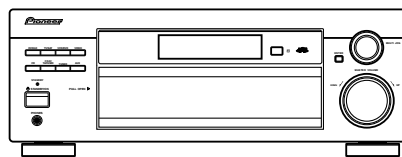


Service Manual



VSX-D912-K

ORDER NO.
RRV2732

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-D912-K

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-K	KUXJICA	AC120V	
VSX-D812-K	KUXJICA	AC120V	
VSX-D812-S	KUXJICA	AC120V	



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.

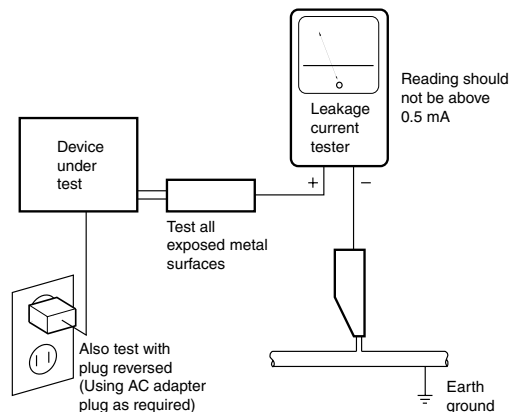
(FOR USA MODEL ONLY)

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.

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1. SPECIFICATIONS

Amplifier section

Continuous average power output of 110 watts* per channel, min., at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.2 %** total harmonic distortion (front).

Continuous power output (stereo)

Front 110 W per channel
(20–20,000 Hz, THD 0.2 %, 8Ω)

Continuous power output (surround)

Front 110 W per channel
(1kHz, 1.0 %, 8Ω)
Center. 110 W (1kHz, 1.0 %, 8 Ω)
Surround 110 W per channel
(1kHz, 1.0 %, 8Ω)
Surround Back 110 W per channel
(1kHz, 1.0 %, 8Ω)

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 ± 3 dB

Output (Level/Impedance)

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

Tone control

Bass ± 6 dB (100 Hz)
Treble ± 6 dB (10 kHz)
Loudness +10 dB/+5 dB (100 Hz/10 kHz)
(at volume level -60 dB)
. +6.5 dB/+3 dB (100 Hz/10 kHz)
(at volume level -50 dB)

Signal-to-Noise Ratio

(IHF, short circuited, A network)
CD, VCR/DVR, CD-R/TAPE/MD,
DVD/LD, TV/SAT. 96 dB

Signal-to Noise Ratio

[EIA, at 1 W (1 kHz)]
CD, VCR/DVR, CD-R/TAPE/MD,
DVD/LD, TV/SAT 79 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 \Rightarrow MONITOR 5 Hz to 7 MHz ± 3 dB
Signal-to-Noise Ratio 55 dB

Component video section

Input (Sensitivity)

DVD/LD, TV/SAT 1 Vp-p/75 Ω

Output (Level/Impedance)

MONITOR OUT 1 Vp-p/75 Ω

Frequency response

DVD/LD,
TV/SAT \Rightarrow MONITOR 5 Hz to 40 MHz ± 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 μ V/ 75Ω)

50 dB Quieting Sensitivity Mono: 20.2 dB
. Stereo: 38.6 dBf

Signal-to-Noise Ratio Mono: 73 dB
(at 85 dBf)

Stereo: 70 dB (at 85 dBf)

Distortion. Stereo: 0.5 % (1 kHz)

Alternate Channel Selectivity 60 dB
(400 kHz)

Stereo Separation 40 dB (1 kHz)
 Frequency Response 30 Hz to 15 kHz
 (±1 dB)
 Antenna Input (DIN). 75 Ω unbalanced

AM Tuner Section

Frequency Range 530 kHz to 1,700 kHz
 Sensitivity (IHF, Loop antenna) 350 μV/m
 Selectivity 25 dB
 Signal-to-Noise Ratio 50 dB
 Antenna. Loop antenna

Miscellaneous

Power Requirements AC 120 V, 60Hz
 Power Consumption. 300W, 420 VA
 In Standby 0.5 W
 AC Outlet. 100 W MAX. (SWITCHED)
 Dimensions. . . 420 (W) x 158 (H) x 401 (D) mm
 (16-9/16 (W) x 6-4/16 (H) x 15-6/16 (D) in.)
 Weight (without package) 10.5 kg (23.1 lb)

Furnished Parts

AM loop antenna 1
 FM wire antenna 1
 AA/LR6 dry cell batteries. 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.

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

** Measured by Audio Spectrum Analyzer.

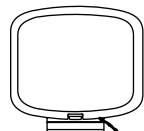
Cleaning the unit

- 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, benzene, insecticide sprays or other chemicals on or near this unit, since these will corrode the surface.

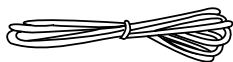
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"DTS", "DTS-ES Extended Surround" and "Neo:6" are trademarks of Digital Theater Systems, Inc.

Accessories



AM loop antenna
(ATB7009)



FM wire antenna
(ADH7004)

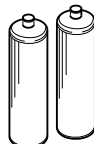


Microphone
(APM7004)

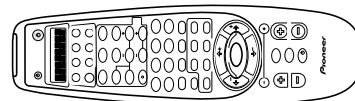
VSX-D912 Only



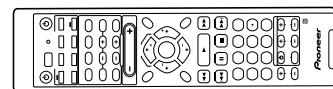
Microphone Stand
(AEB7269)



AA size IEC LR6 (VSX-D912)
 AA size IEC R6 (VSX-D812)
 Dry cell batteries (x2)



Remote control unit
(VSX-D912 : XXD3056)



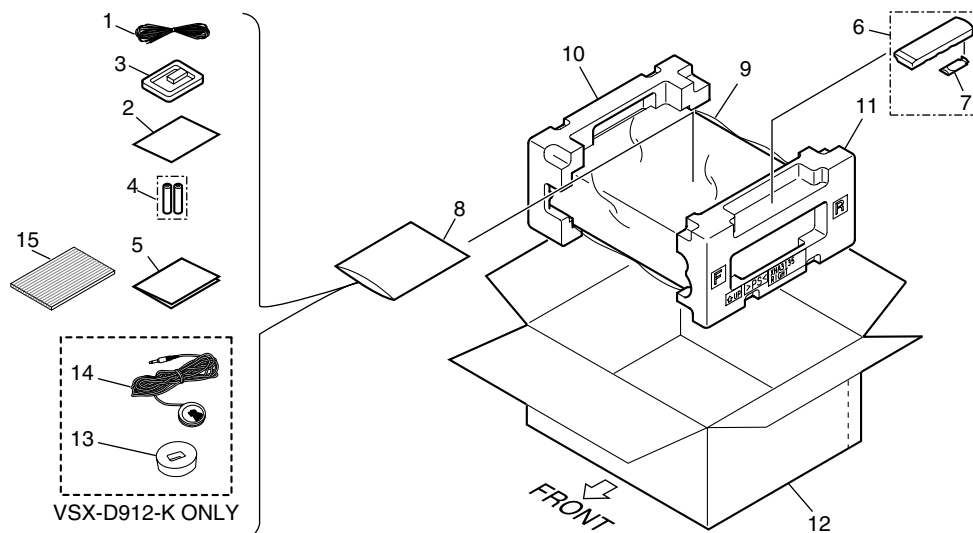
Remote control unit
(VSX-D812 : XXD3051)

2. EXPLODED VIEWS AND PARTS LIST

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

- The \triangle mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Screws adjacent to ∇ mark on product are used for disassembly.
- For the applying amount of lubricants or glue, follow the instructions in this manual.
(In the case of no amount instructions, apply as you think it appropriate.)

2.1 PACKING



PACKING parts List

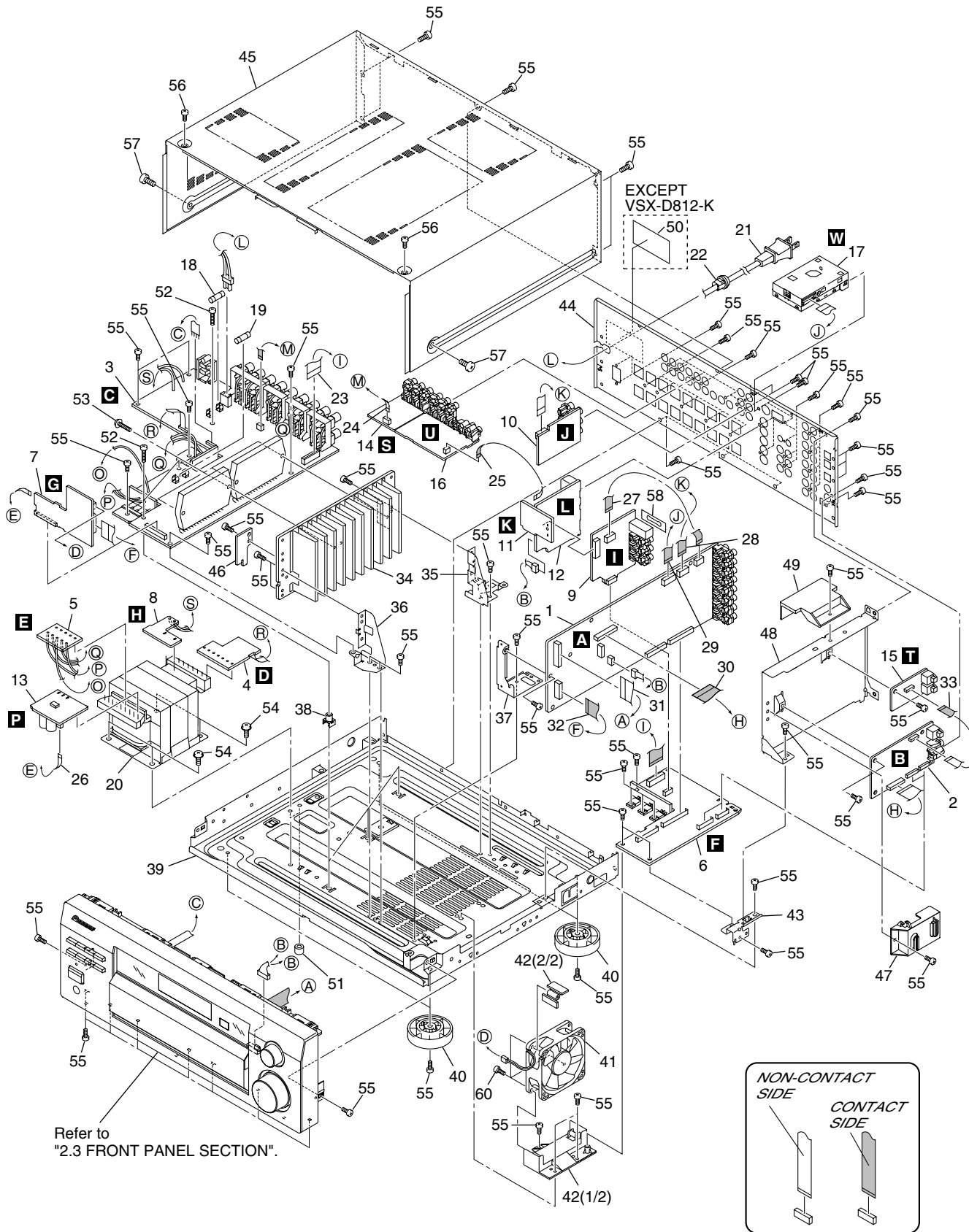
Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	FM wire antenna	ADH7004	NSP 8	Literature Bag	AHG1180
NSP 2	Warranty Card	ARY7045	9	Packing Sheet	AHG7069
3	AM loop antenna	ATB7009	10	Left Pad R6	XHA3134
NSP 4	Dry cell batteries (AA/LR6)	See Contrast table(2)	11	Right Pad R6	XHA3135
NSP 4	Alkaline Dry cell batteries (AA/LR6)	See Contrast table(2)	12	Packing Case	See Contrast table(2)
5	Operating instructions (English)	See Contrast table(2)	13	MIC Stand 45	See Contrast table(2)
6	Remote Control Unit	See Contrast table(2)	14	Microphone Assy	See Contrast table(2)
7	Battery Cover	See Contrast table(2)	NSP 15	Accessory Board R6	XHB3008

(2) CONTRAST TABLE

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

Mark	NO	Symbol and Description	VSX-D812-K/ KUXJICA	VSX-D812-S/ KUXJICA	VSX-D912-K/ KUXJICA
NSP	4	Dry Cell Battery (LR6, AA)	VEM1031	VEM1031	Not used
NSP	4	Alkaline Dry Cell Battery (LR6, AA)	Not used	Not used	VEM1023
	5	Operating Instructions (English)	XRB3020	XRB3020	XRB3021
	6	Remote Control Unit	XXD3051	XXD3051	XXD3056
	7	Battery Cover	AZA7424	AZA7424	Not used
	12	Packing Case	XHD3326	XHD3352	XHD3327
	13	MIC Stand 45	Not used	Not used	AEB7269
	14	Microphone Assy	Not used	Not used	APM7004

2.2 EXTERIOR SECTION



EXTERIOR SECTION parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	MAIN Assy	See Contrast table(2)	32	J35 19P F.F.C/30V	XDD3101
2	DSP Assy	AWX1082	33	J37 10P F.F.C/30V	XDD3127
3	AMP Assy	See Contrast table(2)	NSP 34	Heatsink R6A CORR	XNH3026
4	TRANS2 Assy	XWZ3684	35	H/S Angle Rear	XNG3095
5	TRANS3 Assy	XWZ3687			
			36	H/S Angle Front	XNG3094
6	REGULATOR Assy	XWZ3676	37	PCB Angle R5	XNG3073
7	AMP INPUT Assy	XWZ3679	38	PCB Mold	AMR2533
8	TRANS1 Assy	XWZ3681	NSP 39	Under Base R6	XNA3012
9	VIDEO Assy	XWZ3646	40	Insulator	PNW2766
10	6CH IN Assy	XWZ3650			
			⚠ 41	DC Fan Motor	XXM3006
11	BOARD TO BOARD Assy	XWZ3664	42	Fan Holder R6	XMR3066
12	S. VIDEO Assy	XWZ3660	43	REG Support R6	XNG3093
13	TRANS4 Assy	XWZ3662	44	Rear Panel 812K	XNC3185
14	PRE-OUT Assy	XWZ3663	45	Bonnet	See Contrast table(2)
15	DIGITAL IN Assy	See Contrast table(2)			
			NSP 46	HOLDER Assy	XWZ3693
16	COMPONENT Assy	XWZ3661	47	FFC Holder R6	XMR3072
17	FM/AM TUNER MODULE	AXQ7231	48	Shield A R6	XNG3068
⚠ 18	FU1 Fuse (10A)	REK1087	49	FFC Cover R6	XMR3060
⚠ 19	FU701 Fuse (10A)	REK1087	NSP 50	N Label	See Contrast table(2)
⚠ 20	T1 Power Transformer	XTS3059			
			NSP 51	Spacer	AEB7092
⚠ 21	AC Power Cord	ADG7024	52	Screw	BBZ30P200FMC
22	Cord Stopper	CM-22C	53	Screw 3x23	ABA7043
23	J36 23P F.F.C/30V	XDD3102	54	Screw	FBT40P080FZK
24	J46 7P F.F.C/30V	XDD3105	55	Screw	BBZ30P080FZK
25	J38 5P F.F.C/30V	XDD3104			
			56	Screw	See Contrast table(2)
26	J22 3P F.F.C/30V	XDD3107	57	Screw	See Contrast table(2)
27	J33 11P F.F.C/30V	XDD3123	58	Vjack Spacer R6	XEC3038
28	J48 9P F.F.C/30V	XDD3124	NSP 59	BINDER Assy	XWZ3691
29	J34 13P F.F.C/30V	XDD3122			
30	J43 19P F.F.C/30V	XDD3126	60	Screw	BPZ30P120FMC
31	J31 17P F.F.C/30V	XDD3118			

(2) CONTRAST TABLE

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

Mark	NO	Symbol and Description	VSX-D812-K/ KUXJICA	VSX-D812-S/ KUXJICA	VSX-D912-K/ KUXJICA
	1	MAIN Assy	XWK3095	XWK3095	XWK3100
	3	AMP & PRIMARY Assy	XWZ3669	XWZ3669	XWZ3673
	15	DIGITAL IN Assy	XWZ3658	XWZ3658	XWZ3659
	45	Bonnet D912K	XZN3126	Not used	XZN3126
	45	Bonnet D912S	Not used	XZN3127	Not used
NSP	50	N Label 912K/KU	Not used	Not used	XAL3172
NSP	50	N Label 812S/KU	Not used	XAL3177	Not used
	56	Screw	BPZ30P080FZK	BPZ30P080FNI	BPZ30P080FZK
	57	Screw	FBT40P080FZK	FBT40P080FNI	FBT40P080FZK

2.3 FRONT PANEL SECTION

A



Lubricating Oil
GYA1001

VSX-D912-K ONLY

B

VSX-D812-K,
VSX-D812-S
ONLY

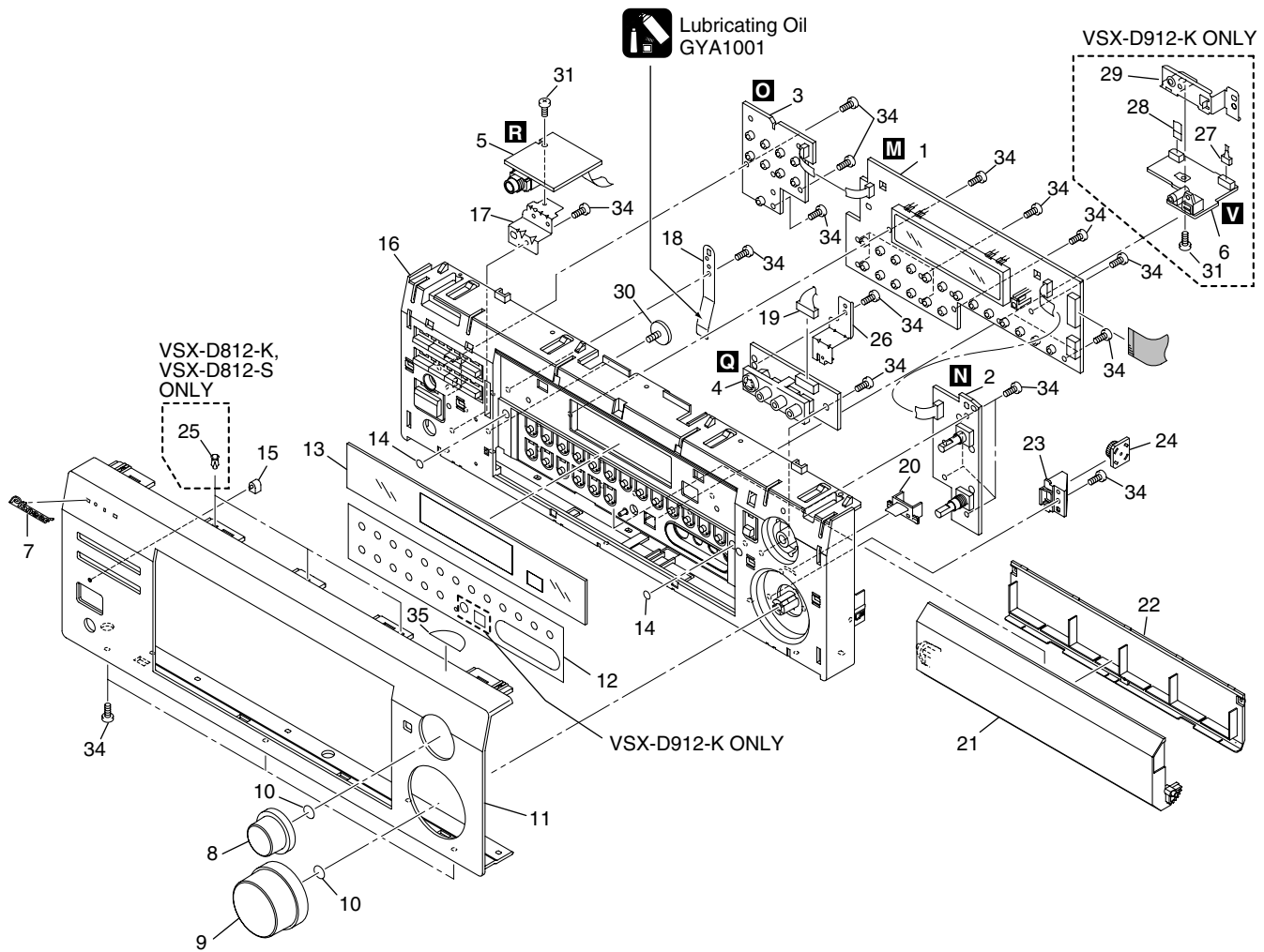
VSX-D912-K ONLY

C

D

E

F



FRONT PANEL SECTION parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	FRONT ASSY	XWZ3648	19	J29 8P Shield Cable	XDX3012
2	R. ENCODER Assy	XWZ3653	20	B Lens R6	XAK3352
3	POWER SW Assy	XWZ3651			
4	FRONT VIDEO Assy	XWZ3655	21	Door	See Contrast table(2)
5	H.P. Assy	XWZ3654	22	Door Cover	See Contrast table(2)
			23	Holder L R6	XMR3059
6	FRONT OPTICAL & MIC Assy	See Contrast table(2)	24	Damper Assy	XXA3025
7	Pioneer Badge B	See Contrast table(2)	25	Push Rivet	See Contrast table(2)
8	Select Knob	See Contrast table(2)			
9	Volume Knob	See Contrast table(2)	26	Earth Plate FI R6	XNG3091
NSP 10	C Ring DIM 8.1	XBH3016	27	J30 5P Shield Cable	See Contrast table(2)
			28	J32 5P F.F.C/30V	See Contrast table(2)
11	FRT Panel	See Contrast table(2)	29	Earth Plate D R6	See Contrast table(2)
12	BN Cover	See Contrast table(2)	30	Screw	XBA3010
13	D Panel R6 W	XAK3348			
14	Cushion	See Contrast table(2)	31	Screw	BBZ30P080FZK
15	LED Lens	PNW2019	32	•••••	
			33	•••••	
16	Panel Stay	See Contrast table(2)	34	Screw	PPZ30P100FMC
17	Earth Plate R5 HP	XNG3066	NSP 35	Energy Star Label	AAX7876
18	Door Spring R6	XBK3002			

(2) CONTRAST TABLE

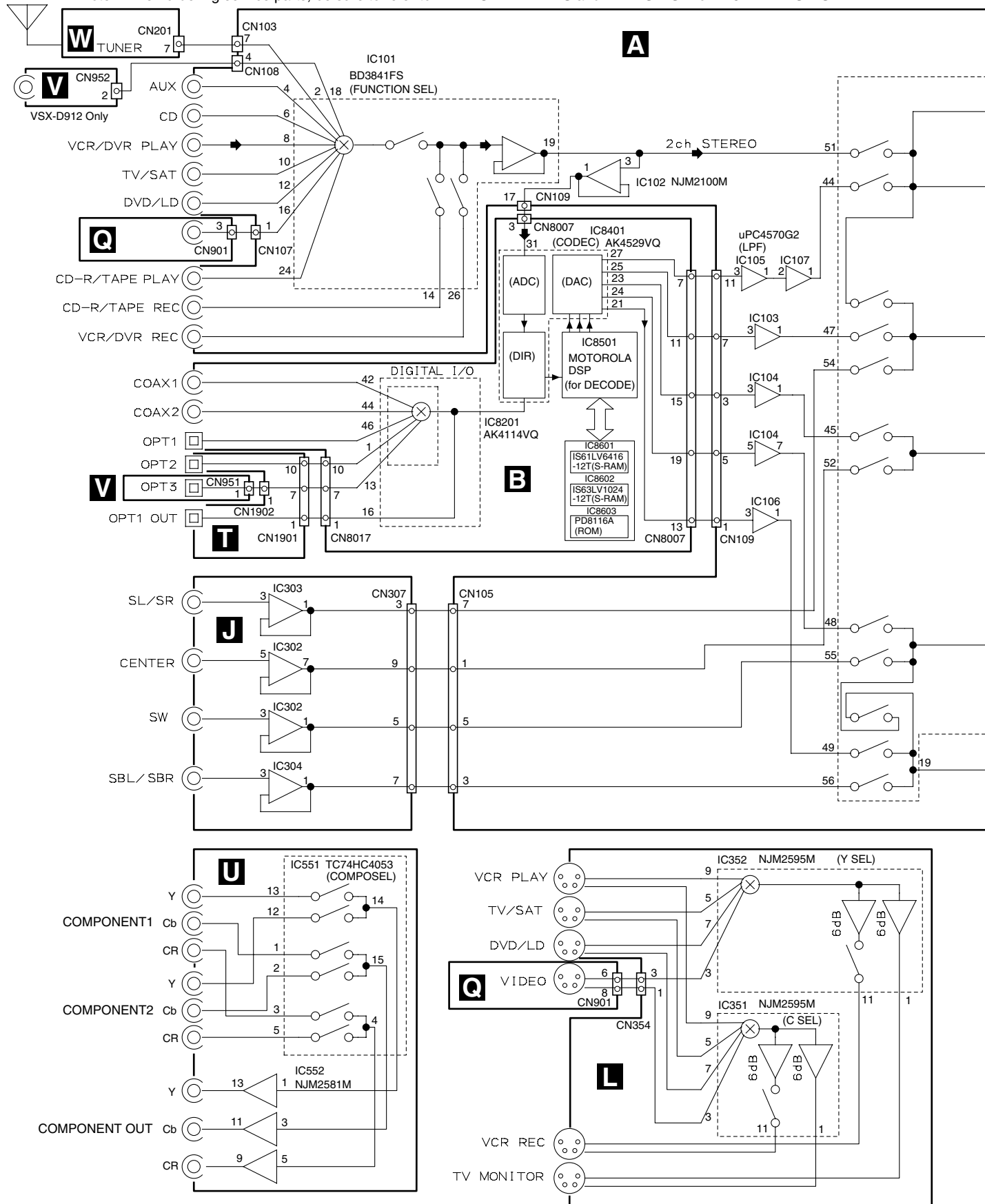
VSX-D812-K/KUXJICA, VSX-D812-S/KUXJICA and VSX-D912-K/KUXJICA are constructed the same except for the following:

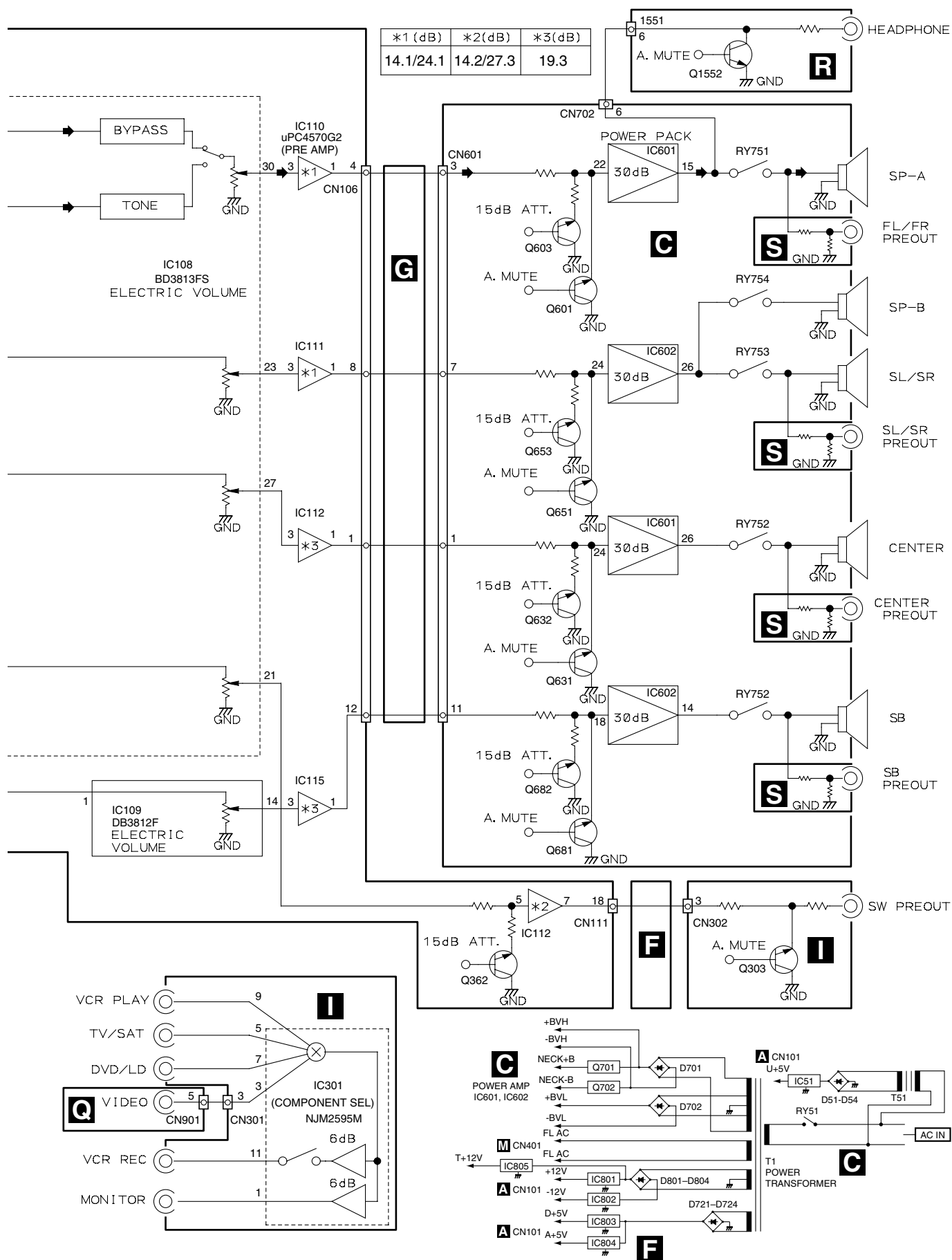
Mark	NO	Symbol and Description	VSX-D812-K/ KUXJICA	VSX-D812-S/ KUXJICA	VSX-D912-K/ KUXJICA
	6	FRONT OPTICAL & MIC Assy	Not used	Not used	XWZ3656
	7	Pioneer Badge B	XAM3006	VAM1129	AAN7218
	8	Select Knob R5BH	XAB3023	Not used	XAB3023
	8	SEL Plat Knob R6S	Not used	XAB3037	Not used
	9	Volume Knob R5BH	XAB3025	Not used	XAB3025
	9	VOL Plat Knob R6S	Not used	XAB3036	Not used
	11	FRT Panel 812K/KU	XMB3095	Not used	Not used
	11	FRT Panel 812S/KU	Not used	XMB3126	Not used
	11	FRT Panel 912K/KU	Not used	Not used	XNB3002
	12	BN Cover 712K/KU	XAK3355	Not used	Not used
	12	BN Cover 812S/JP	Not used	XAK3379	Not used
	12	BN Cover 912K/KU	Not used	Not used	XAK3354
	14	Cushion R4B	XED3001	Not used	XED3001
	14	Cushion R4G	Not used	XED3002	Not used
	16	Panel Stay 812K/KU	XMB3109	Not used	Not used
	16	Panel Stay 812S/KU	Not used	XMB3124	Not used
	16	Panel Stay 912K/KU	Not used	Not used	XMB3094
	21	Door R6K	XAK3356	Not used	XAK3356
	21	Door R6S	Not used	XAK3357	Not used
	22	Door Cover R6K	XAK3358	Not used	XAK3358
	22	Door Cover R6S	Not used	XAK3359	Not used
	25	Push Rivet	AEC7025	AEC7025	Not used
	27	5P Shield Cable	Not used	Not used	XDX3019
	28	J32 5P F.F.C/30V	Not used	Not used	XDD3125
	29	Earth Plate D R6	Not used	Not used	XNG3092

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

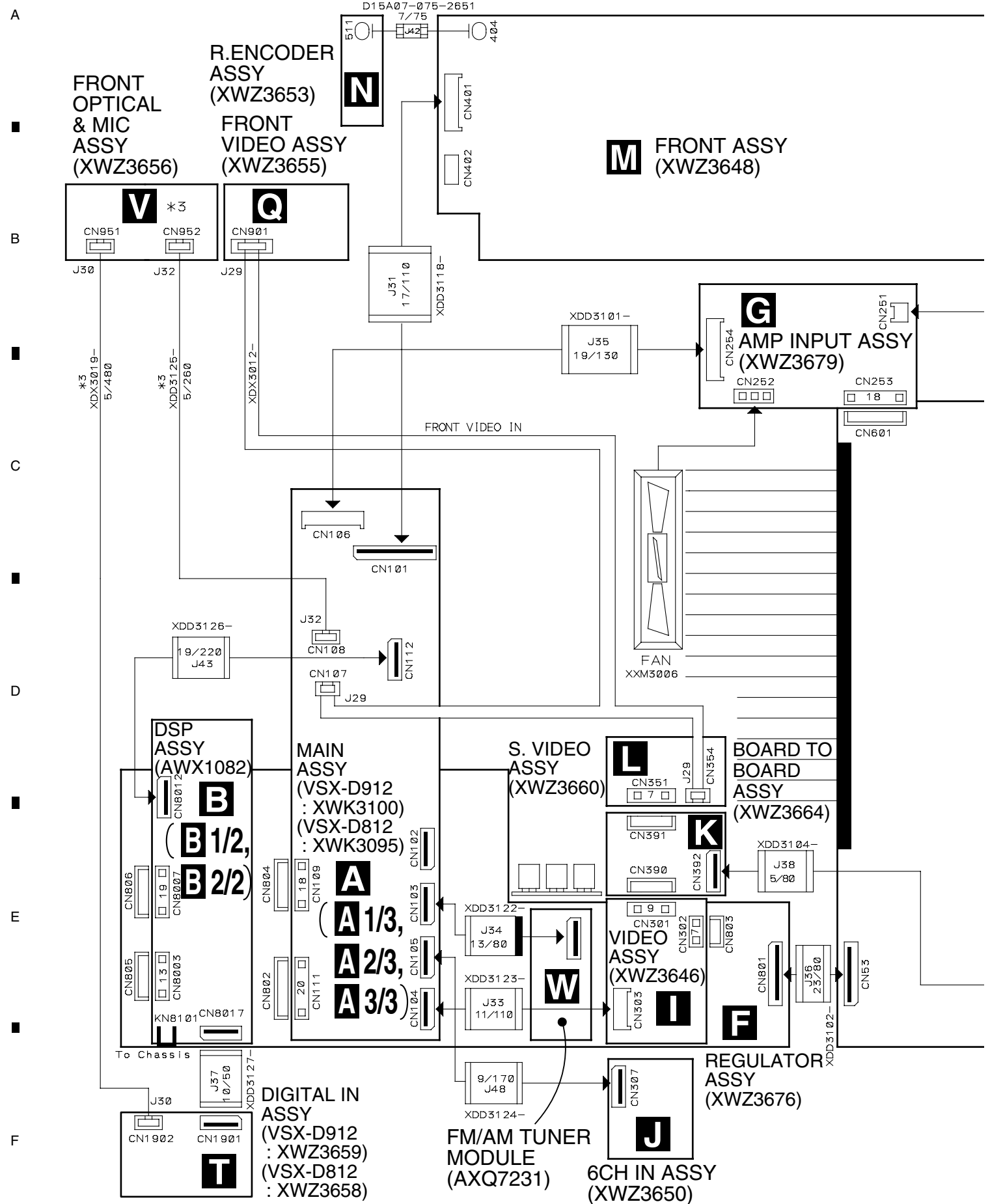
3.1 BLOCK DIAGRAM

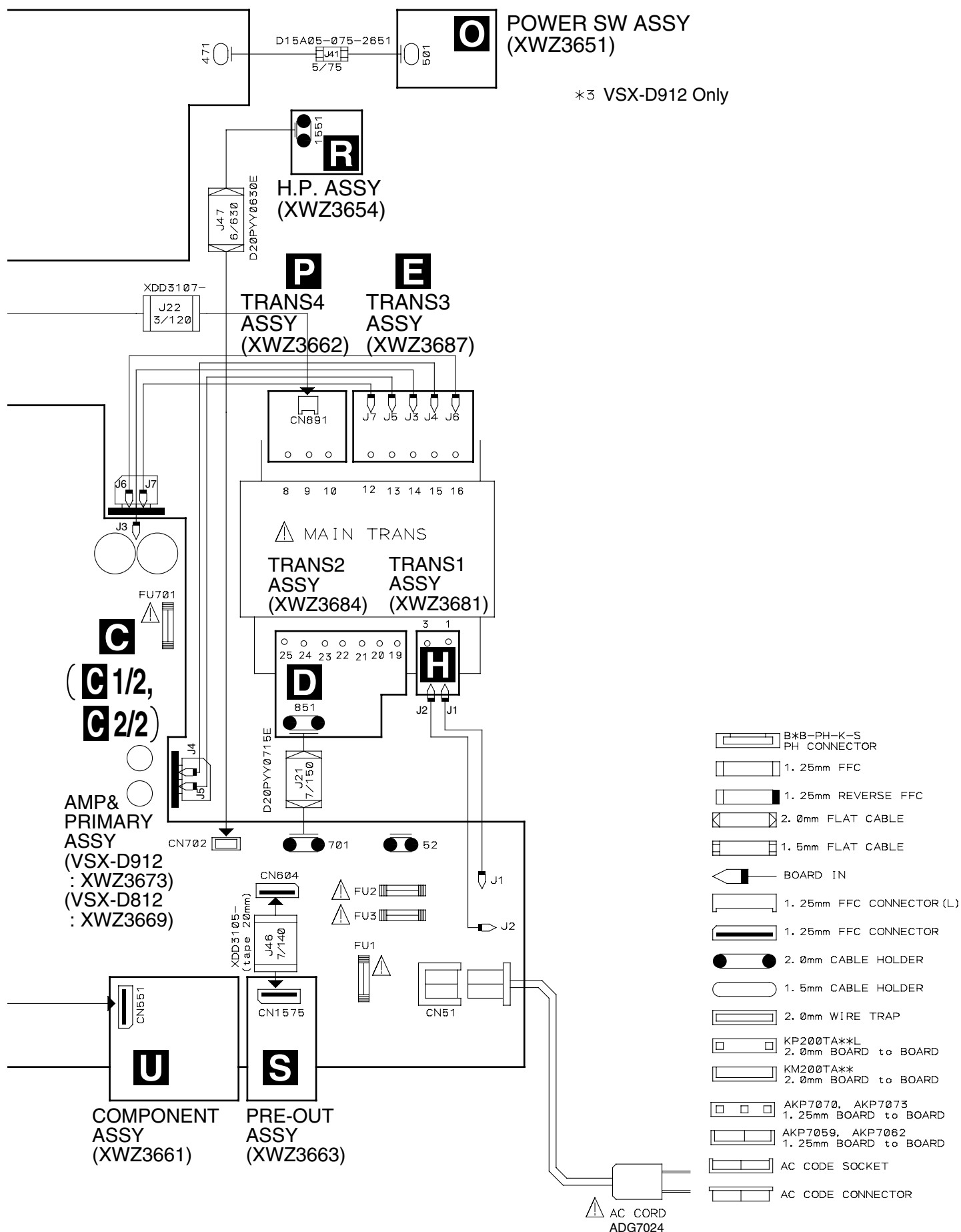
Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".

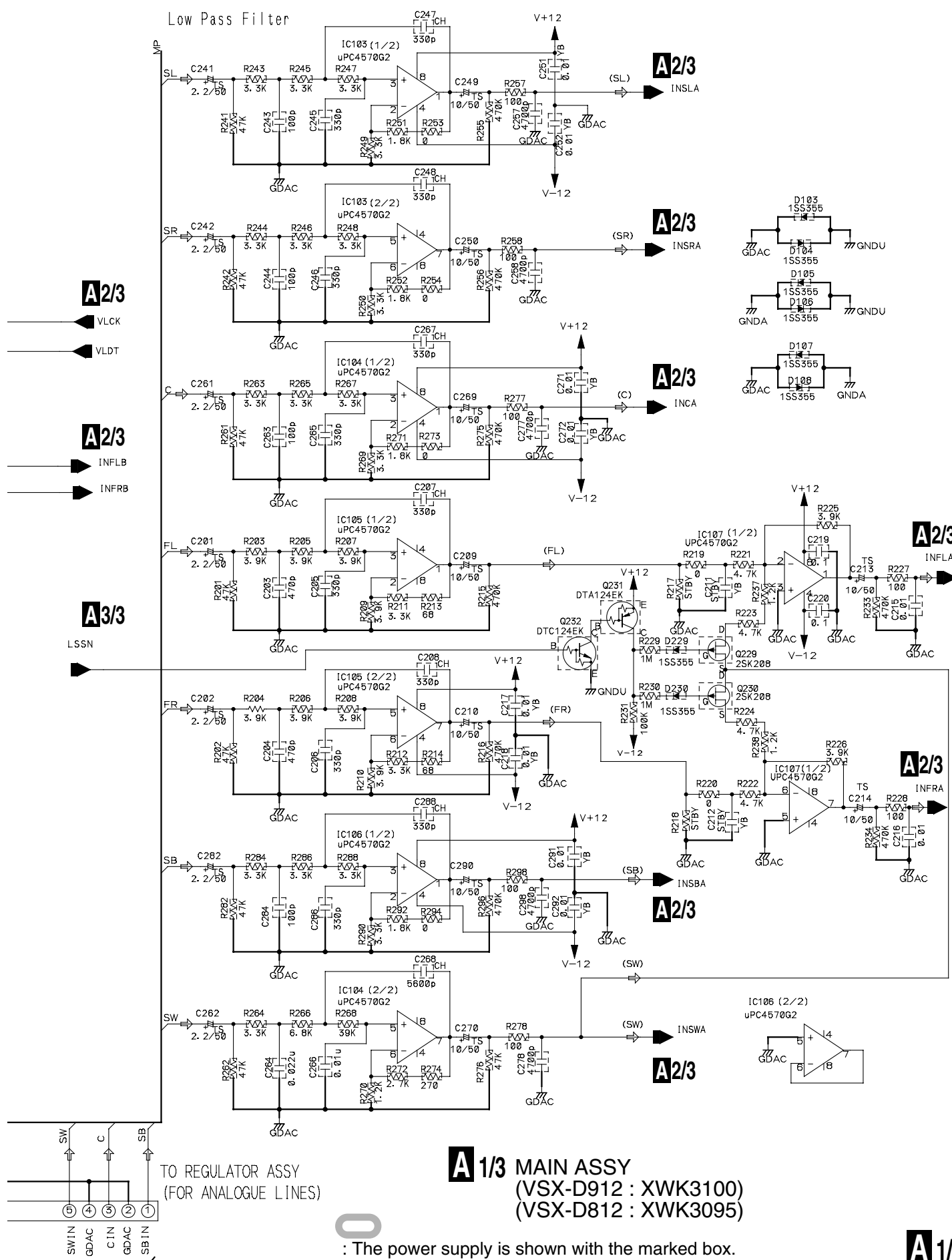




3.2 OVERALL WIRING CONNECTION DIAGRAM







3.4 MAIN ASSY (2/3)

A

B

C

D

E

F

A 2/3 MAIN ASSY
(VSX-D912 : XWK3100)
(VSX-D812 : XWK3095)

A1/3

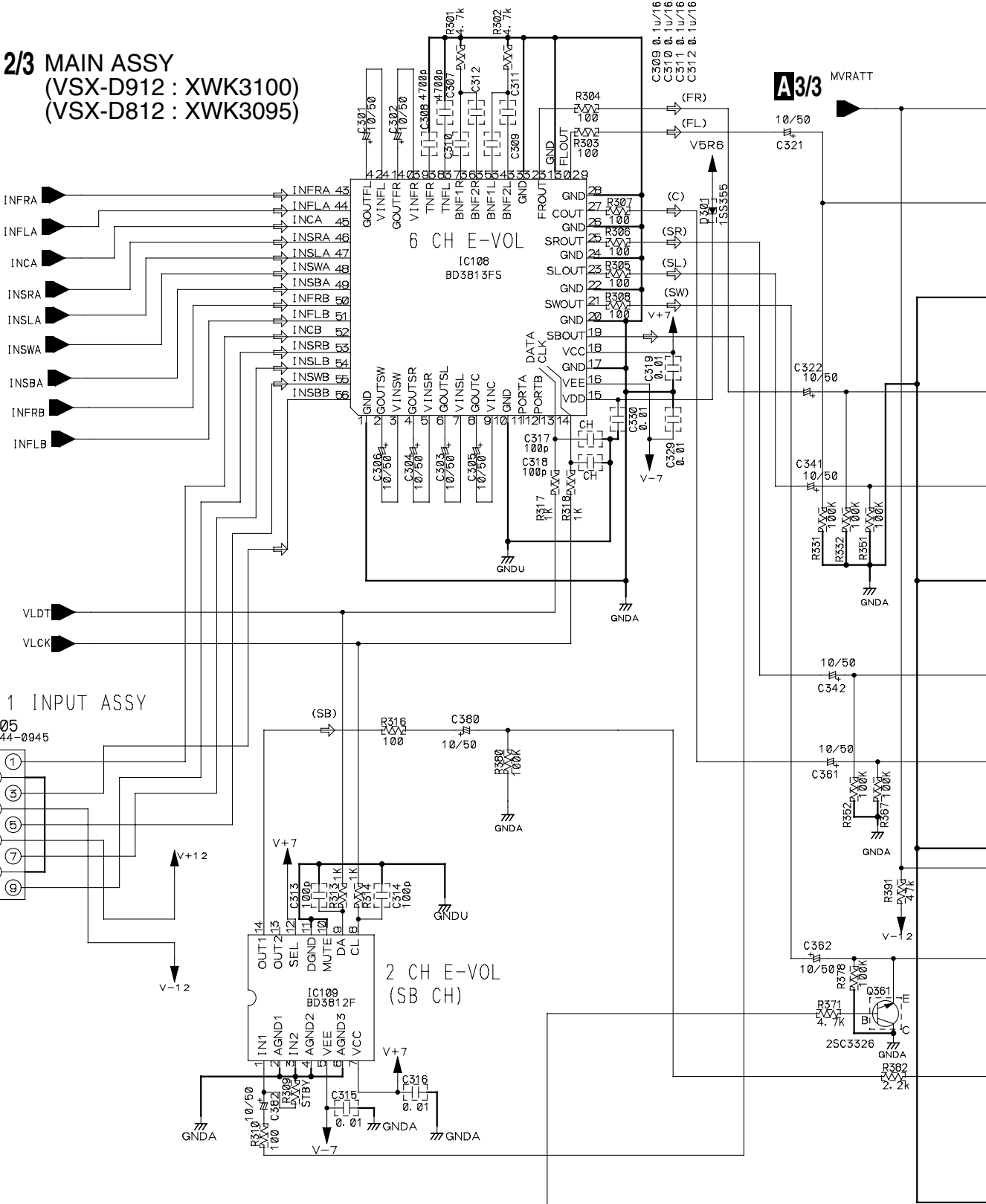
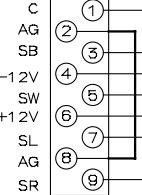
A3/3

A3/3 MVRATT

J CN307

TO 6.1 INPUT ASSY

CN105
52044-0945

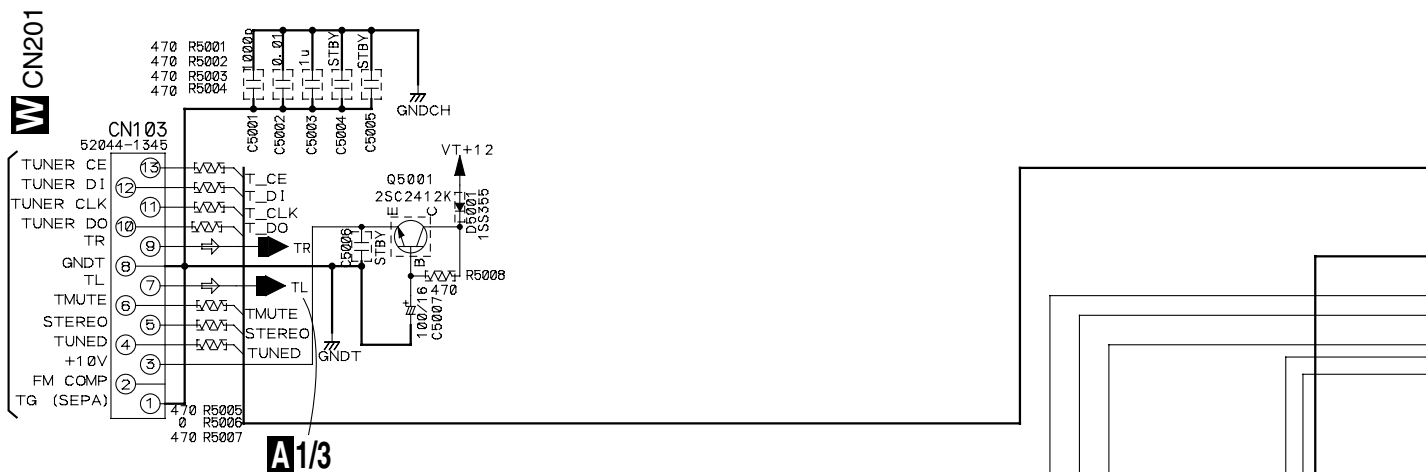


- NOTE
- RESISTORS
Unit: k- Ω , M- Ω or Ω unless otherwise noted.
Rated power: 1/10W unless otherwise noted.
Tolerance: (J) \pm 5% unless otherwise noted.
 - CAPACITORS
Unit: p-pF or μ F unless otherwise noted.
Ratings: Capacity(μ F)/Voltage(V) unless otherwise noted.
Rated Voltage: 50V expect for electrolytic capacitors.
JA:CE/JA
- ⇒ : AUDIO SIGNAL FLOW



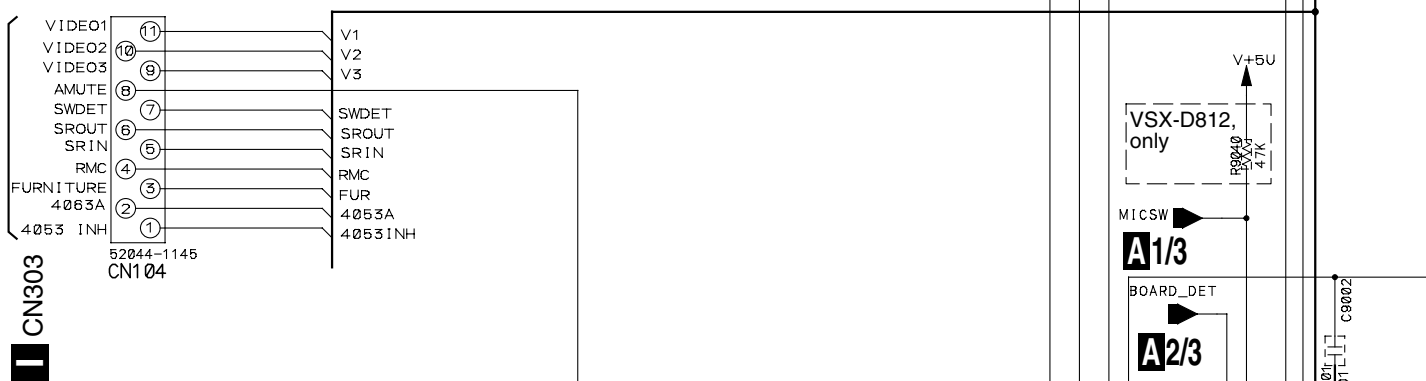
3.5 MAIN ASSY (3/3)

A



B

C



*1	ASSY	R9023	R9024	R9025	R9026
VSX-D812/KU	XWK3095	0	—	—	0
VSX-D912/KU	XWK3100	4.7K	—	4.7K	0

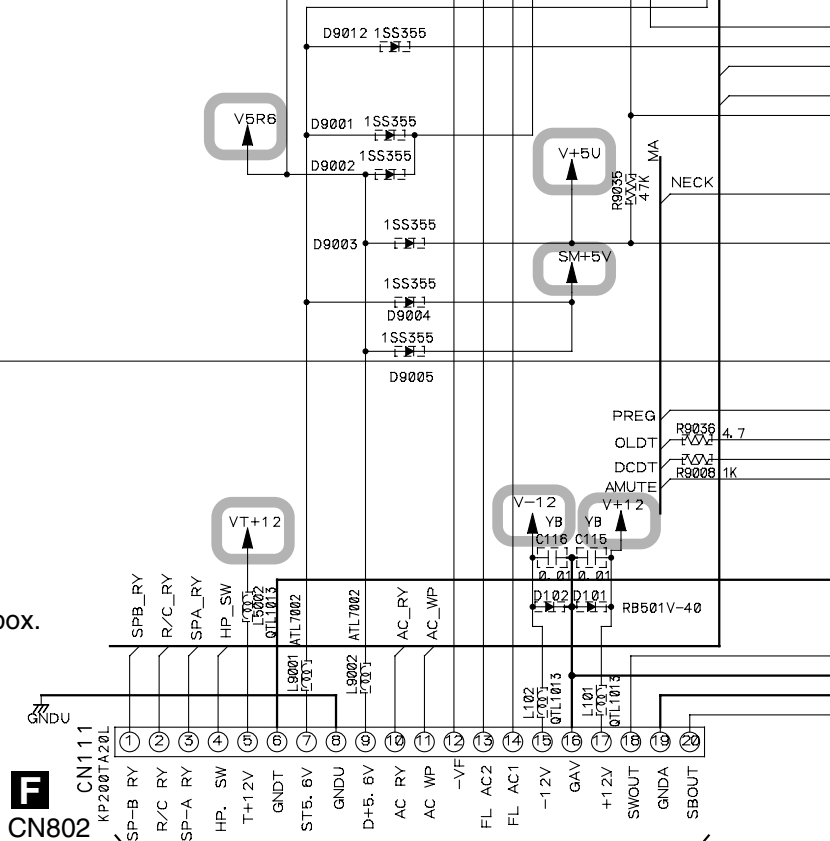
D

E

*3 R9042, R9043, R9044 : 10K

: The power supply is shown with the marked box.

