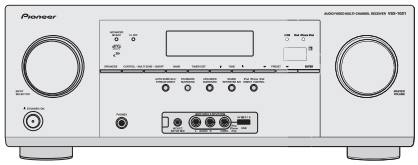
Pioneer

Service Manual



VSX-1021-K

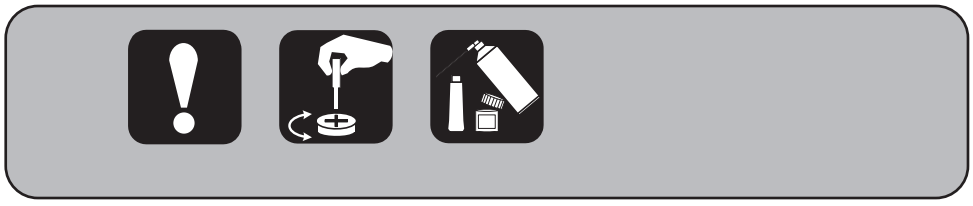
ORDER NO.
RRV4176

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-1021-K

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

Model	Type	Power Requirement	Remarks
VSX-1021-K	UXCNCB	AC 120 V	



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K-IZV JUNE 2011 Printed in Japan

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

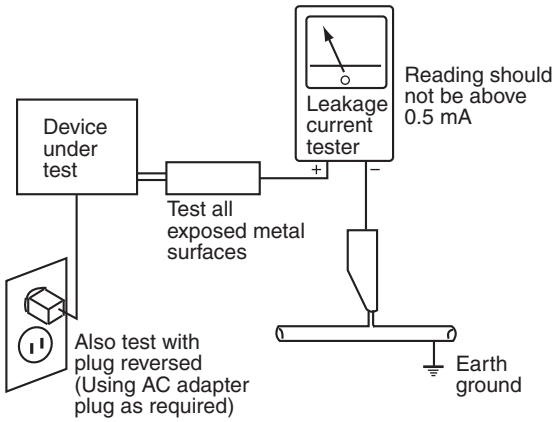
(FOR USA MODEL ONLY)

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.

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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	PCB Assy Part No.	Parts that is Difficult to Replace			
		Ref No.	Function	Part No.	Remarks
D-MAIN Assy	7028070351010-IL	IC101	EMMA2RL2	UPD61283F1-407LU2A	BGA
		IC903	HDMI Receiver	————————	IC with heat-pad
		IC9204	Media Processor IC	DM860	BGA
		IC1602	HDMI Transmitter	————————	IC with heat-pad
		IC9002	Audio DSP System IC	D810K013BZKB400	IC with heat-pad

1.3 SERVICE NOTICE

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

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

2. SPECIFICATIONS

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, 8 Ω, 0.05 %, 1 ch driven) .....120 W per channel

Guaranteed speaker impedance ..... 6 Ω to 16 Ω

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

** Measured by Audio Spectrum Analyzer

Audio Section

Input (Sensitivity/Impedance)

LINE.....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 1700 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) (Video convert off)

Digital In/Out Section

HDMI terminal .....19-pin (Not DVI)

HDMI output type..... 5 V, 100 mA

USB terminal .....USB2.0 Full Speed (Type A)

iPod terminal.....USB, and Video (Composite)

SIRIUS antenna cable ..... 8-pin mini DIN cable

ADAPTER PORT terminal ..... 5 V, 100 mA

WIRELESS LAN ADAPTER terminal ..... 5 V, 600 mA

Integrated Control Section

Control (SR) terminal.....ø 3.5 Mini-jack (MONO)

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.....0.2 W (HDMI Setup – Control : OFF)
0.3 W (HDMI Setup – Control : ON)

Dimensions.. 435 mm (W) x 168 mm (H) x 362.5 mm (D)
(17 3/16 in. (W) x 6 5/8 in. (H) x 14 5/16 in. (D))

Weight (without package) .....10 kg (22 lb 1 oz)

Number of Furnished Parts

MCACC Setup microphone 1

Remote control unit 1

AAA size IEC R03 dry cell batteries 2

iPod cable 1

AM loop antenna 1

FM wire antenna.....1

CD-ROM (AVNavigator)

Operating instructions

Note

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

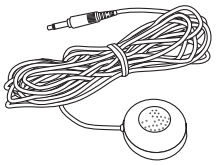
Accessories

AM loop antenna
(E601019000010-IL)

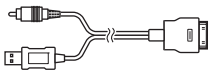
FM wire antenna
(E6050101400010-IL)

Operating instructions
(5707000004890-IL)
CD-ROM (AVNavigator)
(6517000000120-IL)

Remote control unit
(AXD7615)
(8300761500010-IL)



Setup microphone (cable: 5 m (16.4 ft.))
(APM7008)



iPod cable
(L308102013020-IL)

AAA size IEC R03 dry cell batteries
(to confirm system operation) x2

3. BASIC ITEMS FOR SERVICE
3.1 CHECK POINTS AFTER SERVICING

Items to be checked after servicing / VSX, SC

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

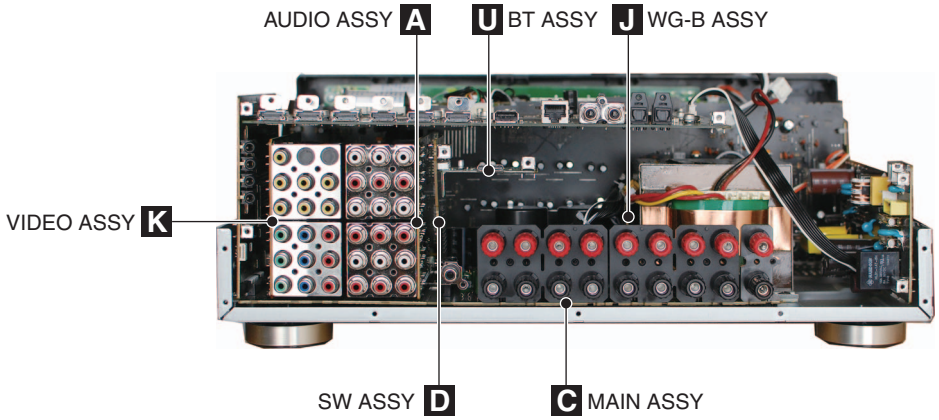
Jigs List

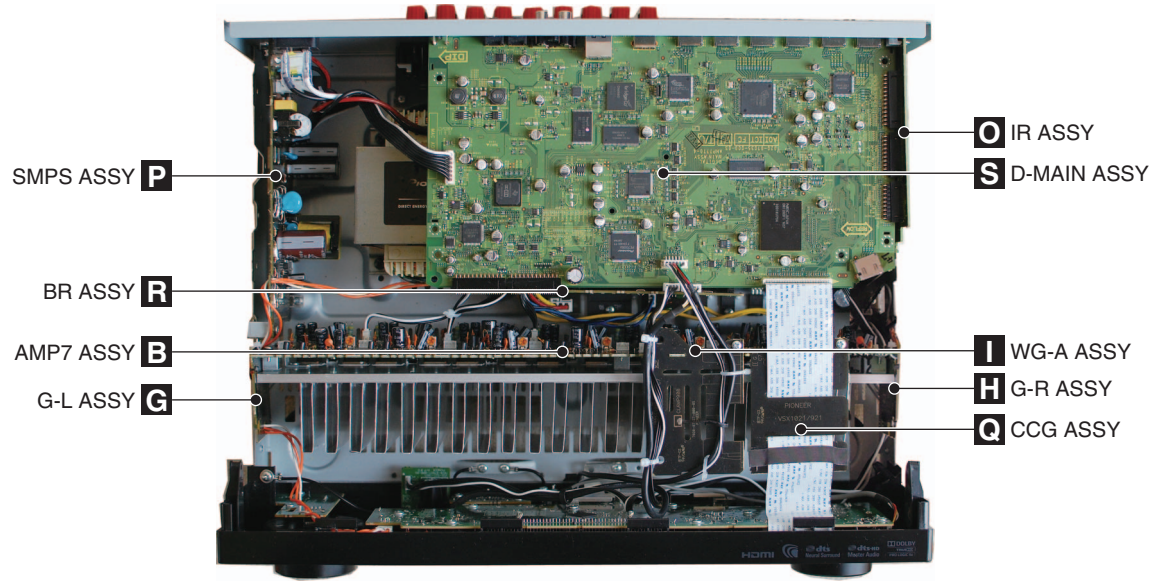
Jig Name	Part No.	Remarks
Board to board extension jig cable	GGD1735	Diagnosis (D-MAIN Assy ↔ IR Assy)
Board to board extension jig cable	GGD1736	Diagnosis (D-MAIN Assy ↔ BR Assy)
7P extension jig cable	GGD1737	Diagnosis (D-MAIN Assy ↔ SMPS Assy)
13P extension jig cable	GGD1740	Diagnosis (AMP7 Assy ↔ AUDIO Assy)
5P extension jig cable	GGD1741	Diagnosis (AMP7 Assy ↔ IR Assy)

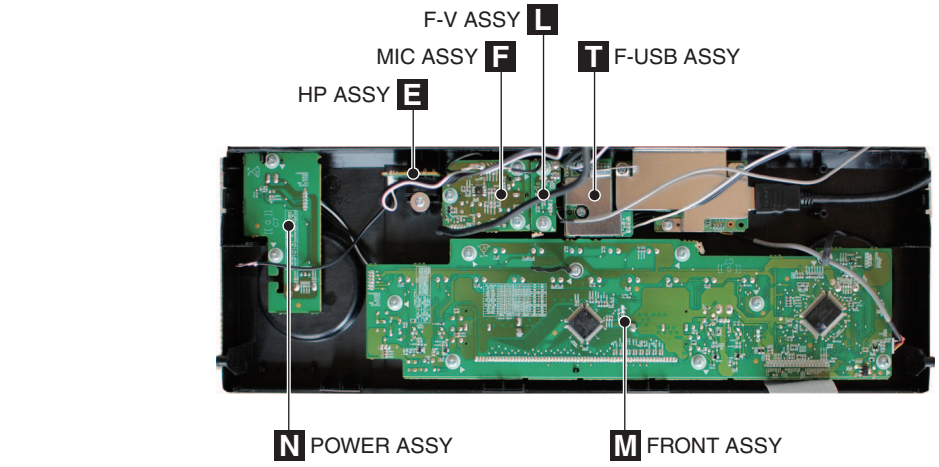
Lubricants and Glues List

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	No.	Description	Part No.
NSP	1..	MAIN ASSY	7025HK1009010-IL
	2..	MAIN ASSY	70280702710J0-IL
	2..	SW ASSY	7028070272010-IL
	2..	G-L ASSY	7028070273010-IL
	2..	G-R ASSY	7028070274010-IL
	2..	WG-A ASSY	7028070276010-IL
	2..	WG-B ASSY	7028070277010-IL
NSP	1..	D-MAIN ASSY	7025HK1009011-IL
	2..	D-MAIN ASSY	7028070351010-IL
NSP	1..	FRONT ASSY	7025HK1009012-IL
	2..	FRONT ASSY	7028070301010-IL
	2..	POWER ASSY	7028070302010-IL
	2..	MIC ASSY	7028070303030-IL
	2..	F-V ASSY	7028070304040-IL
	2..	HP ASSY	7028070306010-IL
NSP	1..	AUDIO ASSY	7025HK1009013-IL
	2..	AUDIO ASSY	7028070311010-IL
NSP	1..	IR ASSY	7025HK1009014-IL
	2..	IR ASSY	7028070321010-IL
⚠	2..	SMPS ASSY	7028070322010-IL
	2..	CCG ASSY	7028070323010-IL
	2..	BR ASSY	7028070324010-IL
NSP	1..	F-USB ASSY	7025HK1009015-IL
	2..	F-USB ASSY	7028070331010-IL
NSP	1..	VIDEO ASSY	7025HK1009018-IL
	2..	VIDEO ASSY	7028070261010-IL
NSP	1..	BT ASSY	7025HK1009019-IL
	2..	BT ASSY	7028070231010-IL
NSP	1..	AMP7 ASSY	7025HK1009077-IL
	2..	AMP7 ASSY	7028070251010-IL

A

B

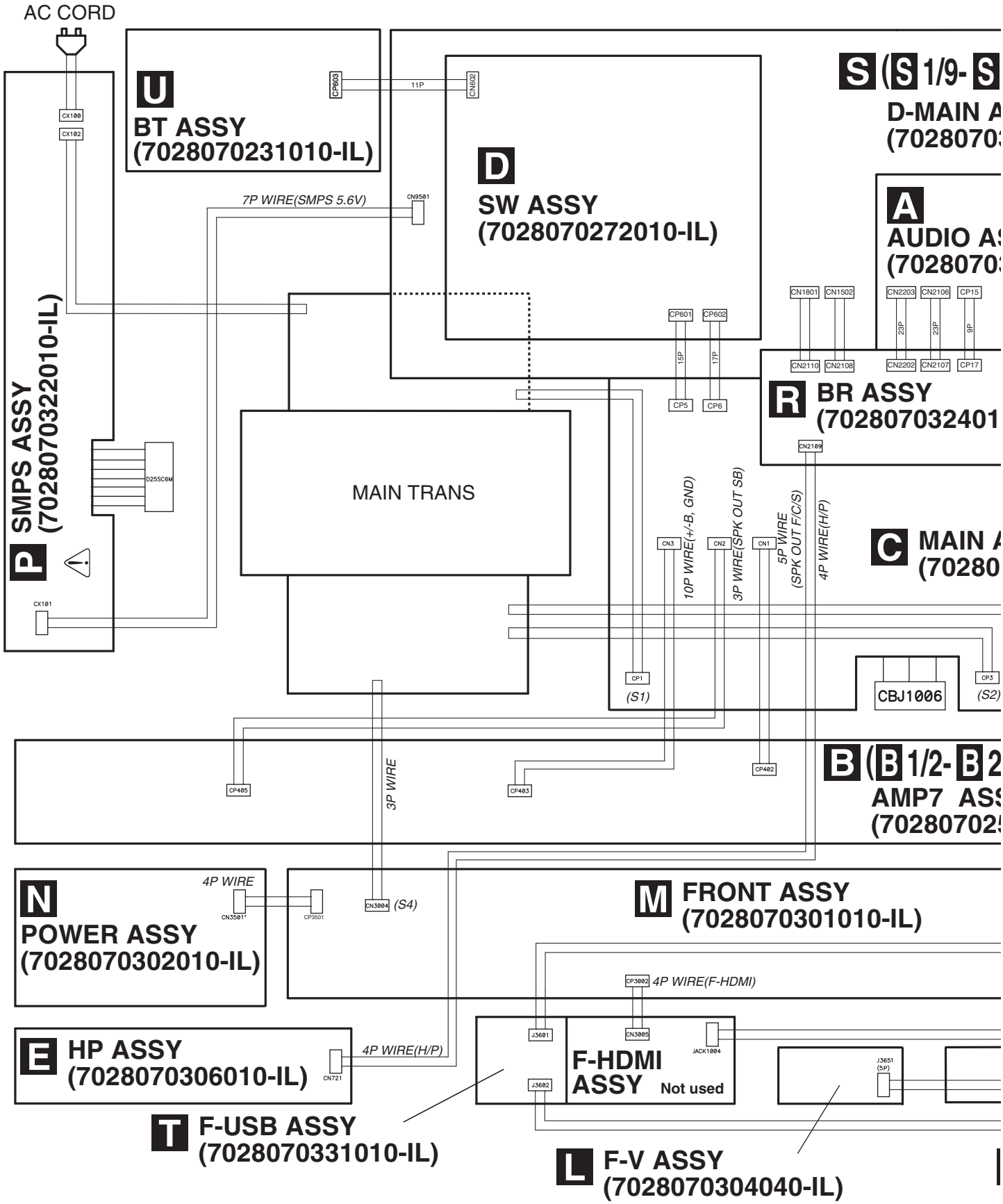
C

D

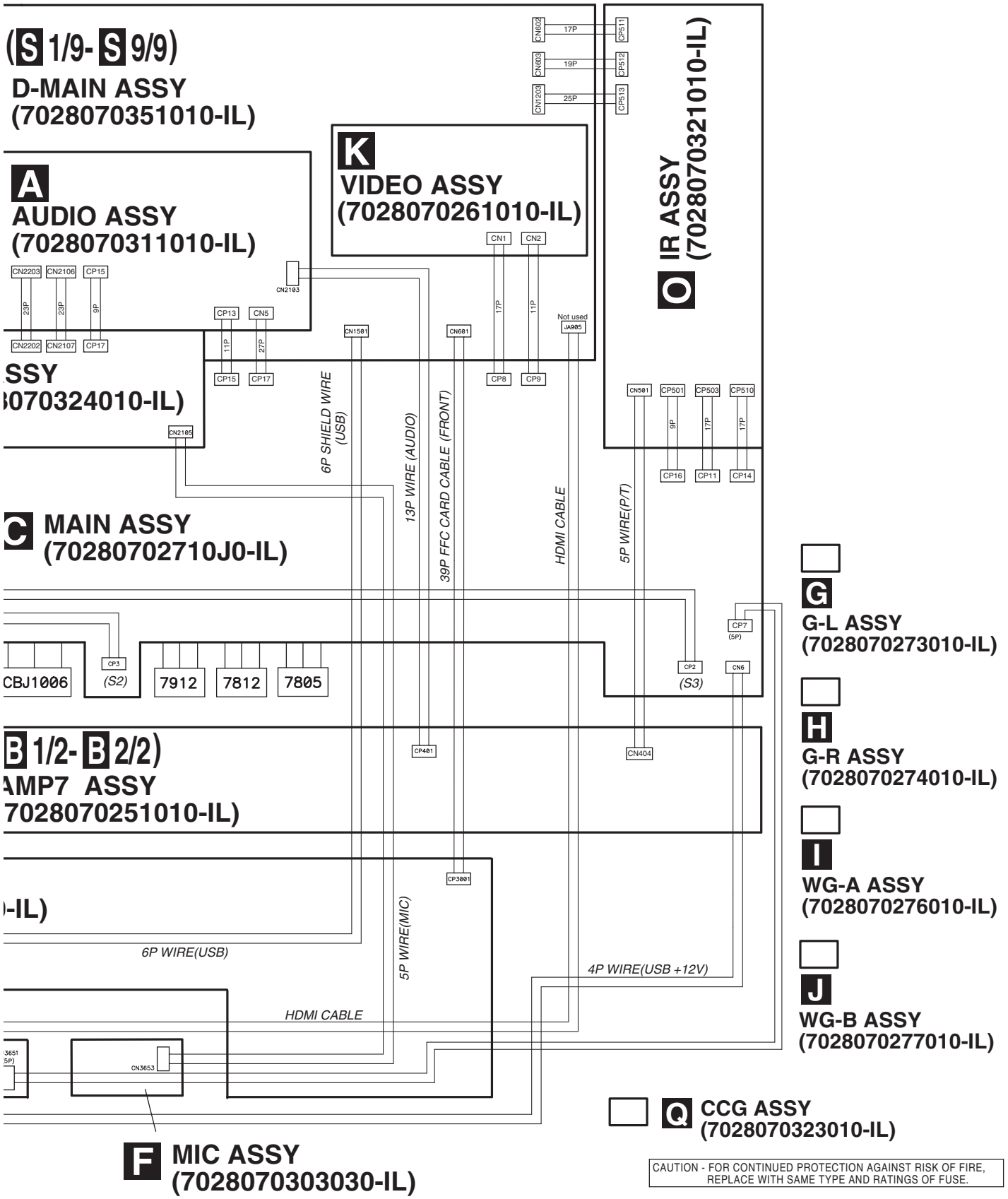
E

F

4. BLOCK DIAGRAM
4.1 OVERALL WIRING DIAGRAM

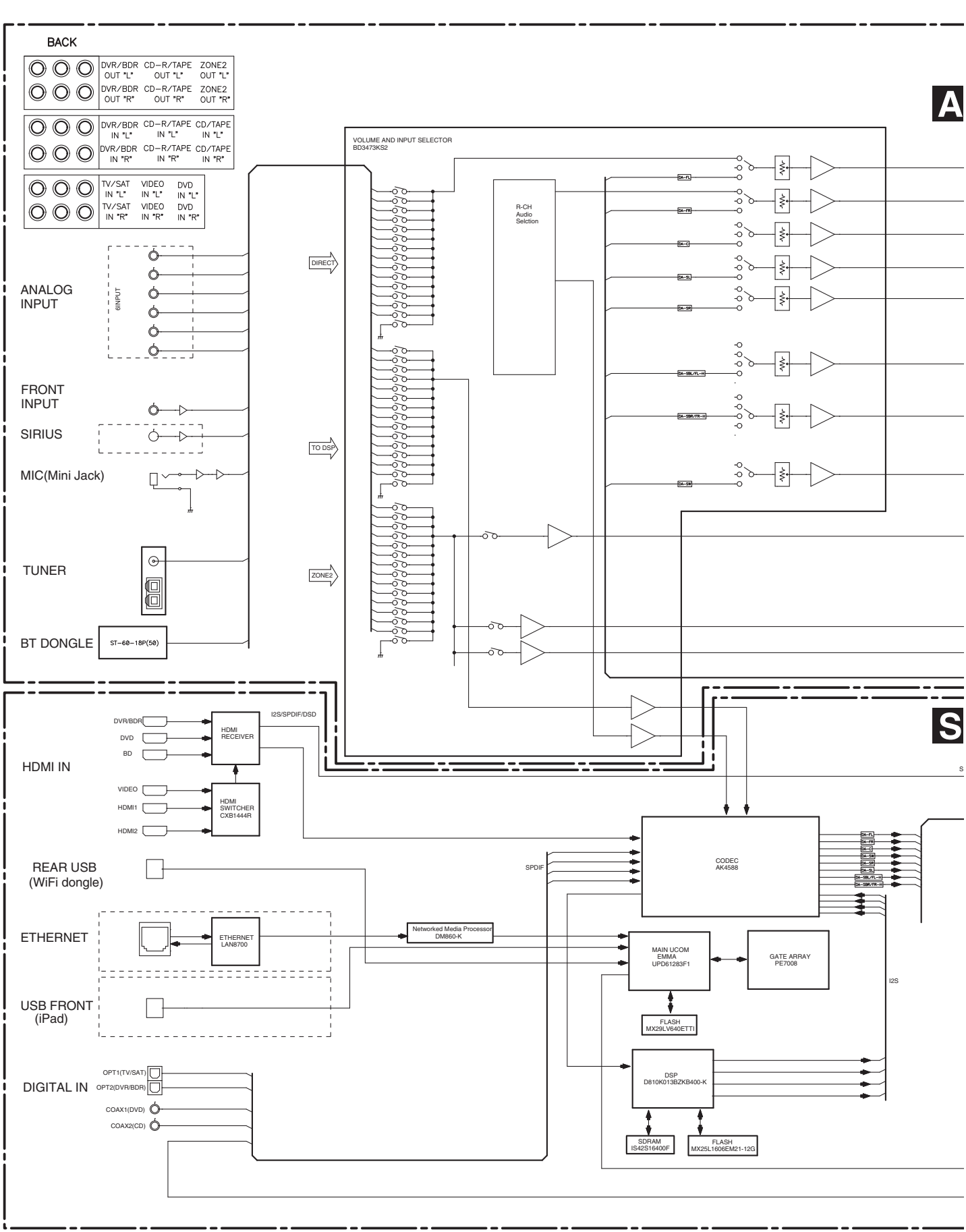


- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

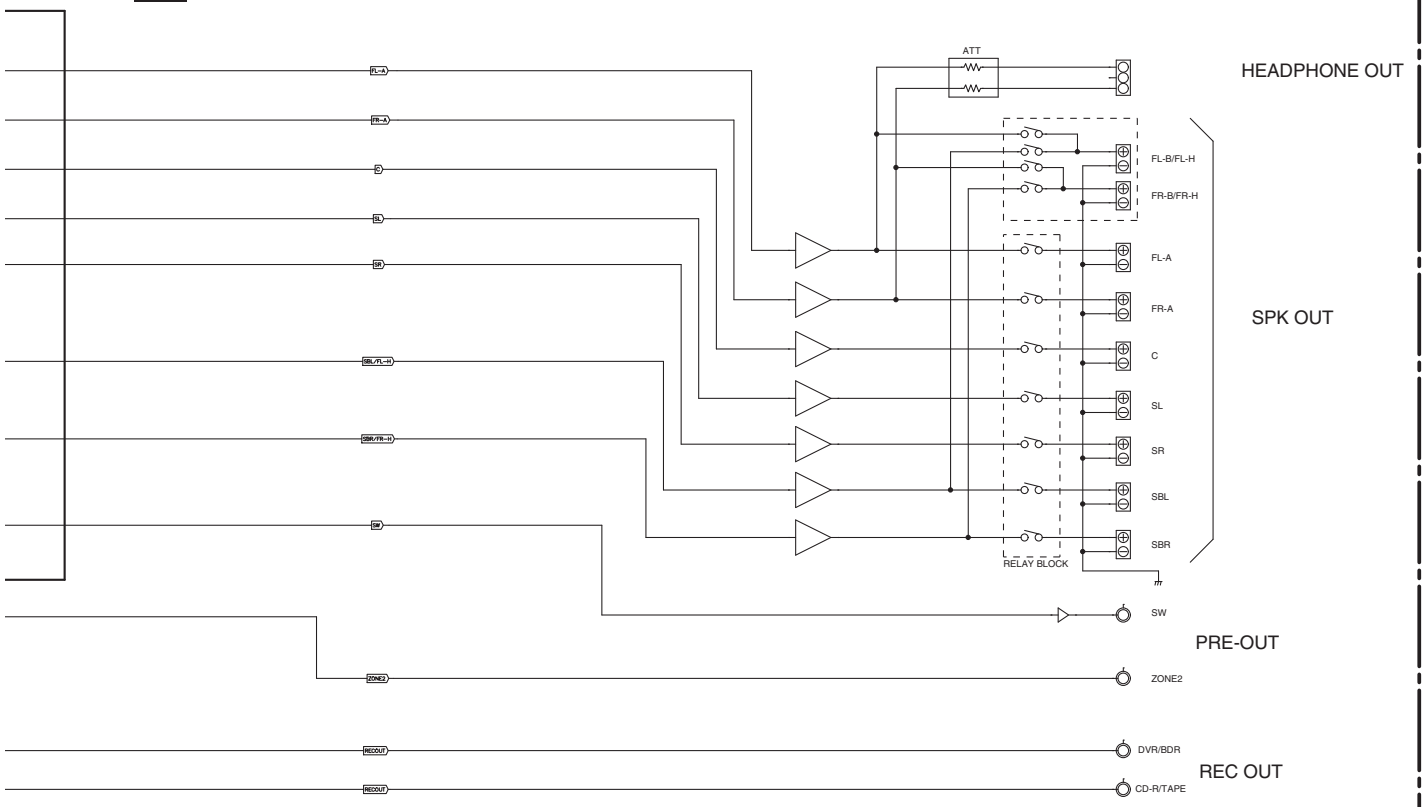


CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE WITH SAME TYPE AND RATINGS OF FUSE.

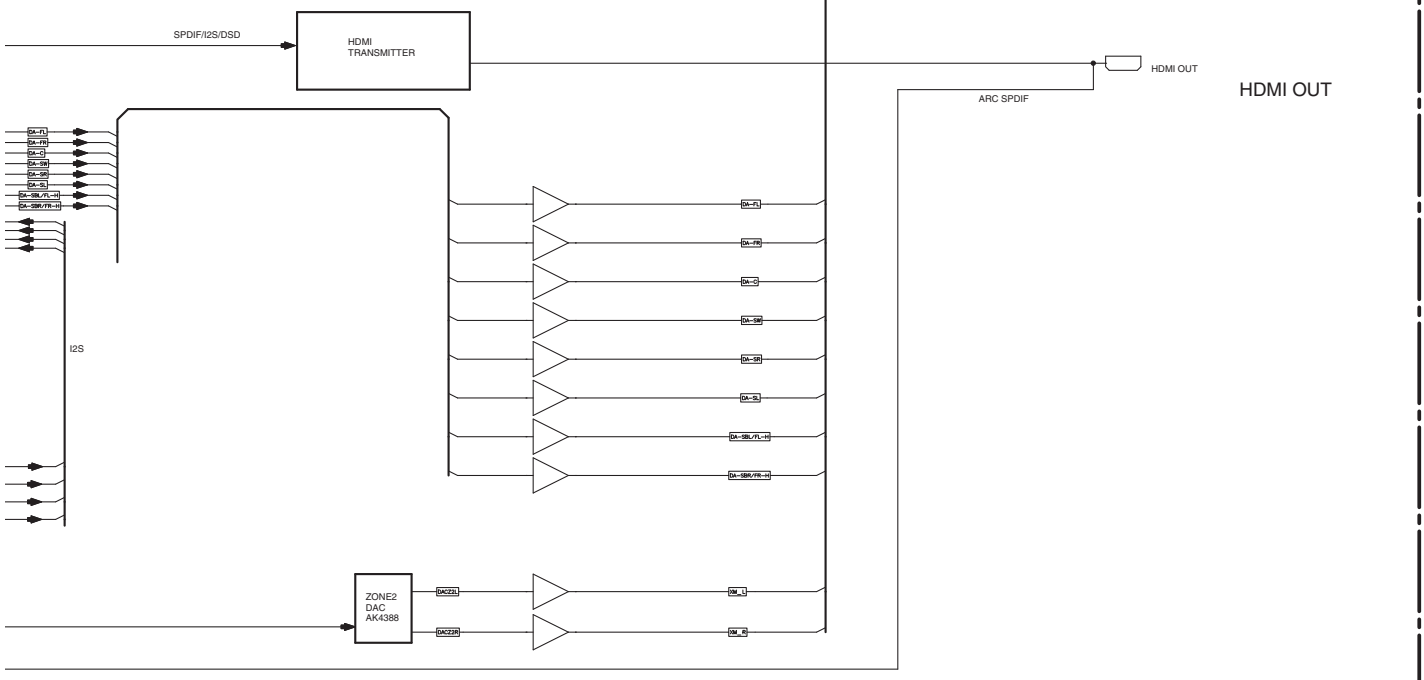
4.2 AUDIO BLOCK DIAGRAM



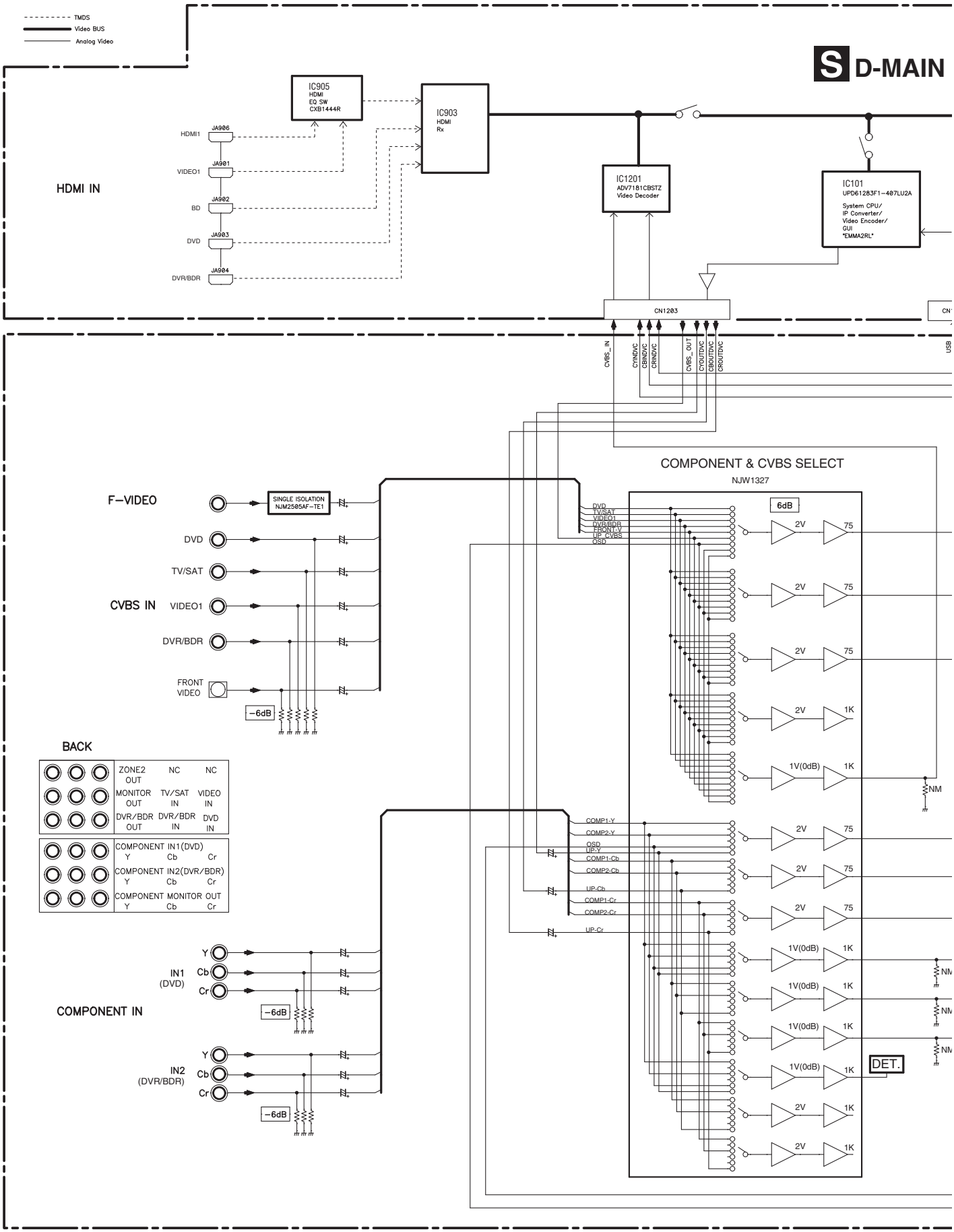
A AUDIO ASSY



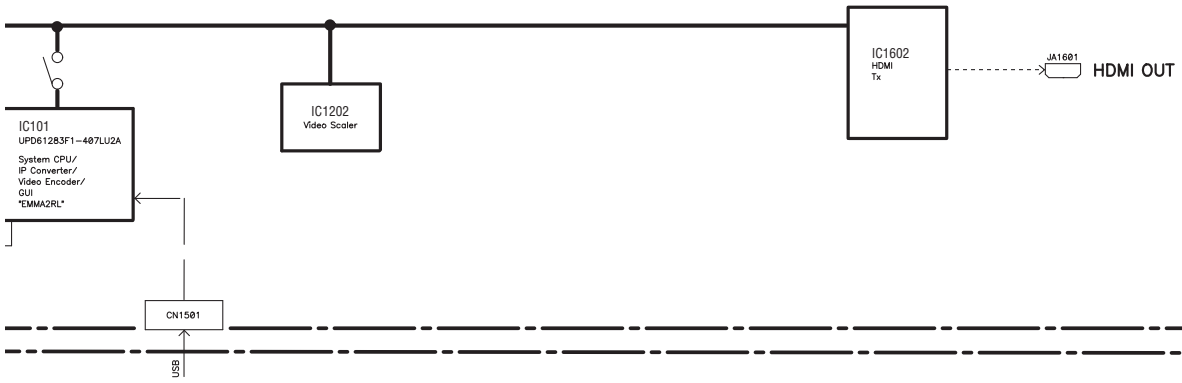
S D-MAIN ASSY



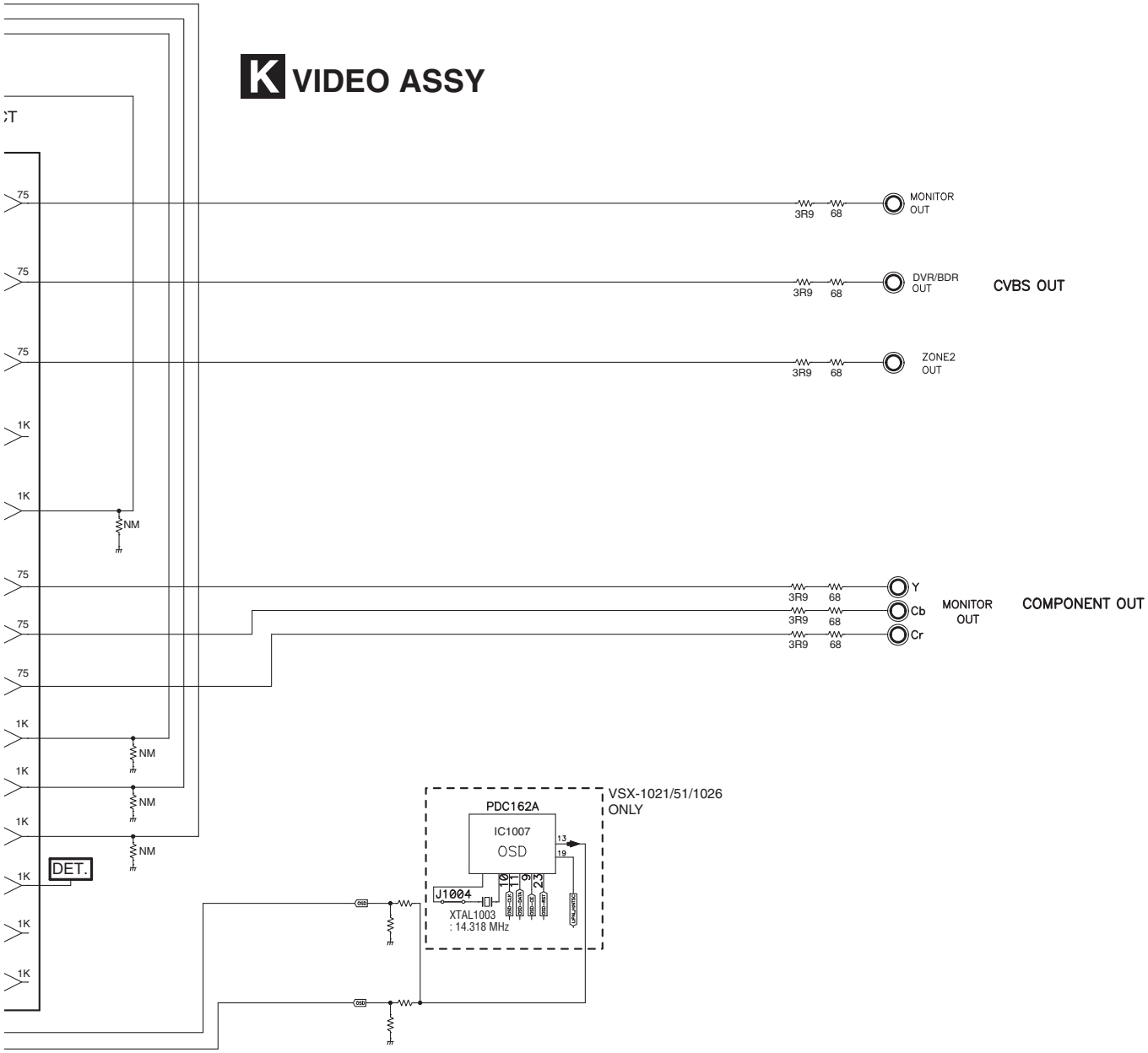
4.3 VIDEO BLOCK DIAGRAM



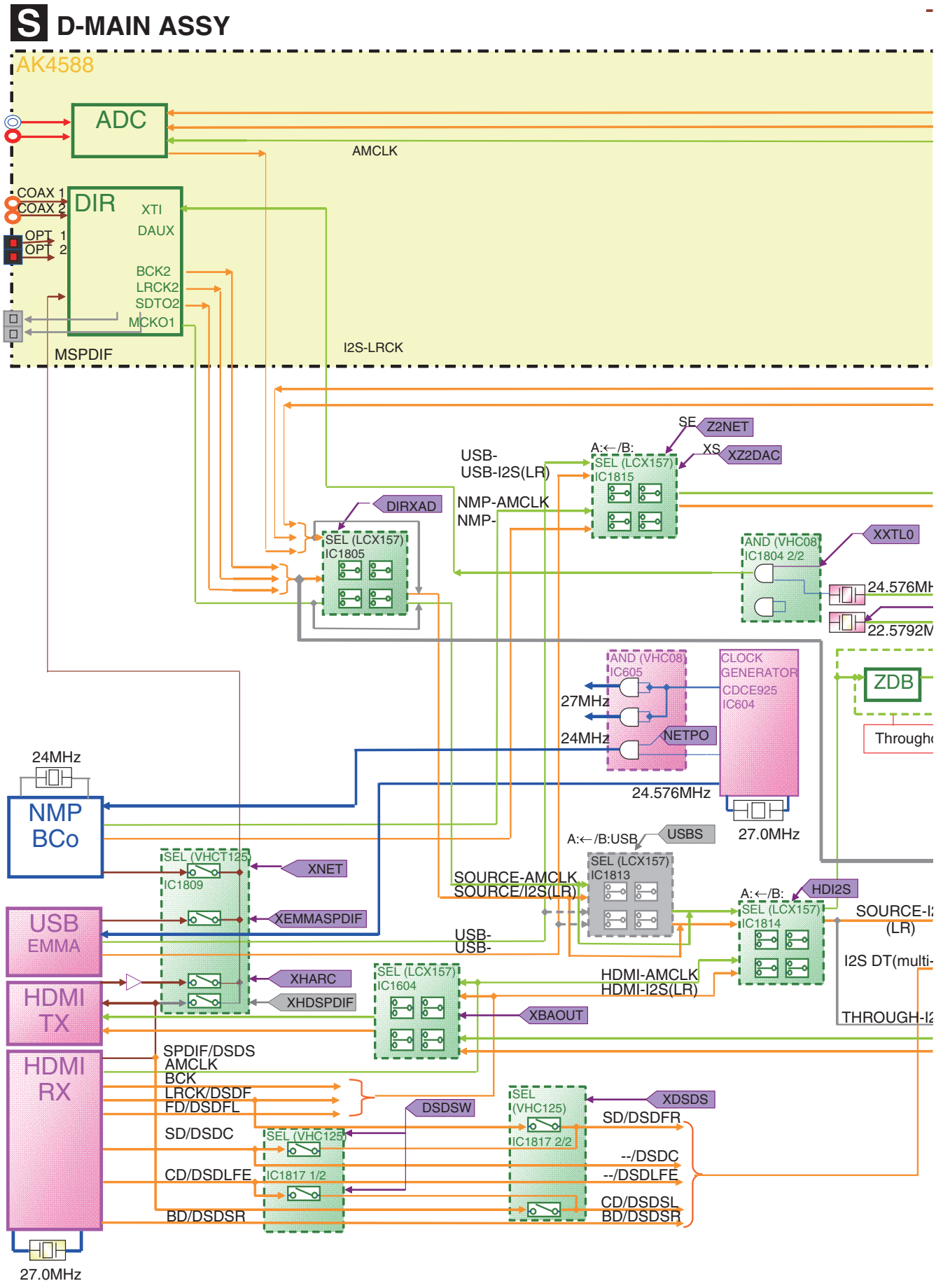
S D-MAIN ASSY

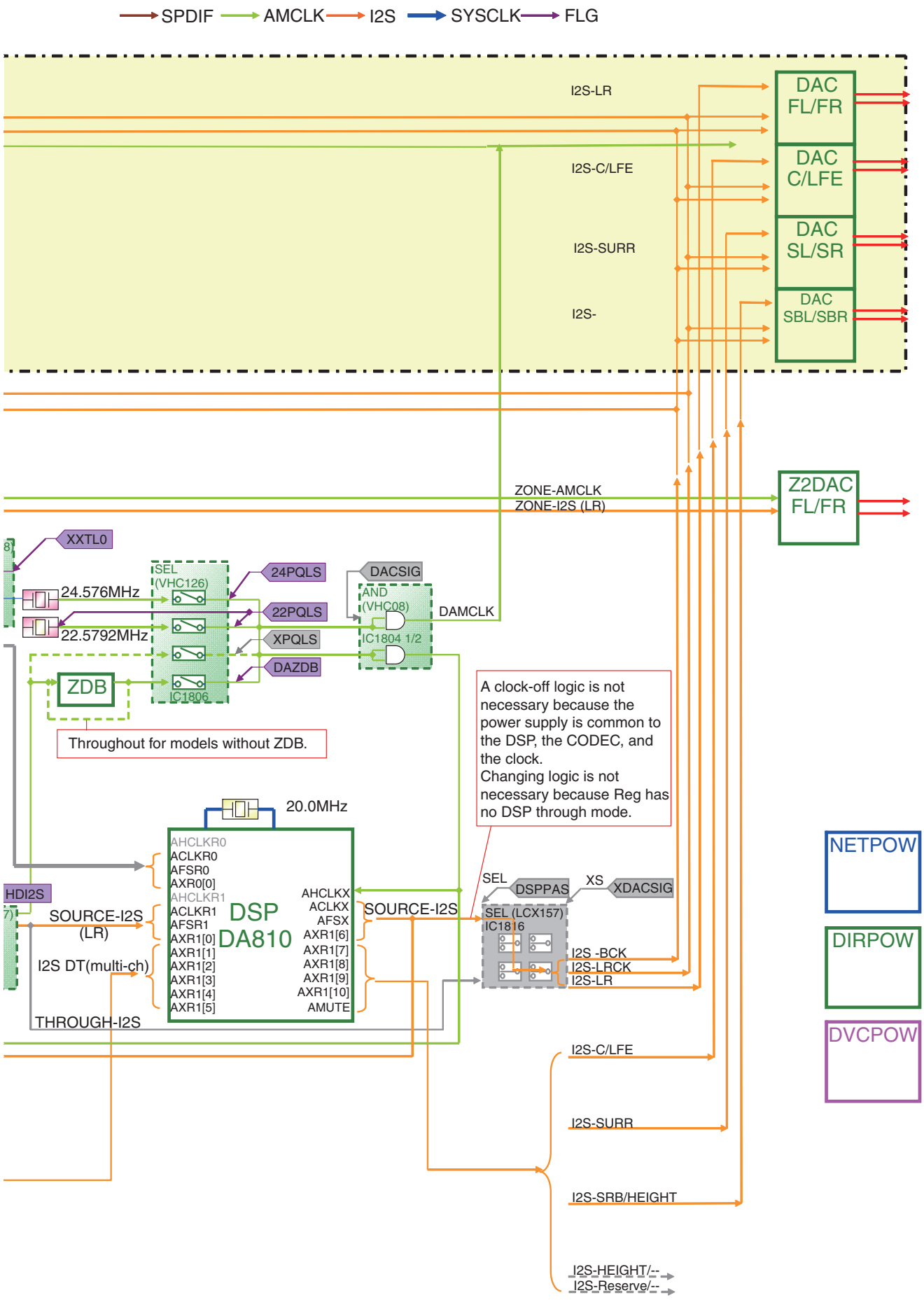


K VIDEO ASSY

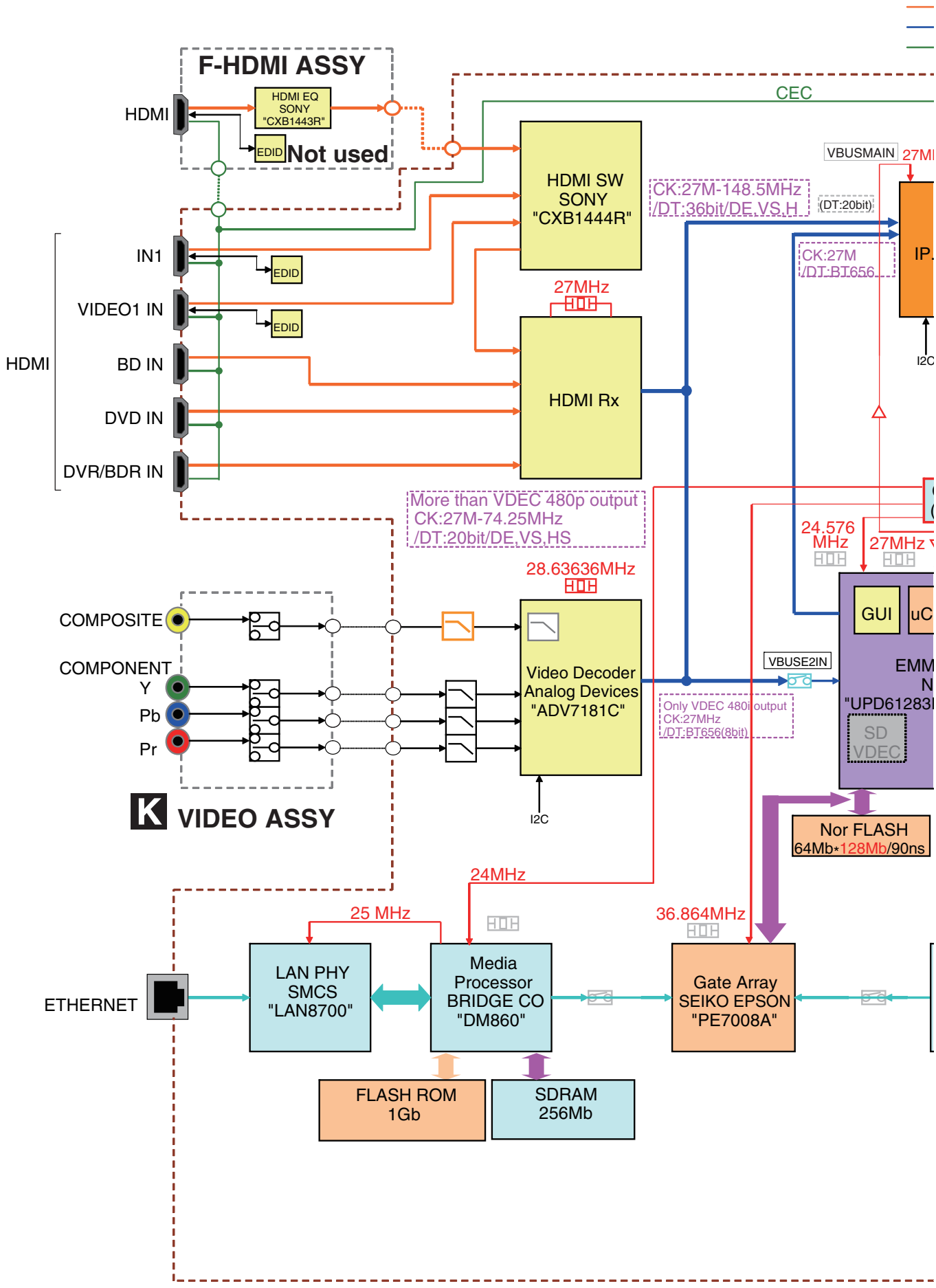


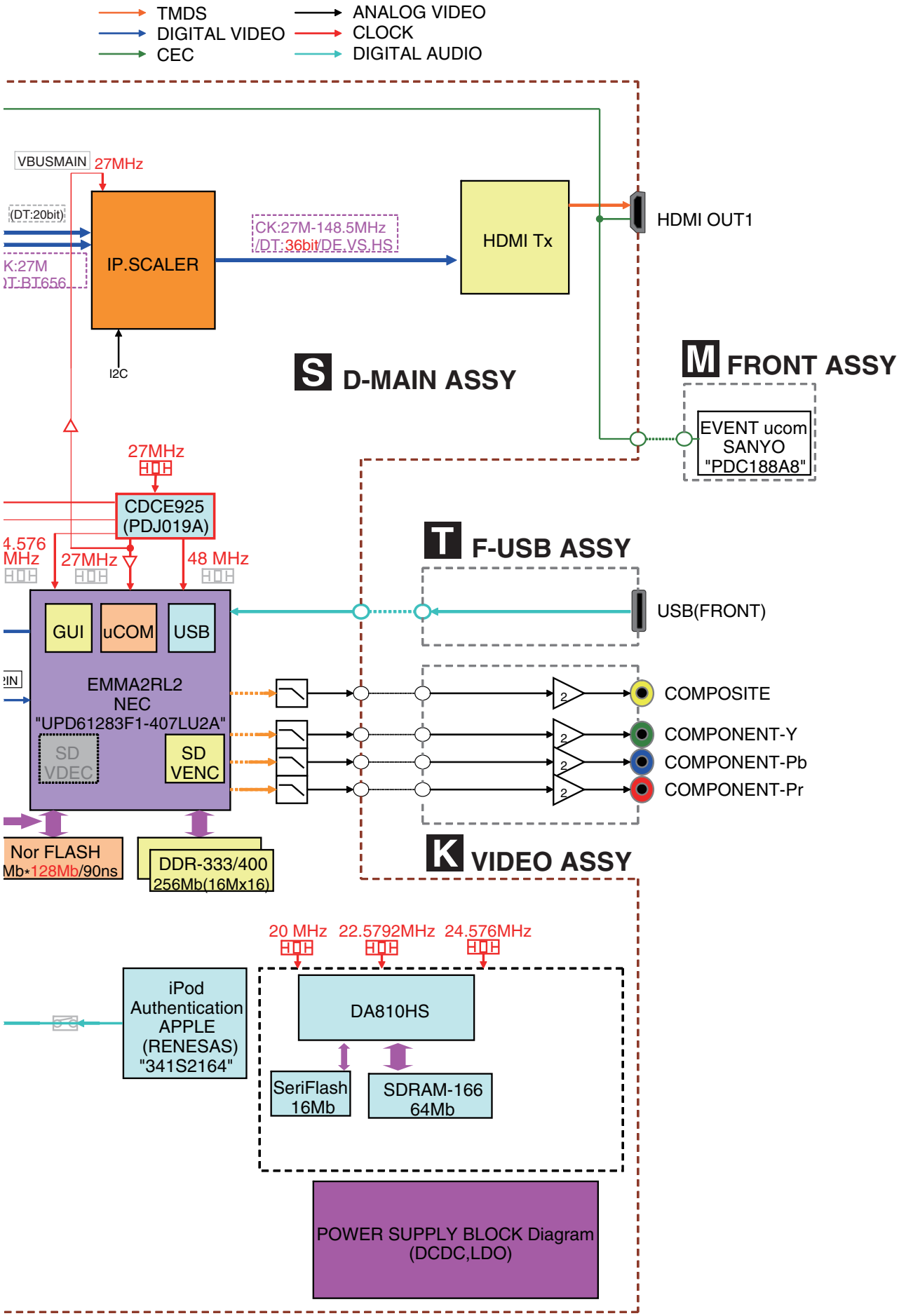
4.4 D-MAIN BLOCK DIAGRAM



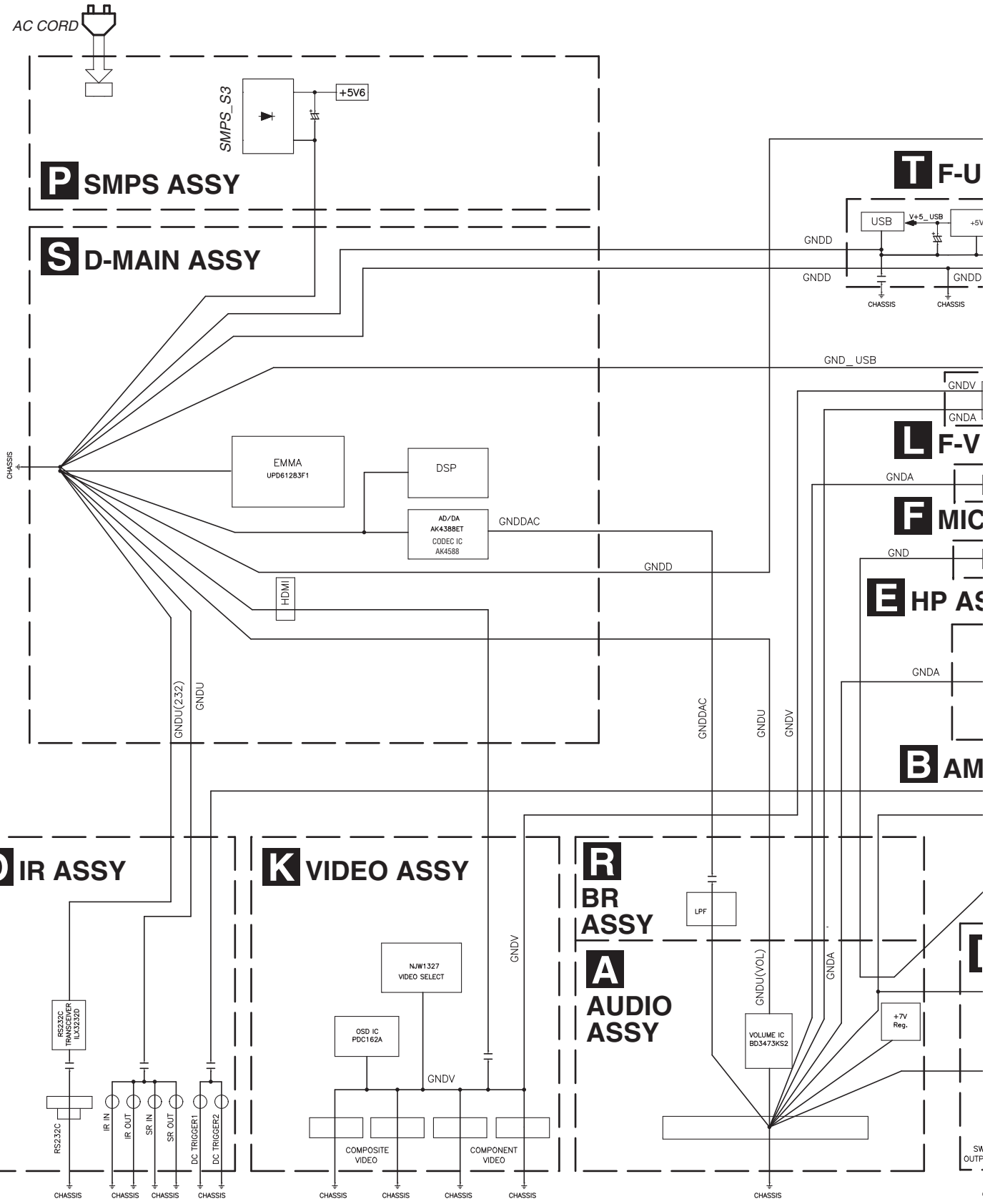

SPDIF
AMCLK
I2S
SYSCLK
FLG
I2S-LR
I2S-C/LFE
I2S-SURR
I2S-
DAC FL/FR
DAC C/LFE
DAC SL/SR
DAC SBL/SBR
ZONE-AMCLK
ZONE-I2S (LR)
Z2DAC FL/FR
XXTL0
24.576MHz
22.5792MHz
SEL (VHC126)
IC1806
24PQLS
22PQLS
XPQLS
DAZDB
DACSIG
AND (VHC08)
IC1804 1/2
DAMCLK
ZDB
Throughout for models without ZDB.
A clock-off logic is not necessary because the power supply is common to the DSP, the CODEC, and the clock.
Changing logic is not necessary because Reg has no DSP through mode.
20.0MHz
DSP DA810
AHCLKR0
ACLKR0
AFSR0
AXR0[0]
AHCLKR1
ACLKR1
AFSR1
AXR1[0]
AXR1[1]
AXR1[2]
AXR1[3]
AXR1[4]
AXR1[5]
AHCLKX
ACLKX
AFSX
AXR1[6]
AXR1[7]
AXR1[8]
AXR1[9]
AXR1[10]
AMUTE
HDI2S
SOURCE-I2S (LR)
I2S DT(multi-ch)
THROUGH-I2S
SOURCE-I2S
SEL
DSPPAS
XS
XDACSIG
SEL (LCX157) IC1816
I2S -BCK
I2S-LRCK
I2S-LR
NETPOW
DIRPOW
DVCPOW
I2S-C/LFE
I2S-SURR
I2S-SRB/HEIGHT
I2S-HEIGHT/--
I2S-Reserve/--

