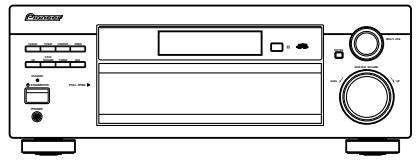
Pioneer sound.vision.soul

Service Manual



VSX-D912-S

ORDER NO.
RRV2745

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-D912-S
VSX-D812-K
VSX-D812-S

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

Model	Type	Power Requirement	Remarks
VSX-D912-S	MYXJIEW	AC220-230V	
VSX-D812-K	MYXJIEW	AC220-230V	
VSX-D812-S	MYXJIEW	AC220-230V	
VSX-D812-S	MYXJIFG	AC220-230V	

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

SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

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

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE

(FOR CANADIAN MODEL ONLY)

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

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

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

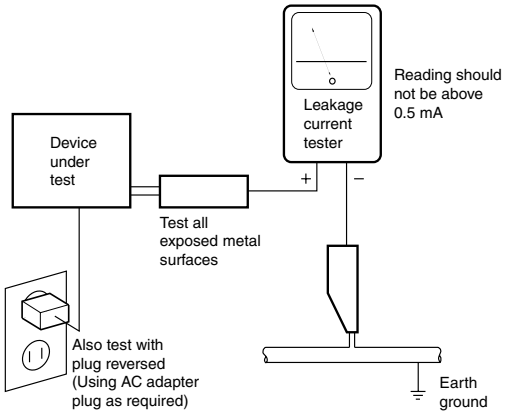
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

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

LEAKAGE CURRENT CHECK

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



AC Leakage Test

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

2. PRODUCT SAFETY NOTICE

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

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

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

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

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

1. Product safety

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

2. Adjustments

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

3. Cleaning

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

4. Shipping mode and shipping screws

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

5. Lubricants, glues, and replacement parts

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

CONTENTS

SAFETY INFORMATION 2
1. SPECIFICATIONS 5
2. EXPLODED VIEWS AND PARTS LIST 7
2.1 PACKING 7
2.2 EXTERIOR SECTION 8
2.3 FRONT PANEL SECTION 10
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM 12
3.1 BLOCK DIAGRAM 12
3.2 OVERALL WIRING CONNECTION DIAGRAM 14
3.3 MAIN ASSY (1/3) 16
3.4 MAIN ASSY (2/3) 18
3.5 MAIN ASSY (3/3) 20
3.6 DSP ASSY (1/2) 22
3.7 DSP ASSY (2/2) 24
3.8 AMP & PRIMARY (1/2), TRANS2 and TRANS3 ASSYS 26
3.9 AMP & PRIMARY (2/2), REG. , AMP INPUT and TRANS1 ASSYS 28
3.10 VIDEO, 6CH IN, BOARD TO BOARD and S. VIDEO ASSYS 30
3.11 FRONT, R. ENCODER and POWER SW ASSYS 32
3.12 TRANS4, F.VIDEO, H.P., PRE., D.IN and F.OPT&MIC ASSYS 34
3.13 FM/AM TUNER MODULE 36
4. PCB CONNECTION DIAGRAM 38
4.1 REGULATOR ASSY 38
4.2 TRANS2, TRANS3, TRANS1 and TRANS4 ASSYS 39
4.3 MAIN ASSY 40
4.4 DSP ASSY 44
4.5 AMP & PRIMARY and AMP INPUT ASSYS 46
4.6 FRONT, R. ENCODER, POWER SW and H. P. ASSYS 48
4.7 BOARD TO BOARD, DIGITAL IN, VIDEO and 6CH IN ASSYS 52
4.8 S.VIDEO, F.VIDEO, F.OPT&MIC and PRE-OUT ASSYS 54
4.9 FM/AM TUNER MODULE 56
5. PCB PARTS LIST 57
6. ADJUSTMENT 64
6.1 TUNER SECTION 64
7. GENERAL INFORMATION 65
7.1 DIAGNOSIS 65
7.1.1 DISASSEMBLY AND DIAGNOSIS 65
7.1.2 PCB LOCATION 66
7.2 PARTS 67
7.2.1 IC 67
7.2.2 DISPLAY 81
7.3 EXPLANATION 83
7.3.1 POWER ON AND OFF INITIAL TIMING CHART 83
7.3.2 IC DATA TRANSMISSION TIMING CHART 85
7.3.3 DETECTION CIRCUIT 86
7.3.4 AMPLIFIER SYSTEM PROTECTION OPERATION SPECIFICATION 87
7.4 CLEANING 87
8. PANEL FACILITIES 88

1. SPECIFICATIONS

• Amplifier section

Continuous power output (stereo)

These specifications are applicable when the power supply is 230 V.

Front.....100 W per channel (DIN 1kHz, THD 1 %, 8 Ω)

Continuous power output (surround)

These specifications are applicable when the power supply is 230 V.

Front.....100 W per channel (1kHz, 1.0 %, 8 Ω)
Center.....100 W per channel (1kHz, 1.0 %, 8 Ω)
Surround.....100 W per channel (1kHz, 1.0 %, 8 Ω)
Surround Back.....100 W per channel (1kHz, 1.0 %, 8 Ω)

Input (Sensitivity/Impedance)

CD, VCR/DVR, CD-R/TAPE/MD, DVD/LD, TV/SAT.....200 mV/47 kΩ

Frequency response

CD, VCR/DVR, CD-R/TAPE/MD,DVD/LD, TV/SAT.....5 Hz to 100,000 Hz $^{+0}_{-3}$ dB

Output (Level/Impedance)

VCR/DVR REC, CD-R/TAPE/MD REC.....200mV/2.2kΩ

Tone control

Bass.....± 6 dB (100 Hz)
Treble.....± 6 dB (10 kHz)
Loudness.....± 6.5 dB/+3 dB (100 Hz/10 kHz) (at volume level -50 dB)

Signal-to-Noise Ratio
[DIN (Continuous rated power output/50 mW)]

CD, VCR/DVR, CD-R/TAPE/MD, DVD/LD, TV/SAT.....96 dB

• Video Section

Input (Sensitivity/Impedance)

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

Output (Level/Impedance)

VCR/DVR, MONITOR OUT.....1 Vp-p/75 Ω

Frequency Response

VCR/DVR, DVD/LD, TV/SAT ⇒ MONITOR.....5 Hz to 7 MHz $^{+0}_{-3}$ dB
Signal-to-Noise Ratio.....55 dB

• FM Tuner Section

Frequency Range.....87.5 MHz to 108 MHz
Usable Sensitivity.....Mono:13.2 dBf, IHF (1.3 μV/ 75 Ω)
50 dB Quieting Sensitivity.....Mono: 20.2 dB Stereo: 38.6 dBf
Signal-to-Noise RatioStereo.....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 1,602 kHz
Selectivity (IHF, Loop antenna).....350 μV/m
Selectivity.....25 dB
Signal-to-Noise Ratio.....50 dB
Antenna.....Loop antenna

• Miscellaneous

Power Requirements.....AC 220-230 V, 50/60Hz
Power Consumption.....280 W
In standby.....0.5 W
Dimensions.....420 (W) x 158 (H) x 401 (D) mm
Weight (without package).....10.0 kg

• Furnished Parts

AM loop antenna.....1
FM wire antenna.....1
Dry cell batteries (AA size IEC R6).....2
Remote control.....1
Microphone (VSX-D912 only).....1
Microphone stand (VSX-D912 only).....1
These operating instructions.....1

Note

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

Cleaning the unit

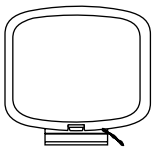
- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surface is dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water, and wrung out well, and then wipe again with a dry cloth. Do not use furniture wax or cleansers.
- Never use thinners, benzine, insecticide sprays or other chemicals on or near this unit, since these will corrode the surface.

Accessories

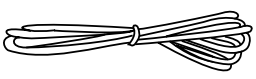
VSX-D912 Only

Microphone (APM7004)

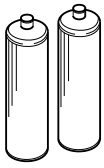
Microphone Stand (AEB7269)



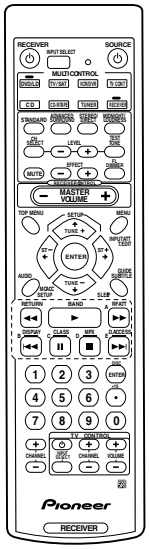
AM loop antenna (ATB7009)



FM wire antenna (ADH7030)



AA size IEC R6 Dry cell batteries (x2)

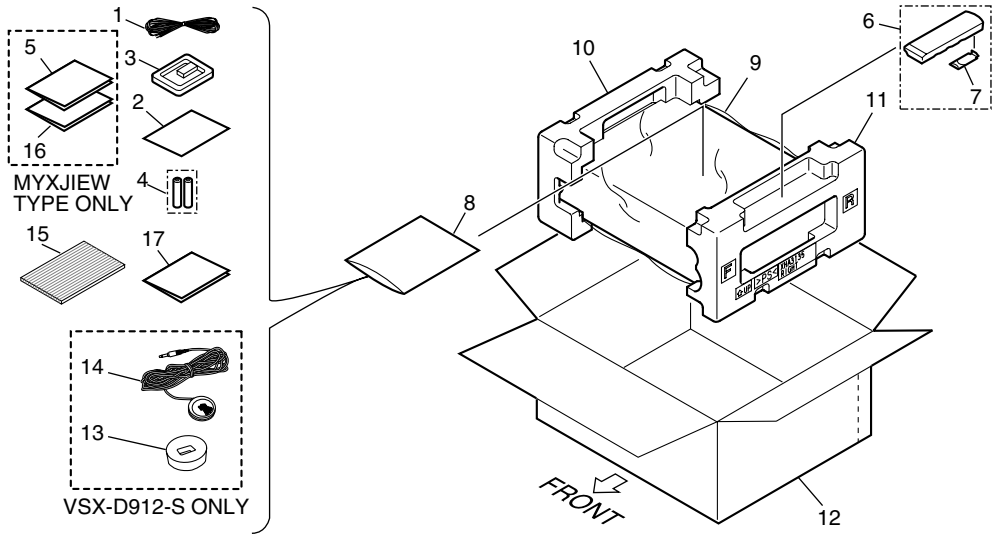


Remote control unit (XXD3054)

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



PACKING parts List

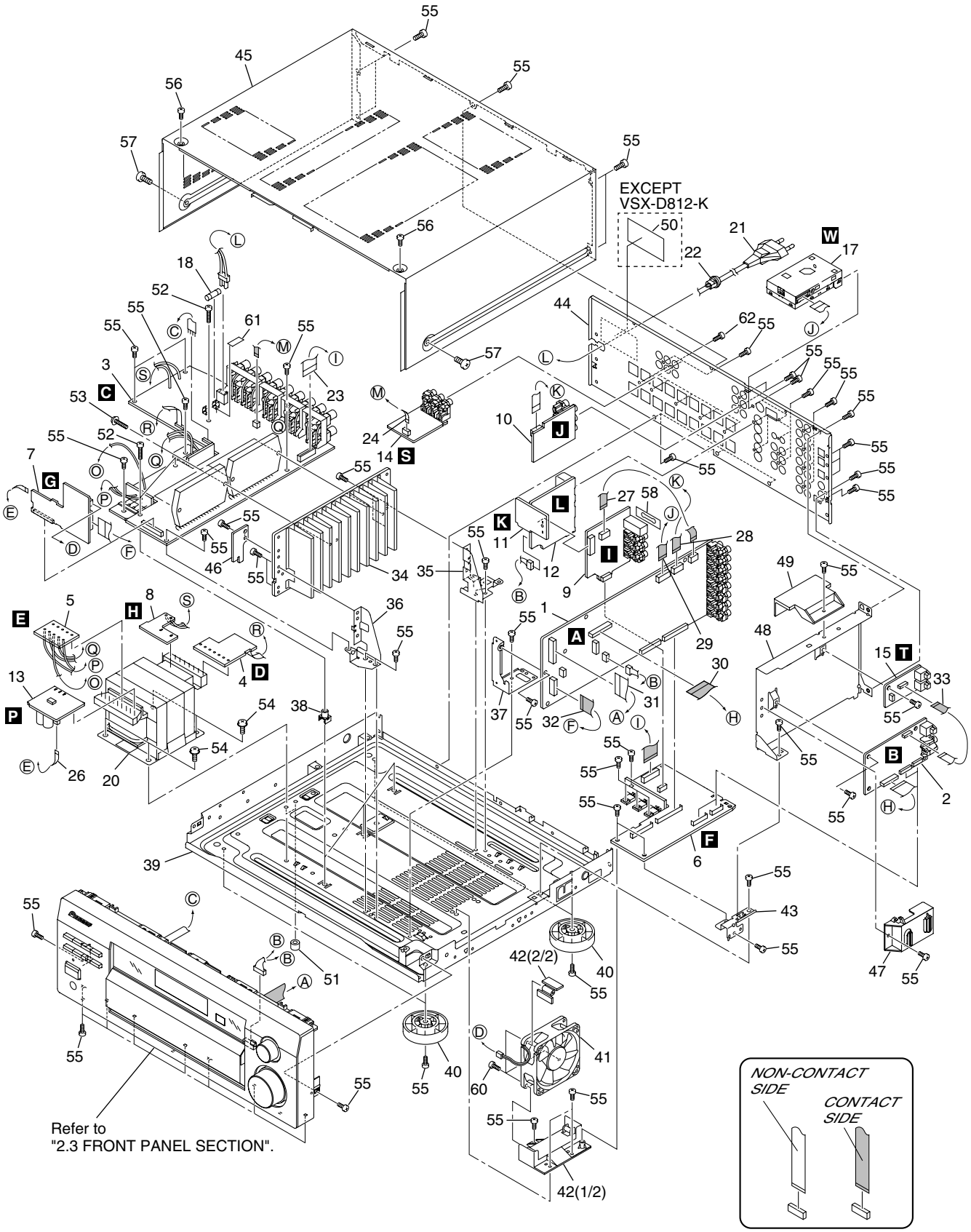
Mark	No.	Description	Part No.
	1	FM wire antenna	ADH7030
NSP	2	Warranty Card	ARY7065
	3	AM loop antenna	ATB7009
NSP	4	Dry cell batteries (AA/R6)	VEM1031
	5	Operating instructions (English/Italian)	See Contrast table(2)
	6	Remote Control Unit	XXD3054
	7	Battery Cover	AZA7424
NSP	8	Literature Bag	AHG1180
	9	Packing Sheet	AHG7069
	10	Left Pad R6	XHA3134
	11	Right Pad R6	XHA3135
	12	Packing Case	See Contrast table(2)
	13	MIC Stand 45	See Contrast table(2)
	14	Microphone Assy	See Contrast table(2)
NSP	15	Accessory Board R6	XHB3008
	16	Operating instructions (Dutch/Spanish)	See Contrast table(2)
	17	Operating instructions (French/German)	XRC3082

(2) CONTRAST TABLE

VSX-D912-S/MYXJIEW, VSX-D812-K/MYXJIEW, VSX-D812-S/MYXJIEW and MYXJIFG are constructed the same except for the following:

Mark	NO	Symbol and Description	VSX-D912-S/ MYXJIEW	VSX-D812-K/ MYXJIEW	VSX-D812-S/ MYXJIEW	VSX-D812-S/ MYXJIFG
	5	Operating Instructions (English/Italian)	XRE3070	XRE3070	XRE3070	Not used
	12	Packing Case	XHD3334	XHD3332	XHD3333	XHD3333
	13	MIC Stand 45	AEB7269	Not used	Not used	Not used
	14	Microphone Assy	APM7004	Not used	Not used	Not used
	16	Operating Instructions (Dutch/Spanish)	XRC3081	XRC3081	XRC3081	Not used

2.2 EXTERIOR SECTION



EXTERIOR SECTION parts List

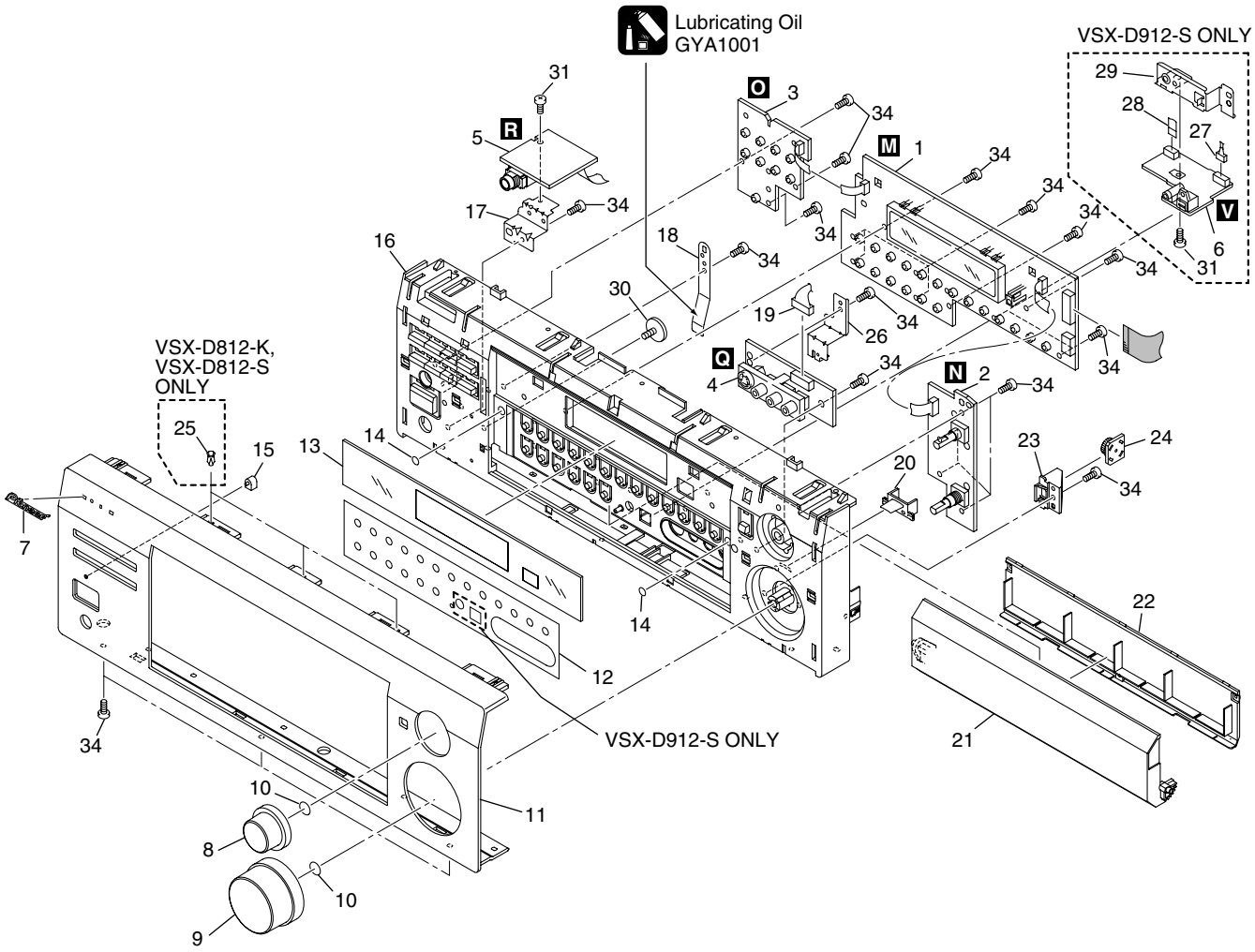
Mark	No.	Description	Part No.
	1	MAIN Assy	See Contrast table(2)
	2	DSP Assy	AWX1082
	3	AMP&PRIMARY Assy	XWZ3670
	4	TRANS2 Assy	XWZ3684
	5	TRANS3 Assy	XWZ3687
	6	REGULATOR Assy	XWZ3676
	7	AMP INPUT Assy	XWZ3679
	8	TRANS1 Assy	XWZ3681
	9	VIDEO Assy	XWZ3647
	10	6CH IN Assy	XWZ3650
	11	BOARD TO BOARD Assy	XWZ3665
	12	S. VIDEO Assy	XWZ3660
	13	TRANS4 Assy	XWZ3662
	14	PRE-OUT Assy	XWZ3663
	15	DIGITAL IN Assy	See Contrast table(2)
	16	••••••	
	17	FM/AM TUNER MODULE	AXQ7232
⚠	18	FU1 Fuse (T3.15A)	REK1027
	19	••••••	
⚠	20	T1 Power Transformer	XTS3063
⚠	21	AC Power Cord	VDG1080
	22	Cord Stopper	CM-22B
	23	J36 23P F.F.C/30V	XDD3102
	24	J46 7P F.F.C/30V	XDD3105
	25	••••••	
	26	J22 3P F.F.C/30V	XDD3107
	27	J33 11P F.F.C/30V	XDD3123
	28	J48 9P F.F.C/30V	XDD3124
	29	J34 13P F.F.C/30V	XDD3122
	30	J43 19P F.F.C/30V	XDD3126
	31	J31 17P F.F.C/30V	XDD3118
	32	J35 19P F.F.C/30V	XDD3101
	33	J37 10P F.F.C/30V	XDD3127
NSP	34	Heatsink R6A CORR	XNH3026
	35	H/S Angle Rear	XNG3095
	36	H/S Angle Front	XNG3094
	37	PCB Angle R5	XNG3073
	38	PCB Mold	AMR2533
NSP	39	Under Base R6	XNA3012
	40	Insulator	PNW2766
⚠	41	DC Fan Motor	XXM3006
	42	Fan Holder R6	XMR3066
	43	REG Support R6	XNG3093
	44	Rear Panel 812K	XNC3196
	45	Bonnet	See Contrast table(2)
NSP	46	HOLDER Assy	XWZ3693
	47	FFC Holder R6	XMR3072
	48	Shield A R6	XNG3068
	49	FFC Cover R6	XMR3060
NSP	50	N Label	See Contrast table(2)
NSP	51	Spacer	AEB7092
	52	Screw	BBZ30P200FMC
	53	Screw 3x23	ABA7043
	54	Screw	FBT40P080FZK
	55	Screw	BBZ30P080FZK
	56	Screw	See Contrast table(2)
	57	Screw	See Contrast table(2)
	58	Vjack Spacer R6	XEC3038
NSP	59	BINDER Assy	XWZ3691
	60	Screw	BPZ30P120FMC
	61	Fuse Card	AAX7493
	62	Screw	BBT30P100FCC

(2) CONTRAST TABLE

VSX-D912-S/MYXJIEW, VSX-D812-K/MYXJIEW, VSX-D812-S/MYXJIEW and MYXJIFG are constructed the same except for the following:

Mark	NO	Symbol and Description	VSX-D912-S/ MYXJIEW	VSX-D812-K/ MYXJIEW	VSX-D812-S/ MYXJIEW	VSX-D812-S/ MYXJIFG
	1	MAIN Assy	XWK3101	XWK3096	XWK3096	XWK3096
	15	DIGITAL IN Assy	XWZ3659	XWZ3658	XWZ3658	XWZ3658
	45	Bonnet D912S	XZN3127	Not used	XZN3127	XZN3127
	45	Bonnet D912K	Not used	XZN3126	Not used	Not used
NSP	50	N Label 912S/MY	XAL3173	Not used	Not used	Not used
NSP	50	N Label 812S/MY	Not used	Not used	XAL3152	XAL3152
	56	Screw	BPZ30P080FNI	BPZ30P080FZK	BPZ30P080FNI	BPZ30P080FNI
	57	Screw	FBT40P080FNI	FBT40P080FZK	FBT40P080FNI	FBT40P080FNI

2.3 FRONT PANEL SECTION



FRONT PANEL SECTION parts List

Mark	No.	Description	Part No.
	1	FRONT ASSY	XWZ3648
	2	R. ENCODER Assy	XWZ3653
	3	POWER SW Assy	XWZ3651
	4	FRONT VIDEO Assy	XWZ3655
	5	H.P. Assy	XWZ3654
	6	FRONT OPTICAL & MIC Assy	See Contrast table(2)
	7	Pioneer Badge B	See Contrast table(2)
	8	Select Knob	See Contrast table(2)
	9	Volume Knob	See Contrast table(2)
NSP	10	C Ring DIM 8.1	XBH3016
	11	FRT Panel	See Contrast table(2)
	12	BN Cover	See Contrast table(2)
	13	D Panel R6 W	XAK3348
	14	Cushion	See Contrast table(2)
	15	LED Lens	PNW2019
	16	Panel Stay	See Contrast table(2)
	17	Earth Plate R5 HP	XNG3066
	18	Door Spring R6	XBK3002
	19	J29 8P Shield Cable	XDX3012
	20	B Lens R6	XAK3352
	21	Door	See Contrast table(2)
	22	Door Cover	See Contrast table(2)
	23	Holder L R6	XMR3059
	24	Damper Assy	XXA3025
	25	Push Rivet	See Contrast table(2)
	26	Earth Plate FI R6	XNG3091
	27	J30 5P Shield Cable	See Contrast table(2)
	28	J32 5P F.F.C/30V	See Contrast table(2)
	29	Earth Plate D R6	See Contrast table(2)
	30	Screw	XBA3010
	31	Screw	BBZ30P080FZK
	32	•••••	
	33	•••••	
	34	Screw	PPZ30P100FMC

(2) CONTRAST TABLE

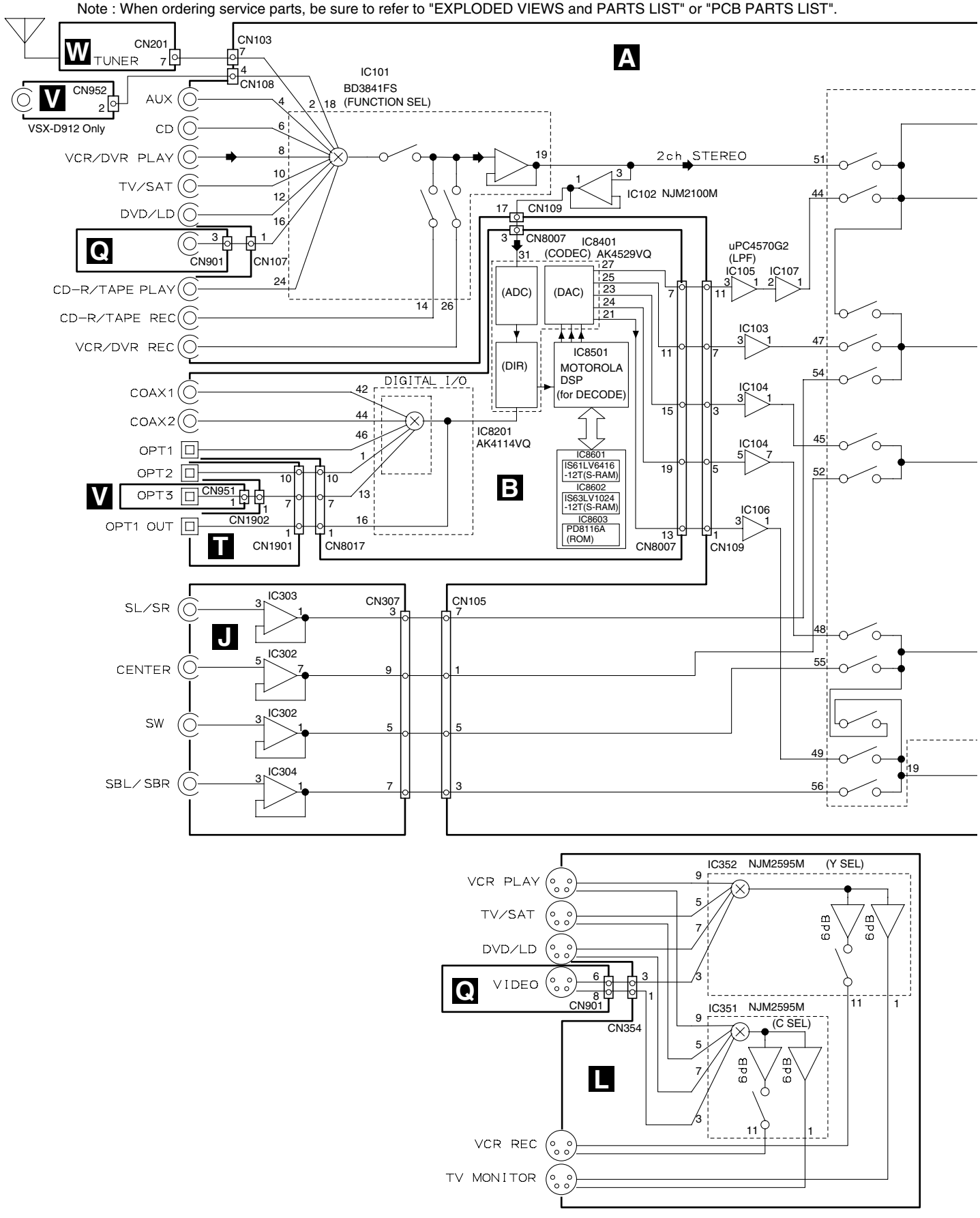
VSX-D912-S/MYXJIEW, VSX-D812-K/MYXJIEW, VSX-D812-S/MYXJIEW and MYXJIFG are constructed the same except for the following:

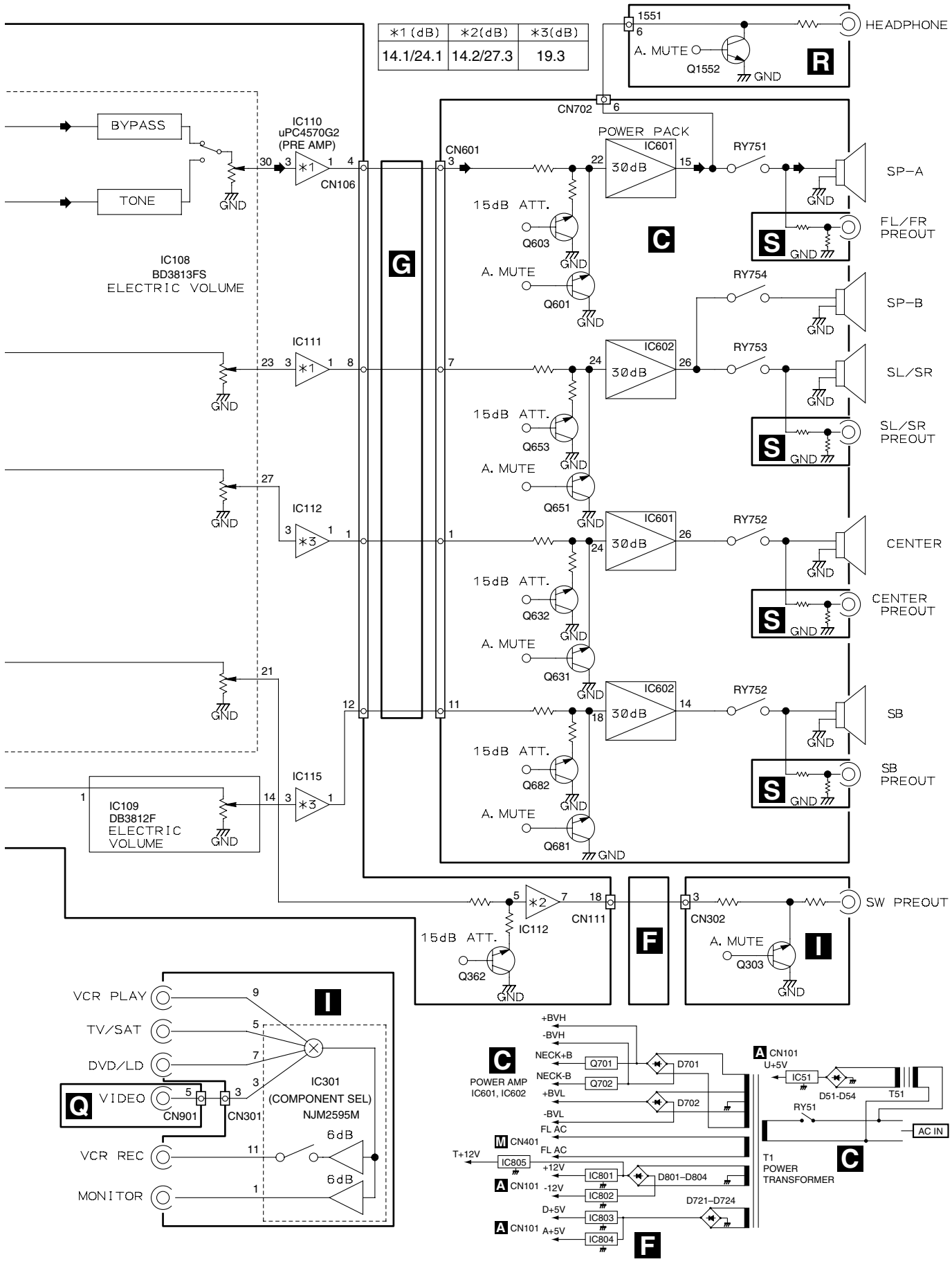
Mark	NO	Symbol and Description	VSX-D912-S/ MYXJIEW	VSX-D812-K/ MYXJIEW	VSX-D812-S/ MYXJIEW	VSX-D812-S/ MYXJIFG
	6	FRONT OPTICAL & MIC Assy	XWZ3656	Not used	Not used	Not used
	7	Pioneer Badge B	VAM1124	XAM3006	VAM1129	VAM1129
	8	SEL Plat Knob R6S	XAB3037	Not used	XAB3037	XAB3037
	8	Select Knob R5BH	Not used	XAB3023	Not used	Not used
	9	VOL Plat Knob R6S	XAB3036	Not used	XAB3036	XAB3036
	9	Volume Knob R5BH	Not used	XAB3025	Not used	Not used
	11	FRT Panel 912S/MY	XNB3001	Not used	Not used	Not used
	11	FRT Panel 812K/MY	Not used	XMB3106	Not used	Not used
	11	FRT Panel 812S/MY	Not used	Not used	XMB3107	XMB3107
	12	BN Cover 912S/MY	XAK3353	Not used	Not used	Not used
	12	BN Cover 712K/MY	Not used	XAK3378	Not used	Not used
	12	BN Cover 712S/MY	Not used	Not used	XAK3380	XAK3380
	14	Cushion R4G	XED3002	Not used	XED3002	XED3002
	14	Cushion R4B	Not used	XED3001	Not used	Not used
	16	Panel Stay 912S/MY	XMB3108	Not used	Not used	Not used
	16	Panel Stay 812K/MY	Not used	XMB3098	Not used	Not used
	16	Panel Stay 812S/MY	Not used	Not used	XMB3104	XMB3104
	21	Door R6S	XAK3357	Not used	XAK3357	XAK3357
	21	Door R6K	Not used	XAK3356	Not used	Not used
	22	Door Cover R6S	XAK3359	Not used	XAK3359	XAK3359
	22	Door Cover R6K	Not used	XAK3358	Not used	Not used
	25	Push Rivet	Not used	AEC7025	AEC7025	AEC7025
	27	J30 5P Shield Cable	XDX3019	Not used	Not used	Not used
	28	J32 5P F.F.C/30V	XDD3125	Not used	Not used	Not used
	29	Earth Plate D R6	XNG3092	Not used	Not used	Not used

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

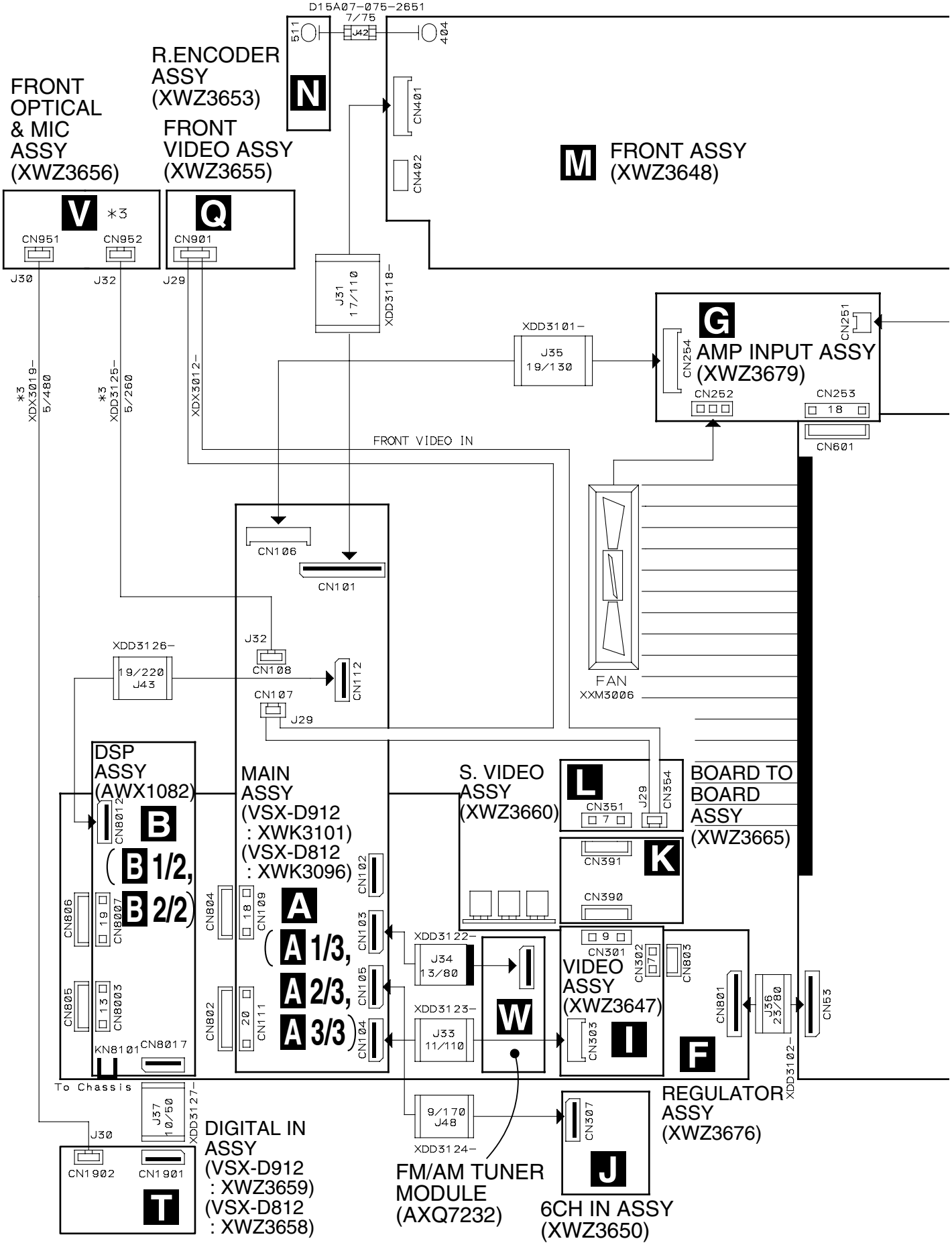
3.1 BLOCK DIAGRAM

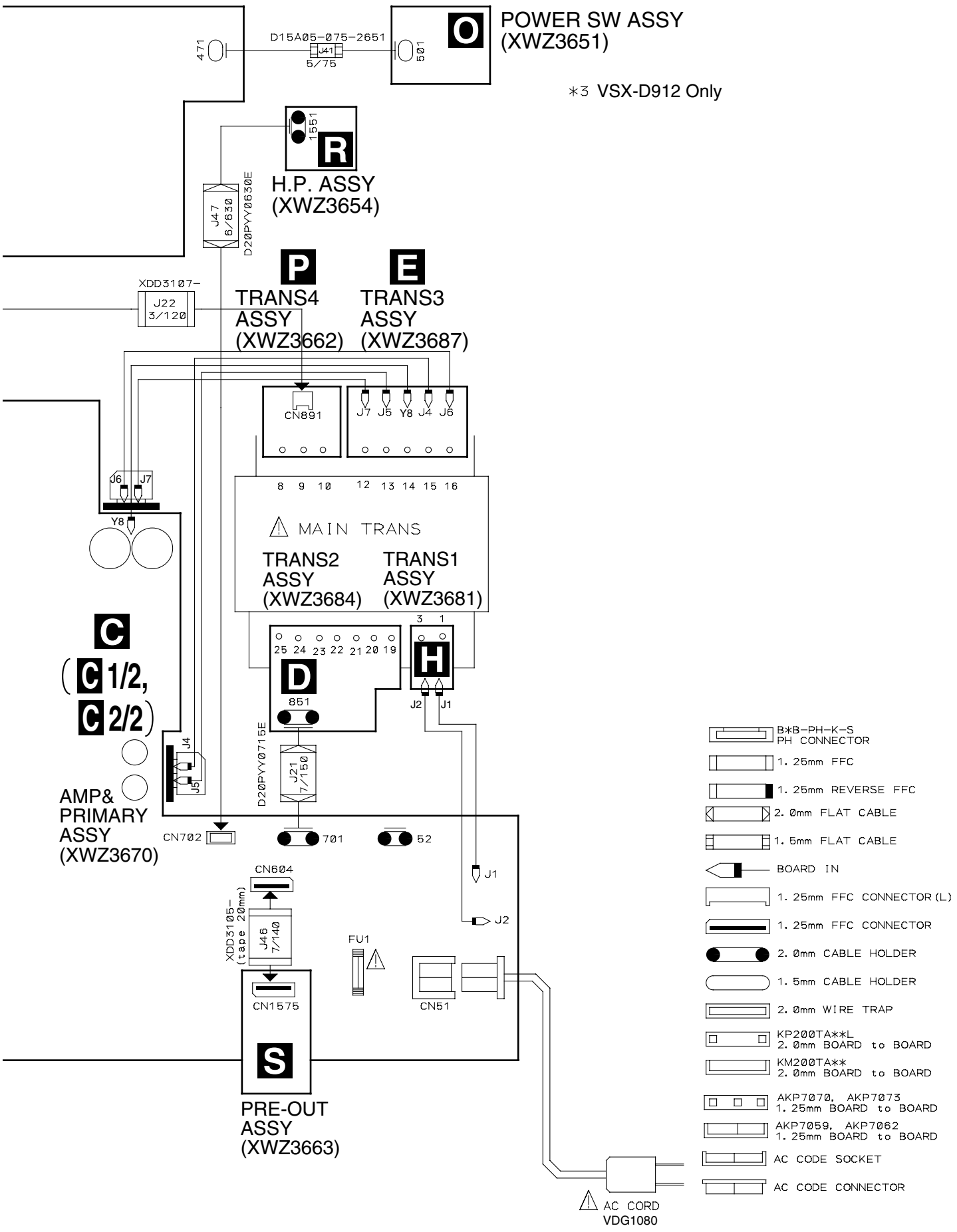
Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".



