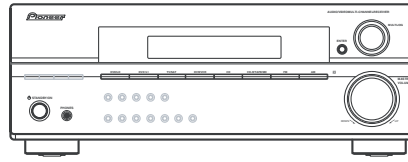


Service Manual



VSX-515-K

ORDER NO.
RRV3092

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-515-K

VSX-515-S

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

Model	Type	Power Requirement	Remarks
VSX-515-K	KUCXJ	AC 120V	
VSX-515-S	KUCXJ	AC 120V	



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

SAFETY INFORMATION



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

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

WARNING

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

Health & Safety Code Section 25249.6 – Proposition 65



NOTICE

(FOR CANADIAN MODEL ONLY)

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

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

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

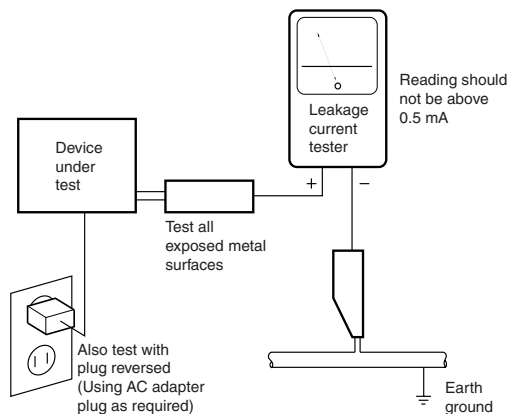
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

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

LEAKAGE CURRENT CHECK

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



AC Leakage Test

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

2. PRODUCT SAFETY NOTICE

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

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

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

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

[Important Check Points for Good Servicing]

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

1. Product safety



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

- ① Use specified parts for repair.

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

- ② Do not perform modifications without proper instructions.

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

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

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

- ④ Make sure the screws are tightly fastened.

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

- ⑤ Make sure each connectors are correctly inserted.

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

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

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

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

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

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

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

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

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

- ⑩ Safe environment should be secured during servicing.

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

2. Adjustments



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

3. Lubricants, Glues, and Replacement parts



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

4. Cleaning



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

5. Shipping mode and Shipping screws



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

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1. SPECIFICATIONS

Amplifier section

- **Continuous power output (stereo)**
Front . . . 110 W (20–20,000 Hz, THD 0.7%, 8 Ω) ¹
- **Continuous power output (surround)**
Front110 W per channel (1kHz, 1.0%, 8 Ω)
Center110 W (1kHz, 1.0%, 8 Ω)
Surround 110 W per channel
(1kHz, 1.0%, 8 Ω)
Surround Back110 W (1kHz, 1.0%, 8 Ω)

Audio section

- **Input (Sensitivity/Impedance)**
CD, DVR/VCR, CD-R/TAPE/MD,
DVD/LD, TV/SAT 200 mV/47 kΩ
- **Frequency response**
CD, DVR/VCR, CD-R/TAPE/MD, DVD/LD,
TV/SAT 5 Hz to 100,000 Hz ± 0.5 dB
- **Output (Level/Impedance)**
DVR/VCR REC, CD-R/TAPE/
MD REC. 200 mV/2.2 kΩ
- **Tone control**
Bass. ± 6 dB (100 Hz)
Treble. ± 6 dB (10 kHz)
Loudness. +10 dB/+5 dB (100 Hz/10 kHz)
(at volume level –50 dB)

- **Signal-to-Noise Ratio (IHF, short circuited, A network)**
CD, DVR/VCR, CD-R/TAPE/MD,
DVD/LD, TV/SAT.96 dB
- **Signal-to Noise Ratio [EIA, at 1 W (1 kHz)]**
CD, DVR/VCR, CD-R/TAPE/MD,
DVD/LD, TV/SAT.79 dB

Video Section

- **Input (Sensitivity/Impedance)**
DVR/VCR, DVD/LD, TV/SAT.1 V_{p-p}/75 Ω
- **Output (Level/Impedance)**
DVR/VCR, MONITOR OUT.1 V_{p-p}/75 Ω
- **Frequency response**
DVR/VCR, DVD/LD,
TV/SAT ⇒ MONITOR.5 Hz to 7 MHz ± 0.5 dB
Signal-to-Noise Ratio.55 dB
Crosstalk. 50dB

Component video section

- **Input (Sensitivity)**
DVD/LD, TV/SAT.1 V_{p-p}/75 Ω
- **Output (Level/Impedance)**
MONITOR OUT.1 V_{p-p}/75 Ω
- **Frequency response**
DVD/LD,
TV/SAT ⇒ MONITOR.5 Hz to 40 MHz ± 0.5 dB
Signal-to-Noise Ratio.60 dB

Note

¹ Continuous average power output of 110 watts* per channel, min., at 8ohms, from 20 Hz to 20,000 Hz with no more than 0.7%** total harmonic distortion (front).

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

** Measured by Audio Spectrum Analyzer.

FM Tuner Section

Frequency Range. 87.5 MHz to 108 MHz
 Usable Sensitivity Mono: 13.2 dBf, IHF
 (1.3 μ V/ 75 Ω)
 50 dB Quieting Sensitivity. Mono: 20.2 dB
 Stereo: 38.6 dBf
 Signal-to-Noise Ratio. . . Mono: 73 dB (at 85 dBf)
 Stereo: 70 dB (at 85 dBf)
 Distortion Stereo: 0.5 % (1 kHz)
 Alternate Channel Selectivity.60 dB
 (400 kHz)
 Stereo Separation 40 dB (1 kHz)
 Frequency Response.30 Hz to 15 kHz
 (\pm 1 dB)
 Antenna Input (DIN) 75 Ω unbalanced

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

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AM Tuner Section

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

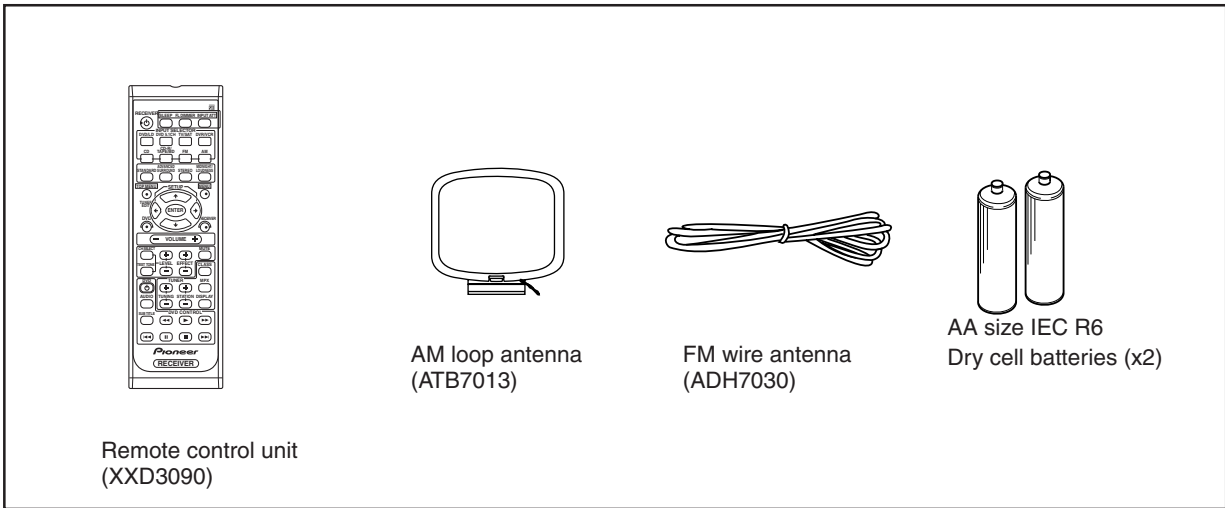
Miscellaneous

Power requirements AC 120V / 60Hz
 Power consumption300 W / 420 VA
 In standby 0.5 W
 Dimensions 16⁹/₁₆ (W) x 6¹/₄ (H) x 15⁷/₈ (D) in.
 420 (W) x 158 (H) x 402.5 (D) mm
 Weight (without package) 21.1 lb (9.9 kg)

Furnished Parts

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

Accessories



Remote control unit (XXD3090)

AM loop antenna (ATB7013)

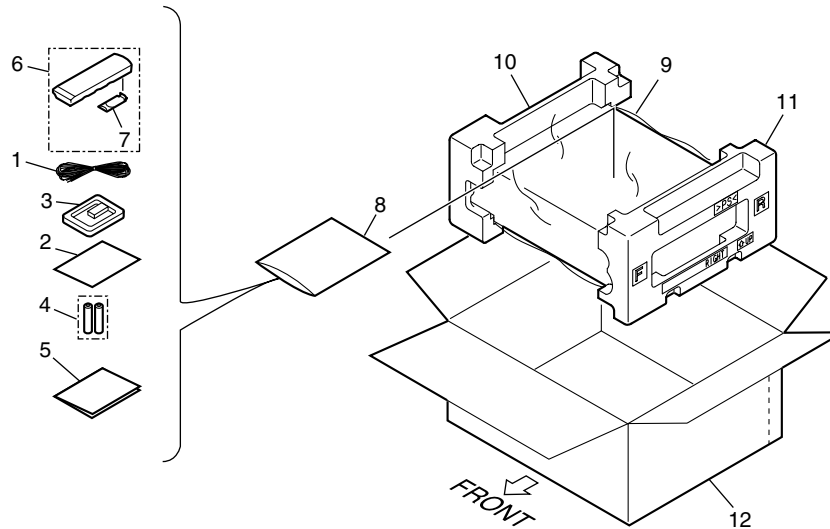
FM wire antenna (ADH7030)

AA size IEC R6 Dry cell batteries (x2)

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	ADH7030	10	Left Pad V2	XHA3149
NSP 2	Warranty Card	ARY7045	11	Right Pad V2	XHA3150
3	AM loop antenna	ATB7013	12	Packing Case	See Contrast table(2)
NSP 4	Alkaline Dry cell batteries (AA/LR6)	VEM1031			
5	Operating instructions (English)	XRE3090			
6	Remote Control Unit	XXD3090			
7	Battery Cover	XZN3139			
NSP 8	Literature Bag	AHG1180			
9	Packing Sheet	AHG7069			

(2) CONTRAST TABLE

VSX-515-K/KUCXJ and VSX-515-S/KUCXJ are constructed the same except for the following:

Mark	NO	Description	VSX-515-K /KUCXJ	VSX-515-S /KUCXJ
	12	Packing Case	XHD3474	XHD3475

2.2 EXTERIOR SECTION

A

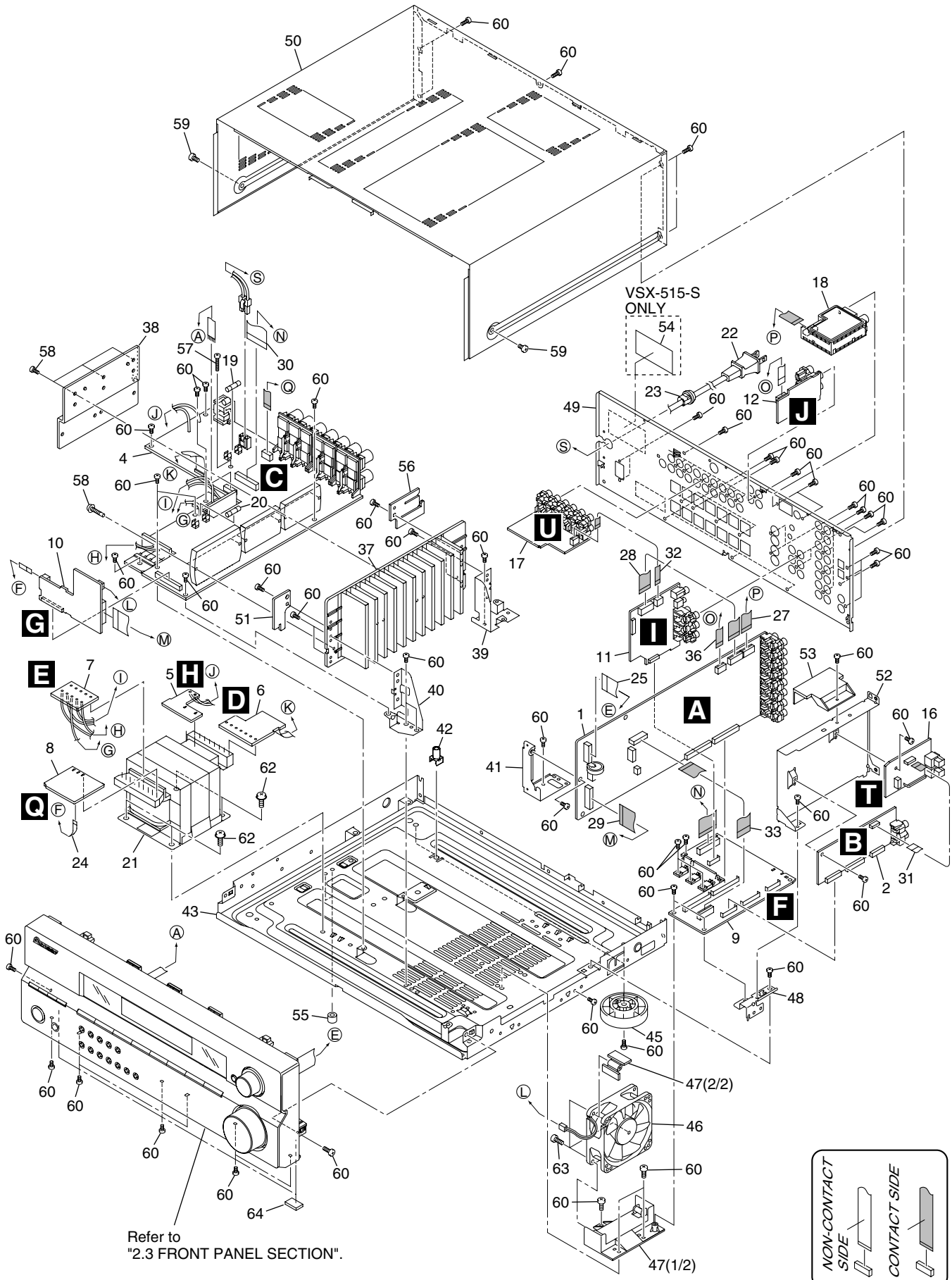
B

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5 6 7 8

EXTERIOR SECTION parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	MAIN Assy	XWK3154	34	•••••	
2	DSP Assy	AWX8573	35	•••••	
3	•••••				
4	AMP & PRIMARY Assy	XWZ3941	36	J48 8P F.F.C/60V	XDD3165
5	TRANS1 Assy	XWZ3958	NSP 37	Heatsink V2B39 CORR	XNH3034
			NSP 38	Sub Heatsink	XNH3039
6	TRANS2 Assy	XWZ3959	39	H/S Angle Rear V2	XNG3133
7	TRANS3 Assy	XWZ3961	40	H/S Angle Front V2	XNG3132
8	TRANS4 Assy	XWZ3936			
9	REGULATOR Assy	XWZ3952	41	PCB Angle R5	XNG3073
10	AMP INPUT Assy	XWZ3955	42	PCB Mold	AMR2533
			NSP 43	Under Base V2	XNA3023
11	VIDEO Assy	XWZ3904	44	•••••	
12	5.1CH INPUT Assy	XWZ3915	45	Insulator	AMR7198
13	•••••				
14	•••••		⚠ 46	DC Fan Motor	XXM3007
15	•••••		47	Fan Holder R6	XMR3066
			48	REG Support R6	XNG3093
16	DIGITAL INPUT Assy	XWZ3927	49	Rear Panel 515S/KU	XNC3326
17	COMPONENT VIDEO Assy	XWZ3934	50	Bonnet	See Contrast table(2)
18	FM/AM TUNER UNIT	AXX7172			
⚠ 19	FU1 Fuse (10A)	REK1087	51	HOLDER Assy	XWZ3964
⚠ 20	FU701 Fuse (10A)	REK1087	52	Shield V2	XNG3134
			53	FFC Cover V2	XMR3091
⚠ 21	Transformer 815KU	XTS3087	NSP 54	N Label	See Contrast table(2)
⚠ 22	AC Power Cord	ADG7024	NSP 55	Spacer	AEB7092
23	Cord Stopper	CM-22C			
24	J22 3P F.F.C/30V	XDD3107	56	BINDER Assy	XWZ3963
25	J31 17P F.F.C/30V	XDD3118	57	Screw	BBZ30P200FTC
			58	Screw 3x23	XBA3012
26	•••••		59	Screw	See Contrast table(2)
27	J33 13P F.F.C/30V	XDD3164	60	Screw	BBZ30P080FTC
28	J34 11P F.F.C/30V	XDD3163			
29	J35 21P F.F.C/30V	XDD3160	61	•••••	
30	J36 23P F.F.C/60V	XDD3167	62	Screw	FBT40P080FNI
			63	Screw	BPZ30P120FTC
31	J37 10P F.F.C/30V	XDD3178	64	Rubber Sheet	AEB1111
32	J38 5P F.F.C/60V	XDD3166			
33	J43 15P F.F.C/60V	XDD3162			

(2) CONTRAST TABLE

VSX-515-K/KUCXJ and VSX-515-S/KUCXJ are constructed the same except for the following:

Mark	NO	Description	VSX-515-K /KUCXJ	VSX-515-S /KUCXJ
NSP	50	Bonnet K V1	XZN3148	Not used
	50	Bonnet S V1	Not used	XZN3149
	54	N Label 515S/KU	Not used	XAL3214
	59	Screw	FBT40P080FTB	FBT40P080FNI

2.3 FRONT PANEL SECTION

1

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3

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A

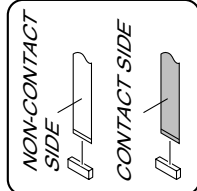
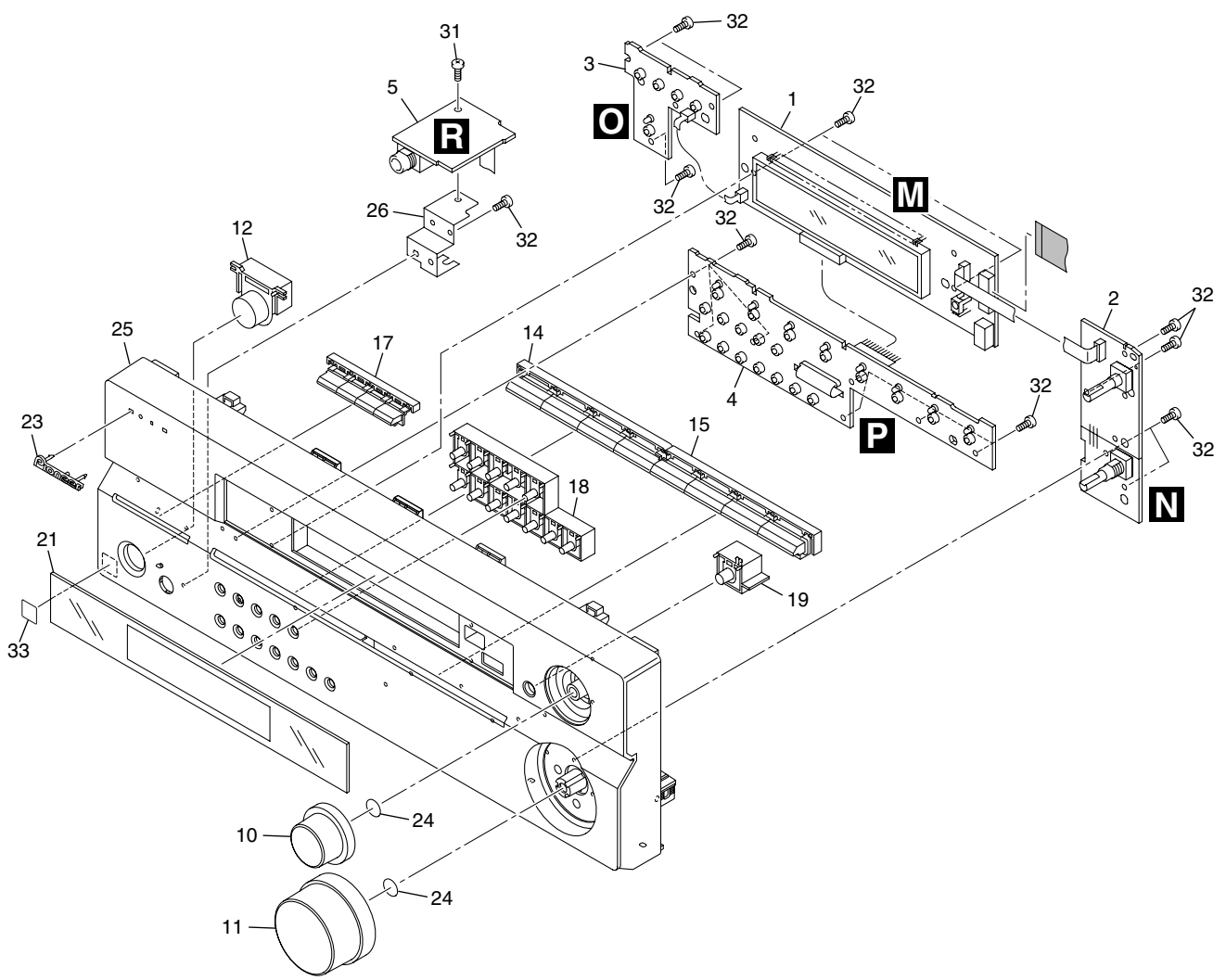
B

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D

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F



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3

4

5 6 7 8

FRONT PANEL SECTION parts List

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	FRONT DISPLAY ASSY	XWZ3909	20	•••••	
2	R. ENCODER Assy	XWZ3921	21	D Panel 415 B	XAK3480
3	POWER SW Assy	XWZ3918	22	•••••	
4	FRONT KEY Assy	XWZ3913	23	Pioneer Badge B	See Contrast table(2)
5	H.P. Assy	XWZ3924	NSP 24	C Ring DIM 8.1	XBH3016
6	•••••		25	FRT Panel	See Contrast table(2)
7	•••••		26	Earth Plate HP V2	XNG3131
8	•••••		27	•••••	
9	•••••		28	•••••	
10	JOG Knob	See Contrast table(2)	29	•••••	
11	VOL Knob	See Contrast table(2)	30	•••••	
12	Standby BTN 515K	See Contrast table(2)	31	Screw	BBZ30P080FTC
13	•••••		32	Screw	BPZ30P100FTC
14	FUNC BTN L	See Contrast table(2)	NSP 33	Energy Star label	AAX8022
15	FUNC BTN R	See Contrast table(2)			
16	•••••				
17	TUNER BTN	See Contrast table(2)			
18	Sub BTN	See Contrast table(2)			
19	JOG BUTTON	See Contrast table(2)			

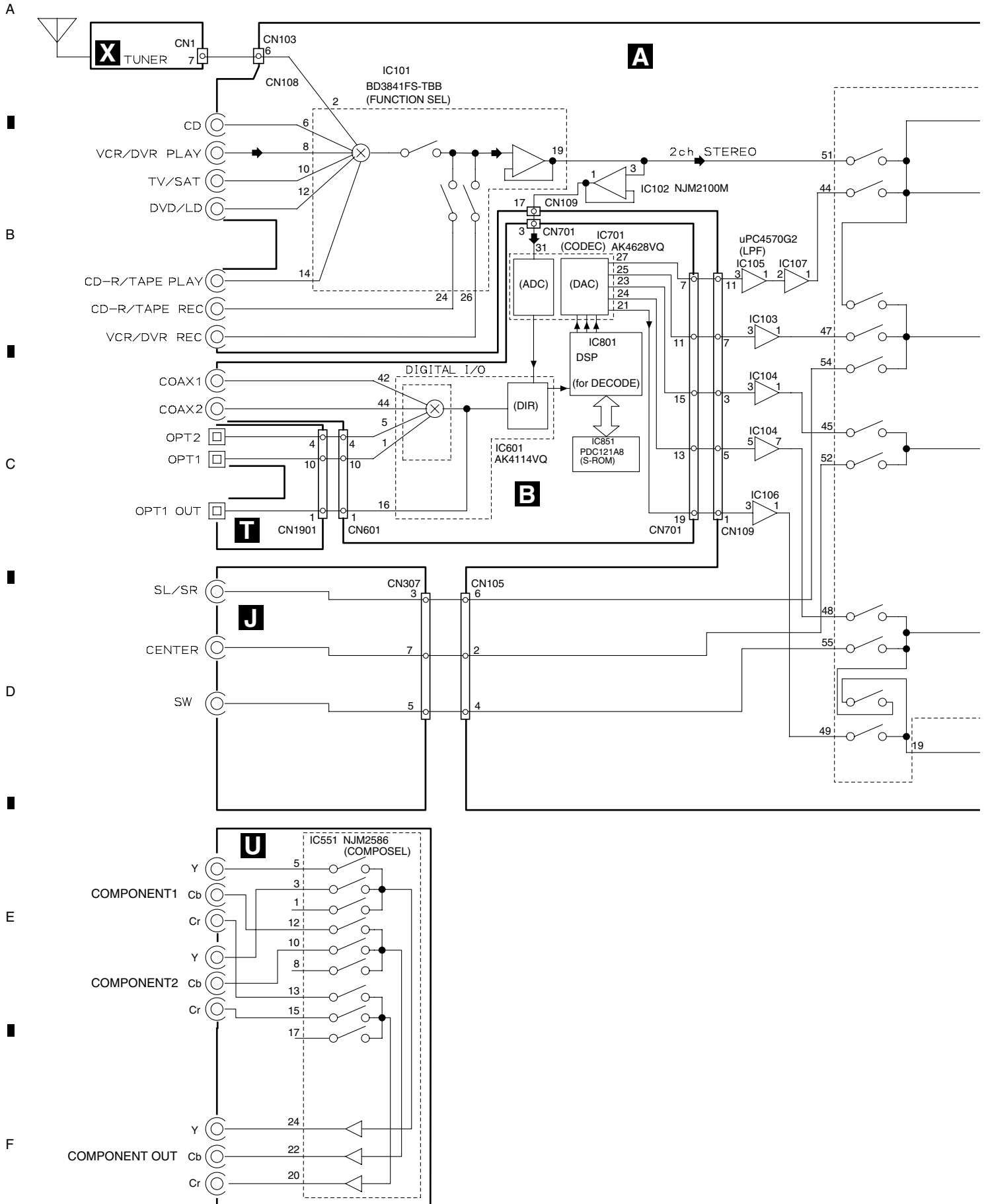
(2) CONTRAST TABLE

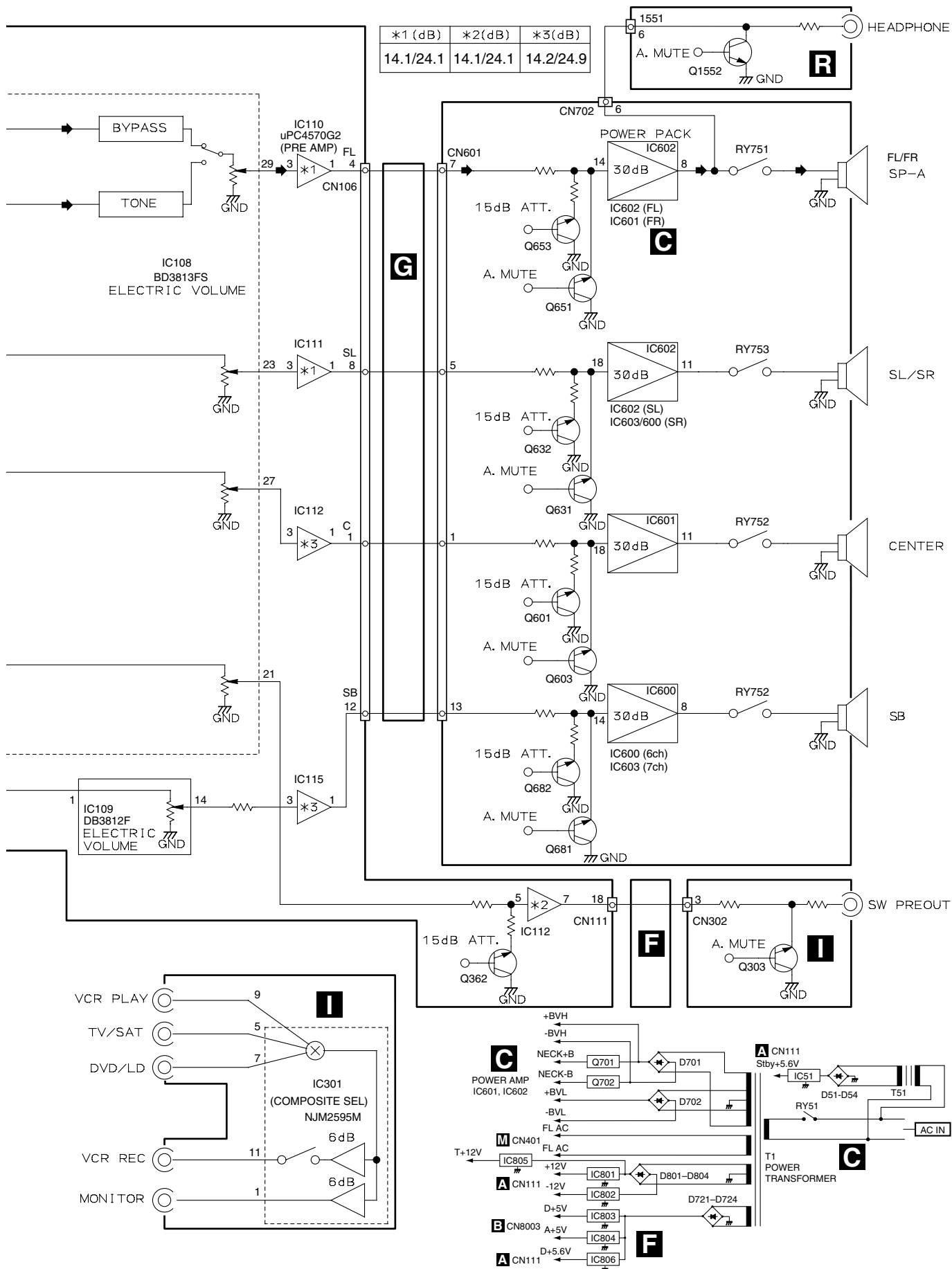
VSX-515-K/KUCXJ and VSX-515-S/KUCXJ are constructed the same except for the following:

