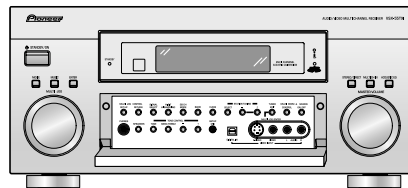


Service Manual



VSX-55TXi

ORDER NO.
RRV2788

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-55TXi

VSX-53TX

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

Model	Type	Power Requirement	Remarks
VSX-55TXi	KUXJI/CA	AC120V	
VSX-53TX	KUXJI/CA	AC120V	



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.

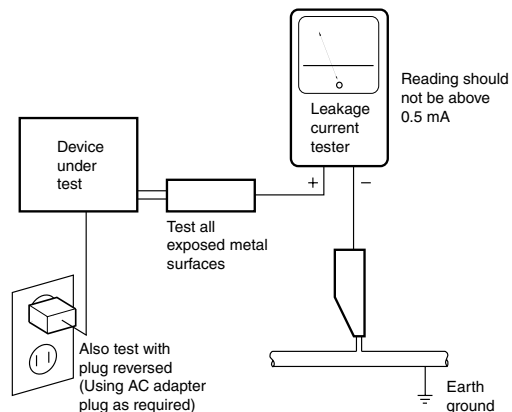
(FOR USA MODEL ONLY)

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 Δ 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 average power output of 100 watts* per channel, min., at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.09% total harmonic distortion (front).**

Continuous Power Output

Front.....	100 W +100 W (20 Hz – 20 kHz, 0.09%, 8 Ω)
Center.....	100 W (20 Hz – 20 kHz, 0.09%, 8 Ω)
Surround.....	100 W +100 W (20 Hz – 20 kHz, 0.09%, 8 Ω)
Surround Back	
.....	100 W +100 W (20 Hz – 20 kHz, 0.09%, 8 Ω)

Audio Section

Input (Sensitivity/Impedance)

PHONO MM.....	4.7 mV/47 kΩ
LINE.....	335 mV/47 kΩ

Frequency Response

PHONO MM.....	20 Hz to 20,000 Hz ± 0.3 dB
LINE.....	5 Hz to 100,000 Hz ± 0.3 dB

Output (Level/Impedance)

LINE.....	335 mV/2.2 kΩ
-----------	---------------

Tone Control

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

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

LINE.....	101 dB
-----------	--------

Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]

LINE.....	83 dB
-----------	-------

* Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifiers.

** Measured by Audio Spectrum Analyzer.

Video Section (S jack)

Input (Sensitivity/Impedance).....	1 Vp-p/75 Ω
Output (Level/Impedance).....	1 Vp-p/75 Ω
Frequency Response.....	5 Hz to 10 MHz ± 0.3 dB
Signal-to-Noise Ratio.....	65 dB

Component Video Section

Input (Sensitivity)	1 Vp-p/75 Ω
Output (Level/Impedance).....	1 Vp-p/75 Ω
Frequency Response.....	5 Hz to 40 MHz ± 0.3 dB
Signal-to-Noise Ratio.....	65 dB

Video Section (Composite)

Input (Sensitivity/Impedance)	
LINE.....	1 Vp-p/75 Ω
Output (Level/Impedance)	
LINE.....	1 Vp-p/75 Ω
Frequency Response	
LINE.....	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: 13.2 dBf, IHF (1.3 μV/75 Ω)
50 dB Quieting Sensitivity.....	Mono: 20.2 dBf Stereo: 38.6 dBf
Signal-to-Noise Ratio.....	Mono: 73 dB (at 85 dBf) Stereo: 70 dB (at 85 dBf)
Distortion.....	Stereo: 0.5 % (1 kHz)
Alternate Channel Selectivity.....	60 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.....	530 kHz to 1,700 kHz
Sensitivity (IHF, Loop antenna).....	350 μV/m
Selectivity.....	25 dB
Signal-to-Noise Ratio.....	50 dB
Antenna.....	Loop antenna

Miscellaneous

Power Requirements.....	AC 120 V, 60 Hz
Power Consumption.....	600 W
Power Consumption in Standby mode.....	0.8 W
AC Outlet SWITCHED.....	100 W (0.8 A) MAX
Dimensions.....	420 (W) x 188 (H) x 464 (D) mm (16-9/16 (W) x 7-7/16 (H) x 18-5/16 (D) in.)
Weight (without package).....	19.0 kg (41.9 lbs)

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:

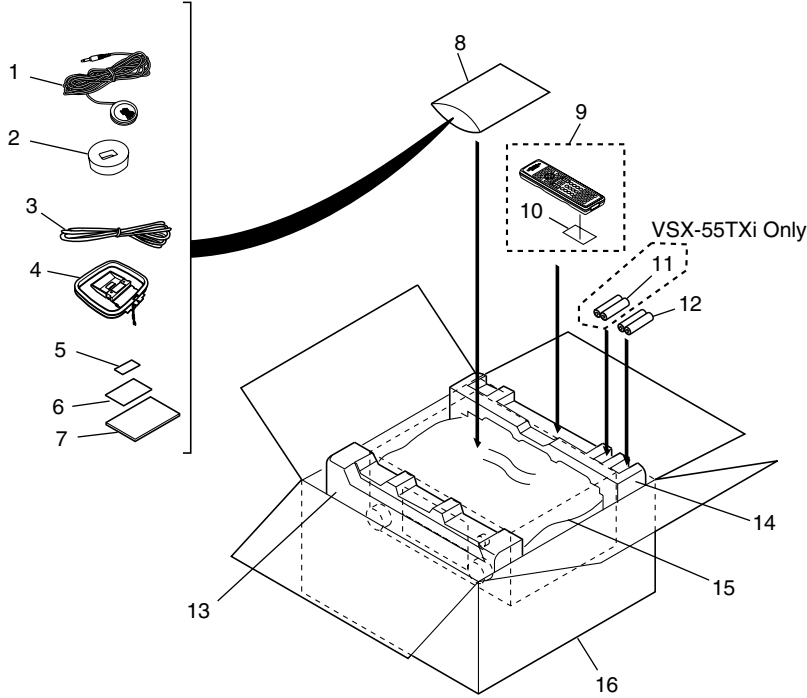
Specifications and the design are subject to possible modifications without notice, due to improvements.

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- Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic", "Surround EX" and double-D symbol are trademarks of Dolby Laboratories.
- "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 \blacktriangledown 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

<p>AM Loop Antenna (ATB7009)</p>	<p>FM Wire Antenna (ADH7004)</p>	<p>"AA" IEC LR6 batteries</p>	<p>Operating Instructions (VSX-55TXi : ARB7284) (VSX-53TX : ARB7285)</p>
<p>Remote Control Unit (VSX-55TXi : AXD7325)</p>	<p>Remote Control Unit (VSX-53TX : AXD7365)</p>	<p>Microphone for Auto Surround Sound Setup (APM7004)</p>	<p>Microphone Stand for Auto Surround Sound Setup (AEB7269)</p>

(1) 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	Microphone for Auto Surround Sound Setup	APM7004	9	Remote Control Unit	See Contrast table (2)
2	Microphone Stand for Auto Surround Sound Setup	AEB7269	10	Battery Cover	See Contrast table (2)
3	FM Wire Antenna	ADH7004	NSP 11	"AA" IEC LR6 batteries	See Contrast table (2)
4	AM Loop Antenna	ATB7009	NSP 12	"AA" IEC LR6 batteries	VEM1023
5	Caution Sheet SP,E	ARM7056	13	Front Pad 45	AHA7374
			14	Rear Pad 45	AHA7375
			15	Packing Sheet	RHC1023
NSP 6	Warranty Card EL	ARY7007			
7	Operating Instructions (English)	See Contrast table (2)	16	Packing Case	See Contrast table (2)
NSP 8	Polyethylene Bag (0.03*230*340)	Z21-038			

(2) CONTRAST TABLE

VSX-55TXi/KUXJI/CA and VSX-53TX/KUXJI/CA are constructed the same except for the following:

Mark	NO	Symbol and Description	VSX-55TXi /KUXJI/CA	VSX-53TX /KUXJI/CA
NSP	7	Operating Instructions (English)	ARB7284	ARB7285
	9	Remote Control Unit 45/KU	AXD7325	Not used
	9	Remote Control Unit 53/KU	Not used	AXD7365
	10	Battery Cover	AZN7896	AZA7424
	11	"AA" IEC LR6 batteries	VEM1023	Not used
	16	Packing Case 55KU	AHD8199	Not used
	16	Packing Case 53KU	Not used	AHD8203

2.2 EXTERIOR SECTION

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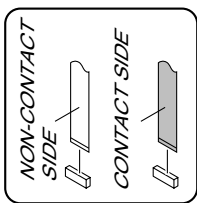
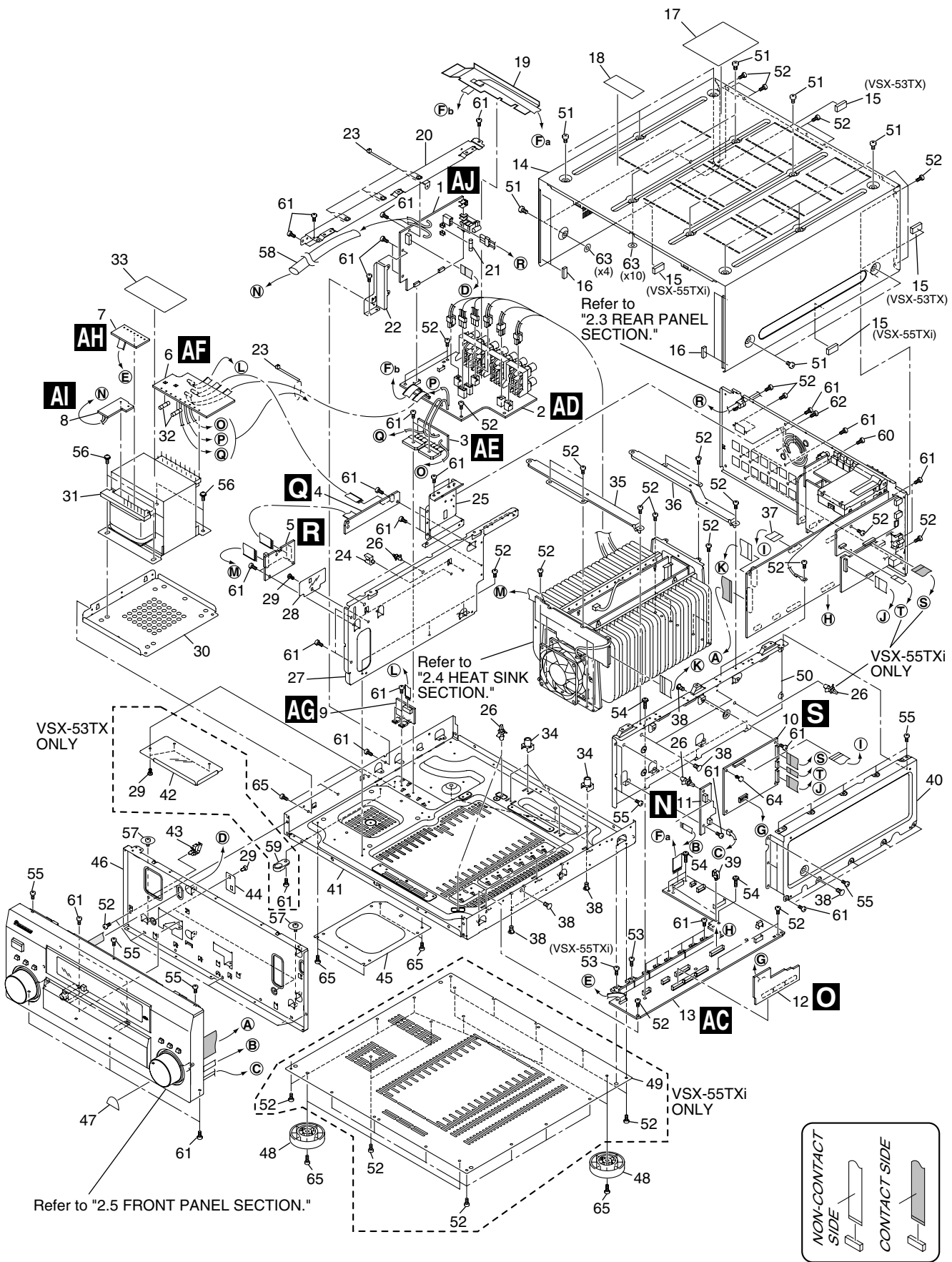
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(1) EXTERIOR SECTION parts List

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	PRIMARY Assy	AWX7968	34	PCB Mold	AMR2534
2	SP/PS Assy	See Contrast table (2)	35	Bridge Frame 45F	ANG7409
3	DIODE Assy	AWX8017			
4	FAN CONNECTION Assy	AWX8005	36	Bridge Frame 45R	ANG7410
5	FAN DRIVE Assy	AWX7976	37	J7 21P FFC/60V	ADD7355
			38	Card Spacer	DNK2769
6	TRANS 2-1 Assy	AWX8326	39	Wire Clip (A)	VEC1355
7	TRANS 2-2 Assy	AWX7970	40	DSP Shield 45B	ANG7403
8	TRANS 1 Assy	AWX7969			
9	VH TR Assy	AWX8018	NSP 41	Under Base	See Contrast table (2)
10	DSP ASSY	AWX8249	42	Screw Cover 45A	See Contrast table (2)
			NSP 43	Wire Saddle	DEC1450
11	MIC AMP Assy	AWX8004	44	Styling Sheet	AEC7413
12	DSP CONNECTION Assy	See Contrast table (2)	45	Stabilizer 45	ANG7408
13	REGULATOR Assy	See Contrast table (2)			
14	Bonnet Case 45B	AZN7897	NSP 46	Panel Stay 45	AND7047
15	Spacer 45A	AEB7263	NSP 47	Energy Star Label	AAX7876
			48	Insulator	PNW2766
16	Spacer 45B	AEB7264	49	Bottom Plate 45	See Contrast table (2)
17	Label (DD/DTS/THX)	ARW7177	50	DSP Shield 45A	See Contrast table (2)
18	Label (FCC/DOC)	ARW7191			
19	Barrier 45	AEC7444	51	Screw	BBZ40P080FZK
20	Left Beam 45	ANG7401	52	Screw	BBZ30P080FCC
			53	Screw	BBZ30P100FCC
⚠ 21	FU1 Fuse (10A)	VEK1029	54	Screw	IBZ30P150FCC
22	Primary Angle 35	ANG7301	55	Screw	BBT30P080FCC
NSP 23	Binder	ZCA-BK1			
NSP 24	Mini Clamp	VEC1597	56	Screw	ABA7066
25	Fan Box 45	ANG7413	57	Screw	ABA7009
			58	UL Tube	ADN7007
26	Locking Card Spacer	PNW2917	59	Screw Cover	See "2.5 FRONT PANEL SECTION" No. 19-3
27	Trans Shield 45	ANG7400	60	Screw	ABA1208
28	Styling Sheet B	AEC7437			
29	Push Rivet	AEC7370	61	Screw	IBZ30P080FCC
30	Trans Frame 45	ANG7399	62	Screw	IBZ30P100FCC
			63	Spacer Circle	AEC7330
⚠ 31	T1 Power Transformer	ATS7328	64	Nylon Rivet	AEC7408
⚠ 32	FU4,FU5 Fuse (3.15A)	REK1114	65	Screw	See Contrast table (2)
NSP 33	Trans Label 45	AAX7957			

(2) CONTRAST TABLE

VSX-55TXi/KUXJI/CA and VSX-53TX/KUXJI/CA are constructed the same except for the following:

Mark	NO	Symbol and Description	VSX-55TXi /KUXJI/CA	VSX-53TX /KUXJI/CA
NSP NSP	2	SP/PS Assy	AWX8307	AWX7975
	12	DSP CONNECTION Assy	AWX8299	AWX8024
	13	REGULATOR Assy	AWX8303	AWX7967
	41	Under Base 45	ANA7138	Not used
	41	Under Base 53	Not used	ANA7158
	42	Screw Cover 45A	Not used	AEC7414
	49	Bottom Plate 45	ANF7031	Not used
	50	DSP Shield 1394 A	ANG7420	Not used
	50	DSP Shield 45 A	Not used	ANG7402
	65	Screw	BBZ30P080FCC	IBZ30P080FCC

2.3 REAR PANEL SECTION

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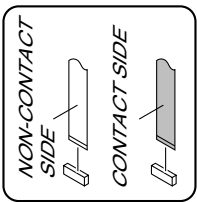
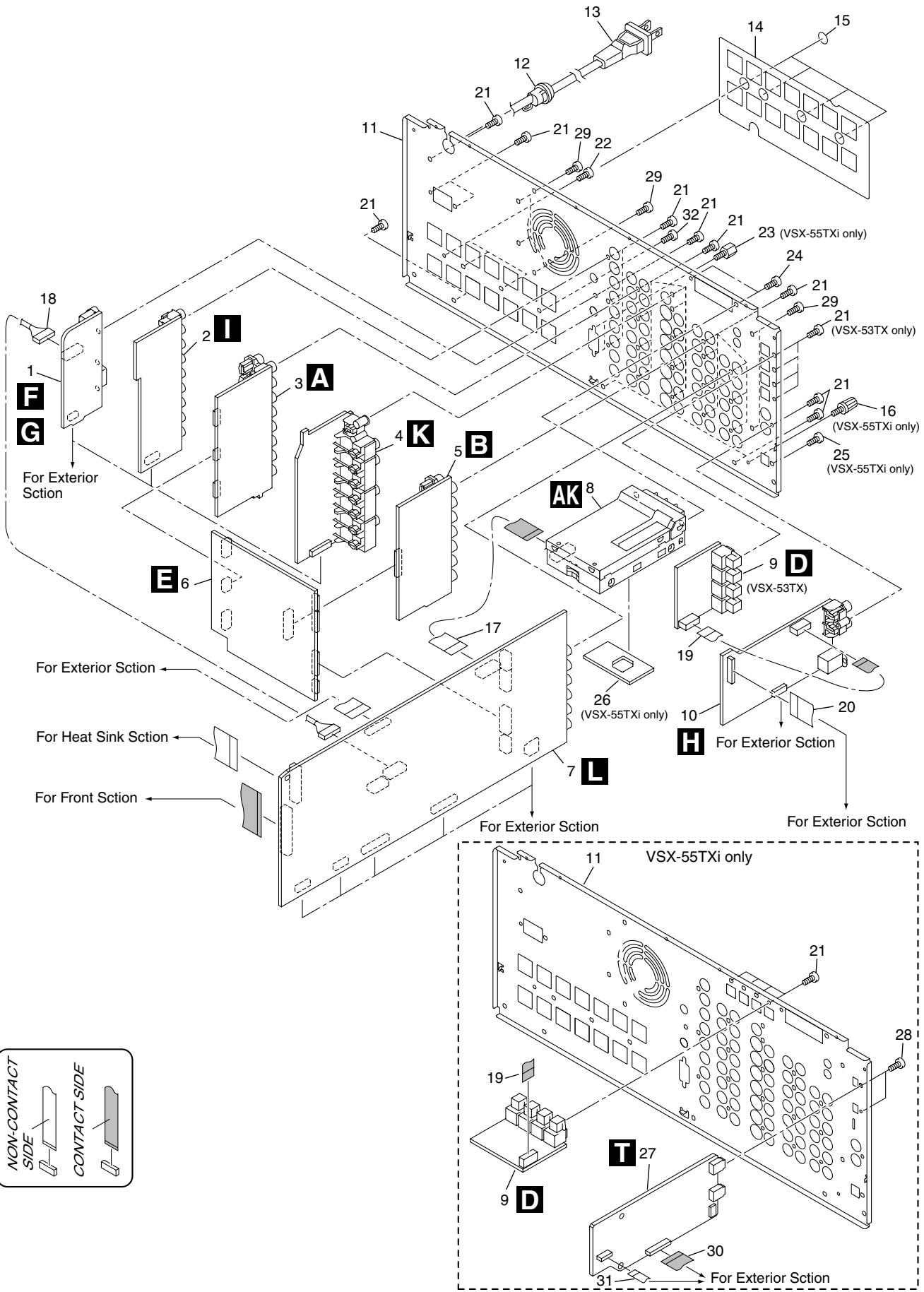
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(1) REAR PANEL SECTION parts List

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	RS232C Assy	See Contrast table (2)	17	J8 13P FFC/60V	ADD7356
2	COMPONENT Assy	See Contrast table (2)	18	J1902 Connector Assy (8P)	ADE7085
3	7.1CH I/O Assy	See Contrast table (2)	19	J5 9P FFC/60V	See Contrast table (2)
4	VIDEO Assy	See Contrast table (2)	20	J6 20P FFC/60V	ADD7354
5	V-AUDIO IN Assy	See Contrast table (2)	21	Screw	BBZ30P080FCC
6	INPUT CONNECT Assy	AWX7974	22	Screw	IBZ30P100FCC
7	MAIN CONTROL Assy	See Contrast table (2)	23	Screw	See Contrast table (2)
8	FM/AM TUNER Module	AXQ7231	24	Screw	VPZ30P100FZK
9	OPTICAL IN Assy	AWX7978	25	Screw	See Contrast table (2)
10	COAXIAL IN Assy	See Contrast table (2)	26	Tuner Spacer	See Contrast table (2)
11	Rear Panel	See Contrast table (2)	27	1394 Assy	See Contrast table (2)
12	Cord Stopper	CM-22C	28	Screw	See Contrast table (2)
 13	AC Power Cord	VDG1075	29	Screw	IBZ30P080FCC
14	Speaker Sheet	AAK8016	30	J16 22P FFC/60V	See Contrast table (2)
15	Cushion Circle 16B	AED7052	31	J17 10P FFC/60V	See Contrast table (2)
16	Screw with Terminal	See Contrast table (2)	32	Screw	ABA1208

(2) CONTRAST TABLE

VSX-55TXi/KUXJI/CA and VSX-53TX/KUXJI/CA are constructed the same except for the following:

Mark	NO	Symbol and Description	VSX-55TXi /KUXJI/CA	VSX-53TX /KUXJI/CA
	1	RS232C Assy	AWX7966	Not used
	1	12V TRIGGER Assy	Not used	AWX8310
	2	COMPONENT Assy	AWX8293	AWX8295
	3	7.1CH I/O Assy	AWX8306	AWX7973
	4	VIDEO Assy	AWX8311	AWX7962
	5	V-AUDIO IN Assy	AWX8313	AWX7964
	7	MAIN CONTROL Assy	AWX8285	AWX8289
	10	COAXIAL IN Assy	AWX8300	AWX8323
	11	Rear Panel 55KU	ANC8192	Not used
	11	Rear Panel 53KU	Not used	ANC8196
	16	Screw with Terminal	AKE-031	Not used
	19	J5 9P FFC/60V	ADD7430	ADD7353
	23	Screw	ABA7078	Not used
	25	Screw	PMZ30P060FCC	Not used
	26	Tuner Spacer	AEC7314	Not used
	27	1394 Assy	AWK7768	Not used
	28	Screw	PCZ26P060FMC	Not used
	30	J16 22P FFC/60V	ADD7431	Not used
	31	J17 10P FFC/60V	ADD7432	Not used

2.4 HEAT SINK SECTION

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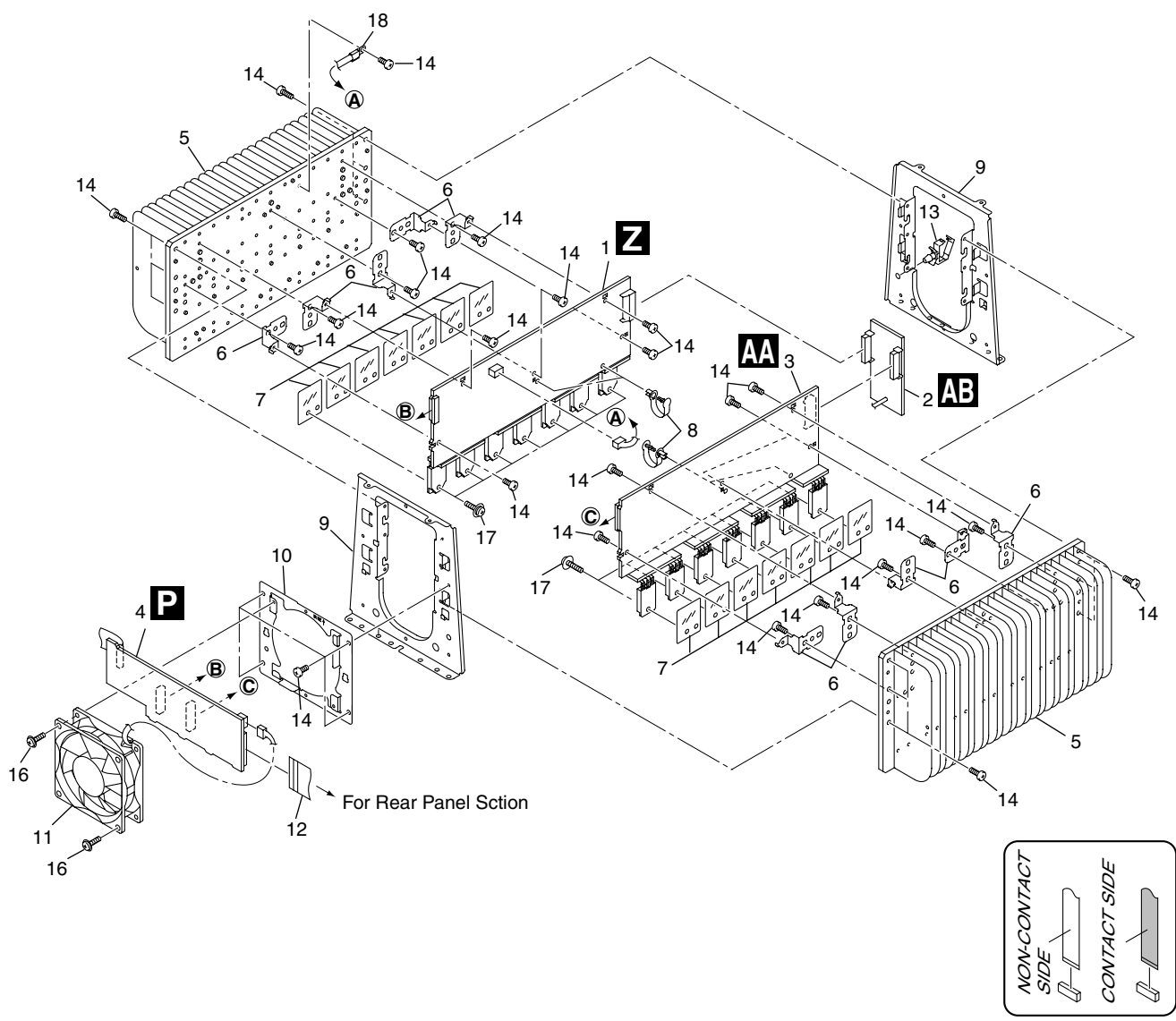
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HEAT SINK SECTION parts List

<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	•••••	
16	Screw	BBZ30P300FMC
17	Screw	ABA7085
⚠ 18	TH1 Thermistor	AEX7004

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2.5 FRONT PANEL SECTION

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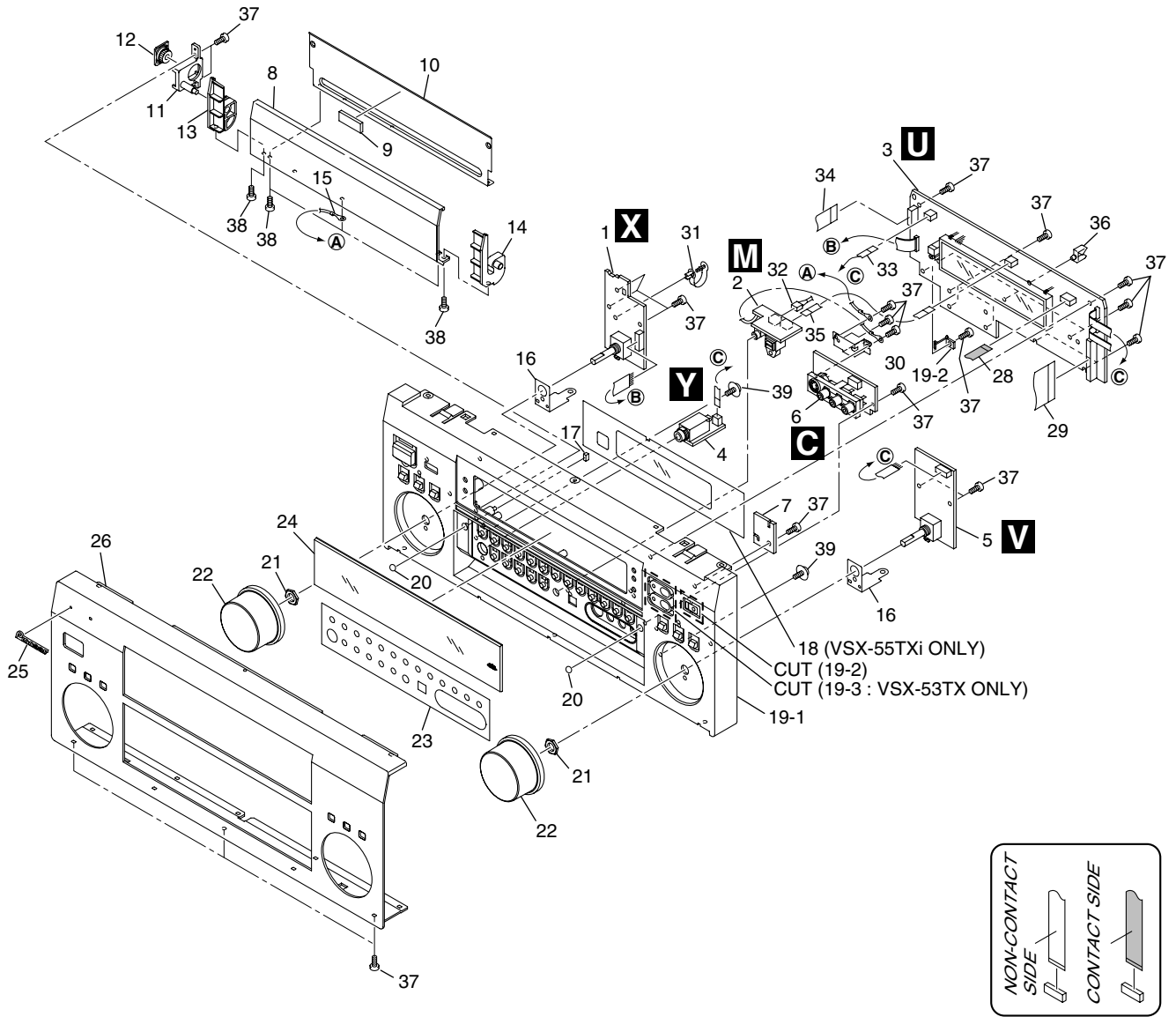
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(1) FRONT PANEL SECTION parts List

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	MULTI JOG Assy	AWX7972			
2	MIC & F.OPT IN Assy	AWX7981	21	Nut	NK90FUC
3	DISPLAY Assy	See Contrast table (2)	22	Rotary Knob L BK	AAA7018
4	HEADPHONE Assy	AWX7980	23	D.Sheet	AAK7955
5	VOLUME Assy	AWX7971	24	Window	See Contrast table (2)
			25	Pioneer Badge B	PAN1376
6	FRONT IN Assy	AWX7977			
7	STYLING Assy	•••••	26	F.Panel	See Contrast table (2)
8	Door 45	ANB7277	27	•••••	
9	Spacer 45A	AEB7263	28	J4 7P FFC/60V	ADD7352
10	Door Stay 45B	AAH7089	29	J1 32P FFC/60V	ADD7349
			30	Earth Plate A	ANG7411
11	Door Shaft 35	AMR7295			
12	Damper Assy (200)	AXA7088	NSP 31	Speed Clamp	AEC7445
13	Door Hinge L 45B	AMR7386	32	J1901 Connector Assy (3P)	ADE7084
14	Door Hinge R 45B	AMR7387	33	J15 3P FFC/60V	ADD7371
NSP 15	Earth Lead Wire	ADH7022	34	J2 11P FFC/60V	ADD7350
			35	J3 4P FFC/60V	ADD7351
16	Earth Plate B	ANG7412			
17	Magnet 35	AMF7007	36	Wire Clip (A)	VEC1355
18	FL Sheet 45R	See Contrast table (2)	37	Screw	BPZ30P100FMC
19-1	Panel Base 45B	AMB7803	38	Screw	BBZ30P080FCC
19-2	Magnet Holder		39	Screw	ABA7009
19-3	Screw Cover				
20	Cushion Circle 6B	AED7044			

(2) CONTRAST TABLE

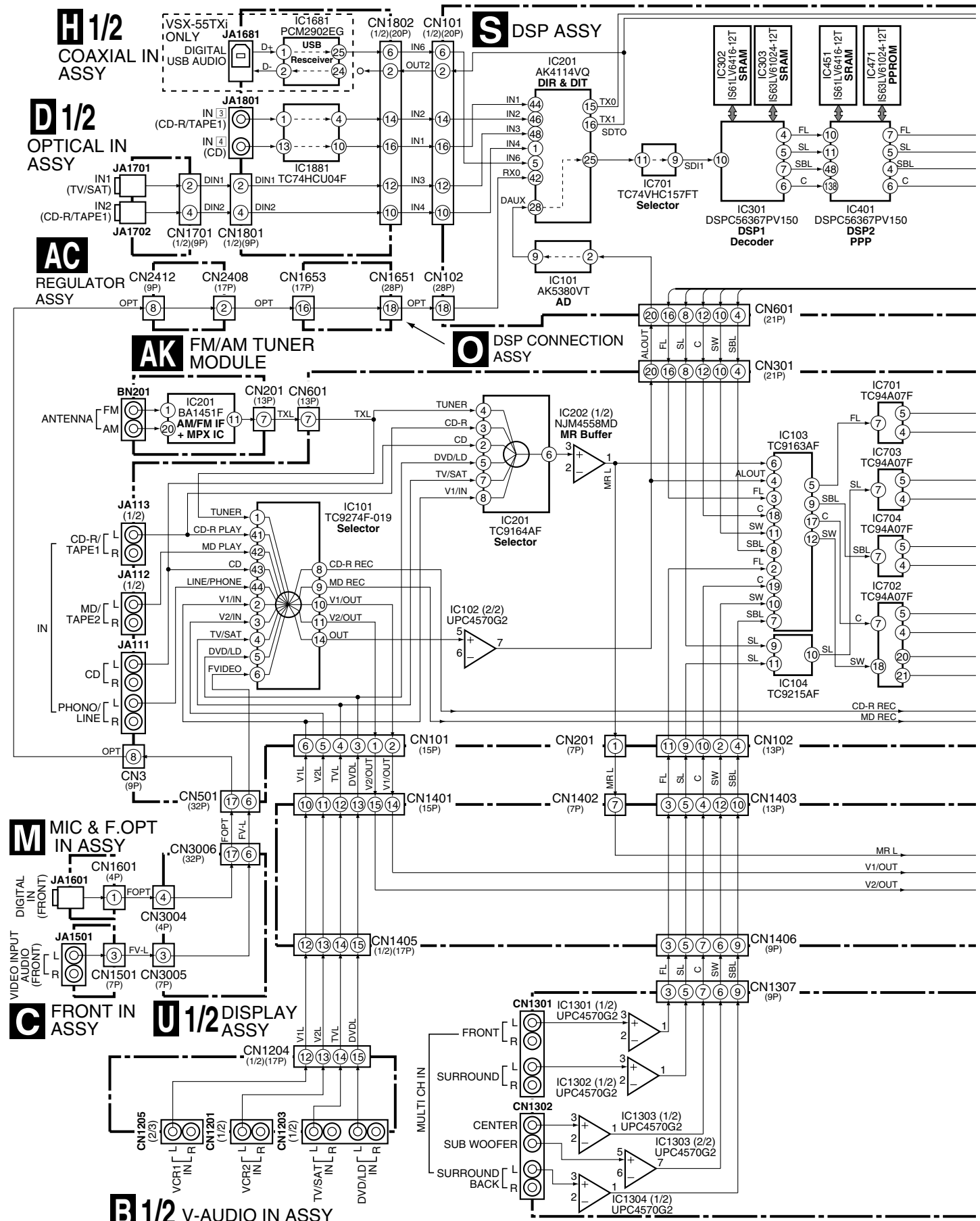
VSX-55TXi/KUXJI/CA and VSX-53TX/KUXJI/CA are constructed the same except for the following:

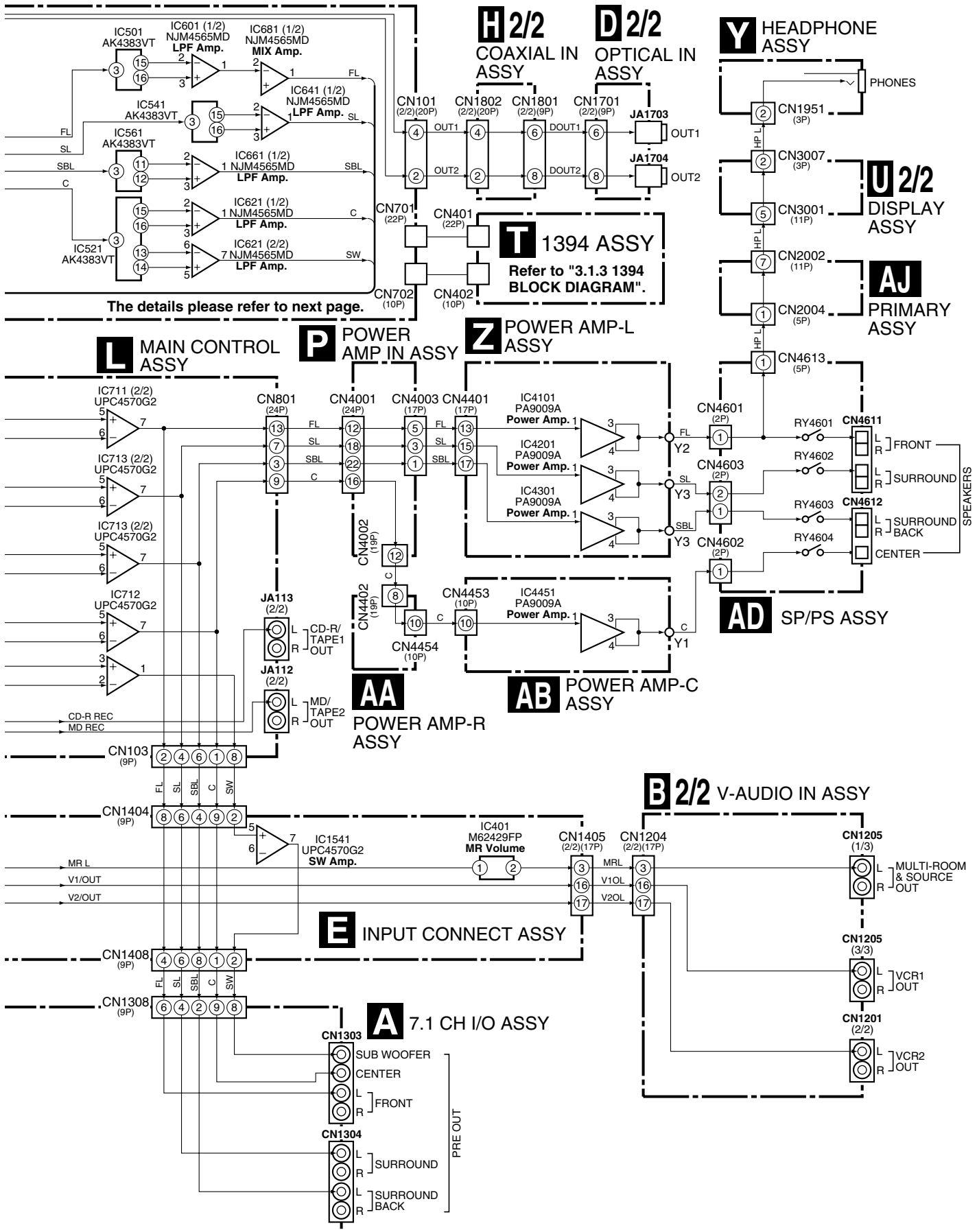
Mark	NO	Symbol and Description	VSX-55TXi /KUXJI/CA	VSX-53TX /KUXJI/CA
	3	DISPLAY Assy	AWX8315	AWX7983
	18	FL Sheet 45R	AAK7957	Not used
	24	Window 55	AAK8150	Not used
	24	Window 53R	Not used	AAK8155
	26	F.Panel 55BKU	ANB7312	Not used
	26	F.Panel 53BKU	Not used	ANB7316

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

3.1.1 AUDIO BLOCK DIAGRAM





3.1.2 DSP BLOCK DIAGRAM

A

B

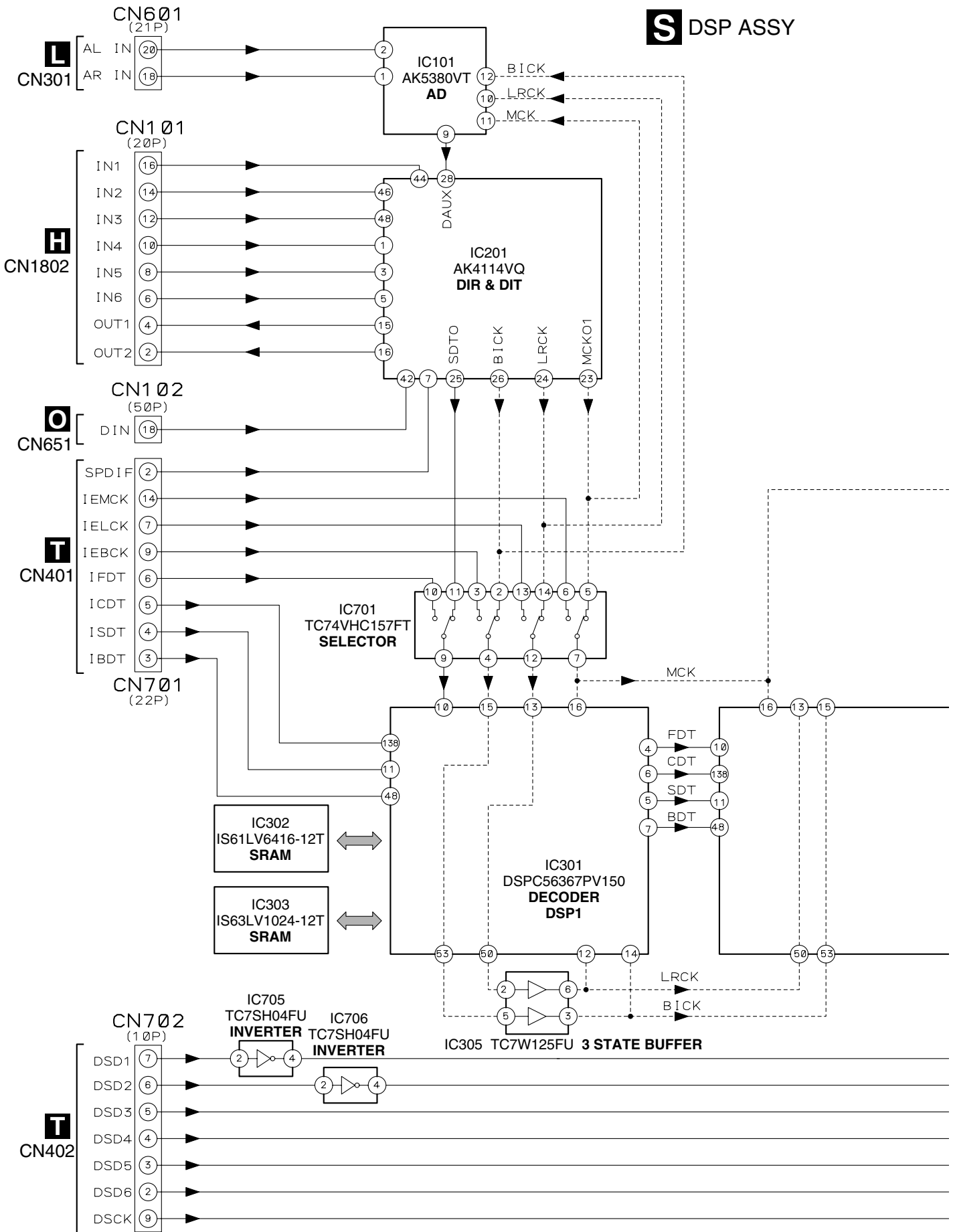
C

D

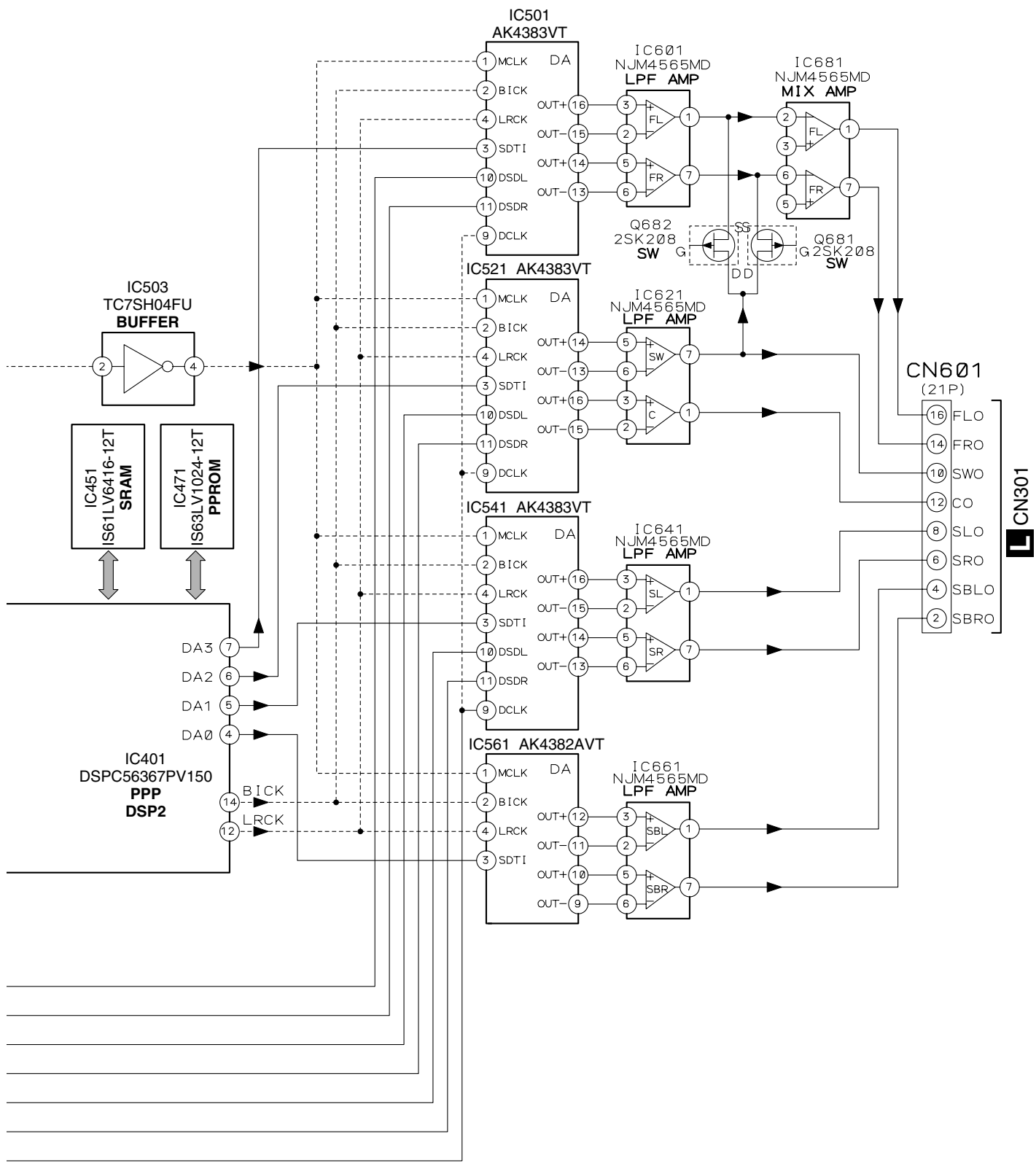
E

F

S DSP ASSY



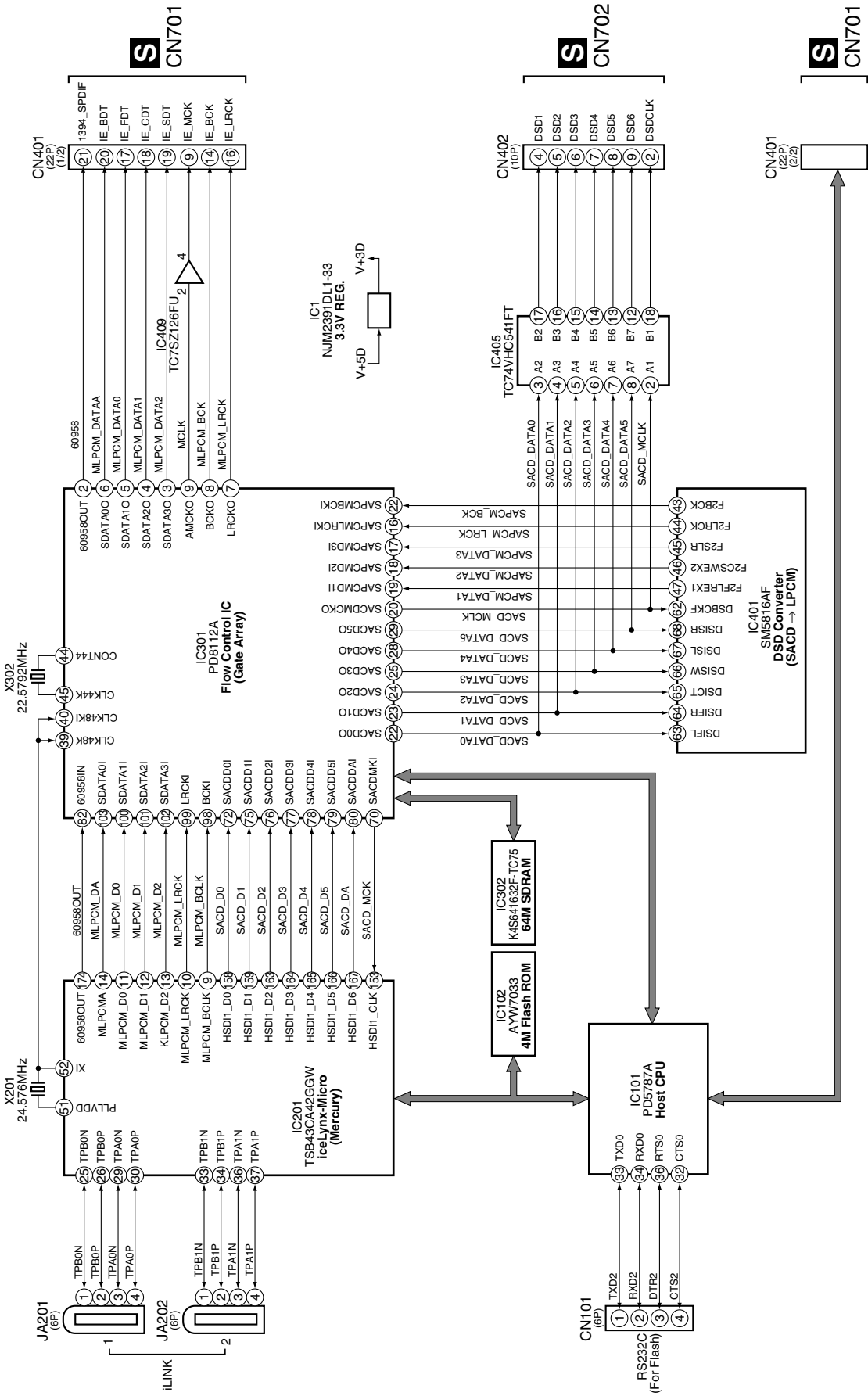
----- CLOCK LINE
 _____ DATA LINE



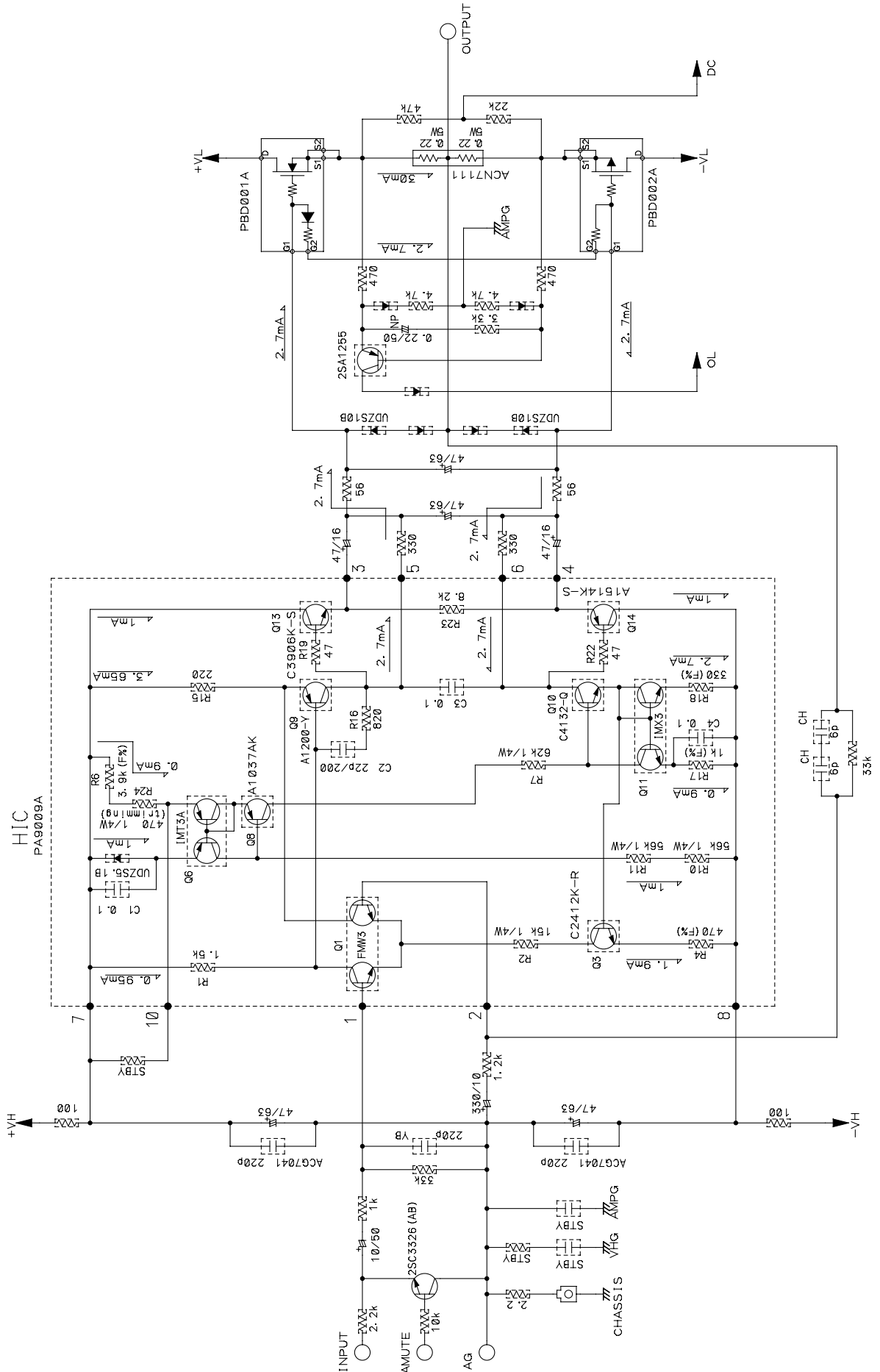
A
B
C
D
E
F

3.1.3 1394 BLOCK DIAGRAM

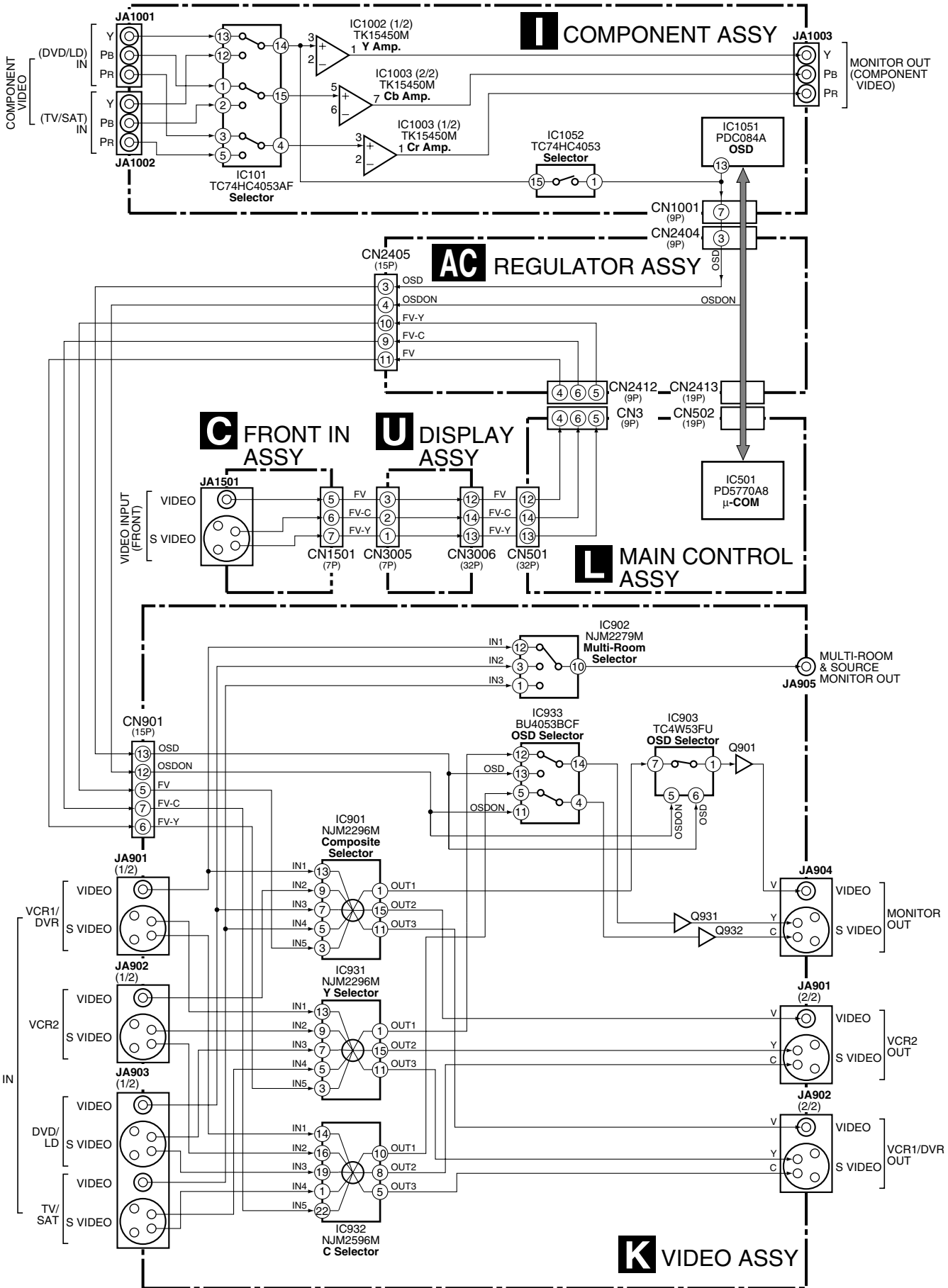
T 1394 ASSY



3.1.4 POWER AMP BLOCK DIAGRAM



3.1.5 VIDEO BLOCK DIAGRAM





5



6



7



8



A

B

C

D

E

F



5



6

VSX-55TXi



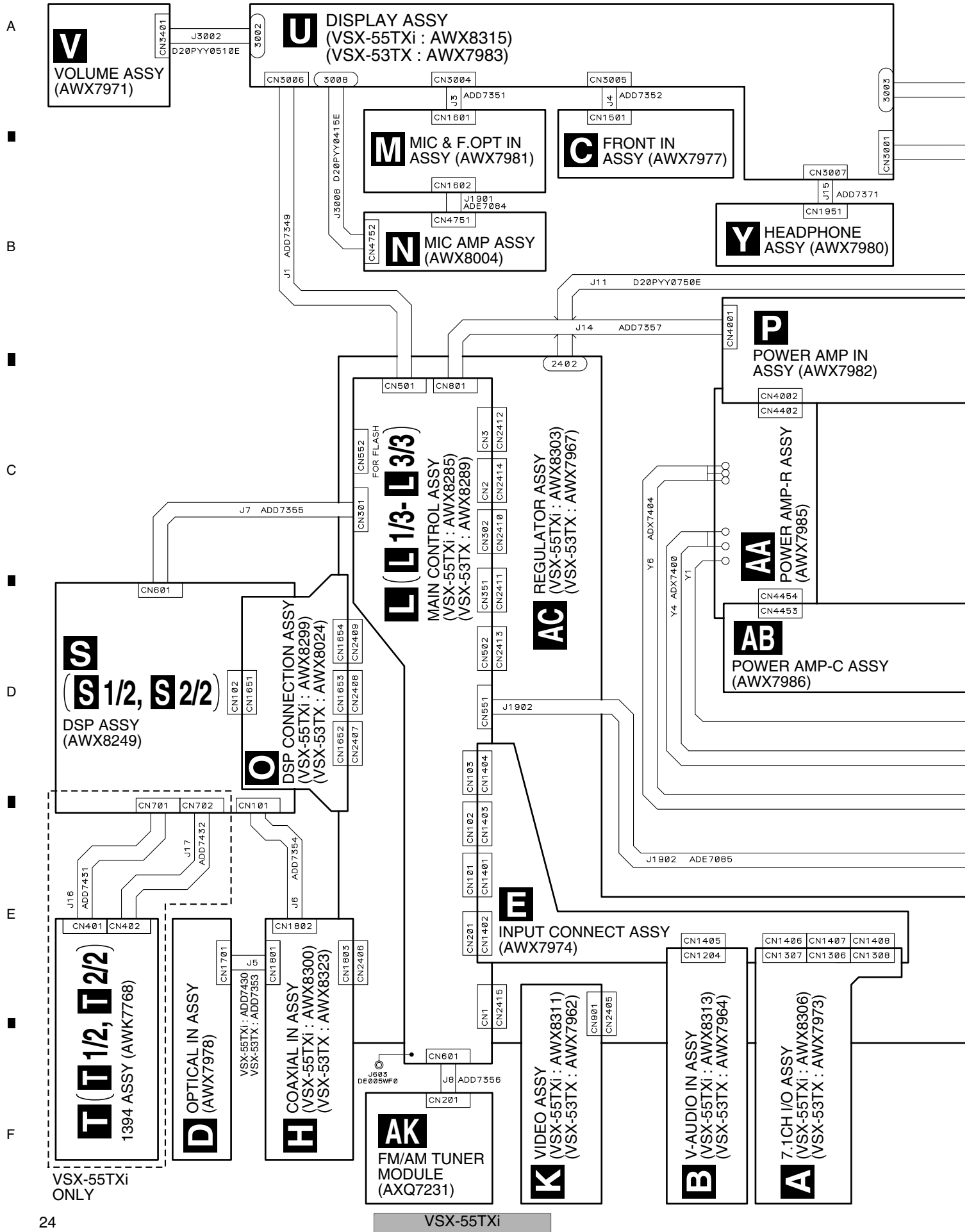
7



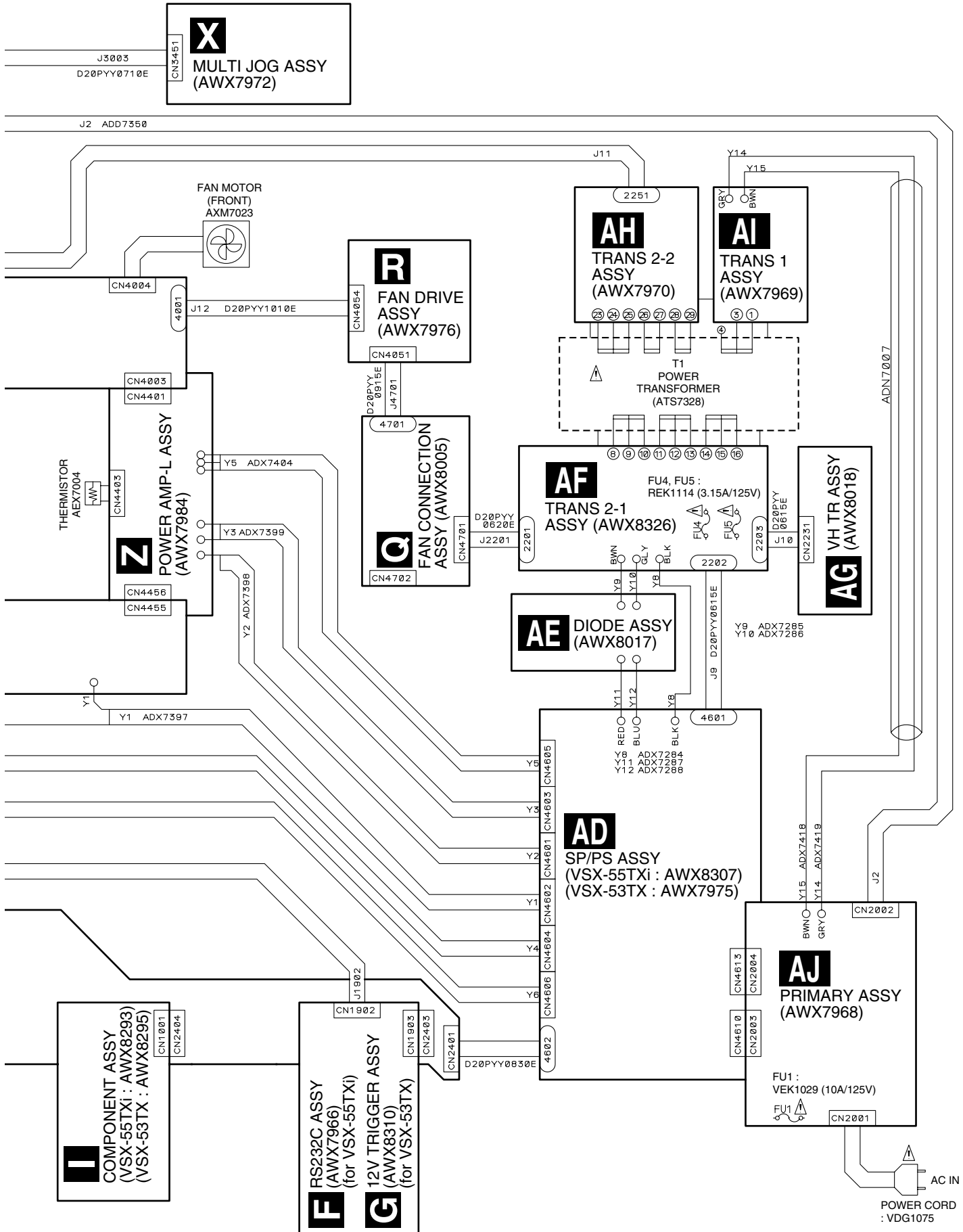
8



3.2 OVERALL WIRING DIAGRAM



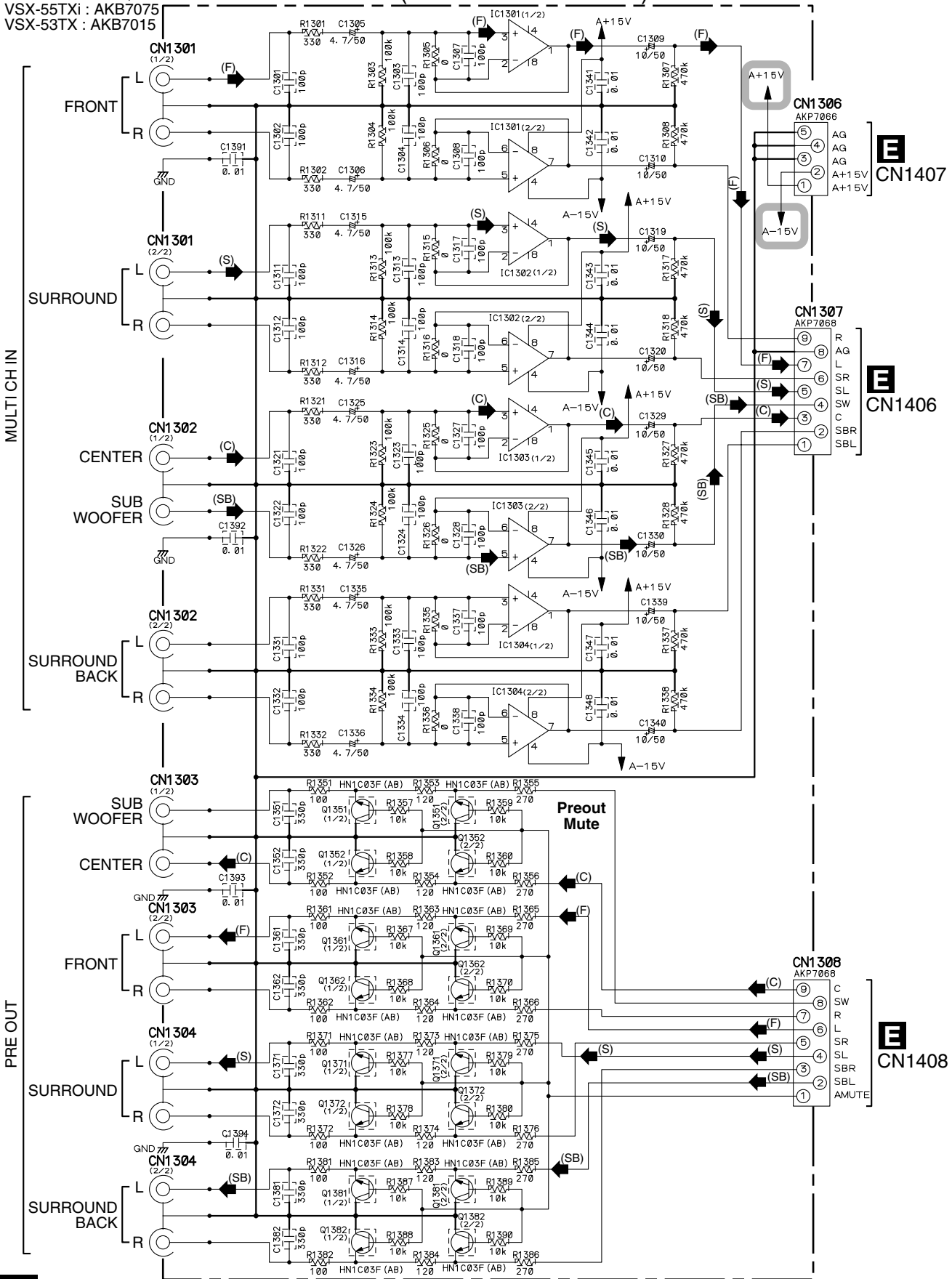
Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".