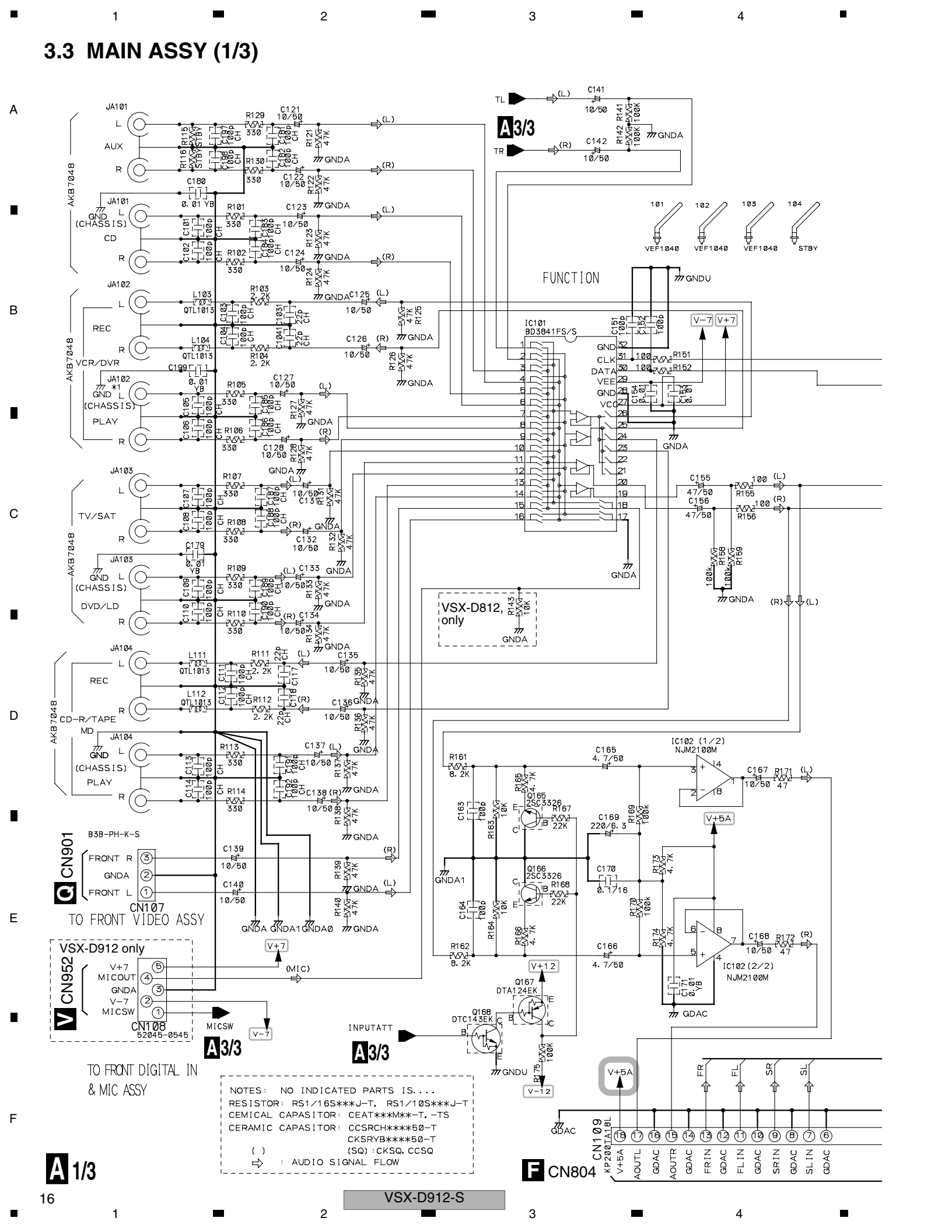

∗1(dB) ∗2(dB) ∗3(dB)
14.1/24.1 14.2/27.3 19.3
HEADPHONE
1551
A. MUTE
Q1552
GND
R
CN702
POWER PACK
IC601
30dB
RY751
SP–A
BYPASS
TONE
IC110
uPC4570G2
(PRE AMP)
CN106
CN601
15dB ATT.
Q603
A. MUTE
Q601
C
G
FL/FR
PREOUT
S
IC108
BD3813FS
ELECTRIC VOLUME
RY754
SP–B
IC111
IC602
RY753
SL/SR
15dB ATT.
Q653
A. MUTE
Q651
SL/SR
PREOUT
IC112
IC601
RY752
CENTER
15dB ATT.
Q632
A. MUTE
Q631
CENTER
PREOUT
IC602
RY752
SB
15dB ATT.
Q682
A. MUTE
Q681
SB
PREOUT
IC115
IC109
DB3812F
ELECTRIC
VOLUME
∗2
IC112
CN111
15dB ATT.
Q362
F
CN302
A. MUTE
Q303
I
SW PREOUT
VCR PLAY
TV/SAT
DVD/LD
VIDEO
CN901
CN301
IC301
(COMPONENT SEL)
NJM2595M
6dB
VCR REC
MONITOR
Q
+BVH
-BVH
NECK+B
NECK-B
+BVL
-BVL
FL AC
POWER AMP
IC601, IC602
Q701
Q702
D701
D702
M CN401
T+12V
IC805
+12V
-12V
D+5V
A+5V
IC801
IC802
IC803
IC804
D801–D804
D721–D724
A CN101
U+5V
IC51
D51-D54
T51
RY51
AC IN
T1
POWER
TRANSFORMER

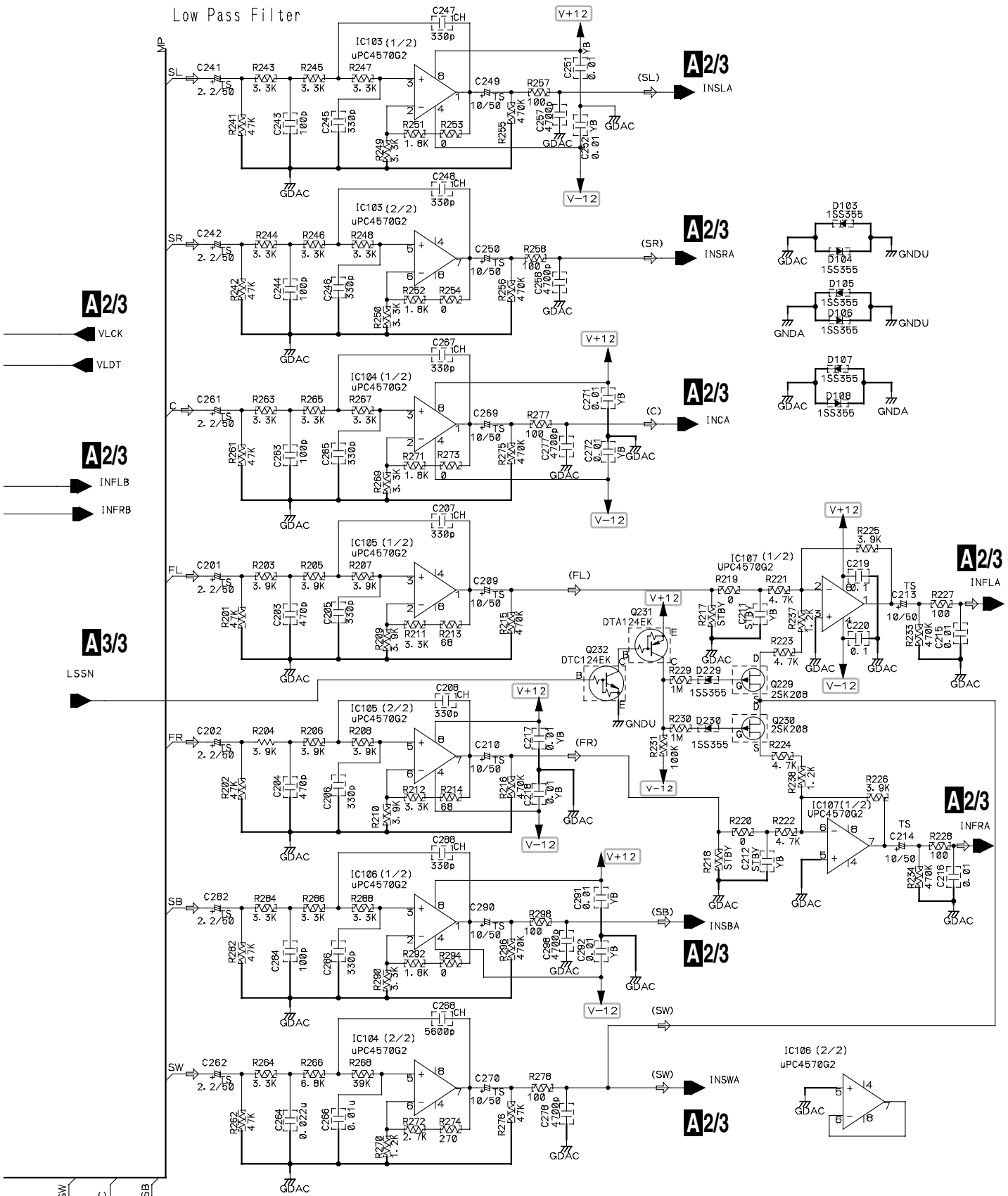
3.2 OVERALL WIRING CONNECTION DIAGRAM




O
POWER SW ASSY
(XWZ3651)
*3 VSX-D912 Only
D15A05-075-2651
J41
5/75
471
501
R
1551
H.P. ASSY
(XWZ3654)
J47
6/630
D20PYY0630E
P
TRANS4
ASSY
(XWZ3662)
E
TRANS3
ASSY
(XWZ3687)
XDD3107-
J22
3/120
CN891
J7 J5 Y8 J4 J6
8 9 10 12 13 14 15 16
J6 J7
Y8
MAIN TRANS
TRANS2
ASSY
(XWZ3684)
TRANS1
ASSY
(XWZ3681)
C
(C 1/2,
C 2/2)
AMP&
PRIMARY
ASSY
(XWZ3670)
25 24 23 22 21 20 19
D
851
3 1
H
J2 J1
J4
J5
D20PYY0715E
J21
7/150
CN702
701
52
CN604
XDD3105-
(tape 20mm)
J46
7/140
CN1575
S
PRE-OUT
ASSY
(XWZ3663)
FU1
CN51
J1
J2
AC CORD
VDG1080
B*B-PH-K-S
PH CONNECTOR
1.25mm FFC
1.25mm REVERSE FFC
2.0mm FLAT CABLE
1.5mm FLAT CABLE
BOARD IN
1.25mm FFC CONNECTOR (L)
1.25mm FFC CONNECTOR
2.0mm CABLE HOLDER
1.5mm CABLE HOLDER
2.0mm WIRE TRAP
KP200TA**L
2.0mm BOARD to BOARD
KM200TA**
2.0mm BOARD to BOARD
AKP7070, AKP7073
1.25mm BOARD to BOARD
AKP7059, AKP7062
1.25mm BOARD to BOARD
AC CODE SOCKET
AC CODE CONNECTOR

3.3 MAIN ASSY (1/3)



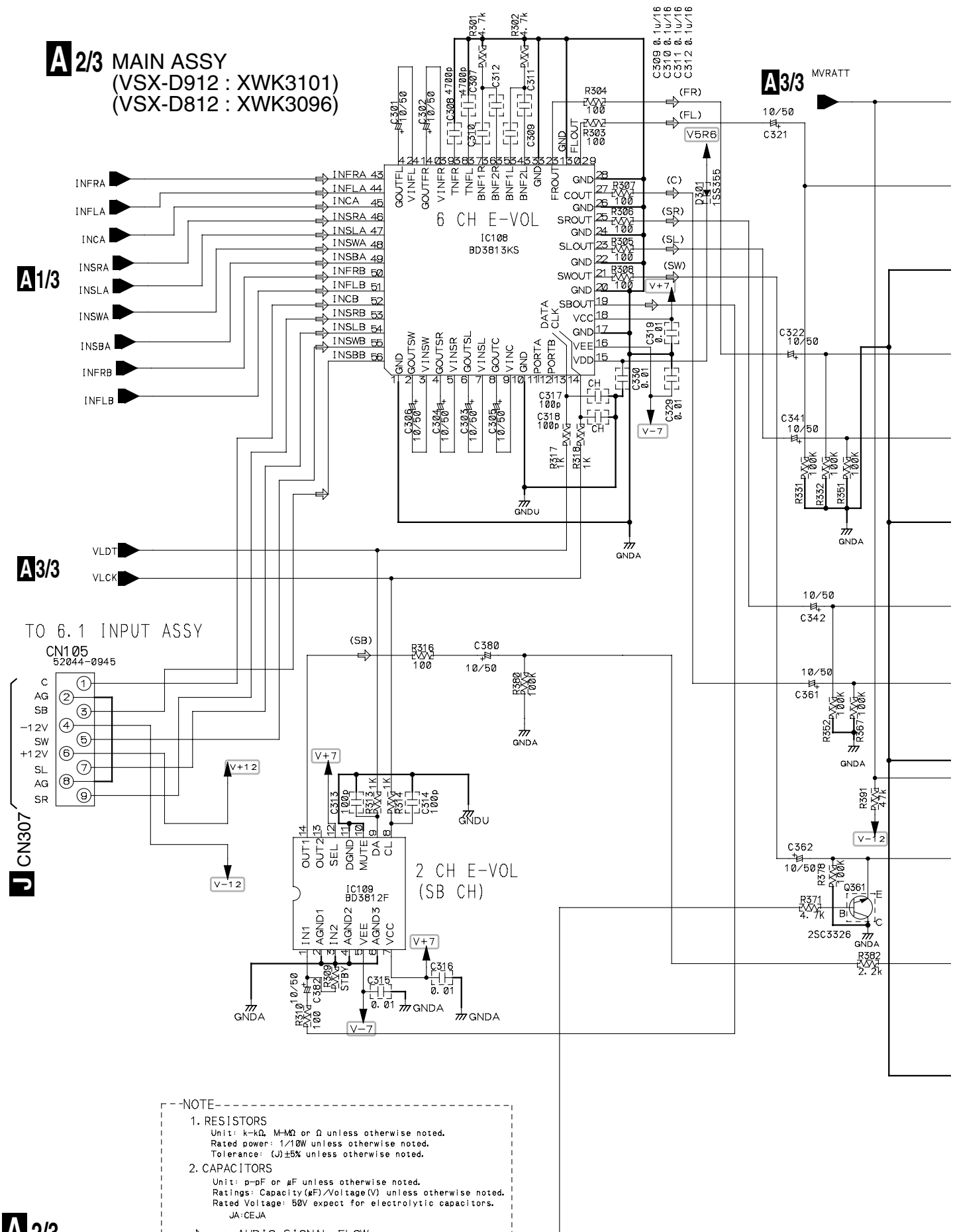


A 1/3 MAIN ASSY
(VSX-D912 : XWK3101)
(VSX-D812 : XWK3096)

: The power supply is shown with the marked box.

A 1/3

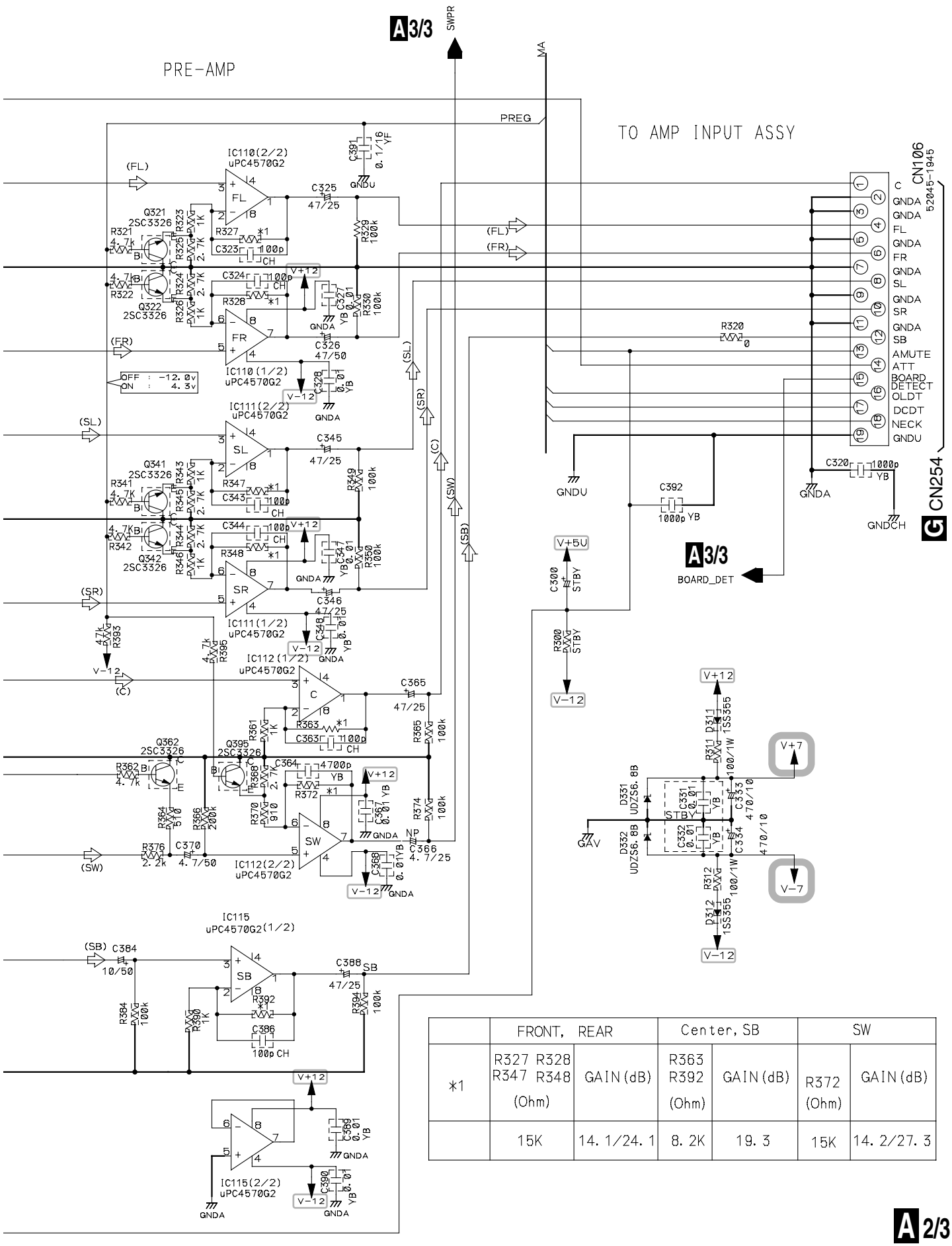
3.4 MAIN ASSY (2/3)



NOTE

1. RESISTORS
   Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
   Rated power: 1/10W 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.
   JA:CEJA

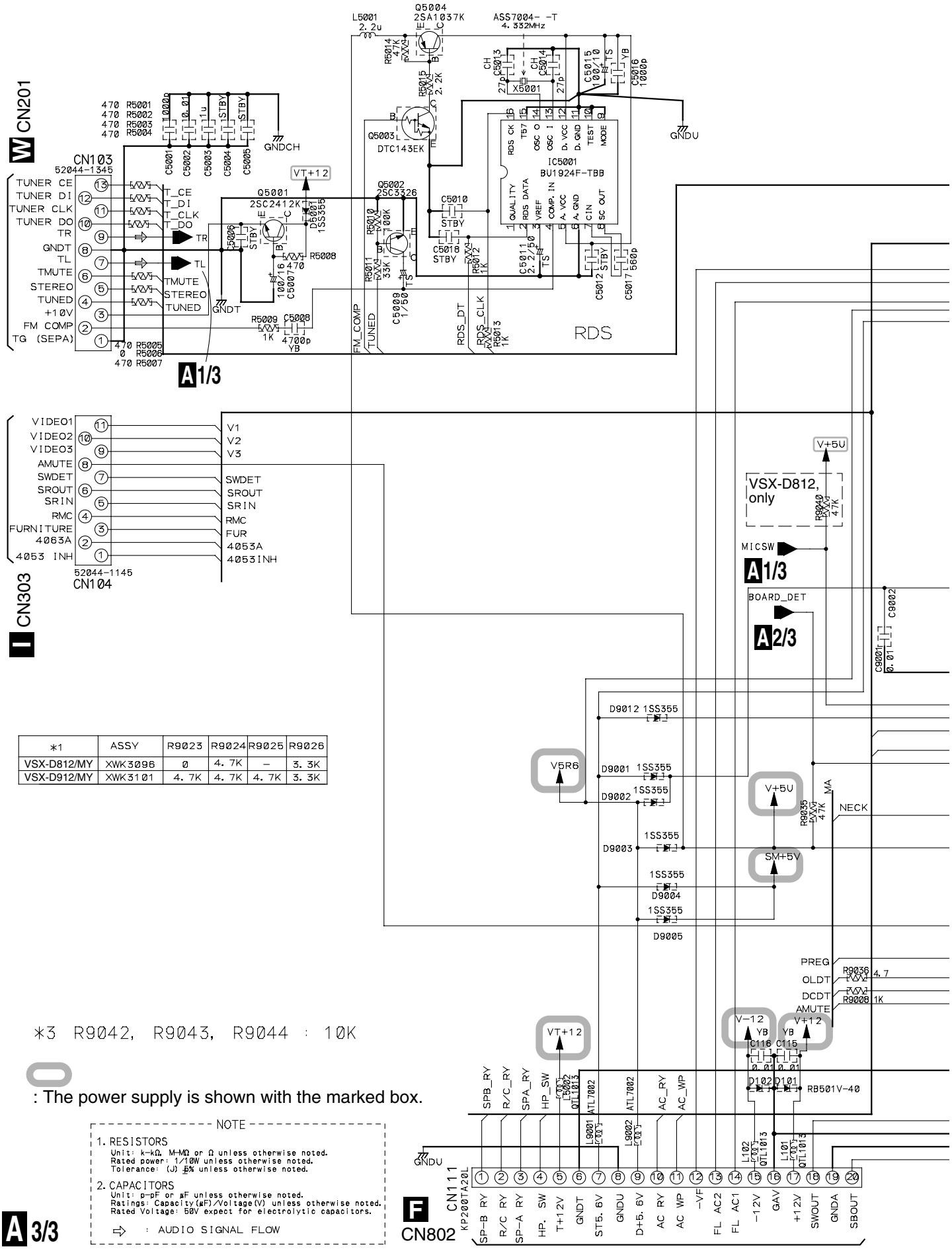
⇨ : AUDIO SIGNAL FLOW



	FRONT, REAR		Center, SB		SW	
*1	R327 R328 R347 R348 (Ohm)	GAIN(dB)	R363 R392 (Ohm)	GAIN(dB)	R372 (Ohm)	GAIN(dB)
	15K	14.1/24.1	8.2K	19.3	15K	14.2/27.3

A2/3

3.5 MAIN ASSY (3/3)



*1	ASSY	R9023	R9024	R9025	R9026
VSX-D812/MY	XWK3096	0	4. 7K	–	3. 3K
VSX-D912/MY	XWK3101	4. 7K	4. 7K	4. 7K	3. 3K

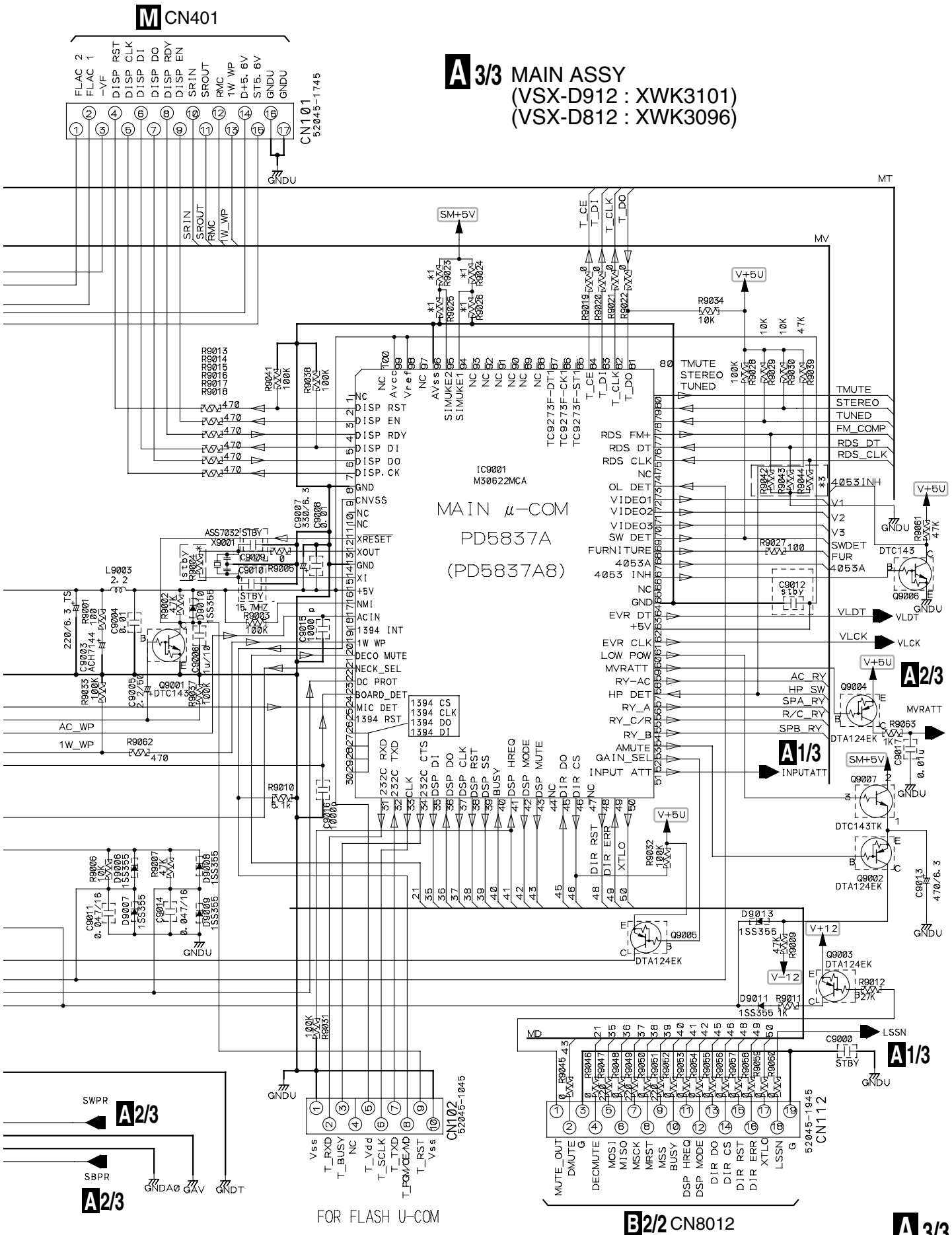
*3 R9042, R9043, R9044 : 10K

: The power supply is shown with the marked box.

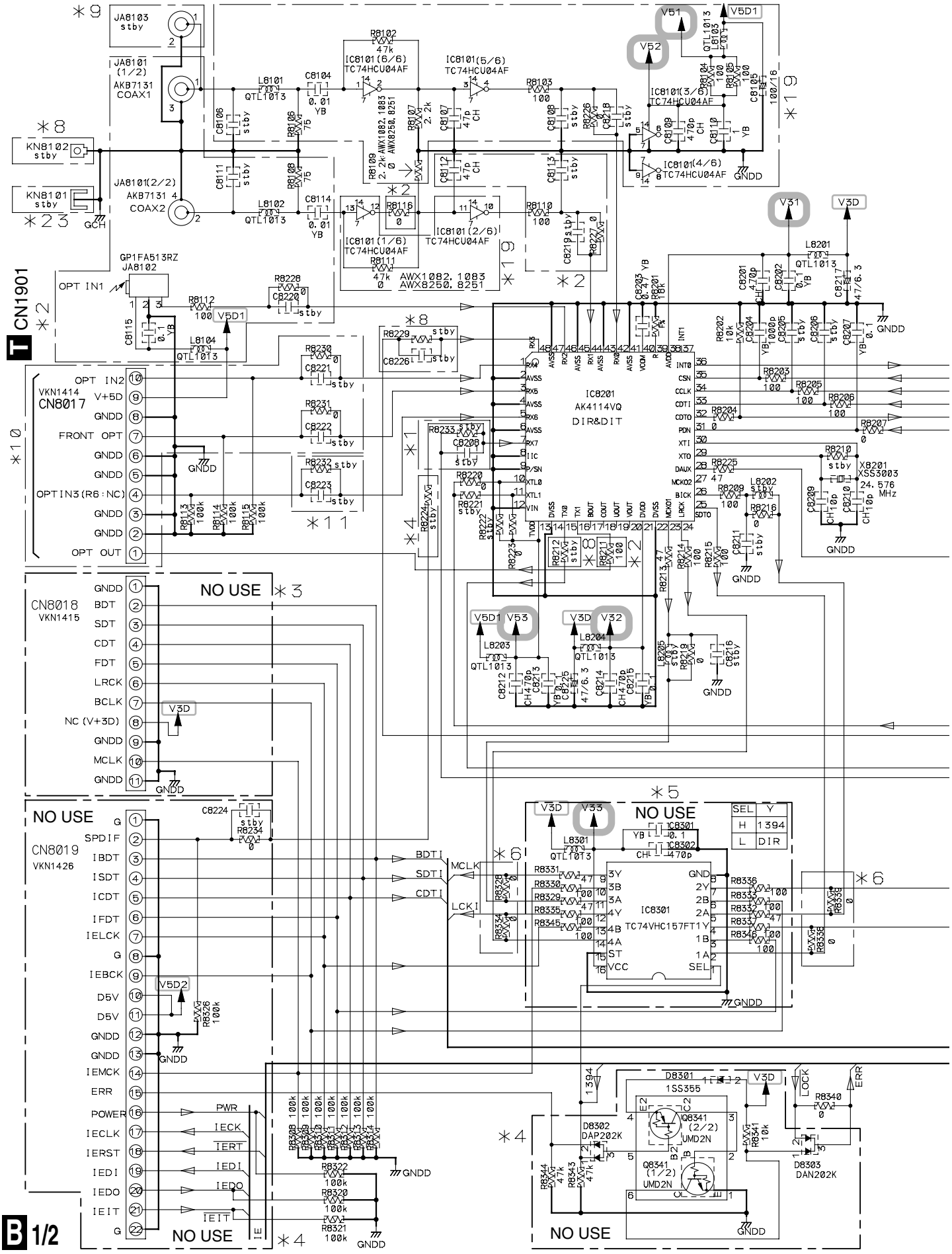
NOTE

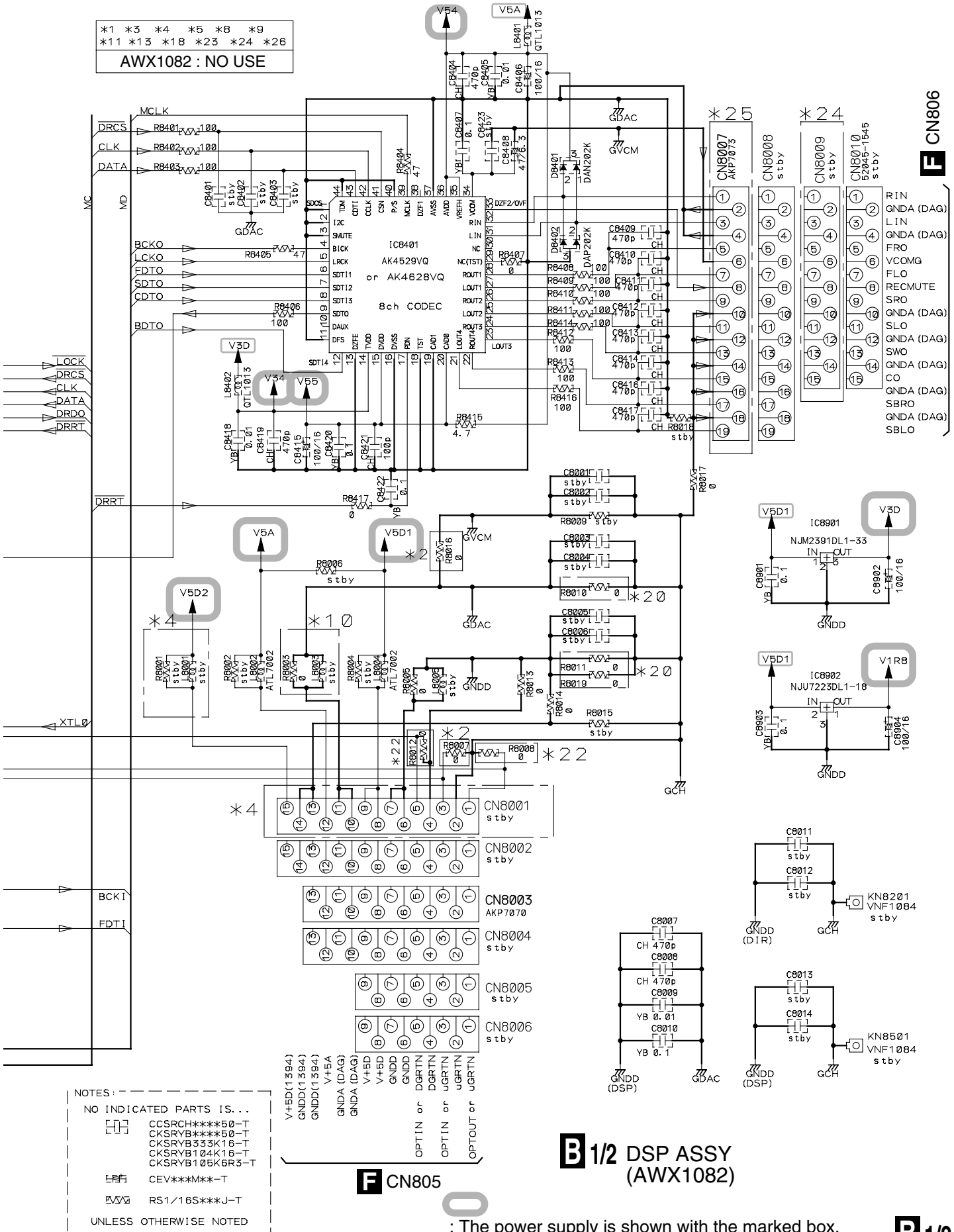
1. RESISTORS
   Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
   Rated power: 1/10W unless otherwise noted.
   Tolerance: (J) ±5% unless otherwise noted.
2. CAPACITORS
   Unit: p-pF or μF unless otherwise noted.
   Ratings: Capacity(μF)/Voltage(V) unless otherwise noted.
   Rated Voltage: 50V expect for electrolytic capacitors.

⇨ : AUDIO SIGNAL FLOW

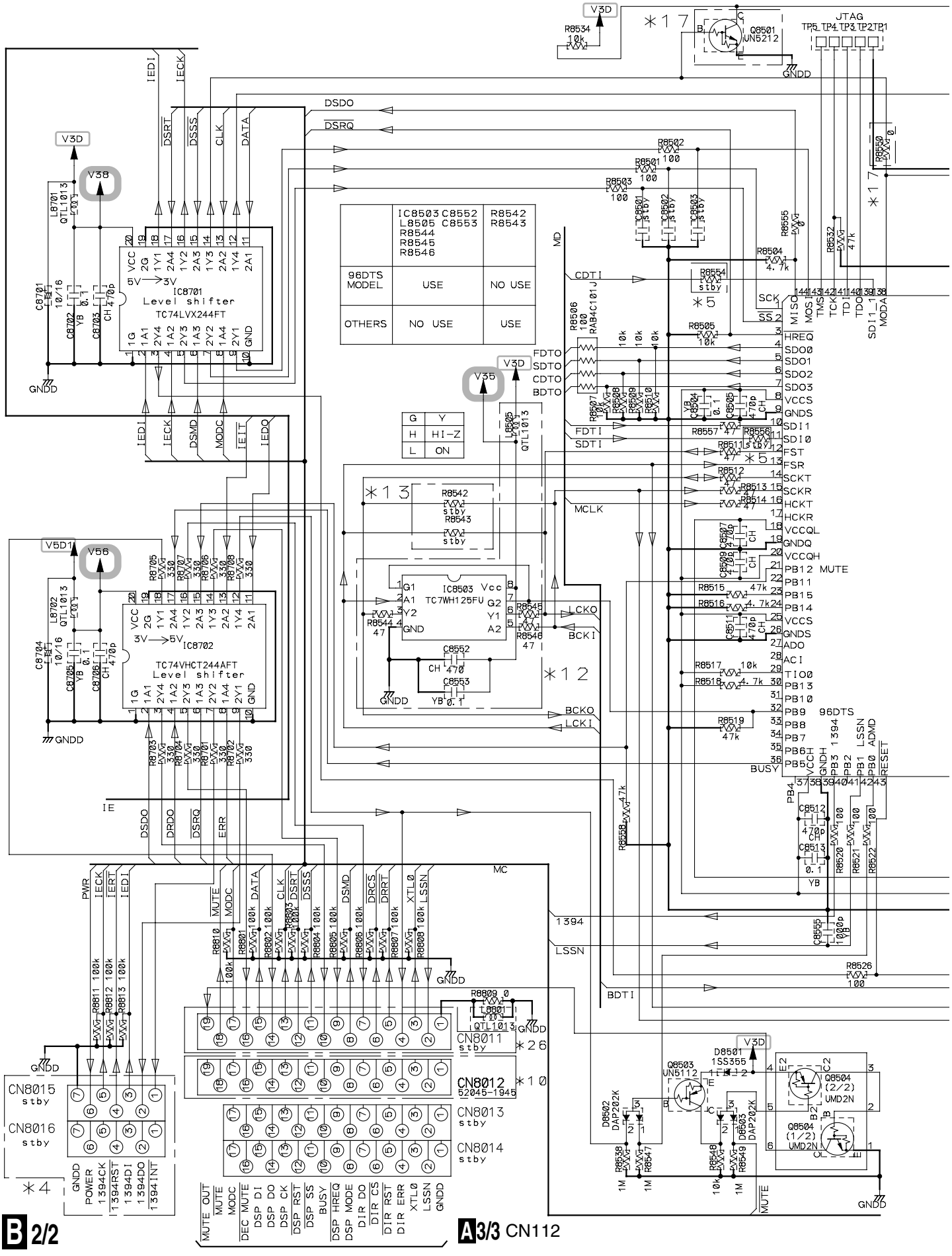

A 3/3 MAIN ASSY
(VSX-D912 : XWK3101)
(VSX-D812 : XWK3096)
M CN401
CN101
52045-1745
FLAC 2
FLAC 1
-VF
DISP RST
DISP CLK
DISP DI
DISP DO
DISP RDY
DISP EN
SRIN
SROUT
RMC
1W WP
D+5. 6V
ST5. 6V
GNDU
GNDU
SRIN
SROUT
RMC
1W_WP
MT
MV
SM+5V
T_CE
T_DI
T_CLK
T_DO
V+5U
R9034
10K
IC9001
M30622MCA
MAIN μ-COM
PD5837A
(PD5837A8)
TC9273F-DT1
TC9273F-CK1
TC9273F-ST1
SIMUKE2
SIMUKE1
TMUTE
STEREO
TUNED
FM_COMP
RDS DT
RDS_CLK
RDS FM+
RDS DT
RDS CLK
OL DET
VIDEO1
VIDEO2
VIDEO3
SW DET
FURNITURE
4053A
4053 INH
EVR DT
EVR CLK
LOW POW
MVRATT
RY-AC
HP DET
RY_A
RY_C/R
RY_B
AMUTE
GAIN_SEL
INPUT ATT
4053INH
V1
V2
V3
SWDET
FUR
4053A
VLDT
VLCK
AC_RY
HP_SW
SPA_RY
R/C_RY
SPB_RY
INPUTATT
MVRATT
DTA124EK
DTC143
DTC143TK
Q9004
Q9006
Q9007
Q9002
Q9005
Q9003
Q9001
A 2/3
A 1/3
SM+5V
V+12
V-12
D9013
1SS355
D9011
1SS355
R9009
47K
R9012
27K
R9011
1K
C9013
470/6. 3
C9017
0. 01u
GNDU
LSSN
C9000
STBY
MD
CN1102
52045-1045
CN1112
52045-1945
Vss
T_RXD
T_BUSY
NC
T_Vdd
T_SCLK
T_TXD
T_PGMODE
T_RST
Vss
MUTE_OUT
DMUTE
G
DECMUTE
MOSI
MISO
MSCK
MRST
MSS
BUSY
DSP HREQ
DSP MODE
DIR DO
DIR CS
DIR RST
DIR ERR
XTLO
LSSN
G
SWPR
SBPR
GNDA
GAV
GNDT
FOR FLASH U-COM
B 2/2 CN8012
A 3/3

3.6 DSP ASSY (1/2)

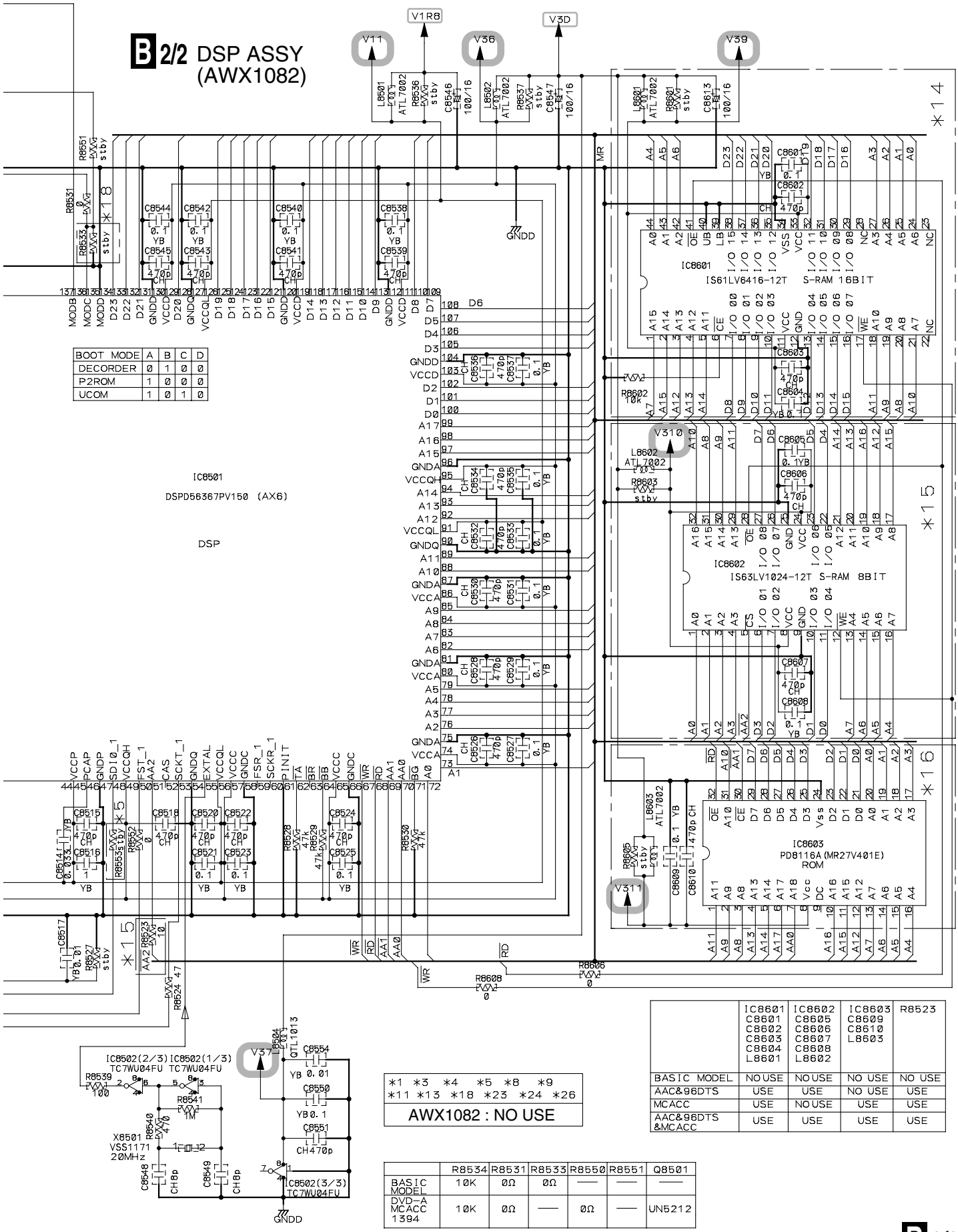



*1 *3 *4 *5 *8 *9
*11 *13 *18 *23 *24 *26
AWX1082 : NO USE
IC8401
AK4529VQ
or AK4628VQ
8ch CODEC
CN8007
AKP7073
CN8008
CN8009
CN8010
52045-1545
CN8001
CN8002
CN8003
AKP7070
CN8004
CN8005
CN8006
IC8901
NJM2391DL1-33
IC8902
NJU7223DL1-18
KN8201
VNF1084
KN8501
VNF1084
F CN806
F CN805
B 1/2 DSP ASSY
(AWX1082)
: The power supply is shown with the marked box.
NOTES:
NO INDICATED PARTS IS...
CCSRCH***50-T
CKSRYB***50-T
CKSRYB333K16-T
CKSRYB104K16-T
CKSRYB105K6R3-T
CEV***M**-T
RS1/16S***J-T
UNLESS OTHERWISE NOTED