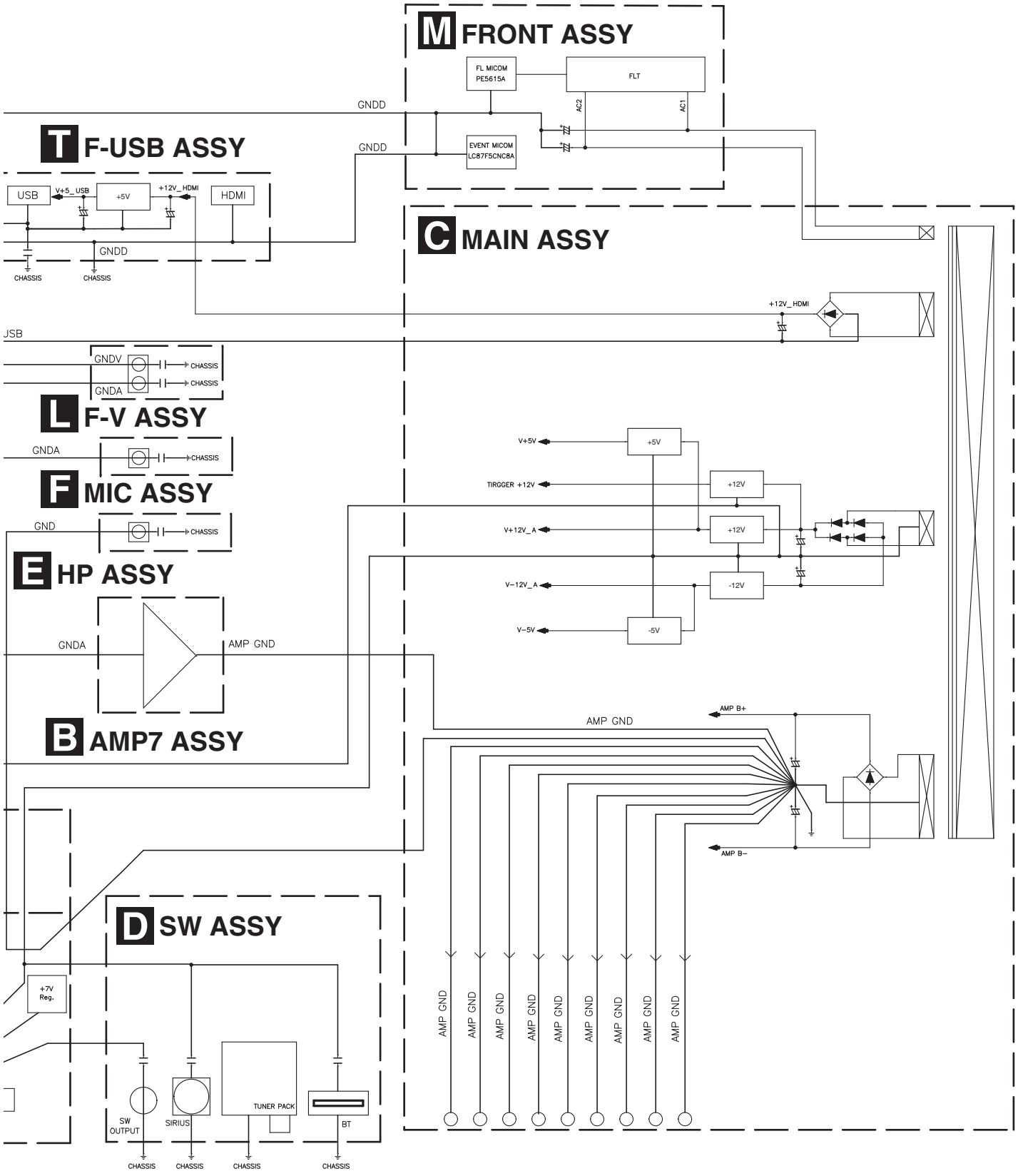
4.5 D-MAIN VIDEO BLOCK DIAGRAM




TMDS
DIGITAL VIDEO
CEC
ANALOG VIDEO
CLOCK
DIGITAL AUDIO
VBUSMAIN
27MHz
(DT:20bit)
IP.SCALER
I2C
CK:27M-148.5MHz
/DT:36bit/DE,VS,HS
HDMI Tx
HDMI OUT1
S D-MAIN ASSY
M FRONT ASSY
EVENT ucom
SANYO
"PDC188A8"
27MHz
CDCE925
(PDJ019A)
48 MHz
T F-USB ASSY
USB(FRONT)
GUI
uCOM
USB
EMMA2RL2
NEC
"UPD61283F1-407LU2A"
SD
VDEC
SD
VENC
COMPOSITE
COMPONENT-Y
COMPONENT-Pb
COMPONENT-Pr
Nor FLASH
DDR-333/400
256Mb(16Mx16)
K VIDEO ASSY
20 MHz
22.5792MHz
24.576MHz
iPod
Authentication
APPLE
(RENESAS)
"341S2164"
DA810HS
SeriFlash
16Mb
SDRAM-166
64Mb
POWER SUPPLY BLOCK Diagram
(DCDC,LDO)

4.6 GND BLOCK DIAGRAM



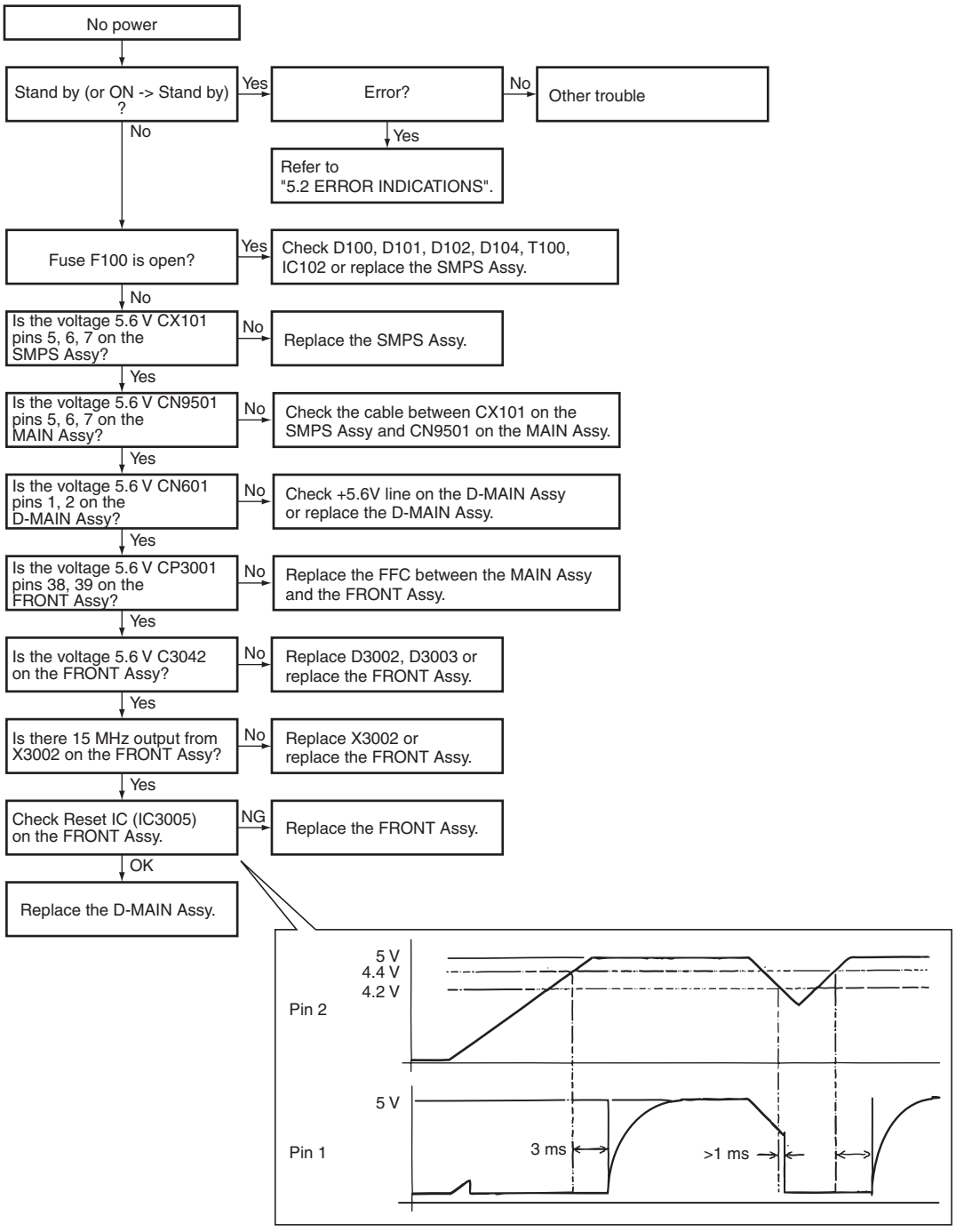

M FRONT ASSY
FL MICOM PE5615A
FLT
AC2
AC1
EVENT MICOM LC87F5CNC8A
GNDD
T F-USB ASSY
USB
V+5_USB
+5V
+12V_HDMI
HDMI
CHASSIS
C MAIN ASSY
JSB
GNDV
GNDA
L F-V ASSY
F MIC ASSY
GND
E HP ASSY
AMP GND
B AMP7 ASSY
V+5V
TIRGGER +12V
V+12V_A
V−12V_A
V−5V
+12V
-12V
-5V
AMP B+
AMP B−
D SW ASSY
+7V Reg.
SW OUTPUT
SIRIUS
TUNER PACK
BT

5. DIAGNOSIS
5.1 DIAGNOSIS FLAWCHART

[1] Main Unit

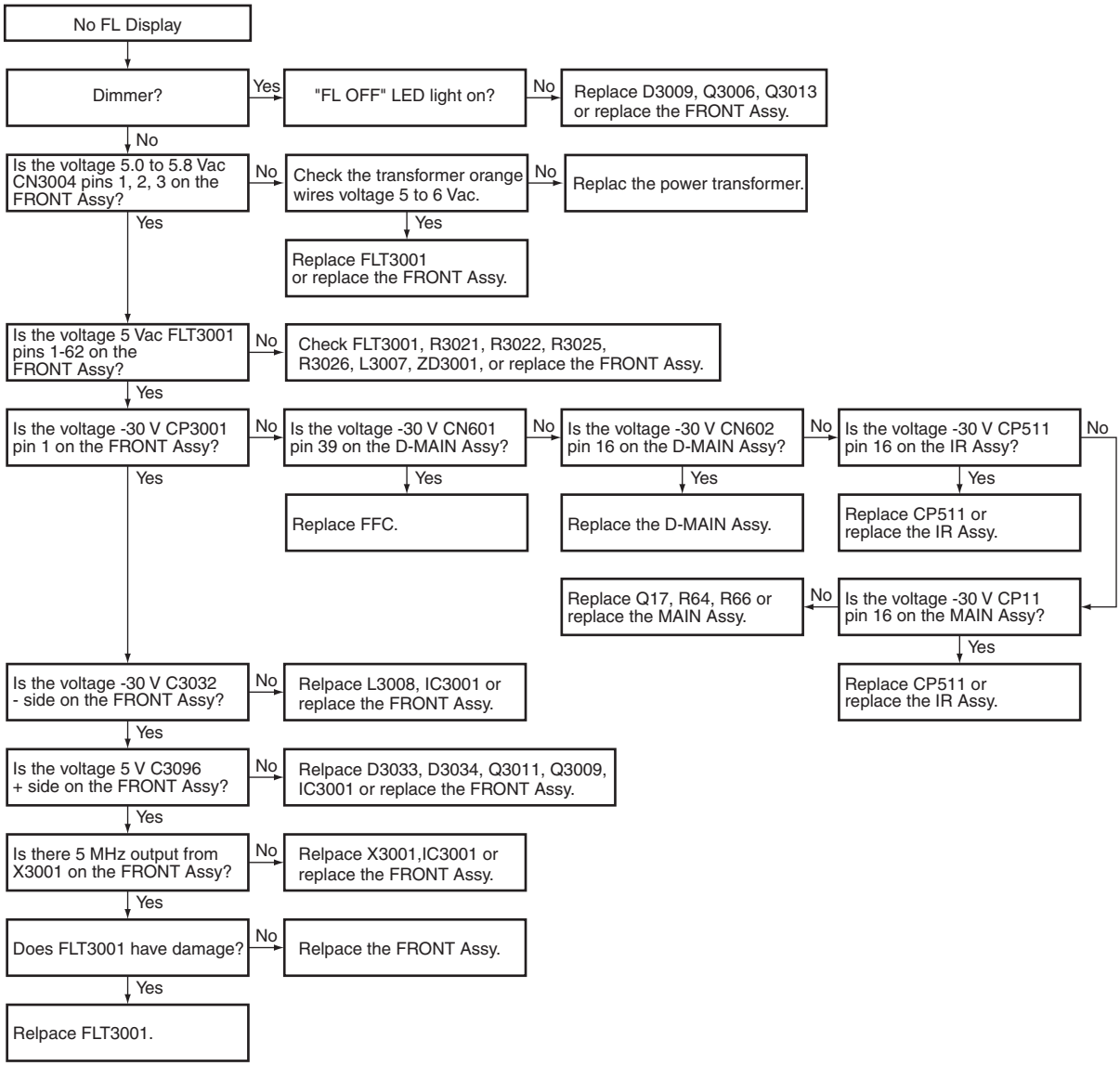
Step 1: No Power

The contents which are usually thought about are listed in this diagnosis flow, that may not fulfill all trouble including a rare case.



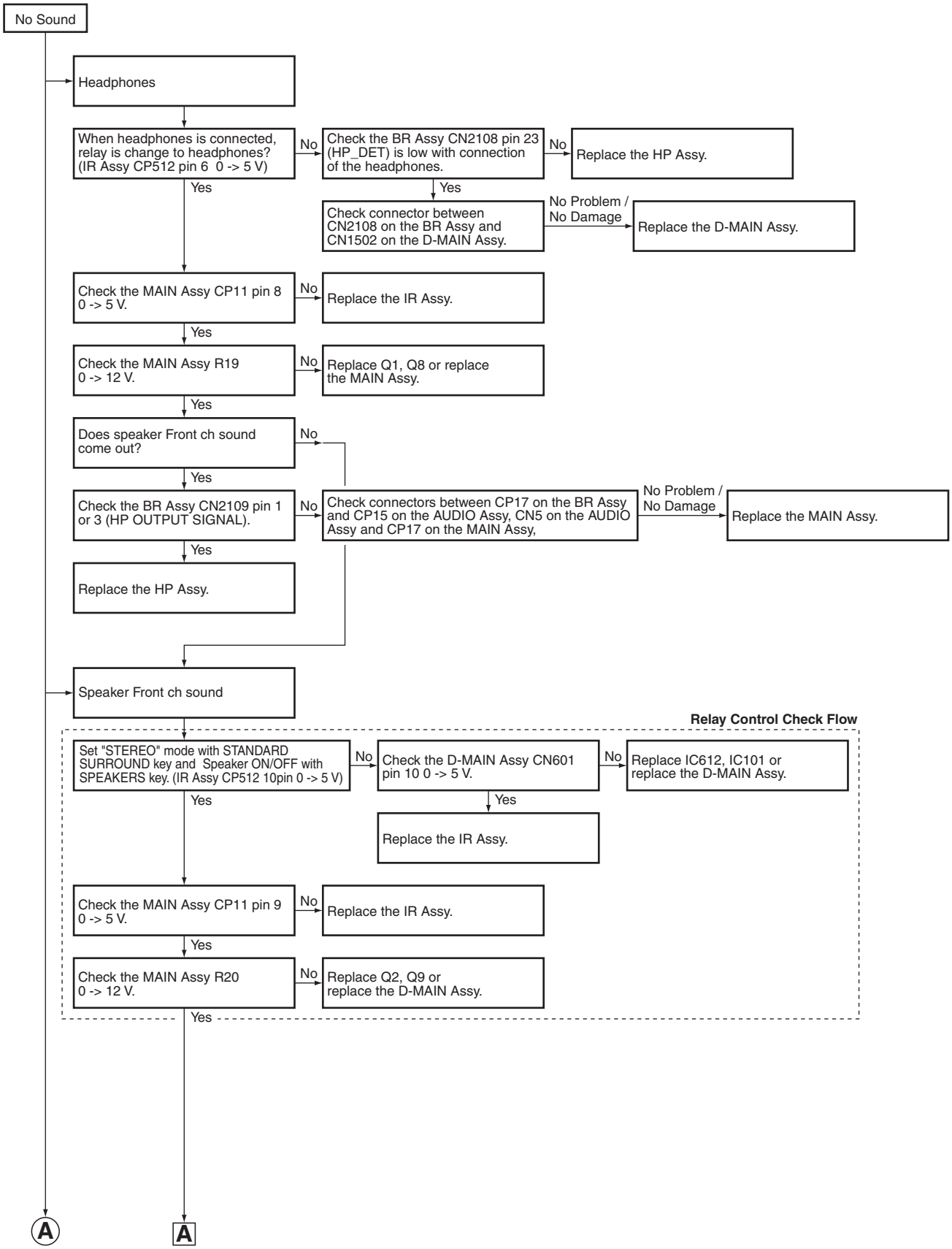
Step 2: No FL Display

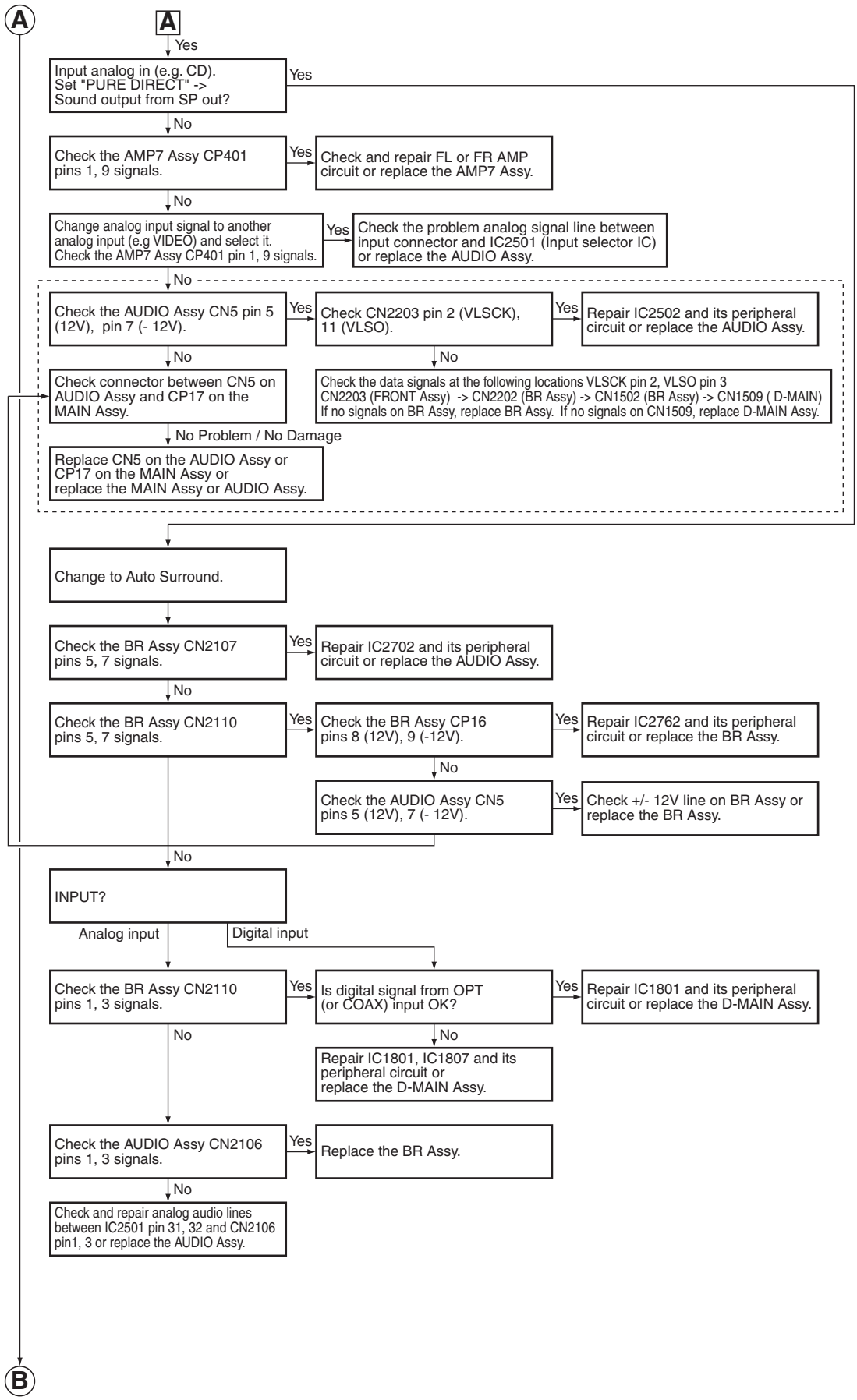
The contents which are usually thought about are listed in this diagnosis flow, that may not fulfill all trouble including a rare case.

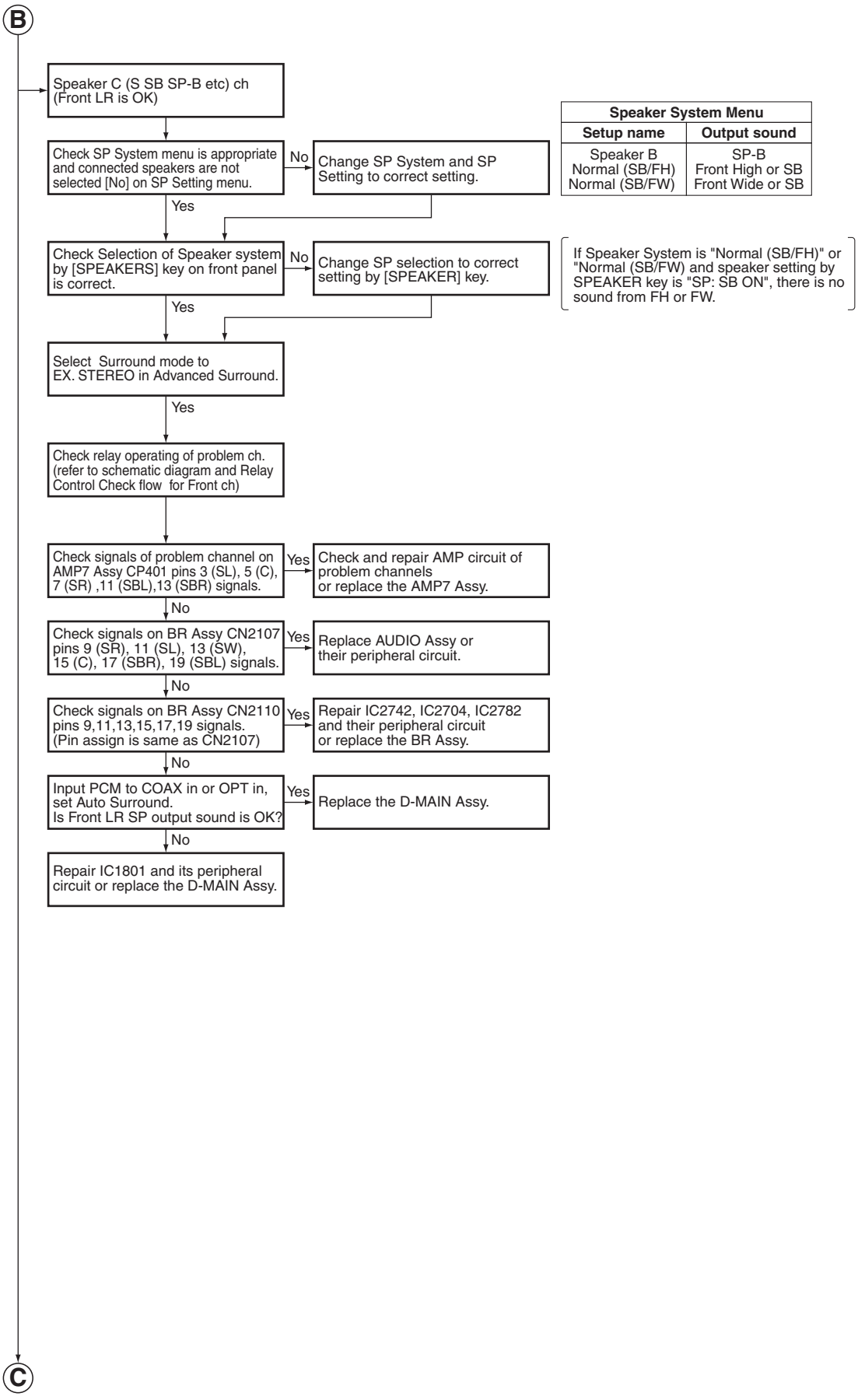


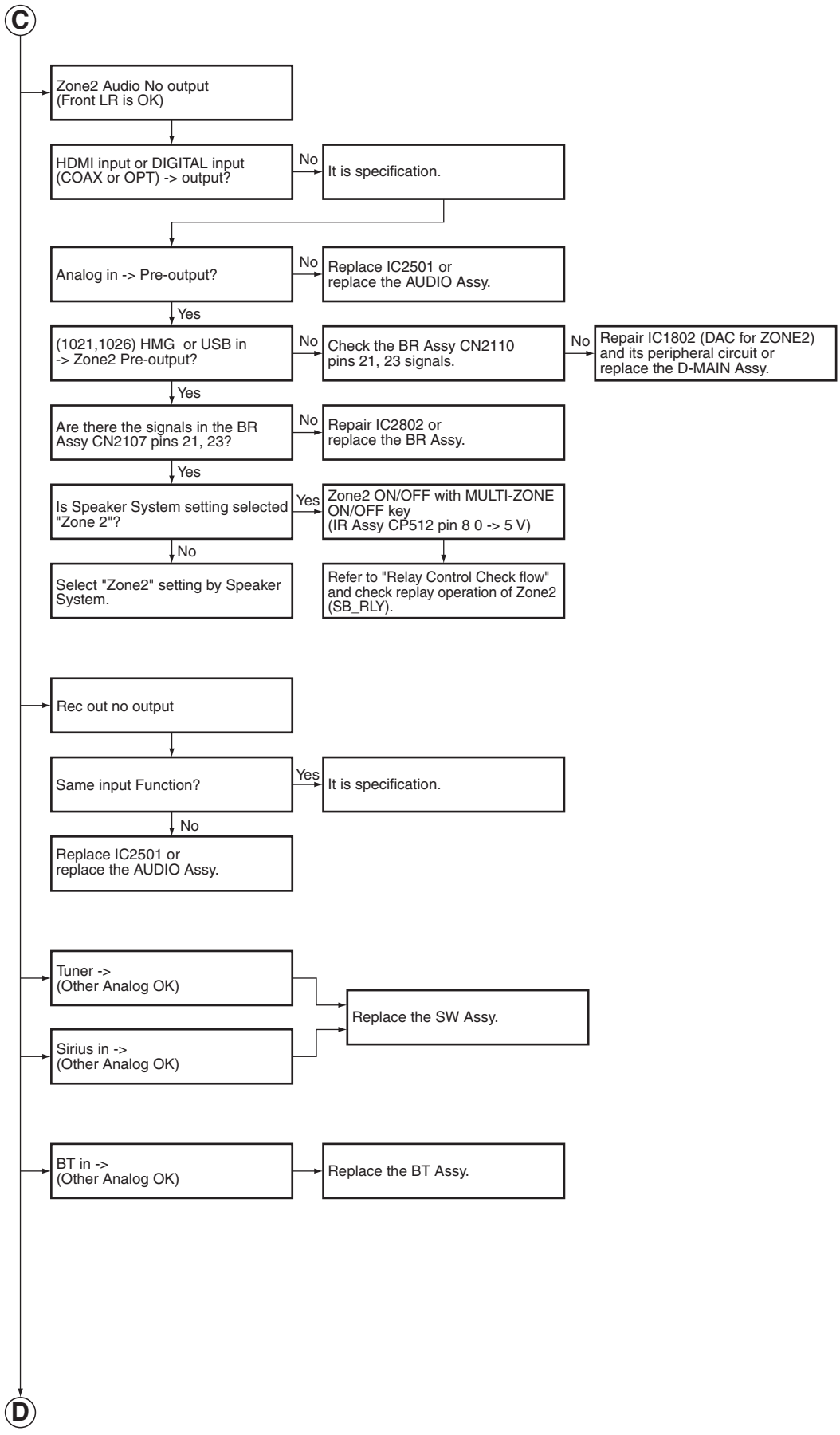
Step 3: No Sound

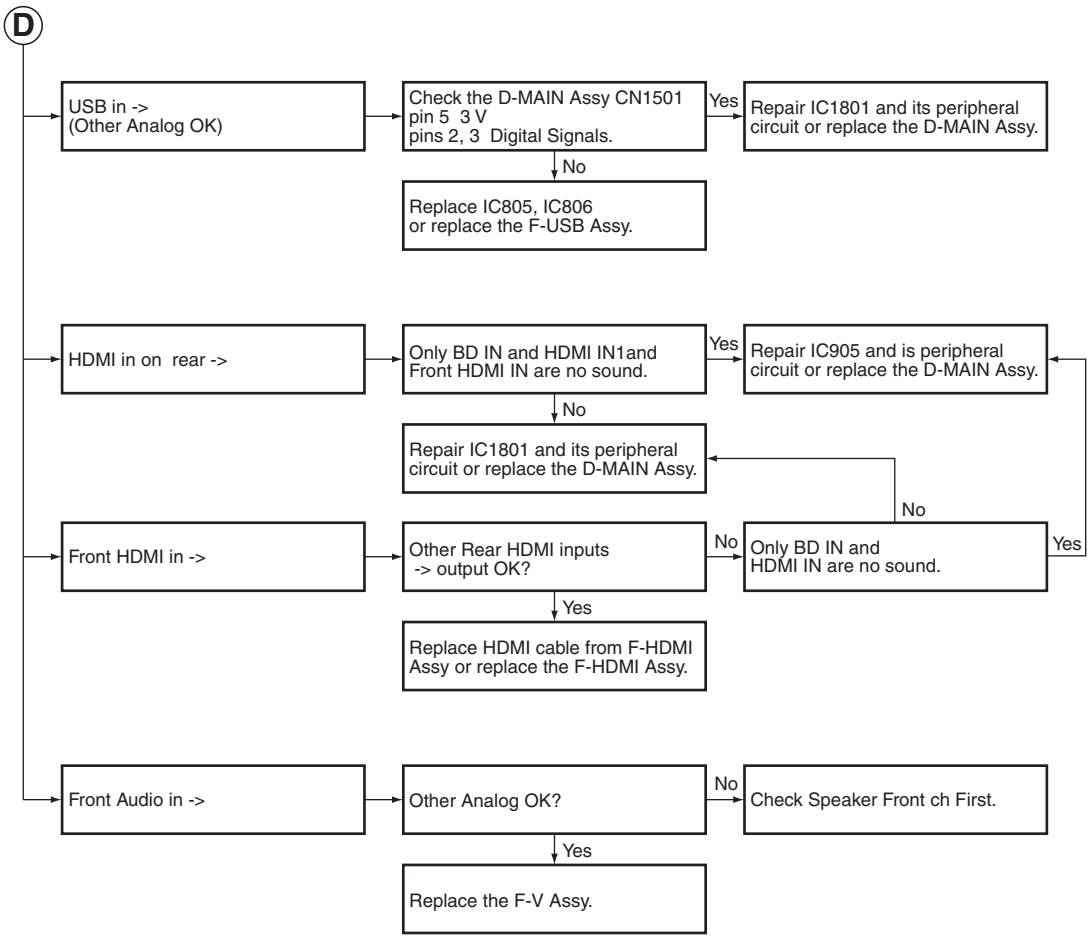
The contents which are usually thought about are listed in this diagnosis flow, that may not fulfill all trouble including a rare case.




A
A
Yes
Input analog in (e.g. CD).
Set "PURE DIRECT" ->
Sound output from SP out?
Yes
No
Check the AMP7 Assy CP401
pins 1, 9 signals.
Yes
Check and repair FL or FR AMP
circuit or replace the AMP7 Assy.
No
Change analog input signal to another
analog input (e.g VIDEO) and select it.
Check the AMP7 Assy CP401 pin 1, 9 signals.
Yes
Check the problem analog signal line between
input connector and IC2501 (Input selector IC)
or replace the AUDIO Assy.
No
Check the AUDIO Assy CN5 pin 5
(12V), pin 7 (- 12V).
Yes
Check CN2203 pin 2 (VLSCK),
11 (VLSO).
Yes
Repair IC2502 and its peripheral
circuit or replace the AUDIO Assy.
No
No
Check connector between CN5 on
AUDIO Assy and CP17 on the
MAIN Assy.
Check the data signals at the following locations VLSCK pin 2, VLSO pin 3
CN2203 (FRONT Assy) -> CN2202 (BR Assy) -> CN1502 (BR Assy) -> CN1509 (D-MAIN)
If no signals on BR Assy, replace BR Assy. If no signals on CN1509, replace D-MAIN Assy.
No Problem / No Damage
Replace CN5 on the AUDIO Assy or
CP17 on the MAIN Assy or
replace the MAIN Assy or AUDIO Assy.
Change to Auto Surround.
Check the BR Assy CN2107
pins 5, 7 signals.
Yes
Repair IC2702 and its peripheral
circuit or replace the AUDIO Assy.
No
Check the BR Assy CN2110
pins 5, 7 signals.
Yes
Check the BR Assy CP16
pins 8 (12V), 9 (-12V).
Yes
Repair IC2762 and its peripheral
circuit or replace the BR Assy.
No
Check the AUDIO Assy CN5
pins 5 (12V), 7 (- 12V).
Yes
Check +/- 12V line on BR Assy or
replace the BR Assy.
No
INPUT?
Analog input
Digital input
Check the BR Assy CN2110
pins 1, 3 signals.
Yes
Is digital signal from OPT
(or COAX) input OK?
Yes
Repair IC1801 and its peripheral
circuit or replace the D-MAIN Assy.
No
No
Repair IC1801, IC1807 and its
peripheral circuit or
replace the D-MAIN Assy.
Check the AUDIO Assy CN2106
pins 1, 3 signals.
Yes
Replace the BR Assy.
No
Check and repair analog audio lines
between IC2501 pin 31, 32 and CN2106
pin1, 3 or replace the AUDIO Assy.
B

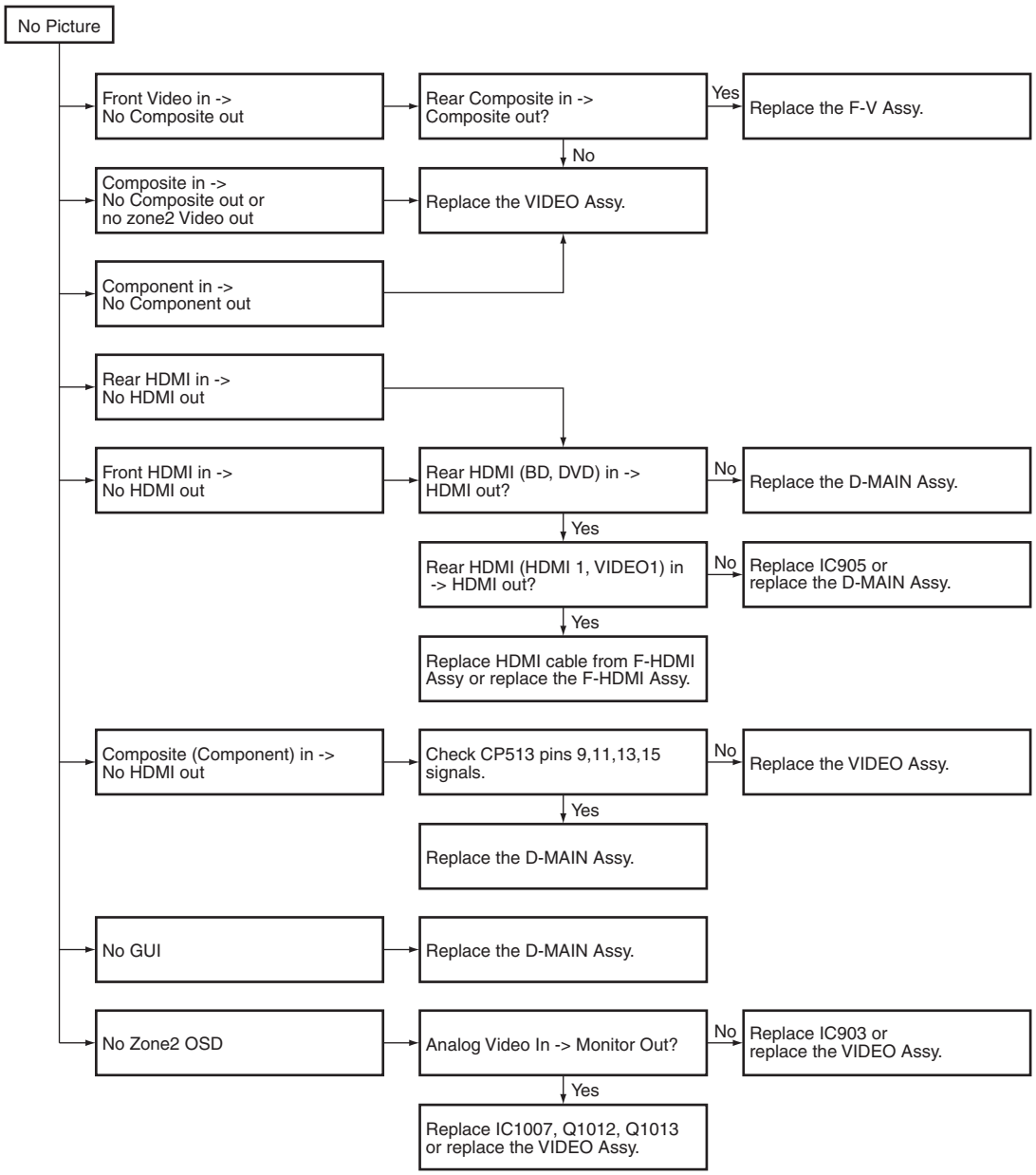

B
Speaker C (S SB SP-B etc) ch
(Front LR is OK)
Check SP System menu is appropriate and connected speakers are not selected [No] on SP Setting menu.
No
Change SP System and SP Setting to correct setting.
Yes
Check Selection of Speaker system by [SPEAKERS] key on front panel is correct.
No
Change SP selection to correct setting by [SPEAKER] key.
Yes
Select Surround mode to EX. STEREO in Advanced Surround.
Yes
Check relay operating of problem ch. (refer to schematic diagram and Relay Control Check flow for Front ch)
Check signals of problem channel on AMP7 Assy CP401 pins 3 (SL), 5 (C), 7 (SR) ,11 (SBL),13 (SBR) signals.
Yes
Check and repair AMP circuit of problem channels or replace the AMP7 Assy.
No
Check signals on BR 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 BR Assy CN2110 pins 9,11,13,15,17,19 signals. (Pin assign is same as CN2107)
Yes
Repair IC2742, IC2704, IC2782 and their peripheral circuit or replace the BR 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.
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


C
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
(1021,1026) HMG or USB in
-> Zone2 Pre-output?
No
Check the BR Assy CN2110
pins 21, 23 signals.
No
Repair IC1802 (DAC for ZONE2)
and its peripheral circuit or
replace the D-MAIN Assy.
Yes
Are there the signals in the BR
Assy CN2107 pins 21, 23?
No
Repair IC2802 or
replace the BR Assy.
Yes
Is Speaker System setting selected
"Zone 2"?
Yes
Zone2 ON/OFF with MULTI-ZONE
ON/OFF key
(IR Assy CP512 pin 8 0 -> 5 V)
No
Select "Zone2" setting by Speaker
System.
Refer to "Relay Control Check flow"
and check replay operation of Zone2
(SB_RLY).
Rec out no output
Same input Function?
Yes
It is specification.
No
Replace IC2501 or
replace the AUDIO Assy.
Tuner ->
(Other Analog OK)
Sirius in ->
(Other Analog OK)
Replace the SW Assy.
BT in ->
(Other Analog OK)
Replace the BT Assy.
D


D
USB in ->
(Other Analog OK)
Check the D-MAIN Assy CN1501
pin 5 3 V
pins 2, 3 Digital Signals.
Yes
Repair IC1801 and its peripheral
circuit or replace the D-MAIN Assy.
No
Replace IC805, IC806
or replace the F-USB Assy.
HDMI in on rear ->
Only BD IN and HDMI IN1and
Front HDMI IN are no sound.
Yes
Repair IC905 and is peripheral
circuit or replace the D-MAIN Assy.
No
Repair IC1801 and its peripheral
circuit or replace the D-MAIN Assy.
No
Front HDMI in ->
Other Rear HDMI inputs
-> output OK?
No
Only BD IN and
HDMI IN are no sound.
Yes
Yes
Replace HDMI cable from F-HDMI
Assy or replace the F-HDMI Assy.
Front Audio in ->
Other Analog OK?
No
Check Speaker Front ch First.
Yes
Replace the F-V Assy.

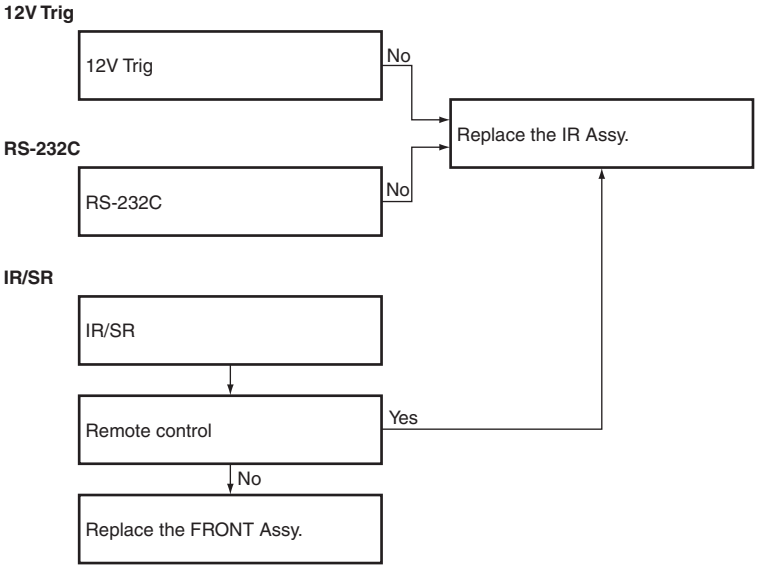
Step 4: No Picture

The contents which are usually thought about are listed in this diagnosis flow, that may not fulfill all trouble including a rare case.



Step 5: Others

The contents which are usually thought about are listed in this diagnosis flow, that may not fulfill all trouble including a rare case.



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]

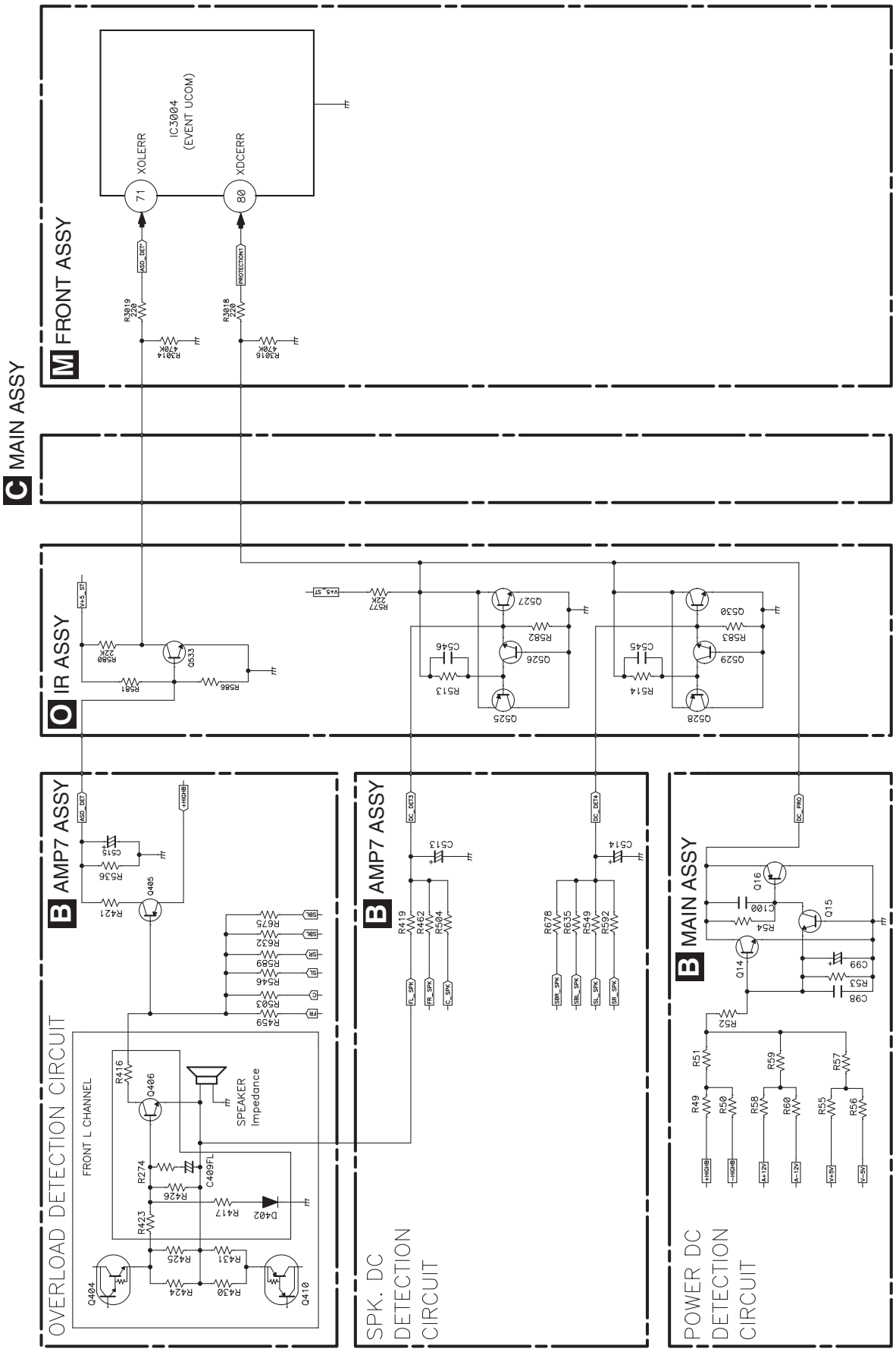
Item	FL Display	LED Flashes	NG Count.	Detection Method	Process After Detection	Description / Remarks
"AMP DC" ("DC output from SP term") detection	Flashing "AMP ERR" for 3 seconds	MCACC LED	DC	XDCERR (Pin 80 of IC3004) Detect "L"	1) Muting on, speaker relay off. 2) "AMP ERR" flashing 3) Shutdown after 3 seconds. 4) "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 LED	OL	XOLERR (Pin 71 of IC3004) Detect "L"	1) Muting on, speaker relay off. 2) Shutdown immediately. 3) "iPod" 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 72 of IC3004) Detect "H" (REDI _DET)	1) Muting on, speaker relay off, 2) "OVERHEAT" flashing 3) Shutdown after 3 seconds. 4) "Center Blue" 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	PQLS LED	DERR	XVDDERR (Pin 70 of IC3004) Detect "L"	1) Muting on, speaker relay off. 2) Shutdown immediately. 3) "PQLS" 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 (Pin M3 of IC101) Detect "H"	1) Bass Power off 2) Display "Over Current" 3) Power on is acceptable	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 (Pin N3 of IC101) 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 83 of IC3004)	Power off	Power-on impossible for 1 min.
"Over Heat" detection	N/A (VOL LEVEL)	N/A	N/A	TEMP L (TR_DET) (Pin 81 of IC3004)	VOL 3 dB down	After this error is detected, the system will not operate for 2 min.
"WiFi Over Current" detection	LAN OVER LOAD	N/A	N/A	XWUSB ERR (#AC23 of IC101)	WUSBPOW is set to L.	To detect the connected WiFi Adapter device is overload. (over 600 mA)

[How to Enter Release Mode]

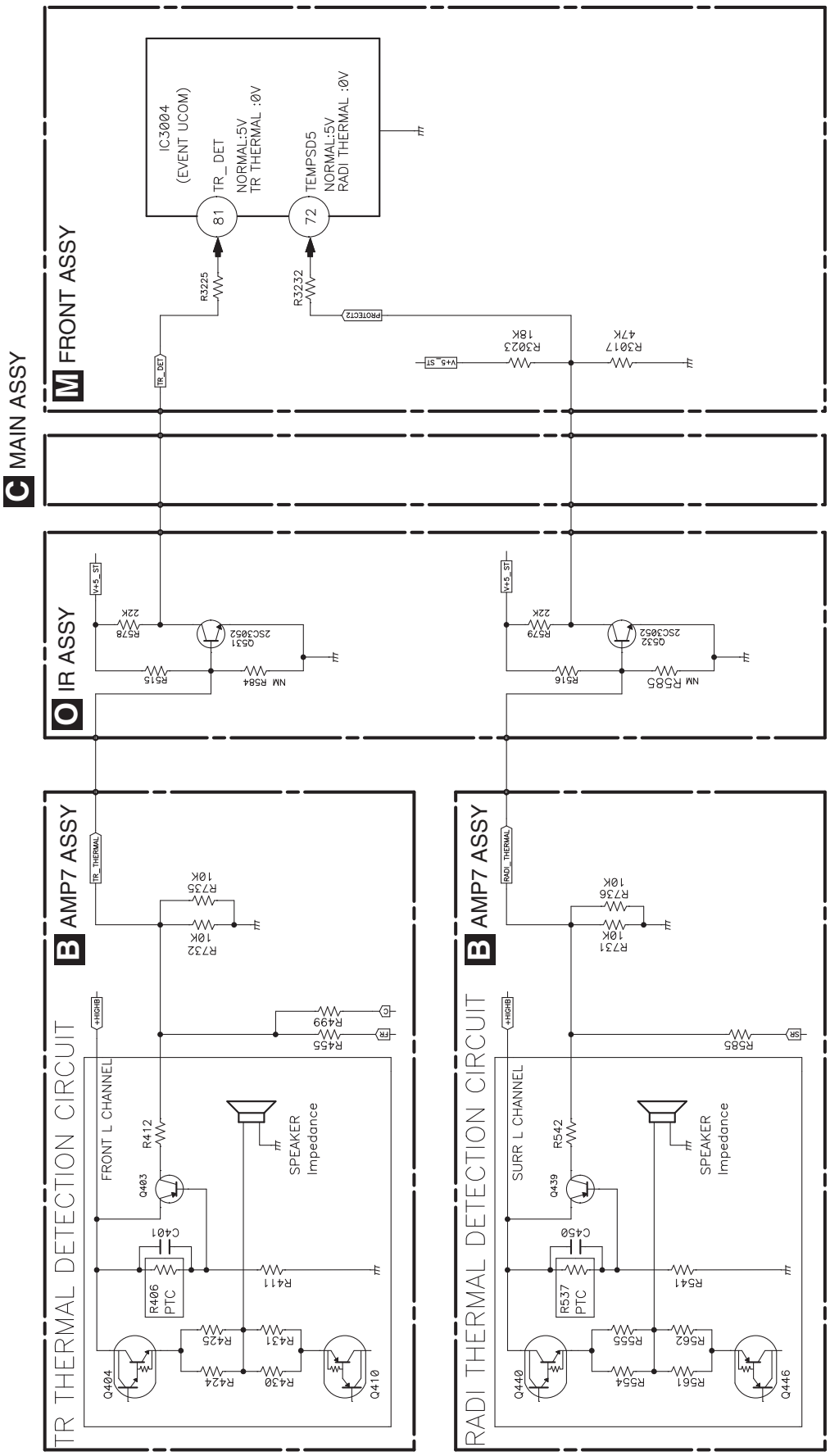
During Standby mode, simultaneously press and hold the "TUNE ↓" and "MULTI-ZONE ON/OFF" keys for 5 seconds.

5.3 DETECTION CIRCUIT

[1] Overload and DC Protection Circuit



[2] TEMP Protection Circuit



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]

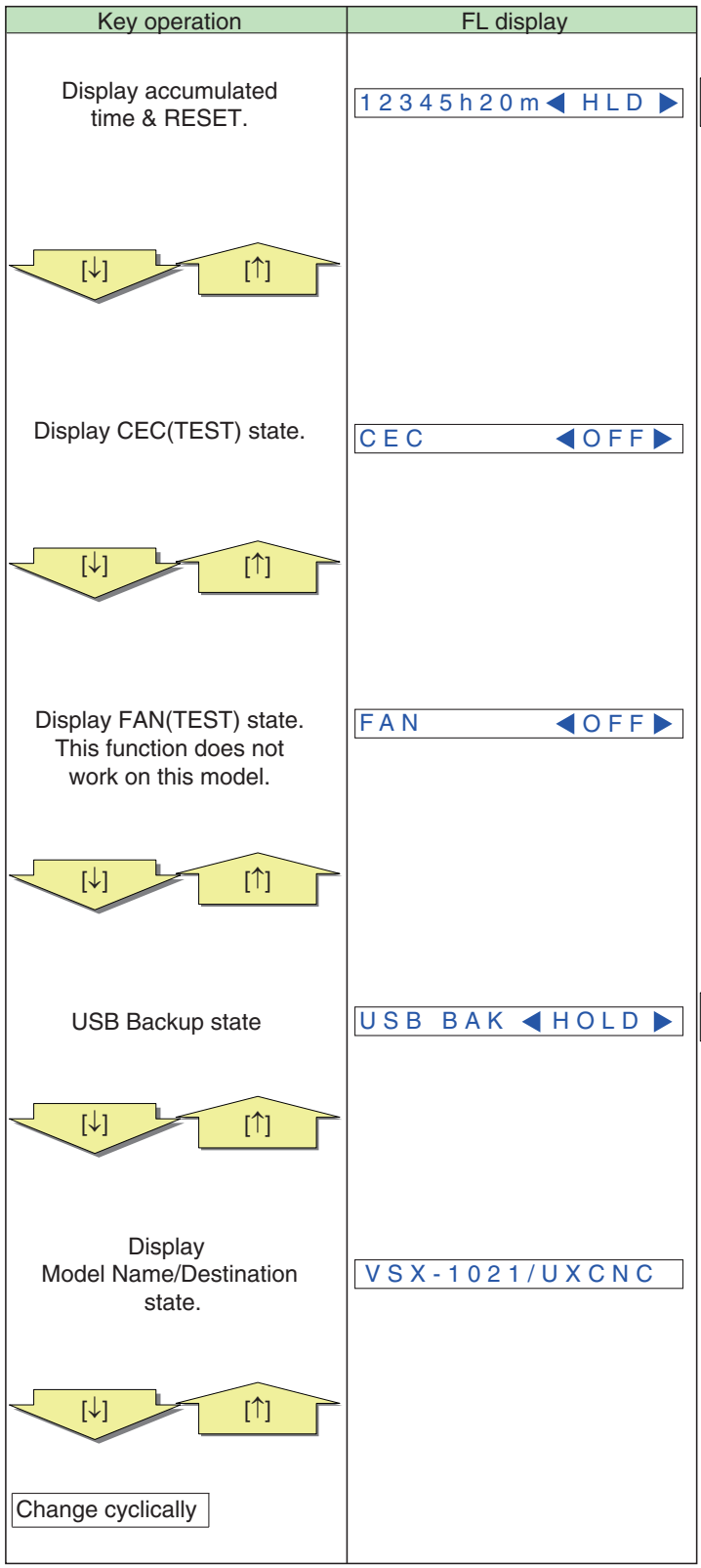
Key operation	FL display
Display number of times DC is detected.	D C : ＊＊＊
[↓] [↑]	
Display number of times OVERLOAD is detected.	O L : ＊＊＊
[↓] [↑]	
Display number of times COMBINATION is detected. (Detects DC and OVERLOAD simultaneously)	C O M : ＊＊＊
[↓] [↑]	
Display number of times Power abnormality 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 0m 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
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
Inputs		
See below table.		
HDMI		
HDMI Audio		Amp
Control		ON
Control Mode		PQLS
Display Power Off		NO

Setting		Default
DSP		
Power On Level		LAST
Volume Limit		OFF
Mute Level		FULL
Phase Control		ON
Auto Sound Retriever	iPod/USB, HOME MEDIA GALLERY, ADAPTER PORT input function	ON
	Other input functions	OFF
Sound Delay		0.0 frame
Dual Mono		CH1
DRC		AUTO
SACD Gain		0 dB
LFE Attenuate		0 dB
Auto delay		OFF
Digital Safety		OFF
Effect Level	ExtendedStereo	90
	Other modes	50
PL II Music Options	Center Width	3
	Dimension	0
	Panorama	OFF
Neo:6 Options	Center Image	Neo:6 MUSIC: 3 Neo:6 CINEMA: 10

Setting		Default
PL IIz Options	Height Gain	MID
All Inputs	Listening Mode (2 ch/multi ch)	AUTO SURROUND
	Listening Mode (Headphones)	STEREO
See also *Setting the Audio options* on page 46 for other default DSP settings.		
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		
	Digital	HDMI	Component
DVD	COAX-1	(DVD)	IN 1
BD		(BD)	
TV/SAT	OPT-1		
DVR/BDR	OPT-2	(DVR/BDR)	IN 2
VIDEO 1		(VIDEO 1)	
HDMI 1		IN 1	
CD	COAX-2		

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.

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.