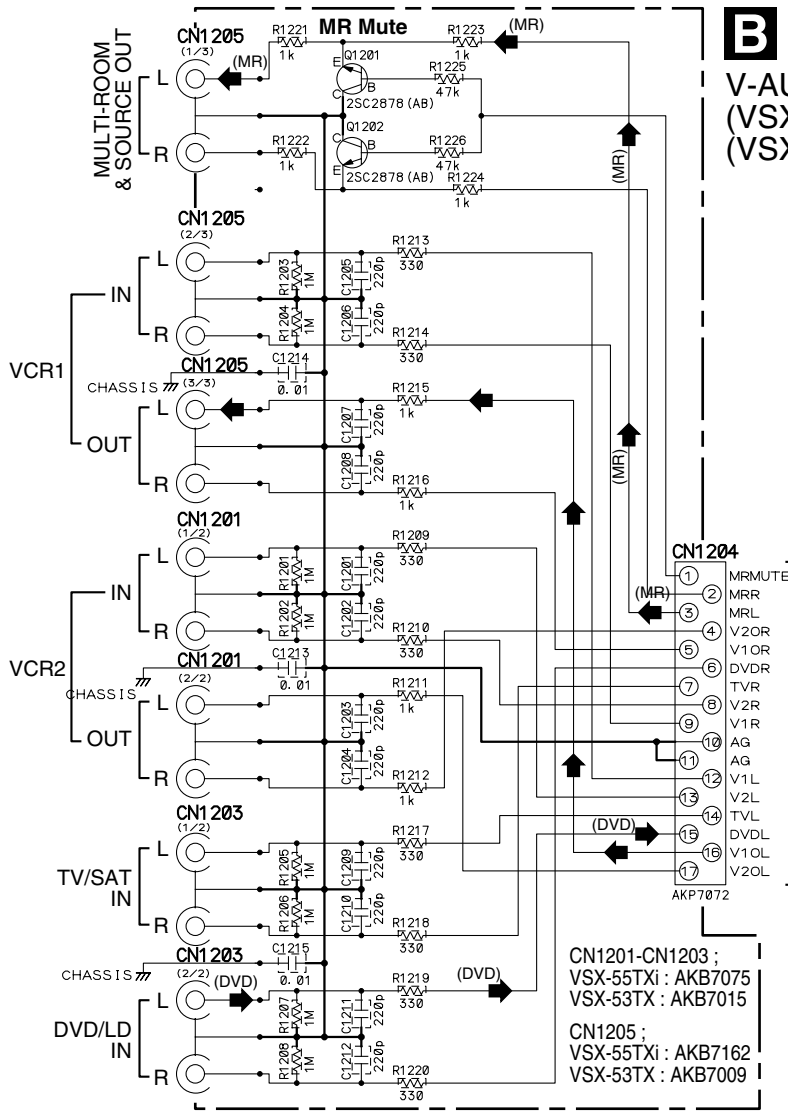
3.3 7.1 CH I/O, V-AUDIO, FRONT IN and OPTICAL IN ASSYS

A 7.1 CH I/O ASSY (VSX-55TXi : AWX8306) (VSX-53TX : AWX7973)

CN1301-CN1304 ;
VSX-55TXi : AKB7075
VSX-53TX : AKB7015



 : The power supply is shown with the marked box.

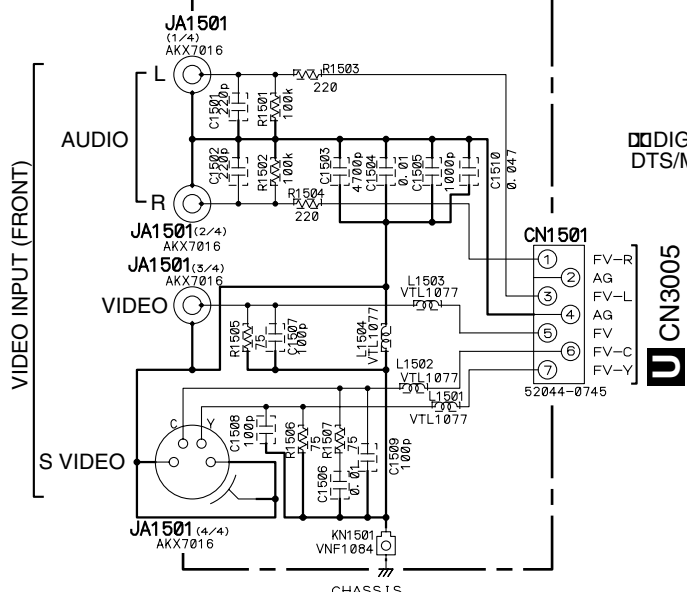


B
V-AUDIO ASSY
 (VSX-55TXi : AWX8313)
 (VSX-53TX : AWX7964)

- : AUDIO SIGNAL ROUTE (Lch)
- (MR) ➤ : AUDIO SIGNAL ROUTE (MULTI-ROOM 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)

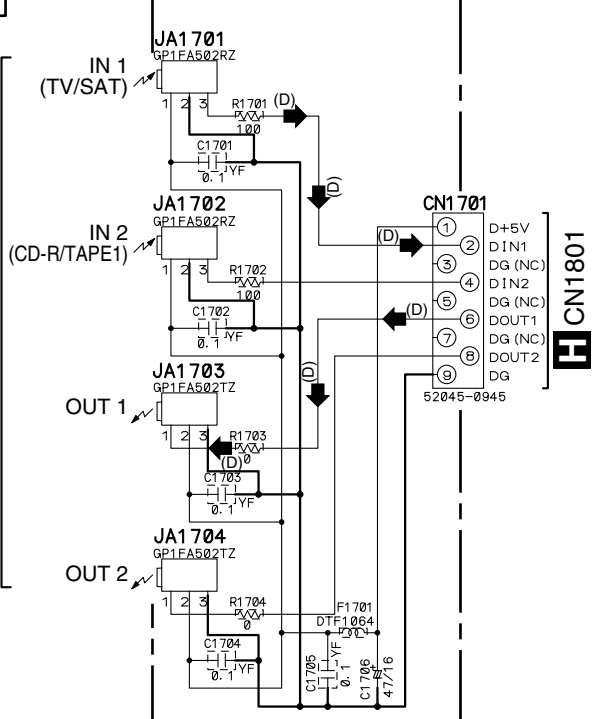
E
CN1405

C **FRONT IN ASSY (AWX7977)**



U
CN3005

D **OPTICAL IN ASSY (AWX7978)**



H
CN1801

B C D

3.4 INPUT CONNECT, RS232C and 12V TRIGGER ASSYS

A
B
C
D
E
F

E INPUT CONNECT ASSY (AWX7974)

L 1/3 CN101

L 1/3 CN201

L 1/3 CN102

L 2/3 CN103

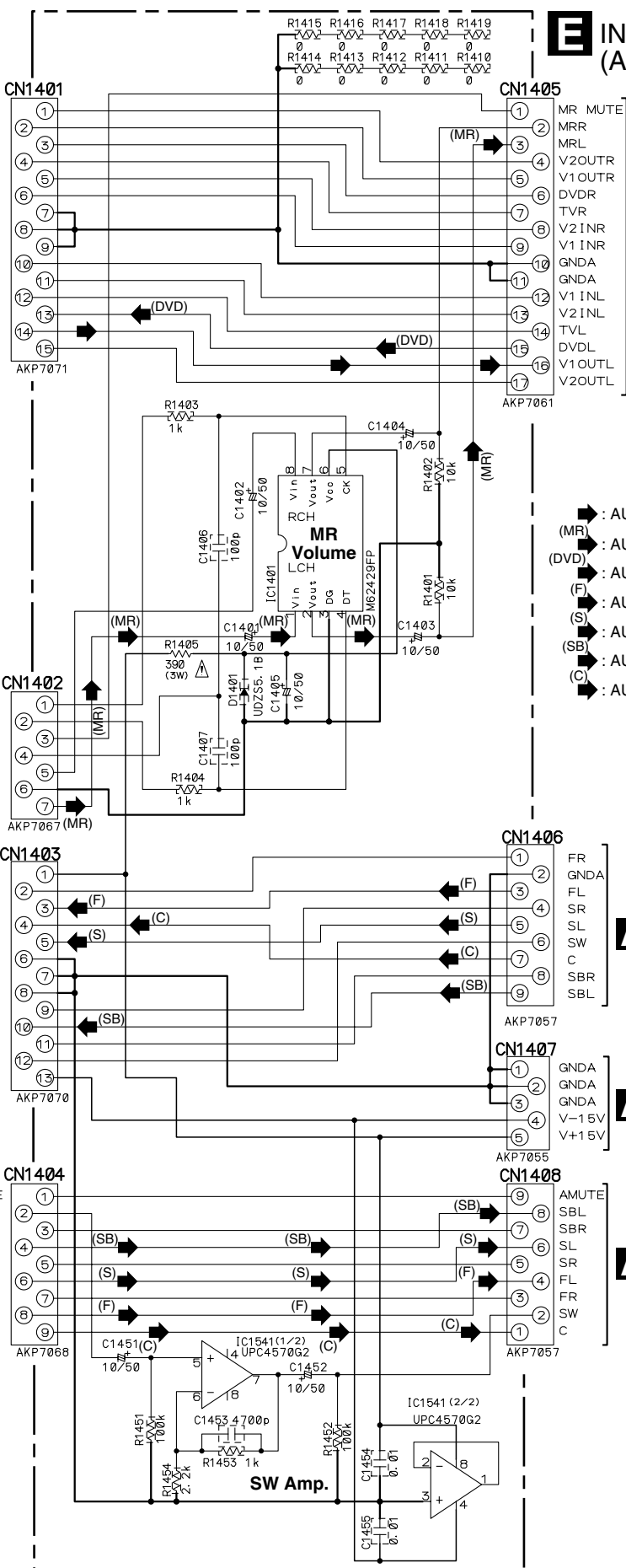
B CN1204

A CN1307

A CN1306

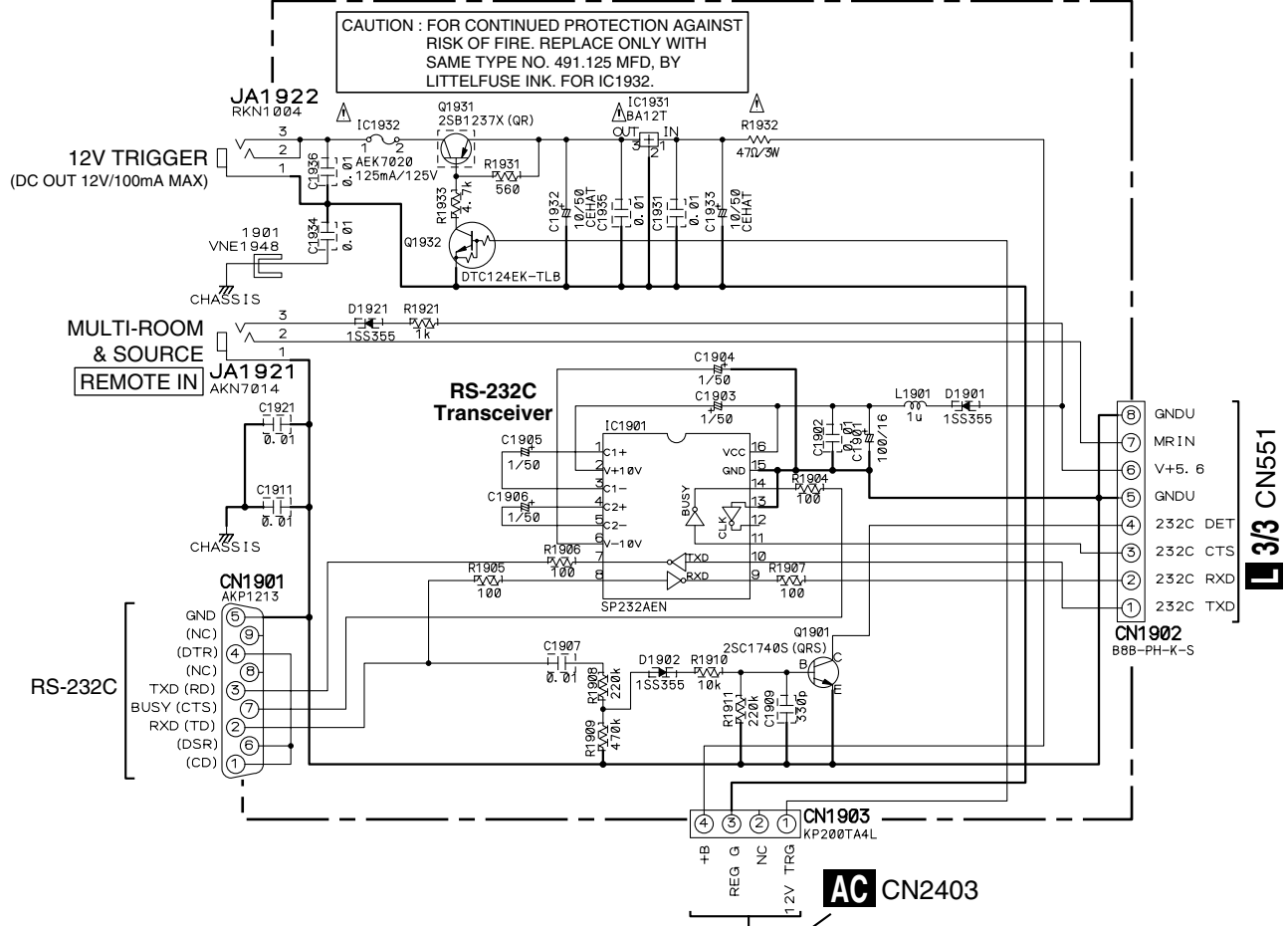
A CN1308

- ➡ : AUDIO SIGNAL ROUTE (Lch)
- (MR) ➡ : AUDIO SIGNAL ROUTE (MULTI-ROOM 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)



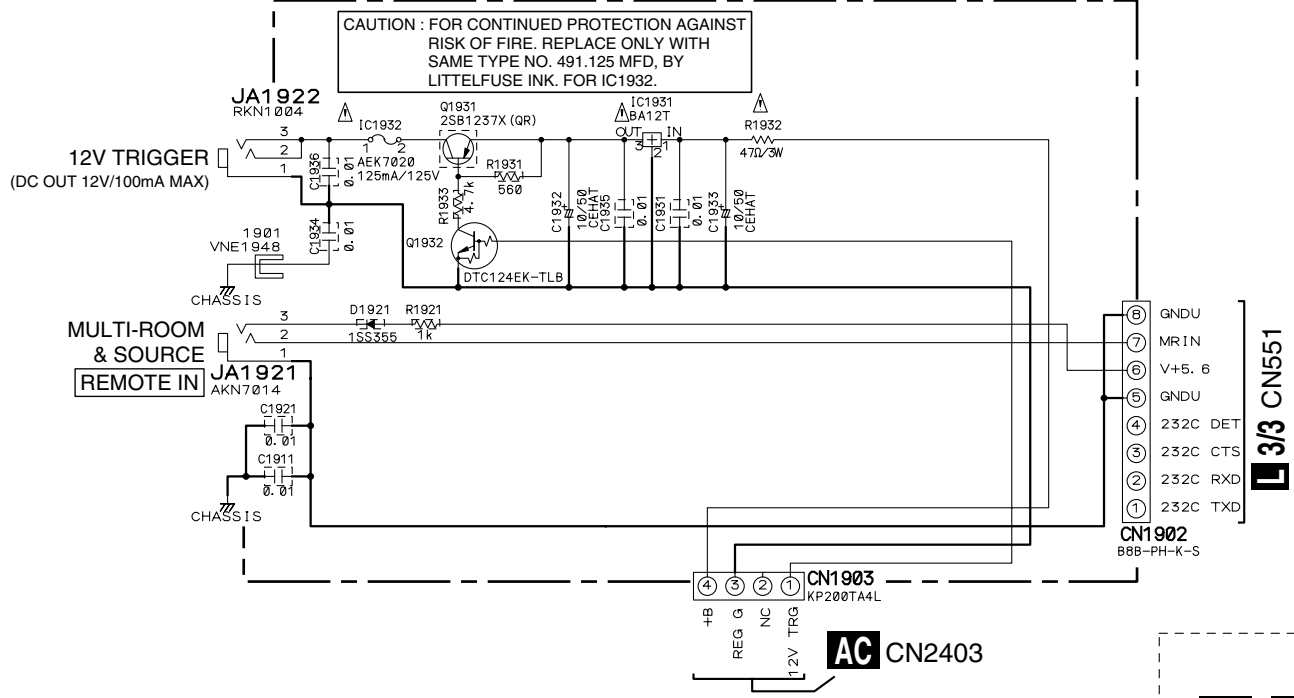
VSX-55TXi ONLY

F RS232C ASSY (AWX7966)



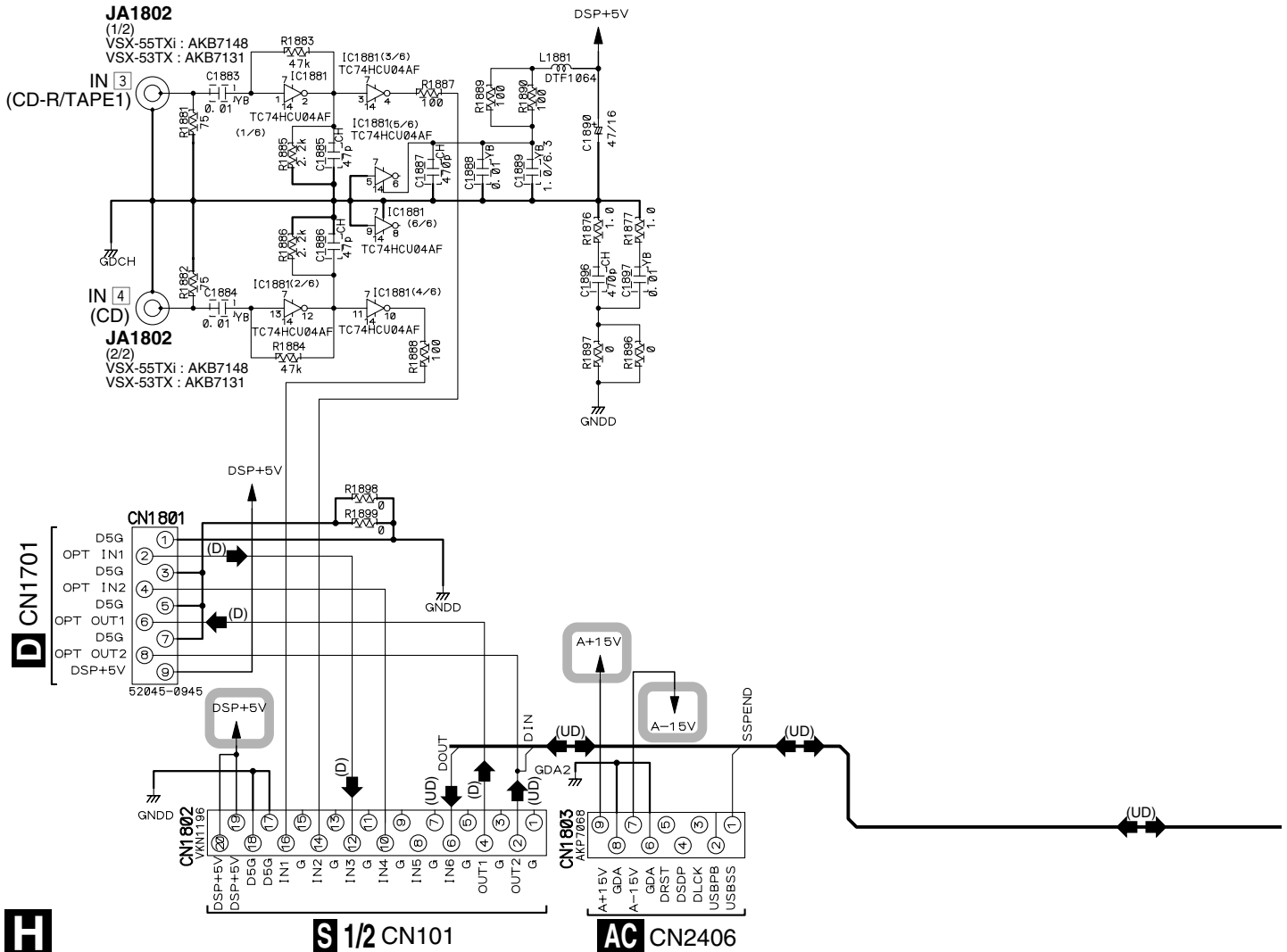
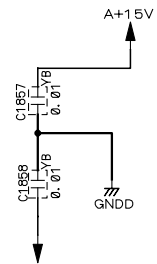
VSX-53TX ONLY

G 12V TRIGGER ASSY (AWX8310)



3.5 COAXIAL IN ASSY

H COAXIAL IN ASSY
 (VSX-55TXi : AWX8300)
 (VSX-53TX : AWX8323)



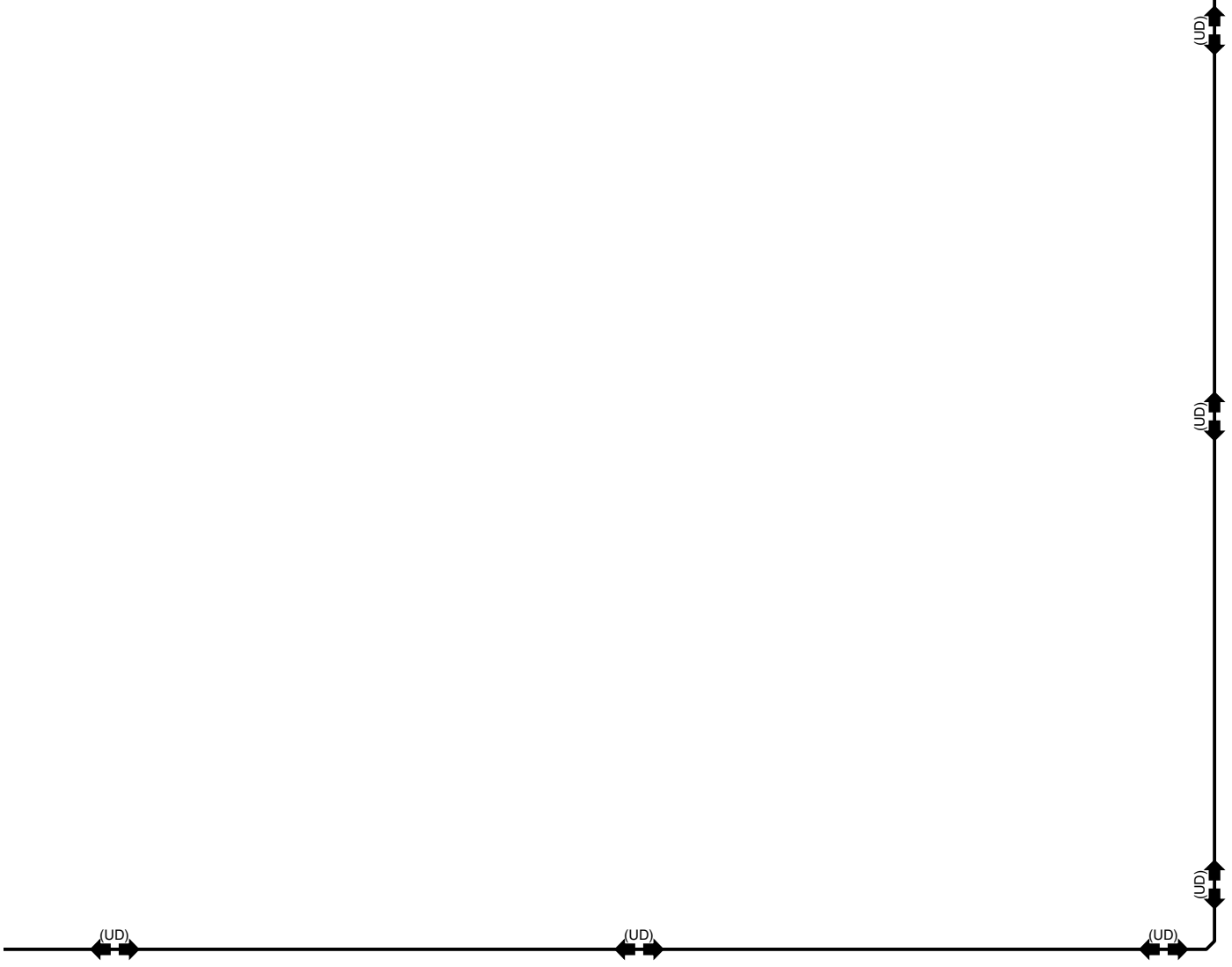
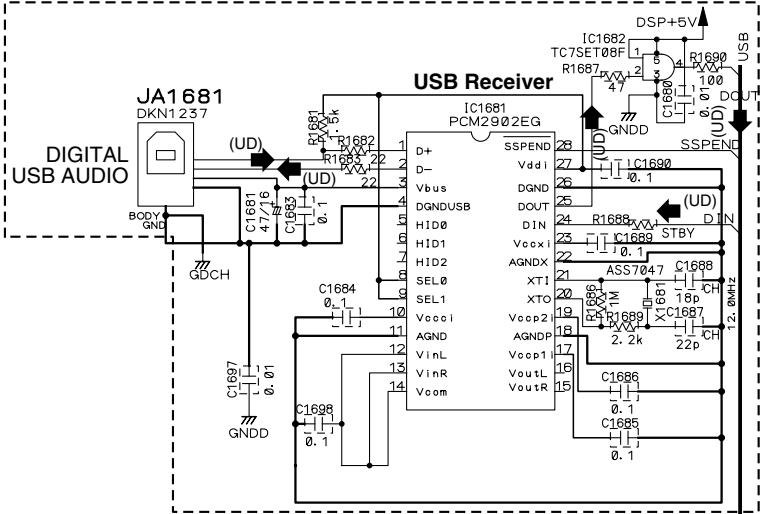
S 1/2 CN101


AC CN2406

H

(D) : AUDIO SIGNAL ROUTE (DIGITAL)
 (UD) : AUDIO SIGNAL ROUTE (USB DIGITAL)

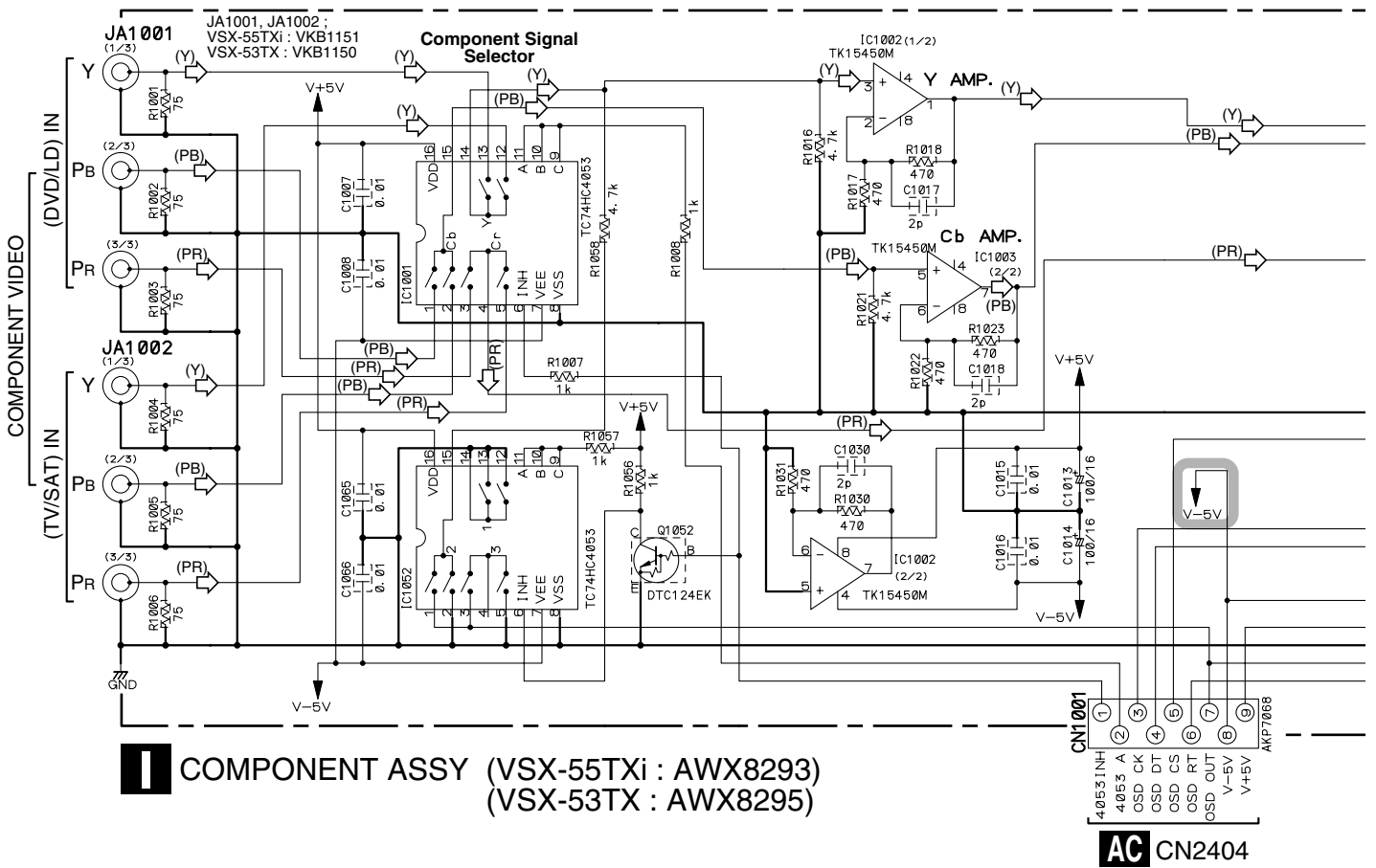
VSX-55TXi ONLY




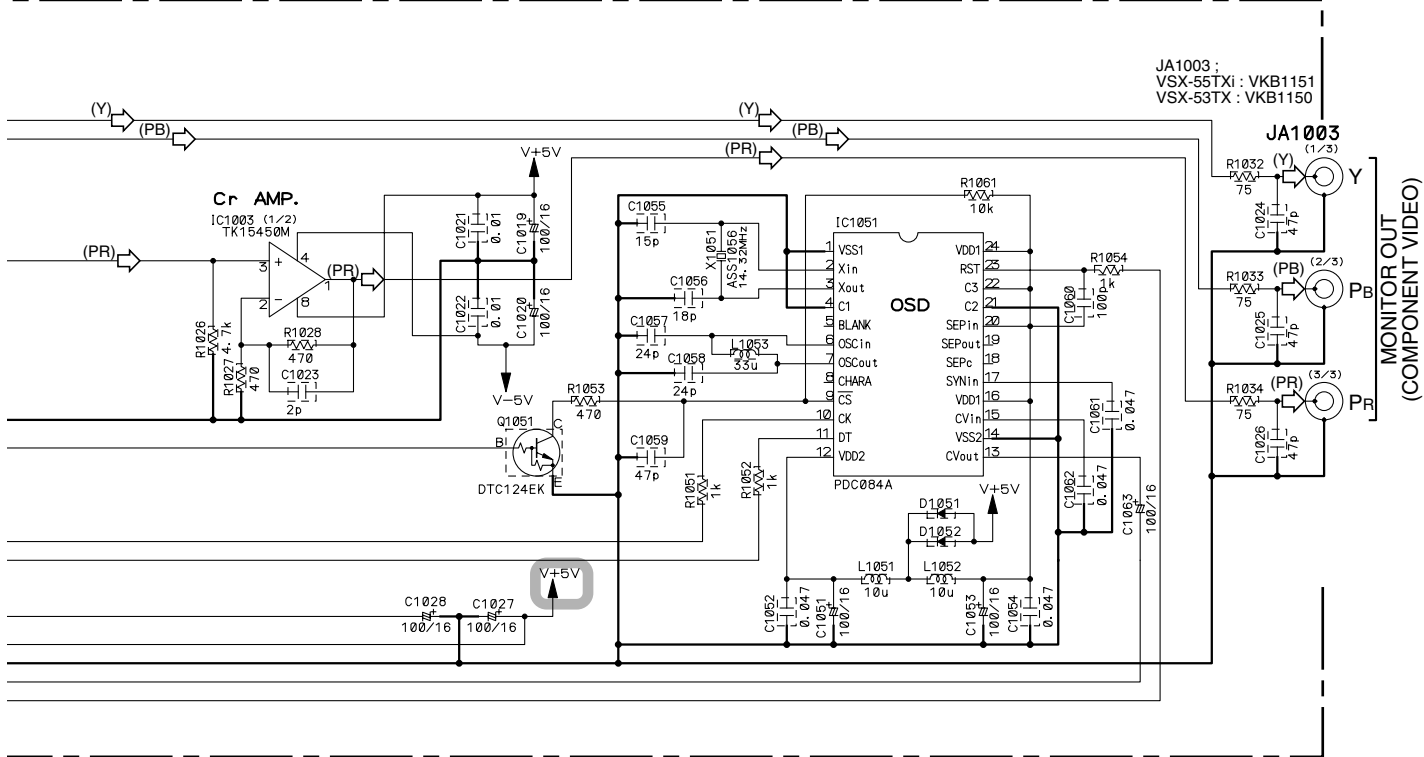
 : The power supply is shown with the marked box.






3.6 COMPONENT ASSY



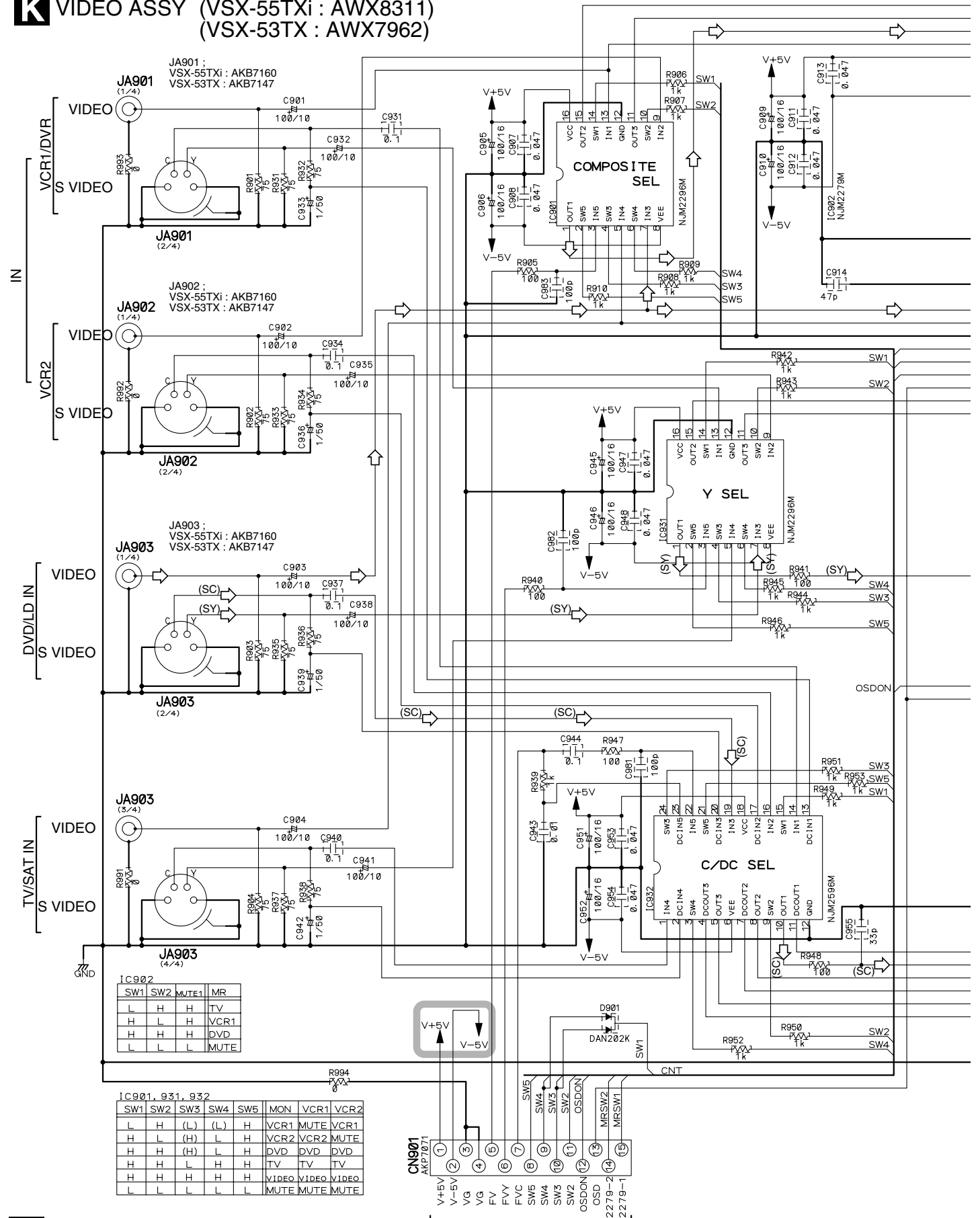
 : The power supply is shown with the marked box.



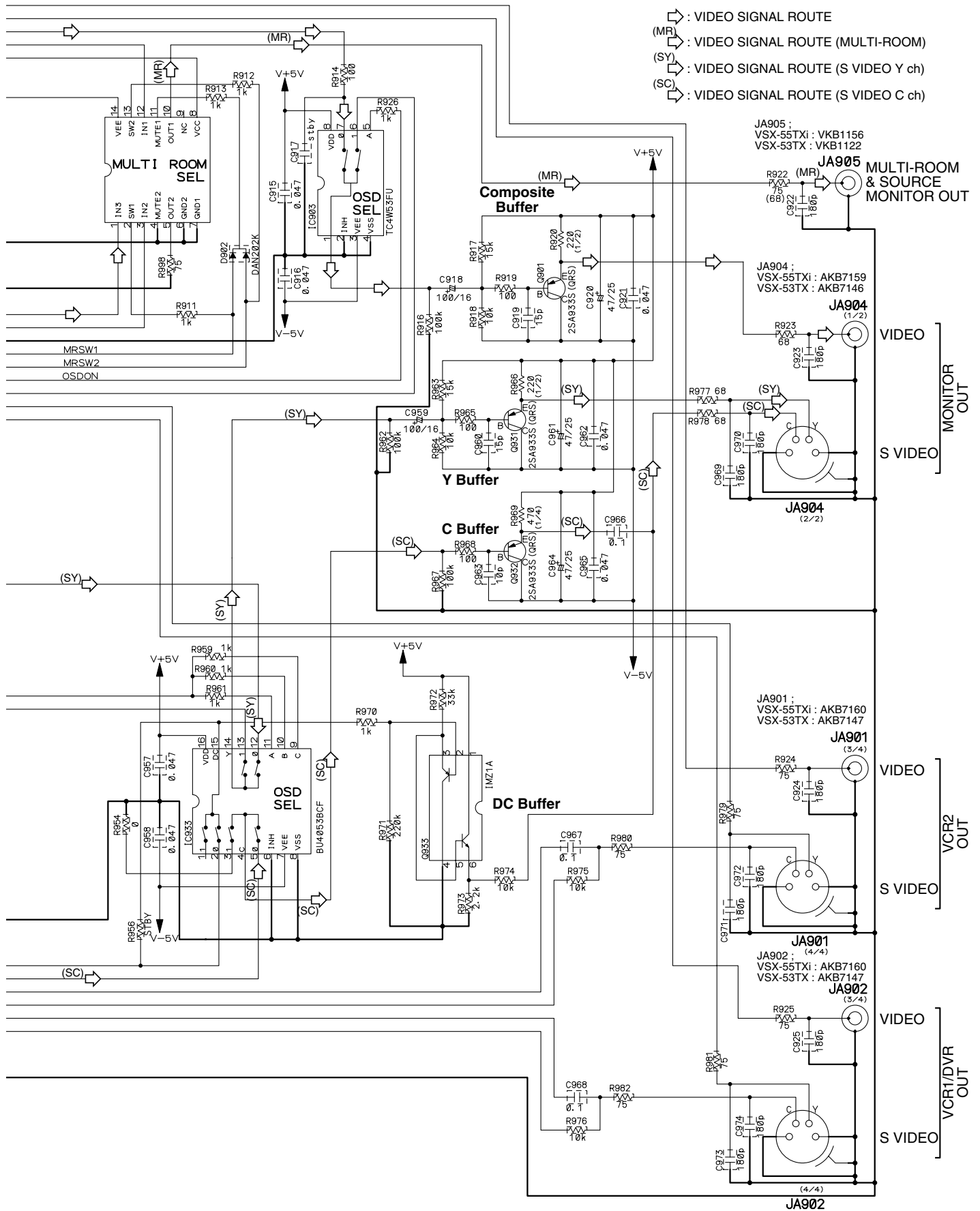
-  : VIDEO SIGNAL ROUTE (Y)
-  : VIDEO SIGNAL ROUTE (PB)
-  : VIDEO SIGNAL ROUTE (PR)

3.7 VIDEO ASSY

K VIDEO ASSY (VSX-55TXi : AWX8311)
(VSX-53TX : AWX7962)



AC CN2405



- (↔) : VIDEO SIGNAL ROUTE
- (MR) : VIDEO SIGNAL ROUTE (MULTI-ROOM)
- (SY) : VIDEO SIGNAL ROUTE (S VIDEO Y ch)
- (SC) : VIDEO SIGNAL ROUTE (S VIDEO C ch)

JA905 :
VSX-55TXi : VKB1156
VSX-53TX : VKB1122

JA905
MULTI-ROOM
& SOURCE
MONITOR OUT

JA904 :
VSX-55TXi : AKB7159
VSX-53TX : AKB7146

JA904
VIDEO

JA904
(1/2)

JA901 :
VSX-55TXi : AKB7160
VSX-53TX : AKB7147

JA901
VIDEO

JA902 :
VSX-55TXi : AKB7160
VSX-53TX : AKB7147

JA902
VIDEO

JA902
(3/4)

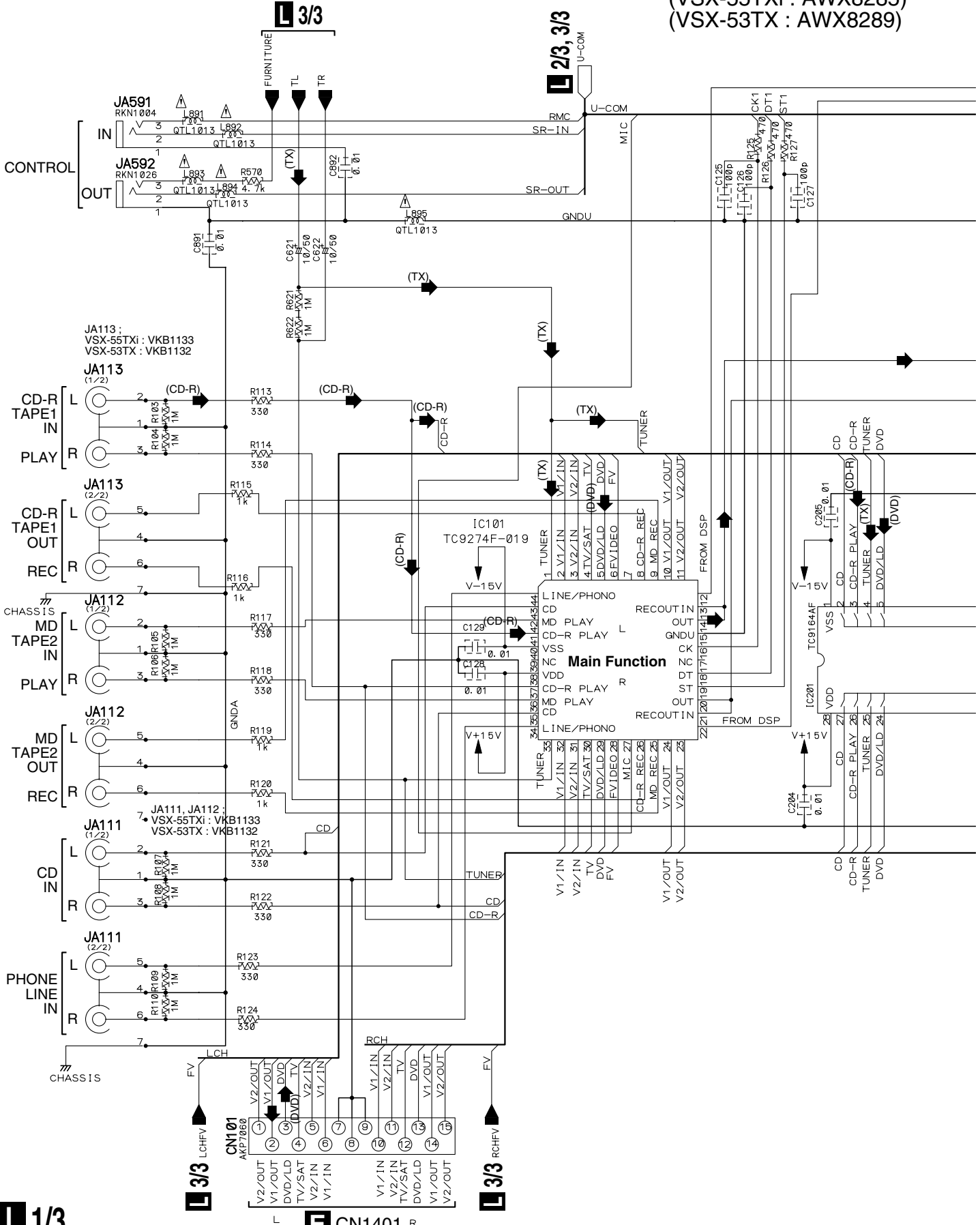
JA902
(4/4)

: The power supply is shown with the marked box.



3.8 MAIN CONTROL ASSY (1/3)

1/3 MAIN CONTROL ASSY
 (VSX-55TXi : AWX8285)
 (VSX-53TX : AWX8289)



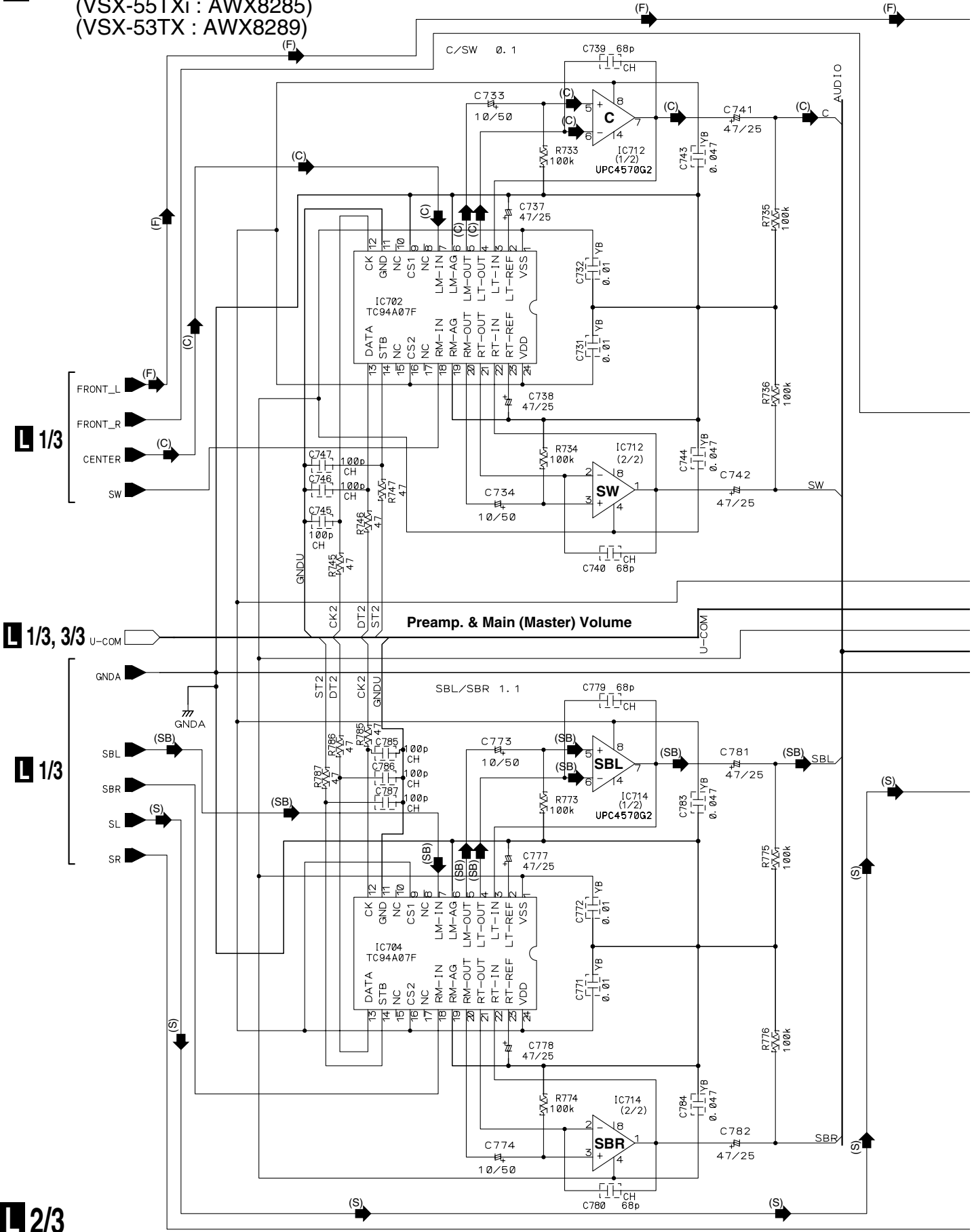
1/3

E CN1401 R

VSX-55TXi

3.9 MAIN CONTROL ASSY (2/3)

L 2/3 MAIN CONTROL ASSY
 (VSX-55TXi : AWX8285)
 (VSX-53TX : AWX8289)



L 1/3

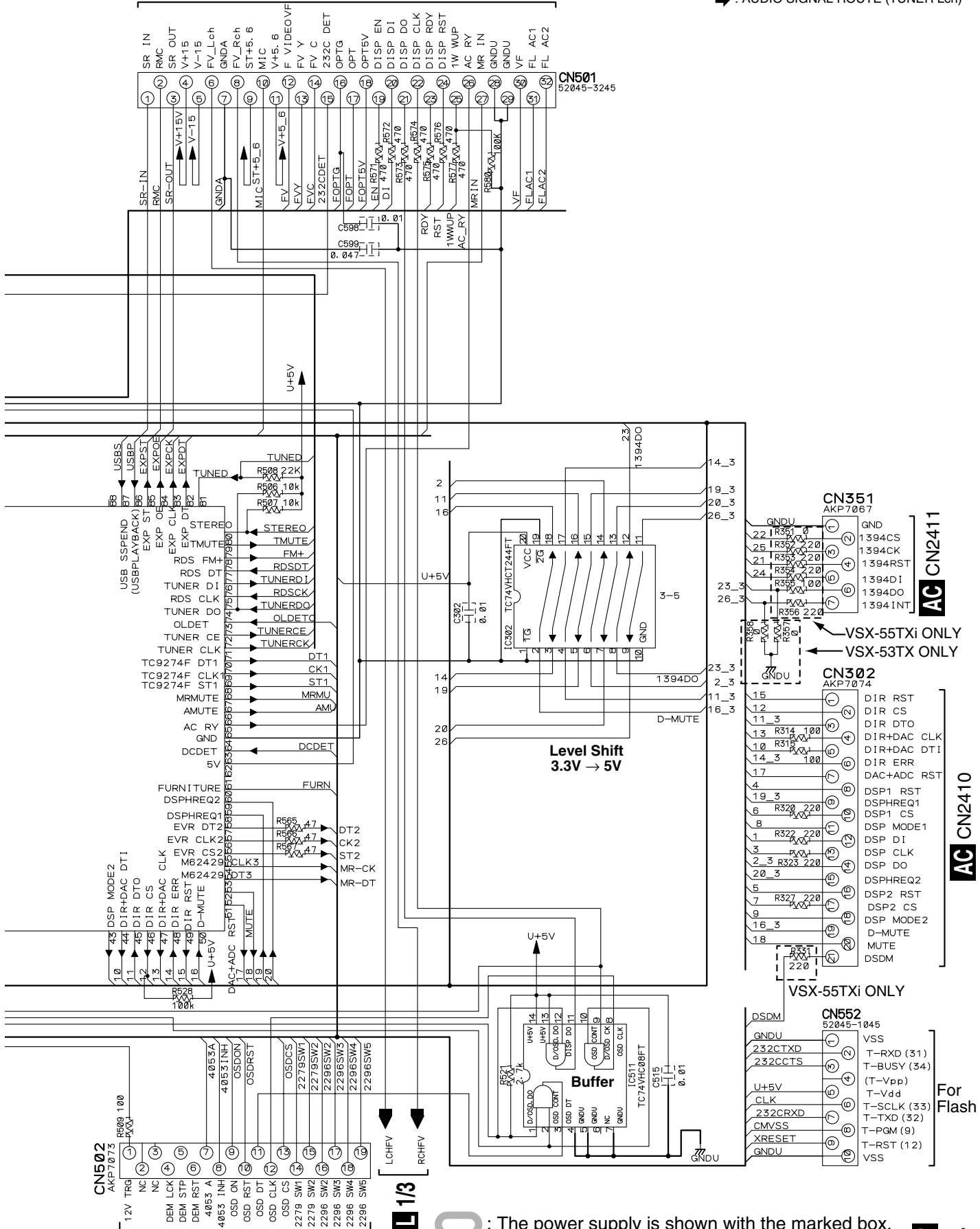
L 1/3, 3/3

L 1/3

L 2/3

U CN3006

(TX) → : AUDIO SIGNAL ROUTE (TUNER Lch)



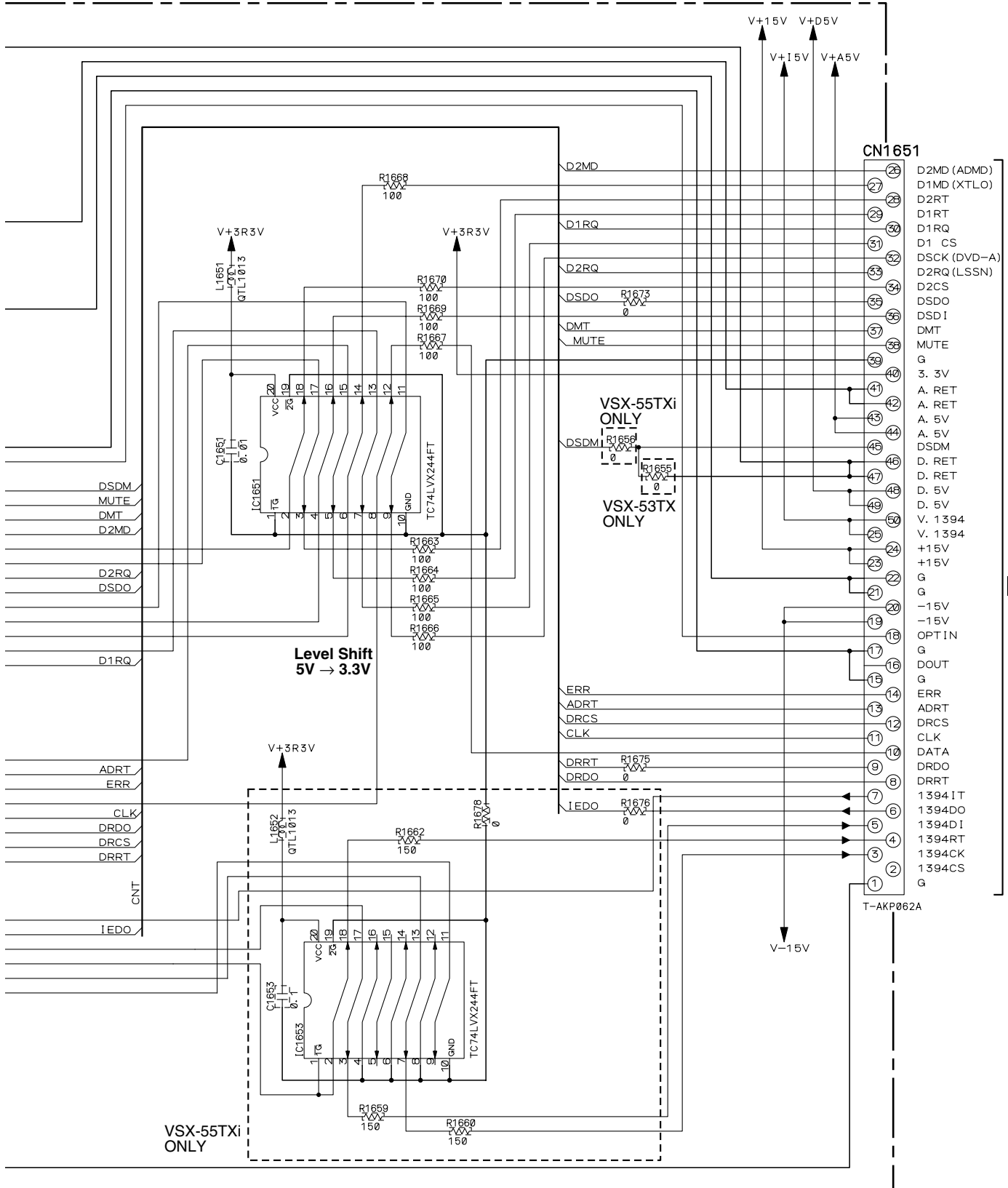
AC CN2413

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

For Flash 3/3

VSX-55TXi

DSP CONNECTION ASSY (VSX-55TXi : AWX8299) (VSX-53TX : AWX8024)



S 1/2 CN102

: The power supply is shown with the marked box.

3.12 POWER AMP IN, FAN CONNECTION and FAN DRIVE ASSYS

A

B

C

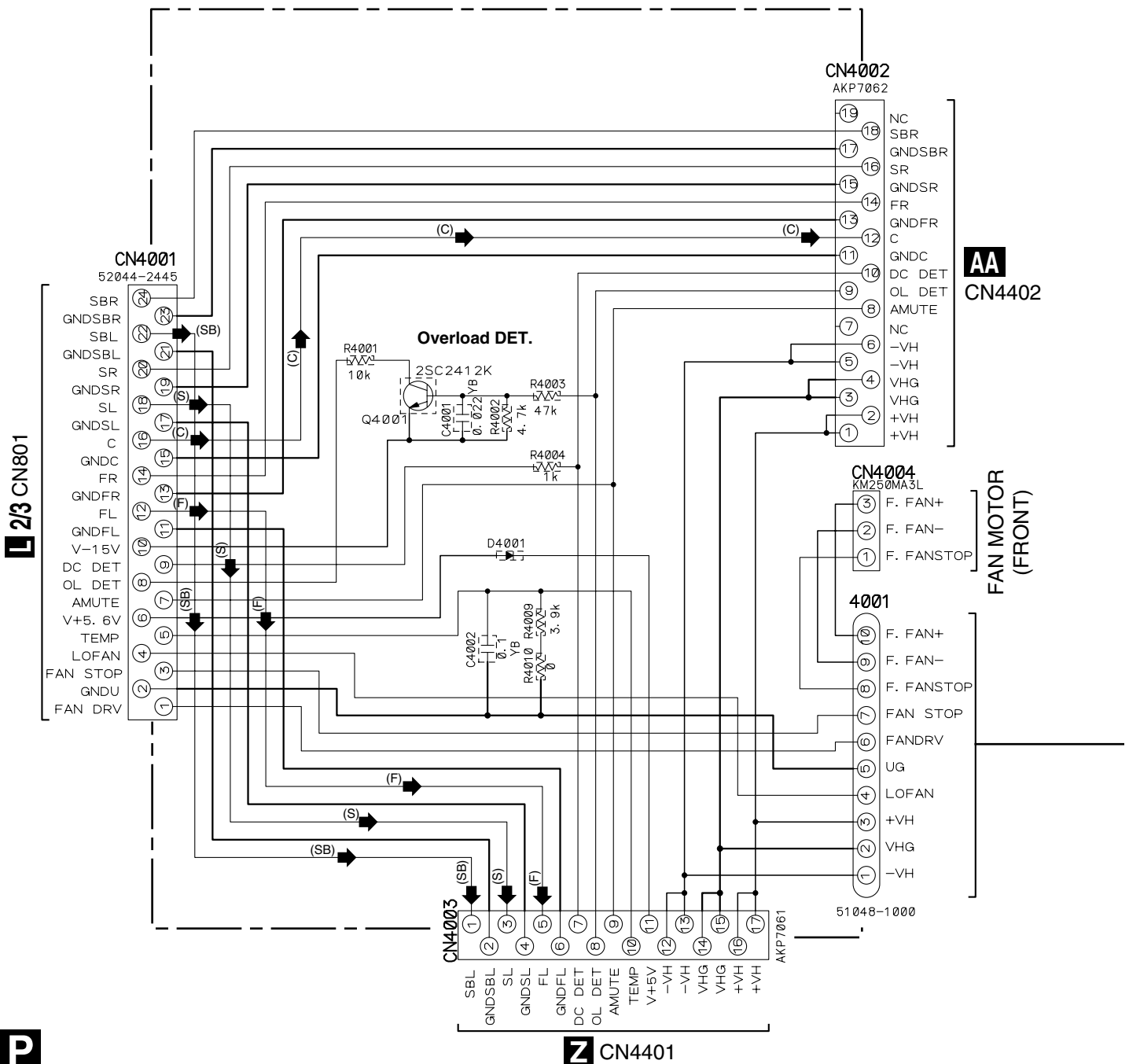
D

E

F

- (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)

P POWER AMP IN ASSY (AWX7982)

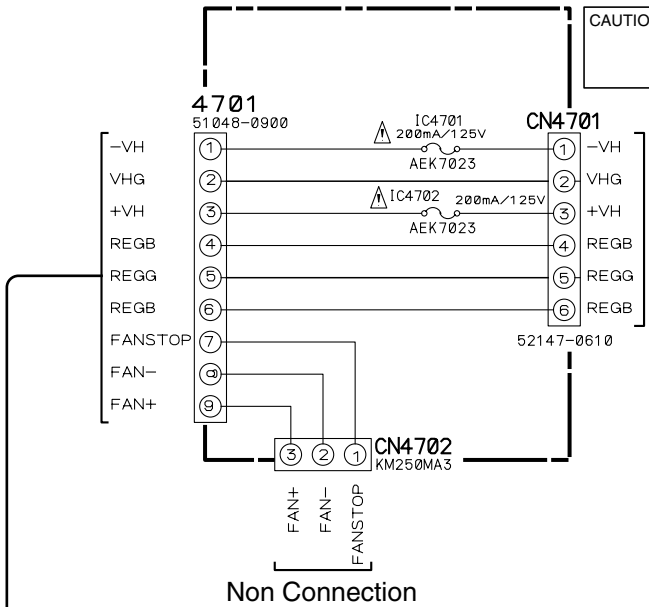


P

Z CN4401

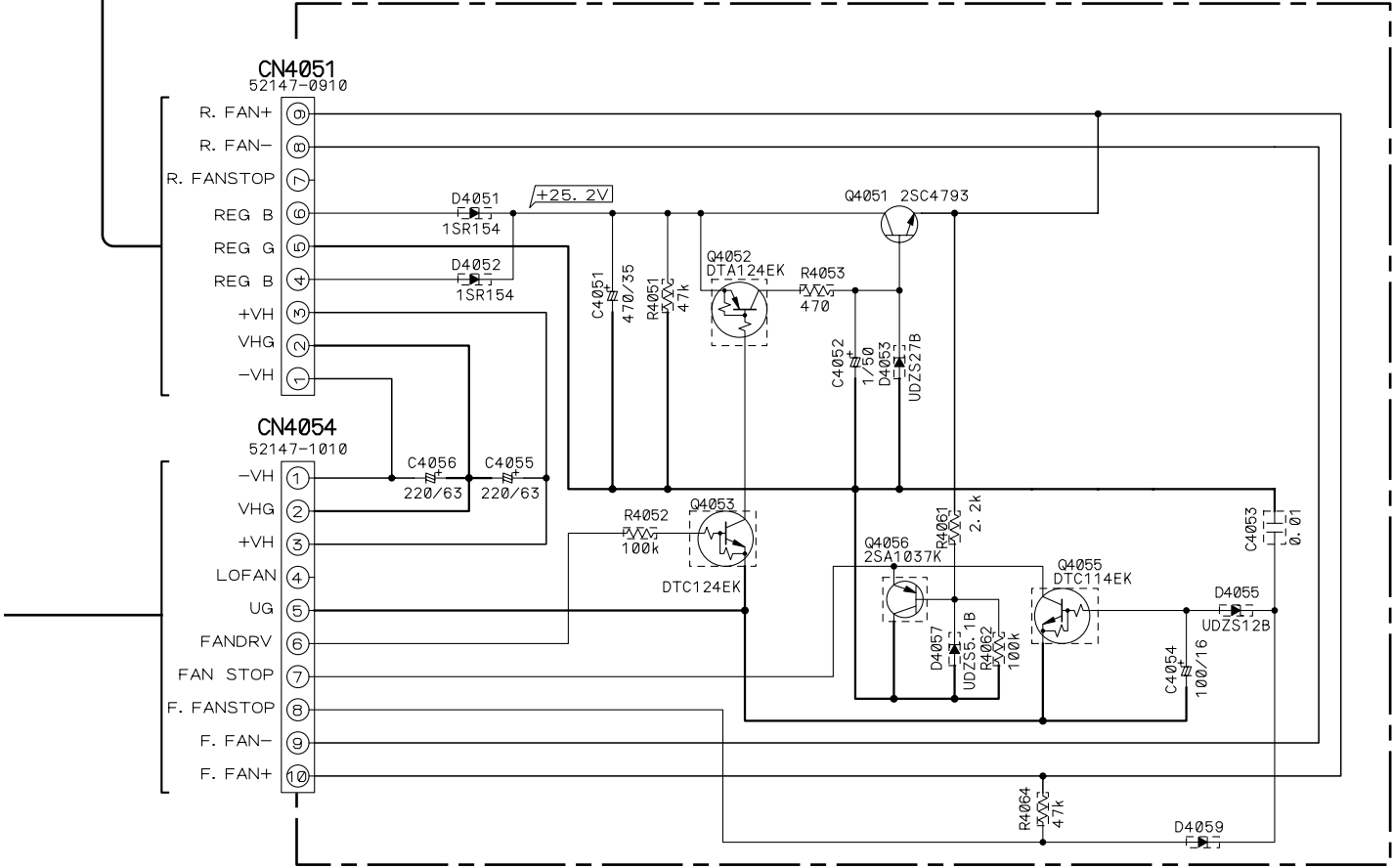
Q FAN CONNECTION ASSY (AWX8005)

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.200 MFD, BY LITTELFUSE INK. FOR IC4701 AND IC4702.



