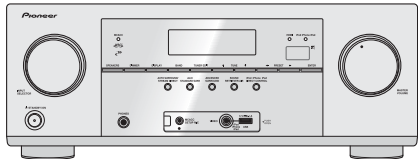


Pioneer

**Service
Manual**



VSX-1022-K

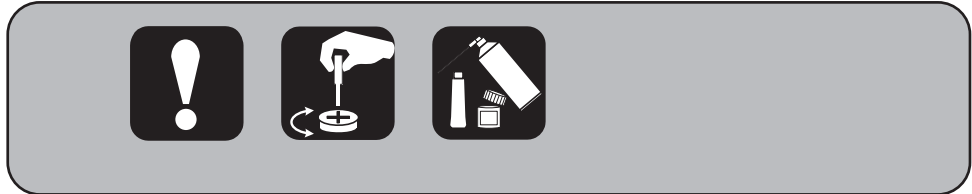
ORDER NO.
RRV4306

AV Receiver

VSX-1022-K
VSX-42
VSX-822-K

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

Model	Type	Power Requirement	Remarks
VSX-1022-K	CUXESM	AC 120 V	
VSX-42	UXECB	AC 120 V	
VSX-822-K	CUXESM	AC 120 V	



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 may contain a chemical known to the State of California to cause cancer, or birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65

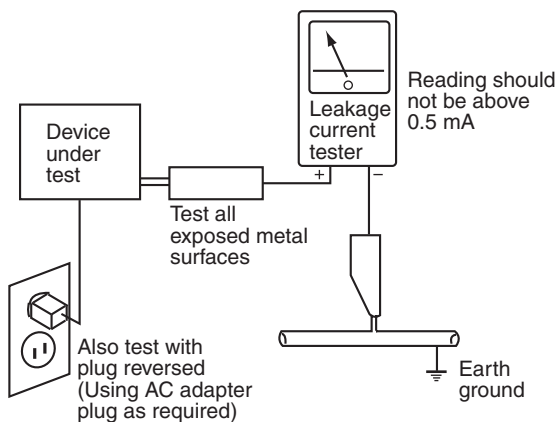
(FOR USA MODEL ONLY)

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 120 V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.



AC Leakage Test

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

2. PRODUCT SAFETY NOTICE

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

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

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

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

CONTENTS

SAFETY INFORMATION.....	2	
1. SERVICE PRECAUTIONS.....	5	
1.1 NOTES ON SOLDERING.....	5	A
1.2 NOTES ON REPLACING PARTS.....	5	
1.3 SERVICE NOTICE.....	5	
2. SPECIFICATIONS.....	6	
3. BASIC ITEMS FOR SERVICE.....	8	
3.1 CHECK POINTS AFTER SERVICING.....	8	
3.2 JIGS LIST.....	8	
3.3 PCB LOCATIONS.....	9	
4. BLOCK DIAGRAM.....	12	
4.1 OVERALL WIRING DIAGRAM.....	12	
4.2 AUDIO BLOCK DIAGRAM (VSX-1022-K, VSX-42).....	14	
4.3 AUDIO BLOCK DIAGRAM (VSX-822-K).....	16	B
4.4 D-MAIN BLOCK DIAGRAM.....	18	
4.5 D-AUDIO BLOCK DIAGRAM.....	20	
4.6 D-MAIN BLOCK DIAGRAM (1/2).....	22	
4.7 D-MAIN BLOCK DIAGRAM (2/2).....	24	
4.8 CPU BLOCK DIAGRAM.....	26	
4.9 VIDEO BLOCK DIAGRAM.....	28	
4.10 POWER SUPPLY BLOCK DIAGRAM.....	30	
5. DIAGNOSIS.....	32	
5.1 TROUBLESHOOTING.....	32	
5.2 ADAPTER ERROR MESSAGE.....	44	
5.3 USB/iPod ERROR MESSAGE.....	44	
5.4 DETECTION CIRCUIT.....	45	C
5.5 IC INFORMATION.....	47	
6. SERVICE MODE.....	51	
6.1 SERVICE MODE.....	51	
7. DISASSEMBLY.....	55	
8. EACH SETTING AND ADJUSTMENT.....	64	
8.1 ADJUSTMENT REQUIRED WHEN THE UNIT IS REPAIRED OR REPLACED.....	64	
8.2 UPDATING OF THE FIRMWARE.....	65	
8.3 IDLE CURRENT ADJUSTMENT.....	69	
9. EXPLODED VIEWS AND PARTS LIST.....	72	
9.1 PACKING SECTION.....	72	
9.2 EXTERIOR SECTION.....	74	
10. SCHEMATIC DIAGRAM.....	78	D
10.1 AUDIO ASSY.....	78	
10.2 AMP7 ASSY (1/2)(VSX-1022-K, VSX-42).....	80	
10.3 AMP7 ASSY (2/2)(VSX-1022-K, VSX-42).....	82	
10.4 AMP5 ASSY (1/2)(VSX-822-K).....	84	
10.5 AMP5 ASSY (2/2)(VSX-822-K).....	86	
10.6 MAIN ASSY.....	88	
10.7 D-MAIN ASSY (1/7)(VSX-1022-K, VSX-42).....	90	
10.8 D-MAIN ASSY (2/7)(VSX-1022-K, VSX-42).....	92	
10.9 D-MAIN ASSY (3/7)(VSX-1022-K, VSX-42).....	94	
10.10 D-MAIN ASSY (4/7)(VSX-1022-K, VSX-42).....	96	
10.11 D-MAIN ASSY (5/7)(VSX-1022-K, VSX-42).....	98	
10.12 D-MAIN ASSY (6/7)(VSX-1022-K, VSX-42).....	100	E
10.13 D-MAIN ASSY (7/7)(VSX-1022-K, VSX-42).....	102	
10.14 D-MAIN ASSY (1/7)(VSX-822-K).....	104	
10.15 D-MAIN ASSY (2/7)(VSX-822-K).....	106	
10.16 D-MAIN ASSY (3/7)(VSX-822-K).....	108	
10.17 D-MAIN ASSY (4/7)(VSX-822-K).....	110	
10.18 D-MAIN ASSY (5/7)(VSX-822-K).....	112	
10.19 D-MAIN ASSY (6/7)(VSX-822-K).....	114	
10.20 D-MAIN ASSY (7/7)(VSX-822-K).....	116	
10.21 CPU ASSY.....	118	
10.22 VIDEO, G-L, G-R, WG-A and WG-B ASSYS.....	120	
10.23 BT CNT, OPTCO, BRG-1 and BRG-2 ASSYS.....	122	
10.24 BT and F-USB ASSYS.....	124	F
10.25 FRONT, INSEL, HP, MIC, FVIDEO and WG ASSYS.....	126	
10.26 STBY ASSY.....	128	

A

B

C

D

E

F

11. PCB CONNECTION DIAGRAM130

11.1 AUDIO ASSY130

11.2 AMP7 ASSY (VSX-1022-K, VSX-42)132

11.3 AMP5 ASSY (VSX-822-K)134

11.4 MAIN ASSY136

11.5 D-MAIN ASSY140

11.6 CPU ASSY144

11.7 VIDEO ASSY146

11.8 G-L, G-R, WG-A and WG-B ASSYS148

11.9 BT CNT and OPTCO ASSYS149

11.10 BRG-1 and BRG-2 ASSYS150

11.11 BT and F-USB ASSYS151

11.12 FRONT, INSEL, HP, MIC, FVIDEO and WG ASSYS152

11.13 STBY ASSY156

12. PCB PARTS LIST157

1. SERVICE PRECAUTIONS

1.1 NOTES ON SOLDERING

- For environmental protection, lead-free solder is used on the printed circuit boards mounted in this unit.
Be sure to use lead-free solder and a soldering iron that can meet specifications for use with lead-free solders for repairs accompanied by reworking of soldering.
- Compared with conventional eutectic solders, lead-free solders have higher melting points, by approximately 40 °C.
Therefore, for lead-free soldering, the tip temperature of a soldering iron must be set to around 373 °C in general, although the temperature depends on the heat capacity of the PC board on which reworking is required and the weight of the tip of the soldering iron.

Do NOT use a soldering iron whose tip temperature cannot be controlled.

Compared with eutectic solders, lead-free solders have higher bond strengths but slower wetting times and higher melting temperatures (hard to melt/easy to harden).

The following lead-free solders are available as service parts:

- Parts numbers of lead-free solder:
GYP1006 1.0 in dia.
GYP1007 0.6 in dia.
GYP1008 0.3 in dia.

1.2 NOTES ON REPLACING PARTS

The part listed below is difficult to replace as a discrete component part.
When the part listed in the table is defective, replace whole Assy.

Assy Name	Parts that is Difficult to Replace			
	Ref No.	Function	Part No.	Remarks
D-MAIN Assy	JA1001 - JA1007	HDMI Connector	—————	JACK with Cu-through-hole & 21 pin
	JA9202	LAN Connector	—————	JACK with Cu-through-hole & 10 pin
	IC9501	D-MAIN 3.3V Power Supply IC	—————	IC with heat-pad
	IC9502	D-MAIN 1.2V Power Supply IC	—————	IC with heat-pad
	IC9503	D-MAIN 1.8V Power Supply IC	—————	IC with heat-pad
	IC9504	D-MAIN 3.3V Power Supply IC	—————	IC with heat-pad
	IC9506	D-MAIN 5V Power Supply IC	—————	IC with heat-pad
	IC101	D-MAIN 5V Power Supply IC	—————	IC with heat-pad
	IC103	D-MAIN 3.3V Power Supply IC	—————	IC with heat-pad
	IC1601	DSP IC	—————	IC with heat-pad
	IC9203	LAN PHY IC	—————	IC with heat-pad
	IC9204	NETWORK MEDIA PROCESSOR	—————	IC BGA type
	IC1001	HDMI INTERFACE IC	—————	IC with heat-pad
F-USB Assy	IC805	USB 5V SW IC	—————	IC with heat-pad
	IC1307	USB 5V SW Power Supply IC	—————	IC with heat-pad

1.3 SERVICE NOTICE

- Discharging**
For more detail, please refer to "7. DISASSEMBLY - 1. Discharging".
- Notes on Ground Points Connection**
For more detail, please refer to "7. DISASSEMBLY - 2. Notes on Ground Points Connection".

2. SPECIFICATIONS

■ VSX-1022-K, VSX-822-K

Amplifier section

Continuous average power output of 80 watts* per channel, min., at 8 ohms, from 20 Hz to 20 000 Hz with no more than 0.08 %** total harmonic distortion.

Front (stereo) 80 W + 80 W
Power output (1 kHz, 6 Ω , 1 %) 140 W per channel
Guaranteed speaker impedance 6 Ω to 16 Ω

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

** Measured by Audio Spectrum Analyzer

Audio Section

Input (Sensitivity/Impedance)

LINE 200 mV/47 k Ω

Signal-to-Noise Ratio (IHF, short circuited, A network)

LINE 98 dB

Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]

LINE 79 dB

Video Section

Signal level

Composite 1 Vp-p (75 Ω)

Tuner Section

Frequency Range (FM) 87.5 MHz to 108 MHz

Antenna Input (FM) 75 Ω unbalanced

Frequency Range (AM) 530 kHz to 1700 kHz

Antenna (AM) Loop antenna

Digital In/Out Section

HDMI terminal Type A (19-pin)

HDMI output type 5 V, 100 mA

USB terminal USB2.0 Full Speed (Type A)

iPod terminal USB, and Video (Composite)

ADAPTER PORT terminal 5 V, 100 mA

Network Section

LAN terminal 10 BASE-T/100 BASE-TX

Miscellaneous

Power Requirements AC 120 V, 60 Hz

Power Consumption 520 W (VSX-1022)

450 W (VSX-822)

In standby 0.4 W (Control OFF)

Dimensions 435 mm (W) x 168 mm (H) x 342.5 mm (D)

173/16 in. (W) x 65/8 in. (H) x 145/16 in. (D)

Weight (without package) 9.3 kg (20 lb 9 oz) (VSX-1022)

8.9 kg (19 lb 10 oz) (VSX-822)

Note

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

- This product includes FontAvenue® fonts licensed by NEC Corporation. FontAvenue is a registered trademark of NEC Corporation.

■ VSX-42

Amplifier section

Continuous average power output of 80 watts* per channel, min., at 8 ohms, from 20 Hz to 20 000 Hz with no more than 0.08 %** total harmonic distortion.

Front (stereo) 80 W + 80 W

Guaranteed speaker impedance 6 Ω to 16 Ω

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

** Measured by Audio Spectrum Analyzer

Audio Section

Input (Sensitivity/Impedance)

LINE 200 mV/47 k Ω

Signal-to-Noise Ratio (IHF, short circuited, A network)

LINE 98 dB

Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]

LINE 79 dB

Video Section

Signal level

Composite 1 Vp-p (75 Ω)

Tuner Section

Frequency Range (FM) 87.5 MHz to 108 MHz

Antenna Input (FM) 75 Ω unbalanced

Frequency Range (AM) 530 kHz to 1700 kHz

Antenna (AM) Loop antenna

Digital In/Out Section

HDMI terminal Type A (19-pin)

HDMI output type 5 V, 100 mA

USB terminal USB2.0 Full Speed (Type A)

iPod terminal USB, and Video (Composite)

ADAPTER PORT terminal 5 V, 100 mA

Network Section

LAN terminal 10 BASE-T/100 BASE-TX

Integrated control section

Control (IR) terminal $\varnothing$ 3.5 Mini-jack (MONO)

IR signal High Active (High Level: 2.0 V)

12 V Trigger terminal $\varnothing$ 3.5 Mini-jack (MONO)

12 V Trigger output type 12 V, 50 mA

Miscellaneous

Power Requirements AC 120 V, 60 Hz

Power Consumption 520 W

In standby 0.4 W (Control OFF)

Dimensions 435 mm (W) x 168 mm (H) x 342.5 mm (D)

173/16 in. (W) x 65/8 in. (H) x 145/16 in. (D)

Weight (without package) 9.3 kg (20 lb 9 oz)

Note

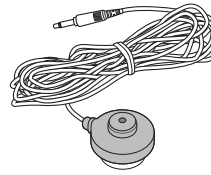
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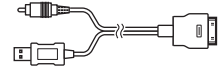
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Manufactured under license under U.S. Patent Nos: 5,956,674; 5,974,380; 6,226,616; 6,487,535; 7,212,872; 7,333,929; 7,392,195; 7,272,567 & other U.S. and worldwide patents issued & pending. DTS-HD, the Symbol, & DTS-HD and the Symbol together are registered trademarks & DTS-HD Master Audio is a trademark of DTS, Inc. Product includes software. © DTS, Inc. All Rights Reserved.

Accessories



Microphone
(for Auto MCACC setup)
(APM7010)



iPod cable
(L308102013030-IL)



Remote control (AXD7661)
(VSX-1022-K, VSX-822-K: 8300766100010-IL)



Remote control (AXD7662)
(VSX-42: 8300766200010-IL)



Dry cell batteries
(AAA size IEC R03) x2



AM loop antenna
(E601019000010-IL)



FM wire antenna
(E605010140010-IL)

Warranty card

Quick start guide
(VSX-1022-K: 5707000006490-IL)
(VSX-42: 5707000006500-IL)
(VSX-822-K: 5707000006490-IL)

Safety Brochure

Operating instructions (CD-ROM)
(VSX-1022-K, VSX-822-K: 6517000000490-IL)
(VSX-42: 6517000000510-IL)

3. BASIC ITEMS FOR SERVICE

3.1 CHECK POINTS AFTER SERVICING

A Items to be checked after servicing

To keep the product quality after servicing, confirm recommended check points shown below.

No.	Procedures	Check points
1	Confirm whether the customer complain has been solved. If the customer complain occurs with the particular source, such as Dolby Digital, DTS, AAC, DVD-A and HDMI, input it for the operation check.	The customer complain must not be reappeared. Video, Audio and operations must be normal.
2	Check the analog audio playback. (Make the analog connections with a DVD player.)	Each channel audio and operations must be normal.
3	Check the digital audio playback. (Make the digital connections with a DVD player.)	Each channel audio and operations must be normal.
4	Check surround playback. (Select Surround mode and check the multichannel operations via the DSP circuit.)	Each channel audio and operations must be normal.
5	Check the video outputs. (Connect with a DVD player.)	Video and operations must be normal.
6	Check the tuner (AM and FM) operations.	Audio and operations must be normal.
7	Check the sound from headphone output.	Sound must be normal, without noise.
8	Check the appearance of the product.	No scratches or dirt on its appearance after receiving it for service.

C See the table below for the items to be checked regarding video and audio.

Item to be checked regarding video	Item to be checked regarding audio
Block noise	Distortion
Horizontal noise	Noise
Flicker	Volume too low
Disturbed image (video jumpiness)	Volume too high
Too dark	Volume fluctuating
Too bright	Sound interrupted
Mottled color	

3.2 JIGS LIST

Jigs List

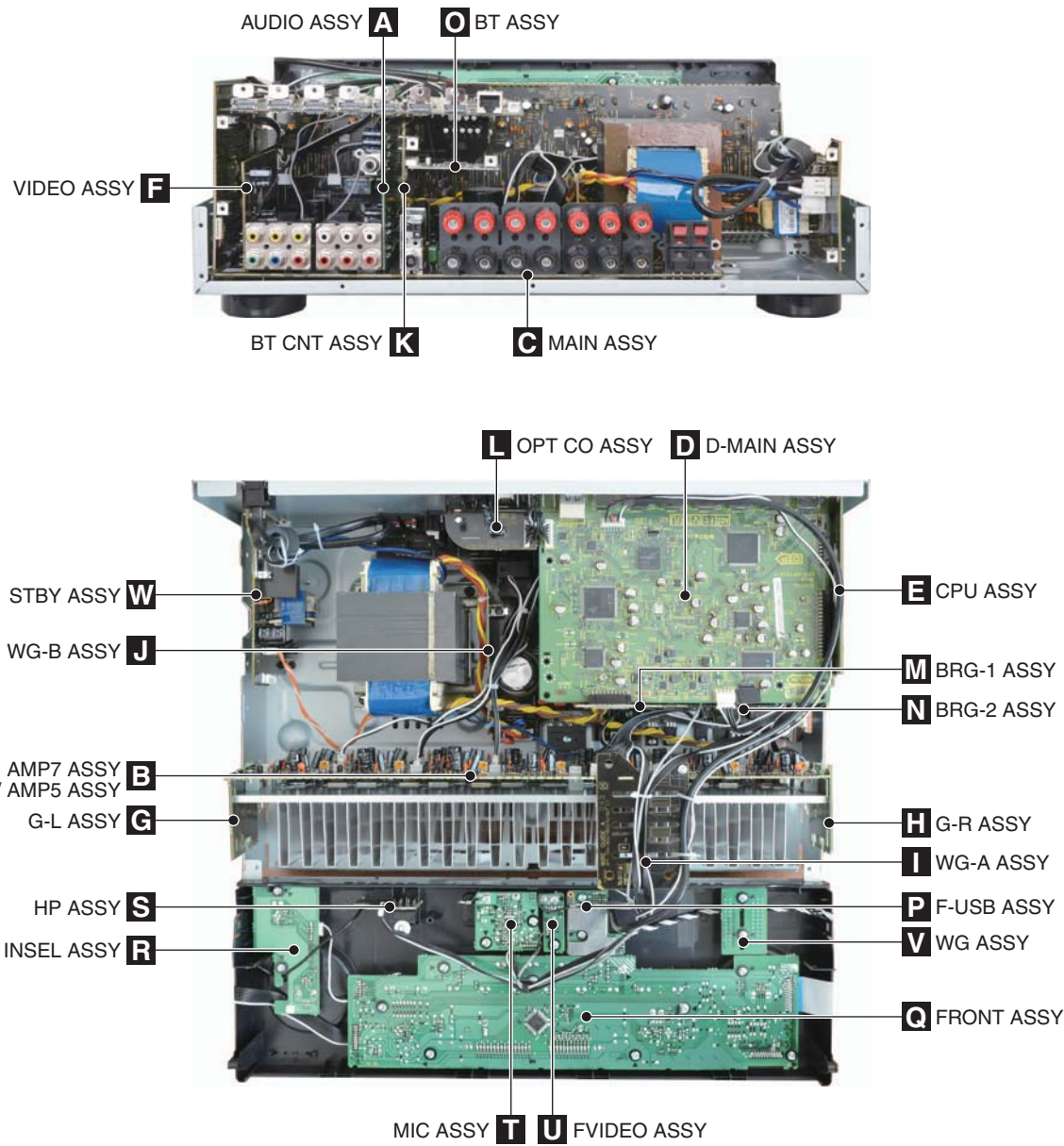
Jig Name	Part No.	Remarks
RS-232C update jig (Jig + 10P FFC)	GGF1642	MAIN microcomputer firmware update (RS-232C ↔ Rear panel)
RS-232C cable (9-pin to 9-pin, straight cable)	(Marketing product)	
9P extension jig cable	GGD1739	Diagnosis (AMP5 Assy ↔ AUDIO Assy)
13P extension jig cable	GGD1740	Diagnosis (AMP7 Assy ↔ AUDIO Assy)
3P extension jig cable	GGD1741	Diagnosis (AMP7 Assy ↔ MAIN Assy)
Board to board extension jig cable	GGD1756	Diagnosis (D-MAIN Assy ↔ BRG-A Assy)
Board to board extension jig cable	GGD1770	Diagnosis (D-MAIN Assy ↔ CPU Assy)
Board to board extension jig cable	GGD1800	Diagnosis (D-MAIN Assy ↔ CPU Assy)
25P extension jig FFC	GGD1801	Diagnosis (FRONT Assy ↔ CPU Assy)

Lubricants and Glues List



Name	Part No.	Remarks
Silicon grease	GEM1057	Refer to "9.2 EXTERIOR SECTION".
Silicon adhesive	GYA1011 (KE40RTV-W)	Refer to "9.2 EXTERIOR SECTION".

3.3 PCB LOCATIONS



- A **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.

LIST OF ASSEMBLIES

Mark	Symbol and Description	VSX-1022-K/ CUXESM	VSX-42/ UXECB	VSX-822-K/ CUXESM
NSP	1..PCB TTL ASSY MAIN	7025HK1108010-IL	7025HK1108020-IL	7025HK1107010-IL
	2..MAIN ASSY	7028071611030-IL	7028071611050-IL	7028071611010-IL
	2..BTCNT ASSY	7028071612050-IL	7028071612050-IL	7028071612050-IL
	2..OPTCO ASSY	7028071613050-IL	7028071613050-IL	7028071613050-IL
	2..G-R ASSY	7028071614050-IL	7028071614050-IL	7028071614050-IL
B				
	2..G-L ASSY	7028071615050-IL	7028071615050-IL	7028071615050-IL
	2..WG-A ASSY	7028071616050-IL	7028071616050-IL	7028071616050-IL
	2..WG-B ASSY	7028071617050-IL	7028071617050-IL	7028071617050-IL
NSP	1.PCB TTL ASSY FRONT	7025HK1108011-IL	7025HK1108021-IL	7025HK1108011-IL
	2..FRONT ASSY	7028071621030-IL	7028071621050-IL	7028071621030-IL
	2..HP ASSY	7028071622030-IL	7028071622050-IL	7028071622030-IL
	2..INSEL ASSY	7028071623030-IL	7028071623050-IL	7028071623030-IL
	2..MIC ASSY	7028071624050-IL	7028071624050-IL	7028071624050-IL
	2..FVIDEO ASSY	7028071626030-IL	7028071626050-IL	7028071626030-IL
	2..WG ASSY	7028071627060-IL	7028071627060-IL	7028071627060-IL
NSP	1..PCB TTL ASSY VIDEO	7025HK1108012-IL	7025HK1108022-IL	7025HK1107012-IL
	2..VIDEO ASSY	7028071671030-IL	7028071671030-IL	7028071671010-IL
	2..STBY ASSY	7028071672030-IL	7028071672030-IL	7028071672010-IL
	2..BRG-1 ASSY	7028071673030-IL	7028071673030-IL	7028071673030-IL
	2..BRG-2 ASSY	7028071674030-IL	7028071674050-IL	7028071674030-IL
NSP	1..PCB TTL ASSY AUDIO	7025HK1108013-IL	7025HK1108023-IL	7025HK1107013-IL
	2..AUDIO ASSY	7028071641030-IL	7028071641050-IL	7028071641010-IL
NSP	1..PCB TTL ASSY DMAIN	7025HK1108014-IL	7025HK1108024-IL	7025HK1107014-IL
	2..D-MAIN ASSY	7028071691050-IL	7028071691050-IL	7028071691010-IL
NSP	1..PCB TTL ASSY CPU	7025HK1108015-IL	7025HK1108025-IL	7025HK1107015-IL
	2..CPU ASSY	7028071681030-IL	7028071681050-IL	7028071681010-IL
NSP	1..PCB TTL ASSY AMP7	7025HK1108017-IL	7025HK1108017-IL	Not used
	2..AMP7 ASSY	7028070253010-IL	7028070253010-IL	Not used
NSP	1..PCB TTL ASSY AMP5	Not used	Not used	7025HK1107017-IL
	2..AMP5 ASSY	Not used	Not used	7028070245010-IL
NSP	1..PCB TTL ASSY BT	7025HK1009019-IL	7025HK1009019-IL	7025HK1009019-IL
	2..BT ASSY	7028070231010-IL	7028070231010-IL	7028070231010-IL
NSP	1..PCB TTL ASSY F-USB	7025HK1108016-IL	7025HK1108016-IL	7025HK1108016-IL
	2..F-USB ASSY	7028071781030-IL	7028071781030-IL	7028071781030-IL

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VSX-1022-K

11

4. BLOCK DIAGRAM

4.1 OVERALL WIRING DIAGRAM

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

O BT ASSY
(7028070231010-IL)

K BTCNT ASSY
(7028071612050-IL)

U FVIDEO ASSY
(VSX-1022-K, VSX-822-K:
7028071626030-IL)
(VSX-42: 7028071626050-IL)

B (B 1/2- B 2/2)

AMP7 ASSY (VSX-1022-K, VSX-42)
(7028070253010-IL)
AMP5 ASSY (VSX-822-K)
(7028070245010-IL)

S HP ASSY
(VSX-1022-K, VSX-822-K:
7028071622030-IL)
(VSX-42: 7028071622050-IL)

T MIC ASSY
(7028071624050-IL)

N BRG-2 ASSY
(VSX-1022-K, VSX-822-K: 7028071674030-IL)
(VSX-42: 7028071674050-IL)

A AUDIO ASSY
(VSX-1022-K: 7028071641030-IL)
(VSX-42: 7028071641050-IL)
(VSX-822-K: 7028071641010-IL)

C MAIN ASSY
(VSX-1022-K: 7028071611030-IL)
(VSX-42: 7028071611050-IL)
(VSX-822-K: 7028071611010-IL)

G G-L ASSY
(7028071615050-IL)

H G-R ASSY
(7028071614050-IL)

I WG-A ASSY
(7028071616050-IL)

J WG-B ASSY
(7028071617050-IL)

V WG ASSY
(7028071627060-IL)

M BRG-1 ASSY
(7028071673030-IL)

F VIDEO ASSY
(VSX-1022-K, VSX-42: 7028071671030-IL)
(VSX-822-K: 7028071671010-IL)

VSX-1022-K

R INSEL ASSY
(VSX-1022-K, VSX-822-K: 7028071623030-IL)
(VSX-42: 7028071623050-IL)

Q FRONT ASSY
(VSX-1022-K, VSX-822-K: 7028071621030-IL)
(VSX-42: 7028071621050-IL)

1 HDMI+12V
2 STBY_RLY
3 PDN
4 CPU_ST_VCC
5 CPU+3.3V
6 GNDU
7 FLJ
8 FLCT
9 FLI

1 -30V
2 -30V
3 GNDU
4 CPU_ST_VCC
5 CPU_ST_VCC
6 GNDU
7 GNDU
8 CPU+3.3V
9 CPU+3.3V
10 ST_H+5V
11 POWERDOWN
12 RMC

13 STBY_RLY
14 FLR_DATA
15 FLT_CLK
16 FLT_CE
17 INPUT_UP
18 KEY2
19 KEY3
20 KEY1 (STBY_KEY)
21 INPUT_DN
22 VOL_UP
23 VOL_DN
24 CNT_LED
25 THRU_LED

CP702
1 STBY_KEY
2 INPUT_UP
3 GNDU
4 INPUT_DOWN
5 ST_H+5V
6 POWER_LED

W STBY ASSY
(VSX-1022-K, VSX-42: 7028071672030-IL)
(VSX-822-K: 7028071672010-IL)

AC CORD
LIVE
NEUTRAL
VOL SEL
TRANS
FLAC
FLCT
FLAC

CP301
CP303
CP302
CP304

1 FLAC
2 FLCT
3 FLAC
4 CPU_GND
5 CPU+3.3V
6 STBY_VCC
7 PDN
8 STBY_RLY
9 CPU_ST_VCC

P F-USB ASSY
(7028071781030-IL)

1 USBDCERR
2 USBPWR
3 USBERR
4 D+
5 D-
6 GNDU
J301

+12V
+12V
DGN2
DGN2

CP801

L OPTCO ASSY
(7028071613050-IL)

OPT
V+3.3
GND
COAX
GND
V+5V
V+5V
GND
2.2K

CP2009

D (D1/7- D7/7)

D-MAIN ASSY
(VSX-1022-K, VSX-42: 7028071691050-IL)
(VSX-822-K: 7028071691010-IL)

E CPU ASSY
(VSX-1022-K: 7028071681030-IL)
(VSX-42: 7028071681050-IL)
(VSX-822-K: 7028071681010-IL)

VSX-42: 11P, OTHER: 9P

CP204
1 Z2VOL_DATA
2 Z2VOL_CLK
3 HP_DET
4 MIO_DET
5 VOL_DATA
6 VOL_CLK
7 SW_SUM
8 HP_RLY
9 A_MUTE
10 SB_MUTE
11 Z2_MUTE

CP404
1 DC_DET4
2 DC_DET3
3 ASD_DET
4 RAD_DET
5 TRTHER_DET

CP704B
13 STBY_RLY
14 FLR_DATA
15 FLT_CLK
16 FLT_CE
17 INPUT_UP
18 KEY2
19 KEY3
20 KEY1 (STBY_KEY)
21 INPUT_DN
22 VOL_UP
23 VOL_DN
24 CNT_LED
25 THRU_LED

CP208
1 U/DGND
2 MUTE_BV
3 U/DGND
4 FBRL
5 SBRL
6 SBRL
7 CRL
8 FRL
9 DC_PCR
10 -VF(-30V)
11 U/DGND

CP211
1 GNDU
2 TUNER_INT
3 TUNER_SDO
4 TUNER_SCLK
5 TUNER_SEN
6 TUNER_RST
7 2533_CTL

CP405
5 BT_ON/OFF
4 BT_DET
3 BT_TX/U_RX
2 BT_RX/U_TX
1 BT_OC

VSX-822/527 OPEN

CP205
1 CRJN
2 GNDU
3 CBJN
4 GNDU
5 YJN
6 GNDU
7 COMP_DET
8 GNDU
9 CVBS_JN

CP214
1 OSD_RST
2 OSD_CE
3 OSD_CLK
4 OSD_DATA
5 CTLA
6 CTLB
7 U/DGND
8 +5V
9 VIDEO_MUTE
10 DC_TRG+12V
11 AGND

CP15
1 JND
2 B+
3 JND
4 3RL
5 3RL
6 JRL
7 3RL
8 FRL
9 +RO
10 OV)
11 JND

CP13
1 GND
2 JNT
3 SDO
4 SCLK
5 SEN
6 RST
7 CTL

CP12
1 OFF
2 DET
3 JRX
4 JTX
5 LOC

CP14
1 RJN
2 NDD
3 BJN
4 NDD
5 YJN
6 NDD
7 DET
8 NDD
9 SJN

CP16
1 RST
2 CE
3 CLK
4 ATA
5 FLA
6 FLB
7 GND
8 +5V
9 UTE
10 12V
11 GND

CP201
1 GND-H
2 USBDCERR
3 N_PWR
4 D_PWR
5 H_PWR2
6 H_PWR1
7 THRU_LED
8 GND-H
9 HDM_LSV
10 HDM+12V
11 4588_PDN
12 4588_SDA
13 4588_SCL
14 DSP_SDA
15 DSP_SCL
16 DSP_RST
17 DSP_SDOUT
18 DSP_CS
19 DSP_RDY
20 HDM_SEL
21 SUB_ON
22 SUB_IRQ
23 MAIN_IRQ
24 SUB_PDN
25 SUB_RST
26 SCD_MAIN
27 SCDO_MAIN
28 CSCK_MAIN
29 HD_MUTE
30 ST_H+5V
31 CPU_ST_VCC
32 CPU_ST_VCC
33 GNDU

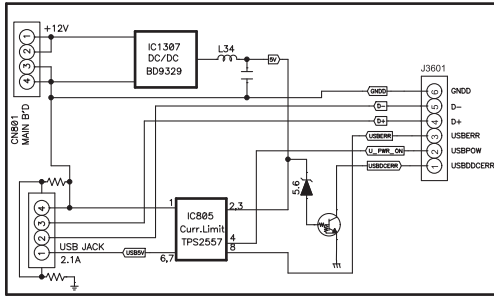
CP213
1 GNDU
2 GNDU
3 CBJN
4 GNDU
5 YJN
6 GNDU
7 COMP_DET
8 GNDU
9 CVBS_JN
10 D_AMUTE
11 XDET_BT
12 BTOL
13 BTPOW
14 BTRX2
15 BTX

CP203
1 AIN_R
2 GND
3 AIN_L
4 GND
5 FR_OUT
6 GND
7 FL_OUT
8 GND
9 SR_OUT
10 GND

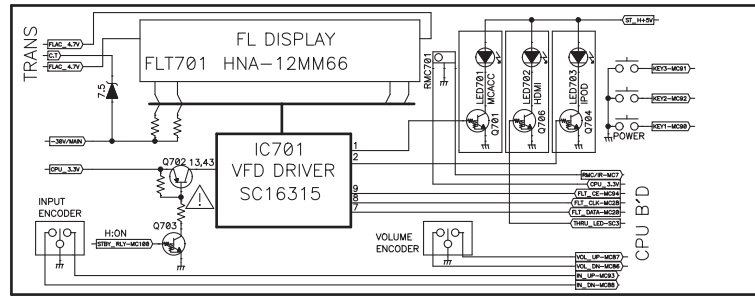
11 SL_OUT
12 GND
13 C_OUT
14 GND
15 SW_OUT
16 GND
17 SBR_OUT
18 GND
19 SBL_OUT

4.2 AUDIO BLOCK DIAGRAM (VSX-1022-K, VSX-42)

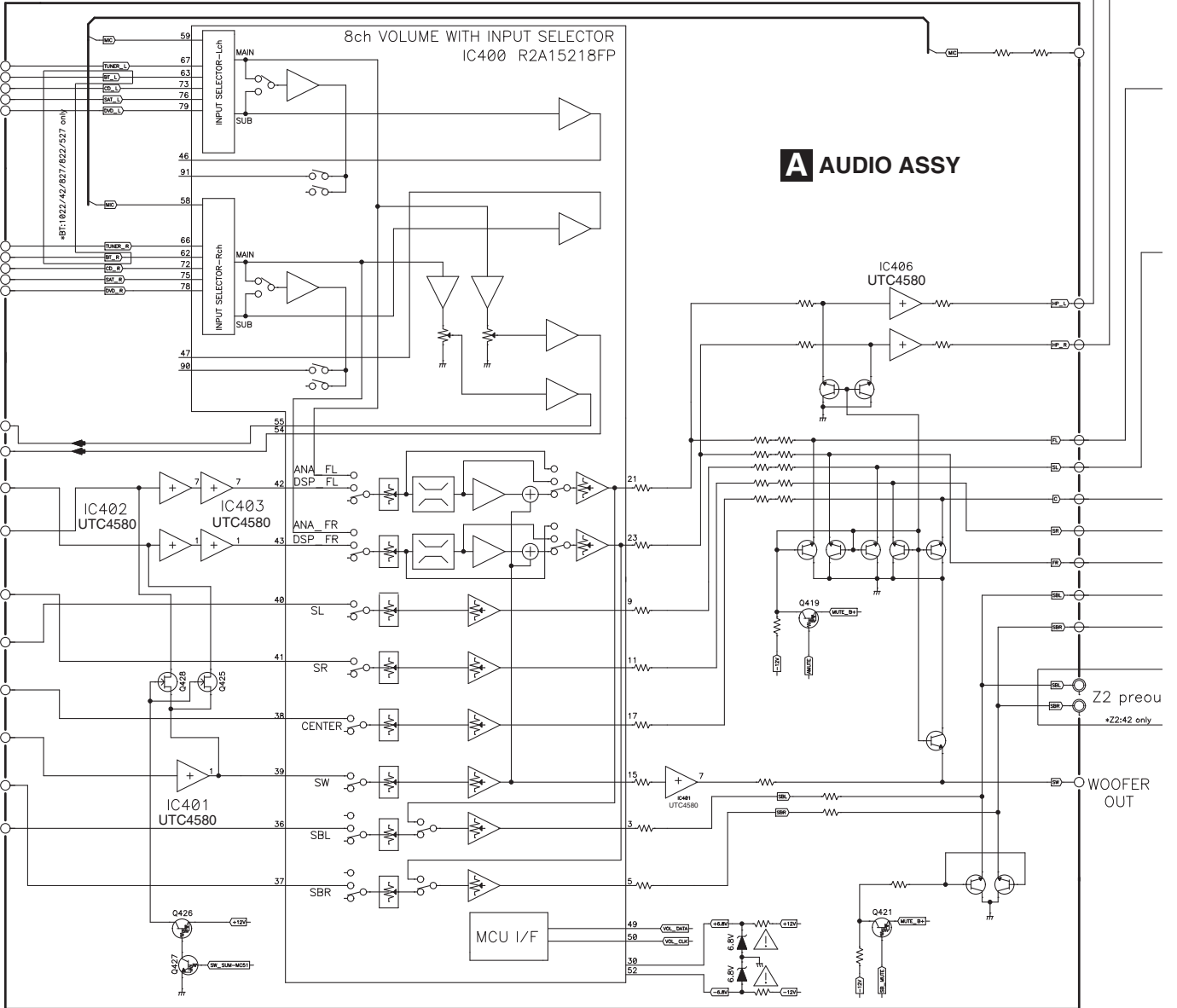
P F-USB ASSY



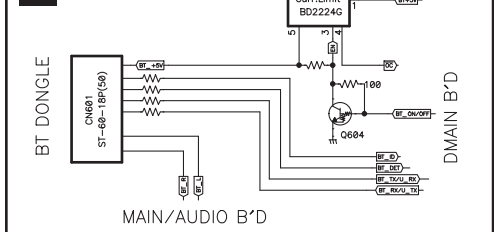
Q FRONT ASSY



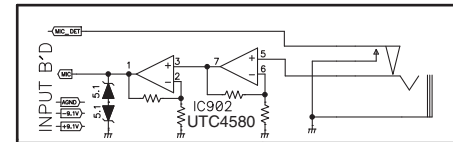
A AUDIO ASSY



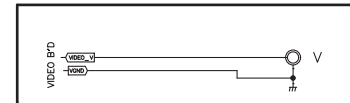
O BT ASSY

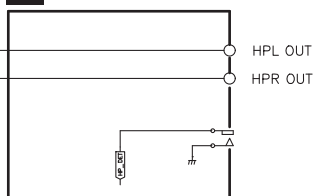
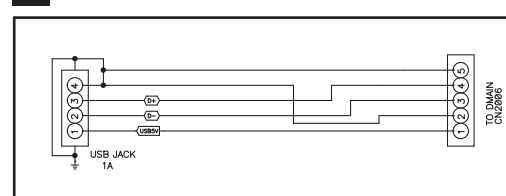
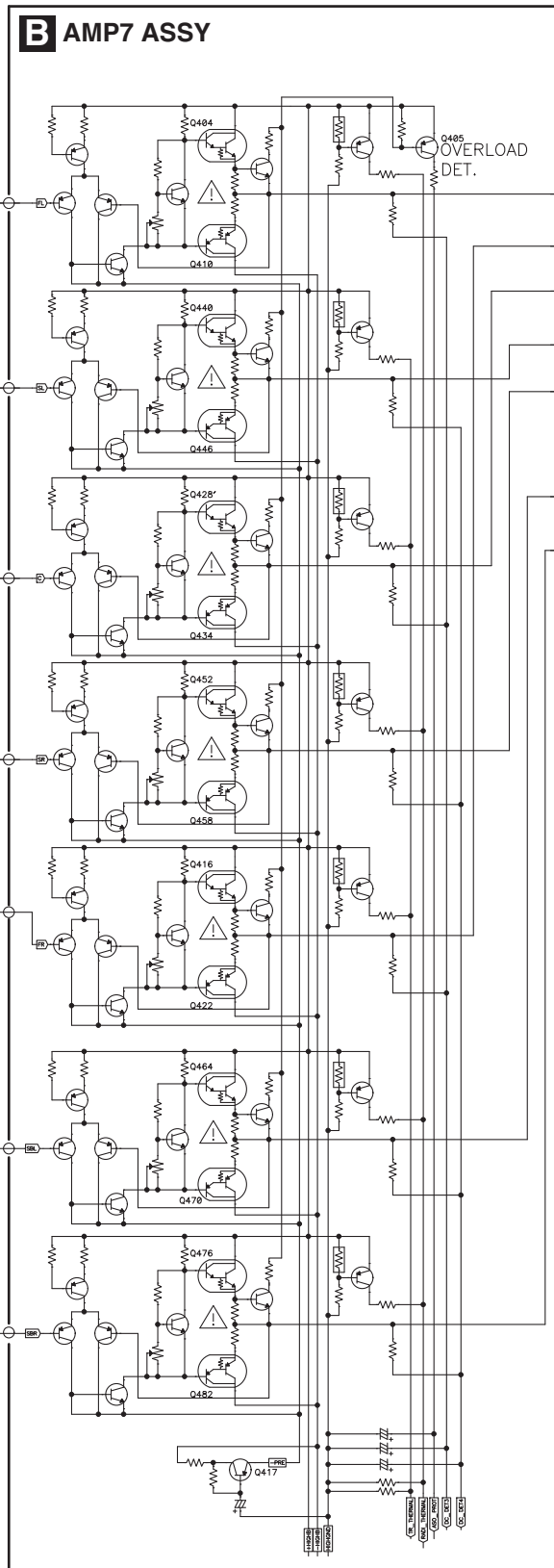
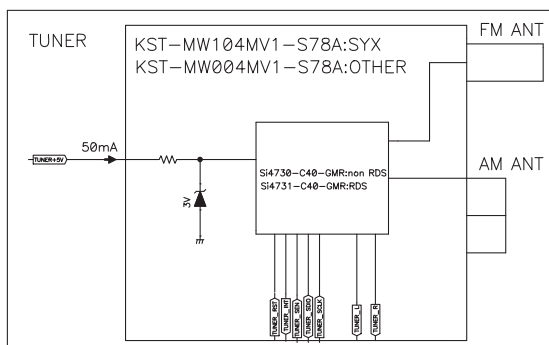
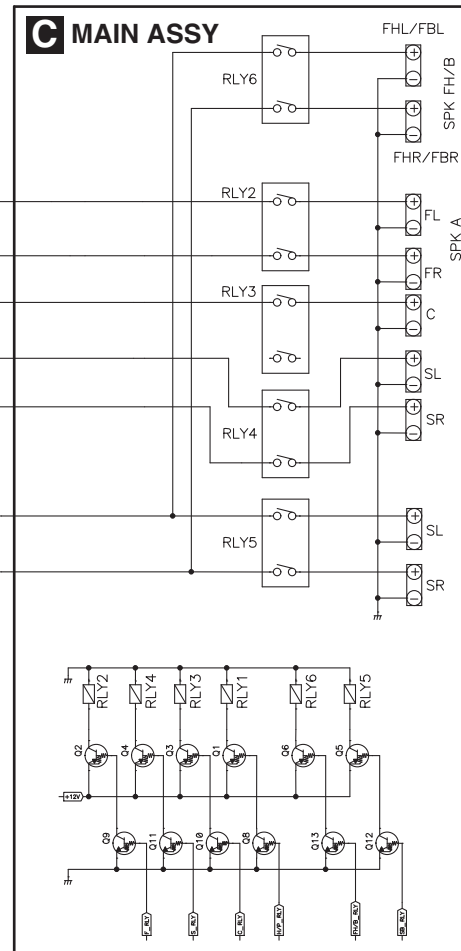


T MIC ASSY



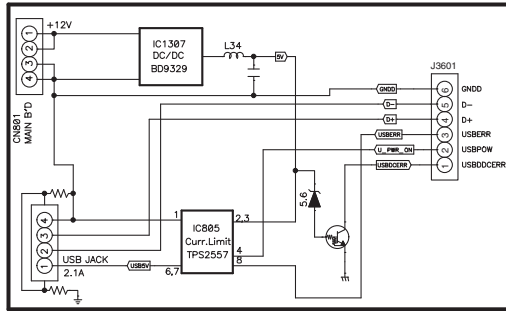
U FVIDEO ASSY



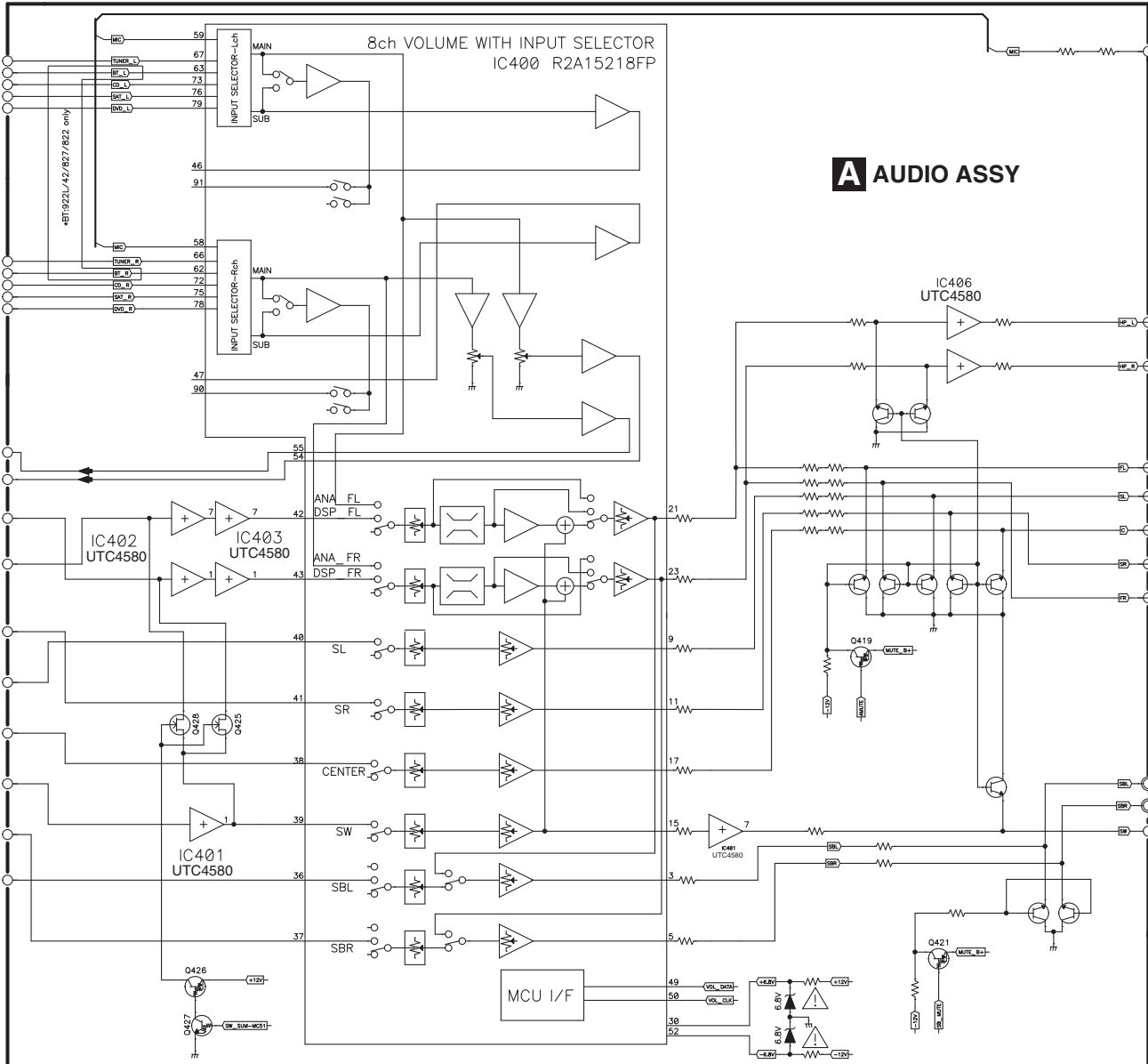
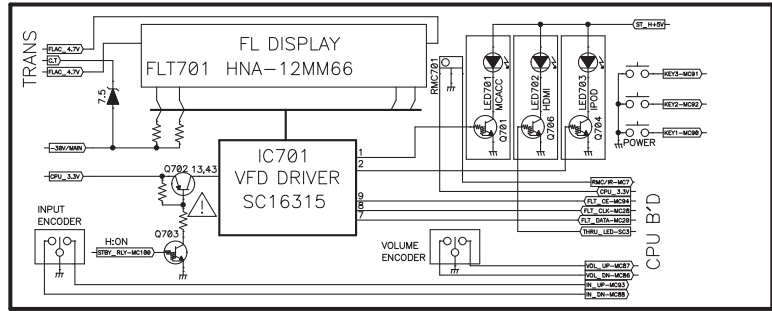
S HP ASSY**P** F-USB ASSY**B** AMP7 ASSY**C** MAIN ASSY

4.3 AUDIO BLOCK DIAGRAM (VSX-822-K)

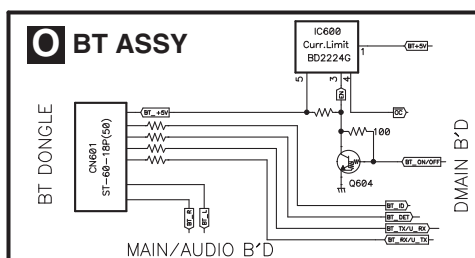
P F-USB ASSY



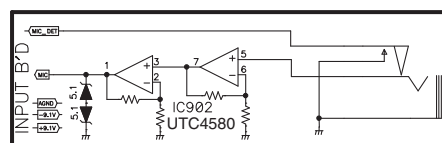
Q FRONT ASSY



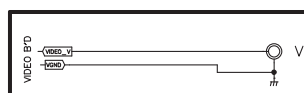
O BT ASSY

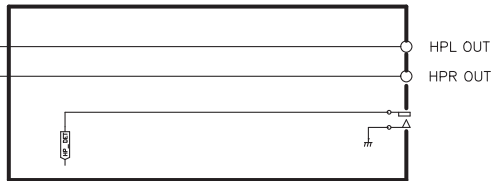
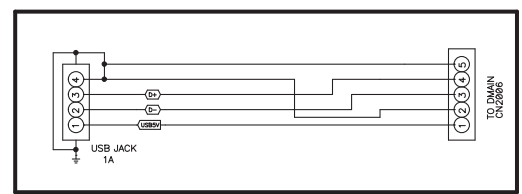
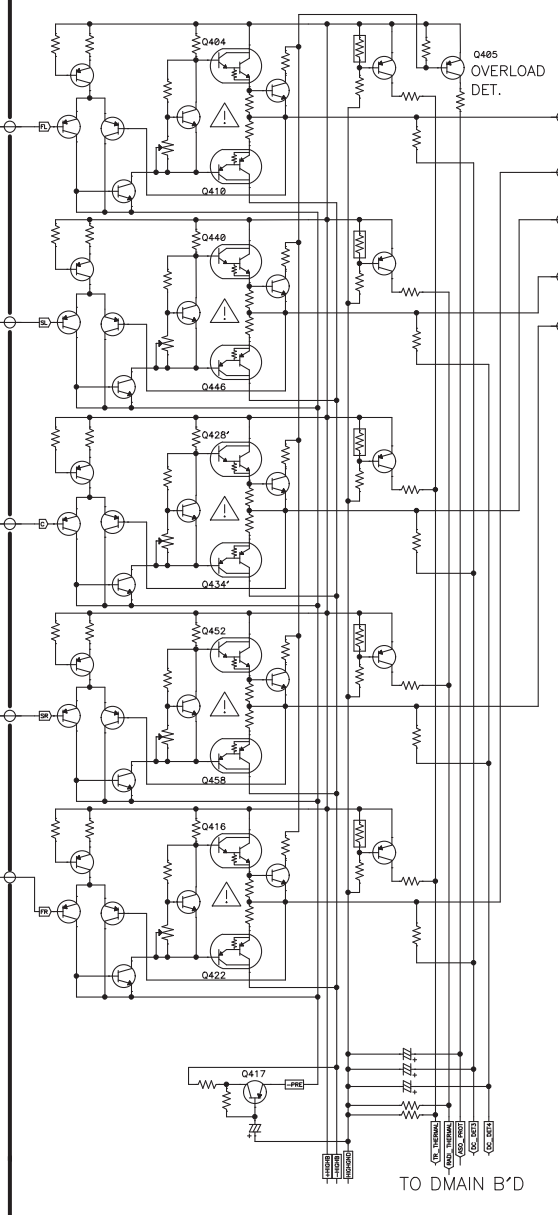
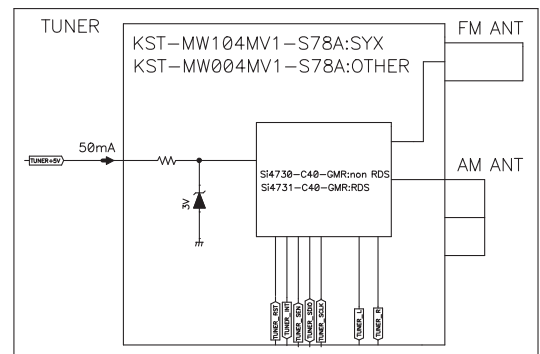
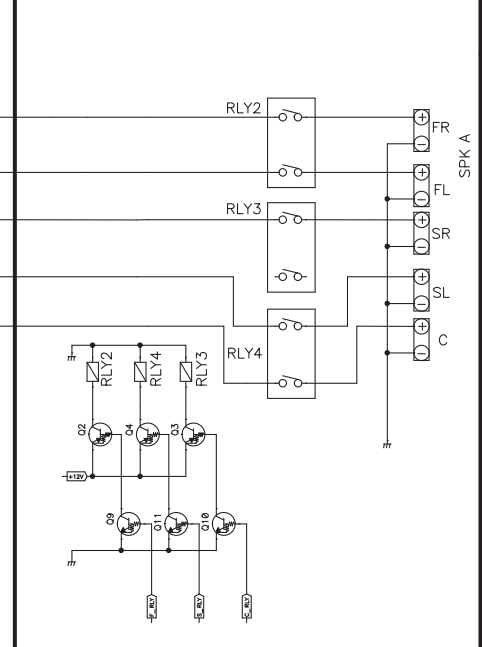


