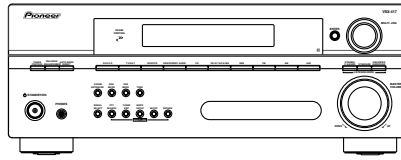


Service Manual



VSX-417-K

ORDER NO.
RRV3560

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-417-K

VSX-417-S

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

Model	Type	Power Requirement	Remarks
VSX-417-K	MYXJ5	AC 220 V to 230 V	
VSX-417-S	MYXJ5	AC 220 V to 230 V	



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

SAFETY INFORMATION



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

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

WARNING

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

Health & Safety Code Section 25249.6 – Proposition 65



NOTICE

(FOR CANADIAN MODEL ONLY)

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

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

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

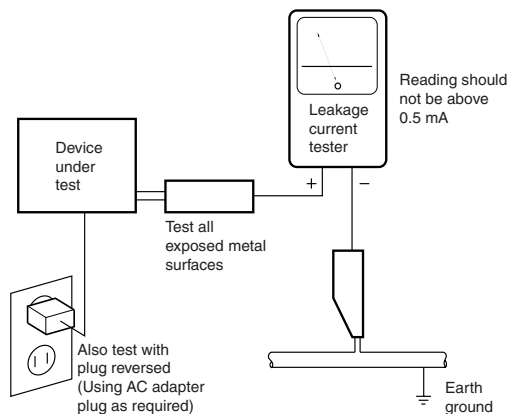
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

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

LEAKAGE CURRENT CHECK

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



AC Leakage Test

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

2. PRODUCT SAFETY NOTICE

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

Electrical components having such features are identified by marking with a 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 Check Points for Good Servicing]

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

1. Product safety



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

- ① Use specified parts for repair.

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

- ② Do not perform modifications without proper instructions.

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

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

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

- ④ Make sure the screws are tightly fastened.

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

- ⑤ Make sure each connectors are correctly inserted.

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

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

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

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

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

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

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

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

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

- ⑩ Safe environment should be secured during servicing.

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

2. Adjustments



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

3. Lubricants, Glues, and Replacement parts



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

4. Cleaning



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

5. Shipping mode and Shipping screws



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

1 2 3 4

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1 2 3 4

VSX-417-K

1. SPECIFICATIONS

Amplifier section

- **Continuous power output (stereo)**
Front 100 W + 100 W
(DIN 1 kHz, THD 1.0 %, 8 Ω)
- **Rated power output (surround / 20 Hz to 20 kHz, THD 0.08 %, 8 Ω)**
Front 90 W per channel
Center 90 W
Surround 90 W per channel
- **Rated power output (surround / 1 kHz, THD 1 %, 8 Ω)**
Front 110 W per channel
Center 110 W
Surround 110 W per channel

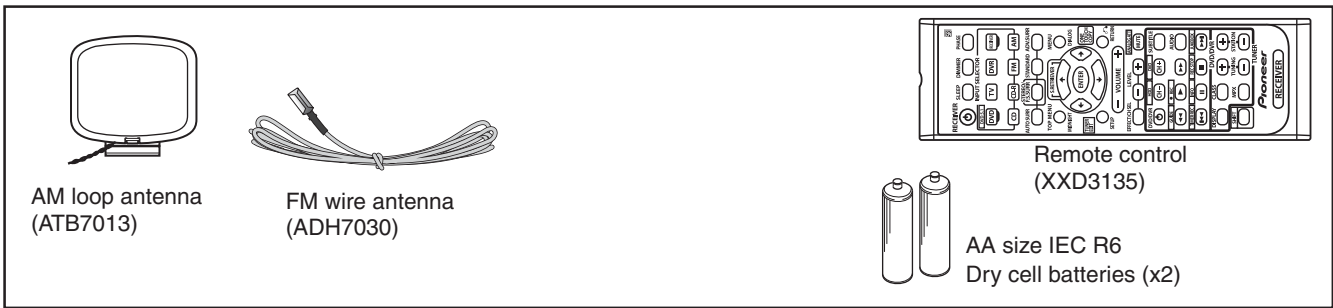
Audio section

- **Input (Sensitivity/Impedance)**
CD, DVR/VCR, CD-R/TAPE/MD,
DVD/LD, TV/SAT 200 mV/47 kΩ
- **Frequency response**
CD, DVR/VCR, CD-R/TAPE/MD, DVD/LD,
TV/SAT 5 Hz to 100 000 Hz ± 3 dB
- **Output (Level/Impedance)**
DVR/VCR REC, CD-R/TAPE/
MD REC 200 mV/2.2 kΩ
- **Tone control**
Bass ± 6 dB (100 Hz)
Treble ± 6 dB (10 kHz)
Loudness +10 dB/+5 dB (100 Hz/10 kHz)
(at volume level -50 dB)
- **Signal-to-Noise Ratio DIN (Continuous rated power output/ 50 mW)**
CD, DVR/VCR, CD-R/TAPE/MD,
DVD/LD, TV/SAT 88 dB/64 dB

Video Section

- **Input (Sensitivity/Impedance)**
DVR/VCR, DVD/LD, TV/SAT 1 Vp-p/75 Ω
- **Output (Level/Impedance)**
DVR/VCR, MONITOR OUT 1 Vp-p/75 Ω
- **Frequency response**
DVR/VCR, DVD/LD,
TV/SAT \Rightarrow MONITOR 5 Hz to 7 MHz ± 3 dB
Signal-to-Noise Ratio 55 dB
Crosstalk 50 dB

Accessories



AM loop antenna (ATB7013)

FM wire antenna (ADH7030)

Remote control (XXD3135)

AA size IEC R6 Dry cell batteries (x2)

FM Tuner Section

- Frequency Range 87.5 MHz to 108 MHz
- Usable Sensitivity Mono: 13.2 dBf, IHF
(1.3 μ V/ 75 Ω)
- 50 dB Quieting Sensitivity Mono: 20.2 dB
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 (DIN) 75 Ω unbalanced

AM Tuner Section

- Frequency Range 531 kHz to 1602 kHz
- Sensitivity (IHF, Loop antenna) 350 μ V/m
- Signal-to-Noise Ratio 50 dB
- Antenna Loop antenna

Miscellaneous

- Power requirements AC 220 V to 230 V, 50 Hz/60 Hz
- Power consumption
VSX-417 280 W
In standby 0.5 W
- Dimensions 420 (W) mm x 158 (H) mm x 352.5 (D) mm
- Weight (without package)
VSX-417 8.3 kg

Furnished Parts

- AM loop antenna 1
- FM wire antenna 1
- Dry cell batteries (AA size IEC R6) 2
- Remote control 1
- Warranty card 1
- Operating instructions



Note

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

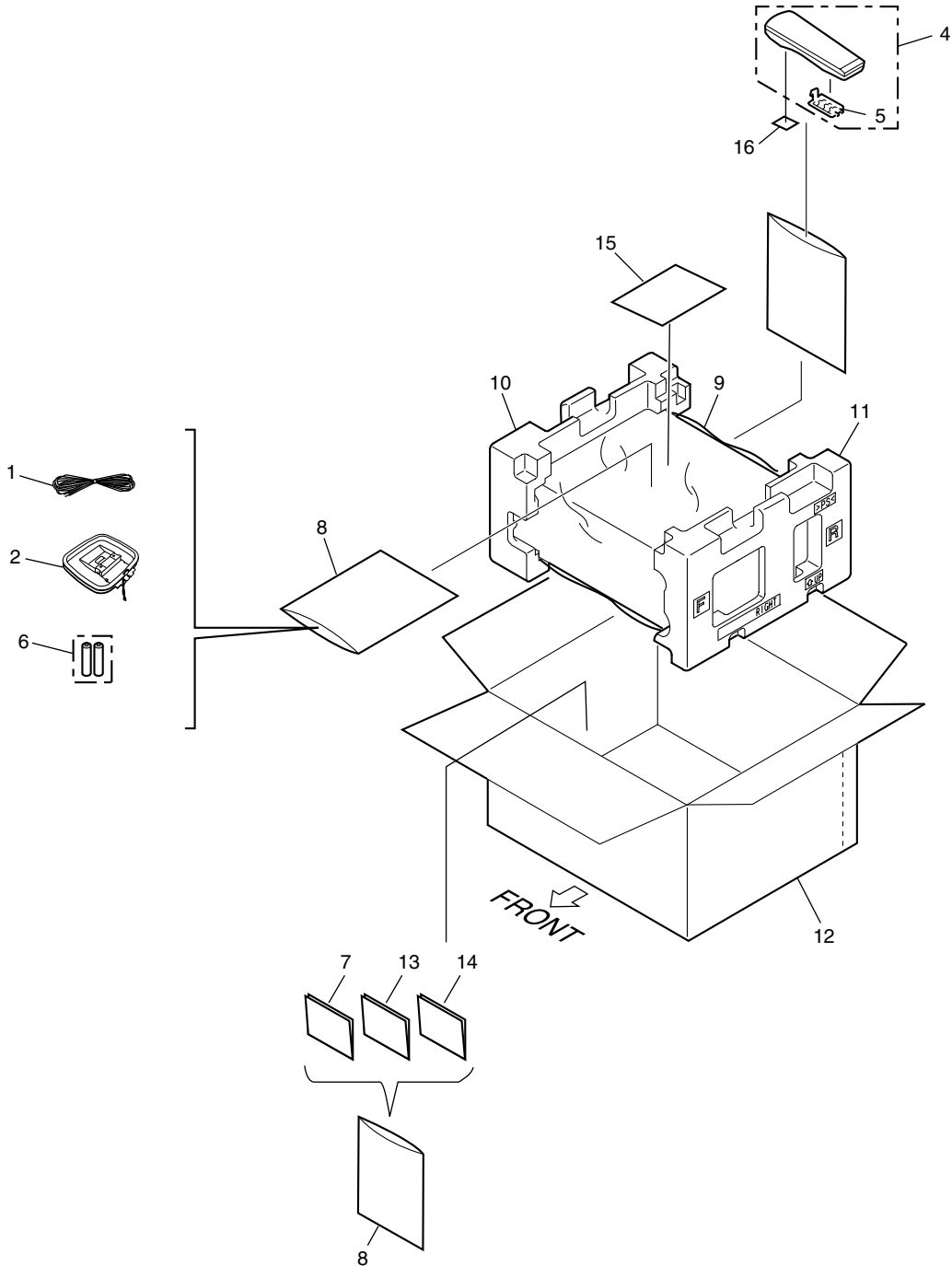
Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories.

"DTS" is a registered trademark of DTS, Inc. and "DTS 96/24" is a trademark of DTS, 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  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
 - Screws adjacent to  mark on product are used for disassembly.
 - For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)

2.1 PACKING SECTION



5 6 7 8

(1) PACKING SECTION PARTS LIST

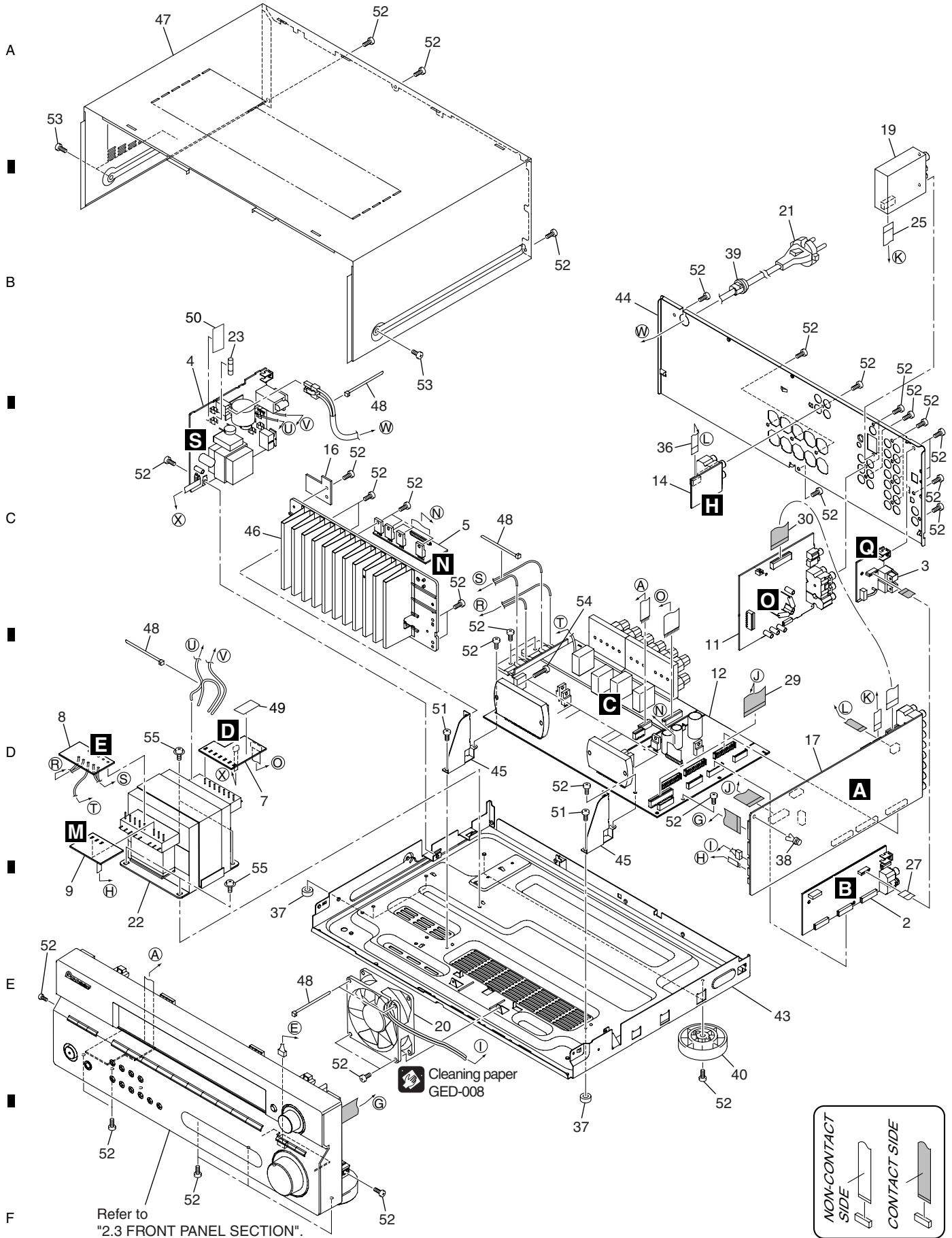
<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	FM Wire Antenna	ADH7030
2	AM Loop Antenna	ATB7013
3	•••••	
4	Remote Control	XXD3135
5	Battery Cover	XZN3139
NSP 6	Dry Cell Battery (AA, R6)	XEX3002
7	Operating Instructions (English/Italian)	XRE3142
NSP 8	Polyethylene Bag (0.06*230*340)	Z21-038
9	Packing Sheet	AHG7069
10	Left Pad V3	XHA3158
11	Right Pad V3	XHA3159
12	Packing Case	See Contrast table (2)
13	Operating Instructions (Dutch/Spanish)	XRC3267
14	Operating Instructions (French/German)	XRC3268
NSP 15	Warranty Card	ARY7065
16	Label (WEEE)	ARW7322

(2) CONTRAST TABLE

VSX-417-K/MYXJ5 and VSX-417-S/MYXJ5 are constructed the same except for the following:

Mark	No.	Symbol and Description	VSX-417-K /MYXJ5	VSX-417-S /MYXJ5
	12	Packing Case	XHD3681	XHD3682

2.2 EXTERIOR SECTION



5 6 7 8

(1) EXTERIOR SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	•••••		31	•••••	
2	DSP Assy	AWX8812	32	•••••	
3	DIGITAL INPUT Assy	XWZ4211	33	•••••	
4	PRIMARY Assy	XWZ4216	34	•••••	
5	REGULATOR Assy	XWZ4271	35	•••••	
6	•••••		36	7P Flexible Cable/30V	XDD3235
7	TRANS2 Assy	XWZ4243	NSP 37	Spacer	AEB7092
8	TRANS3 Assy	XWZ4246	38	Push Rivet	AEC7205
9	TRANS4 Assy	XWZ4225	39	Cord Stopper	CM-22B
10	•••••		40	Insulator	AMR7198
11	VIDEO Assy	XWZ4270	41	•••••	
12	POWER PACK Assy	XWZ4233	42	•••••	
13	•••••		NSP 43	Chassis 816	XNA3026
14	5.1CH INPUT Assy	XWZ4249	44	Rear Panel	See Contrast table (2)
15	•••••		45	Heatsink Angle V3	XNG3145
16	BIND Assy	XWZ4252	NSP 46	Heatsink	XNH3043
17	MAIN Assy	XWK3301	47	Bonnet	See Contrast table (2)
18	•••••		NSP 48	Binder (BK-1)	ZCA-BK1
19	FM/AM TUNER Unit	AXX7170	49	ICP Label	XAX3121
△ 20	DC Fan Motor	XXM3012	50	Fuse Card	AAX7493
△ 21	AC Power Cord	VDG1080	51	Screw	BBZ30P060FCC
△ 22	Power Transformer (T1501)	XTS3090	52	Screw	BBZ30P080FNI
△ 23	Fuse (FU1 : T3.15 A)	REK1027	53	Screw	See Contrast table (2)
24	•••••		54	Screw	BBZ30P140FTC
25	11P Flexible Cable/30V	XDD3189	55	Screw	BBZ40P080FNI
26	•••••				
27	10P Flexible Cable/30V	XDD3196			
28	•••••				
29	17P Flexible Cable/30V	XDD3203			
30	13P Flexible Cable/30V	XDD3220			

(2) CONTRAST TABLE

VSX-417-K/MYXJ5 and VSX-417-S/MYXJ5 are constructed the same except for the following:

Mark	No.	Symbol and Description	VSX-417-K /MYXJ5	VSX-417-S /MYXJ5
	44	Rear Panel	XNC3486	XNC3487
	47	Bonnet	XZN3183	XZN3184
	53	Screw	BBZ30P080FTB	BBZ30P080FNI

2.3 FRONT PANEL SECTION

A

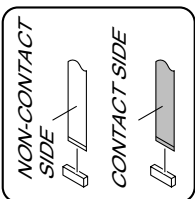
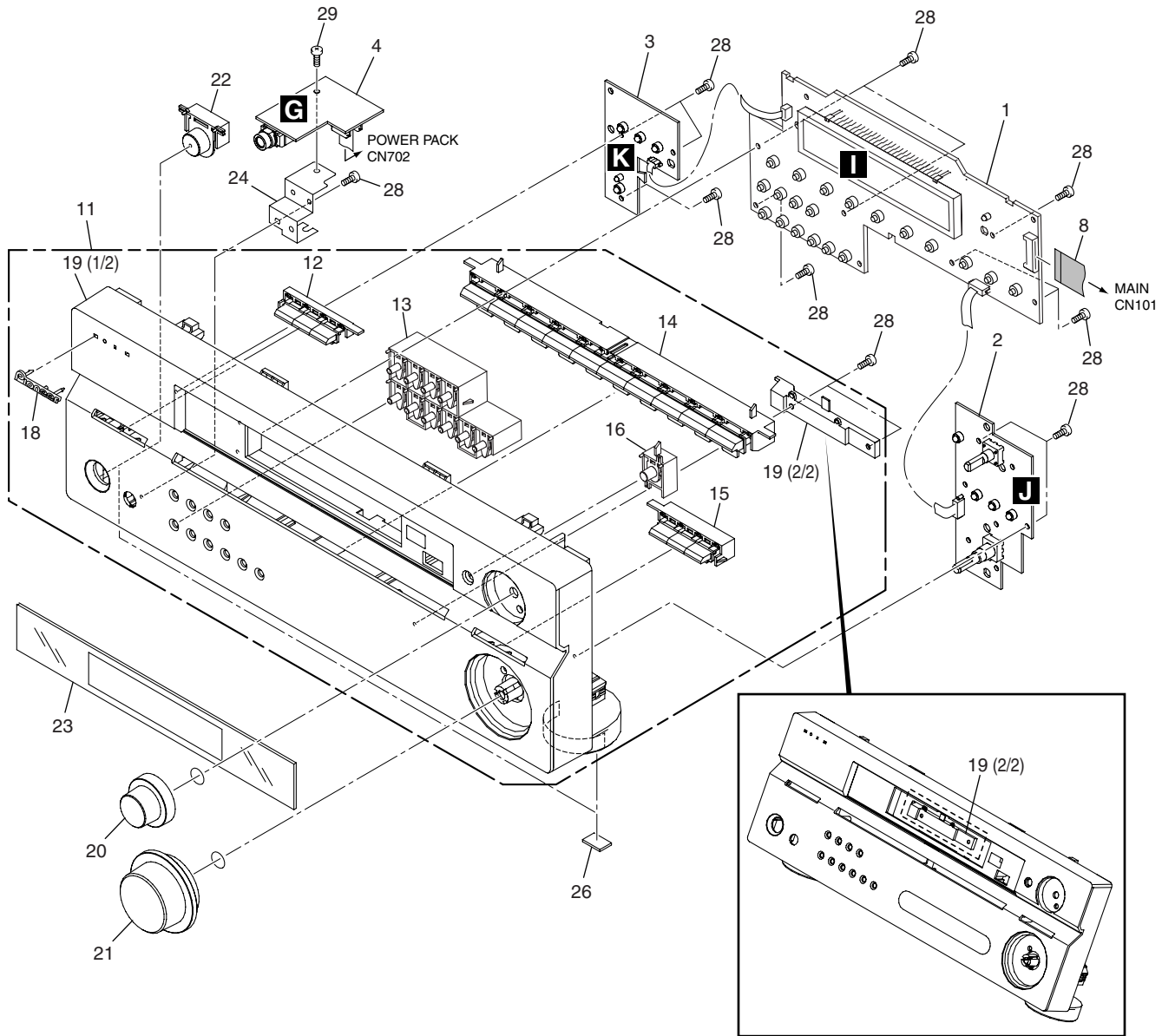
B

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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	FRONT DISPLAY Assy	XWZ4202	16	JOG Button	See Contrast table (2)
2	ROTARY ENCODER Assy	XWZ4205	17	•••••	
3	POWER KEY Assy	XWZ4206	18	Pioneer Name Plate	See Contrast table (2)
4	HEADPHONE Assy	XWZ4265	19	Front Panel	See Contrast table (2)
5	•••••		20	JOG Knob	See Contrast table (2)
6	•••••		21	VOL Knob	See Contrast table (2)
7	•••••		22	STANDBY Button	See Contrast table (2)
8	17P Flexible Cable/30V	XDD3200	23	D Panel PC	XAK3569
9	•••••		24	Earth Plate HP V2 (M)	XNG3131
10	•••••		25	•••••	
NSP 11	Front Panel Assy	See Contrast table (2)	26	Rubber Sheet	AEB1111
12	TUNER Button	See Contrast table (2)	27	•••••	
13	SUB Button	See Contrast table (2)	28	Screw	BPZ30P080FTC
14	FUNCTION Button	See Contrast table (2)	29	Screw	BBZ30P080FNI
15	LISTEN Button	See Contrast table (2)			

(2) CONTRAST TABLE

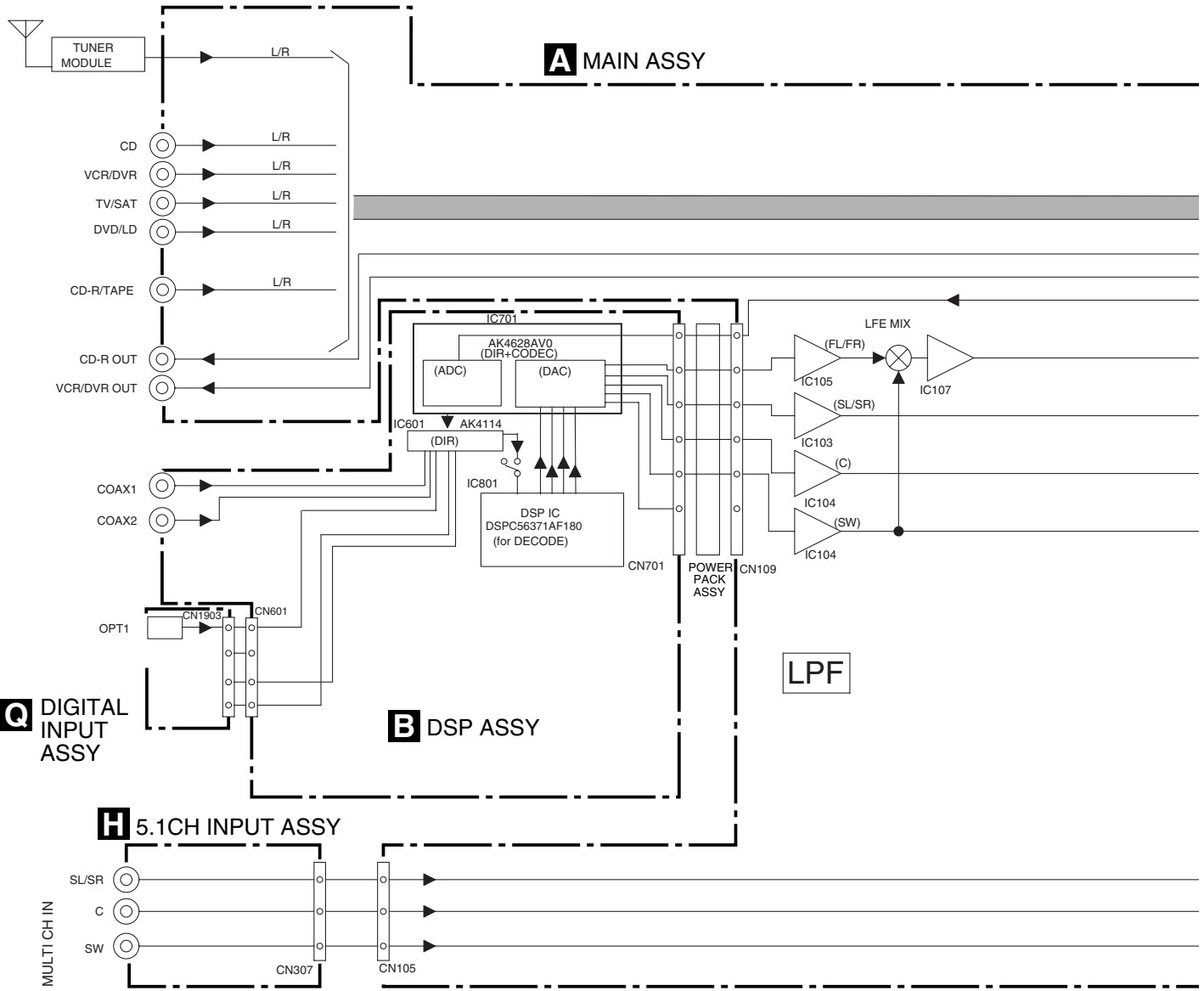
VSX-417-K/MYXJ5 and VSX-417-S/MYXJ5 are constructed the same except for the following:

<u>Mark</u>	<u>No.</u>	<u>Symbol and Description</u>	<u>VSX-417-K /MYXJ5</u>	<u>VSX-417-S /MYXJ5</u>
NSP	11	Front Panel Assy	XXG3294	XXG3295
	12	TUNER Button	XAD3230	XAD3248
	13	SUB Button	XAD3231	XAD3249
	14	FUNCTION Button	XAD3232	XAD3250
	15	LISTEN Button	XAD3233	XAD3251
	16	JOG Button	XAD3240	XAD3252
	18	Pioneer Name Plate	XAM3006	VAM1129
	19	Front Panel	XMB3264	XMB3265
	20	JOG Knob	XAB3052	XAB3055
	21	VOL Knob	XAB3053	XAB3057
	22	STANDBY Button	XAD3202	XAD3203

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

A



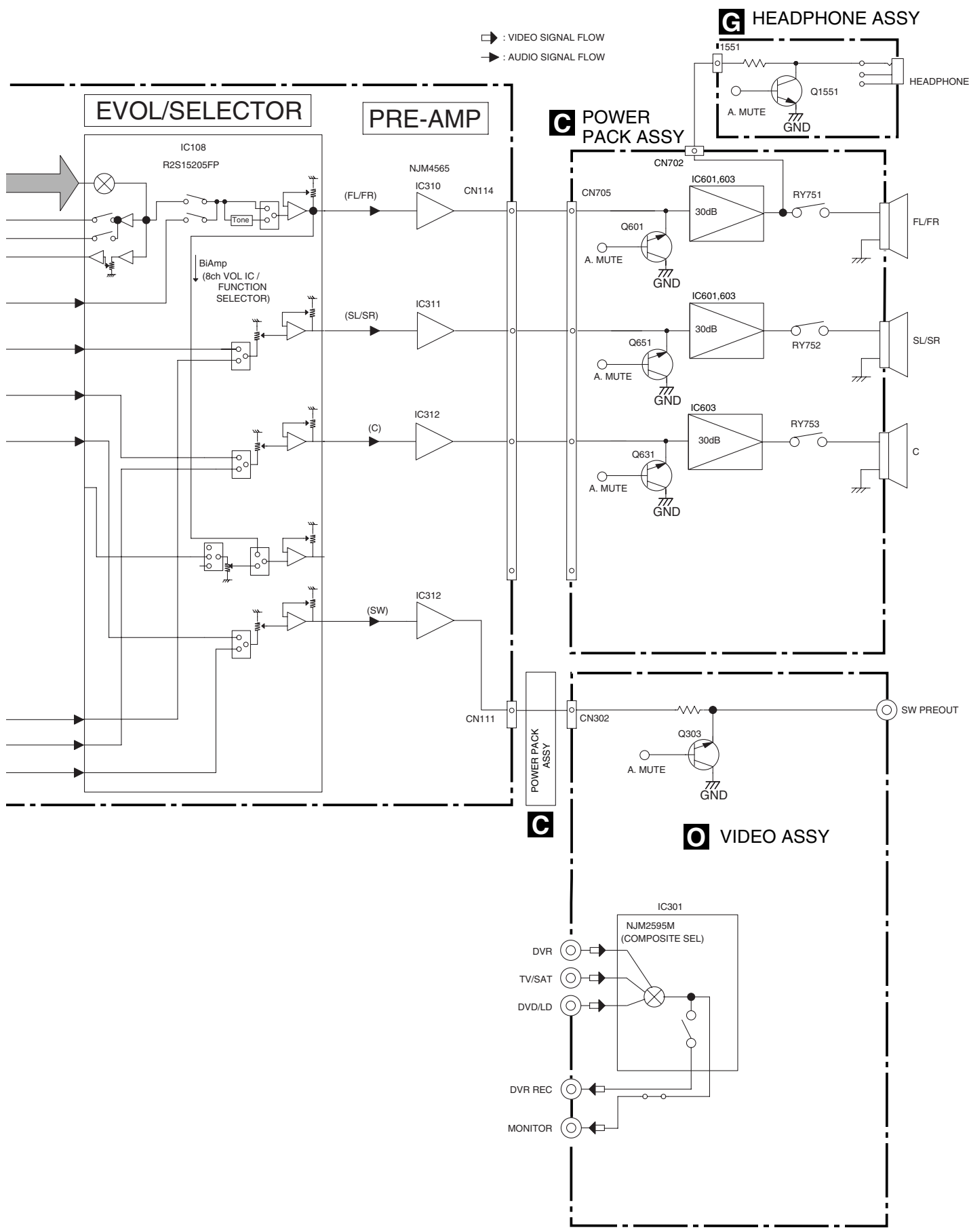
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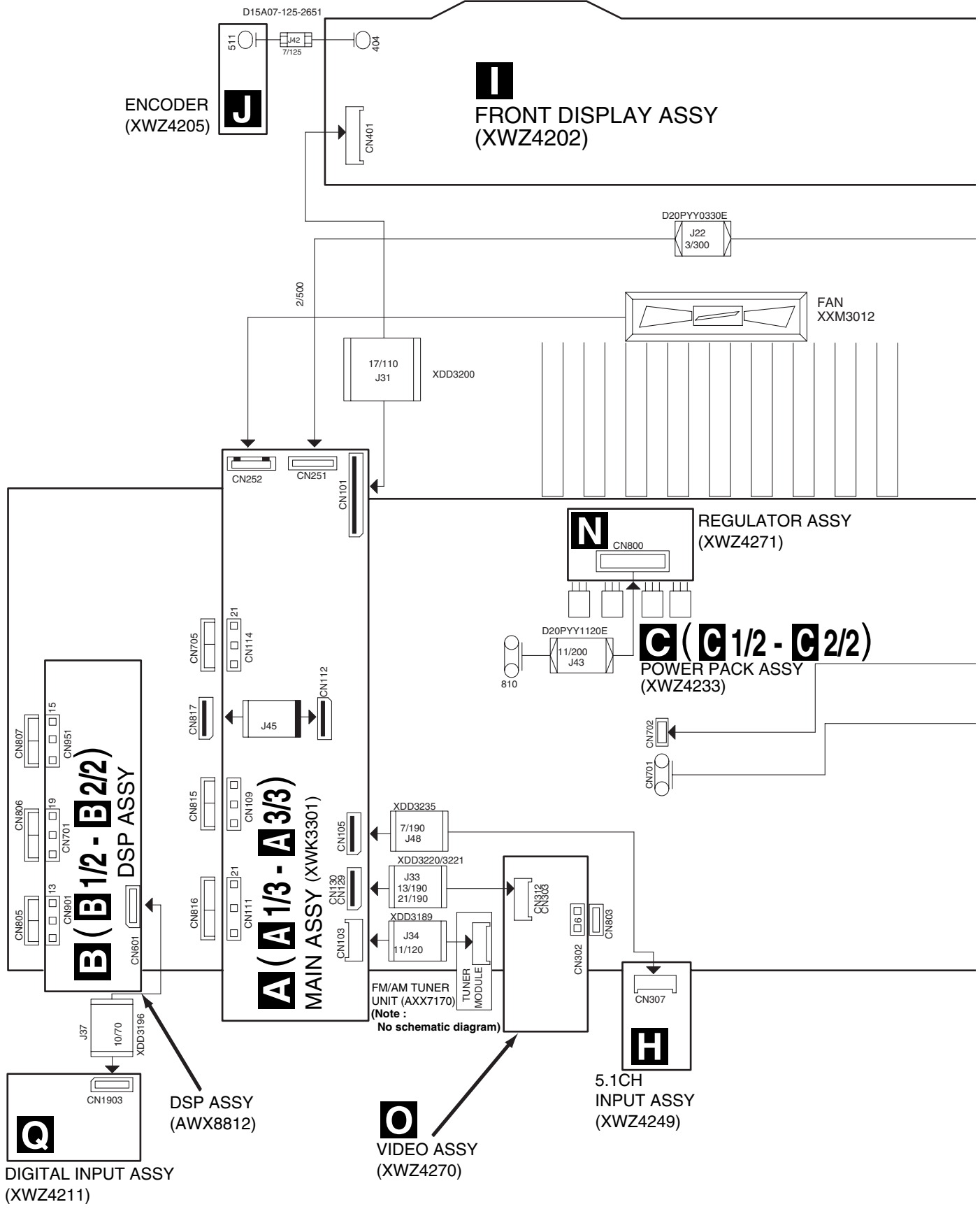
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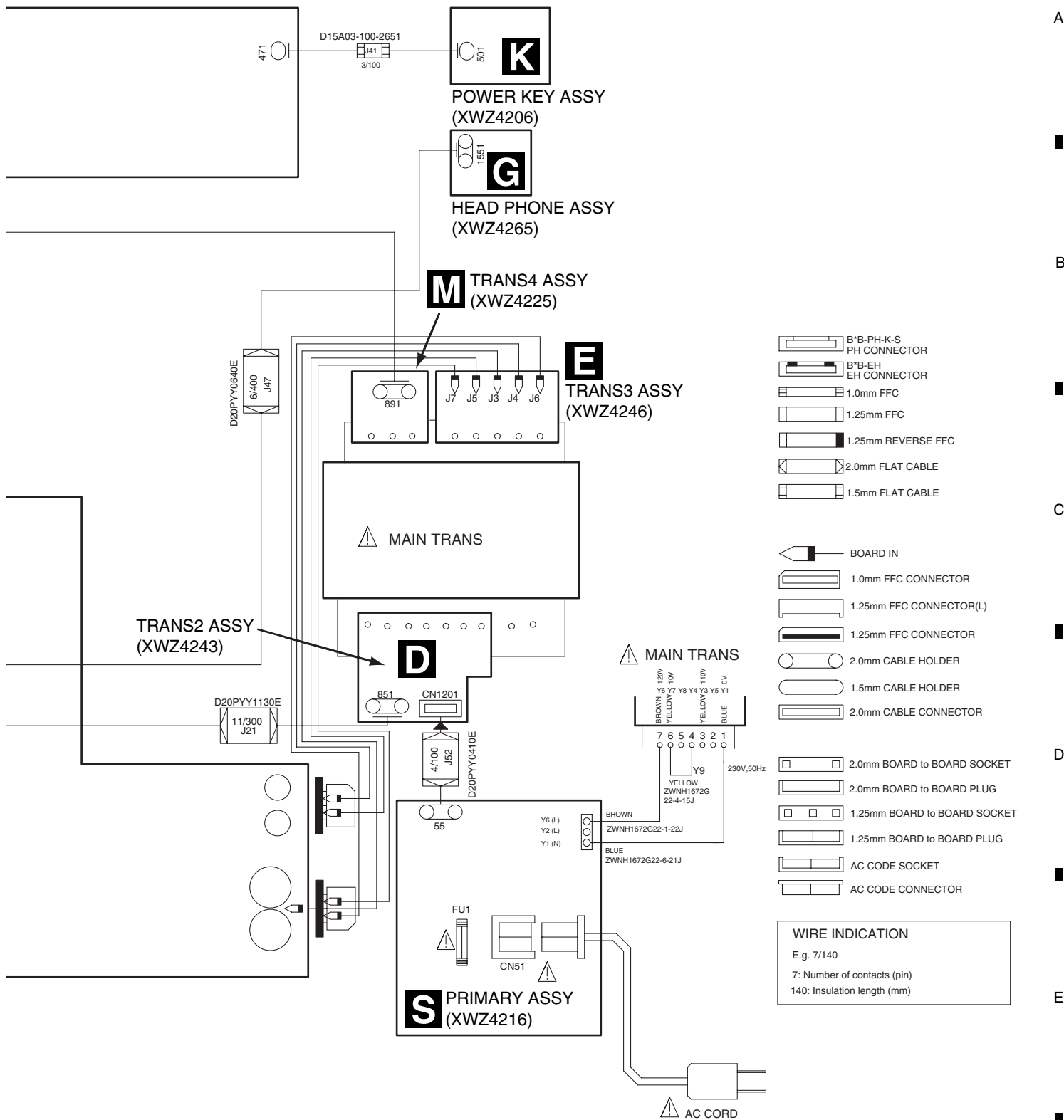
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3.2 OVERALL WIRING CONNECTION DIAGRAM