3.7 DSP ASSY (2/2)



B 2/2 DSP ASSY (AWX1082)



BOOT MODE	A	B	C	D
DECORDER	0	1	0	0
P2ROM	1	0	0	0
UCOM	1	0	1	0

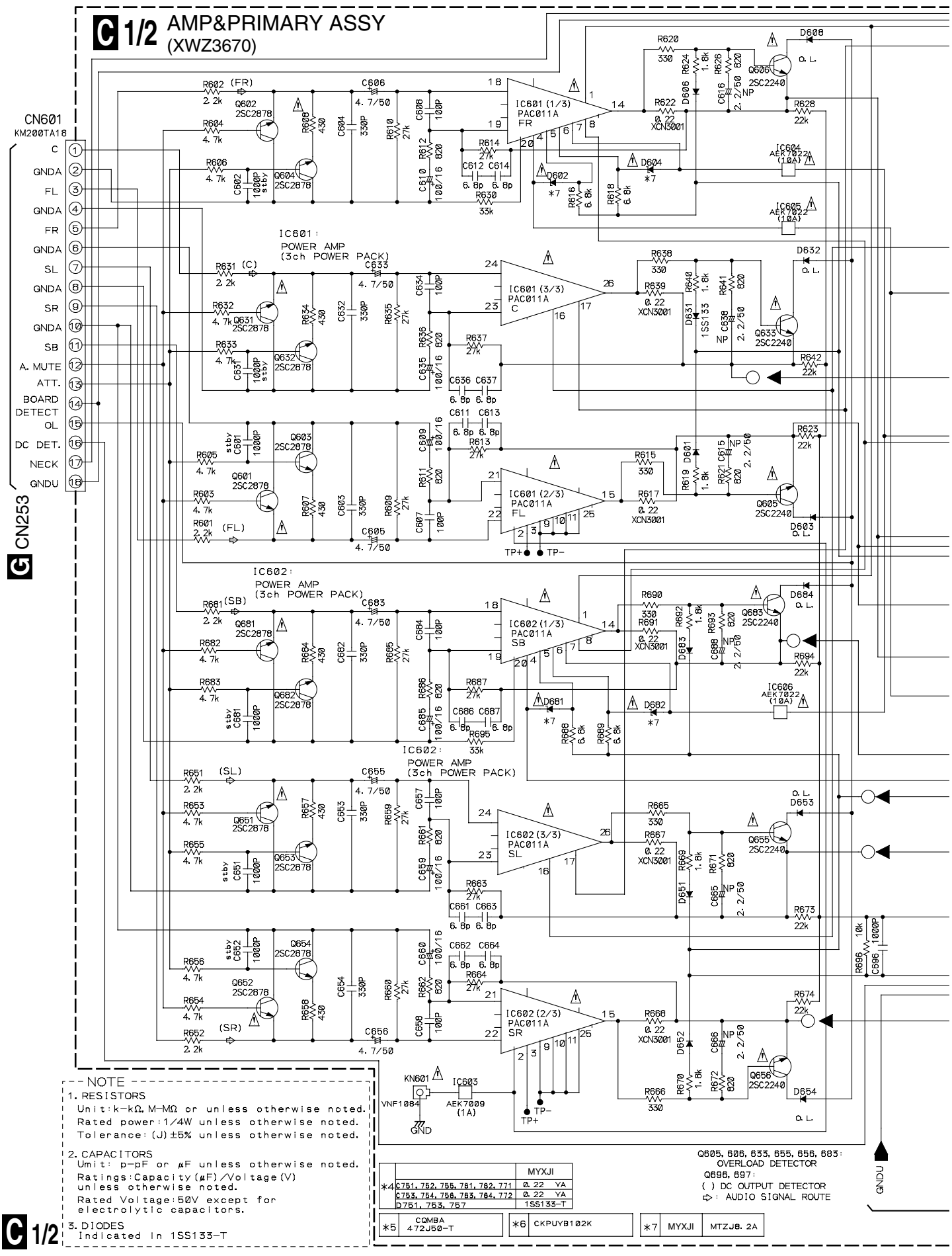
	IC8601 C8601 C8602 C8603 C8604 L8601	IC8602 C8605 C8606 C8607 C8608 L8602	IC8603 C8609 C8610 L8603	R8523
BASIC MODEL	NO USE	NO USE	NO USE	NO USE
AAC&96DTS	USE	USE	NO USE	USE
MCACC	USE	NO USE	USE	USE
AAC&96DTS &MCACC	USE	USE	USE	USE

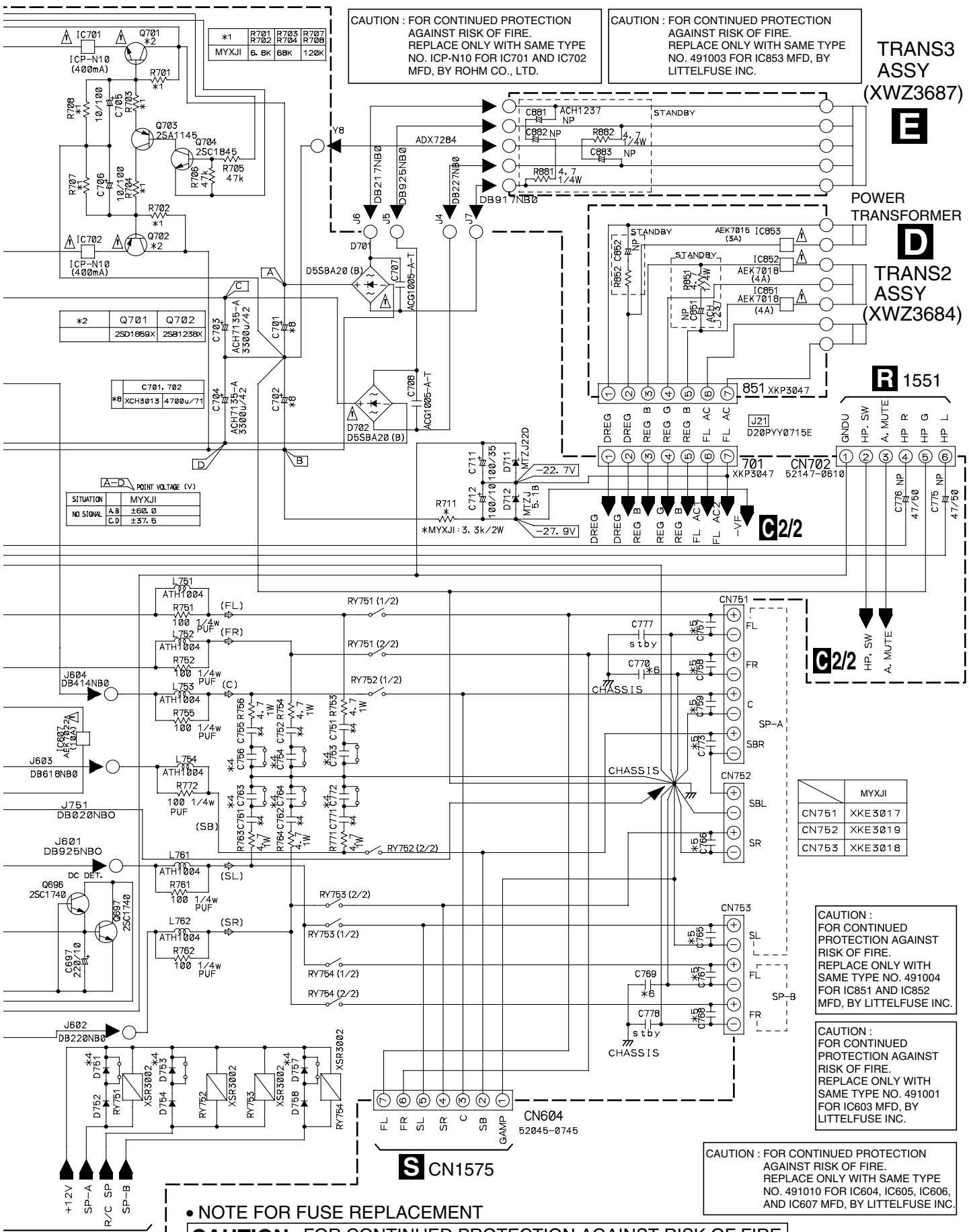
*1	*3	*4	*5	*8	*9
*11	*13	*18	*23	*24	*26

AWX1082 : NO USE

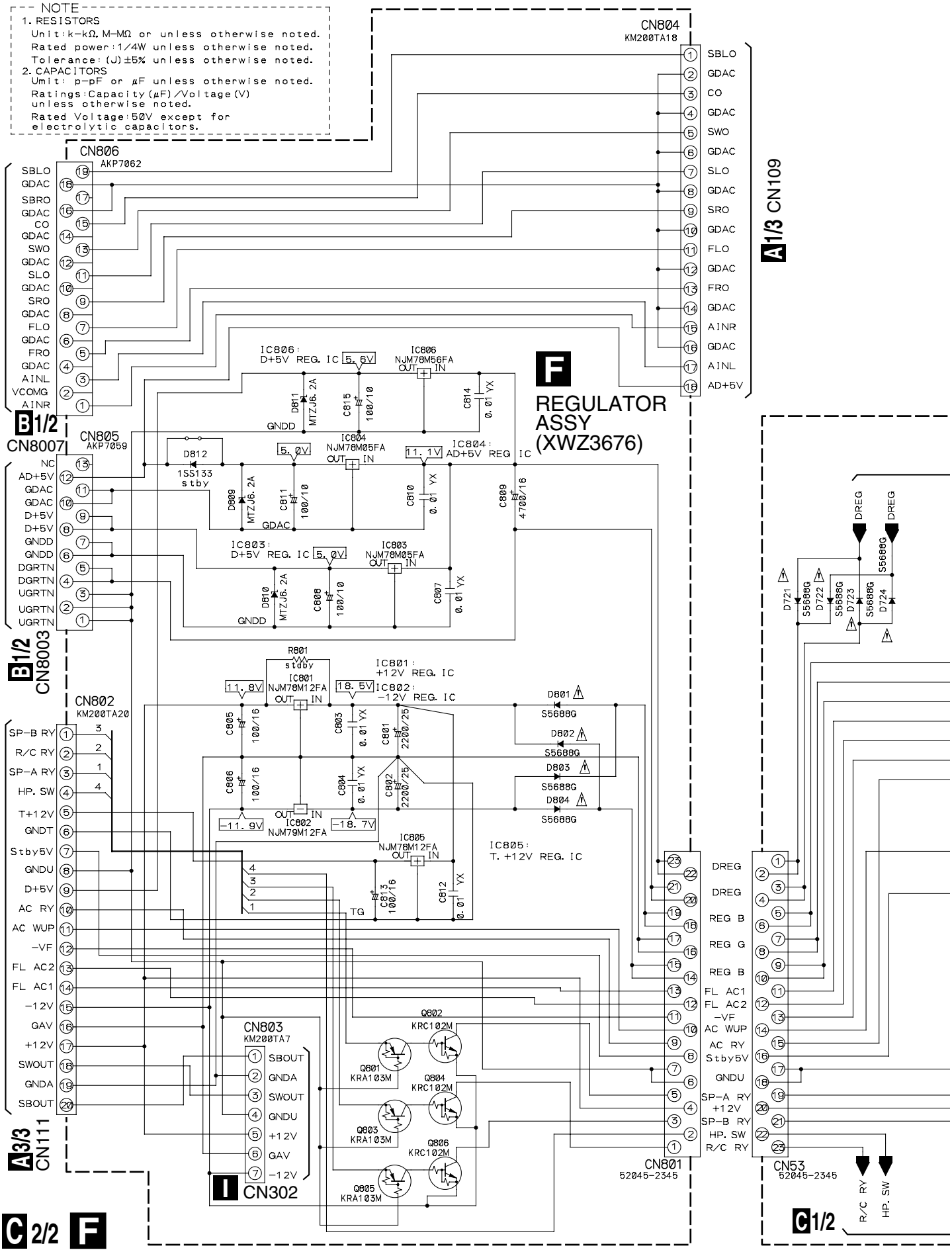
	R8534	R8531	R8533	R8550	R8551	Q8501
BASIC MODEL	10K	0Ω	0Ω	—	—	—
DVD-A MCACC 1394	10K	0Ω	—	0Ω	—	UN5212

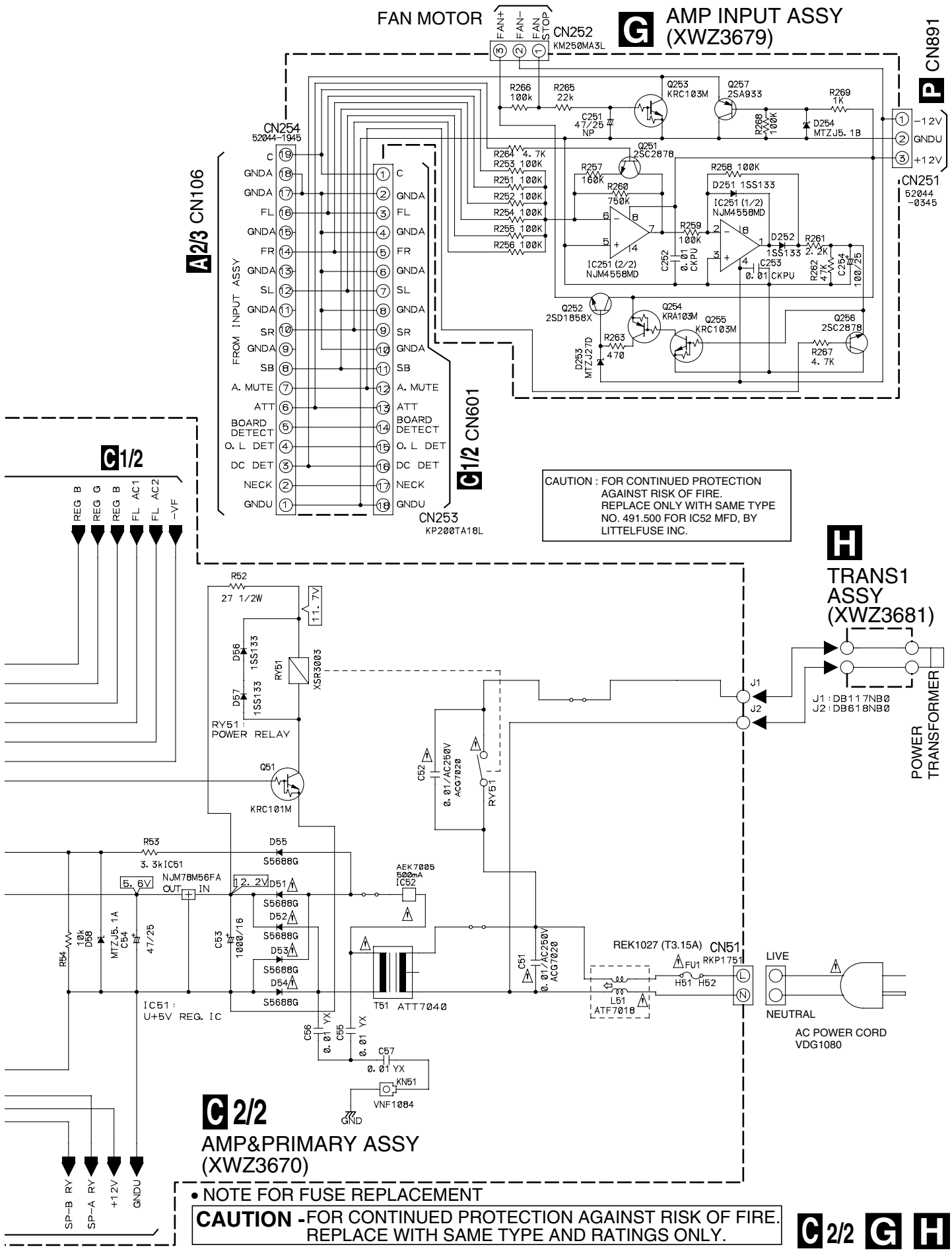
3.8 AMP & PRIMARY (1/2), TRANS2 and TRANS3 ASSYS



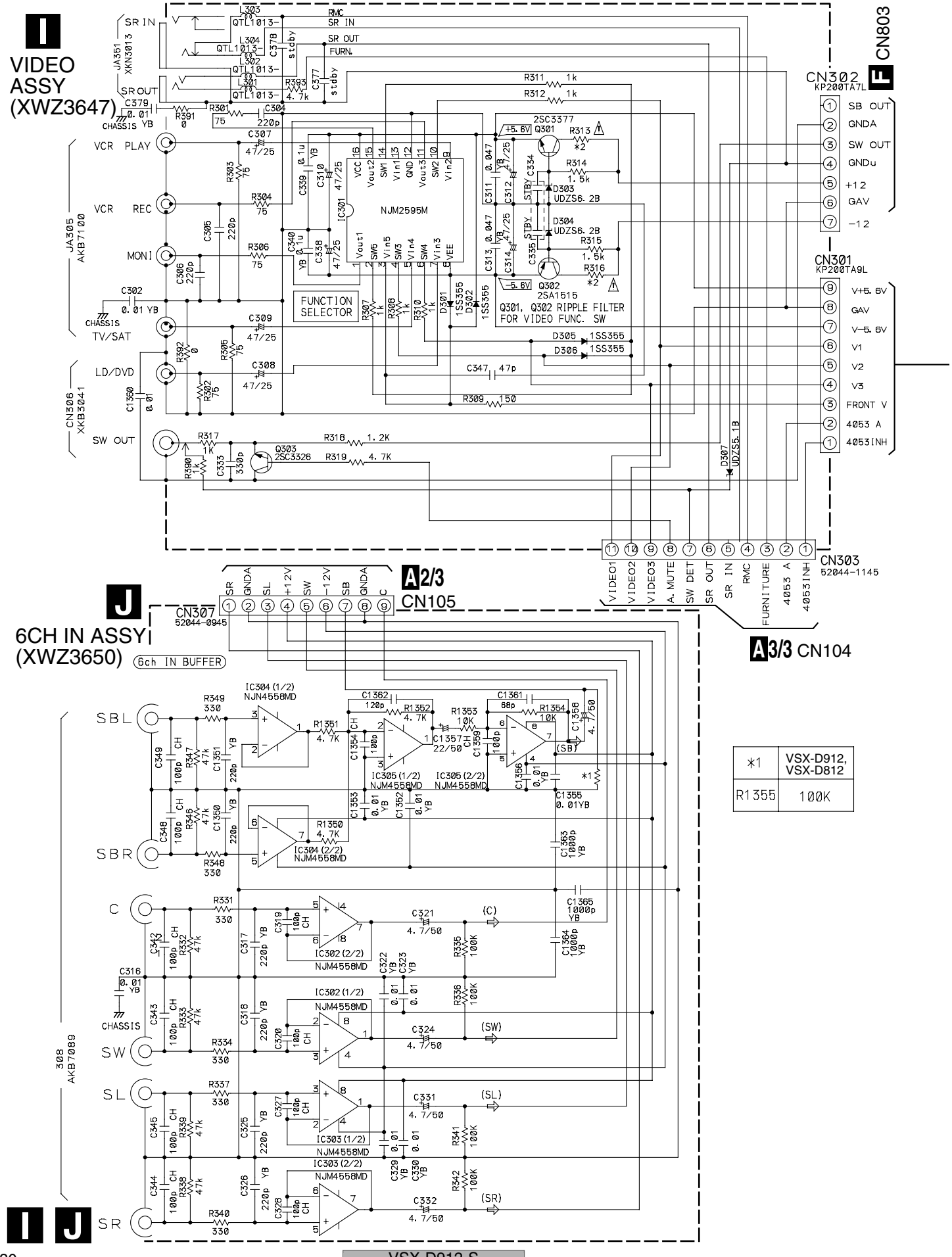

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. ICP-N10 FOR IC701 AND IC702 MFD, BY ROHM CO., LTD.
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491003 FOR IC853 MFD, BY LITTELFUSE INC.
TRANS3 ASSY (XWZ3687)
E
POWER TRANSFORMER
D
TRANS2 ASSY (XWZ3684)
R 1551
C2/2
C1/2 D E
S CN1575
CN604 52045-0745
CN751
CN752
CN753
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491004 FOR IC851 AND IC852 MFD, BY LITTELFUSE INC.
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491001 FOR IC603 MFD, BY LITTELFUSE INC.
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491010 FOR IC604, IC605, IC606, AND IC607 MFD, BY LITTELFUSE INC.
• NOTE FOR FUSE REPLACEMENT
CAUTION -FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS ONLY.

3.9 AMP & PRIMARY (2/2), REG. , AMP INPUT and TRANS1 ASSYS

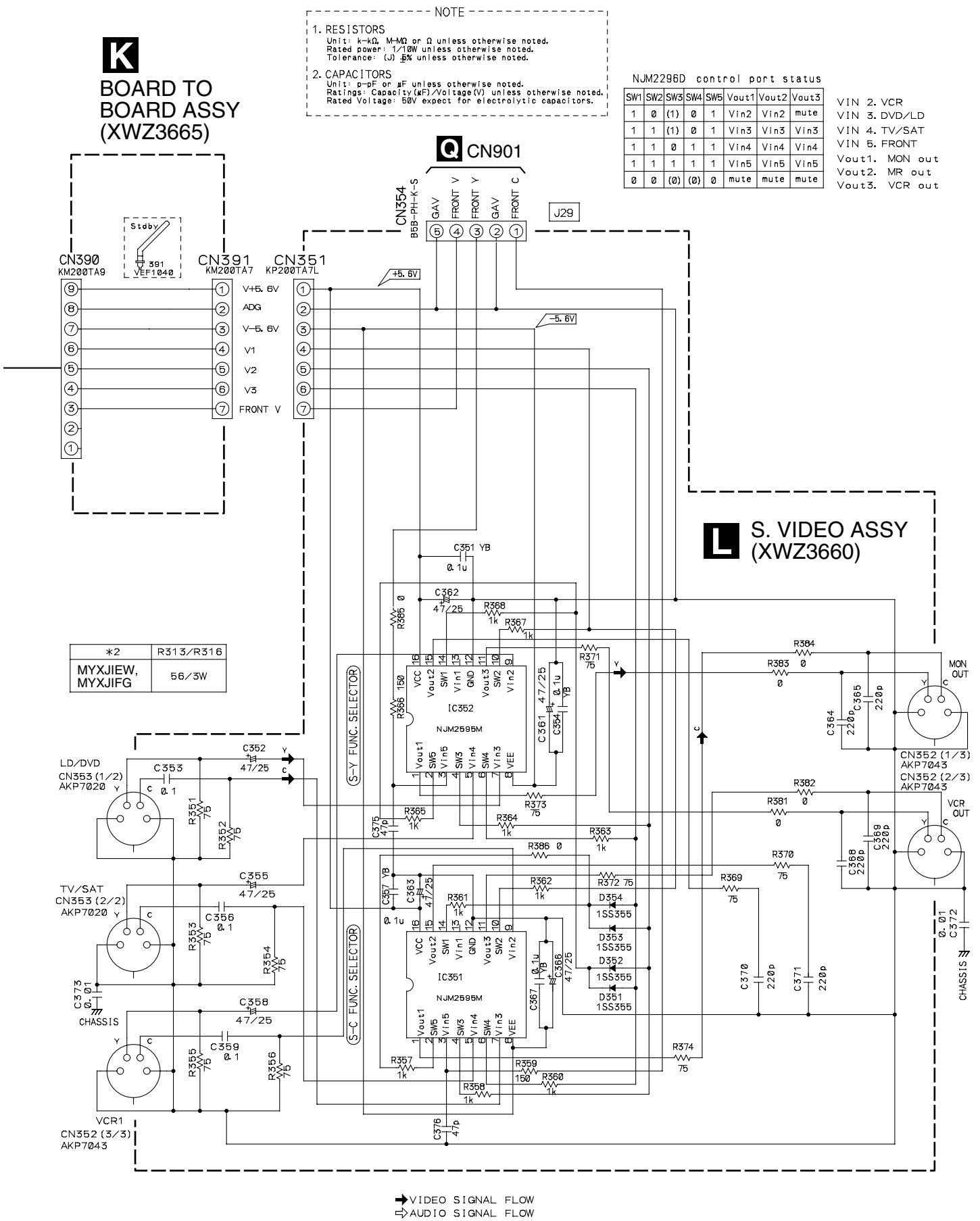



FAN MOTOR
FAN+
FAN−
FAN STOP
CN252
KM250MA3L
G AMP INPUT ASSY
(XWZ3679)
P CN891
CN254
52044-1945
A2/3 CN106
FROM INPUT ASSY
C
GNDA
FL
FR
SL
SR
SB
A. MUTE
ATT
BOARD DETECT
O. L DET
DC DET
NECK
GNDU
C1/2 CN601
CN253
KP200TA18L
R266 100k
R265 22k
C251 47/25 NP
Q253 KRC103M
Q257 2SA933
R269 1K
R268 100K
D254 MTZJ5.1B
-12V
GNDU
+12V
CN251
52044-0345
R264 4.7K
R253 100K
R251 100K
R252 100K
R254 100K
R255 100K
R256 100K
Q251 2SC2878
R257 160K
R260 750K
R258 100K
D251 1SS133
IC251 (1/2) NJM4558MD
IC251 (2/2) NJM4558MD
R259 100K
C252 0.01 CKPU
C253 0.01 CKPU
D252 1SS133
R261 2.2K
R262 47K
C254 100/25
Q252 2SD1858X
Q254 KRA103M
Q255 KRC103M
Q256 2SC2878
R263 470
D253 MTZJ27D
R267 4.7K
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.500 FOR IC52 MFD, BY LITTELFUSE INC.
C1/2
REG B
REG G
REG B
FL AC1
FL AC2
-VF
H TRANS1 ASSY (XWZ3681)
J1 : DB117NB0
J2 : DB618NB0
POWER TRANSFORMER
R52 27 1/2W
11.7V
D56 1SS133
D57 1SS133
RY61
XSR3003
RY51 : POWER RELAY
Q51
KRC101M
C52 0.01/AC250V ACG7020
RY51
R53 3.3kIC51
NJM78M56FA
5.6V
12.2V
D51 S5688G
D52 S5688G
D53 S5688G
D54 S5688G
D55 S5688G
AEK7005 500mA IC52
R54 10k
D58 MTZJ5.1A
C54 47/25
C53 1000/16
IC51 : U+5V REG. IC
T51 ATT7040
C56 0.01 YX
C55 0.01 YX
C57 0.01 YX
KN51
VNF1084
GND
C51 0.01/AC250V ACG7020
REK1027 (T3.15A)
CN51
FU1 RKP1751
H51 H52
L51 ATF7018
LIVE
NEUTRAL
AC POWER CORD VDG1080
C 2/2
AMP&PRIMARY ASSY
(XWZ3670)
SP-B RY
SP-A RY
+12V
GNDU
• NOTE FOR FUSE REPLACEMENT
CAUTION -FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS ONLY.
C 2/2 G H

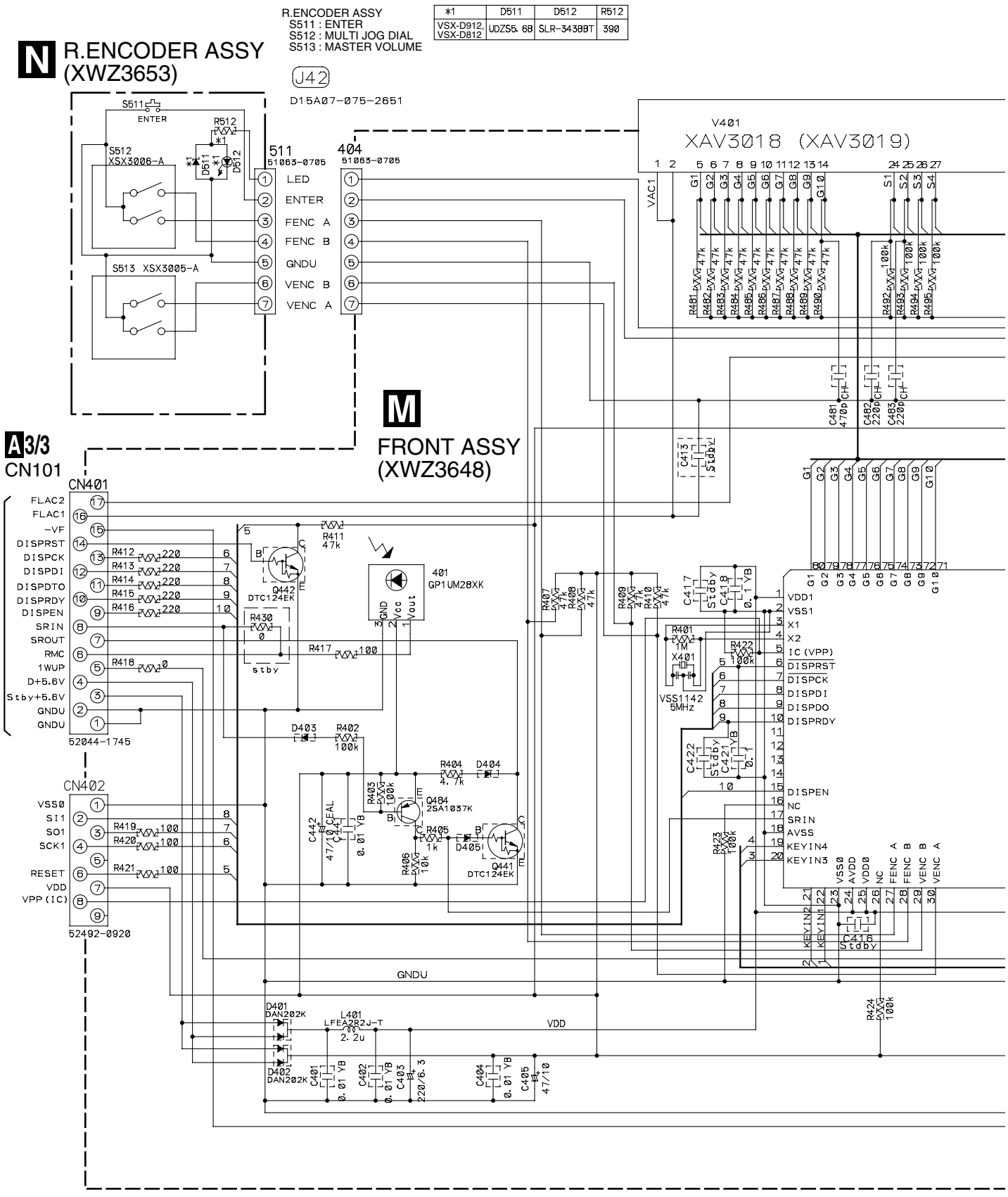
3.10 VIDEO, 6CH IN, BOARD TO BOARD and S. VIDEO ASSYS



*1	VSX-D912, VSX-D812
R1355	100K


NOTE
1. RESISTORS
Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
Rated power: 1/10W 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.
NJM2296D control port status
SW1 SW2 SW3 SW4 SW5 Vout1 Vout2 Vout3
1 0 (1) 0 1 Vin2 Vin2 mute
1 1 (1) 0 1 Vin3 Vin3 Vin3
1 1 0 1 1 Vin4 Vin4 Vin4
1 1 1 1 1 Vin5 Vin5 Vin5
0 0 (0) (0) 0 mute mute mute
VIN 2. VCR
VIN 3. DVD/LD
VIN 4. TV/SAT
VIN 5. FRONT
Vout1. MON out
Vout2. MR out
Vout3. VCR out
K
BOARD TO BOARD ASSY (XWZ3665)
Q CN901
CN354 B5B-PH-K-S
GAV FRONT V FRONT Y GAV FRONT C
J29
Stdby
391 VEF1040
CN390 KM200TA9
CN391 KM200TA7
CN351 KP200TA7L
V+5.6V
ADG
V-5.6V
V1
V2
V3
FRONT V
+5.6V
-5.6V
L S. VIDEO ASSY (XWZ3660)
*2 R313/R316
MYXJIEW, MYXJIFG 56/3W
IC352 NJM2595M
IC351 NJM2595M
S-Y FUNC. SELECTOR
S-C FUNC. SELECTOR
LD/DVD CN353(1/2) AKP7020
TV/SAT CN353(2/2) AKP7020
VCR1 CN352(3/3) AKP7043
MON OUT
VCR OUT
CN352(1/3) AKP7043
CN352(2/3) AKP7043
CHASSIS
D354 1SS355
D353 1SS355
D352 1SS355
D351 1SS355
VIDEO SIGNAL FLOW
AUDIO SIGNAL FLOW

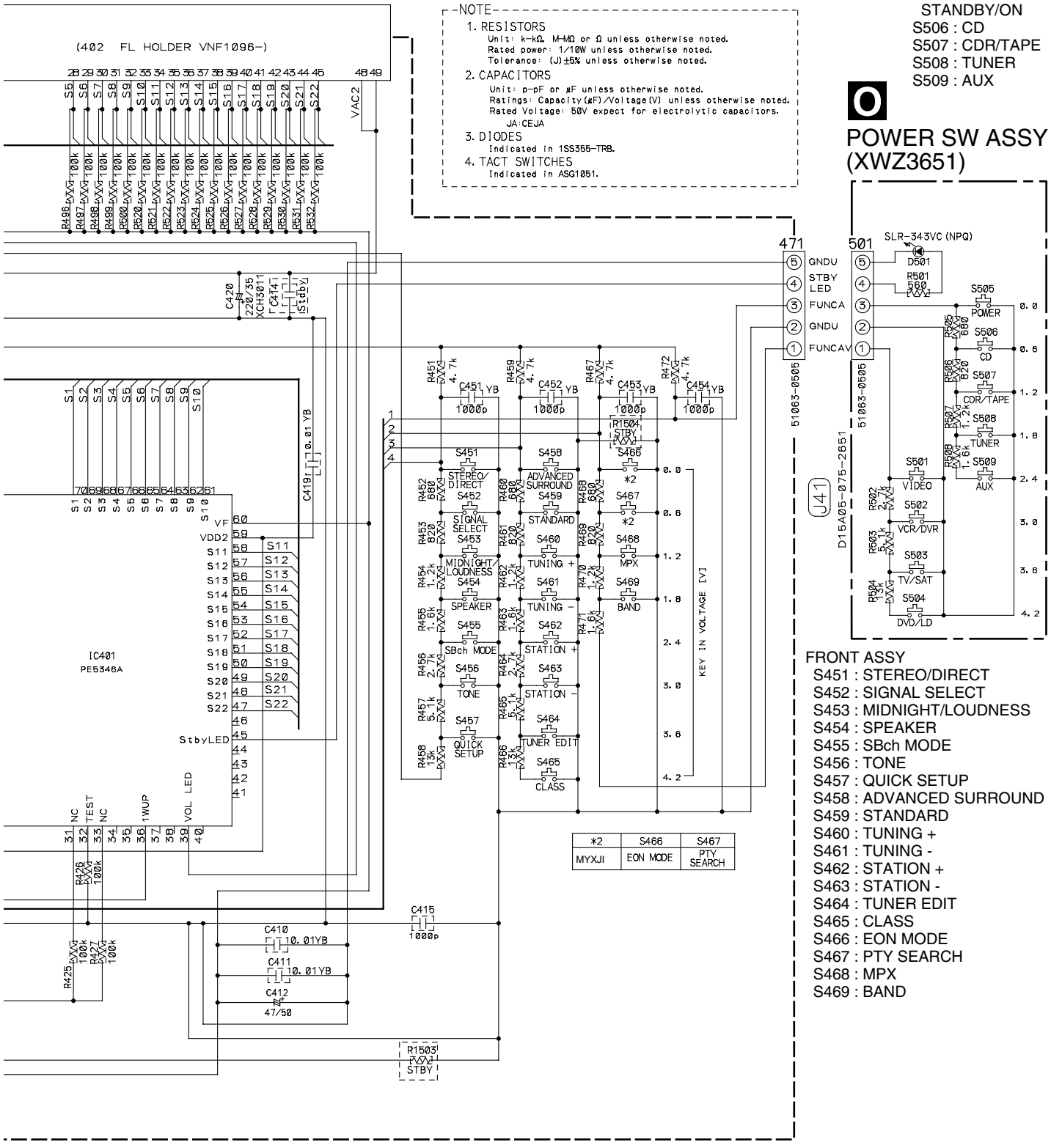
3.11 FRONT, R. ENCODER and POWER SW ASSYS



POWER SW ASSY
S501 : VIDEO
S502 : VCR/DVR
S503 : TV/SAT
S504 : DVD/LD
S505 : POWER
STANDBY/ON
S506 : CD
S507 : CDR/TAPE
S508 : TUNER
S509 : AUX

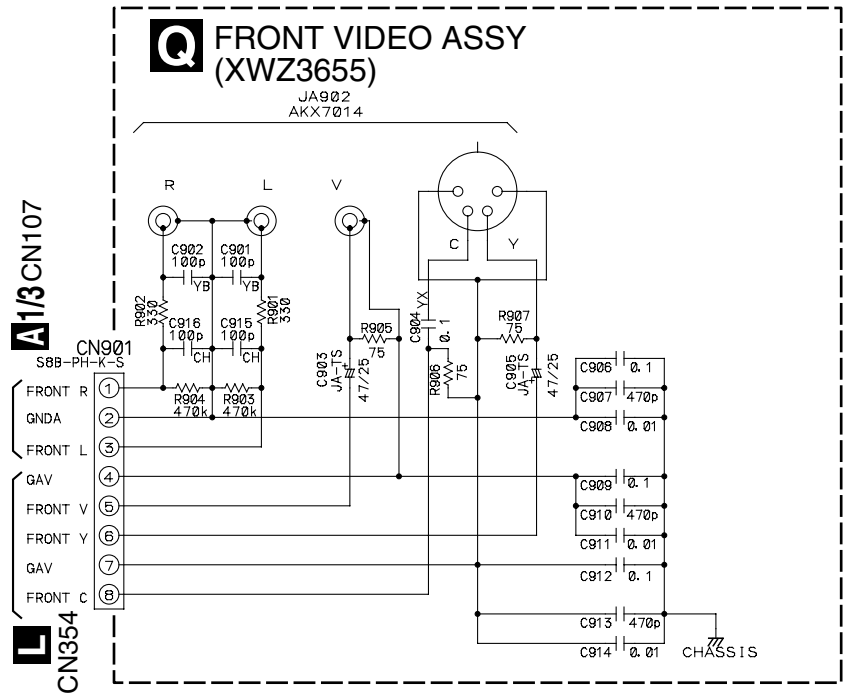
O

POWER SW ASSY (XWZ3651)



FRONT ASSY
S451 : STEREO/DIRECT
S452 : SIGNAL SELECT
S453 : MIDNIGHT/LOUDNESS
S454 : SPEAKER
S455 : SBch MODE
S456 : TONE
S457 : QUICK SETUP
S458 : ADVANCED SURROUND
S459 : STANDARD
S460 : TUNING +
S461 : TUNING -
S462 : STATION +
S463 : STATION -
S464 : TUNER EDIT
S465 : CLASS
S466 : EON MODE
S467 : PTY SEARCH
S468 : MPX
S469 : BAND

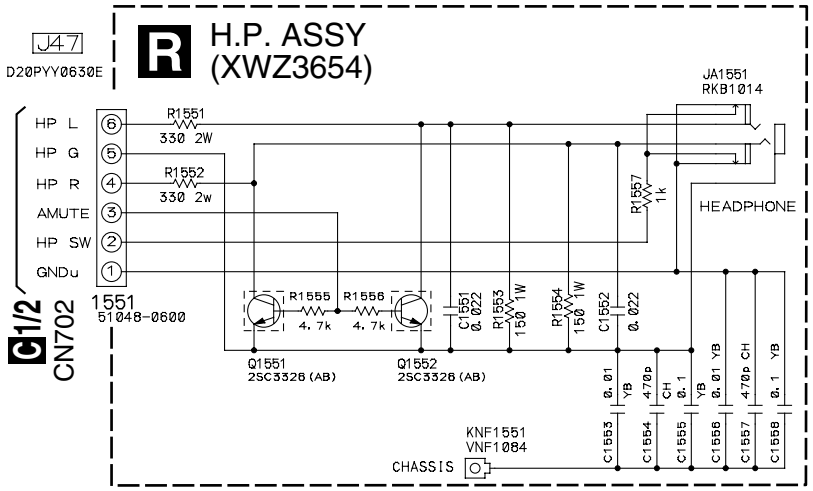
3.12 TRANS4, F.VIDEO, H.P., PRE., D.IN and F.OPT&MIC ASSYS

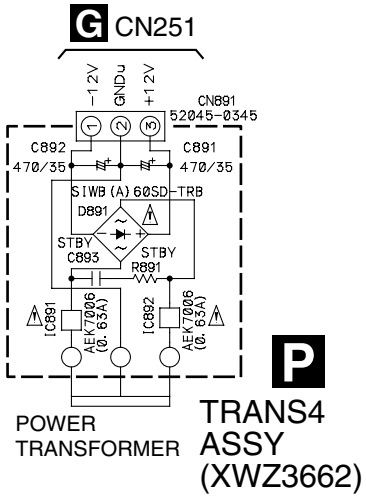


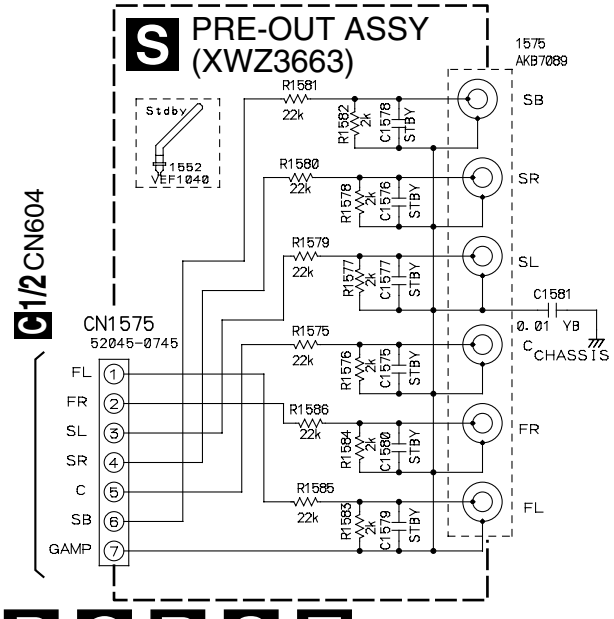
NOTE

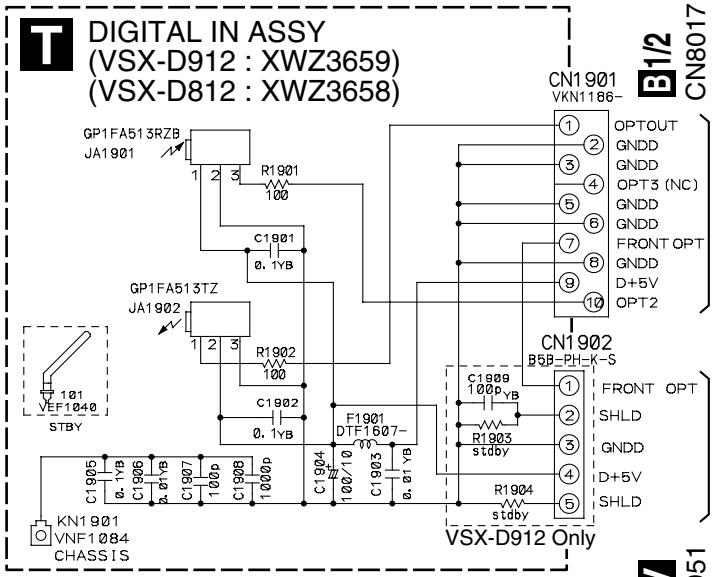
1. RESISTORS
   Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
   Rated power: 1/10W unless otherwise noted.
   Tolerance: (J) ±5% unless otherwise noted.
2. CAPACITORS
   Unit: p-pF or µF unless otherwise noted.
   Ratings: Capacity(µF)/Voltage(V) unless otherwise noted.
   Rated Voltage: 50V expect for electrolytic capacitors.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.630 FOR IC891 AND IC892 MFD, BY LITTELFUSE INC.