T MIC ASSY



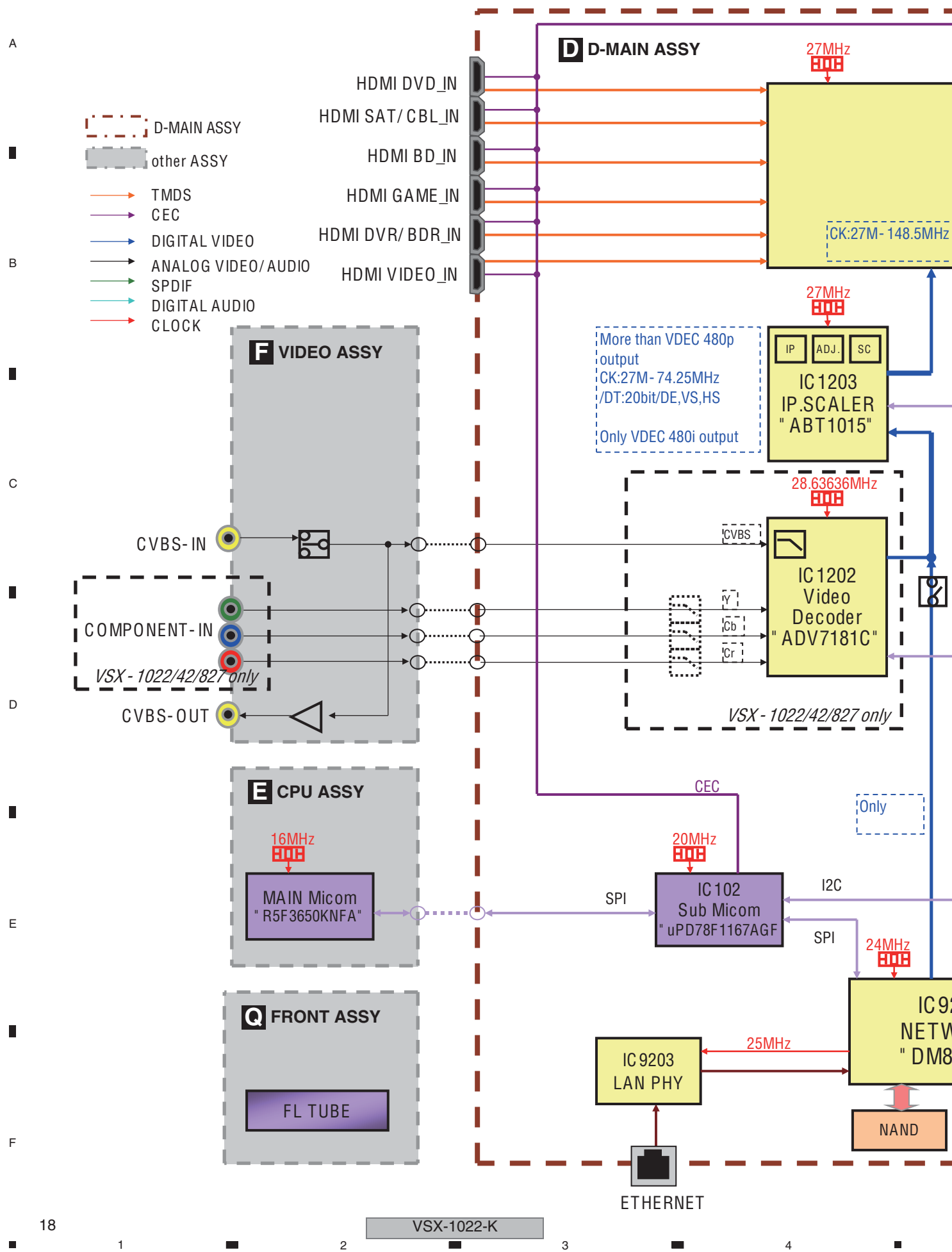
U FVIDEO ASSY

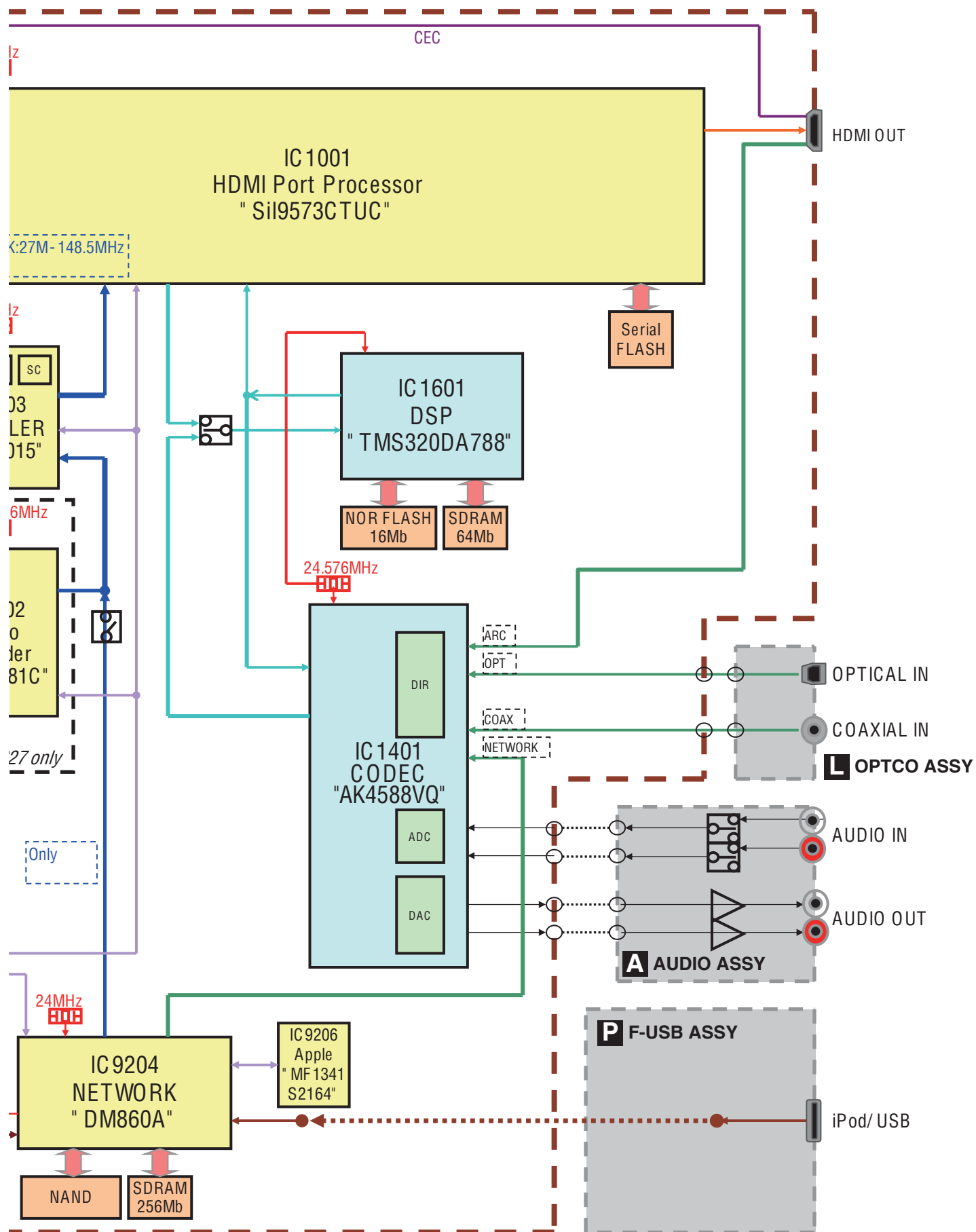


S HP ASSY**P** F-USB ASSY**B** AMP5 ASSY**C** MAIN ASSY

Y

4.4 D-MAIN BLOCK DIAGRAM



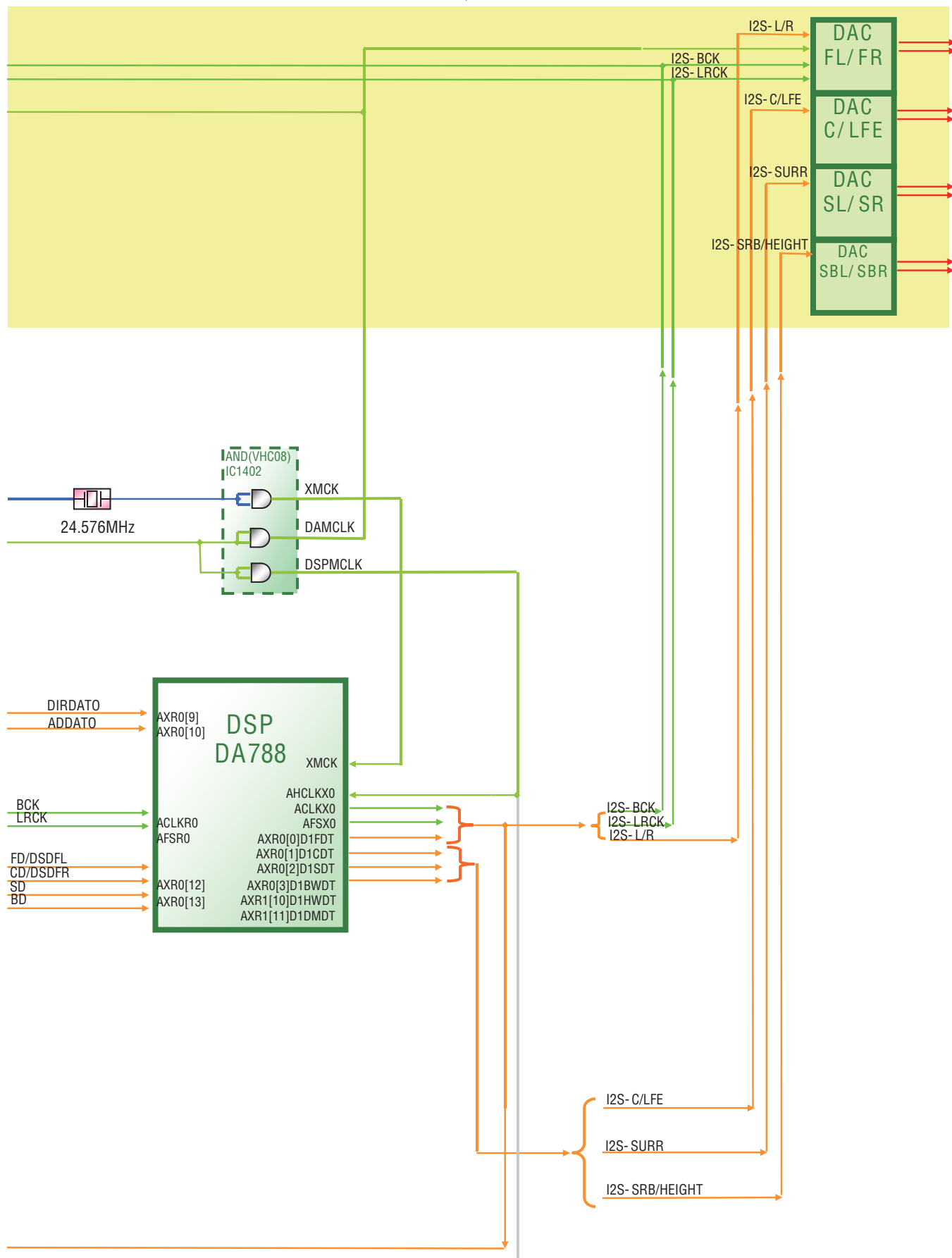


△

A

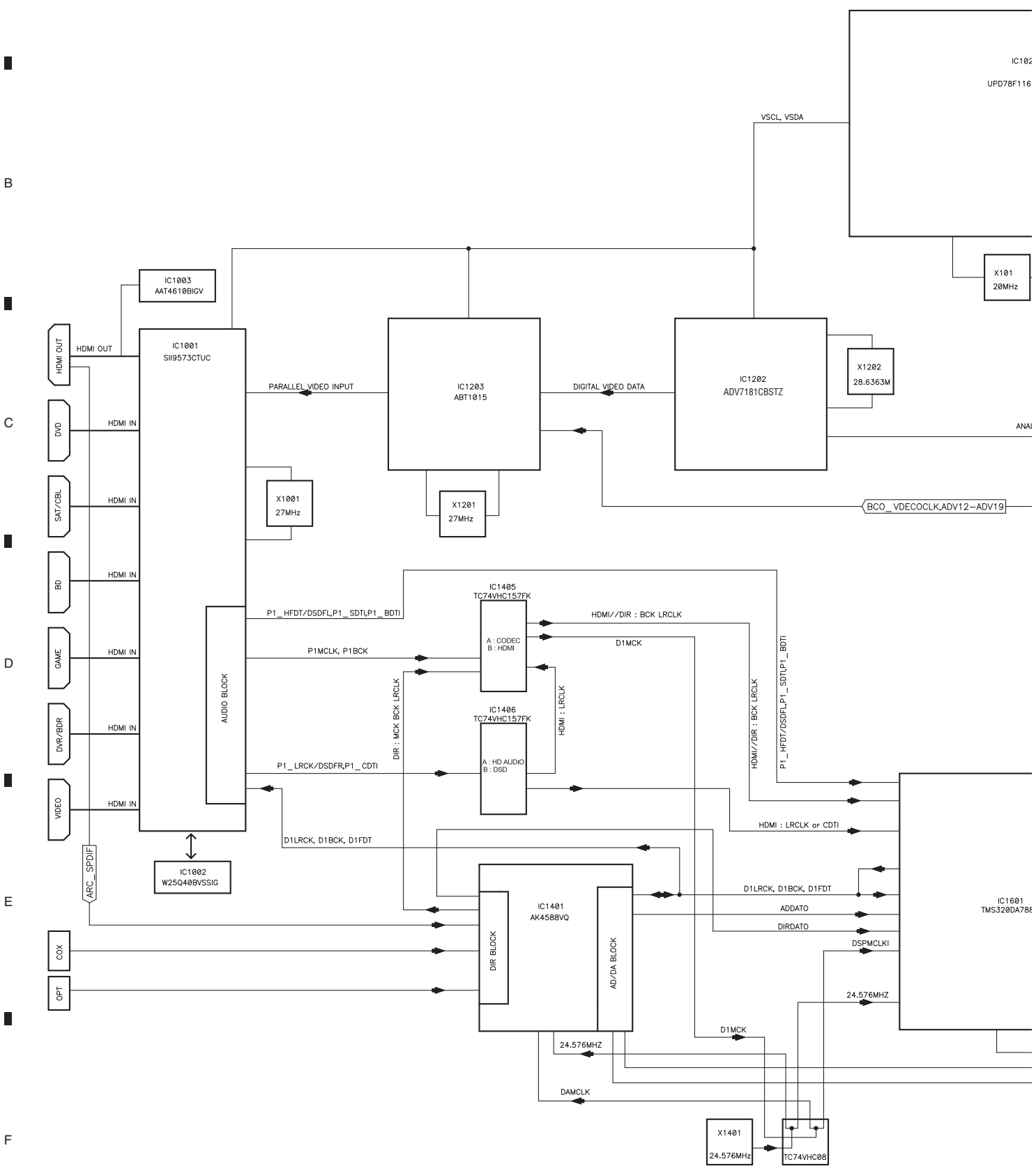


→ SPDIF → AMCLK → I2S → SYSCLK → FLG
 → I2S BCK,LRCK



4.6 D-MAIN BLOCK DIAGRAM (1/2)

D D-MAIN ASSY





5



6



7



8

A

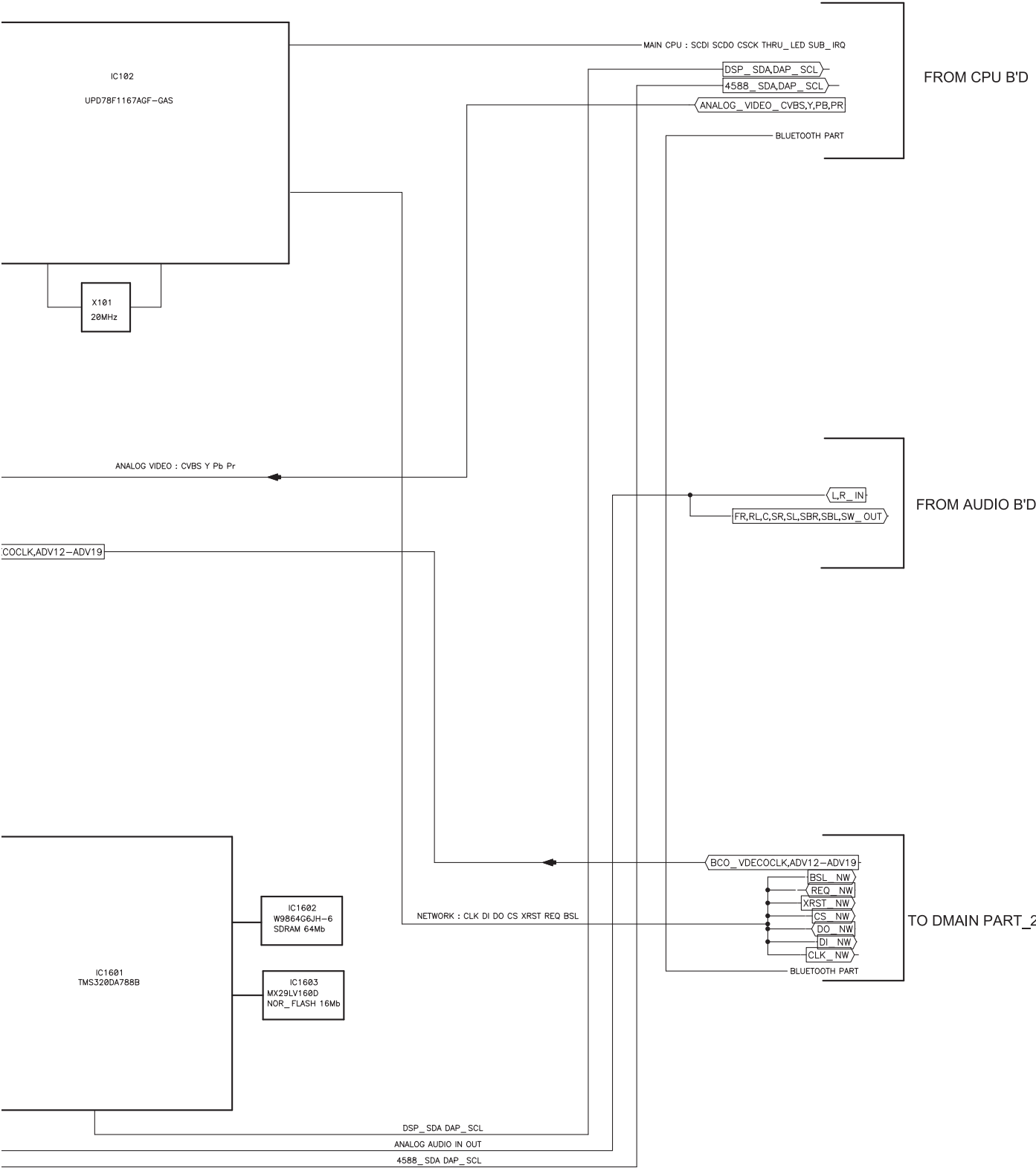
B

C

D

E

F



5



6



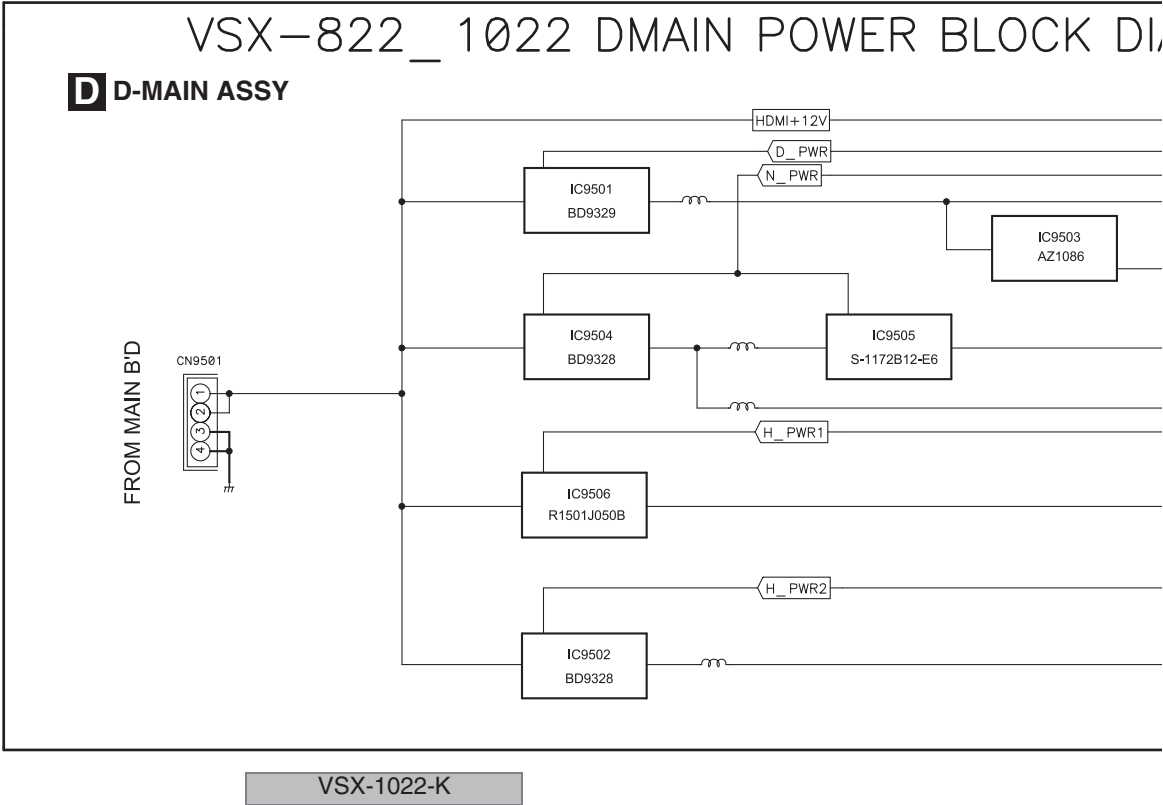
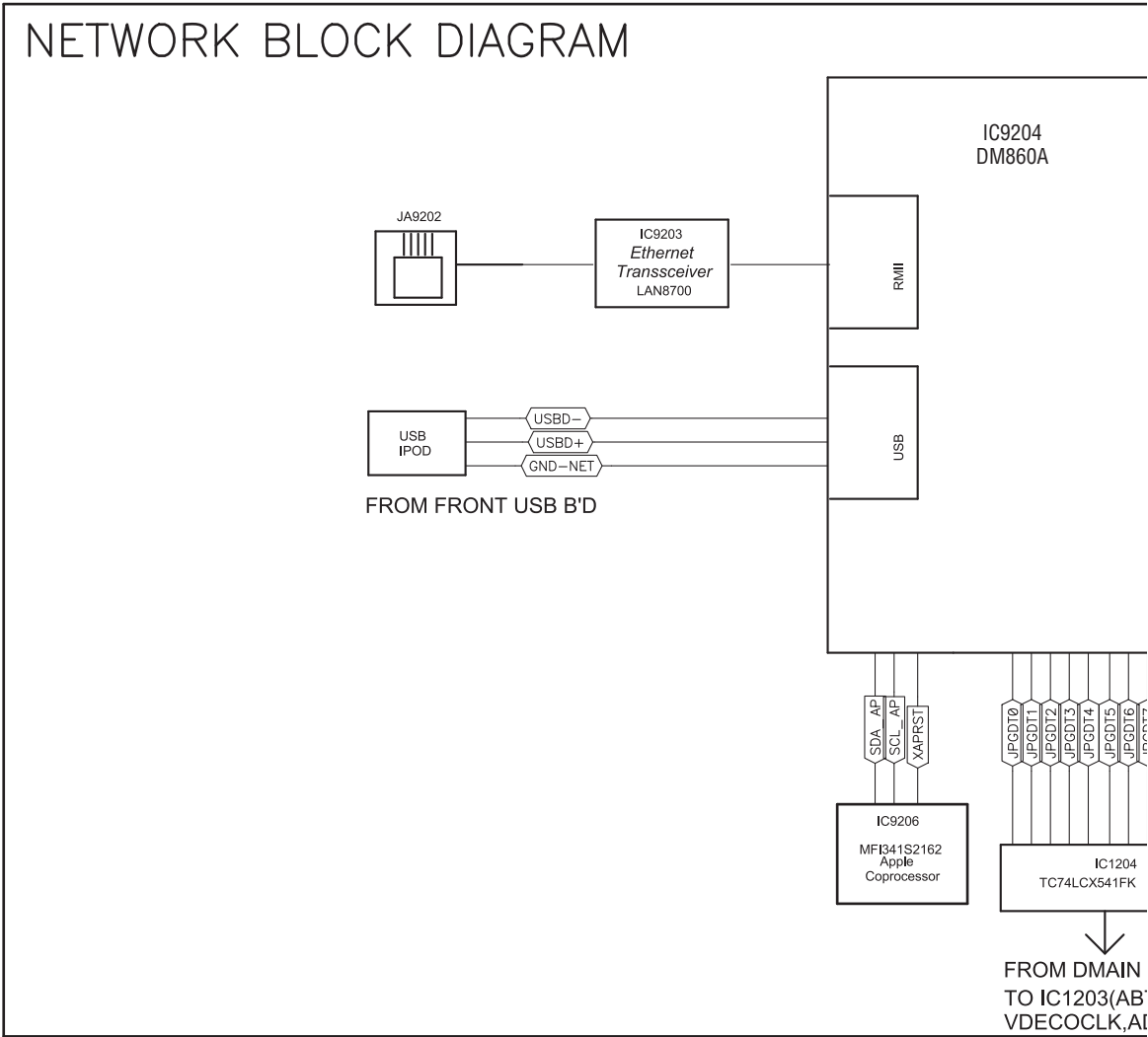
7

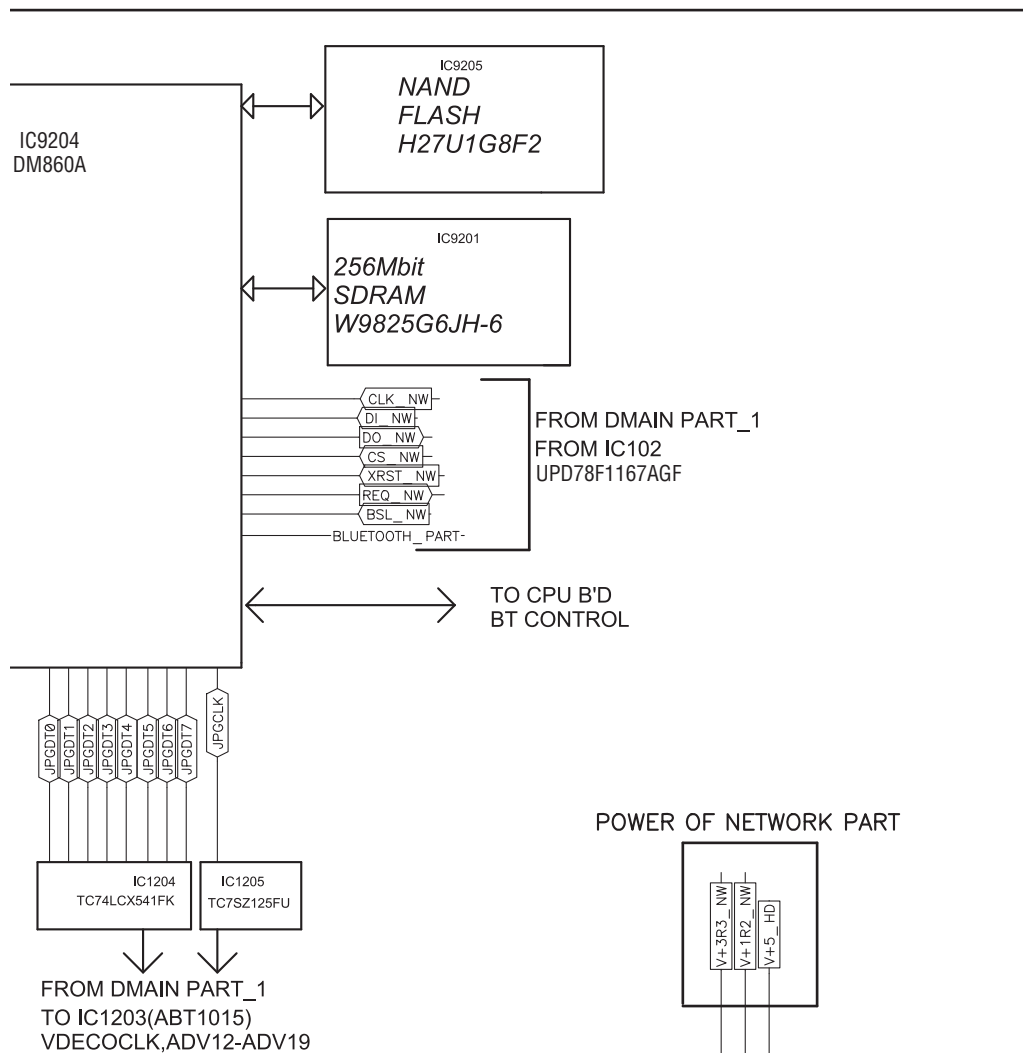


8

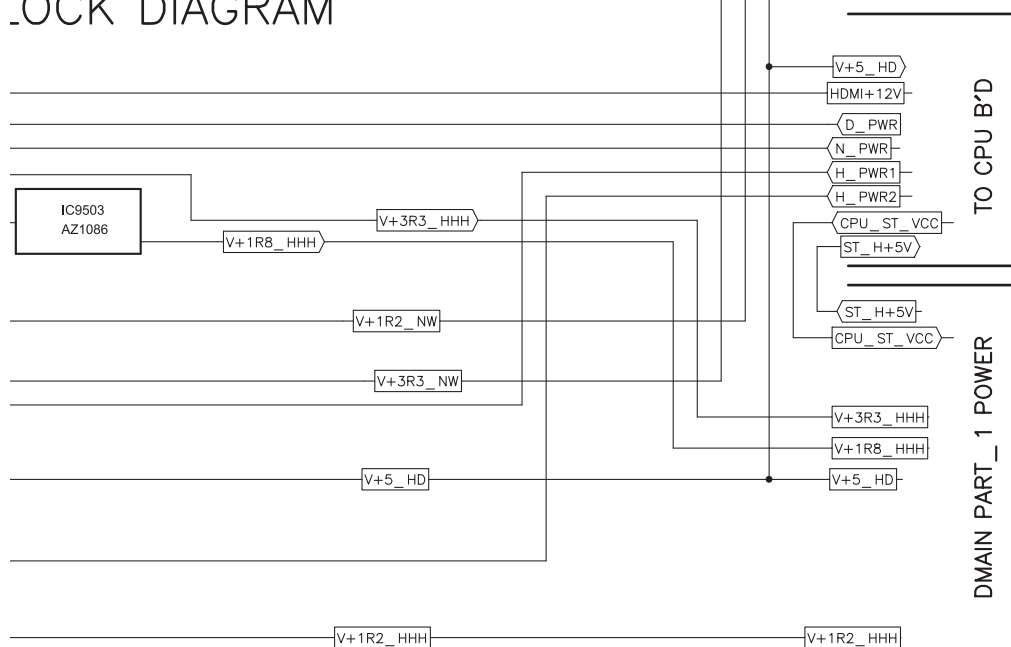
1 2 3 4

4.7 D-MAIN BLOCK DIAGRAM (2/2)





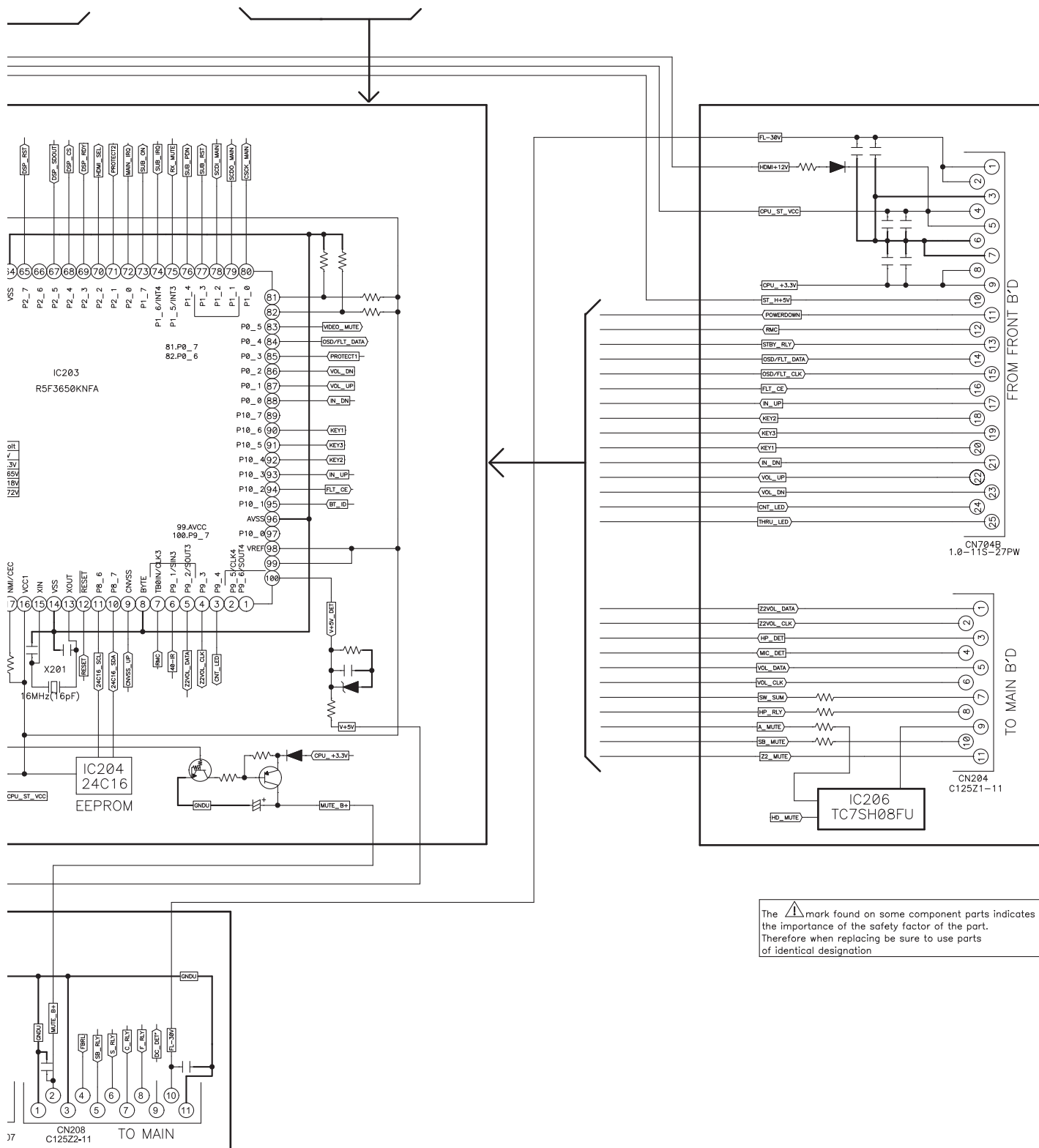
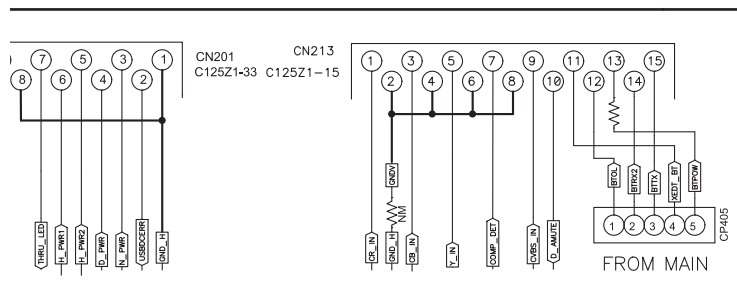
LOCK DIAGRAM



4

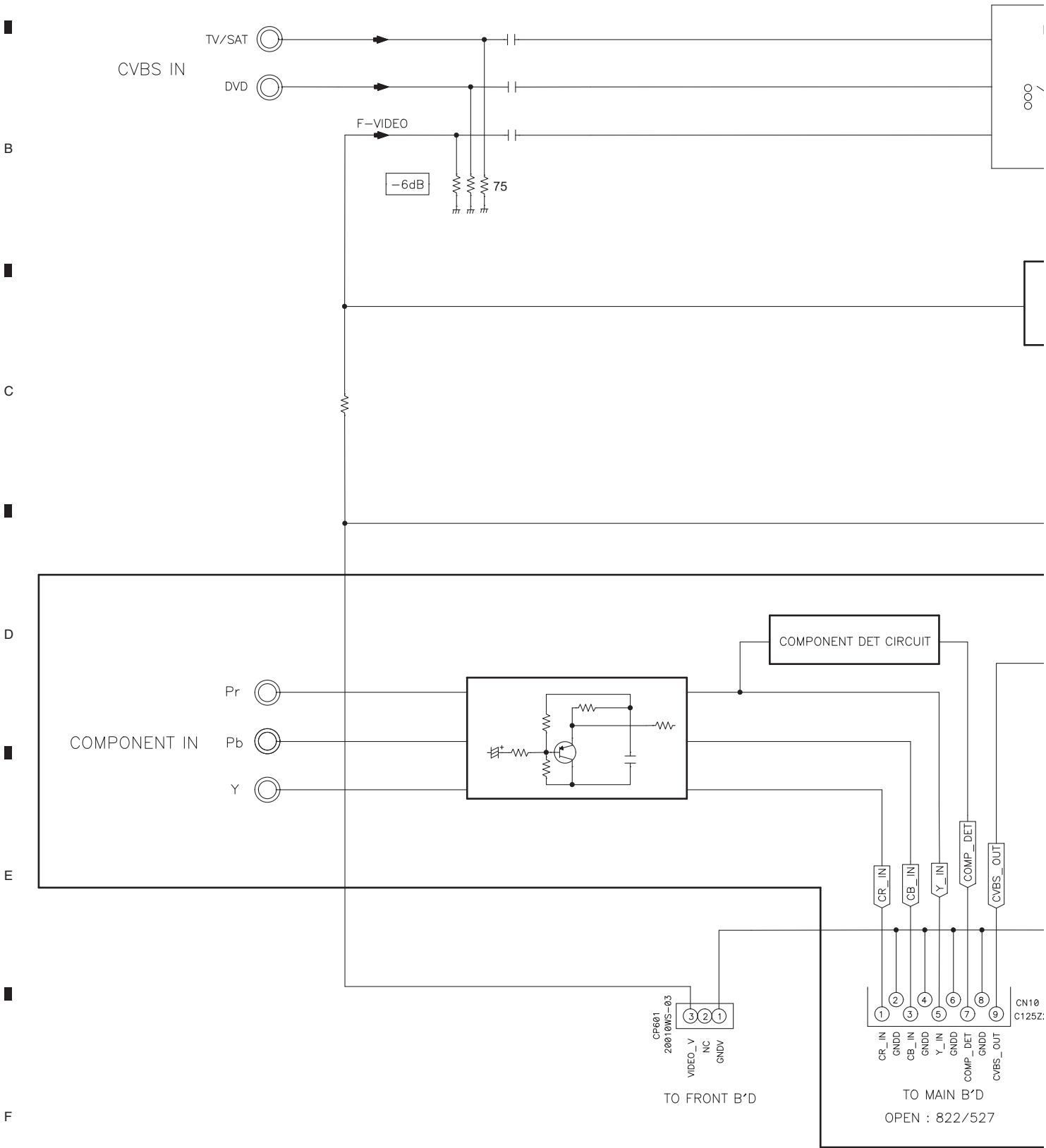
F

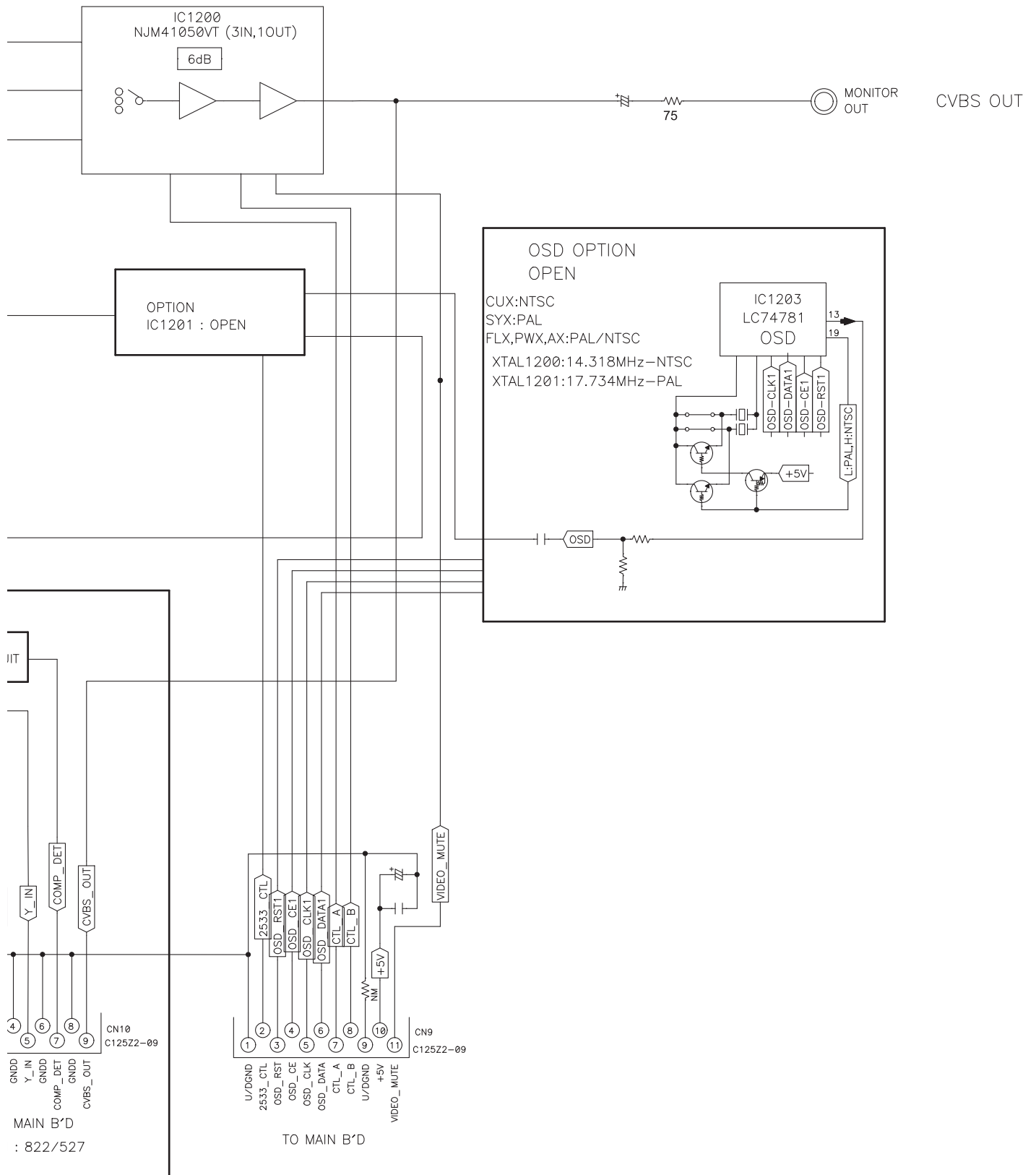




A

F VIDEO ASSY





1 2 3 4

4.10 POWER SUPPLY BLOCK DIAGRAM

A

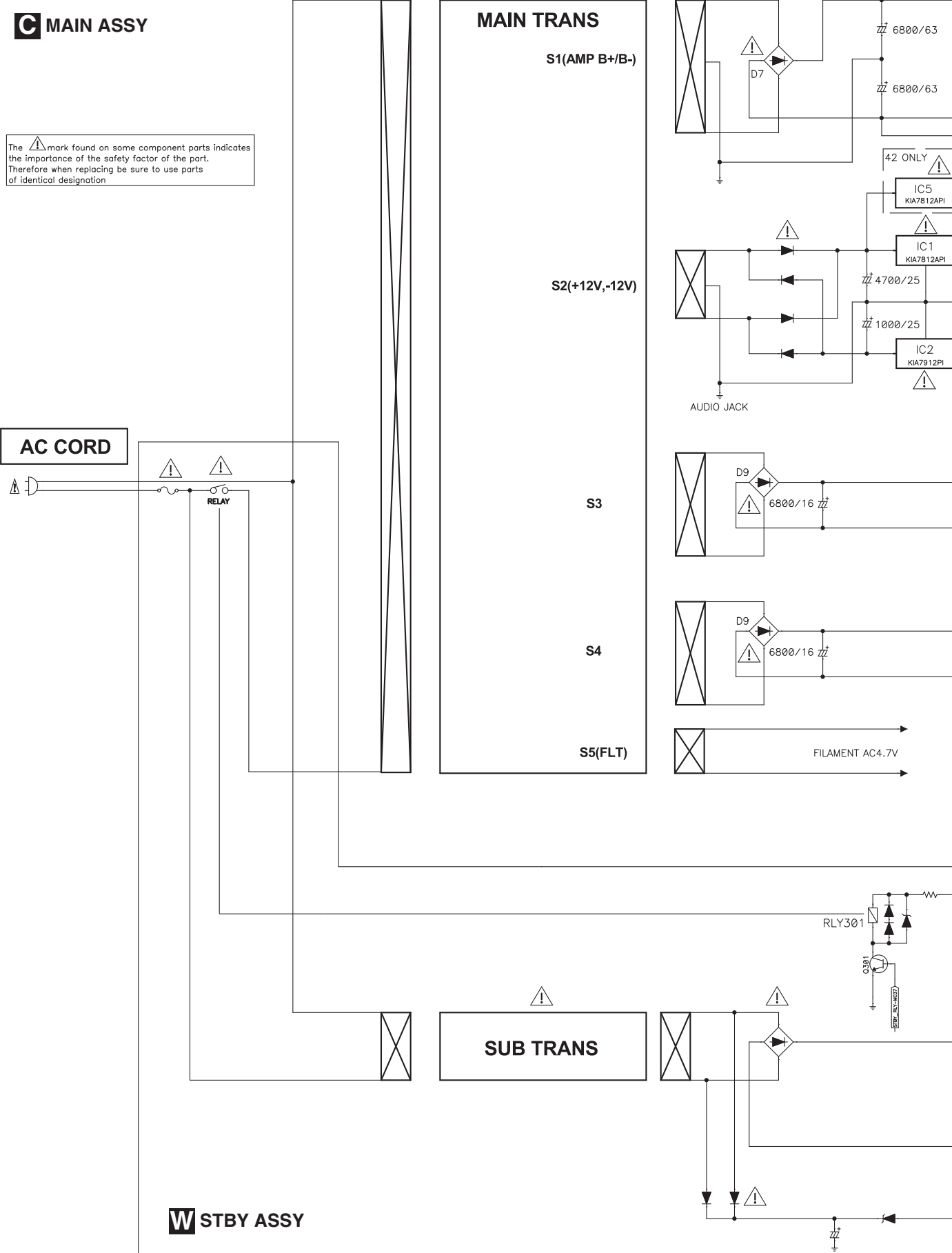
B

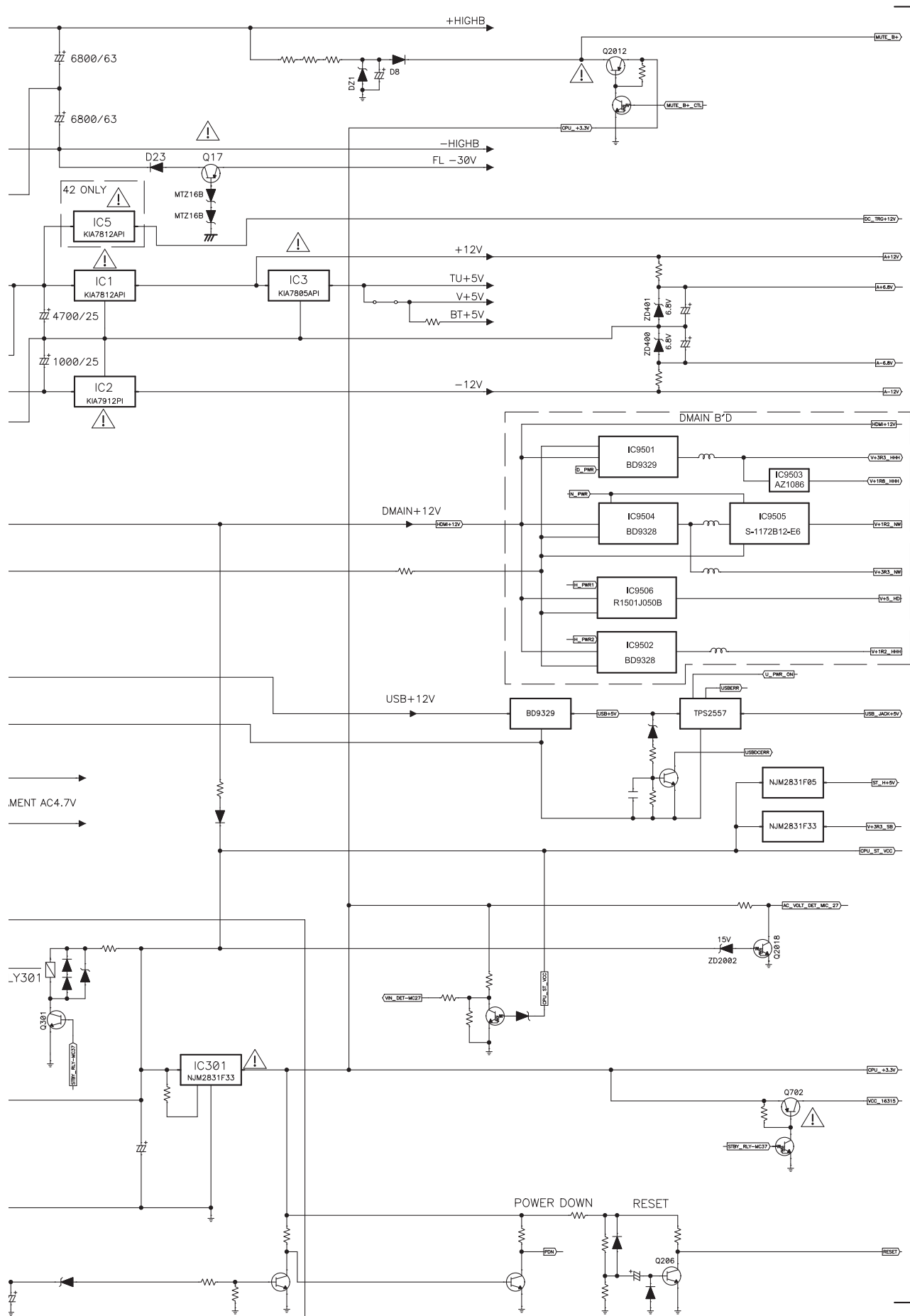
C

D

E

F





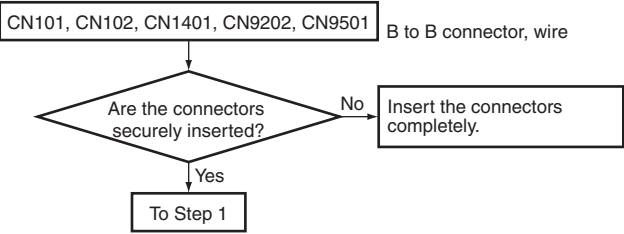
5. DIAGNOSIS

5.1 TROUBLESHOOTING

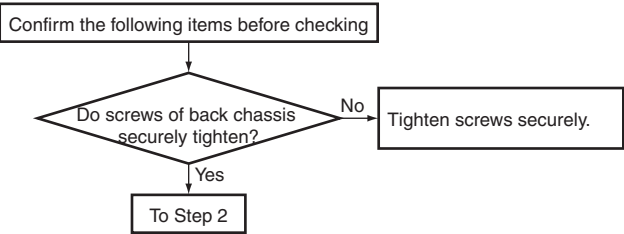
[1] DSP TROUBLESHOOTING

■ TROUBLESHOOTING FOR ALL DESTINATION

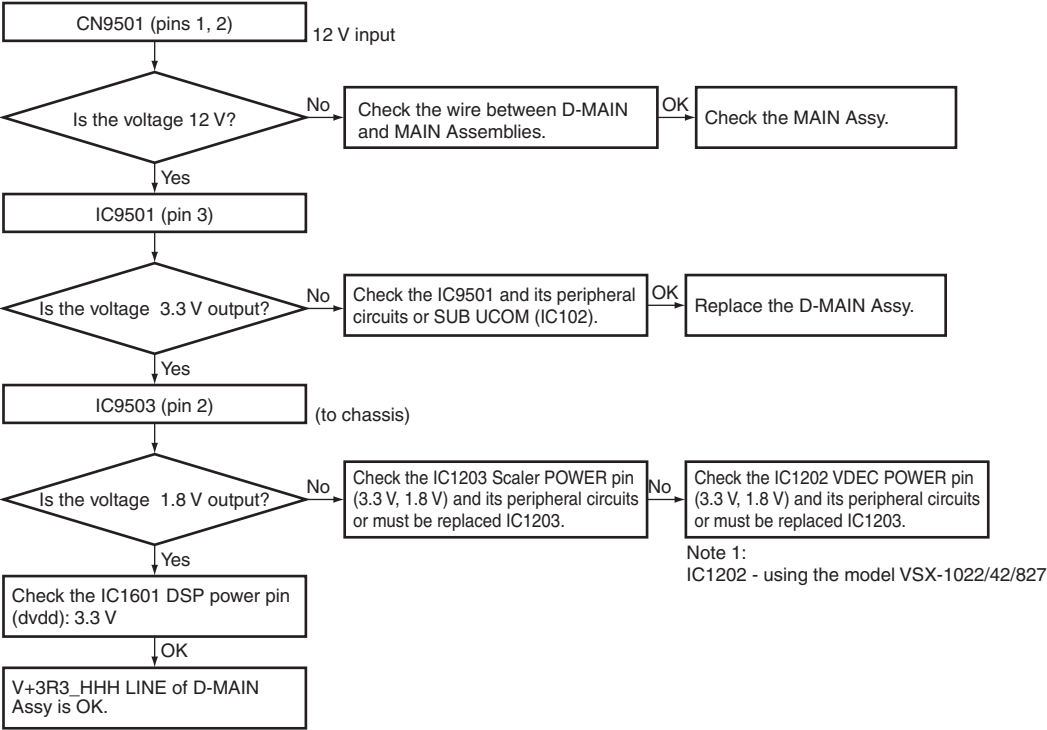
Step 0: Preliminary confirmation



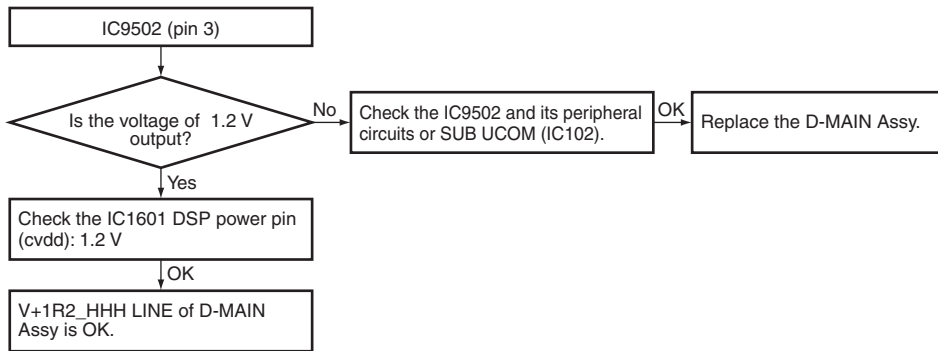
Step 1: Fixed board



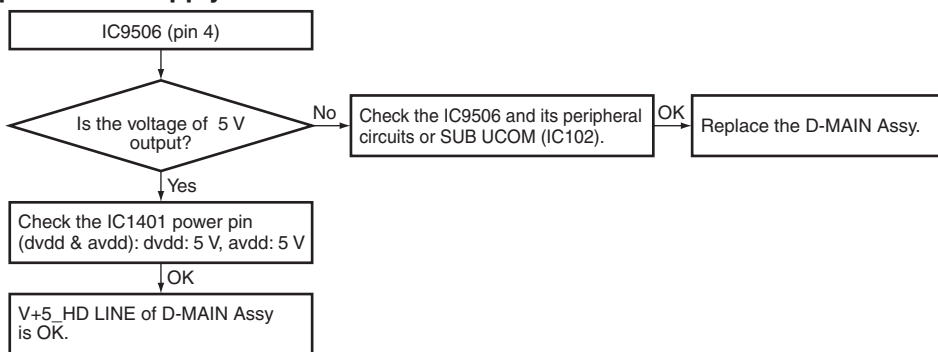
Step 2: Power supply



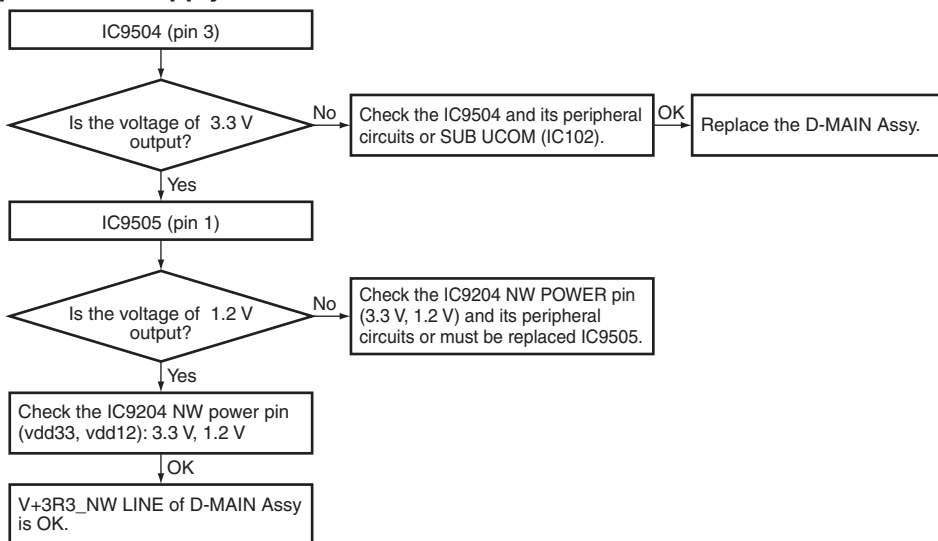
Step 3: Power supply



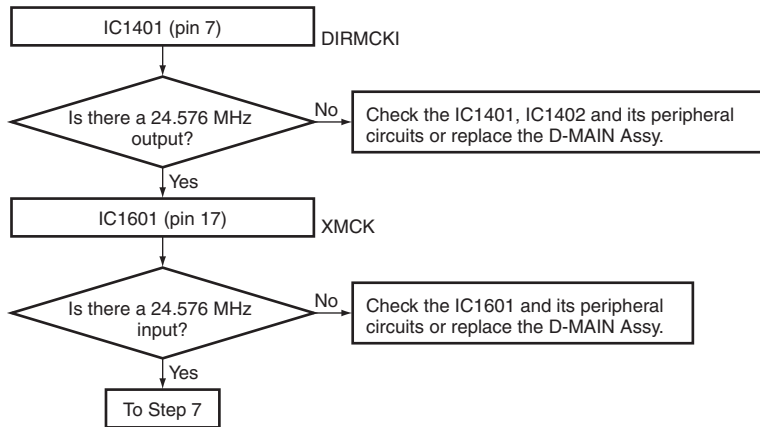
Step 4: Power supply



Step 5: Power supply

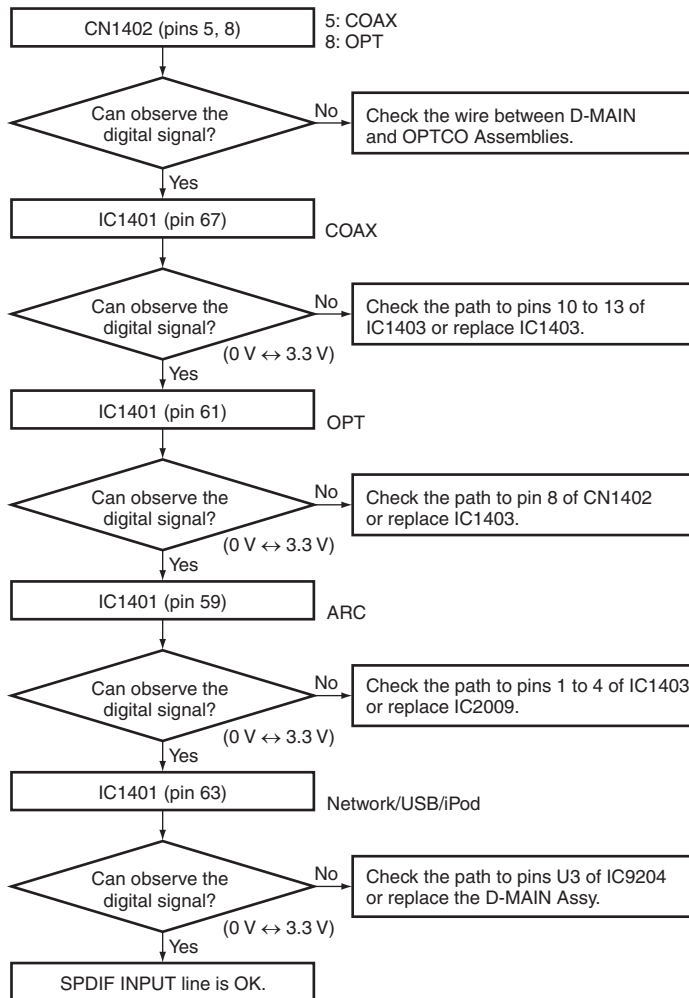


A Step 6: X'tal

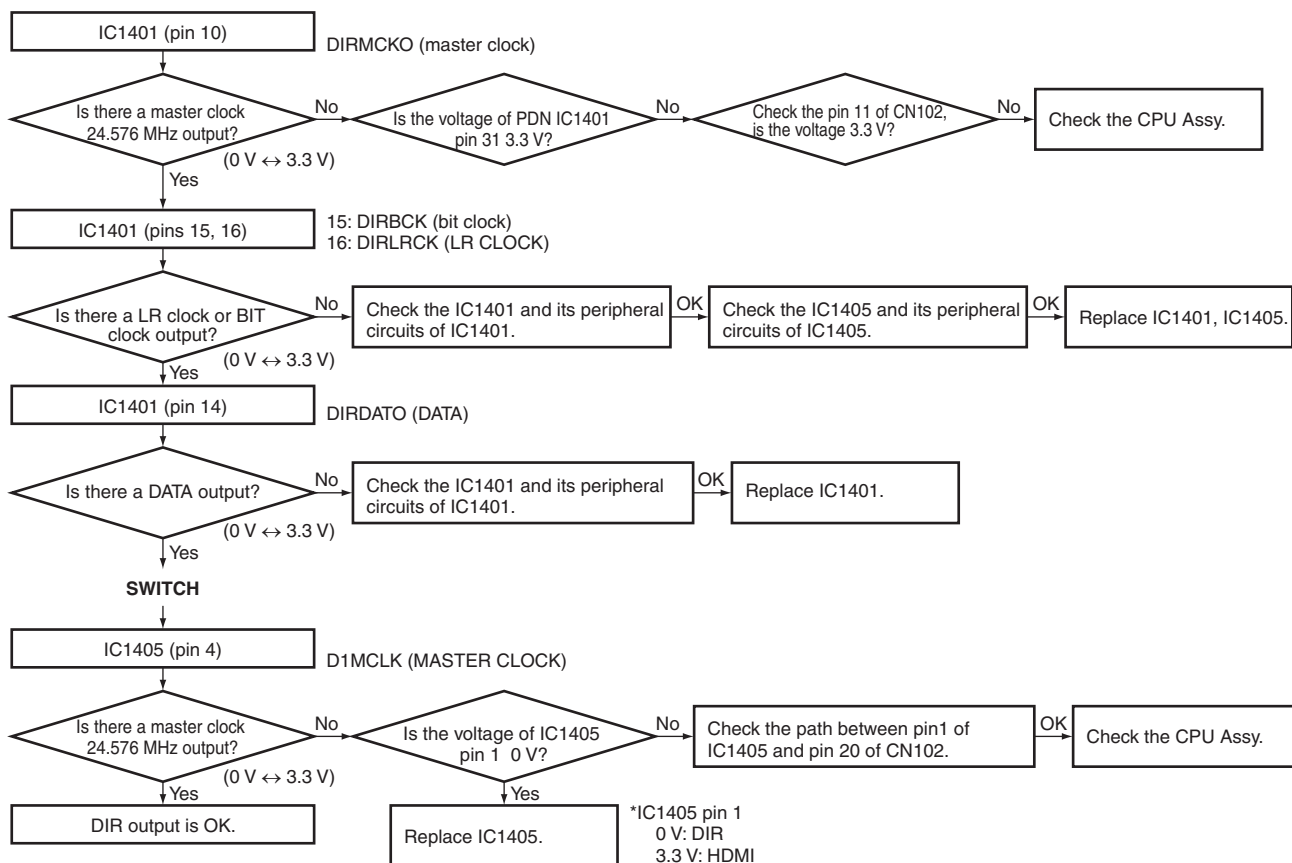


Step 7: DIR

Check that the S/PDIF signal is input.
Check that changes by pulling out and inserting the digital input lines.

