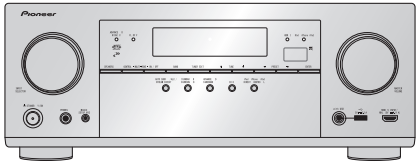
Pioneer

Service Manual



VSX-1128-K

ORDER NO.
RRV4420

AV Receiver

VSX-1128-K
VSX-1123-K
VSX-70
VSX-1028-K

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

Model	Type	Power Requirement	Remarks
VSX-1128-K	CUXE	AC 120 V	
VSX-1123-K	CUXESM	AC 120 V	
VSX-70	CUXE	AC 120 V	
VSX-1028-K	CUXE	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

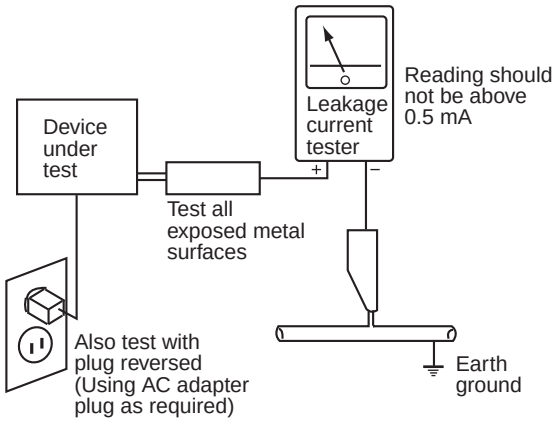
(FOR USA MODEL ONLY)

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

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 ºC.
  Therefore, for lead-free soldering, the tip temperature of a soldering iron must be set to around 373 ºC 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	JA1601, JA1603, JA9601-JA9607	HDMI Connector	L109100195550-IL	JACK with Cu-through-hole & SMD type
	JA9620	HDMI Connector	L109100195550-IL	JACK with Cu-through-hole & SMD type
	JA9201	USB Connector	G480400201010-IL	JACK with Cu-through-hole & 6 pin
	JA9202	LAN Connector	G4060RJ450230-IL	JACK with Cu-through-hole & 10 pin
	IC903	HDMI SW IC	————	IC with heat-pad
	IC9602	HDMI INTERFACE IC	————	IC with heat-pad
	IC1602	HDMI INTERFACE IC	————	IC with heat-pad
	IC1204	VIDEO PROCESSOR IC	————	IC BGA type
	IC1212	DDR IC	————	IC BGA type
	IC1216	VTT/VREF REGULATOR IC	BD3539NUX	IC with heat-pad
	IC9002	DSP IC	————	IC with heat-pad
	IC9204	MEDIA PROCESSOR IC	————	IC BGA type
	IC9203	LAN PHY IC	————	IC with heat-pad
	IC9206	APPLE AUTHENTICATION IC	————	IC with heat-pad
	IC451	3ch SW Power Supply IC	————	IC with heat-pad
FHDMI Assy	IC809	5V SW IC	————	IC with heat-pad
	IC1307	5V SW Power Supply IC	————	IC with heat-pad

1.3 SERVICE NOTICE

- **Discharging**
  For more detail, please refer to "7. DISASSEMBLY - 1. Discharging".

2. SPECIFICATIONS

VSX-1128-K, VSX-1028-K

Amplifier section

Continuous average power output of 90 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) ..... 90 W + 90 W
Power output (1 kHz, 6 Ω, 1 %, 1 ch driven) ..... 165 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 ..... 315 mV/47 kΩ
Signal-to-Noise Ratio (IHF, short circuited, A network)
LINE ..... 100 dB
Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]
LINE ..... 81 dB

Tuner Section

Frequency Range (FM) ..... 87.5 MHz to 108 MHz
Antenna Input (FM) ..... 75 Ω unbalanced
Frequency Range (AM) ..... 530 kHz to 1 700 kHz
Antenna (AM) ..... Loop antenna (balanced)

Video Section

Signal level
Composite Video ..... 1 Vp-p (75 Ω)
Component Video ..... Y: 1.0 Vp-p (75 W), PB/PR: 0.7 Vp-p (75 Ω)
Corresponding maximum resolution
Component Video 1080p (1125p)

Digital In/Out Section

HDMI terminal ..... 19-pin (Not DVI)
HDMI output type ..... 5 V, 100 mA
HDMI input/MHL terminal ..... 5 V, 900 mA
USB terminal ..... USB2.0 High Speed (Type A) 5 V, 2.1 A
iPod terminal ..... USB, and Video (Composite)
ADAPTER PORT terminal ..... 5 V, 100 mA
WIRELESS LAN ADAPTER terminal ..... 5 V, 600 mA

Integrated Control Section

Control (IR) terminal ..... ø 3.5 Mini-jack (MONO)
IR signal ..... High Active (High Level: 2.0 V)

Network Section

LAN terminal ..... 10 BASE-T/100 BASE-TX

Miscellaneous

Power requirements ..... AC 120 V, 60 Hz
Power consumption ..... 550 W
In standby ..... 0.1 W
0.2 W (HDMI Setup – Control : ON)
Dimensions ..... 435 mm (W) x 168 mm (H) x 363 mm (D)
(17 3/16 in. (W) x 6 5/8 in. (H) x 14 5/16 in. (D))
Weight (without package)
VSX-1128 ..... 9.8 kg (21 lb 10 oz)
VSX-1028 ..... 9.7 kg (21 lb 7 oz)

VSX-1123-K

Amplifier section

Continuous average power output of 90 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) ..... 90 W + 90 W
Power output (1 kHz, 6 Ω, 1 %, 1 ch driven) ..... 165 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 ..... 315 mV/47 kΩ
Signal-to-Noise Ratio (IHF, short circuited, A network)
LINE ..... 100 dB
Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]
LINE ..... 81 dB

Tuner Section

Frequency Range (FM) ..... 87.5 MHz to 108 MHz
Antenna Input (FM) ..... 75 Ω unbalanced
Frequency Range (AM) ..... 530 kHz to 1 700 kHz
Antenna (AM) ..... Loop antenna (balanced)

Video Section

Signal level
Composite Video ..... 1 Vp-p (75 Ω)
Component Video ..... Y: 1.0 Vp-p (75 Ω), PB/PR: 0.7 Vp-p (75 Ω)
Corresponding maximum resolution
Component Video 1080p (1125p)

Digital In/Out Section

HDMI terminal ..... 19-pin (Not DVI)
HDMI output type ..... 5 V, 100 mA
HDMI input/MHL terminal ..... 5 V, 900 mA
USB terminal ..... USB2.0 High Speed (Type A) 5 V, 2.1 A
iPod terminal ..... USB, and Video (Composite)
ADAPTER PORT terminal ..... 5 V, 100 mA
WIRELESS LAN ADAPTER terminal ..... 5 V, 600 mA

Integrated Control Section

Control (IR) terminal ..... ø 3.5 Mini-jack (MONO)
IR signal ..... High Active (High Level: 2.0 V)

Network Section

LAN terminal ..... 10 BASE-T/100 BASE-TX

Miscellaneous

Power requirements ..... AC 120 V, 60 Hz
Power consumption ..... 550 W
In standby ..... 0.1 W
0.2 W (HDMI Setup – Control : ON)
Dimensions ..... 435 mm (W) x 168 mm (H) x 363 mm (D)
(17 3/16 in. (W) x 6 5/8 in. (H) x 14 5/16 in. (D))
Weight (without package) ..... 9.8 kg (21 lb 10 oz)

VSX-70

Amplifier section

Continuous average power output of 90 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) ..... 90 W + 90 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..... 315 mV/47 kΩ
Output (Level/Impedance)
REC..... 315 mV/2.2 kΩ
Signal-to-Noise Ratio (IHF, short circuited, A network)
LINE.....100 dB
Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]
LINE.....81 dB

Tuner Section

Frequency Range (FM) ..... 87.5 MHz to 108 MHz
Antenna Input (FM).....75 Ω unbalanced
Frequency Range (AM) .....530 kHz to 1 700 kHz
Antenna (AM) ..... Loop antenna (balanced)

Video Section

Signal level
Composite Video .....1 Vp-p (75 Ω)
Component Video..... Y: 1.0 Vp-p (75 Ω), PB/PR: 0.7 Vp-p (75 Ω)
Corresponding maximum resolution
Component Video.....1080p (1125p)

Digital In/Out Section

HDMI terminal ..... 19-pin (Not DVI)
HDMI output type.....5 V, 100 mA
HDMI input/MHL terminal .....5 V, 900 mA
USB terminal ..... USB2.0 High Speed (Type A) 5 V, 2.1 A
iPod terminal..... USB, and Video (Composite)
ADAPTER PORT terminal .....5 V, 100 mA
WIRELESS LAN ADAPTER terminal .....5 V, 600 mA

Integrated Control Section

Control (IR) terminal ..... ø 3.5 Mini-jack (MONO)
IR signal.....High Active (High Level: 2.0 V)
12 V Trigger terminal..... ø 3.5 Mini-jack (MONO)
12 V Trigger output type.....12 V, Total 150 mA
RS-232C cable type ..... 9-pin, cross type, female-female

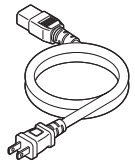
Network Section

LAN terminal.....10 BASE-T/100 BASE-TX

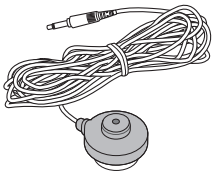
Miscellaneous

Power requirements..... AC 120 V, 60 Hz
Power consumption .....550 W
In standby.....0.1 W
0.2 W (HDMI Setup – Control : ON)
Dimensions.....435 mm (W) x 168 mm (H) x 363 mm (D)
(17 3/16 in. (W) x 6 5/8 in. (H) x 14 5/16 in. (D))
Weight (without package) ..... 9.8 kg (21 lb 10 oz)

Accessories



Power cord
(L068125130010-IL)
(VSX-70 only)



Microphone
(for Auto MCACC setup)
(APM7011)

AM loop antenna
(E601019000010-IL)

FM wire antenna
(E605010140010-IL)

Remote control (AXD7694)
(8300769400010-IL)

Dry cell batteries
(AAA size IEC R03) x2

Warranty card

Quick start guide
(VSX-1128-K, VSX-1028-K: 5707000007780-IL)
(VSX-1123-K: 5707000007770-IL)
(VSX-70: 5707000007860-IL)

Safety Brochure

Operating instructions (CD-ROM)
(VSX-1128-K, VSX-1028-K: 6517000001240-IL)
(VSX-1123-K: 6517000001230-IL)
(VSX-70: 6517000001250-IL)

3. BASIC ITEMS FOR SERVICE

3.1 CHECK POINTS AFTER SERVICING

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.

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

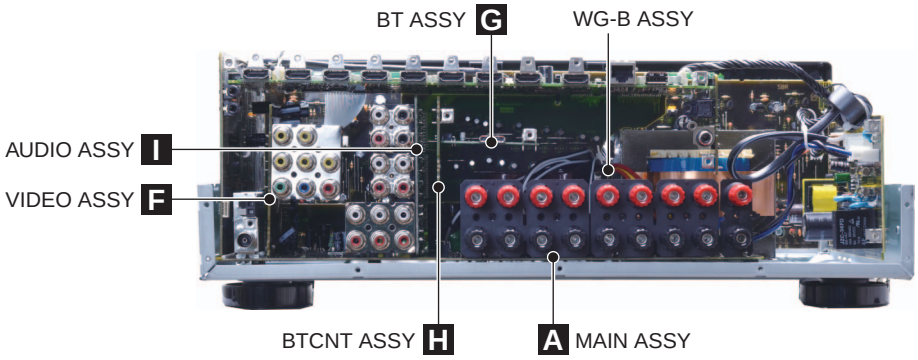
Jigs List

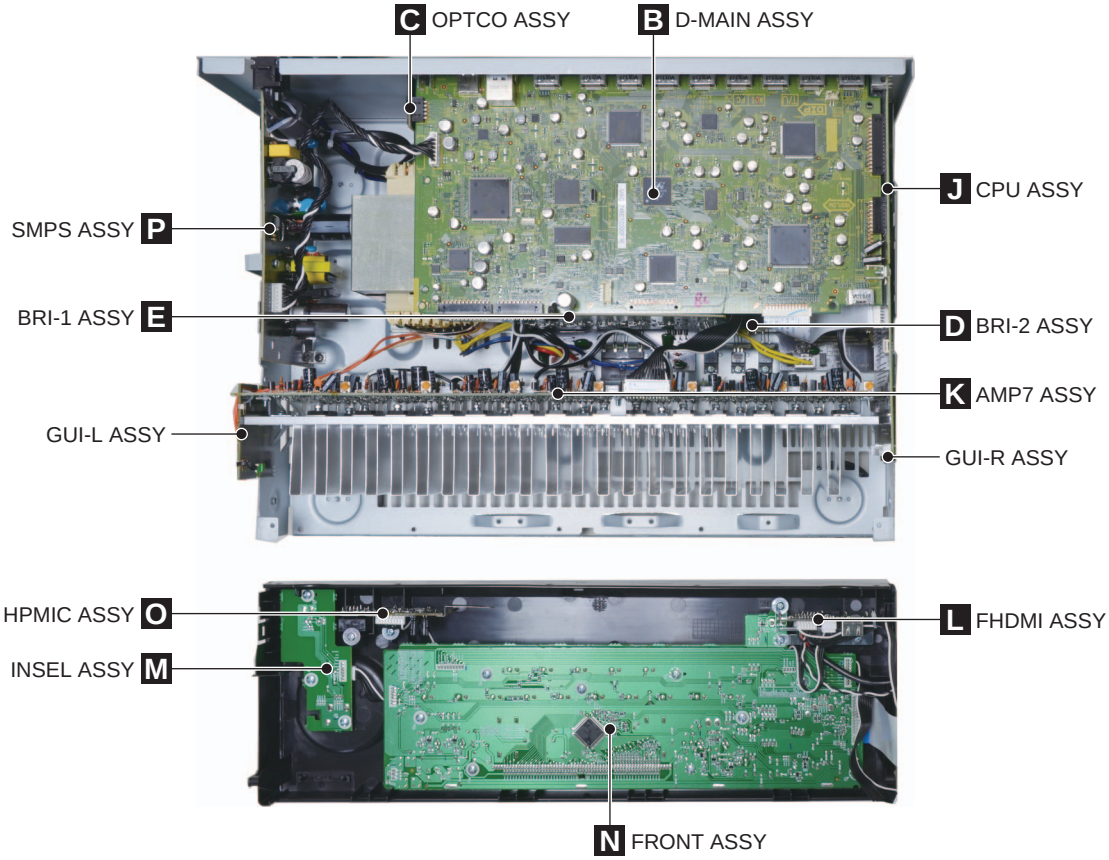
Jig Name	Part No.	Remarks
13P extension jig cable	GGD1740	Diagnosis (AMP7 Assy ↔ AUDIO Assy)
3P extension jig cable	GGD1741	Diagnosis (AMP7 Assy ↔ CPU Assy)
Board to board extension jig cable	GGD1799	Diagnosis (D-MAIN Assy ↔ CPU Assy)
Board to board extension jig cable	GGD1848	Diagnosis (D-MAIN Assy ↔ CPU Assy)
Conversion jig	GGD1804 + GGD1802	Diagnosis (D-MAIN Assy ↔ BRI-1 Assy)
HDMI cable	(Marketing product)	Diagnosis (FRONT ↔ D-MAIN 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





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-1128-K/CUXE	VSX-1123-K/CUXESM	VSX-70/CUXE	VSX-1028-K/CUXE
NSP	1..PCB TTL ASSY MAIN	7025HK1207020-IL	7025HK1207020-IL	7025HK1207040-IL	7025HK1208010-IL
	2..MAIN ASSY (PCB SUB ASSY MAIN)	7028073111040-IL	7028073111040-IL	7028073111010-IL	7028073111040-IL
	2..OPTCO ASSY (PCB SUB ASSY OPTCO)	7028073112010-IL	7028073112010-IL	7028073112010-IL	7028073112010-IL
	2..VIDEO ASSY (PCB SUB ASSY VIDEO)	7028073113040-IL	7028073113040-IL	7028073113010-IL	7028073113070-IL
	2..WG-B ASSY (PCB SUB ASSY WG-B)	7028073115010-IL	7028073115010-IL	7028073115010-IL	7028073115010-IL
	2..G-L ASSY (PCB SUB ASSY GUI-L)	7028073116010-IL	7028073116010-IL	7028073116010-IL	7028073116010-IL
	2..G-R ASSY (PCB SUB ASSY GUI-R)	7028073117010-IL	7028073117010-IL	7028073117010-IL	7028073117010-IL
NSP	1..PCB TTL ASSY SMPS	7025HK1207026-IL	7025HK1207026-IL	7025HK1207046-IL	7025HK1207026-IL
⚠	2..SMPS ASSY (PCB SUB ASSY SMPS)	7028073361000-IL	7028073361000-IL	70280733610F0-IL	7028073361000-IL
NSP	1..PCB TTL ASSY FRONT	7025HK1207031-IL	7025HK1207021-IL	7025HK1207041-IL	7025HK1208011-IL
	2..FRONT ASSY (PCB SUB ASSY FRONT)	7028073121040-IL	7028073121040-IL	7028073121010-IL	7028073121040-IL
	2..HPMIC ASSY (PCB SUB ASSY HPMIC)	7028073122010-IL	7028073122010-IL	7028073122010-IL	7028073122010-IL
	2..INSEL ASSY (PCB SUB ASSY INSEL)	7028073123040-IL	7028073123040-IL	7028073123010-IL	7028073123040-IL
NSP	1..PCB TTL ASSY CPU	7025HK1207033-IL	7025HK1207023-IL	7025HK1207043-IL	7025HK1208013-IL
	2..CPU ASSY (PCB SUB ASSY CPU)	7028073131050-IL	7028073131040-IL	7028073131010-IL	7028073131080-IL
	2..BRI-1 ASSY (PCB SUB ASSY BRI-1)	7028073132010-IL	7028073132010-IL	7028073132010-IL	7028073132070-IL
	2..BRI-2 ASSY (PCB SUB ASSY BRI-2)	7028073133010-IL	7028073133010-IL	7028073133010-IL	7028073133010-IL
	2..BTCNT ASSY (PCB SUB ASSY BTCNT)	7028073134010-IL	7028073134010-IL	7028073134010-IL	7028073134010-IL
NSP	1..PCB TTL ASSY DMAIN	7025HK1207042-IL	7025HK1207042-IL	7025HK1207042-IL	7025HK1208012-IL
	2..D-MAIN ASSY (PCB SUB ASSY DMAIN)	7028073151010-IL	7028073151010-IL	7028073151010-IL	7028073151080-IL
NSP	1..PCB TTL ASSY AMP7	7025HK1207044-IL	7025HK1207044-IL	7025HK1207044-IL	7025HK1207044-IL
	2..AMP7 ASSY (PCB SUB ASSY AMP7)	7028073051040-IL	7028073051040-IL	7028073051040-IL	7028073051040-IL
NSP	1..PCB TTL ASSY AUDIO	7025HK1207045-IL	7025HK1207045-IL	7025HK1207045-IL	7025HK1208015-IL
	2..AUDIO ASSY (PCB SUB ASSY AUDIO)	7028073141010-IL	7028073141010-IL	7028073141010-IL	7028073141080-IL
NSP	1..PCB TTL ASSY FHDMI	7025HK1207048-IL	7025HK1207048-IL	7025HK1207048-IL	7025HK1207048-IL
	2..FHDMI ASSY (PCB SUB ASSY FHDMI)	7028073221060-IL	7028073221060-IL	7028073221060-IL	7028073221060-IL
NSP	1..PCB TTL ASSY BT	7025HK1209028-IL	7025HK1209028-IL	7025HK1209028-IL	7025HK1209028-IL
	2..BT ASSY (PCB SUB ASSY BT)	7028073211040-IL	7028073211040-IL	7028073211040-IL	7028073211040-IL

A

B

C

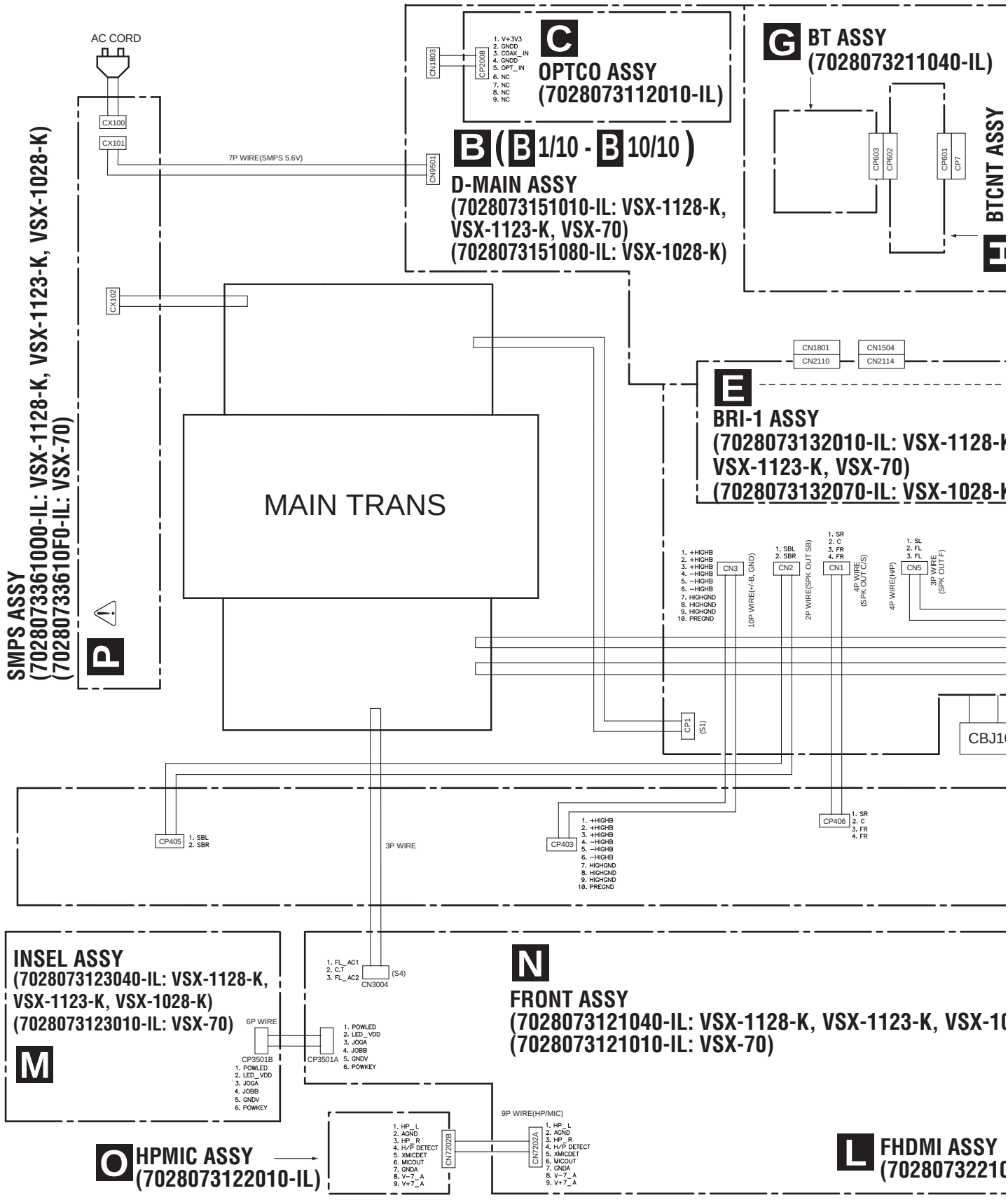
D

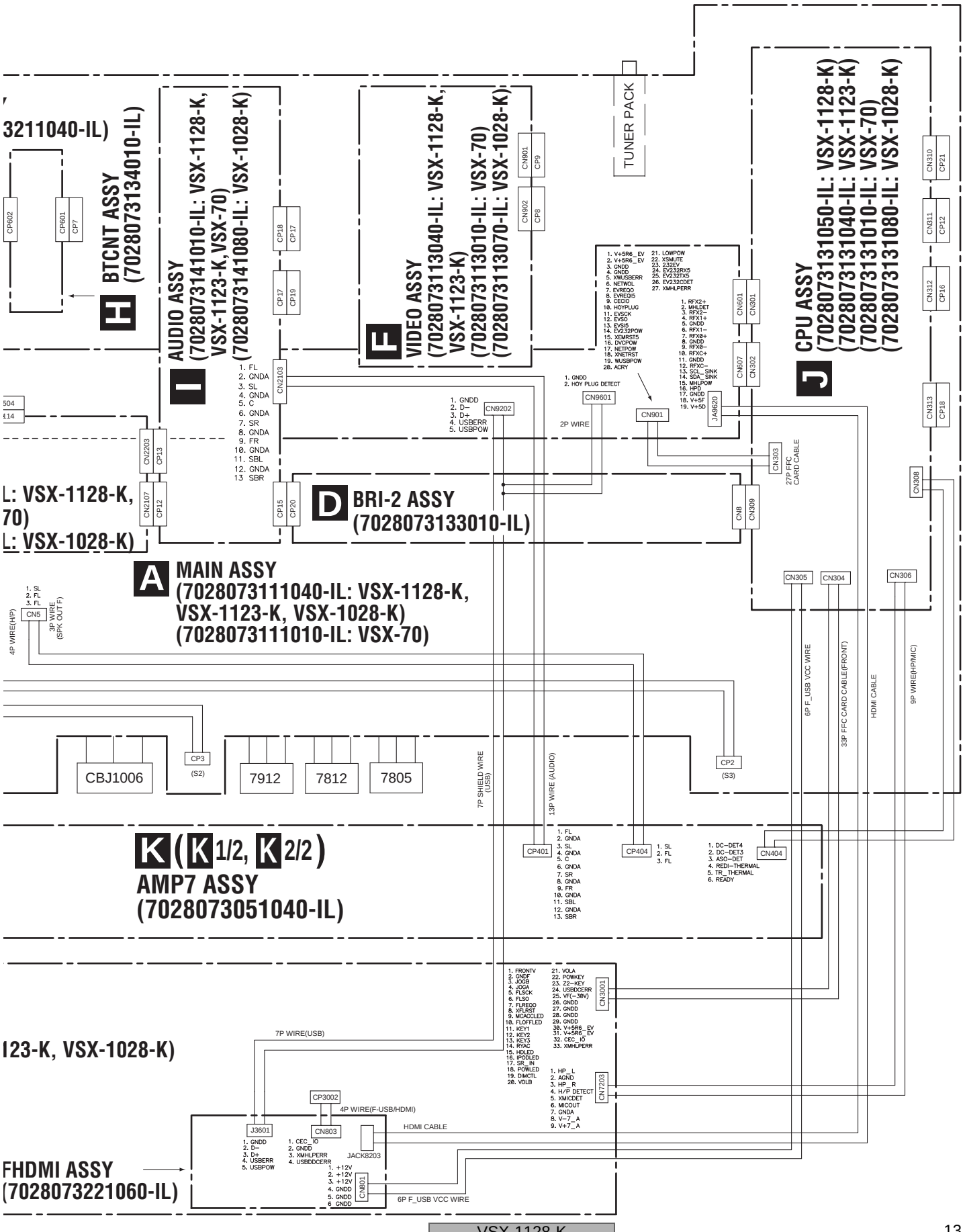
E

F

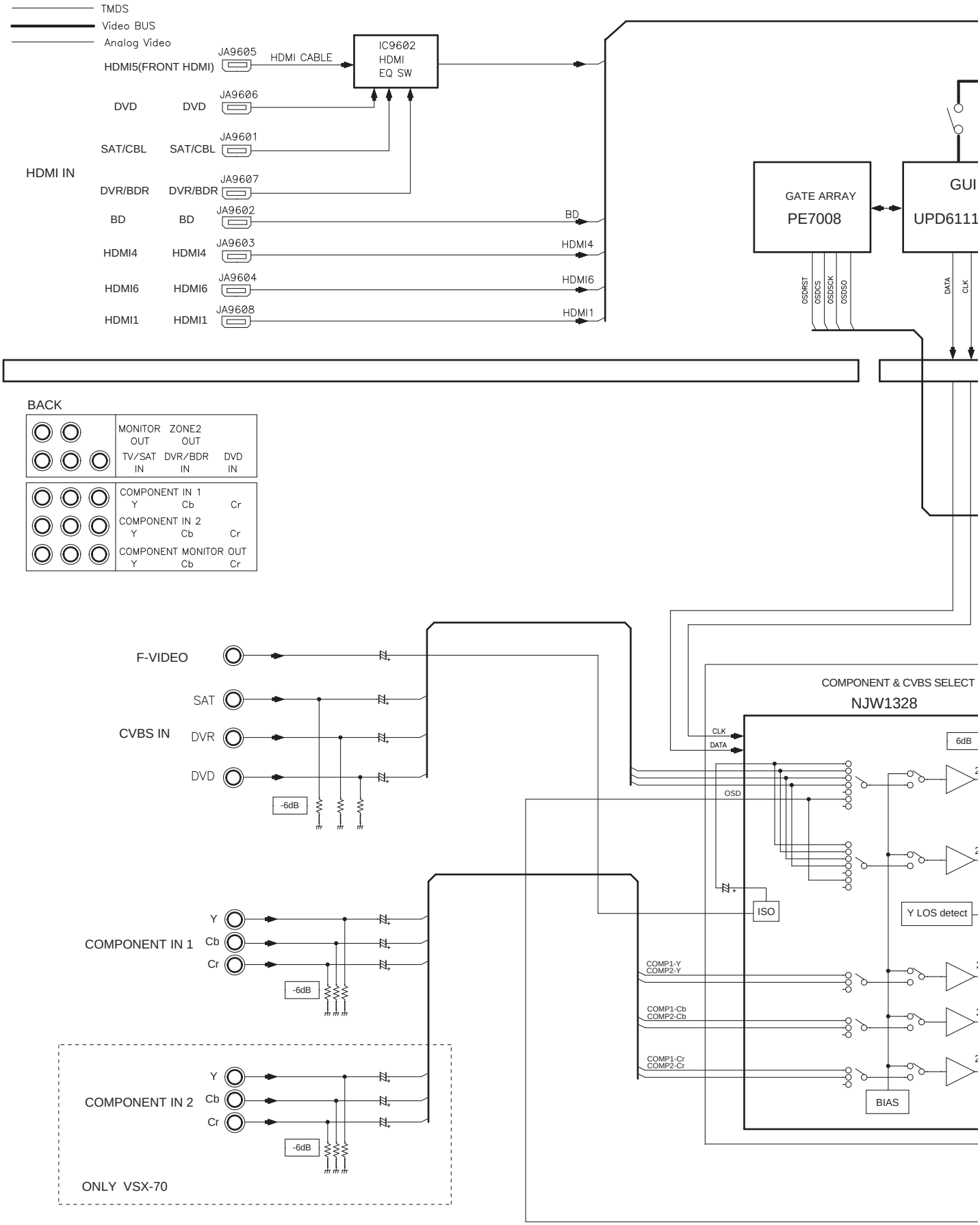
4. BLOCK DIAGRAM
4.1 OVERALL WIRING DIAGRAM

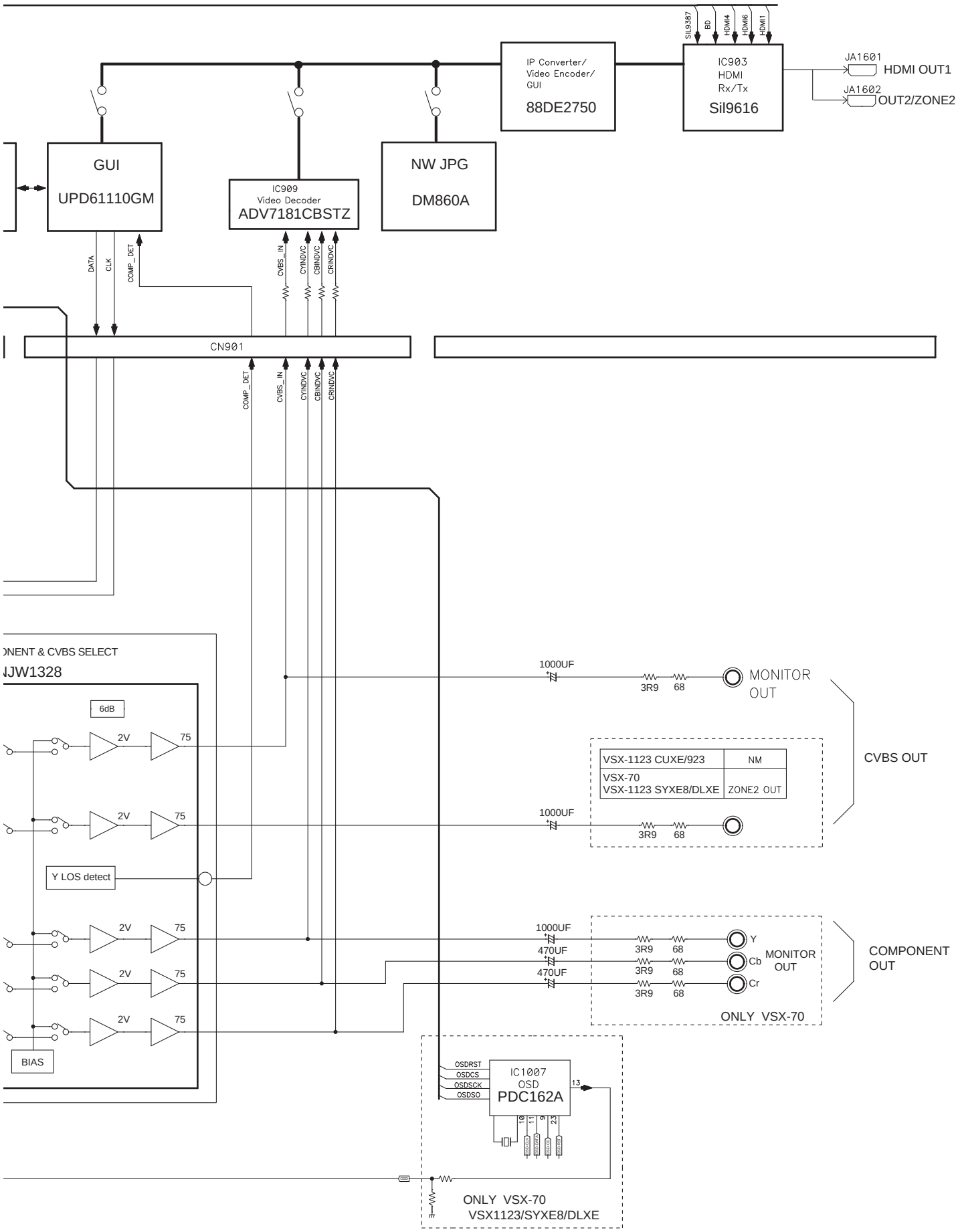
- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- : The power supply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



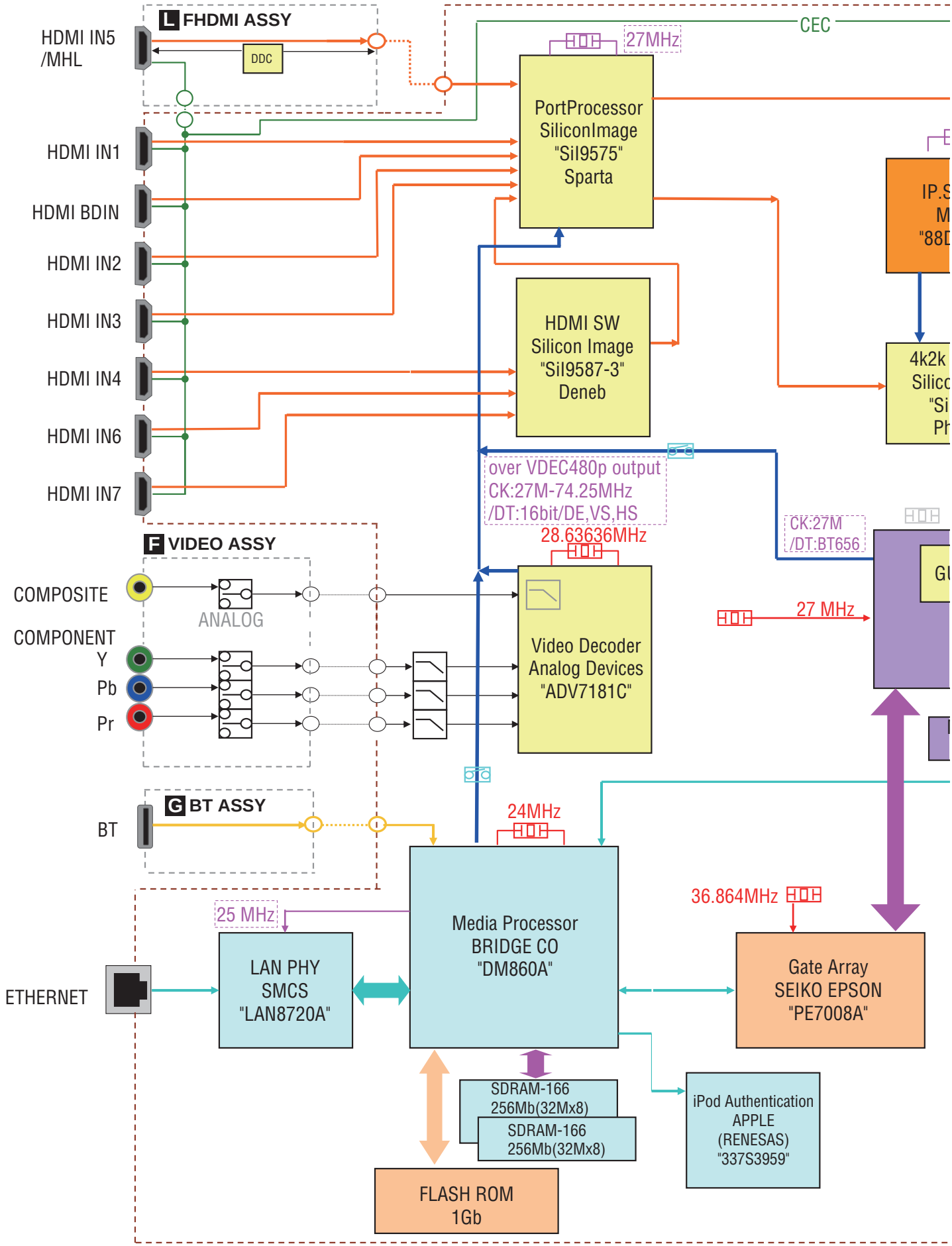

3211040-IL)
H BTCNT ASSY (7028073134010-IL)
I AUDIO ASSY (7028073141010-IL: VSX-1128-K, VSX-1123-K,VSX-70) (7028073141080-IL: VSX-1028-K)
F VIDEO ASSY (7028073113040-IL: VSX-1128-K, VSX-1123-K) (7028073113010-IL: VSX-70) (7028073113070-IL: VSX-1028-K)
TUNER PACK
J CPU ASSY (7028073131050-IL: VSX-1128-K) (7028073131040-IL: VSX-1123-K) (7028073131010-IL: VSX-70) (7028073131080-IL: VSX-1028-K)
L: VSX-1128-K,
70)
L: VSX-1028-K)
D BRI-2 ASSY (7028073133010-IL)
A MAIN ASSY (7028073111040-IL: VSX-1128-K, VSX-1123-K, VSX-1028-K) (7028073111010-IL: VSX-70)
K (K1/2, K2/2) AMP7 ASSY (7028073051040-IL)
I23-K, VSX-1028-K)
FHDMI ASSY (7028073221060-IL)
CBJ1006
7912
7812
7805
2P WIRE
4P WIRE(F-USB/HDMI)
HDMI CABLE
6P F_USB VCC WIRE
7P WIRE(USB)
7P SHIELD WIRE (USB)
13P WIRE (AUDIO)
27P FFC CARD CABLE
33P FFC CARD CABLE(FRONT)
9P WIRE(HP/MIC)
4P WIRE(I-HP)
3P WIRE (SPK OUT F)
JACK8203

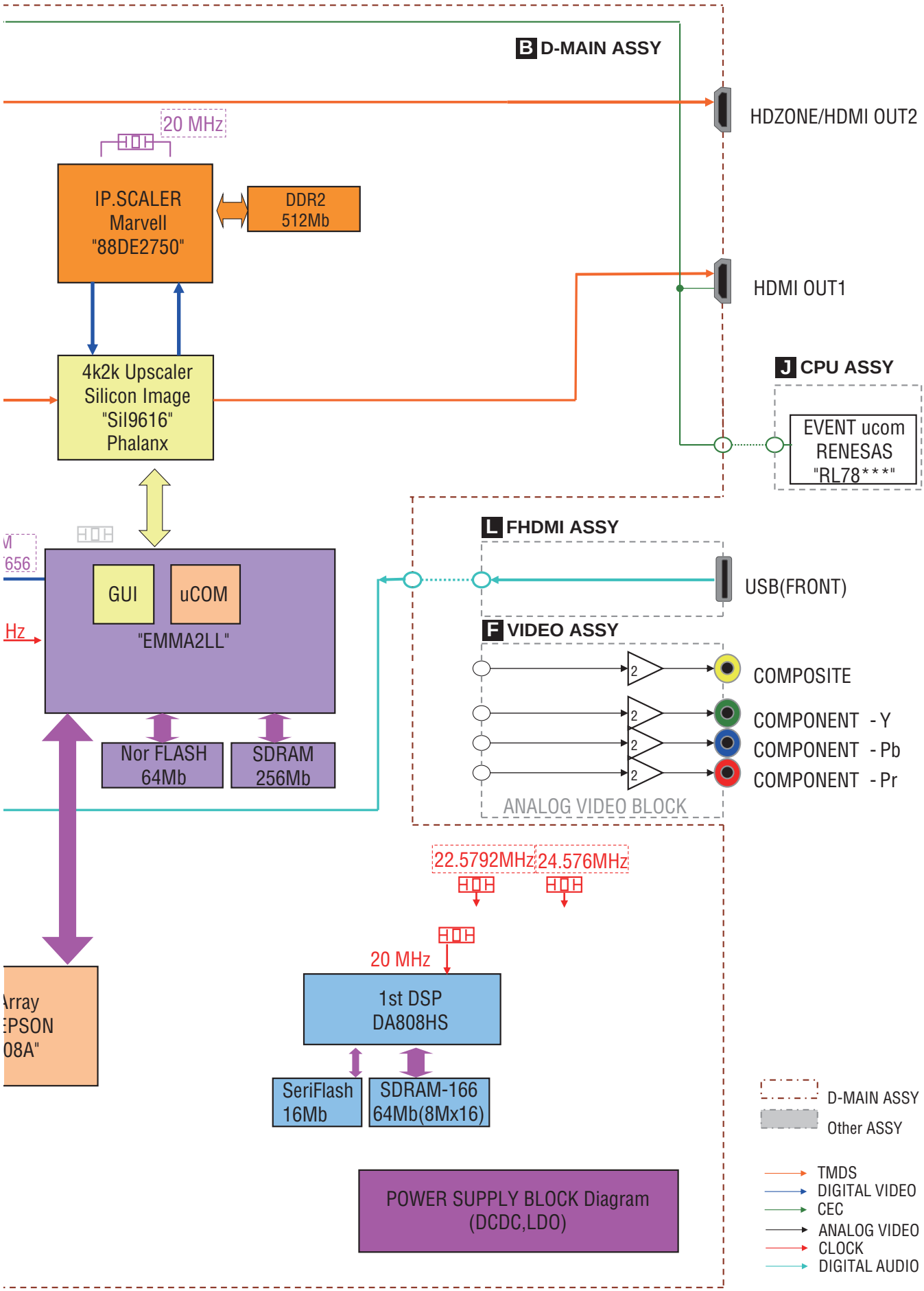
4.2 VIDEO BLOCK DIAGRAM



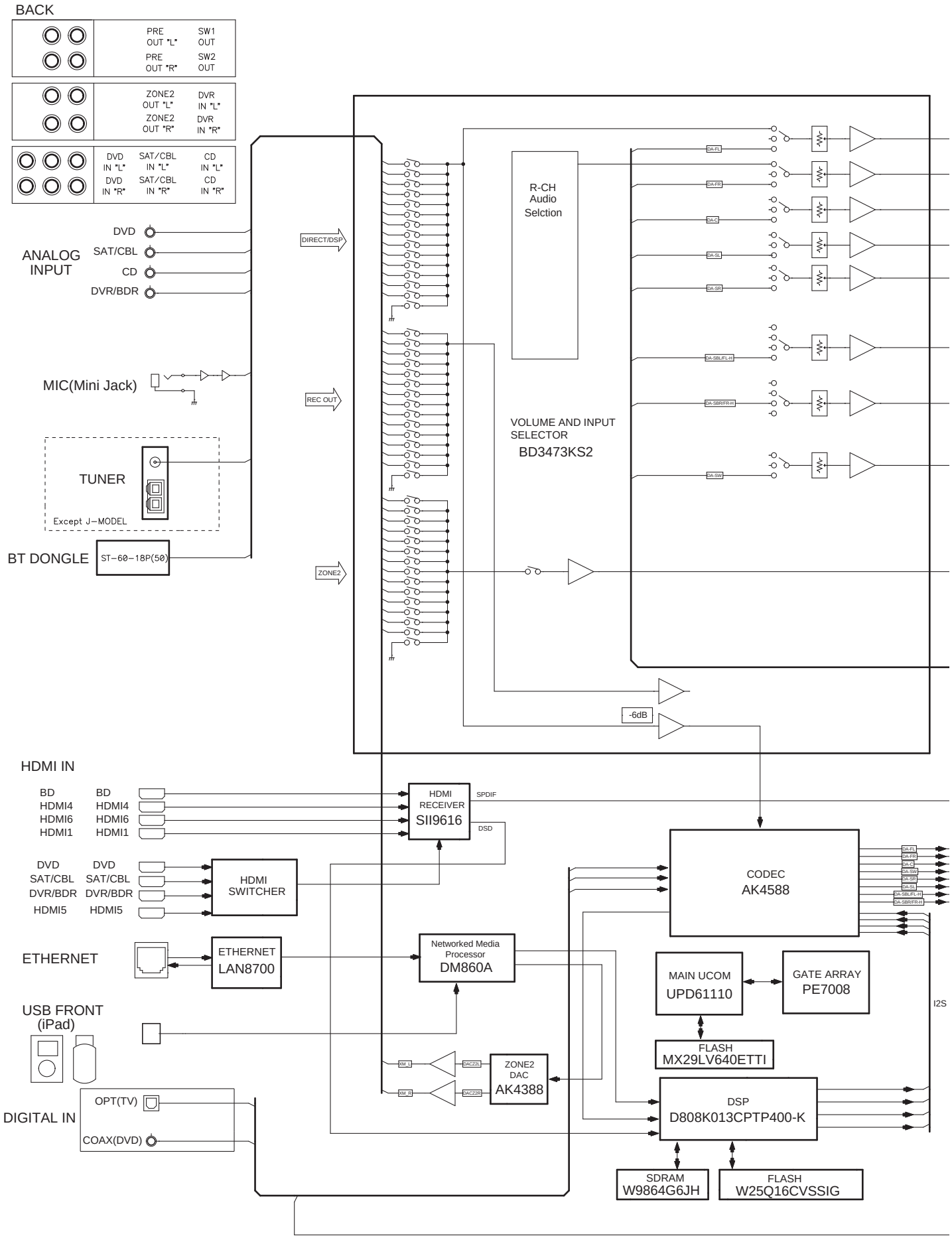

SIL9387
BD
HDMI4
HDMI6
HDMI1
IP Converter/
Video Encoder/
GUI
88DE2750
IC903
HDMI
Rx/Tx
Sil9616
JA1601
HDMI OUT1
JA1602
OUT2/ZONE2
GUI
UPD61110GM
IC909
Video Decoder
ADV7181CBSTZ
NW JPG
DM860A
DATA
CLK
COMP_DET
CVBS_IN
CYINDVC
CBINDVC
CRINDVC
CN901
ONENT & CVBS SELECT
JW1328
6dB
2V
75
Y LOS detect
BIAS
1000UF
3R9
68
MONITOR
OUT
CVBS OUT
VSX-1123 CUXE/923
NM
VSX-70
VSX-1123 SYXE8/DLXE
ZONE2 OUT
470UF
Y
Cb
Cr
COMPONENT
OUT
ONLY VSX-70
OSDRST
OSDCS
OSDSCK
OSDSO
IC1007
OSD
PDC162A
ONLY VSX-70
VSX1123/SYXE8/DLXE

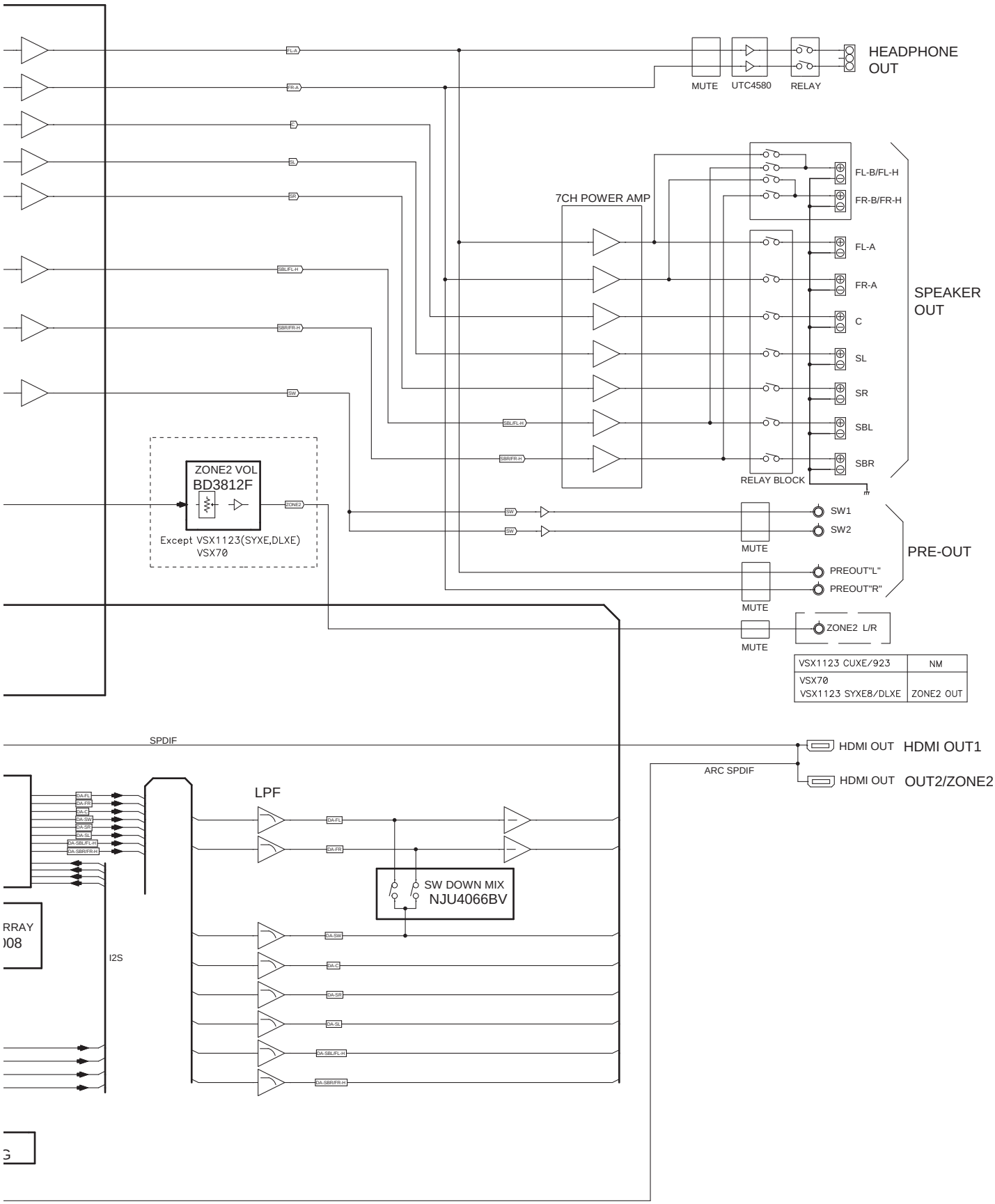
4.3 D-VIDEO BLOCK DIAGRAM



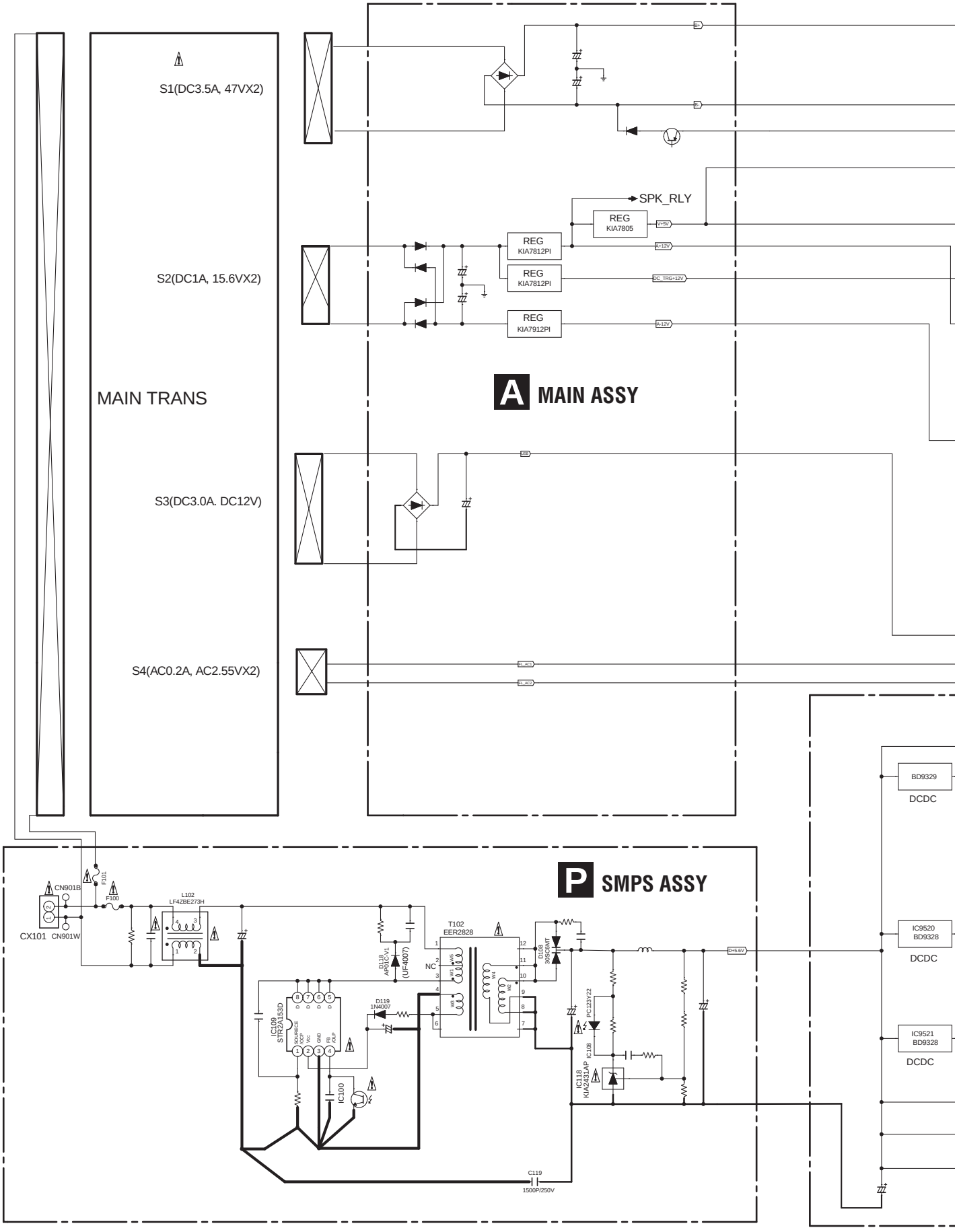

B D-MAIN ASSY
20 MHz
IP.SCALER
Marvell
"88DE2750"
DDR2
512Mb
HDZONE/HDMI OUT2
HDMI OUT1
4k2k Upscaler
Silicon Image
"Sil9616"
Phalanx
J CPU ASSY
EVENT ucom
RENESAS
"RL78***"
L FHDMI ASSY
USB(FRONT)
F VIDEO ASSY
GUI
uCOM
"EMMA2LL"
COMPOSITE
COMPONENT - Y
COMPONENT - Pb
COMPONENT - Pr
ANALOG VIDEO BLOCK
Nor FLASH
64Mb
SDRAM
256Mb
22.5792MHz
24.576MHz
20 MHz
1st DSP
DA808HS
SeriFlash
16Mb
SDRAM-166
64Mb(8Mx16)
POWER SUPPLY BLOCK Diagram
(DCDC,LDO)
D-MAIN ASSY
Other ASSY
TMDS
DIGITAL VIDEO
CEC
ANALOG VIDEO
CLOCK
DIGITAL AUDIO

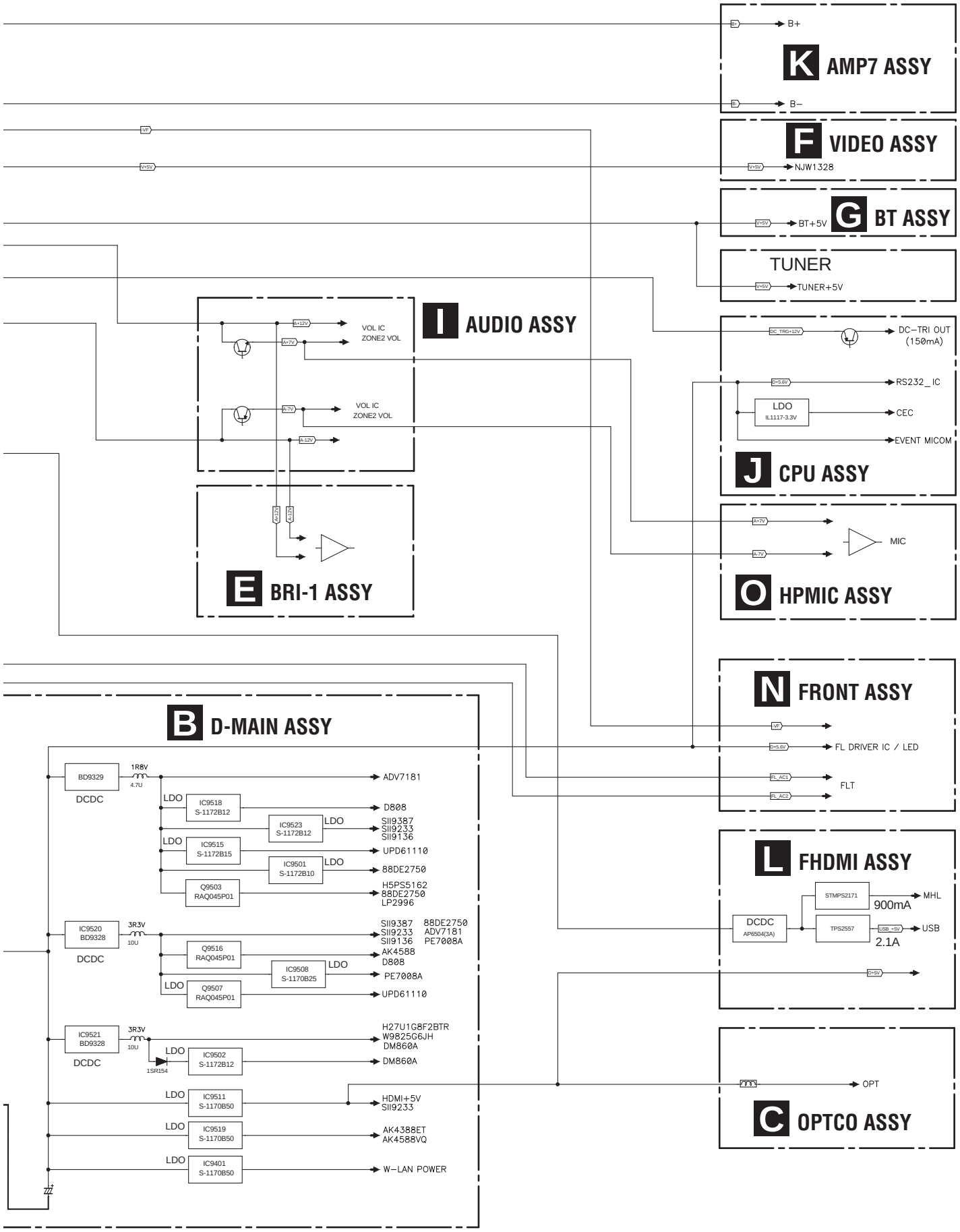
4.4 AUDIO BLOCK DIAGRAM



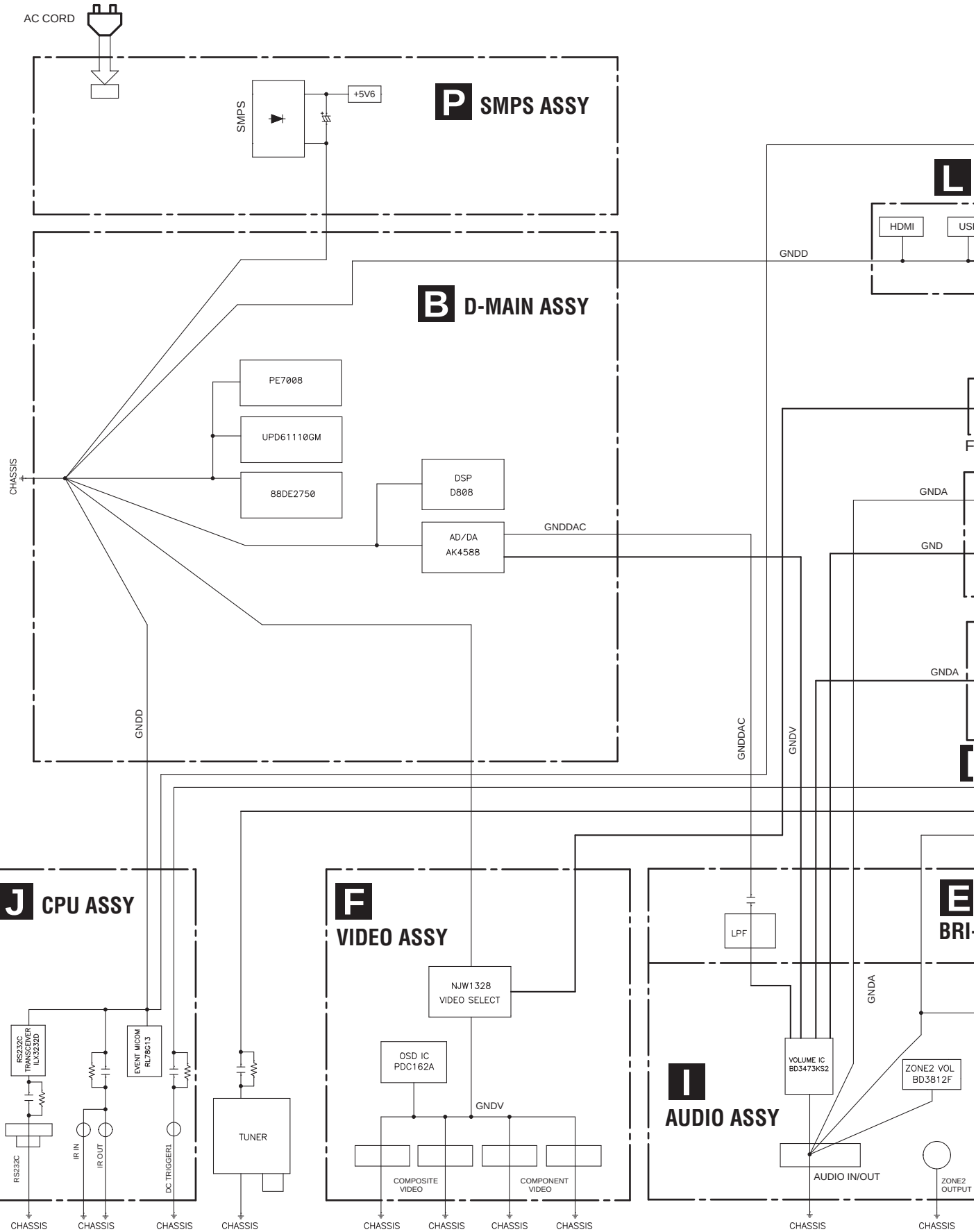

HEADPHONE OUT
MUTE
UTC4580
RELAY
7CH POWER AMP
FL-B/FL-H
FR-B/FR-H
FL-A
FR-A
C
SL
SR
SBL
SBR
SPEAKER OUT
RELAY BLOCK
ZONE2 VOL
BD3812F
Except VSX1123(SYXE,DLXE)
VSX70
SW1
SW2
PRE-OUT
PREOUT"L"
PREOUT"R"
ZONE2 L/R
VSX1123 CUXE/923 | NM
VSX70
VSX1123 SYXE8/DLXE | ZONE2 OUT
SPDIF
HDMI OUT
HDMI OUT1
ARC SPDIF
HDMI OUT
OUT2/ZONE2
LPF
SW DOWN MIX
NJU4066BV
I2S