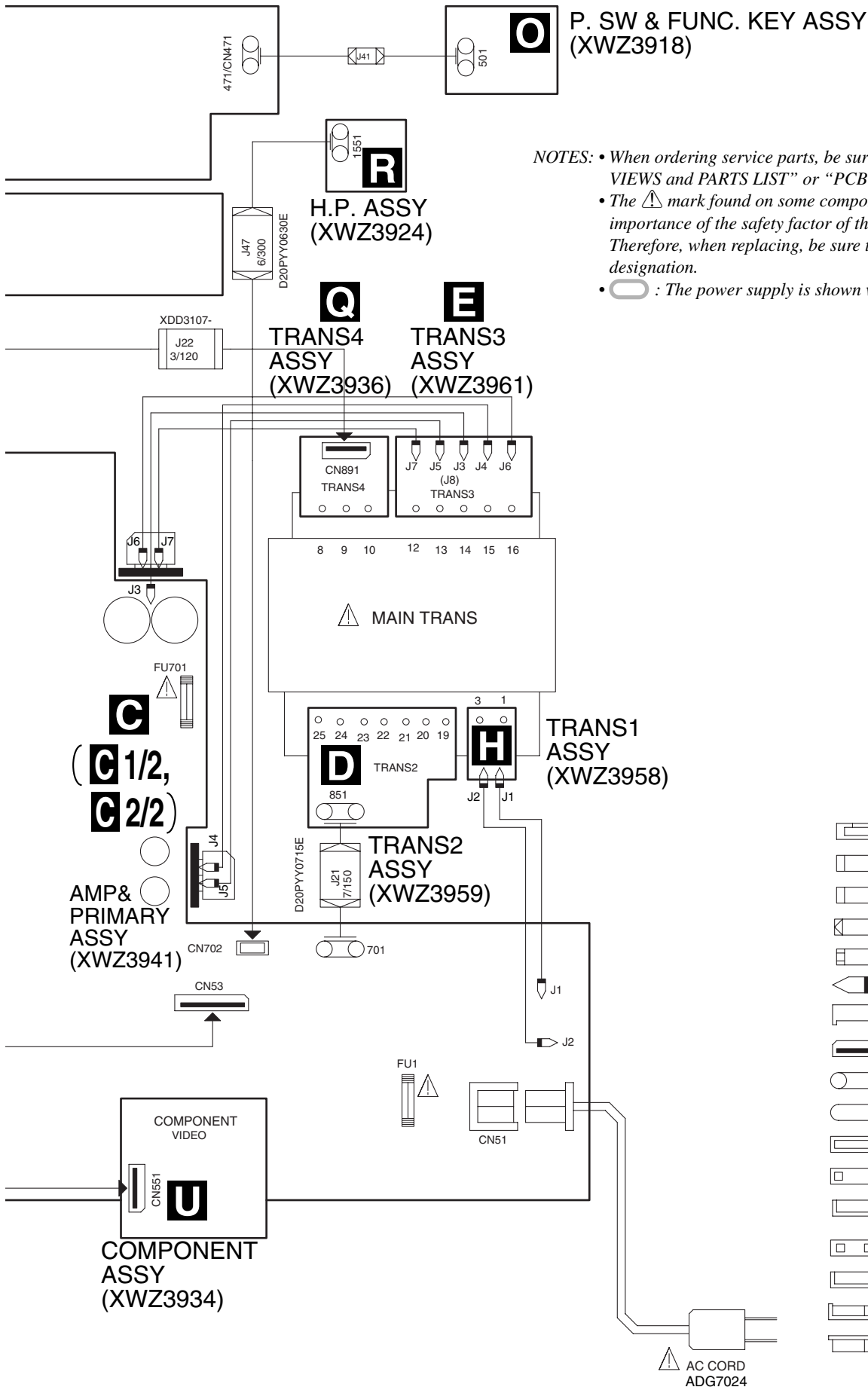
<u>Mark</u>	<u>NO</u>	<u>Description</u>	<u>VSX-515-K /KUCXJ</u>	<u>VSX-515-S /KUCXJ</u>
	10	JOG Knob V1K	XAB3038	Not used
	10	JOG Knob V1S	Not used	XAB3042
	11	VOL Knob V1K	XAB3039	Not used
	11	VOL Knob V1S	Not used	XAB3043
	12	Standby BTN 515K	XAD3202	Not used
	12	Standby BTN 515S	Not used	XAD3203
	14	FUNC BTN 515K L	XAD3206	Not used
	14	FUNC BTN 515S L	Not used	XAD3210
	15	FUNC BTN 515K R	XAD3207	Not used
	15	FUNC BTN 515S R	Not used	XAD3211
	17	TUNER BTN V2K	XAD3192	Not used
	17	TUNER BTN V2S	Not used	XAD3193
	18	Sub BTN V2K	XAD3198	Not used
	18	Sub BTN V2S	Not used	XAD3199
	19	JOG BTN V2K	XAD3204	Not used
	19	JOG BTN V2S	Not used	XAD3205
	23	Pioneer Badge B	XAM3006	VAM1129
	25	FRT Panel 515K/KU	XMB3177	Not used
	25	FRT Panel 515S/KU	Not used	XMB3178

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM







NOTES:

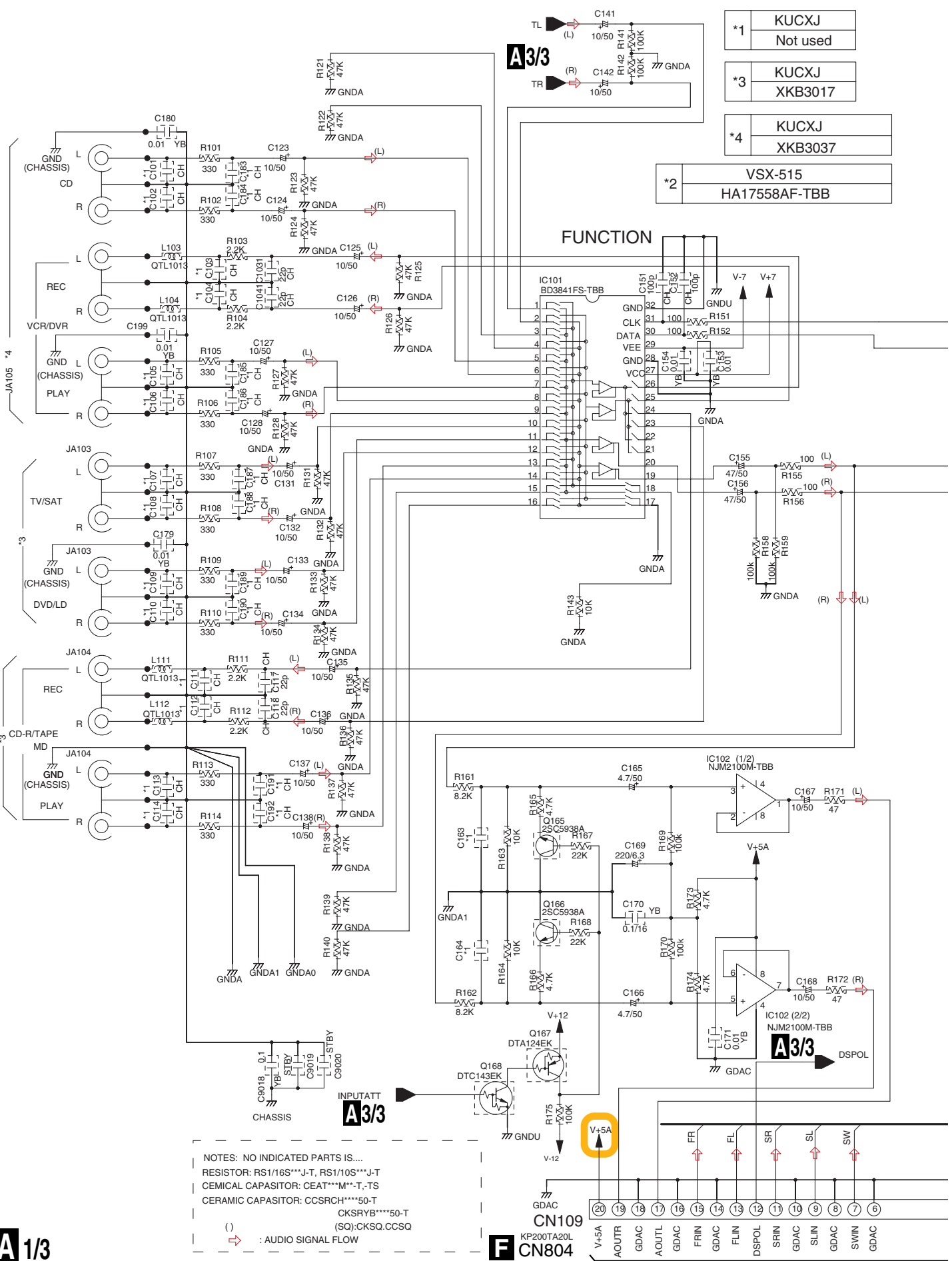
- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- : The power supply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

- B*B-PH-K-S PH CONNECTOR
- 1.25mm FFC
- 1.25mm REVERSE FFC
- 2.0mm FLAT CABLE
- 1.5mm FLAT CABLE
- BOARD IN
- 1.25mm FFC CONNECTOR(L)
- 1.25mm FFC CONNECTOR
- 2.0mm CABLE HOLDER
- 1.5mm CABLE HOLDER
- 2.0mm WIRE TRAP
- KP200TA**L 2.0mm BOARD to BOARD
- KM200TA** 2.0mm BOARD to BOARD
- AKP7070, AKP7073 1.25mm BOARD to BOARD
- AKP7059, AKP7062 1.25mm BOARD to BOARD
- AC CODE SOCKET
- AC CODE CONNECTOR

3.3 MAIN ASSY (1/3)

1 2 3 4

A
B
C
D
E
F



*1	KUCXJ
	Not used
*3	KUCXJ
	XKB3017
*4	KUCXJ
	XKB3037
*2	VSX-515
	HA17558AF-TBB

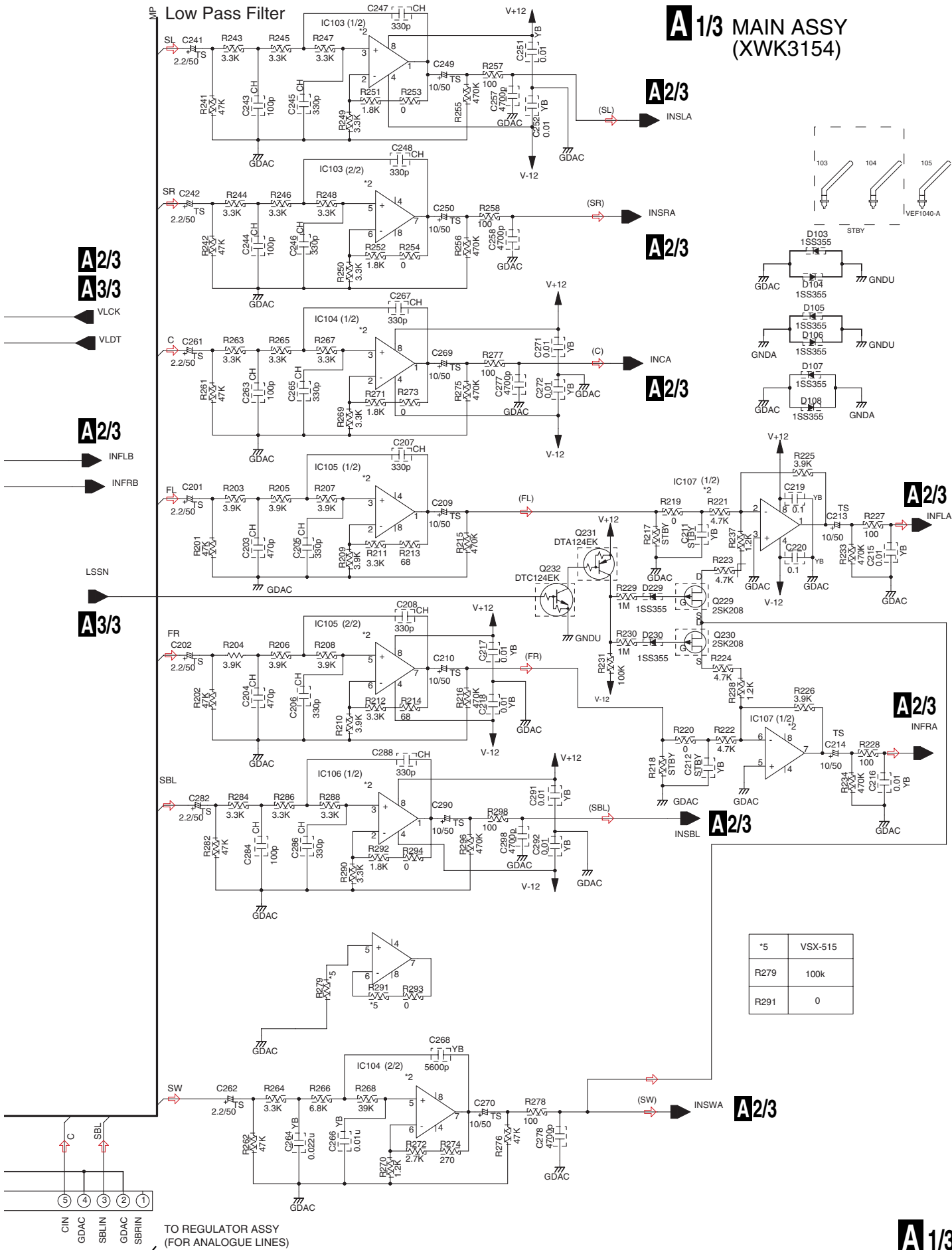
NOTES: NO INDICATED PARTS IS...
 RESISTOR: RS1/16S***J-T, RS1/10S***J-T
 CERAMIC CAPASITOR: CEAT***M**T-,TS
 CERAMIC CAPASITOR: CCSRCH***50-T
 CKSRYB****50-T (SQ):CKSQ.CCSQ
 () : AUDIO SIGNAL FLOW

A 1/3

F KP200TA20L
CN804

VSX-515-K

1 2 3 4



3.4 MAIN ASSY (2/3)

A 2/3 MAIN ASSY (XWK3154)

A1/3

A1/3 A3/3

A1/3 A3/3

J CN307

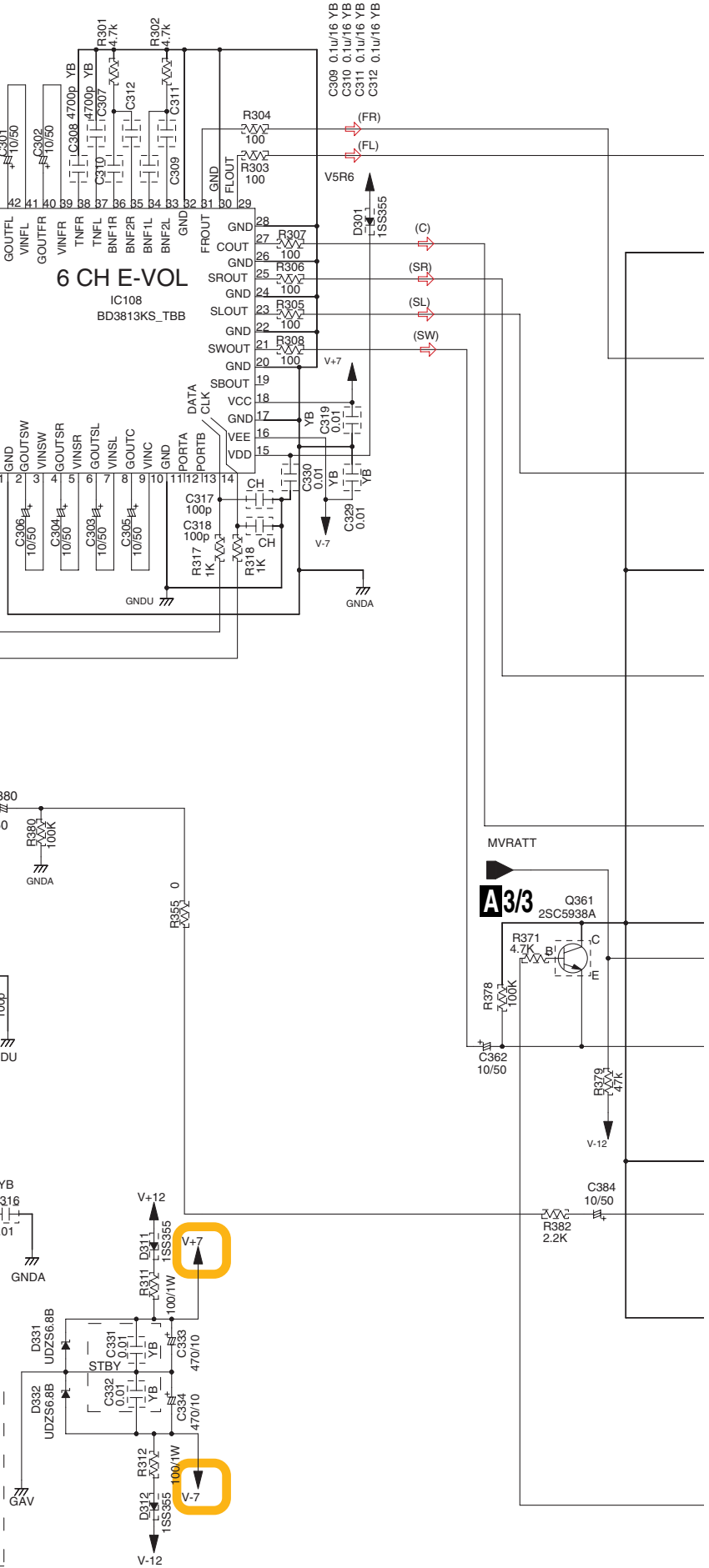
J CN307

A1/3

A1/3

A1/3

A 2/3



NOTE

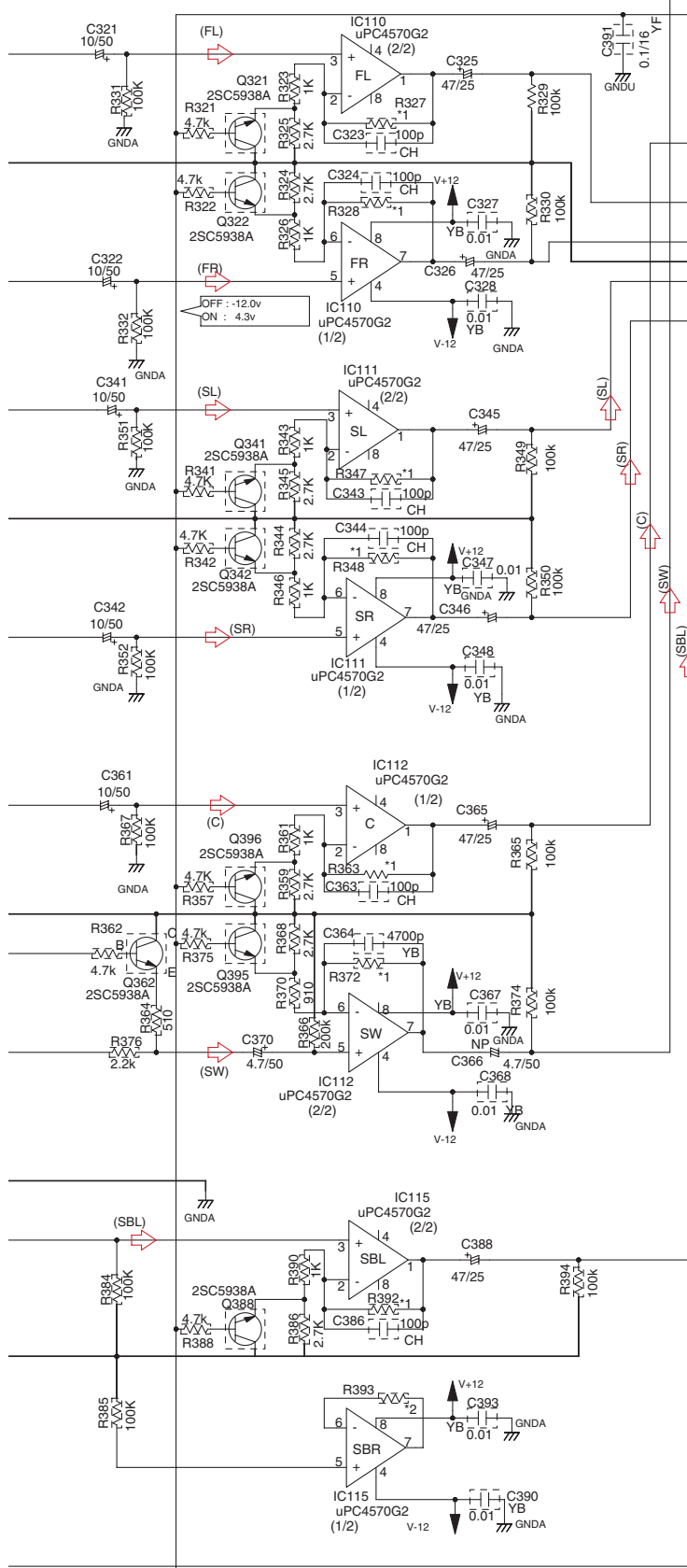
1.RESISTORS
Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
Rated power: 1/16W unless otherwise noted.
Tolerance: (J) ± 5% unless otherwise noted.

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

⇒ : AUDIO SIGNAL FLOW

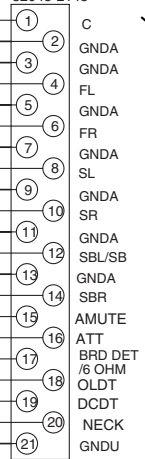
A3/3 SWPR

PRE-AMP



TO AMP INPUT ASSY

CN106
52045-2145



CN254

A2/3

A3/3
BOARD_DET/6_OHM

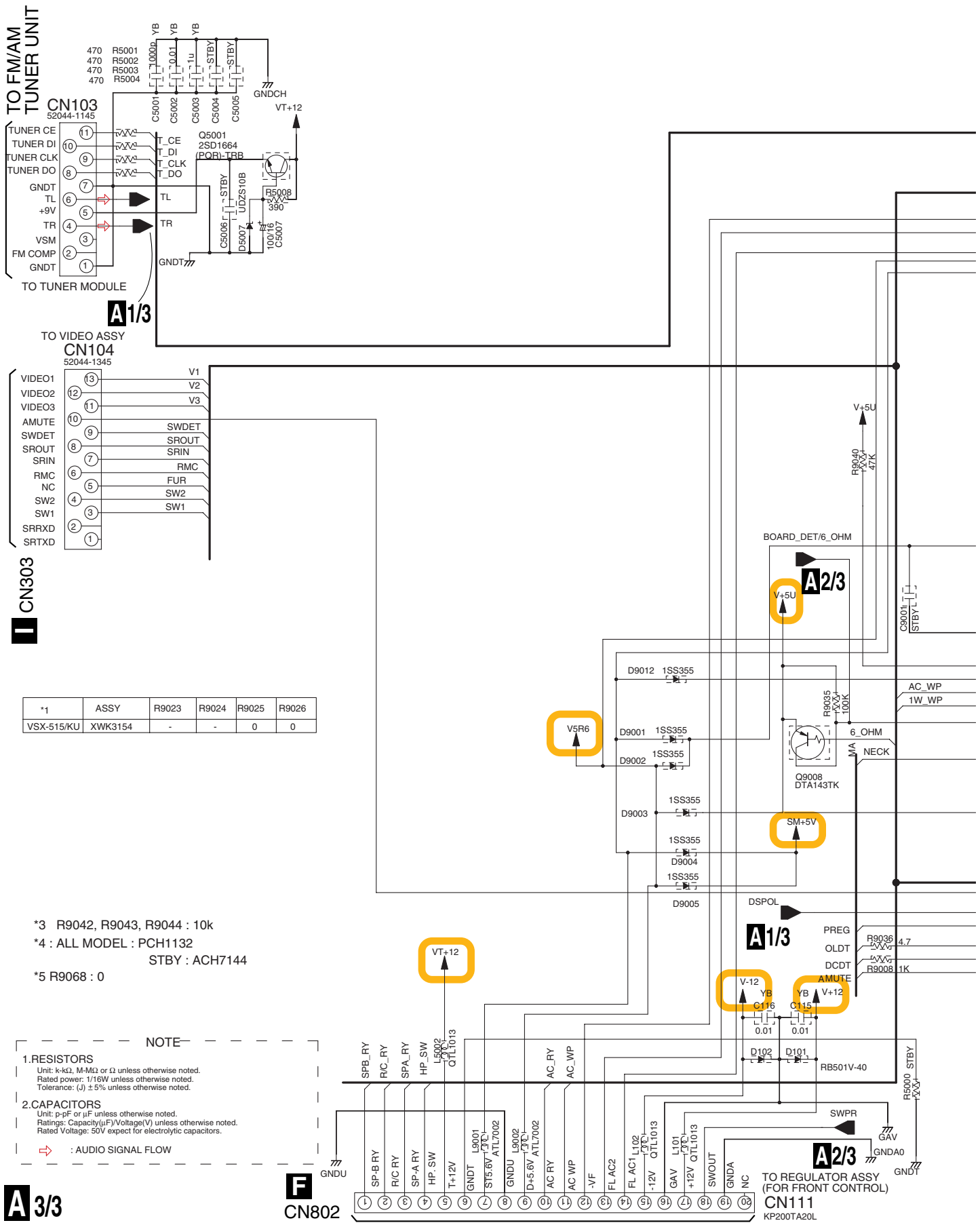
	FRONT, REAR		Center,SB		SW	
*1	R327 R328 R348 R347 (Ohm)	GAIN(dB)	R363 R392 (Ohm)	GAIN(dB) 915	R372 (Ohm)	GAIN(dB)
KUXJ /CA	15k	14.1/24.1	15k	14.1/24.1	15k	14.2/24.9

*2	R393 VSX-515
	0

A 2/3

3.5 MAIN ASSY (3/3)

A
B
C
D
E
F



*1	ASSY	R9023	R9024	R9025	R9026
VSX-515/KU	XWK3154	-	-	0	0

- *3 R9042, R9043, R9044 : 10k
- *4 : ALL MODEL : PCH1132
STBY : ACH7144
- *5 R9068 : 0

NOTE

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

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

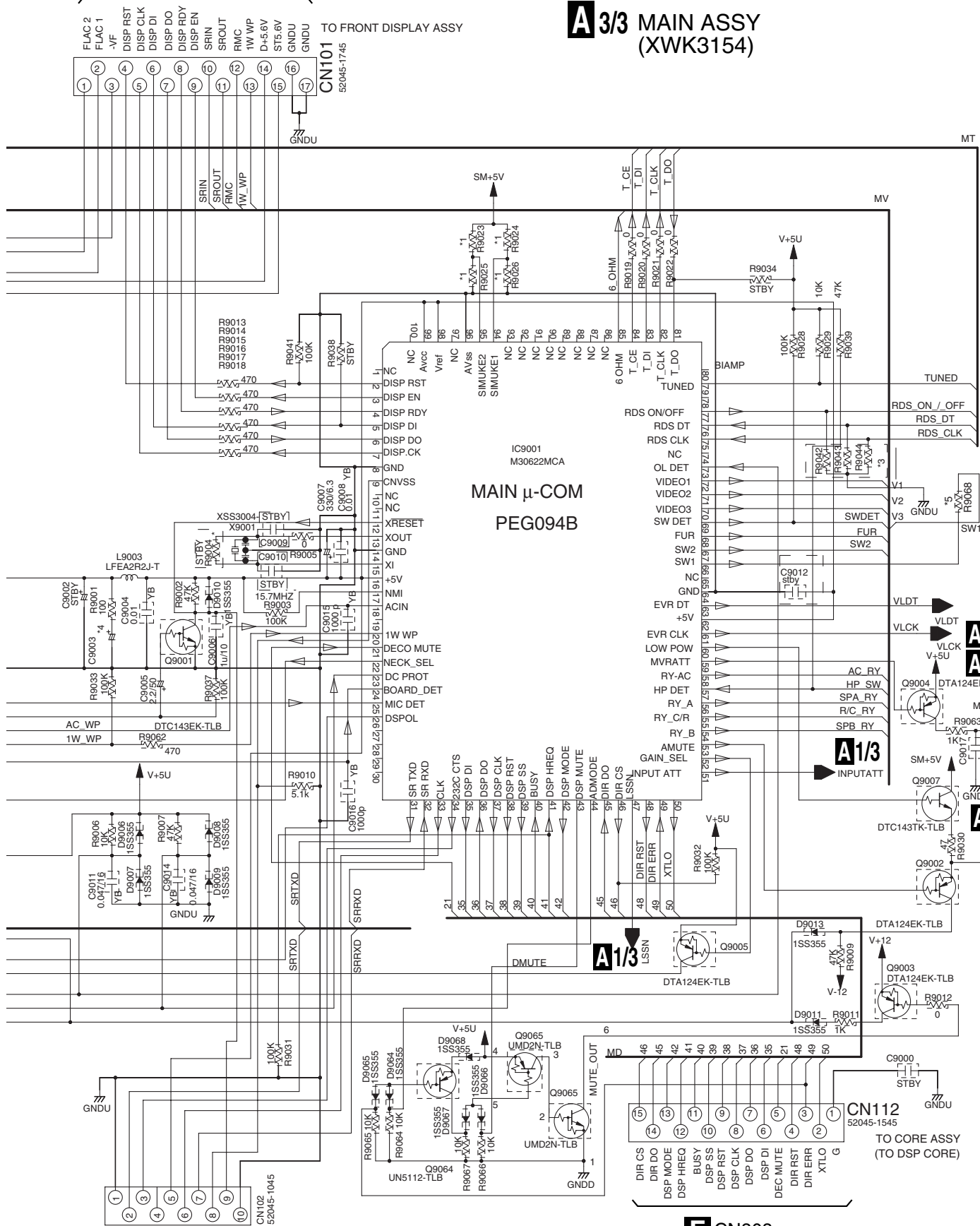
⇒ : AUDIO SIGNAL FLOW

A 3/3

F

M CN401

A 3/3 MAIN ASSY (XWK3154)



A
B
C
D
E
F

FOR FLASH U-COM (for Prototype & TP only)

F CN808

A 3/3

3.6 DSP ASSY (1/2)

1

2

3

4

A

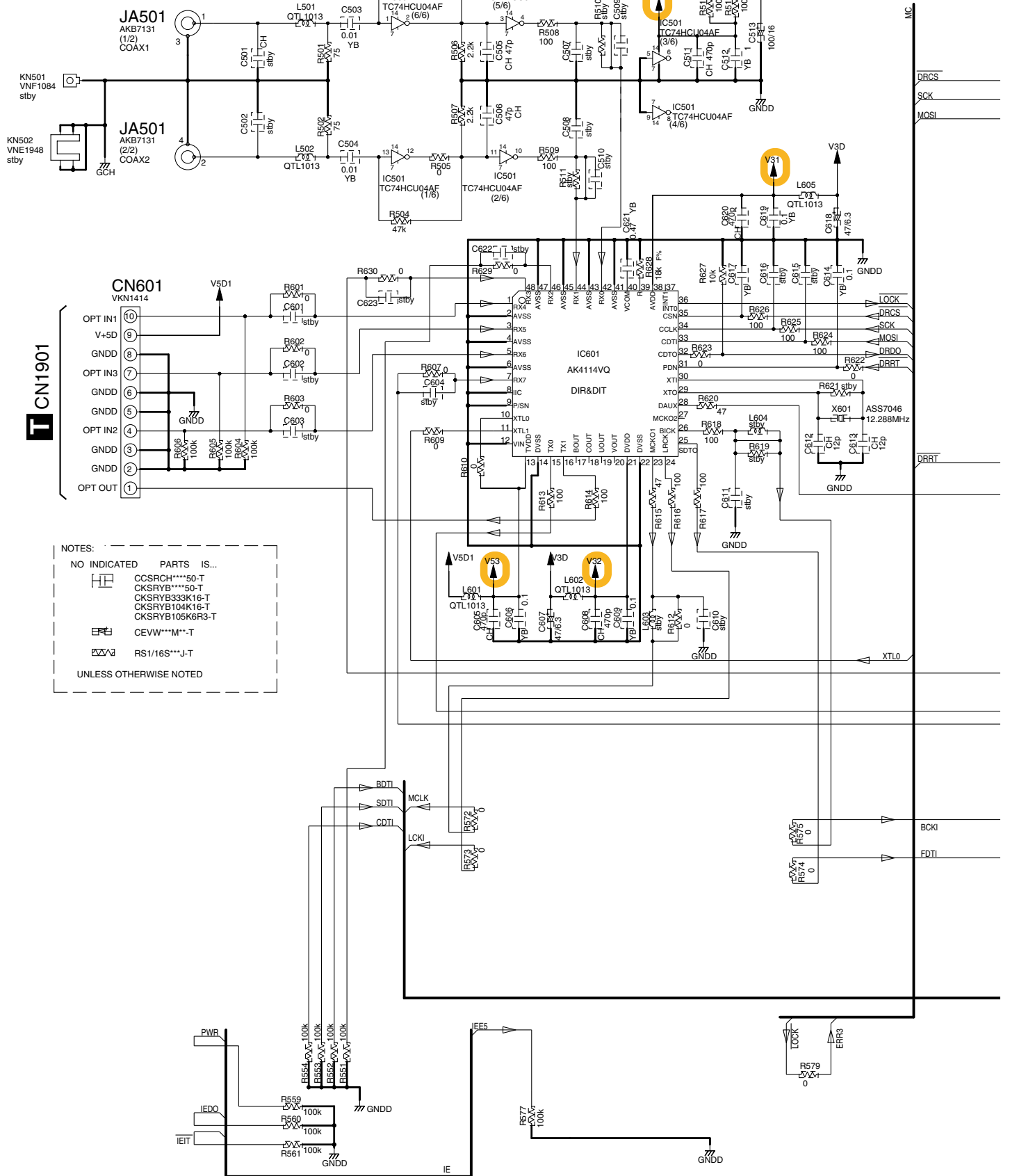
B

C

D

E

F



NOTES:
 NO INDICATED PARTS IS...
 CCSRCH****50-T
 CKSRFB****50-T
 CKSRFB333K16-T
 CKSRFB104K16-T
 CKSRFB105K6R3-T
 CEVW****M**-T
 RS1/16S***J-T
 UNLESS OTHERWISE NOTED