F

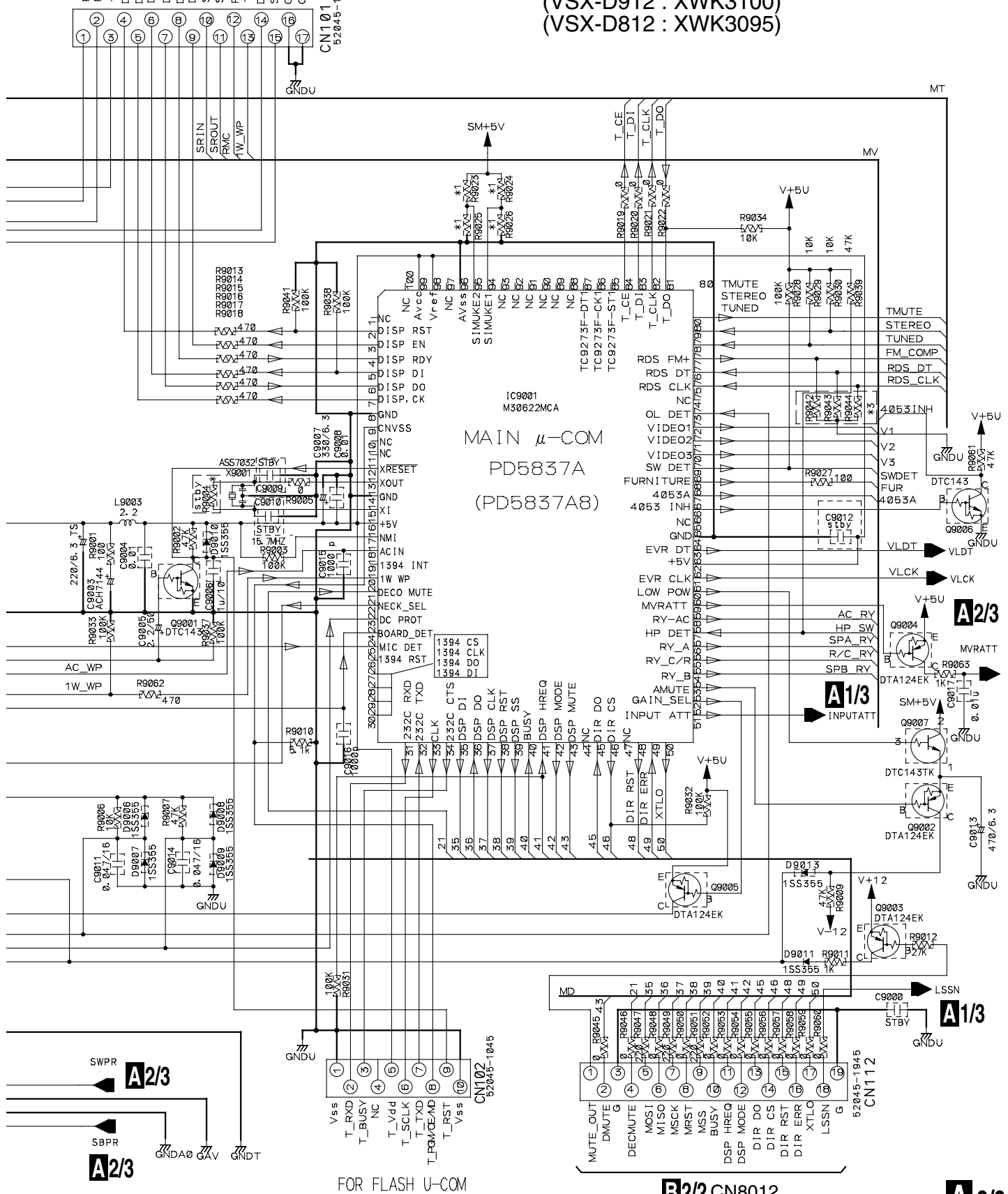


A 3/3

VSX-D912-K

M CN401

A 3/3 MAIN ASSY
(VSX-D912 : XWK3100)
(VSX-D812 : XWK3095)



FOR FLASH U-COM

B2/2 CN8012

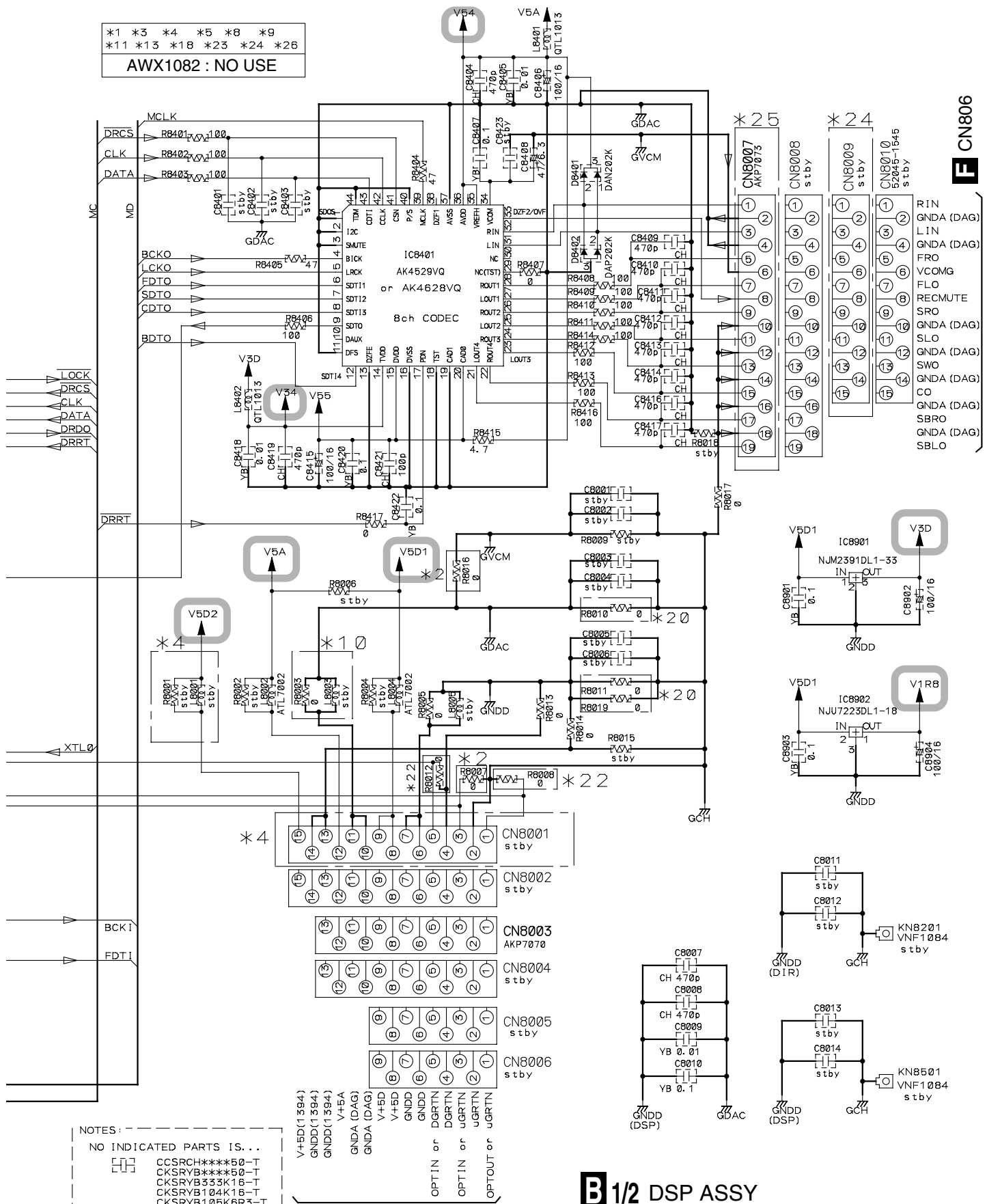
A 3/3

VSX-D912-K

4



*1 *3 *4 *5 *8 *9
*11 *13 *18 *23 *24 *26
AWX1082 : NO USE



NOTES :
NO INDICATED PARTS IS...
CCSRCH***50-T
CKSRVB***50-T
CKSRVB333K16-T
CKSRVB104K16-T
CKSRVB105K6R3-T
CEV***M*-T
RS1/16S***J-T
UNLESS OTHERWISE NOTED

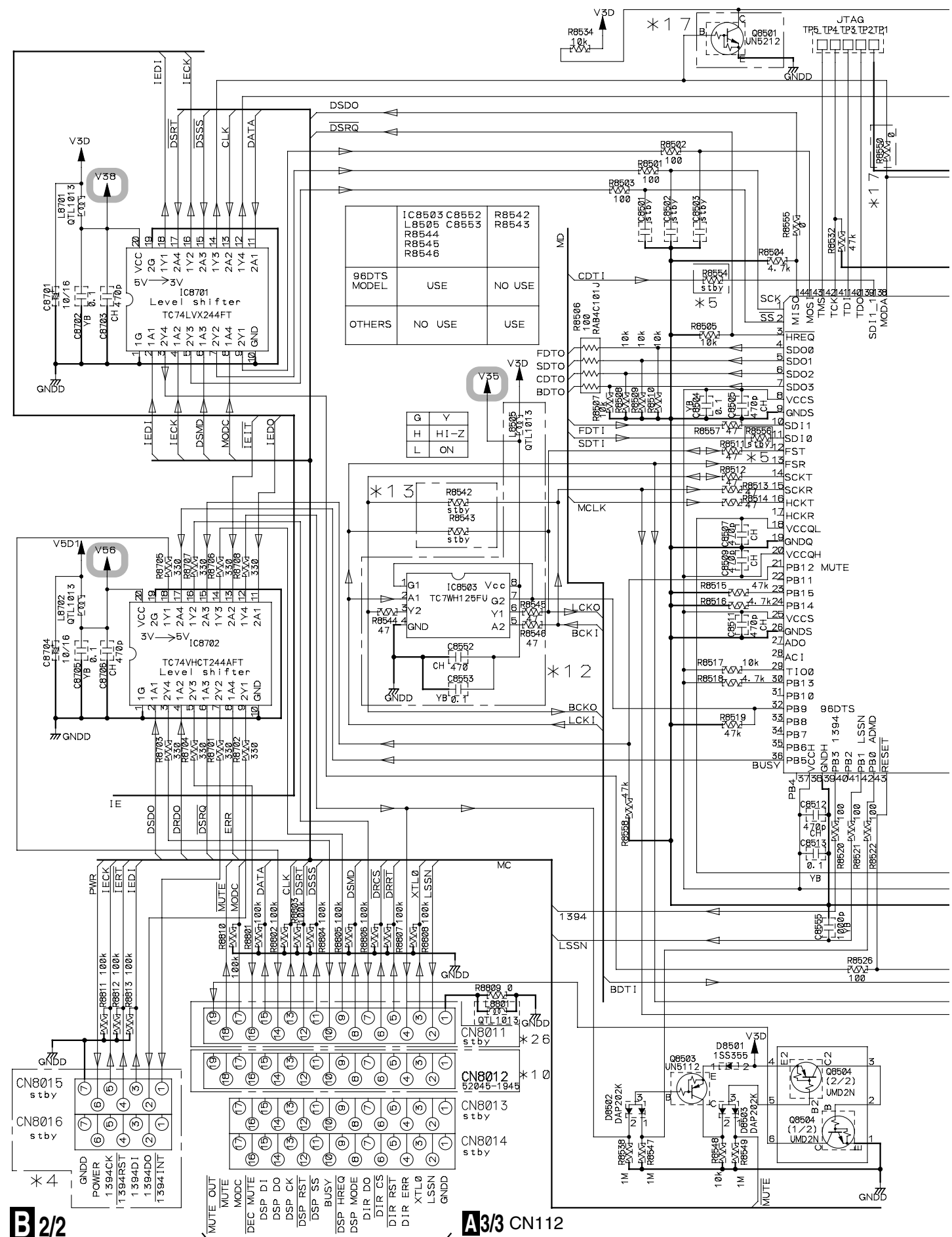
F CN805

B 1/2 DSP ASSY
(AWX1082)

: The power supply is shown with the marked box.

B 1/2

3.7 DSP ASSY (2/2)



	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	USE	USE	USE	USE

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

A

B

C

D

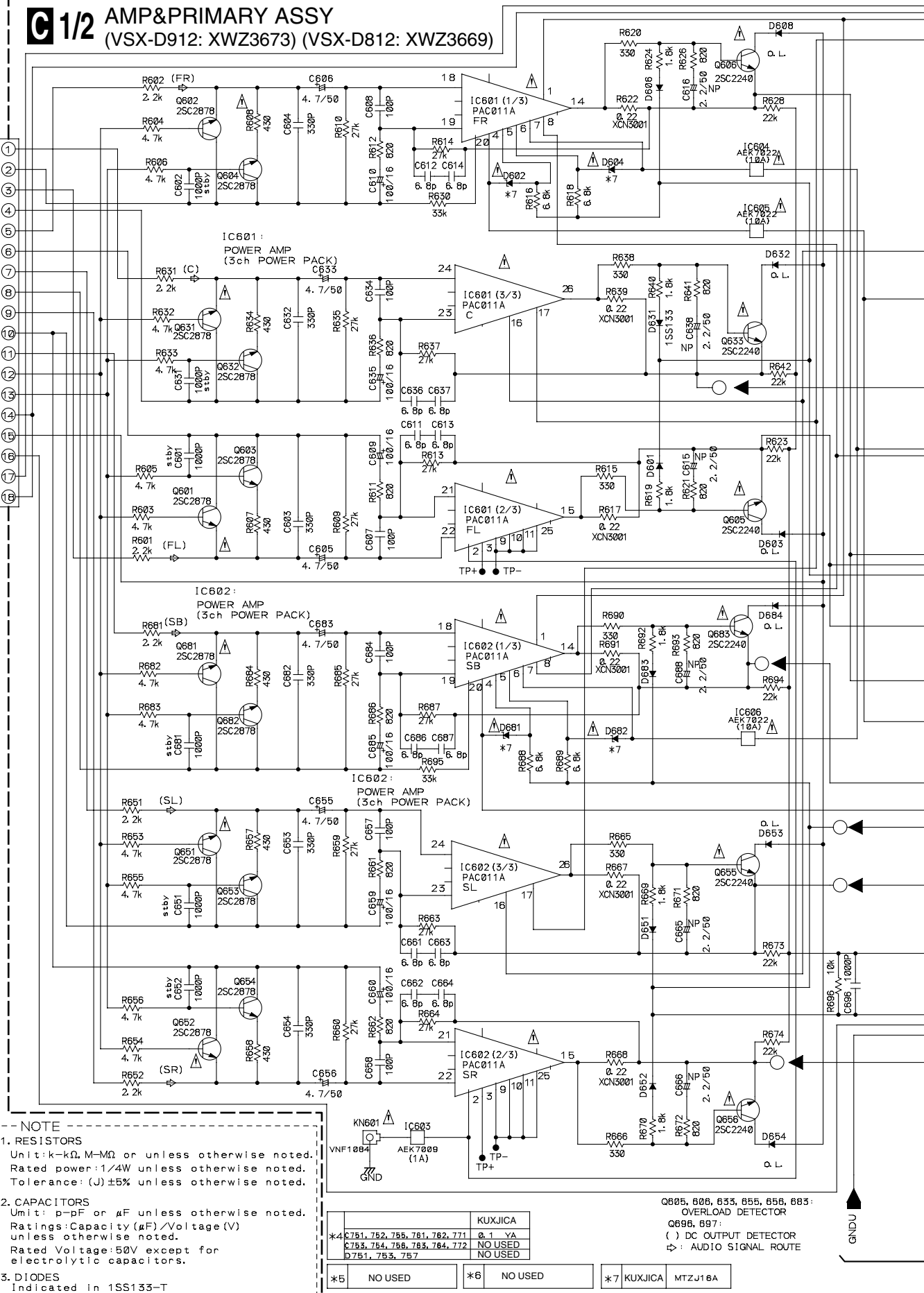
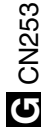
E

F



C1/2 AMP&PRIMARY ASSY (VSX-D912: XWZ3673) (VSX-D812: XWZ3669)

- CN601 KM200TA18
- C
- GNDA
- FL
- GNDA
- FR
- GNDA
- SL
- GNDA
- SR
- GNDA
- SB
- A. MUTE
- ATT.
- BOARD DETECT
- OL
- DC DET.
- NECK
- GNDU



NOTE

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

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

3. DIODES
Indicated in 1SS133-T

	KUXJICA
*4 C751, 752, 755, 761, 762, 771	0.1 YA
C753, 754, 758, 763, 764, 772	NO USED
D751, 753, 757	NO USED

*5 NO USED	*6 NO USED	*7 KUXJICA MTZJ16A
------------	------------	--------------------

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





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

I
VIDEO
ASSY
(XWZ3646)

J
6CH IN ASSY
(XWZ3650)

A2/3
CN105

A3/3 CN104

E CN803

CN302
KP200TA7L

① SB OUT
② GNDA
③ SW OUT
④ GNDu
⑤ +12
⑥ GAV
⑦ -12

CN301
KP200TA9L

⑧ V+5. 6V
⑨ GAV
⑩ V-5. 6V
⑪ V1
⑫ V2
⑬ V3
⑭ FRONT V
⑮ 4053 A
⑯ 4053INH

CN303
52044-1145

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

VSX-D912-K

K
BOARD TO
BOARD ASSY
(XWZ3664)

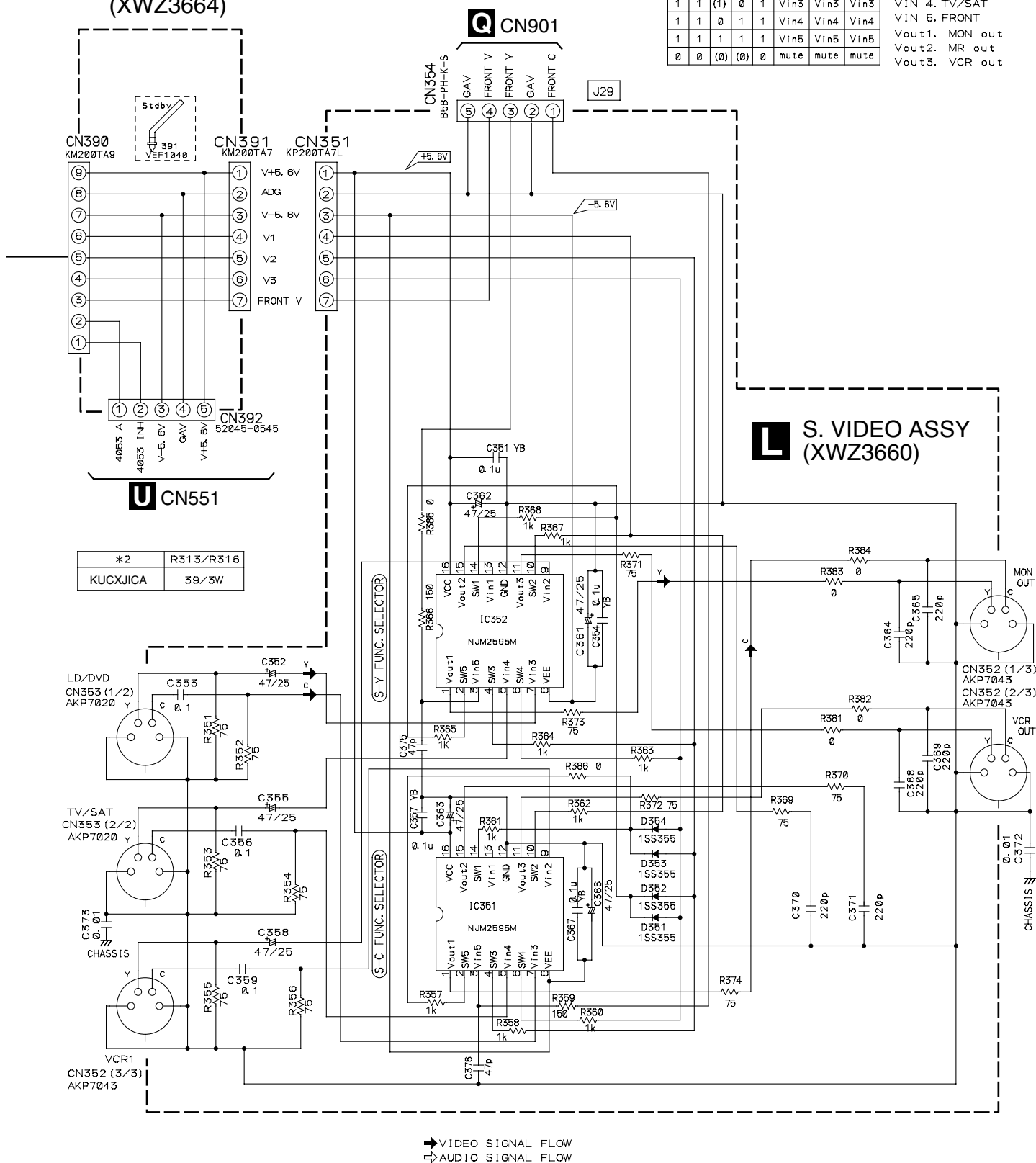
----- NOTE

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

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



3.11 FRONT, R. ENCODER and POWER SW ASSYS

A

R.ENCODER ASSY (XWZ3653)

R.ENCODER ASSY
S511 : ENTER
S512 : MULTI JOG DIAL
S513 : MASTER VOLUME

*1	D511	D512	R512
VSX-D912	UDZ55. 6B	SLR-3438BT	390
VSX-D812			

(J42)

D15A07-075-2651

B

C

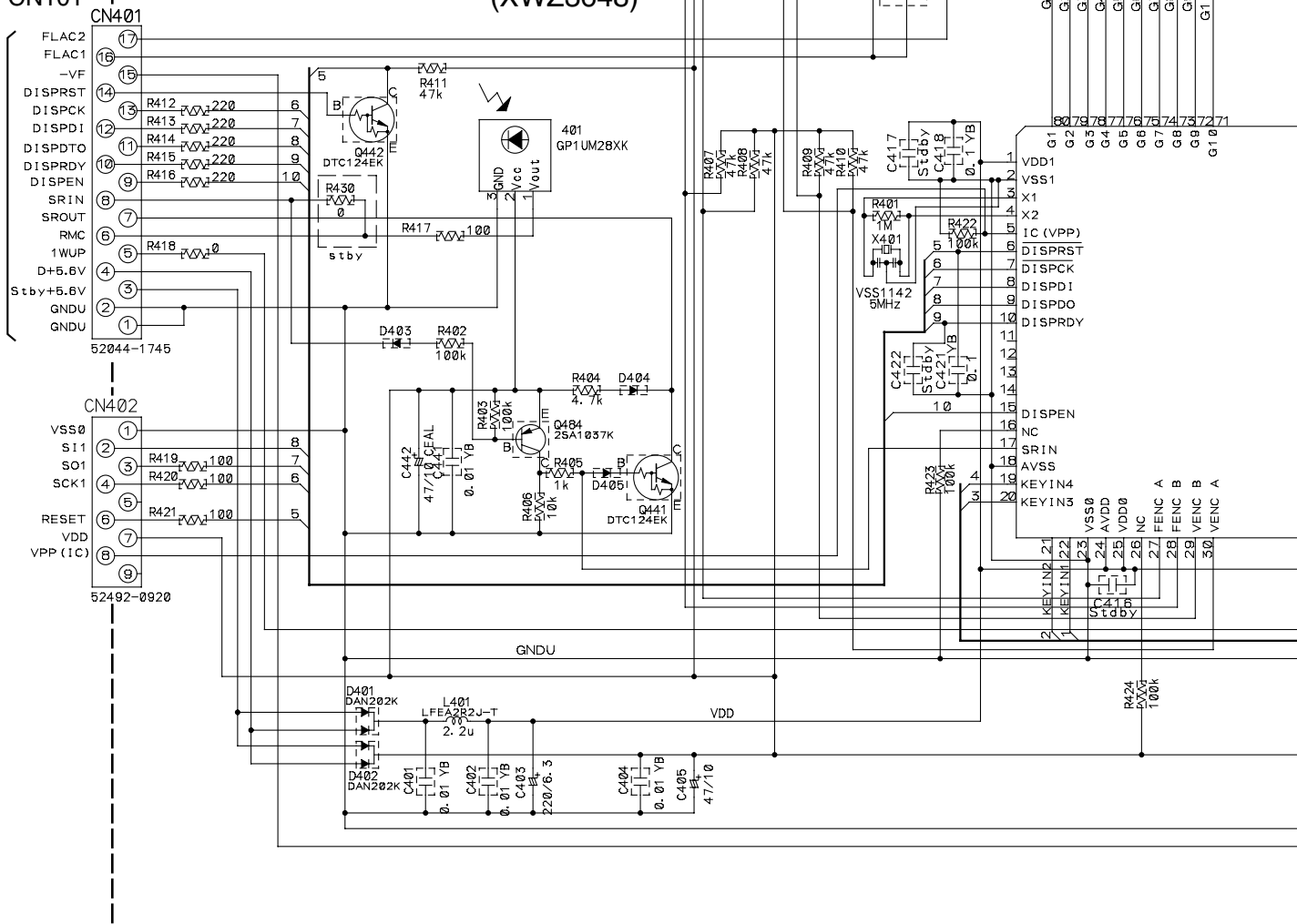
D

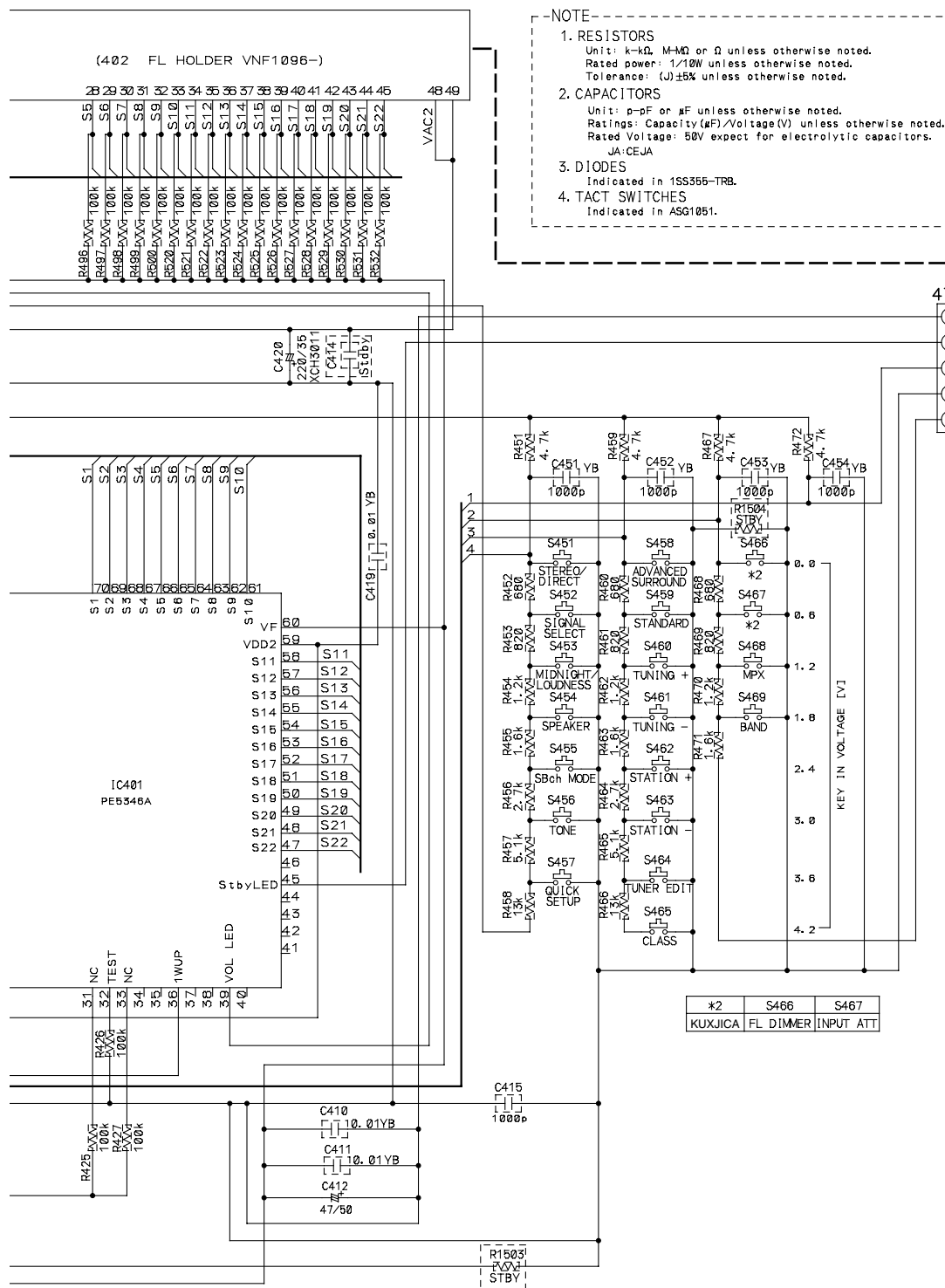
E

F

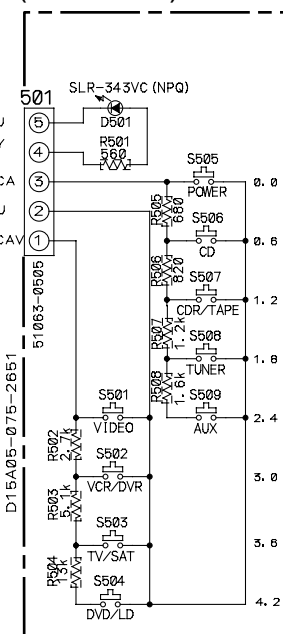
A3/3
CN101

FRONT ASSY (XWZ3648)