- ⏏_{YA} CFTYA□□□J50-T
- ⏏_{LA} CFTLA□□□J2A-T
- ⏏_{CH} CCSRCH□□□J50-T
- ⏏_{YB} CKSRYB□□□K50-T
- ⏏_{YF} CKSRYF□□□Z25-T
- ⏏ 1SS355-TRB
- ⏏ RS1/16S□□□J-T
- ⏏ RDR1/4VM□□□J-T
- ⏏_(MUF) RD1/4MUF□□□J-T
- ⏏ RS3LMF□□□J
- ⏏_F NON-FRAMABLE

R FAN DRIVE ASSY (AWX7976)



3.14 DSP ASSY (2/2)

S 2/2 DSP ASSY (AWX8249)

S 1/2

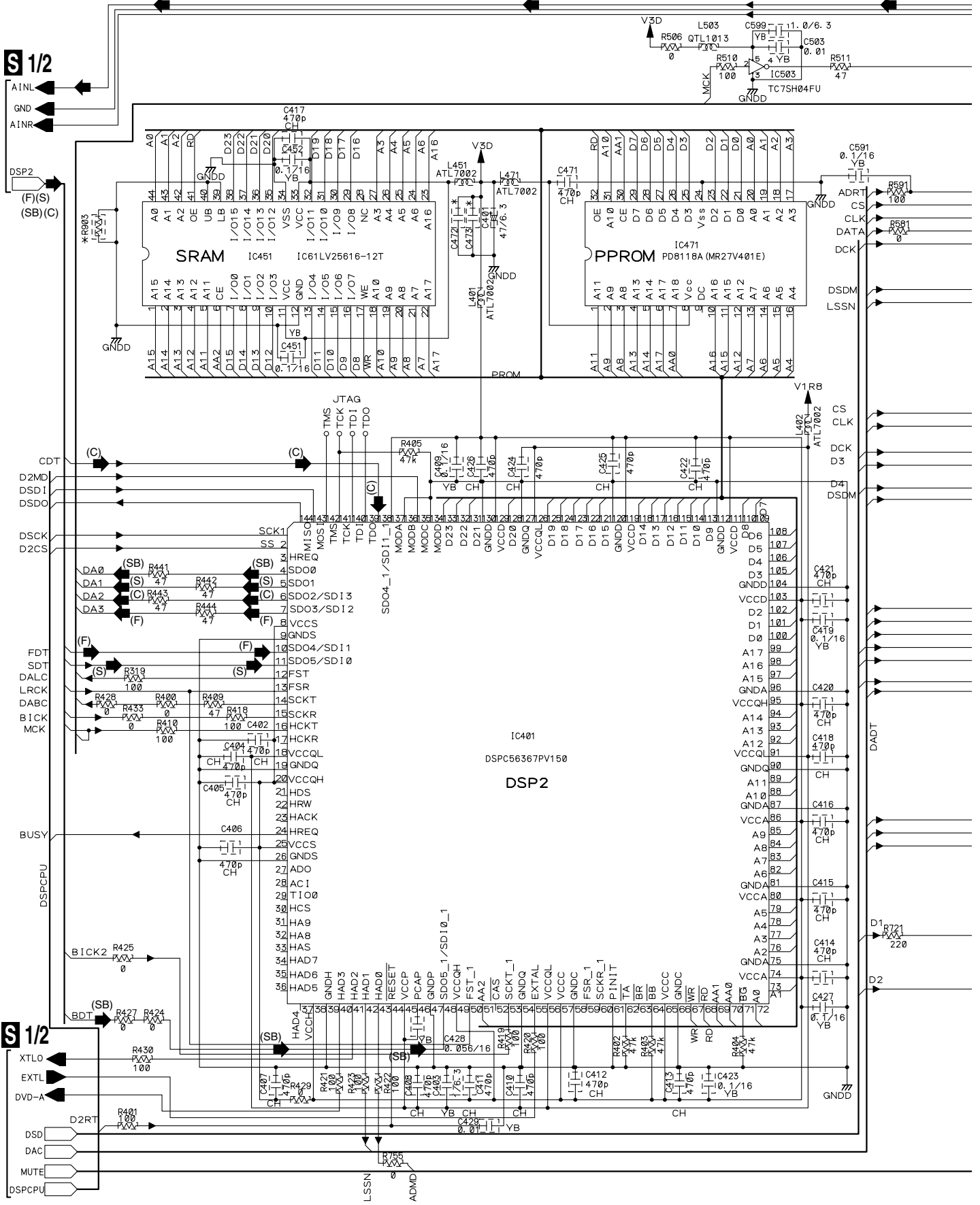
S 1/2

S 1/2

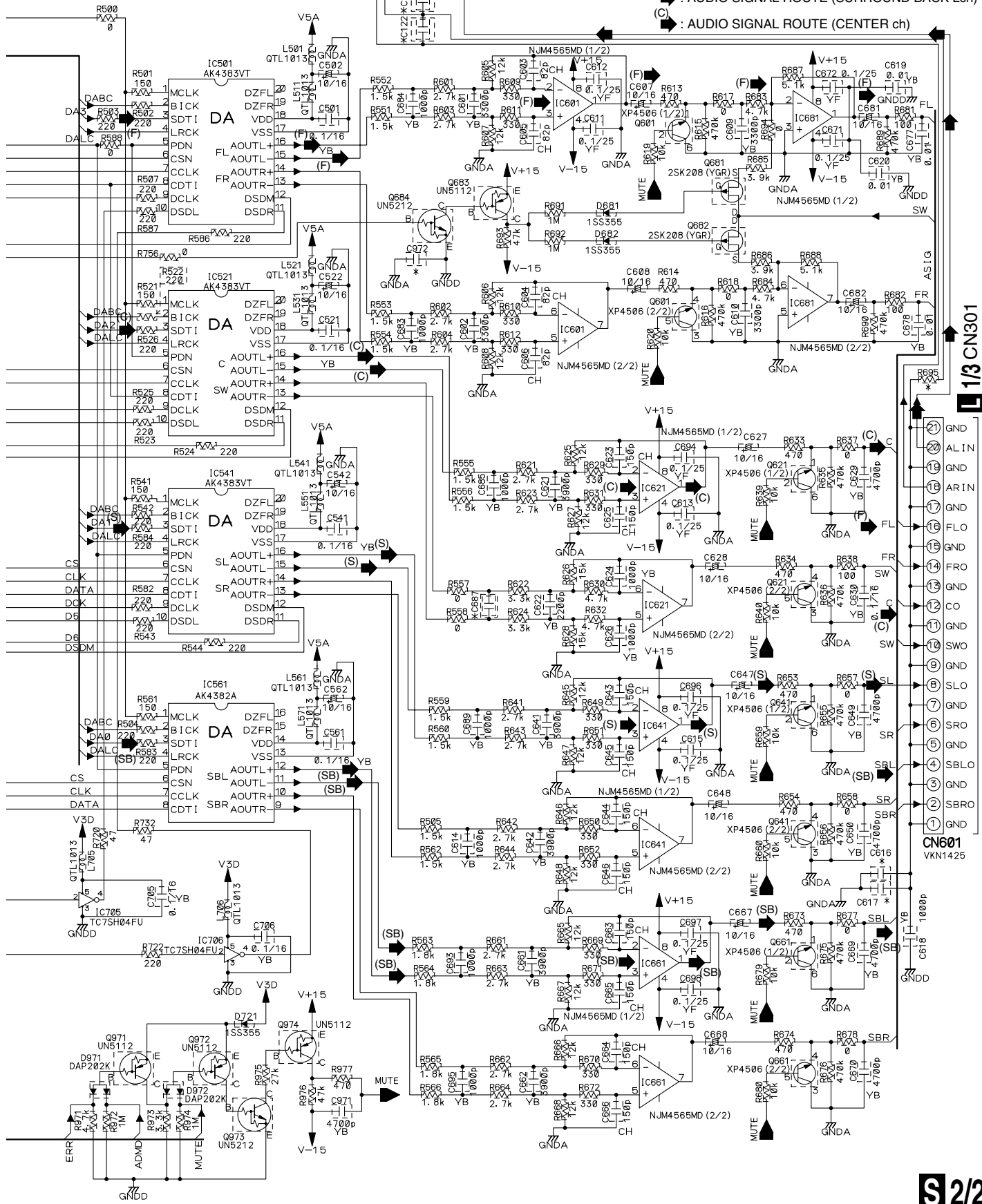
S 1/2

S 1/2

S 2/2



- ◆ : AUDIO SIGNAL ROUTE (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)



A

B

C

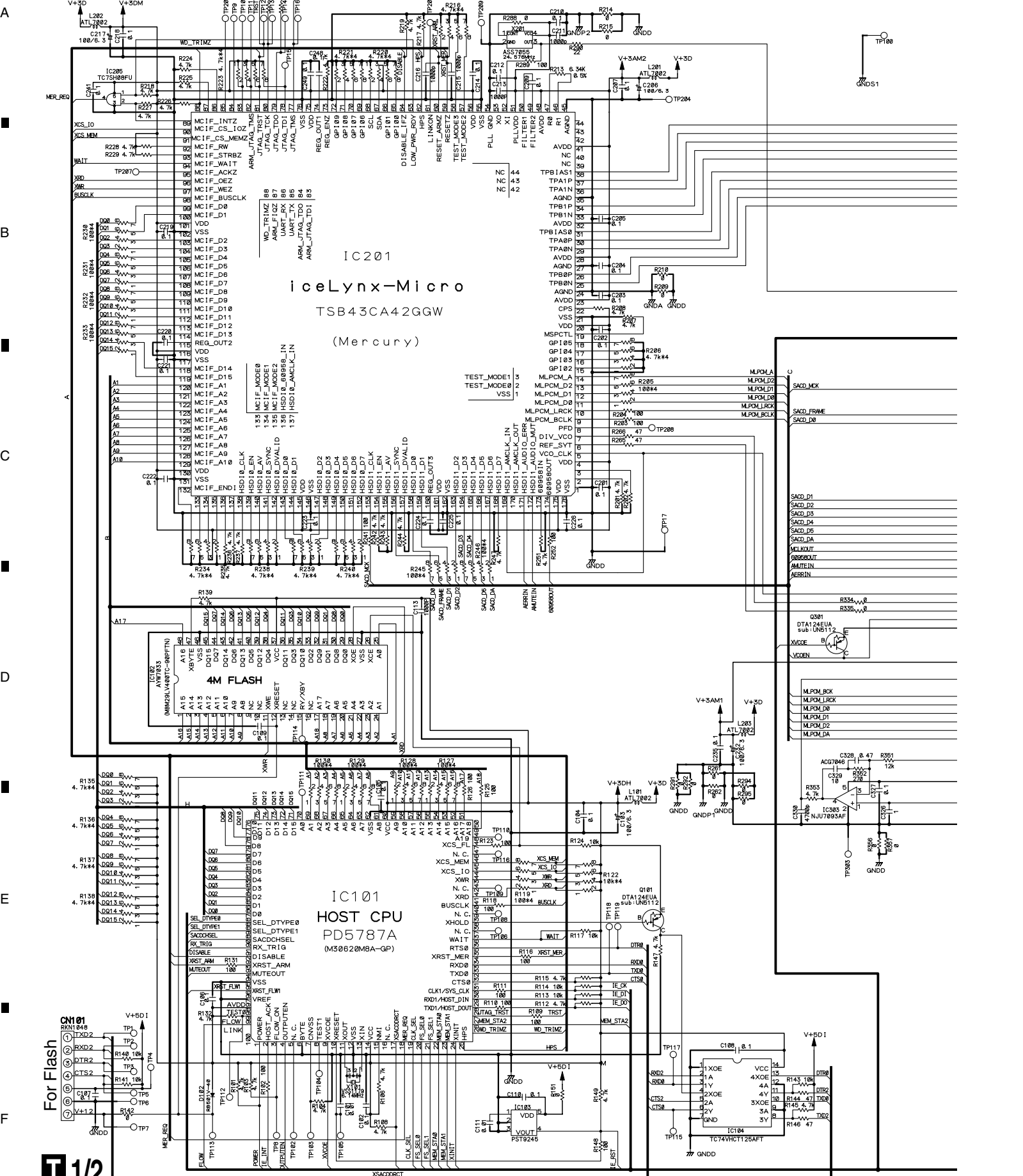
D

E

F



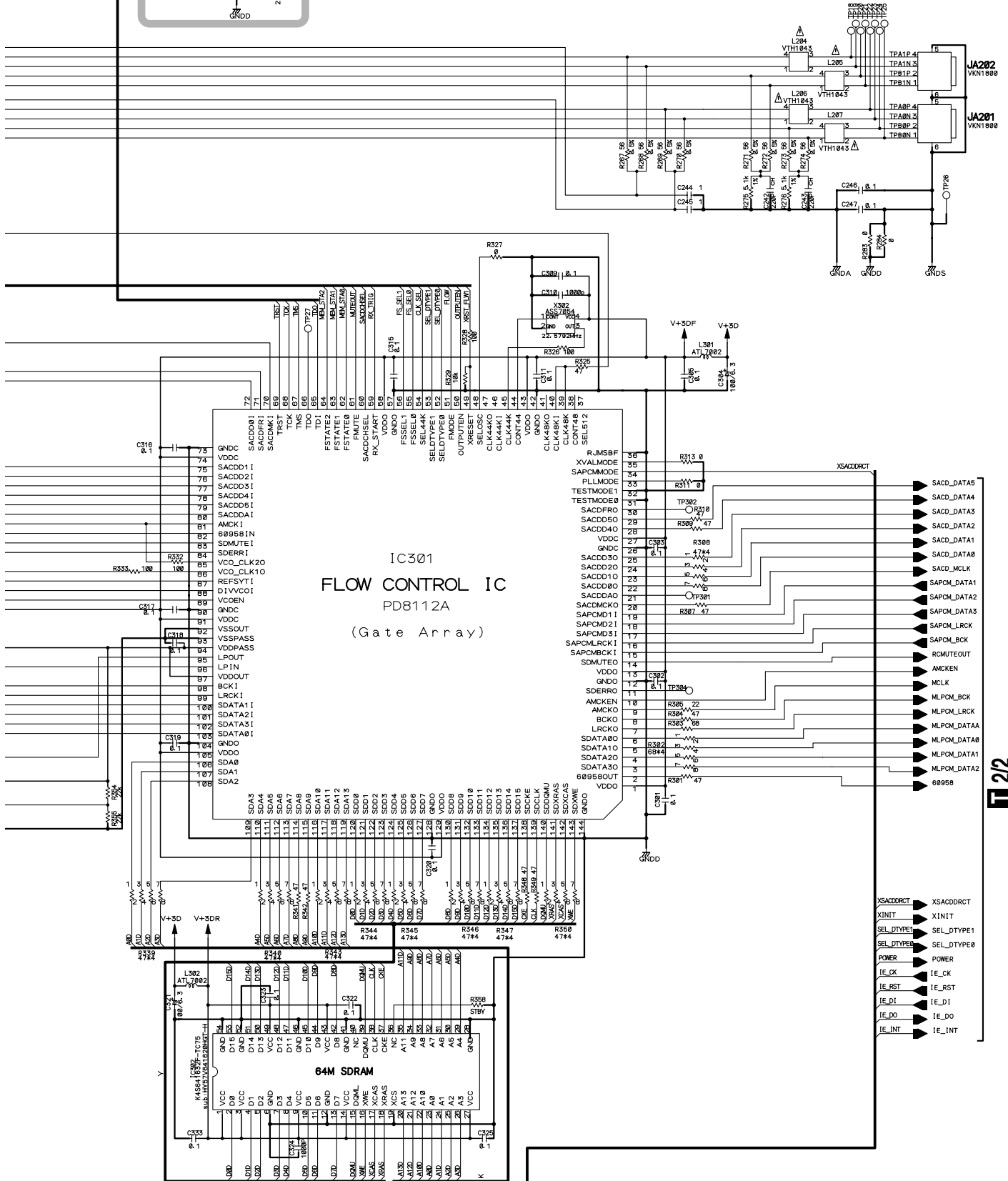
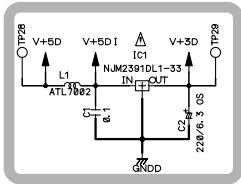
3.15 1394 ASSY (1/2) (VSX-55TXi ONLY)



T 1/2

1/2 1394 ASSY (AWK7768)

: The power supply is shown with the marked box.



1/2 212

1/2

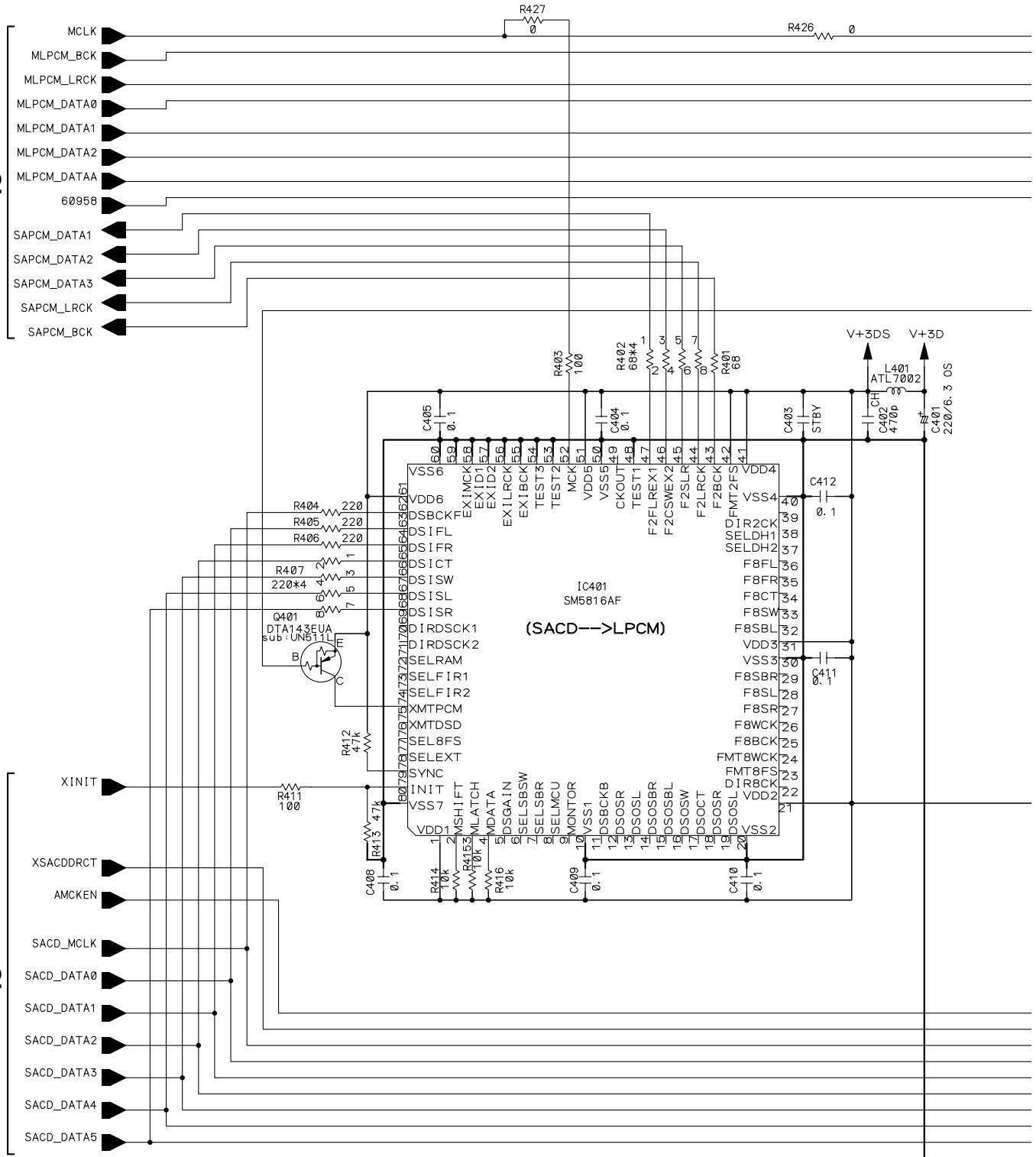
3.16 1394 ASSY (2/2) (VSX-55TXi ONLY)

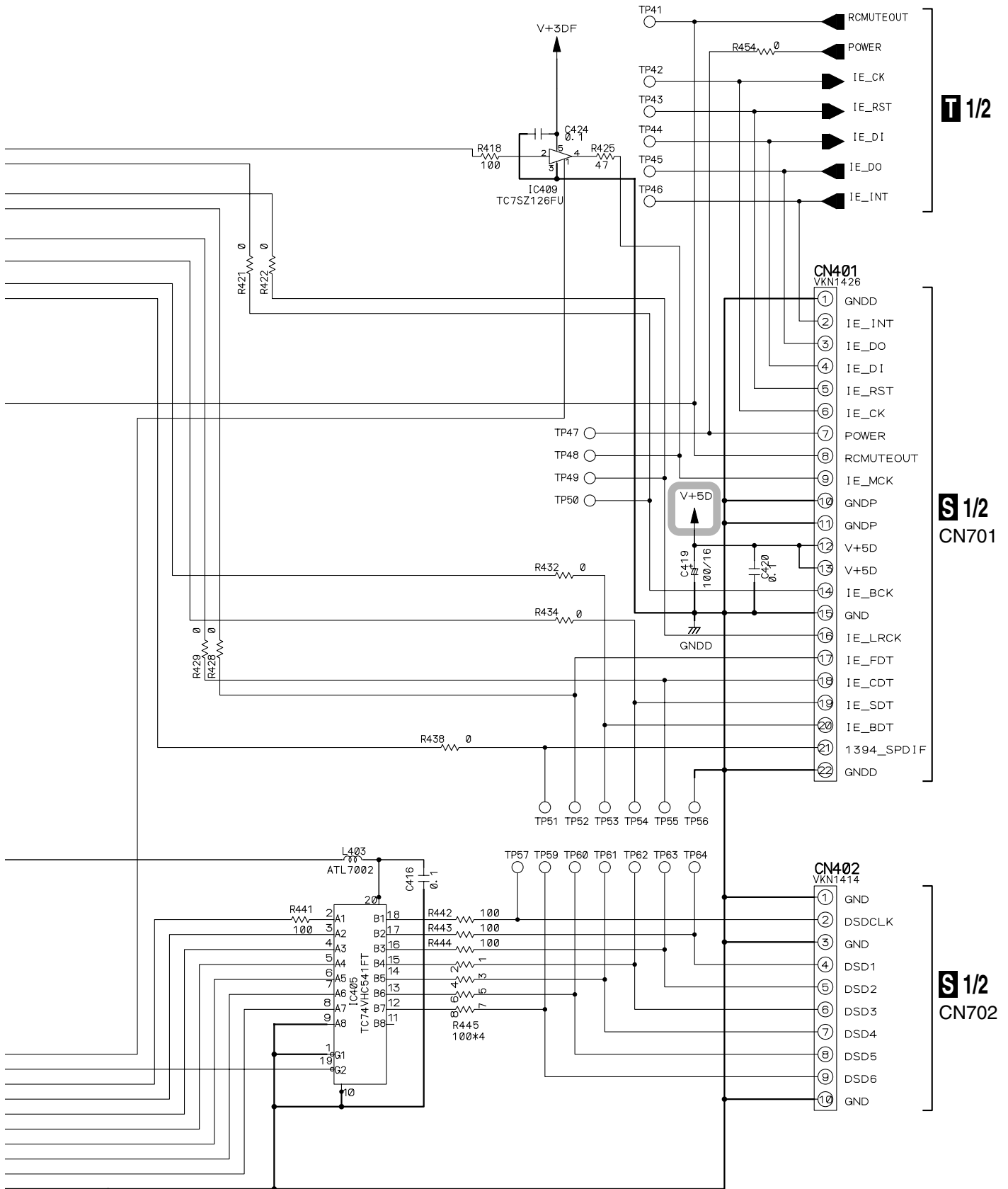
T 2/2 1394 ASSY (AWK7768)


T 1/2

T 1/2

T 2/2





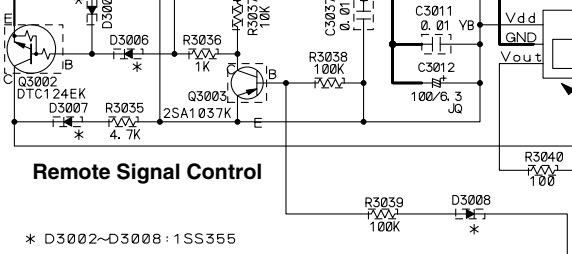
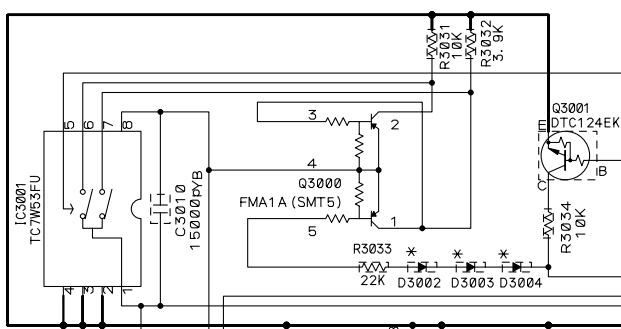
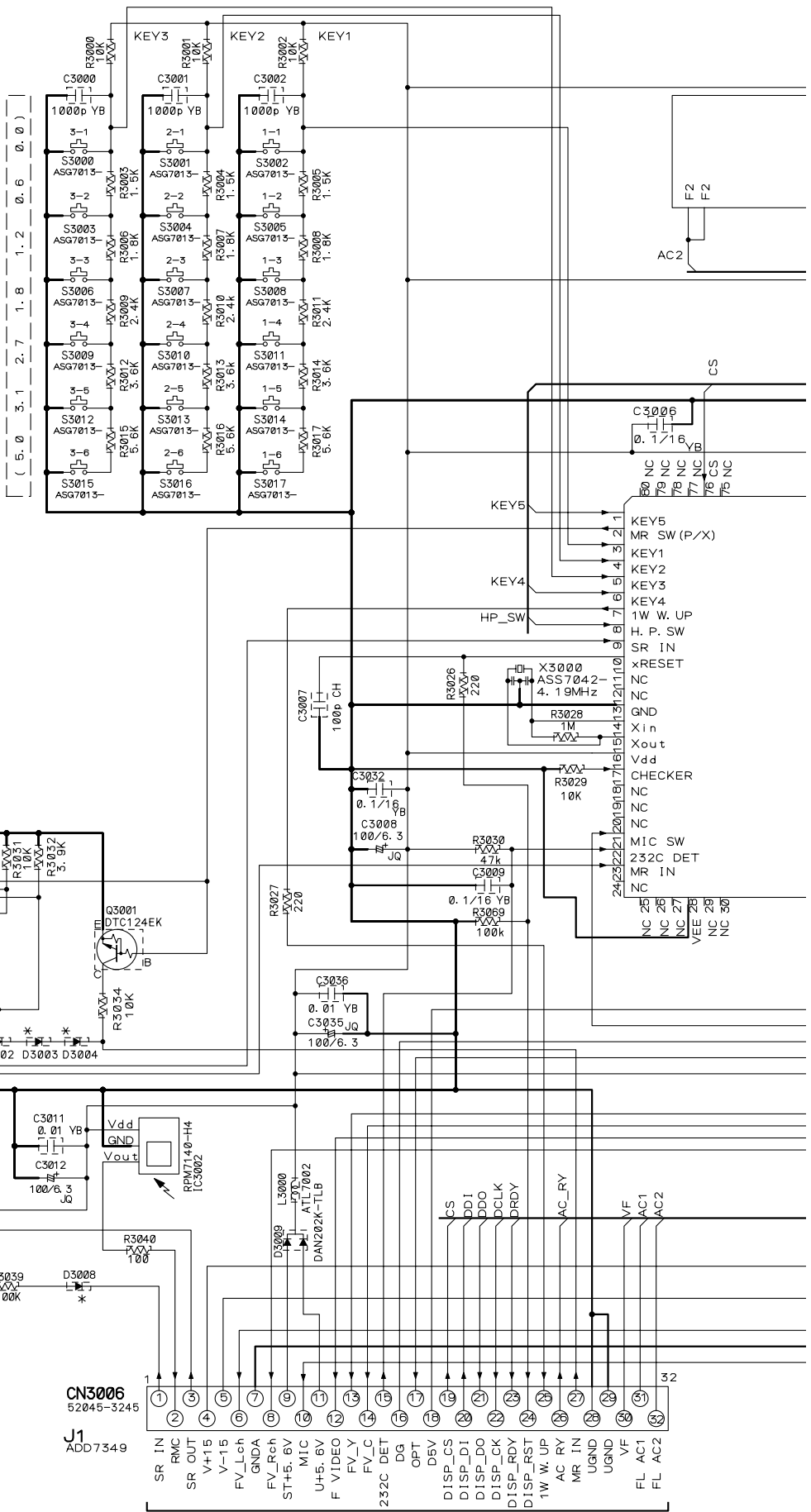
 : The power supply is shown with the marked box.

T 2/2

3.17 DISPLAY ASSY

U DISPLAY ASSY (VSX-55TXi : AWX8315) (VSX-53TX : AWX7983)

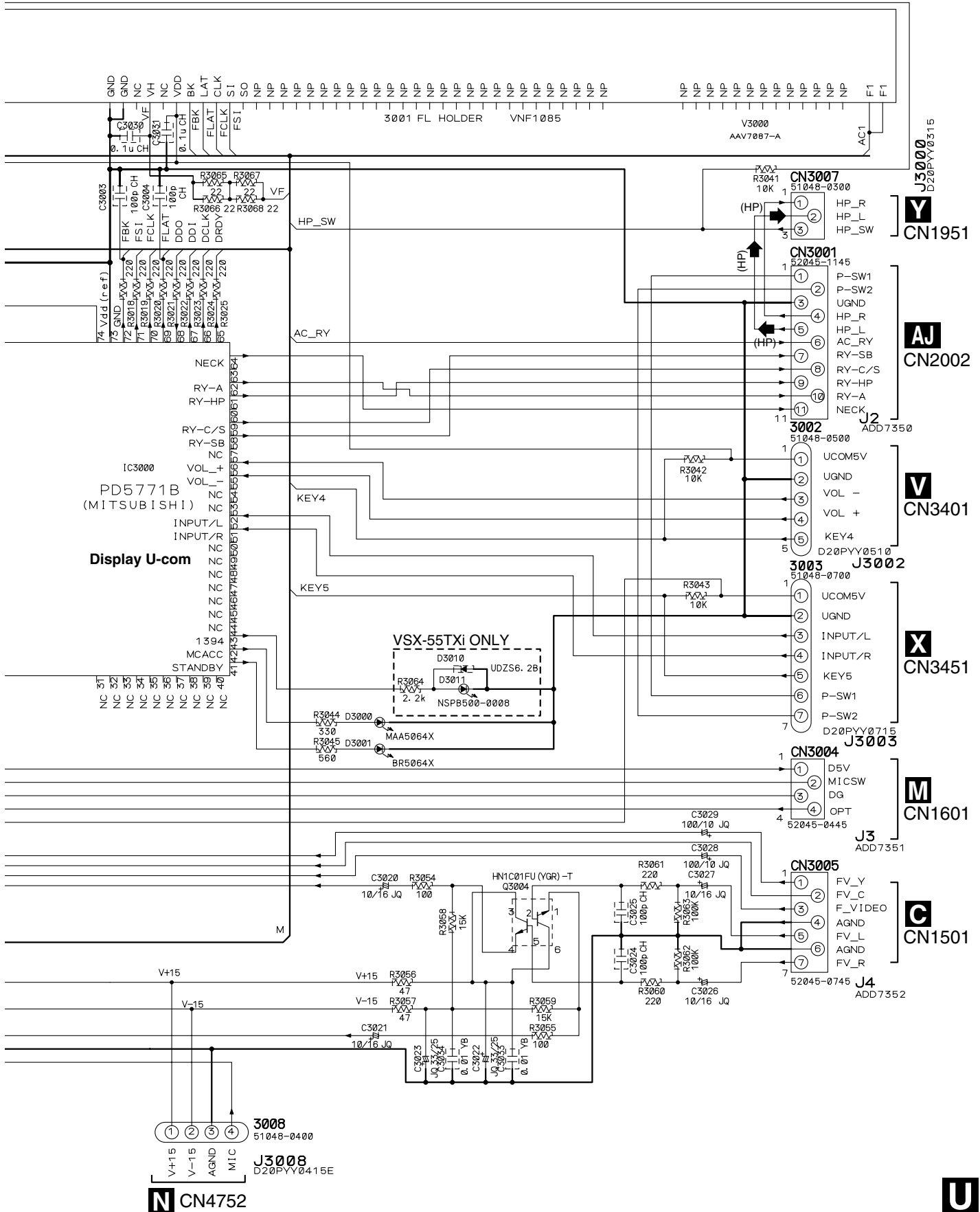
- 55TXi**
- 1-1 SB CH MODE
 - 1-2 HI-BIT/ HI-SAMPLING
 - 1-3 SIGNAL SELECT
 - 1-4 MULTI JOG CONT. RETURN
 - 1-5 MULTI JOG CONT. SETUP
 - 1-6 SPEAKER
- 53TX**
- 2-1 LOUDNESS
 - 2-2 MIDNIGHT
 - 3-1 BAND
 - 3-2 CLASS
 - 3-3 TUNING SELECT
 - 3-4 (ST. FREQ) -
 - 3-5 (ST. FREQ) +
 - 3-6 TUNER EDIT



* D3002~D3008 : 1SS355

L 3/3 CN501

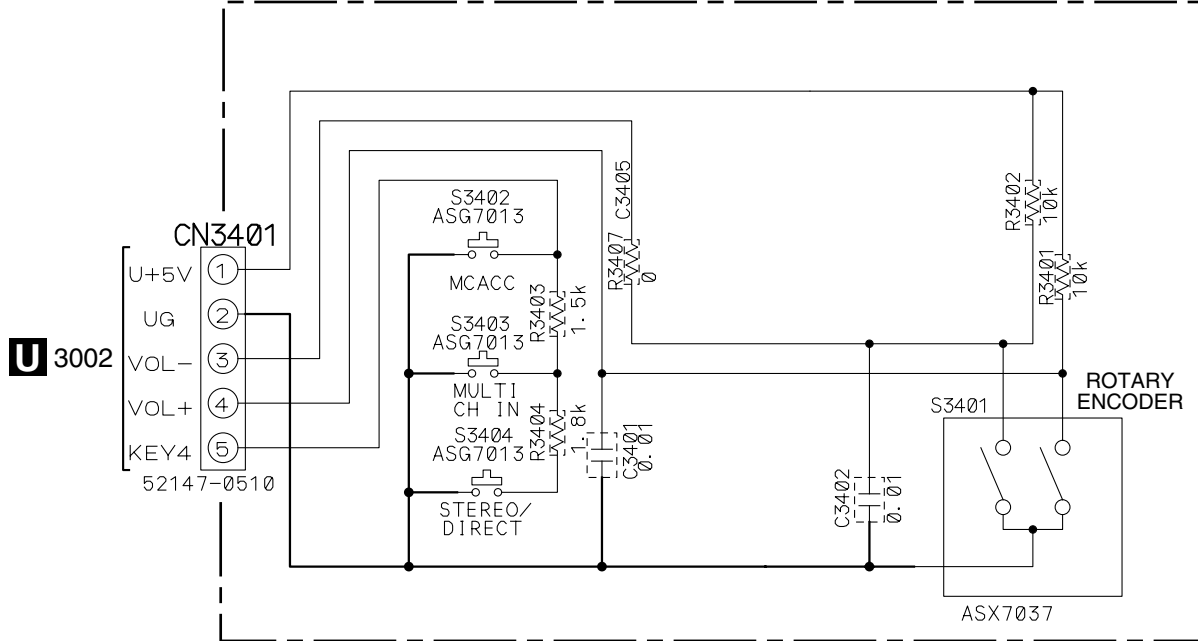
(HP) → AUDIO SIGNAL ROUTE (PHONES ch)



3.18 VOLUME, MULTI JOG and HEADPHONE ASSYS

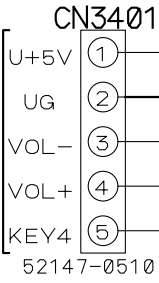
A

V VOLUME ASSY (AWX7971)



B

U 3002



C

- S3401 : MASTER VOLUME
- S3402 : ACOUSTIC EQ
- S3403 : MULTI CH IN
- S3404 : STEREO/DIRECT

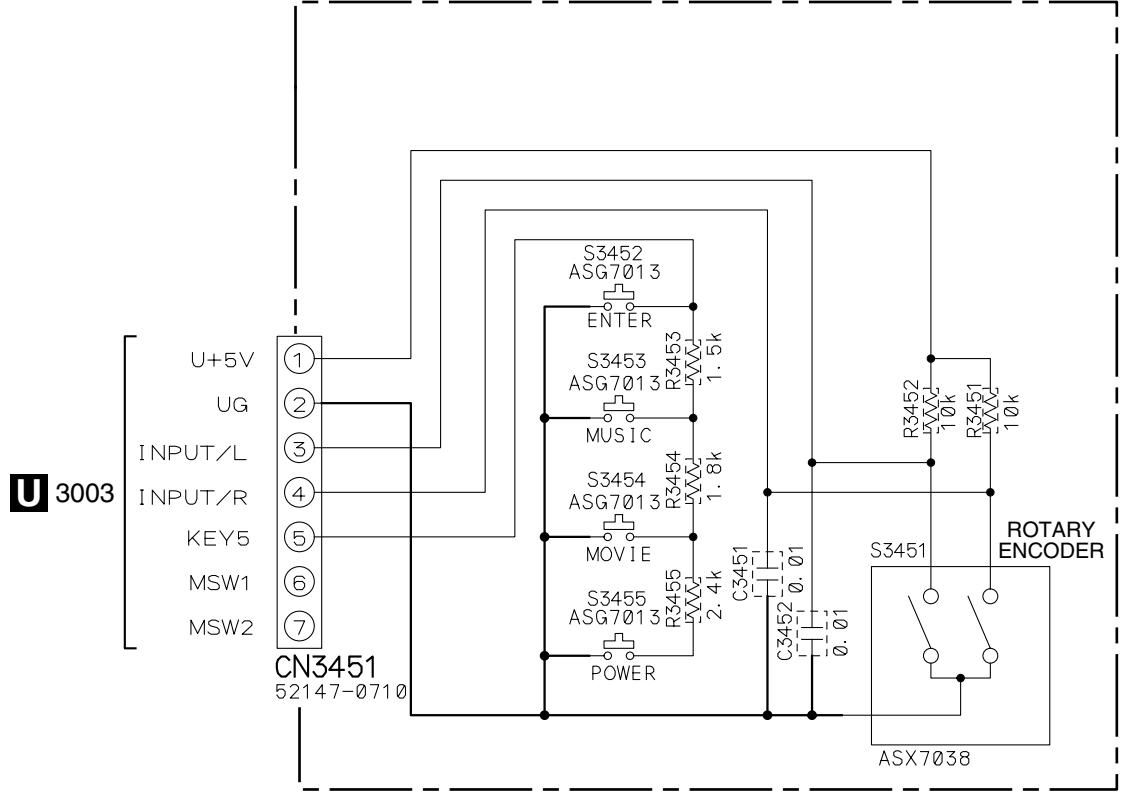
D

E

F

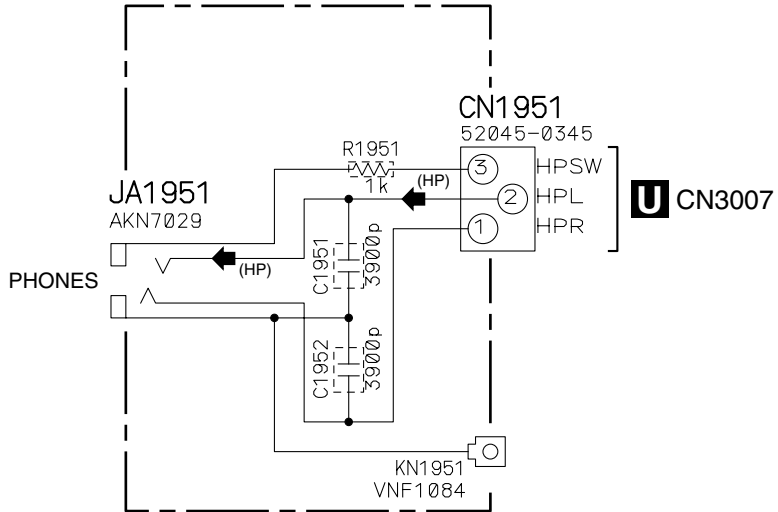


X MULTI JOG ASSY (AWX7972)




- S3451 : MULTI JOG
- S3452 : ENTER
- S3453 : MUSIC
- S3454 : MOVIE
- S3455 : ⏻ STANDBY/ON

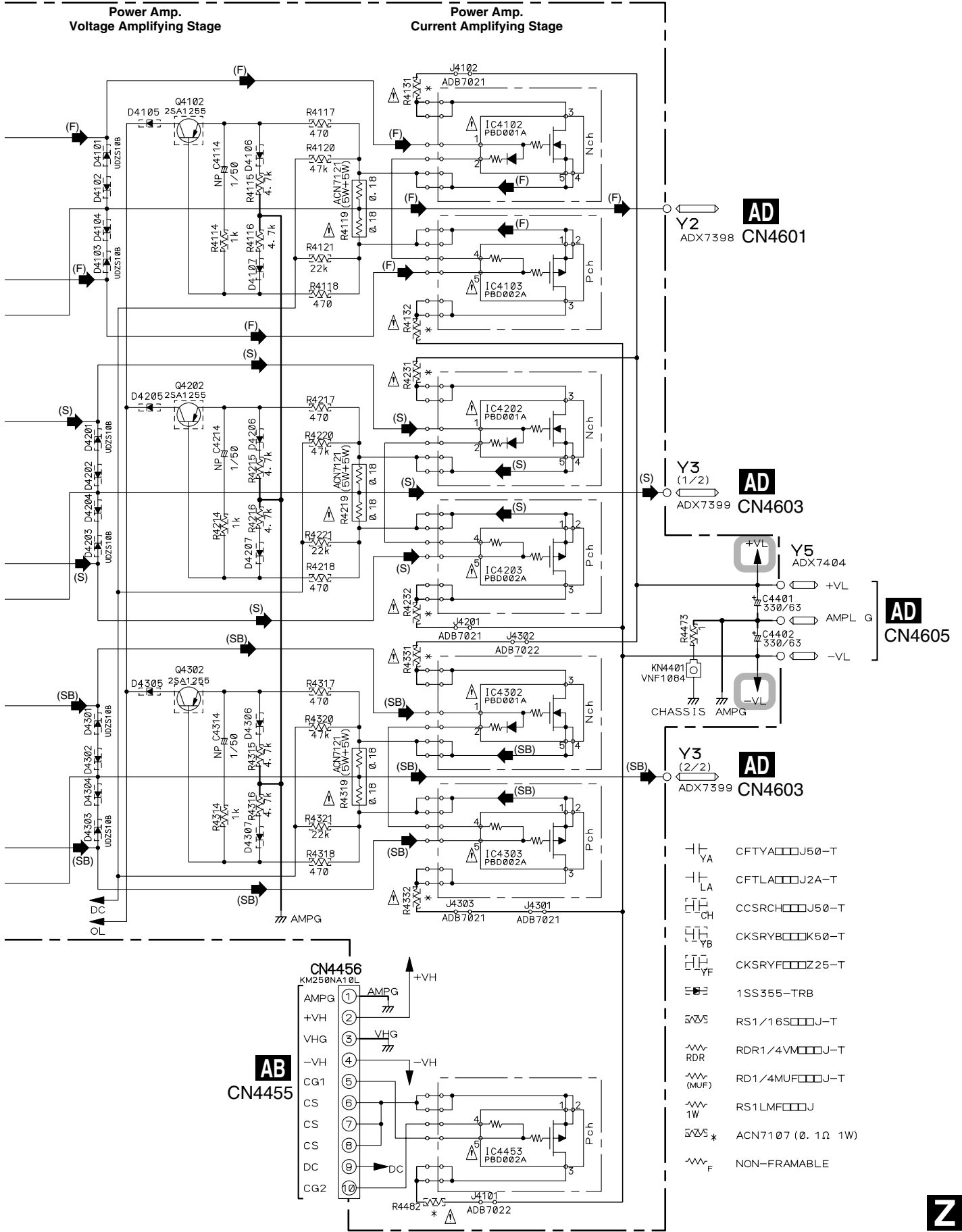
Y HEADPHONE ASSY (AWX7980)



(HP) → : AUDIO SIGNAL ROUTE (PHONES ch)

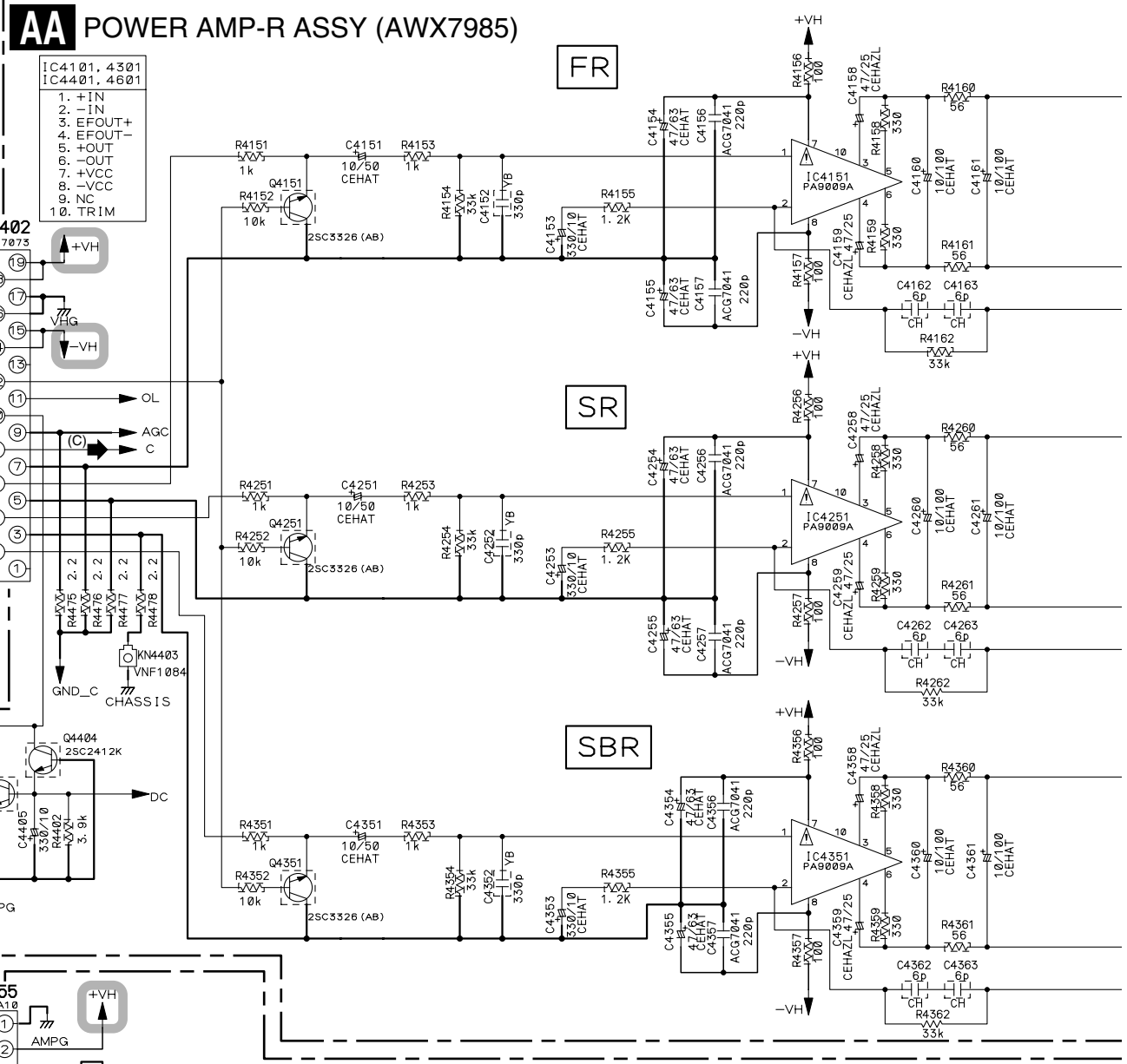


 : The power supply is shown with the marked box.

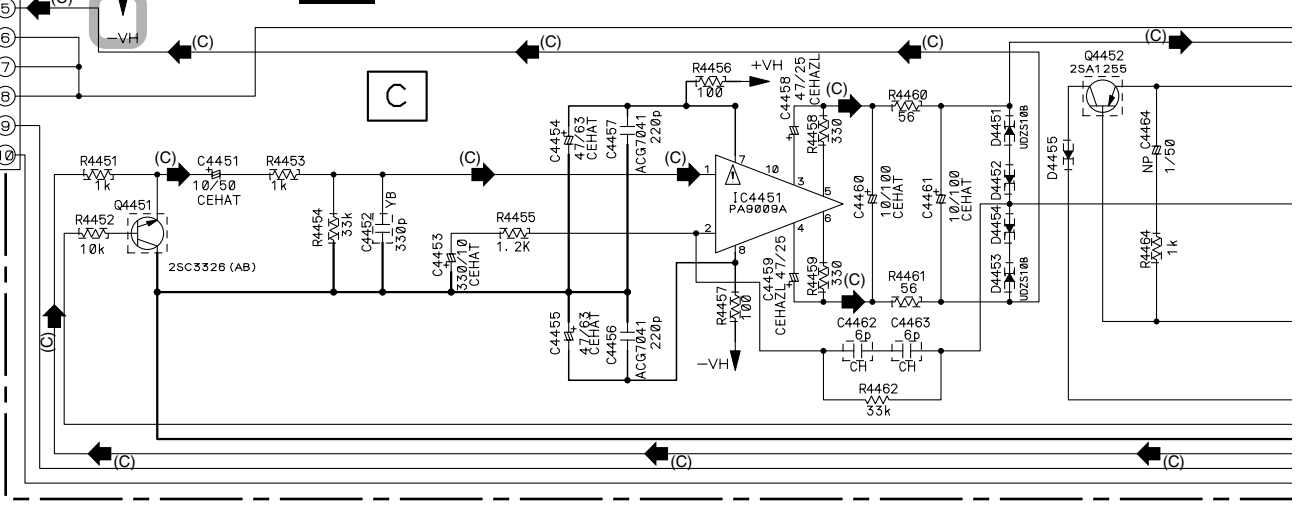


3.20 POWER AMP-R and POWER AMP-C ASSYS

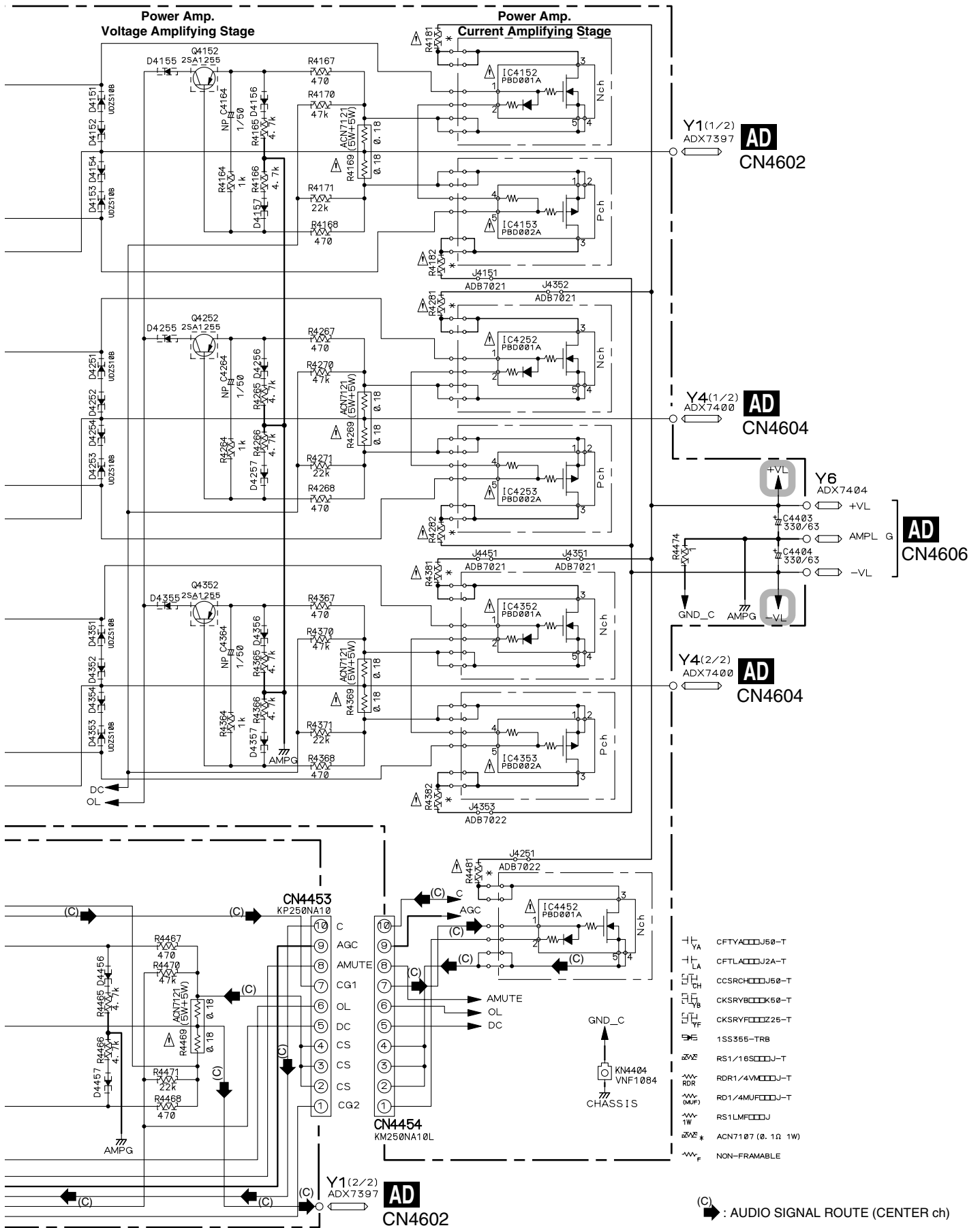
A
B
C
D
E
F



AB POWER AMP-C ASSY (AWX7986)



AA AB



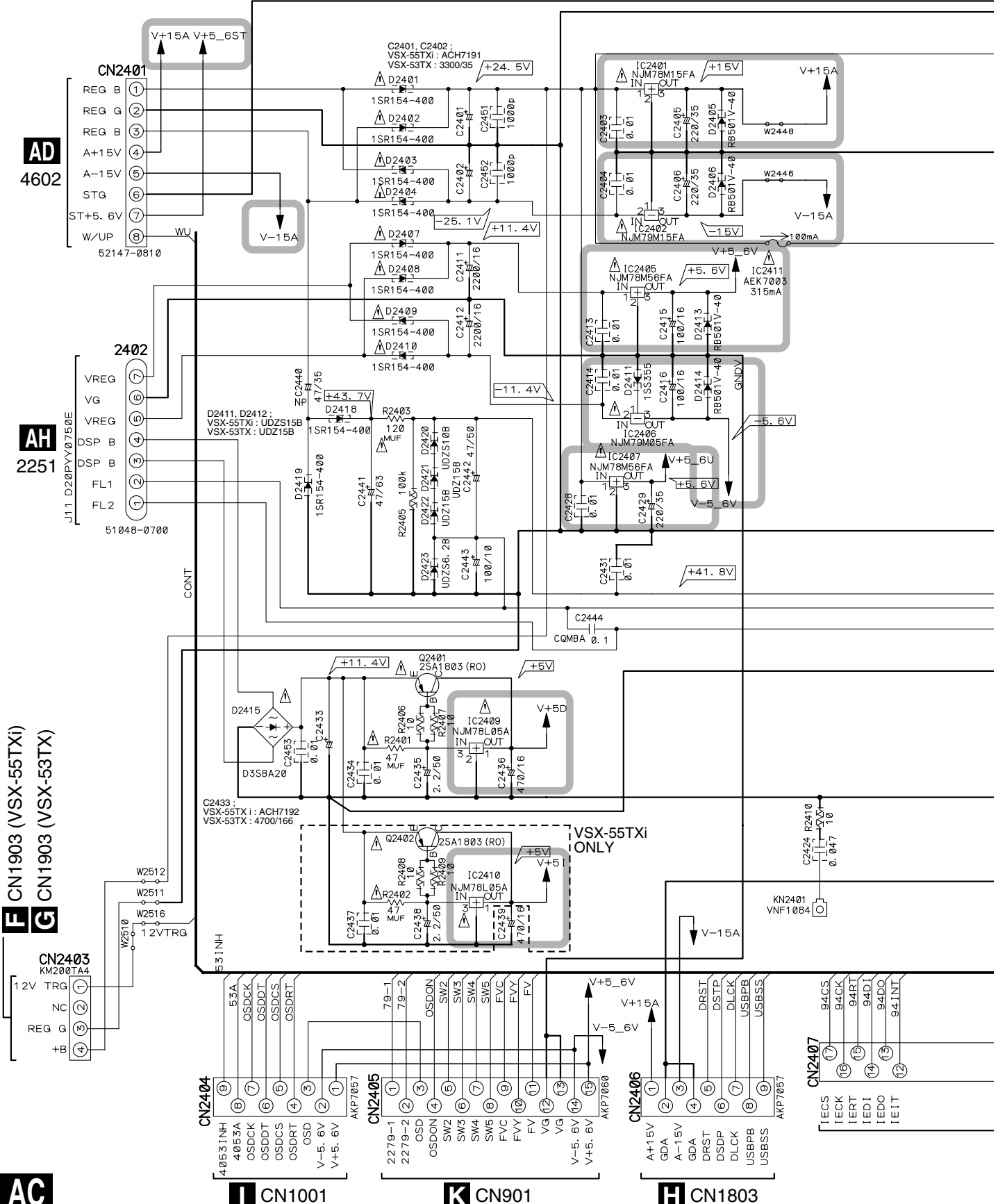
: The power supply is shown with the marked box.

AA AB

3.21 REGULATOR ASSY

AC REGULATOR ASSY (VSX-55TXi : AWX8303)
(VSX-53TX : AWX7967)

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.315 MFD, BY LITTELFUSE INK. FOR IC2411.

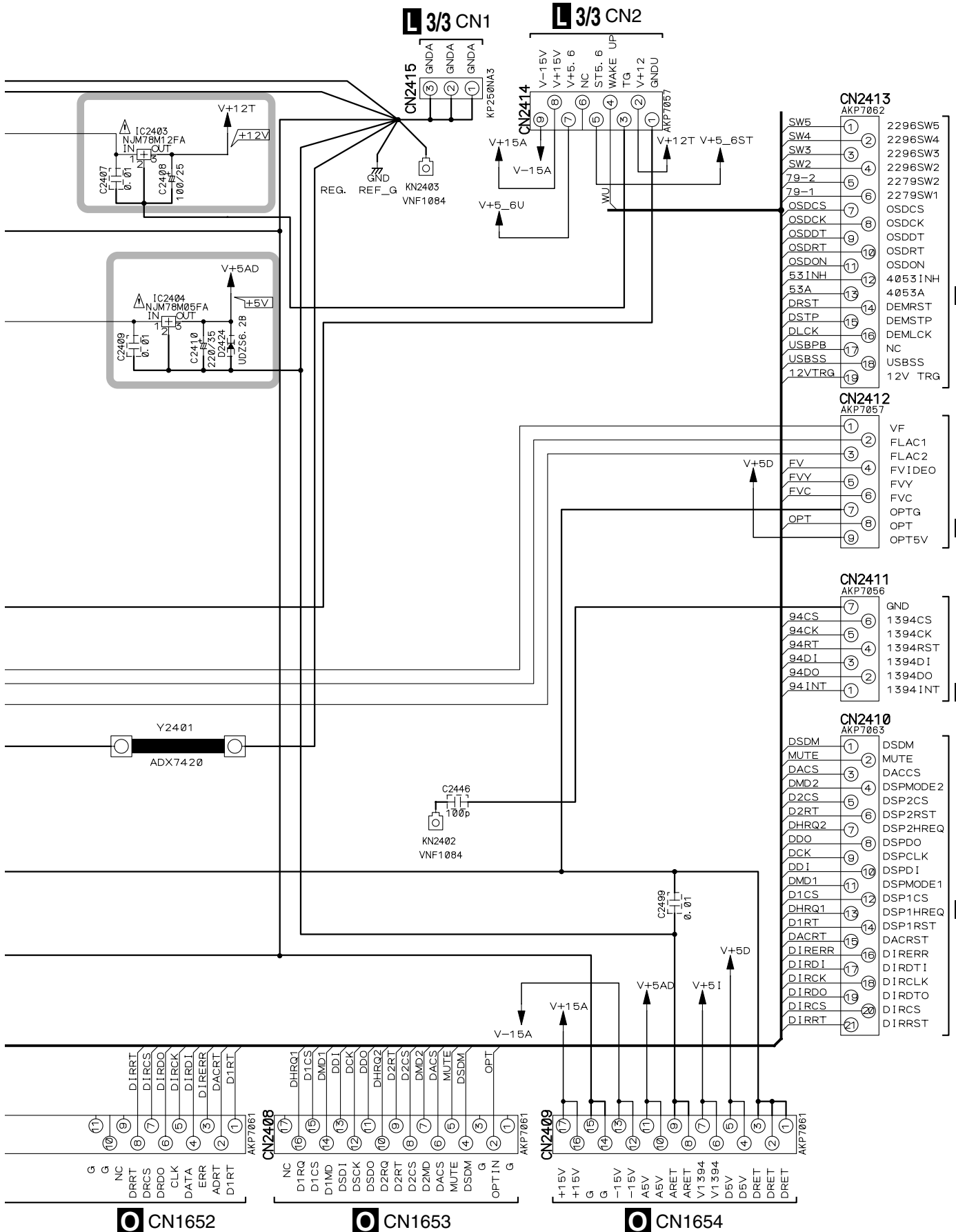


AC

L CN1001

K CN901

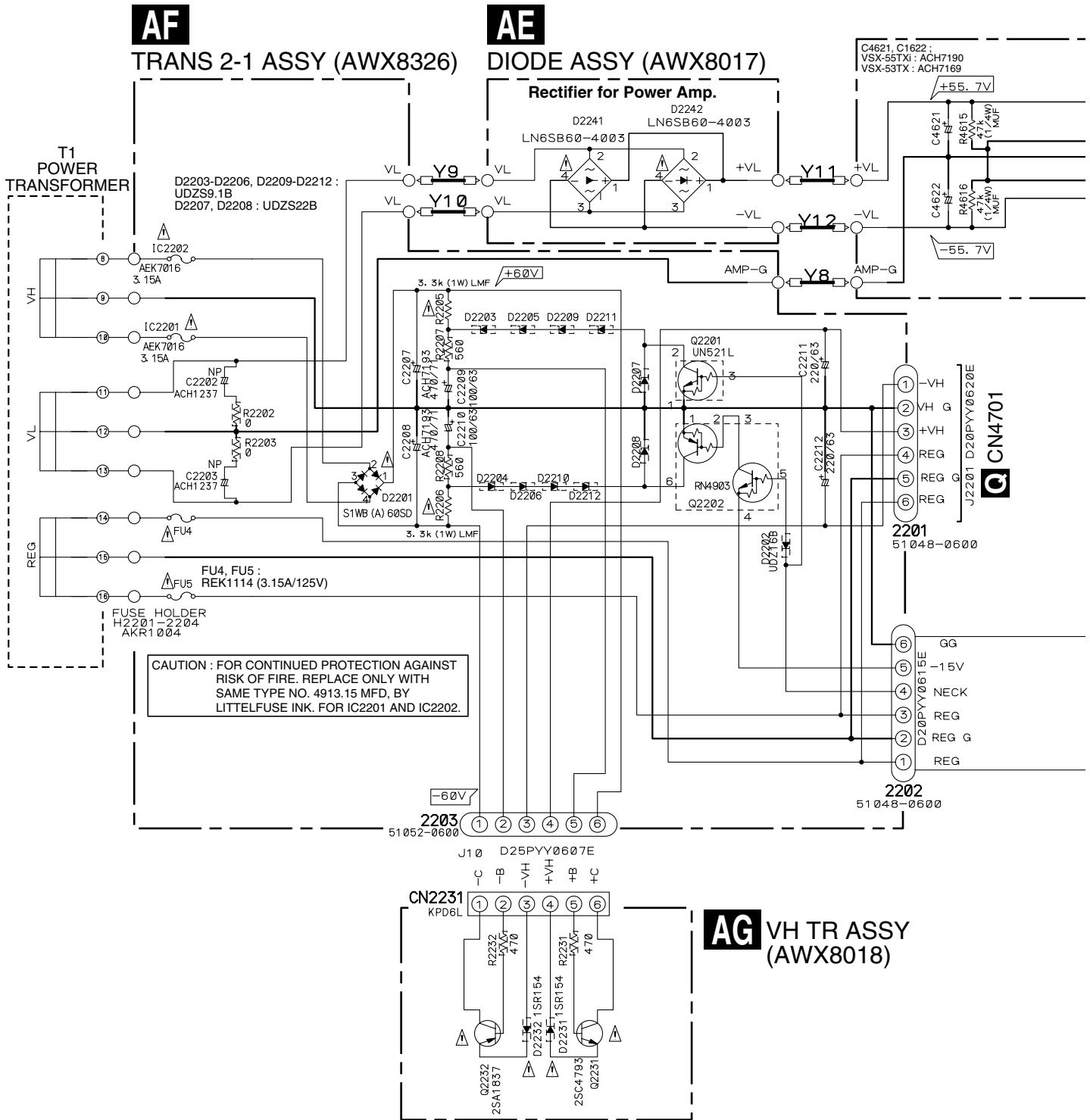
H CN1803



: The power supply is shown with the marked box.