B 1/2

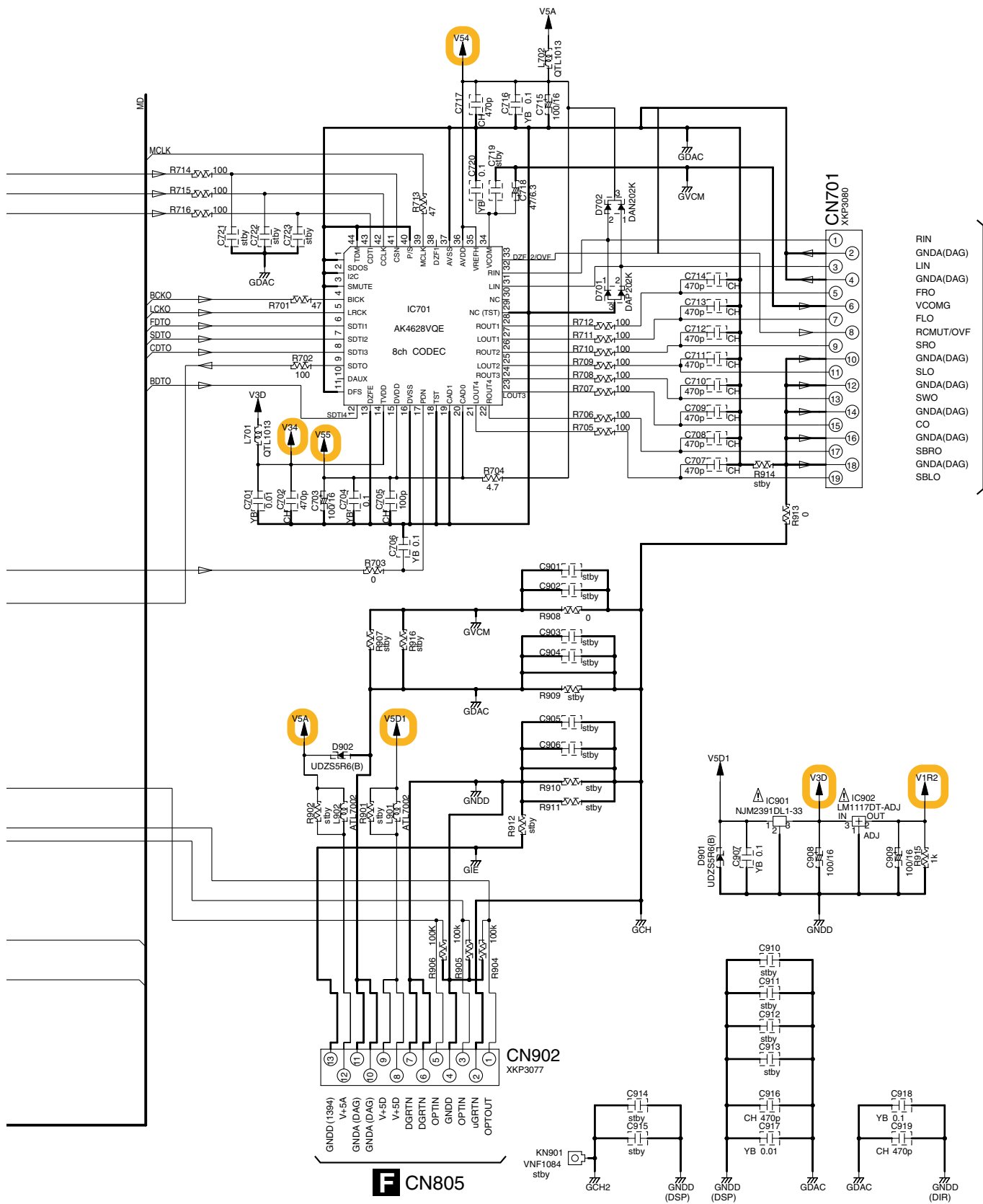
VSX-515-K

1

2

3

4



F CN806

- RIN
- GNDA (DAG)
- LIN
- GNDA (DAG)
- FRO
- VCOMG
- FLO
- RCGMUT/OVF
- SRO
- GNDA (DAG)
- SLO
- GNDA (DAG)
- SWO
- GNDA (DAG)
- CO
- GNDA (DAG)
- SBRO
- GNDA (DAG)
- SBLO

F CN805

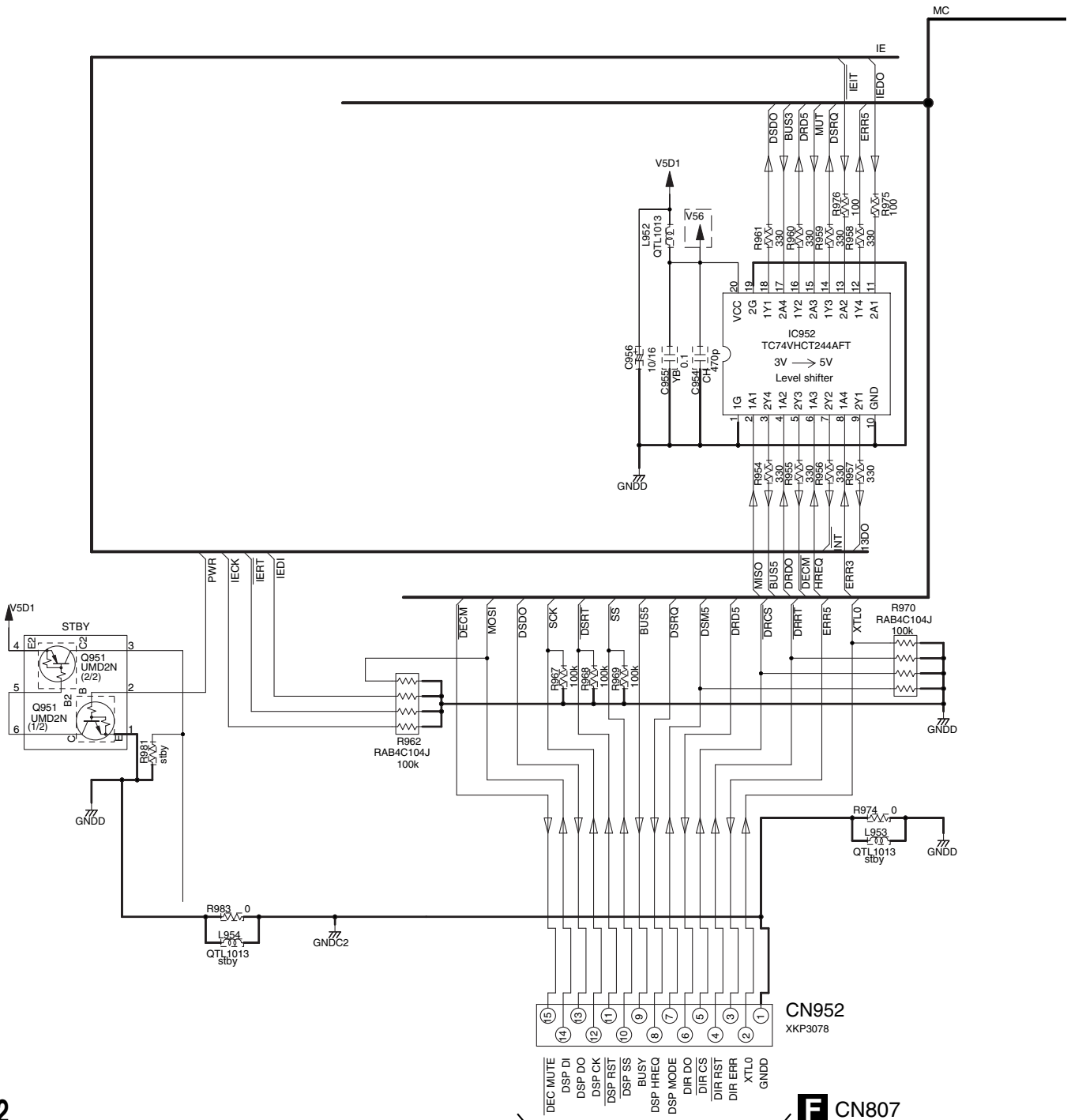
- GNDD (1394)
- V+5A
- GNDA (DAG)
- GNDA (DAG)
- V+5D
- DGRTN
- DGRTN
- OPTIN
- GNDD
- OPTIN
- uGRTN
- OPTOUT

B 1/2 DSP ASSY (AWX8573)

B 1/2

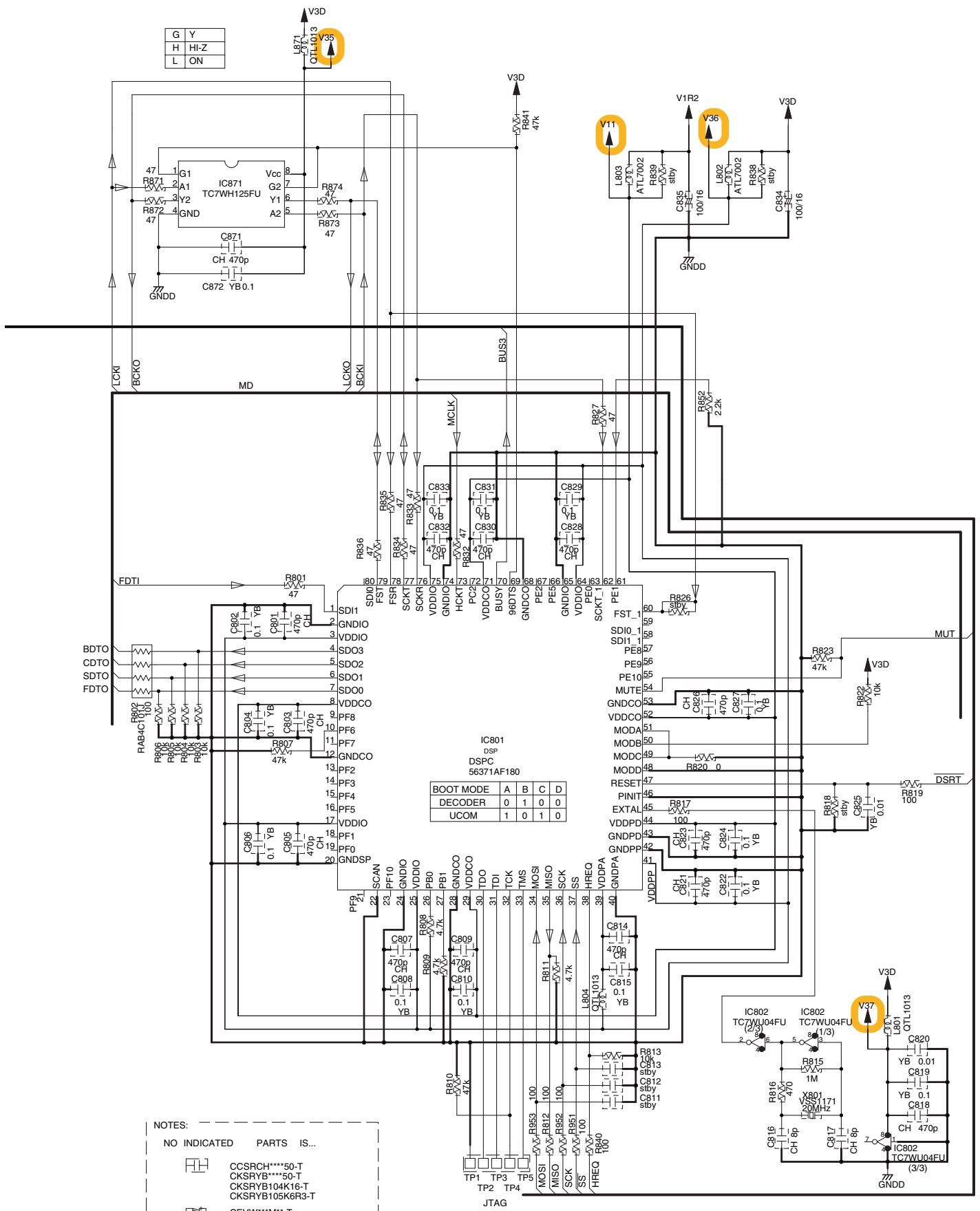
3.7 DSP ASSY (2/2)

A
B
C
D
E
F



B 2/2

F CN807



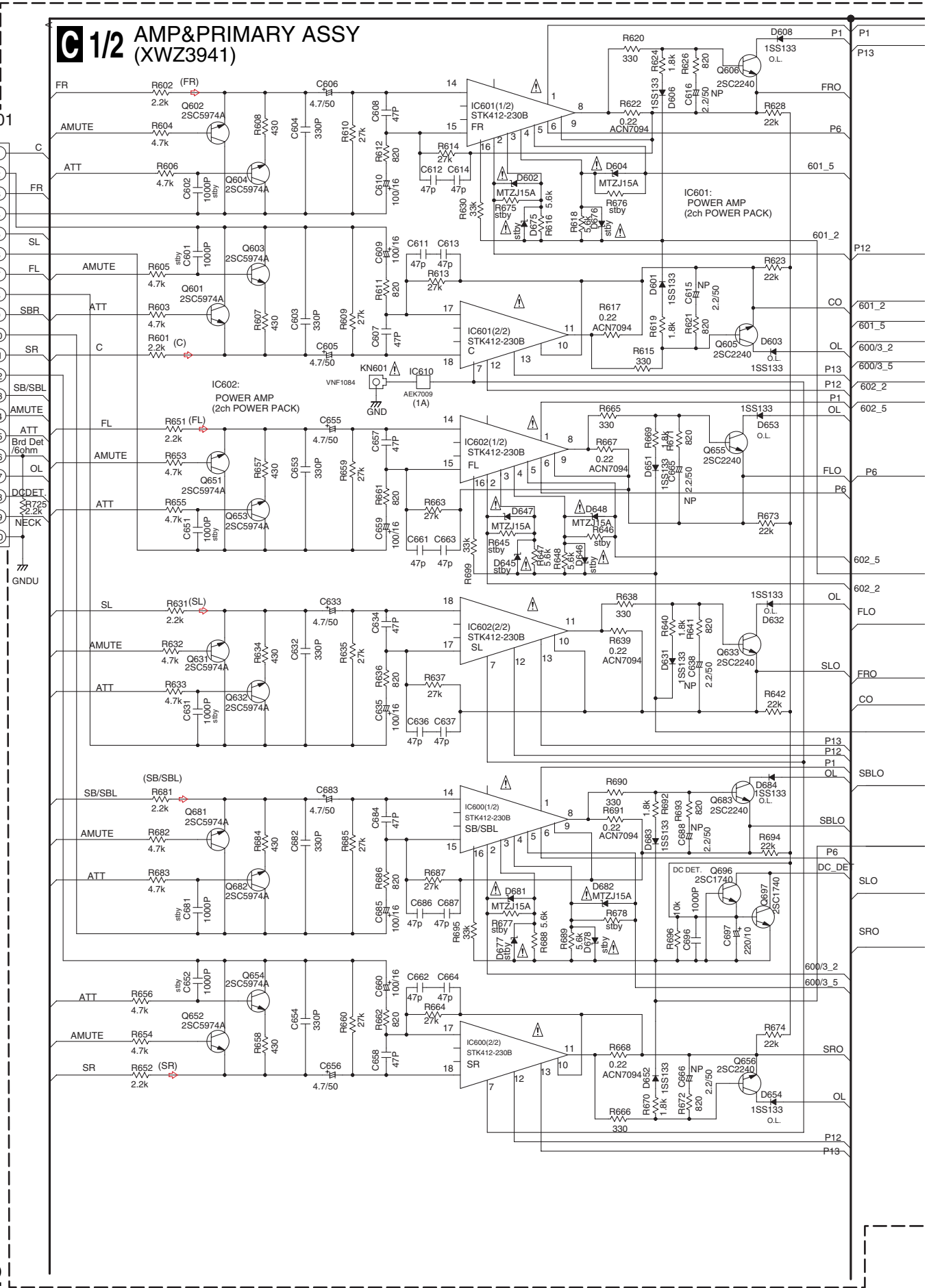
B 2/2 DSP ASSY (AWX8573)

B 2/2

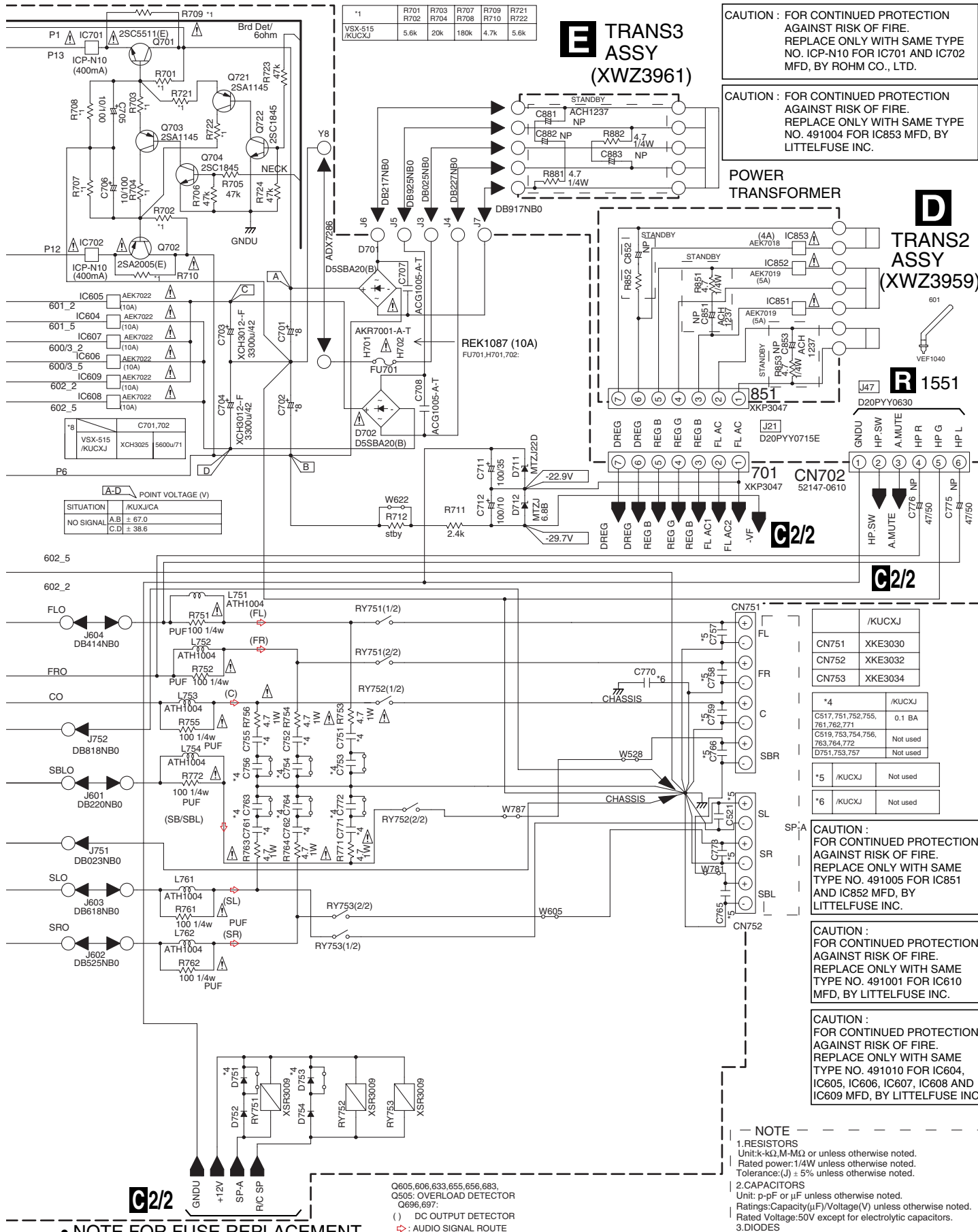
3.8 AMP & PRIMARY (1/2), TRANS2 and TRANS3 ASSYS

1/2 AMP&PRIMARY ASSY (XWZ3941)

A
B
C
D
E
F



CN253



NOTE FOR FUSE REPLACEMENT

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

/KUCXJ	
CN751	XKE3030
CN752	XKE3032
CN753	XKE3034
*4	/KUCXJ
C517, 751, 752, 755, 761, 762, 771	
C519, 753, 754, 756, 763, 764, 772	
D751, 753, 757	
*5	/KUCXJ
Not used	
*6	/KUCXJ
Not used	

A-D POINT VOLTAGE (V)

SITUATION	/KUCJCA
NO SIGNAL	A.B \pm 67.0
	C.D \pm 38.6

Q605, 606, 633, 655, 656, 683, Q505: OVERLOAD DETECTOR
Q696, 697:
() DC OUTPUT DETECTOR
⦿: AUDIO SIGNAL ROUTE

C1/2 D E

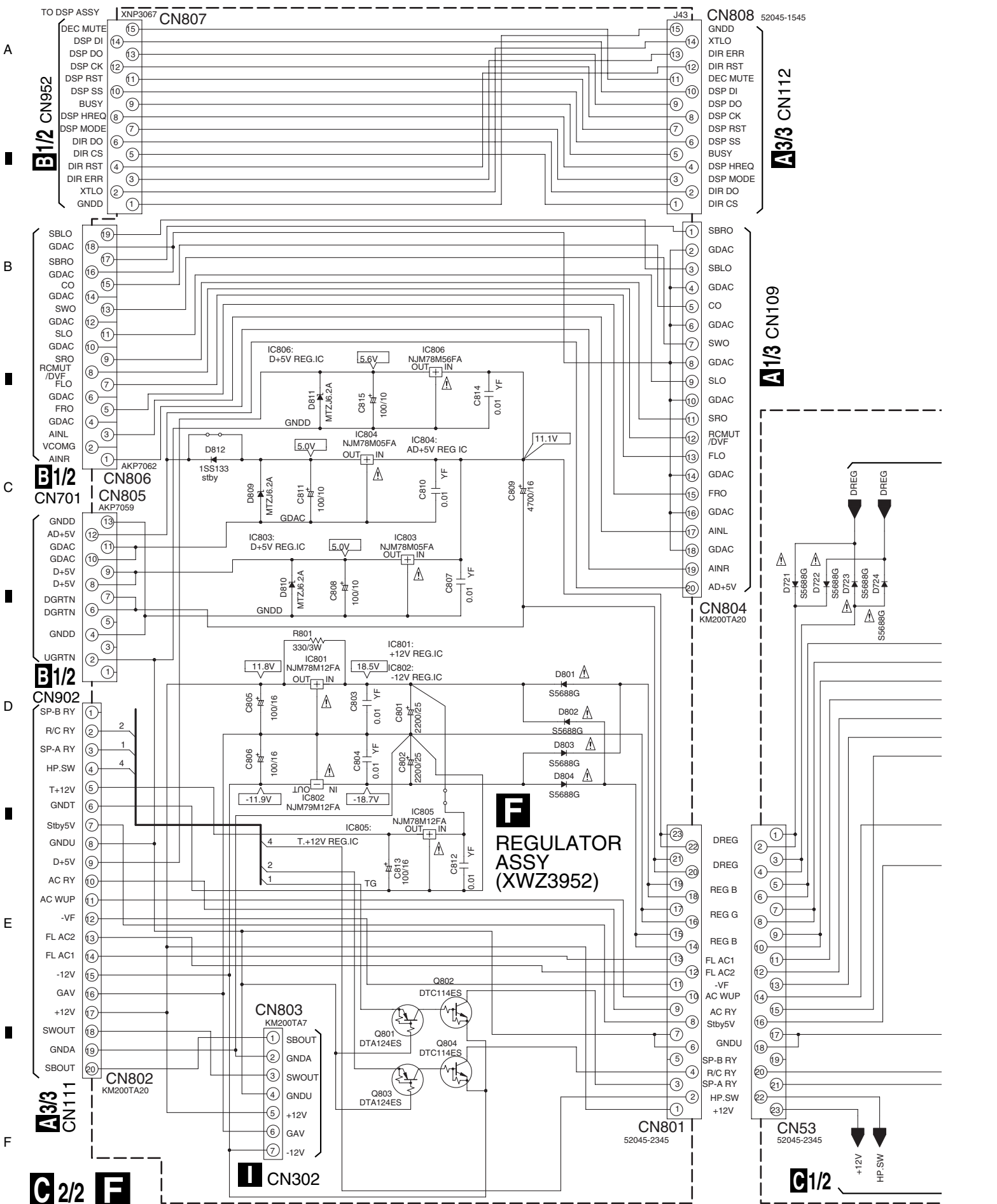
3.9 AMP&PRIMARY(2/2), REGULATOR, AMP INPUT and TRANS1 ASSYS

1

2

3

4



1

2

3

4

NOTE

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

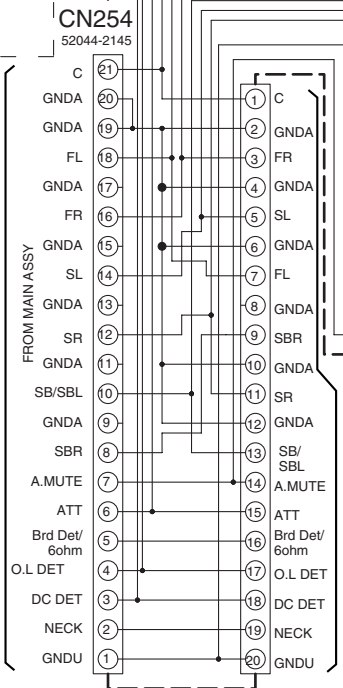
2. CAPACITORS
 Unit: p-pF or μF unless otherwise noted.
 Ratings:Capacity(μF)/Voltage(V) unless otherwise noted.
 Rated Voltage:50V except for electrolytic capacitors.

FAN MOTOR

CN252 S3B-EH

G AMP INPUT ASSY (XWZ3955)

A 2/3 CN106



C 1/2



H

TRANS1 ASSY (XWZ3958)

POWER TRANSFORMER

G 2/2

AMP & PRIMARY ASSY (XWZ3941)

• NOTE FOR FUSE REPLACEMENT

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

G 2/2 **G** **H**

3.10 VIDEO and 5.1CH ASSYS

A

B

C

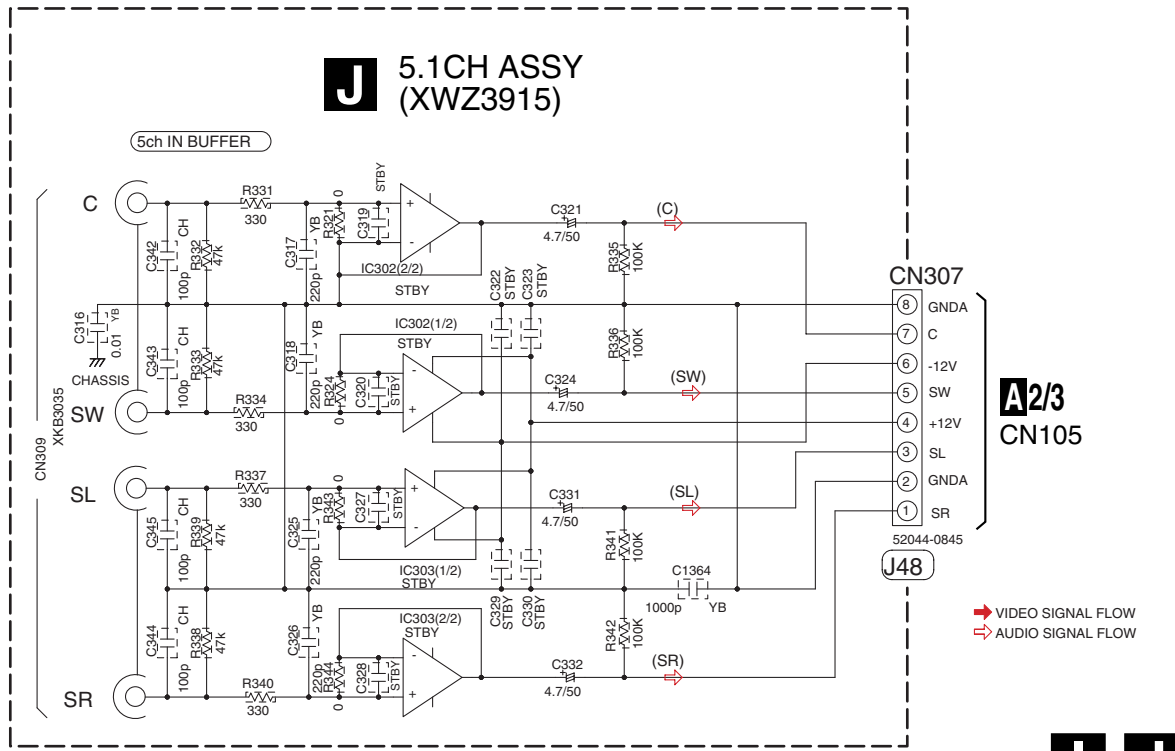
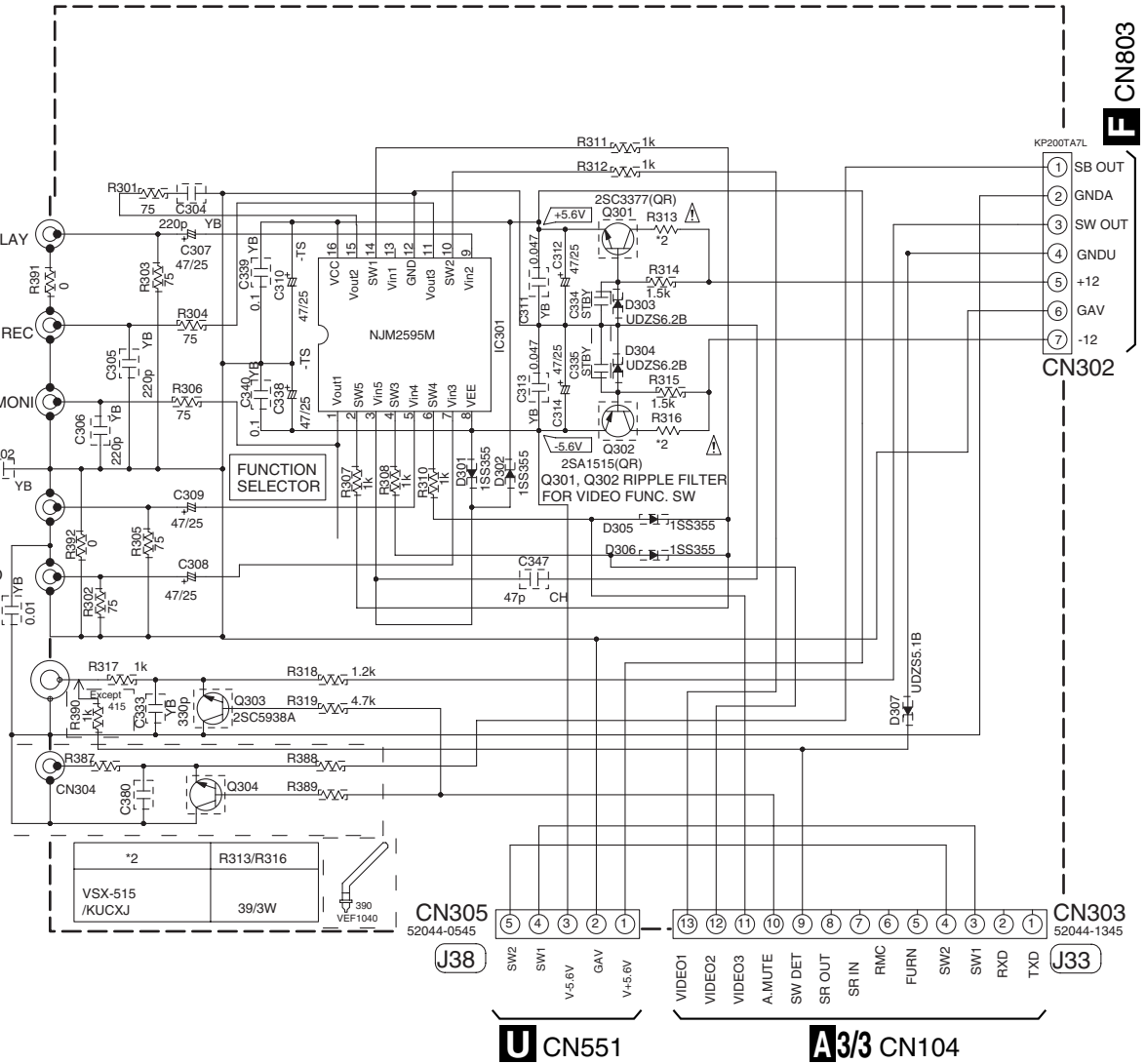
D

