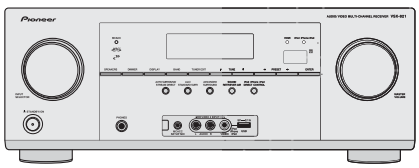
Pioneer

Service Manual



VSX-821-K

ORDER NO.
RRV4167

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-821-K
VSX-921-K
VSX-521-K

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

Model	Type	Power Requirement	Remarks
VSX-821-K	CUXCNSM	AC 120 V	
VSX-921-K	UXCNCB	AC 120 V	
VSX-521-K	CUXCNSM	AC 120 V	

For details, refer to "Important Check Points for good servicing".

SAFETY INFORMATION

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

WARNING

This product 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

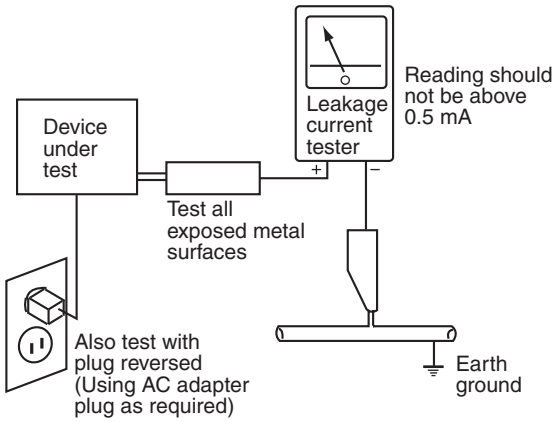
(FOR USA MODEL ONLY)

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.

[Important Check Points for Good Servicing]

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

1. Product safety

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

① Use specified parts for repair.

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

② Do not perform modifications without proper instructions.

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

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

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

④ Make sure the screws are tightly fastened.

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

⑤ Make sure each connectors are correctly inserted.

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

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

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

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

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

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

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

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

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

⑩ Safe environment should be secured during servicing.

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

2. Adjustments

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

3. Lubricants, Glues, and Replacement parts

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

4. Cleaning

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

5. Shipping mode and Shipping screws

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

CONTENTS

1. SERVICE PRECAUTIONS

1.1 NOTES ON SOLDERING

- For environmental protection, lead-free solder is used on the printed circuit boards mounted in this unit.
  Be sure to use lead-free solder and a soldering iron that can meet specifications for use with lead-free solders for repairs accompanied by reworking of soldering.

- Compared with conventional eutectic solders, lead-free solders have higher melting points, by approximately 40 ºC.
  Therefore, for lead-free soldering, the tip temperature of a soldering iron must be set to around 373 ºC in general, although the temperature depends on the heat capacity of the PC board on which reworking is required and the weight of the tip of the soldering iron.

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

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

The following lead-free solders are available as service parts:
- Parts numbers of lead-free solder:
  GYP1006 1.0 in dia.
  GYP1007 0.6 in dia.
  GYP1008 0.3 in dia.

1.2 SERVICE NOTICE

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

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

2. SPECIFICATIONS

VSX-821-K

Amplifier section

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

Front (stereo).....80 W + 80 W
Power output (1 kHz, 8 Ω, 0.05 %).....110 W per channel
Guaranteed speaker impedance
FRONT:A, B.....6 Ω to 16 Ω
FRONT:A+B.....12 Ω to 16 Ω
SURROUND, CENTER.....6 Ω to 16 Ω
* Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifiers
** Measured by Audio Spectrum Analyzer

Audio Section

Input (Sensitivity/Impedance)
LINE.....200 mV/47 kΩ
Output (Level/Impedance)
REC.....200 mV/2.2 kΩ
Signal-to-Noise Ratio (IHF, short circuited, A network)
LINE.....98 dB
Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]
LINE.....79 dB

Video Section

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

Tuner Section

Frequency Range (FM).....87.5 MHz to 108 MHz
Antenna Input (FM).....75 Ω unbalanced
Frequency Range (AM).....530 kHz to 1700 kHz
Antenna (AM).....Loop antenna

Digital In/Out Section

HDMI terminal.....Type A (19-pin)
HDMI output type.....5 V, 100 mA
USB terminal.....USB2.0 Full Speed (Type A)
iPod terminal.....USB, and Video (Composite)
SIRIUS antenna cable.....8-pin mini DIN cable
ADAPTER PORT terminal.....5 V, 100 mA

Miscellaneous

Power Requirements.....AC 120 V, 60 Hz
Power Consumption.....415 W
In standby.....0.4 W (Control OFF)
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).....9.2 kg (20 lb 5 oz)

Furnished Parts

Microphone (for Auto MCACC setup).....1
Remote control.....1
Dry cell batteries (AAA size IEC R03).....2
AM loop antenna.....1
FM wire antenna.....1
iPod cable.....1
Operating instructions.....1

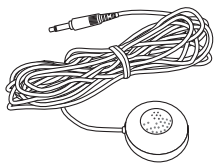
Note

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

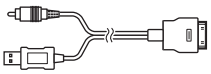
Accessories

AM loop antenna
(E601019000010-IL)

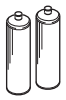
FM wire antenna
(E605010140010-IL)



Microphone (for Auto MCACC setup)
(APM7008)



iPod cable
(L308102013020-IL)



Dry cell batteries
(AAA size IEC R03) x2

Remote control
(8300762100010-IL)

VSX-921-K

Amplifier section

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

Front (stereo).....80 W + 80 W
Power output (1 kHz, 8 Ω, 0.05 %).....110 W per channel
Guaranteed speaker impedance.....6 Ω to 16 Ω
* Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifiers
** Measured by Audio Spectrum Analyzer

Audio Section

Input (Sensitivity/Impedance)
LINE.....200 mV/47 kΩ
Output (Level/Impedance)
REC.....200 mV/2.2 kΩ
Signal-to-Noise Ratio (IHF, short circuited, A network)
LINE.....98 dB
Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]
LINE.....79 dB

Video Section

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

Tuner Section

Frequency Range (FM).....87.5 MHz to 108 MHz
Antenna Input (FM).....75 Ω unbalanced
Frequency Range (AM).....530 kHz to 1700 kHz
Antenna (AM).....Loop antenna

Digital In/Out Section

HDMI terminal.....Type A (19-pin)
HDMI output type.....5 V, 100 mA
USB terminal.....USB2.0 Full Speed (Type A)
iPod terminal.....USB, and Video (Composite)
SIRIUS antenna cable.....8-pin mini DIN cable
ADAPTER PORT terminal.....5 V, 100 mA

Miscellaneous

Power Requirements.....AC 120 V, 60 Hz
Power Consumption.....500 W
In standby.....0.4 W (Control OFF)
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).....9.6 kg (21 lb 3 oz)

Furnished Parts

Microphone (for Auto MCACC setup).....1
Remote control.....1
Dry cell batteries (AAA size IEC R03).....2
AM loop antenna.....1
FM wire antenna.....1
iPod cable.....1
Operating instructions.....1

Note

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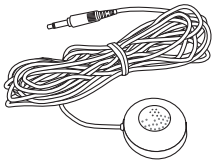

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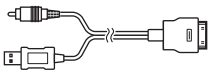

iPod cable
(L308102013020-IL)

Dry cell batteries
(AAA size IEC R03) x2

Remote control
(8300762100010-IL)

VSX-521-K

Amplifier section

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

Front (stereo).....80 W + 80 W
Power output (1 kHz, 8 Ω, 0.05 %).....110 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
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Audio Section

Input (Sensitivity/Impedance)
LINE.....200 mV/47 kΩ
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Signal-to-Noise Ratio (IHF, short circuited, A network)
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Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]
LINE.....79 dB

Video Section

Signal level
Composite.....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)

Tuner Section

Frequency Range (FM).....87.5 MHz to 108 MHz
Antenna Input (FM).....75 Ω unbalanced
Frequency Range (AM).....530 kHz to 1700 kHz
Antenna (AM).....Loop antenna

Digital In/Out Section

HDMI terminal.....Type A (19-pin)
HDMI output type.....5 V, 100 mA
ADAPTER PORT terminal.....5 V, 100 mA

Miscellaneous

Power Requirements.....AC 120 V, 60 Hz
Power Consumption.....415 W
In standby.....0.4 W (Control OFF)
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).....9.0 kg (19 lb 14 oz)

Furnished Parts

Microphone (for Auto MCACC setup).....1
Remote control.....1
Dry cell batteries (AAA size IEC R03).....2
AM loop antenna.....1
FM wire antenna.....1
Operating instructions.....1

Note

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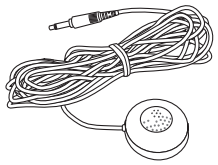
Accessories

AM loop antenna
(E601019000010-IL)

FM wire antenna
(E605010140010-IL)



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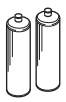


Dry cell batteries
(AAA size IEC R03) x2

Remote control
(8300761900010-IL)

3. BASIC ITEMS FOR SERVICE

3.1 CHECK POINTS AFTER SERVICING

Items to be checked after servicing

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

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

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

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

3.2 JIGS LIST

■ Jigs List

Jig Name	Part No.	Remarks
RS-232C update jig (Jig + 10P FFC)	GGF1642	Firmware update (RS-232C ↔ Rear panel)
RS-232C cable (9-pin to 9-pin, straight cable)	————	
Board to board extension jig cable	GGD1733	Diagnosis (D-MAIN Assy ↔ CPU Assy)
Board to board extension jig cable	GGD1734	Diagnosis (D-MAIN Assy ↔ BRIDGE A Assy)
31P extension jig FFC	GGD1738	Diagnosis (DISPLAY Assy ↔ CPU Assy)
9P extension jig cable (for 5 ch)	GGD1739	Diagnosis (AMP Assy ↔ AUDIO Assy)
13P extension jig cable (for 7 ch)	GGD1740	

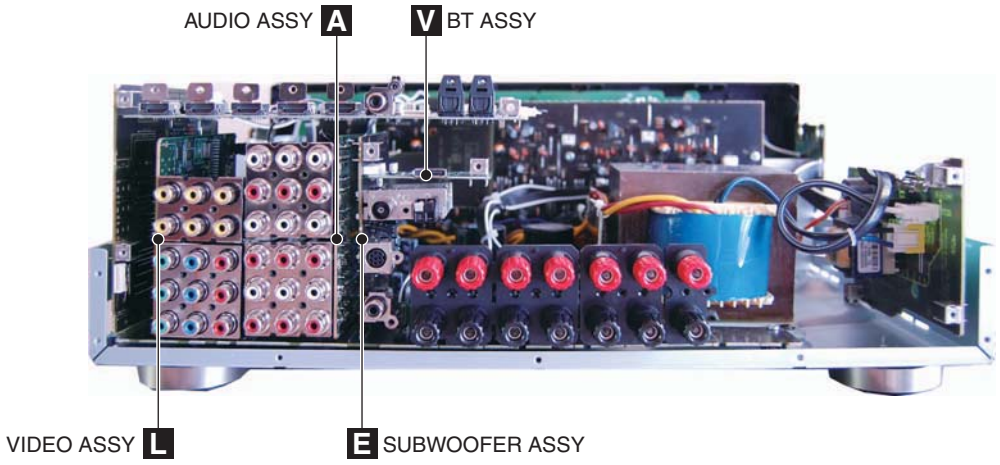
■ Lubricants and Glues List

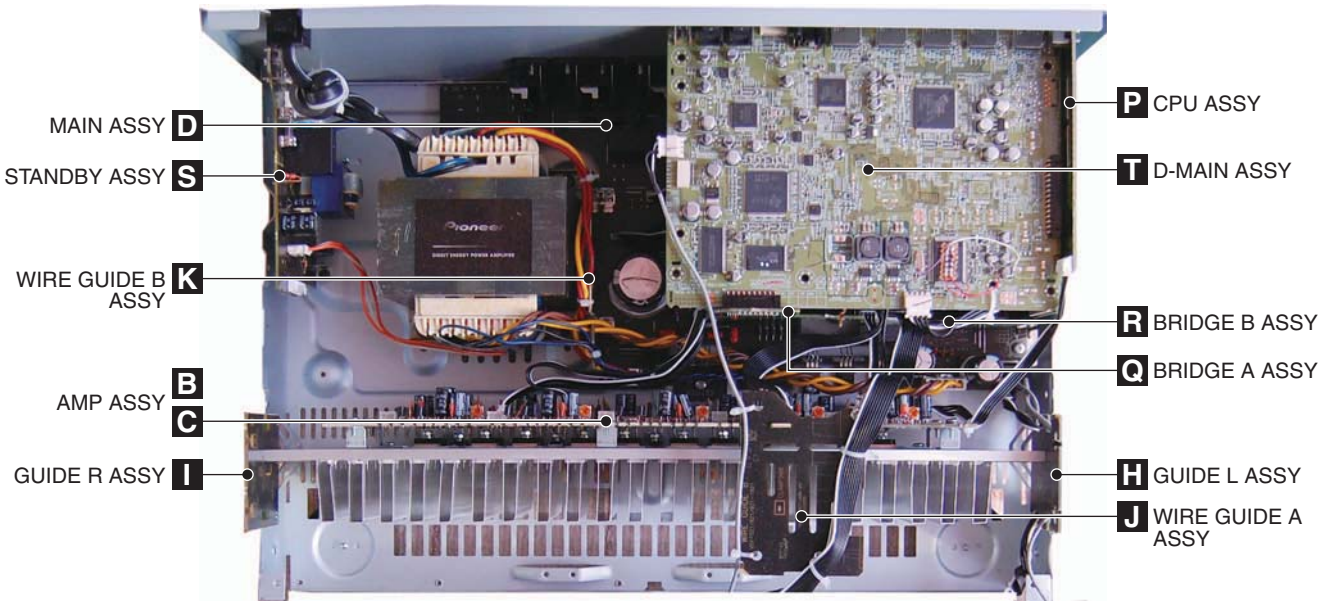
Name	Part No.	Remarks
Silicon grease	GEM1057	Refer to "9.2 EXTERIOR SECTION (VSX-821-K, VSX-921-K)" and "9.3 EXTERIOR SECTION (VSX-521-K)".
Silicon adhesive	GYA1011 (KE40RTV-W)	Refer to "9.2 EXTERIOR SECTION (VSX-821-K, VSX-921-K)" and "9.3 EXTERIOR SECTION (VSX-521-K)".