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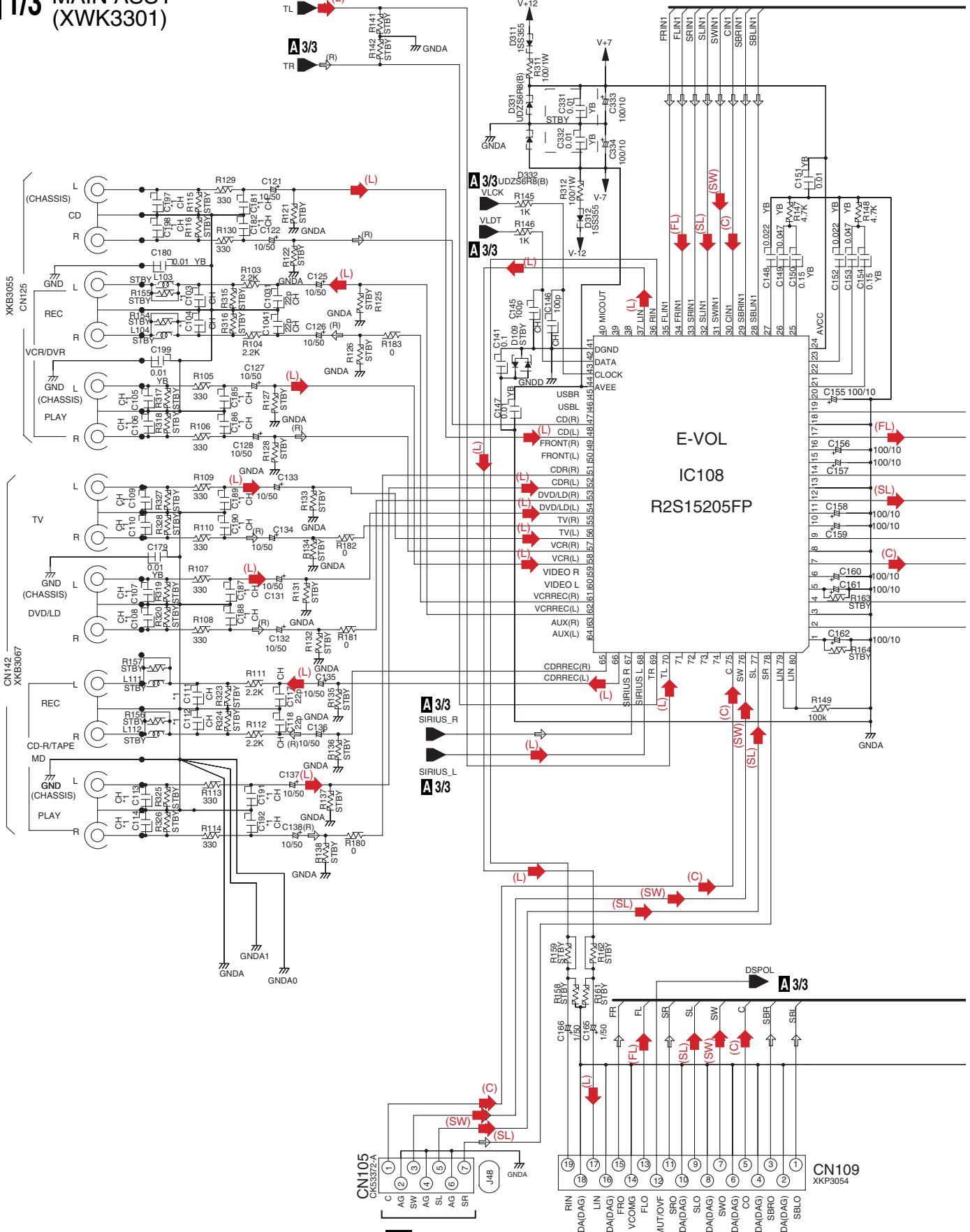
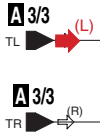


- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
-  : The power supply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

3.3 MAIN ASSY (1/3)

A 1/3 MAIN ASSY (XWK3301)

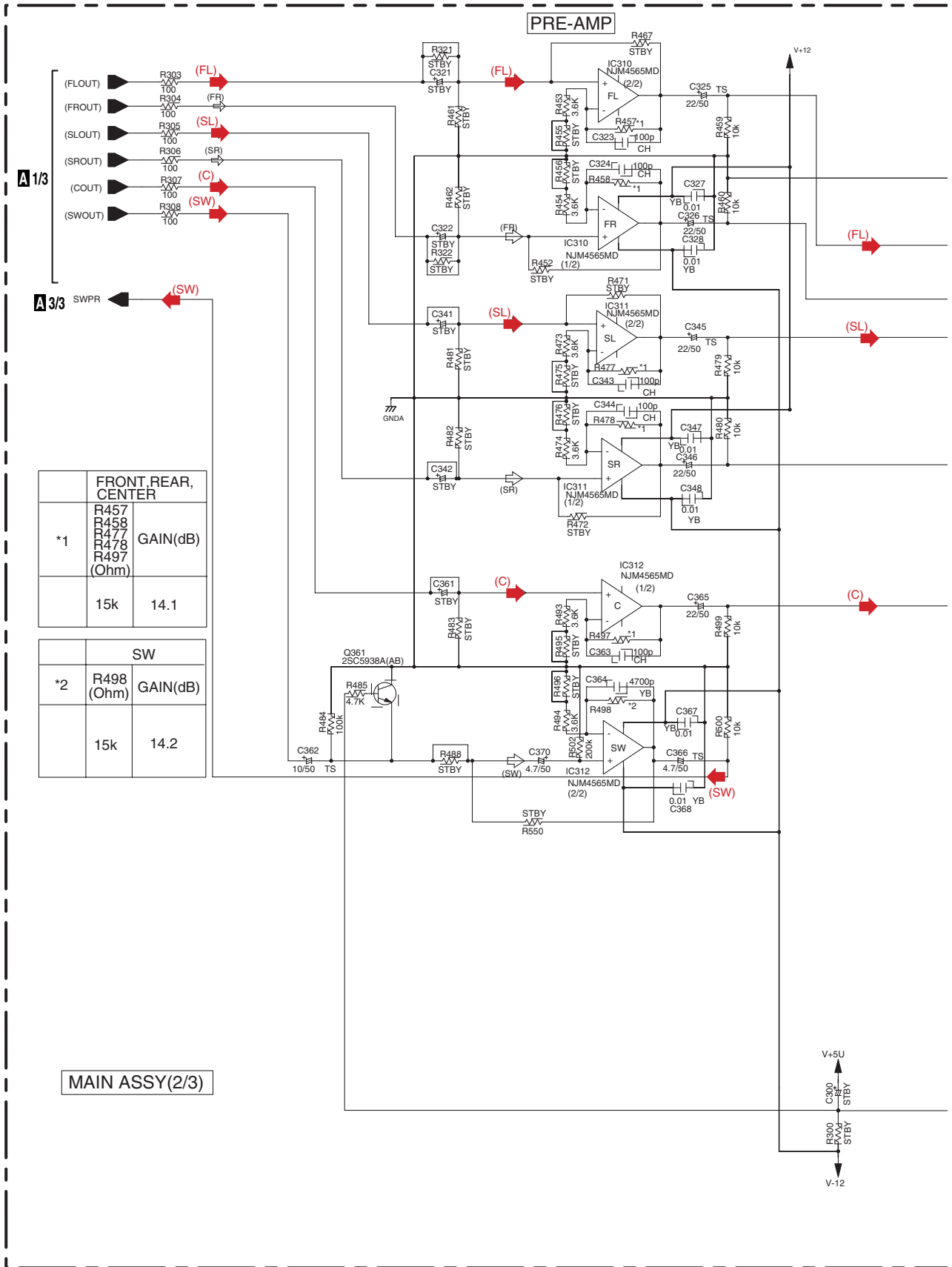
A
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A 1/3

3.4 MAIN ASSY (2/3)

A 2/3 MAIN ASSY (XWK3301)



FRONT REAR, CENTER							
*1	<table border="1"> <tr> <th>R457</th> <th>R458</th> <th>GAIN(dB)</th> </tr> <tr> <td>15k</td> <td>14.1</td> <td></td> </tr> </table>	R457	R458	GAIN(dB)	15k	14.1	
R457	R458	GAIN(dB)					
15k	14.1						

SW					
*2	<table border="1"> <tr> <th>R498</th> <th>GAIN(dB)</th> </tr> <tr> <td>15k</td> <td>14.2</td> </tr> </table>	R498	GAIN(dB)	15k	14.2
R498	GAIN(dB)				
15k	14.2				

MAIN ASSY(2/3)

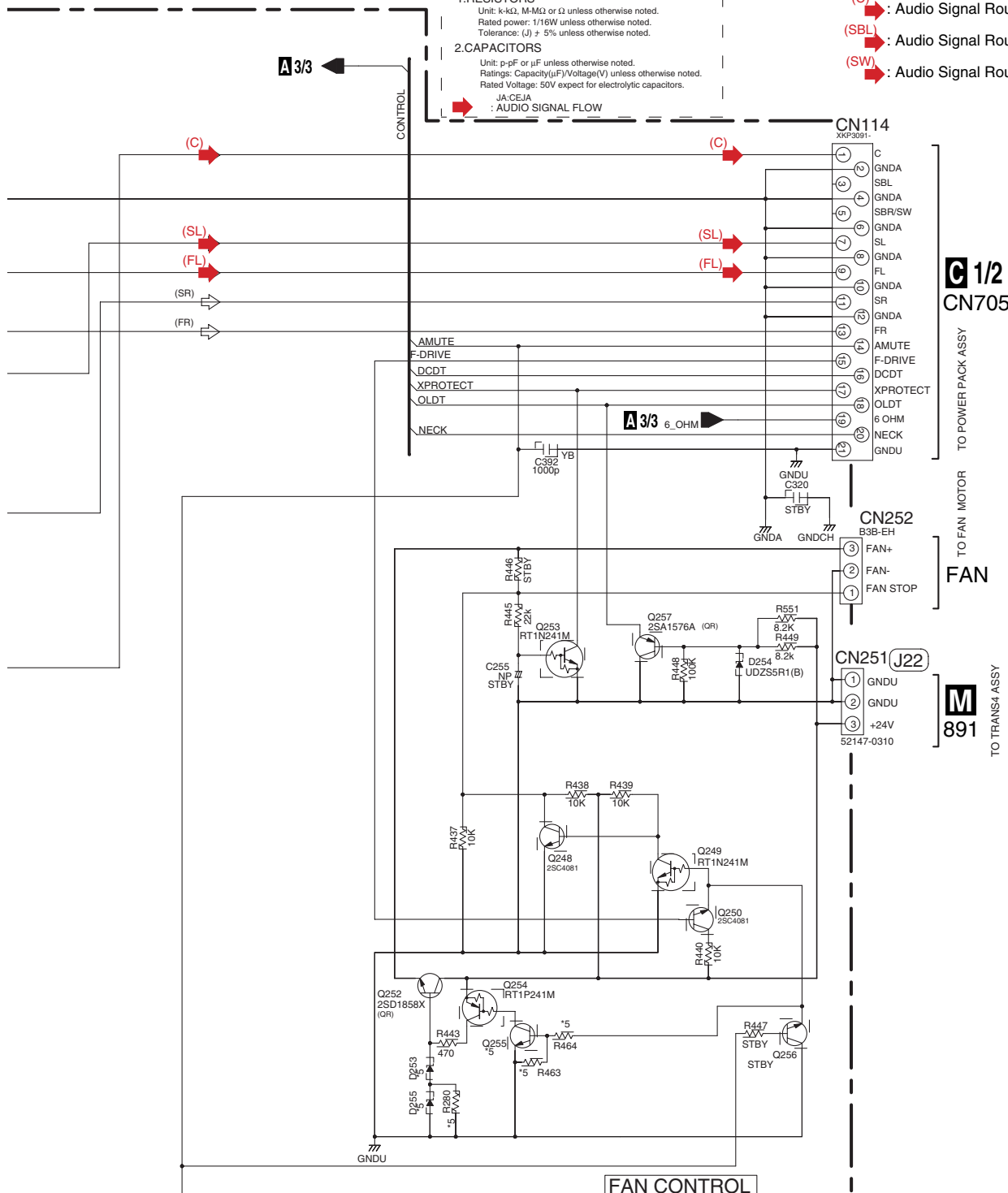
- (FL) : Audio Signal Route (Front L ch)
- (SL) : Audio Signal Route (Surround L ch)
- (C) : Audio Signal Route (Center ch)
- (SBL) : Audio Signal Route (Surround Back L ch)
- (SW) : Audio Signal Route (SubWoofer ch)

NOTE

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

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

JA:CEJA
: AUDIO SIGNAL FLOW



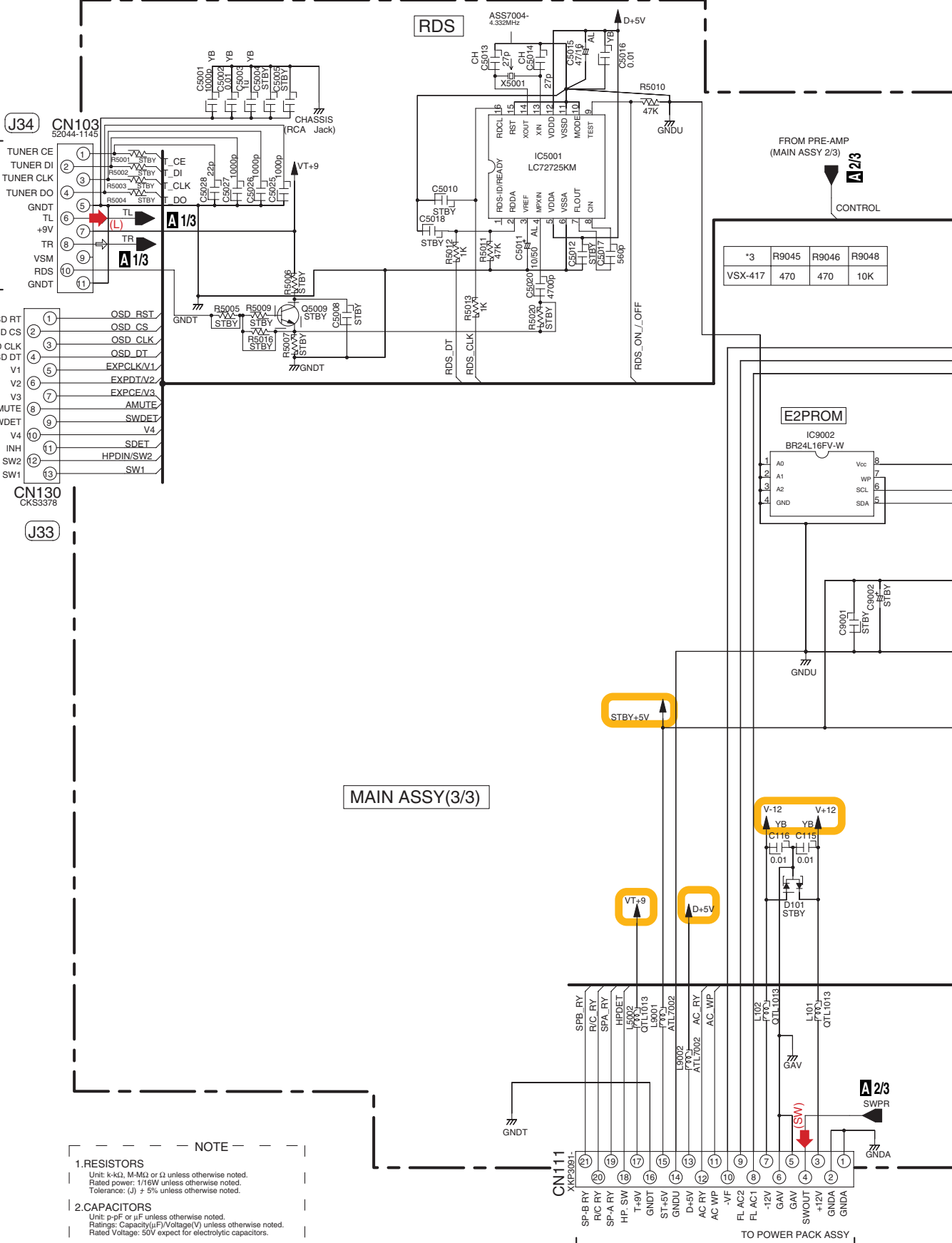
*5	
D253	UDZS27(B)
D255	-
R280	0
Q255	RT1N241M
R463	-
R464	0

3.5 MAIN ASSY (3/3)

A 3/3 MAIN ASSY (XWK3301)

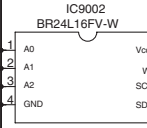
TO FM/AM TUNER UNIT

TO Composite Video Assy



*3	R9045	R9046	R9048
	VSX-417	470	470 10K

E2PROM



MAIN ASSY(3/3)

NOTE

1. RESISTORS
Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
Rated power: 1/4W unless otherwise noted.
Tolerance: (J) ± 5% unless otherwise noted.

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

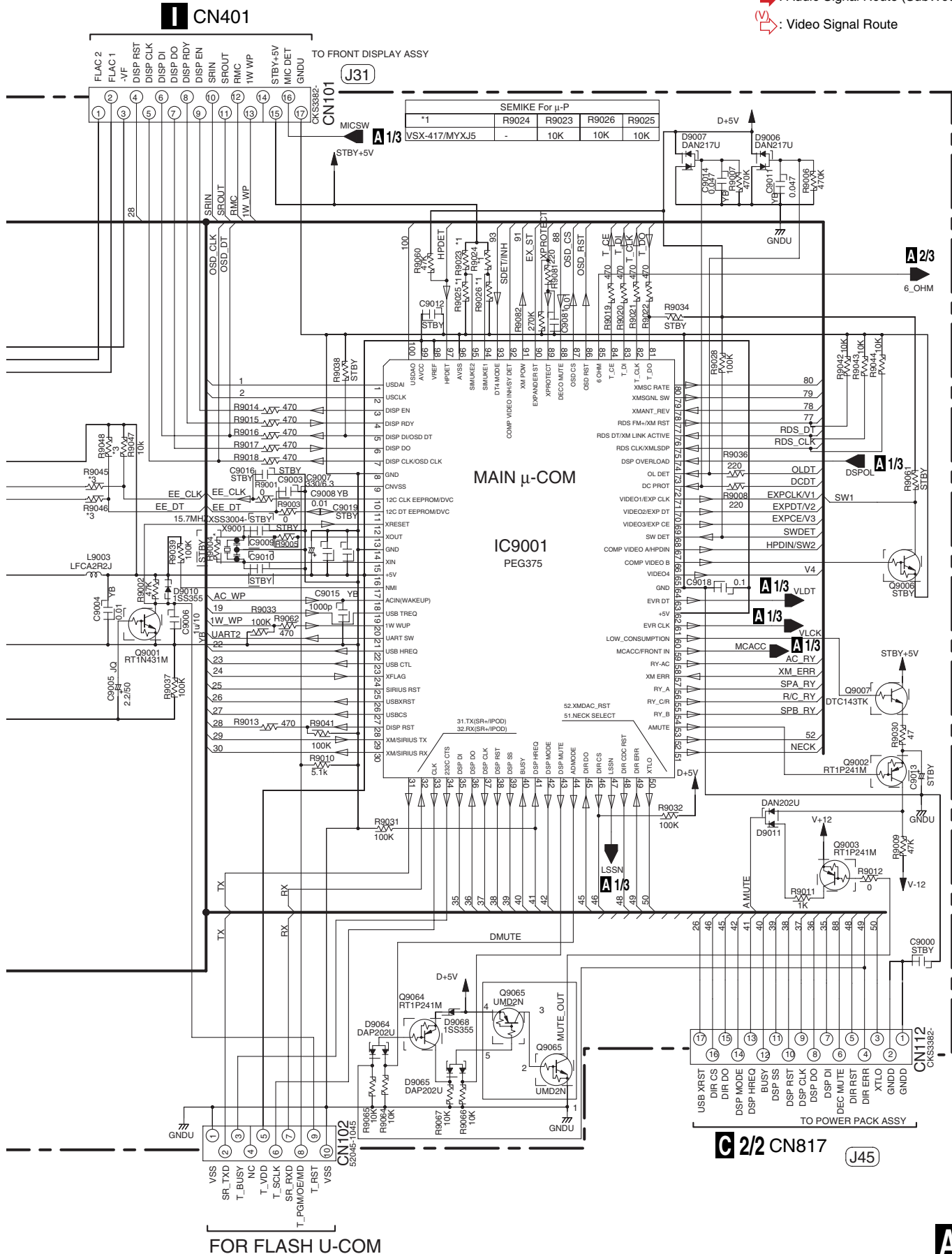
➔ : AUDIO SIGNAL FLOW

A 3/3

C 2/2 CN816

VSX-417-K

- (L) : Audio Signal Route (L ch)
- (SW) : Audio Signal Route (SubWoofer ch)
- (V) : Video Signal Route



1 CN401

J31

SEMI417 For μ-P				
*1	R9024	R9023	R9026	R9025
VSX-417/MYXJ5	-	10K	10K	10K

MAIN μ-COM
IC9001
PEG375

G 2/2 CN817

J45

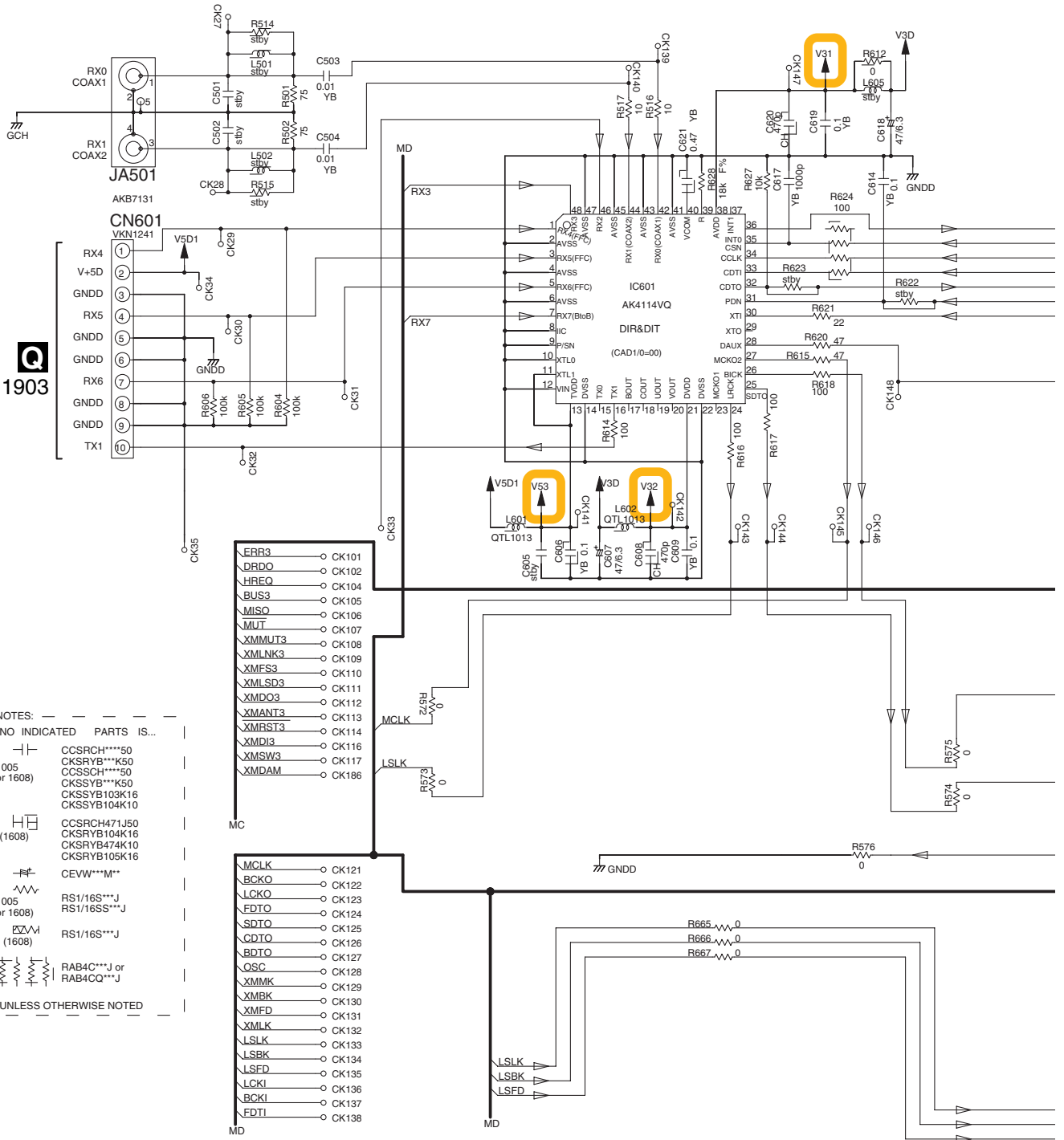
FOR FLASH U-COM

VSX-417-K

A 3/3

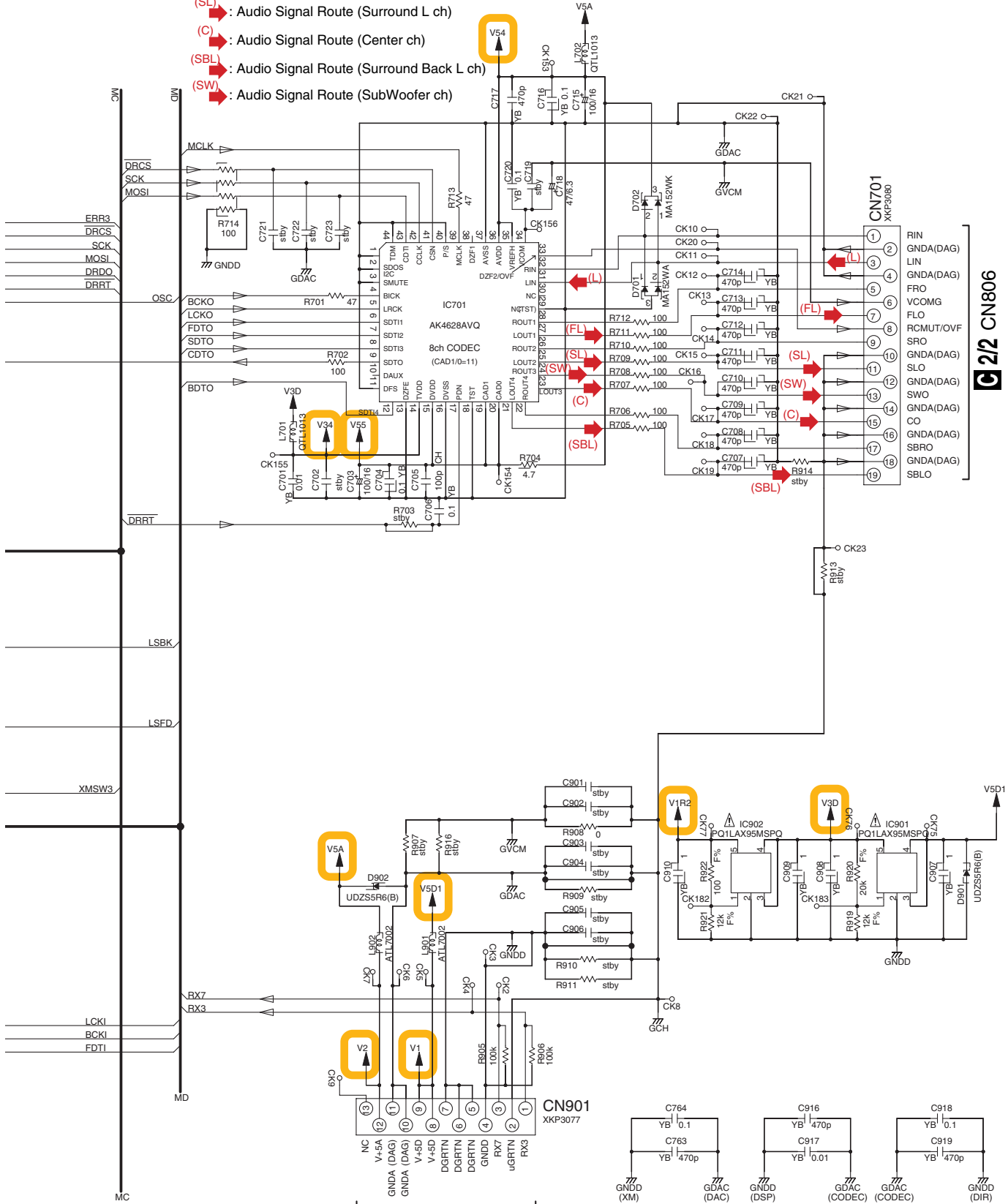
3.6 DSP ASSY (1/2)

B 1/2 DSP ASSY (AWX8812)



NOTES: — — — — —
 NO INDICATED PARTS IS...
 (1005 or 1608) CCSRCH***50
 CKSRYP***K50
 CCSCH***50
 CKSSYP***K50
 CKSSYP103K16
 CKSSYP104K10
 (1609) CCSRCH471J50
 CKSRYP104K16
 CKSRYP474K10
 CKSRYP105K16
 CEVW***M**
 (1005 or 1608) RS1/16S***J
 RS1/16SS***J
 (1609) RS1/16S***J
 RAB4C***J or RAB4CQ***J
 UNLESS OTHERWISE NOTED

- (L) : Audio Signal Route (L ch)
- (FL) : Audio Signal Route (Front L ch)
- (SL) : Audio Signal Route (Surround L ch)
- (C) : Audio Signal Route (Center ch)
- (SBL) : Audio Signal Route (Surround Back L ch)
- (SW) : Audio Signal Route (SubWoofer ch)

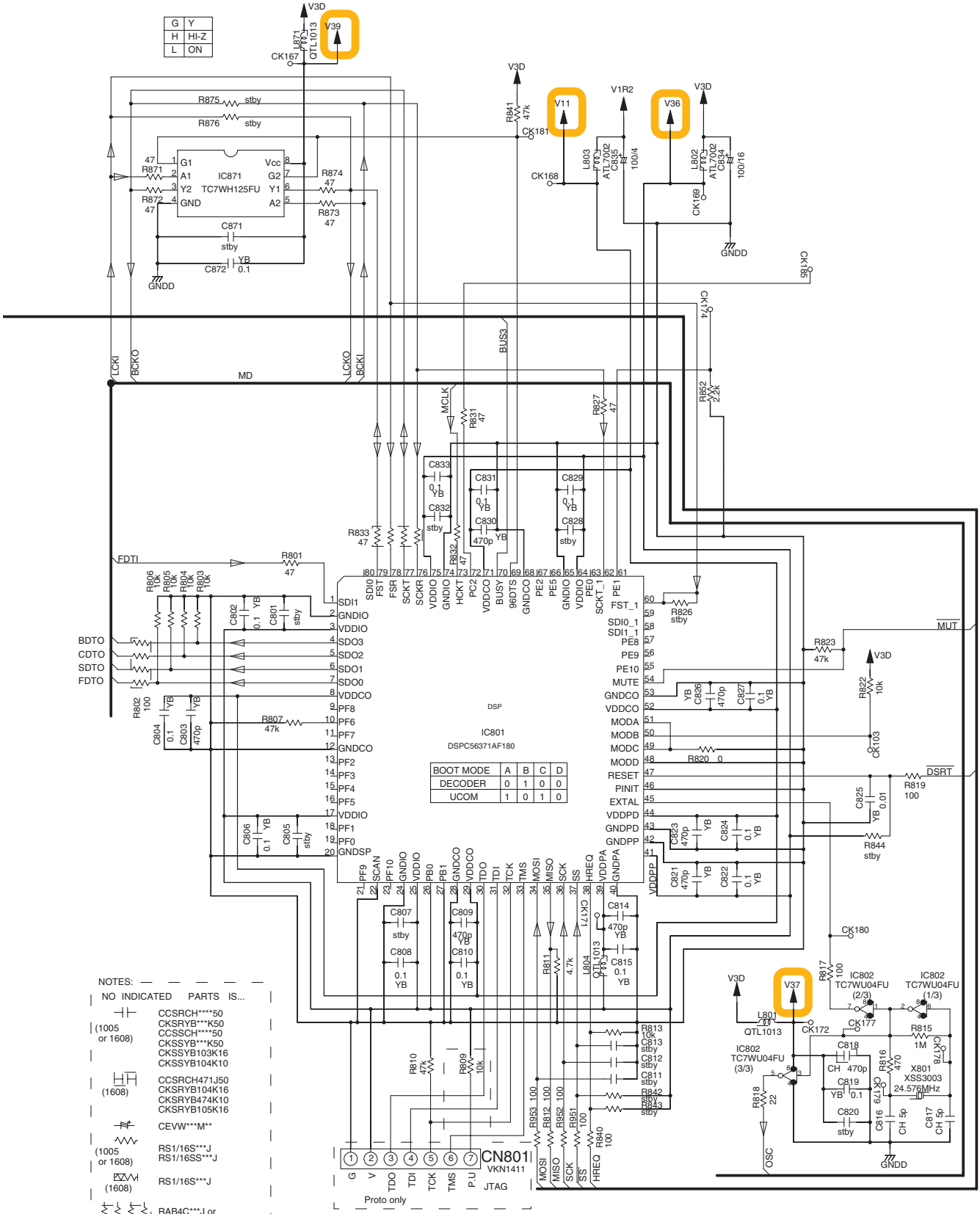


C 2/2 CN805

C 2/2 CN806

B 1/2

A
B
C
D
E
F



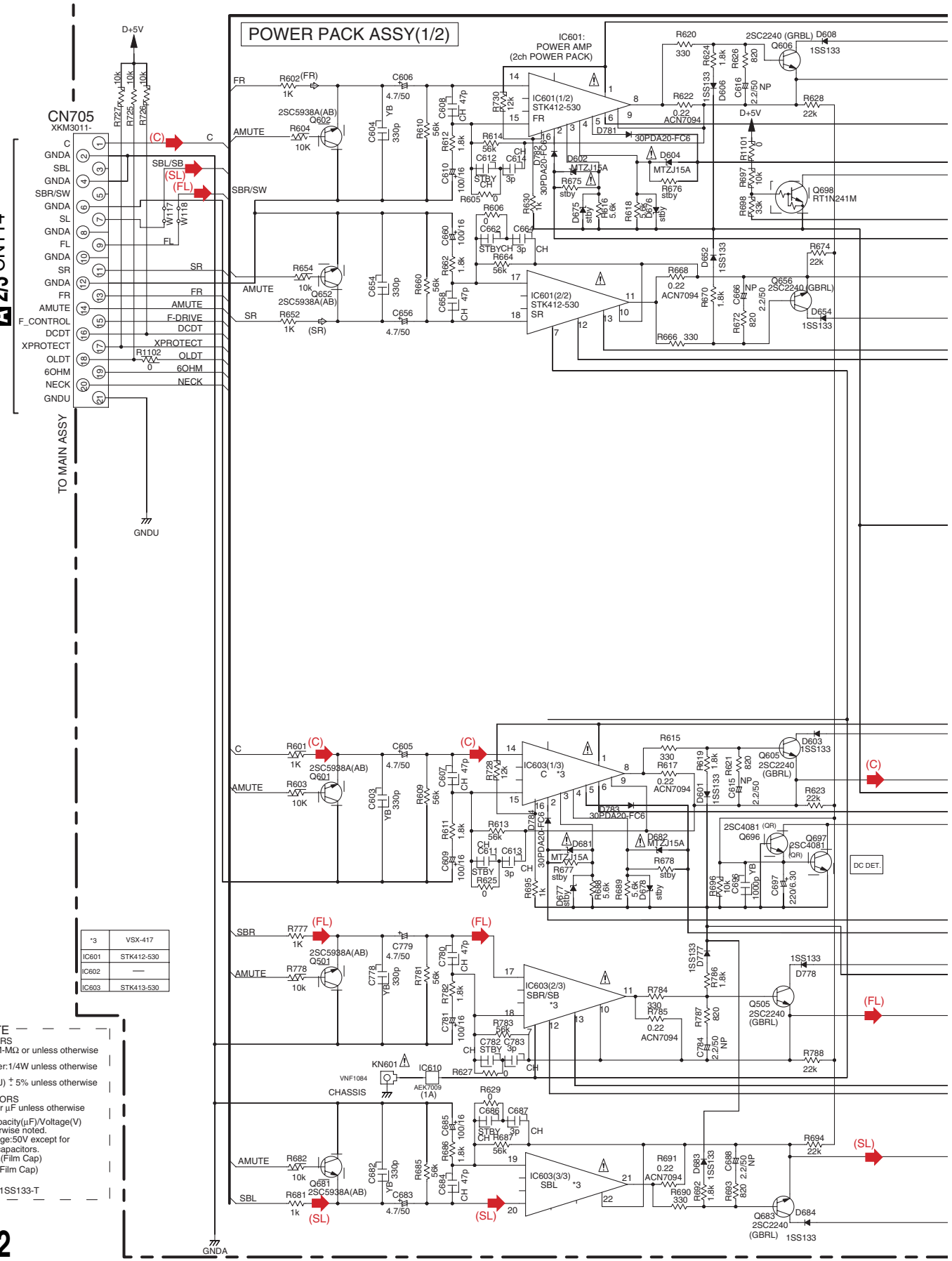
NOTES:

- NO INDICATED PARTS IS...
- CCSRCH***50
- CKSRYPB***K50
- CCSSCH***50
- CKSSYPB***K50
- CKSSYPB103K16
- CKSSYPB104K10
- CCSRCH471J50
- CKSRYPB104K16
- CKSRYPB474K10
- CKSRYPB105K16
- CEVW***M**
- RS1/16S***J
- RS1/16SS***J
- RS1/16S***J
- RAB4C***J or RAB4CO***J

UNLESS OTHERWISE NOTED

3.8 POWER PACK ASSY (1/2) , TRANS2 and TRANS3 ASSYS

C 1/2 POWER PACK ASSY (XWZ4233)



*3	VSX-417
IC601	STK412-530
IC602	—
IC603	STK413-530

— NOTE —
 1.RESISTORS
 Unit:k- Ω ,M-M Ω or unless otherwise noted.
 Rated power:1/4W unless otherwise noted.
 Tolerance:(J) \pm 5% unless otherwise noted.
 2.CAPACITORS
 Unit: p-pF or μ F unless otherwise noted.
 Ratings:Capacity(μ F)/Voltage(V) unless otherwise noted.
 Rated Voltage:50V except for electrolytic capacitors.
 BA:COMBA(Film Cap)
 M:COMMA(Film Cap)
 3.DIODES
 Indicated in 1SS133-T

C 1/2

VSX-417-K

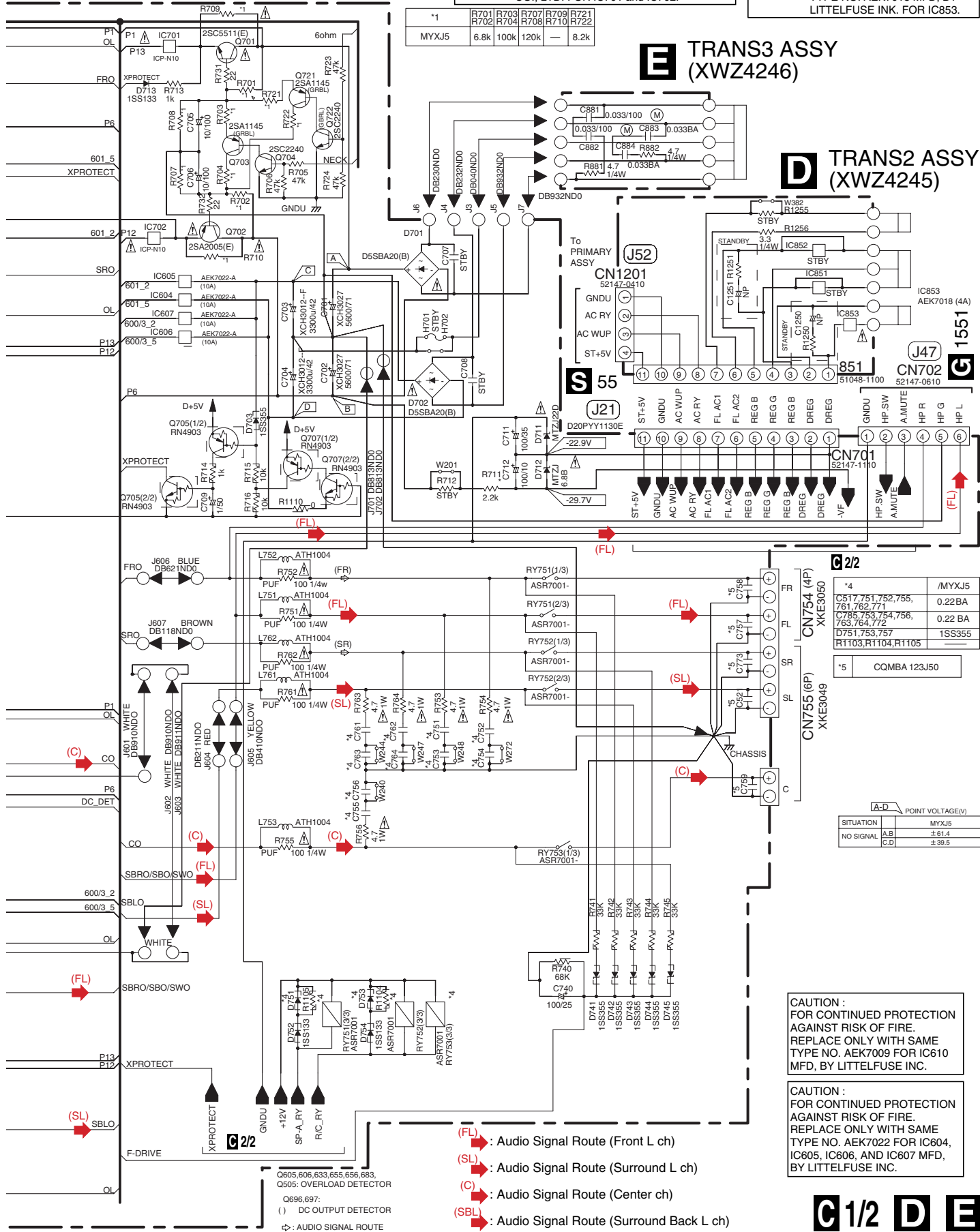
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. ICP-N10, MFD BY ROHM CO., LTD. FOR IC701 and IC702.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. AEK7018 MFD, BY LITTELFUSE INK. FOR IC853.

*1	R701	R703	R707	R709	R721
	R702	R704	R708	R710	R722
MYXJ5	6.8k	100k	120k	—	8.2k

E TRANS3 ASSY (XWZ4246)

D TRANS2 ASSY (XWZ4245)



To PRIMARY ASSY

J52

J21

J47

G/2/2

*4	C517,751,752,755,761,762,771	0.22BA
	C785,793,754,756,763,764,772	0.22 BA
	D751,753,772	1SS355
	R1103,R1104,R1105	
*5	COMBA 123J50	

SITUATION	A/B	POINT VOLTAGE(V)
NO SIGNAL	A/B	± 61.4
	C/D	± 39.5

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. AEK7009 FOR IC610 MFD, BY LITTELFUSE INC.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. AEK7022 FOR IC604, IC605, IC606, AND IC607 MFD, BY LITTELFUSE INC.

- (FL) : Audio Signal Route (Front L ch)
- (SL) : Audio Signal Route (Surround L ch)
- (C) : Audio Signal Route (Center ch)
- (SBL) : Audio Signal Route (Surround Back L ch)

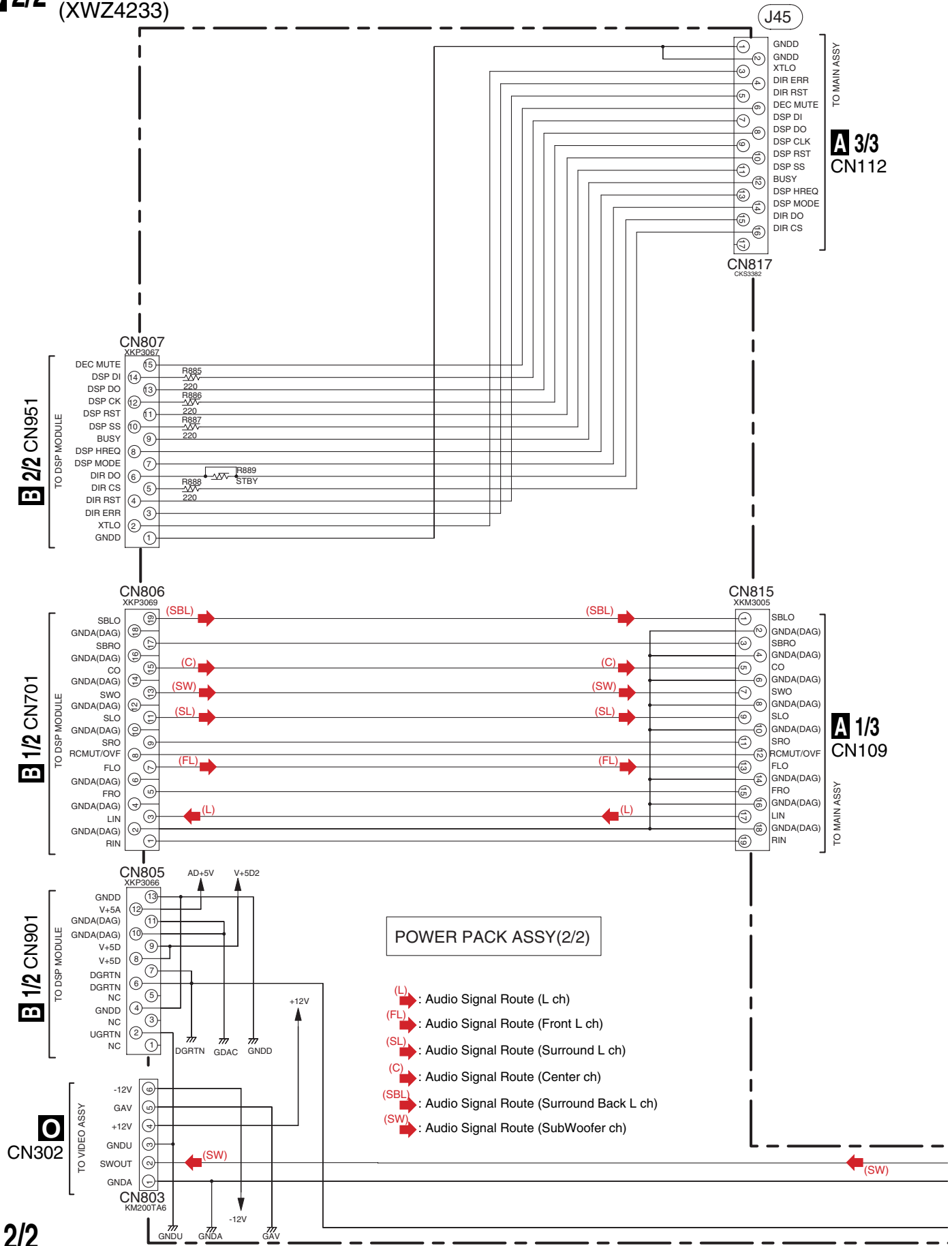
Q605,606,633,655,656,683,
Q605: OVERLOAD DETECTOR
Q696,697:
() DC OUTPUT DETECTOR
⇨ : AUDIO SIGNAL ROUTE

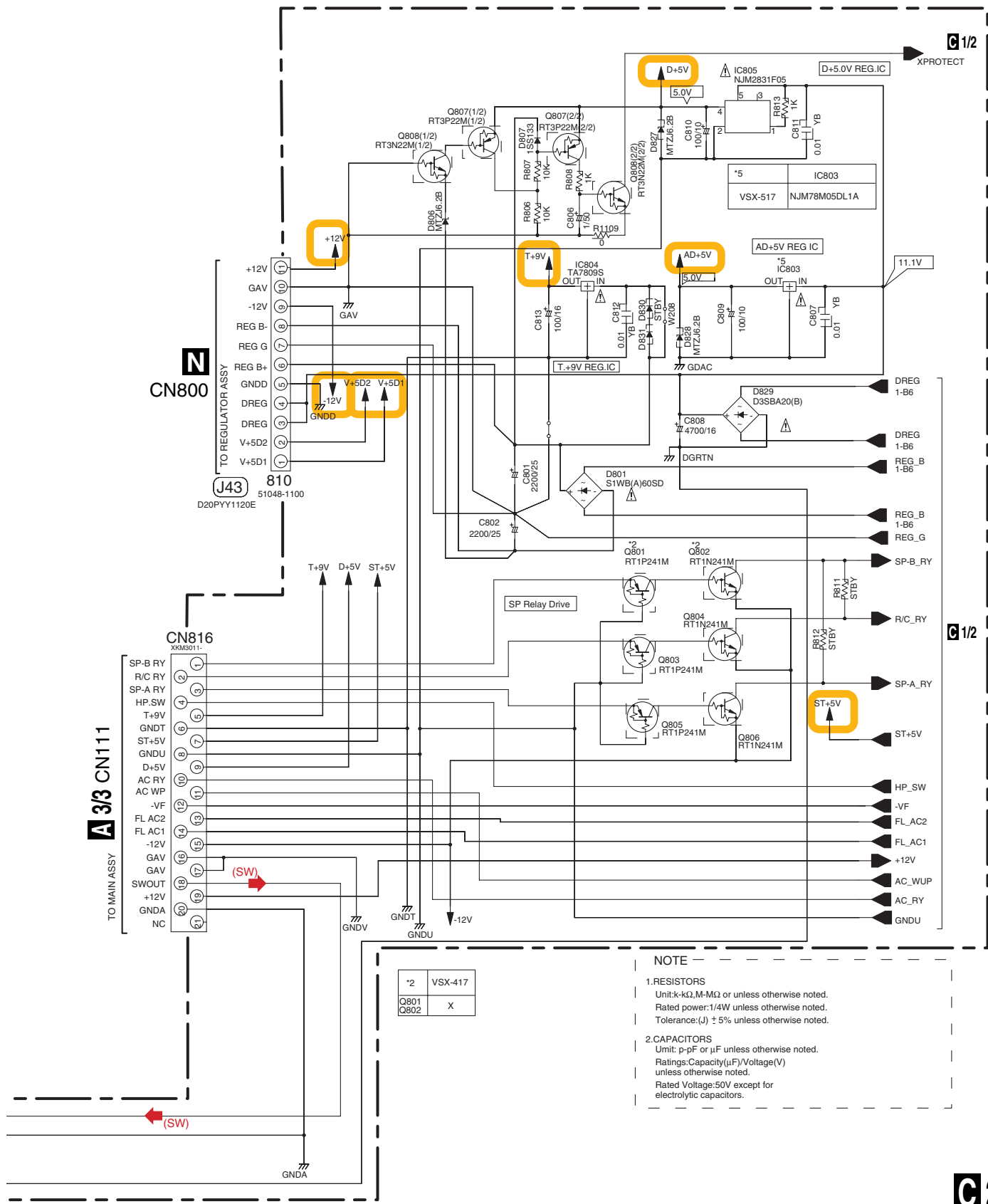
C 1/2 D E

3.9 POWER PACK ASSY (2/2)

C 2/2 POWER PACK ASSY (XWZ4233)

A
B
C
D
E
F





1 2 3 4

3.10 HEAD PHONE and 5.1CH INPUT ASSYS

A

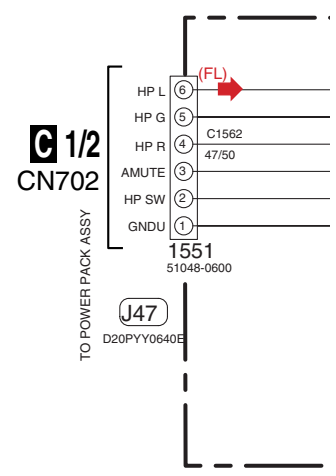
B

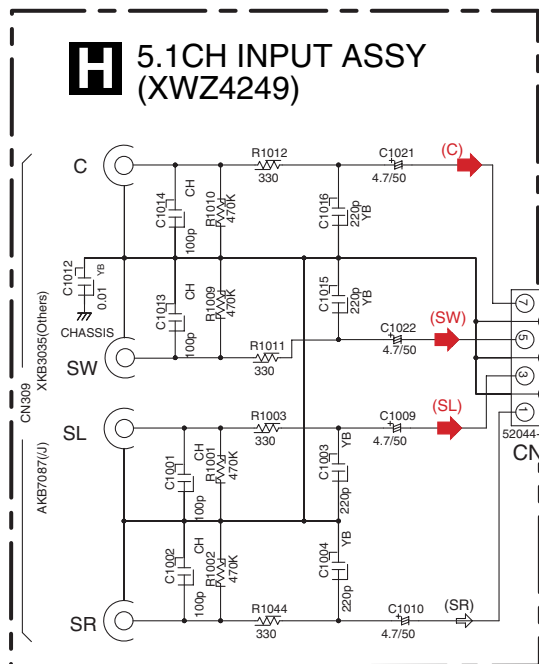
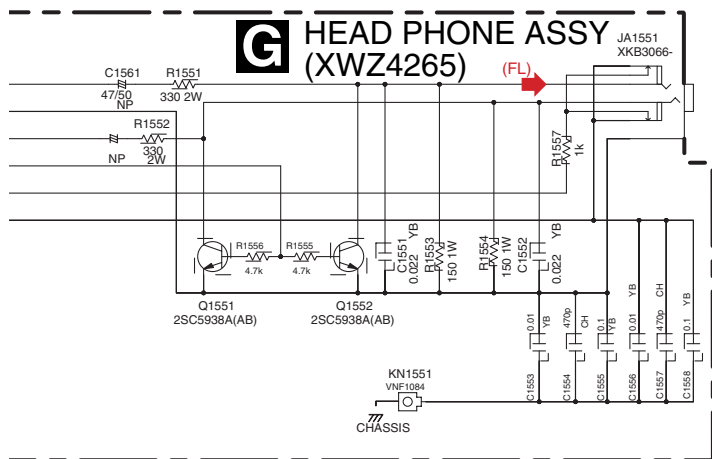
C

D

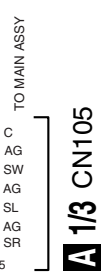
E

F





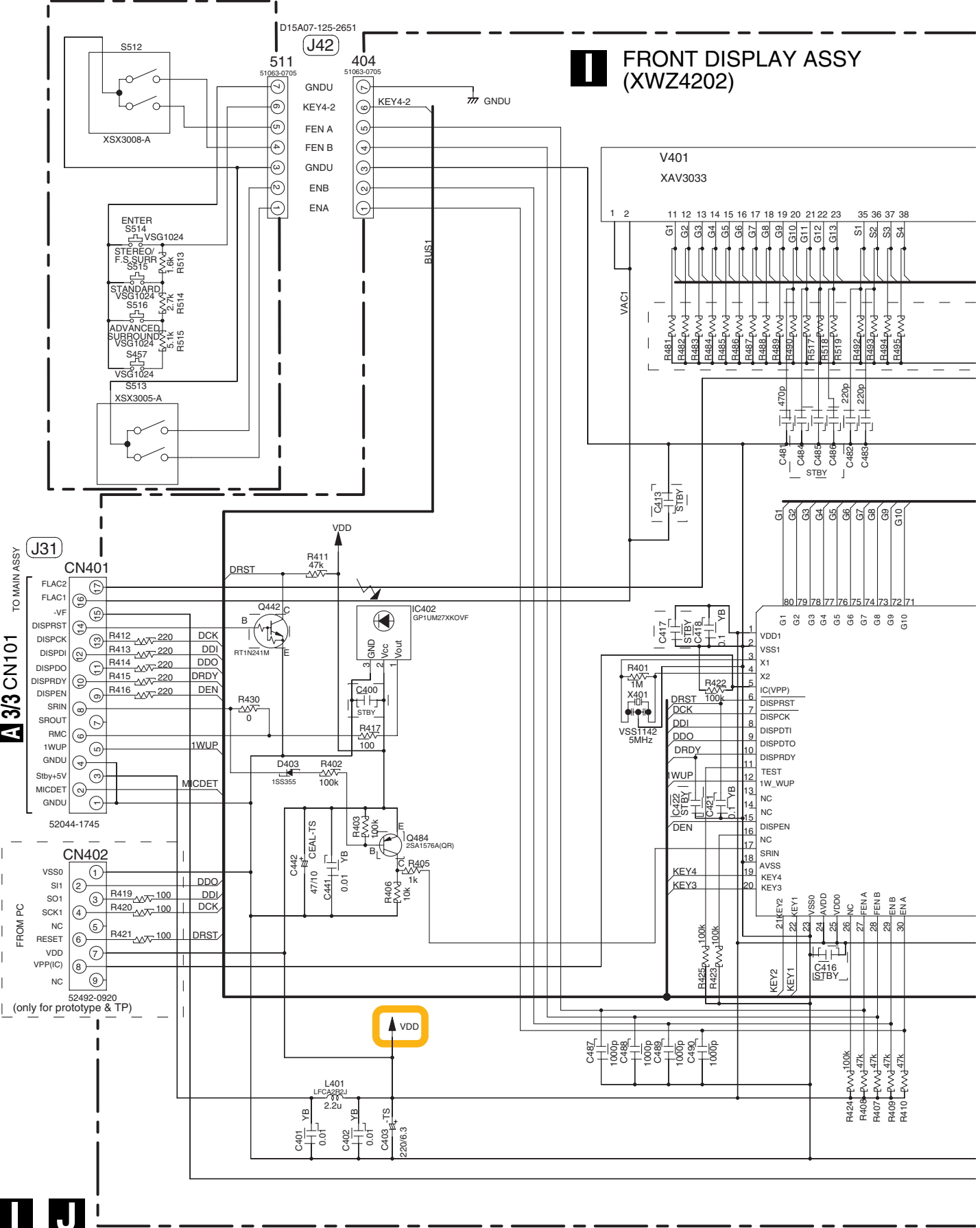
- (FL) : Audio Signal Route (Front L ch)
- (SL) : Audio Signal Route (Surround L ch)
- (C) : Audio Signal Route (Center ch)
- (SW) : Audio Signal Route (SubWoofer ch)

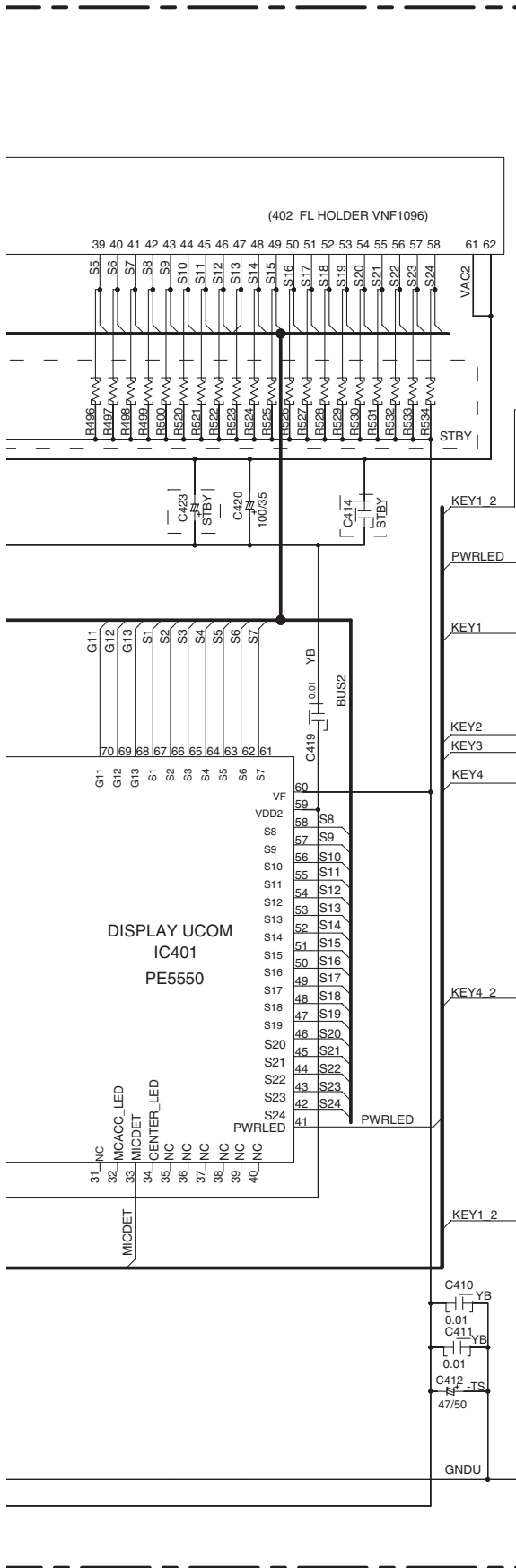


3.11 FRONT DISPLAY, ROTARY ENCODER and POWER KEY ASSYS

J ROTARY ENCODER ASSY (XWZ4205)

I FRONT DISPLAY ASSY (XWZ4202)





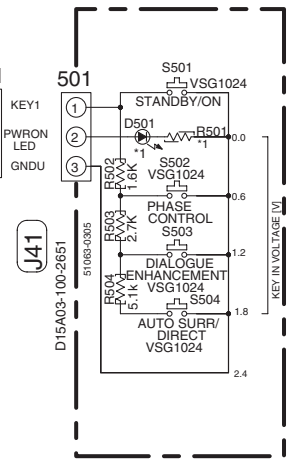
NOTE

1. RESISTORS
Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
Rated power: 1/16W unless otherwise noted.
Tolerance: (J) ± 5% unless otherwise noted.

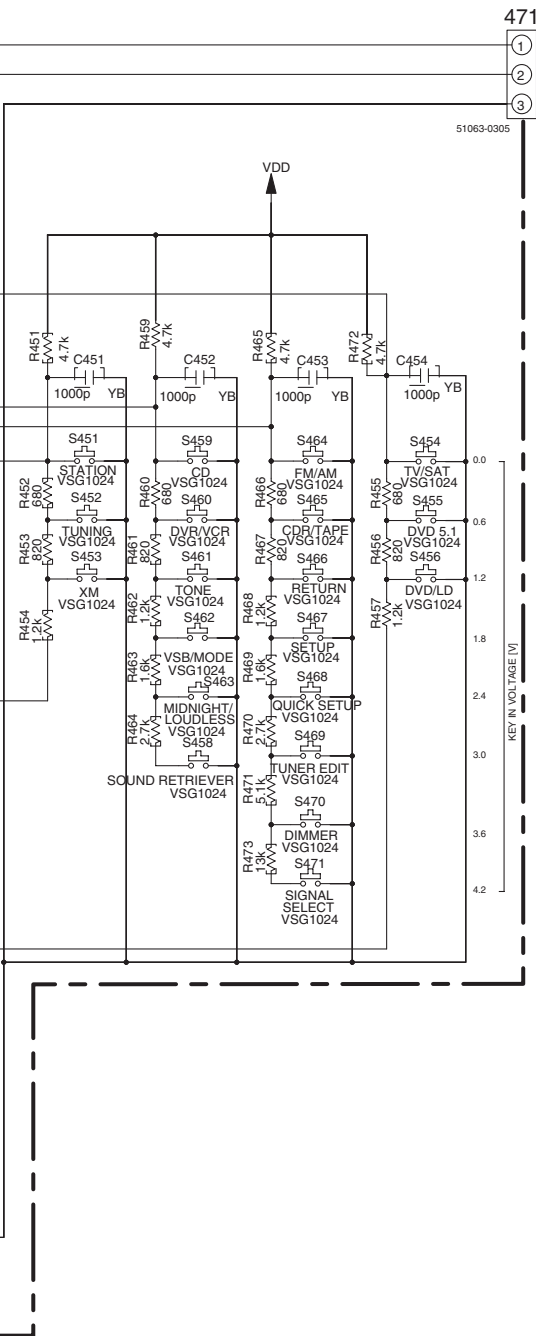
2. CAPACITORS
Unit: p-pF or μF unless otherwise noted.
Ratings: Capacity(μF)/Voltage(V) unless otherwise noted.
Rated Voltage: 50V expect for electrolytic capacitors.

3. TACT SWITCHES
Indicated in VSG1024

K POWER KEY ASSY (XWZ4206)

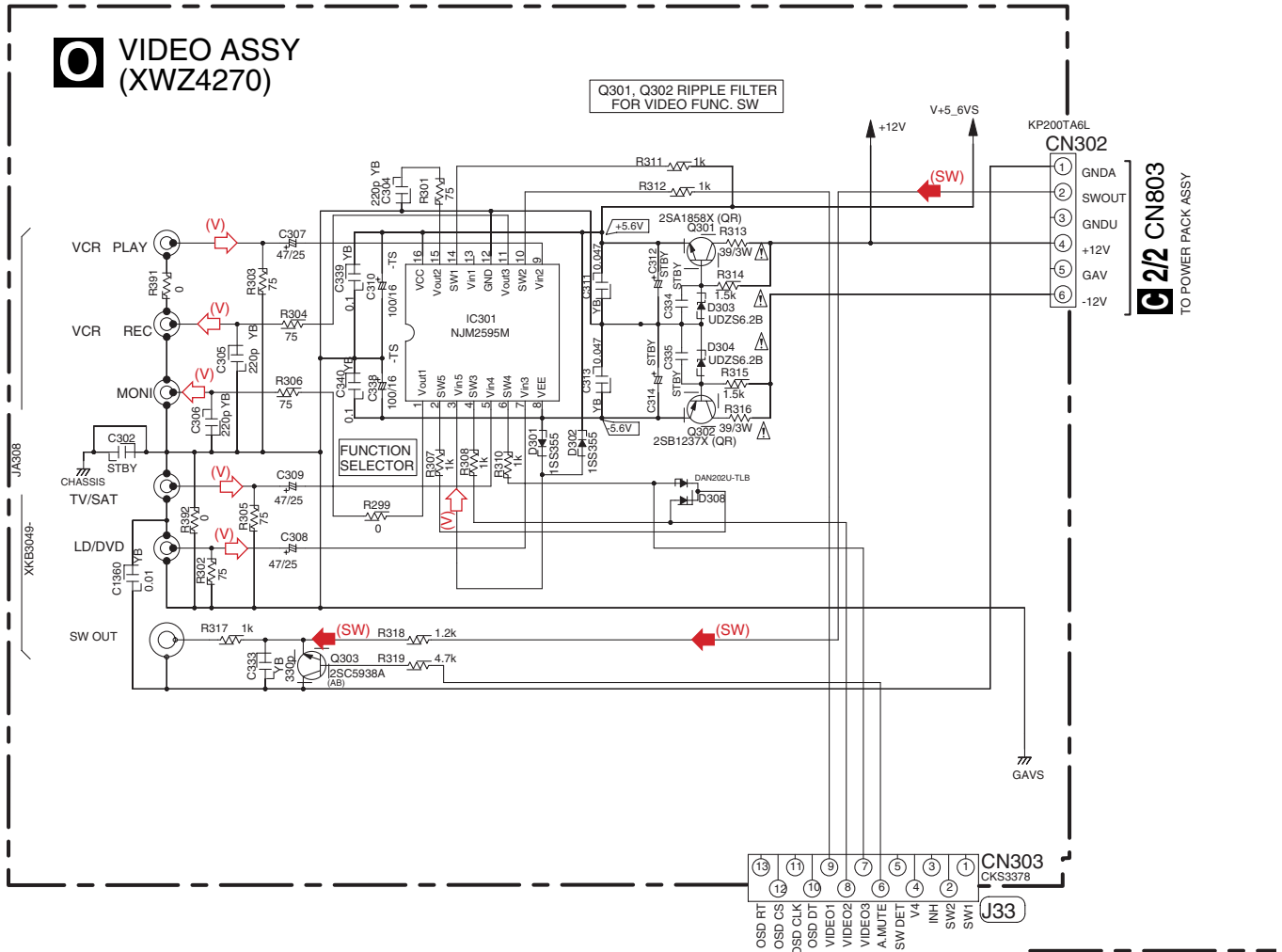


*1	VSX-517
D501	No use
R501	No use



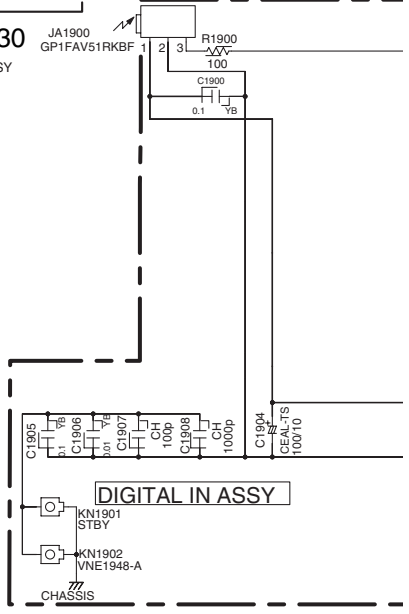
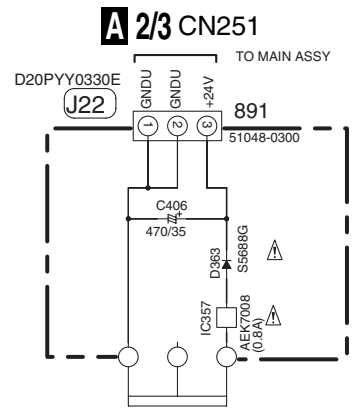
3.12 TRANS4, REGULATOR, VIDEO, DIGITAL INPUT and PRIMARY ASSY

VIDEO ASSY (XWZ4270)



CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. AEK7008 MFD, BY LITTELFUSE INK. FOR IC357.

TRANS4 ASSY (XWZ4225)



- : Video Signal Route
- : Audio Signal Route (L ch)
- : Audio Signal Route (SubWoofer ch)

- NOTE**
1. RESISTORS
Unit: k-Ω, M-Ω or Ω unless otherwise noted.
Rated power: 1/16W unless otherwise noted.
Tolerance: (J) ± 5% unless otherwise noted.
 2. CAPACITORS
Unit: p-F or μF unless otherwise noted.
Ratings: Capacity(μF)/Voltage(V) unless otherwise noted.
Rated Voltage: 50V expect for electrolytic capacitors.



