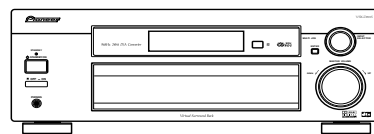


Service Manual



VSX-D811S-K

ORDER NO.
RRV2597

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-D811S-K

VSX-D811S-S

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

Model	Type	Power Requirement	Remarks
VSX-D811S-K	MVXJI	AC230V	
VSX-D811S-K	YXJIEW	AC220-230V	
VSX-D811S-K	YXJIGR	AC220-230V	
VSX-D811S-S	MYXJI	AC220-230V	



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

SAFTY INFORMATION



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

WARNING

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

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE

(FOR CANADIAN MODEL ONLY)

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

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

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

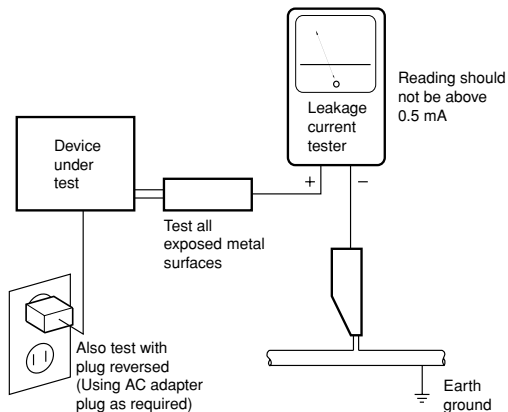
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

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

LEAKAGE CURRENT CHECK

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



AC Leakage Test

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

2. PRODUCT SAFETY NOTICE

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

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

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

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

[Important symbols for good services]

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

1. Product safety



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

2. Adjustments



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

3. Cleaning



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

4. Shipping mode and shipping screws



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

5. Lubricants, glues, and replacement parts



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

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1. SPECIFICATIONS

Amplifier Section

Continuous Power Output (STEREO mode)
Front 100 W per channel (DIN 1kHz, THD 1.0 %, 8 Ω)

Continuous Power Output
Front 100 W per channel (1kHz, THD 1.0 %, 8 Ω)
Center 100 W (1kHz, THD 1.0 %, 8 Ω)
Surround 100 W per channel (1kHz, THD 1.0 %, 8 Ω)
Surround Back 100 W per channel (1kHz, THD 1.0 %, 8 Ω)

- Above specifications are applicable when the power supply is 230V.

Input (Sensitivity/Impedance)
CD, VCR/DVR, CD-R/TAPE/MD, DVD/LD, TV/SAT ... 200 mV/47 k Ω

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 200 mV/2.2 k Ω

Tone Control
BASS ± 6 dB (100 Hz)
TREBLE ± 6 dB (10 kHz)
LOUDNESS +9 dB/+9 dB (100 Hz/10 kHz)

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 1 Vp-p/75 Ω

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

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

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

FM Tuner Section

Frequency Range 87.5 MHz to 108 MHz
Usable Sensitivity Mono:13.2 dBf, IHF (1.3 μ V/ 75 Ω)
50 dB Quieting Sensitivity Mono: 20.2 dB
Stereo: 38.6 dBf
Signal-to-Noise Ratio Mono: 73 dB (at 85 dBf)
Stereo: 70 dB (at 85 dBf)
Signal-to-Noise Ratio (DIN) Mono: 62 dB
Stereo: 58 dB
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
Sensitivity (IHF, Loop antenna) 350 μ V/m
Selectivity 25 dB
Signal-to-Noise Ratio 50 dB
Antenna Loop antenna

Miscellaneous

Power Requirements
UK model AC 230 V, 50/60 Hz
European model AC 220-230 V, 50/60 Hz
Power Consumption
VSX-D811S 280W
In Standby 1 W
Dimensions 420 (W) x 158 (H) x 401 (D) mm
Weight (without package)
VSX-D811S 10 kg

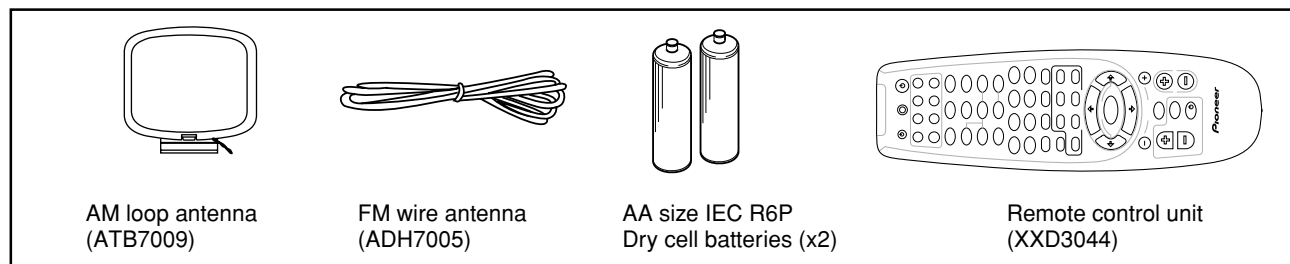
Furnished Parts

AM loop antenna 1
FM wire antenna 1
Dry cell batteries (AA size IEC R6P) 2
Remote control 1
Operating instructions 1

Note

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

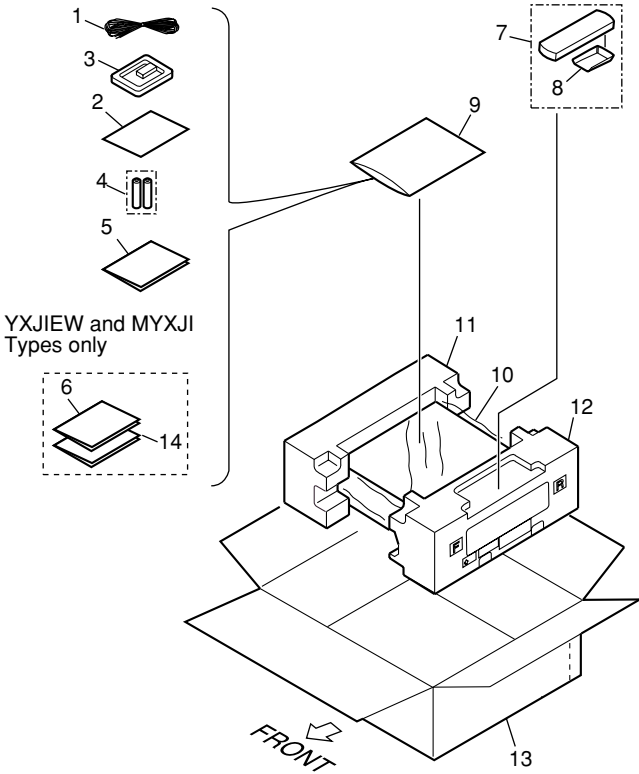
Accessories



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



(1) PACKING parts List

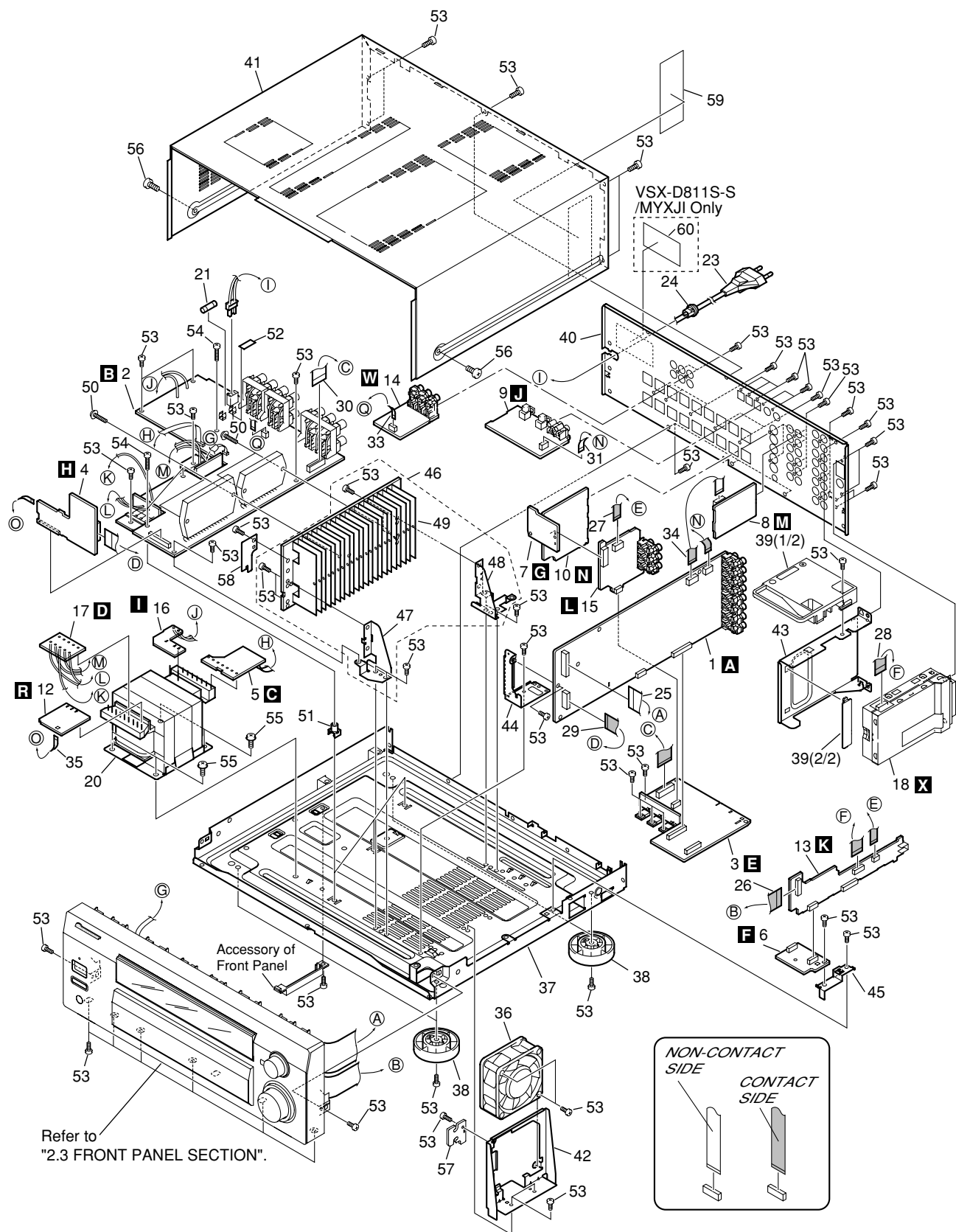
<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	FM wire antenna	ADH7005	8	Battery Cover	XZA3002
NSP 2	Warranty Card	ARY7022	NSP 9	Polyethylene Bag	Z21-038
3	AM loop antenna	ATB7009	10	Packing Sheet	AHG7069
NSP 4	Dry cell batteries (IEC R6P)	VEM-013			
5	Operating instructions (English/German)	XRE3059	11	Left Pad R5	XHA3032
			12	Right Pad R5	XHA3033
			13	Packing Case	See Contrast table (2)
6	Operating instructions (French/Italian)	See Contrast table (2)	14	Operating instructions (Dutch/Spanish)	See Contrast table (2)
7	Remote Control Unit	XXD3044			

(2) CONTRAST TABLE

VSX-D811S-K/MVXJI, YXJIEW, YXJIGR and VSX-D811S-S/MYXJI are constructed the same except for the following :

<u>Mark</u>	<u>NO</u>	<u>Symbol and Description</u>	<u>VSX-D811S-K/ MVXJI</u>	<u>VSX-D811S-K/ YXJIEW</u>	<u>VSX-D811S-K/ YXJIGR</u>	<u>VSX-D811S-S/ MYXJI</u>	<u>Remarks</u>
	6	Operating Instructions (French/Italian)	Not used	XRC3060	Not used	XRC3060	
	13	Packing Case	XHD3207	XHD3207	XHD3207	XHD3295	
	14	Operating Instructions (Dutch/Spanish)	Not used	XRC3071	Not used	XRC3071	

2.2 EXTERIOR SECTION



(1) EXTERIOR SECTION parts List

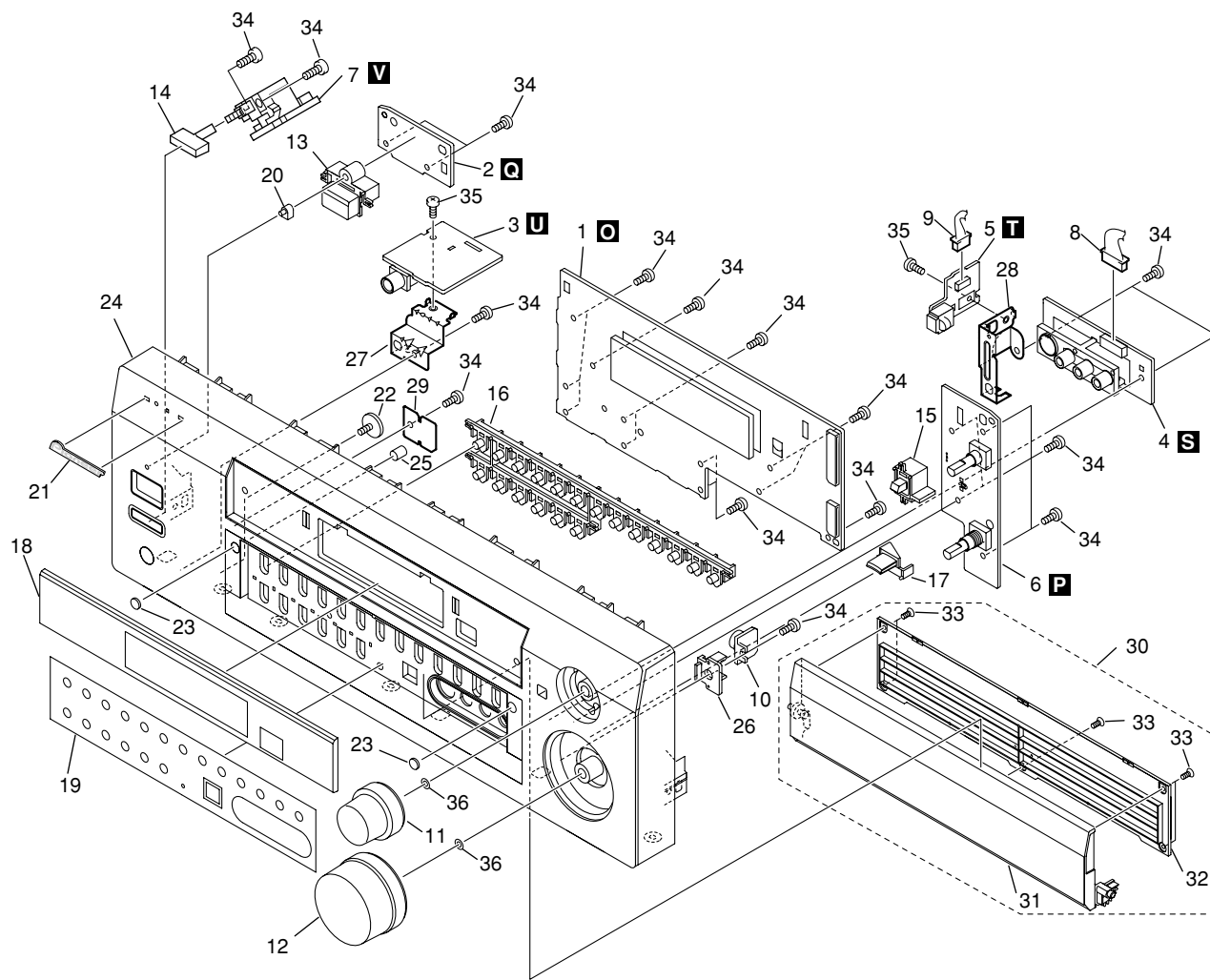
Mark No.	Description	Part No.	Mark No.	Description	Part No.	
1	D.D & INPUT ASSY	XWX3049		- REGULATOR CN801		A
2	AMP & PRIMARY ASSY	XWZ3540				
3	REGULATOR ASSY	XWZ3546	31	7P F•F•C/30V (J37)	XDD3103	
4	AMP INPUT ASSY	XWZ3551		DD CN9101		
5	TRANS2 ASSY	XWZ3559		- DIGITAL IN CN1901		
			32	•••••		
6	HASHIGETA ASSY	XWZ3568	33	7P F•F•C/30V (J46)	XDD3105	
7	BOARD TO BOARD ASSY	XWZ3577		AMP CN604		
8	6CH IN ASSY	XWZ3508		- PRE-OUT CN1575		
9	DIGITAL IN ASSY	XWZ3519	34	9P F•F•C/30V (J48)	XDD3106	
10	S. VIDEO ASSY	XWZ3522		DD CN104		
				- 6CH IN CN307		
11	•••••		35	3P F•F•C/30V (J22)	XDD3107	B
12	TRANS4 ASSY	XWZ3526		AMP INPUT CN251		
13	KAWA ASSY	XWZ3529		- TRANS4 CN891		
14	PRE-OUT ASSY	XWZ3530				
15	VIDEO ASSY	XWZ3584	⚠ 36	Fan Motor	XXM3002	
NSP 16	TRANS1 ASSY	XWZ3554	NSP 37	Under Base 409	ANA7094	
NSP 17	TRANS3 ASSY	XWZ3562	38	Insulator	PNW2766	
18	FM/AM TUNER MODULE	AXQ7232	39	FFC Cover R5	XMR3047	
19	•••••		40	Rear Panel	XNC3145	
⚠ 20	Power Transformer (T1)	XTS3063	41	Bonnet D510	See Contrast table (2)	C
⚠ 21	FU1 (T3.15A)	REK1027	42	Fan Holder R4	XNG3040	
22	•••••		43	Tuner Shield R5	XNG3072	
⚠ 23	AC Power Cord	See Contrast table (2)	44	PCB Angle R5	XNG3073	
24	Cord Stopper	CM-22B	45	Reg Support R5	XNG3074	
25	28P F•F•C/30V (J31)	XDD3097	NSP 46	Heat Sink Assy 0.4*40	XNH3020	
	DD CN102		47	Heat Sink Angle F	ANG7251	
	- FRONT CN402		48	Heat Sink Angle R	ANG7252	
26	17P F•F•C/30V (J32)	XDD3098	NSP 49	Heat Sink	XNH3019	
	KAWA CN5001		50	Screw 3x23	ABA7043	
	- FRONT CN401					D
27	7P F•F•C/30V (J33)	XDD3099	51	PCB Mold	AMR2533	
	KAWA CN5004		52	Fuse Card AAX7493		
	- VIDEO CN503		53	Screw	BBZ30P080FMC	
28	13P F•F•C/30V (J34)	XDD3100	54	Screw	BBZ30P200FMC	
	KAWA CN5005		55	Screw	FBT40P080FZK	
	- FM/AM TUNER CN201		56	Screw	See Contrast table (2)	
29	19P F•F•C/30V (J35)	XDD3101	NSP 57	Binder ASSY	XWZ3571	
	DD CN106		NSP 58	Holder ASSY	XWZ3574	
	- AMP INPUT CN254		59	Tuner Sheet MY	XEC3031	
30	23P F•F•C/30V (J36)	XDD3102	NSP 60	N Label 811S/MY	See Contrast table (2)	E
	AMP CN53					

(2) CONTRAST TABLE

VSX-D811S-K/MVXJI, YXJIEW, YXJIGR and VSX-D811S-S/MYXJI are constructed the same except for the following :

Mark	NO	Symbol and Description	VSX-D811S-K/ MVXJI	VSX-D811S-K/ YXJIEW	VSX-D811S-K/ YXJIGR	VSX-D811S-S/ MYXJI	Remarks
⚠	23	AC Power Cord	VDG1076	VDG1080	VDG1080	VDG1080	
	41	Bonnet D510	XZN3112	XZN3112	XZN3112	XZN3123	
	56	Screw	FBT40P080FZK	FBT40P080FZK	FBT40P080FZK	FBT40P080FNI	
NSP	60	N Label 811S/MY	Not used	Not used	Not used	XAL3113	

2.3 FRONT PANEL SECTION



(1) FRONT PANEL SECTION parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	FRONT ASSY	XWZ3502	20	Led Lens 1.6	XAK3308
2	POWER SW ASSY	XWZ3510	21	Pioneer Badge	See Contrast table (2)
3	H.P. ASSY	XWZ3513	22	Screw DR 3x8W	XBA3010
4	FRONT VIDEO ASSY	XWZ3515	23	Cushion R4	See Contrast table (2)
5	FRONT OPTICAL ASSY	XWZ3516	24	Front Panel	See Contrast table (2)
6	R. ENCODER ASSY	XWZ3582	25	Magnet R5	XMF3002
7	MECHA SW ASSY	XWZ3514	26	Holder L R5	XMR3046
NSP 8	8P Shielded Cable (J29)	XDX3012	27	Earth Plate R5 HP	XNG3066
NSP 9	6P Shielded Cable (J30)	XDX3018	28	Earth Plate R5 D	XNG3067
10	Damper Assy	AXA7052	29	Magnet Cover R5	XNG3075
11	Select Knob R5	See Contrast table (2)	30	Door Assy R5	See Contrast table (2)
12	Volume Knob R5	See Contrast table (2)	NSP 31	Door R5	See Contrast table (2)
13	Power Button R5	See Contrast table (2)	NSP 32	Door Cover R5	See Contrast table (2)
14	Power Button R5M	See Contrast table (2)	NSP 33	Screw 2x35	See Contrast table (2)
15	Jog Button R5	See Contrast table (2)	34	Screw	PPZ30P080FMC
16	Door Button R5	See Contrast table (2)	35	Screw	BBZ30P080FMC
17	B Lens R4	XAK3181	NSP 36	C Ring DIM 8.1	XBH3016
18	D Panel R5 W	XAK3320			
19	BN Cover 811/MY	See Contrast table (2)			

(2) CONTRAST TABLE

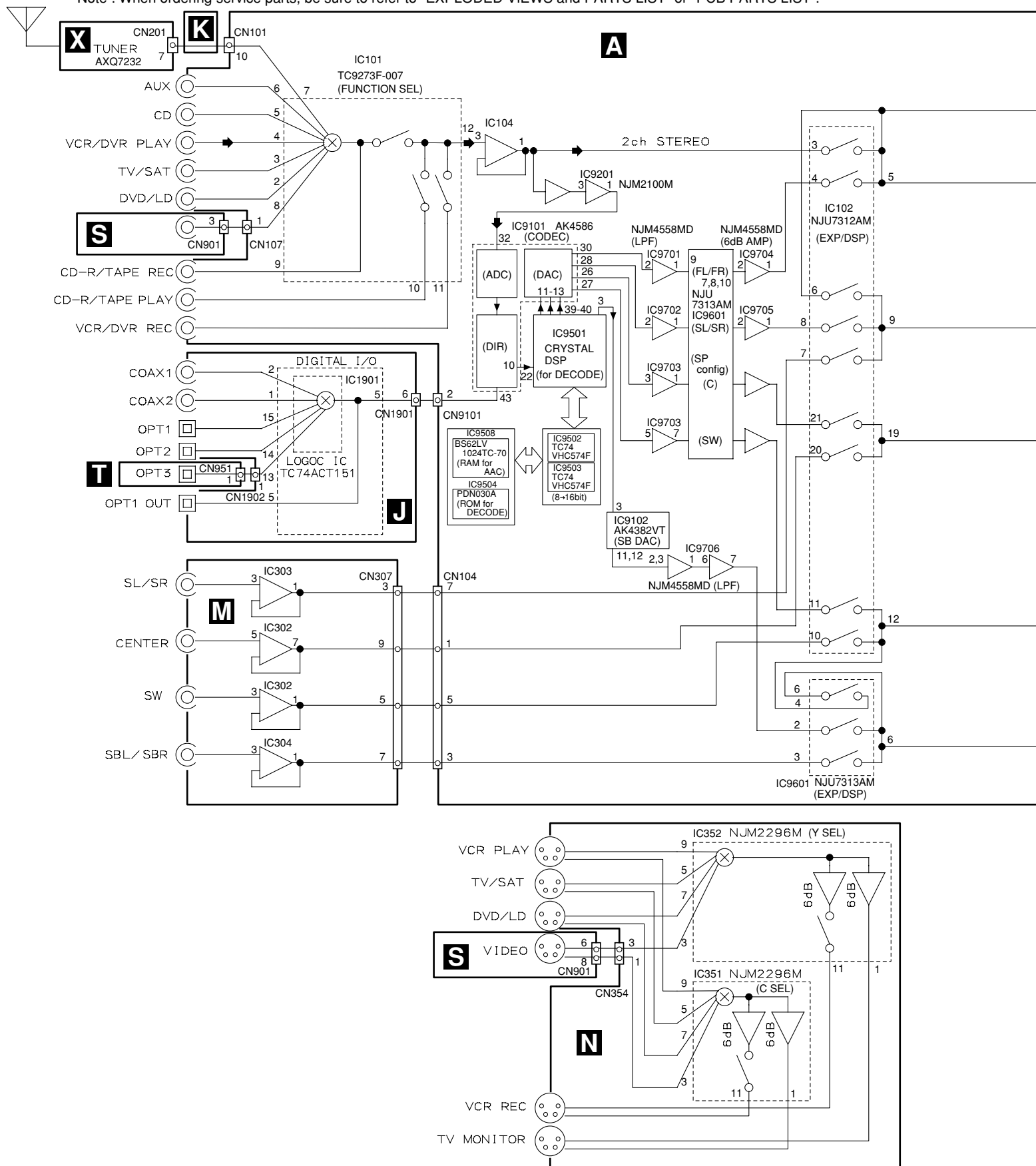
VSX-D811S-K/MVXJI, YXJIEW, YXJIGR and VSX-D811S-S/MYXJI are constructed the same except for the following :

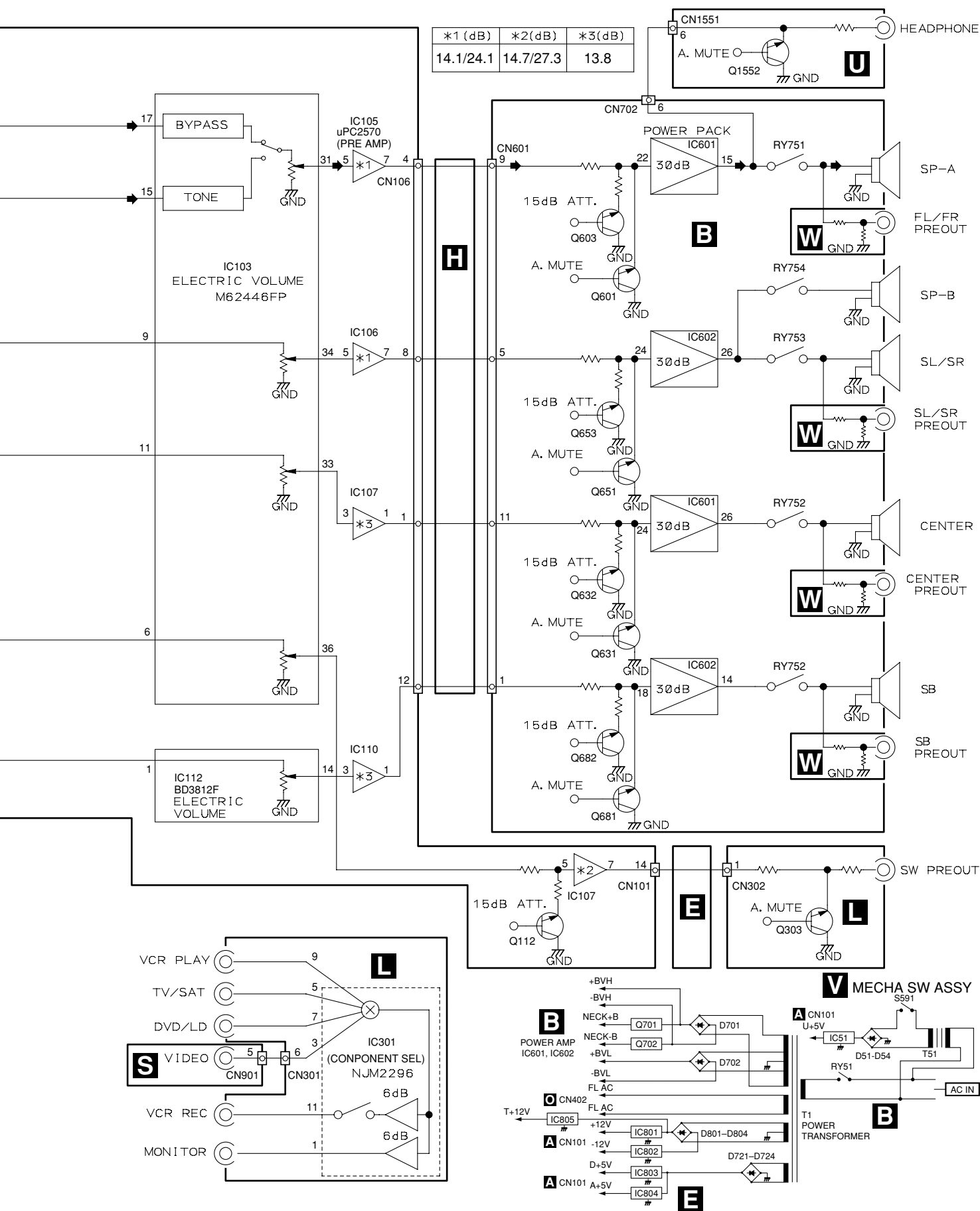
Mark	NO	Symbol and Description	VSX-D811S-K/ MVXJI	VSX-D811S-K/ YXJIEW	VSX-D811S-K/ YXJIGR	VSX-D811S-S/ MYXJI	Remarks
	11	Select Knob R5	XAB3023	XAB3023	XAB3023	XAB3024	
	12	Volume Knob R5	XAB3025	XAB3025	XAB3025	XAB3026	
	13	Power Button R5	XAD3123	XAD3123	XAD3123	XAD3129	
	14	Power Button R5M	XAD3127	XAD3127	XAD3127	XAD3137	
	15	Jog Button R5	XAD3124	XAD3124	XAD3124	XAD3131	
	16	Door Button R5	XAD3126	XAD3126	XAD3126	XAD3135	
	19	BN Cover 811/MY	XAK3292	XAK3292	XAK3292	XAK3289	
	21	Pioneer Badge	XAM3006	XAM3006	XAM3006	VAM1129	
	23	Cushion R4	XED3001	XED3001	XED3001	XED3003	
	24	Front Panel	XMB3067	XMB3067	XMB3067	XMB3073	
	30	Door Assy R5	XXG3091	XXG3091	XXG3091	XXG3093	
NSP	31	Door R5B	XAK3275	XAK3275	XAK3275	XAK3281	
NSP	32	Door Cover R5	XAK3276	XAK3276	XAK3276	XAK3283	
NSP	33	Screw 2x35	XBA3007	XBA3007	XBA3007	XBA3008	