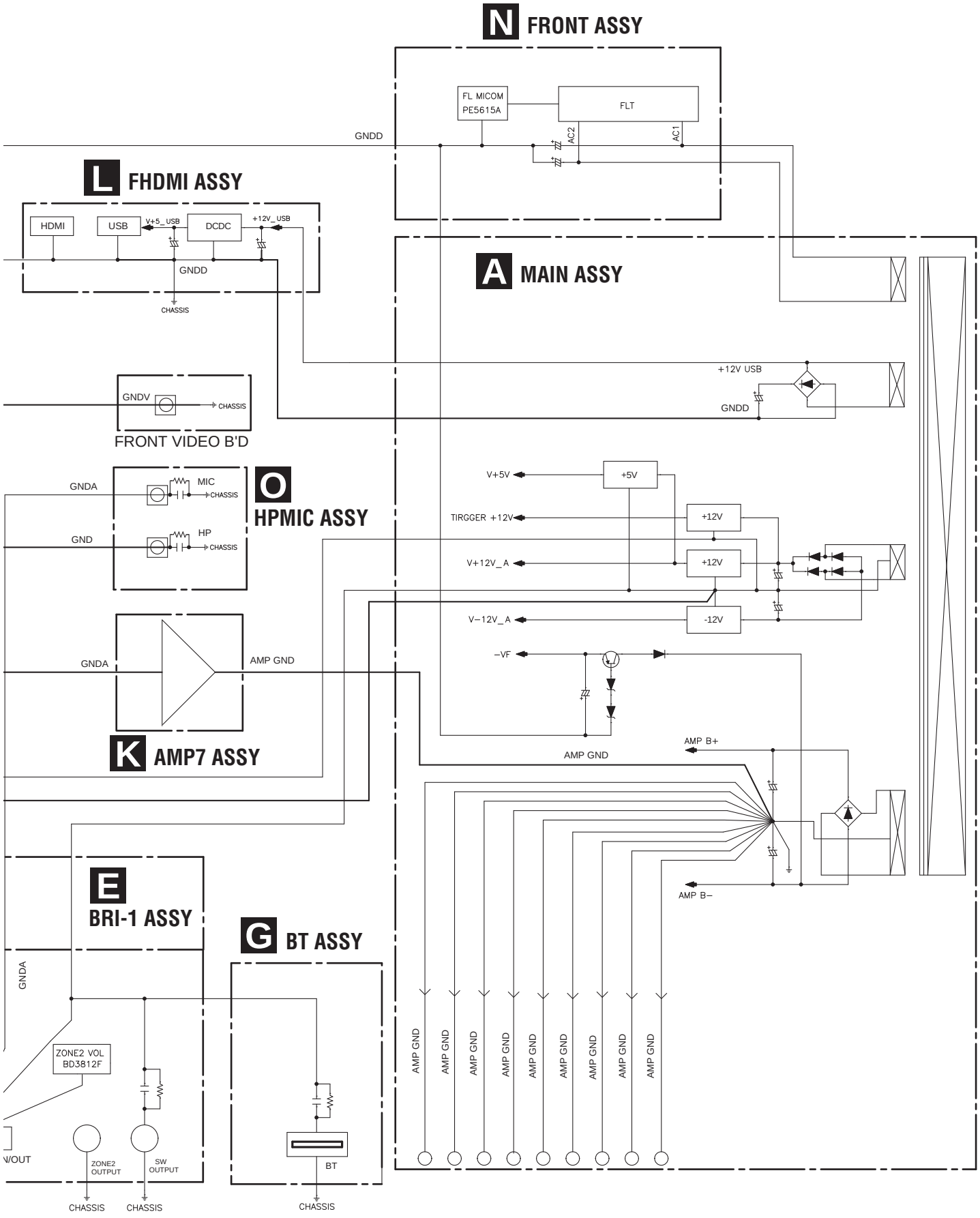
4.5 POWER SUPPLY BLOCK DIAGRAM




K AMP7 ASSY
B+
B–
F VIDEO ASSY
NJW1328
G BT ASSY
BT+5V
TUNER
TUNER+5V
I AUDIO ASSY
VOL IC
ZONE2 VOL
VOL IC
ZONE2 VOL
DC–TRI OUT
(150mA)
RS232_IC
LDO
IL1117-3.3V
CEC
EVENT MICOM
J CPU ASSY
E BRI-1 ASSY
MIC
O HPMIC ASSY
N FRONT ASSY
FL DRIVER IC / LED
FLT
B D-MAIN ASSY
BD9329
DCDC
1R8V
4.7U
ADV7181
LDO
IC9518
S-1172B12
D808
IC9523
S-1172B12
SII9387
SII9233
SII9136
IC9515
S-1172B15
UPD61110
IC9501
S-1172B10
88DE2750
Q9503
RAQ045P01
H5PS5162
88DE2750
LP2996
IC9520
BD9328
3R3V
10U
SII9387 88DE2750
SII9233 ADV7181
SII9136 PE7008A
Q9516
RAQ045P01
AK4588
D808
IC9508
S-1170B25
PE7008A
Q9507
RAQ045P01
UPD61110
IC9521
BD9328
H27U1G8F2BTR
W9825G6JH
DM860A
IC9502
S-1172B12
1SR154
DM860A
IC9511
S-1170B50
HDMI+5V
SII9233
IC9519
S-1170B50
AK4388ET
AK4588VQ
IC9401
S-1170B50
W–LAN POWER
L FHDMI ASSY
DCDC
AP6504(3A)
STMPS2171
900mA
MHL
TPS2557
USB
2.1A
OPT
C OPTCO ASSY

4.6 GND BLOCK DIAGRAM

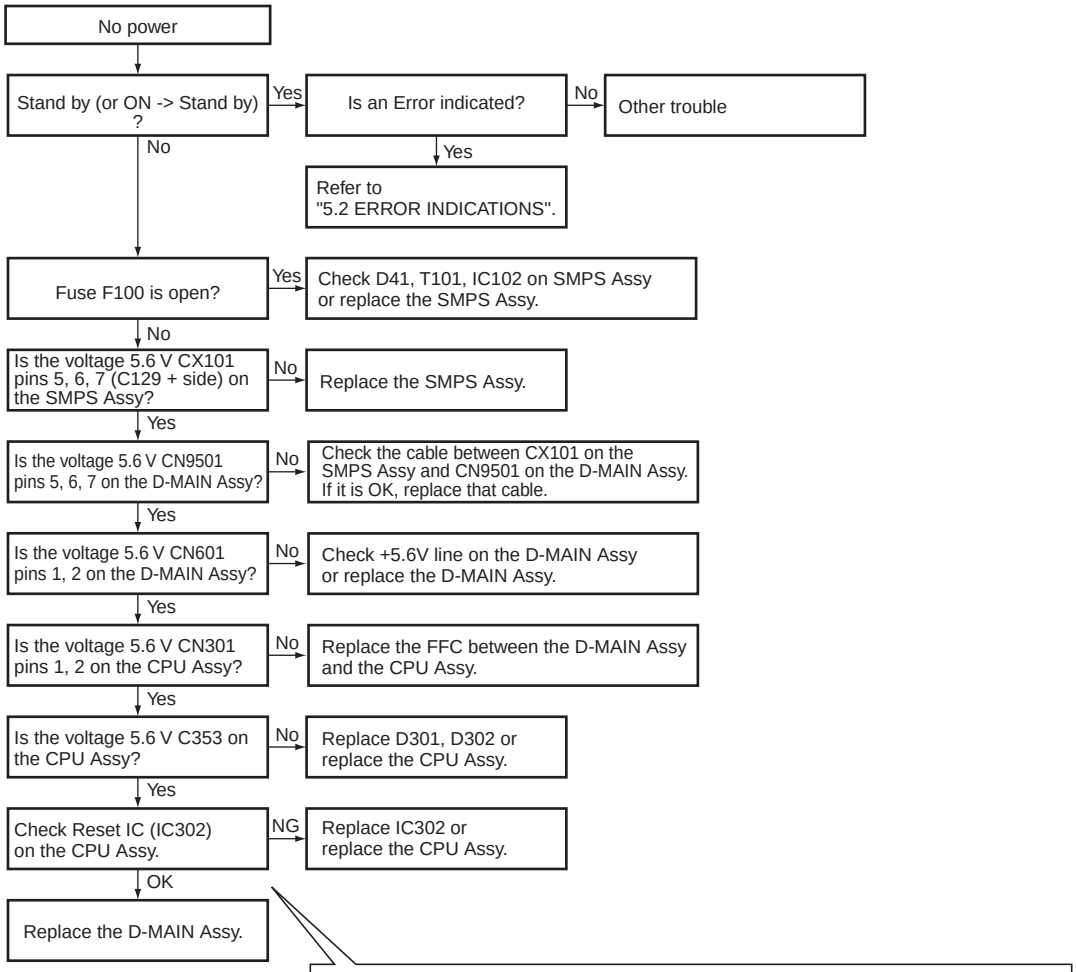


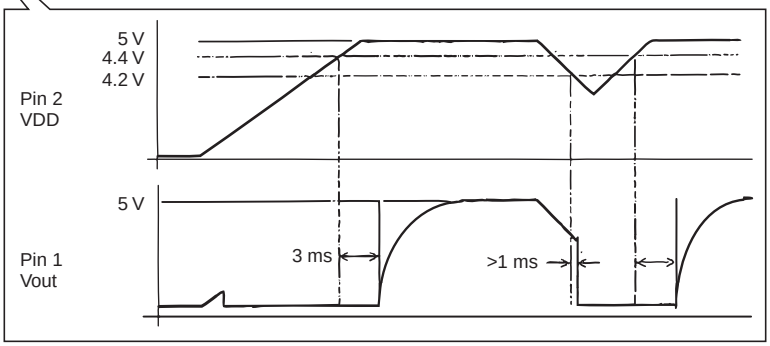

N FRONT ASSY
FL MICOM PE5615A
FLT
AC2
AC1
GNDD
L FHDMI ASSY
HDMI
USB
V+5_USB
DCDC
+12V_USB
GNDD
CHASSIS
A MAIN ASSY
+12V USB
GNDD
GNDV
CHASSIS
FRONT VIDEO B'D
GNDA
MIC
CHASSIS
O HPMIC ASSY
GND
HP
CHASSIS
V+5V
+5V
TIRGGER +12V
+12V
V+12V_A
+12V
V−12V_A
-12V
−VF
GNDA
AMP GND
K AMP7 ASSY
AMP GND
AMP B+
AMP B−
E BRI-1 ASSY
G BT ASSY
GNDA
ZONE2 VOL BD3812F
ZONE2 OUTPUT
SW OUTPUT
BT
CHASSIS
CHASSIS
CHASSIS
AMP GND
AMP GND
AMP GND
AMP GND
AMP GND
AMP GND
AMP GND
AMP GND
AMP GND

5. DIAGNOSIS
5.1 TROUBLESHOOTING

No Power

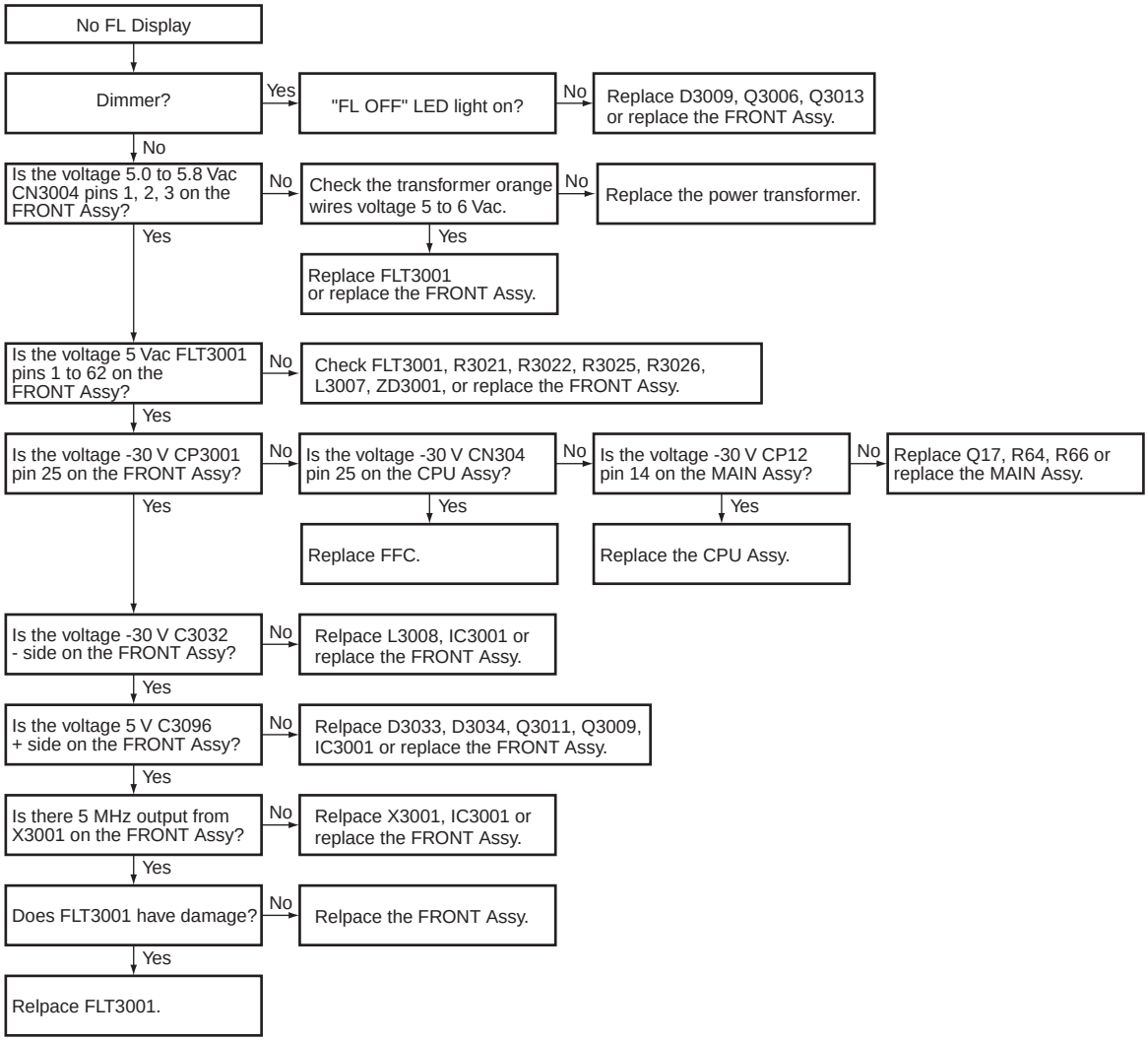
This is just for general reference and does not including every single case.





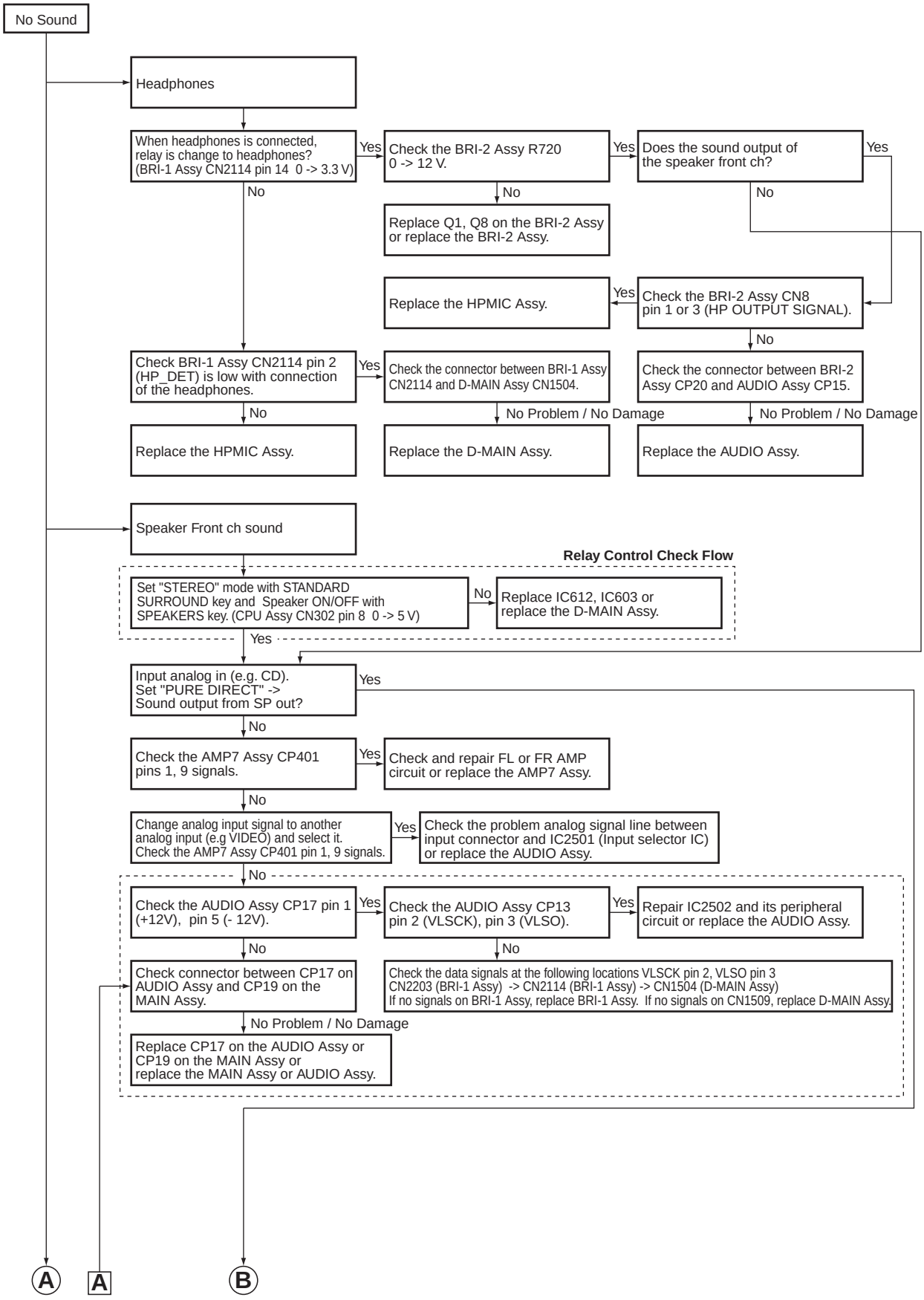
No FL Display

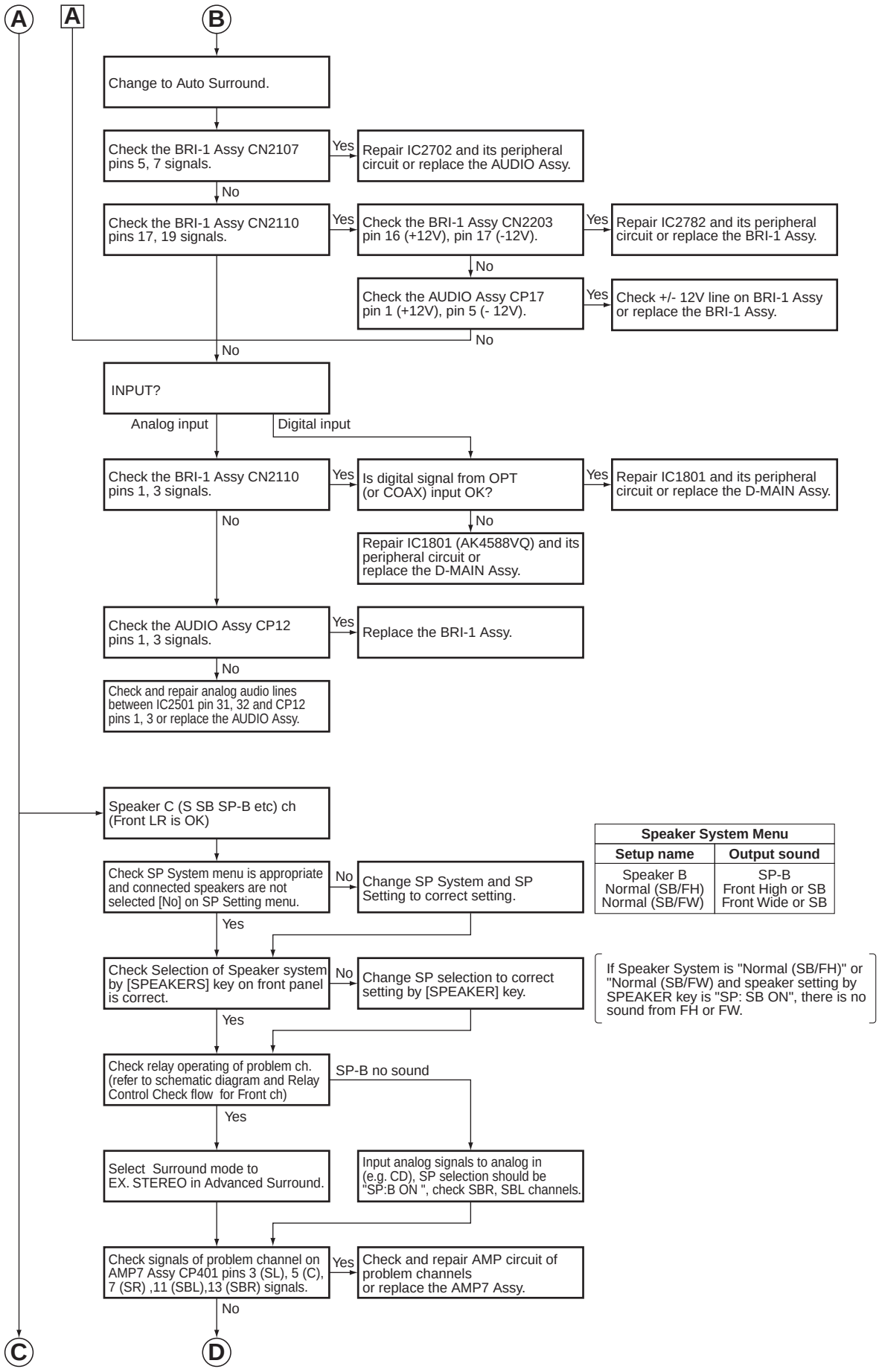
This is just for general reference and does not including every single case.



No Sound

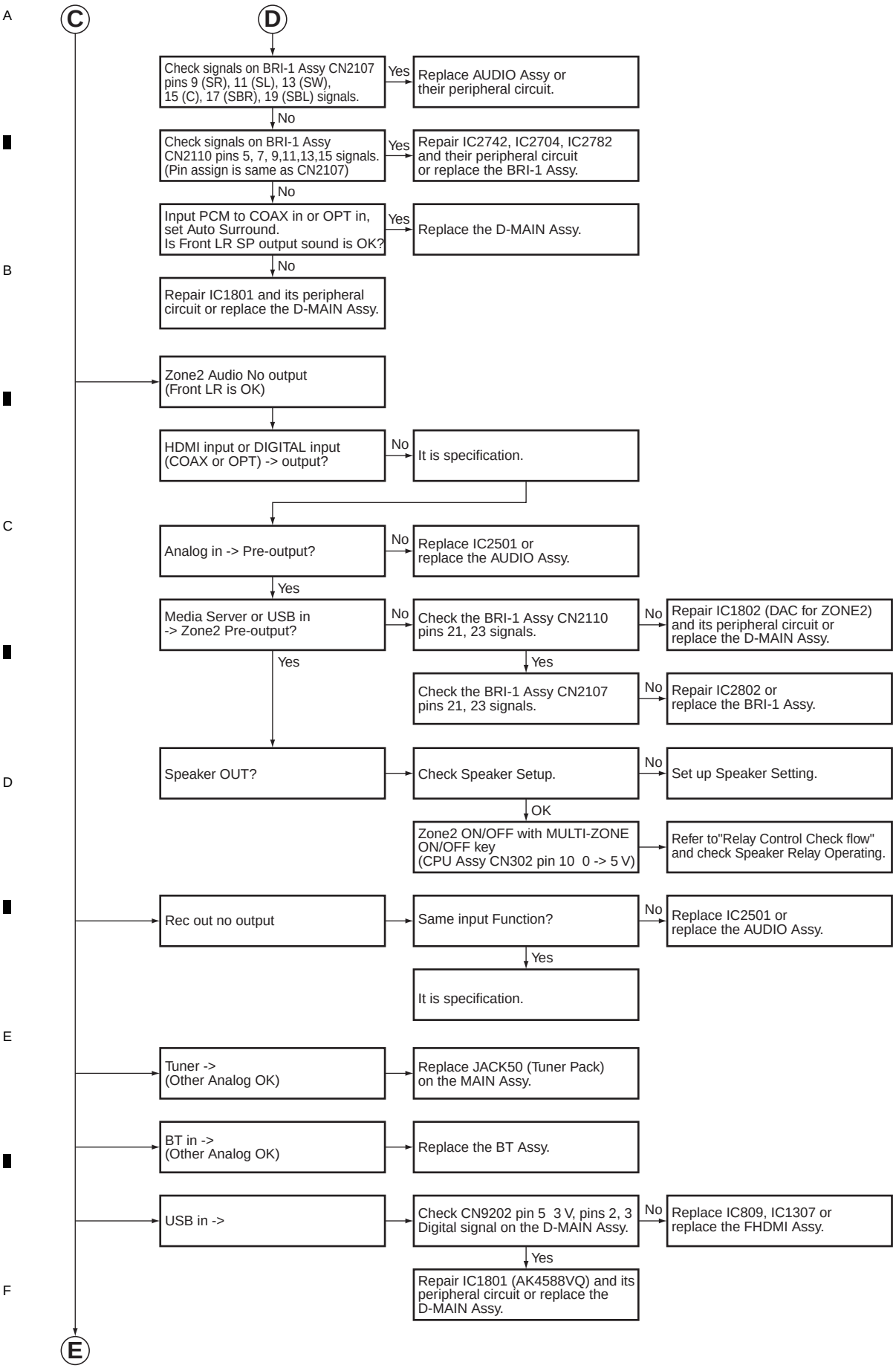
This is just for general reference and does not including every single case.

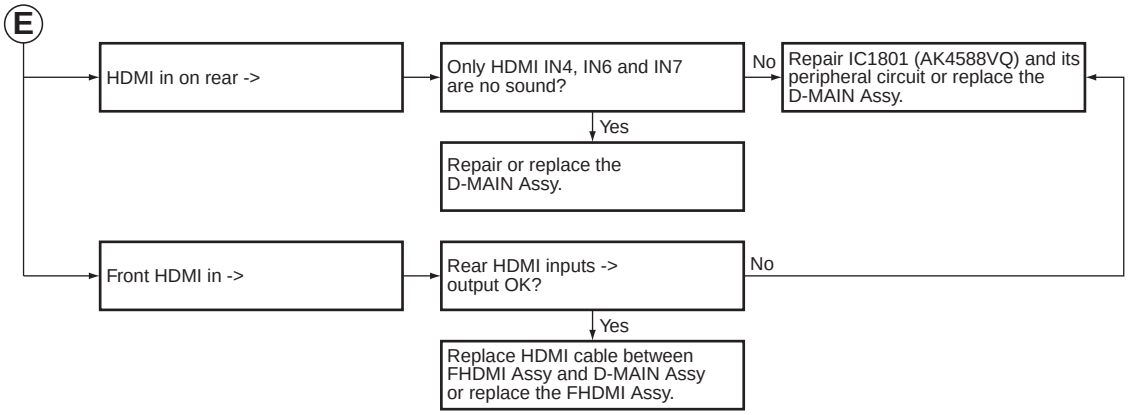




Speaker System Menu	
Setup name	**Output sound**
Speaker B	SP-B
Normal (SB/FH)	Front High or SB
Normal (SB/FW)	Front Wide or SB

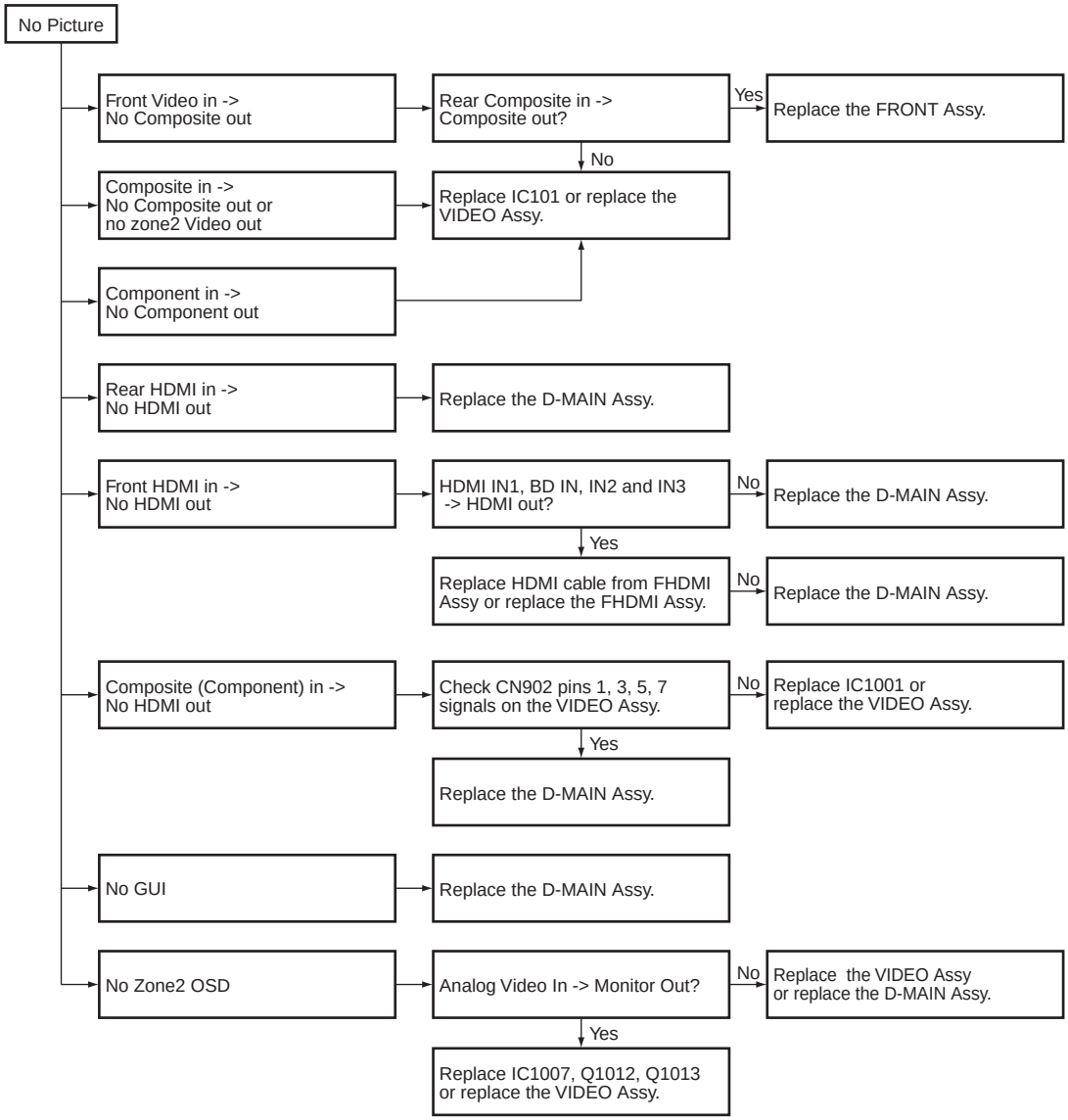
If Speaker System is "Normal (SB/FH)" or "Normal (SB/FW) and speaker setting by SPEAKER key is "SP: SB ON", there is no sound from FH or FW.


C
D
Check signals on BRI-1 Assy CN2107 pins 9 (SR), 11 (SL), 13 (SW), 15 (C), 17 (SBR), 19 (SBL) signals.
Yes
Replace AUDIO Assy or their peripheral circuit.
No
Check signals on BRI-1 Assy CN2110 pins 5, 7, 9,11,13,15 signals. (Pin assign is same as CN2107)
Yes
Repair IC2742, IC2704, IC2782 and their peripheral circuit or replace the BRI-1 Assy.
No
Input PCM to COAX in or OPT in, set Auto Surround. Is Front LR SP output sound is OK?
Yes
Replace the D-MAIN Assy.
No
Repair IC1801 and its peripheral circuit or replace the D-MAIN Assy.
Zone2 Audio No output (Front LR is OK)
HDMI input or DIGITAL input (COAX or OPT) -> output?
No
It is specification.
Analog in -> Pre-output?
No
Replace IC2501 or replace the AUDIO Assy.
Yes
Media Server or USB in -> Zone2 Pre-output?
No
Check the BRI-1 Assy CN2110 pins 21, 23 signals.
No
Repair IC1802 (DAC for ZONE2) and its peripheral circuit or replace the D-MAIN Assy.
Yes
Check the BRI-1 Assy CN2107 pins 21, 23 signals.
No
Repair IC2802 or replace the BRI-1 Assy.
Yes
Speaker OUT?
Check Speaker Setup.
No
Set up Speaker Setting.
OK
Zone2 ON/OFF with MULTI-ZONE ON/OFF key (CPU Assy CN302 pin 10 0 -> 5 V)
Refer to"Relay Control Check flow" and check Speaker Relay Operating.
Rec out no output
Same input Function?
No
Replace IC2501 or replace the AUDIO Assy.
Yes
It is specification.
Tuner -> (Other Analog OK)
Replace JACK50 (Tuner Pack) on the MAIN Assy.
BT in -> (Other Analog OK)
Replace the BT Assy.
USB in ->
Check CN9202 pin 5 3 V, pins 2, 3 Digital signal on the D-MAIN Assy.
No
Replace IC809, IC1307 or replace the FHDMI Assy.
Yes
Repair IC1801 (AK4588VQ) and its peripheral circuit or replace the D-MAIN Assy.
E



No Picture

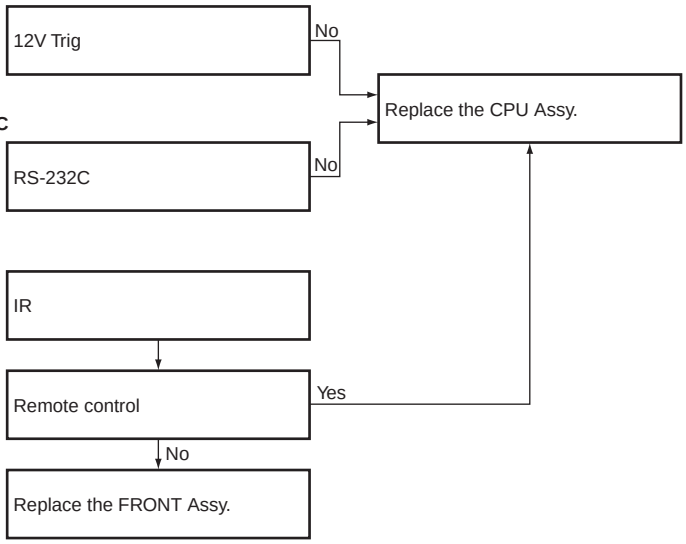
This is just for general reference and does not including every single case.



Others

This is just for general reference and does not including every single case.

12V Trig



5.2 ERROR INDICATIONS

Error Indications When an Abnormality in The Amplifier System is Detected

[Purpose]

Errors upon detection of abnormalities in the amp system are indicated.

[Error Indications]

Item	FL Display	LED Flashes	NG Count.	Detection Method	Process After Detection	Description / Remarks
"AMP DC" ("DC output from SP term") detection	Flashing "AMP ERR" for 3 seconds	ADVANCED MCACC LED	DC	XDCERR (Pin 21 of IC300) Detect "L"	1) Muting on, speaker relay off. 2) "AMP ERR" flashing 3) Shutdown after 3 seconds. 4) "ADVANCED MCACC" LED flashing 5) Power on is not acceptable.	To detect high DC output from amplifier damage (defect status). A process to protect speakers (for protection of connected external devices). For checking, refer to "How to enter release mode" below. If the DC detection port become "H" for 3 seconds, the unit will returns to normal condition automatically.
"AMP overload" detection.	N/A	iPod iPhone iPad LED	OL	XOLERR (Pin 13 of IC300) Detect "L"	1) Muting on, speaker relay off. 2) Shutdown immediately. 3) "iPod iPhone iPad" LED flashing 4) Power on is acceptable.	To detect overloading (abnormal status) with low-load driving or a short circuit of the speaker terminals (for protection of the amplifier).
"Over Heat" detection.	Flashing "AMP OVERHEAT" for 3 seconds	FL OFF LED	STMP	TEMPERR5 (Pin 24 of IC300) Detect "H" (REDI _DET)	1) Muting on, speaker relay off, 2) "OVERHEAT" flashing 3) Shutdown after 3 seconds. 4) "FL OFF" LED flashing 5) Power on is acceptable after 1 minute.	To detect overheat of inner tempareture.
"Abnormality DC voltage of the Digital power supply" detection	N/A	iPod iPhone iPad LED	DERR	XVDDERR (Pin 22 of IC300) Detect "L"	1) Muting on, speaker relay off. 2) Shutdown immediately. 3) "iPod iPhone iPad" LED flashing 4) Power on is acceptable.	To detect the abnormality voltage of Digital power supply circuit for the D-MAIN Assy.
"USB Overload" detection	"Over Current" No Flashing	N/A	N/A	USB ERR (VCO0) (Pin K2 of IC9204 (DM860A)) Detect "H"	1) USB bus Power off 2) Display "Over Current"	To detect the connected USB device is overload. (over 2.1 A)
"BT Adapter overload" detection.	"ADP OVERLOAD" No Flashing	N/A	N/A	BTOL (MII_CRS) (Pin R14 of IC9204 (DM860A)) Detect "H"	1) Adapter port power off 2) Display "ADP OVERLOAD"	To detect the connected Blue Tooth Adapter device is overload. (over 100 mA)
"HDCP of HDMI Error" detection	Flashes "HDCP ERROR" for 5 seconds	N/A	N/A	Read Register value	1) Display "HDCP ERROR"	The monitor does not support HDCP type or is in standby mode. (Warning indication for HDMI Simplay)
"Analog Input Over" detection	"OVER" Icon lights 1 second	N/A	N/A	DSP firmware Detect	While the Icon lights 1 second, when there is no ANALOG INPUT OVER detection, the Icon stops lighting and returns to normal display.	To detect the over-input of the analog audio to the A/D converter. When the Icon lights frequently, output level of the source equipment is high and a sound is distorted. Turn on the Analog Att switch.
Analog POWER SUPPLY Error	N/A	FL OFF LED	XPRT	XPROTECT (Pin 12 of IC300)	1) Muting on, speaker relay off. 2) Shutdown immediately. 3) "FL OFF" LED flashing 4) Power on is acceptable after 1 minute.	Power-on impossible for 1 min.
"Over Heat" detection	N/A (VOL LEVEL)	N/A	N/A	TEMP L (TR_DET) (Pin 11 of IC300)	VOL 3 dB down	After this error is detected, the system interrupts the OVER HEAT detection for 2 minutes.
"wireless LAN converter Over Current" detection	WLAN POW ERR	N/A	N/A	XWUSB ERR (Pin 27 of IC300)	WUSBPOW is set to L.	To detect the connected wireless LAN converter is overload. (over 600 mA)

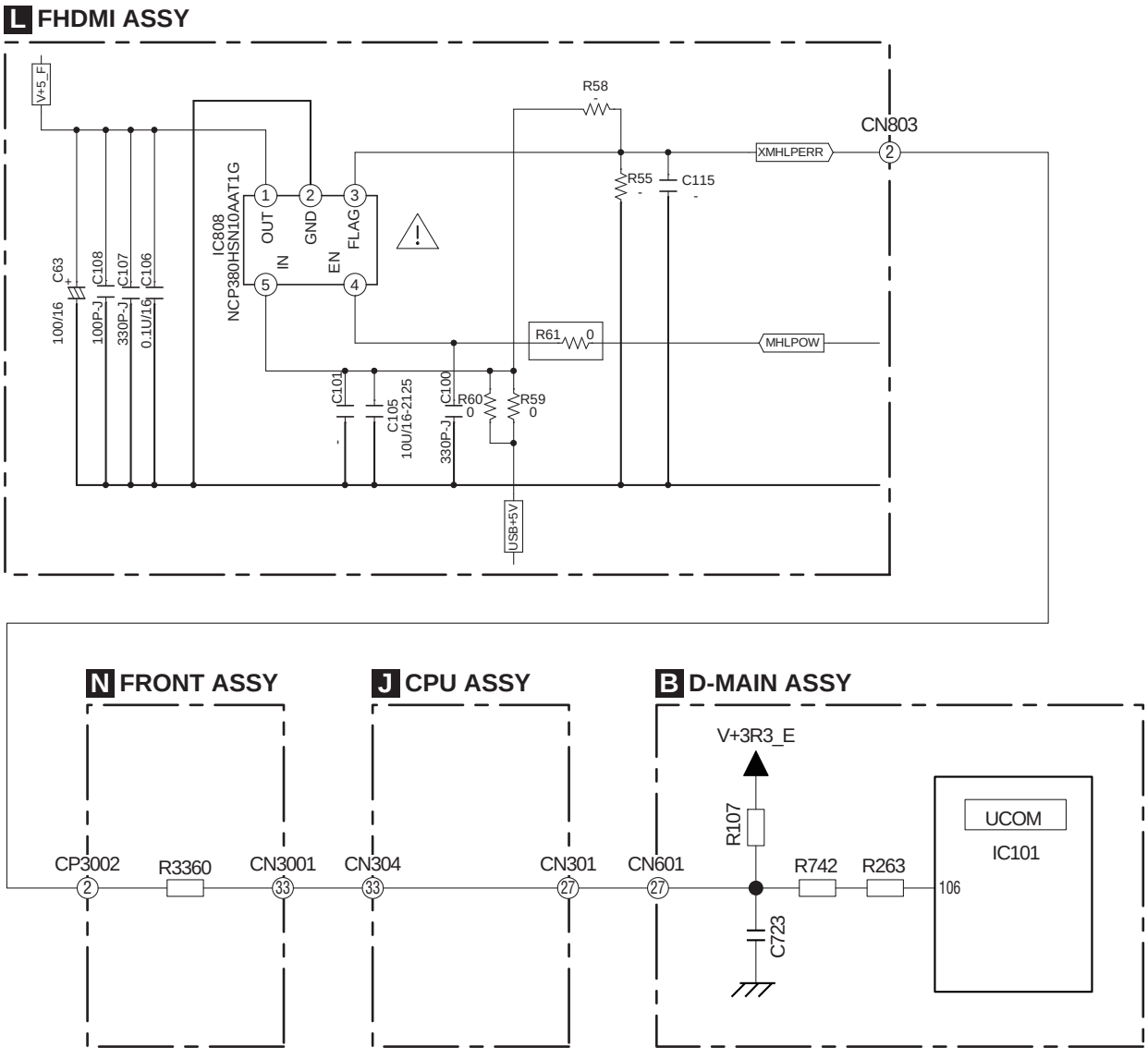
[How to Enter Release Mode]

During Standby mode, simultaneously press and hold the "TUNE ↓" and "MULTI-ZONE ON/OFF" keys for 5 seconds.

Protection Circuit Process List (XMHLPERR)

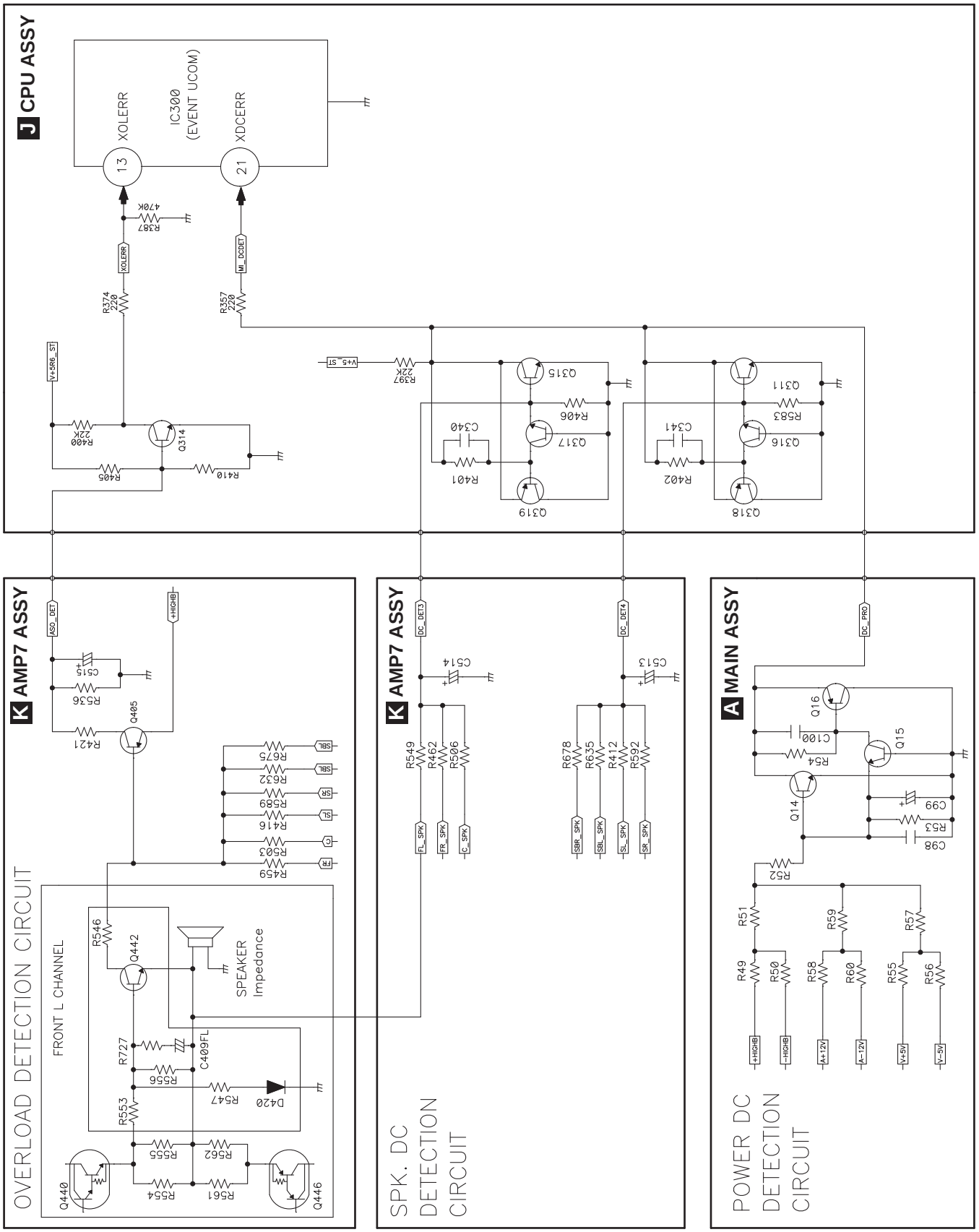
Item	Purpose	Detection Method	Status of Equipment	Warning Indication	Remarks
MHL Overcurrent detecition	Detection of overcurrent in MHL power supply	IC808 detectes MHL circuit overcurrent and XMHLPERR port is set to "L".	Flashes "MHL POW ERR" and stops MHL power supply.		MHL power is not supplied until the MHL equipment is acknowledged after second power-on.

XMHLPERR Circuit

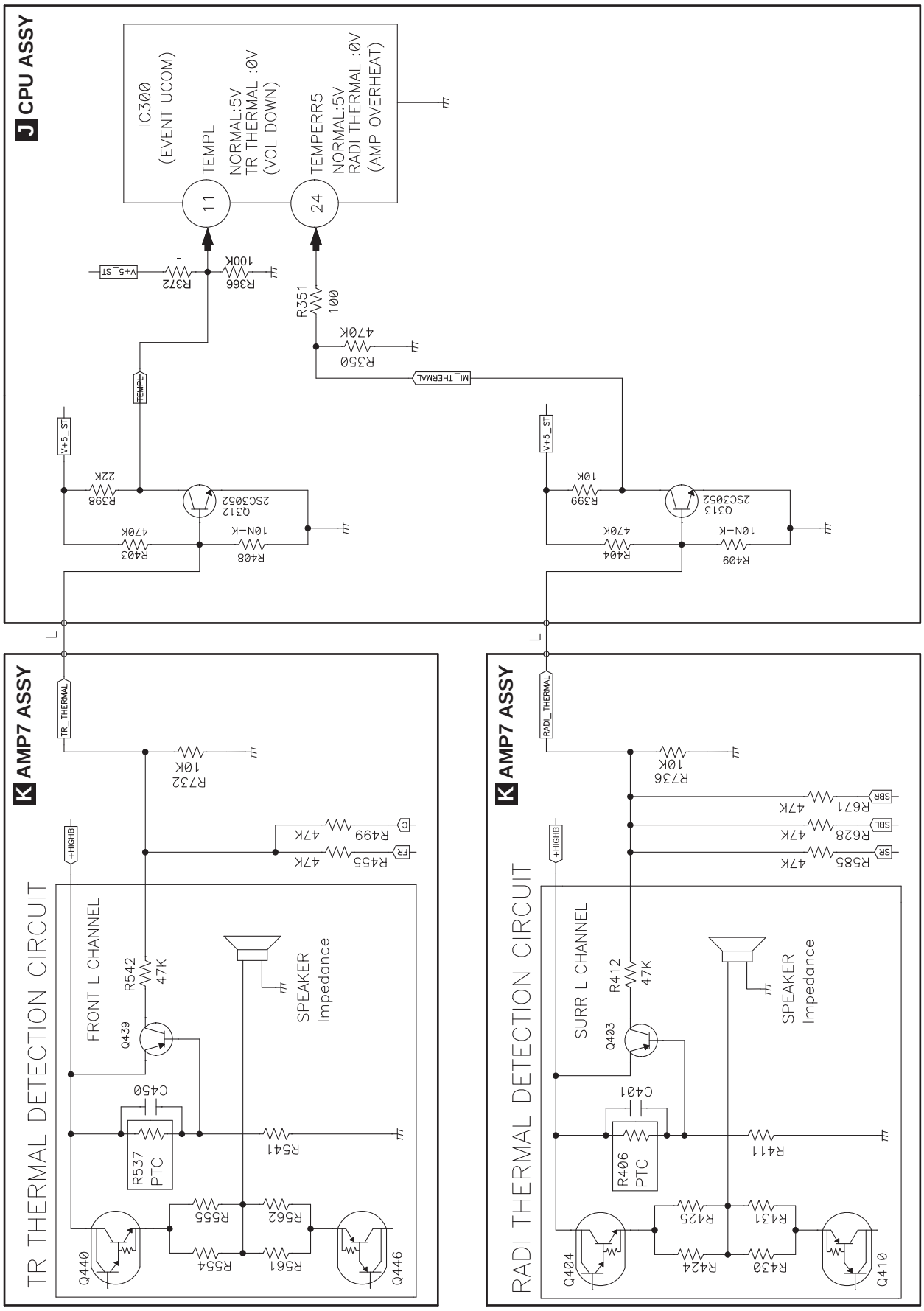


5.3 PROTECTION CIRCUIT

[1] Overload and DC Protection Circuit



[2] TEMP Protection Circuit



5.4 IC INFORMATION

(R5F100MHAFA)(CPU Assy: IC300)

EVENT CPU

• Pin Function

No.	Symbol	I/O	Description	No.	Symbol	I/O	Description
1	P141/PCLBUZ1/INTP7	I/O	-	41	P50/INTP1/SI11/SDA11	I/O	EVREQO
2	P140/PCLBUZ0/INTP6	I/O	232CDET	42	P51/INTP2/SO11	I/O	ACWP5
3	P120/ANI19	I/O	FLREQO	43	P52/SO31	I/O	EVREQI5
4	P45/SO01	I/O	FLSO	44	P53/SI31/SDA31	I/O	IPODLED
5	P44/SI01/SDA01	I/O	-	45	P54/SCK31/SCL31	I/O	HDLED
6	P43/SCK01/SCL01	I/O	FLSCK	46	P55/(PCLBUZ1)/(SCK00)	I/O	-
7	P42/TI04/TO04	I/O	JOGA	47	P17/TI02/TO02/(SO00)/(TXD0)	I/O	HOTPLUG
8	P41/TI07/TO07	I/O	JOGB	48	P16/TI01/TO01/INTP5/(SI00)/(RXD0)	I/O	CECIO
9	P40/TOOL0	I/O	TOOL0	49	P15/SCK20/SCL20/(TI02)/(TO02)	I/O	EVSCK
10	RESET	I	XRESET	50	P14/RxD2/SI20/SDA20/(SCLA0)/(TI03)/(TO03)	I/O	EVSO
11	P124/XT2/EXCLKS	I	TEMPL	51	P13/TxD2/SO20/(SDAA0)/(TI04)/(TO04)	I/O	EVSI5
12	P123/XT1	I	XPROTECT	52	P12/SO00/TxD0/TOOLTxD/(INTP5)/(TI05)/(TO05)	I/O	-
13	P137/INTP0	I	XOLERR	53	P11/SI00/RxD0/TOOLRxD/SDA00/(TI06)/(TO06)	I/O	-
14	P122/X2/EXCLK	I	CT1	54	P10/SCK00/SCL00/(TI07)/(TO07)	I/O	232POW
15	P121/X1	I	CT2	55	P110/(INTP10)	I/O	XEMRST5
16	REGC	-	REGC	56	P111/(INTP11)	I/O	DVCPOW
17	VSS	-	Vss	57	P146	I/O	NETPOW
18	EVSS0	-	Evss	58	P147/ANI18	I/O	XNETRST
19	VDD	-	Vdd	59	P100/ANI20	I/O	WUSBPOW
20	EVDD0	-	Evdd	60	P153/ANI11	I/O	RYAC
21	P60/SCLA0	I/O	XDCERR	61	P152/ANI10	I/O	LOWPOW
22	P61/SDAA0	I/O	XVDDERR	62	P151/ANI9	I/O	XSMUTE
23	P62/SCLA1	I/O	XBERR	63	P150/ANI8	I/O	AREA_MODEL_ON
24	P63/SDAA1	I/O	TEMPERR5	64	P27/ANI7	I/O	AMPTEMP
25	P31/TI03/TO03/INTP4/(PCLBUZ0)	I/O	IR_IN	65	P26/ANI6	I/O	PROJECT
26	P64/TI10/TO10	I/O	ECO MODE	66	P25/ANI5	I/O	KEY4
27	P65/TI11/TO11	I/O	XWUSBERR	67	P24/ANI4	I/O	KEY3
28	P66/TI12/TO12	I/O	XFANERR	68	P23/ANI3	I/O	KEY2
29	P67/TI13/TO13	I/O	CNT1LED	69	P22/ANI2	I/O	KEY1
30	P77/KR7/INTP11/(TXD2)	I/O	NETWOL	70	P21/ANI1/AVREFM	I/O	MODEL
31	P76/KR6/INTP10/(RXD2)	I/O	ZONEPOWKEY	71	P20/ANI0/AVREFP	I/O	AREA
32	P75/KR5/INTP9	I/O	POWKEY	72	P130	O	232EV
33	P74/KR4/INTP8	I/O	MHLWUP	73	P04/SCK10/SCL10	I/O	-
34	P73/KR3	I/O	-	74	P03/ANI16/SI10/RxD1/SDA10	I/O	-
35	P72/KR2/SO21	I/O	-	75	P02/ANI17/SO10/TxD1	I/O	-
36	P71/KR1/SI21/SDA21	I/O	VOLA	76	P01/TO00	I/O	FLOFFLED
37	P70/KR0/SCK21/SCL21	I/O	VOLB	77	P00/TI00	I/O	MCACCLED
38	P06/TI06/TO06	I/O	DIMCTL	78	P144/SO30/TxD3	I/O	EV232RX
39	P05/TI05/TO05	I/O	POWLED	79	P143/SI30/RxD3/SDA30	I/O	EV232TX
40	P30/INTP3/RTC1HZ/SCK11/SCL11	I/O	SR_IN	80	P142/SCK30/SCL30	I/O	XFLRST

6. SERVICE MODE
6.1 TEST MODE

[1] Detected protection history

[Purpose]

The numbers of detections for various protection processes are displayed.

[How to enter]

During Standby mode, simultaneously press and hold “MULTI-ZONE ON/OFF” and “ENTER” keys for 5 seconds to enter this mode.Turn off the power to this unit by setting the main volume level to “---dB” and Multi-zone to “OFF”.

[How to exit]

Turning off the power or pressing the RETURN key returns to the normal mode.

[Basic operations]

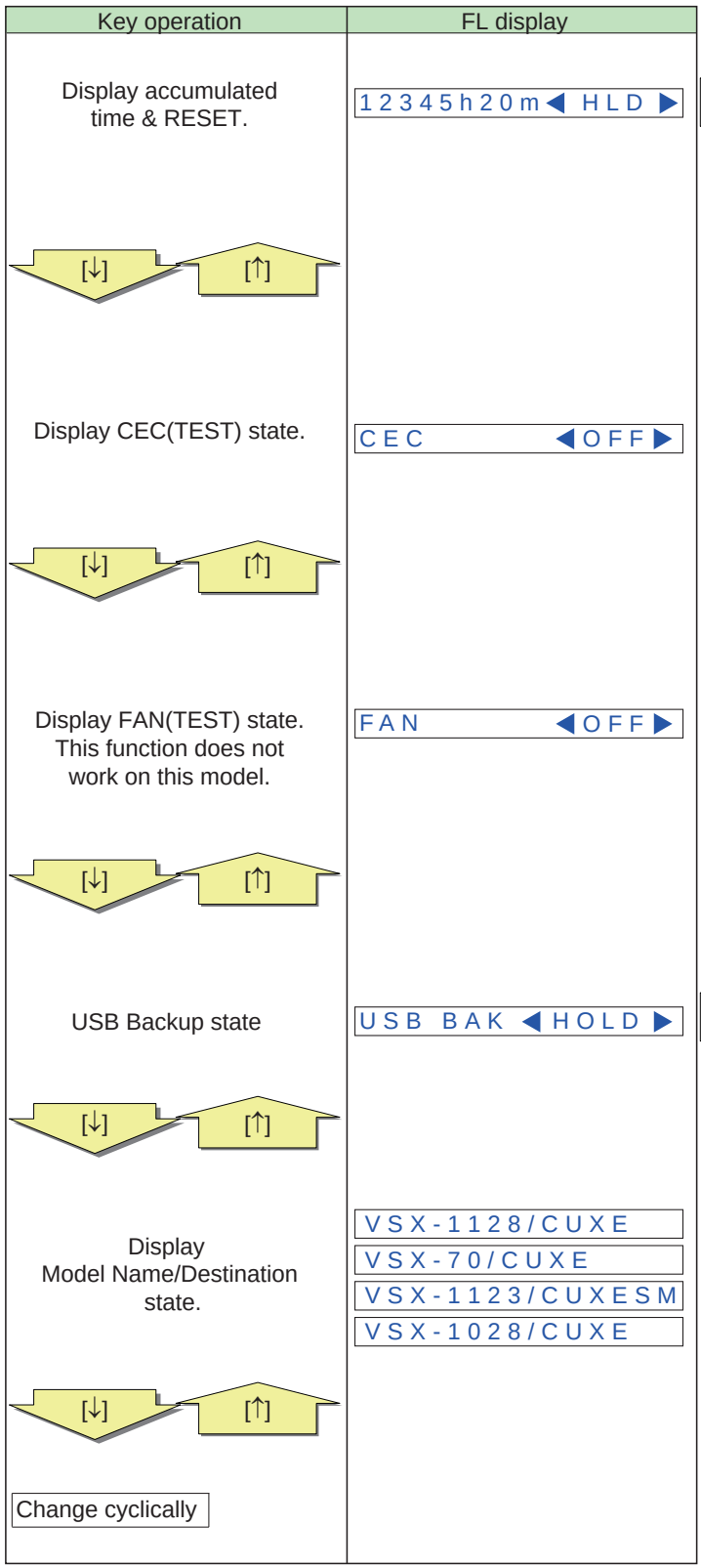
Key operation	FL display
Display number of times DC is detected.	D C : ＊＊＊
[↓] [↑]	
Display number of times OVERLOAD is detected.	O L : ＊＊＊
[↓] [↑]	
Display number of times COMBINATION is detected. (Detects DC and OVERLOAD simultaneously)	C O M : ＊＊＊
[↓] [↑]	
Display number of times Power abnormality is detected.	X P R T : ＊＊＊
[↓] [↑]	
Display number of times AMP overheat is detected.	S T M P : ＊＊＊
[↓] [↑]	
Display number of times Digital Power abnormality is detected.	D E R R : ＊＊＊
[↓] [↑]	
Resetting the number of times error is detected.	R E S E T ◀H O L D▶
[↓] [↑]	

Front Panel Key

[↓] : TUNE key
[↑] : TUNE key
[←] : PRESET key
[→] : PRESET key

Resetting the number of times error is detected

Key operation	FL display
[←][→]	R E S E T ◀C L E A R ?▶
[ENTER]	R E S E T ◀ R E S E T ▶
↓ Continued	



Resetting the accumulated time

Key operation	FL display
[←][→]	12345h 20m CL?
[ENTER]	0h 00m RST
↓ Continued	

Display CEC(TEST) state.

Key operation	FL display
[←][→]	CEC ON
↓ Change cyclically	

Saving and Loading of USB backup state.

Key operation	FL display
[←][→]	(A/V Receiver → USB) USB BAK SAVE?
[←][→]	(USB → A/V Receiver) USB BAK LOAD?
↓ Change cyclically	

Key operation	FL display
[ENTER]	PLEASE WAIT
SAVE or LOAD is completed.	COMPLETE
↓ 5 sec Power OFF (All zone OFF)	

[Description]

CEC TEST : The function for making the HDMI output terminal to output 4 Hz square wave. If the square wave is output, the CEC line is considered to be normal.

FAN TEST : The function for making the FAN to be forced to rotate.

6.2 DEFAULT SETTINGS

Default system settings

Setting		Default
Digital Video Converter		**ON**
SPEAKERS		**SB/FH ON**
Speaker System		Normal(SB/FH)
Speaker Setting	Front	SMALL
	Center	SMALL
	FH/FW	SMALL
	Surr	SMALL
	SB	SMALLx2
	SW	YES
Surround Position		IN REAR
Crossover		80 Hz
X-Curve		OFF
DIMMER		**Brightest**
HDMI		
HDMI Audio		**AMP**
Control		OFF
Control Mode		--- (OFF)
ARC (Audio Return Channel)		--- (OFF)
PQLS		--- (AUTO)
Standby Through		OFF
DSP		
Power On Level		LAST
Volume Limit		OFF
Mute Level		FULL
Phase Control		**ON**
Auto Sound Retriever	iPod/USB, INTERNET RADIO, PANDORA, MEDIA SERVER, FAVORITES, ADAPTER PORT input function	ON
	Other input functions	**OFF**
Sound Delay		**0** ms
Dual Mono		**CH1**
DRC		**AUTO**
LFE Attenuate		**0dB**
Auto delay		**OFF**
Digital Safety		**OFF**
Effect Level	ALC (Auto Level Control)	**50**
PL II Music Options	Center Width	**3**
	Dimension	**0**
	Panorama	**OFF**
Neo:X Options	Center Gain	Neo:X CINEMA: **1.0** Neo:X MUSIC: **0.3** Neo:X GAME: **1.0**
PL IIz Options	Height Gain	**MID**
All Inputs	Listening Mode (2 ch/multi ch)	**AUTO SURROUND**
	Listening Mode (Headphones)	**STEREO**
MCACC		
MCACC Position Memory		**M1. MEMORY 1**
Channel Level (M1 to M6)		0.0 dB
Speaker Distance (M1 to M6)		10'00''
Standing Wave (M1 to M6)	ATT of all channels/filters	0.0 dB
	SWch Wide Trim	0.0 dB
EQ Data (M1 to M6)	All channels/bands	0.0 dB
	EQ Wide Trim	0.0 dB

Default input settings

Input function	Input Terminals			Input Volume absorber
	HDMI	Audio	Component	
BD	(BD)			0 dB
DVD	IN 1	COAX-1	IN 1	0 dB
SAT/CBL	IN 2	●	●	0 dB
DVR/BDR	IN 3	●	●	0 dB
HDMI 4	IN 4			0 dB
HDMI 5/MHL (front panel)	IN 5			0 dB
HDMI 6	IN 6			0 dB
HDMI 7	IN 7			0 dB
INTERNET RADIO				0 dB
PANDORA				0 dB
MEDIA SERVER				0 dB
FAVORITES				0 dB
iPod/USB				0 dB
TV		OPT-1 <a>		0 dB
CD		ANALOG-1 <b>		0 dB
TUNER				0 dB
ADAPTER PORT				0 dB

a When **ARC** at **HDMI Setup** is set to **ON**, it is not possible to make assignments to the **TV** input's **Audio In** terminals.

b Only the **TV** and **CD** inputs can be assigned to **ANALOG-1**.

Resetting the system

Use this procedure to reset all the receiver's settings to the factory default. Use the front panel controls to do this.

Set MULTI-ZONE to **MULTI ZONE OFF**.

- Disconnect the iPod and USB memory device from the receiver beforehand.
- Set the **Control** with HDMI to **OFF**.

1 **Switch the receiver into standby**.

2 **While holding down ENTER on the front panel, press ⏻ STANDBY/ON**.
The display shows **RESET ◄ NO ►**.

3 **Select 'RESET' using PRESET ⬅/➡, then press ENTER on the front panel.**
The display shows **RESET? OK**.

4 **Press ENTER to confirm**.
OK appears in the display to indicate that the receiver has been reset to the factory default settings.

- Note that all settings will be saved, even if the receiver is unplugged.

7. DISASSEMBLY

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

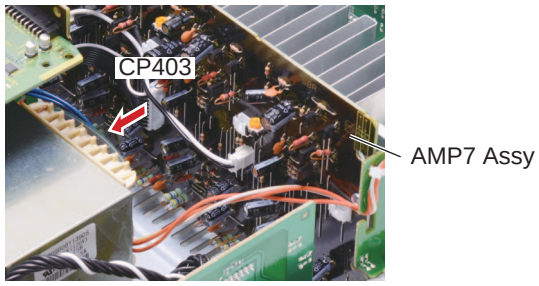
Some connections of the housing wires or connectors may be tight. When disconnecting those wires or connectors, be careful not to damage them.

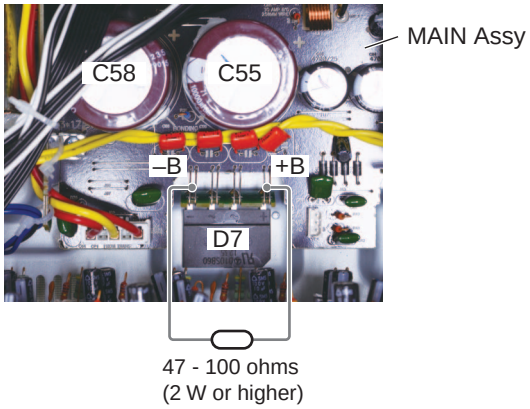
1. Discharging

[1] MAIN Assy Capacitor (C55, C58)

[Procedures]

(1) Unplug the power cord.
(2) Disconnect the 10P connector from CP403 of the AMP7 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).

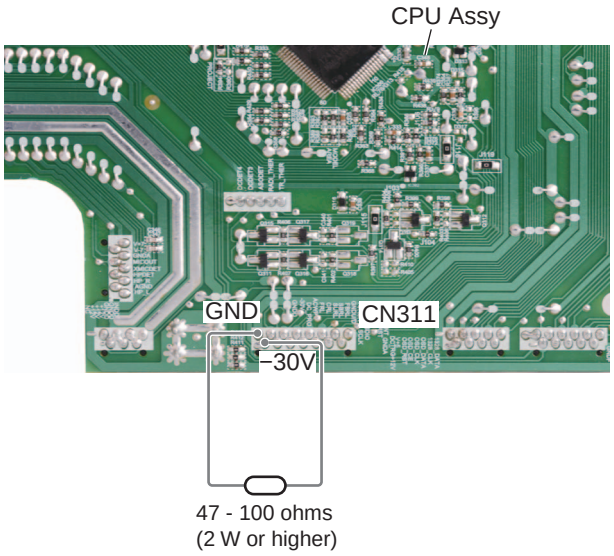




[2] FL-30 V Capacitor (MAIN Assy C101)

[Procedures]

(1) Unplug the power cord.
(2) Connect pins 14 (–30V) and pins 15 (GND) of the CN311 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).