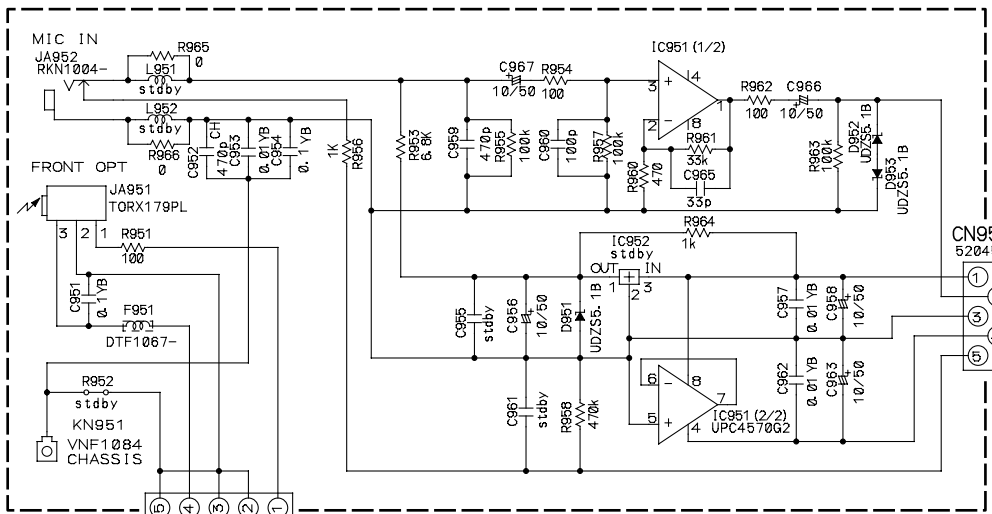






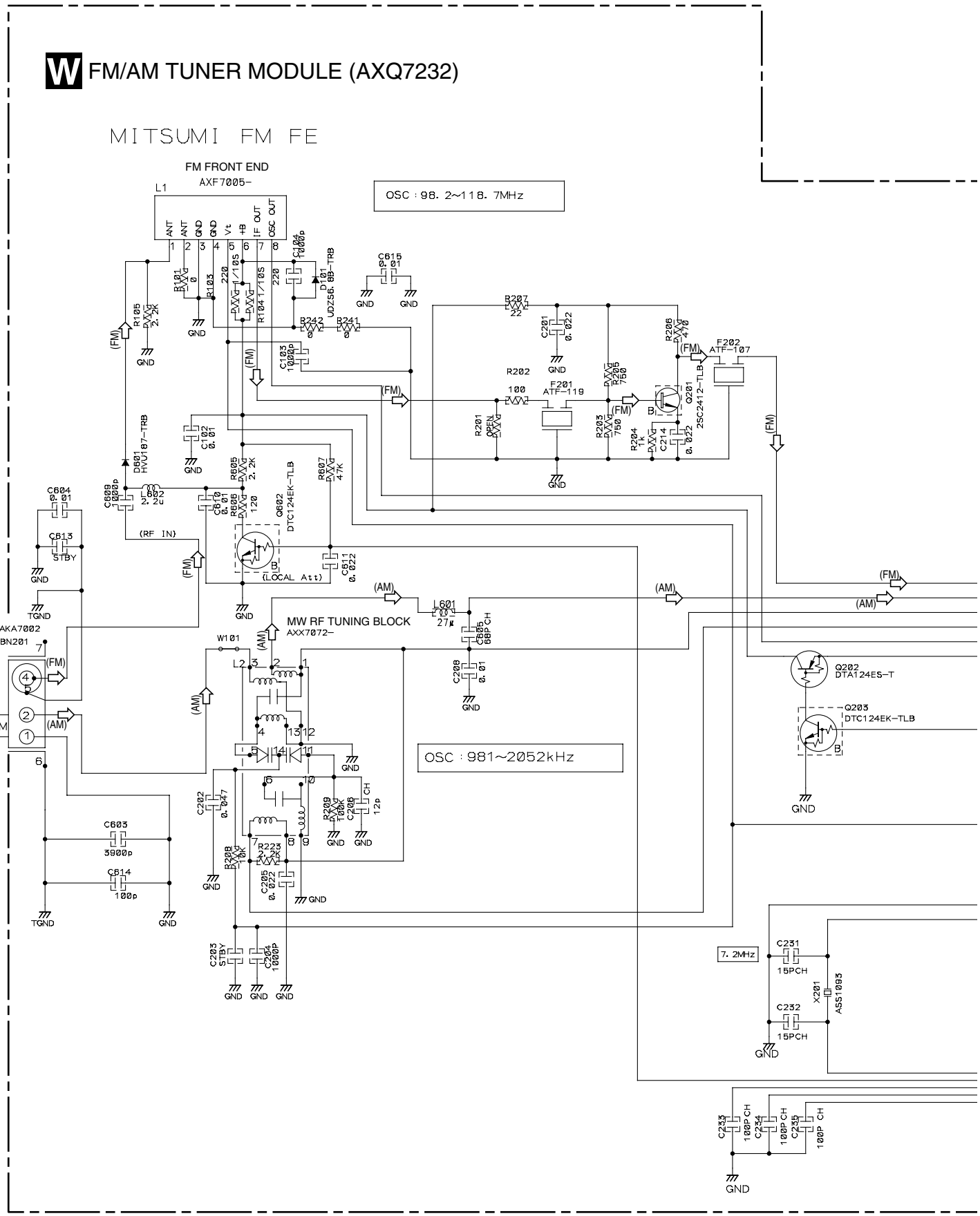


P Q R S T



V FRONT OPTICAL & MICASSY
(XWZ3656) VSX-D912 Only

3.13 FM/AM TUNER MODULE



: The power supply is shown with the marked box.

(TX) : AUDIO SIGNAL ROUTE (TUNER)

(AM) : AM SIGNAL ROUTE

(FM) : FM SIGNAL ROUTE

Notes

1. RESISTORS

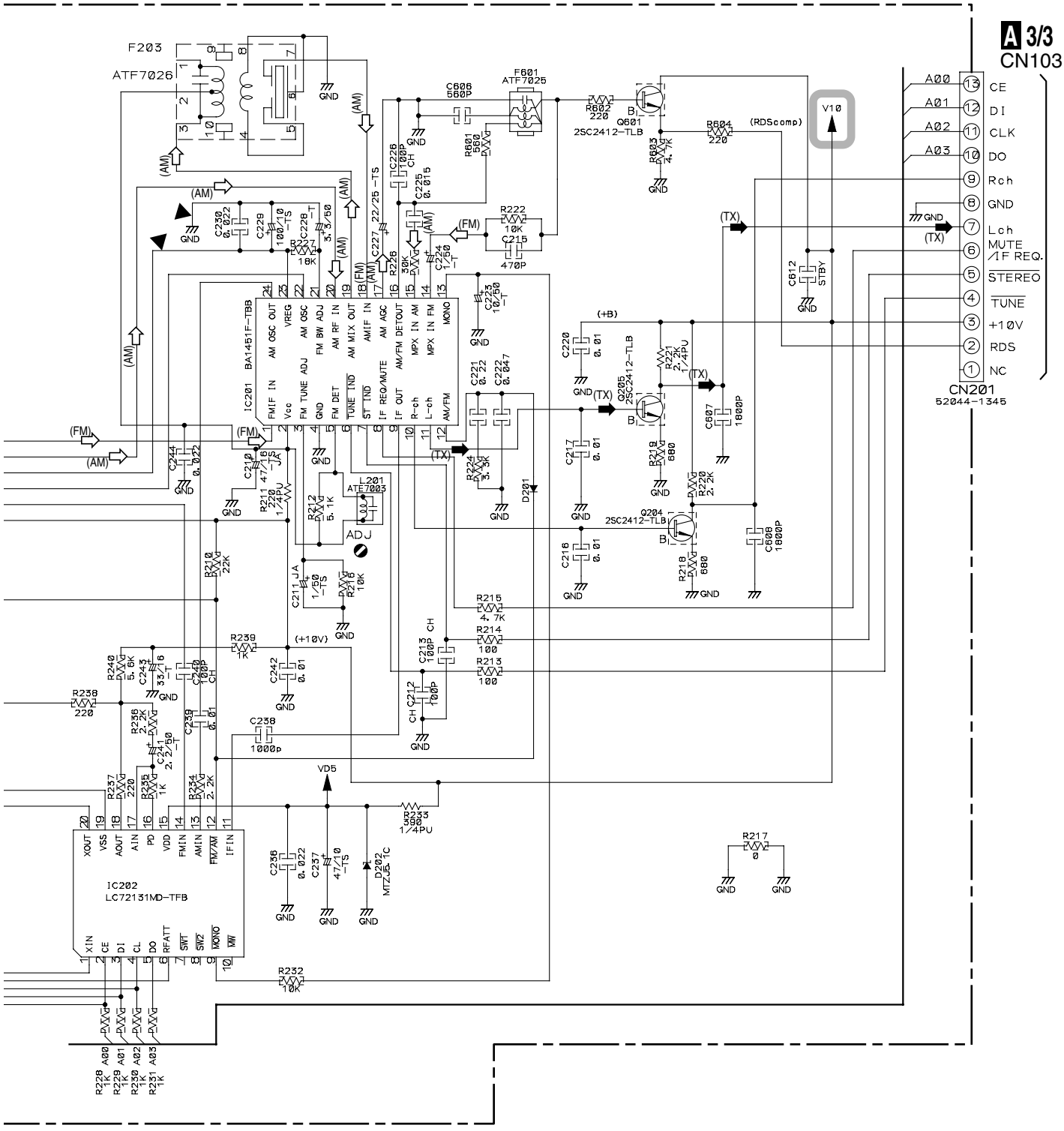
Indicated in Ω, 1/16W±5% Tolerance unless otherwise noted K;KΩ, M;MΩ.

2. CAPACITORS

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

3. DIODES

No mark diode is 1SS133.



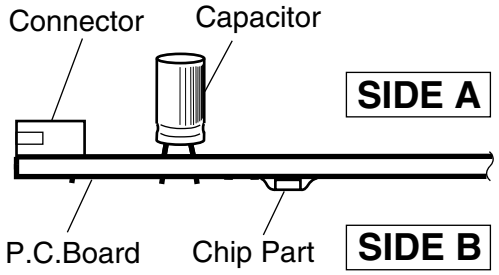
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

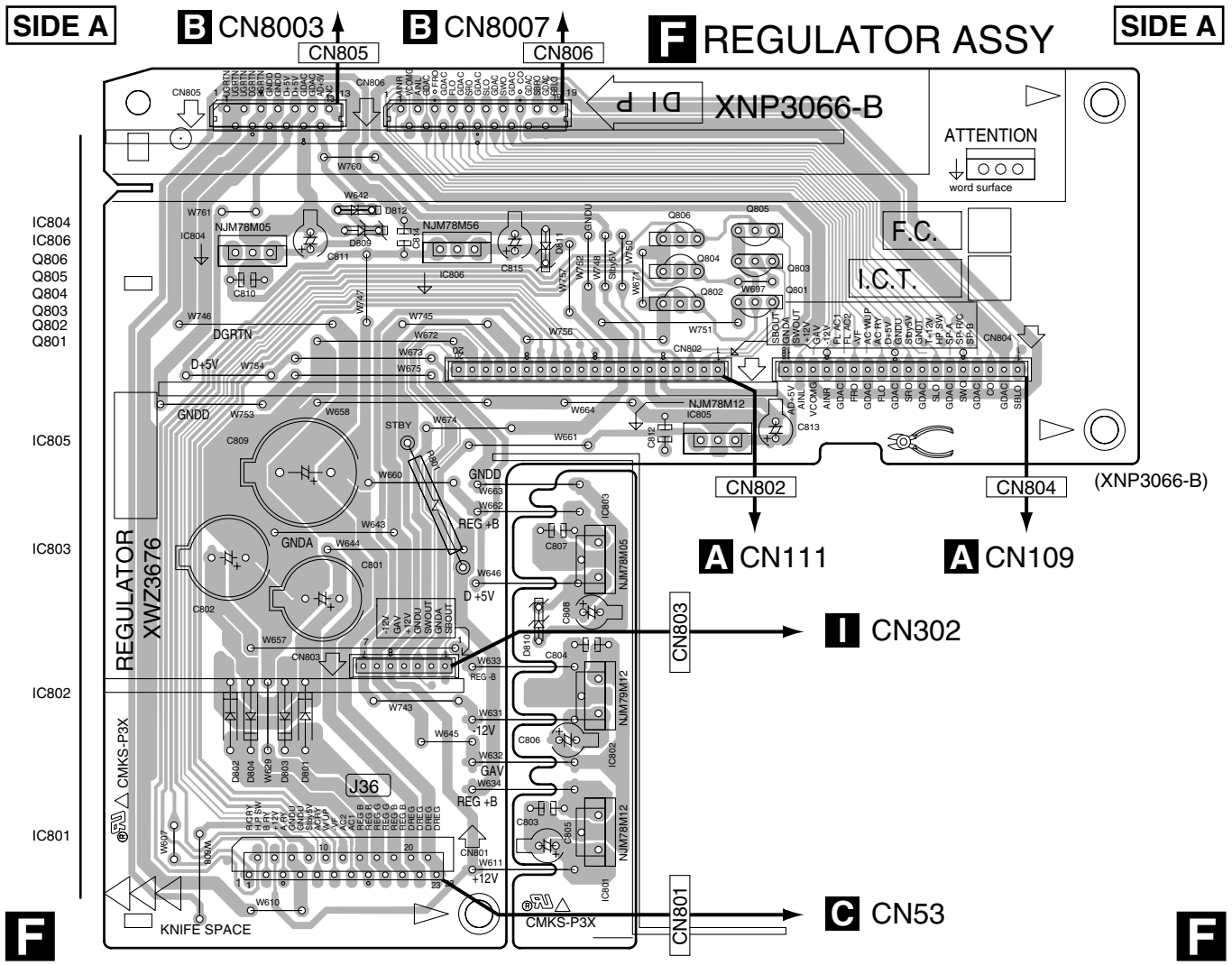
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3-terminal regulator

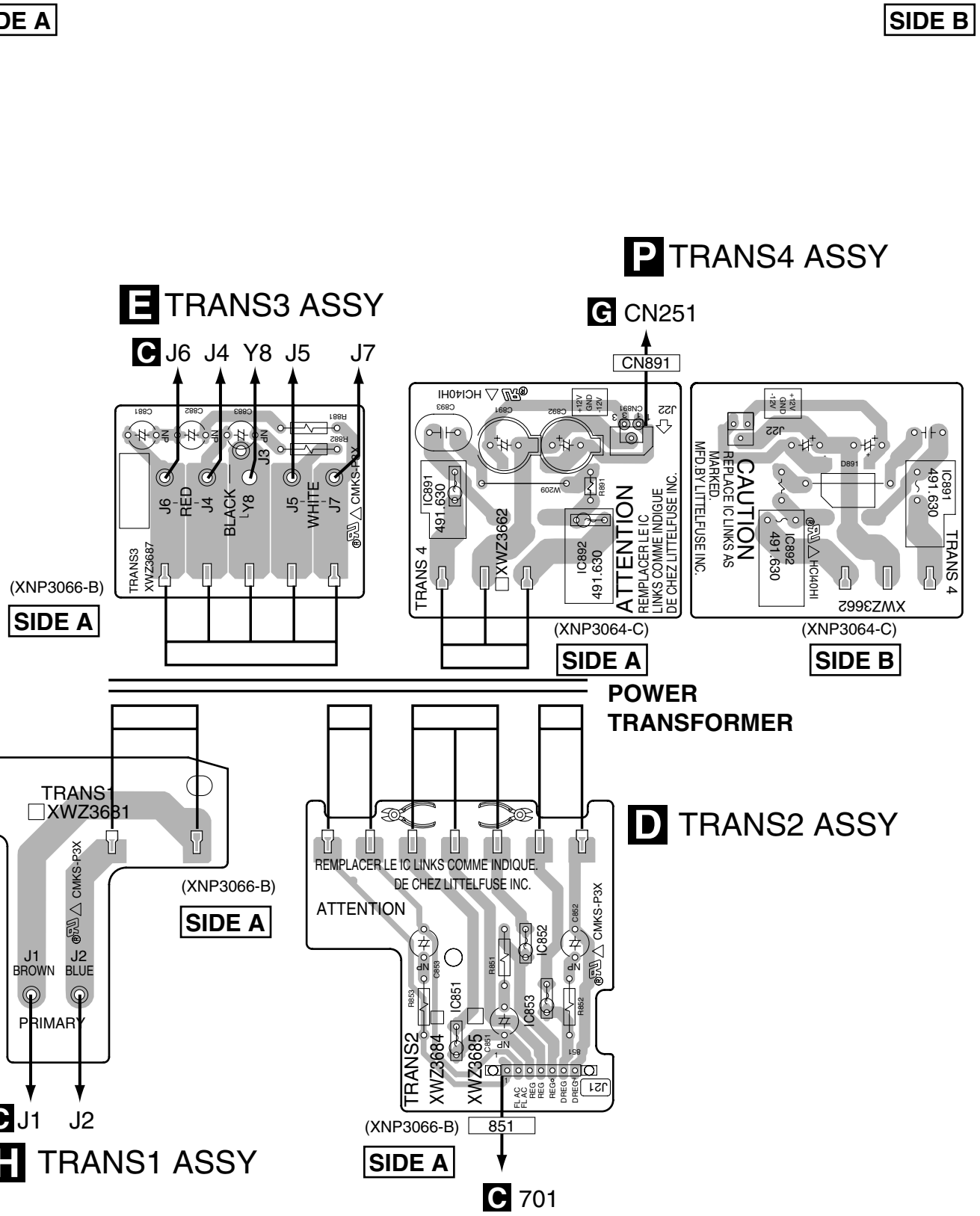
3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.



4.1 REGULATOR ASSY

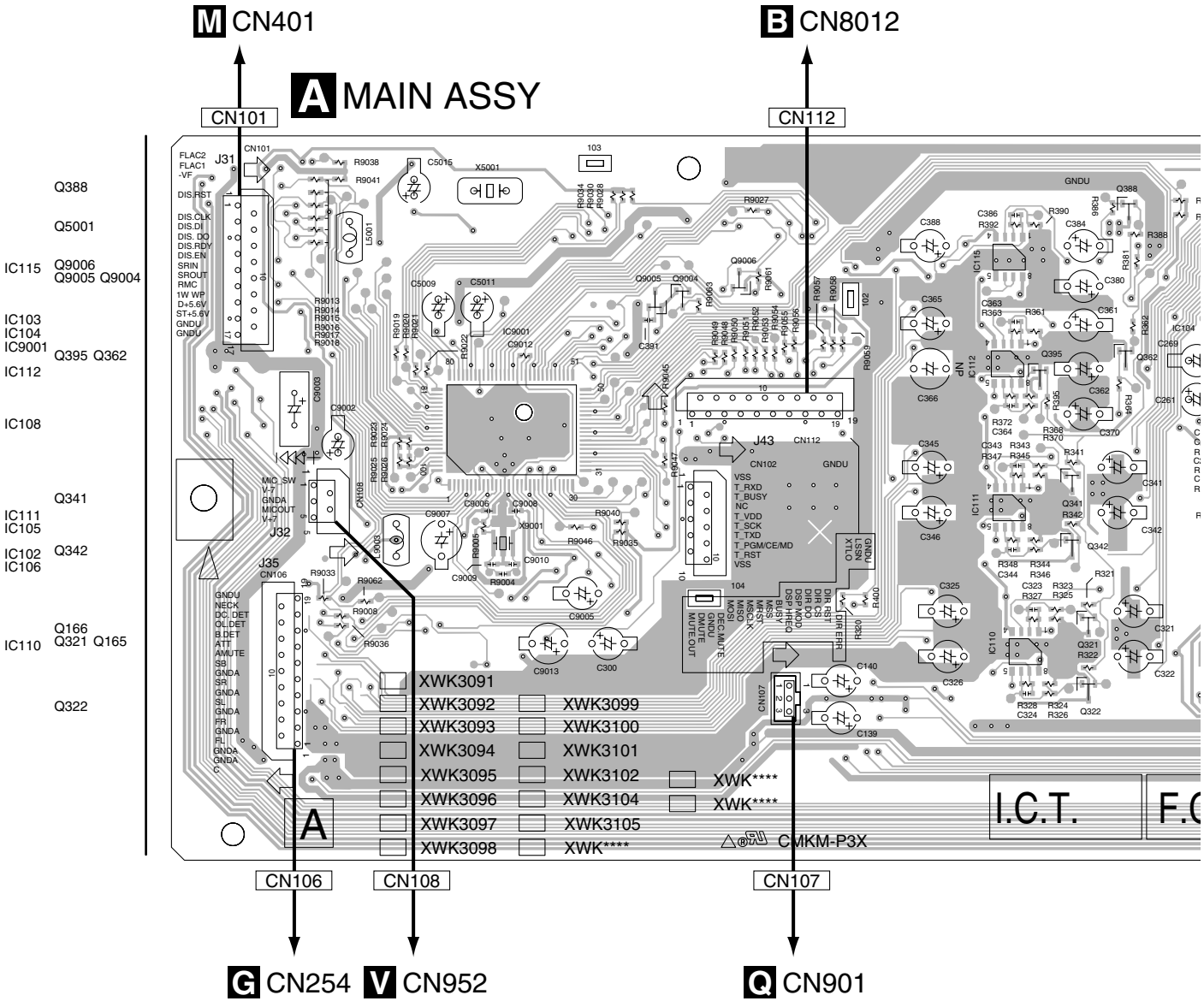


4.2 TRANS2, TRANS3, TRANS1 and TRANS4 ASSYS



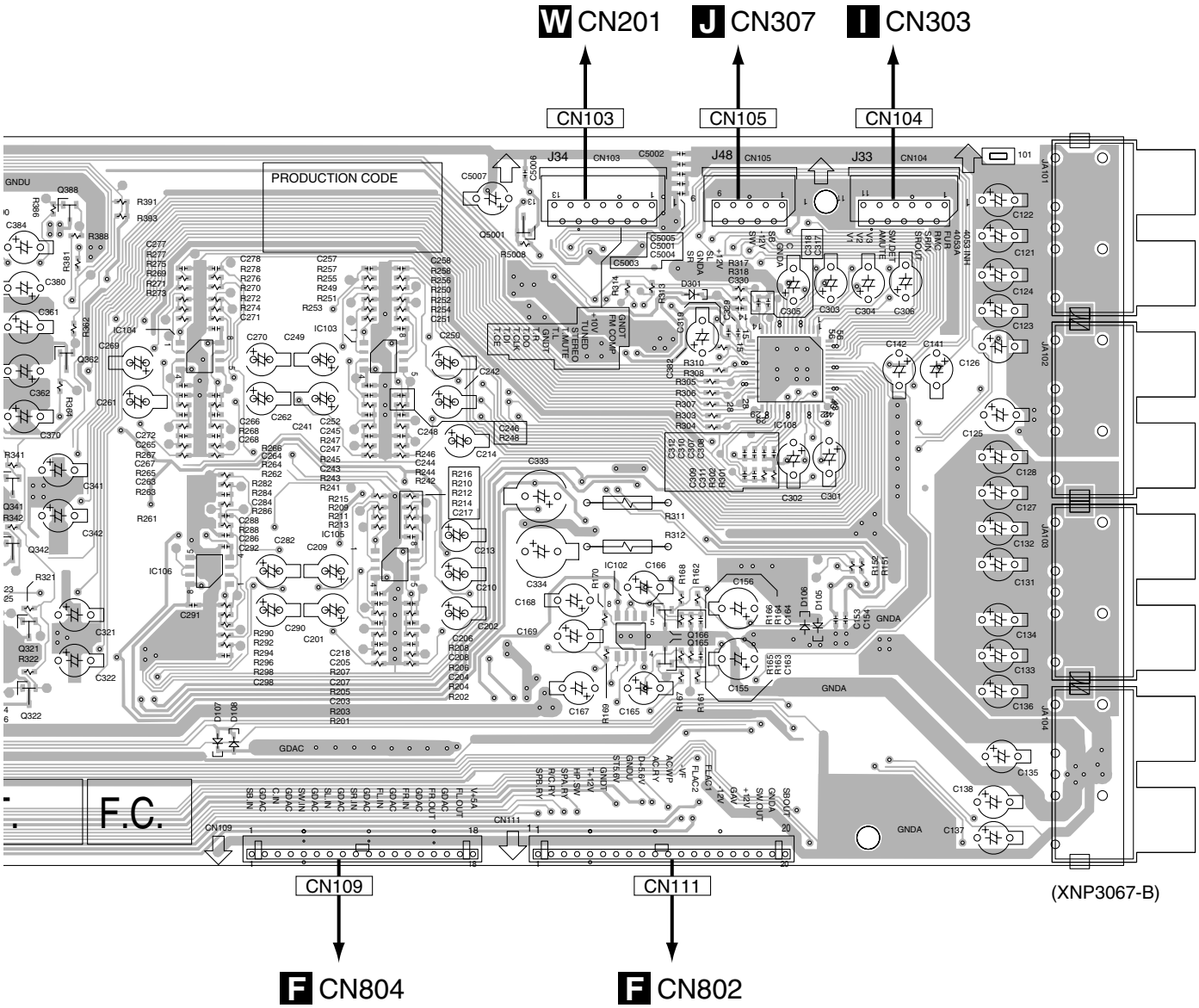
4.3 MAIN ASSY

SIDE A



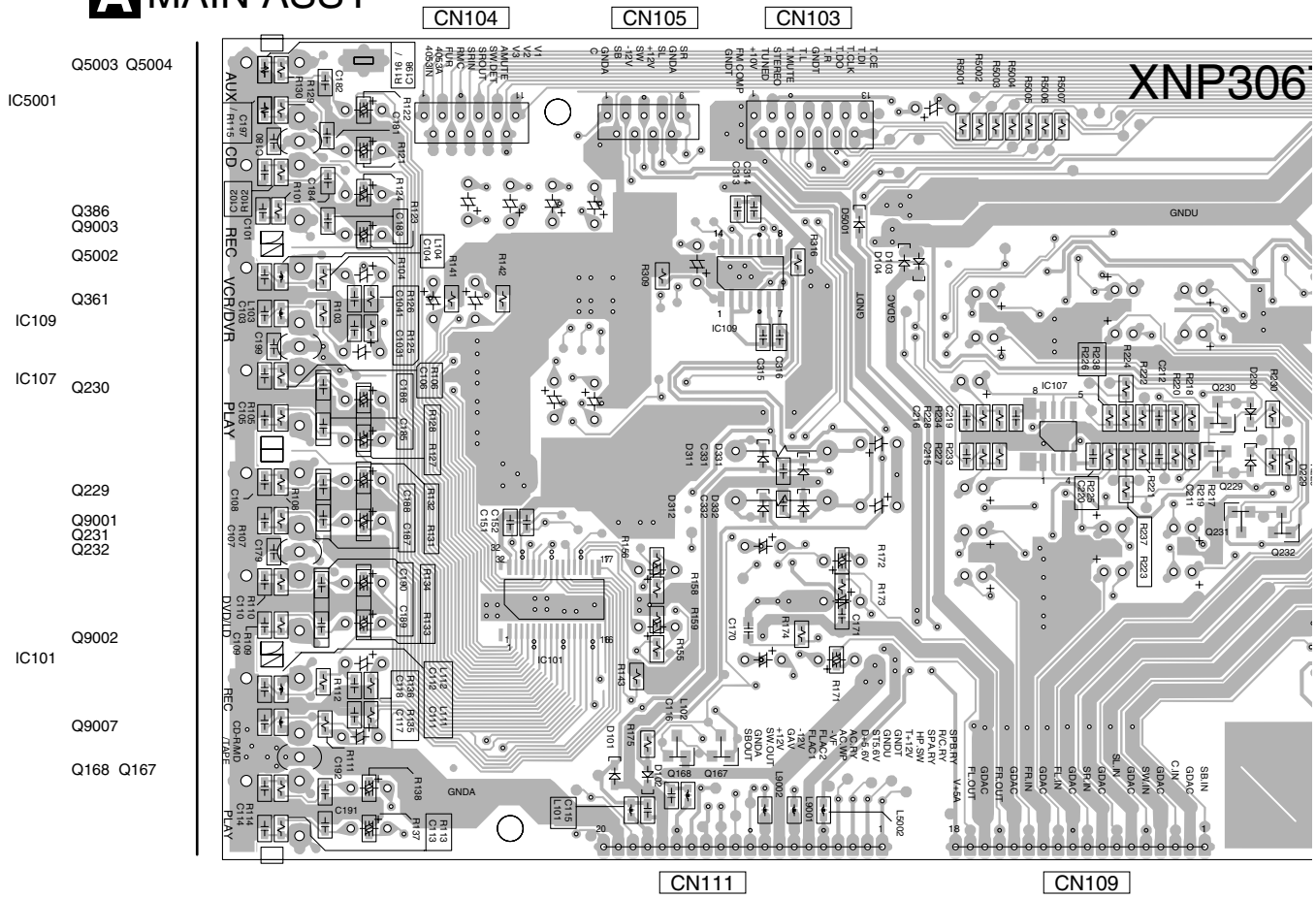
A

SIDE A

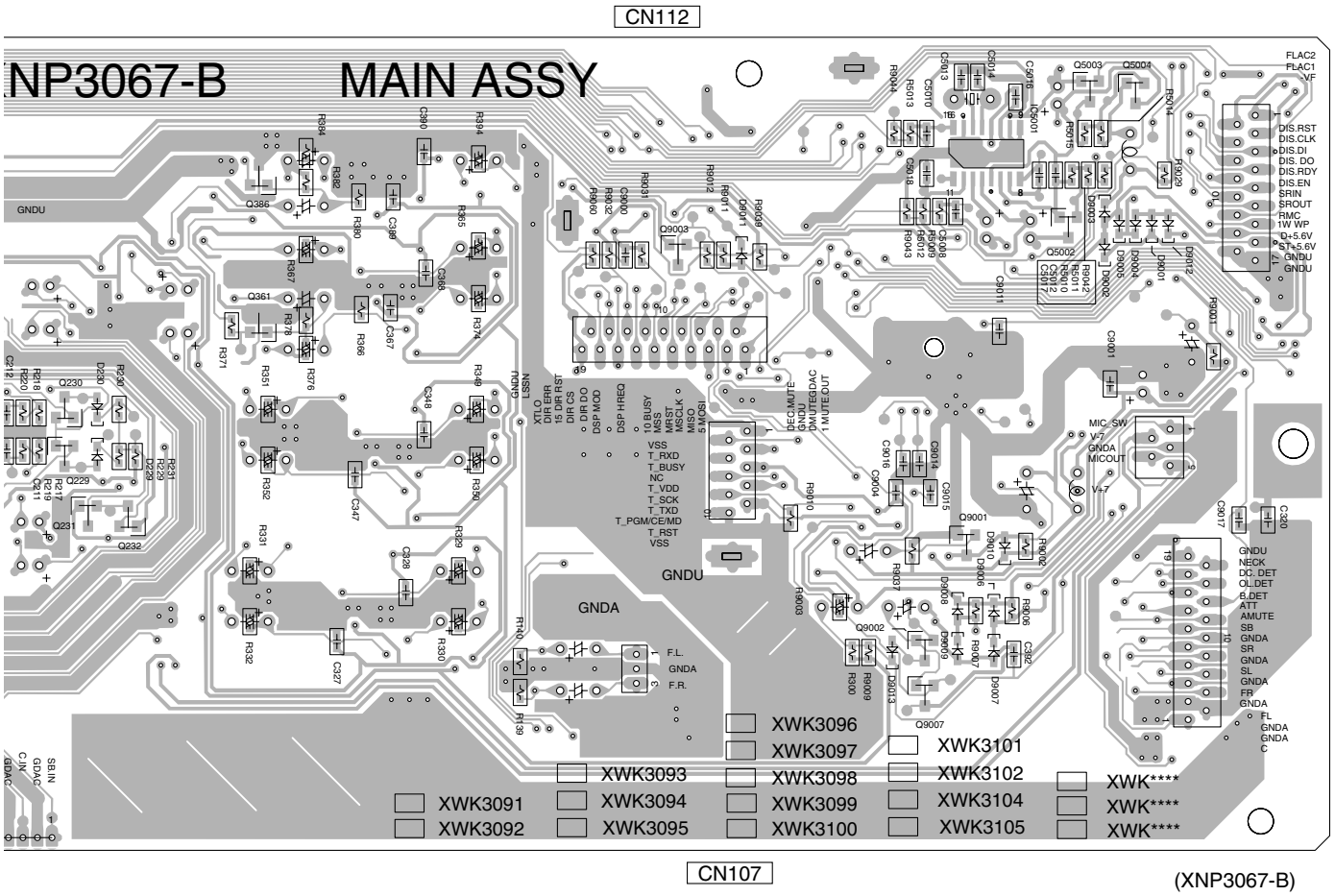

W CN201
J CN307
I CN303
CN103
CN105
CN104
PRODUCTION CODE
J34 CN103
J48 CN105
J33 CN104
CN109
CN111
F.C.
GDAC
GNDA
GNDU
CN109
CN111
F CN804
F CN802
(XNP3067-B)

SIDE B

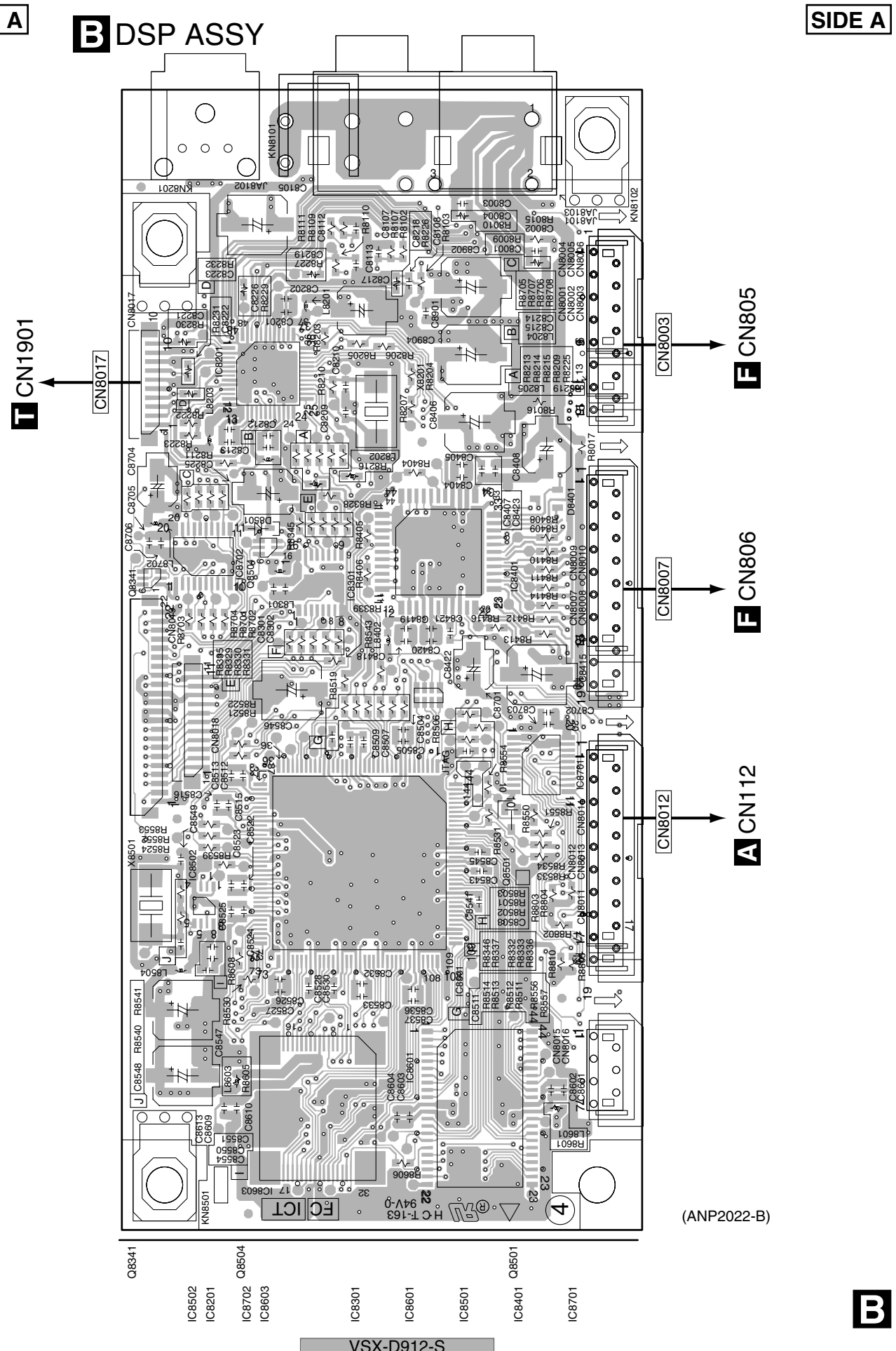
A MAIN ASSY



SIDE B


CN112
XNP3067-B MAIN ASSY
CN101
CN108
CN106
CN107
(XNP3067-B)
XWK3091
XWK3092
XWK3093
XWK3094
XWK3095
XWK3096
XWK3097
XWK3098
XWK3099
XWK3100
XWK3101
XWK3102
XWK3104
XWK3105
XWK****
XWK****
XWK****

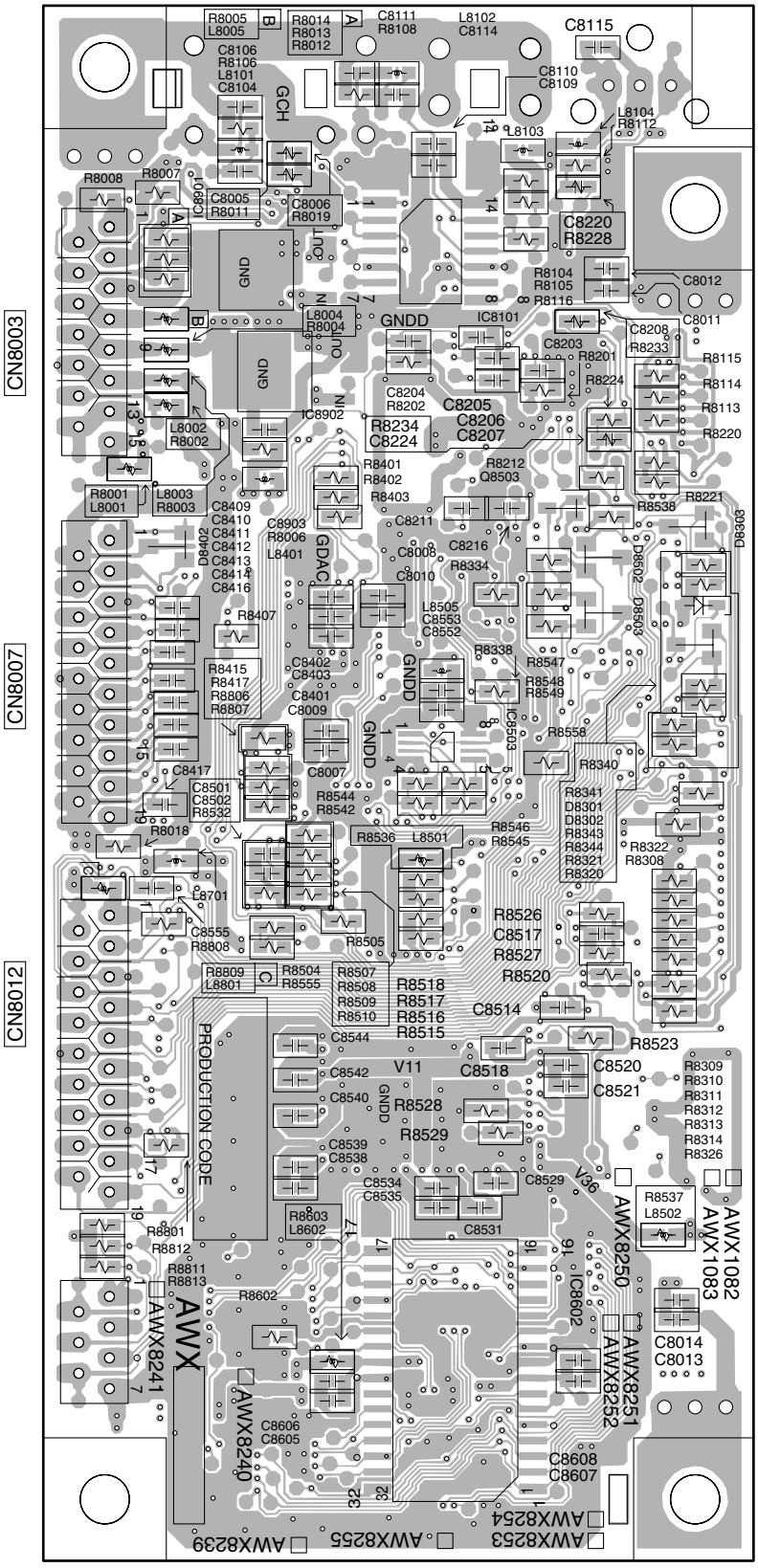
4.4 DSP ASSY


SIDE A
B DSP ASSY
SIDE A
T CN1901
CN8017
CN8003
F CN805
CN8007
F CN806
CN8012
A CN112
(ANP2022-B)
Q8341
Q8504
Q8501
IC8502
IC8201
IC8702
IC8603
IC8301
IC8601
IC8501
IC8401
IC8701
B
B