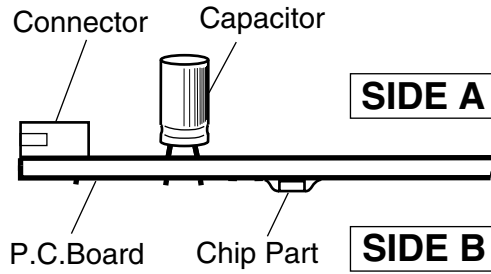
4. PCB CONNECTION DIAGRAM

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.



4.1 DIGITAL INPUT ASSY

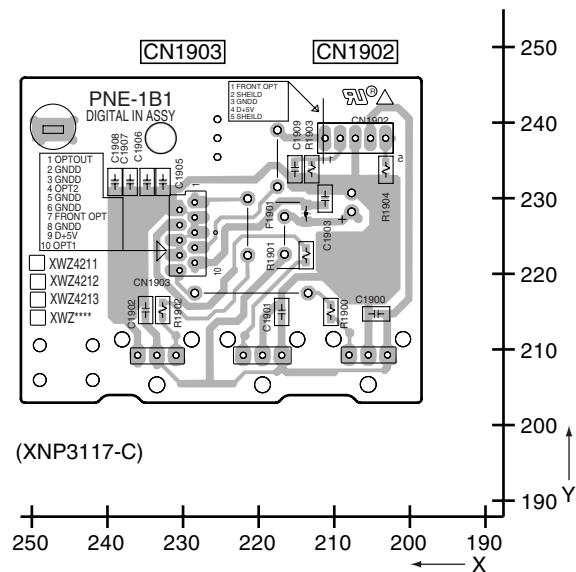
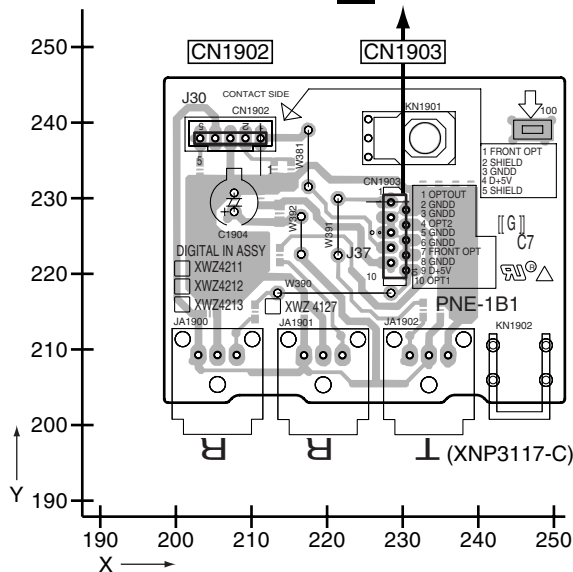
SIDE A

SIDE B

Q DIGITAL INPUT ASSY

Q DIGITAL INPUT ASSY

B CN601



4.3 MAIN ASSY

SIDE A

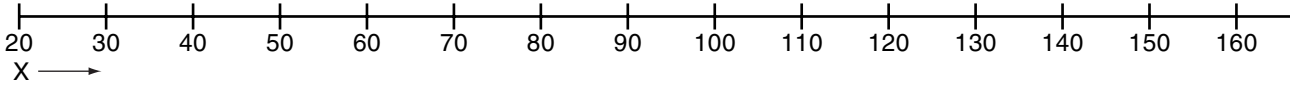
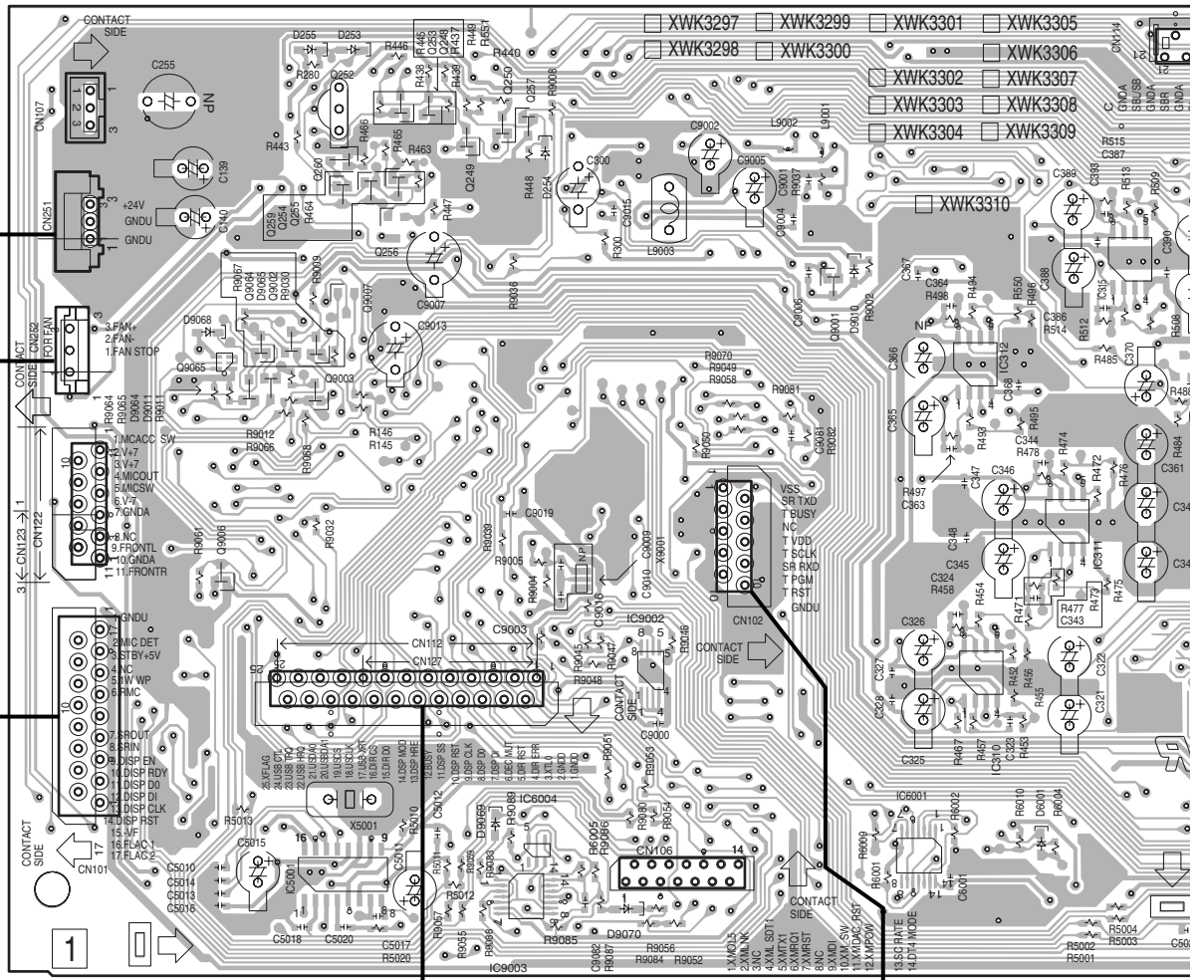
A MAIN ASSY

DC Fan Motor **M 891**

I CN401

C CN817

for FLASH



A

1

2

3

4

SIDE B

A

A MAIN ASSY

CN111

CN109

CN114

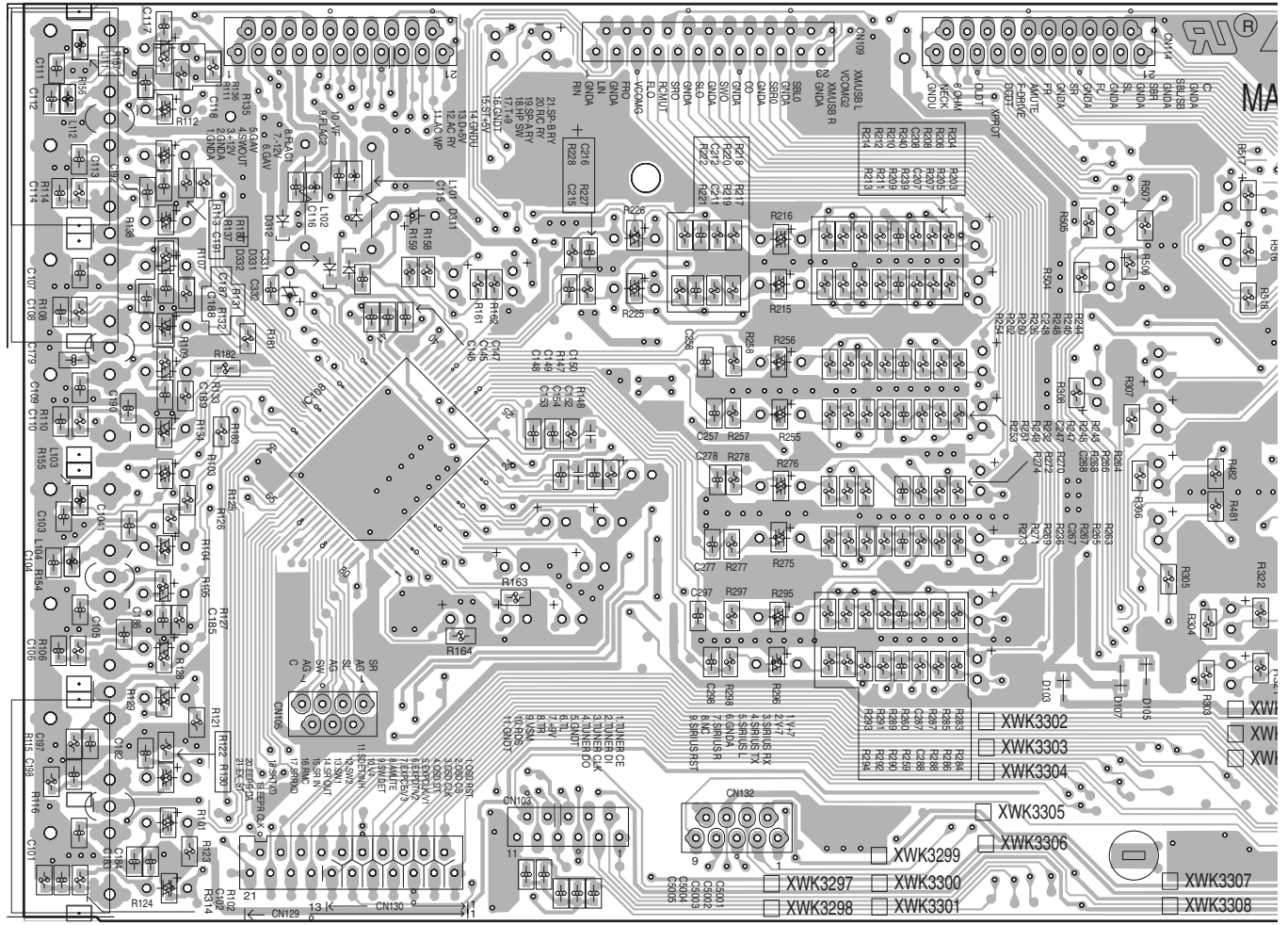
B

C

D

E

F

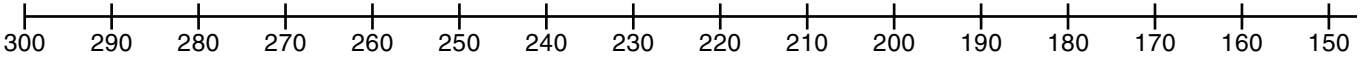


CN105

CN130

CN103

CN132



A

40

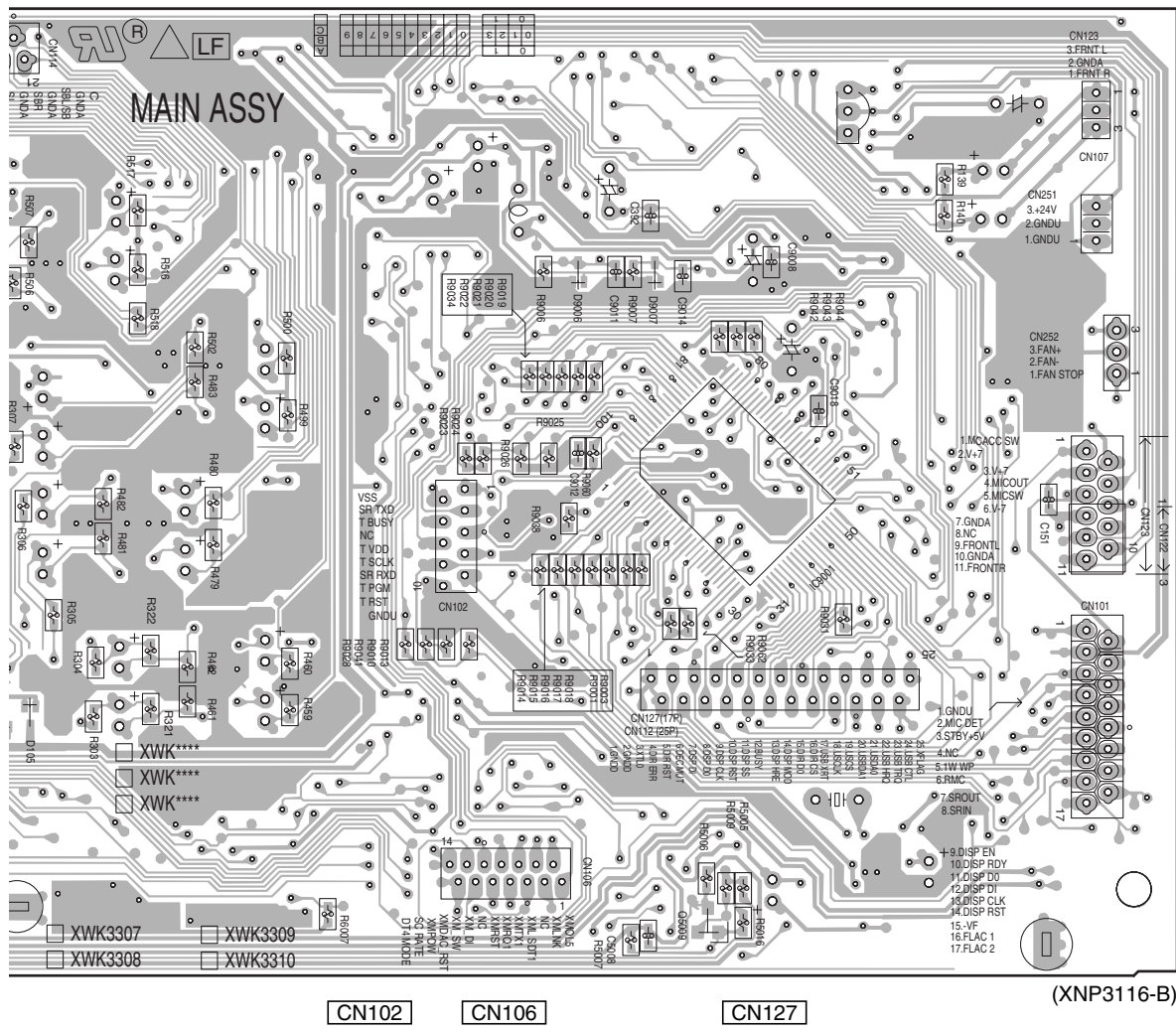
VSX-417-K

1

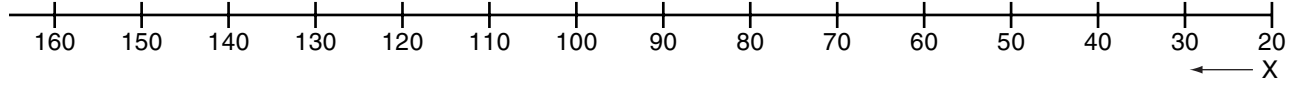
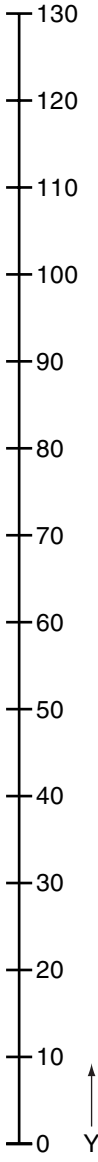
2

3

4



A
B
C
D
E
F

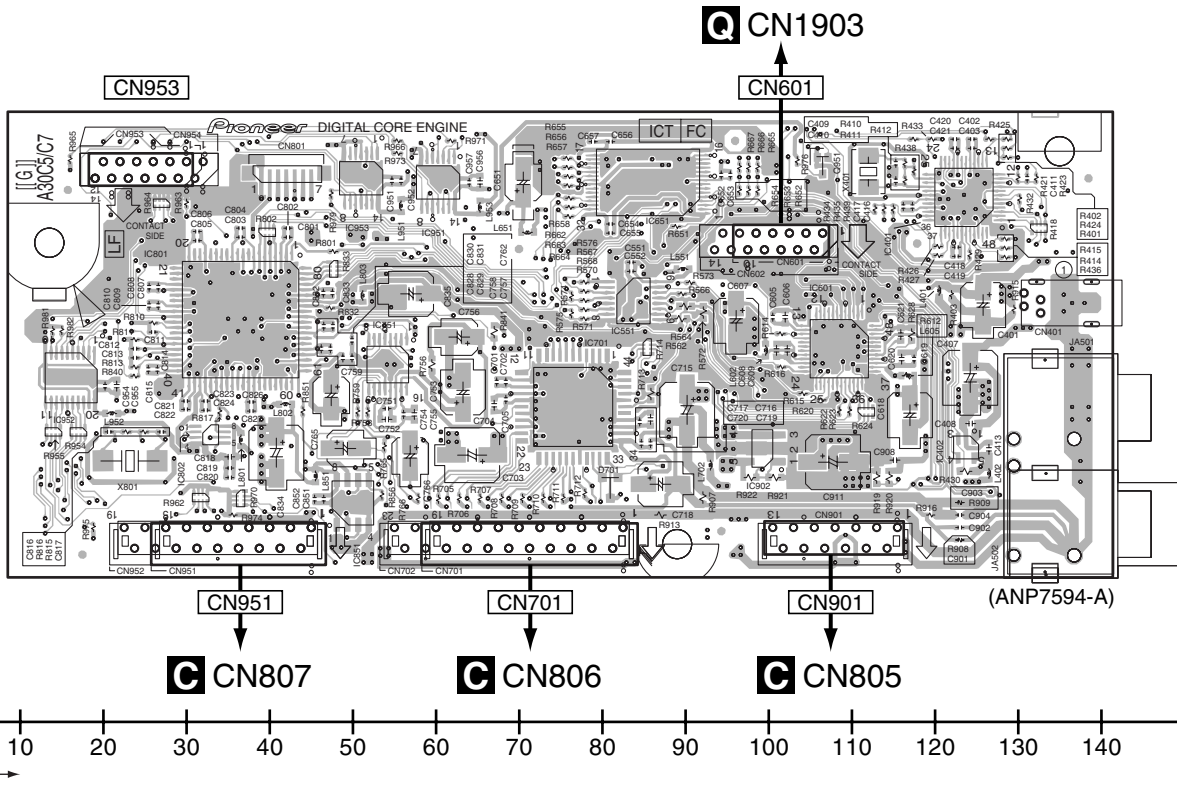


4.4 DSP ASSY

SIDE A

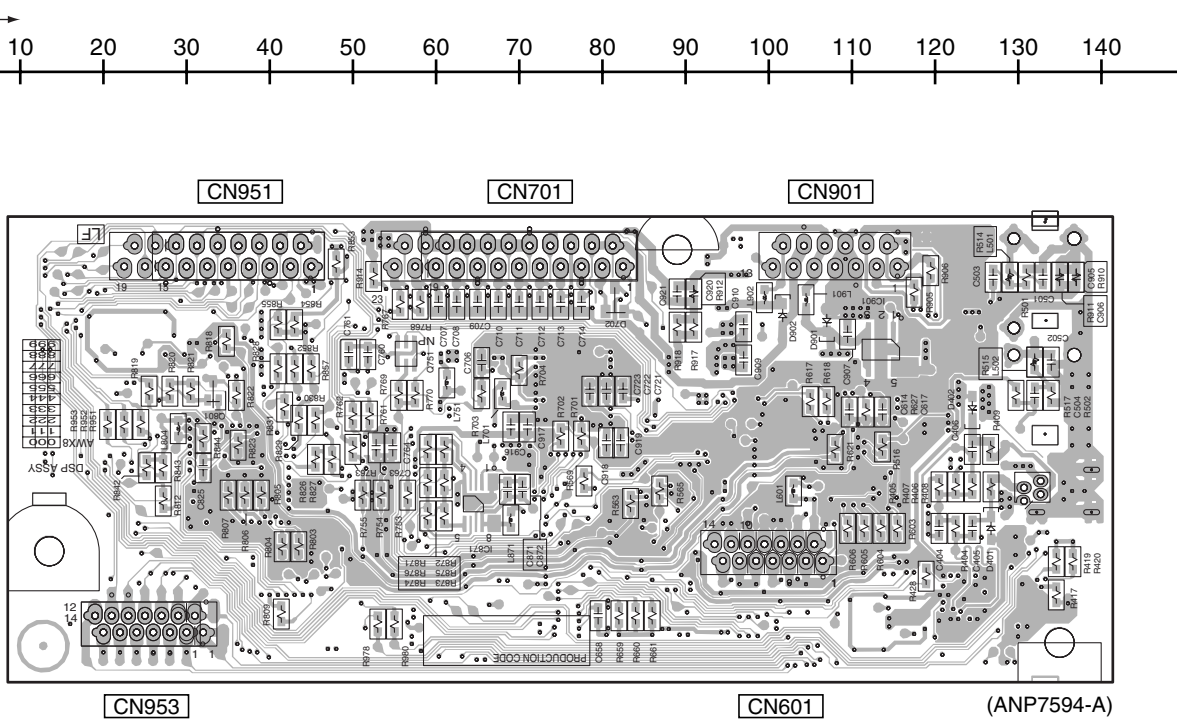
B DSP ASSY

SIDE A



SIDE B

SIDE B

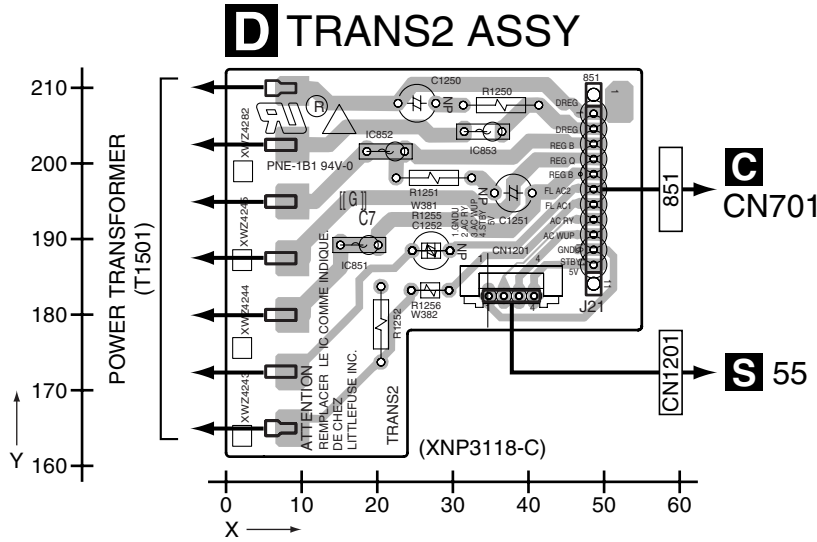


B DSP ASSY

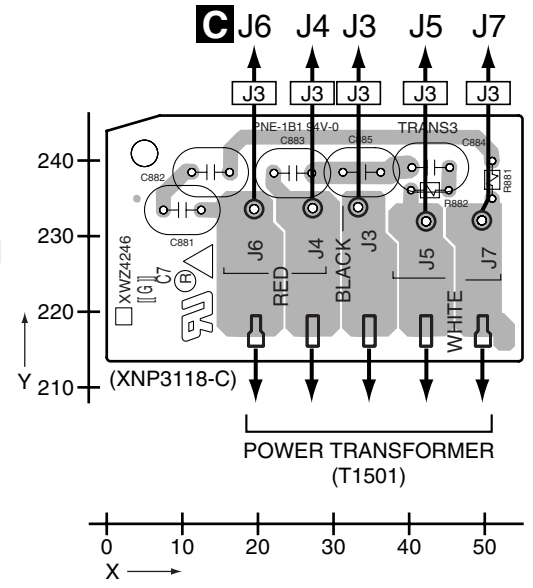
4.5 TRANS2 and TRANS3 ASSYS

SIDE A

SIDE A

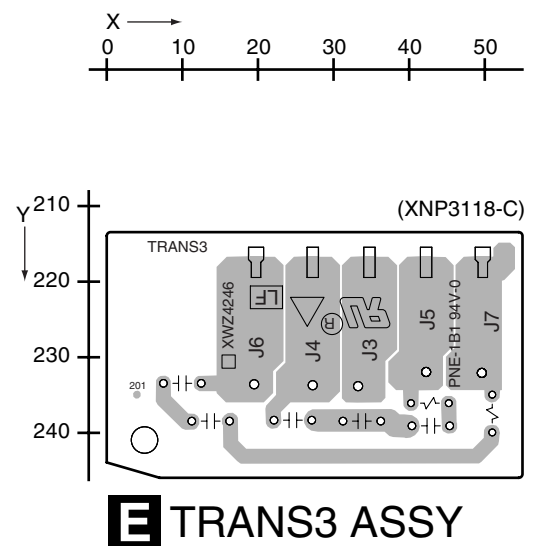
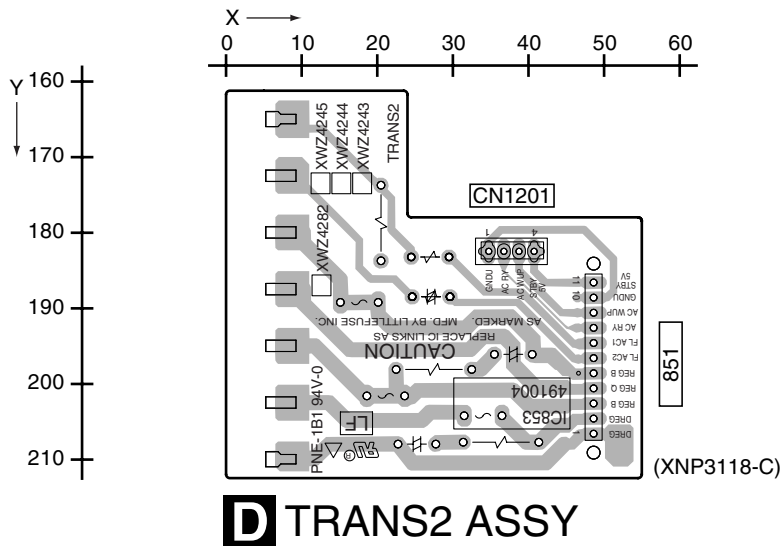


E TRANS3 ASSY



SIDE B

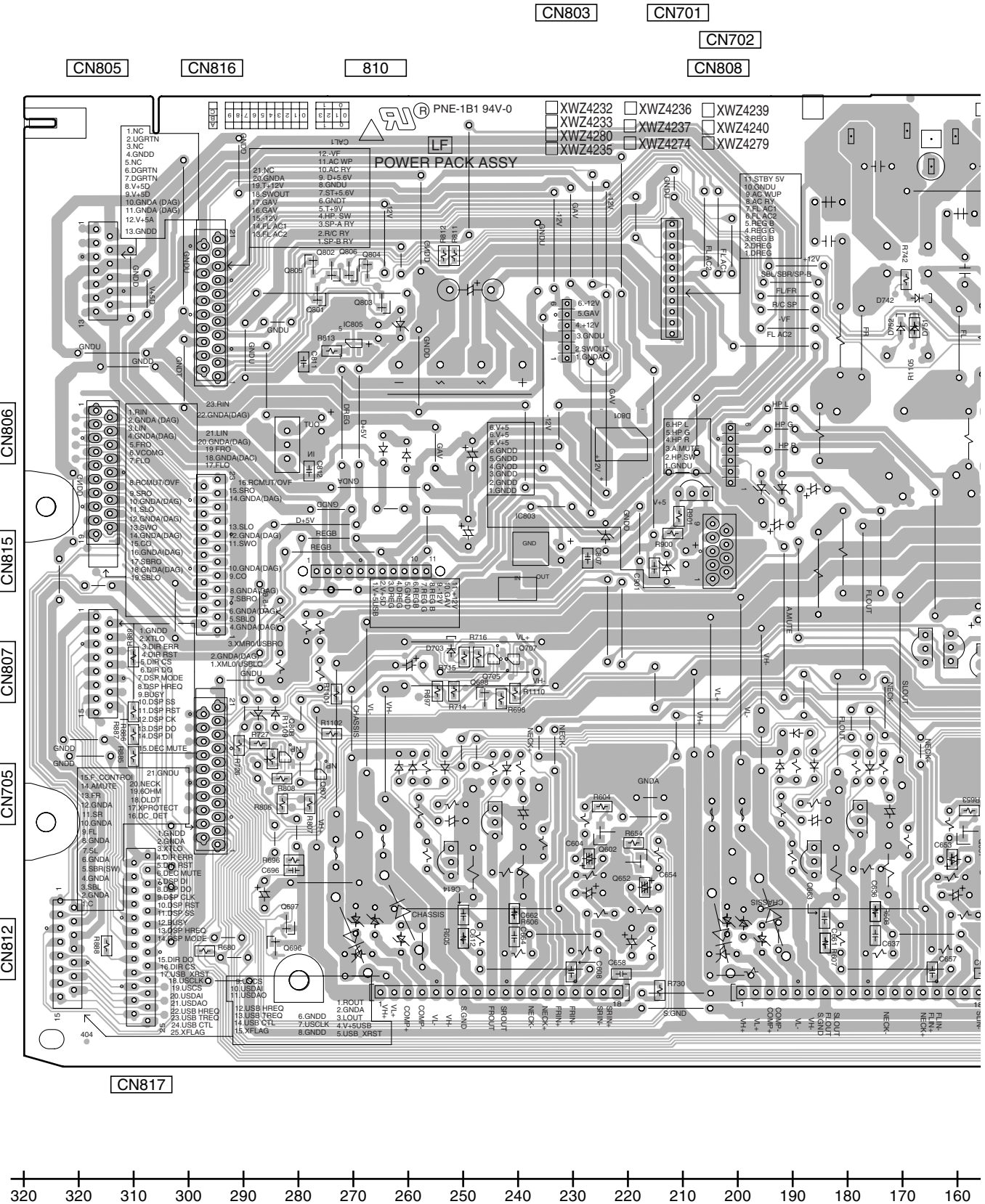
SIDE B

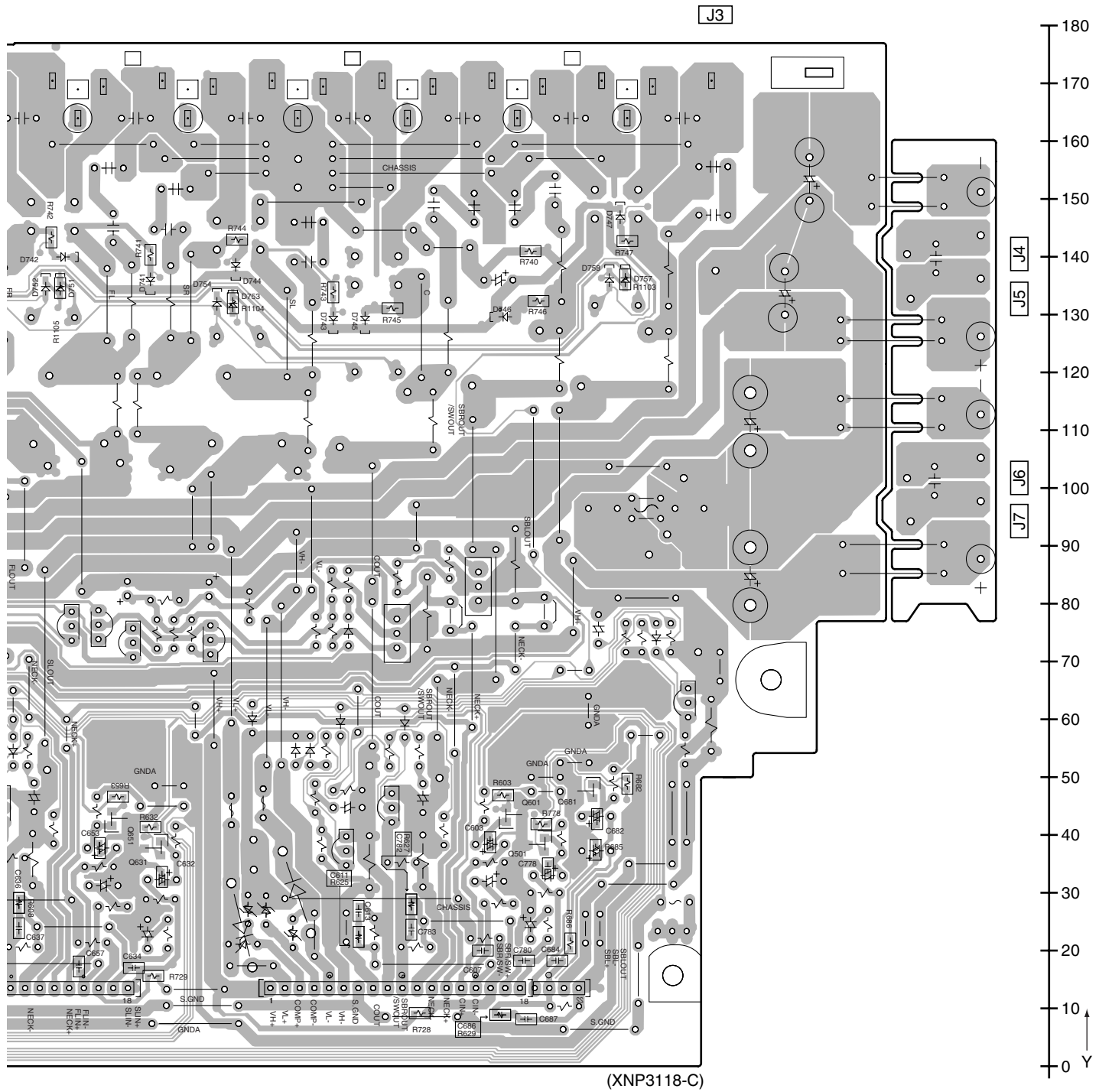


D E

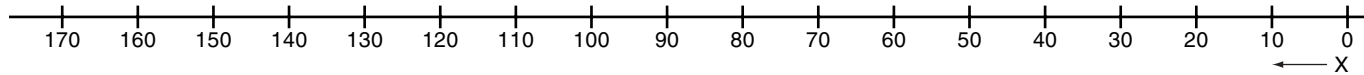
SIDE B

POWER PACK ASSY





(XNP3118-C)