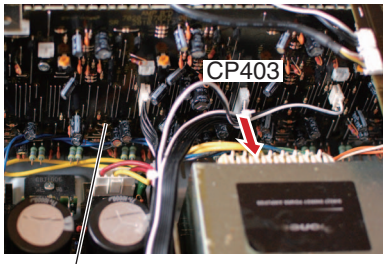
7. DISASSEMBLY

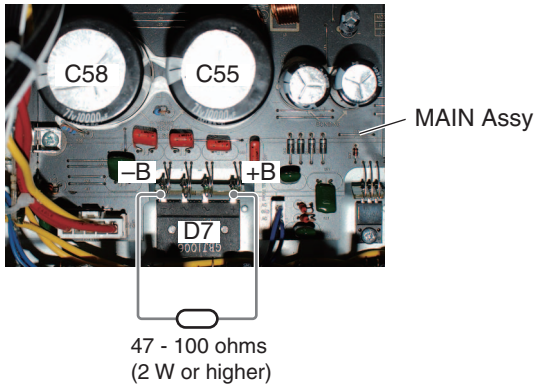
Note:
(1) Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.
(2) For performing the diagnosis shown below, the following jigs for service is required:
- Board to board extension jig cable (GGD1735)
- Board to board extension jig cable (GGD1736)
- 7P extension jig cable (GGD1737)
- 13P extension jig cable (GGD1740)
- 5P extension jig cable (GGD1741)

1. Discharging

[1] MAIN Assy Capacitor (C55, C58)

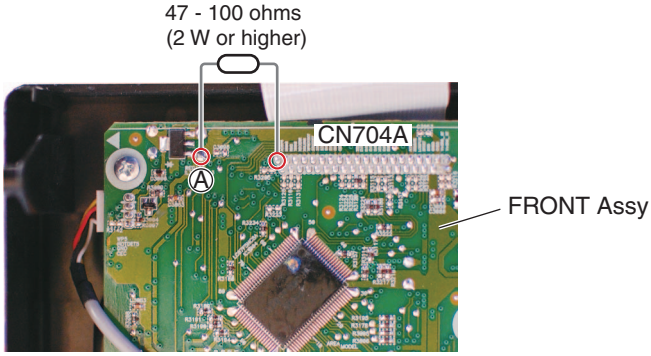
[Procedures]
(1) Unplug the power cord.
(2) Disconnect the 10P connector from CP403 of the AMP7 Assy between CN3 of the MAIN Assy.
(3) Connect +B and –B terminal of the D7, using resistor leads with 47 - 100 ohms (2 W or higher), for discharging.
∗ Discharging time: 30 - 60 seconds, depending on the 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

[Procedures]
(1) Unplug the power cord.
(2) Connect CN704A pins 1 (–30V) of the FRONT Assy and GND terminal Ⓐ, 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).

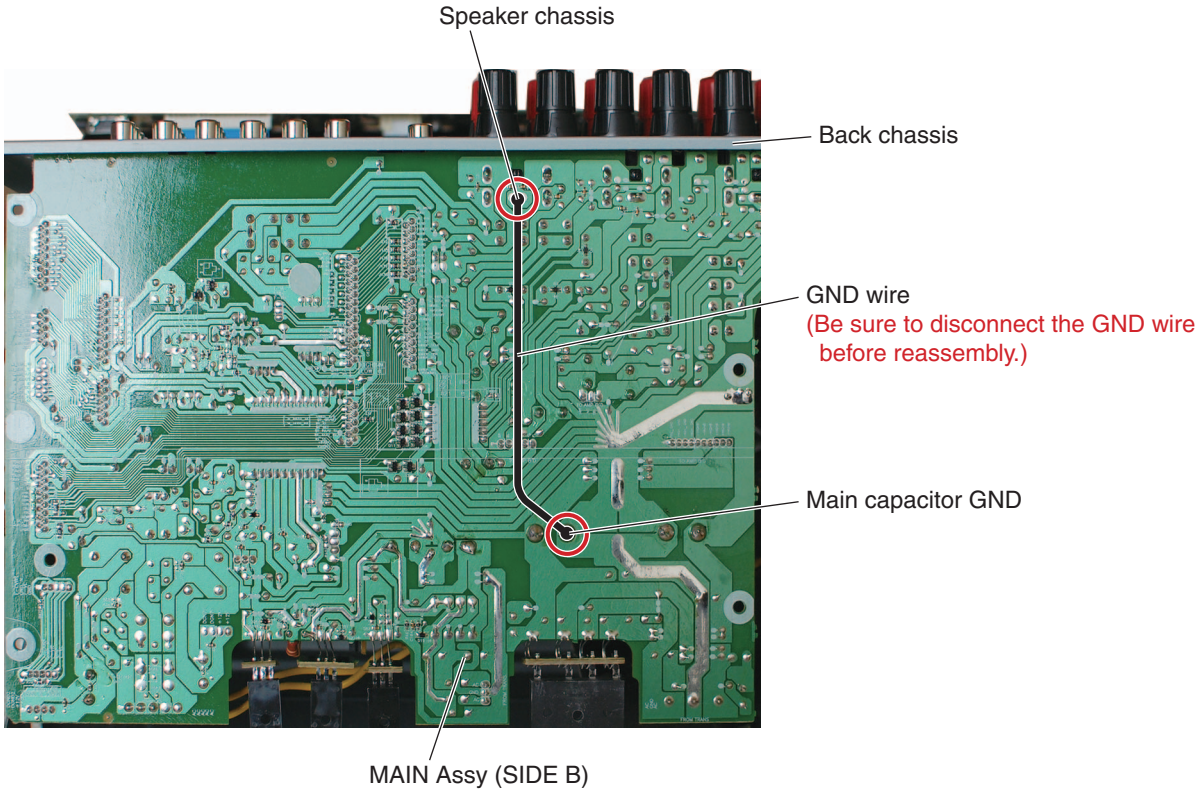


2. Notes on Ground Points Connection

[Note]

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

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



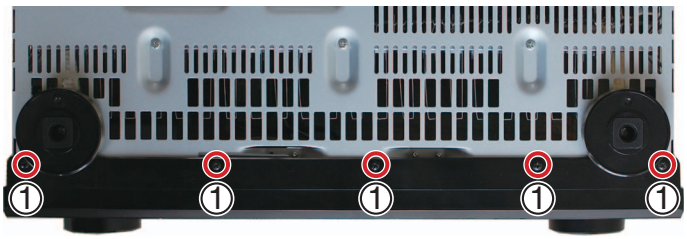
3. Disassembly

NOTE:
Although a HDMI cable and a connector shows on some pictures of the following disassembly section, this model (VSX-1021-K/UXCNCB) does not have them because there is no HDMI front input. However some other models which are designed based on this model have HDMI cable and connector on D-MAIN Assy. Therefore when repairing these models, please refer to the following information (styling info of HDMI cable and some cautions.)

[1] Front Panel Section

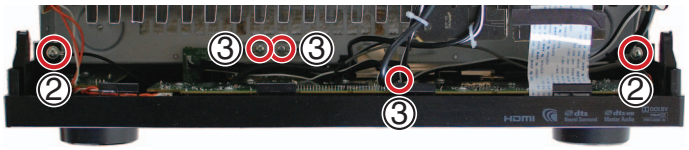
Remove the cabinet by removing the 10 screws.

(1) Remove the five screws. (BBZ30P080FTB)

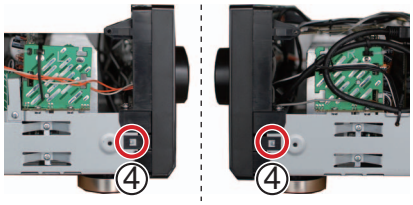


• Bottom view

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

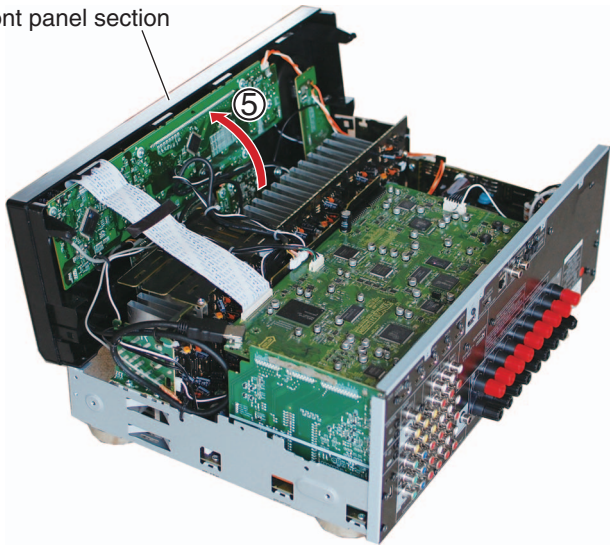


(4) Unhook the two hooks.



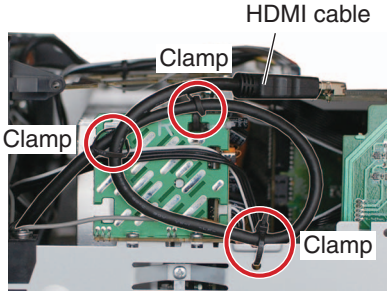
(5) Arrange the front panel section as shown in the photo below.

Front panel section



• HDMI cable styling

The F-HDMI input is not provided for the VSX-1021-K/UXCNCB. Styling of the cables other than the HDMI cable remains the same (without the HDMI cable).

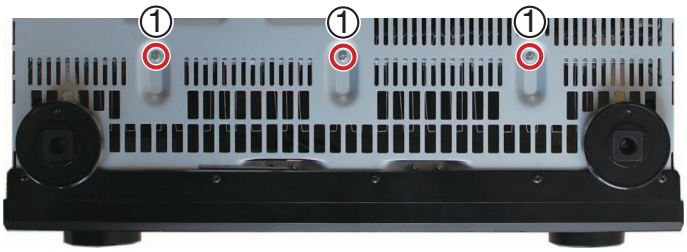


[2] Heatsink Section

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

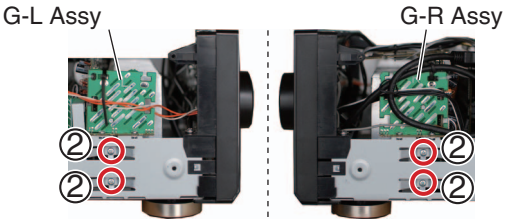
Remove the cabinet by removing the 10 screws.

(1) Remove the three screws. (BBZ30P080FTC)

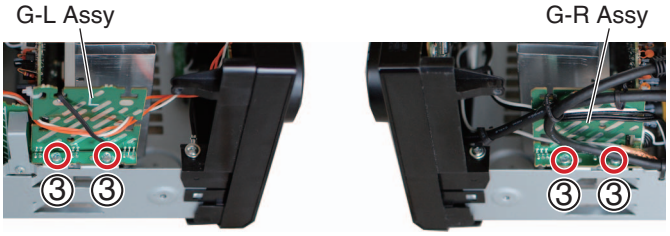


• Bottom view

(2) Remove the four screws. (BBZ30P080FTC)

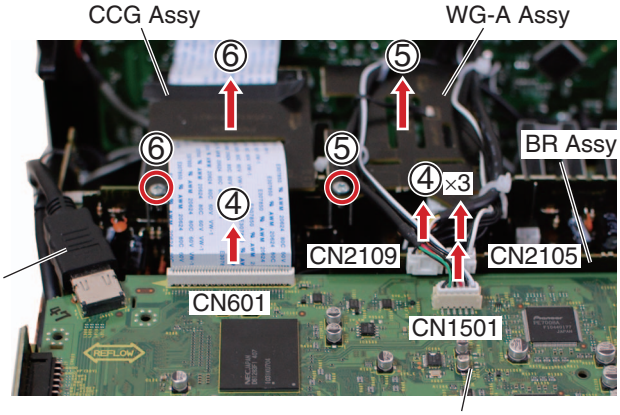


(3) Remove the four screws. (BBZ30P080FTC)

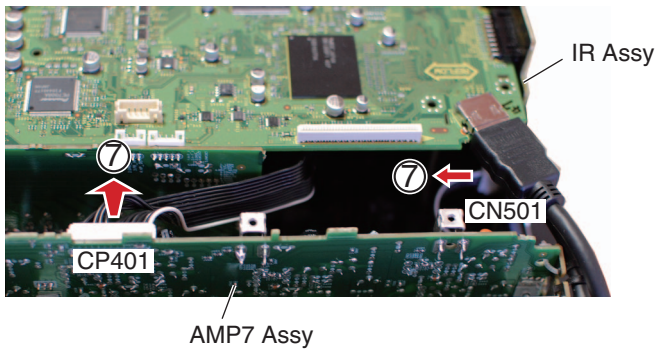


(4) Disconnect the one flexible cable and three connectors. (CN601, 1501, 2105, 2109)
(5) Remove the one screw and remove the WG-A Assy. (BBZ30P080FTC)
(6) Remove the one screw and remove the CCG Assy. (BBZ30P080FTC)

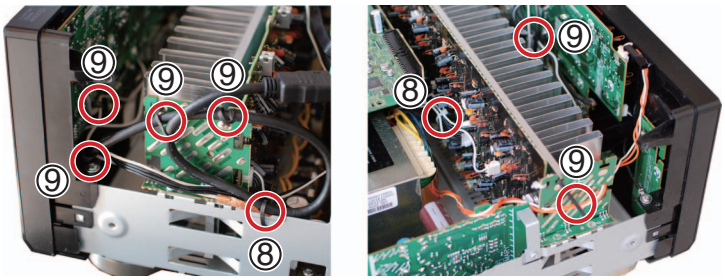
Note:
VSX-1021-K/UXCNCB does not use HDMI cable.



(7) Disconnect the two connectors.
(CP401, CN501)

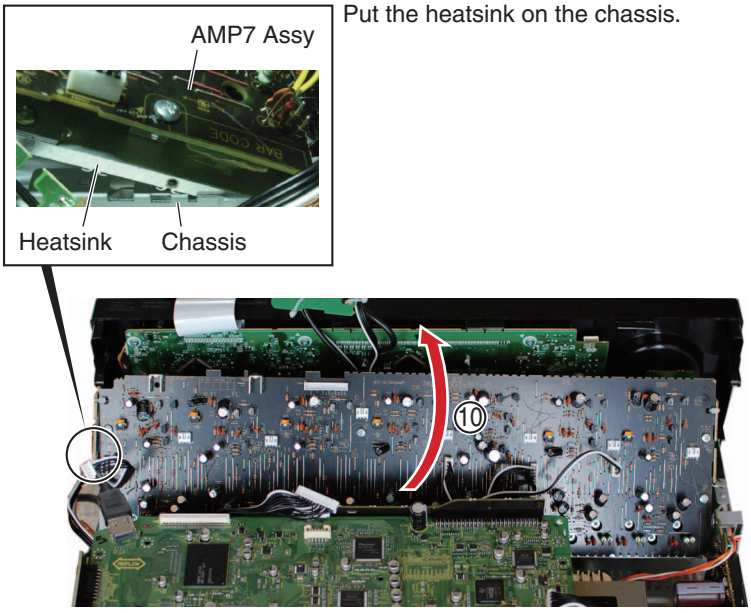


(8) Cut the two binders.
(9) Release the six clampers.

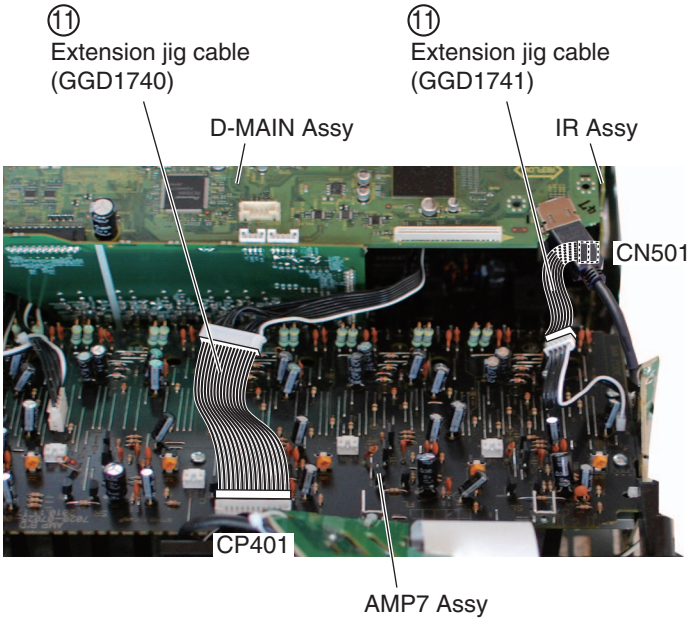


(10) Rotate the heatsink section in the direction of the arrow.

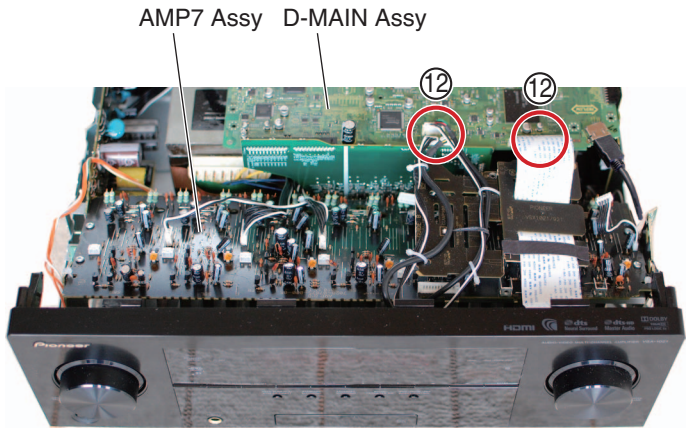
Put the heatsink on the chassis.



(11) Connect the two extension jig cables.



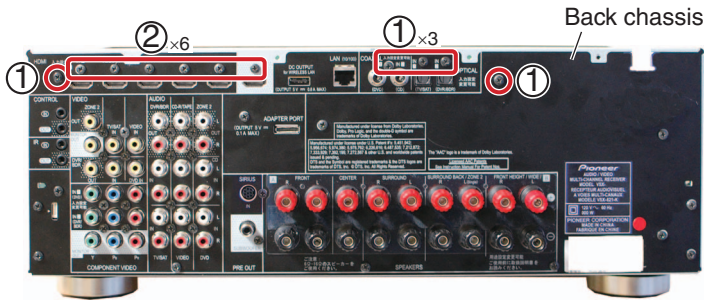
(12) Reconnect the one flexible cable and three connectors which you disconnected in step (4).



[3] D-MAIN Assy

Remove the cabinet by removing the 10 screws.

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

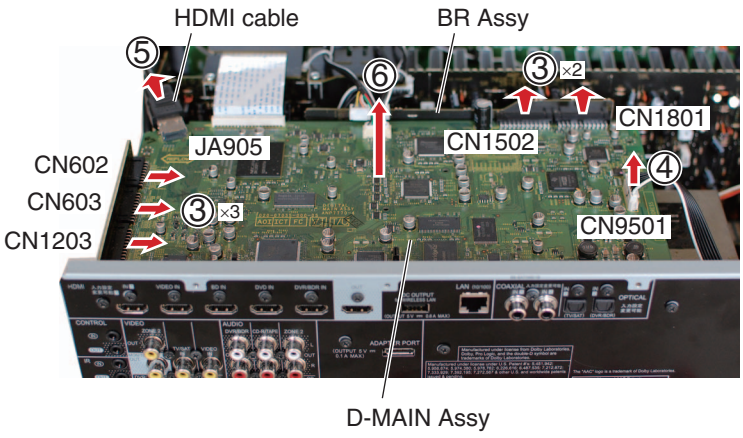


• Rear view

(3) Disconnect the five B to B connectors. (CN602, 603, 1203, 1502, 1801)
(4) Disconnect the one connector. (CN9502)
(5) Disconnect the HDMI cable. (JA905)

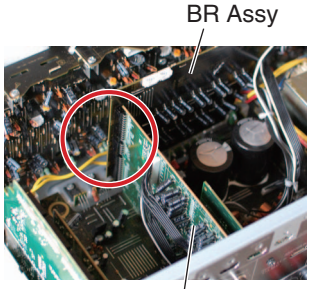
Caution:
Because an HDMI connector might be broken, diagnose HDMI cable without reconnecting it. (VSX-1021-K/UXCNCB does not use HDMI cable.)

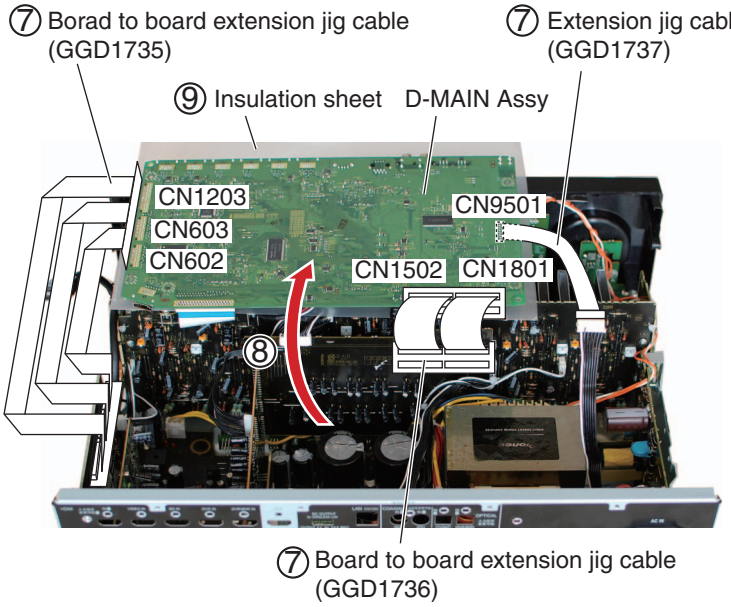
(6) Remove the D-MAIN Assy.



(7) Connect the three extension jig cables.
(8) Arrange the D-MAIN Assy in the photo below.
(9) Insert any insulation sheet.

Note:
Confirm that a B to B connector of BR Assy is connected to AUDIO Assy tightly.



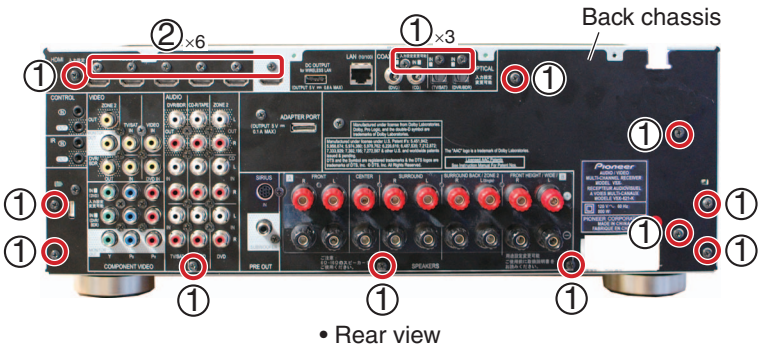


[4] MAIN Assy

Remove the cabinet by removing the 10 screws.

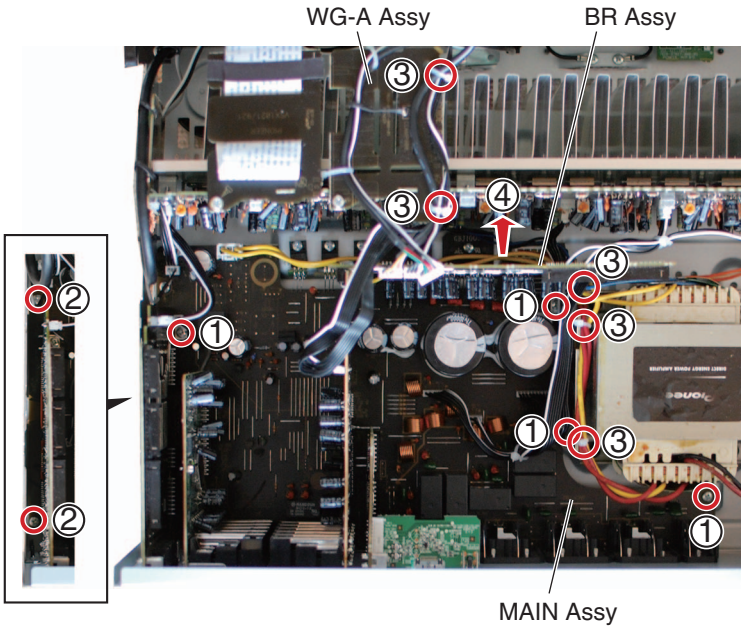
[4-1] Back chassis, D-MAIN Assy

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

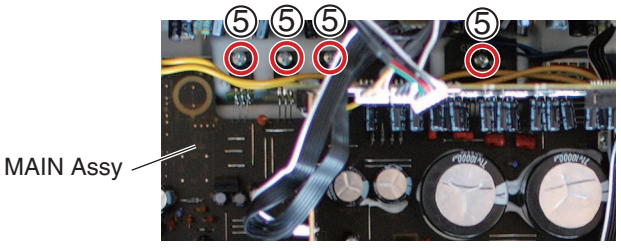


[4-2] MAIN Assy

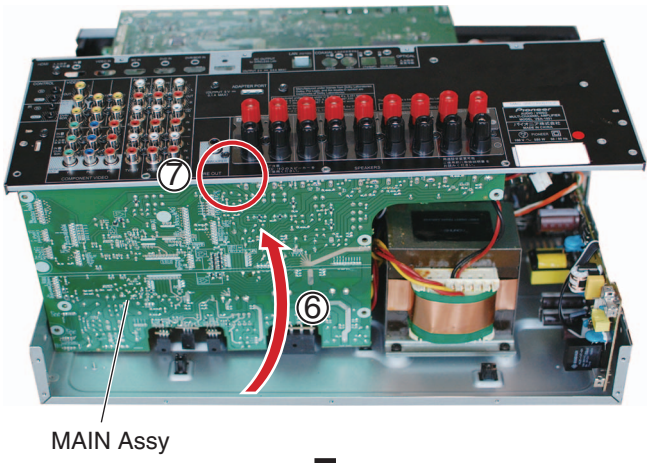
(1) Remove the four screws. (BBZ30P180FTC)
(2) Remove the two screws. (BBZ30P080FTC)
(3) Cut the five binders.
(4) Remove the BR Assy.



(5) Remove the four screws. (BBZ30P080FTC)

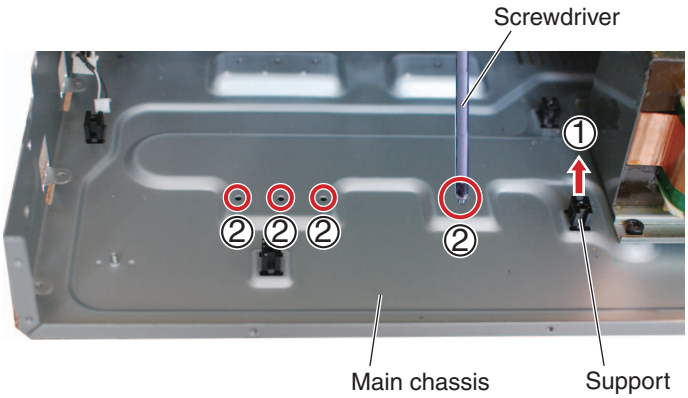


(6) Arrange the unit as shown in the photo below.
(7) Connect the chassis ground.
See “2. Notes on Ground Points Connection”.

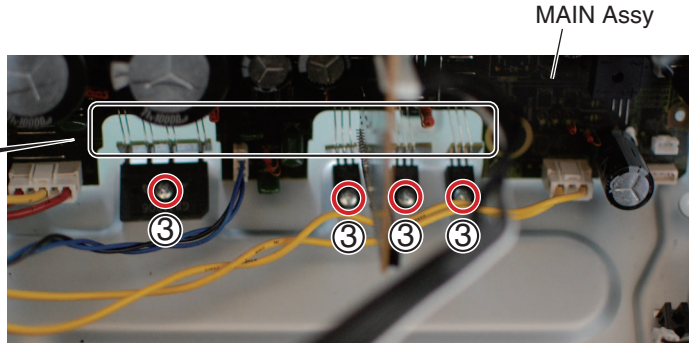


[4-3] Regulator ICs and Recifier diode

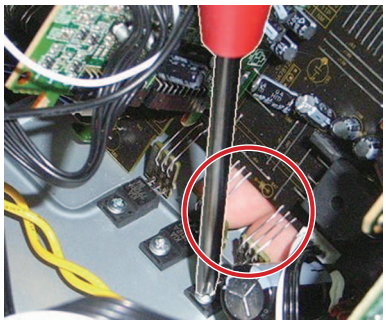
(1) Remove the support.
(2) Tighten then loosen the screw in each of the four holes for temporary joining that are located on the rear side of the main chassis. (This is for shaving the thread grooves to facilitate attachment in the next step.)



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

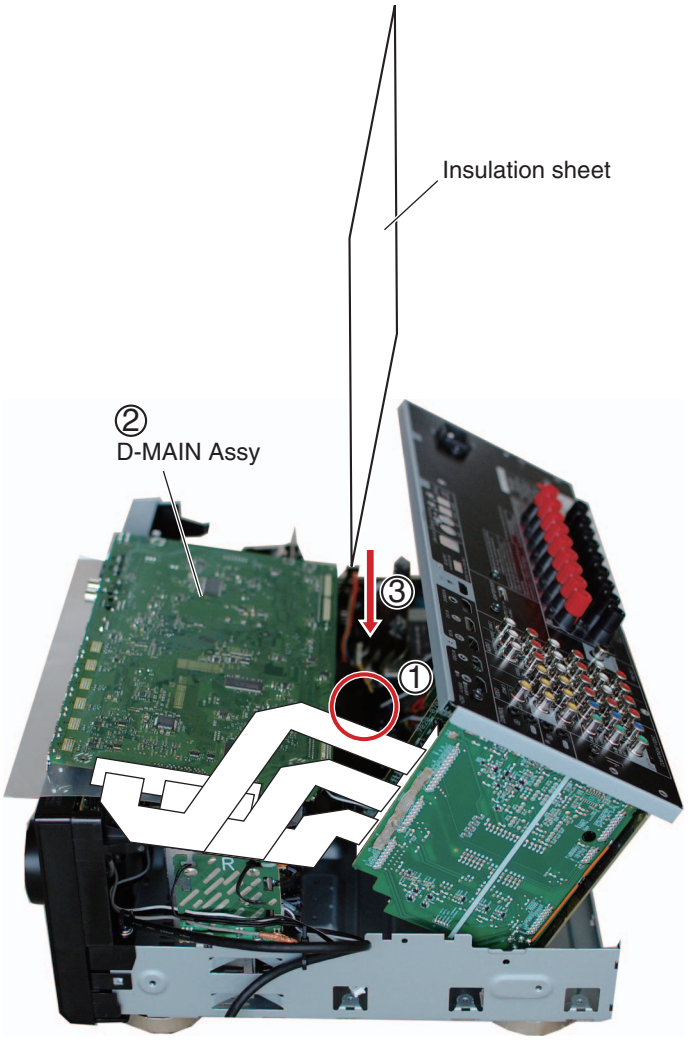


Note:
While securing the regulator ICs and rectifier diode to the holes for temporary joining, tighten the screws while holding the regulator ICs and rectifier diode with your fingers so that the jumper wires will not become distorted.



[4-4] Diagnosis

(1) Reassemble the BR Assy.
(2) Reassemble the D-MAIN Assy with extension jig cables. (See procedure [3].)
(3) Insert any insulation sheet between D-MAIN 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)
D-MAIN Assy	➡	No adjustment required 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. • IC101 (UPD61283F1-407LU2A) • IC903 • IC9204 (DM860) • IC1602 • IC9002 (D810K013BZKB400)
Other assemblies	➡	No adjustment required

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 Last memory for inputting the Main power, ZONE2 Setting for controlling HDMI Remote control ID Setting for RF remote control (EXPANSION Setup) Setting for Network Standby Data to be save upon the operation of protection circuit	EVENT Ucom
Settings for HMG Preset Memory, Favorite, Recently played, Repeat	BridgeCo IC

(As the data saved by EVENT Ucom is on the FRONT 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-1021_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].
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 ◄ SAVE? ►] 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

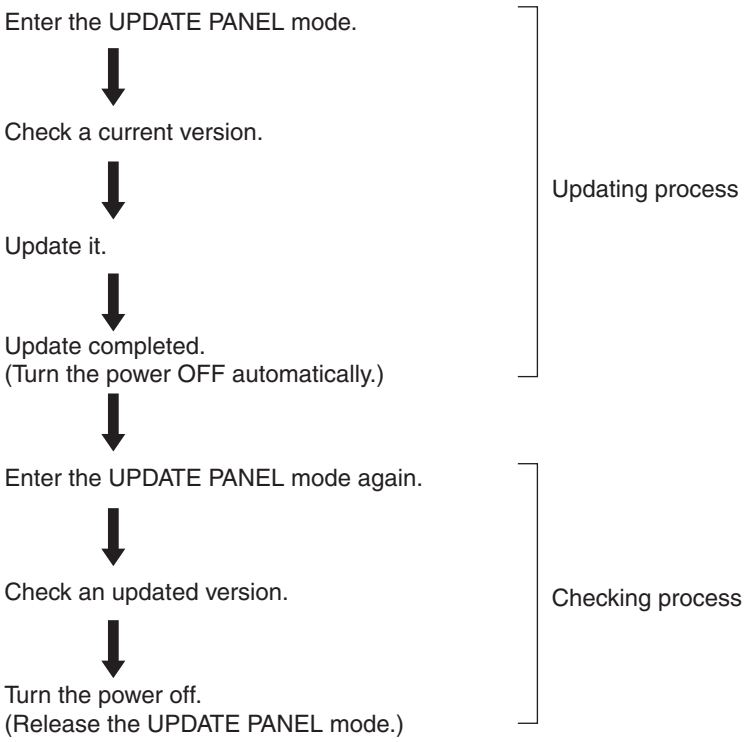
- Files are stored in Root of USB memory.
- Files are read from Root of USB memory.
  ⇨ To make operations such as moving files, be sure to assign the saved file in Root of the USB memory. Also please be careful not to assign *.avr in multiple numbers.
- The time and date of updating for saved file is fixed to "2011/01/01 0:00."
- 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



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.

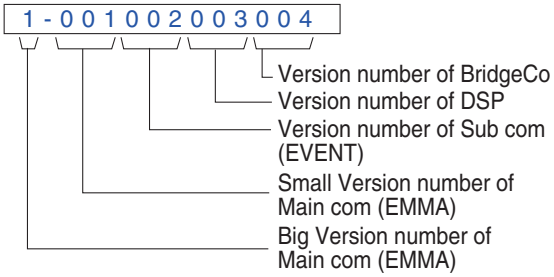
[Procedure]

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 30 seconds till version of the BridgeCo is displayed.
Meanwhile, version of the BridgeCo is displayed with ***.

Key operation	FL display
	Update Menu
	UPDATE
[ENTER]	
	Update Confirmation
[PRESET→] or [PRESET←]	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．　２０％
DSP UPDATE completed	
↓	Updating process ＊Ｕｐｄａｔｉｎｇ．　４０％
BridgeCo IC UPDATE completed	
↓	Updating process ＊Ｕｐｄａｔｉｎｇ．　６０％
MAIN com (EMMA) UPDATE completed	
↓	Updating process ＊Ｕｐｄａｔｉｎｇ．　８０％
SUB com (EVENT) UPDATE completed	
↓	Update completion display ＊Ｕｐｄａｔｉｎｇ．　１００％
5 Second	
↓	
Power turns off automatically. (All ZONE OFF) Disconnect the USB MEMORY.	

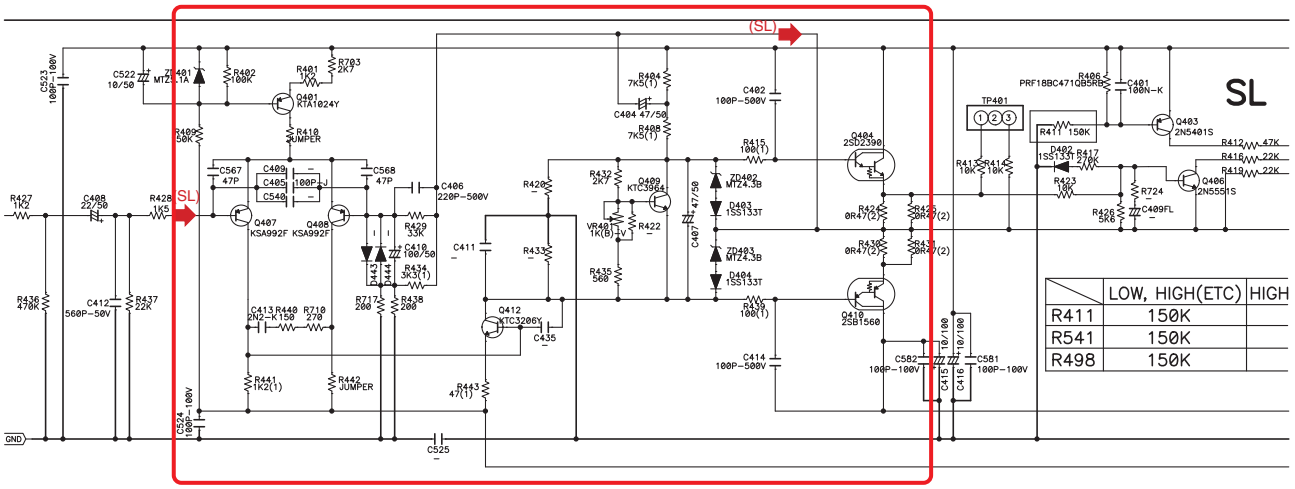
Update time is fluctuated by contents of the update. It will take about 20 minutes at the maximum.
(Actual time is from 2 minutes to 15 minutes.)
Time required for updating varies, because only the programs that require updating will be updated.

[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.

B AMP7 ASSY **SIDE A**

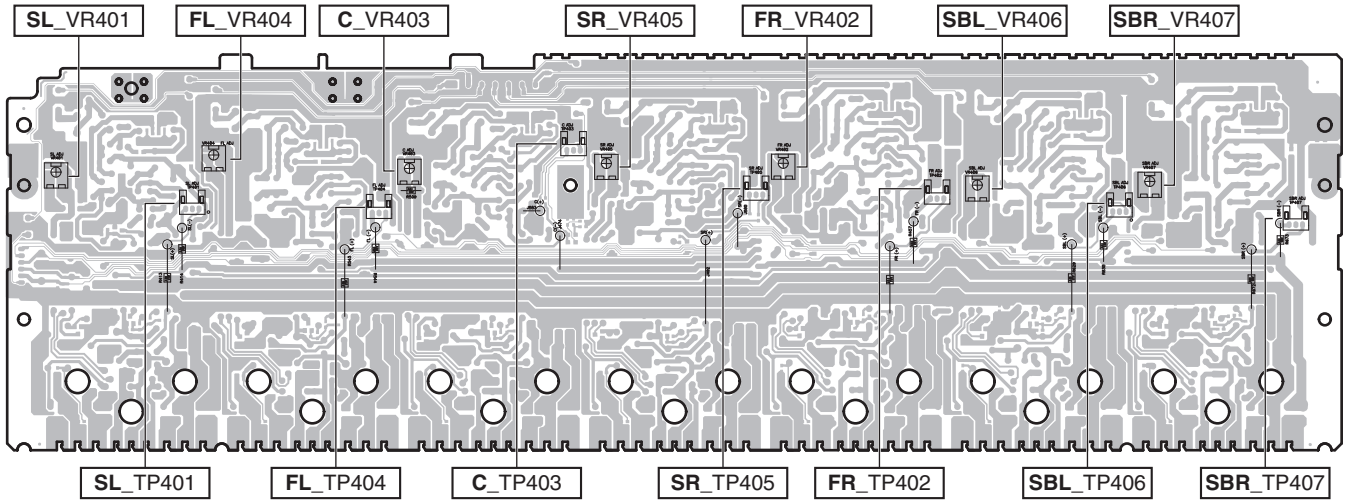


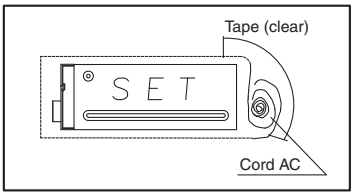
Fig.1

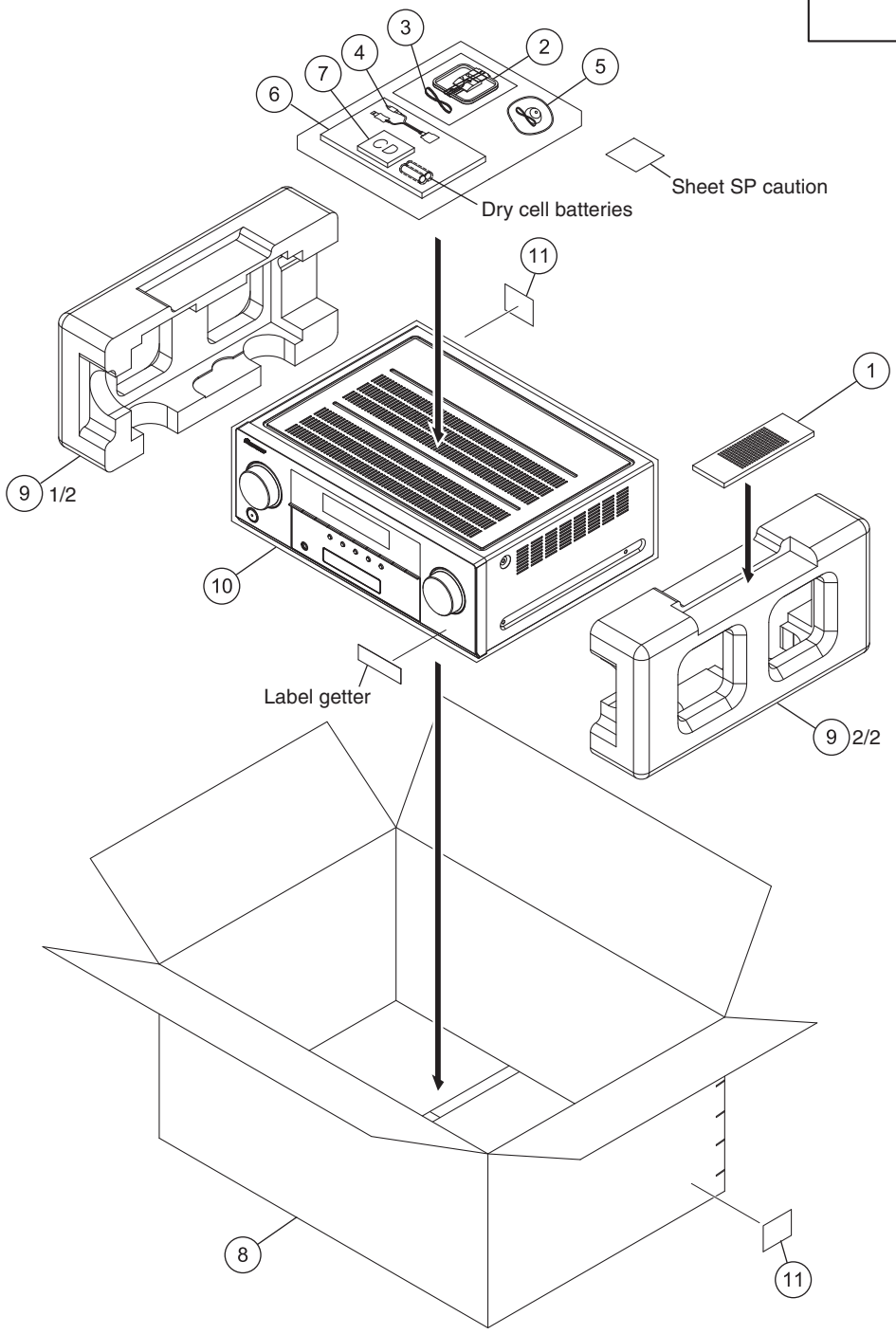
9. EXPLODED VIEWS AND PARTS LIST

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

Poly bag packing style

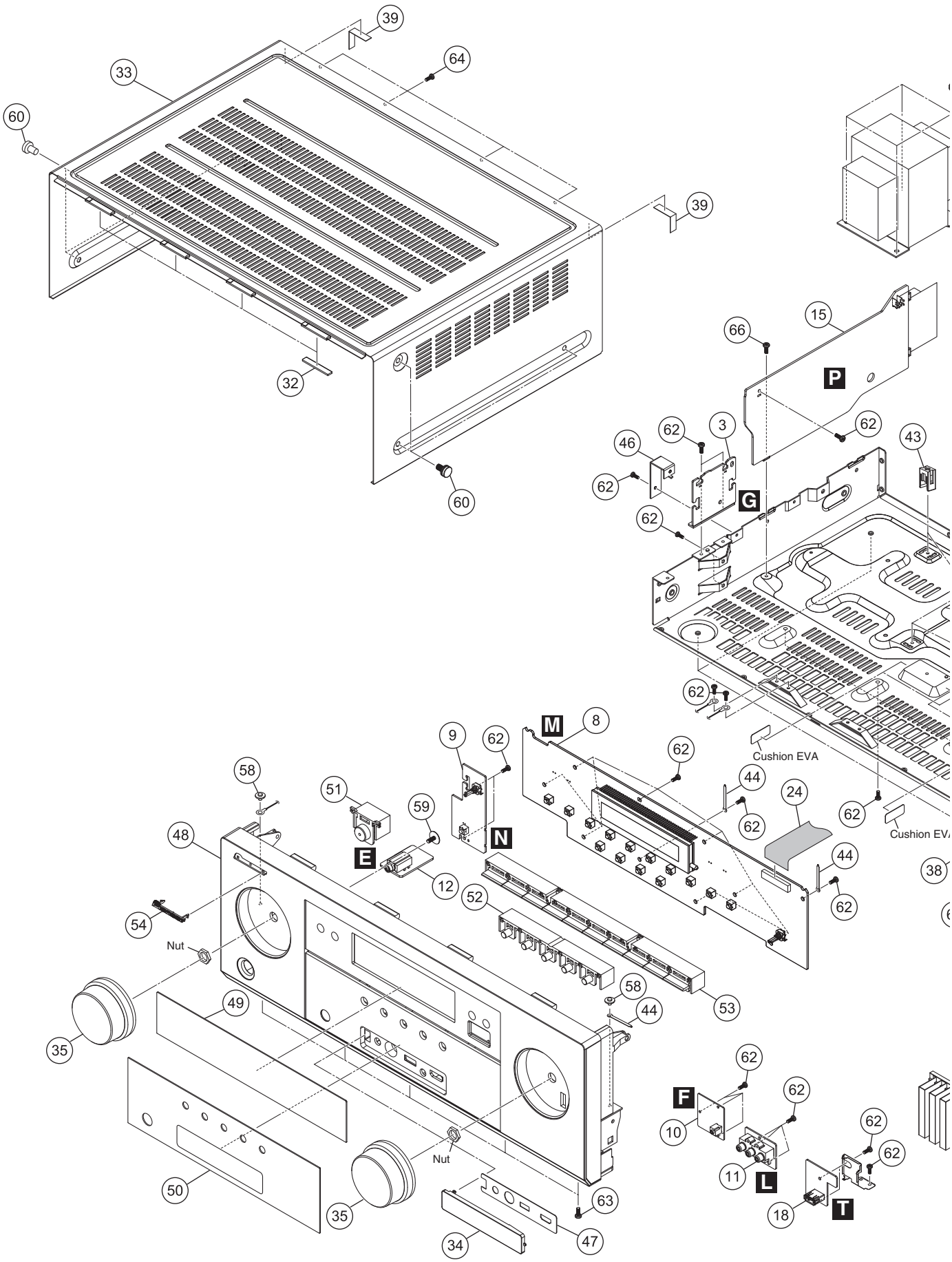


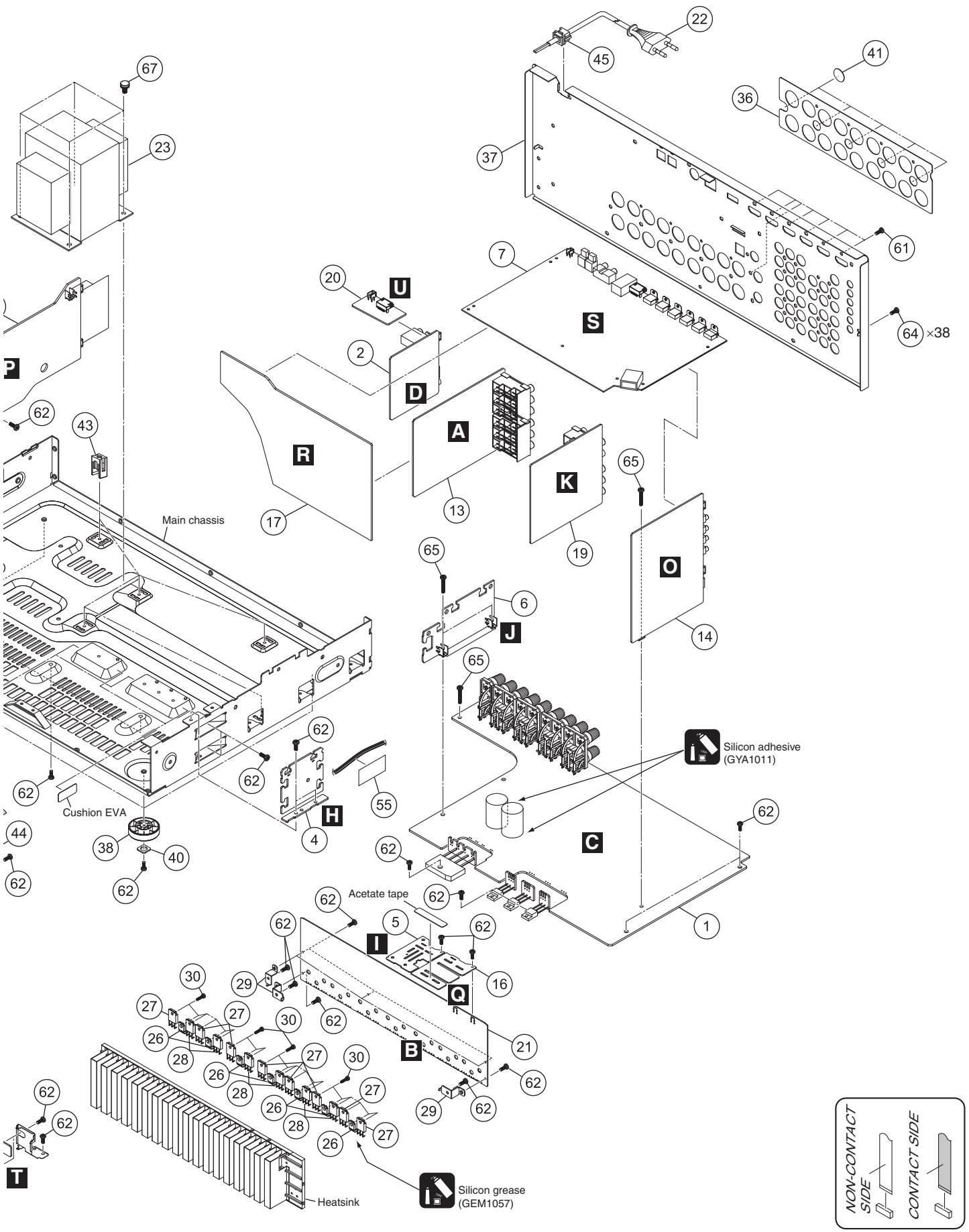


PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Remote Control Unit (AXD7615)	8300761500010-IL
	2	AM Loop Antenna	E601019000010-IL
	3	FM Wire Antenna	E605010140010-IL
⚠	4	iPod Cable	L308102013020-IL
	5	Setup Microphone (cable: 5 m (16.4 ft.))	APM7008
	6	Operating Instructions (En, Es)	5707000004890-IL
	7	CD-ROM (AVNavigator)	6517000000120-IL
	8	Box, Gift 1021U	6007211820000-IL
	9	Cushion, Snow	6230212914000-IL
	10	PE, Sheet	6327040059000-IL
NSP	11	Label	VRW1629

9.2 EXTERIOR SECTION




Main chassis
Cushion EVA
Acetate tape
Silicon adhesive (GYA1011)
Silicon grease (GEM1057)
Heatsink
NON-CONTACT SIDE
CONTACT SIDE
×38

EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	MAIN Assy	70280702710J0-IL
	2	SW Assy	7028070272010-IL
	3	G-L Assy	7028070273010-IL
	4	G-R Assy	7028070274010-IL
	5	WG-A Assy	7028070276010-IL
	6	WG-B Assy	7028070277010-IL
	7	D-MAIN Assy	7028070351010-IL
	8	FRONT Assy	7028070301010-IL
	9	POWER Assy	7028070302010-IL
	10	MIC Assy	7028070303030-IL
	11	F-V Assy	7028070304040-IL
	12	HP Assy	7028070306010-IL
	13	AUDIO Assy	7028070311010-IL
	14	IR Assy	7028070321010-IL
⚠	15	SMPS Assy	7028070322010-IL
	16	CCG Assy	7028070323010-IL
	17	BR Assy	7028070324010-IL
	18	F-USB Assy	7028070331010-IL
	19	VIDEO Assy	7028070261010-IL
	20	BT Assy	7028070231010-IL
	21	AMP7 Assy	7028070251010-IL
⚠	22	Cord Assy	L068125101710-IL
⚠	23	Power Trans 1021U	8200960611050-IL
	24	Cable, Flat Card 1.0 M	N711392412880-IL
	25	•••••	
⚠	26	Transistor	J5011560Y0000-IL
⚠	27	Semi, TR/GE NPN 2SC	J502396400010-IL
⚠	28	Transistor	J5032390Y0000-IL
	29	Bracket	4010056906010-IL
	30	Screw Tapping Assy	B018230141H11-IL
	31	•••••	
	32	Sheet	1210210235000-IL
	33	Cabinet	3007211846000-IL
	34	Cover	4317215111000-IL
	35	Knob	5080212431000-IL
	36	Speaker Sheet 921SY	1210211492000-IL
	37	Back Chassis 1021U	3207213766000-IL
	38	Foot	4007210391000-IL
	39	Cushion	4050211385000-IL
	40	Cushion	4050211605000-IL
	41	Cushion	4050211745000-IL
	42	•••••	
	43	Support	4070001601010-IL
	44	Clamp MTG	4330000310000-IL
	45	Stopper	4380040162010-IL

Mark	No.	Description	Part No.
	46	Bracket SMPS	4010214886000-IL
	47	F Input Sheet 1021U	1217211472000-IL
	48	Front Panel 1021U	3067215091030-IL
	49	Window Display 1021U	5077213113040-IL
	50	Window Display 1021L	5077213123000-IL
	51	Button	5090213741100-IL
	52	5 Key Button	5090214561000-IL
	53	10 Key Button	5090214571000-IL
	54	Pioneer Badge B (PLS)	XAM3006
NSP	55	Tape	1220210879000-IL
	56	•••••	
	57	•••••	
	58	Screw, Tap Tite	1500001206010-IL
	59	Screw	1500001456010-IL
	60	Screw	BBT40P080FTB
	61	Screw	BSZ30P040FTB
	62	Screw	BBZ30P080FTC
	63	Screw	BBZ30P080FTB
	64	Screw	BBT30P100FTB
	65	Screw	BBZ30P180FTC
	66	Screw, Tap Tite	B020230063B10-IL
	67	Screw	B028940101B11-IL

A

B

C

D

E

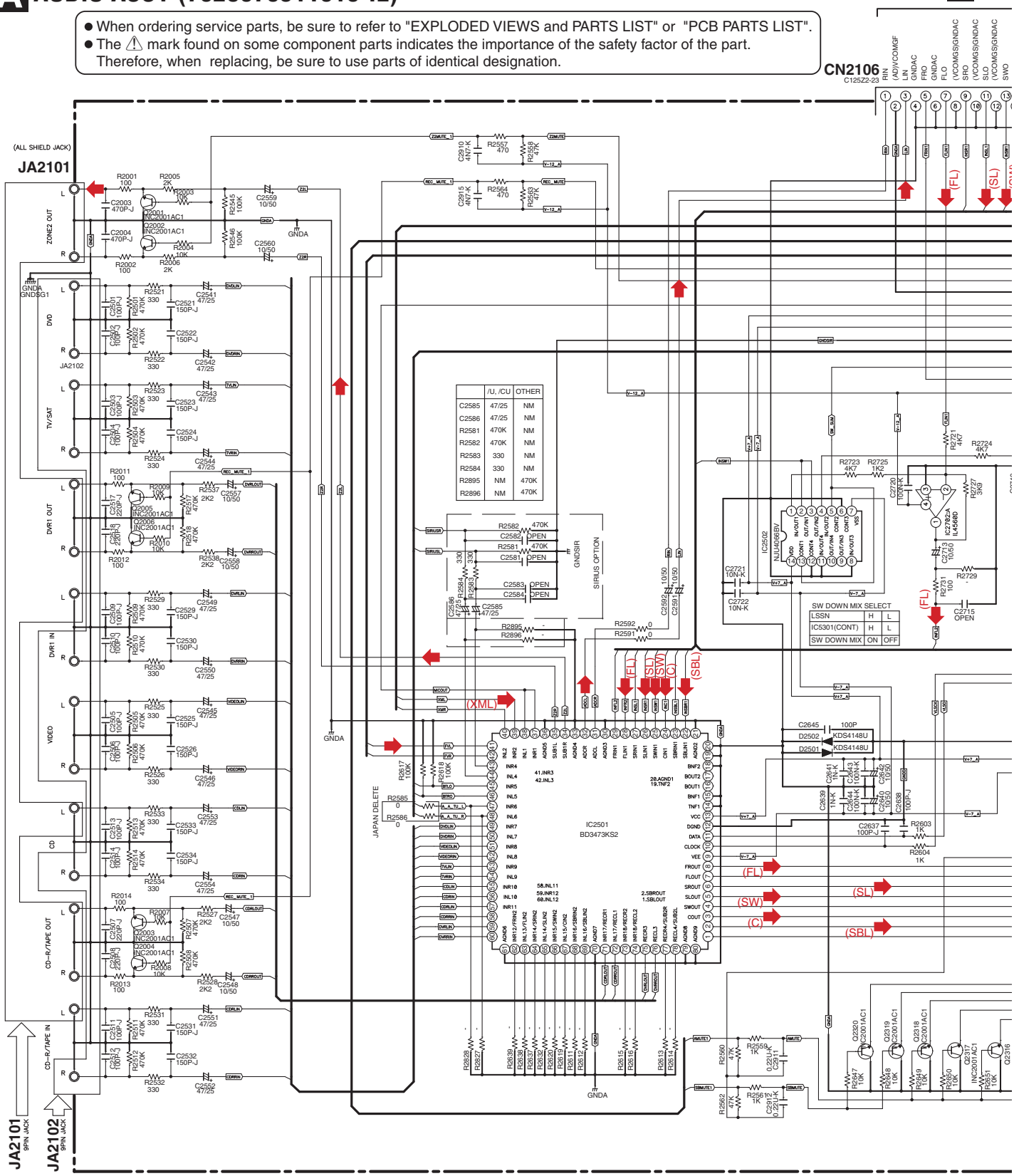
F

10. SCHEMATIC DIAGRAM

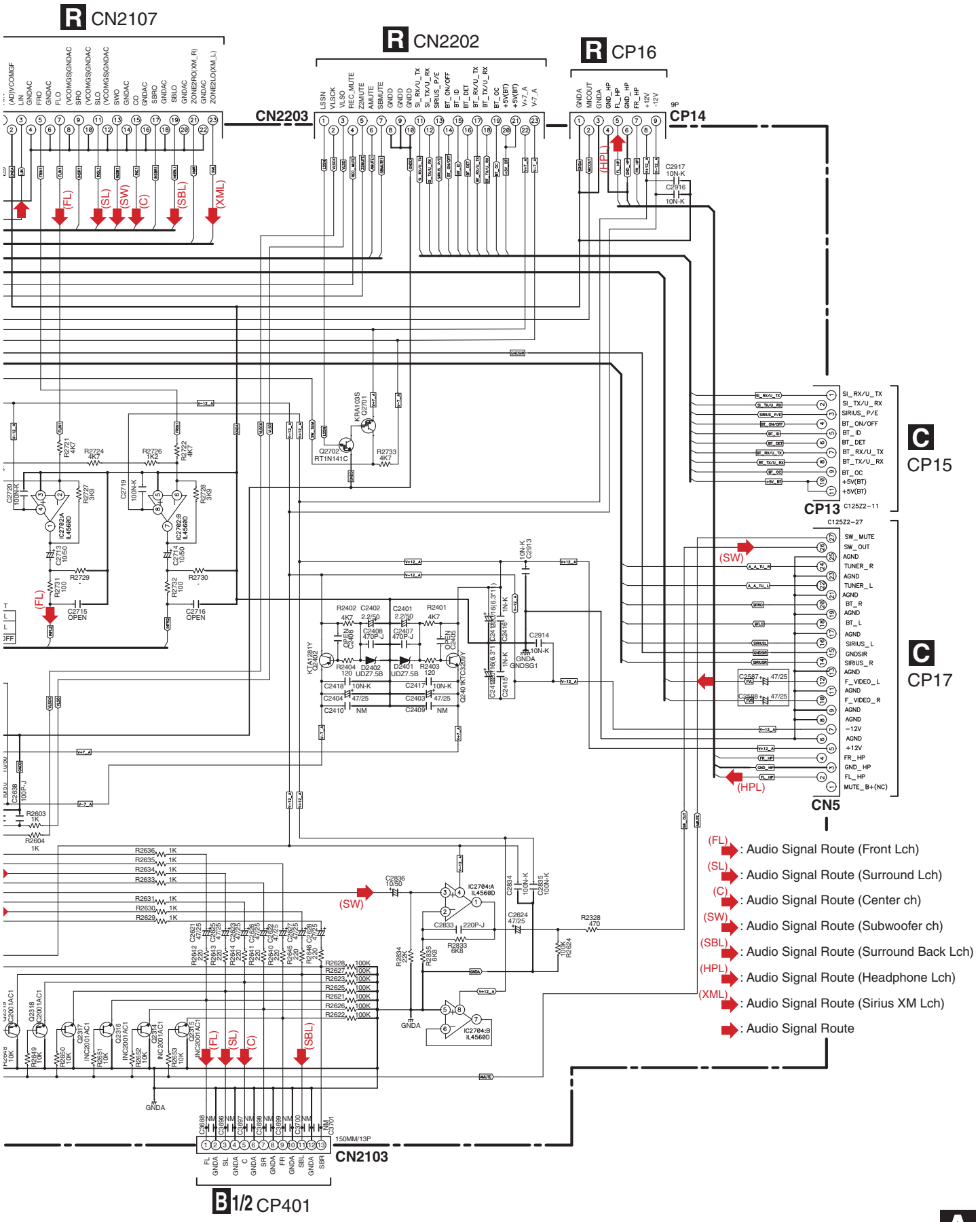
10.1 AUDIO ASSY

A AUDIO ASSY (7028070311010-IL)

- 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.