3.22 SP/PS, DIODE, TRANS 2-1 and VH TR ASSYS



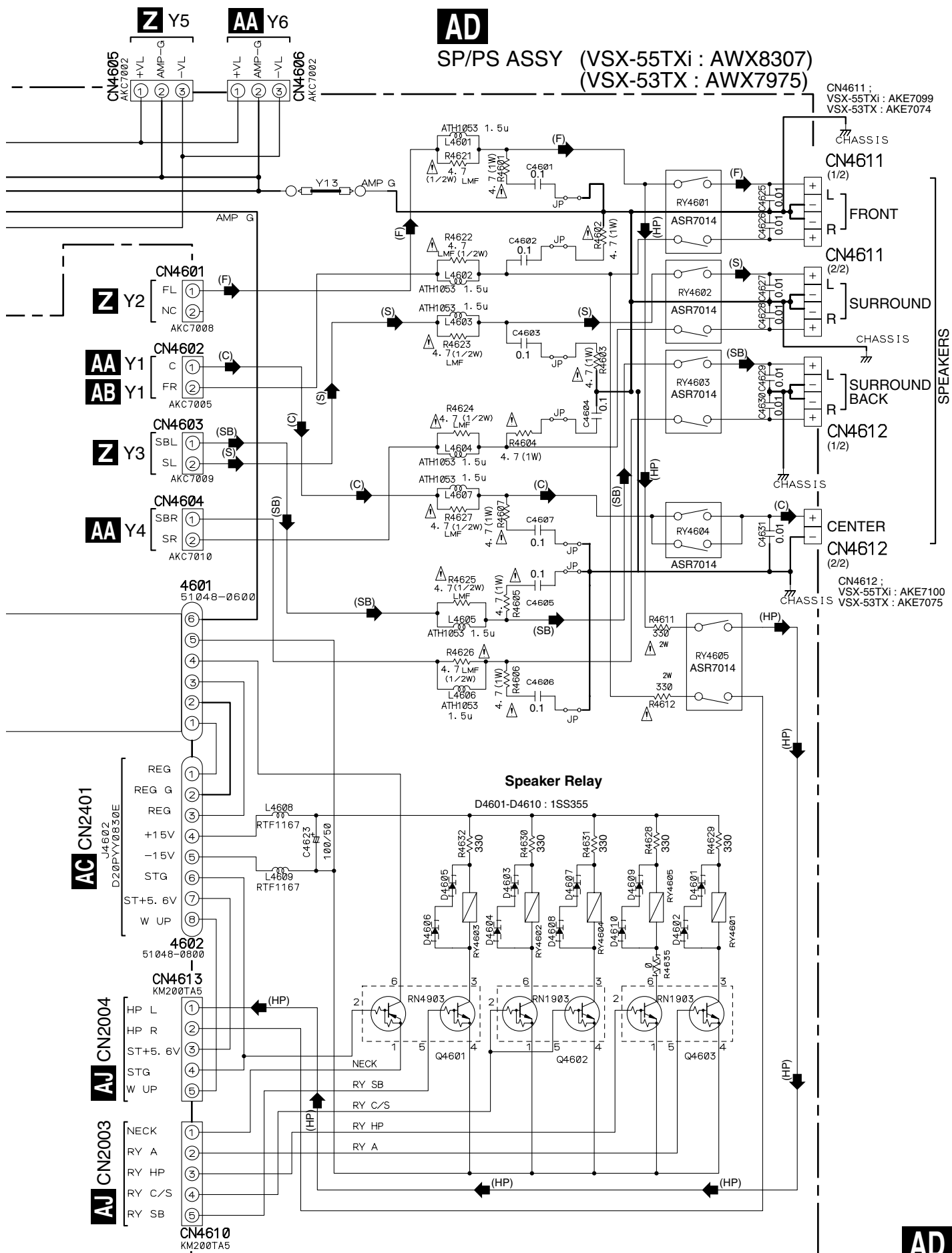
• NOTE FOR FUSE REPLACEMENT

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

- (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)
- (HP) : AUDIO SIGNAL ROUTE (PHONES ch)

AD AE AF AG

AD
 SP/PS ASSY (VSX-55TXi : AWX8307)
 (VSX-53TX : AWX7975)



CN4611 ;
 VSX-55TXi : AKE7099
 VSX-53TX : AKE7074

CHASSIS

CN4611 (1/2)

L R

FRONT

CN4611 (2/2)

L R

SURROUND

CHASSIS

CN4612 (1/2)

L R

SURROUND BACK

CHASSIS

CN4612 (2/2)

L R

CENTER

CHASSIS

CN4612 (2/2)

L R

SPEAKERS

CHASSIS

CN4612 (2/2)

L R

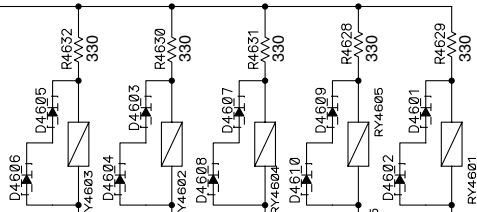
CN4612 ;

VSX-55TXi : AKE7100

VSX-53TX : AKE7075

Speaker Relay

D4601-D4610 : 1SS355



AC CN2401
 J4602
 D20PY9830E

AJ CN2004
 HP L
 HP R
 ST+5.6V
 STG
 W UP

AJ CN2003
 NECK
 RY A
 RY HP
 RY C/S
 RY SB

4601
 51048-0600

4602
 51048-0800

CN4613
 KM200TA5

CN4610
 KM200TA5

3.23 TRANS 2-2, TRANS 1 and PRIMARY ASSYS

A

B

C

D

E

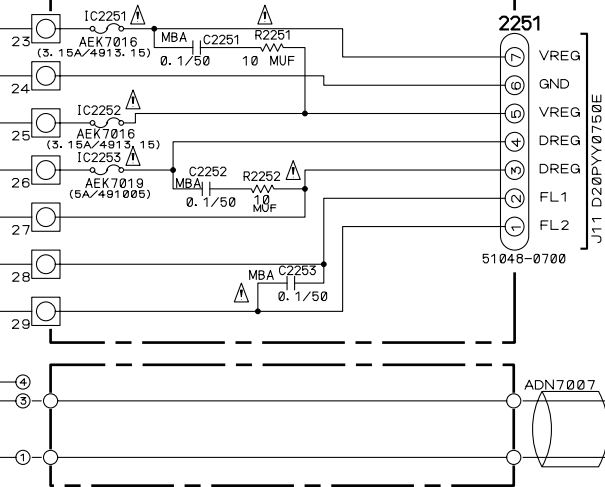
F

AH TRANS 2-2 ASSY (AWX7970)

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. 4913.15 MFD, BY LITTELFUSE INK. FOR IC2251 AND IC2252.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. 491005 MFD, BY LITTELFUSE INK. FOR IC2253.

T1
POWER
TRANSFORMER

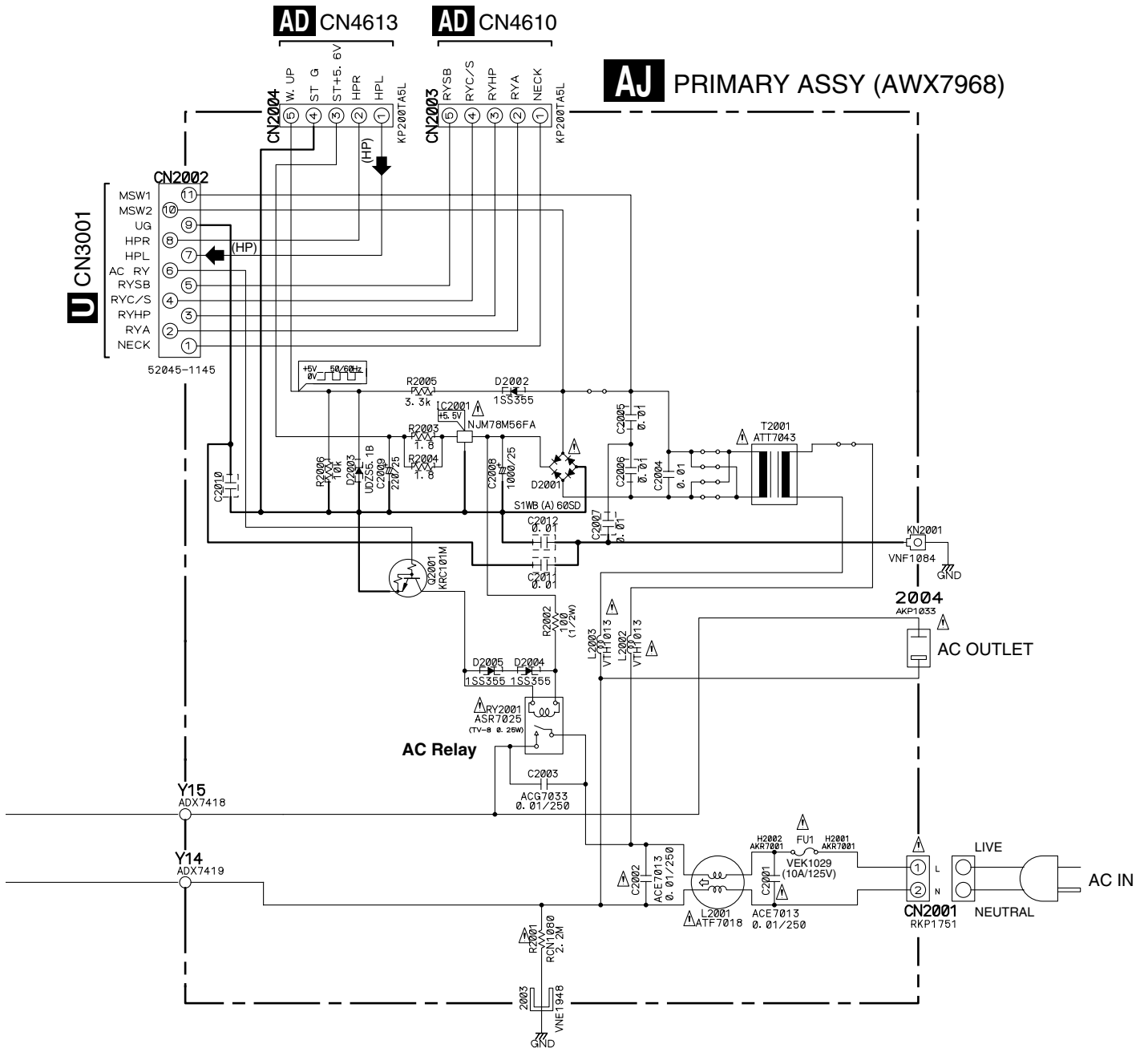


AC 2402

AI TRANS 1 ASSY (AWX7969)

AH AI

(HP) : AUDIO SIGNAL ROUTE (PHONES ch)



• NOTE FOR FUSE REPLACEMENT

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

Notes

1. RESISTORS

Indicated in Ω, 1/16W±5% Tolerance unless otherwise noted K;KΩ, M;MΩ.

2. CAPACITORS

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

3. DIODES

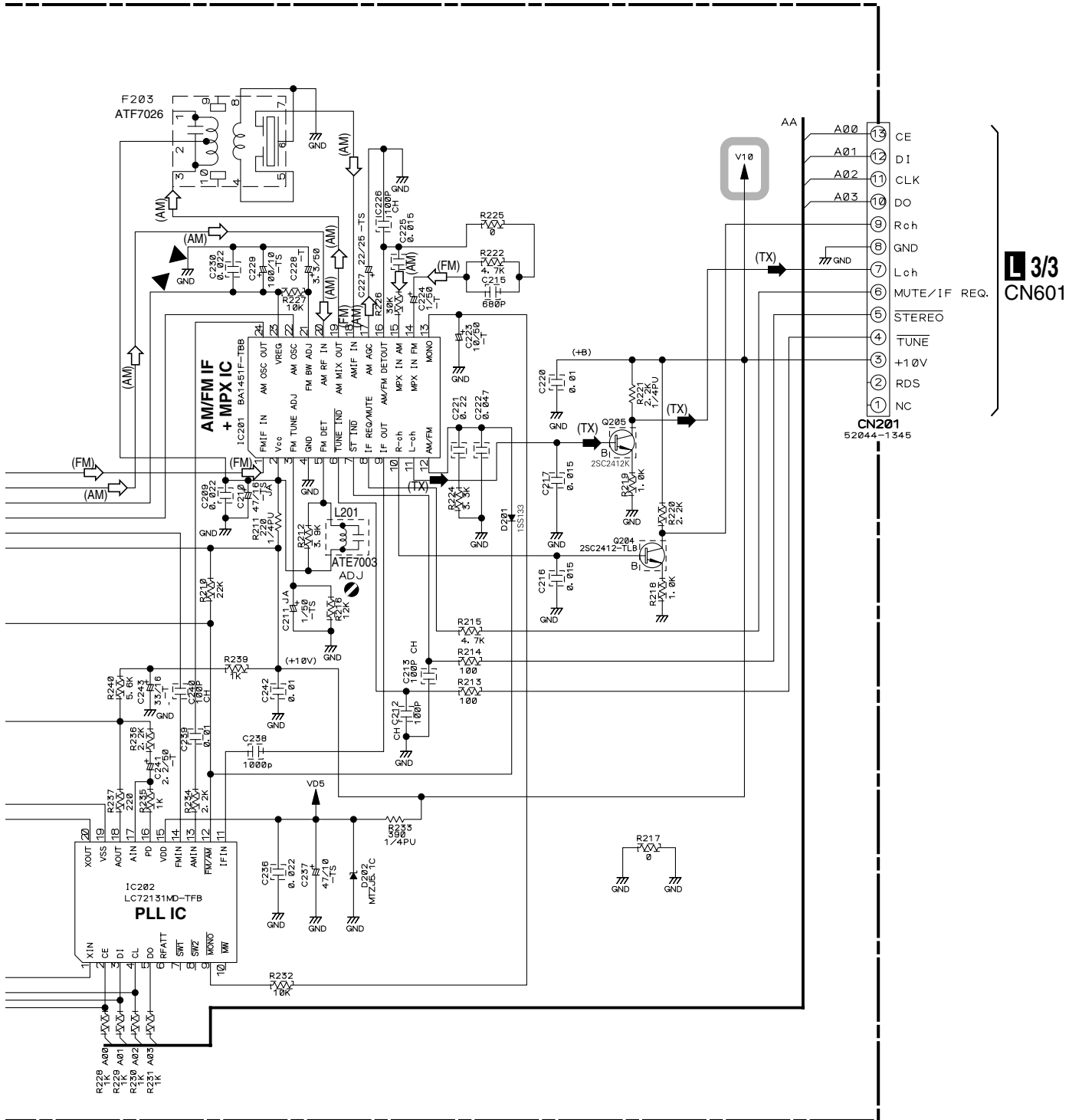
No mark diode is 1SS133.

(TX) : AUDIO SIGNAL ROUTE (TUNER Lch)

(AM) : AM SIGNAL ROUTE

(FM) : FM SIGNAL ROUTE

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




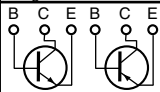

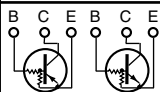

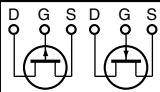

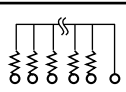


A B C D E F



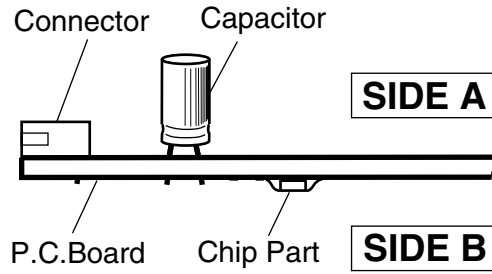
4. PCB CONNECTION DIAGRAM

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.

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

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

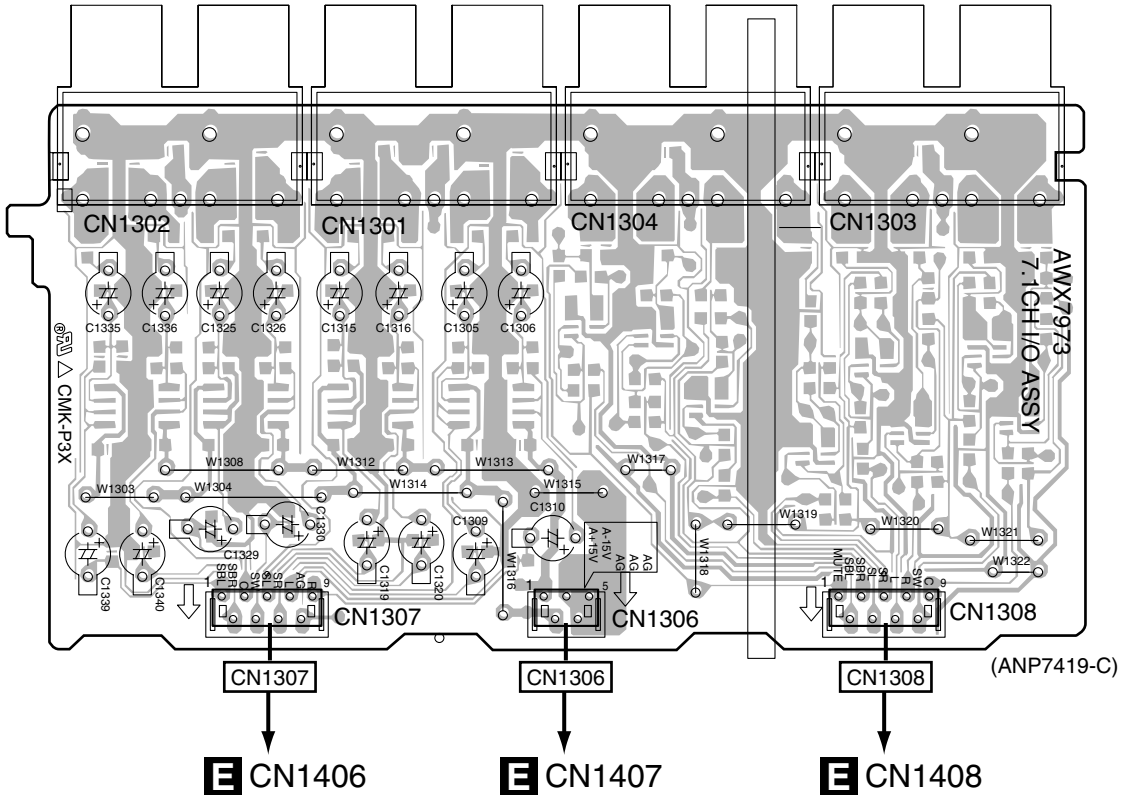


SIDE A

SIDE A

• For VSX-53TX

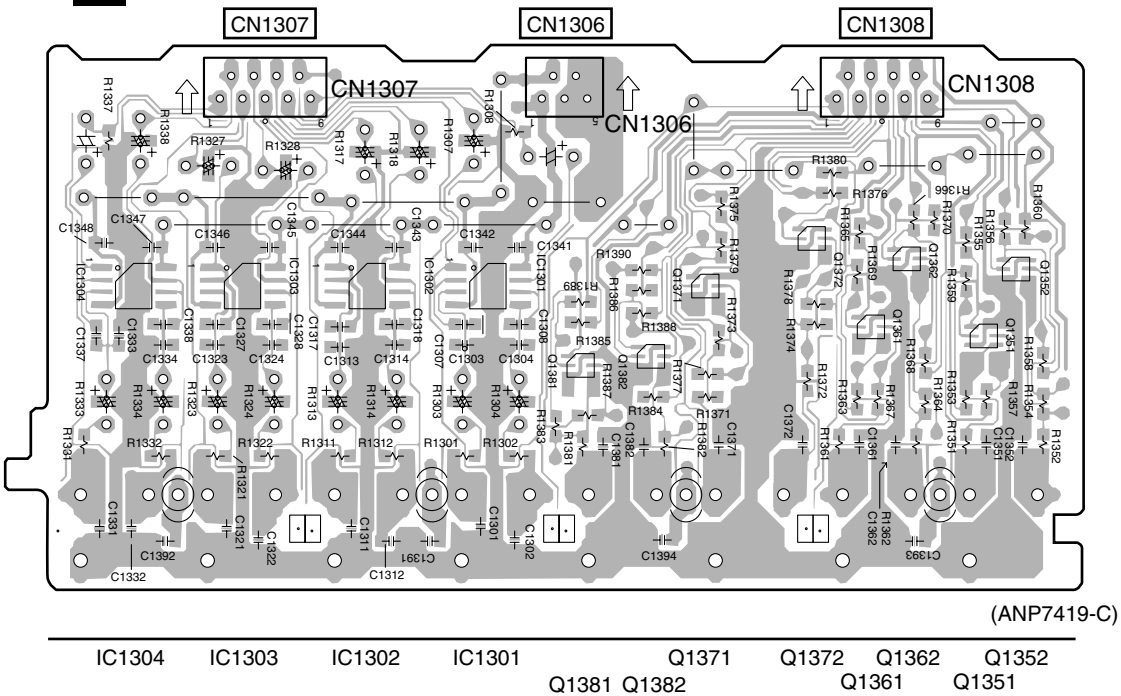
A 7.1CH I/O ASSY



SIDE B

SIDE B

A 7.1CH I/O ASSY



A

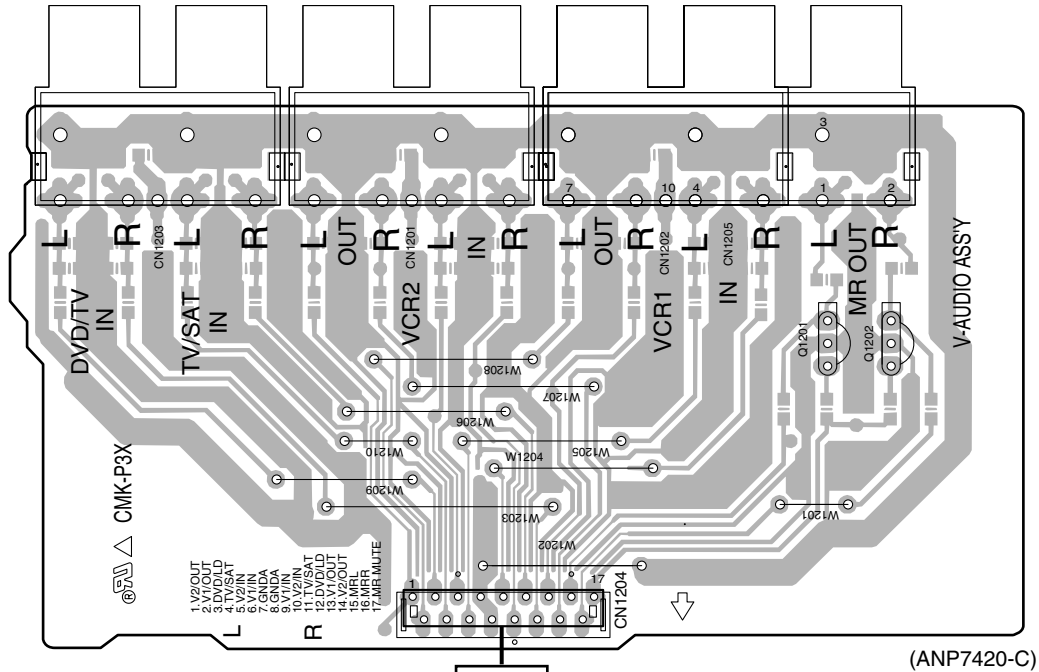
A

4.2 V-AUDIO IN ASSY

SIDE A

SIDE A

B V-AUDIO IN ASSY



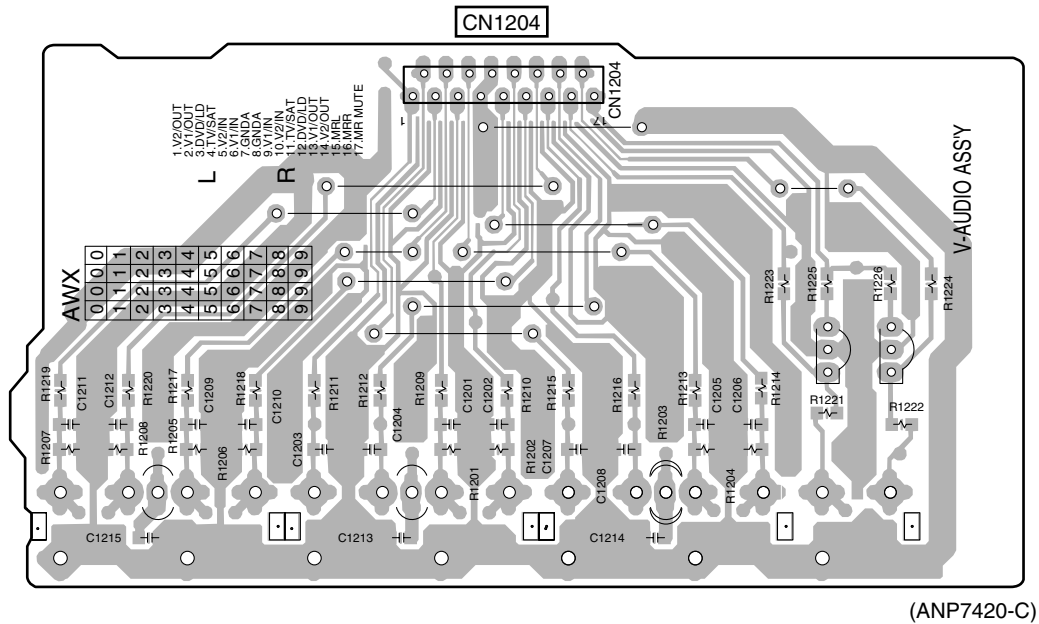
Q1201
Q1202

E CN1405

SIDE B

SIDE B

B V-AUDIO IN ASSY



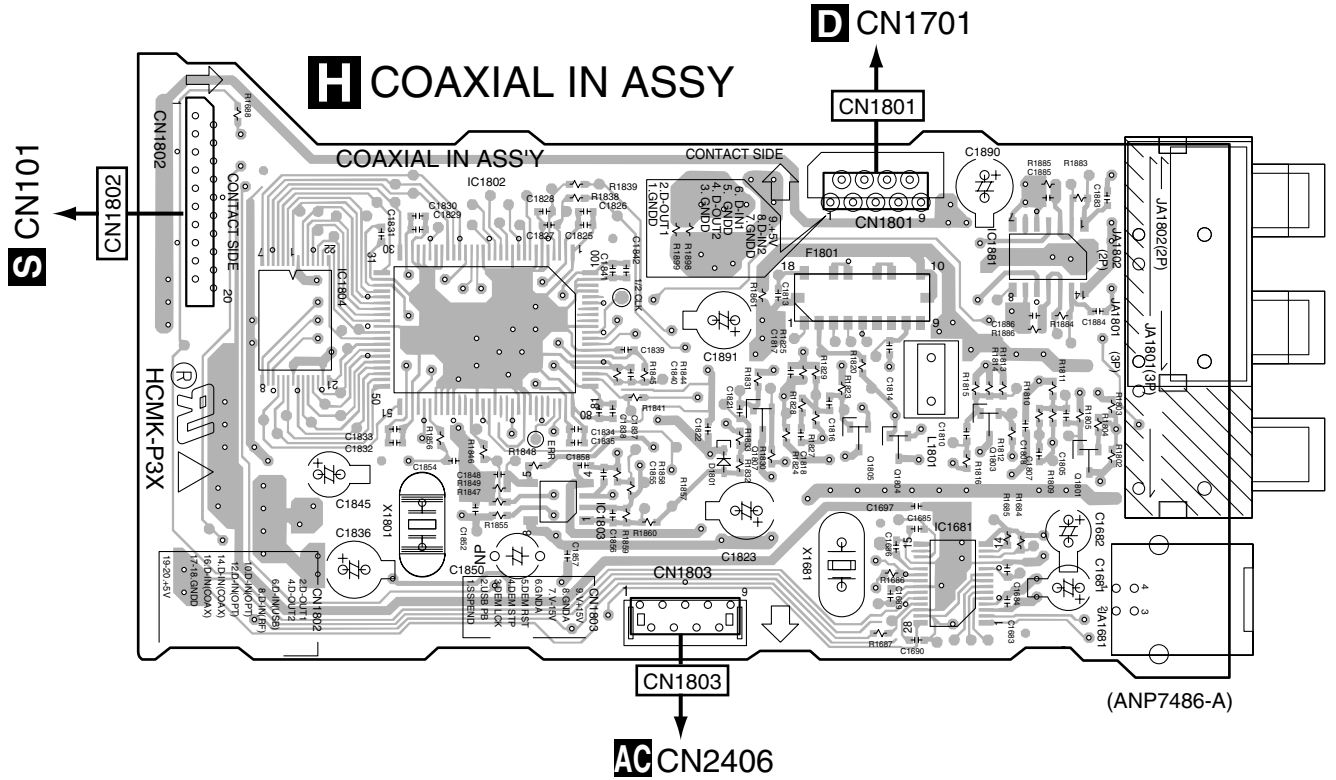
B

B

4.4 COAXIAL IN ASSY

SIDE A

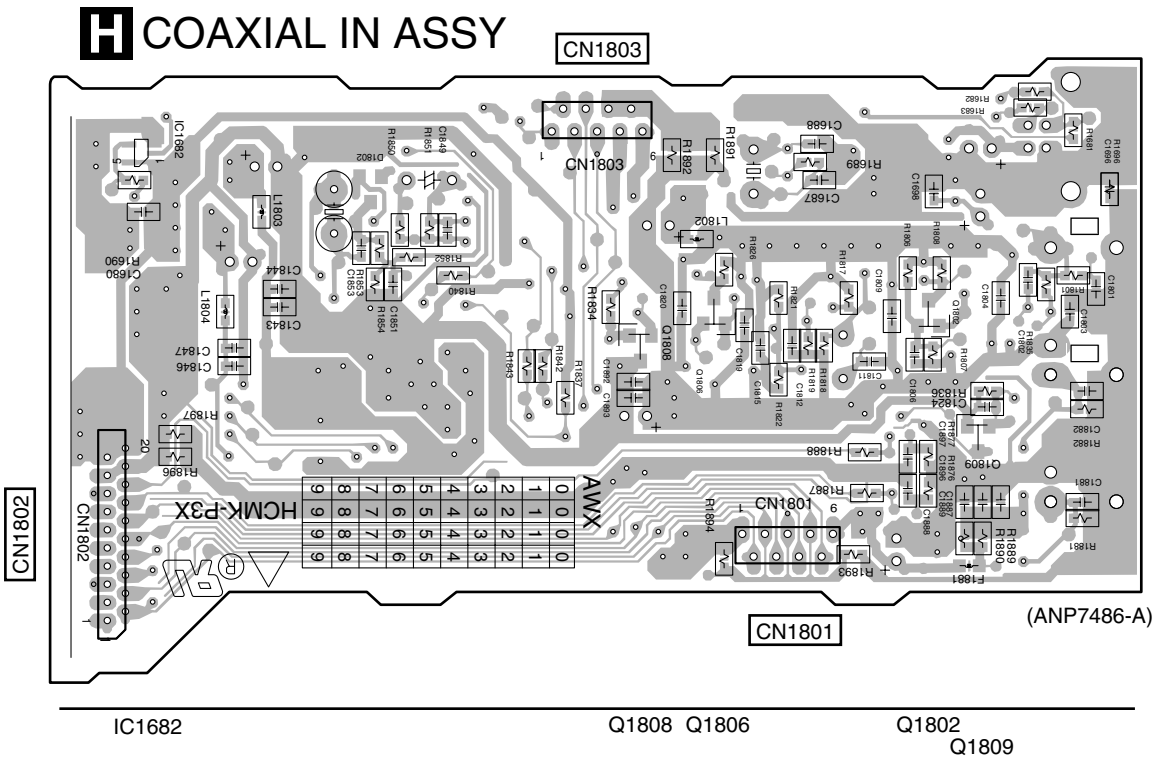
SIDE A



IC1804 IC1802 IC1803 Q1807 Q1805 Q1804 Q1803 Q1801
 IC1881
 IC1681

SIDE B

SIDE B



IC1682 Q1808 Q1806 Q1802 Q1809



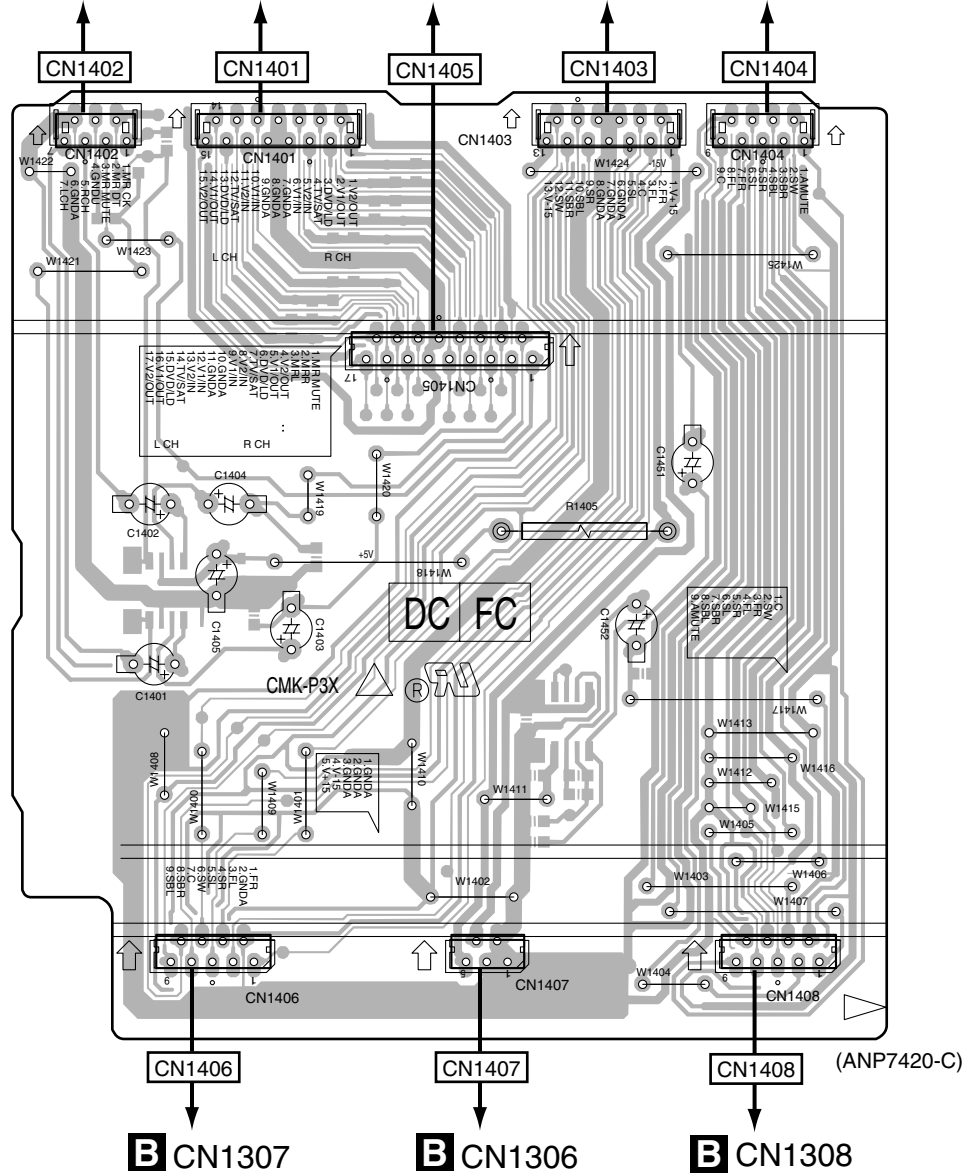
4.5 INPUT CONNECT, RS232C and 12V TRIGGER ASSYS

SIDE A

SIDE A

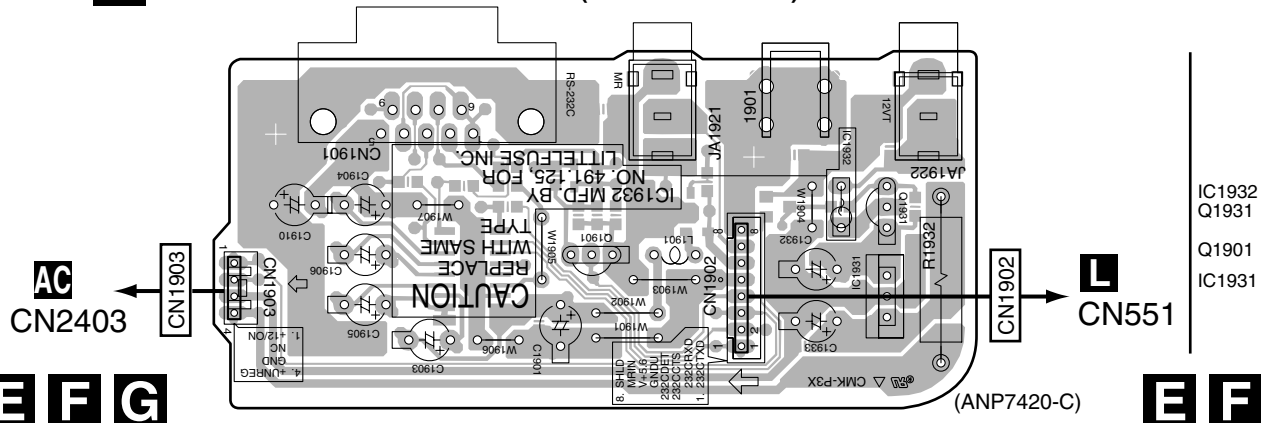
E INPUT CONNECT ASSY

L CN201 **L** CN101 **B** CN1204 **L** CN102 **K** CN103



F RS232C ASSY (VSX-55TXi)

G 12V TRIGGER ASSY (VSX-53TX)



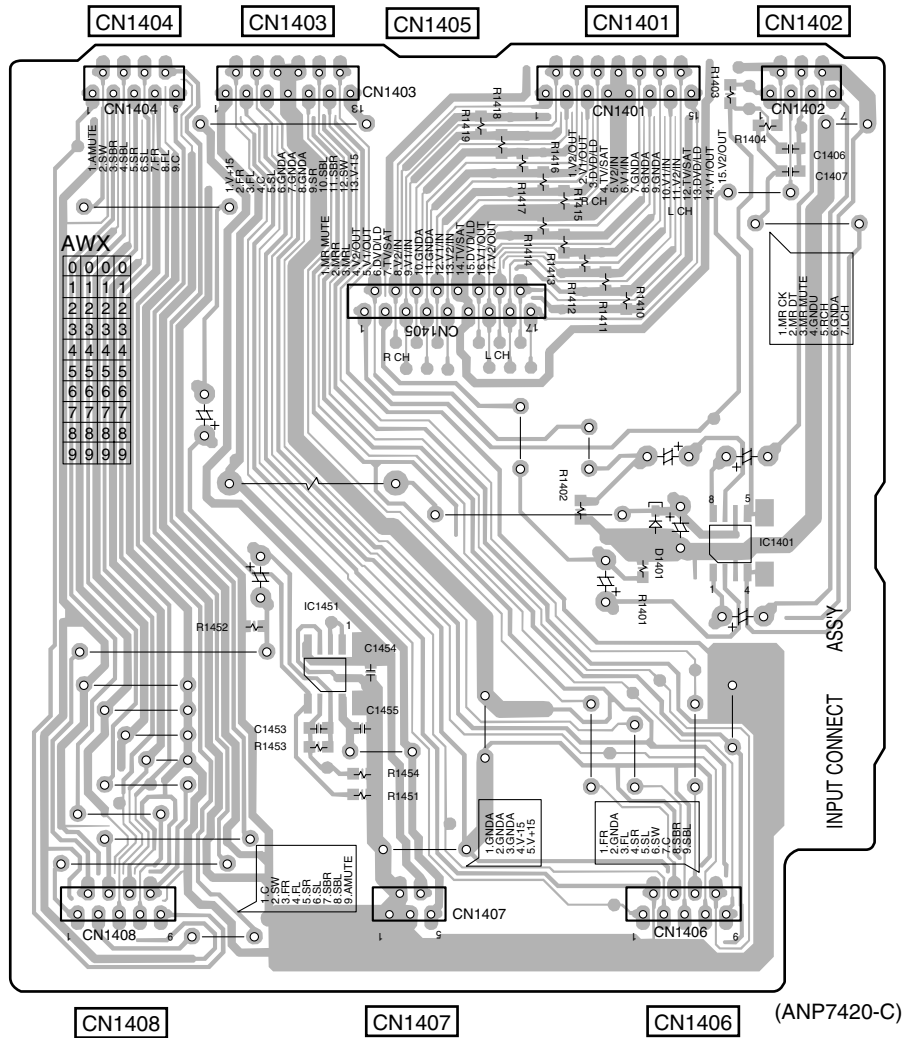
E F G

E F G

SIDE B

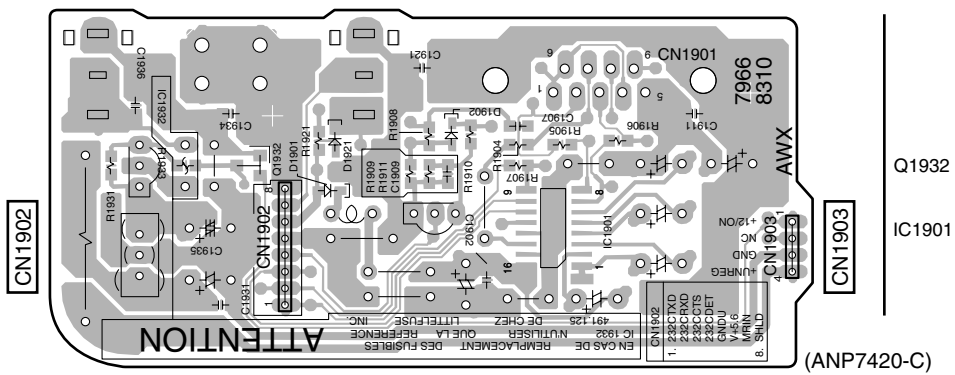
SIDE B

E INPUT CONNECT ASSY



F RS232C ASSY (VSX-55TXi)

G 12V TRIGGER ASSY (VSX-53TX)



E F G

E F G

IC511 IC501 IC104

IC103

IC702 IC701 IC704 IC703

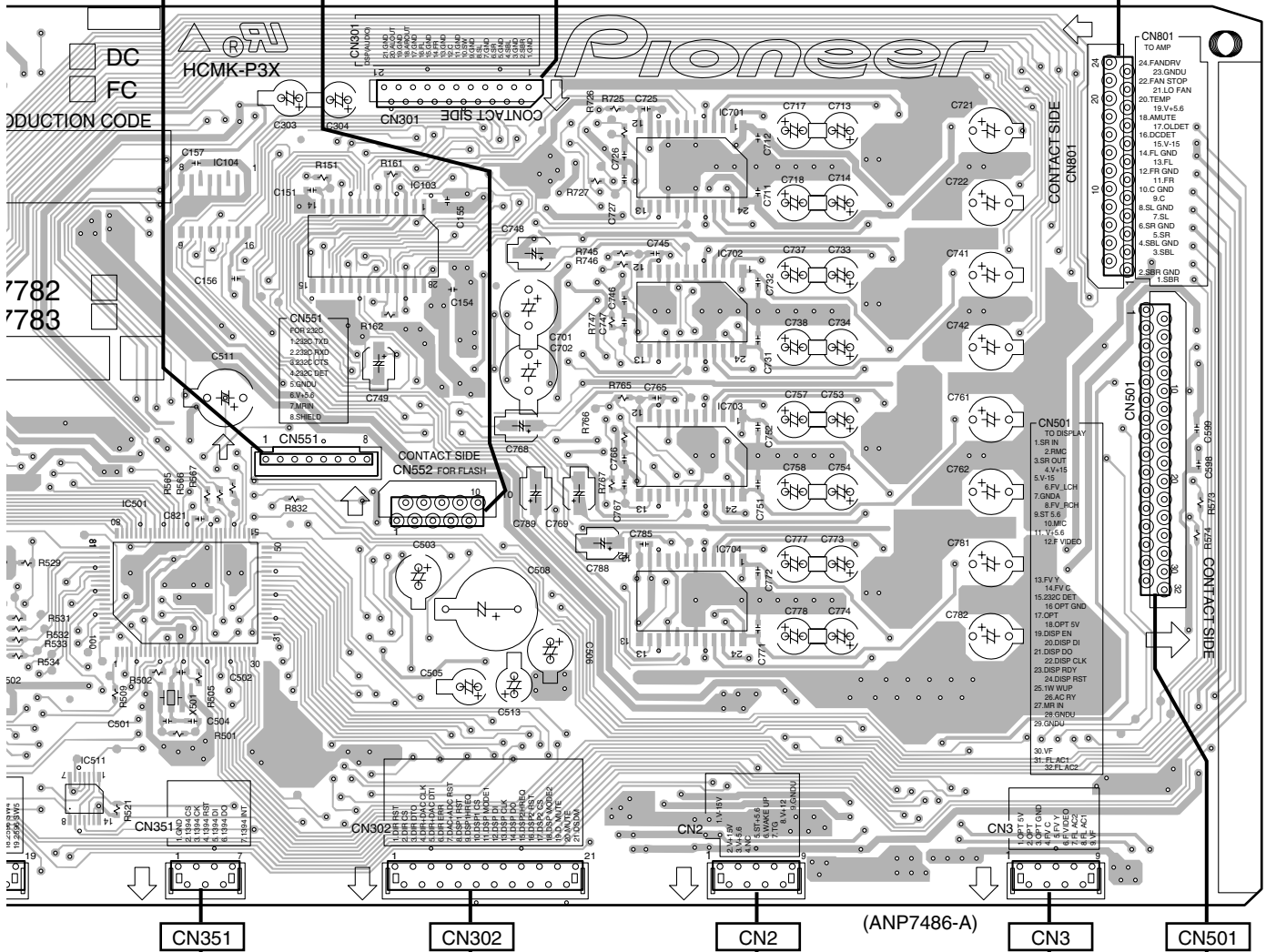
F **G** CN1902 For Flash

S CN601

L

P CN4001

MAIN CONTROL ASSY



3 **AC** CN2411 **AC** CN2410 **AC** CN2414 **AC** CN2412 **U** CN3006

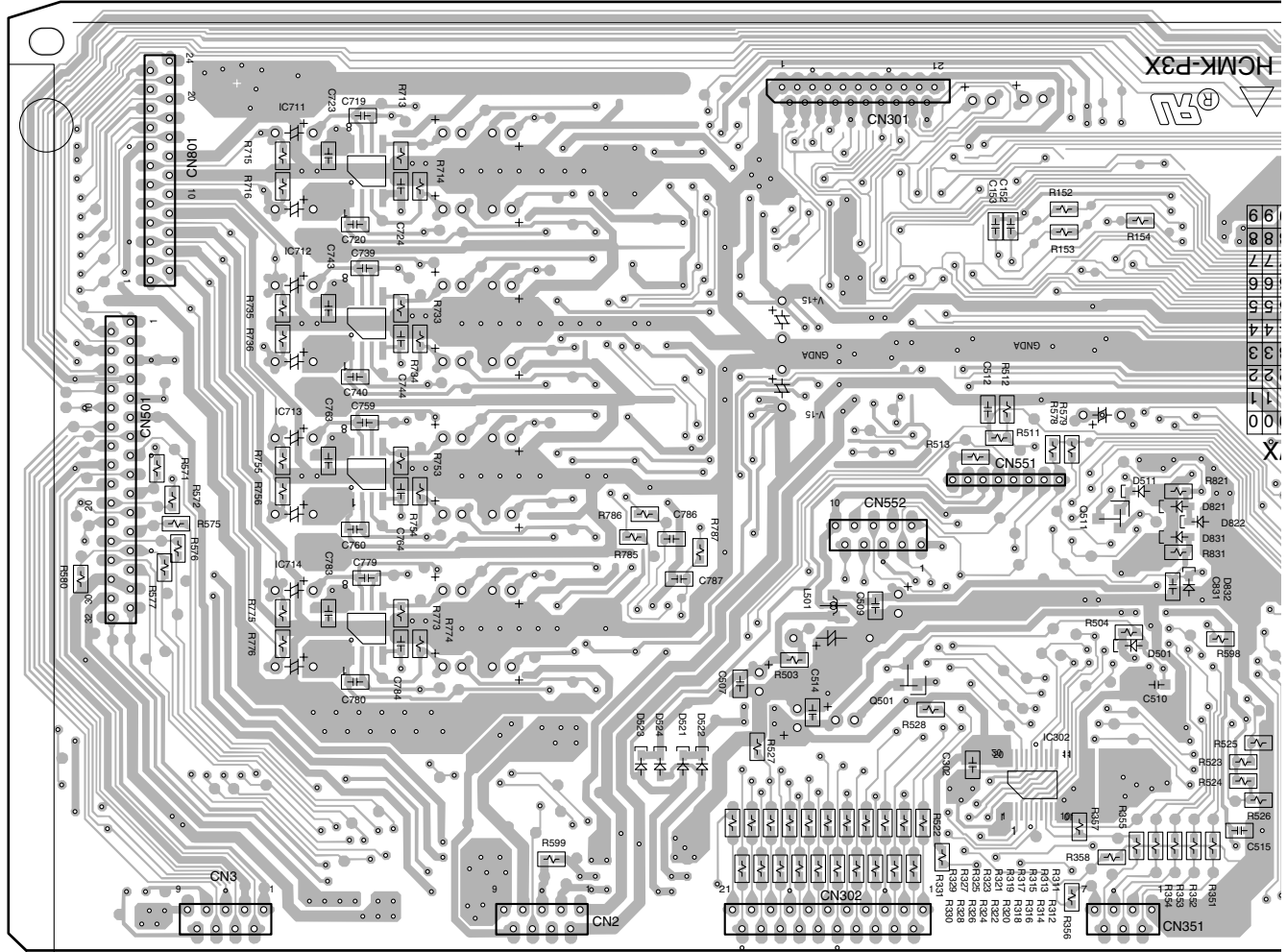
SIDE B

IC711
IC712
IC713
IC714

Q501 IC302 Q511

MAIN CONTROL ASSY

CN301



CN801

CN501

CN3

CN2

CN302

CN552

CN551

CN351

A

B

C

D

E

F



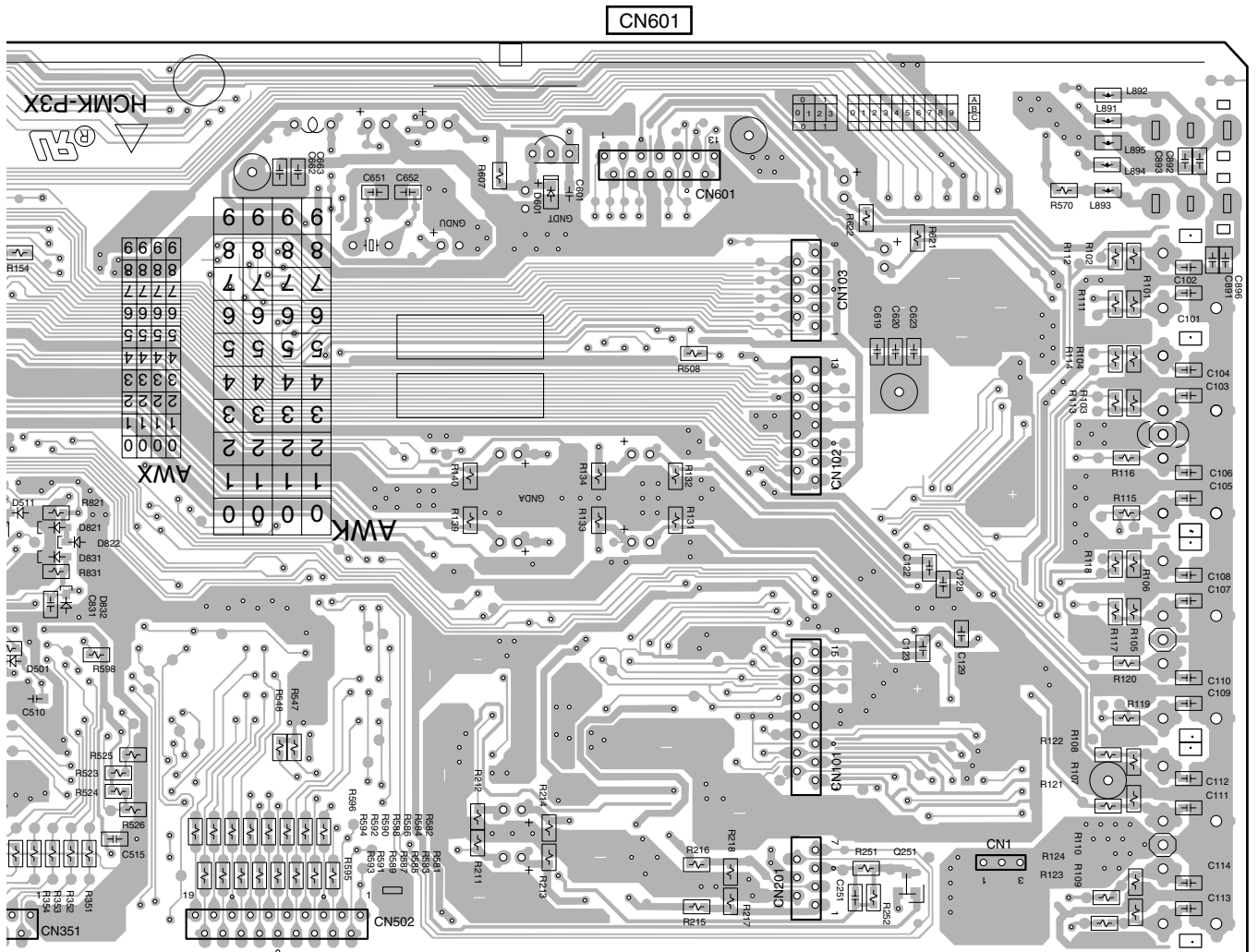
SIDE B

A

1

Q601

Q251



B

C

D

351

CN502

CN1

(ANP7486-A)

E

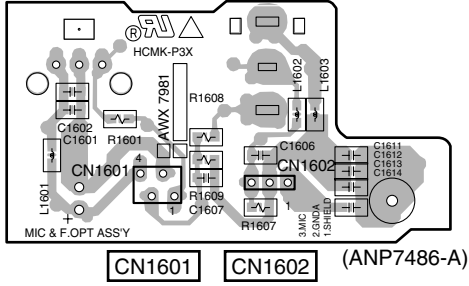
F



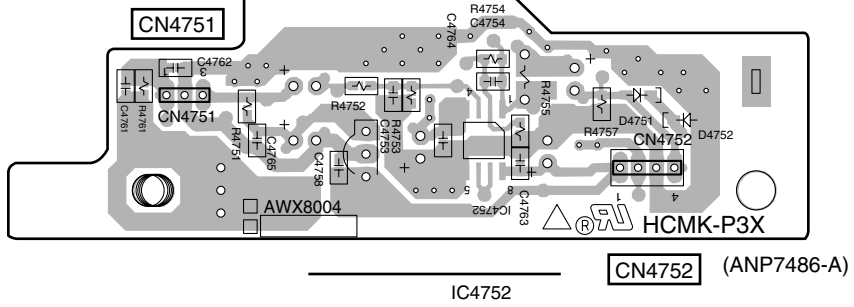
SIDE B

SIDE B

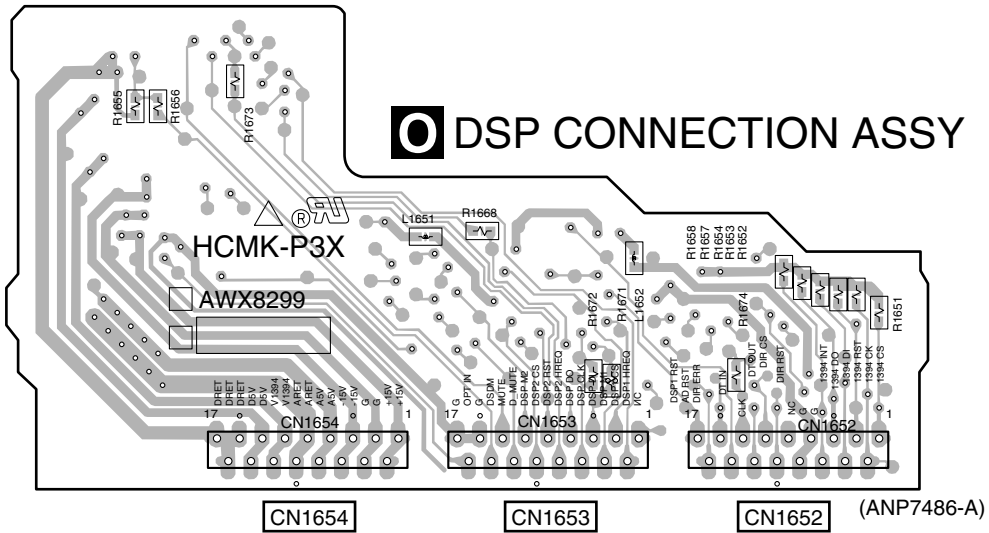
M MIC & F.OPT IN ASSY



N MIC AMP ASSY



O DSP CONNECTION ASSY



MNO

MNO

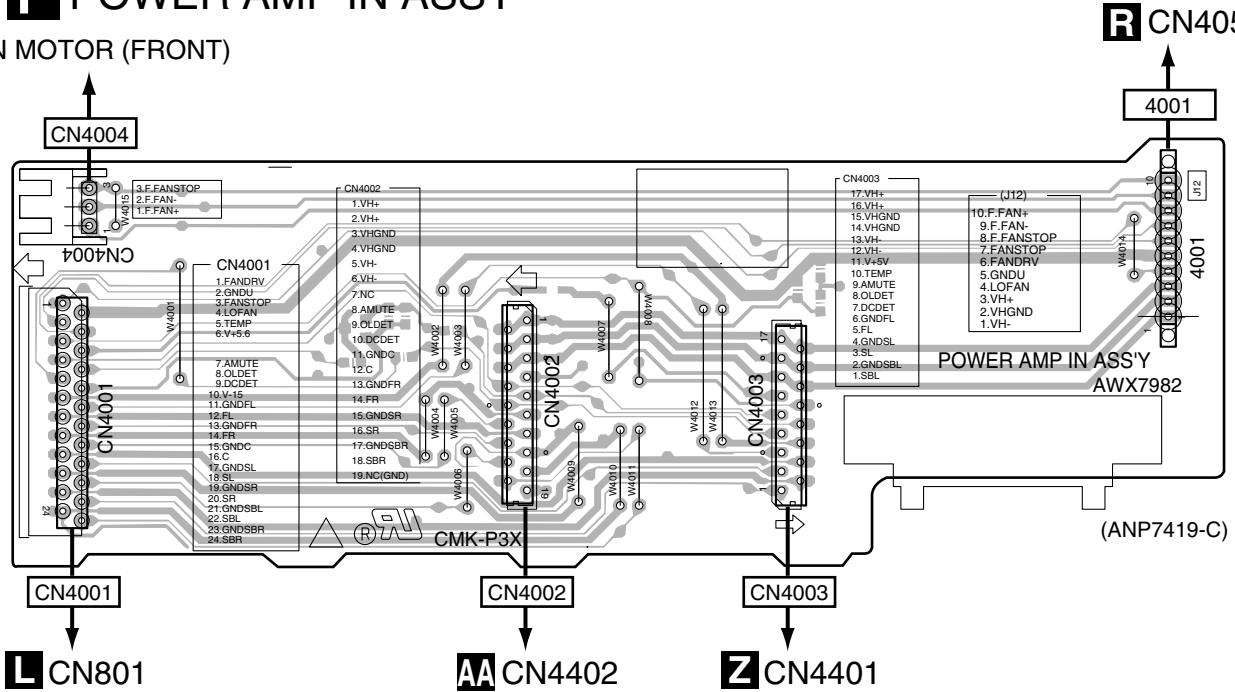
• For VSX-53TX

SIDE A

SIDE A

P POWER AMP IN ASSY

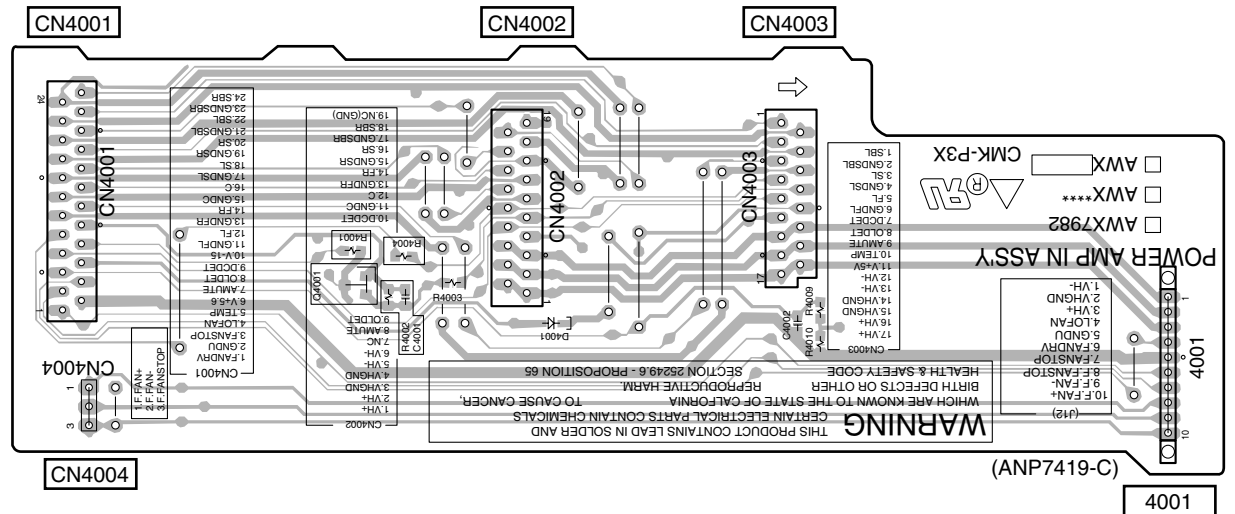
FAN MOTOR (FRONT)



SIDE B

SIDE B

P POWER AMP IN ASSY



P

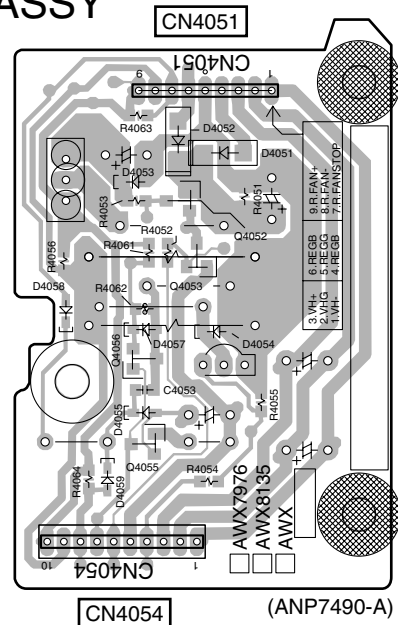
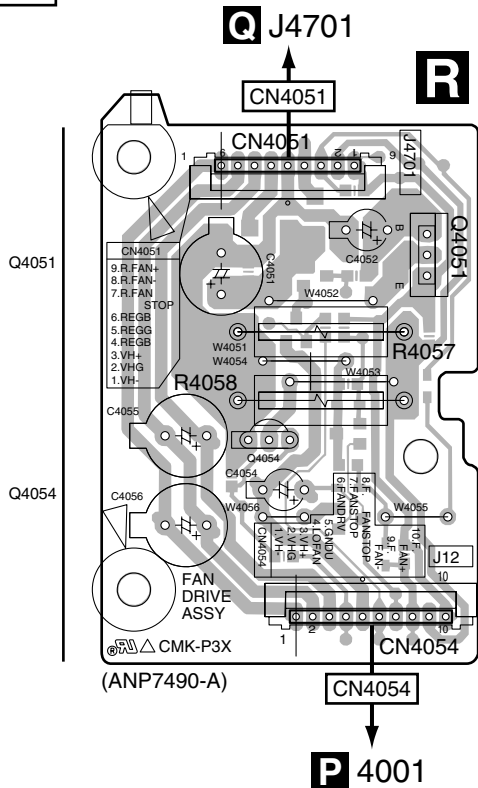
P