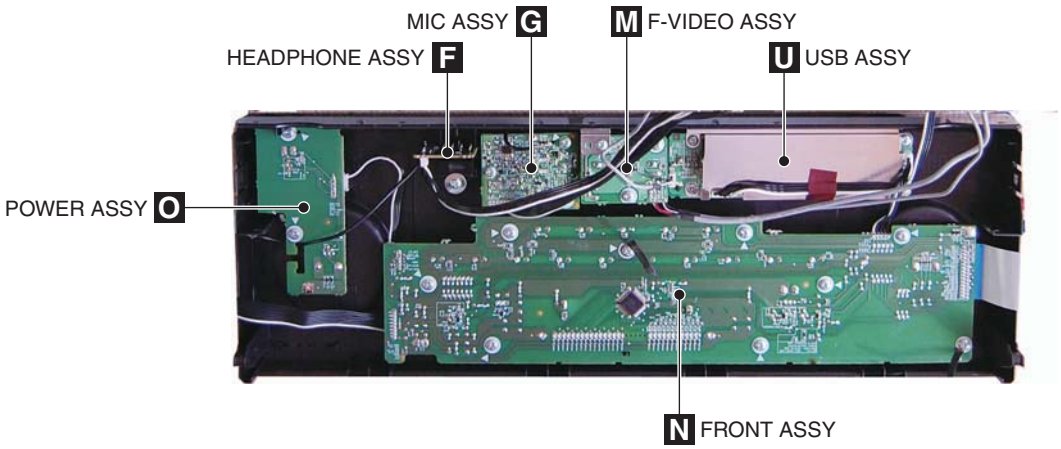
3.3 PCB LOCATIONS

VSX-821-K, VSX-921-K

• This photo. is VSX-821-K.





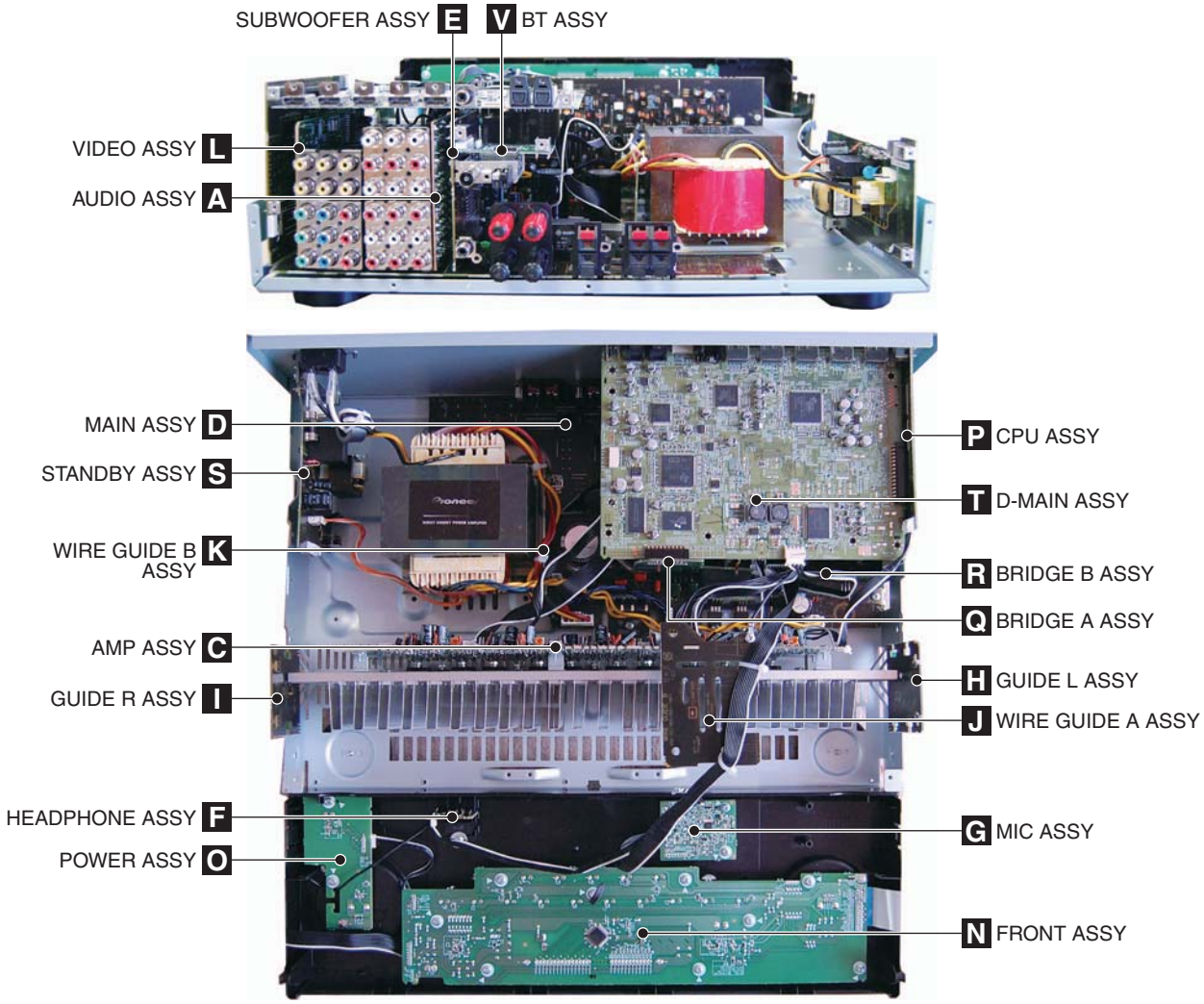


NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
NSP	1	..MAIN ASSY (VSX-821-K)	7025HK1011010-IL
NSP	1	..MAIN ASSY (VSX-921-K)	7025HK1014010-IL
	2	..MAIN ASSY (VSX-821-K)	70280702710H0-IL
	2	..MAIN ASSY (VSX-921-K)	70280702710G0-IL
	2	..SUBWOOFER ASSY	7028070272070-IL
	2	..GUIDE L ASSY	7028070273070-IL
	2	..GUIDE R ASSY	7028070274070-IL
	2	..WIRE GUIDE A ASSY	7028070276070-IL
	2	..WIRE GUIDE B ASSY	7028070277070-IL
NSP	1	..AMP1 ASSY (VSX-821-K ONLY)	7025HK1011017-IL
	2	..AMP ASSY (VSX-821-K ONLY)	7028070241030-IL
NSP	1	..AMP2 ASSY (VSX-921-K ONLY)	7025HK1014016-IL
	2	..AMP ASSY (VSX-921-K ONLY)	7028070251040-IL
NSP	1	..BT ASSY	7025HK1009019-IL
	2	..BT ASSY	7028070231010-IL
NSP	1	..VIDEO ASSY (VSX-821-K)	7025HK1011016-IL
NSP	1	..VIDEO ASSY (VSX-921-K)	7025HK1014017-IL
	2	..VIDEO ASSY (VSX-821-K)	7028070261060-IL
	2	..VIDEO ASSY (VSX-921-K)	7028070261070-IL
NSP	1	..CPU ASSY (VSX-821-K)	7025HK1011011-IL
NSP	1	..CPU ASSY (VSX-921-K)	7025HK1014014-IL
	2	..CPU ASSY (VSX-821-K)	7028070221030-IL
	2	..CPU ASSY (VSX-921-K)	7028070221070-IL
	2	..BRIDGE A ASSY	7028070222070-IL
	2	..BRIDGE B ASSY	7028070223070-IL
	2	..STANDBY ASSY (VSX-821-K)	7028070225030-IL
	2	..STANDBY ASSY (VSX-921-K)	7028070225070-IL
NSP	1	..FRONT ASSY (VSX-821-K)	7025HK1011013-IL
NSP	1	..FRONT ASSY (VSX-921-K)	7025HK1014013-IL
	2	..FRONT ASSY	7028070211050-IL
	2	..POWER ASSY	7028070212050-IL
	2	..MIC ASSY	7028070213050-IL
	2	..F-VIDEO ASSY	7028070214050-IL
	2	..HEADPHONE ASSY	7028070215050-IL
NSP	1	..AUDIO ASSY (VSX-821-K)	7025HK1011014-IL
NSP	1	..AUDIO ASSY (VSX-921-K)	7025HK1014011-IL
	2	..AUDIO ASSY (VSX-821-K)	7028070181030-IL
	2	..AUDIO ASSY (VSX-921-K)	7028070181050-IL
NSP	1	..USB ASSY	7025HK1014012-IL
	2	..USB ASSY	7028070201050-IL
NSP	1	..D-MAIN ASSY (VSX-821-K)	7025HK1011012-IL
NSP	1	..D-MAIN ASSY (VSX-921-K)	7025HK1014018-IL
	2	..D-MAIN ASSY (VSX-821-K)	7028070191030-IL
	2	..D-MAIN ASSY (VSX-921-K)	7028070191050-IL

VSX-521-K



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LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
NSP	1	MAIN ASSY	7025HK1012010-IL
	2	MAIN ASSY	70280702710D0-IL
	2	SUBWOOFER ASSY	7028070272050-IL
	2	GUIDE L ASSY	7028070273070-IL
	2	GUIDE R ASSY	7028070274070-IL
	2	WIRE GUIDE A ASSY	7028070276070-IL
	2	WIRE GUIDE B ASSY	7028070277070-IL
NSP	1	AMP1 ASSY	7025HK1011017-IL
	2	AMP ASSY	7028070241030-IL
NSP	1	BT ASSY	7025HK1009019-IL
	2	BT ASSY	7028070231010-IL
NSP	1	VIDEO ASSY	7025HK1011016-IL
	2	VIDEO ASSY	7028070261060-IL
NSP	1	CPU ASSY	7025HK1012011-IL
	2	CPU ASSY	7028070221020-IL
	2	BRIDGE A ASSY	7028070222070-IL
	2	BRIDGE B ASSY	7028070223070-IL
	2	STANDBY ASSY	7028070225030-IL
NSP	1	FRONT ASSY	7025HK1012013-IL
	2	FRONT ASSY	7028070211020-IL
	2	POWER ASSY	7028070212050-IL
	2	MIC ASSY	7028070213020-IL
	2	HEADPHONE ASSY	7028070215050-IL
NSP	1	AUDIO ASSY	7025HK1011014-IL
	2	AUDIO ASSY	7028070181030-IL
NSP	1	D-MAIN ASSY	7025HK1012012-IL
	2	D-MAIN ASSY	7028070191020-IL