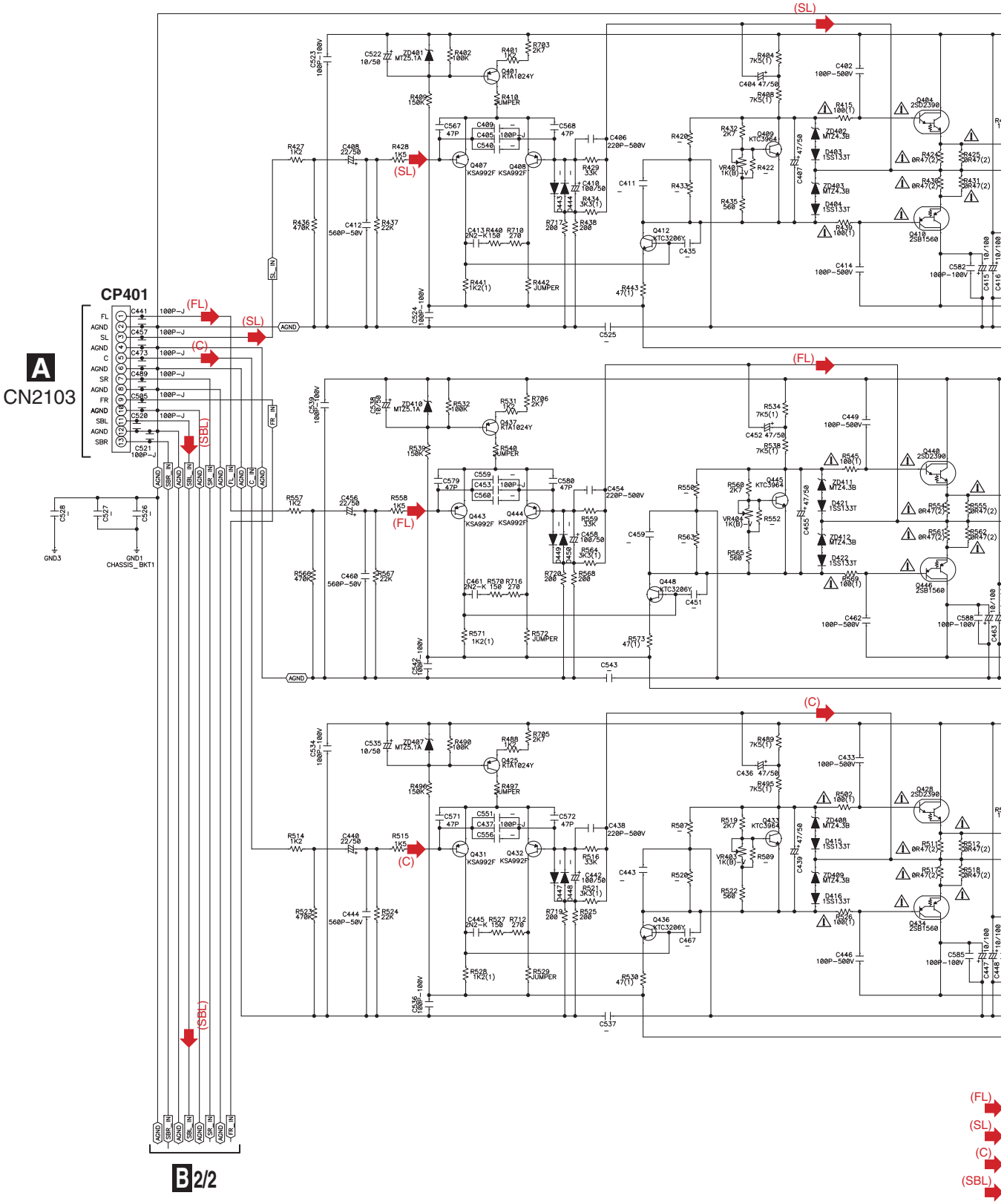


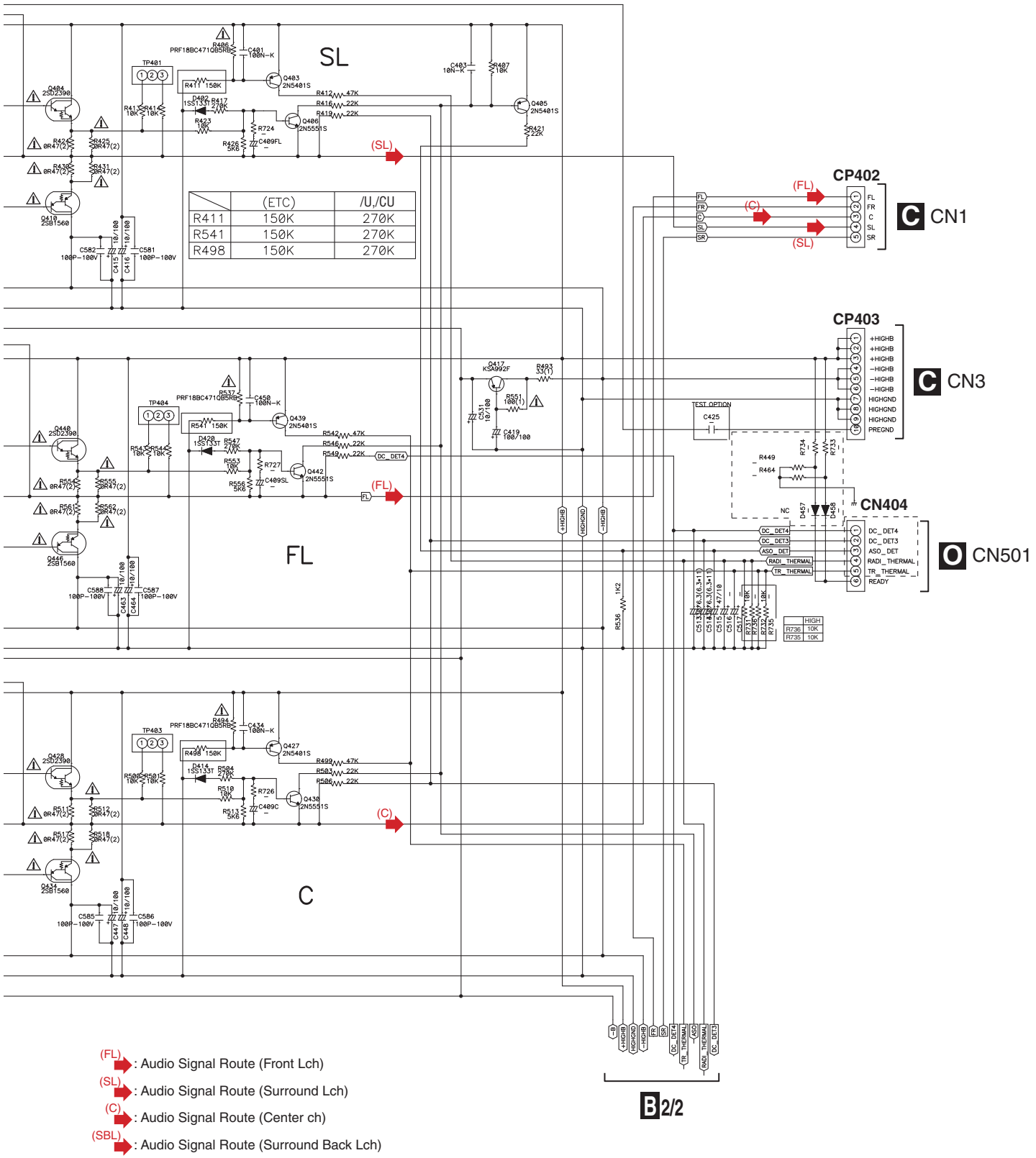
	/U, /CU	OTHER
C2585	47/25	NM
C2586	47/25	NM
R2581	470K	NM
R2582	470K	NM
R2583	330	NM
R2584	330	NM
R2895	NM	470K
R2896	NM	470K


R CN2107
R CN2202
R CP16
CN2203
CP14
9P
C2917
10N-K
C2916
10N-K
(FL)
(SL)
(SW)
(C)
(SBL)
(XML)
(HPL)
C
CP15
CP13
C125Z2-11
C
CP17
C125Z2-27
CN5
(SW)
(HPL)
(FL) : Audio Signal Route (Front Lch)
(SL) : Audio Signal Route (Surround Lch)
(C) : Audio Signal Route (Center ch)
(SW) : Audio Signal Route (Subwoofer ch)
(SBL) : Audio Signal Route (Surround Back Lch)
(HPL) : Audio Signal Route (Headphone Lch)
(XML) : Audio Signal Route (Sirius XM Lch)
: Audio Signal Route
CN2103
B 1/2 CP401

10.2 AMP7 ASSY (1/2)

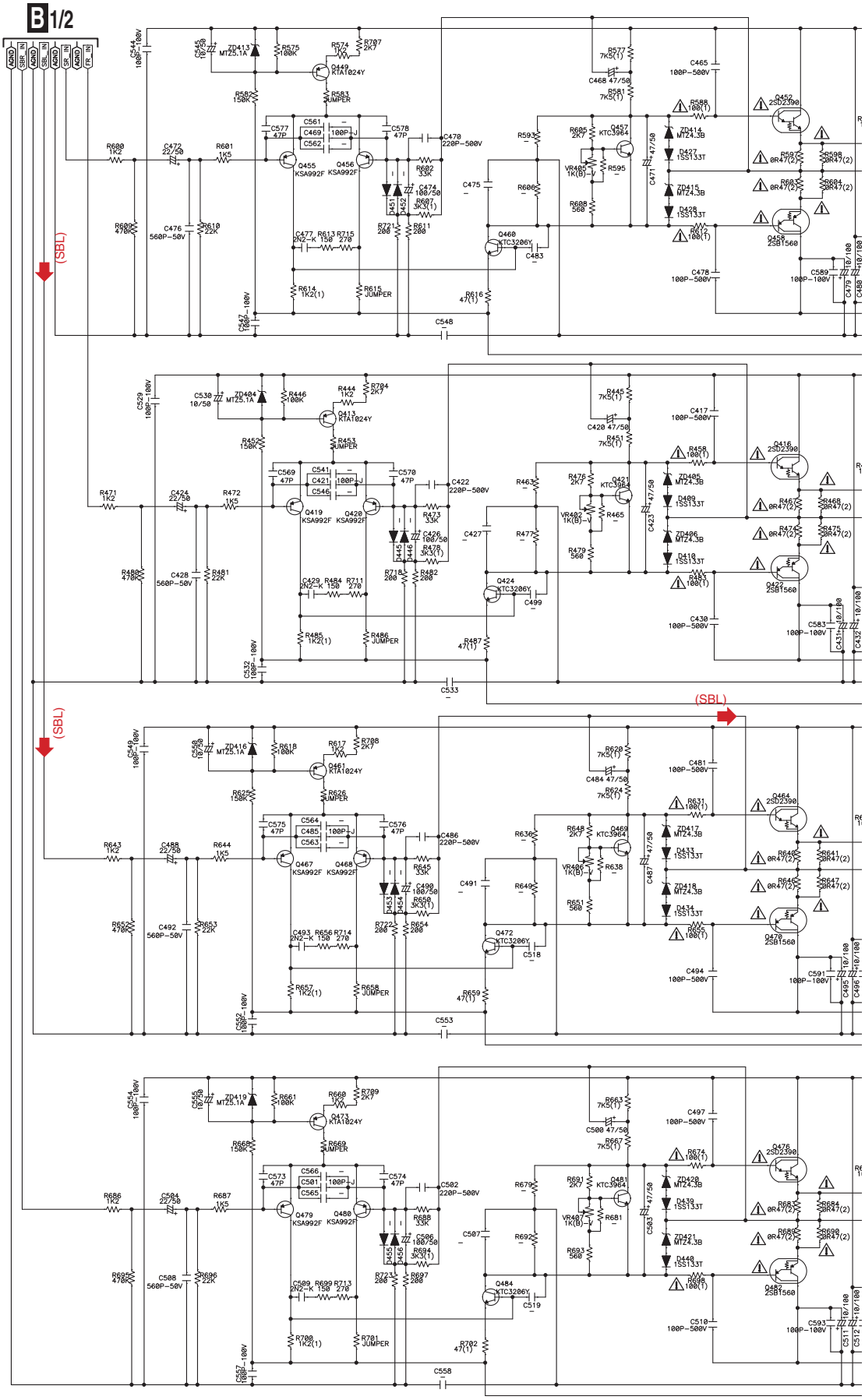
B 1/2 AMP7 ASSY (1/2) (7028070251010-IL)



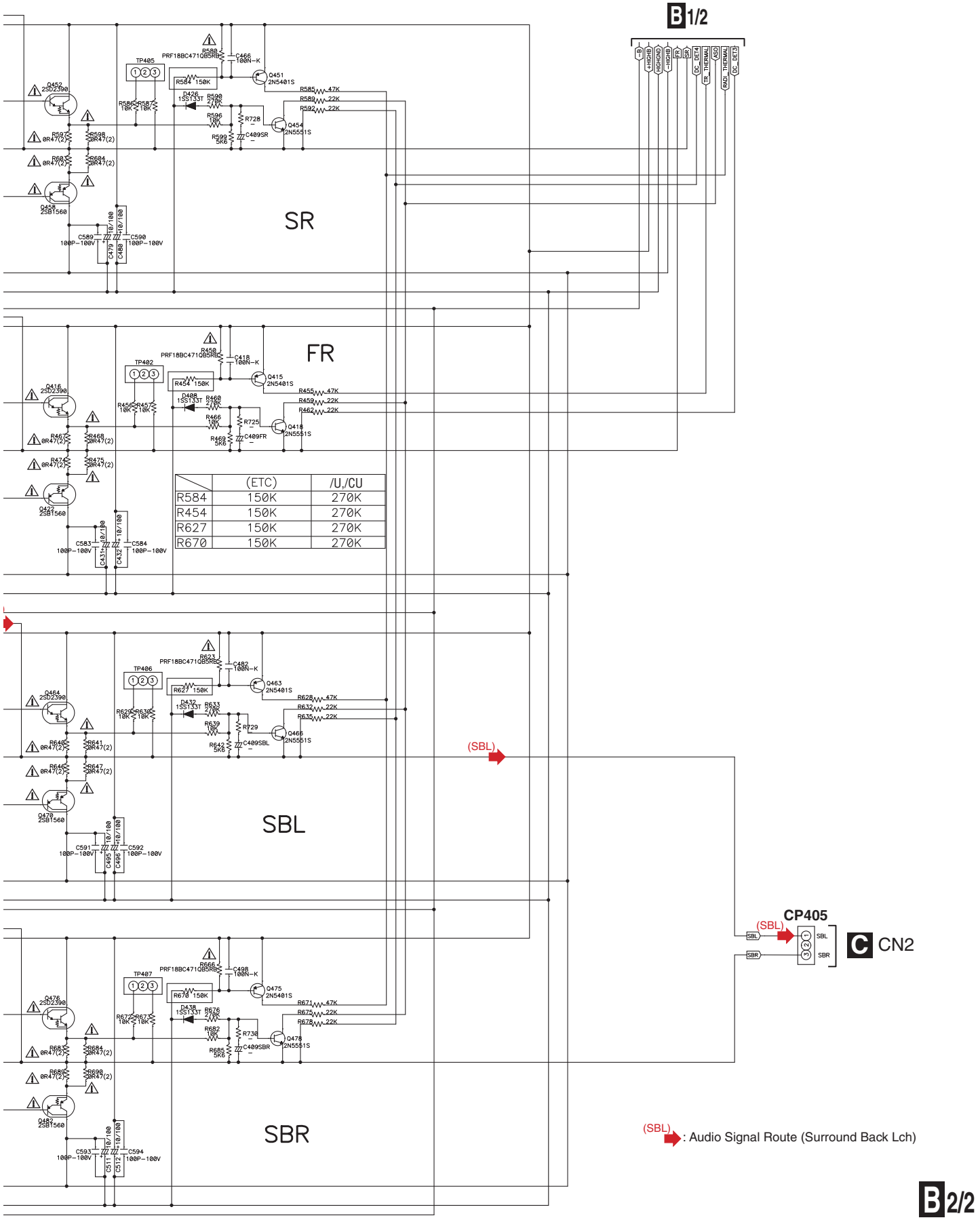

SL
FL
C
(ETC) /U,/CU
R411 150K 270K
R541 150K 270K
R498 150K 270K
CP402
CN1
CP403
CN3
CN404
CN501
TEST OPTION
(FL) : Audio Signal Route (Front Lch)
(SL) : Audio Signal Route (Surround Lch)
(C) : Audio Signal Route (Center ch)
(SBL) : Audio Signal Route (Surround Back Lch)
B2/2

10.3 AMP7 ASSY (2/2)

B 2/2 AMP7 ASSY (2/2) (7028070251010-IL)

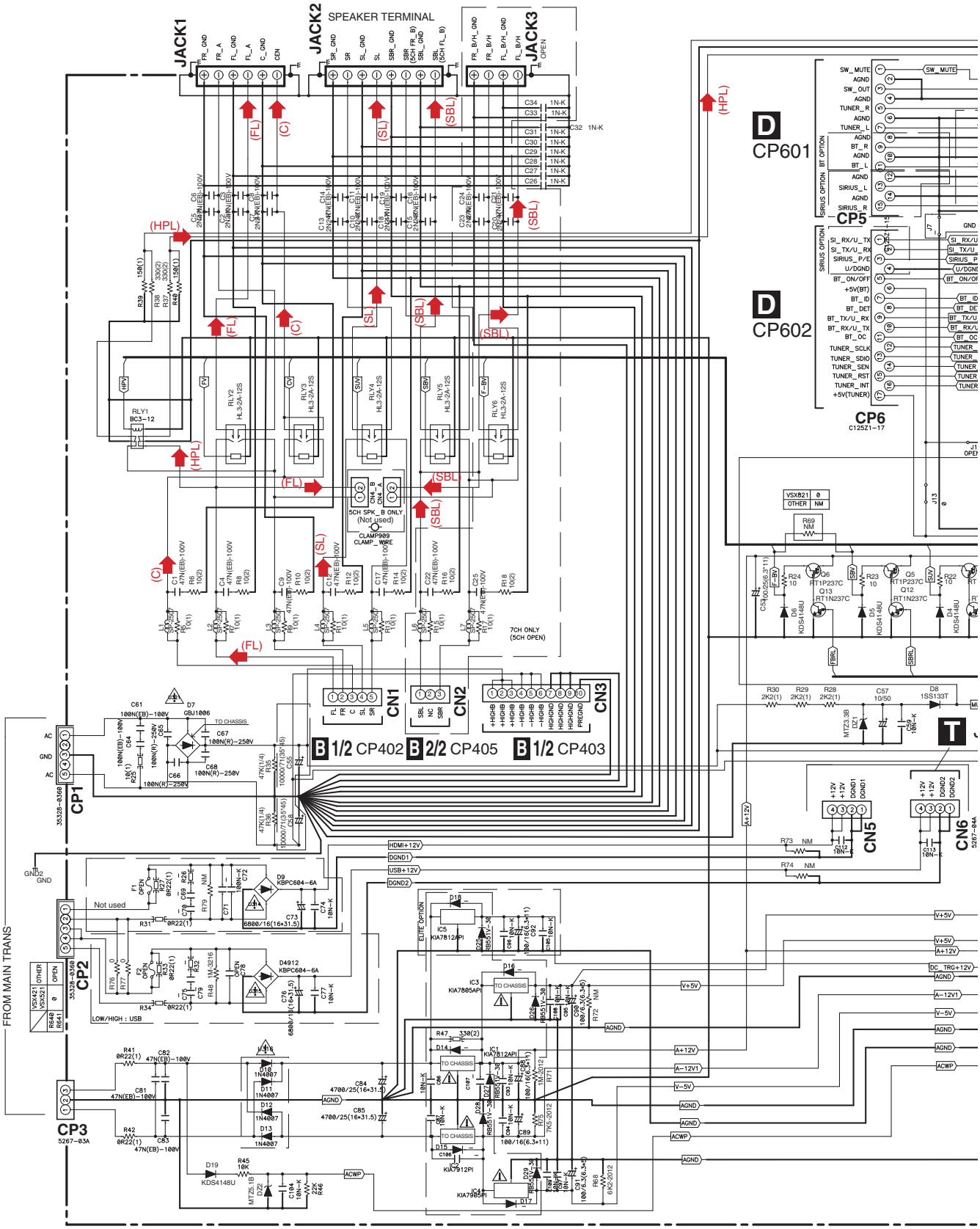


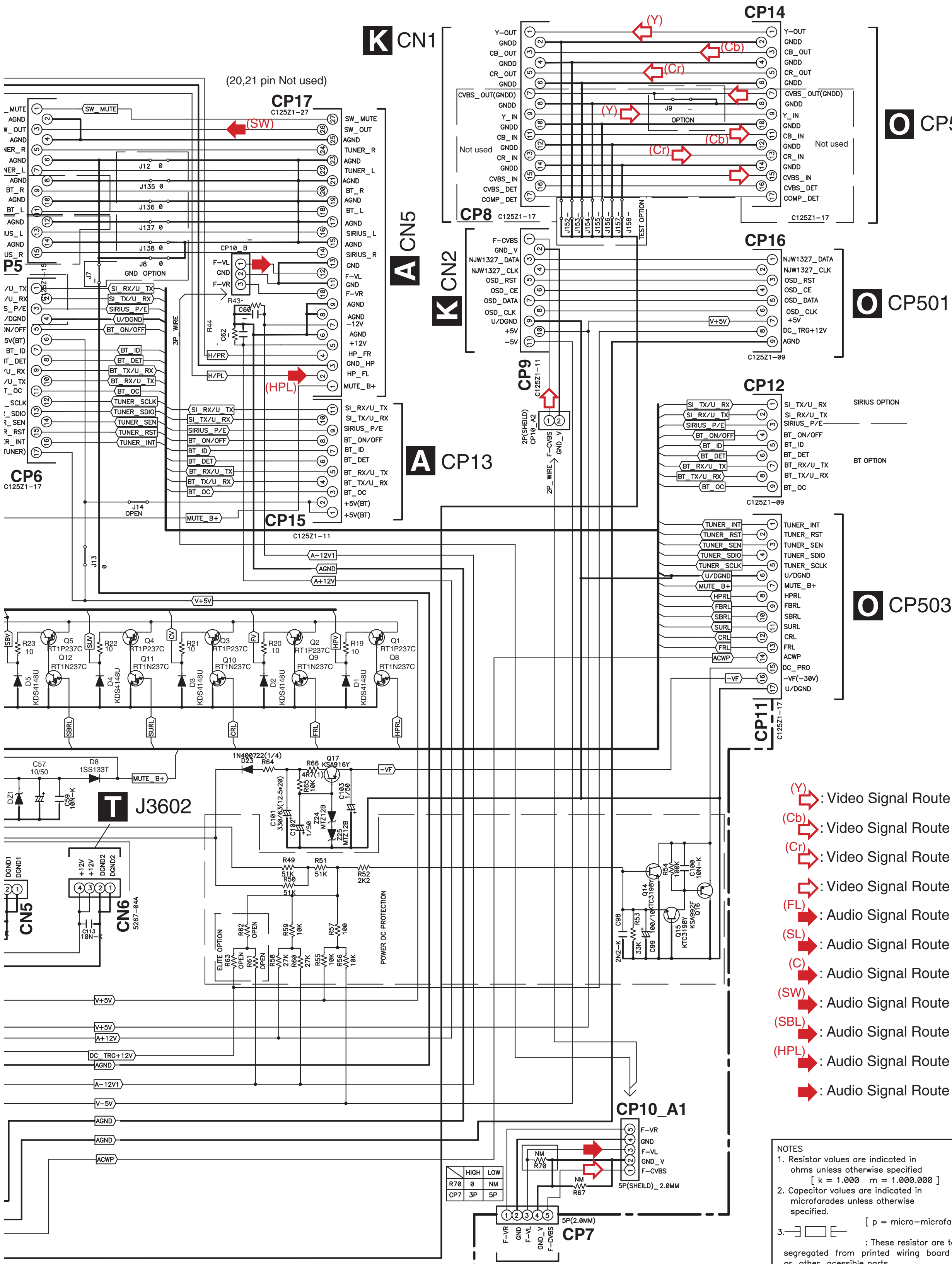
B 2/2


B 1/2
SR
FR
SBL
SBR
(ETC) /U,/CU
R584 150K 270K
R454 150K 270K
R627 150K 270K
R670 150K 270K
(SBL)
CP405
C CN2
(SBL): Audio Signal Route (Surround Back Lch)
B 2/2

10.4 MAIN ASSY

C MAIN ASSY (70280702710J0-IL)





(Y) : Video Signal Route (Y)

(Cb) : Video Signal Route (Cb)

(Cr) : Video Signal Route (Cr)

: Video Signal Route

(FL) : Audio Signal Route (Front Lch)

(SL) : Audio Signal Route (Surround Lch)

(C) : Audio Signal Route (Center ch)

(SW) : Audio Signal Route (Subwoofer ch)

(SBL) : Audio Signal Route (Surround Back Lch)

(HPL) : Audio Signal Route (Headphone Lch)

: Audio Signal Route

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.

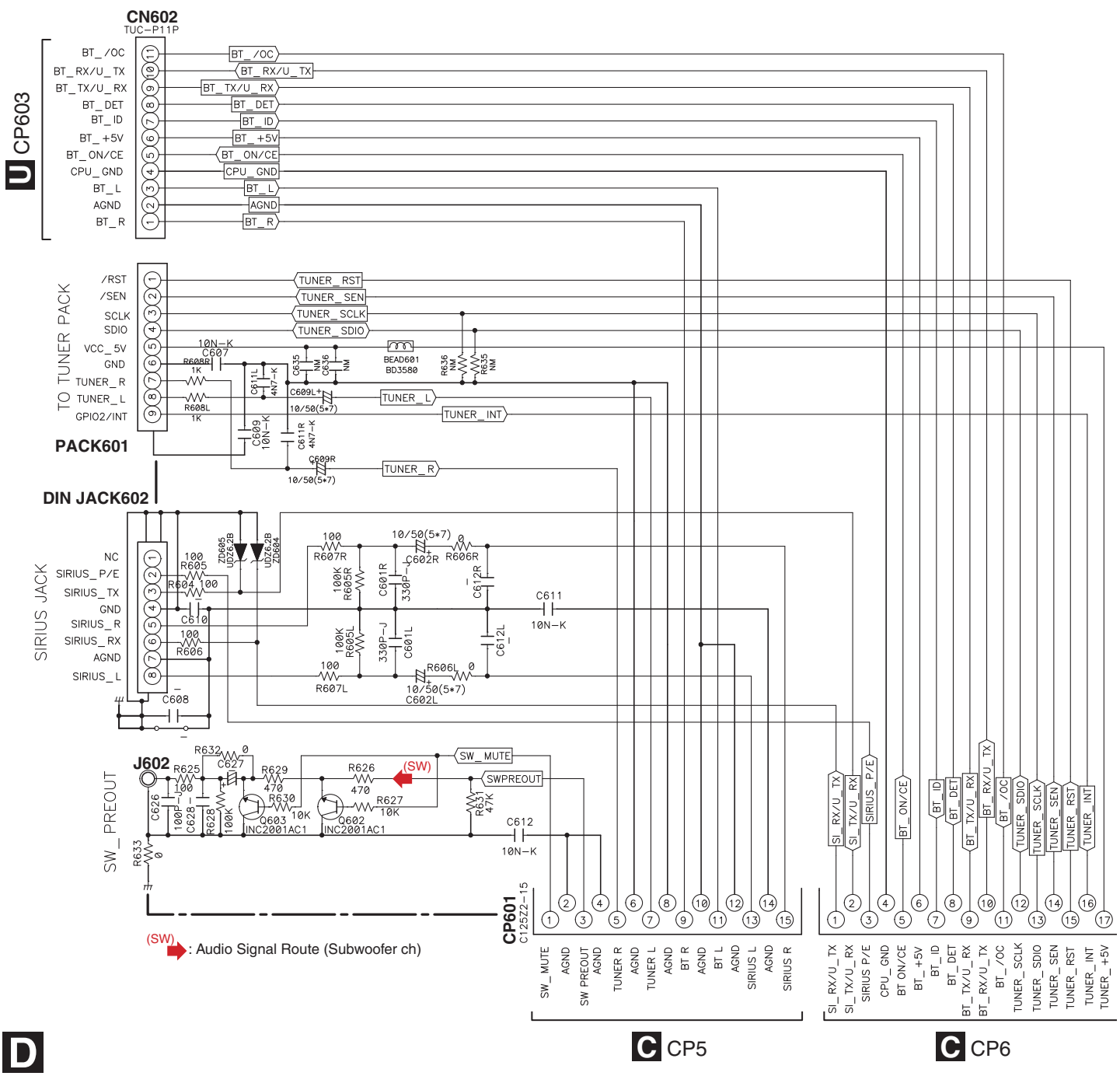
CAUTION
Safety precaution to be followed during servicing
1] Since those parts marked with are critical parts for safety. use only the one described in the parts list
2] Before returning the set to the customer make appropriate leakage current or resistance measurements to determine the exposed parts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

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.

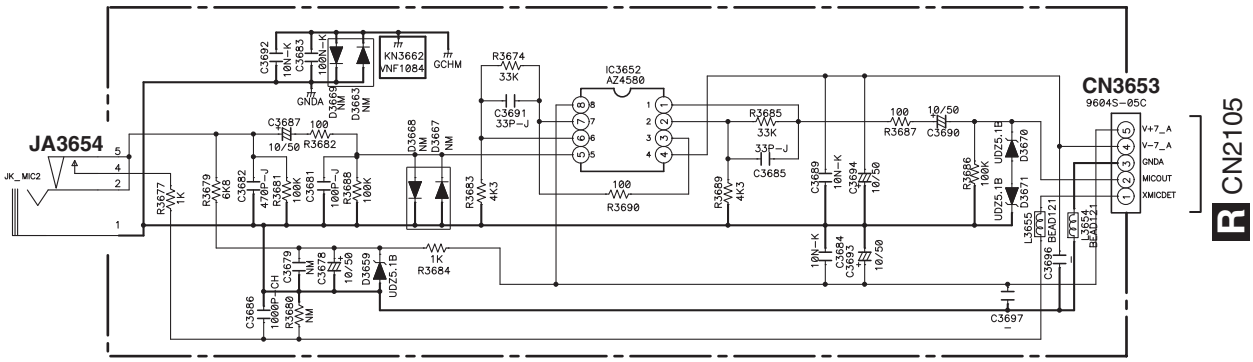
CAUTION
FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS OF FUSE.

10.5 SW, HP, MIC, G-L, G-R, WG-A and WG-B ASSYS

D SW ASSY (7028070272010-IL)

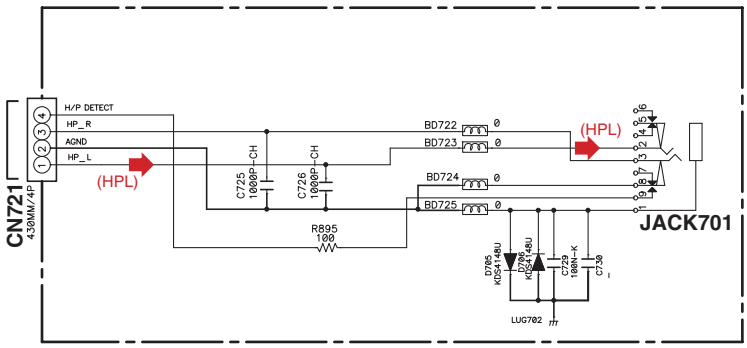


F MIC ASSY (7028070303030-IL)

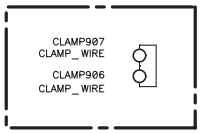


(HPL) : Audio Signal Route (Headphone Lch)

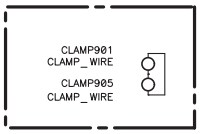
E HP ASSY (7028070306010-IL)



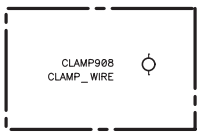
G G-L ASSY (7028070273010-IL)



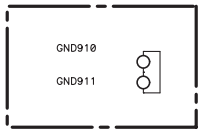
H G-R ASSY (7028070274010-IL)

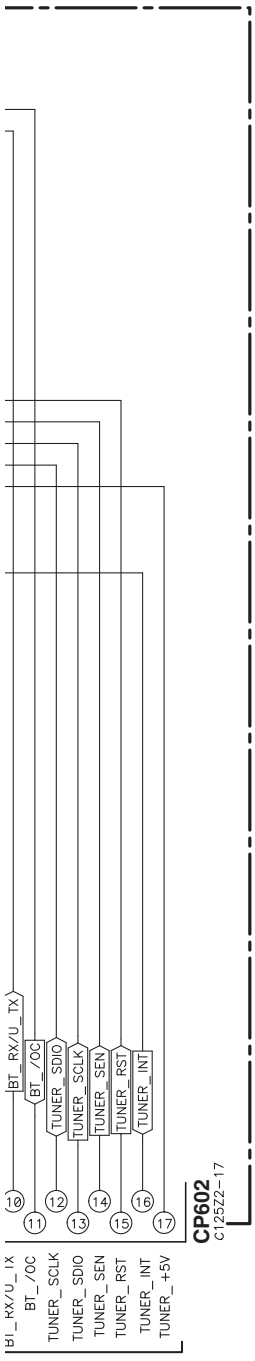


I WG-A ASSY (7028070276010-IL)



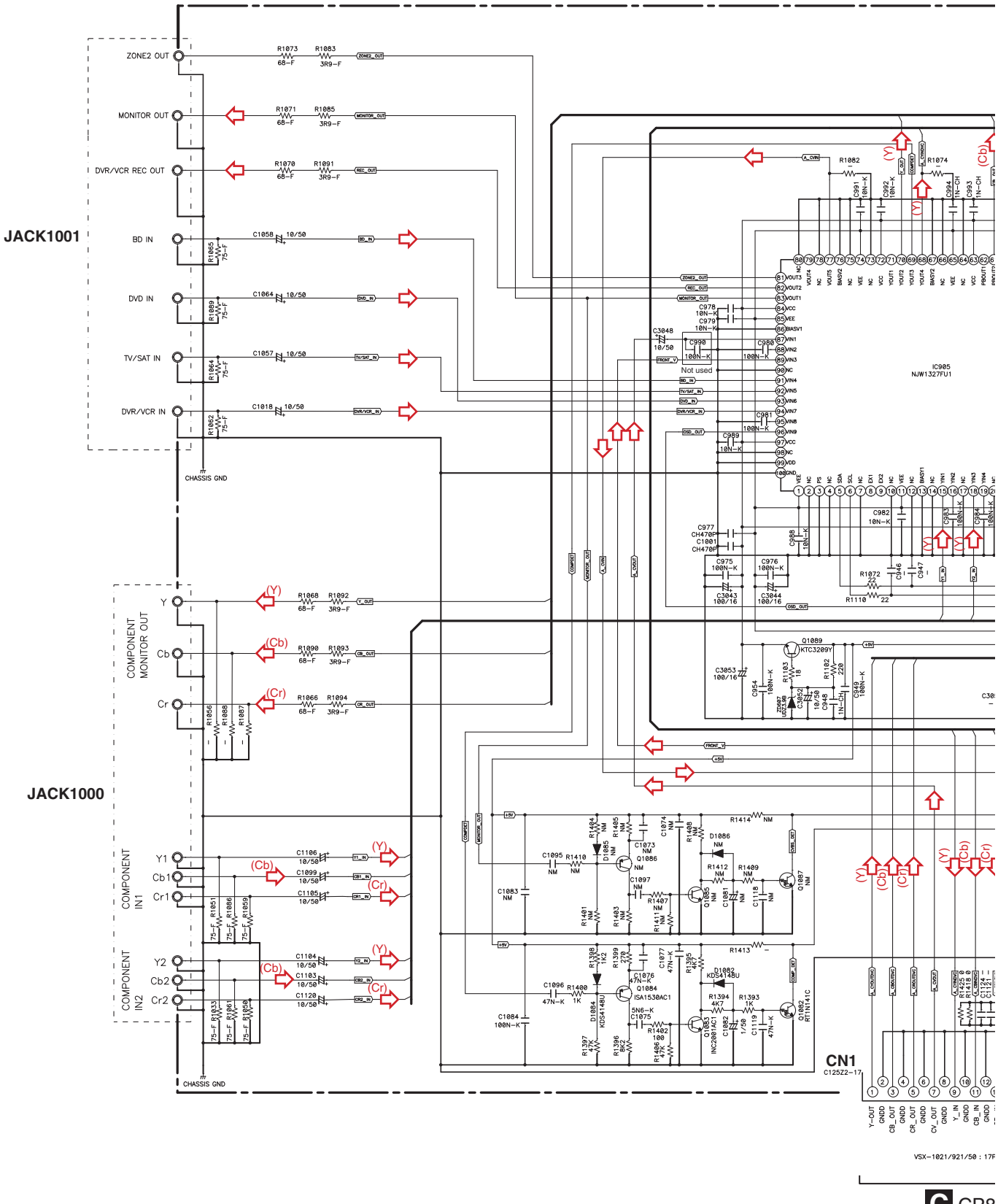
J WG-B ASSY (7028070277010-IL)



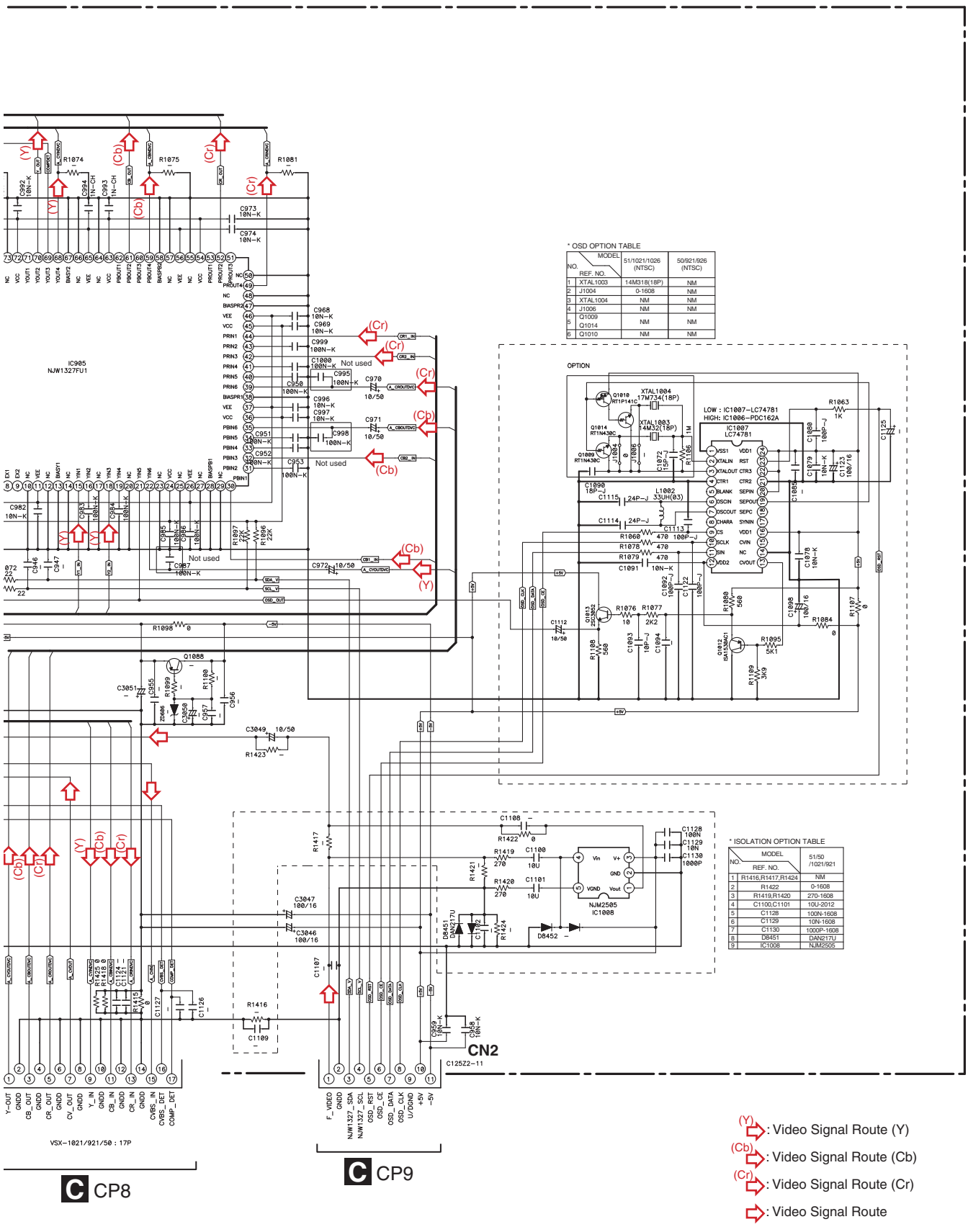


10.6 VIDEO ASSY

K VIDEO ASSY (7028070261010-IL)

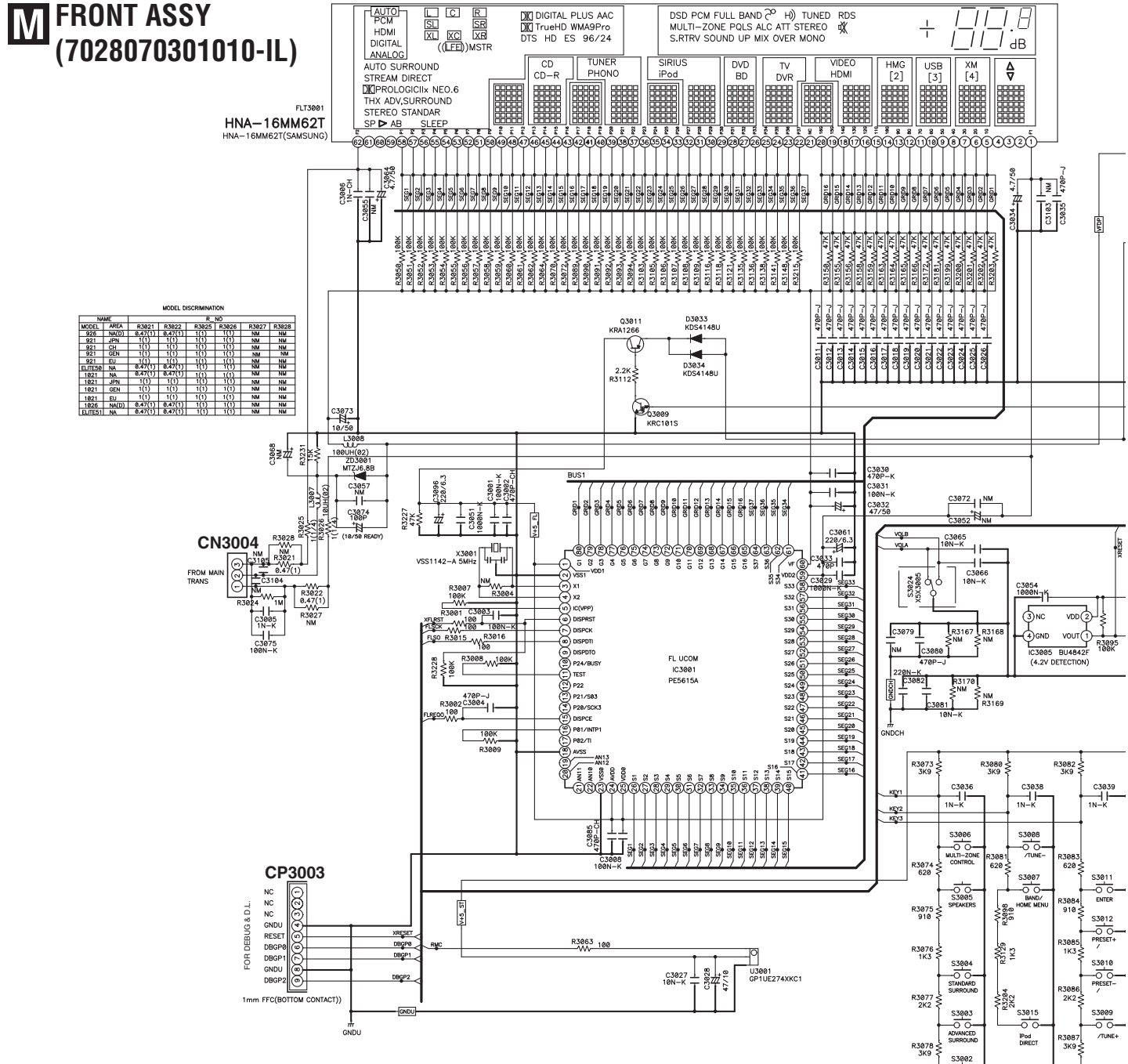


C CP8

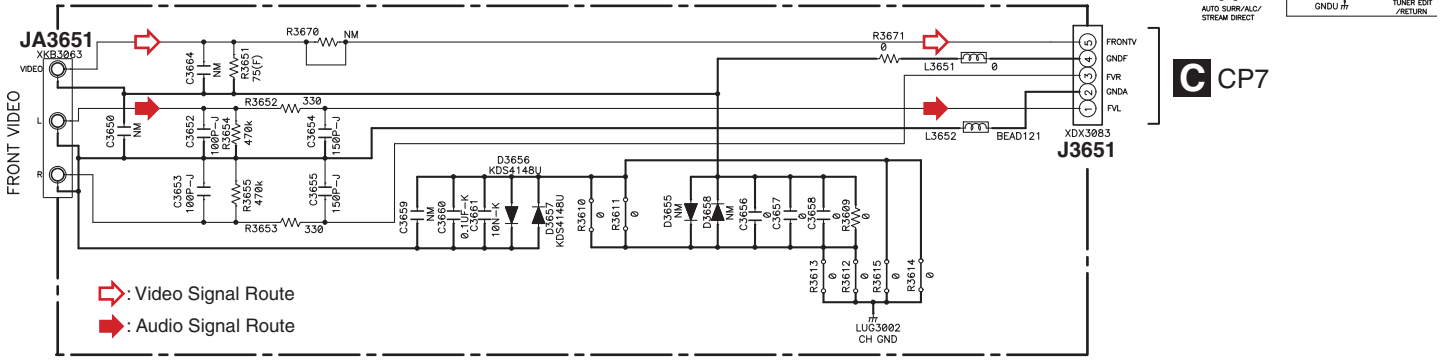

* OSD OPTION TABLE
MODEL
NO. / REF. NO.
51/1021/1026 (NTSC)
50/921/926 (NTSC)
1 XTAL1003 14M318(18P) NM
2 J1004 0-1608 NM
3 XTAL1004 NM NM
4 J1006 NM NM
5 Q1009 Q1014 NM NM
6 Q1010 NM NM
OPTION
LOW : IC1007–LC74781
HIGH: IC1006–PDC162A
IC905
NJW1327FU1
* ISOLATION OPTION TABLE
MODEL
NO. / REF. NO.
51/50 /1021/921
1 R1416,R1417,R1424 NM
2 R1422 0-1608
3 R1419,R1420 270-1608
4 C1100,C1101 10U-2012
5 C1128 100N-1608
6 C1129 10N-1608
7 C1130 1000P-1608
8 D8451 DAN217U
9 IC1008 NJM2505
CN2
C125Z2-11
VSX-1021/921/50 : 17P
CP8
CP9
(Y): Video Signal Route (Y)
(Cb): Video Signal Route (Cb)
(Cr): Video Signal Route (Cr)
: Video Signal Route

10.7 F-V, FRONT and POWER ASSYS

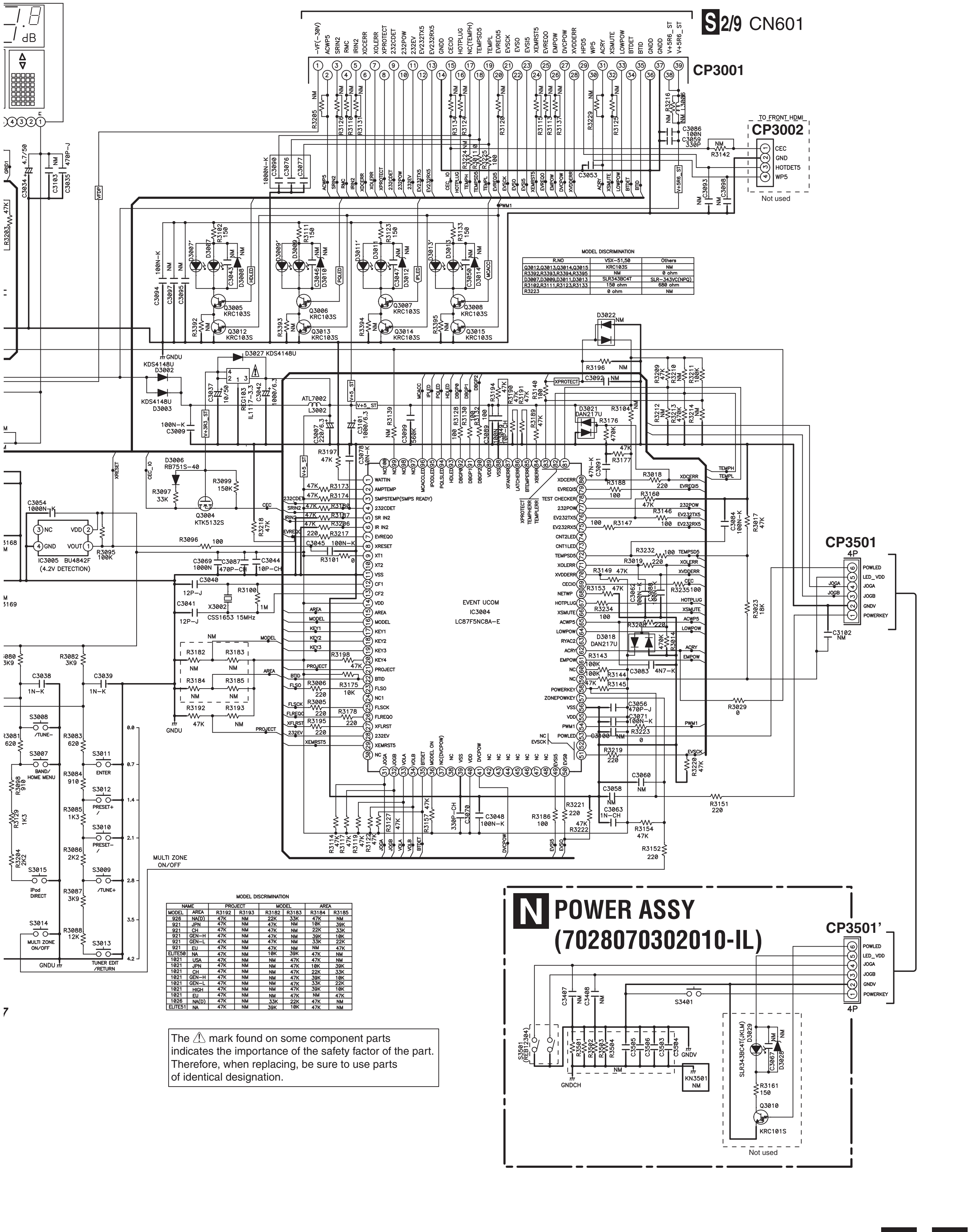
M FRONT ASSY (7028070301010-IL)



L F-V ASSY (7028070304040-IL)



L M



MODEL DISCRIMINATION

R.NO	VSX-51,50	Others
Q3012,Q3013,Q3014,Q3015	KRC103S	NM
R3392,R3393,R3394,R3395	NM	0 ohm
D3007,D3009,D3011,D3013	SLR343BC4T	SLR-343VC(NPQ)
R3102,R3111,R3123,R3133	150 ohm	680 ohm
R3223	0 ohm	NM

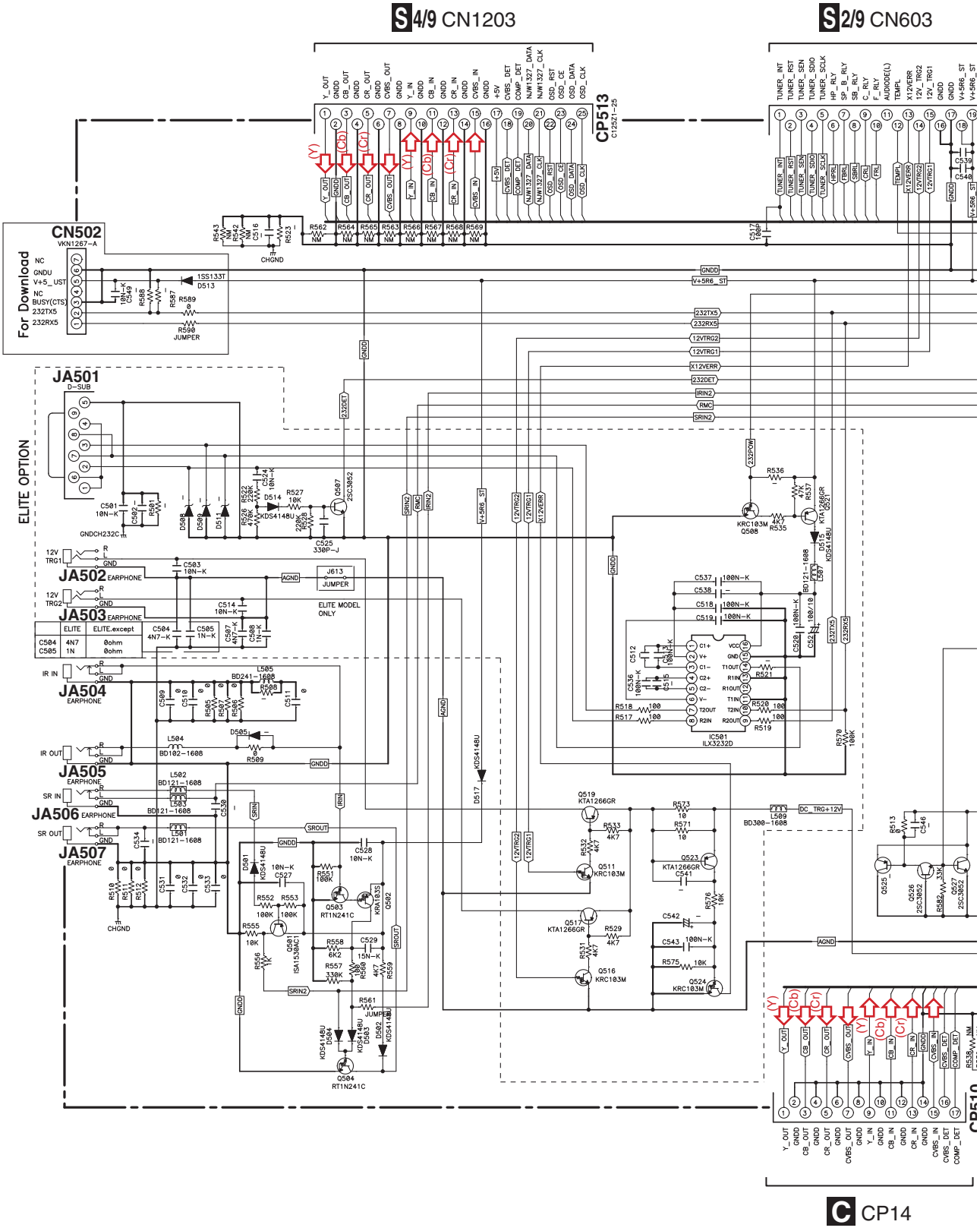
MODEL DISCRIMINATION

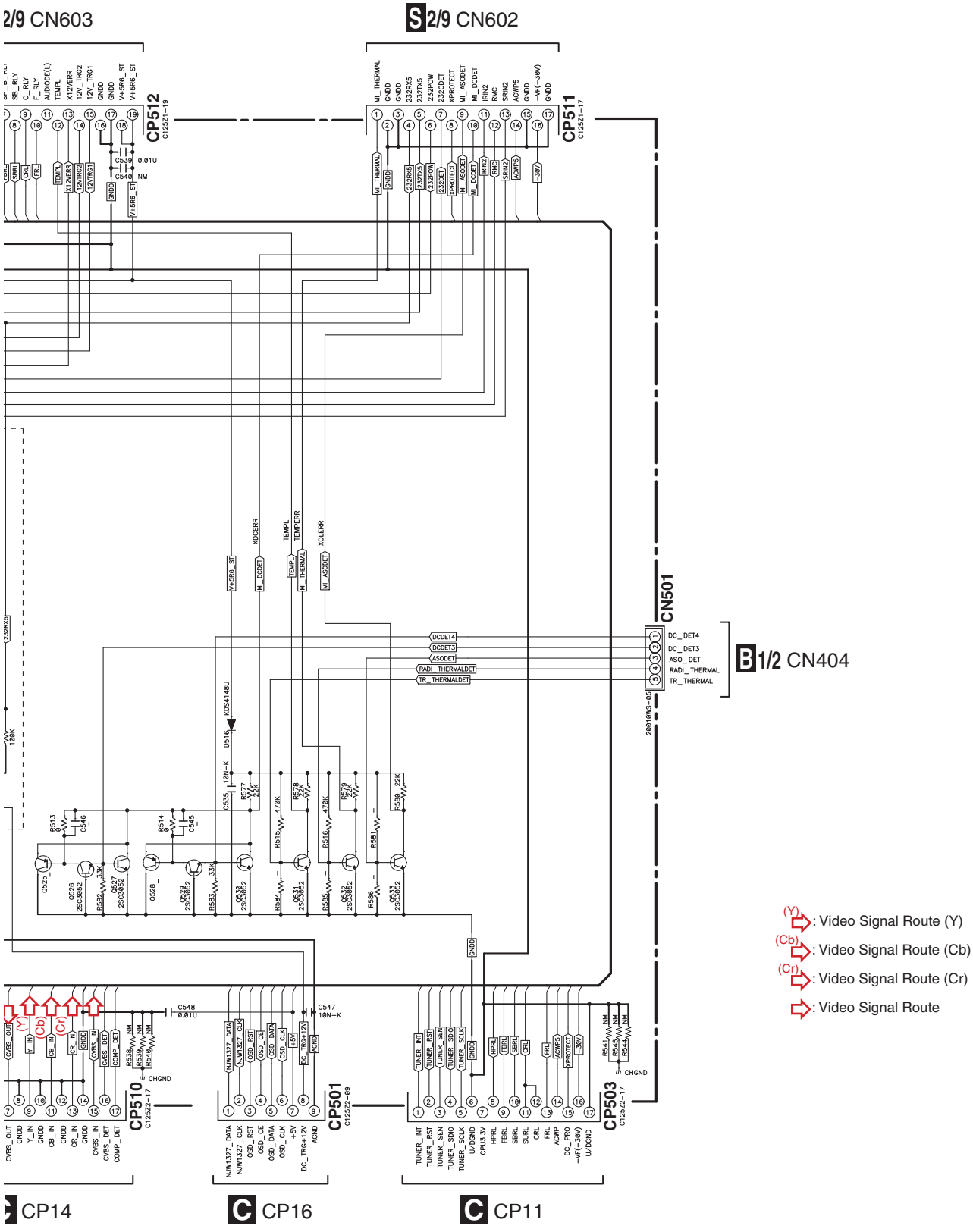
NAME		PROJECT		MODEL		AREA	
MODEL	AREA	R3192	R3193	R3182	R3183	R3184	R3185
926	NA(D)	47K	NM	22K	33K	47K	NM
921	JPN	47K	NM	47K	NM	10K	39K
921	CH	47K	NM	47K	NM	22K	33K
921	GEN-H	47K	NM	47K	NM	39K	10K
921	GEN-L	47K	NM	47K	NM	33K	22K
921	EU	47K	NM	47K	NM	NM	47K
ELITE50	NA	47K	NM	10K	39K	47K	NM
1021	USA	47K	NM	NM	47K	47K	NM
1021	JPN	47K	NM	NM	47K	10K	39K
1021	CH	47K	NM	NM	47K	22K	33K
1021	GEN-H	47K	NM	NM	47K	39K	10K
1021	GEN-L	47K	NM	NM	47K	33K	22K
1021	HIGH	47K	NM	NM	47K	39K	10K
1021	EU	47K	NM	NM	47K	NM	47K
1026	NA(D)	47K	NM	33K	22K	47K	NM
ELITE51	NA	47K	NM	39K	10K	47K	NM

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.