SIDE B

B DSP ASSY

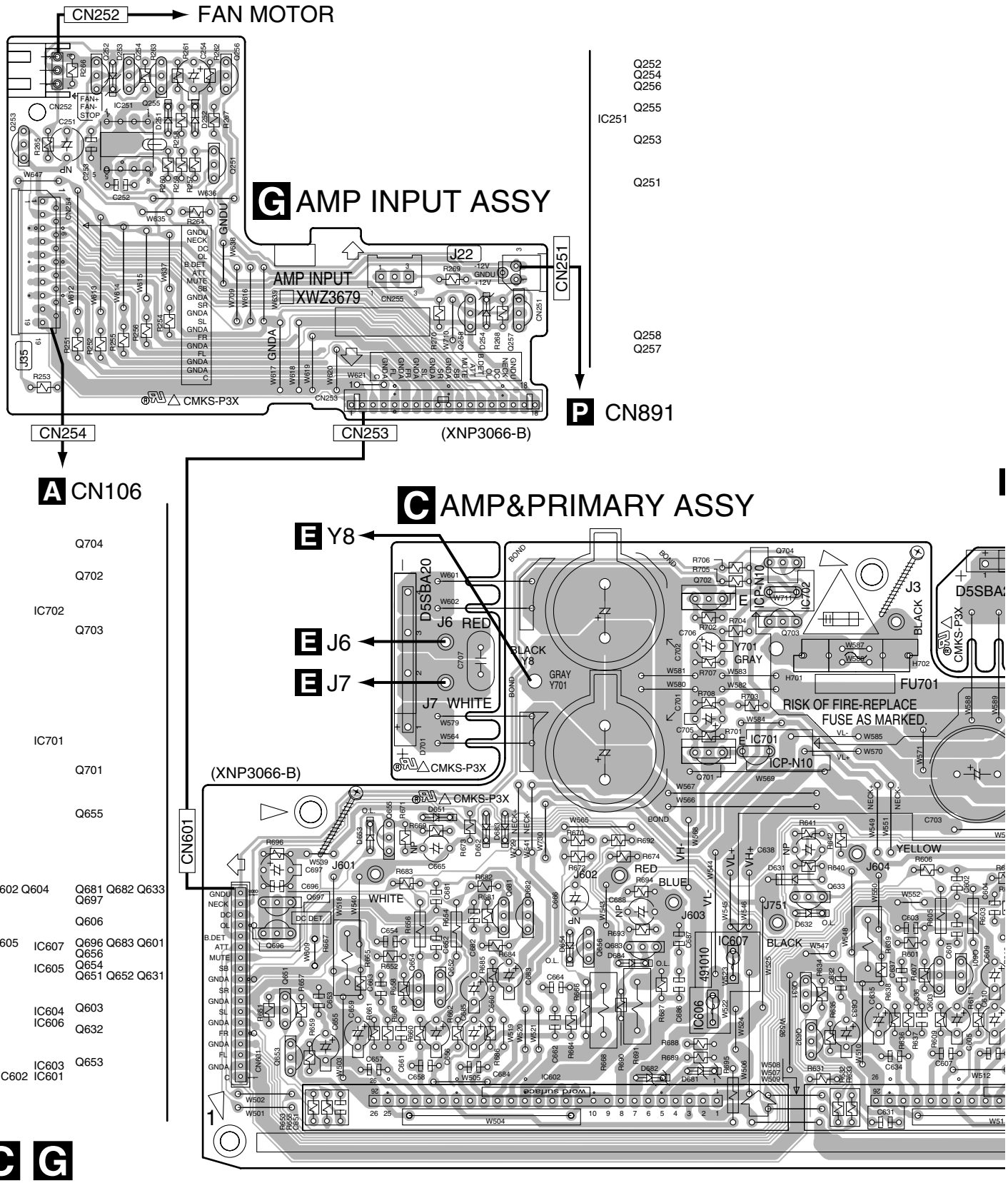
SIDE B

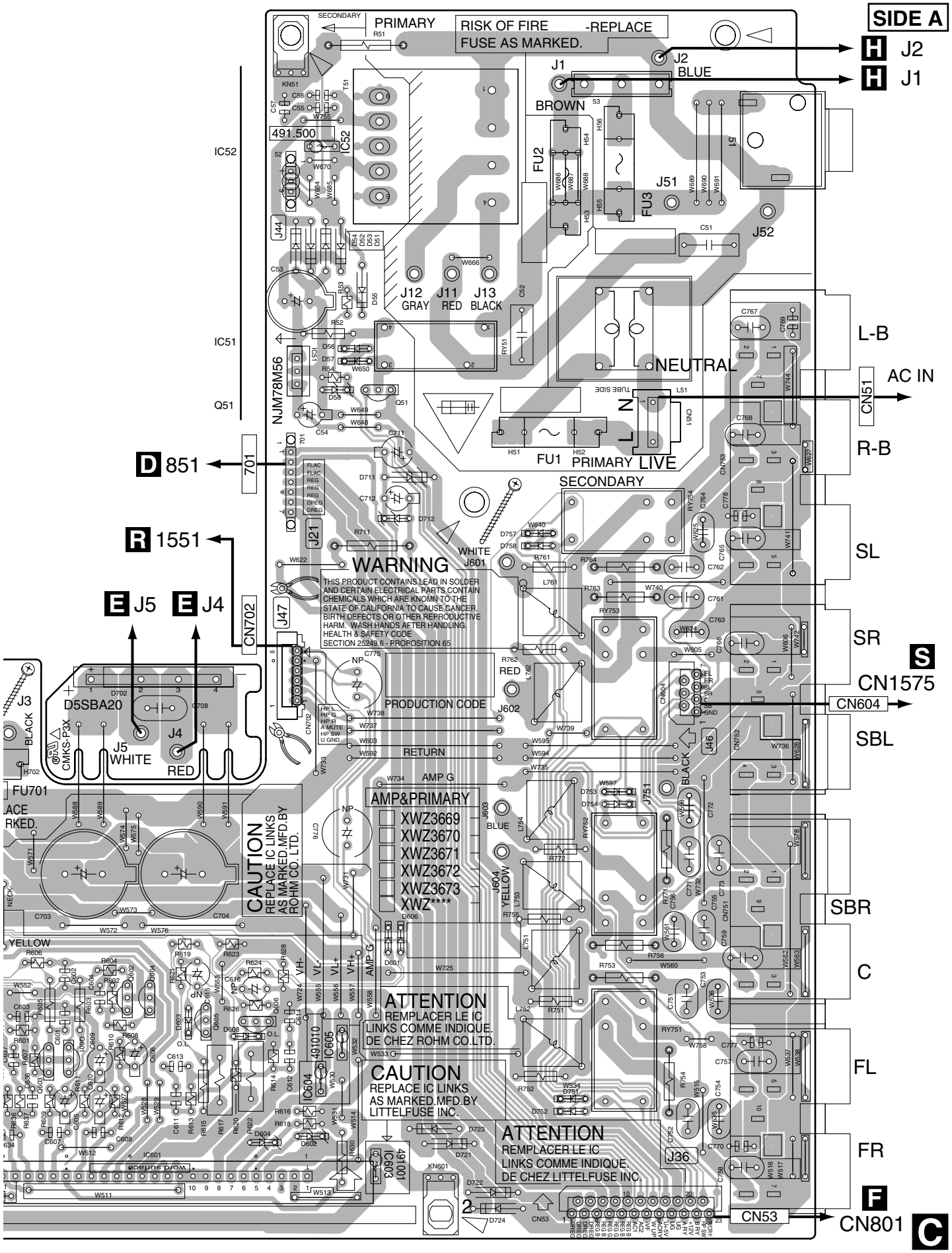


(ANP2022-B)

4.5 AMP & PRIMARY and AMP INPUT ASSYS

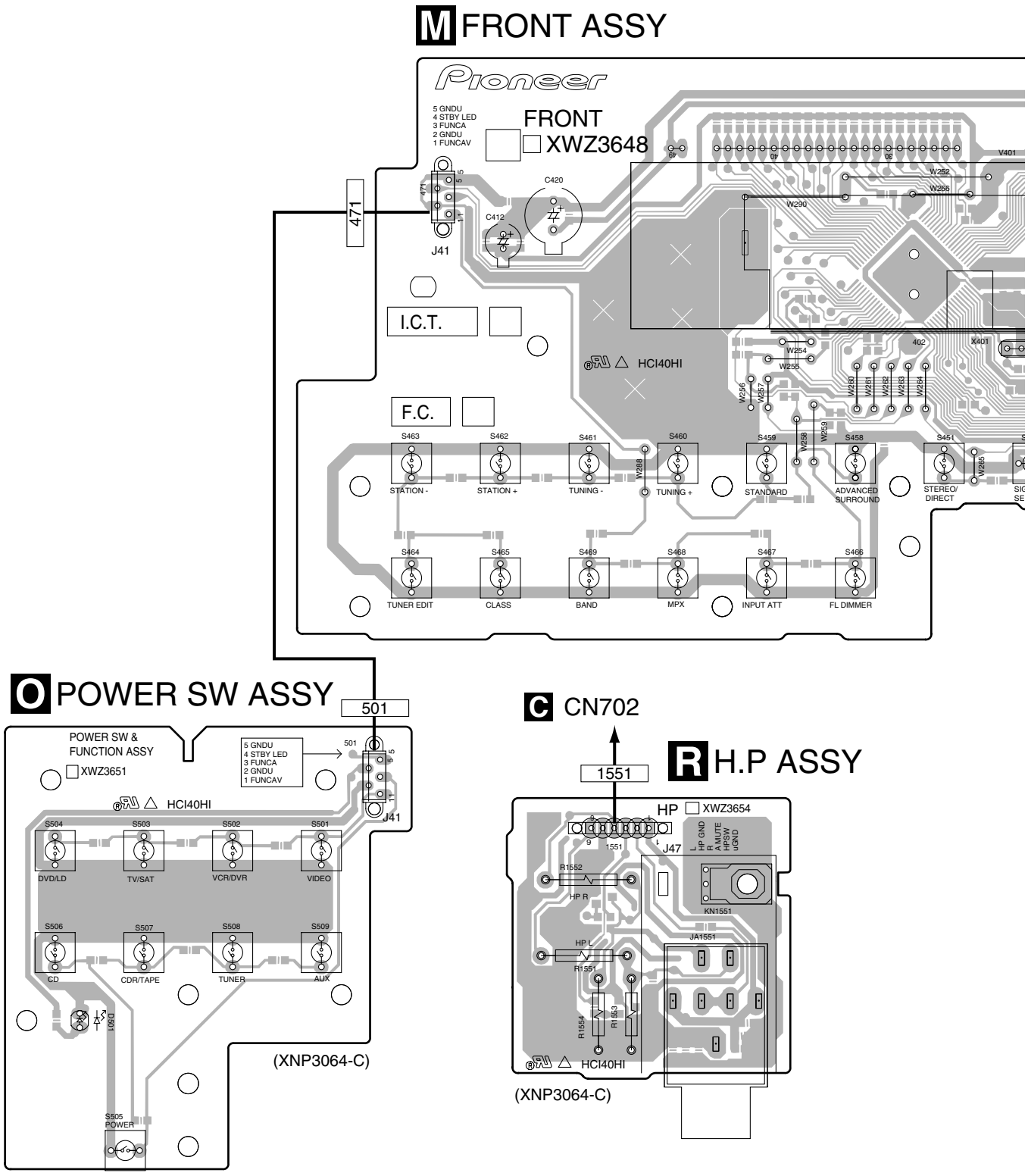
SIDE A



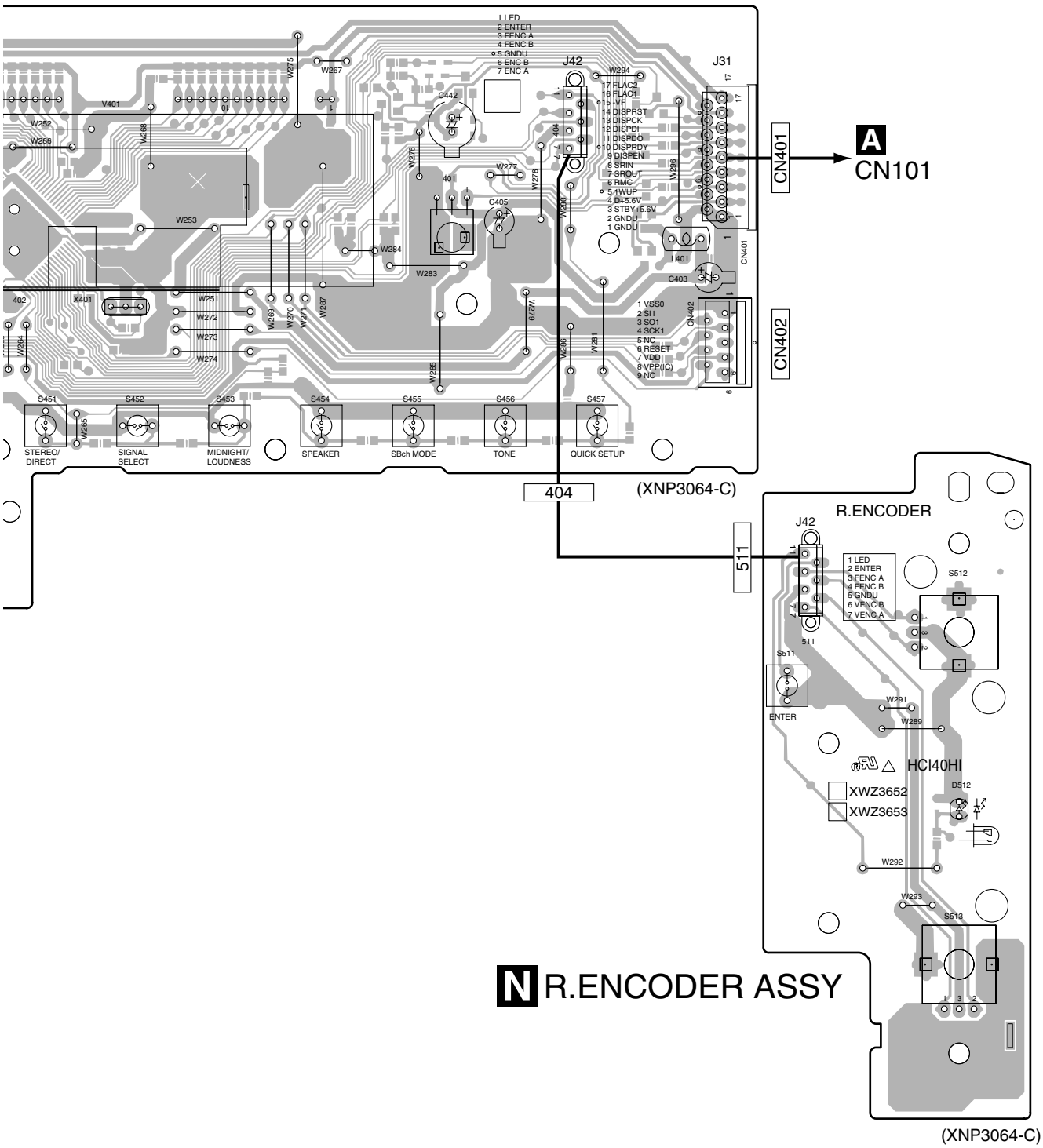

SIDE A
SECONDARY
PRIMARY
RISK OF FIRE -REPLACE FUSE AS MARKED.
H J2
H J1
J2 BLUE
J1 BROWN
491.500
IC52
IC51
Q51
NJM78M56
D 851
701
R 1551
E J5
E J4
CN702
J47
J21
WARNING
THIS PRODUCT CONTAINS LEAD IN SOLDER AND CERTAIN ELECTRICAL PARTS CONTAIN CHEMICALS WHICH ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. WASH HANDS AFTER HANDLING. HEALTH & SAFETY CODE SECTION 25249.6 - PROPOSITION 65
D5SBA20
J3 BLACK
J5 WHITE
J4 RED
FU701
PRODUCTION CODE
J602
RED
J603
BLUE
J604
YELLOW
J751
BLACK
J46
RETURN
AMP G
AMP&PRIMARY
XWZ3669
XWZ3670
XWZ3671
XWZ3672
XWZ3673
XWZ****
CAUTION
REPLACE IC LINKS AS MARKED.MFD.BY ROHM CO. LTD.
ATTENTION
REMPLACER LE IC LINKS COMME INDIQUE. DE CHEZ ROHM CO.LTD.
CAUTION
REPLACE IC LINKS AS MARKED.MFD.BY LITTELFUSE INC.
ATTENTION
REMPLACER LE IC LINKS COMME INDIQUE. DE CHEZ LITTELFUSE INC.
IC604 491010
IC605
IC603 491001
IC601
KN601
J12 GRAY
J11 RED
J13 BLACK
J51
J52
FU2
FU3
FU1
NEUTRAL
LIVE
PRIMARY
SECONDARY
WHITE J601
L-B
AC IN
CN51
R-B
SL
SR
S
CN1575
CN604
SBL
SBR
C
FL
FR
F
CN801
CN53
J36
C
VSX-D912-S
47

4.6 FRONT, R. ENCODER, POWER SW and H. P. ASSYS

SIDE A

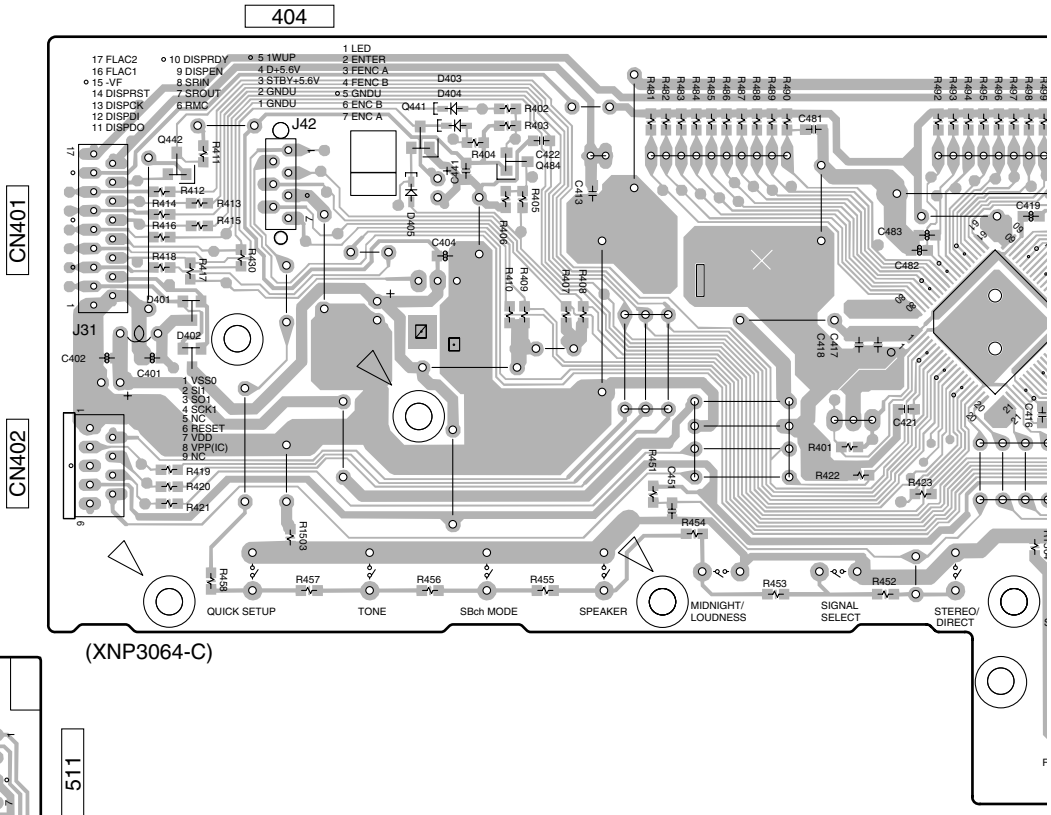


SIDE A

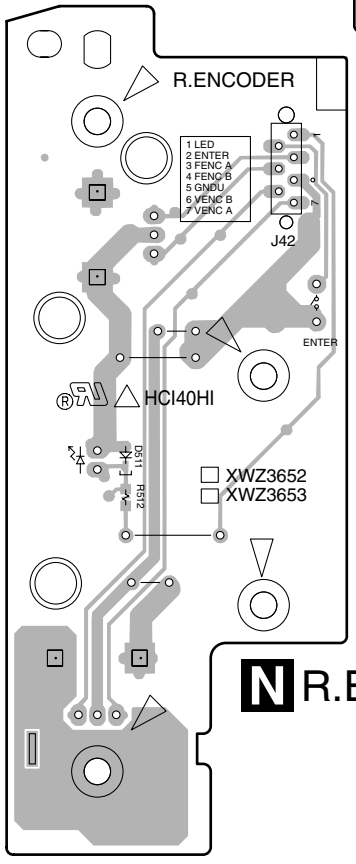

1 LED
2 ENTER
3 FENC A
4 FENC B
5 GNDU
6 ENC B
7 ENC A
J42
J31
W294
17 FLAC2
16 FLAC1
15 VFI
14 DISPRST
13 DISPCK
12 DISPDI
11 DISPDO
10 DISPRDY
9 DISPEN
8 SRIN
7 SROUT
6 RMC
5 1WUP
4 D+5.6V
3 STBY+5.6V
2 GNDU
1 GNDU
CN401
A
CN101
CN402
W275
W267
V401
W252
W265
W268
W253
W284
W283
C442
C405
401
W276
W277
W278
W280
W296
L401
C403
CN402
1 VSS0
2 SI1
3 SO1
4 SCK1
5 NC
6 RESET
7 VDD
8 VPP/(C)
9 NC
402
X401
W251
W272
W273
W274
W269
W270
W271
W287
W279
W286
W281
W285
W294
S451
S452
S453
S454
S455
S456
S457
STEREO/
DIRECT
SIGNAL
SELECT
MIDNIGHT/
LOUDNESS
SPEAKER
SBch MODE
TONE
QUICK SETUP
404
(XNP3064-C)
511
R.ENCODER
J42
1 LED
2 ENTER
3 FENC A
4 FENC B
5 GNDU
6 VENC B
7 VENC A
S512
S511
ENTER
W291
W289
HCI40HI
XWZ3652
XWZ3653
D512
W292
W293
S513
N R.ENCODER ASSY
(XNP3064-C)

SIDE B

M FRONT ASSY



(XNP3064-C)

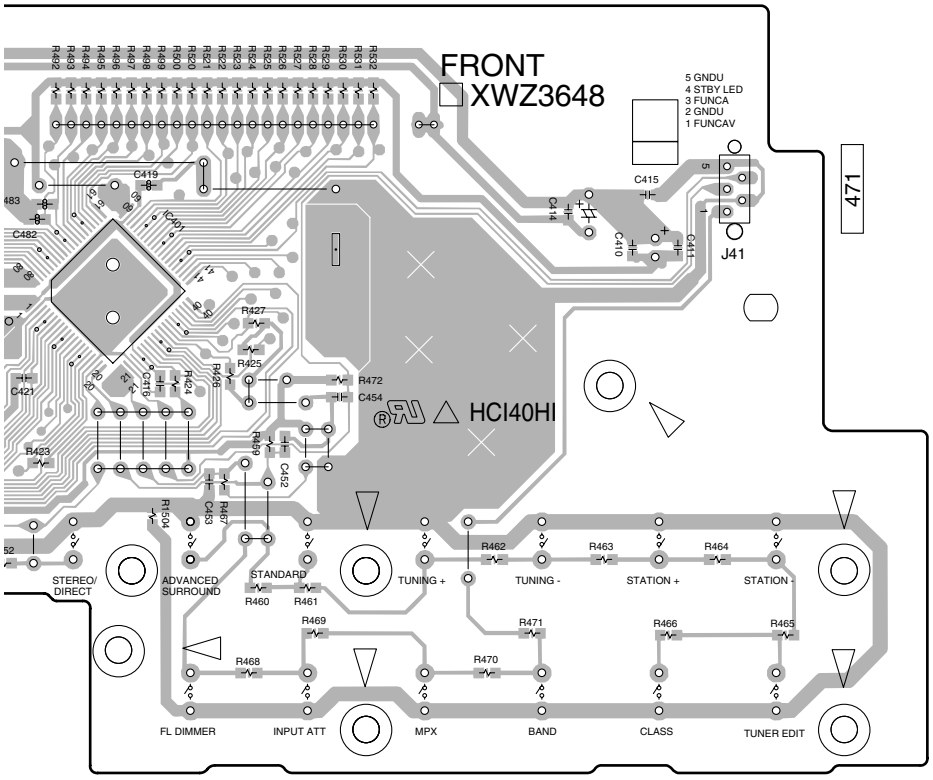


N R.ENCODER ASSY

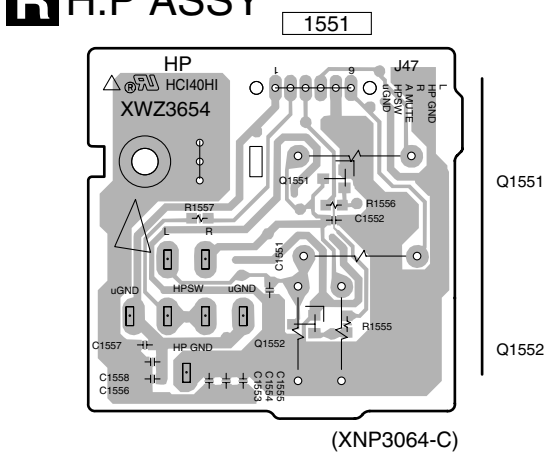
(XNP3064-C)

M N

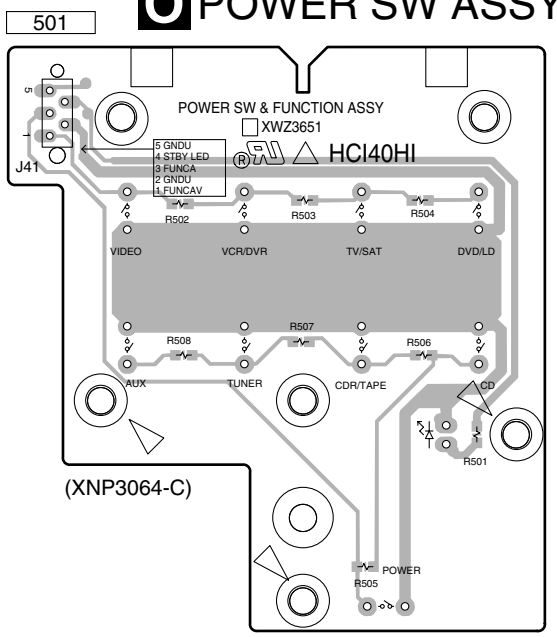
SIDE B



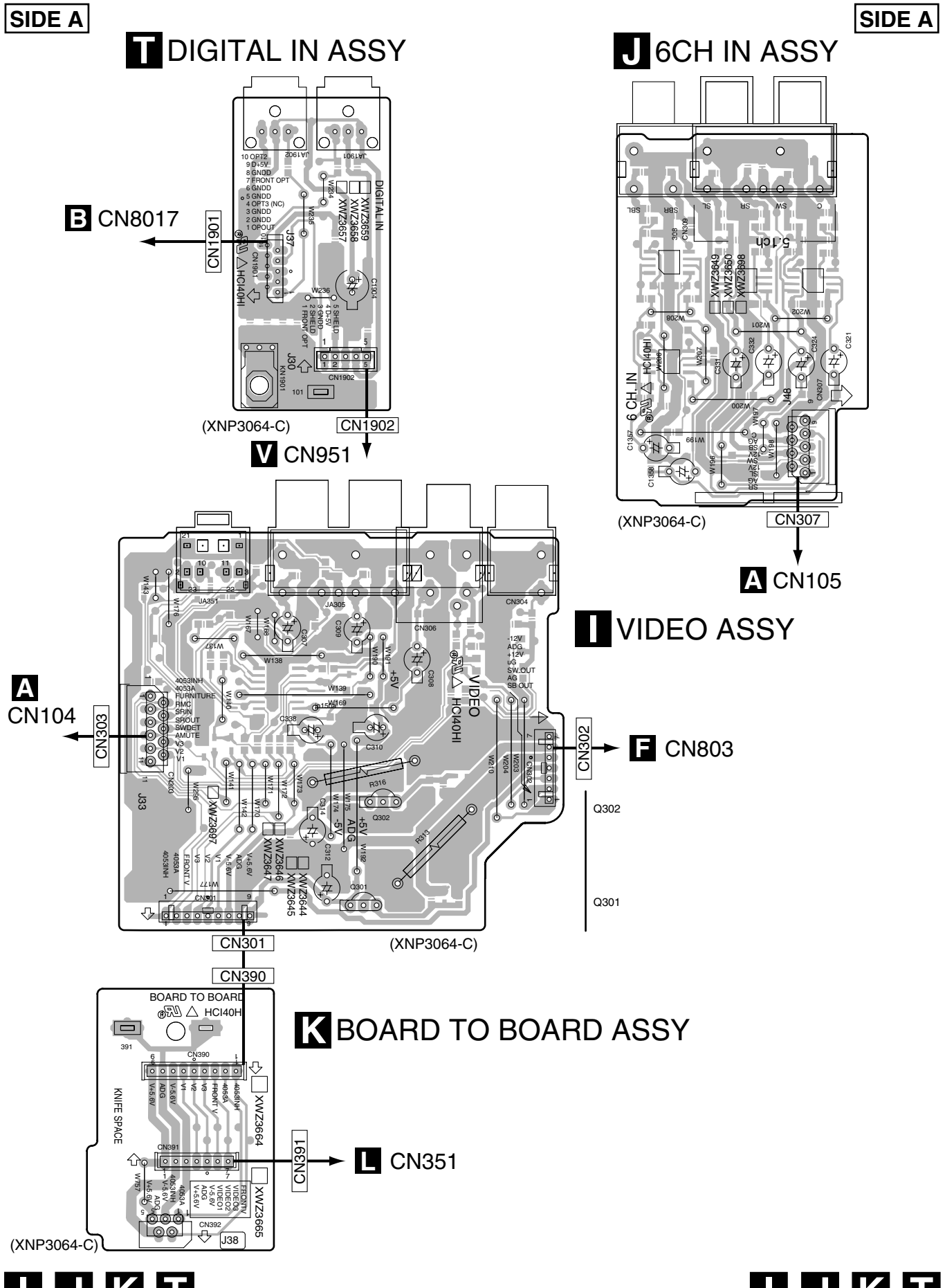
R H.P ASSY



O POWER SW ASSY



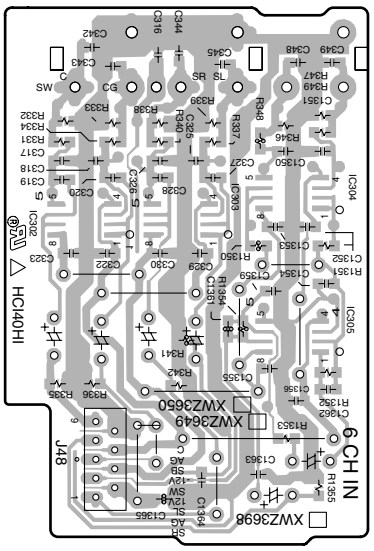
4.7 BOARD TO BOARD, DIGITAL IN, VIDEO and 6CH IN ASSYS



SIDE B

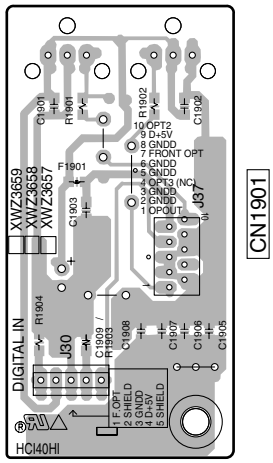
SIDE B

J 6CH IN ASSY



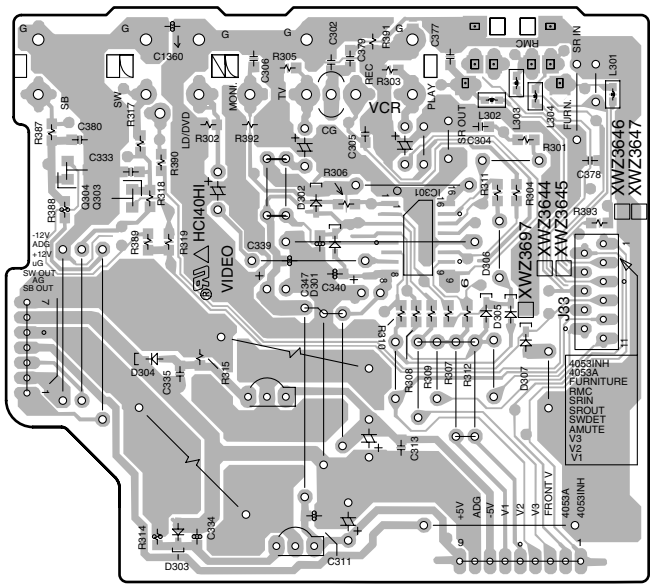
CN307 (XNP3064-C)

T DIGITAL IN ASSY



CN1902 (XNP3064-C)

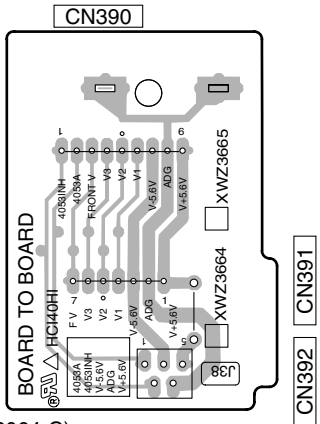
I VIDEO ASSY



(XNP3064-C) CN301

CN390

K BOARD TO BOARD ASSY



(XNP3064-C)

I J K T

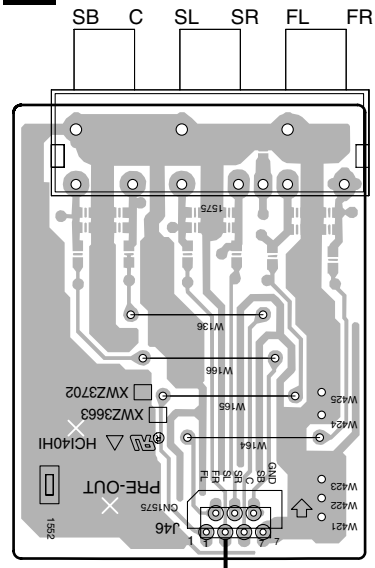
I J K T

4.8 S.VIDEO, F.VIDEO, F.OPT&MIC and PRE-OUT ASSYS

SIDE A

SIDE A

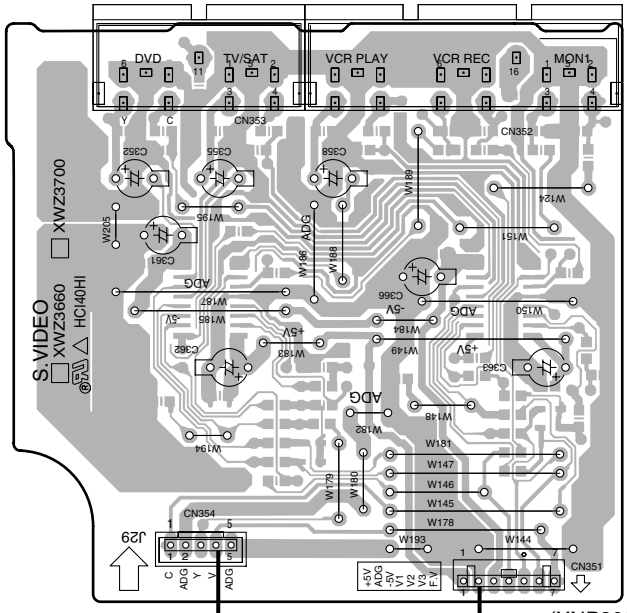
S PRE-OUT ASSY



CN1575

C CN604

L S. VIDEO ASSY



A CN108

Q CN901

CN354

CN1902

T

CN951

K CN391

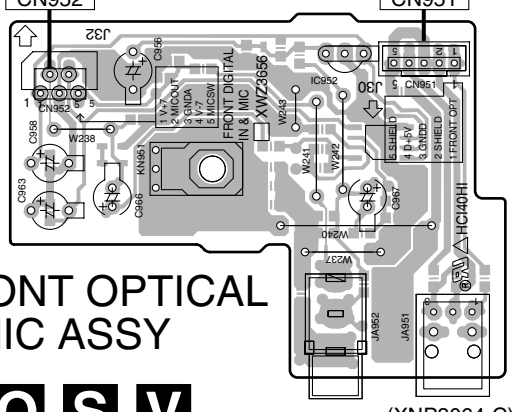
CN351

A CN107

L CN354

CN952

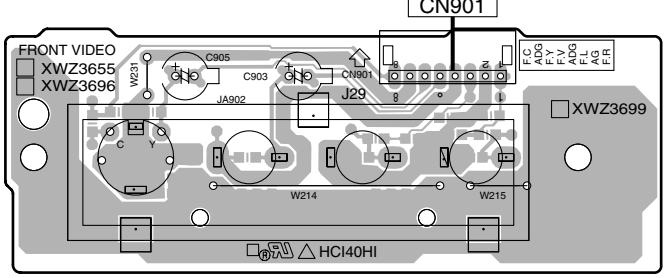
Q952



V FRONT OPTICAL & MIC ASSY

(XNP3064-C)

CN901



Q FRONT VIDEO ASSY

(XNP3064-C)