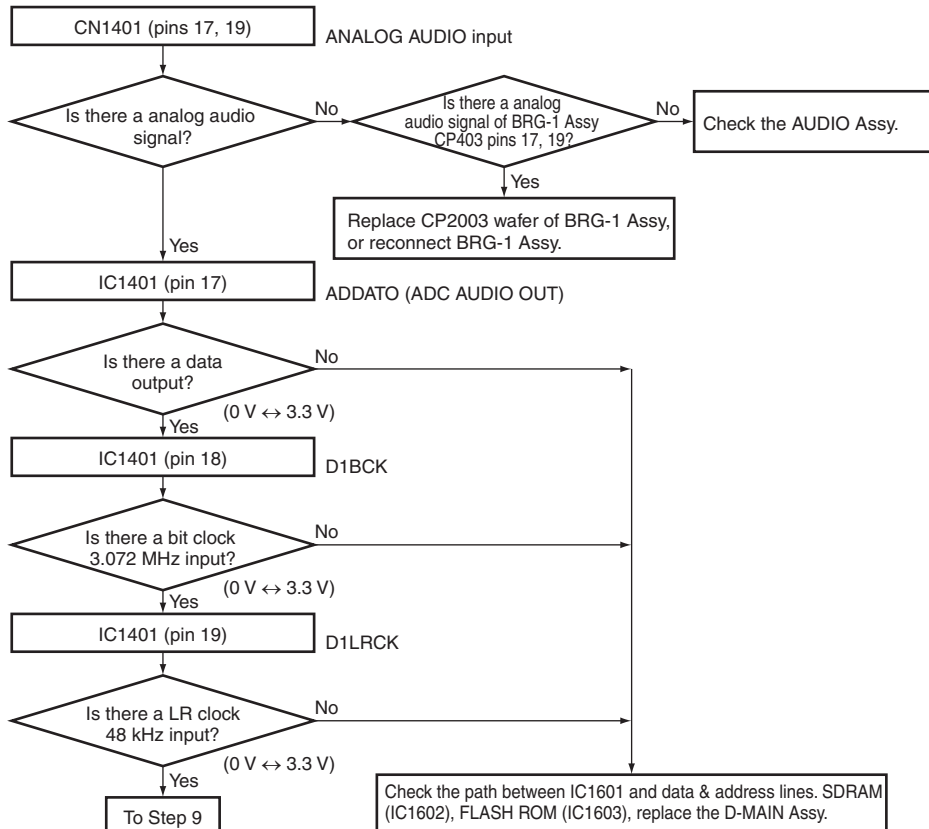


Check that the data and clock signals are output.



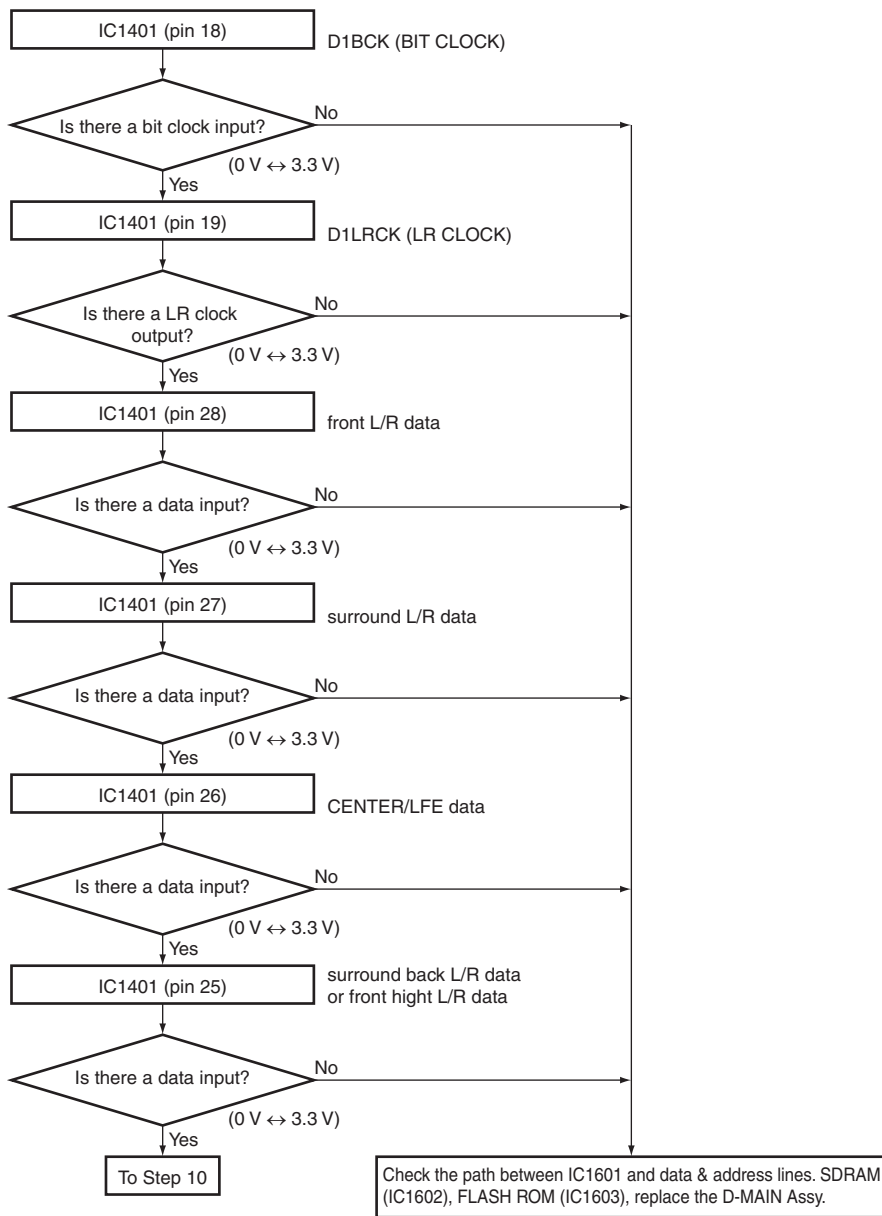
Step 8: ADC

Check that the ANALOG input to DSP mode.



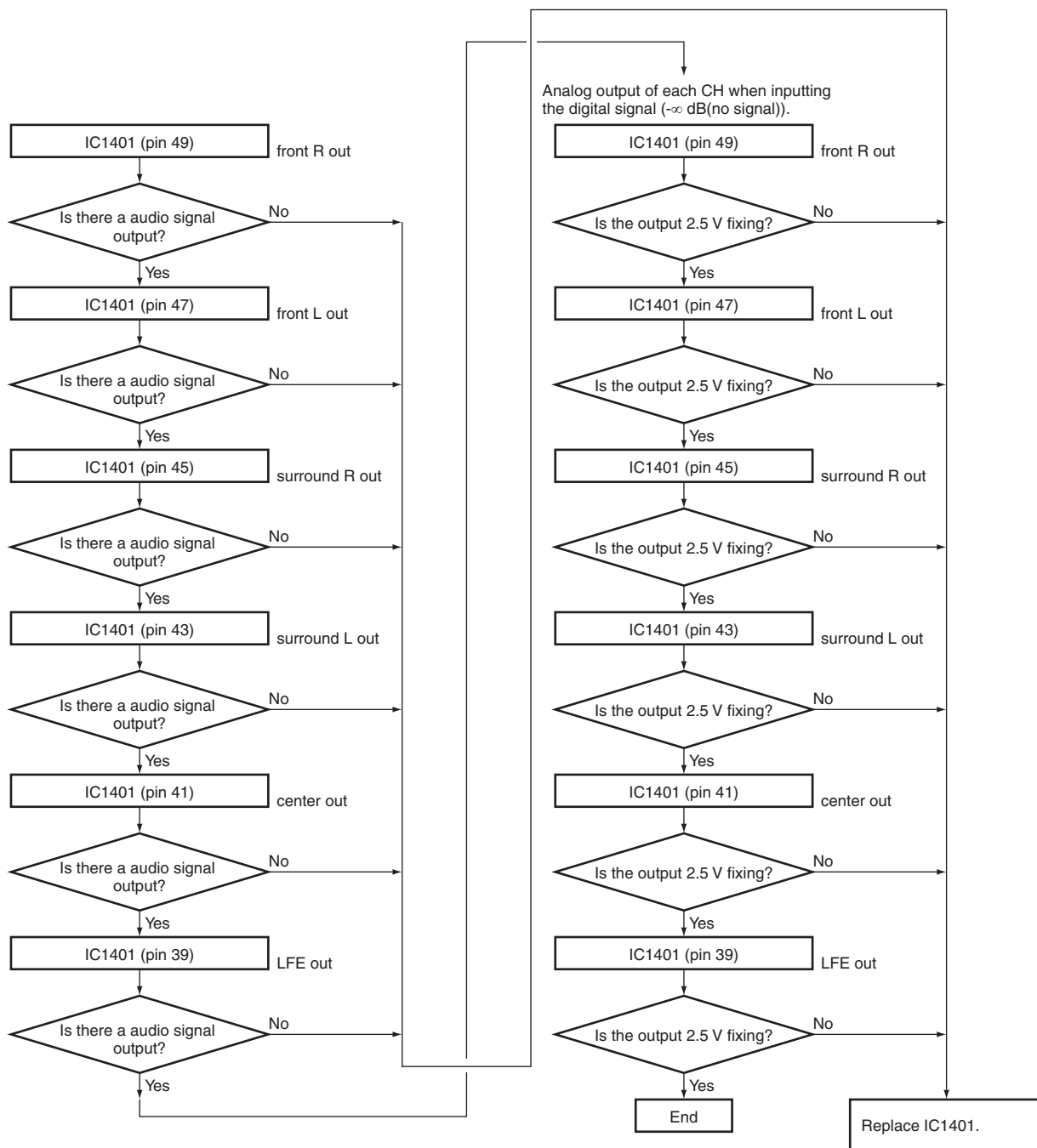
A Step 9: DSP mode audio output

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



Step 10: CODEC output (ANALOG AUDIO OUT)

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



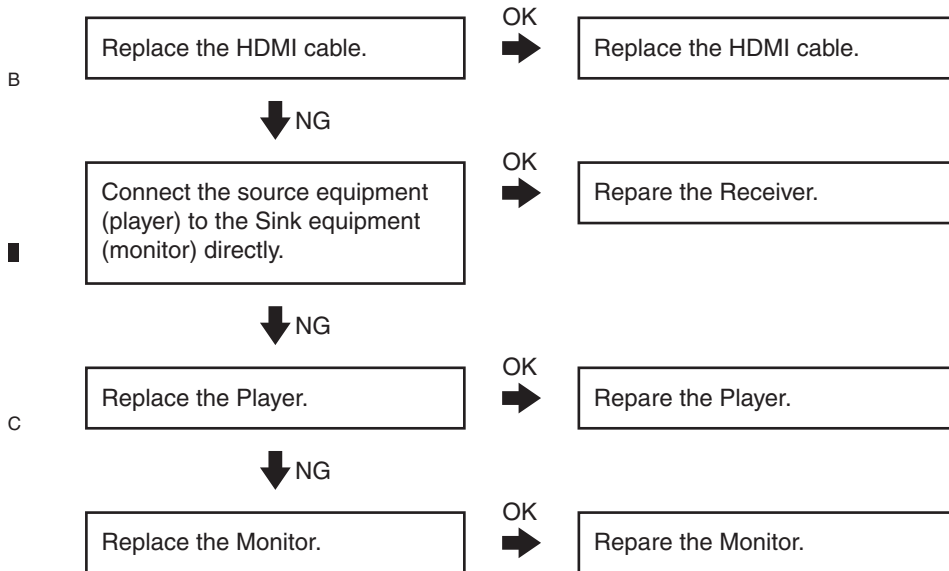
A [2] HDMI TROUBLESHOOTING

■ HDMI Troubleshooting

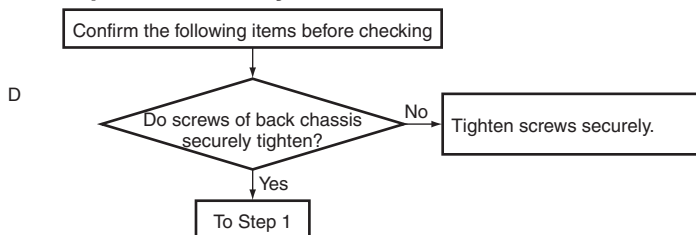
Cause for noncompletion of HDMI authentication between the source equipment and this unit.
(the HDMI indicator is unlit or flasher)

■ HDMI Simple Diagnosis

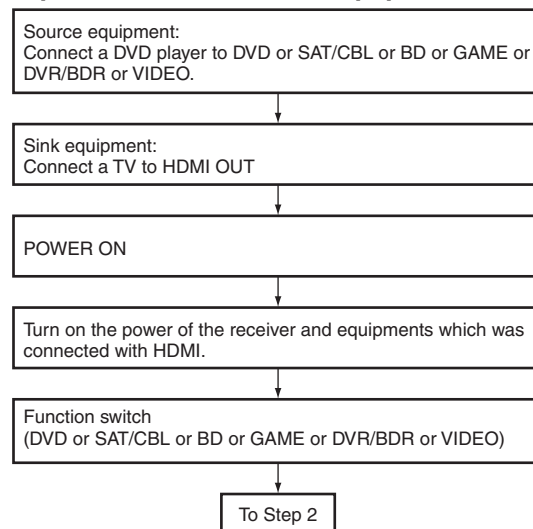
Causes for no display or sound from the monitor



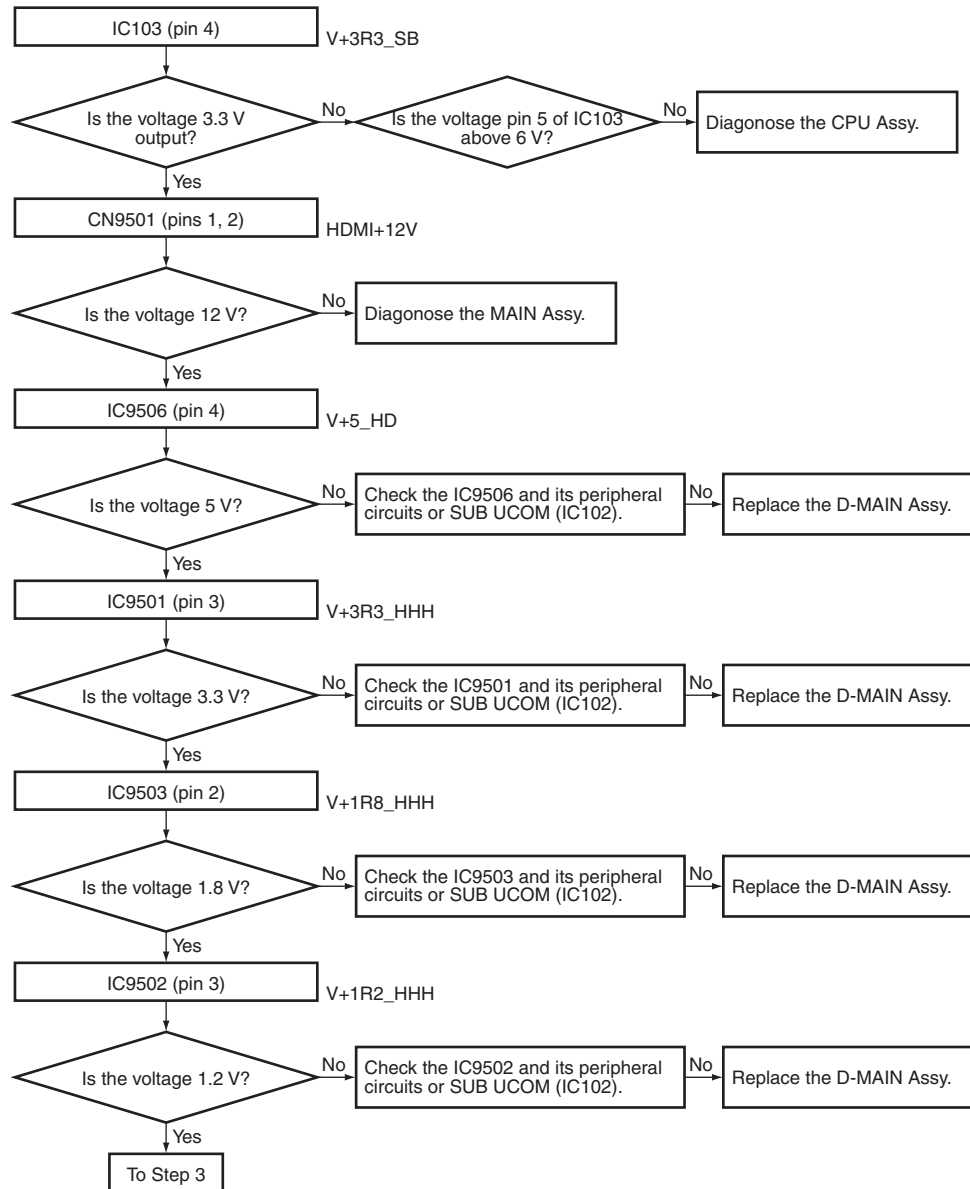
Step 0: Preliminary confirmation



Step 1: Connect the HDMI equipment

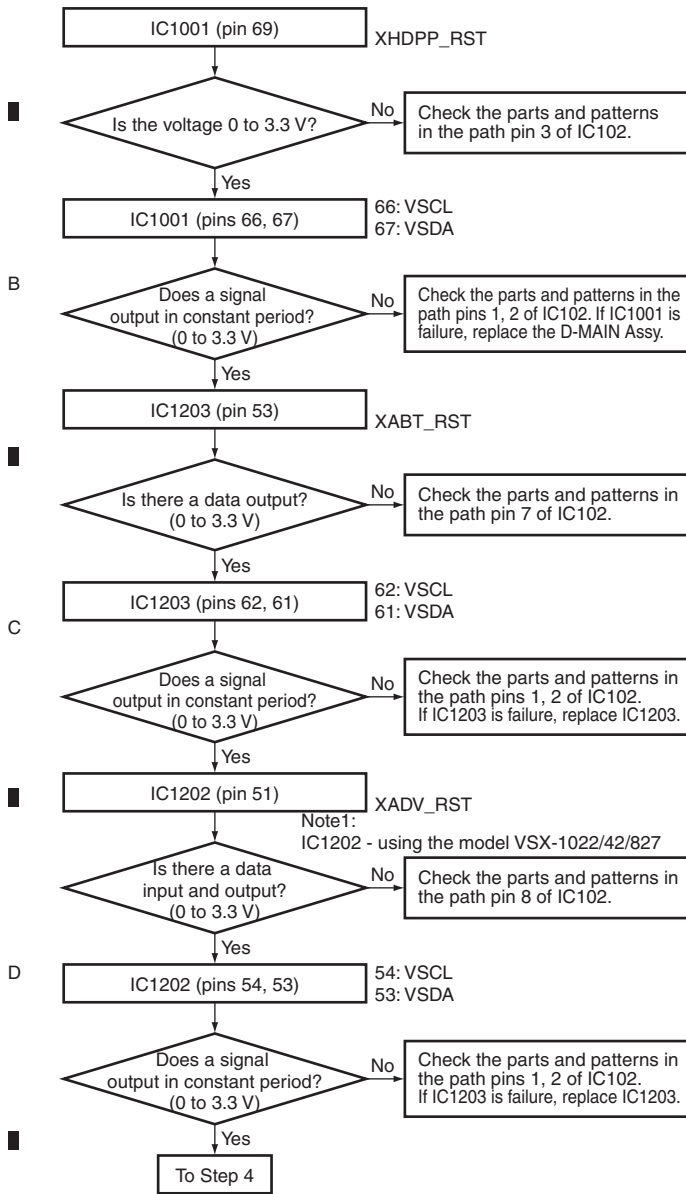


Step 2: Power supply

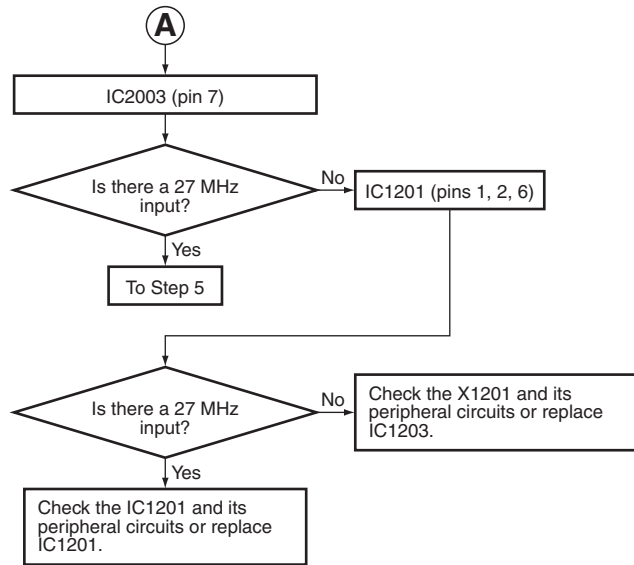
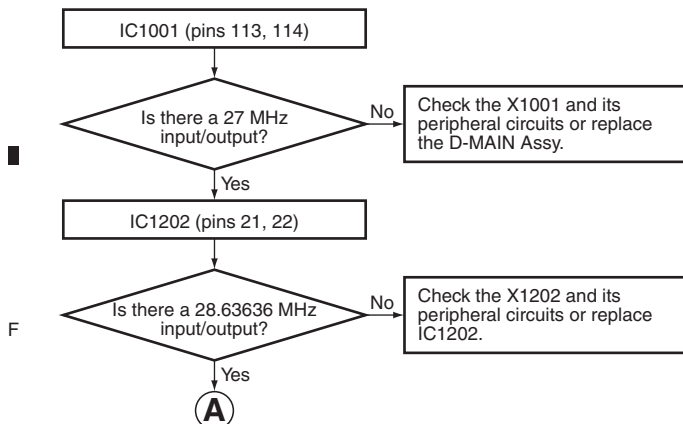


A Step 3: Diagnosis

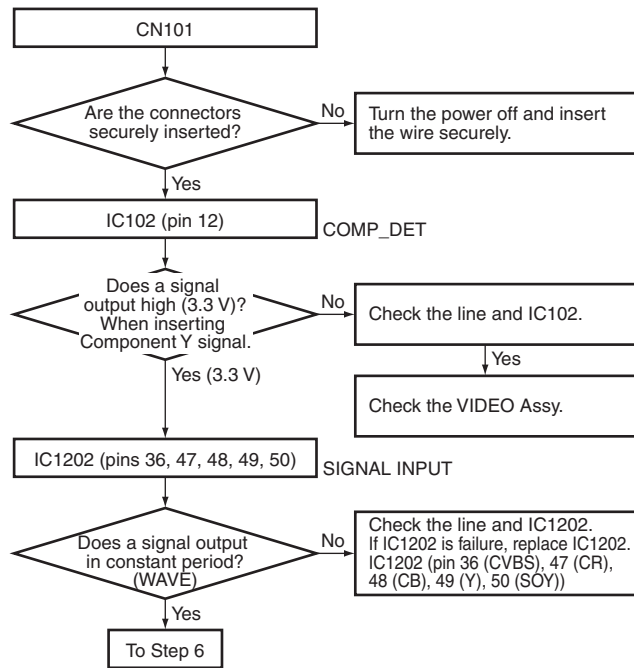
Each data lines confirmation checks it after standby off/on.



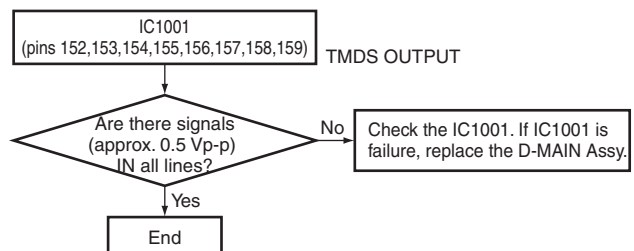
E Step 4: X'TAL



Step 5: ANALOG UP (VSX-1022/42/827 only)

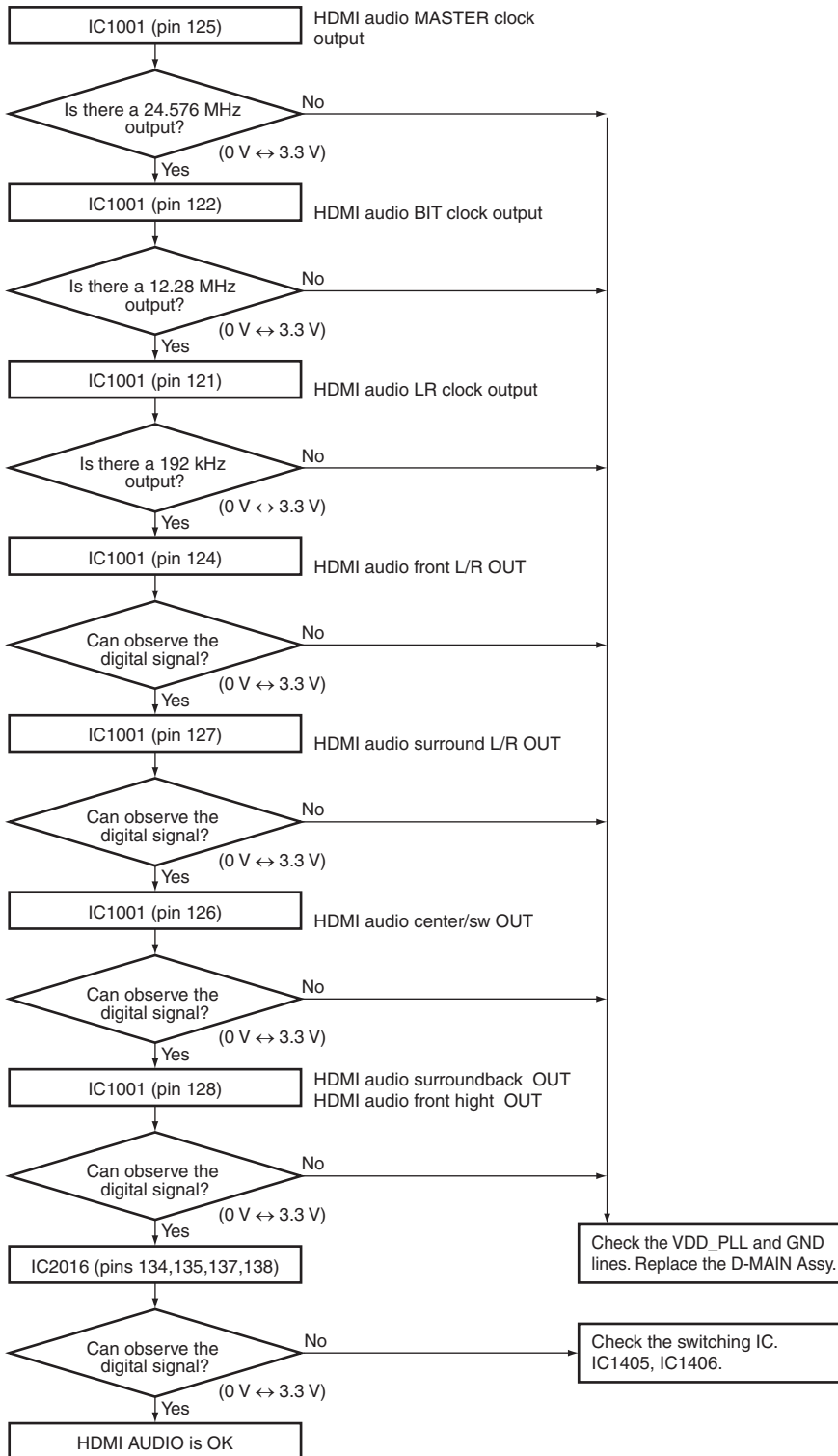


Step 6: TMDS



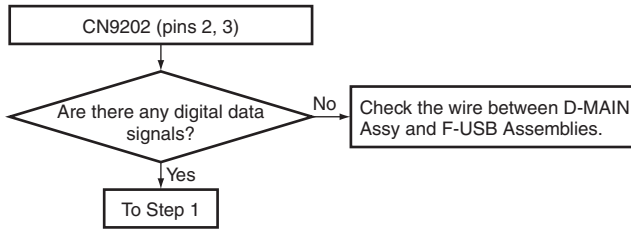
Step 7: HDMI AUDIO

*play is Dolby thru HD @ dts master audio source

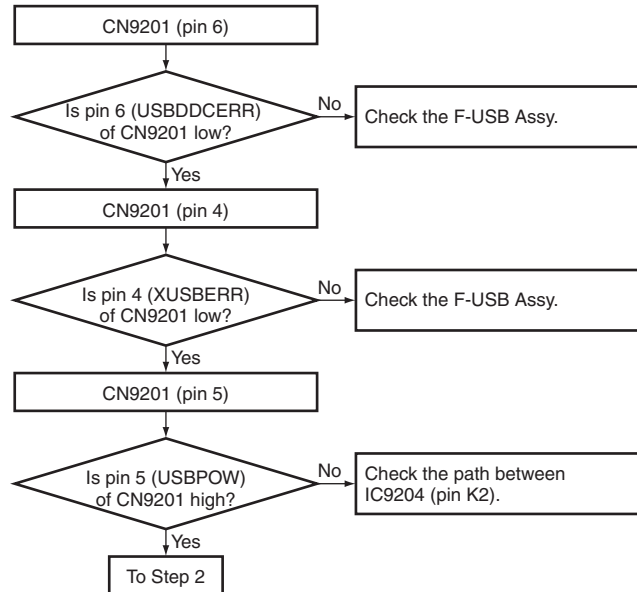


A [3] iPod TROUBLESHOOTING

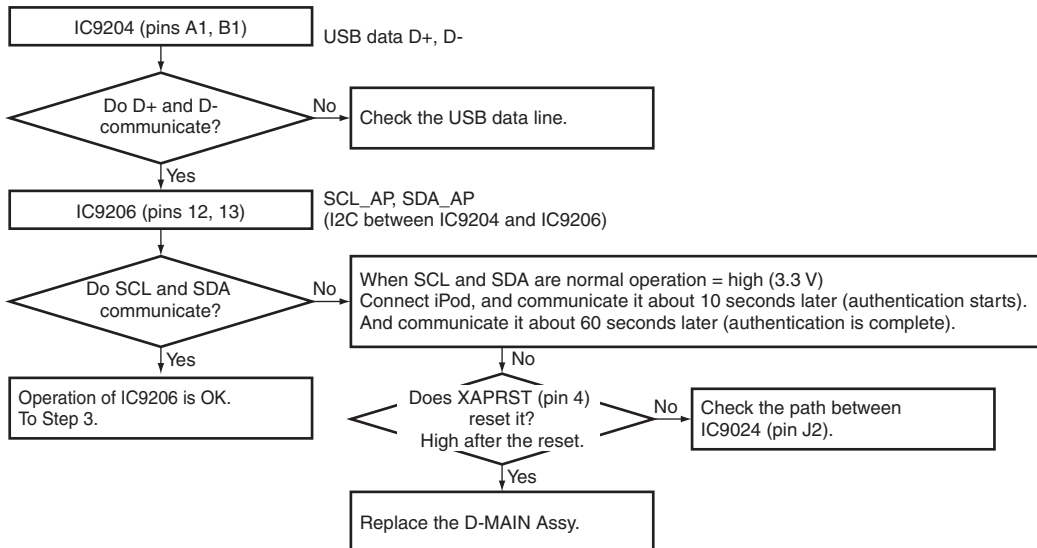
Step 0: iPod/USB Power supply



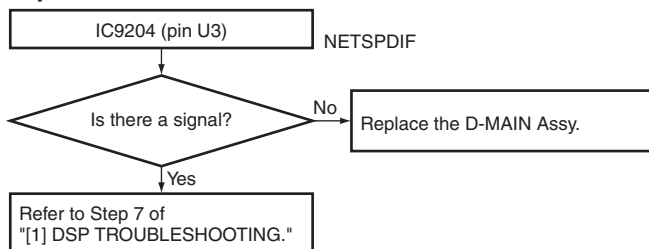
Step 1: Diagnosis



Step 2: Operation of iPod (Authentication process)

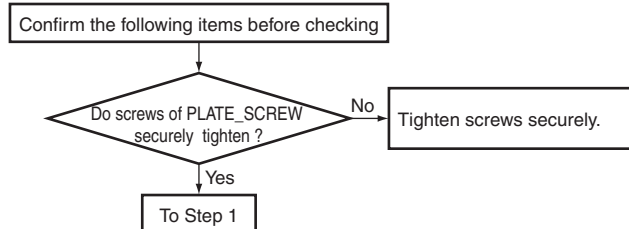


Step 3: Audio out check

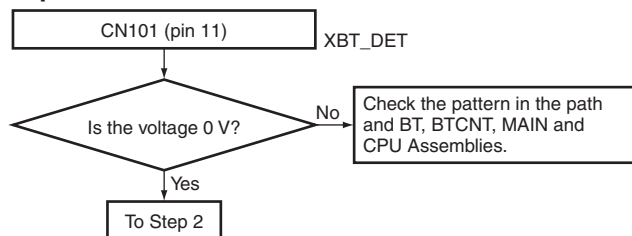


[4] BT (Bluetooth) TROUBLESHOOTING

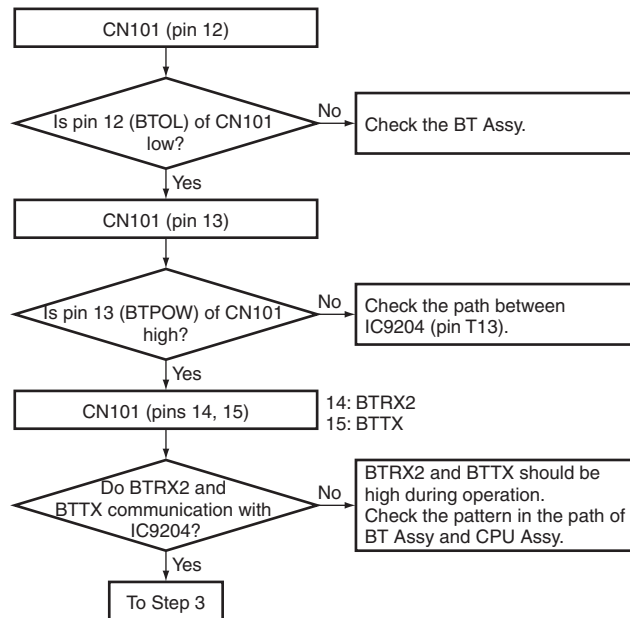
Step 0: Preliminary confirmation



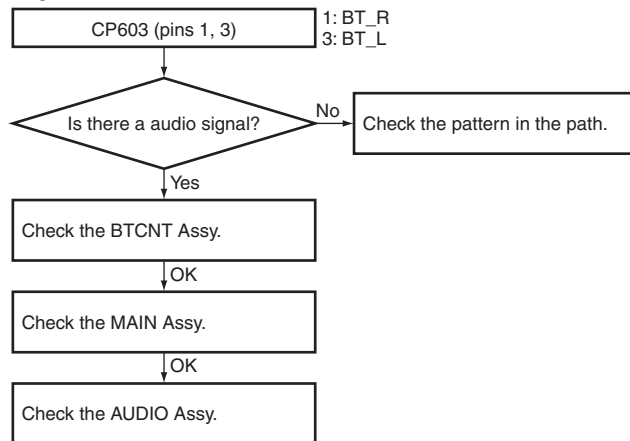
Step 1: BT_DET



Step 2: Diagnosis



Step 3: Audio out check



5.2 ADAPTER ERROR MESSAGE

Functional Name

Adapter port overcurrent detection

Outline

When the BT adapter is inserted in Adapter port, turn off the power of the Adapter port forcibly when it detects an overcurrent. And display ERROR state in FL.

Basic Operation

Front Key Sequence Change	Character Display	Time (sec.)	Icon Display (FL)	LED Display
When the overcurrent is detected	1234567812 A:D:PERR *1 Check it after turning the power once off then back on again, and it becomes the normal operation if normal.	The display continues until the power is turned off.	—	—

*1 Return the "ADP ERR" display to the normal display if you change it into other FUNCTION only in the ADAPTER PORT FUNCTION.
Also display "ADP ERR" if the ADAPTER PORT FUNCTION is ERROR state.

Explain Operation Detail

For detection method

- Confirm a detection port at intervals of 20 msec to 50 msec (*2), and judge it as an overcurrent when you detected an error consecutively three times.

*2 It is assumed that it is fixed value of the 20 msec to 50 msec degree.

5.3 USB/iPod ERROR MESSAGE

Functional Name

iPod ERROR MESSAGE

Outline

Error message is displayed at abnormality time.

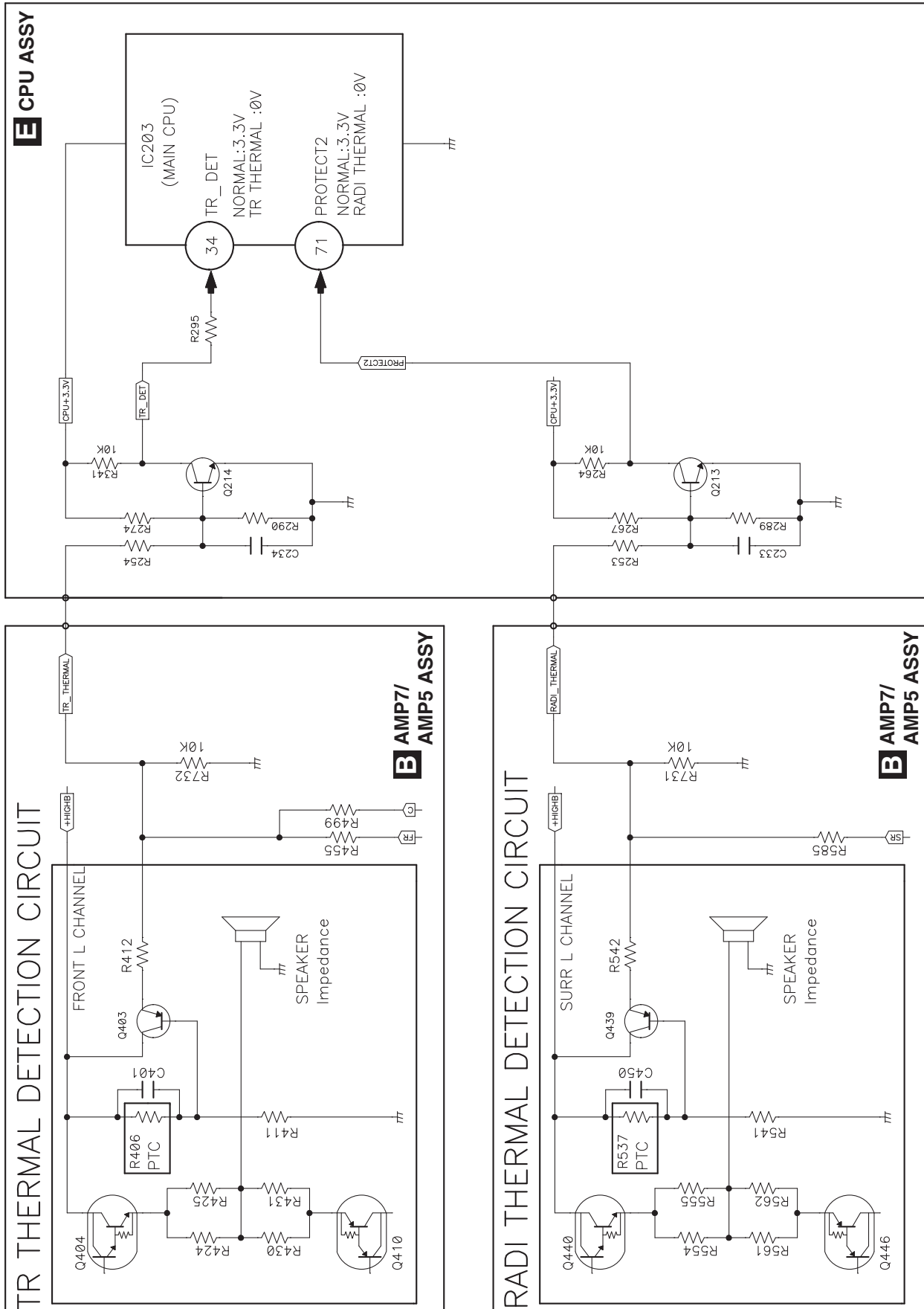
Basic Operation

Front Key Sequence Change	Time (sec)	FL Display
Over Current Error		I//UERR

A



A [2] TEMP Protection Circuit



5.5 IC INFORMATION

■(R5F3650KNFA)(CPU ASSY: IC203)

MAIN Microcomputer

• Pin Function

No.	Symbol	I/O	Description
1	P9_6/SOUT4	O	Not used
2	P9_5/CLK4	O	Not used
3	CNT_LED	O	Power LED control signal
4	Z2VOL_CLK	O	CLK signal output for BD3812F (I2C)
5	Z2VOL_DATA	O	Data signal output for BD3812F (I2C)
6	40-IR	I	Infra_red signal input
7	RMC	I	Remote control signal input pin
8	GNDU	I	The data bus is 16 bits long when the this pin is held "L" (GND)
9	CNVSS_UP	I	Switches processor mode
10	24C16_SDA	I/O	Data signal input & output for data backup of MAIN UCOM
11	24C16_SCL	O	Clock signal output for data backup of MAIN UCOM
12	/RESET	I	UCOM reset signal input pin (active at L)
13	XOUT	O	Output for 16 MHz Crystal
14	VSS	—	Ground
15	XIN	I	Input for 16 MHz Crystal
16	VCC1	—	+3.3 V power supply
17	/NMI	I	Input pin for the NMI interrupt
18	TUNER_INT	I	Tuner Interrupt signal input pin
19	PDN	I	Power down signal input pin
20	Z2_MUTE	O	Z2 ch. Audio output control pins at Mute Tr (active at L)
21	SB_MUTE	O	SB ch. Audio output control pins at Mute Tr (active at L)
22	A_MUTE	O	Audio output control pins at Mute Tr (active at L)
23	HP_DET	I	Monitoring the input pin headphone connection
24	HP_RLY	O	Headphone audio output control pins at Mute Tr (active at L)
25	SW_SUM	O	Output for Sub Woofer SUMMING Control(H:SUMMING)
26	CTL_B	O	IC control signal B output pin for selecting the video input
27	VIN_DET	I	Input for st_pwr condition
28	OSD/FLT_CLK	O	OSD & FL drive Ic output pin of the Data
29	CTL_A	O	ICcontrol signal A output pin for selecting the video input
30	MUTE_B+_CONT	O	Power control pin mute B+
31	BT_RX/U_TX	O	Data signal output from BLUETOOTH Antenna
32	BT_TX/U_RX	I	Data signal input from BLUETOOTH Antenna
33	BUSY_JTAG/TRIGER1	O	Output for JTAG BUSY/TRIGER1_ON/OFF SIGNAL
34	SCLK_JTAG/TR_DET'	I	CLOCK SIGNAL Input for SCLK_JTAG/TR_DET'
35	VOL_DATA	O	Data signal output for R2A15219 (I2C)
36	VOL_CLK	O	CLK signal output for R2A15219 (I2C)
37	STBY_RLY	O	Output to ST-BY Relay ON/OFF (active at H)
38	T12V_ERR	I	Input for dc_trg_err condition
39	OSD_RST	O	OSD IC Reset signal output pin
40	TUNER_SCLK	O	Clock signal output for Tuner Pack
41	EPM_UP	I	UPGRADE
42	TUNER_SDIO	I/O	Data signal input & output for Tuner Pack
43	TUNER_SEN	O	Output for Tuner Pack Serial Enable Input (active at L)
44	TUNER_RST	O	Output to reset Tuner Pack (active at L)
45	2533_CTL/CE	O	Output for NJM2533 control on/off signal
46	USBDCERR	O	Input for usb_dc_err condition
47	OSD_CE	O	OSD IC enable signal output pin
48	S_RLY	O	Tr driven control pins at the Surround speaker output Relay. (active at H)
49	SB_RLY	O	Tr driven control pins at the Surround Back speaker output Relay. (active at H)
50	FBRL	O	Tr driven control pins at the F.H /B speaker output Relay. (active at H)

• Pin Function

No.	Symbol	I/O	Description
51	C_RLY	O	Tr driven control pins at the Center speaker output Relay.(active at H)
52	F_RLY	O	Tr driven control pins at the Front speaker output Relay. (active at H)
53	N_PWR	O	Control pin digital +3.3 V DC/DC IC (on: H)
54	D_PWR	O	Control pin digital +3.3 V DC/DC IC (on: H)
55	H_PWR2	O	Control pin digital +1.2 V DC/DC IC (on: H)
56	H_PWR1	O	Control pin HDMI IC +5.0 V REG. IC (on: H)
57	MIC_DET	O	Monitoring the input pin microphone connection (detection: L)
58	4588_PDN	O	Output for AK4588 power down
59	4588_SDA	O	Data signal output for AK4588 (I2C)
60	4588_SCL	O	Clock signal output for AK4588 (I2C)
61	DSP_SDA	O	Data signal output for DA787 (DA789) (I2C)
62	VCC2	–	+3.3 V power supply
63	DSP_SCL	O	Clock signal output for DA787 (DA789) (I2C)
64	VSS	–	Ground
65	DSP_RST	O	Output to reset DA787(DA788)
66	NC	–	Not used
67	DSP_SDOUT	I	Data signal Input from DA787 (DA788)
68	DSP_CS	O	Output for DA787 (DA788) chip select
69	DSP_RDY	I	Input for DA787 (DA788) SPI Enable
70	HDMI_SEL	O	IC signal of the control pins at select HDMI or analog audio
71	PROTECT2	I	AMP Assy input signal of the RADIATOR THERMAL pin (L= PROTECTION)
72	MAIN_IRQ	O	Interrupt Output to SUB UCOM
73	SUB_ON	O	Output for SUB UCOM Power ON/OFF cotrol pin
74	SUB_IRQ	I	Interrupt luput from SUB UCOM
75	HD_MUTE	I	Input for HDMI_RX_MUTE condition
76	SUB_PDN	O	Output for SUB UCOM power down
77	SUB_RST	O	Output to reset SUB UCOM
78	SCDI_MAIN	I	Data signal input from SUB UCOM
79	SCDO_MAIN	O	Data signal output to SUB UCOM
80	CSCK_MAIN	O	Clock signal output for SUB UCOM
81	SET_OPTION	I	Input for Set option
82	STEP_OPTION	I	Input for Step (Group) option
83	VIDEO_MUTE	O	Output for NJM41050 mute cotrol pin
84	OSD/FLT_DATA	O	OSD & FL drive Ic output pin of the Data
85	PROTECT1	I	AMP Assy Protection detection signal input pin (ASO= 0.82 V, DC= 1.39 V)
86	VOL_DN	I	Data input for VOLUME encoder (VOLUME DOWN is counterclockwise direction)
87	VOL_UP	I	Data input for VOLUME encoder (VOLUME UP is clockwise direction)
88	IN_DN	I	Data input for INPUT selector encoder
89	NC	I	Not used
90	KEY1	I	Data input for Key1 scan
91	KEY3	I	Data input for Key3 scan
92	KEY2	I	Data input for Key2scan
93	IN_UP	I	Data input for INPUT selector encoder
94	FLT_CE	O	Output for chip enable of SC16315
95	NC	O	Not used
96	GND	–	Ground
97	NC	O	Not used
98	VREF	–	Reference voltage (Connected to +3.3 V)
99	AVCC	–	+3.3 V power supply
100	V+5V_DET	I	Output to ST-BY Relay ON/OFF (active at H)

■(UPD78F1167AGF-GAS(D-MAIN ASSY: IC102)

SUB Microcomputer

• Pin Function

No.	Symbol	I/O	Description
1	VSCL	O	IIC clock signal output pin (SII9573CTUC-K)
2	VSDA	I/O	IIC data signal in/output pin (SII9573CTUC-K)
3	XHDPP_RST	O	Reset signal output pin for SII9573CTUC-K
4	XRST_NW	O	Reset signal output pin for DM-860A
5	P31/TI03/TO03/INTP4	—	Not used
6	P64/xRD	—	Not used
7	XABT_RST	O	Reset signal output pin for ABT1015
8	XADV_RST	O	Reset signal output pin for ADV7181CBSTZ
9	XAMUTE_SUB	O	Audio output control pins at Mute Tr (active at L)
10	P77/EX23/KR7/INTP11	—	Not used
11	XHDPP_MUTE	I	Input for HDMI_RX_MUTE condition
12	COMP_DET	I	Input for comp_video condition
13	HDPP_INT	I	Input for SII9573CTUC-K Interrupt Signal
14	P73/EX19/KR3	—	Not used
15	P72/EX18/KR2	—	Not used
16	P71/EX17/KR1	—	Not used
17	P70/EX16/KR0	—	Not used
18	P06/xWAIT	—	Not used
19	P05/CLKOUT	—	Not used
20	EVSS1	—	Ground
21	P80/EX0	—	Not used
22	P81/EX1	—	Not used
23	P82/EX2	—	Not used
24	P83/EX3	—	Not used
25	P84/EX4	—	Not used
26	P85/EX5	—	Not used
27	P86/EX6	—	Not used
28	CEC_O	O	Output for CEC OPERATION
29	CECI_INT	I	Input for CEC Interrupt Signal
30	EVDD1	—	Positive power supply for ports
31	P50/EX8	—	Not used
32	ABT_3V_ON	O	Output for ABT1015 Power ON/OFF control pin
33	XNWJPG_SEL	O	Output for TC74LCX541FK enable
34	DSD_SEL	O	Output for DSD audio signal selector ic control pin.
35	P54/EX12	—	Not used
36	CEC_PWR	O	Output for NJM2831 enable
37	P56/EX14	—	Not used
38	P57/EX15	—	Not used
39	P17/EX31/TI02/TO02	—	Not used
40	P16/EX30/TI01/TO01/INTP5	—	Not used
41	P15/EX29/RTCDIV/RTCCL	—	Not used
42	232RX	I	Input for Upgrade (UART)
43	232TX	O	Output for Upgrade (UART)
44	DI_NW	O	Data signal Output to DM860a
45	DO_NW	I	Data signal Input from DM860a
46	CLK_NW	O	Clock signal Output to DM860a
47	AVREF1	—	D/A converter reference voltage input
48	BSL_NW	O	Not used
49	CS_NW	O	Output for DM860a chip select
50	AVREF0	—	A/D converter reference voltage input

• Pin Function

No.	Symbol	I/O	Description
51	AVSS	–	Ground
52	P157/ANI15	–	Not used
53	P156/ANI14	–	Not used
54	P155/ANI13	–	Not used
55	P154/ANI12	–	Not used
56	P153/ANI11	–	Not used
57	P152/ANI10	–	Not used
58	P151/ANI9	–	Not used
59	P150/ANI8	–	Not used
60	SUB_IRQ	O	Interrupt Output to MAIN microcomputer
61	P26/ANI6	–	Not used
62	P25/ANI5	–	Not used
63	P24/ANI4	–	Not used
64	P23/ANI3	–	Not used
65	P22/ANI2	–	Not used
66	P21/ANI1	–	Not used
67	P20/ANI0	–	Not used
68	P130	–	Not used
69	THRU_LED	O	HDMI LED on/off control pin
70	CSCK_MAIN	I	Clock signal Input from MAIN microcomputer
71	SCDO_MAIN	I	Data signal Input from MAIN microcomputer
72	SCDI_MAIN	O	Data signal Output to MAIN microcomputer
73	P01/TO00	–	Not used
74	P00/TI00	–	Not used
75	P145/TI07/TO07	–	Not used
76	P144/SO20/TxD2	–	Not used
77	P143/SI20/RxD2/SDA2	–	Not used
78	P142/SCK20/SCL2	–	Not used
79	P141/PCLBUZ1/INTP7	–	Not used
80	P140/PCLBUZ0/INTP6	–	Not used
81	MAIN_IRQ	I	Interrupt Input from MAIN microcomputer
82	REQ_NW	I	Interrupt Input from dm860a
83	SUB_PDN	I	Input power down from MAIN microcomputer
84	P45/SO01	–	Not used
85	P44/SI01	–	Not used
86	P43/SCK01	–	Not used
87	P42/TI04/TO04	–	Not used
88	TOOL1	O	Clock output for debugger
89	TOOL0	I/O	Data I/O for flash memory programmer/debugger
90	XSUB_RST	I	System reset input
91	P124/XT2	–	CRYSTAL connection for sub system clock
92	P123/XT1	–	CRYSTAL connection for sub system clock
93	FLMD0	–	Flash memory programming mode setting
94	P122/X2/EXCLK	–	CRYSTAL connection for main system clock
95	P121/X1	–	CRYSTAL connection for main system clock
96	REGC	–	Connecting regulator output (2.5 V) stabilization capacitance for internal operation.
97	VSS	–	Ground
98	EVSS0	–	Ground potential for ports
99	VDD	–	Positive power supply (Connected to +3.3 V)
100	EVDD0	–	Positive power supply for ports (Connected to +3.3 V)

[2] Reset mode for numbers of protection detections

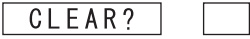
[Purpose]

For clearing all the counts of protection detections.
(This mode resets the counts of protection detections.)

[How to enter/exit]

During Standby mode, simultaneously press and hold the [ALC/STANDARD SURR] and [STANDBY/ON] keys for 10 seconds to enter this mode.
The display will return to the normal indication when no key operation is performed for 5 seconds.

[Basic operations]

Key Operation	FL Display	Time (sec.)	Description of Indications
(STANDBY state)			
[ALC/STANDARD SURR] + [STANDBY/ON] keys (press and hold the keys for 10 seconds.)		5 (-> normal) *1	
[ENTER] key ↓		5 (-> normal) *1	
(Counter Clear end)			
(Normal display)	 *2	usually	

*1 "5 (-> normal)" denotes that the display will return to the normal indication when no key operation is performed for 5 seconds.

*2 Indication when the BD function is selected

[Detailed explanations]

- When the procedures for Reset mode for numbers of protection detections are completed, all the counters will be reset to "000."
- Prohibitions:
The protection detection counts cannot be cleared (reset to 000) with the MEMORY CLEAR process.
They can only be cleared when the procedures of Reset mode are completed.

[3] The unit's operation when a error is detected

[Purpose]

- The unit's operation when a DC/OVER/TEMP error is detected is described here.
- How to cancel the status after detection of a DC error is described here, because no key input will be accepted after a DC error detection.