10.8 IR ASSY

O IR ASSY (7028070321010-IL)



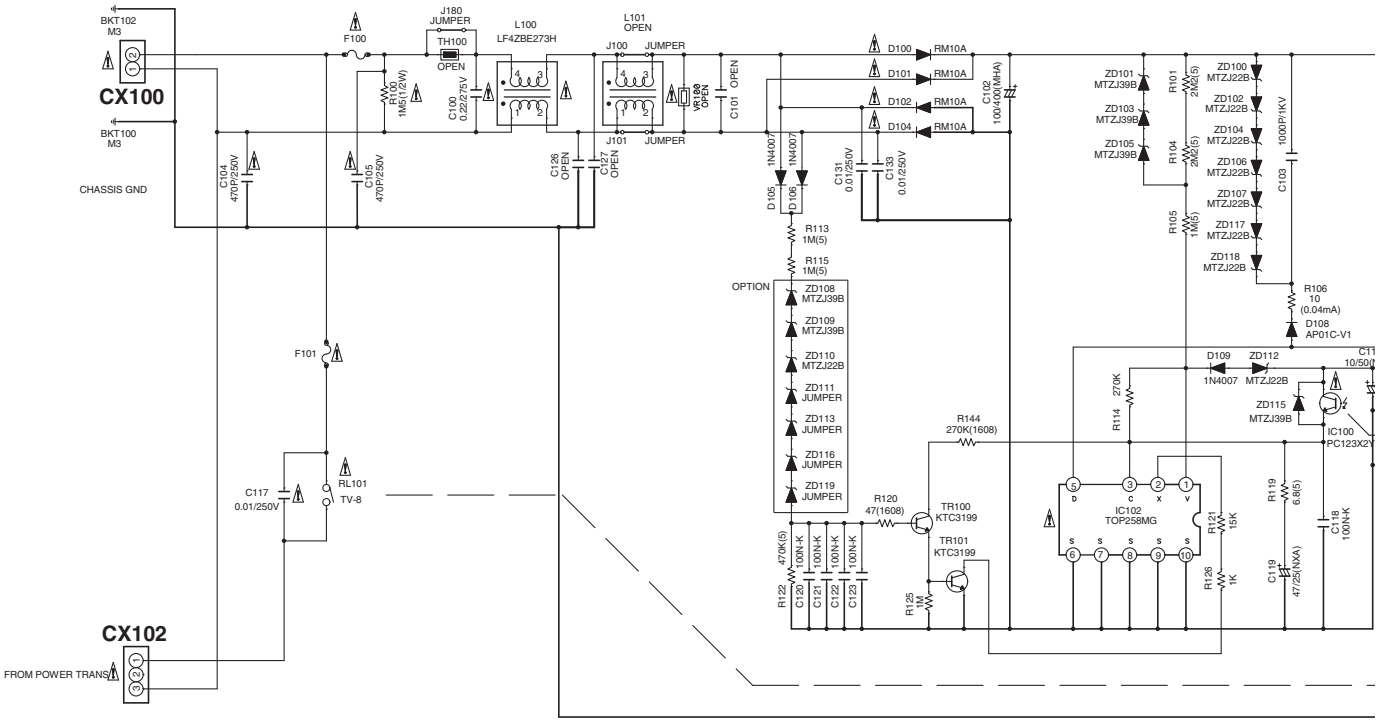

2/9 CN603
S 2/9 CN602
CP512
CP511
CN501
B 1/2 CN404
CP510
CP501
CP503
C CP16
C CP11
CP14
(Y): Video Signal Route (Y)
(Cb): Video Signal Route (Cb)
(Cr): Video Signal Route (Cr)
: Video Signal Route

10.9 SMPS ASSY

P SMPS ASSY (7028070322010-IL)

• NOTE FOR FUSE REPLACEMENT

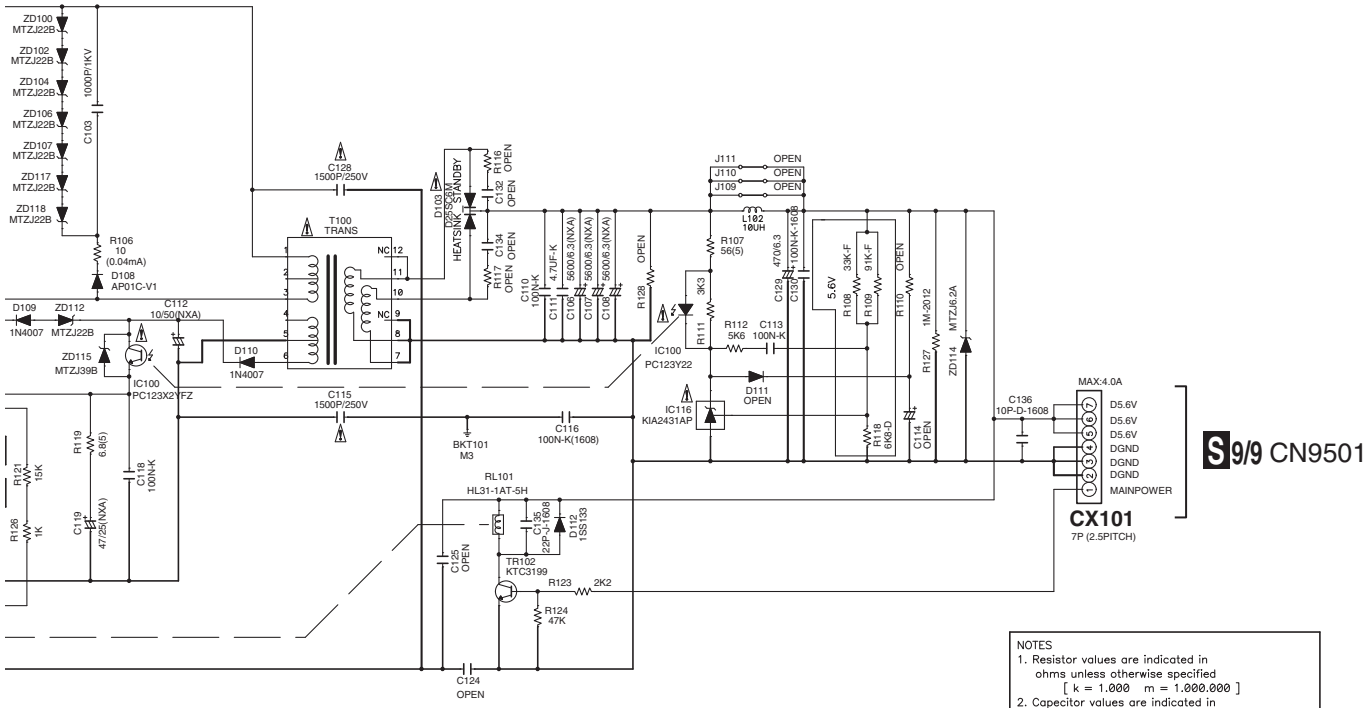
CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE WITH SAME TYPE AND RATINGS OF FUSE.



※ FUSE OPTION

USA/JAPAN		OTHER	
F100	F101	F100	F101
3.15A	8A	3.15A	6.3A

	ZD108	ZD109	ZD110	ZD111	ZD113	ZD116	ZD119	ZD101	ZD103	ZD105	R101	R104	R105
USA	MTZJ39B	MTZJ39B	MTZJ22B	JUMPER	JUMPER	JUMPER	JUMPER	MTZJ39B	MTZJ39B	MTZJ39B	2M2 (5)	2M2 (5)	1M (5)
OTHER	1M (5)	1M (5)	MTZJ39B	MTZJ39B	MTZJ39B	MTZJ39B	MTZJ39B	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
JAPAN	MTZJ39B	MTZJ39B	JUMPER	JUMPER	JUMPER	JUMPER	JUMPER	MTZJ39B	MTZJ39B	MTZJ39B	2M2 (5)	2M2 (5)	1M (5)



ZD105	R101	R104	R105	R114	F100
TZJ39B	2M2 (5)	2M2 (5)	1M (5)	270K	2A
OPEN	OPEN	OPEN	OPEN	56K	1.6A
TZJ39B	2M2 (5)	2M2 (5)	1M (5)	270K	2A

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

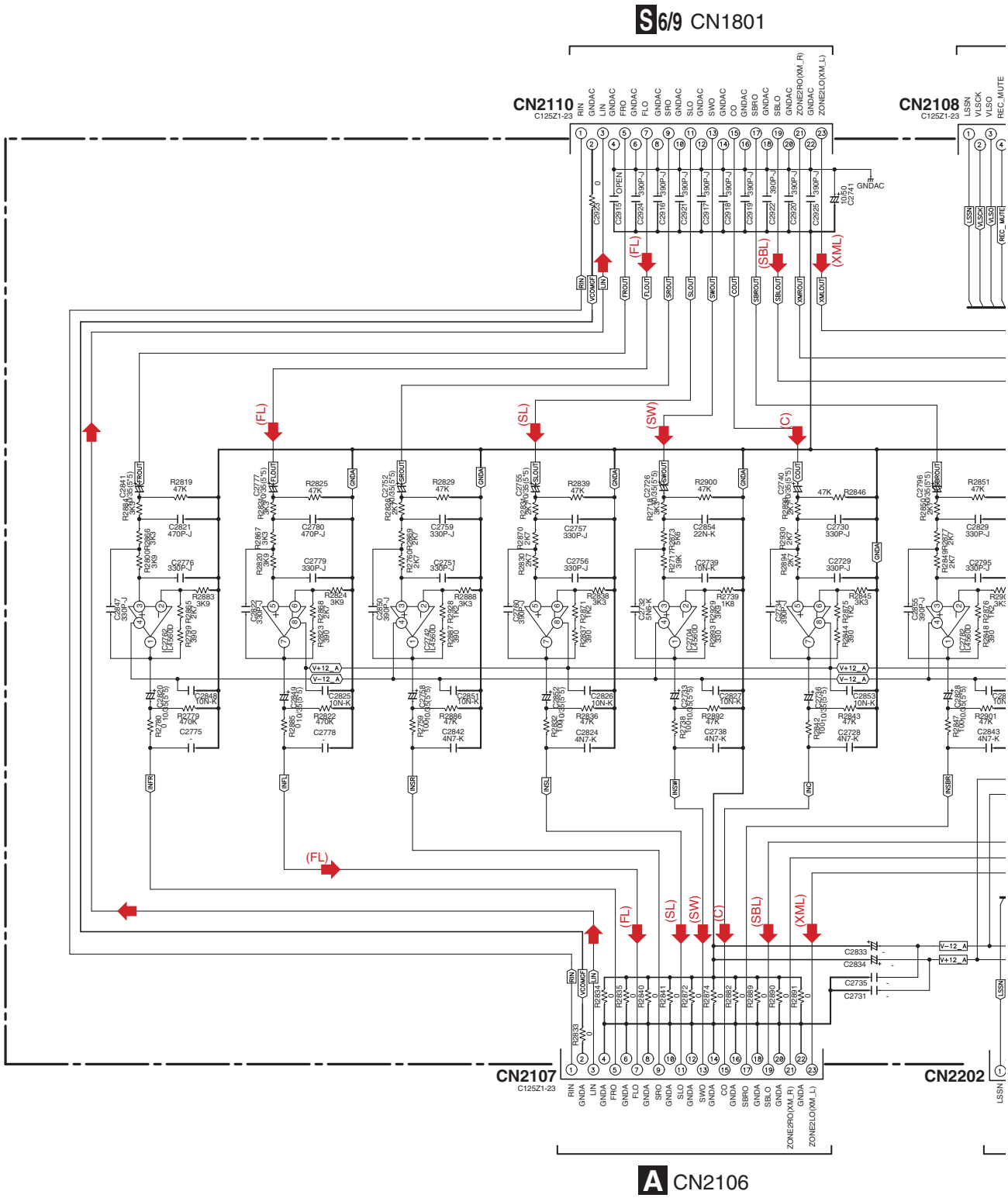
CAUTION
FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS OF FUSE.

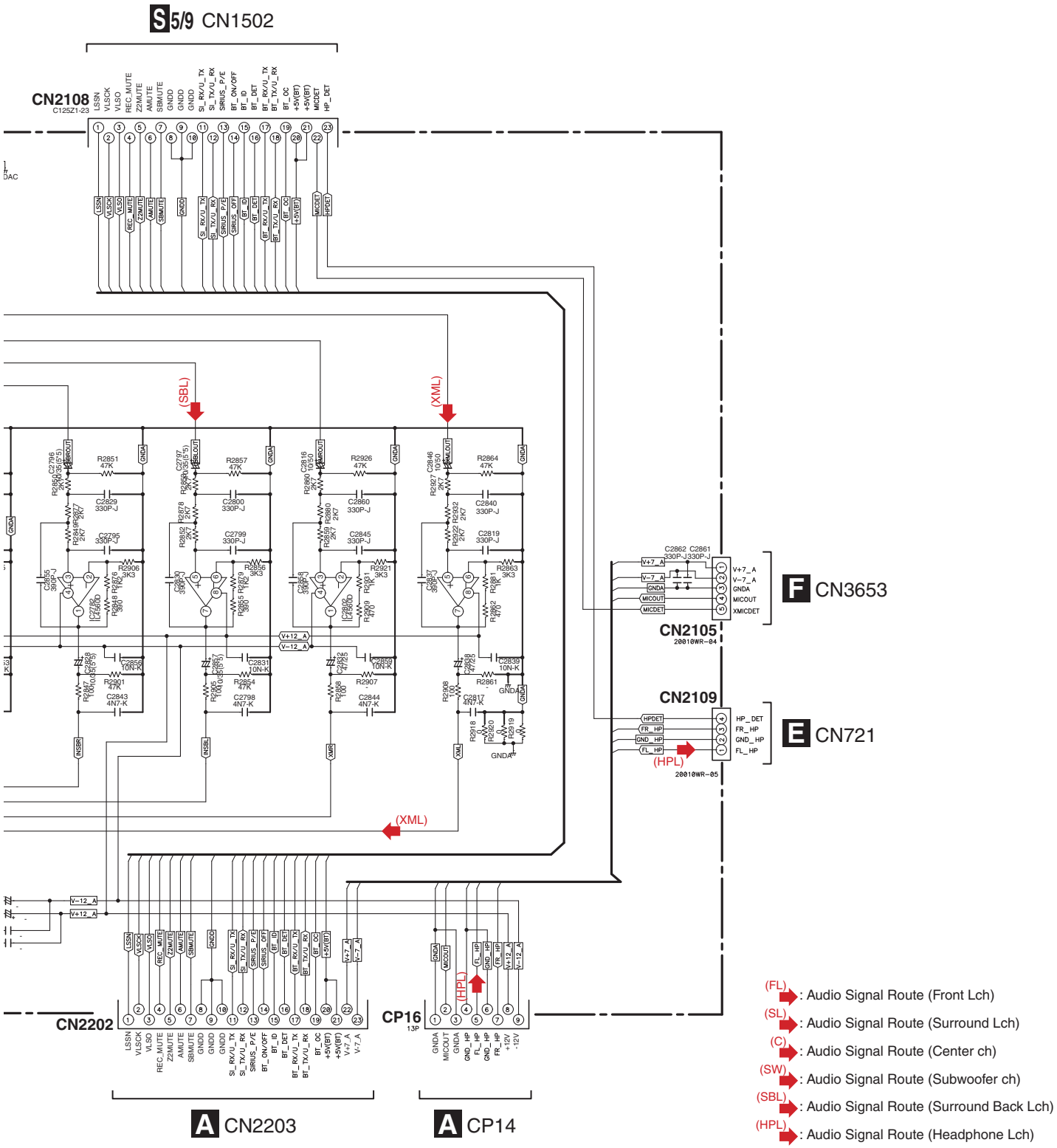
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

⚠ 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.

10.10 BR ASSY

R BR ASSY (7028070324010-IL)





(FL) : Audio Signal Route (Front Lch)

(SL) : Audio Signal Route (Surround Lch)

(C) : Audio Signal Route (Center ch)

(SW) : Audio Signal Route (Subwoofer ch)

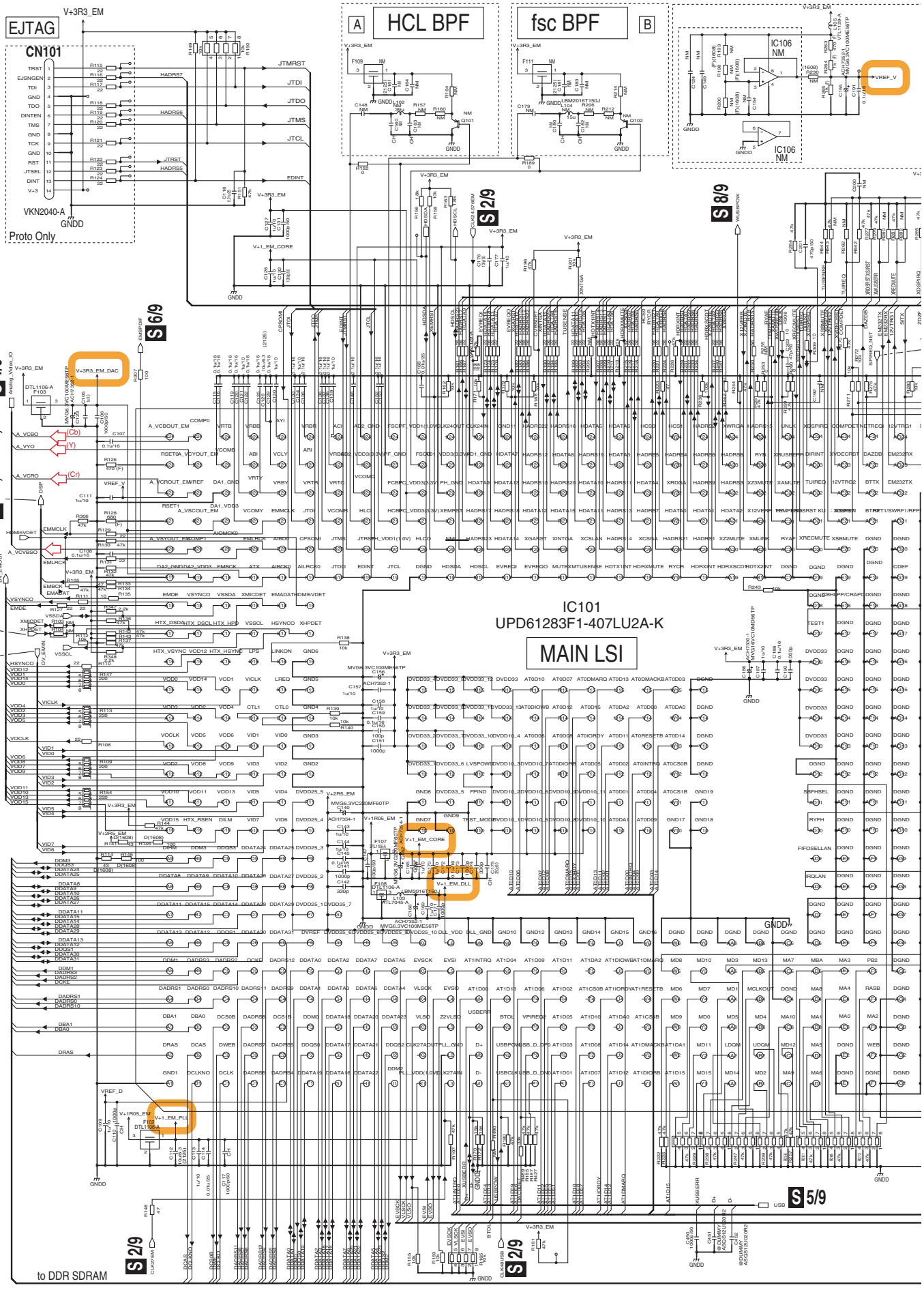
(SBL) : Audio Signal Route (Surround Back Lch)

(HPL) : Audio Signal Route (Headphone Lch)

(XML) : Audio Signal Route (Sirius XM Lch)

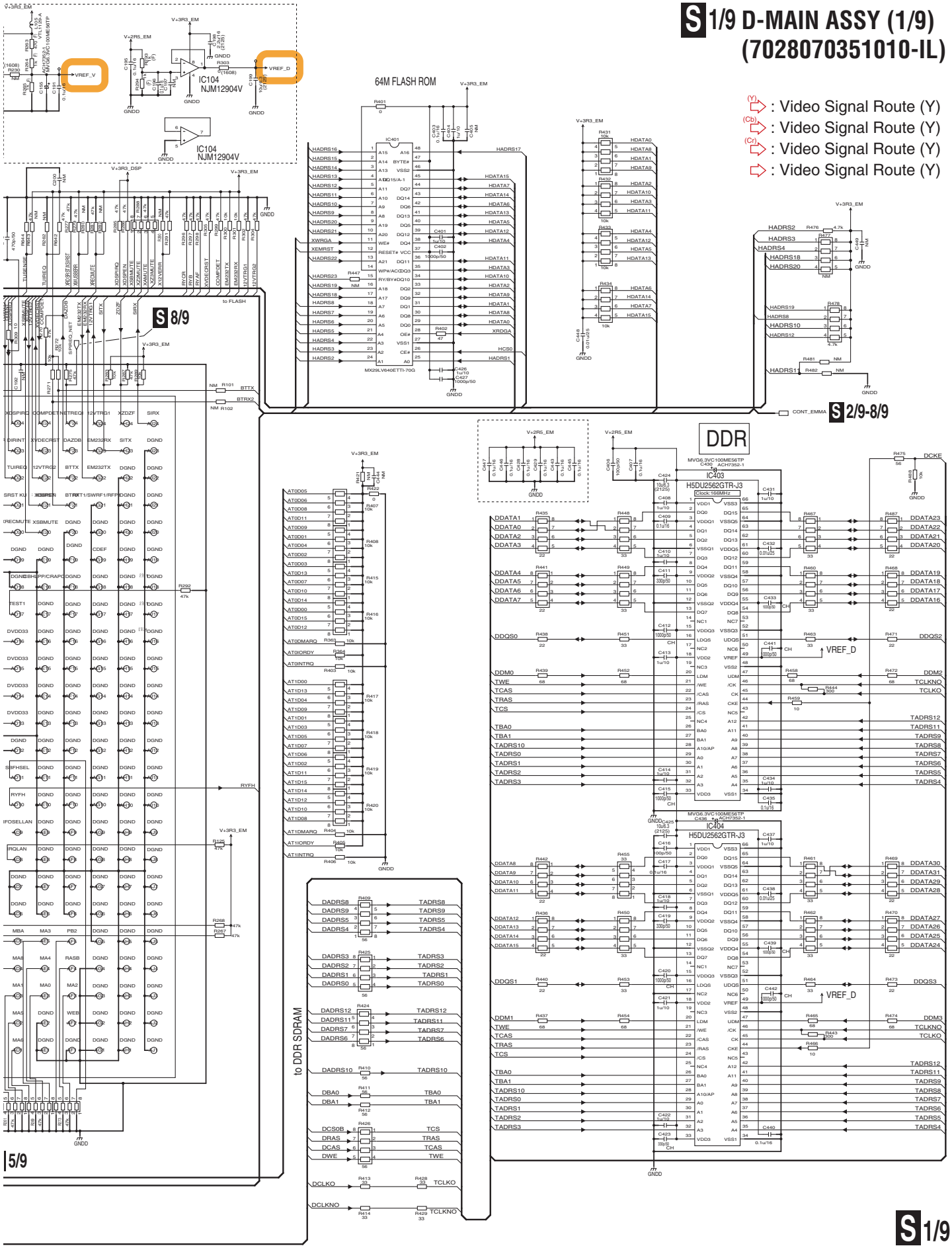
: Audio Signal Route

10.11 D-MAIN ASSY (1/9)



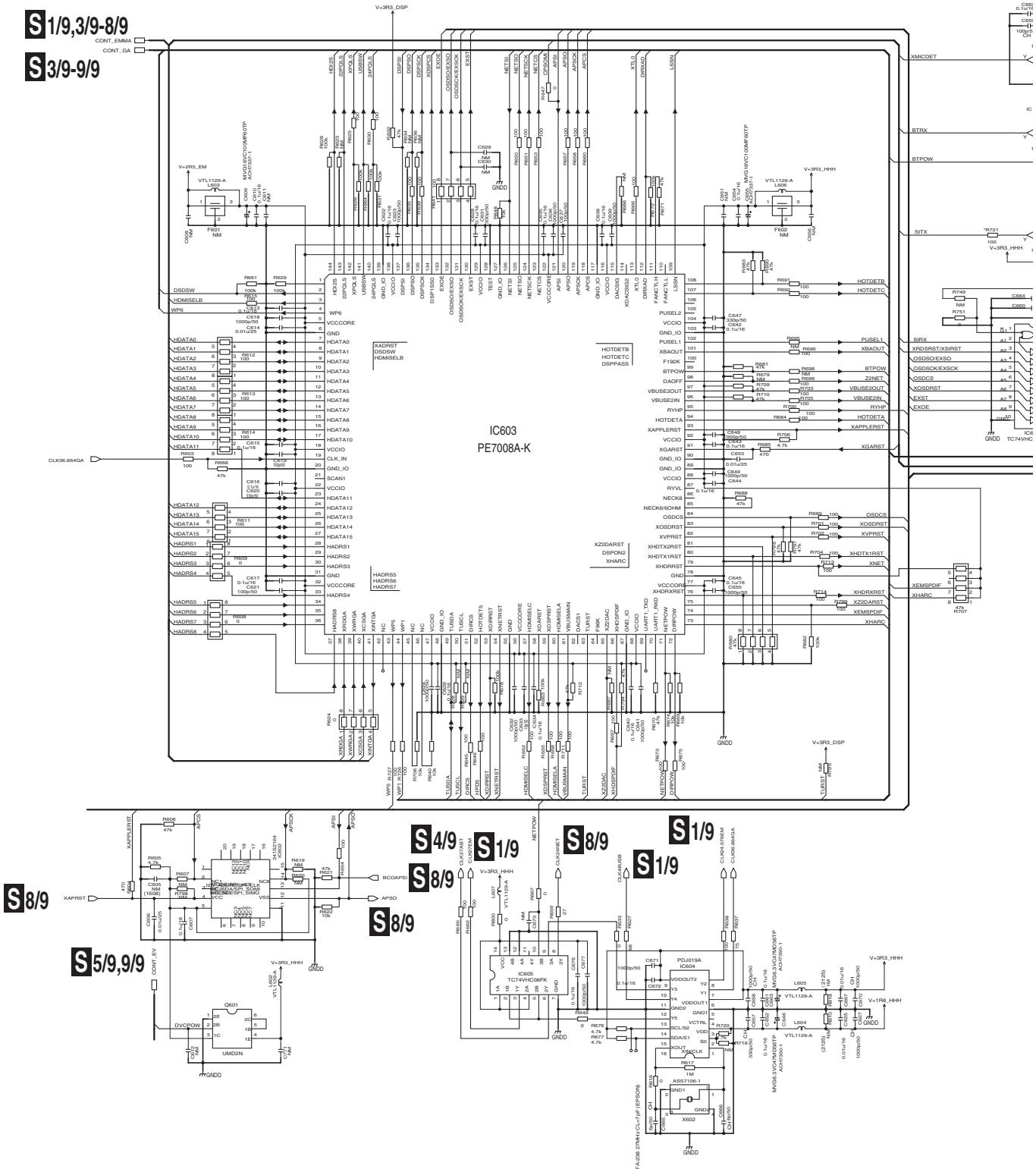
S 1/9 D-MAIN ASSY (1/9) (7028070351010-IL)

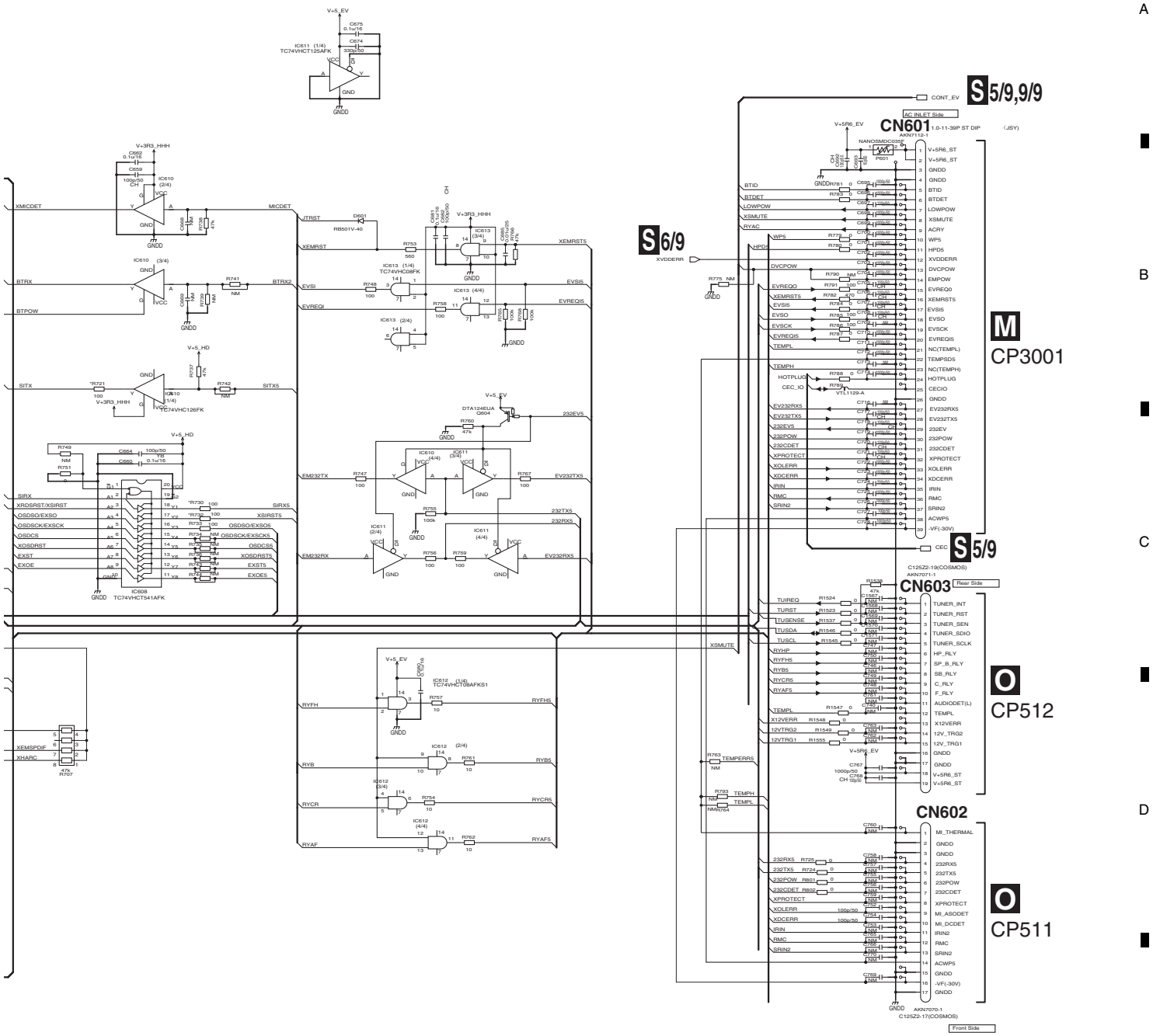
(Y) : Video Signal Route (Y)
(Cb) : Video Signal Route (Y)
(Cr) : Video Signal Route (Y)
: Video Signal Route (Y)



10.12 D-MAIN ASSY (2/9)

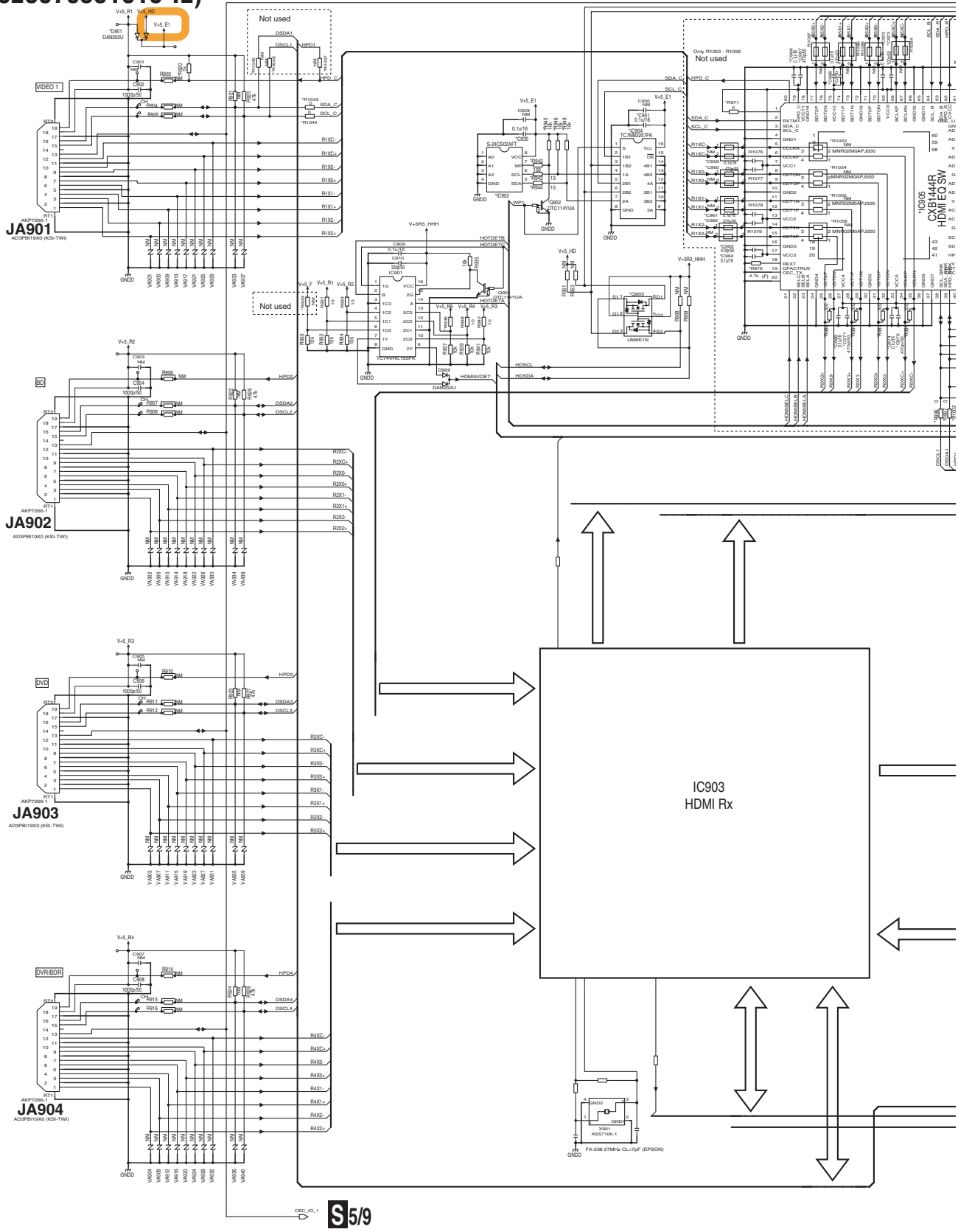
S2/9 D-MAIN ASSY (2/9) (7028070351010-IL)

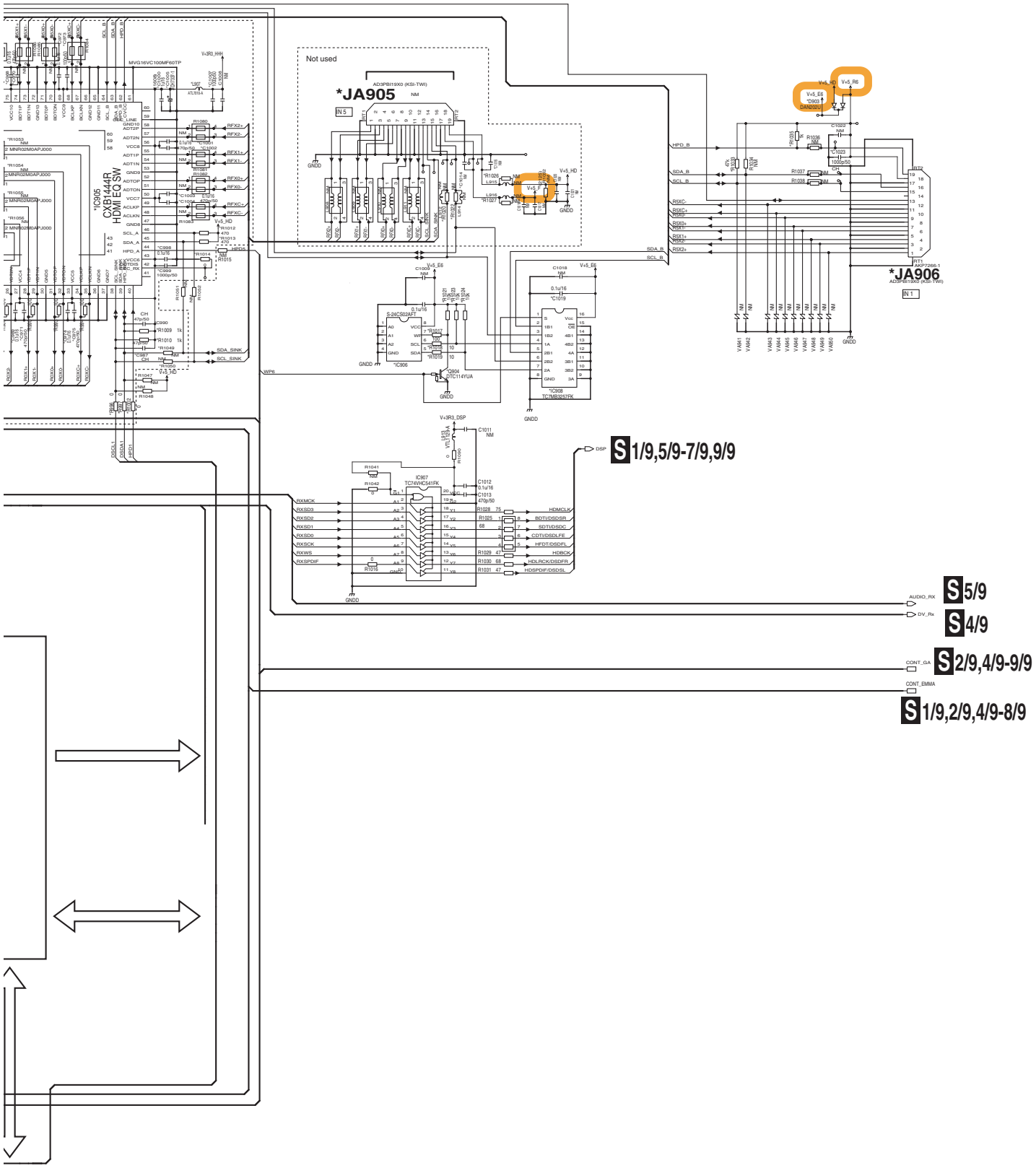




The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

S3/9 D-MAIN ASSY (3/9) (7028070351010-IL)

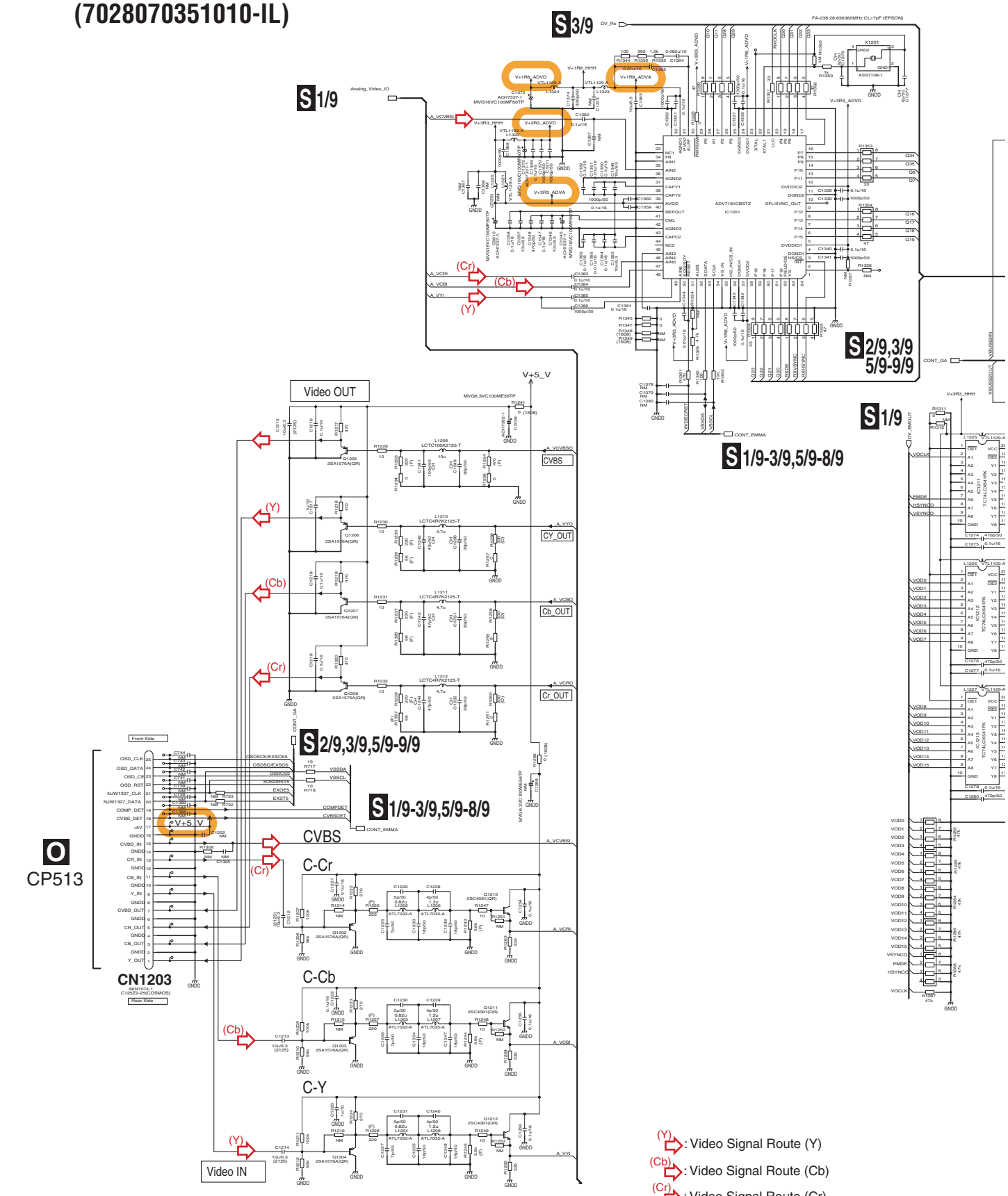




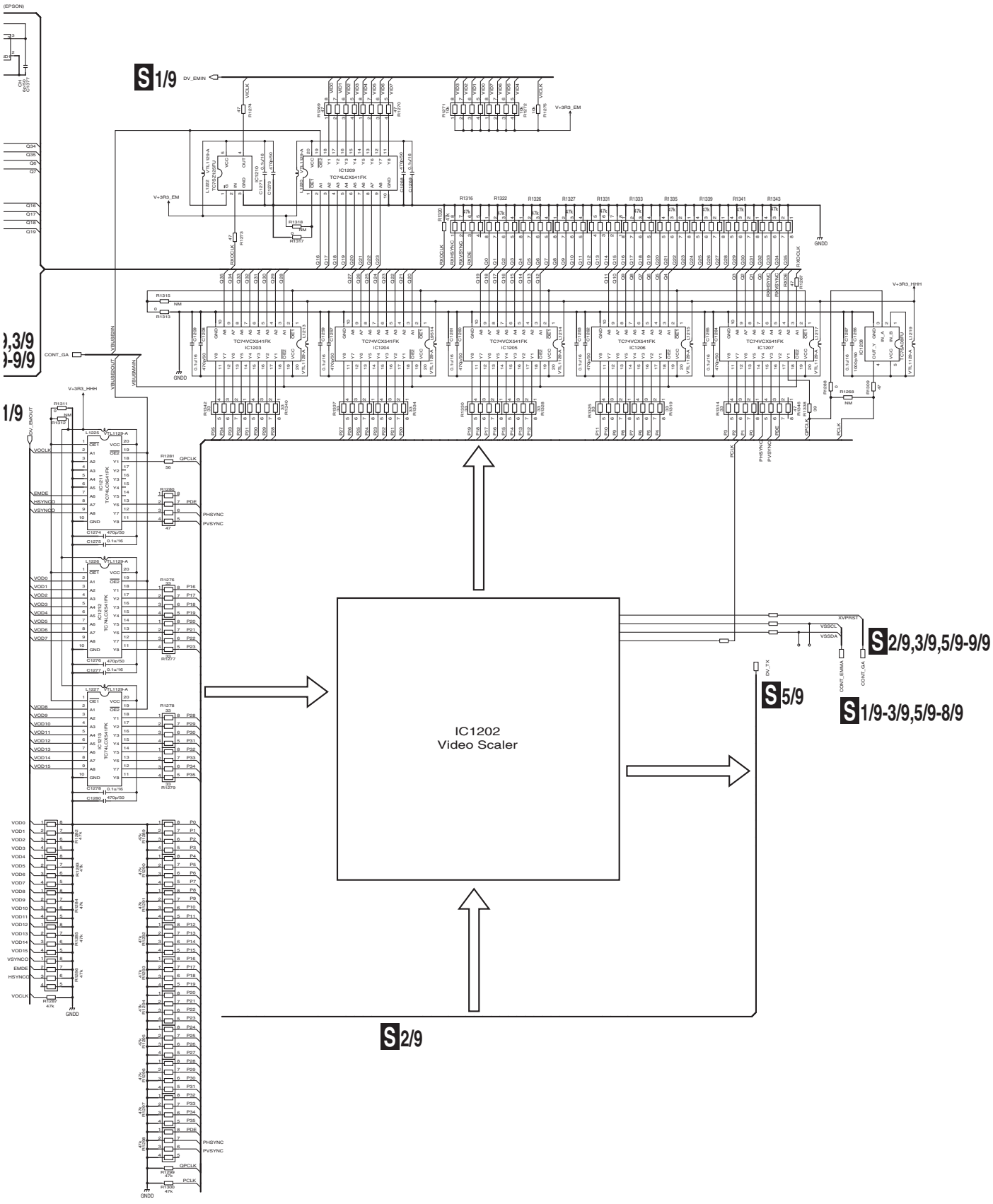
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

10.14 D-MAIN ASSY (4/9)

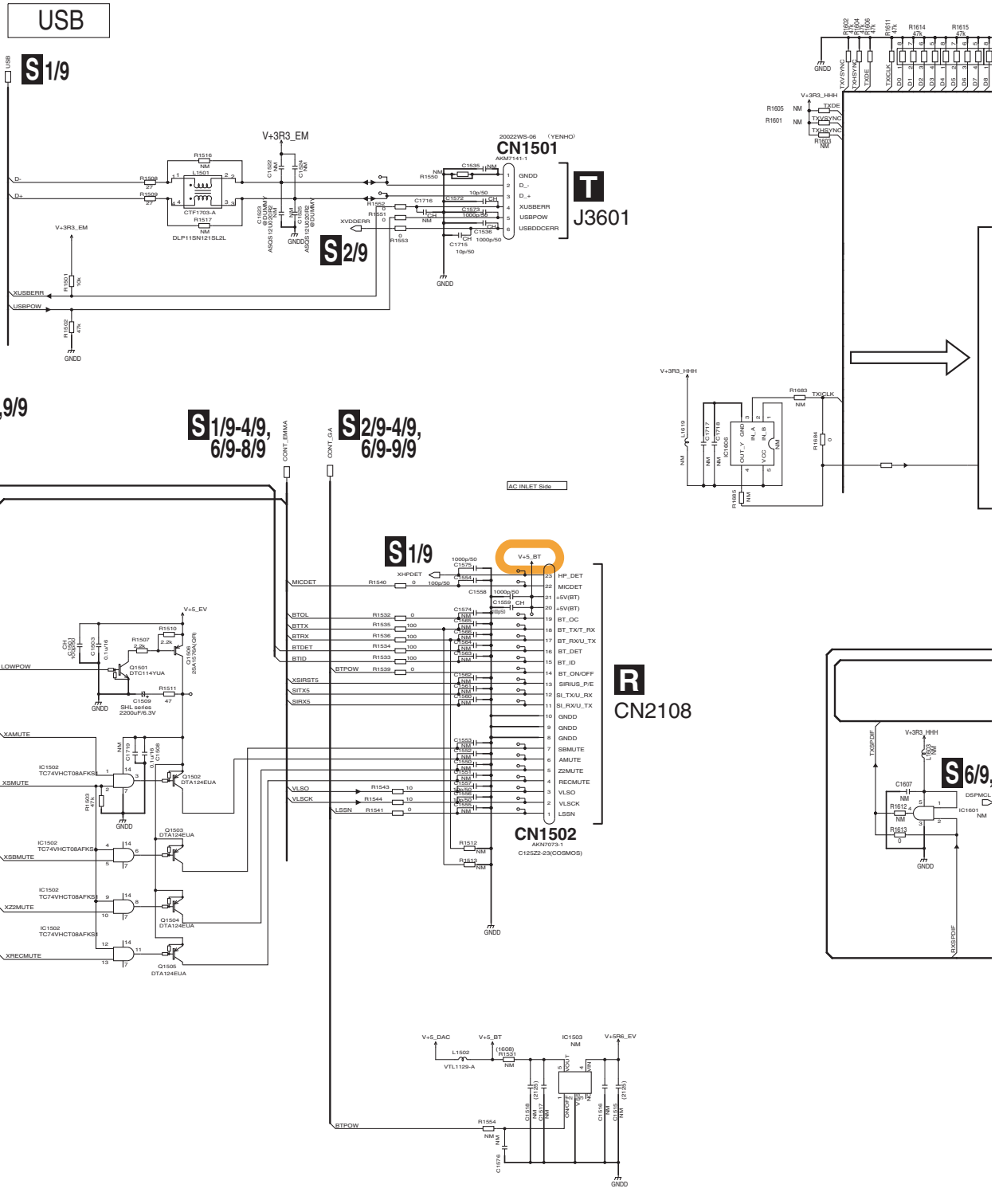
S 4/9 D-MAIN ASSY (4/9) (7028070351010-IL)

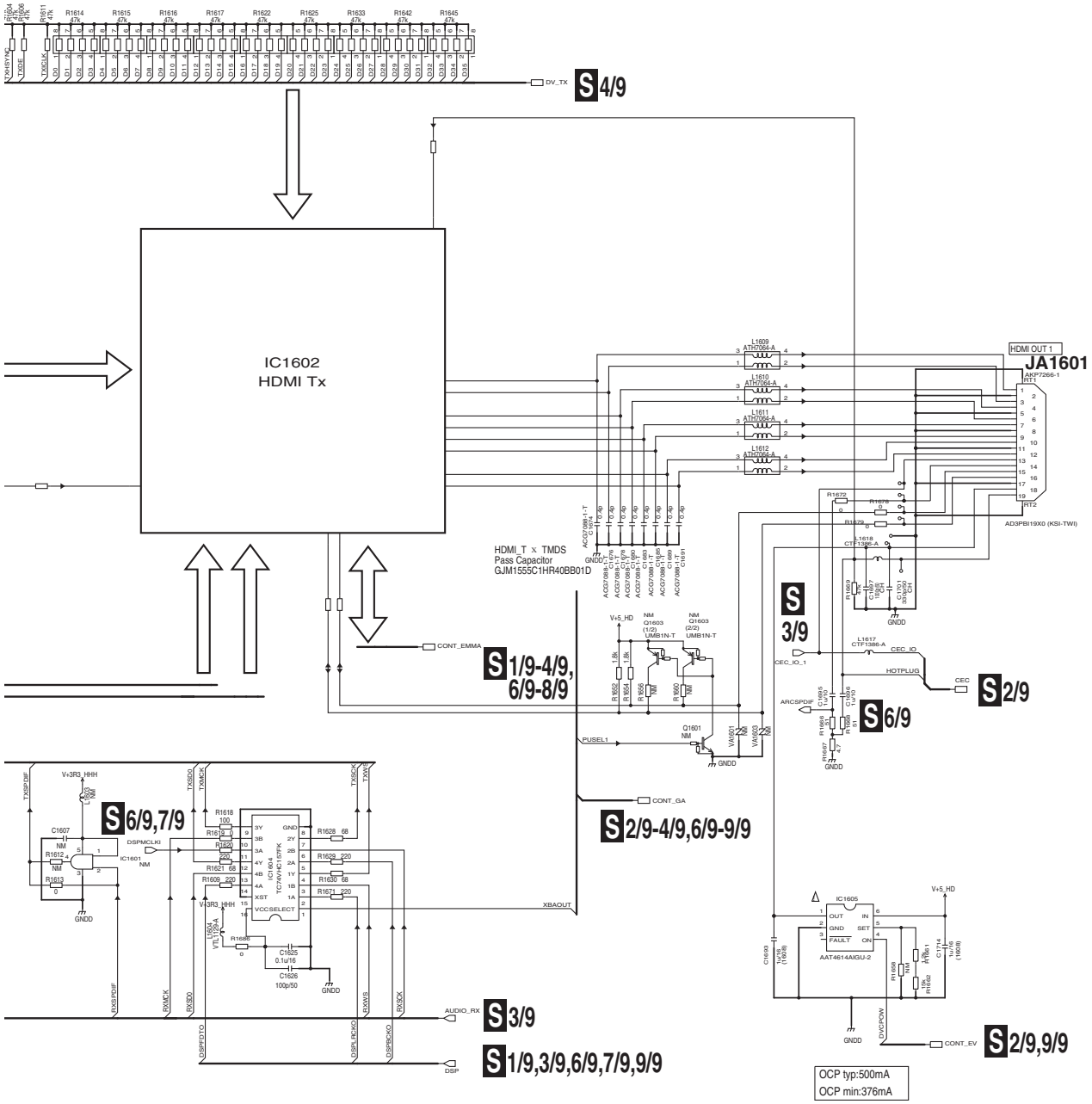


S 4/9


S1/9
DV_EMIN
IC1209
TC74LCX541FK
IC1203
IC1204
IC1205
IC1206
IC1207
TC74VCX541FK
IC1202
Video Scaler
S2/9
S5/9
S2/9,3/9,5/9-9/9
S1/9-3/9,5/9-8/9
S4/9

S5/9 D-MAIN ASSY (5/9)
(7028070351010-IL)





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

S 5/9

S6/9 D-MAIN ASSY (6/9) (7028070351010-IL)

