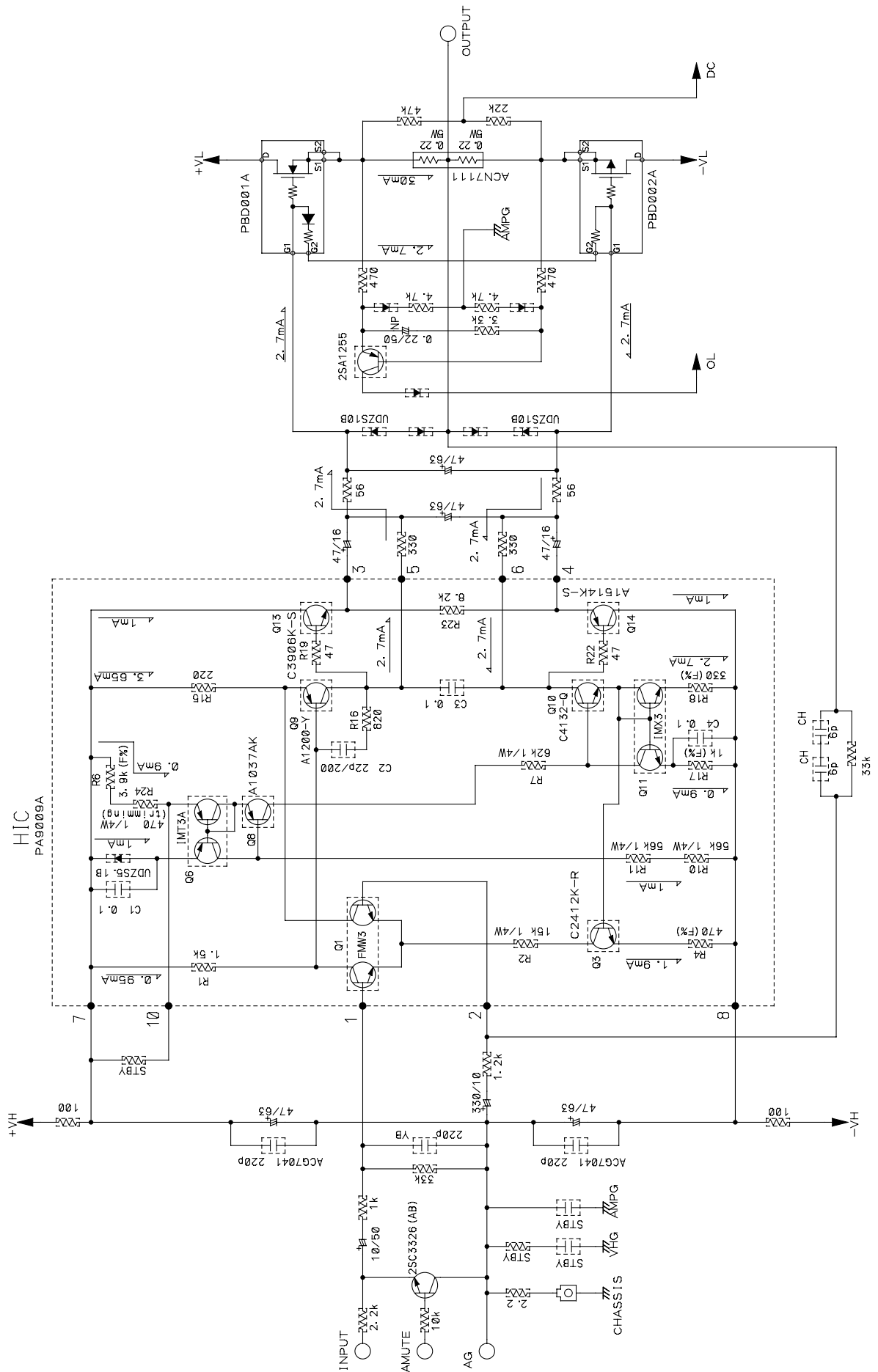
----- CLOCK LINE
 ————— DATA LINE



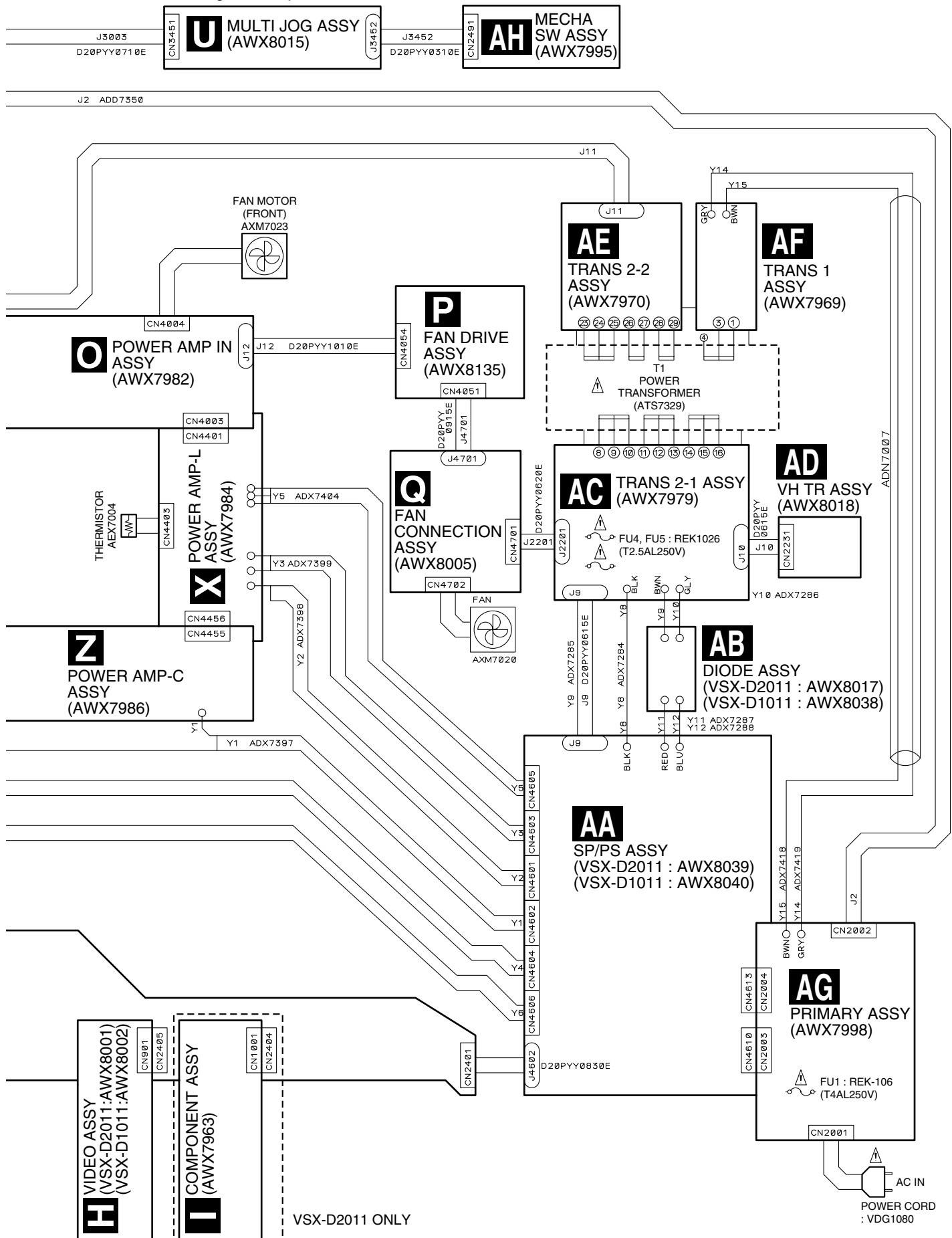
3.3 VIDEO BLOCK DIAGRAM



3.4 POWER AMP BLOCK DIAGRAM



Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".



A
B
C
D
E
F

Notes

1. RESISTORS

Indicated in Ω , $1/16W \pm 5\%$ Tolerance unless otherwise noted K:K Ω , M:M Ω .

2. CAPACITORS

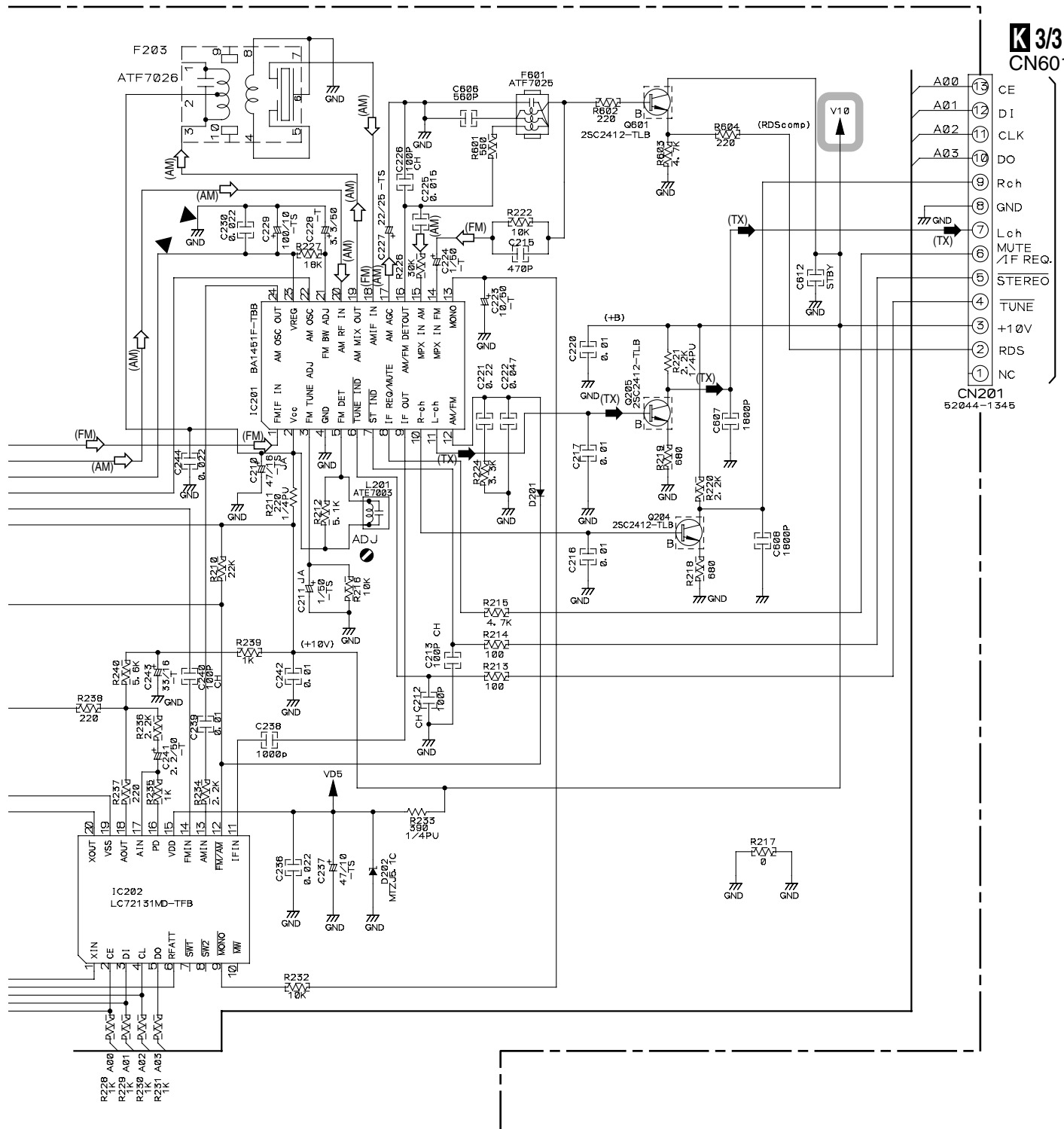
Indicated in Capacity (μF)/VOLTAGE (V) unless otherwise noted P:PF.

3. DIODES

No mark diode is 1SS133.

 : The power supply is shown with the marked box.

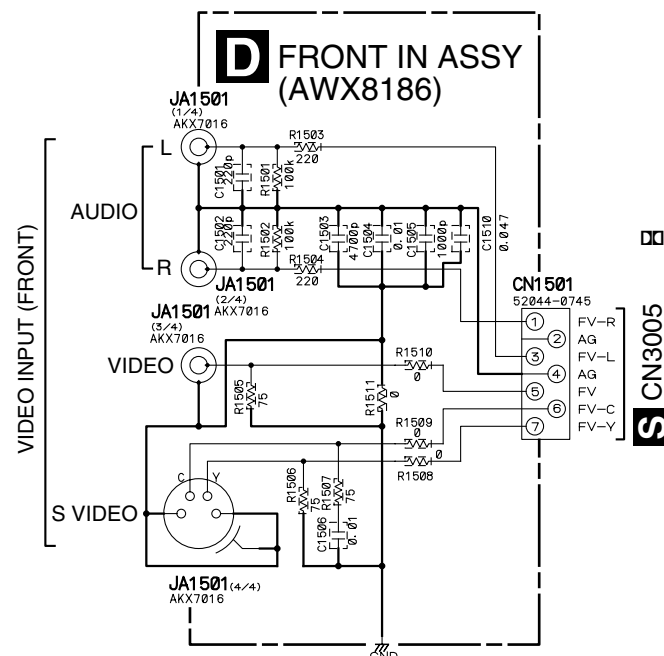
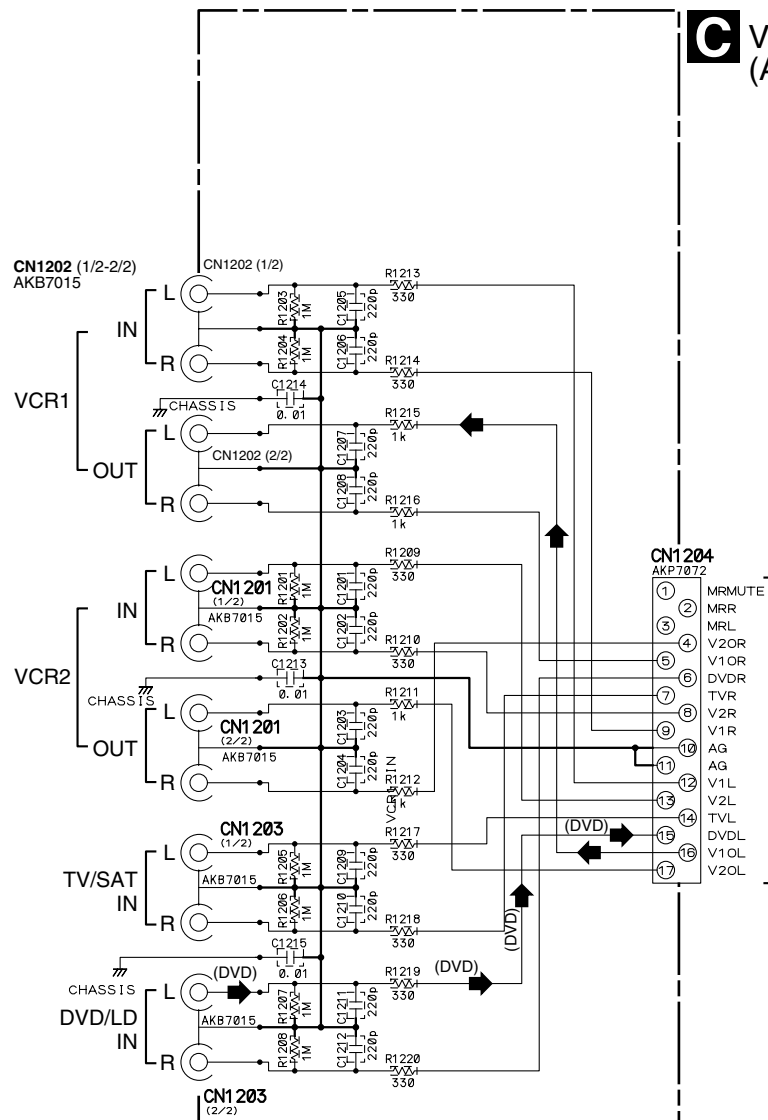
(TX)  : AUDIO SIGNAL ROUTE (TUNER)
 (AM)  : AM SIGNAL ROUTE
 (FM)  : FM SIGNAL ROUTE



F



● : The power supply is shown with the marked box.



➡ : AUDIO SIGNAL ROUTE (Lch)

(DVD) ➡ : AUDIO SIGNAL ROUTE (DVD Lch)

(F) ➡ : AUDIO SIGNAL ROUTE (FRONT Lch)

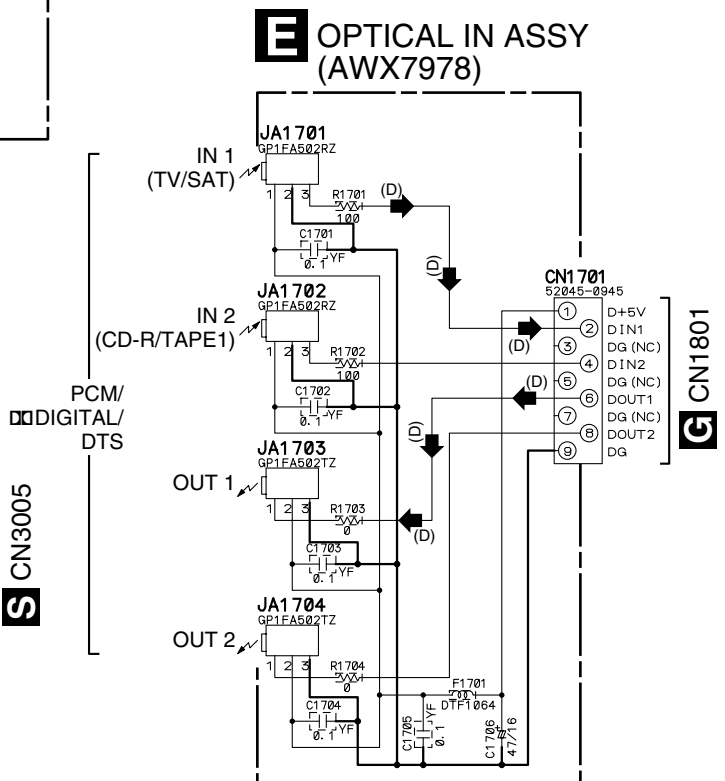
(S) ➡ : AUDIO SIGNAL ROUTE (SURROUND Lch)

(SB) ➡ : AUDIO SIGNAL ROUTE (SURROUND BACK Lch)

(C) ➡ : AUDIO SIGNAL ROUTE (CENTER ch)

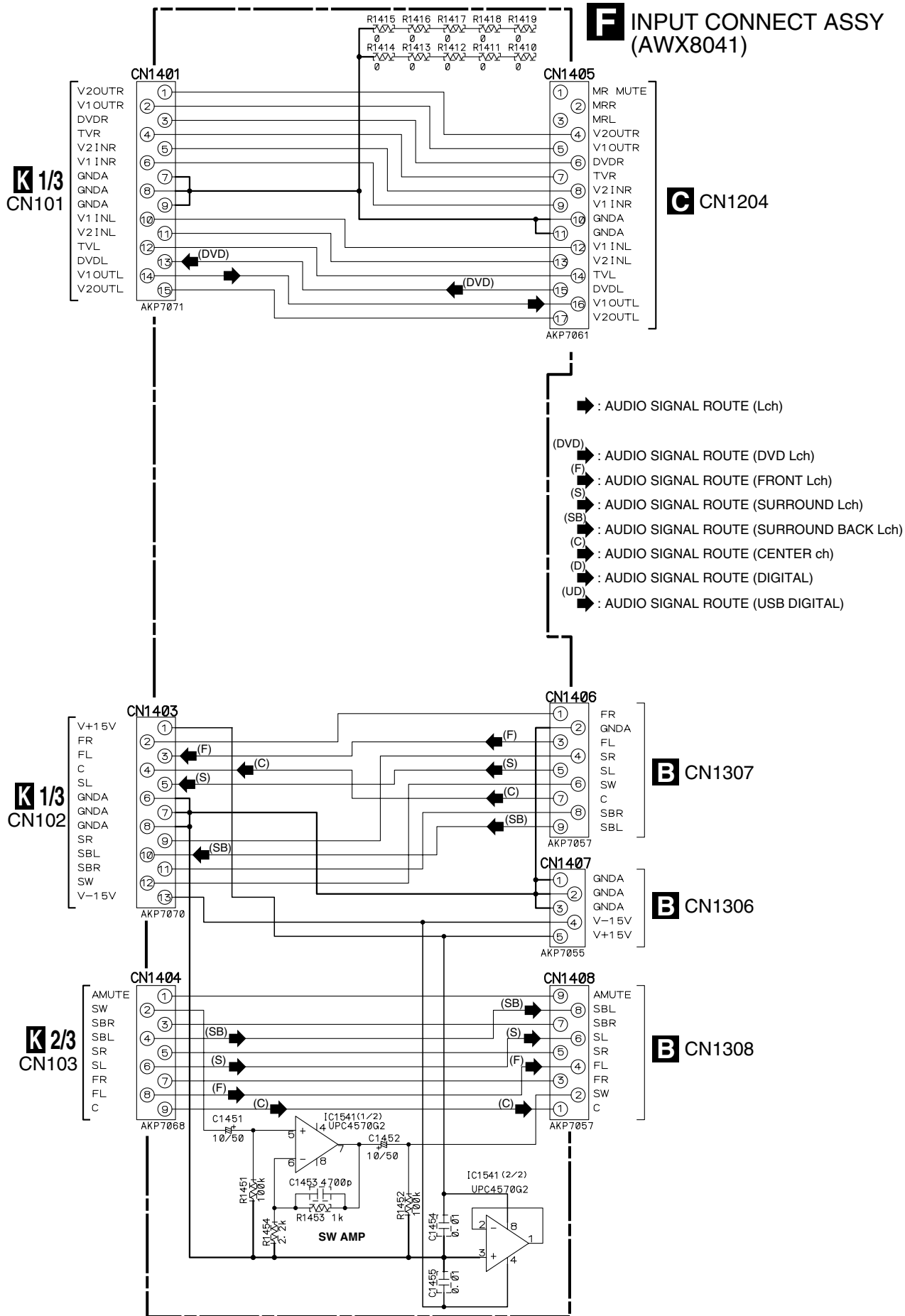
(D) ➡ : AUDIO SIGNAL ROUTE (DIGITAL)

F CN1405

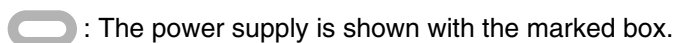


C D E

3.8 INPUT CONNECT and COAXIAL IN ASSYS



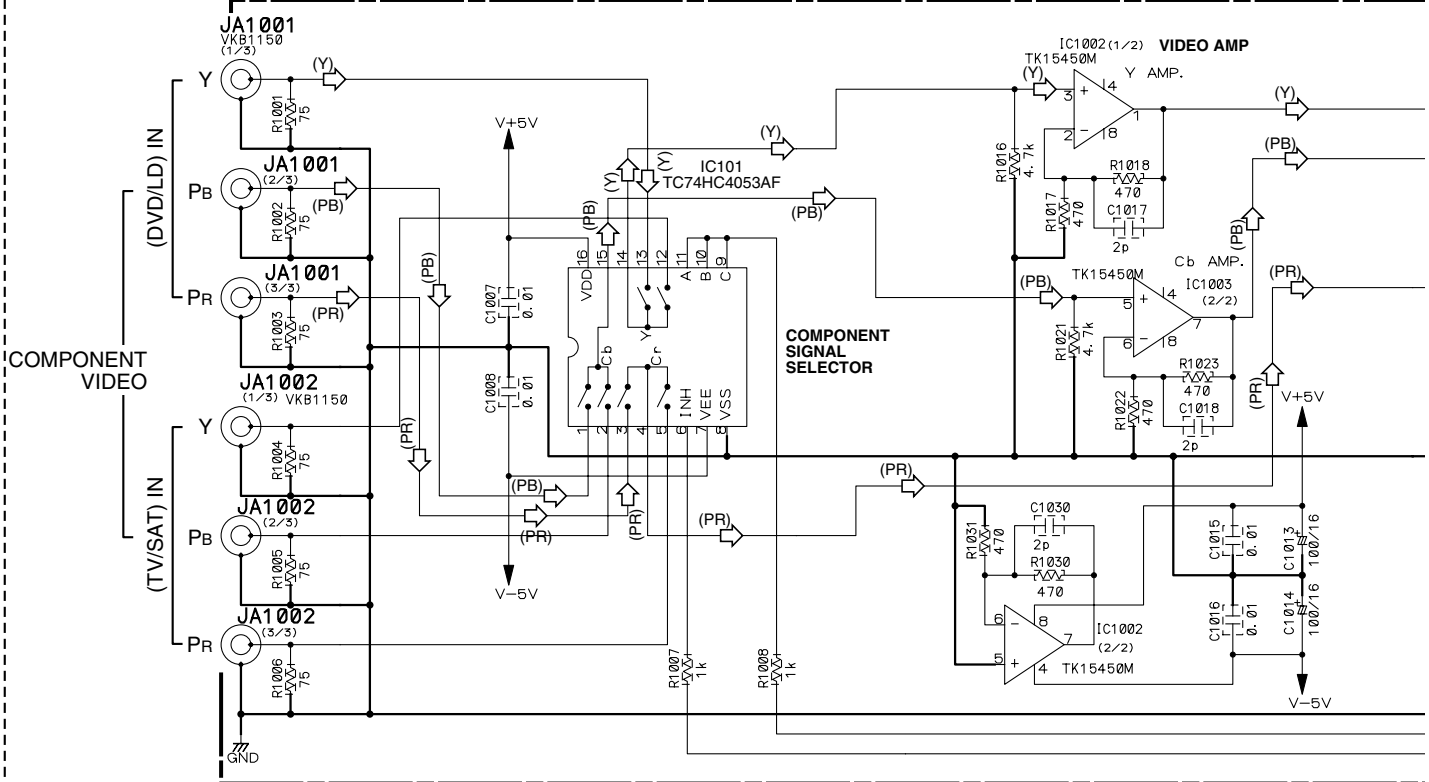




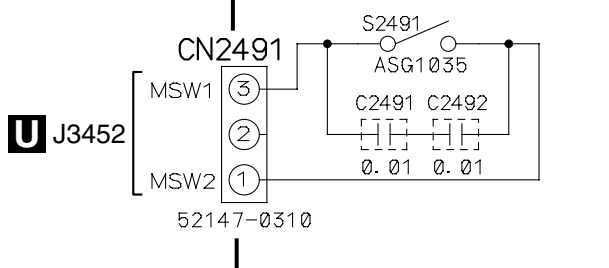
3.10 COMPONENT and MECHA SW ASSYS

VSX-D2011
ONLY

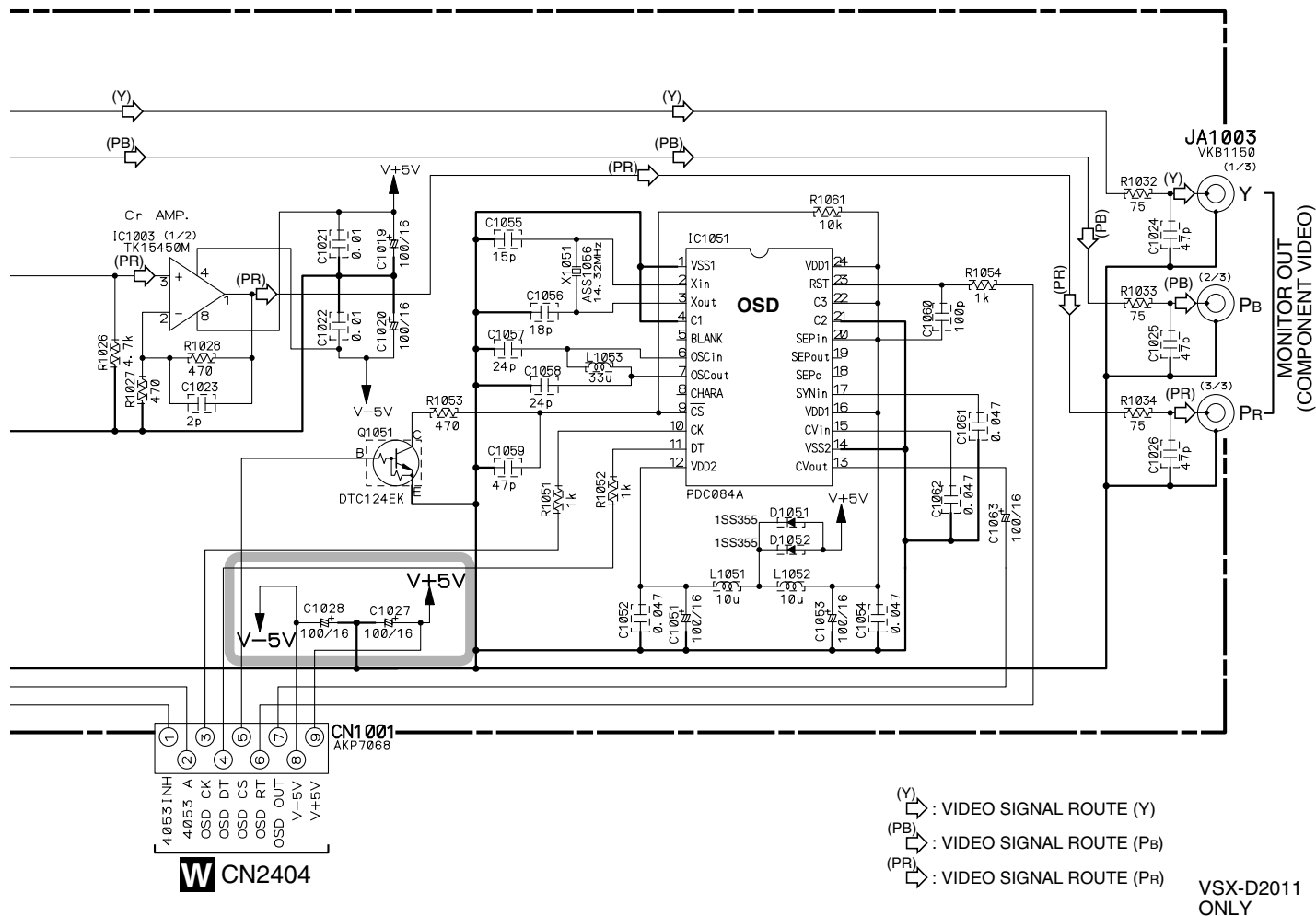
I COMPONENT ASSY (VSX-D2011 : AWX7963)



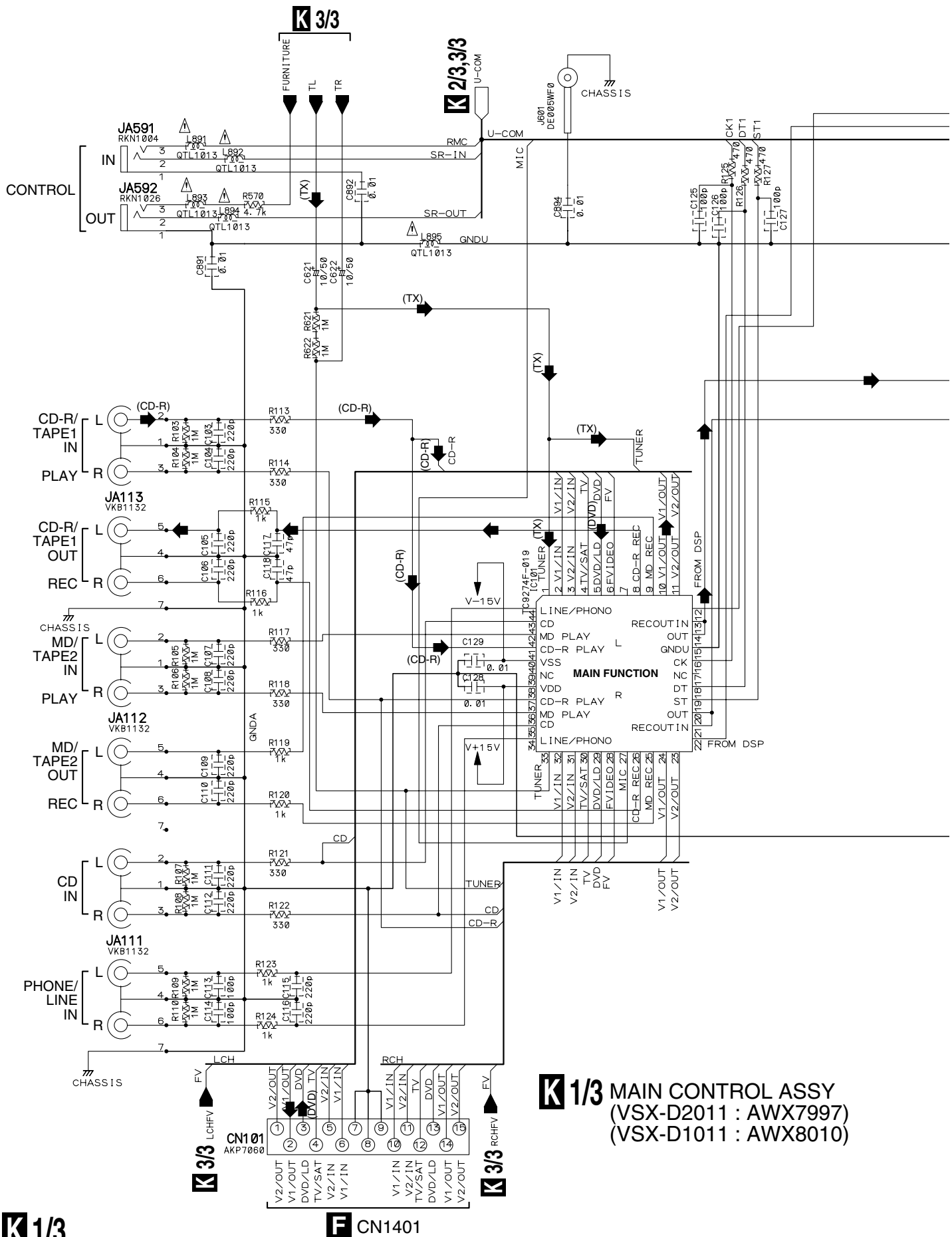
J MECHA SW ASSY (AWX7995)



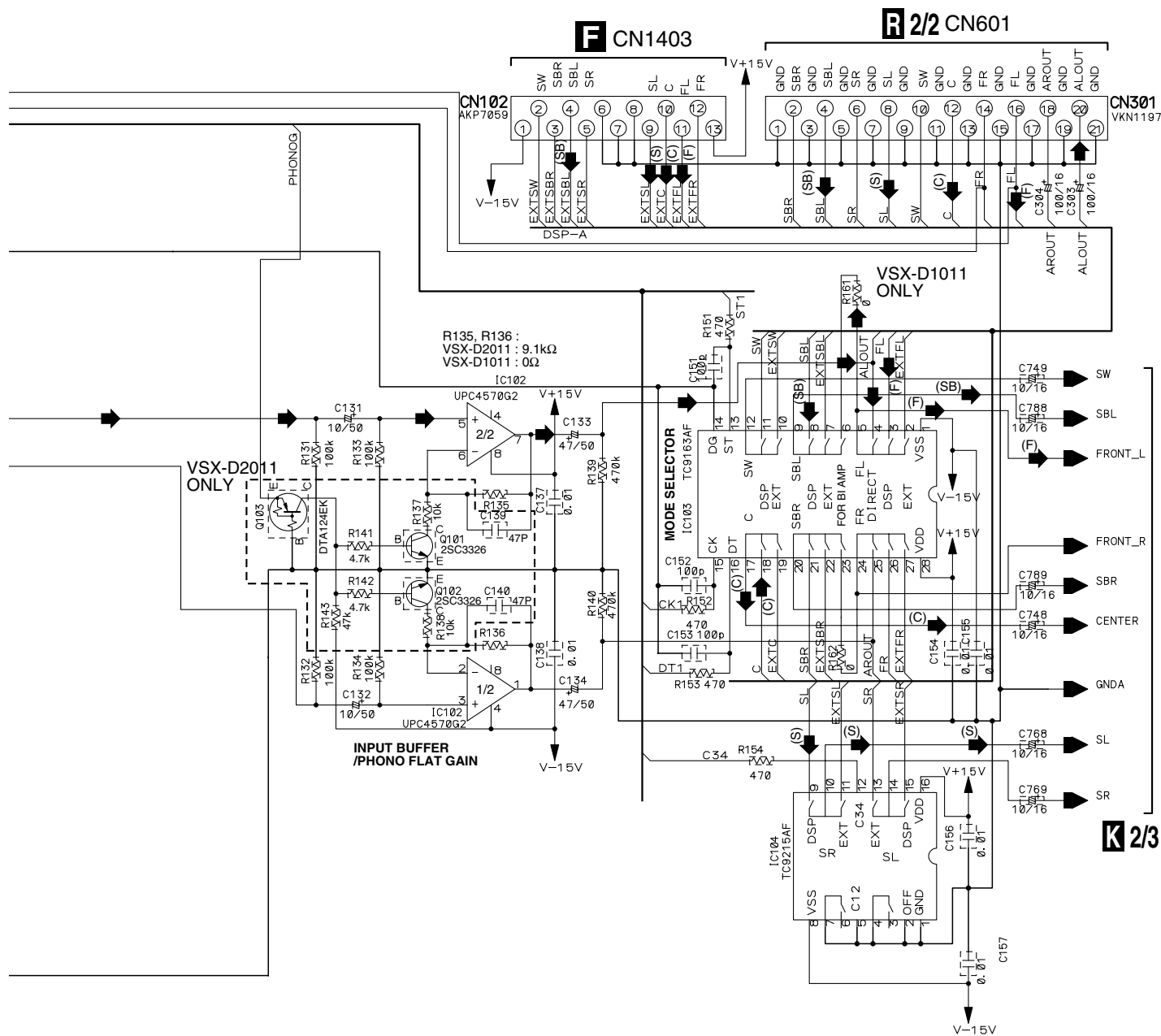
 : The power supply is shown with the marked box.



3.11 MAIN CONTROL ASSY (1/3)



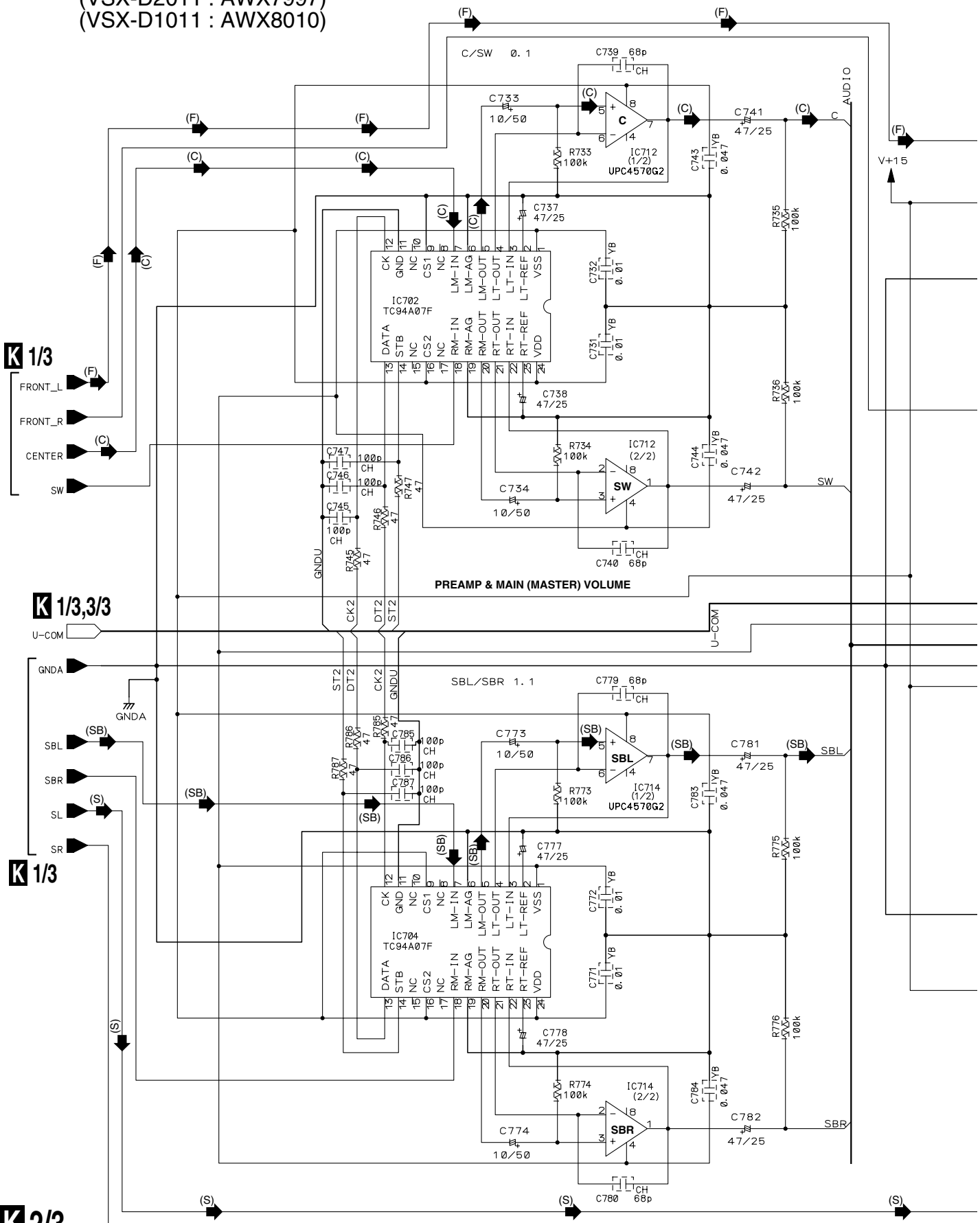
K 1/3 MAIN CONTROL ASSY
(VSX-D2011 : AWX7997)
(VSX-D1011 : AWX8010)

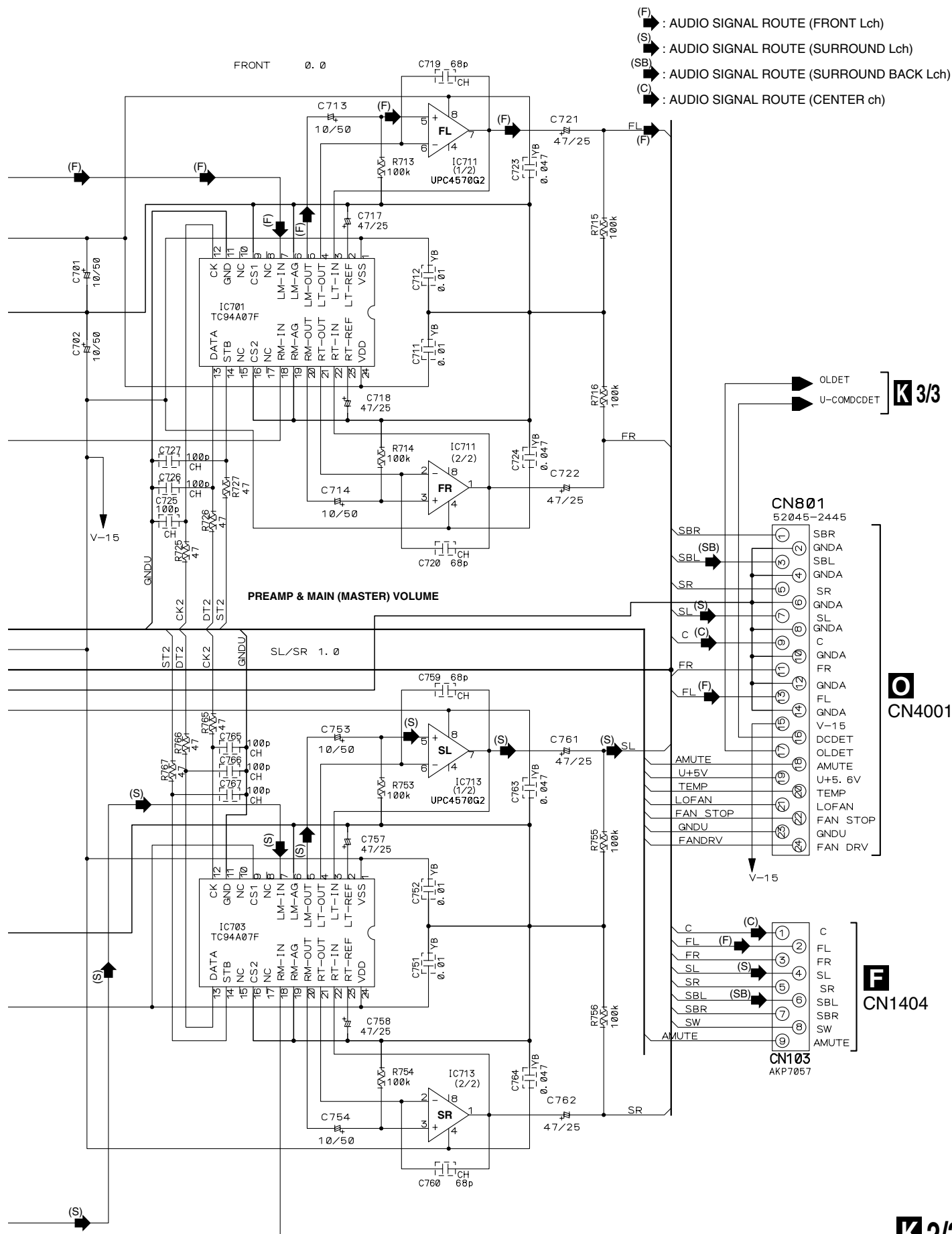


- ➡ : AUDIO SIGNAL ROUTE (Lch)
- (CD-R) ➡ : AUDIO SIGNAL ROUTE (CD-R Lch)
- (TX) ➡ : AUDIO SIGNAL ROUTE (TUNER Lch)
- (DVD) ➡ : AUDIO SIGNAL ROUTE (DVD Lch)
- (F) ➡ : AUDIO SIGNAL ROUTE (FRONT Lch)
- (S) ➡ : AUDIO SIGNAL ROUTE (SURROUND Lch)
- (SB) ➡ : AUDIO SIGNAL ROUTE (SURROUND BACK Lch)
- (C) ➡ : AUDIO SIGNAL ROUTE (CENTER ch)

3.12 MAIN CONTROL ASSY (2/3)

K 2/3 MAIN CONTROL ASSY
(VSX-D2011 : AWX7997)
(VSX-D1011 : AWX8010)



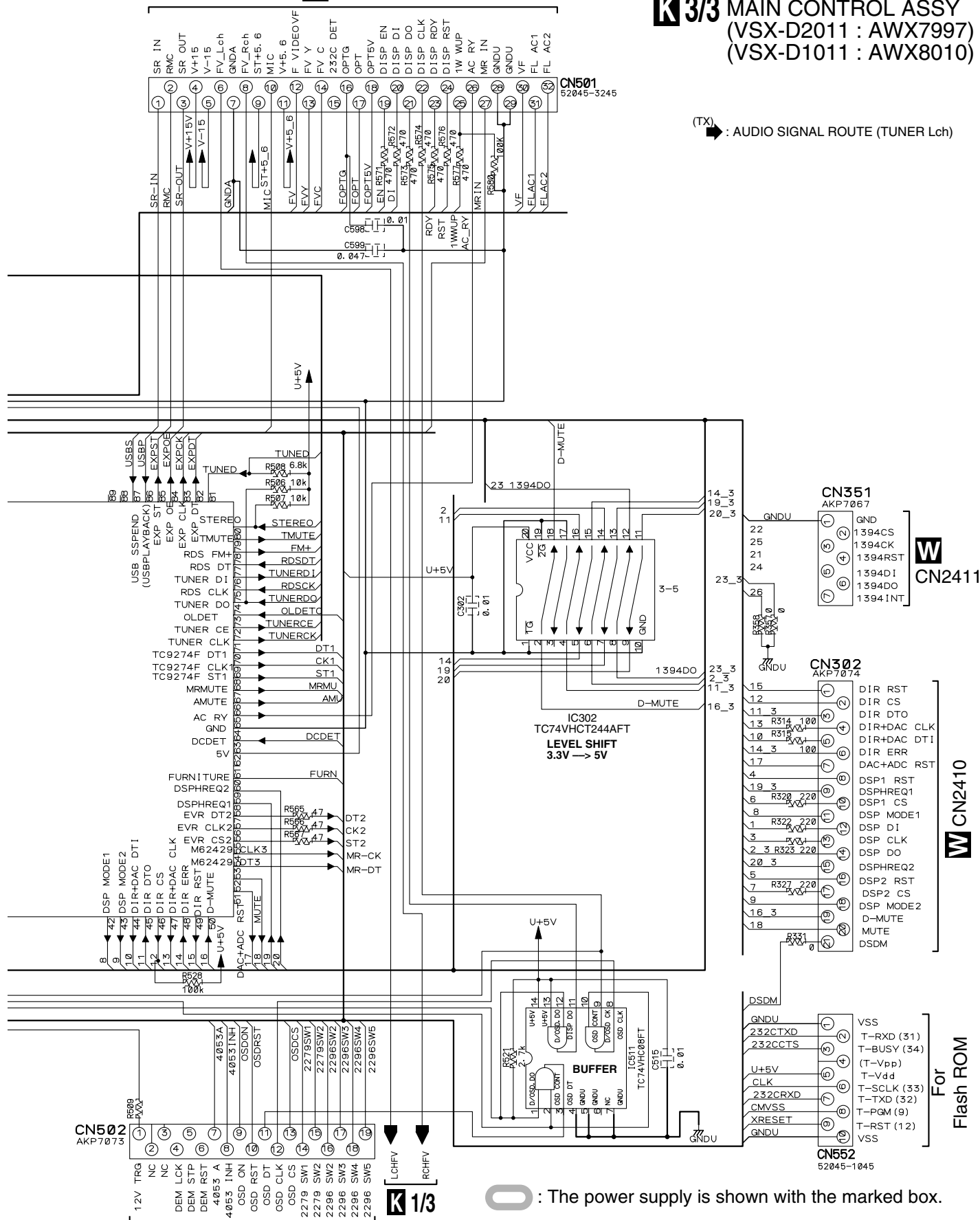


4

E



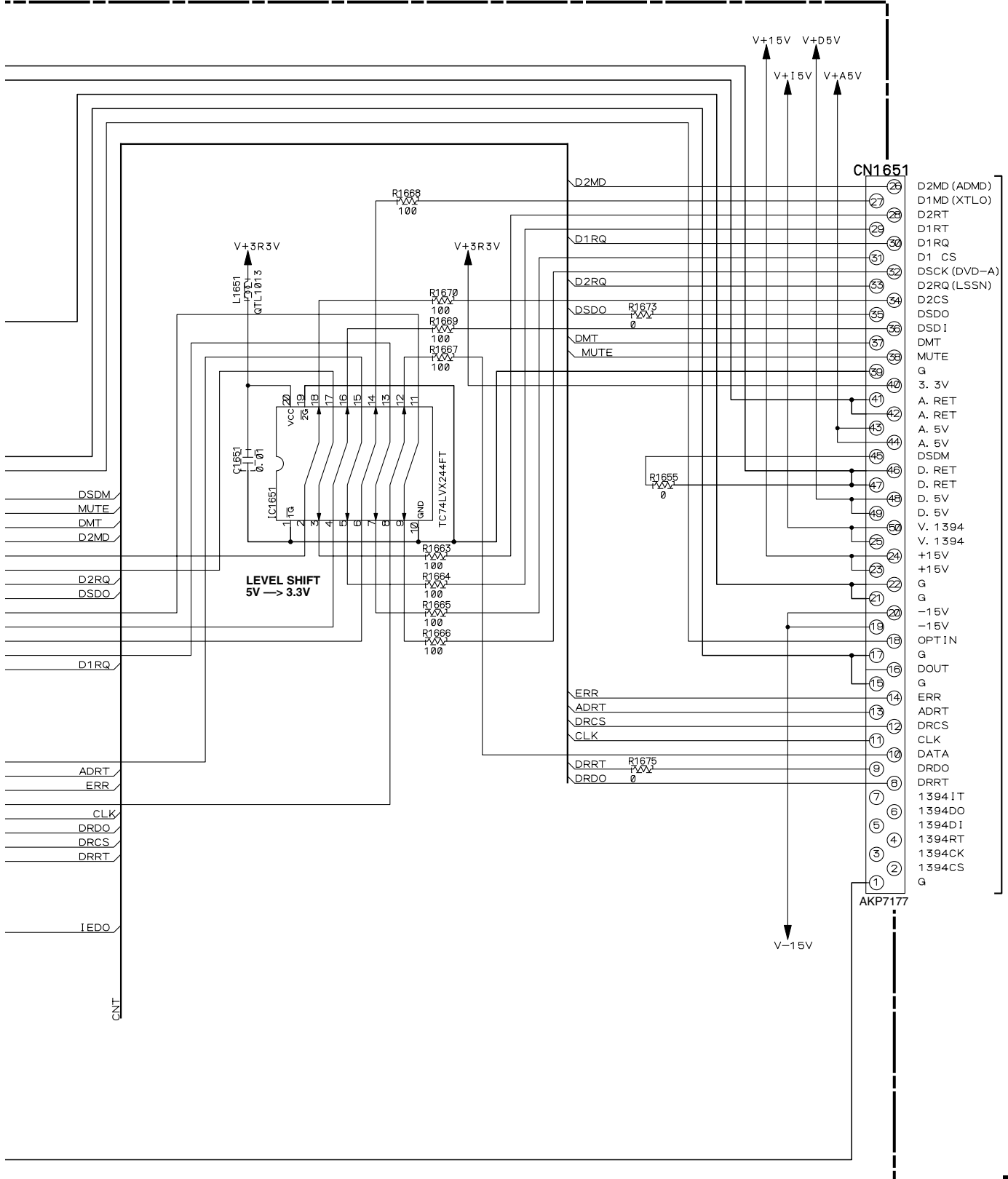
(TX) : AUDIO SIGNAL ROUTE (TUNER Lch)



● : The power supply is shown with the marked box.