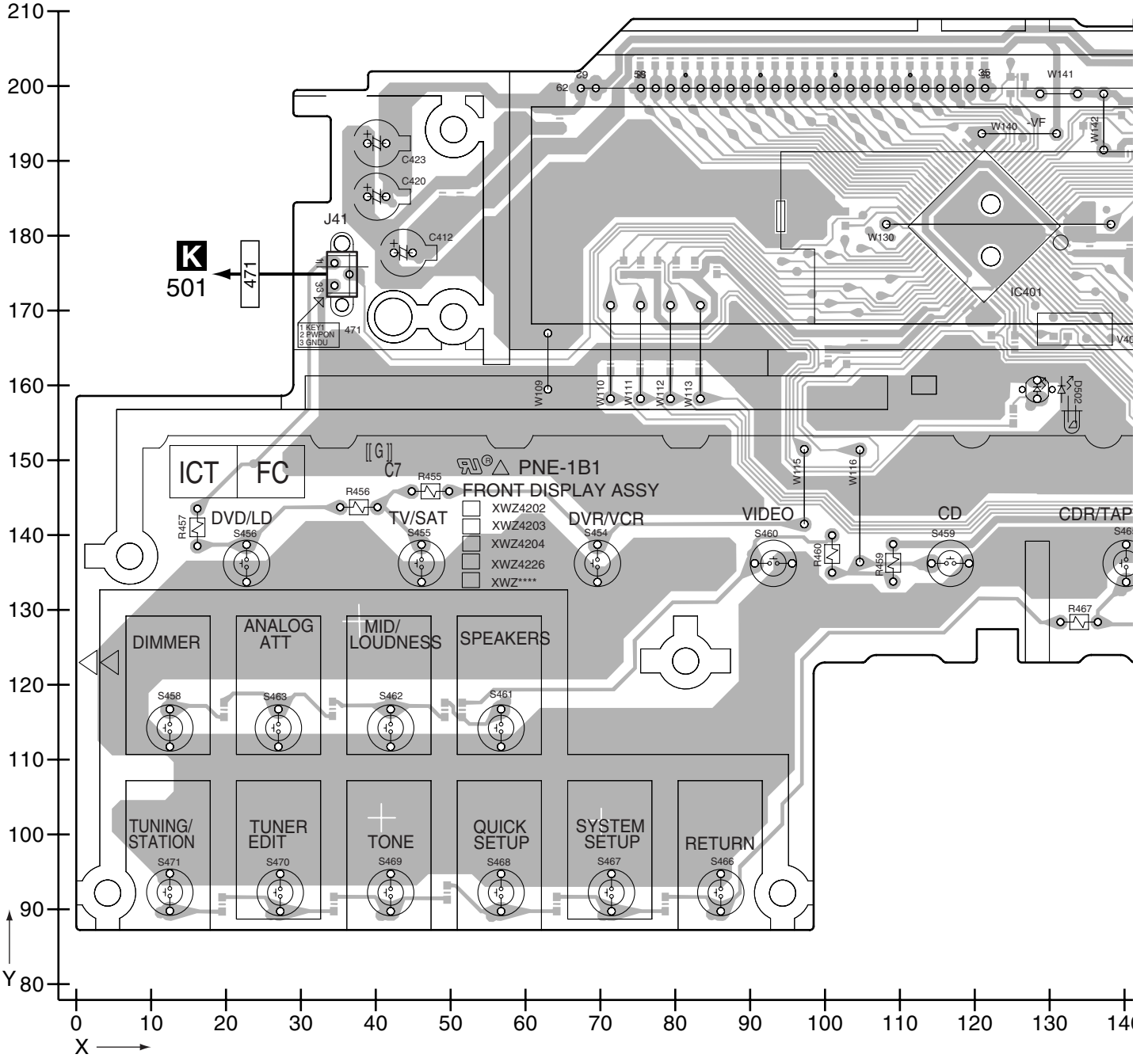


C

4.7 FRONT DISPLAY ASSY

SIDE A

FRONT DISPLAY ASSY



SIDE A

A

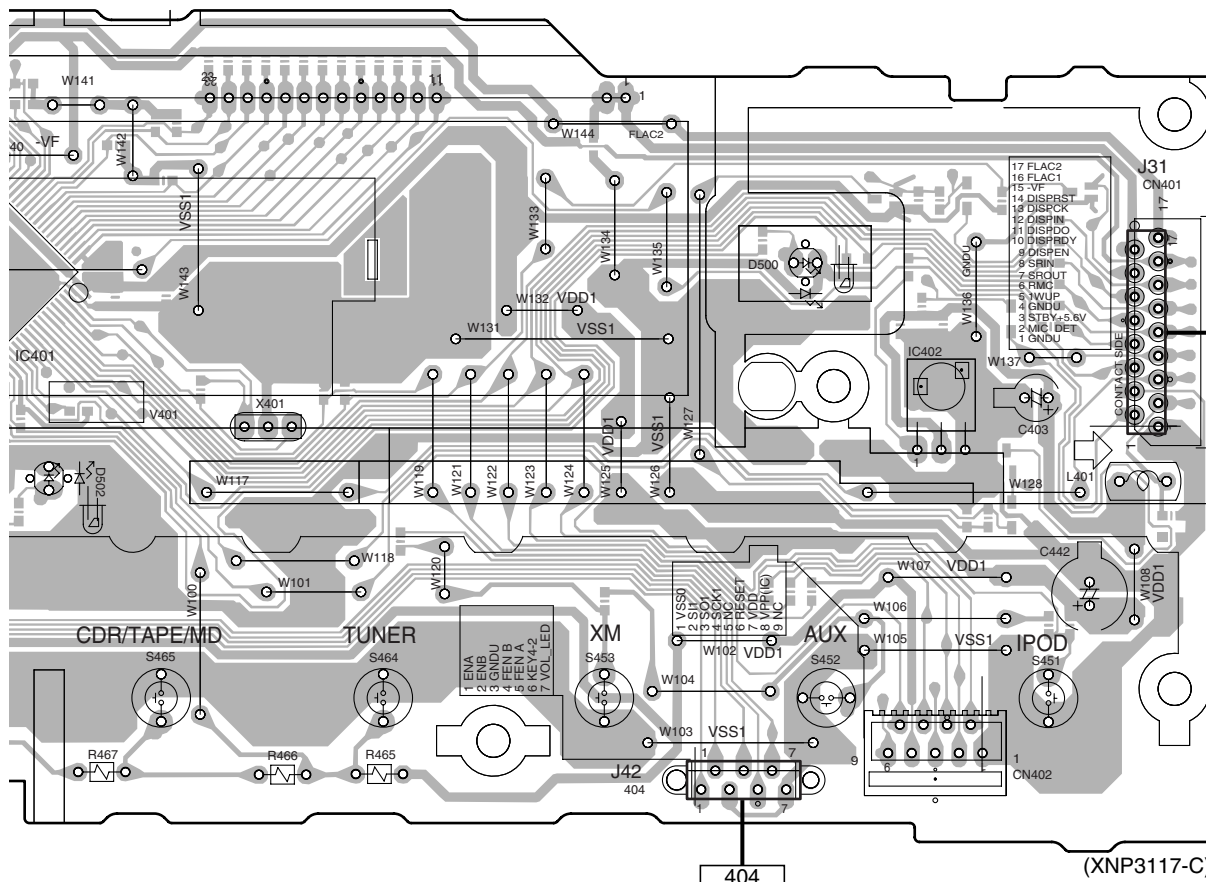
B

C

D

E

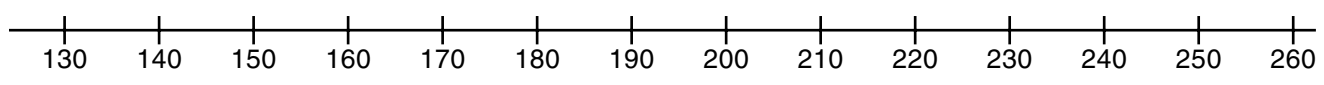
F



A CN101

J 511

(XNP3117-C)



SIDE B

A

B

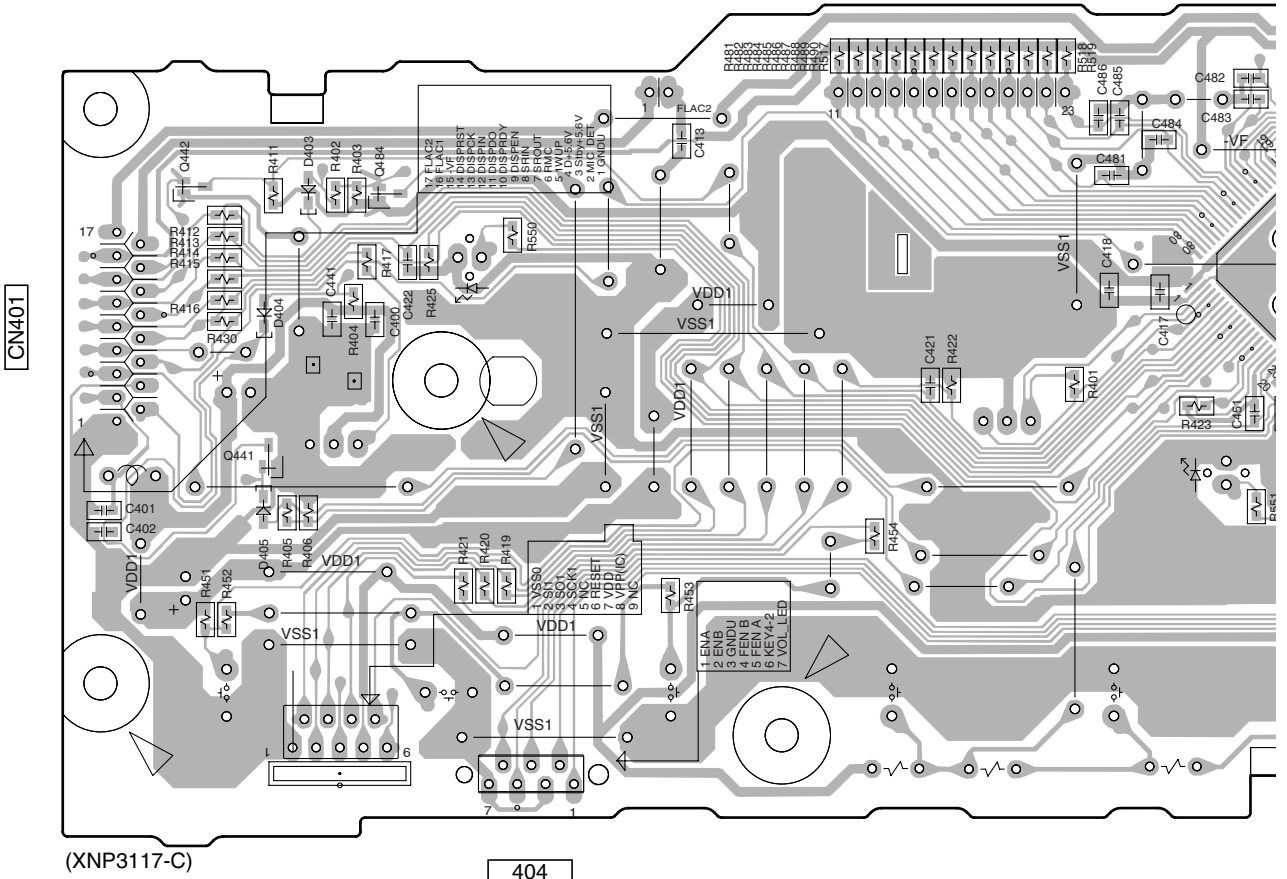
C

D

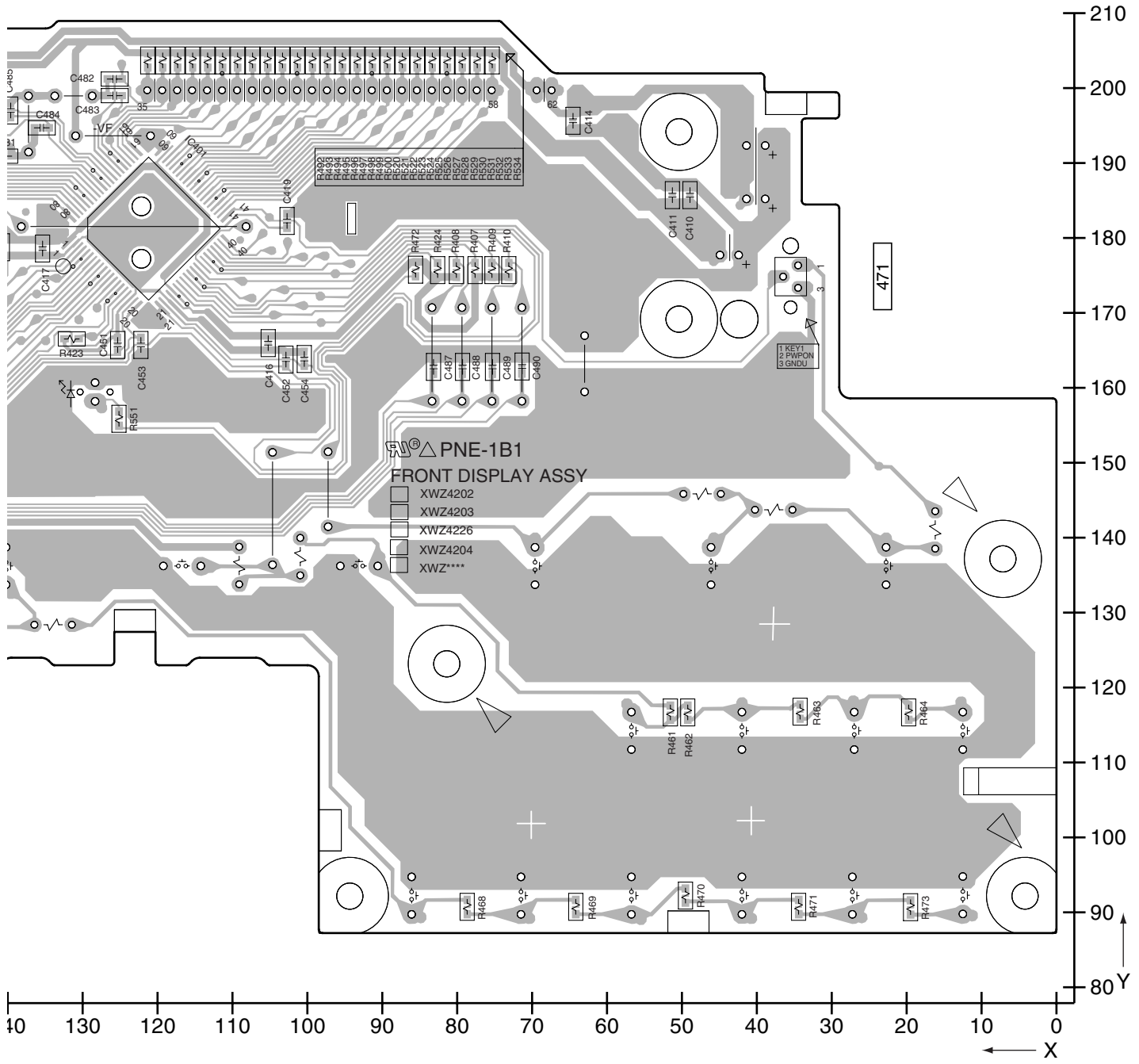
E

F

FRONT DISPLAY ASSY



A
B
C
D
E
F

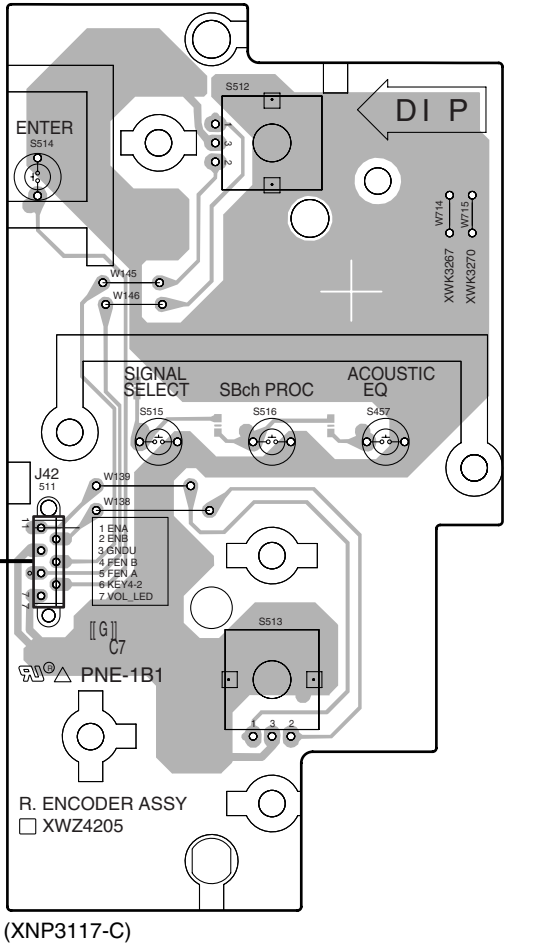


4.8 ROTARY ENCODER and POWER KEY ASSYS

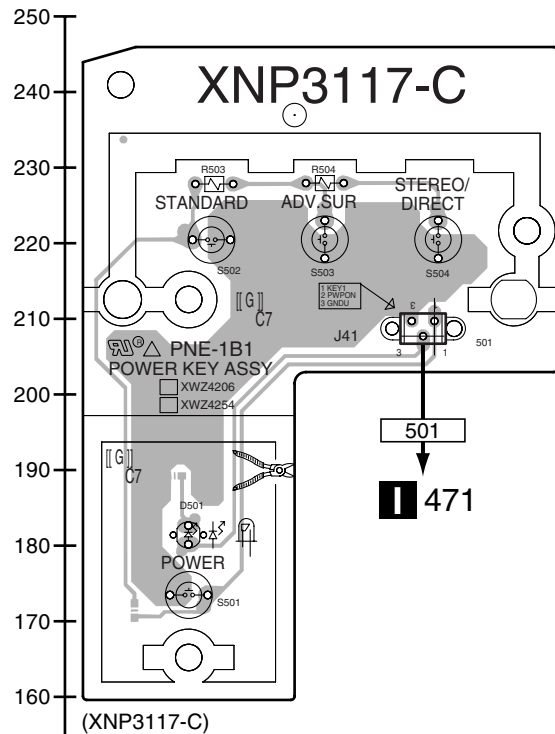
SIDE A

SIDE A

J ROTARY ENCODER ASSY



K POWER KEY ASSY



250
240
230
220
210
200
190
180
170
160
150
140
130
120
110

Y ↑

250 260 270 280 290 300 310 320

X →

250
240
230
220
210
200
190
180
170
160
150

Y ↑

0 10 20 30 40 50 60

X →

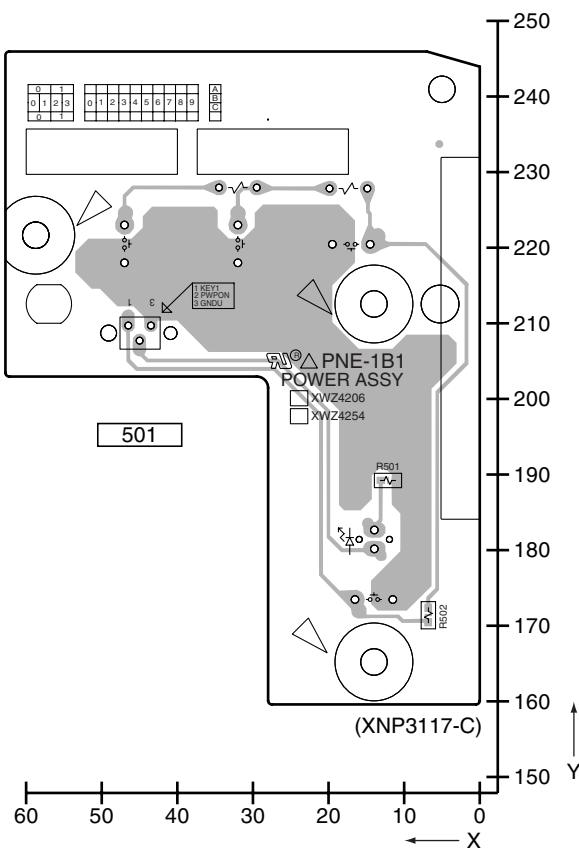
J K

SIDE B

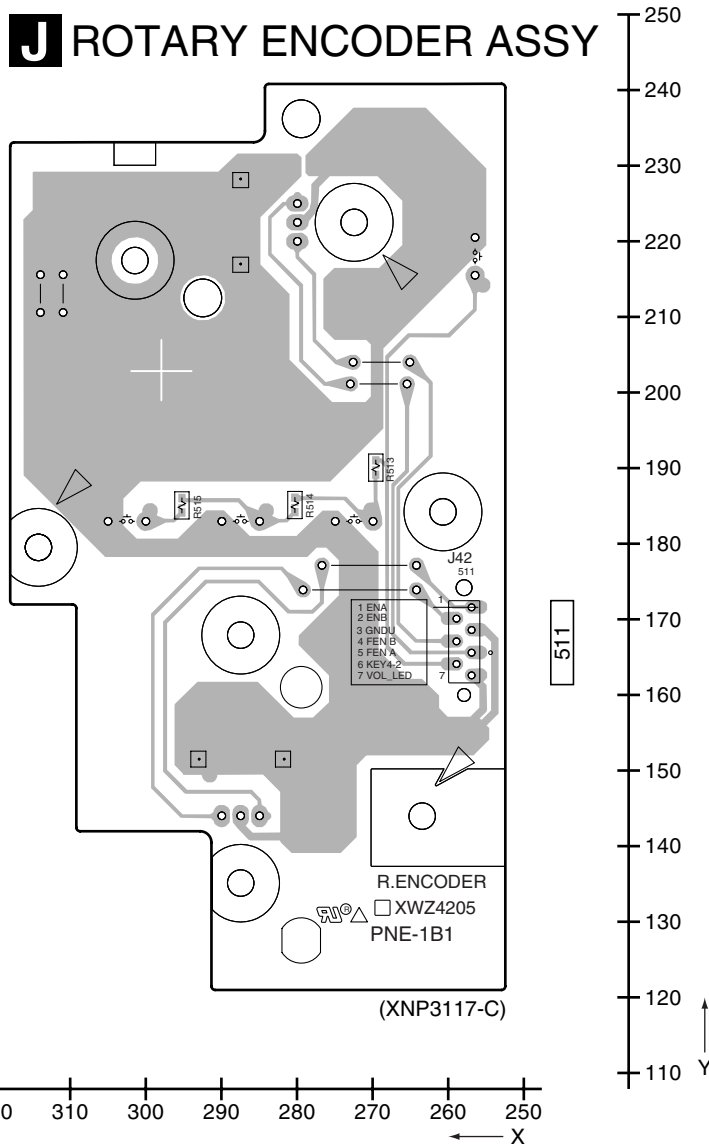
SIDE B

A

K POWER KEY ASSY



J ROTARY ENCODER ASSY



B

C

D

E

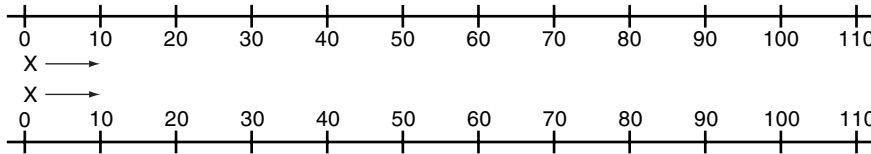
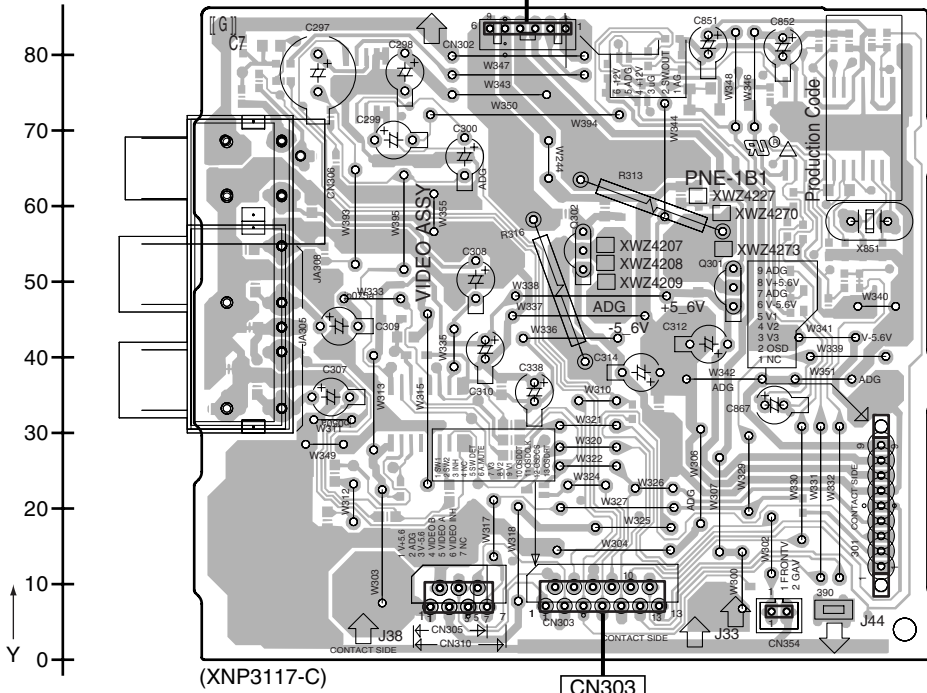
J K

4.10 VIDEO ASSY

SIDE A

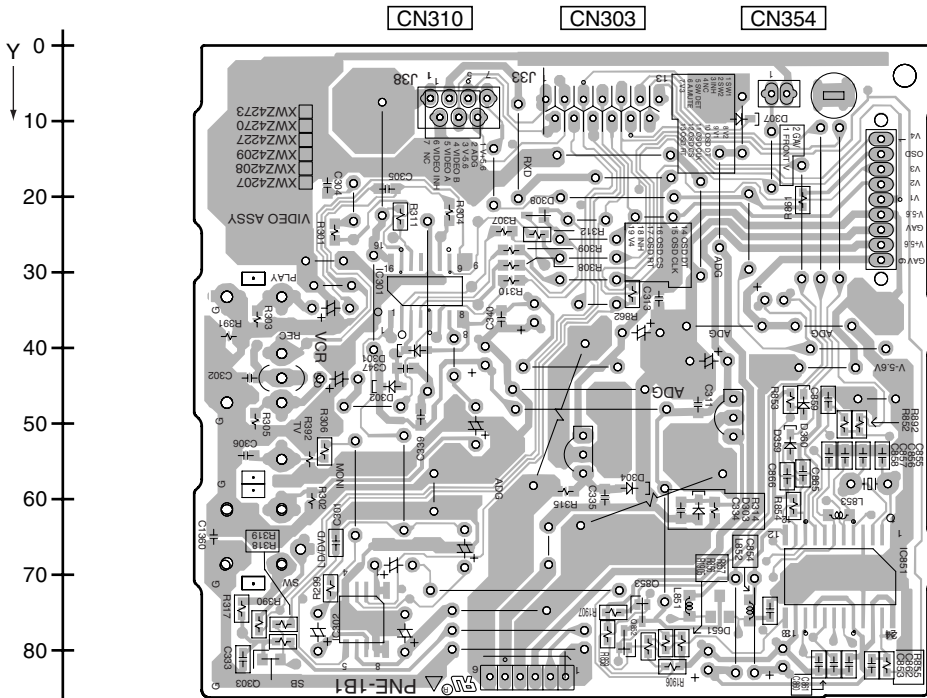
VIDEO ASSY CN302 → **CN803**

SIDE A



SIDE B

SIDE B



VIDEO ASSY CN302

(XNP3117-C)

VSX-417-K



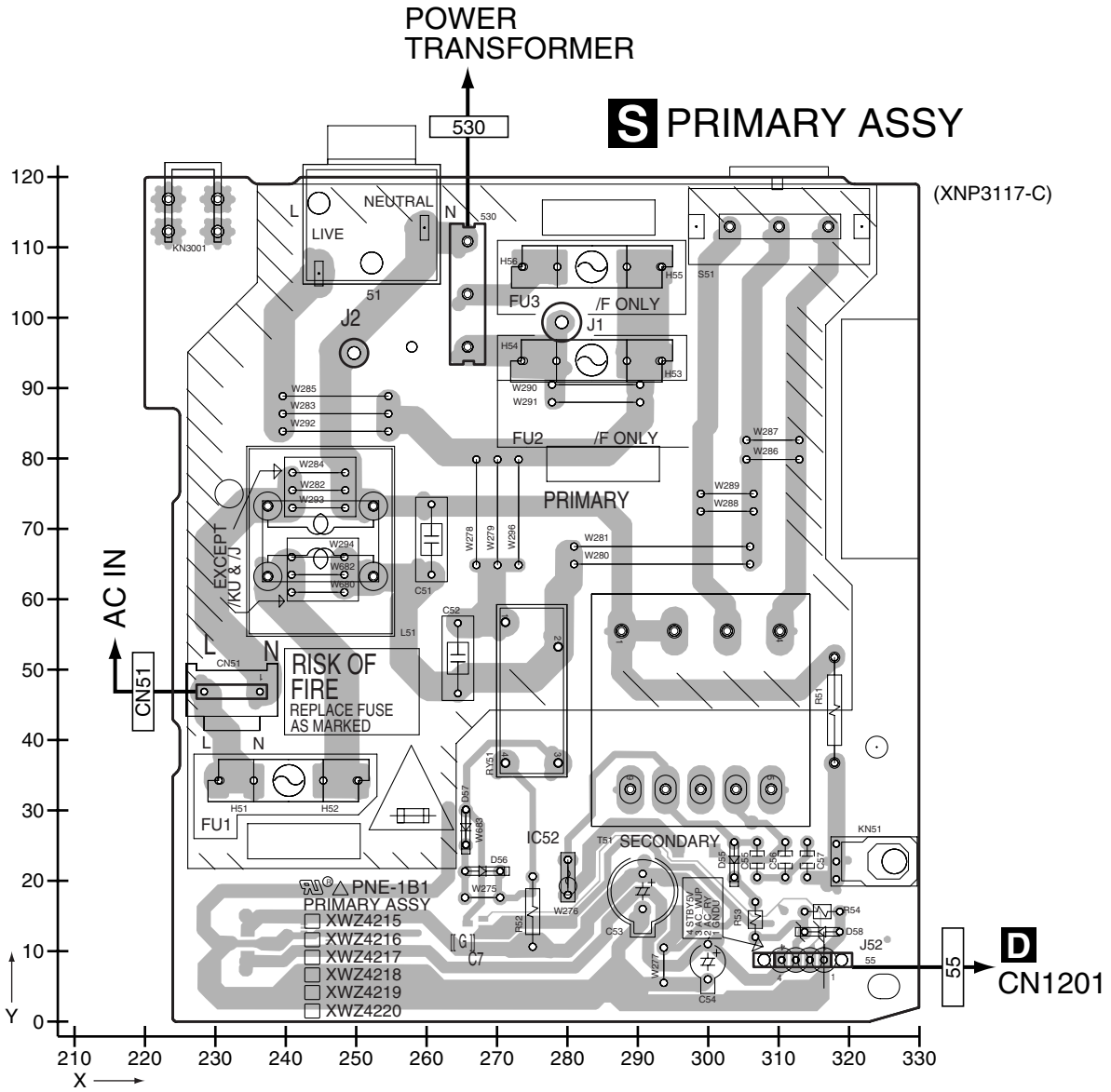
1 2 3 4

4.11 PRIMARY ASSY

SIDE A

SIDE A

A
B
C
D
E
F



S

SIDE B

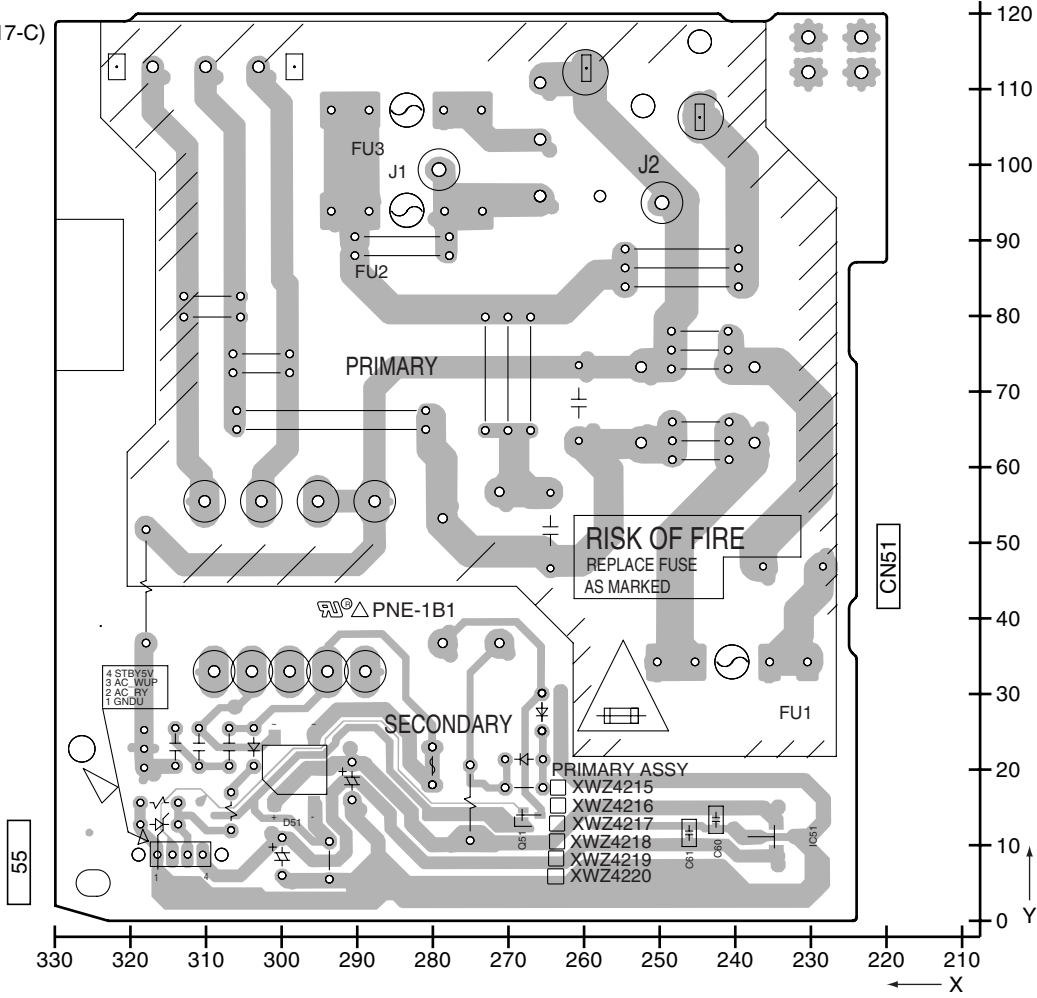
SIDE B

A
B
C
D
E
F

S PRIMARY ASSY

530

(XNP3117-C)



VSX-417-K

S

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 RD1/4PU 5 6 7 J
 47k Ω \rightarrow 47 x 10³ \rightarrow 473 RD1/4PU 4 7 3 J
 0.5 Ω \rightarrow R50 RN2H R 5 0 K
 1 Ω \rightarrow 1R0 RS1P 7 R 0 K

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 RN1/4PC 5 6 2 1 F

● Meaning of the figures and others in the parentheses in the parts list.

Example IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.