4.12 FAN DRIVE ASSY

• For VSX-55TXi

SIDE A

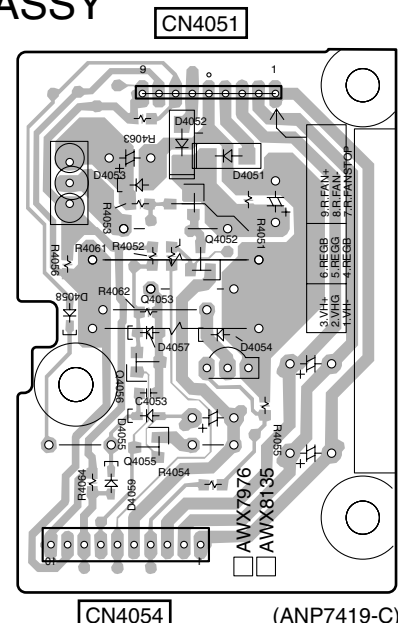
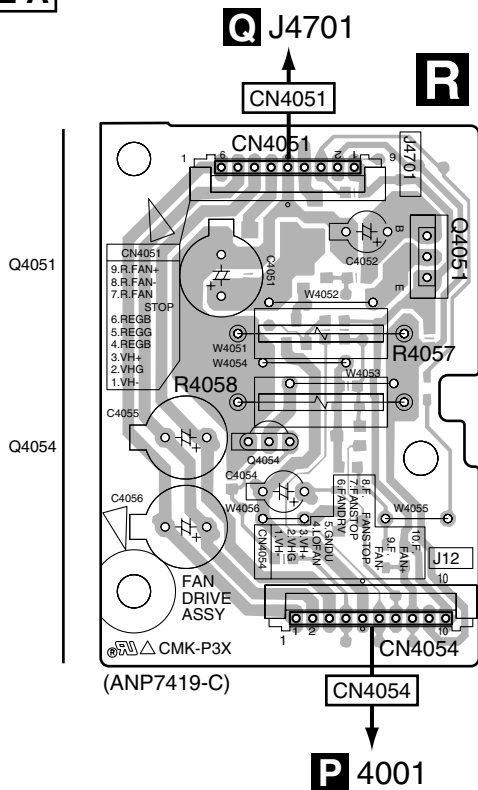
SIDE B



• For VSX-53TX

SIDE A

SIDE B



R

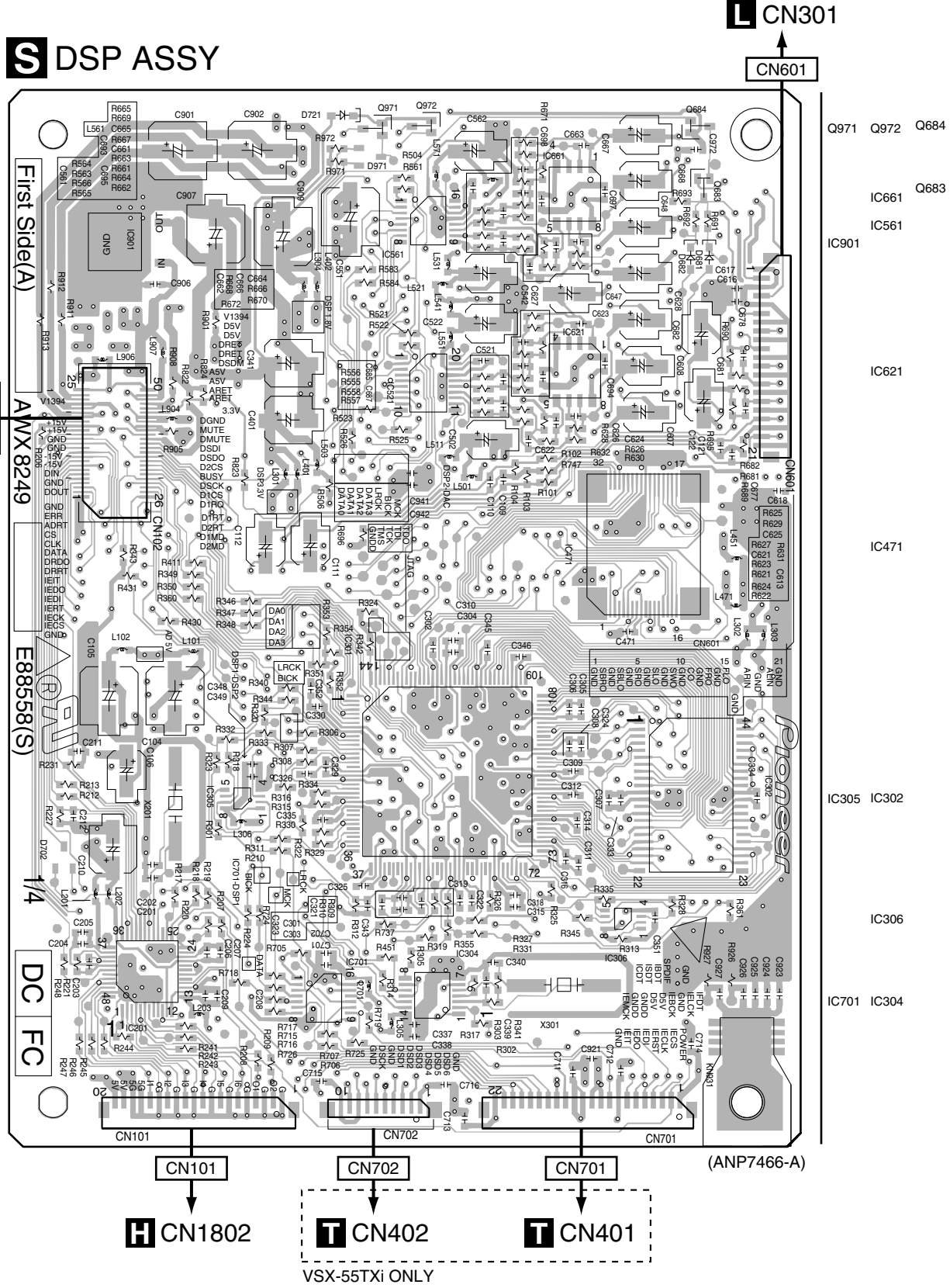
R

4.13 DSP ASSY

SIDE A

SIDE A

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



S DSP ASSY

First Side(A)

E88558(S)

DC FC

(ANP7466-A)

H CN1802

T CN402

T CN401

VSX-55TXi ONLY

VSX-55TXi

- Q971 Q972 Q684
- IC661 Q683
- IC561
- IC901
- IC621
- IC471
- IC305 IC302
- IC306
- IC701 IC304

A
B
C
D
E
F

○ CN1651

□ CN102

AWX 8249

○ E88558(S)

1/4

DC FC

□ CN101

□ CN702

□ CN701

□ CN301

□ CN601

S

S

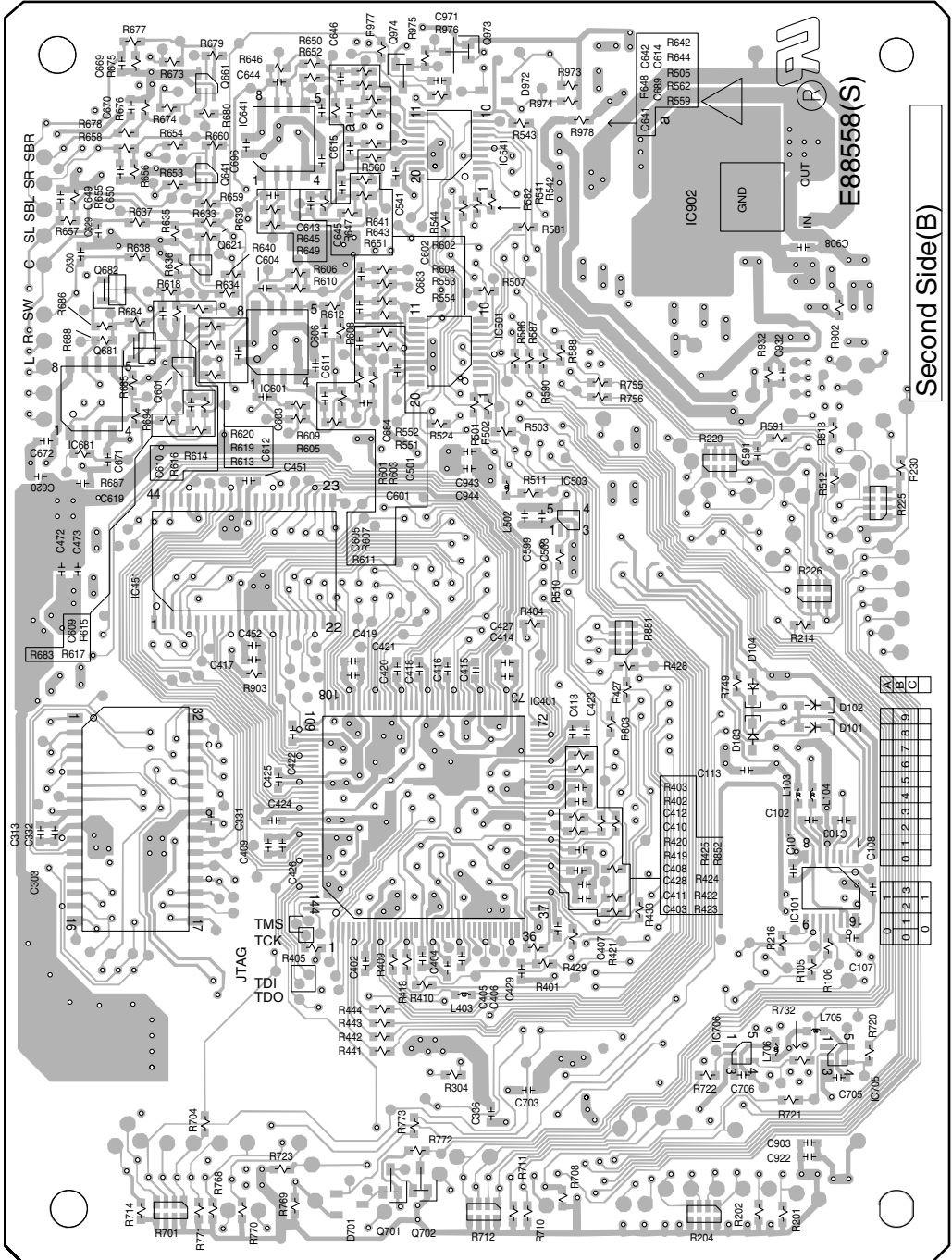
SIDE B

SIDE B

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

S DSP ASSY

Q973
Q974
Q661
IC641
Q641
IC902
Q621
Q682
IC601
Q681
Q601
IC681
IC503
IC451
IC401
IC101
IC706
IC705
Q702



(ANP7466-A)

S

S

4.14 DISPLAY ASSY

• For VSX-55TXi

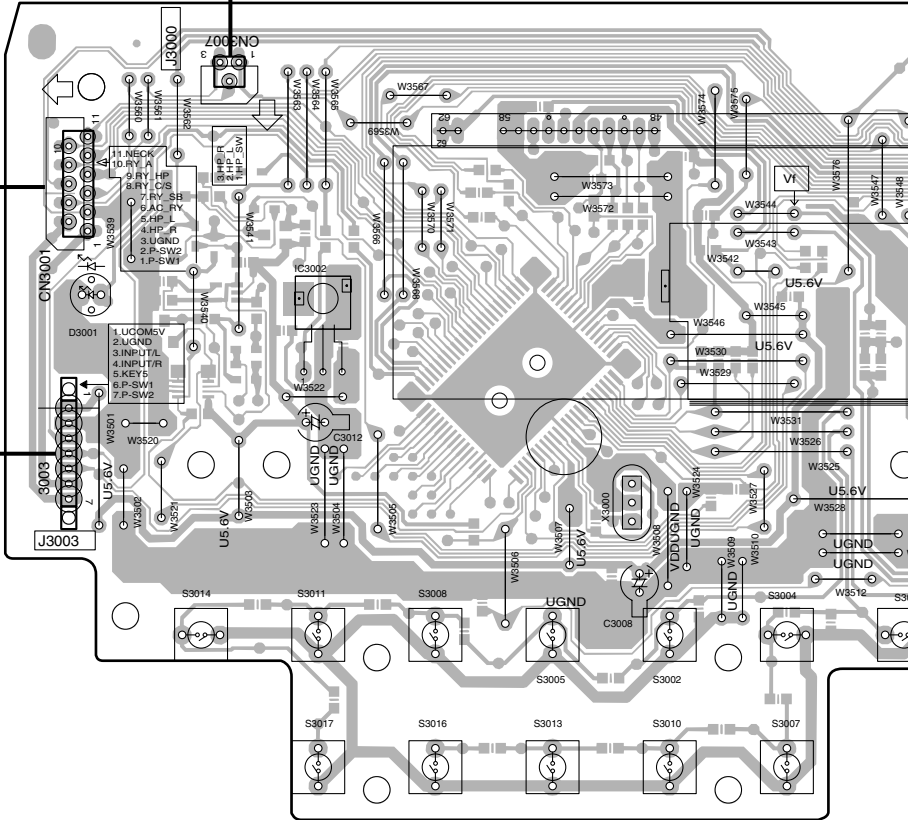
SIDE A

U DISPLAY ASSY

CN3007 → **Y** CN1951

AJ CN2002

X 3003 CN3451



IC3002

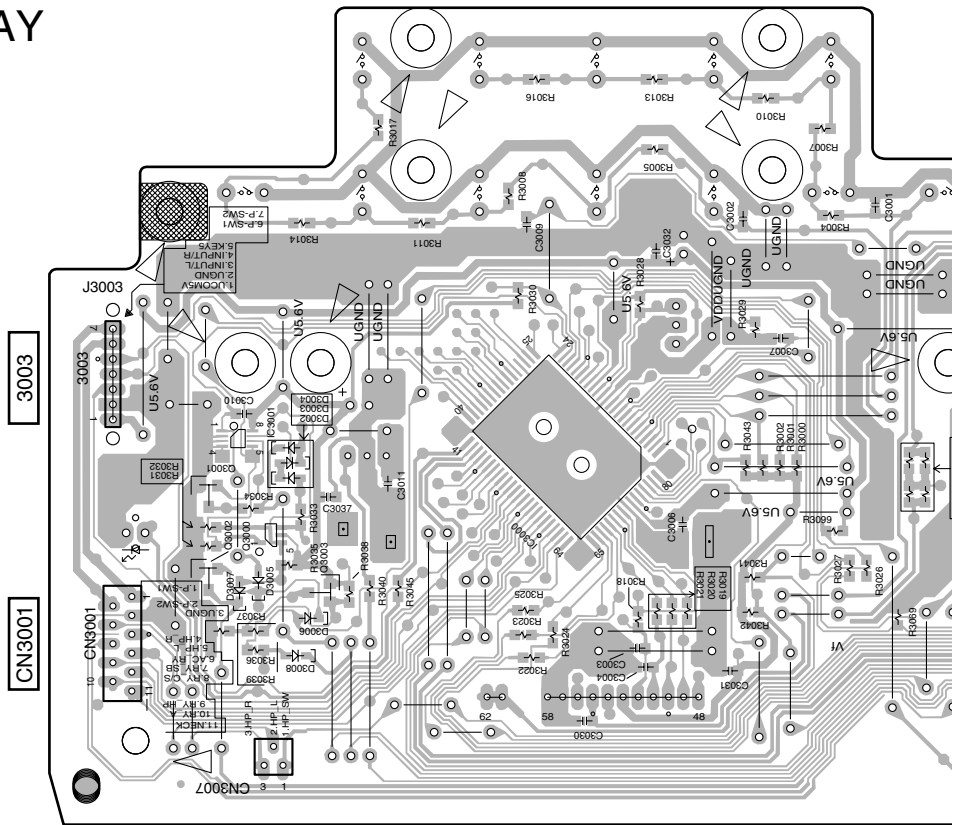
Q3001 IC3001
Q3002 Q3000 Q3003

IC3000

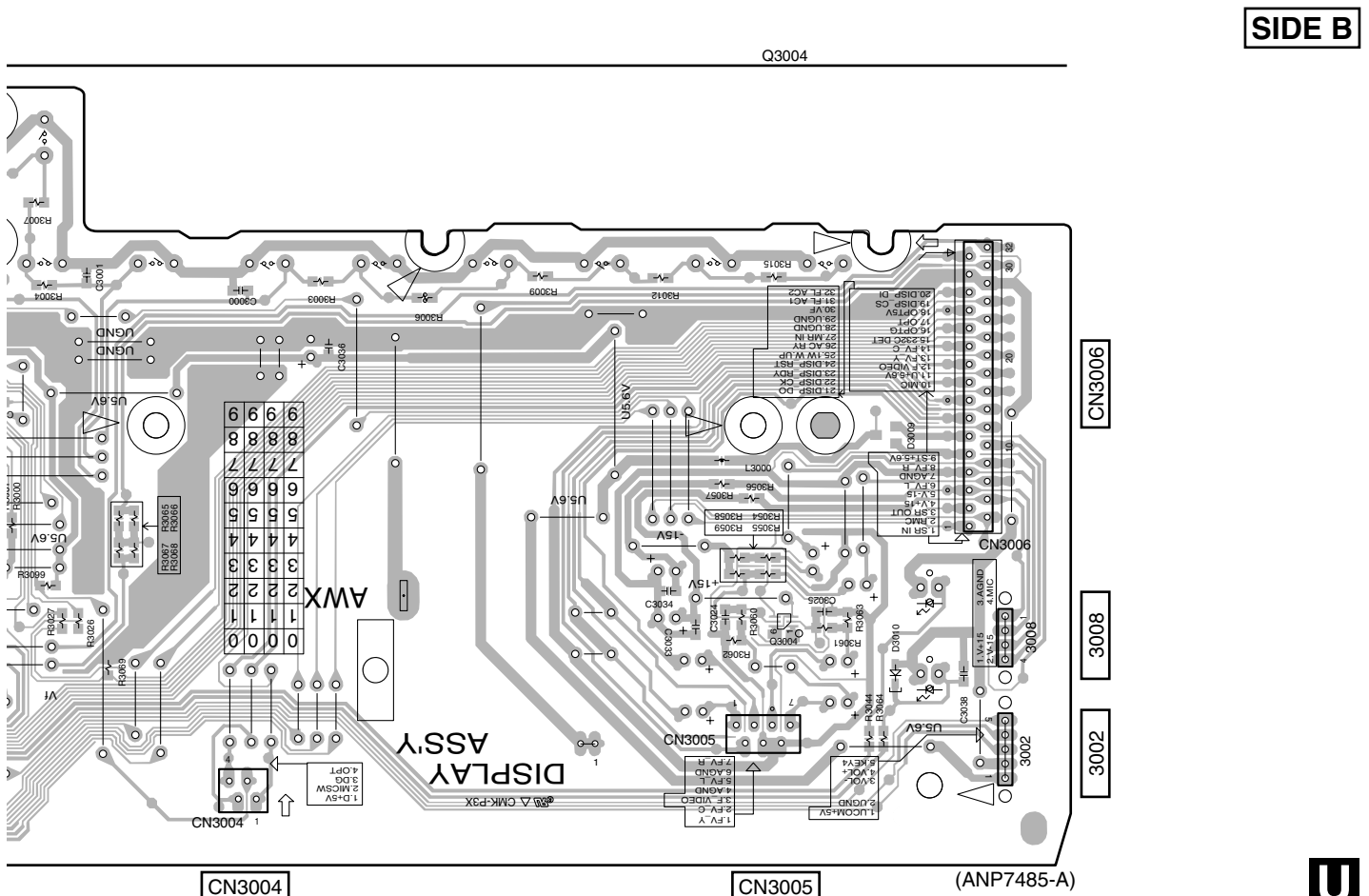
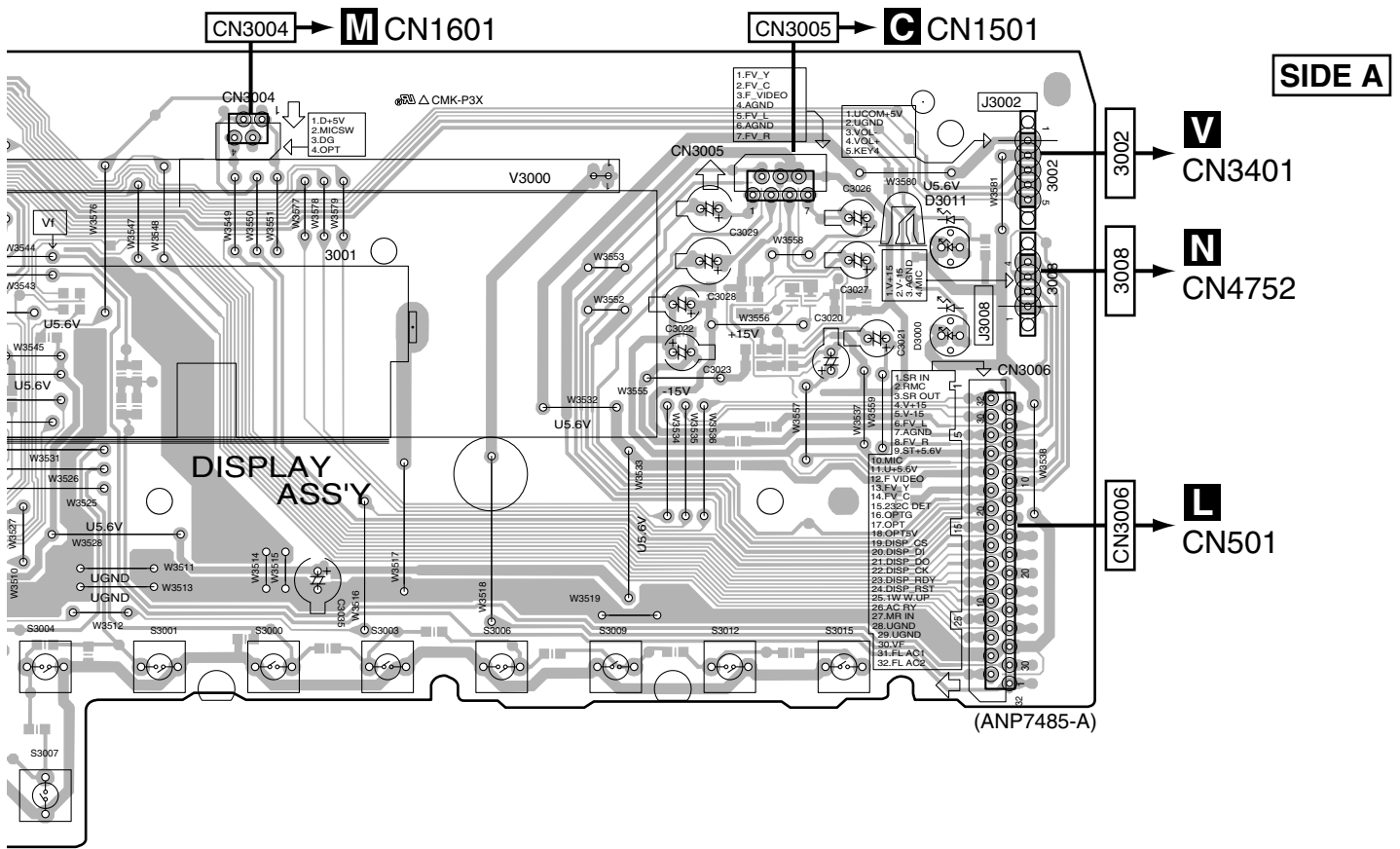
SIDE B