K 3/3

N DSP CONNECTION ASSY (AWX8024)

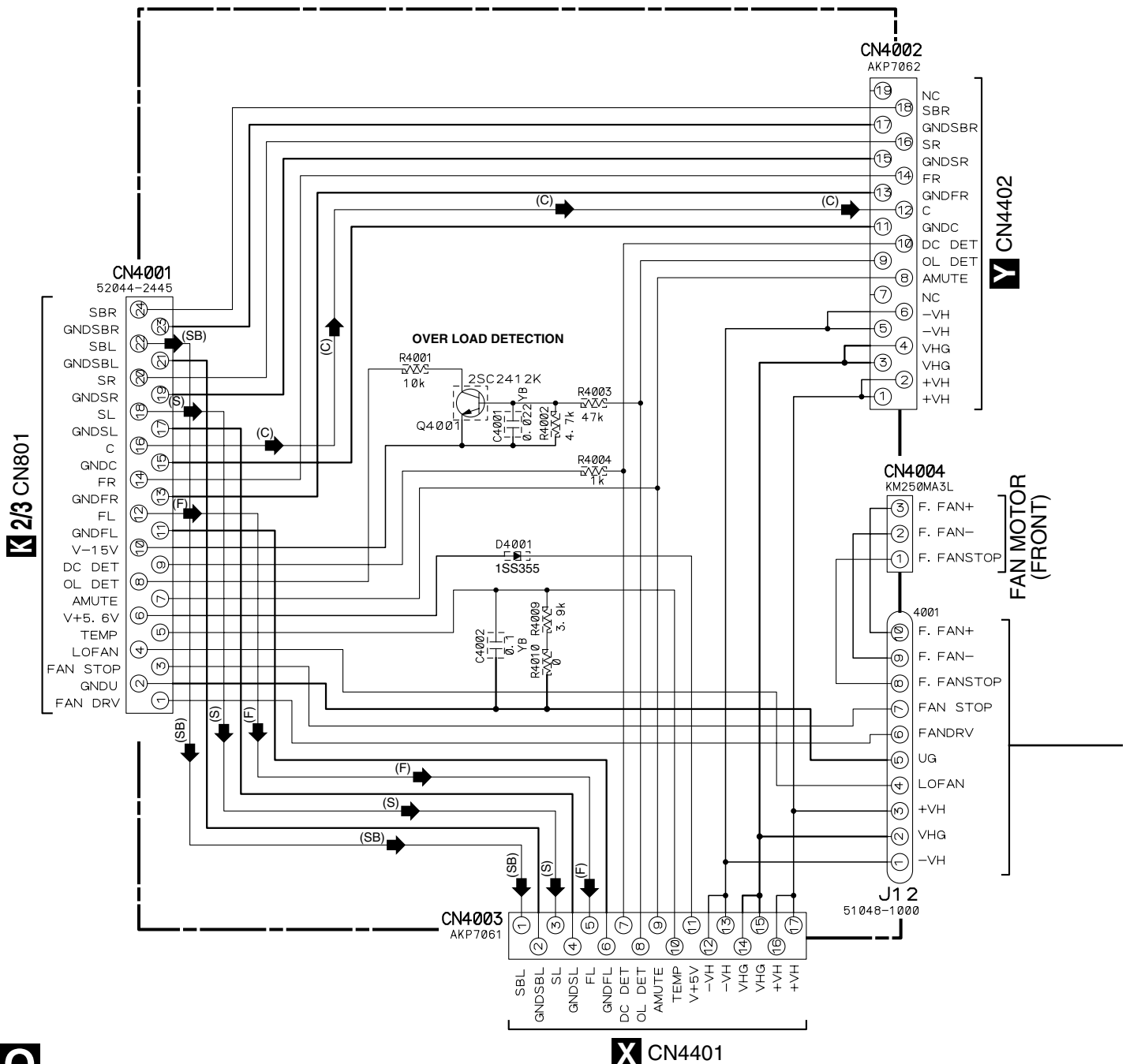


R 1/2 CN102

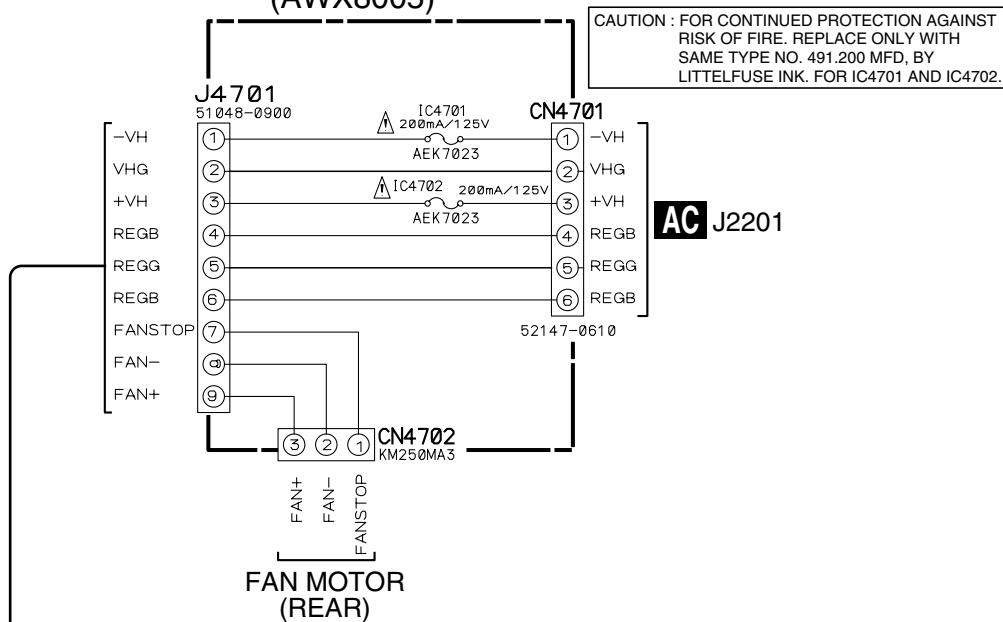
3.15 POWER AMP IN, FAN DRIVE and FAN CONNECTION ASSYS

- (F) : AUDIO SIGNAL ROUTE (FRONT Lch)
 (S) : AUDIO SIGNAL ROUTE (SURROUND Lch)
 (SB) : AUDIO SIGNAL ROUTE (SURROUND BACK Lch)
 (C) : AUDIO SIGNAL ROUTE (CENTER ch)

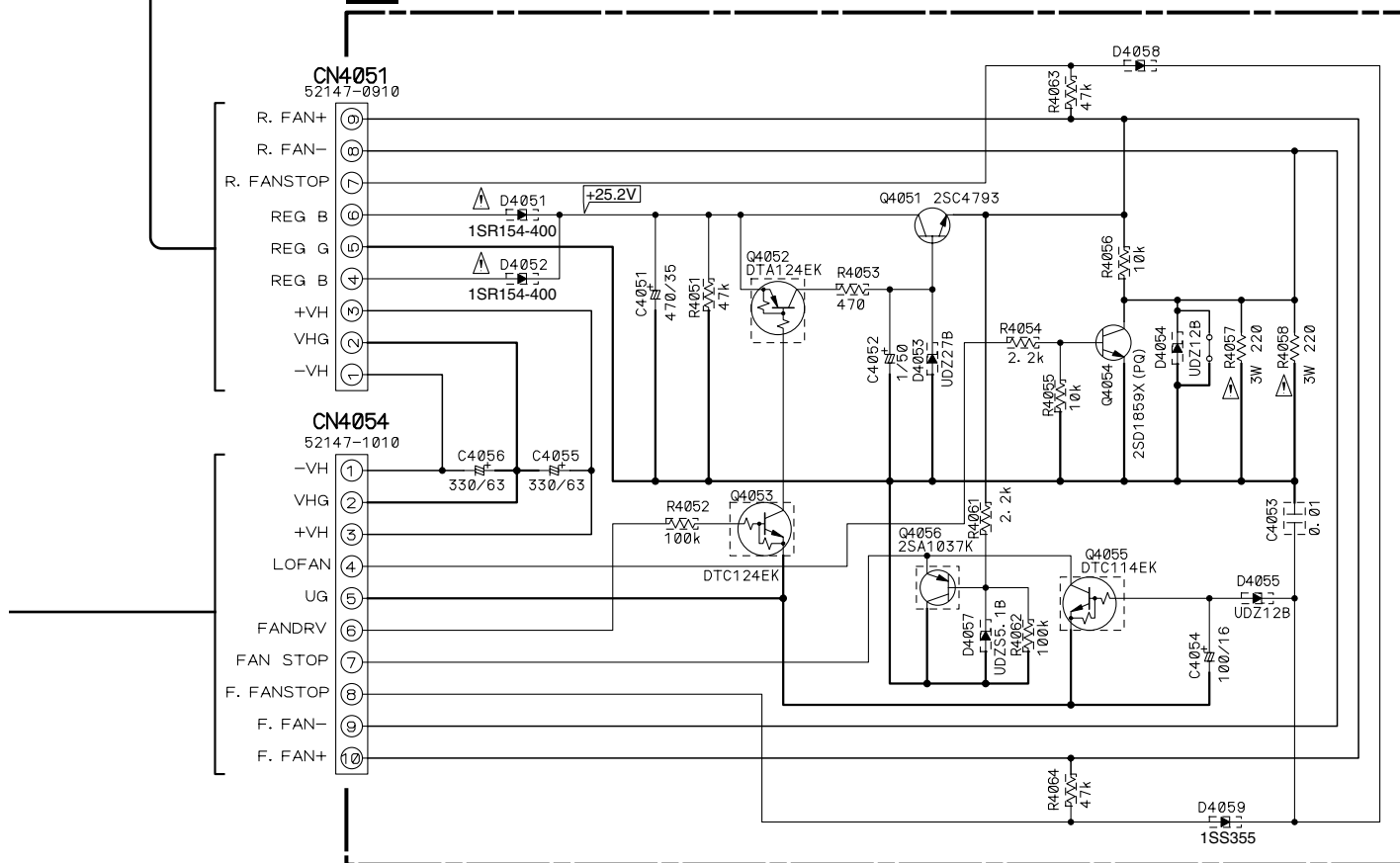
POWER AMP IN ASSY (AWX7982)



Q FAN CONNECTION ASSY (AWX8005)

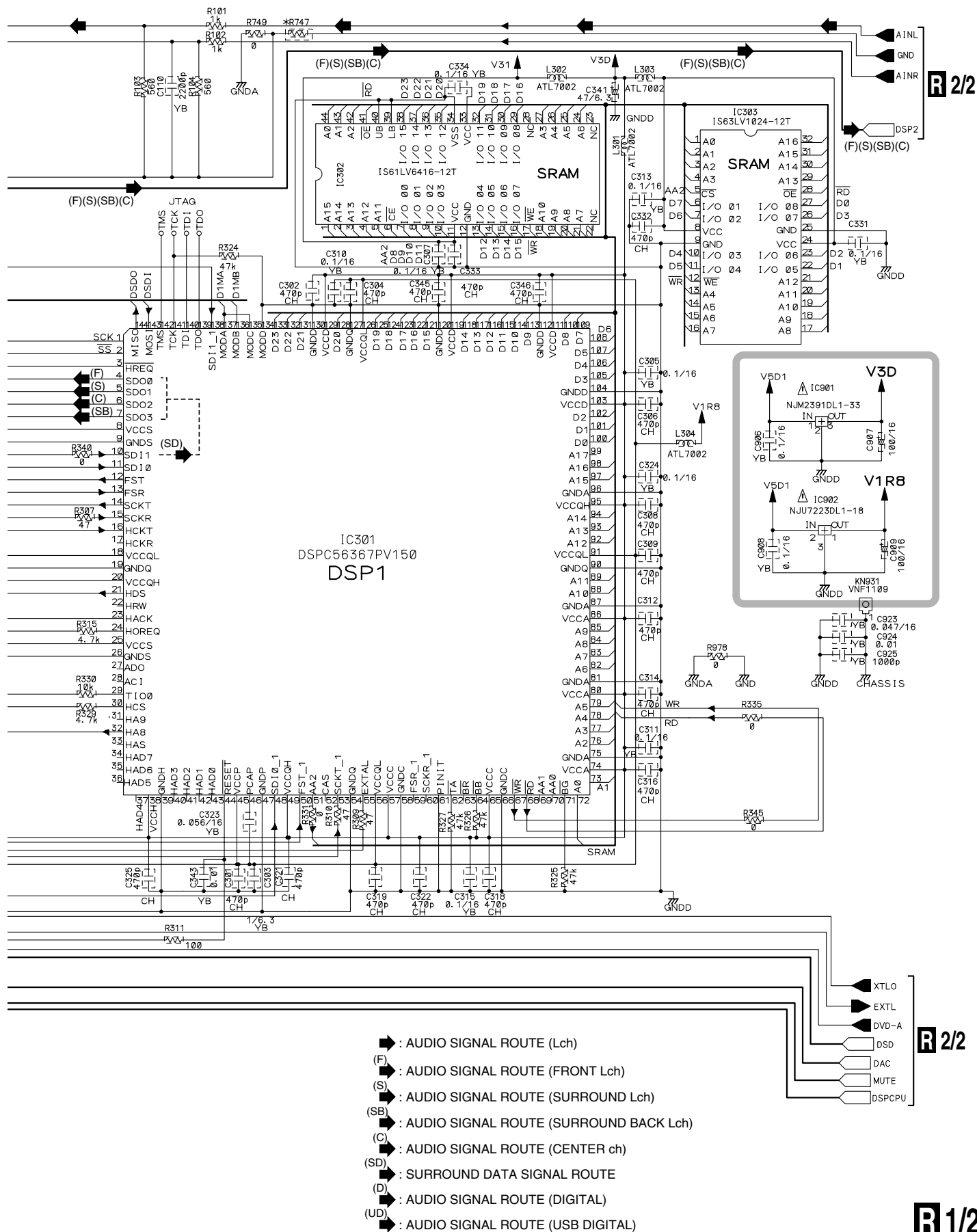


P FAN DRIVE ASSY (AWX8135)



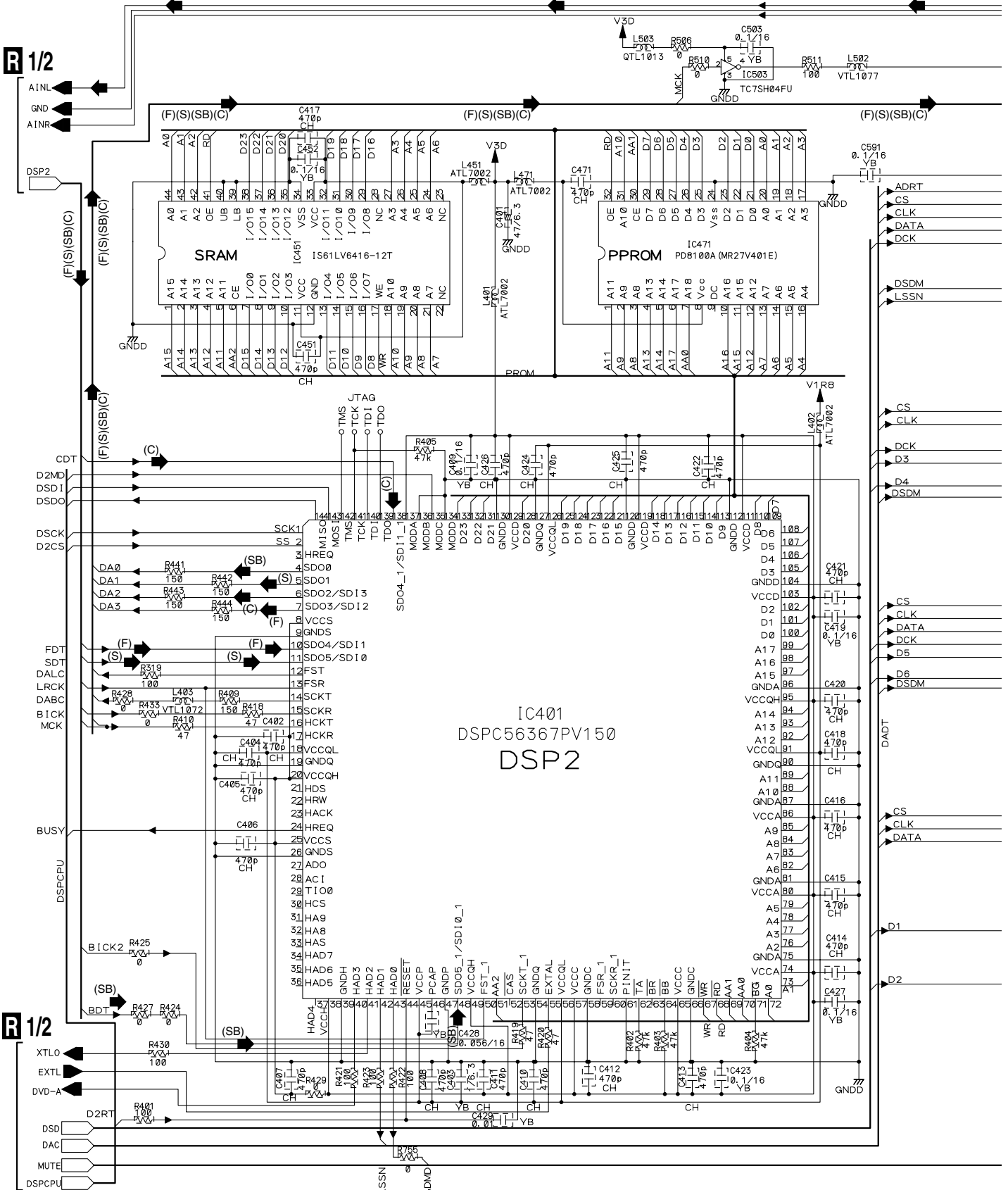
VA	CFTYA	J50-T
LA	CFTLA	J2A-T
CH	CCSRCH	J50-T
VB	CKSRVB	K50-T
VF	CKSRVF	Z25-T
	1SS355	-TRB
	RS1/16S	J-T
	RDR1/4VM	J-T
	RD1/4MU	F
	RS3LMF	J
	NON-FRAMEABLE	

 : The power supply is shown with the marked box.

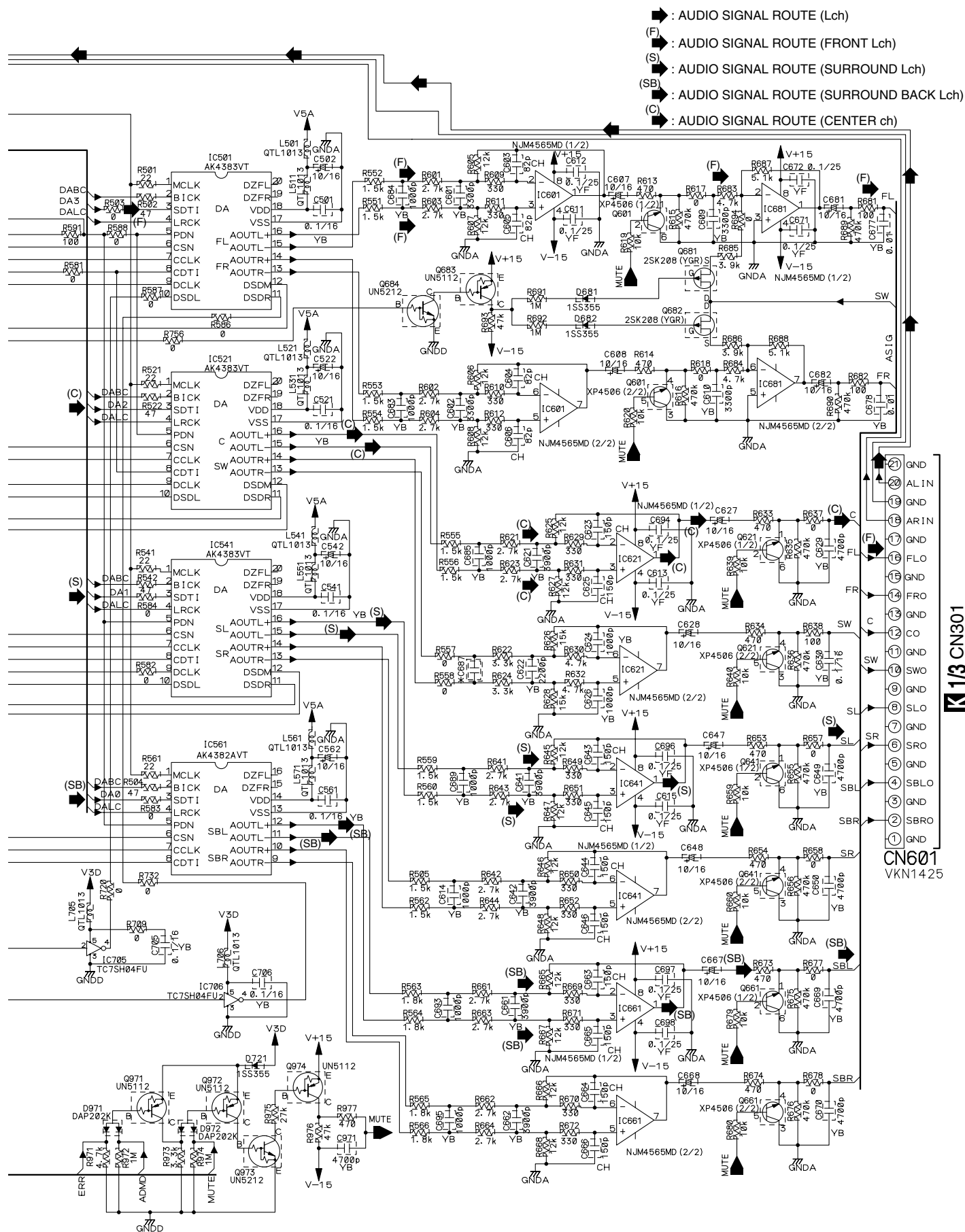


3.17 DSP ASSY (2/2)

R 2/2 DSP ASSY (AWX8016)



R 2/2



A

B

C

D

E

F

K 1/3 CN301

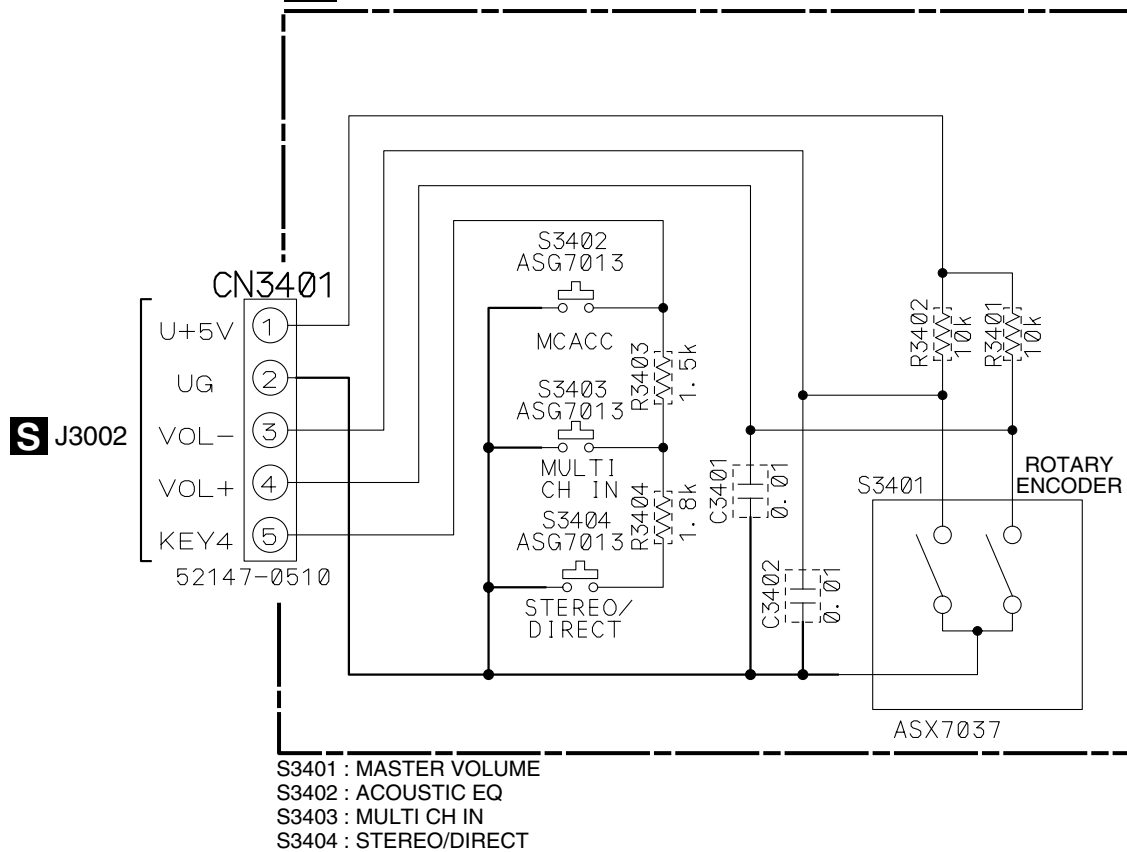
CN601
VKN1425

R 2/2

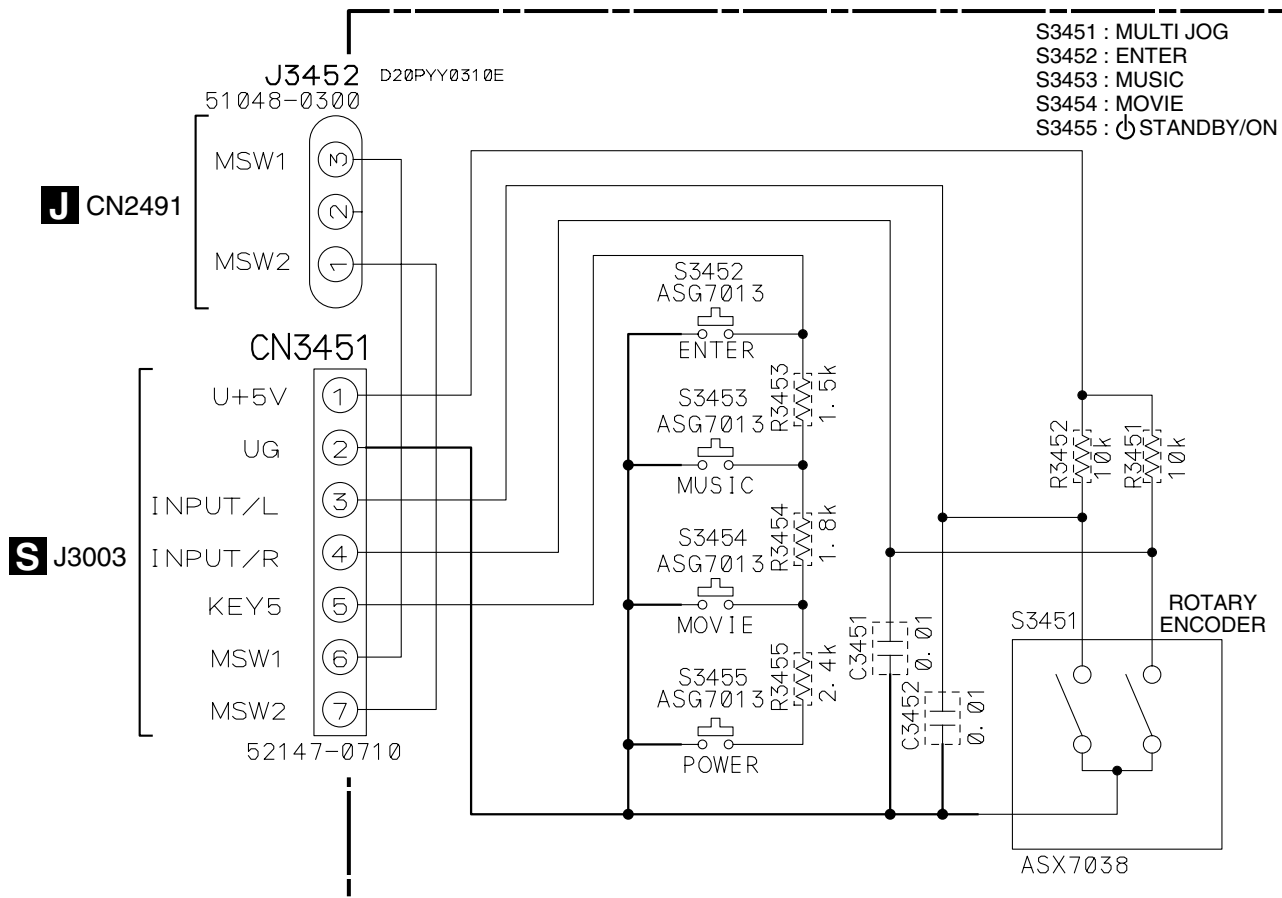


3.19 VOLUME, MULTI JOG and HEADPHONE ASSYS

T VOLUME ASSY (AWX7971)

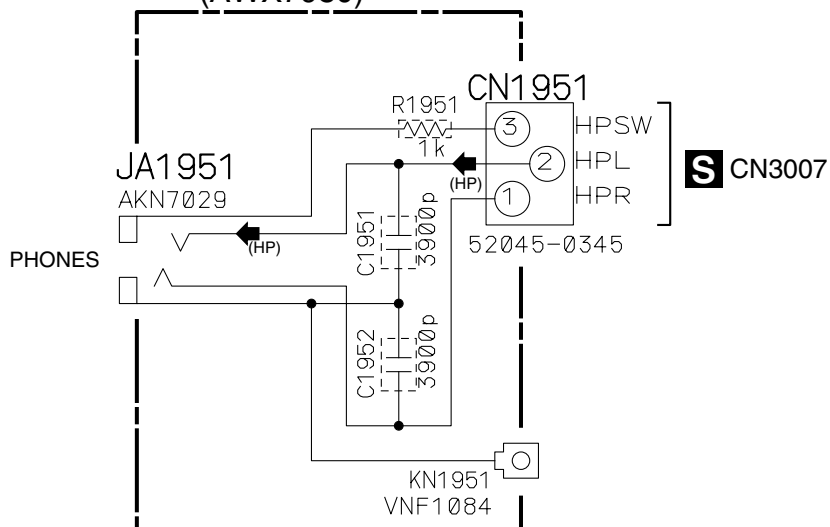


U MULTI JOG ASSY (AWX8015)



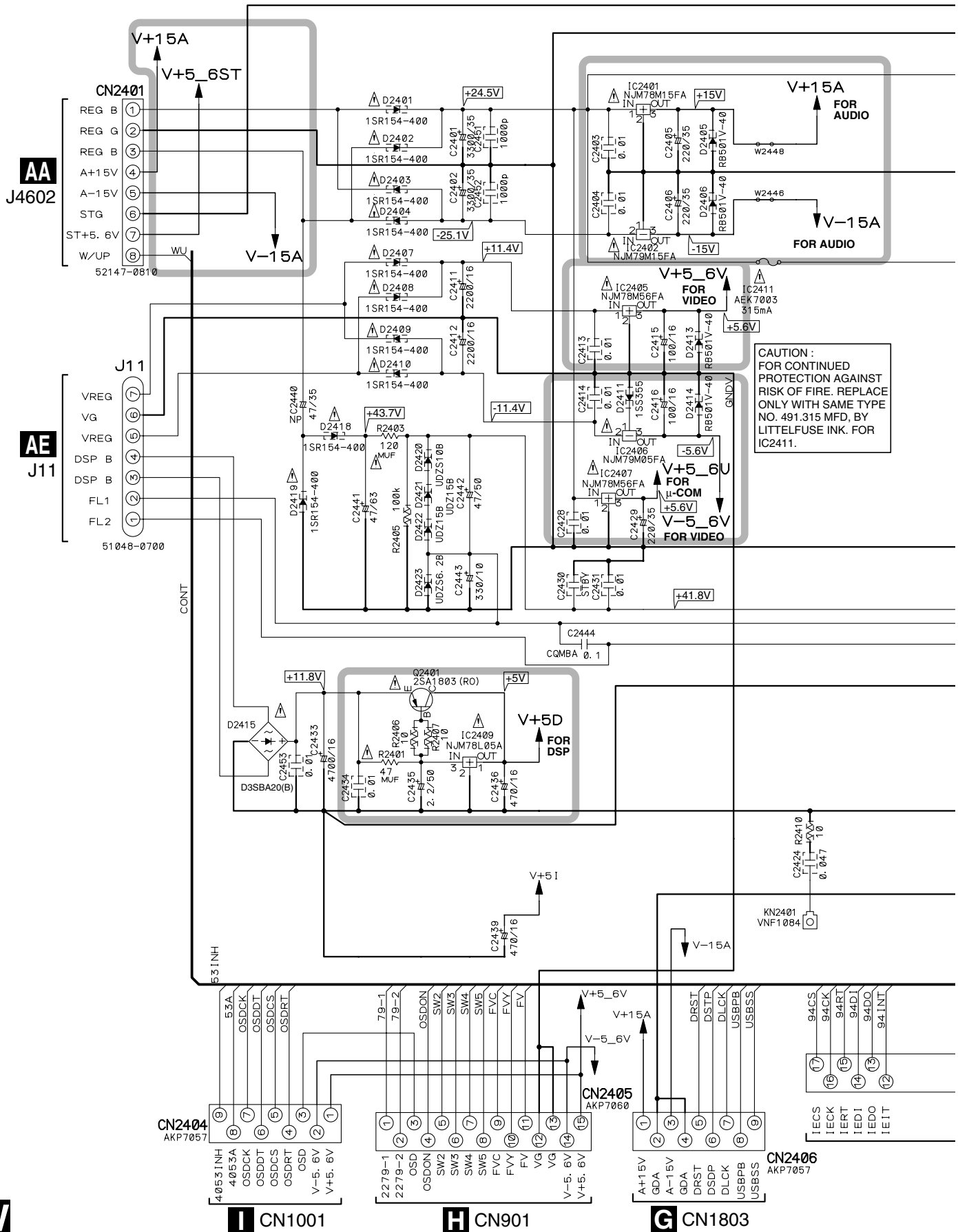
(HP) : AUDIO SIGNAL ROUTE (PHONES ch)

V HEADPHONE ASSY (AWX7980)



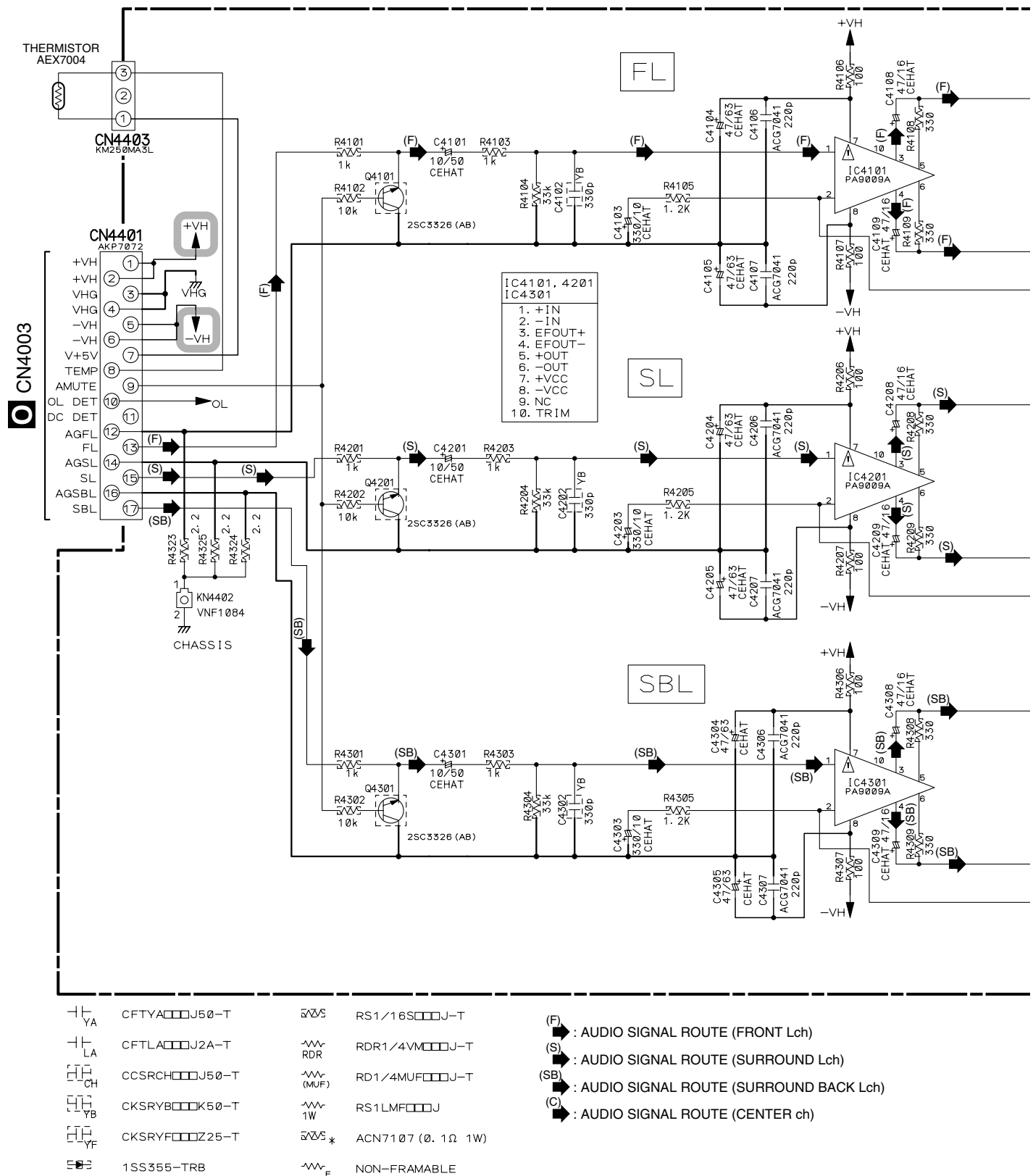
3.20 REGULATOR ASSY

W REGULATOR ASSY (AWX8020)

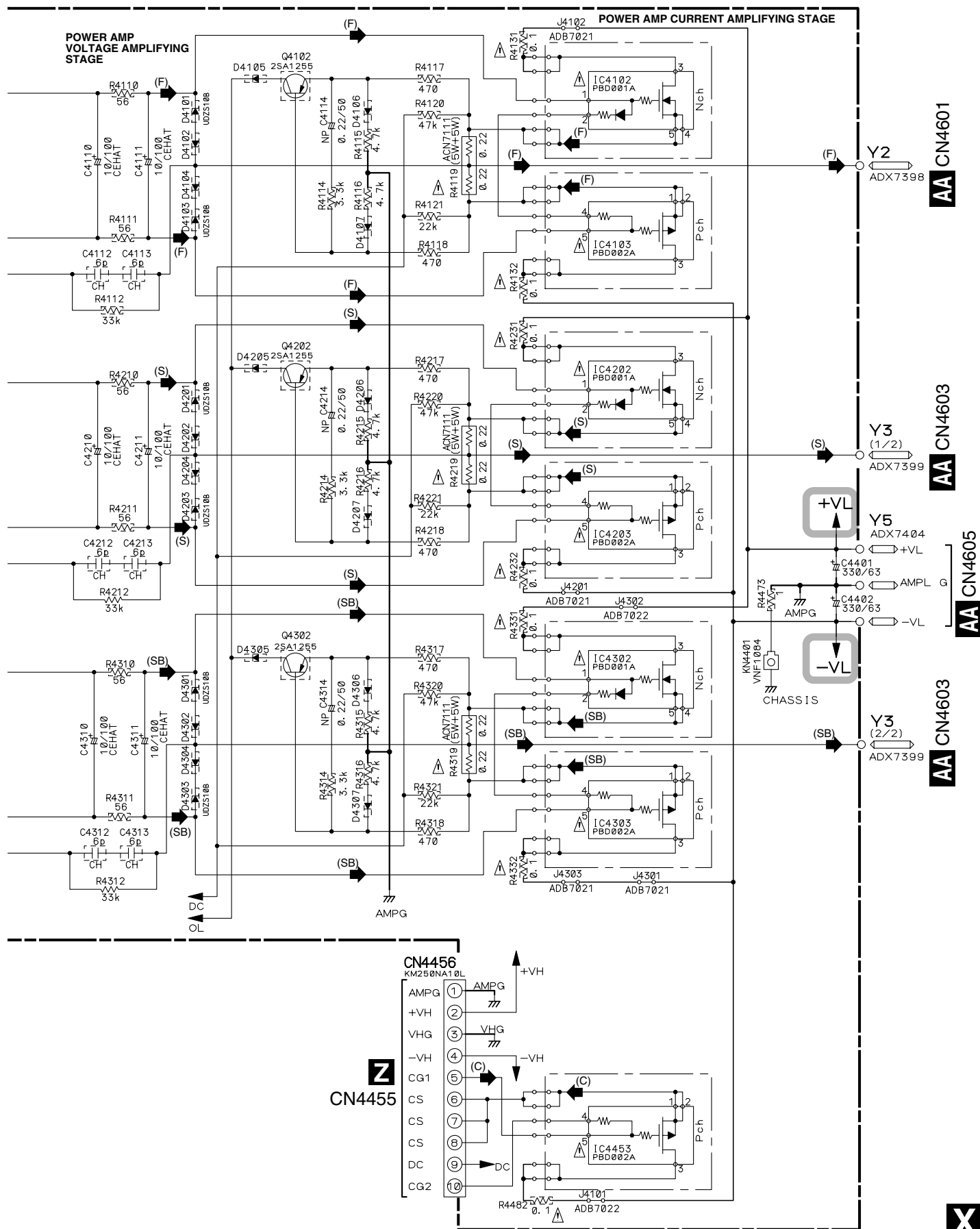


3.21 POWER AMP-L ASSY

POWER AMP-L ASSY (AWX7984)



 : The power supply is shown with the marked box.