[Basic operations]

3.1 DC (AMP is abnormality) error detection

Key Operation	FL Display	Time (sec.)	Description of Indications
(Normal display)	B D	usually	Normal display
(DC detection)	B D		
↓ (Auto) (RECEIVER POWER OFF) *1, *2			

3.2 OVERLOAD (overcurrent) error detection

Key Operation	FL Display	Time (sec.)	Description of Indications
(Normal display)	B D	usually	Normal display
(OVERLOAD detection)	B D		
↓ (Auto) (RECEIVER POWER OFF) *1			

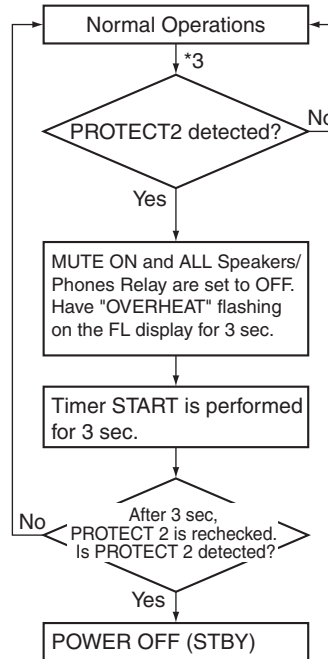
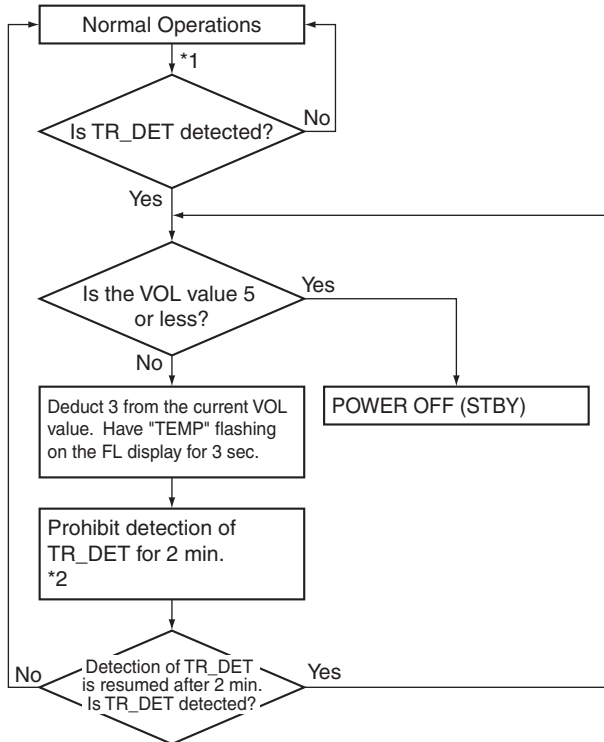
3.3 TEMP (AMP overheat) error detection

For detection of a TEMP error, the unit monitors both the TR_DET and PROTECT2 signals. If a TEMP error is detected, the processes shown below will be performed. The processes shown below are rough operational specifications and are not the actual commands from the mounted components.

After a TEMP error is detected, the count of protection activation detections will be updated.

Counter: Temp2 TR_DET
P6_4 (34 pin)
(TRTHER_DET from AMP Assy)

Counter: Temp1 PROTECT2
PL2_1 (71 pin)
(RADI_DET from AMP Assy)



*1: The detection interval must be 1 sec or less.

*2: If PROTECT 2 is detected while TR_DET detection is prohibited for 2 min, the PROTECT 2 function will be activated.

*3: The detection interval must be 1 sec or less.

3.4 How to cancel the status after detection of the DC error

Key Operation	FL Display	Time (sec.)	Description of Indications
(STANDBY state) [ADVANCED SURROUND] + [STANDBY/ON] keys (press and hold the keys for 2 seconds.) ↓ (Normal display)	 	usually	Normal display

[Detailed explanations] Simultaneously holding the [ADVANCED SURROUND] and [STANDBY/ON] keys on the front panel pressed for 2 seconds will cancel Key Input Inhibition mode after a DC error detection and turn the unit ON.

7. DISASSEMBLY

Note:

- (1) Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.
- (2) For performing the diagnosis shown below, the following jigs for service is required:
 - 9P extension jig cable (GGD1739)
 - 13P extension jig cable (GGD1740)
 - 3P extension jig cable (GGD1741)
 - Board to board extension jig cable (GGD1756)
 - Board to board extension jig cable (GGD1770)
 - Board to board extension jig cable (GGD1800)
 - 25P extension jig FFC (GGD1801)

1. Discharging

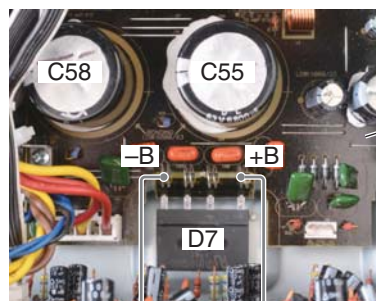
[1] MAIN Assy Capacitor (C55, C58)

[Procedures]

- (1) Unplug the power cord.
- (2) Disconnect the 10P connector from CP403 of the AMP7/AMP5 Assy between CN3 of the MAIN Assy.
- (3) Connect +B and -B terminal of the D7, using resistor leads with 47 - 100 ohms (2 W or higher), for discharging.
 - * Discharging time: 30 - 60 seconds, depending on the level of resistance.
- (4) Check that the voltage between the +B and -B terminals is less than 1 V, using a tester.
 - * Be sure to connect the GND terminal of the tester to the chassis.
 - * If the voltage is still 1 V or higher, repeat Step (3).



AMP7/AMP5 Assy



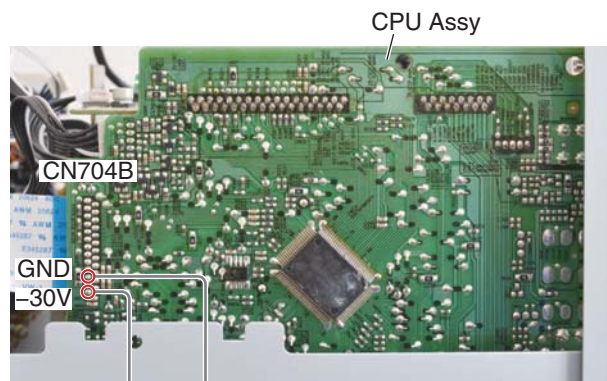
MAIN Assy

47 - 100 ohms
(2 W or higher)

[2] FL-30 V Capacitor (MAIN Assy C101)

[Procedures]

- (1) Unplug the power cord.
- (2) Connect pin 1 (-30V) and pin 2 (GND) of CN704B on the CPU Assy, using resistor leads with 47-100 ohms (2 W or higher), for discharging.
 - * Discharging time: 5 - 10 seconds, depending on the level of resistance.
- (3) Check that the voltage between the -30V terminal is less than 1 V, using a tester.
 - * Be sure to connect the GND terminal of the tester to the chassis.
 - * If the voltage is still 1 V or higher, repeat Step (2).



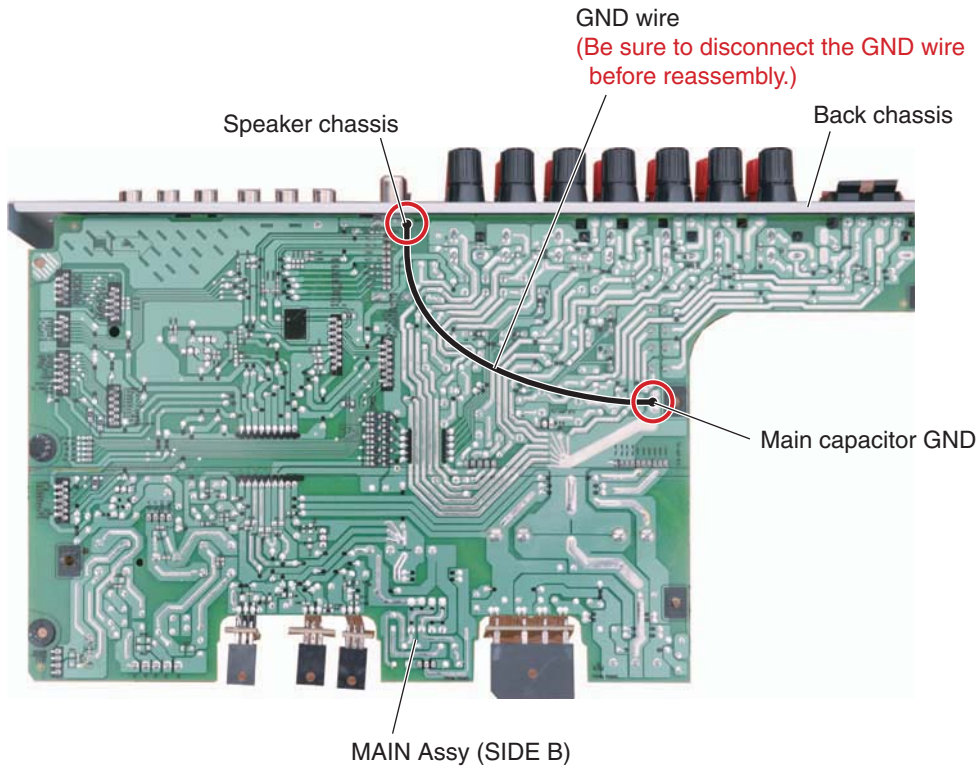
47 - 100 ohms
(2 W or higher)

2. Notes on Ground Points Connection

[Note]

During repair, before checking the MAIN Assy, etc., with the rear chassis removed, be sure to connect the GND terminal of the main capacitor to the back chassis (speaker chassis), as shown below, then connect the power cord.

Without grounding connection, the protection circuit will be activated.
After repairing, be sure to remove the ground wire before reassembling.

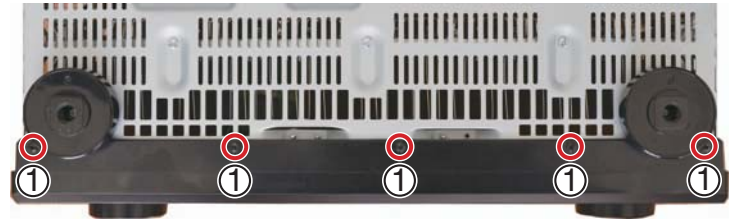


3. Disassembly

[1] Front Panel Section

Remove the cabinet by removing the 10 screws.

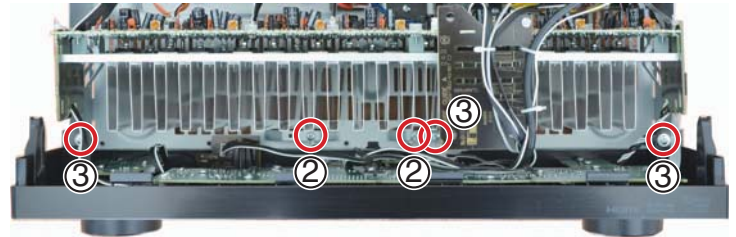
(1) Remove the five screws. (BBZ30P080FTB)



• Bottom view

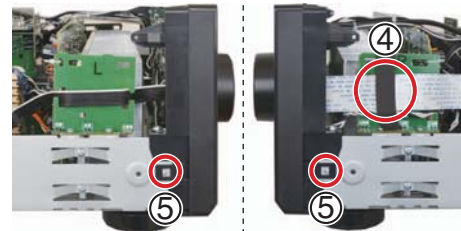
(2) Remove the two screws.
(BBZ30P080FTC)

(3) Remove the three screws.
(1500001206010-IL)



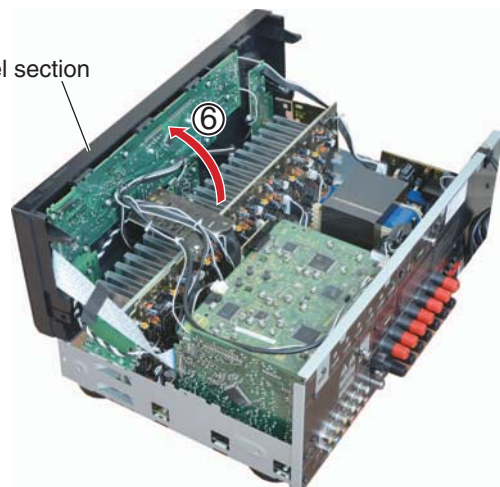
(4) Remove the tape.

(5) Unhook the two hooks.



(6) Arrange the front panel section as shown
in the photo below.

Front panel section

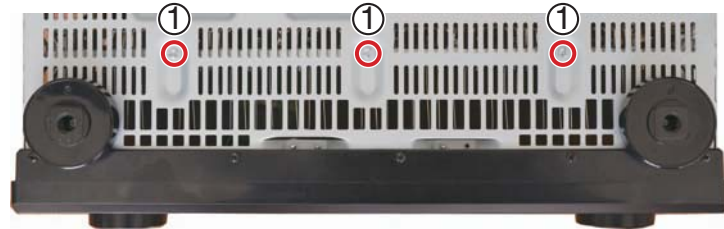


A [2] Heatsink Section

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

Remove the cabinet by removing the 10 screws.

(1) Remove the three screws. (BBZ30P080FTC)



• Bottom view



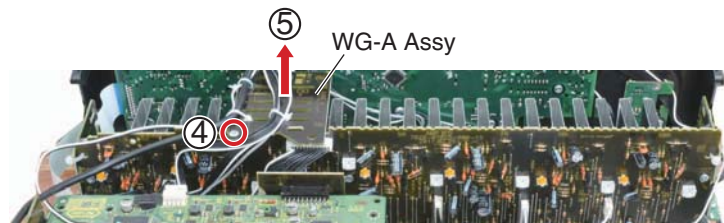
(2) Remove the four screws. (BBZ30P080FTC)

(3) Cut the two binders.

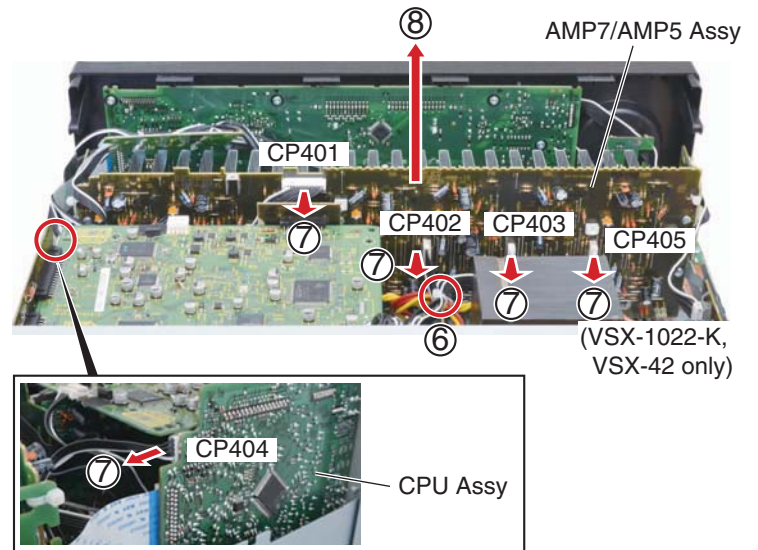


(4) Remove the one screw. (BBZ30P080FTC)

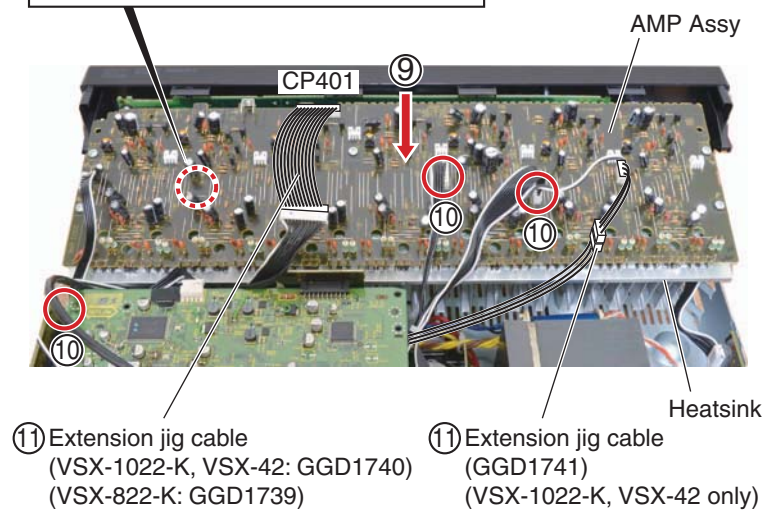
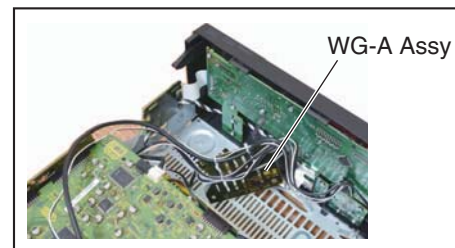
(5) Remove the WG-A Assy.



- (6) Cut the two binders.
- (7) Disconnect the five connectors.
(VSX-1022-K, VSX-42: CP401 to CP405)
Disconnect the four connectors.
(VSX-822-K: CP401 to CP404)
- (8) Remove the Heatsink section.



- (9) As shown, arrange the Heatsink section over the WG-A Assy.
- (10) Re-connect the three connectors.
(VSX-1022-K, VSX-42)
- (11) Connect the two extension jig cables.
(VSX-1022-K, VSX-42)
Connect the one extension jig cable.
(VSX-822-K)



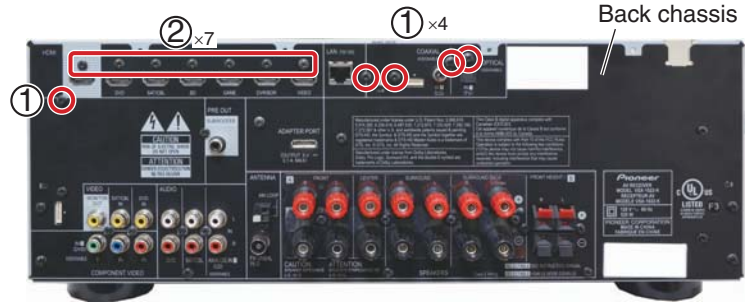
Note:
AMP5 Assy: GGD1739
AMP7 Assy: GGD1740 + GGD1741



A [3] D-MAIN Assy

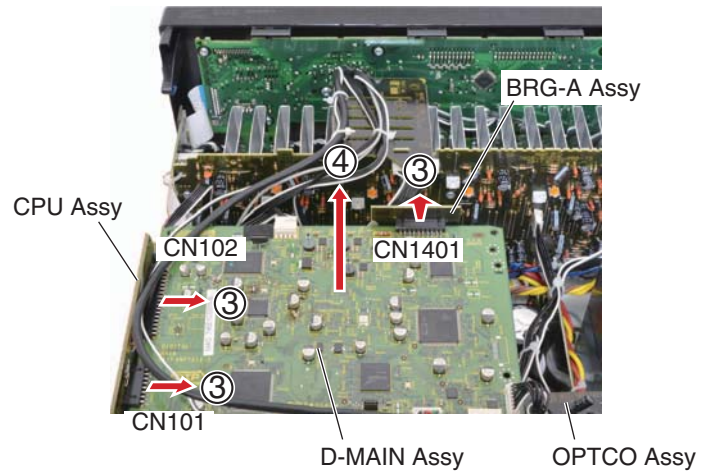
Remove the cabinet by removing the 10 screws.

- (1) Remove the five screws. (BBT30P100FTB)
- (2) Remove the seven screws. (BSZ30P040FTB)



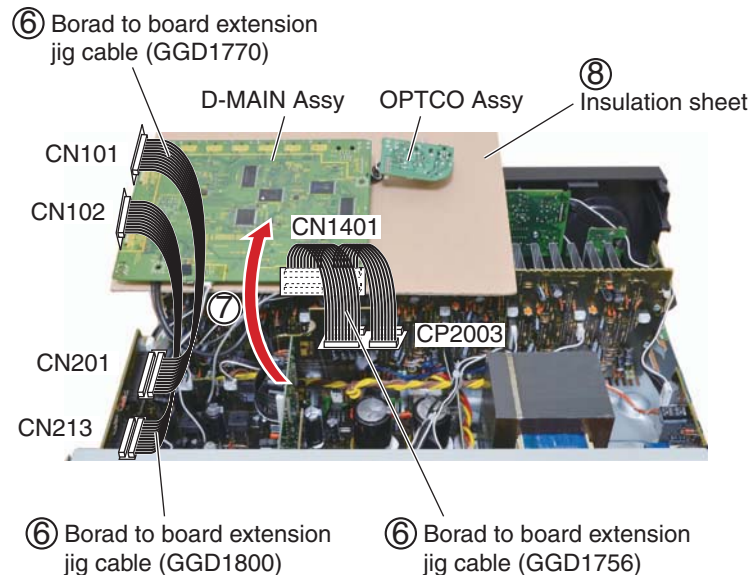
• Rear view

- (3) Disconnect the three B to B connectors. (CN101, CN102, CN1401)
- (4) Remove the D-MAIN and OPTCO Assemblies.



- (6) Connect the three extension jig cables.
- (7) Arrange the D-MAIN and OPTCO Assemblies in the photo below.
- (8) Insert any insulation sheet.

Note:
9 pin connector on GGD1756 is not used in this case.

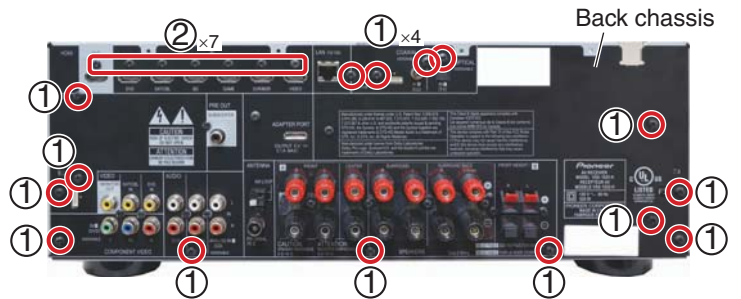


[4] MAIN Assy

Remove the cabinet by removing the 10 screws.

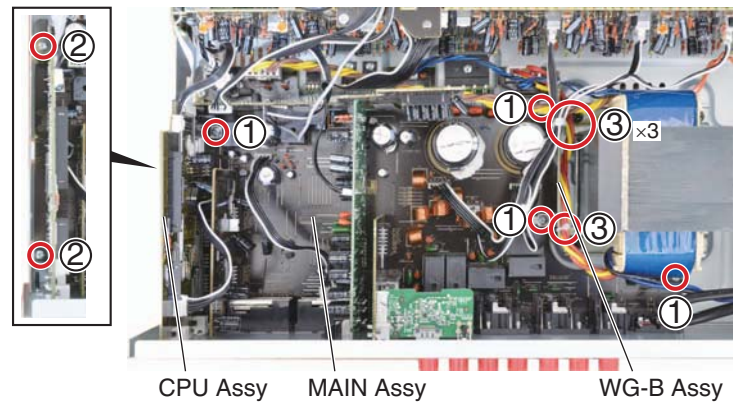
[4-1] Back chassis, D-MAIN Assy

- (1) Remove the 15 screws. (BBT30P100FTB)
- (2) Remove the seven screws. (BSZ30P040FTB)
- (3) Remove the D-MAIN Assy.
(See procedure [3].)

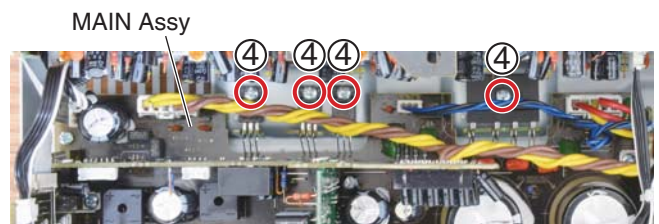


[4-2] MAIN Assy

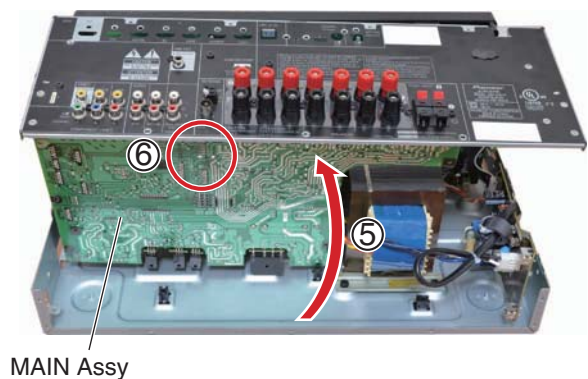
- (1) Remove the four screws. (BBZ30P180FTC)
- (2) Remove the two screws. (BBZ30P080FTC)
- (3) Cut the four binders.



- (4) Remove the four screws. (BBZ30P080FTC)

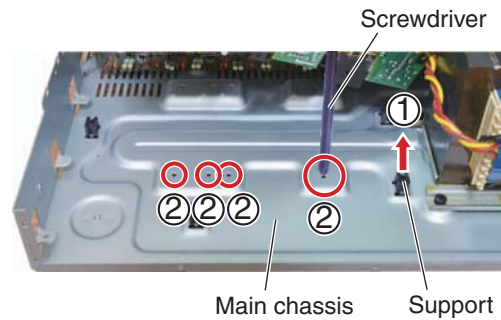


- (5) Arrange the unit as shown in the photo below.
- (6) Connect the chassis ground.
See "2. Notes on Ground Points Connection".



A [4-3] Regulator ICs and Rectifier diode

- (1) Remove the support.
- (2) Tighten then loosen the screw in each of the four holes for temporary joining that are located on the rear side of the main chassis. (This is for shaving the thread grooves to facilitate attachment in the next step.)

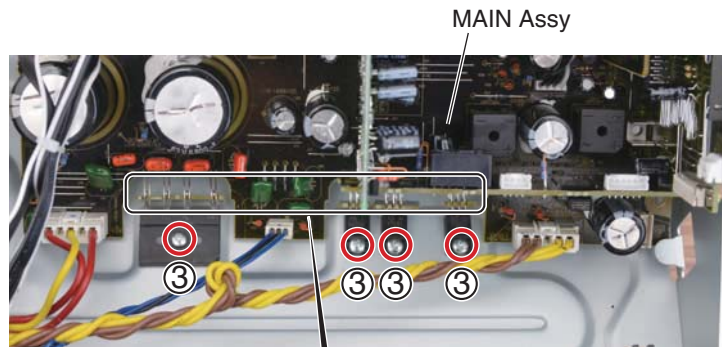


B



C

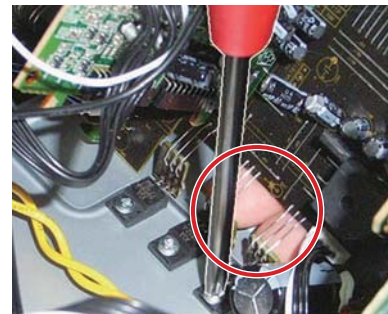
- (3) Attach the three regulator ICs and a rectifier diode to the holes tapped in Step (2). Be sure to place them in a direction perpendicular to the board and take care that the jumper wires will not become distorted.



D

Note:

While securing the regulator ICs and rectifier diode to the holes for temporary joining, tighten the screws while holding the regulator ICs and rectifier diode with your fingers so that the jumper wires will not become distorted.



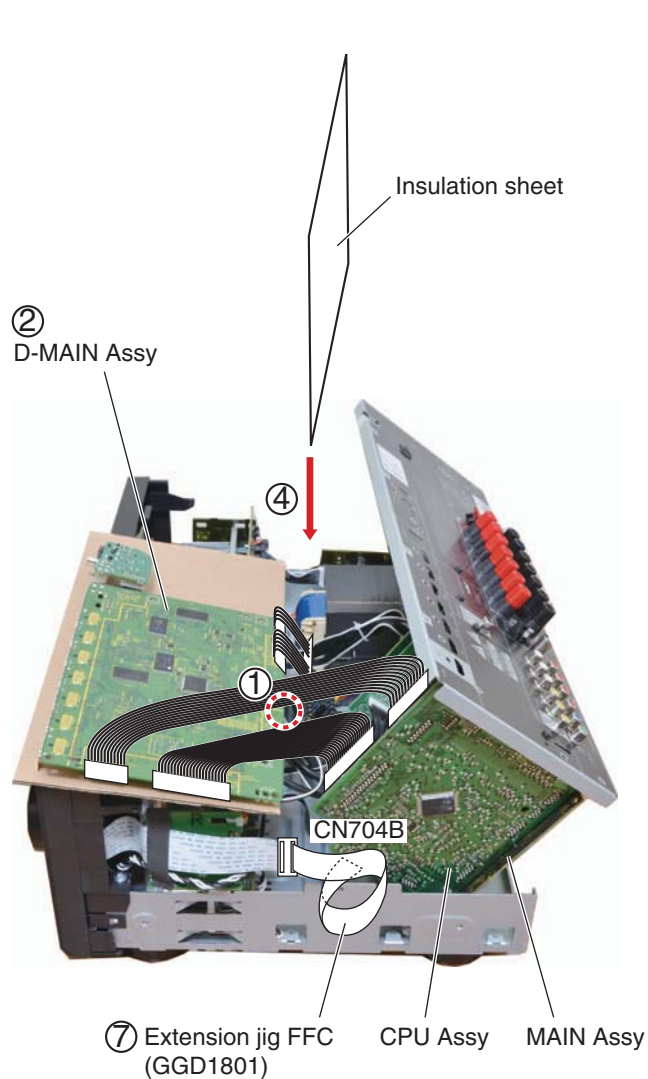
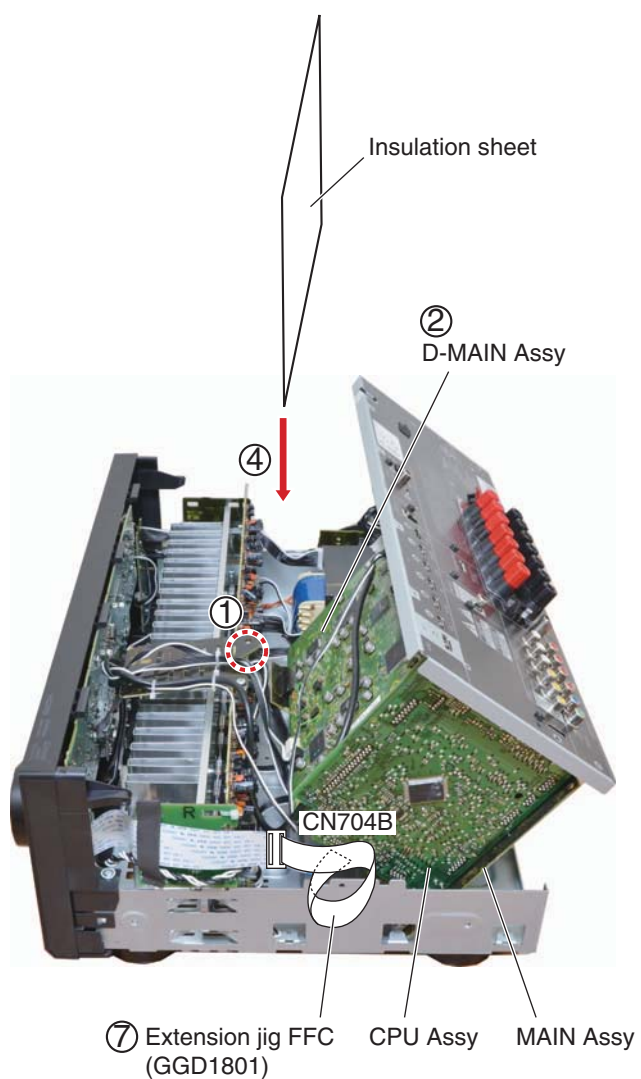
E

F



[4-4] Diagnosis

- (1) Connect the CP401 on the AMP Assy with extension jig cable. (See procedure [2].)
- (2) Reassemble the D-MAIN Assy to the rear panel or put it on the AMP Assy with extension jig cables. (See procedure [3].)
- (3) Connect the extension jig FFC.
- (4) Insert any insulation sheet between AMP Assy and MAIN Assy.



8. EACH SETTING AND ADJUSTMENT

A



- If the adjustment is shifted or if it becomes necessary to readjust because of part replacement, etc., perform the adjustment as described below.
- Any value changed in Adjustment mode will be stored in memory as soon as it is changed. Before readjustment, take note of the original values for reference in case you need to restore the original settings.
- Use a stable AC power supply.

B

8.1 ADJUSTMENT REQUIRED WHEN THE UNIT IS REPAIRED OR REPLACED

■ When any of the following assemblies is replaced

C

AMP7/AMP5 Assy	➡	"8.3 IDLE CURRENT ADJUSTMENT" (All channel)
Other assemblies	➡	No adjustment required

■

■ When any of the following parts is replaced

D

AMP7/AMP5 Assy	➡	"8.3 IDLE CURRENT ADJUSTMENT" (Only channel of replacement parts)
Other assemblies	➡	No adjustment required

■

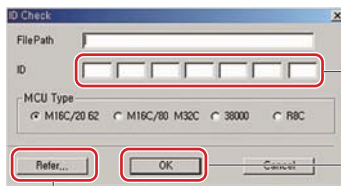
E

Note:
Some parts on D-MAIN and F-USB Assemblies can not be replaced due to using heat-pad connection between the board. Please refer to [1.2 NOTES ON REPLACING PARTS], when the parts listed in the table is defective, replace whole Assy.

■

F

4. Select the update file and enter ID.

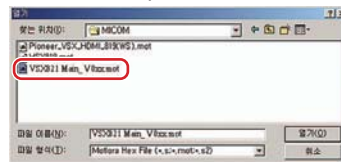


② Enter ID.
Enter "ff" in all field.

③ Press OK button to
go to next step.

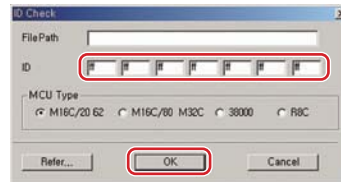
① Selection of upgrade file

① Select the update file



Select "VSX_1022Mid_Main Ver***.mot"
or "VSX42_Main_Ver0.60.mot"
"VSX_822Mid_Main Ver***.mot" file to
update the MCU.

② Enter ID.



Press the OK button.

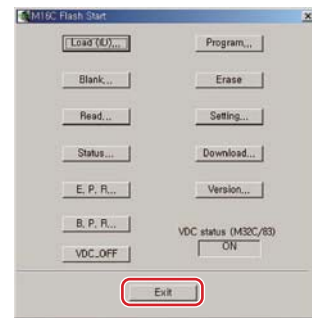


Press the OK button.

6. Update Finished MAIN microcomputer.



Press the OK button.



Press the Exit button.
Please wait for until this window
disappears.

**If the following messages are displayed, shut the update
program down, and start the update again from step 1.**

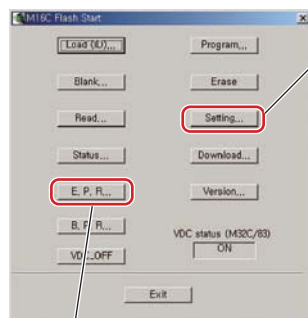


Push the JIG's RESET button during
1 sec.
Press the OK button.



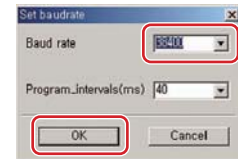
Select the 9600 of the Board rate then
press the OK button

5. Set speed update and update the MCU.



① Set speed of update.

① Set speed of update.
Set Baud rate to 38400.



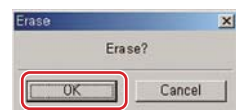
Press the OK button.

② Update the MCU.

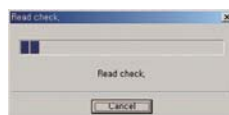
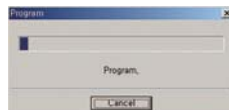
E.P.R=>Erase+Program+Read

② Update the MCU

Press the E.P.R ... button

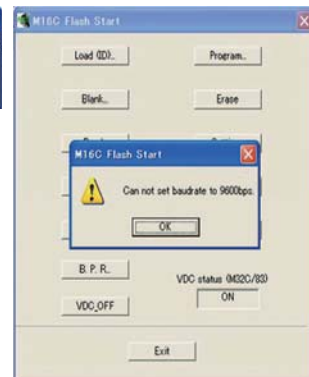


Press OK button.



7. Unplug the AC cord.

Disconnect the FFC cable.



(2) SUB microcomputer firmware update

[Preparations]

Save the firmware file to the "root" of empty USB memory.

The file name of the firmware file is "RegM13Sub_V***.bcd". Don't save other files.

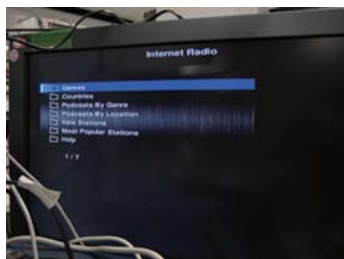
- NetworkStandby: OFF
- HDMI Control: OFF
- HDMI StandbyThrough: OFF (North America model only)
- Connect a unit to TV and HDMI, and the GUI output of the unit performs in a state to appear.

[Procedures]

1. Turn on the unit.
2. Set a function for a "NETRADIO".

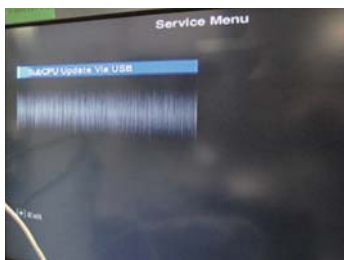
Note:

Without a network connection, "Server Error" will be displayed on the TV screen. Under this condition, the Service Menu (menu for updating the SUB microcomputer) is not accessible. Set the remote control unit supplied with the unit to Network Function Operation mode then press the ENTER button so that "Empty" is displayed on the screen. Then proceed to Step 3.



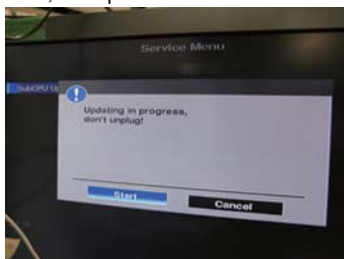
3. Press the "ESC (A85F)" button on the Service remote control unit (GGF1381), then press the "+10 (A81F)" button to enter the service menu (for SUB microcomputer firmware update menu).

When you press other buttons between "ESC" button and "+10" buttons, be invalid.

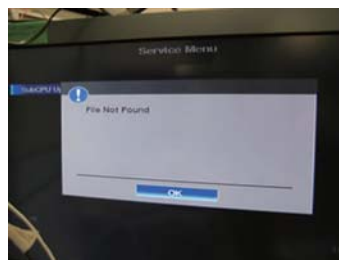


4. Press the "ENTER" button of the remote control unit supplied with Network Function as the state that you can operate.

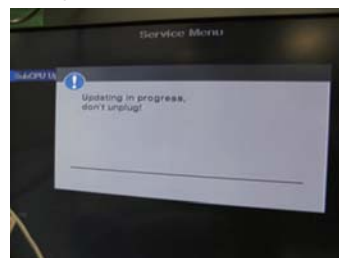
- (1) When a product can recognize a file, become the following indication.
Select "Start", and press the "ENTER" button.



- (2) When a product cannot recognize a file, become the following indication. Check on USB memory with a file.

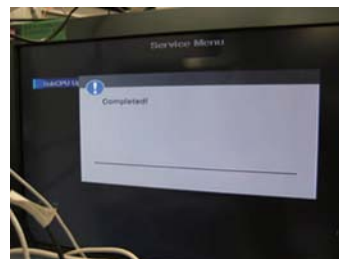


5. Update starts, and "UPDATE" blinks to FL screen and HDMI LED blinks.
Be approximately 8 minutes for update at time.



6. When update is completed, "Completed" is displayed by TV screen and HDMI LED lights.

* "UPDATE" blinks to FL display and is displayed.
In rare cases, "Completed!" may not be displayed on the TV screen. In such a case, updating is completed if the HDMI LED has become lit. Proceed to Step 7.



7. Disconnect the AC power cord. (The POWER button does not respond.) Confirm a version of the firm ware of SUB microcomputer.

Note:

Because update is not possible again, never unplug the power cord until the updating process is completed.

(3) USB (BridgeCo) firmware update

[Procedures]

1. Select 'Firmware Update' from the Network Setup menu. The receiver checks whether the USB memory device inserted into the USB port on the receiver's front panel contains updatable software.
2. To update, select 'Start'.
3. When 'Updating in progress, don't unplug!' is displayed, select 'OK'.
 - If 'File Not Found' is displayed, try the following:
 - No update file was found on the USB memory device. Store the file in the USB memory device's root directory.
 - Try disconnecting then reconnecting the USB device or storing the update file again. If the error still occurs, try using a different USB memory device.
4. The software update will start. Please wait. The OSD display will turn off during update and the words 'UPDATE' will flash on the front panel.
5. If 'COMPLETE' is displayed, updating is completed. The screen will return automatically to the play screen.
 - If 'FAIL' is displayed on the front panel display, updating has failed. Try the following:
 - Turn the receiver's power off, then turn it back on and try updating the software again.
 - Try disconnecting then reconnecting the USB device or storing the update file again. If the error still occurs, try using a different USB memory device.

(4) DSP firmware update

[Preestablishment]

- NetworkStandby: OFF
- HDMI Control: OFF
- HDMI StandbyThrough: OFF (North America model only)

[Procedures]

1. Select an Input Function that allows reception via Optical input 1 then set the unit to STBY_Off mode.
2. Press the SPEAKERS and STANDBY/ON keys simultaneously to enter DSP UpDate mode. ("DSP UP" is displayed.)
3. When "PLAY" is displayed, playback of the .wav file starts. (Play the file only once. NEVER repeat playback.) ("PLAY" is displayed.)
4. After playback is finished and "ENTER" is displayed, press the ENTER key on the front panel. ("ENTER" is displayed.)
5. "WRITING" is automatically displayed.
6. After writing is completed, "COMPLETE" is displayed.
7. Turn the unit off then confirm that the version has been updated.

(5) Check to the firmware version

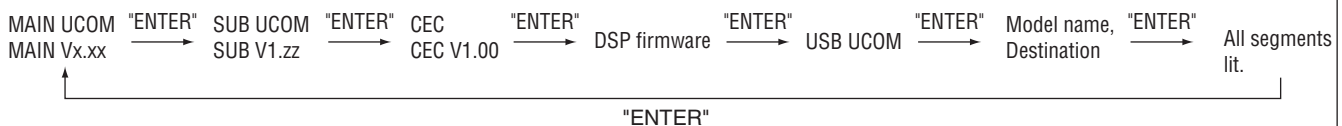
[Preestablishment]

- NetworkStandby: OFF
- HDMI Control: OFF
- HDMI StandbyThrough: OFF (North America model only)

[Procedures]

Make sure that the main unit is in STANDBY mode.

Press and hold the "ENTER" and "STANDBY/ON" keys, then press the "ENTER" key to display each UCOM version. Each time the "ENTER" key is pressed, then indications on the FL display change as follows:



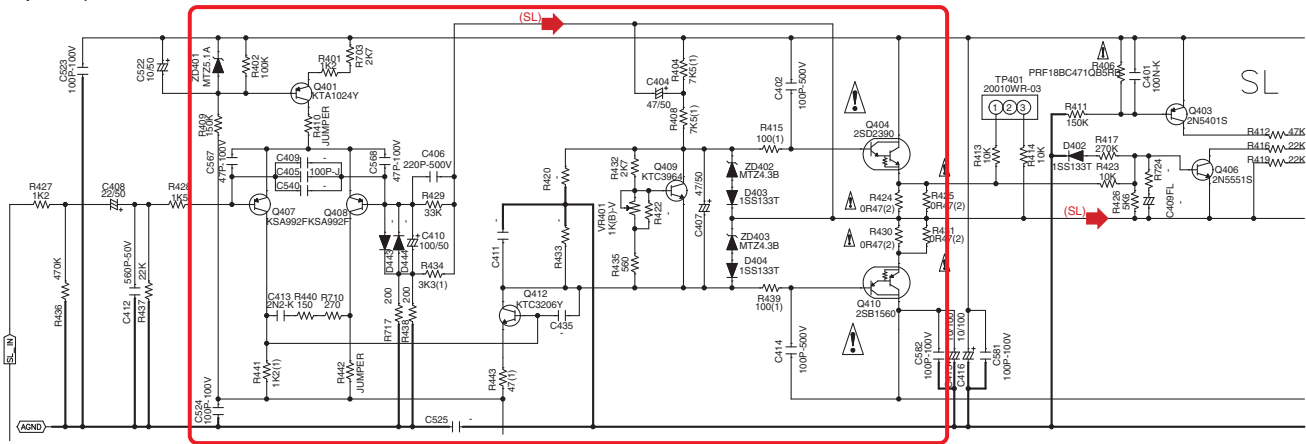
- * It may take around 1 minute until the version of the USB microcomputer is displayed. When be not displayed, wait in the state that turned on the power of the product for 1 minute, and please do it from the first procedure again.

Turn the unit off.



■ for VSX-1022-K, VSX-42

When any component parts which are within the red square on the following circuit diagram are replaced, the idle current adjustment of that channel is required. (Idle current adjustment for another channel is not required.) However, when any capacitors are replaced, the adjustment is not required. (The following circuit diagram is for SL channel, but another channel also has same circuit diagram and same adjustment is required)



Channel	Measurement Points	Adjustment Points	Procedure
FL	TP404 pin 1 (+) TP404 pin 3 (-)	VR404	① Turn on the power. ② Perform aging for one minute. ③ Connect a digital voltmeter to the measurement point. ④ Turn the adjustment VR so that the voltage becomes in 2.0 mV ± 0.2 mV. (Condition : No signal and no load)
FR	TP402 pin 1 (+) TP402 pin 3 (-)	VR402	
C	TP403 pin 1 (+) TP403 pin 3 (-)	VR403	
SL	TP401 pin 1 (+) TP401 pin 3 (-)	VR401	
SR	TP405 pin 1 (+) TP405 pin 3 (-)	VR405	
SBL	TP406 pin 1 (+) TP406 pin 3 (-)	VR406	
SBR	TP407 pin 1 (+) TP407 pin 3 (-)	VR407	

• Adjustment points and measurement points.... see fig.1.

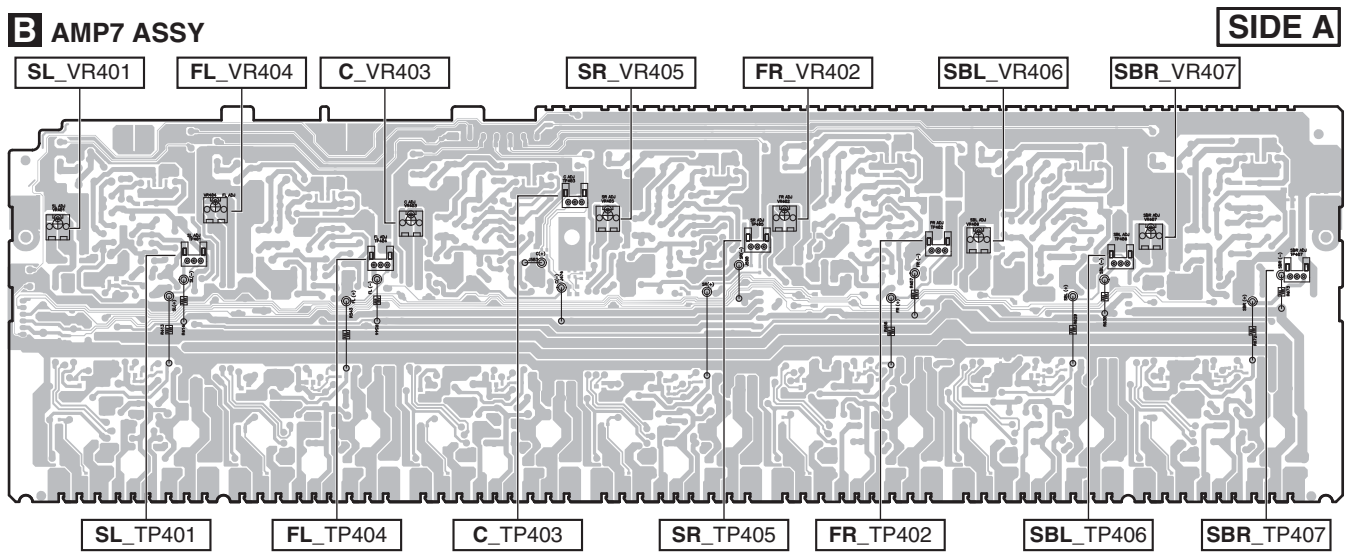


Fig.1

A



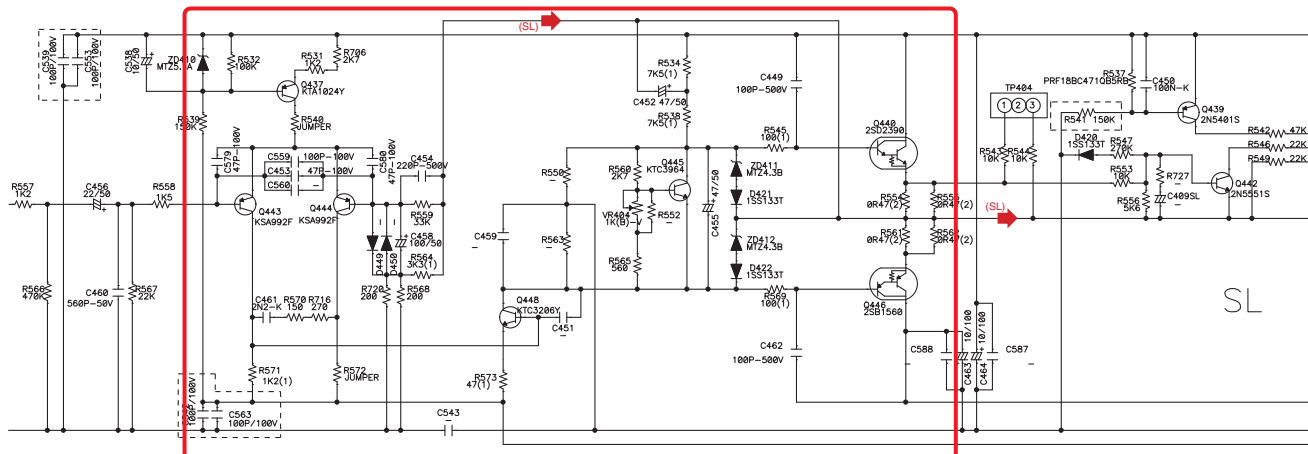
■ for VSX-822-K

When any component parts which are within the red square on the following circuit diagram, the idle current adjustment of that channel is required. (Idle current adjustment for another channel is not required.)

However, when any capacitors are replaced, the adjustment is not required.

(The following circuit diagram is for SL channel, but another channel also has same circuit diagram and same adjustment is required)

B



C

Channel	Measurement Points	Adjustment Points	Procedure
FL	TP401 pin 1 (+) TP401 pin 3 (-)	VR401	① Turn on the power. ② Perform aging for one minute. ③ Connect a digital voltmeter to the measurement point. ④ Turn the adjustment VR so that the voltage becomes in $2.0 \text{ mV} \pm 0.2 \text{ mV}$. (Condition : No signal and no load)
FR	TP402 pin 1 (+) TP402 pin 3 (-)	VR402	
C	TP403 pin 1 (+) TP403 pin 3 (-)	VR403	
SL	TP404 pin 1 (+) TP404 pin 3 (-)	VR404	
SR	TP405 pin 1 (+) TP405 pin 3 (-)	VR405	

• Adjustment points and measurement points.... see fig.2.

E

F

B AMP5 ASSY

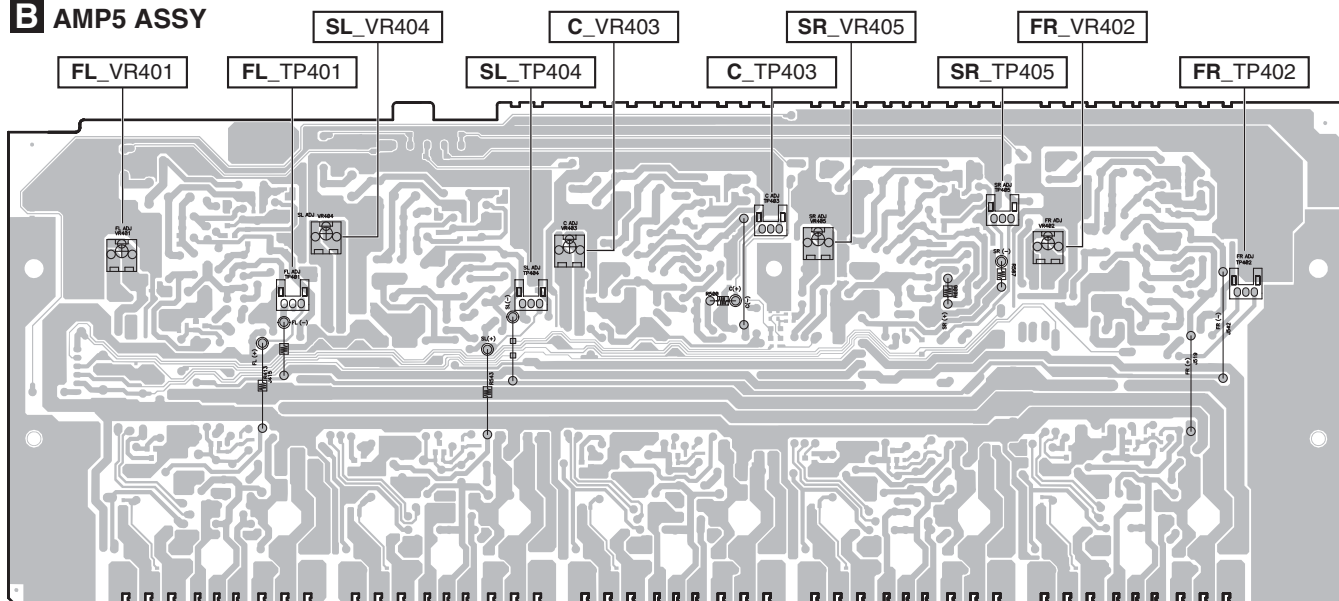


Fig.2

SIDE A

■

5

■

6

■

7

■

8

■

A

■

B

■

C

■

D

■

E

■

F

■

5

■

6

■

7

■

8

■

VSX-1022-K

9. 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.

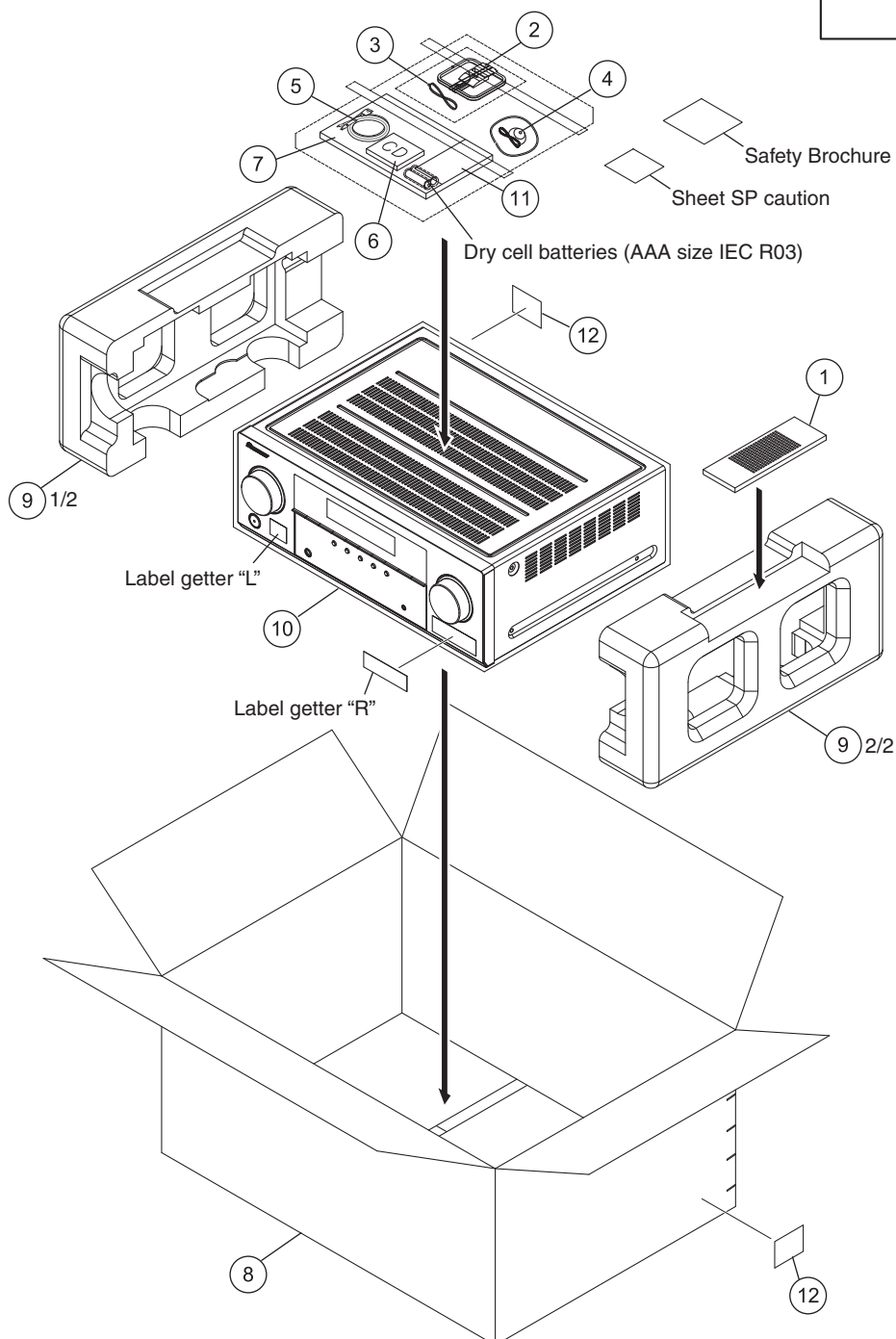
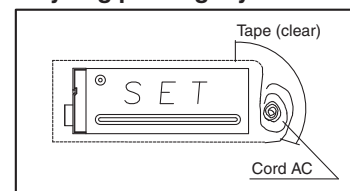
● Screws adjacent to ▼ mark on product are used for disassembly.

● 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.)