U DISPLAY ASSY

CN3007

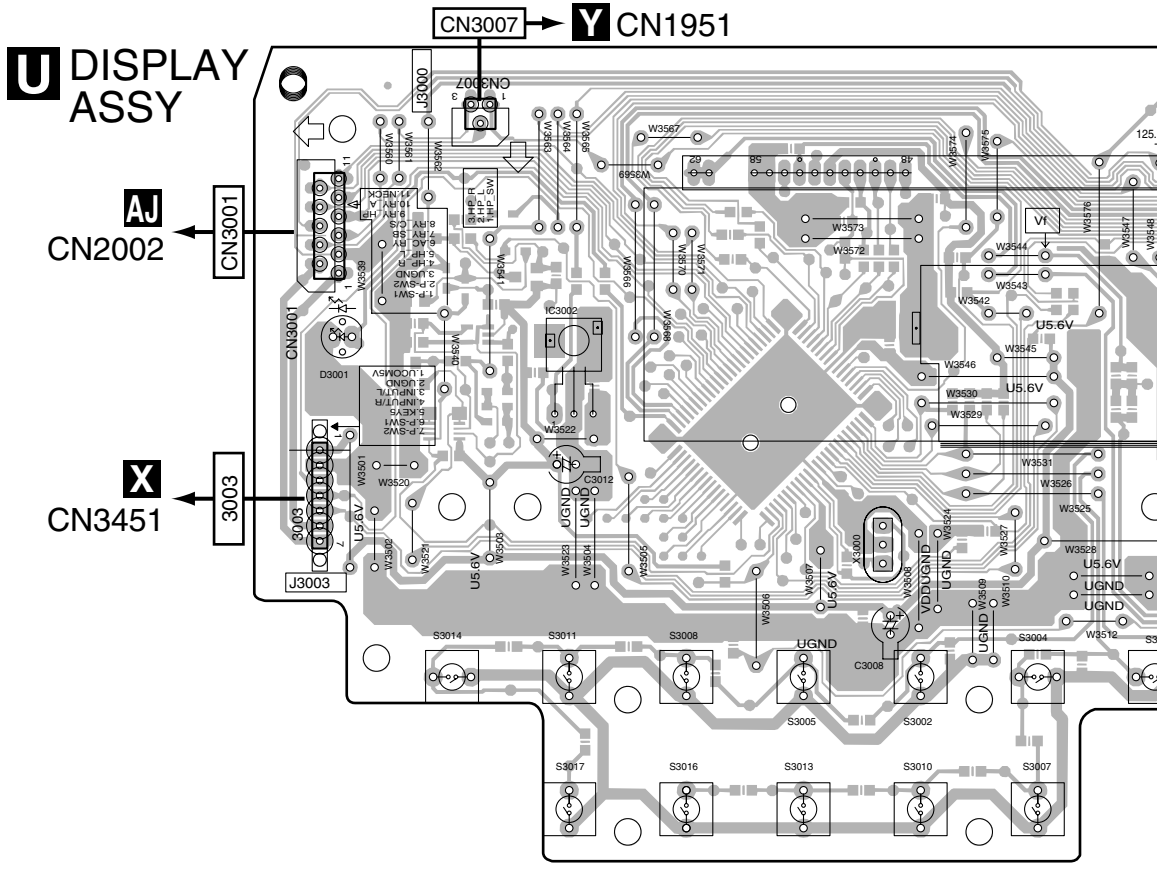


VSX-55TXi



• For VSX-53TX

SIDE A

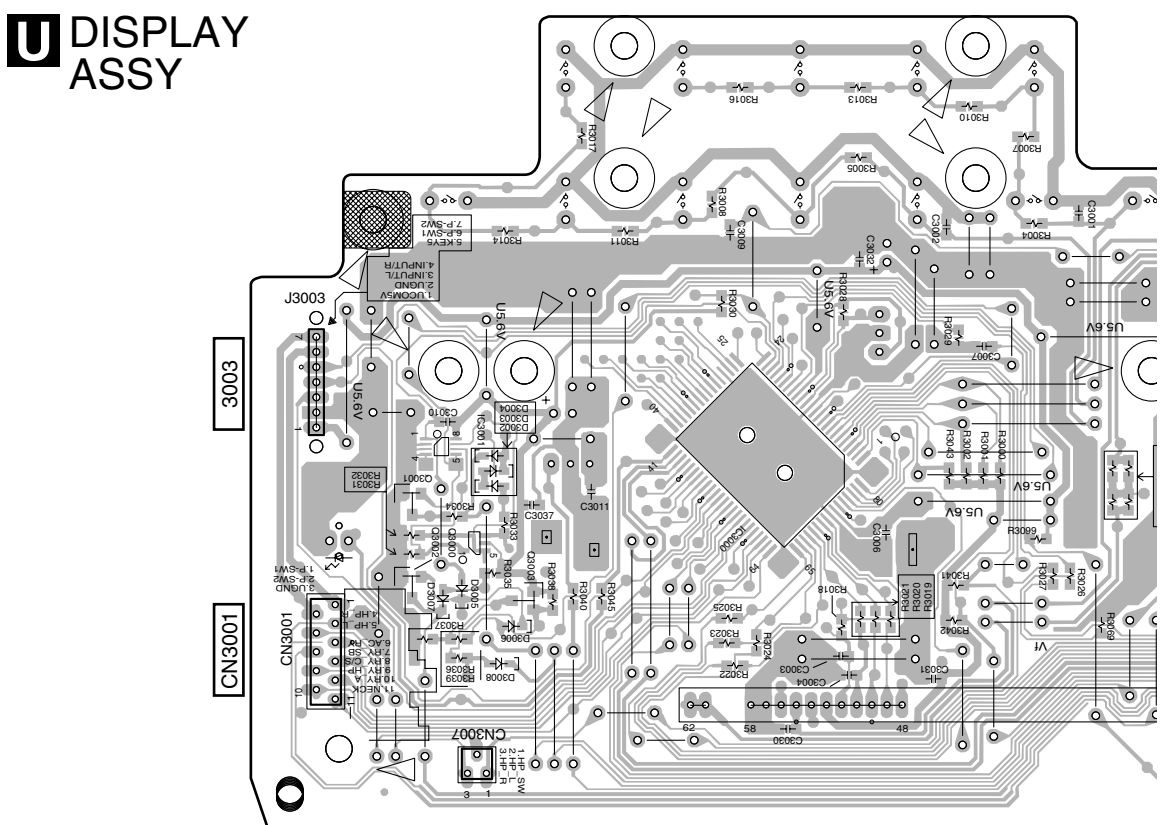


IC3002

Q3001 IC3001
Q3002 Q3000 Q3003

IC3000

SIDE B



CN3007

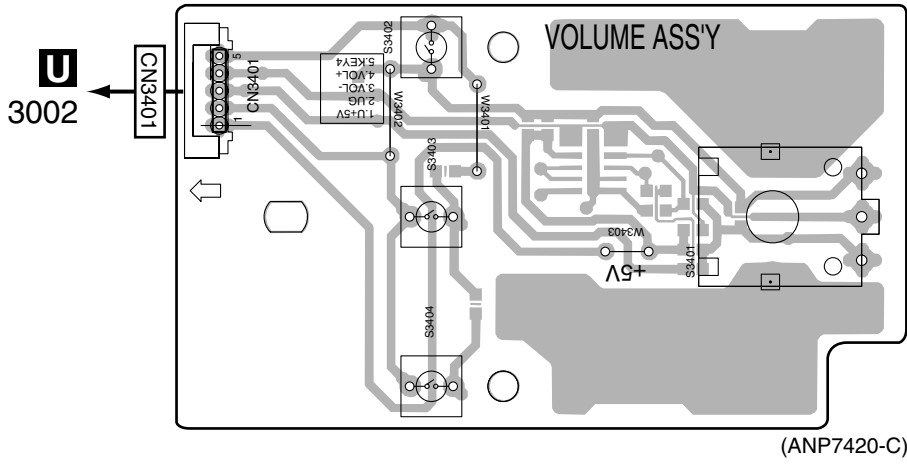
VSX-55TXi

4.15 VOLUME, MULTI JOG and HEADPHONE ASSYS

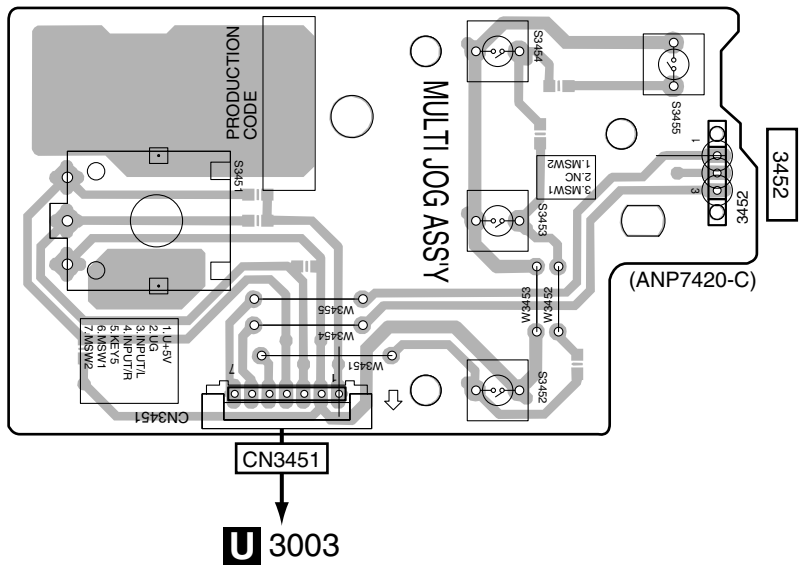
SIDE A

SIDE A

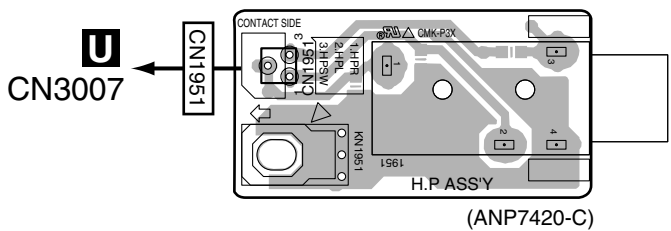
V VOLUME ASSY



X MULTI JOG ASSY



Y HEADPHONE ASSY



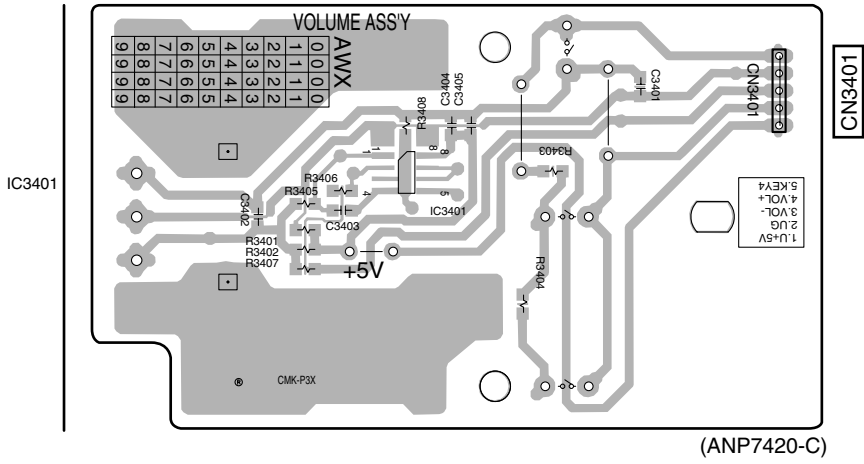
V X Y

V X Y

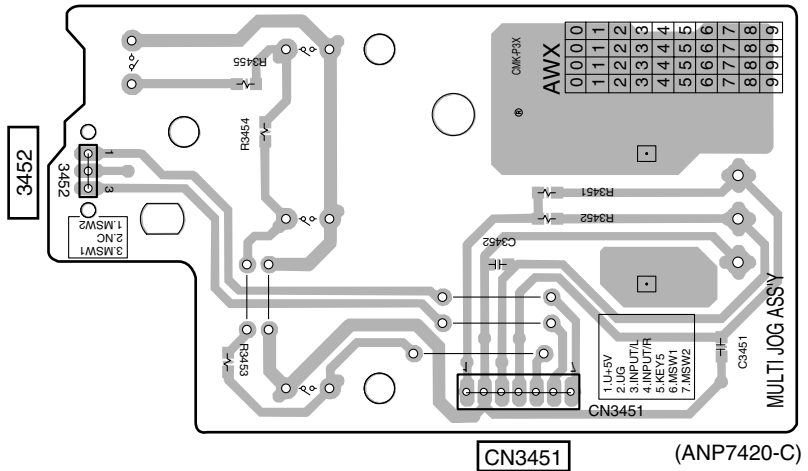
SIDE B

SIDE B

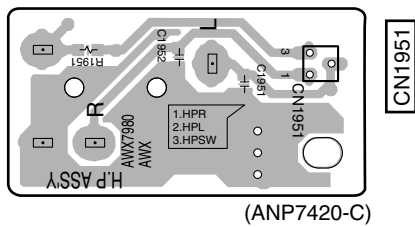
V VOLUME ASSY



X MULTI JOG ASSY



Y HEADPHONE ASSY



V X Y

V X Y

4.16 POWER AMP L and POWER AMP C ASSYS

SIDE A

• For VSX-55TXi

A

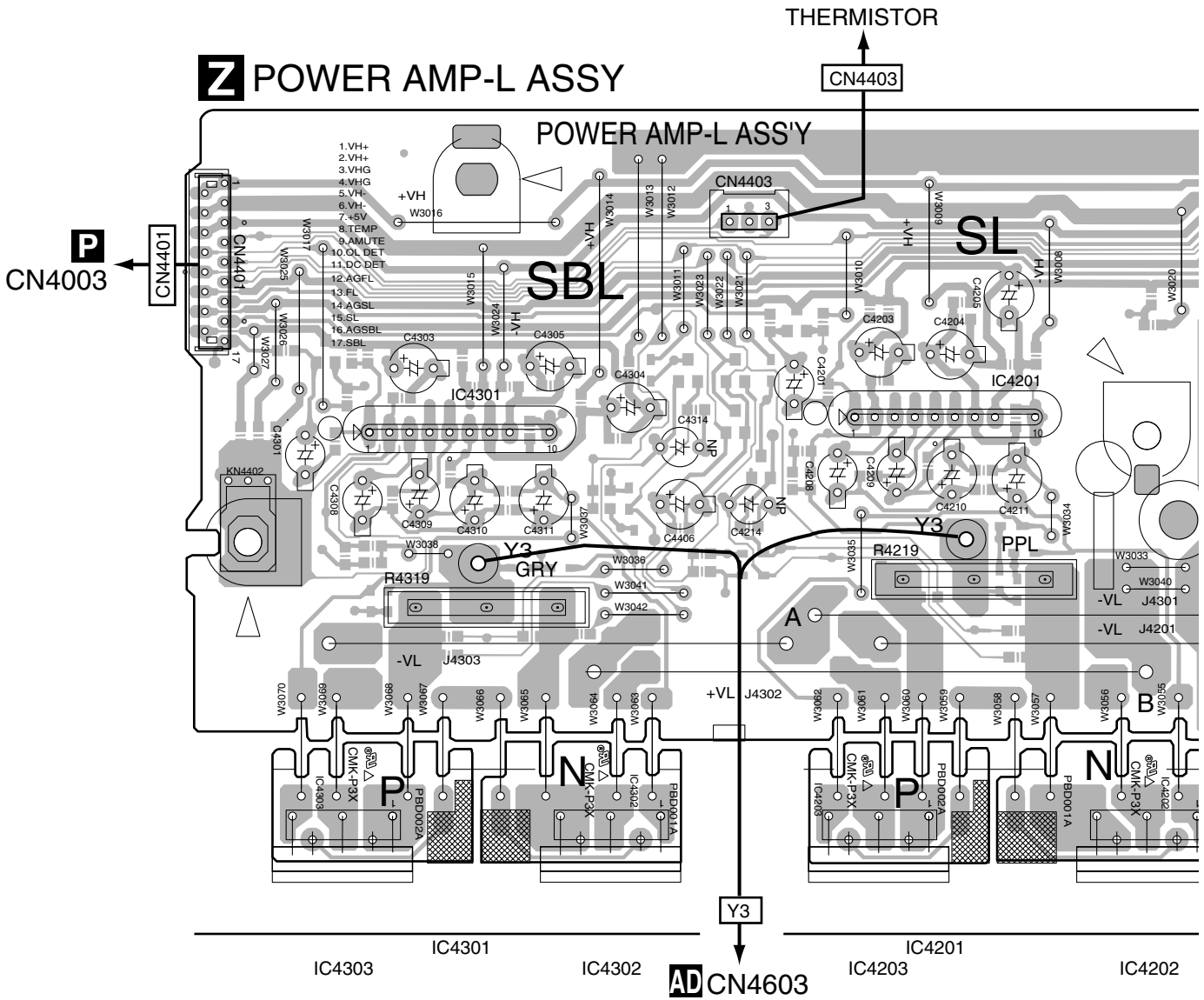
B

C

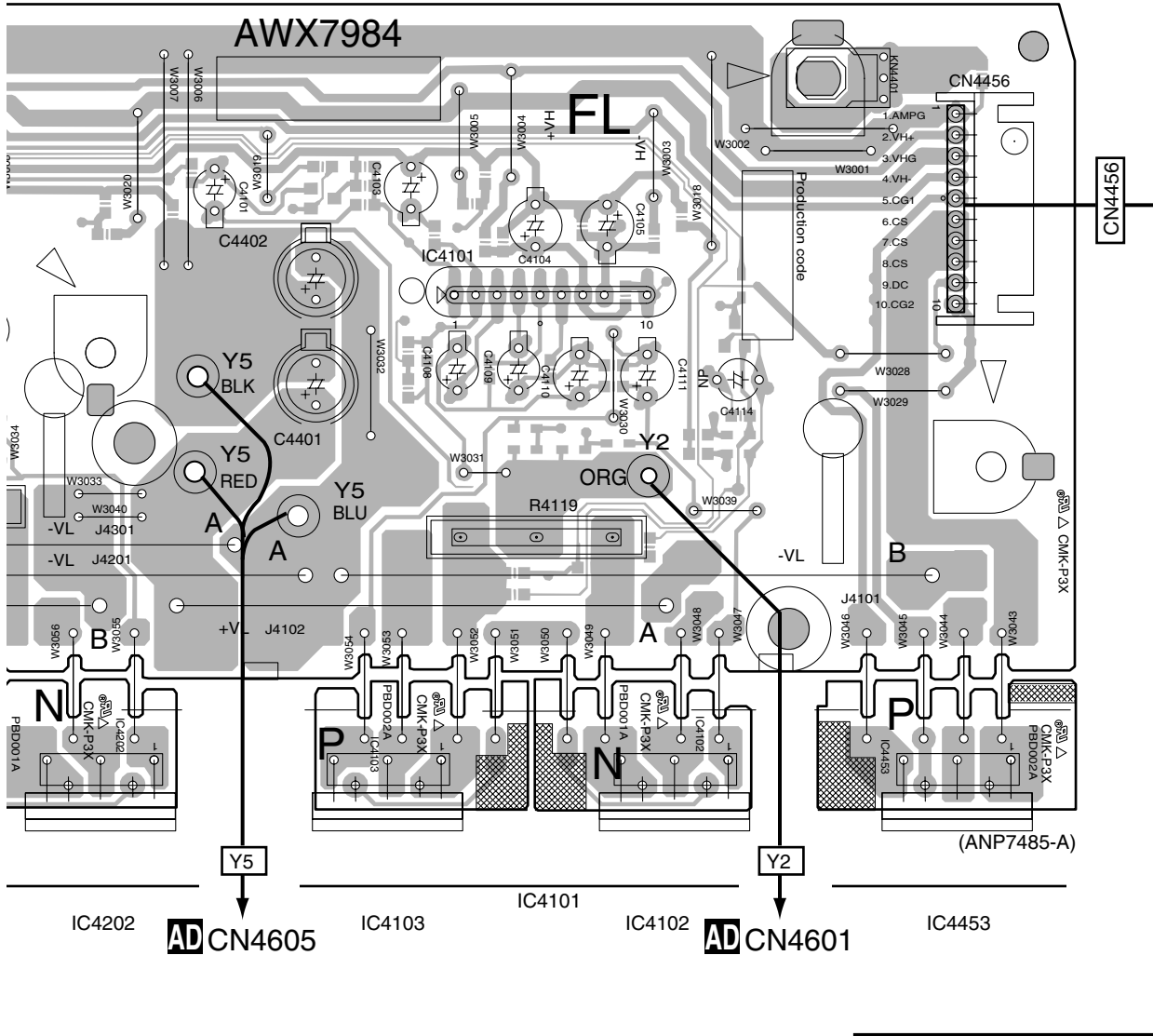
D

E

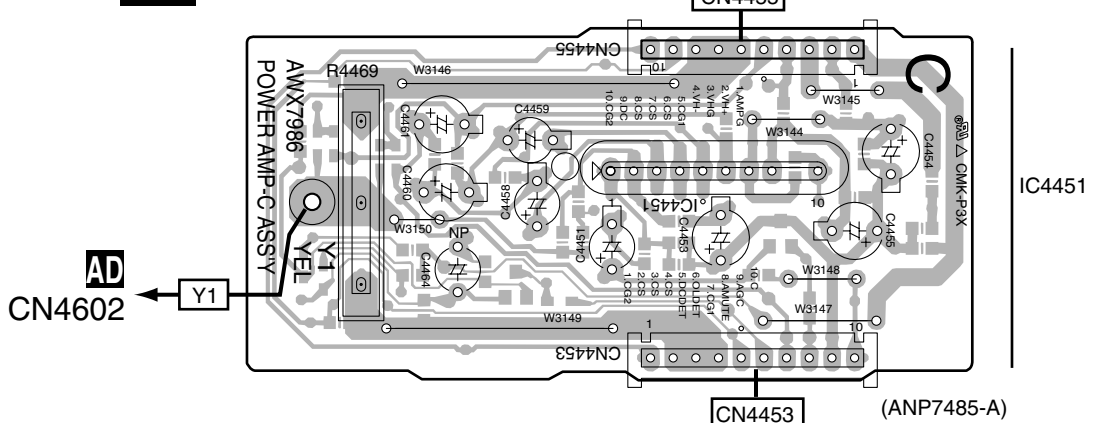
F



SIDE A



AB POWER AMP-C ASSY



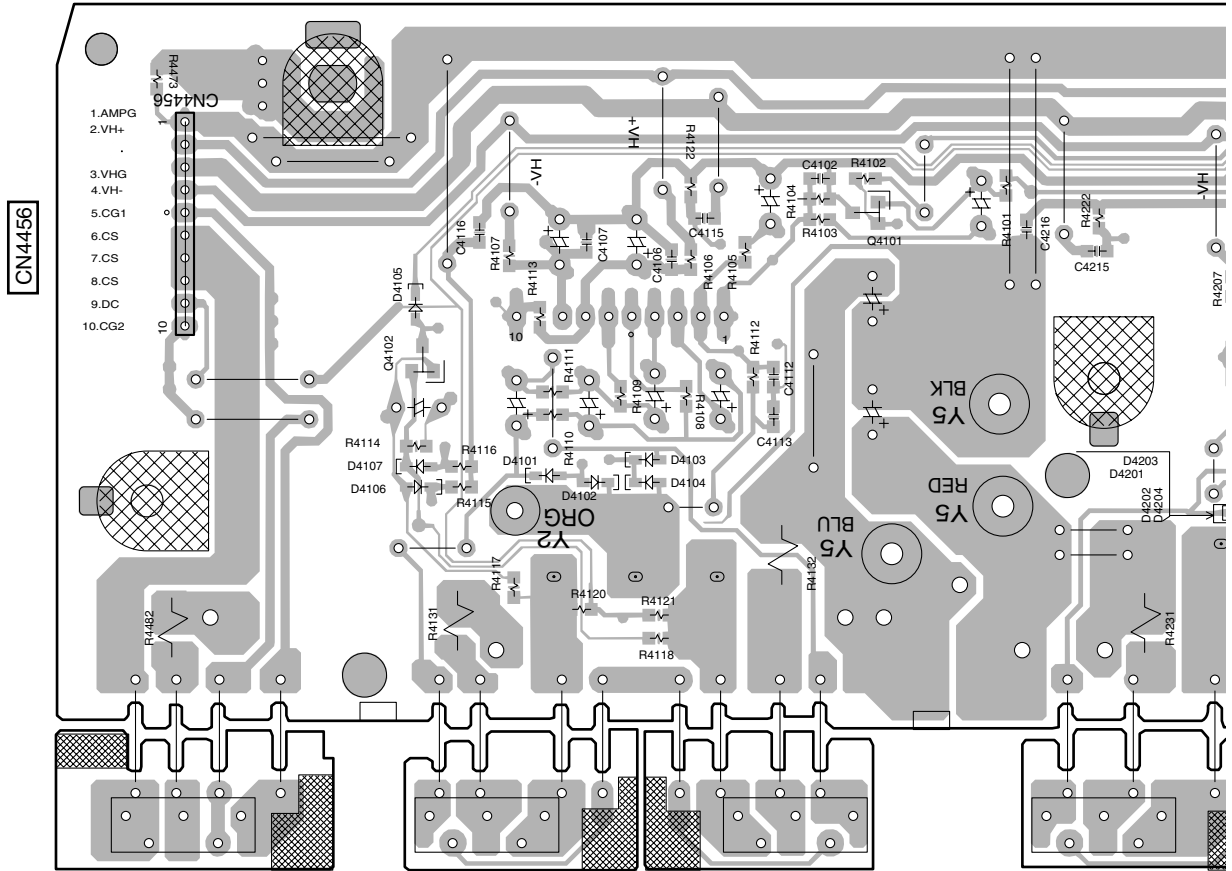
AA CN4454

Z AB

SIDE B

• For VSX-55TXi

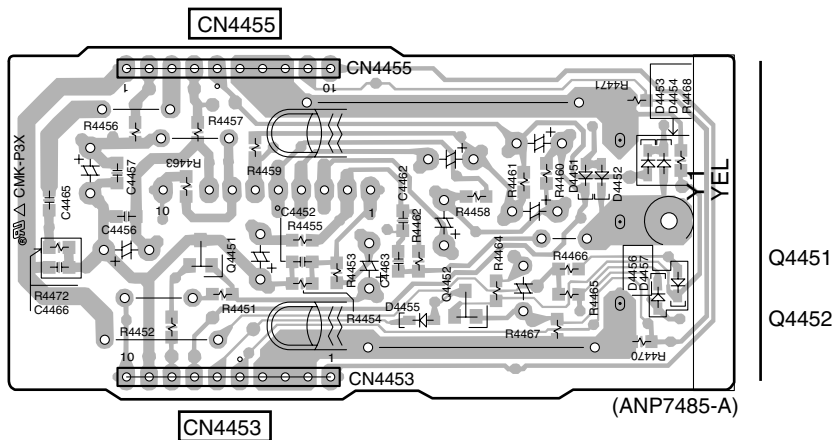
Z POWER AMP-L ASSY



Q4102

Q4101

AB POWER AMP-C ASSY



Q4451

Q4452

Z AB

SIDE B

A

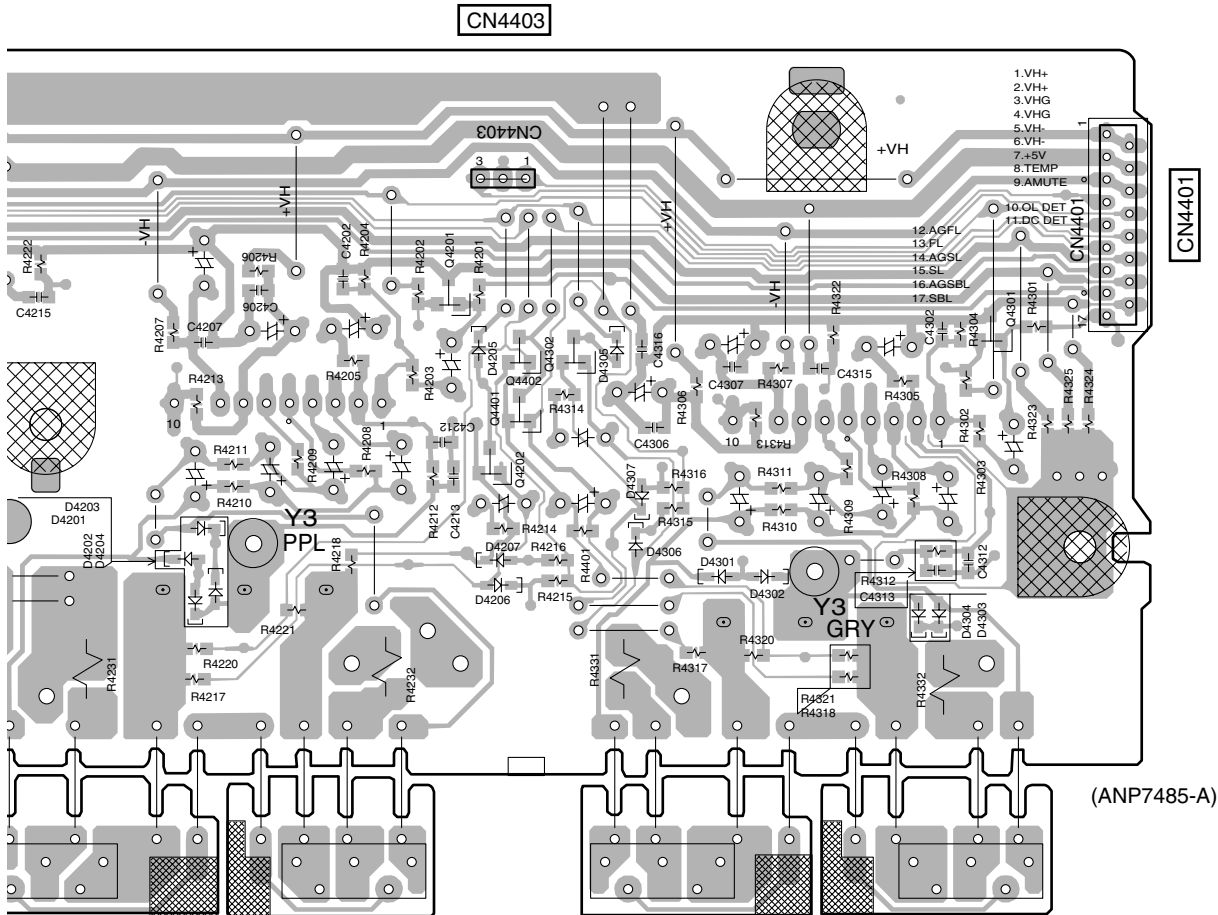
B

C

D

E

F



Q4201 Q4402 Q4302 Q4301
 Q4401
 Q4202



SIDE A

• For VSX-53TX

A

B

C

D

E

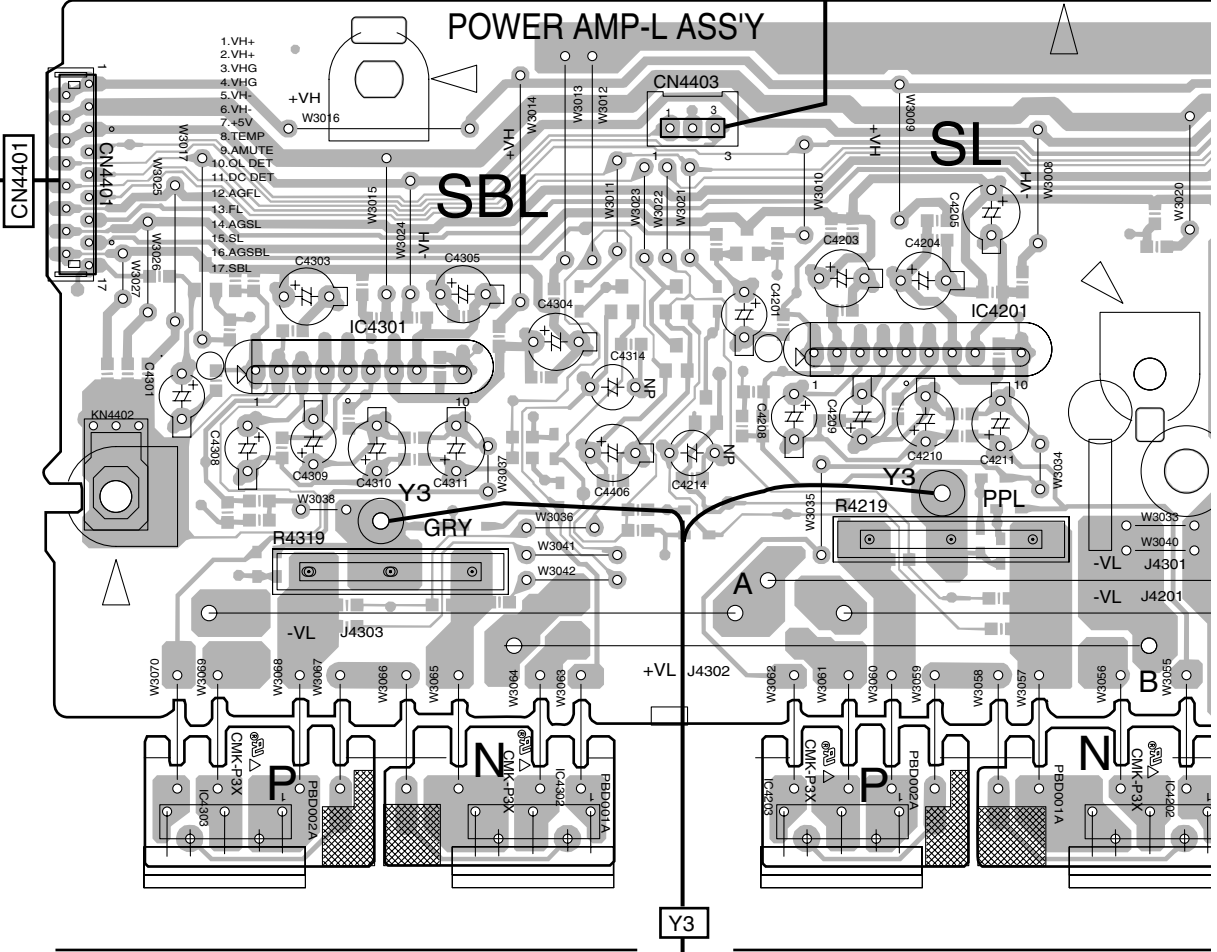
F

THERMISTOR

Z POWER AMP-L ASSY

POWER AMP-L ASS'Y

P CN4403



IC4303 IC4301 IC4302 **AD** CN4603 IC4203 IC4201 IC4202



SIDE A

A

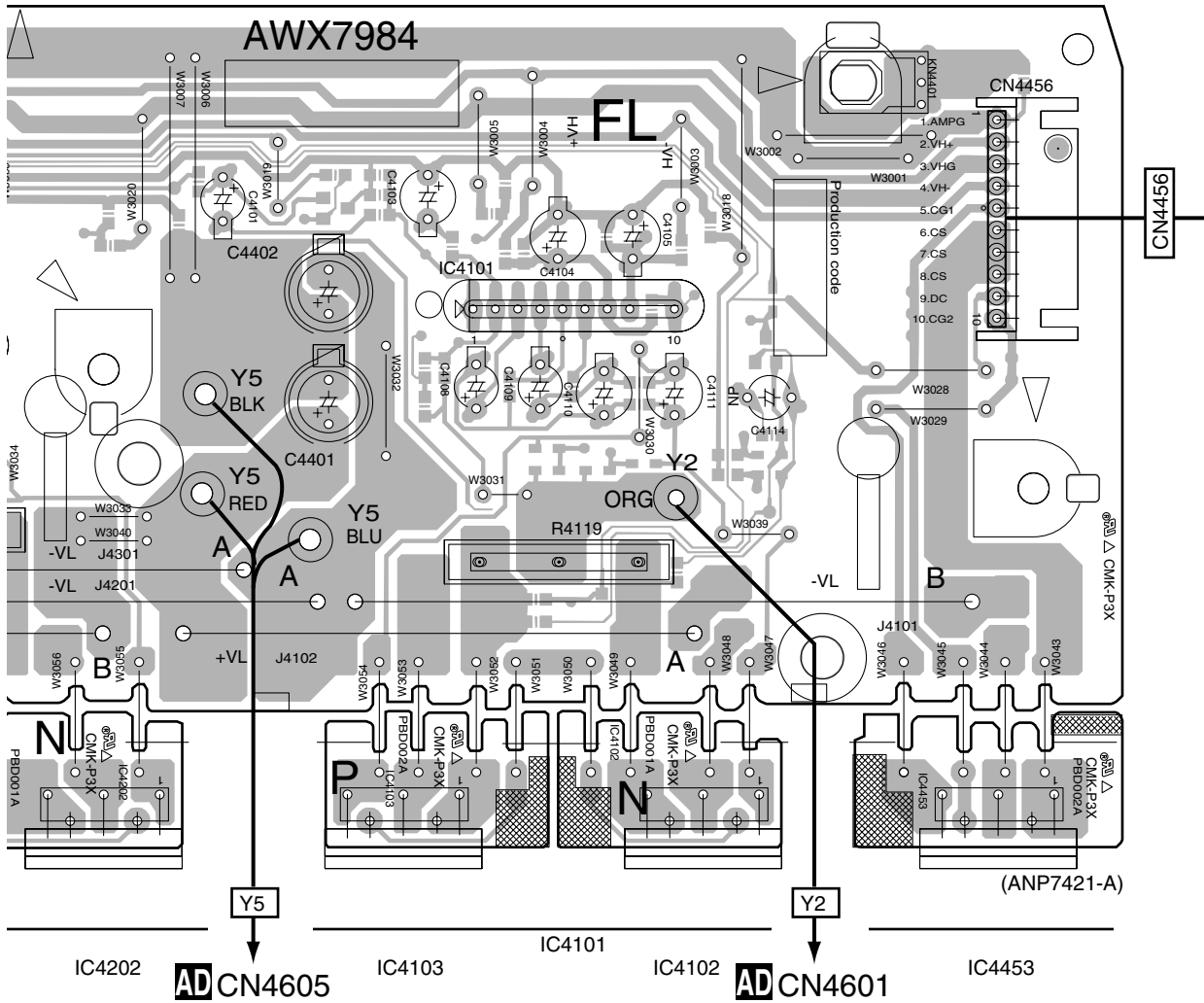
B

C

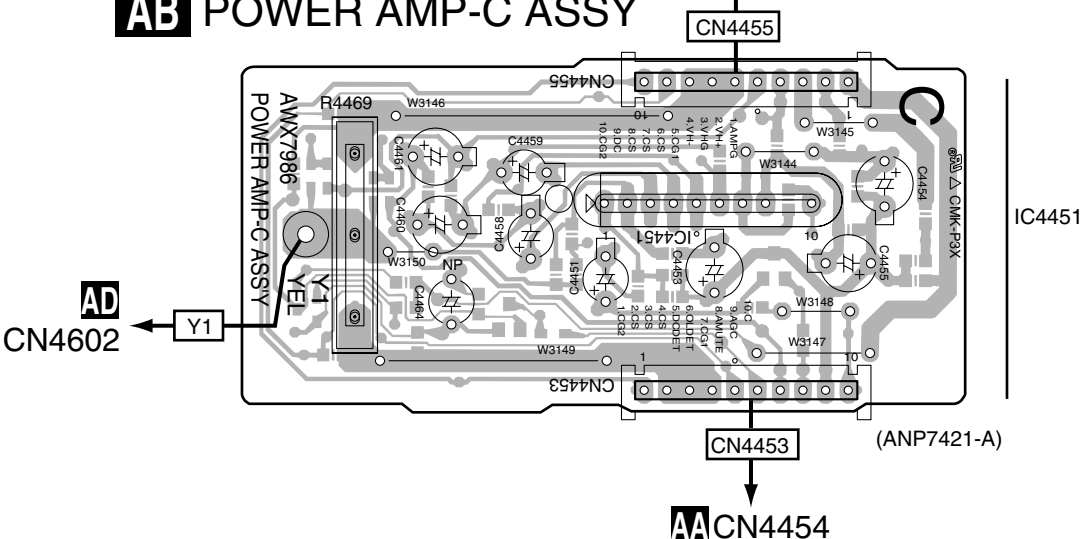
D

E

F



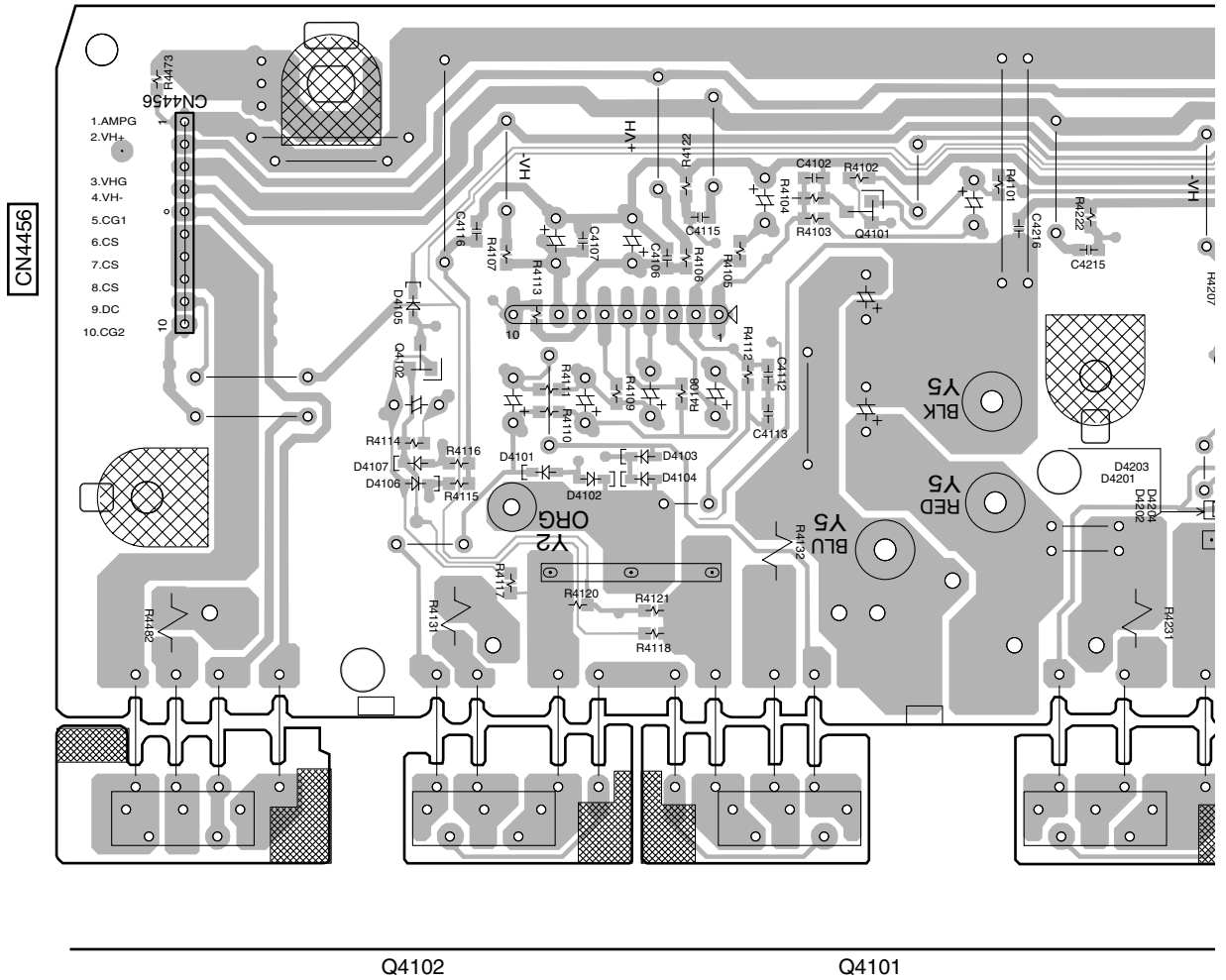
AB POWER AMP-C ASSY



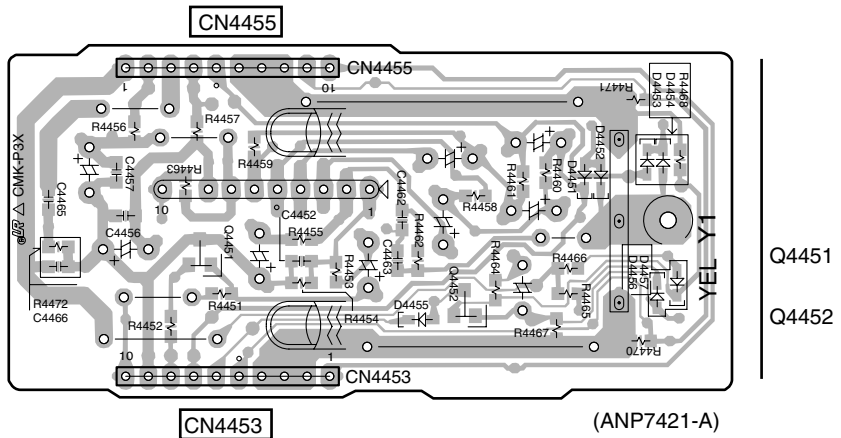
SIDE B

• For VSX-53TX

Z POWER AMP-L ASSY



AB POWER AMP-C ASSY



Z AB

SIDE B

A

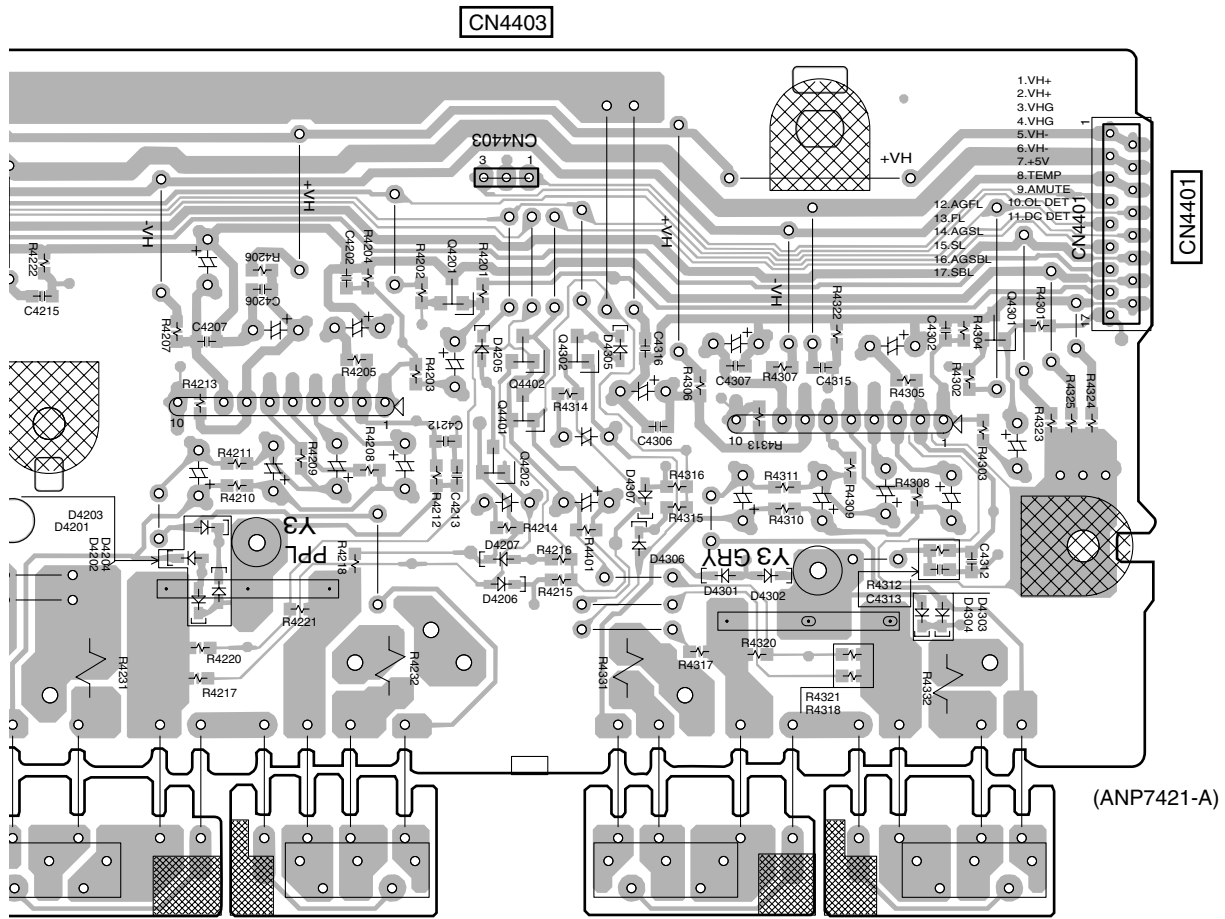
B

C

D

E

F



Q4201 Q4402 Q4302 Q4301
Q4401
Q4202

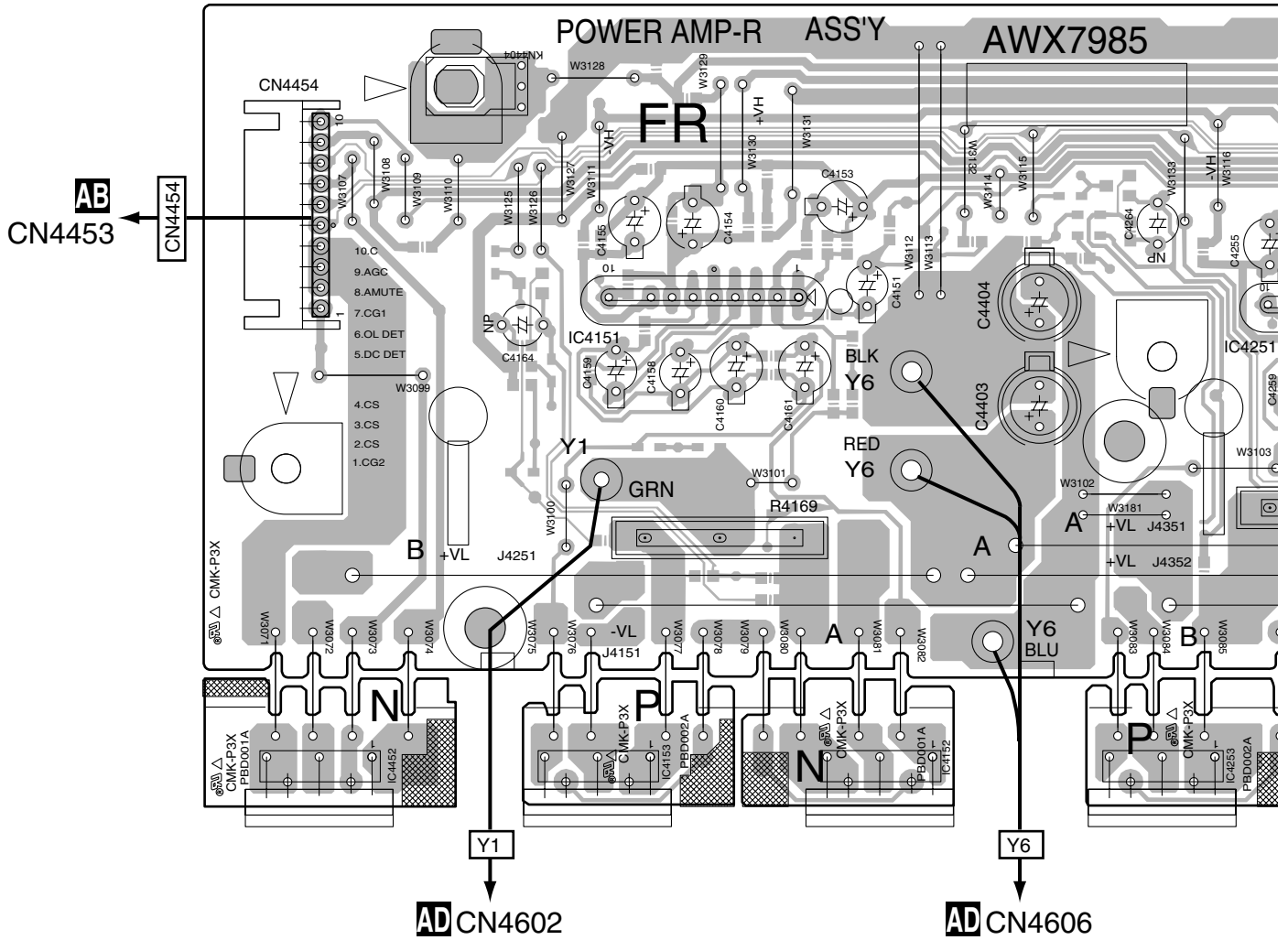


4.17 POWER AMP R ASSY

SIDE A

• For VSX-55TXi

AA POWER AMP-R ASSY

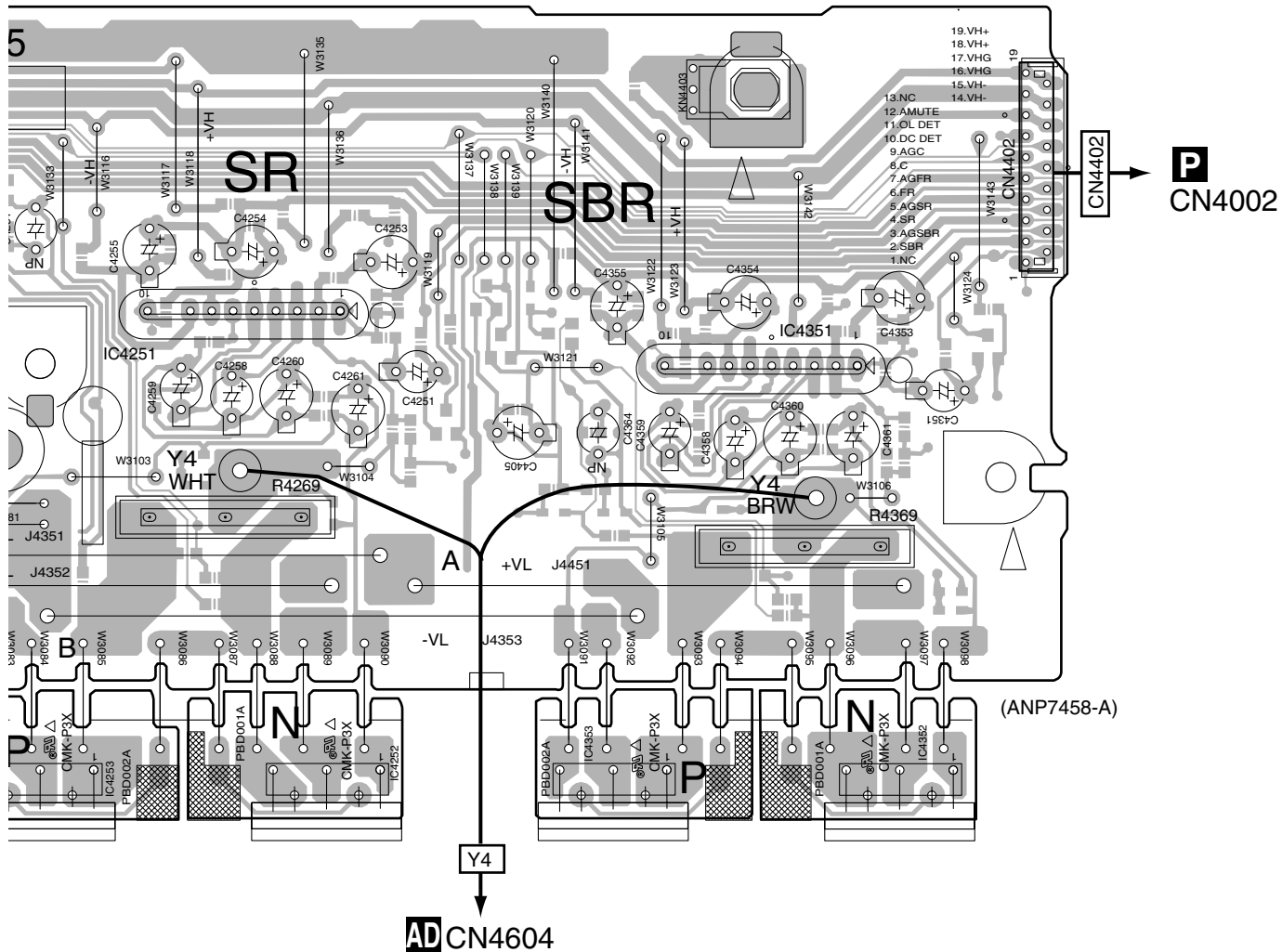


IC4452 IC4151 IC4152 IC4253

IC4153

AA

SIDE A



IC4253 IC4251 IC4252 IC4353 IC4351 IC4352

SIDE B

A

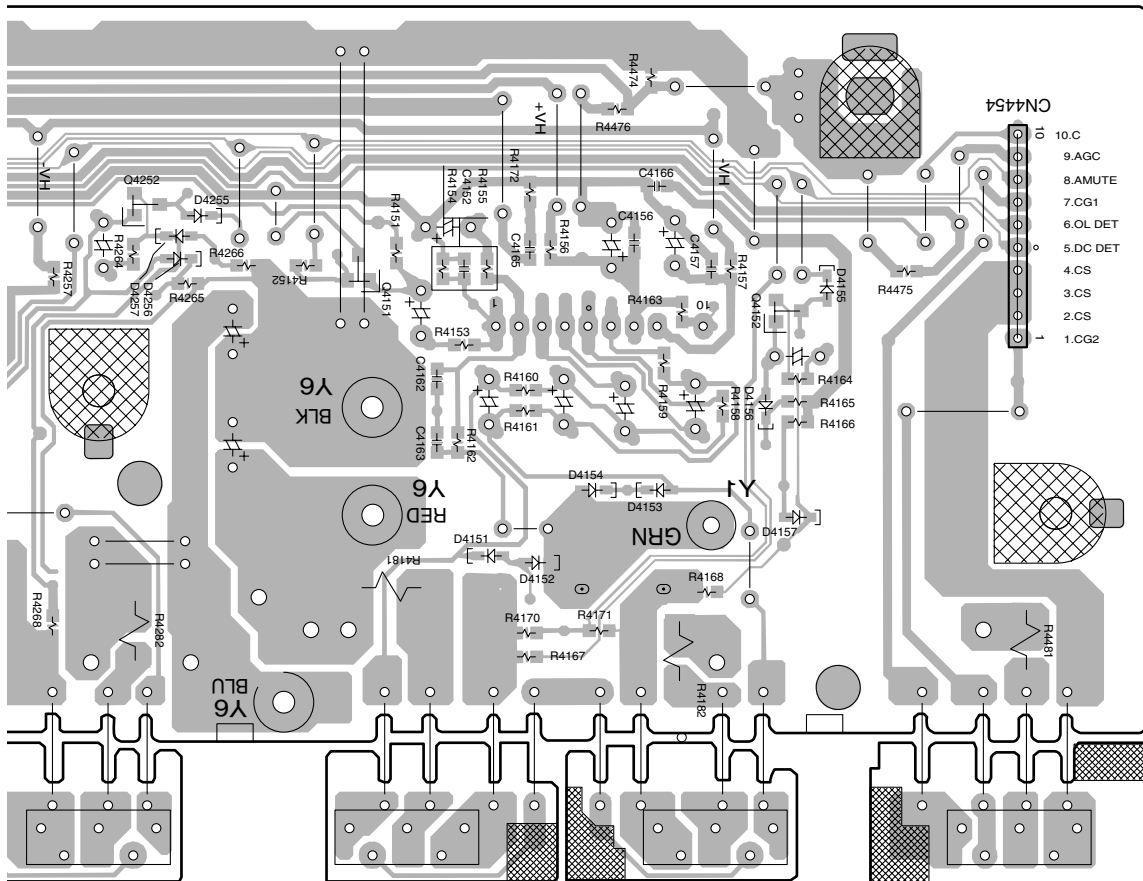
B

C

D

E

F



CN4454

- 10.C
- 9.AGC
- 8.AMUTE
- 7.CG1
- 6.OL DET
- 5.DC DET
- 4.CS
- 3.CS
- 2.CS
- 1.CG2

(ANP7485-A)

Q4252

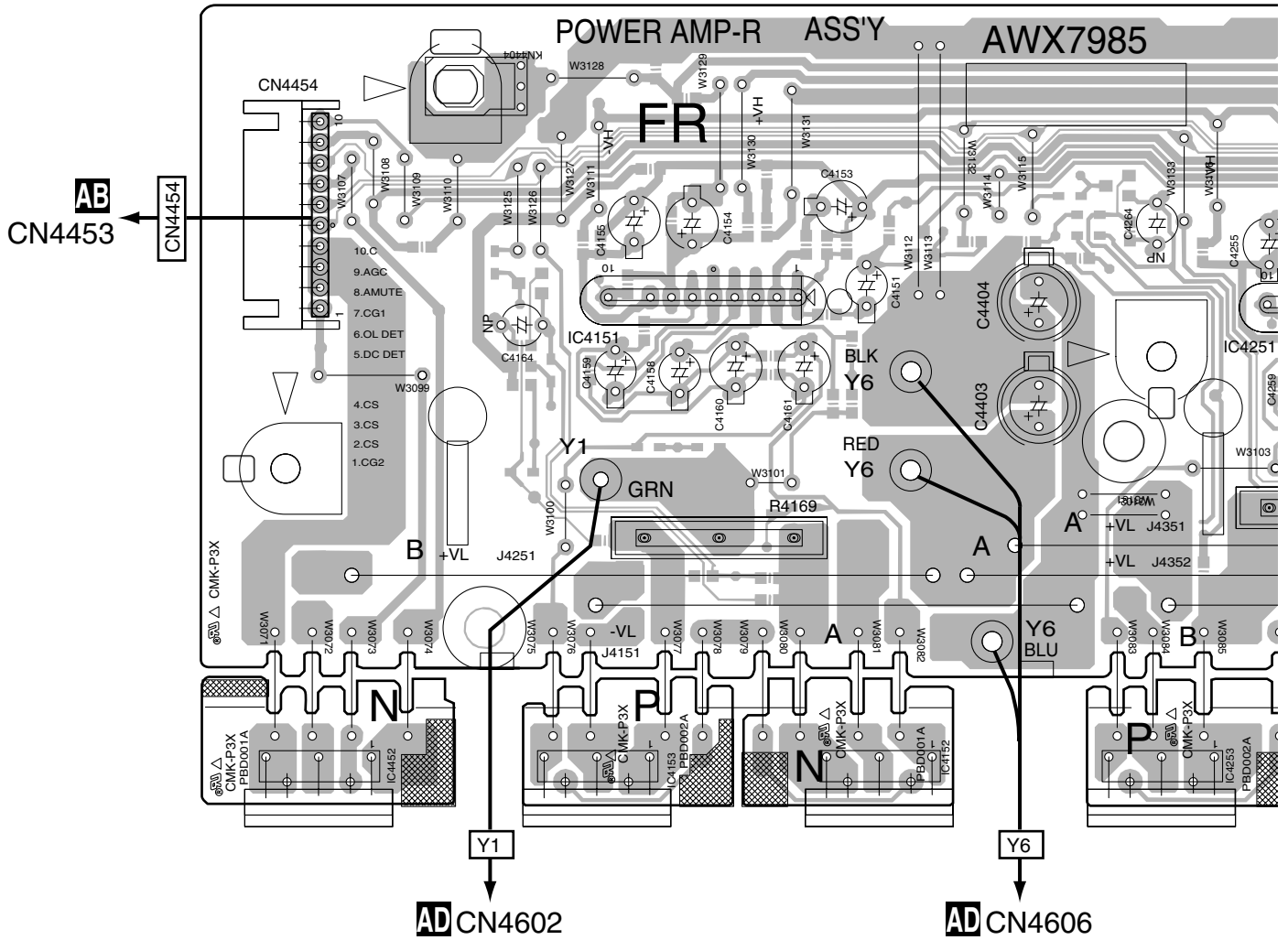
Q4151

Q4152

SIDE A

• For VSX-53TX

AA POWER AMP-R ASSY

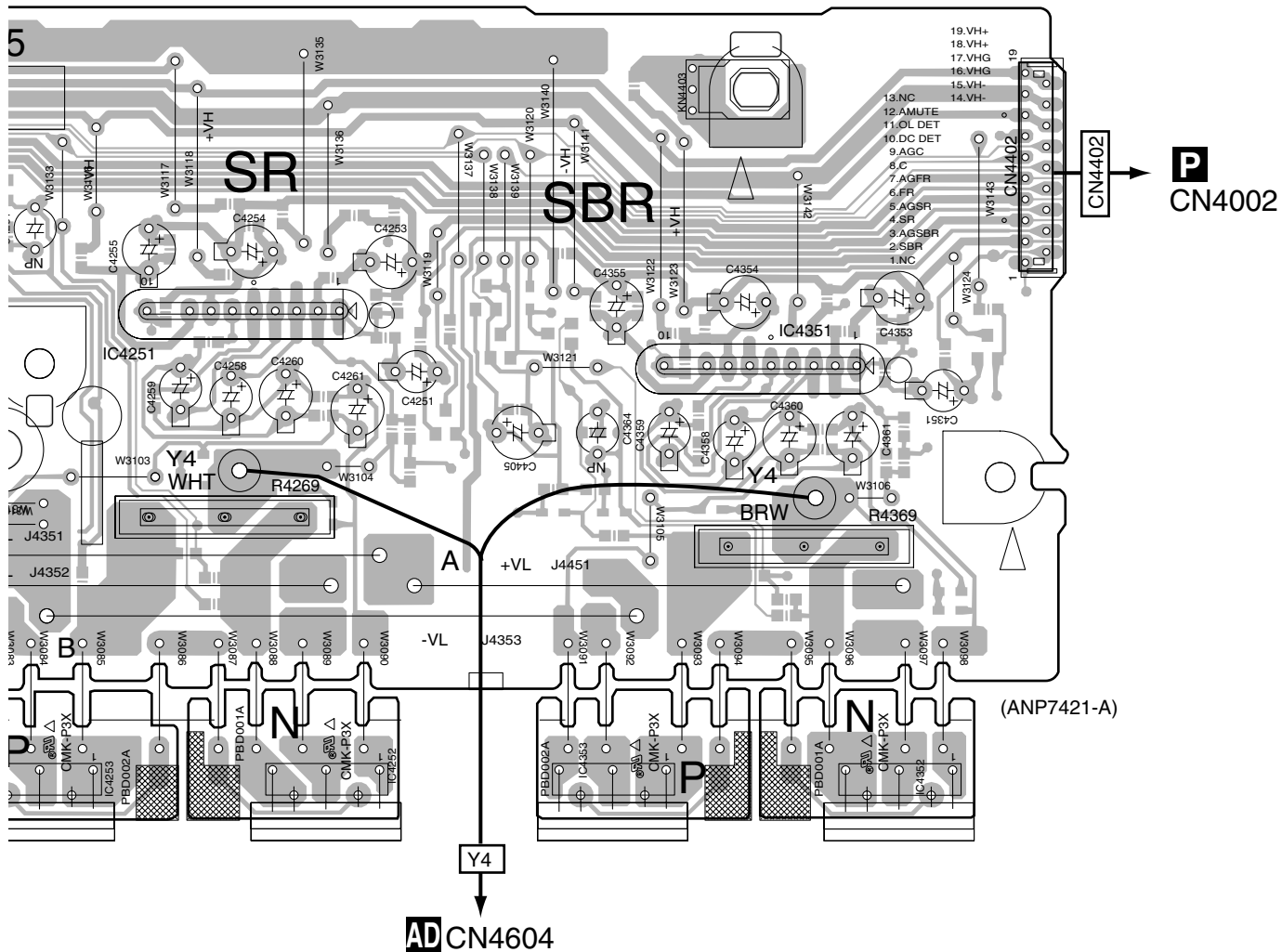


IC4452 IC4151 IC4152 IC4253

IC4153

AA

SIDE A

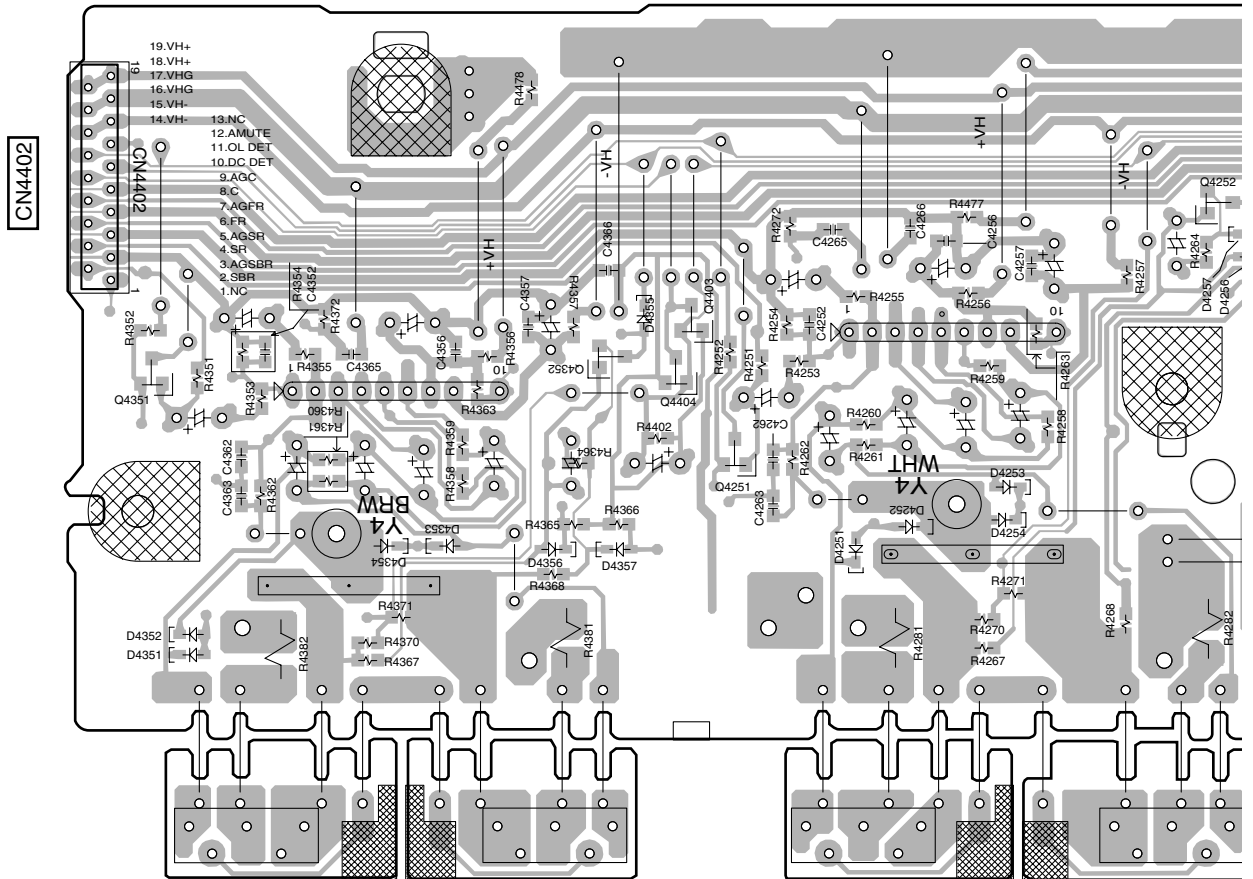


IC4253 IC4251 IC4252 IC4353 IC4351 IC4352

SIDE B

• For VSX-53TX

AA POWER AMP-R ASSY



Q4351

Q4403

Q4252

Q4352 Q4404 Q4251

AA

SIDE B

A

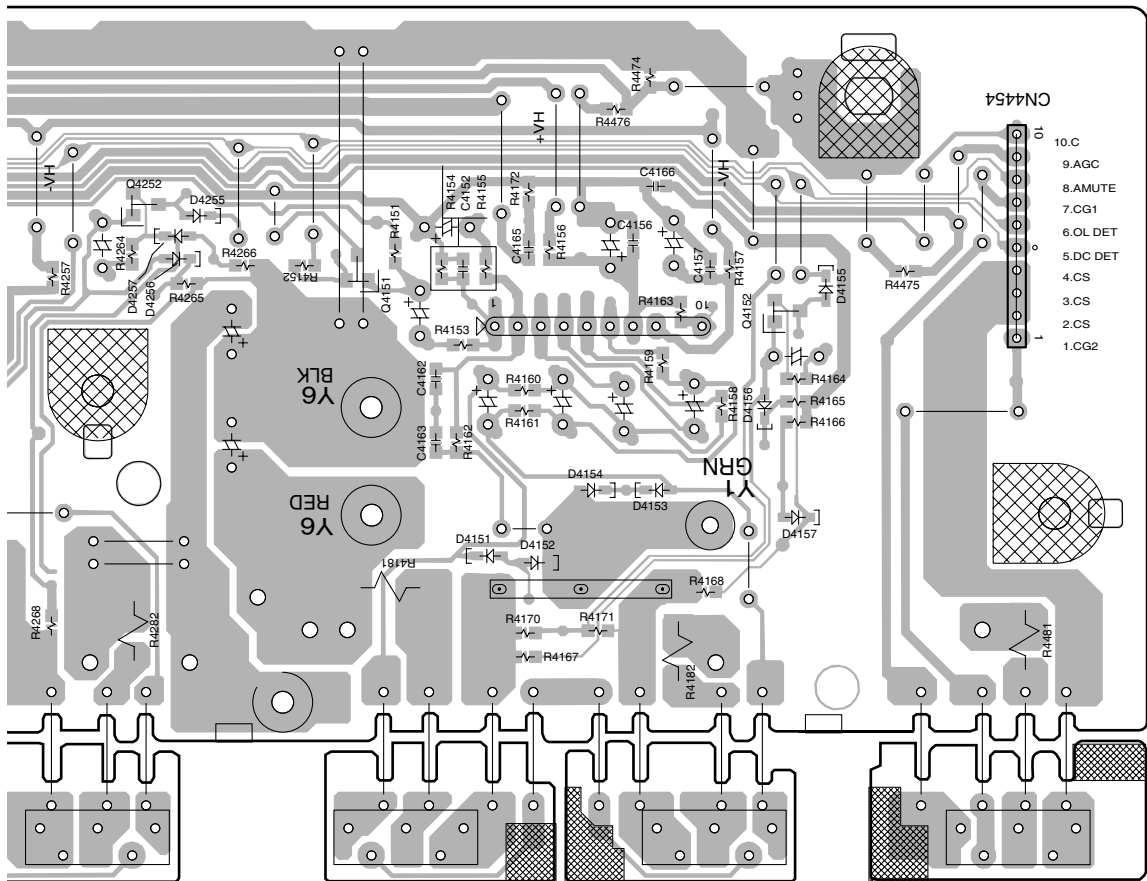
B

C

D

E

F



CN4454

CN4454

- 10.C
- 9.AGC
- 8.AMUTE
- 7.CG1
- 6.OL DET
- 5.DC DET
- 4.CS
- 3.CS
- 2.CS
- 1.CG2

(ANP7421-A)

Q4252

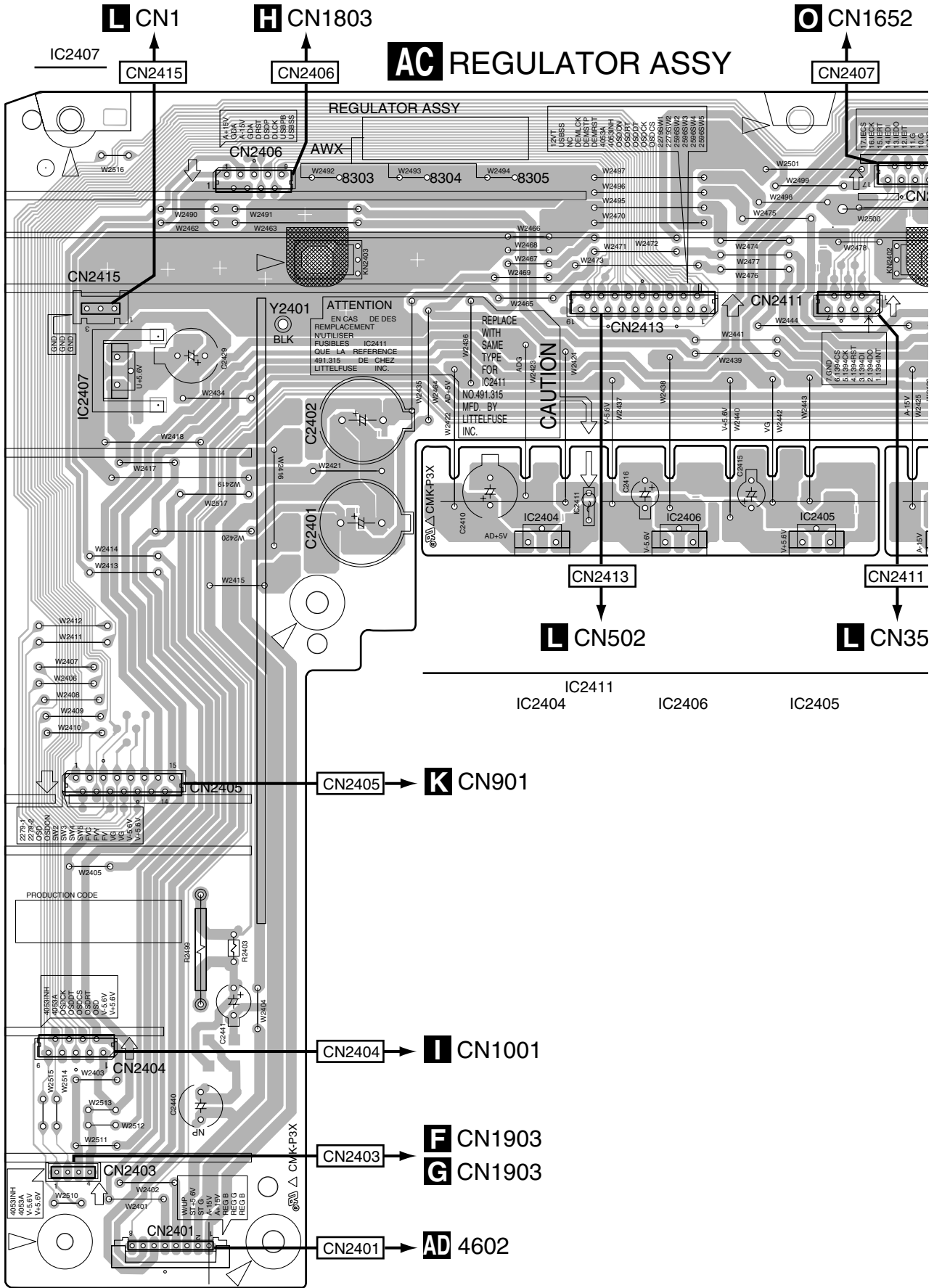
Q4151

Q4152

4.18 REGULATOR ASSY

SIDE A

• For VSX-55TXi

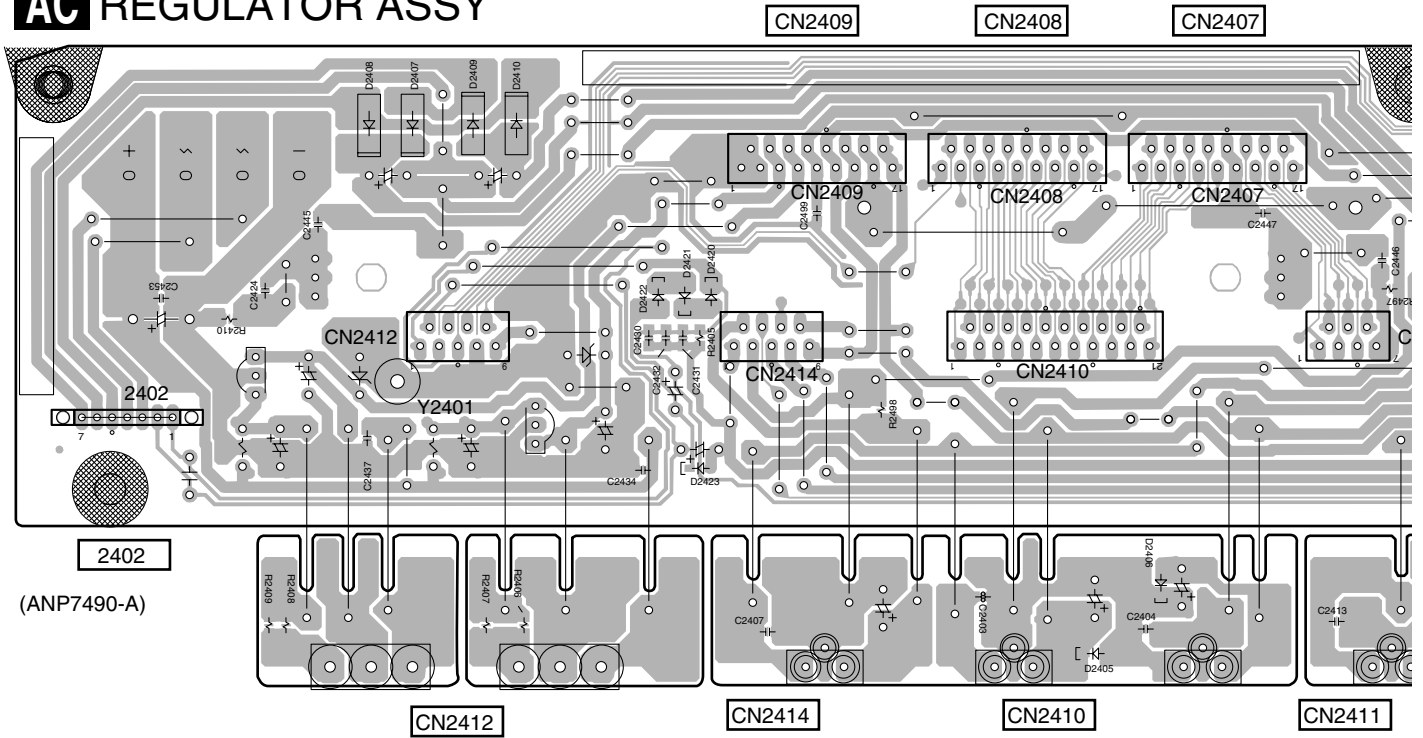


AC

SIDE B

• For VSX-55TXi

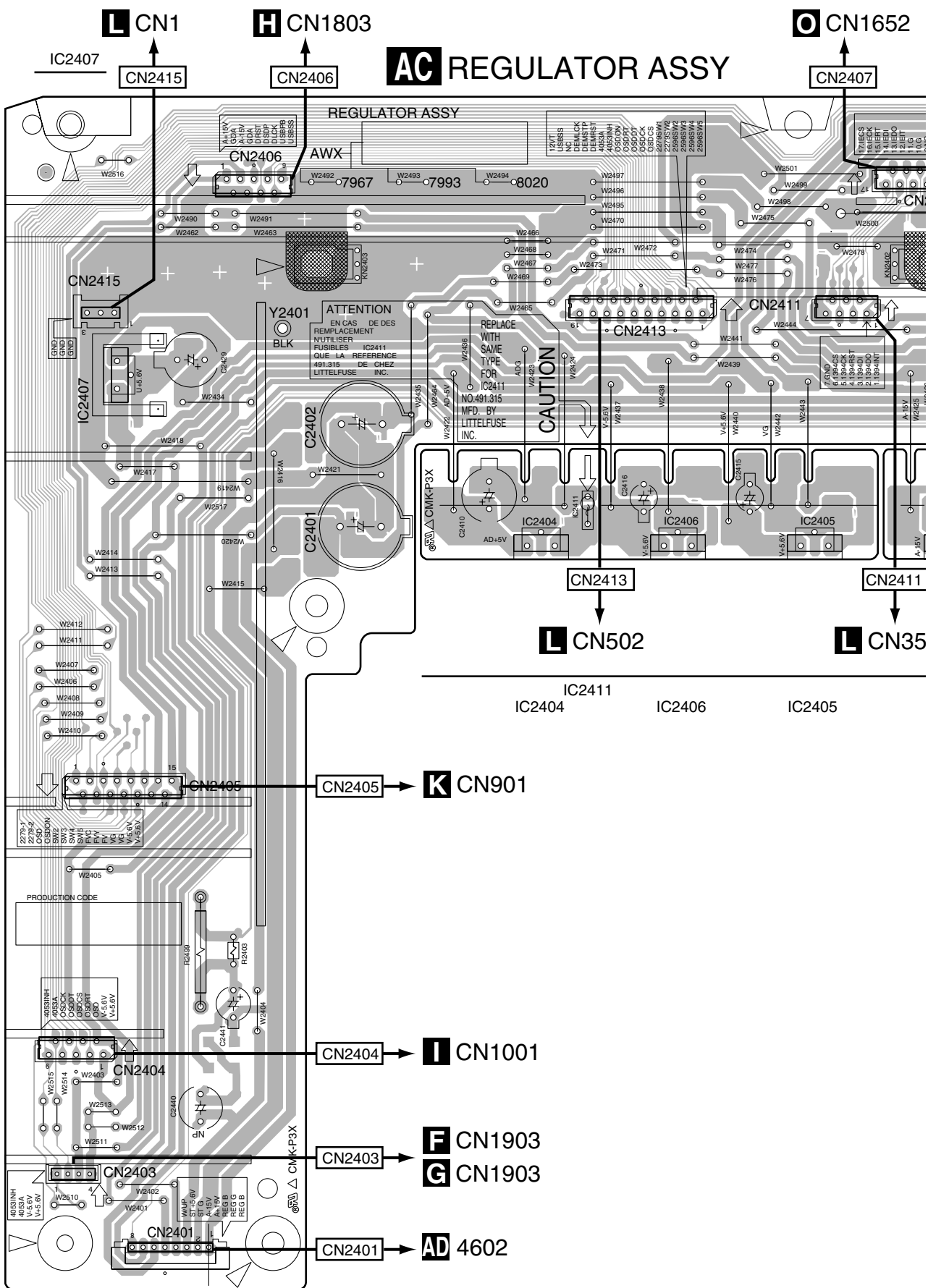
AC REGULATOR ASSY



AC

SIDE A

• For VSX-53TX

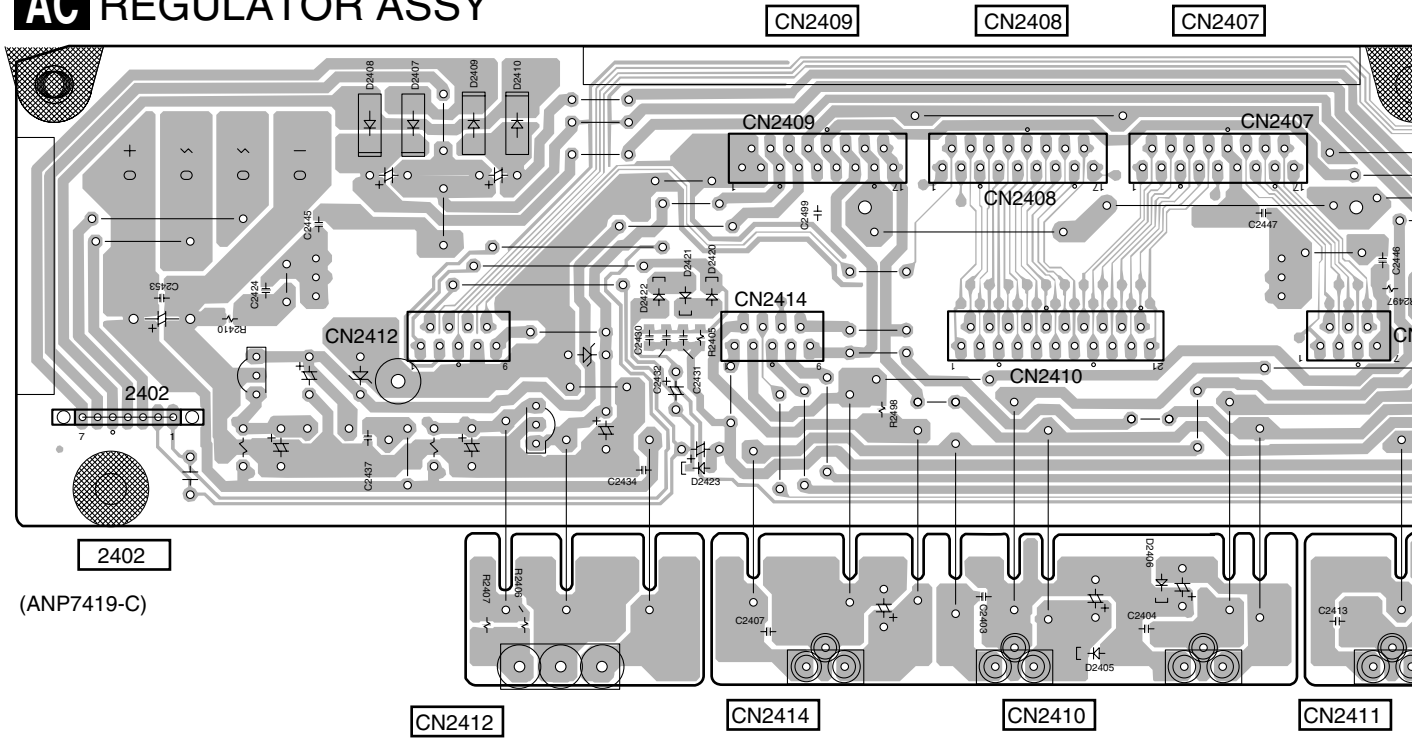


AC

SIDE B

• For VSX-53TX

AC REGULATOR ASSY



AC

SIDE B

A

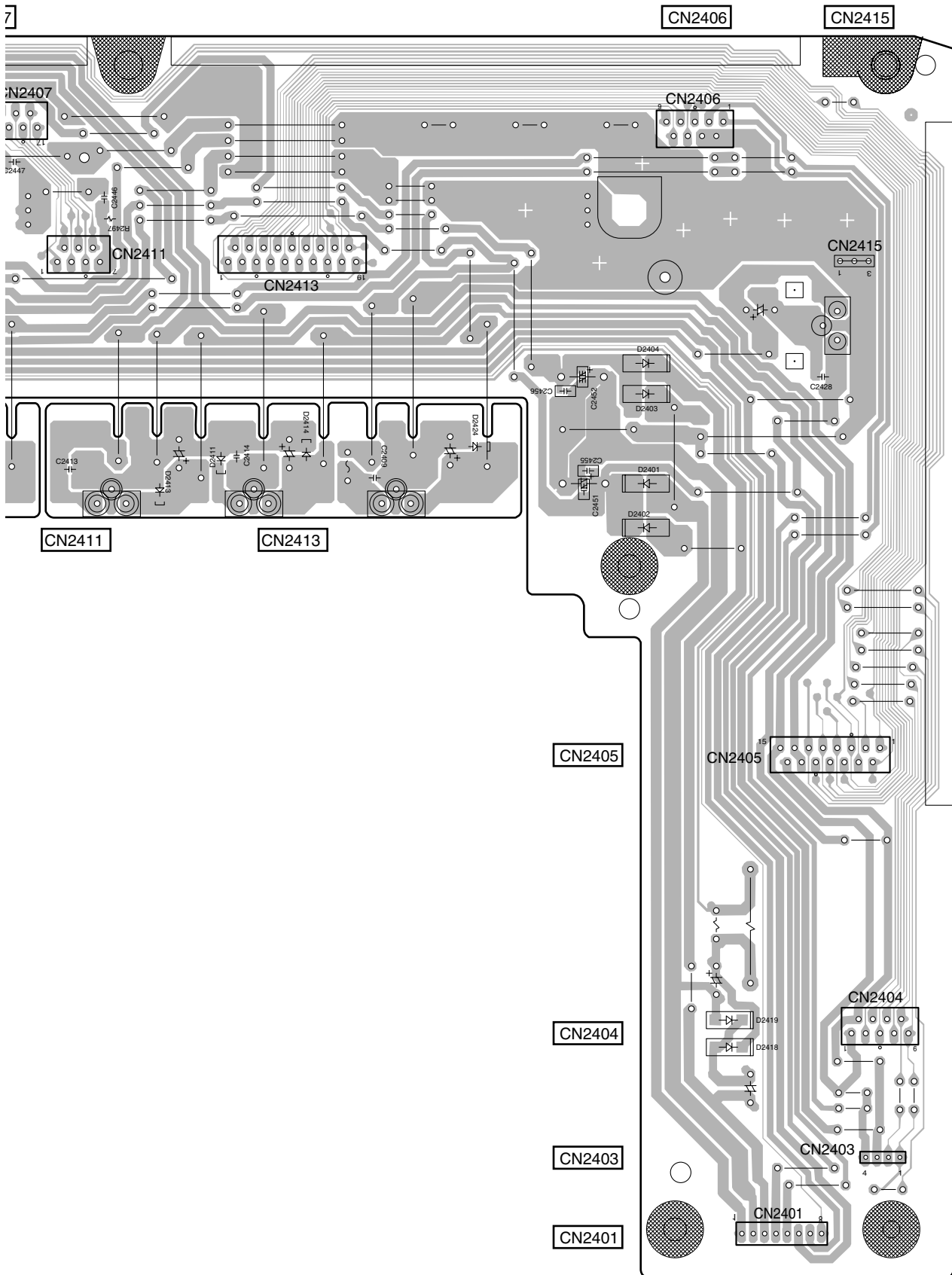
B

C

D

E

F



7

CN2406

CN2415

CN2407

CN2406

R2447

CN2411

CN2413

CN2415

C2413

CN2411

CN2413

CN2405

CN2405

CN2404

CN2403

CN2401

CN2404

CN2403

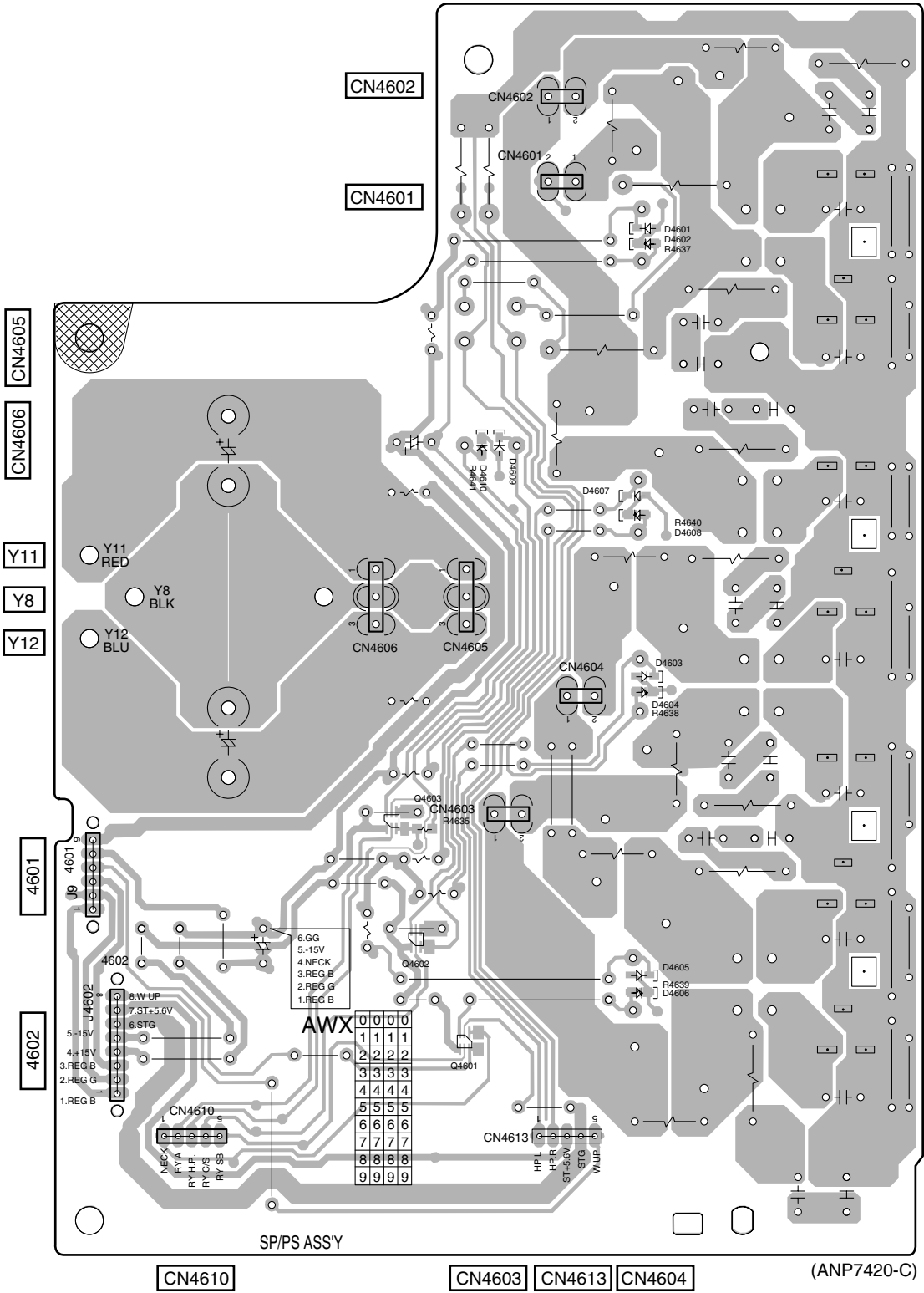
CN2401

AC

SIDE B

SIDE B

AD SP/PS ASSY



Q4603
Q4602
Q4601

AD

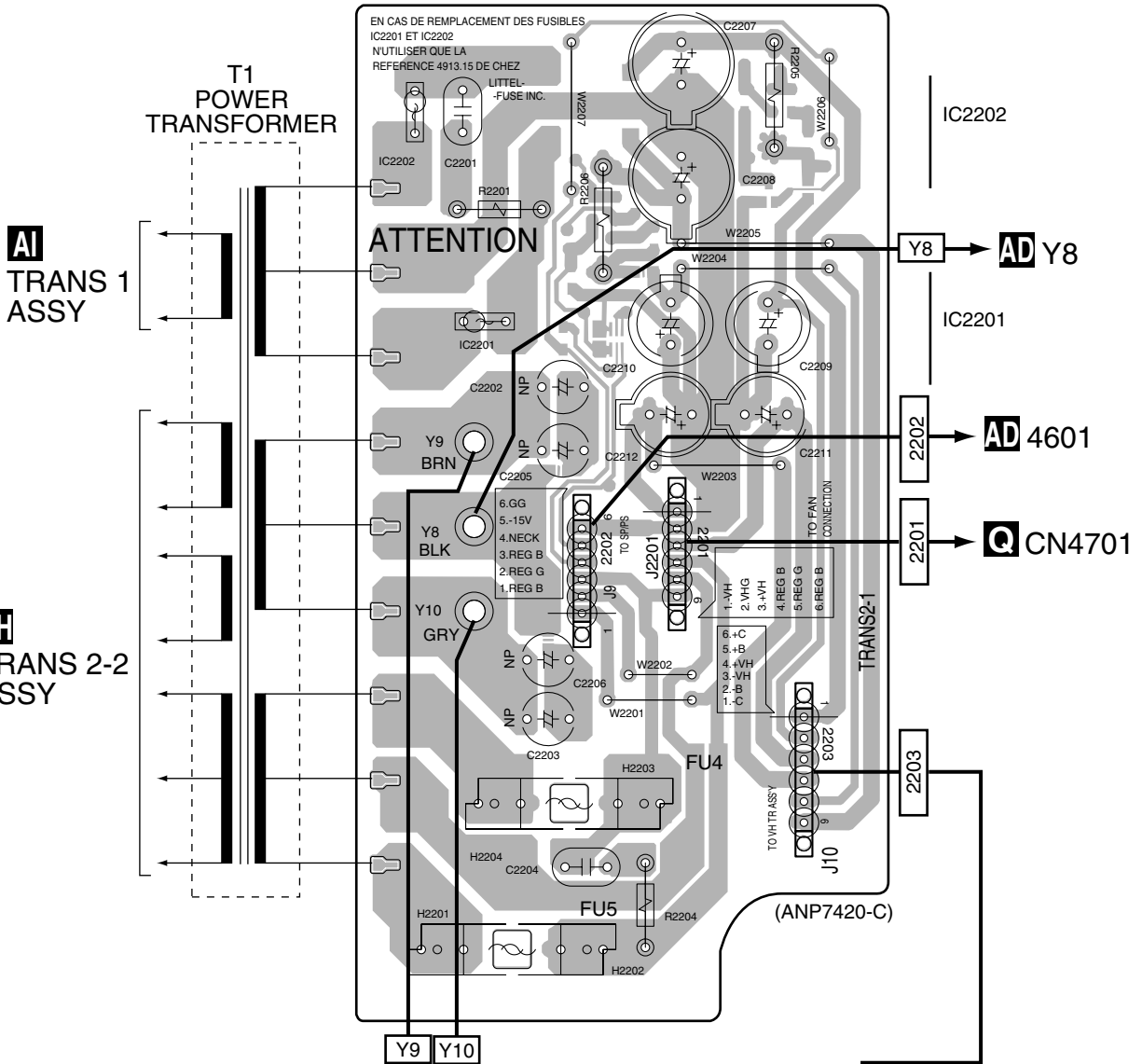
AD

4.20 DIODE, TRANS 2-1 and VH TR ASSYS

SIDE A

SIDE A

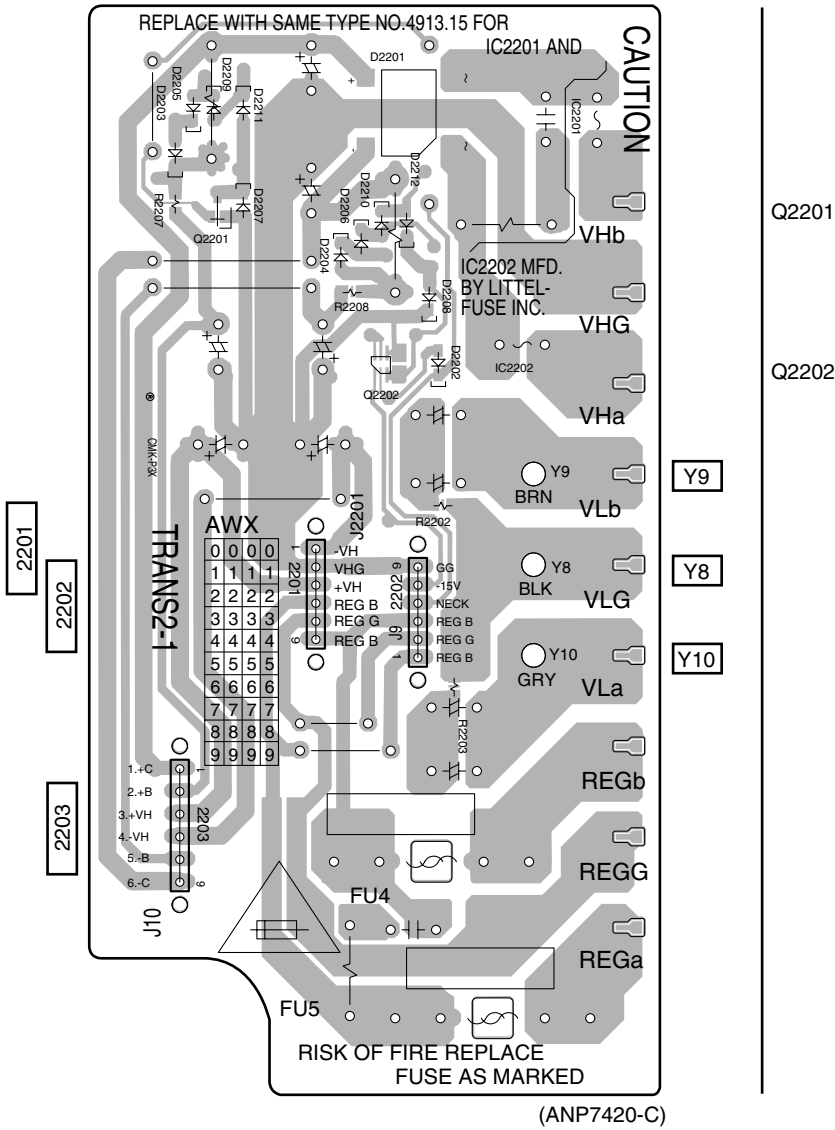
AF TRANS 2-1 ASSY



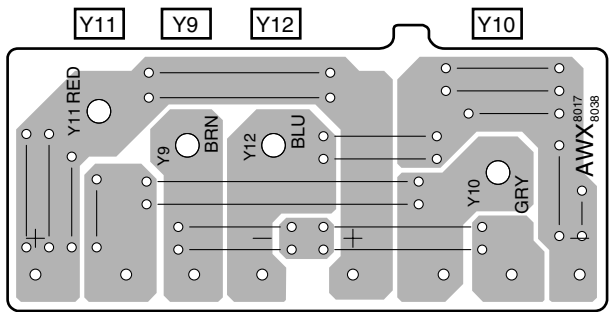
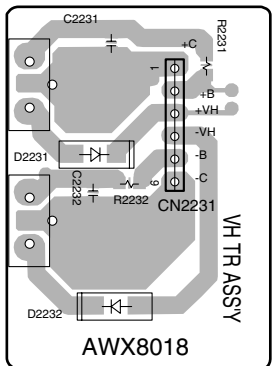
SIDE B