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

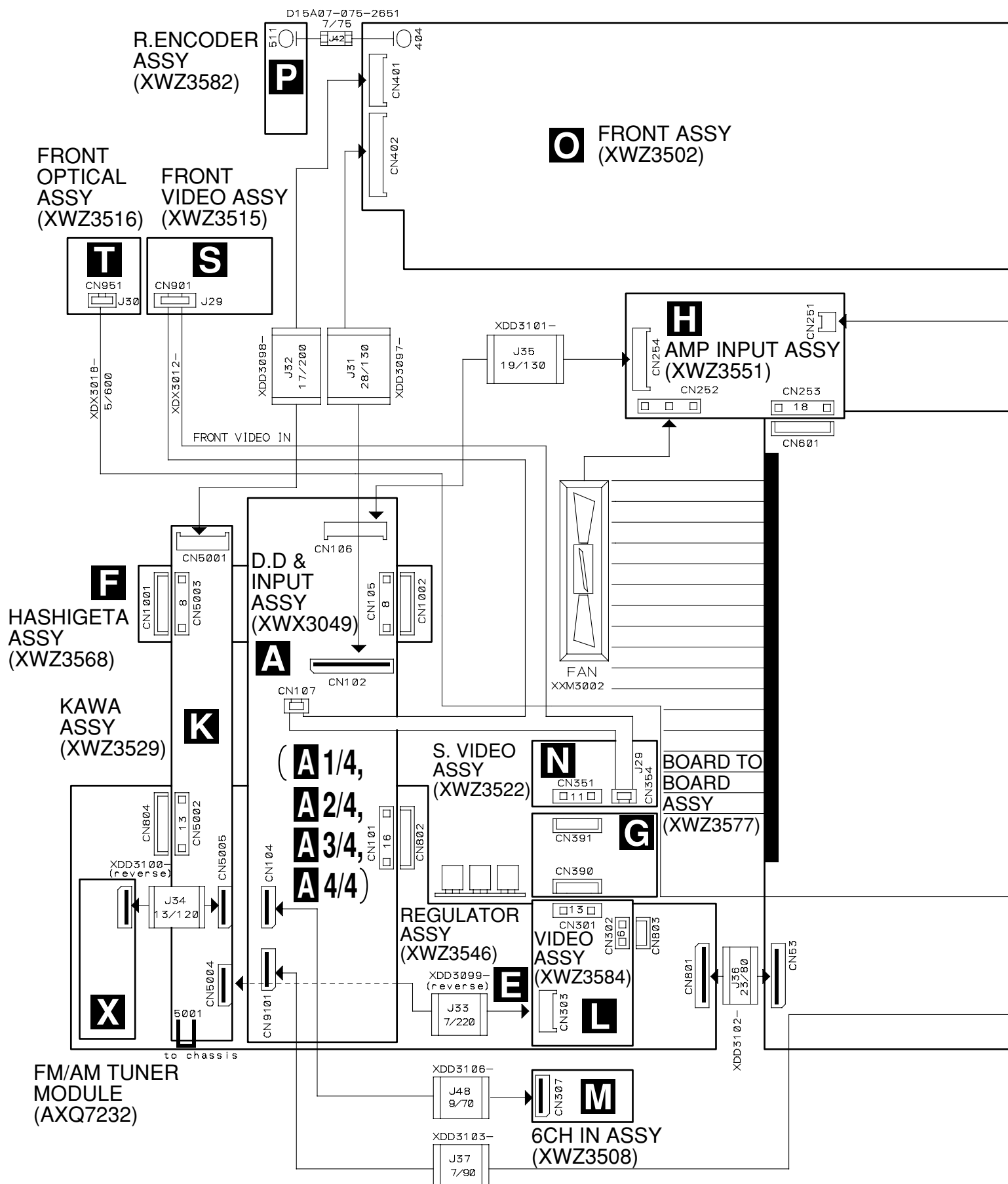
3.1 BLOCK DIAGRAM

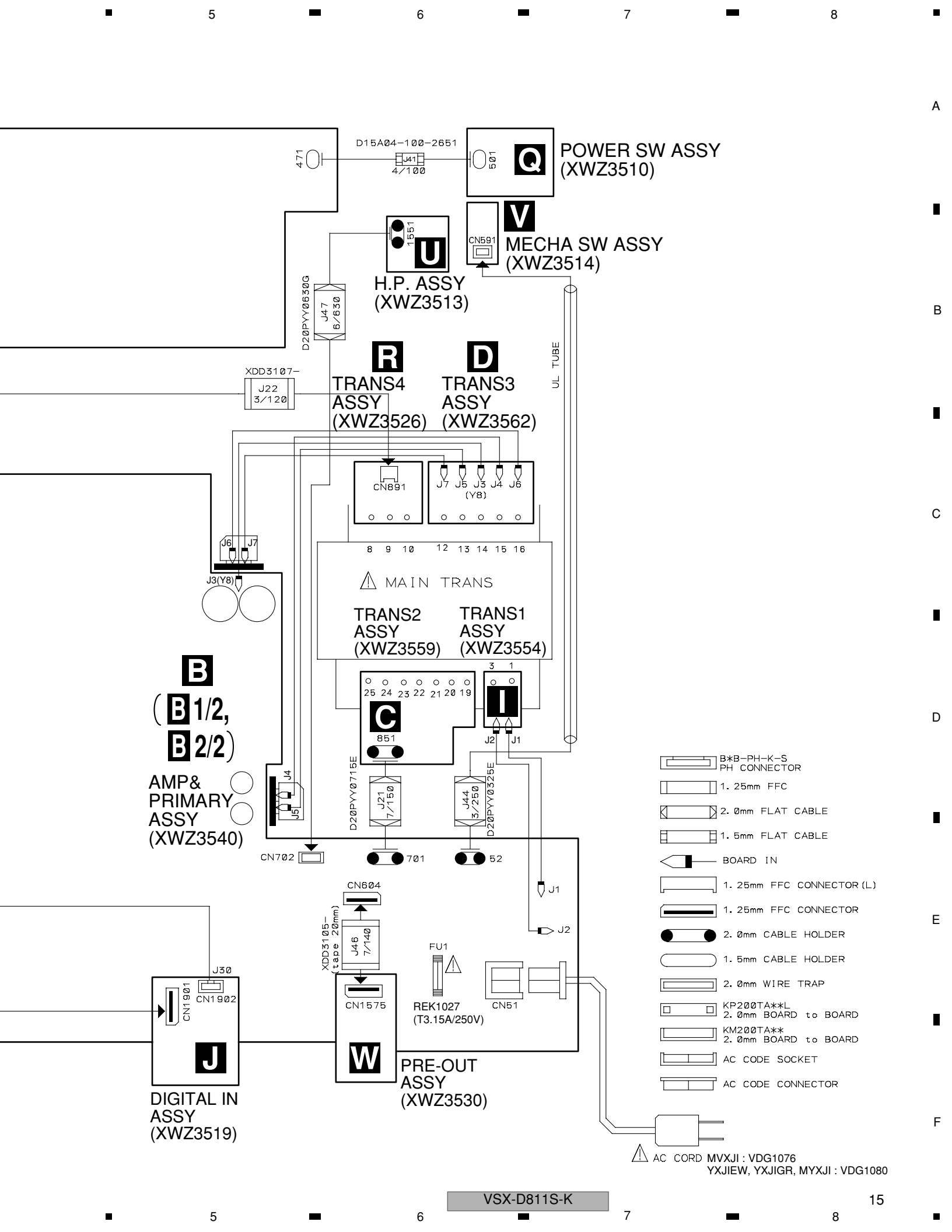
Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".





3.2 OVERALL WIRING CONNECTION DIAGRAM





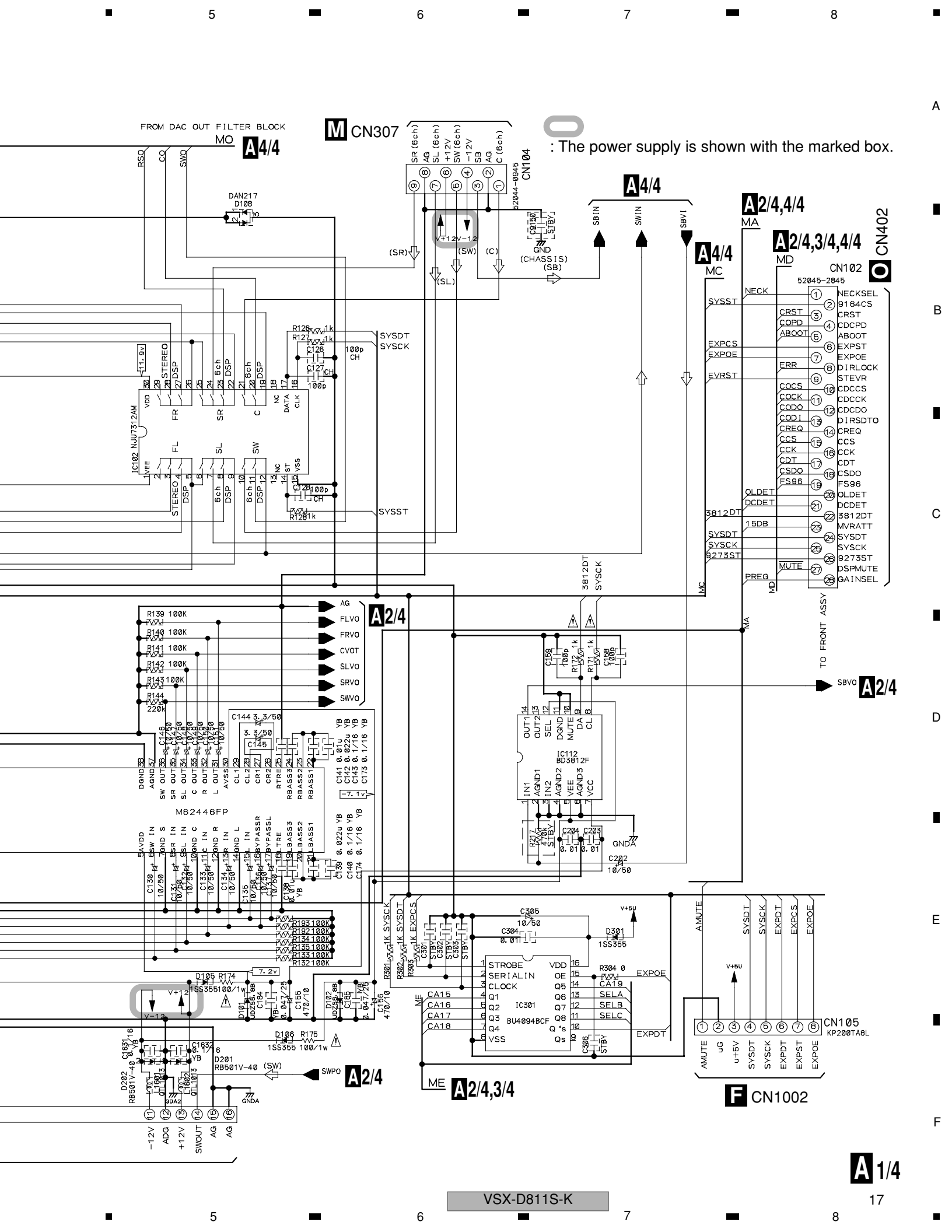
A 1/4

TO REG. ASSY



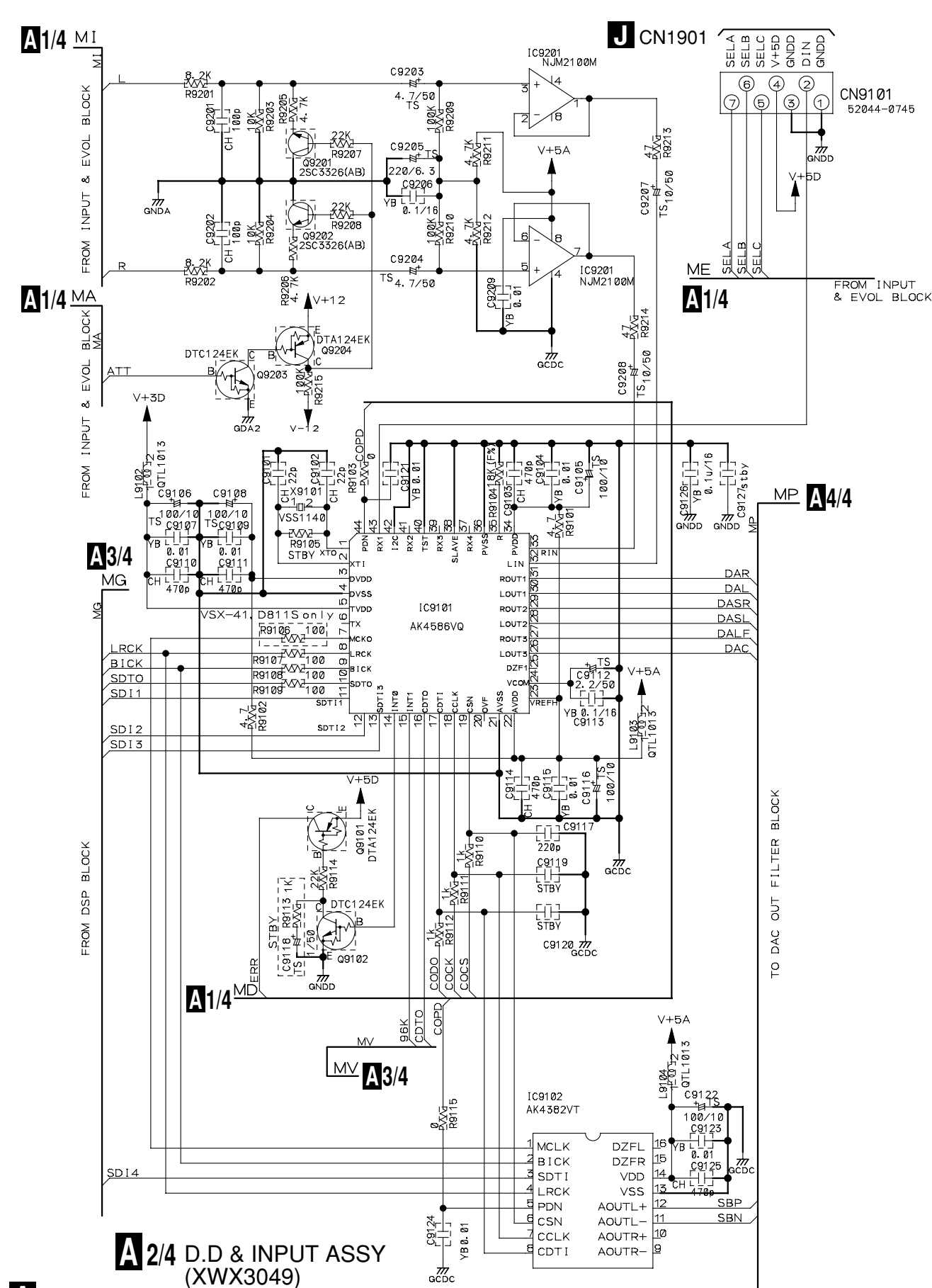
(S) : CKSC
➡ : AUDIO SIGNAL FLOW

VSX-D811S-K



The power supply is shown with the marked box.

3.4 D.D & INPUT (2/4) ASSY



A 2/4

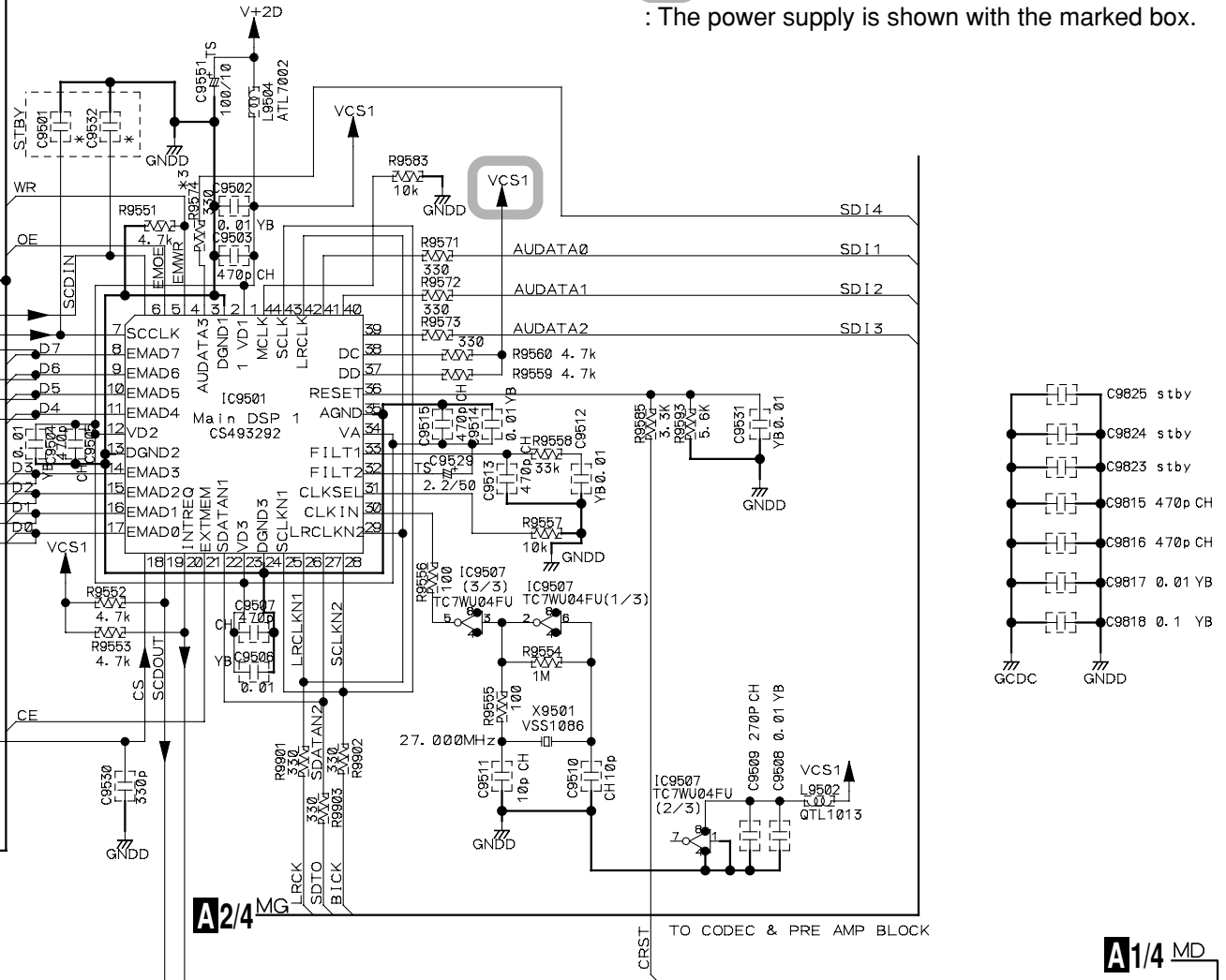


20



Main DSP 1 decodes D.D and DTS signals.

: The power supply is shown with the marked box.

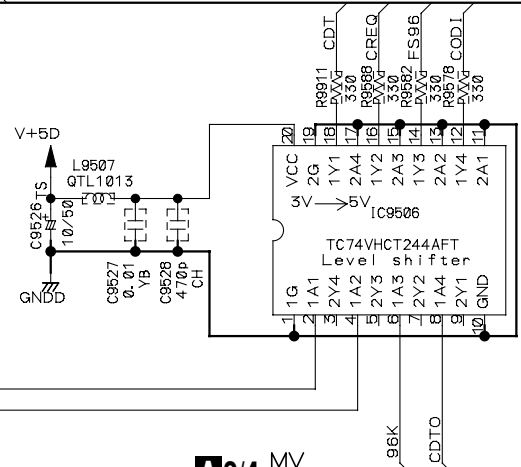


A3/4 D.D & INPUT ASSY
(XWX3049)

*3	R9574
VSX-D811S	USE

A2/4 MV

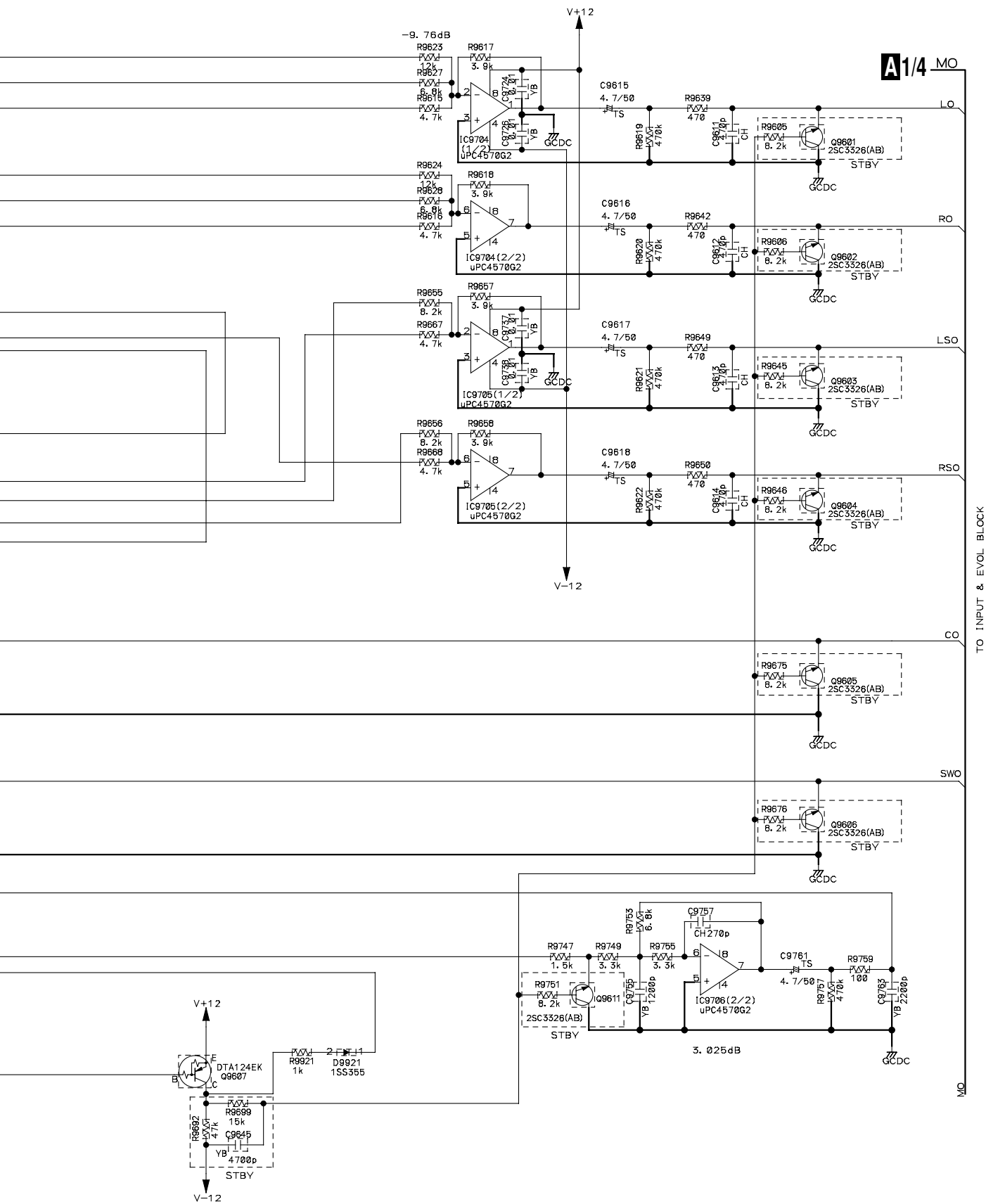
TO CODEC & PRE AMP BLOCK



A3/4

A 4/4





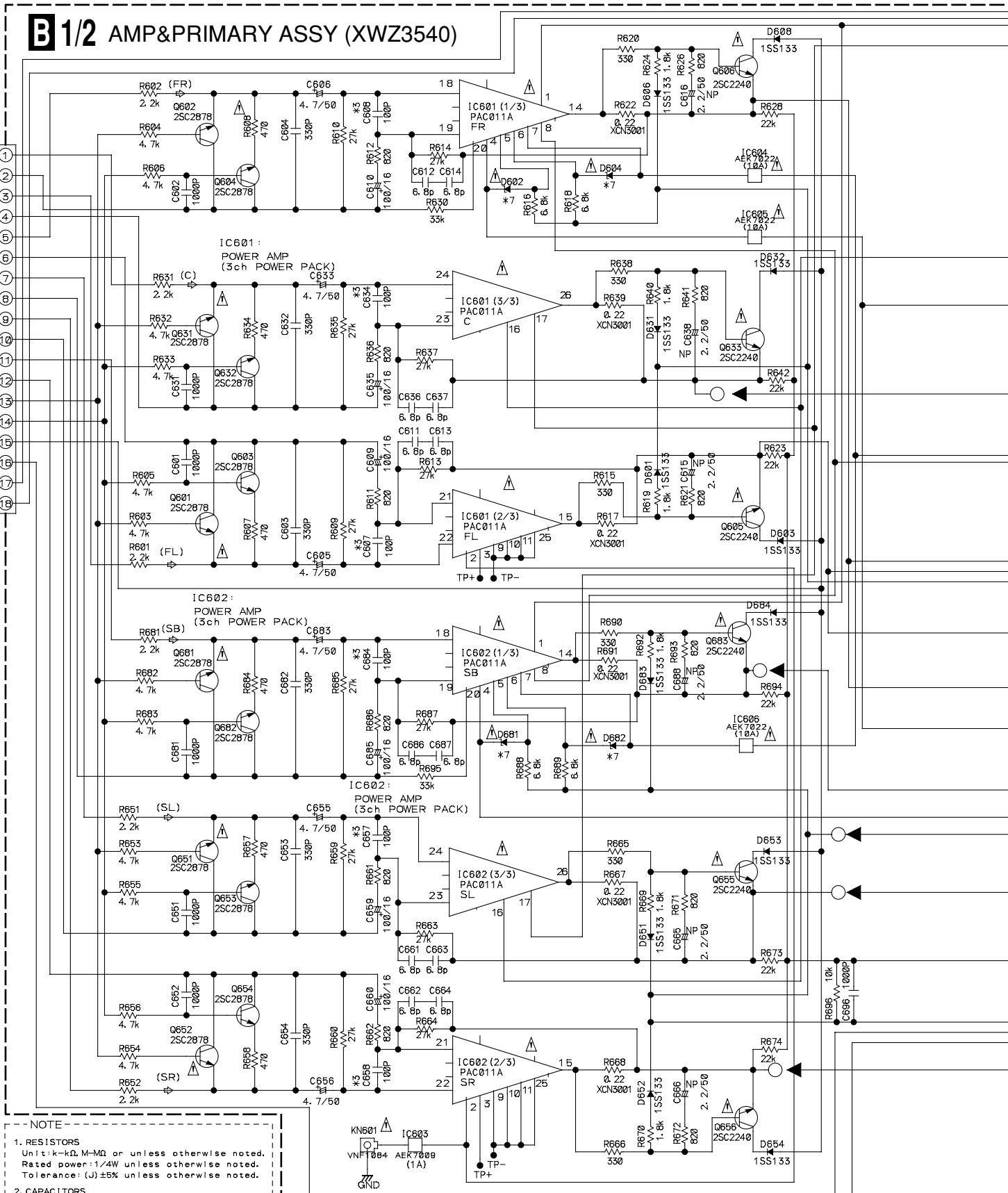
3.7 AMP & PRIMARY (1/2), TRANS2 and TRANS3 ASSYS

B 1/2 AMP&PRIMARY ASSY (XWZ3540)

CN601
KM200TA18

C
AG
FL
AG
FR
AG
SL
SR
AG
SB
A. MUTE
ATT.
OL
DC DET.
NECK
UG

CN253



NOTE

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

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

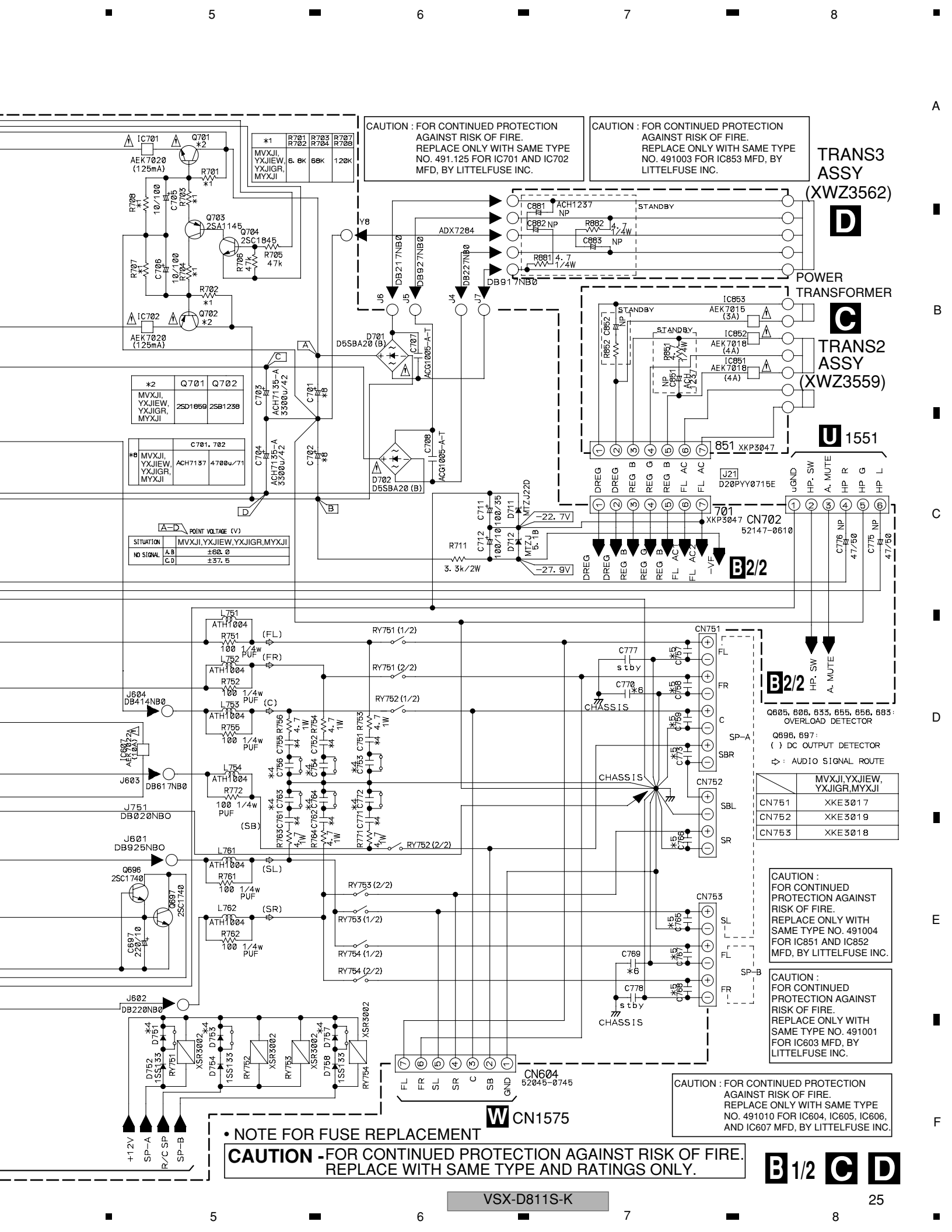
3. DIODES
Indicated in 1SS133-T

*3	C607, 608, 634, C657, 658, 684	USE	*5	COMBA 472J50-T	*7	MVXJI, YXJIEW, YXJIGR, MYXJI	MTZJ8. 2A
*4	C751, 752, 755, 761, 762, 771	MVXJI, YXJIEW, YXJIGR, MYXJI	*6	CKPUB102K			
	C753, 754, 756, 763, 764, 772	0.22 -YA					
	D751, 753, 757	1SS133-T					

B 1/2

B 2/2

VSX-D811S-K



CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
REPLACE ONLY WITH SAME TYPE NO. 491.125 FOR IC701 AND IC702 MFD, BY LITTELFUSE INC.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
REPLACE ONLY WITH SAME TYPE NO. 491003 FOR IC853 MFD, BY LITTELFUSE INC.

TRANS3 ASSY (XWZ3562)

D

POWER TRANSFORMER

C

TRANS2 ASSY (XWZ3559)

U 1551

POINT VOLTAGE (V)	
SITUATION	MOVXJI, YXJIEW, YXJIGR, MYXJI
NO SIGNAL	±60.0
A.B	±37.5
C.D	±37.5

Q605, 606, 633, 655, 656, 685: OVERLOAD DETECTOR

Q696, 697: DC OUTPUT DETECTOR

◇: AUDIO SIGNAL ROUTE

	MOVXJI, YXJIEW, YXJIGR, MYXJI
CN751	XKE3017
CN752	XKE3019
CN753	XKE3018

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.