A

B

C

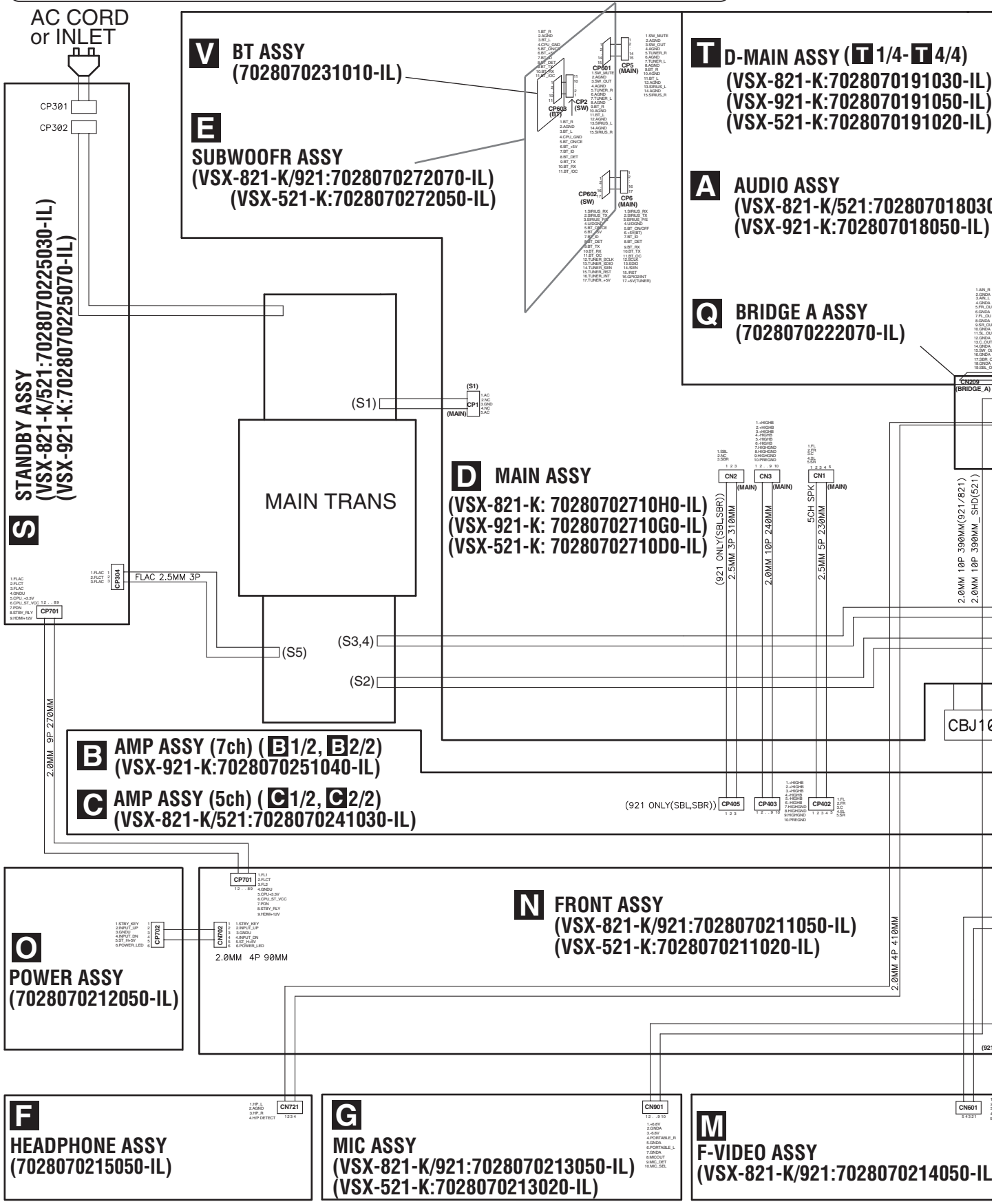
D

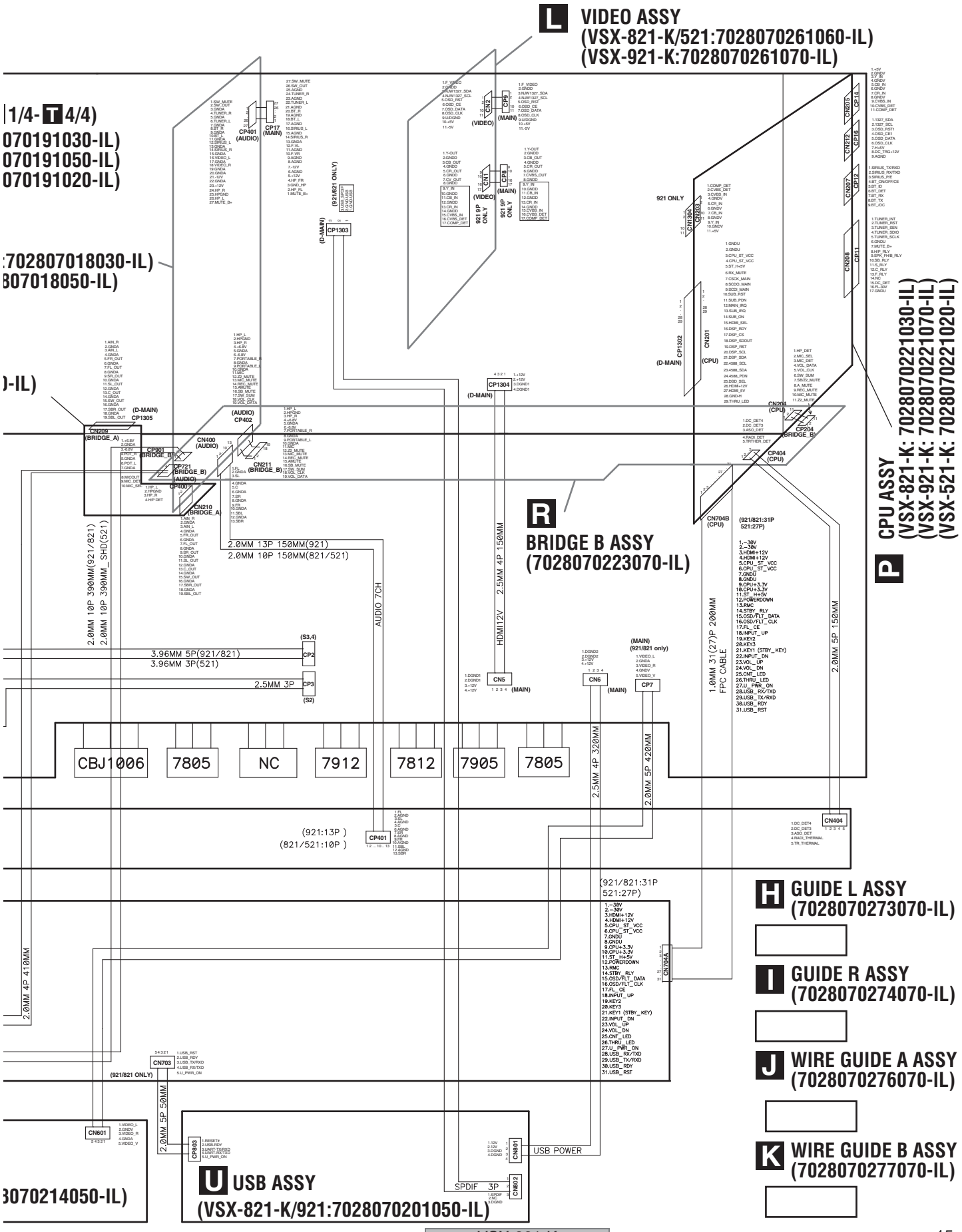
E

F

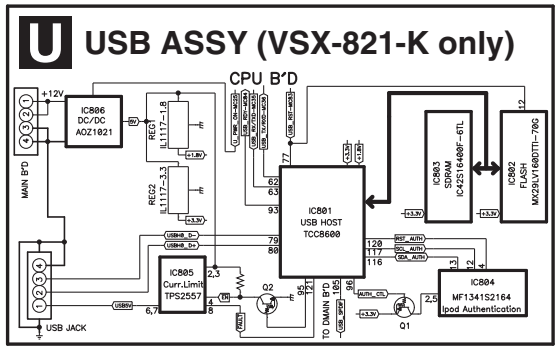
4. BLOCK DIAGRAM
4.1 OVERALL WIRING DIAGRAM

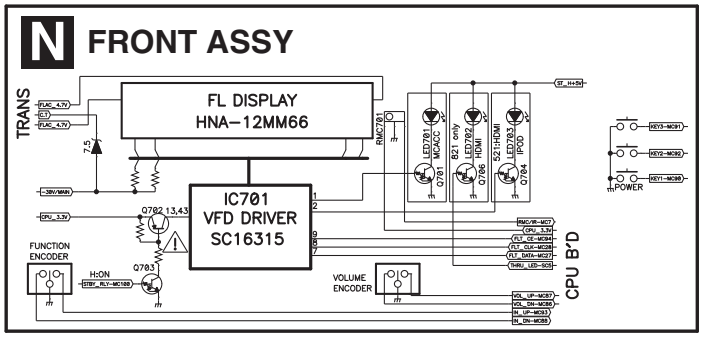
- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