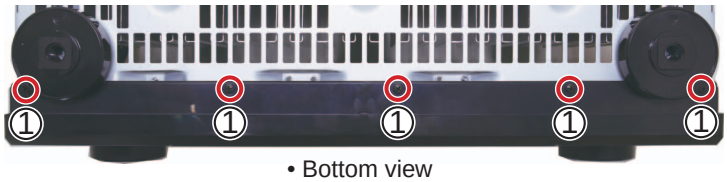
2. Disassembly

Note:
For performing the diagnosis shown below, the following jigs for service is required:
- Board to board extension jig cable (GGD1799)
- Board to board extension jig cable (GGD1848)
- Conversion jig (GGD1804 + GGD1802)
- 13P extension cable (GGD1740)
- 3P extension cable (GGD1741)
- HDMI cable (marketing product)

[1] Front Panel Section

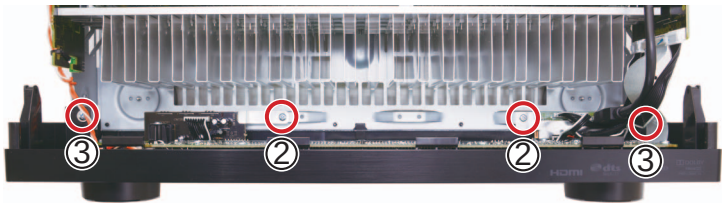
Remove the cabinet by removing the 10 screws.

(1) Remove the five screws.
(BBZ30P080FTB)

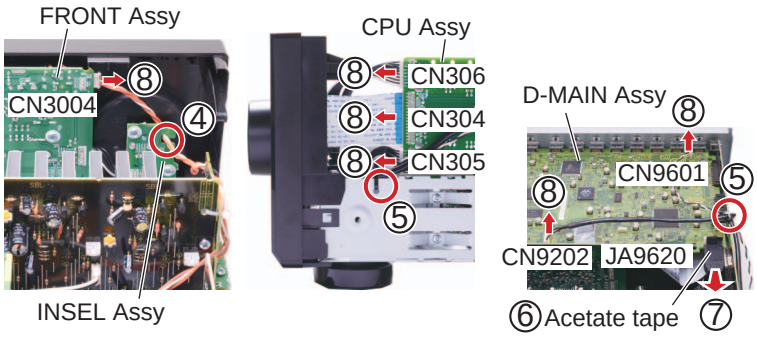


• Bottom view

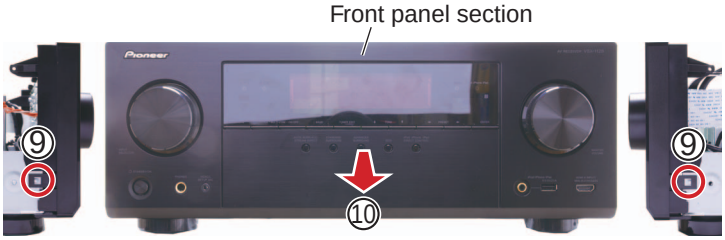
(2) Remove the two screws.
(BBZ30P080FTC)
(3) Remove the two screws.
(1500001206010-IL)



(4) Release the jumper wire.
(5) Cut the two binders.
(6) Remove the acetate tape
(7) Disconnect the HDMI cable.
(JA9620)
(8) Disconnect the one flexible cable and five connectors.
(CN304-CN306, CN3004, CN9202, CN9601)



(9) Unhook the two hooks.
(10) Remove the front panel section.

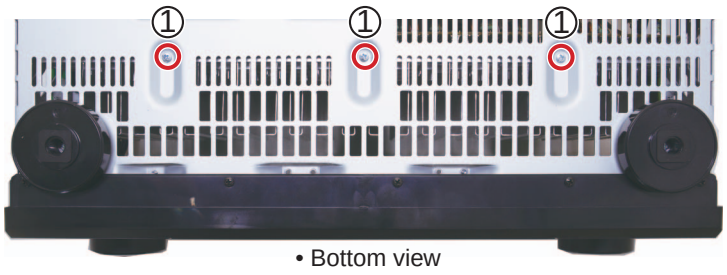


[2] Heatsink Section

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

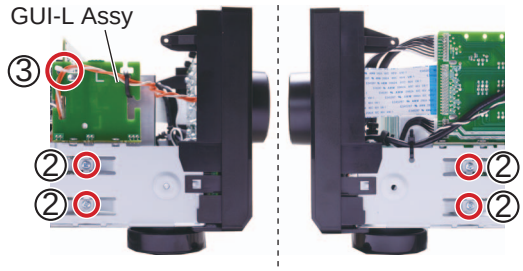
Remove the cabinet by removing the 10 screws.

(1) Remove the three screws. (BBZ30P080FTC)

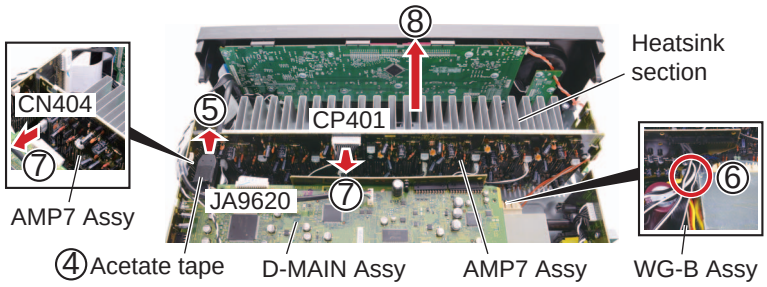


• Bottom view

(2) Remove the four screws. (BBZ30P080FTC)
(3) Cut the one binder.

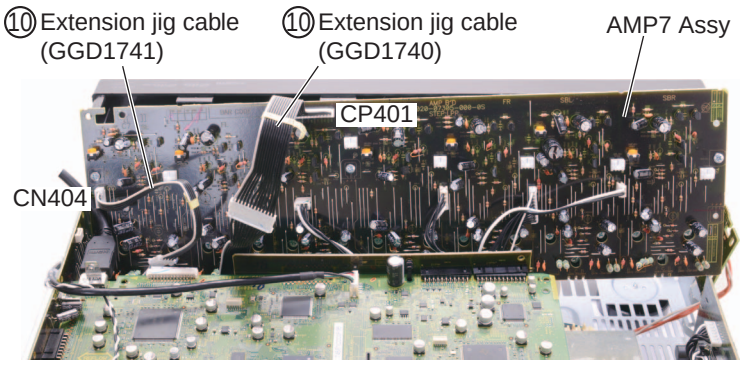


(4) Remove the acetate tape
(5) Disconnect the HDMI cable. (JA9620)
(6) Cut the binder.
(7) Disconnect the two connectors. (CN404, CP401)
(8) Remove the Heatsink section.



(9) Arrange the Heatsink section as shown in the photo below.
(10) Connect the two extension jig cables.

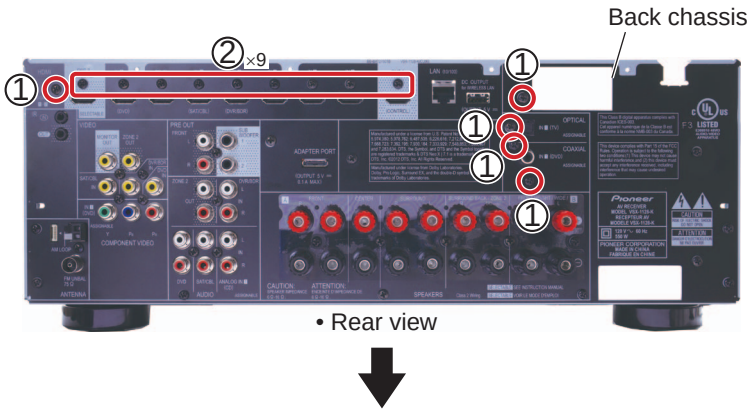
Diagnosis



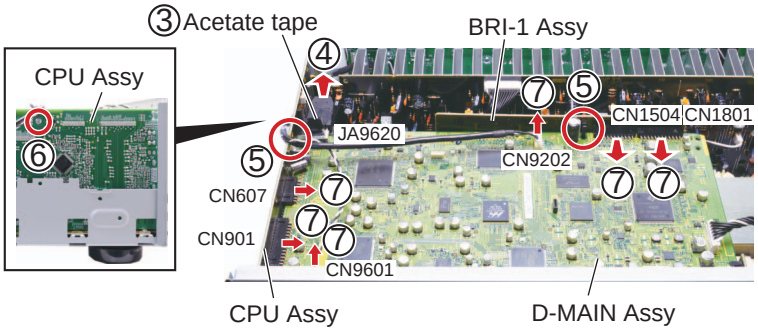
[3] D-MAIN Assy

Remove the cabinet by removing the 10 screws.

(1) Remove the five screws.
(BBT30P100FTB)
(2) Remove the nine screws.
(BSZ30P040FTB)

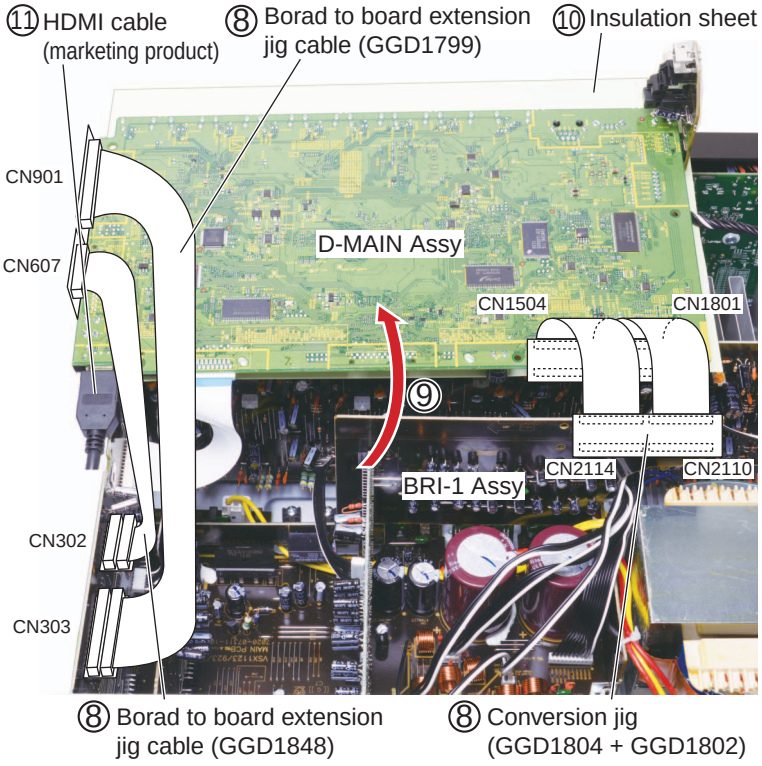


(3) Remove the acetate tape
(4) Disconnect the HDMI cable.
(JA9620)
(5) Cut the two binders.
(6) Remove the one screw.
(BBZ30P080FTC)
(7) Disconnect the two connectors and four B to B connectors.
(CN607, CN901, CN1504, CN1801, CN9202, CN9601)



Note: Some connections of the housing wires or connectors may be tight. When disconnecting those wires or connectors, be careful not to damage them.

(8) Connect the three extension jig cables.
(9) Arrange the D-MAIN Assy in the photo below.
(10) Insert any insulation sheet.
(11) Connect the HDMI cable (marketing product) from the FHDMI Assy if Front HDMI input needs to be checked.



Note:
Do not connect the HDMI cable provided with the product to prevent damage to the HDMI connector. Instead, use the another HDMI cable (marketing product) to prevent a load from being applied to the HDMI connector.
D-MAIN Assy works normally even though no connection of HDMI cable. But when checking Front HDMI input, that HDMI connection is required.

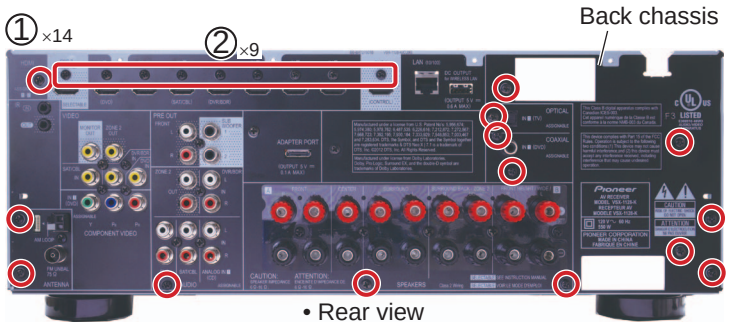
Diagnosis

[4] MAIN Assy

Remove the cabinet by removing the 10 screws.

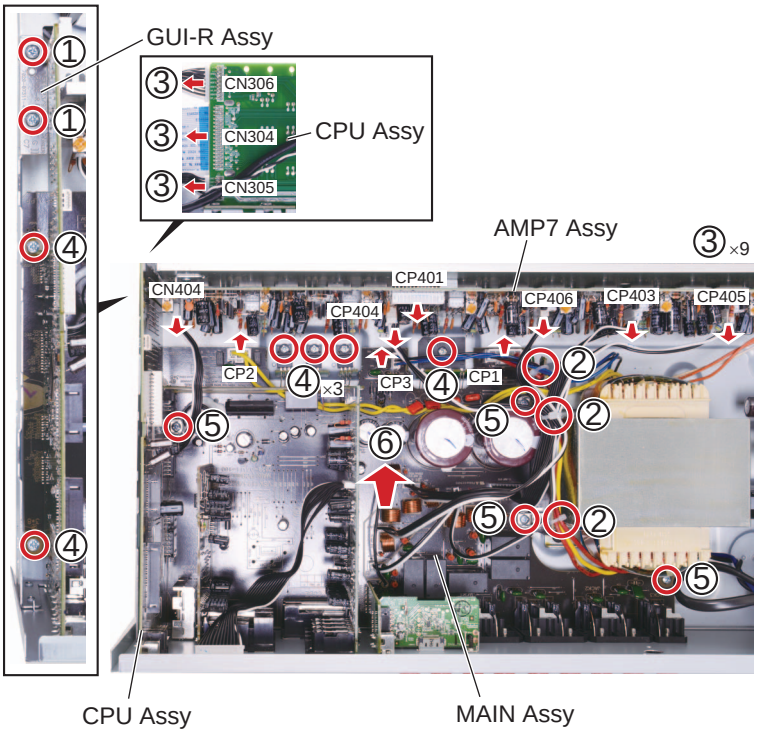
[4-1] Back chassis, D-MAIN Assy

(1) Remove the 14 screws.
(BBT30P100FTB)
(2) Remove the nine screws.
(BSZ30P040FTB)
(3) Remove the D-MAIN Assy.
(See procedure [3].)



[4-2] MAIN Assy

(1) Remove the GUI-R Assy by removing the two screws.
(BBZ30P080FTC)
(2) Cut the three binders.
(3) Disconnect the one flexible cable and 11 connectors.
(CN304-306, 404, CP1 to 3, 401, 403 to 406)
(4) Remove the six screws.
(BBZ30P080FTC)
(5) Remove the four screws.
(BBZ30P180FTC)
(6) Remove the MAIN Assy with CPU Assy and back chassis.



8. EACH SETTING AND ADJUSTMENT

- 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.

8.1 ADJUSTMENT REQUIRED WHEN THE UNIT IS REPAIRED OR REPLACED

■ When any of the following assemblies is replaced

AMP7 Assy	➡	"8.4 IDLE CURRENT ADJUSTMENT" (All channel)
D-MAIN Assy	➡	"8.2 USB BACKUP"
Other assemblies	➡	No adjustment required

■ When any of the following parts is replaced

AMP7 Assy	➡	"8.4 IDLE CURRENT ADJUSTMENT" (Only channel of replacement parts)
Other assemblies	➡	No adjustment required

Note 1:
Some parts on D-MAIN and FHDMI 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.

Note 2:
After replacing D-MAIN Assy, the unit needs to reset factory default settings.
Refer to "Resetting the system" on "6.2 DEFAULT SETTINGS" , reset the unit.

8.2 USB BACKUP

[Introduction]

This model is capable of saving the set values stored in the MAIN Ucom of D-MAIN Assy in the USB and loading them in a new D-MAIN Assy. (Note that MAIN Ucom should normally operate to enable this function.)
When replacing D-MAIN Assy, execute the above mentioned processes.

[Data that can be saved/cannot be saved]

The following **data can not be saved**. Data other than these can be saved.

Contents to save	Destination to save
Last memory for turning ON/OFF the Main power and power supply for ZONE2, HDZONE Last memory for inputting the Main power, ZONE2, HDZONE Setting for controlling HDMI Remote control ID Setting for Network Standby Data to be save upon the operation of protection circuit Standby Through setting	EVENT Ucom
Settings for NETWORK Favorite, Accounts, etc.	BridgeCo IC

(As the data saved by EVENT Ucom is on the CPU Assy, the data cannot be deleted unless Assy is replaced at the same time.)

[Requirements for USB memory]

USB memory to be used should meet the following requirements.

- Compatible with USB Mass storage Class
- With a file system of FAT (FAT32)

[File saving format]

Files are to be saved in the following format:
Example: VSX-1128_BK01.avr

[How to save in the USB memory from AV amplifier]

1. Insert the usable USB memory into the USB terminal when the main device is off.
2. Enter the SERVICE MODE and select [USB BAK ◄ HOLD ►] with ↑↓ keys.
   (See [6.1 TEST MODE] for how to enter the SERVICE MODE.)
3. Select [USB BAK ◄ SAVE? ►] with ⇄ keys and press [ENTER].
   Note: The system cannot execute SAVE, LOAD until start is completed of BridgeCo.
4. Saving in the USB starts and the main device automatically goes off after the normal completion ([COMPLETE] is displayed.).
5. Remove the USB and saving is finished.

*1. If the following errors occur after "SAVE" is executed, error message will be displayed and "SAVE" will be stopped and the power will be turned off.
   - Ejecting of USB device
   - Short capacity of USB device
   - Error during writing in the USB device (Read Only or defective Sector, etc.)

*2. If the same file name exists in the USB, overwriting will be automatically executed.

[How to write into AV amplifier from the USB memory]

1. Insert the USB with the saved file into the USB terminal when the main device is off.
2. Enter the TEST MODE and select [USB BAK ◄ HOLD ►] with ↑↓ keys.
   (See [6.1 TEST MODE] for how to enter the TEST MODE.)
3. Select [USB BAK ◄ LOAD? ►] with ⇄ keys and press [ENTER].
4. Saving in the main device starts and it automatically goes off after the normal completion ([COMPLETE] is displayed.).
5. Remove the USB and loading is finished.

* If the following errors occur after "LOAD" is executed, error message will be displayed and "LOAD" will be stopped and the power will be turned off.
   - No setting file
   - Mismatching between the setting file and the specification of the A/V RECEIVER type to be loaded back
   - Error due to Checksum, Signature Check, and Size Check
   - Ejecting of USB device (during reading of the setting file)

Precautions

- Files are stored in Root of USB memory.
- Files are read from Root of USB memory.
  ⇨ To make operations such as moving files, be sure to assign the saved file in Root of the USB memory. Also please be careful not to assign *.avr in multiple numbers.
- The time and date of updating for saved file is fixed to "2006/03/08 20:01."
- In principle, please implement Load without making of factory default settings.
  To Load from factory default settings status, please take caution on the following points;

  Please be sure to check the HDMI control setting for the user before performing of factory default settings.
  Since the HDMI control setting of default settings is ON, turn OFF the HDMI control setting and Load after performing of factory default settings if the checked user setting is OFF.
  (If Load is executed with the setting ON, the assignment information for each HDMI input will be cleared.)

  Procedures for turning OFF the HDMI control setting
  ⇨ HOME MENU ⇨ 4.System Setup ⇨ e.HDMI Setup ⇨ Control OFF

8.3 UPDATING OF THE FIRMWARE

Workflow

Enter the UPDATE PANEL mode.
↓
Check a current version.
↓
Update it.
↓
Update completed.
(Turn the power OFF automatically.)

Updating process

↓
Enter the UPDATE PANEL mode again.
↓
Check an updated version.
↓
Turn the power off.
(Release the UPDATE PANEL mode.)

Checking process

MAIN com (EMMA), SUB com (EVENT), DSP Flash ROM and BridgeCo IC Update by USB Memory and the Confirmation of the Version

● **UPDATE PANEL Mode (Version update)**

[Preparations]

1. Copy the UPDATE FILE to the root directory of the USB Memory.
   Note: NEVER copy several UPDATE FILES to the root directory of the USB Memory. Copy only the corresponding UPDATE FILE.
2. Turn off the power to this unit by setting Multi-Zone to "OFF".
3. Connect the USB Memory to the USB terminal (A type) of the front panel.

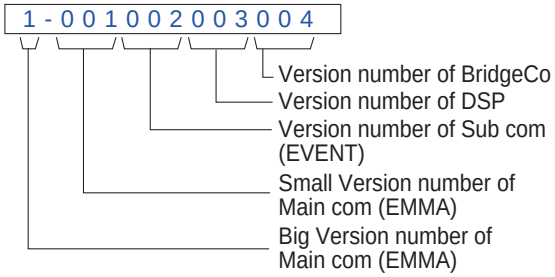
[Procedure]

1. While holding down **"TUNE↑"** key on the front panel, press **"STANDBY ON/OFF"** key and moves to the **UPDATE PANEL mode**.
2. The updating process is as follows.

Key operation	FL display
[TUNE↑] + [STANDBY ON/OFF]	
↓	POWER ON
Booting is completed	
↓	Version is displayed.
	1-0010020003004
[TUNE↓] or [TUNE↑]	
[↓] [↑]	
	Update Menu
	UPDATE

Front Panel Key

[↓] : TUNE key
[↑] : TUNE key
[←] : PRESET key
[→] : PRESET key



Do not do time-out during update panel indication.
It takes about 45 seconds till version of the BridgeCo is displayed.
Meanwhile, version of the BridgeCo is displayed with ***.

Key operation	FL display
	Update Menu
	UPDATE
[ENTER]	
[PRESET→] or [PRESET←]	Update Confirmation
	UPDATE ? ◀NO▶
[←] [→]	
	Update Confirmation
	UPDATE ? ◀YES▶
[ENTER]	
	File searching
	Accessing
UPDATE FILE searching completed	

Key operation	FL display
UPDATE FILE searching completed	
↓	Updating process ＊Ｕｐｄａｔｉｎｇ．　０％
UPDATE start	
↓	
UPDATE completed	
↓	Update completion display ＊Ｕｐｄａｔｉｎｇ．　１００％
5 Second	
↓	
Power turns off automatically. (All ZONE OFF) Disconnect the USB MEMORY.	

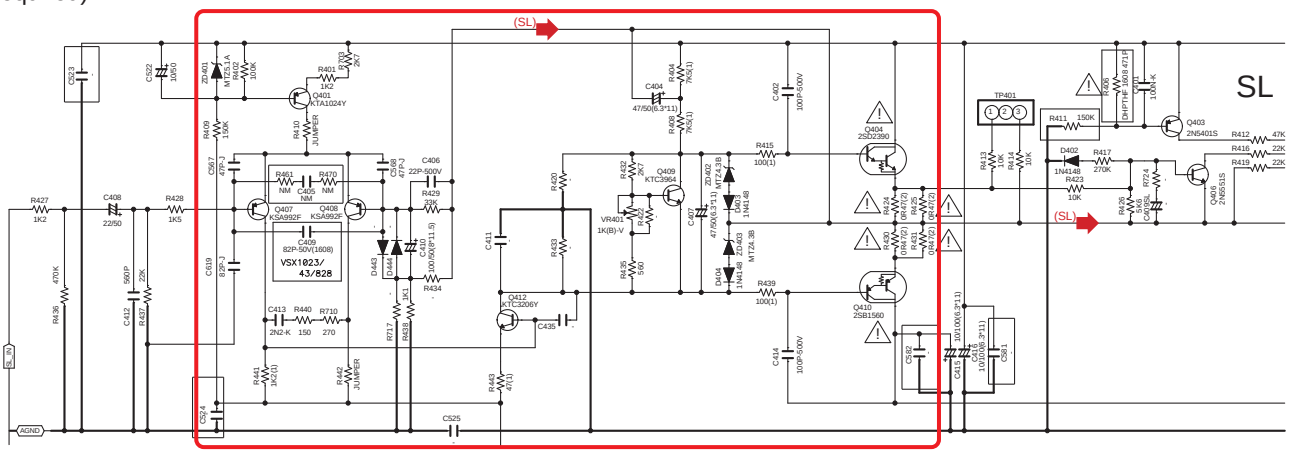
Update time is fluctuated by contents of the update. It will take about 26 minutes at the maximum.
(Actual time is from 3 minutes to 26 minutes.)
Time required for updating varies, because only the programs that require updating will be updated.

[Confirmation]

Enter UPDATE PANEL mode and check that the programs have been updated.

8.4 IDLE CURRENT ADJUSTMENT

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.

K AMP7 ASSY **SIDE A**

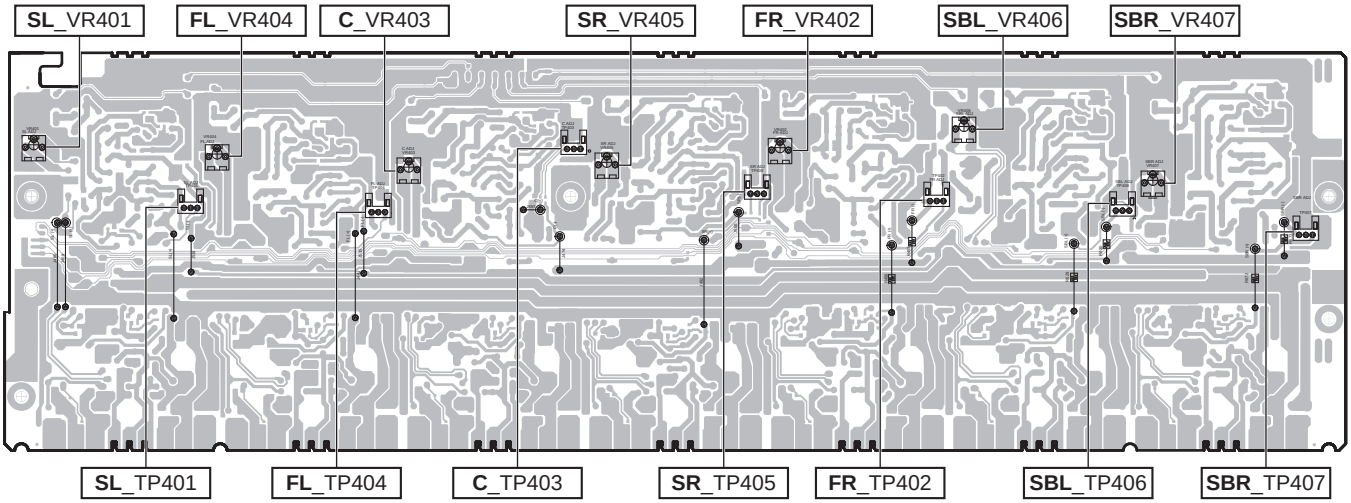


Fig.1

A

B

C

D

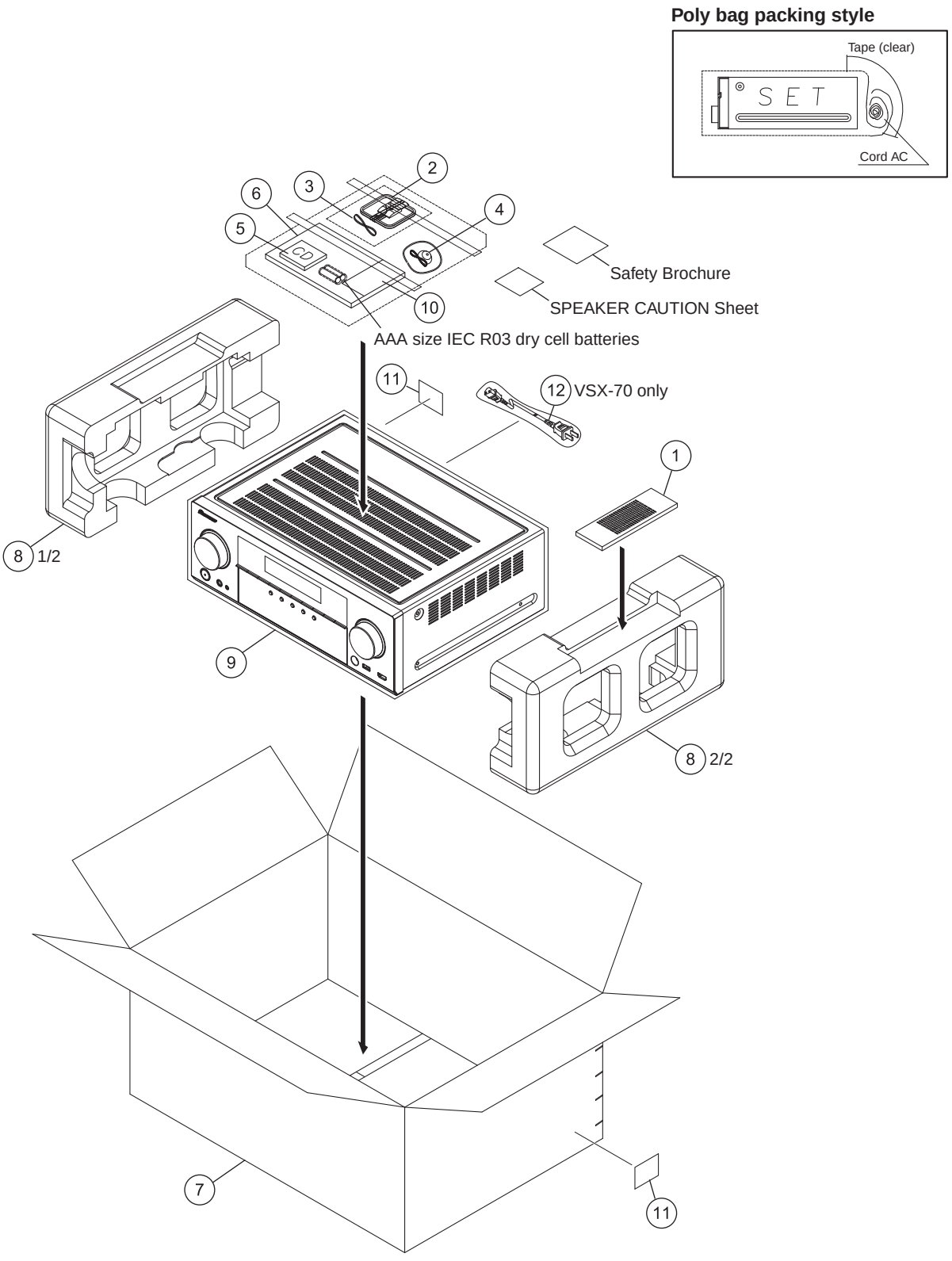
E

F

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 ⚠ 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



(1) PACKING SECTION PARTS LIST

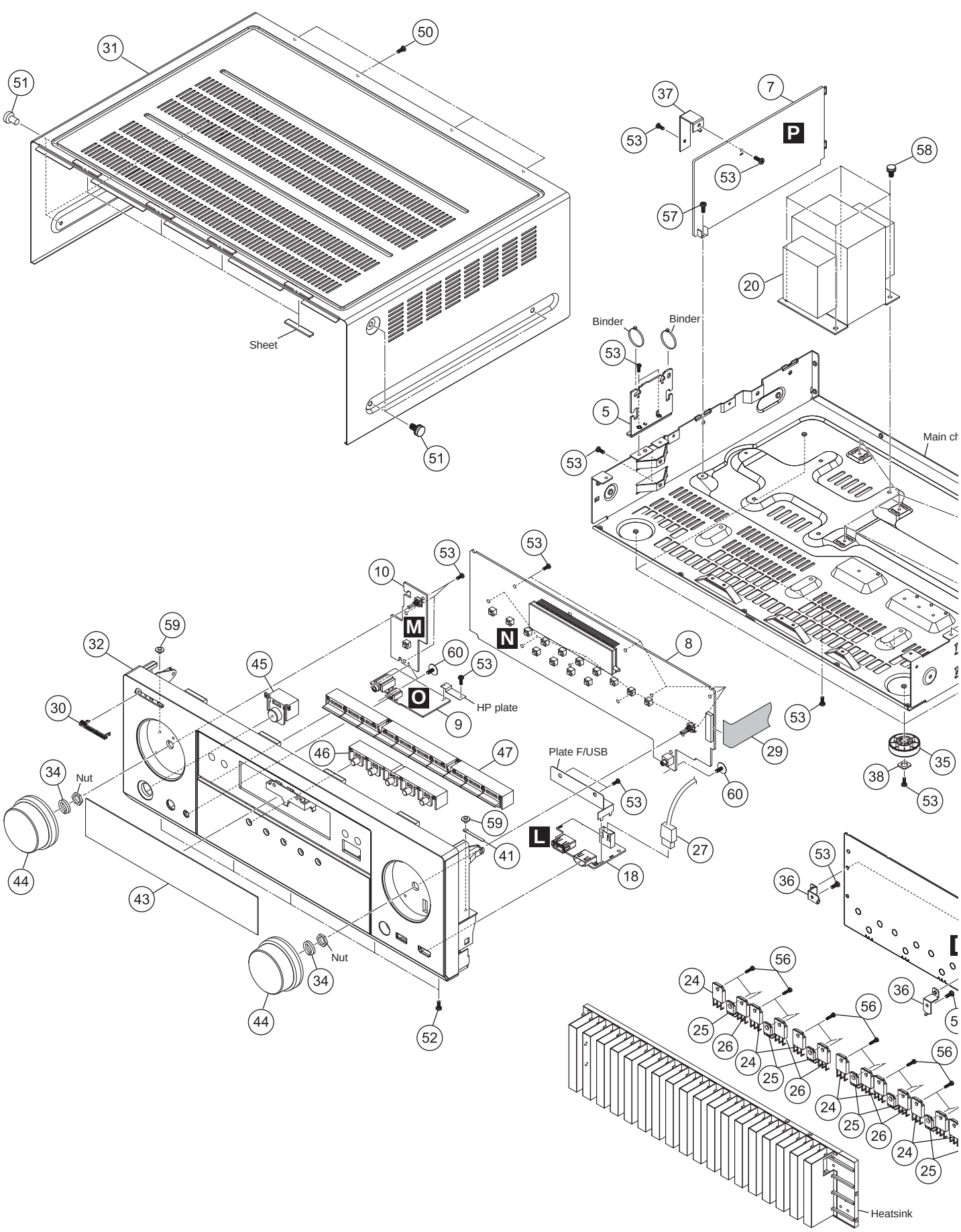
Mark	No.	Description	Part No.
	1	Remote Control	8300769400010-IL
	2	AM Loop Antenna	E601019000010-IL
	3	FM Wire Antenna	E605010140010-IL
	4	Microphone (for Auto MCACC setup)	APM7011
	5	Operating Instructions (CD-ROM)	See Contrast table (2)
	6	Quick Start Guide	See Contrast table (2)
	7	Box, Gift	See Contrast table (2)
	8	Cushion, Snow	6230212914000-IL
	9	PE, Sheet	6327040059000-IL
NSP	10	Warranty Card	See Contrast table (2)
NSP	11	Label	VRW1629
⚠	12	Power Cord	See Contrast table (2)

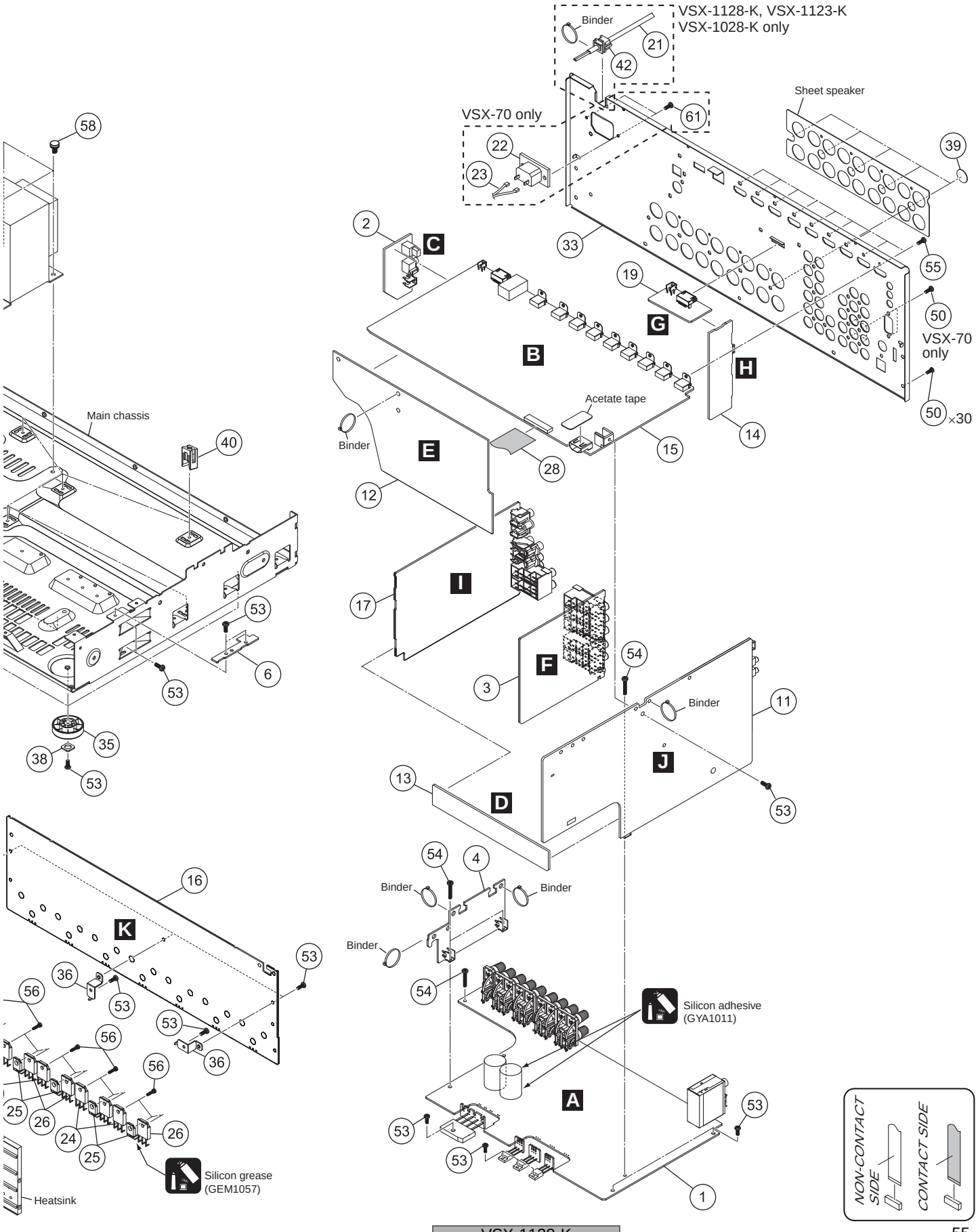
(2) CONTRAST TABLE

VSX-1128-K/CUXE, VSX-1123-K/CUXESM,VSX-70/CUXE and VSX-1028-K/CUXE are constructed the same except for the following:

Mark	No.	Symbol and Description	VSX-1128-K /CUXE	VSX-1123-K /CUXESM	VSX-70 /CUXE	VSX-1028-K /CUXE
	5	Operating Instructions (CD-ROM)	6517000001240-IL	6517000001230-IL	6517000001250-IL	6517000001240-IL
	6	Quick Start Guide	5707000007780-IL	5707000007770-IL	5707000007860-IL	5707000007780-IL
	7	Box, Gift	60072118201J0-IL	6007212390000-IL	60072118201K0-IL	60072118201P0-IL
NSP	10	Warranty Card	ARY7178	ARY7172	ARY7177	ARY7178
⚠	12	Power Cord	Not used	Not used	L068125130010-IL	Not used

9.2 EXTERIOR SECION




VSX-1128-K, VSX-1123-K
VSX-1028-K only
Binder
21
42
VSX-70 only
22
23
61
Sheet speaker
39
58
2
C
33
19
G
55
50
B
H
VSX-70
only
50 ×30
Main chassis
40
Acetate tape
Binder
E
15
14
28
12
I
17
F
3
54
Binder
11
J
53
6
35
38
D
13
16
K
4
Binder
Binder
Binder
Silicon adhesive
(GYA1011)
A
Silicon grease
(GEM1057)
Heatsink
1
NON-CONTACT SIDE
CONTACT SIDE

VSX-1128-K

(1) EXTERIOR SECION SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	MAIN Assy	See Contrast table (2)
	2	OPTCO Assy	7028073112010-IL
	3	VIDEO Assy	See Contrast table (2)
	4	WG-B Assy	7028073115010-IL
	5	G-L Assy	7028073116010-IL
	6	G-R Assy	7028073117010-IL
⚠	7	SMPS Assy	See Contrast table (2)
	8	FRONT Assy	See Contrast table (2)
	9	HPMIC Assy	7028073122010-IL
	10	INSEL Assy	See Contrast table (2)
	11	CPU Assy	See Contrast table (2)
	12	BRI-1 Assy	See Contrast table (2)
	13	BRI-2 Assy	7028073133010-IL
	14	BTCNT Assy	7028073134010-IL
	15	D-MAIN Assy	See Contrast table (2)
	16	AMP7 Assy	7028073051040-IL
	17	AUDIO Assy	See Contrast table (2)
	18	FHDMI Assy	7028073221060-IL
	19	BT Assy	7028073211040-IL
⚠	20	Power Trans 1123CU	8200960611390-IL
⚠	21	Cord Assy	See Contrast table (2)
⚠	22	Socket, Power AC	See Contrast table (2)
	23	CN, Wire	See Contrast table (2)
⚠	24	Transistor	J5011560Y0000-IL
⚠	25	Semi, TR/GE NPN 2SC	J502396400010-IL
⚠	26	Transistor	J5032390Y0000-IL
⚠	27	Cable HDMI 230 mm	L304231190030-IL
	28	Cable, Flat Card 1.0M	N711271122480-IL
	29	Cable, Flat Card 1.0M	N711330922480-IL
	30	Pioneer Badge B (PLS)	See Contrast table (2)
	31	Cabinet Assy	3008211846020-IL
	32	Front Panel	See Contrast table (2)
	33	Back Chassis	See Contrast table (2)
	34	Spring	3720210276000-IL
	35	Foot (PLS)	4000210391000-IL
	36	Bracket	4010056906010-IL
	37	Bracket SMPS	401021488600D-IL
	38	Cushion	4050211605000-IL
	39	Screw Cover	4050211745100-IL
	40	Support	4070001601010-IL
	41	Clamp MTG	4330000310000-IL
	42	Stopper	See Contrast table (2)
	43	Window Display	See Contrast table (2)
	44	Knob	5080212431000-IL
	45	Button	See Contrast table (2)

Mark	No.	Description	Part No.
	46	5 Key Button	5090214561000-IL
	47	10 Key Button	5090214571000-IL
	48	• • • • •	
	49	• • • • •	
	50	Screw	BBT30P100FTB
	51	Screw	BBT40P080FTB
	52	Screw	BBZ30P080FTB
	53	Screw	BBZ30P080FTC
	54	Screw	BBZ30P180FTC
	55	Screw	BSZ30P040FTB
	56	Screw Tapping Assy	B018230141H11-IL
	57	Screw, Tap Tite	B020230063B10-IL
	58	Screw	B028940101B11-IL
	59	Screw	1500001206010-IL
	60	Screw	1500001456010-IL
	61	Screw, tap Tite	See Contrast table (2)

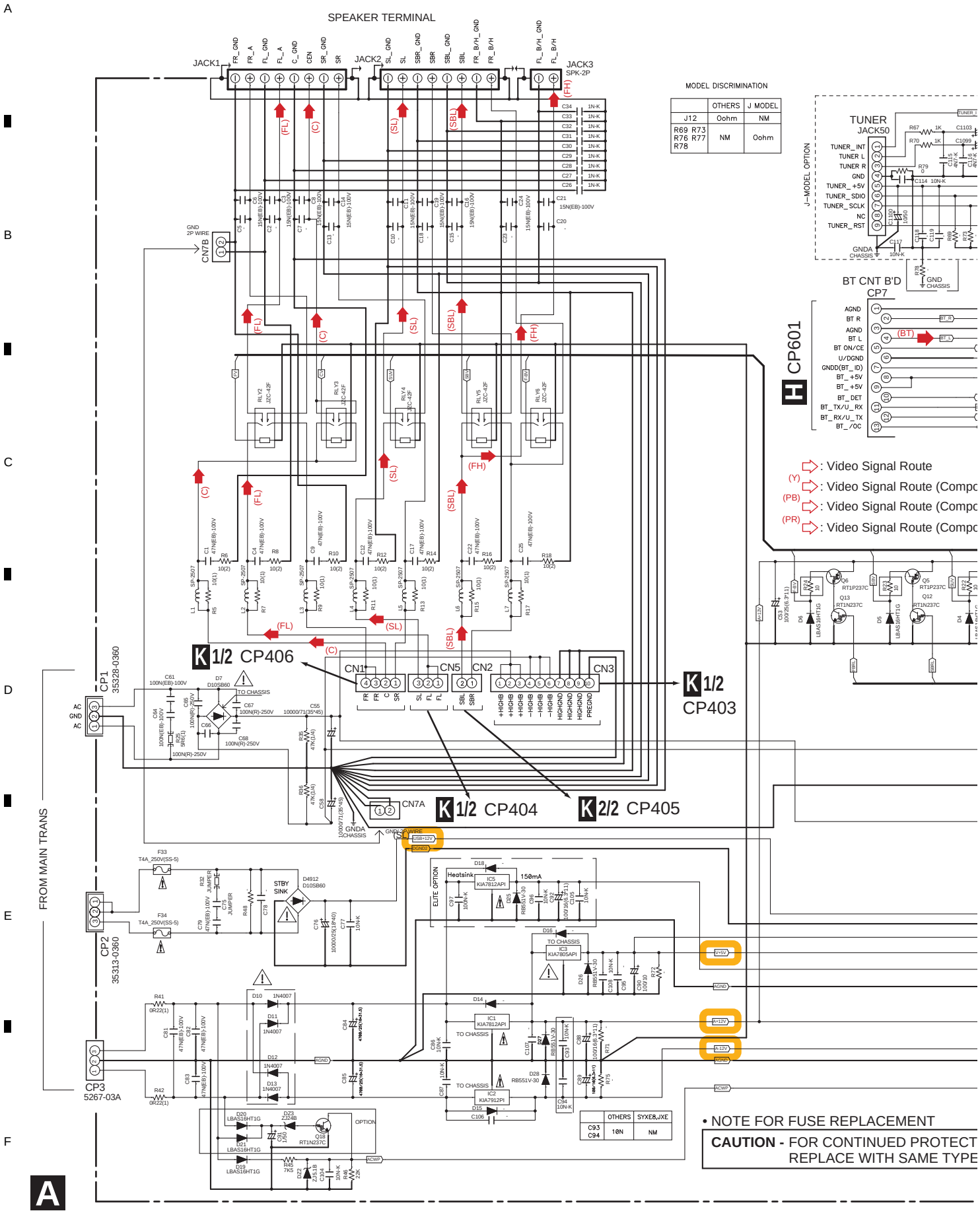
(2) CONTRAST TABLE

VSX-1128-K/CUXE, VSX-1123-K/CUXESM,VSX-70/CUXE and VSX-1028-K/CUXE are constructed the same except for the following:

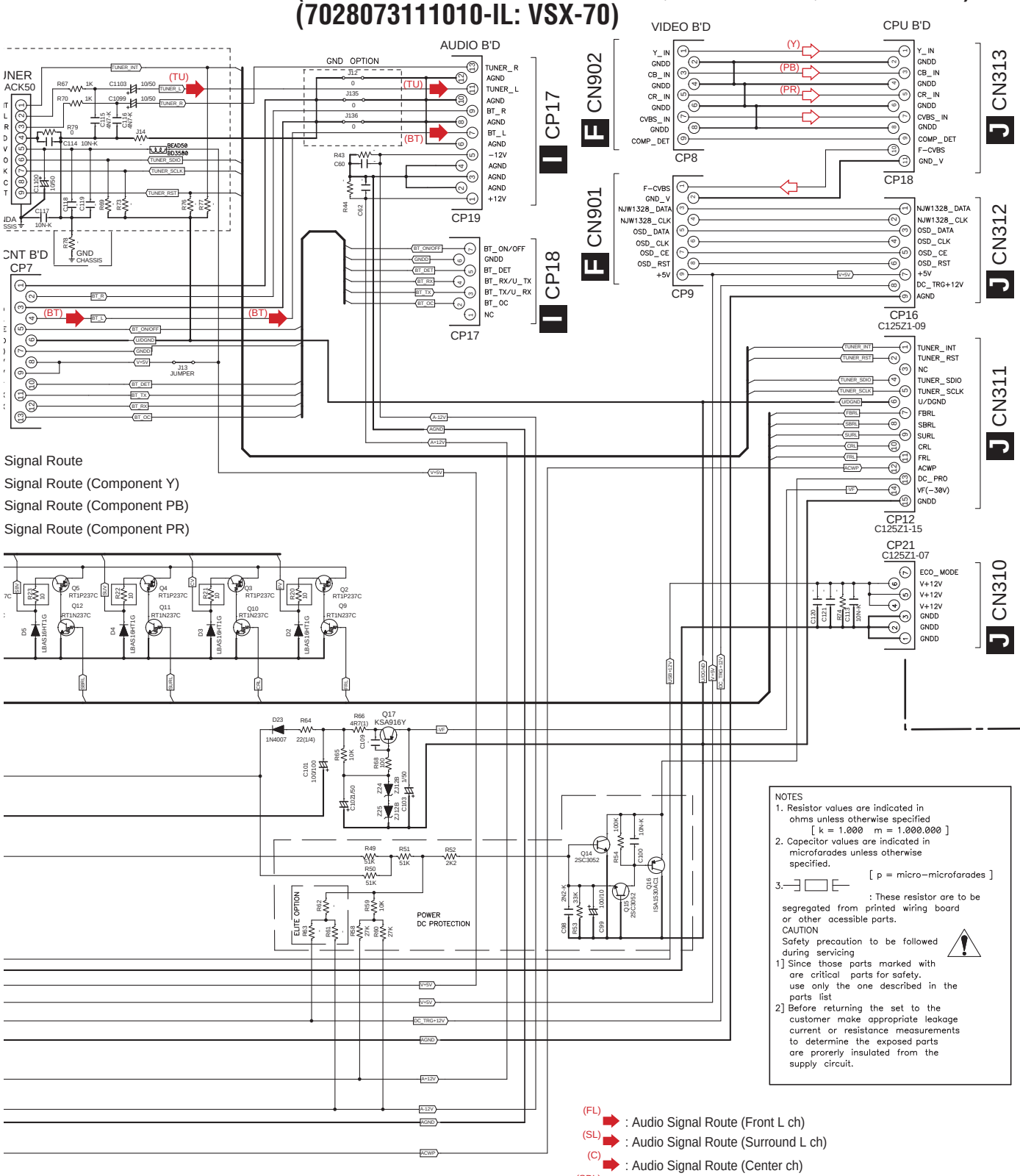
Mark	No.	Symbol and Description	VSX-1128-K /CUXE	VSX-1123-K /CUXESM	VSX-70 /CUXE	VSX-1028-K /CUXE
	1	MAIN Assy	7028073111040-IL	7028073111040-IL	7028073111010-IL	7028073111040-IL
	3	VIDEO Assy	7028073113040-IL	7028073113040-IL	7028073113010-IL	7028073113070-IL
⚠	7	SMPS Assy	70280733610O0-IL	70280733610O0-IL	70280733610F0-IL	70280733610O0-IL
	8	FRONT Assy	7028073121040-IL	7028073121040-IL	7028073121010-IL	7028073121040-IL
	10	INSEL Assy	7028073123040-IL	7028073123040-IL	7028073123010-IL	7028073123040-IL
	11	CPU Assy	7028073131050-IL	7028073131040-IL	7028073131010-IL	7028073131080-IL
	12	BRI-1 Assy	7028073132010-IL	7028073132010-IL	7028073132010-IL	7028073132070-IL
	15	D-MAIN Assy	7028073151010-IL	7028073151010-IL	7028073151010-IL	7028073151080-IL
	17	AUDIO Assy	7028073141010-IL	7028073141010-IL	7028073141010-IL	7028073141080-IL
⚠	21	Cord Assy	L068125101710-IL	L068125101710-IL	Not used	L068125101710-IL
⚠	22	Socket, Power AC	Not used	Not used	G430040560021-IL	Not used
	23	CN, Wire	Not used	Not used	L000800020220-IL	Not used
	30	Pioneer Badge B (PLS)	XAM3006	XAM3006	Not used	XAM3006
	30	Name Plate	Not used	Not used	PAM1791	Not used
	32	Front Panel	3067215881010-IL	3067215881000-IL	3067215891000-IL	3067215881020-IL
	33	Back Chassis	3207214606010-IL	3207214606000-IL	3207214616000-IL	3207214596000-IL
	42	Stopper	4380040162010-IL	4380040162010-IL	Not used	4380040162010-IL
	43	Window Display	5077213113040-IL	5077213113040-IL	5077213113050-IL	5077213113040-IL
	45	Button	5090213741100-IL	5090213741100-IL	Not used	5090213741100-IL
	45	Standby Button Clear	Not used	Not used	5098214551000-IL	Not used
	61	Screw, tap Tite	Not used	Not used	B020030083F10-IL	Not used

10. SCHEMATIC DIAGRAM

10.1 MAIN ASSY



A MAIN ASSY
(7028073111040-IL: VSX-1128-K, VSX-1123-K, VSX-1028-K)
(7028073111010-IL: VSX-70)

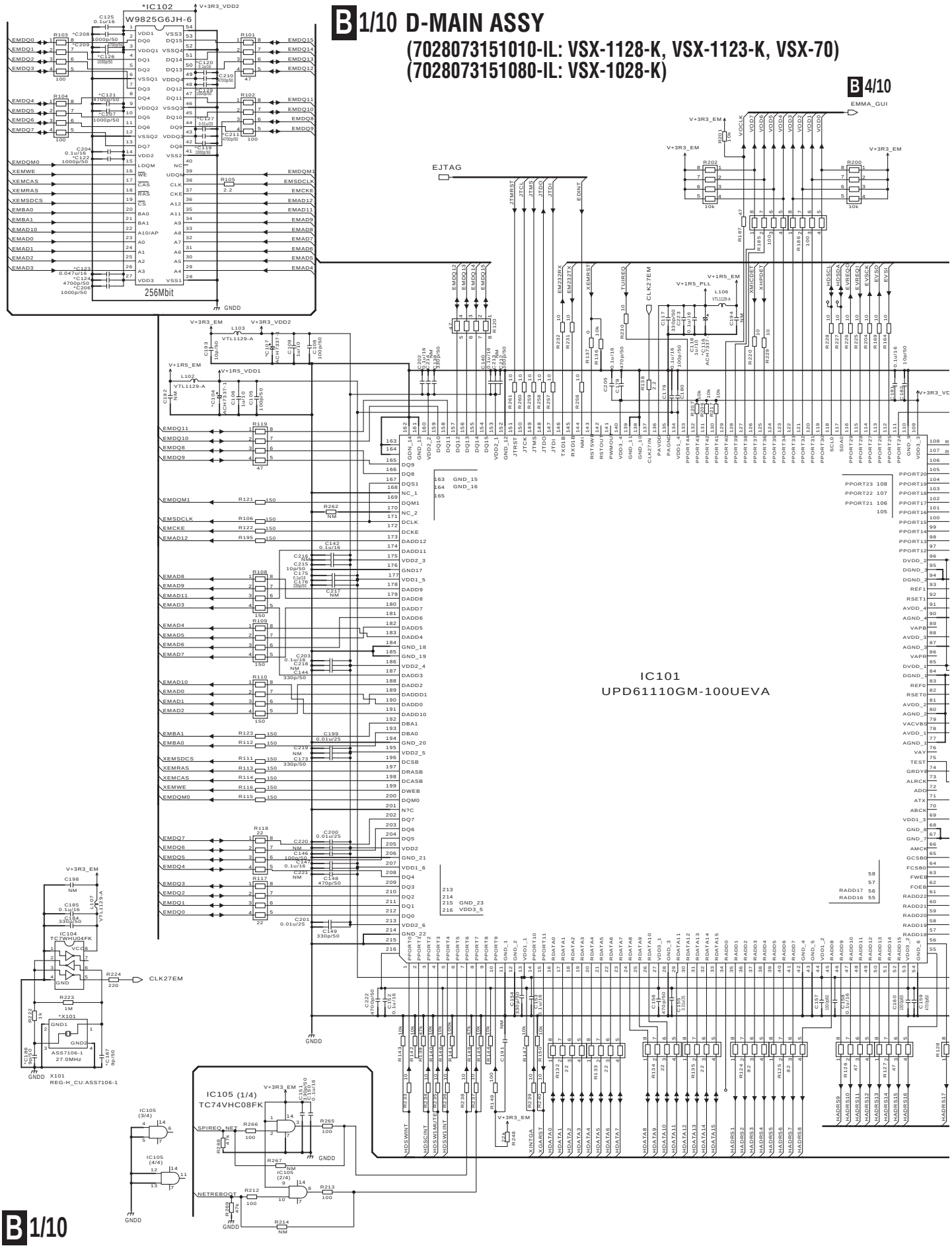


NOTES
1. Resistor values are indicated in ohms unless otherwise specified
[k = 1.000 m = 1.000.000]
2. Capacitor values are indicated in microfarades unless otherwise specified.
[p = micro−microfarades]
3. : These resistor are to be segregated from printed wiring board or other acessible parts.
CAUTION
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 prorerly insulated from the supply circuit.

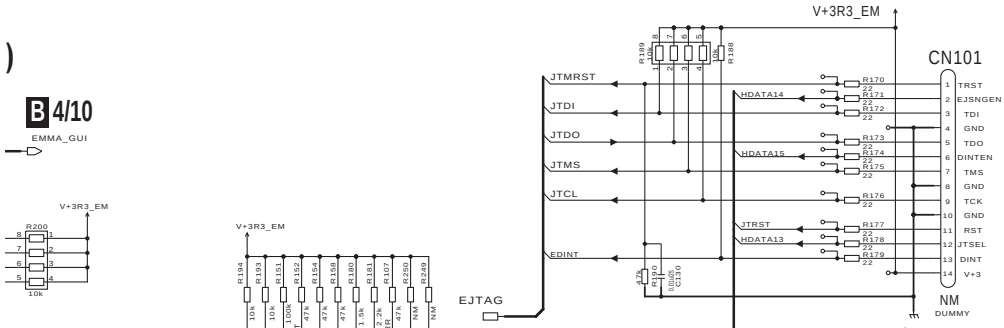
(FL) : Audio Signal Route (Front L ch)
(SL) : Audio Signal Route (Surround L ch)
(C) : Audio Signal Route (Center ch)
(SBL) : Audio Signal Route (Surround Back L ch)
(FH) : Audio Signal Route (Front Height L ch)
(TU) : Audio Signal Route (Tuner L ch)
(BT) : Audio Signal Route (BT L ch)

LACEMENT
INUED PROTECTION AGAINST RISK OF FIRE,
WITH SAME TYPE AND RATINGS OF FUSE.