9.1 PACKING SECTION

Poly bag packing style



(1) PACKING SECTION PARTS LIST

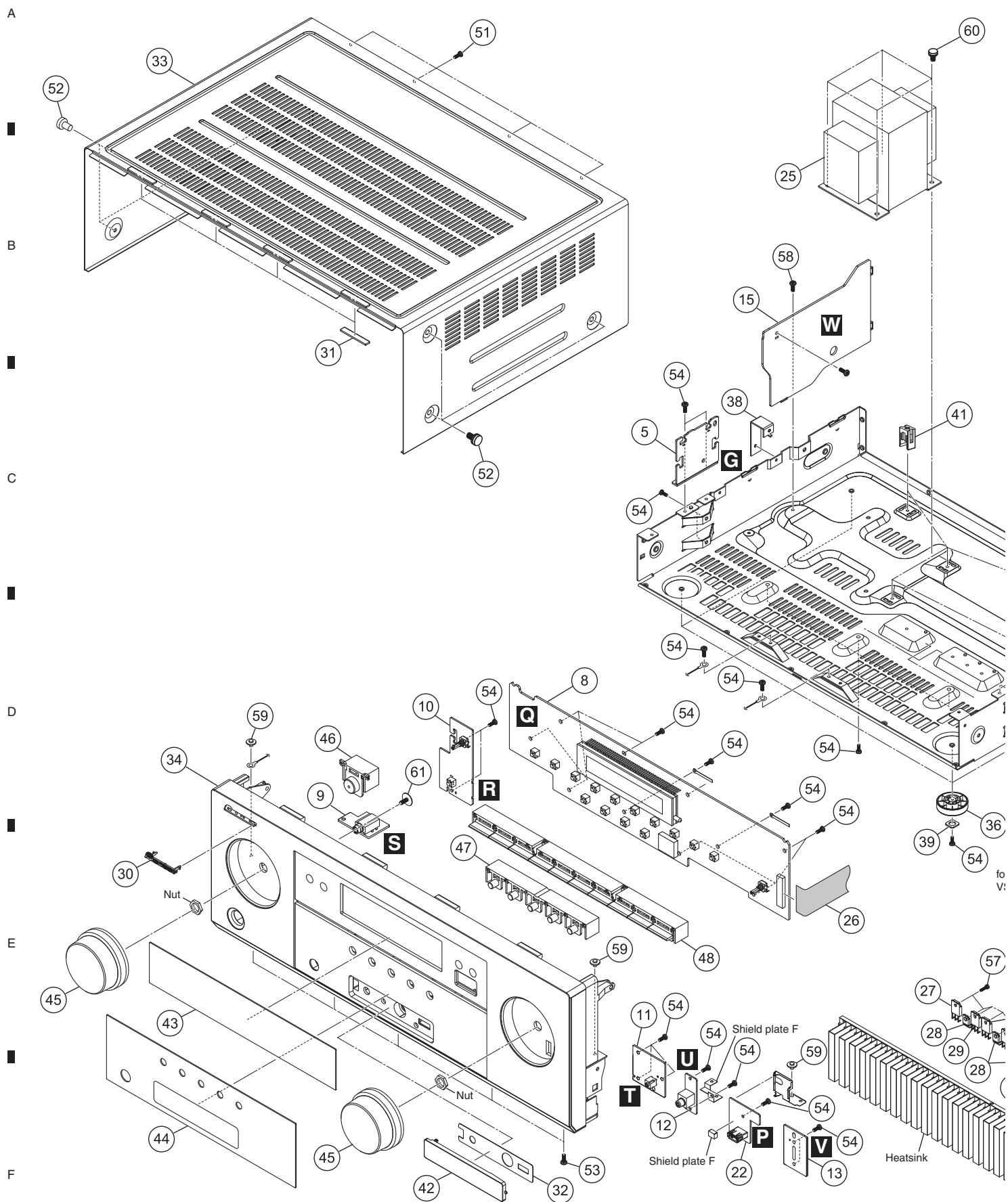
<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	Remote Control	See Contrast table (2)
2	AM Loop Antenna	E601019000010-IL
3	FM Wire Antenna	E605010140010-IL
4	Microphone (for Auto MCACC setup)	APM7010
5	iPod Cable	L308102013030-IL
6	Operating Instructions (CD-ROM)	See Contrast table (2)
7	Quick Start Guide	See Contrast table (2)
8	Box, Gift	See Contrast table (2)
9	Cushion, Snow VSX-522	6230213144000-IL
10	PE, Sheet	6327040059000-IL
NSP 11	Warranty Card	See Contrast table (2)
NSP 12	Label	VRW1629

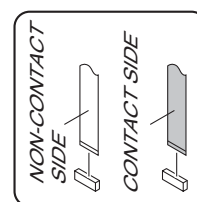
(2) CONTRAST TABLE

VSX-1022-K/CUXESM, VSX-42/UXECB and VSX-822-K/CUXESM are constructed the same except for the following:

Mark	No.	Symbol and Description	VSX-1022-K /CUXESM	VSX-42 /UXECB	VSX-822-K /CUXESM
	1	Remote Control	8300766100010-IL	8300766200010-IL	8300766100010-IL
	6	Operating Instructions (CD-ROM)	6517000000490-IL	6517000000510-IL	6517000000490-IL
	7	Quick Start Guide	5707000006490-IL	5707000006500-IL	5707000006490-IL
	8	Box, Gift	6007212070050-IL	6007212070060-IL	6007212070090-IL
NSP	11	Warranty Card	ARY7156	ARY7007	ARY7156

9.2 EXTERIOR SECTION





(1) EXTERIOR SECTION SECTION PARTS LIST

	Mark No.	Description	Part No.	Mark No.	Description	Part No.
A	1	MAIN Assy	See Contrast table (2)	46	Button	See Contrast table (2)
	2	BTCNT Assy	7028071612050-IL	47	5 Key Button	5090214561000-IL
	3	OPTCO Assy	7028071613050-IL	48	10 Key Button	5090214571000-IL
	4	G-R Assy	7028071614050-IL	49	Shield AMP PCB	See Contrast table (2)
	5	G-L Assy	7028071615050-IL	50	•••••	
	6	WG-A Assy	7028071616050-IL	51	Screw	BBT30P100FTB
	7	WG-B Assy	7028071617050-IL	52	Screw	BBT40P080FTB
	8	FRONT Assy	See Contrast table (2)	53	Screw	BBZ30P080FTB
	9	HP Assy	See Contrast table (2)	54	Screw	BBZ30P080FTC
	10	INSEL Assy	See Contrast table (2)	55	Screw	BBZ30P180FTC
B	11	MIC Assy	7028071624050-IL	56	Screw	BSZ30P040FTB
	12	FVIDEO Assy	See Contrast table (2)	57	Screw Tapping Assy	B018230141H11-IL
	13	WG Assy	7028071627060-IL	58	Screw, Tap Tite	B020230063B10-IL
	14	VIDEO Assy	See Contrast table (2)	59	Screw, Tap Tite	1500001206010-IL
	15	STBY Assy	See Contrast table (2)	60	Screw	B028940101B11-IL
	16	BRG-1 Assy	7028071673030-IL	61	Screw	1500001456010-IL
	17	BRG-2 Assy	See Contrast table (2)			
	18	AUDIO Assy	See Contrast table (2)			
	19	D-MAIN Assy	See Contrast table (2)			
	20	CPU Assy	See Contrast table (2)			
C	21	AMP Assy	See Contrast table (2)			
	22	F-USB Assy	7028071781030-IL			
	23	BT Assy	7028070231010-IL			
	24	Cord Assy	L068125101710-IL			
	25	Power Trans	See Contrast table (2)			
	26	Cable Flat Card 1.0	N711251722480-IL			
	27	Transistor	J5011560Y0000-IL			
	28	Semi, Tr/Ge NPN 2SC	J502396400010-IL			
	29	Transistor	J5032390Y0000-IL			
	30	Pioneer Badge	See Contrast table (2)			
D	31	Sheet	1210210235000-IL			
	32	F Input Sheet	See Contrast table (2)			
	33	Cabinet VSX-522	3007212006000-IL			
	34	Front Panel	See Contrast table (2)			
	35	Back Chassis	See Contrast table (2)			
	36	Foot (PLS)	4000210391000-IL			
	37	Bracket	4010056906010-IL			
	38	Bracket SMPS	4010214886000-IL			
	39	Cushion	4050211605000-IL			
	40	Screw Cover	4050211745100-IL			
E	41	Support	4070001601010-IL			
	42	Front Input Cover	4317215111030-IL			
	43	Window Display U	See Contrast table (2)			
	44	Window Lower	See Contrast table (2)			
	45	Knob	5080212431000-IL			
F						

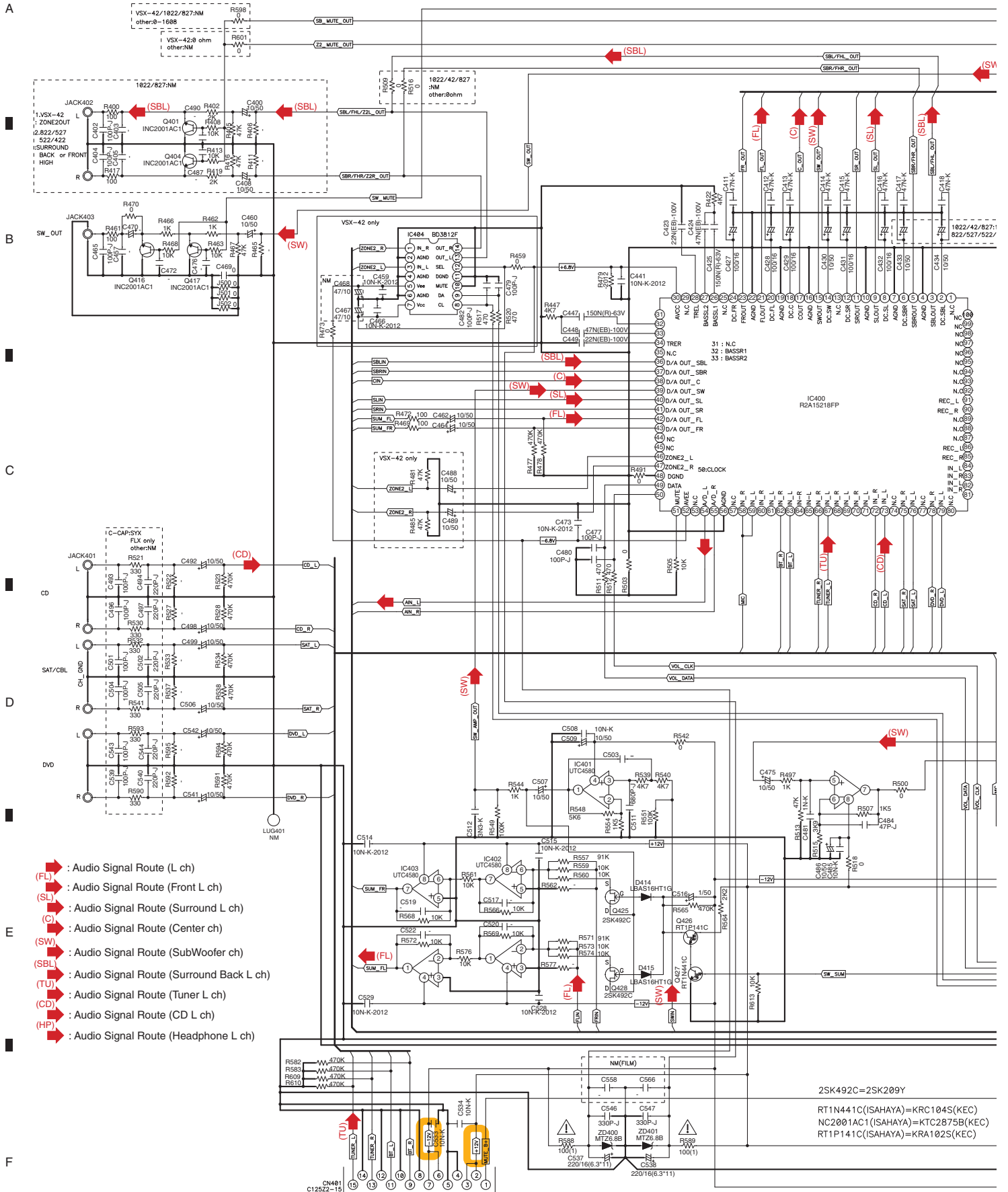
(2) CONTRAST TABLE

VSX-1022-K/CUXESM, VSX-42/UXECB and VSX-822-K/CUXESM are constructed the same except for the following:

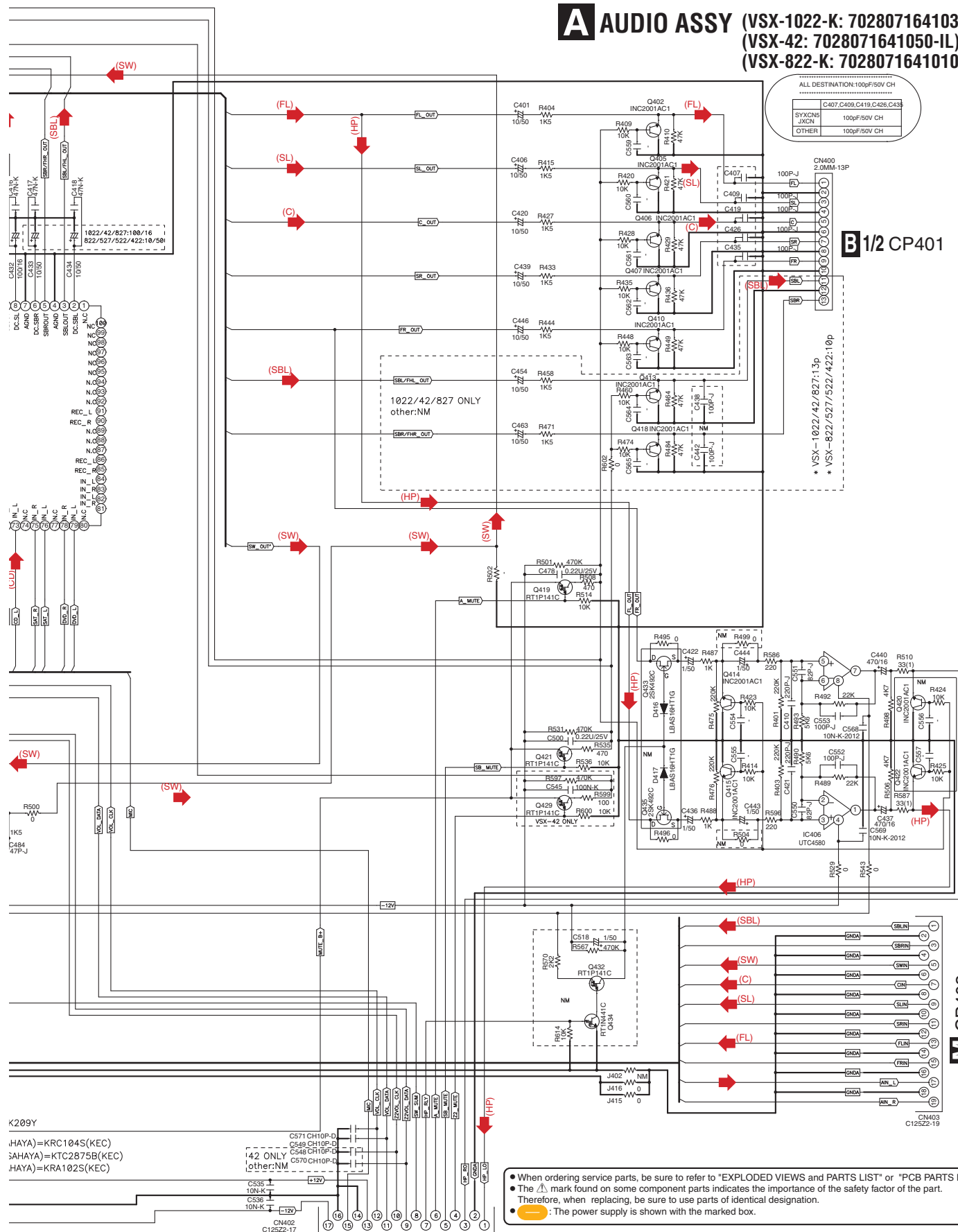
Mark	No.	Symbol and Description	VSX-1022-K /CUXESM	VSX-42 /UXECB	VSX-822-K /CUXESM
⚠	1	MAIN Assy	7028071611030-IL	7028071611050-IL	7028071611010-IL
	8	FRONT Assy	7028071621030-IL	7028071621050-IL	7028071621030-IL
	9	HP Assy	7028071622030-IL	7028071622050-IL	7028071622030-IL
	10	INSEL Assy	7028071623030-IL	7028071623050-IL	7028071623030-IL
	12	FVIDEO Assy	7028071626030-IL	7028071626050-IL	7028071626030-IL
	14	VIDEO Assy	7028071671030-IL	7028071671030-IL	7028071671010-IL
	15	STBY Assy	7028071672030-IL	7028071672030-IL	7028071672010-IL
	17	BRG-2 Assy	7028071674030-IL	7028071674050-IL	7028071674030-IL
	18	AUDIO Assy	7028071641030-IL	7028071641050-IL	7028071641010-IL
	19	D-MAIN Assy	7028071691050-IL	7028071691050-IL	7028071691010-IL
	20	CPU Assy	7028071681030-IL	7028071681050-IL	7028071681010-IL
	21	AMP7 Assy	7028070253010-IL	7028070253010-IL	Not used
	21	AMP5 Assy	Not used	Not used	7028070245010-IL
	25	Power Trans	8200960611140-IL	8200960611140-IL	8200960611180-IL
	30	Pioneer Badge	XAM3006	PAM1791	XAM3006
	32	F Input Sheet	1217211792000-IL	1217211792010-IL	1217211792000-IL
	34	Front Panel	3067215491010-IL	3067215501000-IL	3067215491020-IL
	35	Back Chassis	3207214196000S-IL	3207214196200S-IL	3207214186000S-IL
	43	Window Display U	5077213113020-IL	5077213113030-IL	5077213113020-IL
	44	Window Lower	5077213123060-IL	5077213123040-IL	5077213123060-IL
	46	Button	5090213741100-IL	5098214551000-IL	5090213741100-IL
	49	Shield AMP PCB	Not used	Not used	4010215676000-IL

10. SCHEMATIC DIAGRAM

10.1 AUDIO ASSY



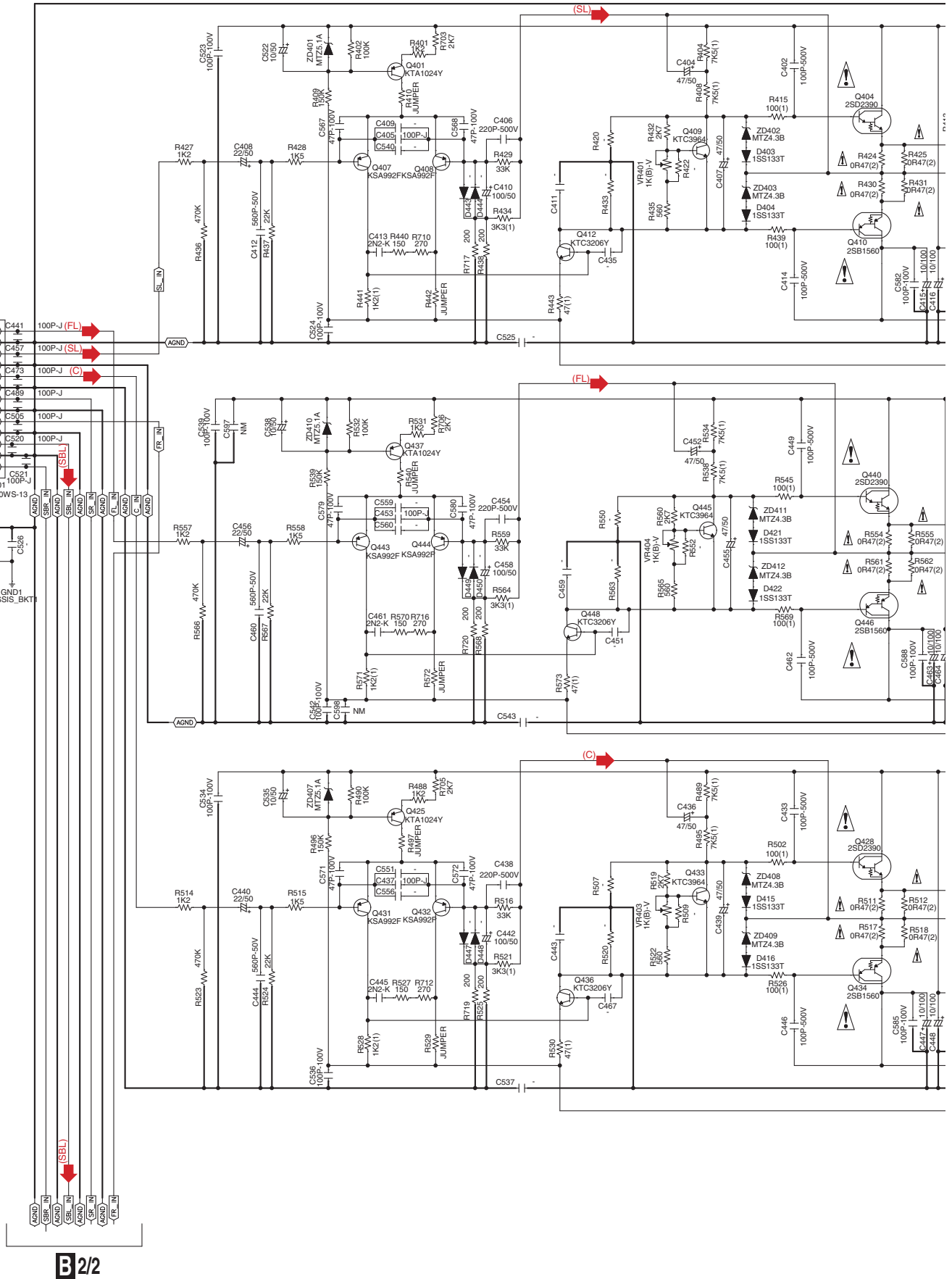
A AUDIO ASSY (VSX-1022-K: 7028071641030-IL) (VSX-42: 7028071641050-IL) (VSX-822-K: 7028071641010-IL)



- 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.
- Δ : The power supply is shown with the marked box.

10.2 AMP7 ASSY (1/2)(VSX-1022-K, VSX-42)

B 1/2 AMP7 ASSY (7028070253010-IL)



B 2/2

VSX-1022-K



10.3 AMP7 ASSY (2/2)(VSX-1022-K, VSX-42)

B1/2

A

B

C

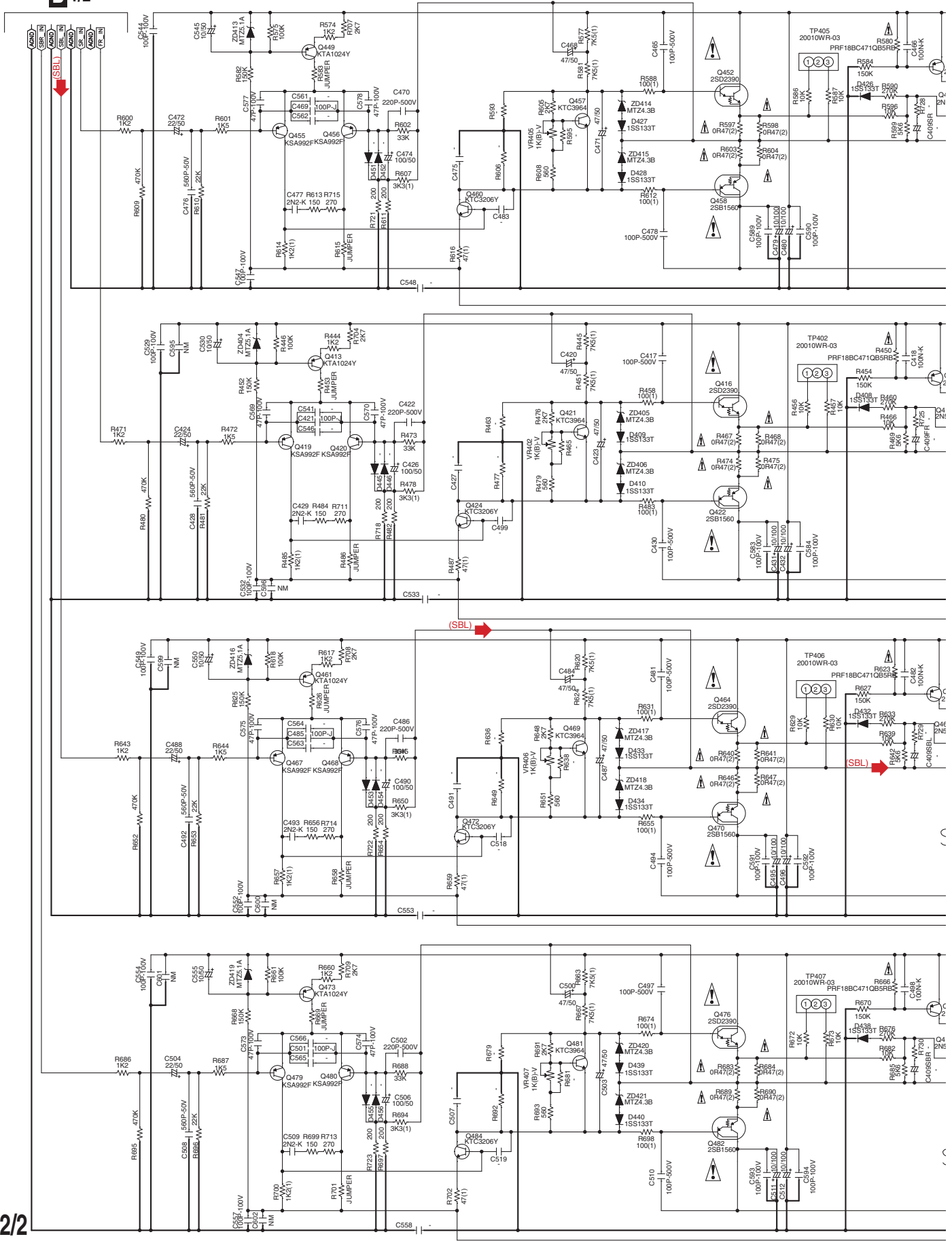
D

E

F

B2/2

VSX-1022-K



B 2/2 AMP7 ASSY (7028070253010-IL)

A

B

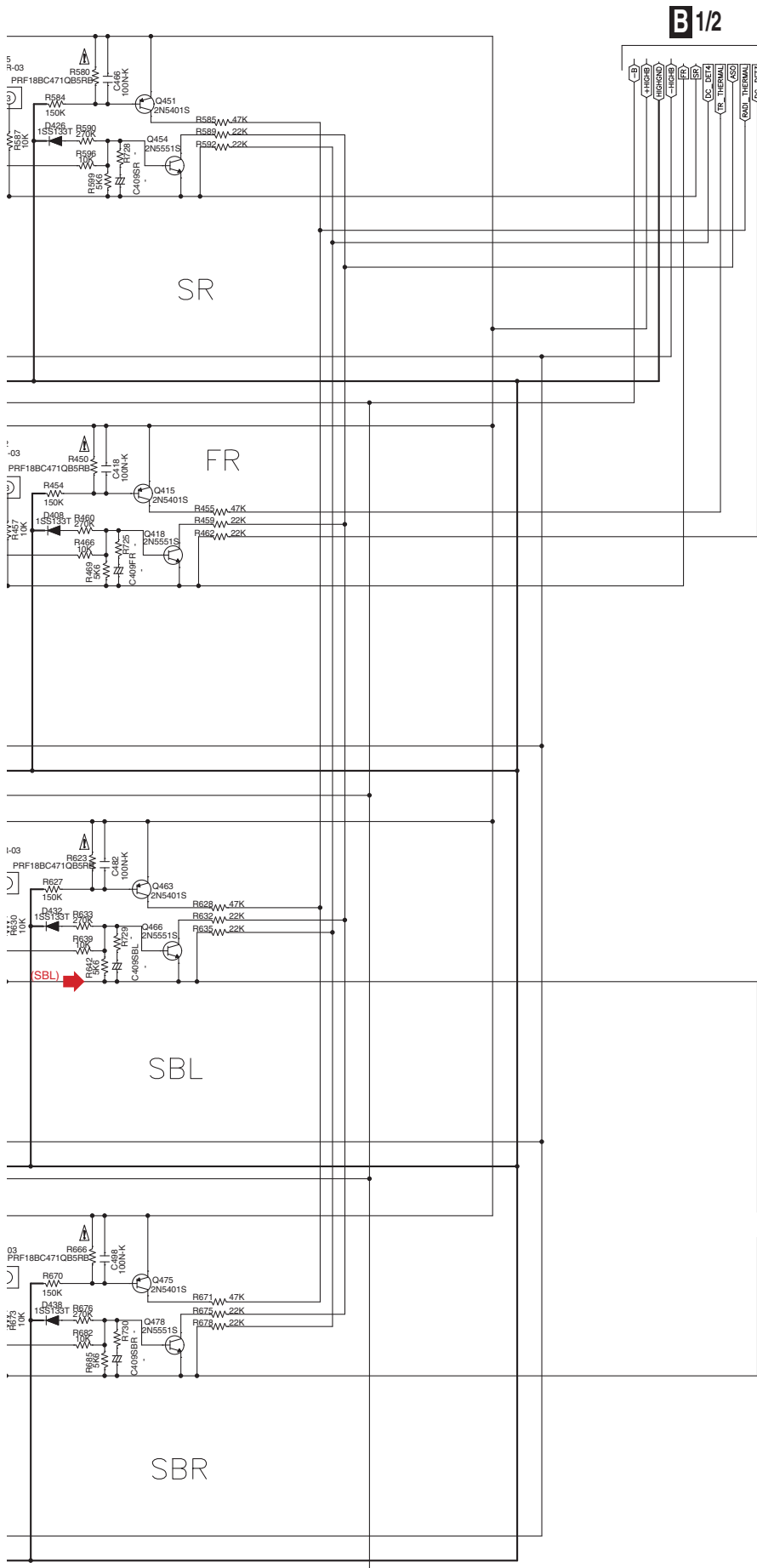
C

D

E

F

(SBL)  : Audio Signal Route (Surround Back L ch)

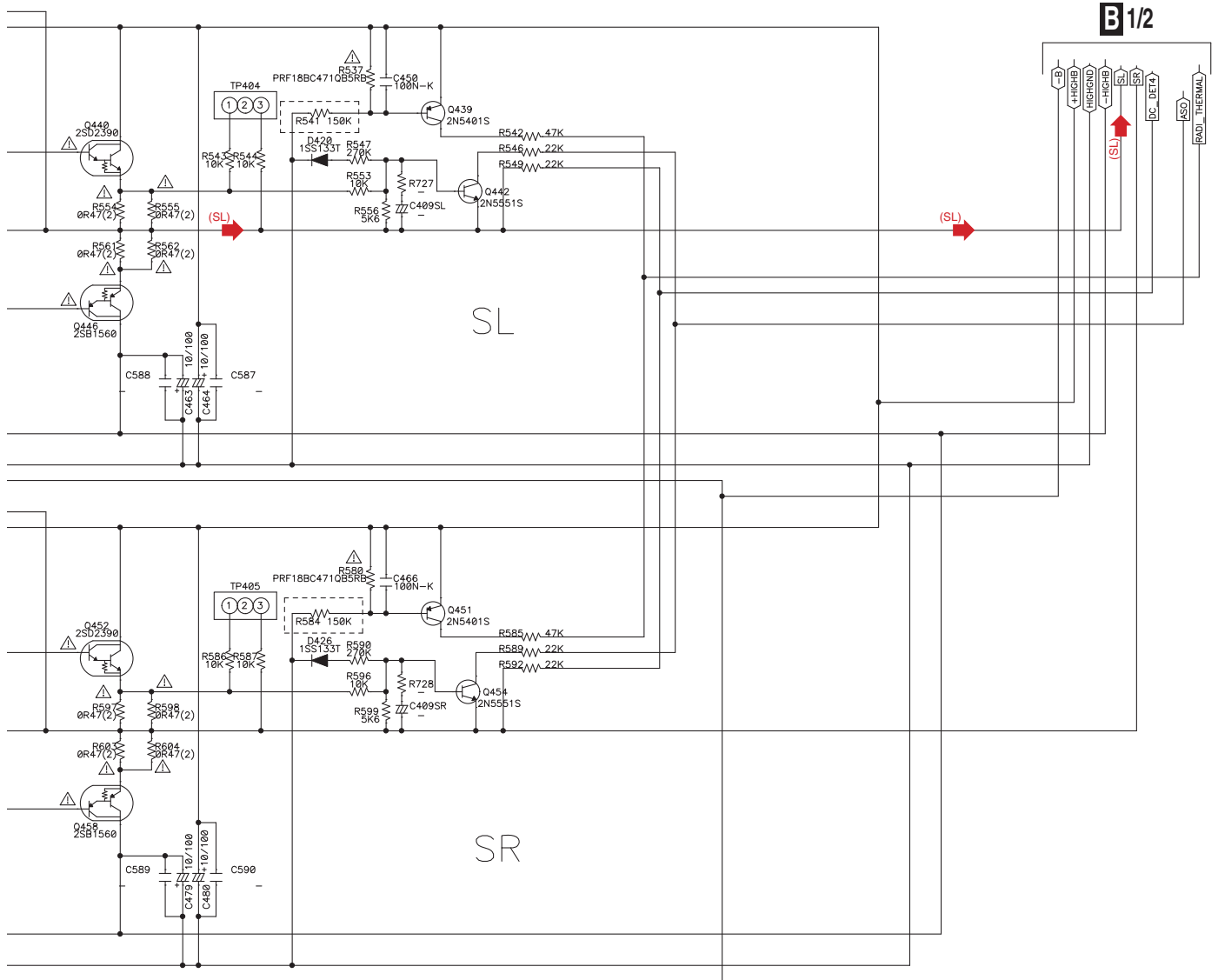


C CN2

B 1/2 AMP5 ASSY (7028070245010-IL)

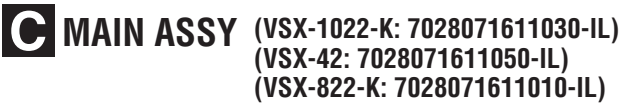
**B** 1/2

(SL) : Audio Signal Route (Surround L ch)



4





10.7 D-MAIN ASSY (1/7)(VSX-1022-K, VSX-42)

A

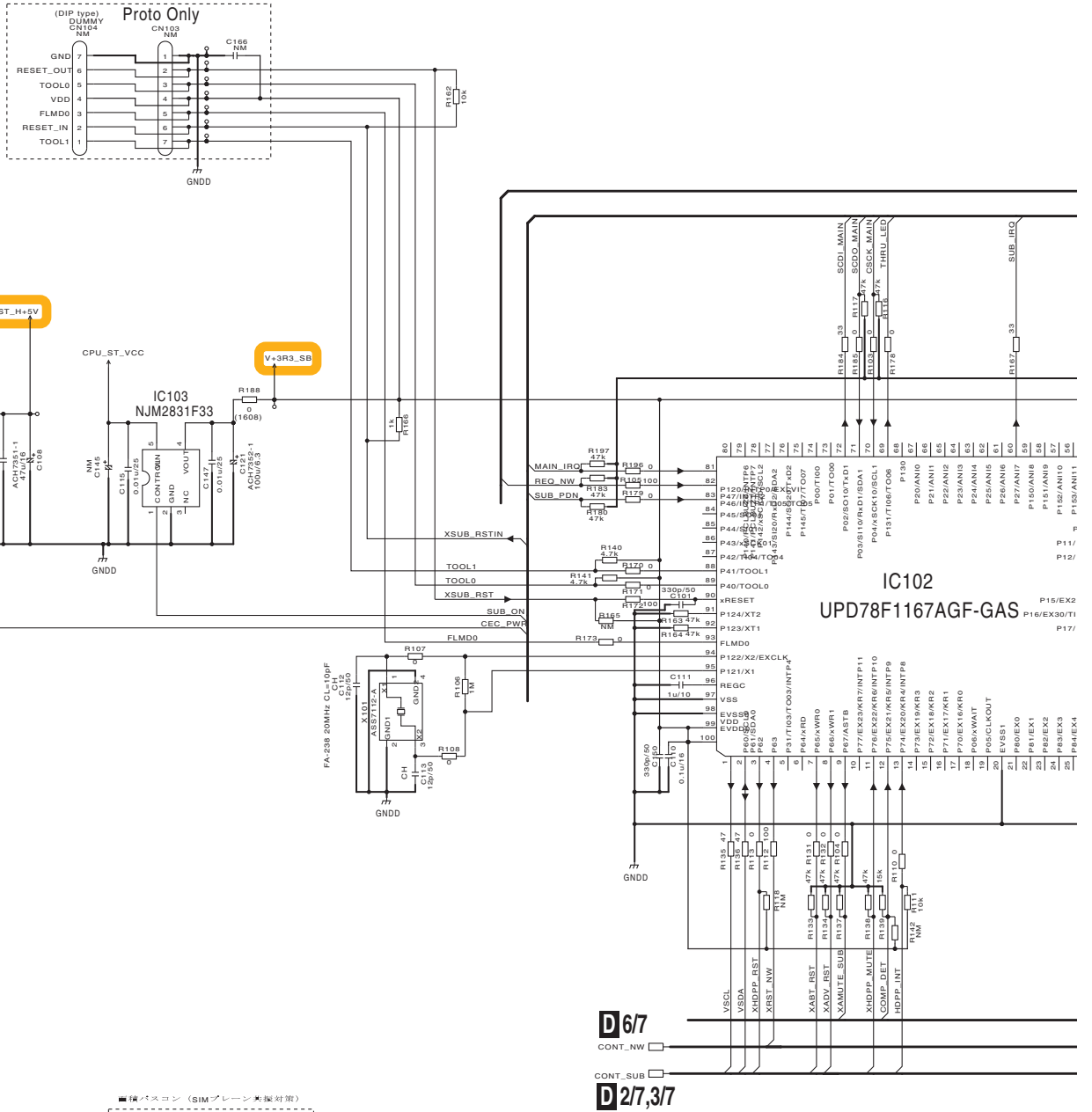
B

C

D

E

F

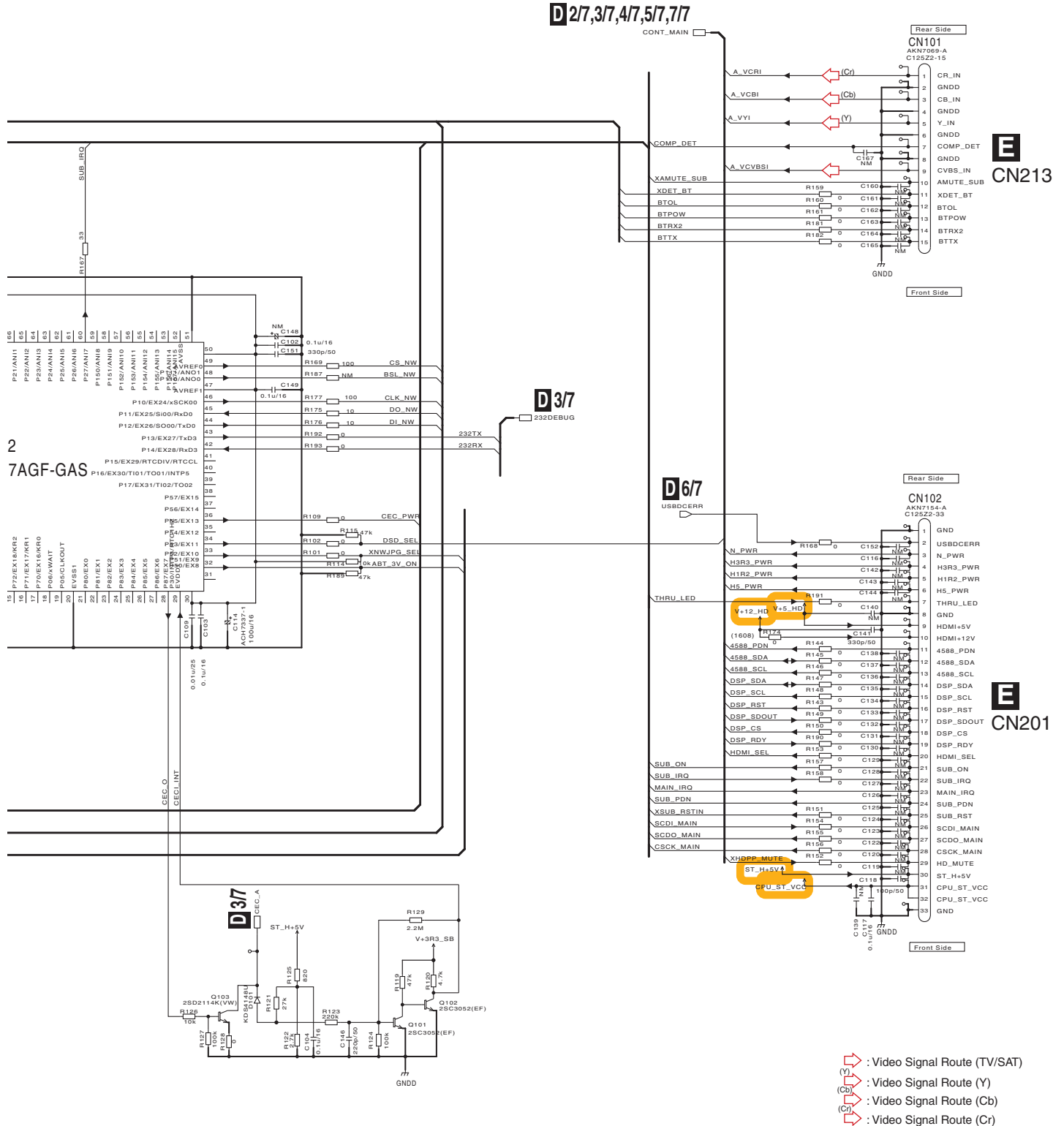


D17

90

VSX-1022-K

D1/7 D-MAIN ASSY (7028071691050-IL)



D2/7 D-MAIN ASSY (7028071691050-IL)

A

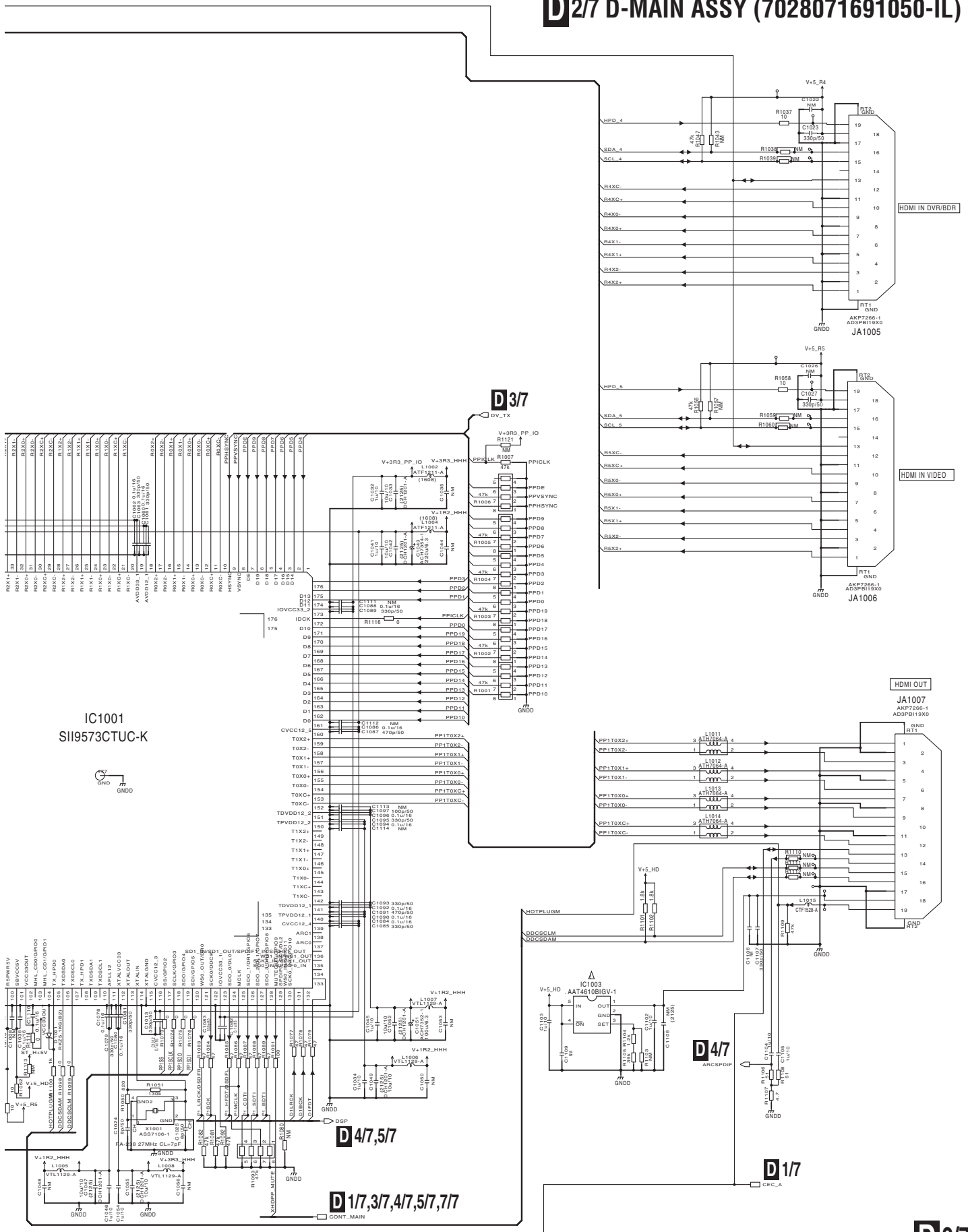
B

C

D

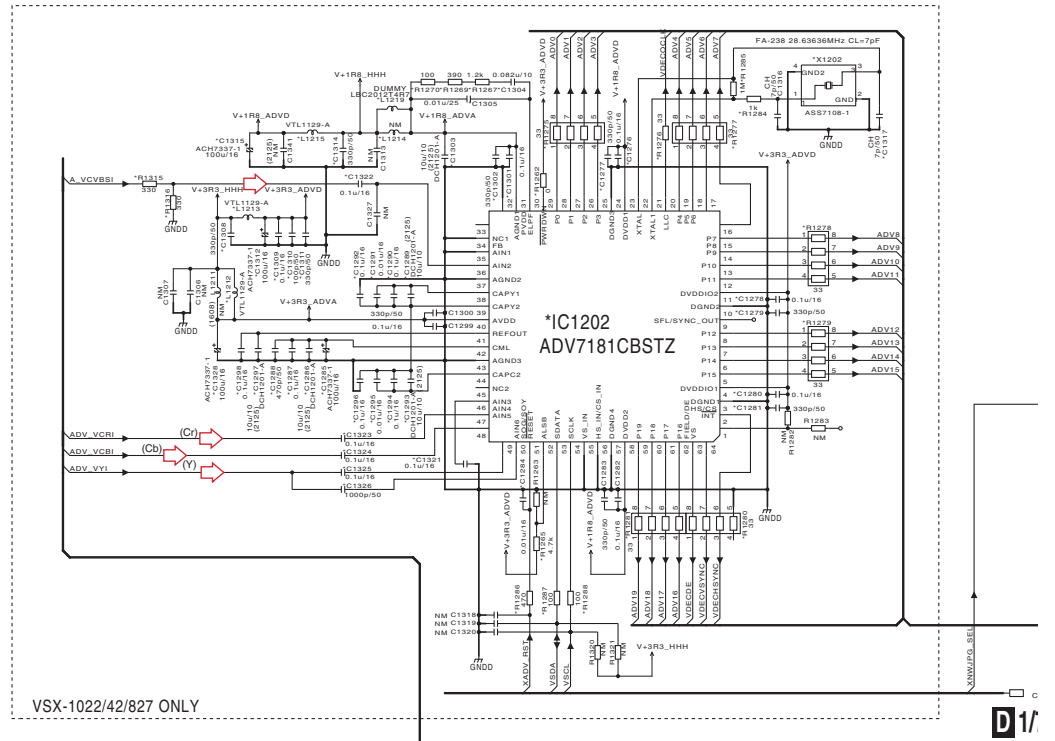
E

F

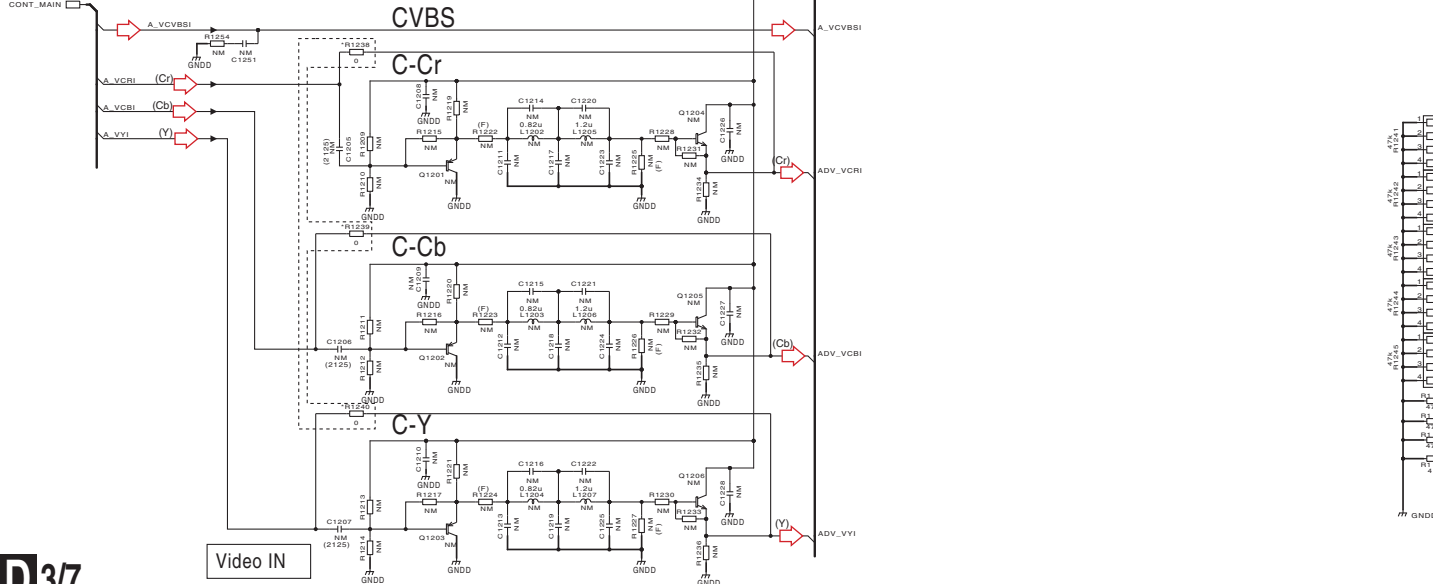


D2/7

10.9 D-MAIN ASSY (3/7)(VSX-1022-K, VSX-42)



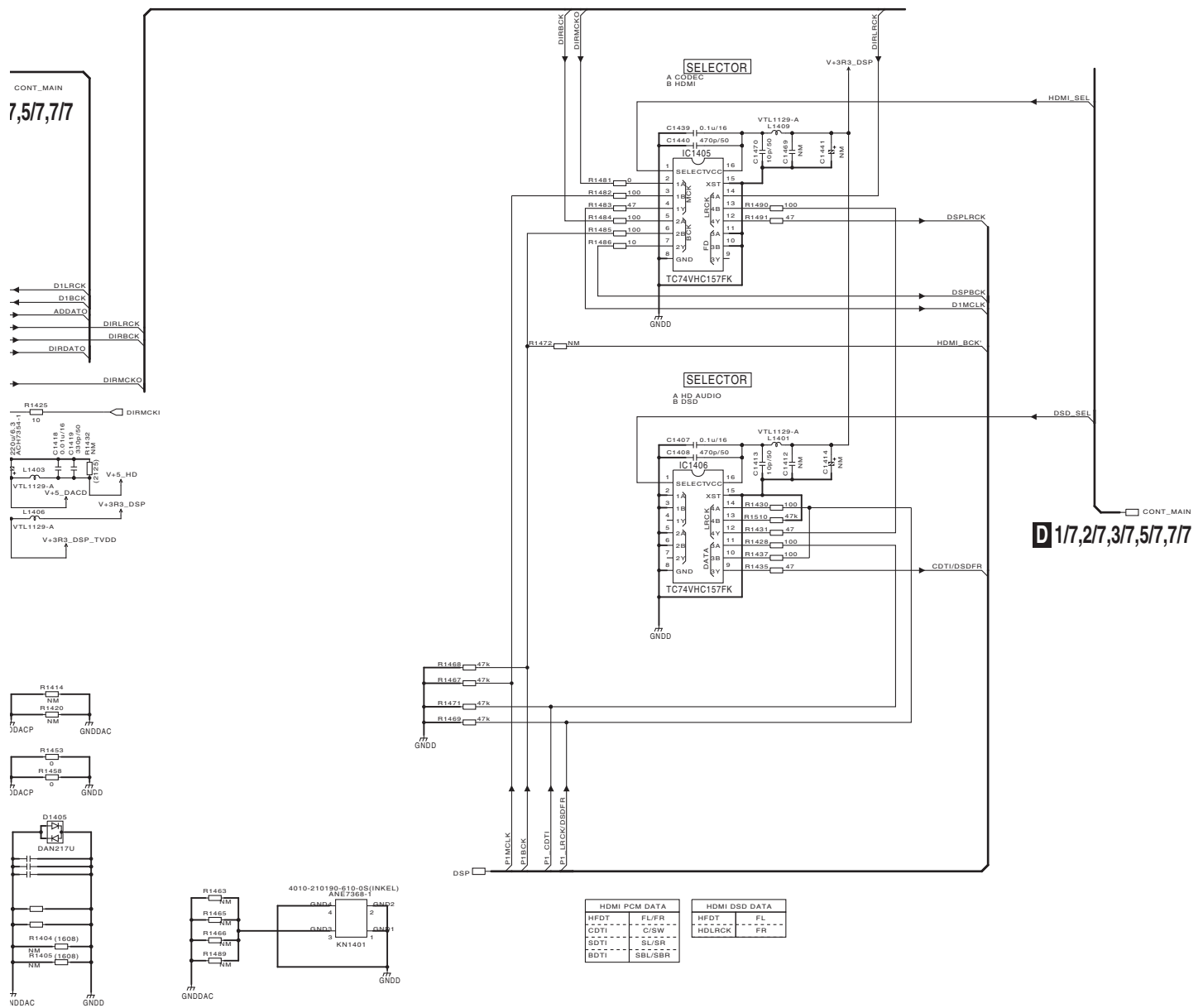
D17,27,47,57,77



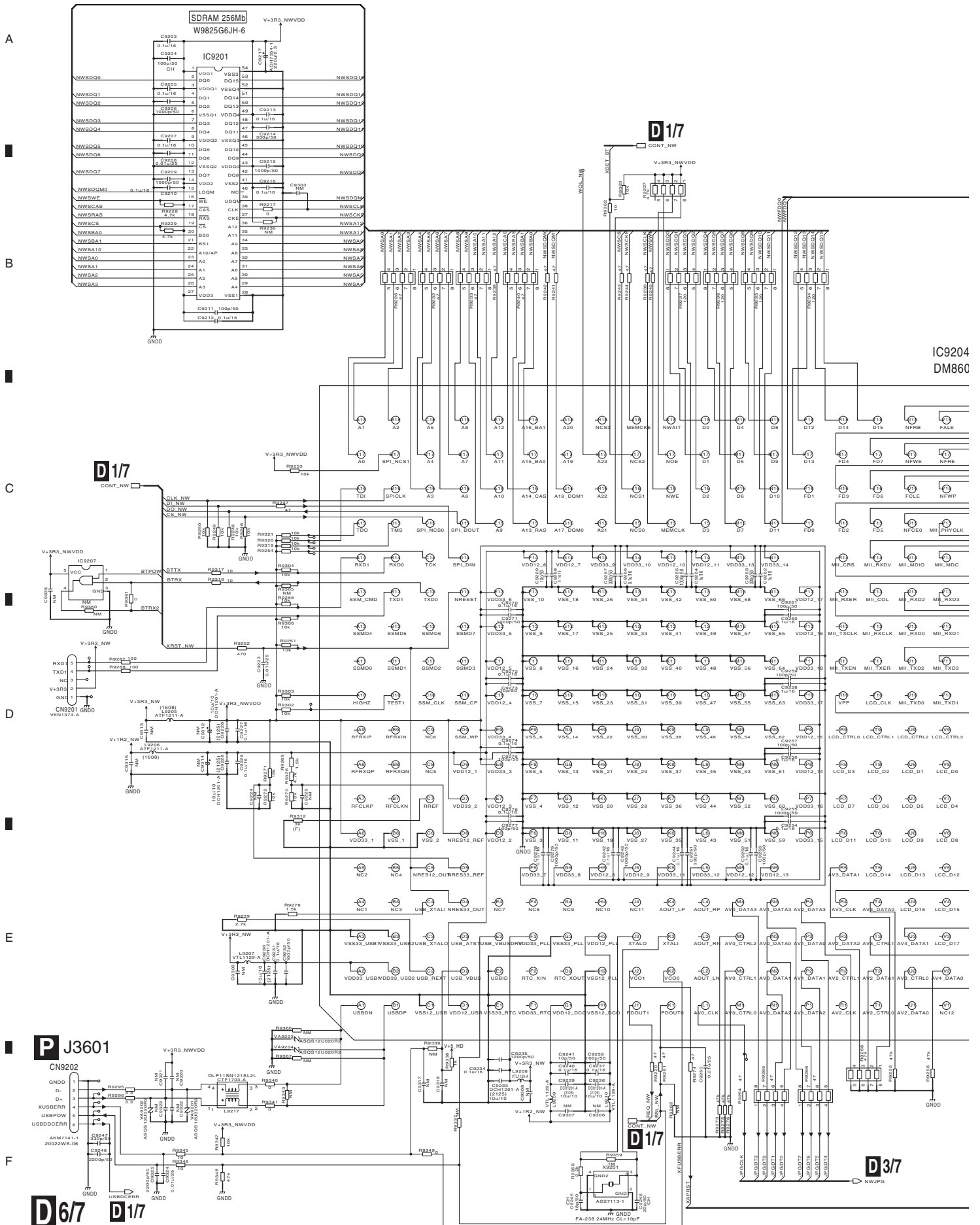
D3/7

D4/7 D-MAIN ASSY (7028071691050-IL)

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



10.12 D-MAIN ASSY (6/7)(VSX-1022-K, VSX-42)



A



The mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.