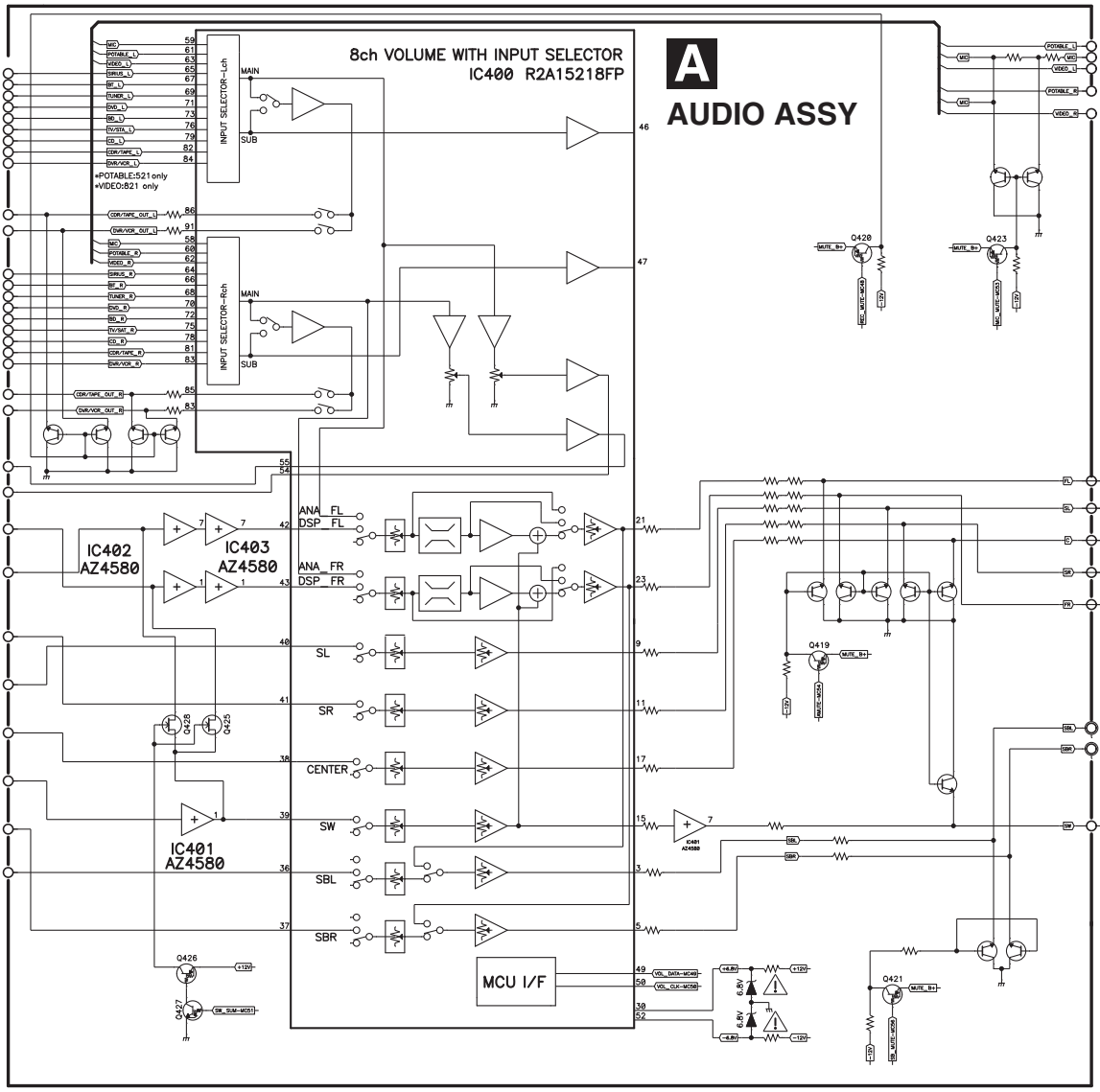


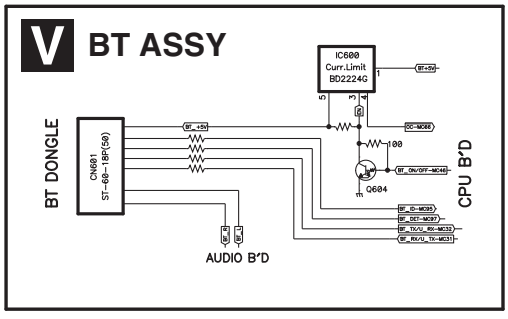

L VIDEO ASSY
(VSX-821-K/521:7028070261060-IL)
(VSX-921-K:7028070261070-IL)
P CPU ASSY
(VSX-821-K: 7028070221030-IL)
(VSX-921-K: 7028070221070-IL)
(VSX-521-K: 7028070221020-IL)
R BRIDGE B ASSY
(7028070223070-IL)
H GUIDE L ASSY
(7028070273070-IL)
I GUIDE R ASSY
(7028070274070-IL)
J WIRE GUIDE A ASSY
(7028070276070-IL)
K WIRE GUIDE B ASSY
(7028070277070-IL)
U USB ASSY
(VSX-821-K/921:7028070201050-IL)
921 ONLY
(D-MAIN)
(CPU)
(MAIN)
(VIDEO)
(AUDIO)
(BRIDGE_A)
(BRIDGE_B)
CBJ1006
7805
NC
7912
7812
7905
7805
2.0MM 13P 150MM(921)
2.0MM 10P 150MM(821/521)
2.0MM 10P 390MM(921/821)
2.0MM 10P 390MM_SHD(521)
2.5MM 4P 150MM
HDMI12V
AUDIO 7CH
3.96MM 5P(921/821)
3.96MM 3P(521)
2.5MM 3P
2.5MM 4P 320MM
2.0MM 5P 420MM
2.0MM 5P 150MM
1.0MM 31(27)P 200MM
FPC CABLE
2.0MM 4P 410MM
2.0MM 5P 50MM
USB POWER
SPDIF 3P

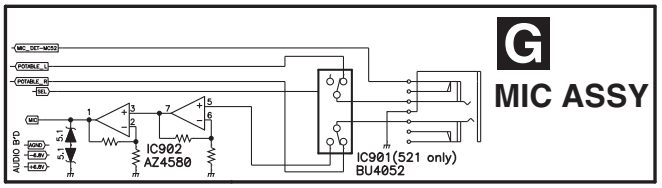
4.2 AUDIO BLOCK DIAGRAM (for VSX-821-K, VSX-521-K)