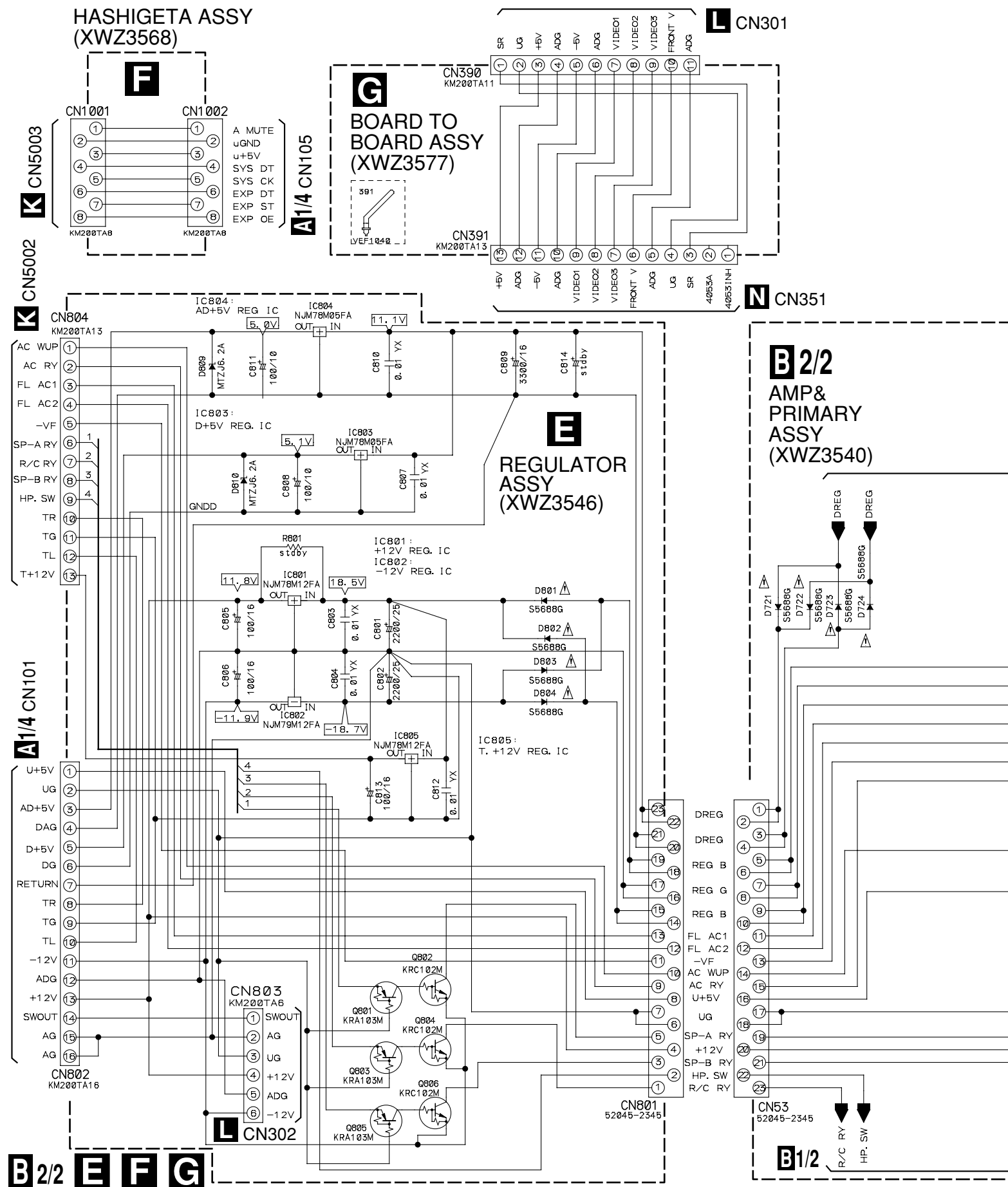
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
REPLACE ONLY WITH SAME TYPE NO. 491010 FOR IC604, IC605, IC606, AND IC607 MFD, BY LITTELFUSE INC.

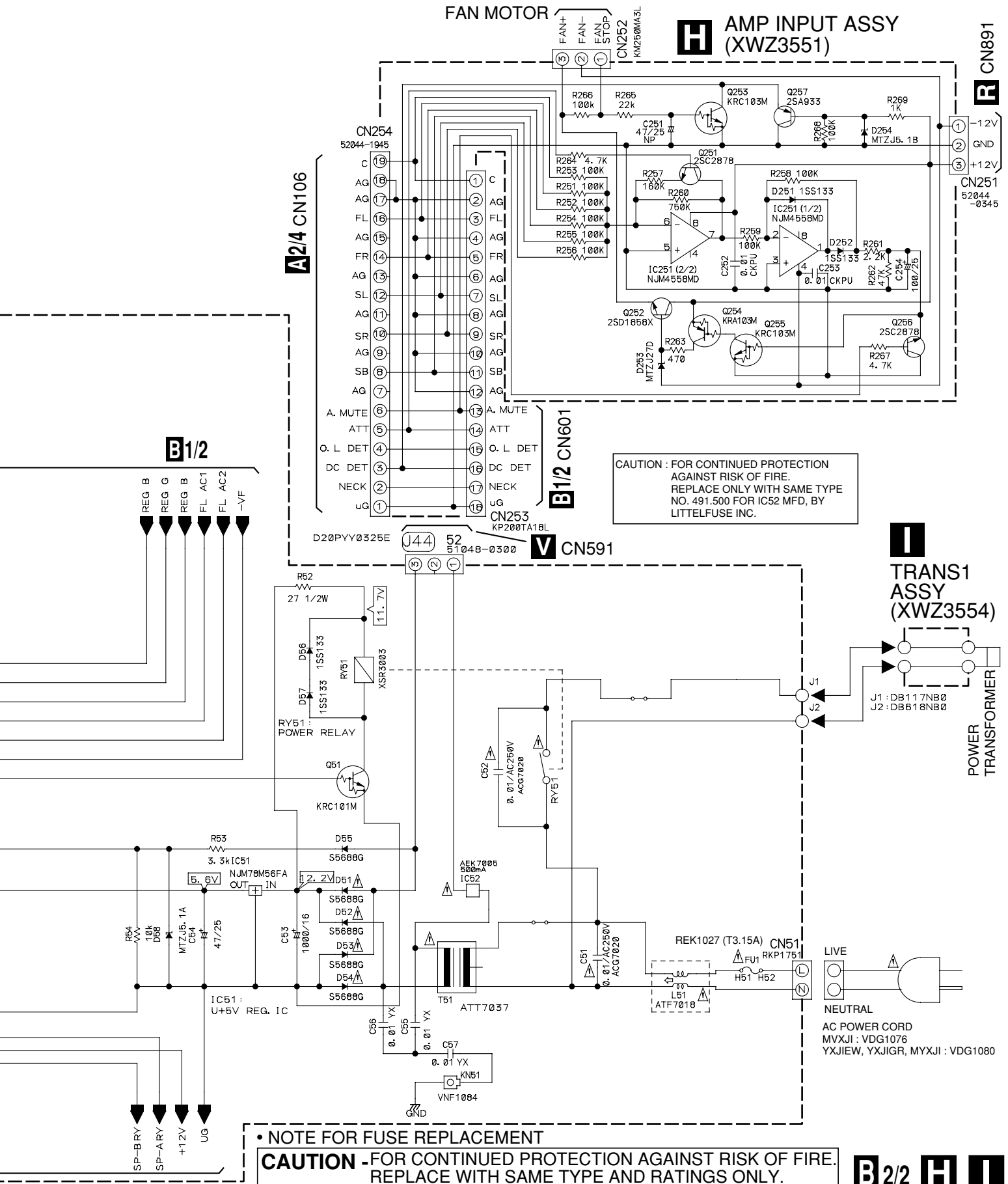
NOTE FOR FUSE REPLACEMENT

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

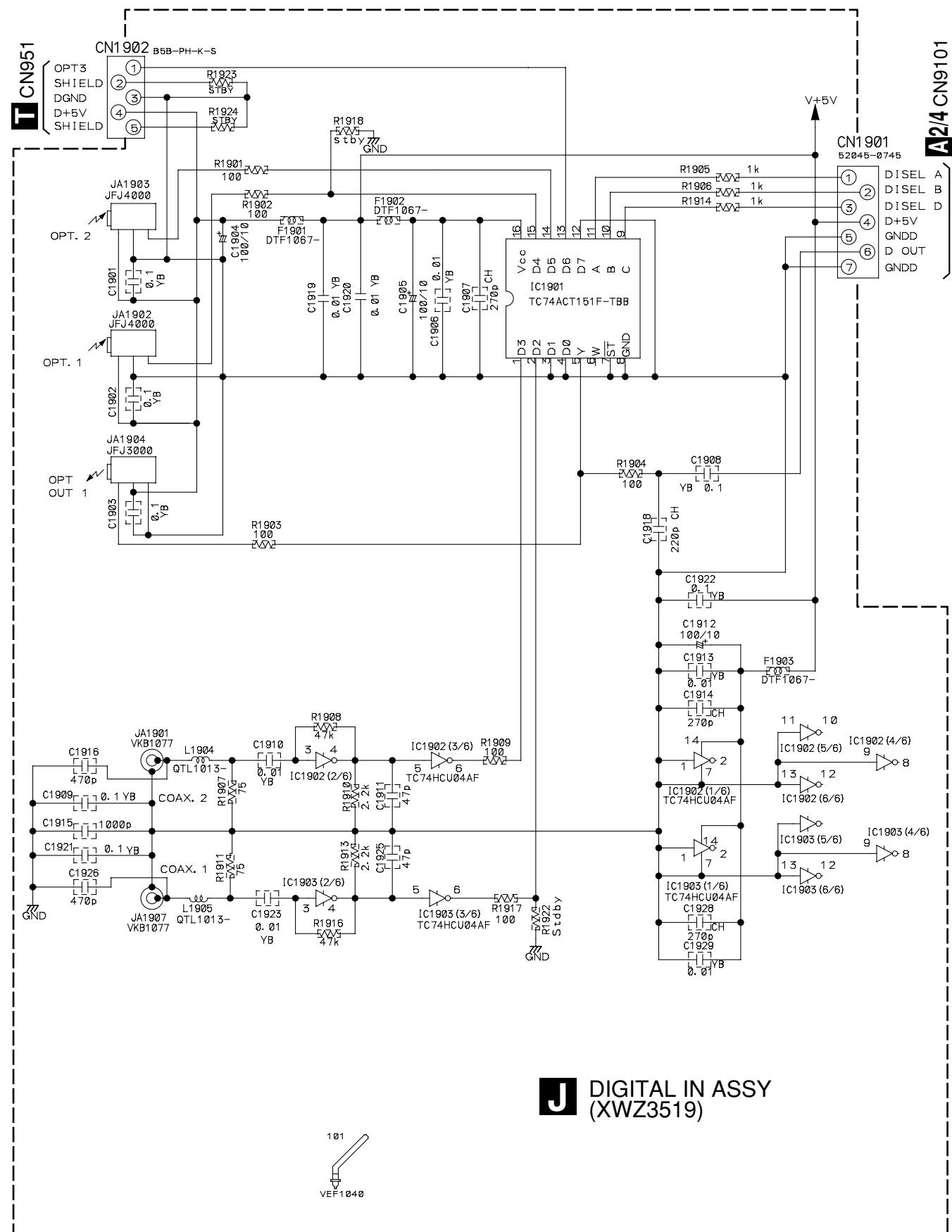
B 1/2 C D

3.8 AMP & PRIMARY (2/2), REG. , HASHIGETA, B TO B and TRANS1 ASSYS

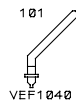


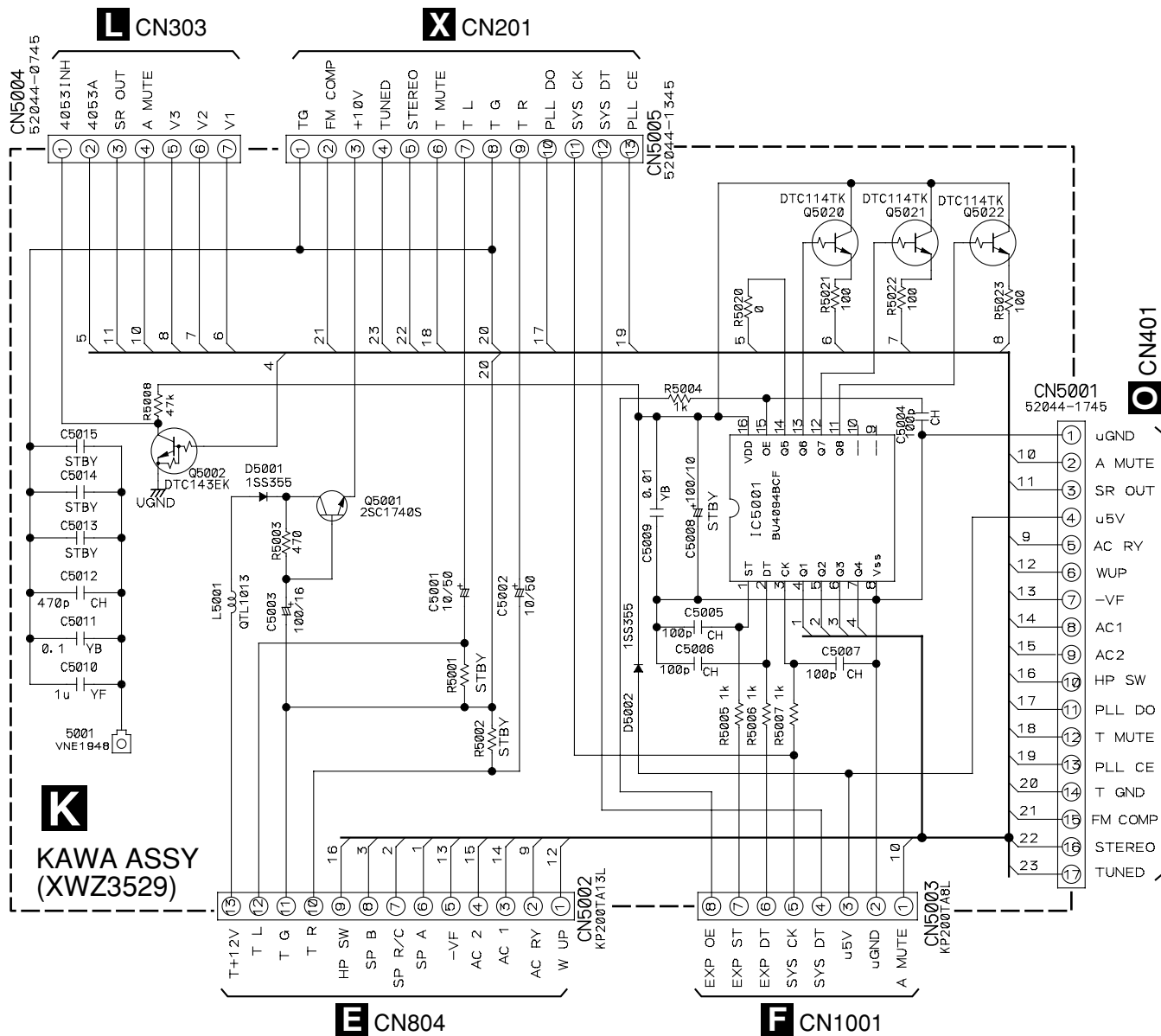


3.9 DIGITAL IN and KAWA ASSYS



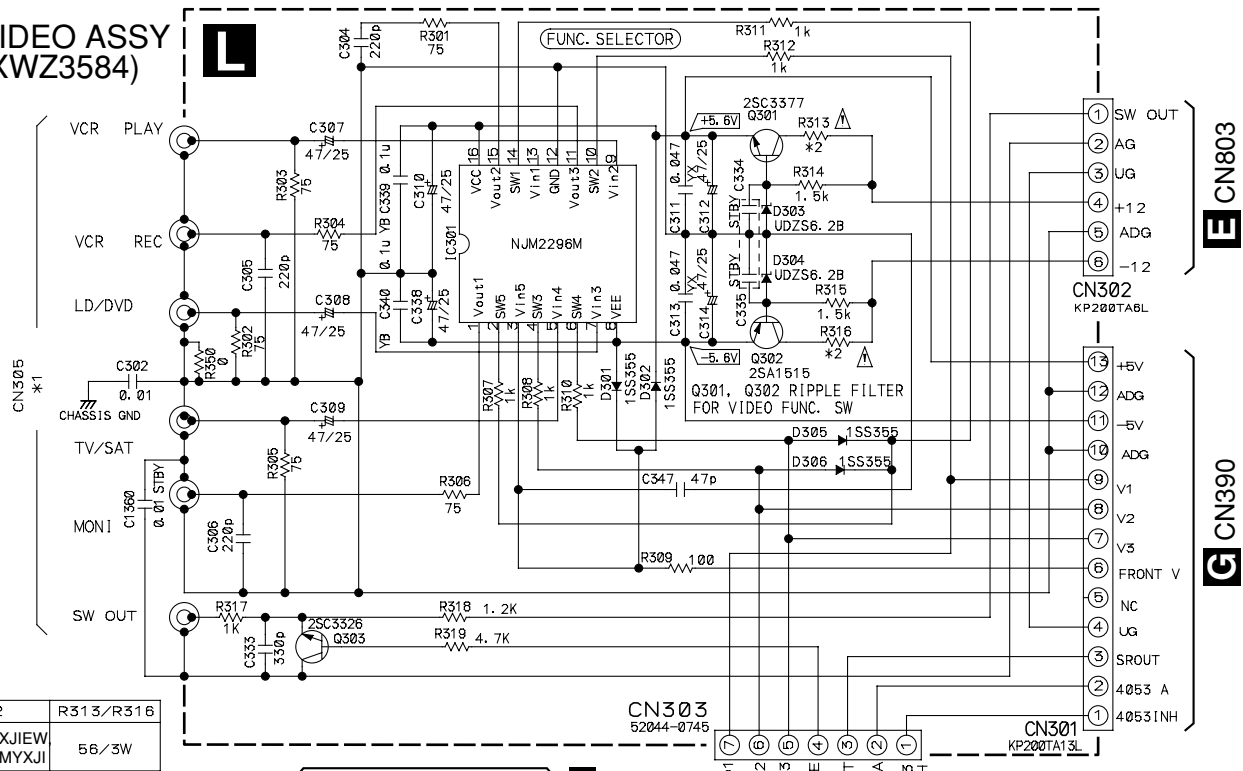
J DIGITAL IN ASSY (XWZ3519)



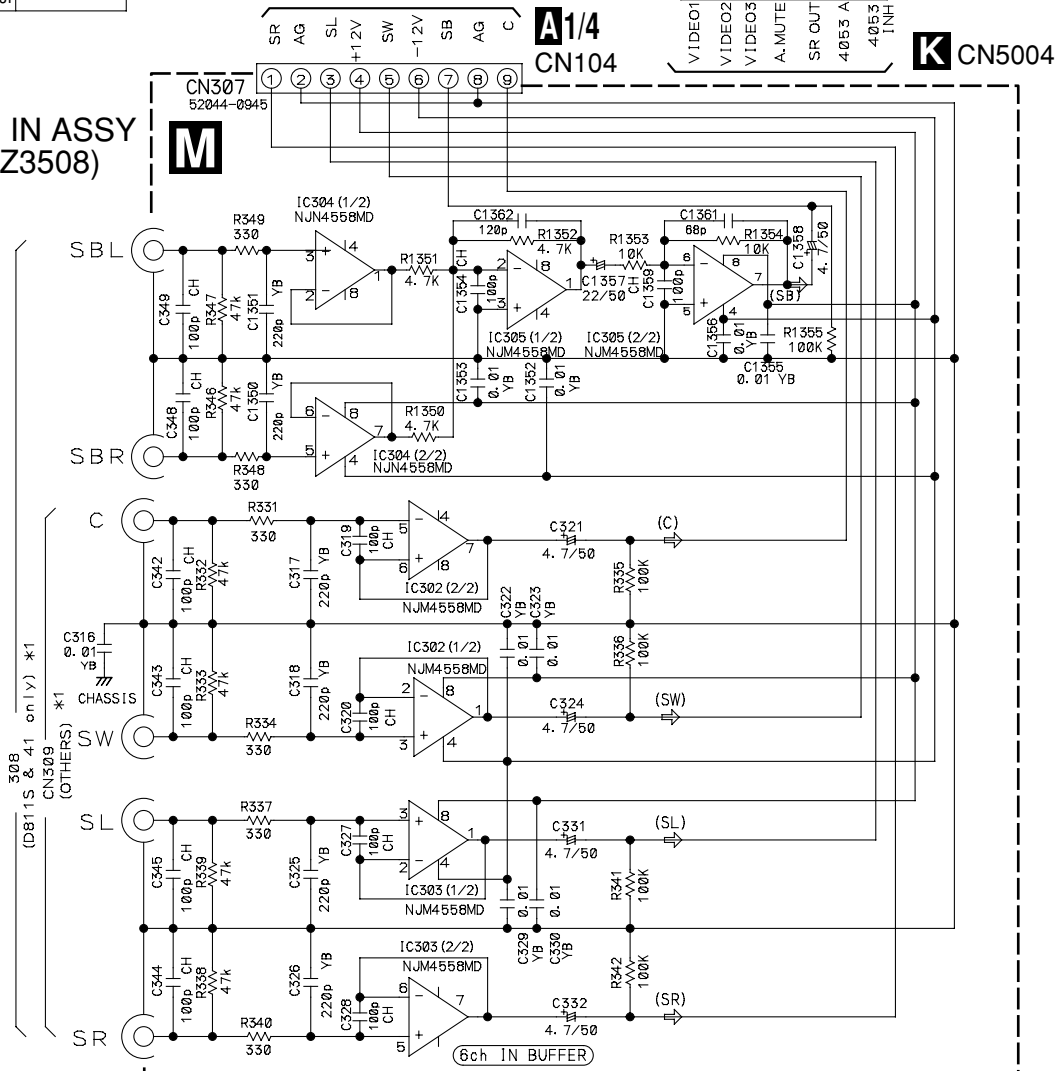


3.10 VIDEO, 6CH IN and S. VIDEO ASSYS

VIDEO ASSY
(XWZ3584)



6CH IN ASSY
(XWZ3508)



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 except for electrolytic capacitors.

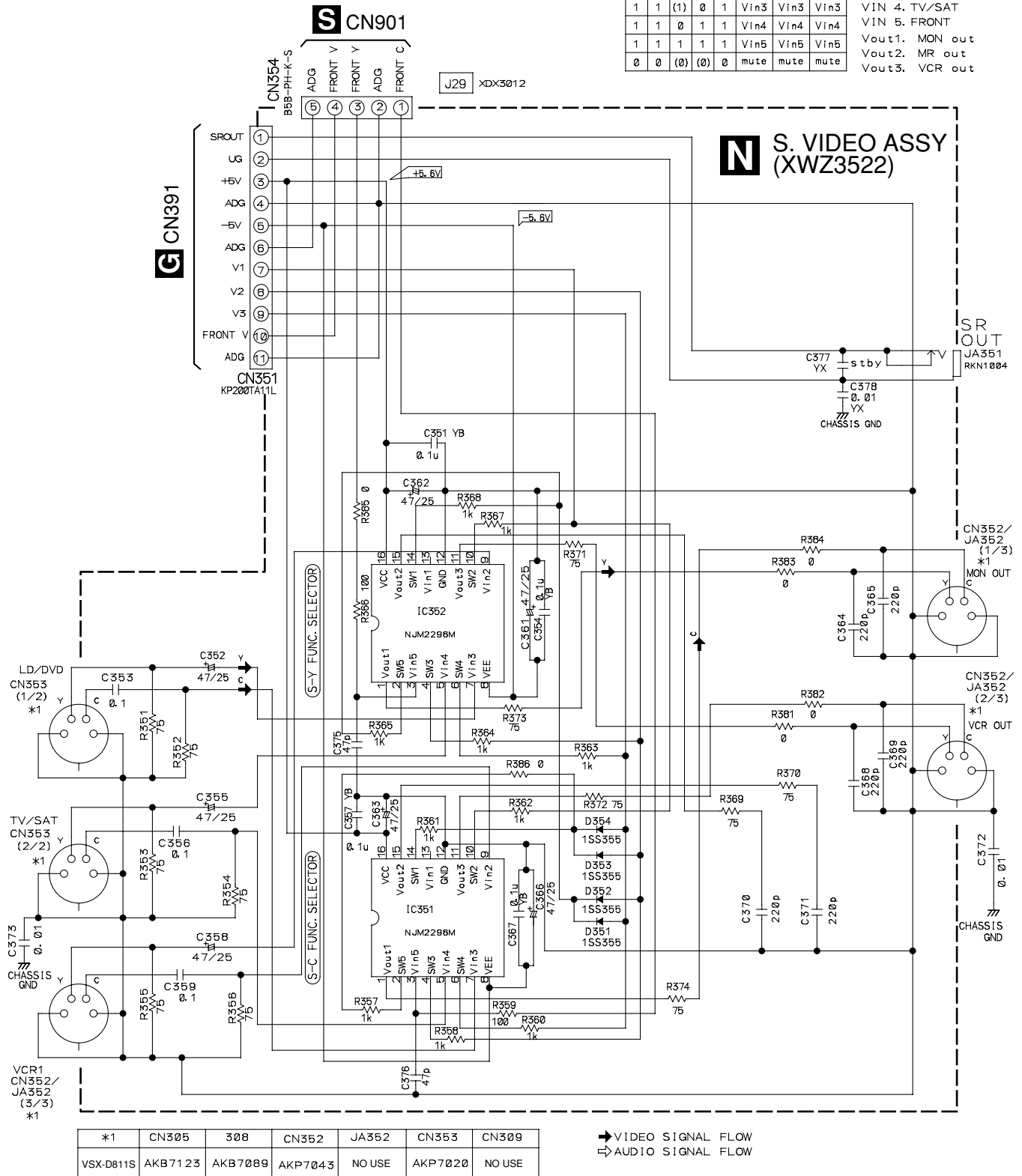
3. DIODES

Indicated in 1SS355-TRB

NJM2296D control port status

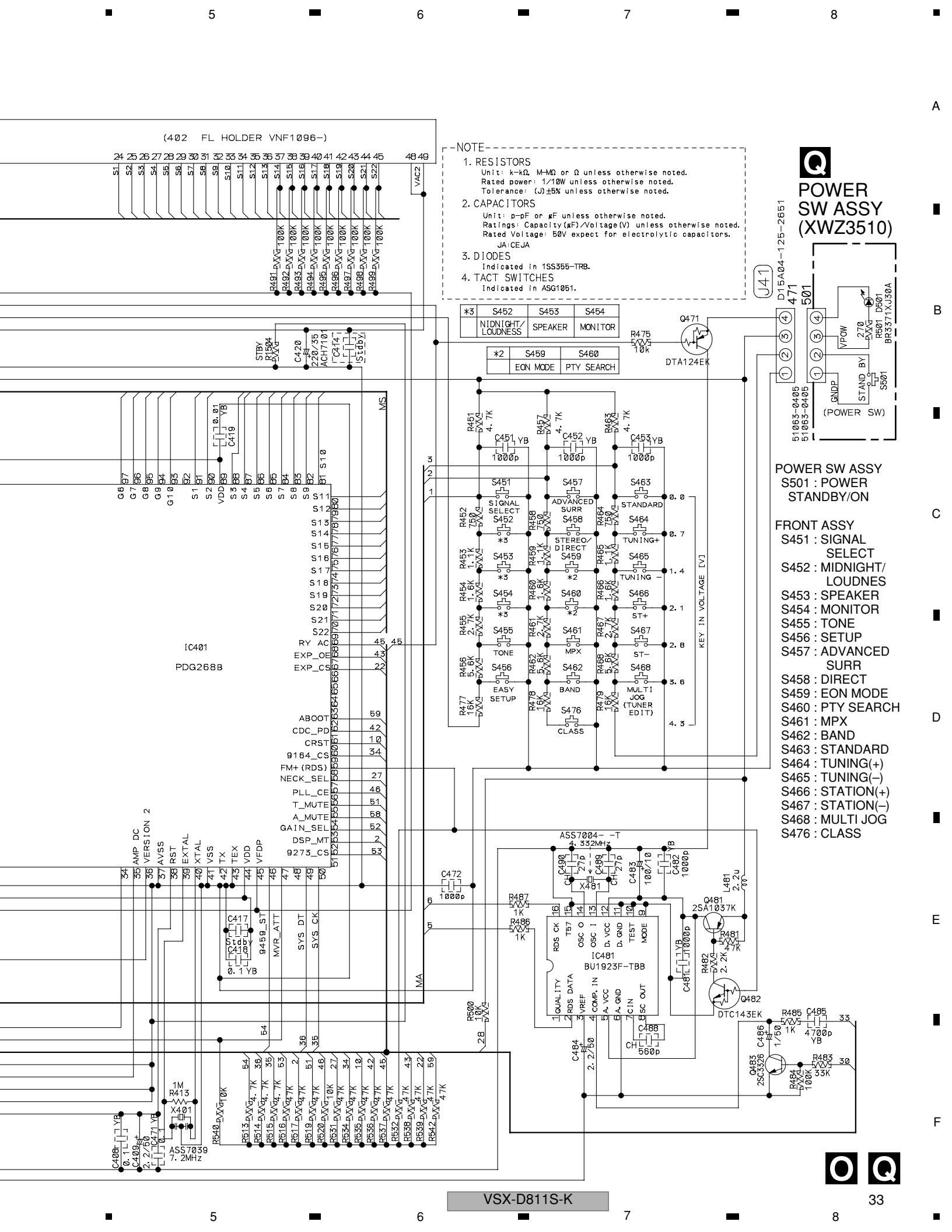
SW1	SW2	SW3	SW4	SW5	Vout1	Vout2	Vout3
1	0	(1)	0	1	Vin2	Vin2	mute
1	1	(1)	0	1	Vin3	Vin3	Vin3
1	1	0	1	1	Vin4	Vin4	Vin4
1	1	1	1	1	Vin5	Vin5	Vin5
0	0	(0)	(0)	0	mute	mute	mute

VIN 2. VCR
VIN 3. DVD/LD
VIN 4. TV/SAT
VIN 5. FRONT
Vout1. MON out
Vout2. MR out
Vout3. VCR out



32





(402 FL HOLDER VNF1096-)

24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49

S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 S15 S16 S17 S18 S19 S20 S21 S22

R491 100K R492 100K R493 100K R494 100K R495 100K R496 100K R497 100K R498 100K R499 100K

STBY R1504 C420 220/35 ACH7101 C414 C413 C412 C411 C410 C409 C408

G6 G7 G8 G9 G10 G11 G12 G13 G14 G15 G16 G17 G18 G19 G20 G21 G22

VDD 89 S3 88 S4 87 S5 86 S6 85 S7 84 S8 83 S9 82 S10 81 S11 80 S12 79 S13 78 S14 77 S15 76 S16 75 S17 74 S18 73 S19 72 S20 71 S21 70 S22 69

IC401 PDG268B RY AC EXP_ON EXP_CS

ABOUT CDC_PD CRST 9164_CS FM+(RDS) NECK_SEL PLL_CE T_MUTE A_MUTE GAIN_SEL DSP_MT 9273_CS

34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

AMP DC VERSION 2 AVSS RST XTAL TX TEX VDD VDDP MVR_ATT SYS_DT SYS_CK

9459 ST 9458 ST 9457 ST 9456 ST 9455 ST 9454 ST 9453 ST 9452 ST 9451 ST 9450 ST

ASS7039 7.2MHz C408 0.1 C409 2.2/50 C410 10 C411 10 C412 10 C413 10 C414 10 C415 10 C416 10 C417 10 C418 10 C419 10 C420 220/35

R513 4.7K R514 4.7K R515 4.7K R516 4.7K R517 4.7K R518 4.7K R519 4.7K R520 4.7K R521 4.7K R522 4.7K R523 4.7K R524 4.7K R525 4.7K R526 4.7K R527 4.7K R528 4.7K R529 4.7K R530 4.7K R531 4.7K R532 4.7K R533 4.7K R534 4.7K R535 4.7K R536 4.7K R537 4.7K R538 4.7K R539 4.7K R540 4.7K R541 4.7K R542 4.7K R543 4.7K R544 4.7K R545 4.7K R546 4.7K R547 4.7K R548 4.7K R549 4.7K R550 4.7K R551 4.7K R552 4.7K R553 4.7K R554 4.7K R555 4.7K R556 4.7K R557 4.7K R558 4.7K R559 4.7K R560 4.7K R561 4.7K R562 4.7K R563 4.7K R564 4.7K R565 4.7K R566 4.7K R567 4.7K R568 4.7K R569 4.7K R570 4.7K R571 4.7K R572 4.7K R573 4.7K R574 4.7K R575 4.7K R576 4.7K R577 4.7K R578 4.7K R579 4.7K R580 4.7K R581 4.7K R582 4.7K R583 4.7K R584 4.7K R585 4.7K R586 4.7K R587 4.7K R588 4.7K R589 4.7K R590 4.7K R591 4.7K R592 4.7K R593 4.7K R594 4.7K R595 4.7K R596 4.7K R597 4.7K R598 4.7K R599 4.7K R600 4.7K

- 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
 3. DIODES
Indicated in 1SS355-TRB.
 4. TACT SWITCHES
Indicated in ASG1051.