10.2 D-MAIN ASSY (1/10)



EJTAG



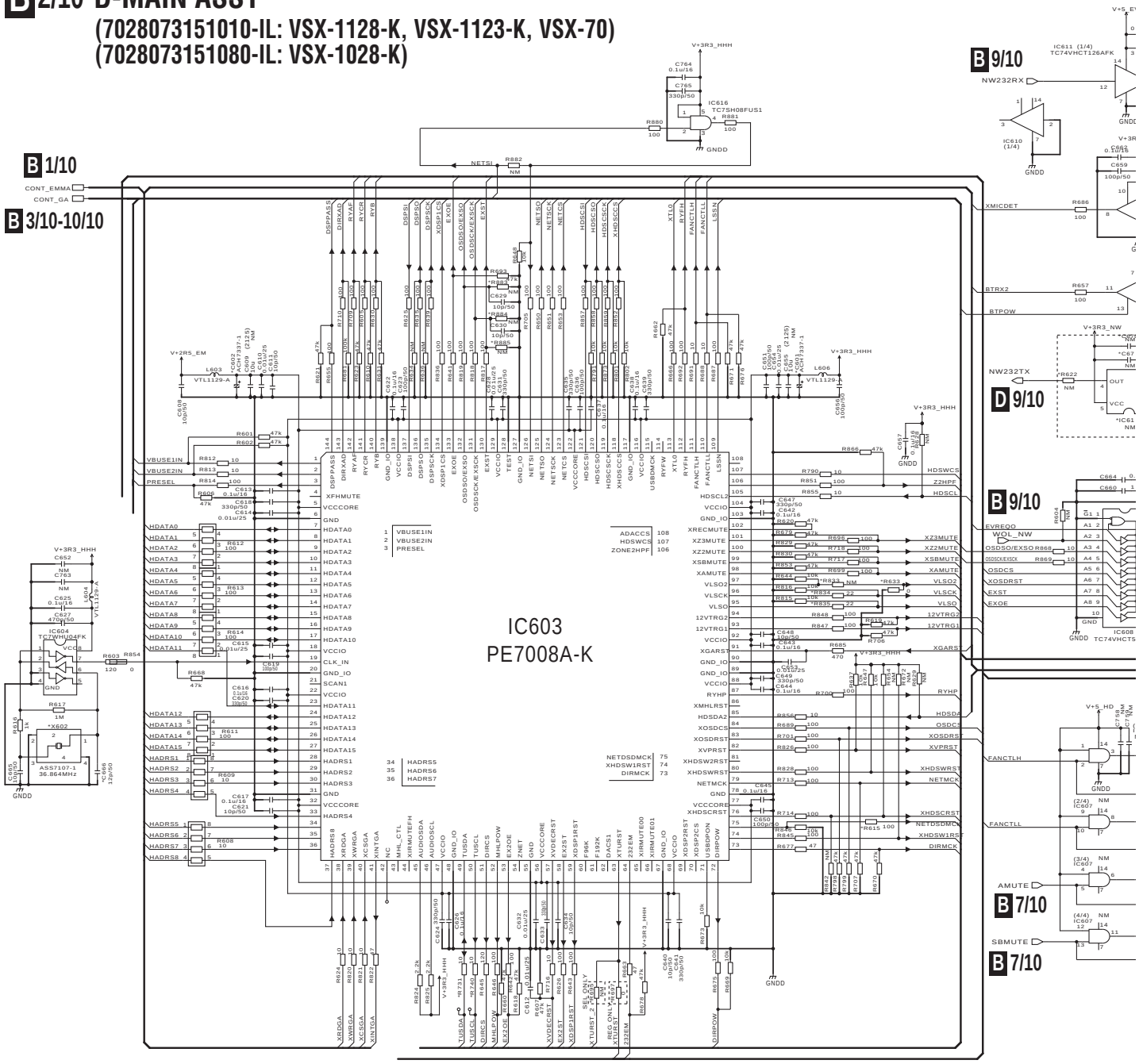
AWX1330: VSX-1128-K/CUXE, VSX-1123-K/CUXESM, VSX-70/CUXE
AWX1352: VSX-1028-K/CUXE
AWX1648: VSX-1123-K/SYXE8
AWX1647: VSX-923-K/SYXE8, VSX-923-S/SYXE8, VSX-923-K/PWVXE8

	AWX1330 (REG-H-H_CU)	AWX1352 (REG-H-L_CU)	AWX1648 (REG-H-H_SY)	AWX1647 (REG-H-L_SY)
C101	ACH7352-1	ACH7352-1	ACH7352-1	ACH7352-1
C104	ACH7337-1	ACH7337-1	ACH7337-1	ACH7337-1
C107	ACH7337-1	ACH7337-1	ACH7337-1	ACH7337-1
C110	ACH7337-1	ACH7337-1	ACH7337-1	ACH7337-1
C116	ACH7337-1	ACH7337-1	ACH7337-1	ACH7337-1
C119	1000p/50	1000p/50	1000p/50	1000p/50
C120	0.1u/16	0.1u/16	0.1u/16	0.1u/16
C121	4700p/50	4700p/50	4700p/50	4700p/50
C122	1000p/50	1000p/50	1000p/50	1000p/50
C123	0.047u/16	0.047u/16	0.047u/16	0.047u/16
C124	4700p/50	4700p/50	4700p/50	4700p/50
C126	1000p/50	1000p/50	1000p/50	1000p/50
C127	0.01u/25	0.01u/25	0.01u/25	0.01u/25
C129	1000p/50	1000p/50	1000p/50	1000p/50
C186	9p/50	9p/50	7p/50	7p/50
C187	9p/50	9p/50	7p/50	7p/50
C206	1000p/50	1000p/50	1000p/50	1000p/50
C207	1000p/50	1000p/50	1000p/50	1000p/50
C208	1000p/50	1000p/50	1000p/50	1000p/50
C209	4700p/50	4700p/50	4700p/50	4700p/50
C210	4700p/50	4700p/50	4700p/50	4700p/50
C211	4700p/50	4700p/50	4700p/50	4700p/50
R167	22k	NM	22k	NM
IC102	W9825G6JH-6	W9825G6JH-6	W9825G6JH-6	W9825G6JH-6
X101	ASS7106-1	ASS7106-1	ASS7123-A	ASS7123-A

B 4/10
EMMA_GUI
CONT_EMMA
B 2/10-5/10,7/10,8/10
B 1/10

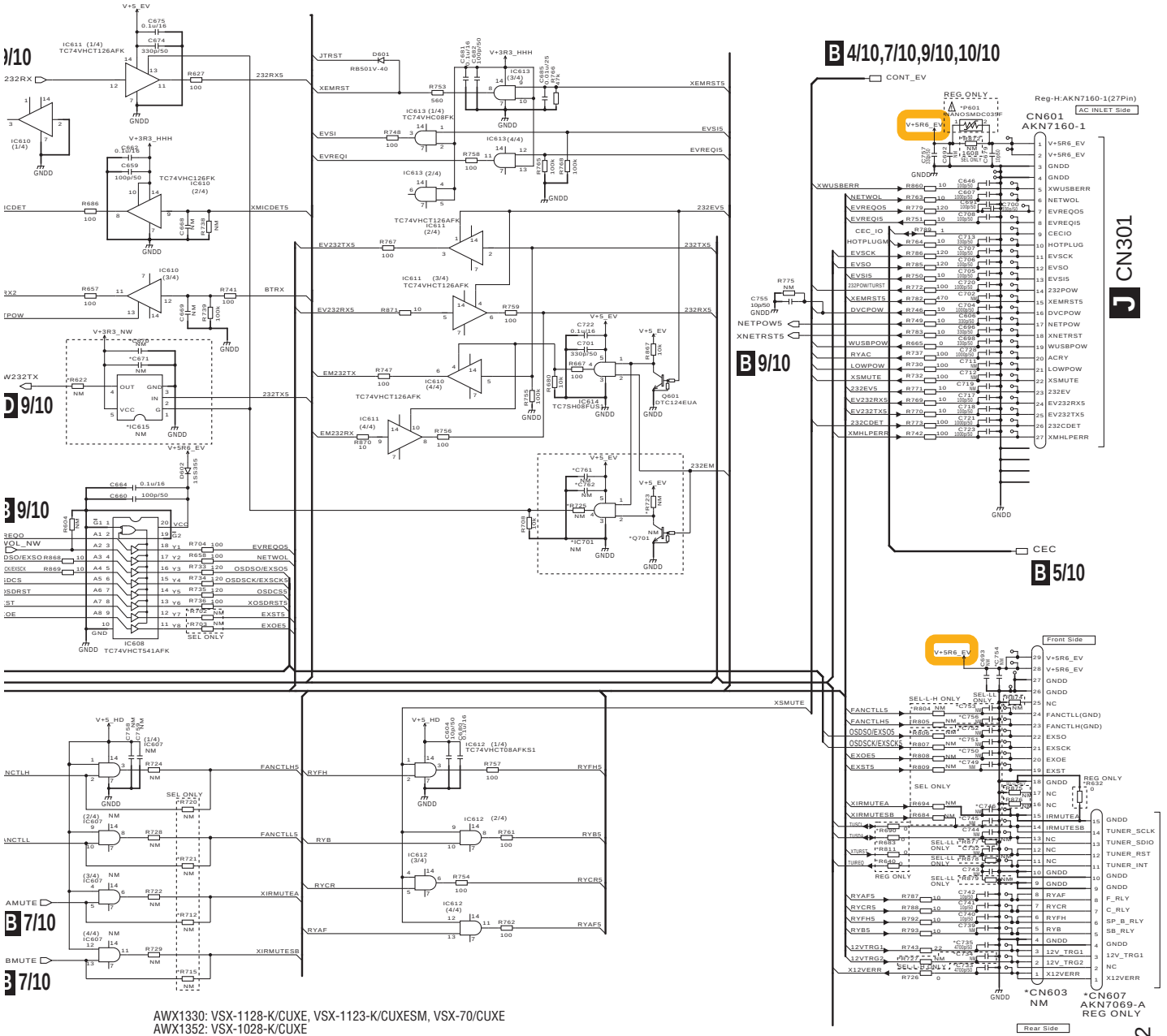
B 2/10 D-MAIN ASSY

(7028073151010-IL: VSX-1128-K, VSX-1123-K, VSX-70)
(7028073151080-IL: VSX-1028-K)



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。

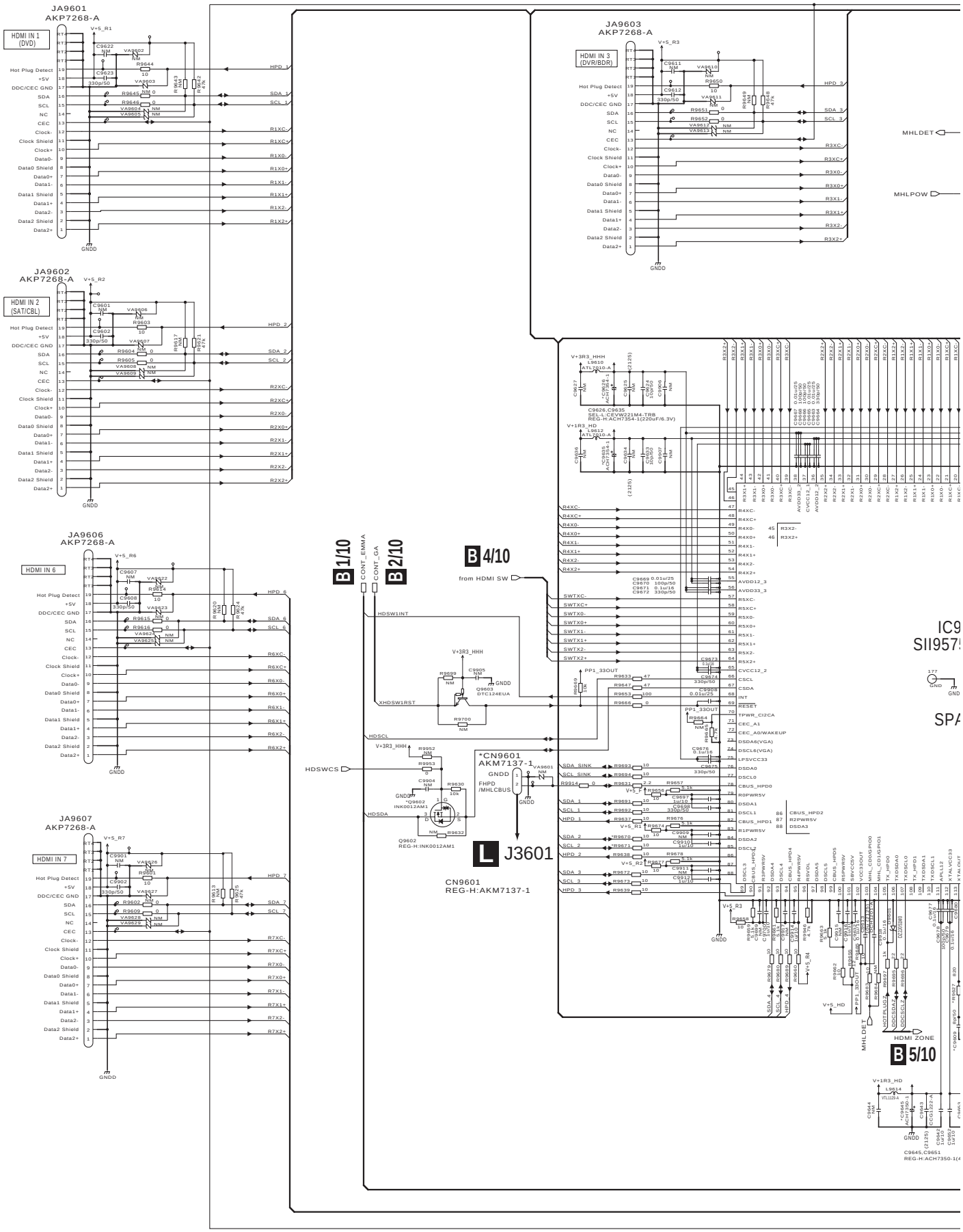


AWX1330: VSX-1128-K/CUXE, VSX-1123-K/CUXESM, VSX-70/CUXE
AWX1352: VSX-1028-K/CUXE
AWX1648: VSX-1123-K/SYXE8
AWX1647: VSX-923-K/SYXE8, VSX-923-S/SYXE8, VSX-923-K/PWVXE8

	AWX1330(REG-H-H_CU)	AWX1352(REG-H-L_CU)	AWX1648(REG-H-H_SY)	AWX1647(REG-H-L_SY)
C601	ACH7337-1	ACH7337-1	ACH7337-1	ACH7337-1
C602	ACH7337-1	ACH7337-1	ACH7337-1	ACH7337-1
C666	12p/50	12p/50	12p/50	12p/50
C670	NM	NM	NM	NM
C671	NM	NM	NM	NM
C733	4700p/50	4700p/50	4700p/50	4700p/50
C734	NM	NM	NM	NM
C735	4700p/50	4700p/50	4700p/50	4700p/50
C745	NM	NM	NM	NM
C746	NM	NM	NM	NM
C749	NM	NM	NM	NM
C750	NM	NM	NM	NM
C751	NM	NM	NM	NM
C752	NM	NM	NM	NM
C753	NM	NM	NM	NM
C754	NM	NM	NM	NM
C756	NM	NM	NM	NM
C761	NM	NM	NM	NM
C762	NM	NM	NM	NM
R615	100	NM	100	NM
R622	NM	NM	NM	NM
R632	0	0	0	0
R633	0	0	0	0
R640	0	0	0	0
R683	0	0	0	0
R684	NM	NM	NM	NM
R690	0	0	0	0
R694	NM	NM	NM	NM
R695	NM	NM	NM	NM
R697	0	0	0	0
R702	NM	NM	NM	NM
R703	NM	NM	NM	NM
R712	NM	NM	NM	NM

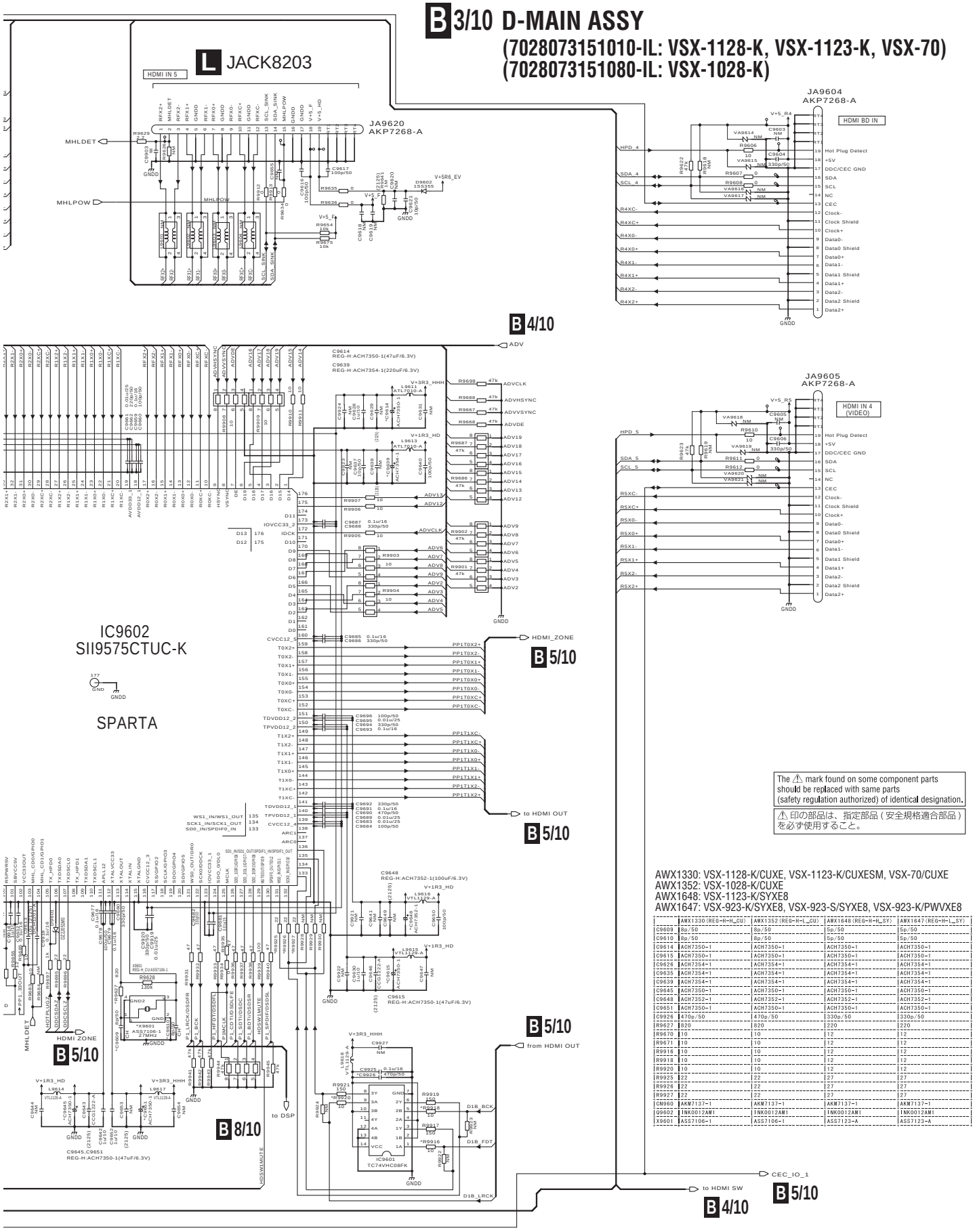
	AWX1330(REG-H-H_CU)	AWX1352(REG-H-L_CU)	AWX1648(REG-H-H_SY)	AWX1647(REG-H-L_SY)
R715	NM	NM	NM	NM
R720	NM	NM	NM	NM
R721	NM	NM	NM	NM
R723	NM	NM	NM	NM
R725	NM	NM	NM	NM
R727	NM	NM	NM	NM
R731	10	10	10	10
R740	10	10	10	10
R804	NM	NM	NM	NM
R805	NM	NM	NM	NM
R806	NM	NM	NM	NM
R807	NM	NM	NM	NM
R808	NM	NM	NM	NM
R809	NM	NM	NM	NM
R811	0	0	0	0
R833	NM	NM	NM	NM
R834	22	22	27	27
R835	22	22	27	27
R846	10k	NM	10k	NM
R872	NM	NM	NM	NM
R874	NM	NM	NM	NM
R875	NM	NM	NM	NM
R876	NM	NM	NM	NM
R877	NM	NM	NM	NM
R878	NM	NM	NM	NM
R879	NM	NM	NM	NM
R883	NM	NM	NM	NM
R884	NM	NM	NM	NM
R885	NM	NM	NM	NM
IC615	NM	NM	NM	NM
IC701	NM	NM	NM	NM
CN603	NM	NM	NM	NM
CN607	AKN7069-A	AKN7069-A	AKN7069-A	AKN7069-A
P601	NANOSMDC035F	NANOSMDC035F	NANOSMDC035F	NANOSMDC035F
Q701	NM	NM	NM	NM
X602	ASS7107-1	ASS7107-1	ASS7107-1	ASS7107-1

10.4 D-MAIN ASSY (3/10)



B 3/10 D-MAIN ASSY

(7028073151010-IL: VSX-1128-K, VSX-1123-K, VSX-70)
(7028073151080-IL: VSX-1028-K)



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。

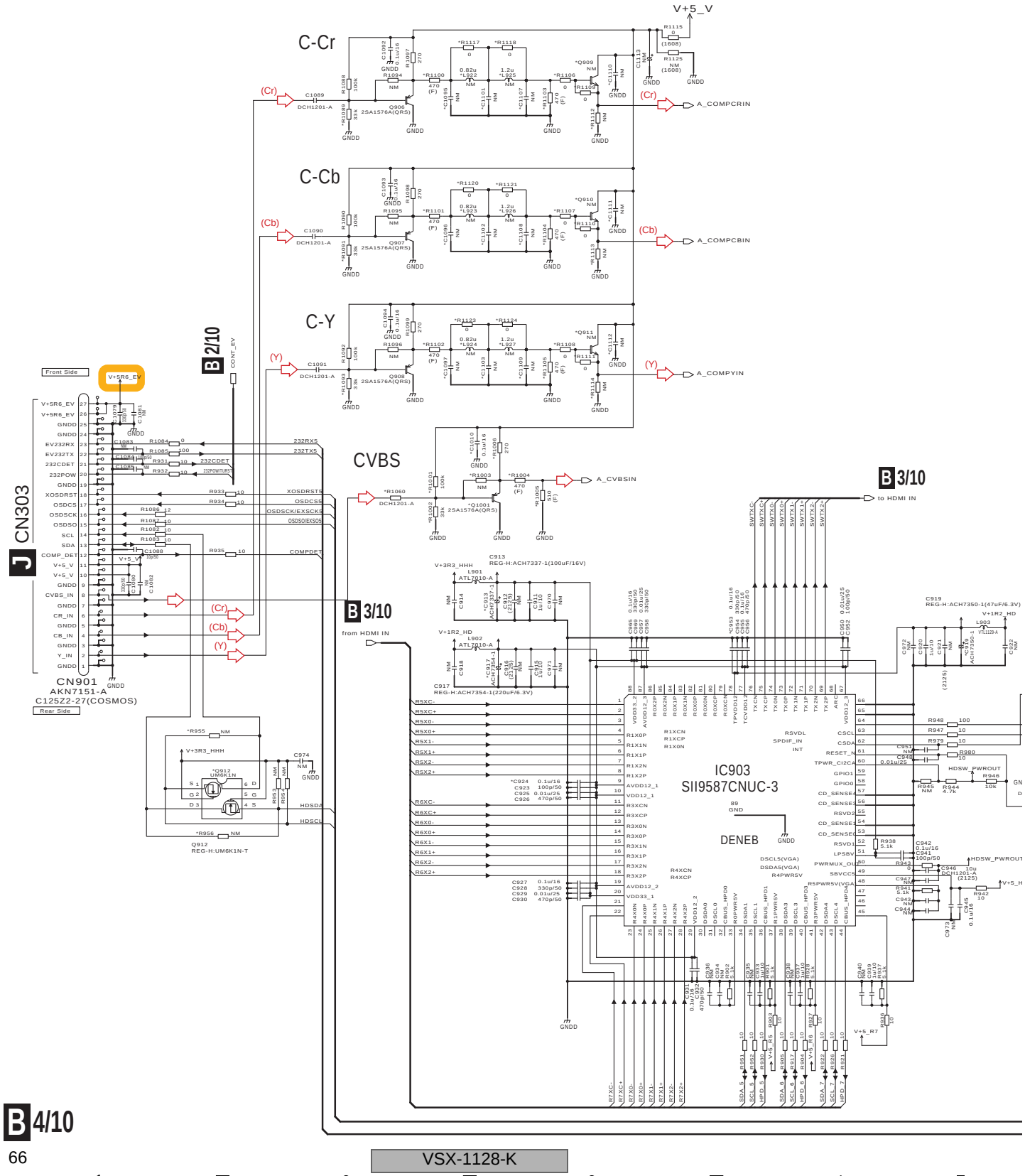
AWX1330: VSX-1128-K/CUXE, VSX-1123-K/CUXESM, VSX-70/CUXE
AWX1352: VSX-1028-K/CUXE
AWX1648: VSX-1123-K/SYXE8
AWX1647: VSX-923-K/SYXE8, VSX-923-S/SYXE8, VSX-923-K/PWVXE8

	AWX1330(REG-H-H_CU)	AWX1352(REG-H-L_CU)	AWX1648(REG-H-H_SY)	AWX1647(REG-H-L_SY)
C9609	18p/50	8p/50	5p/50	5p/50
C9610	18p/50	8p/50	5p/50	5p/50
C9614	ACH7350-1	ACH7350-1	ACH7350-1	ACH7350-1
C9615	ACH7350-1	ACH7350-1	ACH7350-1	ACH7350-1
C9626	ACH7354-1	ACH7354-1	ACH7354-1	ACH7354-1
C9635	ACH7354-1	ACH7354-1	ACH7354-1	ACH7354-1
C9639	ACH7354-1	ACH7354-1	ACH7354-1	ACH7354-1
C9645	ACH7350-1	ACH7350-1	ACH7350-1	ACH7350-1
C9648	ACH7352-1	ACH7352-1	ACH7352-1	ACH7352-1
C9651	ACH7350-1	ACH7350-1	ACH7350-1	ACH7350-1
C9926	470p/50	470p/50	330p/50	330p/50
R9627	820	820	220	220
R9670	10	10	12	12
R9671	10	10	12	12
R9918	10	10	12	12
R9918	10	10	12	12
R9920	10	10	12	12
R9925	22	22	27	27
R9926	22	22	27	27
R9927	22	22	27	27
CN960	AKM7137-1	AKM7137-1	AKM7137-1	AKM7137-1
Q9602	INK0012AW1	INK0012AW1	INK0012AW1	INK0012AW1
X9601	ASS7106-1	ASS7106-1	ASS7123-A	ASS7123-A

10.5 D-MAIN ASSY (4/10)

B 4/10 D-MAIN ASSY

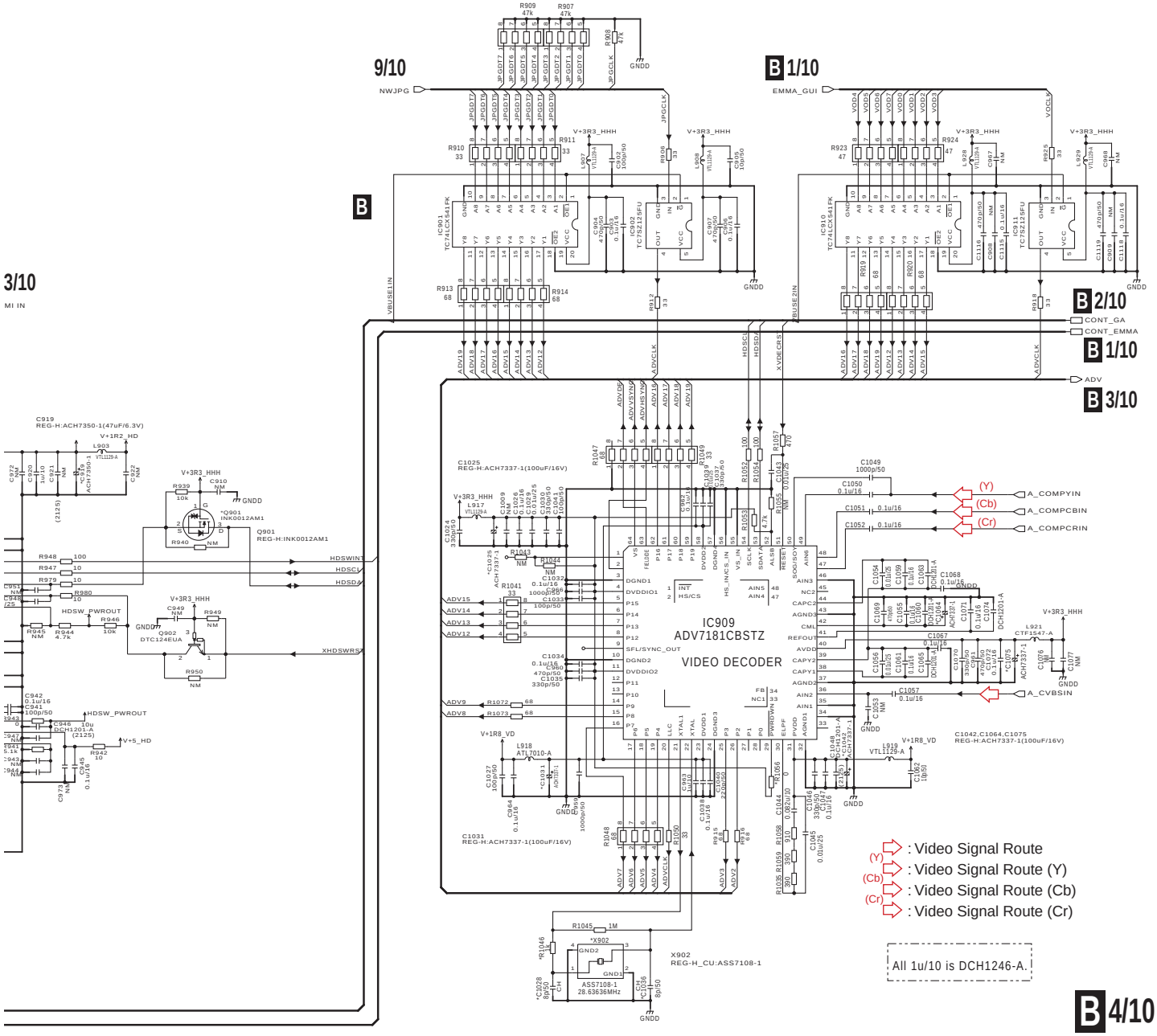
(7028073151010-IL: VSX-1128-K, VSX-1123-K, VSX-70)
(7028073151080-IL: VSX-1028-K)



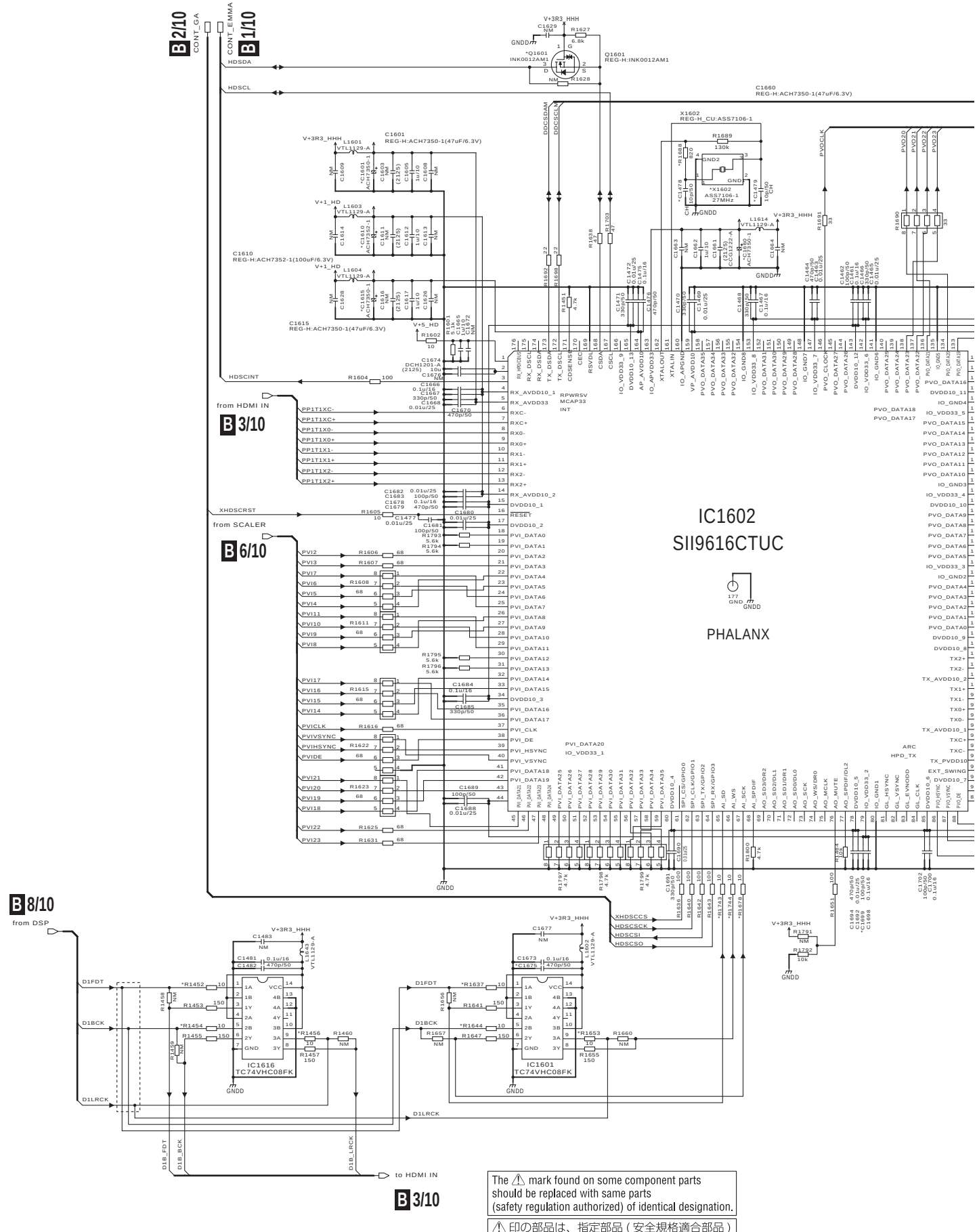
AWX1330: VSX-1128-K/CUXE, VSX-1123-K/CUXESM, VSX-70/CUXE
AWX1352: VSX-1028-K/CUXE
AWX1648: VSX-1123-K/SYXE8
AWX1647: VSX-923-K/SYXE8, VSX-923-S/SYXE8, VSX-923-K/PWVXE8

	AWX1330(REG-H-H_CU)	AWX1352(REG-H-H_CU)	AWX1648(REG-H-H_SY)	AWX1647(REG-H-L_SY)
C913	ACH7337-1	ACH7337-1	ACH7337-1	ACH7337-1
C917	ACH7354-1	ACH7354-1	ACH7354-1	ACH7354-1
C919	ACH7350-1	ACH7350-1	ACH7350-1	ACH7350-1
C924	0.1u/16	0.1u/16	NW	NW
C953	0.1u/16	0.1u/16	0.01u/25	0.01u/25
C1010	0.1u/16	0.1u/16	0.1u/16	0.1u/16
C1025	ACH7337-1	ACH7337-1	ACH7337-1	ACH7337-1
C1028	8p/50	8p/50	27p/50	27p/50
C1031	ACH7337-1	ACH7337-1	ACH7337-1	ACH7337-1
C1036	8p/50	8p/50	27p/50	27p/50
C1042	ACH7337-1	ACH7337-1	ACH7337-1	ACH7337-1
C1064	ACH7337-1	ACH7337-1	ACH7337-1	ACH7337-1
C1075	ACH7337-1	ACH7337-1	ACH7337-1	ACH7337-1
C1095	NW	NW	5p/50	5p/50
C1096	NW	NW	5p/50	5p/50
C1097	NW	NW	5p/50	5p/50
C1101	NW	NW	7p/50	7p/50
C1102	NW	NW	7p/50	7p/50
C1103	NW	NW	7p/50	7p/50
C1107	NW	NW	18p/50	18p/50
C1108	NW	NW	18p/50	18p/50
C1109	NW	NW	18p/50	18p/50
C1110	NW	NW	0.1u/16	0.1u/16
C1111	NW	NW	0.1u/16	0.1u/16
C1112	NW	NW	0.1u/16	0.1u/16
R955	NW	NW	NW	NW
R956	NW	NW	NW	NW
R1001	100k	100k	100k	100k
R1002	33k	33k	33k	33k
R1003	NW	NW	NW	NW
R1004	470	470	470	470
R1005	510	510	510	510
R1006	270	270	270	270
R1046	1k	1k	0	0
R1056	0	0	10	10
R1060	DCH1201-A	DCH1201-A	DCH1201-A	DCH1201-A
R1089	33k	33k	33k	33k
R1091	33k	33k	33k	33k

	AWX1330(REG-H-H_CU)	AWX1352(REG-H-L_CU)	AWX1648(REG-H-H_SY)	AWX1647(REG-H-L_SY)
R1093	33k	33k	33k	33k
R1100	470	470	470	470
R1100	470	470	470	470
R1101	470	470	470	470
R1102	470	470	470	470
R1103	470	470	470	470
R1104	470	470	470	470
R1105	470	470	470	470
R1106	0	0	10	10
R1107	0	0	10	10
R1108	0	0	10	10
R1109	0	0	NW	NW
R1110	0	0	NW	NW
R1111	0	0	NW	NW
R1112	NW	NW	330	330
R1113	NW	NW	330	330
R1114	NW	NW	330	330
R1117	0	0	5p/50	5p/50
R1118	0	0	4p/50	4p/50
R1120	0	0	5p/50	5p/50
R1121	0	0	4p/50	4p/50
R1123	0	0	5p/50	5p/50
R1124	0	0	4p/50	4p/50
L922	NW	NW	ATL7033-A	ATL7033-A
L923	NW	NW	ATL7033-A	ATL7033-A
L924	NW	NW	ATL7033-A	ATL7033-A
L925	NW	NW	ATL7035-A	ATL7035-A
L926	NW	NW	ATL7035-A	ATL7035-A
L927	NW	NW	ATL7035-A	ATL7035-A
Q901	INK0012AM1	INK0012AM1	INK0012AM1	INK0012AM1
Q908	NW	NW	2SC4081(QRS)	2SC4081(QRS)
Q910	NW	NW	2SC4081(QRS)	2SC4081(QRS)
Q911	NW	NW	2SC4081(QRS)	2SC4081(QRS)
Q912	UMG6IN	UMG6IN	UMG6IN	UMG6IN
Q1001	2SA1576A(QRS)	2SA1576A(QRS)	2SA1576A(QRS)	2SA1576A(QRS)
X902	ASS7108-1	ASS7108-1	ASS7111-A	ASS7111-A



10.6 D-MAIN ASSY (5/10)

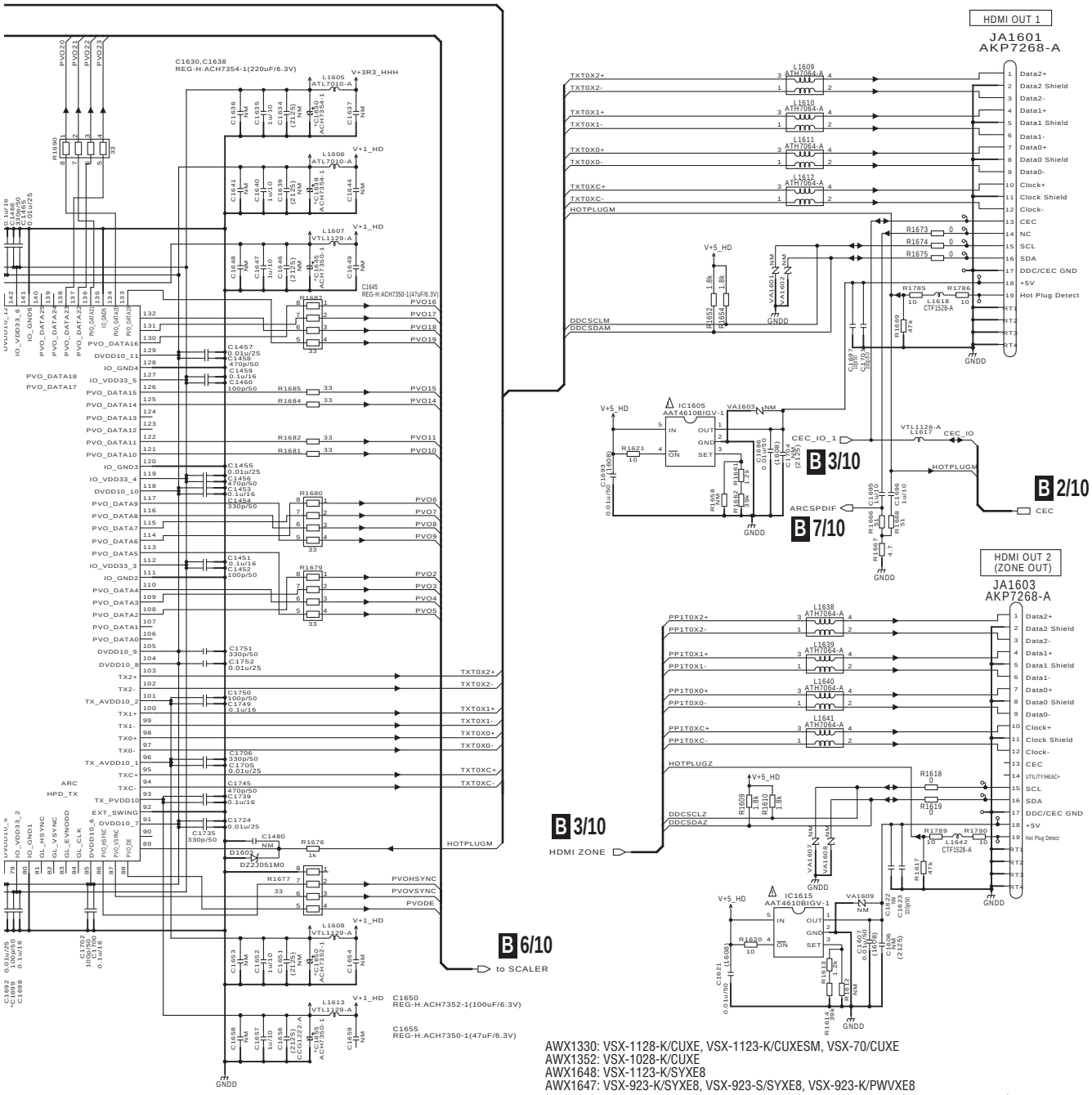


The ⚠ mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.

⚠ 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。

B 5/10 D-MAIN ASSY

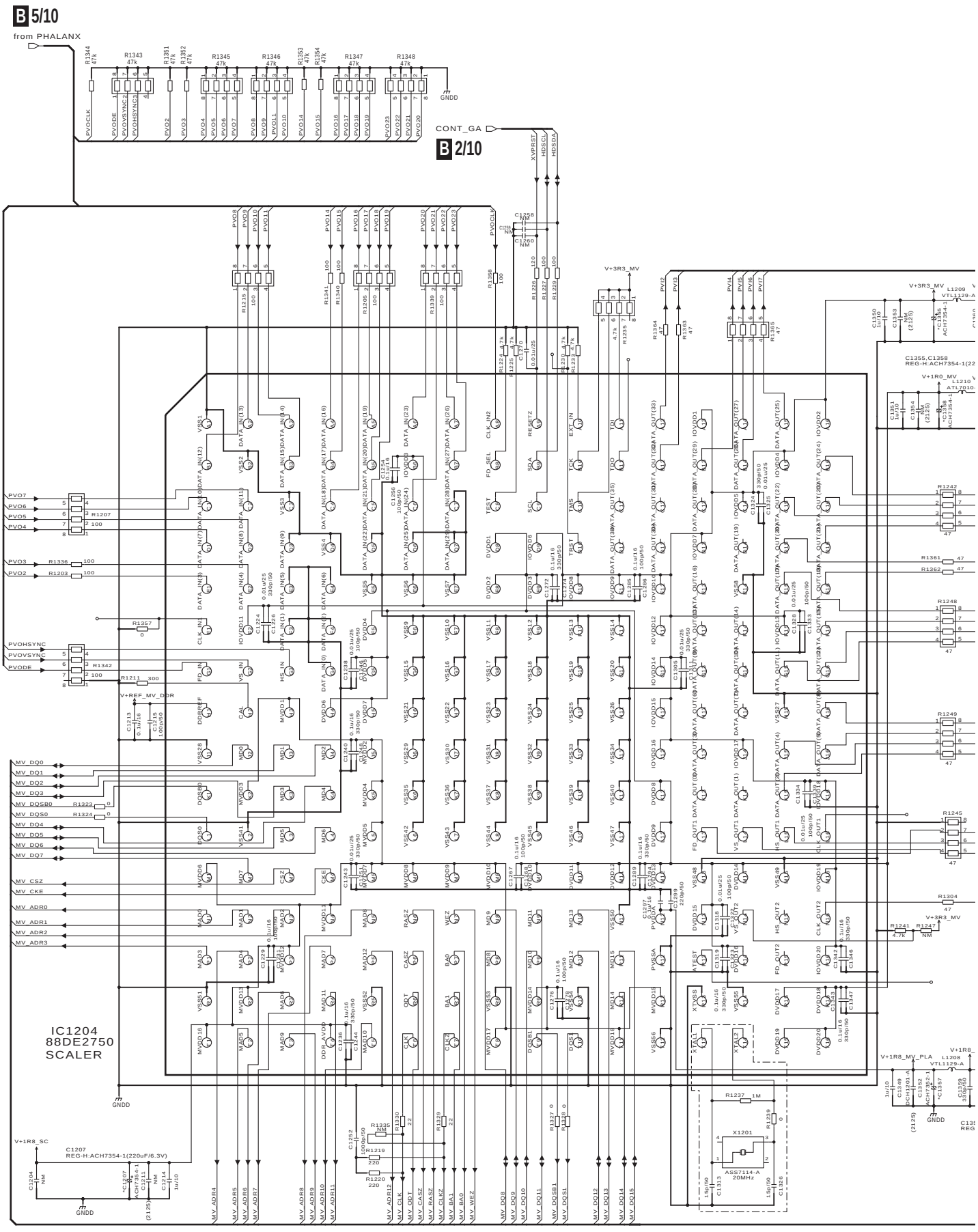
(7028073151010-IL: VSX-1128-K, VSX-1123-K, VSX-70)
(7028073151080-IL: VSX-1028-K)



AWX1330: VSX-1128-K/CUXE, VSX-1123-K/CUXESM, VSX-70/CUXE
AWX1352: VSX-1028-K/CUXE
AWX1648: VSX-1123-K/SYXE8
AWX1647: VSX-923-K/SYXE8, VSX-923-S/SYXE8, VSX-923-K/PWVXE8

	AWX1330(REG-H-H_CU)	AWX1352(REG-H-L_CU)	AWX1648(REG-H-H_SY)	AWX1647(REG-H-L_SY)
C1478	10p/50	10p/50	8p/50	8p/50
C1479	10p/50	10p/50	8p/50	8p/50
C1601	ACH7350-1	ACH7350-1	ACH7350-1	ACH7350-1
C1610	ACH7352-1	ACH7352-1	ACH7352-1	ACH7352-1
C1615	ACH7350-1	ACH7350-1	ACH7350-1	ACH7350-1
C1630	ACH7354-1	ACH7354-1	ACH7354-1	ACH7354-1
C1638	ACH7354-1	ACH7354-1	ACH7354-1	ACH7354-1
C1645	ACH7350-1	ACH7350-1	ACH7350-1	ACH7350-1
C1650	ACH7352-1	ACH7352-1	ACH7352-1	ACH7352-1
C1655	ACH7350-1	ACH7350-1	ACH7350-1	ACH7350-1
C1660	ACH7350-1	ACH7350-1	ACH7350-1	ACH7350-1
C1675	470p/50	470p/50	330p/50	330p/50
C1699	100p/50	100p/50	330p/50	330p/50
R1452	10	10	12	12
R1454	10	10	12	12
R1456	10	10	12	12
R1637	10	10	12	12
R1644	10	10	12	12
R1653	10	10	12	12
R1678	10	10	12	12
R1688	820	820	820	820
R1743	10	10	12	12
R1744	10	10	12	12
Q1601	NKO012AM1	NKO012AM1	NKO012AM1	NKO012AM1
X1602	ASS7106-1	ASS7106-1	ASS7123-A	ASS7123-A

10.7 D-MAIN ASSY (6/10)



B 6/10 D-MAIN ASSY

(7028073151010-IL: VSX-1128-K, VSX-1123-K, VSX-70)
(7028073151080-IL: VSX-1028-K)

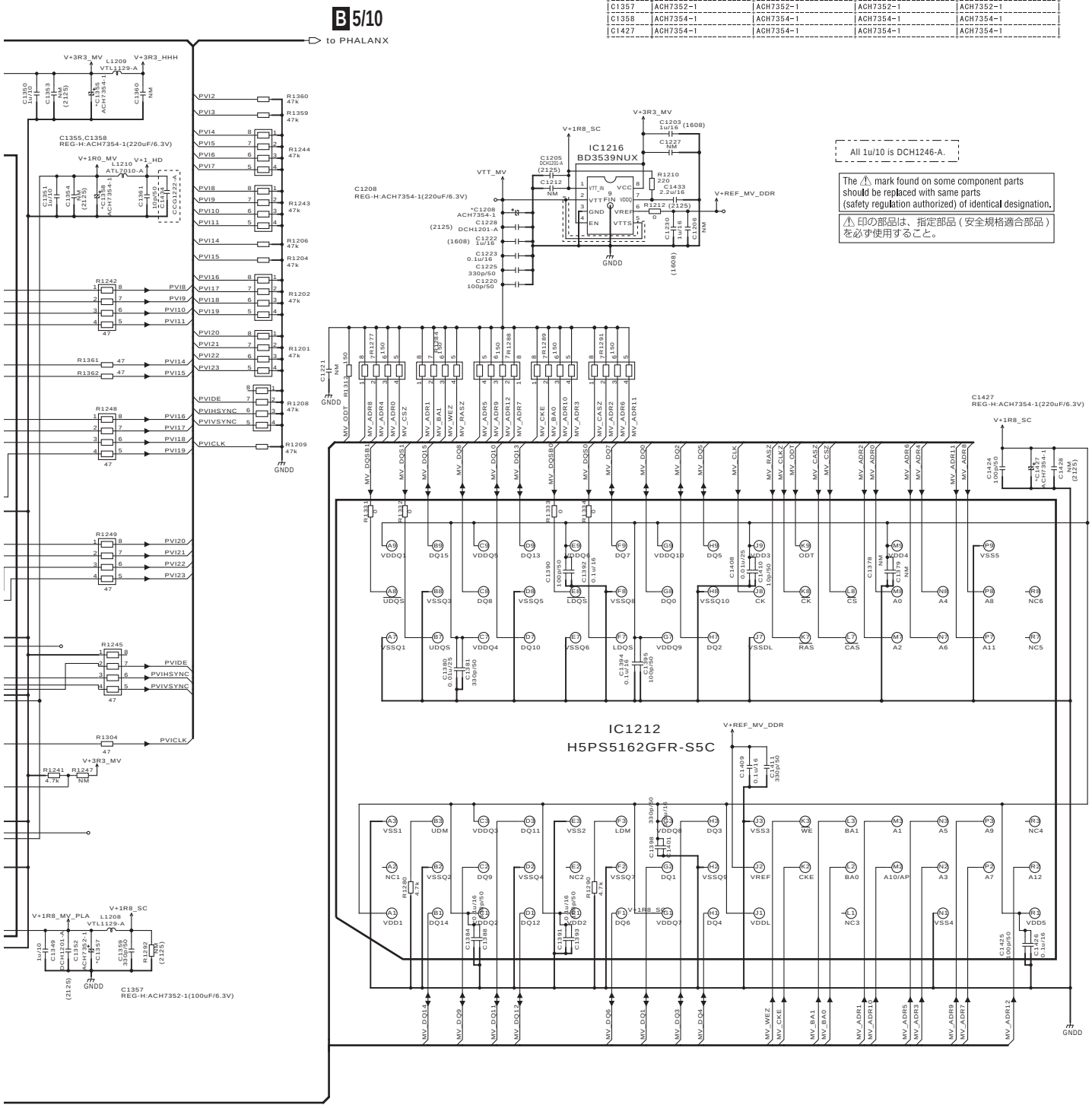
AWX1330: VSX-1128-K/CUXE, VSX-1123-K/CUXESM, VSX-70/CUXE
AWX1352: VSX-1028-K/CUXE
AWX1648: VSX-1123-K/SYXE8
AWX1647: VSX-923-K/SYXE8, VSX-923-S/SYXE8, VSX-923-K/PWVXE8

	AWX1330(REG-H-H_CU)	AWX1352(REG-H-L_CU)	AWX1648(REG-H-H_SY)	AWX1647(REG-H-L_SY)
C1207	ACH7354-1	ACH7354-1	ACH7354-1	ACH7354-1
C1208	ACH7354-1	ACH7354-1	ACH7354-1	ACH7354-1
C1355	ACH7354-1	ACH7354-1	ACH7354-1	ACH7354-1
C1357	ACH7352-1	ACH7352-1	ACH7352-1	ACH7352-1
C1358	ACH7354-1	ACH7354-1	ACH7354-1	ACH7354-1
C1427	ACH7354-1	ACH7354-1	ACH7354-1	ACH7354-1

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.

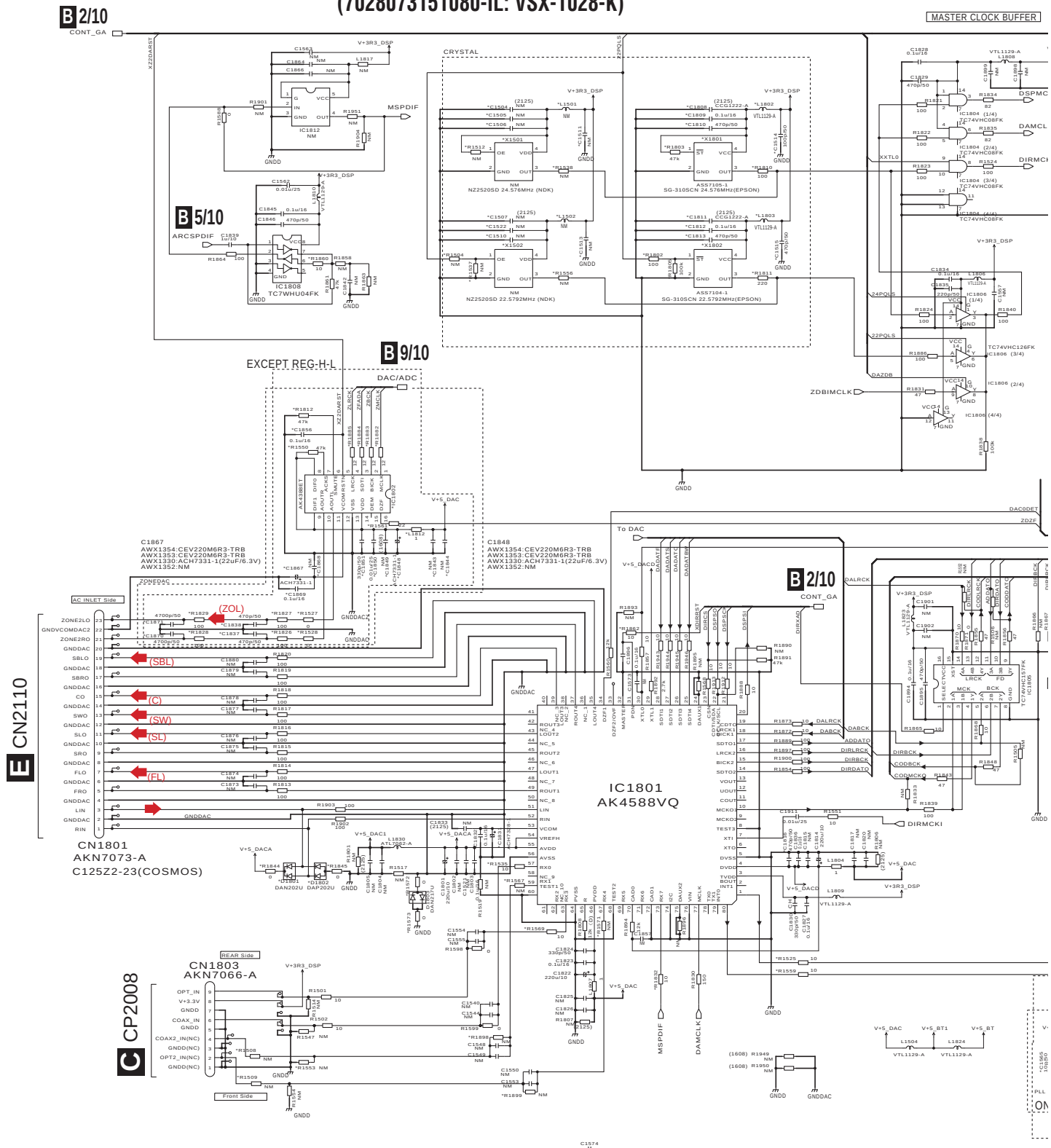
⚠ 印の部品は、指定部品（安全規格適合部品）を必ず使用すること。



10.8 D-MAIN ASSY (7/10)

B 7/10 D-MAIN ASSY

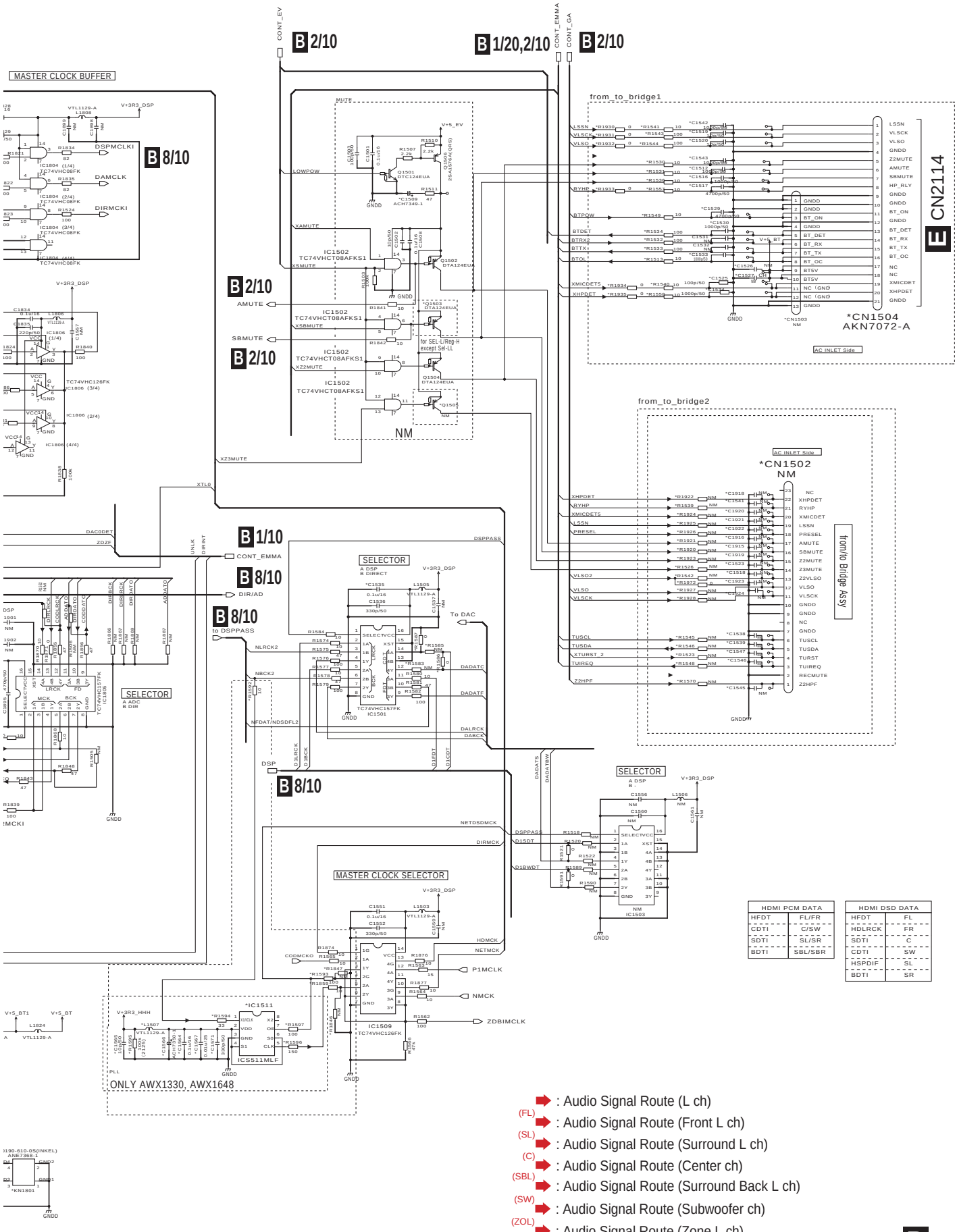
(7028073151010-IL: VSX-1128-K, VSX-1123-K, VSX-70)
(7028073151080-IL: VSX-1028-K)



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。

B 7/10


MASTER CLOCK BUFFER
B 2/10
B 1/20,2/10
B 2/10
B 8/10
B 2/10
B 2/10
B 1/10
B 8/10
B 8/10
B 8/10
E CN2114
from_to_bridge1
*CN1504
AKN7072-A
AC INLET Side
from_to_bridge2
*CN1502
NM
from/to Bridge Assy
NM
SELECTOR
MASTER CLOCK SELECTOR
ONLY AWX1330, AWX1648
HDMI PCM DATA
HDMI DSD DATA
: Audio Signal Route (L ch)
: Audio Signal Route (Front L ch)
: Audio Signal Route (Surround L ch)
: Audio Signal Route (Center ch)
: Audio Signal Route (Surround Back L ch)
: Audio Signal Route (Subwoofer ch)
: Audio Signal Route (Zone L ch)
B 7/10

AWX1330: VSX-1128-K/CUXE, VSX-1123-K/CUXESM, VSX-70/CUXE
AWX1352: VSX-1028-K/CUXE
AWX1648: VSX-1123-K/SYXE8
AWX1647: VSX-923-K/SYXE8, VSX-923-S/SYXE8, VSX-923-K/PWVXE8

	AWX1330(REG-H-H_CU)	AWX1352(REG-H-L_CU)	AWX1648(REG-H-H_SY)	AWX1647(REG-H-L_SY)
C1504	NM	NM	CCG1222-A	CCG1222-A
C1505	NM	NM	0.1u/16	0.1u/16
C1506	NM	NM	470p/50	470p/50
C1507	NM	NM	CCG1222-A	CCG1222-A
C1510	NM	NM	470p/50	470p/50
C1511	NM	NM	100p/50	100p/50
C1513	NM	NM	470p/50	470p/50
C1514	100p/50	100p/50	NM	NM
C1515	470p/50	470p/50	NM	NM
C1522	NM	NM	0.1u/16	0.1u/16
C1808	CCG1222-A	CCG1222-A	NM	NM
C1809	0.1u/16	0.1u/16	NM	NM
C1810	470p/50	470p/50	NM	NM
C1811	CCG1222-A	CCG1222-A	NM	NM
C1812	0.1u/16	0.1u/16	NM	NM
C1813	470p/50	470p/50	NM	NM
C1816	470p/50	470p/50	330p/50	330p/50
C1831	ACH7328-1	ACH7328-1	ACH7328-1	ACH7328-1
C1837	470p/50	NM	470p/50	NM
C1838	470p/50	NM	470p/50	NM
C1843	NM	NM	NM	NM
C1844	NM	NM	NM	NM
C1848	ACH7331-1	NM	ACH7331-1	NM
C1849	NM	NM	NM	NM
C1850	0.01u/25	NM	0.01u/25	NM
C1851	330p/50	NM	330p/50	NM
C1856	0.1u/16	NM	0.1u/16	NM
C1867	ACH7331-1	NM	ACH7331-1	NM
C1868	NM	NM	NM	NM
C1869	0.1u/16	NM	0.1u/16	NM
C1870	4700p/50	NM	4700p/50	NM
C1871	4700p/50	NM	4700p/50	NM
C1912	NM	NM	0.01u/50	0.01u/50
C1913	NM	NM	330p/50	330p/50
C1914	NM	NM	82p/50	82p/50
C1961	0.01u/50	0.01u/50	NM	NM
C1962	330p/50	330p/50	NM	NM
C1963	82p/50	82p/50	NM	NM
L1812	1	NM	1	NM
R1504	NM	NM	100	100
R1508	NM	NM	NM	NM
R1509	NM	NM	NM	NM
R1512	NM	NM	47k	47k
R1525	10	10	12	12
R1527	0	NM	0	NM
R1528	0	NM	0	NM
R1535	10	10	12	12
R1537	NM	NM	100k	100k
R1538	NM	NM	100	100
R1550	47k	NM	47k	NM
R1553	NM	NM	NM	NM
R1556	NM	NM	220	220
R1559	10	10	12	12
R1561	22	NM	22	NM
R1567	NM	NM	NM	NM
R1569	10	10	12	12
R1571	NM	NM	NM	NM
R1572	0	0	1	1
R1573	0	0	1	1
R1802	100	100	NM	NM
R1803	47k	47k	NM	NM
R1805	100k	100k	NM	NM
R1810	100	100	NM	NM
R1811	220	220	NM	NM
R1812	47k	NM	47k	NM
R1826	100	NM	100	NM
R1827	100	NM	100	NM
R1828	100	NM	100	NM
R1829	100	NM	100	NM
R1832	10	10	12	12
R1844	0	0	NM	NM
R1845	0	0	NM	NM
R1860	10	10	12	12
R1862	10	10	12	12
R1882	12	NM	12	NM
R1883	12	NM	12	NM
R1884	12	NM	12	NM
R1885	12	NM	12	NM
R1898	NM	NM	NM	NM
R1899	NM	NM	NM	NM
L1501	NM	NM	VTL1129-A	VTL1129-A
L1502	NM	NM	VTL1129-A	VTL1129-A
L1802	VTL1129-A	VTL1129-A	NM	NM
L1803	VTL1129-A	VTL1129-A	NM	NM
IC1802	AK4388ET	NM	AK4388ET	NM
D1801	DAN202U	DAN202U	NM	NM
D1802	DAP202U	DAP202U	NM	NM
KN1801	ANE7368-1	ANE7368-1	ANE7368-1	ANE7368-1
X1501	NM	NM	ASS7102-A	ASS7102-A
X1502	NM	NM	ASS7101-A	ASS7101-A
X1801	ASS7105-1	ASS7105-1	NM	NM
X1802	ASS7104-1	ASS7104-1	NM	NM

	AWX1330(REG-H-H_CU)	AWX1352(REG-H-L_CU)	AWX1648(REG-H-H_SY)	AWX1647(REG-H-L_SY)
C1509	ACH7349-1	ACH7349-1	ACH7349-1	ACH7349-1
C1512	1000p/50	1000p/50	1000p/50	1000p/50
C1516	1000p/50	1000p/50	1000p/50	1000p/50
C1517	4700p/50	4700p/50	4700p/50	4700p/50
C1518	NM	NM	NM	NM
C1519	10p/50	10p/50	10p/50	10p/50
C1520	10p/50	10p/50	10p/50	10p/50
C1523	NM	NM	NM	NM
C1526	NM	NM	NM	NM
C1527	NM	NM	NM	NM
C1529	4700p/50	4700p/50	4700p/50	4700p/50
C1530	1000p/50	1000p/50	1000p/50	1000p/50
C1533	1000p/50	1000p/50	1000p/50	1000p/50
C1535	0.1u/16	0.1u/16	0.01u/25	0.01u/25
C1538	NM	NM	NM	NM
C1539	NM	NM	NM	NM
C1541	NM	NM	NM	NM
C1542	1000p/50	1000p/50	1000p/50	1000p/50
C1543	1000p/50	1000p/50	1000p/50	1000p/50
C1545	NM	NM	NM	NM
C1546	NM	NM	NM	NM
C1547	NM	NM	NM	NM
C1564	0.1u/16	NM	0.1u/16	NM
C1565	10p/50	NM	10p/50	NM
C1566	ACH7350-1	NM	ACH7350-1	NM
C1567	0.01u/25	NM	0.01u/25	NM
C1571	330p/50	NM	330p/50	NM
C1915	NM	NM	NM	NM
C1916	NM	NM	NM	NM
C1918	NM	NM	NM	NM
C1919	NM	NM	NM	NM
C1920	NM	NM	NM	NM
C1921	NM	NM	NM	NM
C1922	NM	NM	NM	NM
C1923	NM	NM	NM	NM
C1924	NM	NM	NM	NM
C1525	100p/50	100p/50	100p/50	100p/50
C1534	1000p/50	1000p/50	1000p/50	1000p/50
R1513	10	10	10	10
R1523	NM	NM	NM	NM
R1526	NM	NM	NM	NM
R1530	10	10	10	10
R1531	10	10	10	10
R1532	100	100	100	100
R1533	100	100	100	100
R1534	100	100	100	100
R1536	10	10	10	10
R1539	NM	NM	NM	NM
R1540	10	10	10	10
R1541	10	10	10	10
R1542	NM	NM	NM	NM
R1543	100	100	100	100
R1544	100	100	100	100
R1545	NM	NM	NM	NM
R1546	NM	NM	NM	NM
R1548	NM	NM	NM	NM
R1549	10	10	10	10
R1557	10	10	10	10
R1558	10	10	10	10
R1570	NM	NM	NM	NM
R1583	NM	NM	100	100
R1585	NM	NM	10	10
R1586	0	0	NM	NM
R1587	0	0	NM	NM
R1592	10	NM	10	NM
R1593	100	NM	100	NM
R1594	33	NM	33	NM
R1595	100k	NM	100k	NM
R1596	150	NM	150	NM
R1597	100	NM	100	NM
R1846	NM	0	NM	0
R1847	NM	0	NM	0
R1859	10	NM	10	NM
R1920	NM	NM	NM	NM
R1921	NM	NM	NM	NM
R1922	NM	NM	NM	NM
R1923	NM	NM	NM	NM
R1924	NM	NM	NM	NM
R1925	NM	NM	NM	NM
R1926	NM	NM	NM	NM
R1927	NM	NM	NM	NM
R1928	NM	NM	NM	NM
R1930	0	0	0	0
R1931	0	0	0	0
R1932	0	0	0	0
R1933	0	0	0	0
R1934	0	0	0	0
R1935	0	0	0	0
R1972	0	0	0	0
L1507	VTL1129-A	NM	VTL1129-A	NM
IC1511	ICS511MLF	NM	ICS511MLF	NM
CN1502	NM	NM	NM	NM
CN1503	NM	NM	NM	NM
CN1504	AKN7072-A	AKN7072-A	AKN7072-A	AKN7072-A
Q1503	DTA124EUA	DTA124EUA	DTA124EUA	DTA124EUA
Q1505	NM	NM	NM	NM
TP1514	NM	NM	NM	NM
TP1516	NM	NM	NM	NM
TP1527	NM	NM	NM	NM
TP1528	NM	NM	NM	NM
TP1529	NM	NM	NM	NM
TP1531	NM	NM	NM	NM
TP1532	NM	NM	NM	NM
TP1850	NM	NM	NM	NM
TP1851	NM	NM	NM	NM
TP1854	NM	NM	NM	NM
TP1855	NM	NM	NM	NM
TP1856	NM	NM	NM	NM
TP1859	NM	NM	NM	NM
TP1861	NM	NM	NM	NM
TP1862	NM	NM	NM	NM
TP1863	NM	NM	NM	NM
TP1864	NM	NM	NM	NM