IC 301 (A, 91, 111) IC NJM2068V

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

LIST OF ASSEMBLIES

1..MAIN ASSY	XWK3301				
1..DSP ASSY	AWX8812				
NSP 1..AMP ASSY	XWK3287				
2..POWER PACK ASSY	XWZ4233				
2..TRANS2 ASSY	XWZ4243				
2..TRANS3 ASSY	XWZ4246				
2..5.1CH INPUT ASSY	XWZ4249				
2..BIND ASSY	XWZ4252				
2..HEAD PHONE ASSY	XWZ4265				
NSP 1..COMPLEX ASSY	XWK3271				
2..FRONT DISPLAY ASSY	XWZ4202				
2..ROTARY ENCODER ASSY	XWZ4205				
2..POWER KEY ASSY	XWZ4206				
2..VIDEO ASSY	XWZ4270				
2..DIGITAL INPUT ASSY	XWZ4211				
2..PRIMARY ASSY	XWZ4216				
2..TRANS4 ASSY	XWZ4225				
2..REGULATOR ASSY	XWZ4271				
1..FM/AM TUNER UNIT	AXX7170				

A MAIN ASSY MISCELLANEOUS

IC 103 (A,198,72)	DUAL OP-AMP	NJM4565MD			
IC 104 (A,198,56)	DUAL OP-AMP	NJM4565MD			
IC 105 (A,198,87)	DUAL OP-AMP	NJM4565MD			
IC 107 (A,216,88)	DUAL OP-AMP	NJM4565MD			
IC 108 (B,255,64)	8CH E-VOL	R2S15205FP(P)			
IC 110 (A,237,73)	IC	TC4066BFN			
IC 310 (A,142,42)	DUAL OP-AMP	NJM4565MD			
IC 311 (A,152,60)	DUAL OP-AMP	NJM4565MD			
IC 312 (A,142,78)	DUAL OP-AMP	NJM4565MD			
IC 5001(A,69,19)	RDS DECODER IC	LC72725KM			
IC 9001(B,82,64)	CPU	PEG377A			
IC 9002(A,104,42)	EEPROM	BR24L16FV-W			
Q 231 (A,225,69)	DIGITAL TR(SC-70)	RT1P241M			
Q 232 (A,229,69)	TRANSISTOR	RT1N241M			
Q 248 (A,79,108)	TRANSISTOR	2SC4081			
Q 249 (A,83,104)	TRANSISTOR	RT1N241M			
Q 250 (A,87,105)	TRANSISTOR	2SC4081			
Q 252 (A,68,105)	TRANSISTOR	2SD1858X			
Q 253 (A,75,108)	TRANSISTOR	RT1N241M			
Q 254 (A,72,98)	DIGITAL TR(SC-70)	RT1P241M			
Q 255 (A,75,98)	TRANSISTOR	RT1N241M			
Q 257 (A,90,105)	TRANSISTOR	2SA1576A			
Q 361 (A,166,78)	TRANSISTOR	2SC5938A			
Q 9001(A,125,87)	DIGITAL TR(SC-70)	RT1N431M			
Q 9002(A,66,80)	DIGITAL TR(SC-70)	RT1P241M			
Q 9003(A,65,75)	DIGITAL TR(SC-70)	RT1P241M			
Q 9007(A,69,85)	TRANSISTOR	DTC143TK			
Q 9064(A,59,80)	DIGITAL TR(SC-70)	RT1P241M			
Q 9065(A,55,78)	TRANSISTOR	UMD2N			
D 103 (B,173,35)	DIODE	DAN217U			
D 105 (B,163,37)	DIODE	DAN217U			
D 107 (B,166,37)	DIODE	DAN217U			
D 253 (A,70,114)	DIODE	UDZS27(B)			
D 254 (A,92,102)	DIODE	UDZS5R1(B)			
D 311 (B,259,93)	DIODE	1SS355			
D 312 (B,268,93)	DIODE	1SS355			
D 331 (B,260,87)	DIODE	UDZS6R8(B)			
D 332 (B,263,87)	DIODE	UDZS6R8(B)			
D 9006(B,99,89)	DIODE	DAN217U			
D 9007(B,91,89)	DIODE	DAN217U			

Mark No.	Description	Part No.
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AMP ASSY MISCELLANEOUS

J 6 BOARD IN WIRE	DB230ND0	
J 604 BOARD IN WIRE	DB211ND0	
J 605 BOARD IN WIRE	DB410ND0	
J 606 BOARD IN WIRE	DB621ND0	
J 607 BOARD IN WIRE	DB118ND0	

COMPLEX ASSY MISCELLANEOUS

J 41 JUMPER WIRE	D15A03-100-2651	
J 42 JUMPER WIRE	D15A07-125-2651	

5		6		7		8	
Mark No.	Description	Part No.	Mark No.	Description	Part No.		
			R 209	(B,198,85)	RS1/16S392J		
D 9010	(A,128,88) DIODE	1SS355	R 210	(B,198,91)	RS1/16S392J		
D 9011	(A,60,75) DIODE	DAN202U	R 211	(B,200,85)	RS1/16S332J		A
D 9064	(A,58,75) DIODE	DAP202U	R 212	(B,200,91)	RS1/16S332J		
D 9065	(A,63,80) DIODE	DAP202U	R 221	(B,220,84)	RS1/16S472J		
D 9068	(A,53,81) DIODE	1SS355	R 222	(B,219,91)	RS1/16S472J		
L 101	(B,260,98) CHIP SOLID INDUCTOR	QTL1013					
L 102	(B,265,97) CHIP SOLID INDUCTOR	QTL1013	R 223	(A,242,78)	RS1/16S472J		
L 5002	(A,257,104) CHIP SOLID INDUCTOR	QTL1013	R 224	(A,236,78)	RS1/16S472J		
L 9001	(A,124,102) CHIP SOLID INDUCTOR	ATL7002	R 225	(B,225,84)	RS1/16S392J		
L 9002	(A,120,103) CHIP SOLID INDUCTOR	ATL7002	R 226	(B,225,91)	RS1/16S392J		
			R 231	(A,229,72)	RS1/16S104J		
L 9003	(A,106,98) RADIAL INDUCTOR	LFCA2R2J					
X 5001	(A,67,27) CRYSTAL RESONATOR (4.332 MHz)	ASS7004	R 233	(A,231,91)	RS1/16S474J		
X 9001	(A,96,53) CERAMIC RESONATOR (15.7 MHz)	XSS3004	R 234	(A,231,84)	RS1/16S474J		
CN101	(A,41,27) CONNECTOR	CKS3382	R 237	(A,237,88)	RS1/16S122J		B
CN102	(A,113,63) CONNECTOR	52045-1045	R 238	(A,236,80)	RS1/16S122J		
			R 241	(A,190,69)	RS1/16S473J		
CN103	(A,227,17) 11P CONNECTOR	52044-1145	R 242	(A,190,74)	RS1/16S473J		
CN105	(A,266,34) CONNECTOR	CKS3372	R 245	(B,188,69)	RS1/16S332J		
CN109	(A,230,113) 19P SOCKET	XKP3054	R 246	(B,188,75)	RS1/16S332J		
CN111	(A,274,113) 21P SOCKET	XKP3091	R 247	(B,190,69)	RS1/16S332J		
CN112	(A,91,41) CONNECTOR	CKS3382	R 248	(B,190,75)	RS1/16S332J		
CN114	(A,189,113) 21P SOCKET	XKP3091	R 249	(B,197,69)	RS1/16S332J		
CN125	(A,302,42) 6P PIN JACK	XKB3055	R 250	(B,197,75)	RS1/16S332J		
CN130	(A,247,13) CONNECTOR	CKS3378	R 251	(B,199,69)	RS1/16S182J		
CN142	8P PIN JACK	XKB3067	R 252	(B,199,75)	RS1/16S182J		C
CN251	(A,39,92) 3P JUMPER CONNECTOR	52147-0310	R 261	(A,189,53)	RS1/16S473J		
CN252	(A,37,77) 3P TOP POST 101 PCB BINDER	B3B-EH VEF1040	R 262	(A,189,59)	RS1/16S473J		
			R 264	(B,186,60)	RS1/16S392J		
			R 265	(B,188,53)	RS1/16S332J		
			R 266	(B,188,60)	RS1/16S472J		
			R 267	(B,190,53)	RS1/16S332J		
			R 268	(B,190,60)	RS1/16S123J		
			R 269	(B,197,53)	RS1/16S332J		
			R 270	(B,197,60)	RS1/16S122J		
			R 271	(B,199,53)	RS1/16S182J		
			R 272	(B,199,60)	RS1/16S272J		D
			R 274	(B,202,60)	RS1/16S271J		
			R 280	(A,65,112)	RS1/16S0R0J		
			R 303	(B,156,37)	RS1/16S101J		
			R 304	(B,155,43)	RS1/16S101J		
			R 305	(B,160,49)	RS1/16S101J		
			R 306	(B,164,61)	RS1/16S101J		
			R 307	(B,165,68)	RS1/16S101J		
			R 308	(B,171,72)	RS1/16S101J		
			R 311	(A,258,102) METAL OXIDE RESISTOR	RS1LMF101J		
			R 312	(A,266,102) METAL OXIDE RESISTOR	RS1LMF101J		E
			R 437	(A,81,108)	RS1/16S103J		
			R 438	(A,79,112)	RS1/16S103J		
			R 439	(A,80,112)	RS1/16S103J		
			R 440	(A,87,108)	RS1/16S103J		
			R 443	(A,63,104)	RS1/16S471J		
			R 445	(A,73,107)	RS1/16S223J		
			R 448	(A,90,102)	RS1/16S104J		
			R 449	(A,83,108)	RS1/16S822J		
			R 453	(A,147,36)	RS1/16S362J		
			R 454	(A,142,48)	RS1/16S362J		
			R 457	(A,141,36)	RS1/16S153J		F
			R 458	(A,140,47)	RS1/16S153J		
			R 459	(B,133,38)	RS1/16S103J		
			R 460	(B,133,43)	RS1/16S103J		

RESISTORS

R 103	(B,283,62)	RS1/16S222J
R 104	(B,283,52)	RS1/16S222J
R 105	(B,283,48)	RS1/16S331J
R 106	(B,293,40)	RS1/16S331J
R 107	(B,283,88)	RS1/16S331J
R 108	(B,293,81)	RS1/16S331J
R 109	(B,283,75)	RS1/16S331J
R 110	(B,293,68)	RS1/16S331J
R 111	(B,283,112)	RS1/16S222J
R 112	(B,283,106)	RS1/16S222J
R 113	(B,283,101)	RS1/16S331J
R 114	(B,293,96)	RS1/16S331J
R 129	(B,283,34)	RS1/16S331J
R 130	(B,283,25)	RS1/16S331J
R 145	(A,71,73)	RS1/16S102J
R 146	(A,71,74)	RS1/16S102J
R 147	(B,233,67)	RS1/16S472J
R 148	(B,228,62)	RS1/16S472J
R 149	(A,259,45)	RS1/16S104J
R 180	(B,278,97)	RS1/16S0R0J
R 181	(B,273,78)	RS1/16S0R0J
R 182	(B,275,75)	RS1/16S0R0J
R 183	(B,276,67)	RS1/16S0R0J
R 201	(A,189,85)	RS1/16S473J
R 202	(A,189,90)	RS1/16S473J
R 205	(B,189,85)	RS1/16S392J
R 206	(B,189,91)	RS1/16S392J
R 207	(B,191,85)	RS1/16S392J
R 208	(B,191,91)	RS1/16S392J

Mark No. Description**Part No.****Mark No. Description****Part No.**

R 464 (A,77,99)

RS1/16S0R0J

R 9060(B,98,68)

RS1/16S473J

R 473 (A,151,53)

RS1/16S362J

R 9062(B,87,48)

RS1/16S471J

R 474 (A,152,66)

RS1/16S362J

R 9064(A,54,74)

RS1/16S103J

R 477 (A,149,52)

RS1/16S153J

R 9065(A,56,74)

RS1/16S103J

R 478 (A,150,65)

RS1/16S153J

R 9066(A,62,72)

RS1/16S103J

R 479 (B,142,57)

RS1/16S103J

R 9067(A,57,83)

RS1/16S103J

R 480 (B,142,62)

RS1/16S103J

R 9081(A,120,72)

RS1/16S221J

R 484 (A,165,71)

RS1/16S104J

R 9082(A,122,69)

RS1/16S274J

R 485 (A,157,80)

RS1/16S472J

R 493 (A,141,71)

RS1/16S362J

CAPACITORS

R 494 (A,141,84)

RS1/16S362J

C 103 (B,295,56)

CCSRCH101J50

C 104 (B,296,51)

CCSRCH101J50

C 105 (B,293,45)

CCSRCH101J50

C 106 (B,296,40)

CCSRCH101J50

C 107 (B,293,86)

CCSRCH101J50

R 497 (A,139,69)

RS1/16S153J

C 108 (B,296,81)

CCSRCH101J50

R 498 (A,139,83)

RS1/16S153J

C 109 (B,293,72)

CCSRCH101J50

R 499 (B,133,72)

RS1/16S103J

C 110 (B,296,68)

CCSRCH101J50

R 500 (B,133,79)

RS1/16S103J

C 111 (B,296,111)

CCSRCH101J50

R 502 (B,144,80)

RS1/16S204J

C 112 (B,297,107)

CCSRCH101J50

R 551 (A,85,108)

RS1/16S822J

C 113 (B,293,100)

CCSRCH101J50

R 5010(A,76,24)

RS1/16S473J

C 114 (B,296,96)

CCSRCH101J50

R 5011(A,81,20)

RS1/16S473J

C 115 (B,262,98)

CKSRYB103K50

R 5012(A,82,18)

RS1/16S102J

C 116 (B,267,97)

CKSRYB103K50

R 5013(A,57,26)

RS1/16S102J

C 117 (B,283,116)

CCSRCH220J50

R 9001(B,94,54)

RS1/16S0R0J

C 118 (B,285,109)

CCSRCH220J50

R 9002(A,129,89)

RS1/16S473J

C 121 (A,280,34)

CEAT100M50

R 9003(B,92,54)

RS1/16S0R0J

C 122 (A,280,25)

CEAT100M50

R 9006(B,103,89)

RS1/16S474J

C 125 (A,280,62)

CEAT100M50

R 9007(B,93,89)

RS1/16S474J

C 126 (A,280,53)

CEAT100M50

R 9008(A,93,107)

RS1/16S221J

C 127 (A,280,47)

CEAT100M50

R 9009(A,65,85)

RS1/16S473J

C 128 (A,280,40)

CEAT100M50

R 9010(B,115,45)

RS1/16S512J

C 131 (A,280,87)

CEAT100M50

R 9011(A,63,76)

RS1/16S102J

C 132 (A,280,80)

CEAT100M50

R 9012(A,63,73)

RS1/16S0R0J

C 133 (A,280,74)

CEAT100M50

R 9013(B,112,45)

RS1/16S471J

C 134 (A,280,67)

CEAT100M50

R 9014(B,104,54)

RS1/16S471J

C 135 (A,280,114)

CEAT100M50

R 9015(B,102,54)

RS1/16S471J

C 136 (A,280,106)

CEAT100M50

R 9016(B,100,54)

RS1/16S471J

C 137 (A,280,101)

CEAT100M50

R 9017(B,98,54)

RS1/16S471J

C 138 (A,280,93)

CEAT100M50

R 9018(B,96,54)

RS1/16S471J

C 141 (A,256,82)

CKSRYB104K50

R 9019(B,98,76)

RS1/16S471J

C 145 (B,256,81)

CCSRCH101J50

R 9020(B,99,76)

RS1/16S471J

C 146 (B,258,81)

CCSRCH101J50

R 9021(B,101,76)

RS1/16S471J

C 147 (B,253,81)

CKSRYB103K50

R 9022(B,103,76)

RS1/16S471J

C 148 (B,238,67)

CKSRYB223K25

R 9023(B,112,67)

RS1/16S103J

C 149 (B,235,67)

CKSRYB473K25

R 9025(B,103,67)

RS1/16S103J

C 150 (B,231,67)

CKSQYB154K16

R 9026(B,106,67)

RS1/16S103J

C 151 (B,45,62)

CKSRYB103K50

R 9028(B,119,45)

RS1/16S104J

C 152 (B,230,62)

CKSRYB223K25

R 9030(A,68,79)

RS1/16S470J

C 153 (B,234,62)

CKSRYB473K25

R 9031(B,69,48)

RS1/16S104J

C 154 (B,232,62)

CKSQYB154K16

R 9032(A,66,59)

RS1/16S104J

C 155 (A,226,62)

CEAT101M10

R 9033(B,89,48)

RS1/16S104J

C 156 (A,229,56)

CEAT101M10

R 9036(A,88,89)

RS1/16S221J

C 157 (A,236,56)

CEAT101M10

R 9037(A,124,99)

RS1/16S104J

C 158 (A,232,50)

CEAT101M10

R 9039(A,87,57)

RS1/16S104J

C 159 (A,241,50)

CEAT101M10

R 9041(B,117,45)

RS1/16S104J

C 160 (A,234,44)

CEAT101M10

R 9042(B,83,81)

RS1/16S103J

C 161 (A,241,44)

CEAT101M10

R 9043(B,81,81)

RS1/16S103J

C 162 (A,248,44)

CEAT101M10

R 9044(B,79,81)

RS1/16S103J

C 165 (A,240,86)

CEAT1R0M50

R 9045(A,97,46)

RS1/16S471J

R 9046(A,107,46)

RS1/16S471J

R 9047(A,98,46)

RS1/16S103J

R 9048(A,98,43)

RS1/16S103J

Mark No.	Description	Part No.	Mark No.	Description	Part No.
	D 751 (B,168,135) DIODE	1SS355	△ R 622 (A,248,31)	RESISTOR (0.22, 5W)	ACN7094
	D 752 (B,170,135) DIODE	1SS355			
	D 753 (B,138,132) DIODE	1SS355	R 623 (A,116,48)		RD1/4PU223J
A			R 624 (A,257,52)		RD1/4PU182J
	D 754 (B,141,132) DIODE	1SS355	R 625 (B,116,22)		RS1/16SOR0J
	D 777 (A,127,57) DIODE	1SS133	R 626 (A,258,49)		RD1/4PU821J
	D 778 (A,108,57) DIODE	1SS133	R 627 (B,107,28)		RS1/16SOR0J
	D 781 (A,264,35) DIODE	30PDA20-FC6			
	D 782 (A,267,17) DIODE	30PDA20-FC6	R 628 (A,250,48)		RD1/4PU223J
			R 629 (B,92,9)		RS1/16SOR0J
	D 783 (A,129,37) DIODE	30PDA20-FC6	R 630 (A,230,21)		RD1/4PU102J
	D 784 (A,135,17) DIODE	30PDA20-FC6	R 652 (A,215,36)		RD1/4PU102J
△	D 801 (B,221,113) BRIDGE DIODE	S1WB(A)60SD	R 654 (B,219,41)		RS1/16S103J
	D 806 (A,287,62) DIODE	MTZJ6R2(B)			
	D 807 (A,284,67) DIODE	1SS133	R 660 (A,220,29)		RD1/4PU563J
			R 662 (A,216,20)		RD1/4PU182J
B	D 827 (A,262,133) DIODE	MTZJ6R2(B)	R 664 (A,238,21)		RD1/4PU563J
	D 828 (A,224,99) DIODE	MTZJ6R2(B)	R 666 (A,240,35)		RD1/4PU331J
△	D 829 (A,239,128) DIODE	D3SBA20(B)	△ R 668 (A,239,31)	RESISTOR (0.22, 5W)	ACN7094
	L 751 (A,160,108) COIL	ATH1004			
	L 752 (A,173,108) COIL	ATH1004	R 670 (A,245,52)		RD1/4PU182J
			R 672 (A,240,57)		RD1/4PU821J
	L 753 (A,120,107) COIL	ATH1004	R 674 (A,236,38)		RD1/4PU223J
	L 761 (A,130,108) COIL	ATH1004	R 681 (A,72,51)		RD1/4PU102J
	L 762 (A,142,108) COIL	ATH1004	R 682 (B,70,49)		RS1/16S103J
	J 43 JUMPER WIRE 11P	D20PYY1120E			
	KN601 (A,65,23) WRAPPING TERMINAL	VNF1084	R 685 (B,75,37)		RS1/16S563J
			R 686 (B,80,21)		RS1/16S182J
			R 687 (A,83,10)		RD1/4PU563J
C	RY751 (A,173,130) RELAY	ASR7001	R 688 (A,135,30)		RD1/4PU562J
	RY752 (A,141,126) RELAY	ASR7001	R 689 (A,132,30)		RD1/4PU562J
	RY753 (A,117,120) RELAY	ASR7001			
	CN701 (A,212,134) 11PJUMPER CONNECTOR	52147-1110	R 690 (A,60,52)		RD1/4PU331J
	CN702 (A,201,106) 6P JUMPER CONNECTOR	52147-0610	△ R 691 (A,55,55)	RESISTOR (0.22, 5W)	ACN7094
			R 692 (A,70,72)		RD1/4PU182J
	CN705 (A,295,40) 21P PLUG	XKM3011	R 693 (A,67,77)		RD1/4PU821J
	CN754 SP TERMINAL 4-P(V0)	XKE3050	R 694 (A,62,72)		RD1/4PU223J
	CN755 SP TERMINAL 6-P(V0)	XKE3049			
	CN803 (A,231,129) 6P PLUG	KM200TA6	R 695 (A,97,22)		RD1/4PU102J
	CN805 (A,317,153) 13P PLUG	XKP3066	R 696 (B,281,38)		RS1/16S103J
			R 697 (B,255,68)		RS1/16S103J
	CN806 (A,317,120) 19P PLUG	XKP3069	R 698 (B,243,67)		RS1/16S333J
	CN807 (A,317,82) 15P PLUG	XKP3067	R 701 (A,121,86)		RD1/4PU682J
D	CN815 (A,295,79) 19P PLUG	XKM3005			
	CN816 (A,295,126) 21P PLUG	XKM3011	R 702 (A,110,87)		RD1/4PU682J
	CN817 CONNECTOR	CKS3382	R 703 (A,151,72)		RD1/4PU104J
			R 704 (A,148,77)		RD1/4PU104J
	810 (A,277,90) 11P CABLE HOLDER	51048-1100	R 705 (A,283,85)		RD1/4PU473J
			R 706 (A,283,75)		RD1/4PU473J
			R 707 (A,135,77)		RD1/4PU124J
			R 708 (A,147,81)		RD1/4PU124J
			△ R 711 (A,181,86)	METAL OXIDE RESISTOR	RS2LMF222J
			R 713 (A,118,86)		RD1/4PU102J
			R 714 (B,252,68)		RS1/16S102J
E	R 606 (B,241,28)	RS1/16SOR0J	R 715 (B,250,75)		RS1/16S103J
	R 609 (A,91,35)	RD1/4PU563J	R 716 (B,247,75)		RS1/16S103J
	R 610 (A,225,35)	RD1/4PU563J	R 721 (A,145,77)		RD1/4PU822J
	R 611 (A,90,28)	RD1/4PU182J	R 722 (A,124,78)		RD1/4PU822J
	R 612 (A,223,28)	RD1/4PU182J	R 723 (A,276,78)		RD1/4PU473J
	R 613 (A,114,21)	RD1/4PU563J	R 724 (A,279,83)		RD1/4PU473J
	R 614 (A,247,21)	RD1/4PU563J	R 725 (A,276,74)		RD1/4PU103J
	R 615 (A,123,36)	RD1/4PU331J	R 726 (B,291,59)		RS1/16S103J
	R 616 (A,270,29)	RD1/4PU562J	R 727 (B,287,59)		RS1/16S103J
△	R 617 (A,114,31) RESISTOR (0.22, 5W)	ACN7094	R 728 (B,106,9)		RS1/16S123J
F	R 618 (A,266,29)	RD1/4PU562J	R 730 (B,214,14)		RS1/16S123J
	R 619 (A,122,52)	RD1/4PU182J	R 731 (A,121,73)		RD1/4PU220J
	R 620 (A,257,36)	RD1/4PU331J	R 732 (A,101,89)		RD1/4PU220J
	R 621 (A,124,49)	RD1/4PU821J	R 740 (B,87,141)		RS1/16S683J

Mark No. Description

R 882 (A,40,236)

Part No.

RD1/4PU4R7J

Mark No. Description

C 1013(B,151,219)

C 1014(B,151,216)

C 1015(B,147,224)

Part No.

CCSRCH101J50

CCSRCH101J50

CKSRYP221K50

CAPACITORS

C 881 (A,13,234) MYLAR FILM CAPACITOR

CQMA333K2E

C 882 (A,16,239) MYLAR FILM CAPACITOR

CQMA333K2E

C 883 (A,27,238) FILM CAPACITOR

CQMBA333J50

C 884 (A,40,239) FILM CAPACITOR

CQMBA333J50

C 1016(B,147,216)

CKSRYP221K50

C 1021(A,146,214)

CEAT4R7M50

C 1022(A,146,221)

CEAT4R7M50

G HEAD PHONE ASSY**MISCELLANEOUS**

Q 1551(B,78,211) TRANSISTOR

2SC5938A

Q 1552(B,102,219) TRANSISTOR

2SC5938A

J 47 JUMPER WIRE

D20PYY0640E

JA 1551(A,117,233) HEADPHONE JACK

XKB3066

KN1551(A,69,231) WRAPPING TERMINAL

VNF1084

1551(A,59,220) 6P CABLE HOLDER 51048-0600

RESISTORS

⚠ R 1551(A,84,202) METAL OXIDE RESISTOR

RS2LMF331J

⚠ R 1552(A,78,203) METAL OXIDE RESISTOR

RS2LMF331J

⚠ R 1553(A,108,221) METAL OXIDE RESISTOR

RS1LMF151J

⚠ R 1554(A,93,216) METAL OXIDE RESISTOR

RS1LMF151J

R 1555(B,100,216)

RS1/16S472J

R 1556(B,81,210)

RS1/16S472J

R 1557(B,87,228)

RS1/16S102J

CAPACITORS

C 1551(B,94,226)

CKSRYP223K50

C 1552(B,83,210)

CKSRYP223K50

C 1553(B,110,224)

CKSRYP103K50

C 1554(B,110,226)

CCSRCH471J50

C 1555(B,110,229)

CKSRYP104K16

C 1556(B,112,239)

CKSRYP103K50

C 1557(B,109,239)

CCSRCH471J50

C 1558(B,107,239)

CKSRYP104K16

C 1561(A,69,205) ELECT. CAPACITOR

CEANP470M50

C 1562(A,71,223) ELECT. CAPACITOR

CEANP470M50

H V4 5.1CH INPUT ASSY**MISCELLANEOUS**

CN307 (A,125,219) 7P CONNECTOR

52044-0745

CN309 (A,167,225) PIN JACK(4P)

XKB3035

RESISTORS

R 1001(B,147,233)

RS1/16S474J

R 1002(B,150,226)

RS1/16S474J

R 1003(B,149,236)

RS1/16S331J

R 1004(B,150,228)

RS1/16S331J

R 1009(B,150,224)

RS1/16S474J

R 1010(B,151,212)

RS1/16S474J

R 1011(B,150,222)

RS1/16S331J

R 1012(B,150,214)

RS1/16S331J

CAPACITORS

C 1001(B,151,233)

CCSRCH101J50

C 1002(B,151,230)

CCSRCH101J50

C 1003(B,143,233)

CKSRYP221K50

C 1004(B,147,230)

CKSRYP221K50

C 1009(A,146,236)

CEAT4R7M50

C 1010(A,146,228)

CEAT4R7M50

C 1012(B,159,226)

CKSRYP103K50

I FRONT DISPLAY**MISCELLANEOUS**

IC 401 (B,121,181) DISPLAY U-COM

PE5550A

IC 402 (A,223,169) REMOTE RECEIVER UNIT

GP1UM27XK0VF

Q 442 (B,238,190) TRANSISTOR

RT1N241M

Q 484 (B,217,189) TRANSISTOR

2SA1576A

D 403 (B,226,189) DIODE

1SS355

L 401 (A,242,159) RADIAL INDUCTOR

LFCA2R2J

V 401 (A,189,200) FL TUBE

XAV3033

S 451 (A,234,139) SWITCH

VSG1024

S 452 (A,213,136) SWITCH

VSG1024

S 453 (A,187,134) SWITCH

VSG1024

S 454 (A,70,134) SWITCH

VSG1024

S 455 (A,46,134) SWITCH

VSG1024

S 456 (A,23,134) SWITCH

VSG1024

S 458 (A,13,112) SWITCH

VSG1024

S 459 (A,114,136) SWITCH

VSG1024

S 460 (A,91,136) SWITCH

VSG1024

S 461 (A,57,112) SWITCH

VSG1024

S 462 (A,42,112) SWITCH

VSG1024

S 463 (A,27,112) SWITCH

VSG1024

S 464 (A,164,134) SWITCH

VSG1024

S 465 (A,140,134) SWITCH

VSG1024

S 466 (A,86,90) SWITCH

VSG1024

S 467 (A,72,90) SWITCH

VSG1024

S 468 (A,57,90) SWITCH

VSG1024

S 469 (A,42,90) SWITCH

VSG1024

S 470 (A,27,90) SWITCH

VSG1024

S 471 (A,13,90) SWITCH

VSG1024

X 401 (A,149,165) CERAMIC RESONATOR
(5.00 MHz)

VSS1142

CN401 (A,246,165) 17P CONNECTOR

52044-1745

402 FL HOLDER(FE)

VNF1096

404 (A,197,127) CABLE HOLDER(7P)

51063-0705

471 (A,35,176) CABLE HOLDER(3P)

51063-0305

RESISTORS

R 401 (B,144,169)

RS1/16S105J

R 402 (B,223,189)

RS1/16S104J

R 403 (B,220,189)

RS1/16S104J

R 405 (B,228,155)

RS1/16S102J

R 406 (B,226,155)

RS1/16S103J

R 407 (B,78,176)

RS1/16S473J

R 408 (B,80,176)

RS1/16S473J

R 409 (B,75,176)

RS1/16S473J

R 410 (B,73,176)

RS1/16S473J

R 411 (B,229,189)

RS1/16S473J

R 412 (B,234,187)

RS1/16S221J

R 413 (B,234,184)

RS1/16S221J

R 414 (B,234,182)

RS1/16S221J

R 415 (B,234,180)

RS1/16S221J

R 416 (B,234,178)

RS1/16S221J

5	6	
Mark No.	Description	Part No.
R 417	(B,219,182)	RS1/16S101J
R 422	(B,157,169)	RS1/16S104J
R 423	(B,131,167)	RS1/16S104J
R 424	(B,83,176)	RS1/16S104J
R 425	(B,213,182)	RS1/16S104J
R 430	(B,234,175)	RS1/16S0R0J
R 451	(B,236,144)	RS1/16S472J
R 452	(B,234,144)	RS1/16S681J
R 453	(B,187,147)	RS1/16S821J
R 454	(B,166,153)	RS1/16S122J
R 455	(A,45,146)	RD1/4PU681J
R 456	(A,35,144)	RD1/4PU821J
R 457	(A,16,139)	RD1/4PU122J
R 459	(A,109,134)	RD1/4PU472J
R 460	(A,101,135)	RD1/4PU681J
R 461	(B,52,117)	RS1/16S821J
R 462	(B,49,117)	RS1/16S122J
R 463	(B,34,117)	RS1/16S162J
R 464	(B,20,117)	RS1/16S272J
R 465	(A,161,128)	RD1/4PU472J
R 466	(A,151,128)	RD1/4PU681J
R 467	(A,131,128)	RD1/4PU821J
R 468	(B,79,91)	RS1/16S122J
R 469	(B,64,91)	RS1/16S162J
R 470	(B,50,92)	RS1/16S272J
R 471	(B,34,91)	RS1/16S512J
R 472	(B,86,176)	RS1/16S472J
R 473	(B,19,91)	RS1/16S133J

CAPACITORS

C 401	(B,247,155)	CKSRYP103K50
C 402	(B,247,153)	CKSRYP103K50
C 403	(A,234,168)	CEAT221M6R3
C 410	(B,49,186)	CKSRYP103K50
C 411	(B,51,186)	CKSRYP103K50
C 412	(A,42,178)	CEAT470M50
C 418	(B,141,179)	CKSRYP104K16
C 419	(B,103,182)	CKSRYP103K50
C 420	(A,39,185) ELECT. CAPACITOR	CEAT101M35
C 421	(B,160,169)	CKSRYP104K16
C 441	(B,223,176)	CKSRYP103K50
C 442	(A,239,146)	CEAL470M10
C 451	(B,125,166)	CKSRYP102K50
C 452	(B,103,164)	CKSRYP102K50
C 453	(B,122,166)	CKSRYP102K50
C 454	(B,100,164)	CKSRYP102K50
C 481	(B,140,191)	CCSRCH471J50
C 482	(B,126,201)	CCSRCH221J50
C 483	(B,126,199)	CCSRCH221J50
C 487	(B,83,163)	CKSRYP102K50
C 488	(B,79,163)	CKSRYP102K50
C 489	(B,75,163)	CKSRYP102K50
C 490	(A,22,149)	CKSRYP102K50

J ROTARY ENCODER ASSY MISCELLANEOUS

S 457	(A,300,183) SWITCH	VSG1024
S 512	(A,288,223) ROTARY ENCODER (JOG)	XSX3008
S 513	(A,288,152) ROTARY ENCODER	XSX3005
S 514	(A,257,216) SWITCH	VSG1024

7	8	
Mark No.	Description	Part No.
S 515	(A,270,183) SWITCH	VSG1024
S 516	(A,285,183) SWITCH	VSG1024
511	(A,257,172) CABLE HOLDER(7P)	51063-0705

RESISTORS

R 513	(B,270,190)	RS1/16S162J
R 514	(B,280,185)	RS1/16S272J
R 515	(B,295,185)	RS1/16S512J

K POWER KEY ASSY MISCELLANEOUS

S 501	(A,12,174) SWITCH	VSG1024
S 502	(A,20,221) SWITCH	VSG1024
S 503	(A,32,218) SWITCH	VSG1024
S 504	(A,47,218) SWITCH	VSG1024
501	(A,47,210) CABLE HOLDER(3P)	51063-0305

RESISTORS

R 502	(B,7,171)	RS1/16S162J
R 503	(A,15,228)	RD1/4PU272J
R 504	(A,30,228)	RD1/4PU512J

M TRANS4 ASSY MISCELLANEOUS

△ IC 357	(A,85,236) PROTECTOR(800MA)	AEK7008
D 363	(A,88,223) DIODE	S5688G
J 22	JUMPER WIRE	D20PYY0330E
891	(A,70,221) 3P CABLE HOLDER	51048-0300

CAPACITORS

C 406	(A,84,220) ELECT. CAPACITOR	CEAT471M35
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N REGULATOR ASSY MISCELLANEOUS

△ IC 801	(A,147,89) REGULATOR IC	TA7812S
△ IC 802	(A,164,89) REGULATOR IC	TA79012S
△ IC 808	(A,181,89) IC	TA7805S
D 810	(A,172,94) DIODE	MTZJ6R2(B)
CN800	(A,194,113) 11PJUMPER CONNECTOR	52147-1110

RESISTORS

△ R 801	(A,136,95) METAL OXIDE RESISTOR	RS3LMF331J
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CAPACITORS

C 803	(B,147,97)	CKSRYP103K25
C 804	(B,166,97)	CKSRYP103K25
C 805	(A,147,105)	CEJQ101M16
C 806	(A,159,99)	CEAT101M16
C 818	(B,182,95)	CKSRYP103K25
C 819	(A,176,95)	CEAT101M10

O VIDEO ASSY MISCELLANEOUS

IC 301	(B,46,32) VIDEO SW IC	NJM2595M
△ Q 301	(A,86,47) TRANSISTOR	2SD1858X
△ Q 302	(A,66,52) TRANSISTOR	2SB1237X
Q 303	(B,25,83) TRANSISTOR	2SC5938A
D 301	(B,44,40) DIODE	1SS355
D 302	(B,41,45) DIODE	1SS355

Mark No. Description

D 303 (B,82,61) DIODE
 D 304 (B,73,59) DIODE
 D 308 (B,60,23) DIODE
 JA308 (A,14,51) 6P PIN JACK

Part No.

UDZS6R2(B)
 UDZS6R2(B)
 DAN202U
 XKB3049

CN302 (A,64,84) 6P SOCKET
 CN303 (A,62,7) CONNECTOR

KP200TA6L
 CKS3378

RESISTORS

R 299 (B,33,72)
 R 301 (B,34,25)
 R 302 (B,31,60)
 R 303 (B,23,36)
 R 304 (B,49,22)

RS1/16S0R0J
 RS1/16S750J
 RS1/16S750J
 RS1/16S750J
 RS1/16S750J

R 305 (B,23,50)
 R 306 (B,32,54)
 R 307 (B,56,25)
 R 308 (B,57,29)
 R 310 (B,57,31)

RS1/16S750J
 RS1/16S750J
 RS1/16S102J
 RS1/16S102J
 RS1/16S102J

R 311 (B,42,23)
 R 312 (B,60,25)
 ⚠ R 313 (A,85,57) METAL OXIDE RESISTOR
 R 314 (B,84,61)
 R 315 (B,64,59)

RS1/16S102J
 RS1/16S102J
 RS3LMF390J
 RS1/16S152J
 RS1/16S152J

⚠ R 316 (A,67,39) METAL OXIDE RESISTOR

R 317 (B,21,75)
 R 318 (B,27,79)
 R 319 (B,27,77)
 R 391 (B,20,38)

RS3LMF390J
 RS1/16S102J
 RS1/16S122J
 RS1/16S472J
 RS1/16S0R0J

R 392 (B,30,55)

RS1/16S0R0J

CAPACITORS

C 304 (B,33,19)
 C 305 (B,41,19)
 C 306 (B,22,54)
 C 307 (A,31,35)
 C 308 (A,52,53)

CKSRYB221K50
 CKSRYB221K50
 CKSRYB221K50
 CEAT470M25
 CEAT470M25

C 309 (A,32,44)
 C 310 (A,54,42)
 C 311 (B,82,48)
 C 313 (B,76,34)
 C 333 (B,21,81)

CEAT470M25
 CEAT101M16
 CKSRYB473K25
 CKSRYB473K25
 CKSRYB331K50

C 338 (A,60,37)
 C 339 (B,45,49)
 C 340 (B,56,36)
 C 1360(B,18,65)

CEAT101M16
 CKSRYB104K25
 CKSRYB104K25
 CKSRYB103K50

Q DIGITAL INPUT ASSY**MISCELLANEOUS**

F 1901(B,214,228) INDUCTOR
 JA 1900(A,206,201) OPT. LINK IN
 KN1902(A,249,206) SCREW PLATE
 CN1903(A,229,230) CONNECTOR

CTF1295
 GP1FAV51RKBF
 VNE1948
 VKN1186

RESISTORS

R 1900(B,211,215)

RS1/16S101J

CAPACITORS

C 1900(B,205,215)
 C 1903(B,211,230)
 C 1904(A,208,228)
 C 1905(B,233,232)
 C 1906(B,235,232)

CKSRYB104K25
 CKSRYB103K50
 CEAL101M10
 CKSRYB104K25
 CKSRYB103K50

Mark No. Description

C 1907(B,237,232)
 C 1908(B,239,232)

Part No.