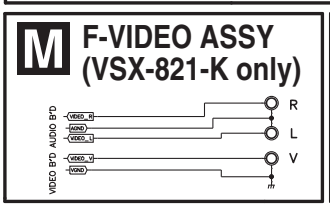


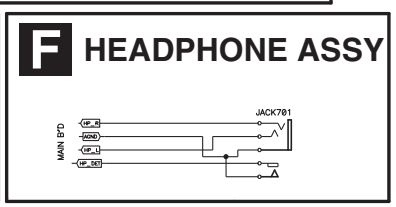


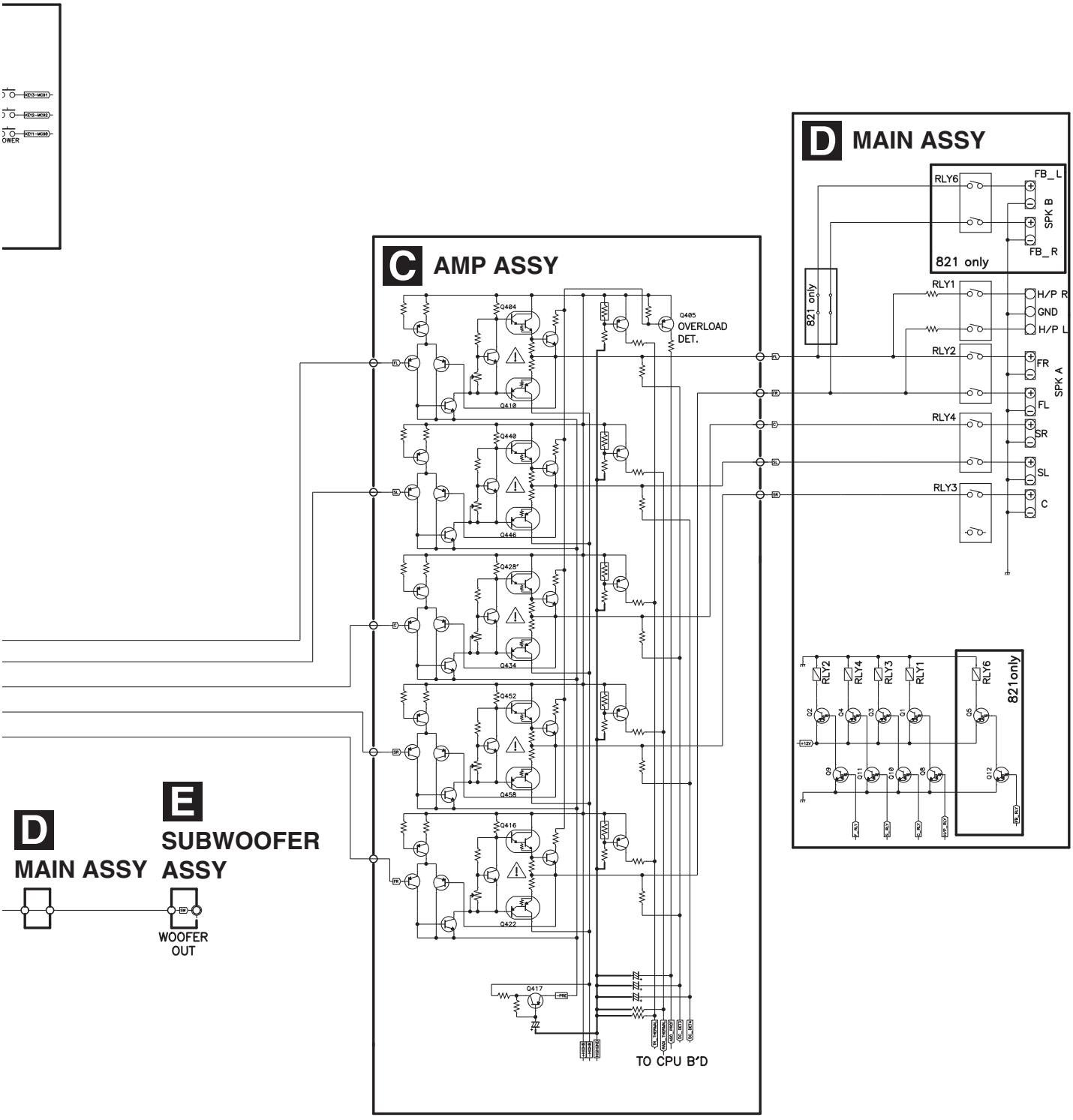




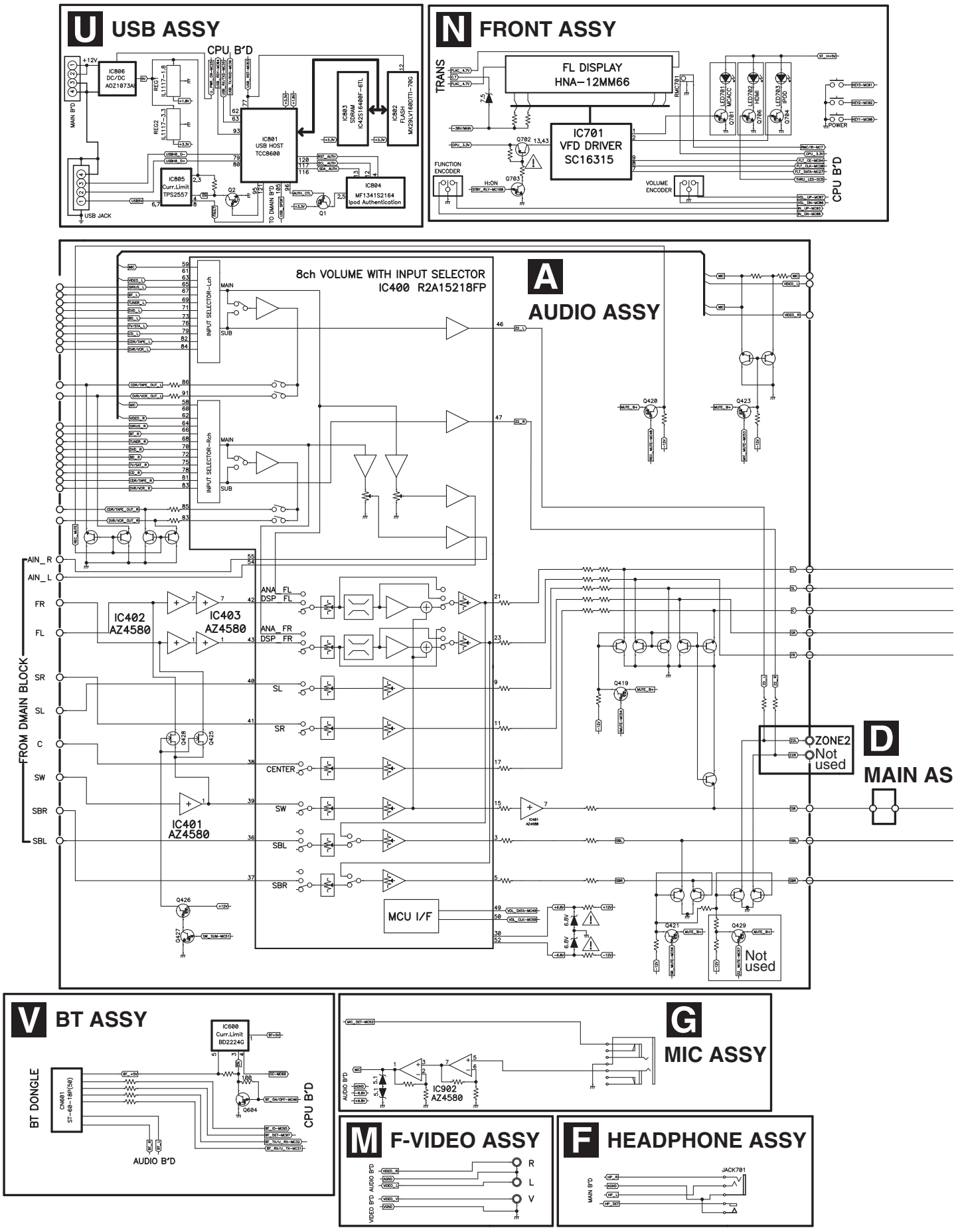


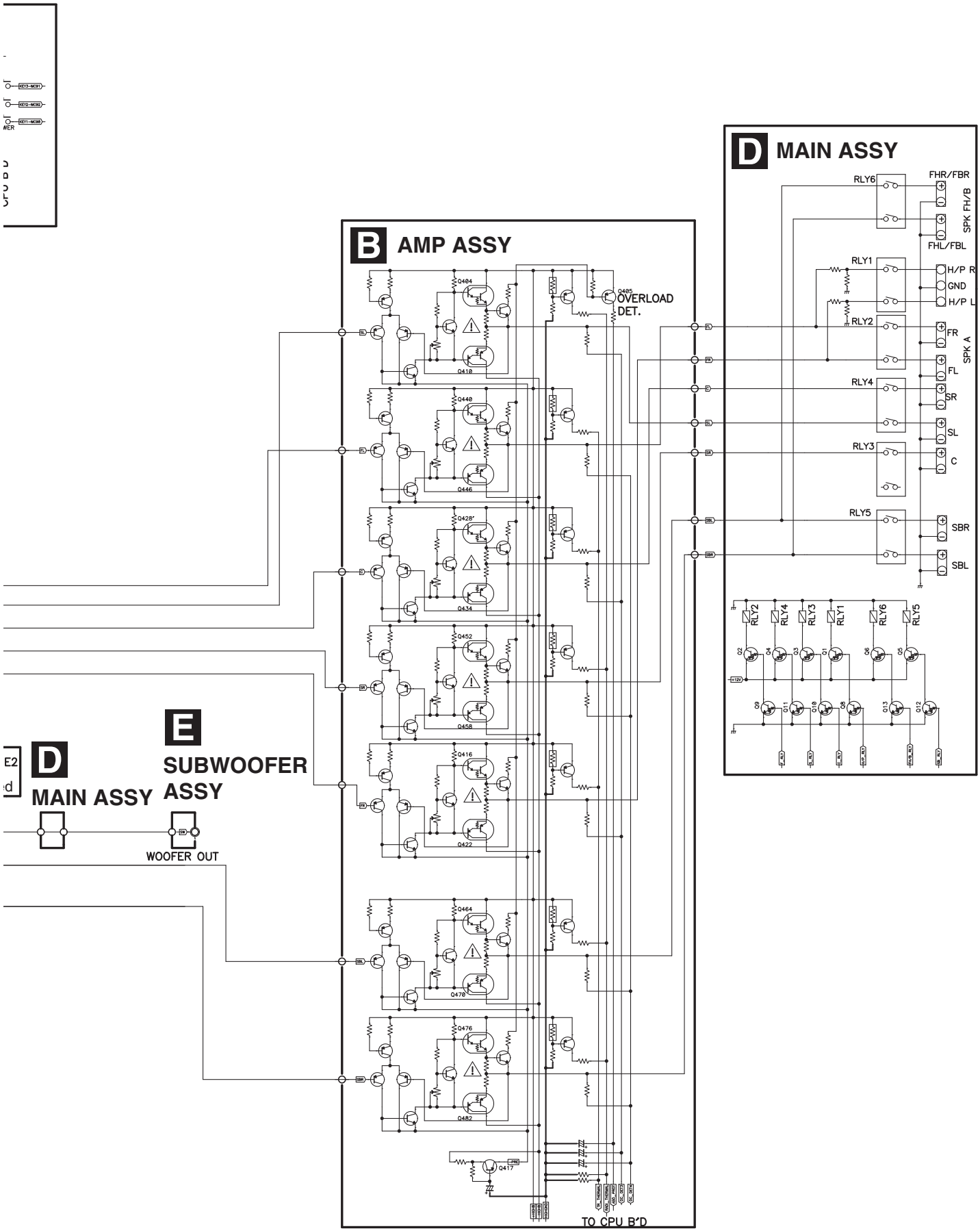




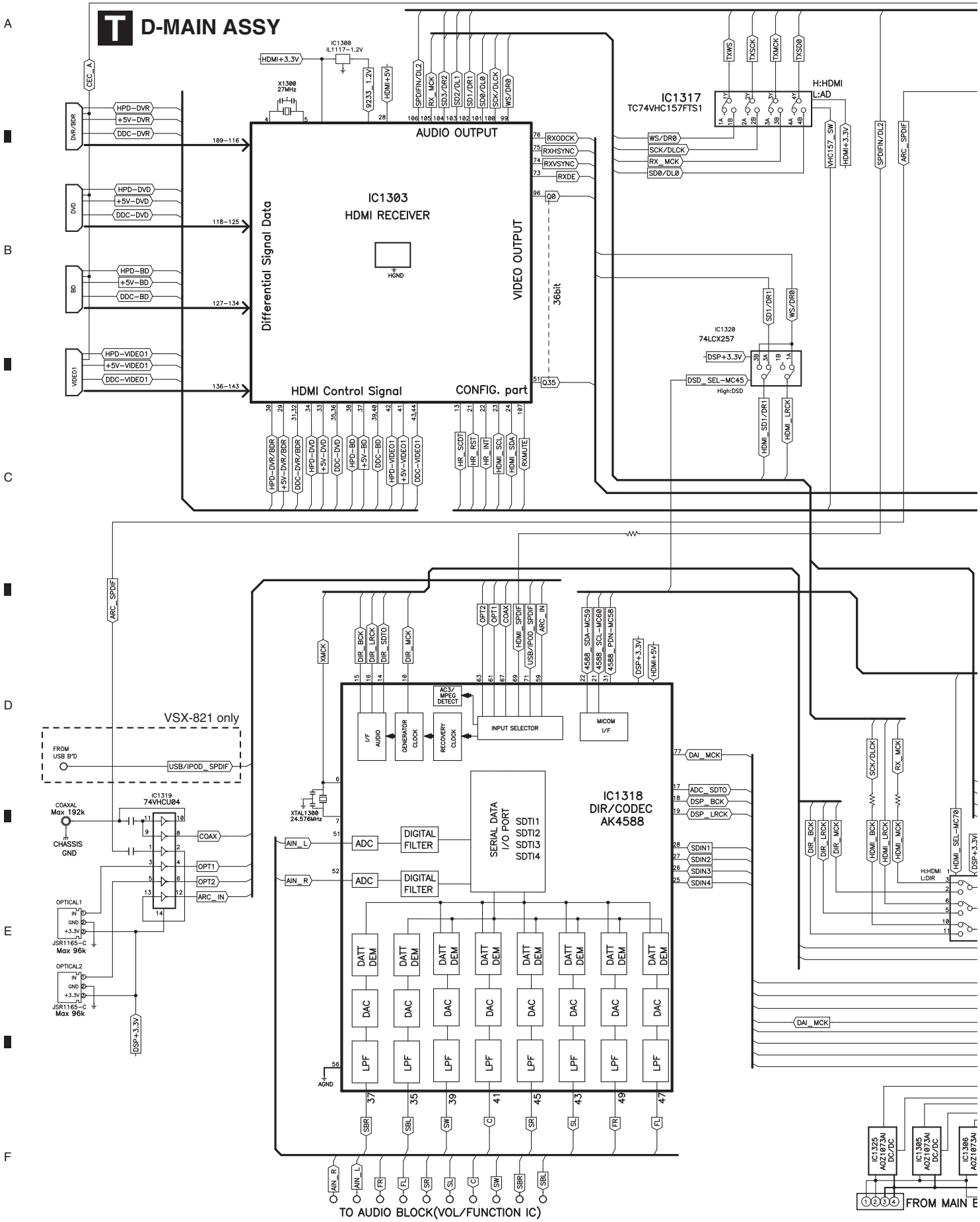

D MAIN ASSY
RLY6
FB_L
SPK B
FB_R
821 only
RLY1
H/P R
GND
H/P L
RLY2
FR
SPK A
FL
RLY4
SR
SL
RLY3
C
RLY2
RLY4
RLY3
RLY1
RLY6
821only
C AMP ASSY
Q404
Q405
OVERLOAD
DET.
Q410
Q440
Q446
Q428
Q434
Q452
Q458
Q416
Q422
Q417
TO CPU B'D
D
MAIN ASSY
E
SUBWOOFER
ASSY
WOOFER
OUT

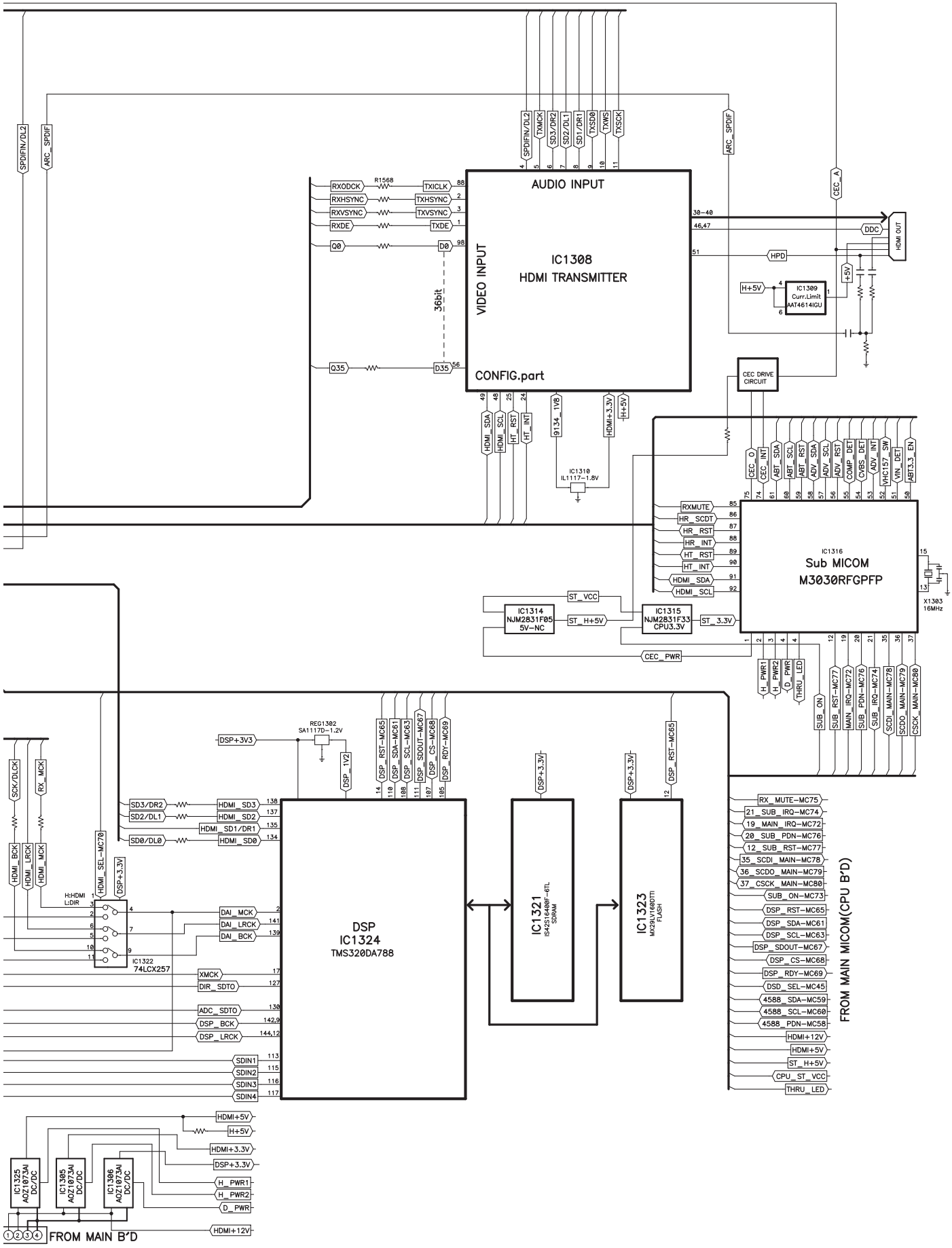
4.3 AUDIO BLOCK DIAGRAM (for VSX-921-K)