SIDE B

AF TRANS 2-1 ASSY



AG VH TR ASSY



AE AF AG

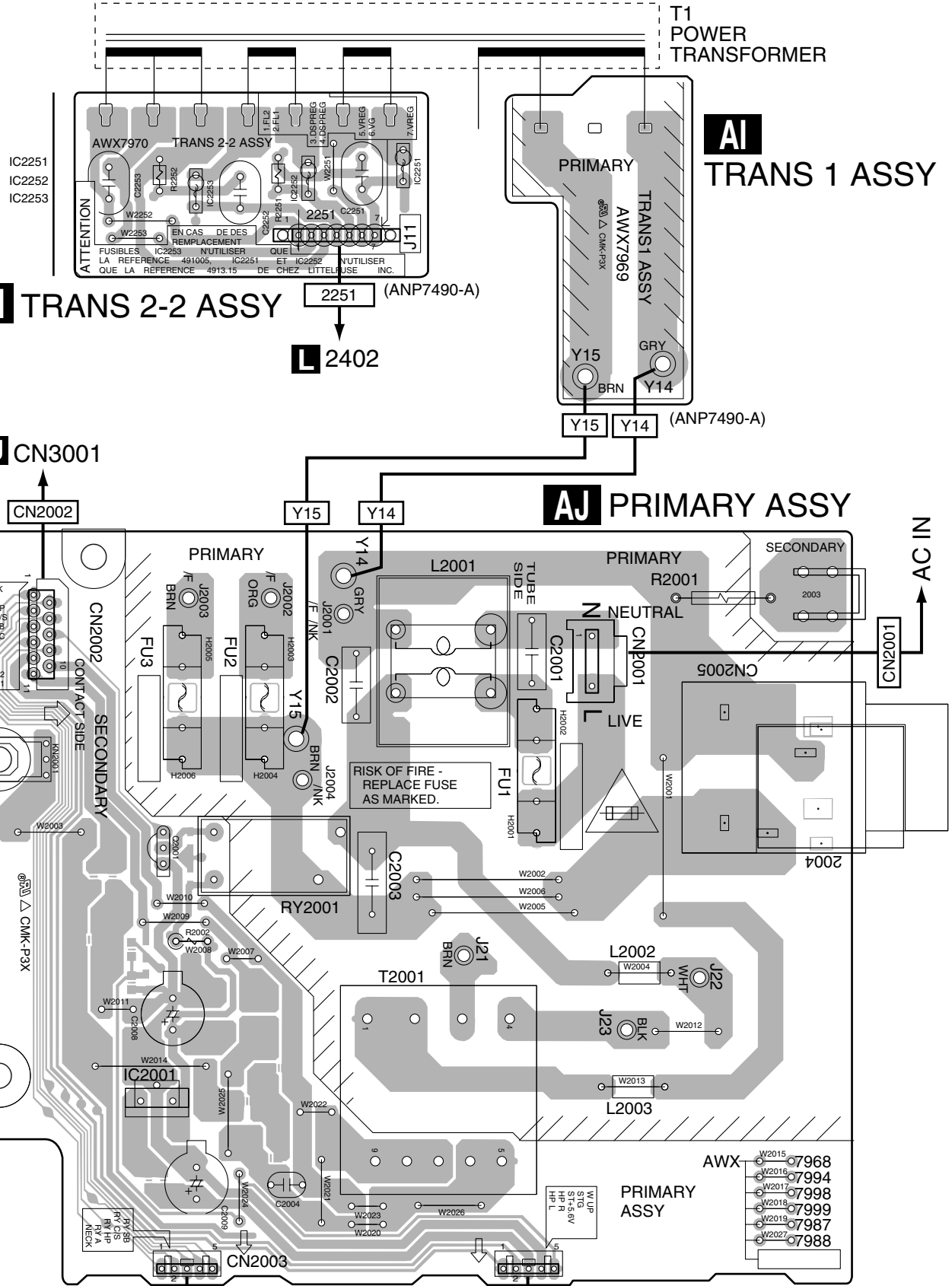
AE AF AG

4.21 TRANS 2-2, TRANS 1 and PRIMARY ASSYS

SIDE A

SIDE A

• For VSX-55TXi



AH TRANS 2-2 ASSY

AI TRANS 1 ASSY

AJ PRIMARY ASSY

CN2003 → **AD** CN4610

CN2004 → **AD** CN4613

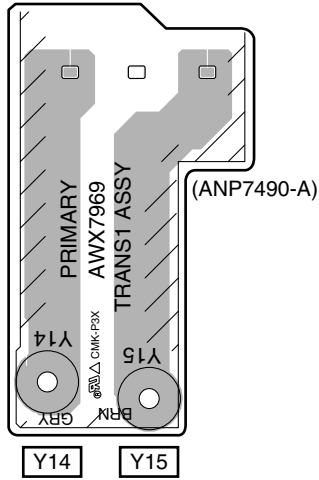
AH AI AJ

SIDE B

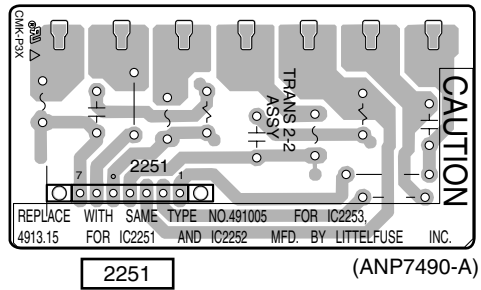
• For VSX-55TXi

SIDE B

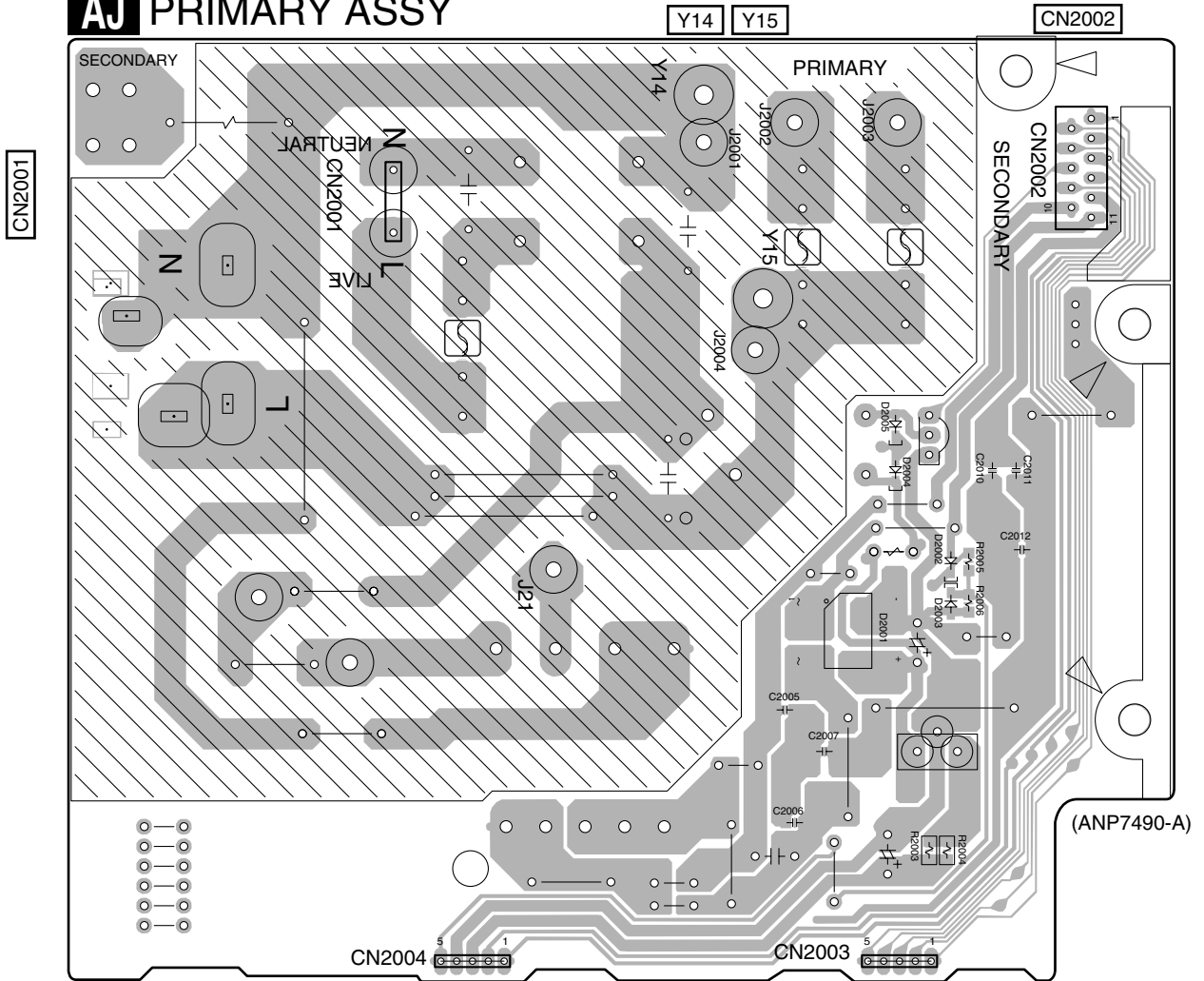
AI
TRANS 1 ASSY



AH TRANS 2-2 ASSY



AJ PRIMARY ASSY



AH AI AJ

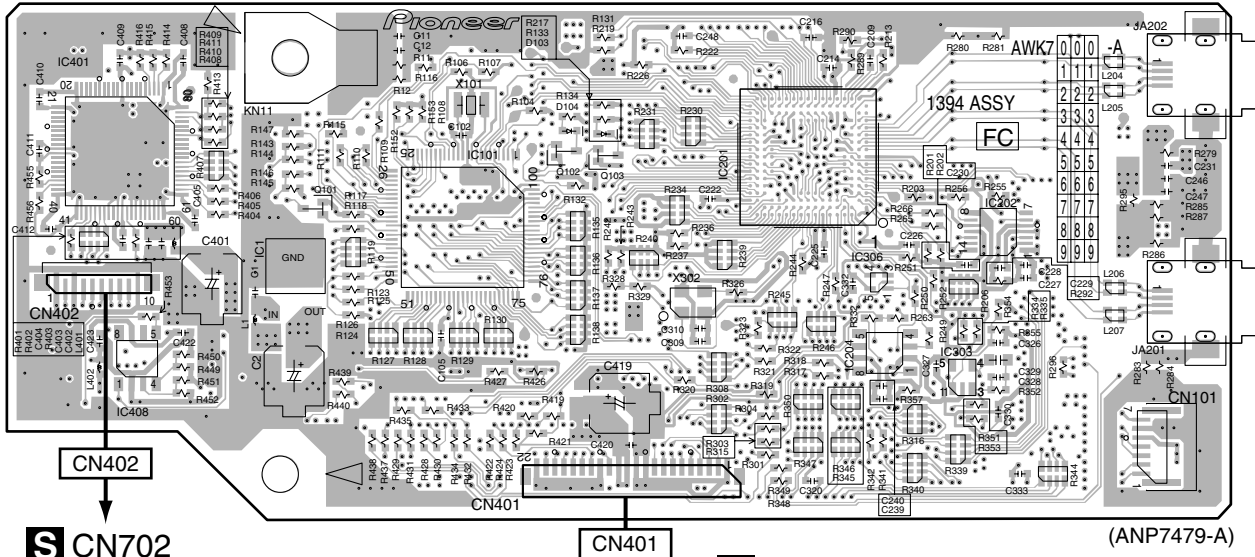
AH AI AJ

4.22 1394 ASSY (VSX-55TXi ONLY)

SIDE A

SIDE A

T 1394 ASSY

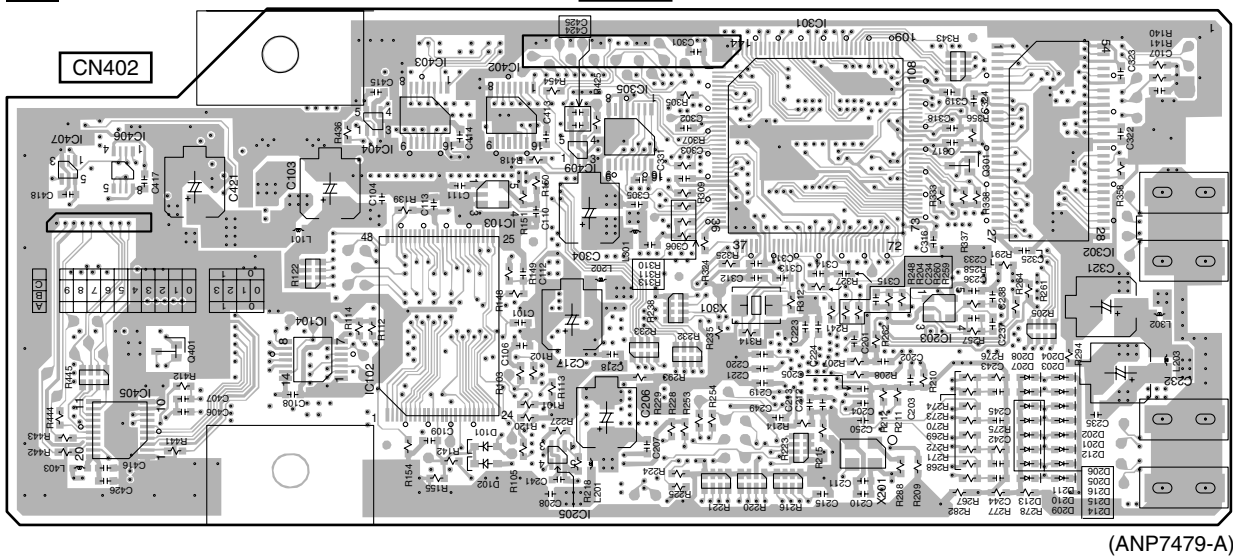


- IC401
- IC408
- Q101
- IC101
- Q102
- Q103
- IC201
- IC306
- IC202
- IC205
- IC303

SIDE B

SIDE B

T 1394 ASSY



- IC407
- IC406
- IC404
- IC403
- IC402
- IC409
- IC305
- IC301
- Q301
- IC203
- IC405
- Q401
- IC104
- IC102
- IC103
- IC205

5. PCB PARTS LIST

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

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

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

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

560 Ω \rightarrow 56 x 10¹ \rightarrow 561 RD1/4PU567J

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

0.5 Ω \rightarrow R50 RN2H R50K

1 Ω \rightarrow 1R0 RS1P 1R0K

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

5.62k Ω \rightarrow 562 x 10¹ \rightarrow 5621 RN1/4PC5627F

• LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol and Description	VSX-55TXi /KUXJI/CA	VSX-53TX /KUXJI/CA
	1..FM/AM TUNER MODULE	AXQ7231	AXQ7231
NSP	1..REGULATOR ASSY	AWK7784	AWK7731
	2..PRIMARY ASSY	AWX7968	AWX7968
	2..TRANS 1 ASSY	AWX7969	AWX7969
	2..TRANS 2-2 ASSY	AWX7970	AWX7970
	2..FAN DRIVE ASSY	AWX7976	AWX7976
	2..POWER AMP IN ASSY	AWX7982	AWX7982
	2..REGULATOR ASSY	AWX8303	AWX7967
	2..7.1 CH I/O ASSY	AWX8306	AWX7973
NSP	1..COMPLEX ASSY	AWK7788	AWK7791
	2..RS232C ASSY	AWX7966	Not used
	2..12V TRIGGER ASSY	Not used	AWX8310
	2..VOLUME ASSY	AWX7971	AWX7971
	2..MULTI JOG ASSY	AWX7972	AWX7972
	2..INPUT CONNECT ASSY	AWX7974	AWX7974
	2..FRONT IN ASSY	AWX7977	AWX7977
	2..OPTICAL IN ASSY	AWX7978	AWX7978
	2..HEADPHONE ASSY	AWX7980	AWX7980
	2..DIODE ASSY	AWX8017	AWX8017
	2..VH TR ASSY	AWX8018	AWX8018
	2..SP/PS ASSY	AWX8307	AWX7975
	2..V-AUDIO IN ASSY	AWX8313	AWX7964
	2..TRANS 2-1 ASSY	AWX8326	AWX8326
NSP	1..MAIN ASSY	AWK7776	AWK7780
	2..MIC & F.OPT IN ASSY	AWX7981	AWX7981
	2..MIC AMP ASSY	AWX8004	AWX8004
	2..FAN CONNECTION ASSY	AWX8005	AWX8005
	2..MAIN CONTROL ASSY	AWX8285	AWX8289
	2..COMPONENT ASSY	AWX8293	AWX8295
	2..DSP CONNECTION ASSY	AWX8299	AWX8024
	2..COAXIAL IN ASSY	AWX8300	AWX8323
	2..VIDEO ASSY	AWX8311	AWX7962
NSP	1..POWER AMP ASSY	AWK7792	AWK7733
	2..POWER AMP-L ASSY	AWX7984	AWX7984
	2..POWER AMP-R ASSY	AWX7985	AWX7985
	2..POWER AMP-C ASSY	AWX7986	AWX7986
	2..DISPLAY ASSY	AWX8315	AWX7983
	1..DSP ASSY	AWX8249	AWX8249
F	1..1394 ASSY	AWK7768	Not used

• CONTRAST OF PCB ASSEMBLIES

A 7.1CH I/O ASSY

AWX8306 and AWX7973 are constructed the same except for the following :

Mark	Symbol and Description	AWX8306	AWX7973
	1301-1304 4P PIN JACK	AKB7075	Not used
	CN1301-CN1304 4P PIN JACK	Not used	AKB7015

B V-AUDIO IN ASSY

AWX8313 and AWX7964 are constructed the same except for the following :

Mark	Symbol and Description	AWX8313	AWX7964
	1201, 1203 4P PIN JACK	AKB7075	Not used
	CN1201, CN1203 4P PIN JACK	Not used	AKB7015
	CN1205 6P PIN JACK	AKB7162	AKB7009

H COAXIAL IN ASSY

AWX8300 and AWX8323 are constructed the same except for the following :

Mark	Symbol and Description	AWX8300	AWX8323
	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
	JA1802 2P PIN JACK	AKB7148	AKB7131

I COMPONENT ASSY

AWX8293 and AWX8295 are constructed the same except for the following :

Mark	Symbol and Description	AWX8293	AWX8295
	JA1001-JA1003 3P PIN JACK	VKB1151	VKB1150

K VIDEO ASSY

AWX8311 and AWX7962 are constructed the same except for the following :

Mark	Symbol and Description	AWX8311	AWX7962
	JA901-JA903 COMB. JACK (2S+2P)	AKB7160	AKB7147
	JA904 COMB. JACK (S+1P)	AKB7159	AKB7146
	JA905 1P PIN JACK	VKB1156	VKB1122

L MAIN CONTROL ASSY

AWX8285 and AWX8289 are constructed the same except for the following :

Mark	Symbol and Description	AWX8285	AWX8289
	IC501	PD5948A8	PD5899A
	Q101, Q102	2SC3326	Not used
	Q103	DTA124EK	Not used
	C139, C140	CCSRCH470J50	Not used
	R135, R136	RS1/16S912J	RS1/16S0R0J

Mark	Symbol and Description	AWX8285	AWX8289
	R137, R138 R141, R142 R143 R331, R352–R354, R356 R351	RS1/16S102J RS1/16S472J RS1/16S473J RS1/16S221J RS1/16S0R0J	Not used Not used Not used Not used Not used
	R355 R357, R358 R523, R524 JA111–JA113 4P PIN JACK	RS1/16S101J Not used Not used VKB1133	Not used RS1/16S0R0J RS1/16S473J VKB1132

O DSP CONNECTION ASSY

AWX8299 and AWX8024 are constructed the same except for the following :

Mark	Symbol and Description	AWX8299	AWX8024
	IC1653 L1652 C1653 R1655 R1656, R1676, R1678 R1659, R1660, R1662	TC74LVX244FT QTL1013 CKSRYB104K16 Not used RS1/16S0R0J RS1/16S151J	Not used Not used Not used RS1/16S0R0J Not used Not used

U DISPLAY ASSY

AWX8315 and AWX7983 are constructed the same except for the following :

Mark	Symbol and Description	AWX8315	AWX7983
	D3010 D3011 R3064	UDZS6.2B NSPB500-0008 RS1/16S222J	Not used Not used Not used

AC REGULATOR ASSY

AWX8303 and AWX7967 are constructed the same except for the following :

Mark	Symbol and Description	AWX8303	AWX7967
⚠	IC2410	NJM78L05A	Not used
⚠	Q2402	2SA1803	Not used
⚠	D2421, D2422	UDZS15B	UDZ15B
	C2401, C1402 C2433	ACH7191 ACH7192	CEAT332M35 CEAT472M16
	C2437 C2438 R2402 R2408, R2409	CKSRYB103K50 CEAT2R2M50 RD1/4MUF470J RS1/16S100J	Not used Not used Not used Not used

AD SP/PS ASSY

AWX8307 and AWX7975 are constructed the same except for the following :

Mark	Symbol and Description	AWX8307	AWX7975
⚠	C4621, C4622 (22000uF/63V) CN4611 8P SPEAKER TERMINAL CN4612 6P SPEAKER TERMINAL	ACH7190 AKE7099 AKE7100	ACH7169 AKE7074 AKE7075

• PARTS LIST FOR VSX-55TXi

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
-----------------	--------------------	-----------------

REGULATOR ASSY

OTHERS

Y15	BOARD IN JUMPER	ADX7418
Y14	BOARD IN JUMPER	ADX7419
J11	JUMPER WIRE 7P	D20PYY0745E

COMPLEX ASSY

OTHERS

Y8	BOARD IN JUMPER	ADX7284
Y9	BOARD IN JUMPER	ADX7285
Y10	BOARD IN JUMPER	ADX7286
Y11	BOARD IN JUMPER	ADX7287
Y12	BOARD IN JUMPER	ADX7288
J9	JUMPER WIRE 6P	D20PYY0615E

A 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	CKSRYP103K50
-------------------------	--------------

RESISTORS

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

OTHERS

1301-1304	4P PIN JACK	AKB7075
CN1306	5P SOCKET	AKP7066
CN1307,CN1308	9P SOCKET	AKP7068

B V-AUDIO IN ASSY SEMICONDUCTORS

Q1201,Q1202	2SC2878
-------------	---------

CAPACITORS

C1201-C1212	CCSRCH221J50
C1213-C1215	CKSRYP103K50

RESISTORS

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

OTHERS

1201,1203	4P PIN JACK	AKB7075
CN1205	6P PIN JACK	AKB7162
CN1204	17P SOCKET	AKP7072

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
-----------------	--------------------	-----------------

C FRONT IN ASSY COILS AND FILTERS

L1501-L1504	CHIP BEAD	VTL1077
-------------	-----------	---------

CAPACITORS

C1507-C1509	CCSRCH101J50
C1501,C1502	CCSRCH221J50
C1505	CKSRYP102K50
C1504,C1506	CKSRYP103K50
C1503	CKSRYP472K50

C1510	CKSRYP473K50
-------	--------------

RESISTORS

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

OTHERS

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

D OPTICAL IN ASSY COILS AND FILTERS

F1701	CHIP BEAD	DTF1064
-------	-----------	---------

CAPACITORS

C1706	CEAT470M16
C1701-C1705	CKSRYP104Z16

RESISTORS

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

OTHERS

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

E INPUT CONNECT ASSY SEMICONDUCTORS

IC1401	M62429FP
IC1451	UPC4570G2
D1401	UDZS5.1B

CAPACITORS

C1406,C1407	CCSQCH101J50
C1401-C1405,C1451,C1452	CEAT100M50
C1454,C1455	CKSRYP103K50
C1453	CKSRYP472K50

RESISTORS

R1405	RS3LMF391J
Other Resistors	RS1/16S###J

OTHERS

CN1407	5P PLUG	AKP7055
CN1406,CN1408	9P PLUG	AKP7057
CN1405	17P PLUG	AKP7061
CN1402	7P SOCKET	AKP7067
CN1404	9P SOCKET	AKP7068
CN1403	13P SOCKET	AKP7070

Mark No.	Description	Part No.
CN1401	15P SOCKET	AKP7071

Mark No.	Description	Part No.
IC1681		PCM2902EG
IC1881		TC74HCU04AF
IC1682		TC7SET08F

F RS232C ASSY

SEMICONDUCTORS

⚠ IC1932	PROTECTOR(125mA)	AEK7020
⚠ IC1931		BA12T
IC1901		SP232AEN
Q1931		2SB1237X
Q1901		2SC1740S
Q1932		DTC124EK
D1901,D1902,D1921		1SS355

COILS AND FILTERS

F1881	CHIP BEAD	DTF1064
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CAPACITORS

C1688		CCSRCH180J50
C1687		CCSRCH220J50
C1885,C1886		CCSRCH470J50
C1887,C1896		CCSRCH471J50
C1681		CEAT470M16
C1890		CEAT470M25
C1680,C1697,C1857,C1858		CKSRYB103K50
C1883,C1884,C1888,C1897		CKSRYB103K50
C1683-C1686,C1689,C1690,C1698		CKSRYB104K16
C1889		CKSRYB105K6R3

COILS AND FILTERS

L1901		LAU1R0J
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CAPACITORS

C1901		CEAT101M16
C1903-C1906		CEAT1R0M50
C1932,C1933		CEHAT100M50
C1902,C1907,C1911,C1921,C1931		CKSRYB103K50
C1934-C1936		CKSRYB103K50
C1909		CKSRYB331K50

RESISTORS

All Resistors		RS1/16S###J
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OTHERS

CN1801	19P FFC CONNECTOR	52045-0945
JA1802	2P PIN JACK	AKB7148
CN1803	9P SOCKET	AKP7068
JA1681	USB CONNECTOR	DKN1237
CN1802	20P FFC CONNECTOR	VKN1196
X1681	CRYSTAL RESONATOR (12.0MHz)	ASS7047

RESISTORS

R1932		RS3LMF470J
Other Resistors		RS1/16S###J

OTHERS

JA1921	MULTI-ROOM JACK	AKN7014
CN1901	D-SUB SOCKET	AKP1213
CN1902	KR CONNECTOR	B8B-PH-K
CN1903	4P SOCKET	KP200TA4L
JA1922	REMOTE CONTROL JACK	RKN1004
1901	SCREW TERMINAL	VNE1948

I COMPONENT ASSY

SEMICONDUCTORS

IC1051		PDC084A
IC1001,IC1052		TC74HC4053AF
IC1002,IC1003		TK15450M
Q1051,Q1052		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,C1065,C1066		CKSRYB103K50
C1052,C1054,C1061,C1062		CKSRYB473K50

RESISTORS

All Resistors		RS1/16S###J
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OTHERS

CN1001	9P SOCKET	AKP7068
JA1001-JA1003	3P PIN JACK	VKB1151
X1051	CRYSTAL RESONATOR (14.32MHz)	ASS1056

G 12V TRIGGER ASSY (VSX-53TX only)

SEMICONDUCTORS

⚠ IC1932	PROTECTOR(125mA)	AEK7020
⚠ IC1931		BA12T
Q1931		2SB1237X
Q1932		DTC124EK
D1921		1SS355

CAPACITORS

C1932,C1933		CEHAT100M50
C1911,C1921,C1931		CKSRYB103K50
C1934-C1936		CKSRYB103K50

RESISTORS

R1932		RS3LMF470J
Other Resistors		RS1/16S###J

OTHERS

JA1921	MULTI-ROOM JACK	AKN7014
CN1902	KR CONNECTOR	B8B-PH-K
CN1903	4P SOCKET	KP200TA4L
JA1922	REMOTE CONTROL JACK	RKN1004
1901	SCREW TERMINAL	VNE1948

H COAXIAL IN ASSY

SEMICONDUCTORS

Mark No. Description Part No.

K VIDEO ASSY SEMICONDUCTORS

IC933	BU4053BCF
IC902	NJM2279M
IC901, IC931	NJM2296M
IC932	NJM2596M
IC903	TC4W53FU
Q901, Q931, Q932	2SA933S
Q933	IMZ1A
D901, D902	DAN202K

CAPACITORS

C981-C983	CCSRCH101J50
C919, C960, C963	CCSRCH150J50
C922-C925, C969-C974	CCSRCH181J50
C955	CCSRCH330J50
C914	CCSRCH470J50
C901-C904, C932, C935, C938	CEAT101M10
C941	CEAT101M10
C905, C906, C909, C910, C918	CEAT101M16
C945, C946, 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, C911-C913	CKSRYB473K50
C915, C916, C921, C947, C948	CKSRYB473K50
C953, C954, C957, C958, C962	CKSRYB473K50
C965	CKSRYB473K50

RESISTORS

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

OTHERS

JA904	COMB. JACK (S+1P)	AKB7159
JA901-JA903	COMB. JACK (2S+2P)	AKB7160
CN901	15P SOCKET	AKP7071
JA905	1P PIN JACK	VKB1156

L MAIN CONTROL ASSY SEMICONDUCTORS

IC502, IC503	BU4094BCF
IC202	NJM4558MD
IC501	PD5948A8
IC511	TC74VHC08FT
IC302	TC74VHCT244AFT
IC103	TC9163AF
IC201	TC9164AF
IC104	TC9215AF
IC101	TC9274F-019
IC701-IC704	TC94A07F
IC102, IC711-IC714	UPC4570G2
Q601	2SC1740S
Q101, Q102	2SC3326
Q103, Q251, Q511	DTA124EK
Q501	DTC143EK

Mark No. Description Part No.

D501, D511, D521-D524	1SS355
D821, D822, D831, D832	1SS355
D601	UDZS11B

COILS AND FILTERS

L501	LCYA2R2J2520
L891-L895 CHIP SOLID INDUCTOR	QTL1013

CAPACITORS

C508 EDL CAPACITOR	ACH7132
C125-C127, C151-C153	CCSRCH101J50
C201-C203, C725-C727	CCSRCH101J50
C745-C747, C765-C767	CCSRCH101J50
C785-C787	CCSRCH101J50

C139, C140, C662	CCSRCH470J50
C719, C720, C739, C740	CCSRCH680J50
C759, C760, C779, C780	CCSRCH680J50
C131, C132, C621, C622	CEAT100M50
C701, C702, C713, C714	CEAT100M50

C733, C734, C753, C754	CEAT100M50
C773, C774	CEAT100M50
C303, C304, C602	CEAT101M16
C211, C212	CEAT1R0M50
C506, C513	CEAT221M10

C505	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
C128, C129, C137, C138	CKSRYB103K50
C155-C157, C204, C205	CKSRYB103K50
C213, C214, C251, C302, C502	CKSRYB103K50

C507, C509, C514, C515, C535	CKSRYB103K50
C540, C598, C711, C712	CKSRYB103K50
C723, C724, C731, C732	CKSRYB103K50
C743, C744, C751, C752	CKSRYB103K50
C763, C764, C771, C772	CKSRYB103K50

C783, C784, C891, C892	CKSRYB103K50
C512	CKSRYB472K50
C154, C599, C821, C831	CKSRYB473K50

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
CN201 7P PLUG	AKP7056

CN103 9P PLUG	AKP7057
CN102 13P PLUG	AKP7059
CN101 15P PLUG	AKP7060
CN351 7P SOCKET	AKP7067
CN2, CN3 9P SOCKET	AKP7068

Mark No.	Description	Part No.
CN502	19P SOCKET	AKP7073
CN302	21P SOCKET	AKP7074
CN551	KR CONNECTOR	B8B-PH-K
CN1	3P PLUG	KM250NA3L
JA591	REMOTE CONTROL JACK	RKN1004
JA592	REMOTE CONTROL JACK	RKN1026
551	PCB BINDER	VEF1040
JA111-JA113	4P PIN JACK	VKB1133
CN301	21P FFC CONNECTOR	VKN1197
X501	CERAMIC RESONATOR (15.7MHz)	ASS7032

Mark No.	Description	Part No.
CAPACITORS		
C1651		CKSRYB103K50
C1653		CKSRYB104K16
RESISTORS		
All Resistors		RS1/16S###J
OTHERS		
CN1652-CN1654	17P SOCKET	AKP7072
CN1651	B TO B CONNECTOR 50P	AKP7177

M 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

N 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

O DSP CONNECTION ASSY SEMICONDUCTORS

IC1651,IC1653	TC74LVX244FT
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COILS AND FILTERS

L1651,L1652	CHIP SOLID INDUCTOR	QTL1013
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P 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

Q FAN CONNECTION ASSY SEMICONDUCTORS

! IC4701,IC4702	AEK7023
	PROTECTOR(200mA)

OTHERS

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

R FAN DRIVE ASSY SEMICONDUCTORS

Q4056	2SA1037K
Q4051	2SC4793D1
Q4052	DTA124EK
Q4055	DTC114EK
Q4053	DTC124EK

! D4051,D4052	1SR154-400
D4059	1SS355
D4055	UDZS12B
D4053	UDZS27B
D4057	UDZS5.1B

CAPACITORS

C4054	CEAT101M16
C4052	CEAT1R0M50
C4055,C4056	CEAT221M63
C4051	CEAT471M35

Mark No.	Description	Part No.
C4053		CKSRYB103K50

RESISTORS

All Resistors	RS1/16S###J
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OTHERS

CN4051	9P JUMPER CONNECTOR	52147-0910
CN4054	10P JUMPER CONNECTOR	52147-1010

S DSP ASSY SEMICONDUCTORS

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

IC451	IC61LV25616-12T
IC302	IC61LV6416-12T
IC303	IC63LV1024-12T
△ IC901	NJM2391DL1-33
IC601, IC621, IC641, IC661, IC681	NJM4565MD

△ IC902	NJU7223DL1-18
IC471	PD8118A
IC701	TC74VHC157FT
IC304	TC74VHCJ04FT
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	

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

C345, C346, C402, C404-C408	CCSRCH471J50
C410-C418, C420-C422	CCSRCH471J50
C424-C426, C471	CCSRCH471J50
C603-C606	CCSRCH820J50
C111, C112, C502, C522, C542	CEV100M16

Mark No.	Description	Part No.
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C562, C607, C608, C627, C628	CEV100M16
C647, C648, C667, C668	CEV100M16
C681, C682	CEV100M16
C104, C105, C551, C907, C909	CEV101M16
C106	CEV2R2M50

C901, C902	CEV330M25
C210, C341, C401	CEV470M6R3
C212, C614, C618, C624, C626	CKSRYB102K50
C683-C685, C689, C693, C695	CKSRYB102K50
C927	CKSRYB102K50

C337, C343, C349, C429, C503	CKSRYB103K50
C619, C620, C677, C678, C701	CKSRYB103K50
C711-C716, C747, C921, C922	CKSRYB103K50
C941	CKSRYB103K50
C101-C103, C205, C207, C208	CKSRYB104K16

C211, C305, C307, C310, C311	CKSRYB104K16
C313, C315, C324, C331, C334	CKSRYB104K16
C352, C409, C419, C423, C427	CKSRYB104K16
C451, C452, C501, C521, C541	CKSRYB104K16
C561, C591, C630, C705, C706	CKSRYB104K16

C906, C908	CKSRYB104K16
C303, C338, C348, C403, C599	CKSRYB105K6R3
C702	CKSRYB105K6R3
C109, C110, C622	CKSRYB222K50
C601, C602, C609, C610	CKSRYB332K50

C621, C641, C642, C661, C662	CKSRYB392K50
C629, C649, C650, C669, C670	CKSRYB472K50
C971	CKSRYB472K50
C926	CKSRYB473K16
C203	CKSRYB474K10

C323, C428	CKSRYB563K16
C107, C611-C613, C615	CKSRYF104Z25
C671, C672, C694, C696-C698	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

T 1394 ASSY SEMICONDUCTORS

IC302	K4S641632F-TC75
△ IC1	NJM2391DL1-33
IC303	NJU7093AF
IC101	PD5787A
IC301	PD8112A

Mark No.	Description	Part No.
IC103		PST9245
IC401		SM5816AF
IC405		TC74VHC541FT
IC104		TC74VHCT125AFT
IC205		TC7SH08FU
IC409		TC7SZ126FU
IC201		TSB43CA42GGW
Q101, Q301		DTA124EUA
Q401		DTA143EUA
D102		RB501V-40

COILS AND FILTERS

L1, L101, L201-L203		ATL7002
L301, L302, L401, L403		ATL7002
CHIP FERRITE BEAD		
⚠ L204-L207 COIL		VTH1043

CAPACITORS

C329 (10u/6.3V)		ACG7046
C2, C401 (220u/6.3V)		ACH7195
C242, C243		CCSRCH221J50
C402		CCSRCH471J50
C419		CEV101M16
C103, C206, C217, C232, C304		CEVL101M6R3
C321		CEVL101M6R3
C113, C211, C213, C215, C216		CKSRYB102K50
C310, C324		CKSRYB102K50
C101, C111		CKSRYB103K50
C1, C102, C104-C110		CKSRYB104K16
C201-C205, C207, C209, C210		CKSRYB104K16
C212, C214, C218-C226, C235		CKSRYB104K16
C241, C246-C249, C301-C303		CKSRYB104K16
C305, C309, C311, C315-C320		CKSRYB104K16
C322, C323, C325, C327, C333		CKSRYB104K16
C404, C405, C408-C412, C416		CKSRYB104K16
C420, C424		CKSRYB104K16
C244, C245, C326		CKSRYB105K6R3
C330		CKSRYB472K50
C328		CKSRYB474K10

RESISTORS

R119, R127-R130, R205		RAB4C101J
R230-R233, R245, R246, R445		RAB4C101J
R122		RAB4C103J
R407		RAB4C221J
R308, R339, R340, R343-R347		RAB4C470J
R350		RAB4C470J
R135-R138, R206, R216		RAB4C472J
R220, R221, R223, R234		RAB4C472J
R238-R240		RAB4C472J
R302, R402		RAB4C680J
R275, R276		RS1/16S5101F
R267-R274		RS1/16S56R0D
R213		RS1/16S6341D
Other Resistors		RS1/16S###J

OTHERS

CN101 7P CONNECTOR		RKN1048
CN402 10P CONNECTOR		VKN1414
CN401 22P CONNECTOR		VKN1426
JA201, JA202 1394-TERMINAL		VKN1800
X302 CRYSTAL RESONATOR (22.5792MHz)		ASS7054

Mark No.	Description	Part No.
X201	CRYSTAL RESONATOR (24.5760MHz)	ASS7055
X101	CERAMIC RESONATOR (6.14MHZ)	VSS1179

U DISPLAY ASSY SEMICONDUCTORS

IC3000		PD5771B
IC3002		RPM7140-H4
IC3001		TC7W53FU
Q3003		2SA1037K
Q3001, Q3002		DTC124EK
Q3000		FMA1A
Q3004		HN1C01FU
D3002-D3008		1SS355
D3001		BR5064X
D3009		DAN202K
D3000		MAA5064X
D3011		NSPB500-0008
D3010		UDZS6.2B

COILS AND FILTERS

L3000 CHIP FERRITE BEAD		ATL7002
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SWITCHES AND RELAYS

S3000-S3017		ASG7013
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CAPACITORS

C3003, C3004, C3007, C3024, C3025		CCSRCH101J50
C3020, C3021, C3026, C3027		CEJQ100M16
C3028, C3029		CEJQ101M10
C3008, C3012, C3035		CEJQ101M6R3
C3022, C3023		CEJQ330M25
C3000-C3002		CKSRYB102K50
C3009, C3011, C3032-C3034		CKSRYB103K50
C3036, C3037		CKSRYB103K50
C3006, C3031		CKSRYB104K16
C3010		CKSRYB153K50
C3030		CKSRYF104Z50

RESISTORS

All Resistors		RS1/16S###J
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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

Mark No.	Description	Part No.
V	VOLUME ASSY	
	SWITCHES AND RELAYS	
S3402-S3404		ASG7013
S3401		ASX7037
CAPACITORS		
C3401,C3402		CKSRYB103K50
RESISTORS		
All Resistors		RS1/16S###J
OTHERS		
CN3401 5P JUMPER CONNECTOR		52147-0510

Mark No.	Description	Part No.
X	MULTI JOG ASSY	
	SWITCHES AND RELAYS	
S3452-S3455		ASG7013
S3451		ASX7038
CAPACITORS		
C3451,C3452		CKSRYB103K50
RESISTORS		
All Resistors		RS1/16S###J
OTHERS		
CN3451 7P JUMPER CONNECTOR		52147-0710

Mark No.	Description	Part No.
Y	HEADPHONE ASSY	
CAPACITORS		
C1951,C1952		CKSRYB392K50
RESISTORS		
All Resistors		RS1/16S###J
OTHERS		
CN1951 3P FFC CONNECTOR		52045-0345
1951 PHONE JACK		AKN7029
KN1951 EARTH METAL FITTING		VNF1084

Mark No.	Description	Part No.
Z	POWER AMP-L ASSY	
SEMICONDUCTORS		
△ 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
CAPACITORS		
C4106,C4107,C4206,C4207		ACG7041
C4306,C4307 (220u/100V)		ACG7041
C4102,C4202,C4302		CCSRCH331J50
C4112,C4113,C4212,C4213		CCSRCH6R0D50
C4312,C4313		CCSRCH6R0D50
C4114,C4214,C4314		CEANP1R0M50
C4401,C4402		CEAT331M63

Mark No.	Description	Part No.
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
RESISTORS		
△ R4131,R4132,R4231,R4232		ACN7107
△ R4331,R4332,R4482 (0.1ohm)		ACN7107
△ R4119,R4219,R4319 (0.22ohm/5W)		ACN7121
Other Resistors		RS1/16S###J

Mark No.	Description	Part No.
OTHERS		
Y2 LEAD WITH HOUSING		ADX7398
Y3 LEAD WITH HOUSING		ADX7399
Y5 LEAD WITH HOUSING		ADX7404
CN4401 17P SOCKET		AKP7072
CN4403 3P L TYPE PLUG		KM250MA3
CN4456 10P PLUG		KM250NA10L
KN4401,KN4402		VNF1084
EARTH METAL FITTING		

Mark No.	Description	Part No.
AA	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 (220u/100V)		ACG7041
C4152,C4252,C4352		CCSRCH331J50
C4162,C4163,C4262,C4263		CCSRCH6R0D50
C4362,C4363		CCSRCH6R0D50
C4164,C4264,C4364		CEANP1R0M50
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

Mark No.	Description	Part No.
RESISTORS		
△ R4181,R4182,R4281,R4282		ACN7107
△ R4381,R4382,R4481 (0.1ohm)		ACN7107
△ R4169,R4269,R4369 (0.22ohm/5W)		ACN7121
Other Resistors		RS1/16S###J

Mark No.	Description	Part No.
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

AB POWER AMP-C ASSY SEMICONDUCTORS

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

CAPACITORS

C4456,C4457 (220u/100V)	ACG7041
C4452	CCSRCH331J50
C4462,C4463	CCSRCH6R0D50
C4464	CEANP1R0M50
C4460,C4461	CEHAT100M2A

C4451	CEHAT100M50
C4453	CEHAT331M10
C4454,C4455	CEHAT470M63
C4458,C4459	CEHAZL470M25

RESISTORS

⚠ R4469 (0.22ohm/5W)	ACN7121
Other Resistors	RS1/16S###J

OTHERS

CN4453,CN4455 10P SOCKET	KP250NA10
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AC REGULATOR ASSY SEMICONDUCTORS

⚠ IC2411 PROTECTOR(315mA)	AEK7003
⚠ IC2409	NJM78L05A
IC2410	NJM78L05A
⚠ IC2404	NJM78M05FA
⚠ IC2403	NJM78M12FA

⚠ IC2401	NJM78M15FA
⚠ IC2405,IC2407	NJM78M56FA
⚠ IC2406	NJM79M05FA
⚠ IC2402	NJM79M15FA
⚠ Q2401	2SA1803

Q2402	2SA1803
⚠ D2401-D2404,D2407-D2410	1SR154-400
⚠ D2418,D2419	1SR154-400
D2411	1SS355
⚠ D2415	D3SBA20(B)

D2405,D2406,D2413,D2414	RB501V-40
D2420	UDZS10B
D2421,D2422	UDZS15B
D2423,D2424	UDZS6.2B

CAPACITORS

C2401,C2402 (3300u/35V)	ACH7191
C2433 (4700u/16V)	ACH7192
C2446	CCSRCH101J50

Mark No.	Description	Part No.
C2440		CEANP470M35
C2443		CEAT101M10
C2415,C2416		CEAT101M16
C2408		CEAT101M25
C2405,C2406,C2410,C2429		CEAT221M35
C2411,C2412		CEAT222M16
C2435,C2438		CEAT2R2M50
C2442		CEAT470M50
C2441		CEAT470M63
C2436,C2439		CEAT471M16
C2451,C2452		CKSRYB102K50
C2403,C2404,C2407,C2409		CKSRYB103K50

C2413,C2414,C2428,C2434,C2437	CKSRYB103K50
C2453,C2499	CKSRYB103K50
C2424	CKSRYB473K50
C2444	CQMBA104J50

RESISTORS

R2403	RD1/4MUF121J
R2401,R2402	RD1/4MUF470J
Other Resistors	RS1/16S###J

OTHERS

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
CN2403 4P PLUG	KM200TA4

CN2415 3P SOCKET	KP250NA3
KN2401-KN2403	VNF1084
EARTH METAL FITTING	

AD SP/PS ASSY SEMICONDUCTORS

Q4602,Q4603	RN1903
Q4601	RN4903
D4601-D4610	1SS355

COILS AND FILTERS

L4601-L4607 AF CHOKE COIL	ATH1053
L4608,L4609 NOISE FILTER	RTF1167

SWITCHES AND RELAYS

RY4601-RY4605	ASR7014
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CAPACITORS

⚠ C4621,C4622 (22000u/63V)	ACH7190
C4623	CEAT101M50
C4601-C4607	CFTYA104J50
C4625-C4631	CQMBA103J50

RESISTORS

⚠ R4621-R4627	RD1/2LMF4R7J
R4628-R4632	RD1/2VM331J
R4615,R4616	RD1/4MUF473J
⚠ R4601-R4607	RS1LMF4R7J
⚠ R4611,R4612	RS2LMF331J

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

OTHERS

4601	6P CABLE HOLDER	51048-0600
4602	8P CABLE HOLDER	51048-0800
Y13	BOARD IN JUMPER	ADX7291
CN4611	8P SPEAKER TERMINAL	AKE7099
CN4612	6P SPEAKER TERMINAL	AKE7100
J4602	JUMPER WIRE 8P	D20PYY0830E
CN4610,CN4613	5P PLUG	KM200TA5

**AE DIODE ASSY
SEMICONDUCTORS**

⚠ D2241,D2242	LN6SB60-4003
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**AF TRANS 2-1 ASSY
SEMICONDUCTORS**

⚠ IC2201,IC2202 PROTECTOR(3.15A) Q2202 Q2201	AEK7016 RN4903 UN521L
⚠ D2201 D2202	S1WB(A)60SD UDZS16B
D2207,D2208 D2203-D2206,D2209-D2212	UDZS22B UDZS9.1B

CAPACITORS

⚠ C2202,C2203 (1u/100v) C2207,C2208 (470u/71V) C2209,C2210 C2211,C2212	ACH1237 ACH7193 CEAT101M63 CEAT221M63
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RESISTORS

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

2201, 2202	6P CABLE HOLDER	51048-0600
2203	6P CABLE HOLDER	51052-0600
H2201-H2204	FUSE CLIP	AKR1004
J2201	JUMPER WIRE 6P	D20PYY0615E
J10	JUMPER WIRE	D25PYY0607E

**AG VH TR ASSY
SEMICONDUCTORS**

⚠ Q2232	2SA1837D1
⚠ Q2231	2SC4793D1
⚠ D2231,D2232	1SR154-400

RESISTORS

All Resistors	RS1/16S###J
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OTHERS

CN2231	6P L TYPE CONNECTOR	KPD6L
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**AH TRANS 2-2 ASSY
SEMICONDUCTORS**

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

Mark No.	Description	Part No.
	CAPACITORS	
	C2251-C2253	CQMB A104J50

RESISTORS

⚠ R2251,R2252	RD1/4MUF100J
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OTHERS

2251	7P CABLE HOLDER	51048-0700
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AI TRANS 1 ASSY

TRANS 1 Assy has no service parts.

**AJ PRIMARY ASSY
SEMICONDUCTORS**

⚠ IC2001 Q2001 D2002,D2004,D2005	NJM78M56FA KRC101M 1SS355 S1WB(A)60SD UDZS5.1B
⚠ D2001 D2003	

COILS AND FILTERS

⚠ L2001	LINE FILTER	ATF7018
L2002,L2003	FERRITE BEAD	VTH1013

TRANSFORMERS

⚠ T2001	ATT7043
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SWITCHES AND RELAYS

⚠ RY2001	ASR7025
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CAPACITORS

⚠ C2001,C2002 (0.01uF/275V)	ACE7013
⚠ C2003 (10000pF/250V)	ACG7033
C2008	CEAT102M25
C2009	CEAT221M25
C2005-C2007,C2011,C2012	CKSRYB103K50
C2004	CQMA103J50

RESISTORS

⚠ R2001 (2.2Mohm/ 1/2W)	RCN1080
R2002	RD1/2VM101J
Other Resistors	RS1/16S###J

OTHERS

CN2002	11P FFC CONNECTOR	52045-1145
⚠ 2004	1P AC OUTLET	AKP1033
H2001,H2002	FUSE CLIP	AKR7001
CN2003,CN2004	5P SOCKET	KP200TA5L
⚠ CN2001	AC CORD SOCKET	RKP1751
2003	SCREW TERMINAL	VNE1948
KN2001	EARTH METAL FITTING	VNF1084

**AK FM/AM TUNER MODULE
SEMICONDUCTORS**

IC201	BA1451F
IC202	LC72131MD
Q201, Q204, Q205	2SC2412K
Q202	DTA124ES
Q203	DTC124EK
D201	1SS133

Mark No.	Description	Part No.
D202		MTZJ5.1C

A **COILS AND FILTERS**

L201	FM DETECTOR COIL	ATE7003
F202	FM CERAMIC FILTER	ATF-107
F201	FM CERAMIC FILTER	ATF-119
F203	AM CERAMIC FILTER	ATF7026

CAPACITORS

C206		CCSRCH100D50
C212, C213, C226, C233-C235		CCSRCH101J50
C240		CCSRCH101J50
C231, C232		CCSRCH150J50
C223		CEAT100M50

C229		CEAT101M10
C224		CEAT1R0M50
C227		CEAT220M25
C241		CEAT2R2M50
C243		CEAT330M16

C228		CEAT3R3M50
C237		CEAT470M10
C211		CEJA1R0M50
C210		CEJQ470M16
C204, C238, C602		CKSRYB102K50

C101, C102, C208, C220, C239		CKSRYB103K50
C242, C601		CKSRYB103K50
C216, C217, C225		CKSRYB153K50
C201, C205, C209, C214, C230		CKSRYB223K50
C236, C603		CKSRYB223K50

C221		CKSRYB224K10
C202, C222		CKSRYB473K16
C215		CKSRYB681K50

RESISTORS

R211		RD1/4PU221J
R221		RD1/4PU222J
R233		RD1/4PU391J
R243		RS1/10S0R0J
R103		RS1/10S331J

R104		RS1/10S391J
Other Resistors		RS1/16S###J

OTHERS

CN201	13P FFC CONNECTOR	52044-1345
BN201	4P ANTENNA TERMINAL	AKA7003
	SHIELD CASE T	ANK7072
	SHIELD CASE B	ANK7073
X201	CRYSTAL RESONATOR	ASS1093

	(7.2MHz)	
	FM FRONT END	AXF7003
	AM RF TUNING BLOCK	AXX7071

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 Vtm) gets within 0 ± 50 mV.

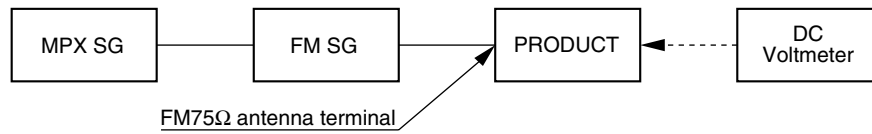


Fig.1 Adjustment Wiring Diagram

AK FM/AM TUNER MODULE

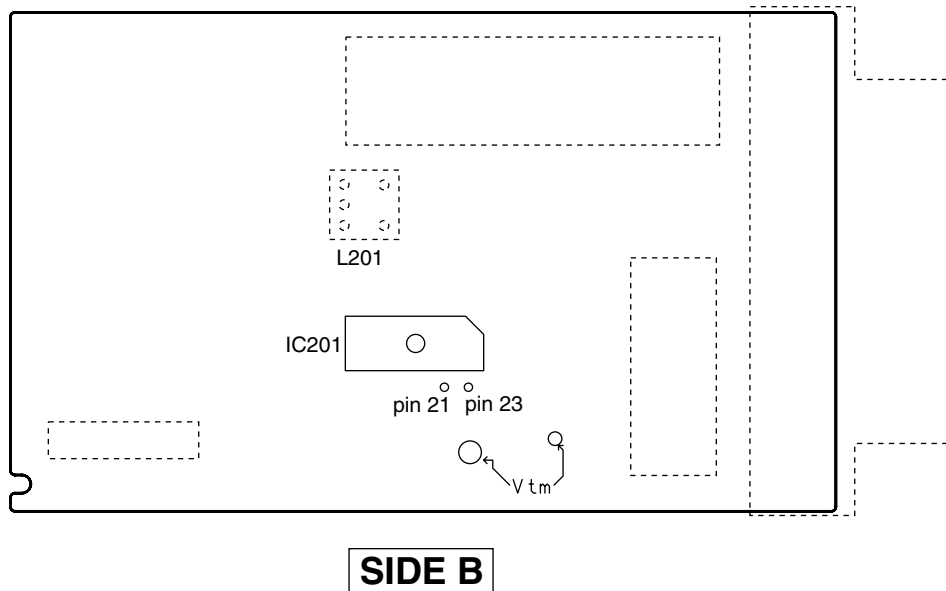


Fig.2 Adjustment Point

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 Fan control

1) Fan control

TEMPIN	Temperature (°C)	Fan	Remarks
More than 219	More than 125	ON	Mute ON & speaker relay OFF : The warning indication "OVERHEAT" Leading hold Mute OFF & speaker relay ON : Normal mode
204 to 218	110 to 125	ON	
156 to 203	80 to 110	ON	
134 to 155	70 to 80	Leading hold	
Less than 133	Less than 70	OFF	

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 1 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.

3) Thermistor open detection

If a total (total of 50 times) of A/D value (TEMPIN) for one second is less than 250, the indication "THDCT NG" flashes.

If this status continues for 3 seconds, the power becomes the standby mode.

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.

(It is effective only when turned the power off with DC detection regarding step 2.)

④ Diagnostic mode

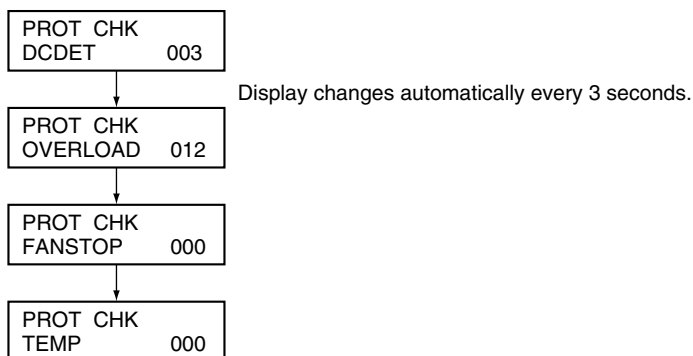
This mode is only for servicing and checking the circuit design, and not open to users.

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	Detect temperature more than 100°C.	Turns muting on and speaker relay off. Rotate the fan	Continue flashing with "OVERHEAT"	Mute, relay and warning indications is leading hold.
		Detect temperature of 90 to 100°C.	Rotate the fan		
		Detect temperature of 74 to 90°C.	Rotate the fan		Mute off & relay on (normal mode)
		Detect temperature of 69 to 74°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).**

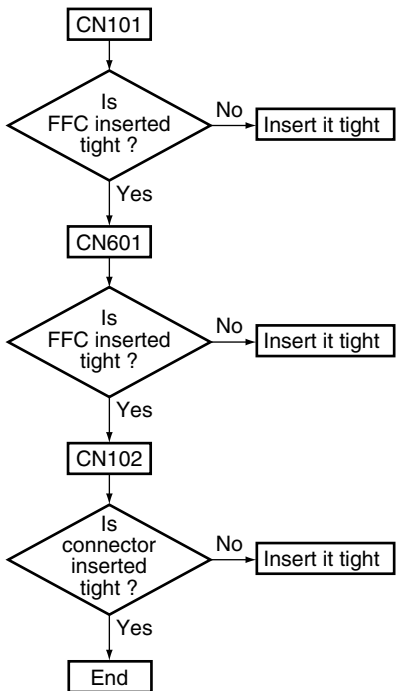
About parts with damaged possibility, explain FL ch to an example in order.

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)

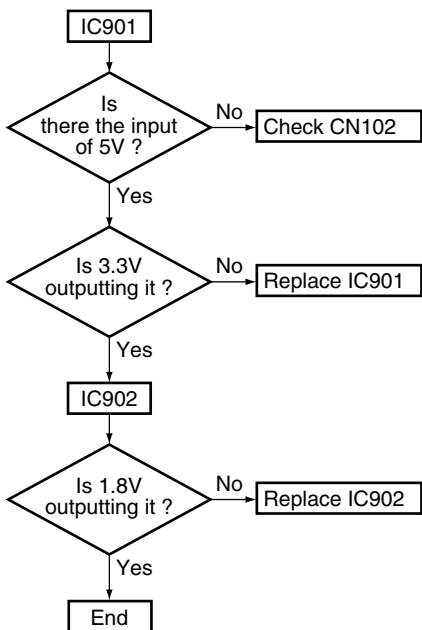
7.1.3 TROUBLE SHOOTING

- 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.

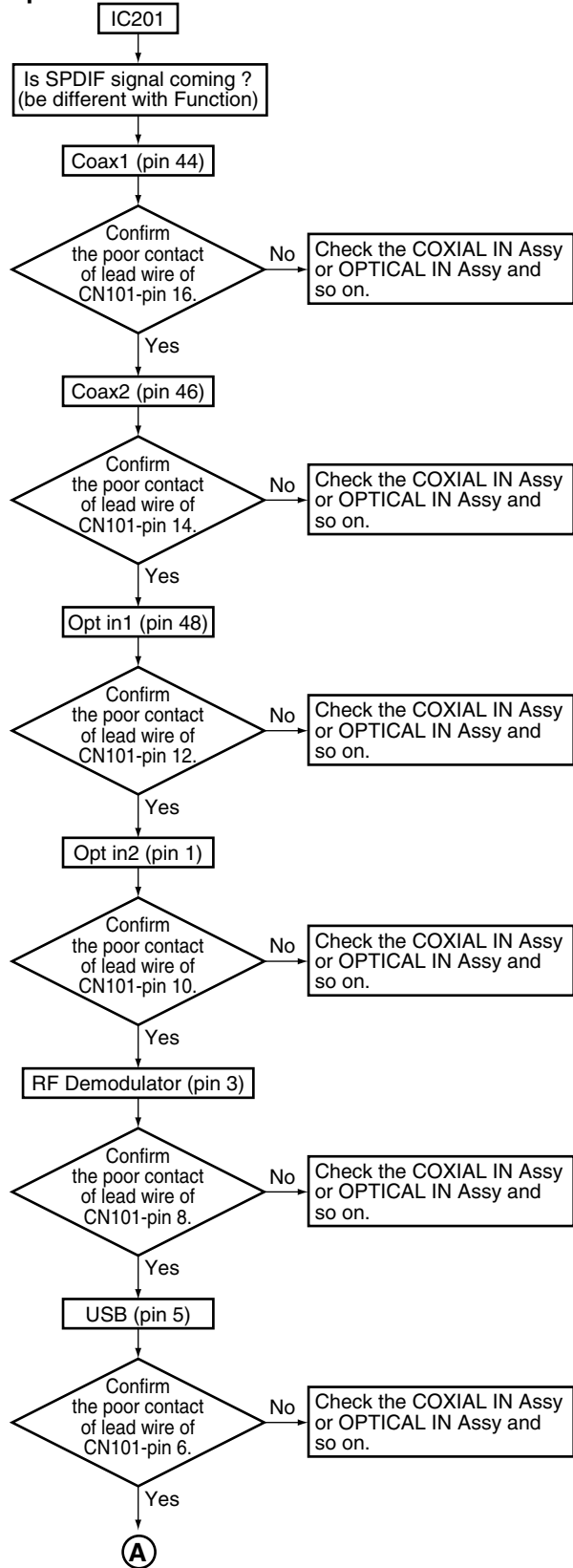
Step 1

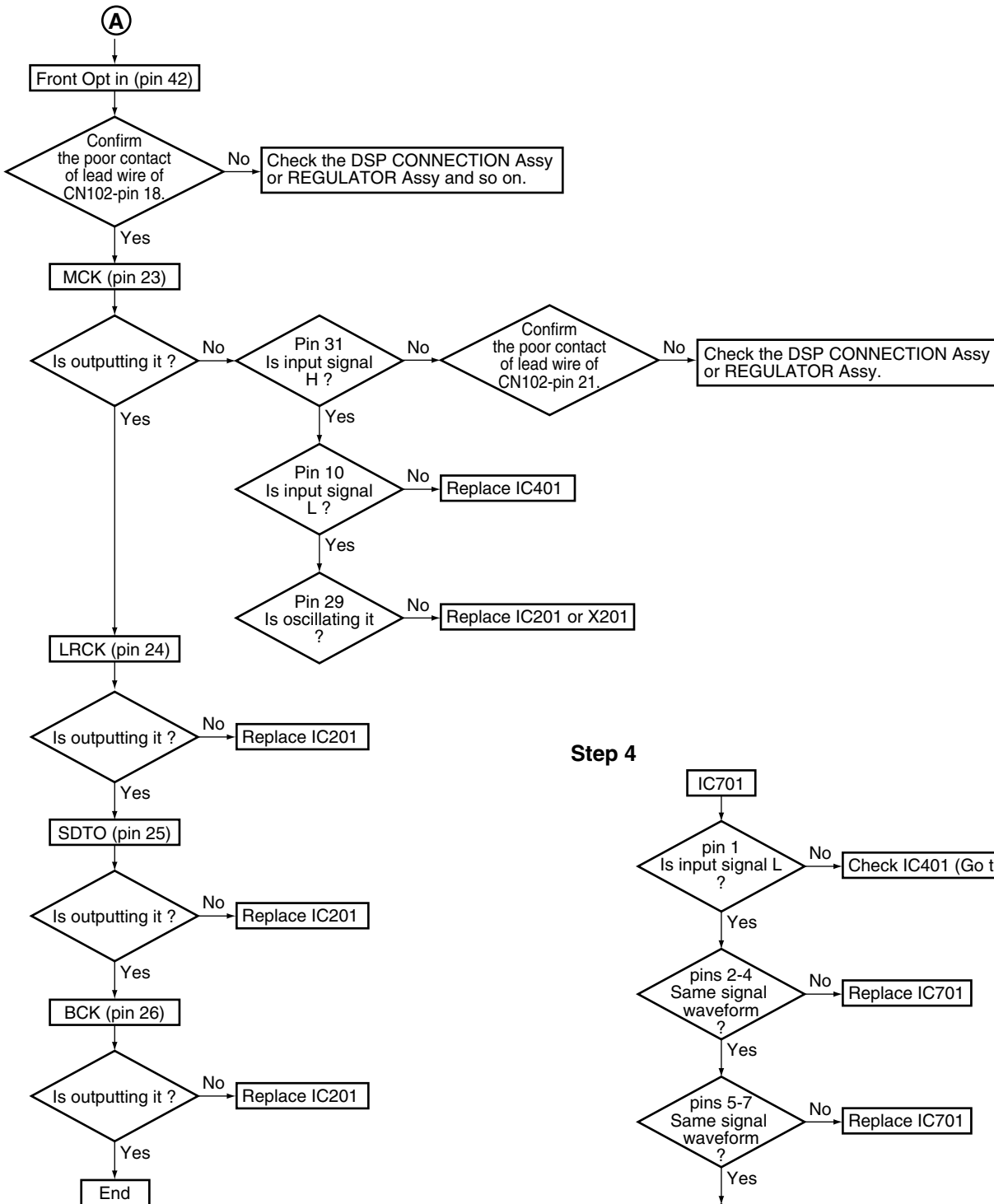


Step 2

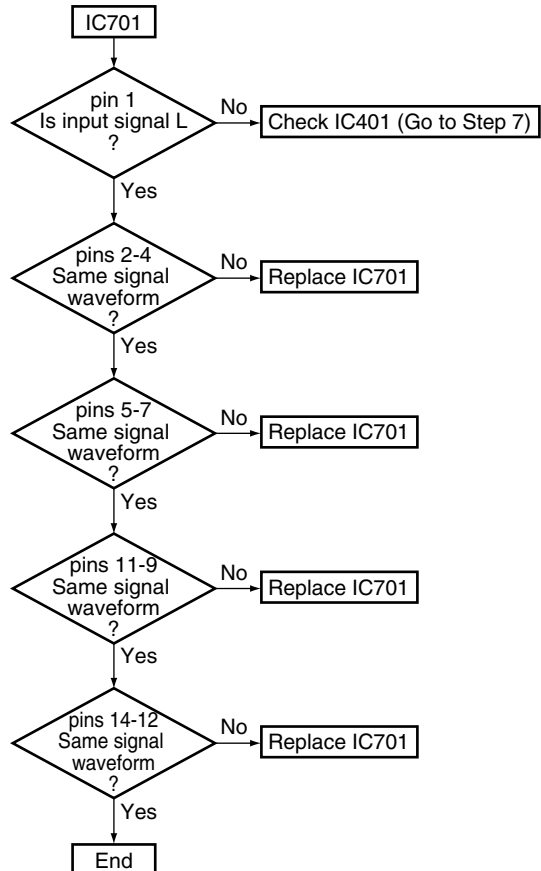


Step 3

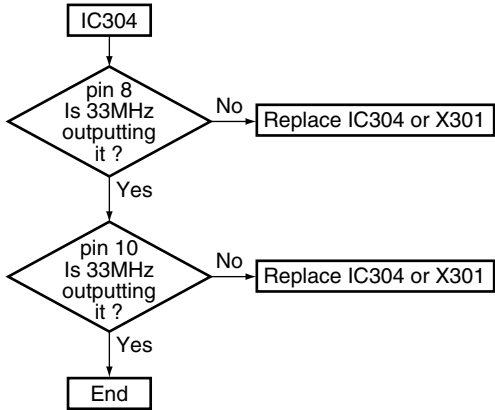




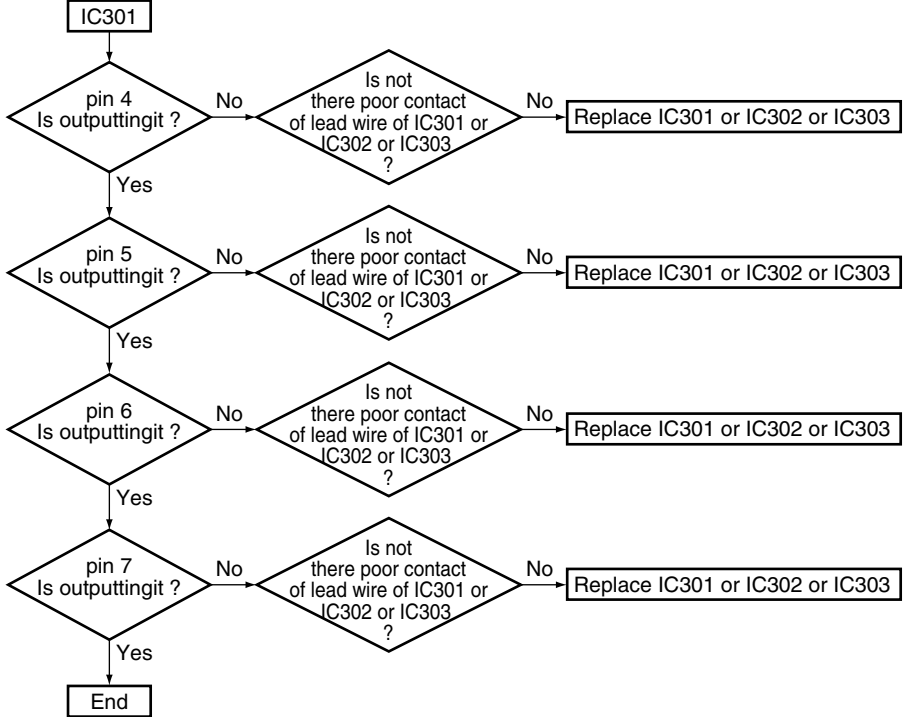
Step 4



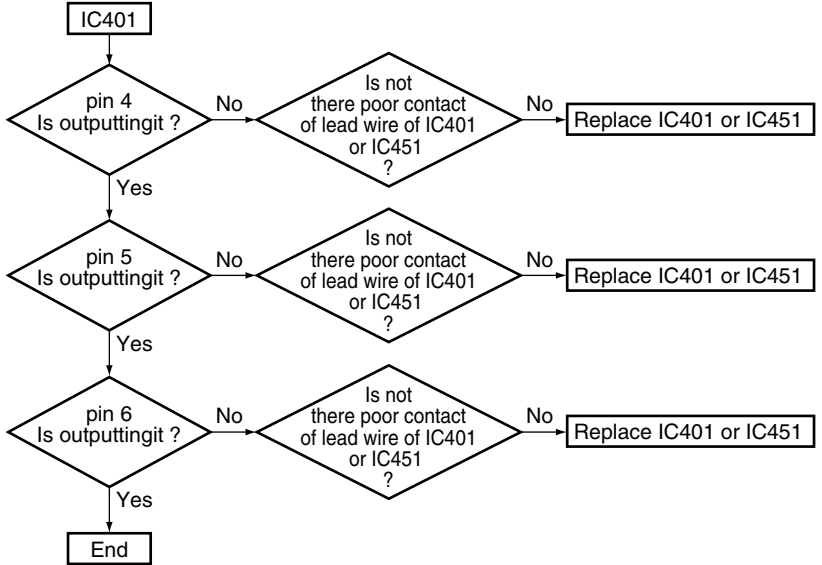
Step 5



Step 6

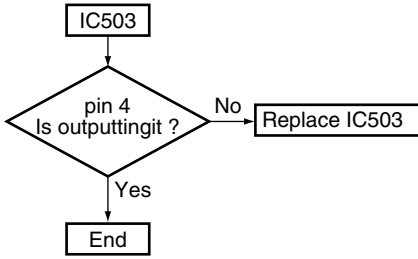


Step 7



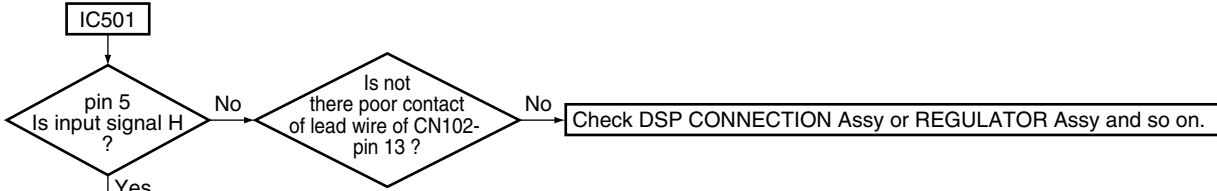
Step 8

A

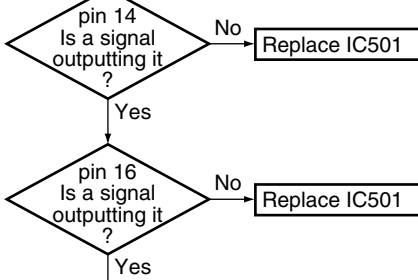


Step 9

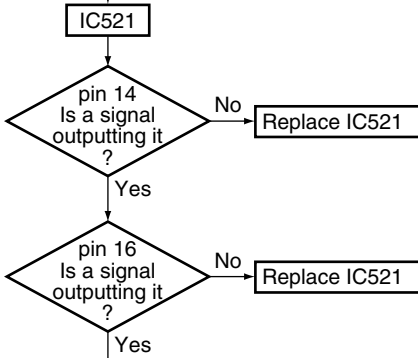
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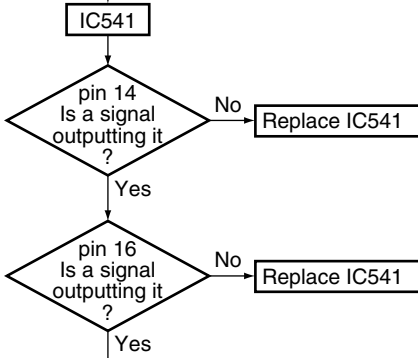
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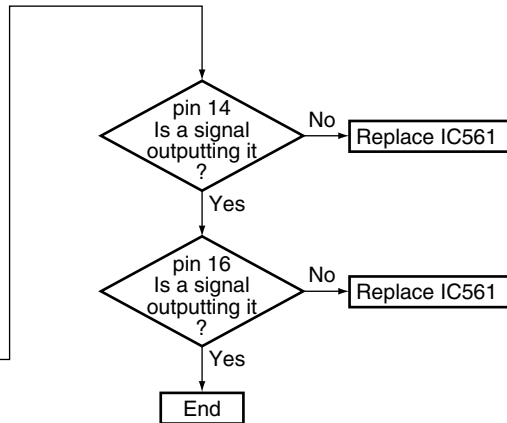
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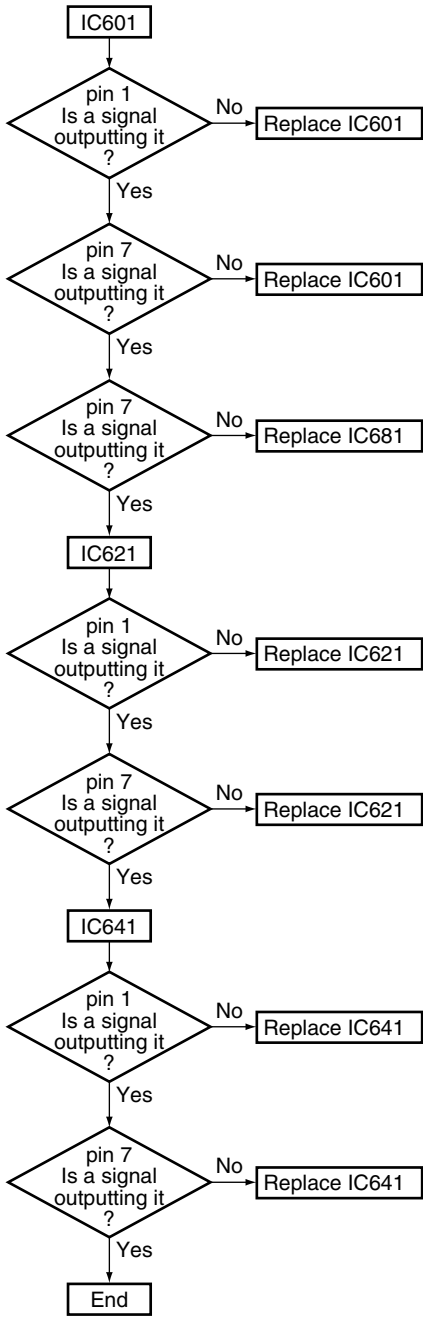
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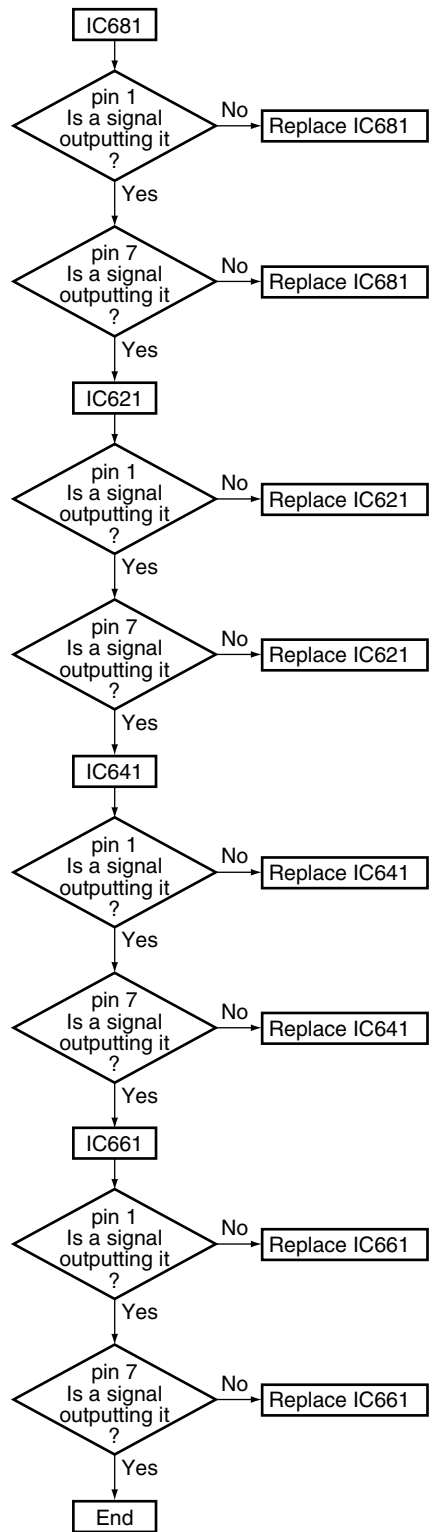
F