3.22 POWER AMP-R and POWER AMP-C ASSYS

Y POWER AMP-R ASSY (AWX7985)

FR

POWER AMP
VOLTAGE AMPLIFYING
STAGE

SR

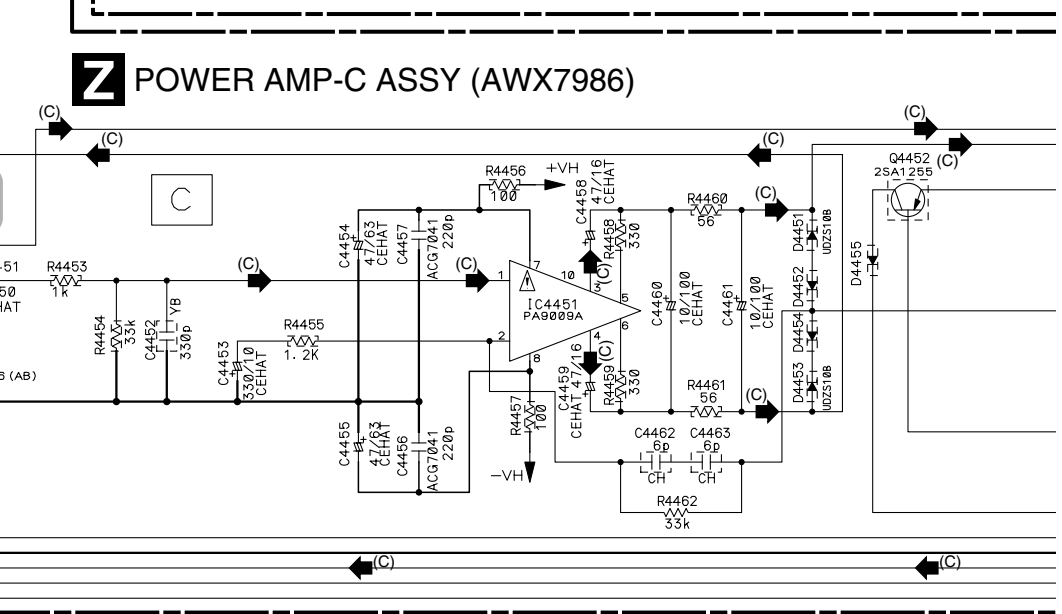
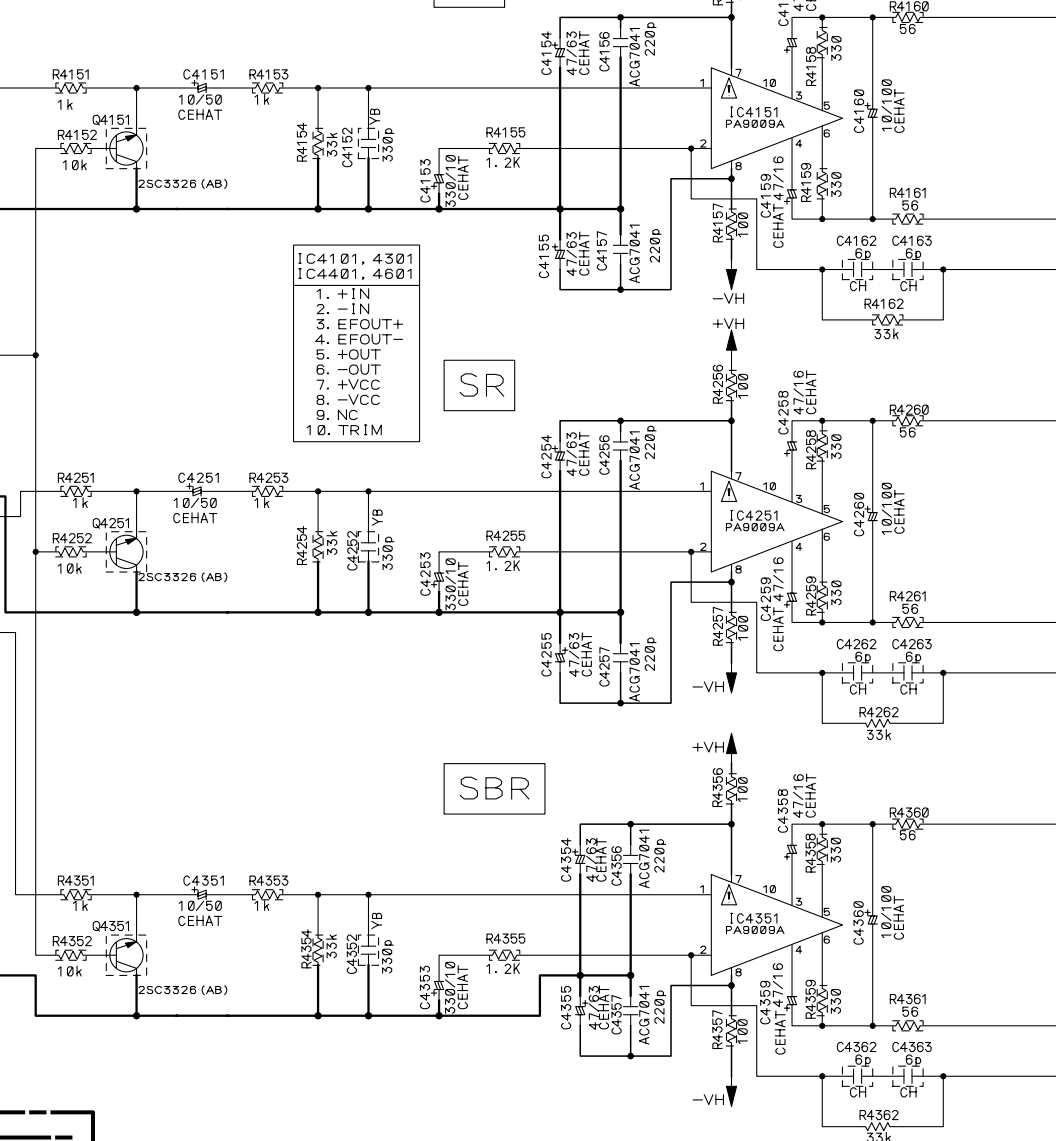
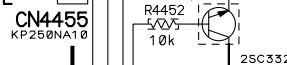
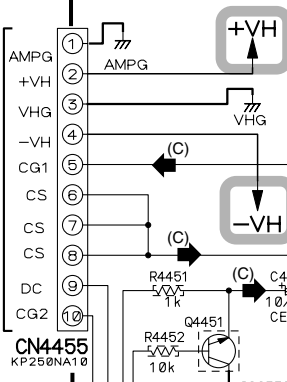
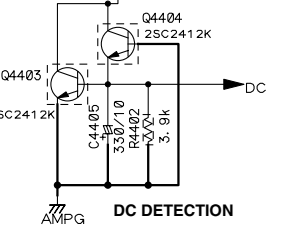
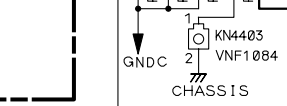
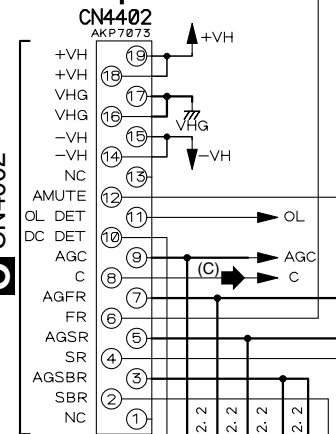
SBR

Z POWER AMP-C ASSY (AWX7986)

C

A
B
C
D
E
F

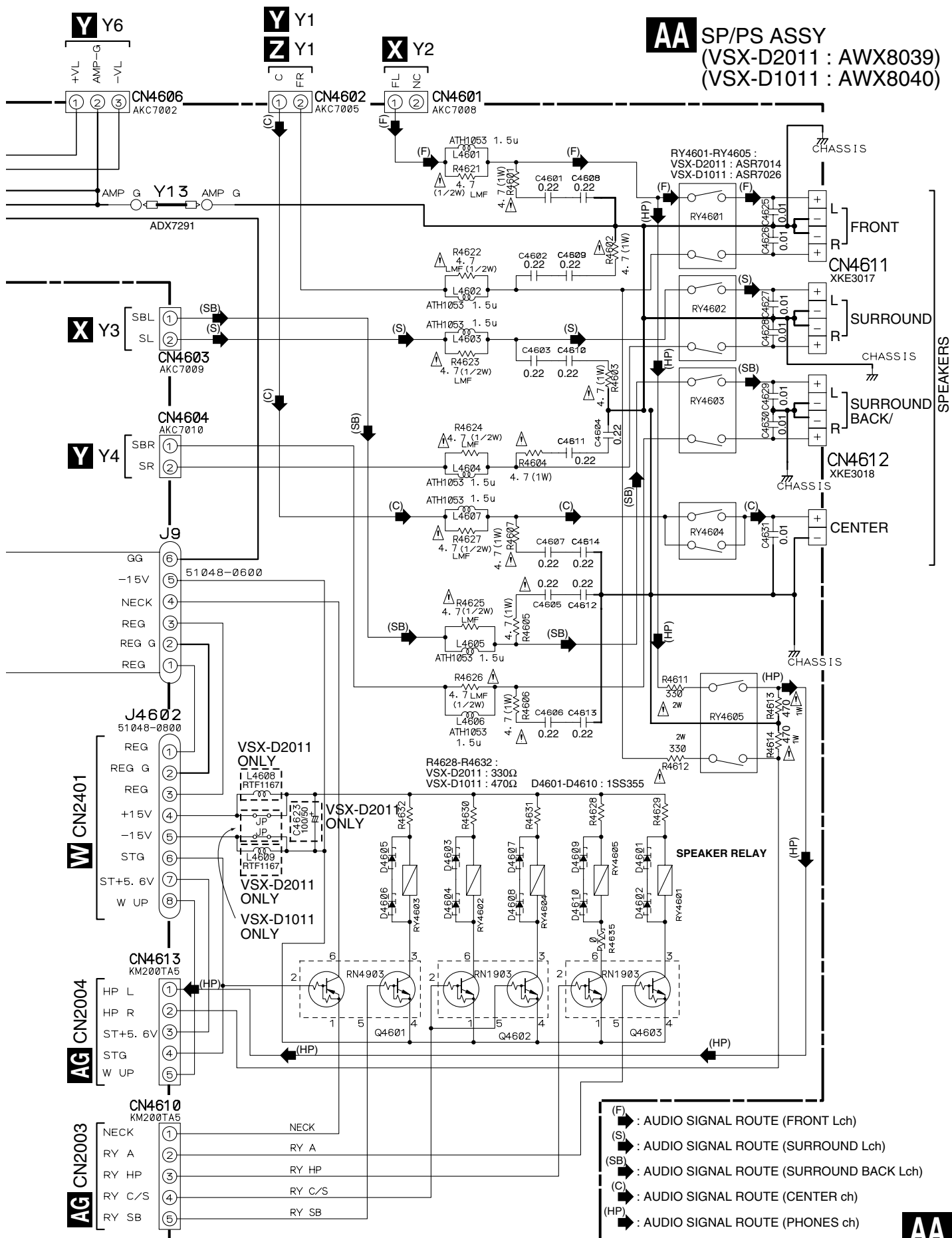
CN4002





F

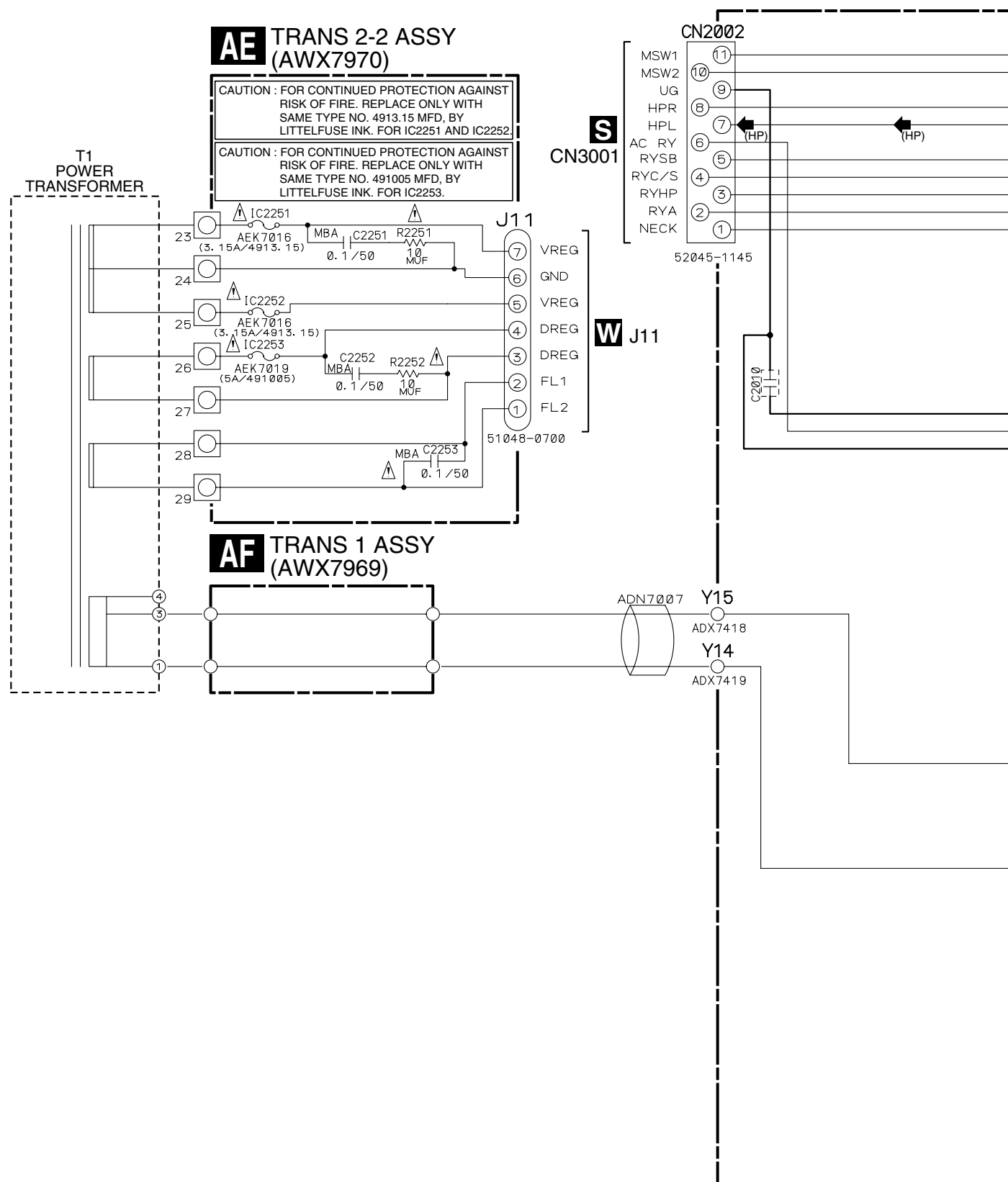
Y Z



3.24 TRANS 2-2, TRANS 1 and PRIMARY ASSYS

• NOTE FOR FUSE REPLACEMENT

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



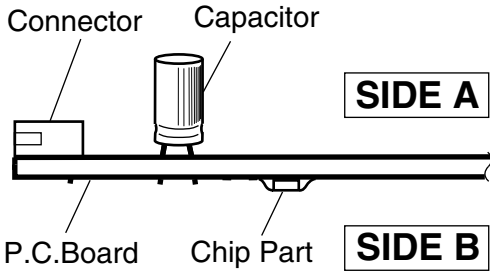
AE AF AG

4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

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.
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.

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

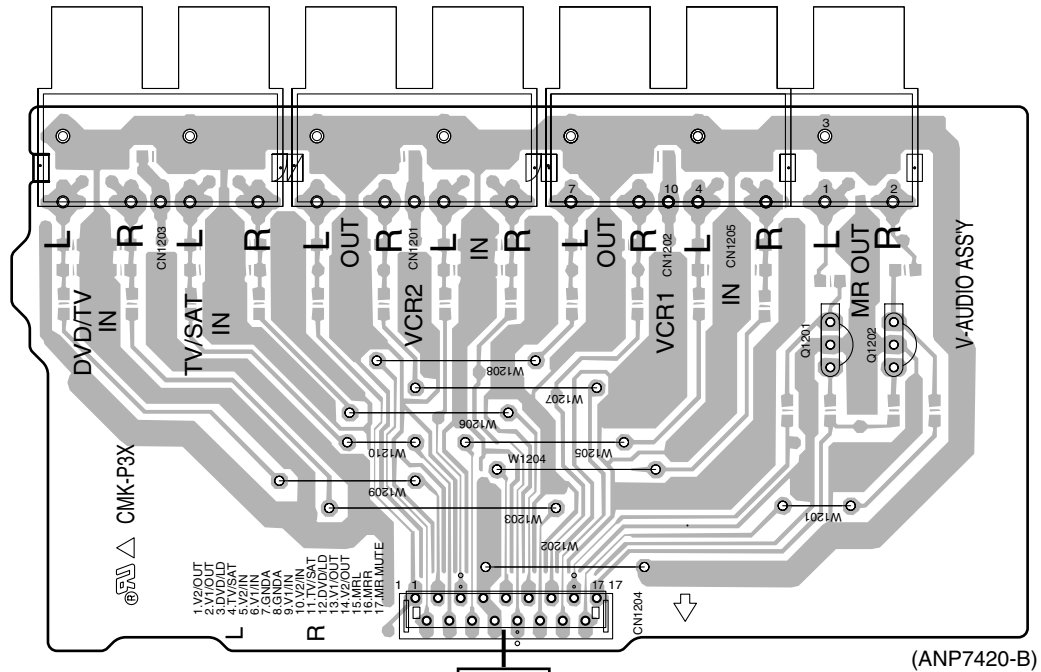


4.3 V-AUDIO IN ASSY

SIDE A

SIDE A

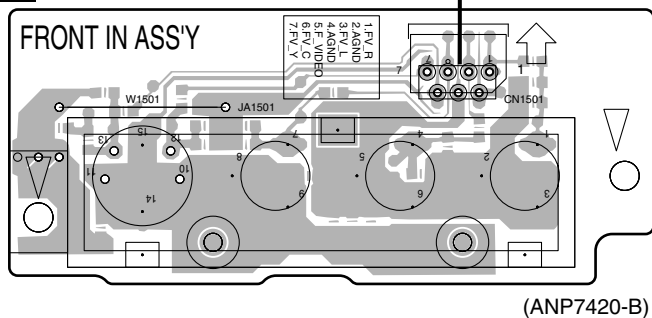
C V-AUDIO IN ASSY



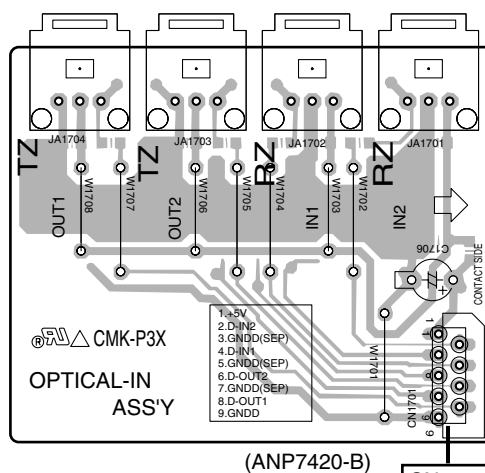
4.4 FRONT IN, OPTICAL IN and INPUT CONNECT ASSYS

SIDE A

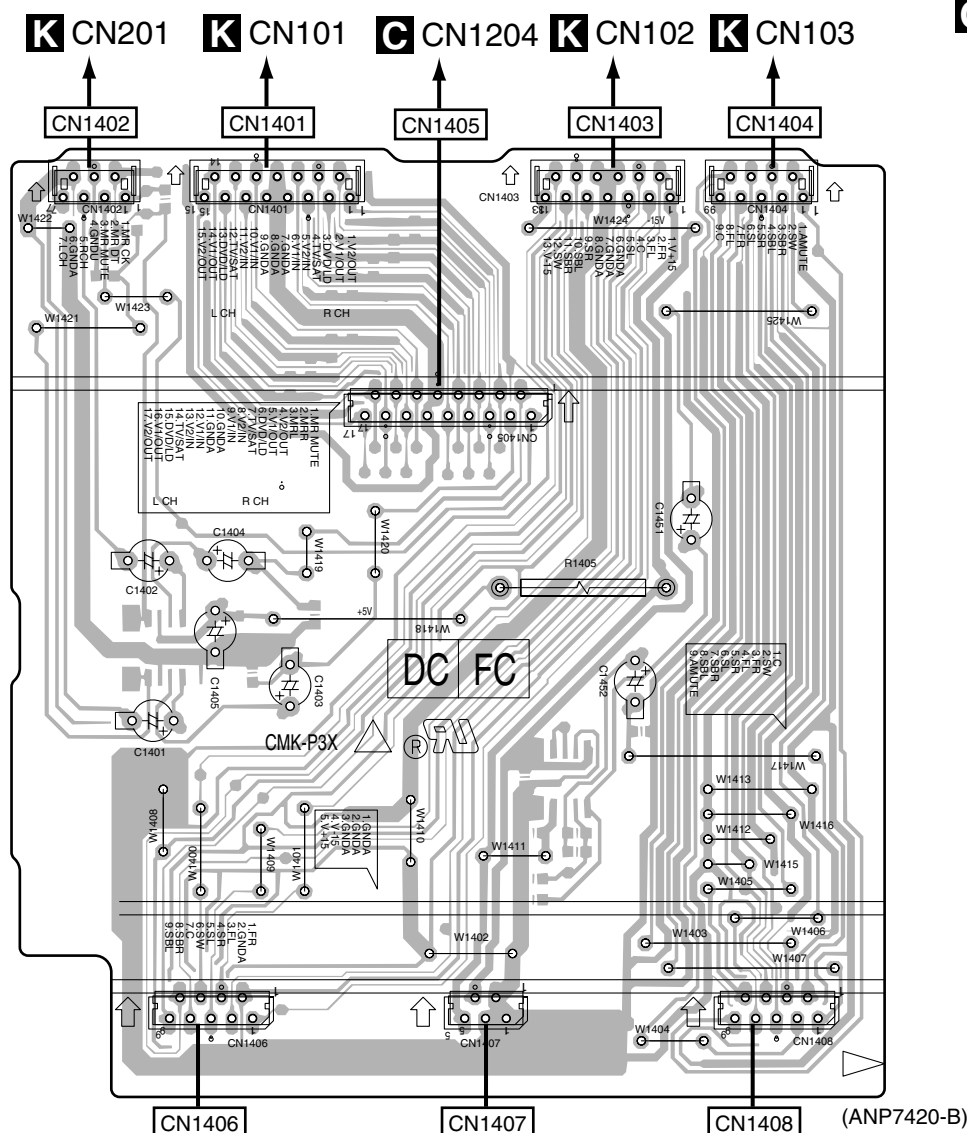
D FRONT IN ASSY



E OPTICAL IN ASSY



F INPUT CONNECT ASSY



D E F

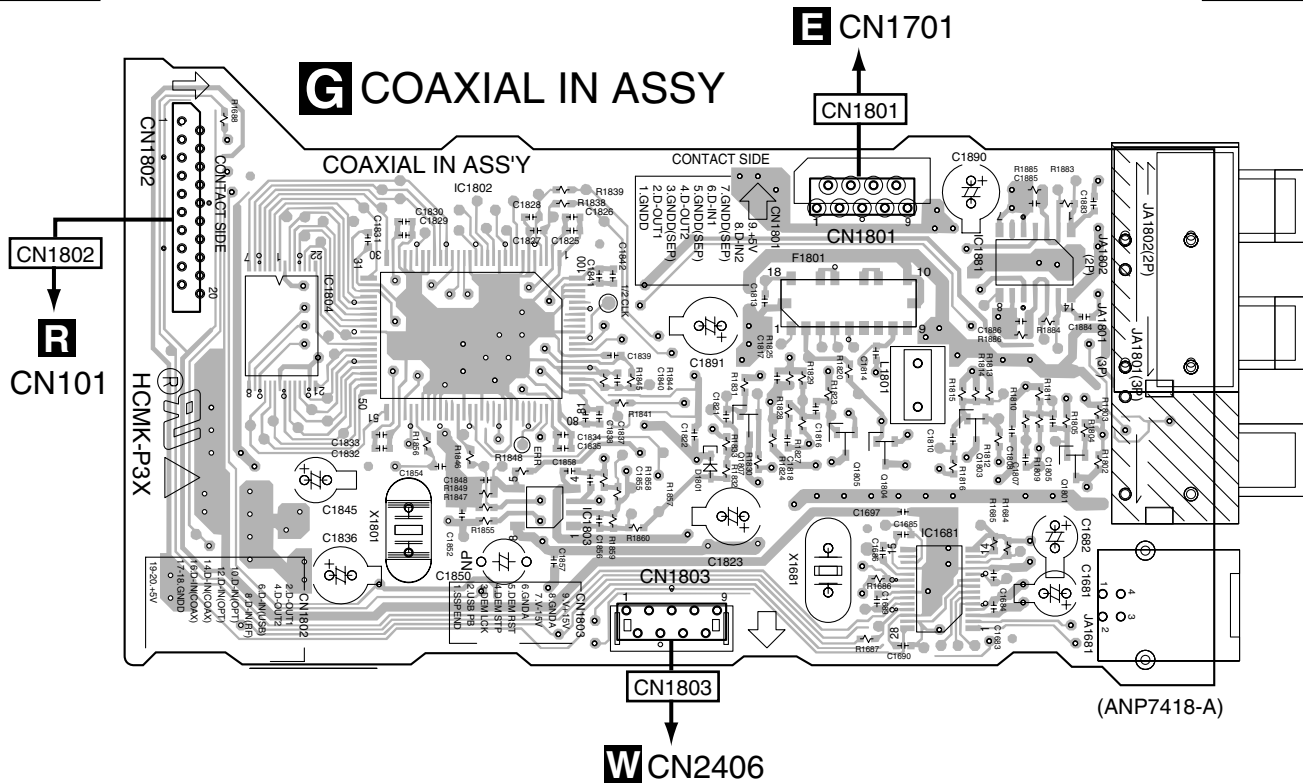
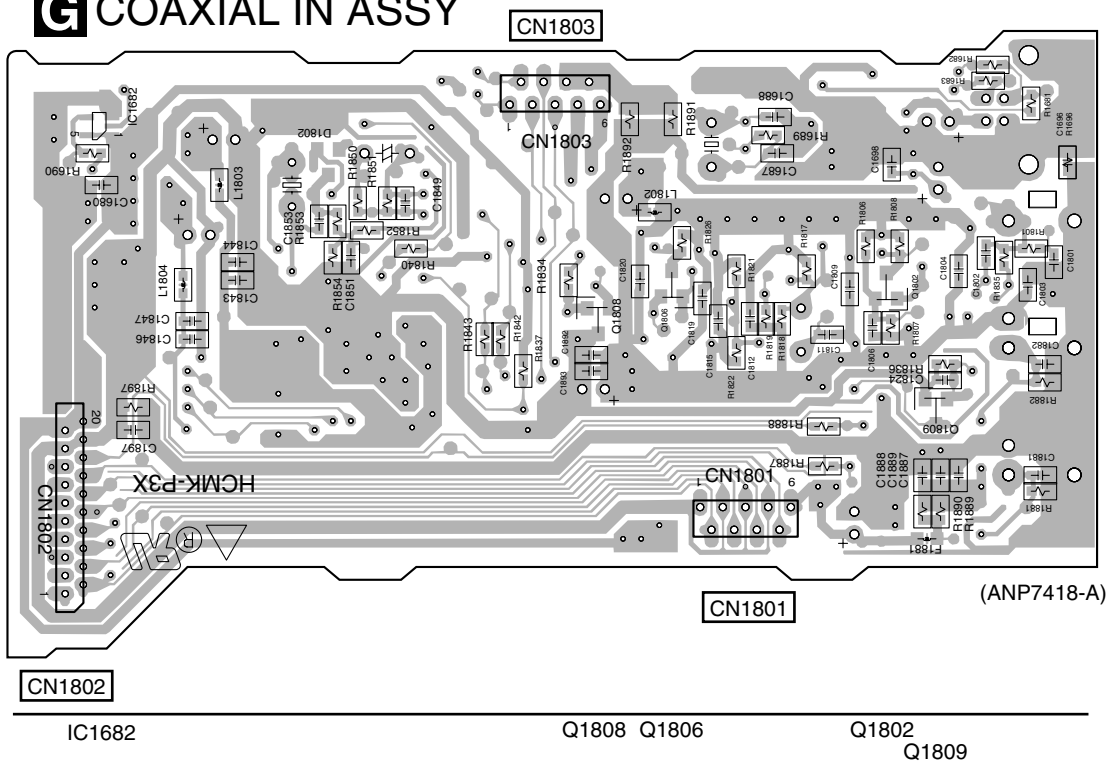
B CN1307

B CN1306

B CN1308

VSX-D2011-S

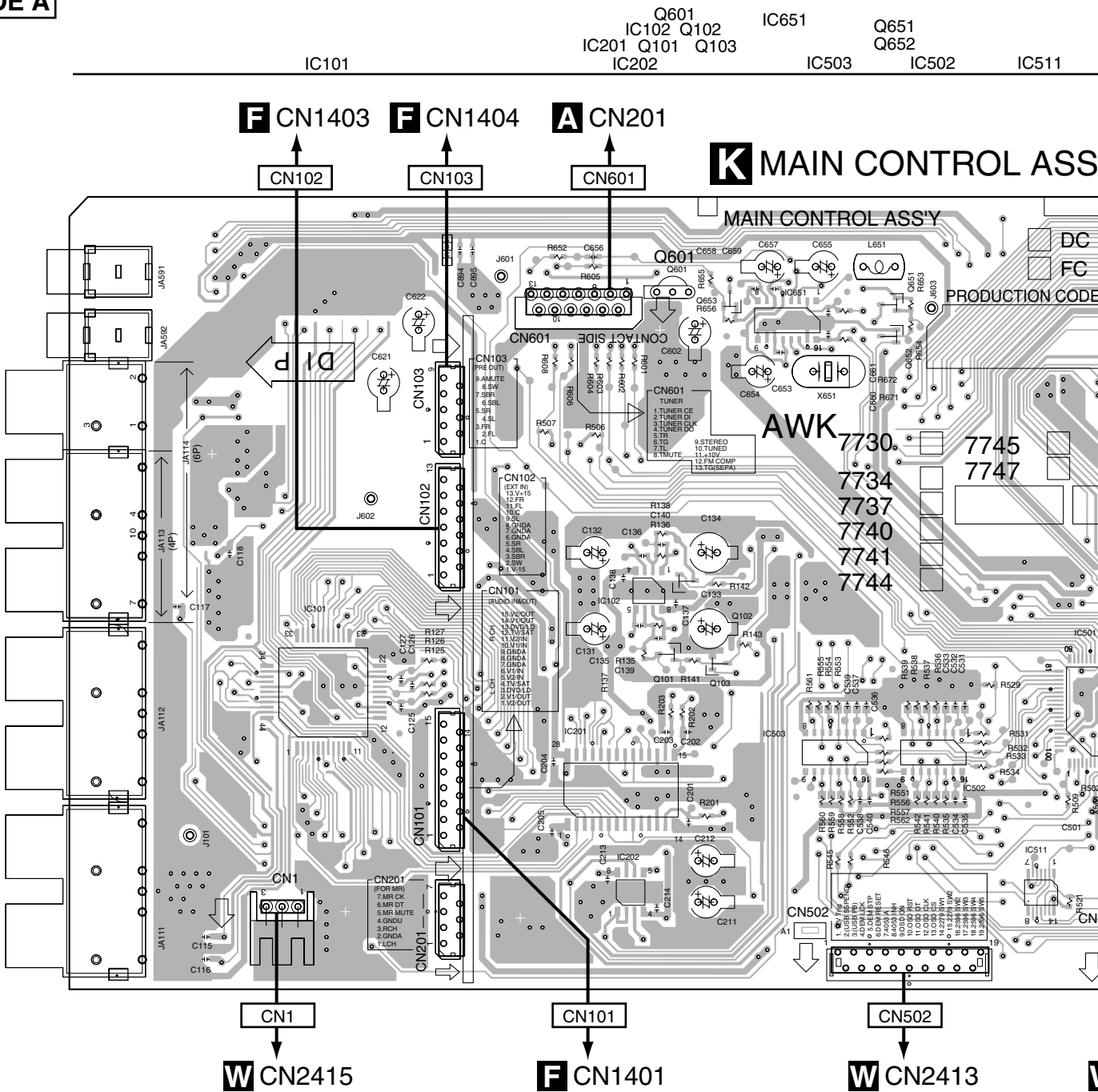
4.5 COAXIAL IN ASSY

SIDE A
SIDE A

SIDE B
SIDE B
G COAXIAL IN ASSY

G

VSX-D2011-S

4.7 MAIN CONTROL ASSY

SIDE A



K

SIDE A

A

B

C

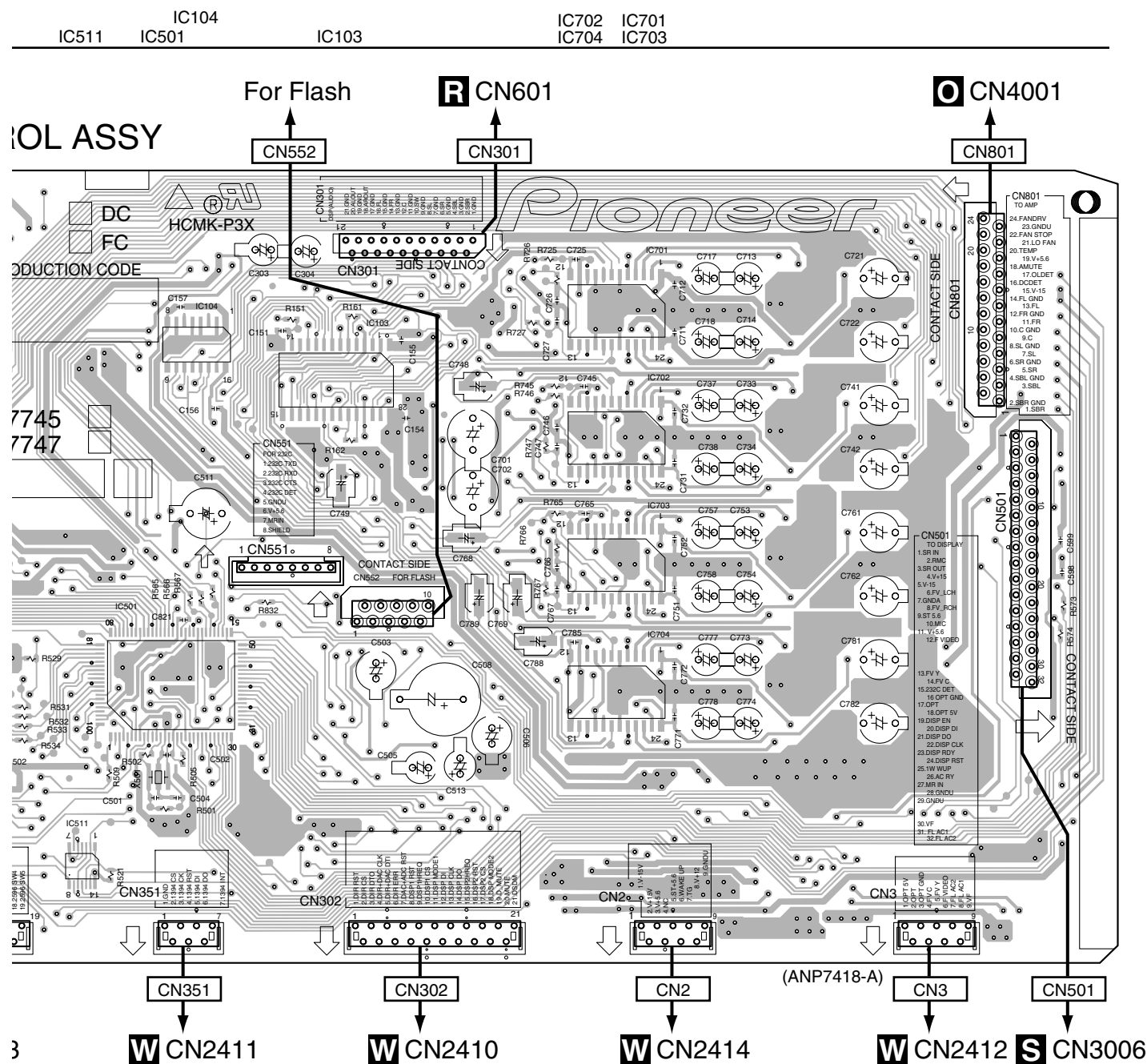
D

E

F

K

71

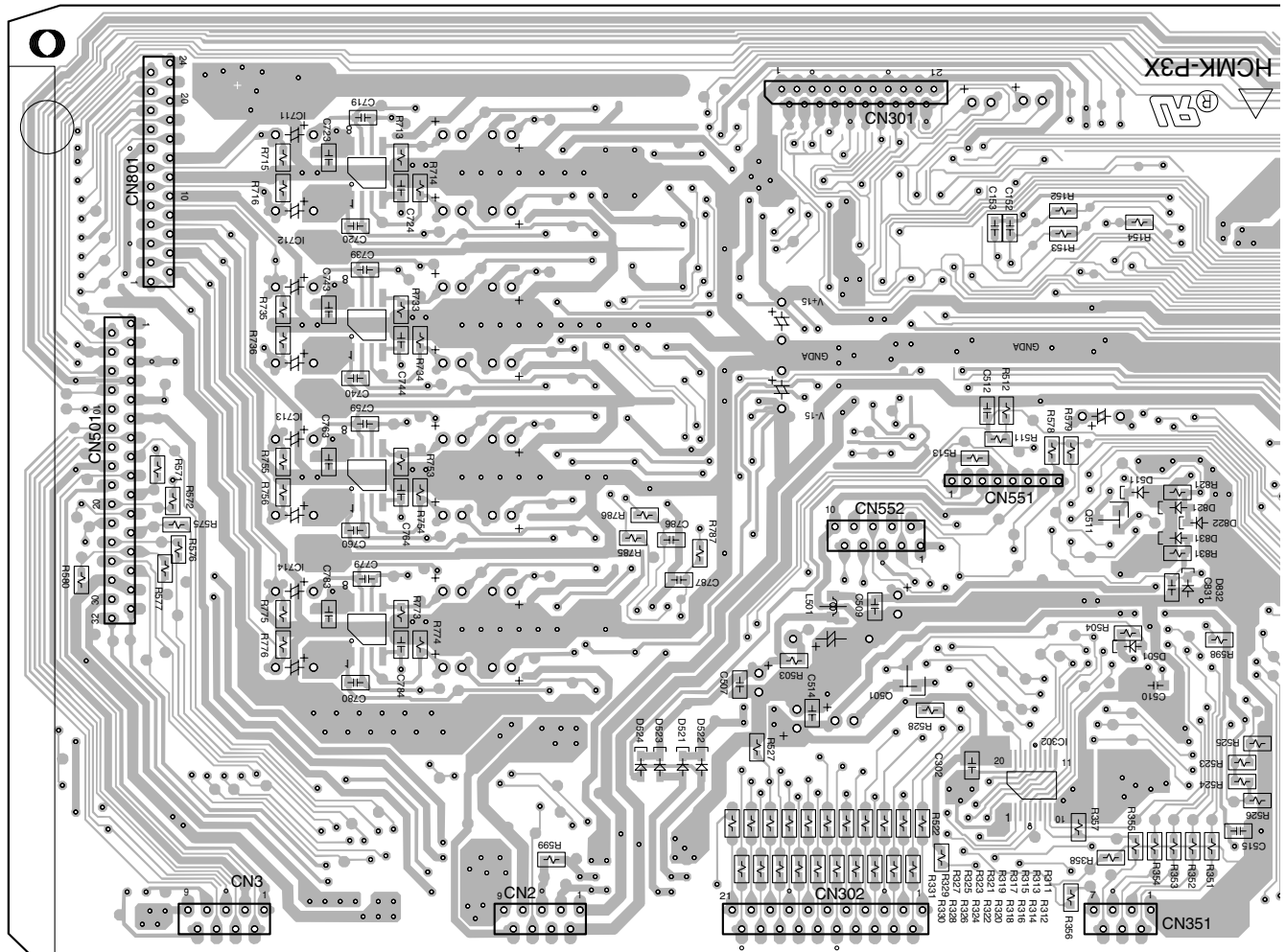


SIDE B

IC711
IC712
IC713
IC714

Q501 IC302 Q511

K MAIN CONTROL ASSY



CN3

CN2

CN302

CN552

CN551

CN351

K

VSX-D2011-S

SIDE B

A

1

Q601

Q251

B

C

D

E

F

K

73

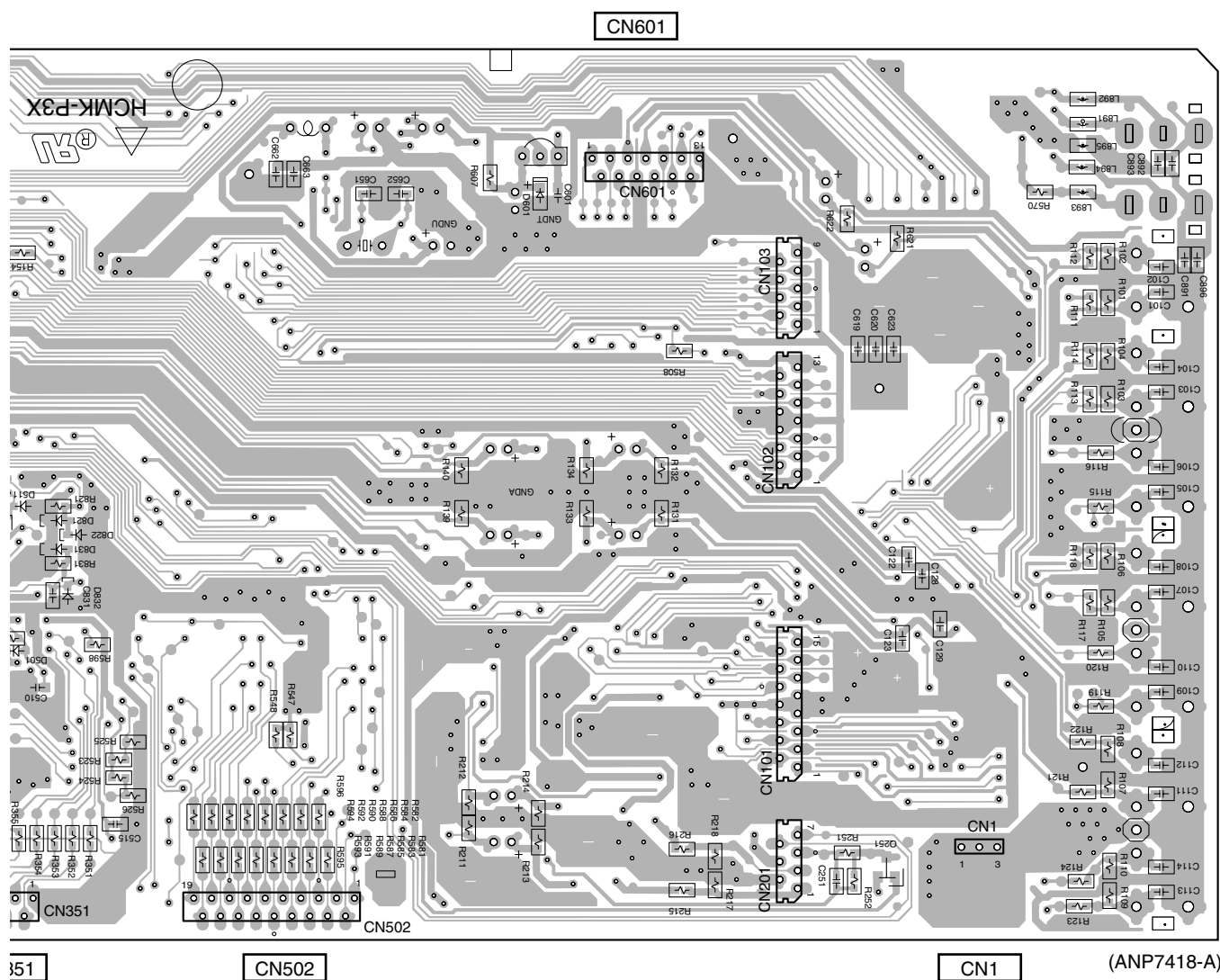
5

6

7

8

VSX-D2011-S



4.8 MIC & F. OPT IN, MIC AMP and DSP CONNECTION ASSYS

SIDE A

L MIC & F.OPT IN ASSY

VSX-D2011-S ONLY

M MIC AMP ASSY

S CN3004**S** J3008**R** CN102

N DSP CONNECTION ASSY

IC1651
IC1653

W CN2407

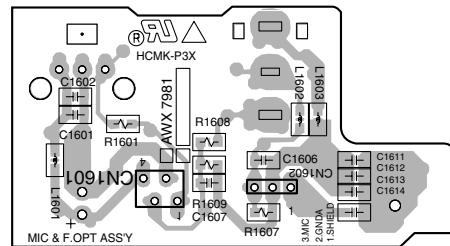
W CN2408

W CN2409

L M N

SIDE B

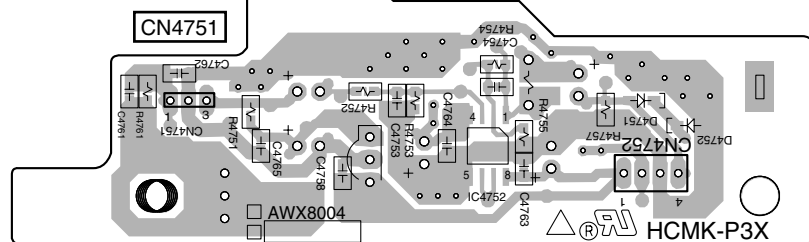
L MIC & F.OPT IN ASSY



CN1601 **CN1602** (ANP7418-A)