*3	S452	S453	S454
	NIGHT/	SPEAKER	MONITOR
	LOUDNESS		
*2	S459	S460	
	EON MODE	PTY SEARCH	

R475 10k Q471 DTA124EK

R451 4.7K C451 1000p R452 4.7K C452 1000p R453 4.7K C453 1000p

S451 SIGNAL SELECT S457 ADVANCED SURR S463 STANDARD

S452 MIDNIGHT/LOUDNESS S458 DIRECT S464 TUNING+

S453 SPEAKER S459 EON MODE S465 TUNING-

S454 MONITOR S460 PTY SEARCH S466 STATION+

S455 TONE S461 MPX S467 STATION-

S456 SETUP S462 BAND S468 MULTI JOG

S457 ADVANCED SURR S463 STANDARD S476 CLASS

S458 DIRECT S464 TUNING(+) S476 CLASS

S459 EON MODE S465 TUNING(-) S476 CLASS

S460 PTY SEARCH S466 STATION(+) S476 CLASS

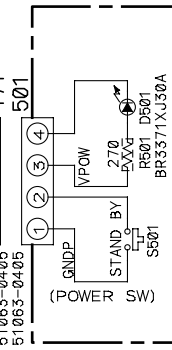
S461 MPX S467 STATION(-) S476 CLASS

S462 BAND S468 MULTI JOG S476 CLASS

S463 STANDARD S469 EON MODE S476 CLASS

S464 TUNING(+) S470 4.7K S471 4.7K S472 4.7K S473 4.7K S474 4.7K S475 4.7K S476 4.7K S477 4.7K S478 4.7K S479 4.7K S480 4.7K S481 4.7K S482 4.7K S483 4.7K S484 4.7K S485 4.7K S486 4.7K S487 4.7K S488 4.7K S489 4.7K S490 4.7K S491 4.7K S492 4.7K S493 4.7K S494 4.7K S495 4.7K S496 4.7K S497 4.7K S498 4.7K S499 4.7K S500 4.7K

POWER SW ASSY (XWZ3510)



POWER SW ASSY
S501 : POWER
STANDBY/ON

- FRONT ASSY
- S451 : SIGNAL SELECT
 - S452 : MIDNIGHT/LOUDNESS
 - S453 : SPEAKER
 - S454 : MONITOR
 - S455 : TONE
 - S456 : SETUP
 - S457 : ADVANCED SURR
 - S458 : DIRECT
 - S459 : EON MODE
 - S460 : PTY SEARCH
 - S461 : MPX
 - S462 : BAND
 - S463 : STANDARD
 - S464 : TUNING(+)
 - S465 : TUNING(-)
 - S466 : STATION(+)
 - S467 : STATION(-)
 - S468 : MULTI JOG
 - S476 : CLASS

3.12 TRANS4, F. VIDEO, F. OPTICAL, H. P. , M. SW and PRI-OUT ASSYS

A

B

C

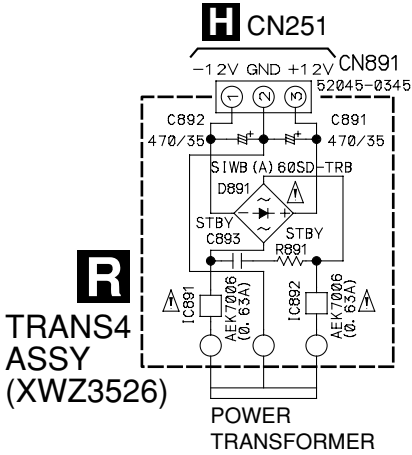
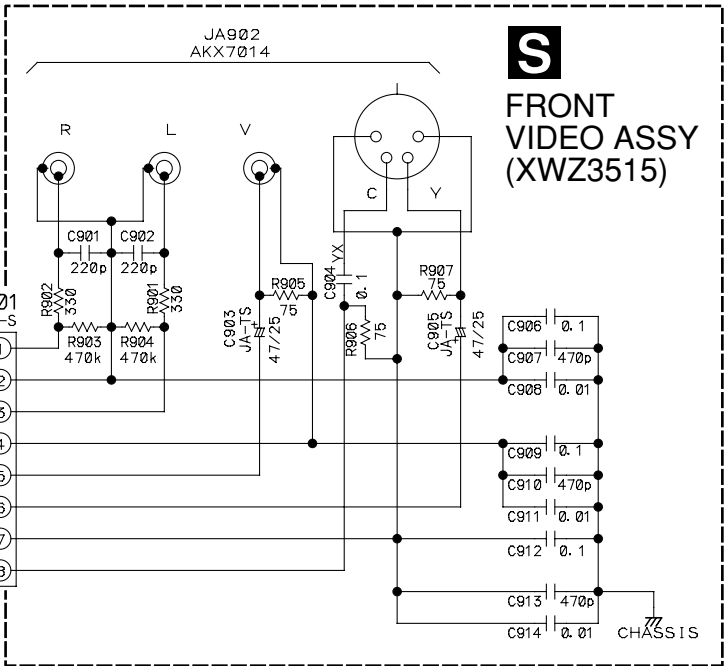
D

E

F

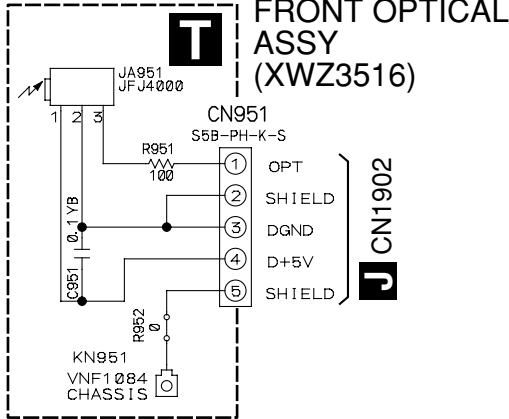
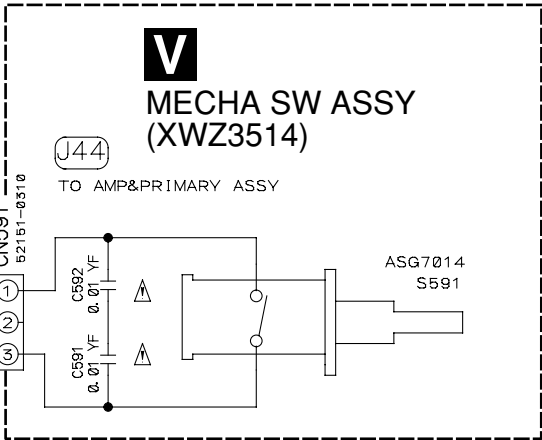
N CN354 **A**1/4 CN107

FRONT R
AG
FRONT L
ADG
FRONT V
FRONT Y
ADG
FRONT C

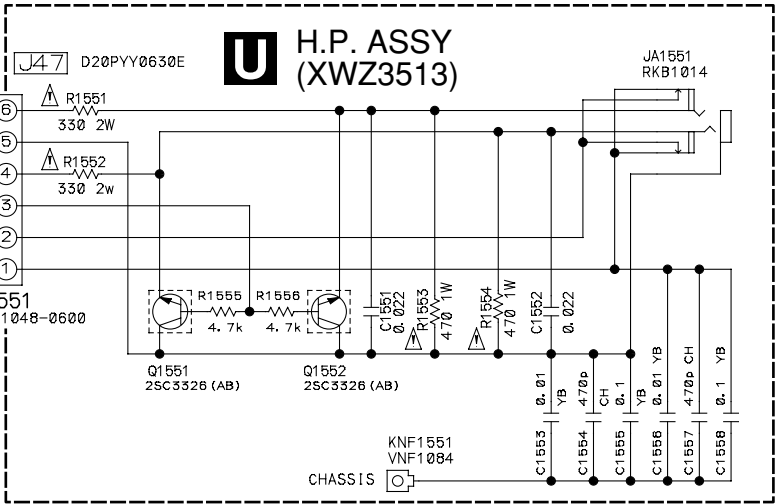


CAUTION : FOR CONTINUED PROTECTION
AGAINST RISK OF FIRE.
REPLACE ONLY WITH SAME TYPE
NO. 491.630 FOR IC891 AND IC892
MFD, BY LITTELFUSE INC.

B2/2 J44



B1/2 CN702



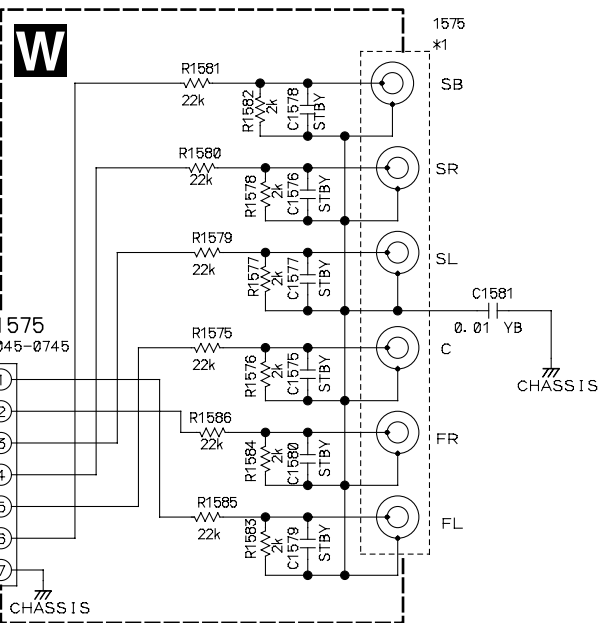
R S T U V

PRI-OUT
ASSY
(XWZ3530)

B1/2 CN604

CN1575
52045-0745

FL
FR
SL
SR
C
SB
GND



*1	1575
VSX-D811S	AKB7089

VSX-D811S-K

W

Notes

1. RESISTORS

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

2. CAPACITORS

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

3. DIODES

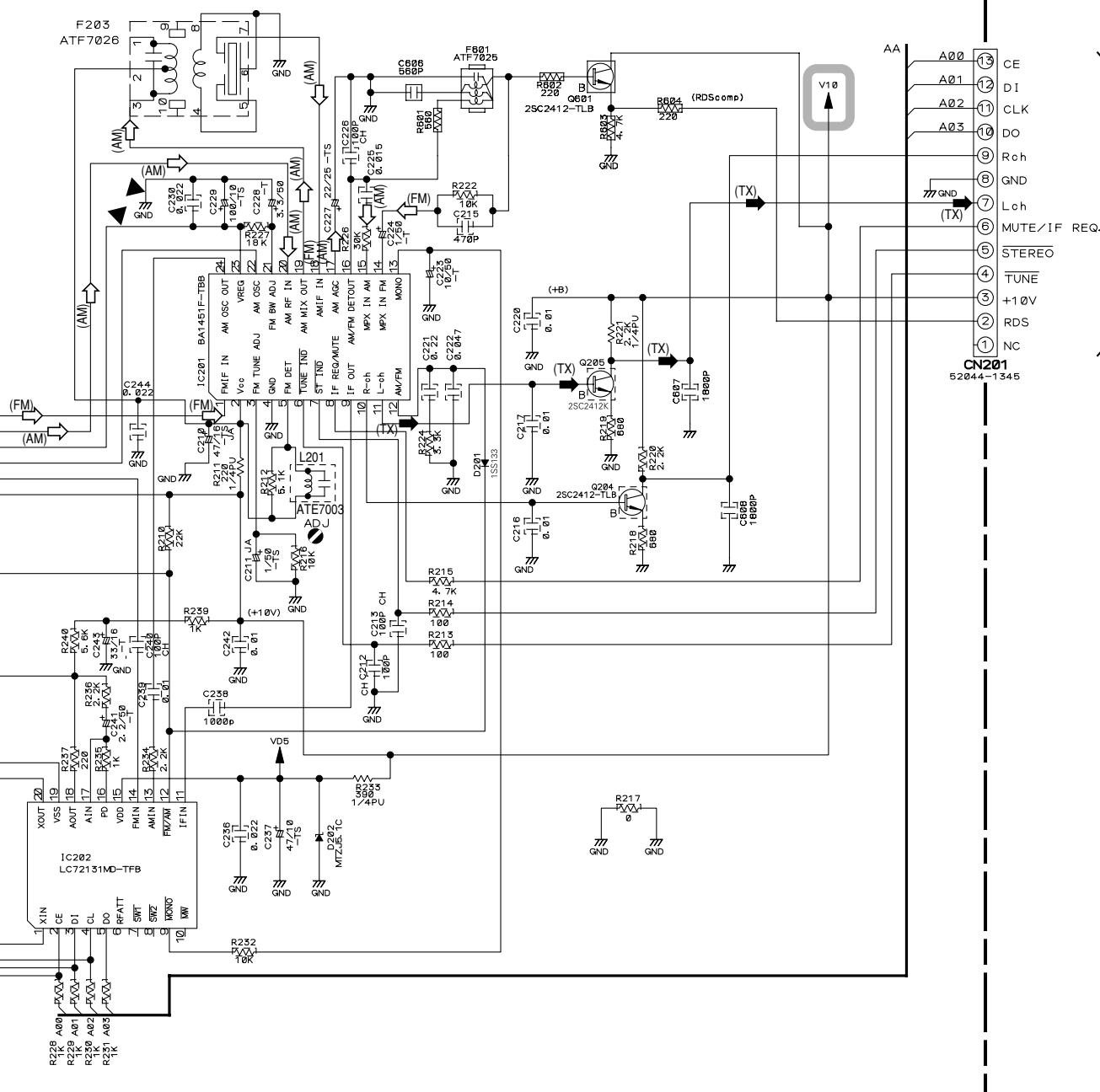
No mark diode is 1SS133.

 : The power supply is shown with the marked box.

(TX)  : AUDIO SIGNAL ROUTE (TUNER)

(AM)  : AM SIGNAL ROUTE

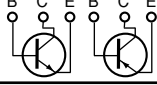
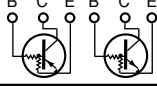
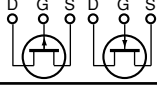
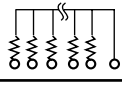
(FM)  : FM SIGNAL ROUTE



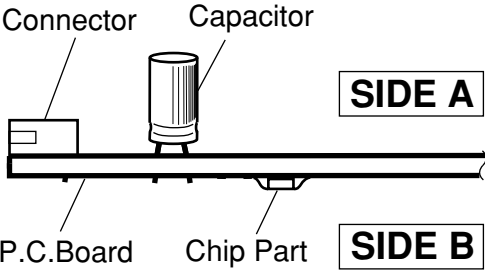
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

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

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

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



4.1 TRANS2,TRANS3,TRANS1 and TRANS4 ASSYS

SIDE A

SIDE B

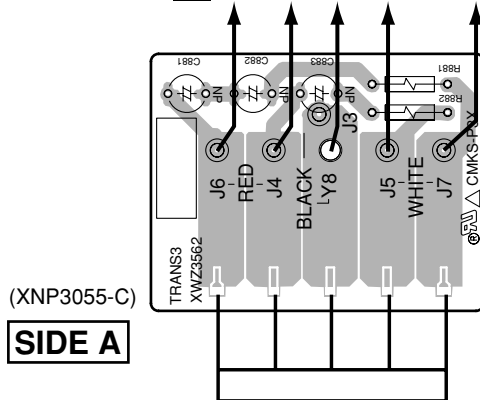
A

R TRANS4 ASSY

H CN251

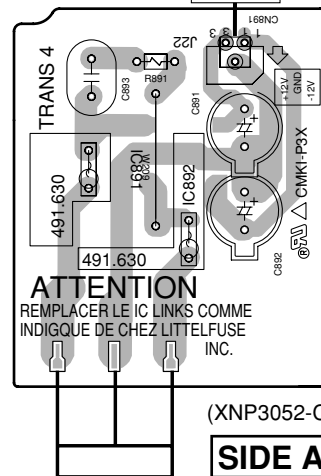
D TRANS3 ASSY

B J6 J4 Y8 J5 J7



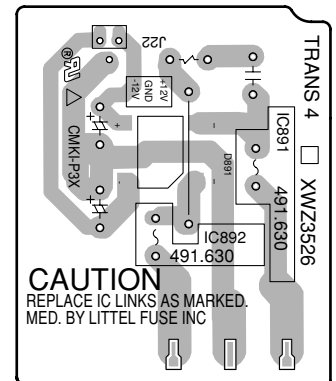
(XNP3055-C)

SIDE A



(XNP3052-C)

SIDE A

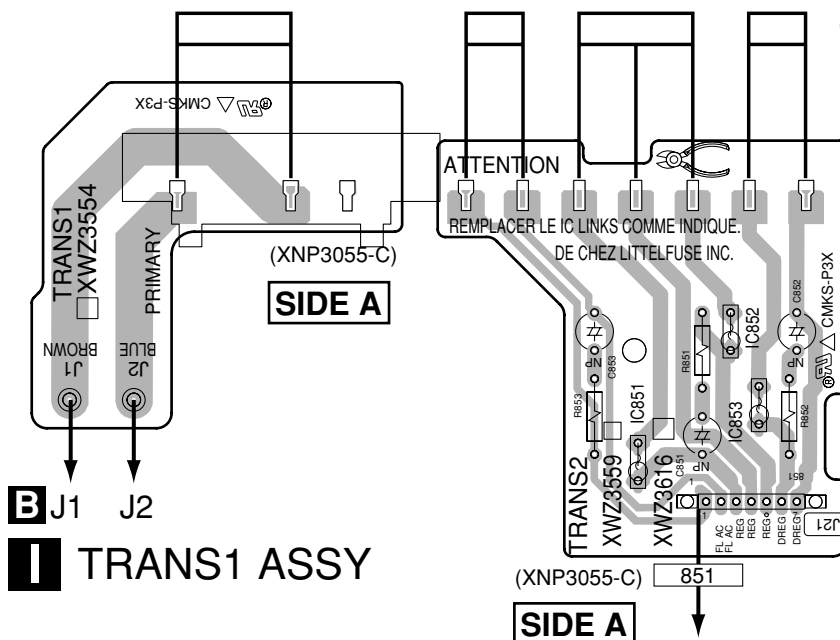


(XNP3052-C)

SIDE B

POWER TRANSFORMER

C TRANS2 ASSY



B J1 J2

TRANS1 ASSY

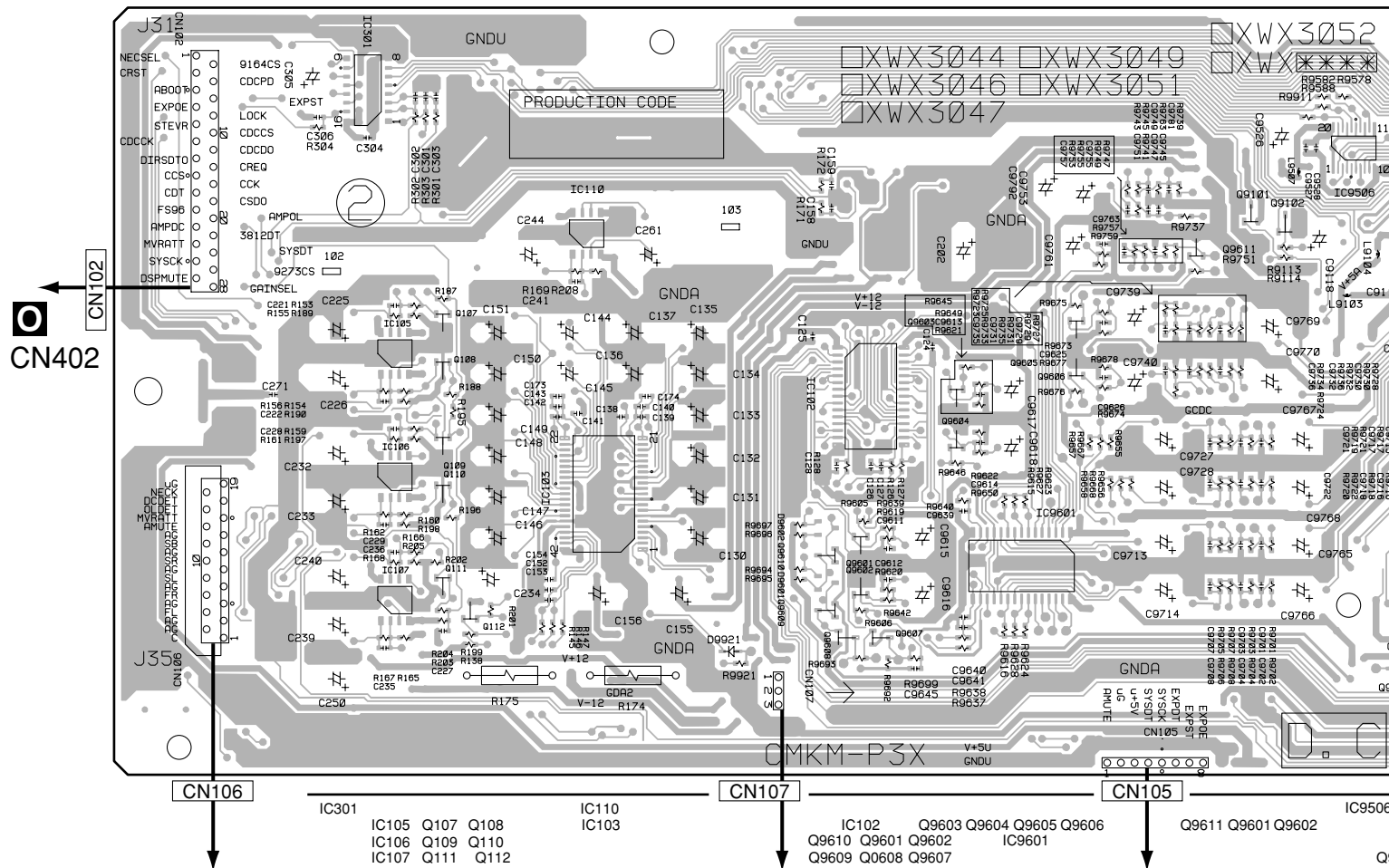
SIDE A**B** 701

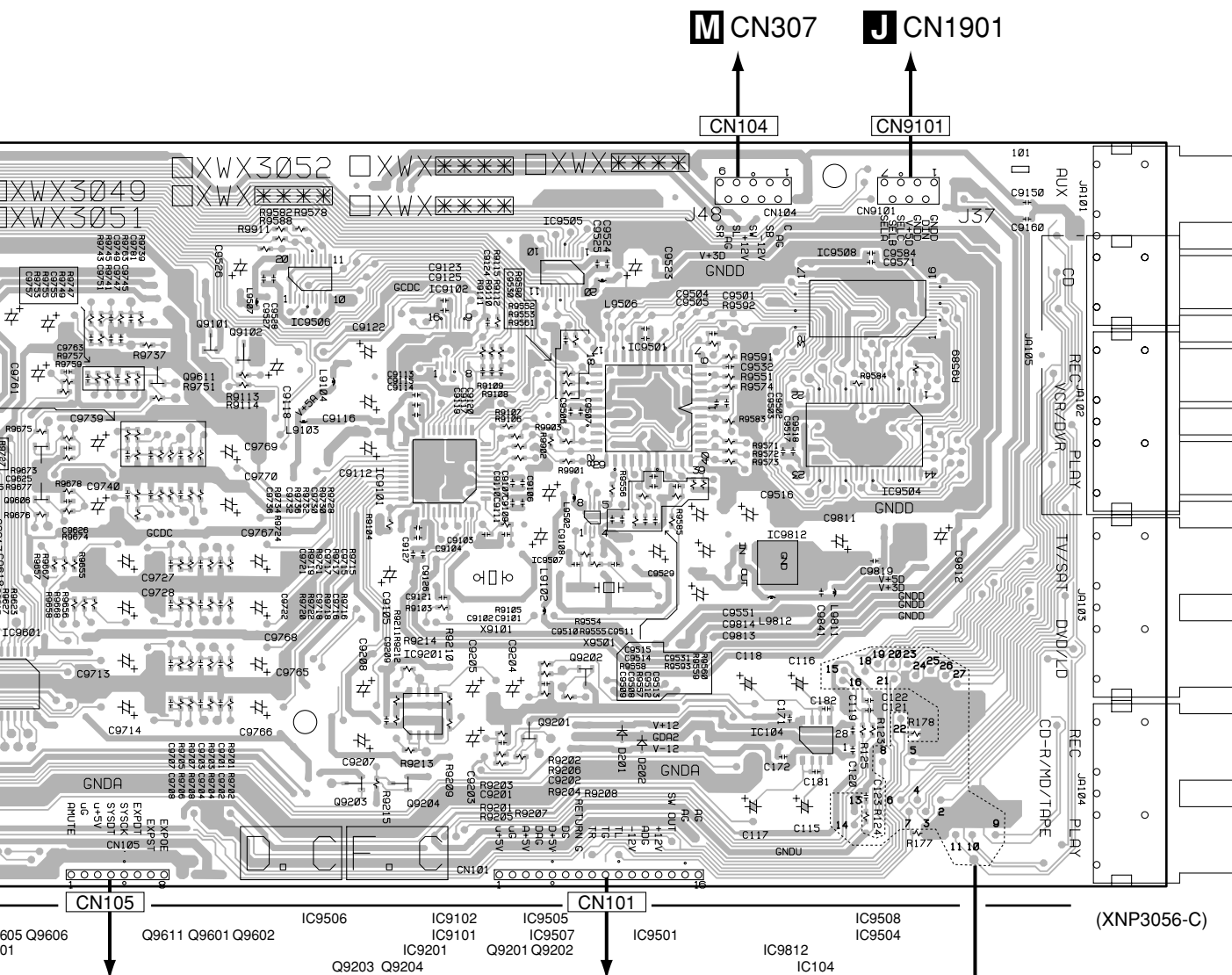
C D I R

CDIR

SIDE A

A D.D & INPUT ASSY

**H** CN254**S** CN901**F** CN1002



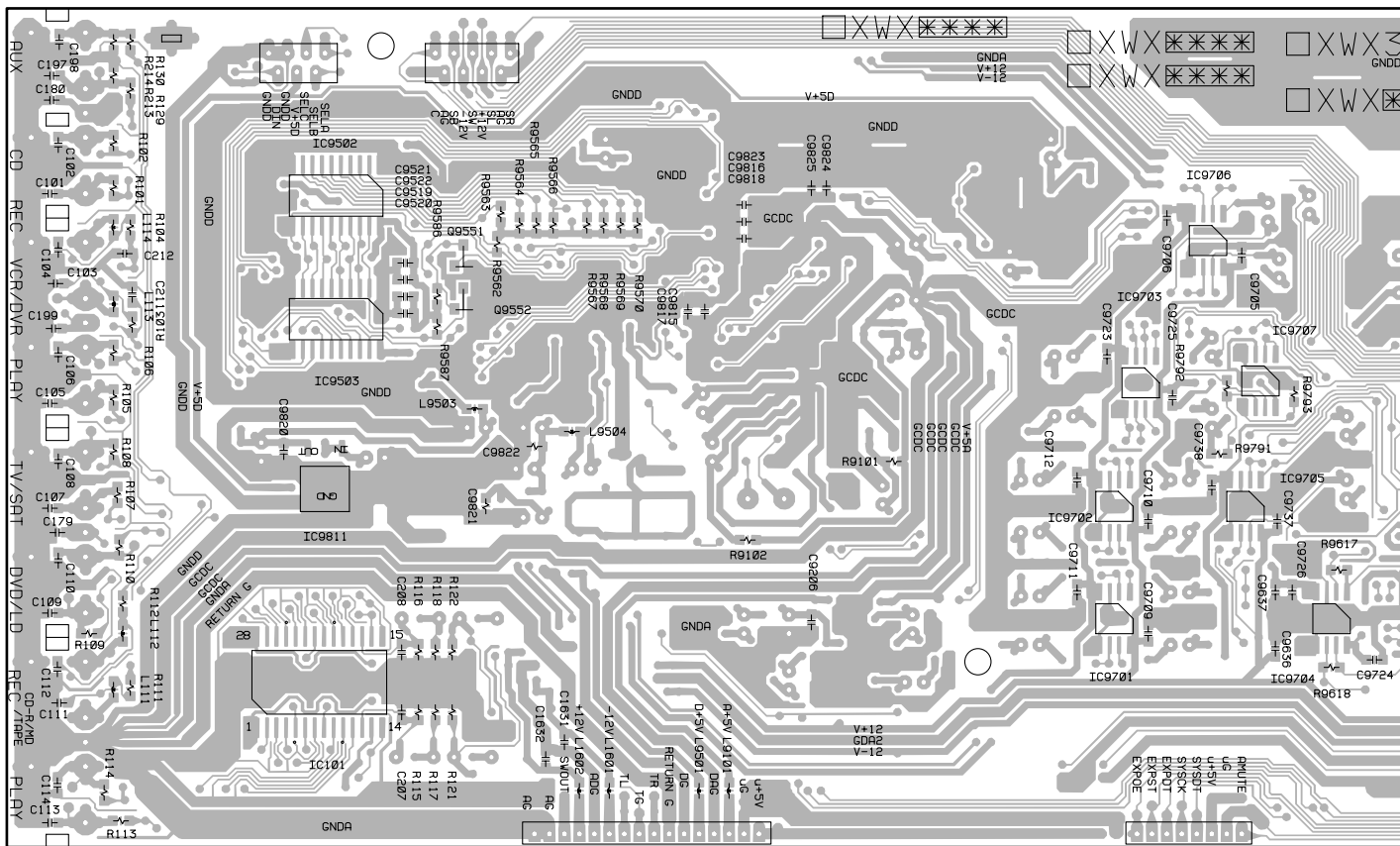
Note : The pin of function IC (IC101 TC9273F-007) can be checked from side-A by the through-hole round. The pin No. is printed on the side-A.

Even if the FM/AM TUNER MODULE is disconnected, other functions can operate.