CCSRCH101J50
 CKSRYB102K50

S PRIMARY ASSY MISCELLANEOUS

⚠ IC 51 (B,236,11) IC NJM78L05UA
 Q 51 (B,267,14) DIGITAL TR(SC-70) RT1N431M
 ⚠ D 51 (B,298,20) BRIDGE DIODE DF06SA
 D 55 (A,304,21) DIODE 1SR139-400
 D 56 (A,271,21) DIODE 1SS133

D 57 (A,266,25) DIODE 1SS133
 D 58 (A,314,13) DIODE MTZJ5R1(B)
 L 51 (A,253,73) LINE FILTER XTF3004
 H 51 (A,231,34) FUSE CLIP AKR7001
 H 52 (A,250,34) FUSE CLIP AKR7001

J 52 JUMPER WIRE D20PYY0410E
 KN51 (A,318,25) WRAPPING TERMINAL VNF1084
 KN3001(A,223,117) SCREW PLATE VNE1948
 ⚠ RY51 (A,271,57) OE LOWPOWER RELAY ASR7013
 ⚠ T 51 (A,288,56) STANDBY TRANSFORMER ATT7040

⚠ CN51 (A,236,47) AC CODE SOCKET RKP1751
 55 (A,317,9) 4P CABLE HOLDER 51048-0400

RESISTORS

R 52 (A,275,11) RD1/2PM270J
 R 53 (A,307,12) RD1/4PU332J
 R 54 (A,319,16) RD1/4PU103J

CAPACITORS

⚠ C 51 (A,261,64) FILM CAPACITOR ACE7013
 ⚠ C 52 (A,265,57) SAFETY CAPACITOR XCG3010
 C 53 (A,291,21) ELECT. CAPACITOR CEAT102M16
 C 54 (A,300,11) CEAT470M25
 C 55 (A,307,21) CKPUYF103Z25

C 56 (A,311,21) CKPUYF103Z25
 C 57 (A,314,21) CKPUYF103Z25

FM/AM TUNER UNIT

FM/AM TUNER UNIT has no service part.

6. ADJUSTMENT

There is no information to be shown in this chapter.

7. GENERAL INFORMATION

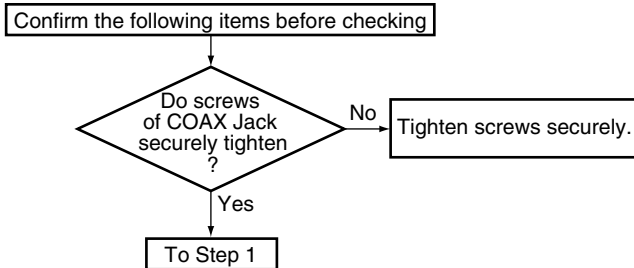
7.1 DIAGNOSIS

7.1.1 DSP TROUBLESHOOTING

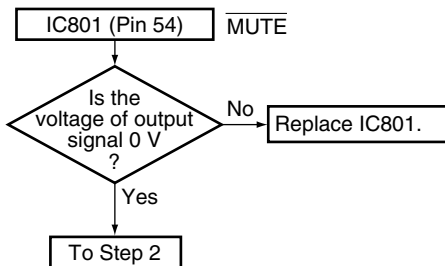
■ Troubleshooting for all destination

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

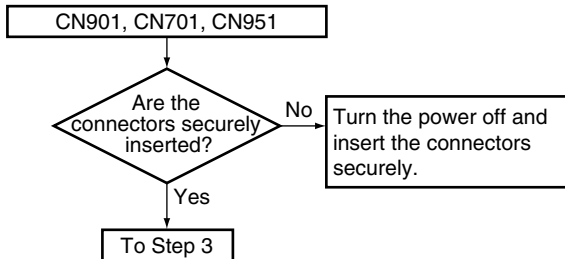
Step 0: Preliminary confirmation



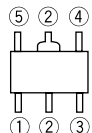
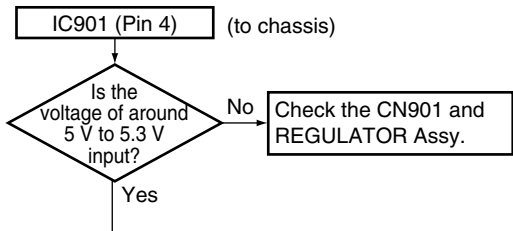
Step 1: MUTE pin



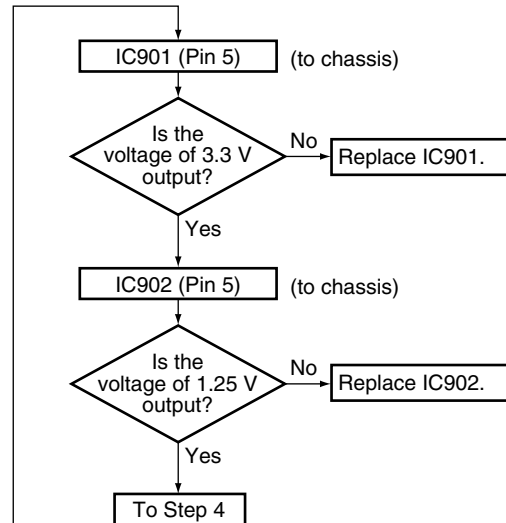
Step 2: BtoB connector



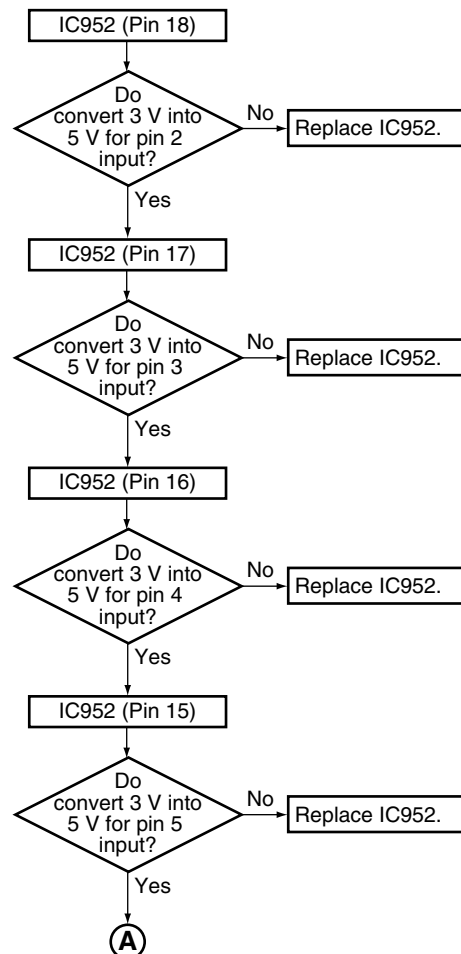
Step 3: Regulator IC



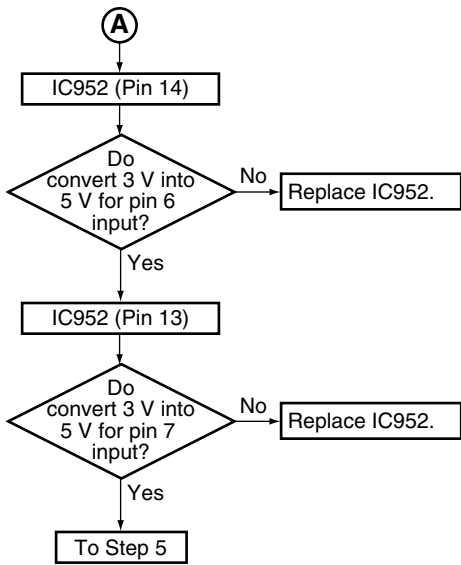
Part name and Pin arrangement of IC901 and IC902



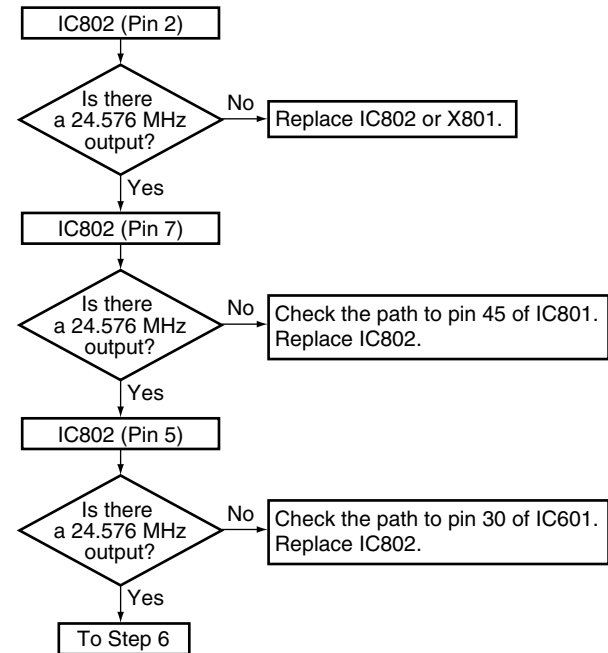
Step 4: 3 V to 5 V conversion



A
B
C
D
E
F

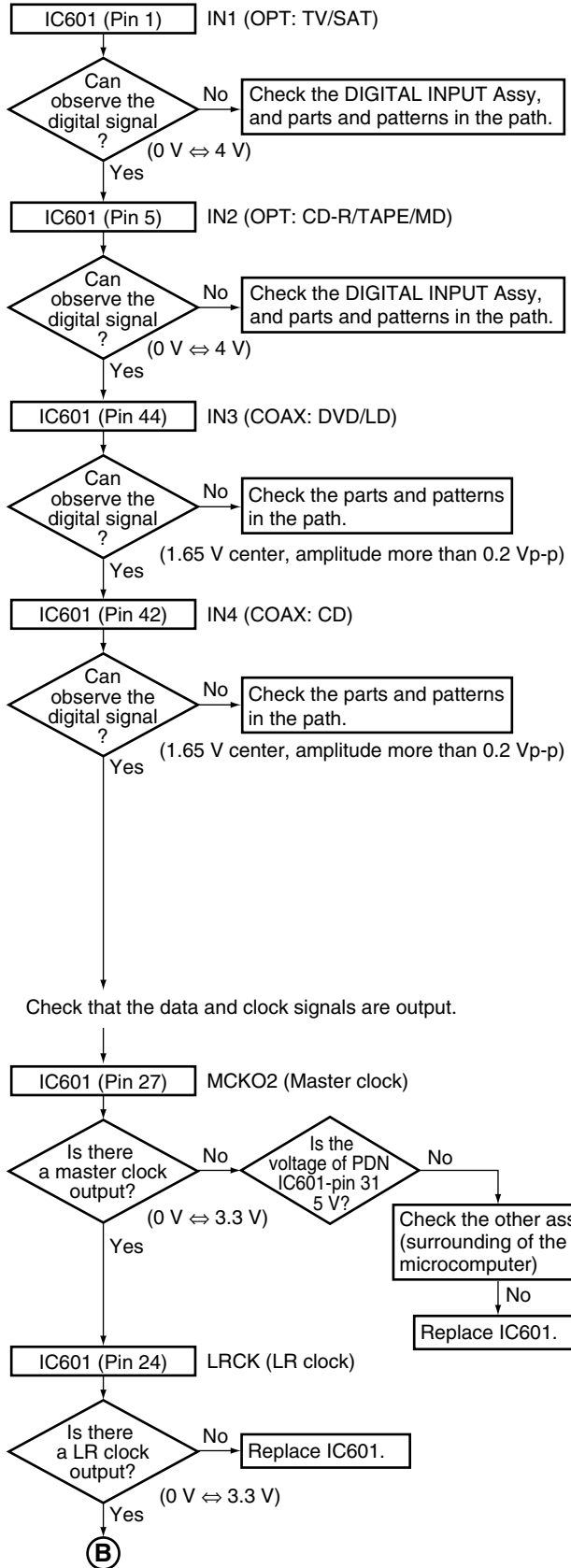


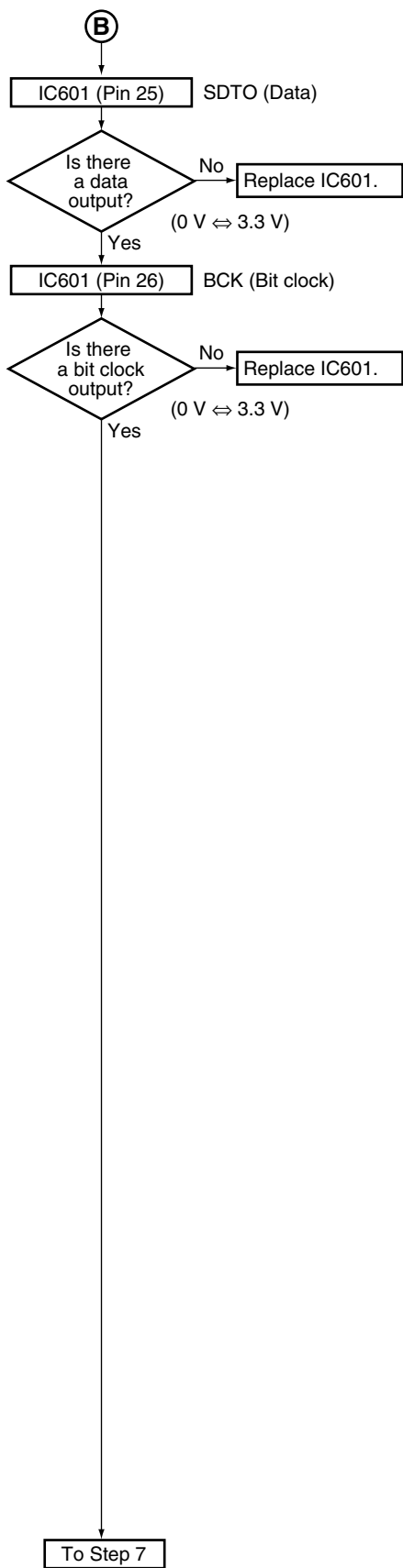
Step 5: X'tal



Step 6: DIR

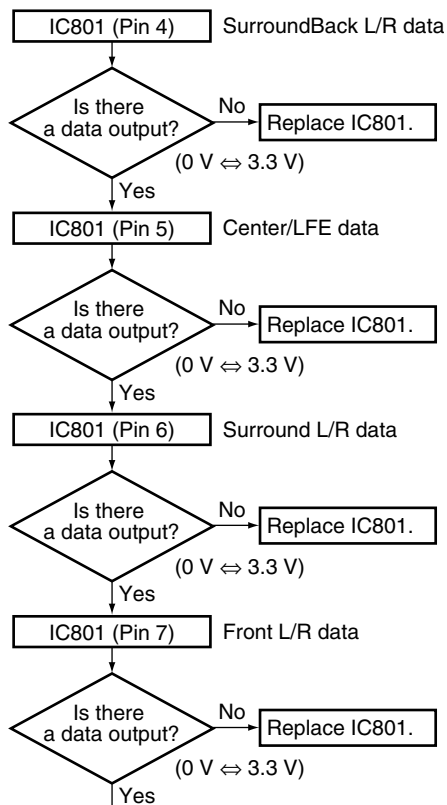
Check that the SPDIF signal is output.
Check that changes by pulling out and inserting the digital input lines.



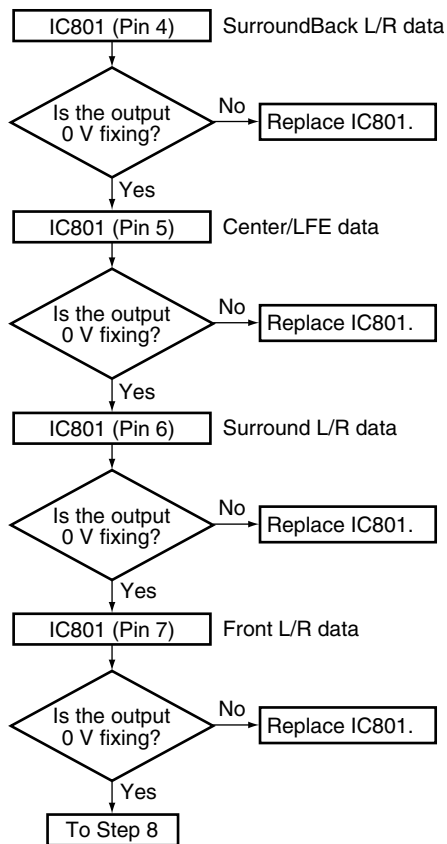


Step 7: DSP output (digital)

Digital output of each CH when inputting the digital signal with audio.



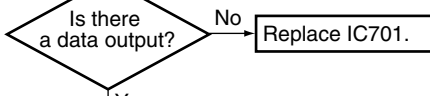
Digital output of each CH when inputting the digital signal (-∞ dB (no audio)).



Step 8: Codec output (analog)

A Analog output of each CH when inputting the digital signal with audio.

IC701 (Pin 21) SurroundBack L out



B Is there a data output? No Replace IC701. Yes

IC701 (Pin 22) SurroundBack R out

C Is there a data output? No Replace IC701. Yes

IC701 (Pin 23) Center out

D Is there a data output? No Replace IC701. Yes

IC701 (Pin 24) LFE out

E Is there a data output? No Replace IC701. Yes

IC701 (Pin 25) Surround L out

F Is there a data output? No Replace IC701. Yes

IC701 (Pin 26) Surround R out

G Is there a data output? No Replace IC701. Yes

IC701 (Pin 27) Front L out

H Is there a data output? No Replace IC701. Yes

IC701 (Pin 28) Front R out

I Is there a data output? No Replace IC701. Yes

IC701 (Pin 29) Front L out

J Is there a data output? No Replace IC701. Yes

IC701 (Pin 30) Front R out

K Is there a data output? No Replace IC701. Yes

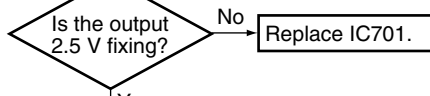
IC701 (Pin 31) Front L out

L Is there a data output? No Replace IC701. Yes

IC701 (Pin 32) Front R out

Analog output of each CH when inputting the digital signal (-∞ dB (no audio)).

IC701 (Pin 21) SurroundBack L out



IC701 (Pin 22) SurroundBack R out

Is the output 2.5 V fixing? No Replace IC701. Yes

IC701 (Pin 23) Center out

Is the output 2.5 V fixing? No Replace IC701. Yes

IC701 (Pin 24) LFE out

Is the output 2.5 V fixing? No Replace IC701. Yes

IC701 (Pin 25) Surround L out

Is the output 2.5 V fixing? No Replace IC701. Yes

IC701 (Pin 26) Surround R out

Is the output 2.5 V fixing? No Replace IC701. Yes

IC701 (Pin 27) Front L out

Is the output 2.5 V fixing? No Replace IC701. Yes

IC701 (Pin 28) Front R out

Is the output 2.5 V fixing? No Replace IC701. Yes

IC701 (Pin 29) Front L out

Is the output 2.5 V fixing? No Replace IC701. Yes

IC701 (Pin 30) Front R out

Is the output 2.5 V fixing? No Replace IC701. Yes

End

7.1.2 DISASSEMBLY

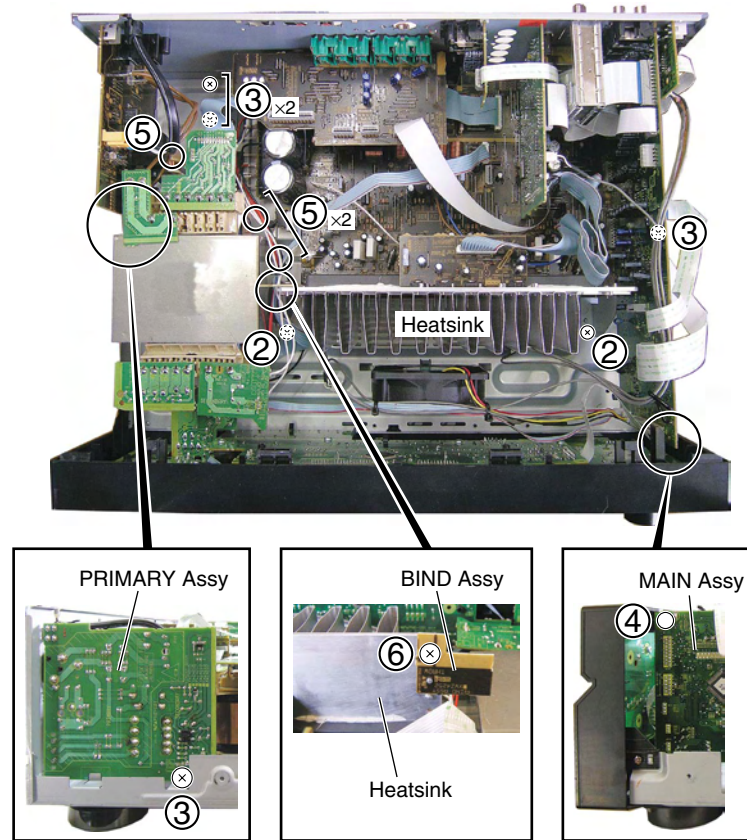
Note: Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

Diagnosis of the Unit

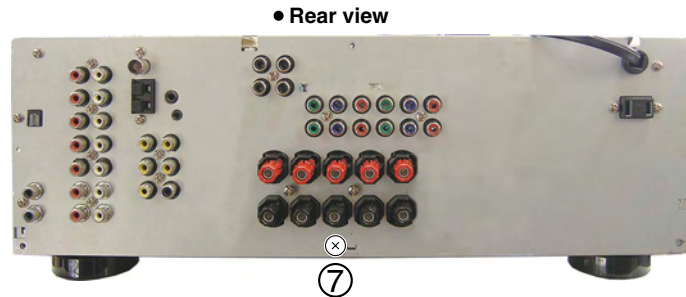
Caution:

Heatsink section in work becomes hot, and be careful with it.

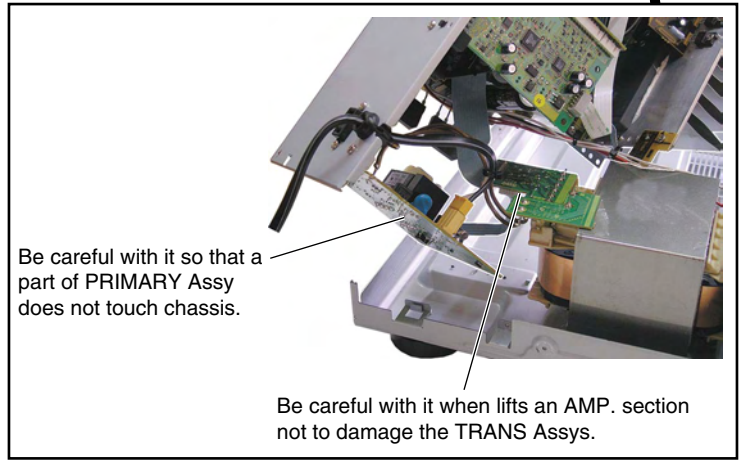
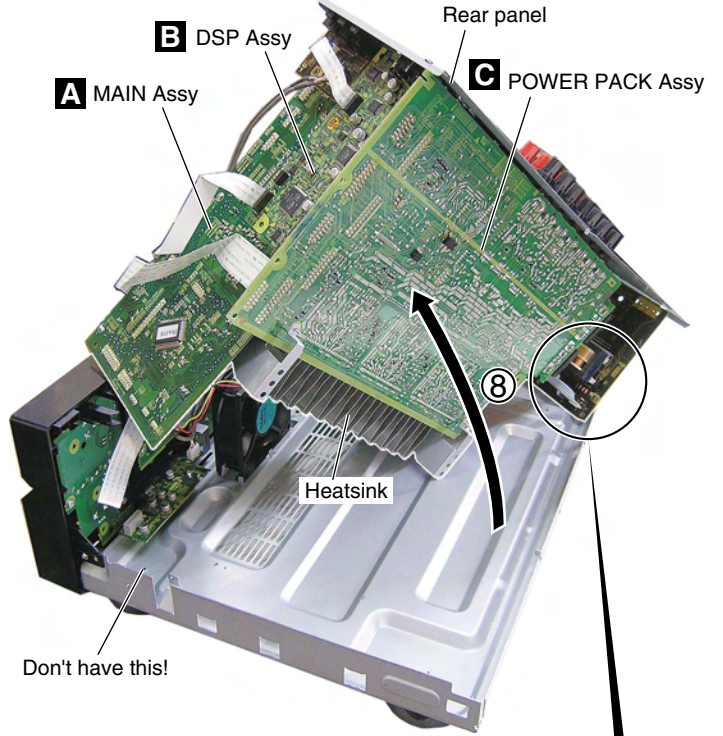
- ① Remove the bonnet by removing the six screws.
- ② Remove the two screws.
- ③ Remove the four screws.
- ④ Remove the push rivet.
- ⑤ Release the three binders.
- ⑥ Remove the BIND Assy by removing the one screw.



- ⑦ Remove the one screw.

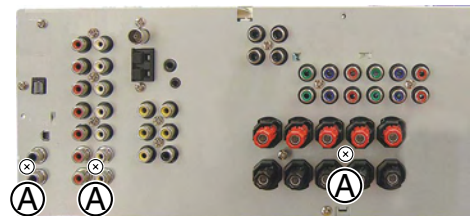


⑧ Arrange the unit as shown in the photo below.



Caution:

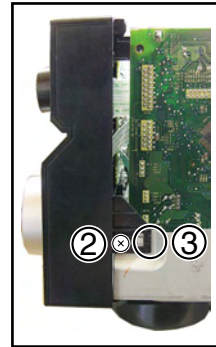
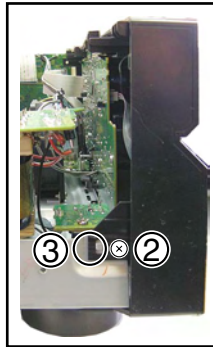
During diagnosis, be sure NOT to remove the three screws marked (A) in the above photo. There is the case that a product does not work normally when removes these screws.



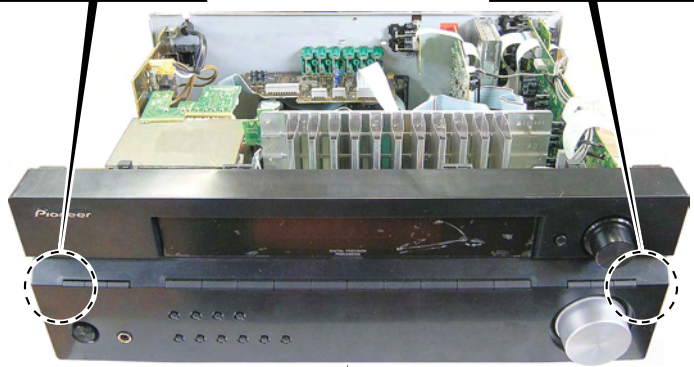
Front Panel Section

A

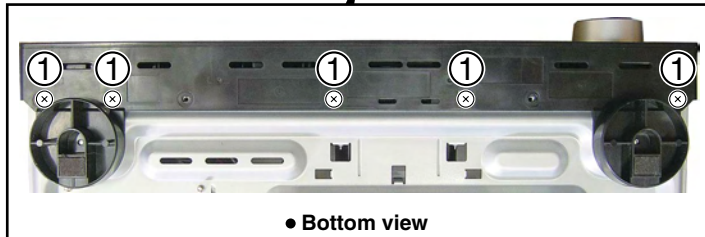
- ① Remove the five screws.
- ② Remove the two screws.
- ③ Unhook the two hooks.



B



C

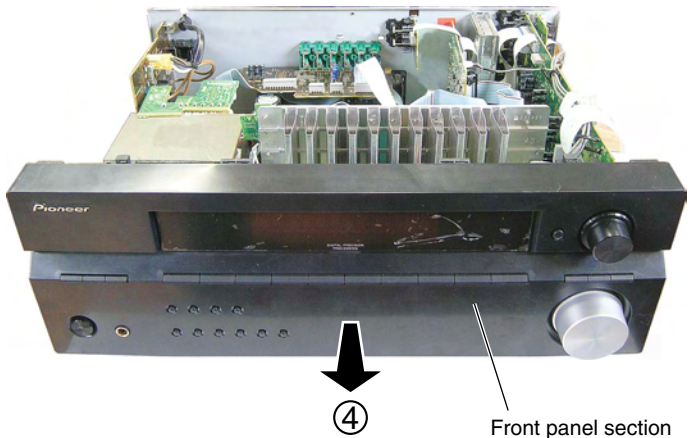


D



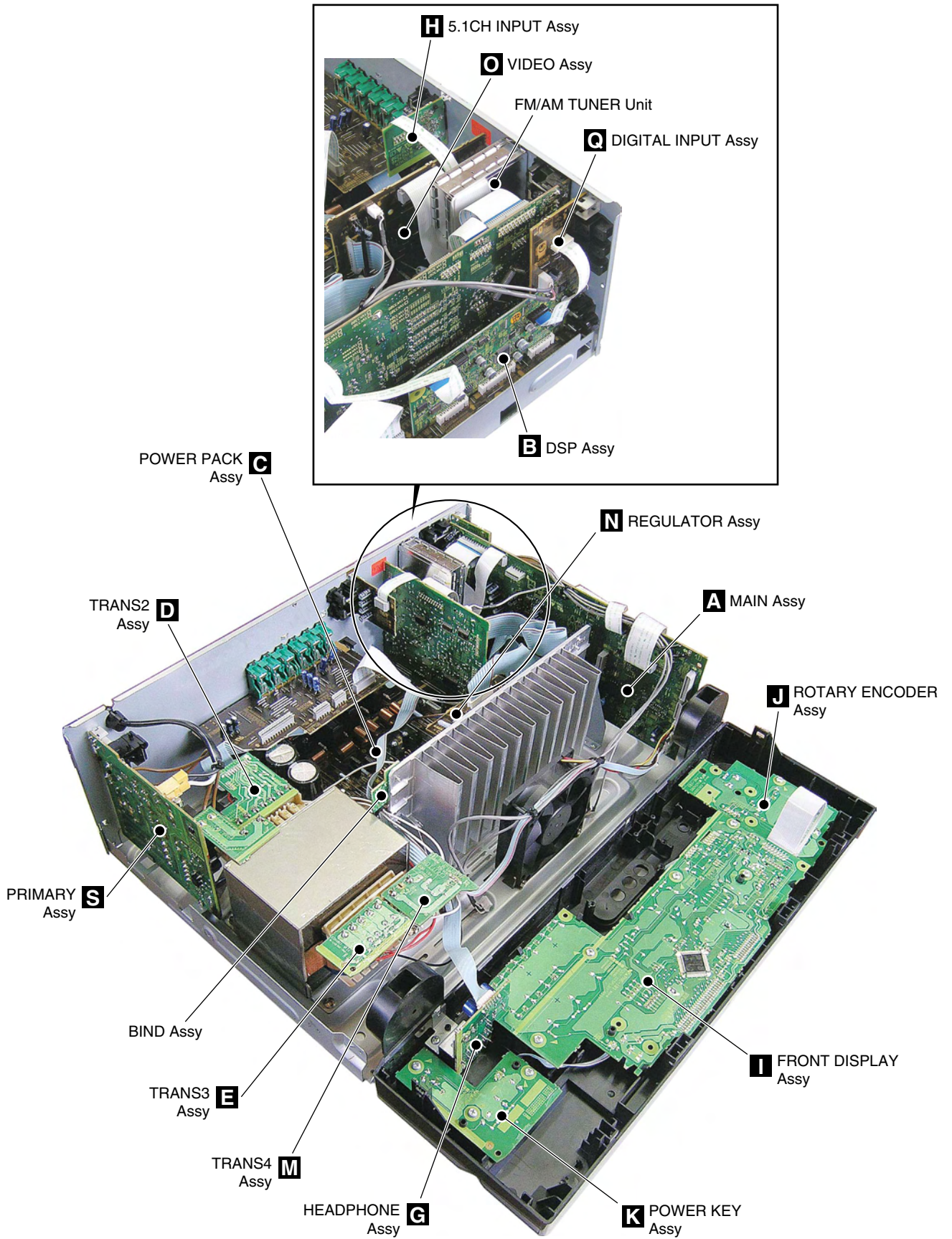
- ④ Remove the front panel section.