Step 10



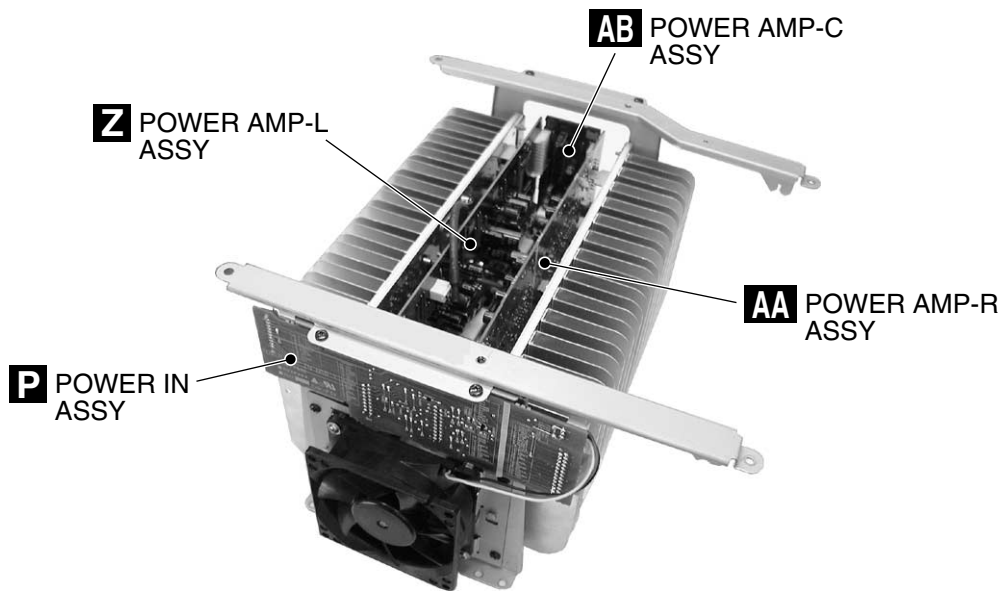
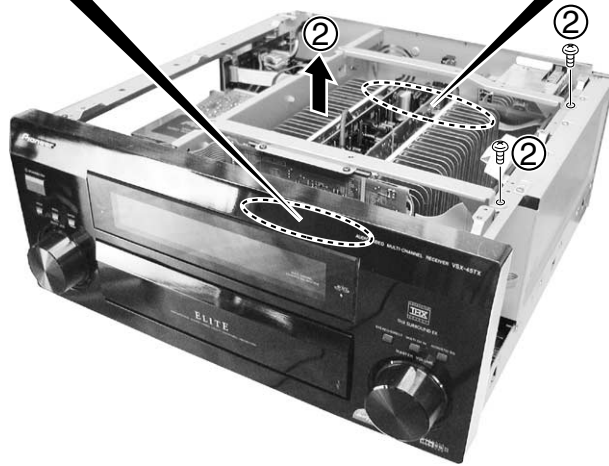
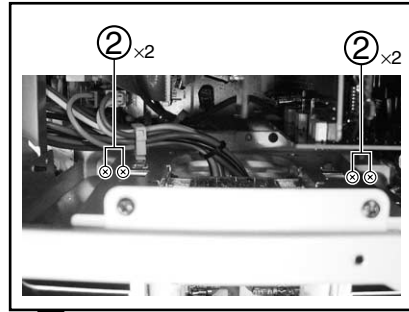
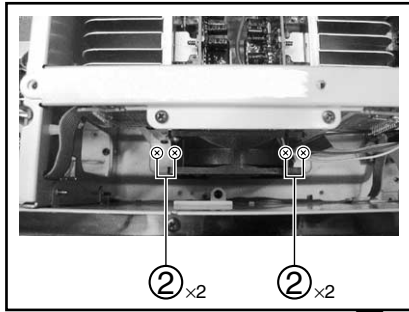
Step 11



7.1.4 DISASSEMBLY

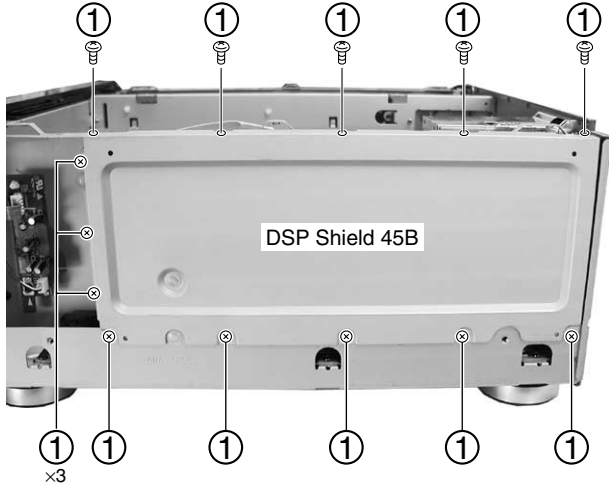
1 Bonnet and Heat Sink Block

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

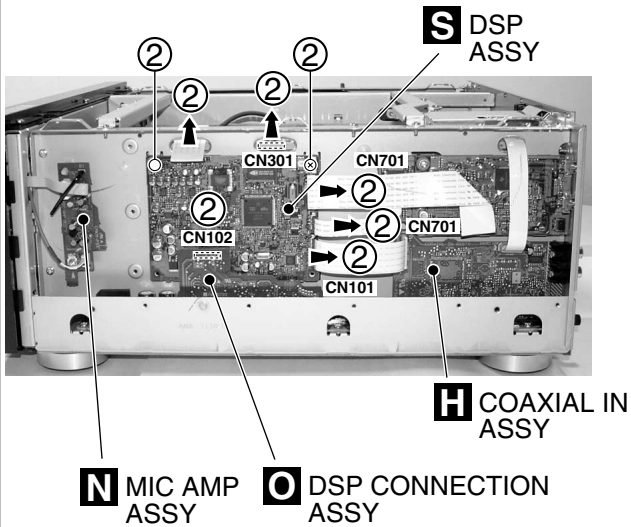


2 DSP Block

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

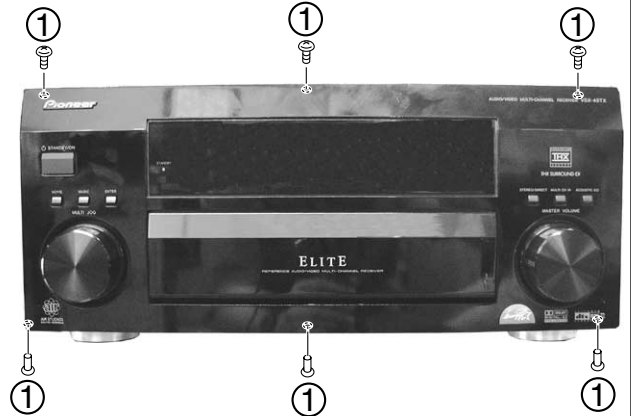


② Remove the DSP ASSY (screws × 1, Nylon Rivet × 1, connectors × 6)



3 Front Panel Block

① Remove six screws

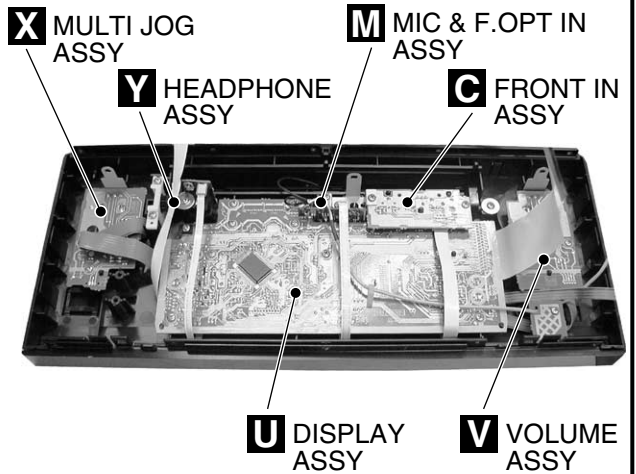
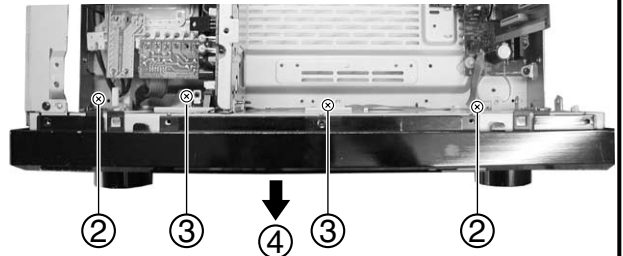


② Remove two screws

③ Remove two screws

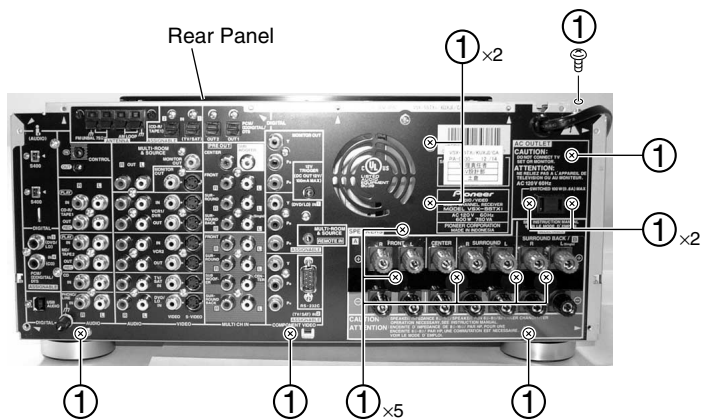
④ Remove the front panel block

● Top View



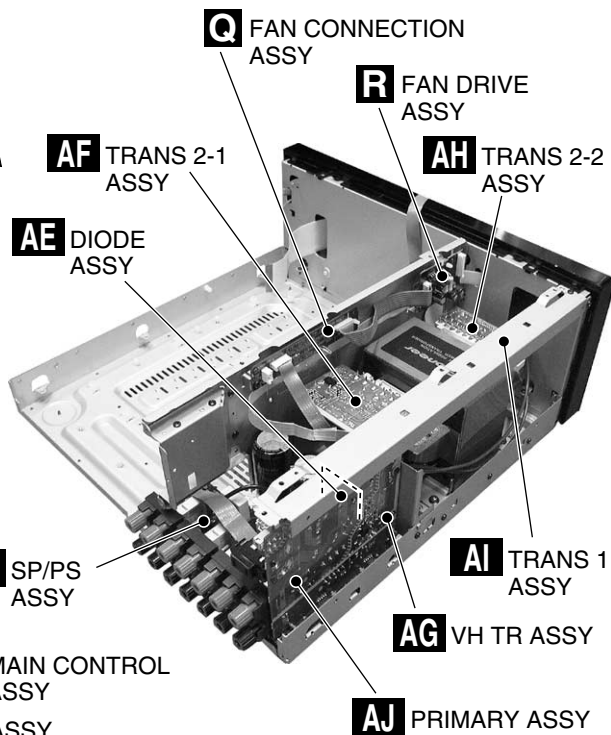
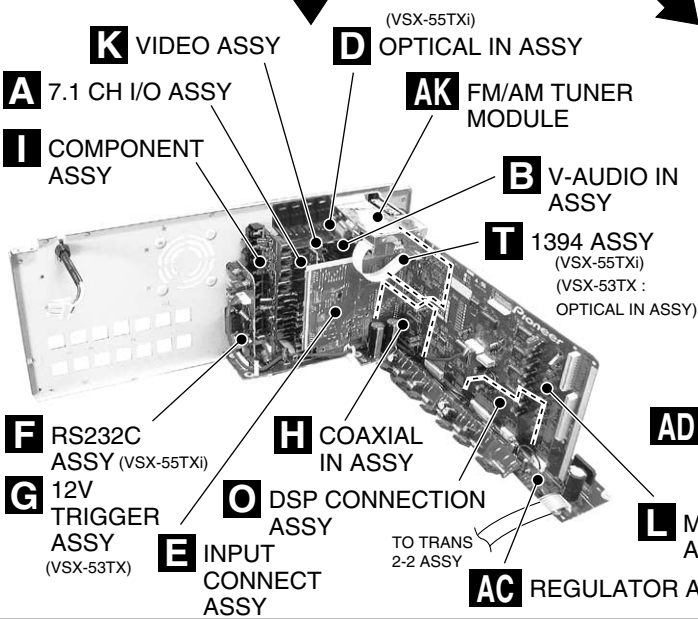
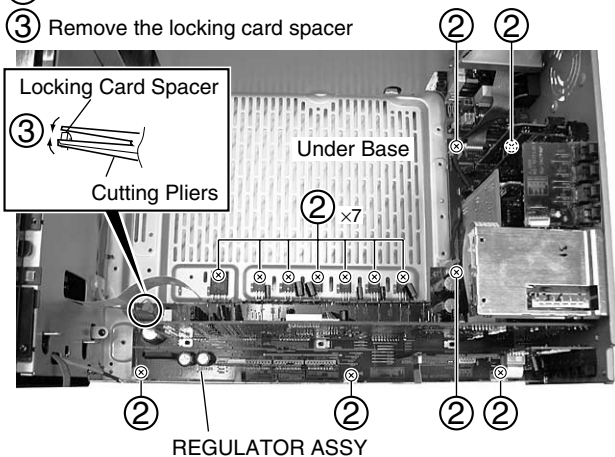
4 Rear Panel Block

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

PD8112A, PD5948A8, PD5899A, PD5771B, BU4094BCF

■ PD8112A (1394 ASSY: IC301)

• Flow Control IC

● Pin Function

No.	Pin Name	I/O	Pin Function
1	VDDOUT	–	Digital VDD (3.3V)
2	SPDIFOUT	O	IEC60958 output
3	SDATA3O	O	MBLA data output (5 ch, 6 ch) (at flow: I2S)
4	SDATA2O	O	MBLA data output (3 ch, 4 ch) (at flow: I2S)
5	SDATA1O	O	MBLA data output (1 ch, 2 ch) (at flow: I2S)
6	SDATA0O	O	MBLA ancillary data output (at flow: I2S)
7	LRCKOUT	O	MBLA LRCK output
8	BCKOUT	O	MBLA BCK output (64fs)
9	AMCLKOUT	O	Master clock output (When AMCLKEN output is LOW, active Hi-Z.)
10	AMCLKEN	O	When 60958 is selected or OUTPUTEN=L output, active LOW. For external clock control
11	SDERRO	O	Data error flag output
12	VSSOUT	–	Digital GND
13	VDDOUT	–	Digital VDD (3.3V)
14	SDMUTEO	O	Data mute flag output MUTE: H
15	SAPCMBCKIN	I	BCK input when converting SACD to MLPCM
16	SAPCMLRCKIN	I	LRCK input when converting SACD to MLPCM
17	SAPCMD3IN	I	DATA3 input when converting SACD to MLPCM
18	SAPCMD2IN	I	DATA2 input when converting SACD to MLPCM
19	SAPCMD1IN	I	DATA1 input when converting SACD to MLPCM
20	SACDMKO	O	SACD master clock output (2.8224MHz)
21	SACDDAO	O	SACD ancillary data output
22	SACDD0O	O	SACD data output (L)
23	SACDD1O	O	SACD data output (R)
24	SACDD2O	O	SACD data output (C)
25	SACDD3O	O	SACD data output (Lfe)
26	VSSCORE	–	Digital GND (for inside)
27	VDDCORE	–	Digital VDD (3.3V, for inside)
28	SACDD4O	O	SACD data output (Ls)
29	SACDD5O	O	SACD data output (Rs)
30	SACDFRO	O	SACD frame data output (75Hz)
31	TESTMODE0	I	LSI test mode input Normally, "L" fixed
32	TESTMODE1	I	LSI test mode input Normally, "L" fixed
33	PLLMODE	I	VCOCLK division ratio selection Normally, "L"
34	SAPCMMODE	I	0: normal, 1: When the data type is SACD, output SAPCM*** input to MLPCM.
35	XVALMODE	I	0: 64M•128M bit SDRAM, 1: 256M bit SDRAM
36	RJMSBF	I	MLPCM output format setting at flow 0: I2S, 1: Right aligned MSB first
37	SEL512	I	Master clock selection at flow 0: 768fs, 1: 512fs
38	CONT48	O	Output for controlling the oscillator (When FMODE="1" and SEL44K="1", active High)
39	CLK48K	I	Master clock input of fs48kHz (36.864MHz or 24.576MHz)
40	CLK48KI	I	Crystal resonator input of fs48kHz (24.576MHz)
41	CLK48KO	O	Crystal resonator output of fs48kHz (24.576MHz)
42	VSSOUT	–	Digital GND
43	VDDOUT	–	Digital VDD (3.3V)
44	CONT44	O	Output for controlling the oscillator (When FMODE="1" and SEL44K="0", active High)
45	CLK44K	I	Master clock input of fs44.1kHz (33.8688MHz or 22.5792MHz)
46	CLK44KI	I	Crystal resonator input of fs44.1kHz (22.5792MHz)
47	CLK44KO	O	Crystal resonator output of fs44.1kHz (22.5792MHz)
48	SELOSC	I	L: CLK4XK input selection, H: crystal resonator I/O selection As for the crystal resonator, less than 30MHz are insured.

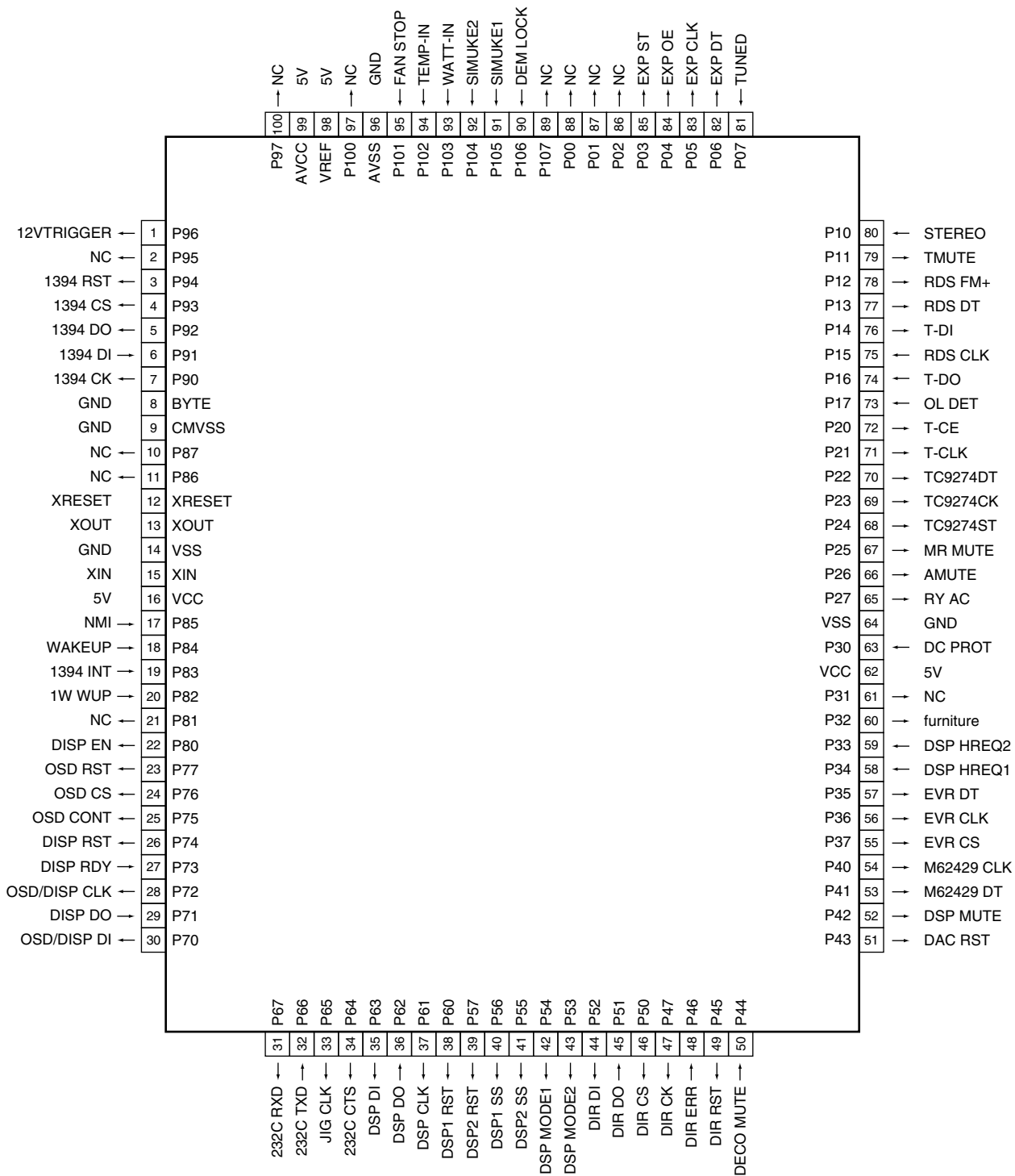
No.	Pin Name	I/O	Function
49	XRESET	I	Logic reset input Reset for L
50	OUTPUTEN	I	Pin for controlling the audio system output H: output, L: Hi-Z
51	FMODE	I	Flow mode control input at flow: H, at through: L
52	SELDTYPE0	I	Data type input 0 00: IEC60958, 01: MBLA
53	SELDTYPE1	I	Data type input 1 1X: SACD
54	SEL44K	I	Selecting signal of master clock input at flow L: CLK48K, H: CLK44K
55	FSSEL0	I	fs setting input 0 00: 44.1/48kHz, 01: 88.2/96kHz
56	FSSEL1	I	fs setting input 1 10: 176.4/192kHz, 11: 29.4/32kHz
57	VSSOUT	-	Digital GND
58	VDDOUT	-	Digital VDD (3.3V)
59	RXSTART	I	Trigger signal input of flow receiving start
60	SACDCHSEL	I	In a through mode, set to 1 in SACD 5 channel receiving. 0: 2ch*6 ch, 1: In 5ch flow receiving, a channel is distinguished automatically by ansillary data.
61	FMUTE	I	Forced mute control signal input Reflect to SDMUTE0.
62	FSTATE0	O	Status output 0 of memory in the flow
63	FSTATE1	O	Status output 1 of memory in the flow 00: Empty < 01: fast < 11: standard < 10: slow • full
64	FSTATE2	O	Status output 2 of flow receive data When received data type to be different from the set data type, active High.
65	TDI	I	Boundary Scan TAP pin
66	TDO	O	Boundary Scan TAP pin
67	TMS	I	Boundary Scan TAP pin
68	TCK	I	Boundary Scan TAP pin
69	TRST	I	Boundary Scan TAP pin
70	SACDMKIN	I	SACD bit clock input
71	SACDFRIN	I	SACD frame signal input
72	SACDD0IN	I	SACD data input 0 (ch1)
73	VSSCORE	-	Digital GND (for inside)
74	VDDCORE	-	Digital VDD (3.3V, for inside)
75	SACDD1IN	I	SACD data input 1 (ch2)
76	SACDD2IN	I	SACD data input 2 (ch3)
77	SACDD3IN	I	SACD data input 3 (ch4)
78	SACDD4IN	I	SACD data input 4 (ch5)
79	SACDD5IN	I	SACD data input 5 (ch6)
80	SACDDAIN	I	SACD ansillary data input
81	AMCLKIN	I	Master clock input (VCO) at through mode
82	SPDIFIN	I	IEC60958 input Data valid input at flow
83	SDMUTEIN	I	Mute flag input at through mode
84	SDERRIN	I	Data error flag input
85	VOCLK2O	O	VCO clock output 2 (for 512fs)
86	VOCLK1O	O	VCO clock output 1 (for 768fs)
87	REFSYT	I	PLL reference input (at passive filter)
88	DIVVCO	I	PLL VCO dividing input (at passive filter)
89	VCOEN	I	Built-in VCO control input Low: stop, High: oscillation
90	VSSCORE	-	Digital GND (for inside)
91	VDDCORE	-	Digital VDD (3.3V, for inside)
92	VSSOUT	-	Connect to analog GND
93	VSSPASS	-	Analog GND
94	VDDPASS	-	Analog VDD (3.3V)
95	LPOUT	O	Phase comparator output (analog)
96	LPIN	I	VCO control voltage input (analog)

No.	Pin Name	I/O	Function
97	VDDOUT	–	Connect to analog VDD (3.3V)
98	BCKIN	I	MBLA flow BCK input
99	LRCKIN	I	MBLA flow LRCK input
100	SDATA1IN	I	MBLA flow data input 1
101	SDATA2IN	I	MBLA flow data input 2
102	SDATA3IN	I	MBLA flow data input 3
103	SDATA0IN	I	MBLA flow data input 0
104	VSSOUT	–	Digital GND
105	VDDOUT	–	Digital VDD (3.3V)
106	SDA0	O	Address output for external SDRAM
107	SDA1	O	Address output for external SDRAM
108	SDA2	O	Address output for external SDRAM
109	SDA3	O	Address output for external SDRAM
110	SDA4	O	Address output for external SDRAM
111	SDA5	O	Address output for external SDRAM
112	SDA6	O	Address output for external SDRAM
113	SDA7	O	Address output for external SDRAM
114	SDA8	O	Address output for external SDRAM
115	SDA9	O	Address output for external SDRAM
116	SDA10	O	Address output for external SDRAM
117	SDA11	O	Address output for external SDRAM
118	SDA12	O	Address output for external SDRAM
119	SDA13	O	Address output for external SDRAM
120	SDD0	I/O	Data input/output for external SDRAM
121	SDD1	I/O	Data input/output for external SDRAM
122	SDD2	I/O	Data input/output for external SDRAM
123	SDD3	I/O	Data input/output for external SDRAM
124	SDD4	I/O	Data input/output for external SDRAM
125	SDD5	I/O	Data input/output for external SDRAM
126	SDD6	I/O	Data input/output for external SDRAM
127	SDD7	I/O	Data input/output for external SDRAM
128	VSSOUT	–	Digital GND
129	VDDOUT	–	Digital VDD (3.3V)
130	SDD8	I/O	Data input/output for external SDRAM
131	SDD9	I/O	Data input/output for external SDRAM
132	SDD10	I/O	Data input/output for external SDRAM
133	SDD11	I/O	Data input/output for external SDRAM
134	SDD12	I/O	Data input/output for external SDRAM
135	SDD13	I/O	Data input/output for external SDRAM
136	SDD14	I/O	Data input/output for external SDRAM
137	SDD15	I/O	Data input/output for external SDRAM
138	SDCKE	I/O	Data input/output for external SDRAM
139	SDCLK	O	Data input/output for external SDRAM
140	SDDQMU	O	Data input/output for external SDRAM
141	SDXRAS	O	XRAS output for external SDRAM
142	SDXCAS	O	XCAS output for external SDRAM
143	SDXWE	O	XWE output for external SDRAM
144	VSSOUT	–	Digital GND

PD5948A8 (MAIN CONTROL ASSY: IC501) (For VSX-55TXi)

• Main Microcomputer

• Pin Assignment (Top view)



● Pin Function

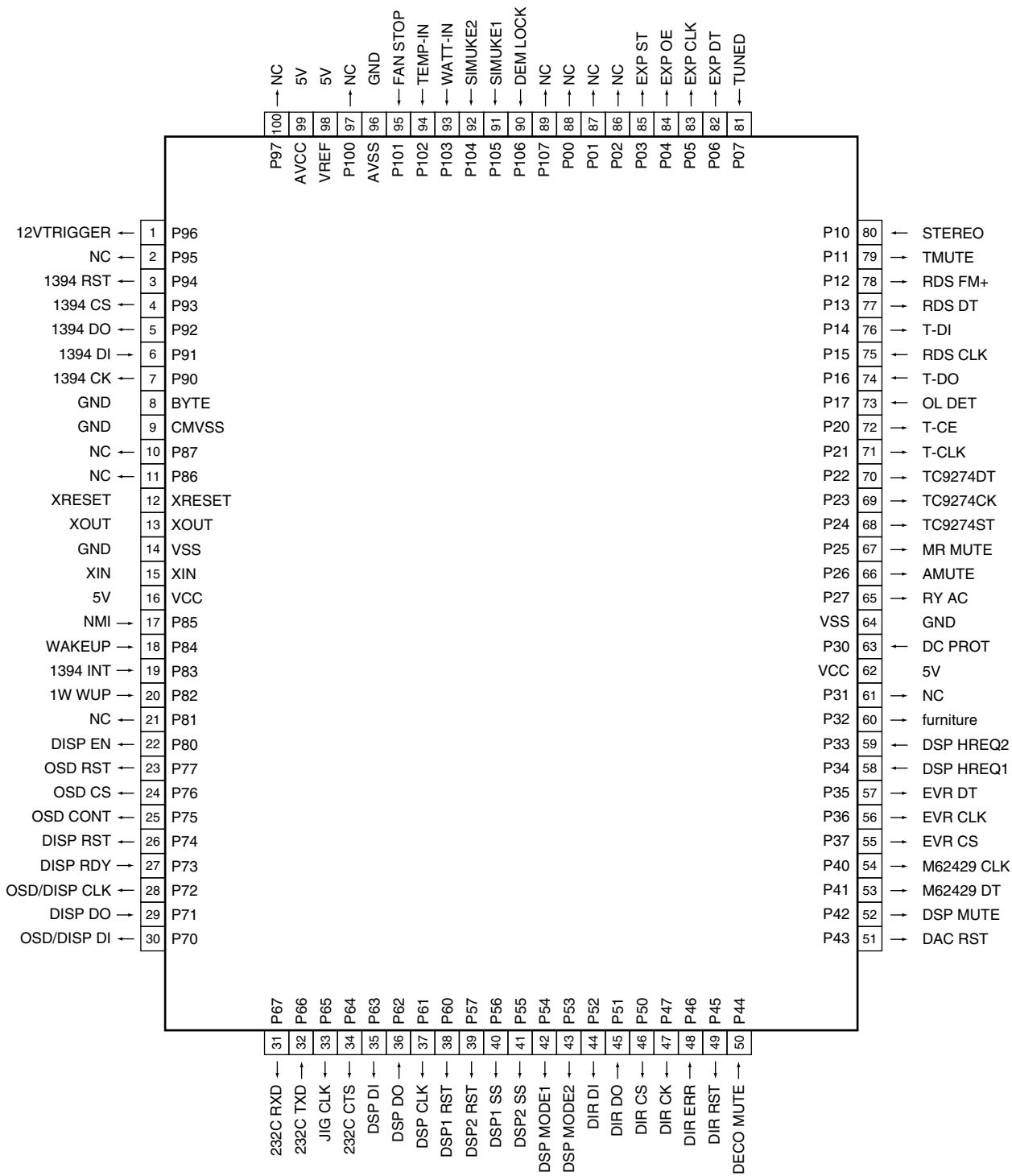
No.	Pin Name	I/O	Pin Function	Active
1	12VTRIGGER	O	"H" at ON	
2	–	O	NC "L" fixed.	
3	1394 RST	O	Reset for 1394	
4	1394 CS	O	Standby for 1394 (Not used) "L" fixed.	
5	1394 DO	O	DO for 1394	
6	1394 DI	I	DI for 1394	
7	1394 CK	O	CK for 1394	
8	GND	–	Ground	
9	CNVSS	–	5.1kΩ pulldown	
10	–	O	L" fixed	
11	–	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	INT for 1394	
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 permission)	
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 electronic volume	
56	EVR CLK	O	Clock signal for electronic volume	
57	EVR DT	O	Data signal for electronic 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 (Strobe)	
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	O	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 A/D	A/D
94	TEMP-IN	I	Temperature detection Level detection with A/D	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	

PD5899A (MAIN CONTROL ASSY: IC501) (For VSX-53TX)

• Main Microcomputer

● Pin Assignment (Top view)



● Pin Function

No.	Pin Name	I/O	Pin Function	Active
1	12VTRIGGER	O	"H" at ON	
2	–	O	NC "L" fixed.	
3	1394 RST	O	RST for 1394 (Not used) "L" fixed.	
4	1394 CS	O	Standby for 1394 (Not used) "L" fixed.	
5	1394 DO	O	DO for 1394 (Not used) "L" fixed.	
6	1394 DI	I	DI for 1394 (Not used) Standby with the circuit.	
7	1394 CK	O	CLK 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	INT 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 permission)	
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 electronic volume	
56	EVR CLK	O	Clock signal for electronic volume	
57	EVR DT	O	Data signal for electronic 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 (Strobe)	
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	O	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 A/D	A/D
94	TEMP-IN	I	Temperature detection Level detection with A/D	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	

● 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 - direction
16	Vcc	-	Power supply 5V	56	VOL_+	I	Volume + direction
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	DSD DIRECT control (VSX-55TXi only)	
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

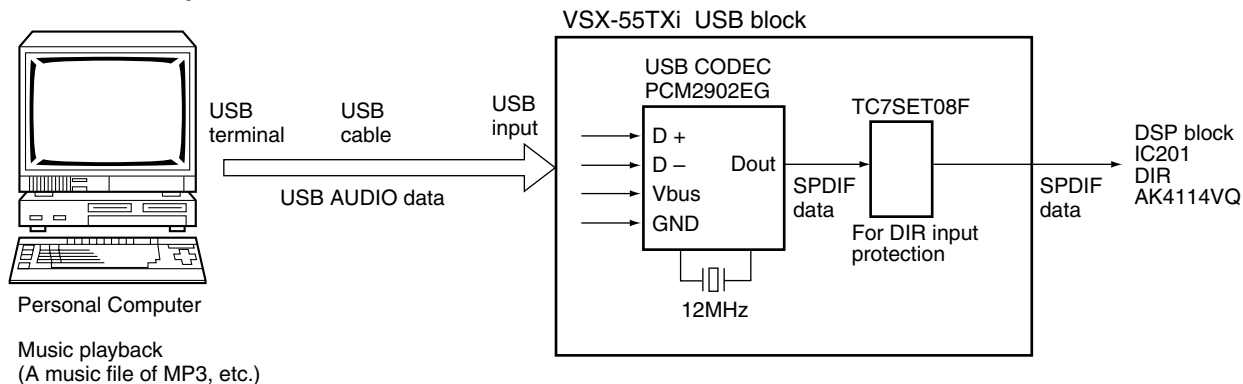
(3) 3.3-V CMOS level input with internal pull-down. This pin informs the PC of serviceable control signals such as mute, volume up, or volume down, which has no connection with the internal DAC or ADC directly. See the volume control and mute control section.

(4) Connect a decouple capacitor to GND

(5) 3.3-V CMOS level input with internal pull-down, 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-55TXi irrelatively.)
- Be USB codec, but analog I/O and digital (SPDIF) input are not using in VSX-55TXi.
- When only connects to PC and receiver (VSX-55TXi) 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-55TXi?
- 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.

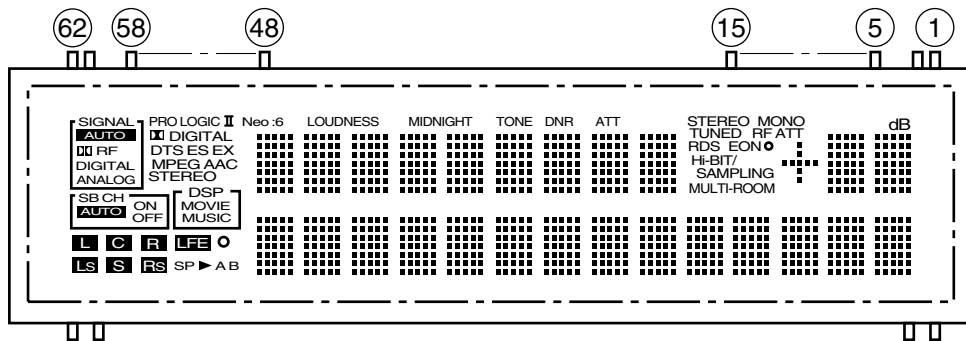
Therefore, do not recommend use in the condition and environment as mentioned above.

7.2.2 DISPLAY

■ AAV7087 (DISPLAY ASSY : V3000)

• FL DISPLAY

• Pin Assignment

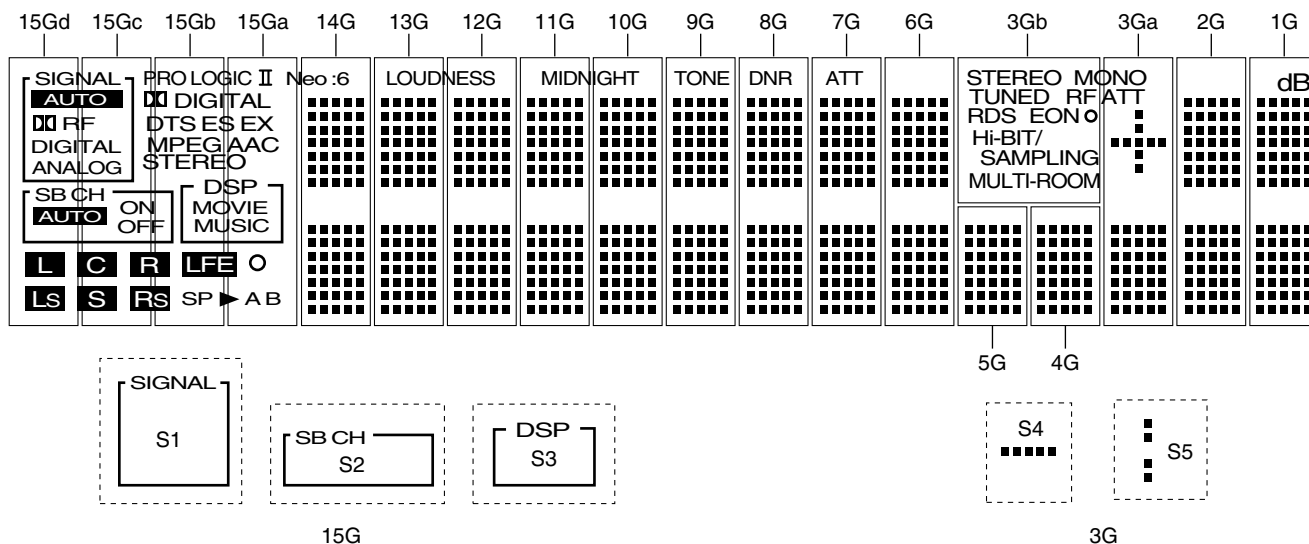


• Pin Connection

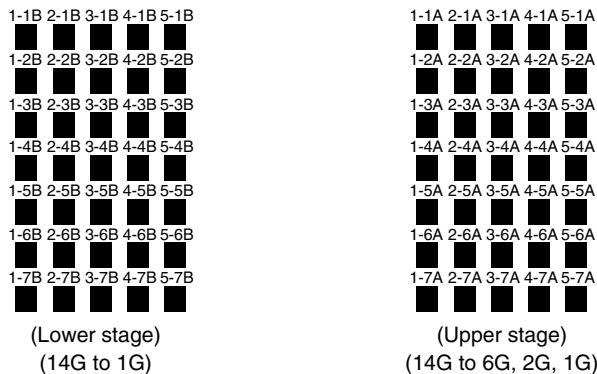
Pin No.	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47-3	2	1
Connection	F2	F2	NP	NP	GND	GND	NC	VH	NC	VDD	BK	LAT	CLK	SI	SO	NP	F1	F1

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

• Grid Assignment



• Segment Designation



• Anode Connection

	15Gd-15Ga	14G	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3Gb, 3Ga	2G	1G
A	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	-	-	MONO	1-1A	1-1A
	P3	II	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	-	-	RF ATT	3-1A	3-1A
	P5	AUTO	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	-	-	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
	P8	ANALOG	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	-	-	S4	3-2A	3-2A
	P10	DTS	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
	P12	EX	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
	P14	AAC	3-3A	3-3A	3-3A	3-3A	3-3A	3-3A	3-3A	3-3A	-	-	-	3-3A	3-3A
B	P15	STEREO	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
	P17	AUTO	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
	P19	OFF	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
	P21	MOVIE	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
	P23	L	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
	P25	R	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
	P27	S	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
C	P29	LFE	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
	P31	SP ▶	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
	P33	B	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
	P35	-	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
	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
	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
	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
	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
	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
D	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
E	P56	-	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B
	P57	-	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B
	P58	-	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B
	P59	-	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B
	P60	-	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B
	P61	-	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B
	P62	-	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B
	P63	-	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B
	P64	-	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B
	P65	-	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B
	P66	-	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B
	P67	-	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B
	P68	-	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B
F	P69	-	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B
	P70	-	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B
	P71	-	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B

• 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



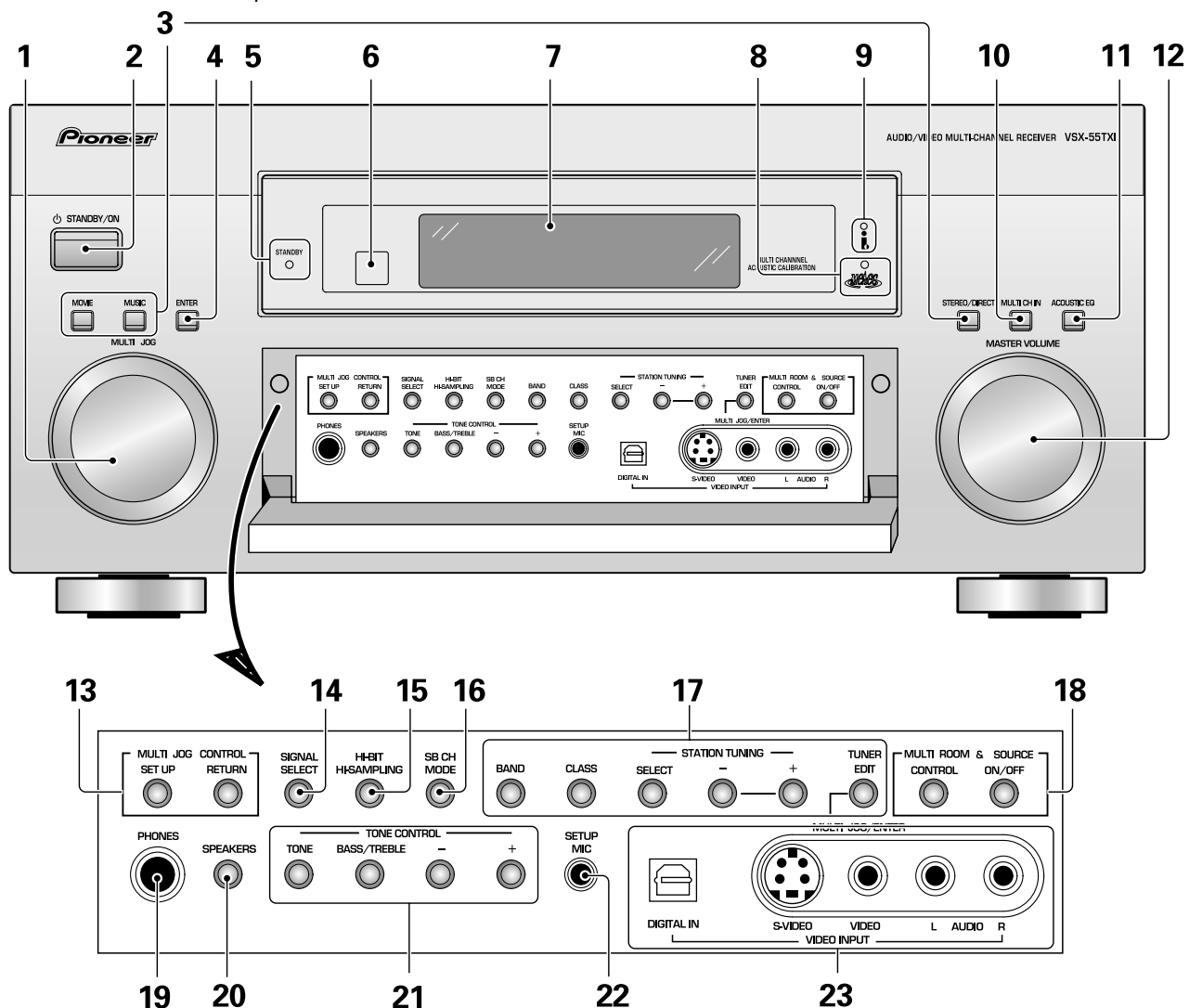
Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

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

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 (13), you can use it to perform SYSTEM SETUP operations; select a function or a listening mode or do TUNER EDIT functions (in TUNER mode).

2 STANDBY/ON button

Press to switch the receiver ON or into STANDBY mode.

3 Listening mode buttons

There are two types of SURROUND modes:

MOVIE: Press to put the receiver into MOVIE mode.

MUSIC: Press to put the receiver into MUSIC mode.

STEREO/DIRECT : Switches the receiver into STEREO mode if it was in a different sound mode or toggles between DIRECT and STEREO 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 [0.8 W] 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 i.LINK indicator

Lights when an i.LINK -Audio-equipped component is selected.

10 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).

11 ACOUSTIC EQ button

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

12 MASTER VOLUME dial

Use to raise or lower the volume of the receiver.

13 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.

14 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.

15 HI-BIT HI-SAMPLING button

Use this button to switch the AUDIO SCALER mode on or off.

16 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.

17 Tuner control buttons**BAND**

Press to select the AM or FM band.

CLASS

Press repeatedly to switch the preset station classes.

SELECT

Switches the $-/+$ buttons between station memory and frequency select modes.

 $-/+$

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.

18 MULTI ROOM & SOURCE buttons

Press to use the multi room feature (requires an optional IR receiver).

CONTROL button

Used together with the MULTI JOG to select the function or use with the MASTER VOLUME to select the volume of the MULTI ROOM system.

ON/OFF buttons

Use to switch MULTI ROOM function on or off.

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 or MR&S is chosen this button toggles between A 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 off, which bypasses the tone circuitry.

BASS/TREBLE button

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

 $-/+$ buttons

Use to adjust the frequency levels.

22 SETUP MIC jack

Plug in the setup 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 or video camera (etc.), that has an optical digital connection.

S-VIDEO

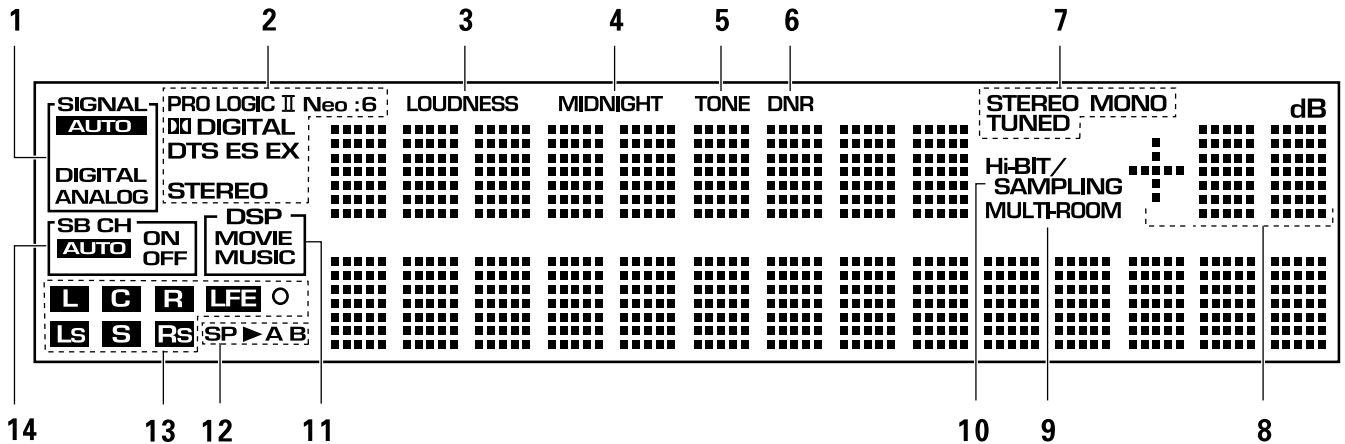
Video input for connecting a portable DVD player or video camera (etc.), that has an S video out.

RCA VIDEO / AUDIO (L/R)

Video input for connecting a portable DVD player or video camera (etc.), that has standard RCA video/audio outputs.

8.2 DISPLAY

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



1 SIGNAL 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.

8 Volume level indicator

9 MULTI-ROOM indicator

Lights when the MULTI ROOM system is on.

10 Hi-BIT/SAMPLING indicator

Lights when the AUDIO SCALER mode is on.

11 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.

12 Speaker indicators

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

13 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.

14 SB CH indicators

Light to indicate the status of the surround back channels.

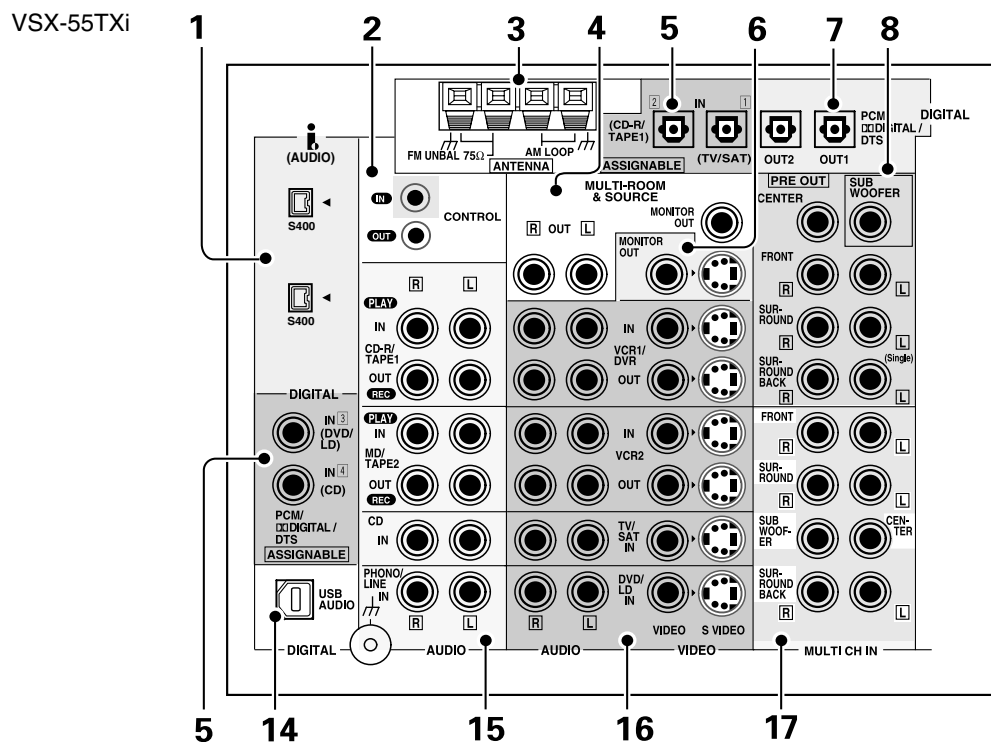
AUTO – Lights when the SB CH MODE or virtual surround back mode is set to AUTO.

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 **(AUDIO) - i.LINK connectors**

4-pin, S400 i.LINK connectors for connection to i.LINK-equipped players and other components. Each i.LINK connector acts simultaneously as both input and output.

2 **CONTROL IN/OUT terminals**

You can use these jacks 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.

3 **Radio antenna terminals**

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

4 **MULTI-ROOM & SOURCE OUT terminals**

These terminals output the audio and video signal to a sub-system in a secondary room. Note that the MONITOR OUT here is different than the MONITOR OUT for the main system. These are analog jacks.

5 **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".

6 **MONITOR OUT terminals (connect a TV or monitor here)**

Use these terminals to output the video signal to your TV, video projector or monitor in your main room. Be careful not to confuse these jacks with the MULTI ROOM & SOURCE MONITOR OUT.

7 **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.

8 **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.

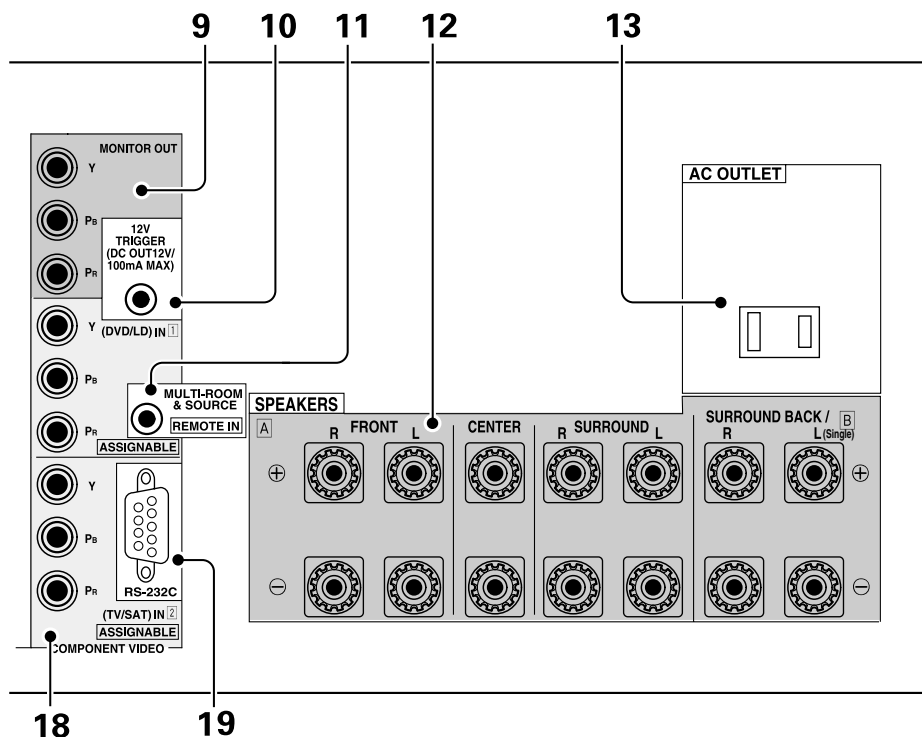
9 **COMPONENT VIDEO MONITOR OUT terminals**

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

10 **12V TRIGGER terminal**

Use this terminal to output a signal that can automatically turn on another component. DC OUT 12V/100mA is the maximum power.

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11 MULTI-ROOM & SOURCE REMOTE IN terminal

Use this terminal to hook up a sub-system in a secondary room. This hook up requires a separately sold IR receiver and allows you to use the receiver to hear different audio sources in different rooms.

12 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, the SECOND ZONE, or the MULTI ROOM. See "set the SURROUND BACK speakers".

13 AC OUTLET (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.

14 USB AUDIO terminal

Use this terminal to connect a PC to this receiver.

15 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.

16 Video components input/output terminals

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

17 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.

18 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".

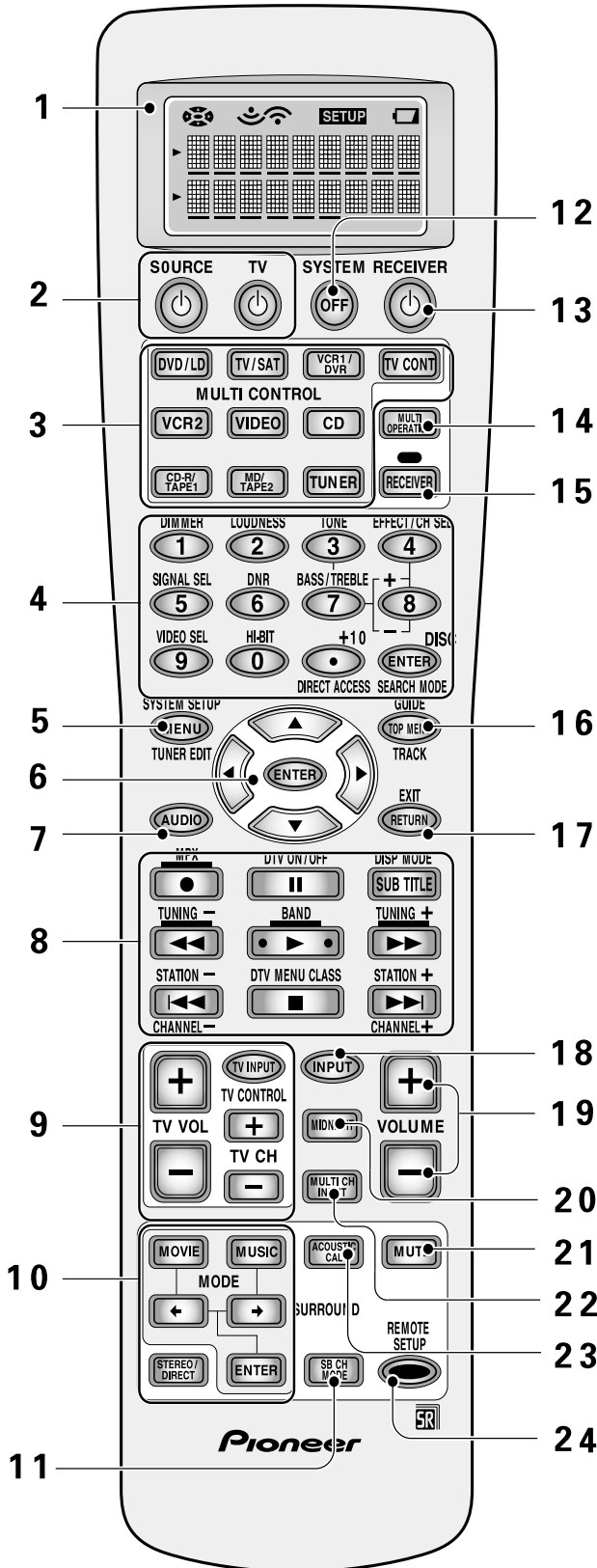
19 RS-232C Connection

This is a future-oriented port that has the possibility on inputting and/or outputting information to/ from the receiver.

8.4 REMOTE CONTROL UNIT

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

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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.

TONE button

This button switches between TONE on and off, 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, channel level and sound delay 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, Dolby Pro Logic II MUSIC parameters and sound delay settings.

You can then use the + and n buttons to make these adjustments.

SIGNAL SEL button

Press 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.

DNR (DIGITAL NR) button

Switches the DIGITAL NR on or off.

VIDEO SEL button

Use to toggle between the different video input possibilities.

HI-BIT button

Use this button to switch the AUDIO SCALER on or off.

5 SYSTEM SETUP button

Use for all system setups, including the speaker and sound systems. For more information see "Setting Up for Surround Sound".

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.

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.

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.

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 including USB, PHONO and i.LINK components.

19 VOLUME (+/-) buttons

Use to raise or lower the volume of the receiver.

20 MIDNIGHT button

Switches the MIDNIGHT listening mode on or off.

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 CAL button

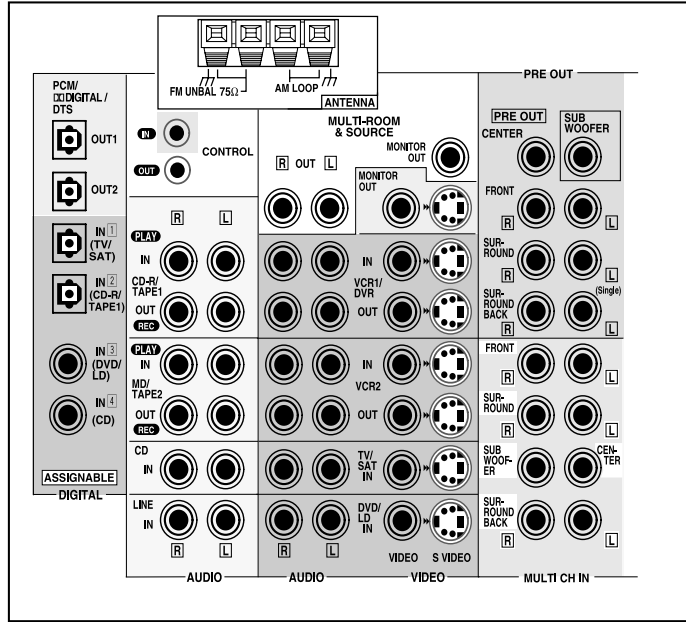
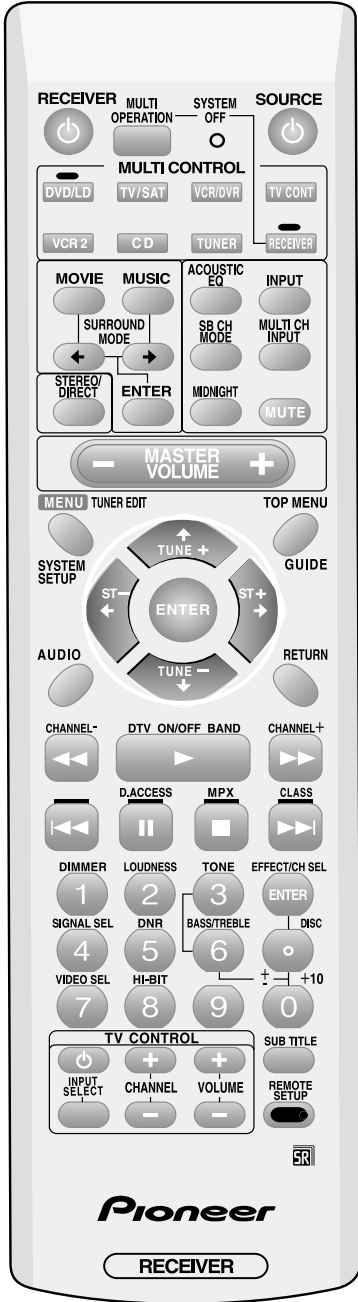
Press to switch on/off and select the type of acoustic calibration EQ.

24 REMOTE SETUP button

Use to customize the remote control functions and the remote control itself. (See "Setting Up the Remote Control to Control Other Components").

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