1 2 3 4

SIDE B

A D.D & INPUT ASSY



IC9502 Q9551 Q9552 IC9705 IC9705
IC9503 IC9706 IC9707
IC9811 IC9708 IC9705
IC101 IC9701 IC9704

A

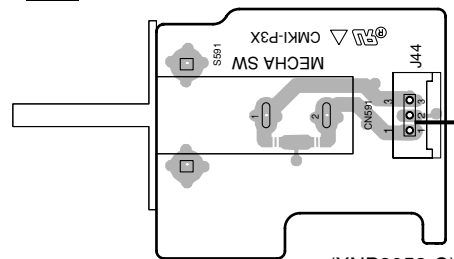
1 2 3 4

4.3 AMP & PRIMARY, AMP INPUT and MECHA SW ASSYS

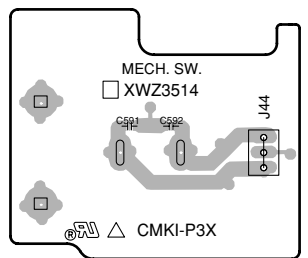
SIDE A

SIDE B

V MECHA SW ASSY

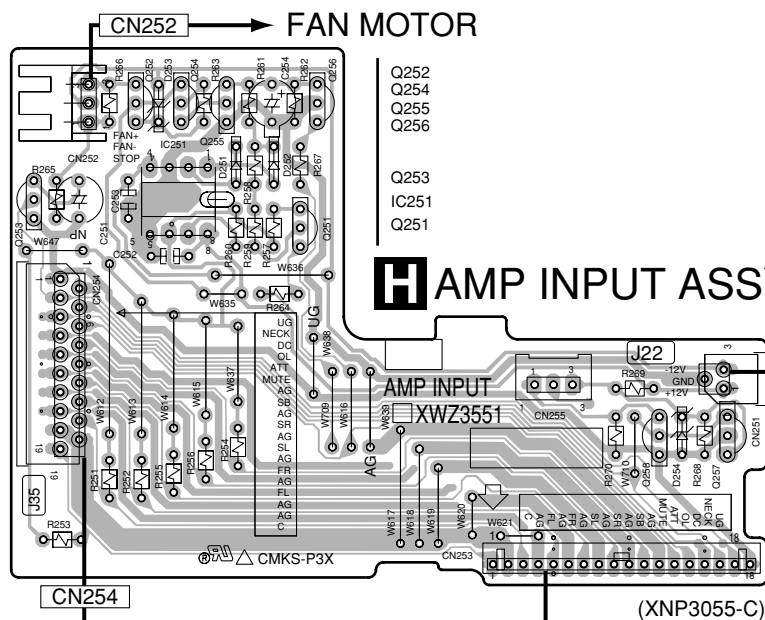


SIDE A



SIDE B

H AMP INPUT ASSY



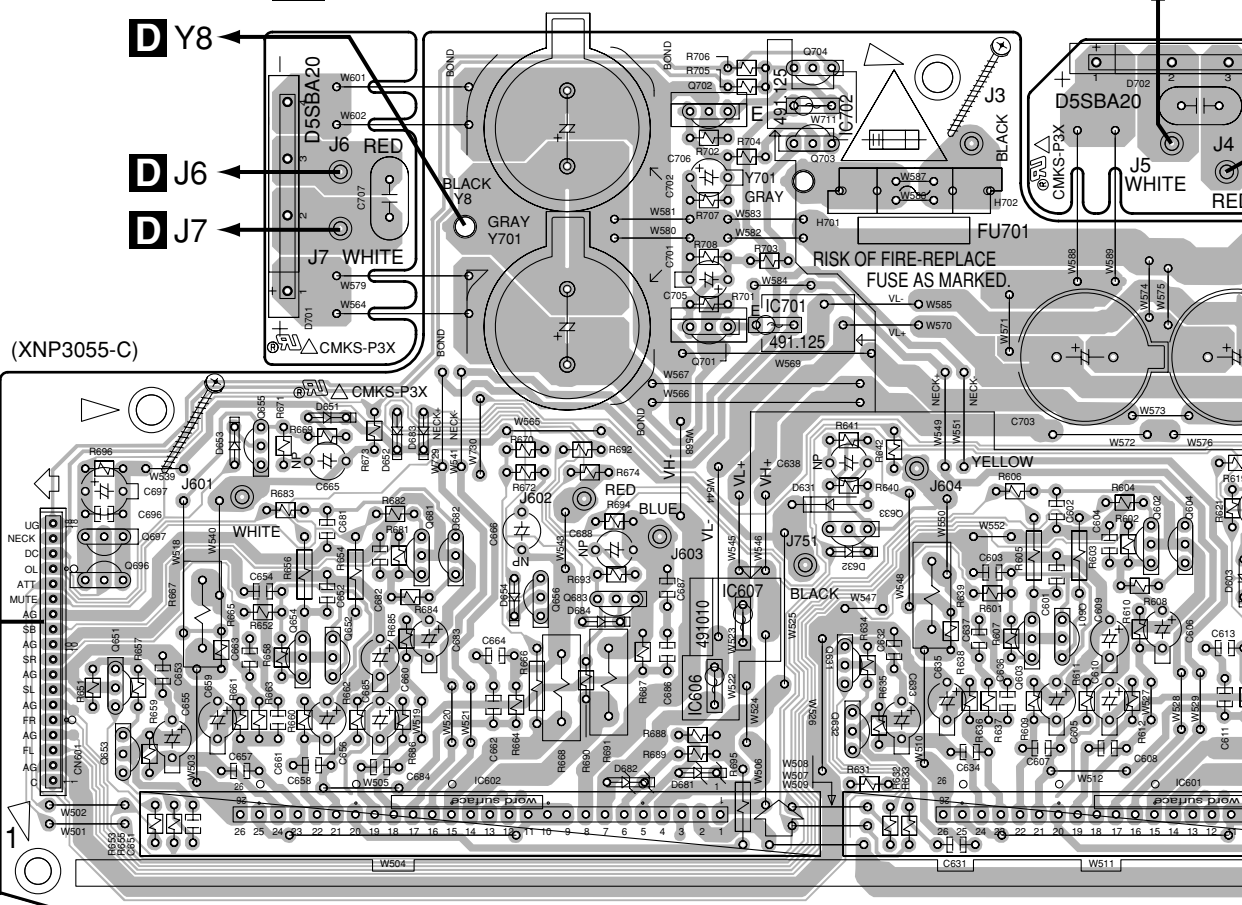
R CN891

B AMP&PRIMARY ASSY

D Y8

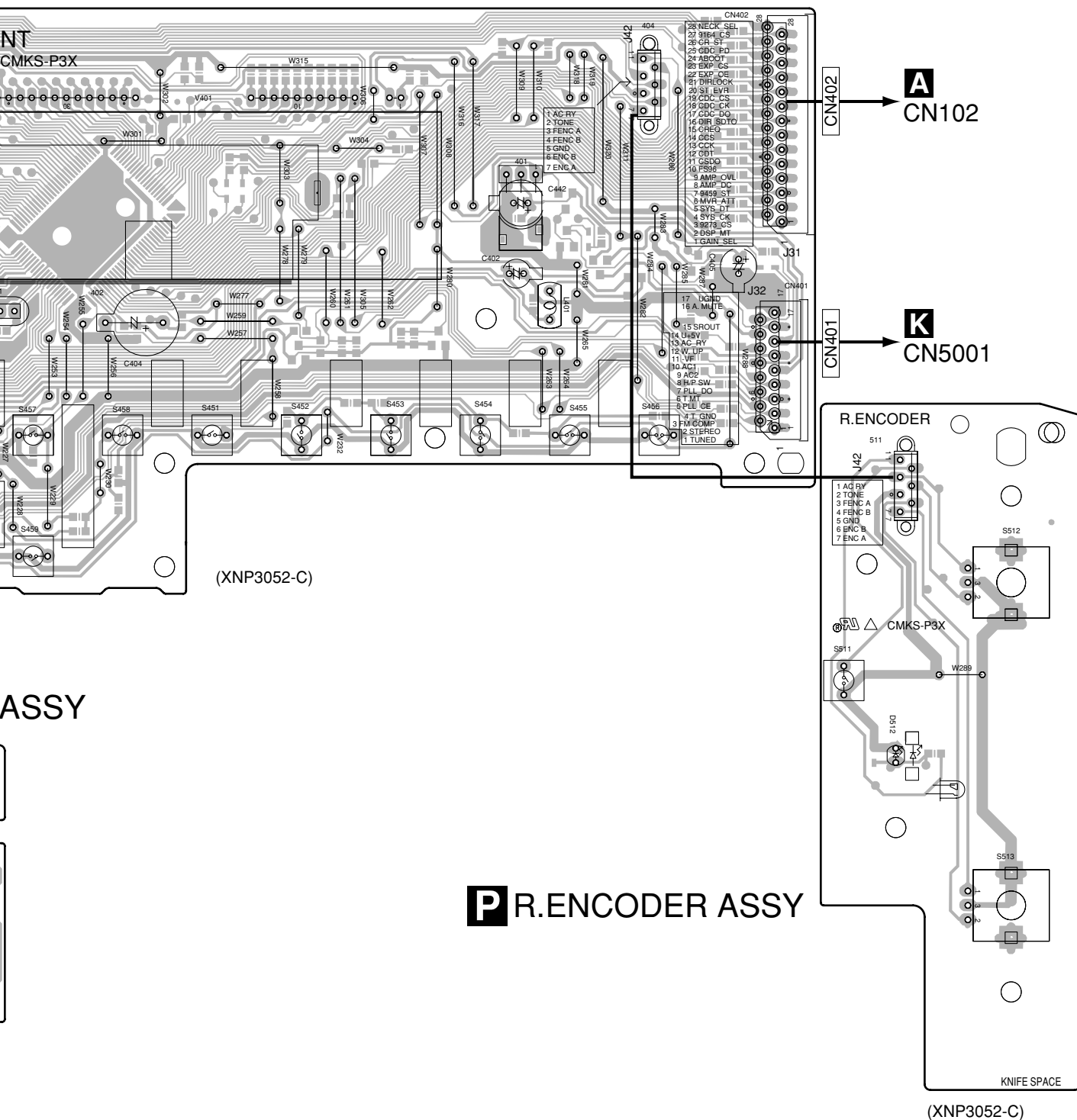
D J6

D J7



B H V

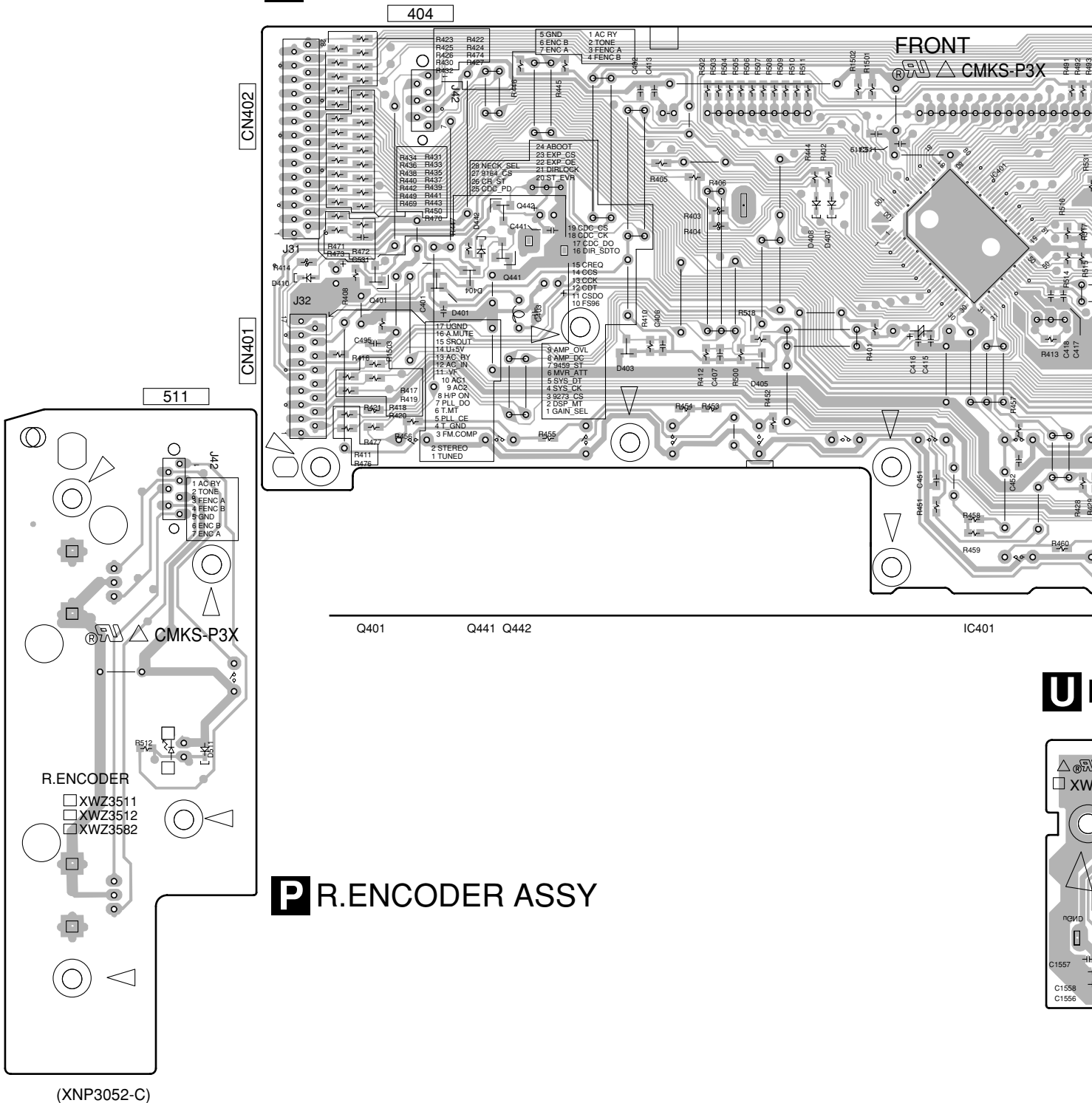
SIDE A



P R.ENCODER ASSY

SIDE B

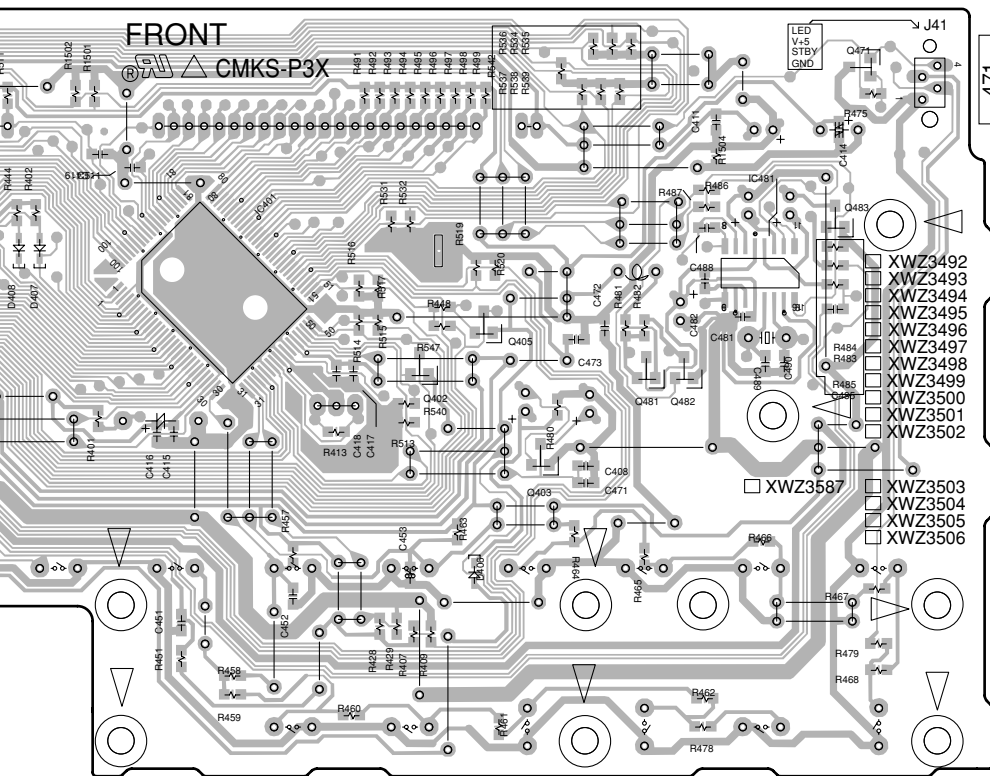
FRONT ASSY



P R.ENCODER ASSY

OP

SIDE B



IC401

Q402

Q405

Q403

Q481

Q482

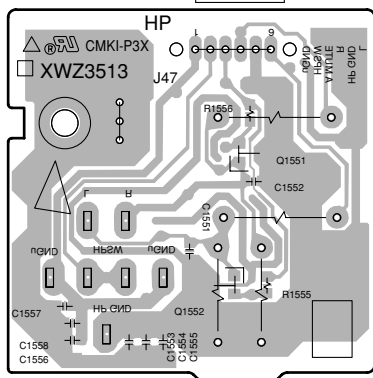
IC481

Q483

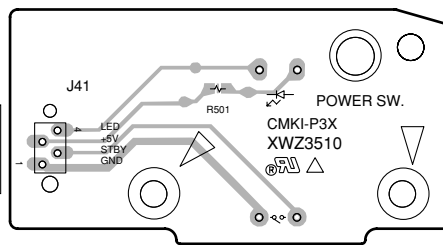
Q471

U H.P ASSY

1551



(XNP3052-C)



(XNP3052-C)

Q POWER SW ASSY

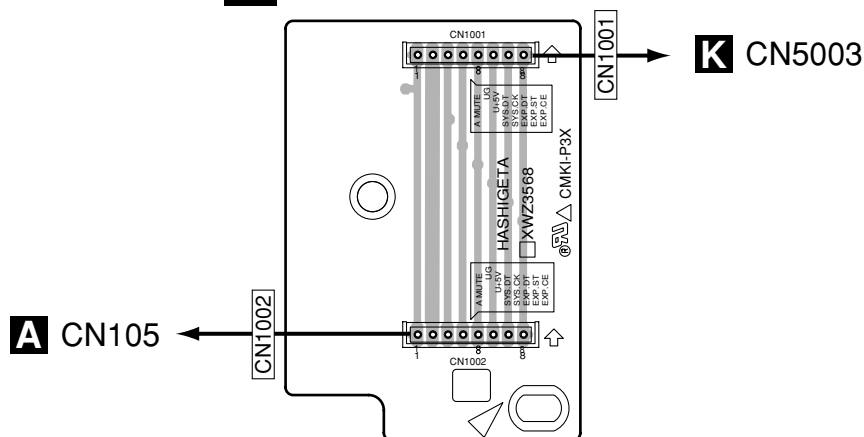
O Q U

4.5 REGULATOR, HASHIGETA and KAWA ASSYS

SIDE A

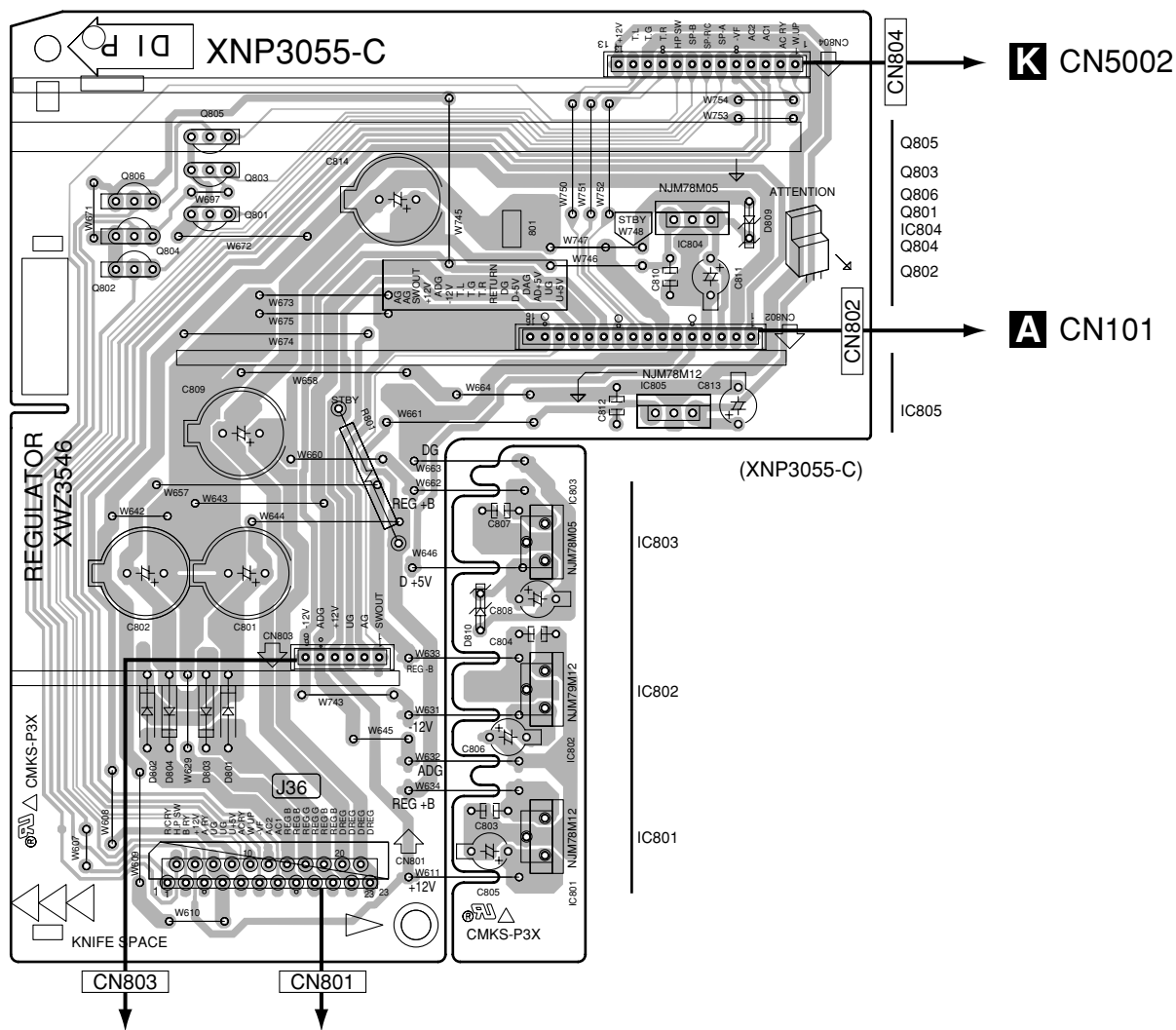
SIDE A

F HASHIGETA ASSY



E REGULATOR ASSY

(XNP3055-C)



L CN302

B CN53

E F

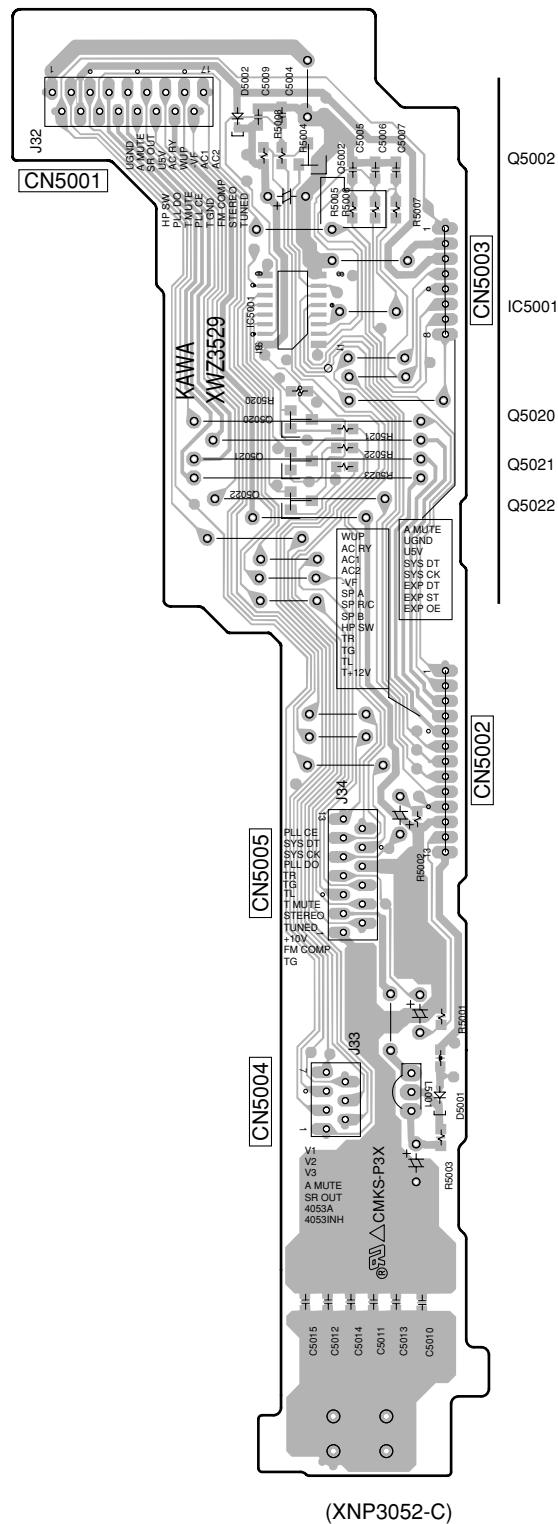
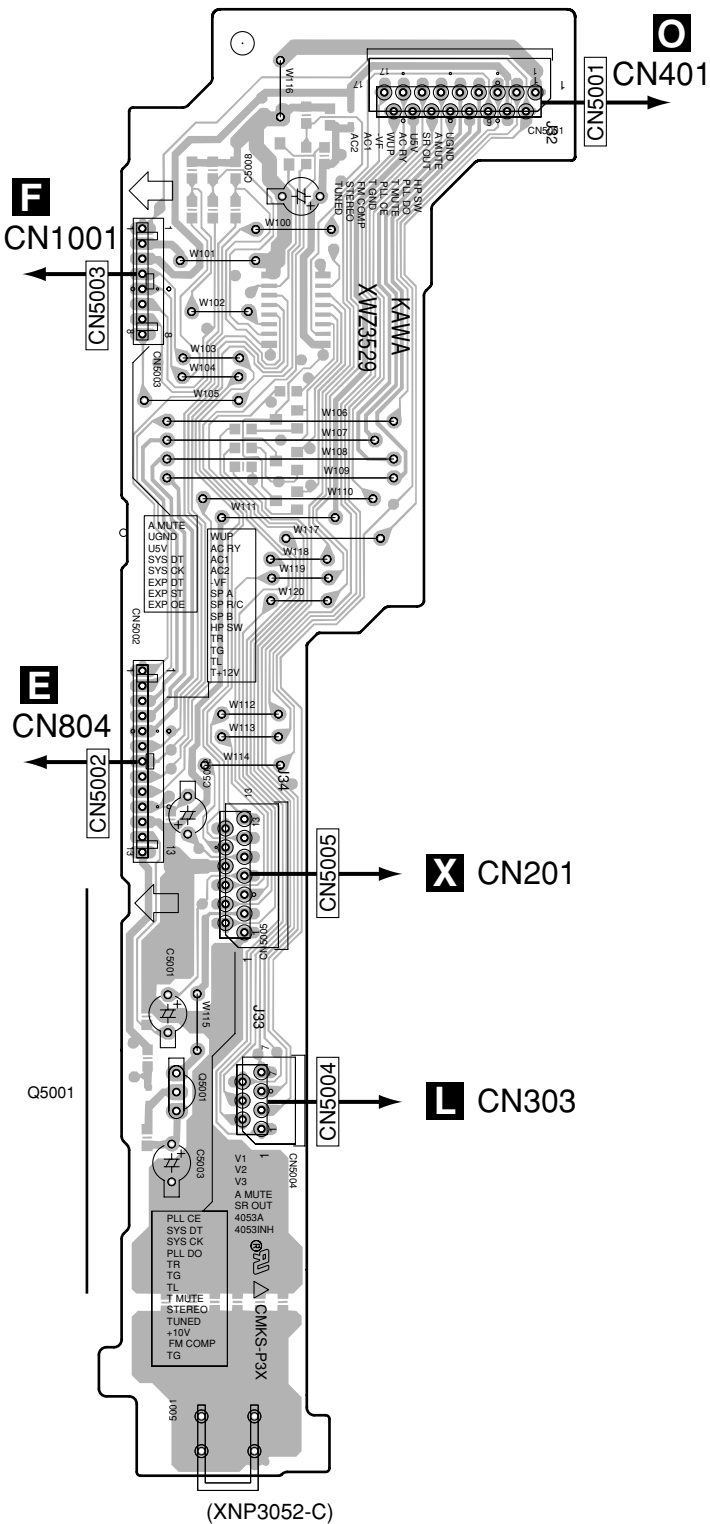
E F

SIDE A

SIDE B

K KAWA ASSY

K KAWA ASSY



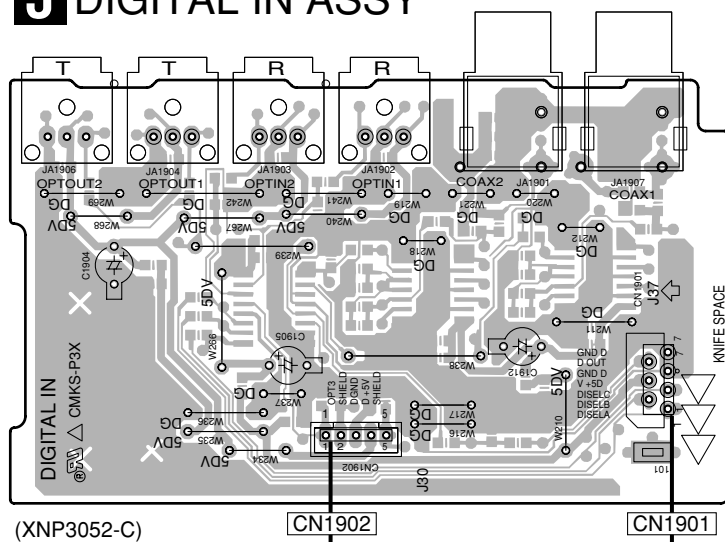
K

K

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

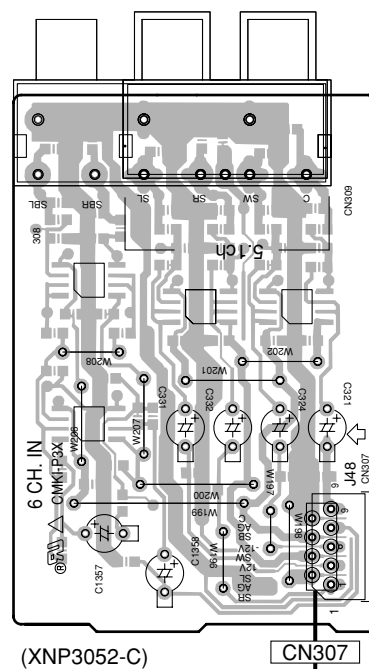
SIDE A

J DIGITAL IN ASSY

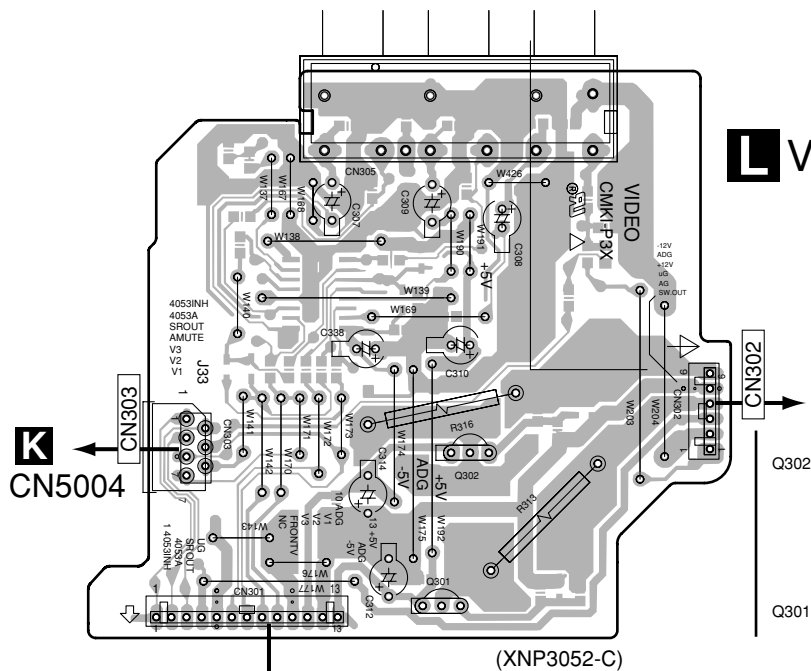


SIDE A

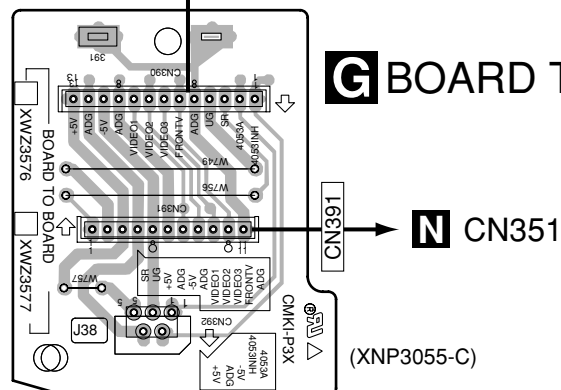
M 6CH IN ASSY



L VIDEO ASSY



G BOARD TO BOARD ASSY



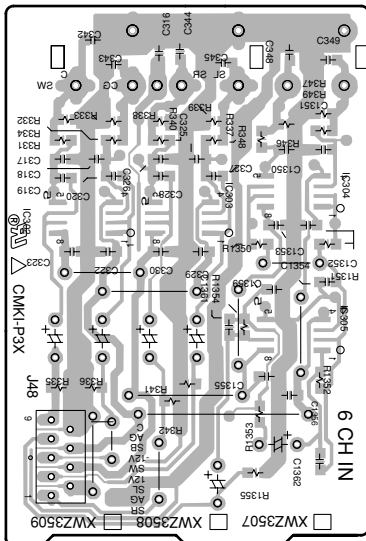
G J L M

G J L M

SIDE B

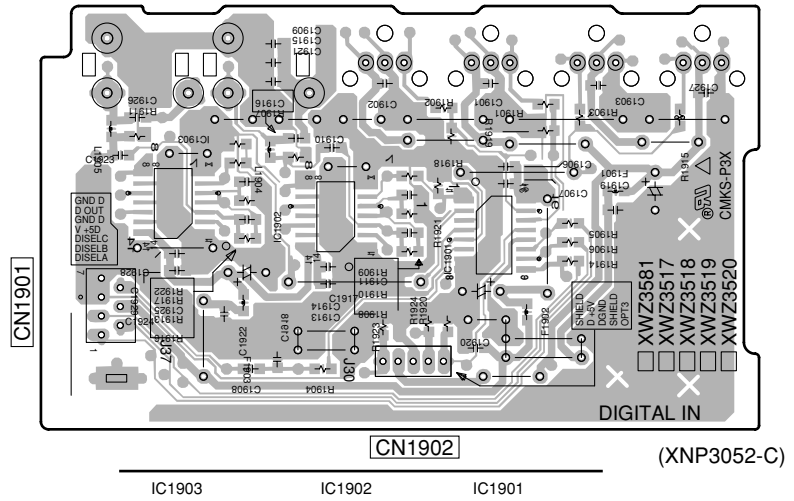
SIDE B

M 6CH IN ASSY

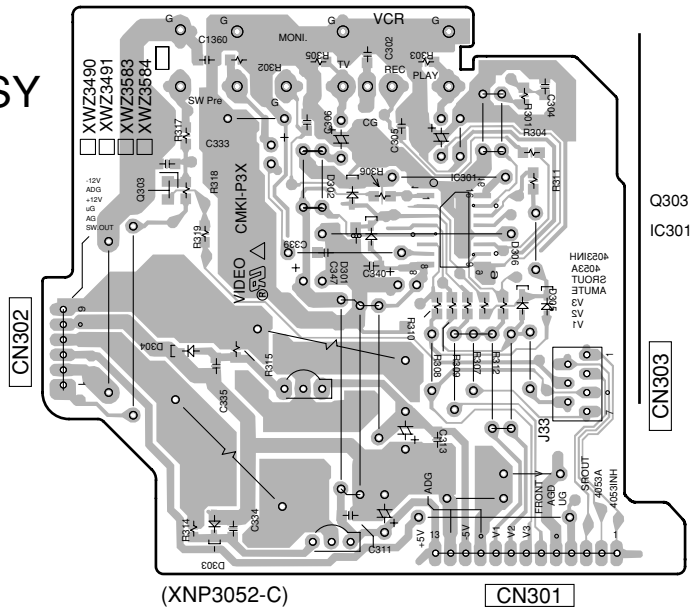


CN307 (XNP3052-C)