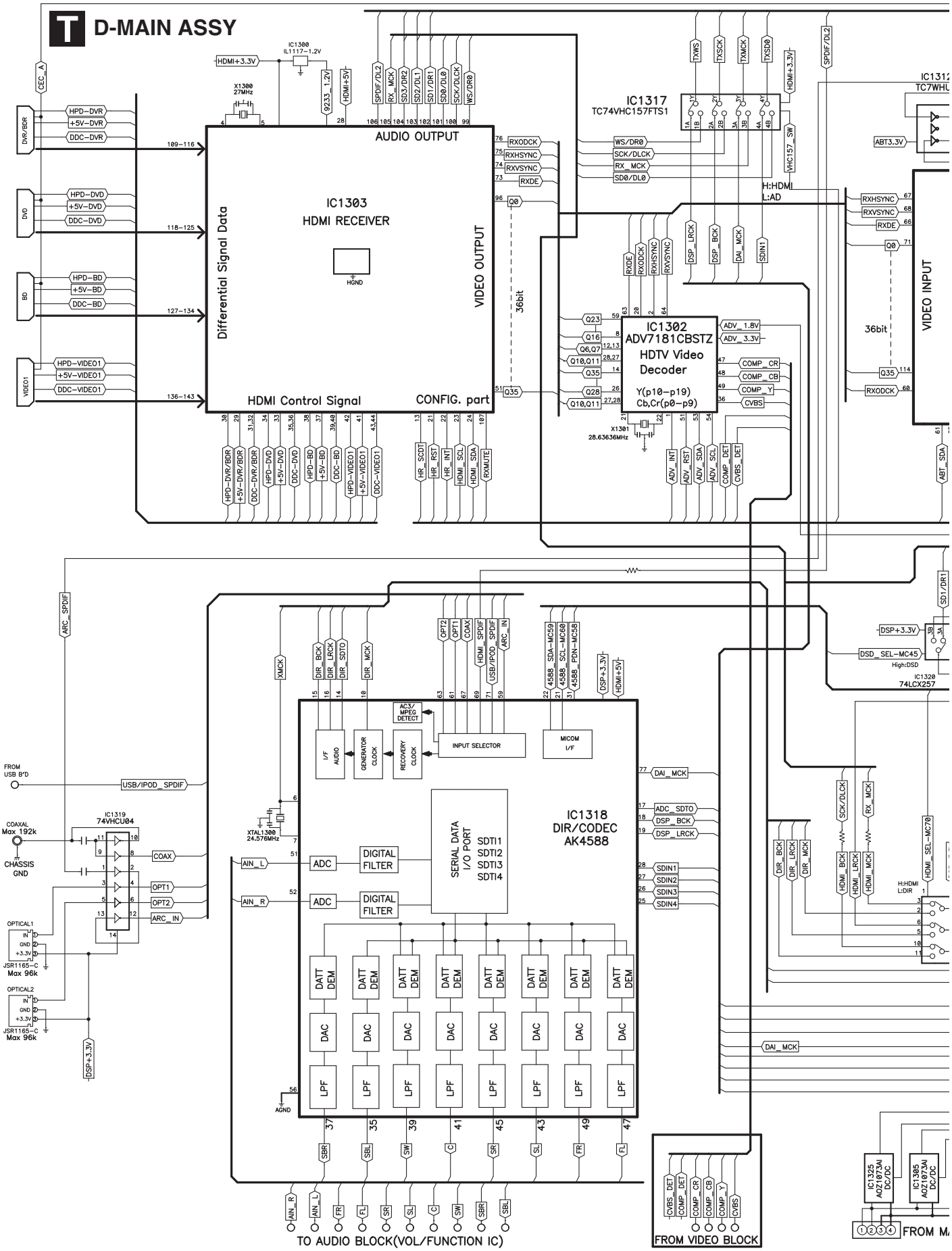

D MAIN ASSY
RLY6
FHR/FBR
SPK FH/B
FHL/FBL
RLY1
H/P R
GND
H/P L
RLY2
FR
SPK A
FL
RLY4
SR
SL
RLY3
C
RLY5
SBR
SBL
RLY2
RLY4
RLY3
RLY1
RLY6
RLY5
B AMP ASSY
Q405
OVERLOAD DET.
Q404
Q410
Q440
Q446
Q428
Q434
Q452
Q458
Q416
Q422
Q464
Q470
Q476
Q482
Q417
TO CPU B'D
E
SUBWOOFER ASSY
D
MAIN ASSY
WOOFER OUT

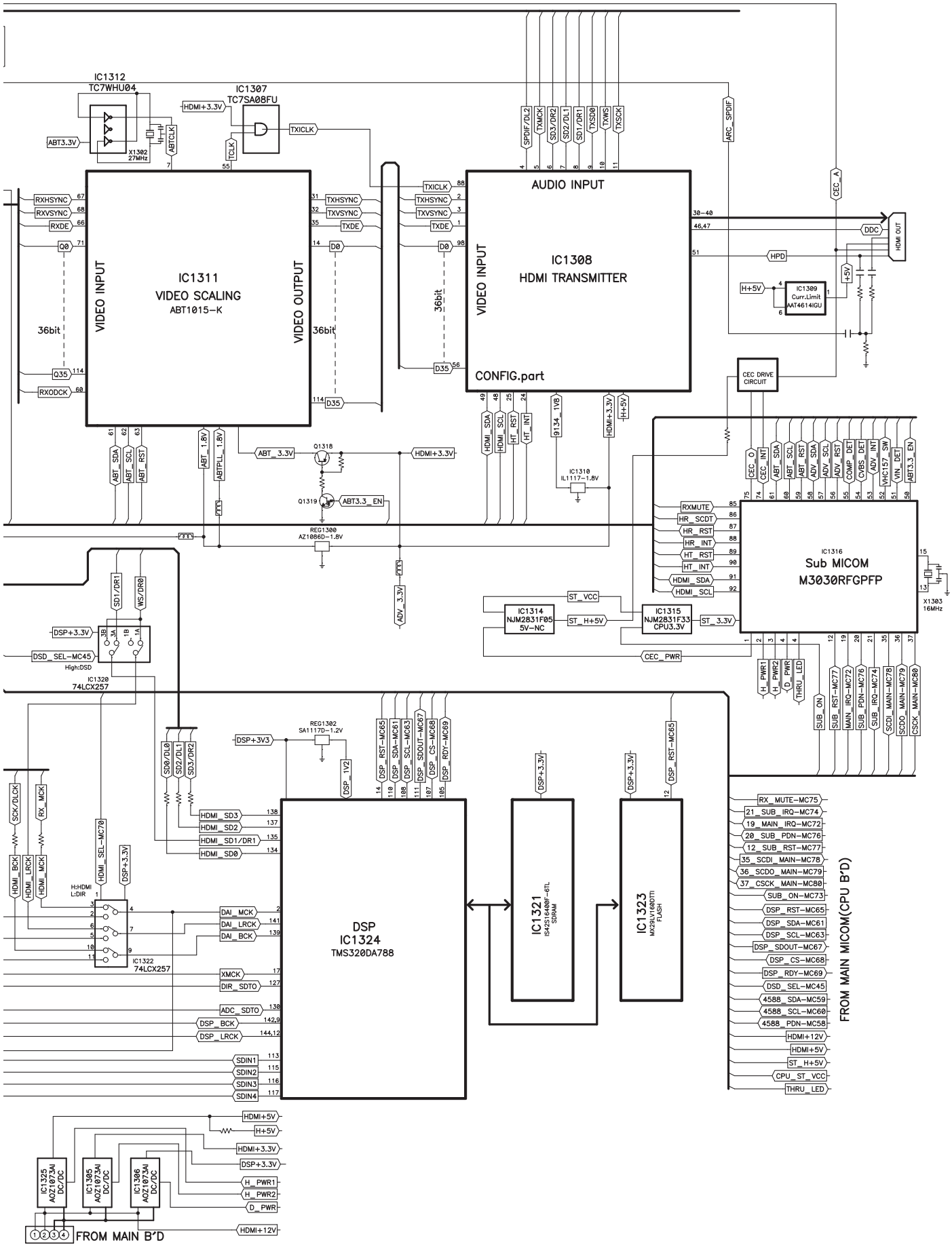
4.4 D-MAIN BLOCK DIAGRAM (for VSX-821-K, VSX-521-K)



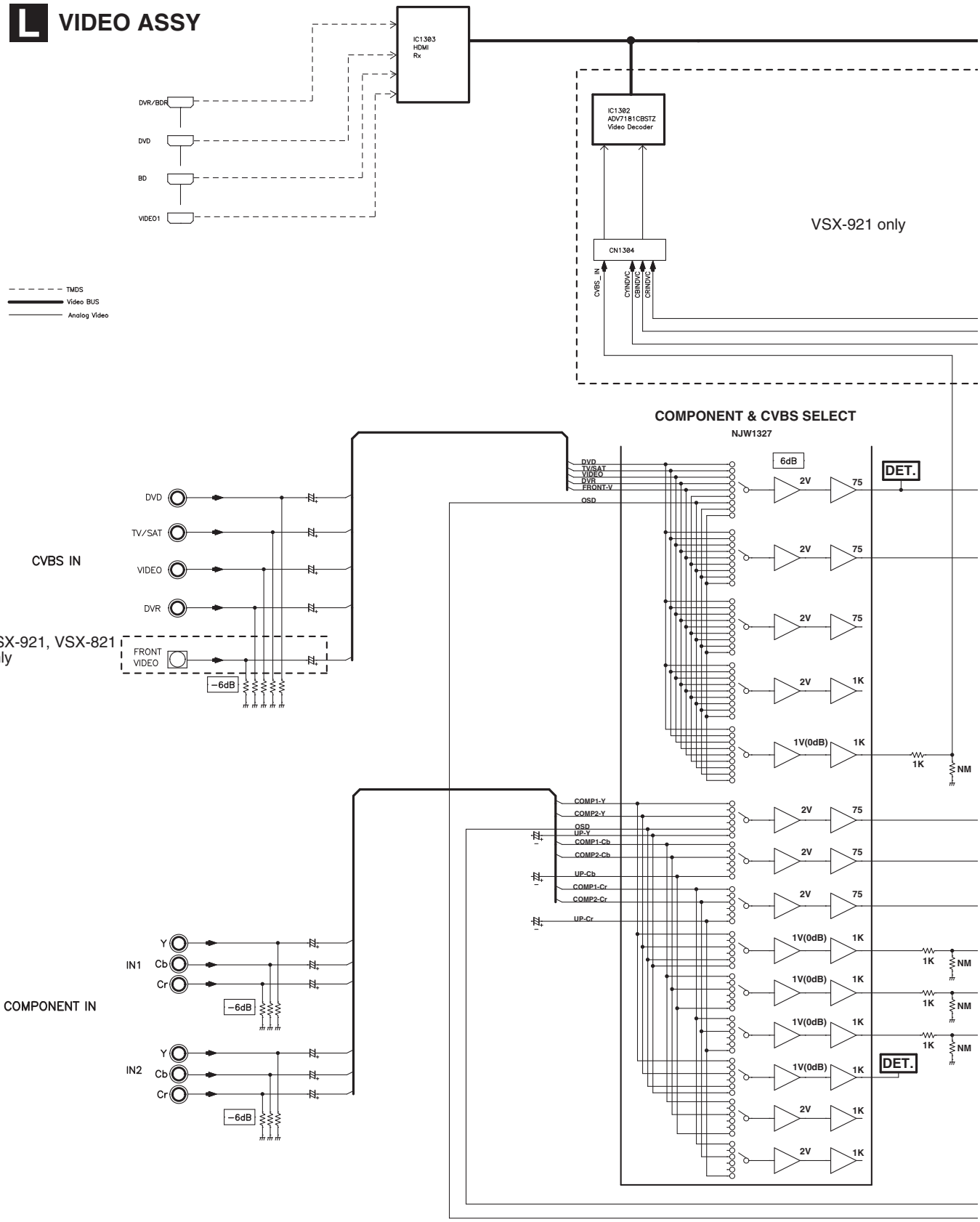

AUDIO INPUT
IC1308
HDMI TRANSMITTER
VIDEO INPUT
CONFIG.part
36bit
IC1309
Curr.Limit
AAT4614IGU
HDMI OUT
DDC
HPD
CEC DRIVE CIRCUIT
IC1310
IL1117-1.8V
IC1316
Sub MICOM
M3030RFGPFP
X1303
16MHz
IC1314
NJM2831F05
5V-NC
IC1315
NJM2831F33
CPU3.3V
REG1302
SA1117D-1.2V
DSP
IC1324
TMS320DA788
IC1321
IS42S16400F-6TL
SDRAM
IC1323
MX29LV160DTTI
FLASH
IC1322
74LCX257
IC1325
AOZ1073AI
DC/DC
IC1305
AOZ1073AI
DC/DC
IC1306
AOZ1073AI
DC/DC
FROM MAIN B'D
FROM MAIN MICOM(CPU B'D)