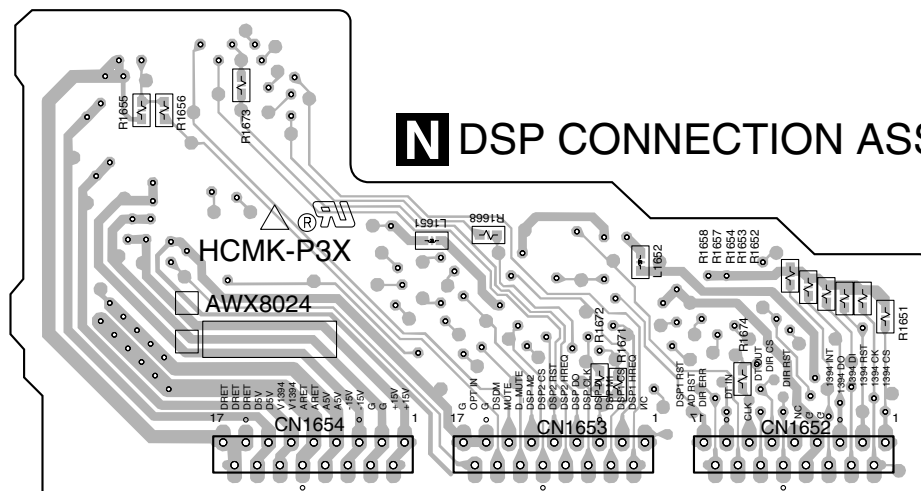
VSX-D2011-S ONLY

M MIC AMP ASSY



CN4752 (ANP7418-A)

N DSP CONNECTION ASSY



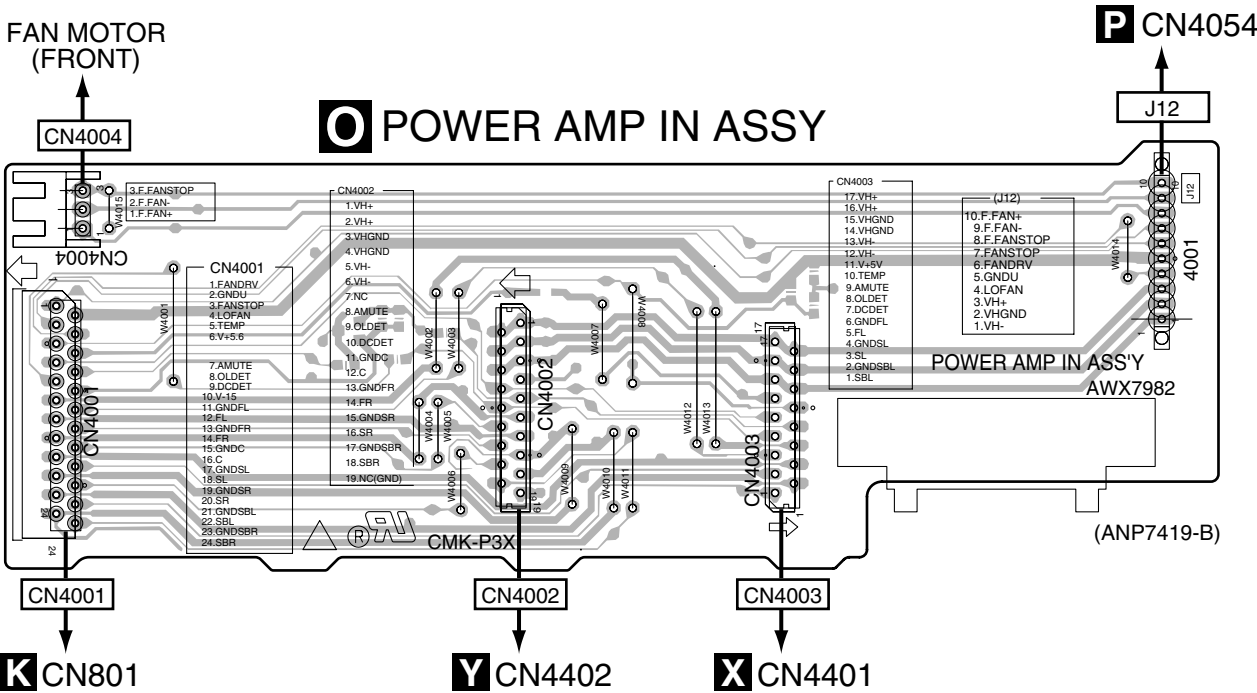
CN1654 **CN1653** **CN1652** (ANP7418-A)

L M N

4.9 POWER AMP IN ASSY

SIDE A

SIDE A

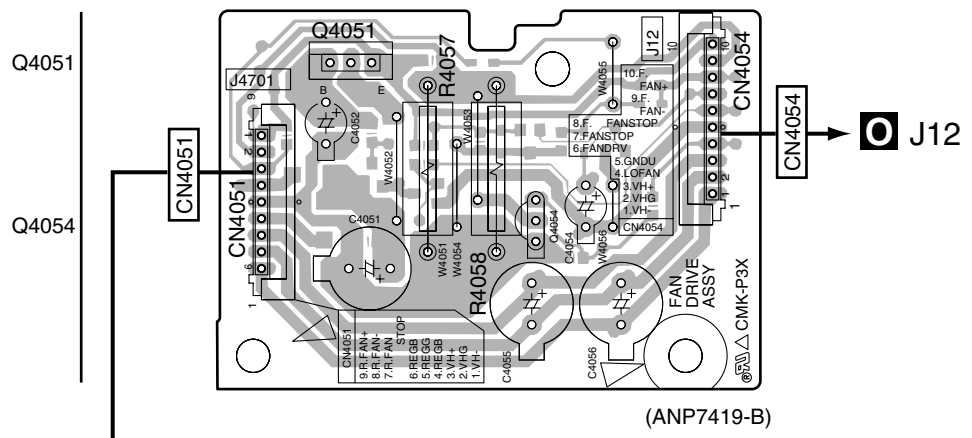


4.10 FAN DRIVE and FAN CONNECTION ASSYS

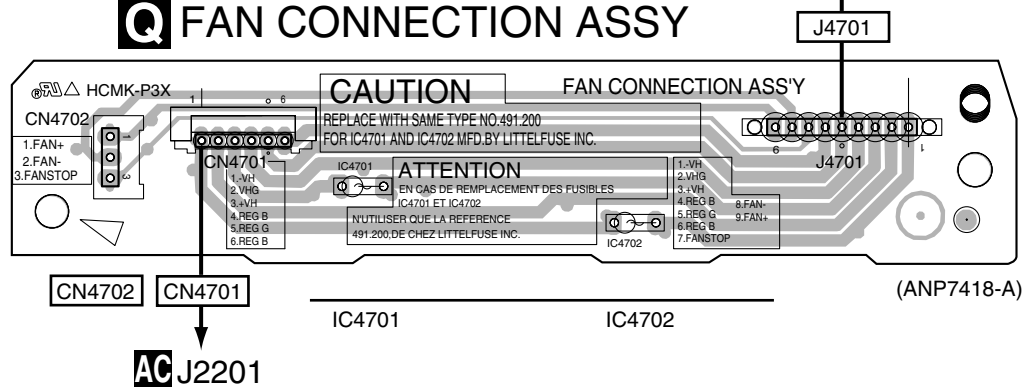
SIDE A

SIDE A

P FAN DRIVE ASSY



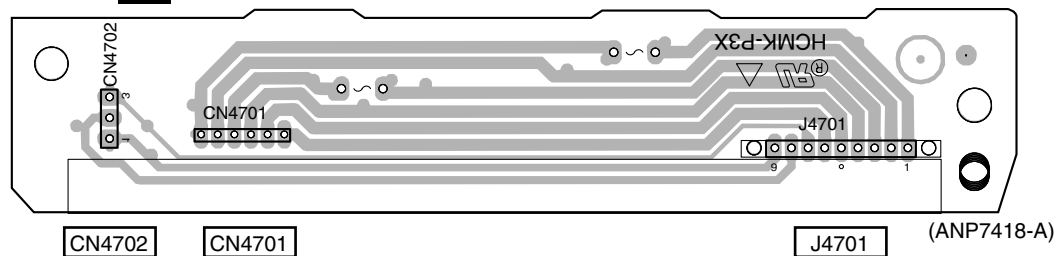
Q FAN CONNECTION ASSY



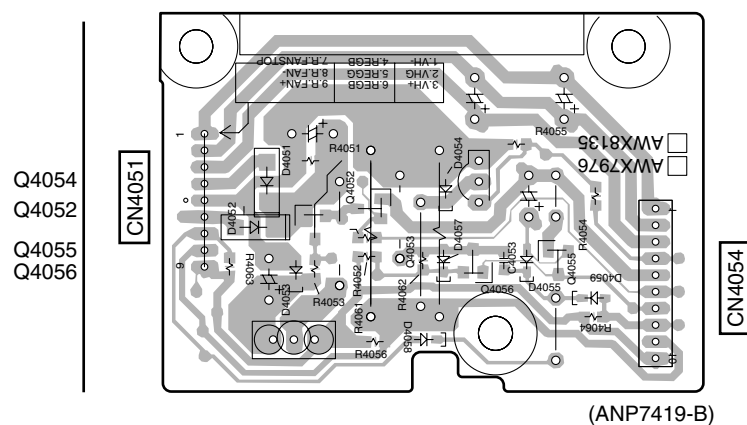
SIDE B

SIDE B

Q FAN CONNECTION ASSY



P FAN DRIVE ASSY

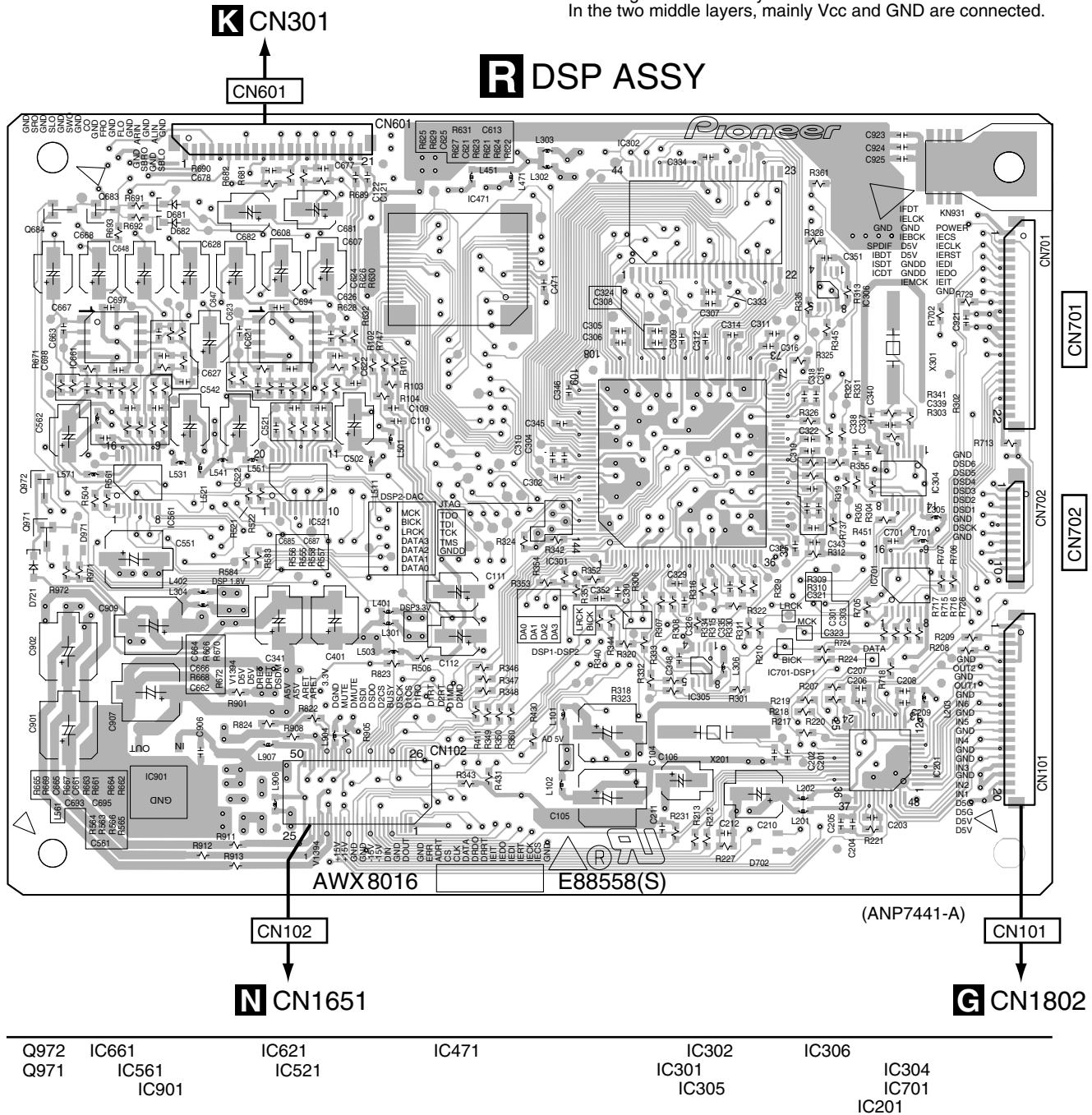


P Q

4.11 DSP ASSY

SIDE A

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



4.12 MECHA SW, DISPLAY, VOLUME, MULTI JOG and HEADPHONE ASSYS

SIDE A

J MECHA SW ASSY

U MULTI JOG ASSY

V HEADPHONE ASSY

S DISPLAY ASSY

AG ←
CN2002

DIS

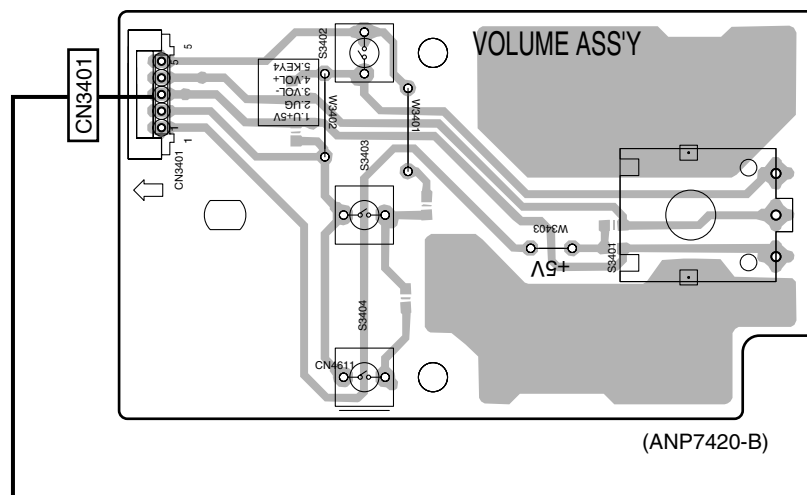
IC3002

J S U V

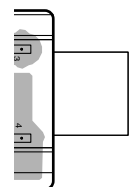
SIDE A

A

T VOLUME ASSY



E ASSY

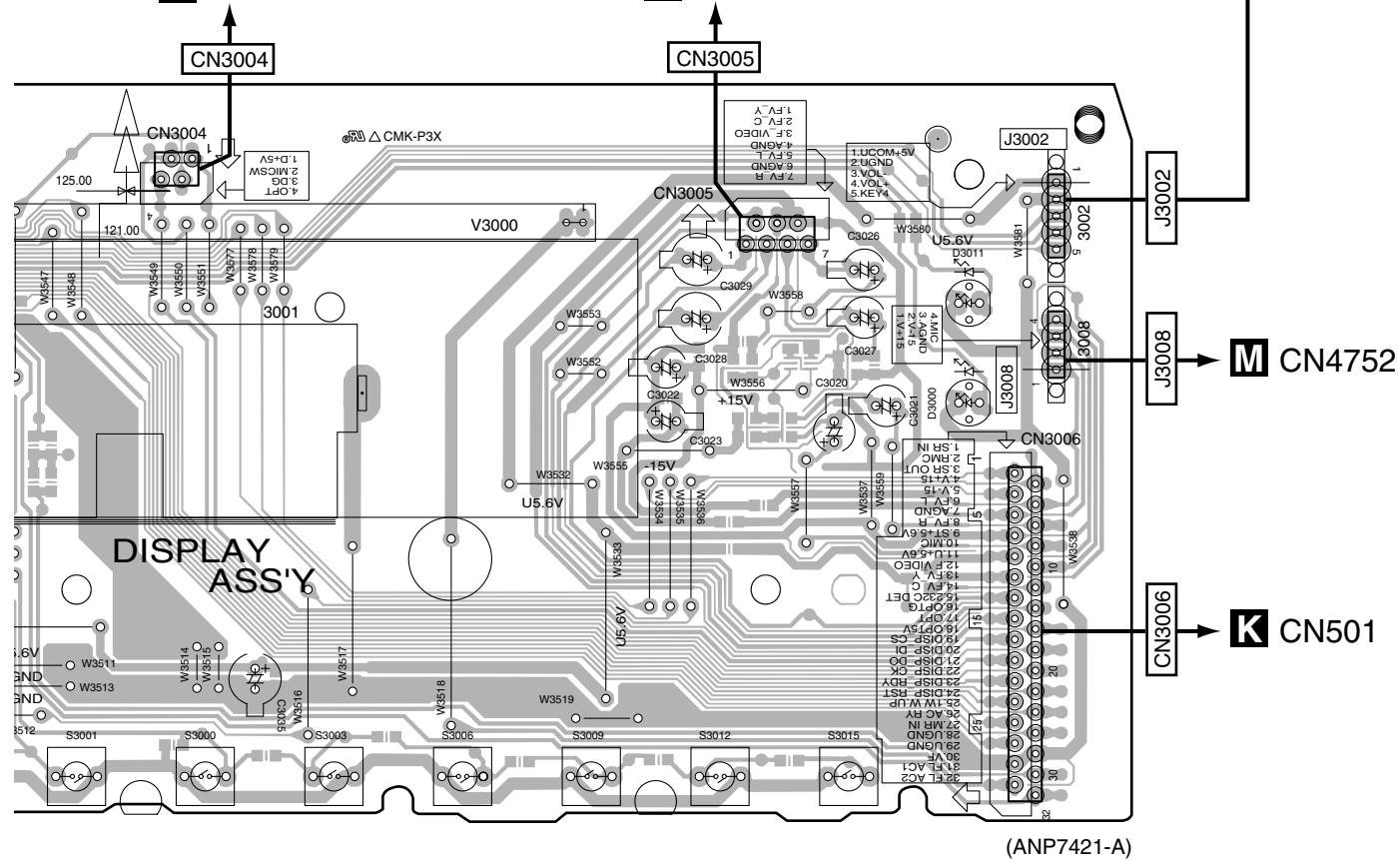


'420-B)

B

L CN1601

D CN1501



C

D

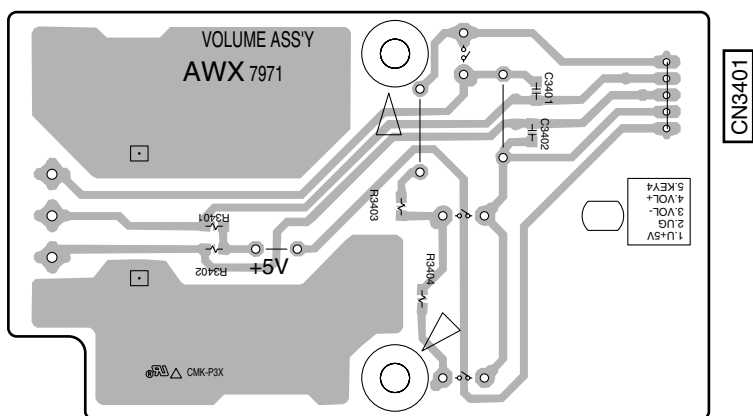
E

F

STV

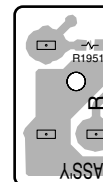
SIDE B

T VOLUME ASSY

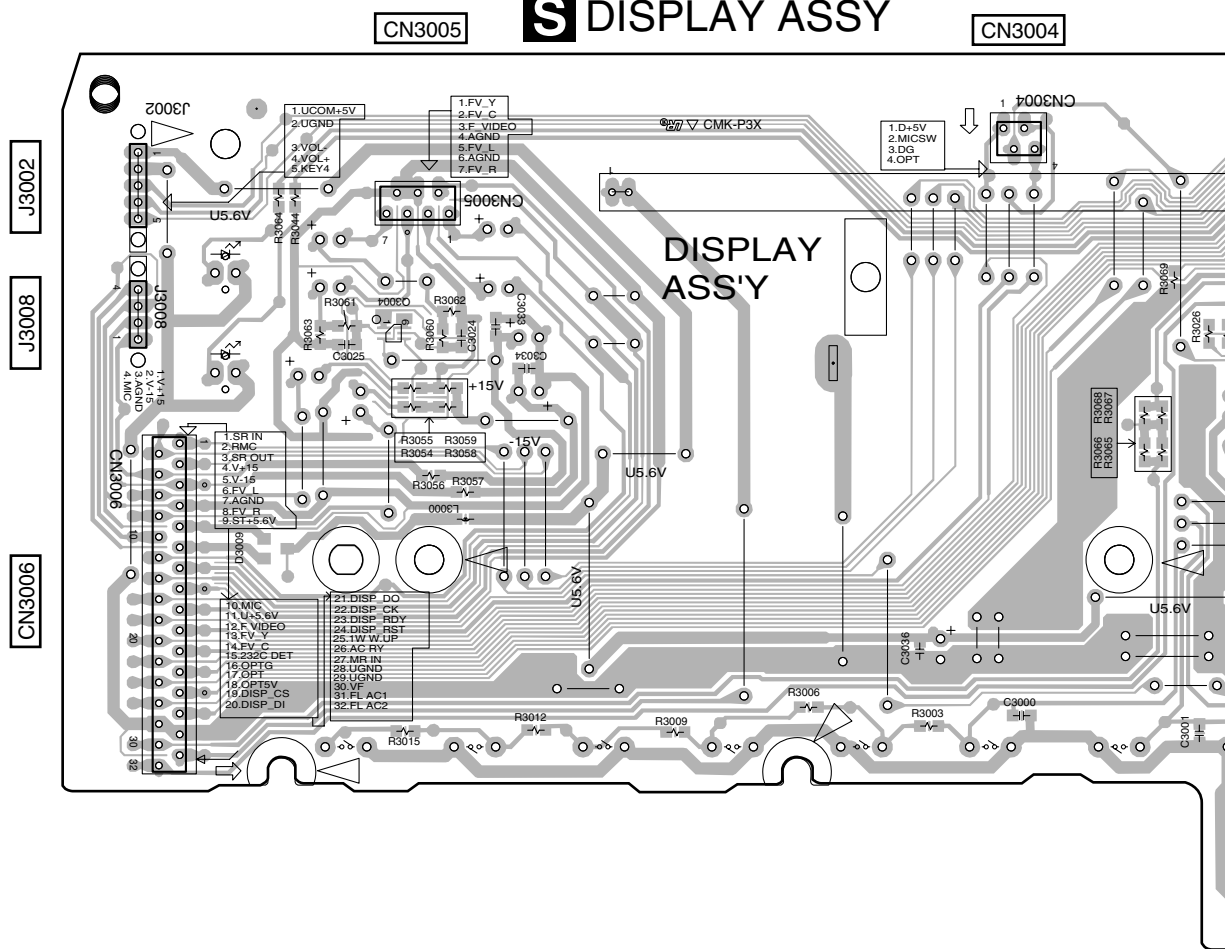


(ANP7420-B)

V HEAD



S DISPLAY ASSY



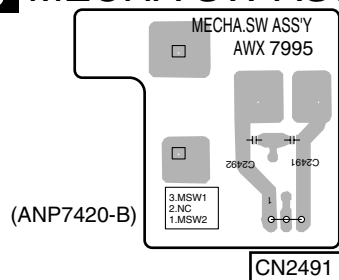
Q3004

S T V

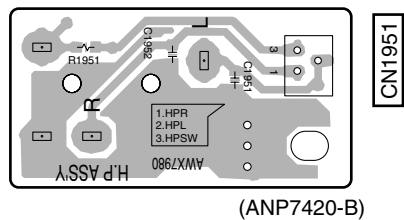
VSX-D2011-S

J MECHA SW ASSY

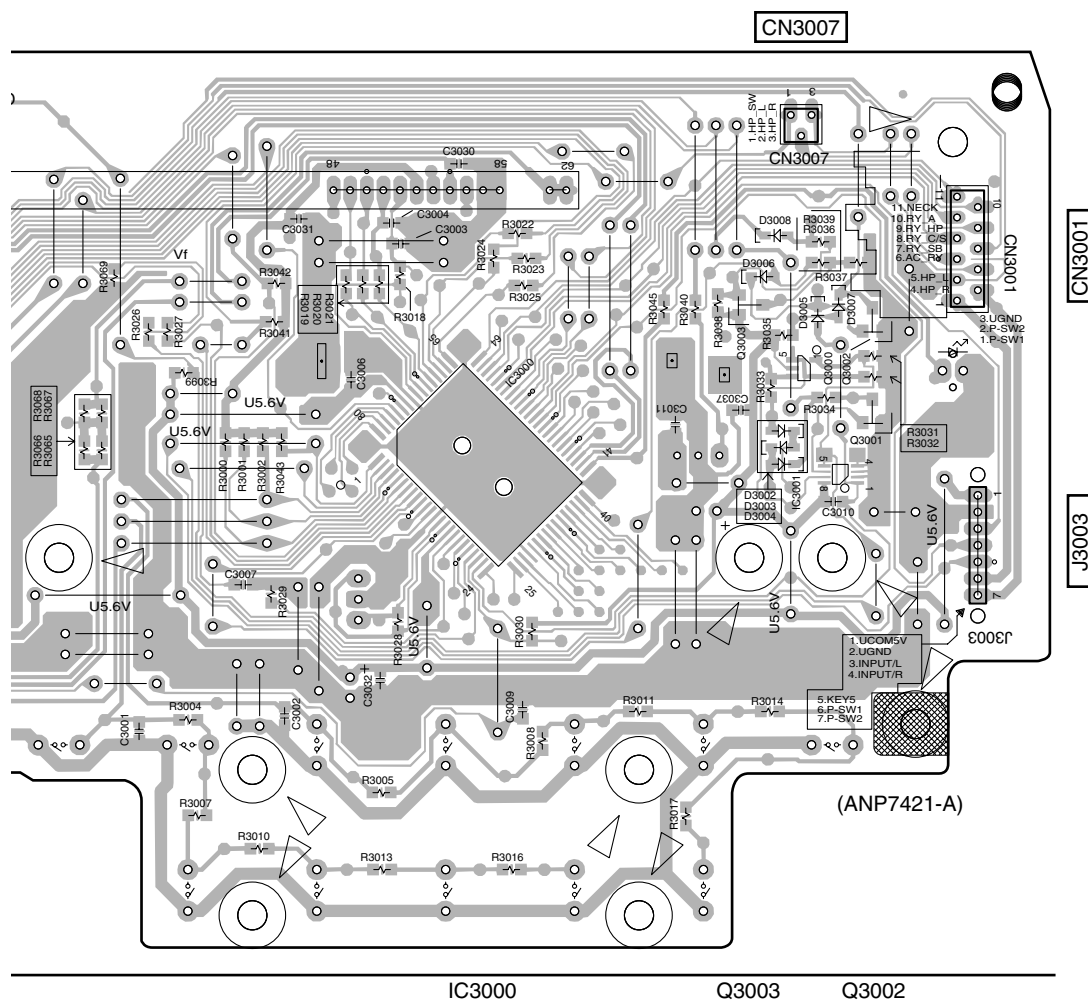
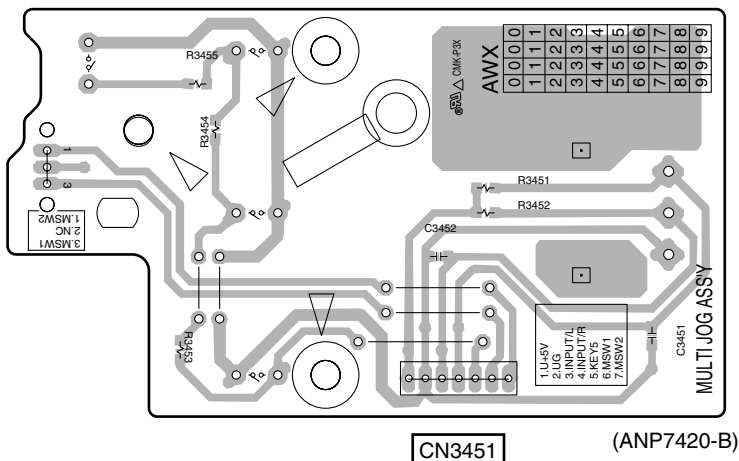
SIDE B



V HEADPHONE ASSY

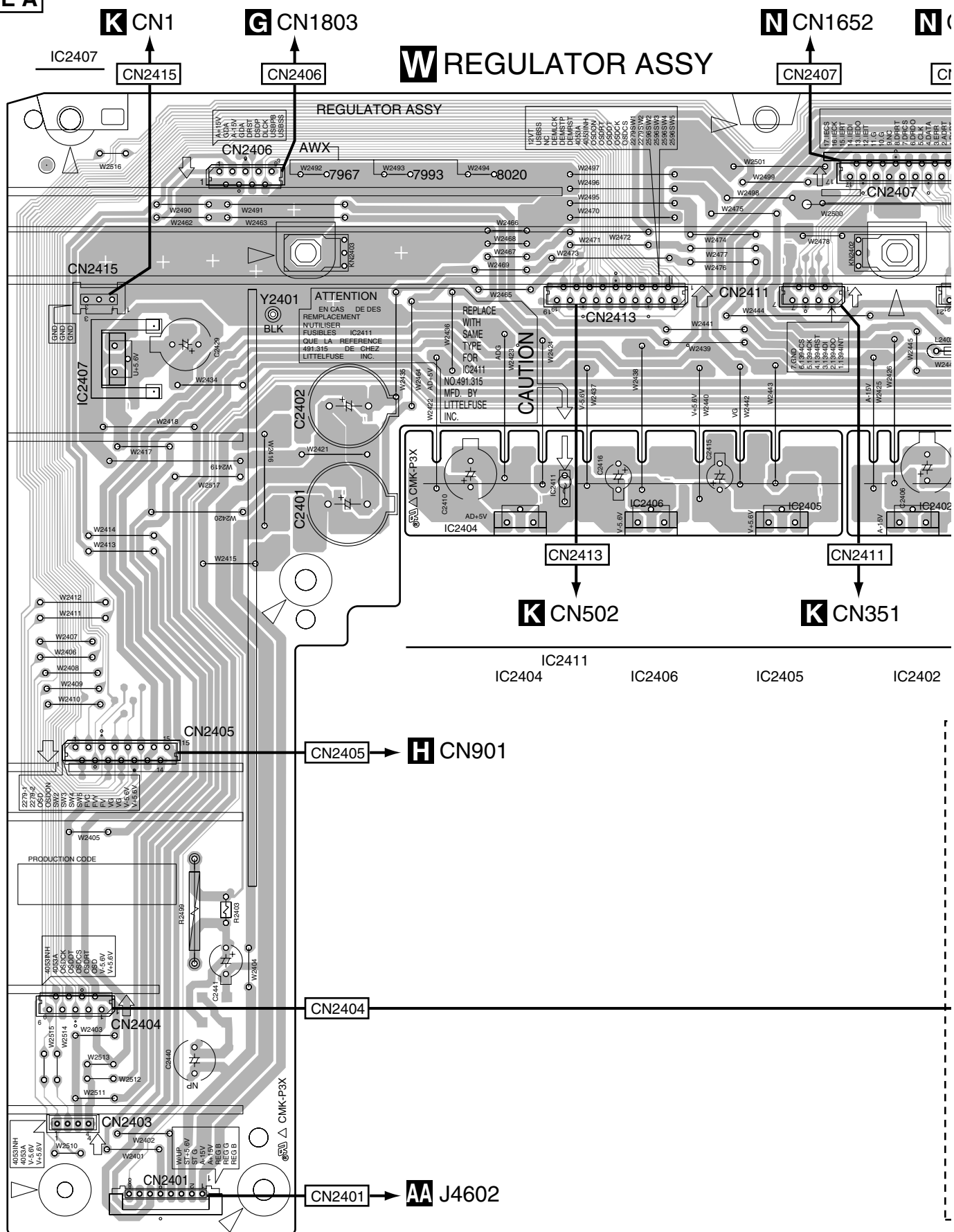


U MULTI JOG ASSY



4.13 REGULATOR and COMPONENT ASSYS

SIDE A



W

SIDE B

A

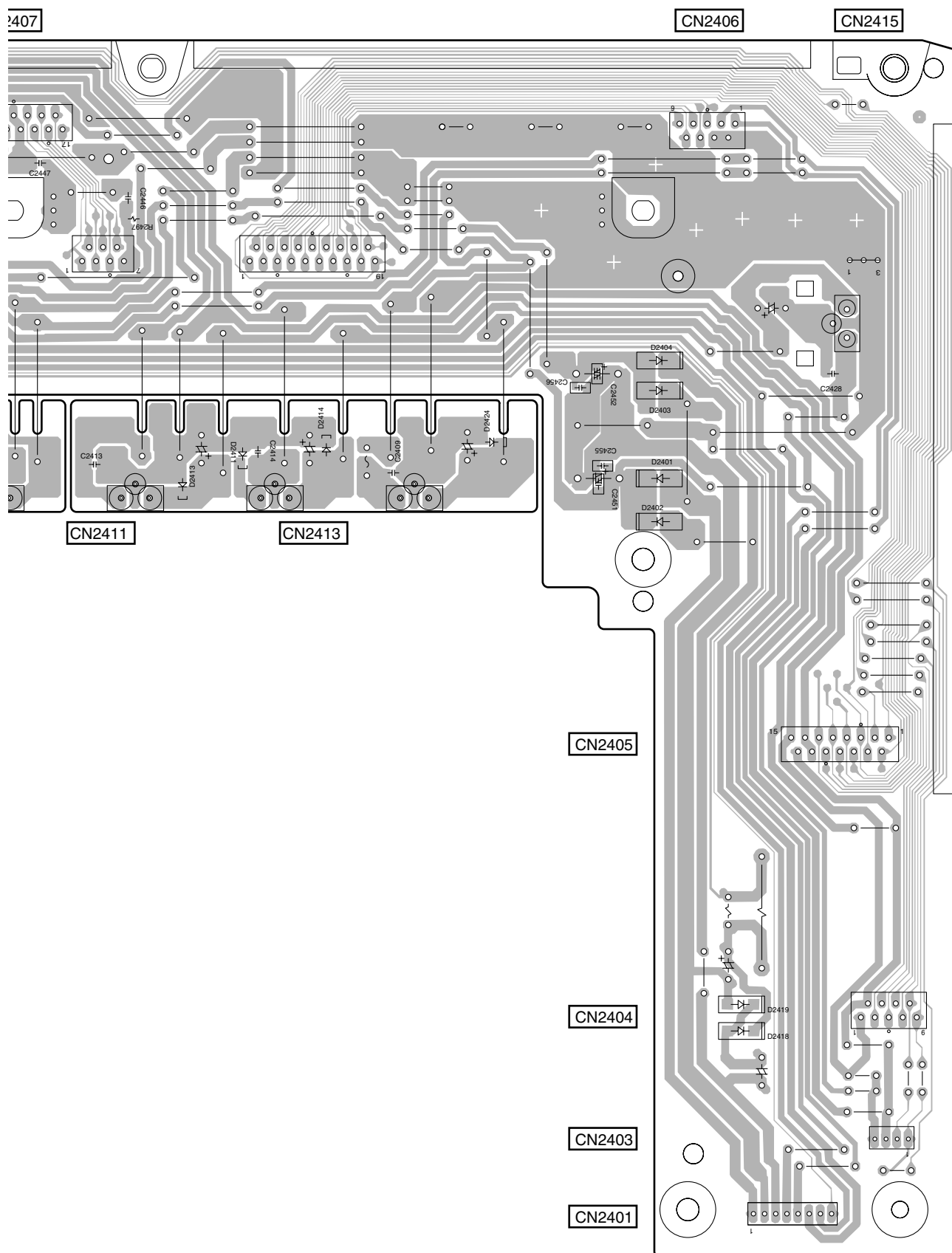
B

C

D

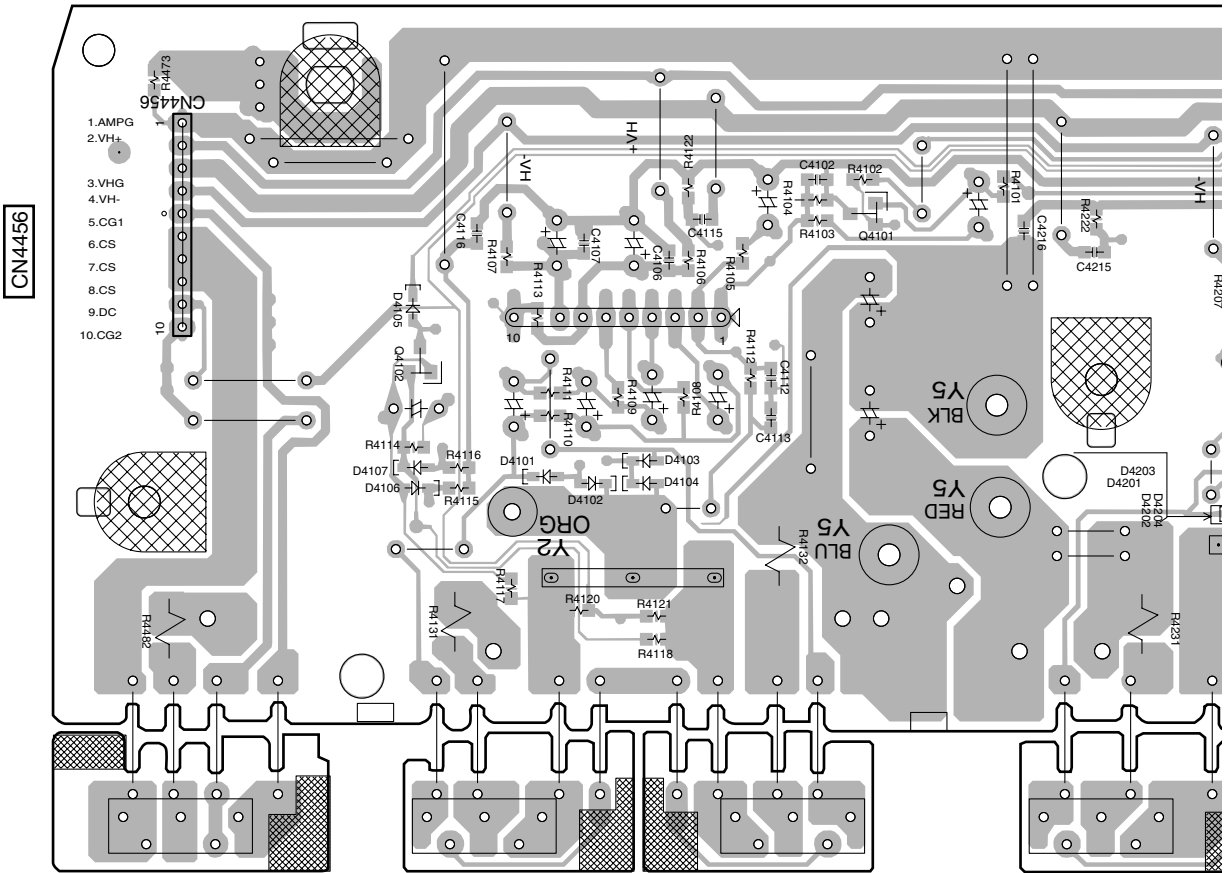
E

F



SIDE B

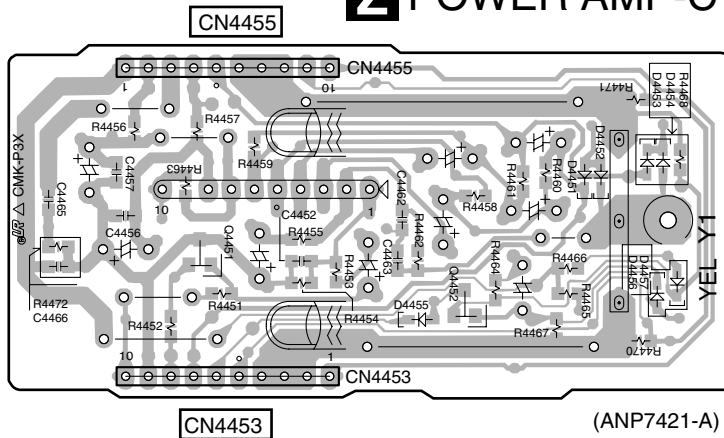
X POWER AMP-L ASSY



Q4102

Q4101

Z POWER AMP-C ASSY



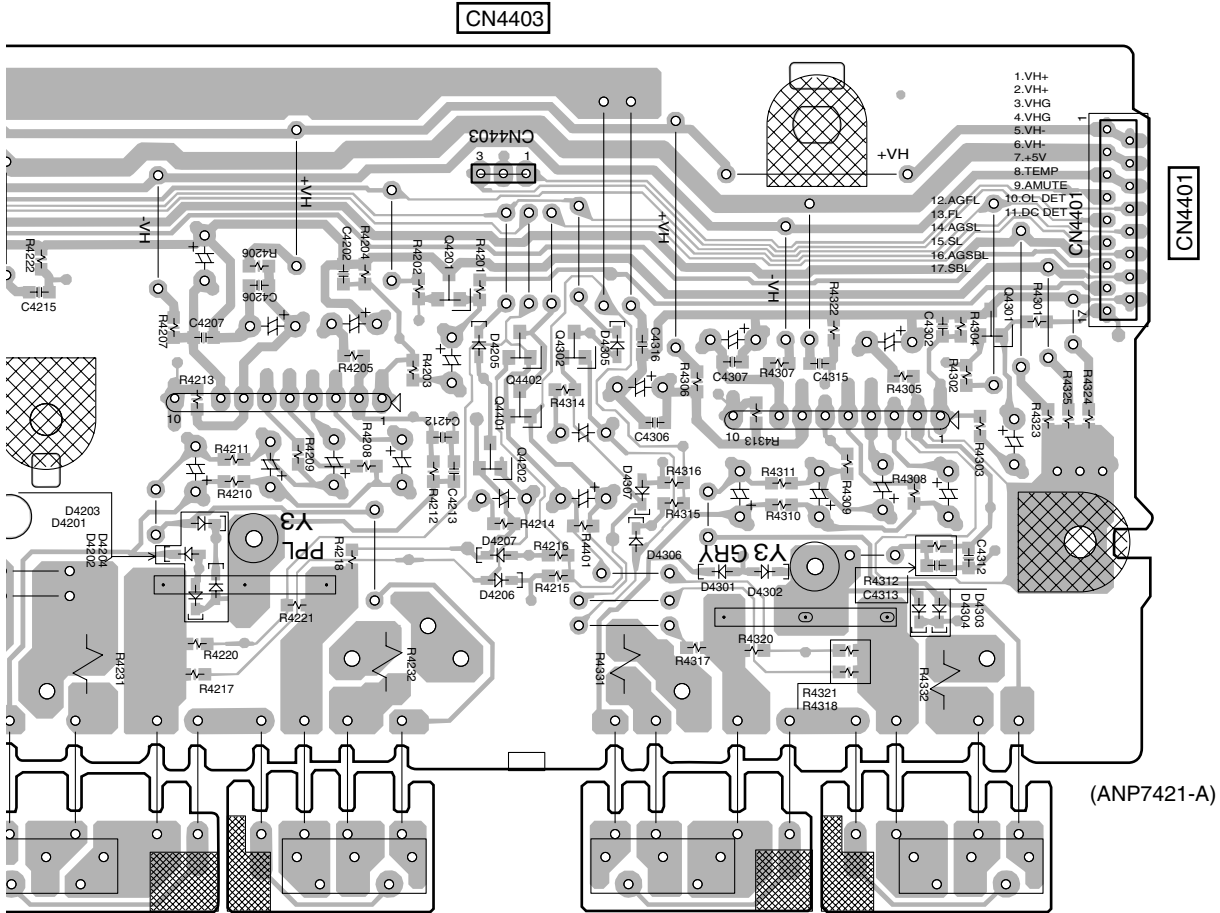
Q4451

Q4452

(ANP7421-A)

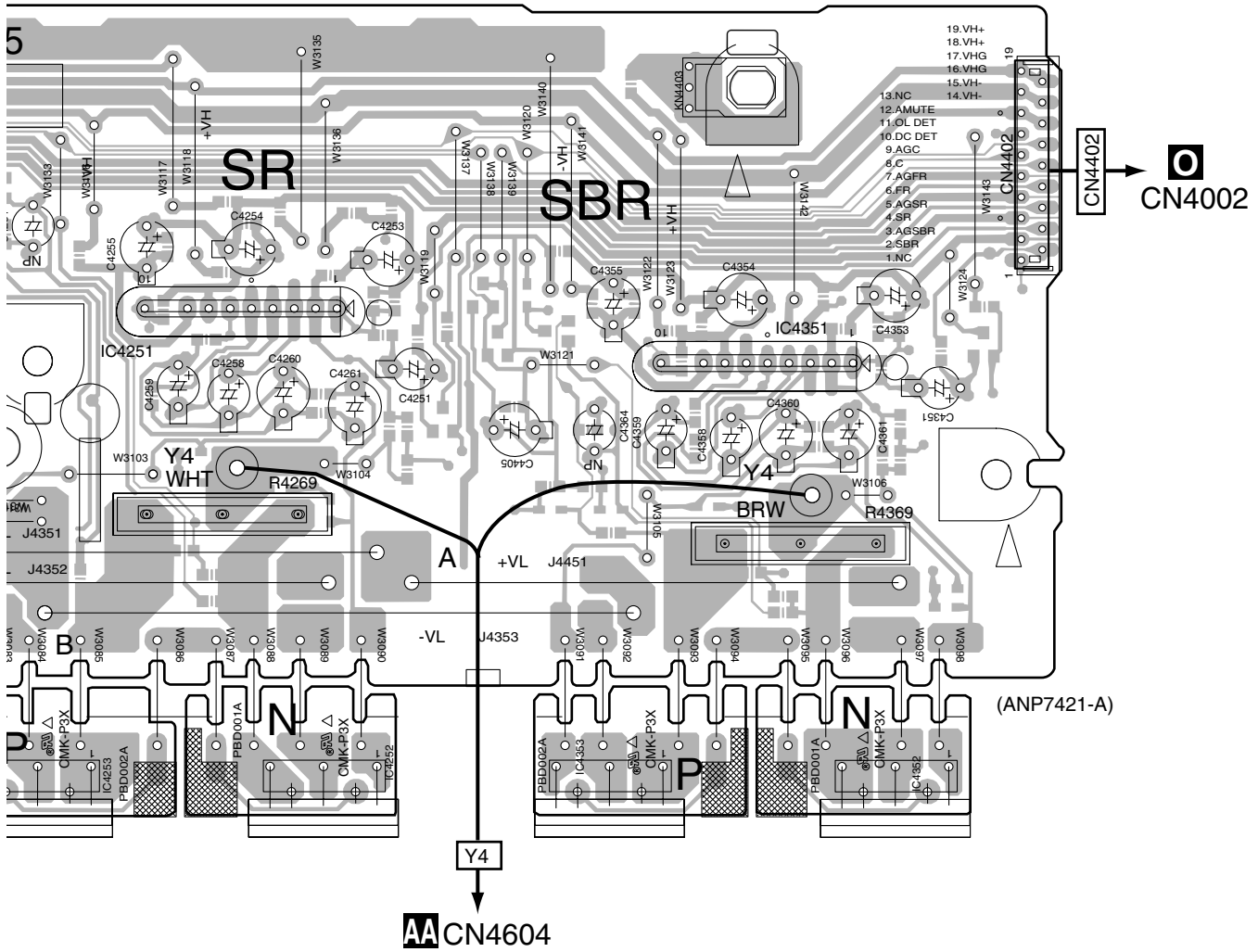
X Z

VSX-D2011-S

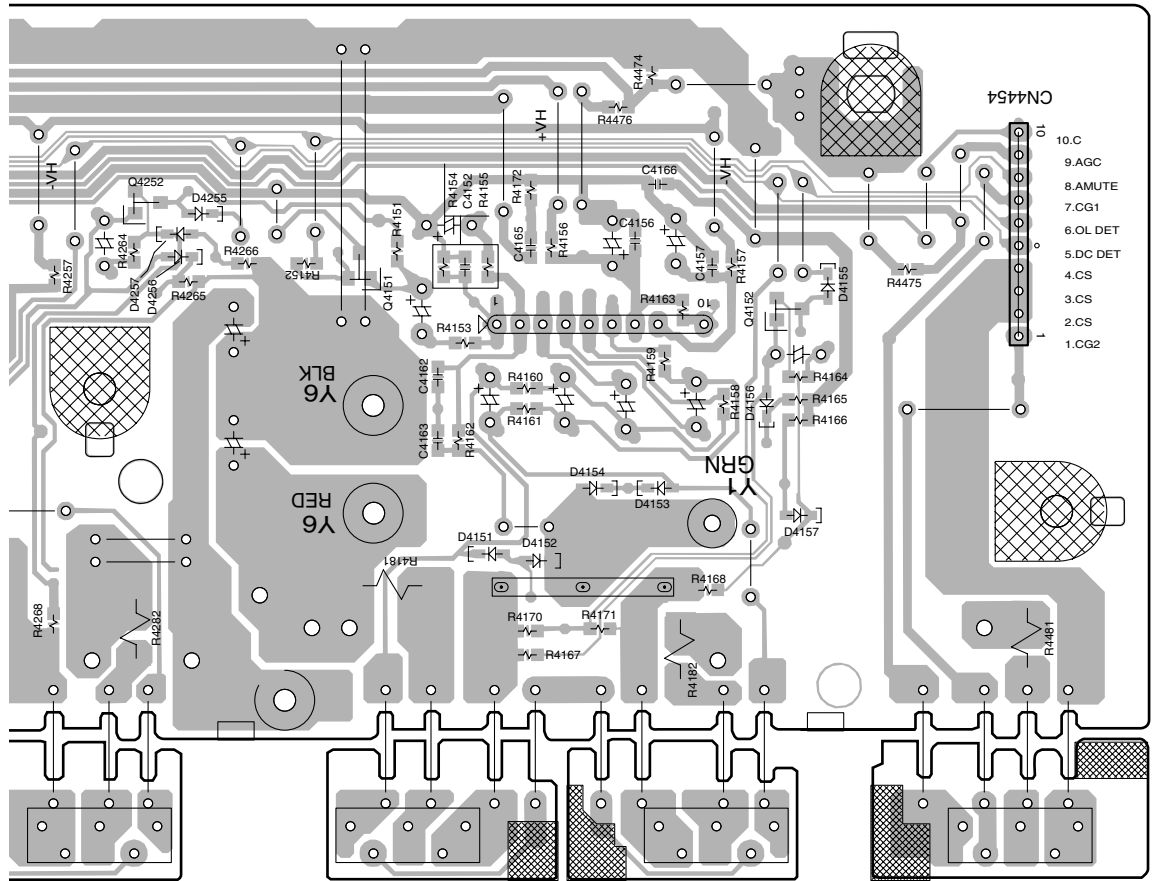


Q4201 Q4402 Q4302
Q4401
Q4202

Q4301



IC4253 IC4251 IC4252 IC4353 IC4351 IC4352



(ANP7421-A)