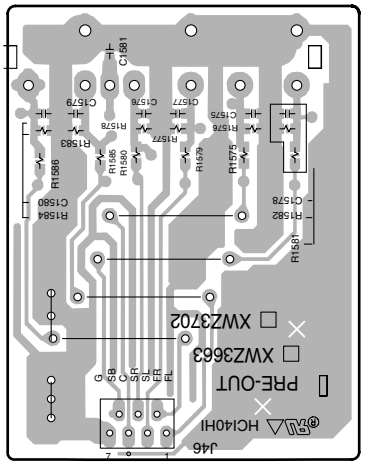
L Q S V

L Q S V

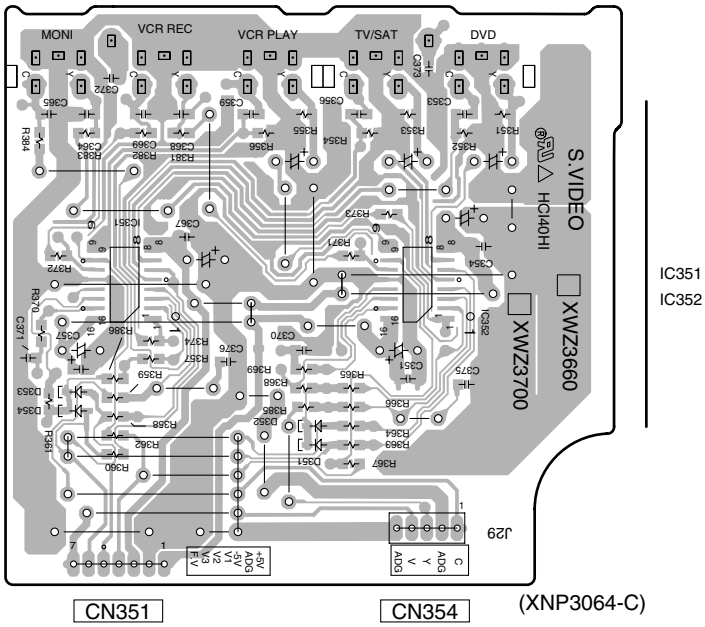
SIDE B

SIDE B

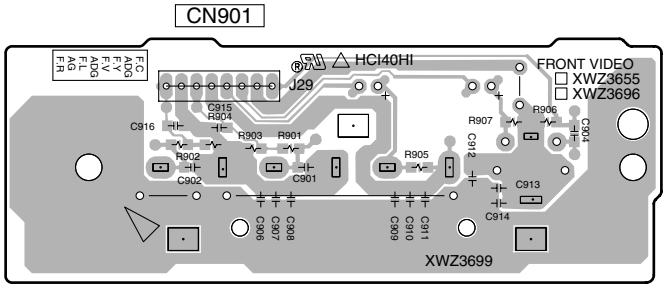
S PRE-OUT ASSY



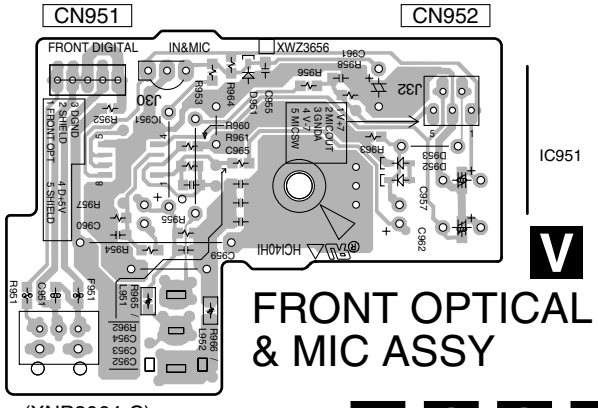
L S. VIDEO ASSY



Q FRONT VIDEO ASSY



V FRONT OPTICAL & MIC ASSY



L Q S V

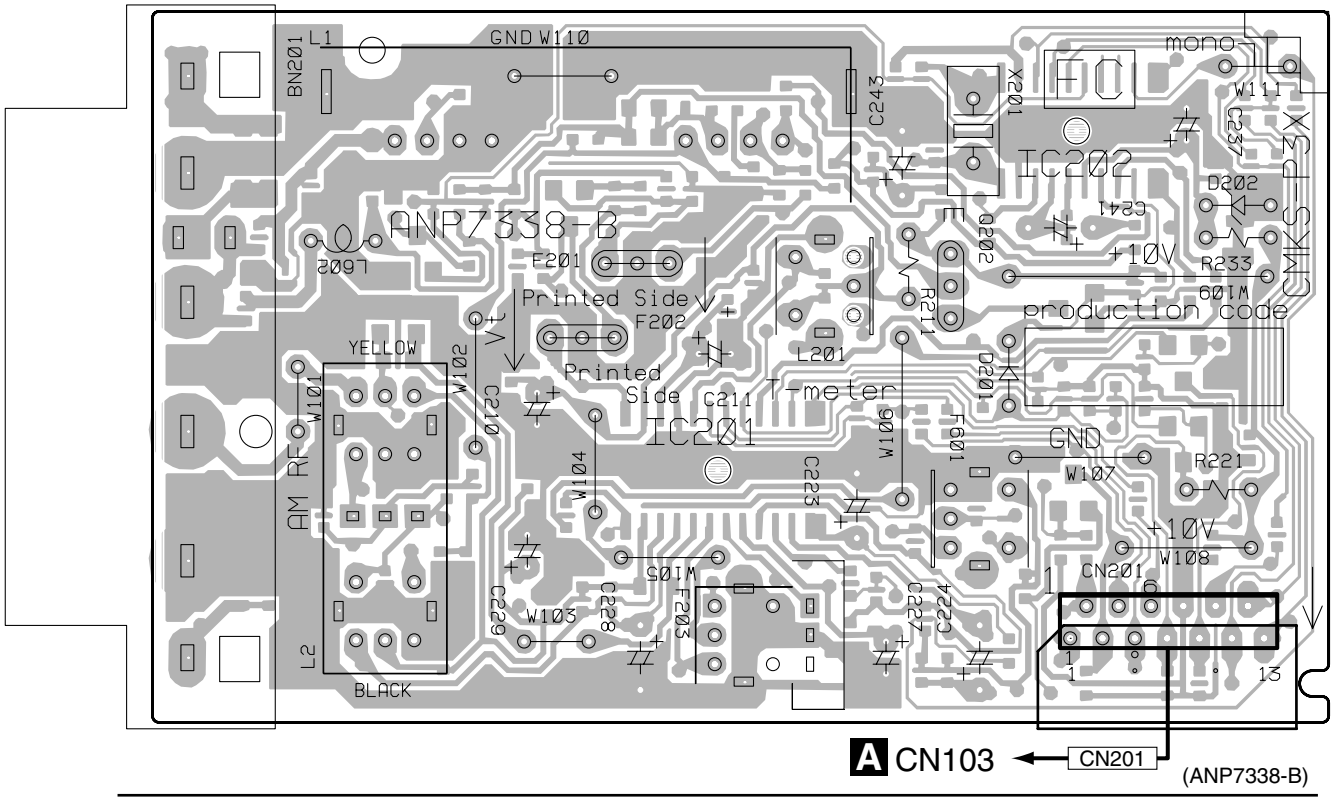
L Q S V

4.9 FM/AM TUNER MODULE

SIDE A **SIDE B**

W FM/AM TUNER MODULE

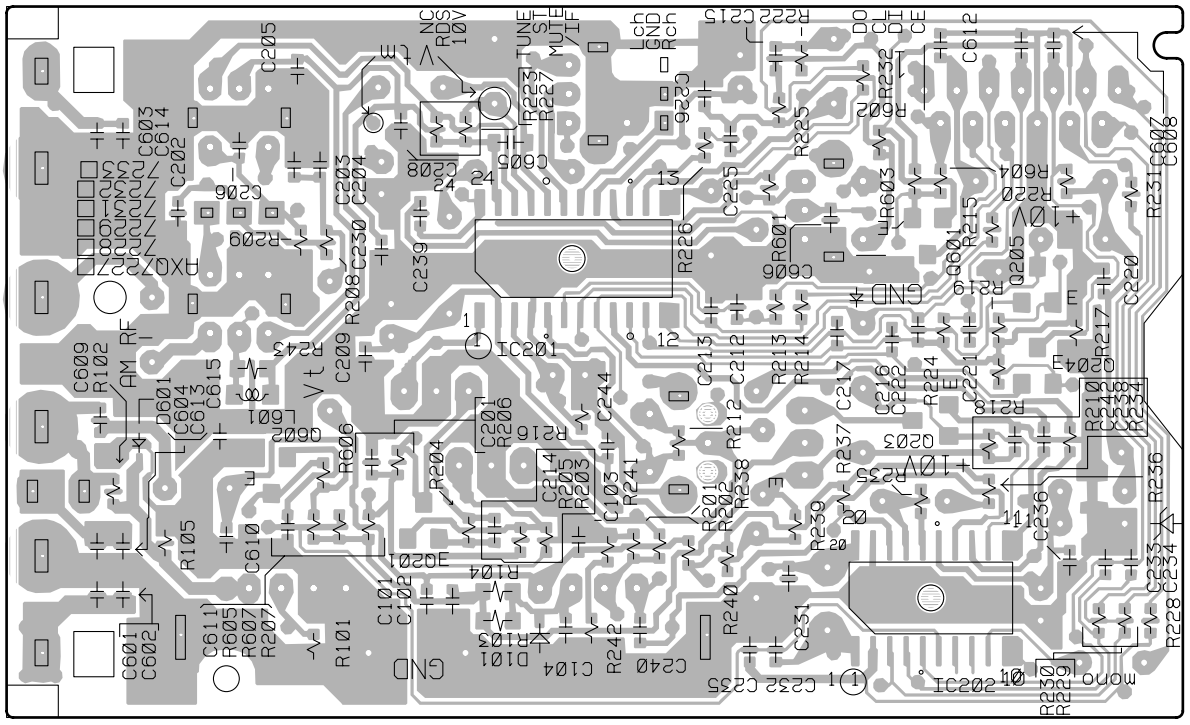
SIDE A



Q202

W FM/AM TUNER MODULE

SIDE B



Q201 IC201 Q203 IC202 Q205 Q204

X **X**

5. PCB 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.*
● *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	→	*56 x 10¹* →	*561*	*RD1/4PU 561 J*
47k Ω	→	*47 x 10³* →	*473*	*RD1/4PU 473 J*
0.5 Ω	→	*R50*		*RN2H R50 K*
1 Ω	→	*1R0*		*RS1P 1R0 K*

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

5.62k Ω	→	*562 x 10¹* →	*5621*	*RN1/4PC 5621 F*

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
	1	MAIN ASSY (VSX-D912)	XWK3101
	1	MAIN ASSY (VSX-D812)	XWK3096
	1	DSP ASSY	AWX1082
NSP	1	AMP & PS ASSY	XWK3086
	2	AMP & PRIMARY ASSY	XWZ3670
	2	REGULATOR ASSY	XWZ3676
	2	AMP INPUT ASSY	XWZ3679
NSP	2	TRANS1 ASSY	XWZ3681
	2	TRANS2 ASSY	XWZ3684
NSP	2	TRANS3 ASSY	XWZ3687
NSP	2	BINDER ASSY	XWZ3691
NSP	2	HOLDER ASSY	XWZ3693
NSP	1	COMPLEX ASSY (VSX-D912)	XWK3081
NSP	1	COMPLEX ASSY (VSX-D812)	XWK3079
	2	VIDEO ASSY	XWZ3647
	2	FRONT ASSY	XWZ3648
	2	6CH IN ASSY	XWZ3650
	2	POWER SW ASSY	XWZ3651
	2	R. ENCODER ASSY	XWZ3653
	2	H.P. ASSY	XWZ3654
	2	FRONT VIDEO ASSY	XWZ3655
	2	FRONT OPTICAL ASSY (VSX-D912)	XWZ3656
	2	DIGITAL IN ASSY (VSX-D912)	XWZ3659
	2	DIGITAL IN ASSY (VSX-D812)	XWZ3658
	2	S. VIDEO ASSY	XWZ3660
	2	TRANS4 ASSY	XWZ3662
	2	PRE-OUT ASSY	XWZ3663
	2	BOARD TO BOARD ASSY	XWZ3665
	1	FM/AM TUNER MODULE	AXQ7232

• CONTRAST OF PCB ASSEMBLIES

A MAIN ASSY

XWK3101 and XWK3096 are constructed the same except for the following :

Mark	Symbol and Description	XWK3101	XWK3096
	R143	Not used	RS1/16S103J
	R9023	RS1/16S472J	RS1/16S0R0J
	R9025	RS1/16S472J	Not used
	R9040	Not used	RS1/16S473J
	CN108 5P FFC CONNECTOR	52045-0545	Not used

T DIGITAL IN ASSY

XWZ3659 and XWZ3658 are constructed the same except for the following :

Mark	Symbol and Description	XWZ3659	XWZ3658
	CN1902 CONNECTOR POST	B5B-PH-K-S	Not used

Mark No.	Description	Part No.

• PARTS LIST FOR VSX-D912-S

COMPLEX ASSY

OTHERS

J 41	JUMPER WIRED	D15A05-075-2651
J 42	JUMPER WIRED	D15A07-075-2651
J 47	JUMPER WIRED	D20PYY0630E

AMP & PS ASSY

OTHERS

Y 8	AWG14 BOARD IN	ADX7284
J 21	JUMPER WIRED	D20PYY0715E

A MAIN ASSY

SEMICONDUCTORS

IC109	BD3812F
IC108	BD3813KS
IC101	BD3841FS
IC5001	BU1924F
IC102	NJM2100M
IC9001	PD5837A
IC103–IC107, IC110–IC112, IC115	UPC4570G2
Q5004	2SA1037K
Q5001	2SC2412K
Q165, Q166, Q321, Q322	2SC3326
Q341, Q342, Q361, Q362, Q395	2SC3326
Q5002	2SC3326
Q229, Q230	2SK208
Q167, Q231, Q9002-Q9005	DTA124EK
Q232	DTC124EK
Q168, Q5003,Q9001,Q9006	DTC143EK
Q9007	DTC143TK
D103–D108, D229, D230, D301	1SS355
D311, D312, D5001,D9001-D9013	1SS355
D101, D102	RB501V-40
D331, D332	UDZS6.8B

COILS AND FILTERS

L9001,L9002 CHIP SOLID INDUCTOR	ATL7002
L5001,L9003	LFEA2R2J
L101–L104, L111, L112, L5002 CHIP SOLID INDUCTOR	QTL1013

CAPACITORS

C9003 (0.22F/5.5V)	ACH7144
C101–C114, C151, C152	CCSRCH101J50
C163, C164, C181–C192	CCSRCH101J50
C197, C198, C243, C244, C263	CCSRCH101J50
C284, C313, C314, C317, C318	CCSRCH101J50
C323, C324, C343, C344, C363	CCSRCH101J50
C386	CCSRCH101J50
C1031,C1041,C117, C118	CCSRCH220J50
C5013,C5014	CCSRCH270J50
C205–C208, C245–C248, C265	CCSRCH331J50
C267, C286, C288	CCSRCH331J50
C203, C204	CCSRCH471J50
C5017	CCSRCH561J50
C366	CEANP4R7M50
C121–C128, C131–C142	CEAT100M50
C167, C168, C209, C210	CEAT100M50
C213, C214, C249, C250	CEAT100M50
C269, C270, C290, C301–C306	CEAT100M50
C321, C322, C341, C342	CEAT100M50
C361, C362, C380, C382, C384	CEAT100M50
C5015	CEAT101M10
C5007	CEAT101M16
C5009	CEAT1R0M50
C169, C9002	CEAT221M6R3
C201, C202, C241, C242	CEAT2R2M50
C261, C262, C282, C5011,C9005	CEAT2R2M50
C9007	CEAT331M6R3
C325, C326, C345, C346, C365	CEAT470M25
C388	CEAT470M25
C155, C156	CEAT470M50
C333, C334	CEAT471M10
C9013	CEAT471M6R3
C165, C166, C370	CEAT4R7M50
C170	CKSQYB104K16
C320, C392, C5001,C5016	CKSRYB102K50
C9015,C9016	CKSRYB102K50
C115, C116, C153, C154, C171	CKSRYB103K50
C179, C180, C199, C215–C218	CKSRYB103K50
C251, C252, C266, C271, C272	CKSRYB103K50
C291, C292, C315, C316, C319	CKSRYB103K50
C327–C330, C347, C348	CKSRYB103K50
C367, C368, C389, C390, C5002	CKSRYB103K50
C9001,C9004,C9008,C9017	CKSRYB103K50
C219, C220, C309–C312	CKSRYB104K16
C5003,C9006	CKSRYB105K10
C264	CKSRYB223K25
C257, C258, C277, C278, C298	CKSRYB472K50
C307, C308, C364, C5008	CKSRYB472K50
C9011,C9014	CKSRYB473K16
C268	CKSRYB562K50
C391	CKSRYF104Z16

RESISTORS

⚠ R171, R172	RS1/16S470J
⚠ R173, R174	RS1/16S472J
⚠ R311, R312	RS1LMF101J
Other Resistors	RS1/16S###J

OTHERS

CN105 9P CONNECTOR	52044-0945
CN104 11P CONNECTOR	52044-1145
CN103 13P CONNECTOR	52044-1345
CN108 5P CONNECTOR	52045-0545
CN102 10P CONNECTOR	52045-1045
CN101 17P CONNECTOR	52045-1745
CN106, CN112 19P CONNECTOR	52045-1945
JA101–JA104 PIN JACK(4P)	AKB7048
CN107 CONNECTOR POST	B3B-PH-K
CN109 18P SOCKET	KP200TA18L
CN111 20P SOCKET	KP200TA20L
101–103 PCB BINDER	VEF1040
X5001 CRYSTAL RESONATOR (4.332 MHz)	ASS7004
X9001 CERAMIC RESONATOR (15.7 MHz)	ASS7032

B DSP ASSY

Mark No.	Description	Part No.
SEMICONDUCTORS		
	IC8201	AK4114VQ
	IC8401	AK4529VQ
	IC8501	DSPD56367PV150
	IC8601	IS61LV6416-12T
	IC8602	IS63LV1024-12T
	IC8901	NJM2391DL1-33
	IC8902	NJU7223DL1-18
	IC8603	PD8116A
	IC8101	TC74HCU04AF
	IC8701	TC74LVX244FT
	IC8702	TC74VHCT244AFT
	IC8503	TC7WH125FU
	IC8502	TC7WU04FU
	Q8504	UMD2N
	Q8503	UN5112
	Q8501	UN5212
	D8501	1SS355
	D8401	DAN202K
	D8402,D8502,D8503	DAP202K
COILS AND FILTERS		
	L8002,L8004,L8501,L8502	ATL7002
	L8601-L8603 CHIP SOLID INDUCTOR	ATL7002
	L8101-L8104,L8201,L8203,L8204	QTL1013
	L8401,L8402,L8504,L8505	QTL1013
	L8701,L8702 CHIP SOLID INDUCTOR	QTL1013
CAPACITORS		
	C8209,C8210	CCSRCH100D50
	C8421	CCSRCH101J50
	C8107,C8112	CCSRCH470J50
	C8007,C8008,C8109,C8201,C8212	CCSRCH471J50
	C8214,C8404,C8409-C8414	CCSRCH471J50
	C8416,C8417,C8419,C8505,C8507	CCSRCH471J50
	C8509,C8511,C8512,C8515,C8518	CCSRCH471J50
	C8520,C8522,C8524,C8526,C8528	CCSRCH471J50
	C8530,C8532,C8534,C8536,C8539	CCSRCH471J50
	C8541,C8543,C8545,C8551,C8552	CCSRCH471J50
	C8602,C8603,C8606,C8607,C8610	CCSRCH471J50
	C8703,C8706	CCSRCH471J50
	C8548,C8549	CCSRCH8R0D50
	C8701,C8704	CEV100M16
	C8105,C8406,C8415,C8546,C8547	CEV101M16
	C8613,C8902,C8904	CEV101M16
	C8217,C8225,C8408	CEV470M6R3
	C8204,C8555	CKSRYB102K50
	C8009,C8104,C8114,C8405,C8418	CKSRYB103K50
	C8517,C8554	CKSRYB103K50
	C8010,C8115,C8202,C8207,C8213	CKSRYB104K16
	C8215,C8407,C8420,C8422,C8504	CKSRYB104K16
	C8513,C8521,C8523,C8525,C8527	CKSRYB104K16
	C8529,C8531,C8533,C8535	CKSRYB104K16
	C8537,C8538,C8540,C8542,C8544	CKSRYB104K16
	C8550,C8553,C8601,C8604,C8605	CKSRYB104K16
	C8608,C8609,C8702,C8705,C8901	CKSRYB104K16
	C8903	CKSRYB104K16
	C8110,C8516	CKSRYB105K6R3
	C8514	CKSRYB333K16
	C8203	CKSRYB473K50
RESISTORS		
	R8506	RAB4C101J
	R8201	RS1/16S1802F
	Other Resistors	RS1/16S###J
OTHERS		
	CN8012 19P CONNECTOR	52045-1945
	JA8101 2P PIN JACK	AKB7131
	CN8003 13P SOCKET	AKP7070
	CN8007 19P SOCKET	AKP7073
	JA8102 OPT. LINK IN	GP1FA513RZB
	CN8017 10P CONNECTOR	VKN1414
	X8501 CRYSTAL RESONATOR (20 MHz)	VSS1171
	X8201 CRYSTAL RESONATOR (24.576 MHz)	XSS3003

C AMP & PRIMARY ASSY

SEMICONDUCTORS		
⚠	IC52 PROTECTOR(500mA)	AEK7005
⚠	IC603 PROTECTOR(1A)	AEK7009
⚠	IC604–IC607 PROTECTOR(125mA)	AEK7022
⚠	IC701, IC702 PROTECTOR(400mA)	ICP-N10
	IC51	NJM78M56FA
⚠	IC601, IC602	PAC011A
	Q703	2SA1145
	Q702	2SB1238X
	Q696, Q697	2SC1740S
	Q704	2SC1845
	Q605, Q606, Q633, Q655, Q656	2SC2240
	Q683	2SC2240
	Q601–Q604, Q631, Q632	2SC2878
	Q651–Q654, Q681, Q682	2SC2878
	Q701	2SD1859X
	Q51	KRC101M
	D56, D57, D601, D603, D606	1SS133
	D608, D631, D632, D651–D654	1SS133
	D683, D684, D751–D754	1SS133
	D757, D758	1SS133
⚠	D701, D702	D5SBA20
	D711	MTZJ22D
	D58	MTZJ5.1A
	D712	MTZJ5.1B
	D602, D604, D681, D682	MTZJ8.2A
⚠	D51–D55, D721–D724	S5688G
COILS AND FILTERS		
⚠	L51 LINE FILTER	ATF7018
	L751–L754, L761, L762 COIL	ATH1004
SWITCHES AND RELAYS		
	RY751–RY754	XSR3002
⚠	RY51	XSR3003
CAPACITORS		
	C707, C708 (0.01/AC250V)	ACG1005
⚠	C51, C52 (10000pF/AC250V)	ACG7020
	C611–C614, C636, C637	CCPUCH6R8K50
	C661–C664, C686, C687	CCPUCH6R8K50
	C615, C616, C638, C665, C666	CEANP2R2M50
	C688	CEANP2R2M50
	C775, C776	CEANP470M50
	C712	CEAT101M10
	C609, C610, C635, C659, C660	CEAT101M16

Mark	No.	Description	Part No.
	C685		CEAT101M16
	C711		CEAT101M35
	C53		CEAT102M16
	C697		CEAT221M10
	C54		CEAT470M25
	C605, C606, C633, C655, C656		CEAT4R7M50
	C683		CEAT4R7M50
	C705, C706		CEHAT100M2A
	C751–C756, C761–C764		CFTYA224J50
	C771, C772		CFTYA224J50
	C607, C608, C634, C657, C658		CKPUYB101K50
	C684		CKPUYB101K50
	C696, C769, C770		CKPUYB102K50
	C603, C604, C632, C653, C654		CKPUYB331K50
	C682		CKPUYB331K50
	C55–C57		CKPUYF103Z25
	C757–C759, C765–C768, C773		CQMBA472J50
	C703, C704 (3300/42V)		XCH3012
	C701, C702 (4700/71)		XCH3013

RESISTORS

⚠	R52	RD1/2PM270J
⚠	R615	RD1/4PU331J
⚠	R751, R752, R755, R761, R762	RD1/4PUF101J
⚠	R772	RD1/4PUF101J
⚠	R753, R754, R756, R763, R764	RS1LMF4R7J
⚠	R771	RS1LMF4R7J
⚠	R711	RS2LMF332J
⚠	R617, R622, R639, R667, R668	XCN3001
⚠	R691 (0.22/5W)	XCN3001
	Other Resistors	RD1/4PU###J

OTHERS

	CN604 7P CONNECTOR	52045-0745
	CN53 23P CONNECTOR	52045-2345
	CN702 6P JUMPER CONNECTOR	52147-0610
	H51, H52 FUSE CLIP	AKR7001
⚠	T51 STANDBY TRANSFORMER	ATT7040
	CN601 18P PLUG	KM200TA18
	CN51 AC CODE SOCKET	RKP1751
	KN51, KN601 EARTH METAL FITTING	VNF1084
	CN751 SP TERMINAL 8-P	XKE3017
	CN753 SP TERMINAL 6-P	XKE3018
	CN752 SP TERMINAL 4-P	XKE3019
⚠	701 7P CABLE HOLDER	XKP3047

D TRANS2 ASSY

SEMICONDUCTORS

⚠	IC853 PROTECTOR (3A)	AEK7015
⚠	IC851, IC852 PROTECTOR (4A)	AEK7018

OTHERS

	851 7P CABLE HOLDER	XKP3047

E TRANS3 ASSY

TRANS3 ASSY has no service part.

F REGULATOR ASSY

SEMICONDUCTORS

	IC803, IC804	NJM78M05FA
	IC801, IC805	NJM78M12FA
	IC806	NJM78M56FA
	IC802	NJM79M12FA
	Q801, Q803, Q805	KRA103M
	Q802, Q804, Q806	KRC102M
	D809–D811	MTZJ6.2A
⚠	D801–D804	S5688G

CAPACITORS

	C808, C811, C815	CEAT101M10
	C805, C806, C813	CEAT101M16
	C801, C802	CEAT222M25
	C809	CEAT472M16
	C803, C804, C807, C810, C812	CKPUYF103Z25
	C814	CKPUYF103Z25

OTHERS

	CN801 23P CONNECTOR	52045-2345
	CN805 13P PLUG	AKP7059
	CN806 19P PLUG	AKP7062
	CN804 18P PLUG	KM200TA18
	CN802 20P PLUG	KM200TA20
	CN803 7P PLUG	KM200TA7

G AMP INPUT ASSY

SEMICONDUCTORS

	IC251	NJM4558D-D
	Q257	2SA933S
	Q251, Q256	2SC2878
	Q252	2SD1858X
	Q254	KRA103M
	Q253, Q255	KRC103M
	D251, D252	1SS133
	D253	MTZJ27D
	D254	MTZJ5.1B

CAPACITORS

	C251	CEANP470M25
	C254	CEAT101M25
	C252, C253	CKPUYF103Z25

RESISTORS

	All Resistors	RD1/4PU###J

OTHERS

	CN251 3P CONNECTOR	52044-0345
	CN254 19P CONNECTOR	52044-1945
	CN252 3P PLUG	KM250MA3L
	CN253 18P SOCKET	KP200TA18L

H TRANS1 ASSY

TRANS1 ASSY has no service part.

I VIDEO ASSY

SEMICONDUCTORS

	IC301	NJM2595M
	Q302	2SA1515
	Q303	2SC3326
	Q301	2SC3377
	D301, D302, D305, D306	1SS355
	D307	UDZS5.1B
	D303, D304	UDZS6.2B

Mark	No.	Description	Part No.
COILS AND FILTERS			
	L301–L304	CHIP SOLID INDUCTOR	QTL1013
CAPACITORS			
	C347		CCSRCH470J50
	C307–C310, C312, C314, C338		CEAT470M25
	C1360,C302, C379		CKSRYB103K50
	C339, C340		CKSRYB104K25
	C304–C306		CKSRYB221K50
	C333		CKSRYB331K50
	C311, C313		CKSRYB473K25
RESISTORS			
⚠	R313, R316		RS3LMF560J
	Other Resistors		RS1/16S###J
OTHERS			
	CN303	11P CONNECTOR	52044-1145
	JA305	PIN JACK(4P)YELLOW	AKB7100
	CN302	7P SOCKET	KP200TA7L
	CN301	9P SOCKET	KP200TA9L
	CN306	2P PIN JACK	XKB3041
	JA351	2P JACK	XKN3013

J 6CH IN ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC302–IC305		NJM4558MD
CAPACITORS			
	C1354,C1359,C319, C320		CCSRCH101J50
	C327, C328, C342–C345		CCSRCH101J50
	C348, C349		CCSRCH101J50
	C1362		CCSRCH121J50
	C1361		CCSRCH680J50
	C1357		CEAT220M25
	C1358,C321, C324, C331, C332		CEAT4R7M50
	C1363-C1365		CKSRYB102K50
	C1352,C1353,C1355,C1356,C316		CKSRYB103K50
	C322, C323, C329, C330		CKSRYB103K50
	C1350,C1351,C317, C318		CKSRYB221K50
	C325, C326		CKSRYB221K50
RESISTORS			
	All Resistors		RS1/16S###J
OTHERS			
	CN307	9P CONNECTOR	52044-0945
	308	6P PIN JACK	AKB7089

K BOARD TO BOARD ASSY

Mark	No.	Description	Part No.
OTHERS			
	CN391	7P PLUG	KM200TA7
	CN390	9P PLUG	KM200TA9

L S. VIDEO ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC351, IC352		NJM2595M
	D351–D354		1SS355
CAPACITORS			
	C375, C376		CCSRCH470J50
	C352, C355, C358, C361–C363		CEAT470M25
	C366		CEAT470M25
	C372, C373		CKSRYB103K50
	C351, C353, C354, C356, C357		CKSRYB104K25
	C359, C367		CKSRYB104K25
	C364, C365, C368–C371		CKSRYB221K50
RESISTORS			
	All Resistors		RS1/16S###J
OTHERS			
	CN353	2-4P MINI DIN SOCKET	AKP7020
	CN352	3-4P MINI DIN SOCKET	AKP7043
	CN354	CONNECTOR POST	B5B-PH-K
	CN351	7P SOCKET	KP200TA7L

M FRONT ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC401		PE5346A
	Q484		2SA1037K
	Q441, Q442		DTC124EK
	D403–D405		1SS355
	D401, D402		DAN202K
COILS AND FILTERS			
	L401		LFEA2R2J
SWITCHES AND RELAYS			
	S451–S469		ASG7013
CAPACITORS			
	C482, C483		CCSRCH221J50
	C481		CCSRCH471J50
	C442		CEAL470M10
	C403		CEAT221M6R3
	C405		CEAT470M10
	C412		CEAT470M50
	C415, C451–C454		CKSRYB102K50
	C401, C402, C404, C410, C411		CKSRYB103K50
	C419, C441		CKSRYB103K50
	C418, C421		CKSRYB104K16
	C420		XCH3011
RESISTORS			
	All Resistors		RS1/16S###J
OTHERS			
	471	CABLE HOLDER (5P)	51063-0505
	404	CABLE HOLDER (7P)	51063-0705
	CN401	17P CONNECTOR	52044-1745
	CN402	9P CONNECTOR	52492-0920
	V401	FL TUBE	XAV3018
	X401	CERAMIC RESONATOR (5 MHz)	VSS1142
	401	REMOTE RECEIVERUNIT	GP1UM28XK

N R. ENCODER ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	D512		SLR-343BBT
	D511		UDZS5.6B
SWITCHES AND RELAYS			
	S511		ASG7013
	S513	ROTARY ENCODER	XSX3005
	S512	ROTARY ENCODER	XSX3006

Mark No.	Description	Part No.
	RESISTORS	
	All Resistors	RS1/16S###J
	OTHERS	
	511 CABLE HOLDER (7P)	51063-0705

O POWER SW ASSY

	SEMICONDUCTORS	
	D501	SLR-343VC
	SWITCHES AND RELAYS	
	S501–S509	ASG7013
	RESISTORS	
	All Resistors	RS1/16S###J
	OTHERS	
	501 CABLE HOLDER (5P)	51063-0505

P TRANS4 ASSY

	SEMICONDUCTORS	
	IC891, IC892 PROTECTOR (630mA)	AEK7006
	D891	S1WB(A)60SD
	CAPACITORS	
	C891, C892	CEAT471M35
	OTHERS	
	CN891	52045-0345

Q FRONT VIDEO ASSY

	CAPACITORS	
	C901, C902, C915, C916	CCSRCH101J50
	C903, C905	CEAL470M25
	C908, C911, C914	CKSRYB103K50
	C904, C906, C909, C912	CKSRYB104K25
	C907, C910, C913	CKSRYB471K50
	RESISTORS	
	All Resistors	RS1/16S###J
	OTHERS	
	JA902 PIN JACK (4P)	AKX7014

R H.P. ASSY

	SEMICONDUCTORS	
	Q1551,Q1552	2SC3326
	CAPACITORS	
	C1554,C1557	CCSRCH471J50
	C1553,C1556	CKSRYB103K50
	C1555,C1558	CKSRYB104K16
	C1551,C1552	CKSRYB223K50
	RESISTORS	
⚠	R1553,R1554	RS1LMF151J
⚠	R1551,R1552	RS2LMF331J
	Other Resistors	RS1/16S###J
	OTHERS	
	1551 6P CABLE HOLDER	51048-0600
	JA1551 HEADPHONE JACK	RKB1014
	KN1551 EARTH METAL FITTING	VNF1084

S PRE-OUT ASSY

	CAPACITORS	
	C1581	CKSRYB103K50
	RESISTORS	
	All Resistors	RS1/16S###J
	OTHERS	
	CN1575 7P CONNECTOR	52045-0745
	1575 PIN JACK(6P)	AKB7089

T DIGITAL IN ASSY

	COILS AND FILTERS	
	F1901 CHIP BEAD	DTF1067
	CAPACITORS	
	C1907,C1909	CCSRCH101J50
	C1904	CEAL101M10
	C1908	CKSRYB102K50
	C1903,C1906	CKSRYB103K50
	C1901,C1902,C1905	CKSRYB104K25
	RESISTORS	
	All Resistors	RS1/16S###J
	OTHERS	
	CN1902 CONNECTOR POST	B5B-PH-K
	JA1901 OPT. LINK IN	GP1FA513RZB
	JA1902 OPT. LINK OUT 12MB/S	GP1FA513TZ
	CN1901 10P CONNECTOR	VKN1186
	KN1901 WRAPPING TERMINAL	VNF1084

V FRONT OPTICAL ASSY

	SEMICONDUCTORS	
	IC951	UPC4570G2
	D951–D953	UDZS5.1B
	COILS AND FILTERS	
	F951 CHIP BEAD	DTF1067
	CAPACITORS	
	C960	CCSRCH101J50
	C965	CCSRCH330J50
	C952, C959	CCSRCH471J50
	C956, C958, C963, C966, C967	CEAT100M50
	C953, C957, C962	CKSRYB103K50
	C951, C954	CKSRYB104K25
	RESISTORS	
	All Resistors	RS1/16S###J
	OTHERS	
	CN952 CONNECTOR 5P	52045-0545
	CN951 CONNECTOR POST	B5B-PH-K
	JA952 JACK	RKN1004
	JA951 OPTICAL INPUT JACK	TORX179PL
	KN951 WRAPPING TERMINAL	VNF1084

W FM/AM TUNER MODULE

	SEMICONDUCTORS	
	IC201	BA1451F
	IC202	LC72131MD
	Q201, Q204, Q205, Q601	2SC2412K

Mark No.	Description	Part No.
Q202		DTA124ES
Q203, Q602		DTC124EK
D201		1SS133
D601		HVU187
D202		MTZJ5.1C
D101		UDZS6.8B

COILS AND FILTERS

L201	FM DETECTOR COIL	ATE7003
F202	CERAMIC FILTER	ATF-107
F201	CERAMIC FILTER	ATF-119
F601	ANTIBIRDY FILTER	ATF7025
F203	AM CERAMIC FILTER	ATF7026
L602		LAU2R2J
L601		LCTA270J2520

CAPACITORS

C605	CCSQCH680J50
C212, C213, C226, C233–C235	CCSRCH101J50
C240, C614	CCSRCH101J50
C206	CCSRCH120J50
C231, C232	CCSRCH150J50
C223	CEAT100M50
C229	CEAT101M10
C224	CEAT1R0M50
C227	CEAT220M25
C241	CEAT2R2M50
C243	CEAT330M16
C228	CEAT3R3M50
C237	CEAT470M10
C211	CEJQ1R0M50
C210	CEJQ470M16
C103, C104, C204, C238, C609	CKSRYB102K50
C102, C208, C216, C217, C220	CKSRYB103K50
C239, C242, C604, C610, C615	CKSRYB103K50
C225	CKSRYB153K50
C607, C608	CKSRYB182K50
C201, C205, C214, C230, C236	CKSRYB223K50
C244, C611	CKSRYB223K50
C221	CKSRYB224K10
C603	CKSRYB392K50
C215	CKSRYB471K50
C202, C222	CKSRYB473K16
C606	CKSRYB561K50

RESISTORS

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

OTHERS

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

6. ADJUSTMENT
6.1 TUNER SECTION

■ AM Tuner Section
• There is no adjustment in the AM tuner.

■ FM Tuner Section
• Set the mode selector to FM BAND.
• Connect the wiring as shown in Fig. 1.

Step No.	Adjustment Title	ANT. Input level and signal condition			Adjustment	
		Frequency (MHz)	Modulation	Input Level (dBμV)	Adjust point	Contents
1	T-METER Adjustment	98	OFF	80	L201	Adjust L201 so that the DC voltage between Pin 21 and Pin 23 of IC201 (Test point Vtm) gets within 0 ± 50mV.

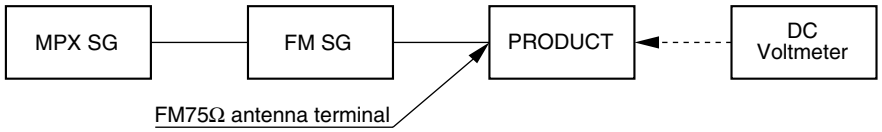
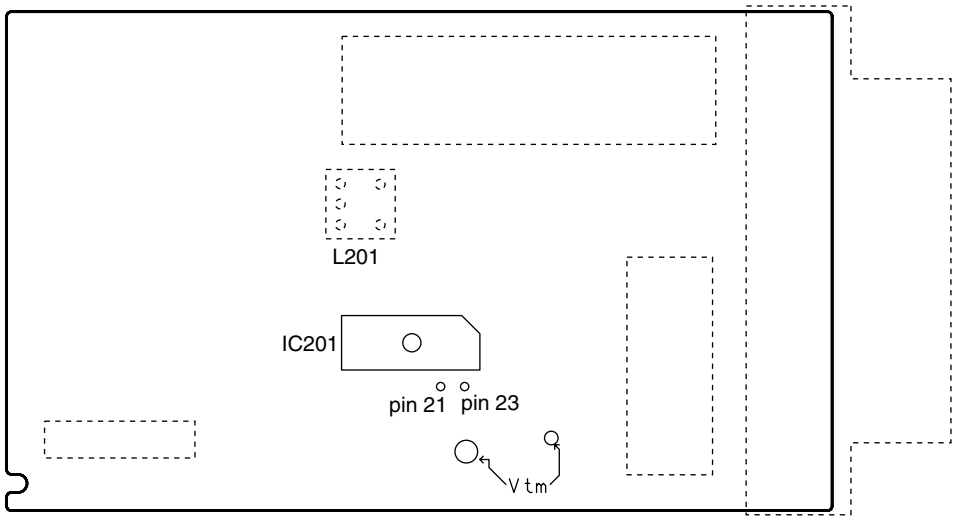


Fig.1 Adjustment Wiring Diagram

W FM/AM TUNER MODULE



SIDE B

Fig.2 Adjustment Point

7. GENERAL INFORMATION

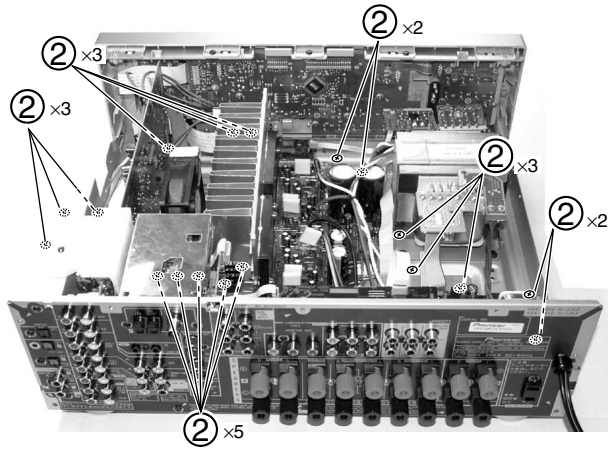
7.1 DIAGNOSIS

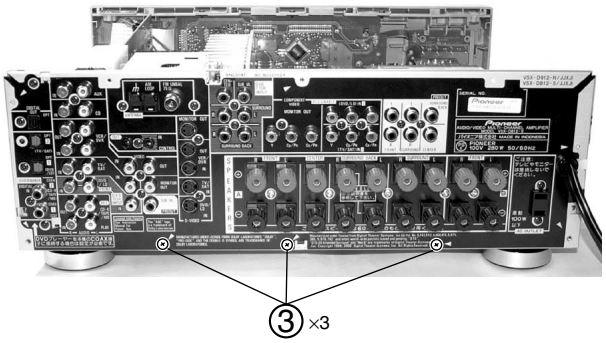
7.1.1 DISASSEMBLY AND DIAGNOSIS

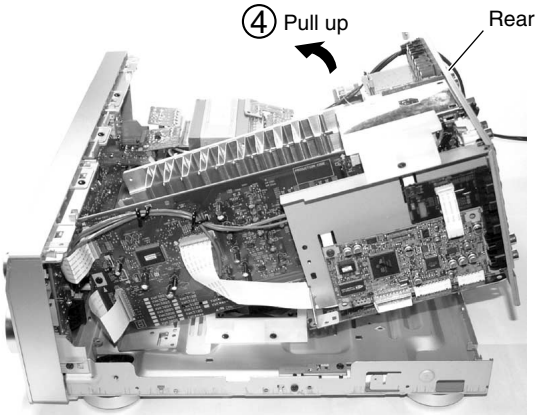
■ **Diagnosis**

Note : This photograph may show a different model.
however, the method for disassembly is the same.

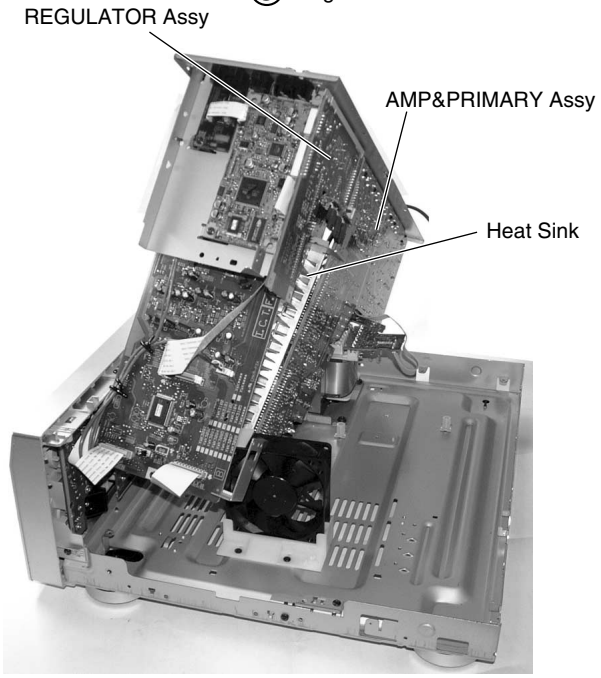
① Remove the top cover (nine screws).





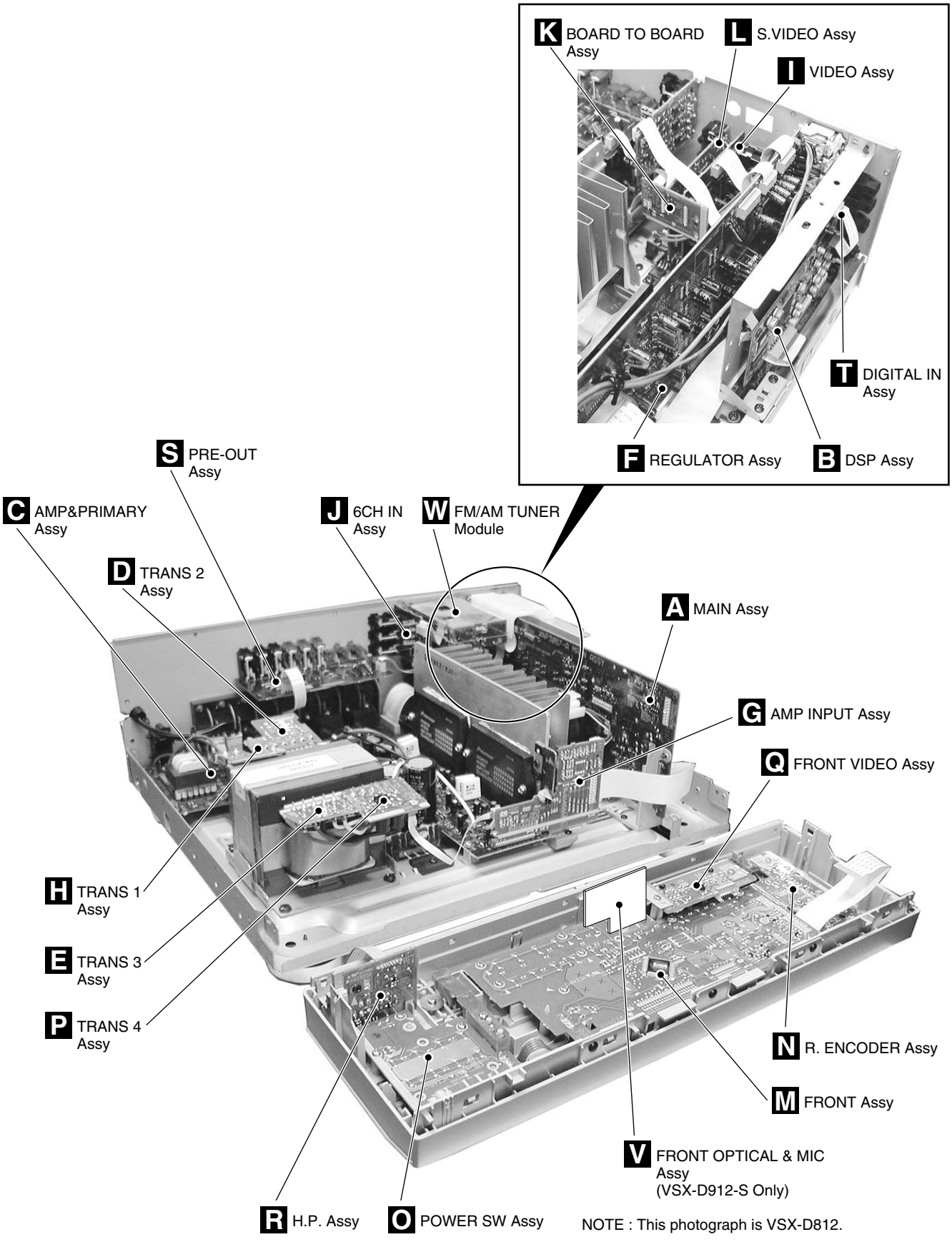


⑤ Diagnosis



Note : The unit does not operate when the screws of Speaker Terminal are taken off from Rear Panel.
Even if the FM/AM TUNER MODULE is disconnected, other functions can operate.