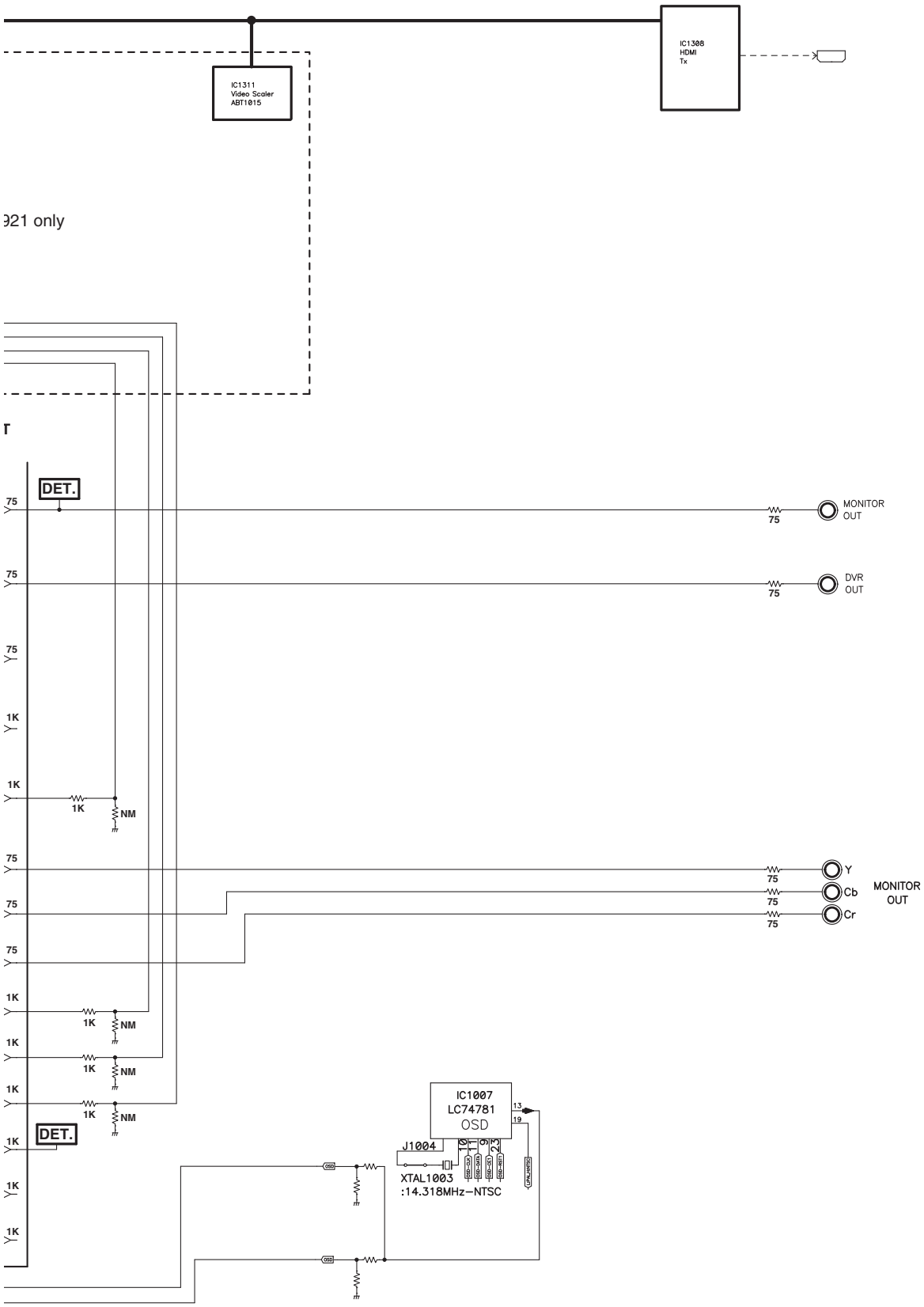
4.5 D-MAIN BLOCK DIAGRAM (for VSX-921-K)



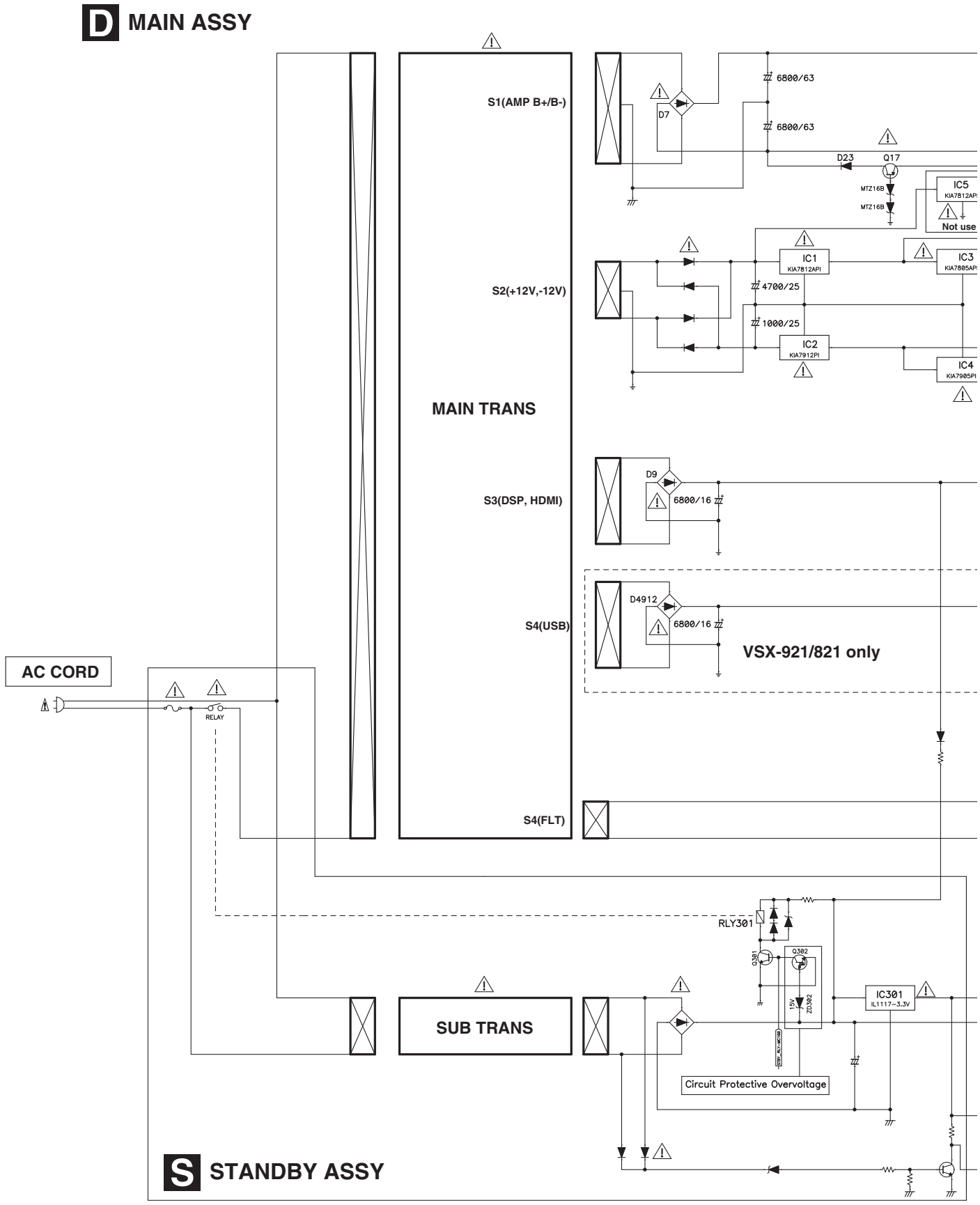

IC1312
TC7WHU04
IC1307
TC7SA08FU
HDMI+3.3V
ABT3.3V
X1302
27MHz
ABTCLK
TCLK
TXICLK
IC1311
VIDEO SCALING
ABT1015-K
VIDEO INPUT
VIDEO OUTPUT
36bit
RXHSYNC
RXVSYNC
RXDE
RXODCK
TXHSYNC
TXVSYNC
TXDE
D0
D35
Q0
Q35
AUDIO INPUT
IC1308
HDMI TRANSMITTER
CONFIG.part
SPDIF/DL2
TXMCK
SD3/DR2
SD2/DL1
SD1/DR1
TXSD0
TXWS
TXSCK
ARC_SPDIF
CEC_A
DDC
HDMI OUT
HPD
H+5V
+5V
IC1309
Curr.Limit
AAT4614IGU
CEC DRIVE CIRCUIT
ABT_SDA
ABT_SCL
ABT_RST
ABT_1.8V
ABTPLL_1.8V
ABT_3.3V
Q1318
Q1319
ABT3.3_EN
HDMI+3.3V
HDMI_SDA
HDMI_SCL
HT_RST
HT_INT
9134_1V8
IC1310
IL1117-1.8V
REG1300
AZ1086D-1.8V
ADV_3.3V
IC1316
Sub MICOM
M3030RFGPFP
RXMUTE
HR_SCDT
HR_RST
HR_INT
HT_RST
HT_INT
CEC_O
CEC_INT
COMP_DET
CVBS_DET
ADV_INT
VHC157_SW
VIN_DET
ABT3.3_EN
X1303
16MHz
ST_VCC
IC1314
NJM2831F05
5V-NC
ST_H+5V
IC1315
NJM2831F33
CPU3.3V
ST_3.3V
CEC_PWR
H_PWR1
H_PWR2
D_PWR
THRU_LED
SUB_ON
SUB_RST-MC77
MAIN_IRQ-MC72
SUB_PDN-MC76
SUB_IRQ-MC74
SCDI_MAIN-MC78
SCDO_MAIN-MC79
CSCK_MAIN-MC80
DSP+3.3V
DSD_SEL-MC45
High:DSD
IC1320
74LCX257
SD0/DL0
SD1/DR1
SD2/DL1
SD3/DR2
WS/DR0
REG1302
SA1117D-1.2V
DSP_1V2
DSP+3V3
DSP_RST-MC65
DSP_SDA-MC61
DSP_SCL-MC63
DSP_SDOUT-MC67
DSP_CS-MC68
DSP_RDY-MC69
SCK/DLCK
RX_MCK
HDMI_BCK
HDMI_LRCK
HDMI_MCK
HDMI_SEL-MC70
H:HDMI
L:DIR
IC1322
74LCX257
HDMI_SD3
HDMI_SD2
HDMI_SD1/DR1
HDMI_SD0
DAI_MCK
DAI_LRCK
DAI_BCK
XMCK
DIR_SDTO
ADC_SDTO
DSP_BCK
DSP_LRCK
SDIN1
SDIN2
SDIN3
SDIN4
DSP
IC1324
TMS320DA788
IC1321
IS42S16400F-6TL
SDRAM
IC1323
MX29LV160DTTI
FLASH
RX_MUTE-MC75
21_SUB_IRQ-MC74
19_MAIN_IRQ-MC72
20_SUB_PDN-MC76
12_SUB_RST-MC77
35_SCDI_MAIN-MC78
36_SCDO_MAIN-MC79
37_CSCK_MAIN-MC80
SUB_ON-MC73
DSP_RST-MC65
DSP_SDA-MC61
DSP_SCL-MC63
DSP_SDOUT-MC67
DSP_CS-MC68
DSP_RDY-MC69
DSD_SEL-MC45
4588_SDA-MC59
4588_SCL-MC60
4588_PDN-MC58
HDMI+12V
HDMI+5V
ST_H+5V
CPU_ST_VCC
THRU_LED
FROM MAIN MICOM(CPU B'D)
IC1325
AOZ1073AI
DC/DC
IC1305
AOZ1073AI
DC/DC
IC1306
AOZ1073AI
DC/DC
H_PWR1
H_PWR2
D_PWR
FROM MAIN B'D

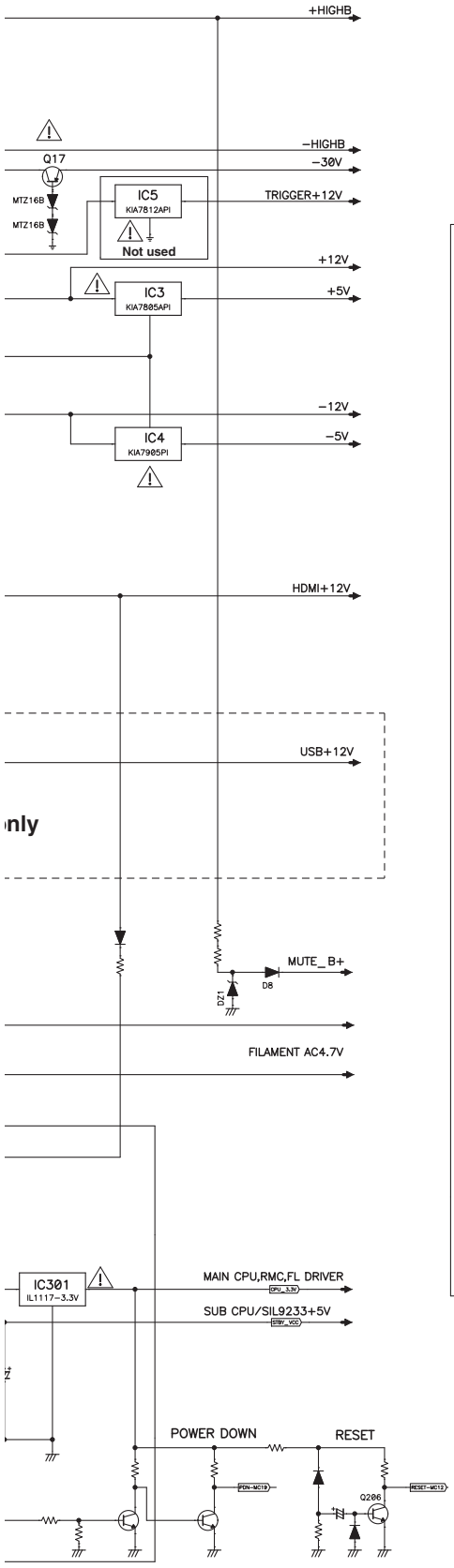
4.6 VIDEO BLOCK DIAGRAM




IC1308
HDMI
Tx
IC1311
Video Scaler
ABT1015
921 only
DET.
75
1K
NM
MONITOR
OUT
DVR
OUT
Y
Cb
Cr
MONITOR
OUT
IC1007
LC74781
OSD
J1004
XTAL1003
:14.318MHz–NTSC