S2/9-5/9,7/9-9/9

S1/9,3/9,5/9,7/9,9/9

S1/9,3/9,5/9, 7/9,9/9

S2/9-5/9, 7/9-9/9

S7/9

S6/9

(FL): Audio Signal Route (Front Lch)

(SL): Audio Signal Route (Surround Lch)

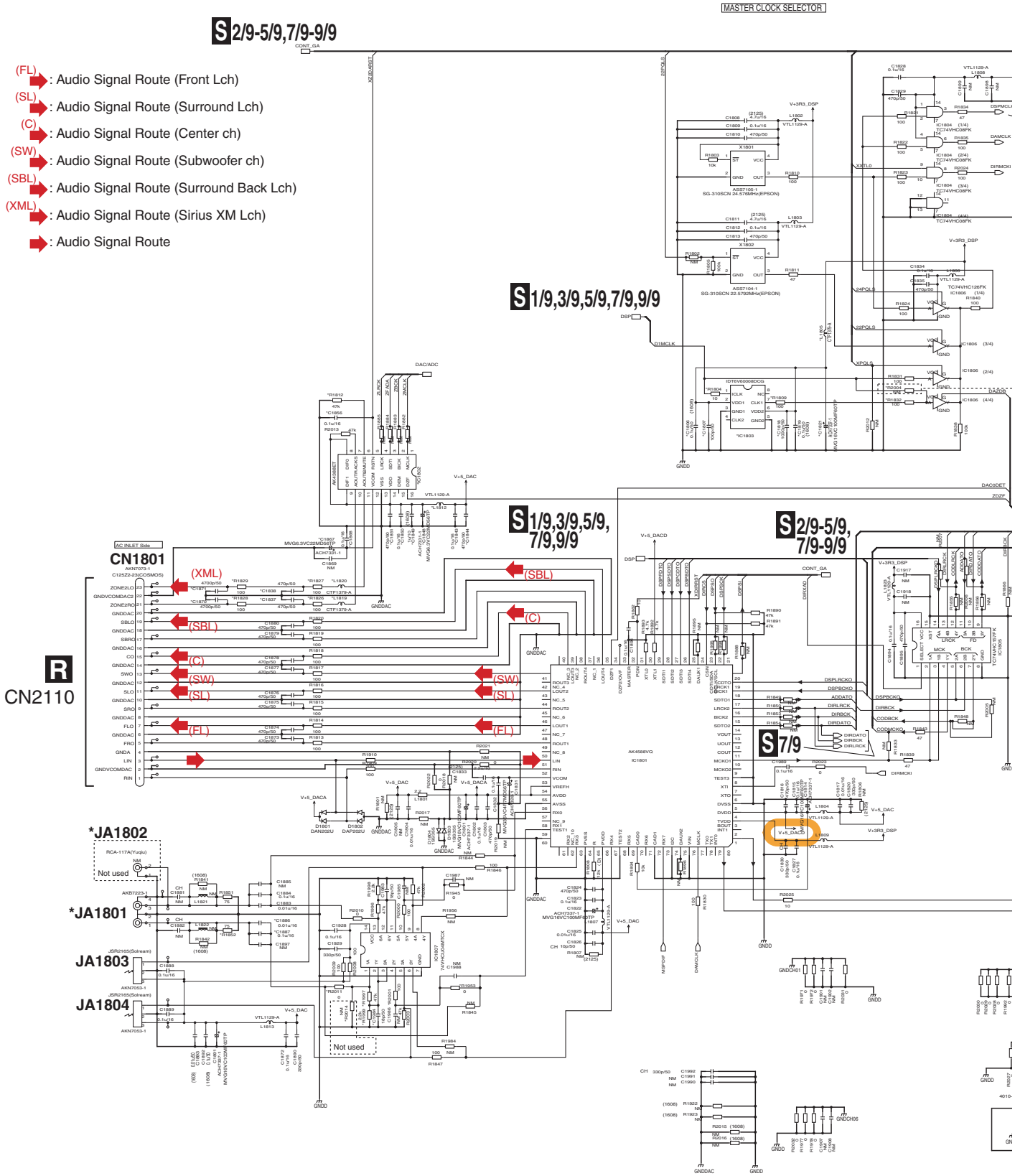
(C): Audio Signal Route (Center ch)

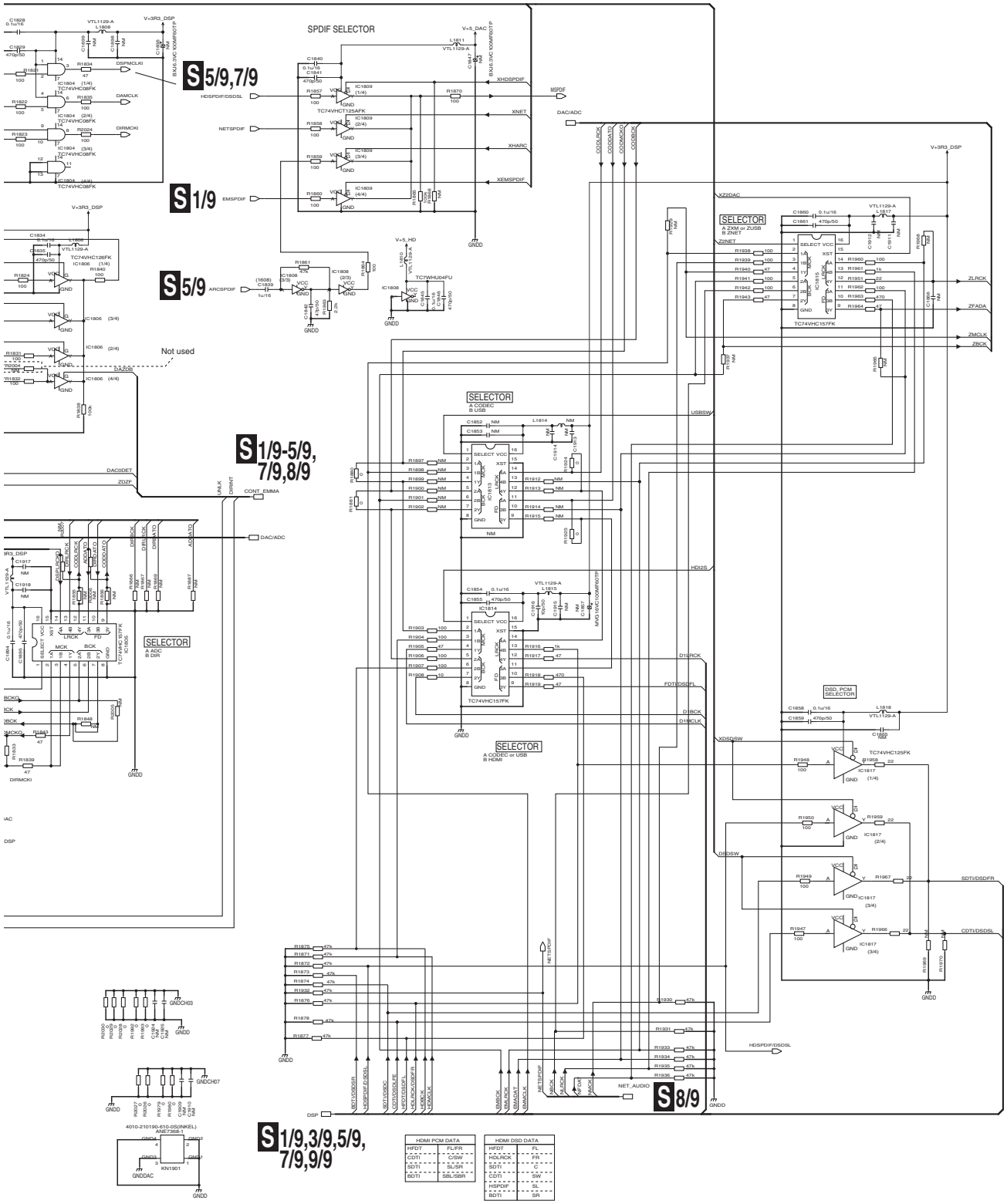
(SW): Audio Signal Route (Subwoofer ch)

(SBL): Audio Signal Route (Surround Back Lch)

(XML): Audio Signal Route (Sirius XM Lch)

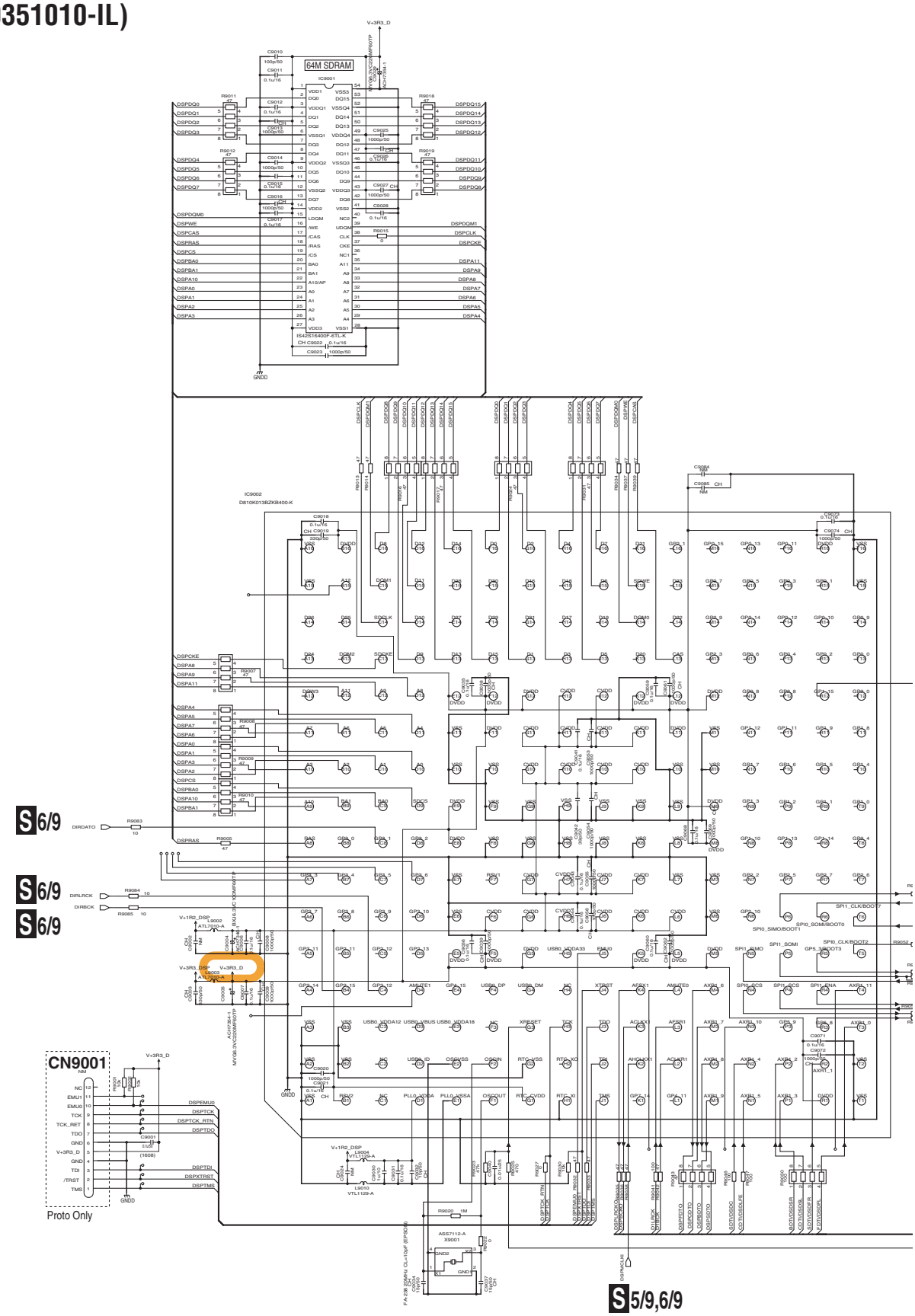
: Audio Signal Route




SPDIF SELECTOR
S5/9,7/9
S1/9
S5/9
S1/9-5/9, 7/9,8/9
S1/9,3/9,5/9, 7/9,9/9
S8/9
S6/9
SELECTOR
A ZXM or ZUSB B ZNET
SELECTOR
A CODEC B USB
SELECTOR
A CODEC or USB B HDMI
SELECTOR
B ADC A DIR
DSD_PCM SELECTOR
Not used
HDMI PCM DATA
HDMI DSD DATA
XHDSPDIF
XNET
XHARC
XEMSPDIF
DAC/ADC
ZLRCK
ZFADA
ZMCLK
ZBCK
USBSW
HDI2S
D1LRCK
FDT/DSDFL
D1BCK
D1MCLK
XDSDSW
DSDSW
SDTI/DSDFR
CDTI/DSDSL
HDSPDIF/DSDSL
DSP
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.

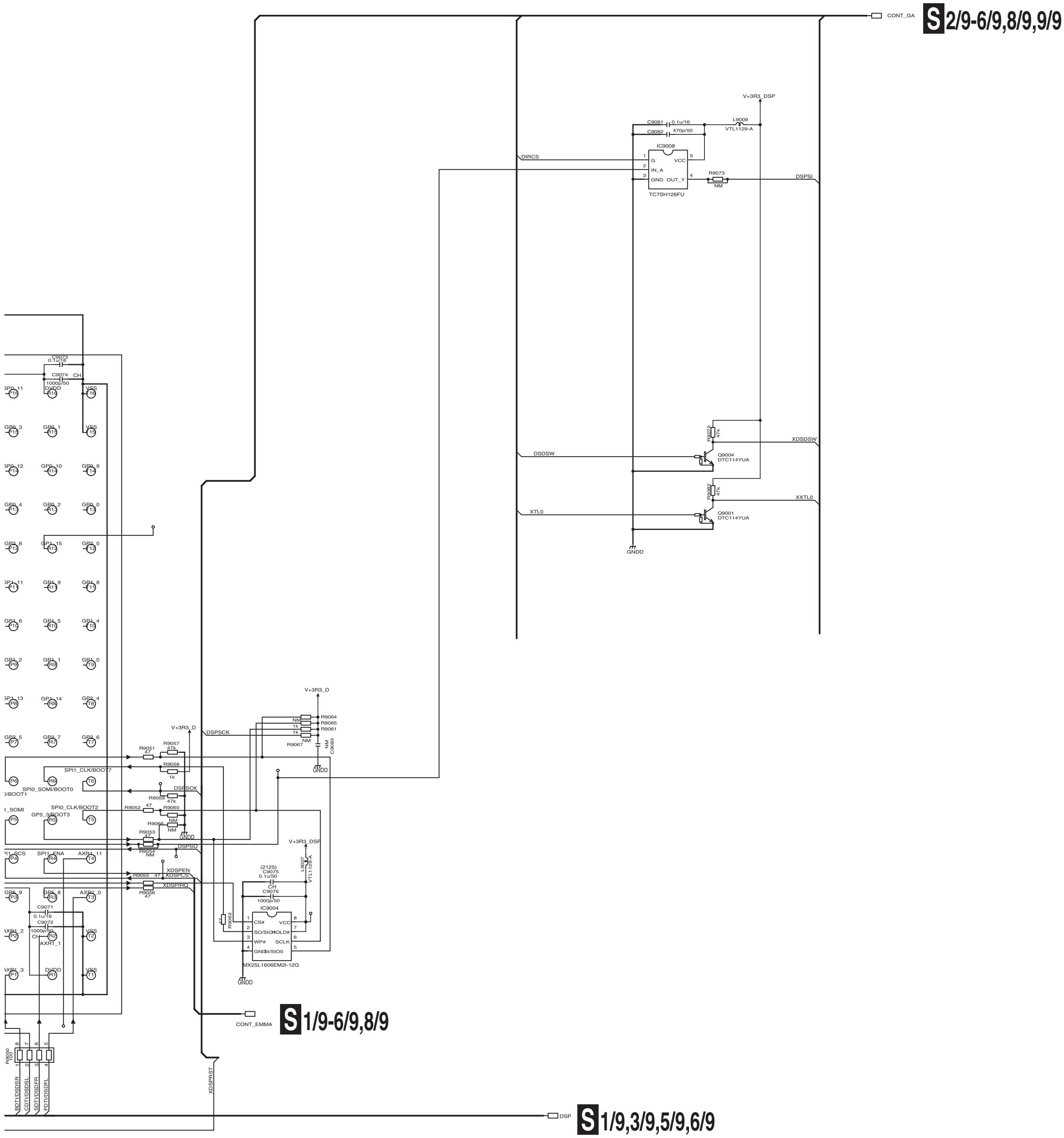
10.17 D-MAIN ASSY (7/9)

S7/9 D-MAIN ASSY (7/9) (7028070351010-IL)



A

B


CONT_GA
S 2/9-6/9,8/9,9/9
V+3R3_DSP
C9081 0.1u/16
C9082 470p/50
L9009
VTL1129-A
IC9008
DIRCS
G
VCC
IN_A
GND
OUT_Y
R9073
NM
DSPSI
TC7SH126FU
R9072
47k
XDSDSW
DSDSW
Q9004
DTC114YUA
R9002
47k
XXTL0
XTL0
Q9001
DTC114YUA
GNDD
V+3R3_D
R9064
R9065
R9061
R9067
C9083
DSPSCK
SPI1_CLK/BOOT7
SPI0_SOMI/BOOT0
SPI0_CLK/BOOT2
GP5_3/BOOT3
SPI1_ENA
DSPSO
XDSPEN
XDSPCS
XDSPIRQ
V+3R3_DSP
L9007
VTL1129-A
C9075
C9076
1000p/50
IC9004
CS#
VCC
SO/SIO1
HOLD#
WP#
SCLK
GND
SI/SIO0
MX25L1606EM2I-12G
CONT_EMMA
S 1/9-6/9,8/9
XDSPRST
SDTI/DSDSR
SDTI/DSDSL
SDTI/DSDFR
SDTI/DSDFL
DSP
S 1/9,3/9,5/9,6/9

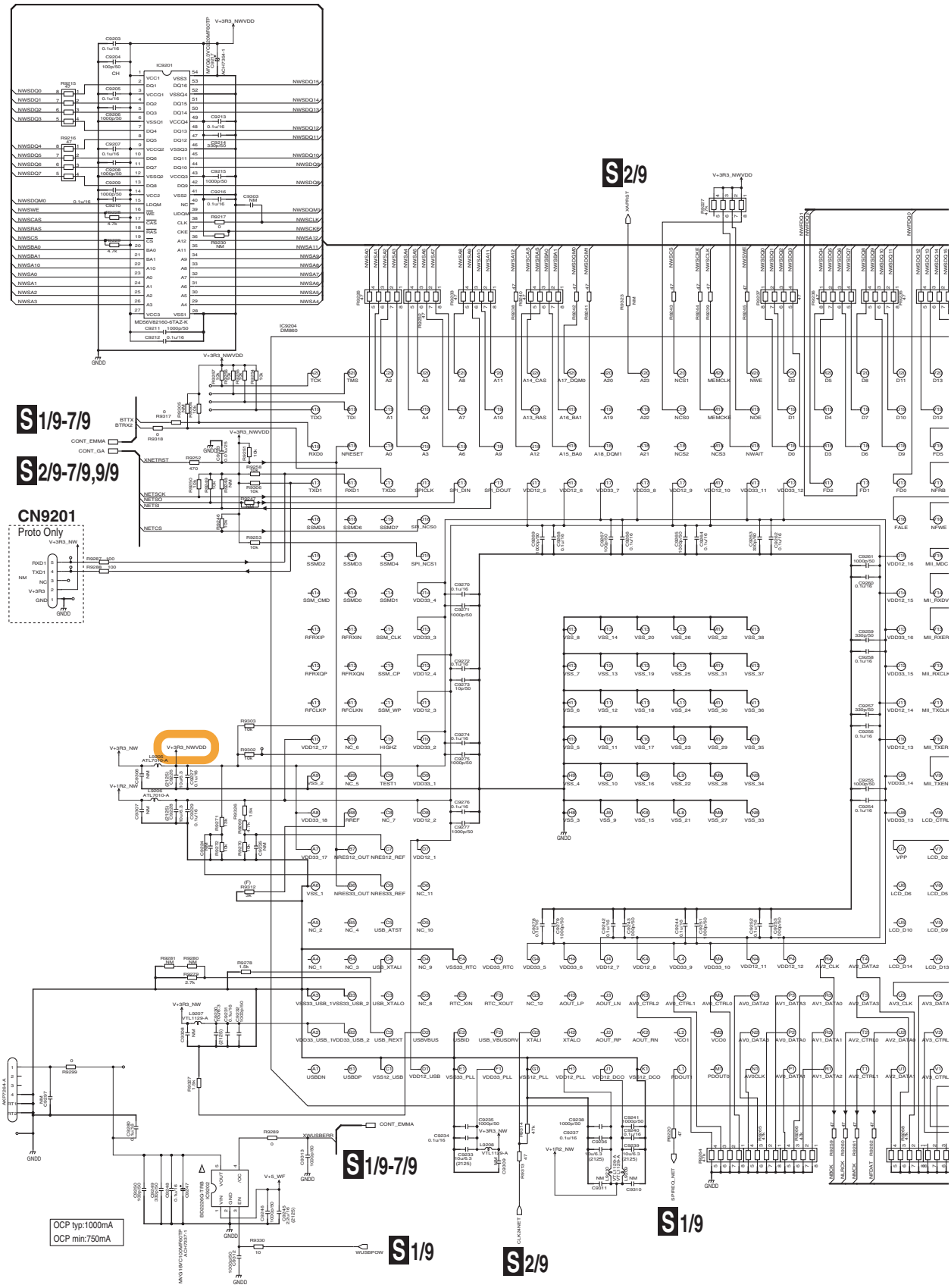
C

D

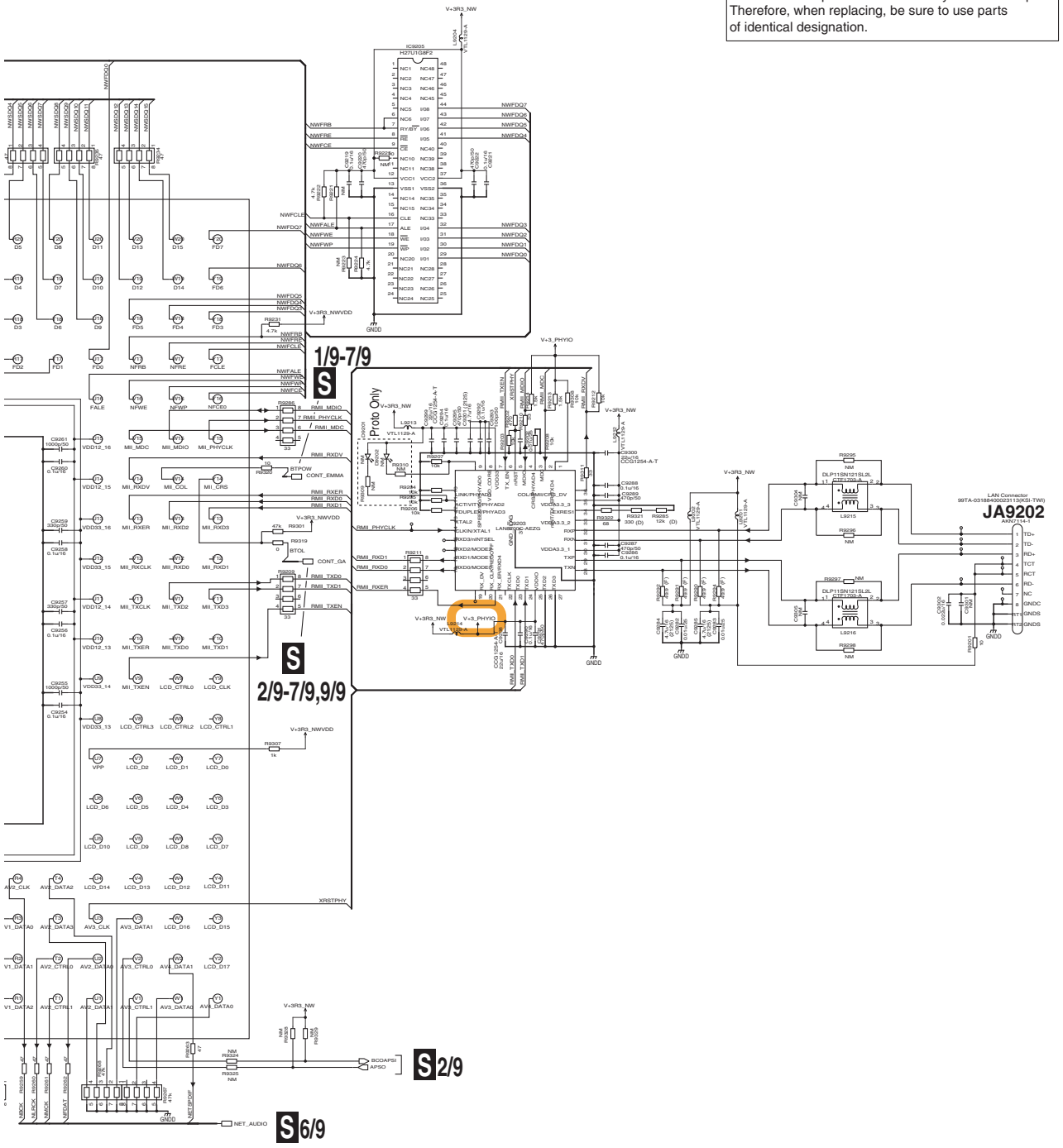
E

F

S8/9 D-MAIN ASSY (8/9) (7028070351010-IL)

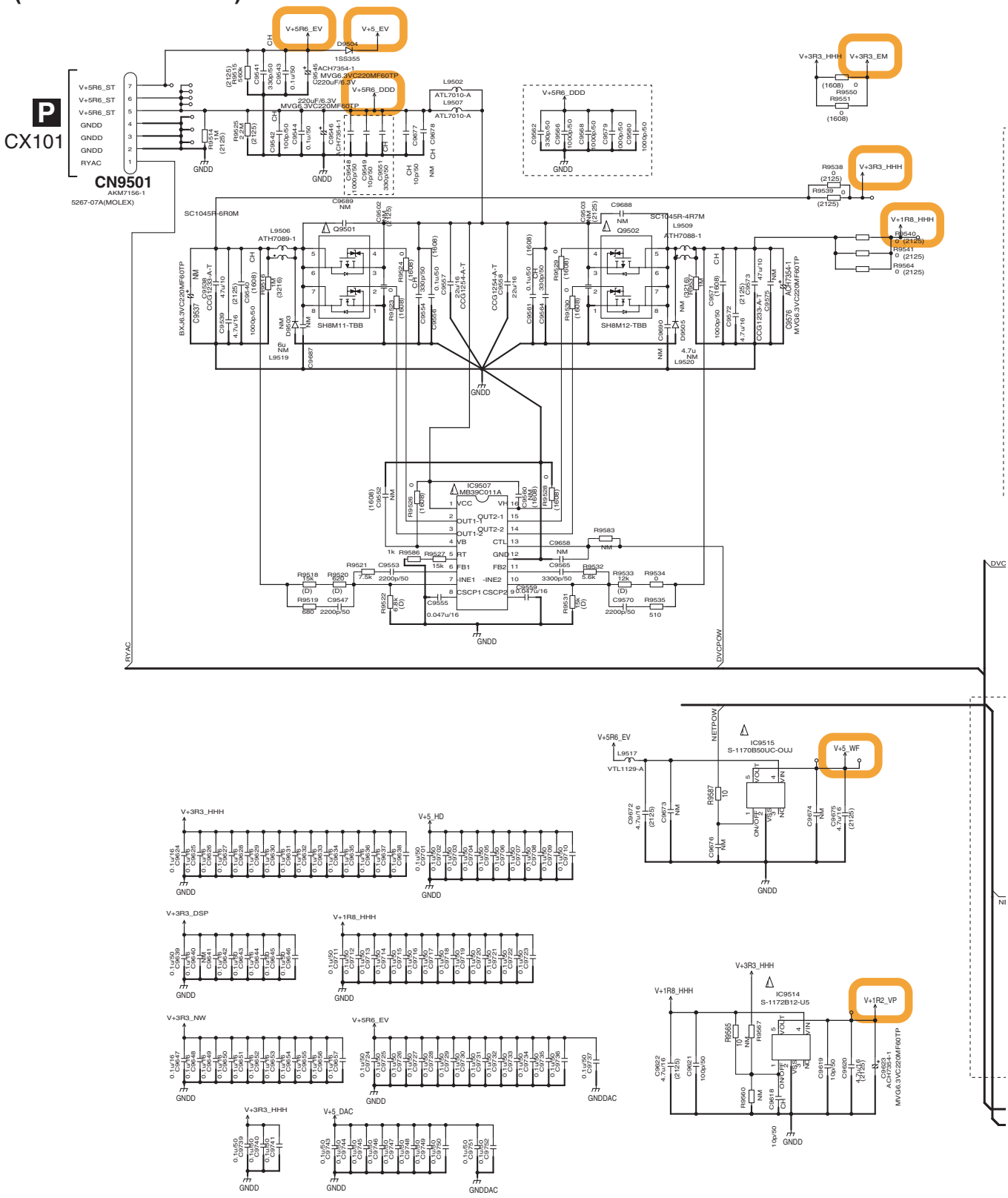


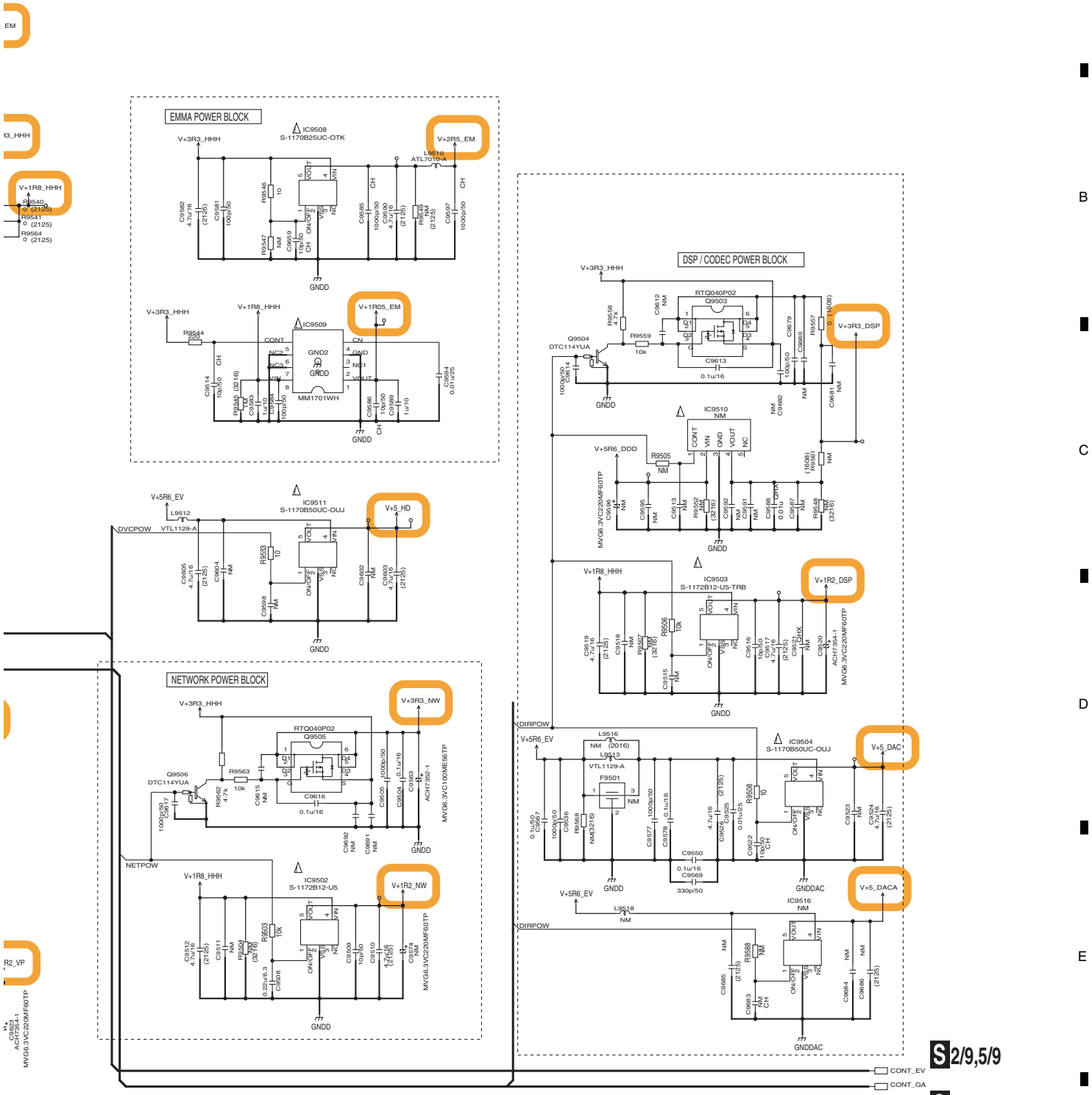
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.



10.19 D-MAIN ASSY (9/9)

S9/9 D-MAIN ASSY (9/9) (7028070351010-IL)





S2/9,5/9

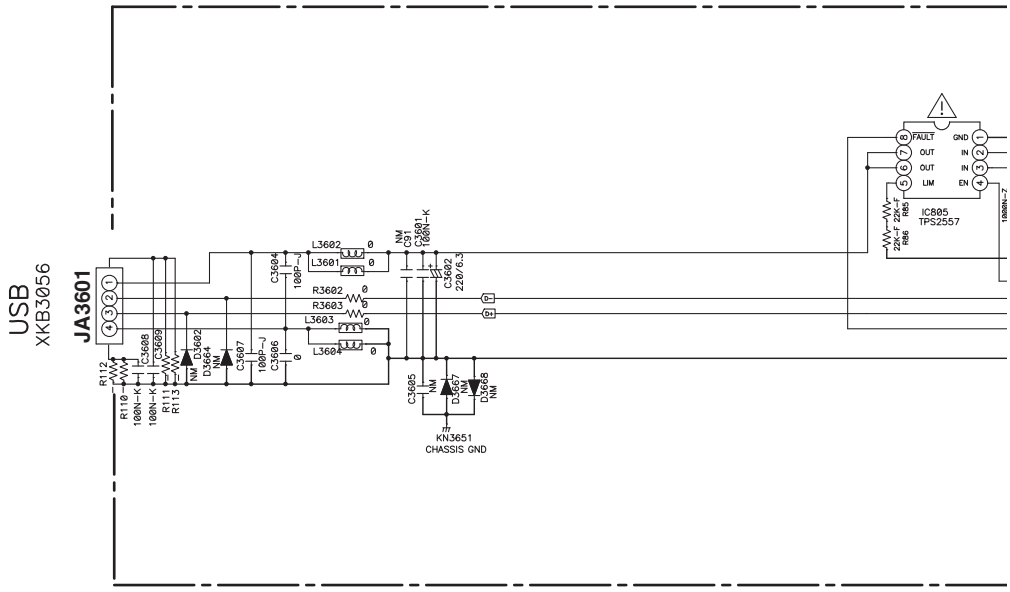
S2/9-8/9

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.

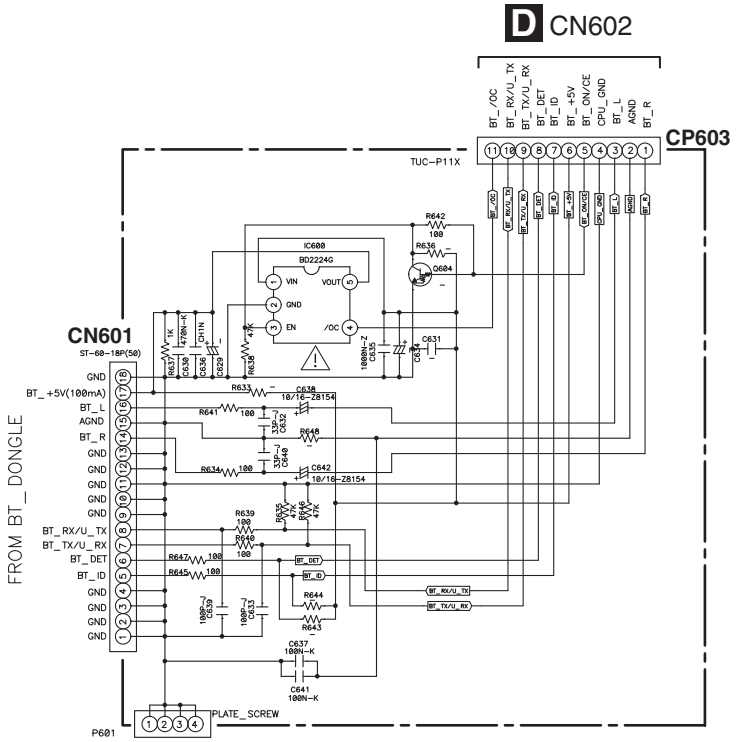
S9/9

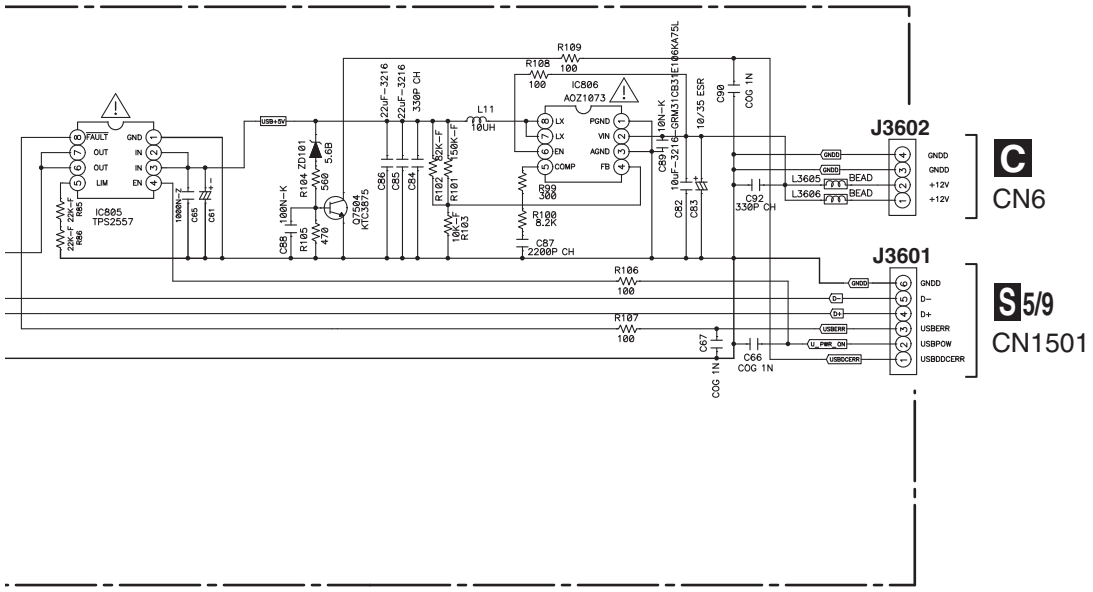
10.20 F-USB and BT ASSYS

T F-USB ASSY (7028070331010-IL)



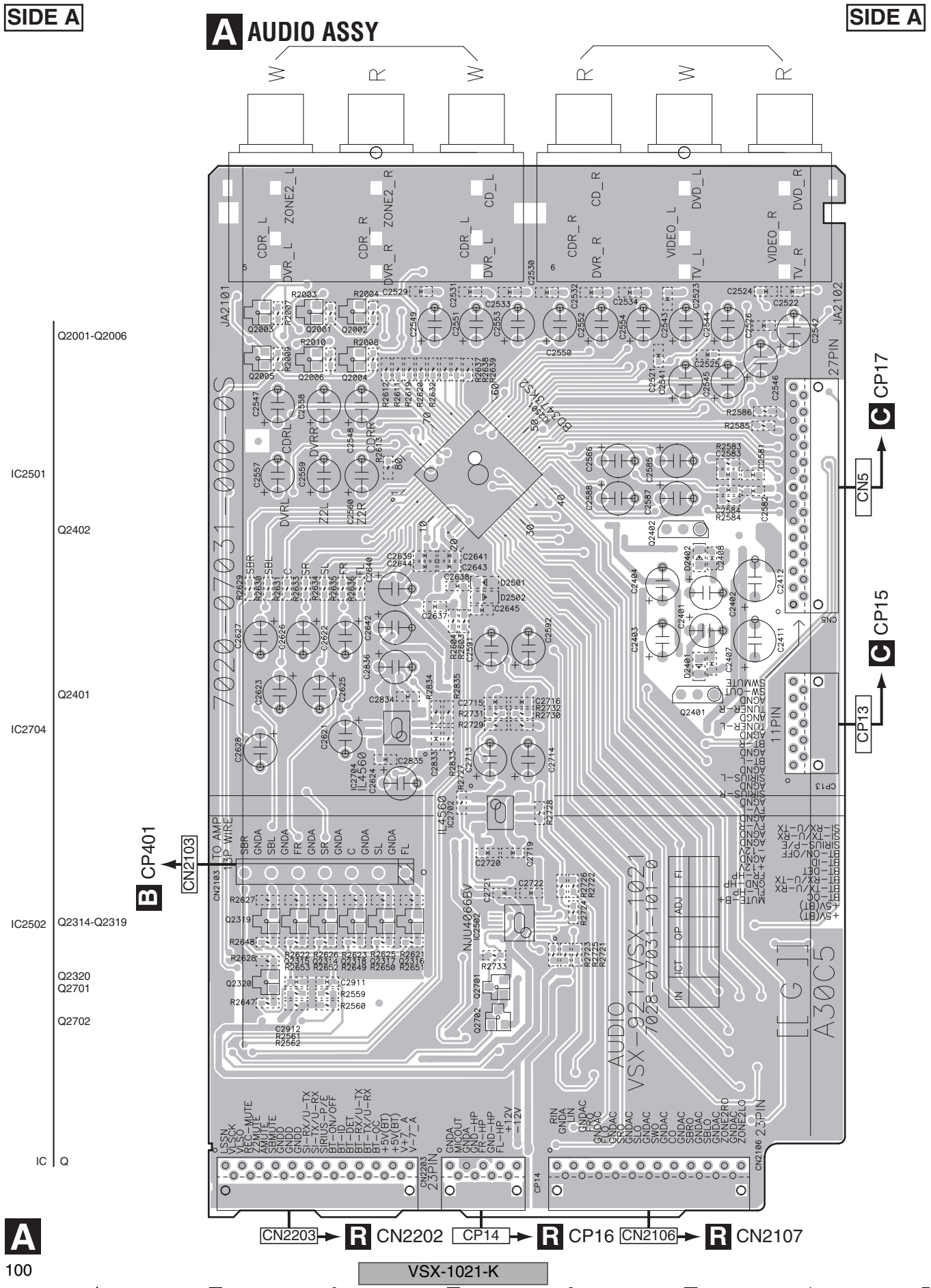
U BT ASSY (7028070231010-IL)





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

11. PCB CONNECTION DIAGRAM
11.1 AUDIO ASSY



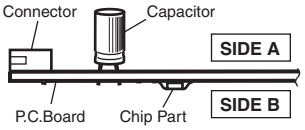
SIDE B

SIDE B

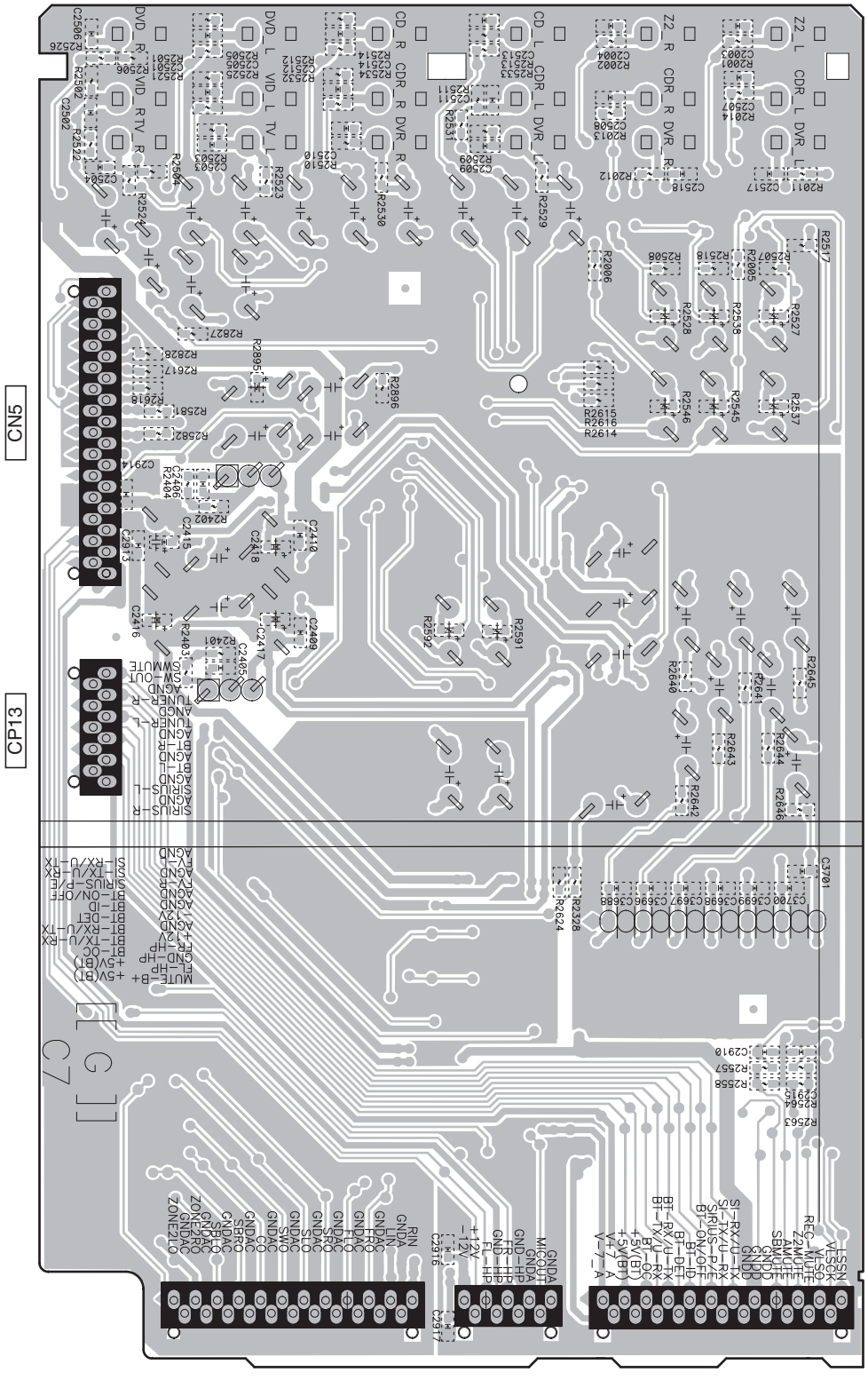
NOTE FOR PCB DIAGRAMS :

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.