 印の部品は指定部品 (安全規格適合部品) を必ず使用すること。

10.13 D-MAIN ASSY (7/7)(VSX-1022-K, VSX-42)

A

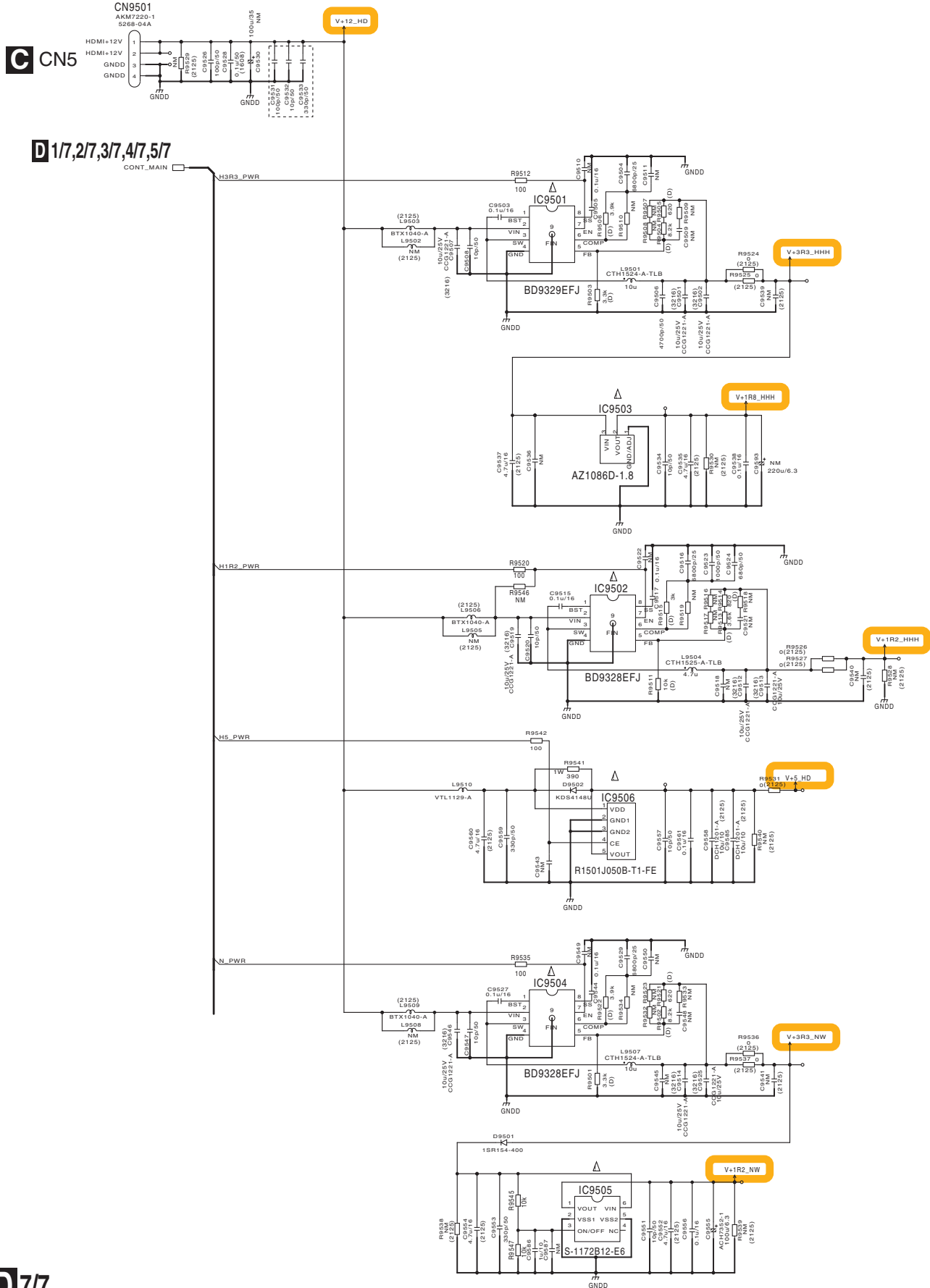
B

C

D

E

F



D7/7

D77 D-MAIN ASSY (7028071691050-IL)

A

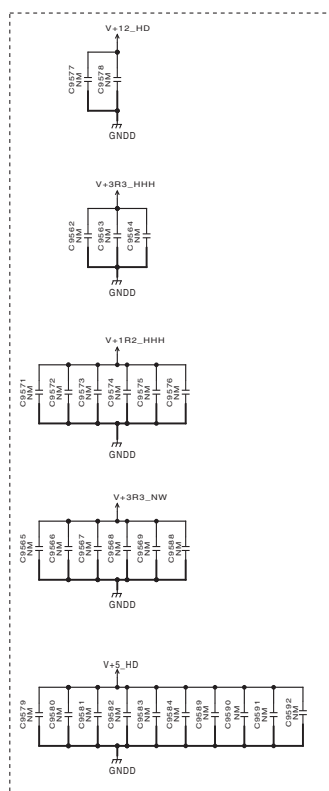
B

C

D

E

F



All 1u/10 is DCH1246-A.

The mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.

 印の部品は指定部品 (安全規格適合部品) を必ず使用すること。

10.15 D-MAIN ASSY (2/7)(VSX-822-K)

A

B

C

D

E

F

HDMI IN DVD

HDMI IN SAT/CBL

HDMI IN BD

HDMI IN GAME

The Δ mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.
 △印の部品は指定部品（安全規格適合部品）を必ず使用すること。

for MP
 R1117 : NM
 R1118 : 0 ohm

D 17/37
 CONT. SUB

VSX-1022-K

D 2/7

IC100
 SII9573CTI

GND

G

G

G

G

G

G

G

G

G

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G

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G

G

A



10.16 D-MAIN ASSY (3/7)(VSX-822-K)

A

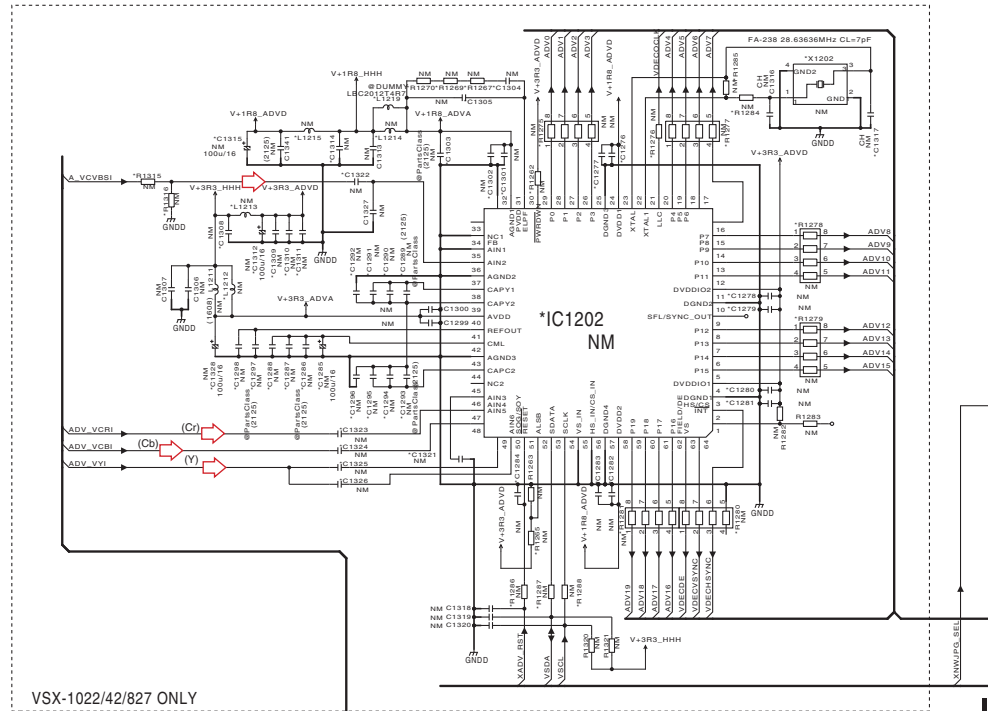
B

C

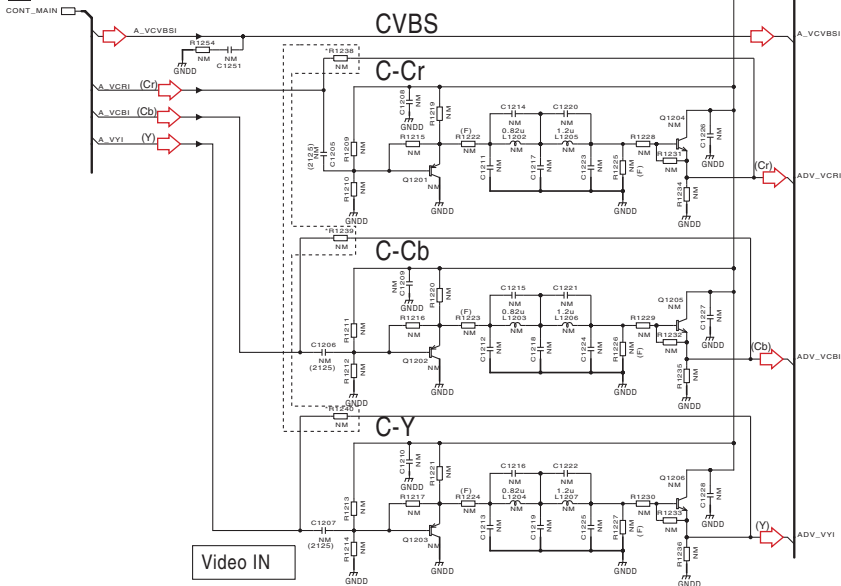
D

E

F



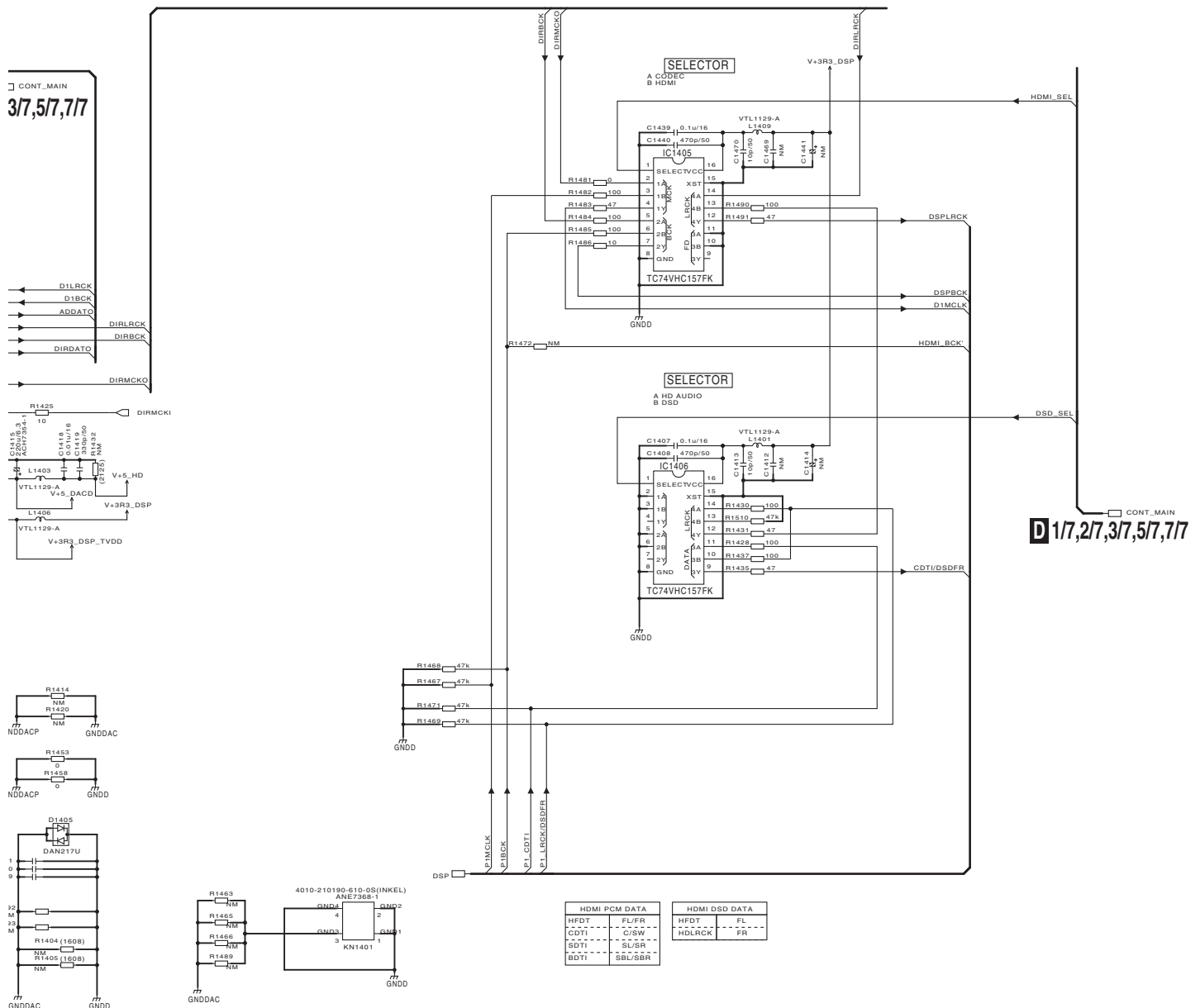
D 1/7,2/7,4/7,5/7,7/7



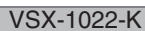
D 3/7

D4/7 D-MAIN ASSY (7028071691010-IL)

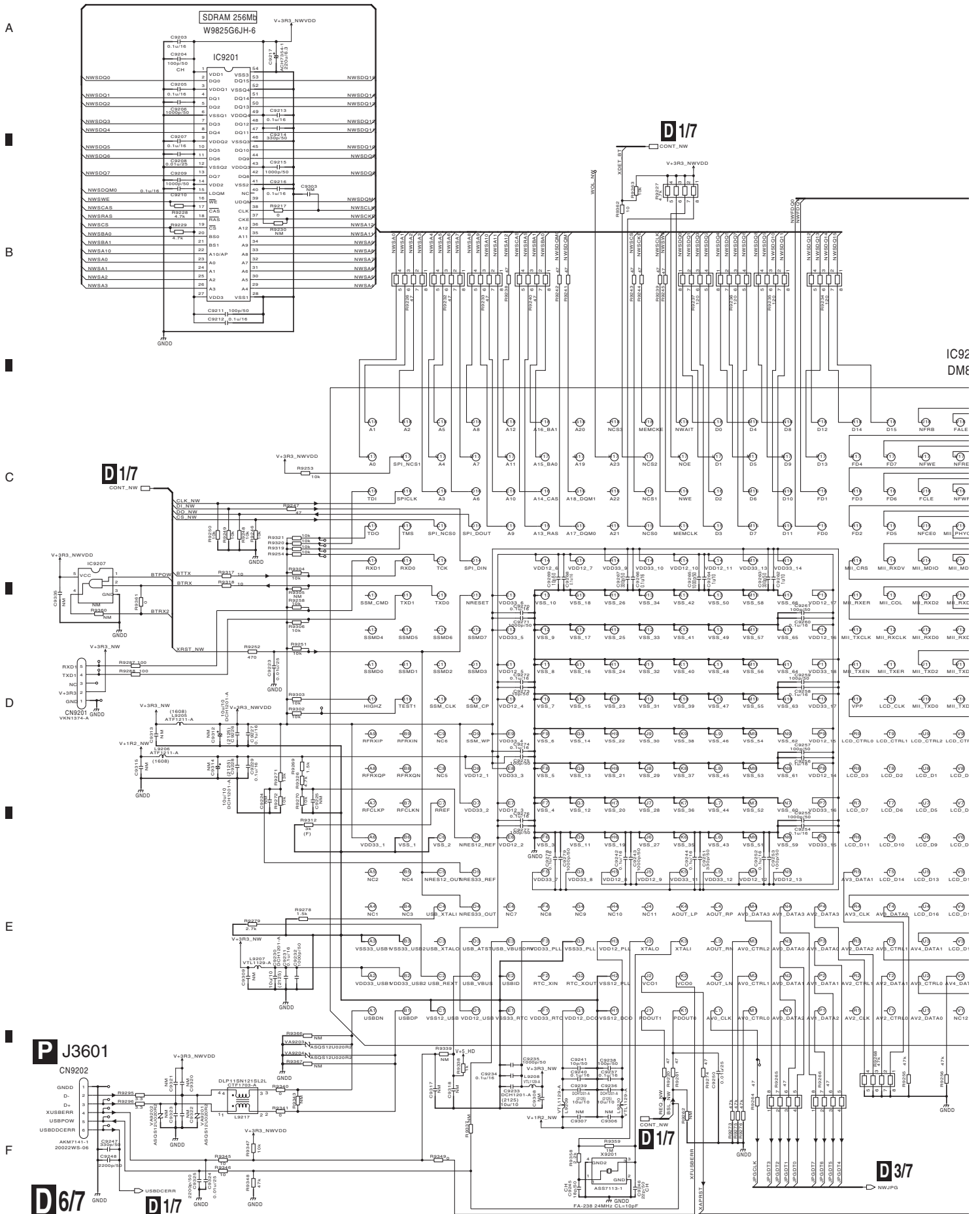
- ▶ : Audio Signal Route (L ch)
- (FL) ▶ : Audio Signal Route (Front L ch)
- (SL) ▶ : Audio Signal Route (Surround L ch)
- (C) ▶ : Audio Signal Route (Center ch)
- (SW) ▶ : Audio Signal Route (SubWoofer ch)
- (SBL) ▶ : Audio Signal Route (Surround Back L ch)



D 5/7



10.19 D-MAIN ASSY (6/7)(VSX-822-K)



A



C

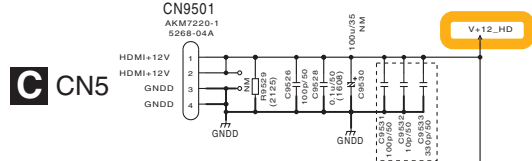
D

F

F

10.20 D-MAIN ASSY (7/7)(VSX-822-K)

A



D 1/7,2/7,3/7,4/7,5/7

B

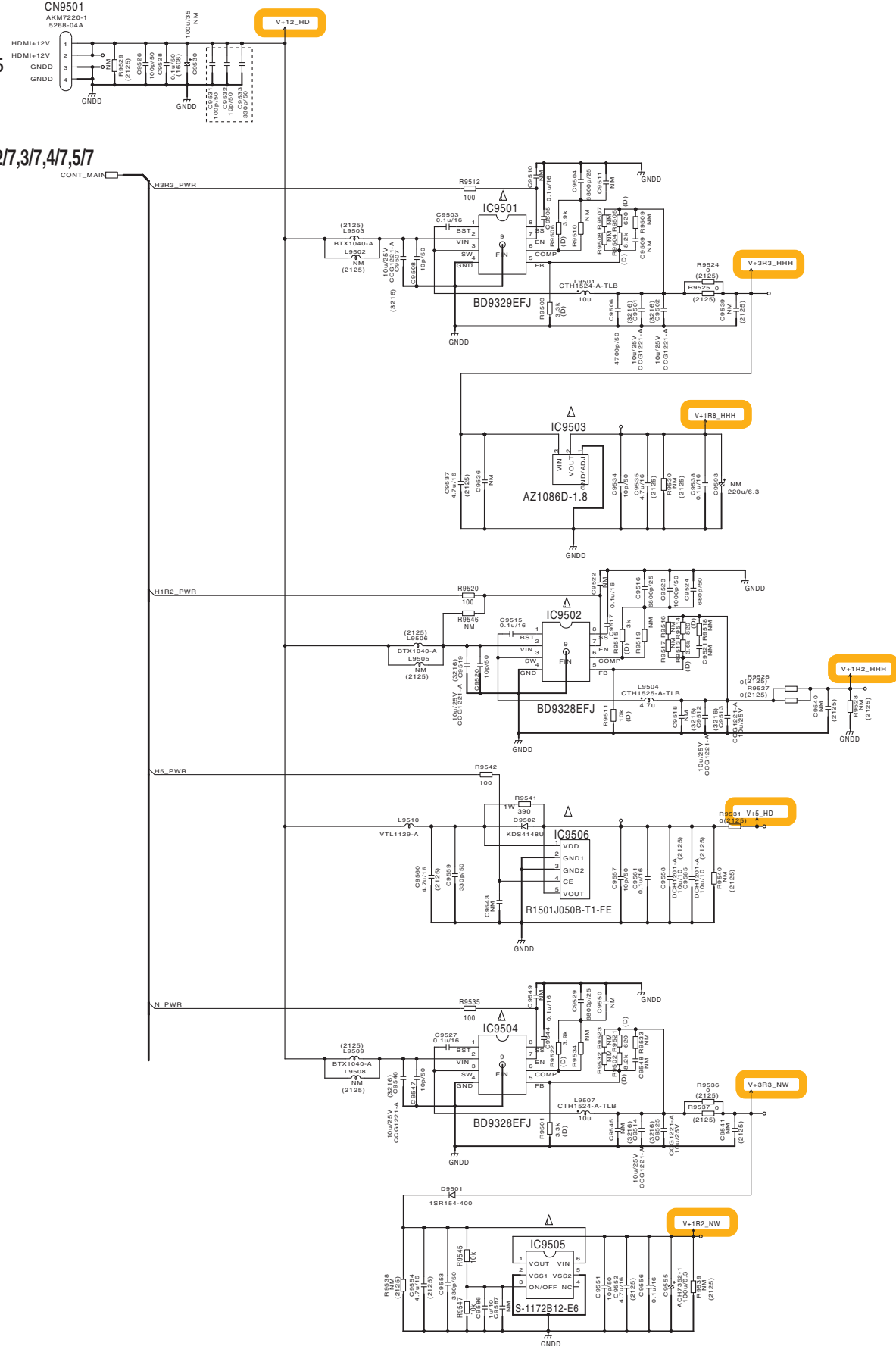
C

D

E

F

D 7/7



D77 D-MAIN ASSY (7028071691010-IL)

A

B

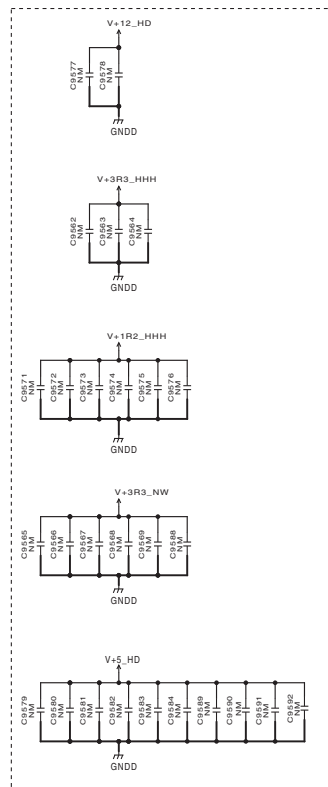
C

D

E

F

12_HHH
NM 5
(2125)



All 1u/10 is DCH1246-A.

The Δ mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.
△印の部品は指定部品（安全規格適合部品）を必ず使用すること。

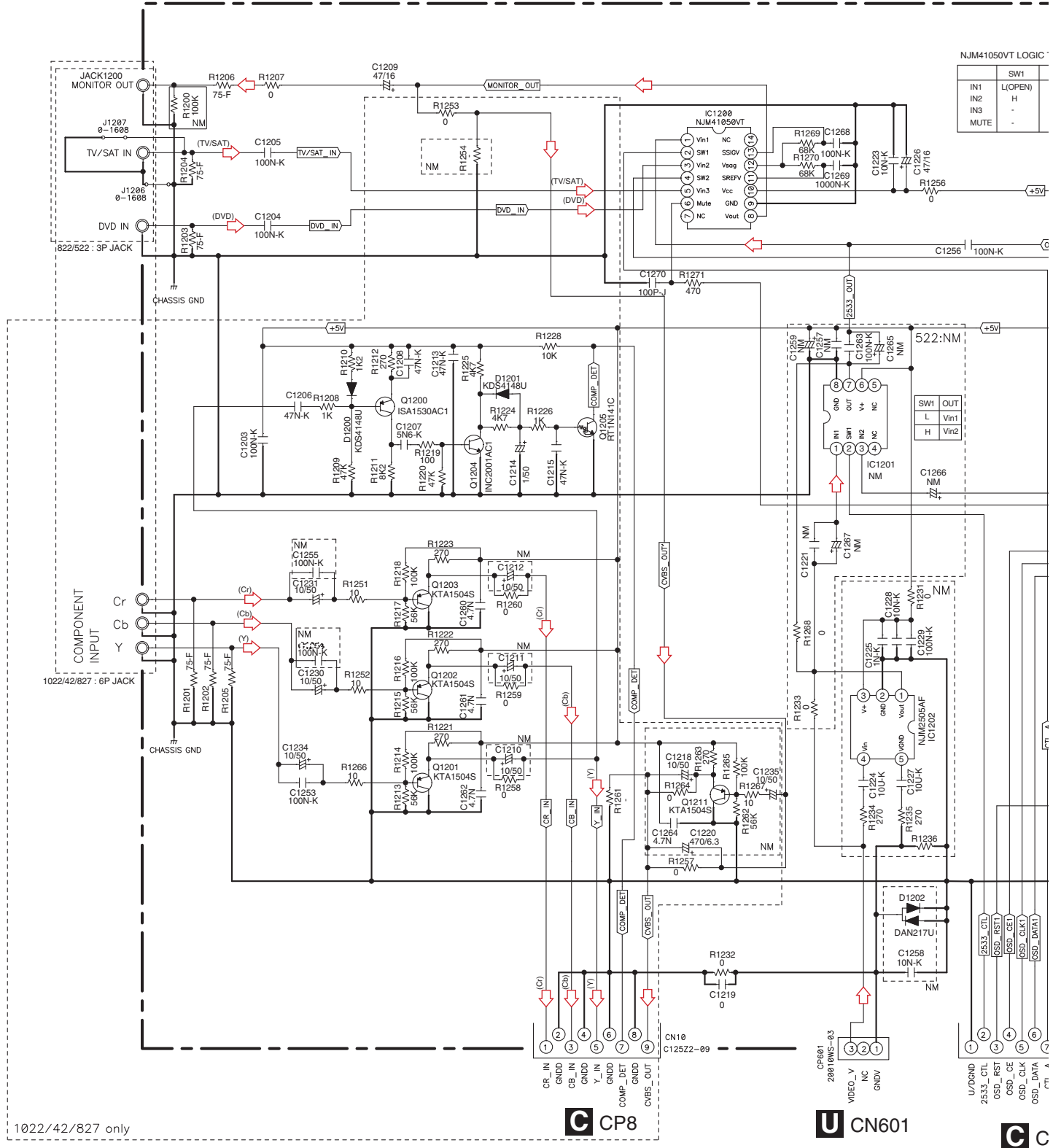


The  mark found on some component parts indicates the importance of the safety factor of the part. Therefore when replacing be sure to use parts of identical designation

-  : Video Signal Route (TV/SAT)
- (Y)  : Video Signal Route (Y)
- (Cb)  : Video Signal Route (Cb)
- (Cr)  : Video Signal Route (Cr)

10.22 VIDEO, G-L, G-R, WG-A and WG-B ASSYS

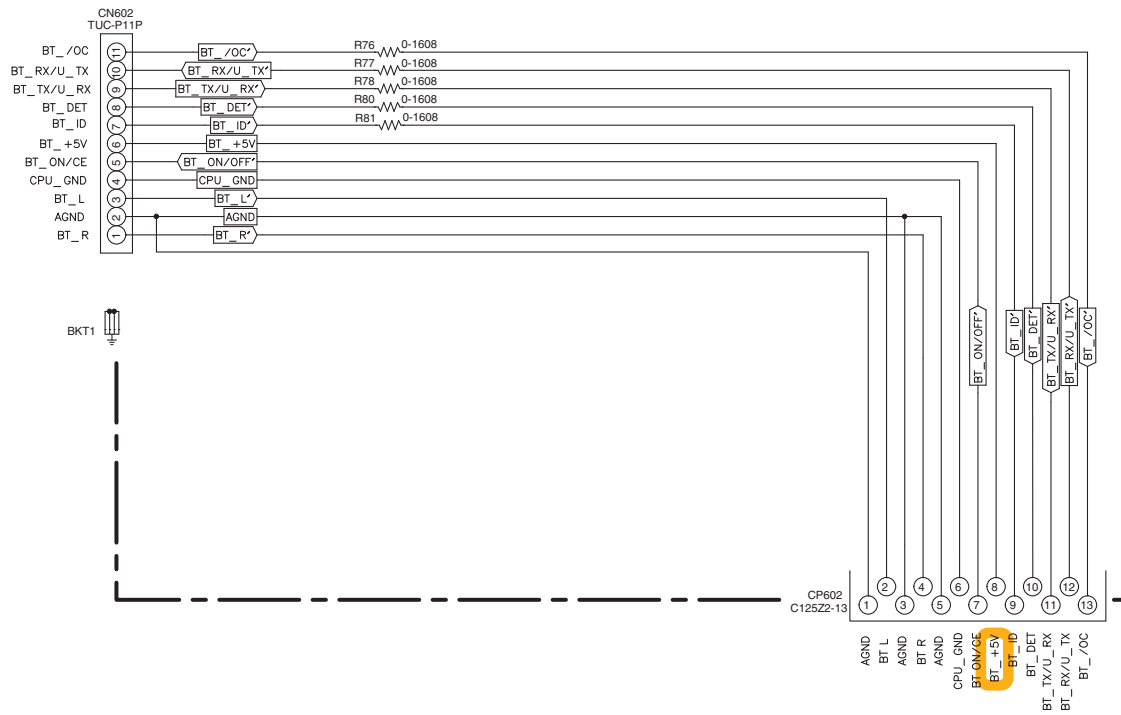
F VIDEO ASSY (VSX-1022-K, VSX-42: 7028071671030-IL) (VSX-822-K: 7028071671010-IL)



10.23 BT CNT, OPTCO, BRG-1 and BRG-2 ASSYS

K BT CNT ASSY (7028071612050-IL)

CP603

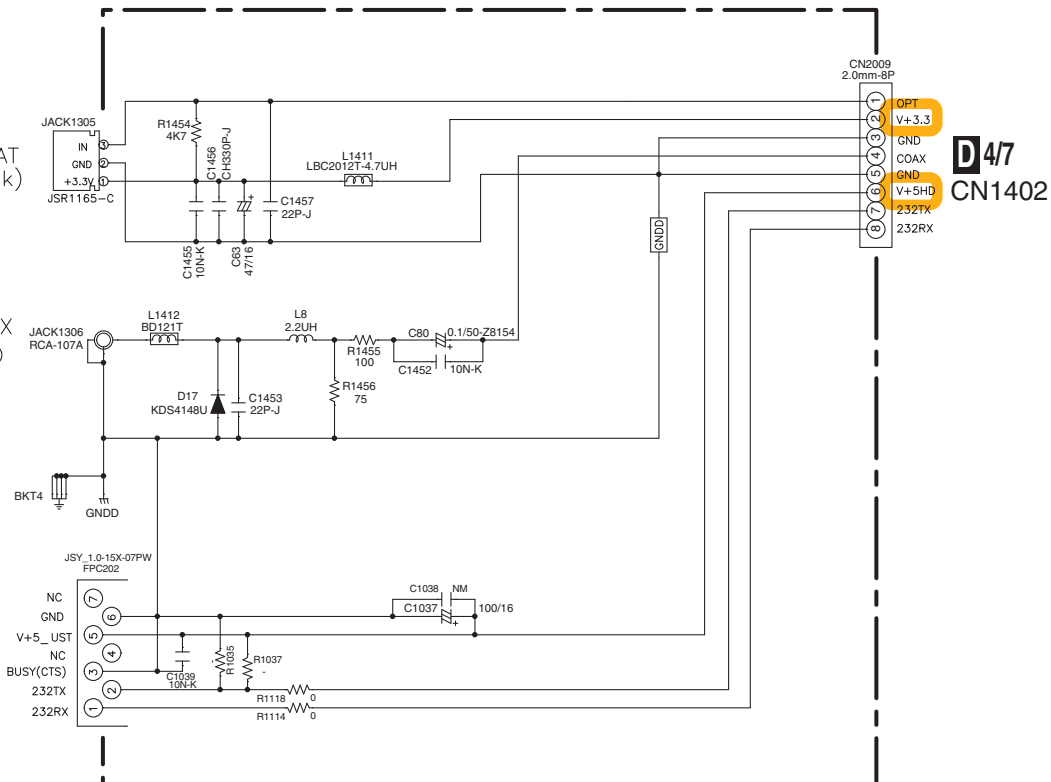


CP605

L OPTCO ASSY (7028071613050-IL)

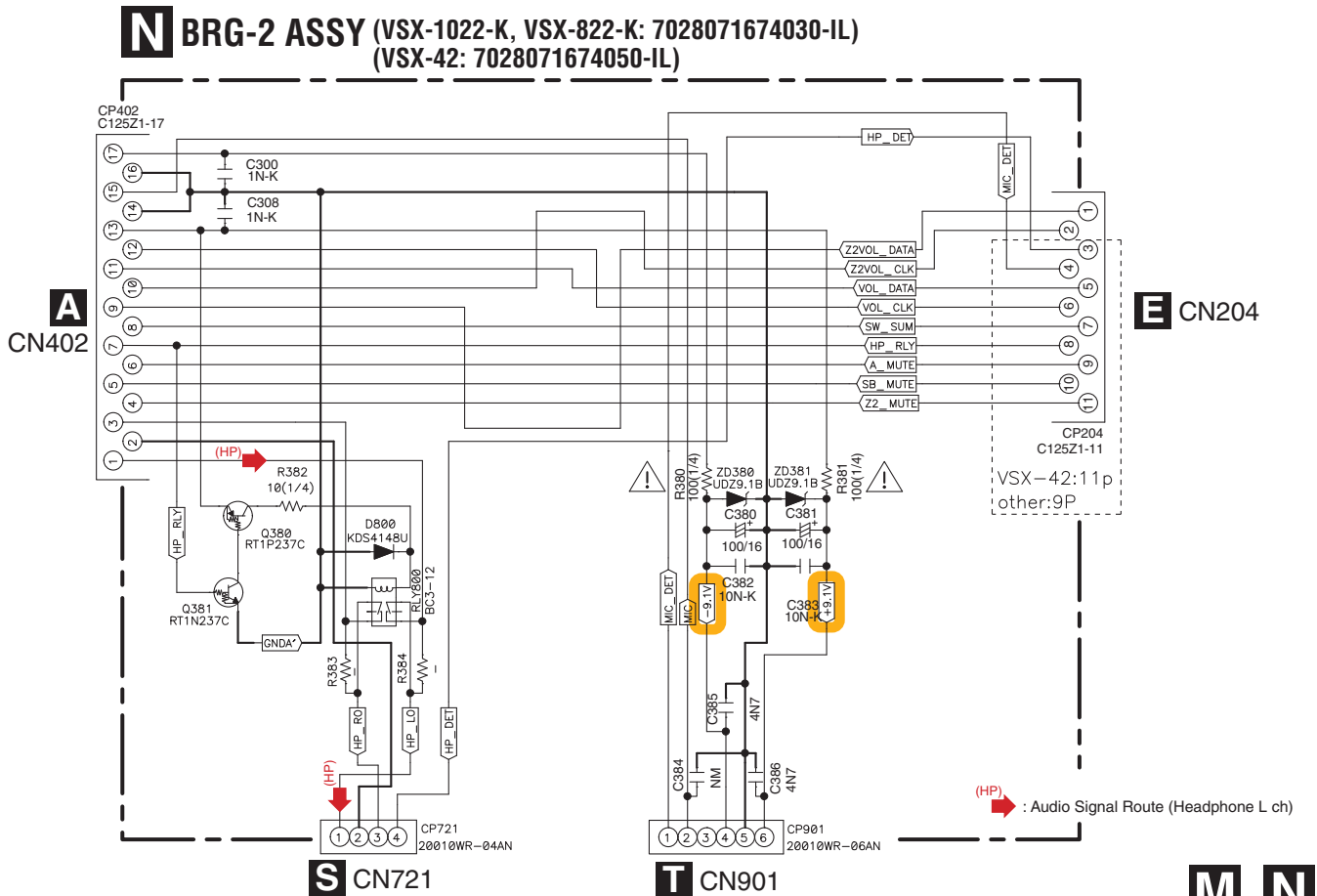
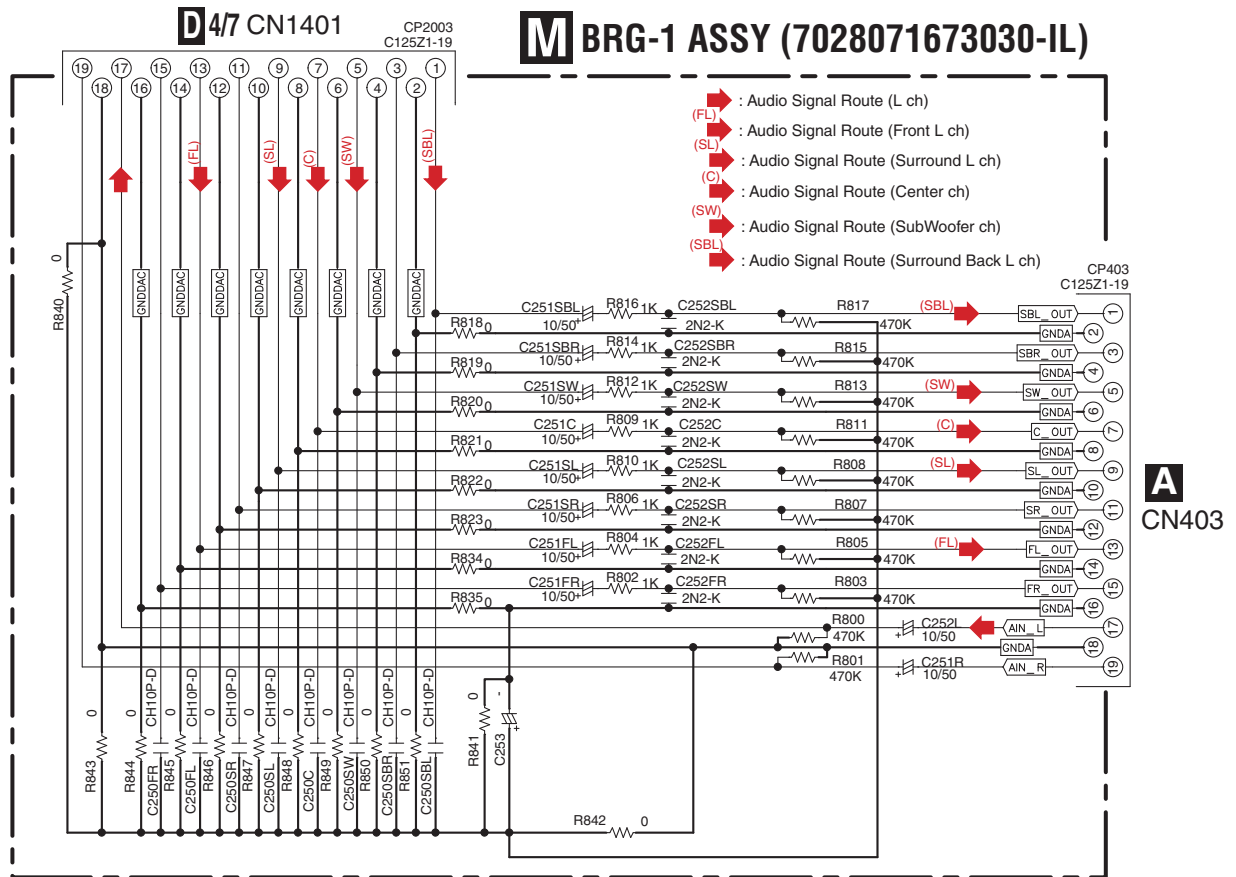
TV/SAT (96k)

COAX CD



47
CN402

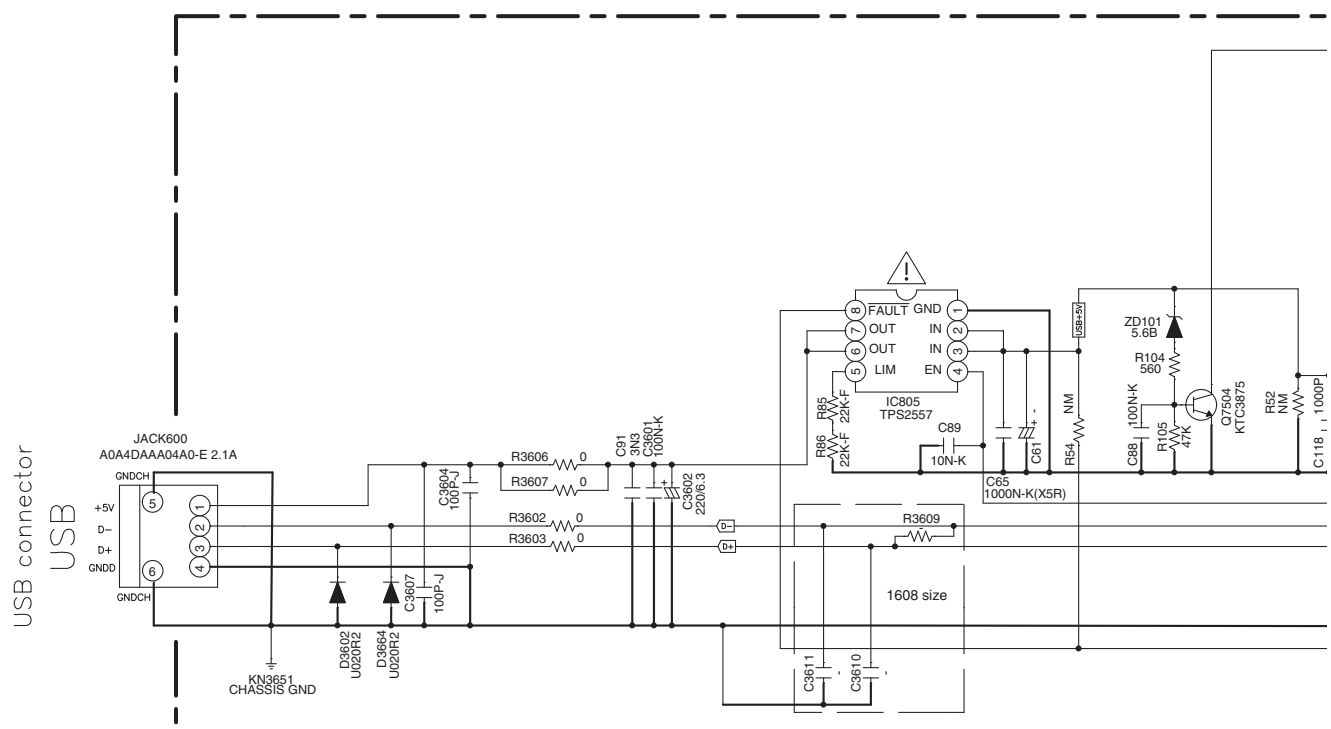
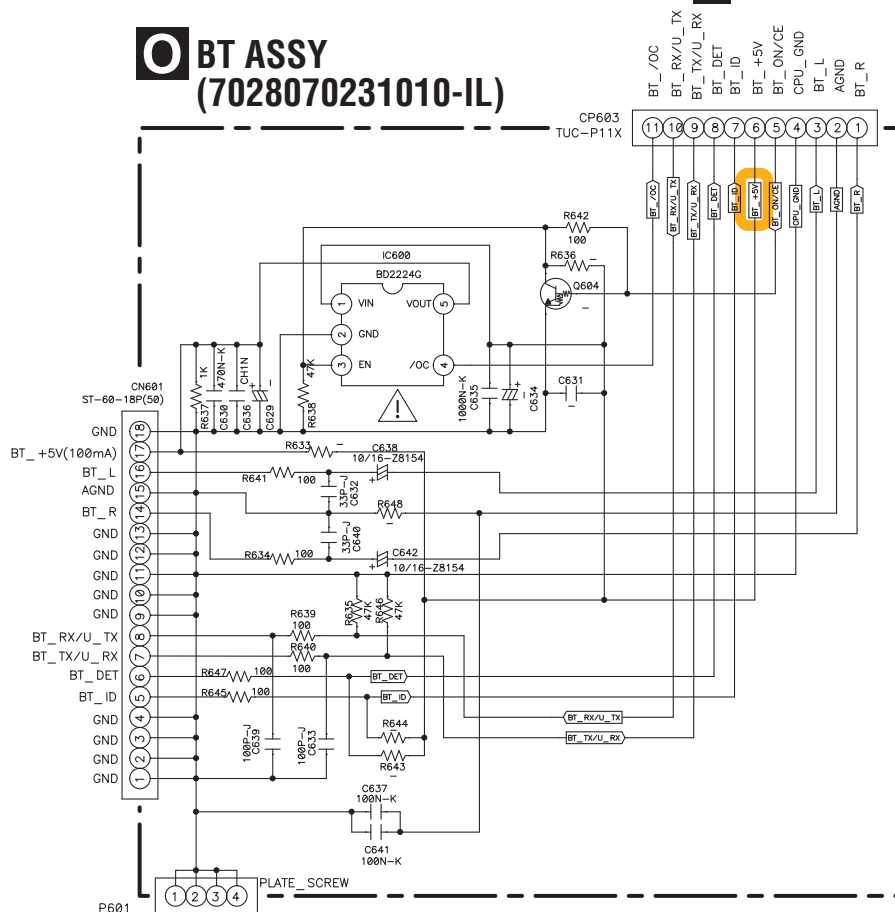
K L



4

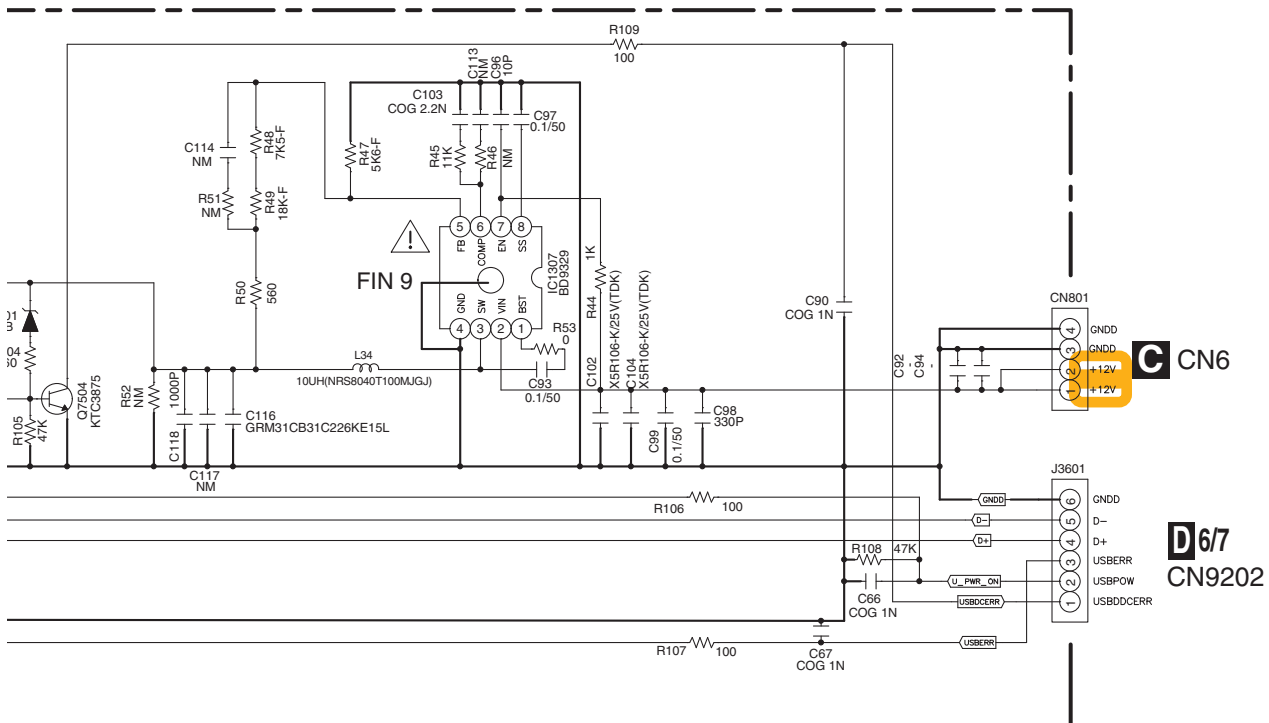
K CN602

BT ASSY
(7028070231010-IL)



VSX-1022-K

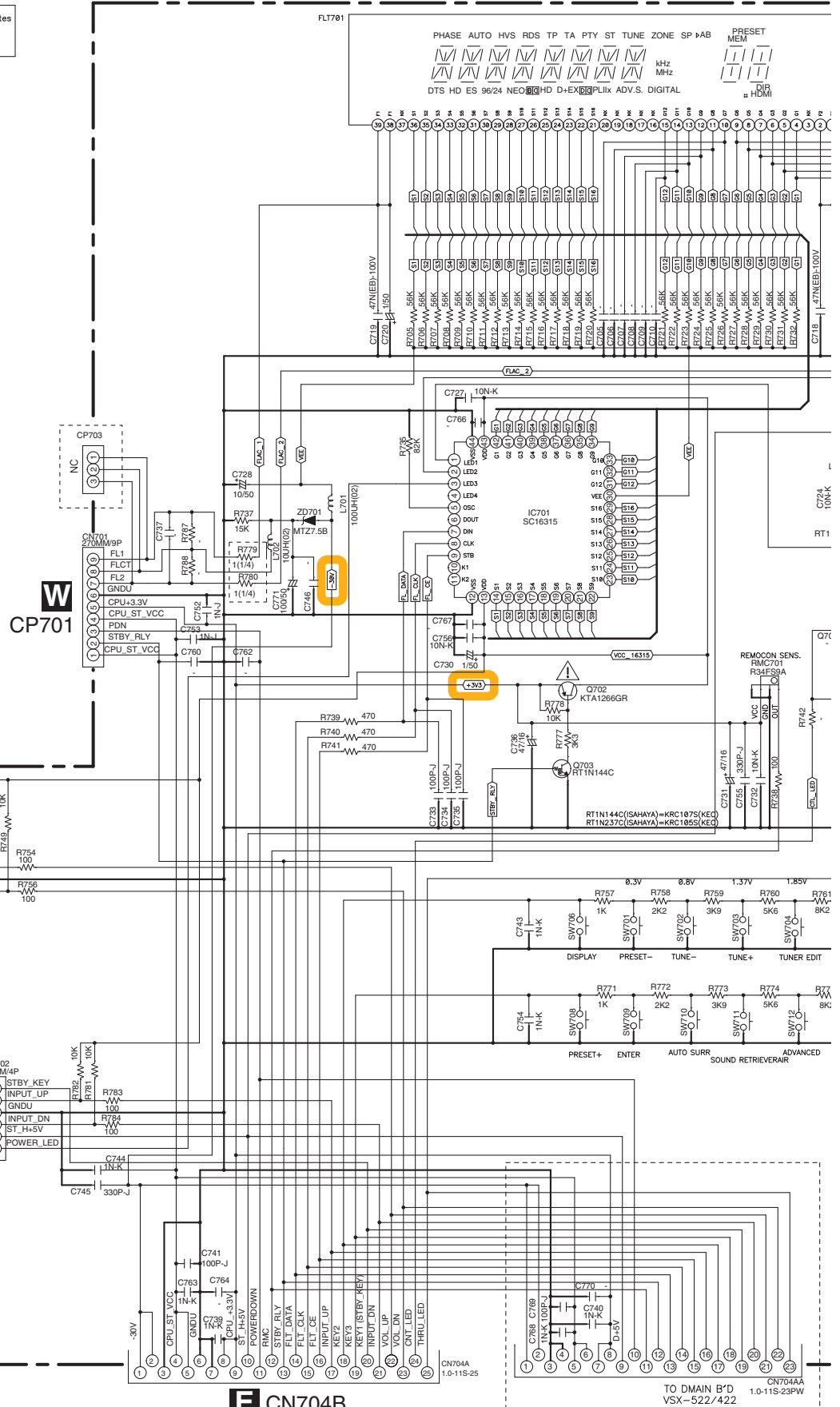
P F-USB ASSY (7028071781030-IL)



10.25 FRONT, INSEL, HP, MIC, FVIDEO and WG ASSYS

Q FRONT ASSY (VSX-1022-K, VSX-822-K: 7028071621030-IL) (VSX-42: 7028071621050-IL)

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

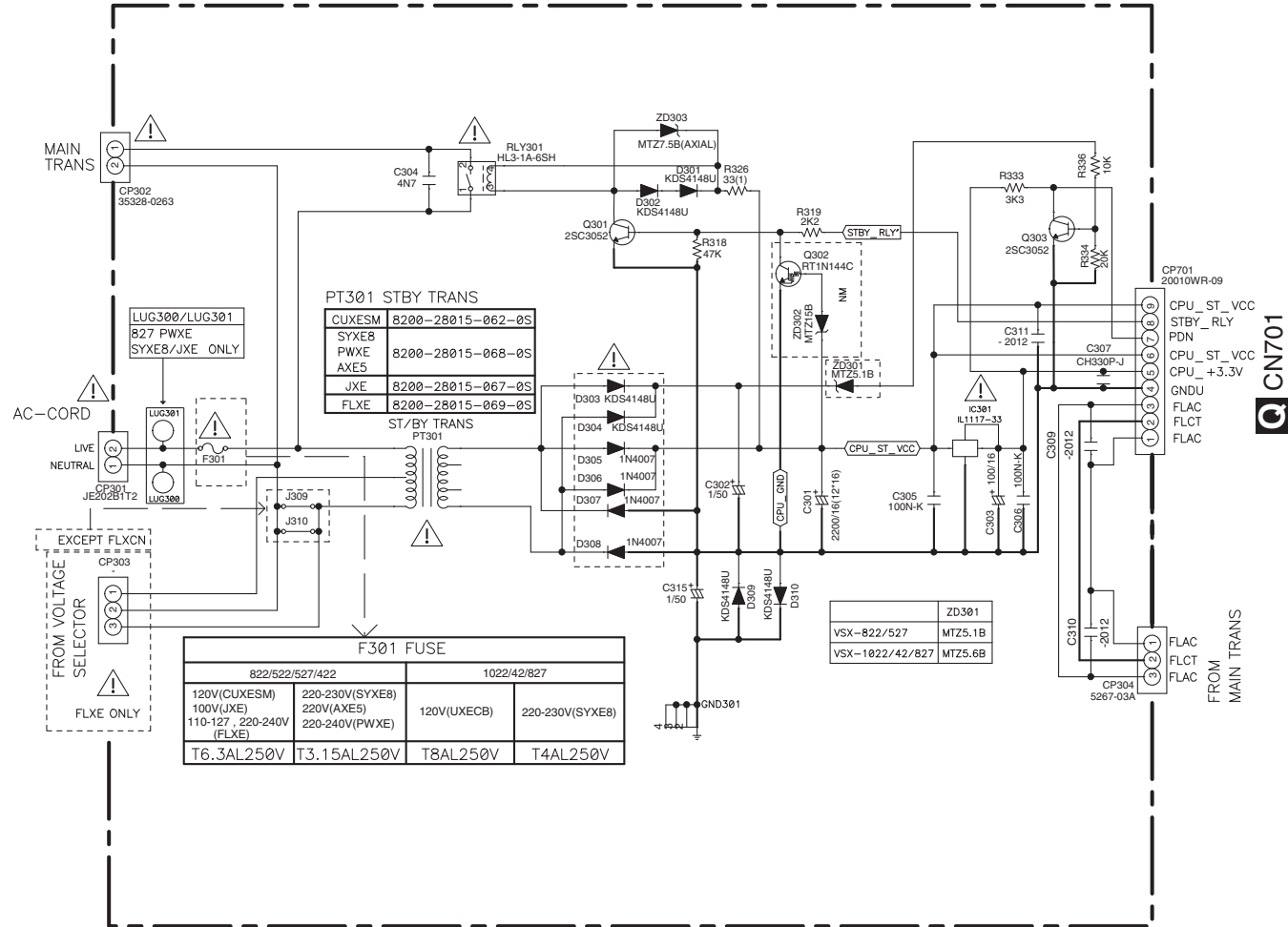


R INSEL ASSY (VSX-1022-K, VSX-822-K: 7028071623030-IL) (VSX-42: 7028071623050-IL)

Q R

10.26 STBY ASSY

W STBY ASSY (VSX-1022-K, VSX-42: 7028071672030-IL) (VSX-822-K: 7028071672010-IL)



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

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

NOTES

1. Resistor values are indicated in ohms unless otherwise specified
[k = 1,000 m = 1,000,000]
 2. Capacitor values are indicated in microfarads unless otherwise specified.
[p = micro-microfarads]
 3.  : These resistor are to be segregated from printed wiring board or other accessible parts.
CAUTION
Safety precaution to be followed during servicing
- 1) Since those parts marked with are critical parts for safety, use only the one described in the parts list
- 2) Before returning the set to the customer make appropriate leakage current or resistance measurements to determine the exposed parts are properly insulated from the supply circuit.