J DIGITAL IN ASSY



L VIDEO ASSY



J L M

J L M

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 RD1/4PU561J

$$47k\,\Omega \rightarrow 47 \times 10^3 \rightarrow 473 \cdots \cdots RD1/4PU \boxed{4}\boxed{7}\boxed{3}J$$
$$0.5\,\Omega \quad \rightarrow \quad R50 \cdots \cdots \cdots RN2H \boxed{R} \boxed{5} \boxed{0} K$$
$$I\Omega \rightarrow I\mathcal{R}0 \cdots \cdots \cdots RSIP\overline{I\mathcal{R}0}K$$

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

$$5.62k\,\Omega \rightarrow 562 \times 10^1 \rightarrow 5621 \dots\dots\dots RN1/4PC\boxed{5}\boxed{6}\boxed{2}\boxed{1}F$$

Mark No.	Description	Part No.
<u>LIST OF ASSEMBLIES</u>		
	1..D.D & INPUT ASSY	XWX3049
NSP	1..AMP & PS ASSY	XWK3060
	2..AMP & PRIMARY ASSY	XWZ3540
	2..REGULATOR ASSY	XWZ3546
	2..AMP INPUT ASSY	XWZ3551
NSP	2..TRANS1 ASSY	XWZ3554
	2..TRANS2 ASSY	XWZ3559
NSP	2..TRANS3 ASSY	XWZ3562
	2..HASHIGETA ASSY	XWZ3568
	2..BOARD TO BOARD ASSY	XWZ3577
NSP	2..BINDER ASSY	XWZ3571
NSP	2..HOLDER ASSY	XWZ3574
NSP	1..COMPLEX ASSY	XWK3047
	2..FRONT ASSY	XWZ3502
	2..6CH IN ASSY	XWZ3508
	2..POWER SW ASSY	XWZ3510
	2..H.P. ASSY	XWZ3513
	2..MECHA SW ASSY	XWZ3514
	2..FRONT VIDEO ASSY	XWZ3515
	2..FRONT OPTICAL ASSY	XWZ3516
	2..DIGITAL IN ASSY	XWZ3519
	2..S. VIDEO ASSY	XWZ3522
	2..TRANS4 ASSY	XWZ3526
	2..KAWA ASSY	XWZ3529
	2..PRE-OUT ASSY	XWZ3530
	2..R. ENCODER ASSY	XWZ3582
	2..VIDEO ASSY	XWZ3584
	1..FM/AM TUNER MODULE	AXQ7232

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
COMPLEX ASSY		
<u>OTHERS</u>		
J 41	(JUMPER WIRED)	D15A04-100-2651
J 42	(JUMPER WIRED)	D15A07-075-2651
J 47	(JUMPER WIRED)	D20PYY0630E

AMP & PS ASSY

OTHERS

Y 8 (AWG14 BOARD IN)	ADX7284
J 44 (JUMPER WIRED)	D20PYY0325E
J 21 (JUMPER WIRED)	D20PYY0715E

A D.D & INPUT ASSY
SEMICONDUCTORS
IC9102
IC9101

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
IC112		BD3812F
IC301		BU4094BCF
IC9501		CS493292
IC103		M62446FP
IC9201		NJM2100M
IC9812		NJM2391DL1-25
IC9811		NJM2391DL1-33
IC102		NJU7312AM
IC9601		NJU7313AM
IC9504		PD8097A
IC9505		TC74LVX244FT
IC9502, IC9503		TC74VHC574F
IC9506		TC74VHCT244AFT
IC9507		TC7WU04FU
IC101		TC9273F-007
IC104-IC107, IC110, IC9701-IC9707		UPC4570G2
Q107-Q112, Q9201, Q9202		2SC3326
Q9101, Q9204, Q9607, Q9609, Q9610		DTA124EK
Q9102, Q9203, Q9608		DTC124EK
D9601, D9602		1SS181
D105, D106, D301, D9921		1SS355
D107, D108		DAN217
D201, D202		RB501V-40
D104		UDZS5.1B
D101, D102		UDZS6.8B

COILS AND FILTERS

L9101, L9501, L9504, L9811, L9812 (CHIP SOLID INDUCTOR)	ATL7002
L111–L114, L1601, L1602	QTL1013
L9102–L9104, L9502, L9503	QTL1013
L9506, L9507 (CHIP SOLID INDUCTOR)	QTL1013

<u>CAPACITORS</u>	
C9510, C9511	CCSRCH100D50
C101–C114, C121–C123	CCSRCH101J50
C126–C128, C152–C154	CCSRCH101J50
C158, C159, C197, C198	CCSRCH101J50
C207, C208, C221, C222	CCSRCH101J50
C228, C229, C9160, C9201, C9202	CCSRCH101J50
C9101, C9102	CCSRCH220J50
C235, C241, C9117, C9749, C9751	CCSRCH221J50
C9509, C9757	CCSRCH271J50
C9530, C9731, C9735	CCSRCH331J50
C9103, C9110, C9111, C9114, C9125	CCSRCH471J50
C9503, C9505, C9507, C9513, C9515	CCSRCH471J50
C9518, C9520, C9522, C9525, C9528	CCSRCH471J50

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
C9571, C9611–C9614, C9625, C9639		CCSRCH471J50
C9729, C9815, C9816		CCSRCH471J50

Mark No.	Description	Part No.
X9501 (CRYSTAL RESONATOR) (27.0MHz)		VSS1086

C9707, C9708, C9721, C9722 C130–C137, C146–C151, C202 C261, C305, C9207, C9208, C9523 C9526 C9105, C9106, C9108, C9116, C9122	CCSRCH820J50 CEAT100M50 CEAT100M50 CEAT100M50 CEAT101M10
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X9101 (CRYSTAL RESONATOR) (12.288MHz)	VSS1140
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B AMP & PRIMARY ASSY SEMICONDUCTORS

⚠ IC52 (PROTECTOR(500mA))	AEK7005
⚠ IC603 (PROTECTOR(1A))	AEK7009
⚠ IC701, IC702 (PROTECTOR(125mA))	AEK7020
⚠ IC604–IC607 (PROTECTOR(10A))	AEK7022
IC51	NJM78M56FA

C9753, C9765–C9768 C144, C145 C117, C118, C225, C226 C232, C233, C239, C244 C155, C156	CEAT330M25 CEAT3R3M50 CEAT470M50 CEAT470M50 CEAT471M10
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⚠ IC601, IC602 Q703 Q702 Q696, Q697 Q704	PAC011A 2SA1145 2SB1238X 2SC1740S 2SC1845
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C115, C116, C234, C240 C9203, C9204, C9615–C9618, C9761 C9811, C9813 C271, C9703, C9704, C9717, C9718 C9745, C9781	CEAT4R7M50 CEAT4R7M50 CEAT4R7M50 CKSRYB102K50 CKSRYB102K50
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Q605, Q606, Q633, Q655, Q656 Q683 Q601–Q604, Q631, Q632 Q651–Q654, Q681, Q682 Q701	2SC2240 2SC2240 2SC2878 2SC2878 2SD1859X
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C119, C120, C124, C125, C138 C141, C171, C172, C179, C180 C183, C199, C203, C204 C223, C224, C230, C231 C237, C238, C242, C243, C304	CKSRYB103K50 CKSRYB103K50 CKSRYB103K50 CKSRYB103K50 CKSRYB103K50
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Q51 D56, D57, D601, D603, D606 D608, D631, D632, D651–D654 D683, D684, D751–D754 D757, D758	KRC101M 1SS133 1SS133 1SS133 1SS133
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C9104, C9107, C9109, C9121 C9123, C9124, C9209, C9502, C9504 C9506, C9508, C9512, C9514, C9517 C9519, C9521, C9524, C9527, C9531 C9584, C9636, C9637, C9705, C9706	CKSRYB103K50 CKSRYB103K50 CKSRYB103K50 CKSRYB103K50 CKSRYB103K50
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⚠ D701, D702 D711 D58 D712 D602, D604, D681, D682	D5SBA20(B) MTZJ22D MTZJ5.1A MTZJ5.1B MTZJ8.2A
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C9709–C9712, C9723–C9726 C9737, C9738, C9817 C140, C143, C1631, C1632 C173, C174, C9113, C9115, C9126 C9206, C9818	CKSRYB103K50 CKSRYB103K50 CKSRYB104K16 CKSRYB104K16 CKSRYB104K16
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⚠ D51–D55, D721–D724	S5688G
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COILS AND FILTERS

⚠ L51 (LINE FILTER) L751–L754, L761, L762 (AF COIL)	ATF7018 ATH1004
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SWITCHES AND RELAYS

RY751–RY754 ⚠ RY51	XSR3002 XSR3003
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CAPACITORS

C707, C708 (0.01/AC250V) ⚠ C51, C52 (10000pF/AC250V) C703, C704 (3300μF/42V) C701, C702 (4700μF/71V) C611–C614, C636, C637	ACG1005 ACG7020 ACH7135 ACH7137 CCPUCH6R8K50
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C661–C664, C686, C687 C615, C616, C638, C665, C666 C688 C775, C776 C705, C706	CCPUCH6R8K50 CEANP2R2M50 CEANP2R2M50 CEANP470M50 CEAT100M2A
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C712 C609, C610, C635, C659, C660 C685 C711 C53	CEAT101M10 CEAT101M16 CEAT101M16 CEAT101M35 CEAT102M16
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C697 C54 C605, C606, C633, C655, C656	CEAT221M10 CEAT470M25 CEAT4R7M50
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C9516, C9551, C9792, C9812, C9814 C9740 C9205 C9112, C9529, C9769, C9770 C9713, C9714, C9727, C9728, C9739	CEAT101M10 CEAT220M25 CEAT221M6R3 CEAT2R2M50 CEAT330M25
C9755 C9701, C9702, C9715, C9716, C9763 C9736 C139, C142, C9626 C236	CKSRYB122K50 CKSRYB222K50 CKSRYB223K25 CKSRYB223K50 CKSRYB472K50
C184, C185, C9732 C227, C9730	CKSRYB473K25 CKSRYF104Z25

RESISTORS

⚠ R171, R172 R9104 ⚠ R174, R175 Other Resistors	RS1/16S102J RS1/16S1802F RS1LMF101J RS1/16S###J
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OTHERS

CN9101 (7P CONNECTOR) CN104 (9P CONNECTOR) CN106 (20P CONNECTOR) CN102 (28P CONNECTOR) JA101–JA104 (PIN JACK(4P))	52044-0745 52044-0945 52045-1945 52045-2845 AKB7048
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CN107 (CONNECTOR POST) CN101 (16P SOCKET) CN105 (8P SOCKET) 101–103 (PCB BINDER)	B3B-PH-K KP200TA16L KP200TA8L VEF1040
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Mark No. DescriptionC683
C751–C756, C761–C764C771, C772
C607, C608, C634, C657, C658
C684
C601, C602, C631, C651, C652
C681, C696, C769, C770C603, C604, C632, C653, C654
C682
C55–C57
C757–C759, C765–C768, C773**RESISTORS**⚠ R52
⚠ R615
⚠ R751, R752, R755, R761, R762
⚠ R772
⚠ R753, R754, R756, R763, R764⚠ R771
⚠ R711
⚠ R617, R622, R639, R667, R668
⚠ R691 (0.22Ω/5W)
Other Resistors**OTHERS**52 (3P CABLE HOLDER)
CN604 (7P CONNECTOR)
CN53 (23P CONNECTOR)
CN702 (6P CONNECTOR)
H51, H52 (FUSE CLIP)⚠ T51 (STANDBY TRANSFORMER)
CN601 (18P PLUG)
CN51 (AC CODE SOCKET)
KN51, KN601 (EARTH METAL FITTING)
CN751SP (TERMINAL 8-P)CN753 (TERMINAL 4-P)
CN752 (TERMINAL 6-P)

⚠ 701 (7P CABLE HOLDER)

**C TRANS2 ASSY
SEMICONDUCTORS**⚠ IC853 (PROTECTOR (3A))
⚠ IC851, IC852 (PROTECTOR (4A))**OTHERS**

851 (7P CABLE HOLDER)

D TRANS3 ASSY

TRANS3 ASSY has no service part.

**E REGULATOR ASSY
SEMICONDUCTORS**IC803, IC804
IC801, IC805
IC802
Q801, Q803, Q805
Q802, Q804, Q806D809, D810
⚠ D801–D804**CAPACITORS****Part No.**CEAT4R7M50
CFTYA224J50CFTYA224J50
CKPUYB101K50
CKPUYB101K50
CKPUYB102K50
CKPUYB102K50CKPUYB331K50
CKPUYB331K50
CKPUYF103Z25
CQMBA472J50RD1/2PM270J
RD1/4PU331J
RD1/4PUF101J
RD1/4PUF101J
RS1LMF4R7JRS1LMF4R7J
RS2LMF332J
XCN3001
XCN3001
RD1/4PU###J51048-0300
52045-0745
52045-2345
52147-0610
AKR7001ATT7037
KM200TA18
RKP1751
VNF1084
XKE3017XKE3018
XKE3019
XKP3047AEK7015
AEK7018

XKP3047

NJM78M05FA
NJM78M12FA
NJM79M12FA
KRA103M
KRC102MMTZJ6.2A
S5688G**Mark No. Description**C808, C811
C805, C806, C813
C801, C802
C809
C803, C804, C807, C810, C812**OTHERS**CN801 (23P CONNECTOR)
CN804 (13P PLUG)
CN802 (16P PLUG)
CN803 (6P PLUG)**Part No.**CEAT101M10
CEAT101M16
CEAT222M25
CEAT332M16
CKPUYF103Z2552045-2345
KM200TA13
KM200TA16
KM200TA6**F HASHIGETA ASSY
OTHERS**

CN1001, CN1002 (8P PLUG)

KM200TA8

**G BOARD TO BOARD ASSY
OTHERS**CN391 (11P PLUG)
CN390 (13P PLUG)KM200TA11
KM200TA13**H AMP INPUT ASSY
SEMICONDUCTORS**IC251
Q257
Q251, Q256
Q252
Q254NJM4558D-D
2SA933S
2SC2878
2SD1858X
KRA103MQ253, Q255
D251, D252
D253
D254KRC103M
1SS133
MTZJ27D
MTZJ5.1B**CAPACITORS**C251
C254
C252, C253CEANP470M25
CEAT101M25
CKPUYF103Z25**RESISTORS**

All Resistors

RD1/4PU###J

OTHERSCN251 (3P CONNECTOR)
CN254 (19P CONNECTOR)
CN252 (3P PLUG)
CN253 (18P SOCKET)52044-0345
52044-1945
KM250MA3L
KP200TA18L**I TRANS1 ASSY**

TRANS1 ASSY has no service part.

**J DIGITAL IN ASSY
SEMICONDUCTORS**IC1901
IC1902, IC1903TC74ACT151F
TC74HCU04AF**COILS AND FILTERS**F1901–F1903 (CHIP BEAD)
L1904, L1905 (CHIP SOLID INDUCTOR)DTF1067
QTL1013**CAPACITORS**C1918
C1907, C1914, C1928
C1911, C1925
C1916, C1926CCSRCH221J50
CCSRCH271J50
CCSRCH470J50
CCSRCH471J50

Mark No.	Description	Part No.
C1904, C1905, C1912		CEAT101M10
C1915		CKSRYB102K50
C1906, C1910, C1913, C1919, C1920		CKSRYB103K50
C1923, C1929		CKSRYB103K50
C1901–C1903, C1908, C1909		CKSRYB104K25
C1921, C1922		CKSRYB104K25

RESISTORS

All Resistors	RS1/16S###J
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OTHERS

CN1901 (7P CONNECTOR)	52045-0745
CN1902 (CONNECTOR POST)	B5B-PH-K
JA1904 (OPT. LINK OUT 12MB/S)	JFJ3000-010020
JA1902, JA1903 (OPT. LINK IN 12MB/S)	JFJ4000-010020
101 (PCB BINDER)	VEF1040

JA1901, JA1907 (1P PIN JACK)	VKB1077
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KAWA ASSY SEMICONDUCTORS

IC5001	BU4094BCF
Q5001	2SC1740S
Q5020–Q5022	DTC114TK
Q5002	DTC143EK
D5001, D5002	1SS355

COILS AND FILTERS

L5001 (CHIP SOLID INDUCTOR)	QTL1013
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CAPACITORS

C5004–C5007	CCSRCH101J50
C5012	CCSRCH471J50
C5001, C5002	CEAT100M50
C5003	CEAT101M16
C5009	CKSRYB103K50

C5011	CKSRYB104K16
C5010	CKSRYF105Z10

RESISTORS

All Resistors	RS1/16S###J
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OTHERS

CN5004 (7P CONNECTOR)	52044-0745
CN5005 (13P CONNECTOR)	52044-1345
CN5001 (17P CONNECTOR)	52044-1745
CN5002 (13P SOCKET)	KP200TA13L
CN5003 (8P SOCKET)	KP200TA8L

5001 (SCREW PLATE)	VNE1948
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L VIDEO ASSY SEMICONDUCTORS

IC301	NJM2296M
Q302	2SA1515
Q303	2SC3326
Q301	2SC3377
D301, D302, D305, D306	1SS355

D303, D304	UDZS6.2B
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CAPACITORS

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

Mark No. Description Part No.

C304–C306	CKSRYB221K50
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C333	CKSRYB331K50
C311, C313	CKSRYB473K25

RESISTORS

R313, R316	RS3LMF560J
Other Resistors	RS1/16S###J

OTHERS

CN303 (7P CONNECTOR)	52044-0745
CN305 (6P PIN JACK)	AKB7123
CN301 (13P SOCKET)	KP200TA13L
CN302 (6P SOCKET)	KP200TA6L

M 6CH IN ASSY SEMICONDUCTORS

IC302–IC305	NJM4558MD
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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
C1352, C1353, C1355, C1356, C316	CKSRYB103K50
C322, C323, C329, C330	CKSRYB103K50
C1350, C1351, C317, C318	CKSRYB221K50

C325, C326	CKSRYB221K50
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RESISTORS

All Resistors	RS1/16S###J
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OTHERS

CN307 (9P CONNECTOR)	52044-0945
308 (6P PIN JACK)	AKB7089

N S.VIDEO ASSY SEMICONDUCTORS

IC351, IC352	NJM2296M
D351–D354	1SS355

CAPACITORS

C375, C376	CCSRCH470J50
C352, C355, C358, C361–C363	CEAT470M25
C366	CEAT470M25
C372, C373, C378	CKSRYB103K50
C351, C353, C354, C356, C357	CKSRYB104K25

C359, C367	CKSRYB104K25
C364, C365, C368–C371	CKSRYB221K50

RESISTORS

All Resistors	RS1/16S###J
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OTHERS

CN353 (2-4P MINI DIN SOCKET)	AKP7020
CN352 (3-4P MINI DIN SOCKET)	AKP7043
CN354 (CONNECTOR POST)	B5B-PH-K
CN351 (11P SOCKET)	KP200TA11L
JA351 (JACK)	RKN1004

O FRONT ASSY

■ 5 ■

Mark No.	Description	Part No.
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SEMICONDUCTORS

IC481
IC401
Q481
Q483
Q401, Q402, Q442, Q471

BU1923F
PDG268B
2SA1037K
2SC3326
DTA124EK

Q403, Q441, Q482
D406, D410, D442
D403, D405
D401, D404
D407, D408

DTC143EK
1SS355
DAN217
DAP202K
RB501V-40

COILS AND FILTERS

L401, L481

LFEA2R2J

SWITCHES AND RELAYS

S451-S468, S476

ASG1051

CAPACITORS

C420 (220µF/35V)
C404 (0.047F/5.5V)
C489, C490
C511
C488

ACH7101
ACH7132
CCSRCH270J50
CCSRCH471J50
CCSRCH561J50

C442
C483
C486
C402
C409, C410, C484

CEAL470M10
CEAT101M10
CEAT1R0M50
CEAT221M6R3
CEAT2R2M50

C412
C405
C451-C453, C472, C481, C482
C492, C495
C401, C403, C411, C419, C441

CEAT470M50
CEAT471M6R3
CKSRYB102K50
CKSRYB102K50
CKSRYB103K50

C531
C408, C416, C418, C471
C485
C406, C407

CKSRYB103K50
CKSRYB104K16
CKSRYB472K50
CKSRYB473K16

RESISTORS

All Resistors

RS1/16S###J

OTHERS

471 (CABLE HOLDER (4P))
404 (CABLE HOLDER (7P))
CN401 (17P CONNECTOR)
CN402 (28P CONNECTOR)
V401 (FL TUBE)

51063-0405
51063-0705
52044-1745
52044-2845
XAV3013

X481 (CRYSTAL RESONATOR)
(4.332MHz)

ASS7004

X401 (CERAMIC RESONATOR)
(7.2MHz)

ASS7039

401 (REMOTE RECEIVER UNIT)

GP1U27X

■ **P R.ENCODER ASSY**
SEMICONDUCTORS

D512
D511

SLI-343DCW(STU)
UDZS5.6B

SWITCHES AND RELAYS

S511
S513
S512

ASG1051
XSX3005
XSX3006

■ 6 ■

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

RESISTORS

All Resistors

RS1/16S###J

OTHERS

511 (CABLE HOLDER (7P))
512 (LED HOLDER)

51063-0705
XAK3187

■ **Q POWER SW ASSY**
SEMICONDUCTORS

D501

BR3371XJ30A

SWITCHES AND RELAYS

S501

ASG1051

RESISTORS

All Resistors

RS1/16S###J

OTHERS

501 (CABLE HOLDER (4P))

51063-0405

■ **R TRANS4 ASSY**
SEMICONDUCTORS

IC891, IC892
D891

AEK7006
S1WB(A)60SD

CAPACITORS

C891, C892

CEAT471M35

OTHERS

CN891 (3P CONNECTOR)

52045-0345

■ **S FRONT VIDEO ASSY**
CAPACITORS

C903, C905
C908, C911, C914
C904, C906, C909, C912
C901, C902
C907, C910, C913

CEAL470M25
CKSRYB103K50
CKSRYB104K25
CKSRYB221K50
CKSRYB471K50

RESISTORS

All Resistors

RS1/16S###J

OTHERS

JA902 (PIN JACK (4P))

AKX7014

■ **T FRONT OPTICAL ASSY**
CAPACITORS

C951

CKSRYB104K25

RESISTORS

All Resistors

RS1/16S###J

OTHERS

JA951 (OPT. LINK IN 12MB/S)
CN951 (CONNECTOR)
KN951 (EARTH METAL FITTING)

JFJ4000-010020
S5B-PH-K
VNF1084

■ **U H.P. ASSY**
SEMICONDUCTORS

Q1551, Q1552

2SC3326

CAPACITORS

C1554, C1557

CCSRCH471J50

Mark No.	Description	Part No.
C1553, C1556		CKSRYB103K50
C1555, C1558		CKSRYB104K16
C1551, C1552		CKSRYB223K50

RESISTORS

⚠ R1553, R1554	RS1LMF471J
⚠ R1551, R1552	RS2LMF331J
Other Resistors	RS1/16S###J

OTHERS

1551 (6P CABLE HOLDER)	51048-0600
JA1551 (HEADPHONE JACK)	RKB1014
KN1551 (EARTH METAL FITTING)	VNF1084

V MECHA SW ASSY

SWITCHES AND RELAYS

S591	ASG7014
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CAPACITORS

C591, C592	CKSRYB103K50
------------	--------------

OTHERS

CN591 (3PJUMPER CONNECTOR)	52151-0310
----------------------------	------------

W PRE-OUT ASSY

CAPACITORS

C1581	CKSRYB103K50
-------	--------------

RESISTORS

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

OTHERS

CN1575 (7P CONNECTOR)	52045-0745
1575 (PIN JACK(6P))	AKB7089

X FM/AM TUNER MODULE

SEMICONDUCTORS

IC201	BA1451F
IC202	LC72131MD
Q201, Q204, Q205, Q601	2SC2412K
Q202	DTA124ES
Q203, Q602	DTC124EK

D201	1SS133
D601	HVU187
D202	MTZJ5.1C
D101	UDZS6.8B

COILS AND FILTERS

L201 (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
------	------------

Mark No.	Description	Part No.
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
0 (SHIELD CASE T)	ANK7072
0 (SHIELD CASE B)	ANK7073
X201 (CRYSTAL RESONATOR) (7.2MHz)	ASS1093

1 (FM FRONTEND)	AXF7005
2 (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 V _{tm}) gets within 0 ± 50mV.

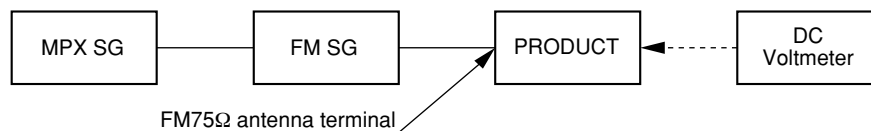


Fig.1 Adjustment Wiring Diagram

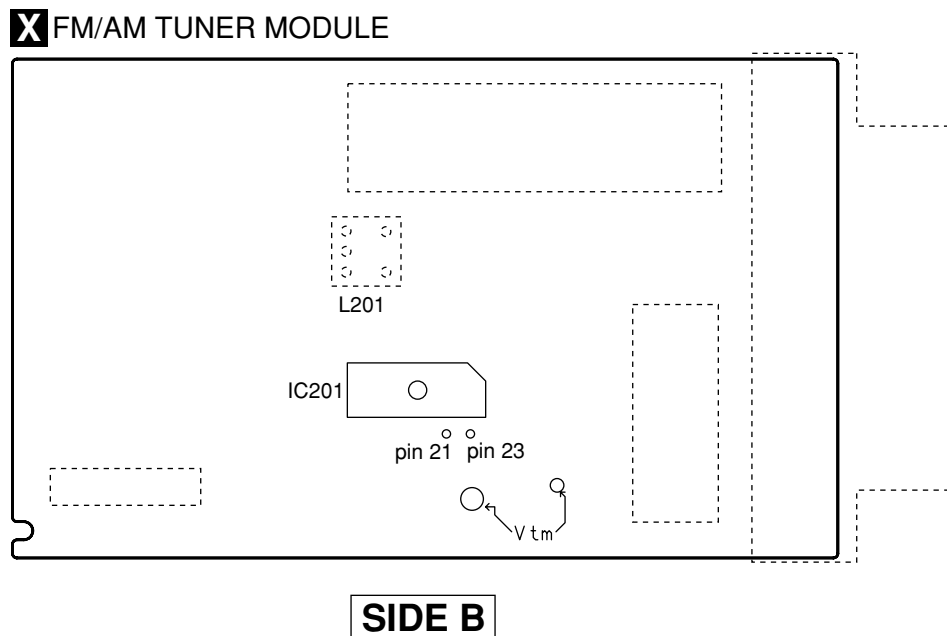
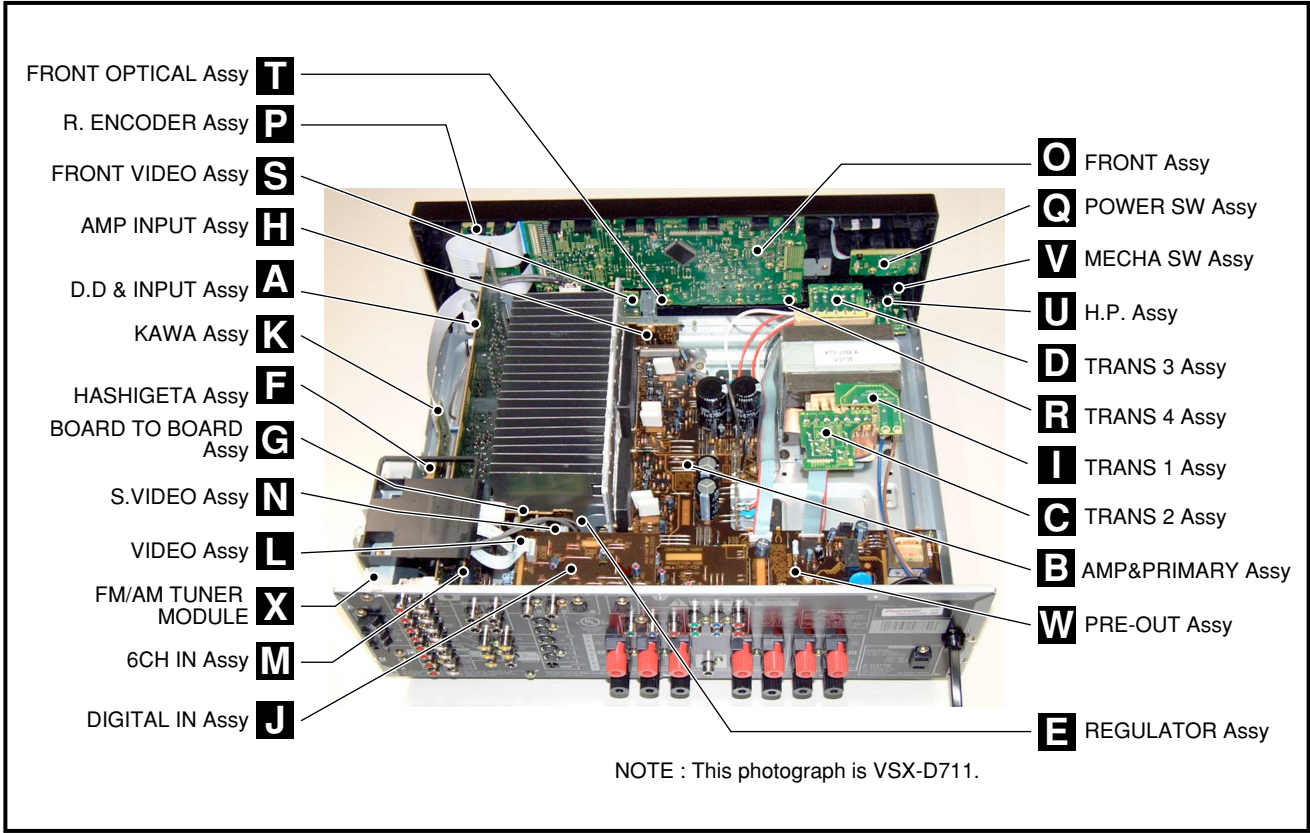


Fig.2 Adjustment Point

7. GENERAL INFORMATION

7.1 PCB LACATION



Note : D.D & INPUT Assy
The pin of function IC (IC101 TC9273F-007) can be checked from side-A by the through-hole round.
The pin No. is printed on the side-A.