E



F

PCB Location



• Pin Function

No.	Port	Pin Name	I/O	Pin Function
1	P96/ANEX1/SOUT4	USDAI	O	Data out to USB
2	P95/ANEX0/CLK4	USCLK	O	Clock signal from USB
3	P94/DA1/TB4IN	DISP EN	O	Enable signal to display u-com
4	P93/DA0/TB3IN	DISP RDY	I	Ready signal from display u-com
5	P92/TB2IN/SOUT3	DISP DI/OSD DT	O	Data out to display u-com
6	P91/TB1IN/SIN3	DISP DO	I	Data in from display u-com
7	P90/TB0IN/CLK3	DISP CLK/OSD CLK	O	Clock signal to display u-com
8	BYTE	GND	I	Ground
9	CNVss	CNVSS	I	Terminate to GND with resistor
10	P87/XCIN	I2C CK EEPROM/DVC	O	I2C bus for EEPROM, DVC
11	P86/XCOUT	I2C DT EEPROM/DVC	I/O	I2C bus for EEPROM, DVC
12	RESET	XRESET	I	Reset signal input
13	XOUT	XOUT	O	X'tal output
14	VSS	GND	I	Ground
15	XIN	XIN	I	X'tal input
16	VCC	5V	I	Power supply
17	P85/NMI	NMI	I	Pull-up to +5 V with resistor
18	P84/INT2	ACIN(WAKEUP)	I	AC pulse in
19	P83/INT1 P85/NMI	USB TREQ	I	Request from TCC760 to main u-com
20	P82/INT0	1W WUP	I	Wake up signal from display u-com (pull-down)
21	P81/TA4IN/U	UART SW	O	XM/SIRIUS UART BUS SWITCH control
22	P80/TA4OUT/U	USB HREQ	O	Request from main u-com to TCC760
23	P77/TA3IN	USB CTL	O	From main u-com to USB power switch IC
24	P76/TA3OUT	USB XFLAG	I	From USB power switch IC to main u-com
25	P75/TA2IN/W	SIRIUS RST	O	Reset signal to SIRIUS
26	P74/TA2OUT/W	USB XRST	O	Reset signal to USB (pull-down)
27	P73/CTS2/RTS2/TA1IN/V	USB CS	O	From main u-com to TCC760
28	P72/CLK2/TA1OUT/V	DISP RST	O	Reset signal to display u-com
29	P71/RXD2/SCL/TA0IN/TB5IN	XM/SIRIUS RX	I	
30	P70/TXD2/SDA/TA0OUT	XM SIRIUS TX	O	Pull-up
31	P67/TXD1	TX (SR+)	O	SR+ communication
32	P66/RxD1	RX (SR+)	I	SR+ communication
33	P65/CLK1	CLK	O	It is necessary when writing for JIG
34	P64/CTS1/RTS1/CLKS1	232C CTS	O	For rewriting 232C (Admit communication)
35	P63/TXD0	DSP DI	O	Data output signal for communication with DSP and DIR
36	P62/RxD0	DSP DO	I	Data input signal for communication with DSP
37	P61/CLK0	DSP CLK	O	Clock signal for communication with DSP and DIR
38	P60/CTS0/RTS0	DSP RST	O	Reset signal for DSP
39	P57/RDY/CLKOUT	DSP SS	O	Strobe select signal to DSP
40	P56/ALE	BUSY	I	Use it in MCACC
41	P55/HOLD	DSP HREQ	I	DSP error detect signal
42	P54/HLDA	DSP MODE	O	Mode select of DSP (ROM/RAM)
43	P53/BCLK	DSP MUTE	O	DSP ASSY mute
44	P52/RD	ADMODE	O	DSP ASSY
45	P51/WRH/BHE	DIR DO	I	Data input signal for communication with DIR/DAC
46	P50/WRL/WR	DIR CS	O	Chip select signal for communication with DIR/DAC
47	P47/CS3	LSSN	O	DSP ASSY
48	P46/CS2	DIR CDC RST	O	Reset signal for DIR CODEC
49	P45/CS1	DIR ERR	I	lock/unlock signal
50	P44/CS0	XTL0	O	DIR X'tal change

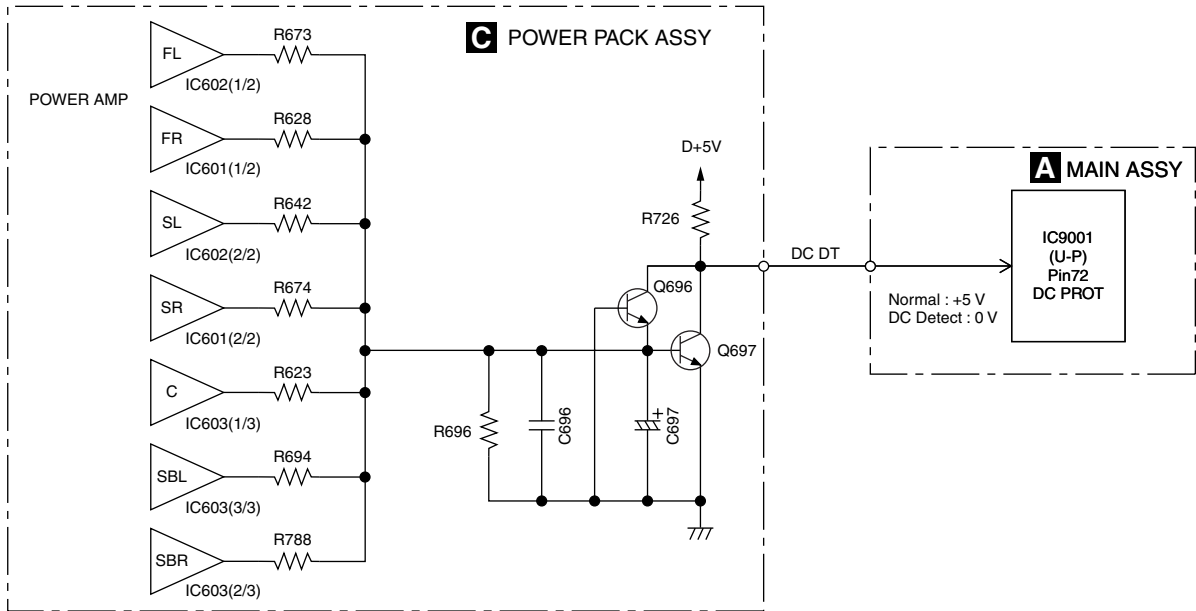
• Pin Function

No.	Port	Pin Name	I/O	Pin Function
51	P43/A19	NECK SELECT	O	For 8ohm spk impedance: *H at Adv , Sandard, 5.1Multich, speaker A+B (7ch model). For 6 ohm spk impedance: L
52	P42/A18	XM DAC_RST	O	
53	P41/A17	AMUTE	O	System mute
54	P40/A16	RY_B	O	Speaker B relay-on / OFF at 916, 816 and 516. This RY_B is used for SW relay at 316.
55	P37/A15	RY_C/R	O	Rear one / center relay-on / OFF
56	P36/A14	RY_A	O	Speaker A relay-on / OFF
57	P35/A13	XM_ERR	I	
58	P34/A12	RY-AC	O	AC relay on/off
59	P33/A11	MCACC/FRONT IN	O	For analog switching control
60	P32/A10	LOW_CONSUMPTION	O	When 1 minutes passed after power off and then go into stop mode and port L, else H.
61	P31/A9	EVR CLK	O	Clock signal for Function and E-volume
62	Vcc	5V	I	
63	P30/A8/_/D7	EVR DT	O	Data signal for Function and E-volume
64	Vss	GND	I	
65	P27/A7/(D7/D6)	VIDEO4	O	917: SYNC DETECT , others: COMONENT VIDEO INH
66	P26/A6/(D6/D5)	COMP VideoB	O	Component terminal control
67	P25/A5/(D5/D4)	COMP VideoA/HPDIN	O	917: HDMI HOT PLUG DETECT, others: COMPONENT VIDEO A
68	P24/A4/(D4/D3)	SW DET	I	"H": SW YES, "L": SW NO
69	P23/A3/(D3/D2)	VIDEO3/EXP CE	O	917: EXPANDER CE , others: VIDEO3
70	P22/A2/(D2/D1)	VIDEO2/EXP DT	O	917: EXPANDER DATA ,others: VIDEO2
71	P21/A1/(D1/D0)	VIDEO1/EXP CLK	O	917: EXPANDER CLK , others: VIDEO1
72	P20/A0/(D0/_)	DC PROT	I	Amplifier DC detection. H:Normal, L:Abnormal
73	P17/D15/INT5	OL DET	I	Amplifier overload detection. H:Normal, L:Abnormal
74	P16/D14/INT4	DSP OVERLOAD	I	ANALOG OVER LOAD detect (H : detect)
75	P15/D13/INT3	RDS CLK/XM LSDP	I	RDS clock in signal
76	P14/D12	RDS DT/XM LINKACTIVE	I	RDS data in signal
77	P13/D11	RDS FM+/XM RST	O	RDS power supply. FM: Low, AM:High
78	P12/D10	XM ANT_REV	I	
79	P11/D9	XM SGNL_SW	O	
80	P10/D8	XM SC_RATE	O	
81	P07/D7	TUNER DO	I	Data input signal for tuner control
82	P06/D6	TUNER CLK	O	Clock signal for tuner control
83	P05/D5	TUNER DI	O	Data output signal for tuner control
84	P04/D4	TUNER CE	O	Chip select signal for tuner control
85	P03/D3	6 OHM	O	If stop mode, port L, else according to setting (J model No connect)
86	P02/D2	OSD RST	O	
87	P01/D1	OSD CS	O	
88	P00/D0	DECO MUTE	I	1st DSP detect port
89	P107/AN7/KI3	XPROTECT	I	Power supply abnormal condition detection. H: Normal, L: Abnormal.
90	P106/AN6/KI2	EXPANDER ST	O	Master volume ATT control (-15dB or less : L)
91	P105/AN5/KI1	XM PWR	O	
92	P104/AN4/KI0	Comp Video INH/SY DET	I/O	917: SYNC DETECT , others: COMONENT VIDEO INH
93	P103/AN3	XM DT4_MODE	I	
94	P102/AN2	SIMUKE1	I	Input 1 to switch region
95	P101/AN1	SIMUKE2	I	Input 2 to switch region
96	AVSS	AVSS	I	connects with VCC.
97	P100/AN0	HP DET	I	HP detection H:detected.
98	VREF	VREF	I	connects with VCC.
99	AVcc	AVCC	I	connects with VCC.
100	P97/ADTRG/SIN4	USDAO	I	data input from USB

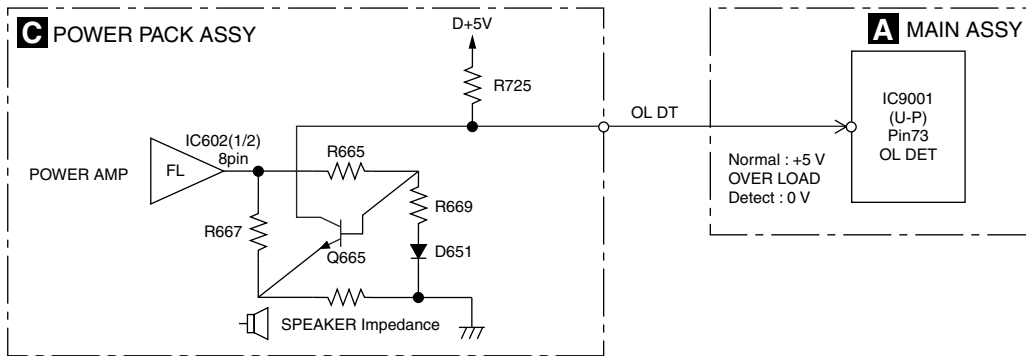
7.3 EXPLANATION

7.3.1 DETECTION CIRCUIT

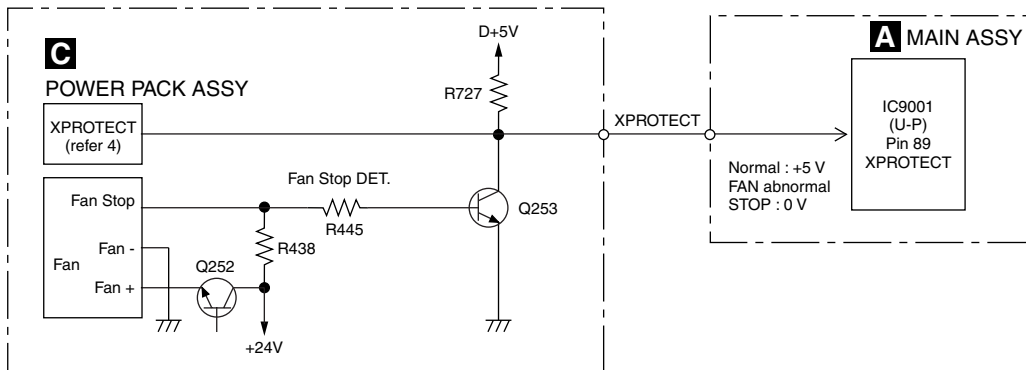
1. DC Derection Circuit Diagram : Example of VSX-917V/KUXJ/CA



2. Overload Detection Circuit Diagram: Example of VSX-917V/KUXJ/CA FRONT Channel



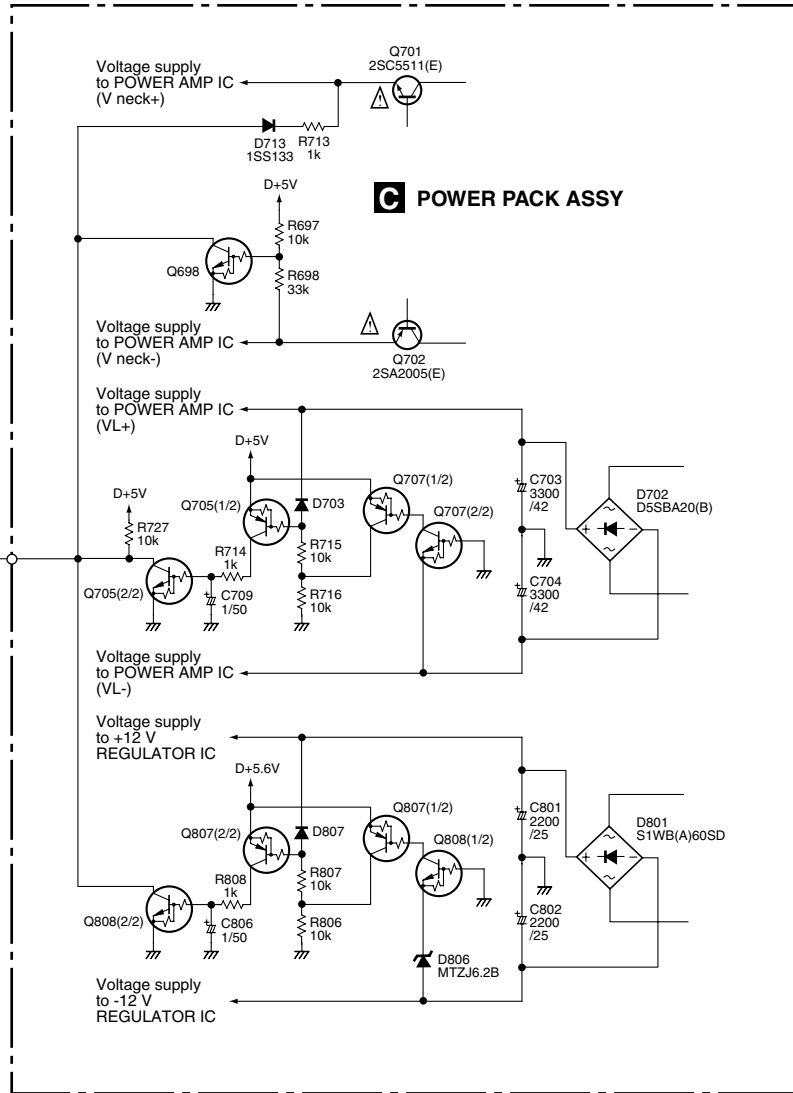
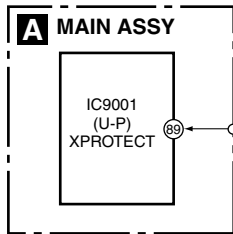
3. Fan Stop Protection Circuit Diagram



4. XPROTECT Detection Circuit Diagram

A When below 6 kind of voltage supply become to be short circuit to GND, XPROTECT circuit work and U-P input port voltage change from +5 V to 0 V. The U-P detect this condition as ERROR.

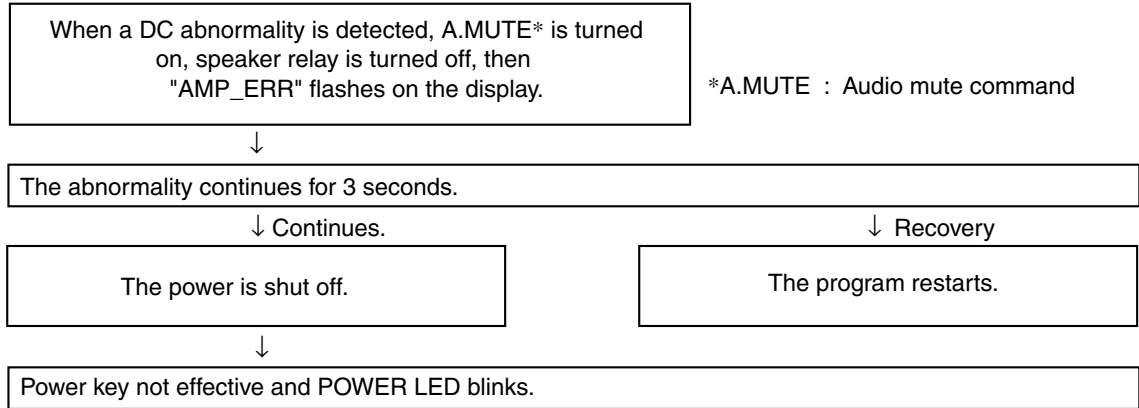
- Voltage supply to POWER AMP IC (V neck+)
- Voltage supply to POWER AMP IC (V neck-)
- Voltage supply to POWER AMP IC (VL+)
- Voltage supply to POWER AMP IC (VL-)
- Voltage supply to +12 V REGULATOR IC
- Voltage supply to -12 V REGULATOR IC



1. DC-abnormality detection

DC detection is only 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".
 If the "L" is detected, the microprocessor will perform as following flow chart.

In the case of simultaneous detection with the overload protection circuit, DC-abnormality detection is performed preferentially to overload detection.



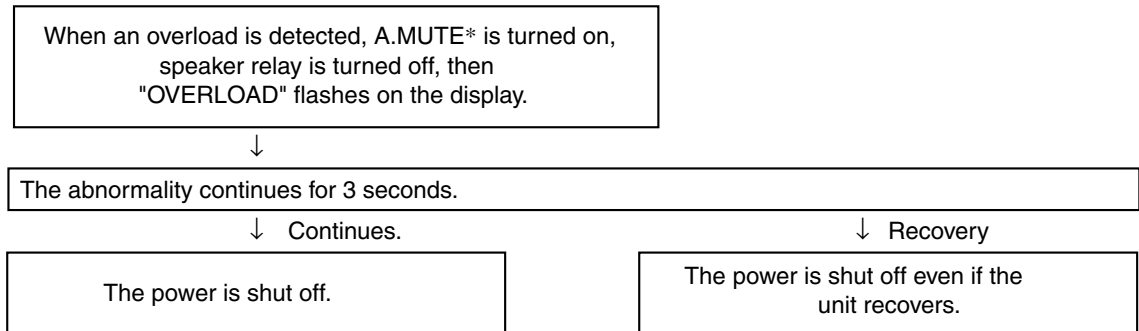
*A.MUTE : Audio mute command

However, when the following keys are pushed so that the key input of a line and the service can be carried out, power can be on.

- ① TESTMODE ON (A55F+A55F)
 - ② When power off, push FRONT ENTER key + AUTO SURR/DIRECT key continuously 2sec.
 (②: When a DC abnormality is detected and the power is shut off.)
- Any other key input from front panel or remote control will not be detected.

2. Overload detection

If the speaker terminals are short-circuited or low-load driving is detected, the OL_DET port becomes "L".
 If the "L" is detected, the microprocessor will perform as following flow chart.



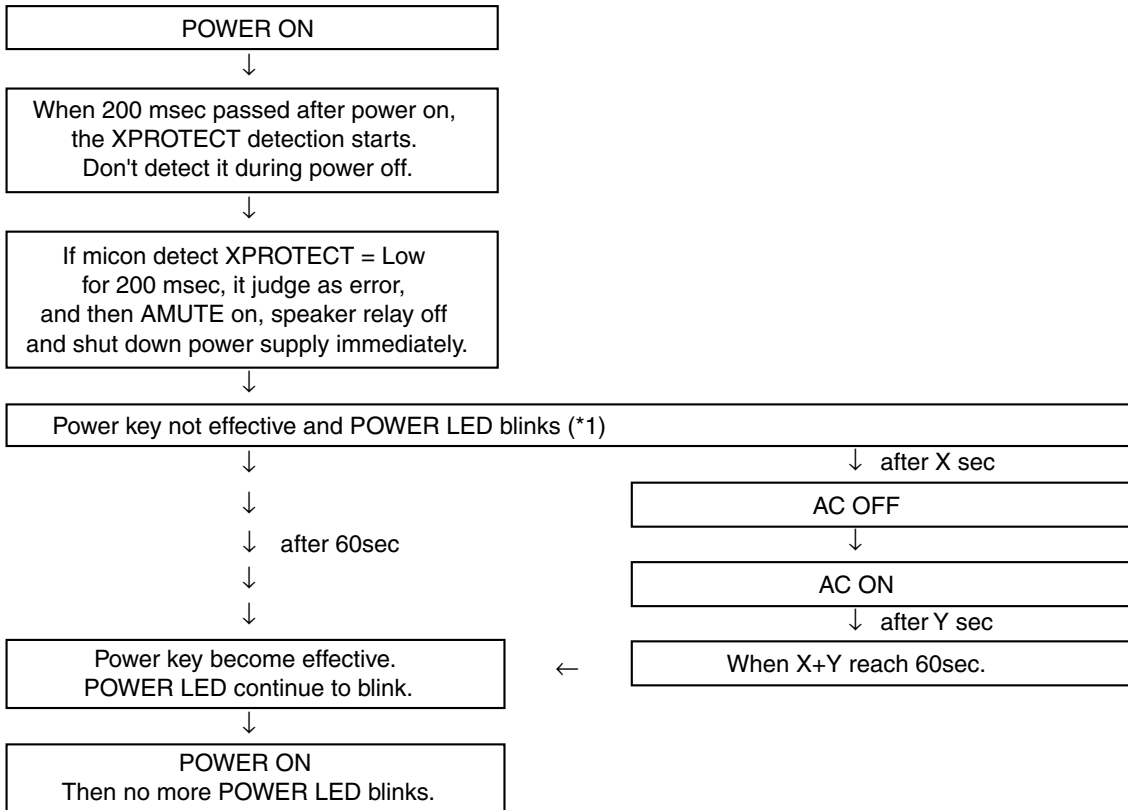
3. XPROTECT detection

XPROTECT is started to be monitored 200msec after power on.

XPROTECT port is checked every 20msec.

If Low level (ERROR) is recognized during consecutive 9 times, micon judge it as XPROTECT ERROR.

It processes more preferentially than DC abnormal detection and overload detection.



(*1) However, when the following keys are pushed so that the key input of a line and the service can be carried out, power can be on.

① TESTMODE ON (A55F+A55F)

② When power off, push FRONT ENTER key + AUTO SURR/DIRECT key continuously 2sec.

(Effective, only when power-off is carried out by DC detection / XPROTECT detection)

Any other key input from front panel or remote control will not be detected.

4. Fan stop detection operation flow in the XPROTECT detection

If the fan is forcibly stopped or become out of order, the 'XPROTECT' port becomes "L". Then an abnormality of fan is detected.

- Detection routine and recovery is same as "3. XPROTECT detection".

7.3.3 AMPLIFIER FAILURE DIAGNOSIS FLOW CHART

■ Amplifier failure diagnosis flow chart

When DC detection is activated ("AMP_ERR" flashes on the display), failure (damage) of the power amplifier section is considered.

Caution:

When releasing the lock state of power key before repair, please be careful because there is the possibility that more damages will occur when turning on the power once again!

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

1) Are there any Fuses and IC protectors open?

↓

2) After turn on the power, confirm that the supply voltage of the point that can be measured is appropriate. (Particularly the supply voltage of the power Tr and drive step)

↓

3) Whether the voltage of pin2 and pin5 of IC601, IC602 or IC603 is equal to (VL-0.7V). If not (eg, equal to VH), then change the corresponding power pack IC601, IC602 or IC603.

↓

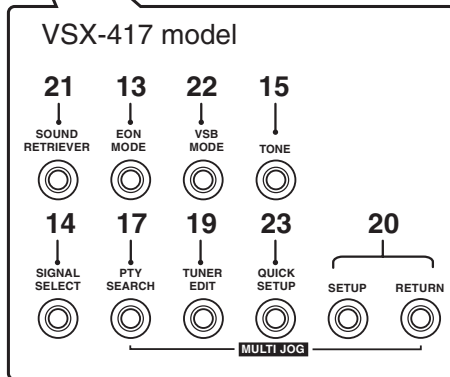
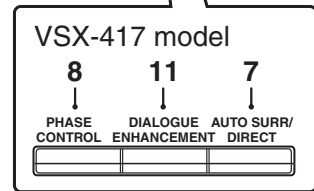
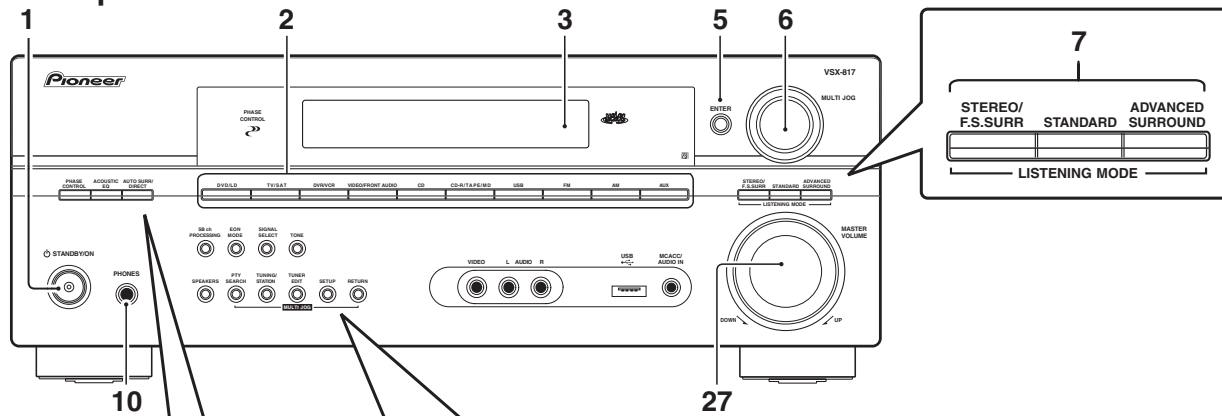
4) Furthermore, check the output DC voltage of each channel of power pack IC601, IC602 and IC603 to limit the failure channel and identify the defect power pack.

↓

• After identify the failure channel, check that each part is not damaged (resistor, diode... etc. value / open / short)

8. PANEL FACILITIES

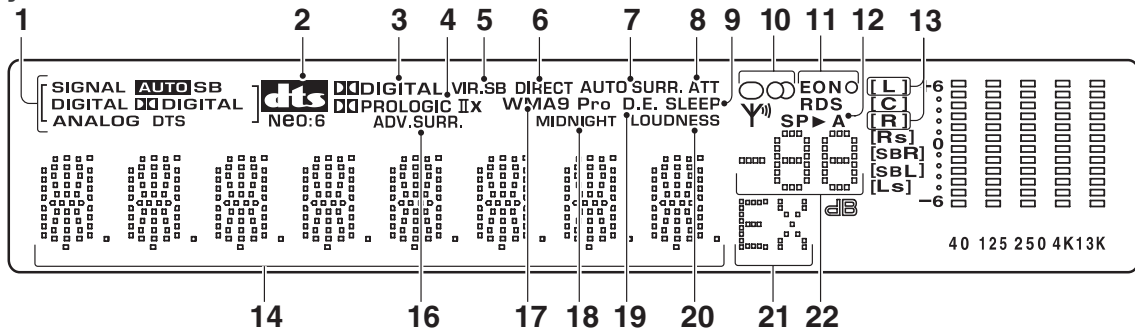
Front panel Illustration shows the VSX-817 model



- 1** **STANDBY/ON**
- 2** **Input select buttons**
Selects an input source.
- 3** **Character display**
See Display.
- 5** **ENTER**
- 6** **MULTI JOG dial**
The **MULTI JOG** dial performs a number of tasks. Use it to select options after pressing the designated **MULTI JOG** buttons.
- 7** **LISTENING MODE buttons**
 - STEREO/F.S.SURR**
Switches between stereo playback and Front Stage Surround Advance modes.
 - STANDARD**
Press for Standard decoding and to switch between the various **Pro Logic II** options.
 - ADVANCED SURROUND**
Switches between the various surround modes.
 - AUTO SURR/DIRECT**
Switches between Auto surround mode (Auto playback) and Stream Direct playback. Stream Direct playback bypasses the tone controls for the most accurate reproduction of a source.
- 8** **PHASE CONTROL**
Press to switch on/off Phase Control.
- 9** **ACOUSTIC EQ**
Press to select an Acoustic Calibration EQ setting.

- 10 PHONES jack**
Use to connect headphones (when connected, there is no sound output from the speakers).
- 11 DIALOGUE ENHANCEMENT**
Use to make dialog stand out when watching TV or a movie .
- 12 SB ch PROCESSING**
Selects the surround back channel mode or virtual surround back mode
- 13 EON MODE**
Use to search for programs that are broadcasting traffic or news information.
- 14 SIGNAL SELECT**
Selects an input signal.
- 15 TONE**
Press this button to access the bass and treble controls, which you can then adjust with the **MULTI JOG** dial.
- 16 SPEAKERS**
Use to change the speaker system and the impedance setting.
- 17 PTY SEARCH**
Use this button to search for RDS Program types.
- 18 TUNING / STATION**
Selects the frequency and station presets when using the tuner.
- 19 TUNER EDIT**
Memorizes/names stations for recall.
- 20 System Setup menu controls**
 - SETUP**
Use with the **MULTI JOG** dial to access the System Setup menu.
 - RETURN**
Confirms and exits the current menu.
- 21 SOUND RETRIEVER**
Press to restore CD quality sound to compressed audio sources.
- 22 VSB MODE**
Press to switch on/off Virtual Surround Back (VSB) mode.
- 23 QUICK SETUP**
See Using the Quick Setup.
- 27 MASTER VOLUME**

Display *Illustration shows the VSX-817 model*



1 SIGNAL SELECT indicators

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

AUTO

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

DIGITAL

Lights when a digital audio signal is detected.

DTS

Lights when a source with DTS encoded audio signals is detected.

DIGITAL

Lights when a Dolby Digital encoded signal is detected.

ANALOG

Lights when an analog signal is detected.

2


Lights to indicate decoding of a DTS multichannel signal.

3 DIGITAL

Lights to indicate decoding of a Dolby Digital multichannel signal.

4

PRO LOGIC II

 **PRO LOGIC II** lights to indicate Pro Logic II decoding (see Listening in surround sound for more on this).

5 **VIR.SB**

Lights during Virtual surround back processing.

6 **DIRECT**

Lights when source Stream Direct playback is in use. Stream Direct playback bypasses the tone controls for the most accurate reproduction of a source.

7 **AUTO SURR.**

Lights when the Auto Surround feature is switched on (see Auto playback).

8 **ATT**

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

9 **SLEEP**

Lights when the receiver is in sleep mode.

10 **Tuner indicators**

/ MONO

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


/ STEREO

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

/ TUNED

Lights when a broadcast is being received.

11 **EON/RDS indicators**

EON - Lights when the EON mode is set, and flashes during an EON broadcast. The  indicator lights when the current station carries the EON service.

RDS - Lights when an RDS broadcast is received.

12 **Speaker indicator**

Shows if the speaker system is on or not.

SP > A means the speakers are switched on.

SP > means the headphones are connected.

13 **Sound Retriever indicators**

Light when the Sound Retriever is switched on.

14 **Character display**

16 **ADV.SURR (Advanced Surround)**

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

17 **WMA9 Pro**

Lights to indicate decoding of a WMA9 Pro signal.

18 **MIDNIGHT**

Lights during Midnight listening.

19 **D.E.**

Lights when Dialog Enhancement is switched on.

20 **LOUDNESS**

Lights during Loudness listening.

21 **EX (VSX-817 model only)**

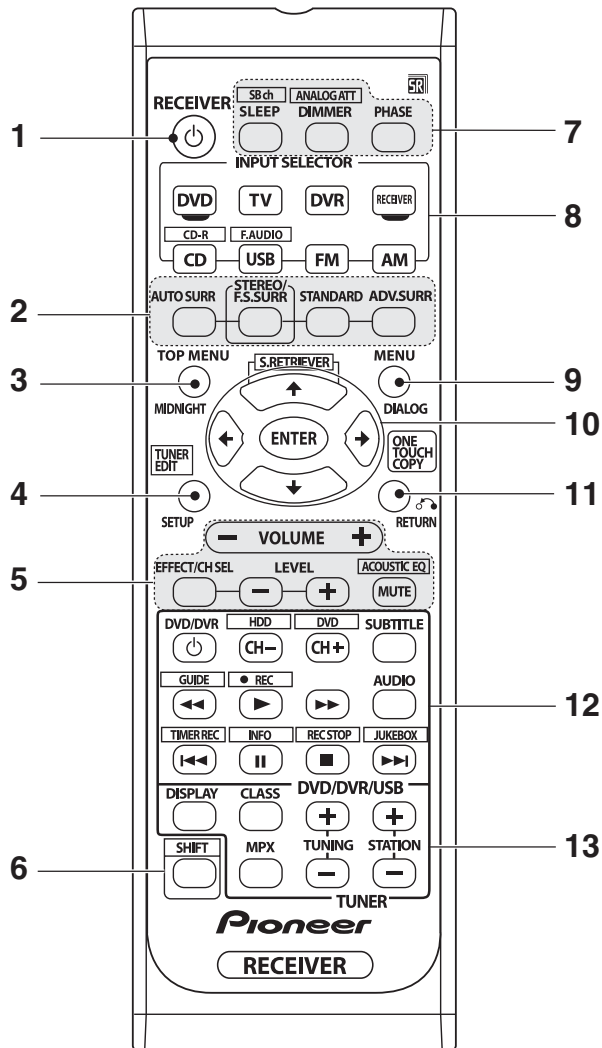
Lights when a Dolby Digital Surround EX encoded signal is detected.

22 **Master volume level indicators**

Remote control

Illustration shows the VSX-817 model

A



B

C

D

E

F

1 RECEIVER

Switches the receiver between standby and on.

2 Listening mode buttons

AUTO SURR

Switches between Auto surround mode (Auto playback) and Stream Direct playback. Stream Direct playback bypasses the tone controls for the most accurate reproduction of a source.

STANDARD

Press for Standard decoding and to switch between Pro Logic II options.

STEREO/F.S.SURR

Switches between stereo playback and Front Stage Surround Advance modes.

ADV.SURR

Switches between the various surround modes.

3 TOP MENU

Displays the disc "top" menu of a DVD.

MIDNIGHT/LOUDNESS

Switches to Midnight or Loudness listening.

4 TUNER EDIT*

Memorizes/names stations for recall.

SETUP

Press to access the System Setup menu. Also functions as the **SETUP** button for DVD/DVR units.

5 RECEIVER CONTROL buttons

VOLUME +/-

Use to set the listening volume.

EFFECT/CH SEL

Press repeatedly to select a channel, then use **LEVEL +/-** to adjust the level. Also adjusts the level of the Advanced Surround effects as well as Dolby Pro Logic IIx Music/Dolby Pro Logic II Music and (VSX-817 only) Neo:6 music parameters. You can then use the **LEVEL +/-** buttons to make these adjustments.

LEVEL +/-

Use to adjust the effect and channel levels.

MUTE

Mutes/unmutes the sound.

6 SHIFT

Press to access the "boxed" commands (above the buttons) on the remote. These buttons are marked with an asterisk (*) in this section.

7 SLEEP

Press to change the amount of time before the receiver switches into standby (**30 min - 60 min - 90 min - Off**). You can check the remaining sleep time at any time by pressing **SLEEP** once.

DIMMER

Dims or brightens the display.

PHASE

Press to switch on/off Phase Control.

ANALOG ATT*

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

8 INPUT SELECTOR buttons

Press to select an input source.

DVD/DVR

Press to use the remote DVD/DVR controls.

RECEIVER

Use to switch to the receiver controls on the remote control. Use when setting up surround sound for the receiver.

9 MENU

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

DIALOG

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

10 ↑↓←→ / ENTER

Use the arrow buttons when setting up your surround sound system. Also used for DVD menus.

↑ (S.RETRIEVER)*

Press to restore CD quality sound to compressed audio sources.

11 RETURN

Confirm and exit the current menu screen.

ONE TOUCH COPY*

Copies the currently playing title from DVD to HDD or vice-versa.

12 DVD/DVR/USB control buttons

Use these buttons to control a Pioneer DVD player, recorder or USB devices (VSX-817 model only) connected to your system (press **SHIFT** to access the commands bordered by a rectangle).

Button	What it does
DVD/ DVR	Turns DVD power on/off.
CH +/-	Switches channels.
SUBTITLE	Displays/changes the subtitles on multilingual DVD-Video discs.
AUDIO	Changes audio language or channel.
▶	Starts/resumes normal playback.
	Pauses/unpauses.
■	Stops playback.
◀◀ / ▶▶	Press to start fast reverse/forward scanning.

Button	What it does
◀◀	Skips to the start of the current track or chapter, then previous tracks/chapters.
▶▶	Skips to the next track or chapter.
HDD/ DVD*	Switch between the hard disk and DVD controls for DVD/HDD recorders.
GUIDE*	Displays the guides on a DVD/DVR.
●REC*	Starts recording.
TIMER REC*	Accesses the timerrecording menu.
INFO*	Displays additional EPG information.
REC STOP*	Stops recording.
JUKEBOX*	Switches to the Jukebox feature.

13 TUNER controls

The **TUNING +/-** buttons can be used to find radio frequencies and the **STATION +/-** buttons can be used to select preset radio stations.

DISPLAY

Switch the display between station preset name and frequency (see tip).

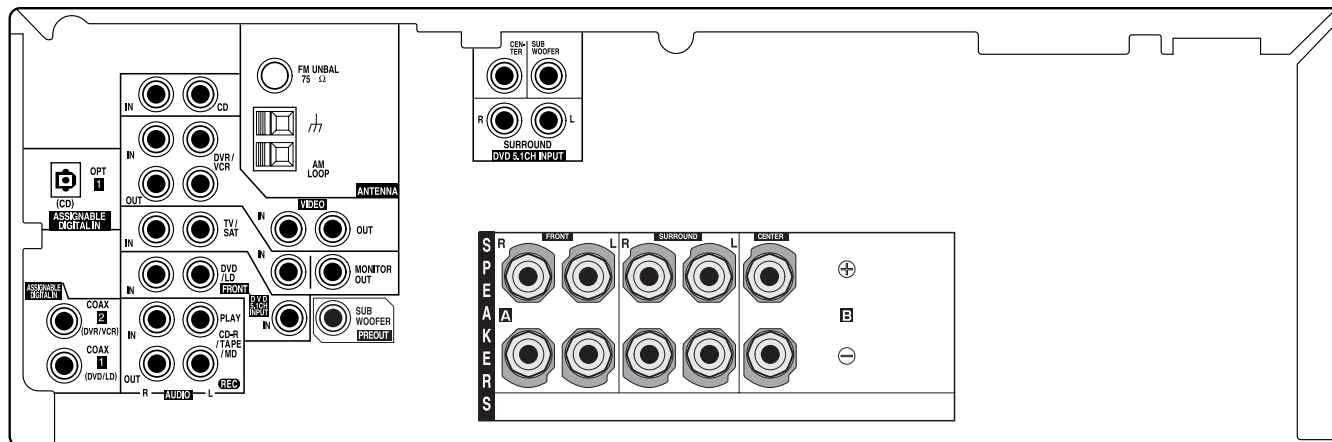
CLASS

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

MPX

Use to switch between auto stereo and mono reception of FM broadcasts. If the signal is weak then switching to mono will improve the sound quality. Press the **FM** button, then while holding down the **SHIFT** button press this button to enable **EON MODE**.

Rear panel



CLEANING



A

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

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

B

C

D

E

F