E

F

I
VIDEO ASSY (XWZ3904)

J 5.1CH ASSY (XWZ3915)



■

5

■

6

■

7

■

8

■

A

■

B

■

C

■

D

■

E

■

F

■

5

■

6

VSX-515-K

■

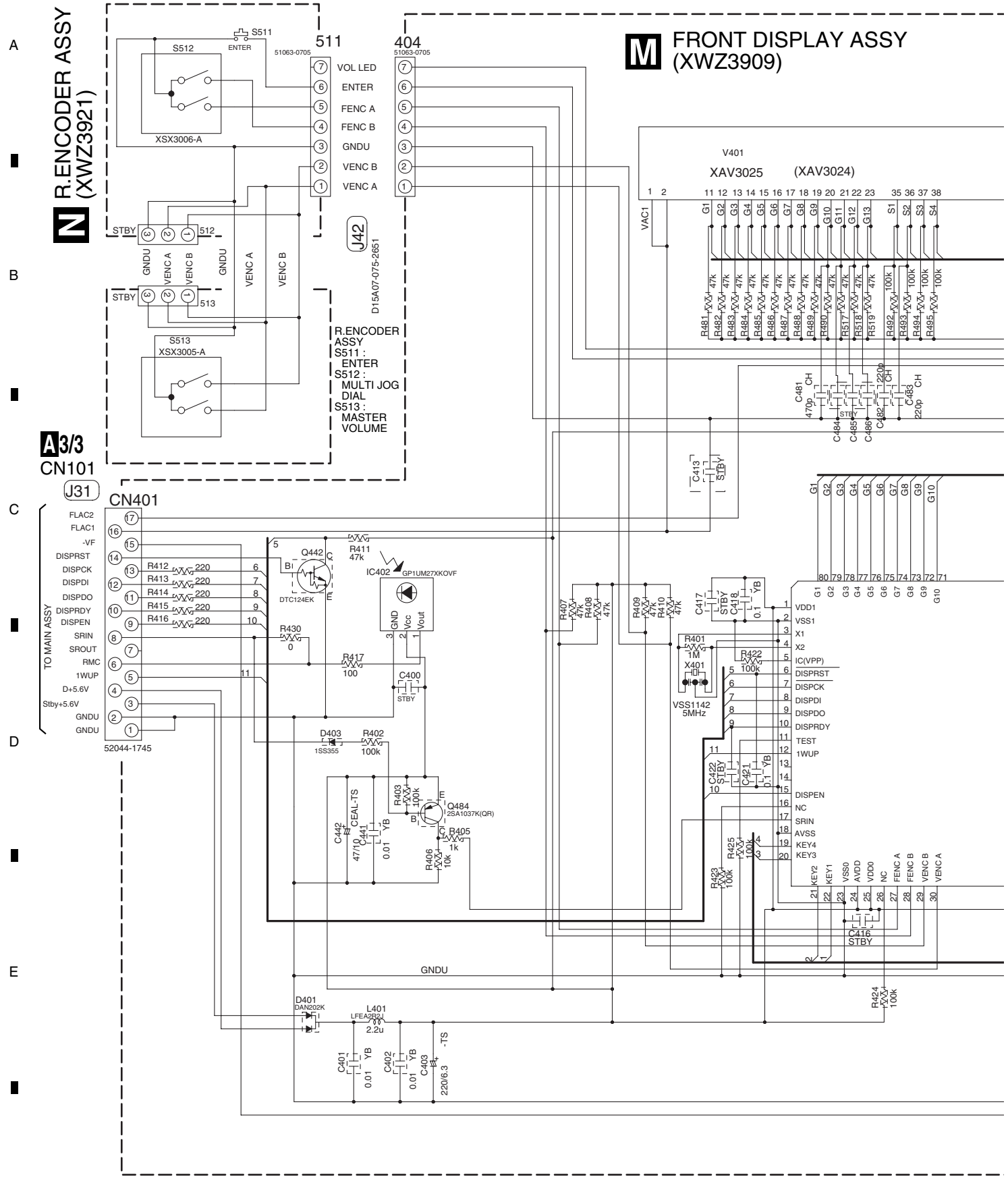
7

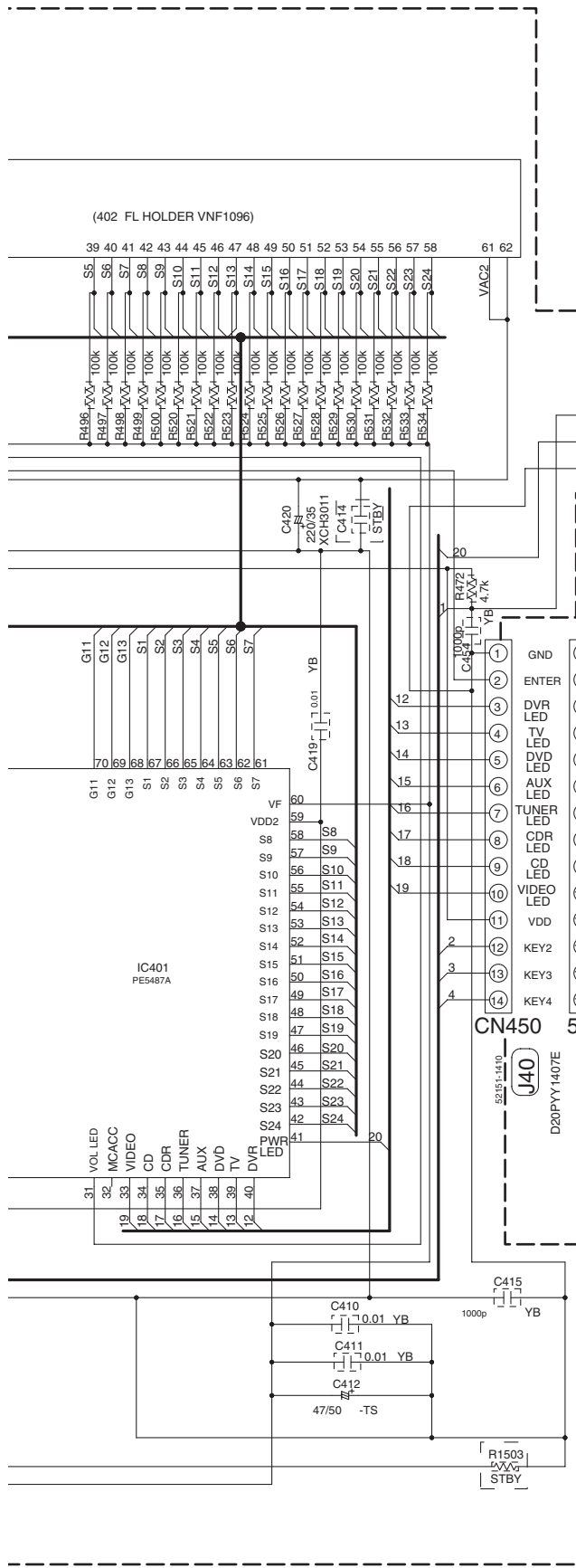
■

8

■

3.11 FRONT DISPLAY, R. ENCODER, P. SW&FUNC KEY and F. KEY ASSYS





NOTE

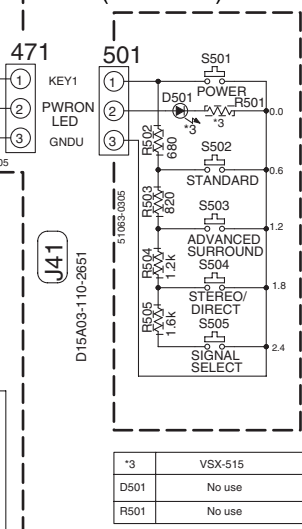
1. RESISTORS
Unit: k-Ω, M-Ω or Ω unless otherwise noted.
Rated power: 1/16W unless otherwise noted.
Tolerance: (J) ± 5% unless otherwise noted.

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

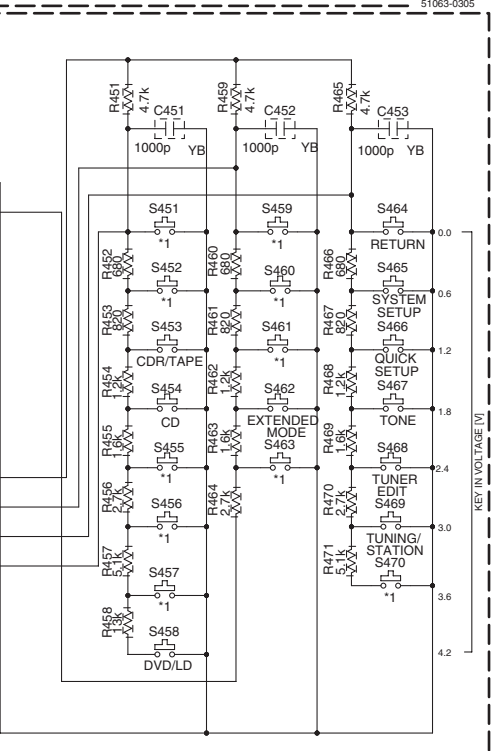
3. TACT SWITCHES
Indicated in VSG1024

POWER SW ASSY
S501 : POWER STANDBY/ON
S502 : STANDARD
S503 : ADVANCED SURROUND
S504 : STEREO/DIRECT
S505 : SIGNAL SELECT

P. SW & FUNC. KEY ASSY (XWZ3918)



*3	VSX-515
D501	No use
R501	No use



P FRONT KEY ASSY (XWZ3913)

*1	VSX-515 /KUCXJ
S451	AM
S452	FM
S453	CDR/TAPE
S454	CD
S455	VCR/DVR
S456	TV/SAT
S457	DVD 5.1ch
S459	FL DIMMER
S460	INPUT ATT
S461	SPEAKER IMPEDANCE
S463	MUTE
S462	EXTENDED MODE
S463	MUTE
S464	RETURN
S465	SYSTEM SETUP
S466	QUICK SETUP
S467	TONE
S468	TUNER EDIT
S469	TUNER STATION
S470	CLASS

FRONT KEY ASSY
S451 : AM
S452 : FM
S453 : CDR/TAPE
S454 : CD
S455 : VCR/DVR
S456 : TV/SAT
S457 : DVD 5.1CH
S459 : FL DIMMER
S460 : INPUT ATT
S461 : SPEAKER INPEDANCE
S462 : EXTENDED MODE
S463 : MUTE
S464 : RETURN
S465 : SYSTEM SETUP
S466 : QUICK SETUP
S467 : TONE
S468 : TUNER EDIT
S469 : TUNER STATION
S470 : CLASS



3.12 TRANS4, H.P., D. IN and COMPONENT ASSYS

1

2

3

4

A

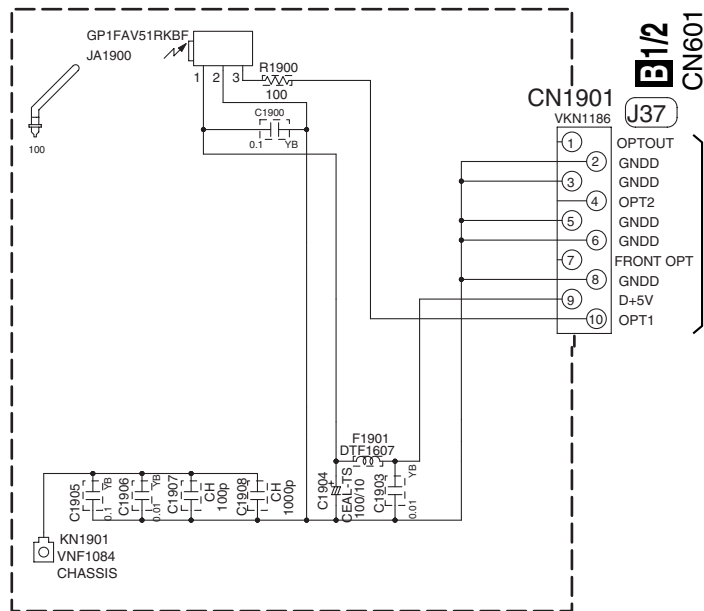
B

C

D

E

F



T DIGITAL IN ASSY (XWZ3927)

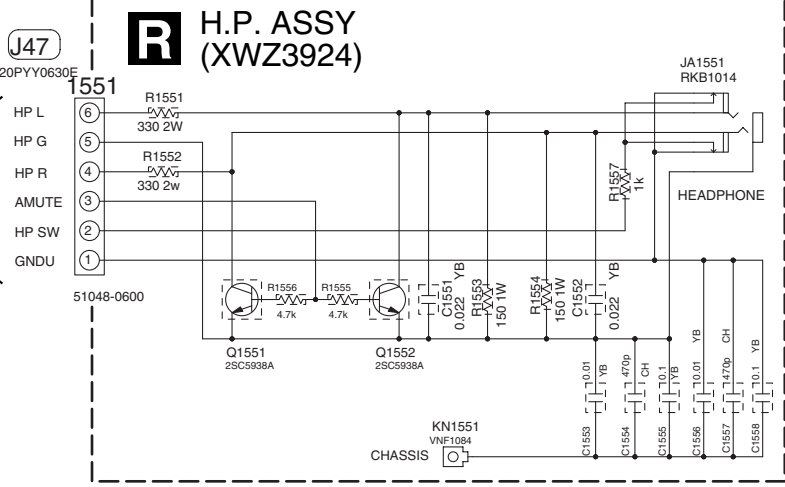
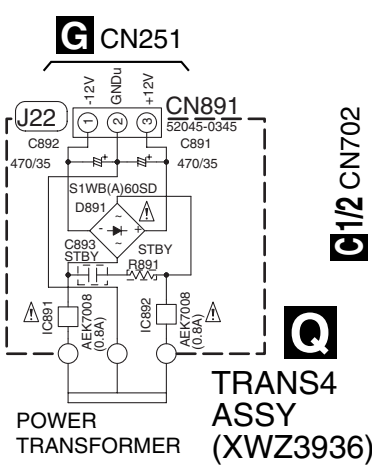
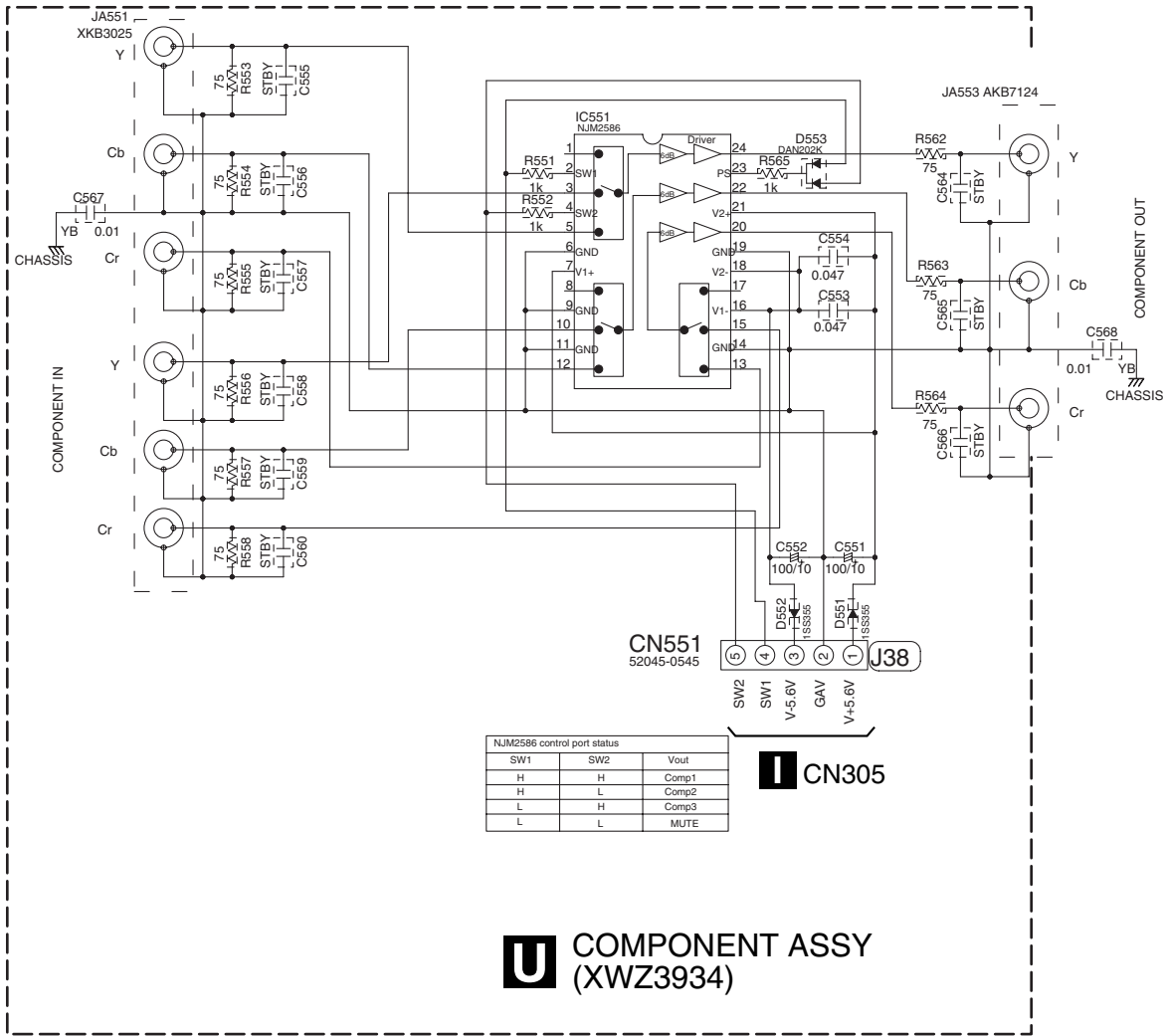
T

1

2

3

4



CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.800 FOR IC891 AND IC892 MFD, BY LITTELFUSE INC.

NOTE

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

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

Q R U

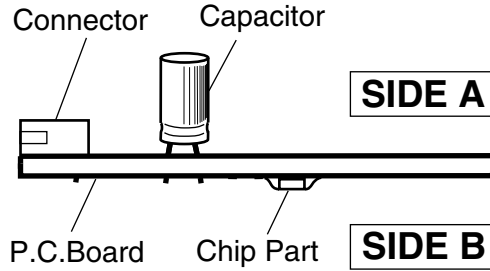
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

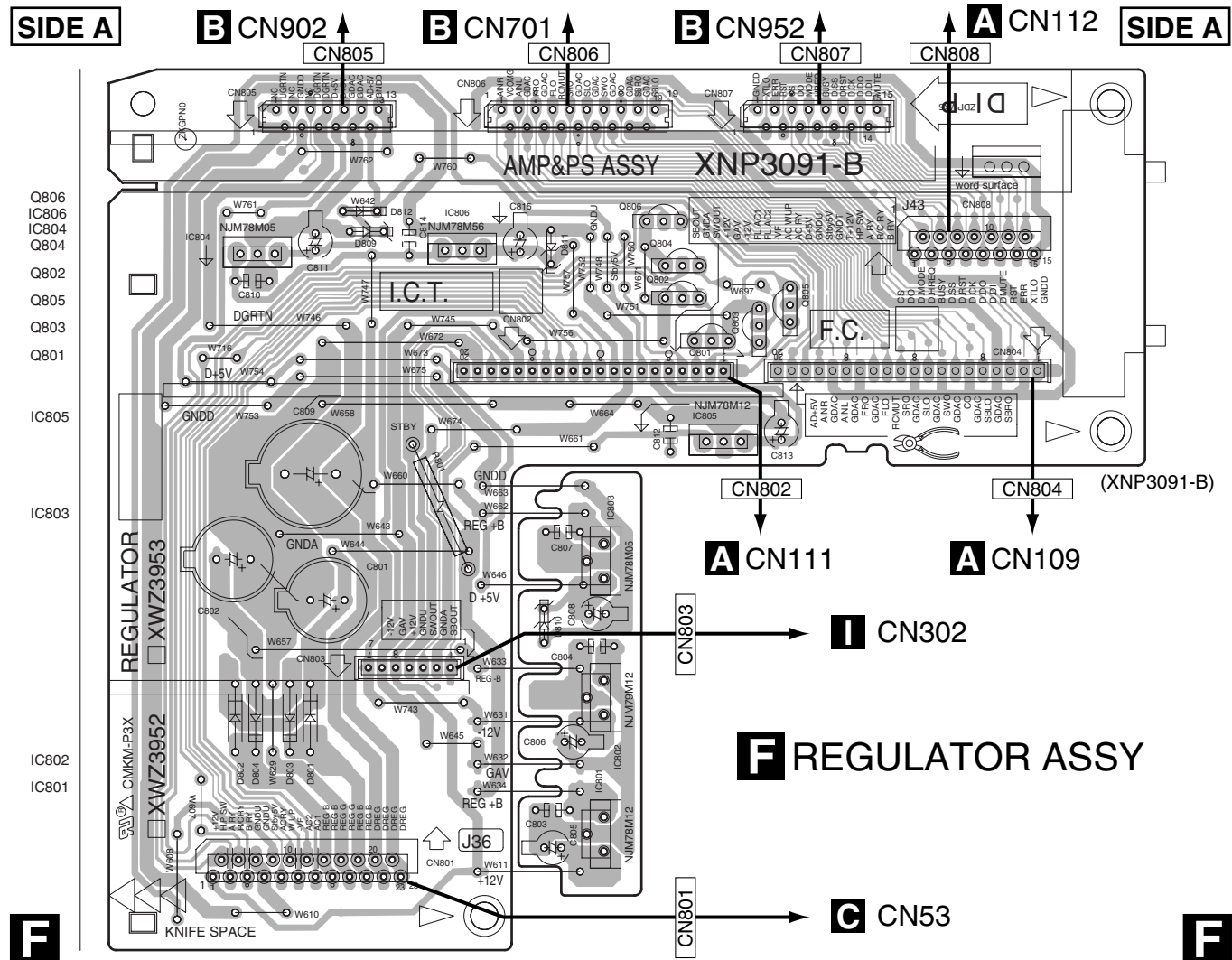
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

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 REGULATOR ASSY

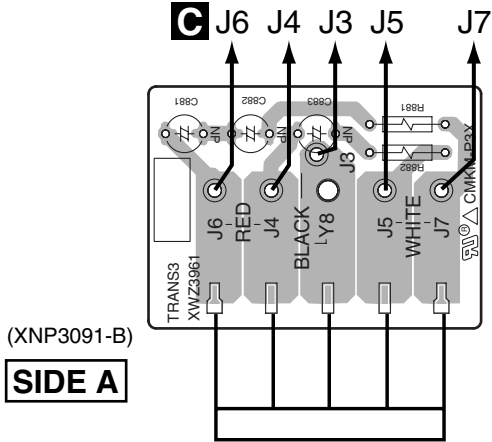


4.2 TRANS2, TRANS3, TRANS1 and TRANS4 ASSYS

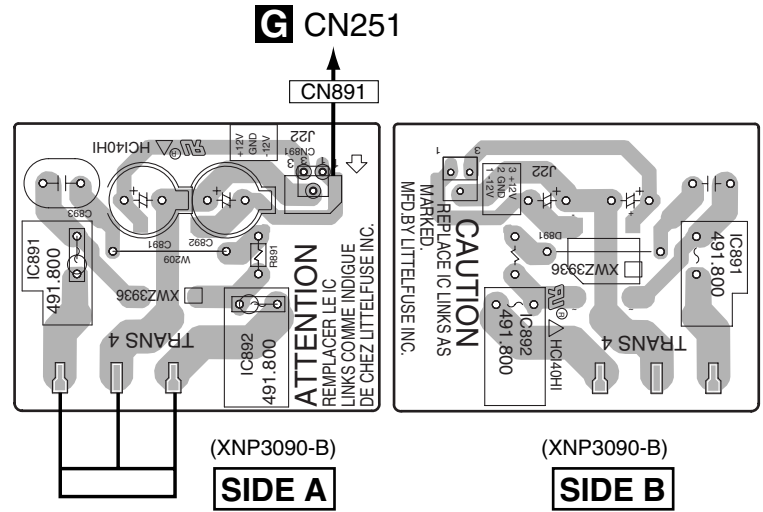
SIDE A

SIDE B

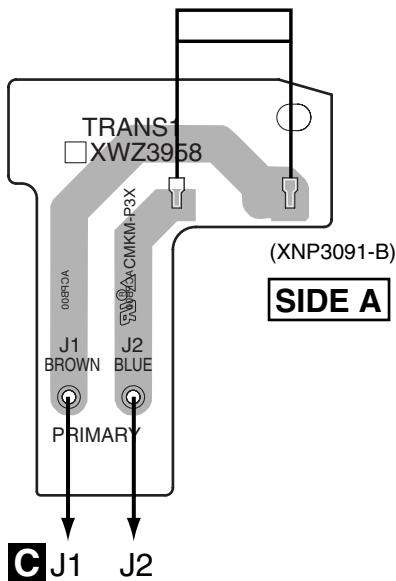
E TRANS3 ASSY



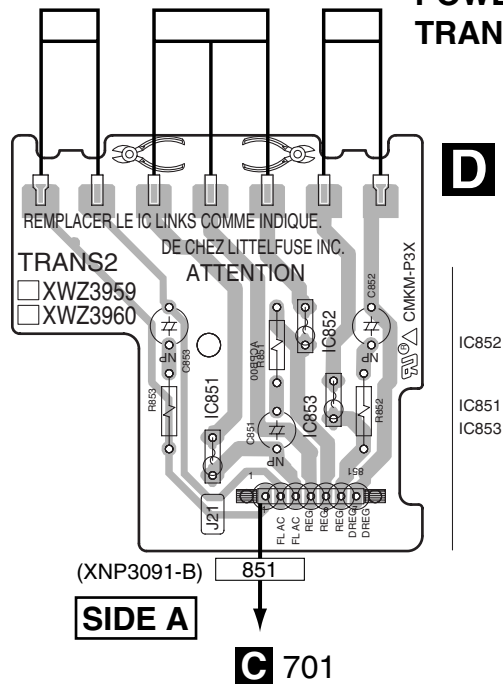
Q TRANS4 ASSY



POWER TRANSFORMER



H TRANS1 ASSY



D TRANS2 ASSY

D E H Q

D E H Q

SIDE A

A

B

C

D

E

F

A

FM/AM
TUNER
UNIT

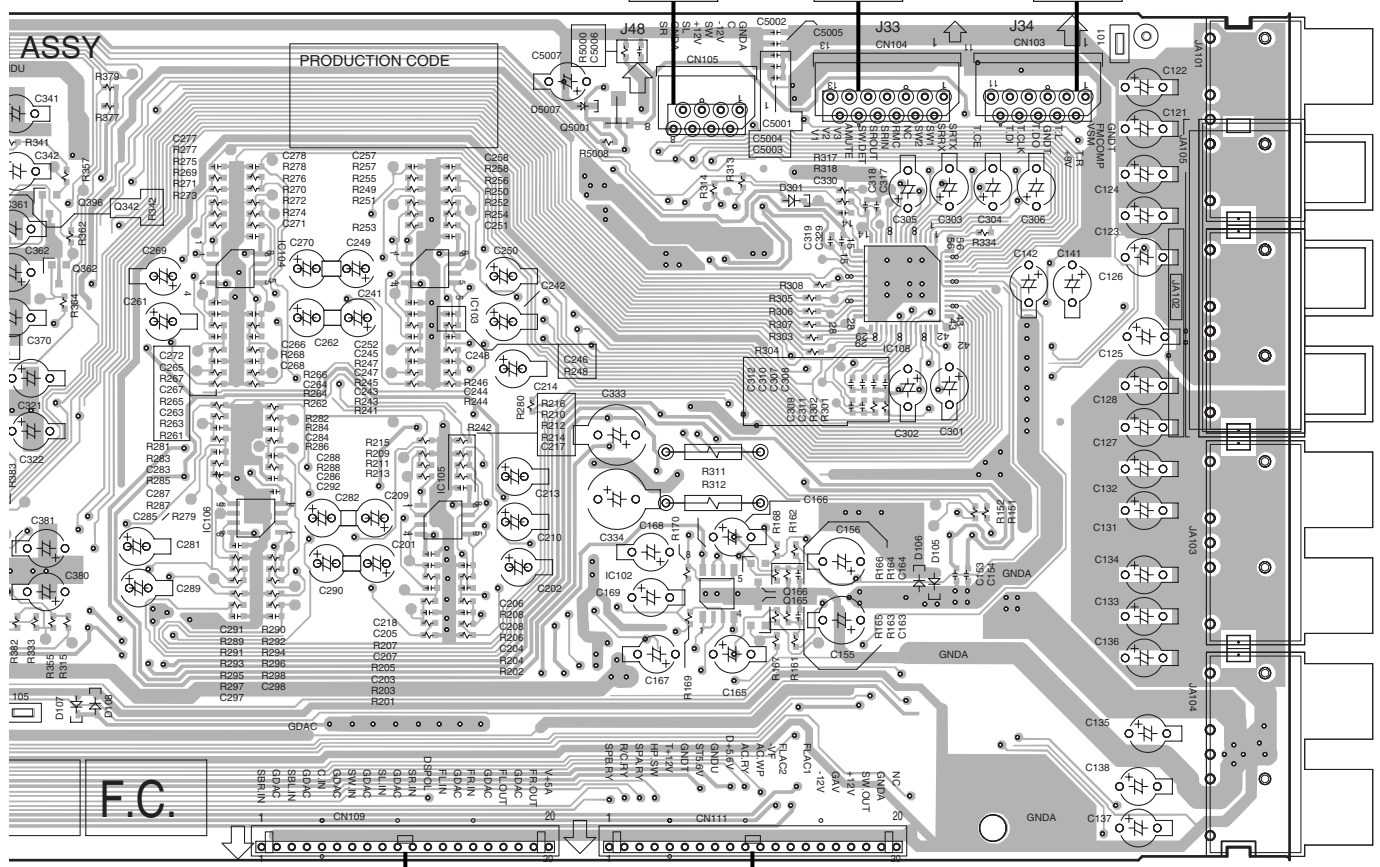
J CN307 **I** CN303

↑ CN105 ↑ CN104 ↑ CN103

↓ CN109 ↓ CN111

F CN804 **F** CN802

(XNP3092-B)