A AUDIO ASSY

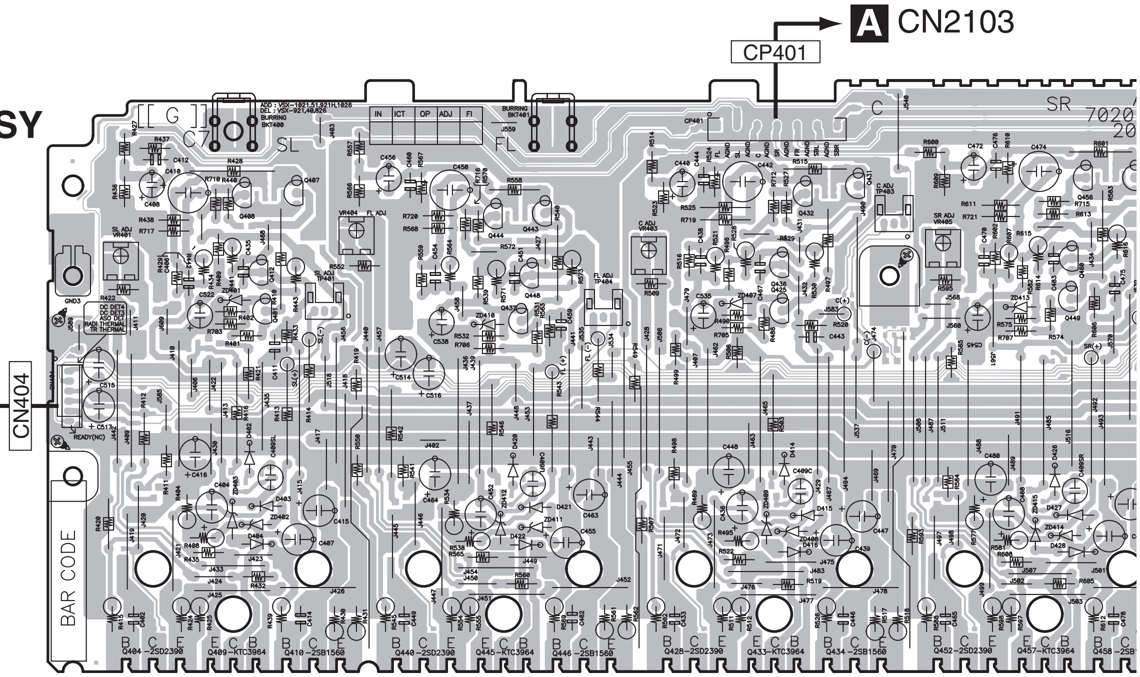


11.2 AMP7 ASSY

SIDE A

B AMP7 ASSY

O CN501



IC

Q

Q408 Q407 Q444 Q443 Q432 Q431 Q456

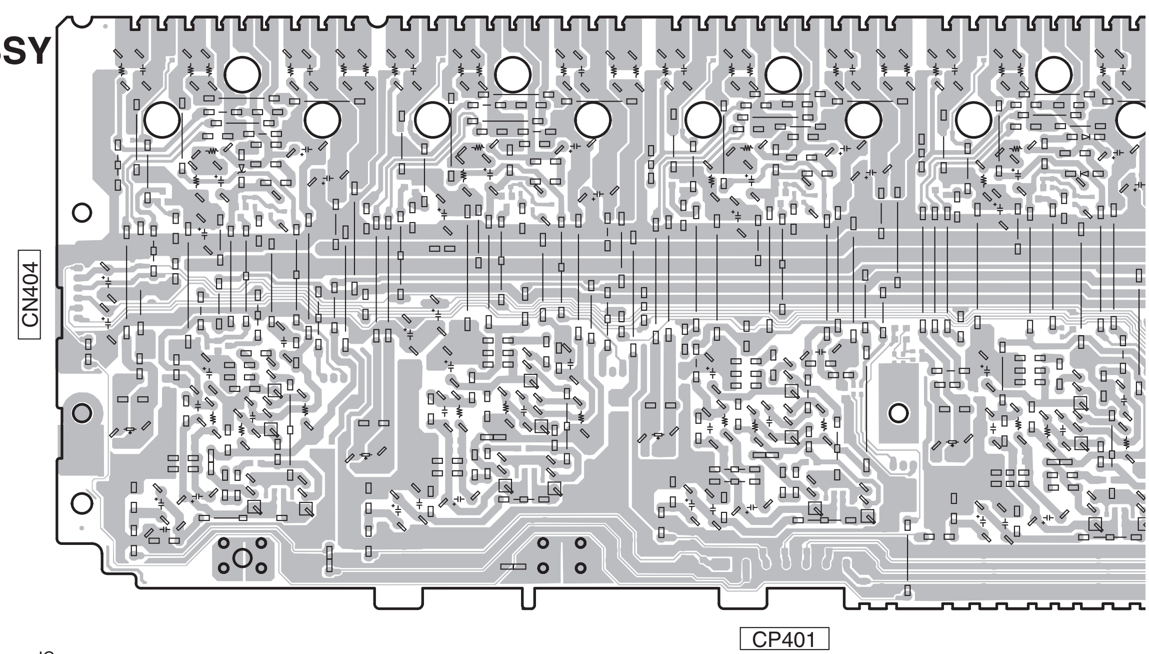
Q412 Q448 Q436 Q460

Q401 Q437 Q425 Q449

Q404 Q409 Q410 Q440 Q445 Q446 Q428 Q433 Q434 Q452 Q457

SIDE B

B AMP7 ASSY



IC

Q

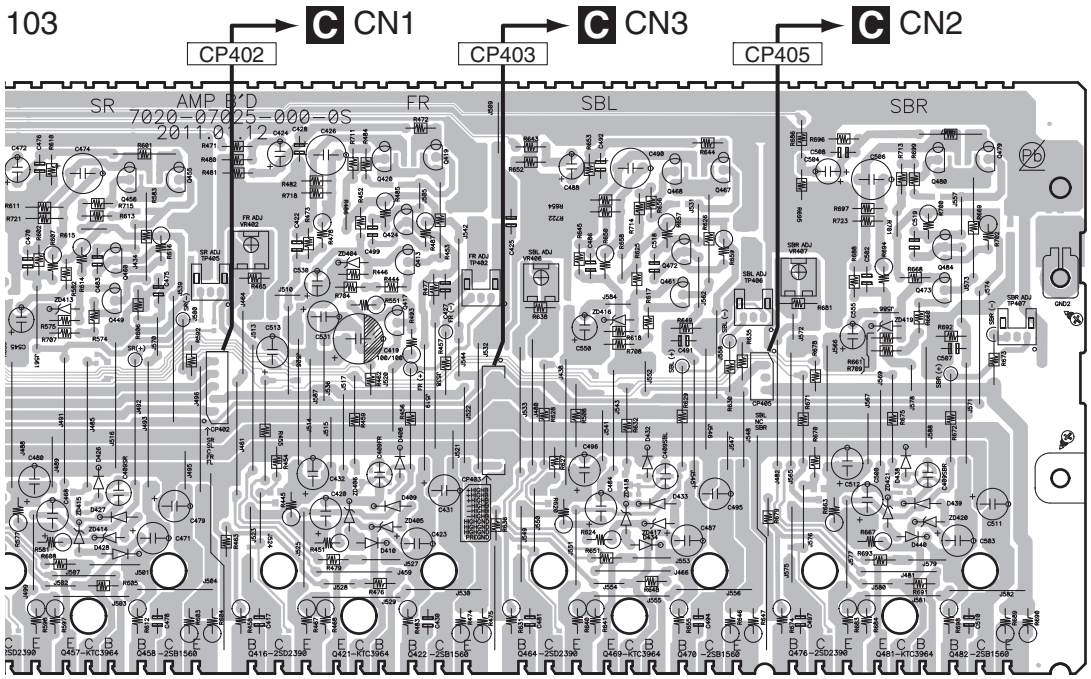
Q478 Q475 Q466 Q463 Q418 Q415 Q454

Q482 Q481 Q476 Q470 Q469 Q464 Q422 Q421 Q416 Q458 Q457

B

SIDE A

103



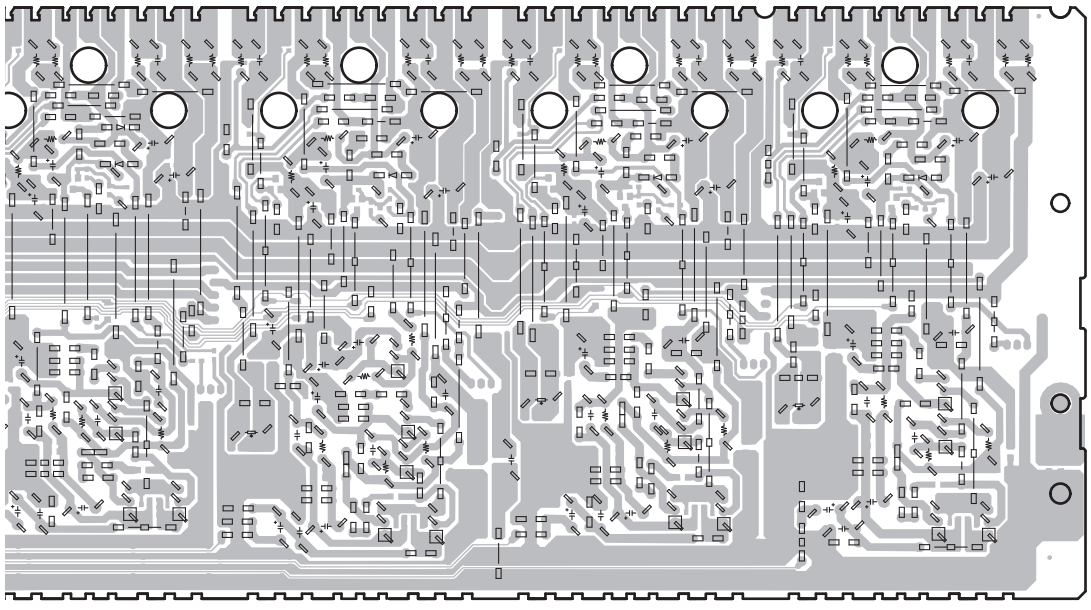
Q456 Q455
Q460
Q449
Q452 Q457 Q458

Q420 Q419
Q424
Q413
Q416 Q421 Q417 Q422

Q468 Q467
Q472
Q461
Q464 Q469 Q470

Q480 Q479
Q484
Q473
Q476 Q481 Q482

SIDE B



Q454 Q451
Q458 Q457 Q452

Q430 Q427
Q434 Q433 Q428

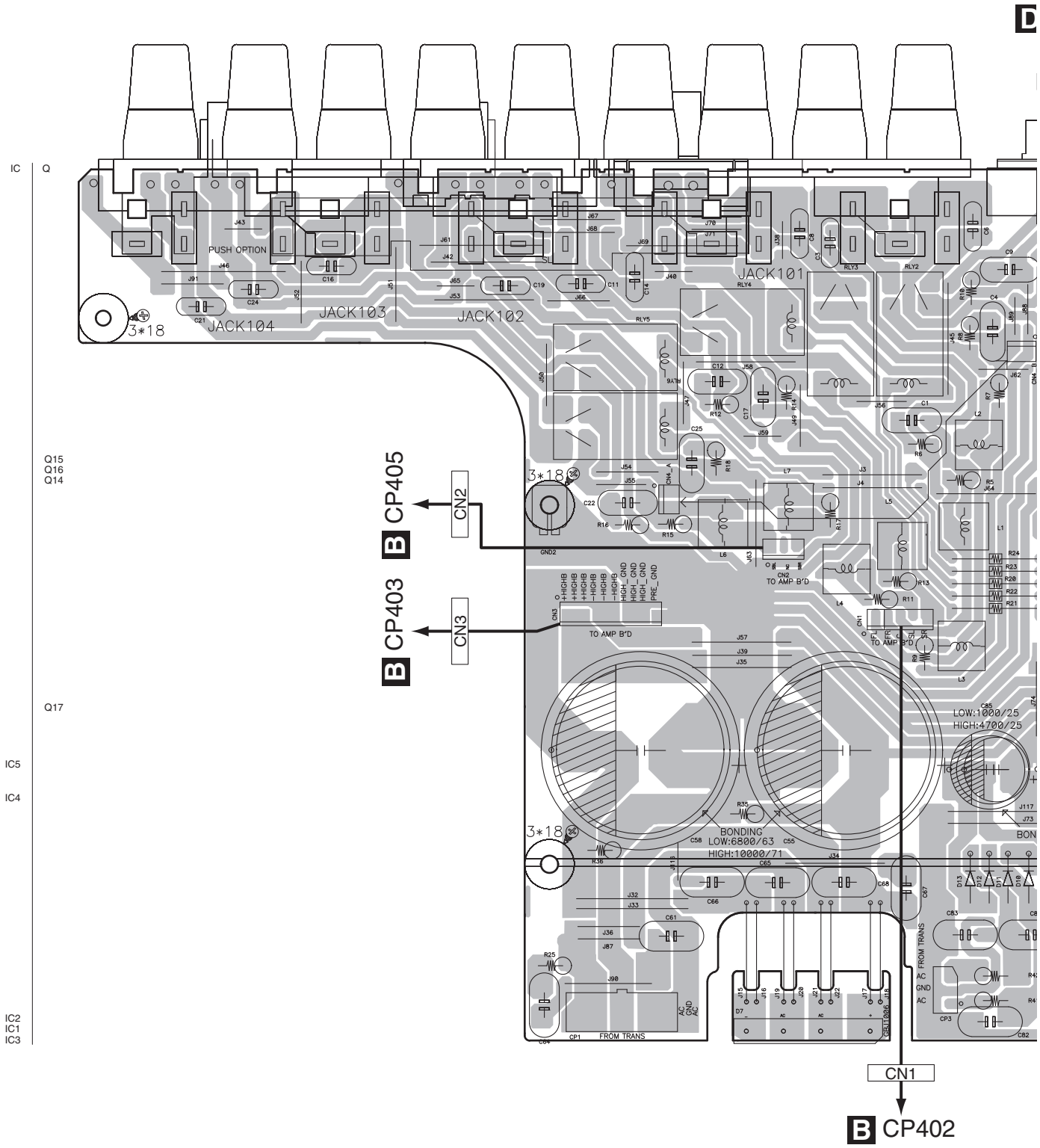
Q442 Q439
Q446 Q445 Q440

Q405
Q406 Q403
Q410 Q409 Q404

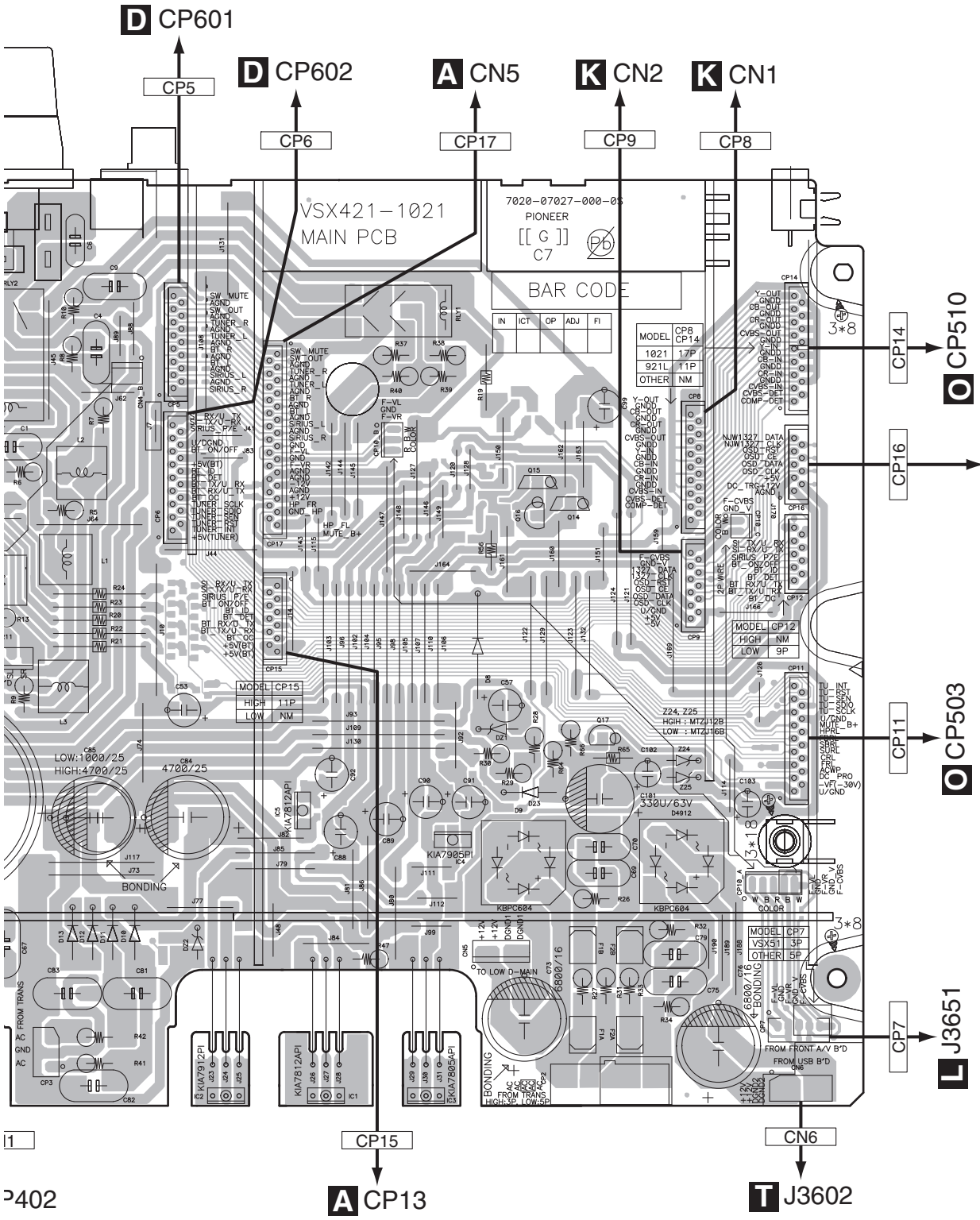
11.3 MAIN ASSY

SIDE A

C MAIN ASSY

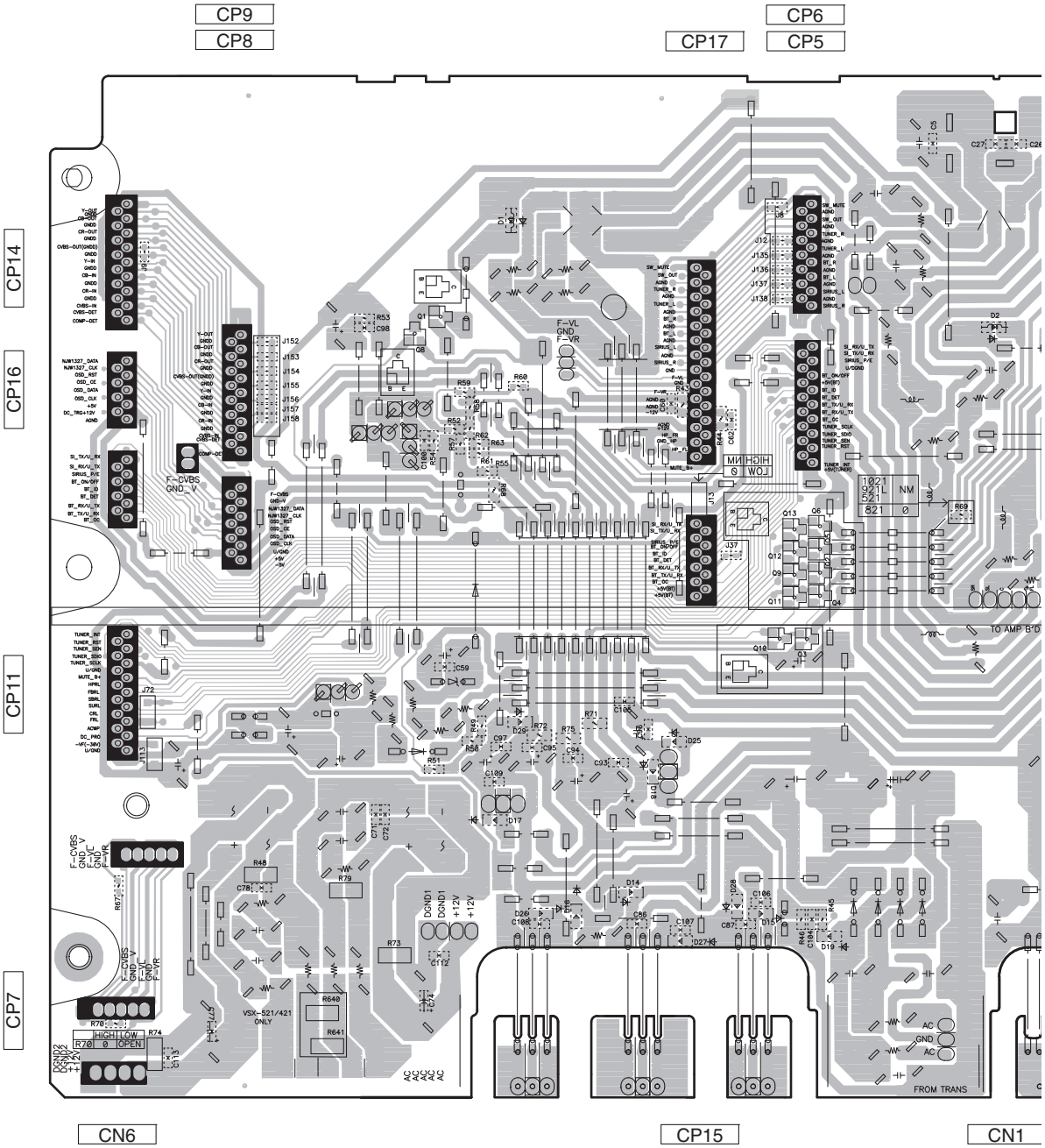


SIDE A

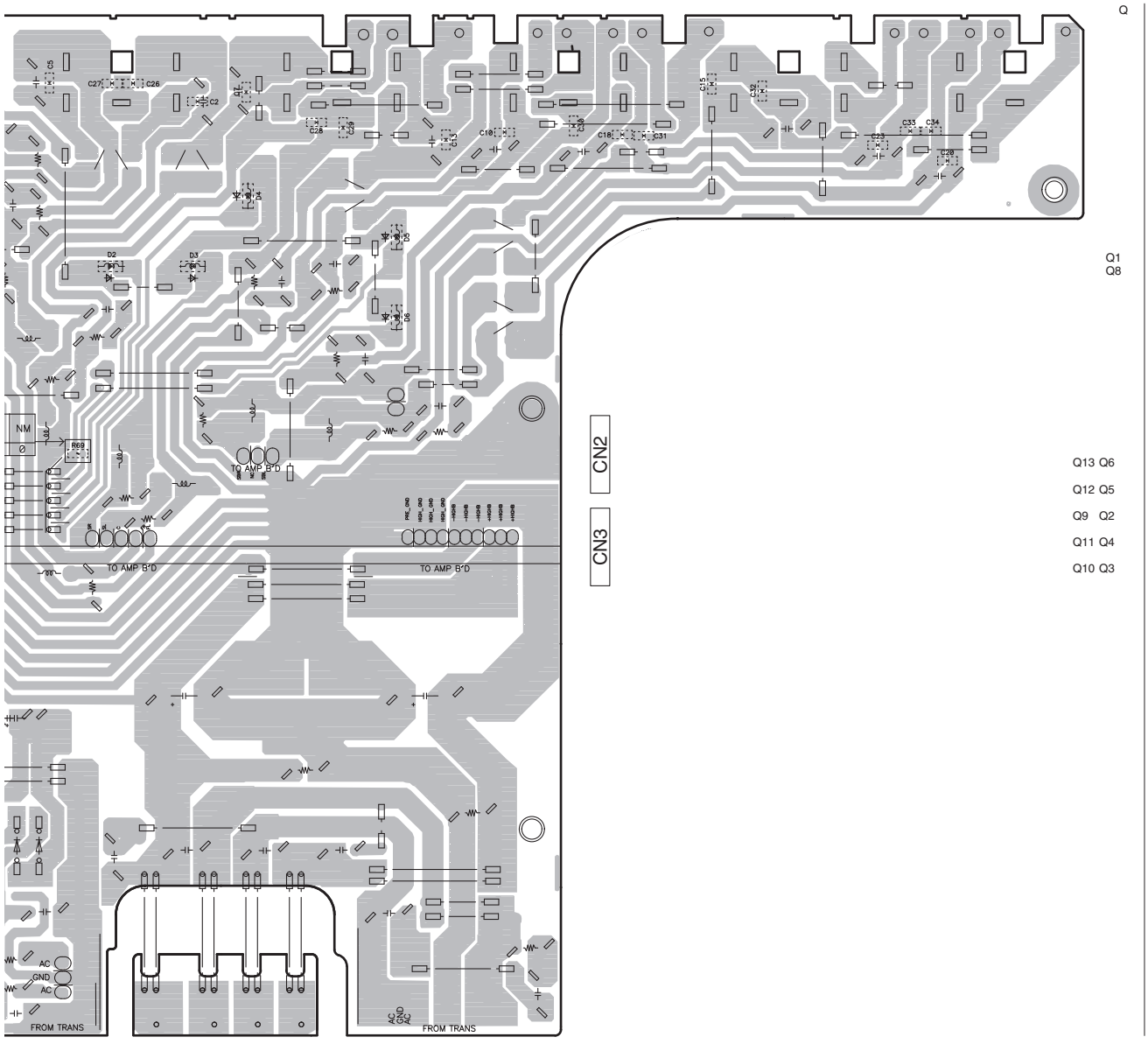

D CP601
D CP602
A CN5
K CN2
K CN1
CP5
CP6
CP17
CP9
CP8
VSX421-1021
MAIN PCB
7020-07027-000-0S
PIONEER
[[G]]
C7
BAR CODE
IN ICT OP ADJ FI
MODEL CP8 CP14
1021 17P
921L 11P
OTHER NM
CP14
CP510
CP16
CP501
CP11
CP503
CP7
J3651
CP15
A CP13
CN6
T J3602
MODEL CP15
HIGH 11P
LOW NM
MODEL CP12
HIGH NM
LOW 9P
MODEL CP7
VSX51 3P
OTHER 5P
LOW:1000/25
HIGH:4700/25
4700/25
BONDING
KIA7812API
KIA7905PI
KBPC604
TO LOW D-MAIN
FROM TRANS
FROM FRONT A/V B'D
FROM USB B'D
CN6

SIDE B

C MAIN ASSY



SIDE B

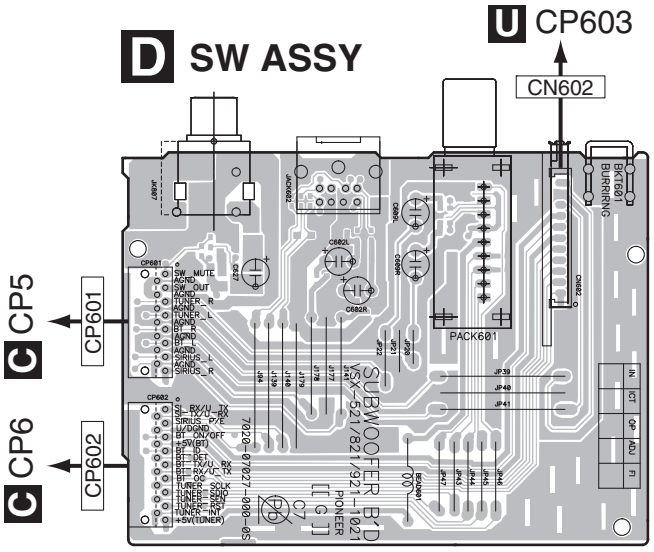

CN1
CN2
CN3
TO AMP B'D
TO AMP B'D
TO AMP B'D
FROM TRANS
FROM TRANS
AC
GND
AC
AC
GND
AC
NM
R69
Q
Q1
Q8
Q13 Q6
Q12 Q5
Q9 Q2
Q11 Q4
Q10 Q3