Even if the FM/AM TUNER MODULE is disconnected, other functions can operate.

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.

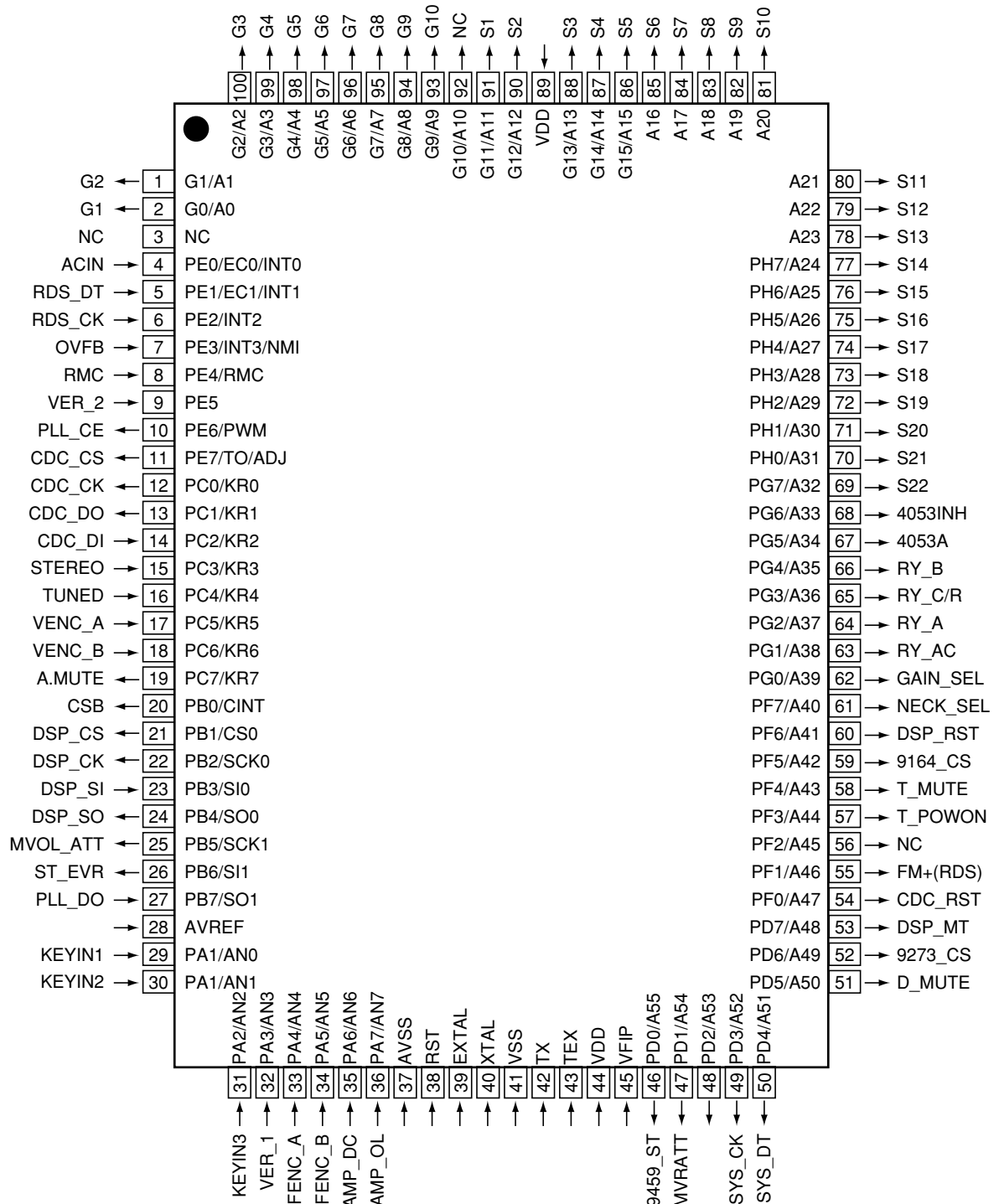
- List of IC**

PDG268A, AK4586VQ, BD3812F, NJU7312AM, PD8097A, AK4382AVT

■ PDG268B (FRONT ASSY : IC401)

- System Control MCU**

■ Pin Arrangement (Top View)



• Pin Function

No.	Pin Name	I/O	Pin Function	Active
1	G2	O	Grid output 2	H
2	G1	O	Grid output 1	H
3	NC	–	Connect to Vdd	
4	ACIN	I	Input AC pulse	
5	RDS_DT	I	Serial control DATA signal of RDS communication	
6	RDS_CK	I	Serial control CLOCK signal of RDS communication (Use external interrupt)	
7	DIRLOCK	I	ERR/OVER input from CODEC	
8	RMC	I	Remote control signal input (no-carrier signal)	
9	VER_2	I	Destination switch 2	
10	ST_EVR	O	Strobe of communication for E-volume	H
11	CDC_CS	O	Chip select for CODEC	
12	CDC_CK	O	Control clock for CODEC & TC9164	
13	CDC_DO	O	Control data for CODEC & TC9164	
14	CDC DI	I	Data input from DIR	
15	STEREO	I	Signal to switch Stereo / Monoral	
16	TUNED	I	Condition of TUNED	
17	VENC_A	I	Input from rotary encoder of E-volume (A)	
18	VENC_B	I	Input from rotary encoder of E-volume (B)	
19	HP ON	I	Headphone detect	L
20	CREQ	I	Request for DSP	L
21	CCS	O	Chip select for DSP	L
22	CCK	O	Clock signal for DSP	H
23	CDT	I	DATA input signal for DSP	
24	CSDO	O	DATA output signal for DSP	H
25	FS 96	I	96 k	H
26	AMP_OL	I	Detect overload of protection circuit (L: overload)	H
27	PLL_DO	I	Data input signal for communication with LC72131 (Tuner)	
28	AVref	–	Connect to Vdd	
29	KEYIN1	I	Key input A/D conversion port 1	
30	KEYIN2	I	Key input A/D conversion port 2	
31	KEYIN3	I	Key input A/D conversion port 3	
32	VER_1	I	Input 1 to switch region (A/D input)	
33	FENC_A	I	FUNC Rotary encoder signal input (A)	
34	FENC_B	I	FUNC Rotary encoder signal input (B)	
35	AMP_DC	I	Detect trouble DC of protection circuit (L : Trouble)	L
36	VER_2	I	Input 2 to switch region (A/D input)	L
37	AVSS	–	Connect to Vss	
38	RST	–	Reset	
39	EXTAL	–	Connect to the oscillator (7.2MHz)	
40	XTAL	–		
41	VSS	–	Connect to Vss	
42	TX	–	NC	
43	TEX	–	Connect to Vss	
44	VDD	–	+5V	
45	VFDP	–	-30V	
46	9459_ST	O	Strobe for E-volume (TC9459) of SB	
47	MVRATT	O	ATT control of master volume for E-volume (less than -15dB : L)	H
48				H
49	SYS_DT	O	Data signal for communication with M62446, TC9163, TC9164 and PLL	H
50	SYS_CK	O	Clock signal for communication with M62446, TC9163, TC9164 and PLL	H

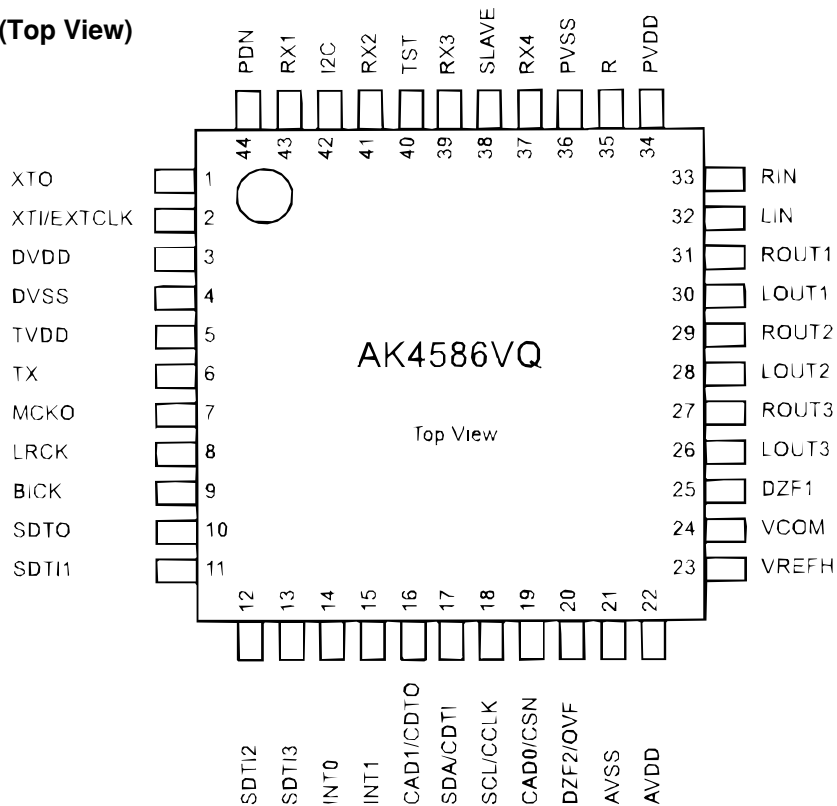
• Pin Function

No.	Pin Name	I/O	Pin Function	Active
51	9273_CS	O	Chip select for TC9273	H
52	DSP_MT	O	DSP Mute (ASSY mute)	H
53	GAIN_SEL	O	Gain select (5.1ch and Stereo of analog input : H)	H
54	AMUTE	O	Audio mute	H
55	T_MUTE	O	Tuner mute	H
56	PLL_CE	O	Chip select for communication to LC72131 (Tuner)	
57	NECK_SEL	O	5.1ch, surround mode and A+B Stereo : H / Stereo : L	H
58	FM+(RDS)	O	Tr switch ON/OFF for power supply of RDS decoder (L : AM, power OFF , H : Other)	H
59	9164_CS	O	TC9163, TC9164 Chip select	
60	CRST	O	Reset for DSP	
61	CDC_PD	O	Power down for CODEC	
62	ABOT	O	Abort for DSP	H
63	RY_AC	O	AC relay ON/OFF	H
64	RY_A	O	Speaker A relay ON/OFF	H
65	RY_C/R	O	Rear/Center Speaker relay ON/OFF	H
66	EXP CS	O	Chip select for expand IC	H
67	EXP OE	O	Chip select for expand IC	H
68	RY_AC	O	AC relay ON/OFF control	H
69	S22	O	Segment output 22	H
70	S21		Segment output 21	
71	S20		Segment output 20	
72	S19		Segment output 19	
73	S18		Segment output 18	
74	S17		Segment output 17	
75	S16		Segment output 16	
76	S15		Segment output 15	
77	S14		Segment output 14	
78	S13		Segment output 13	
79	S12		Segment output 12	
80	S11		Segment output 11	
81	S10		Segment output 10	
82	S9		Segment output 9	
83	S8		Segment output 8	
84	S7		Segment output 7	
85	S6		Segment output 6	
86	S5		Segment output 5	
87	S4		Segment output 4	
88	S3		Segment output 3	
89	VDD	-	5V	
90	S2	O	Segment output 2	H
91	S1		Segment output 1	
92	Not used	O	Not used (Fixed Vfdp)	
93	G10	O	Grid output 10	H
94	G9		Grid output 9	
95	G8		Grid output 8	
96	G7		Grid output 7	
97	G6		Grid output 6	
98	G5		Grid output 5	
99	G4		Grid output 4	
100	G3		Grid output 3	

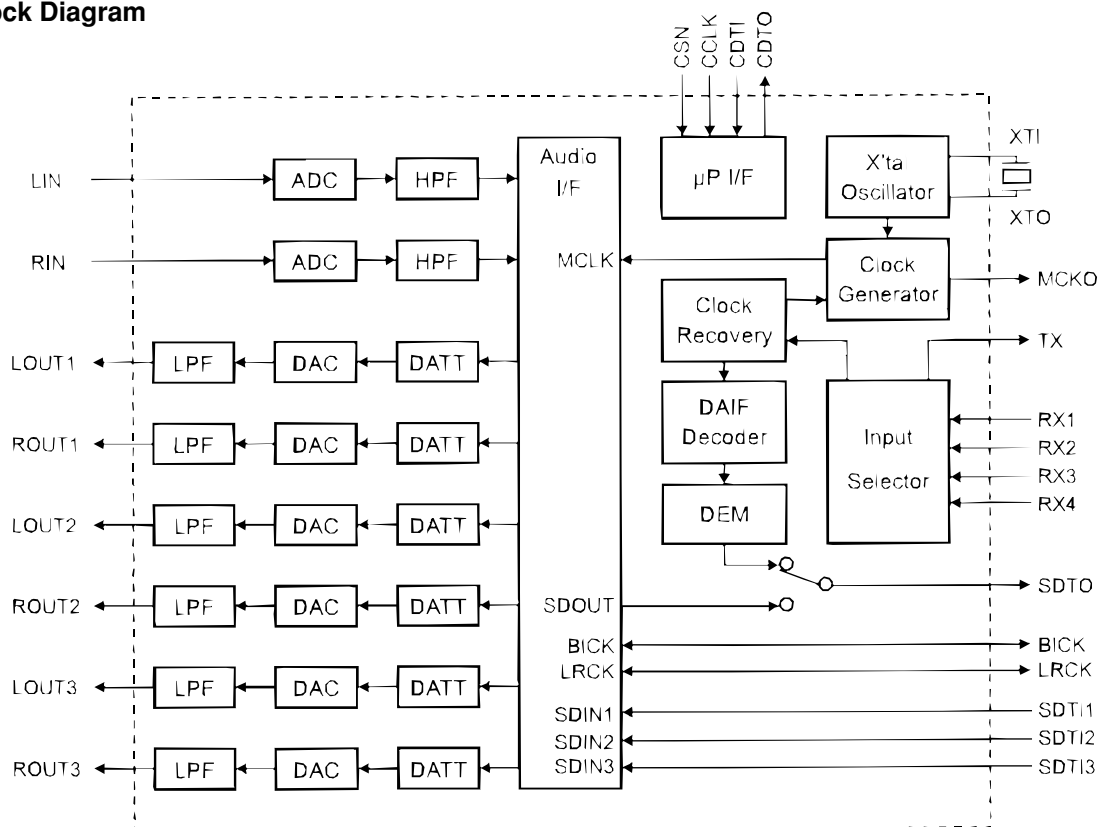
■ AK4586VQ (DD & INPUT ASSY : IC9101)

• 96kHz 24Bit 6-channel CODEC with DIR

■ Pin Arrangement (Top View)



■ Block Diagram



■ Pin / Function

PIN/FUNCTION			
No.	Pin Name	I/O	Function
1	XTO	O	X'tal Output Pin
2	XTI	I	X'tal Input Pin
	EXTCLK	I	External Master Clock Input Pin
3	TVDD	-	Output Buffer Power Supply Pin, 2.7V~5.5V
4	DVSS	-	Digital Ground Pin, 0V
5	DVDD	-	Digital Power Supply Pin, 4.5V~5.5V
6	TX	O	Transmit channel (through data) Output Pin
7	MCKO	O	Master Clock Output Pin
8	LRCK	I/O	Input/Output Channel Clock Pin
9	BICK	I/O	Audio Serial Data Clock Pin
10	SDTO	O	Audio Serial Data Output Pin
11	SDTI1	I	DAC1 Audio Serial Data Input Pin
12	SDTI2	I	DAC2 Audio Serial Data Input Pin
13	SDTI3	I	DAC3 Audio Serial Data Input Pin
14	INT0	O	Interrupt 0 pin
15	INT1	O	Interrupt 1 pin
16	CDTO	O	Control Data Output Pin in 4-wire serial control mode
	CAD1	I	Chip Address 1 Pin in I ² C bus control mode
17	CDTI	I	Control Data Input Pin in 4-wire serial control mode
	SDA	I/O	Control Data Input/Output Pin in I ² C bus control mode
18	CCLK	I	Control Data Clock Pin in 4-wire serial control mode
	SCL	I	Control Data Clock Pin in I ² C bus control mode
19	CSN	I	Chip Select Pin in 4-wire serial control mode
	CAD0	I	Chip Address 0 Pin in I ² C bus control mode
20	DZF2	O	Zero Input Detect 2 Pin (Note 1) 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 2) This pin goes to "H" if the analog input of Lch or Rch is overflows.
21	AVSS	-	Analog Ground Pin, 0V
22	AVDD	-	Analog Power Supply Pin, 4.5V~5.5V

■ Pin / Function

No.	Pin Name	I/O	Function
23	VREFH	I	Positive Voltage Reference Input Pin, AVDD
24	VCOM	O	Common Voltage Output Pin, AVDD/2 Large external capacitor around 2.2μF is used to reduce power-supply noise.
25	DZF1	O	Zero Input Detect 1 Pin (Note 1) When the input data of the group 1 follow total 8192 LRCK cycles with "0" input data, this pin goes to "H".
26	LOUT3	O	DAC3 Lch Analog Output Pin
27	ROUT3	O	DAC3 Rch Analog Output Pin
28	LOUT2	O	DAC2 Lch Analog Output Pin
29	ROUT2	O	DAC2 Rch Analog Output Pin
30	LOUT1	O	DAC1 Lch Analog Output Pin
31	ROUT1	O	DAC1 Rch Analog Output Pin
32	LIN	I	Lch Analog Input Pin
33	RIN	I	Rch Analog Input Pin
34	PVDD	-	PLL Power Supply Pin, 4.5V~5.5V
35	R	-	External Resistor Pin 18kΩ +/-1% resistor to PVSS externally.
36	PVSS	-	PLL Ground Pin, 0V
37	RX4	I	Receiver Channel 4 Pin (Internal biased pin)
38	SLAVE	I	Slave Mode Pin "L": Master mode or Slave mode, "H": Slave mode
39	RX3	I	Receiver Channel 3 Pin (Internal biased pin)
40	TST	I	Test Pin This pin should be connected to DVSS.
41	RX2	I	Receiver Channel 2 Pin (Internal biased pin)
42	I2C	I	Control Mode Select Pin "L": 4-wire Serial, "H": I ² C Bus
43	RX1	I	Receiver Channel 1 Pin (Internal biased pin)
44	PDN	I	Power-Down & Reset Pin When "L", the AK4586 is powered-down, all output pins go to "L" and the control registers are reset to default state. If the state of CAD1-0 changes, then the AK4586 must be reset by PDN.

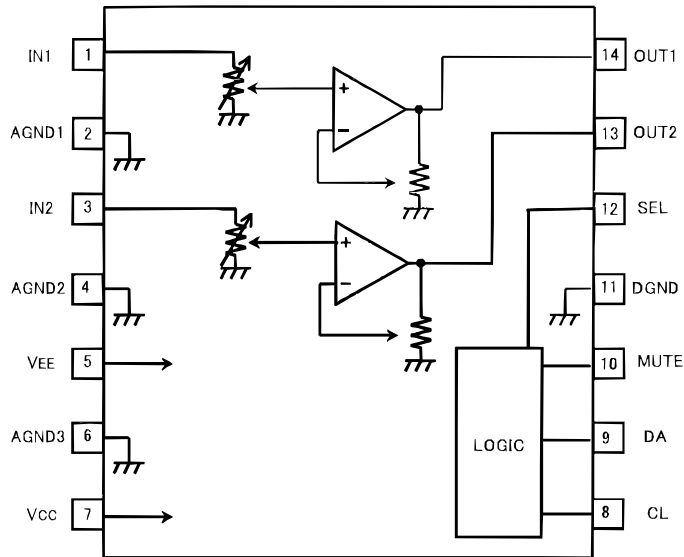
Notes:

1. The group 1 and 2 can be selected by DZFM2-0 bits.
2. This pin becomes OVF pin if OVFE bit is set to "1".
3. All input pins except internal biased pins should not be left floating.

■ BD3812F (D.D & INPUT ASSY : IC112)

• Audio Sound Processor

• Block Diagram



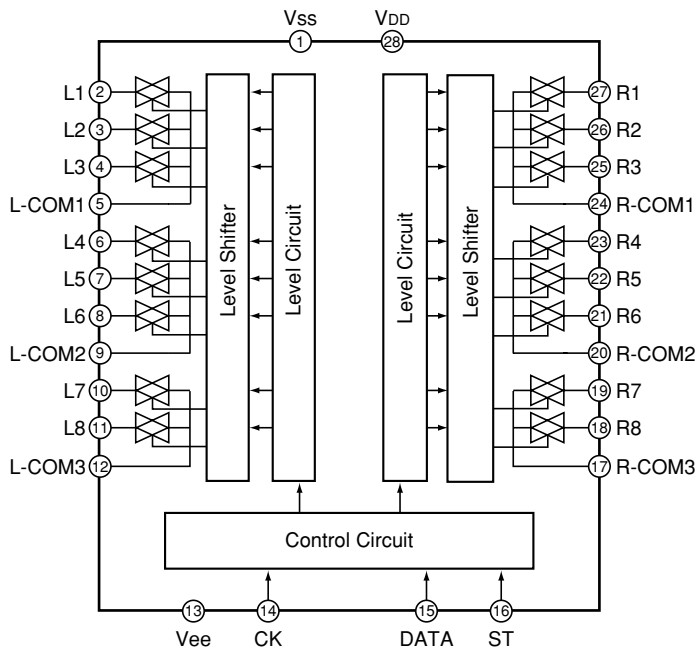
• Pin Function

No.	Pin Name	Function
1	IN1	1ch input terminal
2	AGND1	Analog ground terminal
3	IN2	2ch input terminal
4	AGND2	Analog ground terminal
5	Vee	(-) Power supply terminal
6	AGND3	Analog ground terminal
7	Vcc	(+) Power supply terminal
8	CL	Serial clock input terminal
9	DA	Serial data an latch input terminal
10	MUTE	Mute terminal
11	DGND	Ground terminal for comparator
12	SEL	Serial data select terminal
13	OUT2	2ch output terminal
14	OUT1	1ch output terminal

■ NJU7312AM (D.D & INPUT ASSY : IC102)

• Analog Switch Array

• Block Diagram



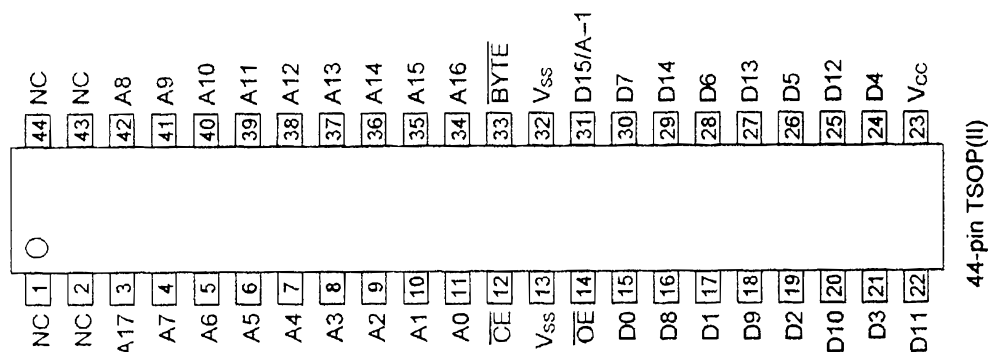
• Pin Function

No.	Pin Name	Function
1	VSS	Minus Power Supply
2, 27	L1,R1	Input and Output
3, 26	L2,R2	
4, 25	L3,R3	
5, 24	COM1	
6, 23	L4,R4	
7, 22	L5,R5	
8, 21	L6,R6	
9, 20	COM2	
10, 19	L7,R7	
21, 18	L8,R8	
26, 17	COM3	
13	GND	Digital Ground
14	CK	Clock Input
15	DATA	Data Input
16	ST	Strobe Input
28	VDD	Plus Power Supply

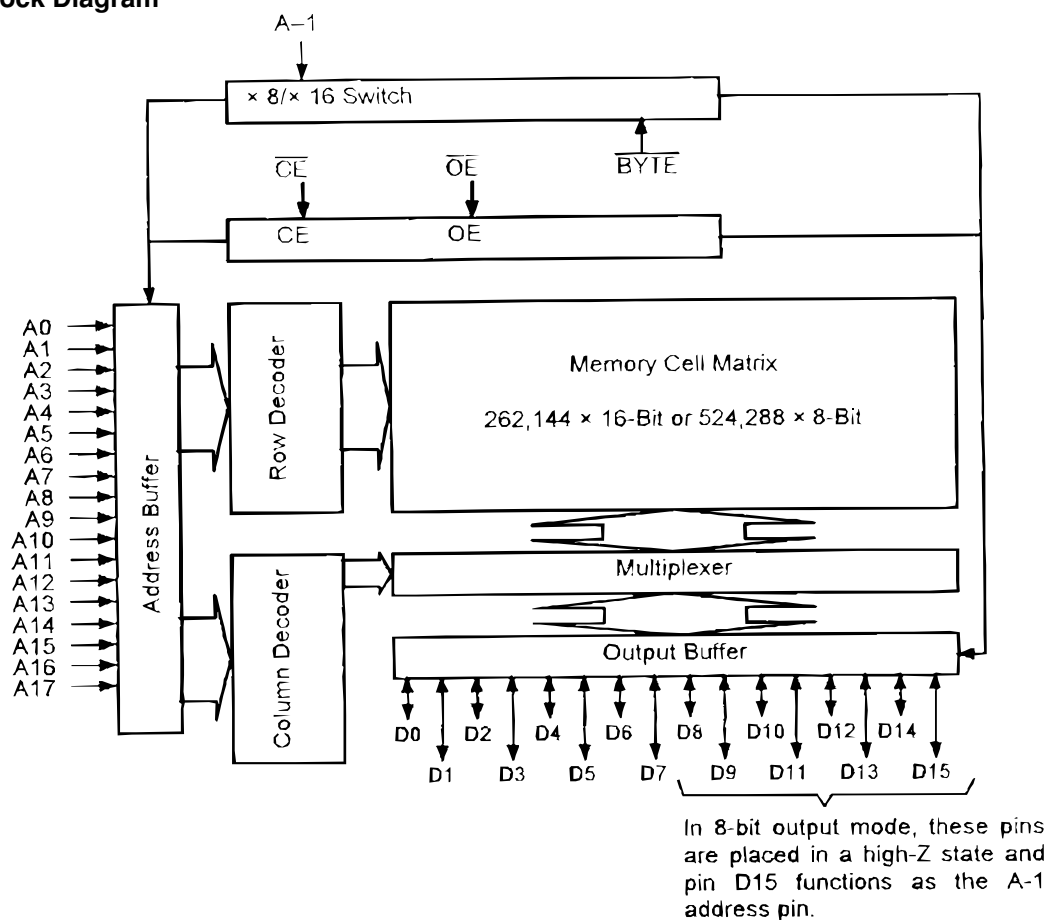
■ PD8097A (D.D & INPUT ASSY : IC9504)

- **4Mb P2ROM**

■ Pin Arrangement (Top View)



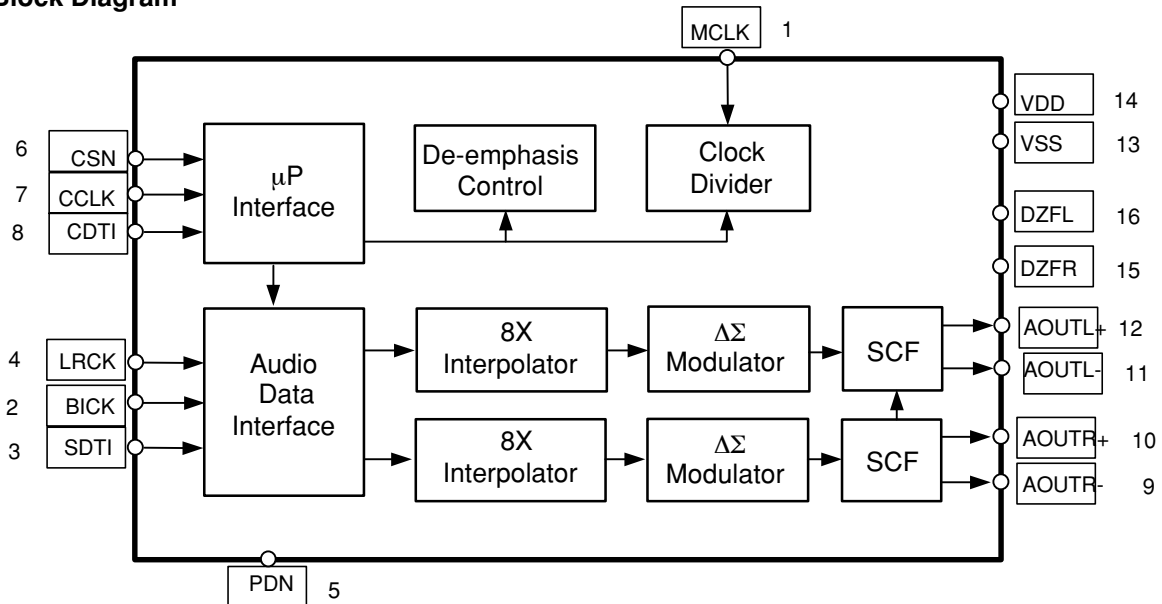
■ Block Diagram



■ AK4382AVT (DD & INPUT ASSY : IC9102)

• D/A Converter IC

■ Block Diagram



■ Pin Function

Pin / Function			
No.	Pin Name	I/O	Function
1	MCLK	I	Master Clock Input Pin An external TTL clock should be input on this pin.
2	BICK	I	Audio Serial Data Clock Pin
3	SDTI	I	Audio Serial Data Input Pin
4	LRCK	I	L/R Clock Pin
5	PDN	I	PowerDown Mode Pin When at L ¹ , the AK4382 is in the power down mode and is held in reset. The AK4382 should always be reset upon power-up.
6	CSN	I	Chip Select Pin
7	CCLK	I	Control Data Input Pin
8	CDTI	I	Control Data Input Pin
9	AOUTR-	O	Rch Negative Analog Output Pin
10	AOUTR+	O	Rch Positive Analog Output Pin
11	AOUTL-	O	Lch Negative Analog Output Pin
12	AOUTL+	O	Lch Positive Analog Output Pin
13	VSS	-	Ground Pin
14	VDD	-	Power Supply Pin
15	DZFR	O	Rch Data Zero Input Detect Pin
16	DZFL	O	Lch Data Zero Input Detect Pin

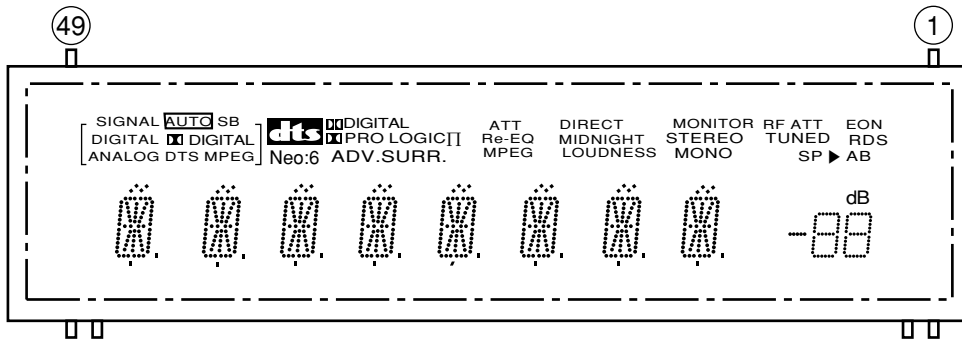
Note: All input pins should not be left floating.