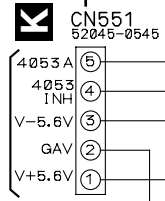
POWER SW ASSY (XWZ3651)



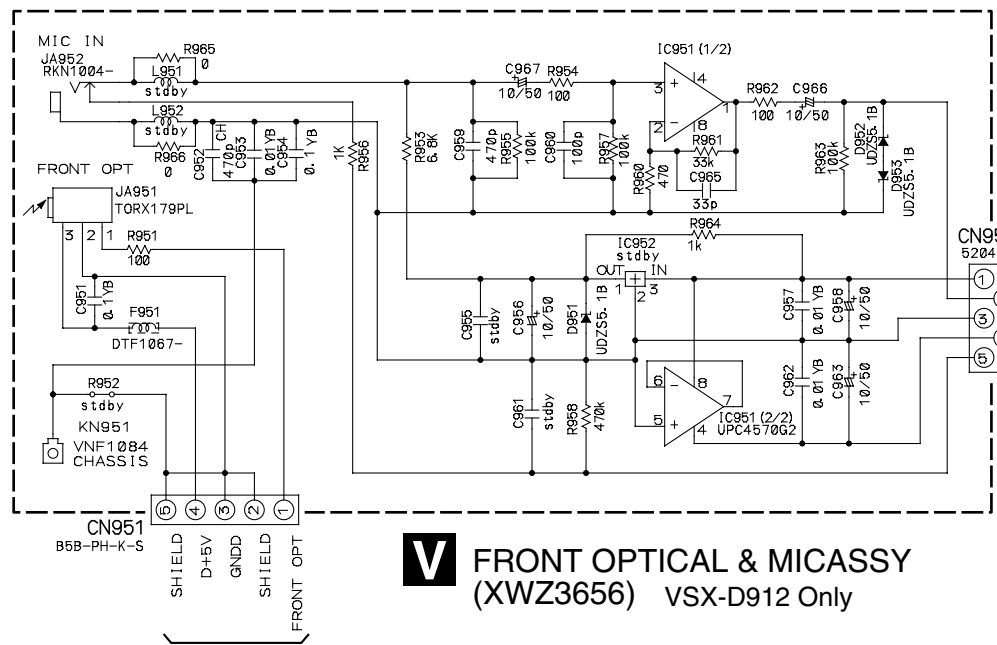
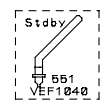
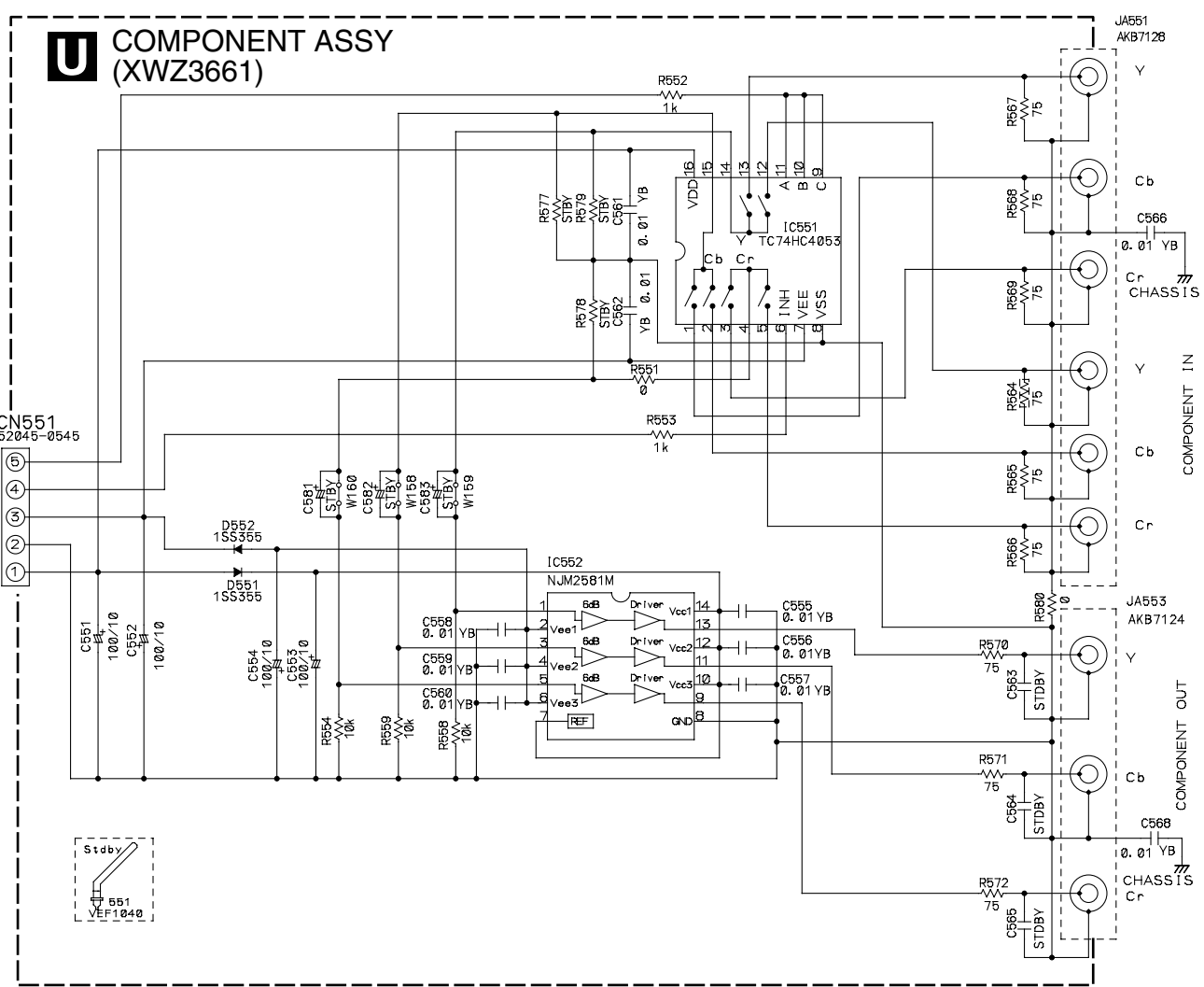
FRONT ASSY

- 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 : FL DIMMER
- S467 : INPUT ATT
- S468 : MPX
- S476 : BAND

K CN392



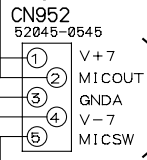
U COMPONENT ASSY
(XWZ3661)



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

T CN1902

A1/3 CN108



U **V**

Notes

1. RESISTORS


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

2. CAPACITORS

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

3. DIODES

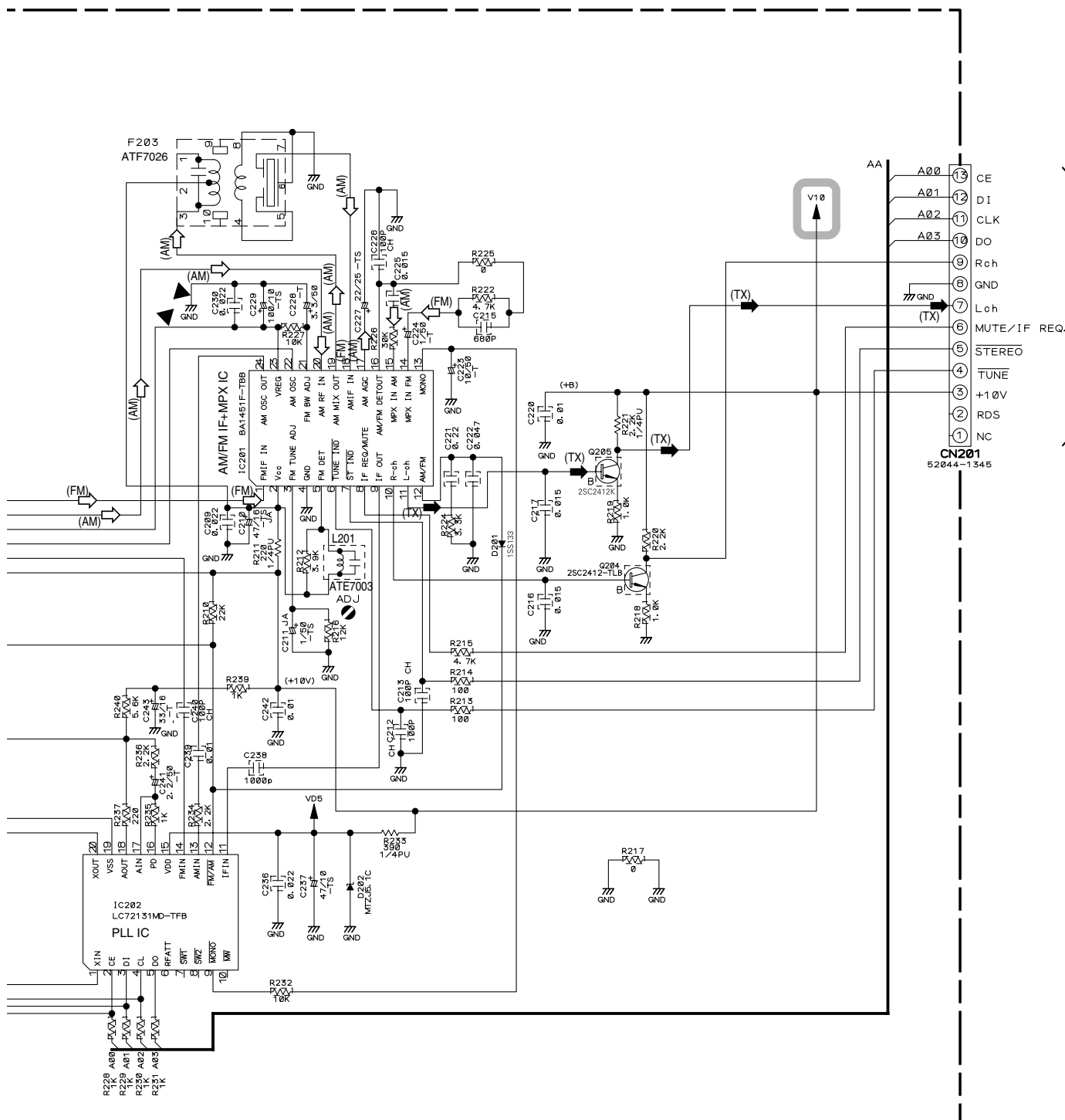
No mark diode is 1SS133.

 : The power supply is shown with the marked box.

 : AUDIO SIGNAL ROUTE (TUNER)

 : AM SIGNAL ROUTE

 : FM SIGNAL ROUTE



4.2 TRANS2, TRANS3, TRANS1 and TRANS4 ASSYS

SIDE A

SIDE B

TRANS4 ASSY

E TRANS3 ASSY

G CN251

C J6 J4 J3 J5 J7

(XNP3066-B)

SIDE A[illegible]

(XNP3064-B)

SIDE A

IC981 TRANS 491.630

IC892 491.630

J22

D881

@EVA HCH40H

CAUTION

REPLACE LINKS AS
MARKED.

MFD BY LITTELFUSE INC.

XWZ3662

(XNP3064-B)

SIDE B

POWER TRANSFORMER

D TRANS2 ASSY

TRANS

□ XWZ36B1

CMKS-PX

J1 BROWN

J2 BLUE

PRIMARY

(XNP3066-B)

SIDE A

(XNP3066-B)

SIDE A

C J1 J2

TRANS1 ASSY

REPLACER LE IC LINKS COMME INDIQUE,
DE CHEZ LITTELFUSE INC.

ATTENTION

TRANS2
XWZ3684
XWZ3685
C853
C851
C852
C853
R851
R852
R853
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(XNP3066-B)

SIDE A

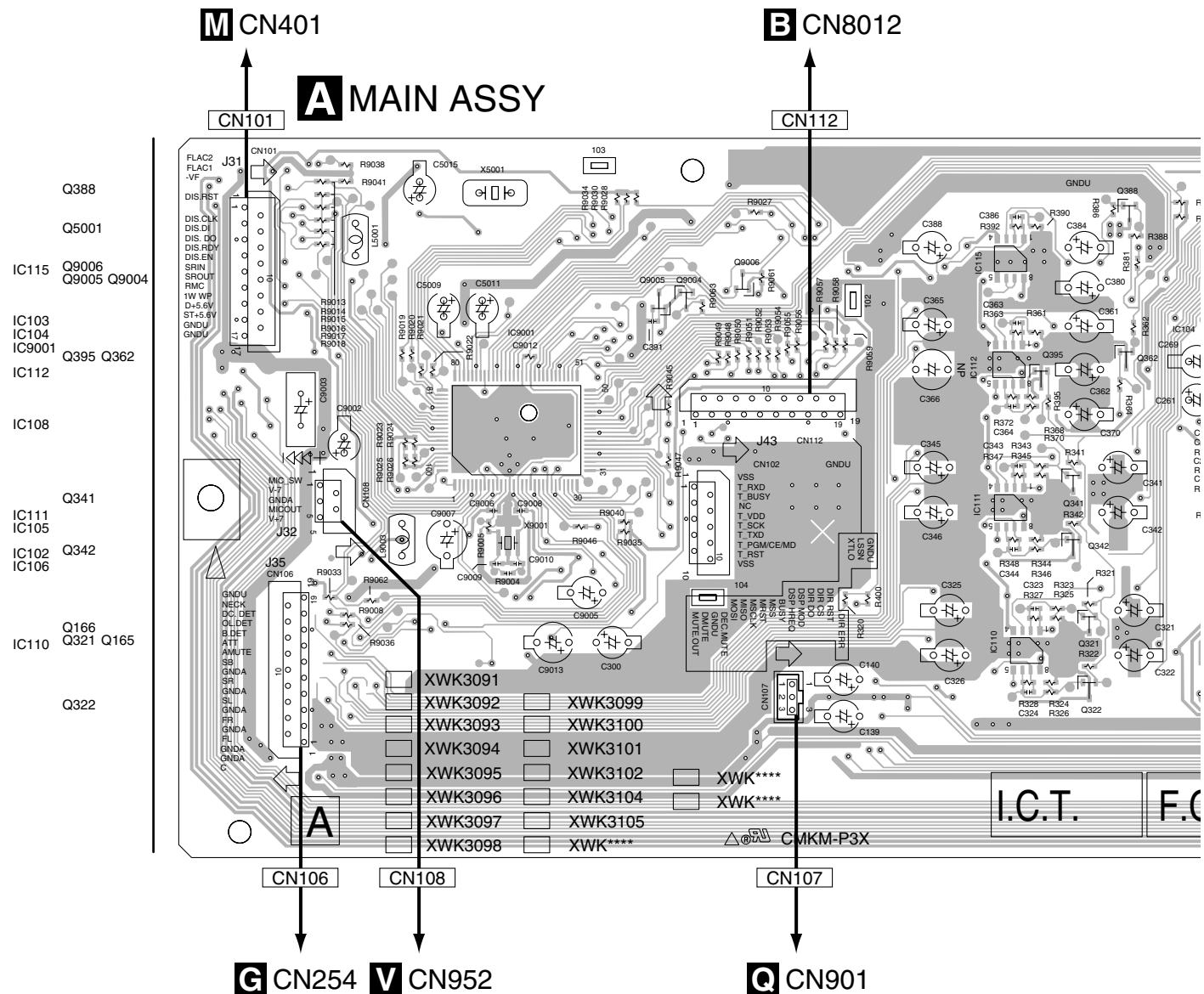
C 701

D E H P

DEHP

4.3 MAIN ASSY

SIDE A



A

SIDE A

A

B

C

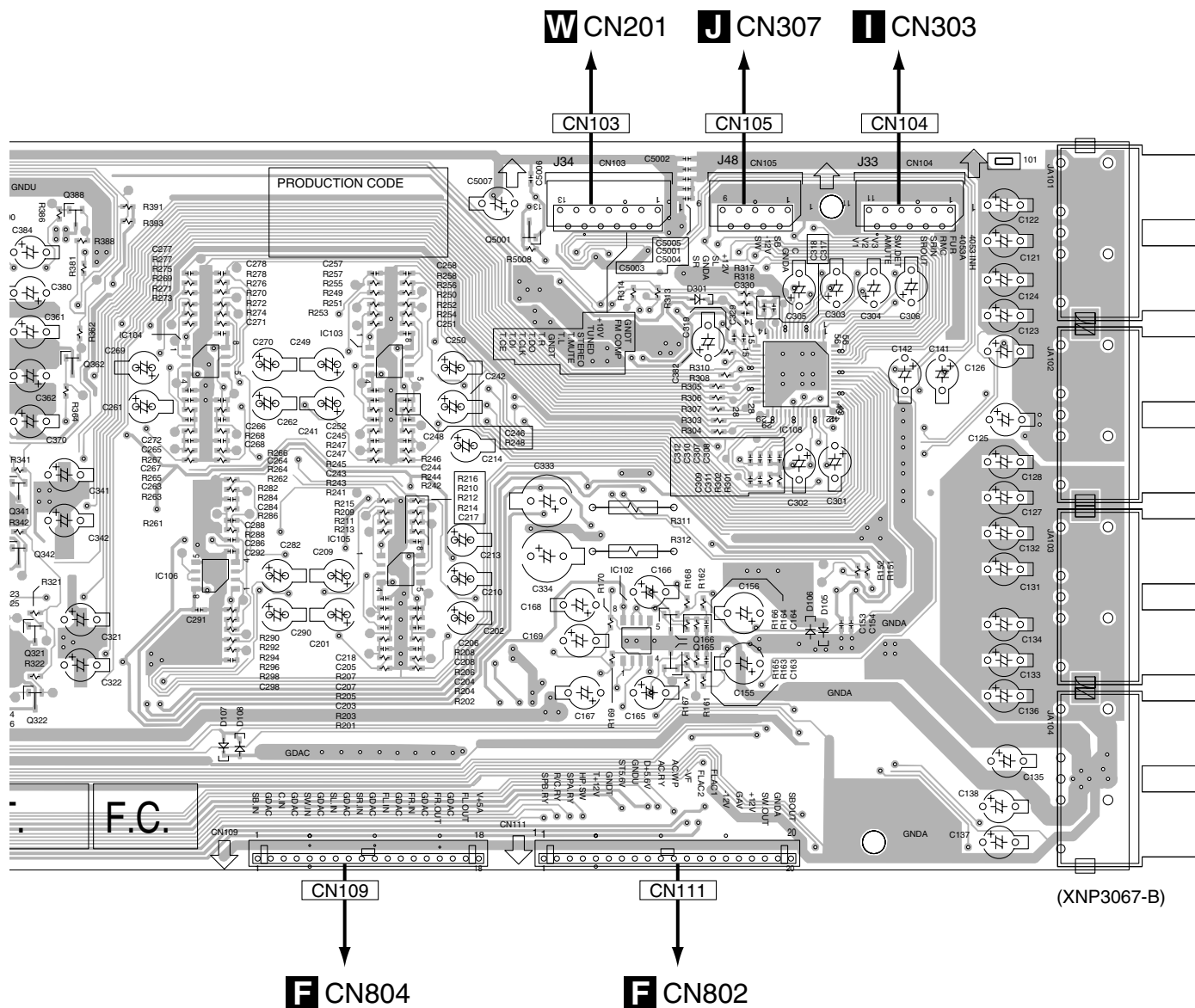
D

E

F

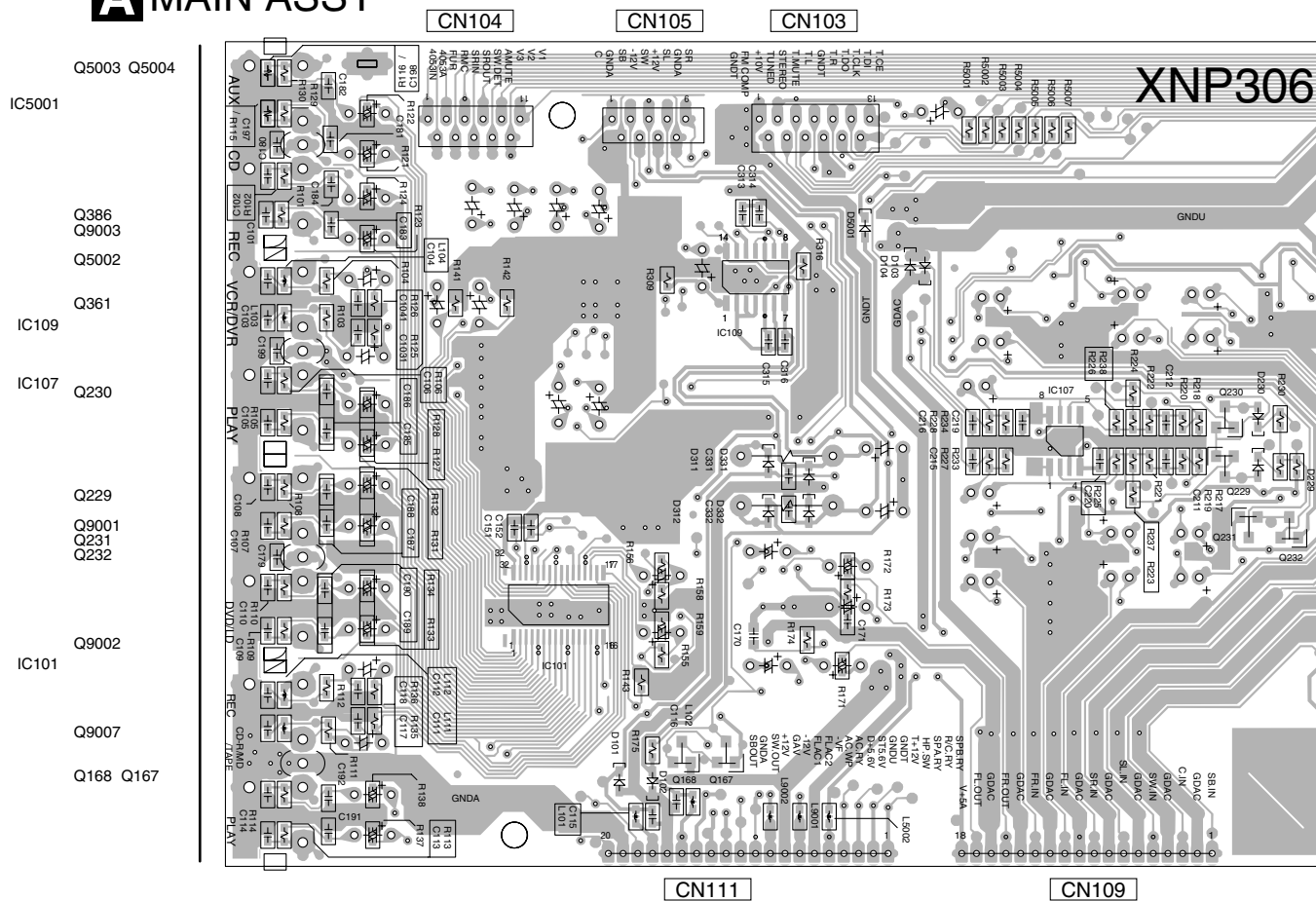
A

41



SIDE B

A MAIN ASSY



A

SIDE B

A

B

C

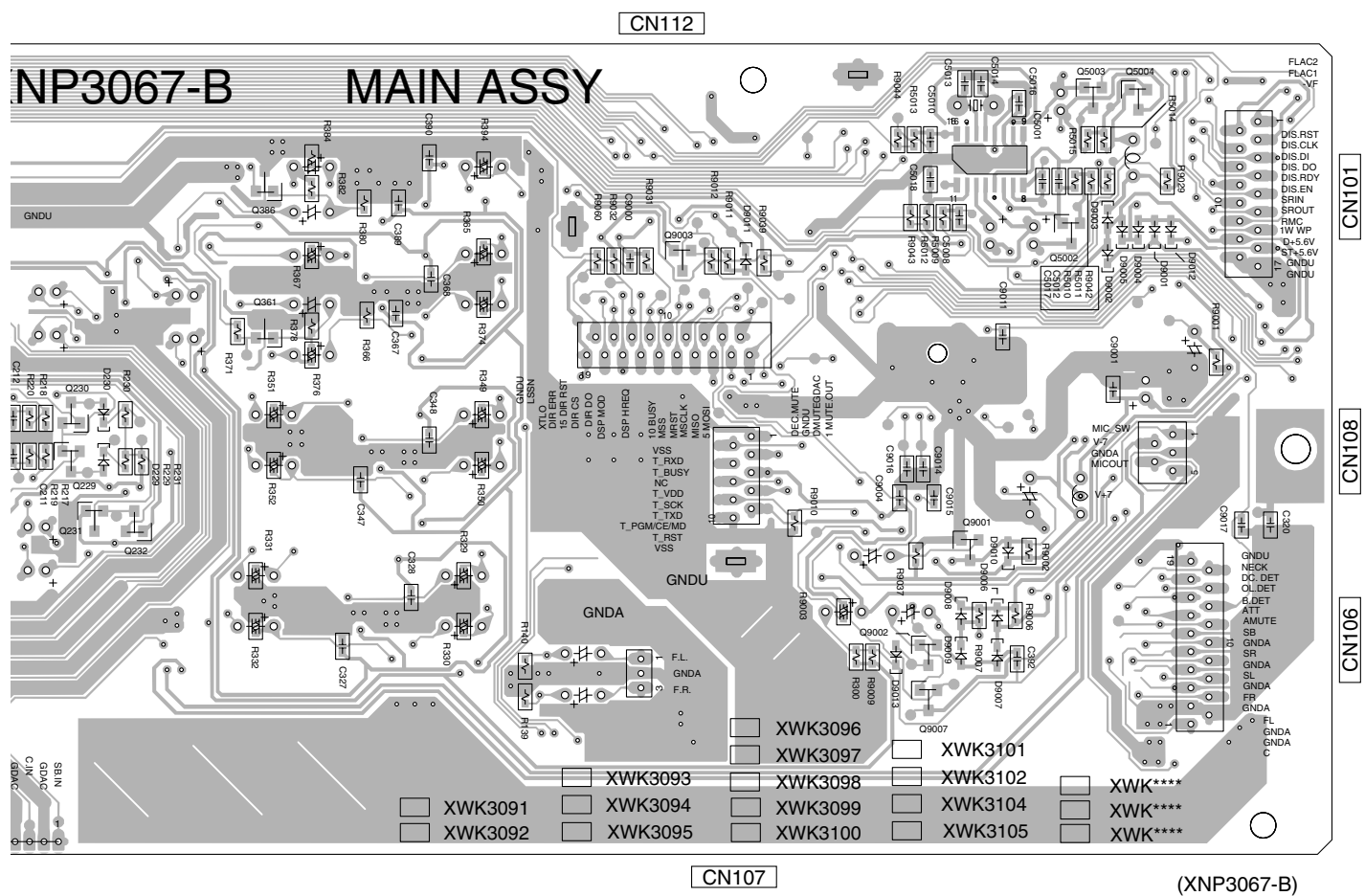
D

E

F

A

43



CN107

(XNP3067-B)