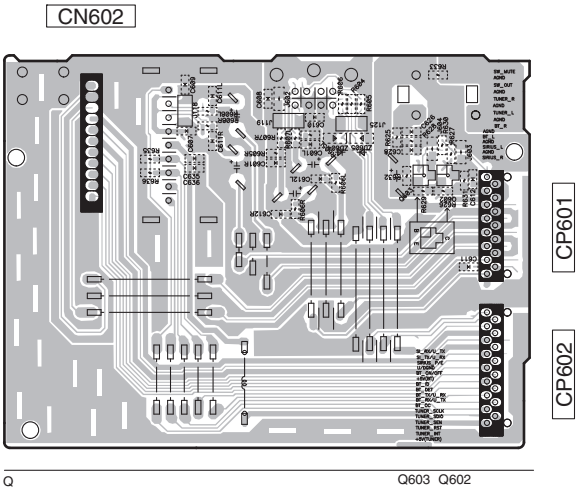
11.4 SW, HP and MIC ASSYS

SIDE A

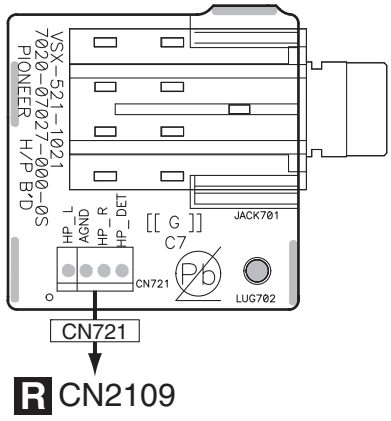
SIDE B

D SW ASSY

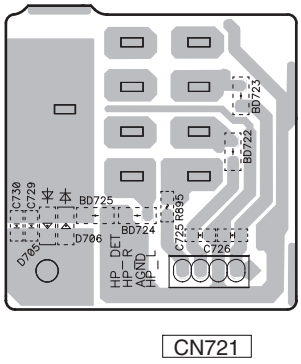




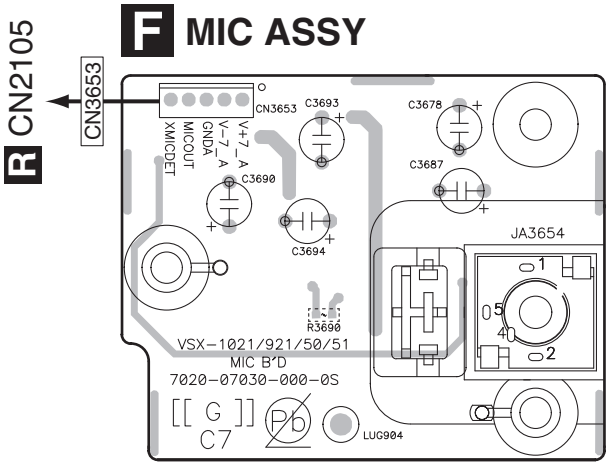
E HP ASSY



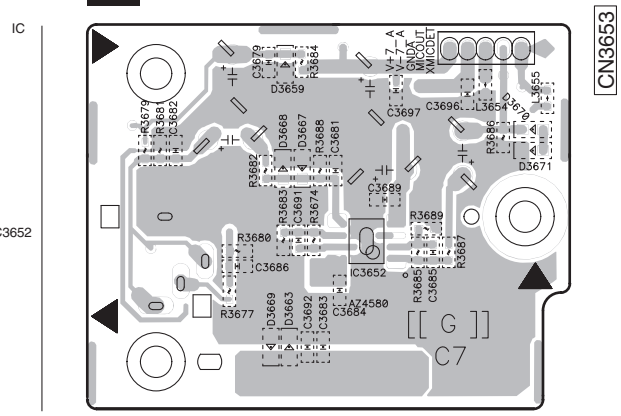
E HP ASSY



F MIC ASSY



F MIC ASSY



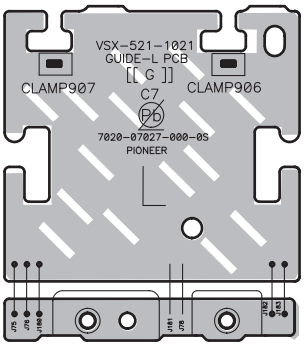
D E F

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

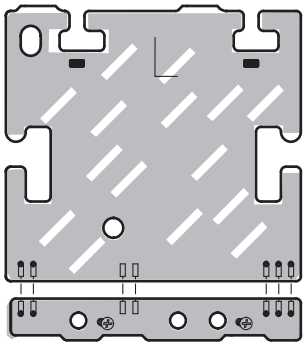
SIDE A

SIDE B

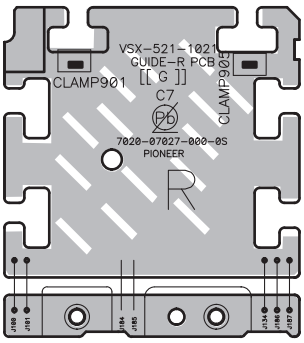
G G-L ASSY



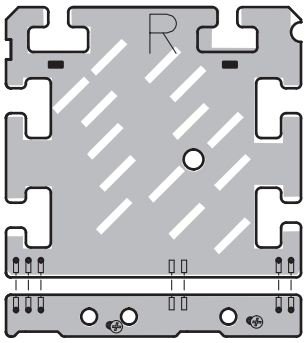
G G-L ASSY



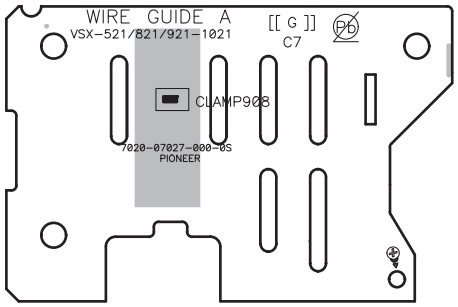
H G-R ASSY



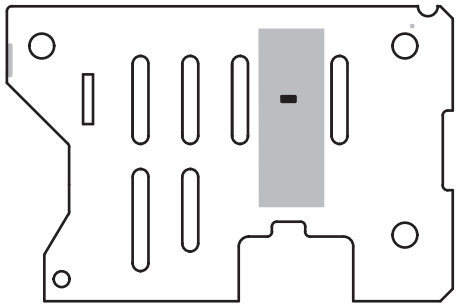
H G-R ASSY



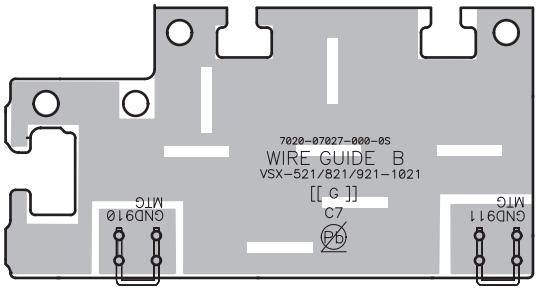
I WG-A ASSY



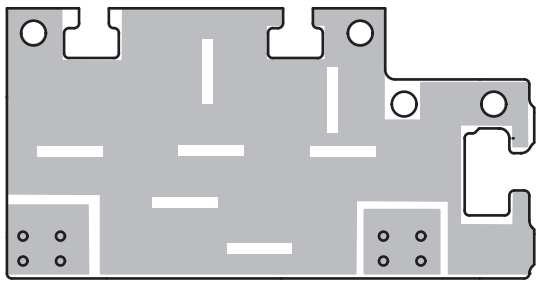
I WG-A ASSY



J WG-B ASSY



J WG-B ASSY



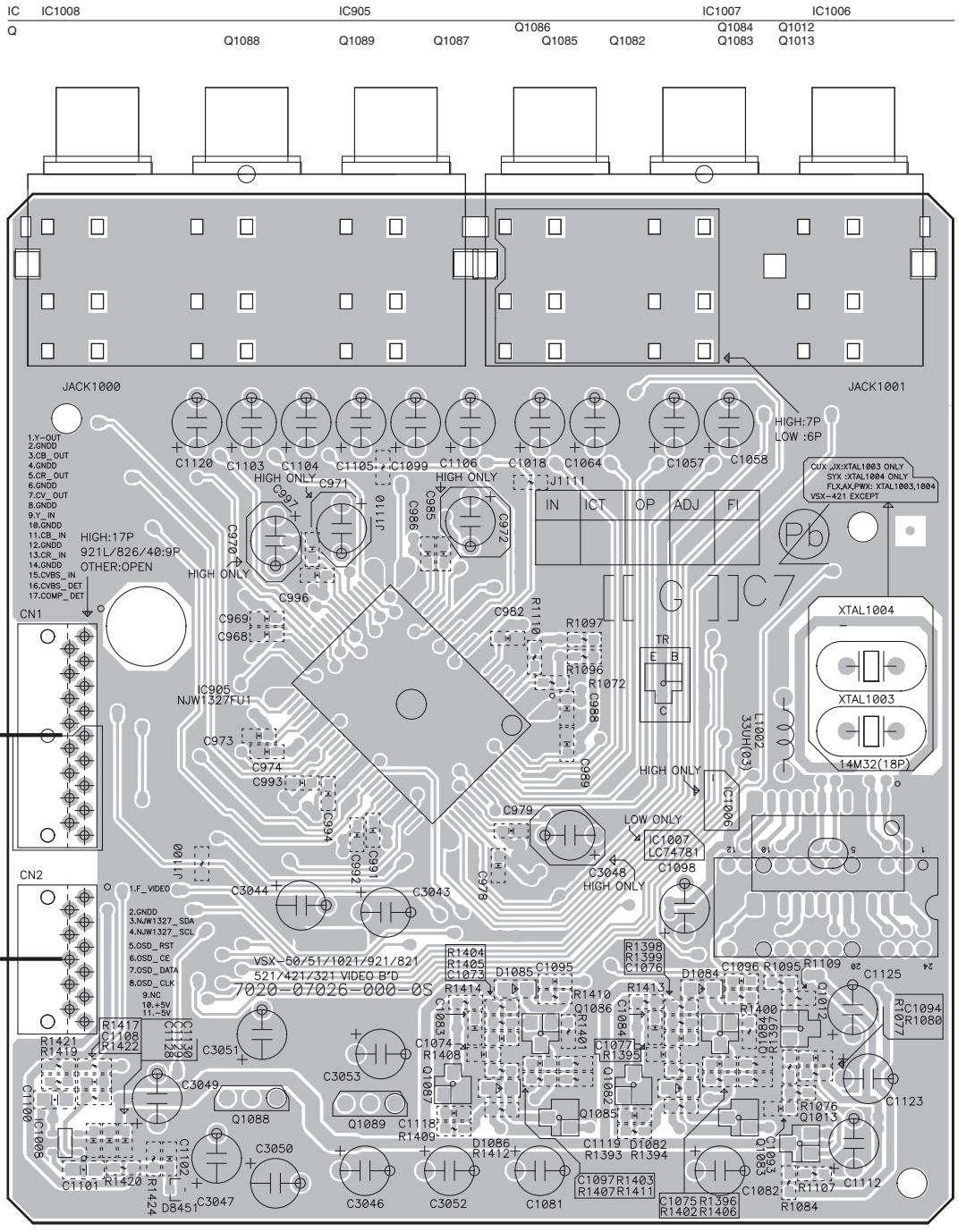
G H I J

11.6 VIDEO ASSY

SIDE A

SIDE A

K VIDEO ASSY

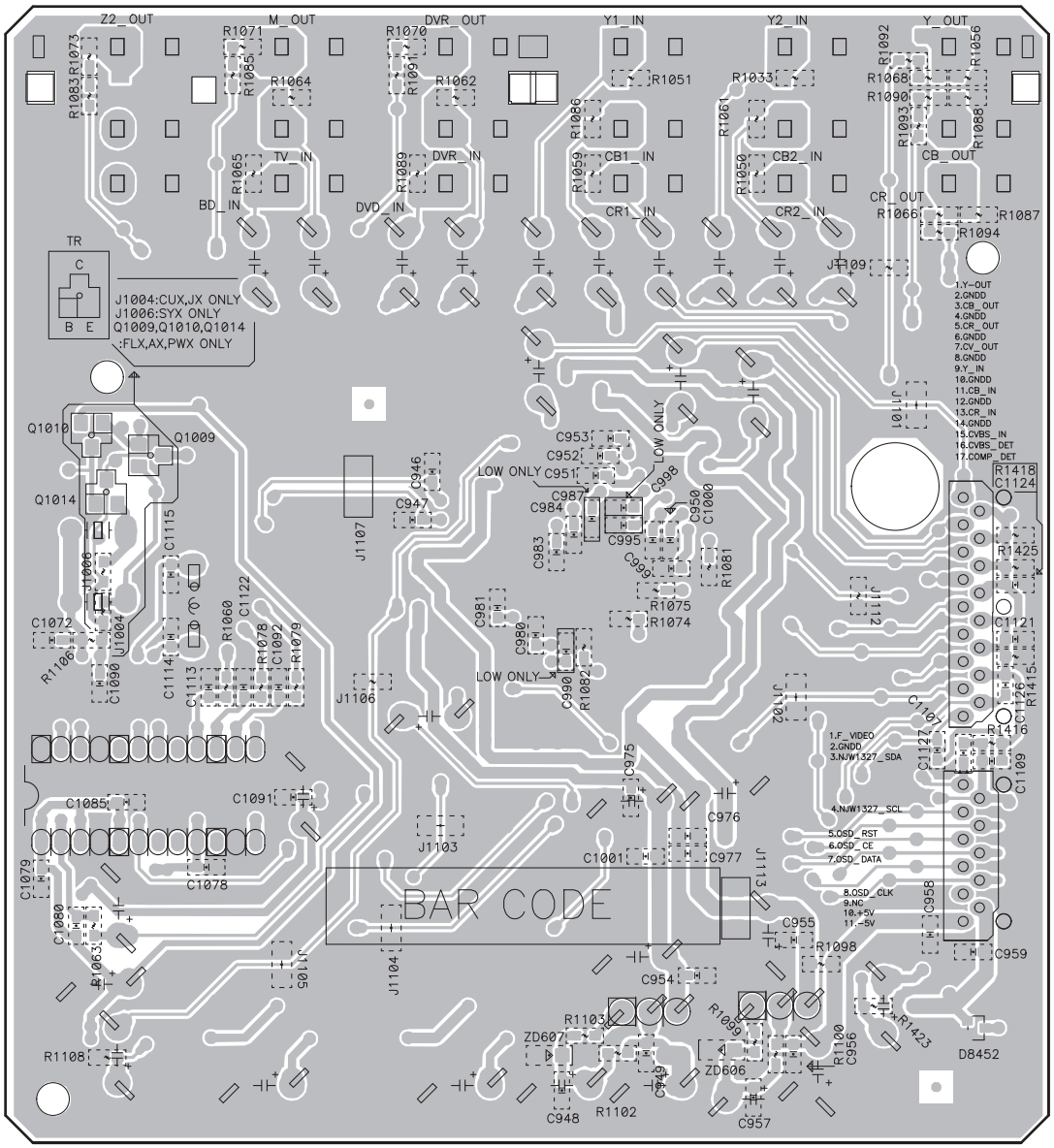


SIDE B

SIDE B

K VIDEO ASSY

Q Q1010 Q1009
Q1014

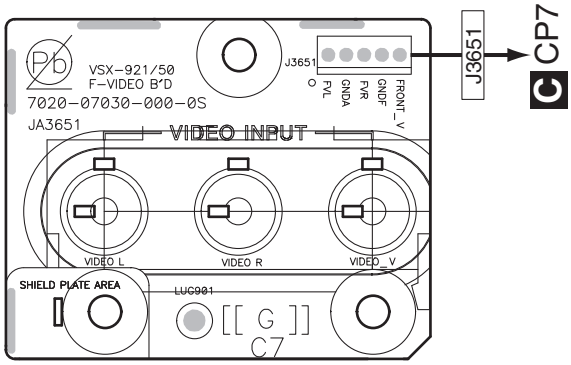


5 6 7 8

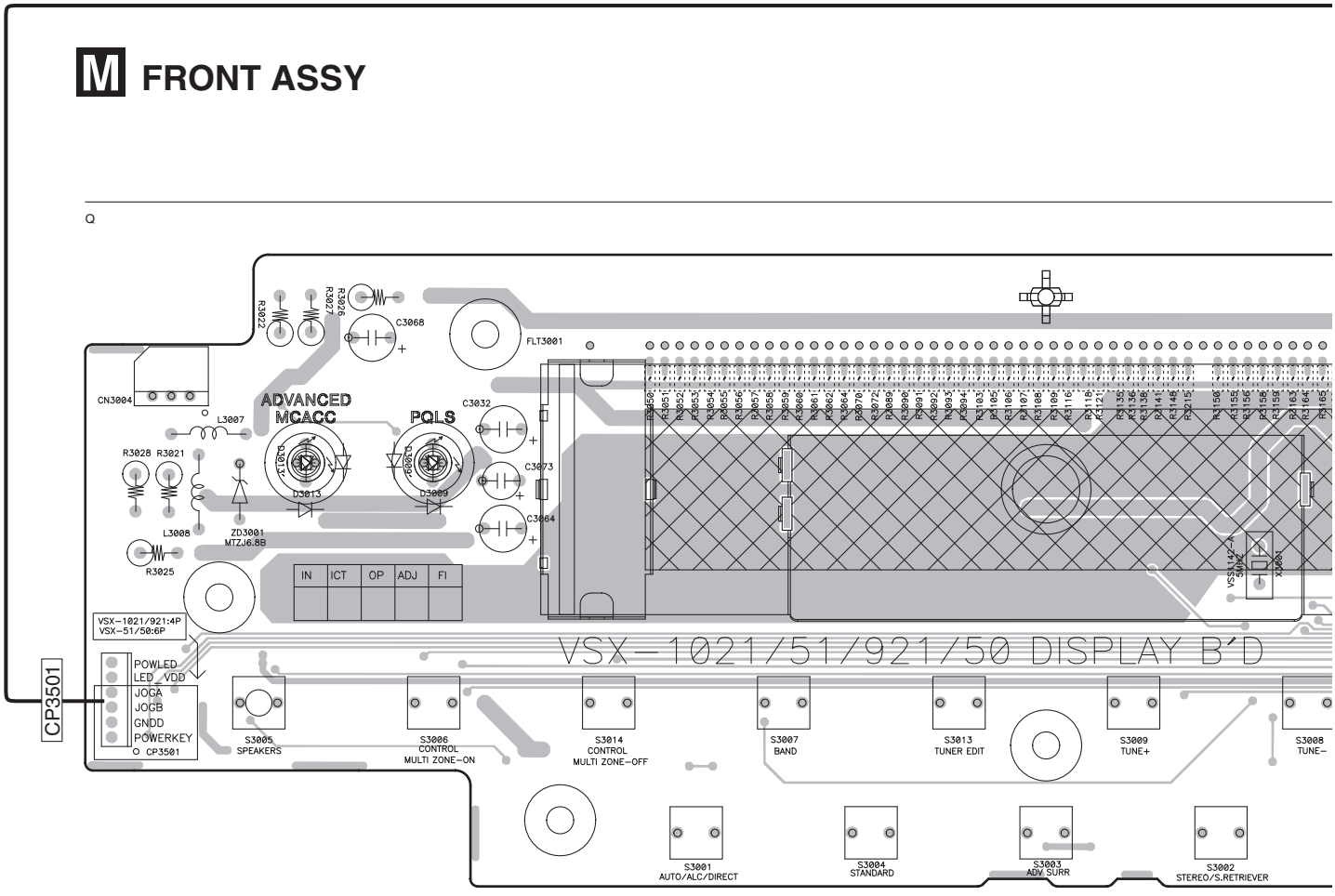
11.7 F-V, FRONT and POWER ASSYS

SIDE A

L F-V ASSY

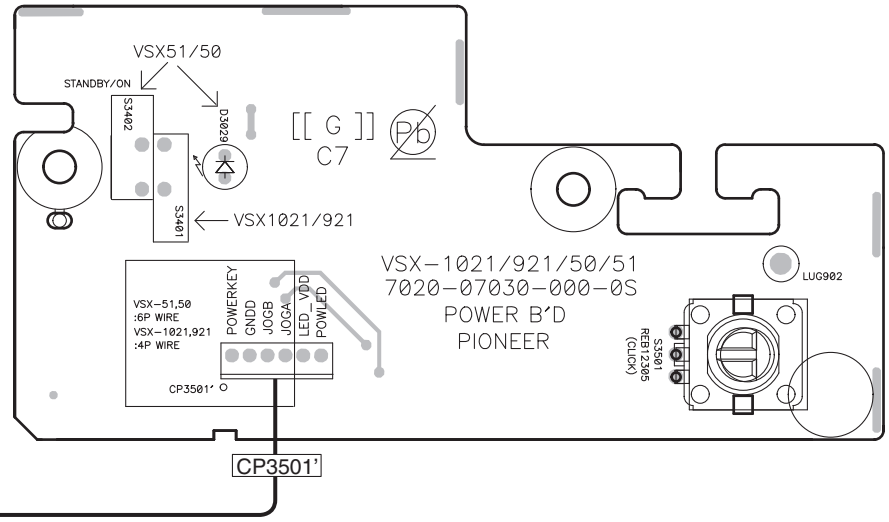


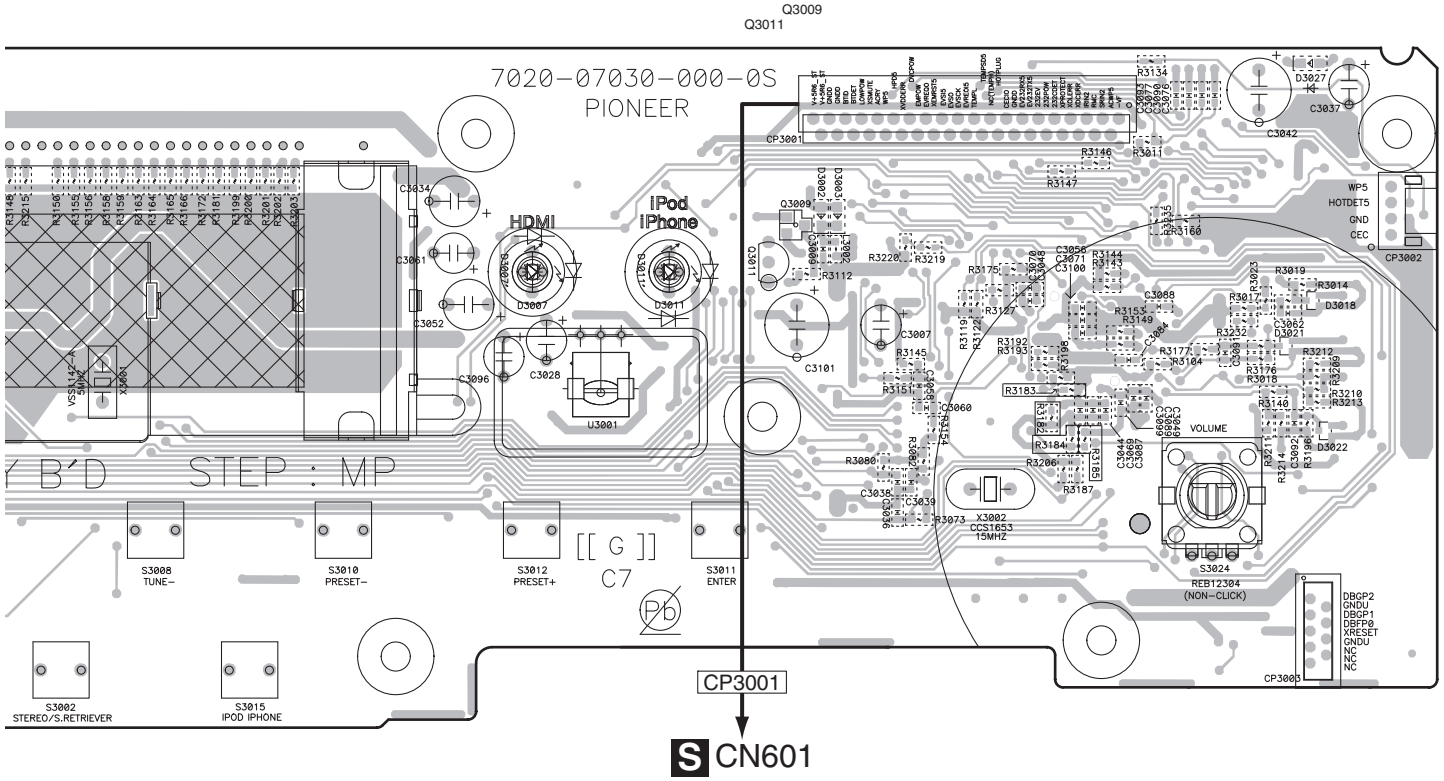
M FRONT ASSY



SIDE A

N POWER ASSY





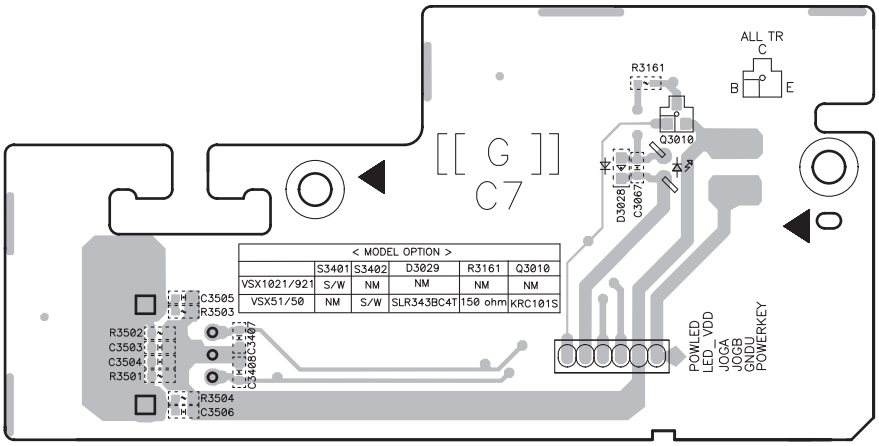
S CN601

M N

SIDE B

N POWER ASSY

Q Q3010



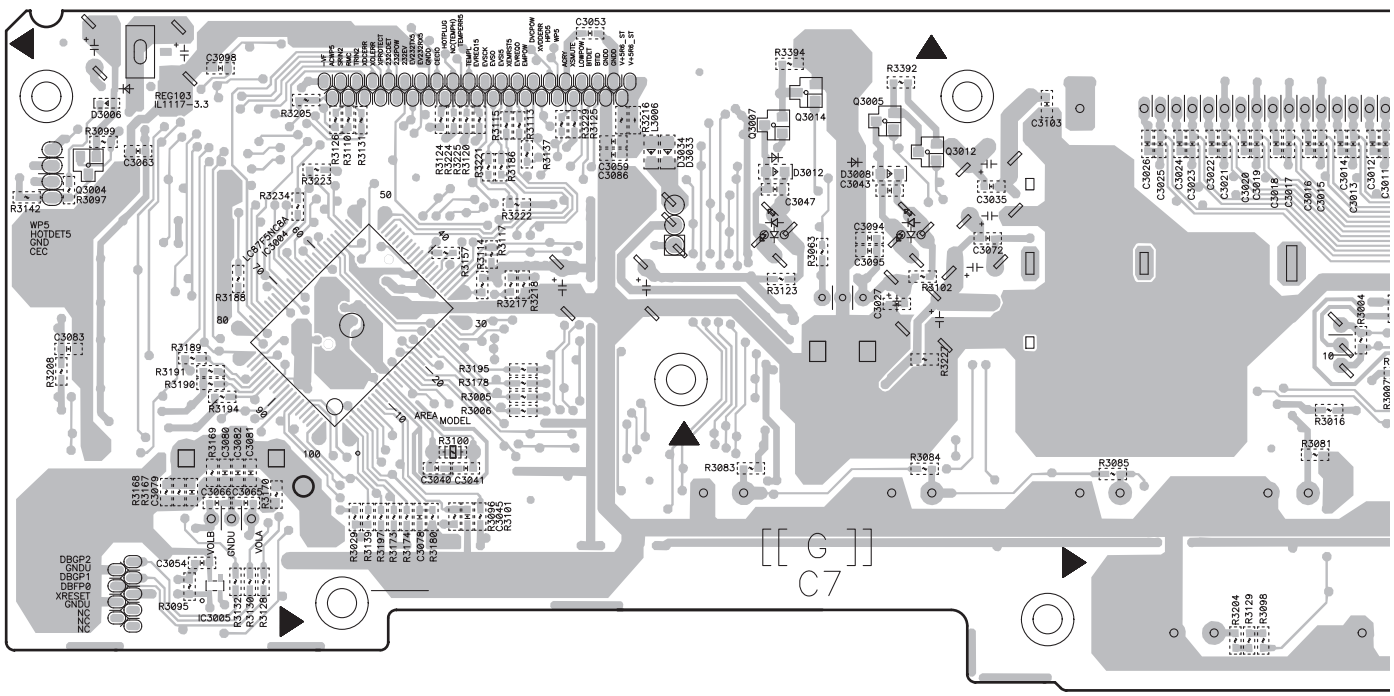
CP3501

M FRONT ASSY

IC REG103 IC3005 IC3004

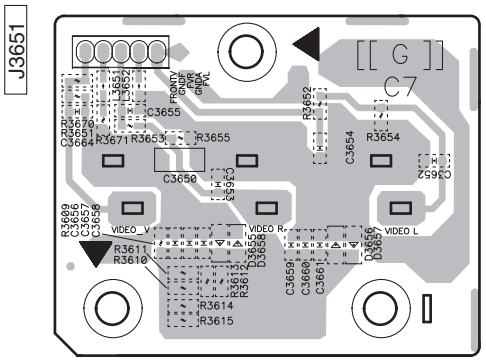
Q Q3004 Q3014 Q3007 Q3005 Q3012

CP3001



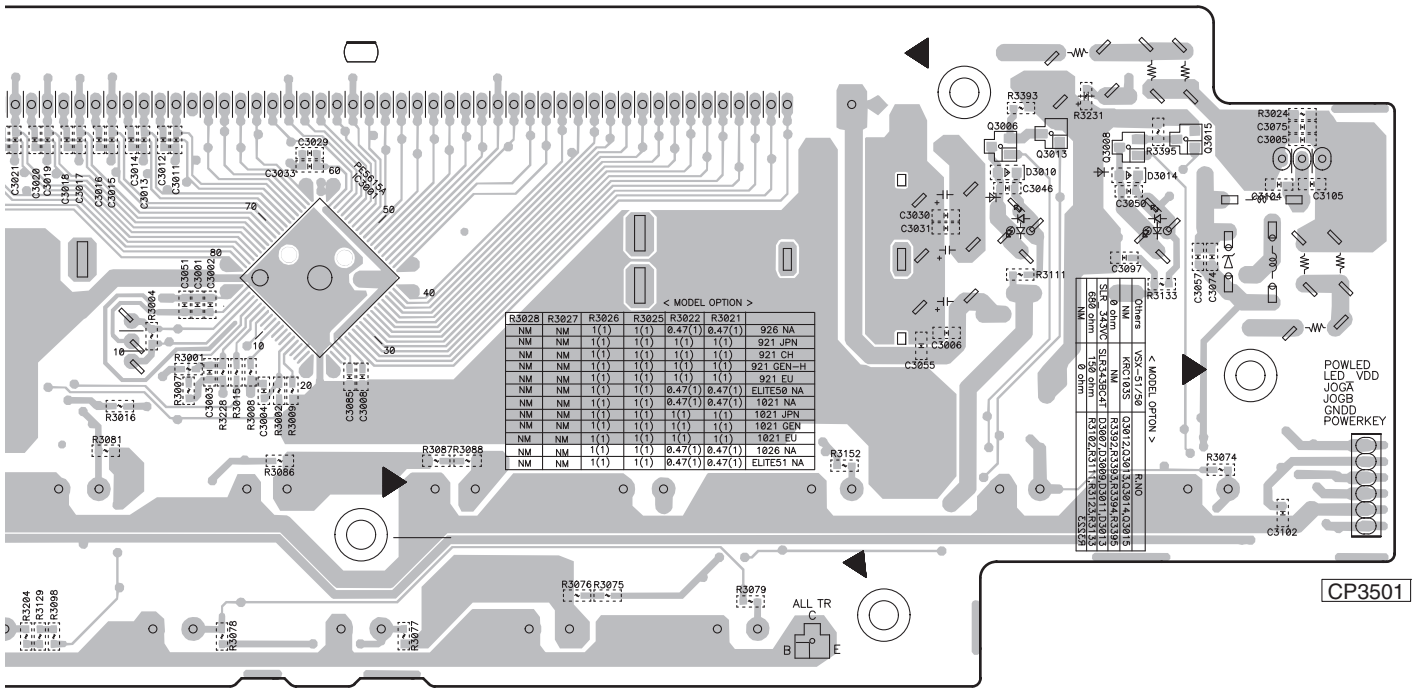
SIDE B

L F-V ASSY



IC3001

Q3006 Q3013 Q3008 Q3015

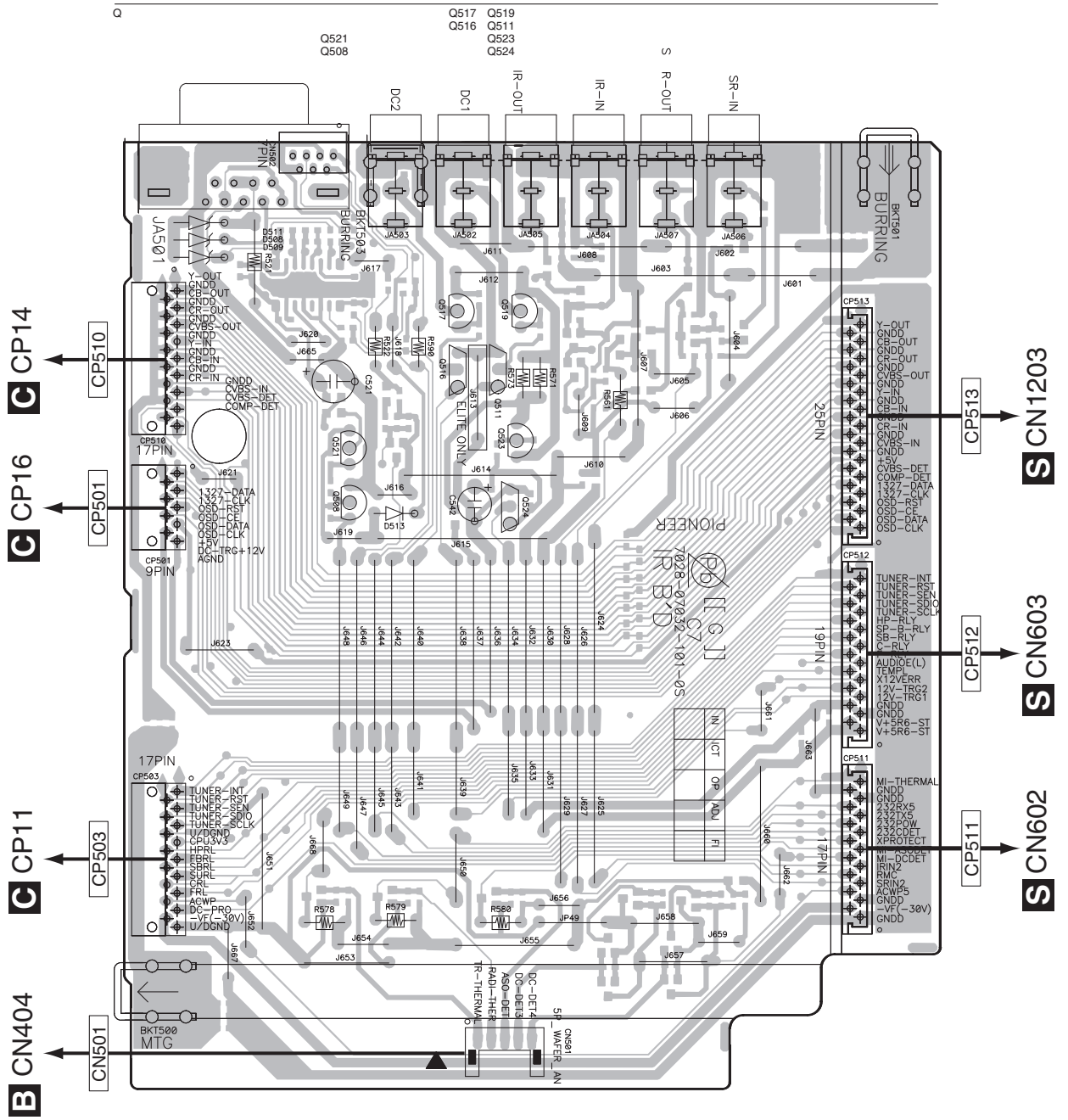


11.8 IR ASSY

SIDE A

SIDE A

O IR ASSY



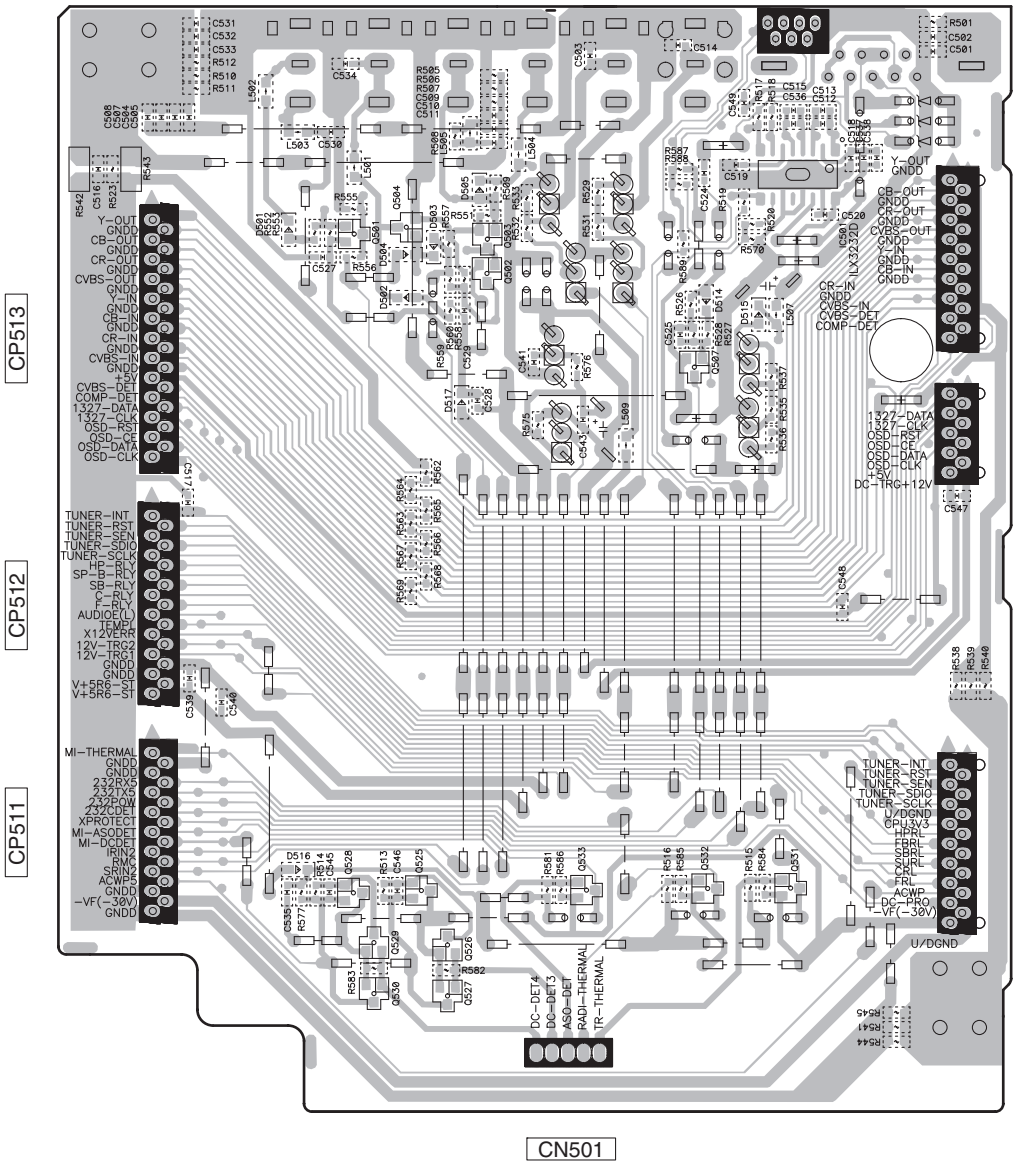
SIDE B

SIDE B

O IR ASSY

IC IC501

Q Q501 Q504 Q503 Q502 Q507
Q528 Q525 Q533 Q532 Q531
Q529 Q526
Q530 Q527

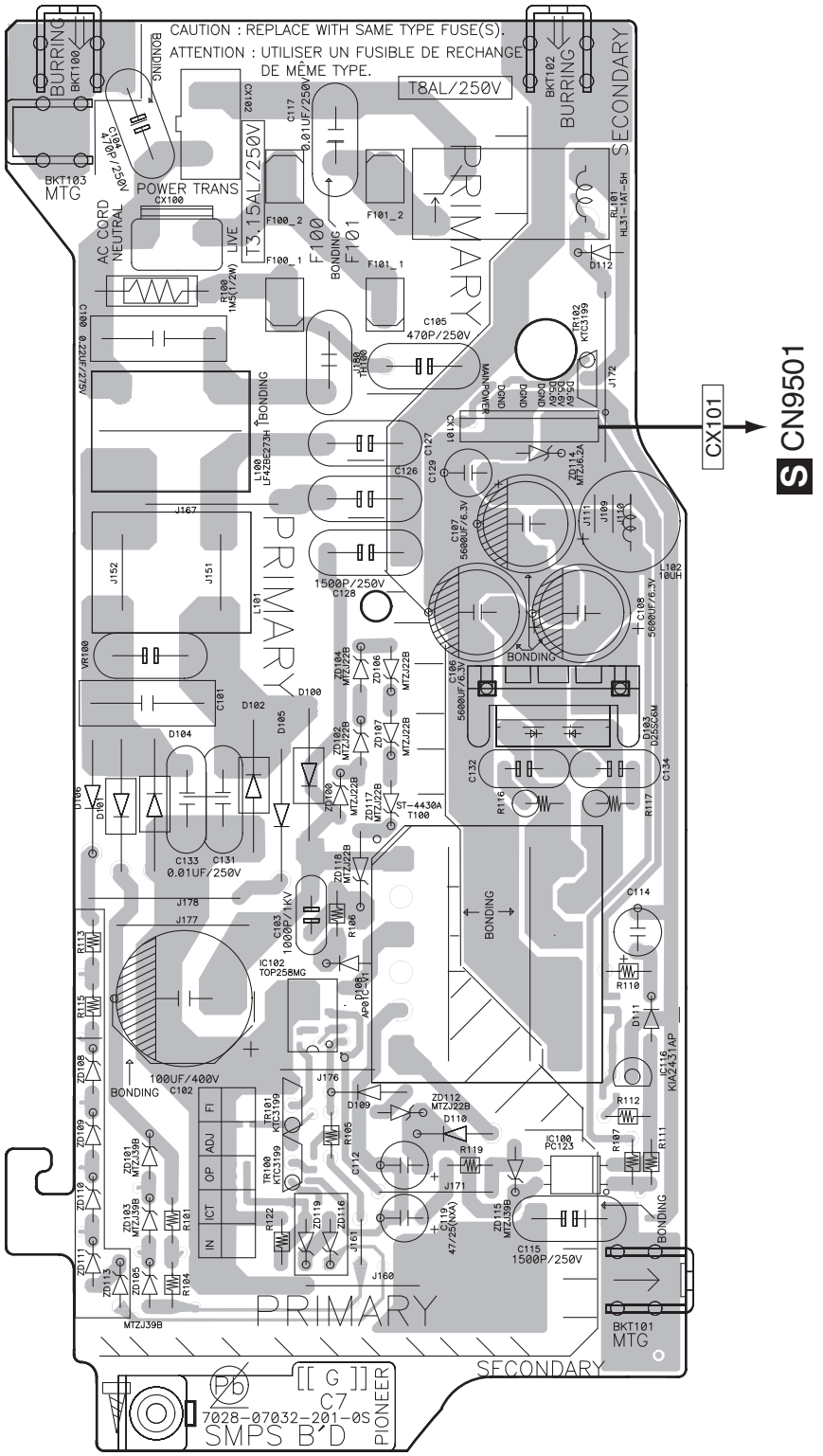


11.9 SMPS ASSY

SIDE A

SIDE A

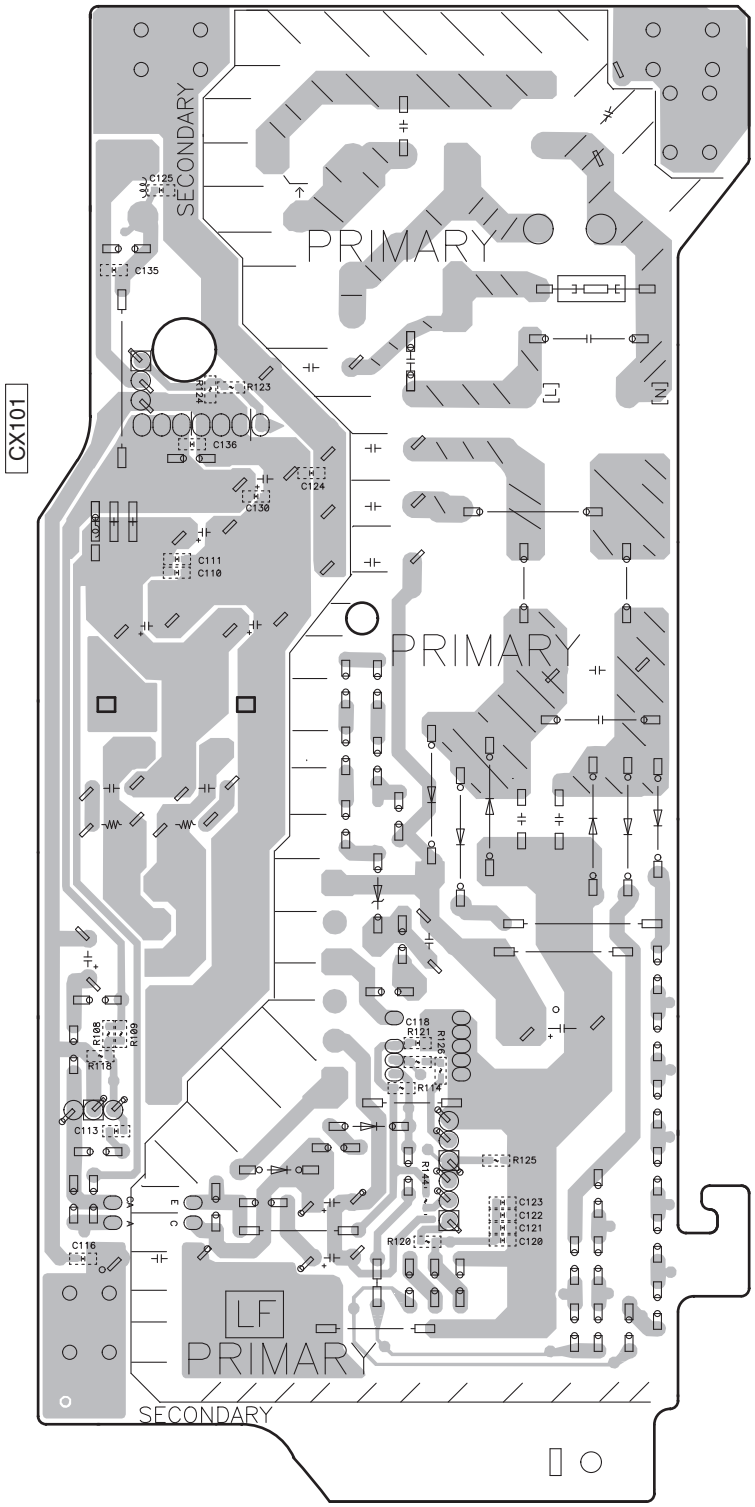
P SMPS ASSY



SIDE B

SIDE B

P SMPS ASSY

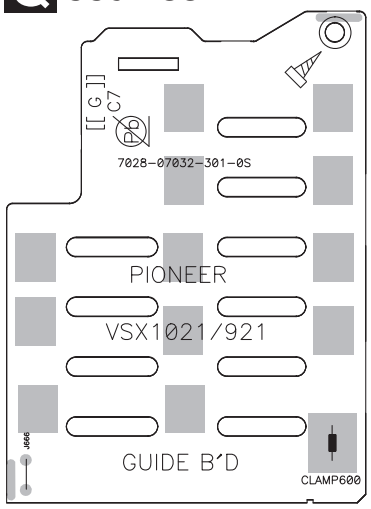


11.10 BR and CCG ASSYS

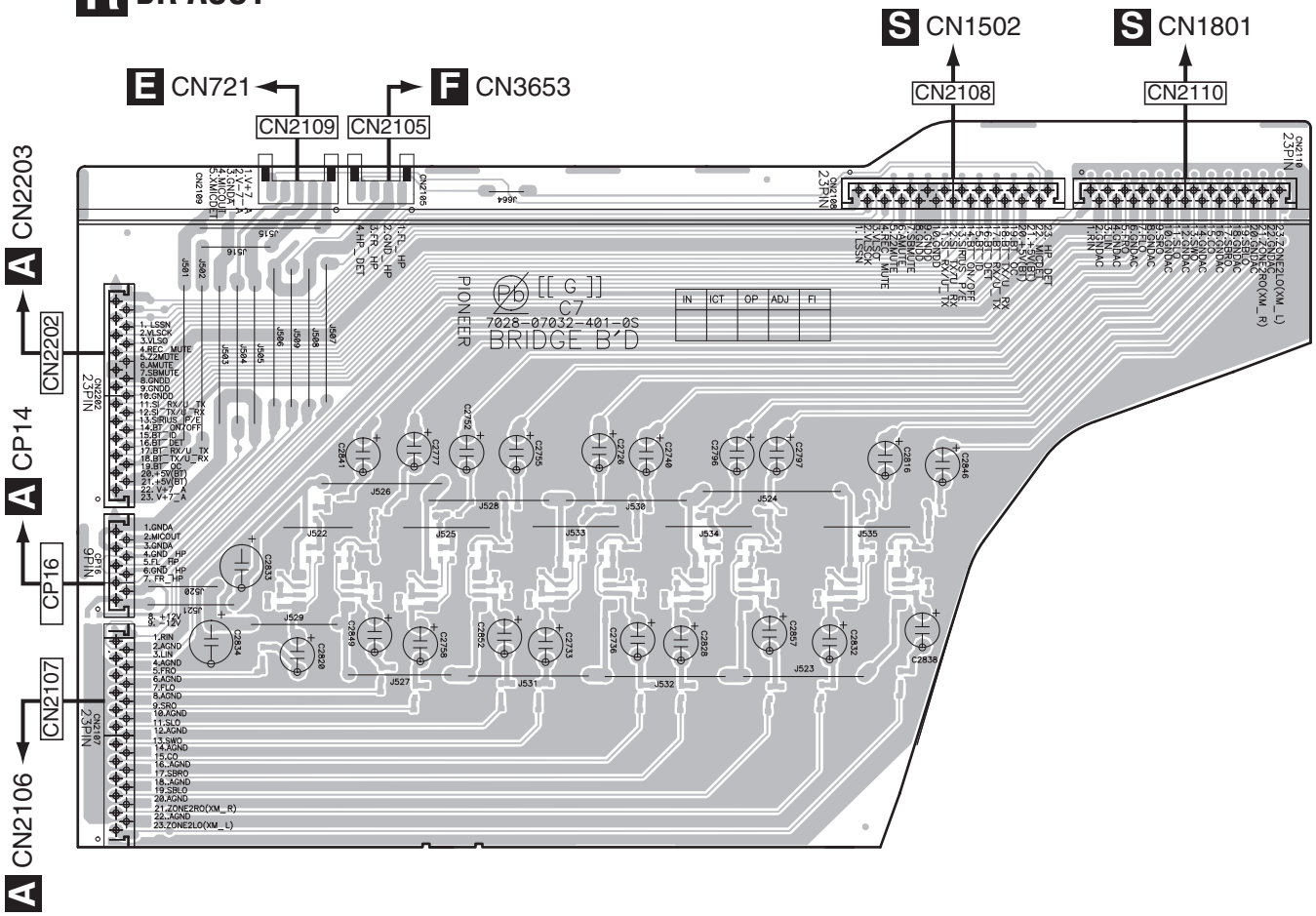
SIDE A

SIDE A

Q CCG ASSY



R BR ASSY

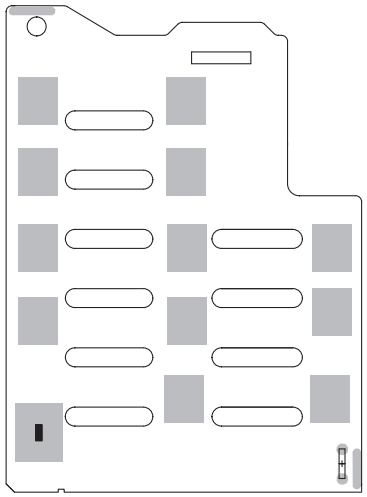


Q R

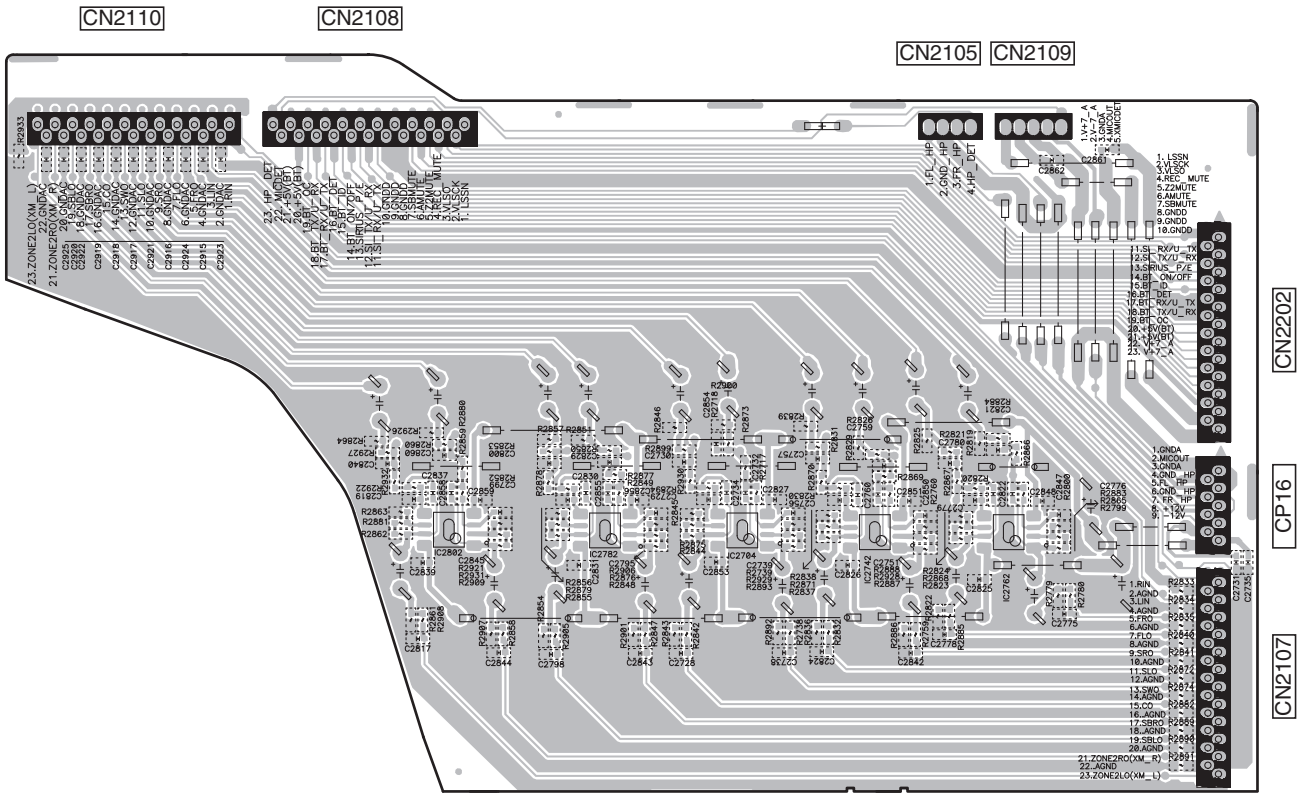
SIDE B

SIDE B

Q CCG ASSY



R BR ASSY

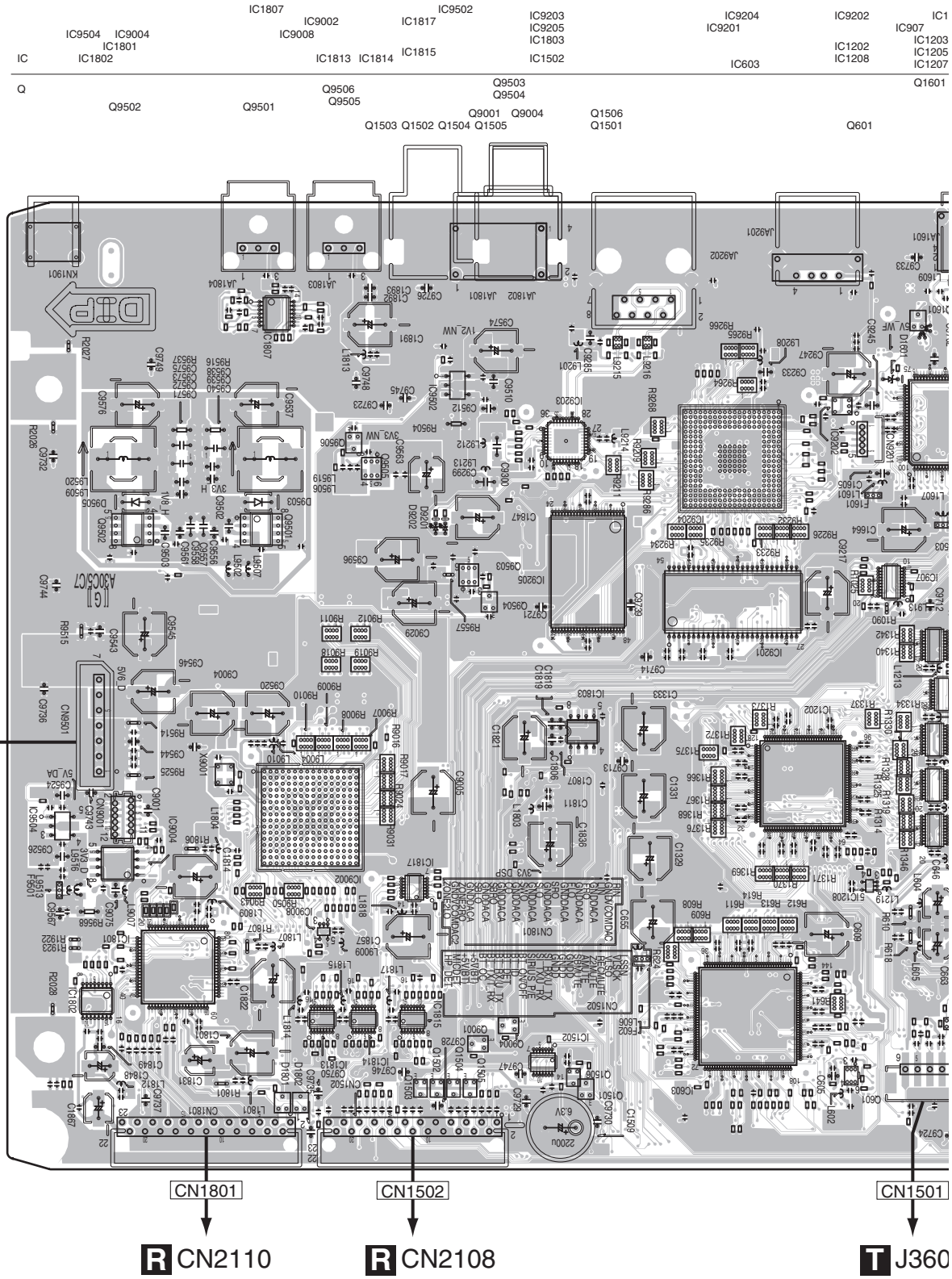


IC	IC2802	IC2782	IC2704	IC2742	IC2762

11.11 D-MAIN ASSY

SIDE A

S D-MAIN ASSY

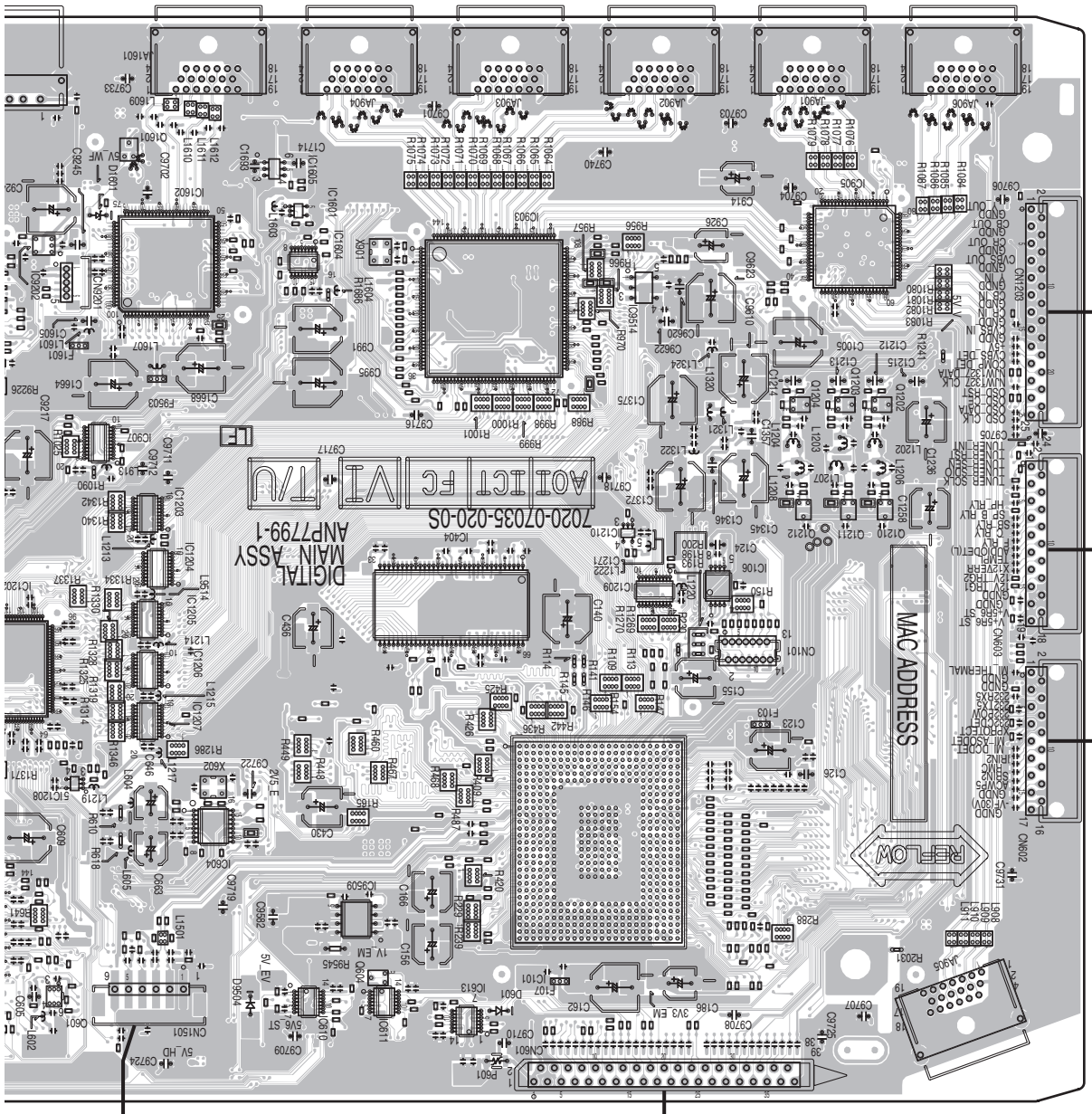


SIDE A

IC9202 IC1602 IC1605 IC903 IC9514 IC905
IC907 IC1601 IC404 IC1210
IC1202 IC1203 IC1204 IC1604 IC9509 IC1209 IC106
IC1208 IC1205 IC1206 IC101
IC1207 IC604 IC610 IC611 IC613

Q1601 Q1204 Q1203 Q1202
Q1212 Q1211 Q1210

Q601 Q604



CN1203 → CP513
CN603 → CP512
CN602 → CP511

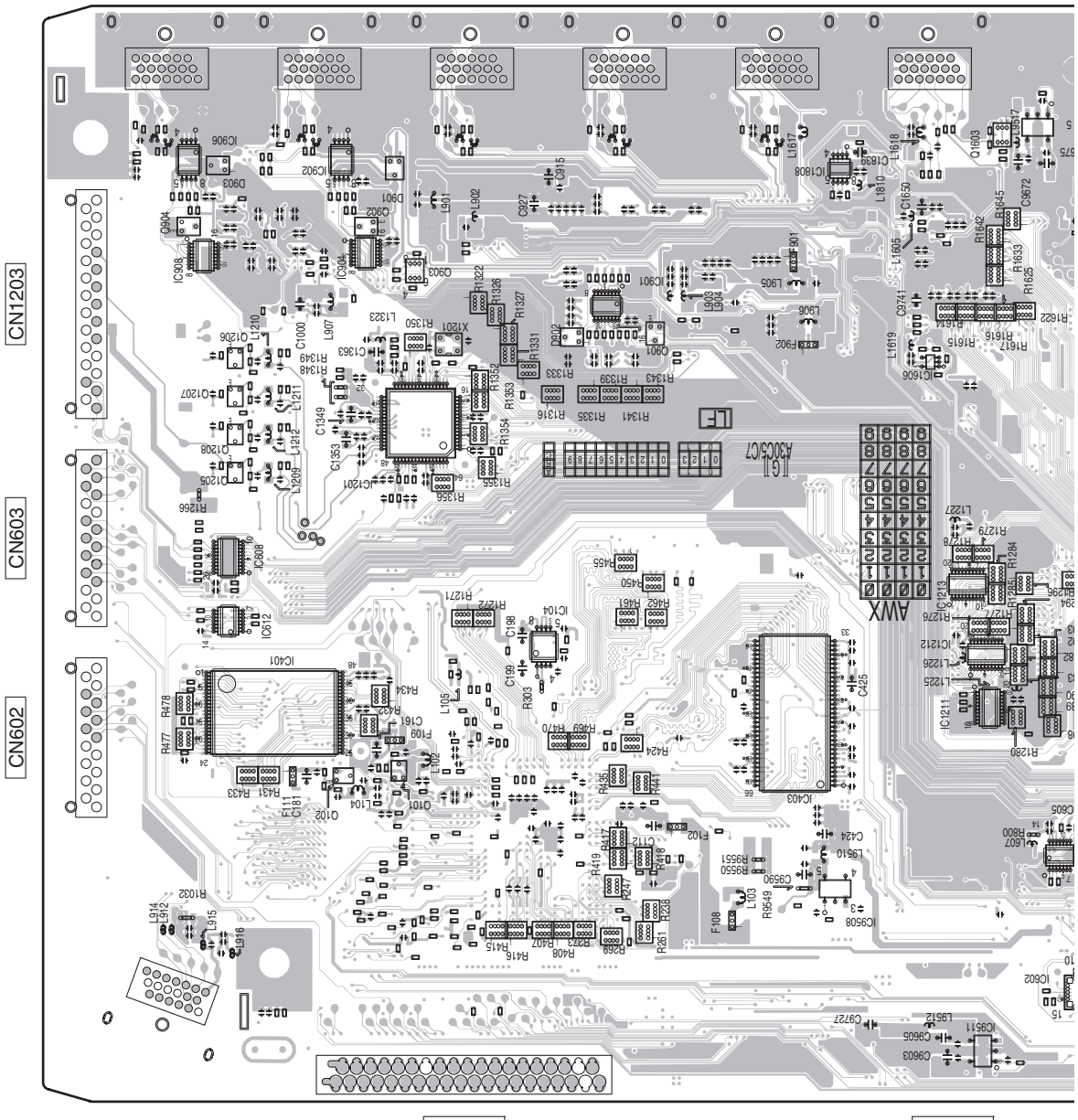
CN1501 → T J3601
CN601 → M CP3001

SIDE B

S D-MAIN ASSY

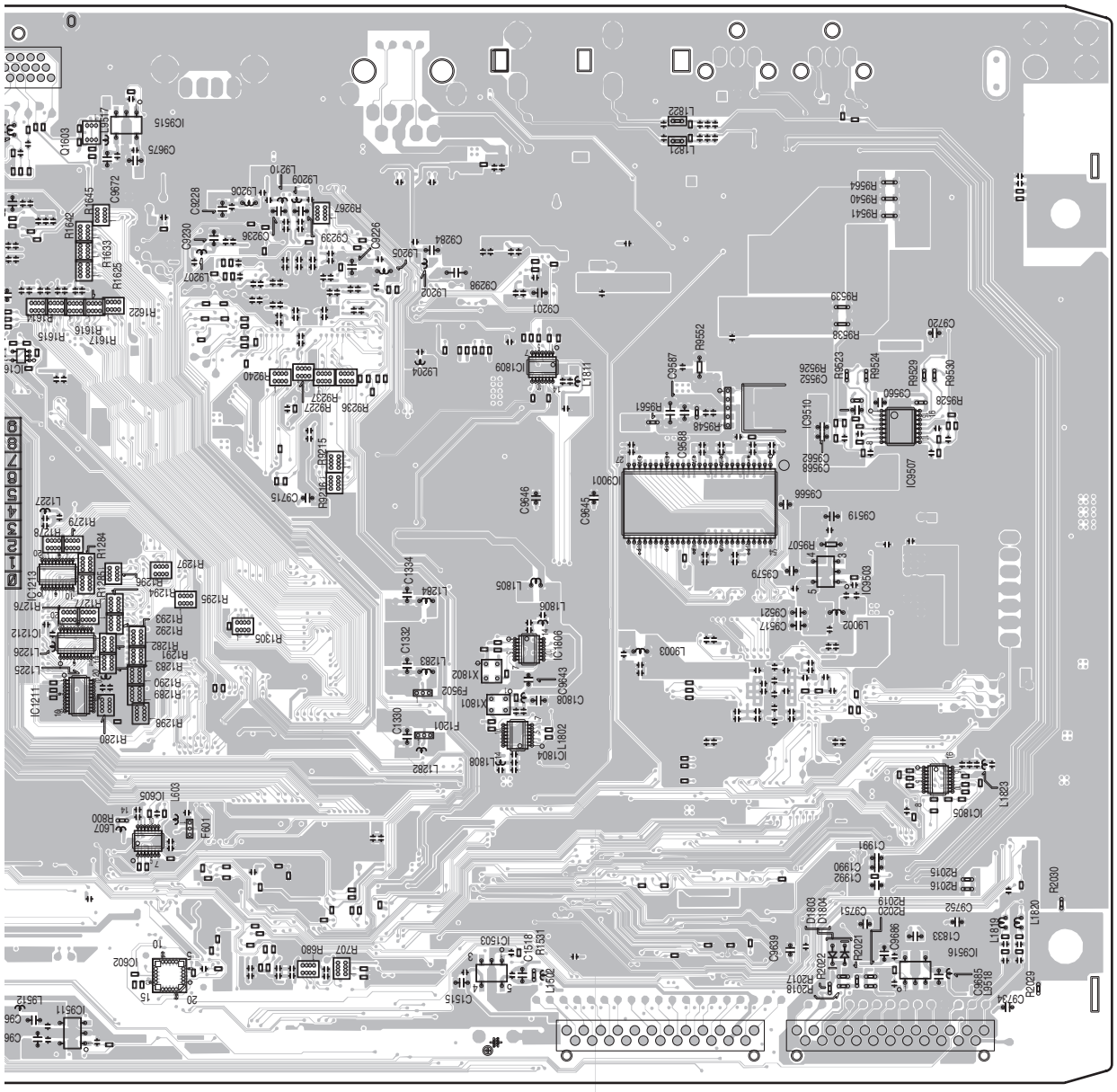
IC: IC906 IC908 IC608 IC612 IC401 IC902 IC904 IC1201 IC901 IC104 IC1808 IC1606 IC1213 IC1212 IC1211 IC9515 IC605 IC602 IC403 IC9508 IC9511

Q: Q904 Q1206 Q1207 Q1208 Q1205 Q902 Q903 Q102 Q101 Q901 Q1603



SIDE B

C1606 IC1213 IC1212 IC1211 IC9511 IC9515 IC605 IC602 Q1603 IC1809 IC1806 IC1804 IC1503 IC9001 IC9510 IC9503 IC9507 IC1805 IC9516

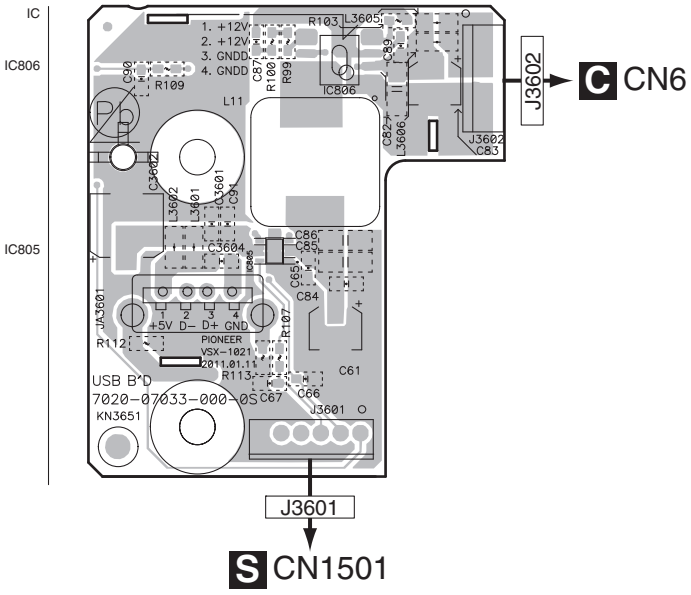


11.12 F-USB and BT ASSYS

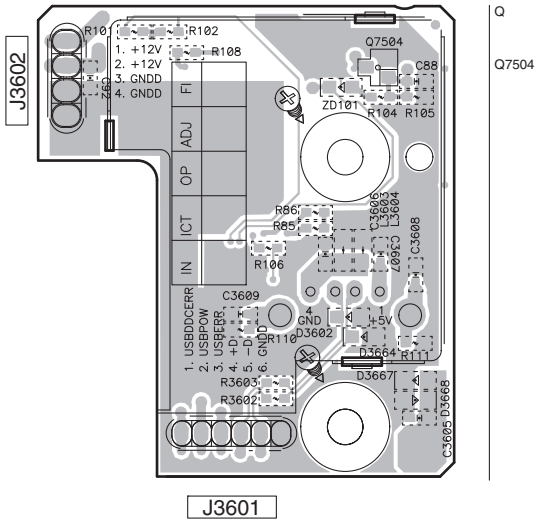
SIDE A

SIDE B

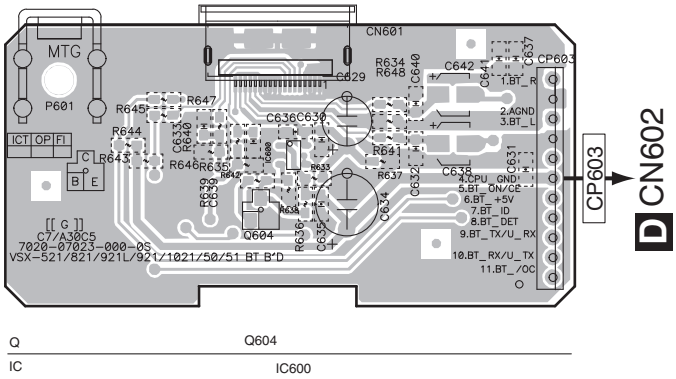
T F-USB ASSY



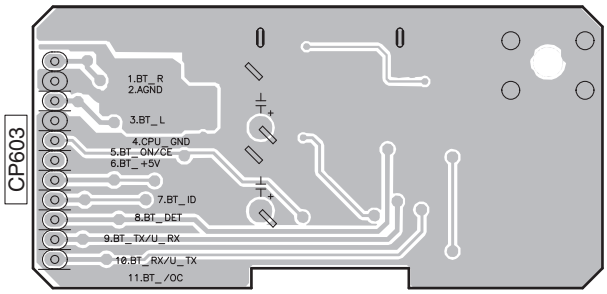
T F-USB ASSY



U BT ASSY



U BT ASSY



T U

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 × 10¹*	→ *561*	*RD1/4PU 5 6 1 J*
47 kΩ	→	*47 × 10³*	→ *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 × 10¹*	→ *5621*	*RN1/4PC 5 6 2 1 F*

● *Meaning of the figures and others in the parentheses in the parts list.*

Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.
IC 301 (A, 91, 111) IC NJM2068V

● *SCHEMATIC DIAGRAM and PCB CONNECTION DIAGRAM → ● 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*		
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****		
FPC	→ *CN9****	*REG*	→ *IC9****	*DZ*	→ *D9****		

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
NSP	1	MAIN ASSY	7025HK1009010-IL
	2	MAIN ASSY	70280702710J0-IL
	2	SW ASSY	7028070272010-IL
	2	G-L ASSY	7028070273010-IL
	2	G-R ASSY	7028070274010-IL
	2	WG-A ASSY	7028070276010-IL
	2	WG-B ASSY	7028070277010-IL
NSP	1	FRONT ASSY	7025HK1009012-IL
	2	FRONT ASSY	7028070301010-IL
	2	POWER ASSY	7028070302010-IL
	2	MIC ASSY	7028070303030-IL
	2	F-V ASSY	7028070304040-IL
	2	HP ASSY	7028070306010-IL
NSP	1	IR ASSY	7025HK1009014-IL
	2	IR ASSY	7028070321010-IL
⚠	2	SMPS ASSY	7028070322010-IL
	2	CCG ASSY	7028070323010-IL
	2	BR ASSY	7028070324010-IL
NSP	1	AUDIO ASSY	7025HK1009013-IL
	2	AUDIO ASSY	7028070311010-IL
NSP	1	D-MAIN ASSY	7025HK1009011-IL
	2	D-MAIN ASSY	7028070351010-IL
NSP	1	F-USB ASSY	7025HK1009015-IL
	2	F-USB ASSY	7028070331010-IL
NSP	1	VIDEO ASSY	7025HK1009018-IL
	2	VIDEO ASSY	7028070261010-IL
NSP	1	BT ASSY	7025HK1009019-IL
	2	BT ASSY	7028070231010-IL
NSP	1	AMP7 ASSY	7025HK1009077-IL
	2	AMP7 ASSY	7028070251010-IL

A AUDIO ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC	2501	BD3473KS2
	IC	2502	J040406600010-IL
	IC	2702,2704	J121456000080-IL
	Q	2001-2006,2314-2320	J522020011210-IL
	Q	2401	J5023209Y0010-IL
	Q	2402	J5001281Y0010-IL
	Q	2701	J520103S00210-IL
	Q	2702	J522101411210-IL
	D	2401,2402	K06607R54P400-IL
	D	2501,2502	K005041480030-IL

MISCELLANEOUS

JA	2101	TER,RCA 9PIN	G607902AA550Y-IL
JA	2102	TER,RCA 9PIN	G607902AA560Y-IL
CN	5	CN,WAFER	L109012522710-IL
CN	13	CN,WAFER	L109012521110-IL
CN	14	CN,WAFER	L109012520910-IL
CN	2103	CN,WIRE 2MM	L002151132621-IL
CN	2106,2203	CN,WAFER	L109012522310-IL

CAPACITORS

C	2411,2412		D040221083110-IL

B AMP7 ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	Q	401,413,425,437	J5001024Y0050-IL
	Q	403,405,415,427	J520254010010-IL
	Q	406,418,430,442	J522255510010-IL
	Q	407,408,417,419	J5000992F0050-IL
	Q	412,424,436,448	J5023206Y0050-IL
	Q	420,431,432,443	J5000992F0050-IL
	Q	439,451,463,475	J520254010010-IL
	Q	444,455,456,467	J5000992F0050-IL
	Q	449,461,473	J5001024Y0050-IL
	Q	454,466,478	J522255510010-IL
	Q	460,472,484	J5023206Y0050-IL
	Q	468,479,480	J5000992F0050-IL
	D	402-404,408-410	K000013300520-IL
	D	414-416,420-422	K000013300520-IL
	D	426-428,432-434	K000013300520-IL
	D	438-440	K000013300520-IL
	D	9401,9404,9407,9410	K06005R134520-IL
	D	9402,9403,9405,9406	K06004R344520-IL
	D	9408,9409,9411,9412	K06004R344520-IL
	D	9413,9416,9419	K06005R134520-IL
	D	9414,9415,9417,9418	K06004R344520-IL
	D	9420,9421	K06004R344520-IL

MISCELLANEOUS

Mark	No.	Description	Part No.
	VR	401-407 VR,SEMI CARBON MOLD	C541102315000-IL
	CN	404 CN,WIRE 2MM	L002600050050-IL
	CN	9401 CN.WAFER 2.0MM	L101200101310-IL
	CN	9402 CN.WAFER 2.5MM	L102526700500-IL
	CN	9403 CONNECTOR (10P)	L101200101010-IL
	CN	9405 CONNECTOR (3P)	L102526700300-IL
		400,401 BRACKET	4010210196100-IL
	TP	401-407 CN.WAFER 2.0MM	L101200100320-IL

RESISTORS

Mark	No.	Description	Part No.
	R	404,408,445,451	C060075265050-IL
⚠	R	406,450,494,537	F320184710050-IL
⚠	R	415,439,458,483	C060010165060-IL
⚠	R	424,425,430,431	N113136647820-IL
	R	434,478,521,564	C060033265050-IL
	R	441,485,528,571	C060012265050-IL
	R	443,487,530,573	C060047065060-IL
⚠	R	467,468,474,475	N113136647820-IL
	R	489,495,534,538	C060075265050-IL
	R	493	C060033065050-IL
⚠	R	502,526,545,551	C060010165060-IL
⚠	R	511,512,517,518	N113136647820-IL
⚠	R	554,555,561,562	N113136647820-IL
⚠	R	569,588,612,631	C060010165060-IL
	R	577,581,620,624	C060075265050-IL
⚠	R	580,623,666	F320184710050-IL
⚠	R	597,598,603,604	N113136647820-IL
	R	607,650,694	C060033265050-IL
	R	614,657,700	C060012265050-IL
	R	616,659,702	C060047065060-IL
⚠	R	640,641,646,647	N113136647820-IL
⚠	R	655,674,698	C060010165060-IL
	R	663,667	C060075265050-IL
⚠	R	683,684,689,690	N113136647820-IL

CAPACITORS

Mark	No.	Description	Part No.
	C	402,414,417,430	D00410107D051-IL
	C	406,422,438,454	D00022106D051-IL
	C	412,428,444,460	D004561277051-IL
	C	419	D04010108C240-IL
	C	433,446,449,462	D00410107D051-IL
	C	465,478,481,494	D00410107D051-IL
	C	470,486,502	D00022106D051-IL
	C	476,492,508	D004561277051-IL
	C	497,510	D00410107D051-IL
	C	513,514	D040331081050-IL

C MAIN ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
⚠	IC	1	J126781200040-IL
⚠	IC	2	J126791200060-IL
⚠	IC	3	J126780500110-IL
⚠	IC	4	J126790500070-IL
	Q	1-6	J520102371210-IL
	Q	8-13	J522102371210-IL
	Q	14,15	J5023198Y0000-IL
	Q	16	J5000992F0050-IL
	Q	17	J5000916Y0050-IL
	D	1-6,19	K005041480030-IL
⚠	D	7	K047100600010-IL
	D	8	K000013300520-IL
⚠	D	10-13	K000400700010-IL
	D	23	K000400700010-IL
	D	26-29	RB551V-30
⚠	D	4912	K047604000020-IL
	D	9001	K06003R344520-IL
	D	9002	K06005R144520-IL
	D	9024,9025	K06012R044520-IL

MISCELLANEOUS

Mark	No.	Description	Part No.
	L	1-7 COIL,FILTER-INDUCTOR	D330900001330-IL
	JA	101,102 TER,BOARD SCREW 8P	G614108V1010M-IL
	JA	104 TER,BOARD SCREW 2P	G611201A0200Y-IL
	RY	1 RELAY	G680240202030-IL
	RY	2-6 RELAY	G680120503020-IL
	CN	1 CN,WIRE	L000231050040-IL
	CN	2 CN,WIRE	L000311020030-IL
	CN	3 CN,WIRE	L002241102620-IL
	CN	6 CN.WAFER 2.5MM	L102526700400-IL
	CN	9001 CONNECTOR	L108353280360-IL
	CN	9002 CN.WAFER 3.96MM	L104353130360-IL
	CN	9003 CONNECTOR (3P)	L102526700300-IL
	CN	9005 CN,WAFER	L109012511510-IL
	CN	9006,9008,9011,9014 CN,WAFER	L109012511710-IL
	CN	9007 CN.WAFER 2.0MM	L101200100510-IL
	CN	9009,9015 CN,WAFER	L109012511110-IL
	CN	9010 CN,WIRE	L002151050160-IL
	CN	9016 CN.WAFER	L109012510910-IL
	CN	9017 CN.WAFER	L109012512710-IL

RESISTORS

Mark	No.	Description	Part No.
	R	5,7,9,11	C060010065050-IL
	R	6,8,10,12	C060010066050-IL
	R	13,15,17,25	C060010065050-IL
	R	14,16,18	C060010066050-IL
	R	28-30	C060022265050-IL

Mark	No.	Description	Part No.
	R	33,34,41,42	C060R22065050-IL
	R	35,36	C060047363050-IL
	R	37,38,47	C060033166050-IL
	R	39,40	C060015165050-IL
	R	64	C060022063050-IL
	R	66	C0604R7065050-IL

CAPACITORS

	C	1,3,4,6	D02047306C060-IL
	C	8,9,11,12	D02047306C060-IL
	C	14,16,17,19	D02047306C060-IL
	C	21,22,24,25	D02047306C060-IL
	C	55,58	D040103089000-IL
	C	61,64	D02010406C060-IL
	C	65-68	D02010407H080-IL
	C	76	D040682083000-IL
	C	81-83	D02047306C060-IL
	C	84,85	D040472084020-IL
	C	101	D040331088230-IL

D SW ASSY

SEMICONDUCTORS

	Q	602,603	J522020011210-IL
	D	9604,9605	K06606R24P400-IL

MISCELLANEOUS

	L	601 BEAD,COIL	7610010030000-IL
	JA	602 JACK,DIN	G403515397000-IL
	JA	807 TER,RCA 1PIN	G600107A0000Y-IL
	CN	602 CN.WAFER 2.0MM	L101100041110-IL
	CN	9601 CN,WAFER	L109012521510-IL
	CN	9602 CN,WAFER	L109012521710-IL
		601 BRACKET	4010210196100-IL
		9601 TUNER,FM/AM	E903004100780-IL

E HP ASSY

SEMICONDUCTORS

	D	705,706	K005041480030-IL

MISCELLANEOUS

	JA	701 JACK,D6.5	G402PJ612AG1Y-IL
	CN	721 CN,WIRE 2MM	L002361042420-IL

F MIC ASSY

SEMICONDUCTORS

	IC	3652	J121458000020-IL
	D	3659,3670,3671	K06605R14P400-IL

MISCELLANEOUS

	L	3654,3655 CHIP BEAD	D340160811210-IL
	JA	3654 JACK,D3.5	G401PJ354H40Y-IL
	CN	3653 CN,WIRE 2MM	L002321050050-IL

G G-L ASSY

There is no service parts.

H G-R ASSY

There is no service parts.

I WG-A ASSY

There is no service parts.

J WG-B ASSY

There is no service parts.

K VIDEO ASSY

SEMICONDUCTORS

	IC	905	NJW1327FU1
	IC	1007	PDC162A
	IC	1008	NJM2505AF
	Q	1012,1084	J520015301210-IL
	Q	1013	J522305200050-IL
	Q	1082	J522101411210-IL
	Q	1083	J522020011210-IL
	Q	1089	J5023209Y0010-IL
	D	1082,1084	K005041480030-IL
	D	8451	K005021700200-IL
	D	9607	K06603R94P400-IL

MISCELLANEOUS

	L	1002 COIL,FILTER-INDUCTOR	D330330700520-IL
	JA	1000 TER,RCA 9PIN	G607902AD013Y-IL
	JA	1001 TER,RCA 9PIN	G607902AD132Y-IL
	X	1003 CRYSTAL	E80014R318080-IL
	CN	1 CN,WAFER	L109012521710-IL
	CN	2 CN,WAFER	L109012521110-IL

L F-VIDEO ASSY

SEMICONDUCTORS

	D	3656,3657	K005041480030-IL

MISCELLANEOUS

	L	3652 CHIP BEAD	D340160811210-IL
	J	3651 CN,WIRE 2MM	L002401050070-IL
	JA	3651 TER,RCA 3PIN	G60603W0192GD-IL

M FRONT ASSY

SEMICONDUCTORS

⚠	IC	103	J126111700041-IL
	IC	3001	J020561500010-IL
	IC	3004	8952921100030-IL
	IC	3005	J126484200010-IL
	Q	3004	J544513200010-IL
	Q	3005-3008	J522102411210-IL
	Q	3009	J522104311210-IL
	Q	3011	J5001266G0050-IL
	D	3002,3003,3027,3033	K005041480030-IL
	D	3006	K125751400010-IL
	D	3007,3009,3011,3013	K500052009011-IL
	D	3021	K005021700200-IL
	D	3034	K005041480030-IL

Mark	No.	Description	Part No.
	D 9301		K06006R844520-IL
	MISCELLANEOUS		
	L 3002	COIL,BEAD	D340160833000-IL
	L 3007	COIL,FILTER-INDUCTOR	D330100700520-IL
	L 3008	COIL	D330101001020-IL
	H 9999	FL HOLDER	4320211016000-IL
	V 3001	DISPLAY,FLT	K530166400010-IL
	S 3001-3015	SWITCH	G180501000010-IL
	S 3024	SW,ENCODER	G121123040011-IL
	X 3001	RESONATOR,CERAMIC (5 MHz)	E830500000020-IL
	X 3002	CRYSTAL (15 MHz)	E80015R000020-IL
	CN 3001	CN.FPC 1.0MM	L130100113910-IL
	CN 3004	CONNECTOR (3P)	L102526803010-IL
	CN 3501	CN,WIRE 2MMC	L002700040120-IL
	U 3001	MODULE,REMOCON	E940349003810-IL
	RESISTORS		
	R 3021,3022		C060R47065050-IL
	R 3025,3026		C060001065060-IL
	CAPACITORS		
	C 3007,3061,3096		D040221081060-IL
	C 3042,3101		D040102081070-IL

N POWER ASSY

	MISCELLANEOUS		
	S 3401	SWITCH	G180501000010-IL
	S 3501	SW,ENCODER	G121123050021-IL

O IR ASSY

	SEMICONDUCTORS		
	Q 501		J520015301210-IL
	Q 502		J520103S00210-IL
	Q 503,504		J522102411210-IL
	Q 526,527,529-533		J522305200050-IL
	D 501-504,516,517		K005041480030-IL
	D 513		K000013300520-IL
	MISCELLANEOUS		
	L 501-503	FERRITE BEAD	D340160831210-IL
	L 504	FERRITE BEAD	D340160861020-IL
	L 505	FERRITE BEAD	D340160862410-IL
	JA 504-507	JACK,D3.5	G401PJ3080100-IL
	CN 501	CN.WAFER 2.0MM	L101200100520-IL
	CN 502	CN.FPC 1.0MM	L130100150750-IL
	CN 9501	CN,WAFER	L109012520910-IL
	CN 9503,9510	CN,WAFER	L109012521710-IL
	CN 9511	CN,WAFER	L109012511710-IL
	CN 9512	CN,WAFER	L109012511910-IL
	CN 9513	CN,WAFER	L109012512510-IL
	500	BRACKET	4010210196000-IL
	501,503	BRACKET	4010210196100-IL

P SMPS ASSY

	SEMICONDUCTORS		
⚠	IC 100		K614123000010-IL
⚠	IC 102		G200258000010-IL
⚠	IC 116		J126243118010-IL
	Q 100-102		J5023199Y0010-IL
⚠	D 100-102,104		K040000100010-IL
⚠	D 103		K120256000010-IL
	D 105,106,109,110		K000400700010-IL
	D 108		K050000015000-IL
	D 112		K000013300520-IL
	D 9100,9102,9104,9106		K06022R044520-IL
	D 9101,9103,9105,9108		K06039R044520-IL
	D 9107,9110,9112,9117		K06022R044520-IL
	D 9109,9115		K06039R044520-IL
	D 9114		K06006R244520-IL
	D 9118		K06022R044520-IL
	MISCELLANEOUS		
⚠	L 100	COIL,LINE FILTER	D320201405510-IL
	L 102	COIL,CHOKE	D300780001010-IL
⚠	RY 101	RELAY	G680050102020-IL
⚠	T 100	TRANS,SWITCHING	E060283405510-IL
⚠	CN 100	CONNECTOR	L108202000220-IL
	CN 101	CN,WIRE	L000211072250-IL
⚠	CN 102	CN.WAFER 7.92MM	L108011430210-IL
	100,102	BRACKET	4010210196100-IL
	101,103	BRACKET	4010210196000-IL
⚠	FU 100	FUSE GLASS TUBE 20MM	N751503151160-IL
⚠	FU 101	FUSE GLASS TUBE 20MM	N751508001160-IL
	RESISTORS		
⚠	R 100		C060015564520-IL
	R 101,104		C060022563520-IL
	R 105,113,115		C060010563520-IL
	R 106		C00001006P520-IL
	R 107		C00005606P520-IL
	R 111		C00003326P520-IL
	R 112		C00005626P520-IL
	R 119		C0006R806P520-IL
	R 122		C00004746P520-IL
	CAPACITORS		
⚠	C 100		D02122407H010-IL
	C 102		D04010108K000-IL
	C 103		D00810207Q010-IL
⚠	C 104,105		D00847127H010-IL
	C 106-108		D041562081001-IL
⚠	C 115,128		D00815248H010-IL
⚠	C 117		D008103589010-IL
	C 129		D040471081070-IL
	C 131,133		D008103589010-IL

Q CCG ASSY

There is no service parts.

R BR ASSY

	SEMICONDUCTORS		
	IC 2704,2742,2762,2782		J121456000080-IL
	IC 2802		J121456000080-IL
	MISCELLANEOUS		
	CN 16	CN.WAFER	L109012510910-IL
	CN 2105	CN.WAFER 2.0MM	L101200100420-IL
	CN 2107,2108,2110,2202	CN,WAFER	L109012512310-IL
	CN 2109	CN.WAFER 2.0MM	L101200100520-IL

Mark	No.	Description	Part No.

S D-MAIN ASSY

SEMICONDUCTORS

	IC	104	NJM12904V
	IC	401	8952921100011-IL
	IC	403,404	H5DU2562GTR-J3C
	IC	602	341S2164
	IC	603	PE7008A
	IC	604	PDJ019A
	IC	605,613,1804	TC74VHC08FK
	IC	608	TC74VHCT541AFK
	IC	610,1806	TC74VHC126FK
	IC	611,1809	TC74VHCT125AFK
	IC	612,1502	TC74VHCT08AFKS1
	IC	901	TC74VHC153FK
	IC	902,906	S-24CS02AFT
	IC	904,908	TC7MB3257FK
	IC	905	CXB1444R
	IC	907	TC74VHC541FK
	IC	1201	ADV7181CBSTZ
	IC	1202	ABT1015
	IC	1203-1207	TC74VCX541FK
	IC	1208	TC7SA08FU
	IC	1209,1211-1213	TC74LCX541FK
	IC	1210	TC7SZ125FU
	IC	1604,1805,1814,1815	TC74VHC157FK
⚠	IC	1605	AAT4614AIGU-2
	IC	1801	AK4588VQ
	IC	1802	AK4388ET
	IC	1803	IDT6V60008DCG
	IC	1807	J040740400270-IL
	IC	1808	TC7WHU04FU
	IC	1817	TC74VHC125FK
	IC	9001	IS42S16400F-6TL
	IC	9004	8952921100021-IL
	IC	9008	TC7SH126FU
	IC	9201	MD56V82160-6TAZ
⚠	IC	9202	BD2226G
	IC	9203	LAN8700C-AEZG
	IC	9205	8952921100040-IL
⚠	IC	9502,9503,9514	S-1172B12-U5
⚠	IC	9504,9511,9515	S-1170B50UC-OUJ
⚠	IC	9507	MB39C011A
⚠	IC	9508	S-1170B25UC-OTK
⚠	IC	9509	MM1701WH
	Q	601	UMD2N
	Q	604,1502-1505	J520012400010-IL
	Q	901,902,904,1501	J522011400020-IL
	Q	903	UM6K1N
	Q	1202-1208,1506	2SA1576A
	Q	1210-1212	2SC4081
	Q	9001,9004,9504,9506	J522011400020-IL
⚠	Q	9501	J543801100010-IL
⚠	Q	9502	J543801200010-IL
	Q	9503,9505	J543040020010-IL
	D	601	RB501V-40
	D	901-903,1801	DAN202U
	D	1601	K06605R14P400-IL
	D	1802	DAP202U
	D	1803,1804,9504	1SS355

MISCELLANEOUS

	L	103 COIL,INDUCTOR	D310153160210-IL
	L	105,602-607 COIL,BEAD	D340100561210-IL
	L	901,905-907,1283 CHIP BEAD	D340212561010-IL
	L	902-904,913 COIL,BEAD	D340100561210-IL
	L	1202-1204 COIL,INDUCTOR	D310820160210-IL
	L	1206-1208 COIL,INDUCTOR	D310122160210-IL
	L	1209 COIL,CHIP	D311201201030-IL
	L	1210-1212 COIL,CHIP	D311201204720-IL
	L	1213-1215,1217,1219 COIL,BEAD	D340100561210-IL
	L	1220,1222,1225-1227 COIL,BEAD	D340100561210-IL
	L	1282,1321-1324,1502 COIL,BEAD	D340100561210-IL
	L	1284,1607,9002,9003 CHIP BEAD	D340212561010-IL
	L	1501,9215,9216 COIL,CHIP	D311121011210-IL
	L	1601,1604,1605 COIL,BEAD	D340100561210-IL
	L	1609-1612 COIL,CHOKE	D300121069000-IL
	L	1617,1618 FERRITE BEAD	D340160862410-IL
	L	1802-1804,1806-1813 COIL,BEAD	D340100561210-IL
	L	1805,1819,1820 COIL,BEAD	D340160851020-IL
	L	1815,1817,1818,1823 COIL,BEAD	D340100561210-IL
	L	9004,9007,9009,9010 COIL,BEAD	D340100561210-IL
	L	9201,9202,9204 COIL,BEAD	D340100561210-IL
	L	9205,9206,9502,9507 CHIP BEAD	D340212561010-IL
	L	9207-9210,9212-9214 COIL,BEAD	D340100561210-IL
	L	9506 COIL,INDUCTOR	D310104500600-IL
	L	9509 COIL,INDUCTOR	D310104500470-IL
	L	9510 CHIP BEAD	D340212561010-IL
	L	9512-9514,9517 COIL,BEAD	D340100561210-IL
	F	102,103,107,108 FILTER,EMI	E470160811050-IL
	JA	901-904,906,1601 CN.WAFER	L109100190160-IL
	JA	1801 PIN JACK(2P)	G601206A0700Y-IL
	JA	1803,1804 MODULE	E100216500010-IL
	JA	9201 CN,PLUG CONTACT	G480040400030-IL
	JA	9202 JACK,MODULAR	G4060RJ450120-IL
	X	602,901 CRYSTAL CHIP (27 MHz)	E80527R000050-IL
	X	1201 CRYSTAL CHIP (28.636360 MHz)	E80528R636360-IL
	X	1801 OSCILATOR,CERA CHIP (24.576 MHz)	E85524R576050-IL
	X	1802 OSCILATOR,CERA CHIP (22.5792 MHz)	E85522R579210-IL
	X	9001 CRYSTAL CHIP (20 MHz)	E80520R000050-IL
	CN	601 CN.FPC 1.0MM	L130100113910-IL
	CN	602 CN,WAFER	L109012521710-IL
	CN	603 CN,WAFER	L109012521910-IL
	CN	1203 CN,WAFER	L109012522510-IL
	CN	1501 CN.WAFER 2.0MM	L101200220610-IL
	CN	1502,1801 CN,WAFER	L109012522310-IL
	CN	9501 CONNECTOR(7P)	L102526700700-IL
		1901 BRACKET	4010210196100-IL
	P	601 SW,POLY	G300003500010-IL

RESISTORS

	R	168,789	D340100561210-IL

CAPACITORS

	C	451,452	K067012020020-IL
	C	1509	D040222081000-IL

Mark	No.	Description	Part No.

T F-USB ASSY

SEMICONDUCTORS

⚠	IC	805	J046255700010-IL
⚠	IC	806	J048107300010-IL
	Q	7504	J5223875Y0210-IL
	D	101	K06605R64P400-IL

MISCELLANEOUS

	L	11 COIL,CHIP	D311120601030-IL
	L	3605,3606 CHIP BEAD	D340212561010-IL
	JA	3601 CN,PLUG CONTACT	G480040040040-IL
	CN	3601 CN,WIRE 2MM	L002341060060-IL
	CN	3602 CN,WIRE	L000331042250-IL

CAPACITORS

	C	3602	D050221081200-IL

U BT ASSY

SEMICONDUCTORS

⚠	IC	600	BD2224G

MISCELLANEOUS

	CN	601 CONNECTOR	CKS5712
	CN	603 CN.WAFER 2.0MM	L101100031110-IL
		601 BRACKET	4010210196100-IL