Q4252

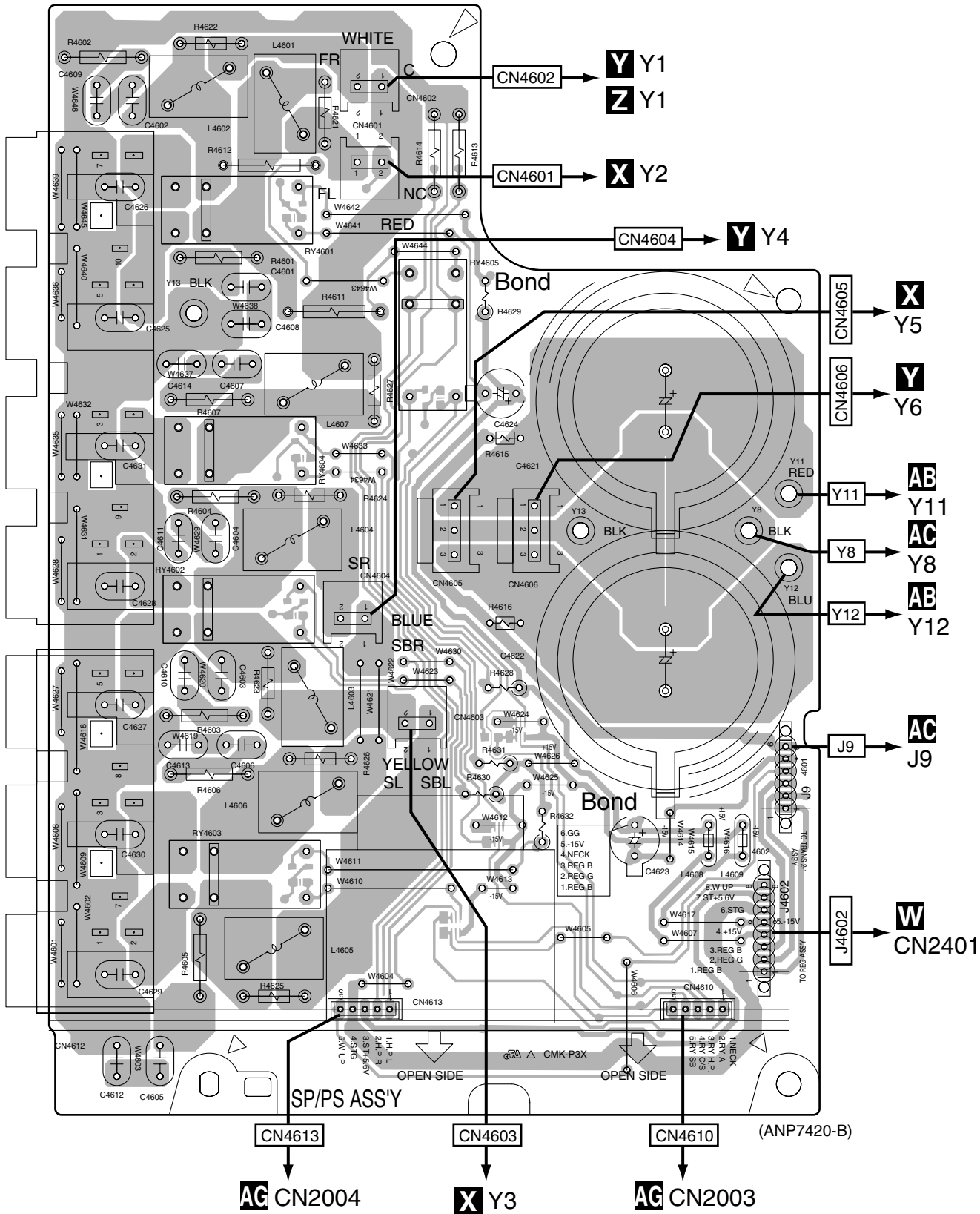
Q4151

Q4152

4.16 SP/PS ASSY

SIDE A

AA SP/PS ASSY

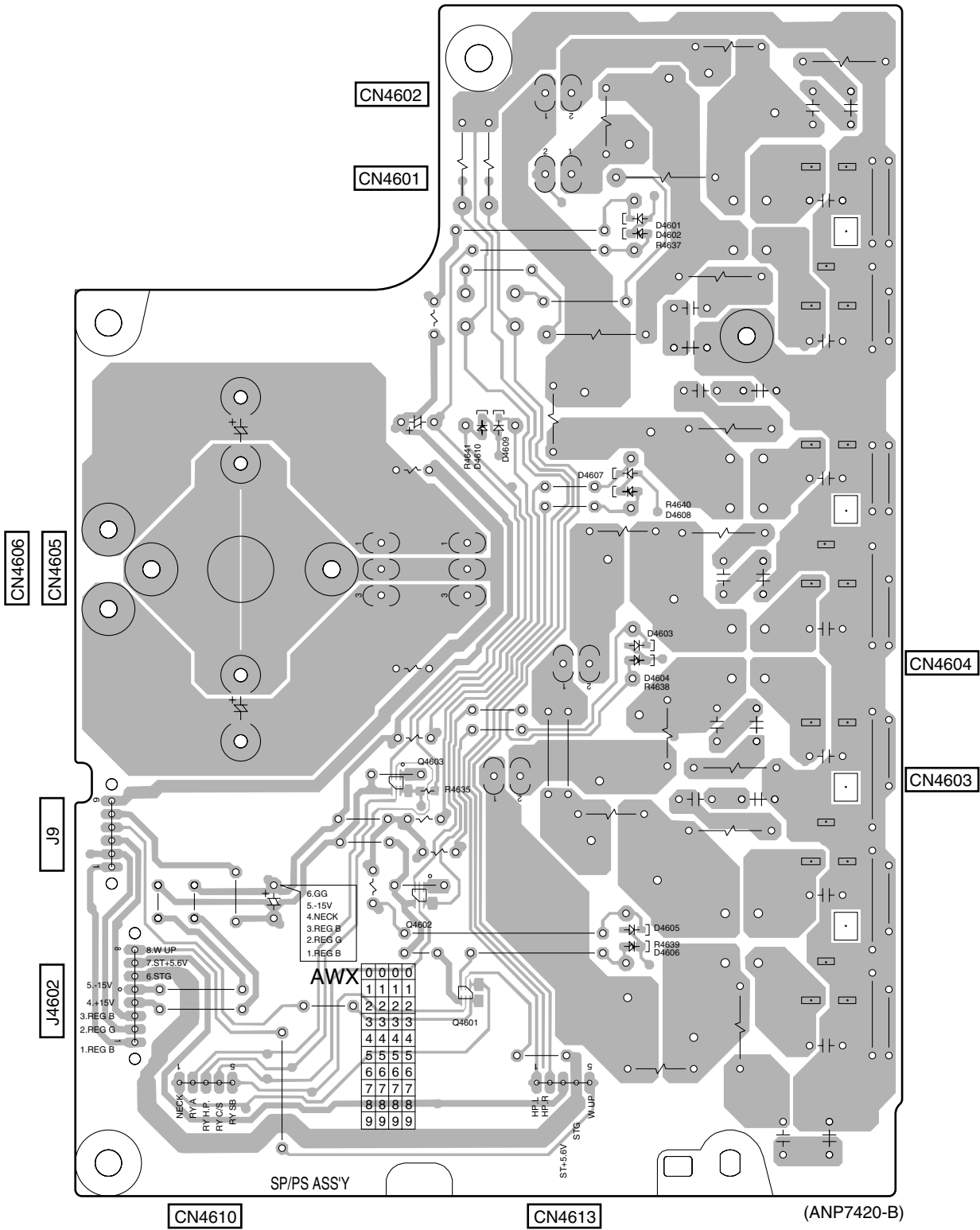


AA

SIDE B

A

AA SP/PS ASSY



B

C

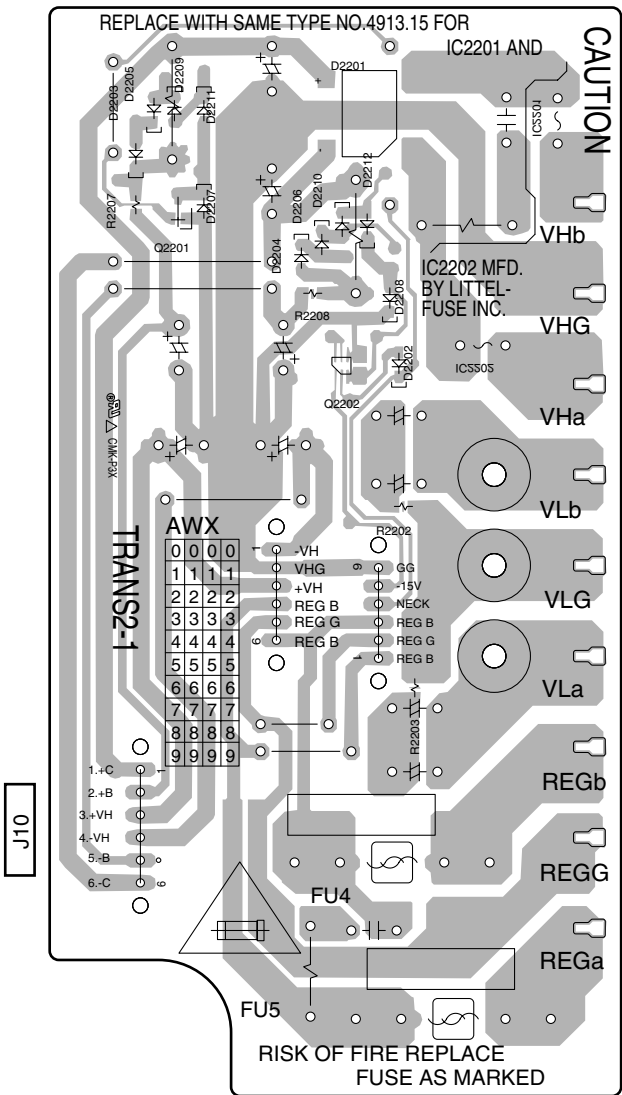
D

E

F

Q4603
Q4602
Q4601

AC TRANS 2-1 ASSY



IC2201

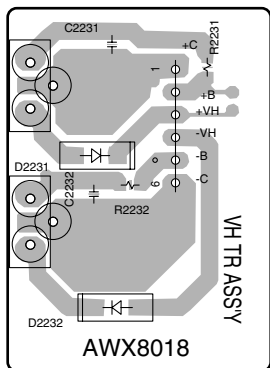
Q2201

IC2202

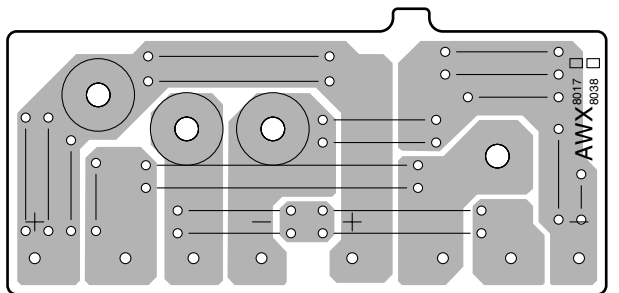
Q2202

J2201

J9



CN2231



AB DIODE ASSY

AD VH TR ASSY

4

A



4

SIDE B**AF****TRANS 1 ASSY**● **Line Voltage Selection**

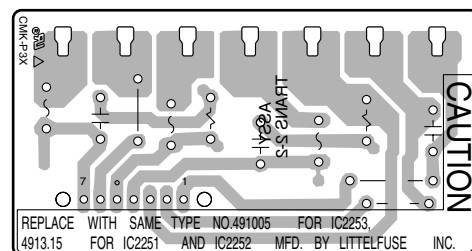
Line Voltage can be changed by the following modification:

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.

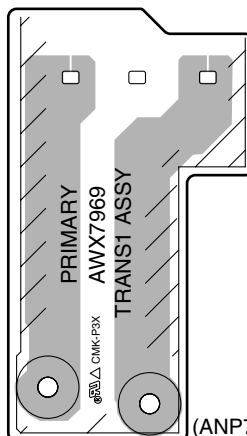
Voltage	Terminal No.
220-230V	Y15 of TRANS 1 ASSY
240V	240V terminal of power transformer

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

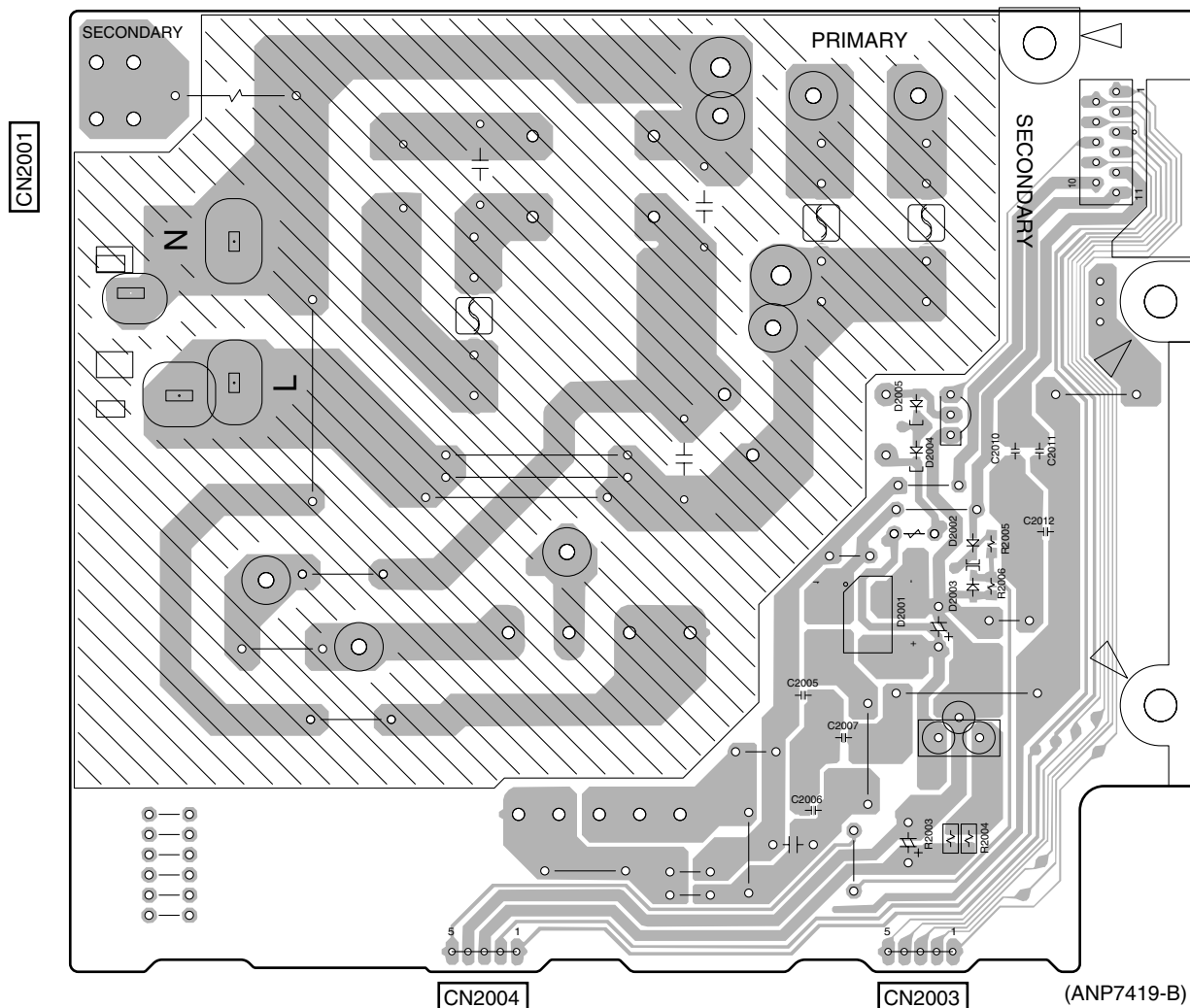
Description	Part No.
220V label	AAX-193
240V label	AAX-192

AE**TRANS 2-2 ASSY**

(ANP7419-B)



(ANP7419-B)

AG**PRIMARY ASSY****CN2002**

(ANP7419-B)

AE AF AG AH

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 $\times 10^1$ $\rightarrow$ 561 RD1/4PU $\overline{561}$ J

47k Ω $\rightarrow$ 47 $\times 10^3$ $\rightarrow$ 473 RD1/4PU $\overline{473}$ J

0.5 Ω $\rightarrow$ R50 RN2H $\overline{R50}$ K

1 Ω $\rightarrow$ 1R0 RS1P $\overline{1R0}$ K

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

5.62k Ω $\rightarrow$ 562 $\times 10^1$ $\rightarrow$ 5621 RN1/4PC $\overline{5621}$ F

• LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol and Description	VSX-D2011-S/ HYXJI	VSX-D1011-S/ HYXJI	VSX-D1011-K/ HYXJI
NSP	1..FM/AM TUNER MODULE	AXQ7232	AXQ7232	AXQ7232
	1..REGULATOR ASSY	AWK7738	AWK7738	AWK7738
	2..7.1 CH I/O ASSY	AWX7973	AWX7973	AWX7973
	2..POWER AMP IN ASSY	AWX7982	AWX7982	AWX7982
	2..FAN DRIVE ASSY	AWX8135	AWX8135	AWX8135
	2..REGULATOR ASSY	AWX8020	AWX8020	AWX8020
	2..TRANS 2-2 ASSY	AWX7970	AWX7970	AWX7970
	2..TRANS 1 ASSY	AWX7969	AWX7969	AWX7969
NSP	2..PRIMARY ASSY	AWX7998	AWX7998	AWX7998
	1..COMPLEX ASSY	AWK7755	AWK7757	AWK7757
	2..V-AUDIO IN ASSY	AWX7991	AWX7991	AWX7991
	2..FRONT IN ASSY	AWX8186	AWX8186	AWX8186
	2..OPTICAL IN ASSY	AWX7978	AWX7978	AWX7978
	2..INPUT CONNECT ASSY	AWX8041	AWX8041	AWX8041
	2..VOLUME ASSY	AWX7971	AWX7971	AWX7971
	2..MULTI JOG ASSY	AWX8015	AWX8015	AWX8015
	2..HEADPHONE ASSY	AWX7980	AWX7980	AWX7980
	2..SP/PS ASSY	AWX8039	AWX8040	AWX8040
	2..DIODE ASSY	AWX8017	AWX8038	AWX8038
	2..TRANS 2-1 ASSY	AWX7979	AWX7979	AWX7979
	2..VH TR ASSY	AWX8018	AWX8018	AWX8018
	2..MECHA SW ASSY	AWX7995	AWX7995	AWX7995
NSP	1..MAIN ASSY	AWK7737	AWK7747	AWK7747
	2..COAXIAL IN ASSY	AWX7965	AWX8013	AWX8013
	2..VIDEO ASSY	AWX8001	AWX8002	AWX8002
	2..COMPONENT ASSY	AWX7963	Not used	Not used
	2..MAIN CONTROL ASSY	AWX7997	AWX8010	AWX8010
	2..MIC & F.OPT IN ASSY	AWX7981	Not used	Not used
	2..MIC AMP ASSY	AWX8004	Not used	Not used
	2..DSP CONNECTION ASSY	AWX8024	AWX8024	AWX8024
	2..FAN CONNECTION ASSY	AWX8005	AWX8005	AWX8005
NSP	1..POWER AMP ASSY	AWK7763	AWK7743	AWK7743
	2..DISPLAY ASSY	AWX8147	AWX8011	AWX8011
	2..POWER AMP-L ASSY	AWX7984	AWX7984	AWX7984
	2..POWER AMP-R ASSY	AWX7985	AWX7985	AWX7985
	2..POWER AMP-C ASSY	AWX7986	AWX7986	AWX7986
	1..DSP ASSY	AWX8016	AWX8016	AWX8016

• CONTRAST OF PCB ASSEMBLIES



COAXIAL IN ASSY

AWX7965 and AWX8013 are constructed the same except for the following :

Mark	Symbol and Description	AWX7965	AWX8013
	IC1681	PCM2902EG	Not used
	IC1682	TC7SET08F	Not used
	C1680, C1697	CKSRYB103K50	Not used
	C1681	CEAT470M16	Not used
	C1683-C1686, C1689, C1690, C1698	CKSRYB104K16	Not used
	C1687	CCSRCH220J50	Not used
	C1688	CCSRCH180J50	Not used
	R1681	RS1/16S152J	Not used
	R1682, R1683	RS1/16S220J	Not used
	R1686	RS1/16S105J	Not used
	R1687	RS1/16S470J	Not used
	R1689	RS1/16S222J	Not used
	R1690	RS1/16S101J	Not used
	X1681 CRYSTAL RESONATOR (12.0MHz)	ASS7047	Not used
	JA1681 USB CONNECTOR	DKN1237	Not used



VIDEO ASSY

AWX8001 and AWX8002 are constructed the same except for the following :

Mark	Symbol and Description	AWX8001	AWX8002
	IC903	TC4W53FU	Not used
	IC933	BU4053BCF	Not used
	Q901	2SA933S	Not used
	C918	CEAT101M16	Not used
	C915, C916, C921, C957, C958	CKSRYB473K50	Not used
	C919	CCSRCH150J50	Not used
	C920	CEAT470M25	Not used
	C922	CCSRCH181J50	Not used
	R914	RS1/16S101J	Not used
	R916	RS1/16S104J	Not used
	R917	RS1/16S153J	Not used
	R918	RS1/16S103J	Not used
	R919	RS1/16S101J	Not used
	R920	RD1/2VM221J	Not used
	R921, R955, R956, R958	Not used	RS1/16S0R0J
	R922	RS1/16S750J	Not used
	R926, R959, R960, R961	RS1/16S102J	Not used
	R954	RS1/16S0R0J	Not used
	JA905 1P PIN JACK	VKB1122	Not used



MAIN CONTROL ASSY

AWX7997 and AWX8010 are constructed the same except for the following :

Mark	Symbol and Description	AWX7997	AWX8010
	Q101, Q102	2SC3326	Not used
	Q103	DTA124EK	Not used
	C139, C140	CCSRCH470J50	Not used
	R135, R136	RS1/16S912J	RS1/16S0R0J
	R137, R138	RS1/16S102J	Not used
	R141, R142	RS1/16S472J	Not used
	R143, R524, R525	RS1/16S473J	Not used
	R523, R526	Not used	RS1/16S473J

S DISPLAY ASSY

AWX8147 and AWX8011 are constructed the same except for the following :

Mark	Symbol and Description	AWX8147	AWX8011
	R3099 4P CABLE HOLDER J3008 JUMPER WIRE 04P	Not used 51048-0400 D20PYY0415E	RS1/16S473J Not used Not used

AA SP/PS ASSY

AWX8039 and AWX8040 are constructed the same except for the following :

Mark	Symbol and Description	AWX8039	AWX8040
	L4608, L4609 RY4601-RY4605 C4621, C4622 C4623 R4628-R4632	RTF1167 ASR7014 ACH7169 CEAT101M50 RD1/2VM331J	Not used ASR7026 ACH7170 Not used RD1/2VM471J

AB DIODE ASSY

AWX8017 and AWX8038 are constructed the same except for the following :

Mark	Symbol and Description	AWX8017	AWX8038
	D2241, D2242	LN6SB60-4003	D5SBA20(B)

• PARTS LIST FOR VSX-D2011-S

Mark No.	Description	Part No.	Mark No.	Description	Part No.
REGULATOR ASSY			F201	FM CERAMIC FILTER	ATF-119
OTHERS			F601	ANTIBIRDY FILTER	ATF7025
Y15	BOARD IN JUMPER	ADX7418	F203	AM CERAMIC FILTER	ATF7026
Y14	BOARD IN JUMPER	ADX7419	L602		LAU2R2J
J11	JUMPER WIRE 7P	D20PYY0745E	L601		LCTA270J2520
COMPLEX ASSY			CAPACITORS		
OTHERS			C605		CCSQCH680J50
Y8	BOARD IN JUMPER	ADX7284	C212, C213, C226, C233-C235		CCSRCH101J50
Y9	BOARD IN JUMPER	ADX7285	C240, C614		CCSRCH101J50
Y10	BOARD IN JUMPER	ADX7286	C206		CCSRCH120J50
Y11	BOARD IN JUMPER	ADX7287	C231, C232		CCSRCH150J50
Y12	BOARD IN JUMPER	ADX7288	C223		CEAT100M50
J9	JUMPER WIRE 6P	D20PYY0615E	C229		CEAT101M10
			C224		CEAT1R0M50
			C227		CEAT220M25
			C241		CEAT2R2M50
			C243		CEAT330M16
			C228		CEAT3R3M50
			C237		CEAT470M10
			C211		CEJQ1R0M50
			C210		CEJQ470M16
			C103, C104, C204, C238, C609		CKSRYB102K50
			C102, C208, C216, C217, C220		CKSRYB103K50
			C239, C242, C604, C610, C615		CKSRYB103K50
			C225		CKSRYB153K50
			C607, C608		CKSRYB182K50
			C201, C205, C214, C230, C236		CKSRYB223K50
			C244, C611		CKSRYB223K50
			C221		CKSRYB224K10
			C603		CKSRYB392K50
			C215		CKSRYB471K50
FM/AM TUNER MODULE					
SEMICONDUCTORS					
IC201		BA1451F			
IC202		LC72131MD			
Q201, Q204, Q205, Q601		2SC2412K			
Q202		DTA124ES			
Q203, Q602		DTC124EK			
D201		1SS133			
D601		HVU187			
D202		MTZJ5.1C			
D101		UDZS6.8B			
COILS AND FILTERS					
L201	FL COIL	ATE7003			
F202	FM CERAMIC FILTER	ATF-107			

Mark No.	Description	Part No.
C202, C222		CKSRYB473K16
C606		CKSRYB561K50

RESISTORS

R211	RD1/4PU221J
R221	RD1/4PU222J
R233	RD1/4PU391J
R103, R104	RS1/10S221J
Other Resistors	RS1/16S###J

OTHERS

CN201	13P FFC CONNECTOR	52044-1345
BN201	2P TERMINAL WITH PAL SHIELD CASE T	AKA7002
	SHIELD CASE B	ANK7072
X201	CRYSTAL RESONATOR (7.2MHz)	ANK7073
		ASS1093
FM FRONTEND		AXF7005
AM RF TUNING BLOCK		AXX7072

B 7.1 CH I/O ASSY SEMICONDUCTORS

IC1301-IC1304	UPC4570G2
Q1351, Q1352, Q1361, Q1362	HN1C03F
Q1371, Q1372, Q1381, Q1382	HN1C03F

CAPACITORS

C1301-C1304, C1307, C1308	CCSRCH101J50
C1311-C1314, C1317, C1318	CCSRCH101J50
C1321-C1324, C1327, C1328	CCSRCH101J50
C1331-C1334, C1337, C1338	CCSRCH101J50
C1351, C1352, C1361, C1362	CCSRCH331J50
C1371, C1372, C1381, C1382	CCSRCH331J50
C1309, C1310, C1319, C1320	CEAT100M50
C1329, C1330, C1339, C1340	CEAT100M50
C1305, C1306, C1315, C1316	CEAT4R7M50
C1325, C1326, C1335, C1336	CEAT4R7M50
C1341-C1348, C1391-C1394	CKSRYB103K50

RESISTORS

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

OTHERS

CN1301-CN1304	4P PIN JACK	AKB7015
CN1306	5P SOCKET	AKP7066
CN1307, CN1308	9P SOCKET	AKP7068

C V-AUDIO IN ASSY CAPACITORS

C1201-C1212	CCSRCH221J50
C1213-C1215	CKSRYB103K50

RESISTORS

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

OTHERS

CN1201-CN1203	4P PIN JACK	AKB7015
CN1204	17P SOCKET	AKP7072

D FRONT IN ASSY CAPACITORS

Mark No.	Description	Part No.
C1501, C1502		CCSRCH221J50
C1505		CKSRYB102K50
C1504, C1506		CKSRYB103K50
C1503		CKSRYB472K50
C1510		CKSRYB473K50

RESISTORS

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

OTHERS

CN1501	7P FFC CONNECTOR	52044-0745
JA1501	FRONT INPUT	AKX7016
KN1501	EARTH METAL FITTING	VNF1084

E OPTICAL IN ASSY COILS AND FILTERS

F1701	CHIP BEAD	DTF1064
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CAPACITORS

C1706	CEAT470M16
C1701-C1705	CKSRYF104Z16

RESISTORS

All Resistors	RS1/16S###J
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OTHERS

CN1701	9P FFC CONNECTOR	52045-0945
JA1701, JA1702	OPTICAL LINK IN	GP1FA502RZ
JA1703, JA1704	OPTICAL LINK OUT	GP1FA502TZ

F INPUT CONNECT ASSY SEMICONDUCTORS

IC1451	UPC4570G2
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CAPACITORS

C1451, C1452	CEAT100M50
C1454, C1455	CKSRYB103K50
C1453	CKSRYB472K50

RESISTORS

All Resistors	RS1/16S###J
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OTHERS

CN1407	5P PLUG	AKP7055
CN1406, CN1408	9P PLUG	AKP7057
CN1405	17P PLUG	AKP7061
CN1404	9P SOCKET	AKP7068
CN1403	13P SOCKET	AKP7070
CN1401	15P SOCKET	AKP7071

G COAXIAL IN ASSY SEMICONDUCTORS

IC1681	PCM2902EG
IC1881	TC74HCU04AF
IC1682	TC7SET08F

COILS AND FILTERS

F1881	CHIP BEAD	DTF1064
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CAPACITORS

C1688	CCSRCH180J50
C1687	CCSRCH220J50

Mark No.	Description	Part No.
C1885, C1886		CCSRCH470J50
C1887		CCSRCH471J50
C1681		CEAT470M16
C1890		CEAT470M25
C1680, C1697, C1857, C1858		CKSRYB103K50
C1883, C1884, C1888, C1897		CKSRYB103K50
C1683-C1686, C1689, C1690, C1698		CKSRYB104K16

RESISTORS

All Resistors	RS1/16S###J
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OTHERS

CN1801	9P FFC CONNECTOR	52045-0945
JA1802	2P PIN JACK	AKB7131
CN1803	9P SOCKET	AKP7068
JA1681	USB CONNECTOR	DKN1237
CN1802	20P FFC CONNECTOR	VKN1196
X1681	CRYSTAL RESONATOR (12.0MHz)	ASS7047

H VIDEO ASSY SEMICONDUCTORS

IC933	BU4053BCF
IC901, IC931	NJM2296M
IC932	NJM2596M
IC903	TC4W53FU
Q901, Q931, Q932	2SA933S
Q933	IMZ1A
D901	DAN202K

CAPACITORS

C981-C983	CCSRCH101J50
C919, C960, C963	CCSRCH150J50
C922-C925, C969-C974	CCSRCH181J50
C955	CCSRCH330J50
C901-C904, C932, C935, C938	CEAT101M10

C941	CEAT101M10
C905, C906, C918, C945, C946	CEAT101M16
C951, C952, C959	CEAT101M16
C933, C936, C939, C942	CEAT1R0M50
C920, C961, C964	CEAT470M25

C943	CKSRYB103K50
C931, C934, C937, C940, C944	CKSRYB104K16
C966-C968	CKSRYB104K16
C907, C908, C915, C916, C921	CKSRYB473K50
C947, C948, C953, C954	CKSRYB473K50

C957, C958, C962, C965	CKSRYB473K50
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RESISTORS

R920, R966	RD1/2VM221J
R969	RD1/2VM471J
Other Resistors	RS1/16S###J

OTHERS

JA904	COMB. JACK (S+1P)	AKB7146
JA901-JA903	COMB. JACK (2S+2P)	AKB7147
CN901	15P SOCKET	AKP7071
JA905	1P PIN JACK	VKB1122

I COMPONENT ASSY

Mark No.	Description	Part No.
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SEMICONDUCTORS

IC1051	PDC084A
IC1001	TC74HC4053AF
IC1002, IC1003	TK15450M
Q1051	DTC124EK
D1051, D1052	1SS355

COILS AND FILTERS

L1051, L1052	LCYA100J2520
L1053	LCYA330J2520

CAPACITORS

C1060	CCSRCH101J50
C1055	CCSRCH150J50
C1056	CCSRCH180J50
C1057, C1058	CCSRCH240J50
C1024-C1026, C1059	CCSRCH470J50

C1017, C1018, C1023, C1029	CCSRCK2R0C50
C1013, C1014, C1019, C1020	CEAT101M16
C1027, C1028, C1051, C1053, C1063	CEAT101M16
C1007, C1008, C1015, C1016	CKSRYB103K50
C1021, C1022	CKSRYB103K50

C1052, C1054, C1061, C1062	CKSRYB473K50
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RESISTORS

All Resistors	RS1/16S###J
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OTHERS

CN1001	9P SOCKET	AKP7068
JA1001-JA1003	3P PIN JACK	VKB1150
X1051	CRYSTAL RESONATOR (14.32MHz)	ASS1056

J MECHA SW ASSY SWITCHES AND RELAYS

S2491	ASG1035
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CAPACITORS

C2491, C2492	CKSRYB103K50
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OTHERS

CN2491	3P JUMPER CONNECTOR	52147-0310
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K MAIN CONTROL ASSY SEMICONDUCTORS

IC651	BU1923F
IC502, IC503	BU4094BCF
IC501	PD5770C8
IC511	TC74VHC08FT
IC302	TC74VHCT244AFT

IC103	TC9163AF
IC104	TC9215AF
IC101	TC9274F-019
IC701-IC704	TC94A07F
IC102, IC711-IC714	UPC4570G2

Q651	2SA1037K
Q601	2SC1740S
Q653	2SC2412K
Q101, Q102	2SC3326
Q103, Q511	DTA124EK

Q501, Q652	DTC143EK
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Mark No.	Description	Part No.
D501, D511, D521-D524		1SS355
D821, D822, D831, D832		1SS355
D601		UDZ11B

COILS AND FILTERS

L501	LCYA2R2J2520
L651	LFCA2R2J
⚠ L891-L895 CHIP SOLID INDUCTOR	QTL1013

CAPACITORS

C508	ACH7132
C719, C720, C739, C740	CCSRCH680J50
C759, C760, C779, C780	CCSRCH680J50
C113, C114, C125-C127	CCSRCH101J50
C151-C153, C725-C727	CCSRCH101J50

C745-C747, C765-C767	CCSRCH101J50
C785-C787	CCSRCH101J50
C103-C112, C115, C116	CCSRCH221J50
C651, C652	CCSRCH270J50
C117, C118, C139, C140, C662	CCSRCH470J50

C131, C132, C621, C622	CEAT100M50
C701, C702, C713, C714	CEAT100M50
C733, C734, C753, C754	CEAT100M50
C773, C774	CEAT100M50
C654	CEAT101M10

C303, C304, C602	CEAT101M16
C657	CEAT1R0M50
C506, C513	CEAT221M10
C505, C655	CEAT2R2M50
C503	CEAT331M10

C717, C718, C721, C722	CEAT470M25
C737, C738, C741, C742	CEAT470M25
C757, C758, C761, C762	CEAT470M25
C777, C778, C781, C782	CEAT470M25
C133, C134	CEAT470M50

C511	CEAT471M10
C748, C749, C768, C769	CEV100M16
C788, C789	CEV100M16
C510	CKSQYF105Z16
C601	CKSQYF225Z16

C653	CKSRYB102K50
C128, C129, C137, C138	CKSRYB103K50
C155-C157, C302, C502, C507	CKSRYB103K50
C509, C514, C515, C535, C540	CKSRYB103K50
C598, C711, C712, C723, C724	CKSRYB103K50

C731, C732, C743, C744	CKSRYB103K50
C751, C752, C763, C764	CKSRYB103K50
C771, C772, C783, C784	CKSRYB103K50
C891, C892, C894	CKSRYB103K50
C512, C656	CKSRYB472K50

C154, C599, C821, C831	CKSRYB473K50
C658	CKSRYB561K50

RESISTORS

All Resistors	RS1/16S###J
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OTHERS

CN552 10P FFC CONNECTOR	52045-1045
CN601 13P FFC CONNECTOR	52045-1345
CN801 24P FFC CONNECTOR	52045-2445
CN501 32P FFC CONNECTOR	52045-3245
CN103 9P PLUG	AKP7057

Mark No.	Description	Part No.
CN102 13P PLUG		AKP7059
CN101 15P PLUG		AKP7060
CN351 7P SOCKET		AKP7067
CN2, CN3 9P SOCKET		AKP7068
CN502 19P SOCKET		AKP7073

CN302 21P SOCKET	AKP7074
CN1 3P PLUG	KM250NA3L
JA591 REMOTE CONTROL JACK	RKN1004
JA592 REMOTE CONTROL JACK	RKN1026
JA111-JA113 4P PIN JACK	VKB1132

CN301 21P FFC CONNECTOR	VKN1197
X651 CRYSTAL RESONATOR (4.332MHz)	ASS7004
X501 CERAMIC RESONATOR (15.7MHz)	ASS7032

L MIC & F.OPT IN ASSY

COILS AND FILTERS

L1601 CHIP FERRITE BEAD	ATL7002
⚠ L1602, L1603 CHIP SOLID INDUCTOR	QTL1013

CAPACITORS

C1601, C1606	CCSRCH471J50
C1603	CEAL470M16
C1611	CKSRYB102K50
C1602, C1612, C1614	CKSRYB103K50

RESISTORS

All Resistors	RS1/16S###J
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OTHERS

CN1601 4P FFC CONNECTOR	52044-0445
J1601 CORD WITH PLUG	ADX7417
JA1601 OPTICAL LINK IN	GP1FA502RZ
JA1606 REMOTE CONTROL JACK	RKN1004
CN1602 KR CONNECTOR	S3B-PH-K

M MIC AMP ASSY

SEMICONDUCTORS

⚠ IC4751	NJM78L05A
IC4752	UPC4570G2
D4751, D4752	UDZS5.1B

CAPACITORS

C4753	CCSRCH101J50
C4754	CCSRCH330J50
C4751, C4752, C4755-C4757	CEAT100M50
C4758, C4762-C4765	CKSRYB473K50

RESISTORS

R4756	RD1/4MUF471J
Other Resistors	RS1/16S###J

OTHERS

CN4752 4P JUMPER CONNECTOR	52147-0410
CN4751 KR CONNECTOR	B3B-PH-K
PCB BINDER	VEF1040
KN4751 EARTH METAL FITTING	VNF1084

N DSP CONNECTION ASSY

SEMICONDUCTORS

Mark No.	Description	Part No.
IC1651		TC74LVX244FT

COILS AND FILTERS

L1651	QTL1013
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CAPACITORS

C1651	CKSRYB103K50
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RESISTORS

All Resistors	RS1/16S###J
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OTHERS

CN1652–CN1654 17P SOCKET	AKP7072
CN1651 B TO B CONNECTOR 50P	AKP7177

POWER AMP IN ASSY SEMICONDUCTORS

Q4001	2SC2412K
D4001	1SS355

CAPACITORS

C4002	CKSRYB104K16
C4001	CKSRYB223K50

RESISTORS

All Resistors	RS1/16S###J
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OTHERS

4001 10P CABLE HOLDER	51048-1000
CN4001 24P FFC CONNECTOR	52044-2445
CN4003 17P PLUG	AKP7061
CN4002 19P PLUG	AKP7062
J12 JUMPER WIRE 10P	D20PYY1010E
CN4004 3P L TYPE PLUG	KM250MA3L

FAN DRIVE ASSY SEMICONDUCTORS

Q4056	2SA1037K
Q4051	2SC4793
Q4054	2SD1859X
Q4052	DTA124EK
Q4055	DTC114EK

Q4053	DTC124EK
⚠ D4051, D4052	1SR154-400
D4058, D4059	1SS355
D4054, D4055	UDZ12B
D4053	UDZ27B

D4057	UDZS5.1B
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CAPACITORS

C4054	CEAT101M16
C4052	CEAT1R0M50
C4055, C4056	CEAT331M63
C4051	CEAT471M35
C4053	CKSRYB103K50

RESISTORS

R4057, R4058	RS3LMF331J
Other Resistors	RS1/16S###J

OTHERS

CN4051 9P JUMPER CONNECTOR	52147-0910
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Mark No.	Description	Part No.
CN4054	10P JUMPER CONNECTOR	52147-1010

FAN CONNECTION ASSY SEMICONDUCTORS

⚠ IC4701, IC4702	AEK7023
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OTHERS

4701 9P CABLE HOLDER	51048-0900
CN4701 6P JUMPER CONNECTOR	52147-0610
J4701 JUMPER WIRE 9P	D20PYY0915E
CN4702 3P PLUG	KM250MA3

DSP ASSY SEMICONDUCTORS

IC201	AK4114VQ
IC561	AK4382AVT
IC501, IC521, IC541	AK4383VT
IC101	AK5380VT
IC301, IC401	DSPC56367PV150

IC302, IC451	IS61LV6416-12T
IC303	IS63LV1024-12T
⚠ IC901	NJM2391DL1-33
IC601, IC621, IC641, IC661, IC681	NJM4565MD
⚠ IC902	NJU7223DL1-18

IC471	PD8100A
IC701	TC74VHC157FT
IC304	TC74VHCU04FT
IC503, IC705, IC706	TC7SH04FU
IC305	TC7WH125FU

Q681, Q682	2SK208
Q683, Q701, Q971, Q972, Q974	UN5112
Q684, Q702, Q973	UN5212
Q601, Q621, Q641, Q661	XP4506
D681, D682, D721	1SS355

D702	DAN202K
D701, D971, D972	DAP202K
D101–D104	RB501V-40

COILS AND FILTERS

L301–L304, L401, L402, L451	ATL7002
L471, L904, L906, L907	ATL7002

CHIP FERRITE BEAD	
L101–L104, L201–L203	QTL1013
L305, L306, L501, L503, L511	QTL1013

L521, L531, L541, L551, L561	QTL1013
L571, L701, L705, L706	QTL1013

CHIP SOLID INDUCTOR	
⚠ L403 CHIP BEAD	VTL1072
⚠ L502 CHIP BEAD	VTL1077

CAPACITORS

C339, C340	CCSRCH100D50
C202	CCSRCH150J50
C623, C625, C643–C646	CCSRCH151J50
C663–C666	CCSRCH151J50
C201	CCSRCH220J50

C204, C206, C209, C301, C302	CCSRCH471J50
C304, C306, C308, C309, C312	CCSRCH471J50
C314, C316, C318, C319	CCSRCH471J50
C321, C322, C325, C326	CCSRCH471J50
C329, C330, C332, C333, C335	CCSRCH471J50

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
C337, C345, C346, C402 C404–C408, C410–C418 C420–C422, C424–C426, C451 C471 C603–C606		CCSRCH471J50 CCSRCH471J50 CCSRCH471J50 CCSRCH471J50 CCSRCH820J50
C111, C112, C502, C522, C542 C562, C607, C608, C627, C628 C647, C648, C667, C668 C681, C682 C104, C105, C551, C907, C909		CEV100M16 CEV100M16 CEV100M16 CEV100M16 CEV101M16
C106 C901, C902 C210, C341, C401 C212, C614, C624, C626 C683–C685, C689, C693, C695		CEV2R2M50 CEV330M25 CEV470M6R3 CKSRYB102K50 CKSRYB102K50
C925 C343, C429, C677, C678, C924 C101–C103, C205, C207, C208 C211, C305, C307, C310, C311 C313, C315, C324, C331, C334		CKSRYB102K50 CKSRYB103K50 CKSRYB104K16 CKSRYB104K16 CKSRYB104K16
C338, C348, C352, C409, C419 C423, C427, C452, C501, C503 C521, C541, C561, C591, C630 C701, C705, C706, C906, C908 C303, C403		CKSRYB104K16 CKSRYB104K16 CKSRYB104K16 CKSRYB104K16 CKSRYB105K6R3
C109, C110, C622 C601, C602, C609, C610 C621, C641, C642, C661, C662 C629, C649, C650, C669, C670 C971		CKSRYB222K50 CKSRYB332K50 CKSRYB392K50 CKSRYB472K50 CKSRYB472K50
C923 C203 C323, C428 C107, C611–C613, C615 C671, C672, C694, C696–C698		CKSRYB473K16 CKSRYB474K10 CKSRYB563K16 CKSRYF104Z25 CKSRYF104Z25