A

B

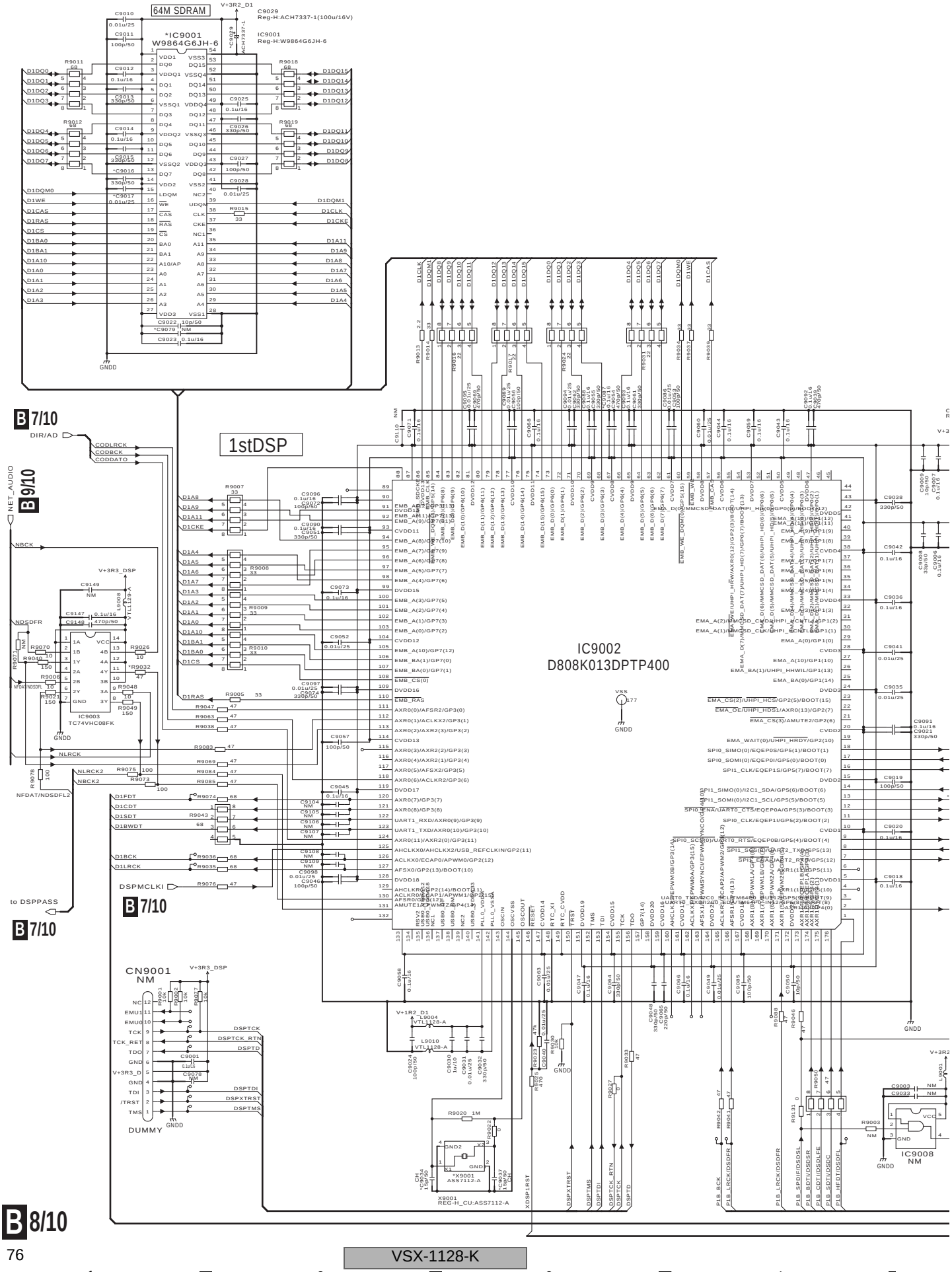
C

D

E

F

10.9 D-MAIN ASSY (8/10)

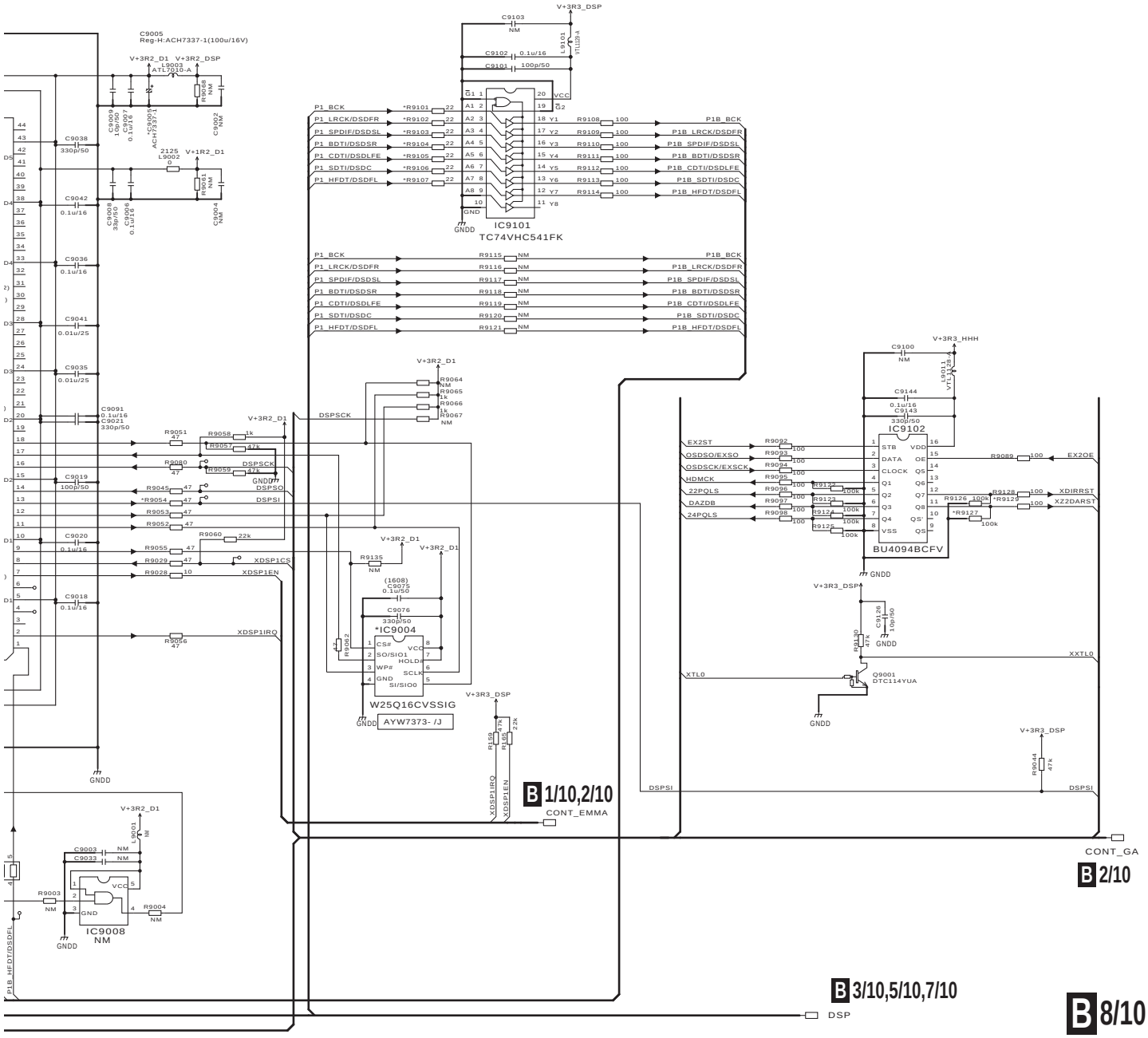


B 8/10 D-MAIN ASSY

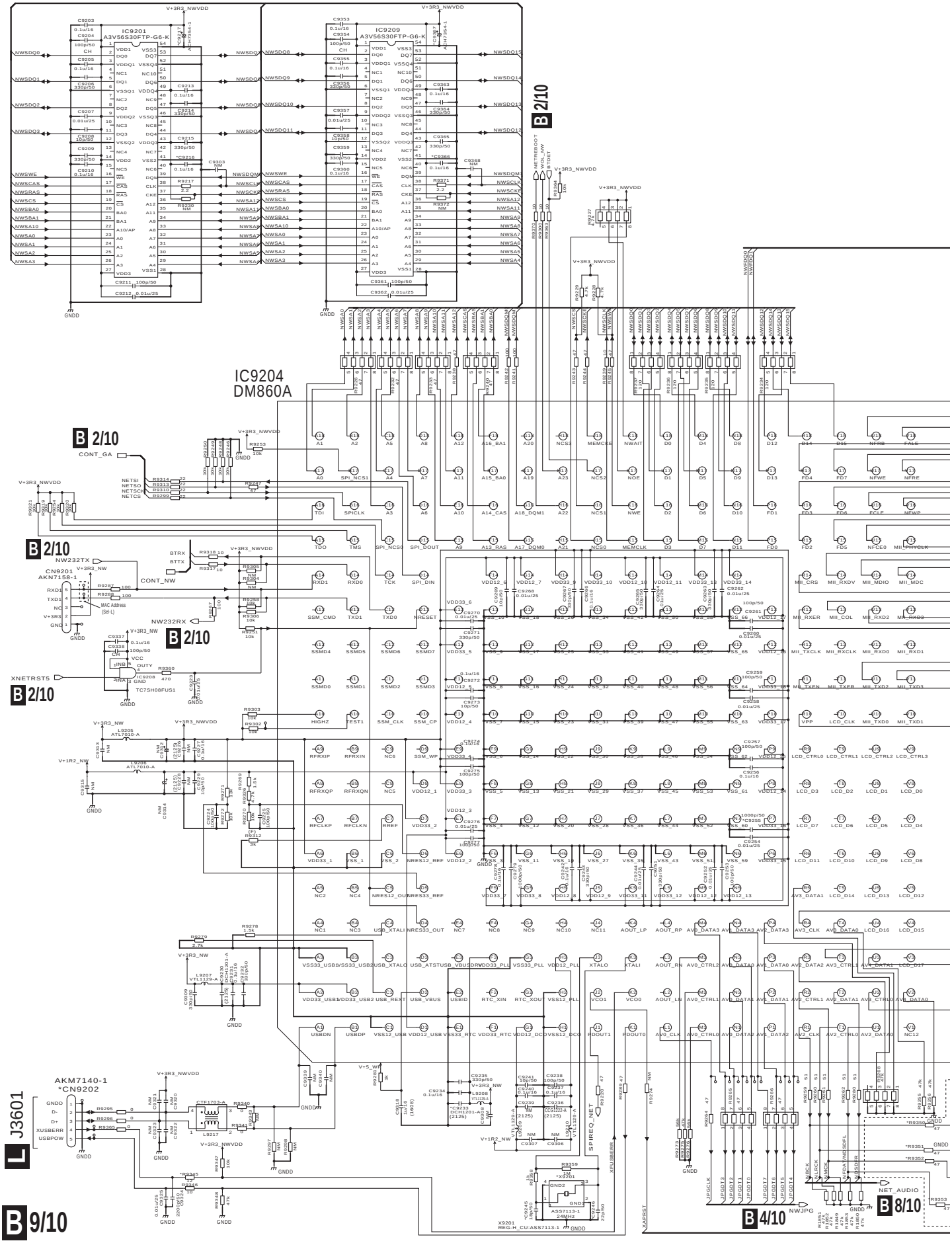
(7028073151010-IL: VSX-1128-K, VSX-1123-K, VSX-70)
(7028073151080-IL: VSX-1028-K)

AWX1330: VSX-1128-K/CUXE, VSX-1123-K/CUXESM, VSX-70/CUXE
AWX1352: VSX-1028-K/CUXE
AWX1648: VSX-1123-K/SYXE8
AWX1647: VSX-923-K/SYXE8, VSX-923-S/SYXE8, VSX-923-K/PWVXE8

	AWX1330(REG-H-H_CU)	AWX1352(REG-H-L_CU)	AWX1648(REG-H-H_SY)	AWX1647(REG-H-L_SY)
C9005	ACH7337-1	ACH7337-1	ACH7337-1	ACH7337-1
C9016	330p/50	330p/50	0.01u/25	0.01u/25
C9017	0.01u/25	0.01u/25	NM	NM
C9029	ACH7337-1	ACH7337-1	ACH7337-1	ACH7337-1
C9034	15p/50	15p/50	10p/50	10p/50
C9037	15p/50	15p/50	10p/50	10p/50
C9079	NM	NM	330p/50	330p/50
C9087	0.1u/16	0.1u/16	0.01u/25	0.01u/25
R9032	47	47	150	150
R9054	47	47	56	56
R9101	22	22	27	27
R9102	22	22	27	27
R9103	22	22	27	27
R9104	22	22	27	27
R9105	22	22	27	27
R9106	22	22	27	27
R9107	22	22	27	27
R9127	100k	NM	100k	NM
R9129	100	NM	100	NM
IC9001	W9864G6JH-6	W9864G6JH-6	W9864G6JH-6	W9864G6JH-6
IC9004	W25Q16CVSSIG	W25Q16CVSSIG	W25Q16CVSSIG	W25Q16CVSSIG
X9001	ASS7112-A	ASS7112-A	CSS1795-A	CSS1795-A



10.10 D-MAIN ASSY (9/10)

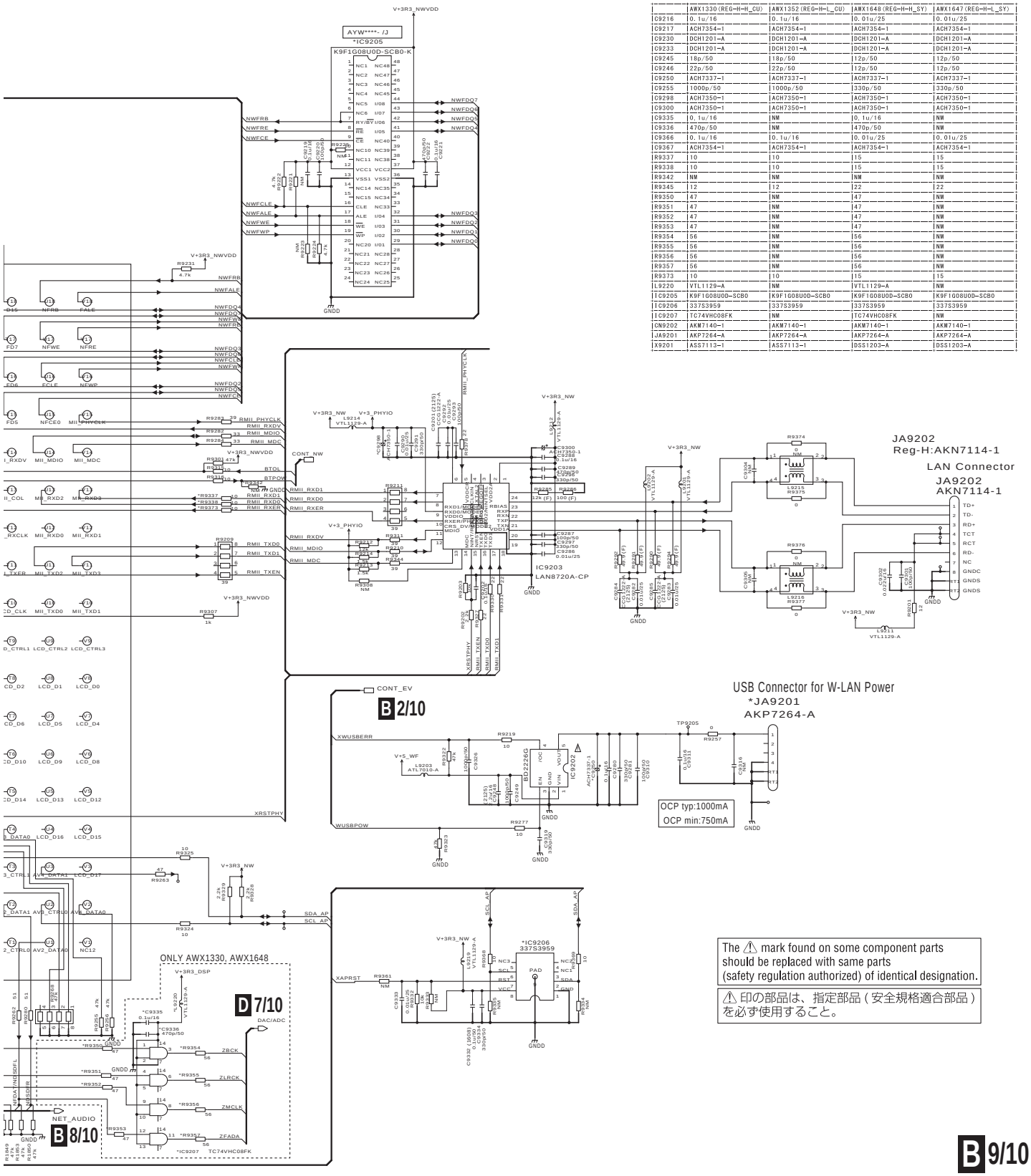


B 9/10 D-MAIN ASSY

(7028073151010-IL: VSX-1128-K, VSX-1123-K, VSX-70)
(7028073151080-IL: VSX-1028-K)

AWX1330: VSX-1128-K/CUXE, VSX-1123-K/CUXESM, VSX-70/CUXE
AWX1352: VSX-1028-K/CUXE
AWX1648: VSX-1123-K/SYXE8
AWX1647: VSX-923-K/SYXE8, VSX-923-S/SYXE8, VSX-923-K/PWVXE8

	AWX1330(REG-H-H_CU)	AWX1352(REG-H-L_CU)	AWX1648(REG-H-H_SY)	AWX1647(REG-H-L_SY)
C9216	0.1u/16	0.1u/16	0.01u/25	0.01u/25
C9217	ACH7354-I	ACH7354-I	ACH7354-I	ACH7354-I
C9230	DCH1201-A	DCH1201-A	DCH1201-A	DCH1201-A
C9233	DCH1201-A	DCH1201-A	DCH1201-A	DCH1201-A
C9245	18p/50	18p/50	12p/50	12p/50
C9246	22p/50	22p/50	12p/50	12p/50
C9250	ACH7337-I	ACH7337-I	ACH7337-I	ACH7337-I
C9255	1000p/50	1000p/50	330p/50	330p/50
C9298	ACH7350-I	ACH7350-I	ACH7350-I	ACH7350-I
C9300	ACH7350-I	ACH7350-I	ACH7350-I	ACH7350-I
C9335	0.1u/16	NM	0.1u/16	NM
C9336	470p/50	NM	470p/50	NM
C9366	0.1u/16	0.1u/16	0.01u/25	0.01u/25
C9367	ACH7354-I	ACH7354-I	ACH7354-I	ACH7354-I
R9337	10	10	15	15
R9338	10	10	15	15
R9342	NM	NM	NM	NM
R9345	12	12	22	22
R9350	47	NM	47	NM
R9351	47	NM	47	NM
R9352	47	NM	47	NM
R9353	47	NM	47	NM
R9354	56	NM	56	NM
R9355	56	NM	56	NM
R9356	56	NM	56	NM
R9357	56	NM	56	NM
R9373	10	10	15	15
L9220	VTL1129-A	NM	VTL1129-A	NM
IC9205	K9F1G08U0D-SCB0	K9F1G08U0D-SCB0	K9F1G08U0D-SCB0	K9F1G08U0D-SCB0
IC9206	337S3959	337S3959	337S3959	337S3959
IC9207	TC74VHC08FK	NM	TC74VHC08FK	NM
CN9202	AKM7140-I	AKM7140-I	AKM7140-I	AKM7140-I
JA9201	AKP7264-A	AKP7264-A	AKP7264-A	AKP7264-A
X9201	ASS7113-I	ASS7113-I	DSS1203-A	DSS1203-A

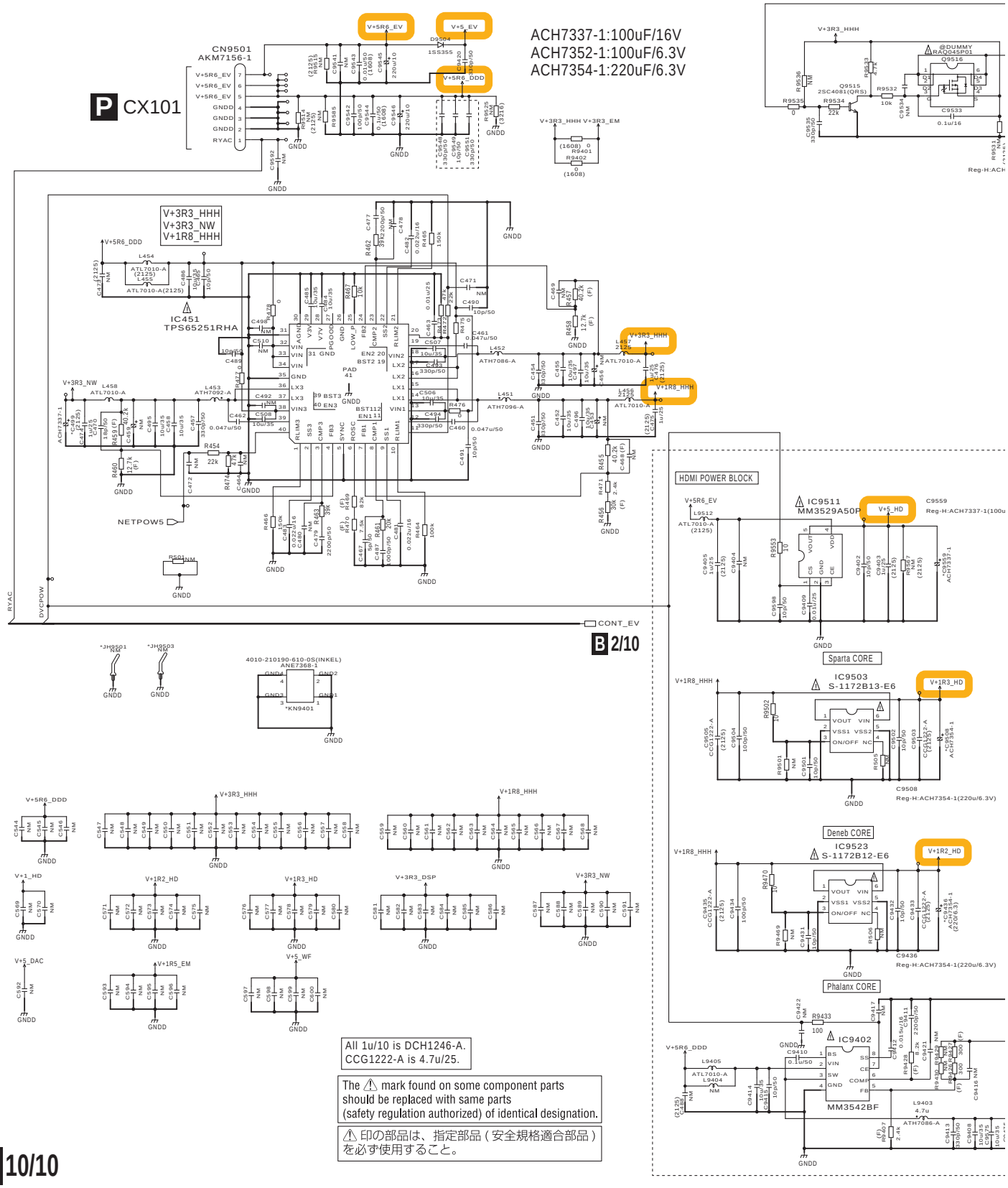


10.11 D-MAIN ASSY (10/10)

AWX1330: VSX-1128-K/CUXE, VSX-1123-K/CUXESM, VSX-70/CUXE
AWX1352: VSX-1028-K/CUXE
AWX1648: VSX-1123-K/SYXE8
AWX1647: VSX-923-K/SYXE8, VSX-923-S/SYXE8, VSX-923-K/PWVXE8

	AWX1330(REG-H-H_CU)	AWX1352(REG-H-L_CU)	AWX1648(REG-H-H_SY)	AWX1647(REG-H-L_SY)
C408	ACH7337-1	ACH7337-1	VCH1234-A	VCH1234-A
C428	ACH7352-1	ACH7352-1	ACH7352-1	ACH7352-1
C499	ACH7337-1	ACH7337-1	ACH7337-1	ACH7337-1
C9436	ACH7354-1	ACH7354-1	ACH7354-1	ACH7354-1
C9489	ACH7337-1	ACH7337-1	ACH7337-1	ACH7337-1
C9508	ACH7354-1	ACH7354-1	ACH7354-1	ACH7354-1
C9559	ACH7337-1	ACH7337-1	ACH7337-1	ACH7337-1
C9574	ACH7337-1	ACH7337-1	ACH7337-1	ACH7337-1
R9555	10	10	12	12
JH9501	NM	NM	NM	NM
JH9503	NM	NM	NM	NM
KN9401	ANE7368-1	ANE7368-1	ANE7368-1	ANE7368-1

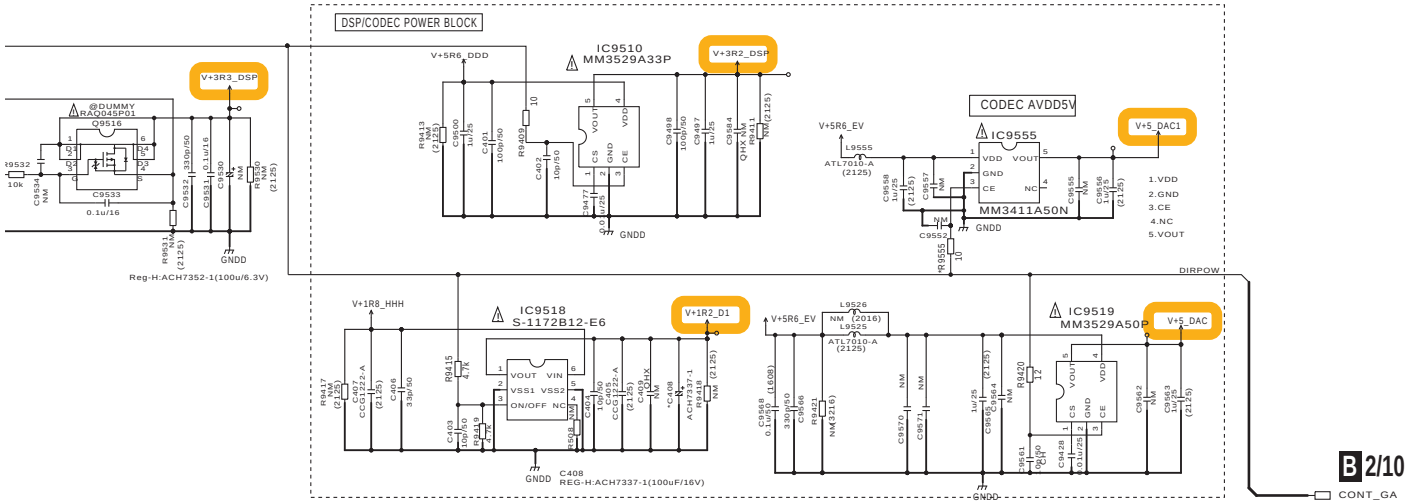
ACH7337-1:100uF/16V
ACH7352-1:100uF/6.3V
ACH7354-1:220uF/6.3V

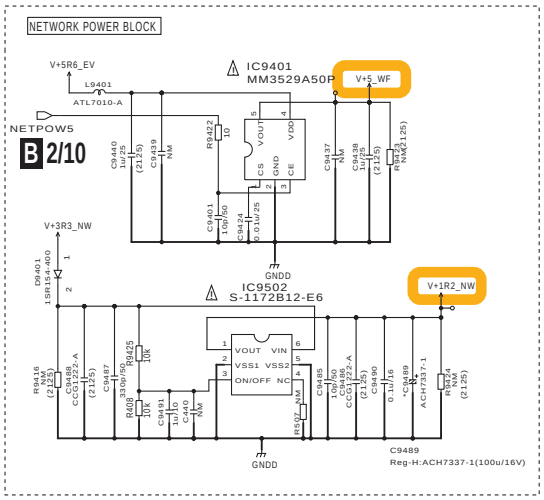


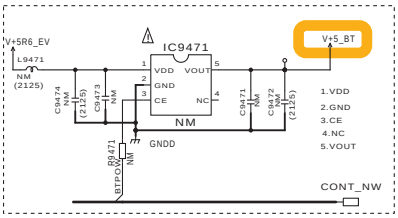
B 10/10

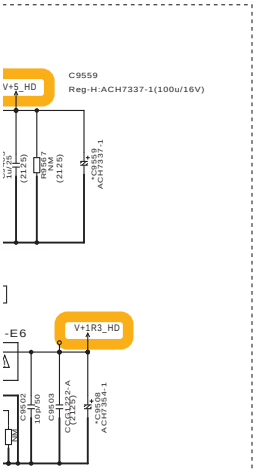
B 10/10 D-MAIN ASSY

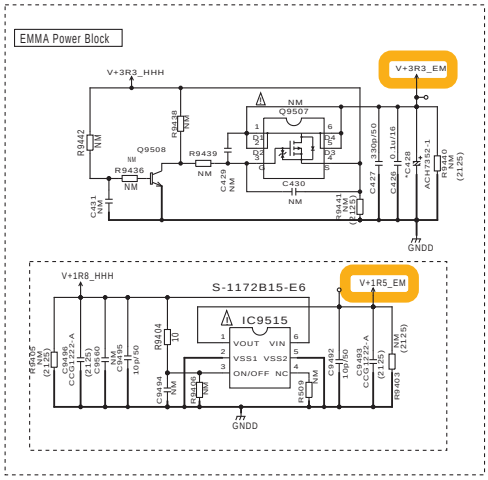
(7028073151010-IL: VSX-1128-K, VSX-1123-K, VSX-70)
(7028073151080-IL: VSX-1028-K)

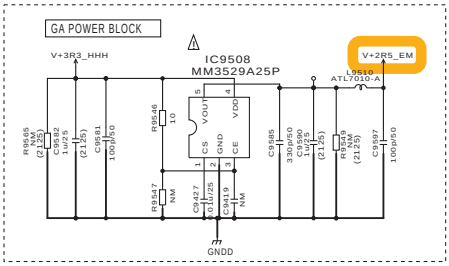


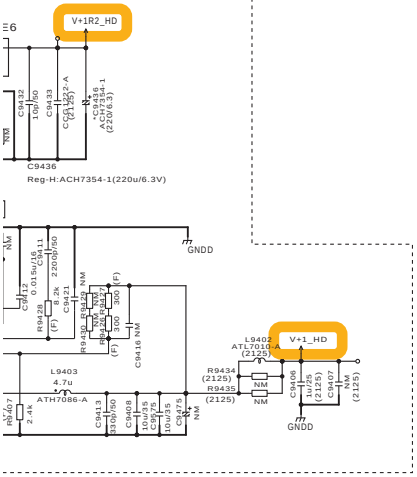


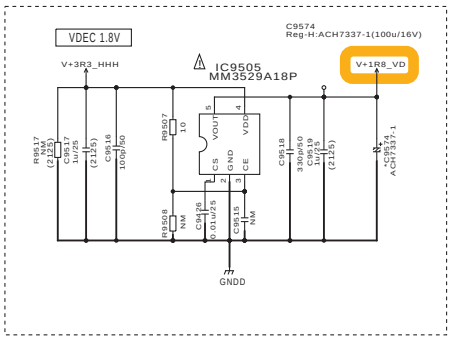


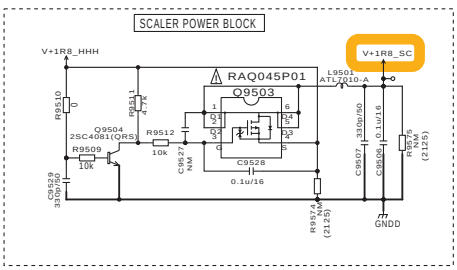








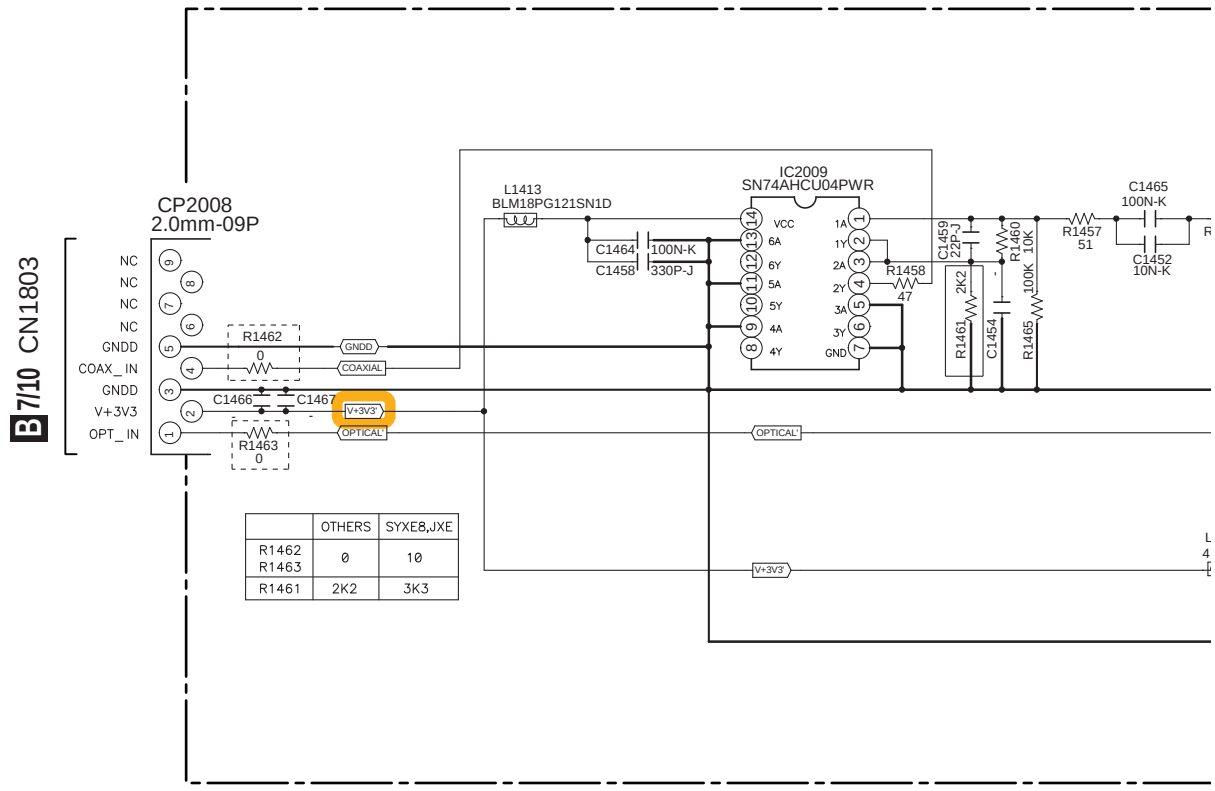




B 10/10

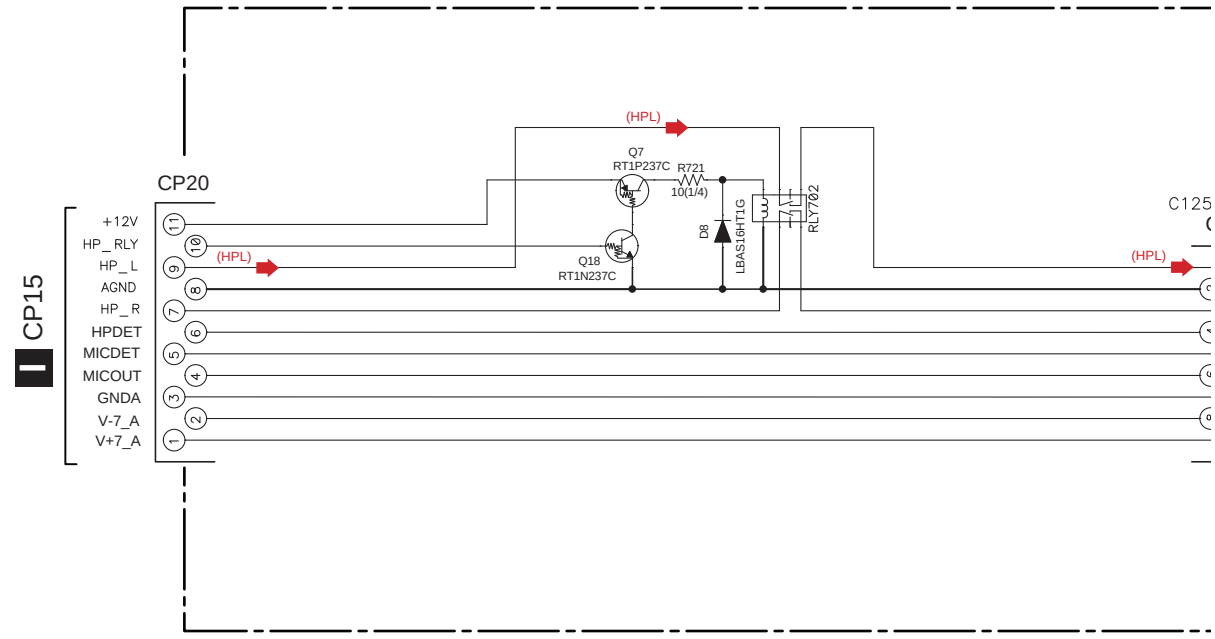
10.12 OPTCO and BRI-2 ASSYS

C OPTCO ASSY (7028073112010-IL)

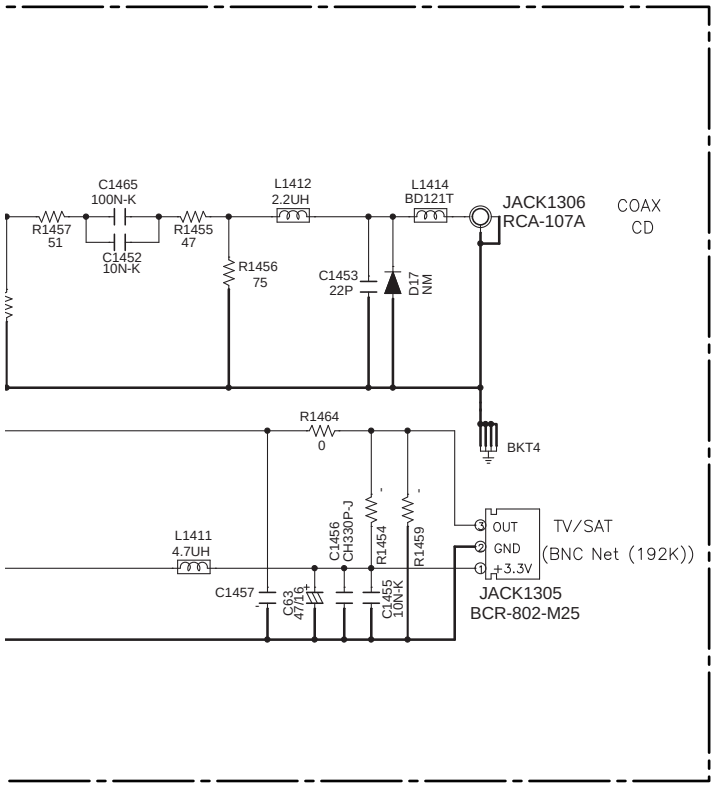


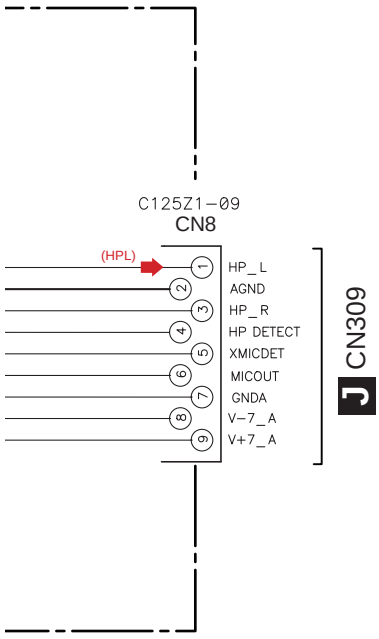
	OTHERS	SYXE8,JXE
R1462 R1463	0	10
R1461	2K2	3K3

D BRI-2 ASSY (7028073133010-IL)



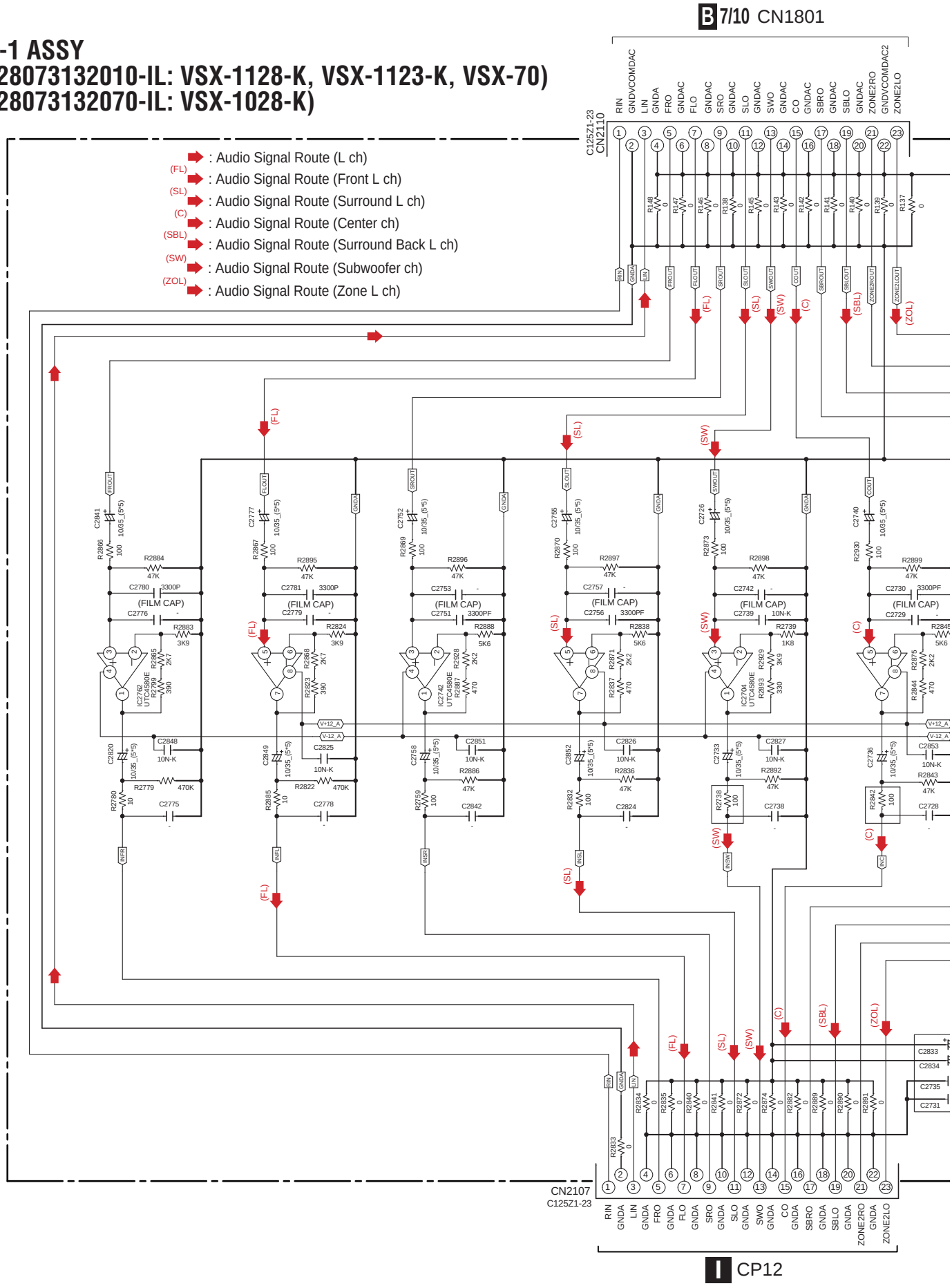
(HPL) : Audio Signal Route (Headphone L ch)

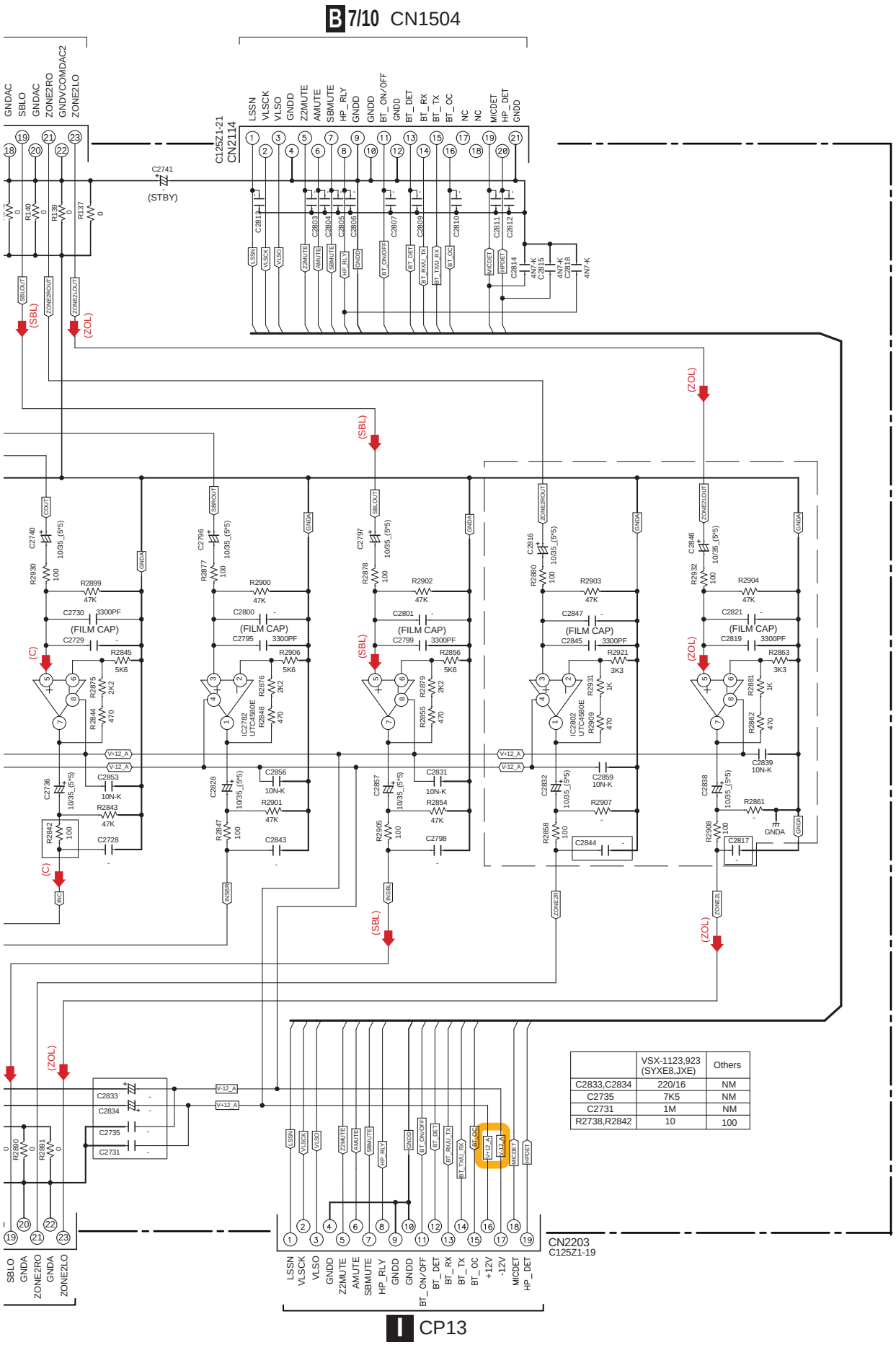

C1465
100N-K
R1457
51
C1452
10N-K
R1455
47
L1412
2.2UH
R1456
75
C1453
22P
D17
NM
L1414
BD121T
JACK1306
RCA-107A
COAX
CD
R1464
0
BKT4
L1411
4.7UH
C1457
C63
47/16
C1456
CH330P-J
R1454
R1459
C1455
10N-K
OUT
GND
+3.3V
TV/SAT
(BNC Net (192K))
JACK1305
BCR-802-M25


C125Z1-09
CN8
(HPL)
1 HP_L
2 AGND
3 HP_R
4 HP DETECT
5 XMICDET
6 MICOUT
7 GNDA
8 V-7_A
9 V+7_A
CN309

E

BRI-1 ASSY
(7028073132010-IL: VSX-1128-K, VSX-1123-K, VSX-70)
(7028073132070-IL: VSX-1028-K)

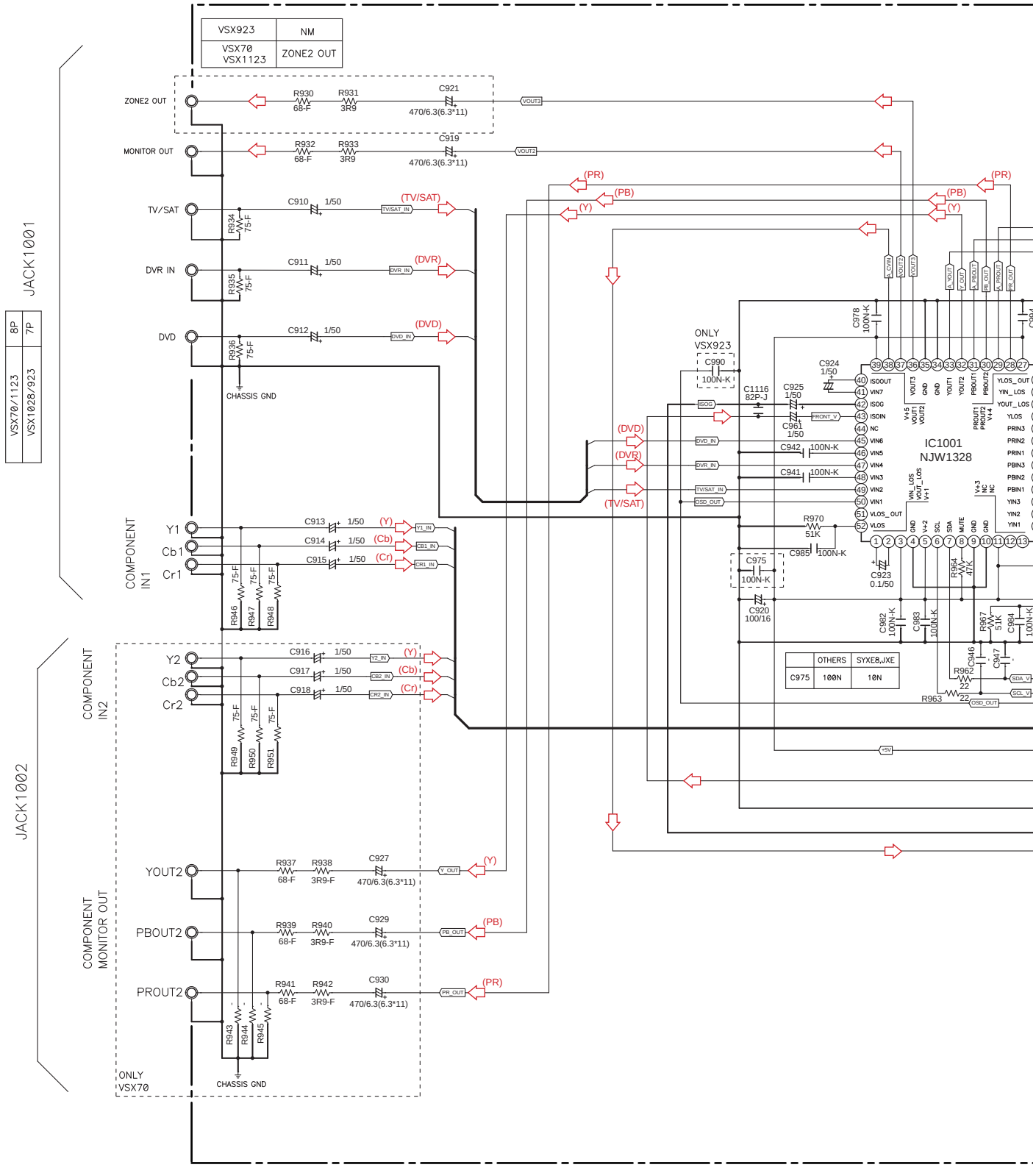




	VSX-1123,923 (SYXE8,JXE)	Others
C2833,C2834	220/16	NM
C2735	7K5	NM
C2731	1M	NM
R2738,R2842	10	100

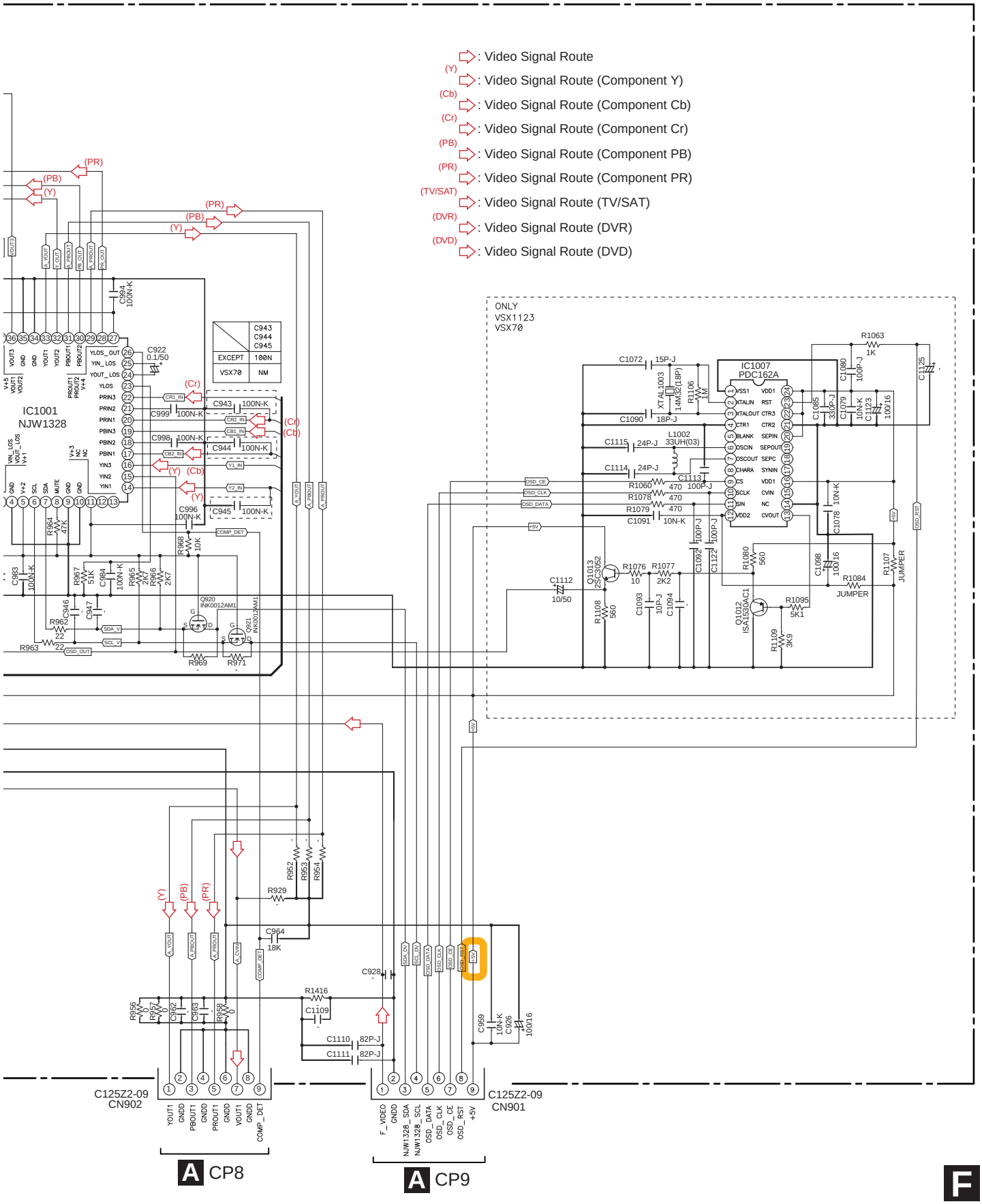
10.14 VIDEO ASSY

F VIDEO ASSY (7028073113040-IL: VSX-1128-K, VSX-1123-K)
(7028073113010-IL: VSX-70)
(7028073113070-IL: VSX-1028-K)

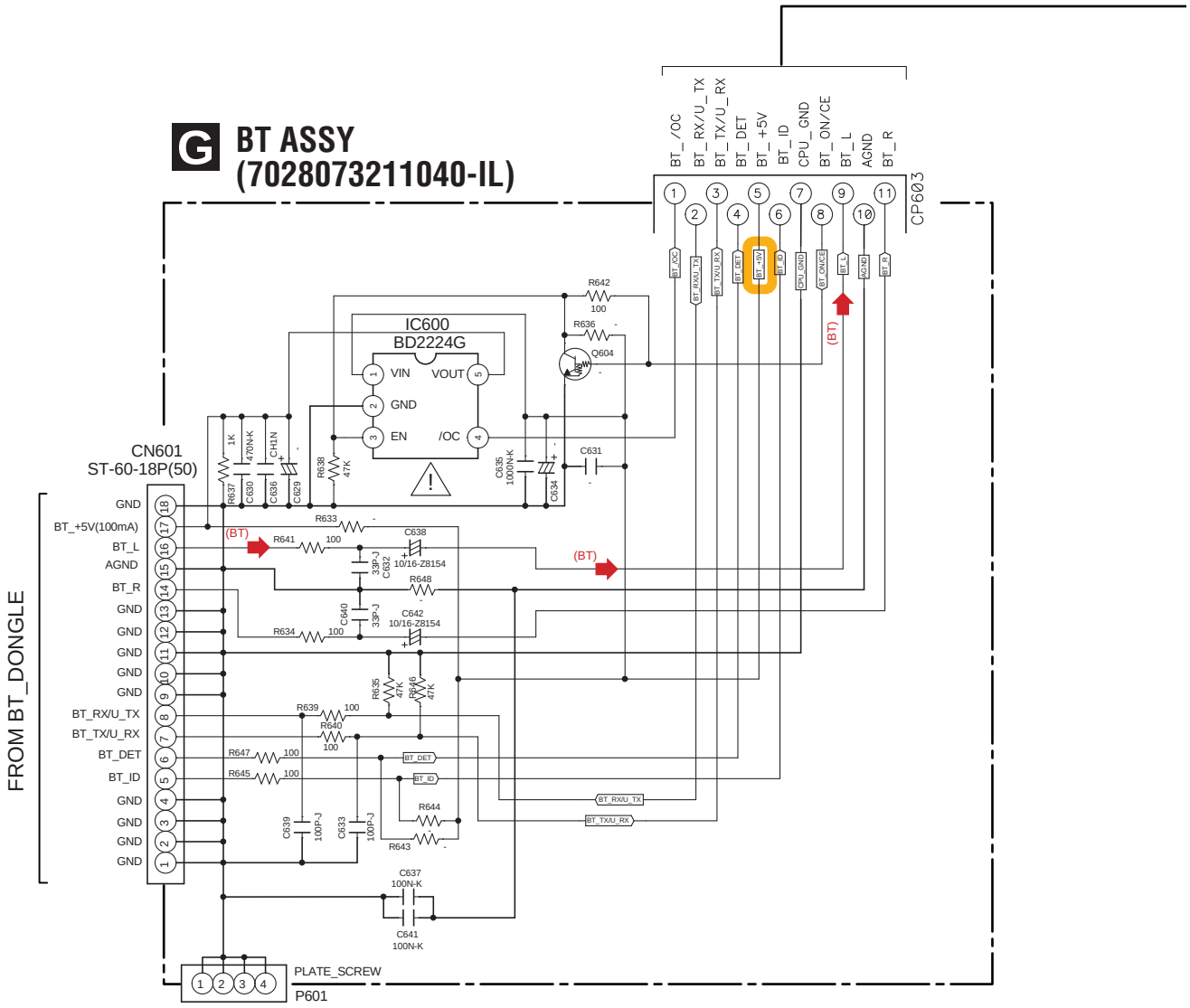


-K)

: Video Signal Route
(Y): Video Signal Route (Component Y)
(Cb): Video Signal Route (Component Cb)
(Cr): Video Signal Route (Component Cr)
(PB): Video Signal Route (Component PB)
(PR): Video Signal Route (Component PR)
(TV/SAT): Video Signal Route (TV/SAT)
(DVR): Video Signal Route (DVR)
(DVD): Video Signal Route (DVD)

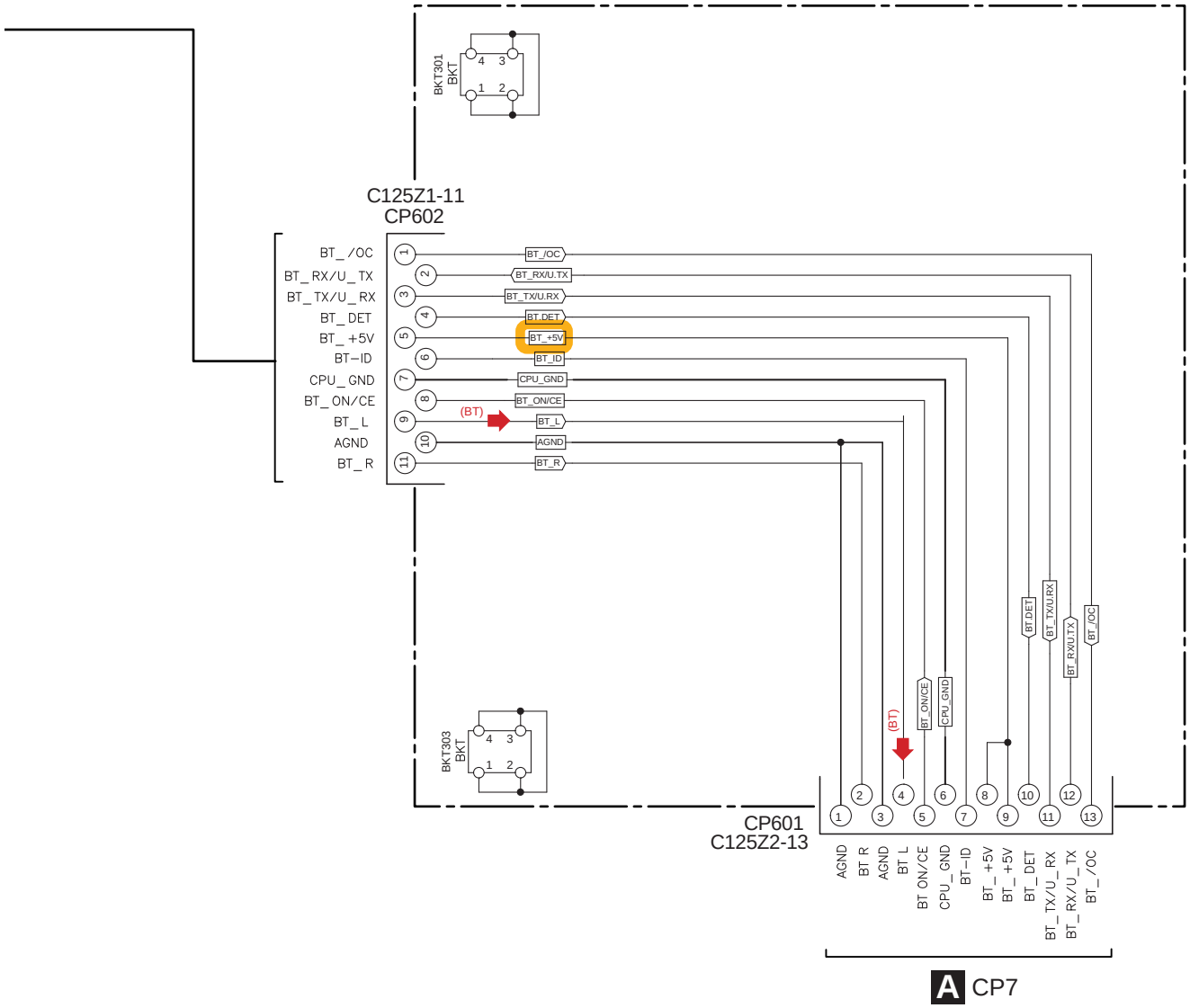


10.15 BT and BTCNT ASSYS



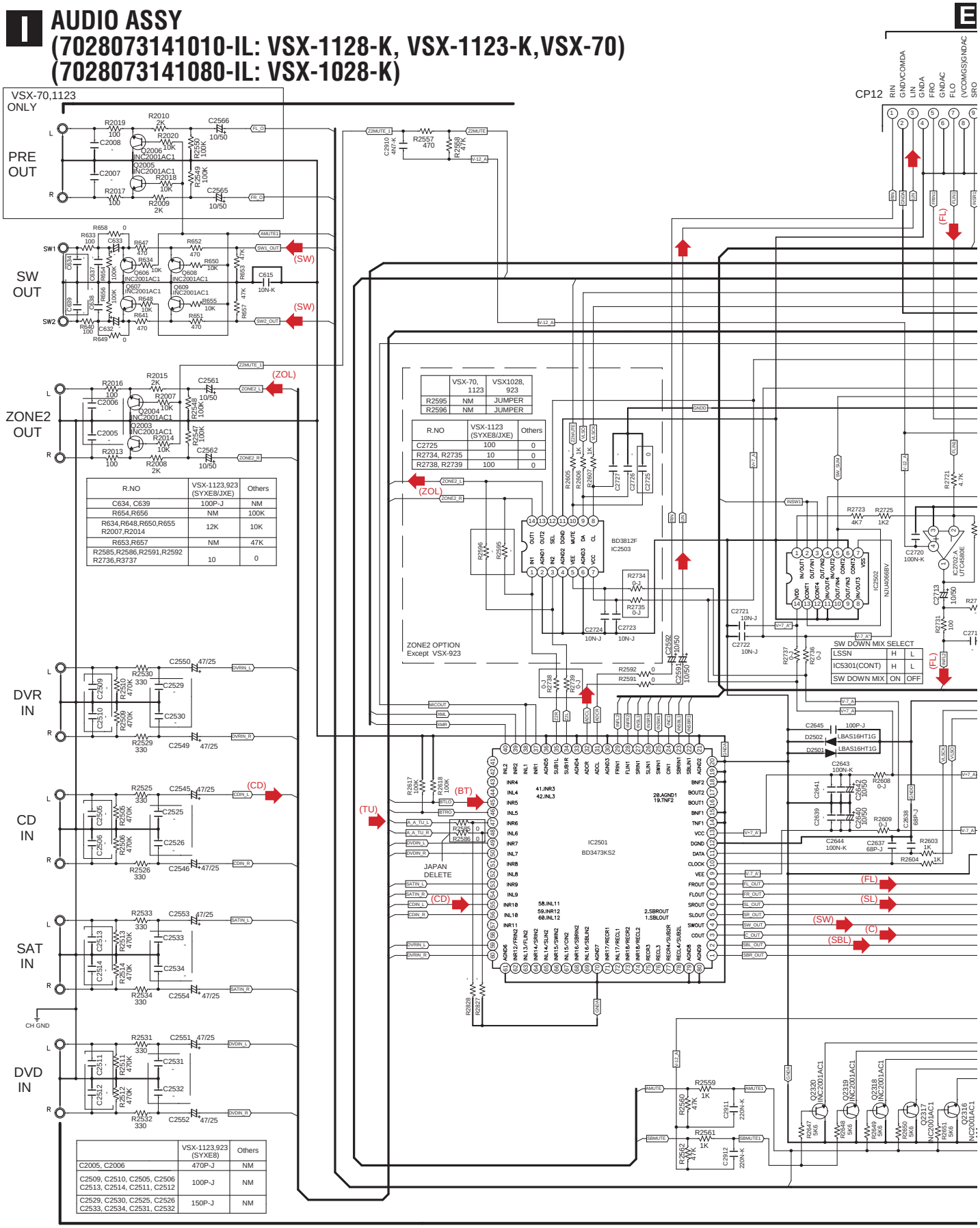
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

H BTCNT ASSY (7028073134010-IL)



(BT) : Audio Signal Route (BT L ch)

AUDIO ASSY
(7028073141010-IL: VSX-1128-K, VSX-1123-K,VSX-70)
(7028073141080-IL: VSX-1028-K)

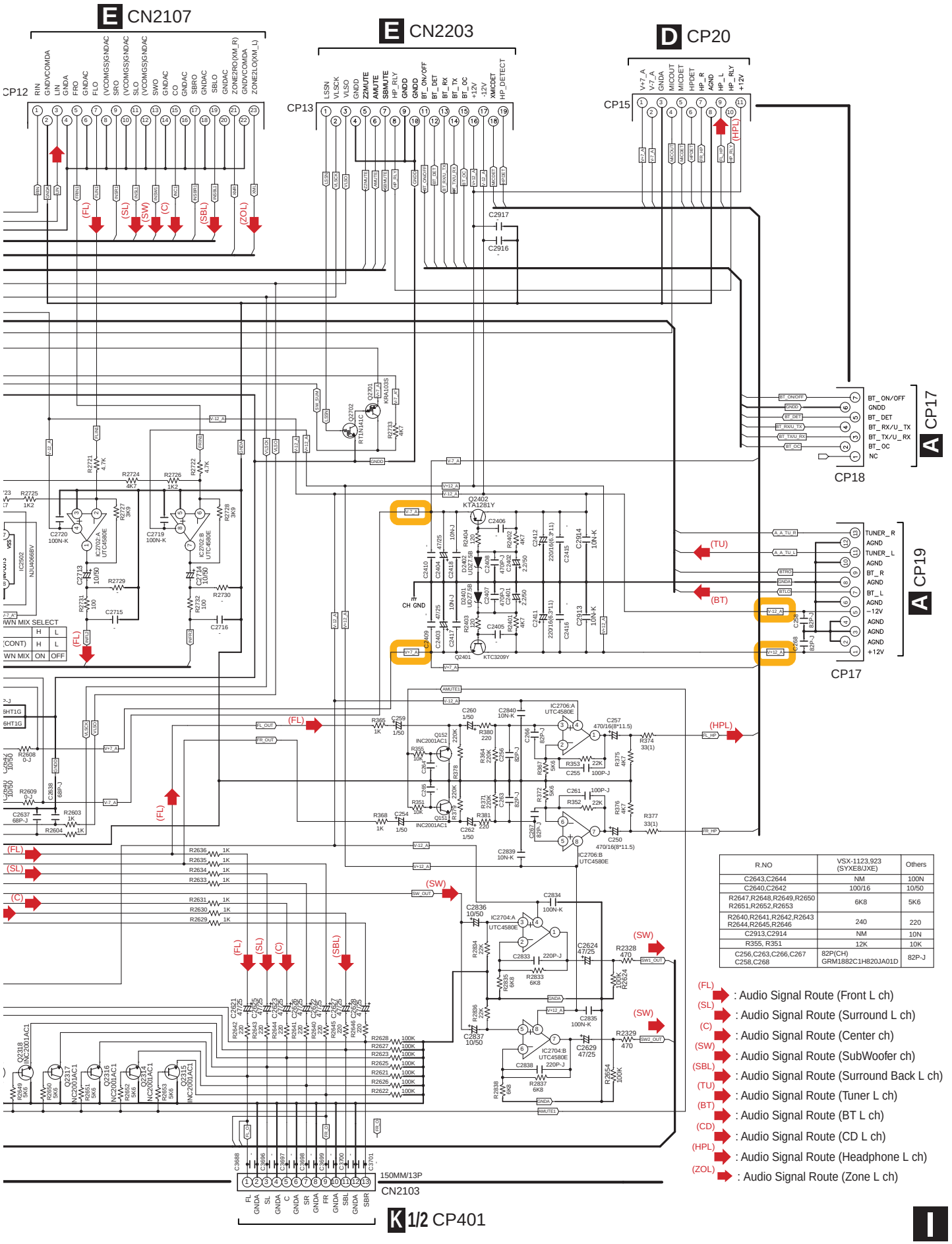


	VSX-70, 1123	VSX1028, 923
R2595	NM	JUMPER
R2596	NM	JUMPER

R.NO	VSX-1123 (SYXE8/JXE)	Others
C2725	100	0
R2734, R2735	10	0
R2738, R2739	100	0

R.NO	VSX-1123,923 (SYXE8/JXE)	Others
C634, C639	100P-J	NM
R654,R656	NM	100K
R634,R648,R650,R655 R2007,R2014	12K	10K
R653,R657	NM	47K
R2585,R2586,R2591,R2592 R2736,R3737	10	0

	VSX-1123,923 (SYXE8)	Others
C2005, C2006	470P-J	NM
C2509, C2510, C2505, C2506 C2513, C2514, C2511, C2512	100P-J	NM
C2529, C2530, C2525, C2526 C2533, C2534, C2531, C2532	150P-J	NM



R.NO	VSX-1123,923 (SYXE8/JXE)	Others
C2643,C2644	NM	100N
C2640,C2642	100/16	10/50
R2647,R2648,R2649,R2650 R2651,R2652,R2653	6K8	5K6
R2640,R2641,R2642,R2643 R2644,R2645,R2646	240	220
C2913,C2914	NM	10N
R355, R351	12K	10K
C256,C263,C266,C267 C258,C268	82P(CH) GRM1882C1H820JA01D	82P-J

(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)
(TU) : Audio Signal Route (Tuner L ch)
(BT) : Audio Signal Route (BT L ch)
(CD) : Audio Signal Route (CD L ch)
(HPL) : Audio Signal Route (Headphone L ch)
(ZOL) : Audio Signal Route (Zone L ch)

10.17 CPU ASSY

MODEL DISCRIMINATION

NAME		PROJECT		AREA		MODEL	
MODEL	AREA	R390	R394	R389	R393	R388	R392
923	JPN(JXE)	NM	47K	39K	10K	NM	47K
923	CH(AXE5)	NM	47K	33K	22K	NM	47K
923	GEN-H,(FXE)	NM	47K	22K	33K	NM	47K
923	GEN-H(DLXE)	NM	47K	10K	39K	NM	47K
923	AUS(PWXE)	NM	47K	47K	NM	39K	10K
923	EU(SYXE8)	NM	47K	47K	NM	NM	47K
1028	NA(CUXE)	NM	47K	NM	47K	33K	22K
1123	JPN(JXE)	NM	47K	39K	10K	47K	NM
1123	CH(AXE5)	NM	47K	33K	22K	47K	NM
1123	GEN-H(DLXE)	NM	47K	10K	39K	47K	NM
1123	EU(SYXE8)	NM	47K	47K	NM	47K	NM
1128	NA(CUXE)	NM	47K	NM	47K	22K	33K
1123	NA(CUXESM)	NM	47K	NM	47K	47K	NM
ELITE70	NA(UXECB)	NM	47K	NM	47K	10K	39K

FOR DEBUG & D.L.