7.1.2 PCB LOCATION



NOTE : This photograph is VSX-D812.

7.2 PARTS

7.2.1 IC

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

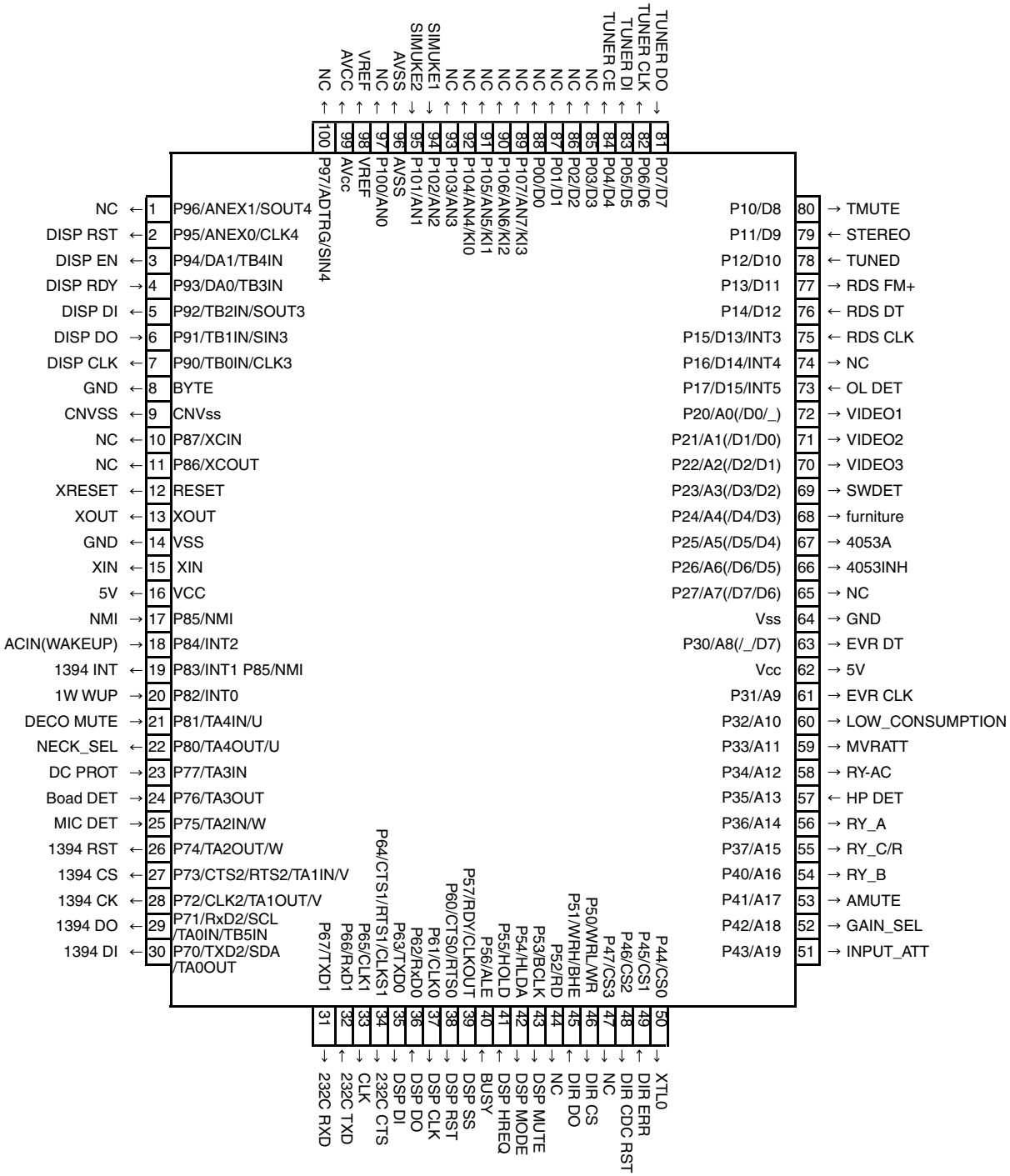
• List of IC

PD5837A, PE5346A, BD3813KS, BD3841FS, NJM2581, NJM2595, AK4529, BU1924F

■ PD5837A (MAIN ASSY : IC9001)

• System Control MCU

■ Pin Arrangement (Top View)



• Pin Function

No.	Port	Pin Name	I/O	Pin Function
1	P96/ANEX1/SOUT4	NC	I/O	
2	P95/ANEX0/CLK4	DISP RST	I/O	Reset signal to display u-com
3	P94/DA1/TB4IN	DISP EN	I/O	Enable signal to display u-com
4	P93/DA0/TB3IN	DISP RDY	I/O	Ready signal from display u-com
5	P92/TB2IN/SOUT3	DISP DI	I/O	Data out to display u-com
6	P91/TB1IN/SIN3	DISP DO	I/O	Data input from display u-com
7	P90/TB0IN/CLK3	DISP CLK	I/O	Clock signal to display u-com
8	BYTE	GND		
9	CNVss	CNVSS		
10	P87/XCIN	NC	I/O	
11	P86/XCOUT	NC	I/O	
12	RESET	XRESET		
13	XOUT	XOUT		
14	VSS	GND		
15	XIN	XIN		
16	VCC	5V		
17	P85/NMI	NM	I	No use
18	P84/INT2	ACIN(WAKEUP)	I/O	AC pulse input
19	P83/INT1 P85/NMI	1394 INT	I/O	No use (Standby for 1394)
20	P82/INT0	1W WUP	I/O	Wake up signal from display u-com
21	P81/TA4IN/U	DECO MUTE	I/O	1st DSP detect port
22	P80/TA4OUT/U	NECK_SEL	I/O	5.1ch, surround mode and A+B Stereo : H / Stereo : L
23	P77/TA3IN	DC PROT	I/O	AMP DC detect
24	P76/TA3OUT	Boad DET	I/O	AMP INPUT ASSY detect, H : detected
25	P75/TA2IN/W	MIC DET	I/O	MIC detect (VSX-D912 only), L : detect
26	P74/TA2OUT/W	1394 RST	I/O	No use (Standby for 1394)
27	P73/CTS2/RTS2/TA1IN/V	1394 CS	I/O	No use (Standby for 1394)
28	P72/CLK2/TA1OUT/V	1394 CK	I/O	No use (Standby for 1394)
29	P71/RxD2/SCL/TA0IN/TB5IN	1394 DO	I/O	No use (Standby for 1394)
30	P70/TXD2/SDA/TA0OUT	1394 DI	I/O	No use (Standby for 1394)
31	P67/TXD1	232C RXD	I/O	For rewriting 232C (Data output)
32	P66/RxD1	232C TXD	I/O	For rewriting 232C (Data input)
33	P65/CLK1	CLK	I/O	It is necessary when writing for JIG
34	P64/CTS1/RTS1/CLKS1	232C CTS	I/O	For rewriting 232C (Admit communication)
35	P63/TXD0	DSP DI	I/O	Data output signal for communication with DSP and DIR
36	P62/RxD0	DSP DO	I/O	Data input signal for communication with DSP
37	P61/CLK0	DSP CLK	I/O	Clock signal for communication with DSP and DIR
38	P60/CTS0/RTS0	DSP RST	I/O	Reset signal for DSP
39	P57/RDY/CLKOUT	DSP SS	I/O	Srobe select signal to DSP
40	P56/ALE	BUSY	I/O	Use it in MCACC
41	P55/HOLD	DSP HREQ	I/O	DSP error detect signal
42	P54/HLDA	DSP MODE	I/O	Mode select of DSP (ROM/RAM)
43	P53/BCLK	DSP MUTE	I/O	DSP ASSY mute
44	P52/RD	NC	I/O	
45	P51/WRH/BHE	DIR DO	I/O	Data input signal for communication with DIR/DAC
46	P50/WRL/WR	DIR CS	I/O	Chip select signal for communication with DIR/DAC
47	P47/CS3	NC	I/O	
48	P46/CS2	DIR CDC RST	I/O	Reset signal for DIR CODEC
49	P45/CS1	DIR ERR	I/O	lock/unlock signal
50	P44/CS0	XTL0	I/O	DIR X'tal change

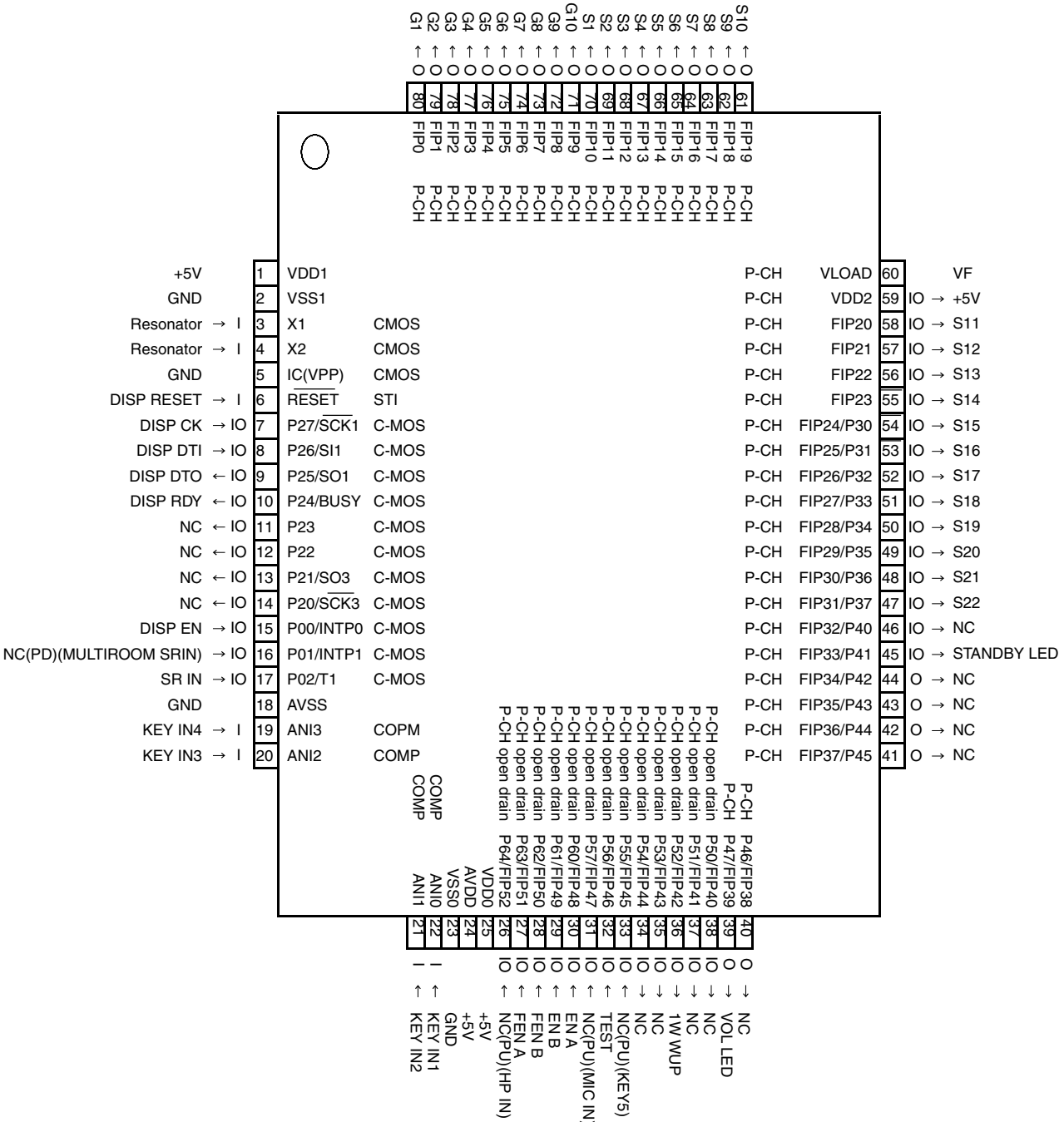
• **Pin Function**

No.	Port	Pin Name	I/O	Pin Function
51	P43/A19	INPUT_ATT	I/O	Analog input ATT(H : ATT ON)
52	P42/A18	GAIN_SEL	I/O	Gain select (5.1ch and Stereo of analog input : H)
53	P41/A17	AMUTE	I/O	System mute
54	P40/A16	RY_B	I/O	Speaker B relay ON/OFF
55	P37/A15	RY_C/R	I/O	Rear/Center Speaker relay ON/OFF
56	P36/A14	RY_A	I/O	Speaker A relay ON/OFF
57	P35/A13	HP DET	I/O	HP detect, H : detected
58	P34/A12	RY-AC	I/O	AC relay ON/OFF
59	P33/A11	MVRATT	I/O	ATT control of master volume (less than -15dB : L)
60	P32/A10	LOW_CONSUMPTION	I/O	If stop mode, port L, else H
61	P31/A9	EVR CLK	I/O	Clock signal for Function and E-volume
62	Vcc	5V		
63	P30/A8(/_/D7)	EVR DT	I/O	Data signal for Function and E-volume
64	Vss	GND		
65	P27/A7(/D7/D6)	NC	I/O	
66	P26/A6(/D6/D5)	4053INH	I/O	Component terminal control
67	P25/A5(/D5/D4)	4053A	I/O	Component terminal control
68	P24/A4(/D4/D3)	furniture	I/O	Furniture control signal
69	P23/A3(/D3/D2)	SWDET	I/O	SWSP detect
70	P22/A2(/D2/D1)	VIDEO3	I/O	SWSP detect
71	P21/A1(/D1/D0)	VIDEO2	I/O	SWSP detect
72	P20/A0(/D0/_)	VIDEO1	I/O	NJM2296 control (VIDEO input select)
73	P17/D15/INT5	OL DET	I/O	Detect overload of AMP
74	P16/D14/INT4	NC	I/O	
75	P15/D13/INT3	RDS CLK	I/O	Clock input signal for RDS module
76	P14/D12 RDS	DT	I/O	Data input signal for RDS module
77	P13/D11 RDS	FM+	I/O	Power ON/OFF of RDS decoder
78	P12/D10	TUNED	I/O	L : TUNED
79	P11/D9	STEREO	I/O	L :STEREO
80	P10/D8	TMUTE	I/O	Tuner mute
81	P07/D7	TUNER DO	I/O	Data input signal for tuner contorol
82	P06/D6	TUNER CLK	I/O	Clock signal for tuner contorol
83	P05/D5	TUNER DI	I/O	Data output signal for tuner contorol
84	P04/D4	TUNER CE	I/O	Chip select signal for tuner contorol
85	P03/D3	NC	I/O	
86	P02/D2	NC	I/O	
87	P01/D1	NC	I/O	
88	P00/D0	NC	I/O	
89	P107/AN7/KI3	NC	I/O	
90	P106/AN6/KI2	NC	I/O	
91	P105/AN5/KI1	NC	I/O	
92	P104/AN4/KI0	NC	I/O	
93	P103/AN3	NC	I/O	
94	P102/AN2	SIMUKE1	I/O	Input 1 to switch region
95	P101/AN1	SIMUKE2	I/O	Input 2 to switch region
96	AVSS	AVSS		Connect to VSS
97	P100/AN0	NC	I/O	
98	VREF	VREF		Connect to VCC
99	AVcc	AVCC		Connect to VCC
100	P97/ADTRG/SIN4	NC	I/O	

■ PE5346A (FRONT ASSY : IC401)

• **System Control MCU**

■ **Pin Arrangement (Top View)**



• Pin Function

No.	Port	Pin Name	I/O	Pin Function
1	VDD1	+5V	-	positive power supply
2	VSS1	GND	-	ground potential
3	X1	Resonator	I	crystal connection for system clock oscillation
4	X2	Resonator	I	crystal connection for system clock oscillation
5	IC(VPP)	GND	-	
6	RESET	DISP RESET	I	receive reset signal from main u-com
7	P27/SCK1	DISP CK	I/O	clock signal from main u-com
8	P26/SI1	DISP DTI	I/O	datain from main u-com
9	P25/SO1	DISP DTO	I/O	data out to main u-com
10	P24/BUSY	DISP RDY	I/O	ready signal from main u-com
11	P23	NC	I/O	
12	P22	NC	I/O	
13	P21/SO3	NC	I/O	
14	P20/SCK3	NC	I/O	
15	P00/INTP0	DISP EN	I/O	enable signal from main u-com
16	P01/INTP1	NC	I/O	
17	P02/T1	SR IN	I/O	remote control signal input from main room
18	AVSS	GND	-	ground potential for A/D converter
19	ANI3	KEY IN4	I	
20	ANI2	KEY IN3	I	
21	ANI1	KEY IN2	I	
22	ANI0	KEY IN1	I	
23	VSS0	GND	-	ground potential for ports
24	AVDD	'+5V	-	analog power voltage input to A/D converter
25	VDD0	'+5V	-	positive power supply to ports
26	P64/FIP52	NC	I/O	
27	P63/FIP51	FEN A	I/O	MULTI JOG(Right)
28	P62/FIP50	FEN B	I/O	MULTI JOG(Left)
29	P61/FIP49	EN B	I/O	VOLUME JOG1(-)
30	P60/FIP48	EN A	I/O	VOLUME JOG1(+)
31	P57/FIP47	NC	I/O	
32	P56/FIP46	TEST	I/O	test mode input for checker
33	P55/FIP45	NC	I/O	
34	P54/FIP44	NC	I/O	
35	P53/FIP43	NC	I/O	
36	P52/FIP42	1W WUP	I/O	output wakeup signal to main u-com
37	P51/FIP41	NC	I/O	
38	P50/FIP40	NC	I/O	
39	P47/FIP39	VOL LED	I/O	LED Output
40	P46/FIP38	NC	I/O	

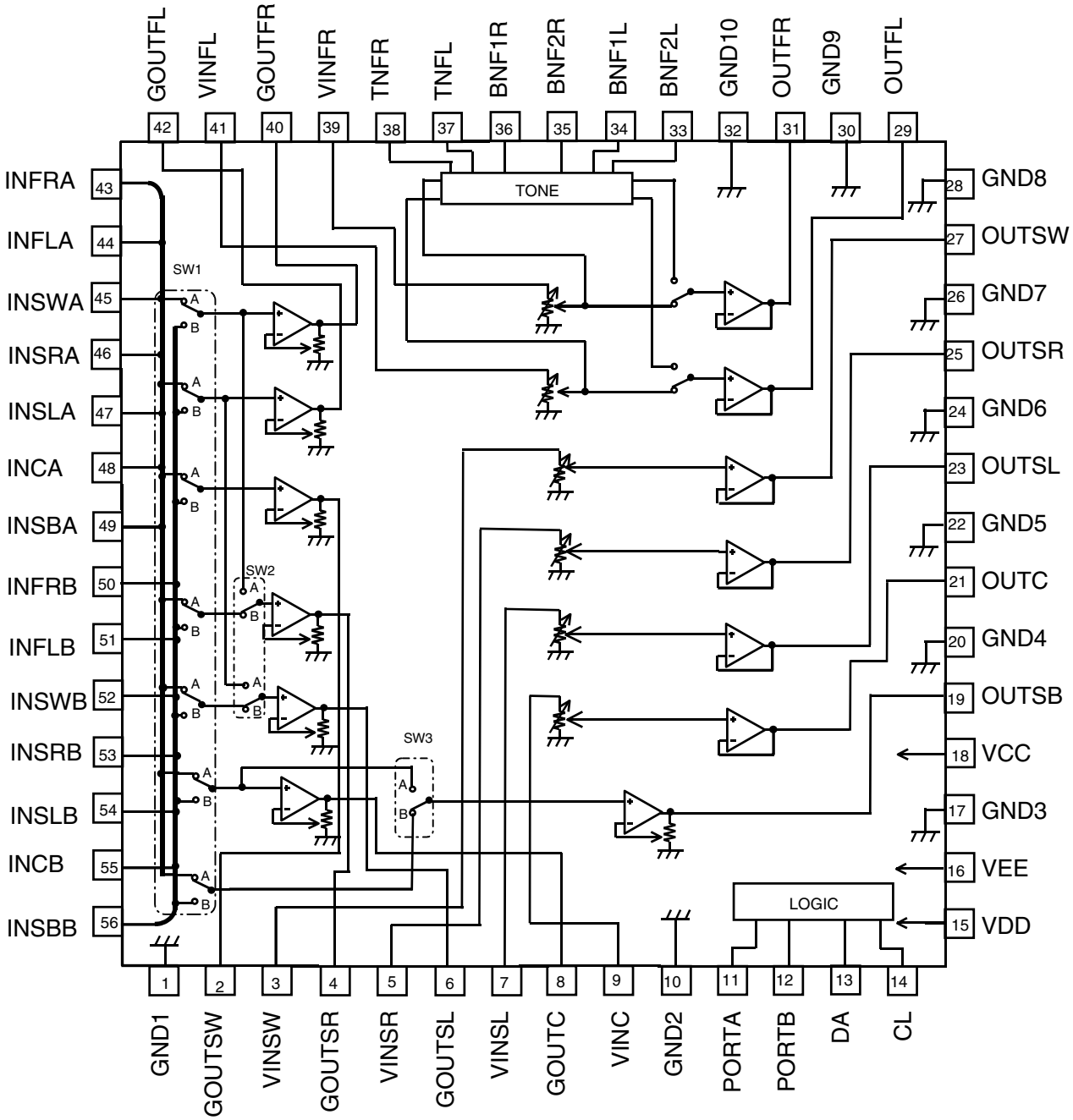
• Pin Function

No.	Port	Pin Name	I/O	Pin Function
41	FIP37/P45	NC	I/O	
42	FIP36/P44	NC	/O	
42	FIP35/P43	NC	I/O	
44	FIP34/P42	NC	I/O	
45	FIP33/P41	STANDBY LED	I/O	LED Output
46	FIP32/P40	NC	I/O	
47	FIP31/P37	S22	I/O	Display
48	FIP30/P36	S21	I/O	Display
49	FIP29/P35	S20	I/O	Display
50	FIP28/P34	S19	I/O	Display
51	FIP27/P33	S18	I/O	Display
52	FIP26/P32	S17	I/O	Display
53	FIP25/P31	S16	I/O	Display
54	FIP24/P30	S15	I/O	Display
55	FIP23	S14	O	Display
56	FIP22	S13	O	Display
57	FIP21	S12	O	Display
58	FIP20	S11	O	Display
59	VDD2	'+5V	-	positive power supply to FIP controller.
60	VLOAD	VF	-	pull down resistor connection of FIP controller
61	FIP19	S10	O	Display
62	FIP18	S9	O	Display
63	FIP17	S8	O	Display
64	FIP16	S7	O	Display
65	FIP15	S6	O	Display
66	FIP14	S5	O	Display
67	FIP13	S4	O	Display
68	FIP12	S3	O	Display
69	FIP11	S2	O	Display
70	FIP10	S1	O	Display
71	FIP9	G10	O	Display
72	FIP8	G9	O	Display
73	FIP7	G8	O	Display
74	FIP6	G7	O	Display
75	FIP5	G6	O	Display
76	FIP4	G5	O	Display
77	FIP3	G4	O	Display
78	FIP2	G3	O	Display
79	FIP1	G2	O	Display
80	FIP0	G1	O	Display

■ BD3813KS (MAIN ASSY : IC108)

• 6.1ch Audio Sound Processor

■ Block Diagram



• Description of terminal

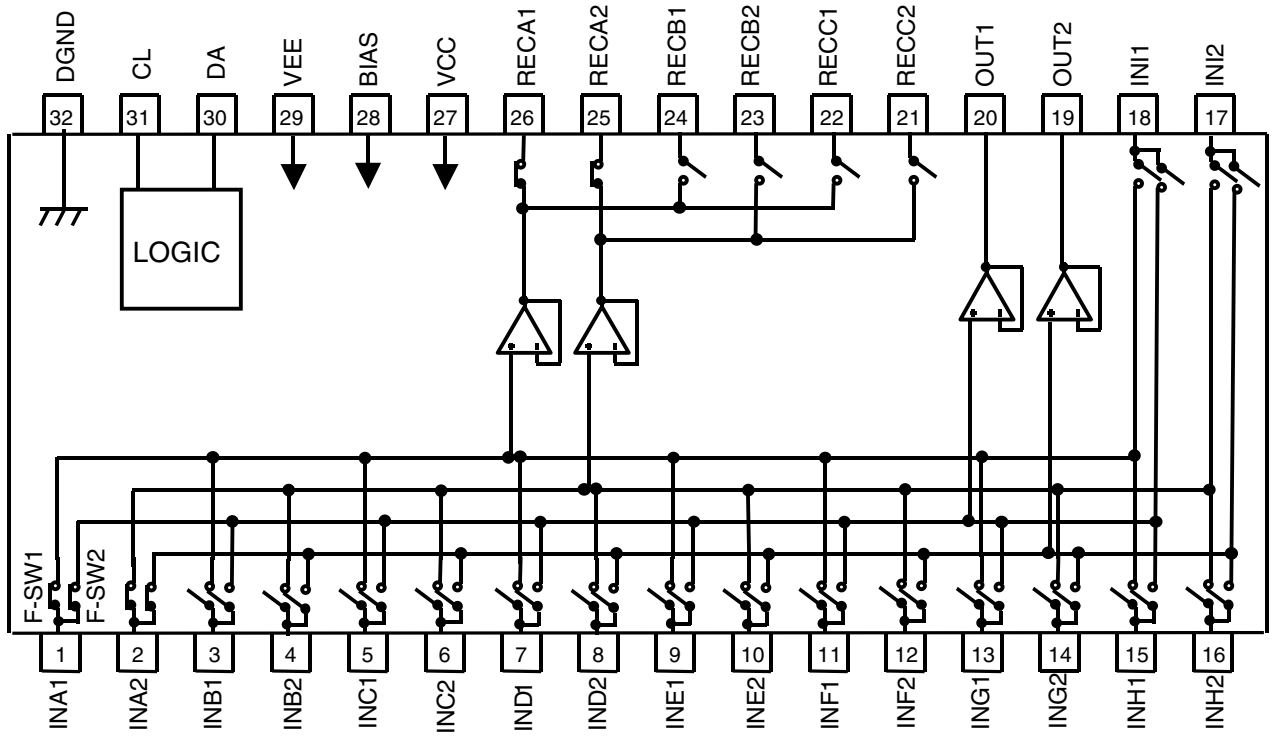
Terminal Number	Terminal Name	Description	Terminal Number	Terminal Name	Description
1	GND1	Ground terminal	14	CL	Serial clock input terminal
2	GOUTSW	Sub woofer input gain output terminal	15	VDD	Power supply terminal for port
3	VINSW	Subwoofer volume input terminal	16	VEE	(-)Power supply terminal
4	GOUTSR	Surround Rch input gain output terminal	17	GND3	Ground terminal
5	VINSR	Surround Rch volume input terminal	18	VCC	(+)Power supply terminal
6	GOUTSL	Surround Lch input gain output terminal	19	OUTSB	Surround backoutput terminal
7	VINSL	Surround Lch volume input terminal	20	GND4	Ground terminal
8	GOUTC	Center speakerinput gain output terminal	21	OUTC	Center speaker output terminal
9	VINC	Center speaker volume input terminal	22	GND5	Ground terminal
10	GND2	Ground terminal	23	OUTSL	Surround Lch output terminal
11	PORTA	Output terminal for port	24	GND6	Ground terminal
12	IPORTB	Output terminal for port	25	OUTSR	Surround Rch output terminal
13	DA	Serial data and latch input terminal	26	GND7	Ground terminal

Terminal Number	Terminal Name	Description	Terminal Number	Terminal Name	Description
27	OUTSW	Sub woofer output terminal	42	GOUTFL	Lch input gain output terminal
28	GND8	Ground terminal	43	INFRA	Rch DVD inputterminal
29	OUTFL	Lch output terminal	44	INFLA	Lch DVD input terminal
30	GND9	Ground terminal	45	INSWA	SWch DVD input terminal
31	OUTFR	Rch output terminal	46	INSRA	SRch DVD input terminal
32	GND10	Ground terminal	47	INSLA	SLch DVD input terminal
33	BNF2L	Lch bass filter terminal 2	48	INCA	Cch DVD input terminal
34	BNF1L	Lch bass filter terminal 1	49	INSBA	SBch DVD input terminal
35	BNF2R	Rch bass filter terminal 2	50	INFRB	Rch DSP input terminal
36	BNF1R	Lch bass filter terminal 1	51	INFLB	Lch DSP input terminal
37	TNFL	Lch treble filter terminal	52	INSWB	SWch DSP input terminal
38	TNFR	Rch treble filter terminal	53	INSRB	SRch DSP input terminal
39	VINFR	Rch volume Input terminal	54	INSLB	SLch DSP input terminal
40	GOUTFR	Rch input gain output terminal	55	INCB	Cch DSP input terminal
41	VINFL	Lch volume Input terminal	56	INSBB	SBch DSP input terminal

■ BD3841FS (MAIN ASSY : IC101)

• 9ch Function Switch

■ Block Diagram



* F-SW1 : INPUT FUNCTION1
F-SW2 : INPUT FUNCTION2

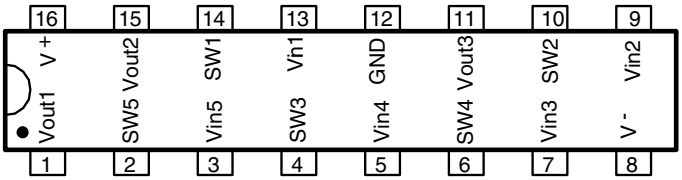
• Description of terminal

Terminal Number	Terminal Name	Description	Terminal Number	Terminal Name	Description
1	INA1	A 1ch input terminal	17	INI2	I 2ch input terminal
2	INA2	A 2ch input terminal	18	INI1	I 1ch input terminal
3	INB1	B 1ch input terminal	19	OUT2	2ch output terminal
4	INB2	B 2ch input terminal	20	OUT1	1ch output terminal
5	INC1	C 1ch input terminal	21	RECC2	C 2ch REC output terminal
6	INC2	C 2ch input terminal	22	RECC1	C 1ch REC output terminal
7	IND1	D 1ch input terminal	23	RECB2	B 2ch REC output terminal
8	IND2	D 2ch input terminal	24	RECB1	B 1ch REC output terminal
9	INE1	E1ch input terminal	25	RECA2	A 2ch REC output terminal
10	INE2	E 2ch input terminal	26	RECA1	A 1ch REC output terminal
11	INF1	F 1ch input terminal	27	VCC	(+)Power supply terminal
12	INF2	F 2ch input terminal	28	BIAS	Bias input terminal
13	ING1	G1ch input terminal	29	VEE	(-)Power supply terminal
14	ING2	G2ch input terminal	30	DA	Serial date anlatch input terminal
15	INH1	H 1ch input terminal	31	CL	Serial clock input terminal
16	INH2	H 2ch input terminal	32	DGND	Digital ground terminal

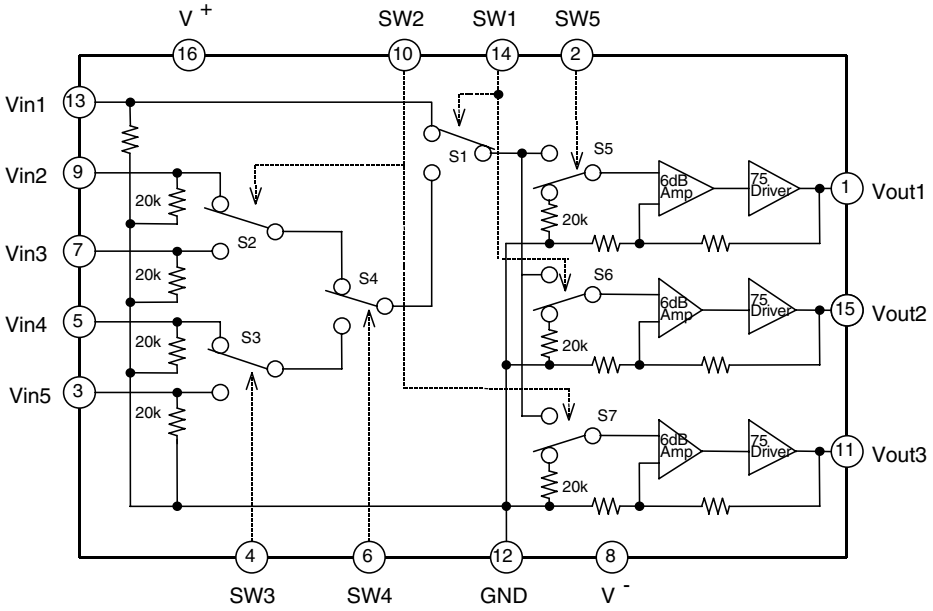
■ NJM2595 (VIDEO ASSY : IC301) (S. VIDEO ASSY : IC351, IC352)

• 5 input 3 output video SW for AV

■ Pin Arrangement (Top View)



■ Block Diagram



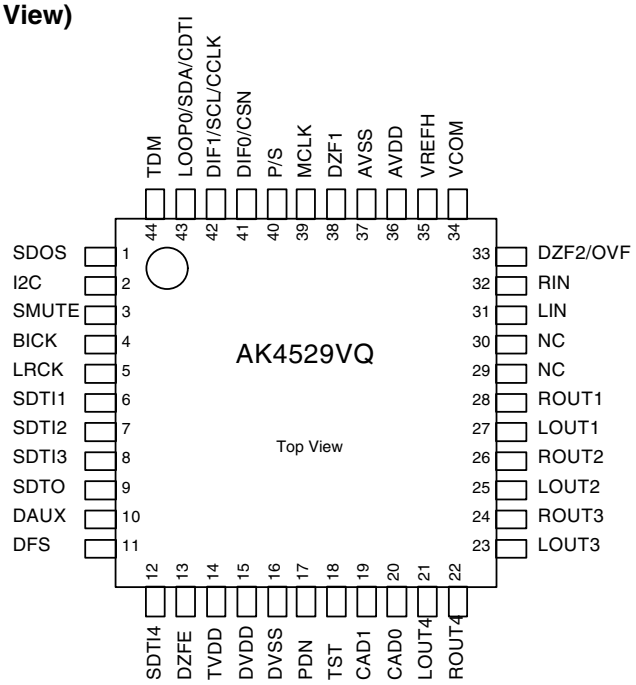
■ SW list for input and output (L=VCL,H=VCH,X=LorH)

SW1	SW2	SW3	SW4	SW5	Vout1	Vout2	Vout3
L	H	X	X	H	Vin1	MUTE	Vin1
	L			H	Vin1	MUTE	MUTE
	H			L	MUTE	MUTE	Vin1
H	L	X	L	H	Vin2	Vin2	MUTE
				L	MUTE	Vin2	MUTE
H	H	X	L	H	Vin3	Vin3	Vin3
				L	MUTE	Vin3	Vin3
H	H	L	H	H	Vin4	Vin4	Vin4
	H			L	MUTE	Vin4	Vin4
	L			H	Vin4	Vin4	MUTE
	L			L	MUTE	Vin4	MUTE
H	H	H	H	H	Vin5	Vin5	Vin5
	H			L	MUTE	Vin5	Vin5
	L			H	Vin5	Vin5	MUTE
	L			L	MUTE	Vin5	MUTE
L	L	X	X	L	MUTE	MUTE	MUTE

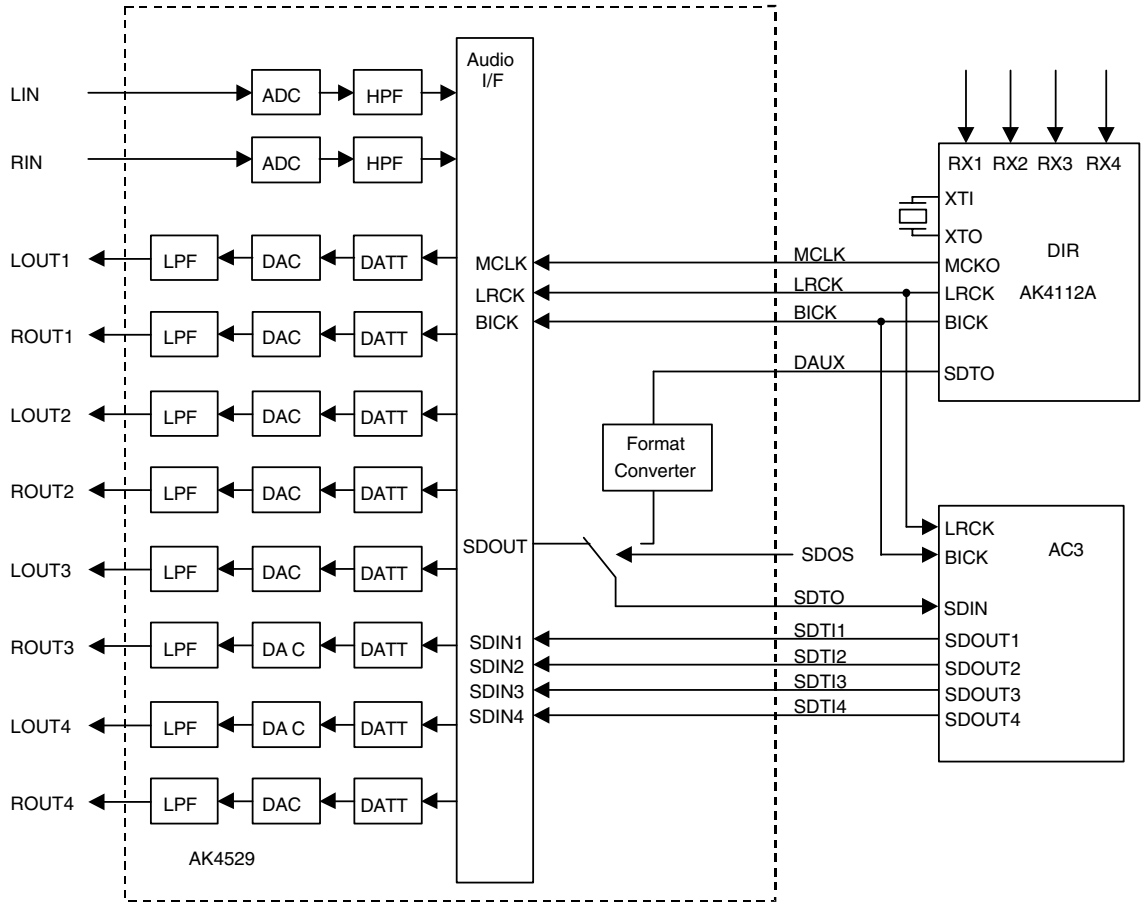
■ AK4529VQ (DSP ASSY : IC8401)

• High Performance Multi-channel Audio CODEC

■ Pin Arrangement (Top View)



■ Block Diagram



Block Diagram (DIR and AC-3 DSP are external parts)

• Pin Function

No.	Pin Name	I/O	Function
1	SDOS	I	SDTO Source Select Pin (Note 1) "L" : Internal ADC output, "H" : DAUX input SDOS pin should be set to "L" when TDM= "1".
2	I2C	I	Control Mode Select Pin "L" : 3-wire Serial, "H" : I ^{2}C Bus
3	SMUTE	I	Soft Mute Pin (Note 1) When this pin goes to "H", soft mute cycle is initialized. When returning to "L", the output mute releases.
4	BICK	I	Audio Serial Data Clock Pin
5	LRCK	I	Input Channel Clock Pin
6	SDTI1	I	DAC1 Audio Serial Data Input Pin
7	SDTI2	I	DAC2 Audio Serial Data Input Pin
8	SDTI3	I	DAC3 Audio Serial Data Input Pin
9	SDTO	O	Audio Serial Data Output Pin
10	DAUX	I	AUX Audio Serial Data Input Pin
11	DFS	I	Double Speed Sampling Mode Pin (Note 1) "L" : Normal Speed, "H" : Double Speed
12	SDTI4	I	DAC4 Audio Serial Data Input Pin
13	DZFE	I	Zero Input Detect Enable Pin "L" : mode 7 (disable) at parallel mode, zero detect mode is selectable by DZFM3-0 bits at serial mode "H" : mode 0 (DZF1 is AND of all eight channels)
14	TVDD	-	Output Buffer Power Supply Pin, 2.7V~5.5V
15	DVDD	-	Digital Power Supply Pin, 4.5V~5.5V
16	DVSS	-	Digital Ground Pin, 0V
17	PDN	I	Power-Down & Reset Pin When "L", the AK4529 is powered-down and the control registers are reset to default state. If the state of P/S or CAD0-1 changes, then the AK4529 must be reset by PDN.
18	TST	I	Test Pin This pin should be connected to DVSS.
19	CAD1	I	Chip Address 1 Pin
20	CAD0	I	Chip Address 0 Pin
21	LOUT4	O	DAC4 Lch Analog Output Pin
22	ROUT4	O	DAC4 Rch Analog Output Pin

• Pin Function

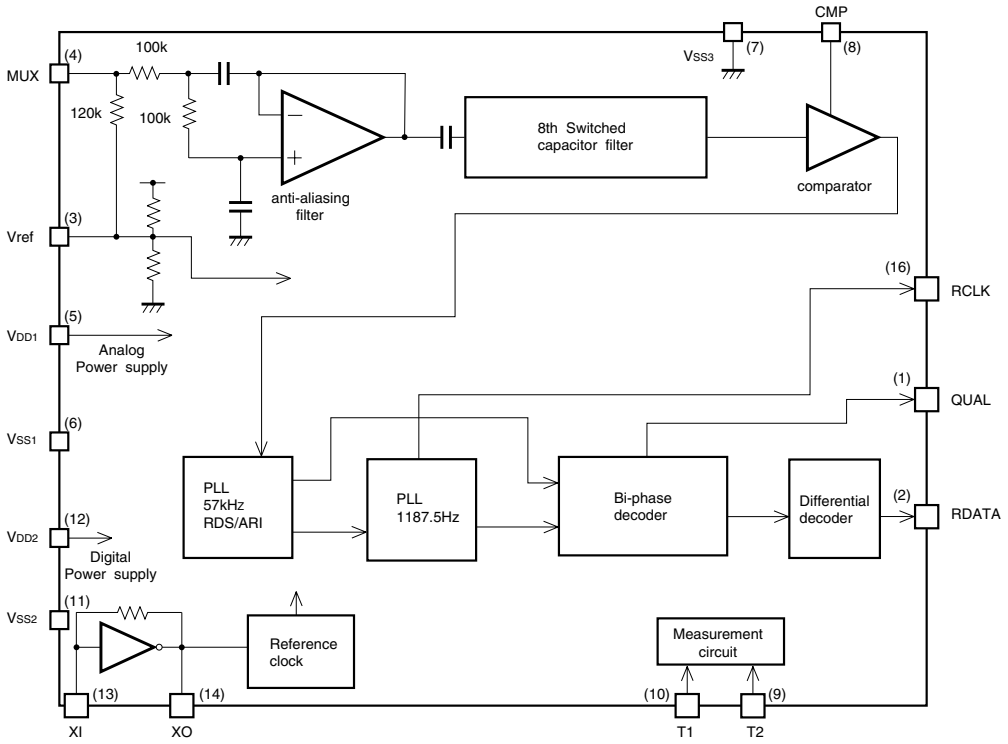
No.	Pin Name	I/O	Function
23	LOUT3	O	DAC3 Lch Analog Output Pin
24	ROUT3	O	DAC3 Rch Analog Output Pin
25	LOUT2	O	DAC2 Lch Analog Output Pin
26	ROUT2	O	DAC2 Rch Analog Output Pin
27	LOUT1	O	DAC1 Lch Analog Output Pin
28	ROUT1	O	DAC1 Rch Analog Output Pin
29	NC	-	No Connect No internal bonding.
30	NC	-	No Connect No internal bonding.
31	LIN	I	Lch Analog Input Pin
32	RIN	I	Rch Analog Input Pin
33	DZF2	O	Zero Input Detect 2 Pin (Note 2) When the input data of the group 1 follow total 8192 LRCK cycles with "0" input data, this pin goes to "H".
	OVF	O	Analog Input Overflow Detect Pin (Note 3) This pin goes to "H" if the analog input of Lch or Rch is overflows.
34	VCOM	O	Common Voltage Output Pin, AVDD/2 Large external capacitor around 2.2μF is used to reduce power-supply noise.
35	VREFH	I	Positive Voltage Reference Input Pin, AVDD
36	AVDD	-	Analog Power Supply Pin, 4.5V~5.5V
37	AVSS	-	Analog Ground Pin, 0V
38	DZF1	O	Zero Input Detect 1 Pin (Note 2) When the input data of the group 1 follow total 8192 LRCK cycles with "0" input data, this pin goes to "H".
39	MCLK	I	Master Clock Input Pin
40	P/S	I	Parallel/Serial Select Pin "L" : Serial control mode, "H" :Parallel control mode
41	DIF0	I	Audio Data Interface Format 0 Pin in parallel control mode
	CSN	I	Chip Select Pin in 3-wire serial control mode This pin should be connected toDVDD at I ^{2} C bus control mode
42	DIF1	I	Audio Data Interface Format 1 Pin in parallel control mode
	SCL/CCLK	I	Control Data Clock Pin in serial control mode I2C= "L" : CCLK (3-wire Serial), I2C = "H" : SCL (I ^{2} C Bus)
43	LOOP0	I	Loopback Mode 0 Pin in parallel control mode Enables digital loop-back from ADC to 4 DACs.
	SDA/CDTI	I/O	Control Data Input Pin in serial control mode I2C= "L" : CDTI (3-wire Serial), I2C = "H" : SDA (I ^{2} C Bus)
44	TDM	I	TDM I/F Format Mode Pin (Note 1) "L" : Normal format, "H" :TDM format

Notes: 1. SDOS, SMUTE, DFS, and TDM pins are ORed with register data if P/S = "L".
2. The group 1 and 2 can be selected by DZFM3-0 bits if P/S = "L" and DZFE = "L".
3. This pin becomes OVF pin if OVFE bit is set to "1" at serial control mode.
4. All input pins should not be left floating.