RESISTORS

R851	RAB4C101J
R204, R225, R226, R229, R701	RAB4C104J
R712	RAB4C104J
R221	RS1/16S1802F
Other Resistors	RS1/16S###J

OTHERS

CN102	B TO B CONNECTOR 50P	AKP7176
X201	CRYSTAL RESONATOR (24MHz)	ASS7025
X301	CRYSTAL RESONATOR (33MHz)	ASS7040
CN702	10P FFC CONNECTOR	VKN1414
CN101	20P FFC CONNECTOR	VKN1424
CN601	21P FFC CONNECTOR	VKN1425
CN701	22P FFC CONNECTOR	VKN1426
KN931	EARTH METAL FITTING	VNF1109

S DISPLAY ASSY SEMICONDUCTORS

IC3000	PD5771A
IC3002	RPM7140-H4
Q3003	2SA1037K
Q3002	DTC124EK

Mark No.	Description	Part No.
Q3004		HN1C01FU
D3006–D3008 D3001 D3009 D3000		1SS355 BR5064X DAN202K MAA5064X
COILS AND FILTERS		
L3000	CHIP FERRITE BEAD	ATL7002
SWITCHES AND RELAYS		
S3000–S3017		ASG7013
CAPACITORS		
C3003, C3004, C3007, C3024, C3025 C3020, C3021, C3026, C3027 C3028, C3029 C3008, C3012, C3035 C3022, C3023		CCSRCH101J50 CEJQ100M16 CEJQ101M10 CEJQ101M6R3 CEJQ330M25
C3000–C3002 C3009, C3011, C3032–C3034 C3036, C3037 C3006, C3031 C3030		CKSRYB102K50 CKSRYB103K50 CKSRYB103K50 CKSRYB104K16 CKSRYF104Z50
RESISTORS		
All Resistors		RS1/16S###J
OTHERS		
3008	4P CABLE HOLDER	51048-0400
3002	5P CABLE HOLDER	51048-0500
3003	7P CABLE HOLDER	51048-0700
CN3007	3P FFC CONNECTOR	52045-0345
CN3004	4P FFC CONNECTOR	52045-0445
CN3005	7P FFC CONNECTOR	52045-0745
CN3001	11P FFC CONNECTOR	52045-1145
CN3006	32P FFC CONNECTOR	52045-3245
V3000	FL TUBE	AAV7087
J3008	JUMPER WIRE 4P	D20PYY0415E
J3002	JUMPER WIRE 5P	D20PYY0510E
J3003	JUMPER WIRE 7P	D20PYY0715E
3001	FL HOLDER	VNF1085
X3000	CERAMIC RESONATOR (4.19MHz)	ASS7042

T VOLUME ASSY SWITCHES AND RELAYS

S3402–S3404 S3401	ASG7013 ASX7037
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CAPACITORS

C3401, C3402	CKSRYB103K50
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RESISTORS

All Resistors	RS1/16S###J
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OTHERS

CN3401	5P JUMPER CONNECTOR	52147-0510
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U MULTI JOG ASSY SWITCHES AND RELAYS

S3452–S3455 S3451	ASG7013 ASX7038
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Mark No.	Description	Part No.
<u>CAPACITORS</u>		
A C3451, C3452		CKSRYB103K50

<u>RESISTORS</u>		
All Resistors		RS1/16S###J

<u>OTHERS</u>		
3452 3P CABLE HOLDER		51048-0300
CN3451 7P JUMPER CONNECTOR		52147-0710
J3452 3P JUMPER WIRE		D20PY0310E

V HEADPHONE ASSY

<u>CAPACITORS</u>		
C1951, C1952		CKSRYB392K50

<u>RESISTORS</u>		
All Resistors		RS1/16S###J

<u>OTHERS</u>		
CN1951 3P FFC CONNECTOR		52045-0345
1951 PHONE JACK		AKN7029
KN1951 EARTH METAL FITTING		VNF1084

W REGULATOR ASSY

<u>SEMICONDUCTORS</u>		
⚠ IC2411		AEK7003
⚠ IC2409		NJM78L05A
⚠ IC2404		NJM78M05FA
⚠ IC2403		NJM78M12FA
⚠ IC2401		NJM78M15FA

⚠ IC2405, IC2407		NJM78M56FA
⚠ IC2406		NJM79M05FA
⚠ IC2402		NJM79M15FA
⚠ Q2401		2SA1803
⚠ D2401-D2404, D2407-D2410		1SR154-400

⚠ D2418, D2419		1SR154-400
D2411		1SS355
⚠ D2415		D3SBA20(B)
D2405, D2406, D2413, D2414		RB501V-40
D2421, D2422		UDZ15B

D2420		UDZS10B
D2423, D2424		UDZS6.2B

<u>CAPACITORS</u>		
C2446		CCSRCH101J50
C2440		CEANP470M35
C2415, C2416		CEAT101M16
C2408		CEAT101M25
C2405, C2406, C2410, C2429		CEAT221M35

C2411, C2412		CEAT222M16
C2435		CEAT2R2M50
C2443		CEAT331M10
C2401, C2402		CEAT332M35
C2442		CEAT470M50

C2441		CEAT470M63
C2436, C2439		CEAT471M16
C2433		CEAT472M16
C2451, C2452		CKSRYB102K50
C2403, C2404, C2407, C2409		CKSRYB103K50

Mark No.	Description	Part No.
C2413, C2414, C2428, C2434, C2453		CKSRYB103K50
C2424		CKSRYB473K50
C2444		CQMBA104J50

<u>RESISTORS</u>		
R2403		RD1/4MUF121J
R2401		RD1/4MUF470J
Other Resistors		RS1/16S###J

<u>OTHERS</u>		
2402 7P CABLE HOLDER		51048-0700
CN2401 8P JUMPER CONNECTOR		52147-0810
Y2401 BOARD IN JUMPER		ADX7420
CN2411 7P PLUG		AKP7056
CN2404, CN2406, CN2412, CN2414		AKP7057
9P PLUG		

CN2405 15P PLUG		AKP7060
CN2407-CN2409 17P PLUG		AKP7061
CN2413 19P PLUG		AKP7062
CN2410 21P PLUG		AKP7063
CN2415 3P SOCKET		KP250NA3

KN2401-KN2403		VNF1084
EARTH METAL FITTING		

X POWER AMP-L ASSY

<u>SEMICONDUCTORS</u>		
⚠ IC4101, IC4201, IC4301		PA9009A
⚠ IC4102, IC4202, IC4302		PBD001A
⚠ IC4103, IC4203, IC4303, IC4453		PBD002A
Q4102, Q4202, Q4302		2SA1255
Q4101, Q4201, Q4301		2SC3326
D4102, D4104-D4107, D4202		1SS355
D4204-D4207, D4302, D4304-D4307		1SS355
D4101, D4103, D4201, D4203, D4301		UDZS10B
D4303		UDZS10B

<u>CAPACITORS</u>		
C4106, C4107, C4206, C4207		ACG7041
C4306, C4307 (221μF/100V)		ACG7041
C4102, C4202, C4302		CCSRCH331J50
C4112, C4113, C4212, C4213		CCSRCH6R0D50
C4312, C4313		CCSRCH6R0D50

C4114, C4214, C4314		CEANPR22M50
C4401, C4402		CEAT331M63
C4110, C4111, C4210, C4211		CEHAT100M2A
C4310, C4311		CEHAT100M2A
C4101, C4201, C4301		CEHAT100M50

C4103, C4203, C4303		CEHAT331M10
C4104, C4105, C4204, C4205		CEHAT470M63
C4304, C4305		CEHAT470M63
C4108, C4109, C4208, C4209		CEHAZL470M25
C4308, C4309		CEHAZL470M25

<u>RESISTORS</u>		
⚠ R4131, R4132, R4231, R4232		ACN7107
⚠ R4331, R4332, R4482 (0.1Ω)		ACN7107
⚠ R4119, R4219, R4319 (0.22Ω/5W)		ACN7111
Other Resistors		RS1/16S###J

<u>OTHERS</u>		
Y2 LEAD WITH HOUSING		ADX7398
Y3 LEAD WITH HOUSING		ADX7399
Y5 LEAD WITH HOUSING		ADX7404

Mark No.	Description	Part No.
CN4401	17P SOCKET	AKP7072
CN4403	3P L TYPE PLUG	KM250MA3
CN4456	10P PLUG	KM250NA10L
KN4401, KN4402	EARTH METAL FITTING	VNF1084

Y POWER AMP-R ASSY SEMICONDUCTORS

⚠ IC4151, IC4251, IC4351	PA9009A
⚠ IC4152, IC4252, IC4352, IC4452	PBD001A
⚠ IC4153, IC4253, IC4353	PBD002A
Q4152, Q4252, Q4352	2SA1255
Q4403, Q4404	2SC2412K
Q4151, Q4251, Q4351	2SC3326
D4152, D4154-D4157, D4252	1SS355
D4254-D4257, D4352, D4354-D4357	1SS355
D4151, D4153, D4251, D4253, D4351	UDZS10B
D4353	UDZS10B

CAPACITORS

C4156, C4157, C4256, C4257	ACG7041
C4356, C4357 (221μF/100V)	ACG7041
C4152, C4252, C4352	CCSRCH331J50
C4162, C4163, C4262, C4263	CCSRCH6R0D50
C4362, C4363	CCSRCH6R0D50

C4164, C4264, C4364	CEANPR22M50
C4405	CEAT331M10
C4403, C4404	CEAT331M63
C4160, C4161, C4260, C4261	CEHAT100M2A
C4360, C4361	CEHAT100M2A

C4151, C4251, C4351	CEHAT100M50
C4153, C4253, C4353	CEHAT331M10
C4154, C4155, C4254, C4255	CEHAT470M63
C4354, C4355	CEHAT470M63
C4158, C4159, C4258, C4259	CEHAZL470M25

C4358, C4359	CEHAZL470M25
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RESISTORS

⚠ R4181, R4182, R4281, R4282	ACN7107
⚠ R4381, R4382, R4481 (0.1Ω)	ACN7107
⚠ R4169, R4269, R4369 (0.22Ω/5W)	ACN7111
Other Resistors	RS1/16S###J

OTHERS

Y1	LEAD WITH HOUSING	ADX7397
Y4	LEAD WITH HOUSING	ADX7400
Y6	LEAD WITH HOUSING	ADX7404
CN4402	19P SOCKET	AKP7073
CN4454	10P PLUG	KM250NA10L
KN4403, KN4404	EARTH METAL FITTING	VNF1084

Z POWER AMP-C ASSY SEMICONDUCTORS

⚠ IC4451	PA9009A
Q4452	2SA1255
Q4451	2SC3326
D4452, D4454-D4457	1SS355
D4451, D4453	UDZS10B

Mark No.	Description	Part No.
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CAPACITORS

C4456, C4457 (221μF/100V)	ACG7041
C4452	CCSRCH331J50
C4462, C4463	CCSRCH6R0D50
C4464	CEANPR22M50
C4460, C4461	CEHAT100M2A
C4451	CEHAT100M50

C4453	CEHAT331M10
C4454, C4455	CEHAT470M63
C4458, C4459	CEHAZL470M25

RESISTORS

⚠ R4469 (0.22Ω/5W)	ACN7111
Other Resistors	RS1/16S###J

OTHERS

CN4453, CN4455 10P SOCKET	KP250NA10
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AA SP/PS ASSY SEMICONDUCTORS

Q4602, Q4603	RN1903
Q4601	RN4903
D4601-D4610	1SS355

COILS AND FILTERS

L4601-L4607	ATH1053
L4608, L4609	RTF1167

SWITCHES AND RELAYS

RY4601-RY4605	ASR7014
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CAPACITORS

⚠ C4621, C4622	ACH7169
C4623	CEAT101M50
C4601-C4614	CFTYA224J50
C4625-C4631	CQMB4103J50

RESISTORS

⚠ R4621-R4627	RD1/2LMF4R7J
R4628-R4632	RD1/2VM331J
R4615, R4616	RD1/4MUF473J
⚠ R4613, R4614	RS1LMF471J
⚠ R4601-R4607	RS1LMF4R7J

⚠ R4611, R4612	RS2LMF331J
Other Resistors	RS1/16S###J

OTHERS

4601	6P CABLE HOLDER	51048-0600
4602	8P CABLE HOLDER	51048-0800
Y13	BOARD IN JUMPER	ADX7291
J4602	JUMPER WIRE 8P	D20PYY0830E
CN4610, CN4613	5P PLUG	KM200TA5

CN4611	8P SPEAKER TERMINAL	XKE3017
CN4612	6P SPEAKER TERMINAL	XKE3018

AB DIODE ASSY SEMICONDUCTORS

⚠ D2241, D2242	LN6SB60-4003
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AC TRANS 2-1 ASSY

Mark No. Description Part No.

SEMICONDUCTORS

⚠ IC2201, IC2202 PROTECTOR(3.15A) AEK7016
 Q2202 RN4903
 Q2201 UN521L
 ⚠ D2201 S1WB(A)60SD
 D2202 UDZ16B

D2207, D2208 UDZS22B
 D2203–D2206, D2209–D2212 UDZS9.1B

CAPACITORS

⚠ C2202, C2203 (1μF/100V) ACH1237
 C2207, C2208 (470μF/71V) ACH7173
 C2209, C2210 CEAT101M63
 C2211, C2212 CEAT221M63

RESISTORS

⚠ R2205, R2206 RS1LMF332J
 Other Resistors RS1/16S###J

OTHERS

2201 2202 6P CABLE
 HOLDER51048-0600
 2203 6P CABLE HOLDER 51052-0600
 H2201–H2204 FUSE CLIP AKR1004
 J2201 JUMPER WIRE6P D20PYY0615E
 J10 JUMPER WIRE D25PYY0607E

AD VH TR ASSY

SEMICONDUCTORS

⚠ Q2232 2SA1837
 ⚠ Q2231 2SC4793
 ⚠ D2231, D2232 1SR154-400

RESISTORS

All Resistors RS1/16S###J

OTHERS

CN2231 6P L TYPE CONNECTOR KPD6L

AE TRANS 2-2 ASSY

SEMICONDUCTORS

⚠ IC2251, IC2252 PROTECTOR(3.15A) AEK7016
 ⚠ IC2253 PROTECTOR(5A) AEK7019

CAPACITORS

C2251–C2253 CQMBA104J50

RESISTORS

⚠ R2251, R2252 RD1/4MUF100J

OTHERS

2251 7P CABLE HOLDER 51048-0700

AF TRANS 1 ASSY

TRANS 1 Assy has no service parts.

AG PRIMARY ASSY

SEMICONDUCTORS

⚠ IC2001 NJM78M56FA
 Q2001 KRC101M
 D2002, D2004, D2005 1SS355

Mark No. Description Part No.

⚠ D2001 S1WB(A)60SD
 D2003 UDZS5.1B

COILS AND FILTERS

⚠ L2001 LINE FILTER ATF7018
 ⚠ L2002, L2003 FERRITE BEAD VTH1013

TRANSFORMERS

⚠ T2001 ATT7040

SWITCHES AND RELAYS

⚠ RY2001 ASR7025

CAPACITORS

⚠ C2001, C2002 (0.01F/AC275V) ACE7013
 ⚠ C2003 (10000pF/AC250V) ACG7033
 C2008 CEAT102M25
 C2009 CEAT221M25
 C2005–C2007, C2011, C2012 CKSRYB103K50

C2004

CQMA103J50

RESISTORS

R2002 RD1/2VM101J
 Other Resistors RS1/16S###J

OTHERS

CN2002 11P FFC CONNECTOR 52045-1145
 ⚠ CN2005 1P AC SOCKET AKP1034
 H2001, H2002 FUSE CLIP AKR7001
 CN2003, CN2004 5P SOCKET KP200TA5L
 ⚠ CN2001 AC CORD SOCKET RKP1751

KN2001 EARTH METAL FITTING VNF1084

5 6 7 8

6. ADJUSTMENT



■ AM Tuner Section

- There is no adjustment in the AM tuner.

■ FM Tuner Section

- Set the mode selector to FM BAND.
- Connect the wiring as shown in Fig. 1.

Step No.	Adjustment Title	ANT. Input level and signal condition			Adjustment	
		Frequency (MHz)	Modulation	Input Level (dB μ V)	Adjust point	Contents
1	T-METER Adjustment	98	OFF	80	L201	Adjust L201 so that the DC voltage between Pin 21 and Pin 23 of IC201 (Test point V _{tm}) gets within 0 $\pm$ 50mV.

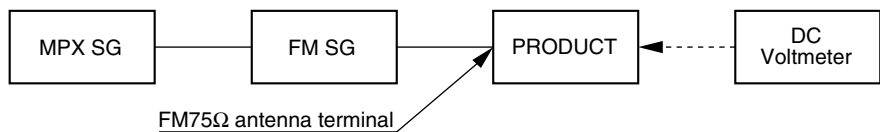


Fig.1 Adjustment Wiring Diagram

A FM/AM TUNER MODULE

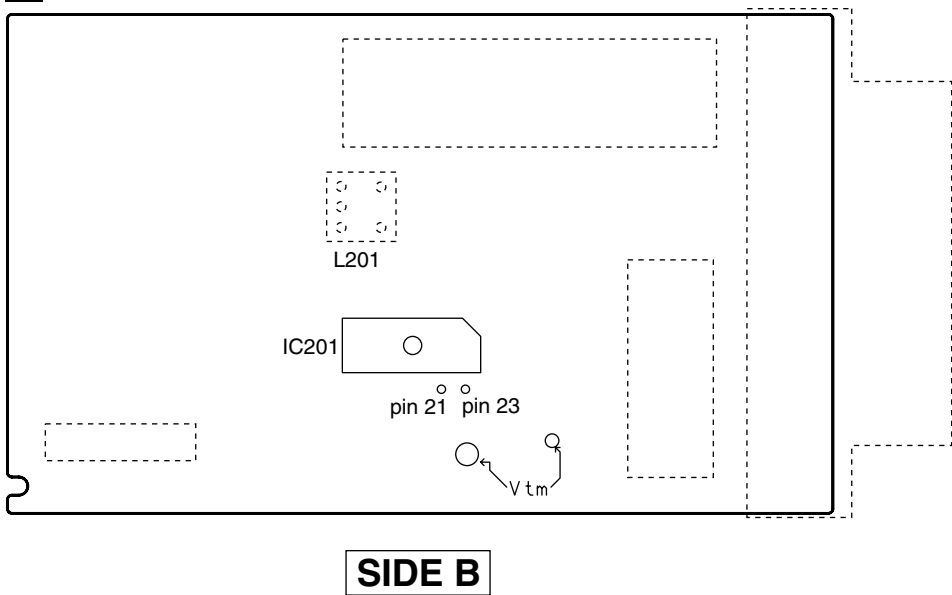


Fig.2 Adjustment Point

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 PROTECTION CIRCUIT CONTROL SPECIFICATION

Microcomputer-related ports

FAN_DRIVE (Expansion IC) : For Fan on/off

TEMP_IN (pin 94)

Input port (A/D) : To detect temperature

FAN_STOP (pin 95)

Input port : To detect Fan forced stop

OL_DET (pin 73)

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

DC_DET (pin 63)

Input port : For DC detection

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 Thermal and Fan detection, and Fan control

1) Thermal detection and Fan control

Valid with American and Japanese models only.

TEMPIN (V)	Temperature (°C)	Fan	Remarks
More than 4.10	More than 125	ON	Mute ON & speaker relay OFF : The warning indication "OVERHEAT" Leading hold
3.83 to 4.09	110 to 125	ON	Mute OFF & speaker relay ON : Normal mode
2.91 to 3.82	80 to 110	ON	
2.58 to 2.90	70 to 80	Leading hold	
Less than 2.52	Less than 70	OFF	

Valid with European and other general-area models only.

TEMPIN (V)	Temperature (°C)	Fan	Remarks
More than 3.58	More than 100	ON	Mute ON & speaker relay OFF : The warning indication "OVERHEAT" Leading hold
3.30 to 3.57	90 to 100	ON	Mute OFF & speaker relay ON : Normal mode
2.91 to 3.29	80 to 90	ON	
2.53 to 2.90	70 to 80	Leading hold	
Less than 2.52	Less than 70	OFF	

* By poor contact of Thermistor and alien substance mixture, there are the following cases displayed FL.

Become STBY after having done flushing with "THDCT NG" for three seconds.
By opening of thermistor junction or energization in very cold place (less than -15°C), TEMP line becomes high impedance. And when TEMP port became equal to or less than 0.1V.

2) Fan detection

If the fan is forcibly stopped, the FAN_DET port becomes "L"

Detecting "L" the microcomputer performs the following operations:

1. System muting on
2. Protection relays off

The warning indication "FAN STOP" appears (flashing) on the FL display.

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

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

FAN_DET port performs the chattering check for 7 msec.

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

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 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_DET 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) and flashes the standby LED.

Do not accept the key input afterward.

(Flash it always till turns the primary side off.)

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

DC_DET 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_DET port with a main loop.

Even if turns the primary side off and turns on once again, standby LED flashes as it is.

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 protection line and service.

1. Test mode (remote control code : A55F)
2. When the STEREO/DIRECT key and SIGNAL SELECT key are both held pressed for 2 seconds.

(Be effective when turned the power off by DC detection regarding 2.)

④ Diagnostic mode

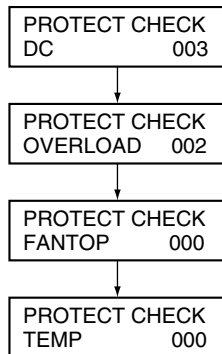
This mode is only for servicing and checking the circuit design, and not open to users.

When the STEREO/DIRECT key and TONE + 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 STEREO/DIRECT key and TONE + key pressed for 2 seconds in Standby mode.



When the MULTI CH IN key and TONE – key are both held pressed for 2 seconds in standby mode, all clear the counter for detection.

● Protection Process List

Item	Purpose	Detection Method	Process	Warning Indication	Remarks
DC detection	To detect amplifier damage (defect status) A process to protect speakers (for protection of connected external devices)	Detects when the DC_DET port becomes "L".	Turns muting on and speaker relay off, then turns off the power after 3 seconds.	Flashing "AMP ERR" for 3 seconds. Flash the standby LED after the power off.	Once detected and turned the power off, input a key never again.
AMP overload	To detect overloading (abnormal status) With low-load driving or a short circuit of the speaker terminals (for protection of the amplifier)	Detects when the AMP_OL port becomes "L" (checks by interrupt).	Turns muting on and speaker relay off, and immediately turns off the power.	None	
Fan control	Protection function against a temperature rise at the heat sink	HY, F : Detect temperature more than 100°C. KU, J : Detect temperature more than 125°C.	Turns muting on and speaker relay off. Rotate the fan	Continue flashing with "OVERHEAT"	
		HY, F : Detect temperature of 90 to 100°C. KU, J : Detect temperature of 110 to 125°C.	Rotate the fan		Mute, relay and warning indications is leading hold.
		HY, F : Detect temperature of 80 to 90°C. KU, J : Detect temperature of 80 to 110°C.	Rotate the fan		Mute off & relay on (normal mode)
		Detect temperature of 70 to 80°C.	Fan is leading hold		
		A condition except the above.	Stop the fan		
Fan stop	To know that the rotating fan is forcibly stopped	Detects when the FAN_DET 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.

7.1.2 DIAGNOSTICS OF AMPLIFIER SECTION

When DC detection worked (STBY IND. 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 STBY (flashes) state before repair, 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 R4621-4627 (Either of the amplifier side and the speaker terminal side is possible) (Or remove either of CN4601-4604). 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).**

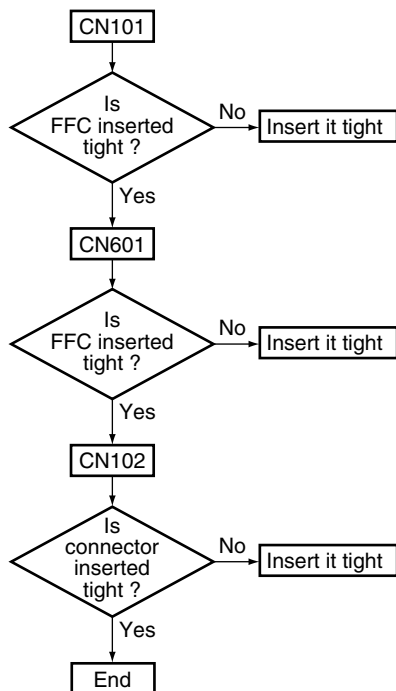
About parts with damaged possibility, explain FL ch to an example in order.

1. R4131, 4132 (ACN7107: 0.1 Ω , 1W chip drain resistor)
IC 4102, 4103
(PBD001A: Nch, PBD002A: Pch output POWER MOS Tr.)
2. R4119 (ACN7111: 0.22 Ω .5W $\times$ 2 cement source resistor)
R4117, 4118
(RS1/16S471J: 470 Ω chip resistor for protection circuit)
D4101, 4103
(UDZS10B: 10V Zener diode for current limiting)
D4102, 4104 (1SS355: Small signal diodes same as above)
R4110, 4111 (RS1/16S560J: 56 Ω chip gate resistor)
R4106, 4107
(RS1/16S101J: 100 Ω chip IC4101 power filter resistor)
3. IC4101 (PA9009A: Power amplifier with output current bias Voltage step HIC)
IC4701, 4702
(AEK7023: 200mA IC protector /FAN CONNECTION Assy)
4. Q2231, 2232 (2SC4793, 2SA1837 TO-220 Tr. /VH TR Assy)

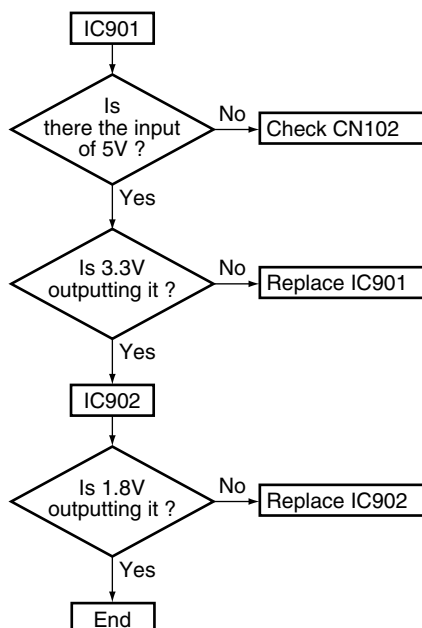
7.1.3 TROUBLE SHOOTING

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

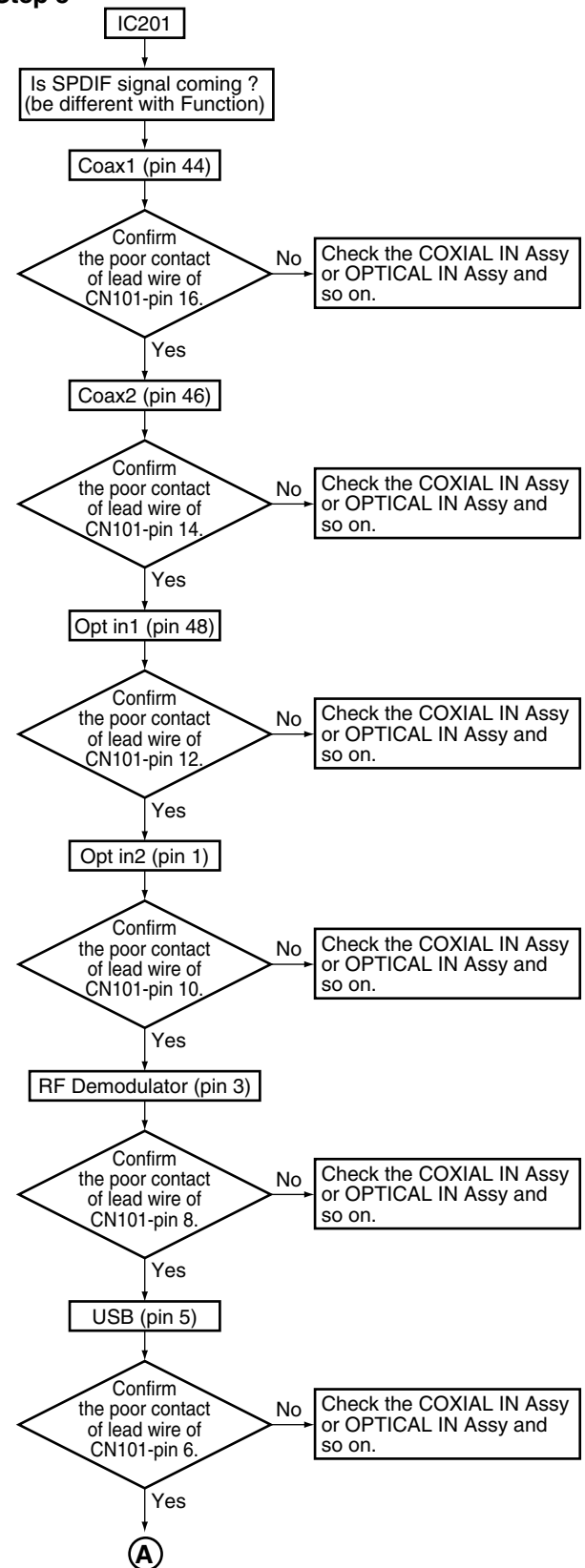
Step 1

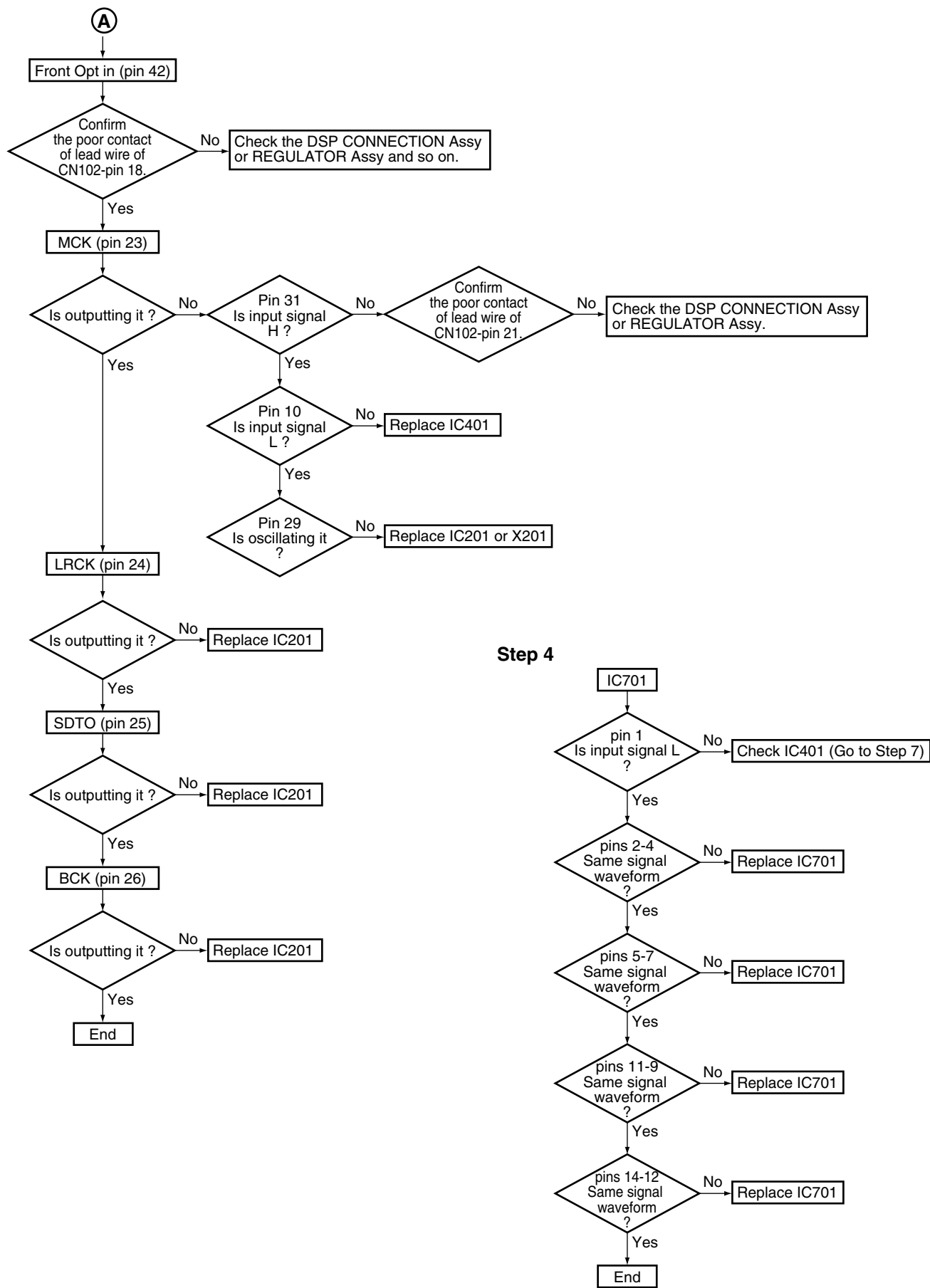


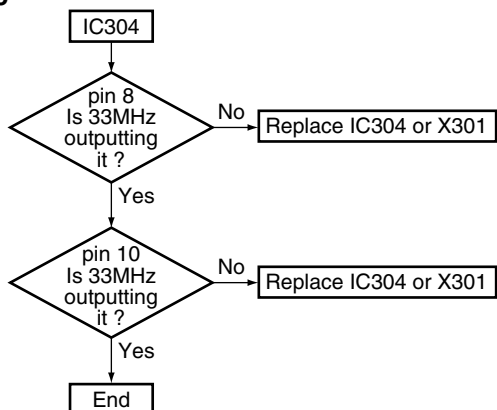
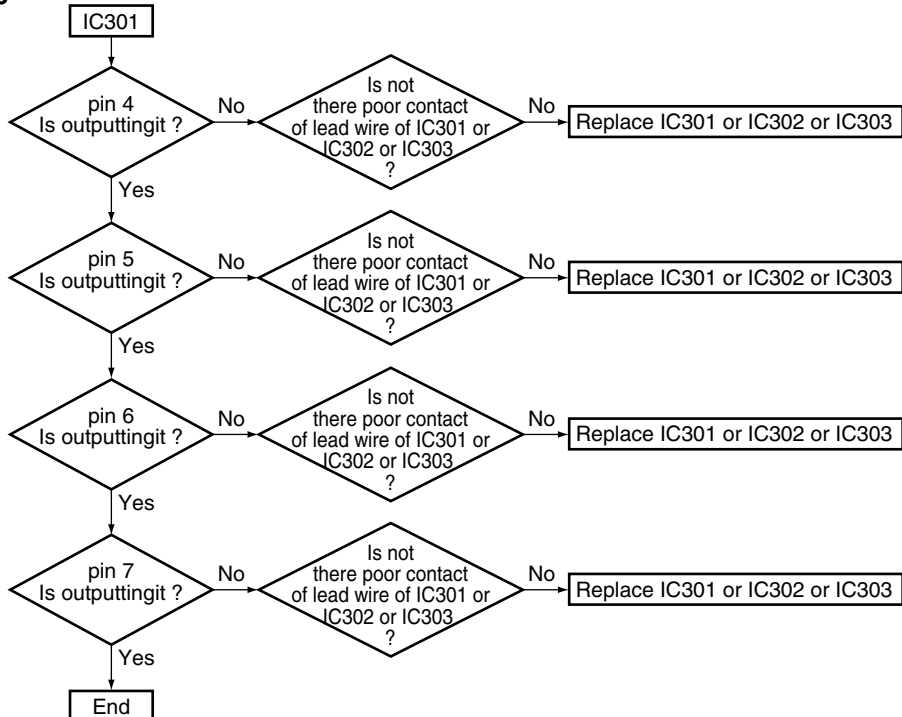
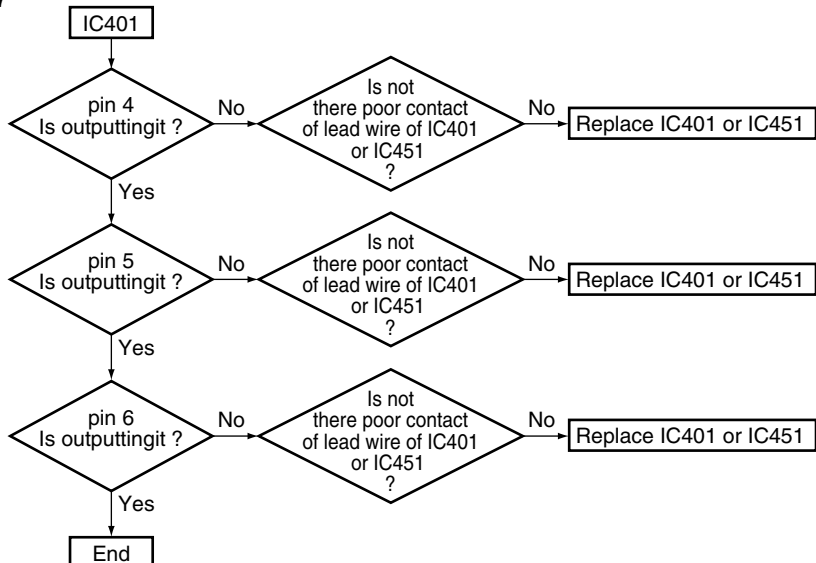
Step 2



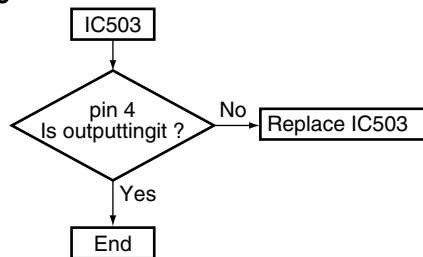
Step 3



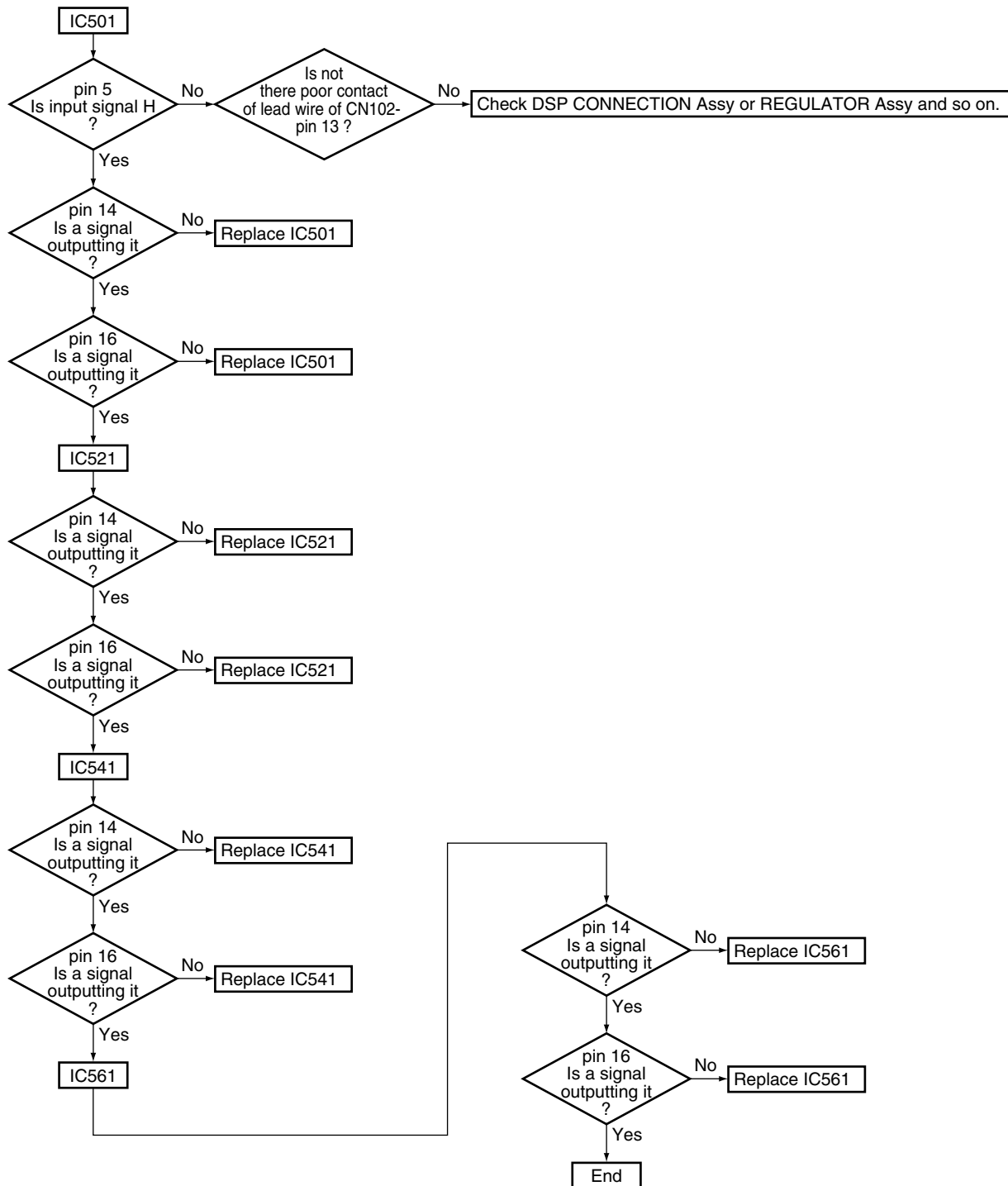


Step 5**Step 6****Step 7**

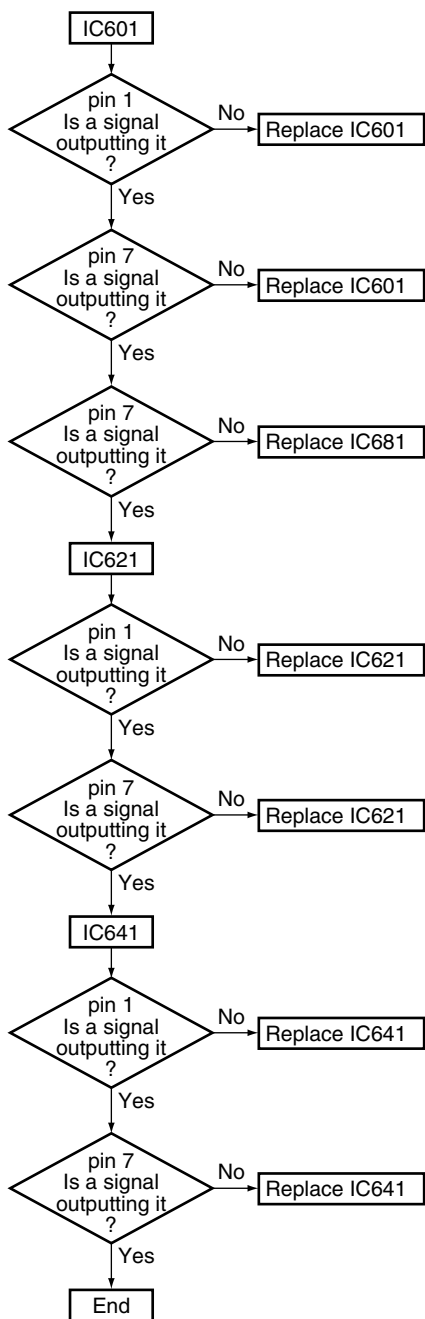
Step 8



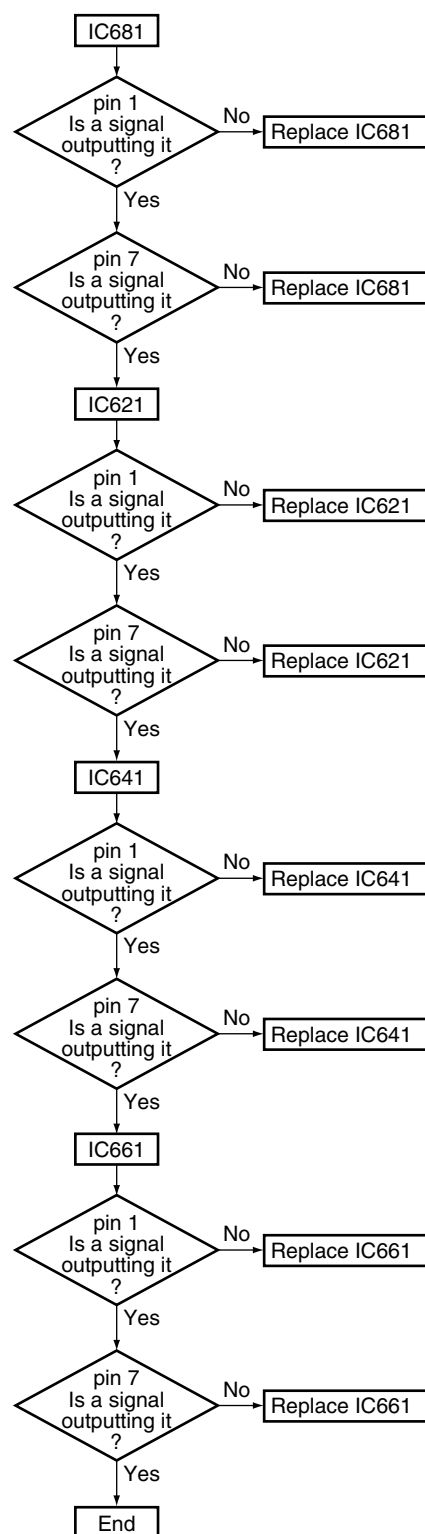
Step 9



Step 10



Step 11

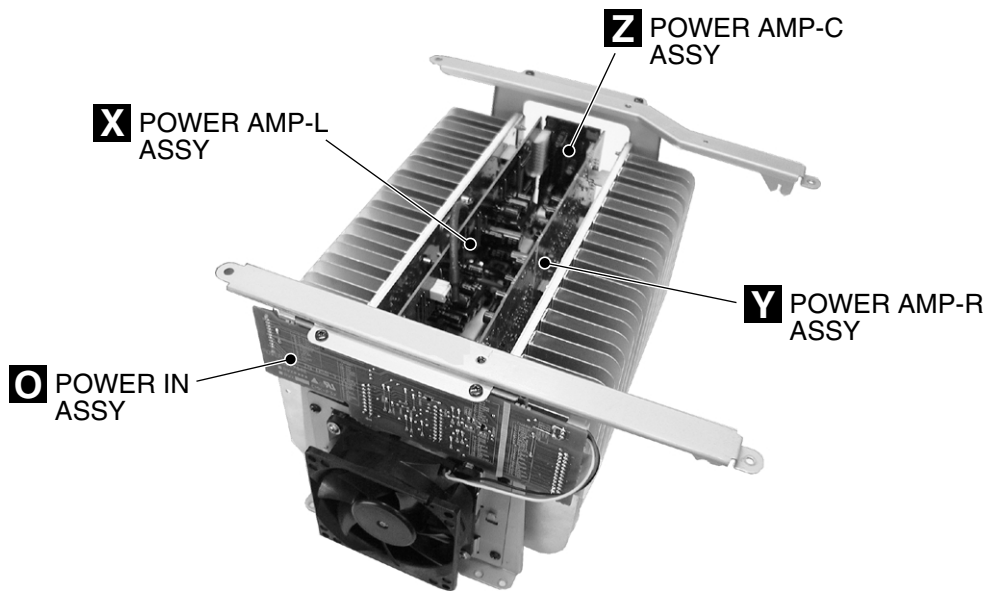
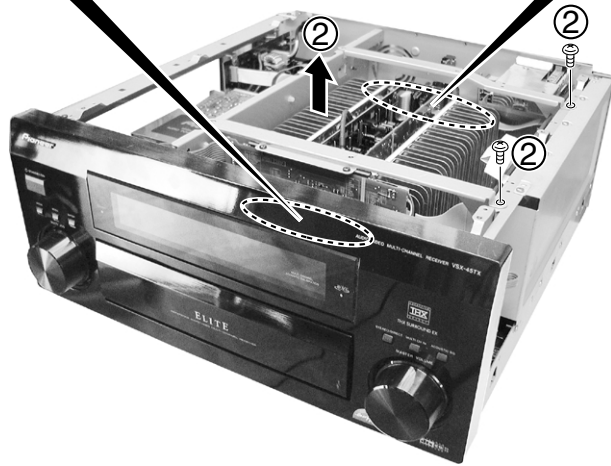
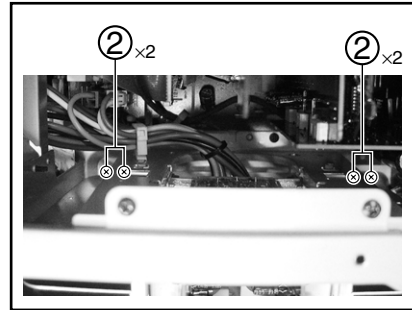
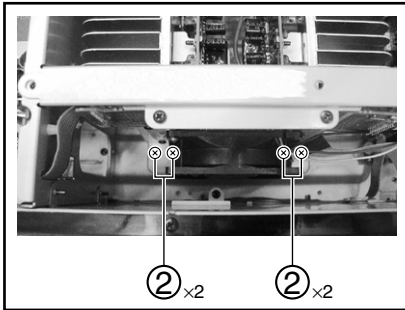


7.1.4 DISASSEMBLY

1 Bonnet and Heat Sink Block

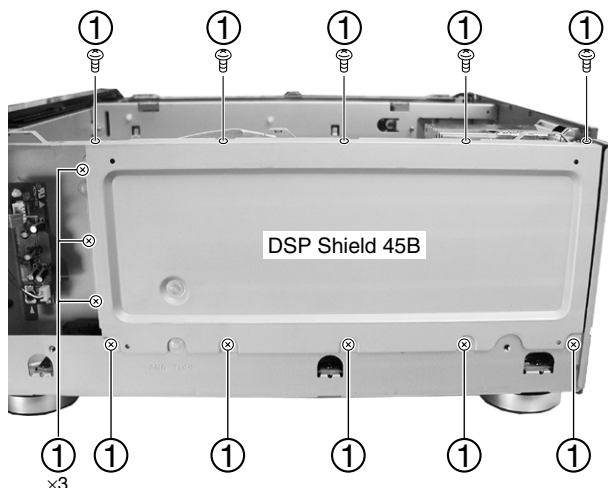
- ① Remove the bonnet case (screws × 23)
- ② Remove the heat sink block (screws × 10, connectors × 8)

Note : This photograph shows other models.
However, the work method is the same.