B 2/10 CN601

B 2/10

CP300
FPC1.0MM/5P_AN

CN301
FFC/27P_WAFER

CN302
C125Z1-15

CN304
1.0-11S-33PW

CN3001

CN305
20010WR-06

CN801

CN306
20010WR-09

CN7203

CN309
B-B/9P_WAFER

CN8

EVENT UCOM
IC300
R5F100MHAFA

REG300
AP1117-3.3

IC302 NJU7700F4-42
(4.2V DETECTION)

VSX70 ONLY
R418,R332
C349,C358

	VSX70	EXCEPT ELITE
R365	10K	47K

CN310
B-B/7P_WAFER

CN311
B-B/15P_WAFER

CN312
B-B/9P_WAFER

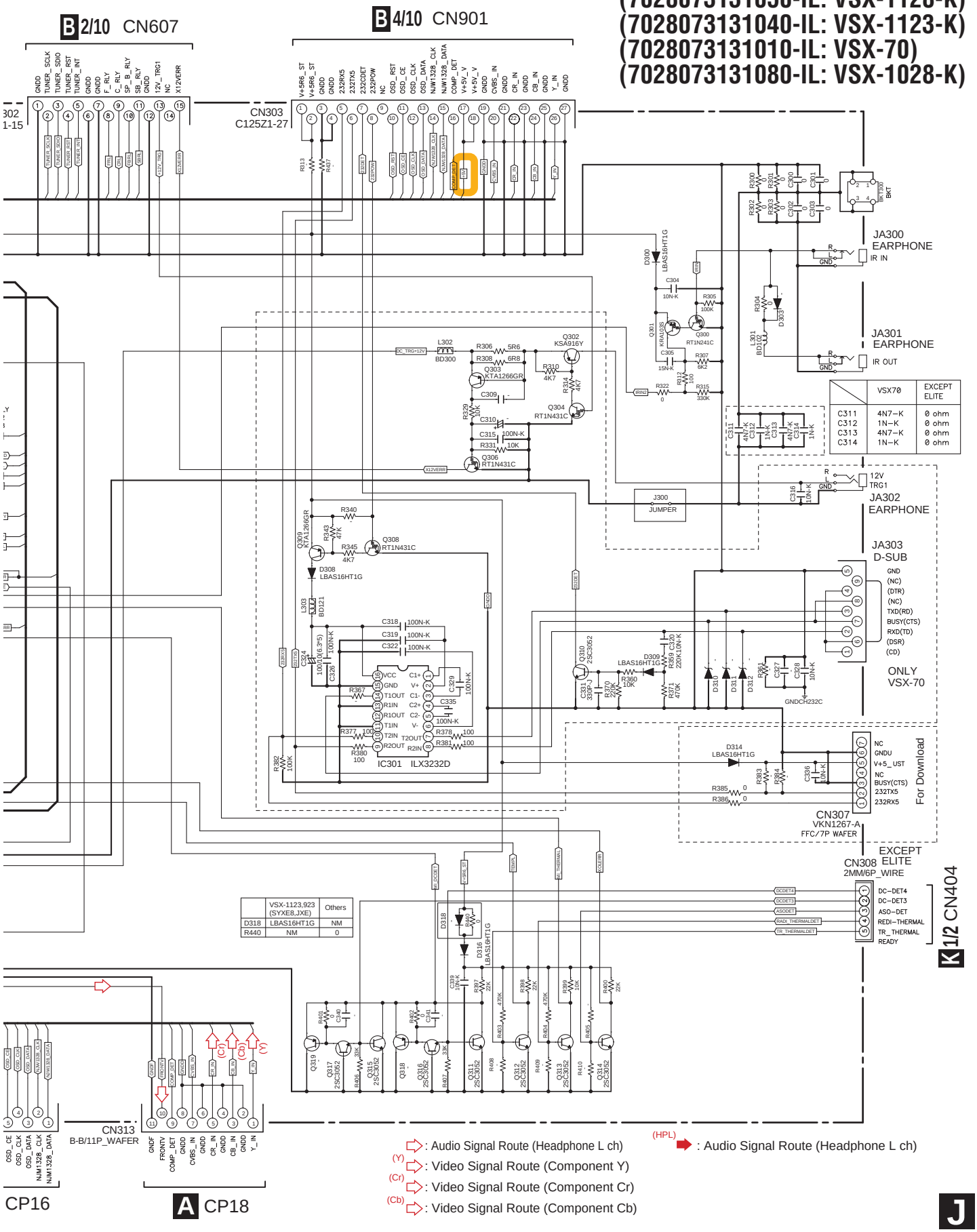
CN3
B-B/11P_WA

A CP21

A CP12

A CP16

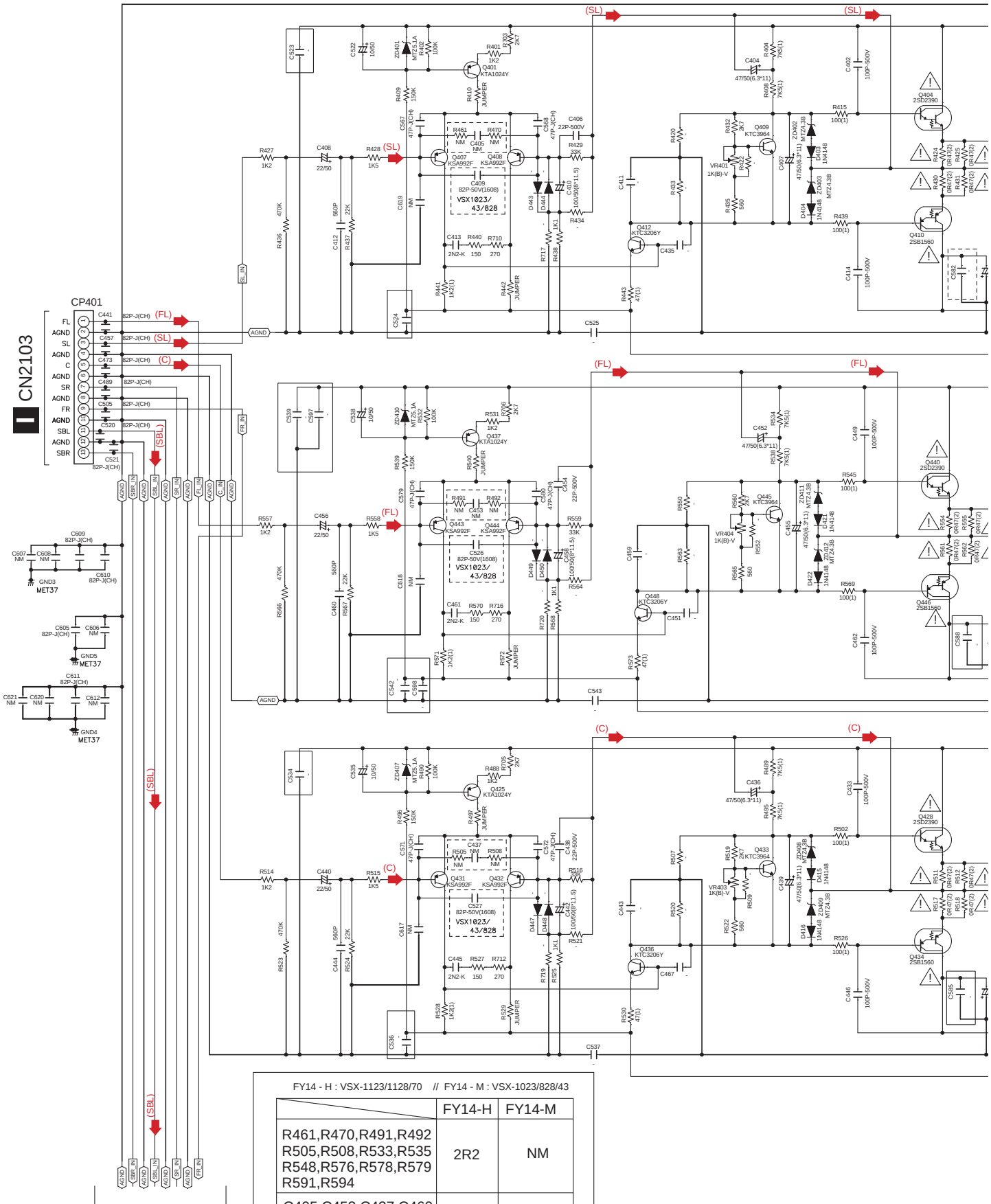
J CPU ASSY
(7028073131050-IL: VSX-1128-K)
(7028073131040-IL: VSX-1123-K)
(7028073131010-IL: VSX-70)
(7028073131080-IL: VSX-1028-K)



	VSX70	EXCEPT ELITE
C311	4N7−K	0 ohm
C312	1N−K	0 ohm
C313	4N7−K	0 ohm
C314	1N−K	0 ohm

	VSX-1123,923 (SYXE8,JXE)	Others
D318	LBAS16HT1G	NM
R440	NM	0

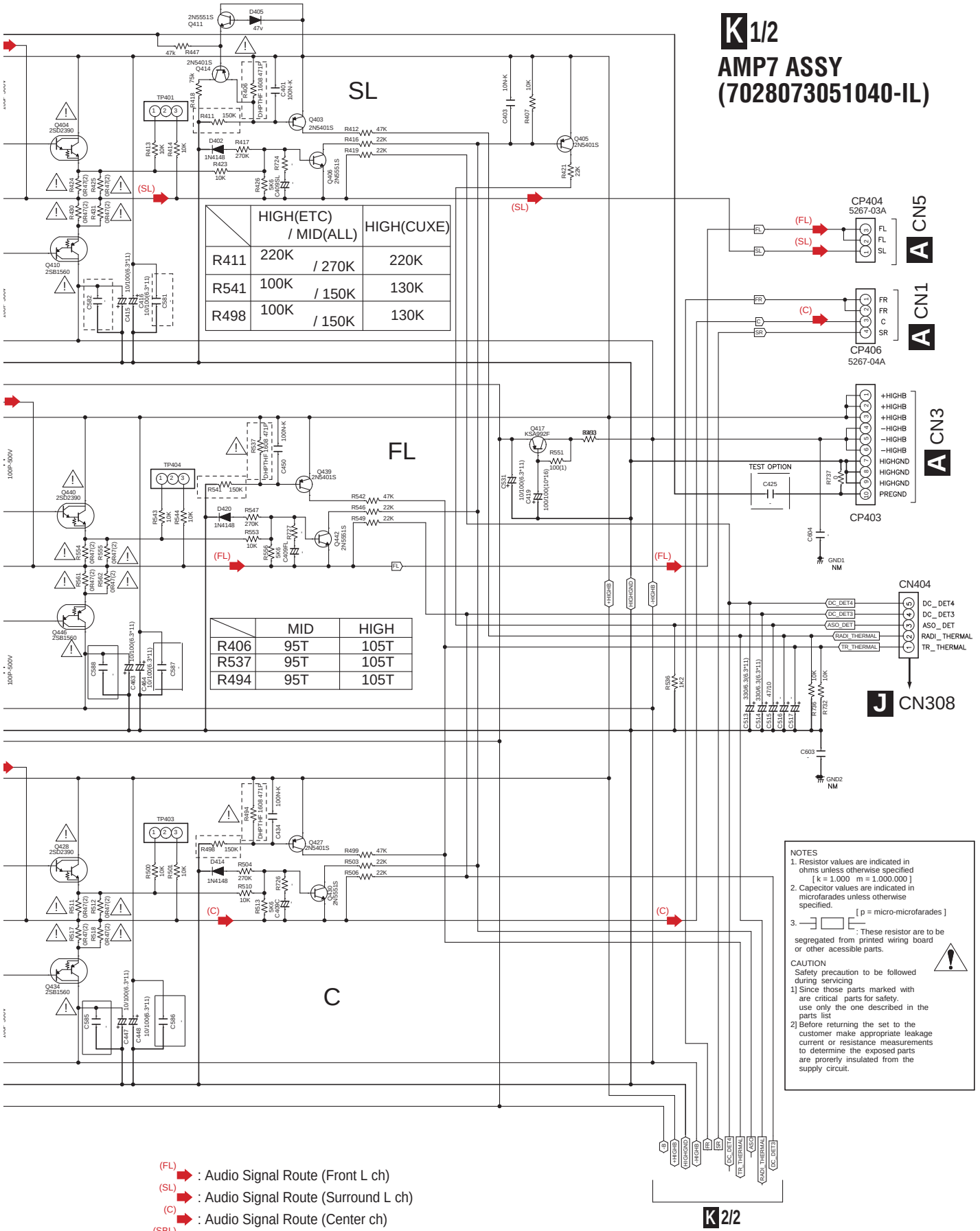
10.18 AMP7 ASSY (1/2)



FY14 - H : VSX-1123/1128/70 // FY14 - M : VSX-1023/828/43

	FY14-H	FY14-M
R461,R470,R491,R492 R505,R508,R533,R535 R548,R576,R578,R579 R591,R594	2R2	NM
C405,C453,C437,C469 C421,C485,C501	82P	NM

K 1/2
AMP7 ASSY (7028073051040-IL)

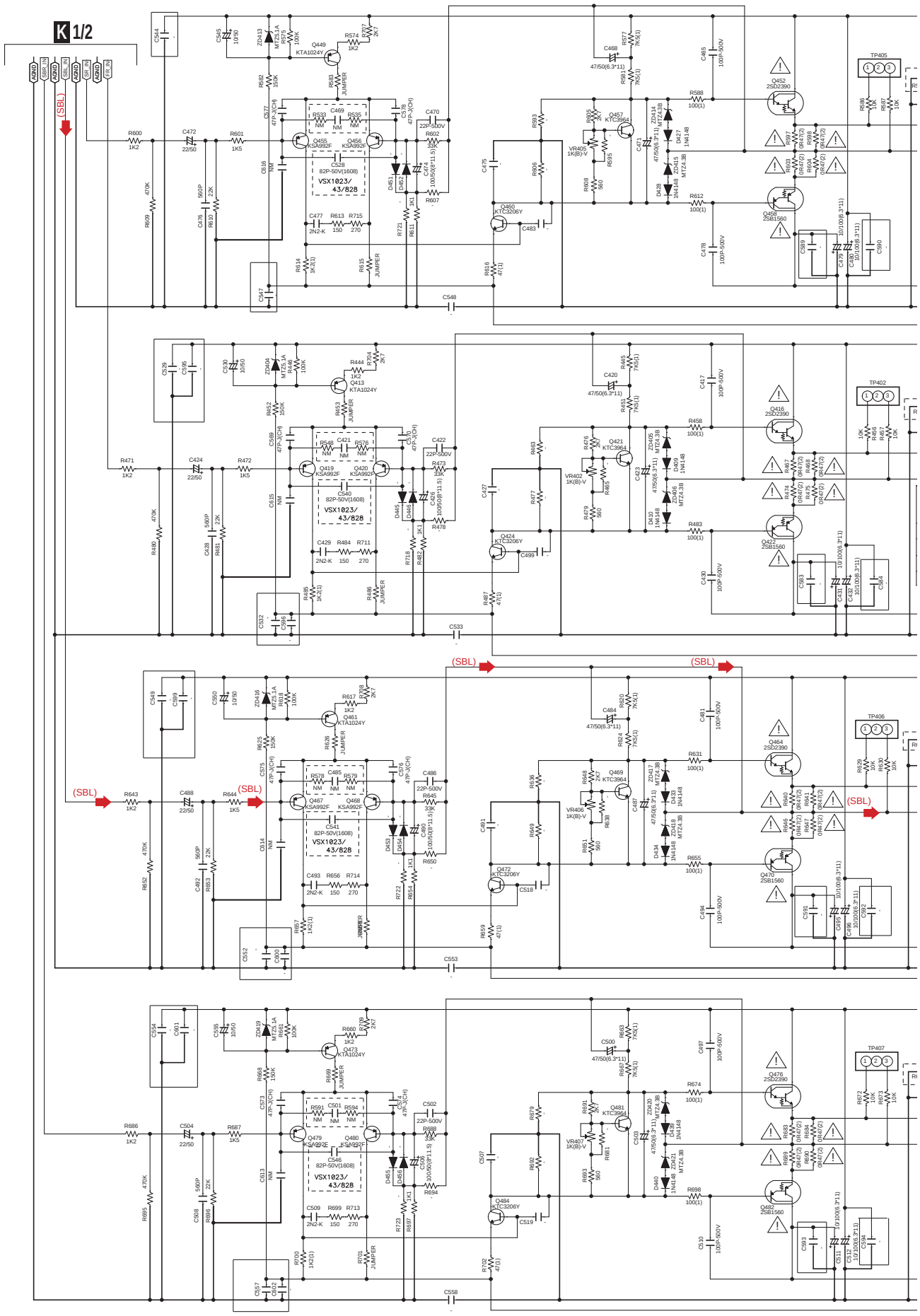


NOTES
1. Resistor values are indicated in ohms unless otherwise specified [k = 1.000 m = 1.000.000]
2. Capacitor values are indicated in microfarades unless otherwise specified. [p = micro-microfarades]
3. : These resistor are to be segregated from printed wiring board or other acessible parts.

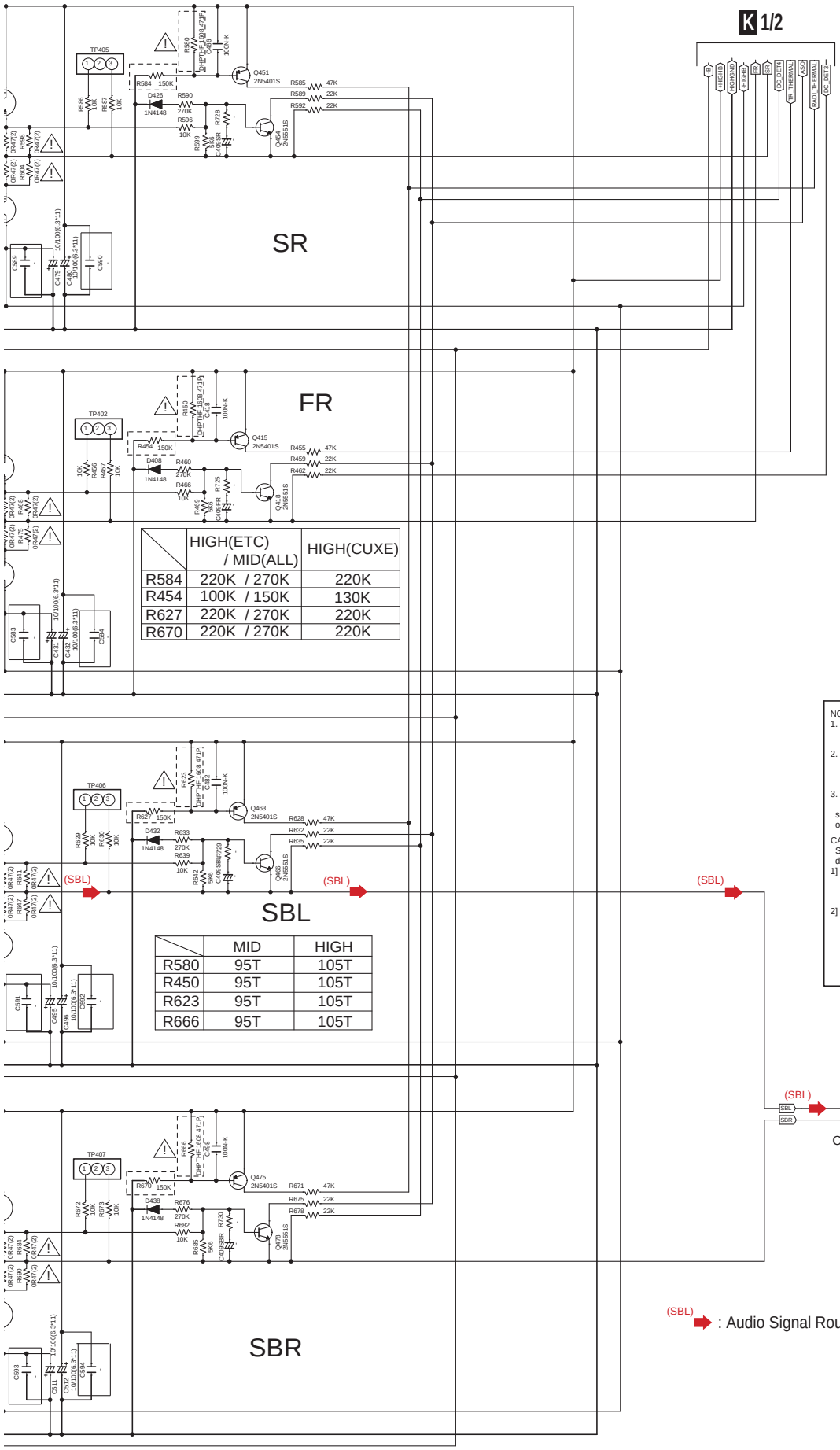
CAUTION
Safety precaution to be followed during servicing
1] Since those parts marked with are critical parts for safety. use only the one described in the parts list
2] Before returning the set to the customer make appropriate leakage current or resistance measurements to determine the exposed parts are prorerly insulated from the supply circuit.

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

10.19 AMP7 ASSY (2/2)



K 2/2
AMP7 ASSY (7028073051040-IL)



	HIGH(ETC) / MID(ALL)	HIGH(CUXE)
R584	220K / 270K	220K
R454	100K / 150K	130K
R627	220K / 270K	220K
R670	220K / 270K	220K

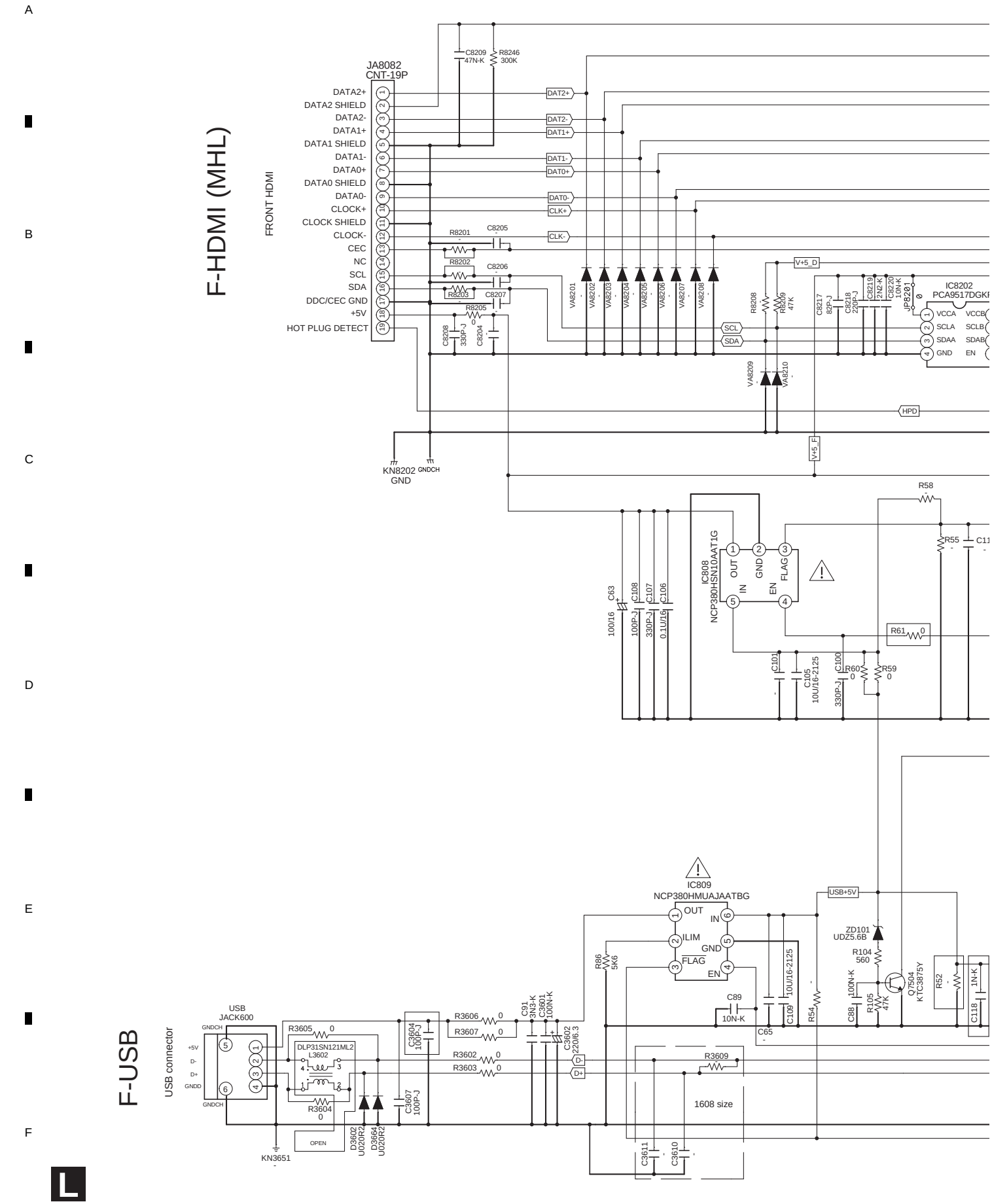
	MID	HIGH
R580	95T	105T
R450	95T	105T
R623	95T	105T
R666	95T	105T

NOTES
1. Resistor values are indicated in ohms unless otherwise specified [k = 1.000 m = 1.000.000]
2. Capacitor values are indicated in microfarades unless otherwise specified. [p = micro-microfarades]
3. : These resistor are to be segregated from printed wiring board or other acessible parts.

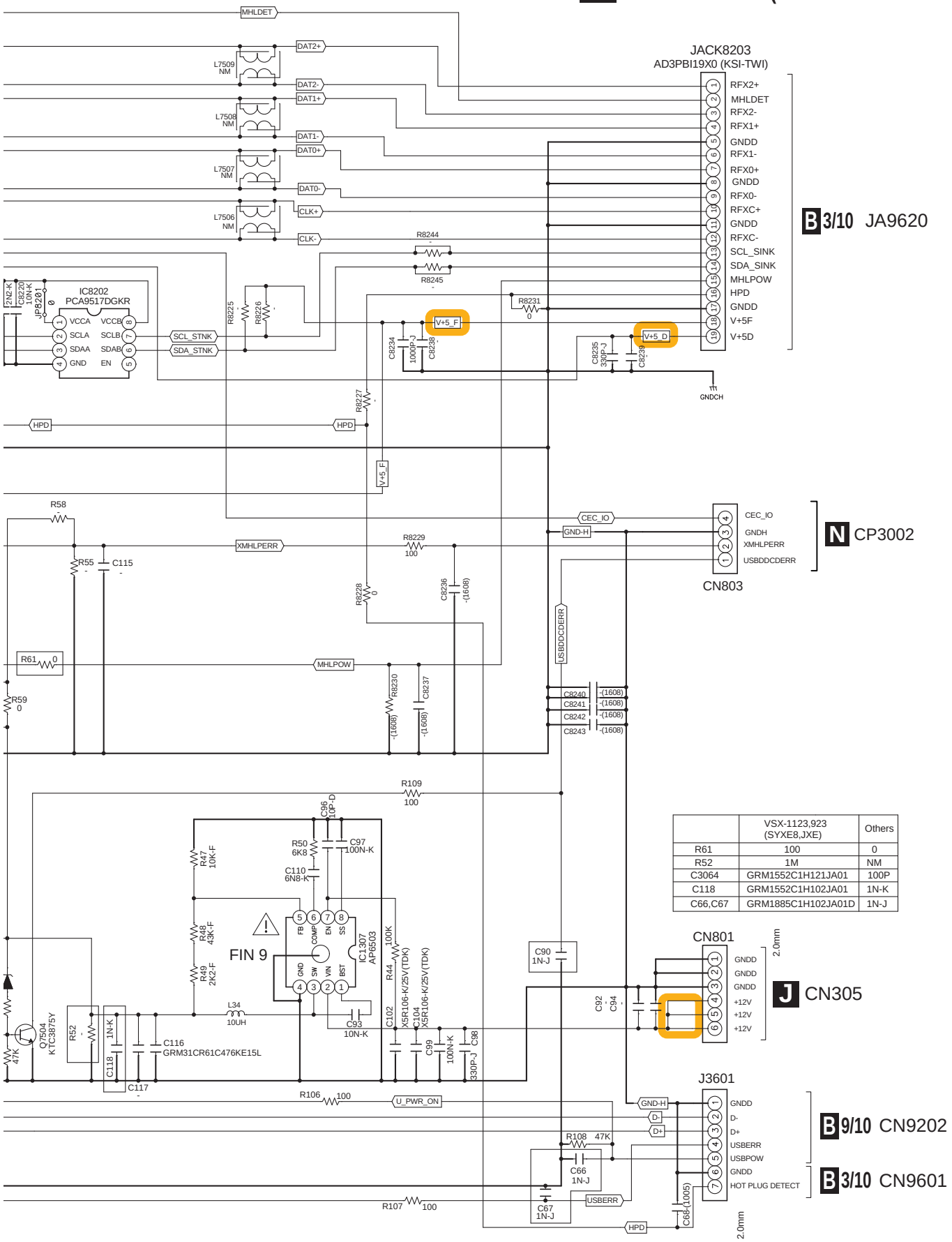
CAUTION
Safety precaution to be followed during servicing
1] Since those parts marked with are critical parts for safety. use only the one described in the parts list
2] Before returning the set to the customer make appropriate leakage current or resistance measurements to determine the exposed parts are prorerly insulated from the supply circuit.

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

10.20 FHDMI ASSY

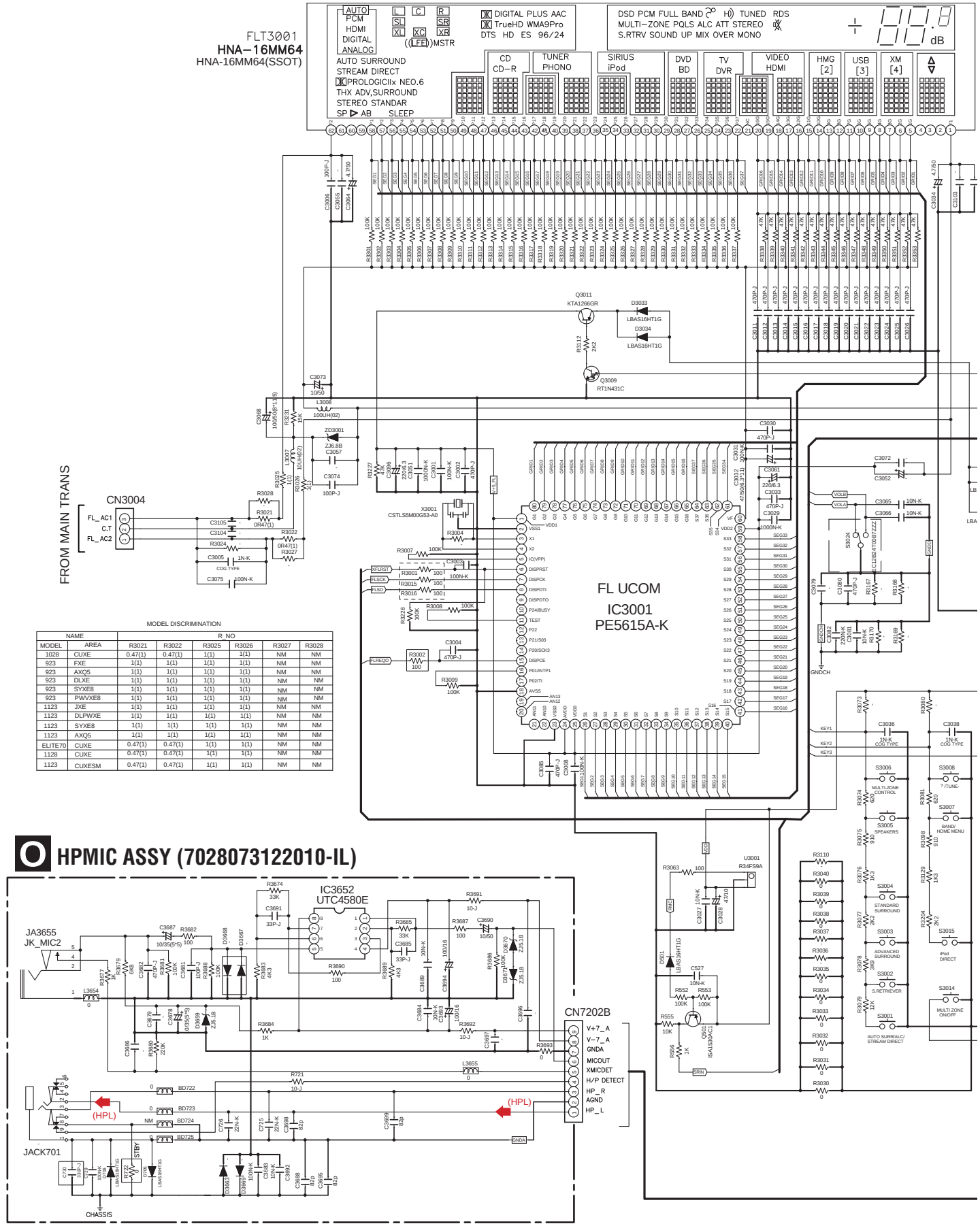


L FHDMI ASSY (7028073221060-IL)



	VSX-1123,923 (SYXE8,JXE)	Others
R61	100	0
R52	1M	NM
C3064	GRM1552C1H121JA01	100P
C118	GRM1552C1H102JA01	1N-K
C66,C67	GRM1885C1H102JA01D	1N-J

10.21 INSEL, FRONT and HPMIC ASSYS



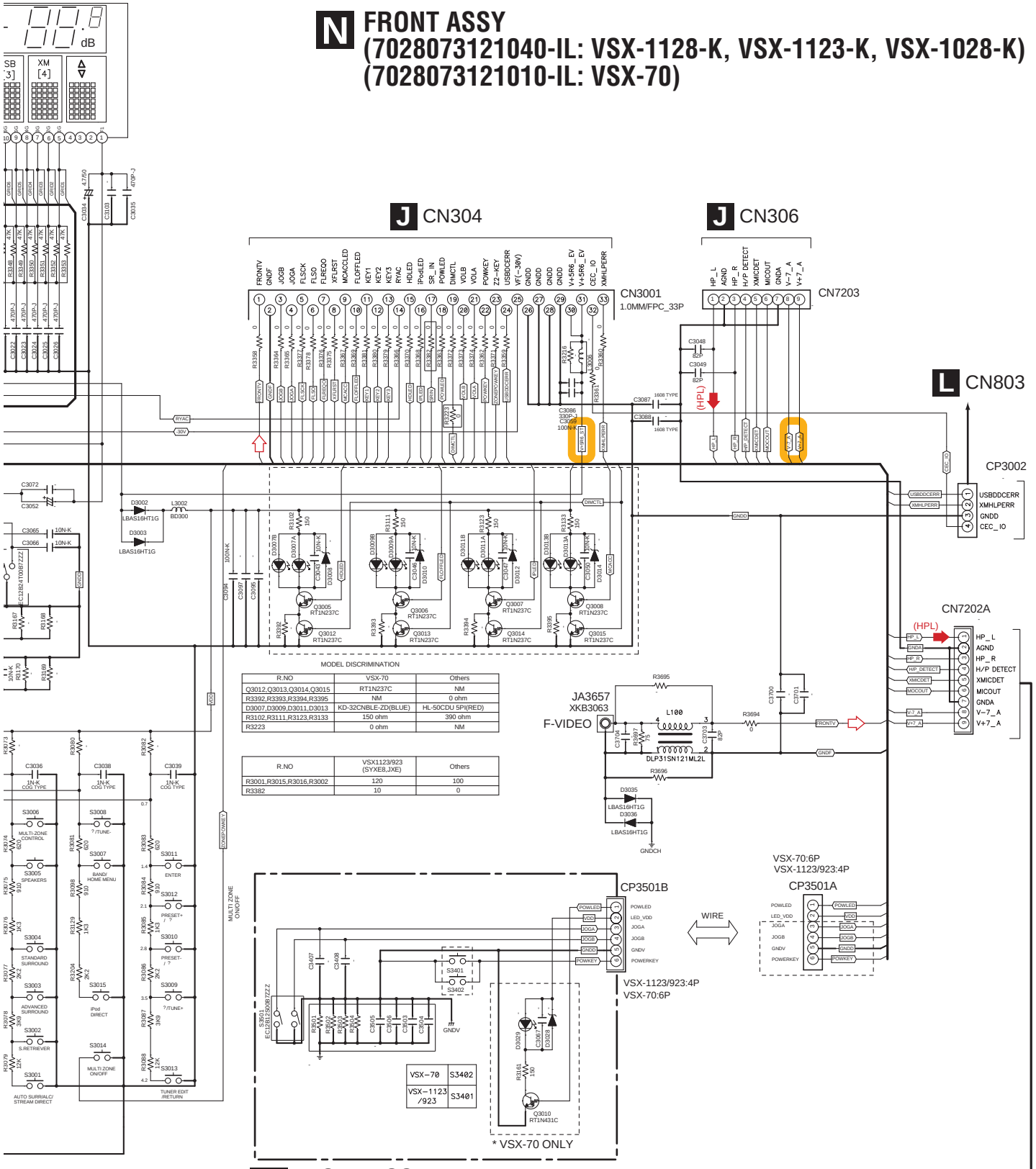
MODEL DISCRIMINATION

NAME		R_NO					
MODEL	AREA	R3021	R3022	R3025	R3026	R3027	R3028
1028	CUXE	0.47(1)	0.47(1)	1(1)	1(1)	NM	NM
923	FXE	1(1)	1(1)	1(1)	1(1)	NM	NM
923	AXQ5	1(1)	1(1)	1(1)	1(1)	NM	NM
923	DLXE	1(1)	1(1)	1(1)	1(1)	NM	NM
923	SYXE8	1(1)	1(1)	1(1)	1(1)	NM	NM
923	PWVXE8	1(1)	1(1)	1(1)	1(1)	NM	NM
1123	JXE	1(1)	1(1)	1(1)	1(1)	NM	NM
1123	DLPWXE	1(1)	1(1)	1(1)	1(1)	NM	NM
1123	SYXE8	1(1)	1(1)	1(1)	1(1)	NM	NM
1123	AXQ5	1(1)	1(1)	1(1)	1(1)	NM	NM
ELITE70	CUXE	0.47(1)	0.47(1)	1(1)	1(1)	NM	NM
1128	CUXE	0.47(1)	0.47(1)	1(1)	1(1)	NM	NM
1123	CUXESM	0.47(1)	0.47(1)	1(1)	1(1)	NM	NM

O HPMIC ASSY (7028073122010-IL)

N O

N FRONT ASSY
(7028073121040-IL: VSX-1128-K, VSX-1123-K, VSX-1028-K)
(7028073121010-IL: VSX-70)



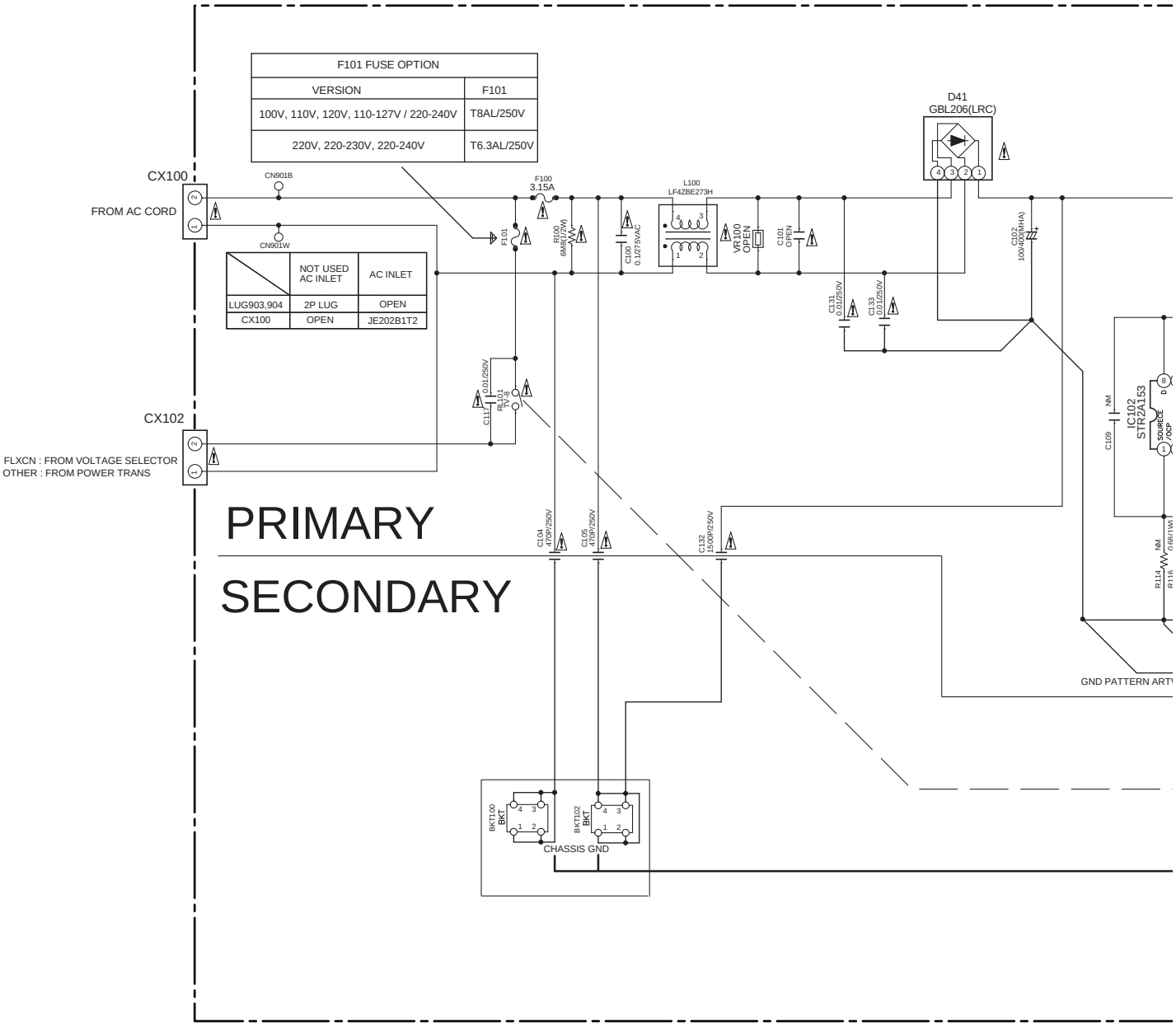
M INSEL ASSY
(7028073123040-IL: VSX-1128-K, VSX-1123-K, VSX-1028-K)
(7028073123010-IL: VSX-70)

(HPL) : Video Signal Route
(HPL) : Audio Signal Route (Headphone L ch)

M N

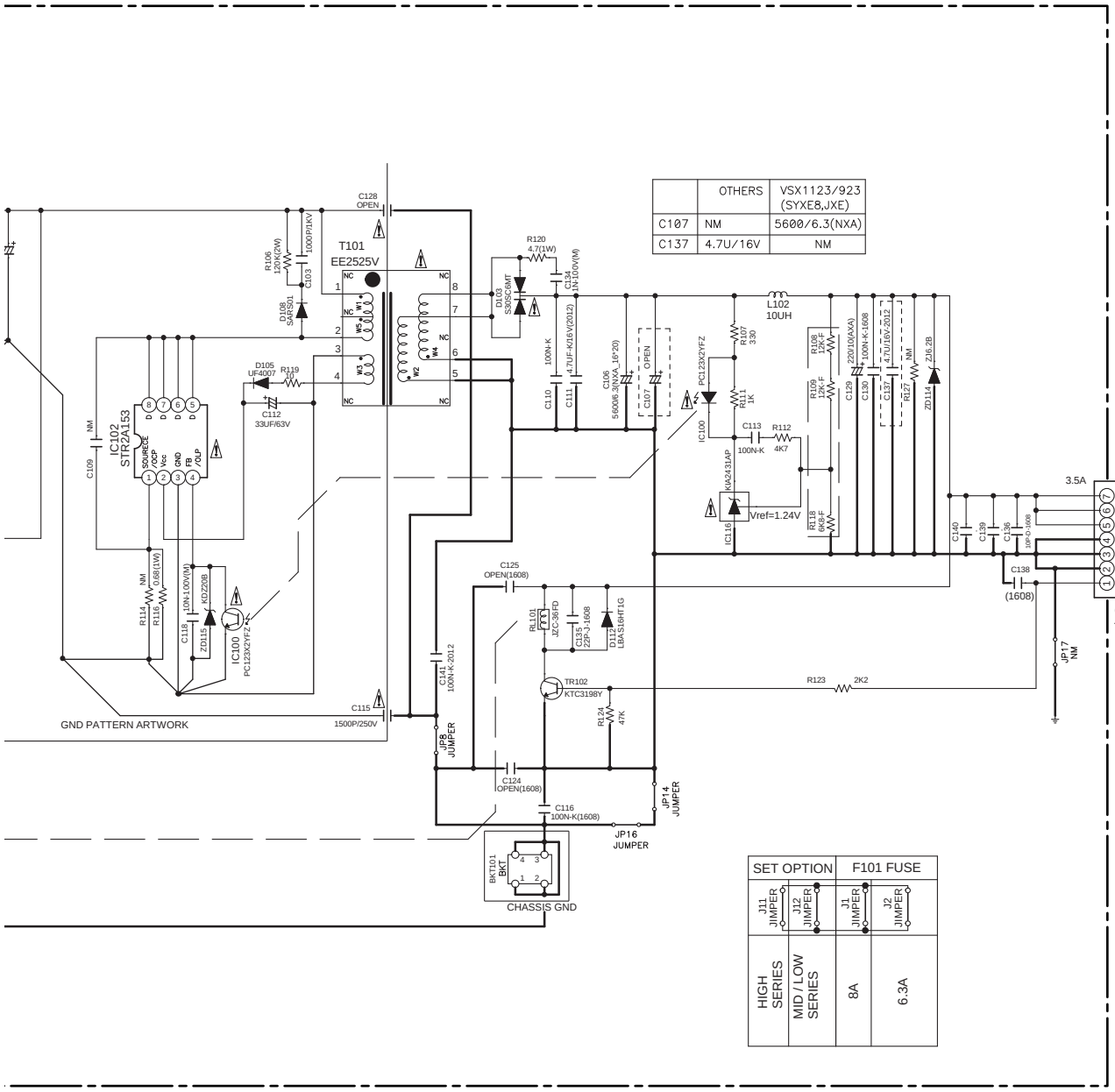
10.22 SMPS ASSY

⚠ P SMPS ASSY (7028073361000-IL: VSX-1128-K, VSX-1123-K, VSX-1028-K) (70280733610F0-IL: VSX-70)



• NOTE FOR FUSE REPLACEMENT

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



	OTHERS	VSX1123/923 (SYXE8,JXE)
C107	NM	5600/6.3(NXA)
C137	4.7U/16V	NM

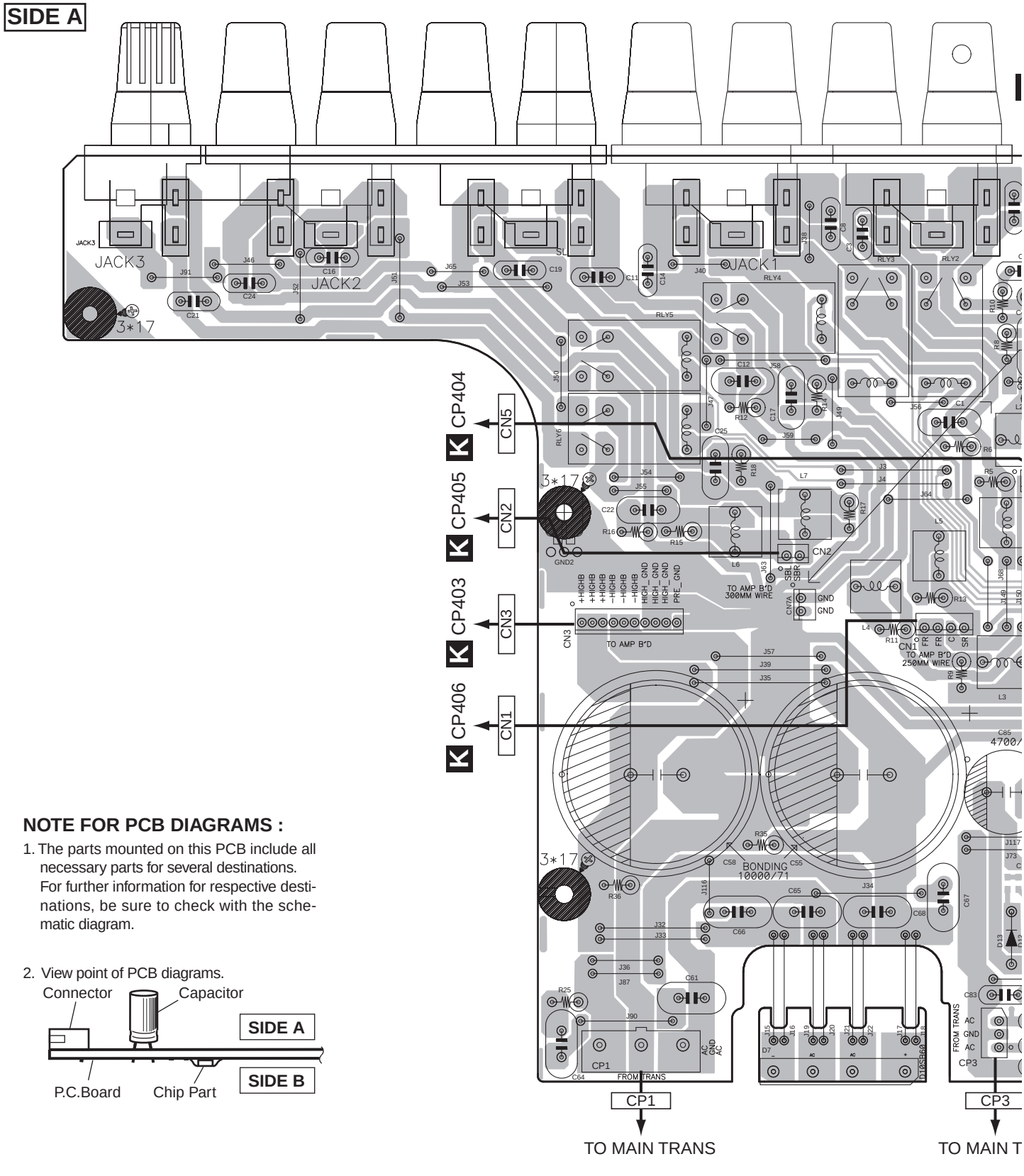
SET OPTION		F101 FUSE	
J11 JUMPER	J12 JUMPER	J1 JUMPER	J2 JUMPER
HIGH SERIES	MID / LOW SERIES	8A	6.3A

NOTES
1. Resistor values are indicated in ohms unless otherwise specified
[k = 1.000 m = 1.000.000]
2. Capecitor values are indicated in microfarades unless otherwise specified.
[p = micro-microfarades]
3. : These resistor are to be segregated from printed wiring board or other acessible 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 prorerly insulated from the supply circuit.

! INDICATES SAFETY CRITICAL COMPONENTS.

TO REDUCE THE RISK OF ELECTIC SHOCK, LEAKAGE CURRENT OR RESISTANCE MEASUREMENTS SHALL BE CARRIED OUT (EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT) BEFORE THE APPLIANCE RETURNED TO THE CUSTOMER.

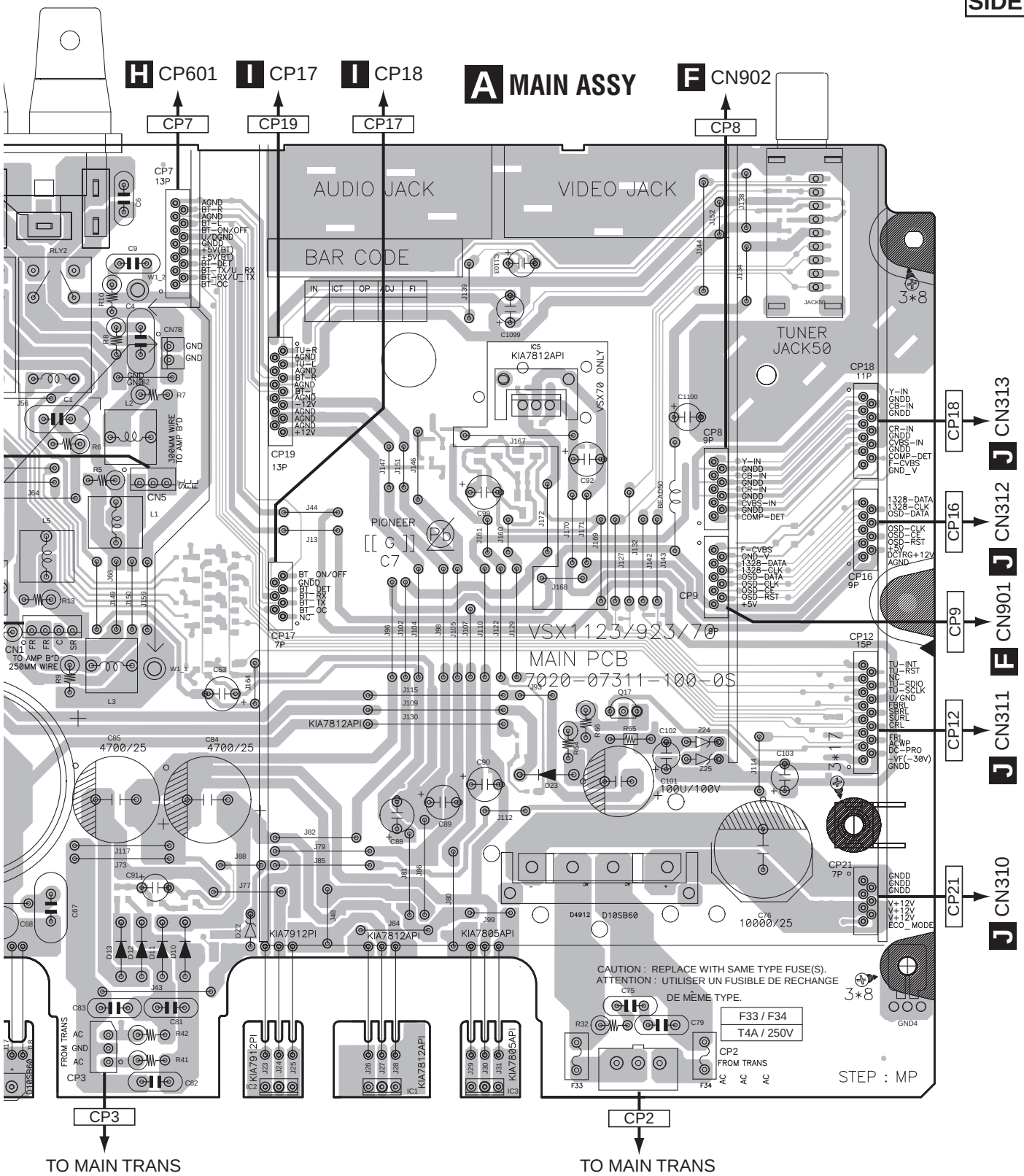
11. PCB CONNECTION DIAGRAM
11.1 MAIN ASSY



NOTE FOR PCB DIAGRAMS :

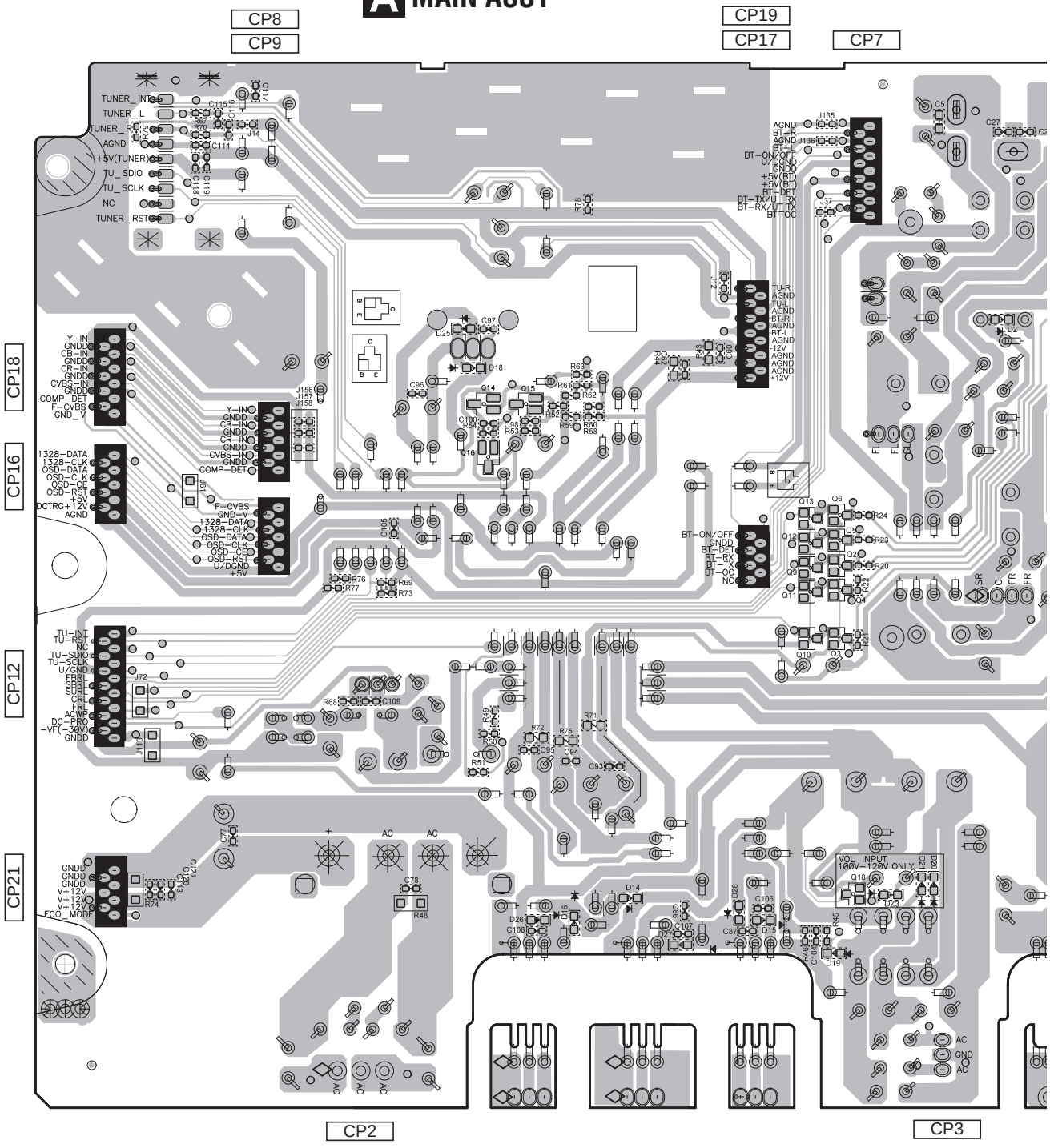
1. The parts mounted on this PCB include all necessary parts for several destinations. For further information for respective destinations, be sure to check with the schematic diagram.