SIDE B

A

B

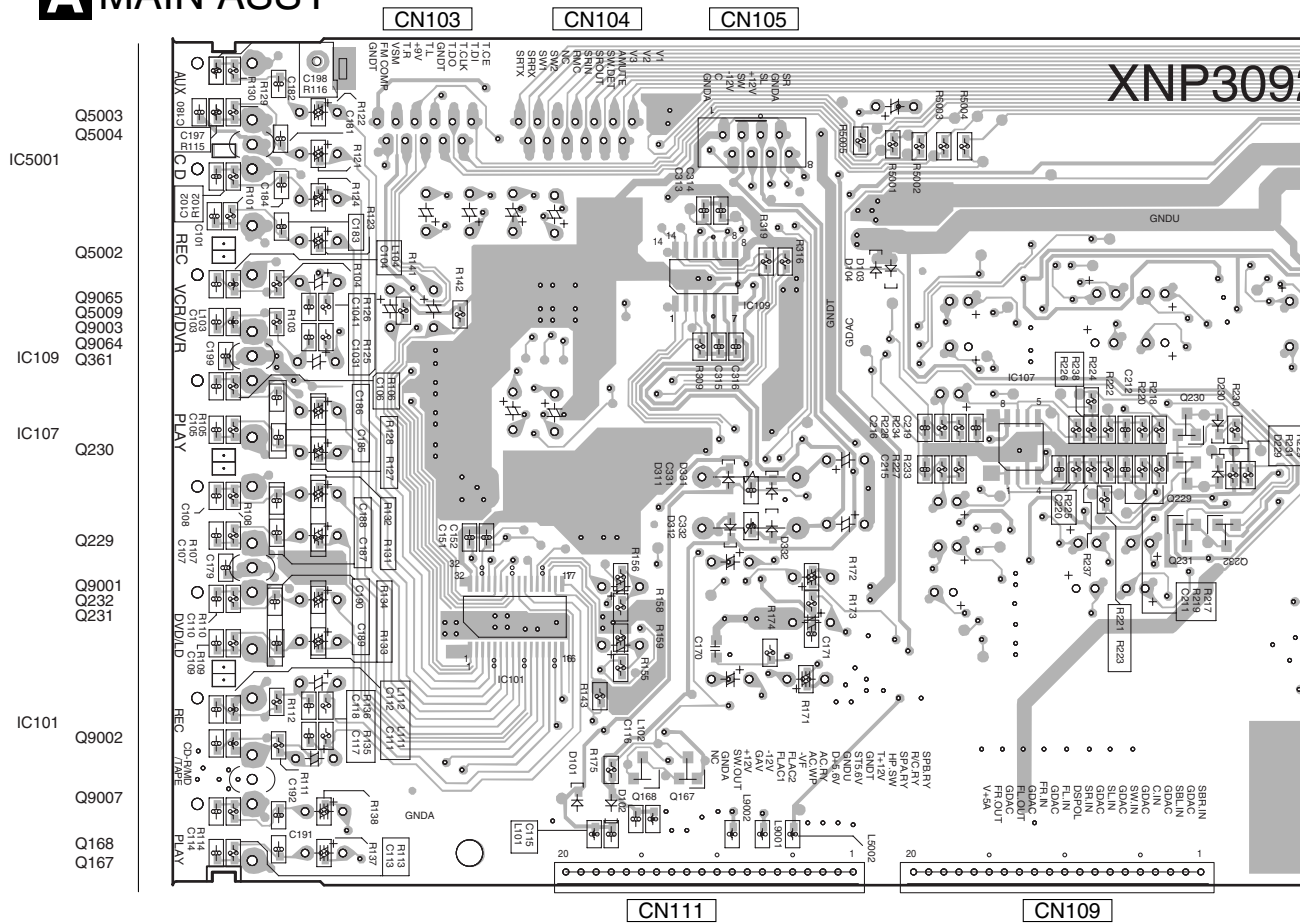
C

D

E

F

A MAIN ASSY



SIDE B

A

B

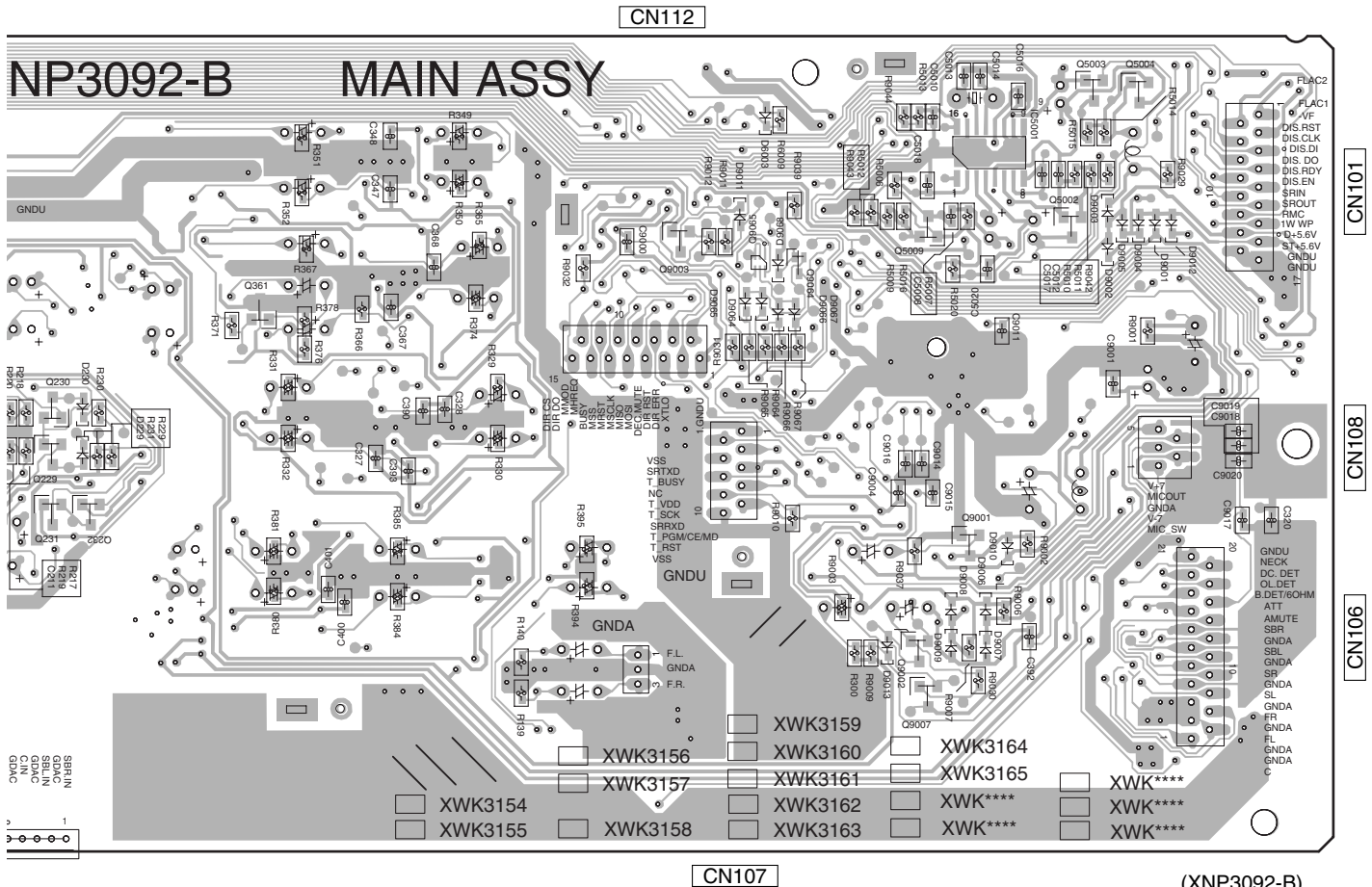
C

D

E

F

A

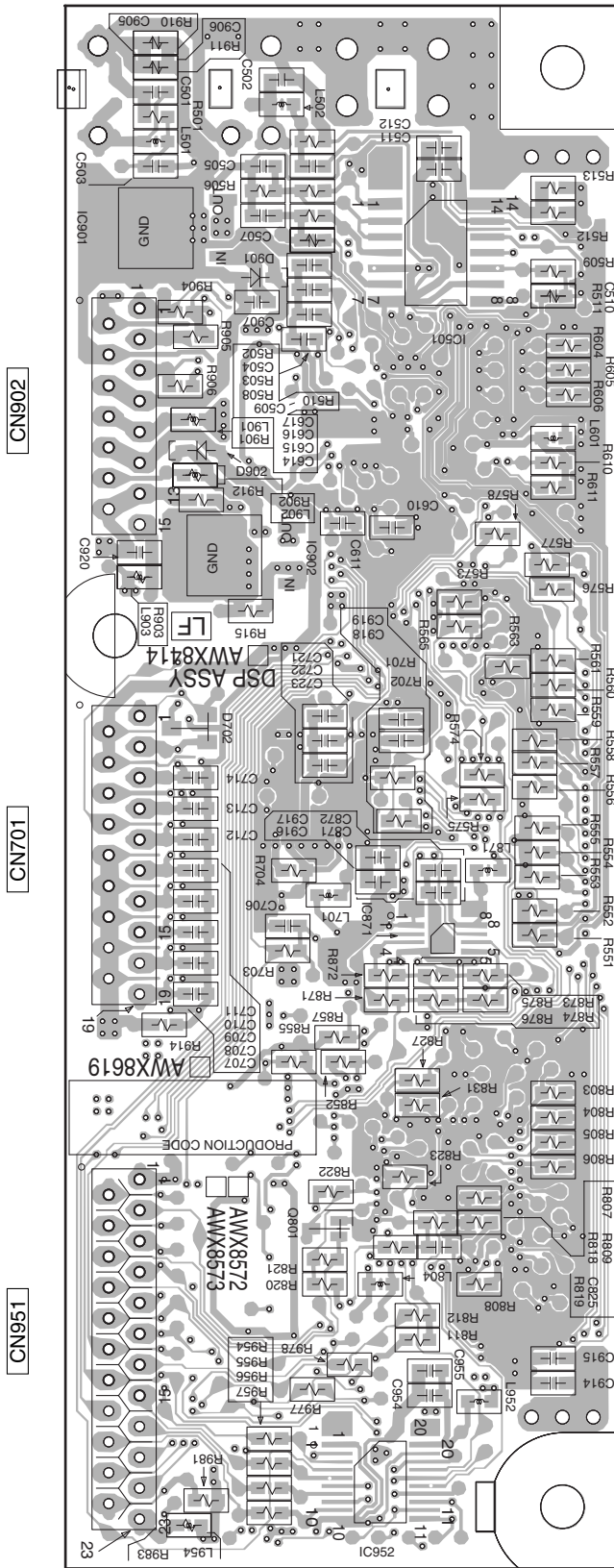


(XNP3092-B)

SIDE B

B DSP ASSY

SIDE B



(ANP7525-A)

B

B

VSX-515-K

4.5 AMP & PRIMARY and AMP INPUT ASSYS

SIDE A

A

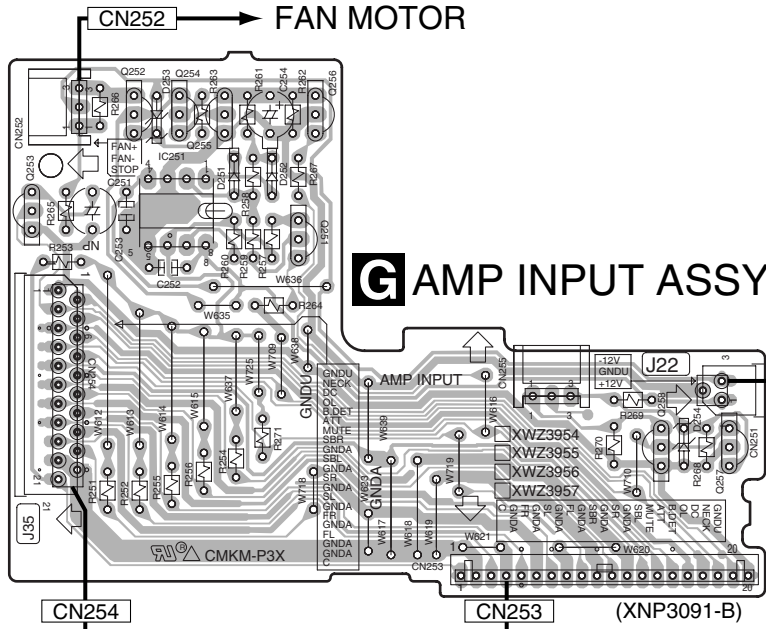
B

C

D

E

F

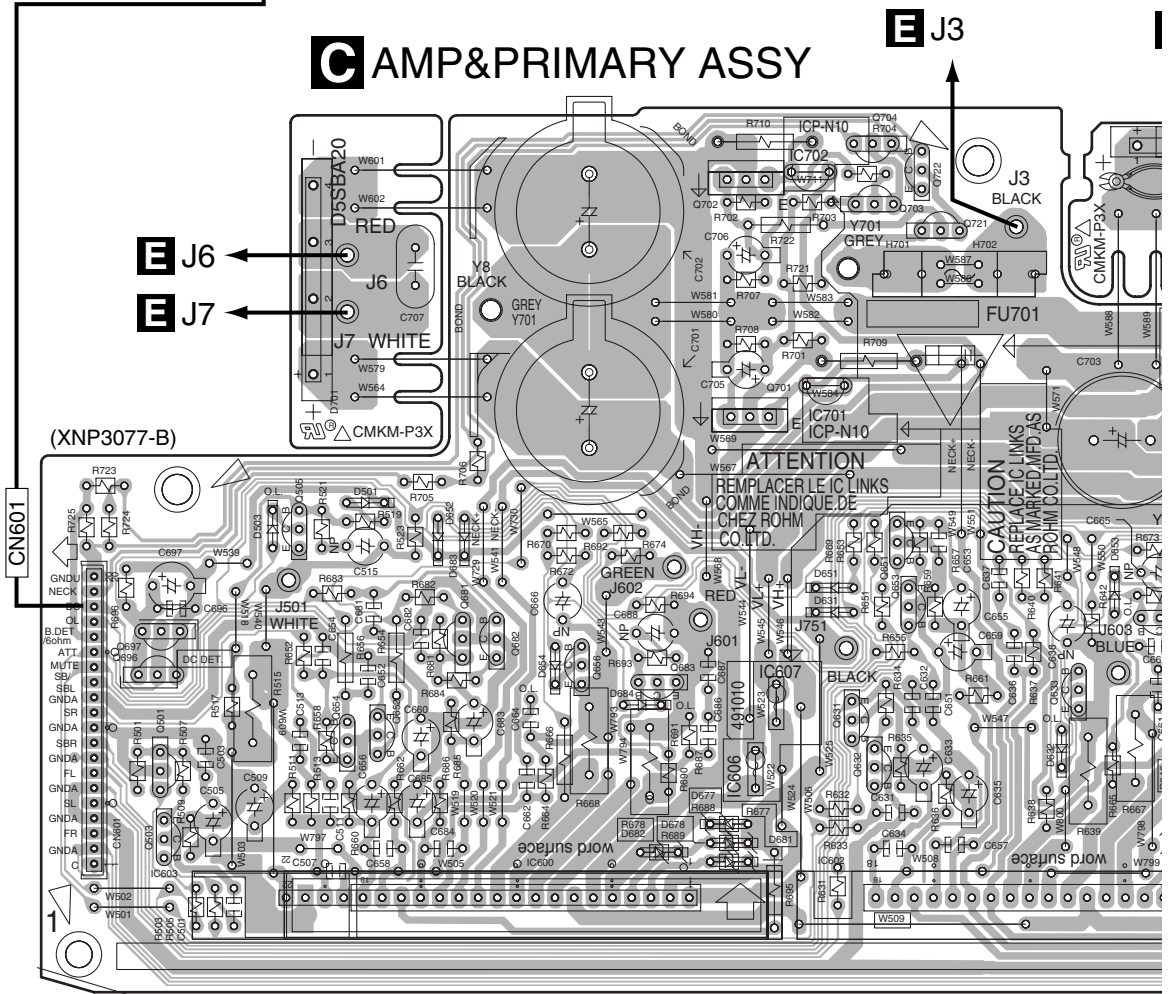


- Q252
- Q254
- Q256
- Q255 IC251
- Q253
- Q251
- Q258
- Q257
- Q CN891

A CN106

C AMP&PRIMARY ASSY

E J3



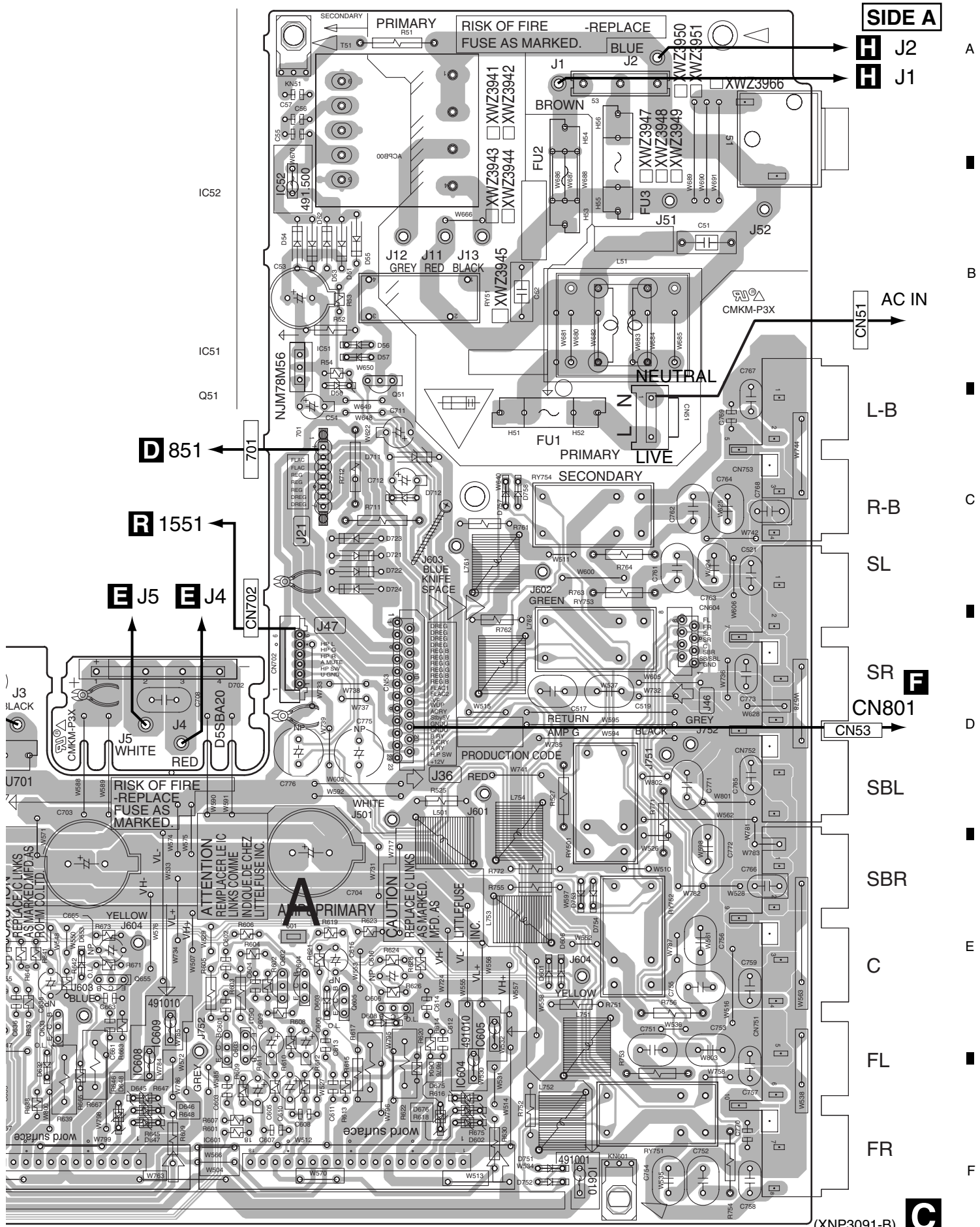
- Q704
- IC702
- Q722
- Q702 Q703
- Q721
- Q701
- IC701
- Q505
- Q651
- Q653 Q602
- Q681 Q604
- Q655
- Q697 Q682 Q606
- Q696 Q683 Q601
- Q656 Q605
- Q654
- Q501 Q652 Q631
- Q603
- Q632
- Q608
- Q604
- Q606
- Q503
- Q600
- Q602
- Q603
- Q601
- Q610

E J6

E J7

C **G**

VSX-515-K



SIDE A

H J2
H J1

AC IN

L-B

R-B

SL

SR **F**
CN801

SBL

SBR

C

FL

FR

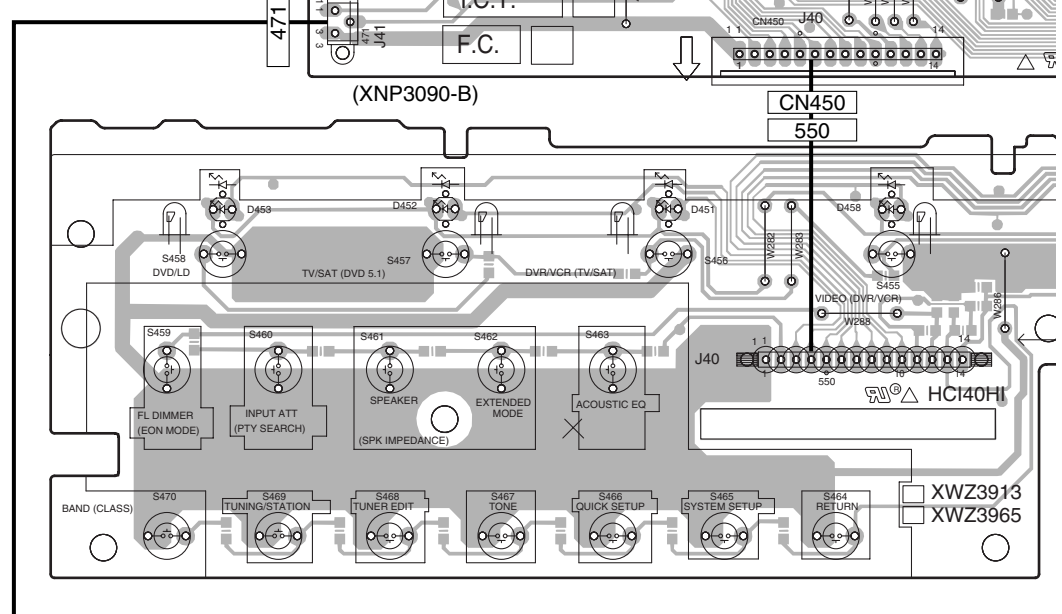
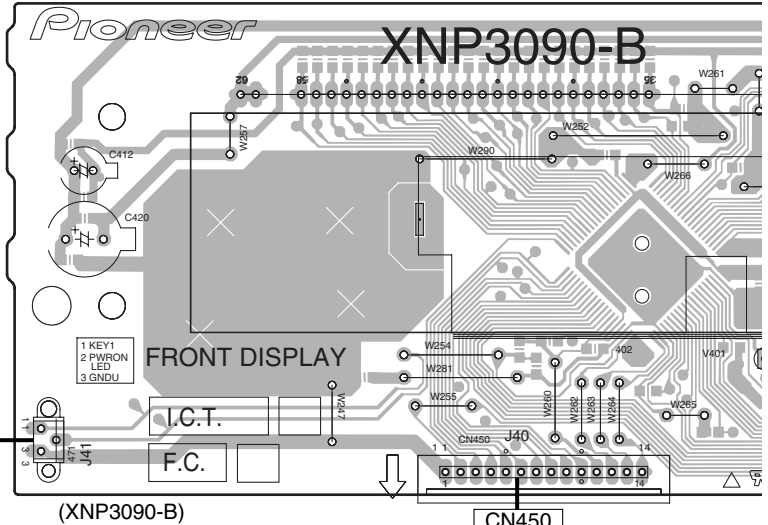
(XNP3091-B) **C**

VSX-515-K

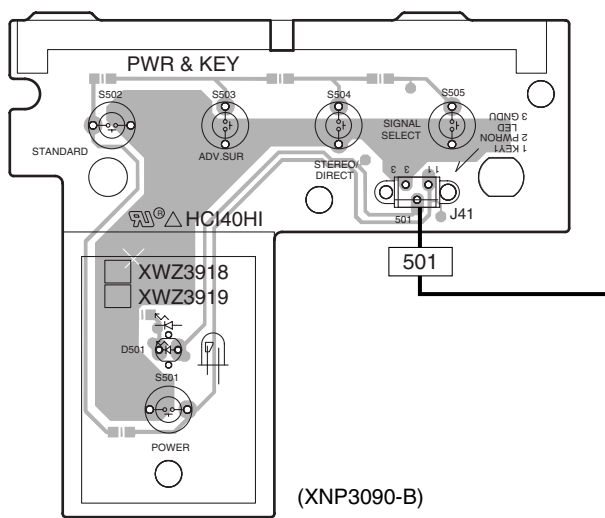
4.6 F. DISPLAY, R. ENCODER, P. SW & KEY, H. P. and F. KEY ASSYS

SIDE A

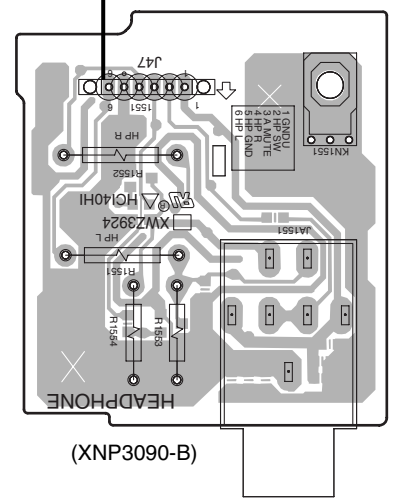
M FRONT DISPLAY ASSY



O POWER SW & KEY ASSY



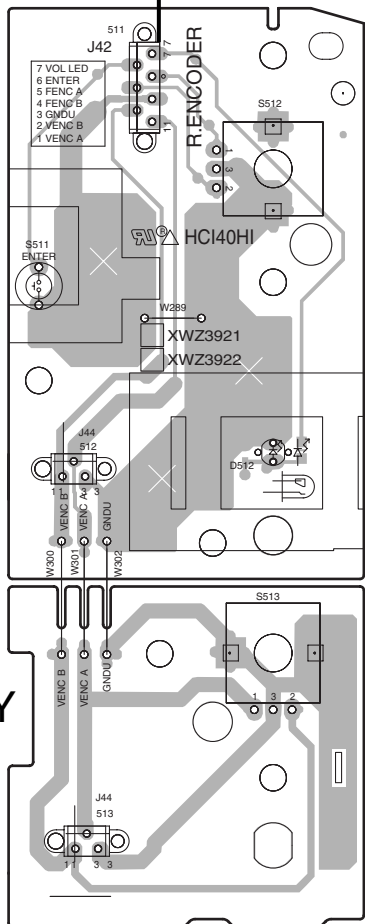
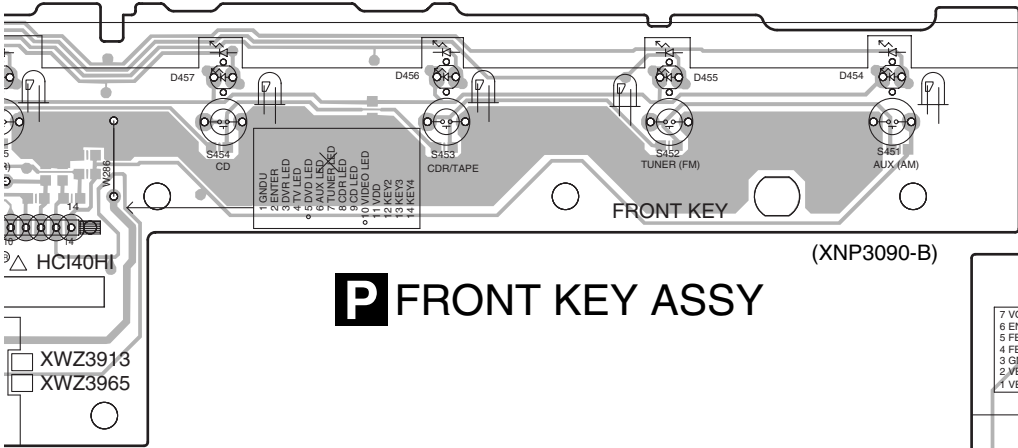
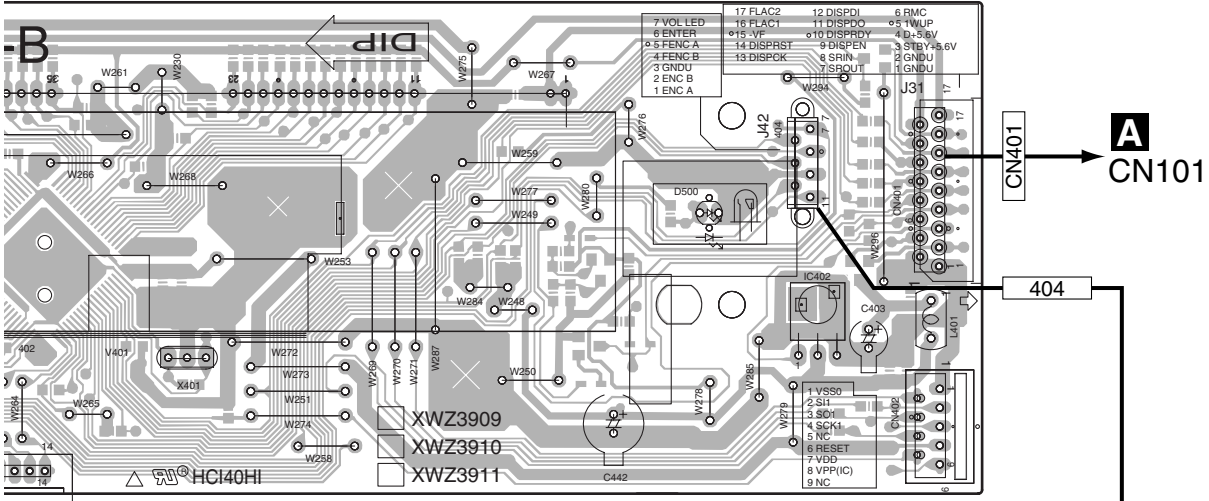
C CN702 R H.P ASSY



M O P R

SIDE A

A
B
C
D
E
F



N R. ENCODER ASSY

P FRONT KEY ASSY

(XNP3090-B)

M N P

SIDE B

A

B

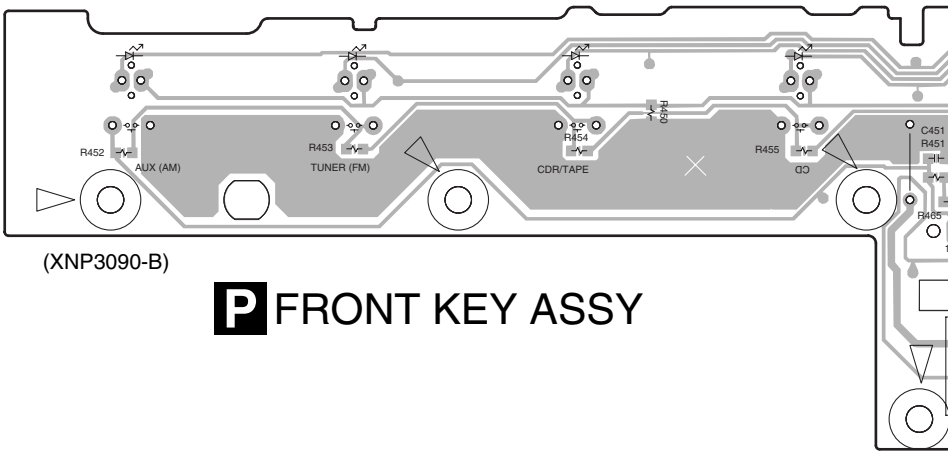
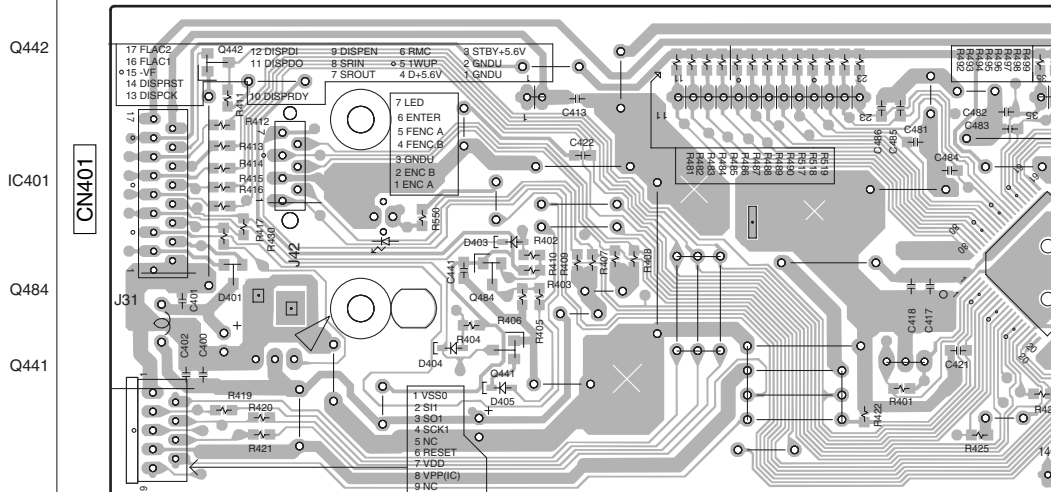
C

D

E

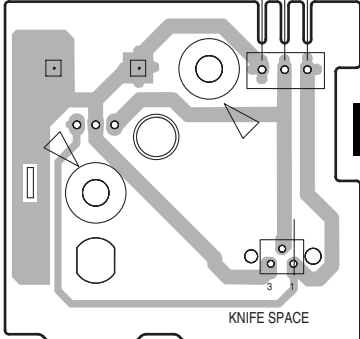
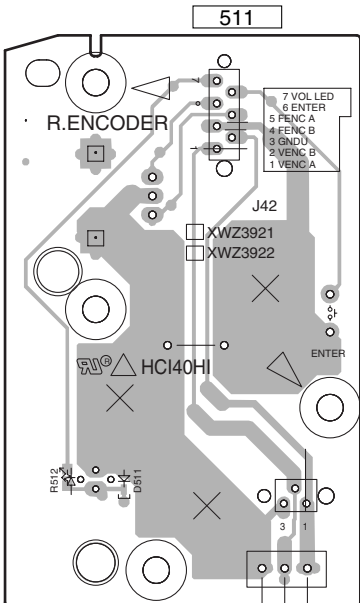
F