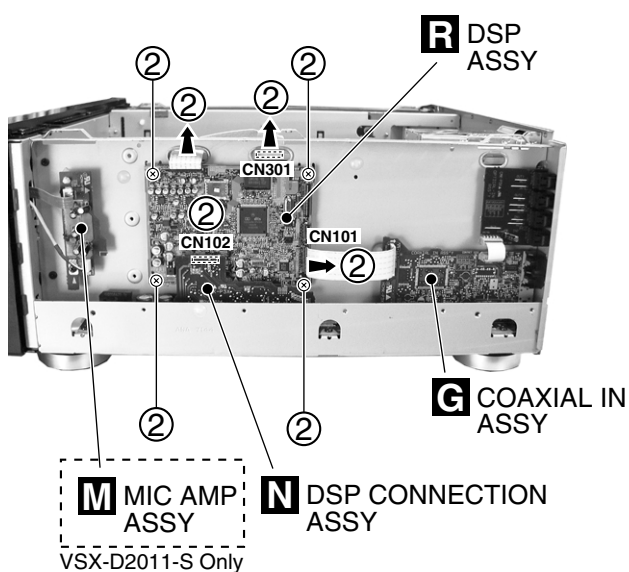


2 DSP Block

- ① Remove the DSP shield 45B (screws × 13)

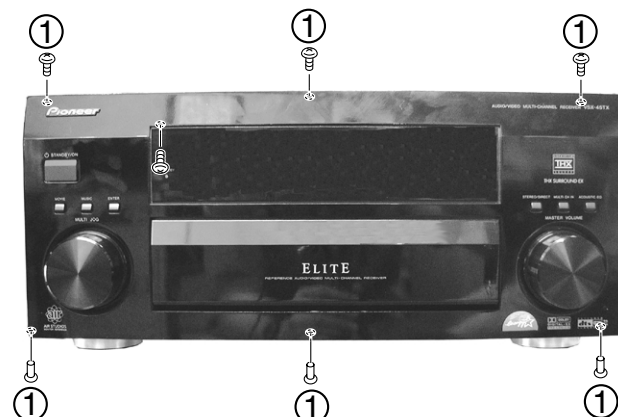


- ② Remove the DSP ASSY (screws × 4, connectors × 4)



3 Front Panel Block

- ① Remove six screws

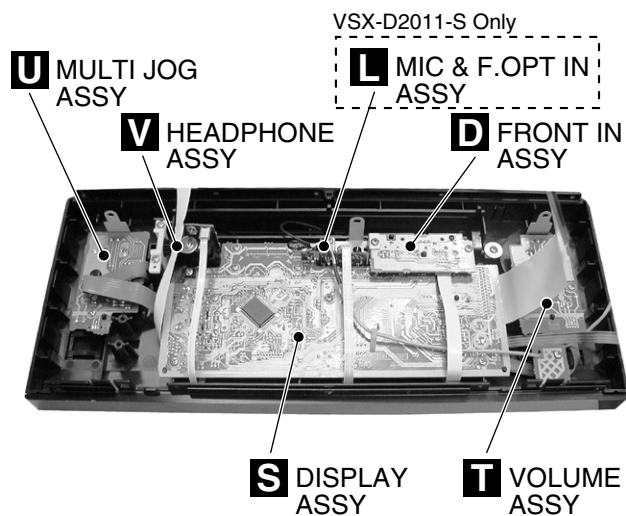
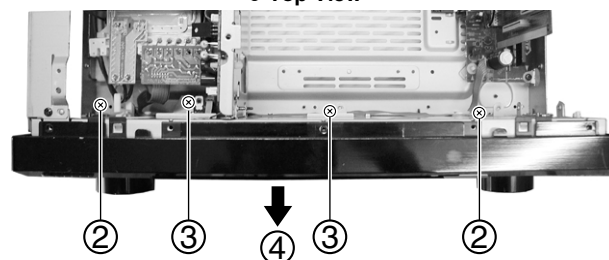


- ② Remove two screws

- ③ Remove two screws

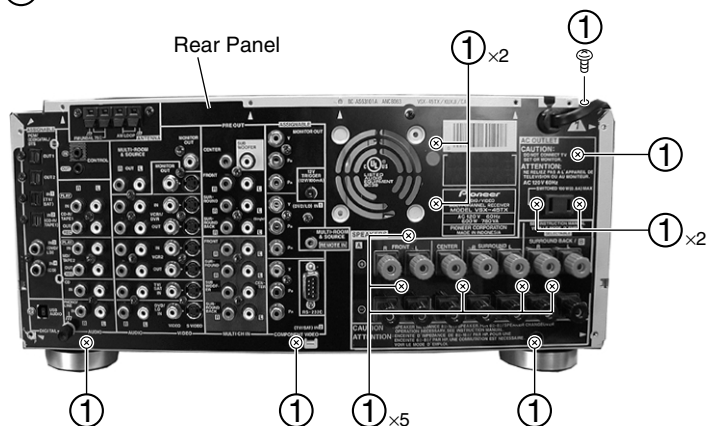
- ④ Remove the front panel block

● Top View



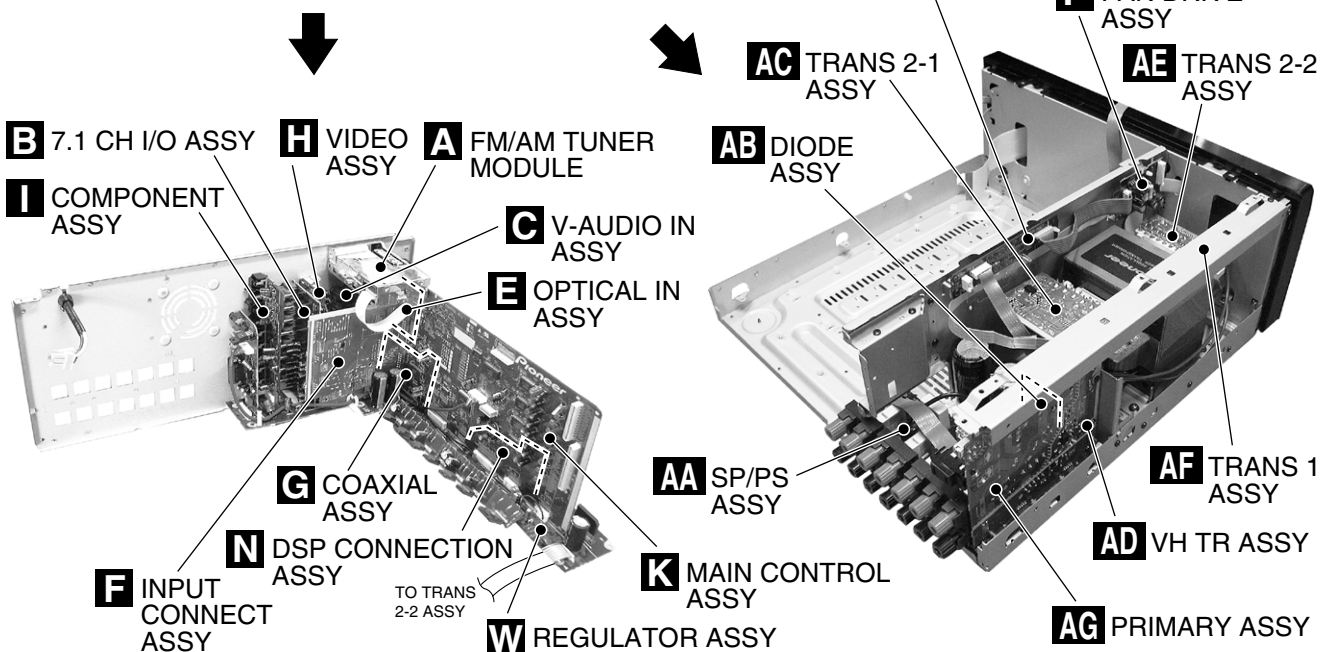
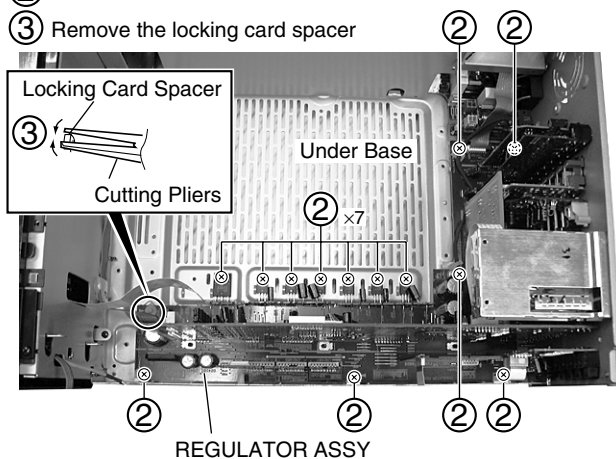
4 Rear Panel Block

① Remove 14 screws



② Remove 13 screws

③ Remove the locking card spacer



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

PDSPC56367PV150, PD5770C8, PD5771A, BU4094BCF, PCM2902EG

■ DSPC56367PV150 (DSP ASSY: IC301)

• DSP Microcomputer

● Pin Function

No.	Pin Name	I/O	Function
1	SCK1	I	Microcomputer communication clock
2	SS	I	Microcomputer communication chip select
3	HREQ	O	Microcomputer communication request
4	SDO0	O	Digital audio data (Front L/R)
5	SDO1	O	Digital audio data (Surround L/R)
6	SDO2	O	Digital audio data (Center/Subwoofer)
7	SDO3	O	Digital audio data (Front L/R)
8	VCCS	–	Interface power supply (3.3V)
9	GNDS	–	Interface GND
10	SDI1	I	Digital audio data (Front L/R)
11	SDI0	I	Digital audio data (Surround L/R)
12	FST	O	Digital audio LR clock
13	FSR	I	Digital audio LR clock
14	SCKT	O	Digital audio Bit clock
15	SCKR	I	Digital audio Bit clock
16	HCKT	I	Digital audio master clock
17	HCKR	I	Digital audio master clock
18	VCCQL	–	Quiet core power supply (1.8V)
19	GNDQ	–	Quiet GND
20	VCCQH	–	Quiet external power supply (3.3V)
21	HDS	I	Host data strobe
22	HRW	I	Host write data
23	HACK	I	Host acknowledge
24	HOREQ	O	Host request
25	VCCS	–	Interface power supply (3.3V)
26	GNDS	–	Interface GND
27	ADO	O	Digital audio data output
28	ACI	I	Digital audio master clock input
29	TIO0	I	Timer input
30	HCS	I	Host chip select
31	HA9	O	General-purpose port
32	HA8	O	DSP master switch
33	HAS	O	General-purpose port
34	HAD7	O	General-purpose port
35	HAD6	O	General-purpose port
36	HAD5	O	General-purpose port
37	HAD4	O	General-purpose port
38	VCCH	–	Host power supply (3.3V)
39	GNDH	–	Host GND
40	HAD3	O	General-purpose port
41	HAD2	O	General-purpose port
42	HAD1	O	General-purpose port
43	HAD0	O	General-purpose port
44	RESET	I	Reset
45	VCCP	–	PLL power supply (1.8V)
46	PCAP	I	PLL capacitor connection pin
47	GNDP	–	PLL GND
48	SDI0_1	I	Digital audio data (Surroundback L/R)

No.	Pin Name	I/O	Function
49	VCCQH	–	Quiet external power supply (3.3V)
50	FST_1	I	Digital audio LR clock
51	AA2	O	External memory chip select
52	CAS	O	Column address
53	SCKT_1	I	Digital audio Bit clock
54	GNDQ	–	Quiet GND
55	EXTAL	I	External clock input
56	VCCQL	–	Quiet core power supply (1.8V)
57	VCCC	–	Bus control power supply (3.3V)
58	GNDC	–	Bus control GND
59	FSR_1	O	Digital audio LR clock
60	SCKR_1	O	Digital audio Bit clock
61	PINIT	I	PLL initial pin
62	TA	I	Transfer acknowledge
63	BR	O	Bus request
64	BB	I	Bus busy
65	VCCC	–	Bus control power supply (3.3V)
66	GNDC	–	Bus control GND
67	WR	O	External memory read enable
68	RD	O	External memory write enable
69	AA1	O	Address control (Not used)
70	AA0	O	Address control (Not used)
71	BG	O	Bus control
72	A0	O	External memory address
73	A1	O	External memory address
74	VCCA	–	Address bus power supply (3.3V)
75	GNDA	–	Address bus GND
76	A2	O	External memory address
77	A3	O	External memory address
78	A4	O	External memory address
79	A5	O	External memory address
80	VCCA	–	Address bus power supply (3.3V)
81	GNDA	–	Address bus GND
82	A6	O	External memory address
83	A7	O	External memory address
84	A8	O	External memory address
85	A9	O	External memory address
86	VCCA	–	Address bus power supply (3.3V)
87	GNDA	–	Address bus GND
88	A10	O	External memory address
89	A11	O	External memory address
90	GNDQ	–	Quiet GND
91	VCCQL	–	Quiet core power supply (1.8V)
92	A12	O	External memory address
93	A13	O	External memory address
94	A14	O	External memory address
95	VCCQH	–	Quiet external power supply (3.3V)
96	GNDA	–	Address bus GND

No.	Pin Name	I/O	Function
97	A15	O	External memory address
98	A16	O	External memory address
99	A17	O	External memory address
100	D0	I/O	External memory data
101	D1	I/O	External memory data
102	D2	I/O	External memory data
103	VCCD	–	Data bus power supply (3.3V)
104	GNDD	–	Data bus GND
105	D3	I/O	External memory data
106	D4	I/O	External memory data
107	D5	I/O	External memory data
108	D6	I/O	External memory data
109	D7	I/O	External memory data
110	D8	I/O	External memory data
111	VCCD	–	Data bus power supply (3.3V)
112	GNDD	–	Data bus GND
113	D9	I/O	External memory data
114	D10	I/O	External memory data
115	D11	I/O	External memory data
116	D12	I/O	External memory data
117	D13	I/O	External memory data
118	D14	I/O	External memory data
119	VCCD	–	Data bus power supply (3.3V)
120	GNDD	–	Data bus GND
121	D15	I/O	External memory data
122	D16	I/O	External memory data
123	D17	I/O	External memory data
124	D18	I/O	External memory data
125	D19	I/O	External memory data
126	VCCQL	–	Quiet core power supply (1.8V)
127	GNDQ	–	Quiet GND
128	D20	I/O	External memory data
129	VCCD	–	Data bus power supply (3.3V)
130	GNDD	–	Data bus GND
131	D21	I/O	External memory data
132	D22	I/O	External memory data
133	D23	I/O	External memory data
134	MODD	I	Mode select D
135	MODC	I	Mode select C
136	MODB	I	Mode select B
137	MODA	I	Mode select A
138	SDI1_1	I	Digital audio data (Center/Subwoofer)
139	TDO	O	JTAG data output
140	TDI	I	JTAG data input
141	TCK	I	JTAG test clock
142	TMS	I	JTAG mode select
143	MOSI	I	Microcomputer communication data input
144	MISO	O	Microcomputer communication data output

■ DSPC56367PV150 (DSP ASSY: IC401)

• DSP Microcomputer

● Pin Function

No.	Pin Name	I/O	Function
1	SCK1	I	Microcomputer communication clock
2	SS	I	Microcomputer communication chip select
3	HREQ	O	Microcomputer communication request
4	SDO0	O	Digital audio data (Front L/R)
5	SDO1	O	Digital audio data (Surround L/R)
6	SDO2	O	Digital audio data (Center/Subwoofer)
7	SDO3	O	Digital audio data (Front L/R)
8	VCCS	–	Interface power supply (3.3V)
9	GNDS	–	Interface GND
10	SDI1	I	Digital audio data (Front L/R)
11	SDI0	I	Digital audio data (Surround L/R)
12	FST	O	Digital audio LR clock
13	FSR	I	Digital audio LR clock
14	SCKT	O	Digital audio Bit clock
15	SCKR	I	Digital audio Bit clock
16	HCKT	I	Digital audio master clock
17	HCKR	I	Digital audio master clock
18	VCCQL	–	Quiet core power supply (1.8V)
19	GNDQ	–	Quiet GND
20	VCCQH	–	Quiet external power supply (3.3V)
21	HDS	I	Host data strobe
22	HRW	I	Host write data
23	HACK	I	Host acknowledge
24	HOREQ	O	Host request
25	VCCS	–	Interface power supply (3.3V)
26	GNDS	–	Interface GND
27	ADO	O	Digital audio data output
28	ACI	I	Digital audio master clock input
29	TIO0	I	Timer input
30	HCS	I	Host chip select
31	HA9	O	General-purpose port
32	HA8	O	General-purpose port
33	HAS	O	General-purpose port
34	HAD7	O	General-purpose port
35	HAD6	O	General-purpose port
36	HAD5	O	General-purpose port
37	HAD4	O	General-purpose port
38	VCCH	–	Host power supply (3.3V)
39	GNDH	–	Host GND
40	HAD3	O	DVD-A switch
41	HAD2	O	DIR oscillation stop
42	HAD1	O	LSSN modxe (LFE addition)
43	HAD0	O	Analog mode
44	RESET	I	Reset
45	VCCP	–	PLL power supply (1.8V)
46	PCAP	I	PLL capacitor connection pin
47	GNDP	–	PLL GND
48	SDI0_1	I	Digital audio data (Surroundback L/R)

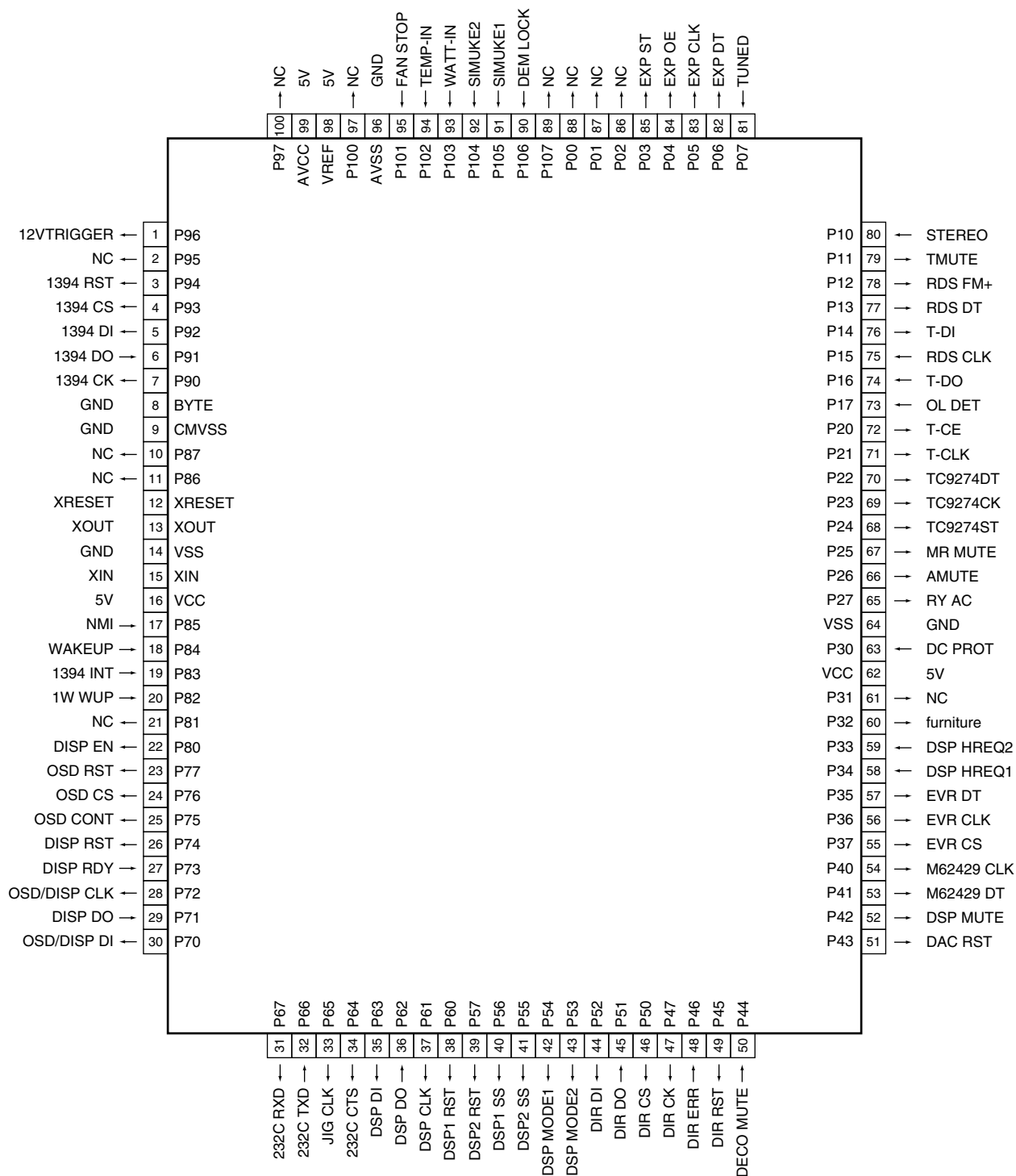
No.	Pin Name	I/O	Function
49	VCCQH	–	Quiet external power supply (3.3V)
50	FST_1	I	Digital audio LR clock
51	AA2	O	External memory chip select
52	CAS	O	Column address
53	SCKT_1	I	Digital audio Bit clock
54	GNDQ	–	Quiet GND
55	EXTAL	I	External clock input
56	VCCQL	–	Quiet core power supply (1.8V)
57	VCCC	–	Bass control power supply (3.3V)
58	GNDC	–	Bass control GND
59	FSR_1	O	Digital audio LR clock
60	SCKR_1	O	Digital audio Bit clock
61	PINIT	I	PLL initial pin
62	TA	I	Transfer acknowledge
63	BR	O	Bus request
64	BB	I	Bus busy
65	VCCC	–	Bus control power supply (3.3V)
66	GNDC	–	Bus control GND
67	WR	O	External memory read enable
68	RD	O	External memory write enable
69	AA1	O	Address control (Not used)
70	AA0	O	Address control (Not used)
71	BG	O	Bus control
72	A0	O	External memory address
73	A1	O	External memory address
74	VCCA	–	Address bus power supply (3.3V)
75	GNDA	–	Address bus GND
76	A2	O	External memory address
77	A3	O	External memory address
78	A4	O	External memory address
79	A5	O	External memory address
80	VCCA	–	Address bus power supply (3.3V)
81	GNDA	–	Address bus GND
82	A6	O	External memory address
83	A7	O	External memory address
84	A8	O	External memory address
85	A9	O	External memory address
86	VCCA	–	Address bus power supply (3.3V)
87	GNDA	–	Address bus GND
88	A10	O	External memory address
89	A11	O	External memory address
90	GNDQ	–	Quiet GND
91	VCCQL	–	Quiet core power supply (1.8V)
92	A12	O	External memory address
93	A13	O	External memory address
94	A14	O	External memory address
95	VCCQH	–	Quiet external power supply (3.3V)
96	GNDA	–	Address bus GND

No.	Pin Name	I/O	Function
A 97	A15	O	External memory address
98	A16	O	External memory address
99	A17	O	External memory address
100	D0	I/O	External memory data
101	D1	I/O	External memory data
102	D2	I/O	External memory data
103	VCCD	–	Data bus power supply (3.3V)
104	GNDD	–	Data bus GND
105	D3	I/O	External memory data
106	D4	I/O	External memory data
B 107	D5	I/O	External memory data
108	D6	I/O	External memory data
109	D7	I/O	External memory data
110	D8	I/O	External memory data
111	VCCD	–	Data bus power supply (3.3V)
112	GNDD	–	Data bus GND
113	D9	I/O	External memory data
114	D10	I/O	External memory data
115	D11	I/O	External memory data
116	D12	I/O	External memory data
117	D13	I/O	External memory data
C 118	D14	I/O	External memory data
119	VCCD	–	Data bus power supply (3.3V)
120	GNDD	–	Data bus GND
121	D15	I/O	External memory data
122	D16	I/O	External memory data
123	D17	I/O	External memory data
124	D18	I/O	External memory data
125	D19	I/O	External memory data
126	VCCQL	–	Quiet core power supply (1.8V)
127	GNDQ	–	Quiet GND
128	D20	I/O	External memory data
D 129	VCCD	–	Data bus power supply (3.3V)
130	GNDD	–	Data bus GND
131	D21	I/O	External memory data
132	D22	I/O	External memory data
133	D23	I/O	External memory data
134	MODD	I	Mode select D
135	MODC	I	Mode select C
136	MODB	I	Mode select B
137	MODA	I	Mode select A
138	SDI1_1	I	Digital audio data (Center/Subwoofer)
139	TDO	O	JTAG data output
E 140	TDI	I	JTAG data input
141	TCK	I	JTAG test clock
142	TMS	I	JTAG mode select
143	MOSI	I	Microcomputer communication data input
144	MISO	O	Microcomputer communication data output

PD5770C8 (MAIN CONTROL ASSY: IC501)

• Main Microcomputer

● Pin Assignment (Top view)



● Pin Function

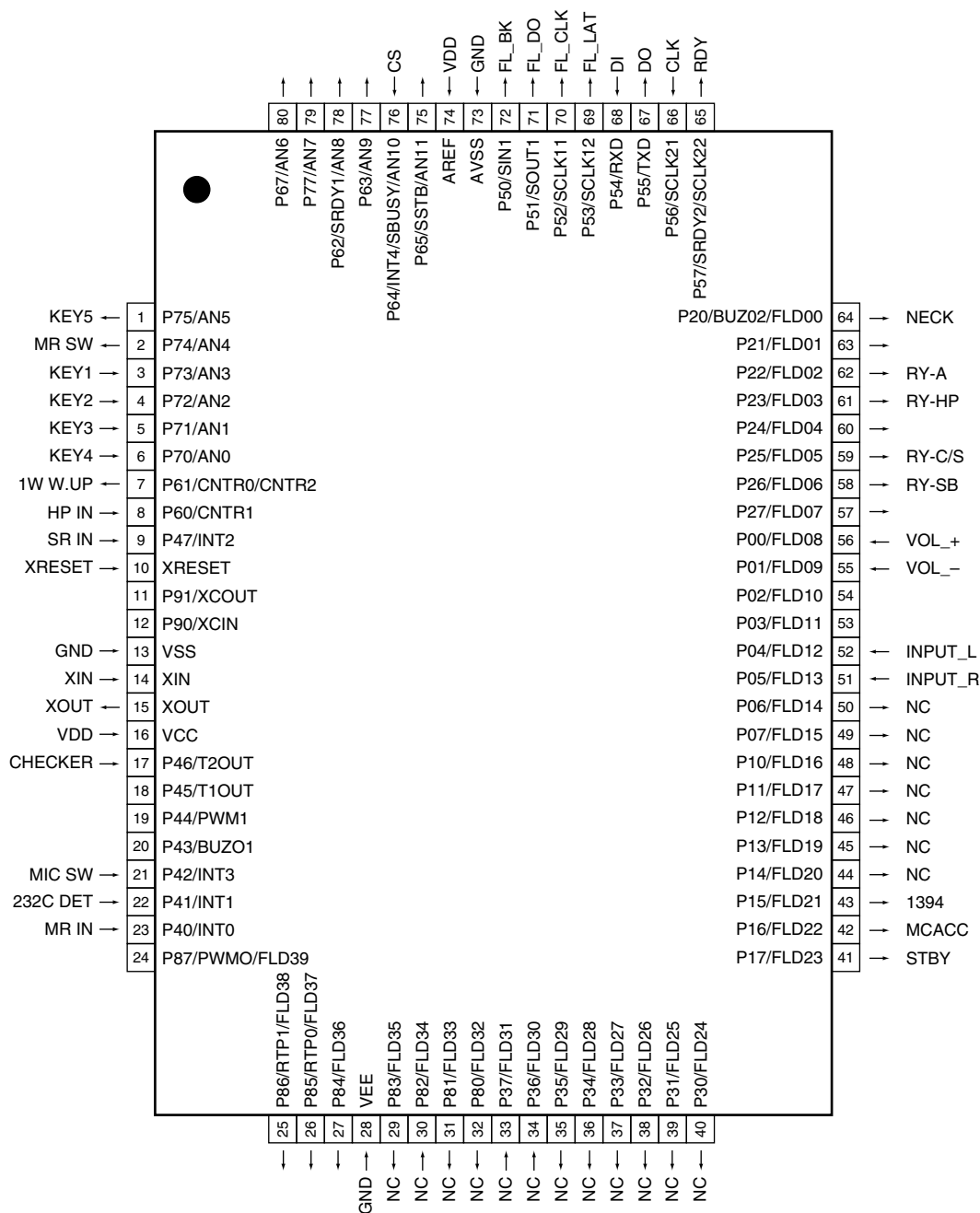
No.	Pin Name	I/O	Pin Function	Active
1	12VTRIGGER	O	"H" at O	
2	–	O	NC "L" fixed.	
3	1394 RST	O	Standby for 1394 (Not used) "L" fixed.	
4	1394 CS	O	Standby for 1394 (Not used) "L" fixed.	
5	1394 DI	O	Standby for 1394 (Not used) "L" fixed.	
6	1394 DO	I	Standby for 1394 (Not used) Standby with the circuit.	
7	1394 CK	O	Standby for 1394 (Not used) "L" fixed.	
8	GND	–	Ground	
9	CNVSS	–	5.1kΩ pulldown	
10	–	O	L" fixed	
11	–	O	L" fixed	
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	1394 INT	I	Standby for 1394 (Not used) Standby with the circuit.	
20	1W WUP	I	Wakeup signal at standby (from the display microcomputer) (pulldown)	H
21	–	O	L" fixed	
22	DISP EN	O	Communication enabling signal to the display microcomputer	H
23	OSD RST	O	OSD-IC reset signal L: reset, H: release reset	
24	OSD CS	O	OSD-IC chip select signal	H
25	OSD CONT.	O	At data transfer to the OSD-IC: "H"	
26	DISP RST	O	Display microcomputer reset signal L: reset, H: release reset (pulldown)	
27	DISP RDY	I	Communication enabling signal from the display microcomputer	H
28	OSD/DISP CLK	O	Communication clock signal with the OSD-IC/display microcomputer	
29	DISP DO	I	Communication data in signal with the display microcomputer (N ch open drain)	
30	OSD/DISP DI	O	Communication data out signal with the OSD-IC/display microcomputer (N ch open drain: pullup)	
31	232C RXD	O	For 232C rewriting (data output)	
32	232C TXD	I	For 232C rewriting (data input)	
33	CLK	O	Not used	
34	232C CTS	O	For 232C rewriting (communication enabling)	
35	DSP DI	O	Communication data out signal with the DSP1 microcomputer	
36	DSP DO	I	Communication data in signal with the DSP2 microcomputer	
37	DSP CLK	O	Communication clock signal with the DSP microcomputer	
38	DSP1 RST	O	DSP1 microcomputer reset signal L: reset, H: release reset	
39	DSP2 RST	O	DSP2 microcomputer reset signal L: reset, H: release reset	
40	DSP1 SS	O	Slave select signal to DSP1 microcomputer	L
41	DSP2 SS	O	Slave select signal to DSP2 microcomputer	L
42	DSP MODE1	O	Mode selection of DSP1 microcomputer (ROM/RAM) H: ROM mode, L: RAM (PPP) mode	H
43	DSP MODE2	O	Mode selection of DSP2 microcomputer (ROM/RAM) H: ROM mode, L: RAM (PPP) mode	H
44	DIR DI	O	Communication data out signal with the DIR	
45	DIR DO	I	Communication data in signal with the DIR/DAC	
46	DIR CS	O	Communication chip select signal with the DIR/DAC	
47	DIR CK	O	Communication clock signal with the DIR/DAC	
48	DIR ERR	I	Lock/Unlock signal	
49	DIR RST	O	DIR reset signal	
50	DECO MUTE	I	Boot success detecting port of 1st DSP	

No.	Pin Name	I/O	Pin Function	Active
51	DAC RST	O	DAC/AD reset	
52	DSP MUTE	O	DSP Assy mute	H
53	M62429 DT	O	Data signal for multi room volume IC control	
54	M62429 CLK	O	Clock signal for multi room volume IC control	
55	EVR CS	O	Chip select signal for erelectronic volume	
56	EVR CLK	O	Clock signal for erelectronic volume	
57	EVR DT	O	Data signal for erelectronic volume	
58	DSP HREQ1	I	Error detection signal of DSP1 microcomputer	
59	DSP HREQ2	I	Error detection signal of DSP2 microcomputer	
60	furniture	O	Furniture control signal	
61	–	O	L" fixed	
62	5V	–	5V power supply	
63	DC PROT	I	DC detection L: Detection	L
64	GND	–	Ground	
65	RC-AC	O	AC relay ON/OFF	H
66	AMUTE	O	System mute L: Mute ON	L
67	MRMUTE	O	Multi room mute L: Mute ON	L
68	tc9274f-st	O	Function SW control (STEREO)	
69	tc9274f-ck	O	Function SW control (CLOCK)	
70	tc9274f-dt	O	Function SW control (DATA)	
71	TUNER CLK	O	Clock signal of tuner control	
72	TUNER CE	O	Chip select signal of tuner control	
73	OL DET	I	Amp. overload detection L: Detection	L
74	TUNER DO	I	Data input signal of tuner control (pullup)	
75	RDS CLK	O	L" fixed	
76	TUNER DI	I	Data output signal of tuner control	
77	RDS DT	O	L" fixed	
78	RDS FM+	O	L" fixed	
79	TMUTE	O	Tuner mute	H
80	STEREO	I	L: STEREO (pullup)	L
81	TUNED	I	L: TUNED (pullup)	L
82	EXP DT	O	Data signal of expansion IC control	
83	EXP CLK	O	Clock signal of expansion IC control	
84	EXP OE	O	Output enable signal of expansion IC control	
85	EXP ST	O	Chip clock signal of expansion IC control	
86	–	O	NC	
87	–	O	NC	
88	–	O	NC	
89	–	O	NC	
90	DEM LOCK	I	Not used	
91	SIMUKE1	I	Destination read 1	
92	SIMUKE2	I	Destination read 2	
93	WATT-IN	I	Wattage detection Level detection with AD	A/D
94	TEMP-IN	I	Temperature detection Level detection with AD	A/D
95	FAN STOP	I	Fan forced stop detection	H
96	AVSS	–	Connect to VSS	
97	–	O	NC	L
98	VREF	–	Connect to VCC	
99	AVCC	–	Connect to VCC	
100	–	O	NC	

PD5771A (DISPLAY ASSY: IC3000)

• Display Microcomputer

• Pin Assignment (Top view)



● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	KEY5	I	KEY AD input	41	STANDBY	O	Standby LED
2	MR SW	O	Multi room input Pioneer/others L: Pioneer	42	MCACC	O	MCACC LED
3	KEY1	I	KEY AD input	43	1394	O	1394 LED
4	KEY2			44	NC	O	Non connection
5	KEY3			45	NC		
6	KEY4			46	NC		
7	1W WUP	O	1W correspondence main wakeup	47	NC		
8	HP	I	Headphone detection (active: H)	48	NC		
9	SR IN	I	Remote control input of main room	49	NC		
10	RESET	–	Reset input from the main microcomputer	50	NC		
11	NC	O	Non connection	51	INPUT_R	I	Input selector RIGHT
12	NC			52	INPUT_L	I	Input selector LEFT
13	Vss	–	Ground	53	NC	O	Non connection
14	XIN	–	Oscillator	54	NC	O	Non connection
15	XOUT	–	Oscillator	55	VOL_–	I	Volume –
16	Vcc	–	Power supply 5V	56	VOL_+	I	Volume +
17	CHECKER	I	Checker mode detection (10kΩ pulldown)	57	NC	O	Non connection
18	NC	O	Non connection	58	RY-SB	O	Surround back/SP-B relay ON/OFF (active: H)
19	NC			59	RY-C/S	O	C/S relay ON/OFF (active: H)
20	NC			60	NC	O	Non connection
21	MIC SW	I	MIC detection	61	RY-HP	O	Headphone relay ON/OFF (active: H)
22	232C DET	I	232C signal input detection	62	RY-A	O	Speaker A relay ON/OFF (active: H)
23	MR IN	I	Remote control input of sub room (active: H)	63	NC	O	Non connection
24	NC	O	Non connection	64	NECK	O	6/8Ω switch L: 6Ω, H: 8Ω, Initial: 8Ω
25	NC	O	Non connection	65	RDY	O	Communication ready with main UCOM
26	NC			66	CLK	O	Communication clock with main UCOM
27	NC			67	DO	O	Communication data out with main UCOM
28	VEE	–	Ground	68	DI	I	Communication data in with main UCOM
29	NC	O	Non connection	69	FL_LAT	O	FL DRV LAT
30	NC			70	FL_CLK	O	FL DRV CLK
31	NC			71	FL_DO	O	FL DRV DATA
32	NC			72	FL_BK	O	FL DRV BK
33	NC			73	AVSS	–	Ground
34	NC			74	VREF	–	5V reference voltage
35	NC			75	NC	O	Non connection
36	NC			76	CS	I	Communication CS with main UCOM
37	NC			77	NC	O	Non connection
38	NC			78	NC		
39	NC			79	NC		
40	NC			80	NC		

■ BU4094BCF (MAIN CONTROL ASSY: IC502)

• Expansion IC

● Pin Function

No.	Pin Name	Pin Function	Active
1	DEM_STP	Demodulator oscillation OFF/ON	H
2	DEM_RST	Demodulator reset L: RESET	L
3	NJM2279_SW1	NJM2279 video control of sub room system	
4	NJM2279_SW2		H
5	NJM2596_SW2	NJM2596 video control of main system	H
6	NJM2596_SW3		H
7	NJM2596_SW4		H
8	NJM2596_SW5		

■ BU4094BCF (MAIN CONTROL ASSY: IC503)

• Expansion IC

● Pin Function

No.	Pin Name	Pin Function	Active
1	OSD ON	ON at OSD on	H
2	TC9215_C34	Switch the DSP/DIRECT/MULTI CH IN of surround signal H: Multi ch input path	
3	PHONO GAIN	"H" at PHONO equalizer ON	H
4	DSDM	For SACD "L" fixed	
5	TC74HC4053_INH	Select the Component/D4 input (2 inputs → 1 output)	
6	TC74HC4053_A		
7	FAN DRIVE	ON when rotates the FAN	H
8	LOFAN	Not used "H" fixed	

PCM2902EG (COAXIAL IN ASSY: IC1681)

• USB Codec IC

● Pin Assignment (Top view)

28	27	26	25	24	23	22	21	20	19	18	17	16	15
SSPND	VDDI	DGND	DOUT	DIN	VCCXI	AGNDX	XTI	XTO	VCCP2I	AGNDP	VCCP1I	VOU TL	VOU TR
1	2	3	4	5	6	7	8	9	10	11	12	13	14
D+	D-	VBUS	DGNDU	HID0	HID1	HID2	SEL0	SEL1	VCCCI	AGNDC	VINL	VINR	VCOM

● Pin Function

No.	Pin Name	I/O	Pin Function
1	D+	I/O	USB differential input/output plus(1)
2	D-	I/O	USB differential input/output minus(1)
3	VBUS	I	Connect to USB power (VBUS)
4	DGNDU	-	Digital ground for USB transceiver
5	HID0	I	HID key state input (mute), active high(3)
6	HID1	I	HID key state input (volume up), active high(3)
7	HID2	I	HID key state input (volume down), active high(3)
8	SEL0	I	Must be set to high(6)
9	SEL1	I	Must be set to high(6)
10	VCCCI	-	Internal analog power supply for codec(4)
11	AGNDC	-	Analog ground for codec
12	VINL	I	ADC analog input for L-channel
13	VINR	I	ADC analog input for R-channel
14	VCOM	-	Common for ADC/DAC (VCCCI/2) (4)
15	VOU TR	O	DAC Analog output for R-channel
16	VOU TL	O	DAC analog output for L-channel
17	VCCP1I	-	Internal analog power supply for PLL(4)
18	AGNDP	-	Analog ground for PLL
19	VCCP2I	-	Internal analog power supply for PLL(4)
20	XTO	O	Crystal oscillator output
21	XTI	I	Crystal oscillator input(2)
22	AGNDX	-	Analog ground for oscillator
23	VCCXI	-	Internal analog power supply for oscillator(4)
24	DIN	I	S/PDIF input(5)
25	DOUT	O	S/PDIF output
26	DGND	-	Digital ground
27	VDDI	-	Internal digital power supply(4)
28	SSPND	O	Suspend flag, active low (Low: suspend, High: operational)

(1) LV-TTL level

(2) 3.3-V CMOS level input

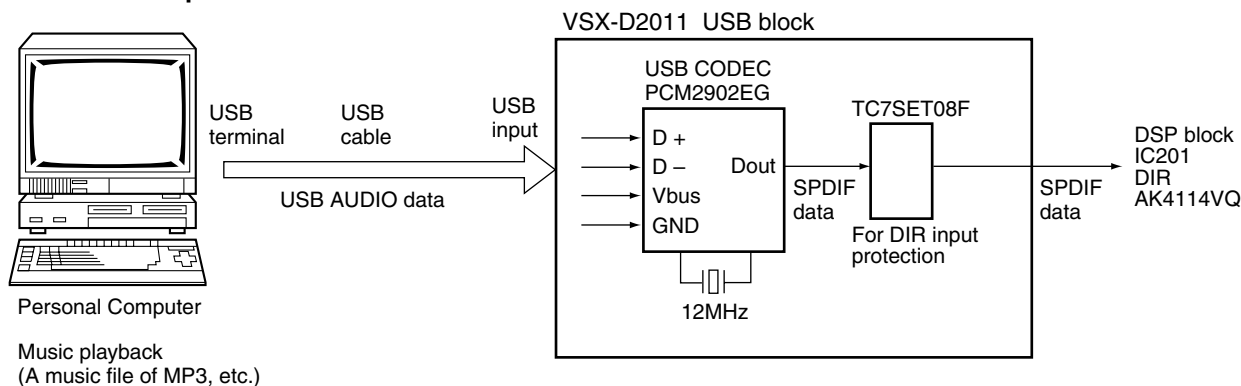
(3) 3.3-V CMOS level input with internal pulldown. This pin informs the PC of serviceable control signals such as mute, volume up, or volume down, which has no connection with the internal DAC or ADC directly. See the volume control and mute control section.

(4) Connect a decouple capacitor to GND

(5) 3.3-V CMOS level input with internal pulldown, 5 V tolerant

(6) TTL Schmitt trigger, 5 V tolerant

● Flow of USB Input Data



About PCM2902EG

- With codec of USB BUS POWERED, power is supplied from Vbus of USB, and work. (work with a power supply of VSX-D2011 irrelatively.)
- Be USB codec, but analog I/O and digital (SPDIF) input are not using in VSX-D2011.
- When only connects to PC and receiver (VSX-D2011) is turned on, the output of TC7SET08F outputs.

● Help of Non-failure Decision

Symptom when a sound is not output (Symptom is different by each OS)

- Confirm a driver whether PC is recognizing it. (With a device manager).
- Is a switch of sound source performed properly? (Control Panel, Sound or Multimedia)
- Is volume control of PC adjusted?
- How is other PC?
- In the state that does not change PC setting, is sound output in other VSX-D2011?
- When uses CD-ROM and playback a music CD, and a sound is not output, is digital playback of CD-ROM checked?

When contain noise

- There is a bug in early USB AUDIO driver of WINDOWS XP, and contain noise once for several minutes. (Correspond with WINDOWS UPDATE.)
- An affinity problem with chip set
- Adaptation problem with chip set (refer to next item)
- Performance issue of PC. (Release resident software as measures.)
- Noise when using the other software during music playback. (Do not guarantee or do not use the other software)
- Do contain the same noise even if changes the PC?

Reference

Confirmation item of the USB part with Function checker.
Supply a power supply (+5V: pin 3, GND: pin 4) of IC1681 (PCM2902EG), and connect D+ (pin1) to GND.
Confirm that X1681 (ASS7047) starts oscillating.

Support OS

Windows	98 / 98SE / ME
Windows	2000 Professional
Windows	XP Home / Professional

● Adaptation Problem with Chip Set

PCM2902EG caution of operation

Operating environment and findings of PCM2902EG

Evaluation PC: Libretto PAL2060 TNML made by Toshiba

- (1) CPU: Crusoe 600MHz made by Transmeta
Use chip set: Transmeta N/B (North Bridge)
M1533 (South Bridge) made by ALi
OS: Windows ME
- (2) CPU: Celeron 566MHz made by Intel
Use chip set: Aladdin Pro 5 (North Bridge) and M1533 (South Bridge) made by ALi
OS: Windows ME
- (3) CPU: K6-2 400MHz made by AMD
Use chip set: Aladdin 5 (North Bridge) and M1543 (South Bridge) made by ALi
OS: Windows ME

When contain noise by a problem of the chip set side, there is a problem in the PC side because even other USB audio equipment contains noise.