2. View point of PCB diagrams.


H CP601
I CP17
I CP18
A MAIN ASSY
F CN902
CP7
CP19
CP17
CP8
AUDIO JACK
VIDEO JACK
BAR CODE
TUNER JACK50
IC5 KIA7812API
VSX70 ONLY
PIONEER
C7
VSX1123/923/70
MAIN PCB
7020-07311-100-0S
KIA7812API
KIA7912PI
KIA7812API
KIA7805API
D4912 D10SB60
CAUTION : REPLACE WITH SAME TYPE FUSE(S).
ATTENTION : UTILISER UN FUSIBLE DE RECHANGE
DE MÊME TYPE.
F33 / F34
T4A / 250V
STEP : MP
CP3
TO MAIN TRANS
CP2
TO MAIN TRANS
CP18
CN313
CP16
CN312
CP9
CN901
CP12
CN311
CP21
CN310
IC2
IC1
IC3
IC5
Q17

SIDE B

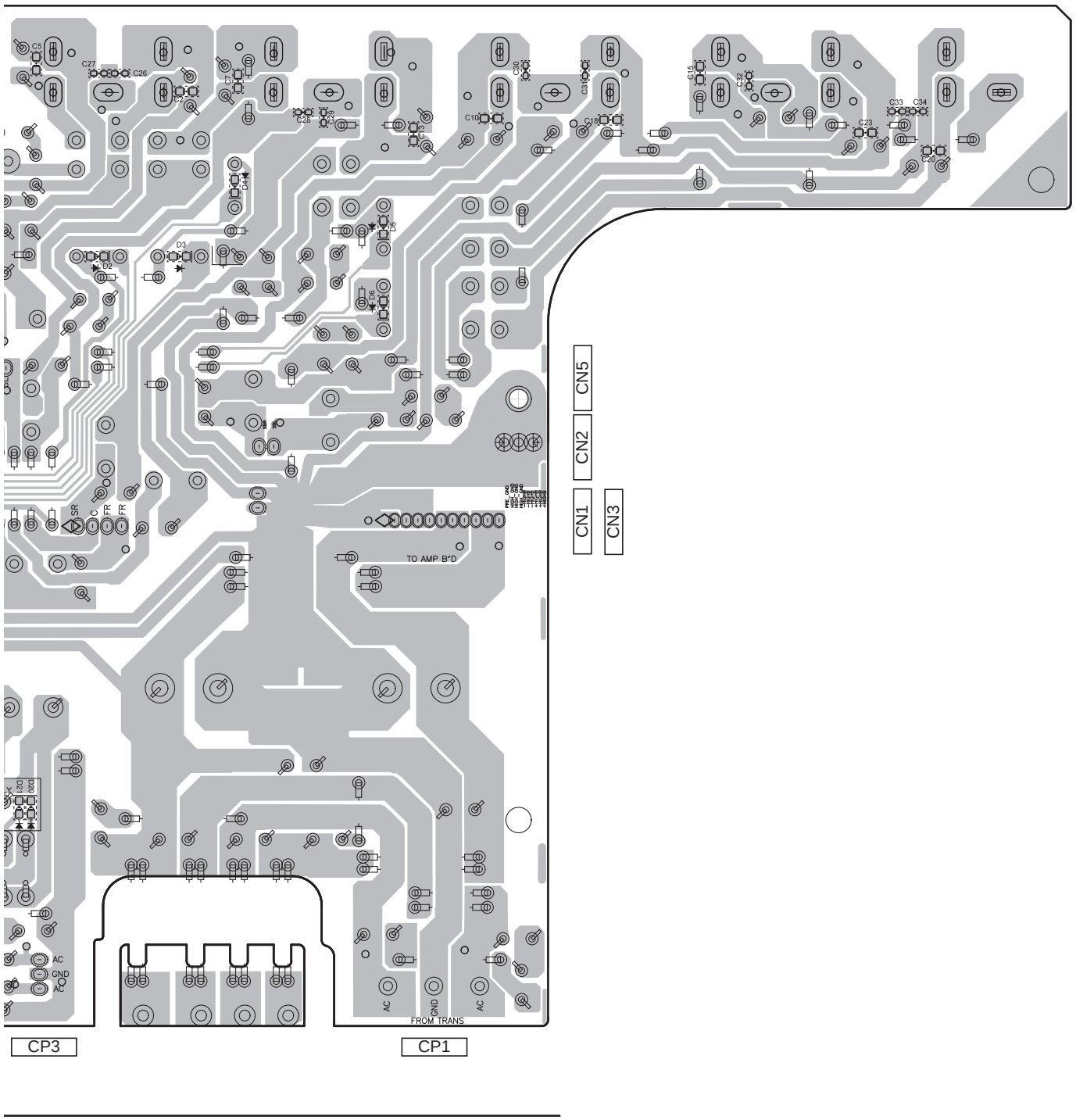
A MAIN ASSY



Q14 Q15
Q16

Q9-Q13 Q2-Q6
Q18

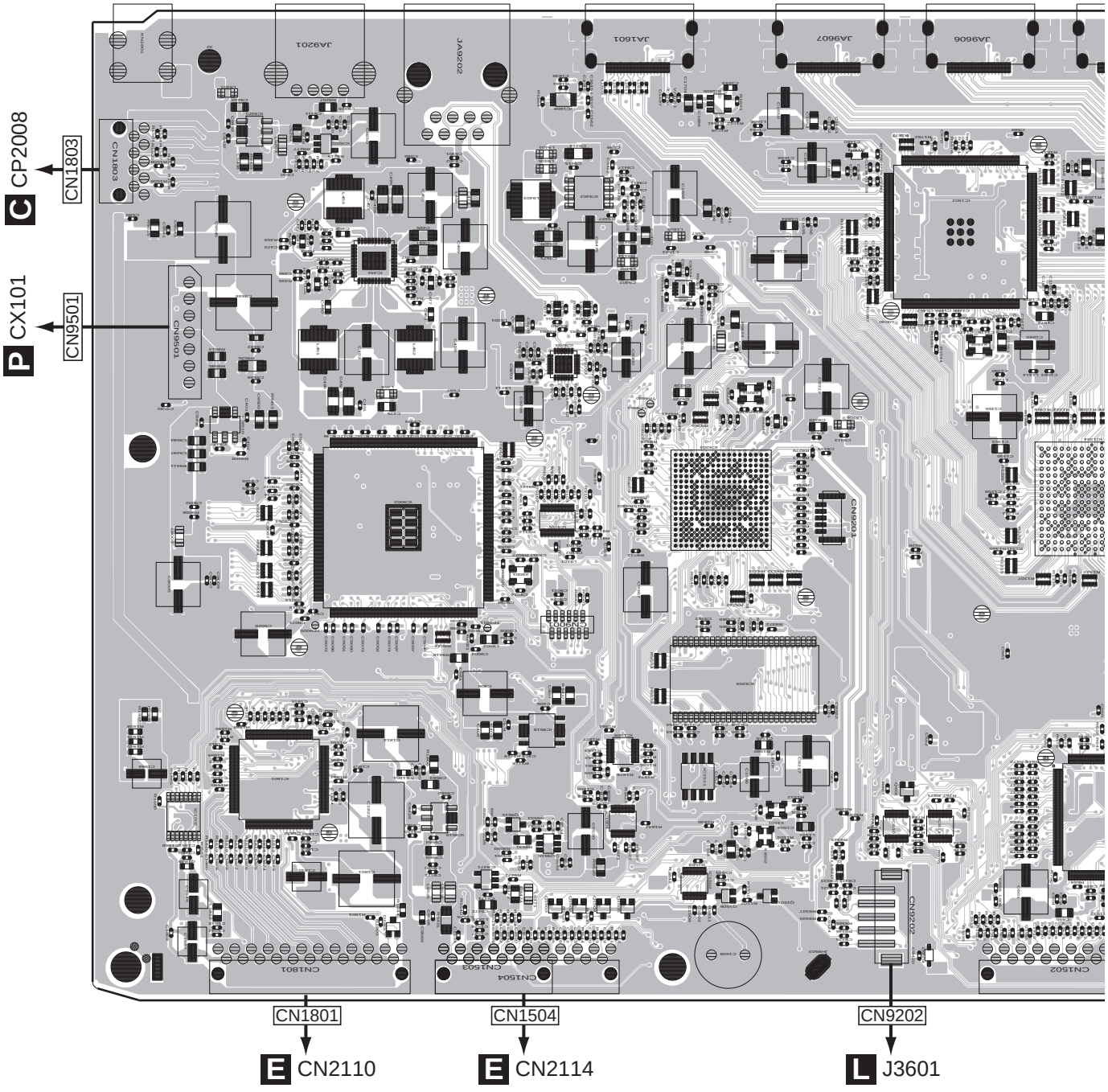
SIDE B



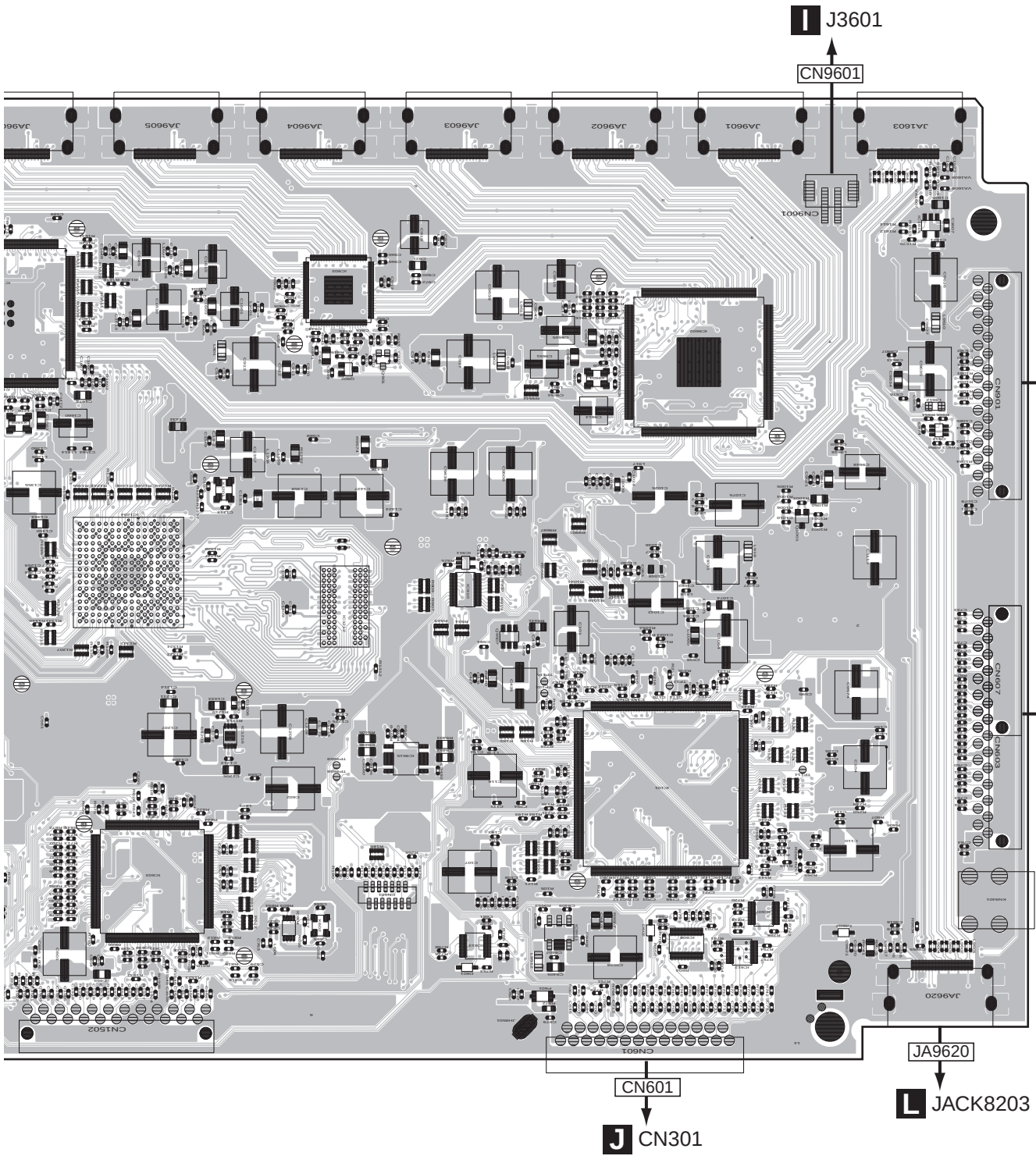
11.2 D-MAIN ASSY

SIDE A

B D-MAIN ASSY



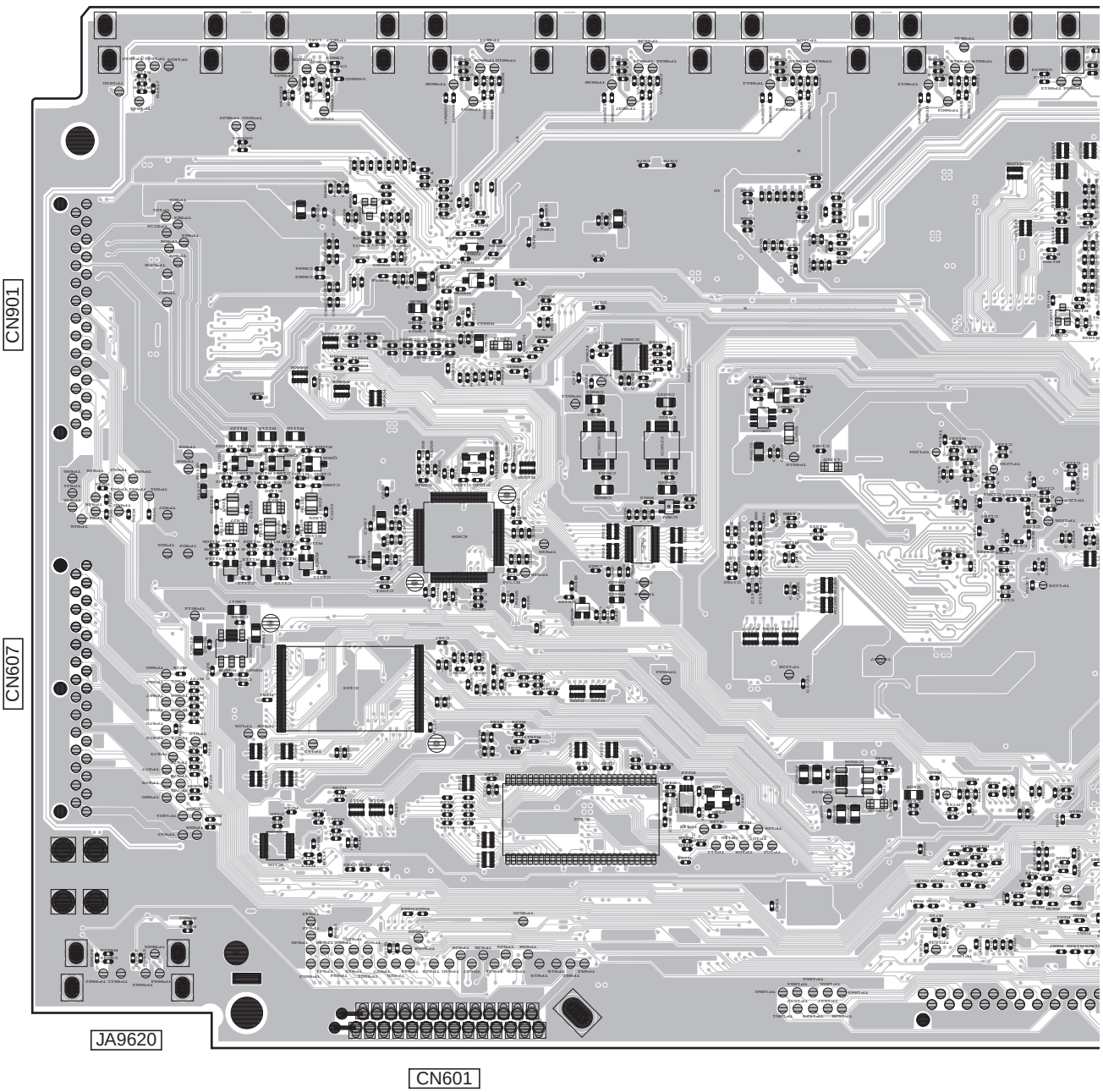
SIDE A



IC1502 IC903 IC9602 IC1615
Q902 Q901 IC911 Q912
IC1204 IC1212 IC9515 IC910 Q9507 IC101 IC607
IC1603 IC604 IC613 IC9511 IC608 IC612

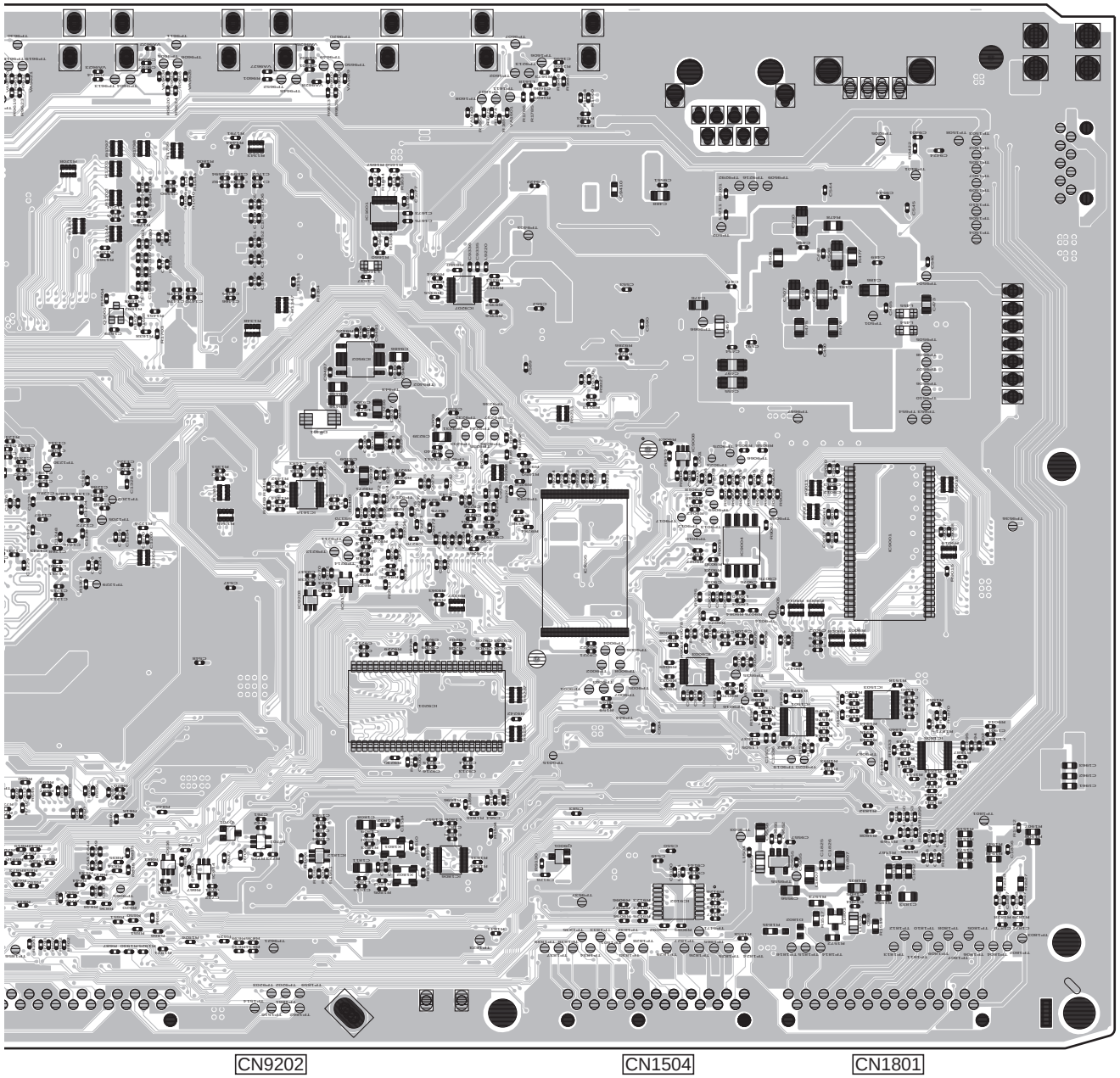
SIDE B

B D-MAIN ASSY



Q9602 Q9603 IC9601 Q9504 Q1601 IC
Q908 Q907 Q906 IC909 IC9503 IC9523 Q9503
Q911 Q910 Q909 Q9508
IC9505 IC105 IC103 IC102 IC104 IC9508

SIDE B

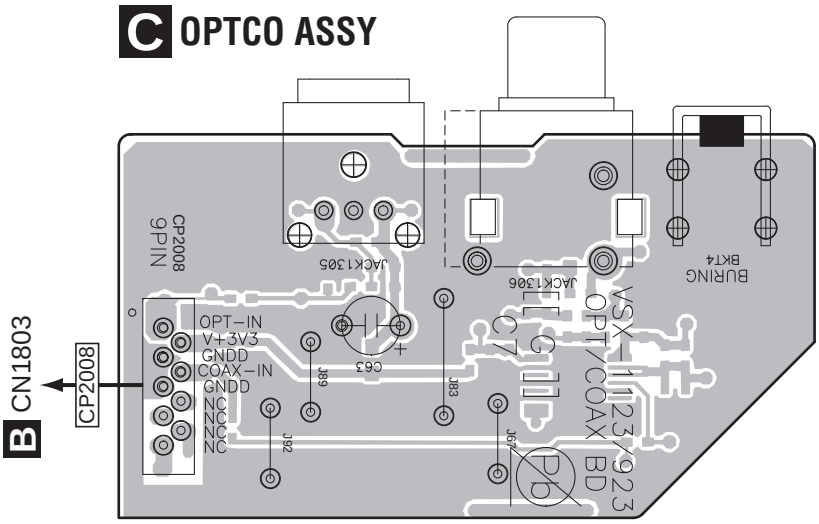


Q1601 IC616 Q701 IC1601 IC9207 IC9008 IC9004 IC9001
IC614 IC701 IC1616 IC9502 IC9201 IC9205 IC9003 IC1501 IC1503 IC1805
IC9208 IC615 Q9001 IC9102 IC9555
IC1812 IC1806

11.3 OPTCO ASSY

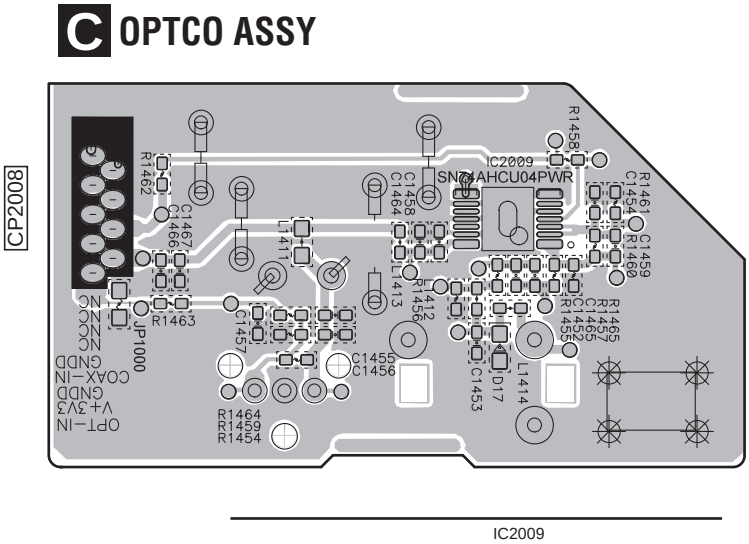
SIDE A

SIDE A



SIDE B

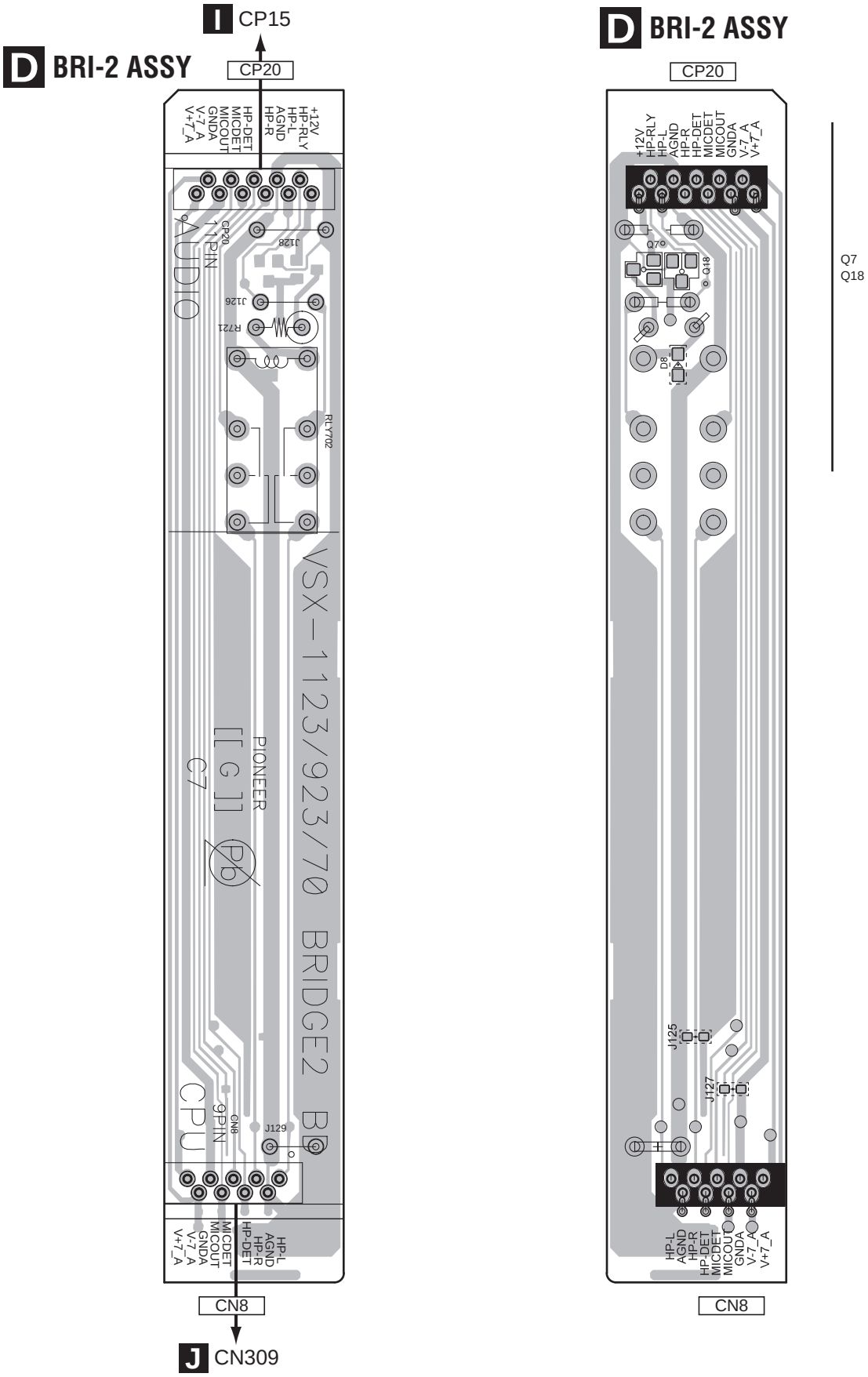
SIDE B



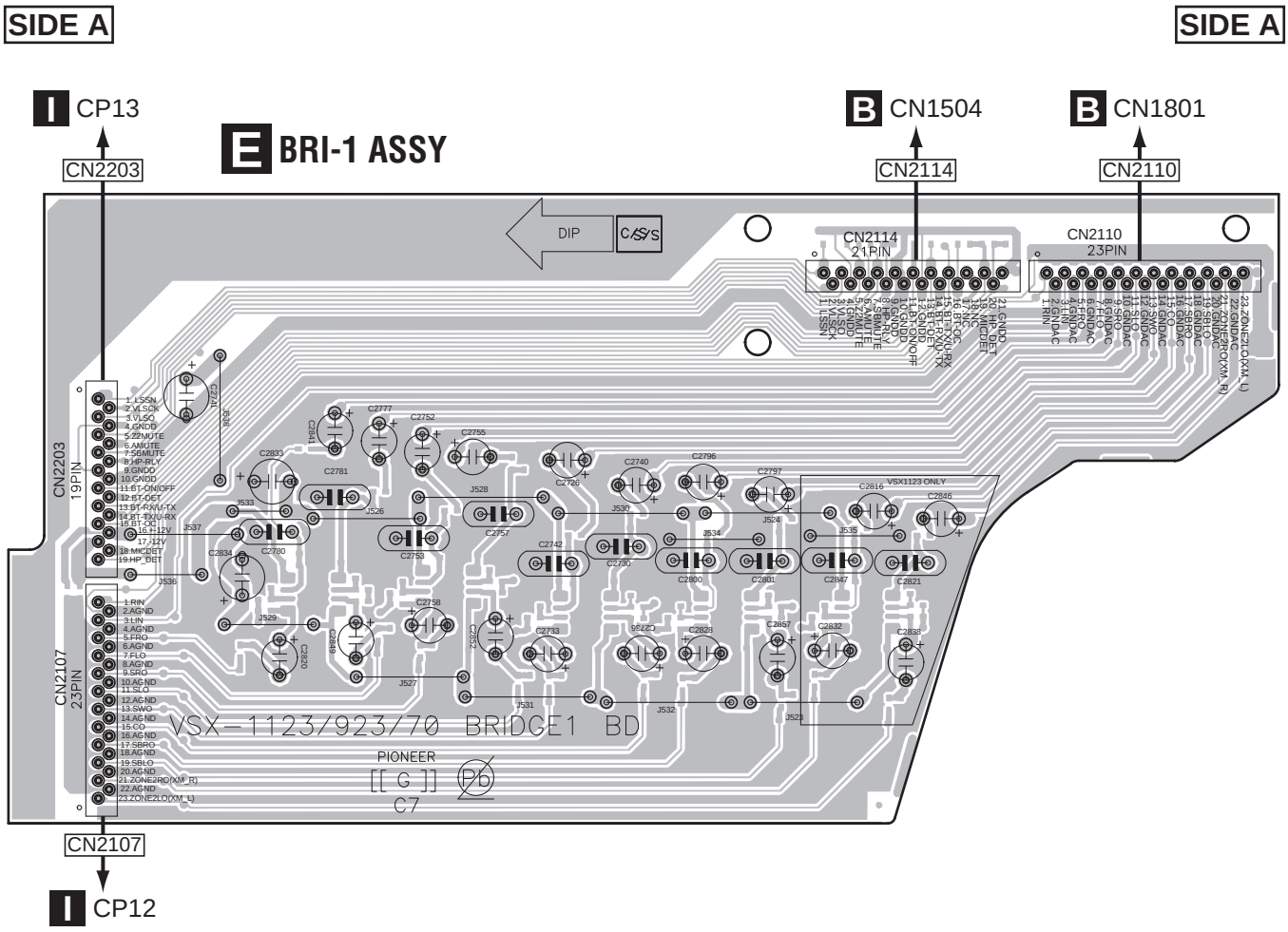
11.4 BRI-2 ASSY

SIDE A

SIDE B



11.5 BRI-1 ASSY

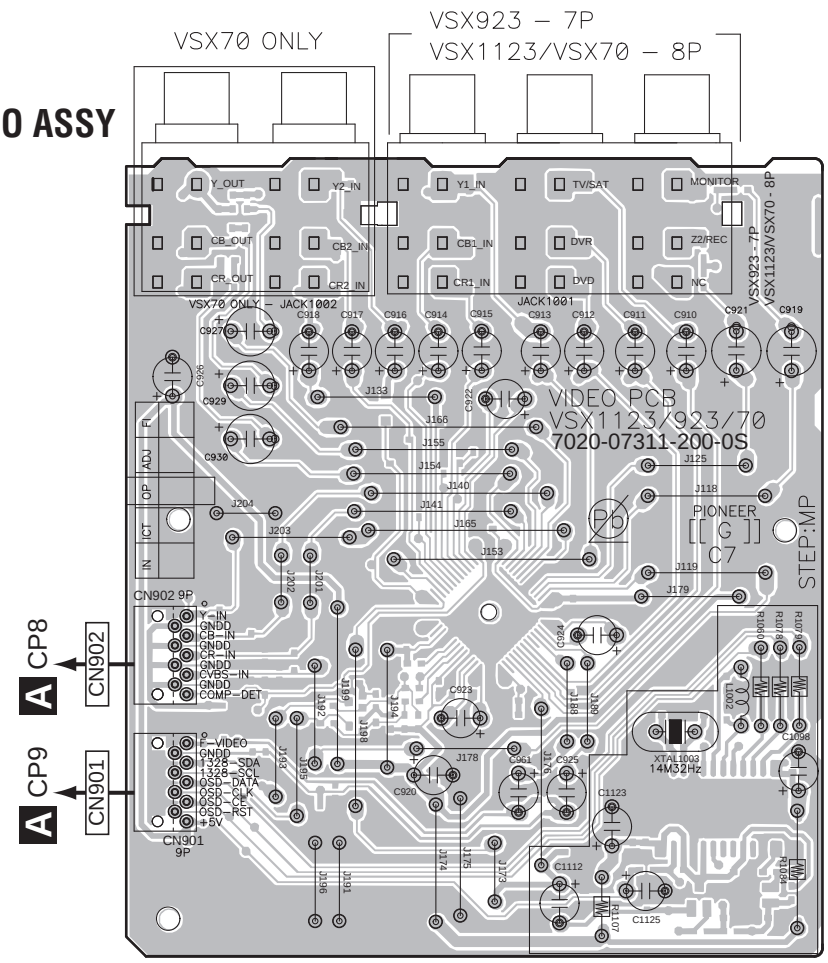


IC2762 IC2742 IC2704 IC2782 IC2802

11.6 VIDEO ASSY

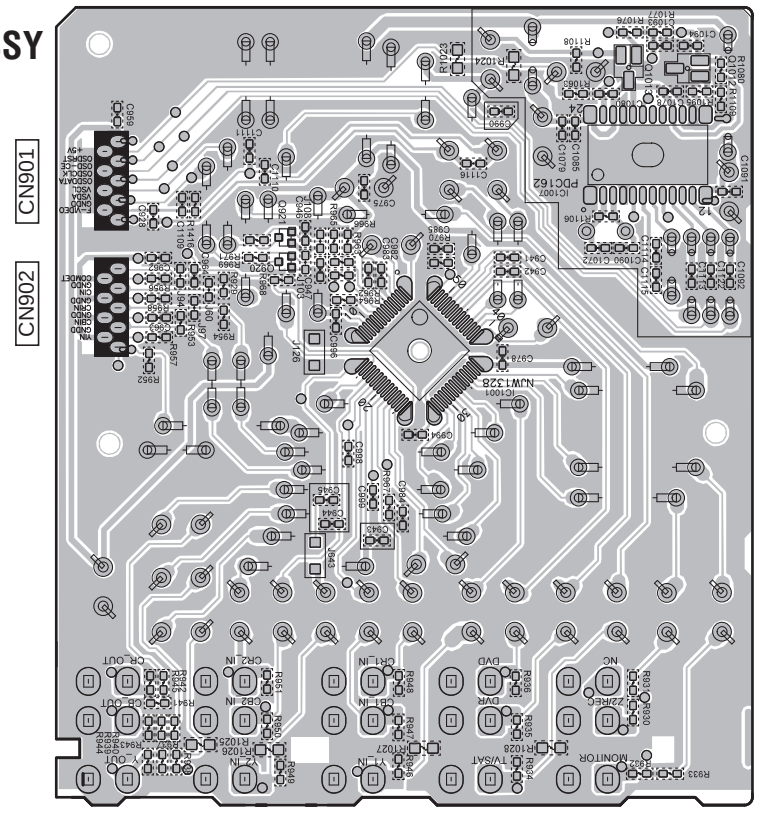
SIDE A

F VIDEO ASSY



SIDE B

F VIDEO ASSY

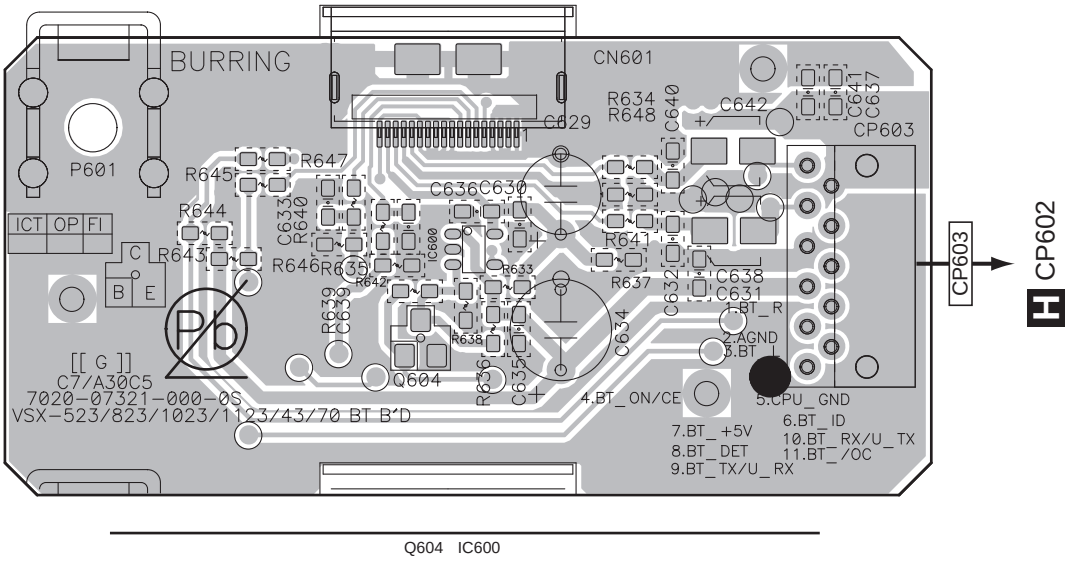


11.7 BT ASSY

SIDE A

SIDE A

G BT ASSY

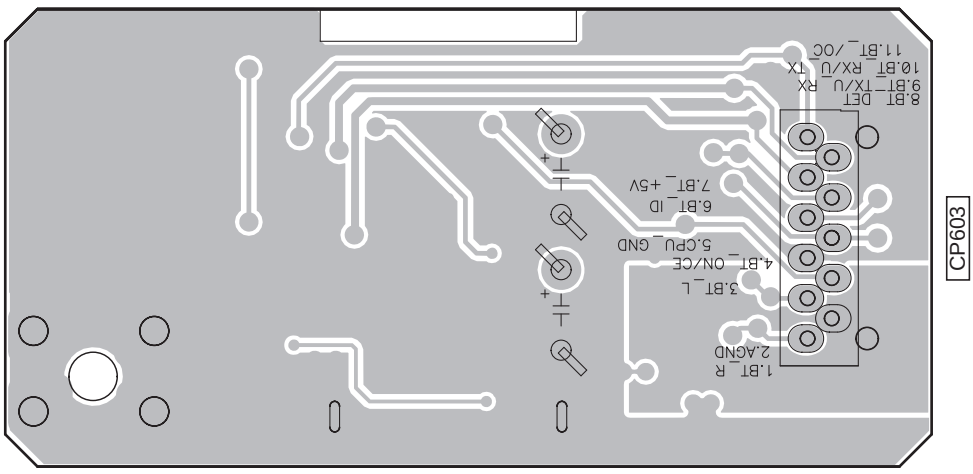


Q604 IC600

SIDE B

SIDE B

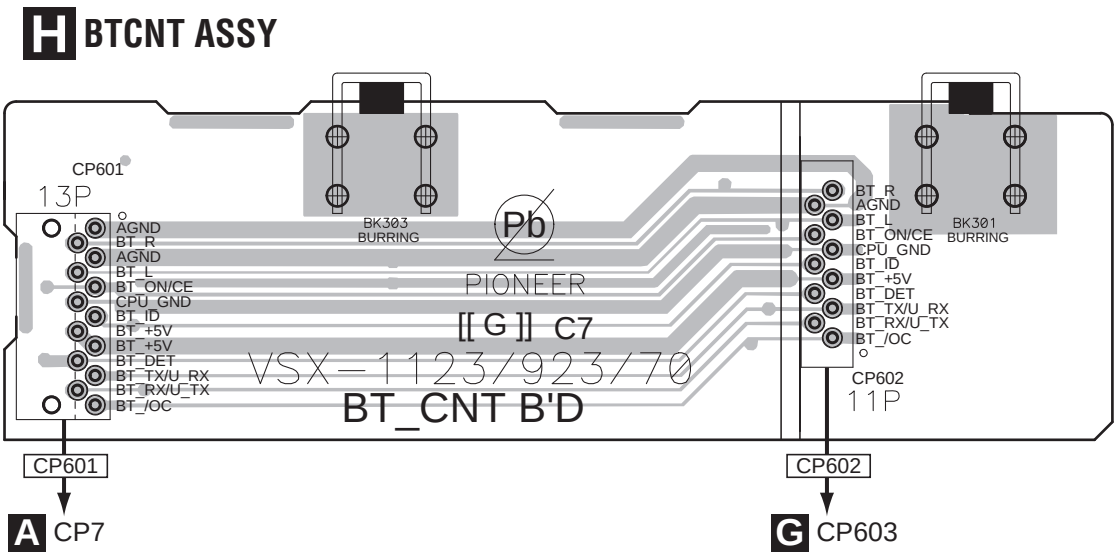
G BT ASSY



G

11.8 BTCNT ASSY

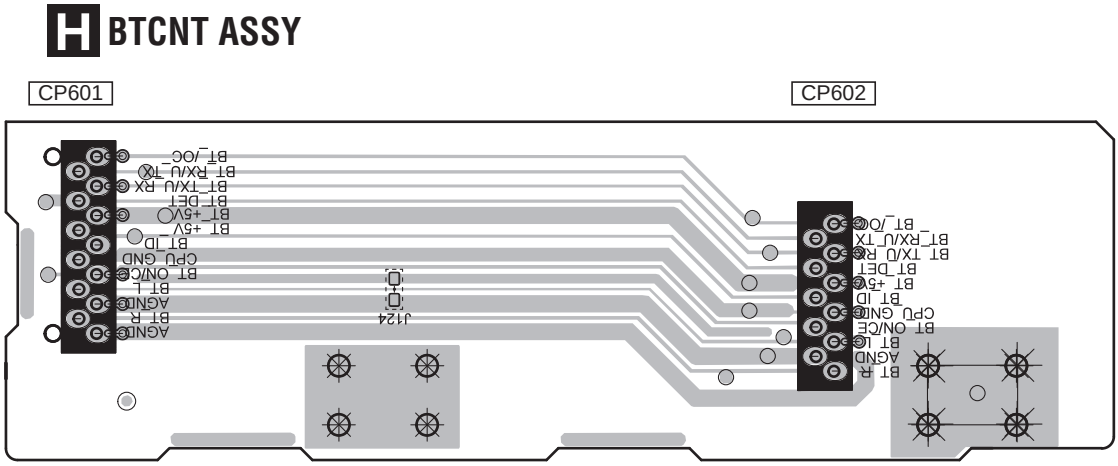
SIDE A



SIDE A

SIDE B

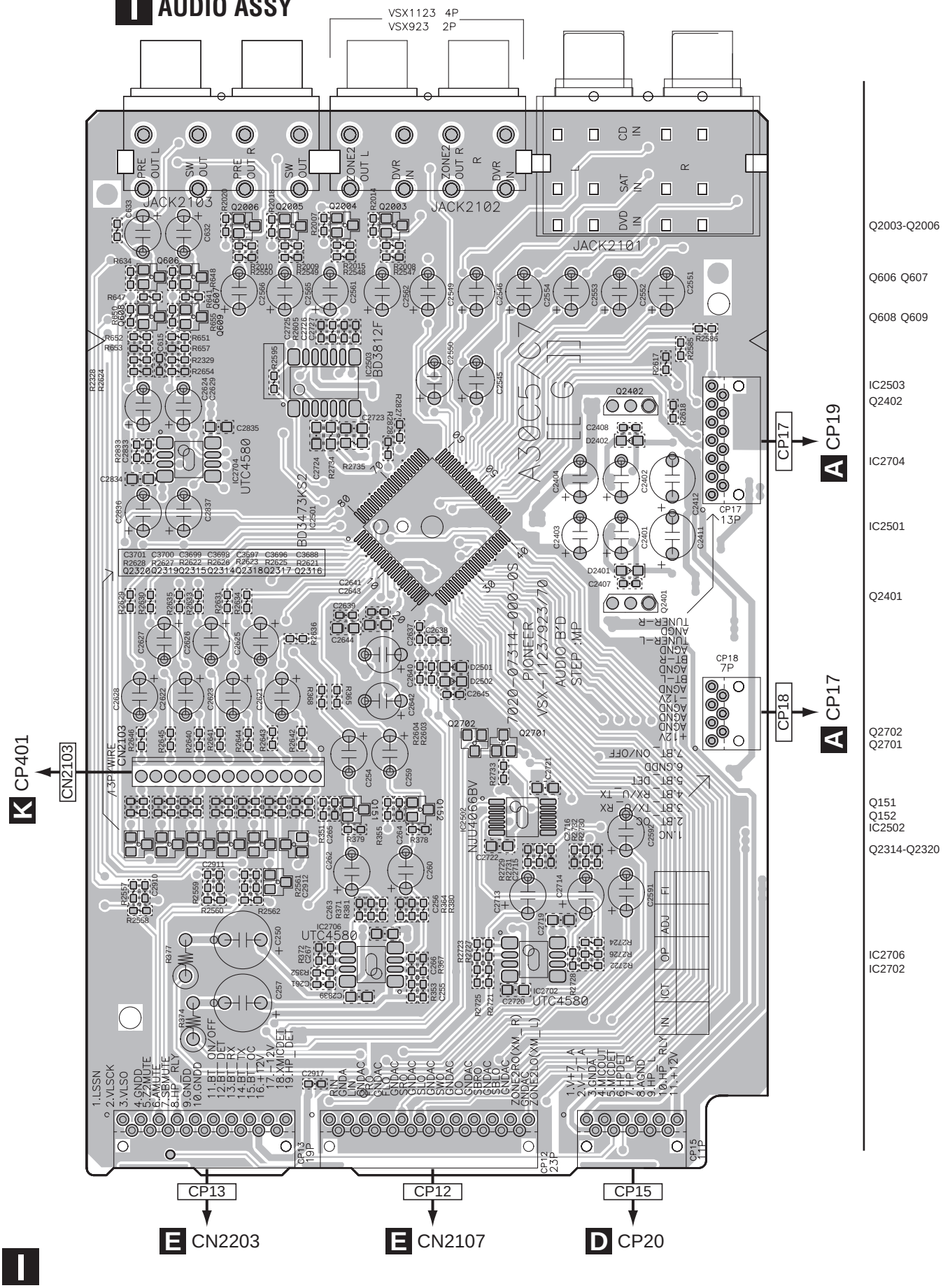
SIDE B



11.9 AUDIO ASSY

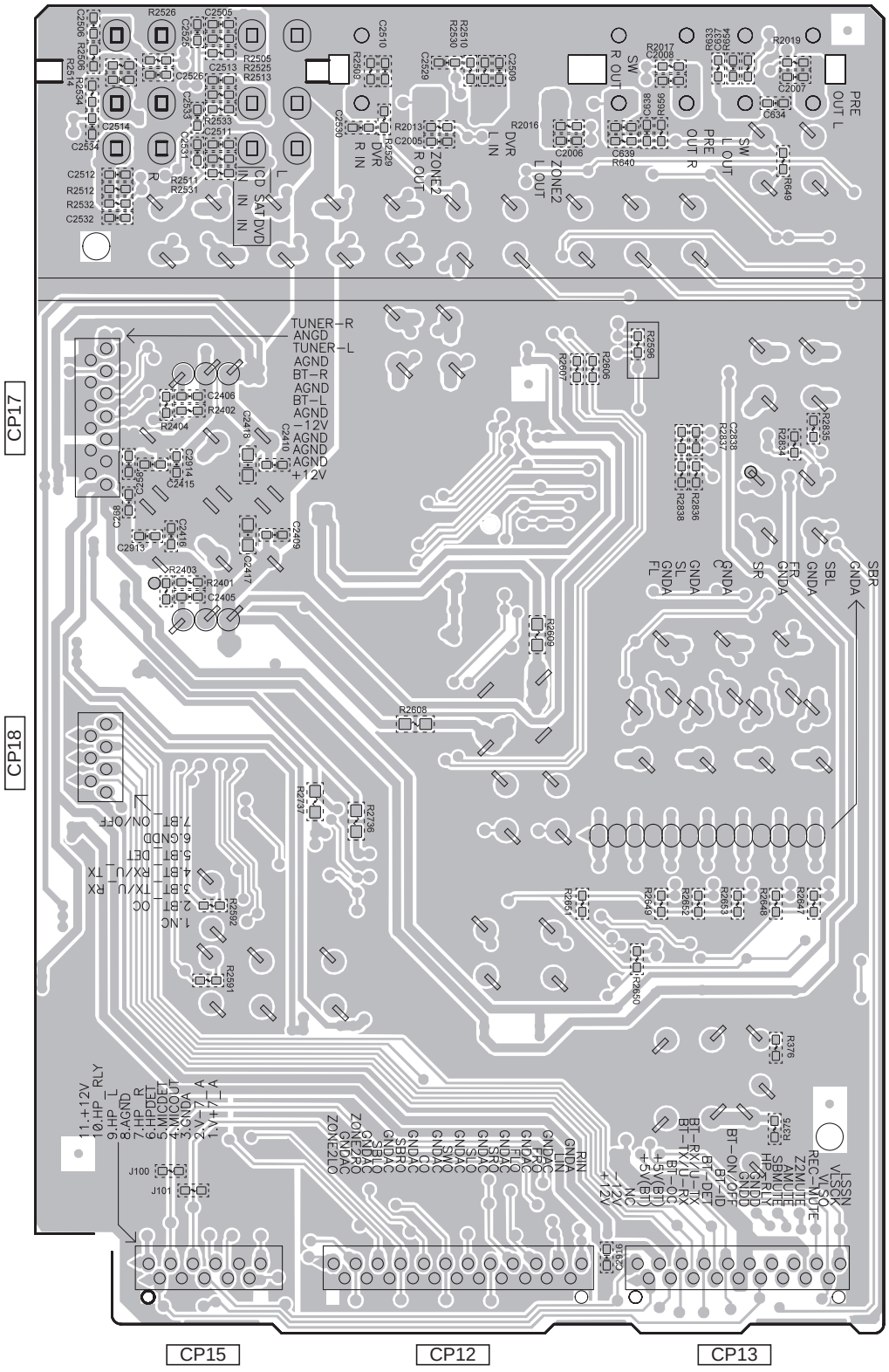
SIDE A

SIDE A



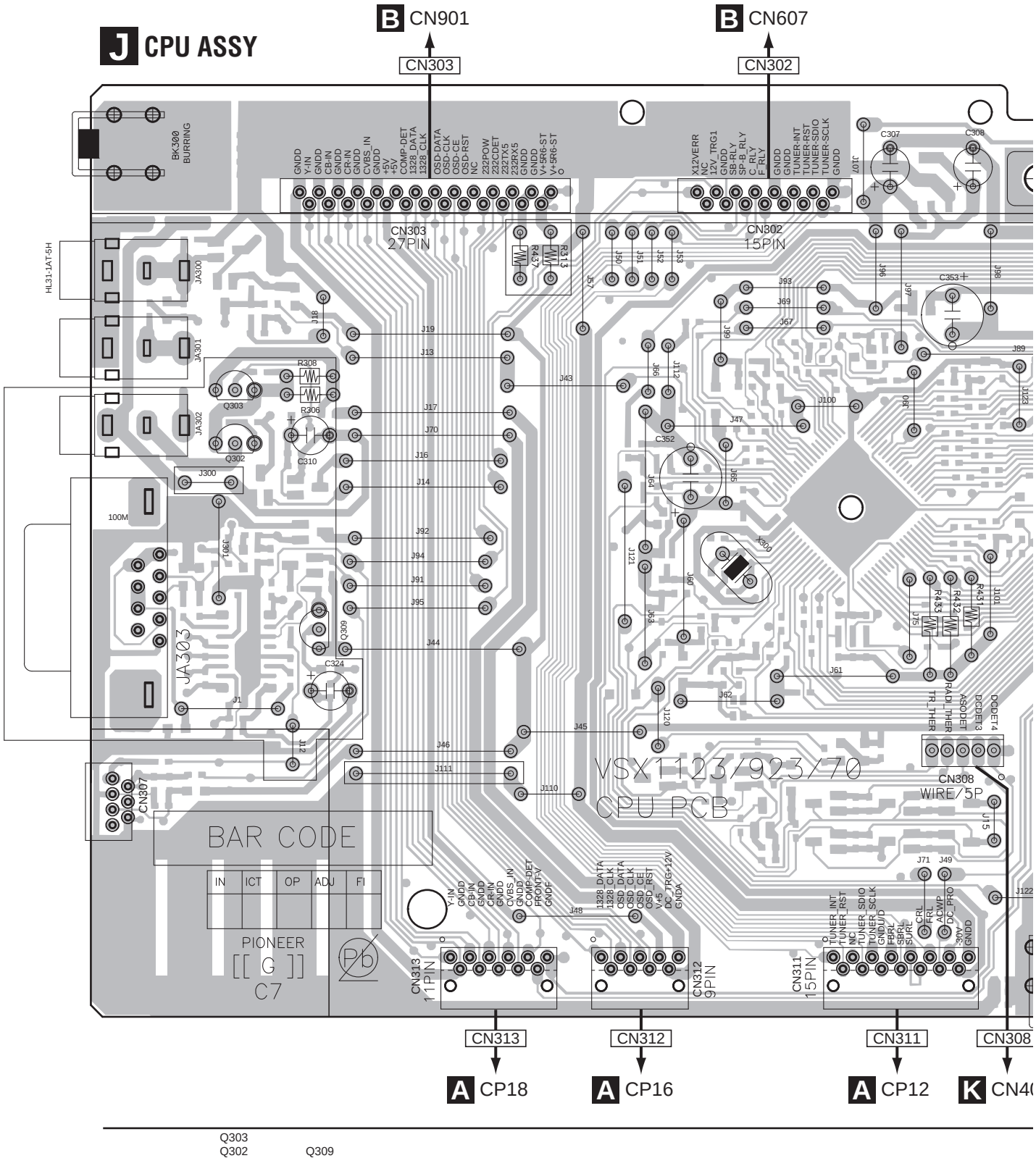
SIDE B

AUDIO ASSY

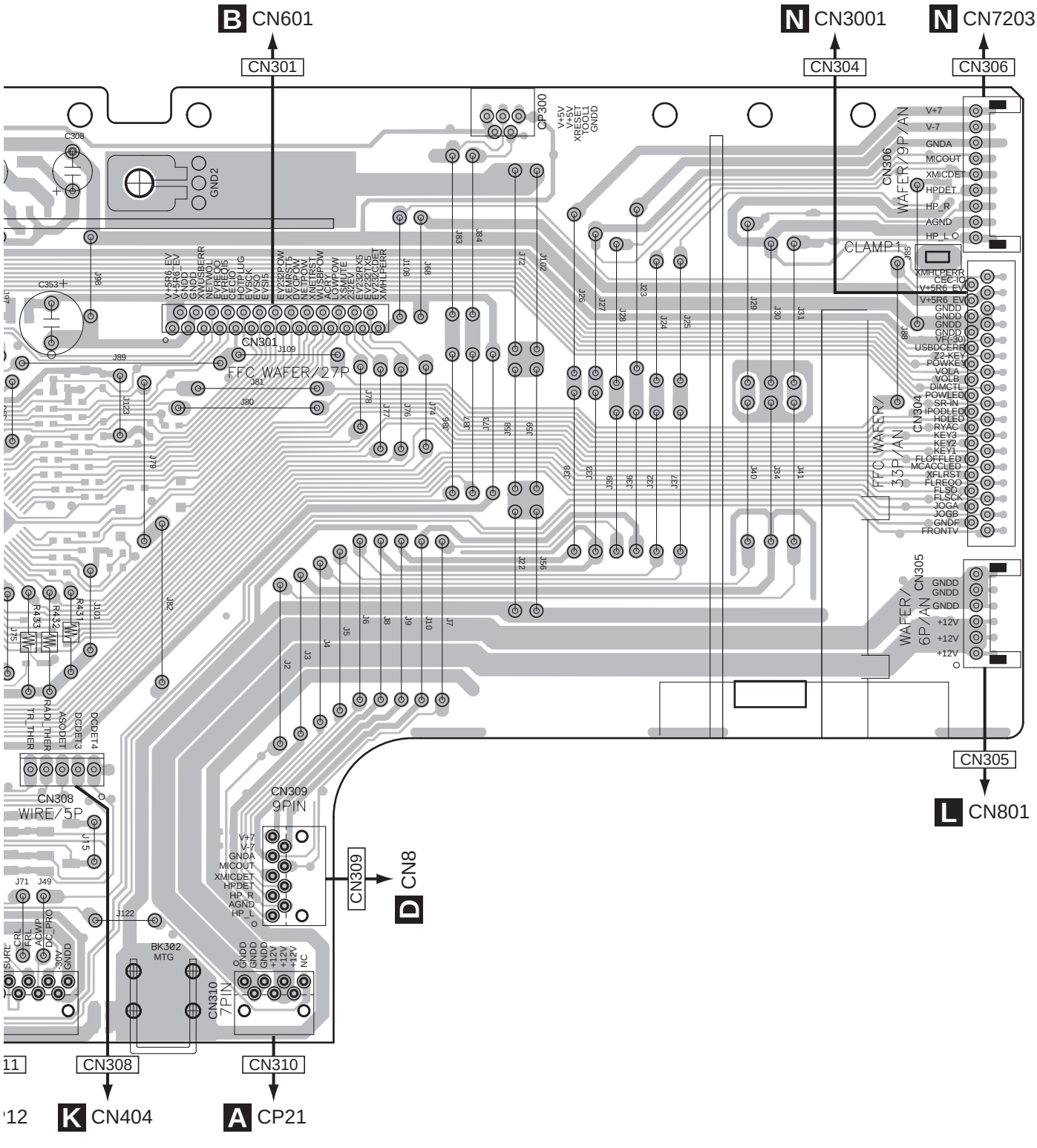


11.10 CPU ASSY

SIDE A

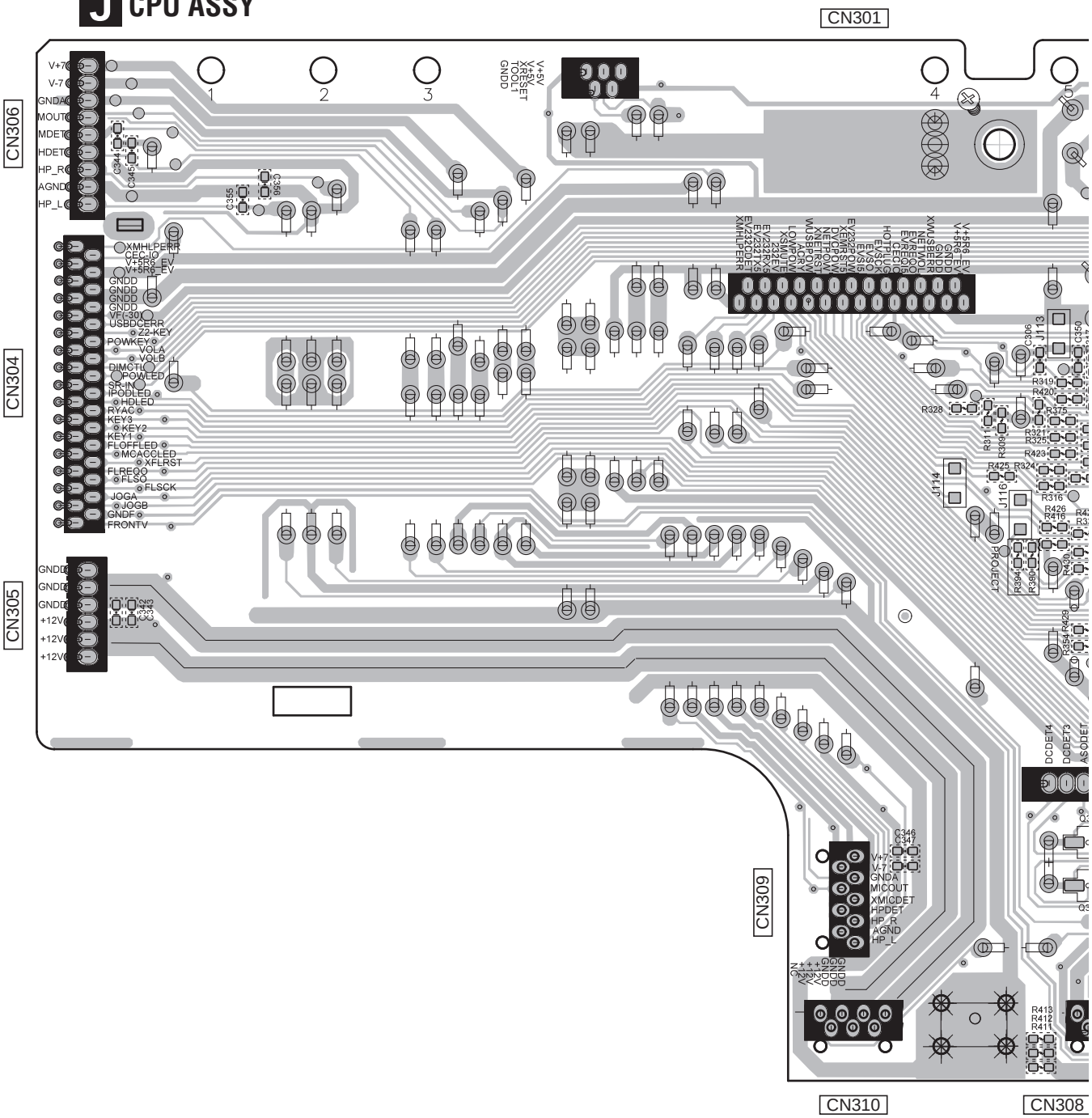


SIDE A

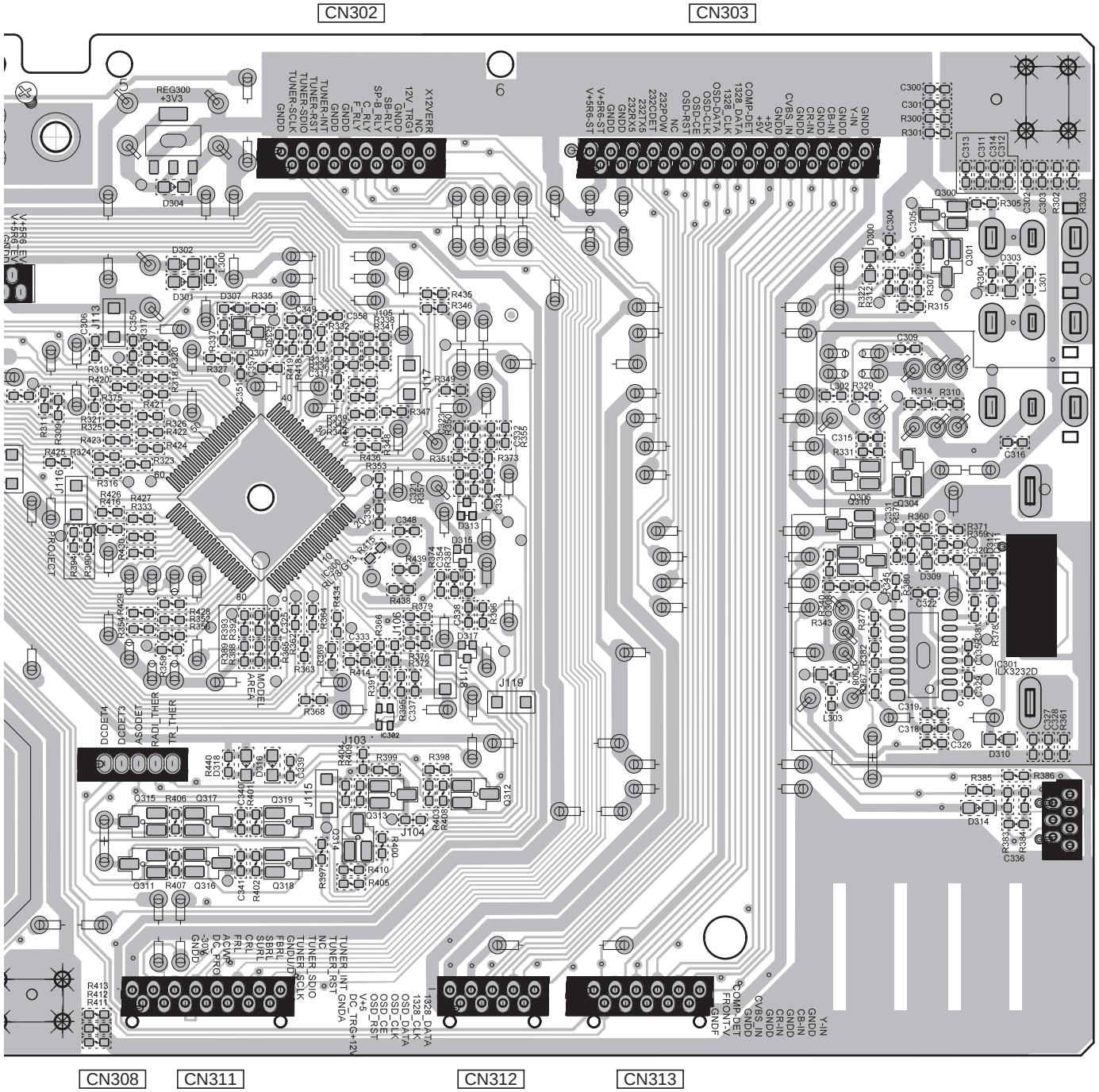

B CN601
CN301
N CN3001
CN304
N CN7203
CN306
CP300
V+5V
V-5V
XRESET
TOOL1
GNDD
CN306 WAFER/9P/AN
V+7
V-7
GNDA
MICOUT
XMICDET
HPDET
HP_R
AGND
HP_L
CLAMP1
CN301
FFC_WAFER/27P
CN304 FFC WAFER/ 33P/AN
XMHLPERR
CEC IO
V+5R6_EV
GNDD
VFL30V
USBDCERR
Z2-KEY
POWKEY
VOLA
VOLB
DIMCTL
POWLED
SR-IN
IPODLED
HDLED
RYAC
KEY3
KEY2
KEY1
FLOFFLED
MCACCLED
XFLRST
FLREQO
FLSD
FLSCK
JOGA
JOGB
GNDF
FRONTV
CN305 WAFER/6P/AN
GNDD
+12V
CN305
L CN801
CN308 WIRE/5P
CN309 9PIN
V+7
V-7
GNDA
MICOUT
XMICDET
HPDET
HP_R
AGND
HP_L
CN309
D CN8
BK302 MTG
CN310 7PIN
GNDD
+12V
NC
CN308
CN310
K CN404
A CP21