■

5

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6

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7

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8

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A

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B

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C

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D

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F

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5

■

6

■

7

■

8

■

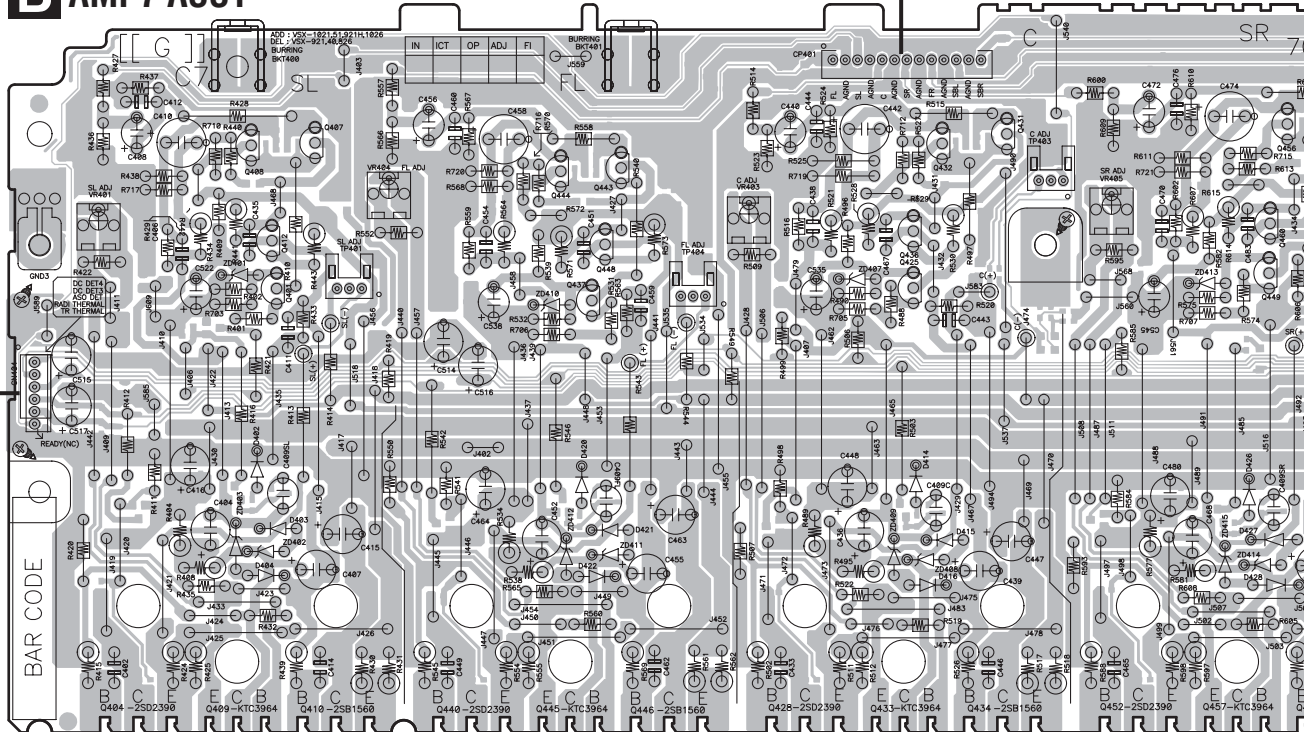
VSX-1022-K

11.2 AMP7 ASSY (VSX-1022-K, VSX-42)

SIDE A

B AMP7 ASSY

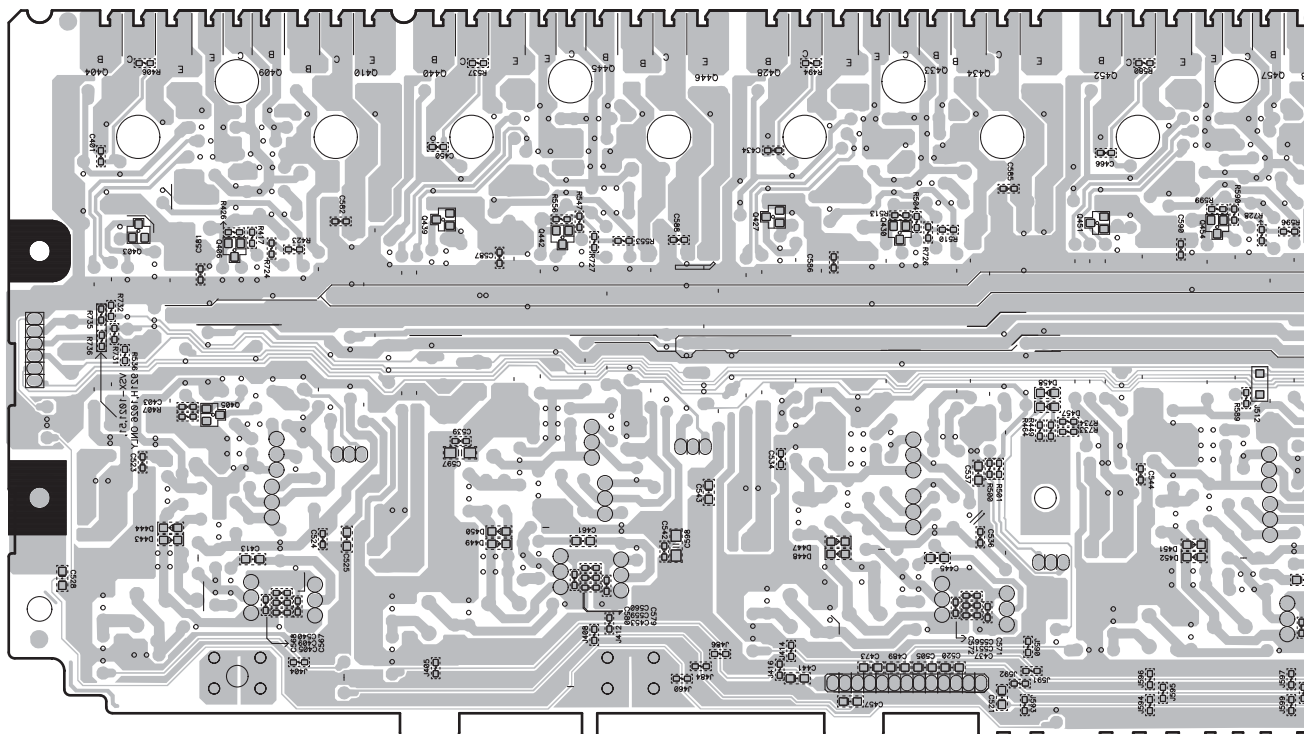
CP401 → **A** CN400



Q408 Q407 Q444 Q443 Q432 Q431 Q456
Q412 Q448 Q436 Q460
Q401 Q437 Q425 Q449
Q404 Q409 Q410 Q440 Q445 Q446 Q428 Q433 Q434 Q452 Q457

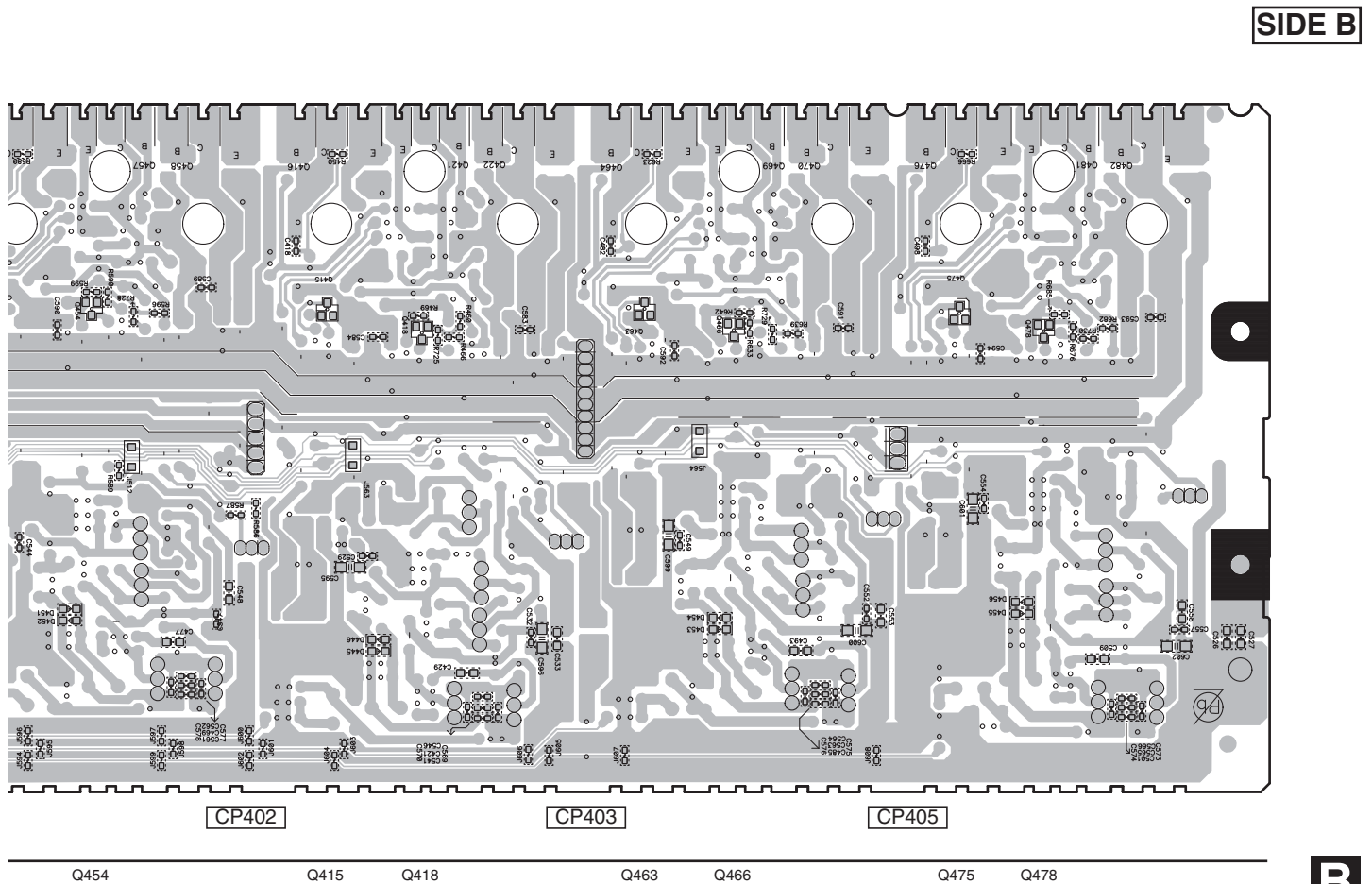
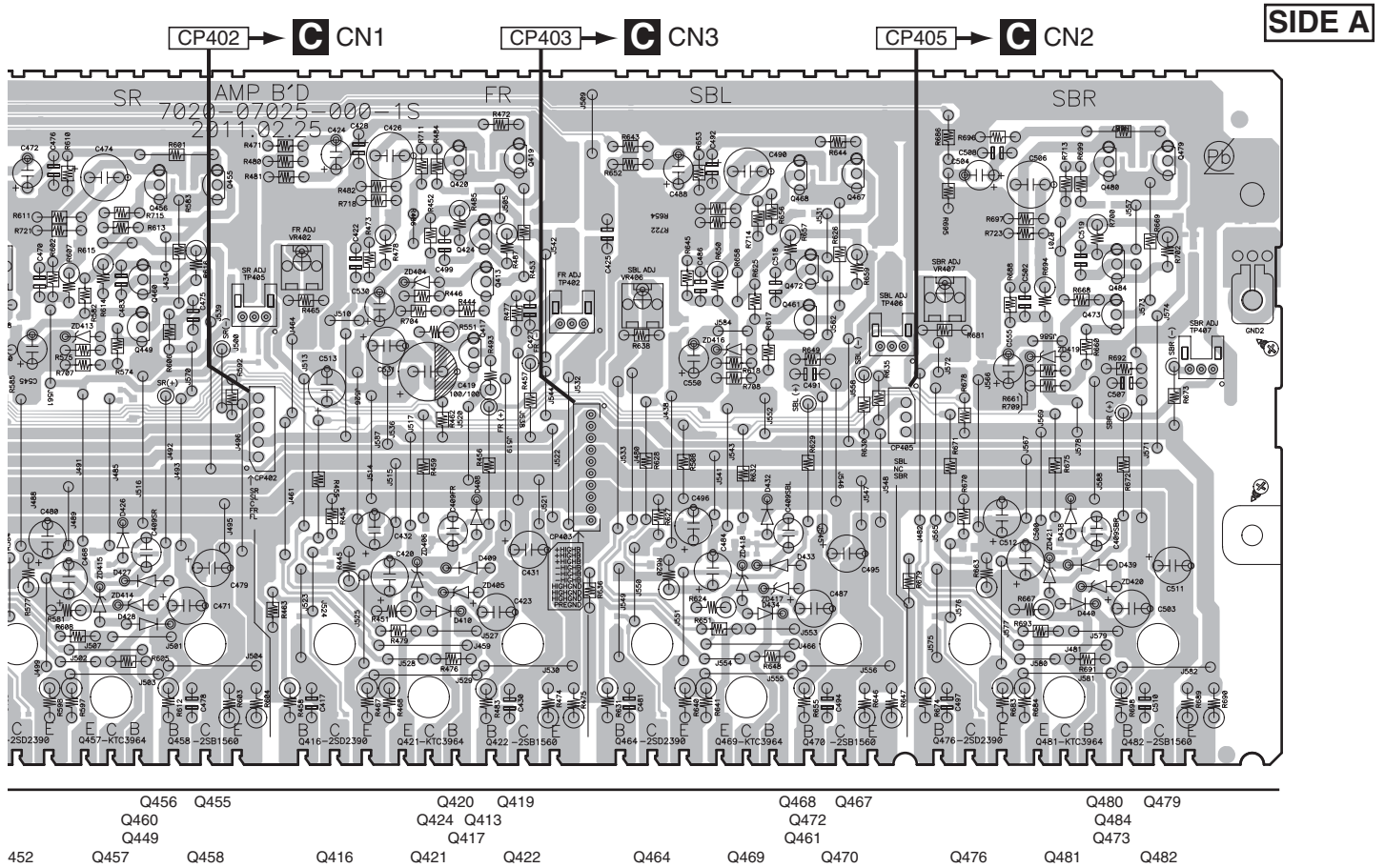
SIDE B

B AMP7 ASSY



Q403 Q406 Q439 Q442 Q427 Q430 Q451 Q454
Q405

VSX-1022-K



11.3 AMP5 ASSY (VSX-822-K)

SIDE A

B AMP5 ASSY

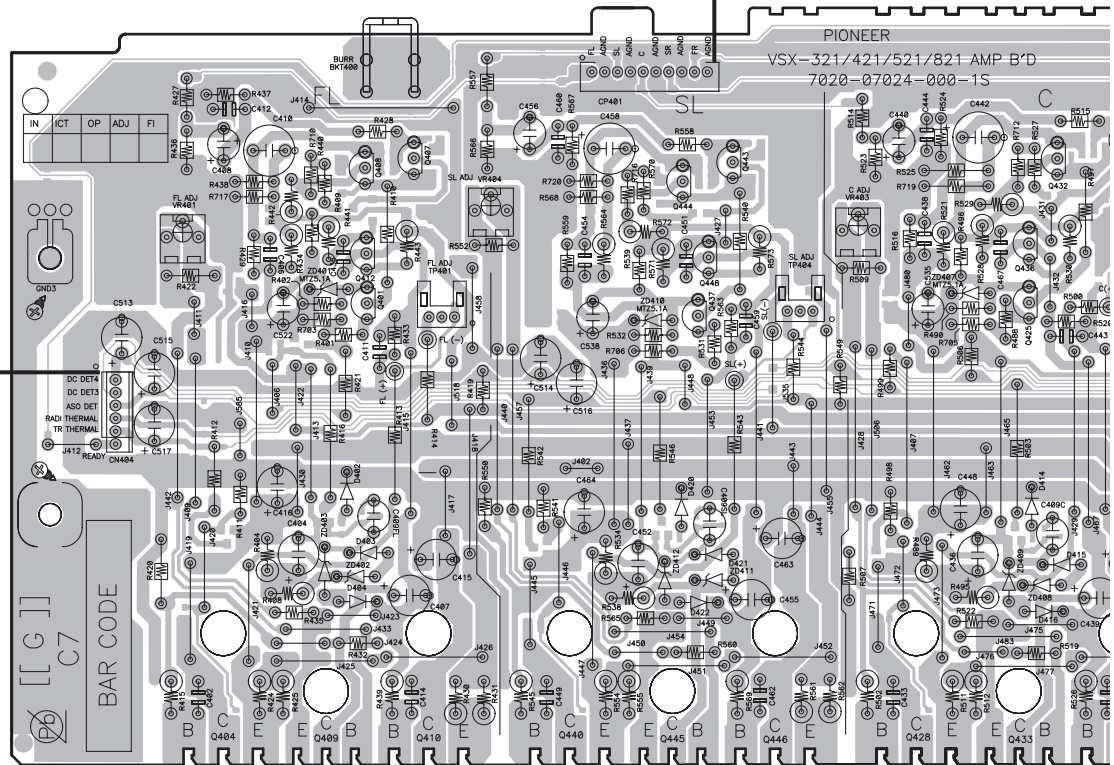
E CP404

CN404

CP401

A

CN400



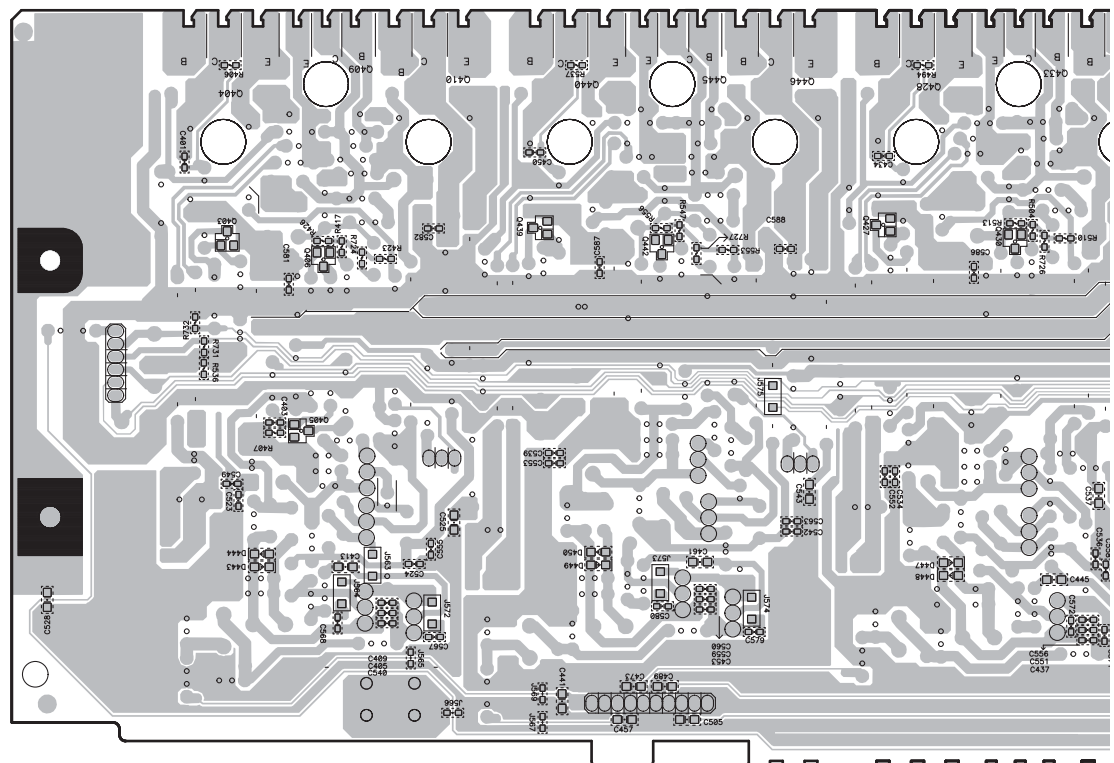
Q408 Q407 Q444 Q443 Q432
Q412 Q448 Q436
Q401 Q437 Q425
Q404 Q409 Q410 Q440 Q445 Q446 Q428 Q443 Q

SIDE B

B AMP5 ASSY

CN404

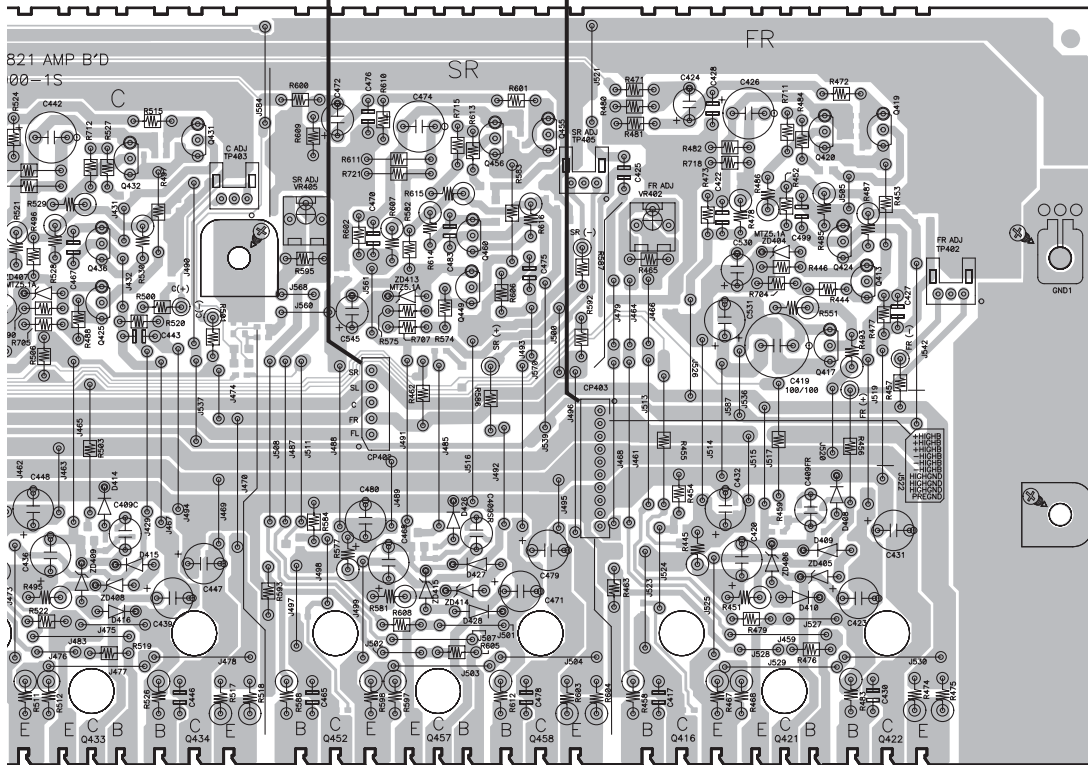
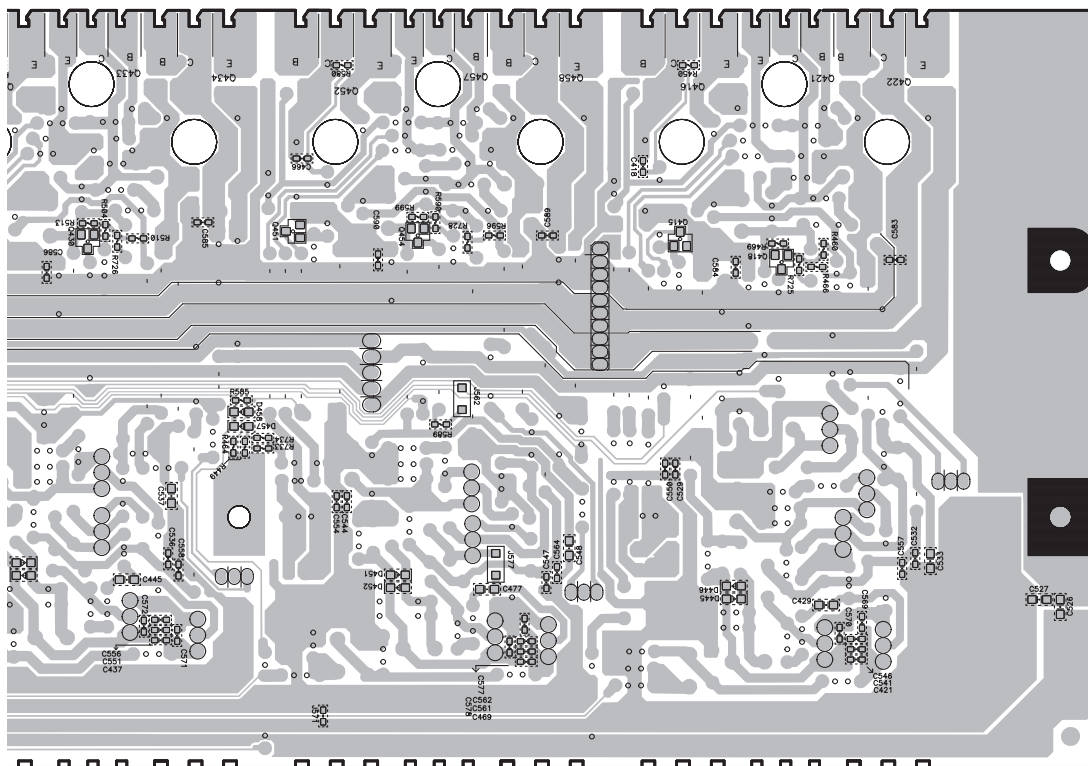
CP401



Q403 Q406 Q439 Q442 Q427 Q430
Q405

VSX-1022-K

B

CP402 → **C** CN1 CP403 → **C** CN3**SIDE A****SIDE B**

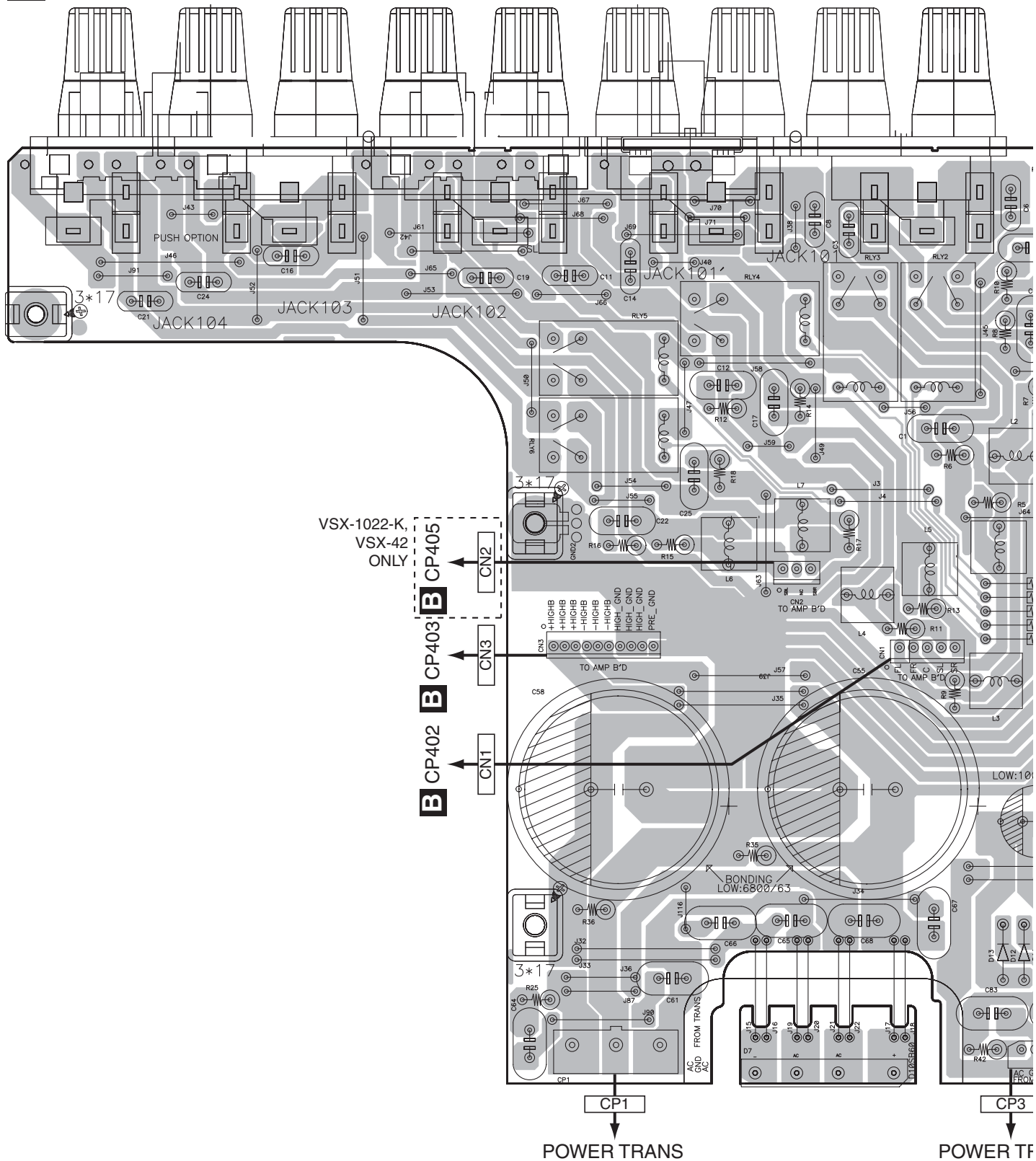
VSX-1022-K

B

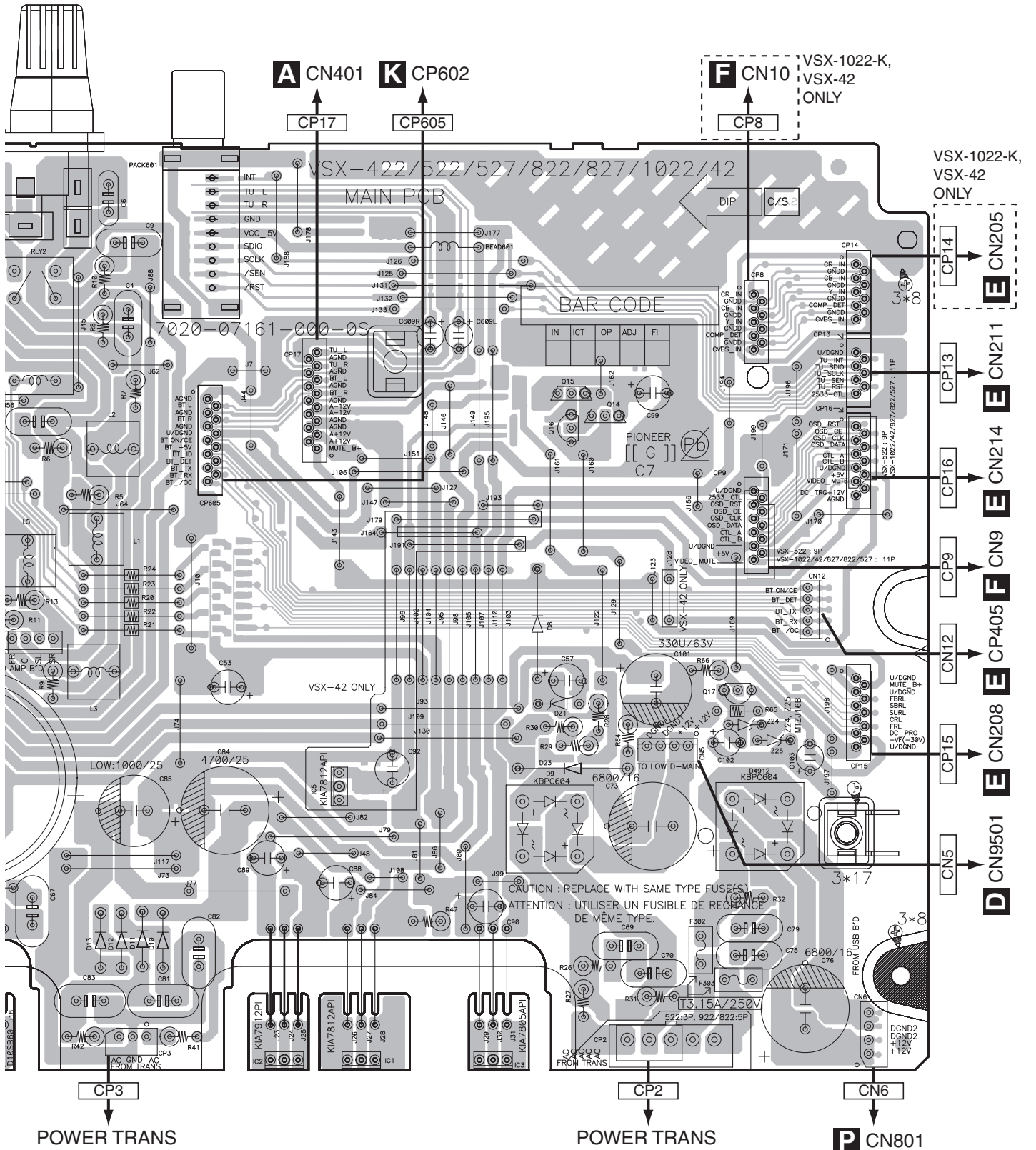
11.4 MAIN ASSY

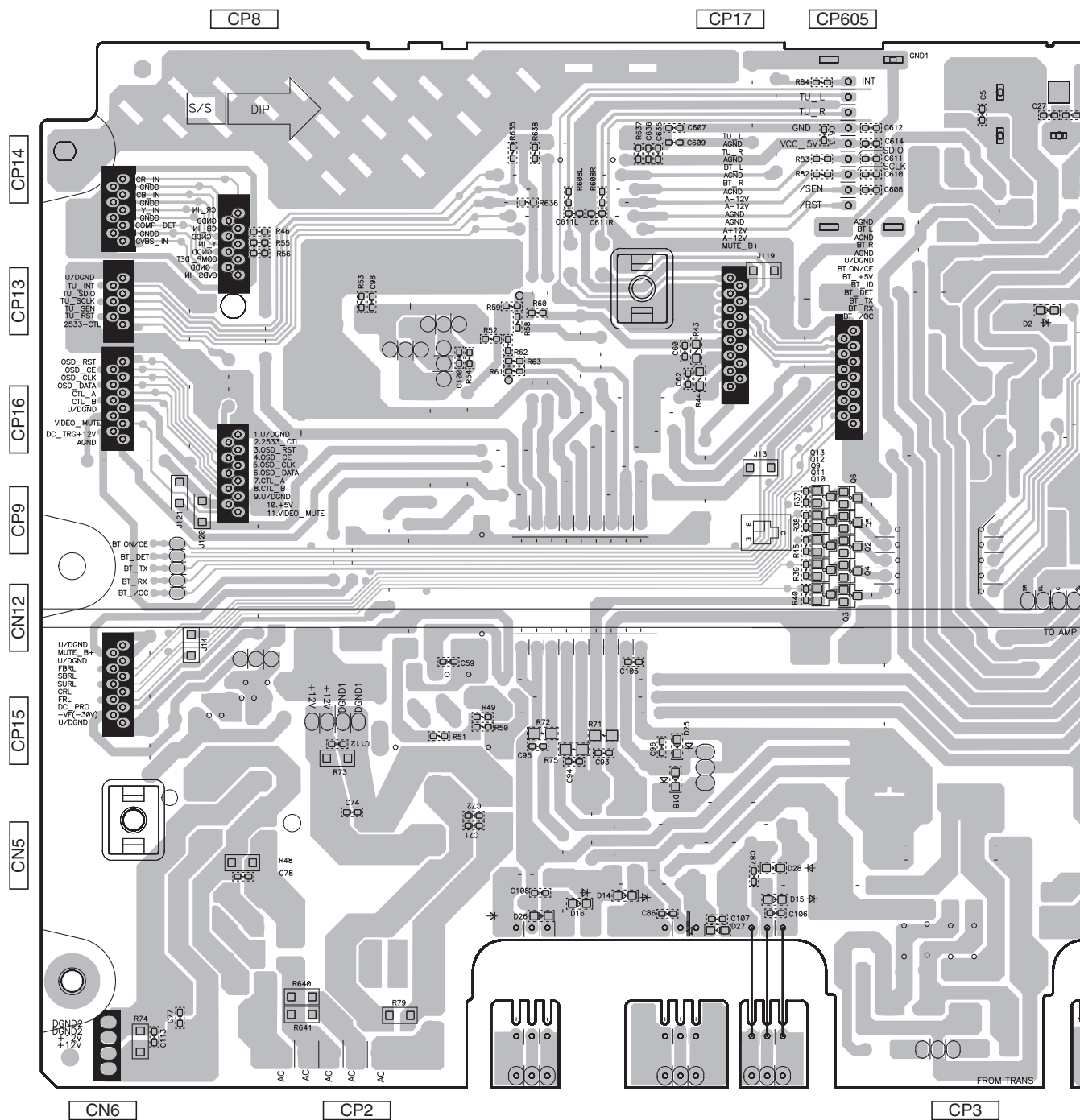
SIDE A

C MAIN ASSY



C



SIDE B**C MAIN ASSY**

Q9-Q13 Q2-Q6

VSX-1022-K

SIDE B

A

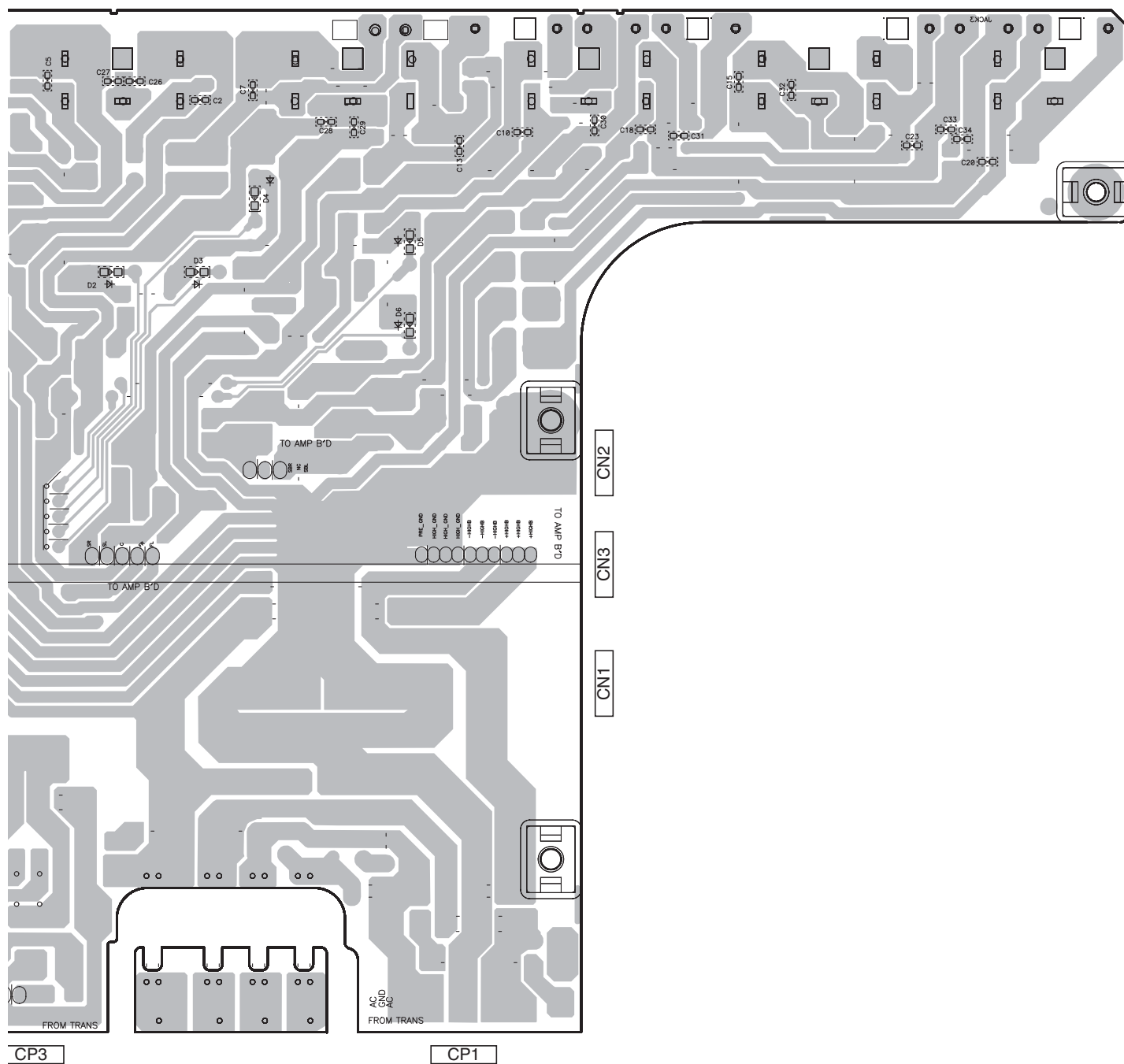
B

C

D

E

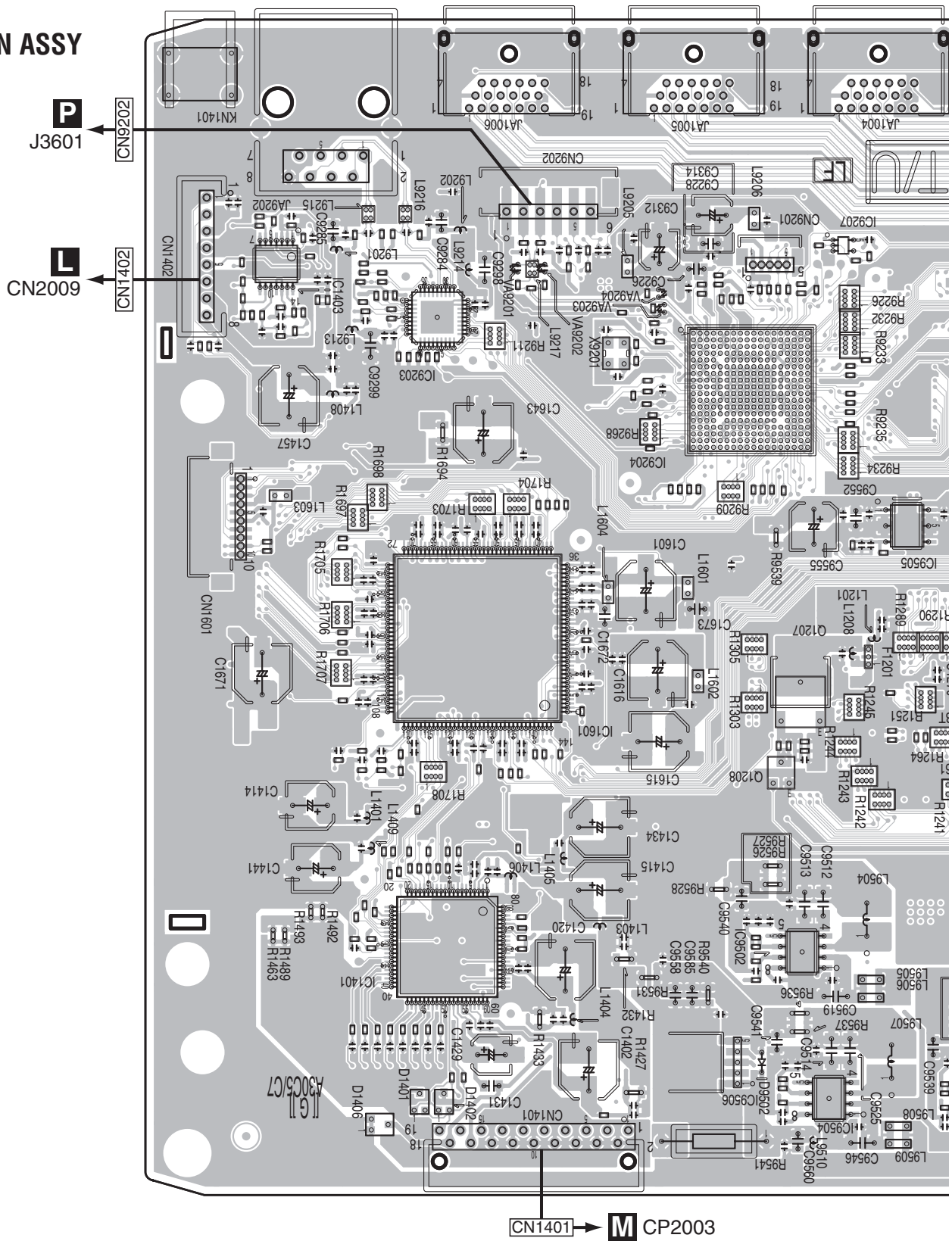
F



11.5 D-MAIN ASSY

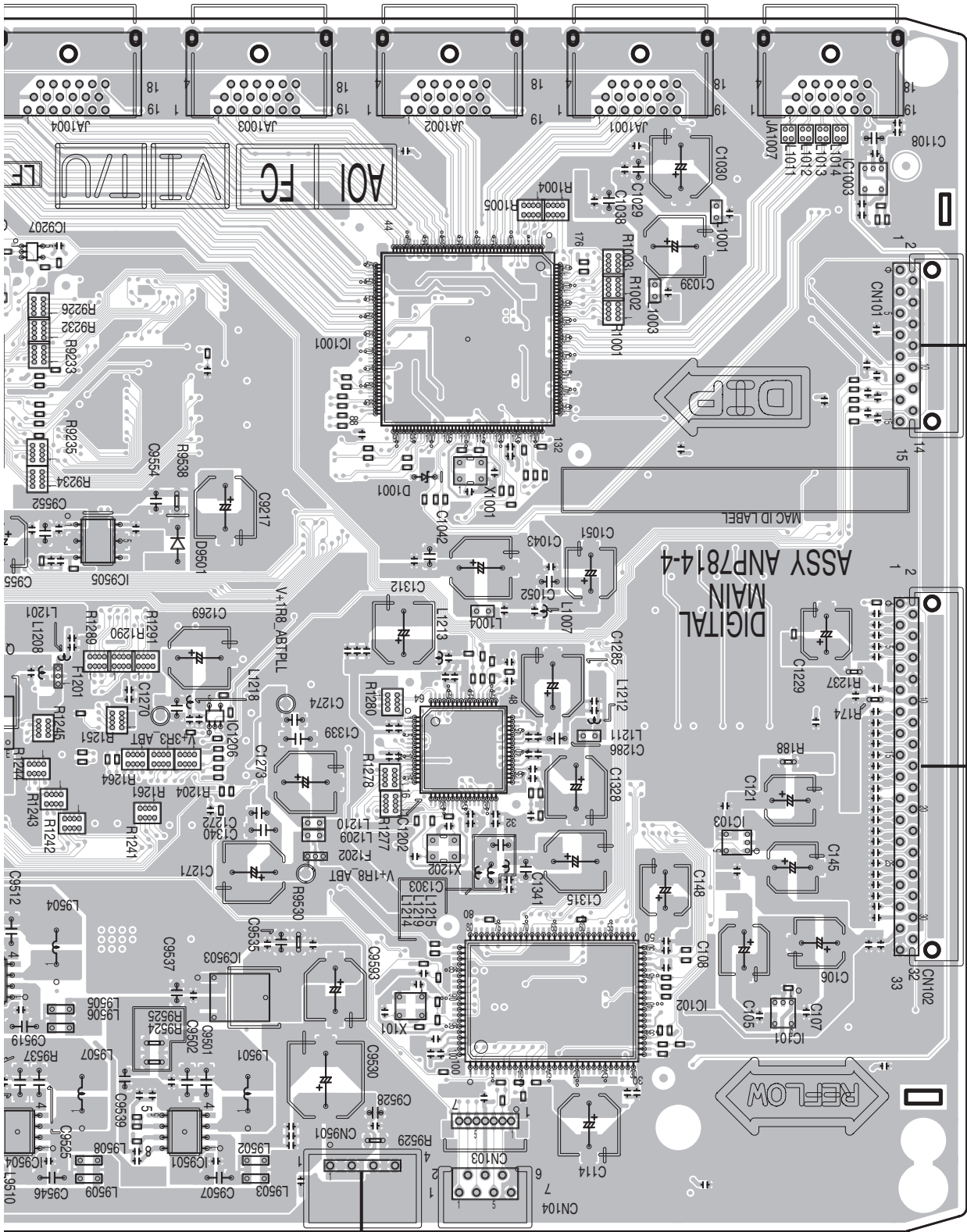
SIDE A

D D-MAIN ASSY



D

SIDE A



C CN5 ← CN9501

E CN213

E CN201

IC9207 IC9505 IC1206 IC1001 IC1202 IC103 IC1003
2 IC9503 IC102 IC101
C9504 IC9501

VSX-1022-K

D

SIDE B

A

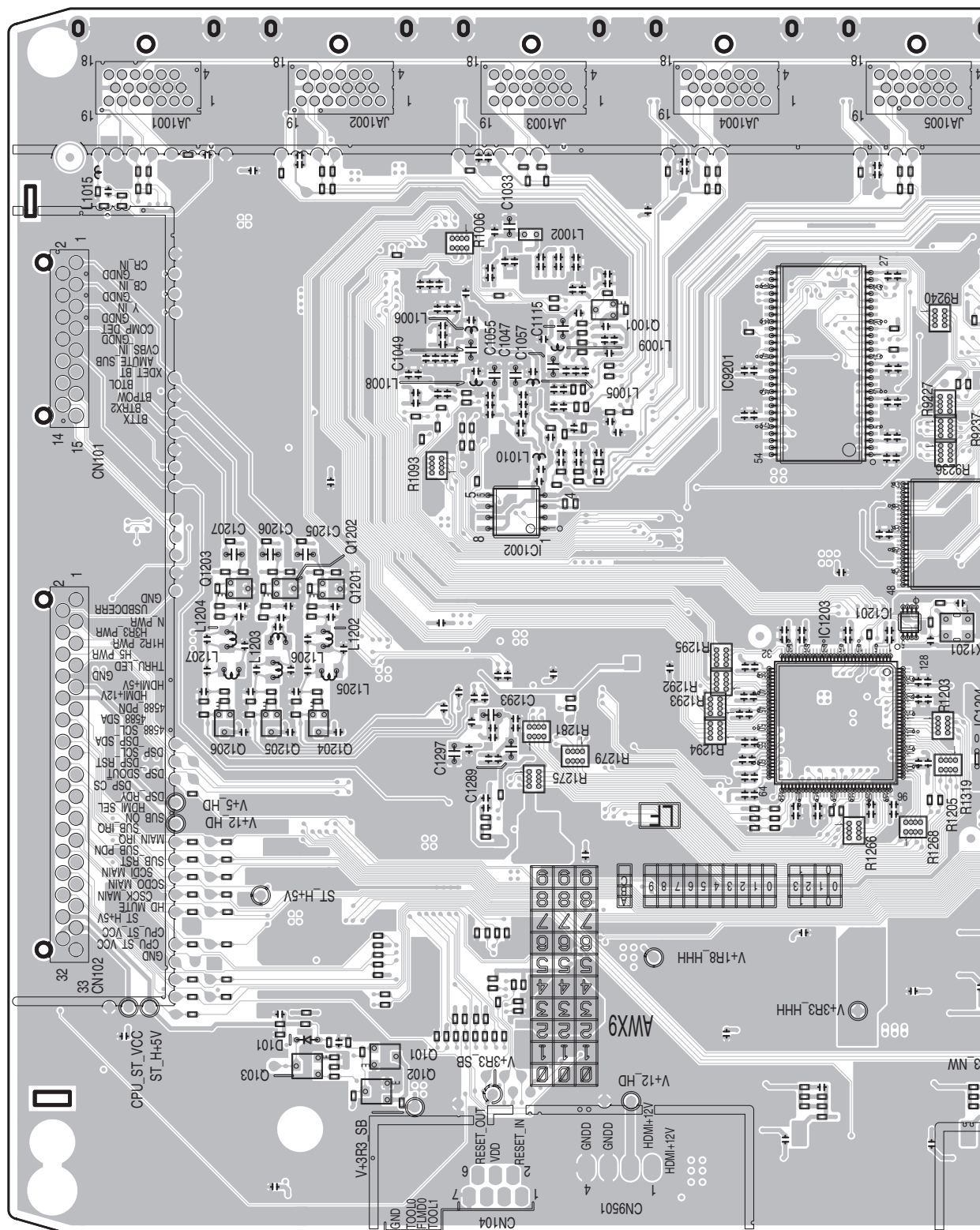
B

C

D

E

F



CN9501

Q1201-Q1206

IC1002

Q1001

IC9201

IC

IC1201

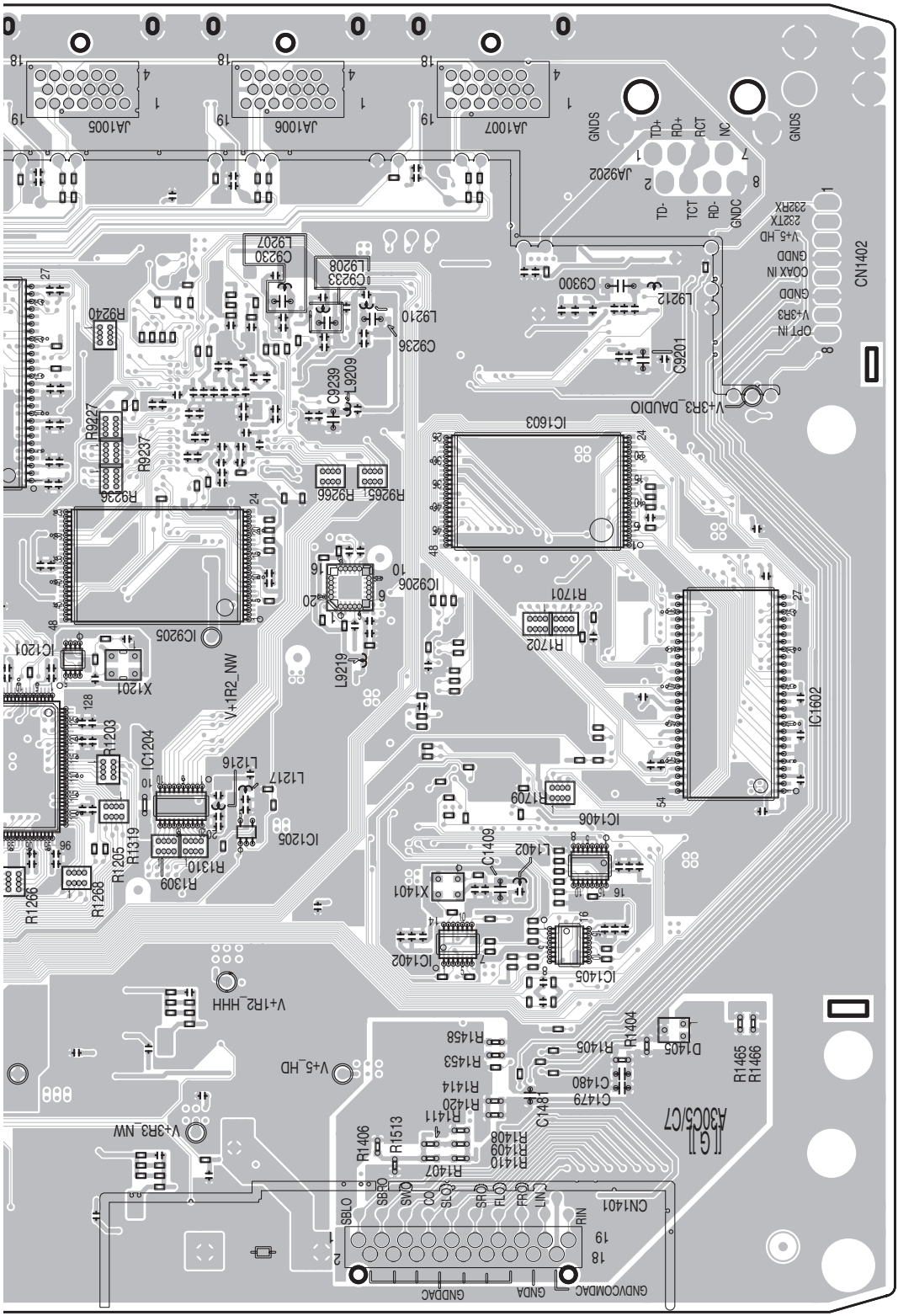
IC1203

Q101-Q103

VSX-1022-K

SIDE B

D D-MAIN ASSY



CN1401

IC9205 IC9206 IC1603 IC1602
IC1201 IC1204 IC1205 IC1402 IC1406 IC1405

VSX-1022-K

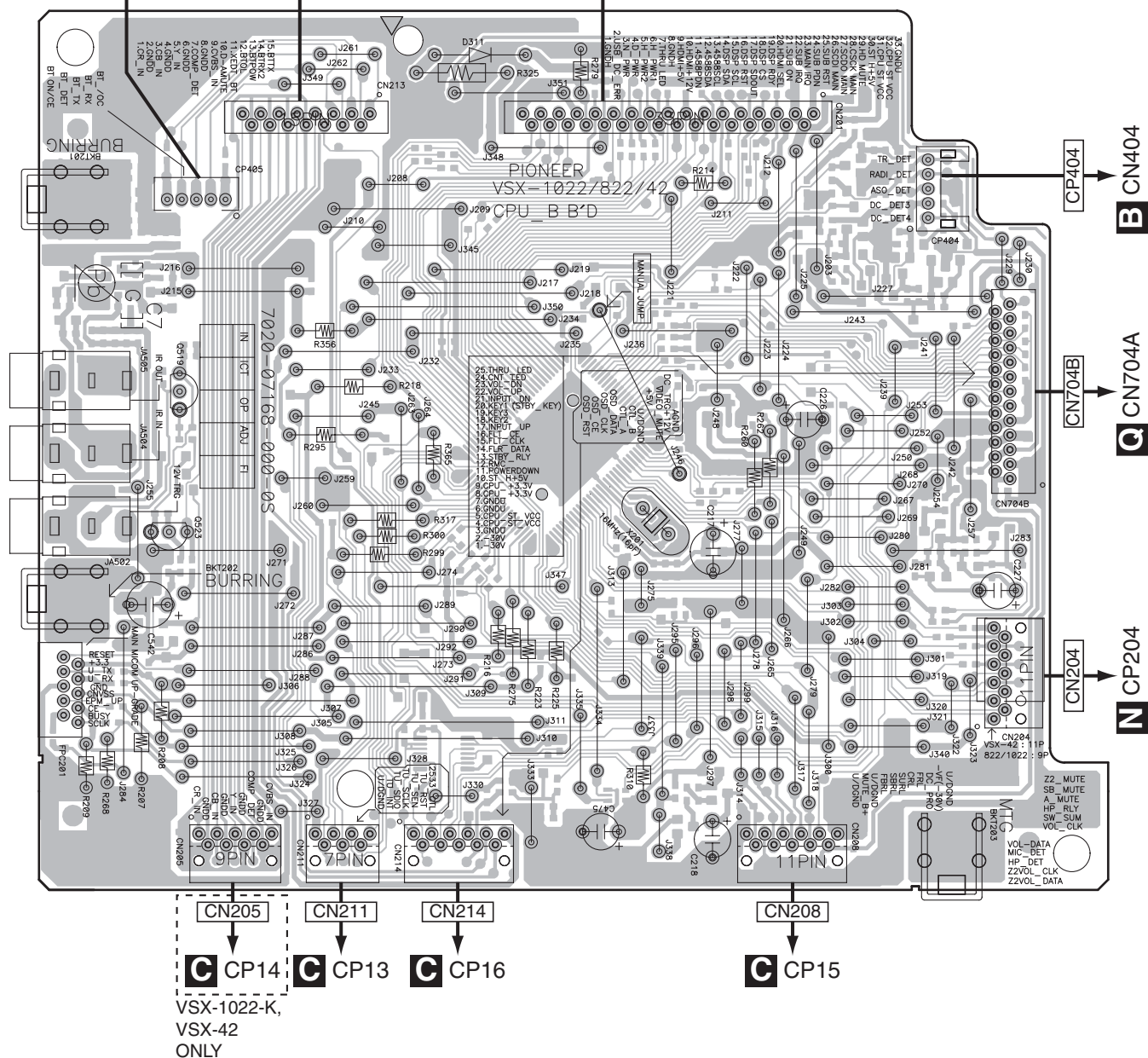
D

143

SIDE A

SIDE A

Figure 1 consists of three schematic diagrams labeled C, D, and D. Diagram C shows a box labeled 'CP405' with an upward arrow pointing to a box labeled 'CN12'. Diagram D shows a box labeled 'CN213' with an upward arrow pointing to a box labeled 'CN101'. Another diagram D shows a box labeled 'CN201' with an upward arrow pointing to a box labeled 'CN102'.