404



P FRONT KEY ASSY

N R.ENCODER ASSY

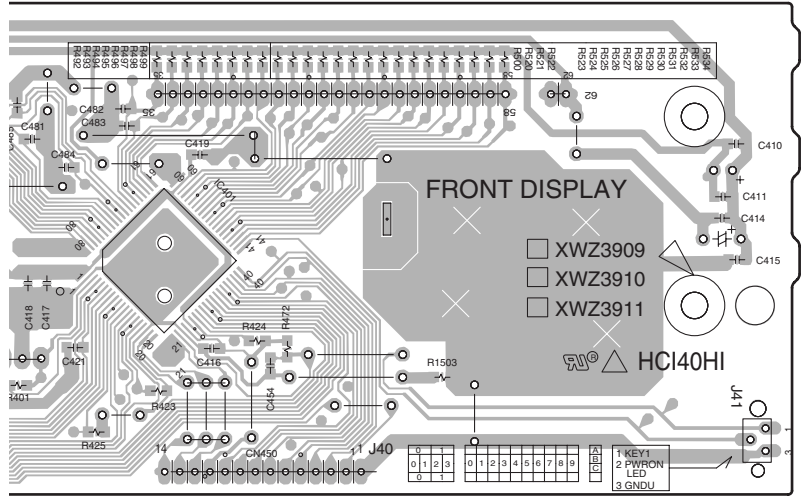


(XNP3090-B)

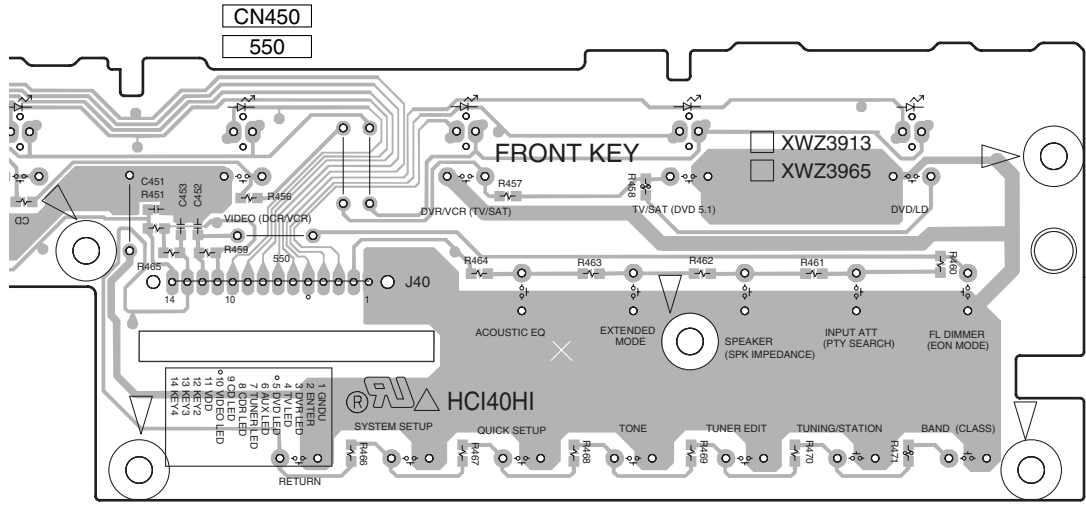
M N P

SIDE B

M FRONT DISPLAY ASSY

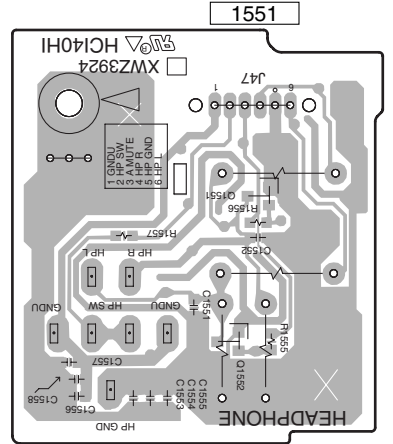


471
(XNP3090-B)



CN450
550

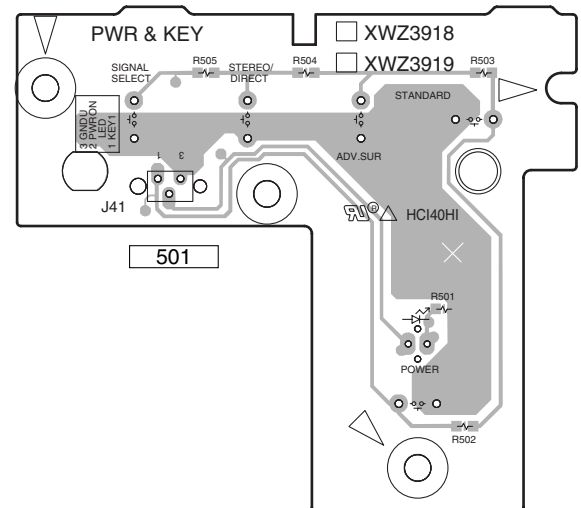
R H.P ASSY



1551

(XNP3090-B)

O POWER SW & KEY ASSY



501

(XNP3090-B)

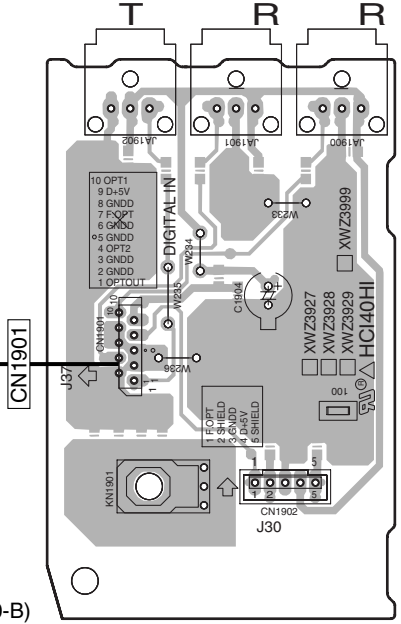
Q1551
Q1552

M O P R

4.7 DIGITAL IN, VIDEO and 5.1CH ASSYS

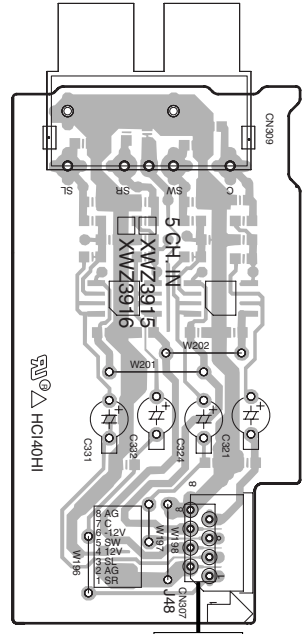
SIDE A

T DIGITAL IN ASSY



(XNP3090-B)

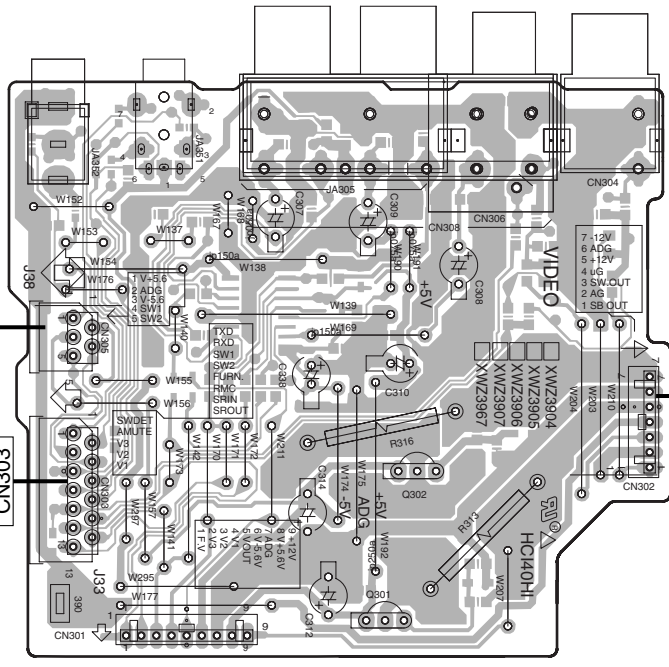
J 5.1CH ASSY



(XNP3090-B)

A CN105

I VIDEO ASSY



(XNP3090-B)

U CN551

A CN104

F CN803

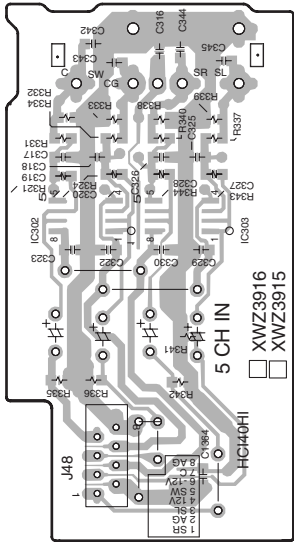
I J T

I J T

SIDE B

SIDE B

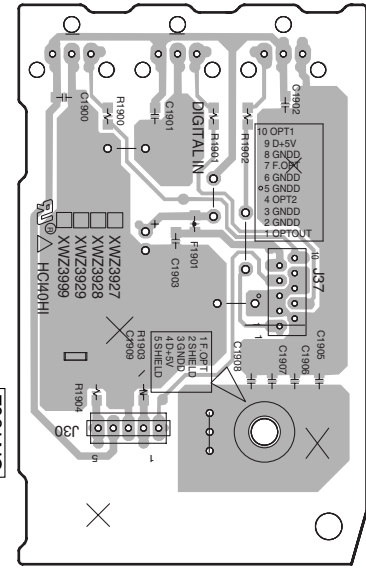
J 5.1CH ASSY



CN307 (XNP3090-B)

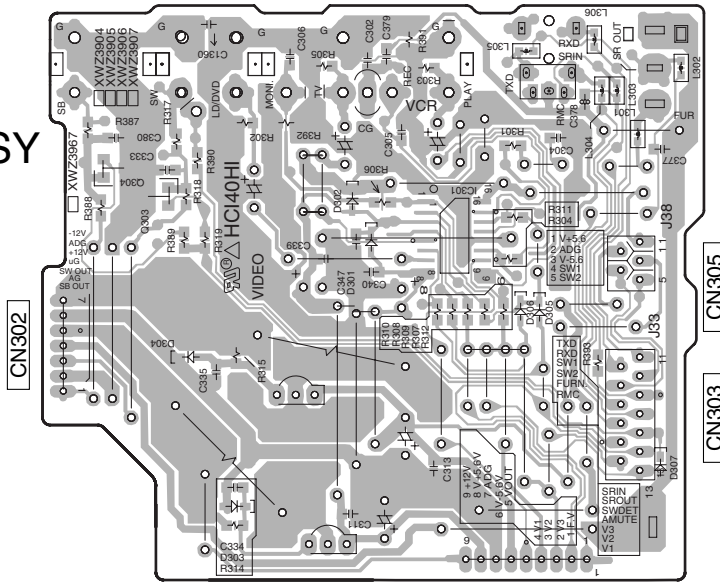
IC302
IC303

T DIGITAL IN ASSY



(XNP3090-B)

I VIDEO ASSY



(XNP3090-B)

CN301

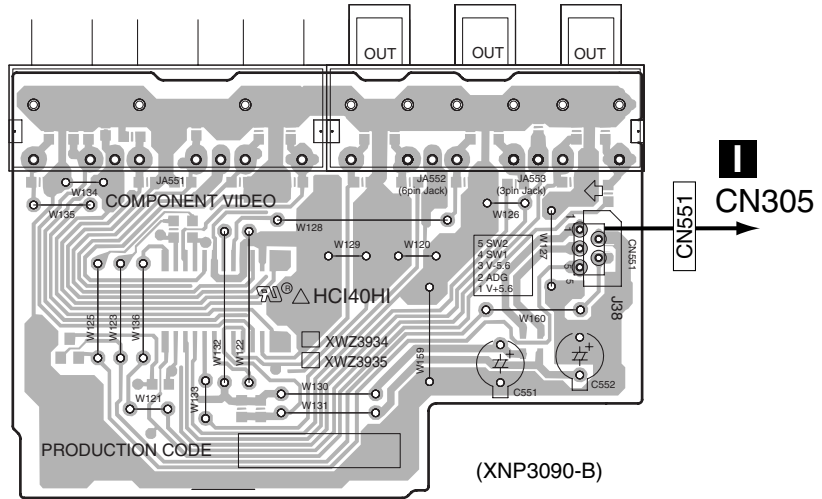
Q304
Q303
IC301

4.8 COMPONENT ASSY

SIDE A

U COMPONENT ASSY

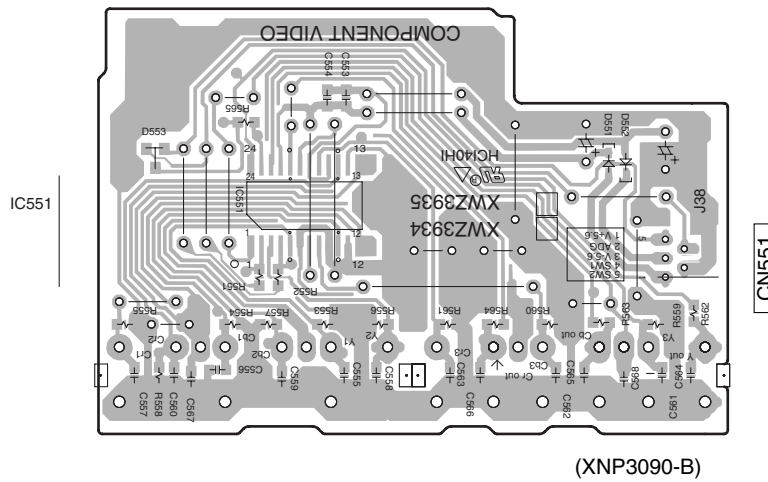
SIDE A



SIDE B

SIDE B

U COMPONENT ASSY



5. ELECTRICAL 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 → 56 x 10¹ → 561 RD1/4PU $\overline{56} \overline{1} J$
 47k Ω → 47 x 10³ → 473 RD1/4PU $\overline{47} \overline{3} J$
 0.5 Ω → R50 RN2H $\overline{R} \overline{50} K$
 1 Ω → 1R0 RS1P $\overline{1} \overline{R} \overline{0} K$

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

5.62k Ω → 562 x 10¹ → 5621 RN1/4PC $\overline{562} \overline{1} F$

Mark No. Description Part No.
LIST OF ASSEMBLIES

	1..MAIN ASSY	XWK3154
	1..DSP ASSY	AWX8573
NSP	1..AMP & PS ASSY	XWK3174
	2..AMP & PRIMARY ASSY	XWZ3941
	2..REGULATOR ASSY	XWZ3952
	2..AMP INPUT ASSY	XWZ3955
	2..TRANS1 ASSY	XWZ3958
	2..TRANS2 ASSY	XWZ3959
	2..TRANS3 ASSY	XWZ3961
	2..BINDER ASSY	XWZ3963
	2..HOLDER ASSY	XWZ3964
NSP	1..COMPLEX ASSY	XWK3167
	2..VIDEO ASSY	XWZ3904
	2..FRONT DISPLAY ASSY	XWZ3909
	2..FRONT KEY ASSY	XWZ3913
	2..5.1CH ASSY	XWZ3915
	2..P. SW ASSY	XWZ3918
	2..R. ENCODER ASSY	XWZ3921
	2..H.P. ASSY	XWZ3924
	2..DIGITAL IN ASSY	XWZ3927
	2..COMPONENT ASSY	XWZ3934
	2..TRANS4 ASSY	XWZ3936
	1..FM/AM TUNER UNIT	AXX7172

Mark No. Description Part No.

COMPLEX ASSY

OTHERS

J41	JUMPER WIRE	D15A03-110-2651
J42	JUMPER WIRE	D15A07-075-2651
J47	JUMPER WIRE 6P	D20PYY0630E
J40	JUMPER WIRE 14P	D20PYY1407E

AMP & PS ASSY

OTHERS

Y701	AWG14 BOARD IN	ADX7286
J21	JUMPER WIRED 7P	D20PYY0715E

Mark No. Description Part No.
A MAIN ASSY
SEMICONDUCTORS

IC109	BD3812F
IC108	BD3813KS
IC101	BD3841FS
IC103-IC107	HA17558AF
IC102	NJM2100M
IC9001	PEG094B
IC110-IC112, IC115	UPC4570G2
Q165, Q166, Q321, Q322	2SC5938A
Q341, Q342, Q361, Q362, Q388	2SC5938A
Q395, Q396	2SC5938A
Q5001	2SD1664
Q229, Q230	2SK208
Q167, Q231, Q9002-Q9005	DTA124EK
Q9008	DTA143TK
Q232	DTC124EK
Q168, Q9001	DTC143EK
Q9007	DTC143TK
Q9065	UMD2N
Q9064	UN5112
D103-D108, D229, D230, D301	1SS355
D311, D312, D9001-D9013	1SS355
D9064-D9068	1SS355
D101, D102	RB501V-40
D5007	UDZS10(B)
D331, D332	UDZS6R8(B)

COILS AND FILTERS

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

CAPACITORS

C151, C152, 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
C123-C128, C131-C138	CEAT100M50
C141, C142, C167, C168	CEAT100M50
C209, C210, C213, C214	CEAT100M50
C249, C250, C269, C270, C290	CEAT100M50

Mark No. Description**Part No.**C301–C306, C321, C322
C341, C342, C361, C362, C380CEAT100M50
CEAT100M50

A

C384
C5007
C169
C201, C202, C241, C242
C261, C262, C282, C9005CEAT100M50
CEAT101M16
CEAT221M6R3
CEAT2R2M50
CEAT2R2M50C9007
C325, C326, C345, C346, C365
C388
C155, C156
C333, C334CEAT331M6R3
CEAT470M25
CEAT470M25
CEAT470M50
CEAT471M10

B

C9013
C165, C166, C370
C170
C320, C392, C5001, C9015, C9016
C115, C116, C153, C154, C171CEAT471M6R3
CEAT4R7M50
CKSQYB104K16
CKSRYB102K50
CKSRYB103K50C179, C180, C199, C215–C218
C251, C252, C266, C271, C272
C291, C292, C315, C316, C319
C327–C330, C347, C348
C367, C368, C390, C393, C5002CKSRYB103K50
CKSRYB103K50
CKSRYB103K50
CKSRYB103K50
CKSRYB103K50

C

C9004, C9008, C9017
C219, C220, C309–C312, C9018
C5003, C9006
C264
C257, C258, C277, C278, C298CKSRYB103K50
CKSRYB104K16
CKSRYB105K10
CKSRYB223K25
CKSRYB472K50C307, C308, C364
C9011, C9014
C268
C391
C9003 (1F/5.5V)CKSRYB472K50
CKSRYB473K16
CKSRYB562K50
CKSRYF104Z16
PCH1132**RESISTORS**⚠ R311, R312
Other ResistorsRS1LMF101J
RS1/16S###J

D

OTHERSCN105 8P CONNECTOR
CN103 11P CONNECTOR
CN104 13P CONNECTOR
CN102 10P CONNECTOR
CN112 15P CONNECTOR52044-0845
52044-1145
52044-1345
52045-1045
52045-1545CN101 17P CONNECTOR
CN106 21P CONNECTOR
CN109, CN111 20P SOCKET
105 PCB BINDER
JA103, JA104 PIN JACK (4P)52045-1745
52045-2145
KP200TA20L
VEF1040
XKB3017

E

JA105 PIN JACK (6P)
X9001 CERAMIC RESONATOR
(15.7 MHz)XKB3037
XSS3004**B DSP ASSY
SEMICONDUCTORS**IC601
IC701
IC801
⚠ IC902
⚠ IC901AK4114VQ
AK4628VQE
DSPC56371AF180
LM1117DT-ADJ
NJM2391DL1-33

IC501

TC74HCU04AF

Mark No. Description**Part No.**IC952
IC871
IC802
D702TC74VHCT244AFTS1
TC7WH125FU
TC7WU04FU
DAN202KD701
D901, D902DAP202K
UDZS5R6(B)**COILS AND FILTERS**L802, L803
L901, L902 CHIP SOLID INDUCTOR
L501–L503, L601, L602, L605
L701, L702, L801, L804, L871
L952 CHIP SOLID INDUCTORATL7002
ATL7002
QTL1013
QTL1013
QTL1013**CAPACITORS**C705
C612, C613
C505, C506
C511, C605, C608, C620, C702
C707–C714, C717, C801, C803CCSRCH101J50
CCSRCH120J50
CCSRCH470J50
CCSRCH471J50
CCSRCH471J50C805, C807, C809, C814, C818
C821, C823, C826, C828, C830
C832, C871, C916, C919, C954
C816, C817
C956CCSRCH471J50
CCSRCH471J50
CCSRCH471J50
CCSRCH8R0D50
CEVW100M16C513, C703, C715, C834, C835
C908, C909
C607, C618, C718
C617
C503, C504, C701, C820, C825CEVW101M16
CEVW101M16
CEVW470M6R3
CKSRYB102K50
CKSRYB103K50C917
C606, C609, C614, C619, C704
C706, C716, C720, C802, C804
C806, C808, C810, C815, C819
C822, C824, C827, C829, C831CKSRYB103K50
CKSRYB104K16
CKSRYB104K16
CKSRYB104K16
CKSRYB104K16C833, C872, C907, C918, C955
C512
C621CKSRYB104K16
CKSRYB105K6R3
CKSRYB474K10**RESISTORS**R802
R962, R970
R628
Other ResistorsRAB4C101J
RAB4C104J
RS1/16S1802F
RS1/16S###J**OTHERS**JA501 2P PIN JACK
CN601 10P CONNECTOR
CN902 13P SOCKET
CN952 15P SOCKET
CN701 19P SOCKETAKB7131
VKN1414
XKP3077
XKP3078
XKP3080X601 CRYSTAL RESONATOR
(12.288 MHz)
X801 CRYSTAL RESONATOR
(20 MHz)ASS7046
VSS1171**C AMP & PRIMARY ASSY
SEMICONDUCTORS**⚠ IC610 PROTECTOR(1A)
⚠ IC604–IC609 PROTECTOR(10A)
⚠ IC701, IC702 IC PROTECTOR
⚠ IC51
⚠ IC600–IC602 POWER PACK 2CHAEK7009
AEK7022
ICP-N10
NJM78M56FA
STK412-230B

Mark No.	Description	Part No.
	Q703, Q721	2SA1145
△	Q702	2SA2005
	Q696, Q697	2SC1740S
	Q704, Q722	2SC1845
	Q605, Q606, Q633, Q655, Q656	2SC2240
	Q683	2SC2240
△	Q701	2SC5511
	Q601-Q604, Q631, Q632	2SC5974A
	Q651-Q654, Q681, Q682	2SC5974A
	Q51	DTC143ES
	D56, D601, D603, D606, D608	1SS133
	D631, D632, D651-D654	1SS133
	D683, D684, D752, D754	1SS133
△	D701, D702	D5SBA20(B)
	D602, D604, D647, D648	MTZJ15A
	D681, D682	MTZJ15A
	D711	MTZJ22D
	D58	MTZJ5.1B
	D712	MTZJ6R8(B)
△	D51-D55, D721-D724	S5688
COILS AND FILTERS		
	L751-L754, L761, L762 COIL	ATH1004
△	L51 LINE FILTER	XTF3004
SWITCHES AND RELAYS		
	RY751-RY753 RELAY	XSR3009
△	RY51 RELAY	XSR3010
CAPACITORS		
	C707, C708 (0.01/AC250V)	ACG1005
	C607, C608, C611-C614, C634	CCPUSL470J50
	C636, C637, C657, C658	CCPUSL470J50
	C661-C664, C684, C686, C687	CCPUSL470J50
	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
	C696	CKPUYB102K50
	C603, C604, C632, C653, C654	CKPUYB331K50
	C682	CKPUYB331K50
	C55	-C57CKPUYF103Z25
	C751, C752, C755, C761, C762	CQMBA104J50
	C771	CQMBA104J50
△	C51, C52 (10000pF/250V(AC))	XCG3009
	C703, C704 (3300/42V)	XCH3012
	C701, C702 (5600/71V)	XCH3025
RESISTORS		
△	R617, R622, R639, R667, R668	ACN7094
△	R691 (0.22/5W)	ACN7094
△	R51 (2.2M/ 1/2W)	RCN1080
△	R52	RD1/2PM270J

Part No.
2SA1145
2SA2005
2SC1740S
2SC1845
2SC2240
2SC2240
2SC5511
2SC5974A
2SC5974A
DTC143ES
1SS133
1SS133
1SS133
D5SBA20(B)
MTZJ15A
MTZJ15A
MTZJ22D
MTZJ5.1B
MTZJ6R8(B)
S5688
ATH1004
XTF3004
XSR3009
XSR3010
ACG1005
CCPUSL470J50
CCPUSL470J50
CCPUSL470J50
CEANP2R2M50
CEANP2R2M50
CEANP470M50
CEAT101M10
CEAT101M16
CEAT101M16
CEAT101M35
CEAT102M16
CEAT221M10
CEAT470M25
CEAT4R7M50
CEAT4R7M50
CEHAT100M2A
CKPUYB102K50
CKPUYB331K50
CKPUYB331K50
-C57CKPUYF103Z25
CQMBA104J50
CQMBA104J50
XCG3009
XCH3012
XCH3025
ACN7094
ACN7094
RCN1080
RD1/2PM270J

Mark No.	Description	Part No.
△	R615, R620, R638, R665, R666	RD1/4PU331J
△	R690	RD1/4PU331J
△	R751, R752, R755, R761, R762	RD1/4PUF101J
△	R772	RD1/4PUF101J
△	R709, R710	RS1LMF472J
△	R753, R754, R756, R763, R764	RS1LMF4R7J
△	R771	RS1LMF4R7J
△	R711	RS2LMF242J
	Other Resistors	RD1/4PU###J
OTHERS		
	CN53 23P CONNECTOR	52045-2345
	CN702 6P JUMPER CONNECTOR	52147-0610
△	51 AC SOCKET 1-P	AKP1060
	H51, H52, H701, H702 FUSE CLIP	AKR7001
△	T51 STANDBY TRANSFORMER	ATT7043
	CN601 20P PLUG	KM200TA20
△	CN51 AC CODE SOCKET	RKP1751
	601 PCB BINDER	VEF1040
	KN51, KN601 EARTH METAL FITTING	VNF1084
	CN751 SP TERMINAL 8-P(V0)	XKE3030
	CN752 SP TERMINAL 6-P(V0)	XKE3032
	701 7P CABLE HOLDER	XKP3047
D TRANS2 ASSY SEMICONDUCTORS		
△	IC853 PROTECTOR (4A)	AEK7018
△	IC851, IC852 PROTECTOR (5A)	AEK7019
OTHERS		
	851 7P CABLE HOLDER	XKP3047
E TRANS3 ASSY		
	TRANS3 ASSY has no service part.	
F REGULATOR ASSY SEMICONDUCTORS		
△	IC803, IC804	NJM78M05FA
△	IC801, IC805	NJM78M12FA
△	IC806	NJM78M56FA
△	IC802	NJM79M12FA
	Q801, Q803	DTA124ES
	Q802, Q804	DTC114ES
	D809-D811	MTZJ6.2B
△	D801-D804	S5688G
CAPACITORS		
	C811, C815	CEAT101M10
	C813	CEAT101M16
	C801, C802	CEAT222M25
	C809	CEAT472M16
	C808	CEHAT101M10
	C805, C806	CEHAT101M16
	C803, C804, C807, C810, C812	CKPUYF103Z25
	C814	CKPUYF103Z25
RESISTORS		
△	R801	RS3LMF331J

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

CN808	15P CONNECTOR	52045-1545
CN801	23P CONNECTOR	52045-2345
CN802, CN804	20P PLUG	KM200TA20
CN803	7P PLUG	KM200TA7
CN805	13P PLUG	XKP3066
CN807	15P PLUG	XKP3067
CN806	19P PLUG	XKP3069

**G AMP INPUT ASSY
SEMICONDUCTORS**

IC251	NJM4558D-D
Q257	2SA933S
Q251, Q256	2SC5974A
Q252	2SD1858X
Q254	DTA124ES
Q253, Q255	DTC124ES
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	21P CONNECTOR	52044-2145
CN253	20P SOCKET	KP200TA20L
CN252	3PIN CONNECTOR	S3B-EH

H TRANS1 ASSY

TRANS1 ASSY has no service part.

**I VIDEO ASSY
SEMICONDUCTORS**

IC301	NJM2595M
Q302	2SA1515
Q301	2SC3377
Q303	2SC5938A
D301, D302, D305, D306	1SS355

D307	UDZS5R1(B)
D303, D304	UDZS6R2(B)

CAPACITORS

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

C333	CKSRYB331K50
C311, C313	CKSRYB473K25

RESISTORS

△ R313, R316	RS3LMF390J
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Mark No. Description**Part No.**

Other Resistors

RS1/16S####J

OTHERS

CN305	5P CONNECTOR	52044-0545
CN303	13P CONNECTOR	52044-1345
JA305	PIN JACK(4P)YELLOW	AKB7100
CN302	7P SOCKET	KP200TA7L
390	PCB BINDER	VEF1040
CN306	2P PIN JACK	XKB3041

**J 5.1CH ASSY
CAPACITORS**

C342-C345	CCSRCH101J50
C321, C324, C331, C332	CEAT4R7M50
C1364	CKSRYB102K50
C316	CKSRYB103K50
C317, C318, C325, C326	CKSRYB221K50

RESISTORS

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

CN307	8P CONNECTOR	52044-0845
CN309	PIN JACK (4P)	XKB3035

**M FRONT DISPLAY ASSY
SEMICONDUCTORS**

IC402	GP1UM27XK0VF
IC401	PE5487A
Q484	2SA1037K
Q442	DTC124EK
D403	1SS355

D401

DAN202K

COILS AND FILTERS

L401	LFEA2R2J
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CAPACITORS

C482, C483	CCSRCH221J50
C481	CCSRCH471J50
C442	CEAL470M10
C403	CEAT221M6R3
C412	CEAT470M50

C415, C454	CKSRYB102K50
C401, C402, C410, C411, C419	CKSRYB103K50
C441	CKSRYB103K50
C418, C421	CKSRYB104K16
C420 (220uF/35V)	XCH3011

RESISTORS

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

471	CABLE HOLDER (3P)	51063-0305
404	CABLE HOLDER (7P)	51063-0705
CN401	17P CONNECTOR	52044-1745
CN402	9P CONNECTOR	52492-0920
V401	FL TUBE	XAV3025

X401	CERAMIC RESONATOR (5 MHz)	VSS1142
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Mark No.	Description	Part No.
N R.ENCODER ASSY SWITCHES AND RELAYS		
S511	SWITCH	VSG1024
S513	ROTARY ENCODER	XSX3005
S512	ROTARY ENCODER	XSX3006

OTHERS

511	CABLE HOLDER (7P)	51063-0705
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**O POWER SW & KEY ASSY
SWITCHES AND RELAYS**

S501-S505	SWITCH	VSG1024
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RESISTORS

All Resistors	RS1/16S###J
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OTHERS

501	CABLE HOLDER (3P)	51063-0305
-----	-------------------	------------

**P FRONTER KEY ASSY
SWITCHES AND RELAYS**

S451-S470	SWITCH	VSG1024
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CAPACITORS

C451-C453	CKSRYB102K50
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RESISTORS

All Resistors	RS1/16S###J
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**Q TRANS4 ASSY
SEMICONDUCTORS**

△ IC891, IC892	PROTECTOR (800mA)	AEK7008
△ D891		S1WB(A)60SD

CAPACITORS

C891, C892	CEAT471M35
------------	------------

OTHERS

CN891	3P CONNECTOR	52045-0345
-------	--------------	------------

**R H.P. ASSY
SEMICONDUCTORS**

Q1551, Q1552	2SC5938A
--------------	----------

CAPACITORS

C1554, C1557	CCSRCH471J50
C1553, C1556	CKSRYB103K50
C1555, C1558	CKSRYB104K16
C1551, C1552	CKSRYB223K50

RESISTORS

△ R1553, R1554	RS1LMF151J
△ R1551, R1552	RS2LMF331J
Other Resistors	RS1/16S###J

OTHERS

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

Mark No.	Description	Part No.
T DIGITAL INPUT ASSY COILS AND FILTERS		
F1901	CHIP BEAD	DTF1067

CAPACITORS

C1907	CCSRCH101J50
C1904	CEAL101M10
C1908	CKSRYB102K50
C1903, C1906	CKSRYB103K50
C1900, C1905	CKSRYB104K25

RESISTORS

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

OTHERS

JA1900	OPT. LINK IN	GP1FAV51RKBF
100	PCB BINDER	VEF1040
CN1901	10P CONNECTOR	VKN1186
KN1901	WRAPPING TERMINAL	VNF1084

**U COMPONENT VIDEO ASSY
SEMICONDUCTORS**

IC551	NJM2586AM
D551, D552	1SS355
D553	DAN202K

CAPACITORS

C551, C552	CEAT101M10
C567, C568	CKSRYB103K50
C553, C554	CKSRYB473K50

RESISTORS

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

OTHERS

CN551	5P CONNECTOR	52045-0545
JA553	3P RCA PINJACK	AKB7124
JA551	6P RCA PINJACK	XKB3025

X FM/AM TUNER UNIT

FM/AM TUNER UNIT has no service part.