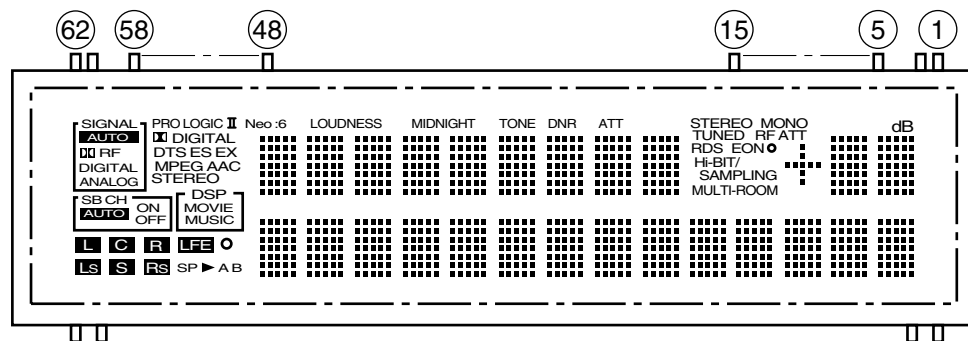
Therefore, do not recommend use in the condition and environment as mentioned above.

7.2.2 DISPLAY

■ AAV7087 (DISPLAY ASSY : V3000)

• FL DISPLAY

• Pin Assignment

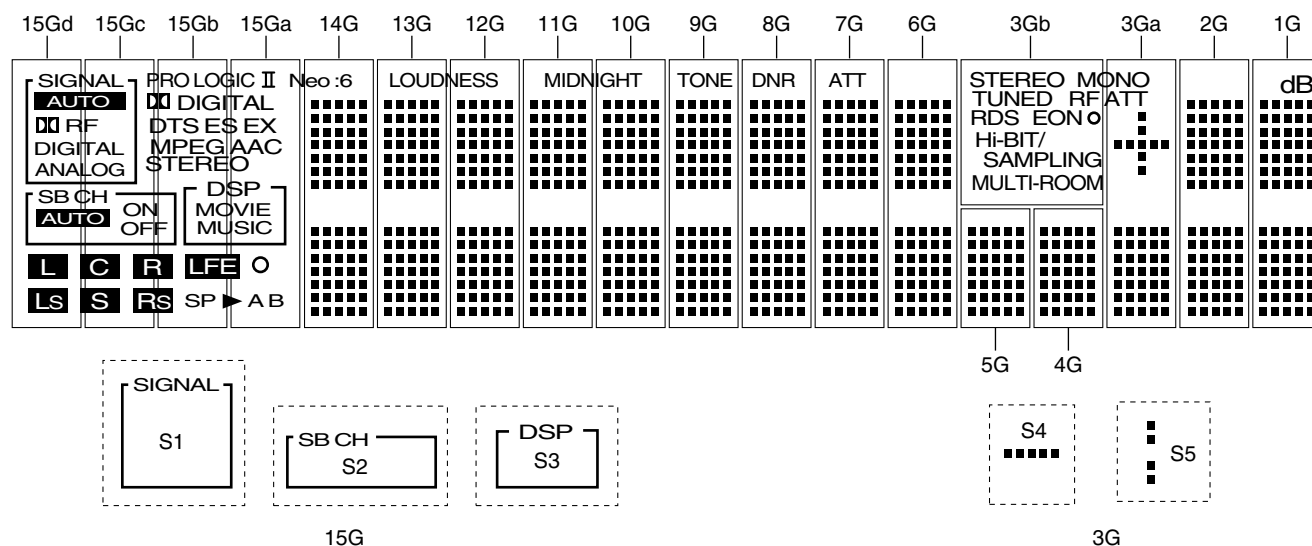


• Pin Connection

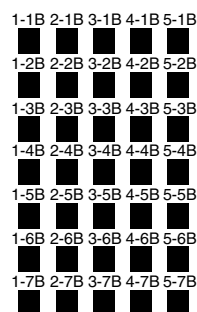
Pin No.	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47-3	2	1
Connection	F2	F2	NP	NP	GND	GND	NC	VH	NC	VDD	BK	LAT	CLK	SI	SO	NP	F1	F1

- NOTE
- | | | |
|--|--|---|
| 1) F1, F2..... Filament | 6) VDD..... Logic Voltage Supply pin | 10) CLK..... Shift Register Clock |
| 2) NP..... No pin (5-15 cut it by 2mm) | 7) NC..... No connection
(NC pin should be electrically open on the PC board) | 11) SI..... Serial Data Input |
| 3) DL..... Datum Line | 8) BK..... Driver Output Blanking | 12) SO..... Serial Data Output
(to be open, if don't use) |
| 4) GND..... GND pin | 9) LAT..... Latch Control Input | 13) Field of vision is a minimum of 21°
from the lower side. |
| 5) VH..... High Voltage Supply pin | | |

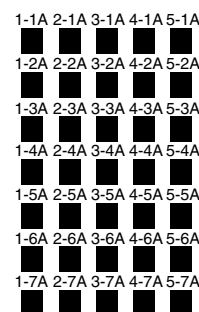
• Grid Assignment



• Segment Designation



(Lower stage)
(14G to 1G)



(Upper stage)
(14G to 6G, 2G, 1G)

Anode Connection

	15Gd-15Ga	14G	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3Gb, 3Ga	2G	1G	
P1	Neo:6		LOUDNESS		MIDNIGHT		TONE		DNR	ATT	—	—	—	STEREO	—	dB
P2	PROLOGIC	1-1A	1-1A	1-1A	1-1A	1-1A	1-1A	1-1A	1-1A	1-1A	—	—	—	MONO	1-1A	1-1A
P3	II	2-1A	2-1A	2-1A	2-1A	2-1A	2-1A	2-1A	2-1A	2-1A	—	—	—	TUNED	2-1A	2-1A
P4	S1	3-1A	3-1A	3-1A	3-1A	3-1A	3-1A	3-1A	3-1A	3-1A	—	—	—	RF ATT	3-1A	3-1A
P5	AUTO	4-1A	4-1A	4-1A	4-1A	4-1A	4-1A	4-1A	4-1A	4-1A	—	—	—	RDS	4-1A	4-1A
P6	RF	5-1A	5-1A	5-1A	5-1A	5-1A	5-1A	5-1A	5-1A	5-1A	—	—	—	EON	5-1A	5-1A
P7	DIGITAL	1-2A	1-2A	1-2A	1-2A	1-2A	1-2A	1-2A	1-2A	1-2A	—	—	—	○	1-2A	1-2A
P8	ANALOG	2-2A	2-2A	2-2A	2-2A	2-2A	2-2A	2-2A	2-2A	2-2A	—	—	—	HI-BIT/ SAMPLING	2-2A	2-2A
P9	DIGITAL	3-2A	3-2A	3-2A	3-2A	3-2A	3-2A	3-2A	3-2A	3-2A	—	—	—	S4	3-2A	3-2A
P10	DTS	4-2A	4-2A	4-2A	4-2A	4-2A	4-2A	4-2A	4-2A	4-2A	—	—	—	S5	4-2A	4-2A
P11	ES	5-2A	5-2A	5-2A	5-2A	5-2A	5-2A	5-2A	5-2A	5-2A	—	—	—	—	5-2A	5-2A
P12	EX	1-3A	1-3A	1-3A	1-3A	1-3A	1-3A	1-3A	1-3A	1-3A	—	—	—	—	1-3A	1-3A
P13	MPEG	2-3A	2-3A	2-3A	2-3A	2-3A	2-3A	2-3A	2-3A	2-3A	—	—	—	—	2-3A	2-3A
P14	AAC	3-3A	3-3A	3-3A	3-3A	3-3A	3-3A	3-3A	3-3A	3-3A	—	—	—	—	3-3A	3-3A
P15	STEREO	4-3A	4-3A	4-3A	4-3A	4-3A	4-3A	4-3A	4-3A	4-3A	—	—	—	—	4-3A	4-3A
P16	S2	5-3A	5-3A	5-3A	5-3A	5-3A	5-3A	5-3A	5-3A	5-3A	—	—	—	—	5-3A	5-3A
P17	AUTO	1-4A	1-4A	1-4A	1-4A	1-4A	1-4A	1-4A	1-4A	1-4A	—	—	—	—	1-4A	1-4A
P18	ON	2-4A	2-4A	2-4A	2-4A	2-4A	2-4A	2-4A	2-4A	2-4A	—	—	—	—	2-4A	2-4A
P19	OFF	3-4A	3-4A	3-4A	3-4A	3-4A	3-4A	3-4A	3-4A	3-4A	—	—	—	—	3-4A	3-4A
P20	S3	4-4A	4-4A	4-4A	4-4A	4-4A	4-4A	4-4A	4-4A	4-4A	—	—	—	—	4-4A	4-4A
P21	MOVIE	5-4A	5-4A	5-4A	5-4A	5-4A	5-4A	5-4A	5-4A	5-4A	—	—	—	—	5-4A	5-4A
P22	MUSIC	1-5A	1-5A	1-5A	1-5A	1-5A	1-5A	1-5A	1-5A	1-5A	—	—	—	—	1-5A	1-5A
P23	L	2-5A	2-5A	2-5A	2-5A	2-5A	2-5A	2-5A	2-5A	2-5A	—	—	—	—	2-5A	2-5A
P24	C	3-5A	3-5A	3-5A	3-5A	3-5A	3-5A	3-5A	3-5A	3-5A	—	—	—	—	3-5A	3-5A
P25	R	4-5A	4-5A	4-5A	4-5A	4-5A	4-5A	4-5A	4-5A	4-5A	—	—	—	—	4-5A	4-5A
P26	LS	5-5A	5-5A	5-5A	5-5A	5-5A	5-5A	5-5A	5-5A	5-5A	—	—	—	—	5-5A	5-5A
P27	S	1-6A	1-6A	1-6A	1-6A	1-6A	1-6A	1-6A	1-6A	1-6A	—	—	—	—	1-6A	1-6A
P28	RS	2-6A	2-6A	2-6A	2-6A	2-6A	2-6A	2-6A	2-6A	2-6A	—	—	—	—	2-6A	2-6A
P29	LFE	3-6A	3-6A	3-6A	3-6A	3-6A	3-6A	3-6A	3-6A	3-6A	—	—	—	—	3-6A	3-6A
P30	○	4-6A	4-6A	4-6A	4-6A	4-6A	4-6A	4-6A	4-6A	4-6A	—	—	—	—	4-6A	4-6A
P31	SP ►	5-6A	5-6A	5-6A	5-6A	5-6A	5-6A	5-6A	5-6A	5-6A	—	—	—	—	5-6A	5-6A
P32	A	1-7A	1-7A	1-7A	1-7A	1-7A	1-7A	1-7A	1-7A	1-7A	—	—	—	—	1-7A	1-7A
P33	B	2-7A	2-7A	2-7A	2-7A	2-7A	2-7A	2-7A	2-7A	2-7A	—	—	—	—	2-7A	2-7A
P34	—	3-7A	3-7A	3-7A	3-7A	3-7A	3-7A	3-7A	3-7A	3-7A	—	—	—	—	3-7A	3-7A
P35	—	4-7A	4-7A	4-7A	4-7A	4-7A	4-7A	4-7A	4-7A	4-7A	—	—	—	—	4-7A	4-7A
P36	—	5-7A	5-7A	5-7A	5-7A	5-7A	5-7A	5-7A	5-7A	5-7A	—	—	—	—	5-7A	5-7A
P37	—	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B
P38	—	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B
P39	—	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B
P40	—	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B
P41	—	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B
P42	—	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B
P43	—	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B
P44	—	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B
P45	—	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B
P46	—	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B
P47	—	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B
P48	—	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B
P49	—	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B
P50	—	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B
P51	—	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B
P52	—	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B
P53	—	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B
P54	—	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B
P55	—	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B

• Anode Timing Chart

	15Gd-15Ga	14G	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3Gb, 3Ga	2G	1G
P1	T18		T17		T16		T9	T8	T7	—	—	—	T3	—	T1
P2	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	—	—	T3	T2	T1
P11	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	—	—	T3	T2	T1
P12	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	—	—	—	T2	T1
P12	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	—	—	—	T2	T1
P33	—	T14	T13	T12	T11	T10	T9	T8	T7	T6	—	—	—	T2	T1
P71	—	T14	T13	T12	T11	T10	T9	T8	T7	T6	—	—	—	T2	T1

7.3 CLEANING

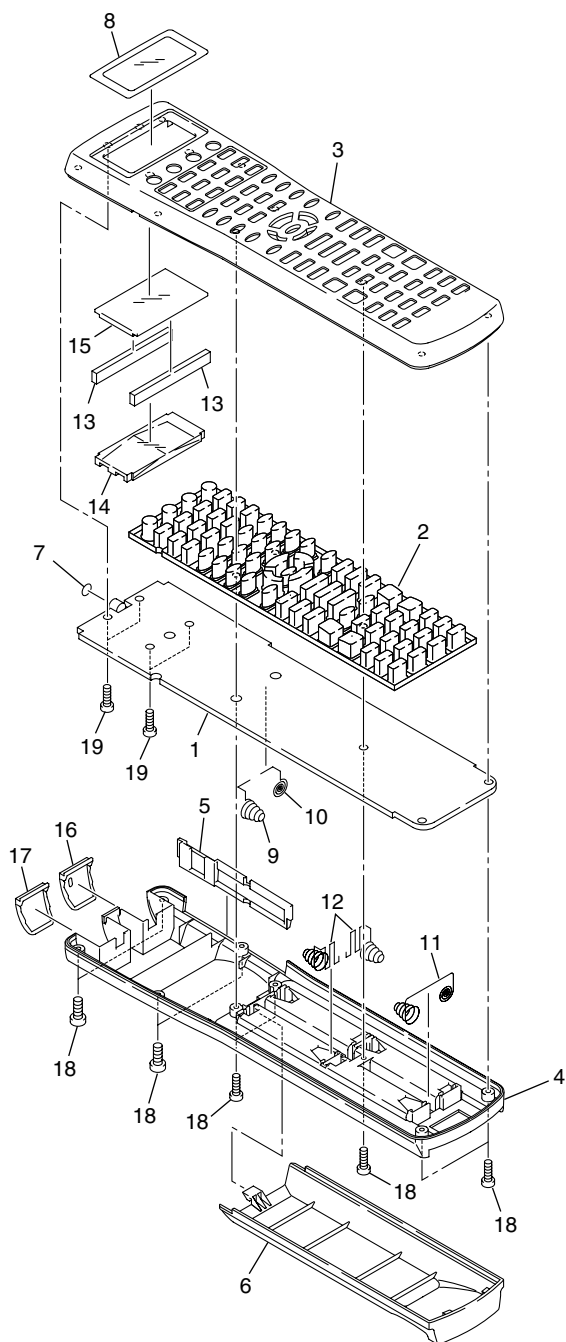


Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

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

7.4 REMOTE CONTROL UNIT

7.4.1 EXPLODED VIEWS AND PARTS LIST (VSX-D2011S : AXD7326)



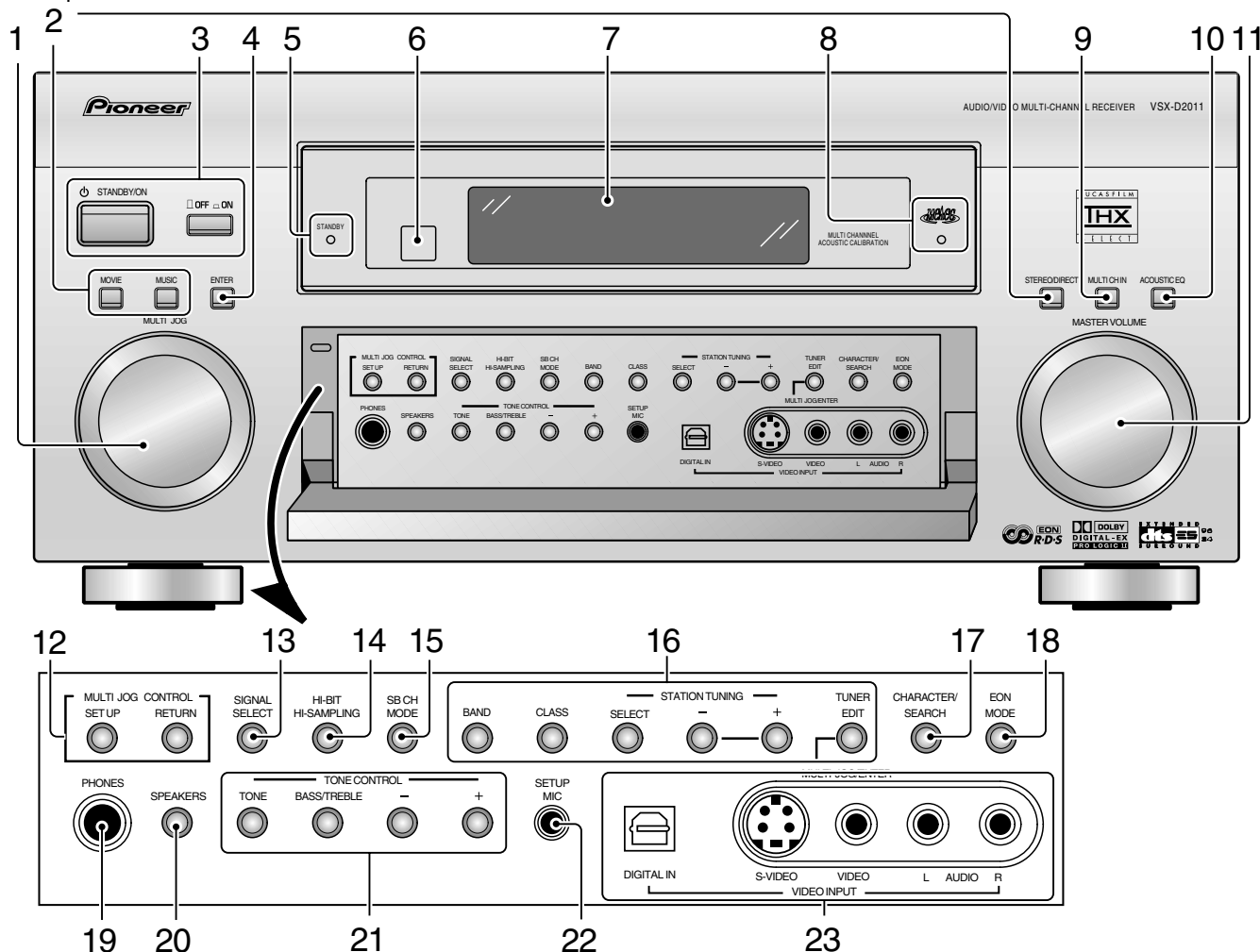
Mark No.	Description	Part No.
1	PCB Assy	AZC7301
2	Rubber Key	AZA7425
3	Case A	AZN7906
4	Case B	AZN7892
5	Frame	AZN7908
6	Battery Cover	AZN7896
7	MIC Cap	AZN7909
8	Name Plate	201RRC-314-01L
9	Terminal A	411RRC-212-01G
10	Terminal B	411RRC-213-01G
11	Battery Terminal	413RRC-143-01R
12	Spring	413RRC-171-01G

Mark No.	Description	Part No.
13	Connector	423RRC-046-01G
14	Plate	481RRC-018-01G
15	Shield Plate	801RRC-020-01L
16	Filter A	811RRC-109-01G
17	Filter B	811RRC-110-01G
18	Screw	A-BA2008-225002
19	Screw	A-BJ2006

8. PANEL FACILITIES

8.1 FRONT PANEL

All the controls on the front panel are explained and/or referenced here. To open the front panel push gently on the lower third of the panel.



1 MULTI JOG dial

You can use this dial for many purposes. When you press the SET UP button (12), you can use it to perform SYSTEM SETUP operations; select a function (like a DVD) or a listening mode (like Dolby Pro logic II) or do TUNER EDIT functions (in TUNER mode).

2 Listening mode buttons

There are two types of SURROUND modes:

MOVIE: Press to put the receiver into MOVIE listening mode.

MUSIC: Press to put the receiver into MUSIC listening mode.

STEREO/DIRECT: Switches the receiver into STEREO mode if it was in a different sound mode or toggles between DIRECT and STEREO mode.

DIRECT playback bypasses the tone controls and channel level for the most accurate reproduction of a program source.

3 OFF/ON button

Press to switch the receiver between OFF and STANDBY mode or ON.

STANDBY/ON button

Press to switch the receiver between ON and STANDBY mode.

4 ENTER button

Use this button to enter information concerning the SYSTEM SETUP, listening mode or the tuner.

5 STANDBY indicator

Lights when the receiver is in STANDBY mode. (Please note that this receiver consumes a small amount of power [0.7 W for the European model and 0.9 W for the multi-voltage model] in the standby mode.)

6 Remote sensor

Receives the signals from the remote control.

7 Display

8 MCACC indicator

Lights when the ACOUSTIC CAL EQ is on. (After the AUTO SURROUND SOUND SETUP has been completed the ACOUSTIC CAL EQ is set on and this display will light.)

9 MULTI CH IN button

Use this button to select the component you have hooked up to the MULTI CH IN terminals (for example, a DVD-Audio player).

10 ACOUSTIC EQ button

Press to switch on/off and select the type of acoustic calibr

11 MASTER VOLUME dial

Use to raise or lower the volume of the receiver.

12 MULTI JOG CONTROL buttons**SET UP**

Press to switch the SYSTEM SETUP mode.

RETURN

Press to move back one step in the SYSTEM SETUP process.

13 SIGNAL SELECT button

Press SIGNAL SELECT repeatedly to select one of the following:

AUTO – If there are analog and digital signals input, the receiver automatically selects the digital signal.

DIGITAL – To select an optical or coaxial digital signal.

ANALOG – To select an analog signal.

14 HI-BIT HI-SAMPLING button

Use this button to switch the HI-BIT HI-SAMPLING mode on or off. Use to hear CD and DVD, as well as other digital soundtracks at a wider dynamic range, allowing for finer audio reproduction.

15 SB CH MODE button

Use this button to turn the surround back channels ON/OFF/AUTO or switch the VIRTUAL SURROUND BACK mode between ON/OFF/AUTO.

16 TUNER CONTROL buttons**BAND**

Press to select the AM or FM band.

CLASS

Press repeatedly to switch the preset station classes.

SELECT

Switches the $\pm$ buttons between station memory and frequency select modes.

 $\pm$

Selects station memories or frequencies when using the tuner.

TUNER EDIT

Press to memorize and name a station for recall using the MULTI JOG and ENTER buttons.

17 CHARACTER/SEARCH button

Use to search for different program types in RDS mode.

18 EON MODE button

Use to search for different programs that are transmitting traffic or news information (this search method is called EON).

19 PHONES jack

Connect headphones for private listening (no sound will be heard through the speakers).

20 SPEAKERS (A/B) button

The use of this button depends on how the SURRBACK SYSTEM is set. If NORMAL SYSTEM is chosen this button toggles between A and OFF. If FRON Bi-AMP is chosen this button toggles between A+B and OFF. If SECOND ZONE is chosen this button toggles between A, B, A+B and OFF.

21 TONE control buttons**TONE button**

This button switches between TONE ON and TONE BYPASS, which bypasses the tone circuitry.

BASS/TREBLE button

Use to select whether the bass or treble will be adjusted.

 $\pm$ buttons

Use to adjust the frequency levels.

22 SET UP MIC jack

Plug in the set up mic here. This is very important in order to set up your system and get proper surround sound.

23 VIDEO INPUT jacks**DIGITAL IN**

Digital input for connecting a game console, DVD player, video camera (etc.), that has an optical digital connection.

S-VIDEO

Video input for connecting a portable DVD player, video camera (etc.), that has an S video out.

RCA VIDEO / AUDIO (L/R)

Video input for connecting a portable DVD player, video camera, etc. That has standard RCA video/audio outputs.

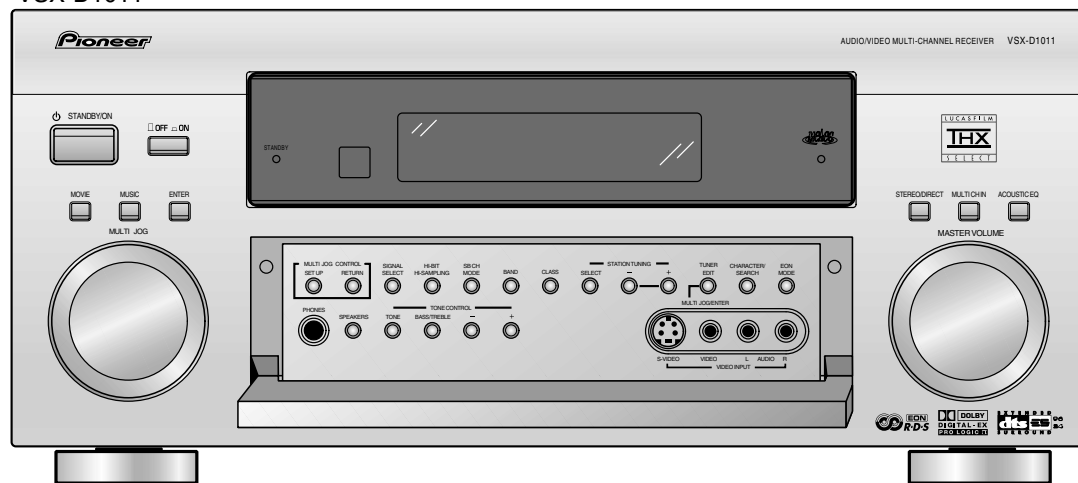
24 MIDNIGHT button

Switches the MIDNIGHT listening mode on or off (for all modes except THX CINEMA and MULTI CH IN).

25 LOUDNESS button

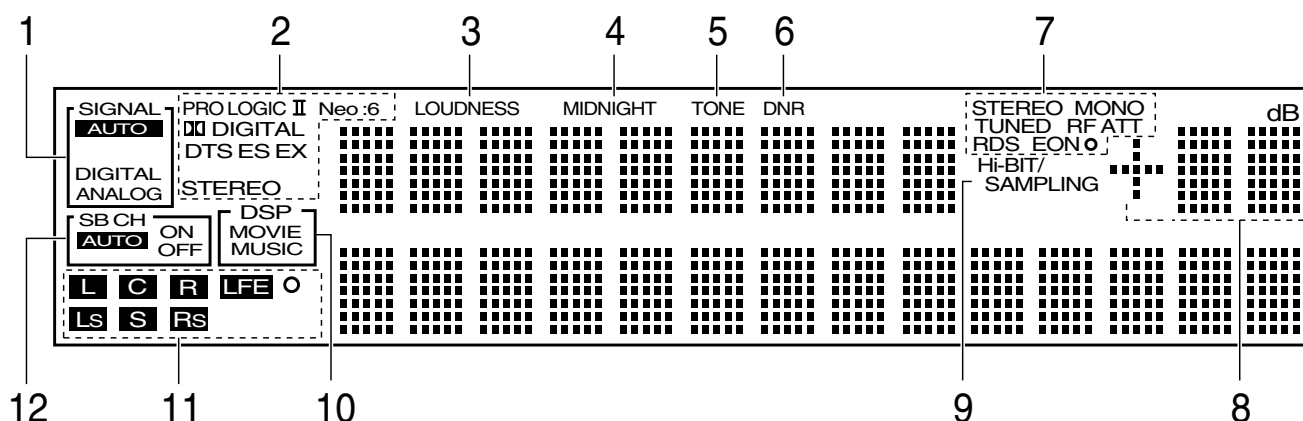
Switches the LOUDNESS mode on or off (for all modes except THX CINEMA and MULTI CH IN).

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8.2 DISPLAY

All the display information is explained and/or referenced here.



1 SIGNAL SELECT indicators

Light to indicate the input signal you selected.

AUTO: Lights when the receiver is set to select the input signal automatically.

DIGITAL: Lights when digital audio signals are selected.

ANALOG: Lights when analog signals are selected.

2 Digital format indicators

PRO LOGIC II: Lights during Dolby Pro Logic II processing.

NEO:6: Lights during NEO:6 processing.

DIGITAL: Lights when a Dolby Digital signal is detected.

DTS: Lights when a DTS signal is detected.

ES: Lights when playing back a DTS ES signal.

EX: Lights when playing back a Dolby Digital EX signal.

STEREO: Lights during two-channel playback.

3 LOUDNESS indicator

Lights when LOUDNESS is on.

4 MIDNIGHT indicator

Lights when MIDNIGHT is on.

5 TONE indicator

Lights when the TONE control is on.

6 DNR indicator

Lights when DIGITAL NR is on.

7 TUNER indicators

STEREO: Lights when an FM stereo broadcast is received in the auto stereo mode.

MONO: Lights when the tuner is set to receive FM broadcasts and when MPX mode is selected.

TUNED: Lights when a broadcast is received.

RF ATT (European model only): Lights when the RF ATT is on.

RDS (European model only): Lights when an RDS broadcast is received.

EON (European model only): EON lights when it has been set. The dot indicator next to it lights when the station you are currently tuned to carries the EON data service.

8 Volume level indicator

9 Hi-BIT/SAMPLING indicator

Lights when a HI-BIT/SAMPLING mode is on.

10 DSP indicators

MOVIE: Lights when a MOVIE mode is selected. When a DSP MOVIE mode is selected DSP will light with a box around it.

MUSIC: Lights when a MUSIC mode is selected. When a DSP MUSIC mode is selected DSP will light with a box around it.

11 Program Format indicators

For Dolby Digital or DTS sources: These indicators change according to which channels are active in the source. When all three **LS** (left surround), **S** (surround) and **RS** (right surround) light at the same time it means a source with a 6.1 channel playback flag is being used.

L – Left front channel.

C – Center channel.

R – Right front channel.

LS – Left surround channel.

S – Surround channel or Surround back channel.

RS – Right surround channel.

LFE – Low Frequency Effects channel.

O – Lights when LFE signal is input.

12 SB CH indicators

Light to indicate the status of the surround back channels.

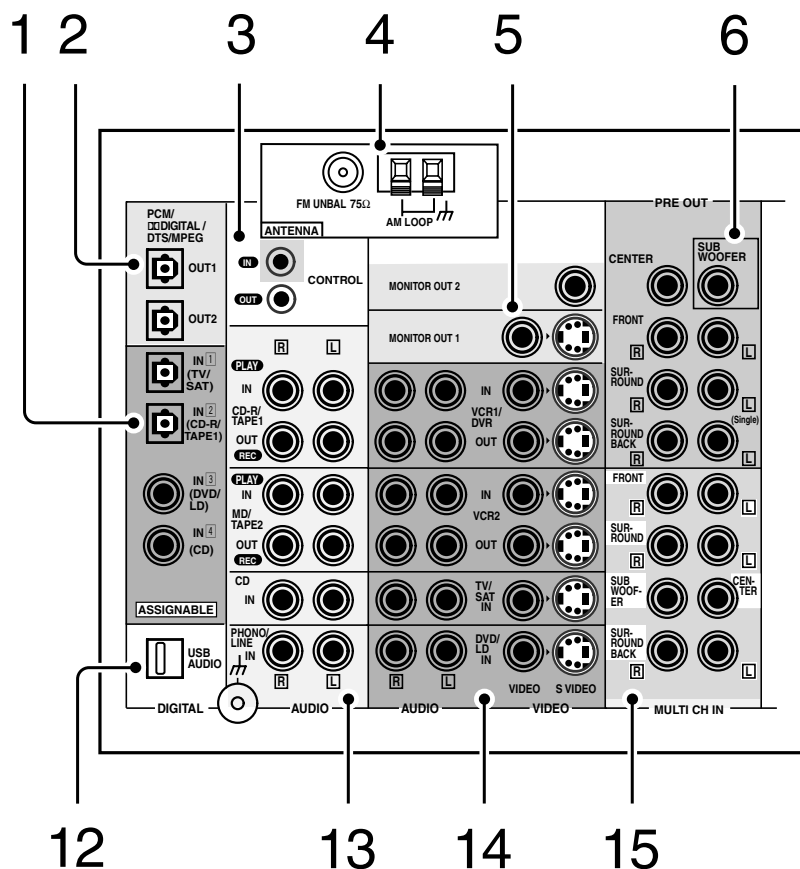
AUTO – Lights when the SB CH MODE or VIRTUAL SURROUND BACK mode is set to AUTO.

ON – Lights when the SB CH MODE or VIRTUAL SURROUND BACK mode is set to ON.

OFF – Lights when the SB CH MODE or VIRTUAL SURROUND BACK mode is set to OFF.

8.3 REAR PANEL

All the terminals on the back panel are explained and/or referenced here.



1 DIGITAL IN terminals

Use these terminals to input the signal from a DVD, CD player or any other kind of digital player. To be able to play Dolby Digital and other surround soundtracks you need to make digital connections. To do this use the digital terminals here. If you don't connect as per the default settings you need to complete "Assigning the Digital Inputs".

2 DIGITAL OUT terminals

Use these terminals to output a digital signal to a DVD-R, CD-R, MD recorder or any other kind of digital recorder.

3 CONTROL IN/OUT terminal

You can use this jack to hook up other PIONEER equipment, that has a CONTROL terminal, so that you can control them all by pointing the remote control(s) at one remote sensor.

4 Radio antenna terminals

Hook up antennas for the radio tuner built into the receiver here.

5 MONITOR OUT 1 & 2 terminals (connect a TV or monitor here)

Use either of these terminals to output the video signal to your TV(s), video projector(s) or monitor(s). The on-screen displays to setup the receiver will only be output through MONITOR OUT 1.

6 PRE OUT analog terminals (connect an amplifier here)

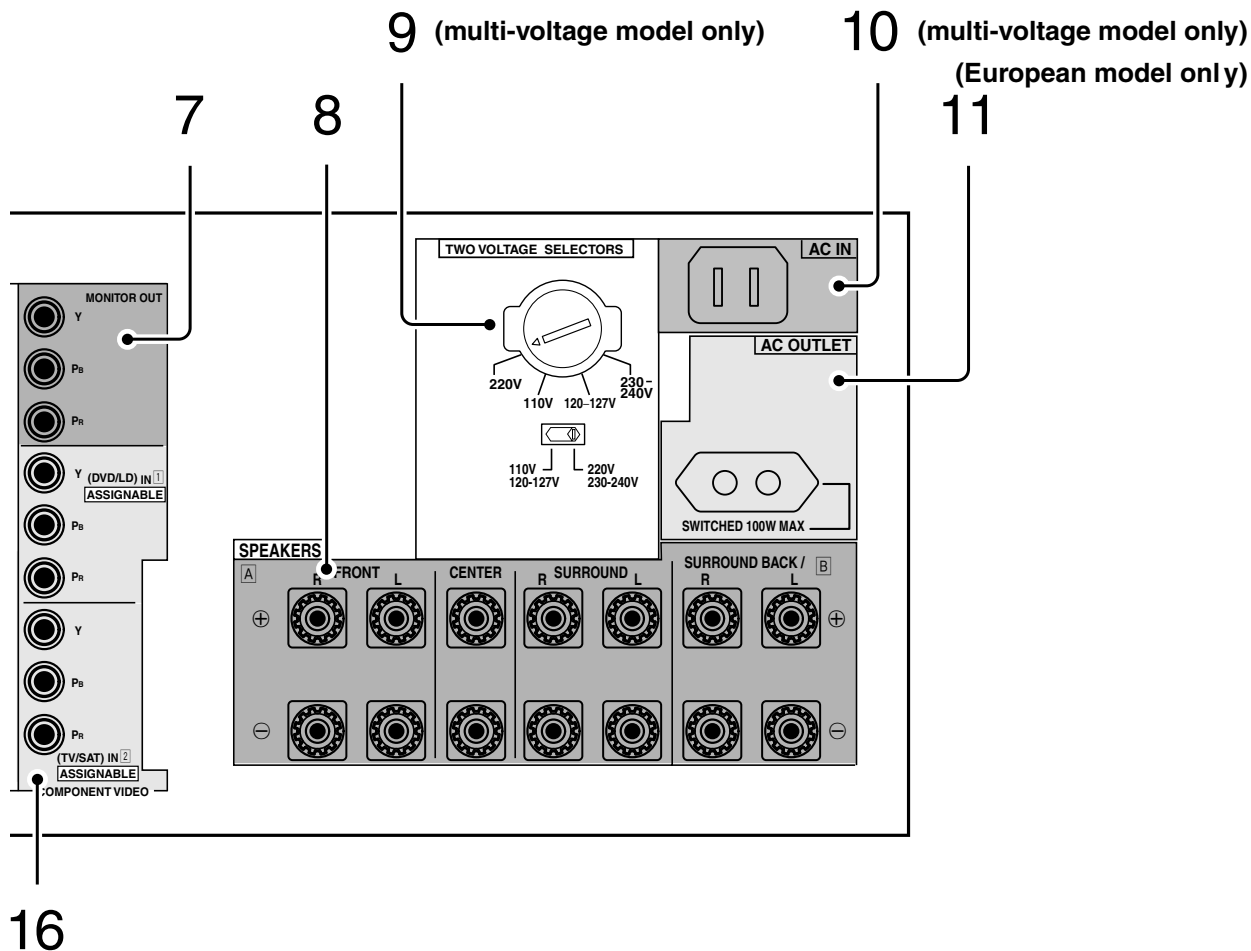
Use these terminals to output the audio signal from this amplifier to a different amplifier if that's how you choose to set up your system.

7 COMPONENT VIDEO MONITOR OUT terminals

Use these terminals to output the video signal from the COMPONENT VIDEO IN terminals to your TV. See #16 for more information.

8 SPEAKERS terminals

Use these terminals to connect speakers to the receiver. The FRONT, CENTER and SURROUND terminals are for the main speaker system and the SURROUND BACK speakers can be set to either the main system or the SECOND ZONE. See page 37 to set the SURROUND BACK speakers.



9 Voltage Selector (multi-voltage model only)

Use to match the voltage coming into the receiver with the voltage in your country or region.

10 AC IN (multi-voltage model only)

Hook up the power cord to this terminal.

11 AC OUTLET (European model only) (switched, 100 W max)

Hook up an external component to the power supply of this receiver. Only do this with audio or video components being used in this system and never hook up heavy equipment (like TVs, heaters, air conditioners, refrigerators, etc.) to this receiver.

12 USB AUDIO IN terminal

Use this terminal to connect a PC to this receiver.

13 Audio input/output terminals (connect analog components here)

Use these terminals to input/output the audio signal from analog components (like a cassette deck or turntable). These are analog jacks.

14 Video components input/output terminals

Input/output signals from your video components (DVD, VCR, TV tuners, SAT tuners, etc.) here.

15 MULTI CH IN terminals

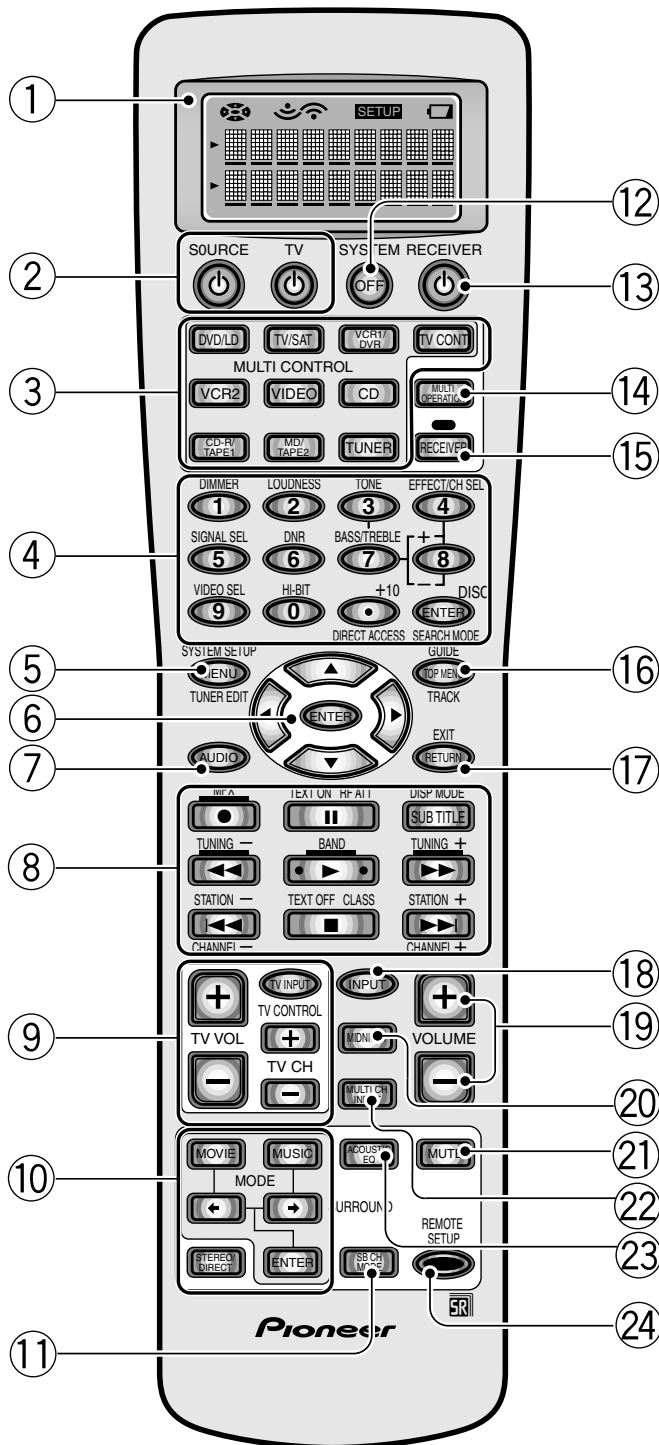
Use these terminals to input a multichannel surround signal (for example, a DVD-Audio signal) in an analog fashion. These are analog jacks.

16 COMPONENT VIDEO IN terminals

Use these terminals to hook up the video connections of your video components with this high quality method. Your components will have to have the terminals as well to take advantage of this kind of connection. If you don't connect as per the default settings you need to complete "Assigning the Component Video Inputs".

8.4 REMOTE CONTROL UNIT

This page describes the buttons on the remote control used to operate the receiver.



① Remote Control Display Screen

② SOURCE button

Use this button to turn on/off other components. You must input the preset code in order to use this function.

TV button

This is a dedicated TV button. Use it to turn on/off your TV.

③ MULTI CONTROL buttons

These buttons are the basic controls that switch the mode of the receiver and the remote control, which allows you to control your other components.

TV CONT: Press so that the remote control can operate the TV control commands.

④ Number buttons

These can be used for many purposes depending on the mode of the remote control.

When in receiver mode the buttons operate as below:

DIMMER button

Use to adjust the brightness of the receiver's display.

LOUDNESS button

Switches the LOUDNESS mode on or off (for all modes except THX CINEMA and MULTI CH IN).

TONE button

This button switches between TONE ON and TONE BYPASS, which bypasses the tone circuitry.

BASS/TREBLE buttons

Use to select whether the bass or treble will be adjusted.

(+/-) buttons

Use to adjust the TONE level, effect level and channel level as well as make Dolby Pro Logic II MUSIC parameter settings.

EFFECT/CH SEL. button

Switches between the different channels so you can add volume individually to each channel with the + and - buttons. Also selects EFFECT mode of PIONEER original sound modes and Dolby Pro Logic II MUSIC parameter settings. You can then use the + and - buttons to make these adjustments.

SIGNAL SELECT button

Press SIGNAL SELECT repeatedly to select one of the following:

AUTO – If there are analog and digital signals input, the receiver automatically selects the digital signal.

DIGITAL – To select an optical or coaxial digital signal.

ANALOG – To select an analog signal.

DIGITAL NR (DNR) button

Switches the DIGITAL NR on or off.

VIDEO SELECT button

Use to toggle between the different video input possibilities.

HI-BIT button

Use this button to switch the HI-BIT HI-SAMPLING on or off. Use to hear CD and DVD, as well as other digital soundtracks at a wider dynamic range, allowing for finer audio reproduction.

⑤ SYSTEM SETUP button

Use for all system setups, including the speaker and sound systems. For more information see. "Setting up for Surround Sound" starting on page 36. For a DVD player use this button to bring up the DVD menu and for a tuner use this button in the same way as the TUNER EDIT button.

⑥ ▲/▼/◀/▶/ENTER buttons

These buttons can be used for a variety of operations in the SYSTEM SETUP menu.

These buttons are used to control the menus for other components when in those modes (DVD, digital TV tuner, satellite tuner, cable tuner, etc.). In TUNER mode, they can select a station and/or a frequency.

⑦ AUDIO button

Use to switch the audio tracks of a DVD when in DVD mode.

⑧ Command button for other components

Use these buttons to control other components you selected with the MULTI CONTROL buttons. You must input the preset code in order use this function.

⑨ TV CONTROL buttons

The following buttons are used to control the TV only and can be used once they are preset to control your TV.

TV INPUT: Press to select the input source for the TV.

TV CH +/- : Use these buttons to change the channel of the TV.

TV VOL +/- : Press to control the volume of the TV.

⑩ Listening mode buttons

SURROUND buttons (MOVIE, MUSIC, ◀ ▶ & ENTER):

MOVIE: Press to put the receiver into MOVIE listening mode.

MUSIC: Press to put the receiver into MUSIC listening mode.

◀ ▶: Use to select the MOVIE or MUSIC listening mode.

ENTER: Use this button to enter information concerning the listening modes.

STEREO/DIRECT: Switches the receiver into STEREO mode if it was in a different sound mode or toggles between DIRECT and STEREO mode.

DIRECT playback bypasses the tone controls and channel level for the most accurate reproduction of a program source.

⑪ SB CH MODE button

Use this button to turn the surround back channels ON/OFF/AUTO or switch the VIRTUAL SURROUND BACK mode between ON/OFF/AUTO.

⑫ SYSTEM OFF button

This button turns off components in two ways. First, when pressed it will turn off all PIONEER components. Secondly, any component that has programmed into the SYSTEM OFF settings will be turned off.

For example: If you programmed power off in the SYSTEM OFF settings for your TV and VCR, pressing the SYSTEM OFF button will turn off these components even if they are not

PIONEER products.

⑬ ⏻ RECEIVER (STANDBY/ON) button

Press to turn power of the receiver on or to standby (off).

⑭ MULTI OPERATION button

Use this button to start the MULTI OPERATION mode. For how to program and use the MULTI OPERATION mode.

⑮ RECEIVER button

Use this button to switch the remote control into receiver mode in order to get certain receiver functions or do receiver setups.

⑯ TOP MENU/GUIDE button

Use to find stations or menus on a digital TV tuner. For a DVD player use this button to bring up the DVD menu.

⑰ RETURN button

When you are in a receiver setup operation this button will go back one step in the SYSTEM SETUP procedure. When you are using your DVD menu screen this button acts the same as the DVD player's "RETURN" button. When you are using cable tuners, satellite tuners or digital TV tuners this button will either exit you from the menu screen or act like a "RETURN" button above, depending on the maker of the unit.

⑱ INPUT button

Press to select an input source. The button will cycle through all the possible sources.

⑲ VOLUME (+/-) buttons

Use to raise or lower the volume of the receiver.

⑳ MIDNIGHT button

Switches the MIDNIGHT listening mode on or off (for all modes except THX CINEMA and MULTI CH IN).

㉑ MUTE button

Press to mute or restore the volume.

㉒ MULTI CH INPUT button

Use this button to select the component you have hooked up to the MULTI CH IN terminals (for example, a DVD-Audio player).

㉓ ACOUSTIC EQ button

Press to switch on/off and select the type of acoustic calibration EQ.

㉔ REMOTE SETUP button.

Use to customize the remote control functions and the remote control itself.

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