7.2.2 DISPLAY

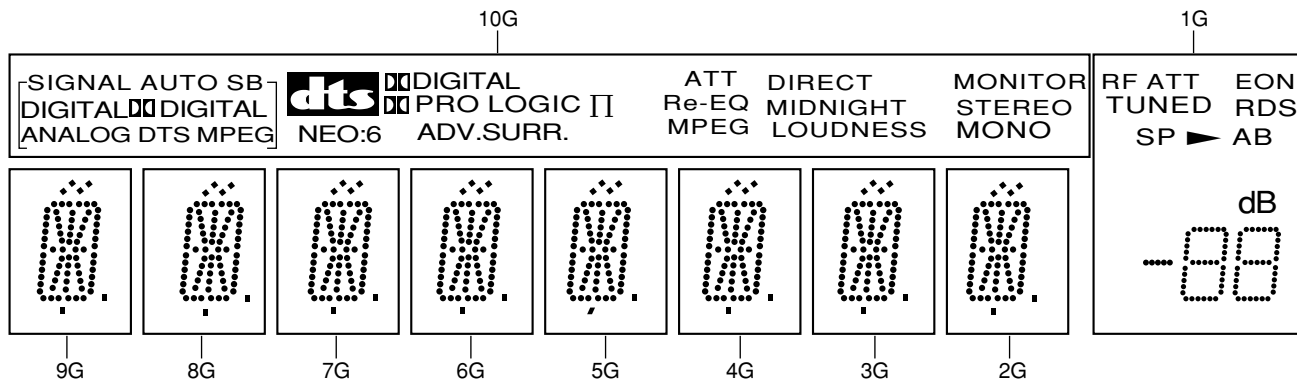
■ XAV3013 (FRONT ASSY : V401)

• FL DISPLAY

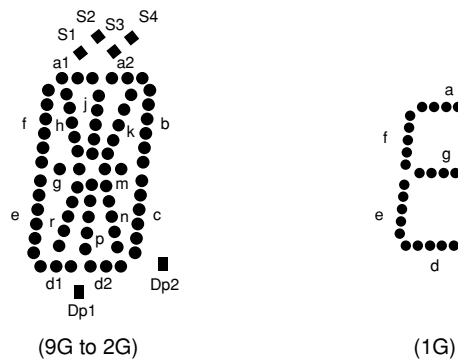
• Pin Assignment



• 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	

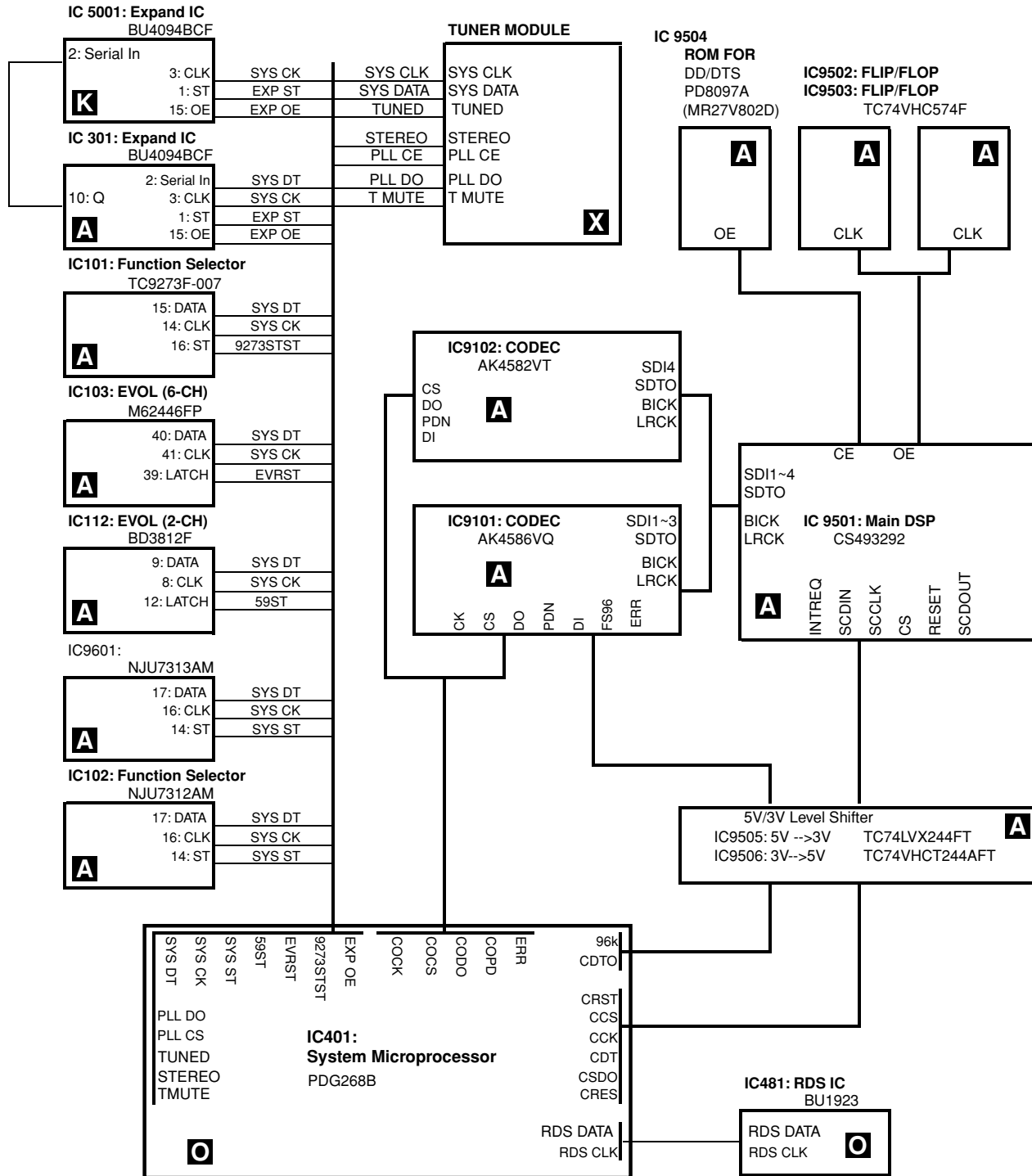
- NOTE
- 1) F1, F2..... Filament
 - 2) NP..... No pin
 - 3) NX..... No extend pin
 - 4) DL..... Datum Line
 - 5) 1G to 10G..... Grid
 - 6) Field of vision is a minimum of 21.8° from the lower side.

• Anode Connection

	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	S1	a1	a1	a1	a1	a1	a1	a1	a1	RFATT
P2	AUTO	a2	a2	a2	a2	a2	a2	a2	a2	EON
P3	SB	h	h	h	h	h	h	h	h	○
P4	DIGITAL	j	j	j	j	j	j	j	j	TUNED
P5	ANALOG	k	k	k	k	k	k	k	k	RDS
P6	DIGITAL (L)	b	b	b	b	b	b	b	b	S1
P7	DTS	f	f	f	f	f	f	f	f	A
P8	MPEG	m	m	m	m	m	m	m	m	B
P9	DTS	g	g	g	g	g	g	g	g	1a
P10	MPEG	c	c	c	c	c	c	c	c	1b
P11	DIGITAL (R)	e	e	e	e	e	e	e	e	1f
P12	PROLOGIC II	r	r	r	r	r	r	r	r	1g
P13	Neo:6	p	p	p	p	p	p	p	p	1c
P14	ATT	n	n	n	n	n	n	n	n	1e
P15	ADV.SURR.	d1	d1	d1	d1	d1	d1	d1	d1	1d
P16	Re-EQ	d2	d2	d2	d2	d2	d2	d2	d2	2a
P17	DIRECT	Dp2	Dp2	Dp2	Dp2	Dp2	Dp2	Dp2	Dp2	2b
P18	MIDNIGHT	Dp1	Dp1	Dp1	Dp1	Dp1	Dp1	Dp1	Dp1	2f
P19	LOUDNESS	S1	S1	S1	S1	S1	S1	S1	S1	2g
P20	MONITOR	S4	S4	S4	S4	S4	S4	S4	S4	2c
P21	STEREO	S2	S2	S2	S2	S2	S2	S2	S2	2e
P22	MONO	S3	S3	S3	S3	S3	S3	S3	S3	2d

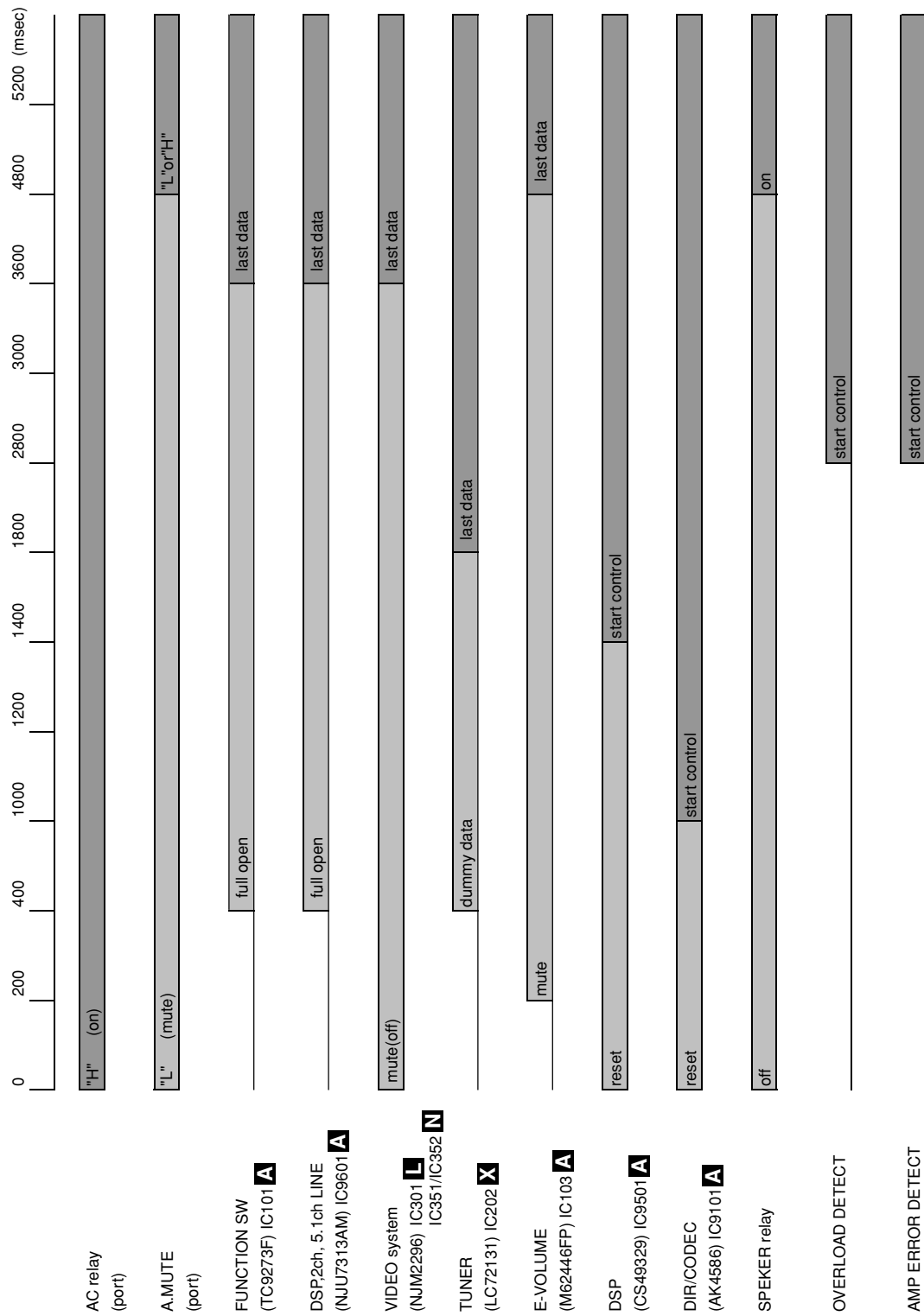
7.3 EXPLANATION

7.3.1 U-COM BLOCK DIAGRAM



7.3.2 POWER ON AND OFF SEQUENCE

POWER ON SEQUENCE



A

■ POWER OFF SEQUENCE

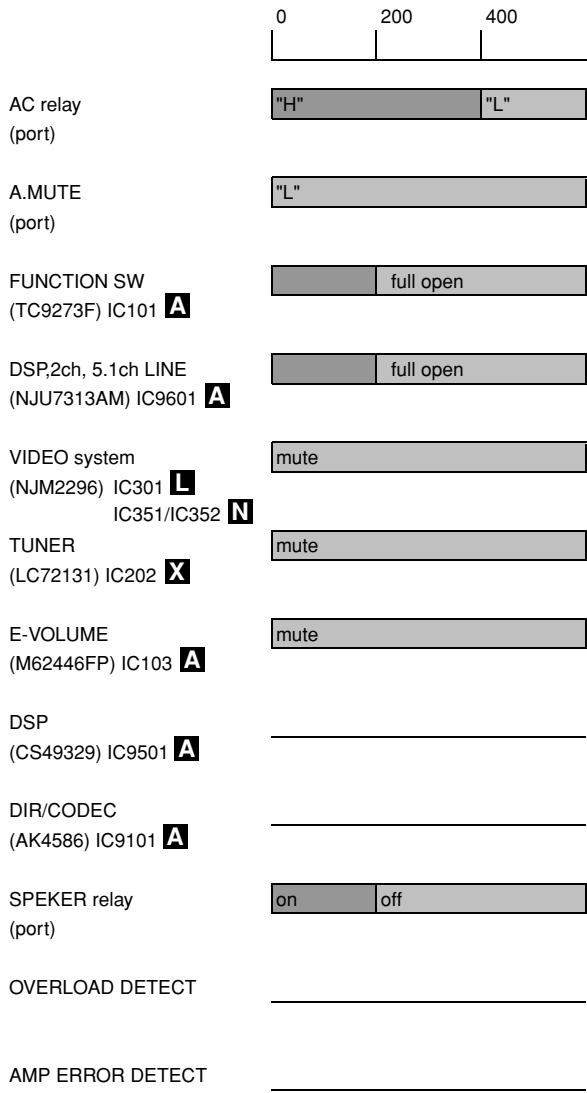
B

C

D

E

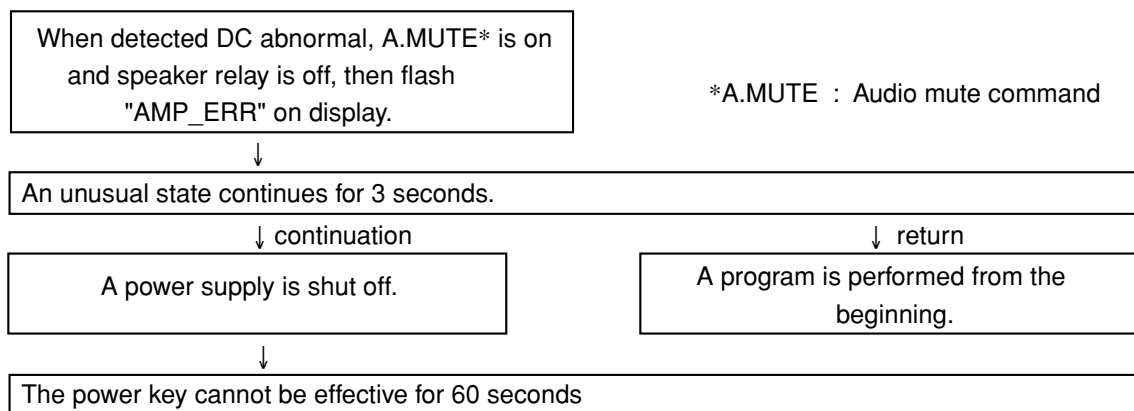
F



7.3.3 PROTECTION CIRCUIT

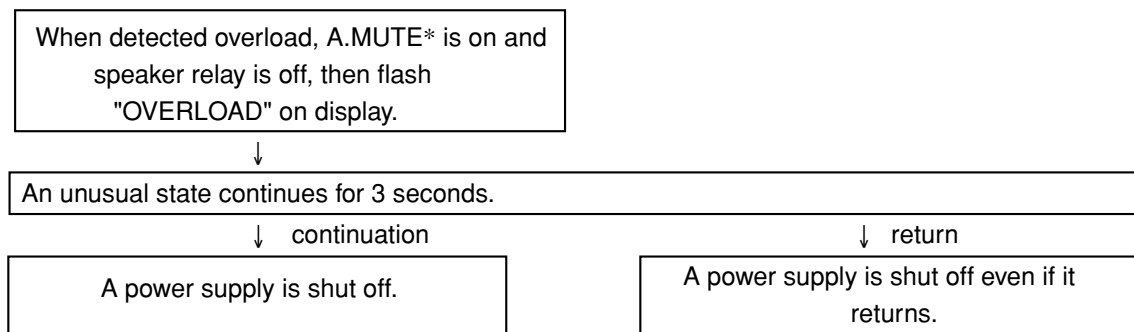
1. DC abnormal detection

It processes more preferentially than overload detection.



If the AC plug is pulled off within 60 sec, and then it is plugged in again, the unit will be reset for 60 sec.

2. Overload detection



7.4 CLEANING

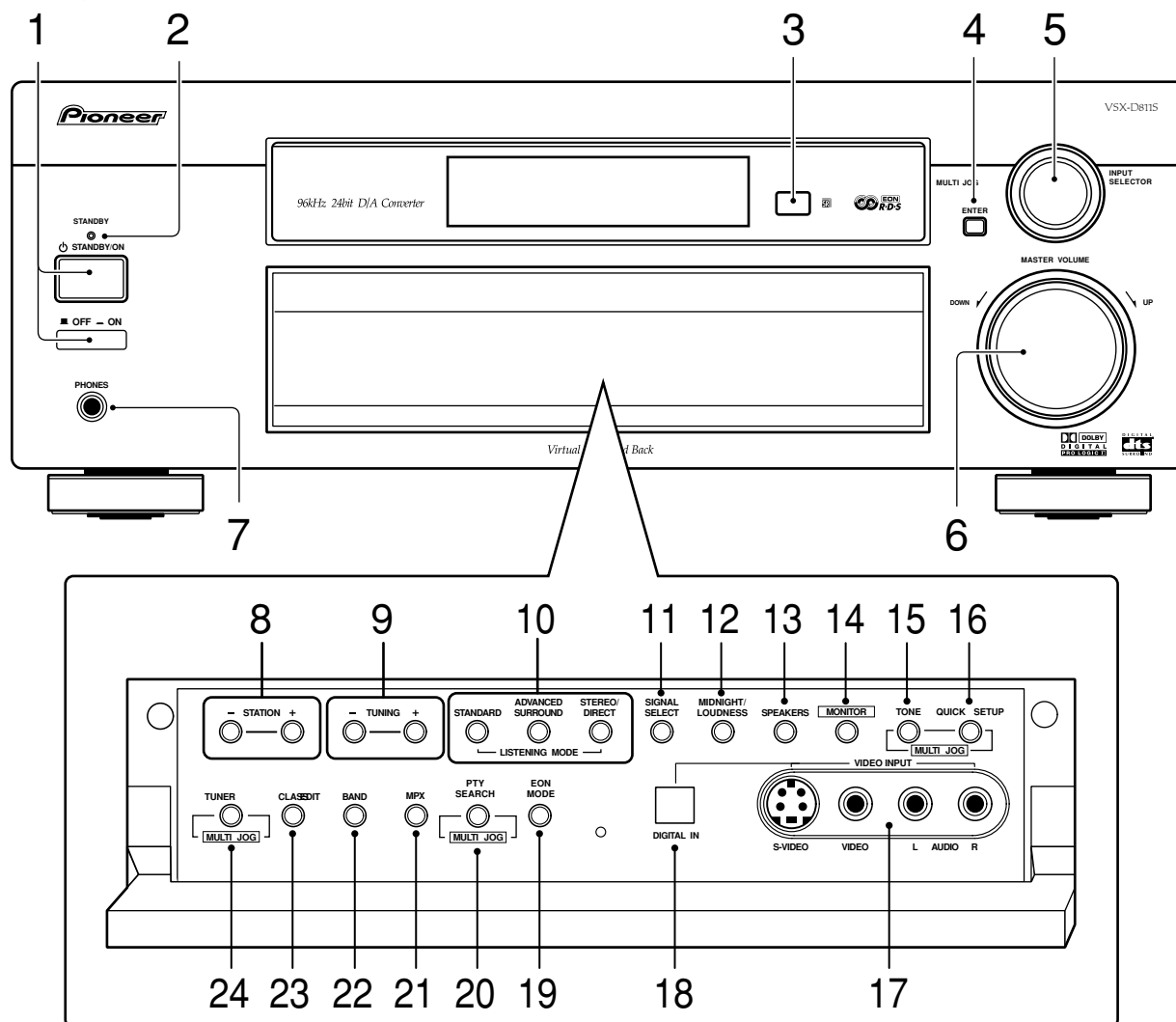


Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

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

8. PANEL FACILITIES

Front panel



1 STANDBY/ON-power OFF ON button
STANDBY/ON switches the receiver between on and standby. The power button switches the receiver off.

2 STANDBY indicator
Lights when the receiver is in standby.

3 Remote sensor
Receives the signals from the remote control.

4 ENTER

5 MULTI JOG/INPUT SELECTOR dial
The MULTI JOG/INPUT SELECTOR dial performs a number of tasks. Use it to select options after pressing TONE CONTROL, QUICK SETUP, TUNER EDIT or PTY SEARCH.

6 MASTER VOLUME

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

8 STATION (+/-) buttons
Selects station presets when using the tuner.

9 TUNING buttons
Selects the frequency when using the tuner.

10 LISTENING MODE buttons

STANDARD

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

ADVANCED SURROUND

Use to switch between the various surround modes.

STEREO/DIRECT

Switches direct playback on or off. Direct playback bypasses the tone controls and channel levels for the most accurate reproduction of a source.

11 SIGNAL SELECT

Use to select between input signals.

12 MIDNIGHT/LOUDNESS

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

13 SPEAKERS

Use to cycle through the speaker system: A → B → A+B

14 MONITOR

Press to switch tape monitoring on/off.

15 TONE

Press this button to access the bass and treble controls, which you can then adjust with the MULTI JOG/INPUT SELECTOR dial.

16 QUICK SETUP

17 VIDEO INPUT

18 DIGITAL IN

19 EON MODE

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

20 PTY SEARCH

Use to search for different program types in RDS mode.

21 MPX

Press to receive a radio broadcast in mono.

22 BAND

Switches between AM and FM radio bands.

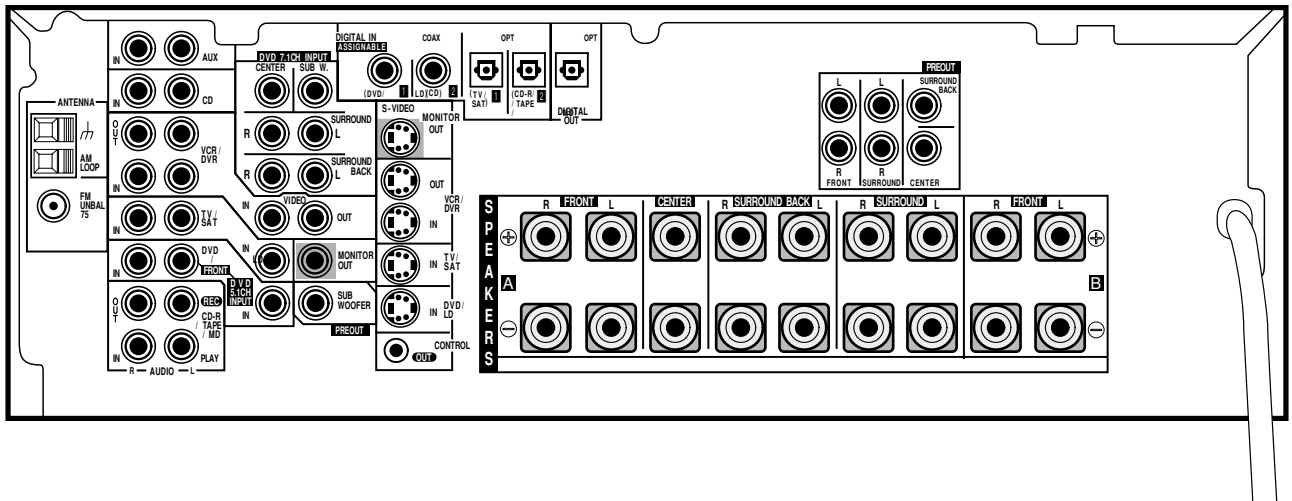
23 CLASS

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

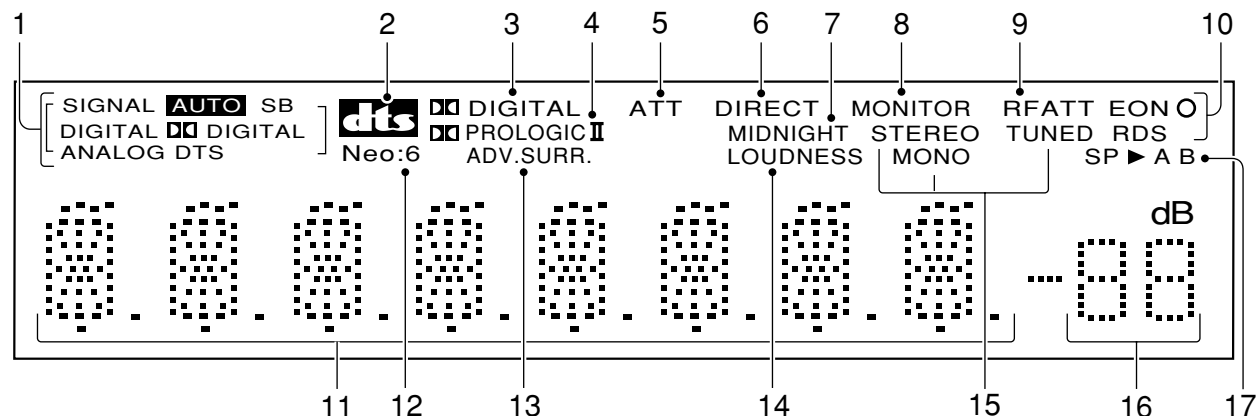
24 TUNER EDIT

Use for memorizing and naming stations.

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 mode of the receiver is on, this lights to indicate Pro Logic II decoding.

5 ATT

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

6 DIRECT

Lights when source direct playback is in use. This function bypasses all tone, balance, Advanced Surround, and Dolby Surround effects.

7 MIDNIGHT

Lights during Midnight listening.

8 MONITOR

Lights when MONITOR is selected.

9 RF ATT

Lights when the RF ATT is on.

10 EON and O

The O indicator lights to inform you that the currently tuned station carries the EON data service. When the EON mode is set, the EON indicator lights, but during actual reception of an EON broadcast the EON indicator will flash.

RDS

Lights when an RDS broadcast is received.

11 Character display

12 Neo:6

Lights during 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

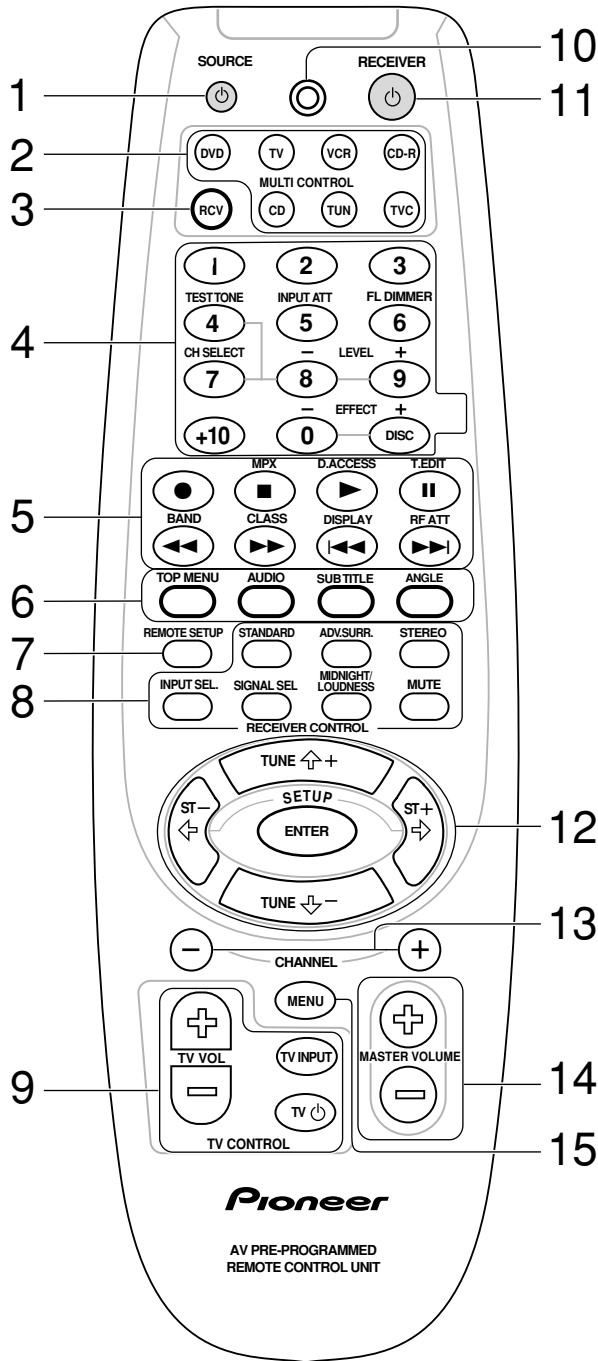
Shows the overall volume level. ---dB indicates the minimum level, and -0 dB indicates the maximum level.

Depending on your level settings for each channel, the maximum level can range between -10 dB and -0 dB.

17 Speaker indicator

Shows the speaker system currently in use.

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

Use to switch to the receiver controls on the remote control (ex. INPUT ATT, FL DIMMER). Also use this button to set up surround sound.

4 Number buttons/Receiver controls

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

DISC

The button's use depends on the component selected.

Receiver Controls

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.

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 listening modes (except 5 or 6 Ch Stereo and Virtual SB).

5 Component/Tuner controls

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 DVD (when connected to DTV)).

MPX

Switches between stereo and mono reception of FM broadcasts. If the signal is weak then switching to mono will improve the sound quality. Also acts as a stop button for CDs, tapes, or DVDs.

D. ACCESS

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

A

T. EDIT

Use for memorizing and naming stations.

BAND

Switches between the tuner AM and FM bands.

CLASS

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

DISPLAY

Use to switch the display between tuner displays (including RDS information).

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.

B

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.

C

7 REMOTE SETUP

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

D

8 RECEIVER CONTROL buttons**STANDARD**

Press to switch between the various Dolby/DTS modes.

ADV. SURR.

Use to switch between the various surround modes.

STEREO

Switches direct playback on or off. Direct playback bypasses the tone controls and channel levels for the most accurate reproduction of a source.

E

INPUT SEL

Use to select the input source.

SIGNAL SEL

Use to select between input signals.

MIDNIGHT/LOUDNESS

Switches to Midnight or Loudness listening.

MUTE

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

F

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 LED DISPLAY

This display flashes when a command is sent from the remote control.

**11 RECEIVER **

This switches between standby and on for this receiver.

12 (TUNE/ST +/-) /ENTER

Use the arrow buttons when setting up your surround sound system (see pages 65–76). 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 CHANNEL +/-

Select radio station presets. Also skip tracks backward or forward on CDs, DVDs, etc.

14 MASTER VOLUME +/-

Use to set the listening volume.

15 MENU button

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