6. ADJUSTMENT

There is no information to be shown in this chapter.

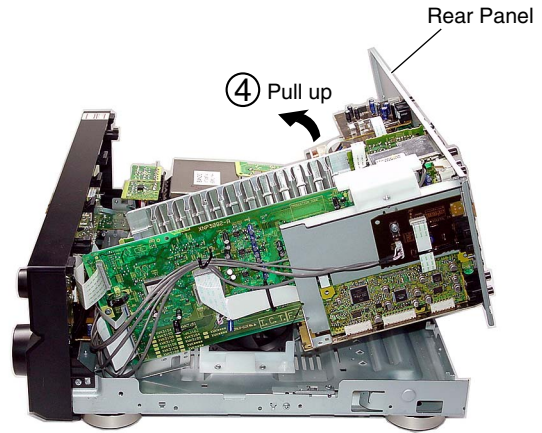
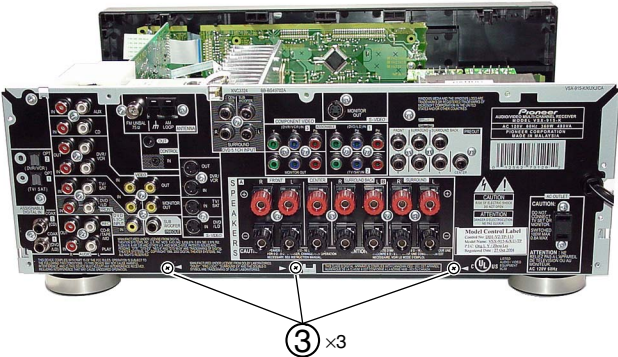
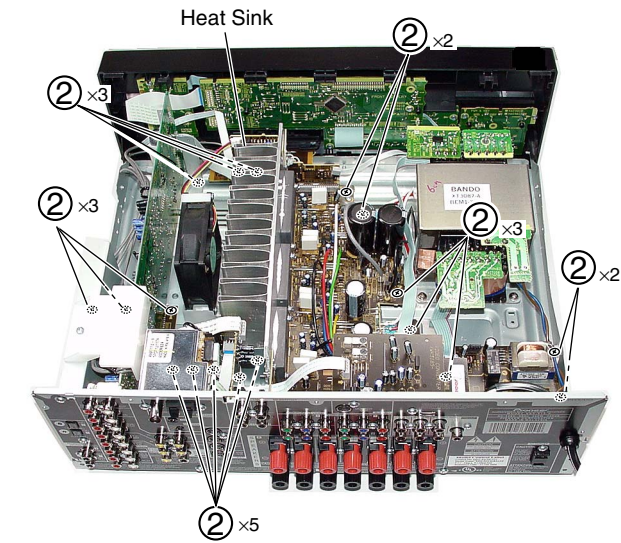
7. GENERAL INFORMATION

7.1 DIAGNOSIS

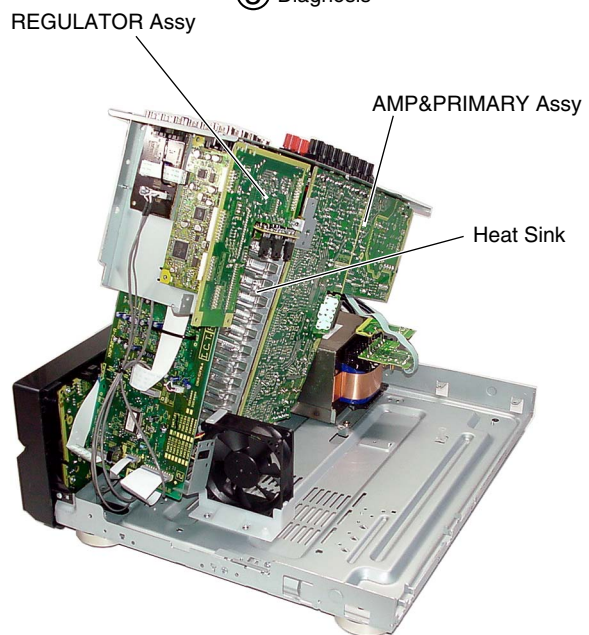
7.1.1 DISASSEMBLY

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

① Remove the top cover (seven screws).

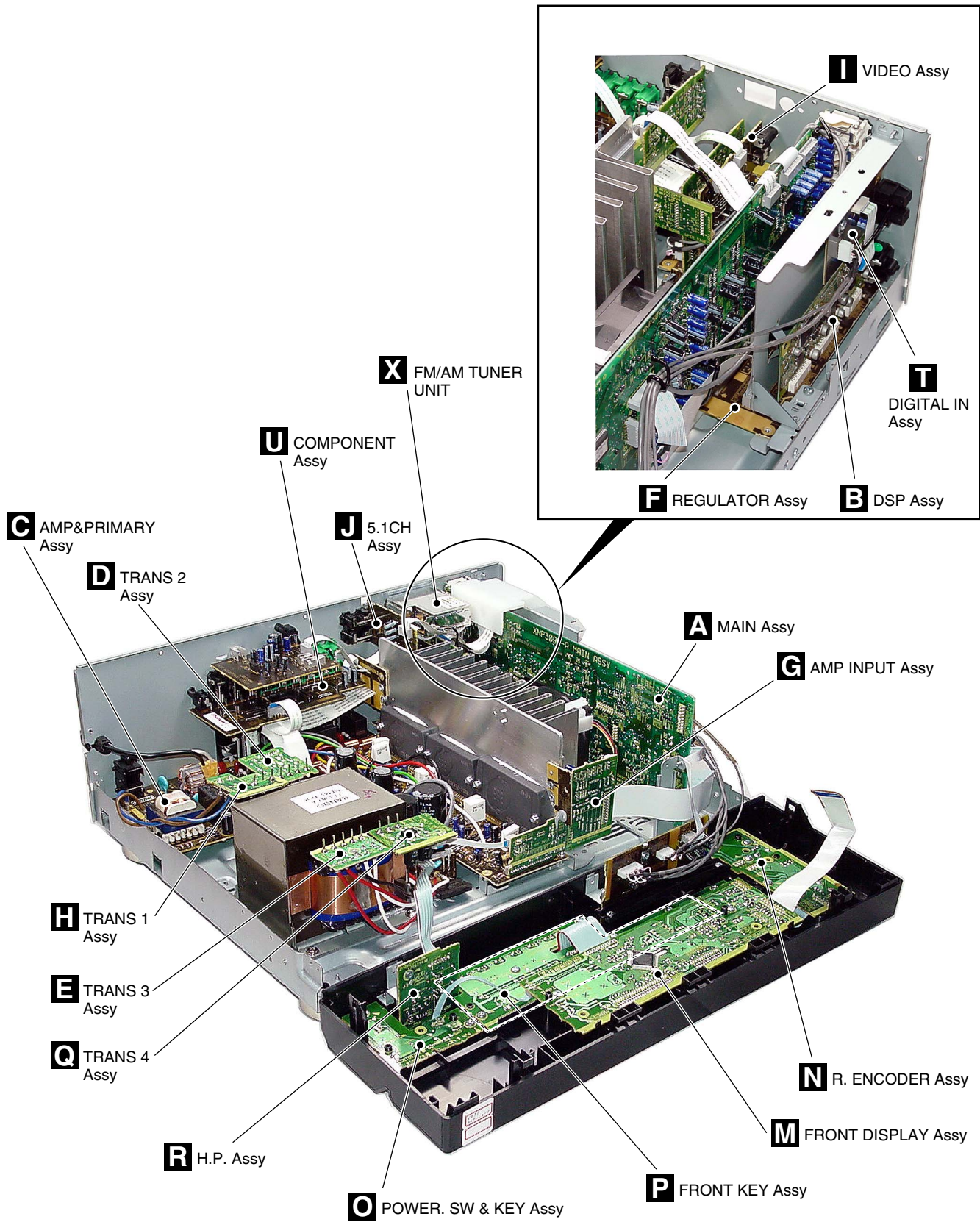


⑤ Diagnosis



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

Heat-sink caution in the disassembling : Because Heat-sink becomes hot, please pay attention.



NOTE : This photograph is VSX-915-K.

7.2 PARTS

7.2.1 IC

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

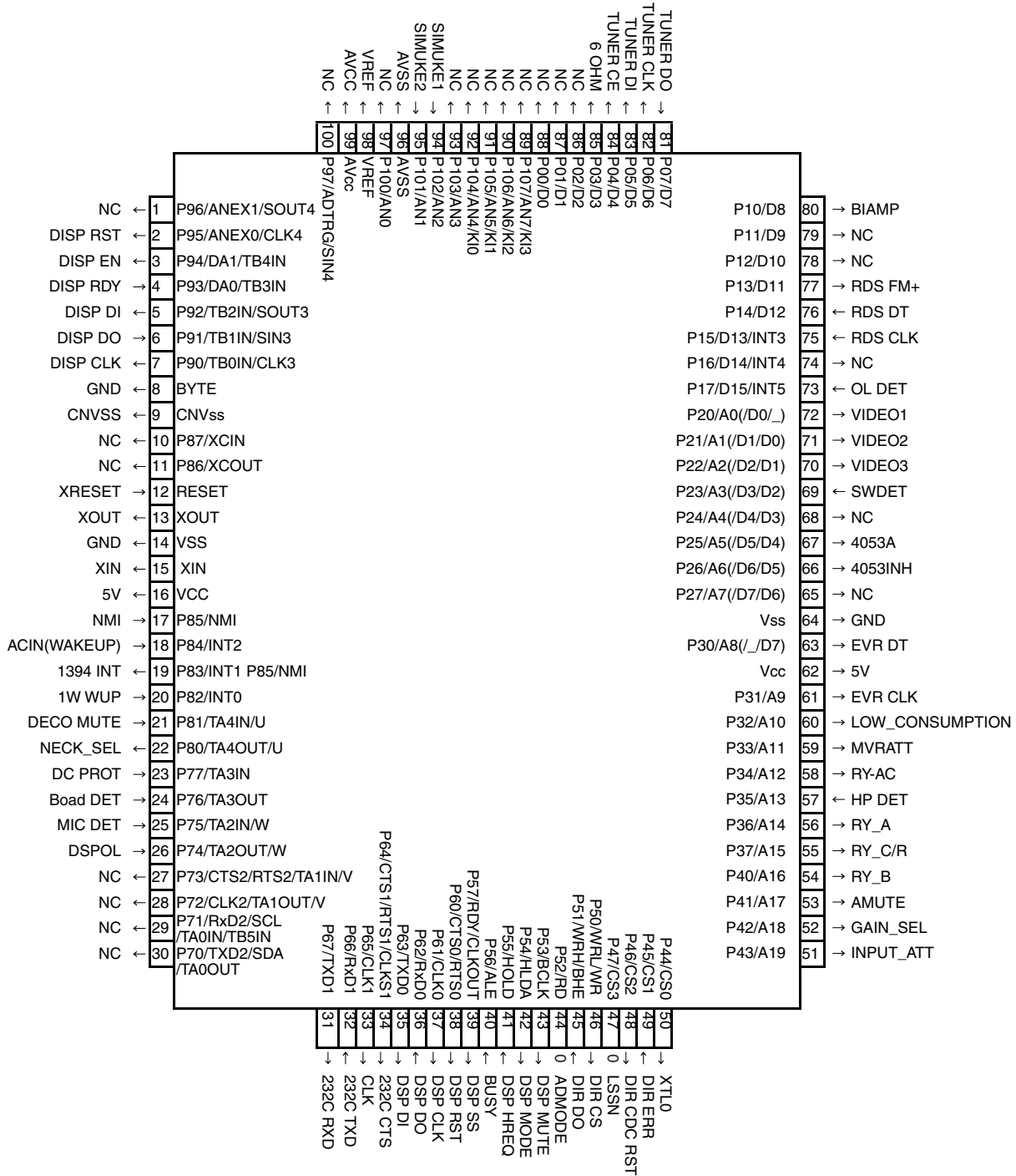
• List of IC

PEG094B, PE5487A

■ PEG094B (MAIN ASSY : IC9001)

• System Control MCU

■ Pin Arrangement (Top View)



• Pin Function

No.	Port	Pin Name	I/O	Pin Function
1	P96/ANEX1/SOUT4	NC	I/O	
2	P95/ANEX0/CLK4	DISP RST	I/O	Reset signal to display u-com
3	P94/DA1/TB4IN	DISP EN	I/O	Enable signal to display u-com
4	P93/DA0/TB3IN	DISP RDY	I/O	Ready signal from display u-com
5	P92/TB2IN/SOUT3	DISP DI	I/O	Data out to display u-com
6	P91/TB1IN/SIN3	DISP DO	I/O	Data input from display u-com
7	P90/TB0IN/CLK3	DISP CLK	I/O	Clock signal to display u-com
8	BYTE	GND		
9	CNVss	CNVSS		
10	P87/XCIN	NC	I/O	
11	P86/XCOUT	NC	I/O	
12	RESET	XRESET		
13	XOUT	XOUT		
14	VSS	GND		
15	XIN	XIN		
16	VCC	5V		
17	P85/NMI	NM	I	No use
18	P84/INT2	ACIN(WAKEUP)	I/O	AC pulse input
19	P83/INT1 P85/NMI	1394 INT	I/O	No use (Standby for 1394)
20	P82/INT0	1W WUP	I/O	Wake up signal from display u-com
21	P81/TA4IN/U	DECO MUTE	I/O	1st DSP detect port
22	P80/TA4OUT/U	NECK_SEL	I/O	5.1ch, surround mode and A+B Stereo : H / Stereo : L
23	P77/TA3IN	DC PROT	I/O	AMP DC detect
24	P76/TA3OUT	Boad DET	I/O	AMP INPUT ASSY detect, H : detected
25	P75/TA2IN/W	MIC DET	I/O	MIC detect (VSX-D914 only), L : detect
26	P74/TA2OUT/W	DSP OL	I/O	ANALOG OVER LOAD detect, H : detected
27	P73/CTS2/RTS2/TA1IN/V	NC(1394 CS)	I/O	No use (Standby for 1394)
28	P72/CLK2/TA1OUT/V	NC(1394 CK)	I/O	No use (Standby for 1394)
29	P71/RxD2/SCL/TA0IN/TB5IN	NC(1394 DO)	I/O	No use (Standby for 1394)
30	P70/TXD2/SDA/TA0OUT	NC(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	ADMODE	0	DSP ASSY
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	LSSN	0	DSP ASSY
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

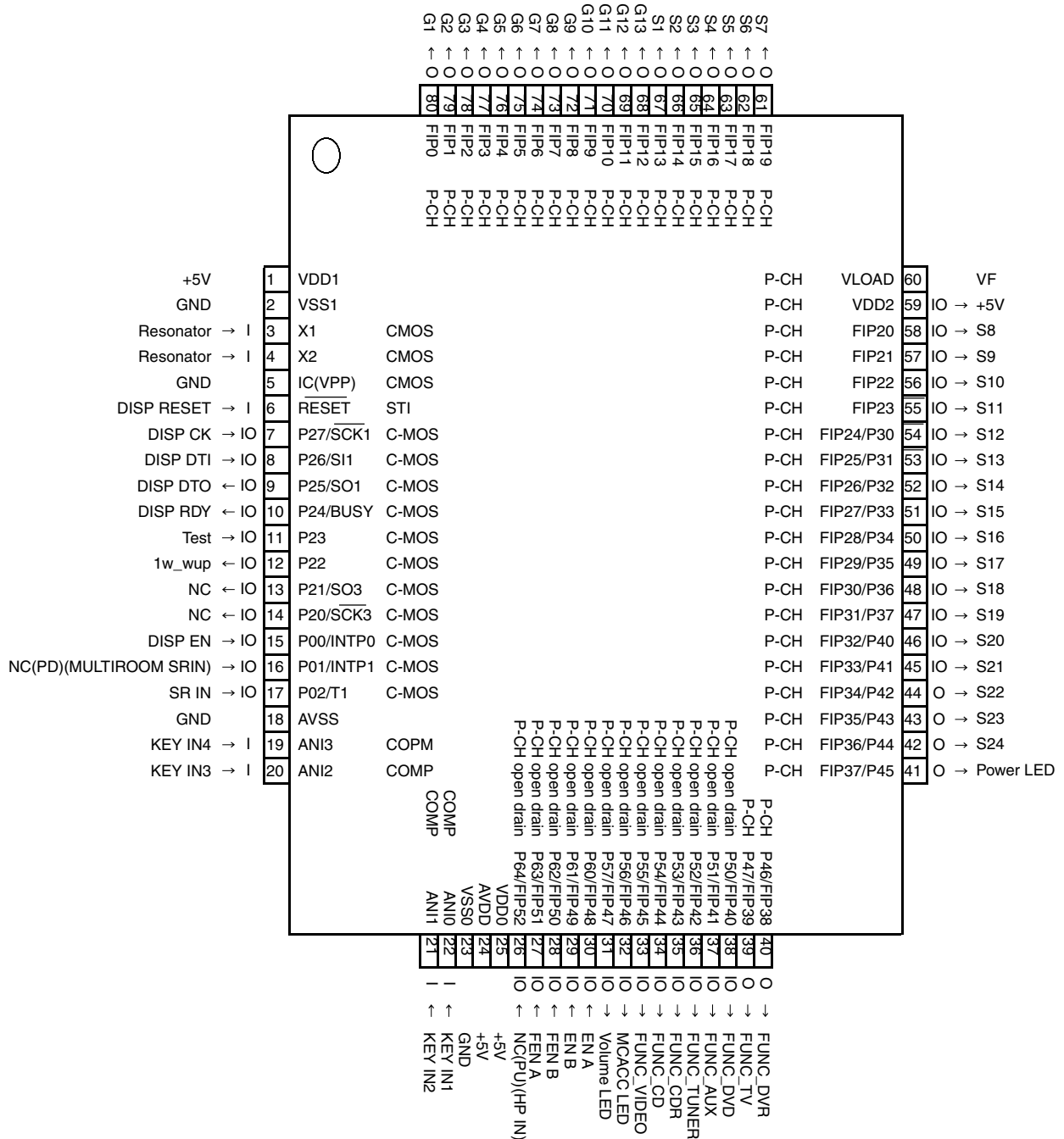
• Pin Function

No.	Port	Pin Name	I/O	Pin Function
A 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
B 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)	NC	I/O	
69	P23/A3(/D3/D2)	SWDET	I/O	SWSP detect
70	P22/A2(/D2/D1)	VIDEO3	I/O	SWSP detect
C 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	NC	I/O	
79	P11/D9	NC	I/O	
80	P10/D8	BIAMP	I/O	At the time of BiAMP: L and time of Normal:H
D 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	6 OHM	I/O	If stop mode, port L, else L/H depends on selection.
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	
E 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
F 100	P97/ADTRG/SIN4	NC	I/O	

PE5487A (FRONT DISPLAY ASSY : IC401)

• System Control MCU

■ Pin Arrangement (Top View)



• Pin Function

No.	Port	Pin Name	I/O	Pin Function
A 1	VDD1	+5V	-	positive power supply
2	VSS1	GND	-	ground potential
3	X1	Resonator	I	crystal connection for system clock oscillation
4	X2	Resonator	-	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
B 10	P24/BUSY	DISP RDY	I/O	ready signal from main u-com
11	P23	Test	I/O	test mode input for checker
12	P22	1w_wup	I/O	output wakeup signal to main u-com
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	
C 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(+)
D 31	P57/FIP47	VOLUME LED	I/O	VOLUME LED Output
32	P56/FIP46	MCACC LED	I/O	MCACC LED Output
33	P55/FIP45	FUNC_VIDEO	I/O	FUNCLED Output
34	P54/FIP44	FUNC_CD	I/O	FUNCLED Output
35	P53/FIP43	FUNC_CDR	I/O	FUNCLED Output
36	P52/FIP42	FUNC_TUNER	I/O	FUNCLED Output
37	P51/FIP41	FUNC_AUX	I/O	FUNCLED Output
38	P50/FIP40	FUNC_DVD	I/O	FUNCLED Output
39	P47/FIP39	FUNC_TV	O	FUNCLED Output
E 40	P46/FIP38	FUNC_DVR	O	FUNCLED Output

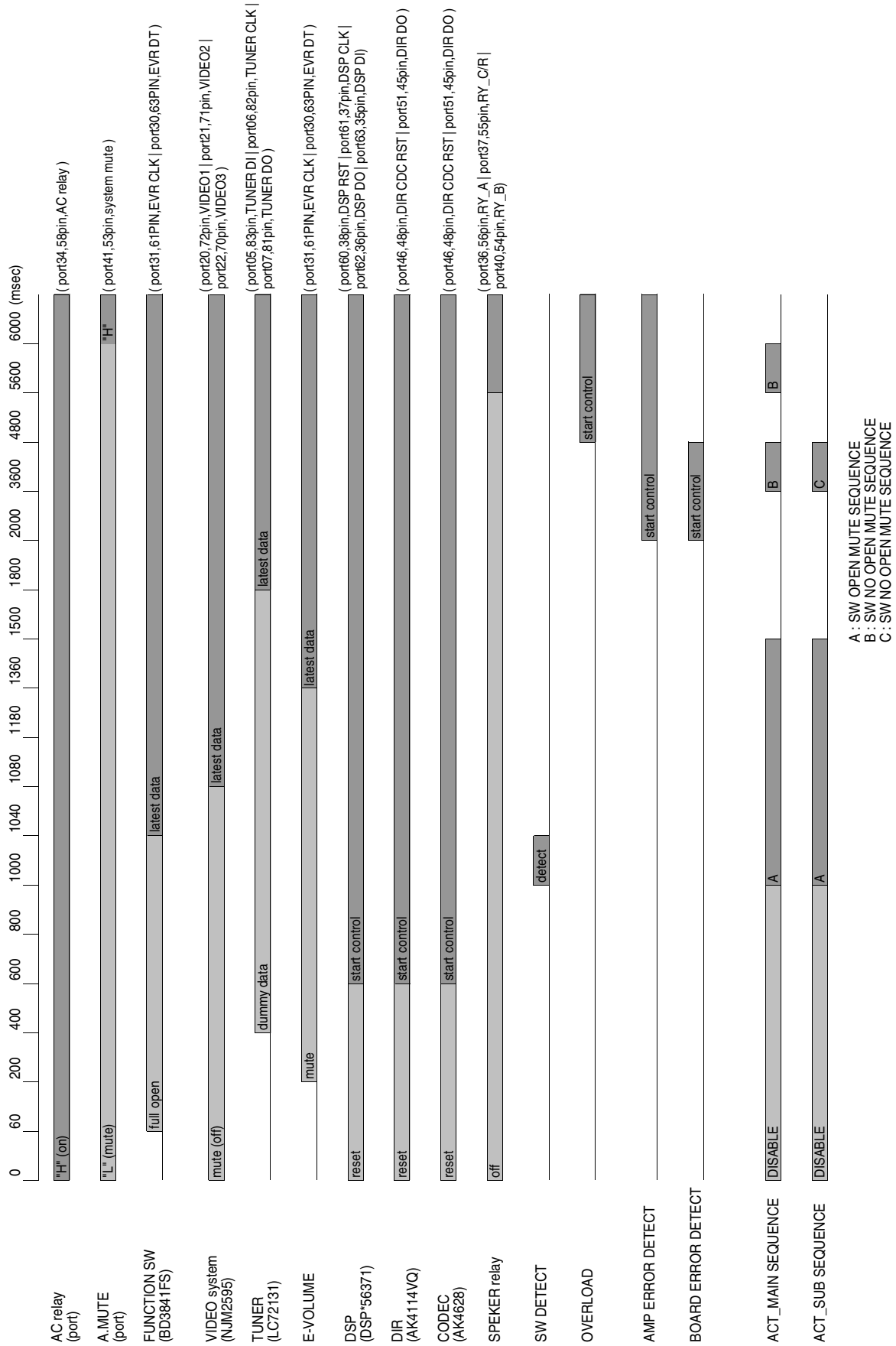
• Pin Function

No.	Port	Pin Name	I/O	Pin Function
41	FIP37/P45	POWER LED	O	Power On LED Output
42	FIP36/P44	S24	O	Display
42	FIP35/P43	S23	O	Display
44	FIP34/P42	S22	O	Display
45	FIP33/P41	S21	O	Display
46	FIP32/P40	S20	O	Display
47	FIP31/P37	S19	O	Display
48	FIP30/P36	S18	O	Display
49	FIP29/P35	S17	O	Display
50	FIP28/P34	S16	O	Display
51	FIP27/P33	S15	O	Display
52	FIP26/P32	S14	O	Display
53	FIP25/P31	S13	O	Display
54	FIP24/P30	S12	O	Display
55	FIP23	S11	O	Display
56	FIP22	S10	O	Display
57	FIP21	S9	O	Display
58	FIP20	S8	O	Display
59	VDD2	+5V	-	positive power supply to FIP controller.
60	VLOAD	VF	-	pull down resistor connection of FIP controller
61	FIP19	S7	O	Display
62	FIP18	S6	O	Display
63	FIP17	S5	O	Display
64	FIP16	S4	O	Display
65	FIP15	S3	O	Display
66	FIP14	S2	O	Display
67	FIP13	S1	O	Display
68	FIP12	G13	O	Display
69	FIP11	G12	O	Display
70	FIP10	G11	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