VSX-D912-K

4.4 DSP ASSY

SIDE A

DSP ASSY

SIDE A

T CN1901

CN8017

CN8003

F CN805

CN8007

F CN806

CN8012

A CN112

(ANP2022-B)

Q8341

IC8502

IC8201

Q8504

IC8702

IC8603

IC8301

IC8601

IC8501

Q8501

IC8401

IC8701

VSX-D912-K

4.5 AMP & PRIMARY and AMP INPUT ASSYS

SIDE A

A

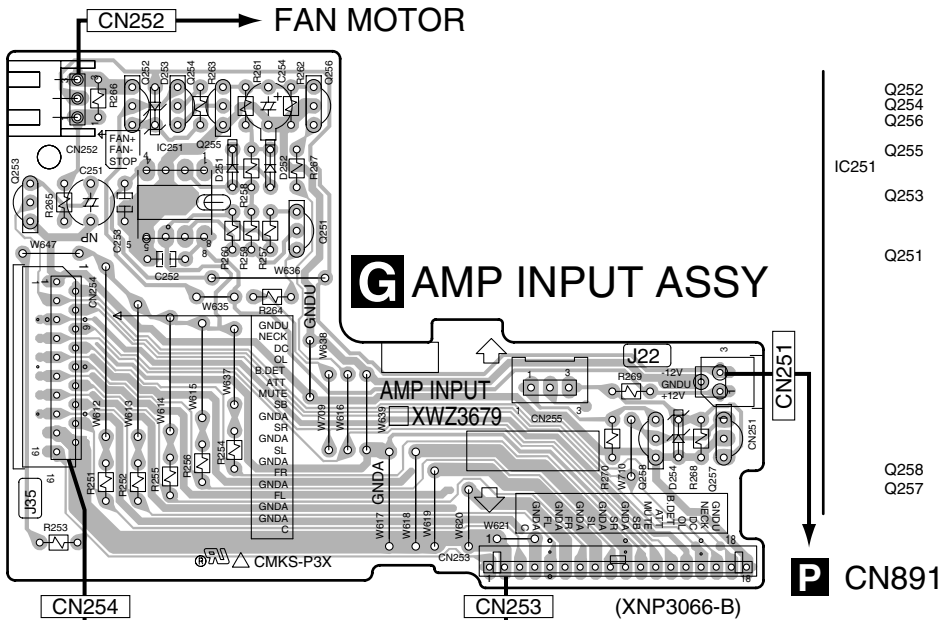
B

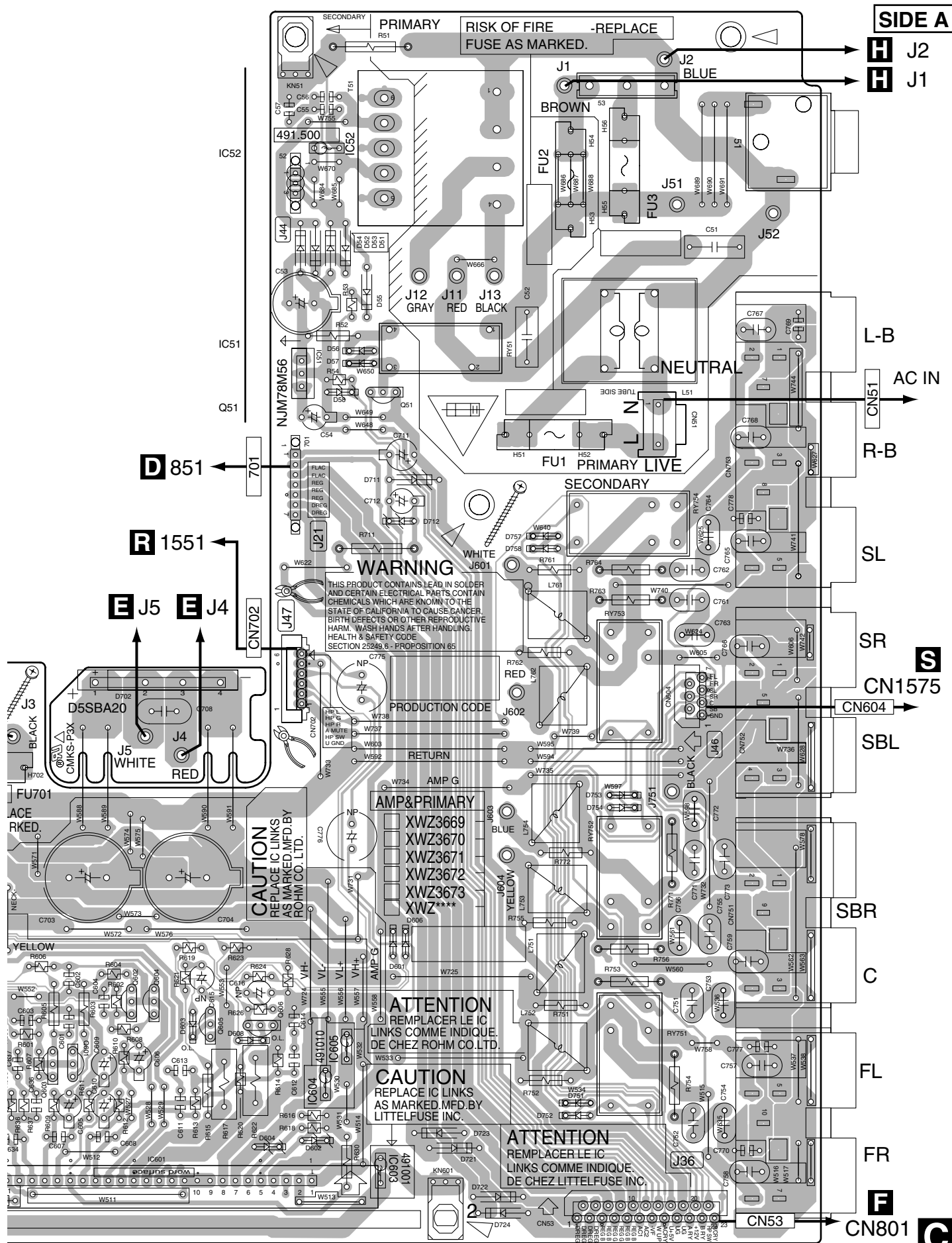
C

D

E

F

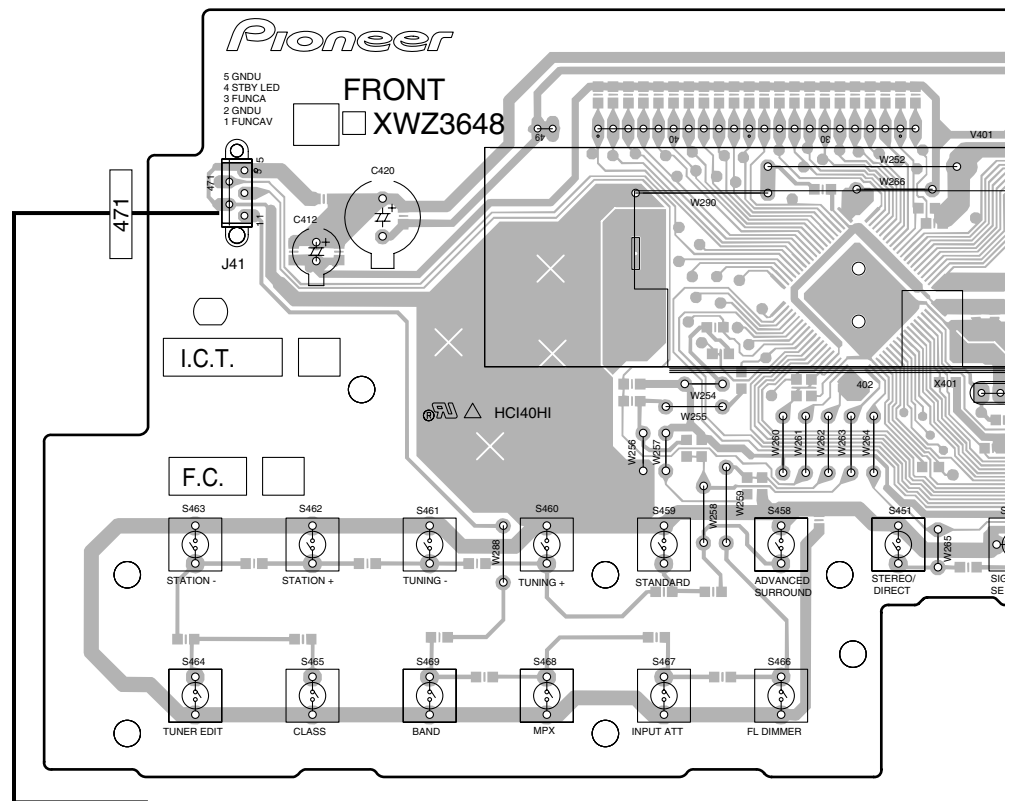




4.6 FRONT, R. ENCODER, POWER SW and H. P. ASSYS

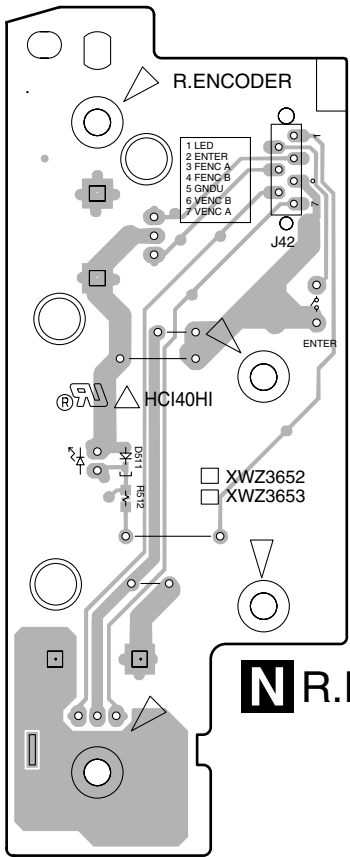
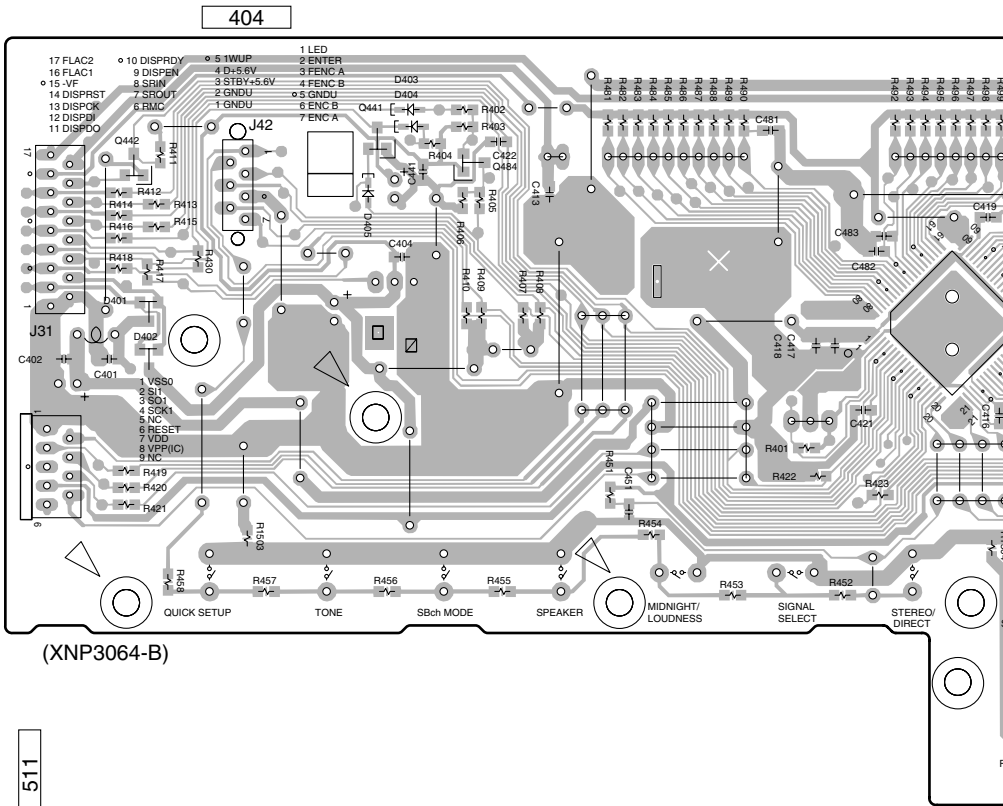
SIDE A

M FRONT ASSY



SIDE B

M FRONT ASSY



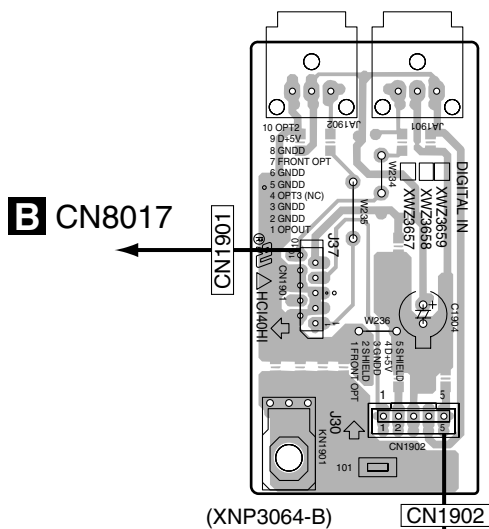
N R.ENCODER ASSY

M N

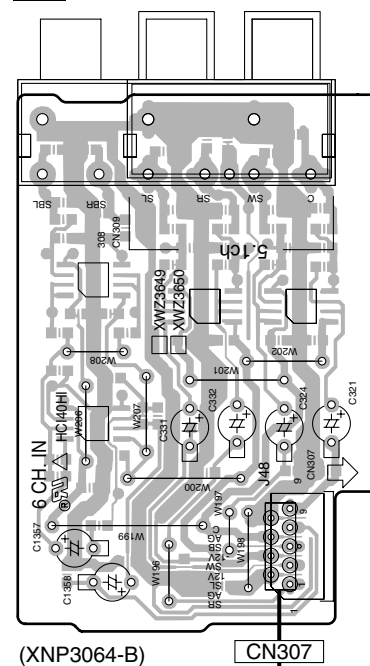
4.7 BOARD TO BOARD, DIGITAL IN, VIDEO and 6CH IN ASSYS

SIDE A

T DIGITAL IN ASSY

**SIDE A**

J 6CH IN ASSY



VIDEO ASSY

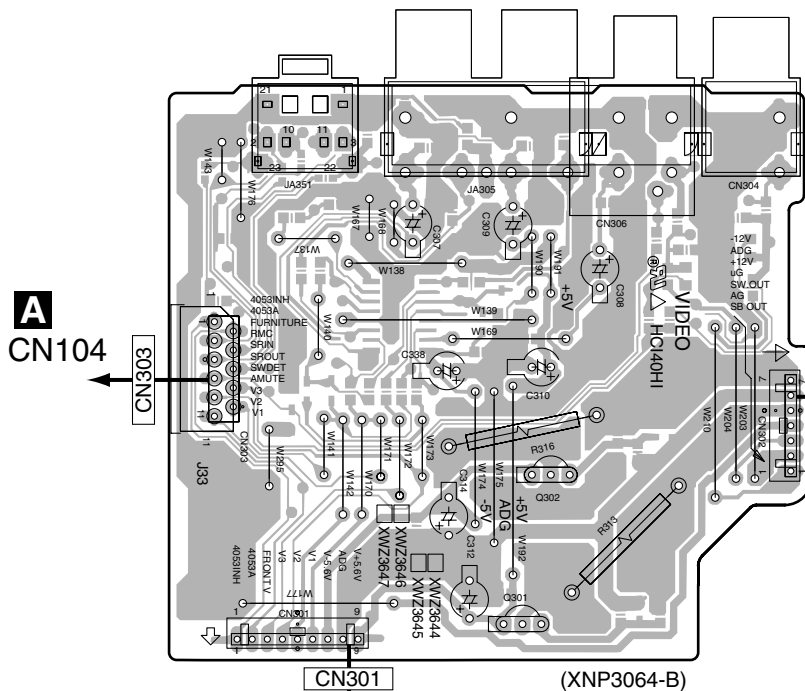
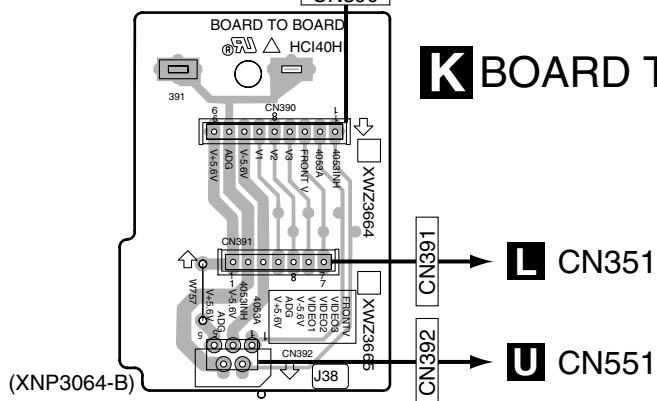
**F** CN803

Diagram illustrating a queue structure. A horizontal line represents the queue, with two elements labeled Q301 and Q302. Q302 is at the front of the queue and has an arrow pointing to a box labeled CN302.

K BOARD TO BOARD ASSY

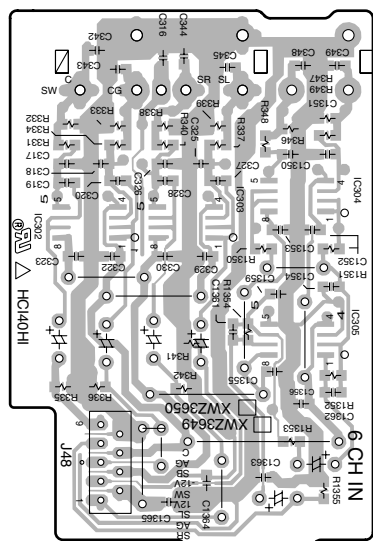


I J K T

I J K T

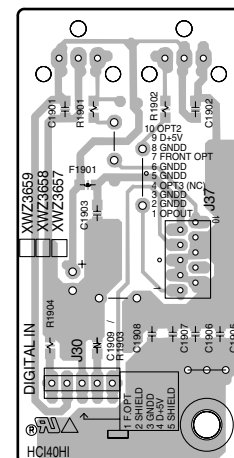
SIDE B

SIDE B

J 6CH IN ASSY

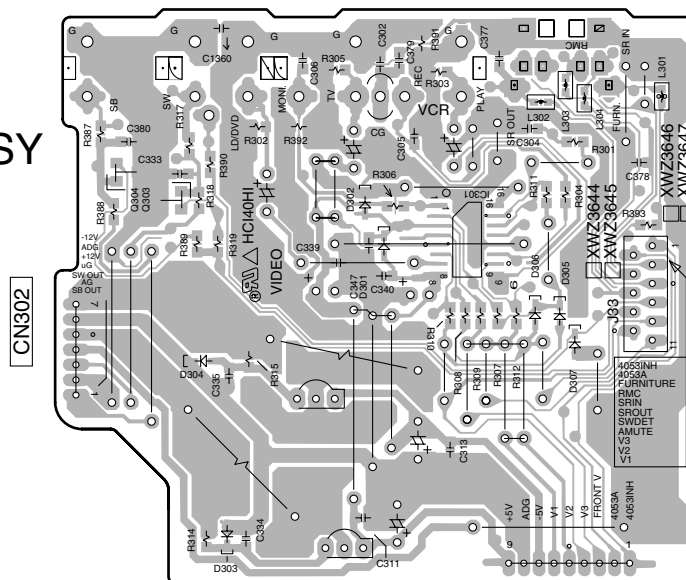
CN307

(XNP3064-B)

T DIGITAL IN ASSY

CN1902

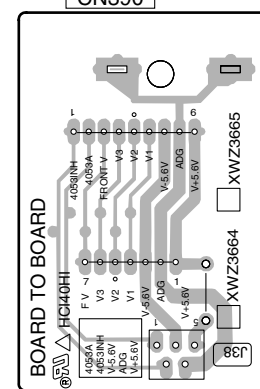
(XNP3064-B)

I VIDEO ASSY

(XNP3064-B)

CN301

CN390

K BOARD TO BOARD ASSY

(XNP3064-B)

CN391
CN392**I J K T****I J K T**

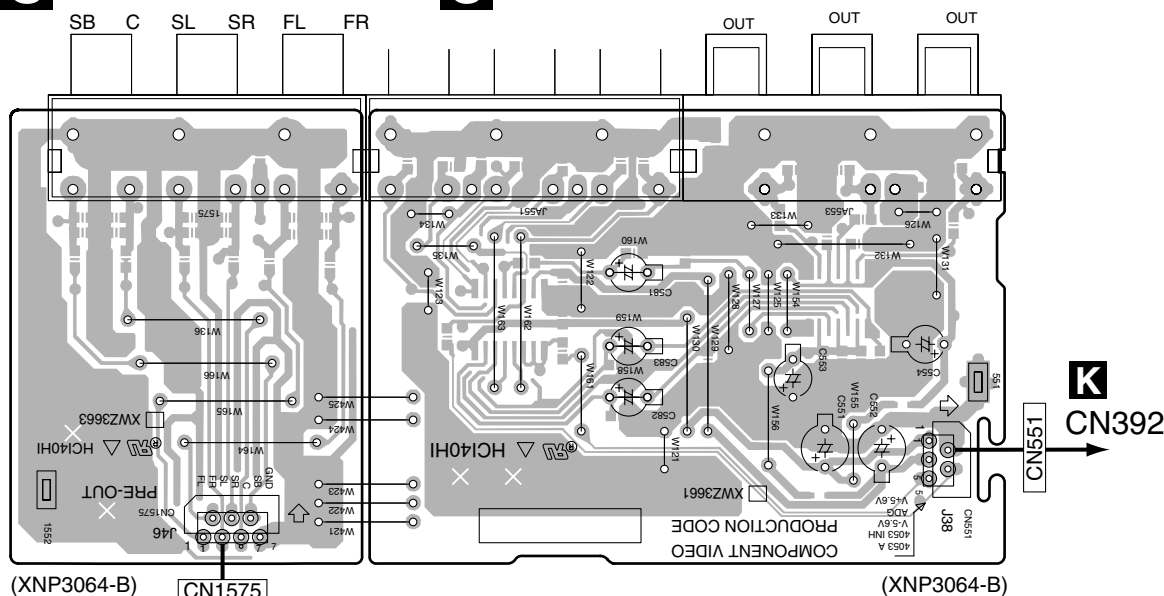
4.8 S.VIDEO, F.VIDEO, F.OPT&MIC, COMP. and PRE-OUT ASSYS

SIDE A

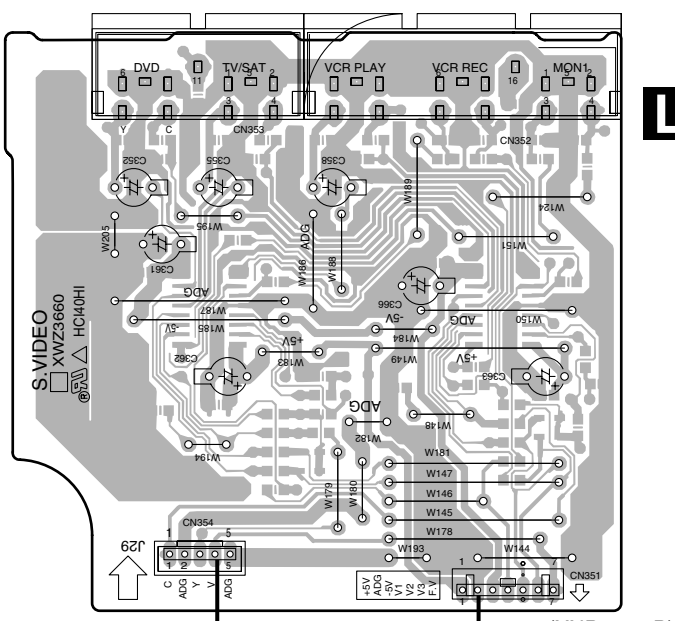
PRE-OUT ASSY

U COMPONENTASSY

SIDE A

**C** CN604

L S. VIDEO ASSY



A CN108

Q CN354
CN901 ↓

CN1902
T ▲

K CN391

A CN107

L CN354

↑
CN952

CN951

↑
CN001

V FRONT OPTICAL & MIC ASSY

Q FRONT VIDEO ASSY

(XNP3064-B)