SIDE B

J CPU ASSY



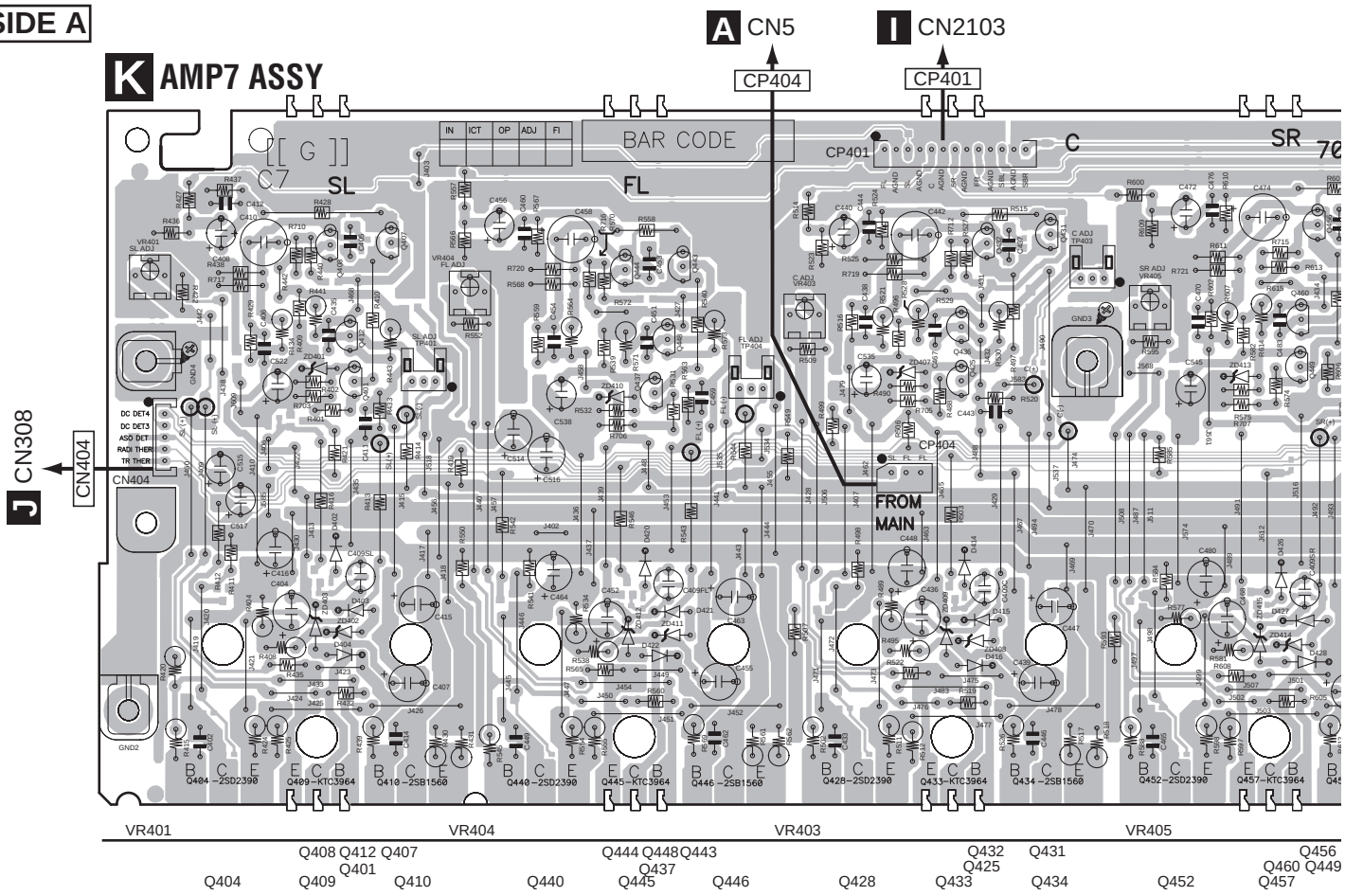
SIDE B



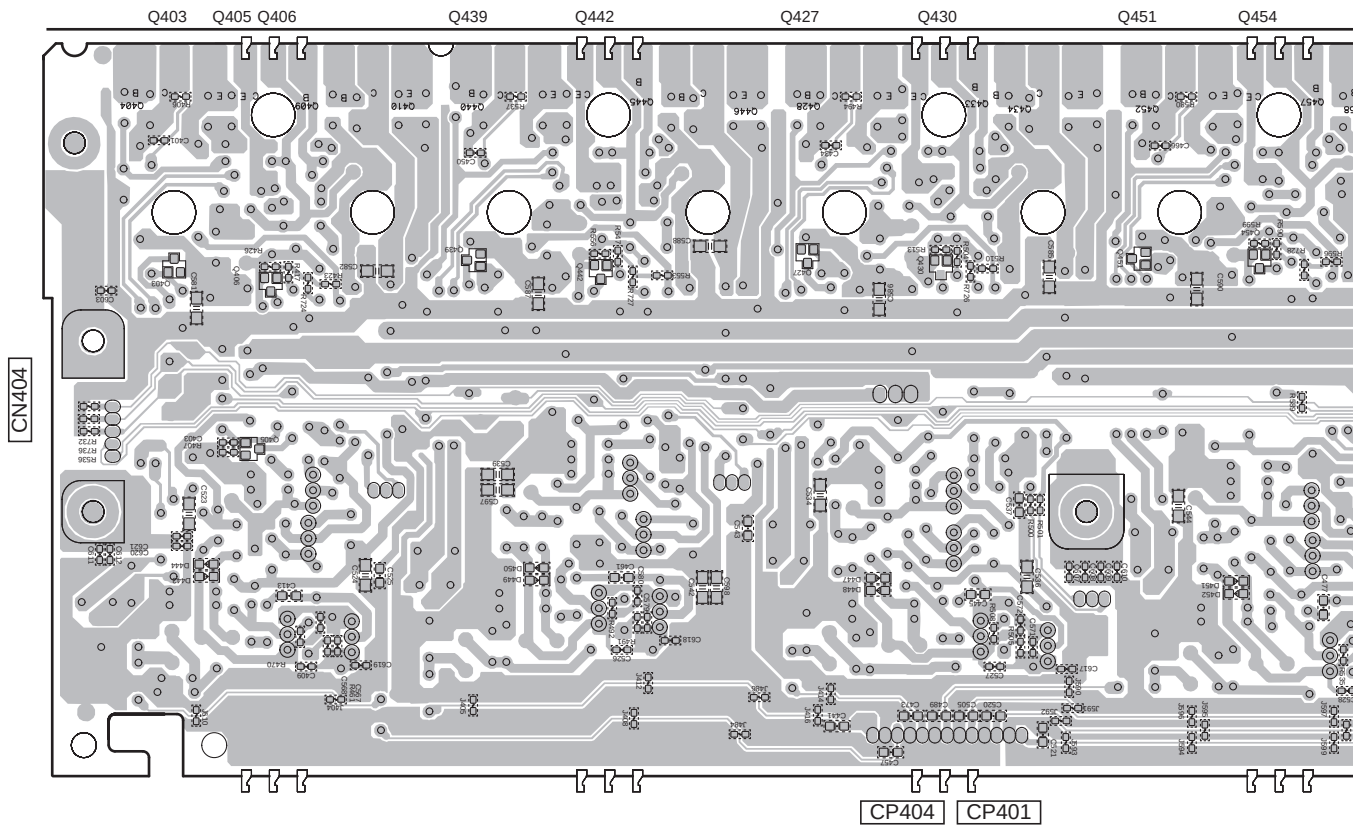
Q307
IC300
Q315 Q317 Q319
Q311 Q316 Q318
IC302
Q313 Q312
Q314
Q300 Q301
Q306 Q304
Q310 Q308 IC301

11.11 AMP7 ASSY

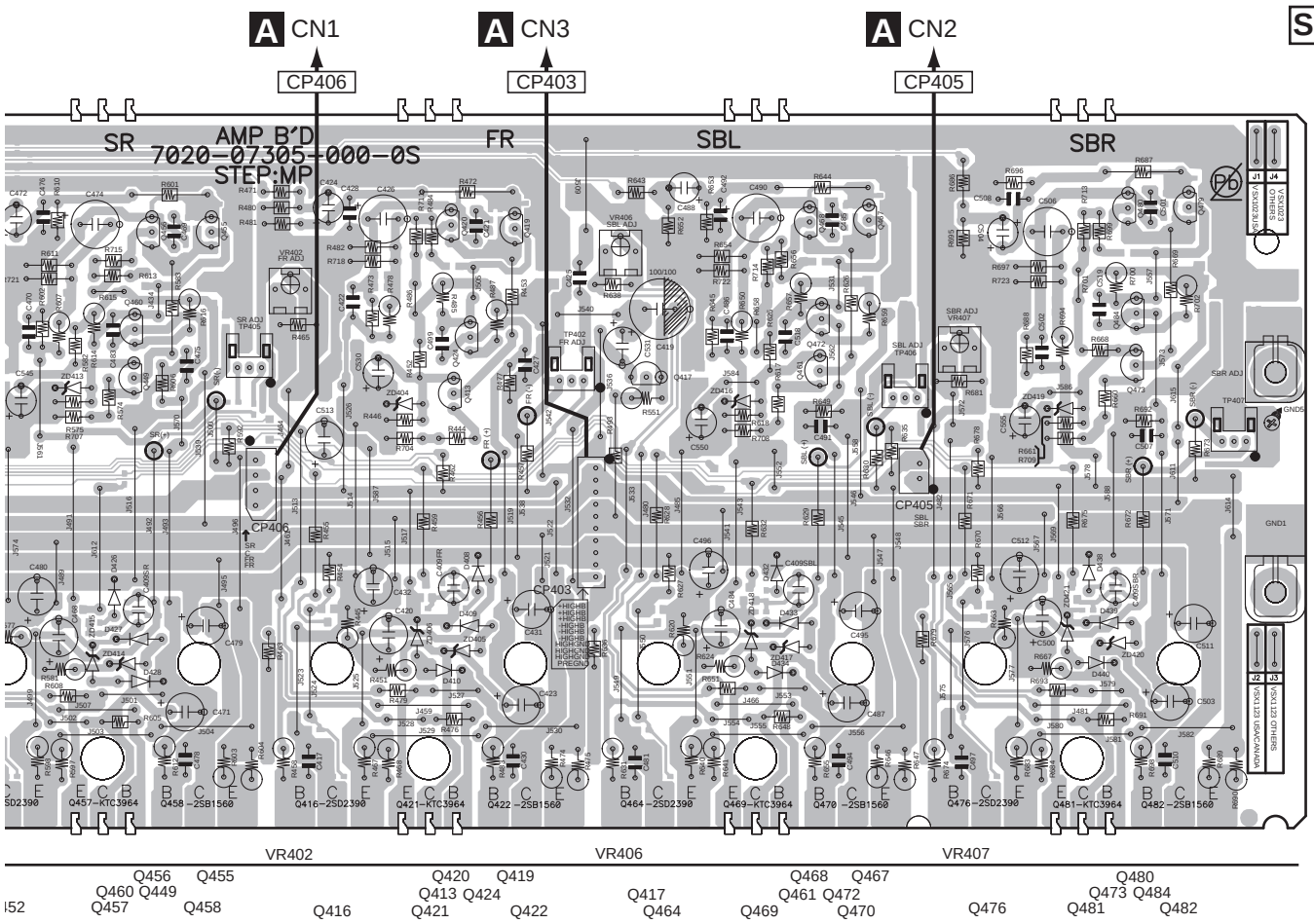
SIDE A



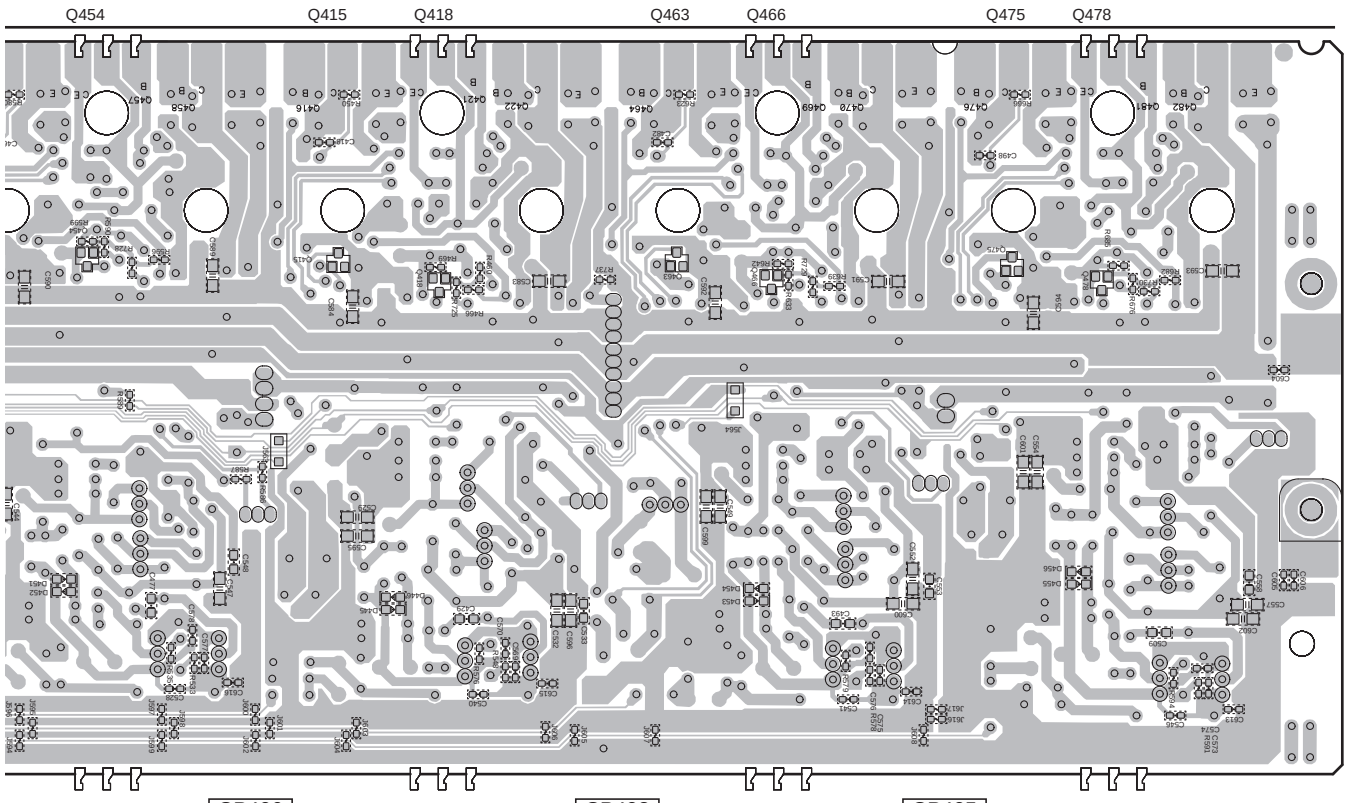
SIDE B



SIDE A

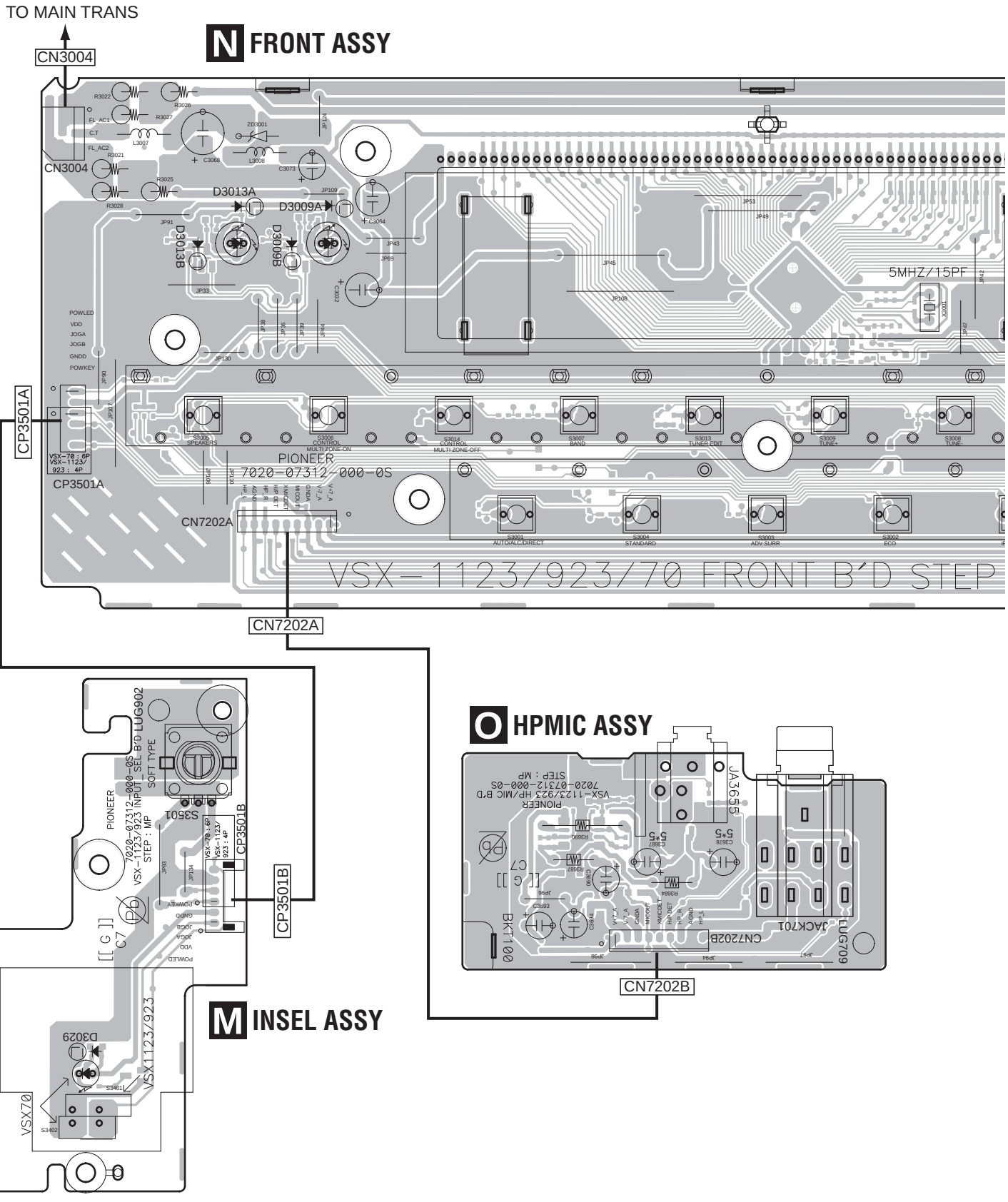

A CN1
A CN3
A CN2
CP406
CP403
CP405
SR
AMP B'D
7020-07305-000-0S
STEP:MP
FR
SBL
SBR
VR402
VR406
VR407
Q456 Q455 Q420 Q419 Q468 Q467 Q480
Q460 Q449 Q413 Q424 Q417 Q461 Q472 Q473 Q484
Q457 Q458 Q416 Q421 Q422 Q464 Q469 Q470 Q476 Q481 Q482

SIDE B


Q454 Q415 Q418 Q463 Q466 Q475 Q478
CP406
CP403
CP405

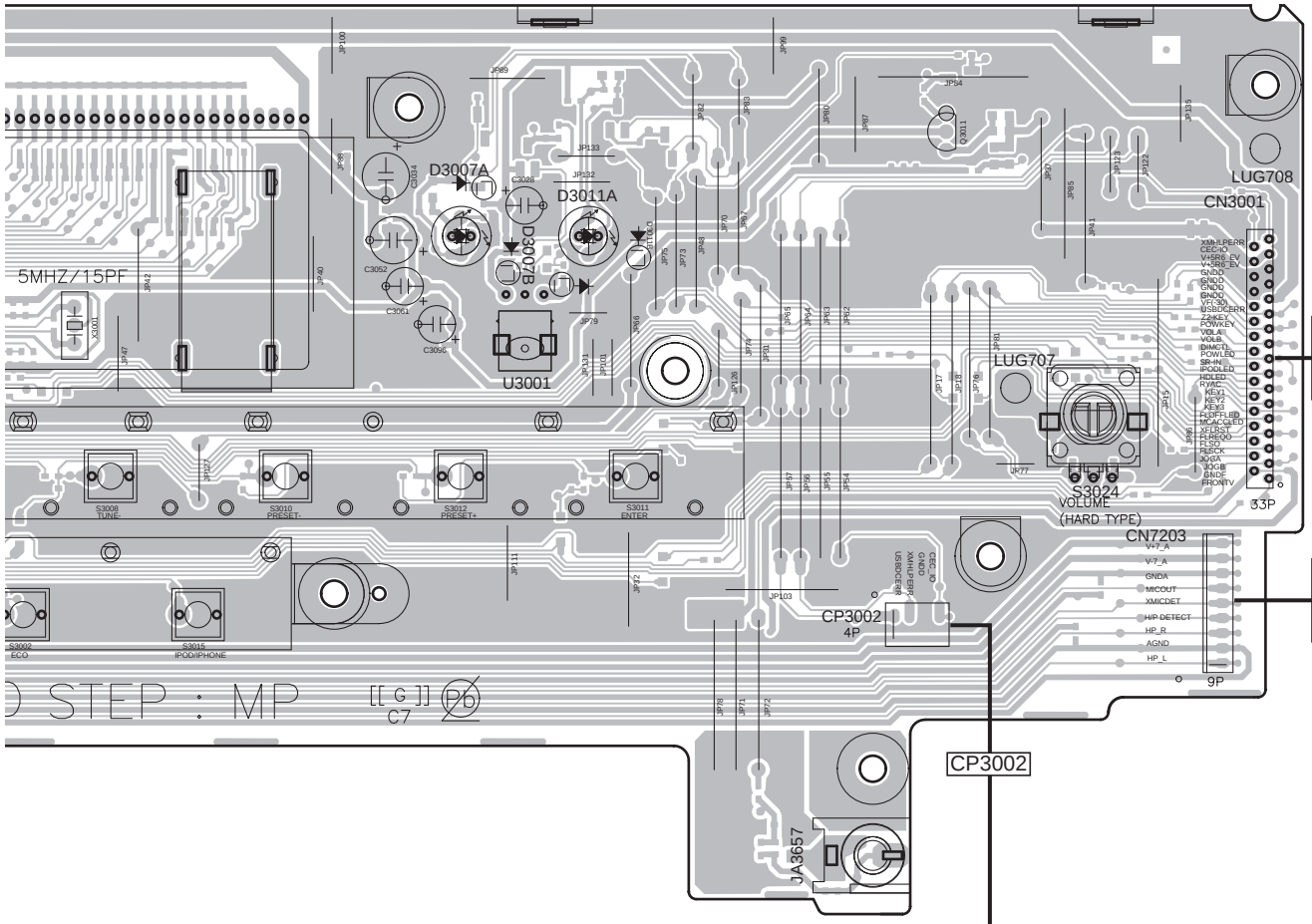
11.12 INSEL, FRONT and HPMIC ASSYS

SIDE A

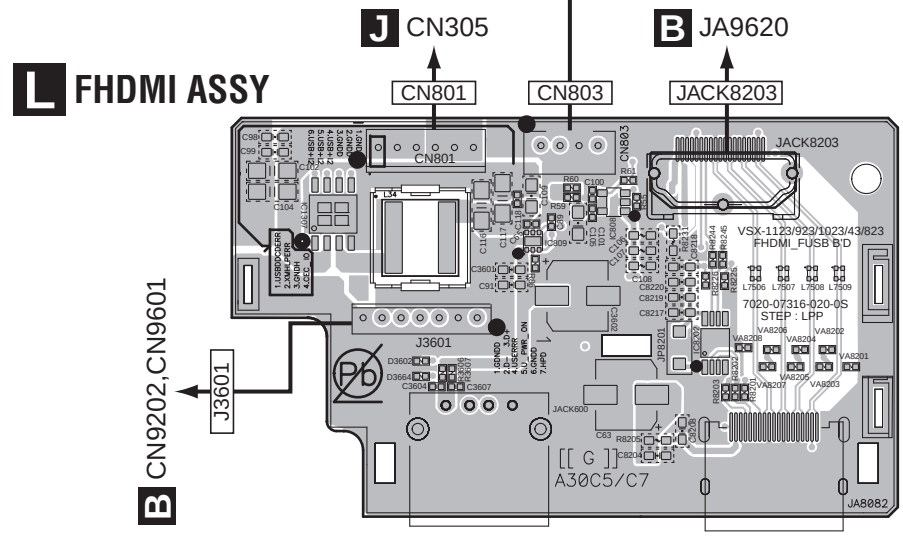


M N O

SIDE A



L FHDMI ASSY

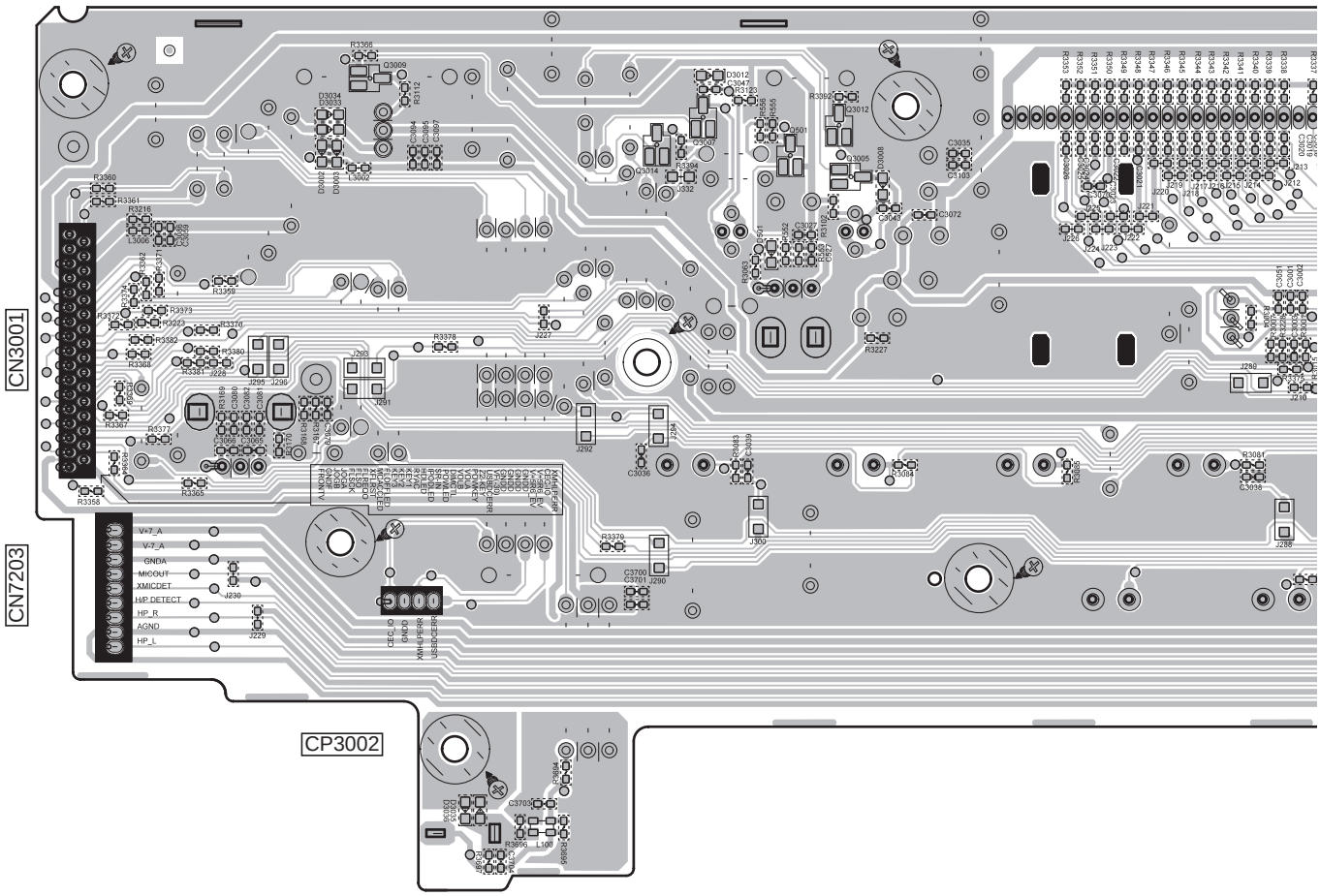


SIDE B

A

Q3009 Q3014 Q3007 Q501 Q3012 Q3005

N FRONT ASSY

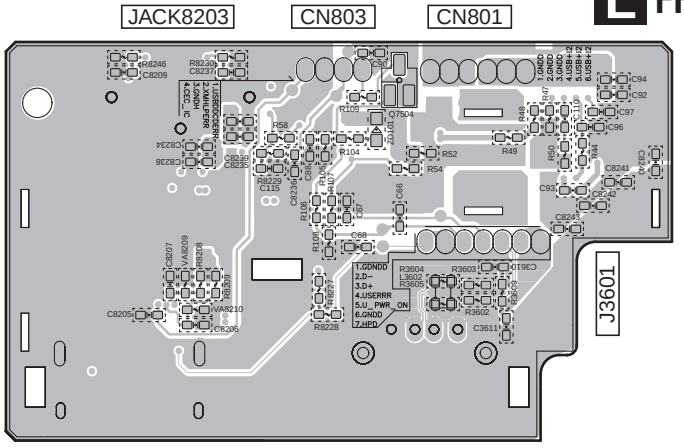


B

C

D

L FHDMI ASSY



E

Q7504

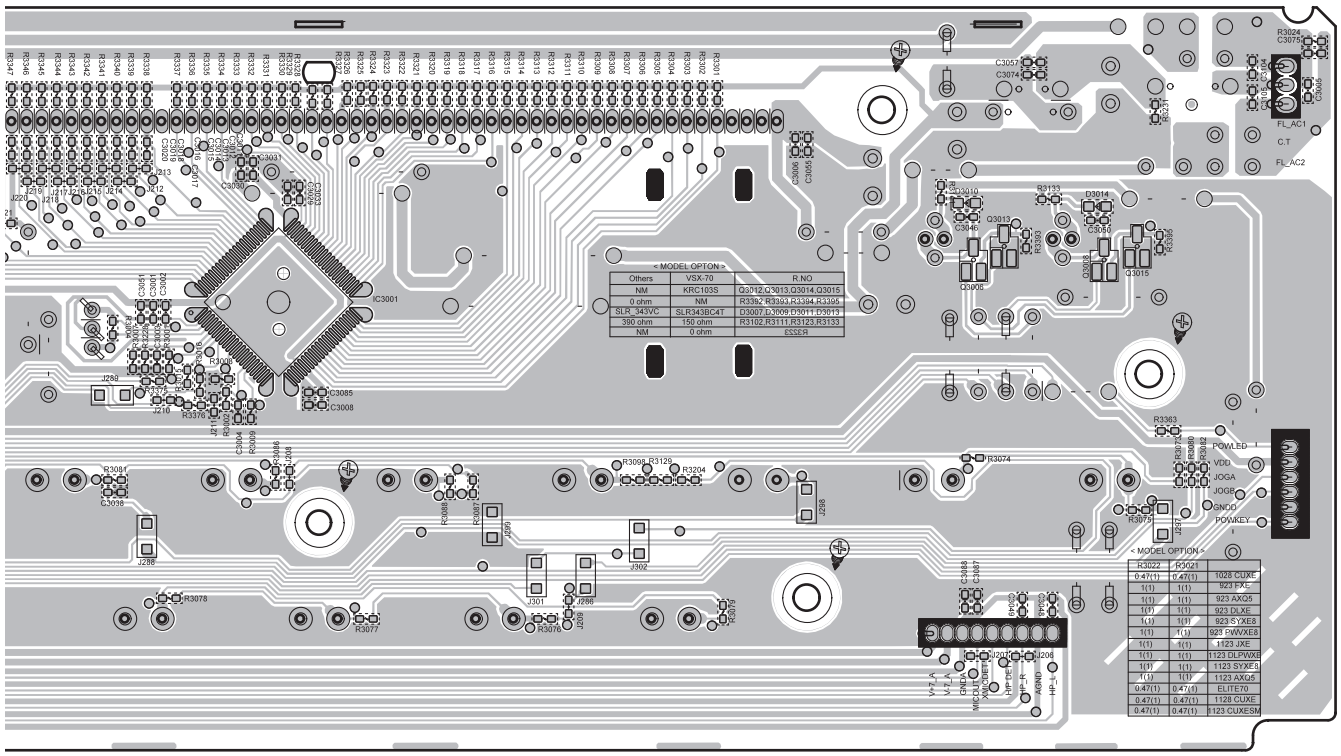
F

L N

SIDE B

IC3001 Q3006 Q3013 Q3008 Q3015

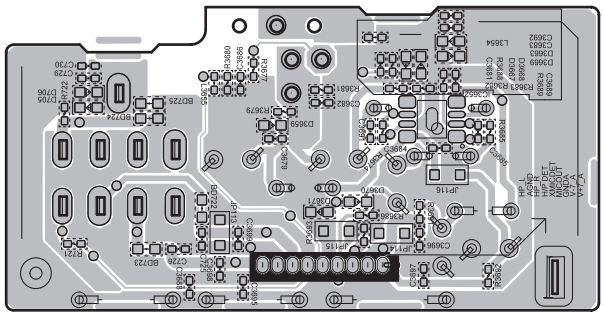
CN3004



CP3501A

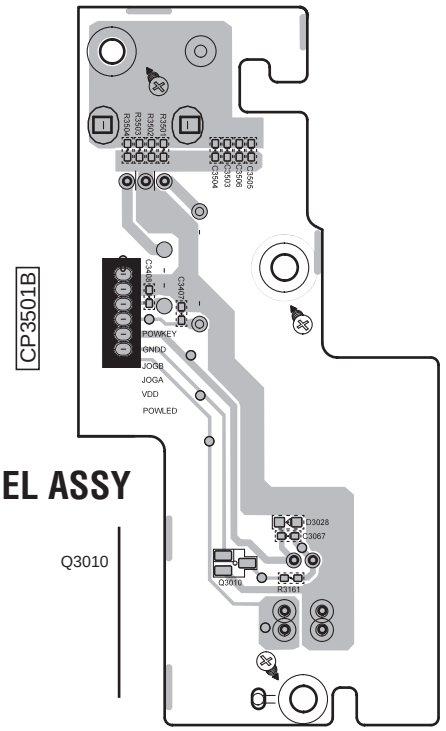
CN7202A

O HPMIC ASSY



CN7202B

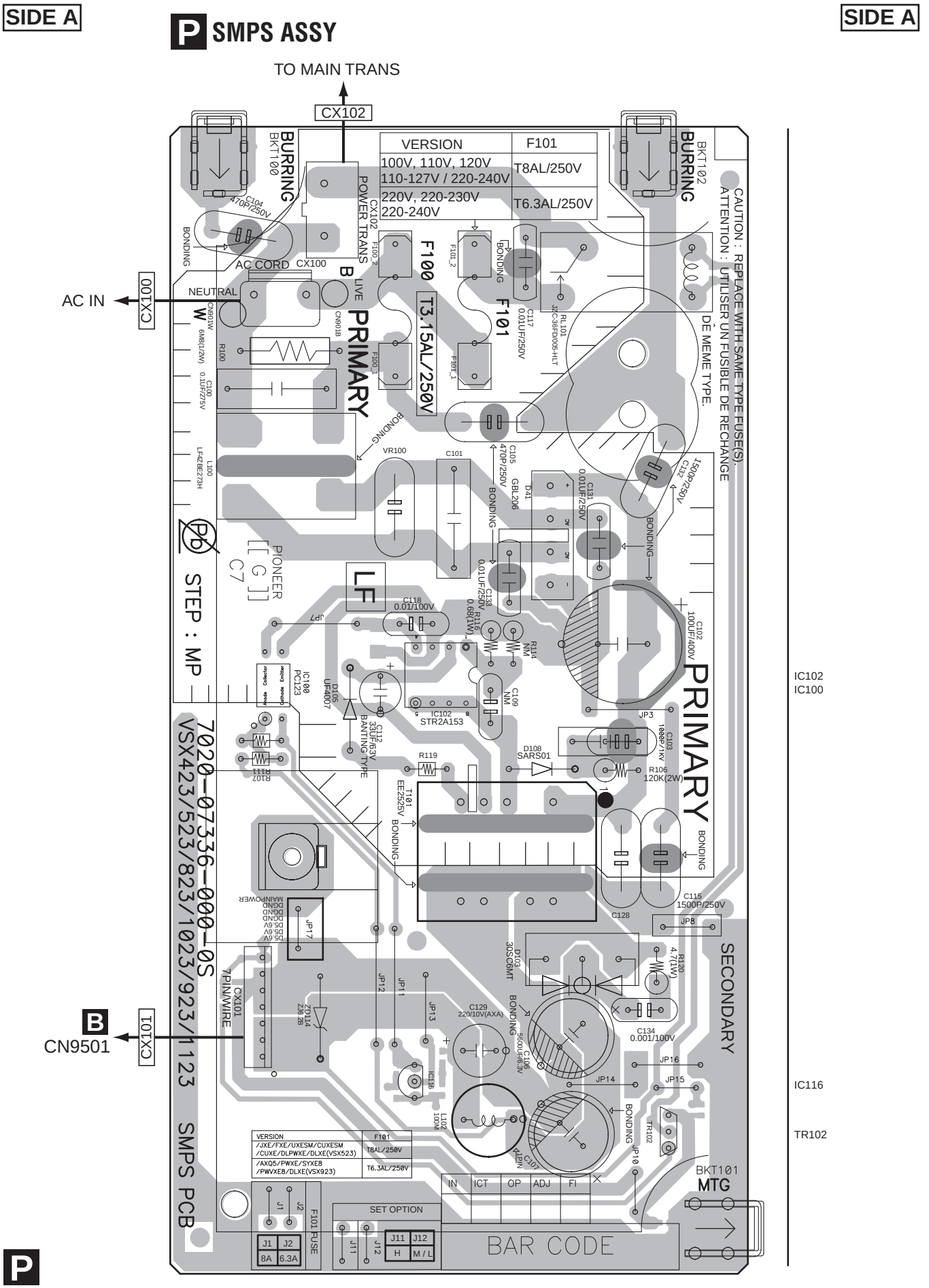
IC3652



M INSEL ASSY

M N O

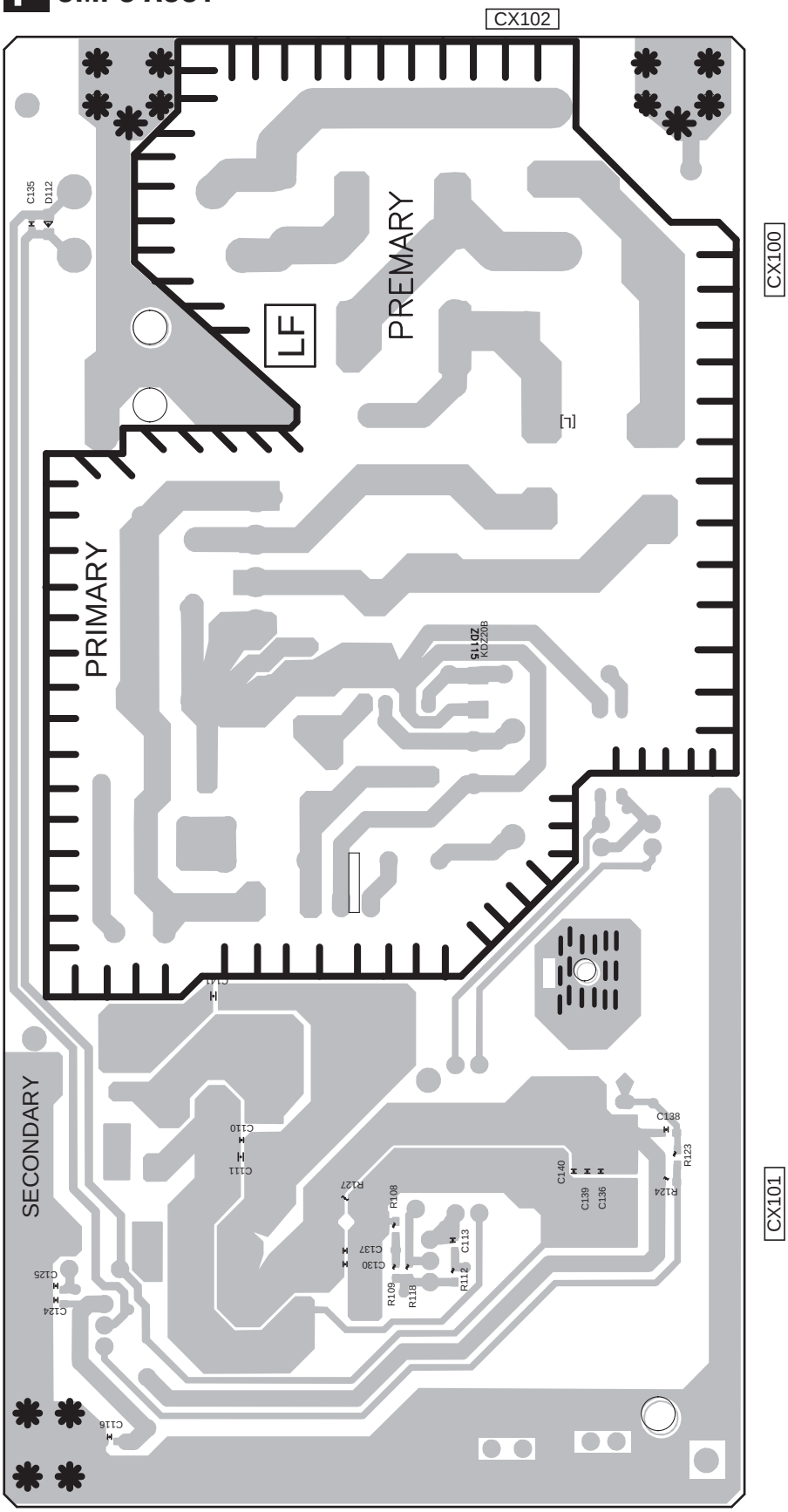
11.13 SMPS ASSY



SIDE B

SIDE B

P SMPS ASSY

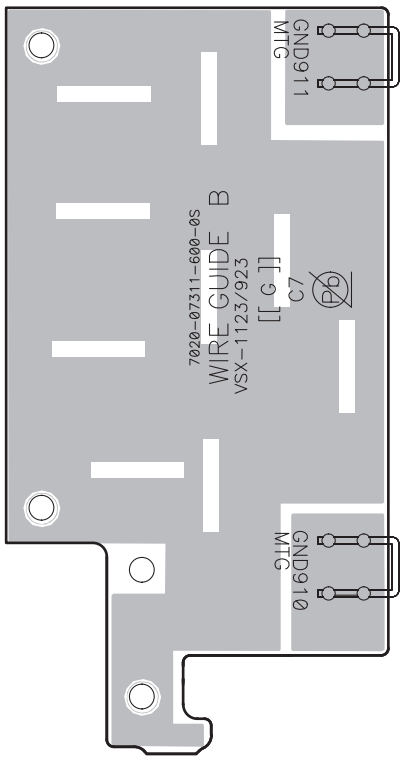


VSX-1128-K

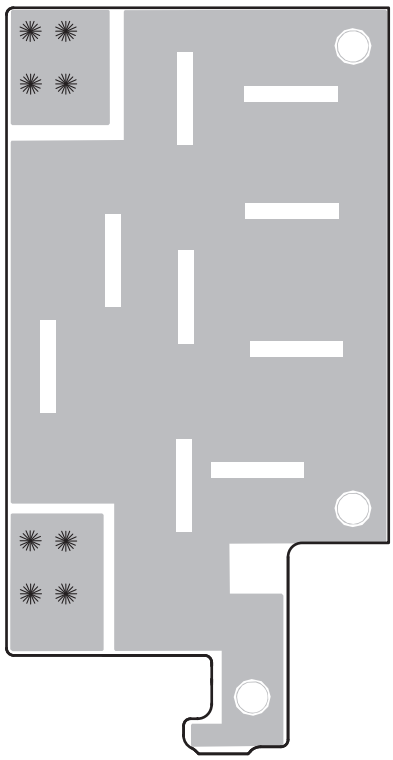
11.14 WG-B, GUI-L and GUI-R ASSYS

SIDE A **SIDE B**

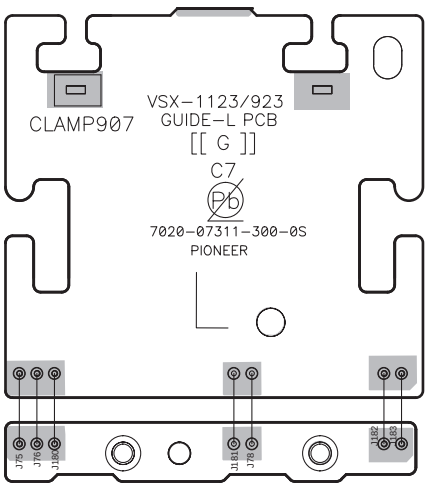
WG-B ASSY



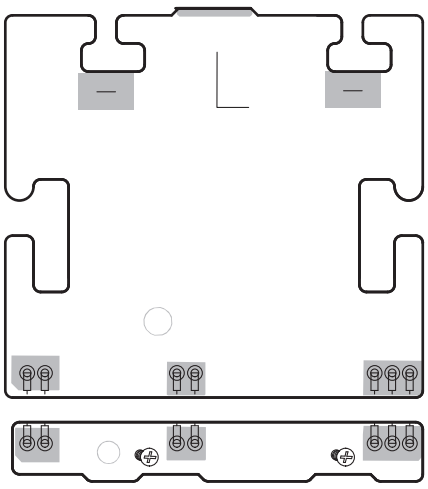
WG-B ASSY



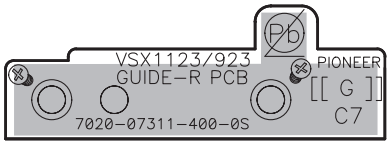
GUI-L ASSY



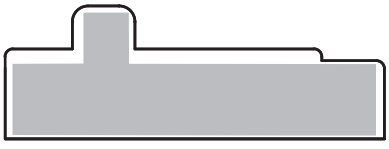
GUI-L ASSY



GUI-R ASSY



GUI-R ASSY



12. PCB PARTS LIST

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

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

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

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

560 Ω	→	*56 × 10^1*	→	*561* ····· *RD1/4PU 5 6 1 J*
47 kΩ	→	*47 × 10^3*	→	*473* ····· *RD1/4PU 4 7 3 J*
0.5 Ω	→	*R50* ····· *RN2H R 5 0 K*		
1 Ω	→	*1R0* ····· *RS1P 1 R 0 K*		

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

5.62 kΩ	→	*562 × 10^1*	→	*5621* ····· *RN1/4PC 5 6 2 1 F*

● *SCHEMATIC DIAGRAM and PCB CONNECTION DIAGRAM* → ● *PCB PARTS LIST*

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

LIST OF ASSEMBLIES

Mark	Symbol and Description	VSX-1128-K/CUXE	VSX-1123-K/CUXESM	VSX-70/CUXE	VSX-1028-K/CUXE
NSP	1..PCB TTL ASSY MAIN	7025HK1207020-IL	7025HK1207020-IL	7025HK1207040-IL	7025HK1208010-IL
	2..MAIN ASSY (PCB SUB ASSY MAIN)	7028073111040-IL	7028073111040-IL	7028073111010-IL	7028073111040-IL
	2..OPTCO ASSY (PCB SUB ASSY OPTCO)	7028073112010-IL	7028073112010-IL	7028073112010-IL	7028073112010-IL
	2..VIDEO ASSY (PCB SUB ASSY VIDEO)	7028073113040-IL	7028073113040-IL	7028073113010-IL	7028073113070-IL
	2..WG-B ASSY (PCB SUB ASSY WG-B)	7028073115010-IL	7028073115010-IL	7028073115010-IL	7028073115010-IL
	2..G-L ASSY (PCB SUB ASSY GUI-L)	7028073116010-IL	7028073116010-IL	7028073116010-IL	7028073116010-IL
	2..G-R ASSY (PCB SUB ASSY GUI-R)	7028073117010-IL	7028073117010-IL	7028073117010-IL	7028073117010-IL
NSP	1..PCB TTL ASSY SMPS	7025HK1207026-IL	7025HK1207026-IL	7025HK1207046-IL	7025HK1207026-IL
⚠	2..SMPS ASSY (PCB SUB ASSY SMPS)	7028073361OO-IL	7028073361OO-IL	70280733610F0-IL	7028073361OO-IL
NSP	1..PCB TTL ASSY FRONT	7025HK1207031-IL	7025HK1207021-IL	7025HK1207041-IL	7025HK1208011-IL
	2..FRONT ASSY (PCB SUB ASSY FRONT)	7028073121040-IL	7028073121040-IL	7028073121010-IL	7028073121040-IL
	2..HPMIC ASSY (PCB SUB ASSY HPMIC)	7028073122010-IL	7028073122010-IL	7028073122010-IL	7028073122010-IL
	2..INSEL ASSY (PCB SUB ASSY INSEL)	7028073123040-IL	7028073123040-IL	7028073123010-IL	7028073123040-IL
NSP	1..PCB TTL ASSY CPU	7025HK1207033-IL	7025HK1207023-IL	7025HK1207043-IL	7025HK1208013-IL
	2..CPU ASSY (PCB SUB ASSY CPU)	7028073131050-IL	7028073131040-IL	7028073131010-IL	7028073131080-IL
	2..BRI-1 ASSY (PCB SUB ASSY BRI-1)	7028073132010-IL	7028073132010-IL	7028073132010-IL	7028073132070-IL
	2..BRI-2 ASSY (PCB SUB ASSY BRI-2)	7028073133010-IL	7028073133010-IL	7028073133010-IL	7028073133010-IL
	2..BTCNT ASSY (PCB SUB ASSY BTCNT)	7028073134010-IL	7028073134010-IL	7028073134010-IL	7028073134010-IL
NSP	1..PCB TTL ASSY DMAIN	7025HK1207042-IL	7025HK1207042-IL	7025HK1207042-IL	7025HK1208012-IL
	2..D-MAIN ASSY (PCB SUB ASSY DMAIN)	7028073151010-IL	7028073151010-IL	7028073151010-IL	7028073151080-IL
NSP	1..PCB TTL ASSY AMP7	7025HK1207044-IL	7025HK1207044-IL	7025HK1207044-IL	7025HK1207044-IL
	2..AMP7 ASSY (PCB SUB ASSY AMP7)	7028073051040-IL	7028073051040-IL	7028073051040-IL	7028073051040-IL
NSP	1..PCB TTL ASSY AUDIO	7025HK1207045-IL	7025HK1207045-IL	7025HK1207045-IL	7025HK1208015-IL
	2..AUDIO ASSY (PCB SUB ASSY AUDIO)	7028073141010-IL	7028073141010-IL	7028073141010-IL	7028073141080-IL
NSP	1..PCB TTL ASSY FHDMI	7025HK1207048-IL	7025HK1207048-IL	7025HK1207048-IL	7025HK1207048-IL
	2..FHDMI ASSY (PCB SUB ASSY FHDMI)	7028073221060-IL	7028073221060-IL	7028073221060-IL	7028073221060-IL
NSP	1..PCB TTL ASSY BT	7025HK1209028-IL	7025HK1209028-IL	7025HK1209028-IL	7025HK1209028-IL
	2..BT ASSY (PCB SUB ASSY BT)	7028073211040-IL	7028073211040-IL	7028073211040-IL	7028073211040-IL

CONTRAST OF PCB ASSEMBLIES

A MAIN ASSY

7028073111040-IL and 7028073111010-IL are constructed the same except for the following:

Mark	Symbol and Description	7028073111040-IL	7028073111010-IL
⚠	IC5 Liner regulator IC	Not used	J126781200040-IL
	Heatsink	Not used	2120000818070-IL
	Screw	Not used	B020030081B10-IL

B D-MAIN ASSY

7028073151010-IL and 7028073151080-IL are constructed the same except for the following:

Mark	Symbol and Description	7028073151010-IL	7028073151080-IL
	IC1802 D/A Converter IC	AK4388ET	Not used
	IC9207 IC	TC74VHC08FK	Not used
	IC1511 PLL IC	ICS511MLF	Not used

E BRI-1 ASSY

7028073132010-IL and 7028073132070-IL are constructed the same except for the following:

Mark	Symbol and Description	7028073132010-IL	7028073132070-IL
	IC2802 IC, Linear OP	J121458001010-IL	Not used

F VIDEO ASSY

7028073113040-IL, 7028073113010-IL and 7028073113070-IL are constructed the same except for the following:

Mark	Symbol and Description	7028073113040-IL	7028073113010-IL	7028073113070-IL
	IC1007 Character Generator	PDC162A	PDC162A	Not used
	X1003 Crystal (14M32)	E80014R318080-IL	E80014R318080-IL	Not used
	JA1001 Ter, RCA 9pin	G607902AA151Y-IL	G607902AA151Y-IL	G607902AA133Y-IL
	JA1002 Ter, RCA 6pin	Not used	G603610A0032Y-IL	Not used

I AUDIO ASSY

7028073141010-IL and 7028073141080-IL are constructed the same except for the following:

Mark	Symbol and Description	7028073141010-IL	7028073141080-IL
	IC2503 Elect VR IC	J084615400010-IL	Not used
	JA2103 Ter, RCA 4pin	G602421E0046Y-IL	G601206A0700Y-IL

J CPU ASSY

7028073131050-IL, 7028073131040-IL, 7028073131010-IL and 7028073131080-IL are constructed the same except for the following:

Mark	Symbol and Description	7028073131050-IL	7028073131040-IL	7028073131010-IL	7028073131080-IL
	IC301 IC, logic-interface	Not used	Not used	J046323200020-IL	Not used
	Q303, Q309 Semi, TR/GE PNP 2SA	Not used	Not used	J5001266G0050-IL	Not used
	Q302 Transistor	Not used	Not used	J5000916Y0050-IL	Not used
	JA302 Jack, D3.5	Not used	Not used	G401PJ3080100-IL	Not used
	JA303 CN. wafer Interfac	Not used	Not used	L103090090040-IL	Not used

M INSEL ASSY

7028073123040-IL and 7028073123010-IL are constructed the same except for the following:

Mark	Symbol and Description	7028073123040-IL	7028073123010-IL
	D3029 LED, round	Not used	K500036000160-IL
	S3401 Switch	G180501000010-IL	Not used
	S3402 Switch	Not used	G180501000010-IL

N FRONT ASSY

7028073121040-IL and 7028073121010-IL are constructed the same except for the following:

Mark	Symbol and Description	7028073121040-IL	7028073121010-IL
	D307, D309, D3011, D3013 LED, round	K500052009011-IL	K500036000160-IL

P SMPS ASSY

70280733610O0-IL and 70280733610F0-IL are constructed the same except for the following:

Mark	Symbol and Description	70280733610O0-IL	70280733610F0-IL
	CN9100 CN. wafer 7.92 mm	L108396030010-IL	Not used

PARTS LIST (VSX-1128-K)

A MAIN ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
⚠	IC	1	J126781200040-IL
⚠	IC	2	J126791200060-IL
⚠	IC	3	J126780500110-IL
	Q	17	J5000916Y0050-IL
⚠	D	7,4912	K047100600220-IL
⚠	D	10-13	K000400700220-IL
	D	23	K000400700220-IL
	D	9002	K06005R144522-IL
	D	9024,9025	K06012R044522-IL
MISCELLANEOUS			
	JA	1,2 TER,BOARD SCREW 8P	G614108V1010M-IL
	JA	3 TER,BOARD SCREW 2P	G611201A0200Y-IL
	JA	50 TUNER,FM/AM	E903004100780-IL
	RY	2-6 RELAY	G680060103010-IL
	CN	9007,9019 CN,WAFER	L109012511320-IL
	CN	9008,9009,9016 CN.WAFER	L109012510920-IL
	CN	9012 CN,WAFER	L109012511520-IL
	CN	9017,9021 CN,WAFER	L109012510720-IL
	CN	9018 CN,WAFER	L109012511120-IL
	FU	33,34 FUSE,MICRO (T4A_250V)	G658402250050-IL
RESISTORS			
	R	5,7,9,11	C060010065050-IL
	R	6,8,10,12	C060010066050-IL
	R	13,15,17	C060010065050-IL
	R	14,16,18	C060010066050-IL
	R	25	C0605R6065050-IL
	R	41,42	C060R22065050-IL
	R	64	C060022063050-IL
	R	66	N113135647920-IL
CAPACITORS			
	C	55,58	D040103089230-IL
	C	65-68	D02010407H080-IL
	C	76	D040103084000-IL
	C	84,85	D040472084020-IL

B D-MAIN ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC	101	UPD61110GM-100UEVA
	IC	104,604,1808	TC7WHU04FK
	IC	105,613,1601,1616	TC74VHC08FK
	IC	603	PE7008A
	IC	608	TC74VHCT541AFK
	IC	610,1509,1806	TC74VHC126FK
	IC	611	TC74VHCT126AFK
	IC	612,1502	TC74VHCT08AFKS1
	IC	614,616,9208	TC7SH08FUS1
	IC	901,910	TC74LCX541FK
	IC	902,911	TC7SZ125FU
	IC	909	J044718100010-IL
⚠	IC	1216	BD3539NUX
	IC	1501,1805	TC74VHC157FK
	IC	1511	ICS511MLF
⚠	IC	1605,1615	AAT4610BIGV-1
	IC	1801	AK4588VQ
	IC	1802	AK4388ET
	IC	1804,9003,9207,9601	TC74VHC08FK
	IC	9101	TC74VHC541FK
	IC	9102	BU4094BCFV
⚠	IC	9202	BD2226G
⚠	IC	9401,9511,9519	MM3529A50P
⚠	IC	9402	MM3542BF
⚠	IC	9502,9518,9523	S-1172B12-E6
⚠	IC	9503	S-1172B13-E6
⚠	IC	9505	MM3529A18P
⚠	IC	9508	MM3529A25P
⚠	IC	9510	MM3529A32P
⚠	IC	9515	S-1172B15-E6
⚠	IC	9555	MM3411A50N
MISCELLANEOUS			
	JA	1601,1603,9601-9607 CN.WAFER	L109100195550-IL
	JA	9201 CN,PLUG CONTACT	G480400201010-IL
	JA	9202 JACK,MODULAR	G4060RJ450230-IL
	JA	9620 CN.WAFER	L109100195550-IL
⚠	P	601 SW,POLY	G300003500010-IL
CAPACITORS			
	C	1509	D040222081000-IL

C OPTCO ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC	2009	J040740400290-IL
MISCELLANEOUS			
	JA	1305 MODULE	E100802000250-IL
	JA	1306 TER,RCA 1PIN	G600107A0000Y-IL
	CN	9006 CN.WAFER	L109012510920-IL

Mark	No.	Description	Part No.

D BRI-2 ASSY

MISCELLANEOUS

	RY 702	RELAY	G680240202030-IL
	CN 8	CN.WAFER	L109012510920-IL
	CN 9020	CN,WAFER	L109012511120-IL

RESISTORS

	R 721		C060010063050-IL

E BRI-1 ASSY

SEMICONDUCTORS

	IC 2704,2742,2762,2782		J121458001010-IL
	IC 2802		J121458001010-IL

MISCELLANEOUS

	CN 2107,2110	CN,WAFER	L109012512320-IL
	CN 2114	CN,WAFER	L109012512120-IL
	CN 2203	CN,WAFER	L109012511920-IL

F VIDEO ASSY

SEMICONDUCTORS

	IC 1001		J171132800010-IL
	IC 1007		PDC162A

MISCELLANEOUS

	JA 1001	TER,RCA 9PIN	G607902AA151Y-IL
	X 1003	CRYSTAL (14M32)	E80014R318080-IL

G BT ASSY

SEMICONDUCTORS

⚠	IC 600		BD2224G

MISCELLANEOUS

	CN 601	CONNECTOR	CKS5712

H BTCNT ASSY

MISCELLANEOUS

	CN 9602	CN,WAFER	L109012511120-IL

I AUDIO ASSY

SEMICONDUCTORS

	IC 2501		BD3473KS2
	IC 2502		J040406600010-IL
	IC 2503		J084615400010-IL
	IC 2702,2704,2706		J121458001010-IL
	Q 2401		J5023209Y0010-IL
	Q 2402		J5001281Y0010-IL

MISCELLANEOUS

	JA 2101	TER,RCA 6PIN	G603610A0001Y-IL
	JA 2102	TER,RCA 4PIN	G602421E0002Y-IL
	JA 2103	TER,RCA 4PIN	G602421E0046Y-IL

RESISTORS

	R 374,377		C060033065050-IL

J CPU ASSY

SEMICONDUCTORS

	IC 302		J126077004210-IL
⚠	IC 9300		J126111733230-IL

MISCELLANEOUS

	JA 300,301	JACK,D3.5	G401PJ3080100-IL
	CN 302	CN,WAFER	L109012511520-IL
	CN 303	CN.WAFER	L109012512720-IL

CAPACITORS

	C 352,353		D040102081070-IL

K AMP7 ASSY

SEMICONDUCTORS

	Q 401,413,425,437		J5001024Y0050-IL
	Q 407,408,417,419		J5000992FA050-IL
	Q 412,424,436,448		J5023206Y0050-IL
	Q 420,431,432,443		J5000992FA050-IL
	Q 444,455,456,467		J5000992FA050-IL
	Q 449,461,473		J5001024Y0050-IL
	Q 460,472,484		J5023206Y0050-IL
	Q 468,479,480		J5000992FA050-IL
	D 9401,9404,9407,9410		K06005R134522-IL
	D 9402,9403,9405,9406		K06004R344522-IL
	D 9408,9409,9411,9412		K06004R344522-IL
	D 9413,9416,9419		K06005R134522-IL
	D 9414,9415,9417,9418		K06004R344522-IL
	D 9420,9421		K06004R344522-IL

MISCELLANEOUS

	VR 401-407	VR,SEMI CARBON MOLD	C541102315000-IL

RESISTORS

⚠	R 406,450,494,537		F320471001050-IL
⚠	R 415,439,458,483		C060010165060-IL
⚠	R 424,425,430,431		N113136647820-IL
	R 443,487,530,573		C060047065060-IL
⚠	R 467,468,474,475		N113136647820-IL
	R 493		C060033065060-IL
⚠	R 502,526,545,569		C060010165060-IL
⚠	R 511,512,517,518		N113136647820-IL
	R 551		C060010165060-IL
⚠	R 554,555,561,562		N113136647820-IL
⚠	R 580,623,666		F320471001050-IL
⚠	R 588,612,631,655		C060010165060-IL
⚠	R 597,598,603,604		N113136647820-IL
	R 616,659,702		C060047065060-IL
⚠	R 640,641,646,647		N113136647820-IL
⚠	R 674,698		C060010165060-IL
⚠	R 683,684,689,690		N113136647820-IL

L FHDMI ASSY

SEMICONDUCTORS

⚠	IC 808		J127380100050-IL
	IC 8202		PCA9517DGK

MISCELLANEOUS

	JA 600	CN,PLUG CONTACT	G480400201010-IL
	JA 8082	CN.WAFER	L109100190140-IL

Mark	No.	Description	Part No.

M INSEL ASSY

MISCELLANEOUS

	S 3401	SWITCH	G180501000010-IL
	S 3501	SW,ENCODER	G121121200230-IL

N FRONT ASSY

SEMICONDUCTORS

	IC 3001		J020561500010-IL
	Q 3011		J5001266G0050-IL
	D 3007,3009,3011,3013		K500052009011-IL
	D 9001		K06006R844522-IL

MISCELLANEOUS

	JA 3657	TER,RCA 1PIN	G600101HG000Y-IL
	V 3001	DISPLAY,FLT	K530166400012-IL
	S 3001-3015	SWITCH	G180501000010-IL
	S 3024	SW,ENCODER	G121122400230-IL
	X 3001	RESONATOR,CERAMIC	E830500000020-IL
	1	HOLDER	4320211306000-IL
	U 3001	MODULE,REMOCON	E940349003810-IL

RESISTORS

	R 3021,3022		C060R47065050-IL
	R 3025,3026		C060001065060-IL

O HPMIC ASSY

SEMICONDUCTORS

	IC 3652		J121458001010-IL

MISCELLANEOUS

	JA 701	JACK,D6.5	G402PJ612AG1Y-IL
	JA 3655	JACK,D3.5	G40132340000Y-IL

P SMPS ASSY

SEMICONDUCTORS

⚠	IC 100		K614123000010-IL
⚠	IC 102		J122201530080-IL
⚠	IC 116		J126243118010-IL
	Q 102		J5023198Y0000-IL
⚠	D 41		K047200600010-IL
⚠	D 103		K120300600010-IL
	D 105		K050400700010-IL
	D 108		K050010010010-IL
	D 9114		K06006R244522-IL
	D 9115		K06620R04P410-IL

MISCELLANEOUS

⚠	L 100	COIL,LINE FILTER	D320201405510-IL
⚠	RY 101	RELAY	G680060103030-IL
⚠	T 101	TRANS,SWITCHING	E060252505510-IL
	CN 9100	CN.WAFER 7.92MM	L108396030010-IL
	CN 9102	CN.WAFER 7.92MM	L108011430210-IL
	100,102	BRACKET	4010215796000-IL
	101	BRACKET	4010210196000-IL
⚠	FU 100	FUSE GLASS TUBE 20MM (3.15A)	N751503151160-IL
⚠	FU 101	FUSE GLASS TUBE 20MM (T8AL/250V)	N751508001160-IL

RESISTORS

Mark	No.	Description	Part No.
	R 100		C060068564520-IL
	R 116		C060R68065050-IL
	R 120		C0604R7065050-IL

CAPACITORS

⚠	C 100		D02110407H010-IL
	C 102		D04010108K000-IL
	C 103		D00810207Q010-IL
	C 104,105		D00847127H010-IL
	C 106		D041562081001-IL
	C 115,132		D00815248H010-IL
	C 117,131,133		D008103589010-IL
	C 129		D041221082230-IL

WG-B ASSY

There is no service parts.

GUI-L ASSY

There is no service parts.

GUI-R ASSY

There is no service parts.