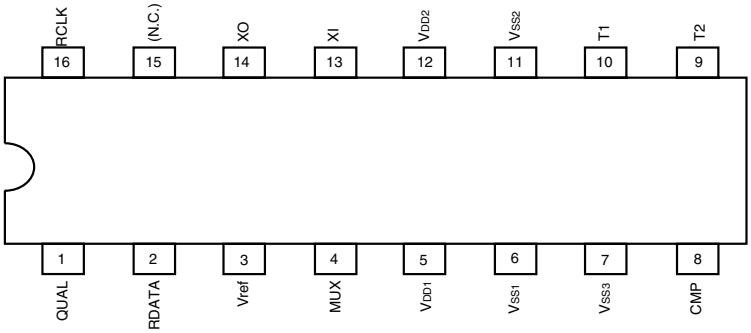
■ BU1924F (MAIN ASSY : IC5001)

• **RDS / RBDS Demodulation IC**

■ Block Diagram



■ Pin Arrangement (Top View)



■ Pin Function

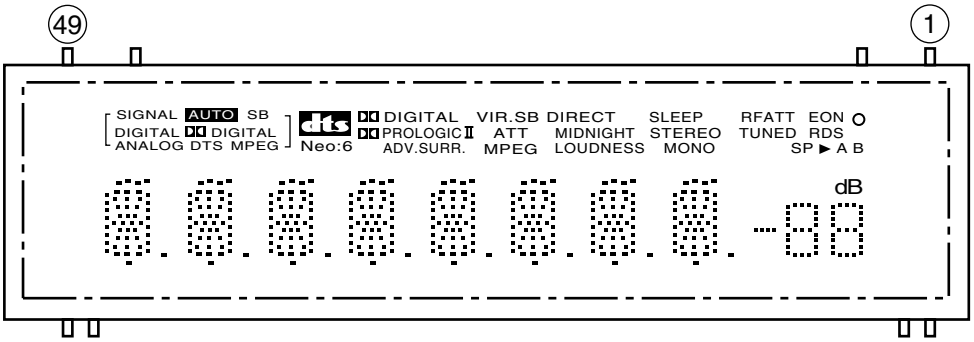
No.	Pin Name	Function	No.	Pin Name	Function
1	QUAL	Demodulation quality fine data :H , error data :L	9	T2	Test input Open or connect to GND.
2	RDATA	Demodulation data	10	T1	
3	Vref	Reference power supply (1/2 VDD1)	11	VSS2	Digital power supply (4.5V to 5.5V)
4	MUX	Composite signal input	12	VDD2	
5	VDD1	Analog power supply (4.5V to 5.5V)	13	XI	Connect the crystal resonator (4.332MHz)
6	VSS1		14	XO	
7	VSS3	GND	15	(NC)	Non connection
8	CMP	Comparator input	16	RCLK	Demodulation clock (1187.5kHZ)

7.2.2 DISPLAY

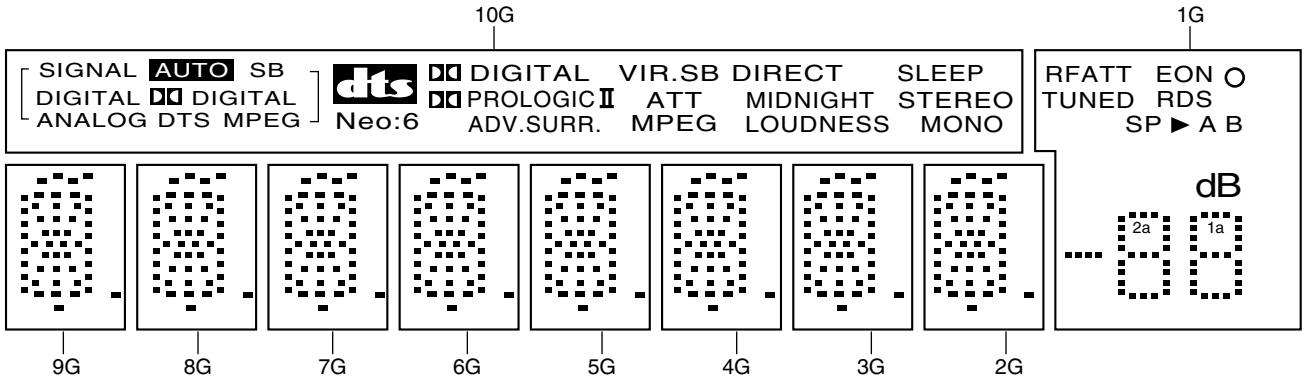
■ XAV3018 (FRONT ASSY : V401)

• FL DISPLAY

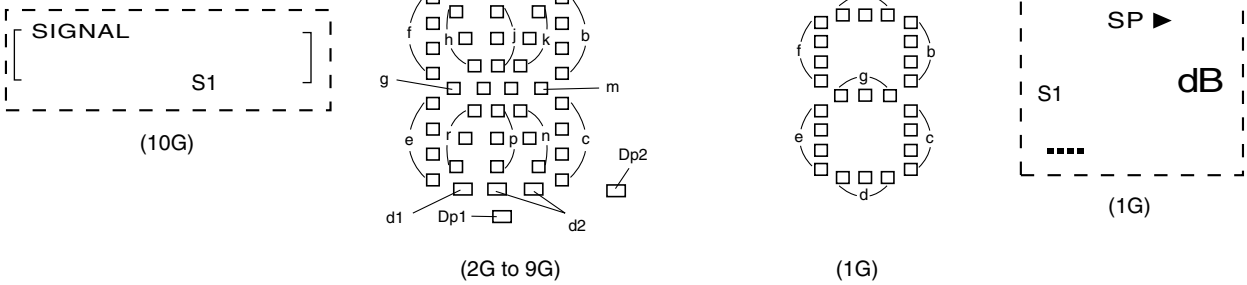
• Pin Assignment



• Grid Assignment



• Segment Designation



• Pin Connection

Pin No.	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25
Connection	F2	F2	NP	NP	P22	P21	P20	P19	P18	P17	P16	P15	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2
Pin No.	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
Connection	P1	NX	NX	NX	NX	NX	NX	NX	NX	NX	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	NP	NP	F1	F1	

NOTE 1) F1, F2..... Filament
2) NP..... No pin
3) NX..... No extend pin
4) DL..... Datum Line
5) 1G to 10G..... Grid
6) Field of vision is a minimum of 21.8° from the lower side.

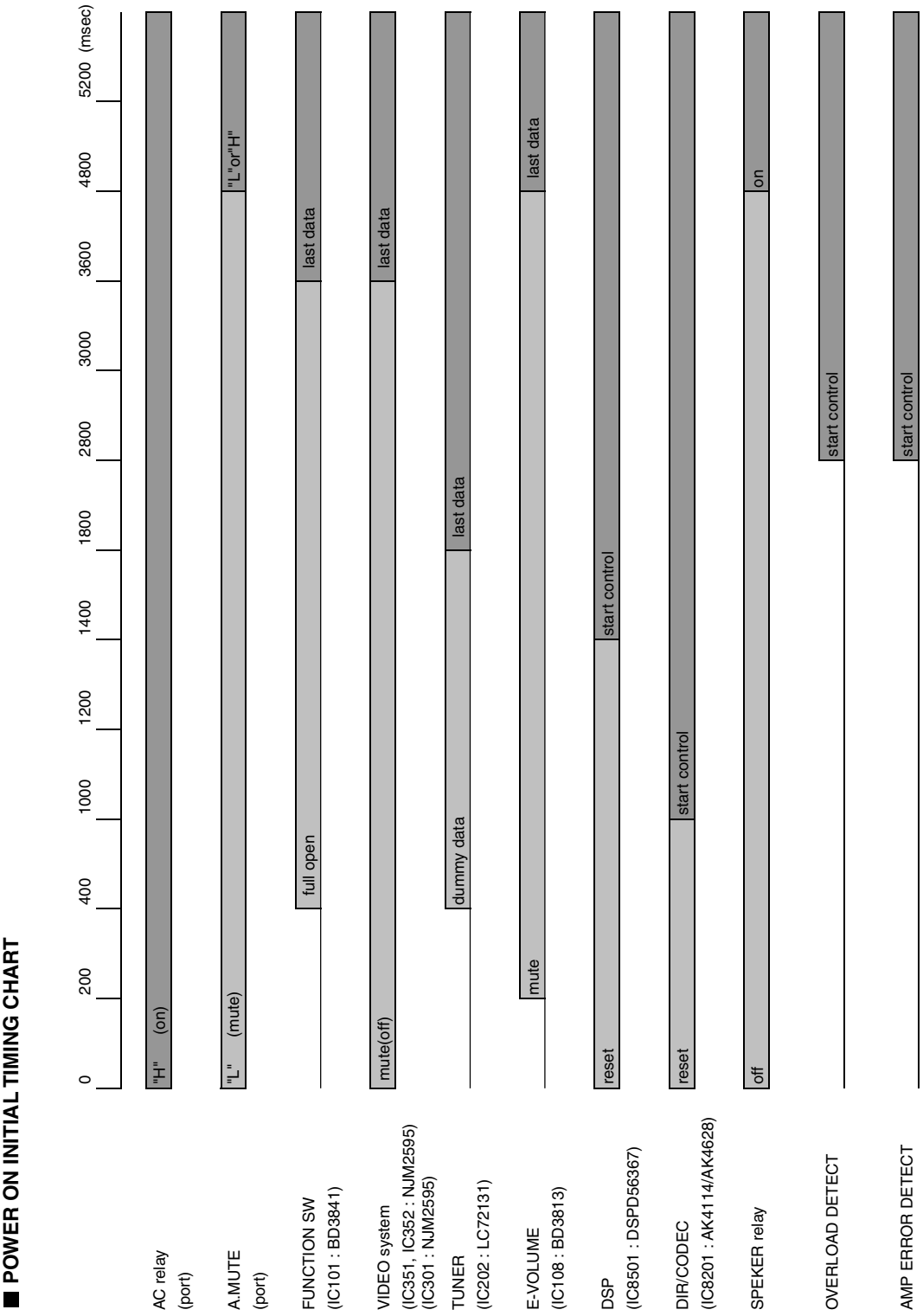
• Anode Connection

	10G	9G-2G	1G
P1	S1	a1	RFATT
P2	AUTO	a2	EON
P3	SB	h	○
P4	DIGITAL	j	TUNED
P5	ANALOG	k	RDS
P6	DIGITAL (L)	b	S1
P7	DTS	f	A
P8	MPEG	m	B
P9	dts	g	1a
P10	MPEG	c	1b
P11	DIGITAL (R)	e	1f
P12	PROLOGIC Π	r	1g
P13	Neo:6	p	1c
P14	VIR.SB	n	1e
P15	ADV.SURR.	d1	1d
P16	ATT	d2	2a
P17	DIRECT		2b
P18	MIDNIGHT		2f
P19	LOUDNESS	S1	2g
P20	SLEEP	S4	2c
P21	STEREO	S2	2e
P22	MONO	S3	2d

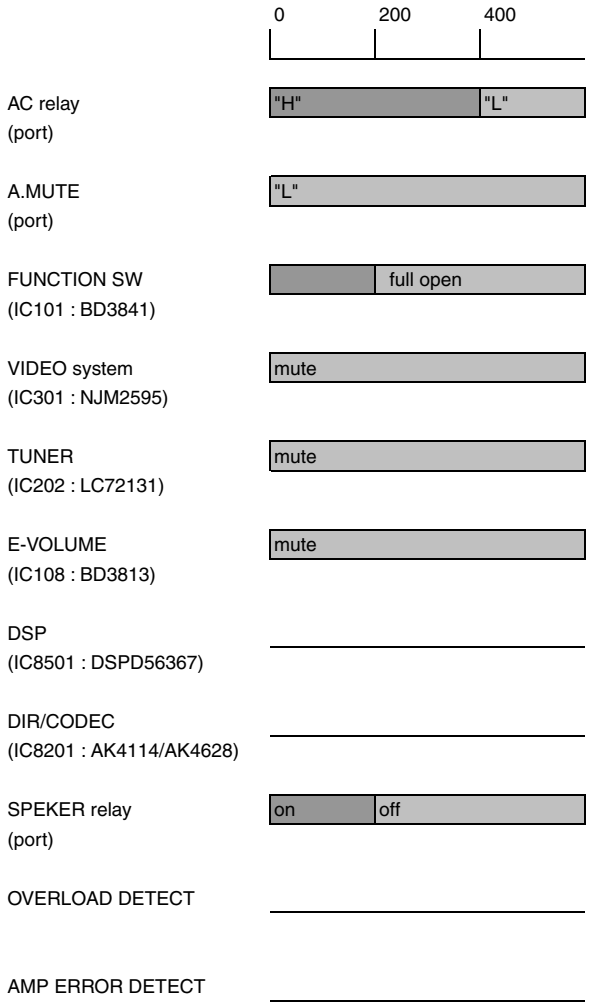
7.3 EXPLANATION

7.3.1 POWER ON AND OFF INITIAL TIMING CHART

■ **POWER ON INITIAL TIMING CHART**



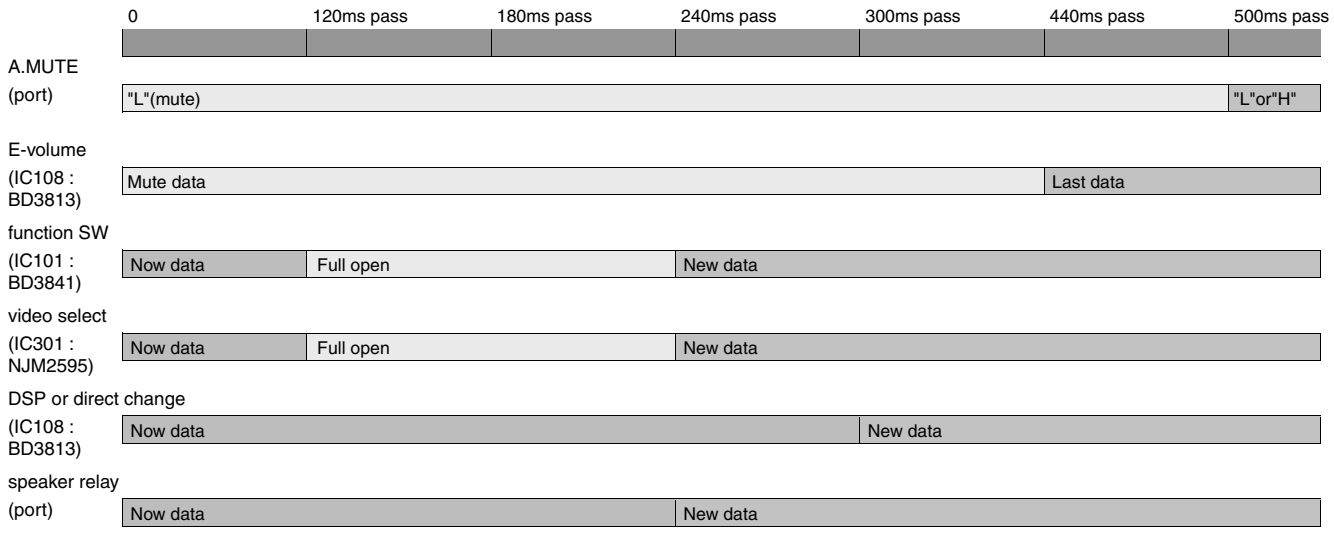
■ POWER OFF INITIAL TIMING CHART



7.3.2 IC DATA TRANSMISSION TIMING CHART

■ IC data transmission timing chart

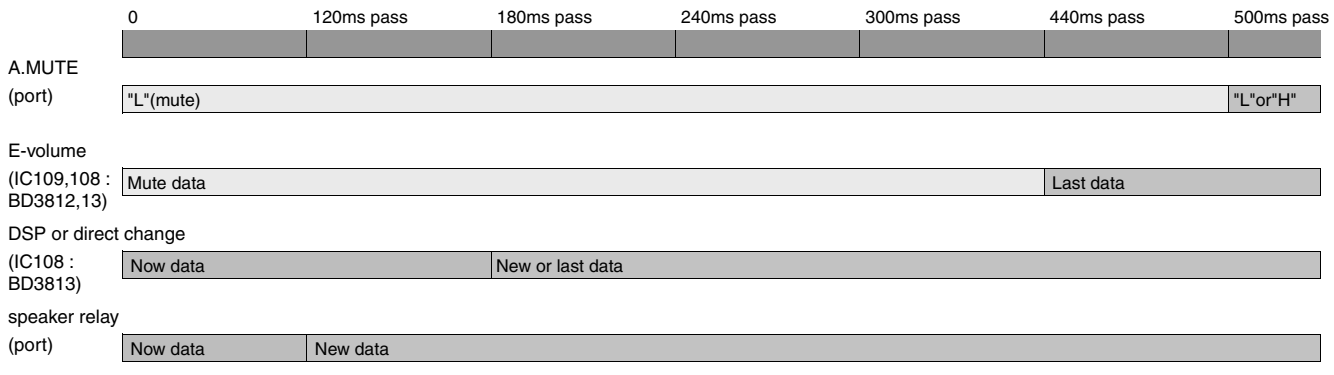
1.When function chage



condition of mute cancel (system mute & E-volume mute)

1) when tuner mute during Tuner function
2) when communicate to DSP
3) when initial processing
4) when detect trouble of AMP DC
5) when detect overload of AMP
6) when Power off
7) when muting by key input

2.When except function chage

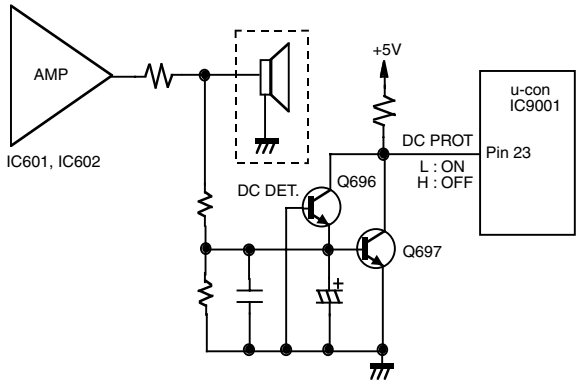


condition of mute cancel (system mute & E-volume mute)

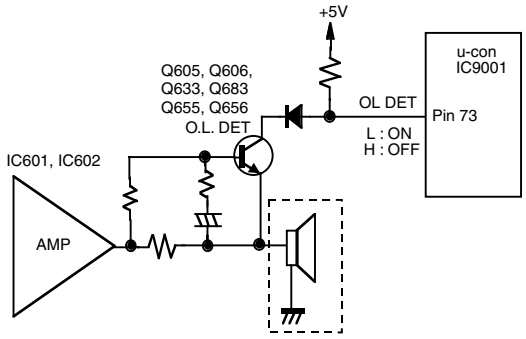
1) when tuner mute during Tuner function
2) when communicate to DSP
3) when initial processing
4) when detect trouble of AMP DC
5) when detect overload of AMP
6) when Power off
7) when muting by key input

7.3.3 DETECTION CIRCUIT

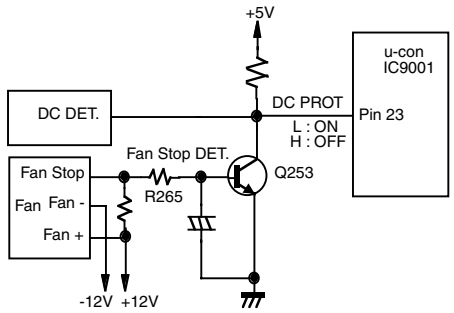
1.DC Detection Circuit Diagram:



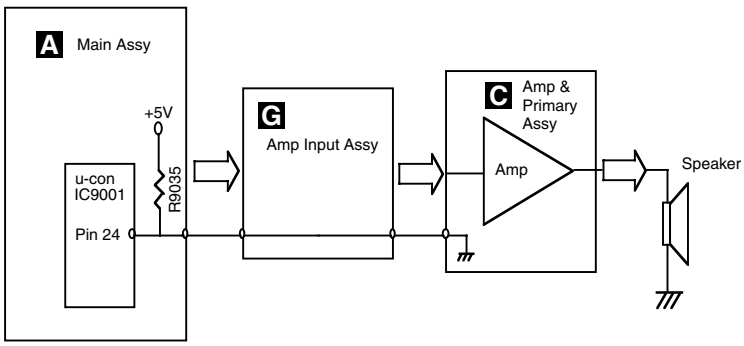
2. Overload Detection Circuit Diagram:



3. Fan Stop Prottection Circuit Diagram:



4. PCB Board Protection Circuit Diagram



7.3.4 AMPLIFIER SYSTEM PROTECTION OPERATION SPECIFICATION

1. DC-abnormality detection

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

When a DC abnormality is detected, A.MUTE* is turned on, speaker relay is turned off, then "AMP_ERR" flashes on the display.

*A.MUTE : Audio mute command

↓

The abnormality continues for 3 seconds.

↓ Continues.

The power is shut off.

↓

The power key is disabled and Standby LED blinks.

↓ Recovery

The program restarts.

But be switched on with the following methods.
① TESTMODE ON (A55F+A55F)
② When power off, push FRONT ENTER key + ADVANCED SURROUND key continuously 2sec.
(②: When a DC abnormality is detected and the power is shut off.)

2. Overload detection

When an overload is detected, A.MUTE* is turned on, speaker relay is turned off, then "OVERLOAD" flashes on the display.

↓

The abnormality continues for 3 seconds.

↓ Continues.

The power is shut off.

↓ Recovery

The power is shut off even if the unit recovers.

3. Board detection

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

When an boad error is detected, A.MUTE* is turned on, speaker relay is turned off, then "BOAD ERR" flashes on the display.

↓

The abnormality continues for 3 seconds.

↓ Continues.

The power is shut off.

↓ Recovery

The power is shut off even if the unit recovers.

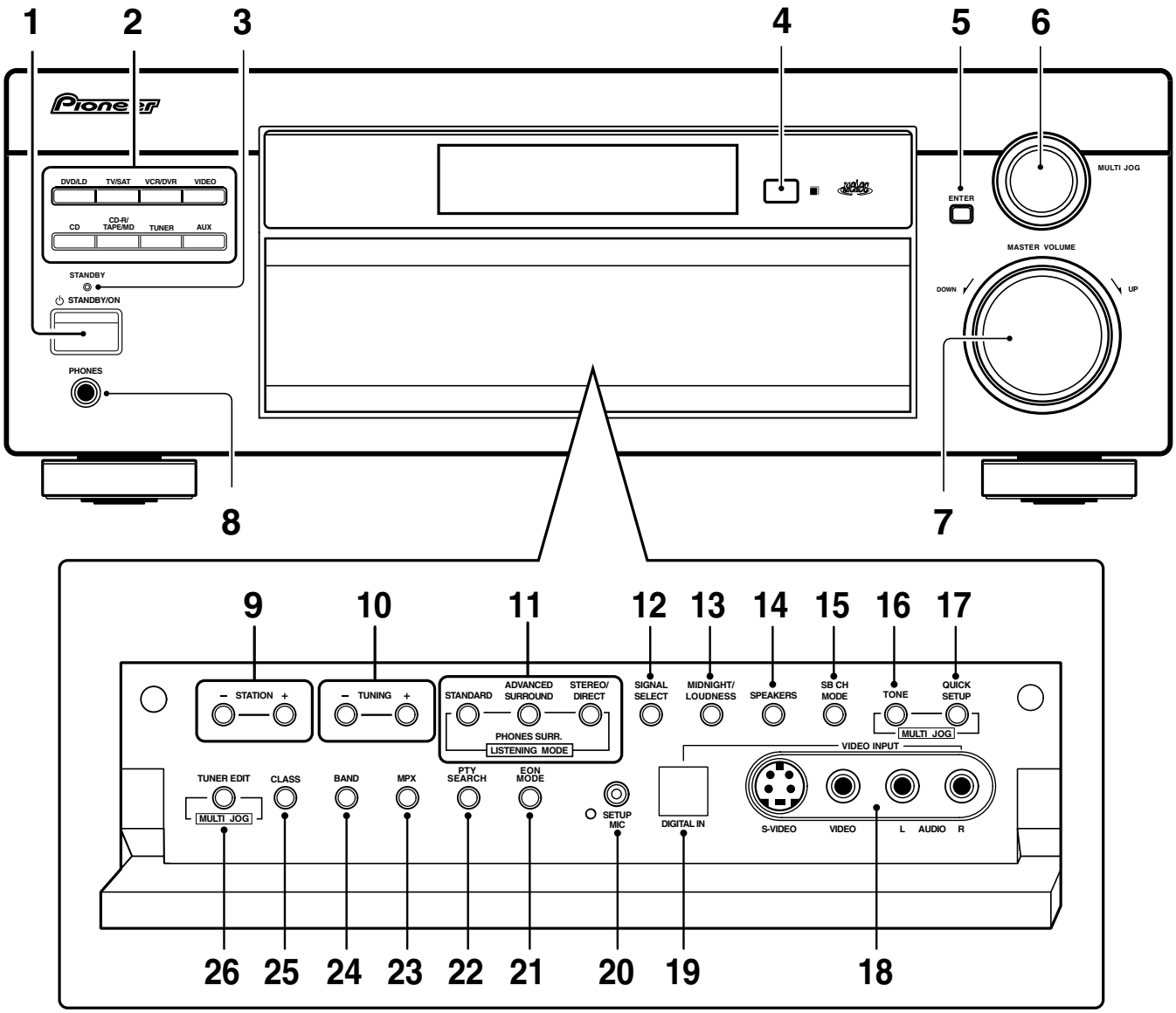
7.4 CLEANING

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

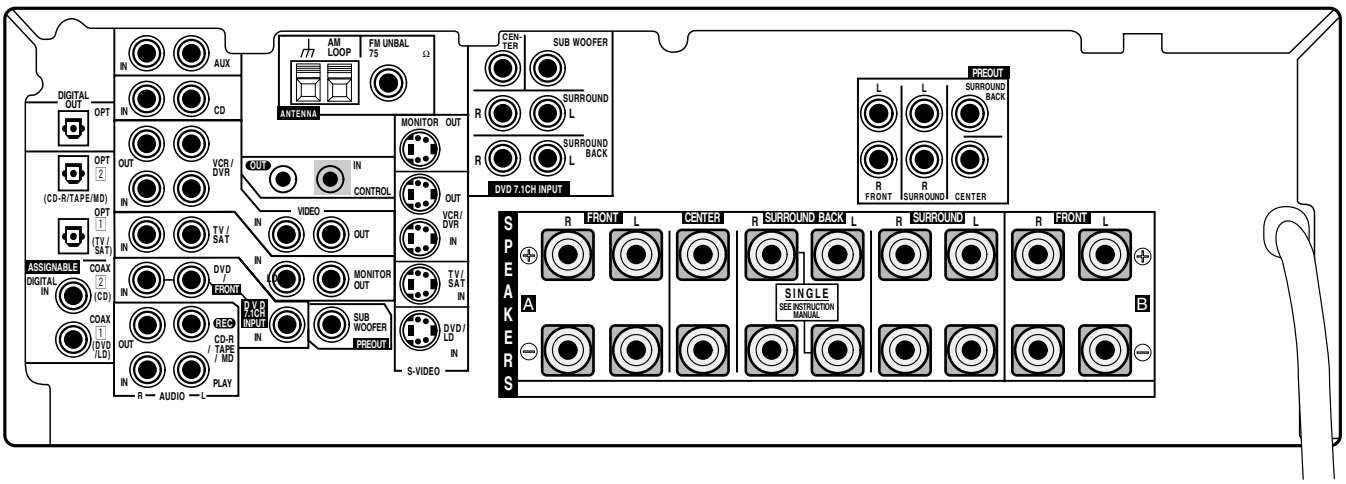
Position to be cleaned	Cleaning tools
Fans	Cleaning paper : GED-008

8. PANEL FACILITIES

Front Panel



Rear Panel



1 ⏻ STANDBY/ON
Switches the receiver between on and standby.

2 Input select buttons
Press to select an input source.

3 STANDBY indicator
Lights when the receiver is in standby.

4 Remote sensor
Receives the signals from the remote control.

5 ENTER

6 MULTI JOG dial
The **MULTI JOG** dial performs a number of tasks. Use it to select options after pressing **TONE**, **QUICK SETUP** or **TUNER EDIT**.

7 MASTER VOLUME

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

9 STATION +/– buttons
Selects station presets when using the tuner.

10 TUNING +/– buttons
Selects the frequency when using the tuner.

11 LISTENING MODE buttons
STANDARD
Press for Standard decoding and to switch between the various Pro Logic II and Neo:6 options.
ADVANCED SURROUND
Use to switch between the various surround modes.
STEREO/DIRECT
Switches between direct and stereo playback. Direct playback bypasses the tone controls and channel levels for the most accurate reproduction of a source.

12 SIGNAL SELECT
Use to select an input signal.

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

14 SPEAKERS
Use to cycle through the speaker system:
A → **B** → **A**+**B**.

15 SB CH MODE
Selects the Surround back channel mode and the Virtual Surround Back (VSB) mode.

16 TONE
Press this button to access the bass and treble controls, which you can then adjust with the **MULTI JOG** dial.

17 QUICK SETUP

18 VIDEO INPUT

19 DIGITAL IN
VSX-D912 only

20 SETUP MIC
VSX-D912 only
Connect the microphone supplied with your system to the **SETUP MIC** jack when using the auto surround setup (MCACC).

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

22 PTY SEARCH
Use to search for different program types in RDS mode.

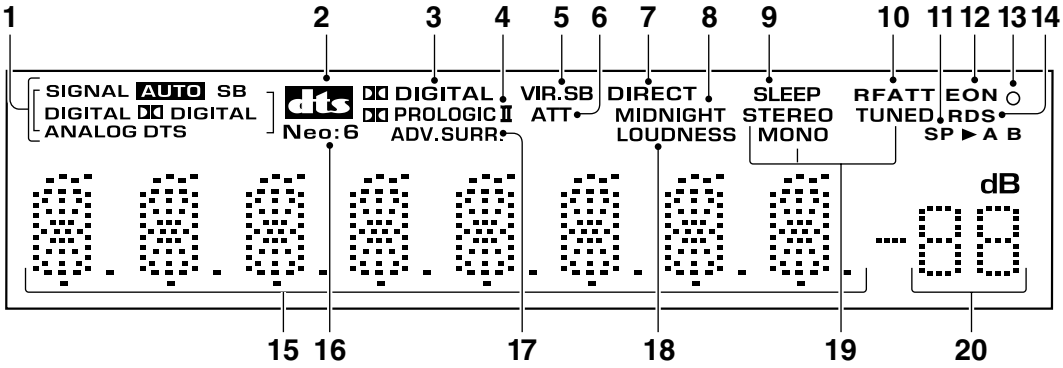
23 MPX
Press to receive a radio broadcast in mono.

24 BAND
Switches between AM and FM radio bands.

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

26 TUNER EDIT
Press to memorize and name a station for recall.

Display



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.

SB
Depending on the source, this lights when a signal with surround back channel encoding is detected.

DIGITAL
Lights when a digital audio signal is detected.

DIGITAL
Lights when a Dolby Digital encoded signal is detected.

ANALOG
Lights when an analog signal is detected.

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

2 DTS
When the **STANDARD** mode of the receiver is on, this lights to indicate decoding of a DTS signal.

3 DIGITAL
When the **STANDARD** mode of the receiver is on, this lights to indicate decoding of a Dolby Digital signal.

4 PRO LOGIC II
When the (**STANDARD**) Pro Logic II mode of the receiver is on, this lights to indicate Pro Logic II decoding.

5 VIR.SB
Lights during Virtual surround back processing.

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

7 DIRECT
Lights when source direct playback is in use. Direct playback bypasses the tone controls and channel levels for the most accurate reproduction of a source.

8 MIDNIGHT
Lights during Midnight listening.

9 SLEEP
Lights when the receiver is in sleep mode.

10 RF ATT
Lights when the RF attenuator is on.

11 Speaker indicator
Shows the speaker system currently in use.

12 EON
When the EON mode is set. the **EON** indicatorlights, but during actual reception of an EON broadcast the **EON** indicator will flash.

13 ○ indicator
The ○ indicator lights to inform you that the currently tuned station carries the EON data service.

14 RDS
Lights when an RDS broadcast is received.

15 Character display

16 Neo:6
When the (**STANDARD**) NEO:6 mode of the receiver is on, this lights to indicate NEO:6 processing.

17 ADV.SURR. (Advanced Surround)
Lights when one of the Advanced Surround modes has been selected.

18 LOUDNESS
Lights when **LOUDNESS** has been selected.

19 TUNER indicators

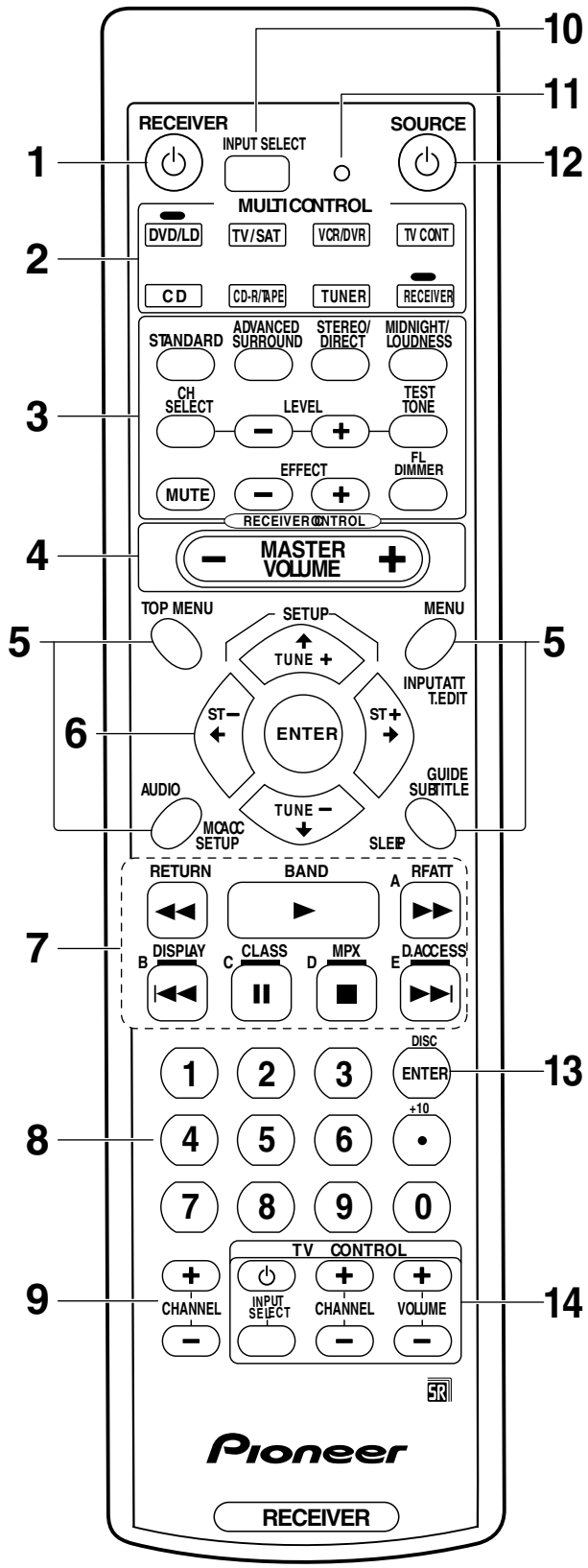
STEREO
Lights when a stereo FM broadcast is being received in auto stereo mode.

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

TUNED
Lights when a broadcast is being received.

20 Master volume level
Shows the overall volume level. **---dB** indicates the minimum level, and **- 0 dB** indicates the maximum level.
Depending on your level settings for each channel, the maximum volume can range between –10 dB and –0 dB.

Remote Control Unit



1 RECEIVER ⏻

This switches between standby and on for this receiver.

2 MULTI CONTROL buttons

Press to select control of other components.

RECEIVER

Switches the remote to control the receiver (used to select the features such as **SLEEP**, **MCACC SETUP**, etc). Also use this button to set up surround sound.

3 RECEIVER CONTROL buttons

STANDARD

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

ADVANCED SURROUND

Use to switch between the various surround modes.

STEREO/DIRECT

Switches between direct and stereo playback. Direct playback bypasses the tone controls and channel levels for the most accurate reproduction of a source.

MIDNIGHT/LOUDNESS

Switches to Midnight or Loudness listening.

CH SELECT

Selects a speaker when setting up the surround sound of the receiver.

LEVEL +/–

Adjusts the levels of the surround sound of the receiver.

TEST TONE

Sounds the test tone when setting up the surround sound of the receiver.

MUTE

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

EFFECT +/–

Adds or subtracts the amount of effect with different advanced surround modes.

FL DIMMER

Dims or brightens the display.

4 MASTER VOLUME +/–

Use to set the listening volume.

5 Receiver and component control buttons (Press the corresponding **MULTI CONTROL** button first to access). These controls function according to the component you've selected.

TOP MENU
Displays the disc 'top' menu of a DVD.

AUDIO
Changes the audio language or channel with DVD discs.

MCACC SETUP
Use to setup your speaker system using the multi-channel acoustic calibration system.

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

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

T.EDIT
Use to memorize and name a station for recall using the **STATION +/–** buttons.

GUIDE
Displays the guides on a digital TV.

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

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

6 ⇐ ⇒ ⇓ ⇑ (TUNE +/–,ST +/–) /ENTER
Use the arrow buttons when setting up your surround sound system. Also used to control DVD menus/options and for deck 1 of a double cassette deck player. Use the **TUNE +/–** buttons to find radio frequencies and use **ST +/–** to find preset stations.

7 Component/Tuner control buttons
The main buttons (►, ■, etc.) are used to control a component after you have selected it using the **MULTI CONTROL** buttons. The tuner/DTV controls above these buttons can be accessed after you have selected the corresponding **MULTI CONTROL** button (**TUNER** or **TV/SAT** (when connected to DTV)).

RETURN
Returns to the last screen selected when using a digital TV tuner.

BAND
Switches between the tuner AM and FM bands.

RF ATT
Use to lower the input level of a radio signal that is too powerful or contains interference that causes the sound to distort.

DISPLAY
Use to switch the display between the station preset name, frequency and RDS data when using the tuner.

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

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

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

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

9 CHANNEL +/–
Use to select channels when using a VCR, DVR, etc.

10 INPUT SELECT
Use to select the input source.

11 LED
This lights when a command is sent from the remote control.

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

13 DISC (ENTER)
The button's use depends on the component selected. It can be used to enter commands for TV or DTV, and can also be used to select a disc in a multi-CD player.

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

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

(TV CONTROL) INPUT SELECT
Use select the TV function.

CHANNEL +/–
Use to select channels.

VOLUME +/–
Use to adjust the volume on your TV.