L Q S U V

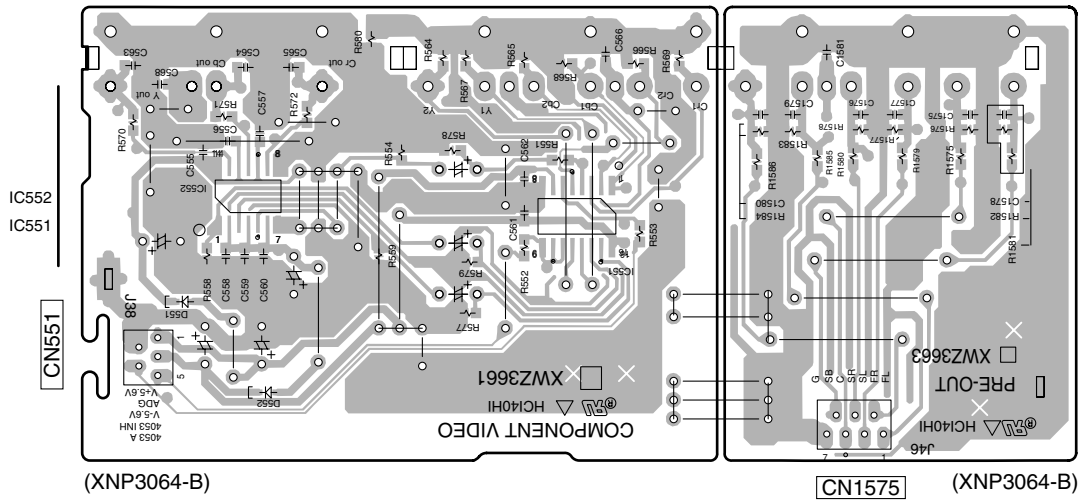
L Q S U V

SIDE B

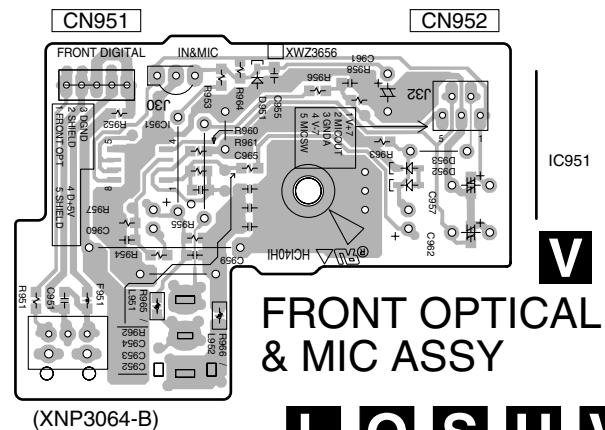
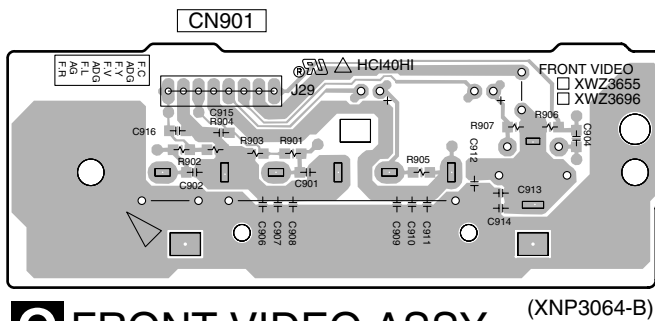
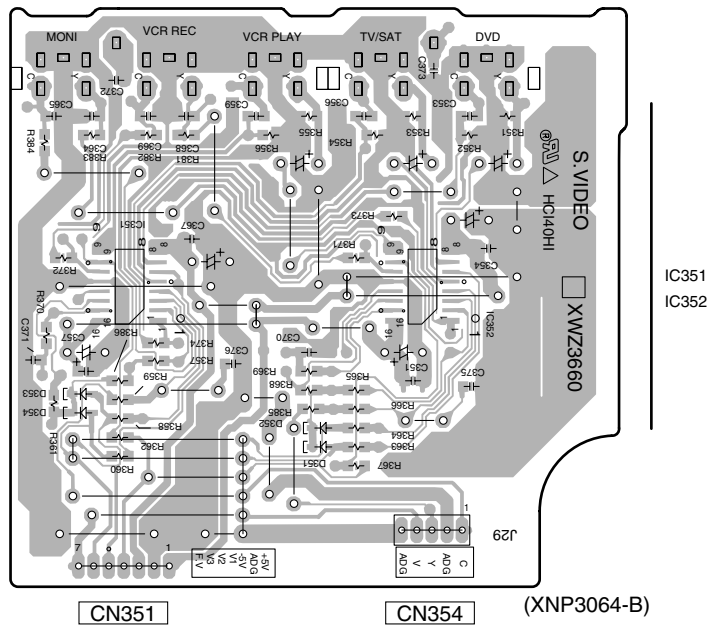
SIDE B

U COMPONENT ASSY

S PRE-OUT ASSY



L S. VIDEO ASSY



L Q S U V

L Q S U V

5. PCB PARTS LIST

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

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

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

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

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

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

0.5 Ω \rightarrow R50 RN2H50K

1 Ω \rightarrow 1R0 RS1P1R0K

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

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

Mark No.	Description	Part No.	Mark No.	Description	Part No.
LIST OF ASSEMBLIES			NSP	1..COMPLEX ASSY (VSX-D912)	XWK3080
	1..MAIN ASSY (VSX-D912)	XWK3100	NSP	1..COMPLEX ASSY (VSX-D812)	XWK3078
	1..MAIN ASSY (VSX-D812)	XWK3095		2..VIDEO ASSY	XWZ3646
				2..FRONT ASSY	XWZ3648
	1..DSP ASSY	AWX1082		2..6CH IN ASSY	XWZ3650
				2..POWER SW ASSY	XWZ3651
NSP	1..AMP & PS ASSY (VSX-D912)	XWK3089		2..R. ENCODER ASSY	XWZ3653
NSP	1..AMP & PS ASSY (VSX-D812)	XWK3085		2..H.P. ASSY	XWZ3654
	2..AMP & PRIMARY ASSY	XWZ3673		2..FRONT VIDEO ASSY	XWZ3655
	(VSX-D912)			2..FRONT OPTICAL ASSY	XWZ3656
	2..AMP & PRIMARY ASSY	XWZ3669		(VSX-D912)	
	(VSX-D812)			2..DIGITAL IN ASSY (VSX-D912)	XWZ3659
	2..REGULATOR ASSY	XWZ3676		2..DIGITAL IN ASSY (VSX-D812)	XWZ3658
	2..AMP INPUT ASSY	XWZ3679		2..S. VIDEO ASSY	XWZ3660
NSP	2..TRANS1 ASSY	XWZ3681		2..COMPONENT ASSY	XWZ3661
	2..TRANS2 ASSY	XWZ3684		2..TRANS4 ASSY	XWZ3662
NSP	2..TRANS3 ASSY	XWZ3687		2..PRE-OUT ASSY	XWZ3663
NSP	2..BINDER ASSY	XWZ3691		2..BOARD TO BOARD ASSY	XWZ3664
NSP	2..HOLDER ASSY	XWZ3693			
				1..FM/AM TUNER MODULE	AXQ7231

● CONTRAST OF PCB ASSEMBLIES

A MAIN ASSY

XWK3100 and XWK3095 are constructed the same except for the following :

Mark	Symbol and Description	XWK3100	XWK3095
	R143	Not used	RS1/16S103J
	R9023	RS1/16S472J	RS1/16S0R0J
	R9025	RS1/16S472J	Not used
	R9040	Not used	RS1/16S473J
	CN108 5P CONNECTOR	52045-0545	Not used

C AMP & PRIMARY ASSY

XWZ3673 and XWZ3669 are constructed the same except for the following :

Mark	Symbol and Description	XWZ3673	XWZ3669
	C701, C702 (5600/71V)	XCH3015	Not used
	C701, C702 (4700/71V)	Not used	XCH3013

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	Not used

Mark No. Description Part No.

• PARTS LIST FOR VSX-D912-K

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 701 AWG14 BOARD IN ADX7286
J 21 JUMPER WIRED D20PYY0715E

**A MAIN ASSY
SEMICONDUCTORS**

IC109 BD3812F
IC108 BD3813KS
IC101 BD3841FS
IC102 NJM2100M
IC9001 PD5837A

IC103-IC107, IC110-IC112, IC115 UPC4570G2
Q5001 2SC2412K
Q165, Q166, Q321, Q322 2SC3326
Q341, Q342, Q361, Q362, Q395 2SC3326
Q229, Q230 2SK208

Q167, Q231, Q9002-Q9005 DTA124EK
Q232 DTC124EK
Q168, 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
L9003 LFEA2R2J
L101-L104, L111, L112, L5002 QTL1013
CHIP SOLID INDUCTOR

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
C205-C208, C245-C248, C265 CCSRCH331J50
C267, C286, C288 CCSRCH331J50

C203, C204 CCSRCH471J50
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
C5007 CEAT101M16
C169, C9002 CEAT221M6R3

Mark No. Description Part No.

C201, C202, C241, C242 CEAT2R2M50
C261, C262, C282, 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, 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 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 7P 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
X9001 CERAMIC RESONATOR ASS7032
(15.7 MHz)

**B DSP ASSY
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

Mark No.	Description	Part No.
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
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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

Mark No.	Description	Part No.
X8501	CRYSTAL RESONATOR (20 MHz)	VSS1171
X8201	CRYSTAL RESONATOR (24.576 MHz)	XSS3003

C AMP & PRIMARY ASSY SEMICONDUCTORS

⚠ IC603 PROTECTOR(1A)	AEK7009
⚠ IC604-IC607 PROTECTOR(125mA)	AEK7022
IC701, IC702 PROTECTOR(400mA)	ICP-N10
IC51	NJM78M56FA
⚠ IC601, IC602	PAC011A

Q703	2SA1145
Q702	2SA1837D1
Q696, Q697	2SC1740S
Q704	2SC1845
Q605, Q606, Q633, Q655, Q656	2SC2240

Q683	2SC2240
Q601-Q604, Q631, Q632	2SC2878
Q651-Q654, Q681, Q682	2SC2878
Q701	2SC4793D1
Q51	KRC101M

D56, D601, D603, D606, D608	1SS133
D631, D632, D651-D654	1SS133
D683, D684, D752, D754, D758	1SS133
⚠ D701, D702	D5SBA20(B)
D602, D604, D681, D682	MTZJ16A

D711	MTZJ22D
D58	MTZJ5.1A
D712	MTZJ5.1B
⚠ 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
C685	CEAT101M16

C711	CEAT101M35
C53	CEAT102M16
C697	CEAT221M10
C54	CEAT470M25
C605, C606, C633, C655, C656	CEAT4R7M50

C683	CEAT4R7M50
C705, C706	CEHAT100M2A
C751, C752, C755, C761, C762	CFTYA104J50
C771	CFTYA104J50
C607, C608, C634, C657, C658	CKPUYB101K50

C684	CKPUYB101K50
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Mark No.	Description	Part No.
C696		CKPUYB102K50
C603, C604, C632, C653, C654		CKPUYB331K50
C682		CKPUYB331K50
C55–C57		CKPUYF103Z25
C703, C704 (3300/42V)		XCH3012
C701, C702 (5600/71V)		XCH3015

RESISTORS

⚠ R51 (2.2M/ 1/2W)	RCN1080
⚠ 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	RS2LMF392J
⚠ 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
CN751 SPEAKER TERMINAL 8-P	AKE7074
CN753 SPEAKER TERMINAL 6-P	AKE7075
CN752 SPEAKER TERMINAL 4-P	AKE7076
51 AC SOCKET 1-P	AKP1060
H51, H52, H701, H702 FUSE CLIP	AKR7001
⚠ T51 STANDBY TRANSFORMER	ATT7043
CN601 18P PLUG	KM200TA18
CN51 AC CODE SOCKET	RKP1751
KN51, KN601 EARTH METAL FITTING	VNF1084
701 7P CABLE HOLDER	XKP3047

D TRANS2 ASSY SEMICONDUCTORS

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

OTHERS

851 7P CABLE HOLDER	XKP3047
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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

Mark No.	Description	Part No.
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
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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

COILS AND FILTERS

L301–L304 CHIP SOLID INDUCTOR	QTL1013
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CAPACITORS

C347	CCSRCH470J50
C307–C310, C312, C314, C338	CEAT470M25
C1360, C302, C379	CKSRYB103K50
C339, C340	CKSRYB104K25
C304–C306	CKSRYB221K50

C333	CKSRYB331K50
C311, C313	CKSRYB473K25

Mark No. **Description**

Part No.

RESISTORS

⚠ R313, R316
Other Resistors

RS3LMF390J
RS1/16S###J

OTHERS

CN303 11P CONNECTOR
JA305 PIN JACK(4P)YELLOW
CN302 7P SOCKET
CN301 9P SOCKET
CN306 2P PIN JACK

52044-1145
AKB7100
KP200TA7L
KP200TA9L
XKB3041

JA351 2P JACK

XKN3013

**J 6CH IN ASSY
SEMICONDUCTORS**

IC302-IC305

NJM4558MD

CAPACITORS

C1354,C1359,C319, C320
C327, C328, C342-C345
C348, C349
C1362
C1361

CCSRCH101J50
CCSRCH101J50
CCSRCH101J50
CCSRCH121J50
CCSRCH680J50

C1357
C1358,C321, C324, C331, C332
C1363-C1365
C1352,C1353,C1355,C1356,C316
C322, C323, C329, C330

CEAT220M25
CEAT4R7M50
CKSRYB102K50
CKSRYB103K50
CKSRYB103K50

C1350,C1351,C317, C318
C325, C326

CKSRYB221K50
CKSRYB221K50

RESISTORS

All Resistors

RS1/16S###J

OTHERS

CN307 9P CONNECTOR
308 6P PIN JACK

52044-0945
AKB7089

**K BOARD TO BOARD ASSY
OTHERS**

CN392 5P CONNECTOR
CN391 7P PLUG
CN390 9P PLUG

52045-0545
KM200TA7
KM200TA9

**L S. VIDEO ASSY
SEMICONDUCTORS**

IC351, IC352
D351-D354

NJM2595M
1SS355

CAPACITORS

C375, C376
C352, C355, C358, C361-C363
C366
C372, C373
C351, C353, C354, C356, C357

CCSRCH470J50
CEAT470M25
CEAT470M25
CKSRYB103K50
CKSRYB104K25

C359, C367
C364, C365, C368-C371

CKSRYB104K25
CKSRYB221K50

RESISTORS

All Resistors

RS1/16S###J

OTHERS

Mark No. **Description**

Part No.

CN353 2-4P MINI DIN SOCKET
CN352 3-4P MINI DIN SOCKET
CN354 CONNECTOR POST
CN351 7P SOCKET

AKP7020
AKP7043
B5B-PH-K
KP200TA7L

**M FRONT ASSY
SEMICONDUCTORS**

IC401
Q484
Q441, Q442
D403-D405
D401, D402

PE5346A
2SA1037K
DTC124EK
1SS355
DAN202K

COILS AND FILTERS

L401

LFEA2R2J

SWITCHES AND RELAYS

S451-S469

ASG7013

CAPACITORS

C482, C483
C481
C442
C403
C405

CCSRCH221J50
CCSRCH471J50
CEAL470M10
CEAT221M6R3
CEAT470M10

C412
C415, C451-C454
C401, C402, C404, C410, C411
C419, C441
C418, C421

CEAT470M50
CKSRYB102K50
CKSRYB103K50
CKSRYB103K50
CKSRYB104K16

C420

XCH3011

RESISTORS

All Resistors

RS1/16S###J

OTHERS

471 CABLE HOLDER (5P)
404 CABLE HOLDER (7P)
CN401 17P CONNECTOR
CN402 9P CONNECTOR
V401 FL TUBE

51063-0505
51063-0705
52044-1745
52492-0920
XAV3018

X401 CERAMIC RESONATOR
(5 MHz)
401 REMOTE RECEIVERUNIT

VSS1142
GP1UM28XK

**N R. ENCODER ASSY
SEMICONDUCTORS**

D512
D511

SLR-343BBT
UDZS5.6B

SWITCHES AND RELAYS

S511
S513 ROTARY ENCODER
S512 ROTARY ENCODER

ASG7013
XSX3005
XSX3006

RESISTORS

All Resistors

RS1/16S###J

OTHERS

511 CABLE HOLDER (7P)

51063-0705

**O POWER SW ASSY
SEMICONDUCTORS**

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
D501		SLR-343VC

SWITCHES AND RELAYS

S501-S509	ASG7013
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RESISTORS

All Resistors	RS1/16S###J
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OTHERS

501 CABLE HOLDER (5P)	51063-0505
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P TRANS4 ASSY SEMICONDUCTORS

IC891, IC892 PROTECTOR (630mA) D891	AEK7006 S1WB(A)60SD
--	------------------------

CAPACITORS

C891, C892	CEAT471M35
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OTHERS

CN891	52045-0345
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Q FRONT VIDEO ASSY

CAPACITORS

C901, C902, C915, C916 C903, C905 C908, C911, C914 C904, C906, C909, C912 C907, C910, C913	CCSRCH101J50 CEAL470M25 CKSRYB103K50 CKSRYB104K25 CKSRYB471K50
--	--

RESISTORS

All Resistors	RS1/16S###J
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OTHERS

JA902 PIN JACK (4P)	AKX7014
---------------------	---------

R H.P. ASSY SEMICONDUCTORS

Q1551, Q1552	2SC3326
--------------	---------

CAPACITORS

C1554, C1557 C1553, C1556 C1555, C1558 C1551, C1552	CCSRCH471J50 CKSRYB103K50 CKSRYB104K16 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
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OTHERS

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
CN1575 7P CONNECTOR 1575 PIN JACK(6P)		52045-0745 AKB7089

T DIGITAL IN ASSY COILS AND FILTERS

F1901 CHIP BEAD	DTF1067
-----------------	---------

CAPACITORS

C1907, C1909 C1904 C1908 C1903, C1906 C1901, C1902, C1905	CCSRCH101J50 CEAL101M10 CKSRYB102K50 CKSRYB103K50 CKSRYB104K25
---	--

RESISTORS

All Resistors	RS1/16S###J
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OTHERS

CN1902 CONNECTOR POST JA1901 OPT. LINK IN JA1902 OPT. LINK OUT 12MB/S CN1901 10P CONNECTOR KN1901 WRAPPING TERMINAL	B5B-PH-K GP1FA513RZB GP1FA513TZ VKN1186 VNF1084
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U COMPONENT ASSY SEMICONDUCTORS

IC552 IC551 D551, D552	NJM2581M TC74HC4053AF 1SS355
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CAPACITORS

C551-C554 C555-C562, C566, C568	CEAT101M10 CKSRYB103K50
------------------------------------	----------------------------

RESISTORS

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

OTHERS

CN551 5P CONNECTOR JA553 3P RCA PINJACK JA551 6P RCA PINJACK	52045-0545 AKB7124 AKB7128
--	----------------------------------

V FRONT OPTICAL ASSY SEMICONDUCTORS

IC951 D951-D953	UPC4570G2 UDZS5.1B
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COILS AND FILTERS

F951 CHIP BEAD	DTF1067
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CAPACITORS

C960 C965 C952, C959 C956, C958, C963, C966, C967 C953, C957, C962	CCSRCH101J50 CCSRCH330J50 CCSRCH471J50 CEAT100M50 CKSRYB103K50
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C951, C954	CKSRYB104K25
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RESISTORS

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

OTHERS

CN952 CONNECTOR 5P CN951 CONNECTOR POST JA952 JACK	52045-0545 B5B-PH-K RKN1004
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<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
JA951	OPTICAL INPUT JACK	TORX179PL
KN951	WRAPPING TERMINAL	VNF1084

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
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W FM/AM TUNER MODULE

SEMICONDUCTORS

IC201	BA1451F
IC202	LC72131MD
Q201, Q204, Q205	2SC2412K
Q202	DTA124ES
Q203	DTC124EK
D201	1SS133
D202	MTZJ5.1C

COILS AND FILTERS

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

CAPACITORS

C206	CCSRCH100D50
C212, C213, C226, C233–C235	CCSRCH101J50
C240	CCSRCH101J50
C231, C232	CCSRCH150J50
C223	CEAT100M50
C229	CEAT101M10
C224	CEAT1R0M50
C227	CEAT220M25
C241	CEAT2R2M50
C243	CEAT330M16
C228	CEAT3R3M50
C237	CEAT470M10
C211	CEJA1R0M50
C210	CEJQ470M16
C204, C238, C602	CKSRYB102K50
C101, C102, C208, C220, C239	CKSRYB103K50
C242, C601	CKSRYB103K50
C216, C217, C225	CKSRYB153K50
C201, C205, C209, C214, C230	CKSRYB223K50
C236, C603	CKSRYB223K50
C221	CKSRYB224K10
C202, C222	CKSRYB473K16
C215	CKSRYB681K50

RESISTORS

R211	RD1/4PU221J
R221	RD1/4PU222J
R233	RD1/4PU391J
R243	RS1/10S0R0J
R103	RS1/10S331J
R104	RS1/10S391J
Other Resistors	RS1/16S###J

OTHERS

CN201 13P CONNECTOR	52044-1345
BN201 TERMINAL 4-P	AKA7003
(SHIELD CASE T)	ANK7072
(SHIELD CASE B)	ANK7073
X201 CRYSTAL RESONATOR	ASS1093
(7.2MHz)	
FM FRONTEND	AXF7003
AM RF TUNING BLOCK	AXX7071

6. ADJUSTMENT

6.1 TUNER SECTION

A



■ 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.

B

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.

C

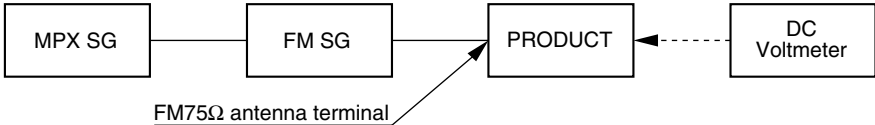


Fig.1 Adjustment Wiring Diagram

D

E

F

W FM/AM TUNER MODULE

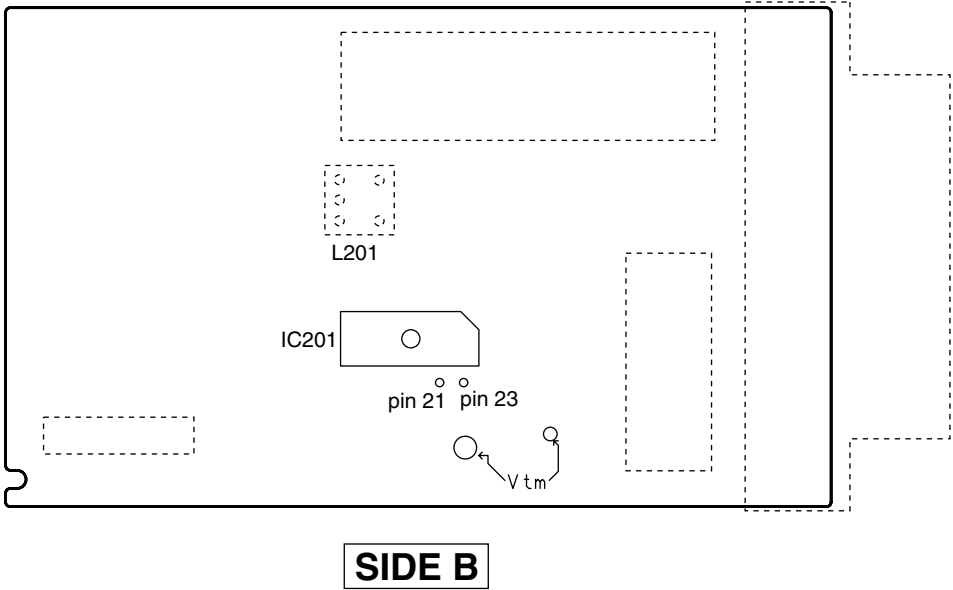


Fig.2 Adjustment Point

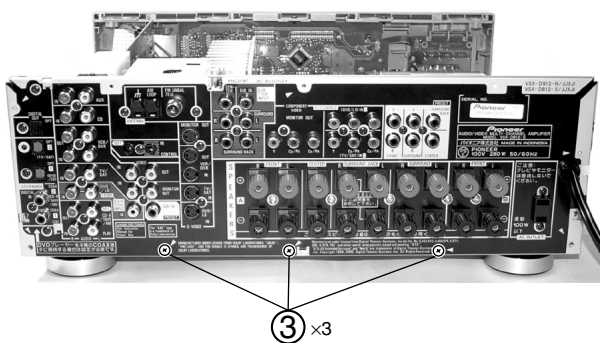
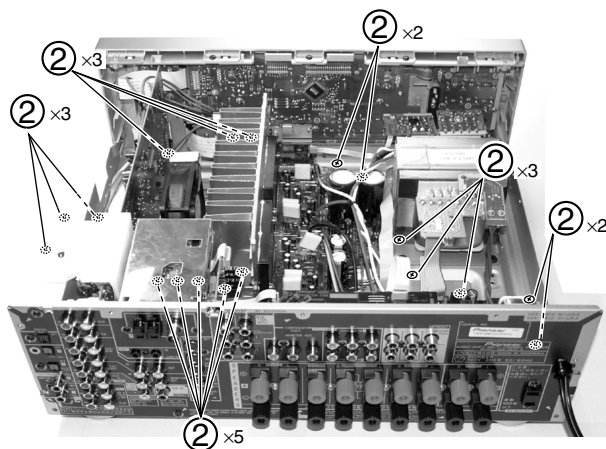
7. GENERAL INFORMATION

7.1 DIAGNOSIS

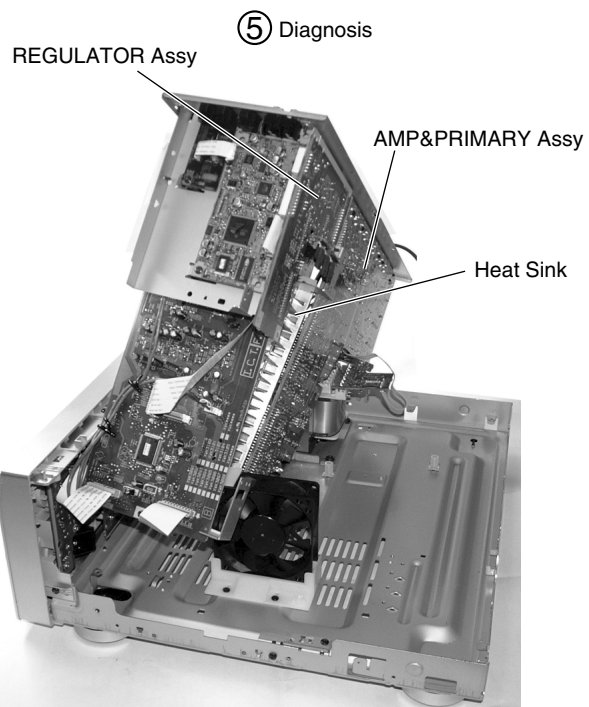
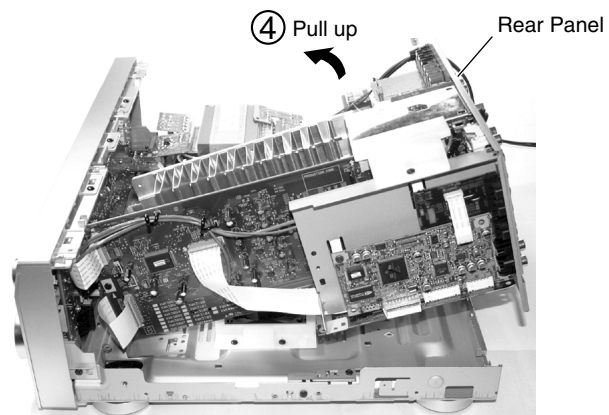
7.1.1 DISASSEMBLY AND DIAGNOSIS

■ Diagnosis

① Remove the top cover (nine screws).