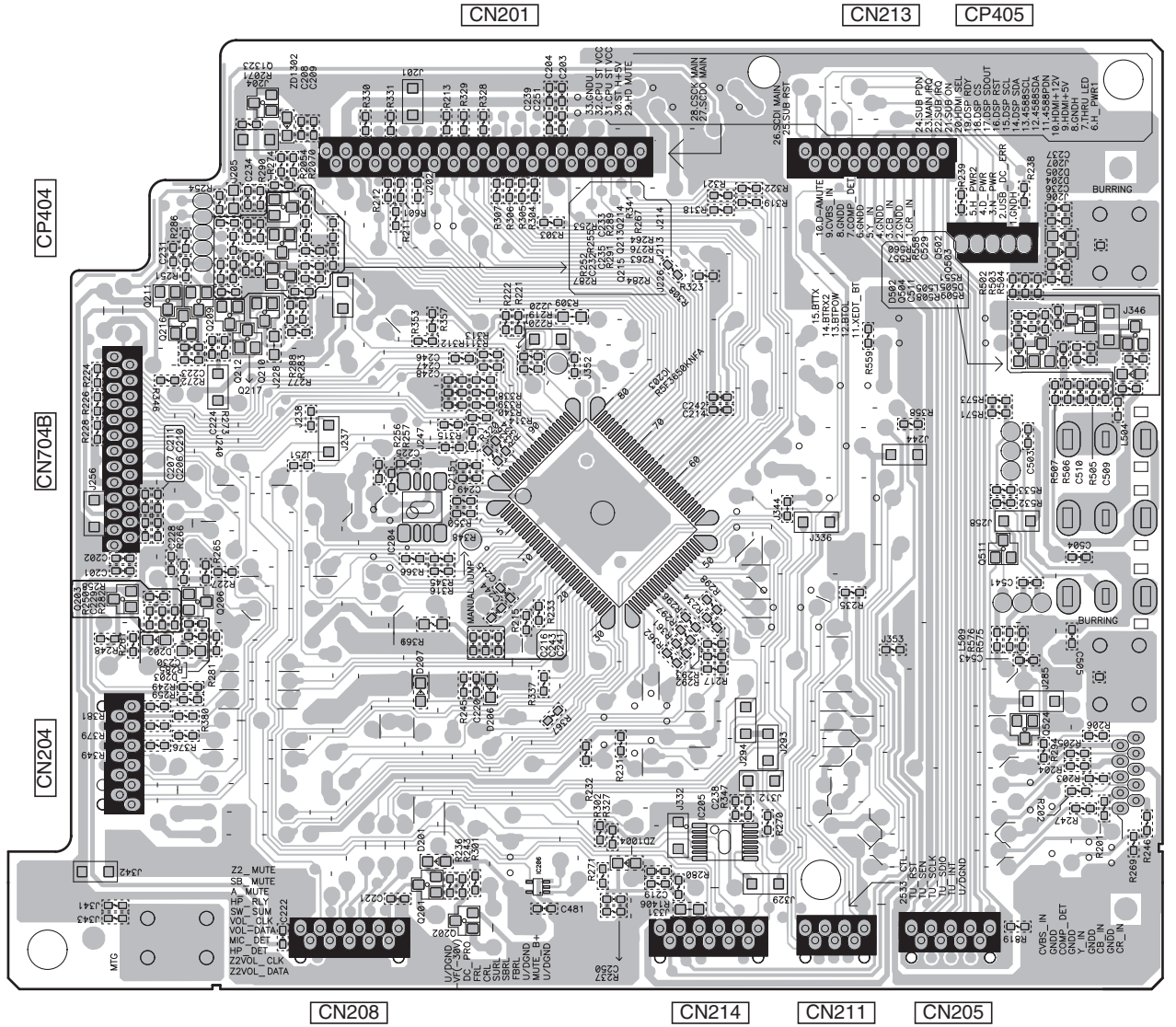


Q519
Q523

SIDE B

SIDE B

CPU ASSY



Q1323
Q213-Q215
Q209-Q212
Q216 Q217
Q203 Q206

IC204
Q201 Q202

IC203

IC205

Q511
Q524

Q504 Q502 Q503

VSX-1022-K

E

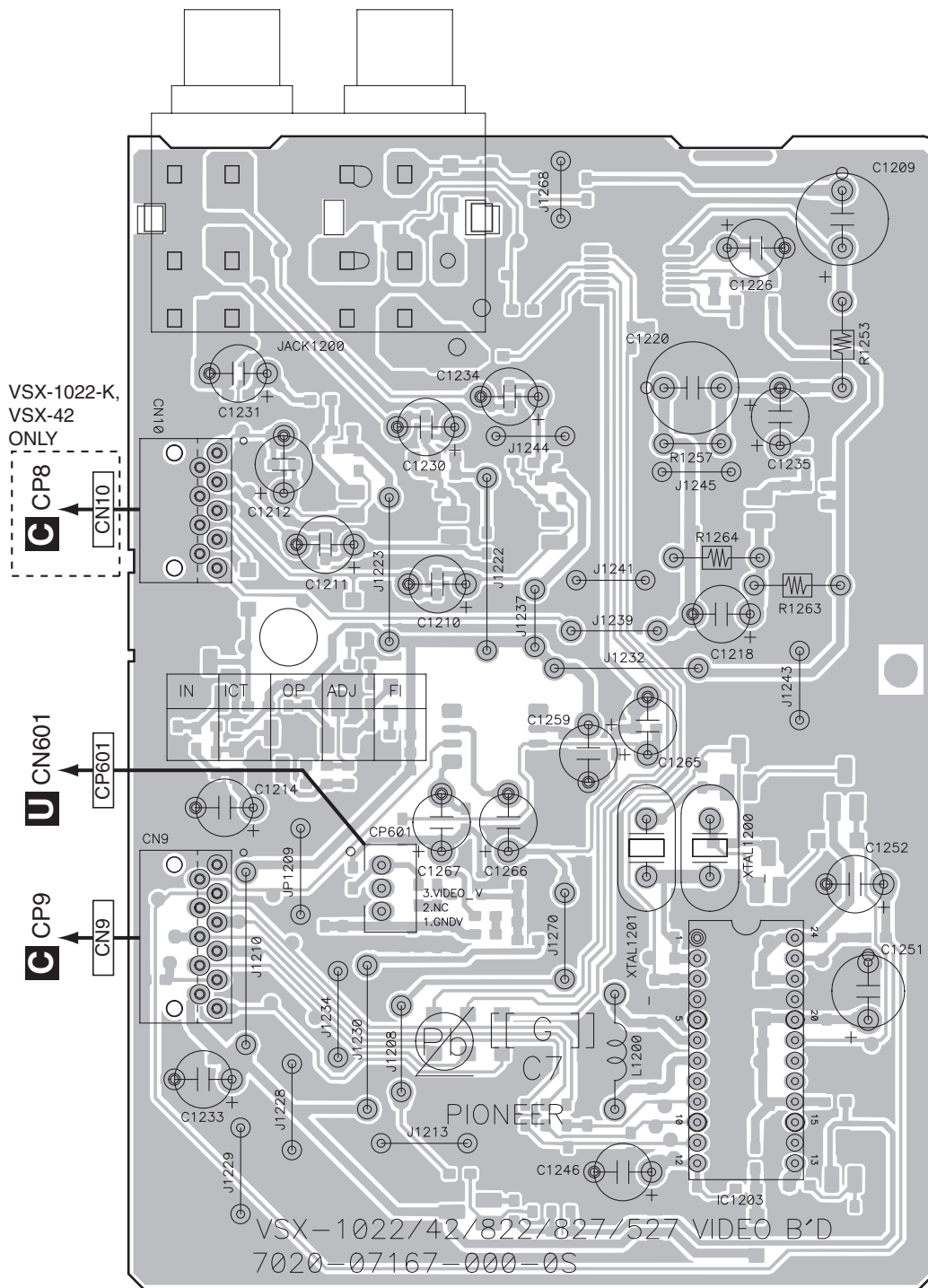
145

11.7 VIDEO ASSY

SIDE A

SIDE A

F VIDEO ASSY



IC1203

SIDE B

SIDE B

VIDEO ASSY

IC200

Q1211 Q1203
Q1201 Q1202

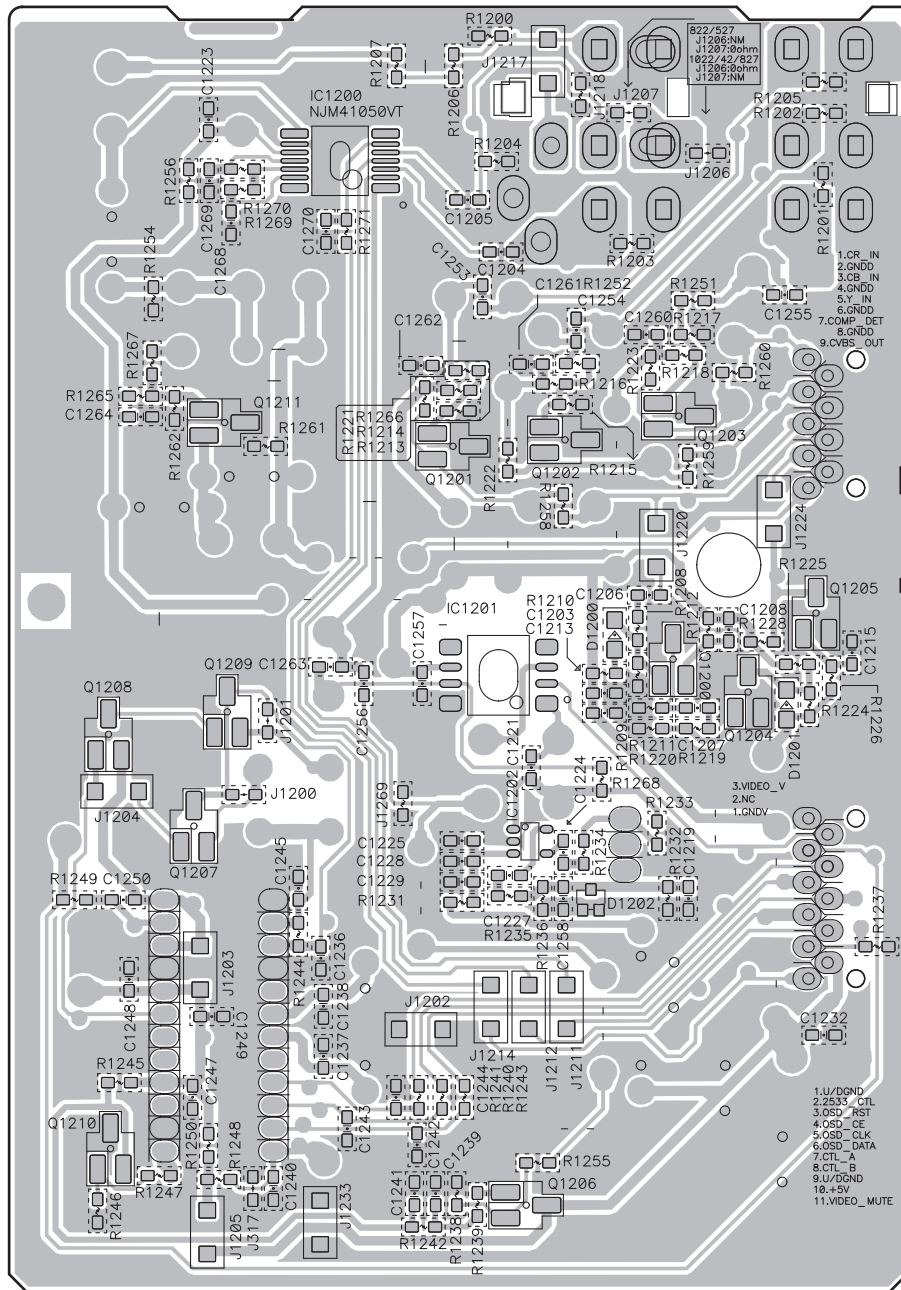
Q1205

IC1201 Q1200
Q1209 Q1204
Q1208

Q1207 IC1202

Q1210

Q1206



CN10

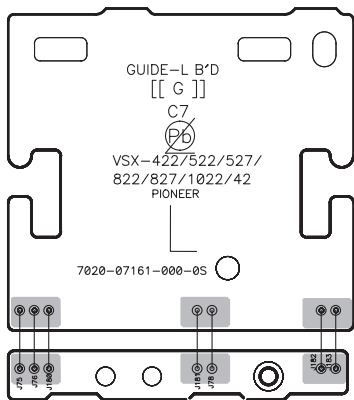
CP601

CN9

11.8 G-L, G-R, WG-A and WG-B ASSYS

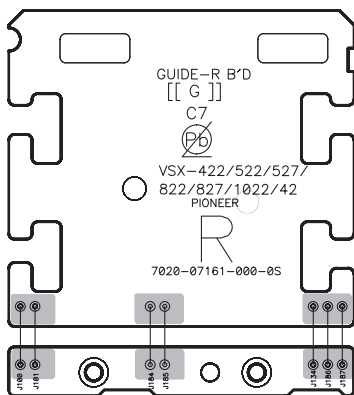
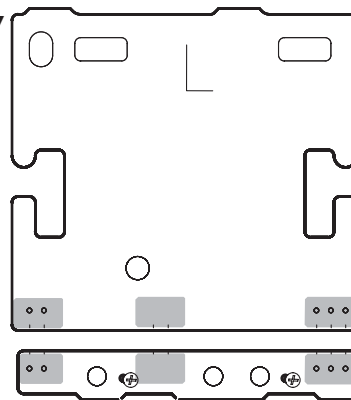
SIDE A

SIDE B



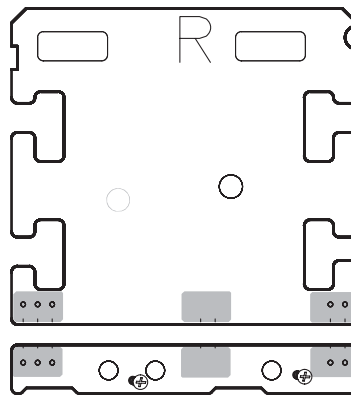
G G-L ASSY

G G-L ASSY



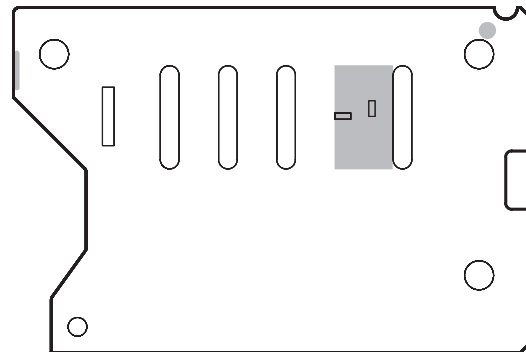
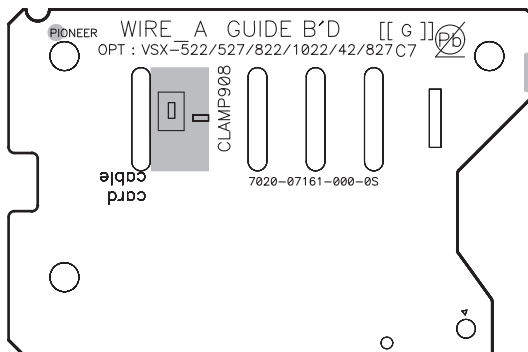
H G-R ASSY

H G-R ASSY



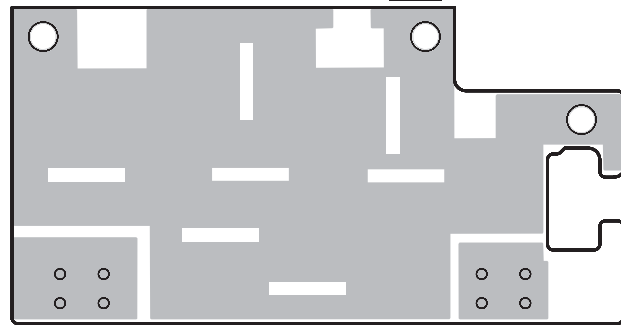
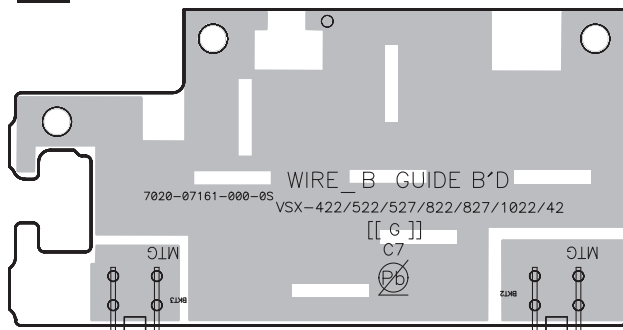
I WG-A ASSY

I WG-A ASSY



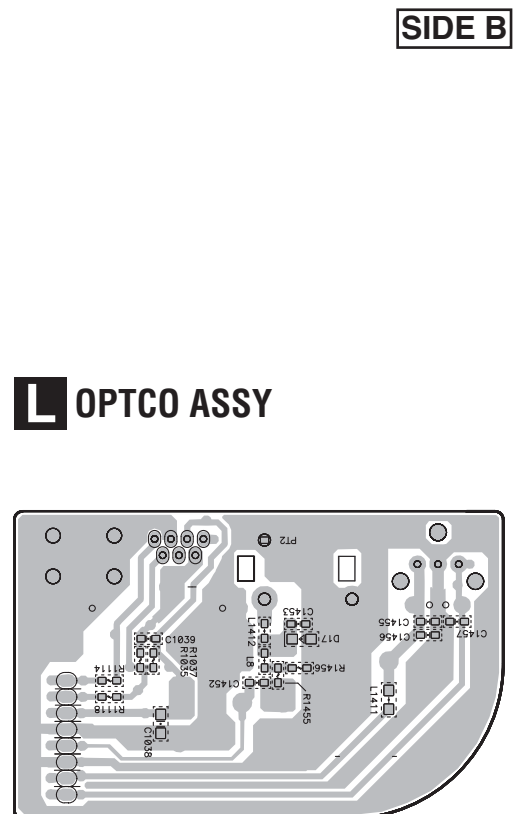
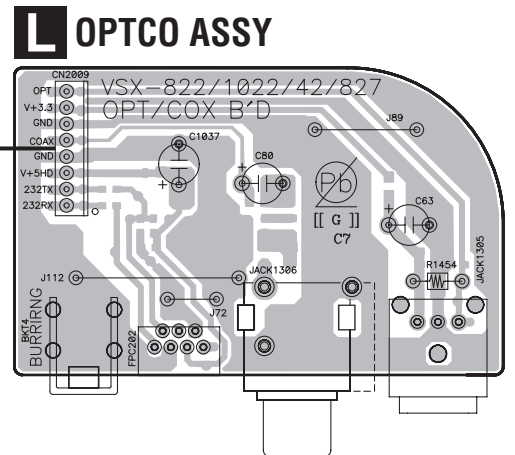
J WG-B ASSY

J WG-B ASSY



G H I J

SIDE A

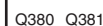


△

F



F

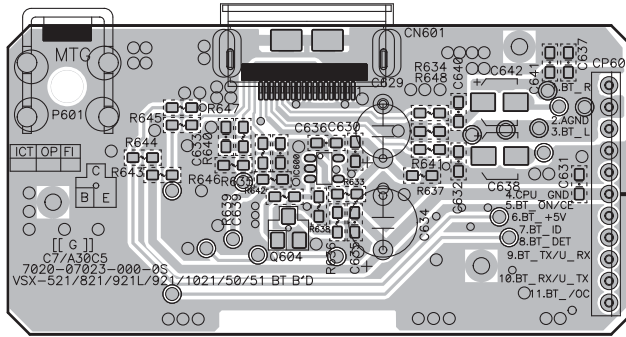


VSX-1022-K

11.11 BT and F-USB ASSYS

SIDE A

O BT ASSY

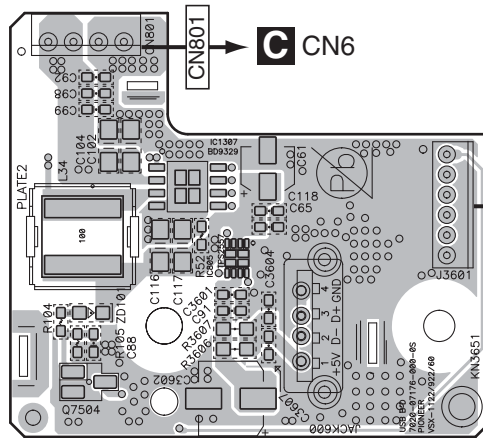


K CN602

SIDE A

IC600
Q604

P F-USB ASSY

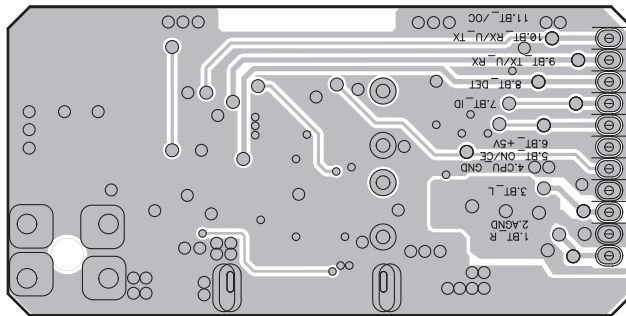


D CN9202

IC1307
Q7504

SIDE B

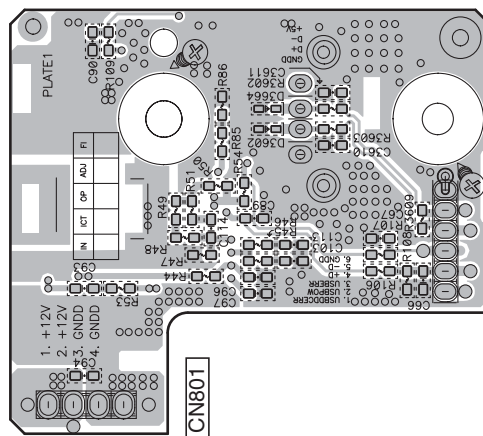
O BT ASSY



CP603

SIDE B

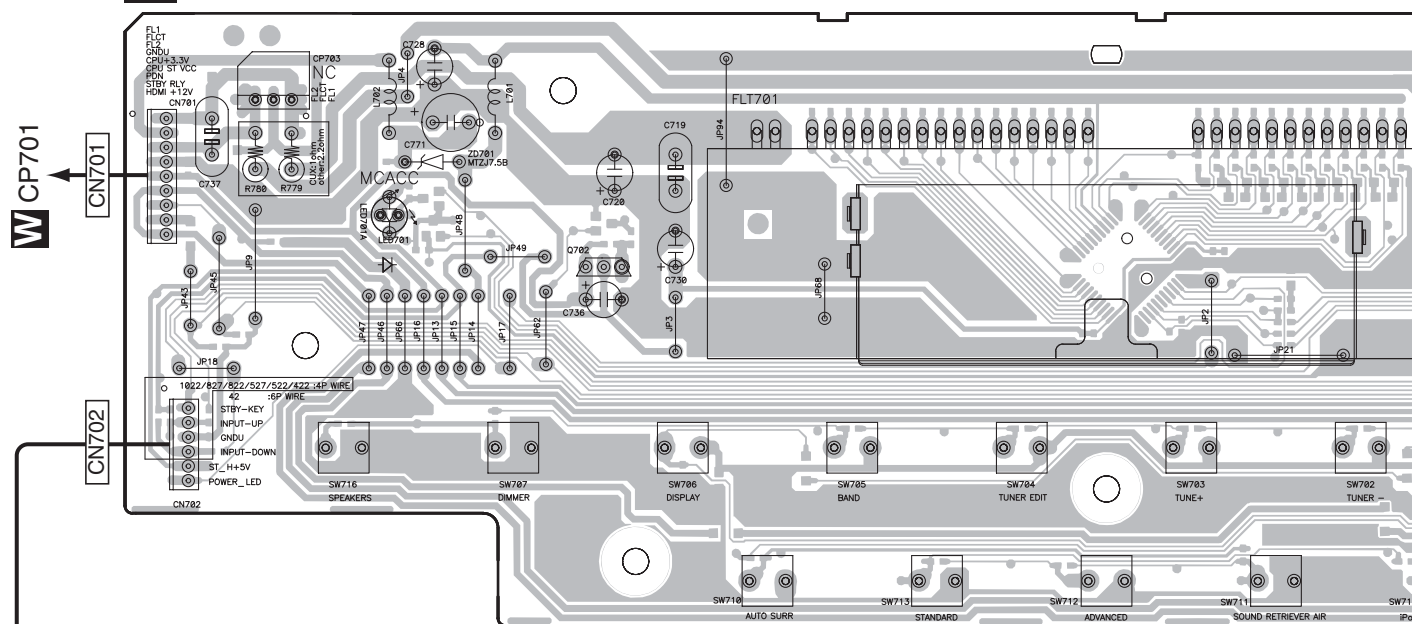
P F-USB ASSY



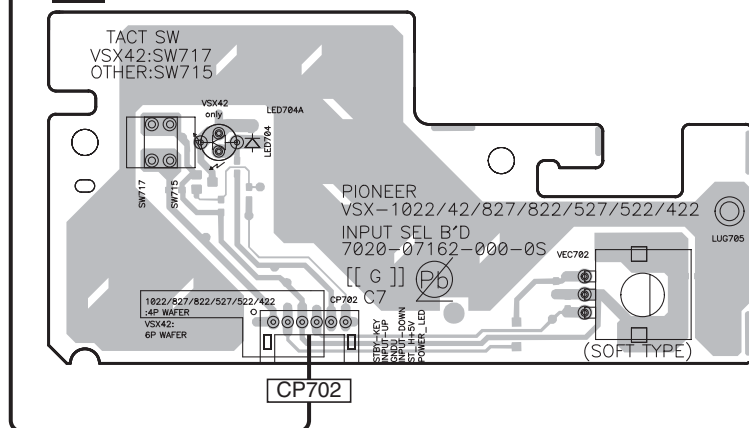
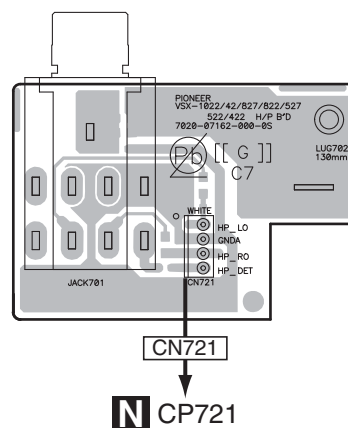
CN801

J3601

O P

SIDE A**Q FRONT ASSY**

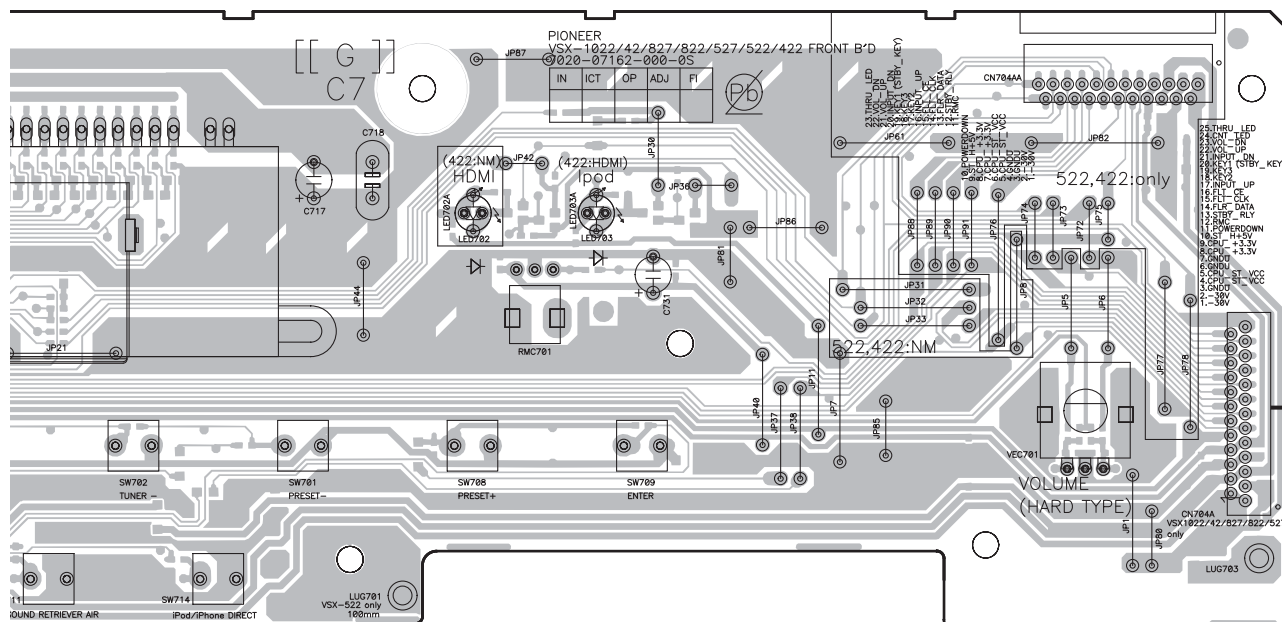
Q702

R INSEL ASSY**S HP ASSY**

Q R S

SIDE A

A



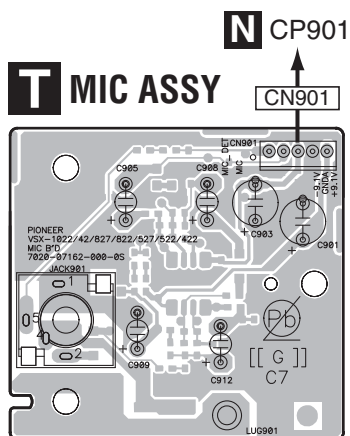
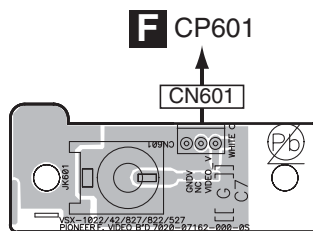
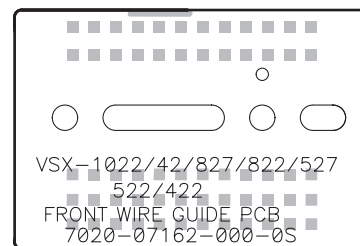
B

C

D

E

F

**U** FVIDEO ASSY**V** WG ASSY**Q T U V**

VSX-1022-K

SIDE B

A

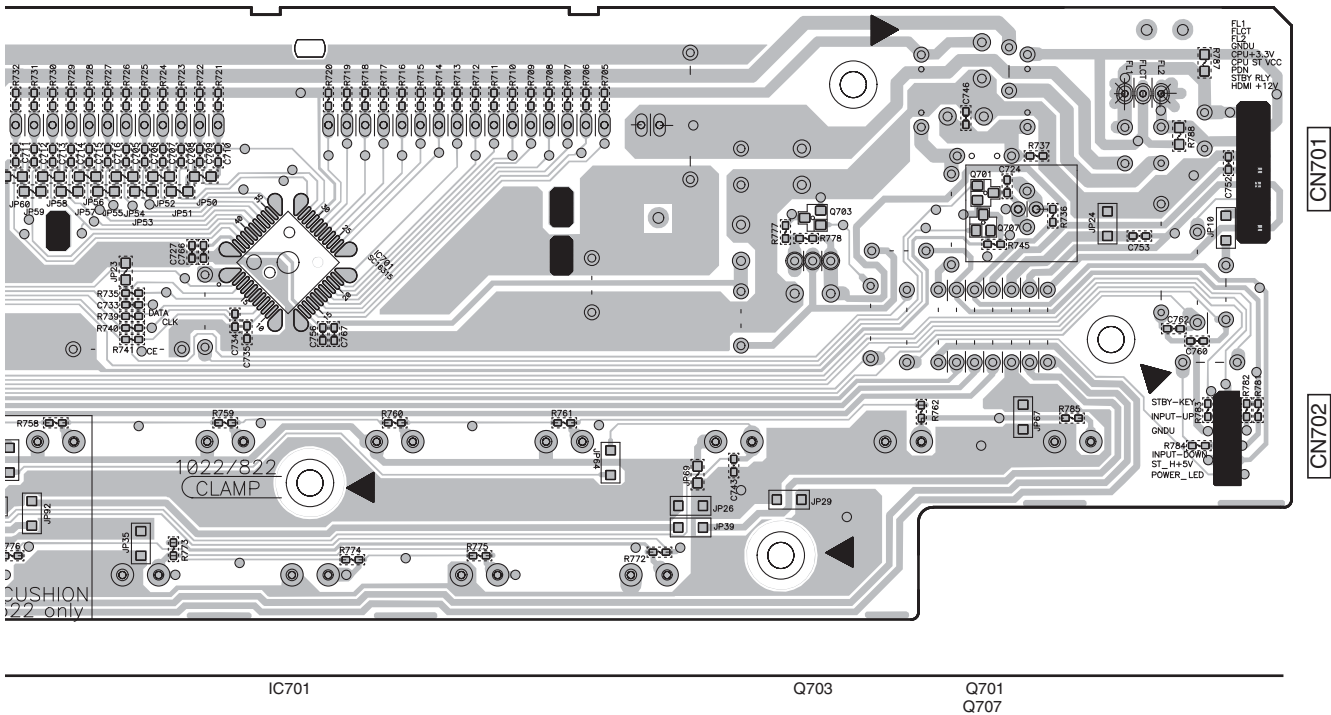
B

C

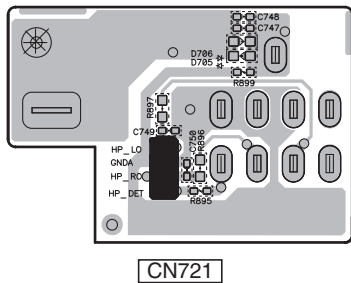
D

E

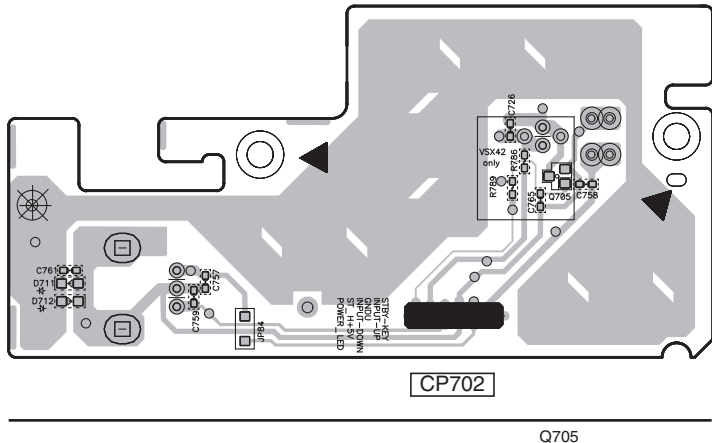
F



S HP ASSY



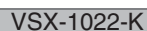
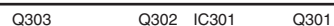
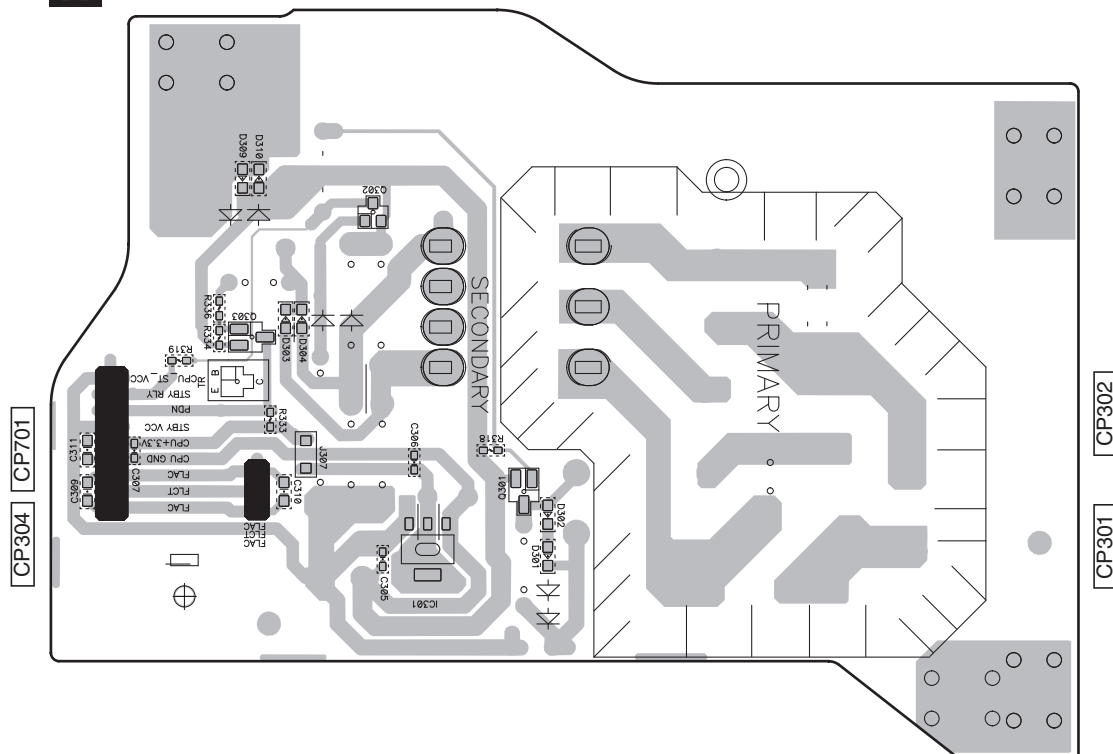
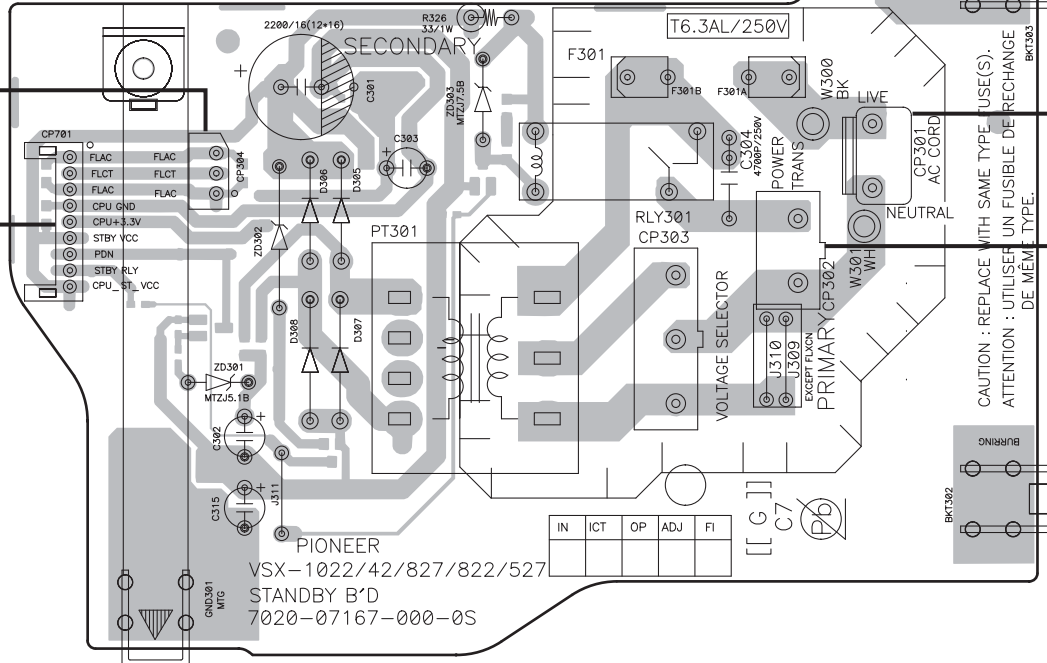
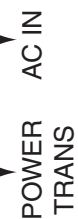
R INSEL ASSY



Q705

Q R S

SIDE A



12. PCB PARTS LIST

- NOTES: ● Parts marked by “NSP” are generally unavailable because they are not in our Master Spare Parts List.
 ● The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
 ● When ordering resistors, first convert resistance values into code form as shown in the following examples.

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

560 Ω $\rightarrow$ 56×10^1 $\rightarrow$ 561.....RD1/APU $\begin{bmatrix} 5 \\ 6 \end{bmatrix} \begin{bmatrix} 1 \\ 0 \end{bmatrix} J$
 47 k Ω $\rightarrow$ 47×10^3 $\rightarrow$ 473.....RD1/APU $\begin{bmatrix} 4 \\ 7 \end{bmatrix} \begin{bmatrix} 3 \\ 0 \end{bmatrix} J$
 0.5 Ω $\rightarrow$ R50.....RN2H $\begin{bmatrix} R \\ 5 \end{bmatrix} \begin{bmatrix} 0 \\ 0 \end{bmatrix} K$
 1 Ω $\rightarrow$ 1R0.....RSIP $\begin{bmatrix} 1 \\ R \end{bmatrix} \begin{bmatrix} 0 \\ 0 \end{bmatrix} K$

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

5.62 k Ω $\rightarrow$ 562×10^1 $\rightarrow$ 5621.....RN1/4PC $\begin{bmatrix} 5 \\ 6 \end{bmatrix} \begin{bmatrix} 2 \\ 1 \end{bmatrix} F$

- Meaning of the figures and others in the parentheses in the parts list.
 Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.
 IC 301 (A, 91, 111) IC NJM2068V

● SCHEMATIC DIAGRAM and PCB CONNECTION DIAGRAM $\rightarrow$ ● PCB PARTS LIST

BKT	$\rightarrow$ none	BEAD	$\rightarrow$ L	RLY	$\rightarrow$ RY	SW	$\rightarrow$ S
CLAMP	$\rightarrow$ none	F	$\rightarrow$ FU	RMC	$\rightarrow$ U	VEC	$\rightarrow$ S9***
W	$\rightarrow$ none	FLT	$\rightarrow$ V	RES	$\rightarrow$ X	GND	$\rightarrow$ KN
LUG	$\rightarrow$ none	JACK	$\rightarrow$ JA	XTAL	$\rightarrow$ X9***		
P	$\rightarrow$ none	JACK	$\rightarrow$ JA9***	BD	$\rightarrow$ L7***		
PACK	$\rightarrow$ 9***	JK	$\rightarrow$ JA	LED	$\rightarrow$ D8***		
CP	$\rightarrow$ CN	PT	$\rightarrow$ T	Z	$\rightarrow$ D9***		
CP	$\rightarrow$ CN9***	REG	$\rightarrow$ IC	ZD	$\rightarrow$ D9***		
FPC	$\rightarrow$ CN9***	REG	$\rightarrow$ IC9***	DZ	$\rightarrow$ D9***		

LIST OF ASSEMBLIES

Mark	Symbol and Description	VSX-1022-K /CUXESM	VSX-42 /UXECB	VSX-822-K /CUXESM
NSP	1..PCB TTL ASSY MAIN	7025HK1108010-IL	7025HK1108020-IL	7025HK1107010-IL
	2..MAIN ASSY	7028071611030-IL	7028071611050-IL	7028071611010-IL
	2..BTCNT ASSY	7028071612050-IL	7028071612050-IL	7028071612050-IL
	2..OPTCO ASSY	7028071613050-IL	7028071613050-IL	7028071613050-IL
	2..G-R ASSY	7028071614050-IL	7028071614050-IL	7028071614050-IL
	2..G-L ASSY	7028071615050-IL	7028071615050-IL	7028071615050-IL
	2..WG-A ASSY	7028071616050-IL	7028071616050-IL	7028071616050-IL
	2..WG-B ASSY	7028071617050-IL	7028071617050-IL	7028071617050-IL
NSP	1..PCB TTL ASSY FRONT	7025HK1108011-IL	7025HK1108021-IL	7025HK1108011-IL
	2..FRONT ASSY	7028071621030-IL	7028071621050-IL	7028071621030-IL
	2..HP ASSY	7028071622030-IL	7028071622050-IL	7028071622030-IL
	2..INSEL ASSY	7028071623030-IL	7028071623050-IL	7028071623030-IL
	2..MIC ASSY	7028071624050-IL	7028071624050-IL	7028071624050-IL
	2..FVIDEO ASSY	7028071626030-IL	7028071626050-IL	7028071626030-IL
	2..WG ASSY	7028071627060-IL	7028071627060-IL	7028071627060-IL
NSP	1..PCB TTL ASSY VIDEO	7025HK1108012-IL	7025HK1108022-IL	7025HK1107012-IL
	2..VIDEO ASSY	7028071671030-IL	7028071671030-IL	7028071671010-IL
	2..STBY ASSY	7028071672030-IL	7028071672030-IL	7028071672010-IL
	2..BRG-1 ASSY	7028071673030-IL	7028071673030-IL	7028071673030-IL
	2..BRG-2 ASSY	7028071674030-IL	7028071674050-IL	7028071674030-IL
NSP	1..PCB TTL ASSY AUDIO	7025HK1108013-IL	7025HK1108023-IL	7025HK1107013-IL
	2..AUDIO ASSY	7028071641030-IL	7028071641050-IL	7028071641010-IL
NSP	1..PCB TTL ASSY DMAIN	7025HK1108014-IL	7025HK1108024-IL	7025HK1107014-IL
	2..D-MAIN ASSY	7028071691050-IL	7028071691050-IL	7028071691010-IL
NSP	1..PCB TTL ASSY CPU	7025HK1108015-IL	7025HK1108025-IL	7025HK1107015-IL
	2..CPU ASSY	7028071681030-IL	7028071681050-IL	7028071681010-IL
NSP	1..PCB TTL ASSY AMP7	7025HK1108017-IL	7025HK1108017-IL	Not used
	2..AMP7 ASSY	7028070253010-IL	7028070253010-IL	Not used
NSP	1..PCB TTL ASSY AMP5	Not used	Not used	7025HK1107017-IL
	2..AMP5 ASSY	Not used	Not used	7028070245010-IL
NSP	1..PCB TTL ASSY BT	7025HK1009019-IL	7025HK1009019-IL	7025HK1009019-IL
	2..BT ASSY	7028070231010-IL	7028070231010-IL	7028070231010-IL
NSP	1..PCB TTL ASSY F-USB	7025HK1108016-IL	7025HK1108016-IL	7025HK1108016-IL
	2..F-USB ASSY	7028071781030-IL	7028071781030-IL	7028071781030-IL

CONTRAST OF PCB ASSEMBLIES

A AUDIO ASSY

7028071641030-IL, 7028071641050-IL and 7028071641010-IL are constructed the same except for the following:

Mark	Symbol and Description	7028071641030-IL	7028071641030-IL	7028071641030-IL
	JA402 Ter, RCA 2pin	Not used	Not used	G601206A0005Y-IL

C MAIN ASSY

7028071611030-IL, 7028071611050-IL and 7028071611010-IL are constructed the same except for the following:

Mark	Symbol and Description	7028071611030-IL	7028071611050-IL	7028071611010-IL
⚠	IC5 Liner Regulator IC	Not used	J126781200040-IL	Not used
	R15, R17 R, metal Film 100PPM	C060010065050-IL	C060010065050-IL	Not used
	R16, R18 R, metal Film 100PPM	C060010066050-IL	C060010066050-IL	Not used
	RY5, RY6 Relay	G680120502050-IL	G680120502050-IL	Not used
	CN9008, CN9014 CN. wafer	L109012510920-IL	L109012510920-IL	Not used
	JA104 Ter, board Push 4p	G594408SA030Y-IL	G594408SA030Y-IL	Not used
	JA103 Ter, board Screw 2p	G611201A0200Y-IL	G611201A0200Y-IL	Not used
	JA102 Ter, board Screw 4p	G612405E0200Y-IL	G612405E0200Y-IL	G611201A0200Y-IL

D D-MAIN ASSY

7028071691050-IL and 7028071691010-IL are constructed the same except for the following:

Mark	Symbol and Description	7028071691050-IL	7028071691010-IL
	IC1202 Video Decoder IC	ADV7181CBSTZ-K	Not used

E CPU ASSY

7028071681030-IL, 7028071681050-IL and 7028071681010-IL are different in part number, they consist of the same components.

F VIDEO ASSY

7028071671030-IL and 7028071671010-IL are constructed the same except for the following:

Mark	Symbol and Description	7028071671030-IL	7028071671010-IL
	JA1200 Ter, RCA 6pin	G603610A0051Y-IL	G606305AW140Y-IL

N BRG-2 ASSY

7028071674030-IL and 7028071674050-IL are constructed the same except for the following:

Mark	Symbol and Description	7028071674030-IL	7028071674050-IL
	CN204 CN. wafer	L109012510920-IL	L109012511120-IL

Q FRONT ASSY

7028071621030-IL and 7028071621050-IL are constructed the same except for the following:

Mark	Symbol and Description	7028071621030-IL	7028071621050-IL
	D9701 - D9703 LED, round	K500052009011-IL	K500036001120-IL

R INSEL ASSY

7028071623030-IL and 7028071623050-IL are constructed the same except for the following:

Mark	Symbol and Description	7028071623030-IL	7028071623050-IL
	D9704 LED, round	Not used	K500036001120-IL

SHP ASSY

7028071622030-IL and 7028071622050-IL are constructed the same except for the following:

Mark	Symbol and Description	7028071622030-IL	7028071622050-IL
	JA701 Jack, d6.5	G402PJ612A09Y-IL	G402PJ612AG1Y-IL

UVIDEO ASSY

7028071626030-IL and 7028071626050-IL are constructed the same except for the following:

Mark	Symbol and Description	7028071626030-IL	7028071626050-IL
	JA601 Ter, RCA 1pin	G600101H0000Y-IL	G600101HG000Y-IL

WSTBY ASSY

7028071672030-IL and 7028071672010-IL are constructed the same except for the following:

Mark	Symbol and Description	7028071672030-IL	7028071672010-IL
	D9301 D, zener	K06005R644520-IL	K06005R144520-IL
⚠	FU301 Fuse Glass Tube 20mm	N751508001160-IL	N751506301160-IL

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

PARTS LIST (VSX-1022-K)

A AUDIO ASSY SEMICONDUCTORS

IC 400	J084152180010-IL
IC 401-403,406	J121458001010-IL
D 9400,9401	K06006R844520-IL

MISCELLANEOUS

JA 401 TER,RCA 6PIN	G603610A0001Y-IL
JA 403 TER,RCA 1PIN	G600107A0000Y-IL

RESISTORS

R 510,587	C060033065050-IL
⚠ R 588,589	C060010165060-IL

B AMP7 ASSY (VSX-1022-K, VSX-42) SEMICONDUCTORS

Q 401,413,425,437	J5001024Y0050-IL
Q 407,408,417,419	J5000992F0050-IL
Q 412,424,436,448	J5023206Y0050-IL
Q 420,431,432,443	J5000992F0050-IL
Q 444,455,456,467	J5000992F0050-IL

Q 449,461,473	J5001024Y0050-IL
Q 460,472,484	J5023206Y0050-IL
Q 468,479,480	J5000992F0050-IL
D 9401,9404,9407,9410	K06005R134520-IL
D 9402,9403,9405,9406	K06004R344520-IL

D 9408,9409,9411,9412	K06004R344520-IL
D 9413,9416,9419	K06005R134520-IL
D 9414,9415,9417,9418	K06004R344520-IL
D 9420,9421	K06004R344520-IL

MISCELLANEOUS

VR 401-407 VR,SEMI CARBON MOLD 401 BRACKET	C541102315000-IL 4010210196100-IL
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RESISTORS

⚠ R 406,450,494,537	F320184710050-IL
⚠ R 424,425,430,431	N113136647820-IL
R 443,487,530,573	C060047065060-IL
⚠ R 467,468,474,475	N113136647820-IL

Mark	No.	Description	Part No.
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R 493	C060033065050-IL
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⚠ R 511,512,517,518	N113136647820-IL
⚠ R 554,555,561,562	N113136647820-IL
⚠ R 580,623,666	F320184710050-IL
⚠ R 597,598,603,604	N113136647820-IL
R 616,659,702	C060047065060-IL

⚠ R 640,641,646,647	N113136647820-IL
⚠ R 683,684,689,690	N113136647820-IL

CAPACITORS

C 419	D04010108C240-IL
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B AMP5 ASSY (VSX-822-K) SEMICONDUCTORS

Q 401,413,425,437	J5001024Y0050-IL
Q 407,408,417,419	J5000992F0050-IL
Q 412,424,436,448	J5023206Y0050-IL
Q 420,431,432,443	J5000992F0050-IL
Q 444,455,456	J5000992F0050-IL

Q 449	J5001024Y0050-IL
Q 460	J5023206Y0050-IL
D 9401,9404,9407,9410	K06005R134520-IL
D 9402,9403,9405,9406	K06004R344520-IL
D 9408,9409,9411,9412	K06004R344520-IL

D 9413	K06005R134520-IL
D 9414,9415	K06004R344520-IL

MISCELLANEOUS

VR 401-405 VR,SEMI CARBON MOLD 400 BRACKET	C541102315000-IL 4010210196100-IL
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RESISTORS

⚠ R 406,450,494,537	F320184710050-IL
⚠ R 424,425,430,431	N113136647820-IL
R 443,487,530,573	C060047065060-IL
⚠ R 467,468,474,475	N113136647820-IL
R 493	C060033065050-IL

⚠ R 511,512,517,518	N113136647820-IL
⚠ R 554,555,561,562	N113136647820-IL
⚠ R 580	F320184710050-IL

Mark No. Description

⚠ R 597,598,603,604
R 616

Part No.

N113136647820-IL
C060047065060-IL

Mark No. Description

IC 1403
IC 1405,1406

Part No.

J040740400270-IL
TC74VHC157FK

CAPACITORS

C 419

D04010108C240-IL

C MAIN ASSY**SEMICONDUCTORS**

⚠ IC 1 J126781200040-IL
⚠ IC 2 J126791200060-IL
⚠ IC 3 J126780500110-IL
Q 14,15 J5023198Y0000-IL
Q 16 J5000992F0050-IL

Q 17 J5000916Y0050-IL
D 7 K047100600220-IL
⚠ D 9,4912 K047604000020-IL
⚠ D 10-13 K000400700220-IL
D 23 K000400700220-IL

D 9001 K06003R344520-IL
D 9024,9025 K06016R044520-IL

MISCELLANEOUS

JA 101 TER,BOARD SCREW 8P G614108V1010M-IL
JA 102 TER,BOARD SCREW 4P G612405E0200Y-IL
JA 103 TER,BOARD SCREW 2P G611201A0200Y-IL
JA 104 TER,BOARD PUSH 4P G594408SA030Y-IL
RY 2-6 RELAY G680120502050-IL

CN9008,9014 CN,WAFER L109012510920-IL
CN9009,9015,9016 CN,WAFER L109012511120-IL
CN9013 CN,WAFER L109012510720-IL
CN9017 CN,WAFER L109012511520-IL
CN9605 CN,WAFER L109012511320-IL

⚠ 601 TUNER,FM/AM E903004100780-IL
FU 302,303 FUSE,MICRO G658315250050-IL

RESISTORS

R 5,7,9,11 C060010065050-IL
R 6,8,10,12 C060010066050-IL
R 13,15,17,25 C060010065050-IL
R 14,16,18 C060010066050-IL
R 27,31,41,42 C060R22065050-IL

R 64 C060022063050-IL
R 66 C0604R7065050-IL

CAPACITORS

C 55,58 D040682088010-IL
C 73,76 D040682083000-IL
C 84 D040472084020-IL
C 85 D040102084060-IL
C 101 D040331088230-IL

D D-MAIN ASSY**SEMICONDUCTORS**

⚠ IC 1003 AAT4610BIGV-1
IC 1201 TC7WHU04FK
IC 1202 ADV7181CBSTZ
IC 1203 ABT1015
IC 1204 TC74LCX541FK

IC 1205 TC7SZ125FU
IC 1401 AK4588VQ
IC 1402 TC74VHC08FK

MISCELLANEOUS

1401 BRACKET

4010210196100-IL

E CPU ASSY**SEMICONDUCTORS**

IC 204
IC 206

J000241600170-IL
TC7SH08FUS1

MISCELLANEOUS

X 201 CRYSTAL (16 MHz)
CN201 CN,WAFER
CN213 CN,WAFER
201,202 BRACKET

E80016R000030-IL
L109012513320-IL
L109012511520-IL
4010210196100-IL

F VIDEO ASSY**SEMICONDUCTORS**

IC 1200

J127410500010-IL

MISCELLANEOUS

JA 1200 TER,RCA 6PIN

G603610A0051Y-IL

G G-L ASSY

There is no service parts.

H G-R ASSY

There is no service parts.

I WG-A ASSY

There is no service parts.

J WG-B ASSY

There is no service parts.

K BT CNT ASSY**MISCELLANEOUS**

CN 602 CN,WAFER 2.0MM

L101100041110-IL

L OPTCO ASSY**MISCELLANEOUS**

JA 1305 OPTICAL RECEIVER
JA 1306 TER,RCA 1PIN

E100116500040-IL
G600107A0000Y-IL

Mark	No.	Description	Part No.
M		BRG-1 ASSY	
		MISCELLANEOUS	
		CN 403,2003 CN,WAFER	L109012511920-IL
N		BRG-2 ASSY	
		MISCELLANEOUS	
		RY 800 RELAY	G680240202030-IL
		CN 204 CN.WAFER	L109012510920-IL
		CN 402 CN,WAFER	L109012511720-IL
		RESISTORS	
		R 382	C060010063050-IL
O		BT ASSY	
		SEMICONDUCTORS	
		⚠ IC 600	BD2224G
		MISCELLANEOUS	
		CN 601 CONNECTOR	CKS5712
		CN 603 CN.WAFER 2.0MM	L101100031110-IL
		601 BRACKET	4010210196100-IL
P		F-USB ASSY	
		MISCELLANEOUS	
		JA 600 CN,PLUG CONTACT	G480040000180-IL
Q		FRONT ASSY	
		SEMICONDUCTORS	
		IC 701	J127163150010-IL
		⚠ Q 702	J5001266G0050-IL
		D 8701	K06007R544520-IL
		D 9701-9703	K500052009011-IL
		MISCELLANEOUS	
		H 701 FL HOLDER	4320211016000-IL
		V 701 DISPLAY,FLT	K530126600010-IL
		S 701-714,716 SWITCH	G180501000010-IL
		S 9701 SW,ENCODER	G121125042011-IL
		U 701 MODULE,REMOCON	E940349003810-IL
		RESISTORS	
		R 779,780	C060001063050-IL
R		INSEL ASSY	
		MISCELLANEOUS	
		S 715 SWITCH	G180501000010-IL
		S 9702 SW,ENCODER	G121125052011-IL
S		HP ASSY	
		MISCELLANEOUS	
		JA 701 JACK,D6.5	G402PJ612A09Y-IL
T		MIC ASSY	
		SEMICONDUCTORS	
		IC 902	J121458001010-IL

Mark	No.	Description	Part No.
<u>MISCELLANEOUS</u>			
	JA 901	JACK,D3.5	G401PJ354H40Y-IL
<u>U FVIDEO ASSY</u>			
<u>MISCELLANEOUS</u>			
	JA 601	TER,RCA 1PIN	G600101H0000Y-IL
<u>V WG ASSY</u>			
There is no service parts.			
<u>W STBY ASSY</u>			
<u>SEMICONDUCTORS</u>			
⚠	IC 301		J126111700041-IL
⚠	D 303,304		K005041480230-IL
⚠	D 305-307		K000400700220-IL
	D 308		K000400700220-IL
	D 9301		K06005R644520-IL
	D 9303		K06007R544520-IL
<u>MISCELLANEOUS</u>			
⚠	RY 301	RELAY	G680060102020-IL
⚠	T 301	POWER TRANS	8200280150620-IL
⚠	CN301	CONNECTOR	L108396030010-IL
⚠	CN302	CN.WAFER 7.92MM	L108011430210-IL
	302,303	BRACKET	4010210196100-IL
⚠	FU 301	FUSE GLASS TUBE 20MM	N751508001160-IL
<u>RESISTORS</u>			
⚠	R 326		C060033065050-IL
<u>CAPACITORS</u>			
	C 301		D040222083010-IL
⚠	C 304		D00847208H010-IL