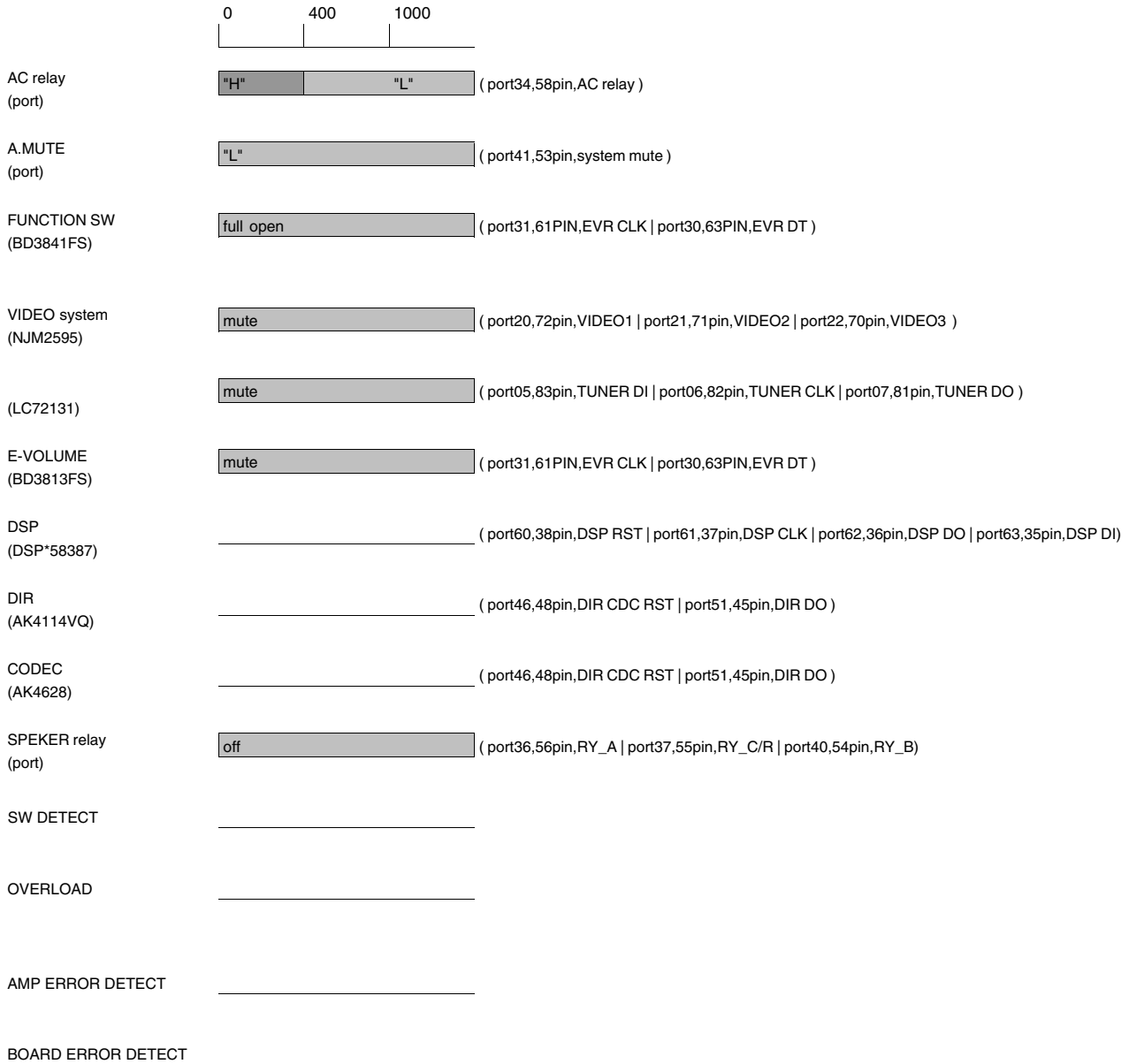
7.3 EXPLANATION

7.3.1 POWER ON AND OFF INITIAL TIMING CHART

POWER ON INITIAL TIMING CHART



POWER OFF INITIAL TIMING CHART

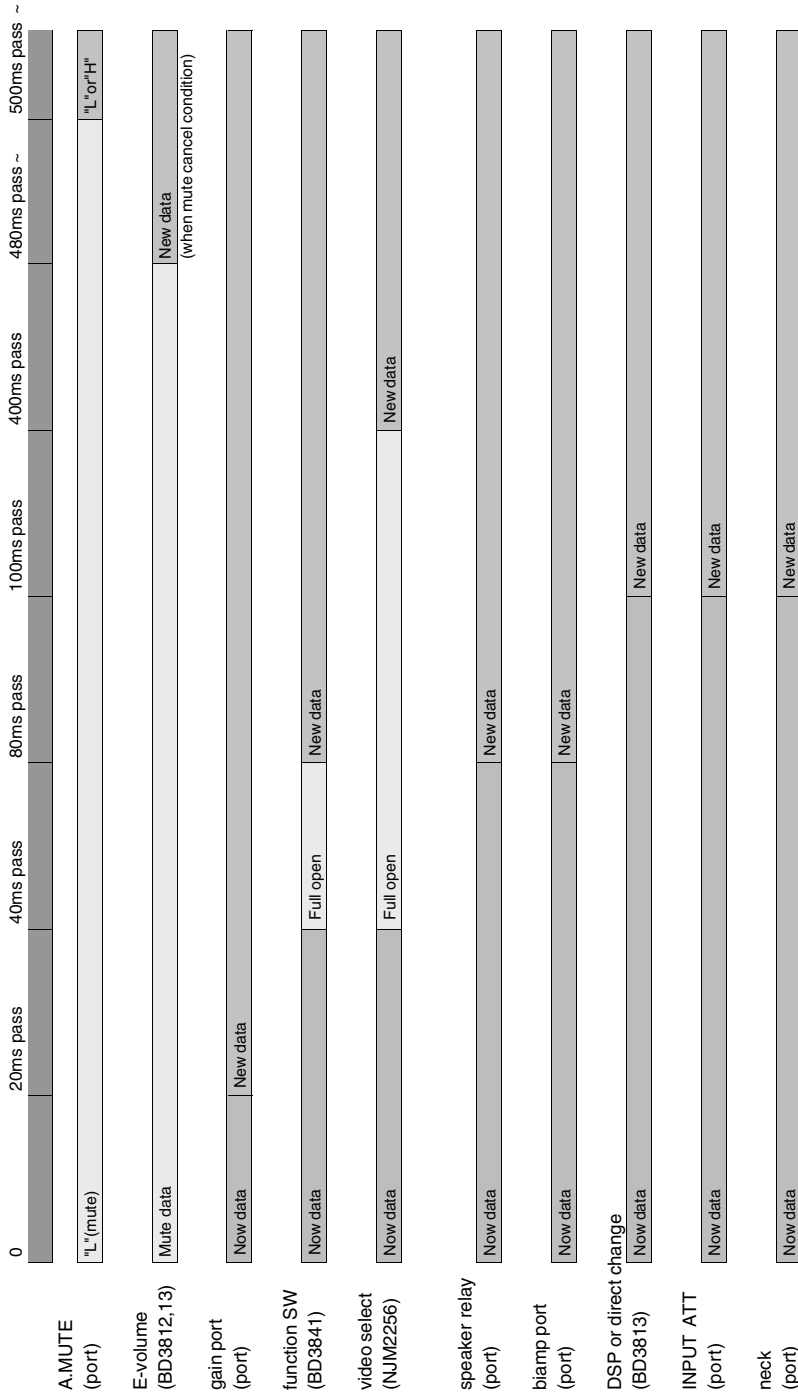


A
B
C
D
E
F

7.3.2 IC DATA TRANSMISSION TIMING CHART

IC data transmission timing chart

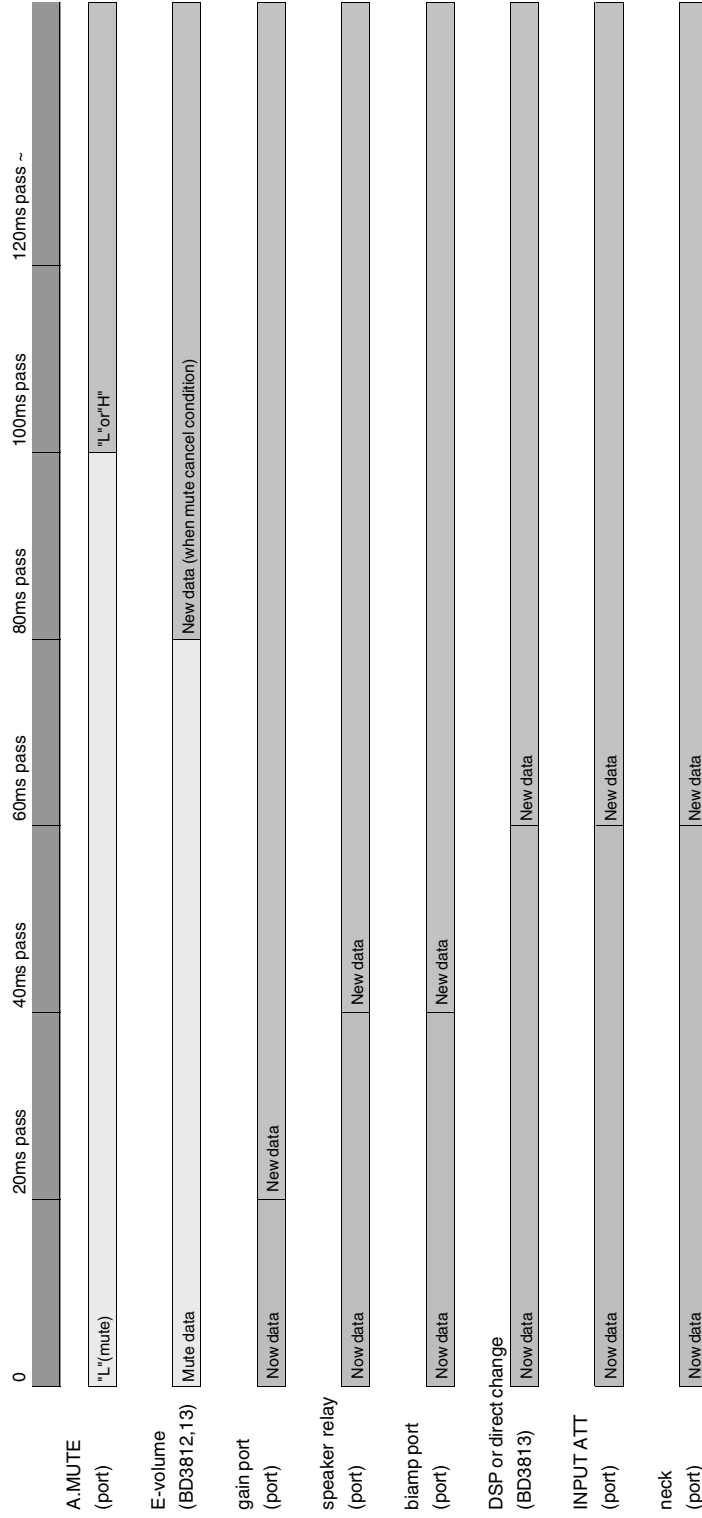
1. When function change



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

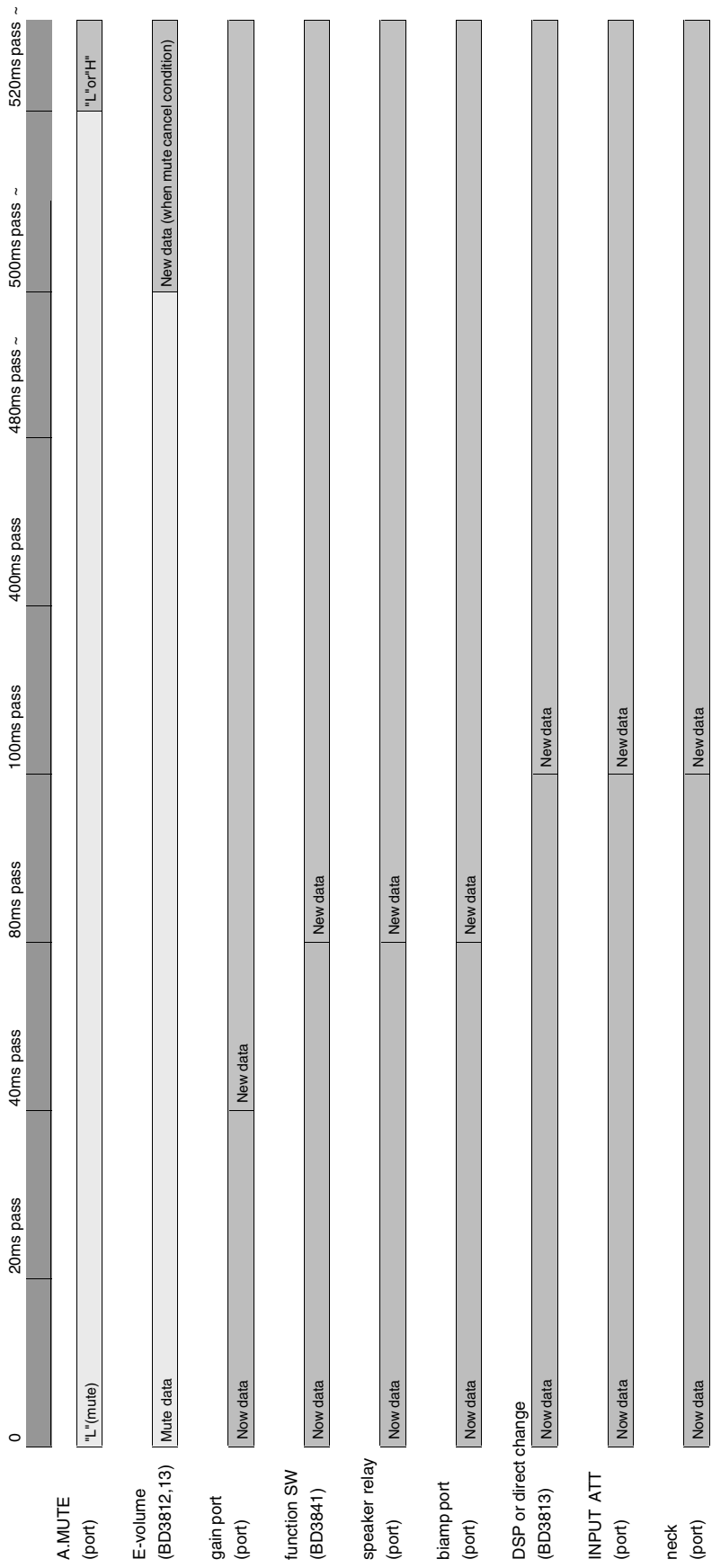
2. When except function change



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

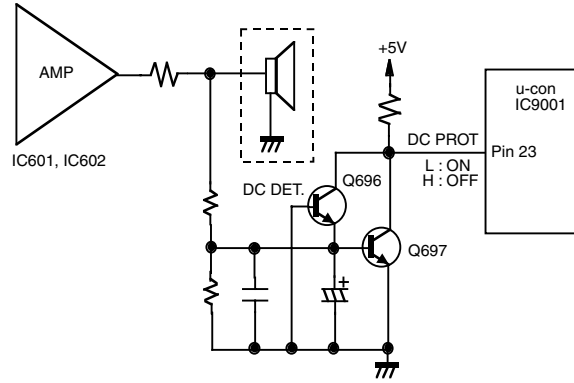
3. When except function change(case 2)



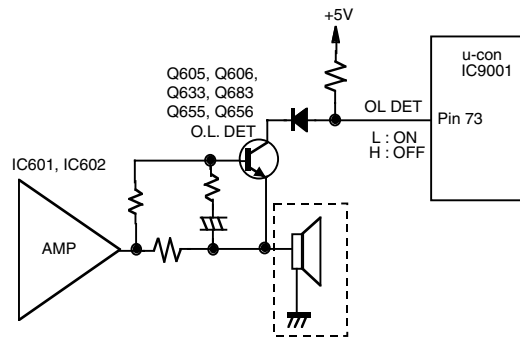
- (1) When standard mode change.
- (2) When listening mode change.
- (3) When surround back ch change.
- (4) When "dolby_set_with_mete" function call.

7.3.3 DETECTION CIRCUIT

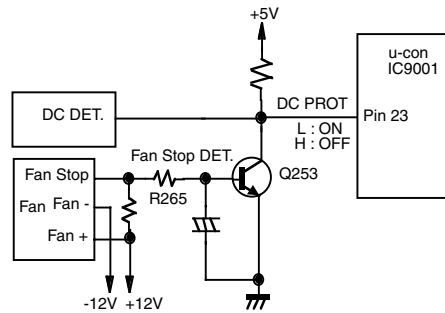
1. DC Detection Circuit Diagram:



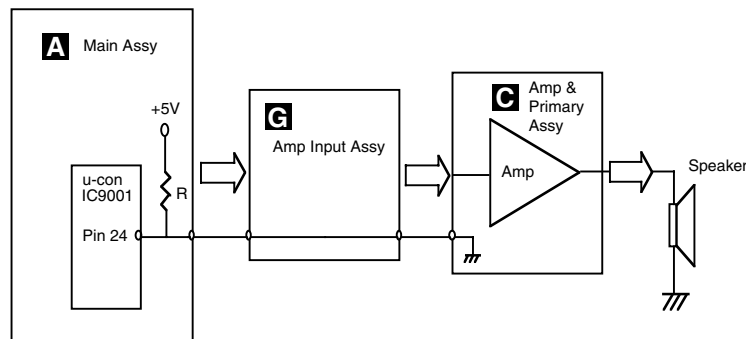
2. Overload Detection Circuit Diagram:



3. Fan Stop Protection Circuit Diagram:



4. PCB Board Protection Circuit Diagram

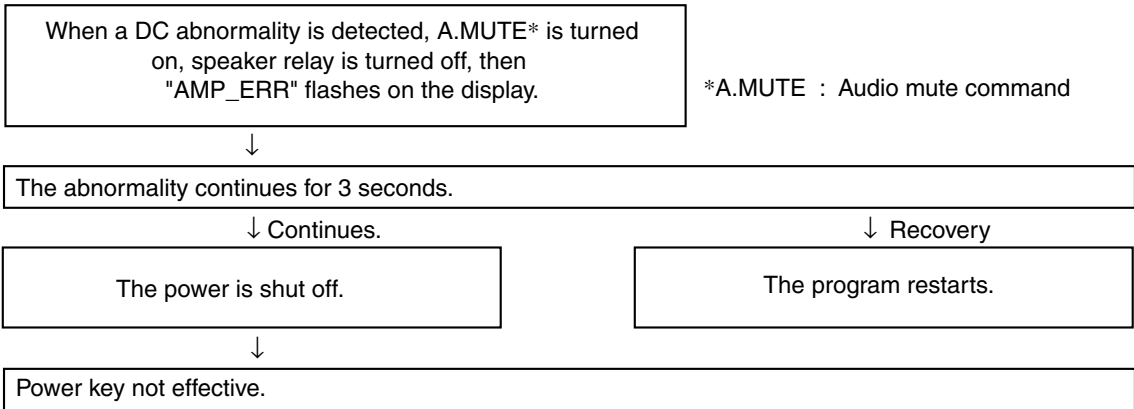


7.3.4 AMPLIFIER SYSTEM PROTECTION OPERATION SPECIFICATION

1. DC-abnormality detection

DC detection is only enabled 2 seconds after power-on.
If there is a fault in the power amplifier or a high-level signal lower than 5 Hz is input, the DC_DET port becomes "L".
If the "L" is detected, the microprocessor will perform as following flow chart.

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

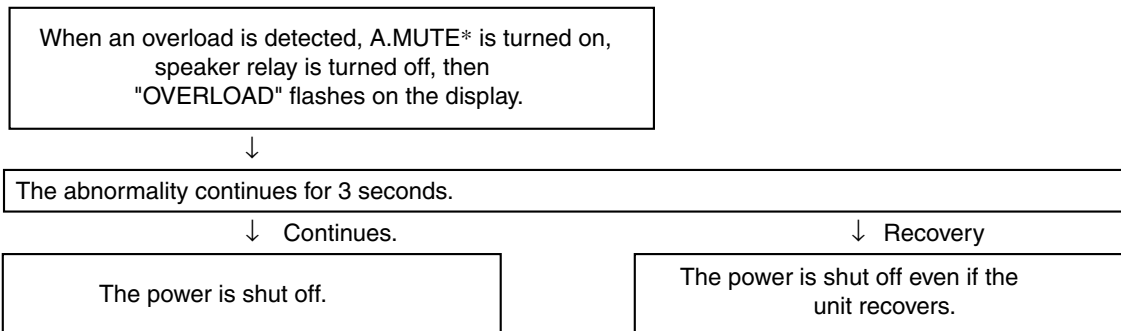


However, when the following keys are pushed so that the key input of a line and the service can be carried out, power can be on. (If don't push these key, need to wait 1 min then power can be on again.)

- 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

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

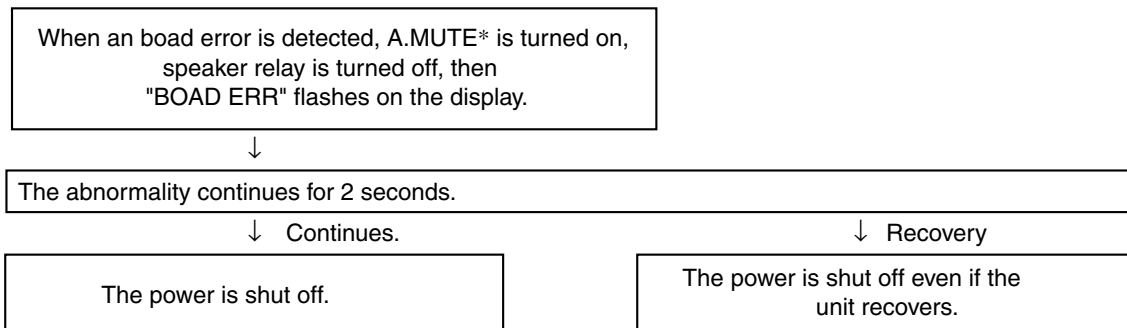


3. Board detection

If the board connection from Main Ass'y to Amp&Primary Ass'y is interrupted, the BOARD_DET port becomes "H".

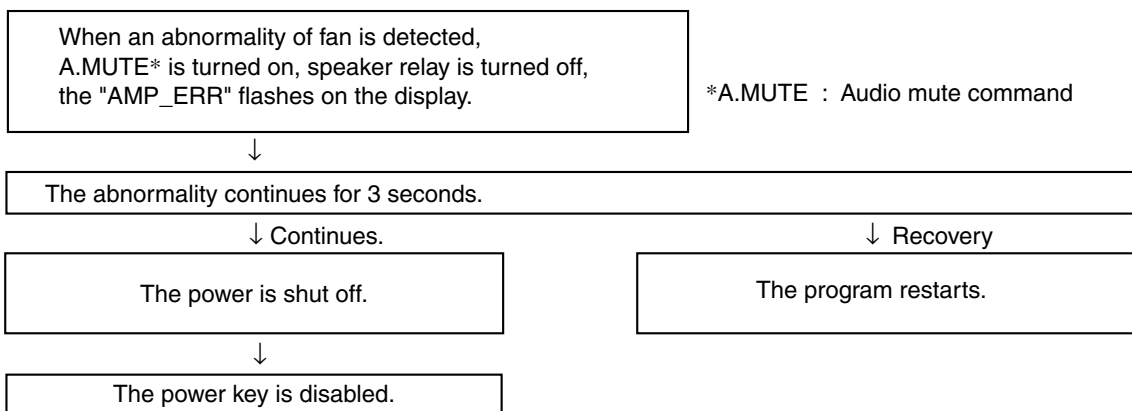
If the "H" is detected, the microprocessor will perform as following flow chart.

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



4. Fan stop detection operation flow in the DC abnormality detection

If the fan is forcibly stopped, the 'DC PROT' port becomes "L". Then an abnormality of fan is detected.



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

- ① TESTMODE ON (A55F+A55F)
- ② When power off, push FRONT ENTER key + ADVANCED SURROUND key continuously 2sec. (Effective, only when power-off is carried out by DC detection)

7.3.5 AMPLIFIER FAILURE DIAGNOSIS FLOW CHART

■ Amplifier failure diagnosis flow chart

A

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

As DC detection and fan stop protection circuits commonly use same abnormality detection port in microprocessor, please make sure that the operation of fan motor is in normal condition before proceeding to the troubleshooting of amplifier.

Caution:

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

B

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

1) Is the operation of fan motor in normal condition?

2) Are there any Fuses and IC protectors open?

3) After turn on the power, confirm that the supply voltage of the point that can be measured is appropriate.

C

4) Whether the voltage of pin3 of IC601 or IC602 is equal to (VL-0.7V). If not (eg, equal to VH), then change the corresponding power pack IC601 or IC602.

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

■

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

D

■

7.4 CLEANING

E



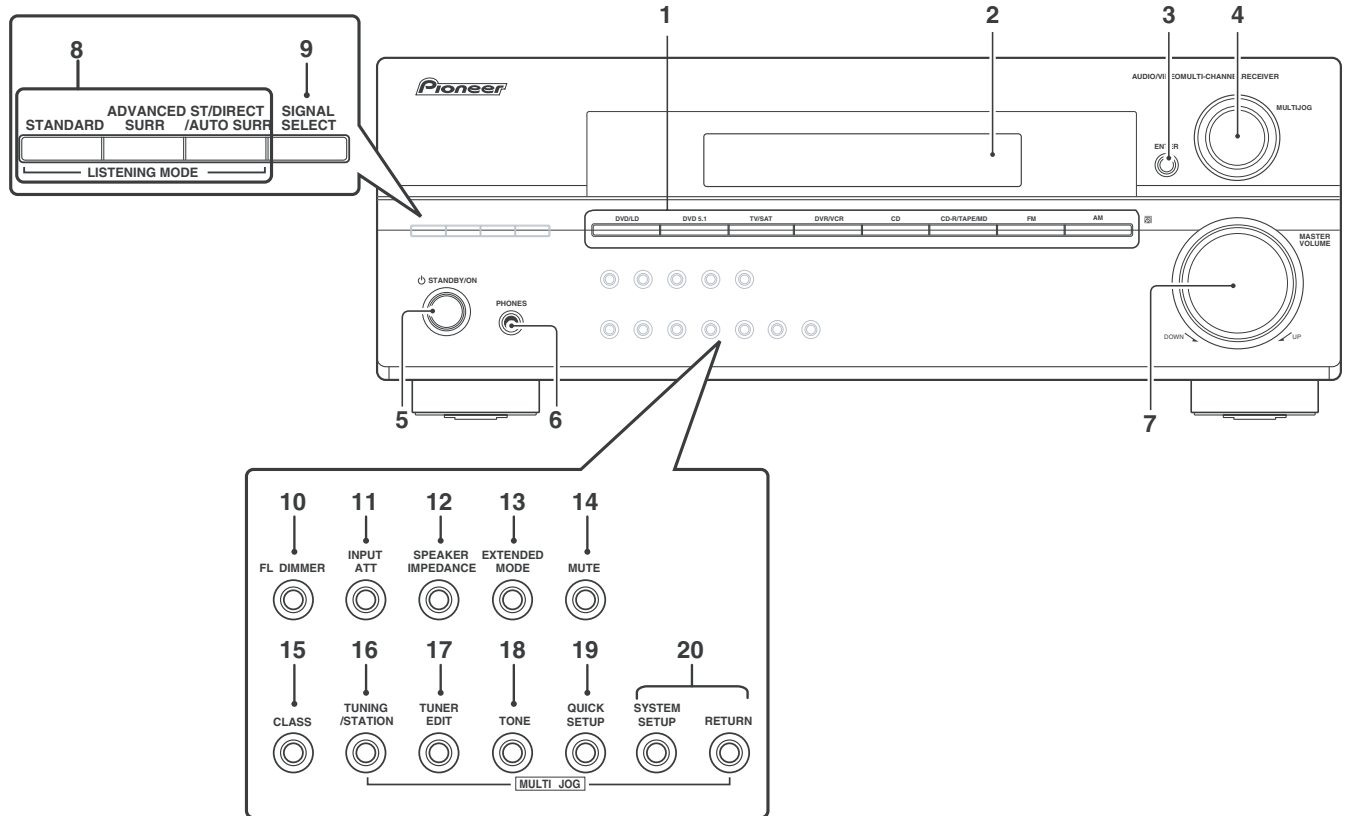
Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

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

F

8. PANEL FACILITIES

Front panel



1 Input select buttons

Press to select an input source.

2 Character display

See Display.

3 ENTER

4 MULTI JOG dial

The **MULTI JOG** dial performs a number of tasks. Use it to select options after pressing the designated **MULTI JOG** buttons.

5 STANDBY/ON

Switches the receiver between on and standby.

6 PHONES jack

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

7 MASTER VOLUME

8 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 (AUTO SURR)

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

Selects the Auto Surround mode.

9 SIGNAL SELECT

Use to select an input signal.

10 FL DIMMER

Dims or brightens the display.

11 INPUT ATT

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

12 SPEAKER IMPEDANCE

Use to change the impedance setting

13 EXTENDED MODE

Selects a surround back channel option or (when the surround back speakers are not available) the Virtual Surround Back (VSB) mode.

14 MUTE

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

15 CLASS

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

16 TUNING / STATION buttons

Selects the frequency and station presets when using the tuner.

17 TUNER EDIT

Press to memorize and name a station for recall.

18 TONE

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

19 QUICK SETUP

See Using the Quick Setup.

20 System Setup menu controls

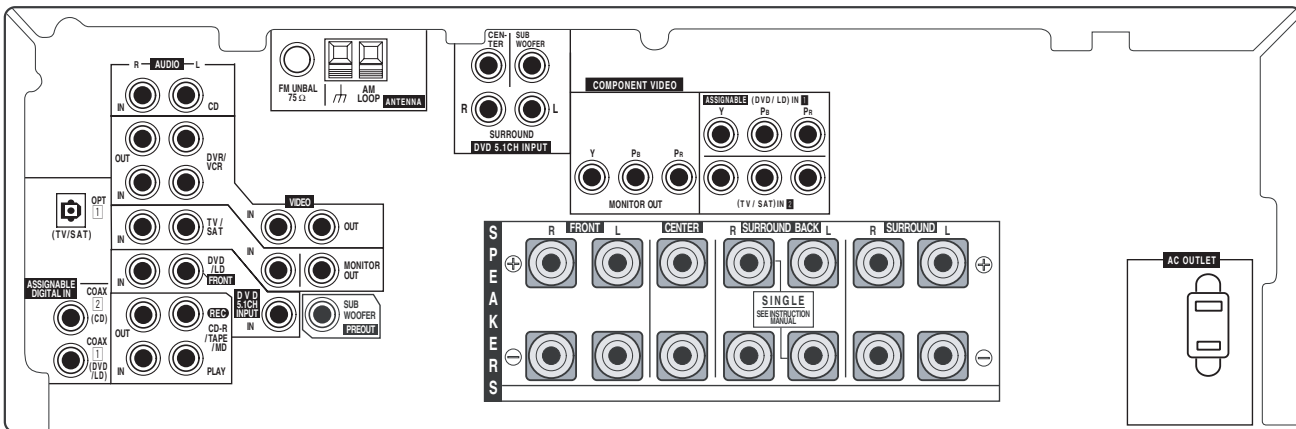
SYSTEM SETUP

Use with the **MULTI JOG** dial to access the System Setup menu.

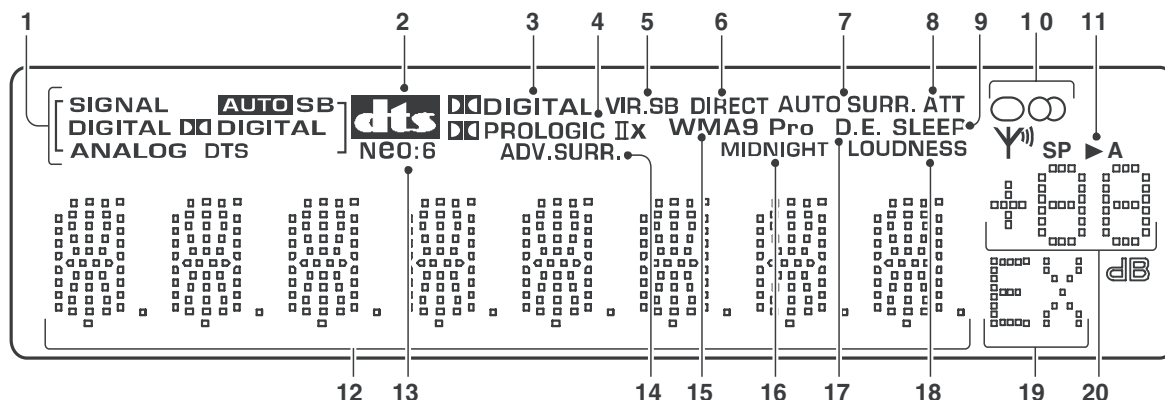
RETURN

Press to confirm and exit the current menu screen.

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


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

3

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

4

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

 lights to indicate Pro Logic IIx decoding (see Listening in surround sound for more on this).

5 **VIR.SB**

Lights during Virtual surround back processing.

6 **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.

7 **AUTO SURR.**

Lights when the Auto Surround feature is switched on.

8 **ATT**

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

9 **SLEEP**

Lights when the receiver is in sleep mode.

10 Tuner indicators

/ **MONO**

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

/ **STEREO**

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

/ **TUNED**

Lights when a broadcast is being received.

11 **Speaker indicator**

Shows if the speaker system is on or not. **SP▶A** means the speakers are switched on. **SP▶** means the headphones are connected.

12 **Character display**

13 **Neo:6**

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

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

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

15 **WMA9 Pro**

Lights to indicate decoding of a WMA9 Pro signal.

16 **MIDNIGHT**

Lights during Midnight listening.

17 **D.E.**

Lights when Dialog Enhancement (**DIALOG E**) is switched on.

18 **LOUDNESS**

Lights during Loudness listening.

19 **EX**

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

20 **Master volume level**

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

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

Remote control

Illustration shows the VSX-515 remote control

A

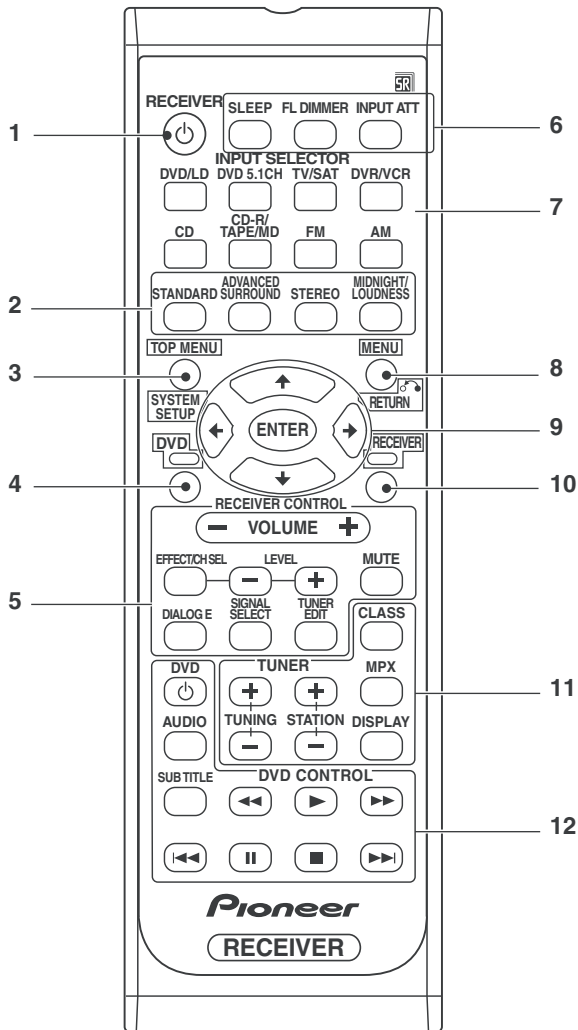
B

C

D

E

F



1 RECEIVER

Switches the receiver between standby and on.

2 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

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

Selects the Auto Surround mode.

MIDNIGHT/LOUDNESS

Switches to Midnight or Loudness listening.

3 TOP MENU

Displays the disc 'top' menu of a DVD.

SYSTEM SETUP

Press to access the System Setup menu.

4 DVD

Press to use the DVD controls on the remote.

5 RECEIVER CONTROL buttons

VOLUME +/-

Use to set the listening volume.

MUTE

Mutes/unmutes the sound.

EFFECT/CH SEL

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

LEVEL +/-

Use to adjust the effect and channel levels, as well as to change Dolby Pro Logic IIx and Neo:6 Music parameter settings.

DIALOG E

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

SIGNAL SELECT

Use to select an input signal.

TUNER EDIT

Press to memorize and name a station for recall.

6 SLEEP

Use to set the sleep timer.

FL DIMMER

Dims or brightens the display.

INPUT ATT

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

7 INPUT SELECTOR buttons

Press to select an input source.

8 MENU

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

RETURN

Confirm and exit the current menu screen.

9 ↑↓←→/ENTER

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

10 RECEIVER

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

11 TUNER controls

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

CLASS

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

MPX











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

DISPLAY

Switch the display between station preset name and frequency.

12 DVD CONTROL buttons

You can use these buttons to control a Pioneer DVD player connected to your system.

Button	What it does
DVD 	Turns DVD power on/off.
AUDIO 	Changes the audio language or channel.
SUBTITLE 	Displays/changes the subtitles on multilingual DVD-Video discs.
	Starts/resumes normal playback.
	Pauses/unpauses a disc.
	Stops playback.
	Press to start fast reverse scanning.
	Press to start fast forward scanning.
	Skips to the start of the current track or chapter, then previous tracks/chapters.
	Skips to the next track or chapter.

Operating range of remote control unit

The remote control may not work properly if:

- There are obstacles between the remote control and the receiver's remote sensor.
- Direct sunlight or fluorescent light is shining onto the remote sensor.
- The receiver is located near a device that is emitting infrared rays.
- The receiver is operated simultaneously with another infrared remote control unit.