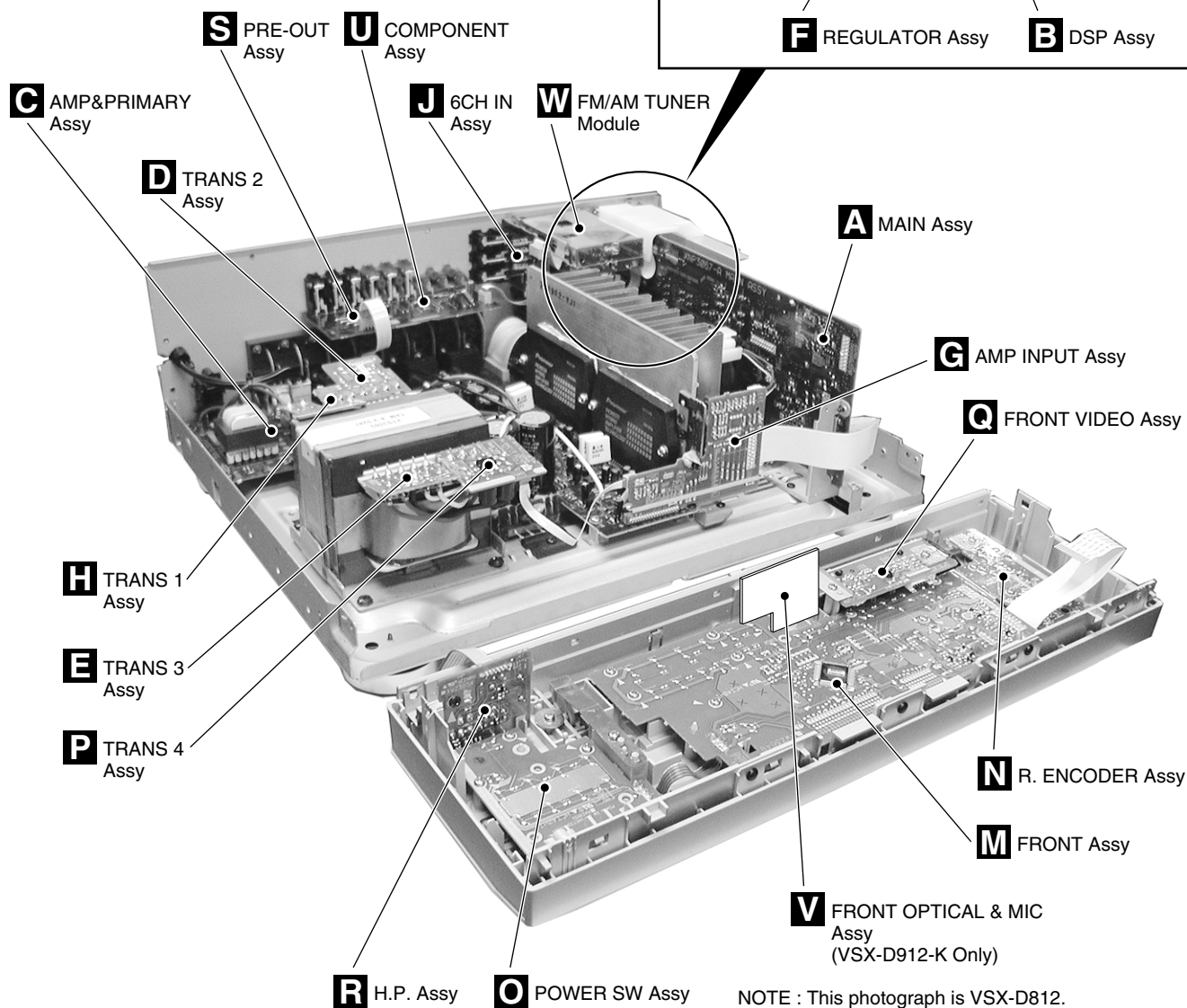
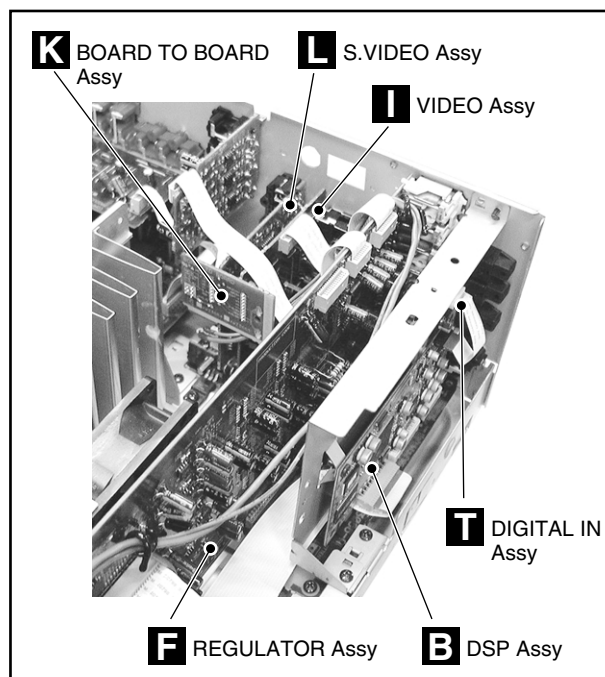


Note : This photograph shows other models.
However, the work method is the same.



Note : The unit does not operate when the screws of Speaker Terminal are taken off from Rear Panel.

7.1.2 PCB LOCATION



NOTE : This photograph is VSX-D812.

7.2.1 IC

- A

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

- **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 control
82	P06/D6	TUNER CLK	I/O	Clock signal for tuner control
83	P05/D5	TUNER DI	I/O	Data output signal for tuner control
84	P04/D4	TUNER CE	I/O	Chip select signal for tuner control
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	

• 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	

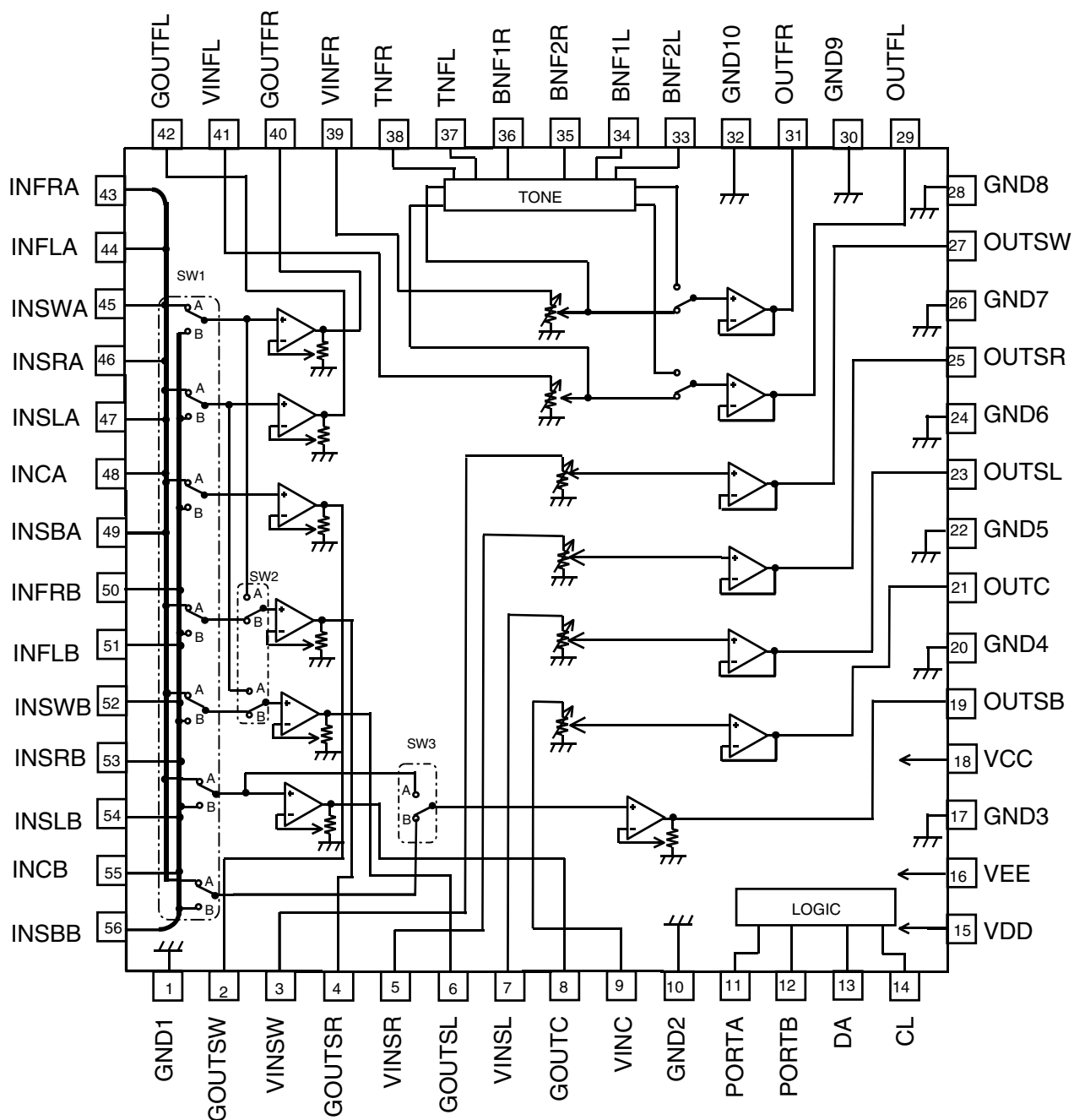
• Pin Function

No.	Port	Pin Name	I/O	Pin Function
41	FIP37/P45	NC	I/O	
42	FIP36/P44	NC	I/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

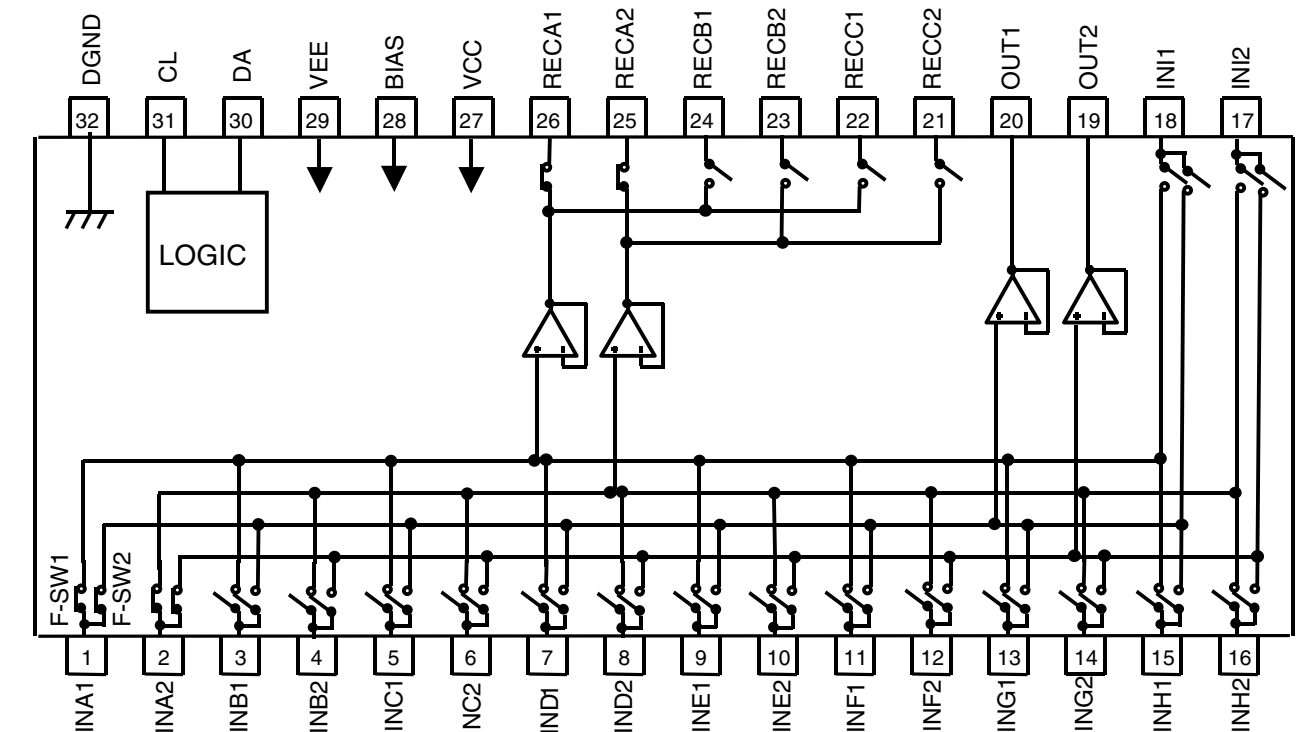
Terminal Number	Terminal Name	Description	Terminal Number	Terminal Name	Description
1	GND1	Ground terminal	14	CL	Serial clock input terminal
2	GOUTSW	Sub woofer input gain output terminal	15	VDD	Power supply terminal for port
3	VINSW	Subwoofer volume input terminal	16	VEE	(-)Power supply terminal
4	GOUTSR	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 speaker input 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 input terminal
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

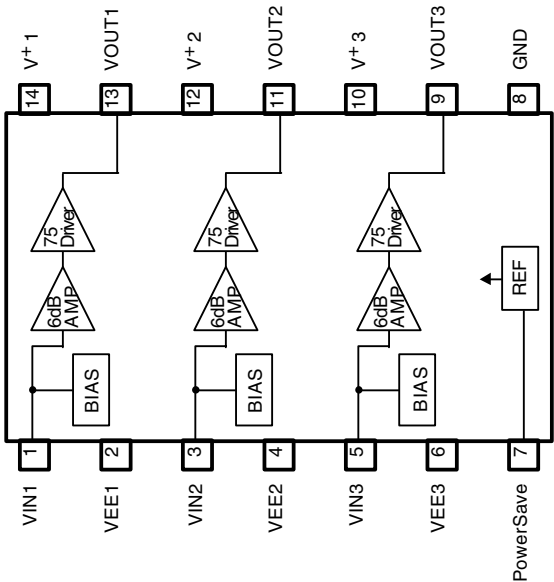
• Description of terminal

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

■ NJM2581 (COMPONENT ASSY : IC552)

• DUAL SUPPLY WIDE BAND 3ch VIDEO AMPLIFIER

■ Block Diagram



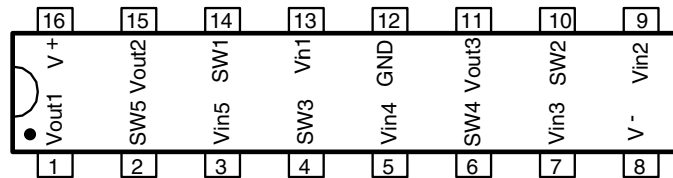
■ Equivalent Circuit

PIN No.	PIN NAME	FUNCTION	INSIDE EQUIVALENT CIRCUIT
1 3 5	VIN1 VIN2 VIN3	Input	
13 11 9	VOUT1 VOUT2 VOUT3	Output	
7	Power Save	Power Save	
14 12 10	V+1 V+2 V+3	V+	
2 4 6	VEE1 VEE2 VEE3	V-	
8	GND	GND	

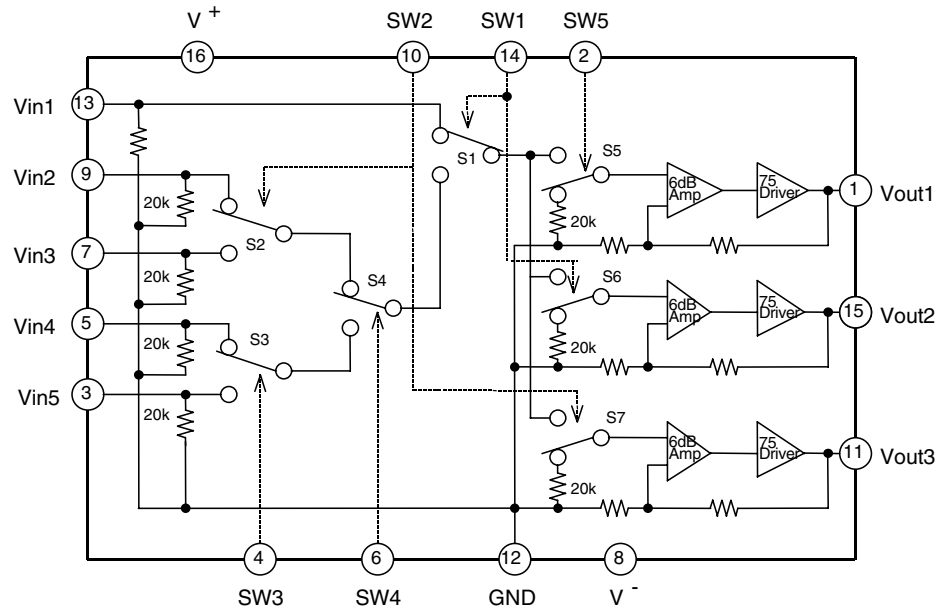
■ NJM2595 (VIDEO ASSY : IC301) (S. VIDEO ASSY : IC351, IC352)

- 5 input 3 output video SW for AV

■ Pin Arrangement (Top View)



■ Block Diagram



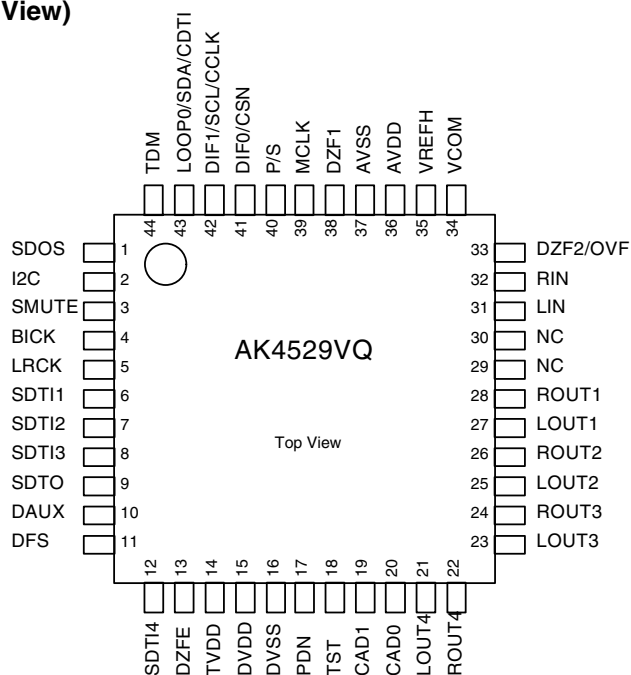
■ SW list for input and output (L=VCL,H=VCH,X=LorH)

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

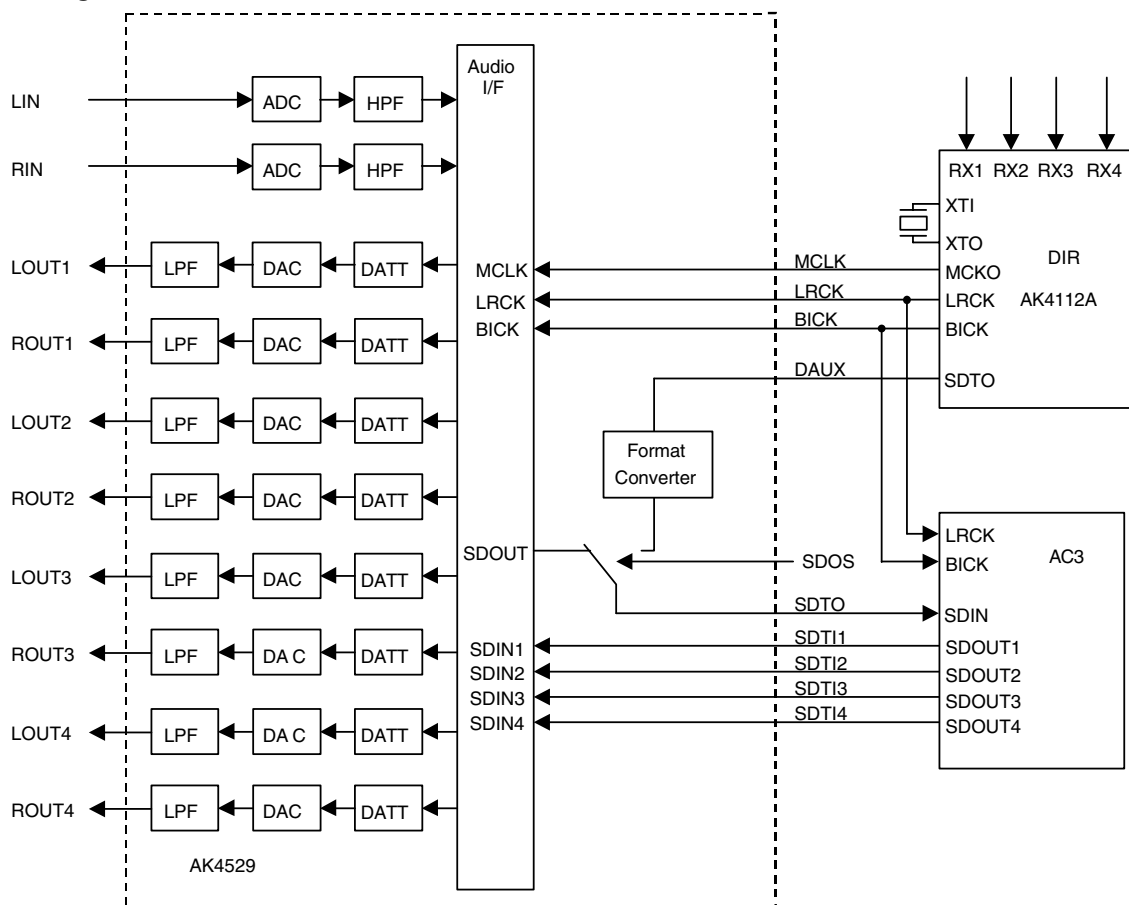
■ AK4529VQ (DSP ASSY : IC8401)

• 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 to DVDD 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

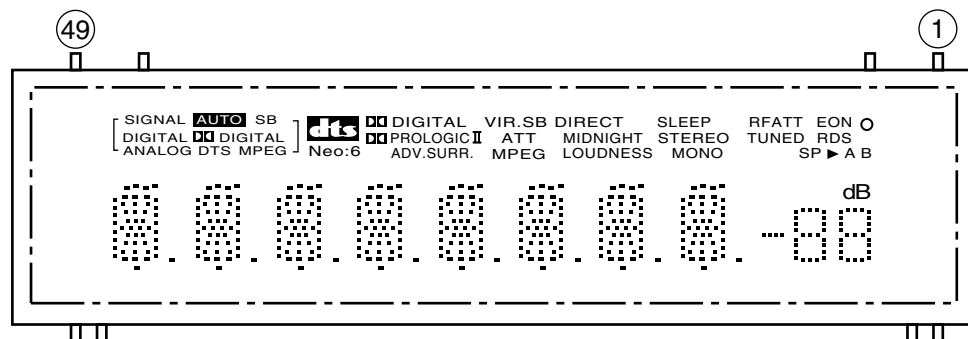
Notes: 1. SDOS, SMUTE, DFS, and TDM pins are ORed with register data if P/S = "L".
2. The group 1 and 2 can be selected by DZFM3-0 bits if P/S = "L" and DZFE = "L".
3. This pin becomes OVF pin if OVFE bit is set to "1" at serial control mode.
4. All input pins should not be left floating.

7.2.2 DISPLAY

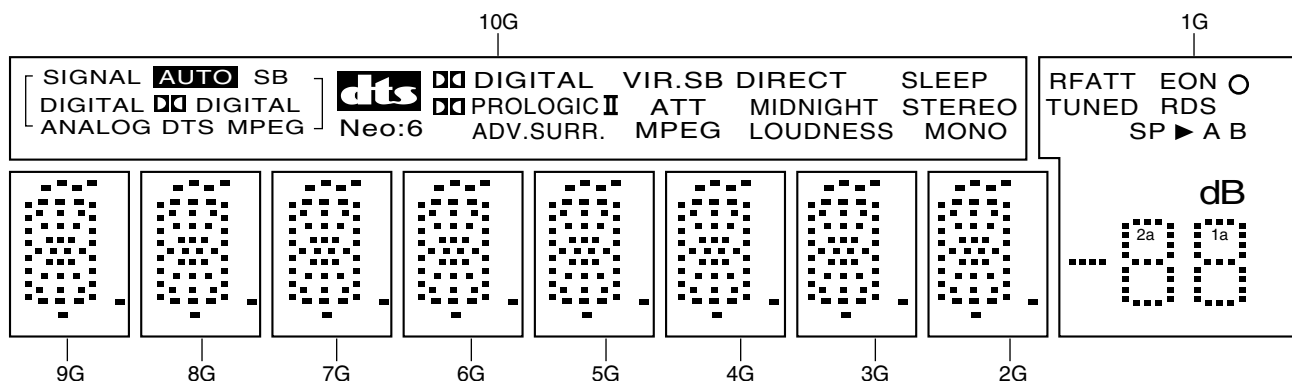
■ XAV3018 (FRONT ASSY : V401)

• FL DISPLAY

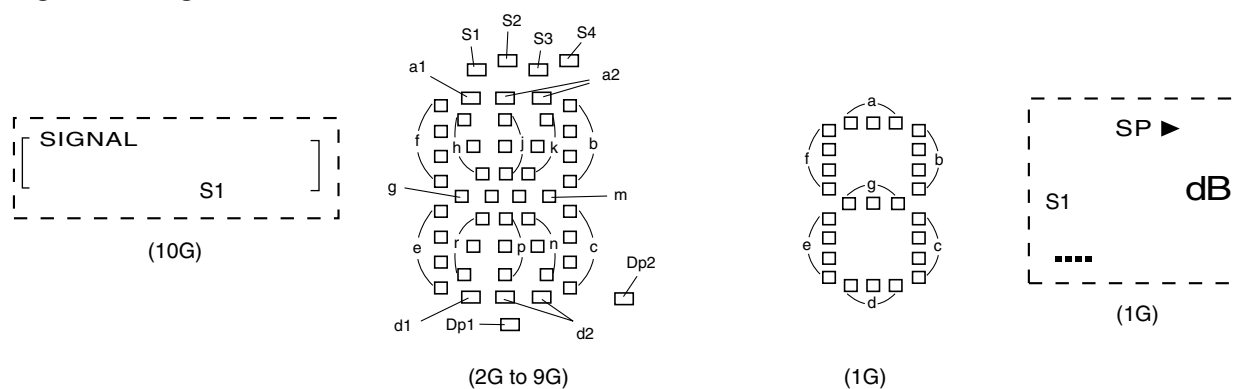
• Pin Assignment



• 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.

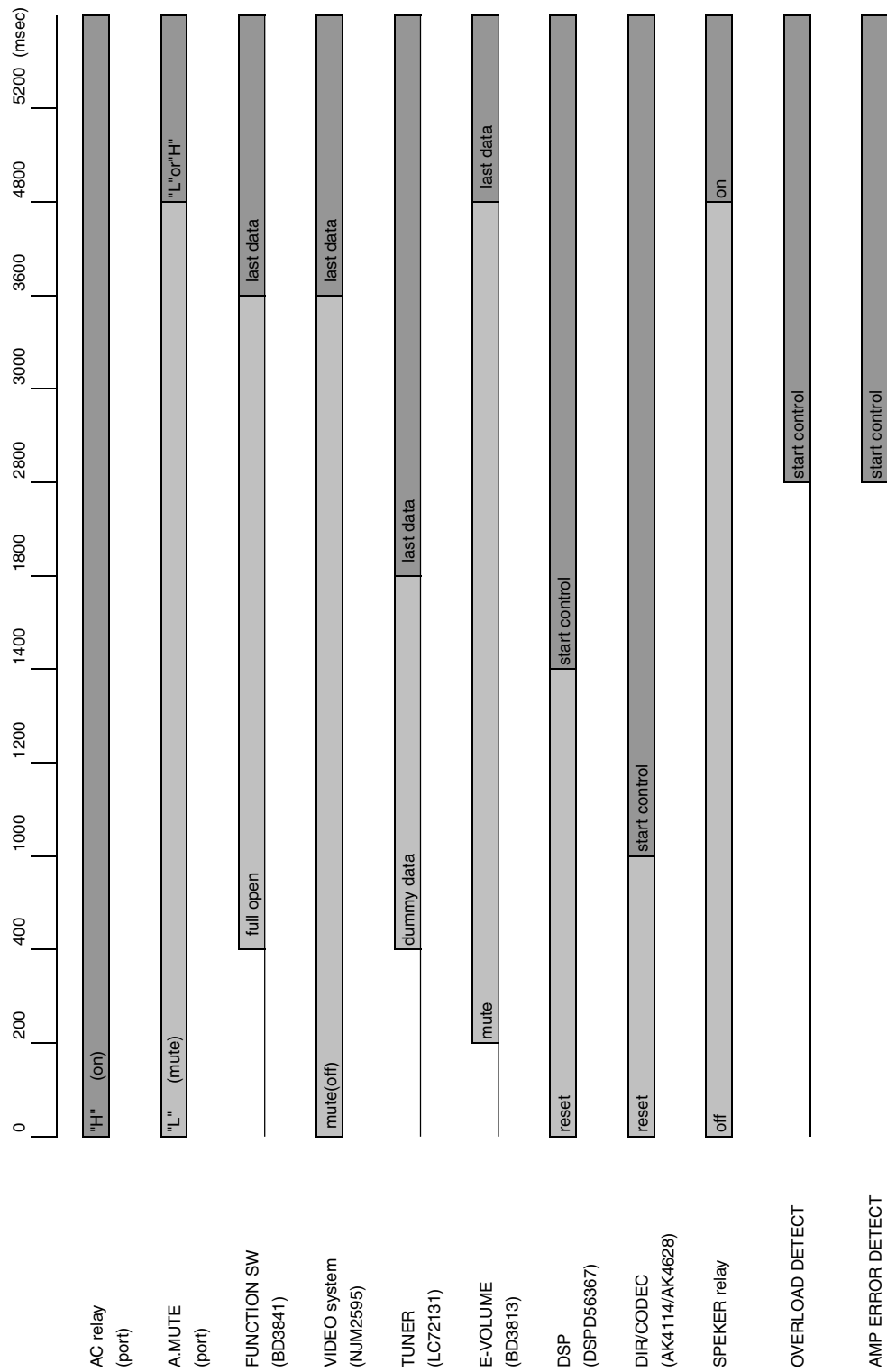
• Anode Connection

	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 II	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



A

■

B

■

C

■

D

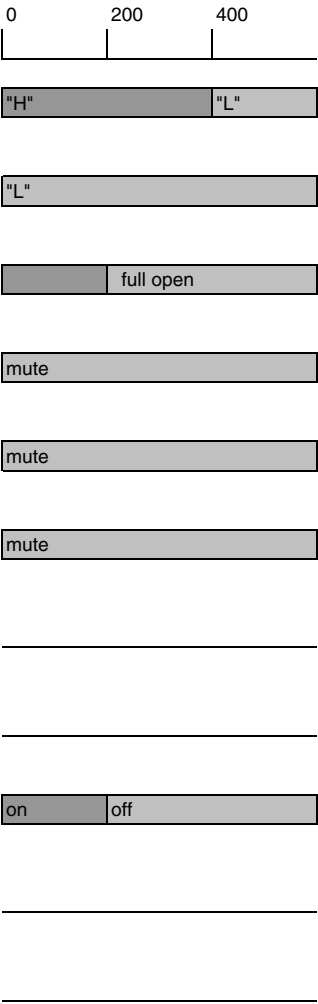
■

E

■

F

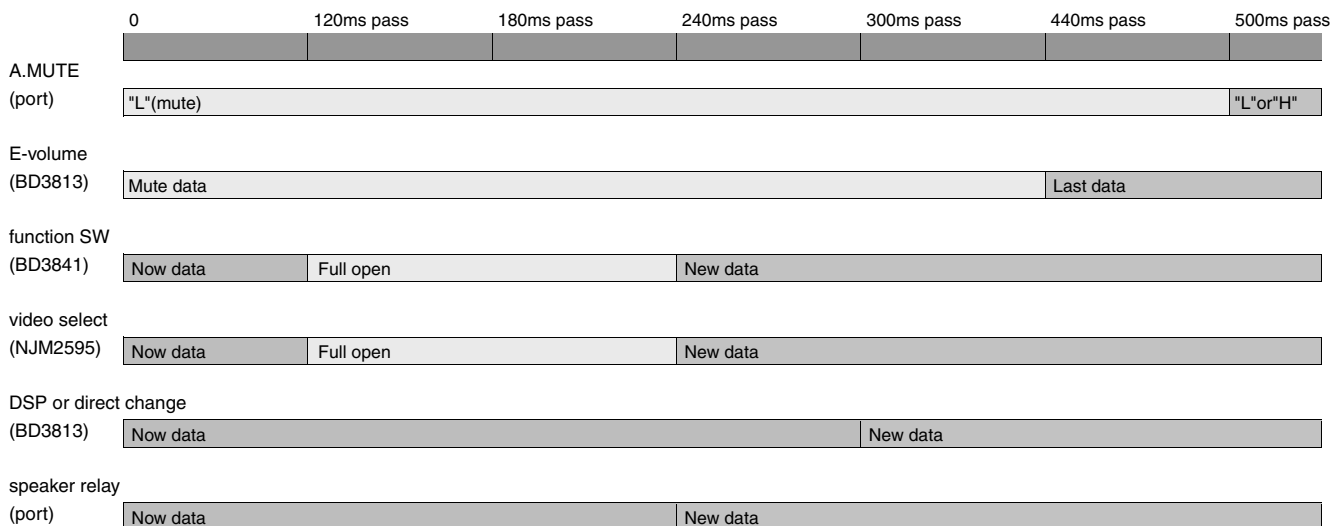
■ POWER OFF INITIAL TIMING CHART



7.3.2 IC DATA TRANSMISSION TIMING CHART

IC data transmission timing chart

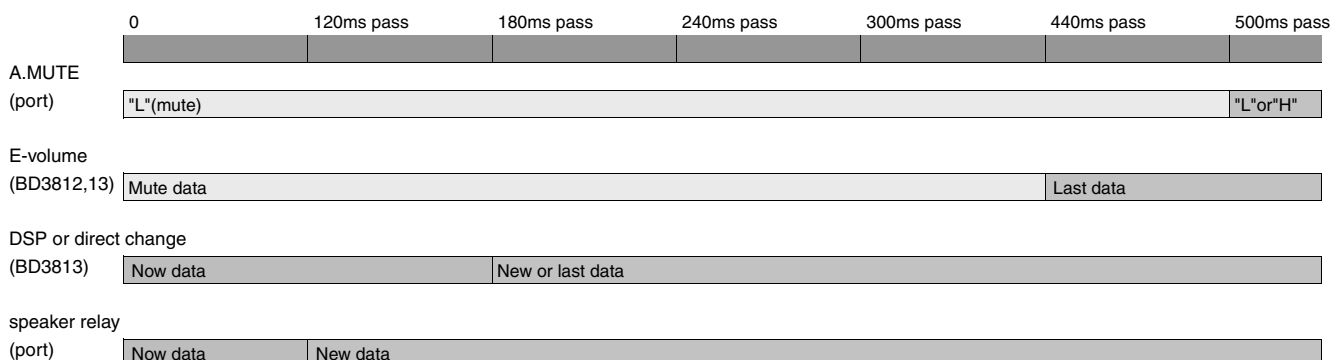
1. When function change



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 change

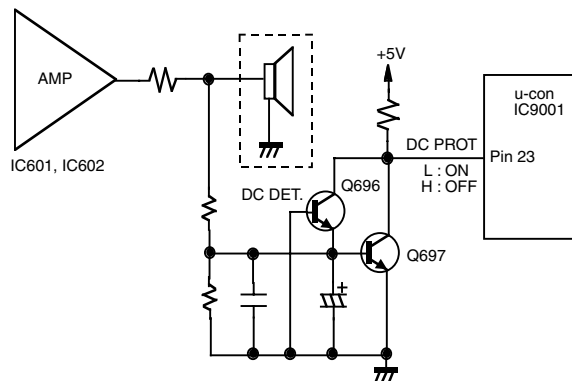


condition of mute cancel (system mute & E-volume mute)

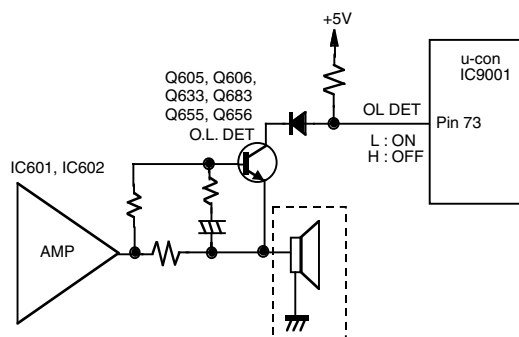
- 1) when tuner mute during Tuner function
- 2) when communicate to DSP
- 3) when initial processing
- 4) when detect trouble of AMP DC
- 5) when detect overload of AMP
- 6) when Power off
- 7) when muting by key input

7.3.3 DETECTION CIRCUIT

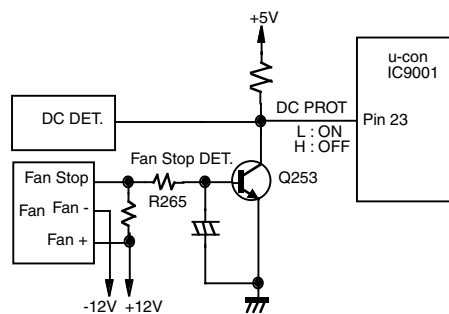
1.DC Detection Circuit Diagram:



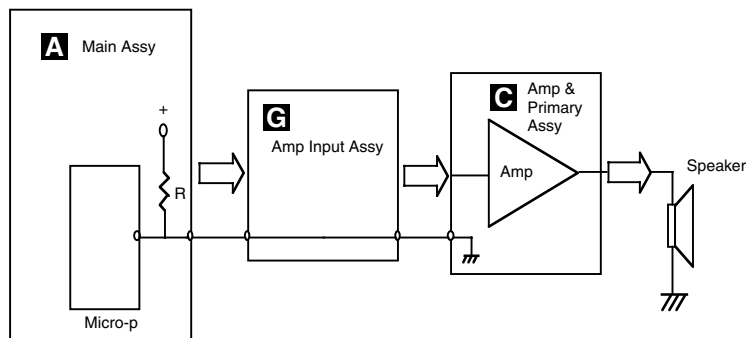
2. Overload Detection Circuit Diagram:



3. Fan Stop Protection 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.

↓ Recovery

The program restarts.



The power key is disabled and Standby LED blinks.

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. Boad 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 erre 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

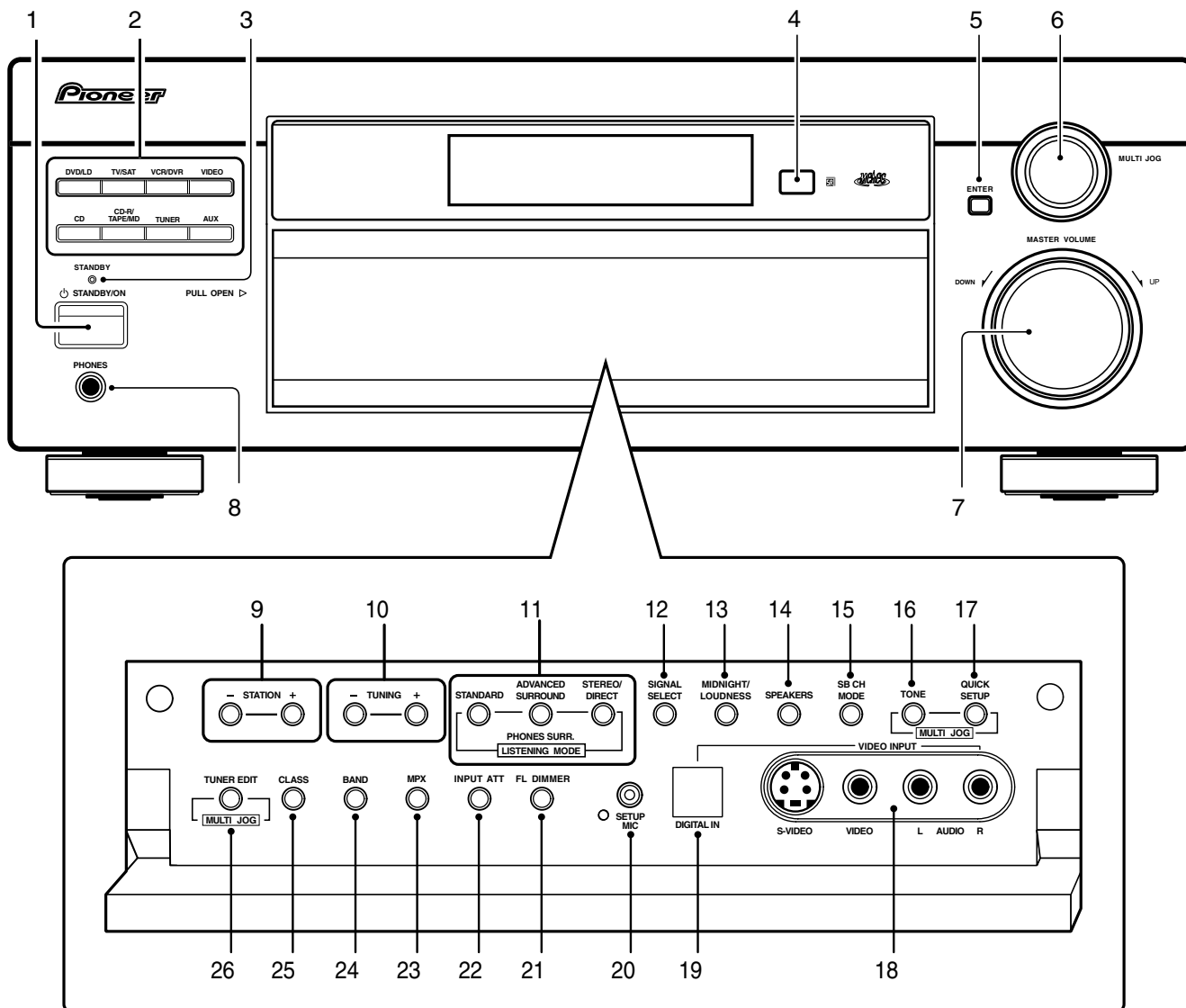


Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

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

8. PANEL FACILITIES

Front panel



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.

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

See Using the Quick Setup on.

18 VIDEO INPUT

See Connecting to the front panel video terminal.

19 DIGITAL IN

See Connecting to the front panel video terminal.

20 SETUP MIC

Connect the microphone supplied with your system to the SETUP MIC jack when using the auto surround setup (MCACC).

21 FL DIMMER

Use this button to make the fluorescent display (FL) dimmer or brighter.

22 INPUT ATT

Use to attenuate (lower) the level of an analog input signal to prevent distortion.

23 MPX

Press to receive a radio broadcast in mono.

24 BAND

Switches between AM and FM radio bands.

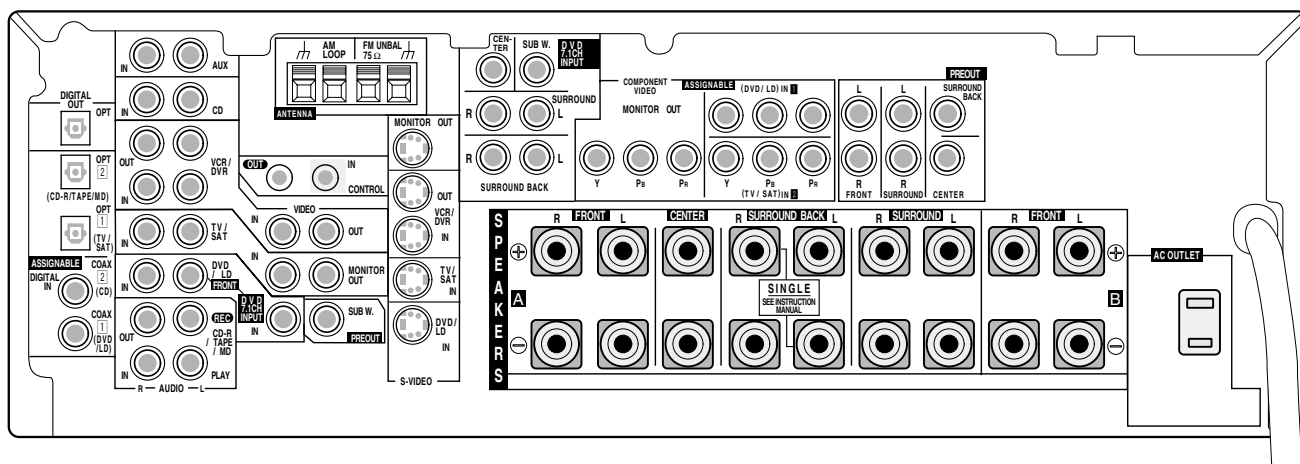
25 CLASS

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

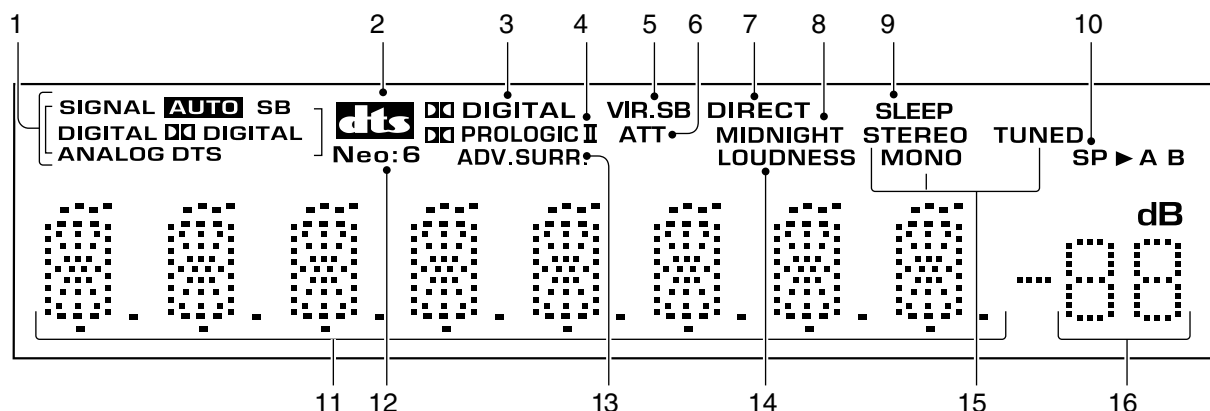
26 TUNER EDIT

Press to memorize and name a station for recall.

Rear panel



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 Speaker indicator

Shows the speaker system currently in use.

11 Character display

12 Neo:6

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

13 ADV.SURR. (Advanced Surround)

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

14 LOUDNESS

Lights when LOUDNESS has been selected.

15 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

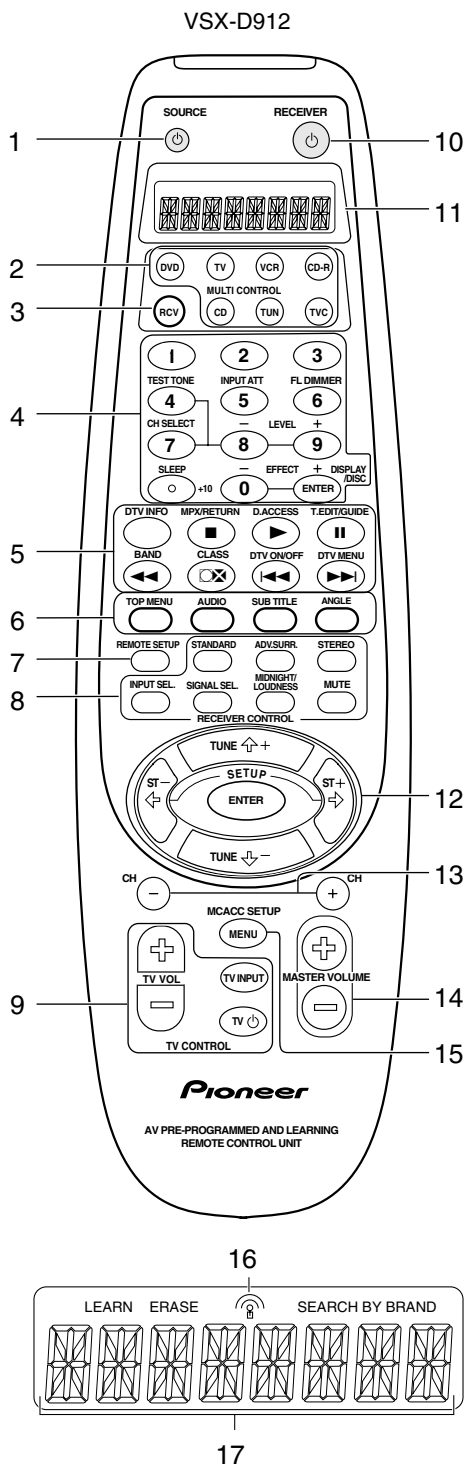
Lights when a broadcast is being received.

16 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



1 SOURCE

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

2 MULTI CONTROL buttons

Press to select control of other components (see Controlling the rest of your system).

3 RCV

Switches the remote to controls the receiver (used to select the features above the number buttons. (ex. INPUT ATT, FL DIMMER). Also use this button to set up surround sound.

4 Number buttons/Receiver controls/ENTER buttons

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

Press the RCV button first to access the functions above the number buttons. The display flashes when it isn't possible to use a function.

The following (except DISPLAY/DISC) are accessed by pressing RCV:

TEST TONE

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

INPUT ATT

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

FL DIMMER

Dims or brightens the display.

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.

EFFECT +/- buttons

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

SLEEP

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

DISPLAY/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. It can also be used to switch the display between the station preset name and the frequency for the tuner.

5 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 (TUN or TV (when connected to DTV)).

DTV INFO

Use to bring up information screens on a digital TV.

MPX/RETURN

Switches between stereo and mono reception of FM broadcasts. If the signal is weak then switching to mono will improve the sound quality. Also selects closed-captioning on DTVs.

D. ACCESS

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

T. EDIT/GUIDE

Press to memorize and name a station for recall using the STATION +/- buttons. Also displays the guides on a digital TV.

BAND

Switches between the tuner AM and FM bands.

CLASS

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

DTV ON/OFF

Switches a digital TV on/off.

DTV MENU

Displays menus on a digital TV.

6 DVD controls (Press DVD first to access)

These controls will also function as DTV controls, depending on the component you've selected.

TOP MENU

Displays the disc 'top' menu of a DVD.

AUDIO

Changes the audio language or channel.

SUBTITLE

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

ANGLE

Switches camera angles on discs with multi-angle scenes.

7 REMOTE SETUP

Press this button to set up the remote control to control other components.

8 RECEIVER CONTROL buttons

STANDARD

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

ADV. SURR.

Use to switch between the various surround modes.

STEREO

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

INPUT SEL.

Use to select the input source.

SIGNAL SEL.

Use to select between an input signal.

MIDNIGHT/LOUDNESS

Switches to Midnight or Loudness listening.

MUTE

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

9 TV CONTROL buttons

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

TV VOL +/-

Use to adjust the volume on your TV.

TV INPUT

Use select the TV function.

TV ⏻

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

10 RECEIVER ⏻

This switches between standby and on for this receiver.

11 LCD display

This display shows preset codes and other information when transmitting control signals.

12 ⏮⏭⏪⏩ (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.

13 CH +/-

Use to select channels when using a TV, VCR, DVR, etc. Also use to skip tracks backward or forward on CDs, DVDs, etc.

14 MASTER VOLUME +/-

Use to set the listening volume.

15 MCACC SETUP (Press RCV first to access)

Use to setup your speaker system using Multi-Channel Acoustic Calibration (MCACC).

MENU button

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

16 Transmit icon

Blinks to indicate the remote is transmitting control signals.

17 Character display (LCD)

The following commands are shown when you're setting the remote to control other components (see Controlling the rest of your system):

SETUP

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

DIR SET

See Direct function.

BRAND

See Searching for preset codes using brand names.

SEARCH

See Searching for preset codes.

LEARN

See Programming signals from other remote controls.

ERASE

See Erasing one of the remote control button settings.

RESET

See Clearing all the remote control settings.

READ ID

See Confirming preset codes.

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