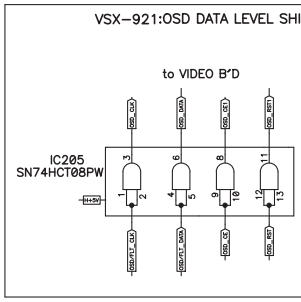
4.7 POWER SUPPLY and MAIN UCOM BLOCK DIAGRAM



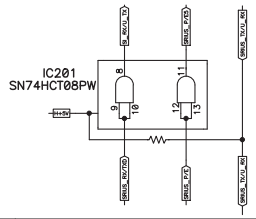


P CPU ASSY

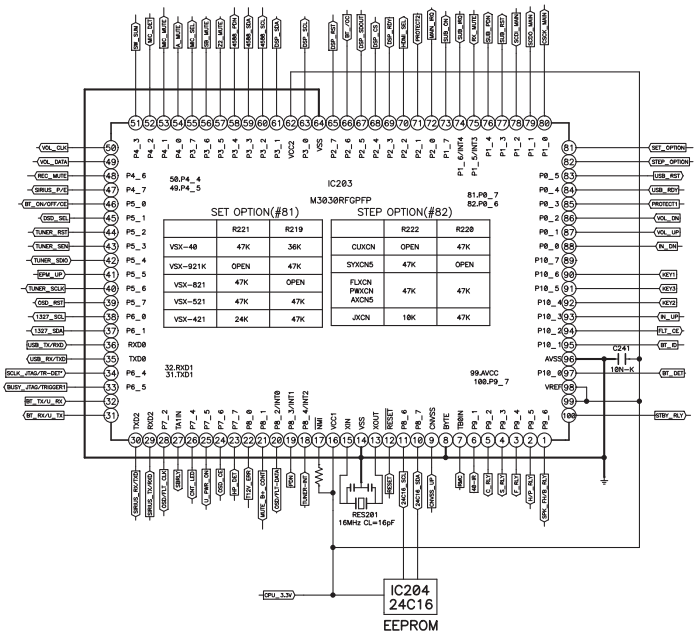
VSX−921:OSD DATA LEVEL SHIFT



VSX−921/821 only
SIRIUS DATA LEVEL SHIFT



MAIN MICOM



SET OPTION(#81)

	R221	R219
VSX−40	47K	36K
VSX−921K	OPEN	47K
VSX−821	47K	OPEN
VSX−521	47K	47K
VSX−421	24K	47K

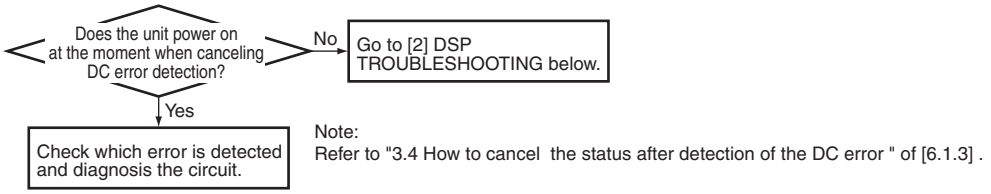
STEP OPTION(#82)

	R222	R220
CUXCN	OPEN	47K
SYXCN5	47K	OPEN
FLXCN PWXCN AXCN5	47K	47K
JXCN	10K	47K

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

5. DIAGNOSIS
5.1 TROUBLESHOOTING

[1] No Power

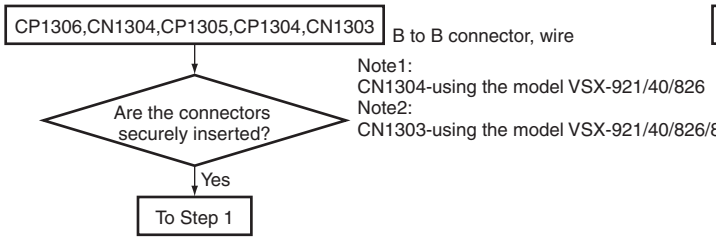


Note:
Refer to "3.4 How to cancel the status after detection of the DC error " of [6.1.3] .

[2] DSP TROUBLESHOOTING

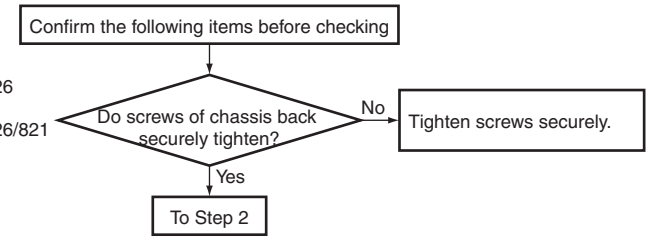
■ TROUBLESHOOTING FOR ALL DESTINATION

Step 0: Preliminary confirmation

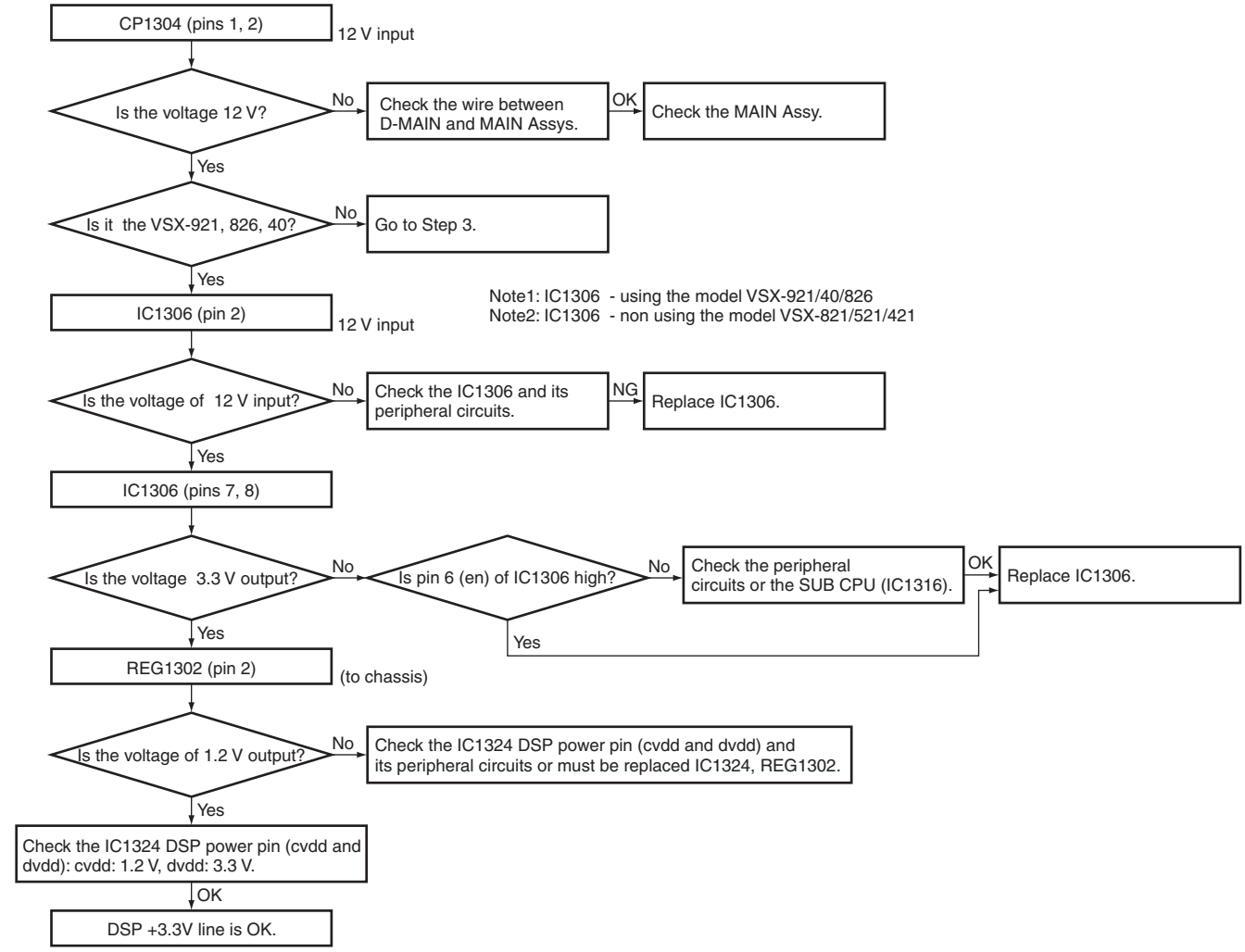


Note1:
CN1304-using the model VSX-921/40/826
Note2:
CN1303-using the model VSX-921/40/826/821

Step 1: Fixed board

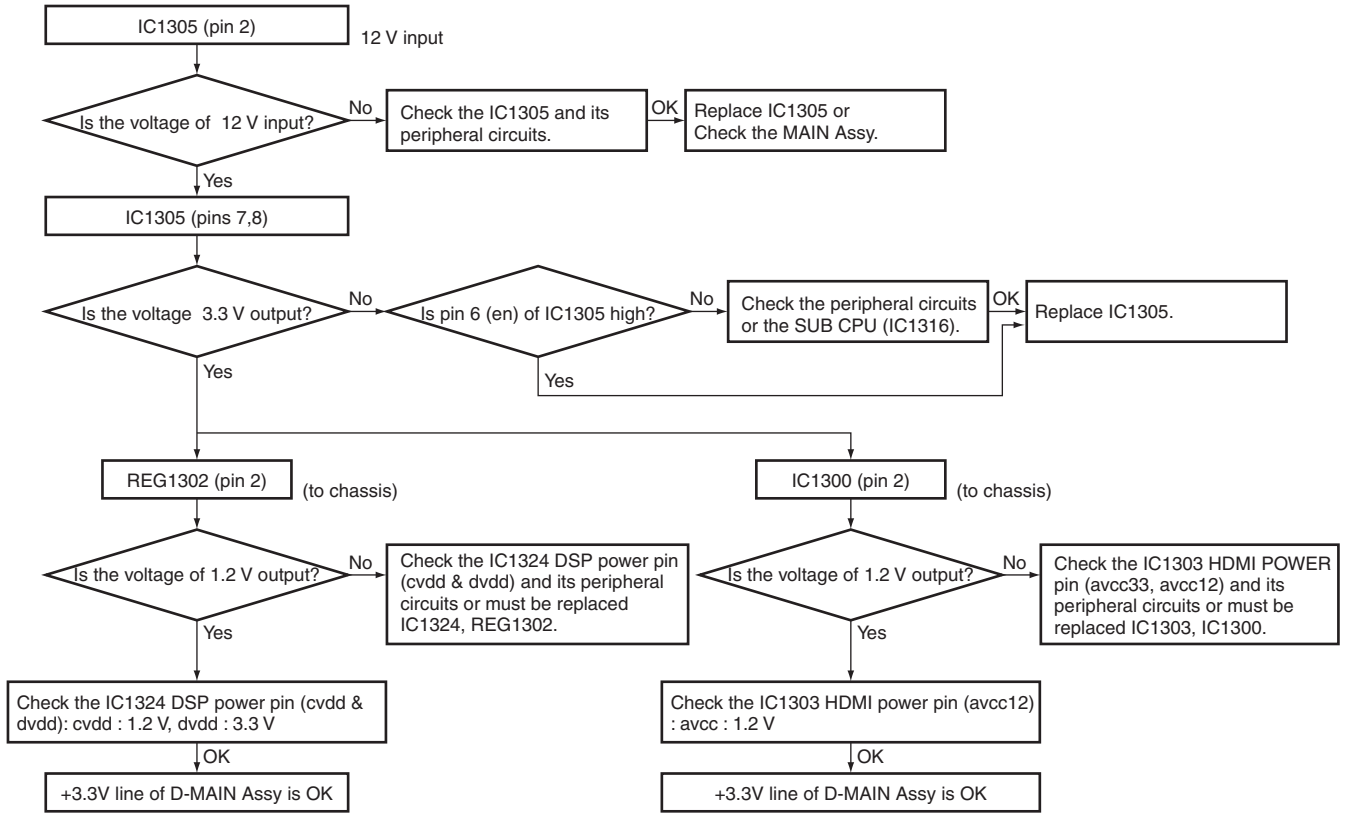


Step 2: Power supply

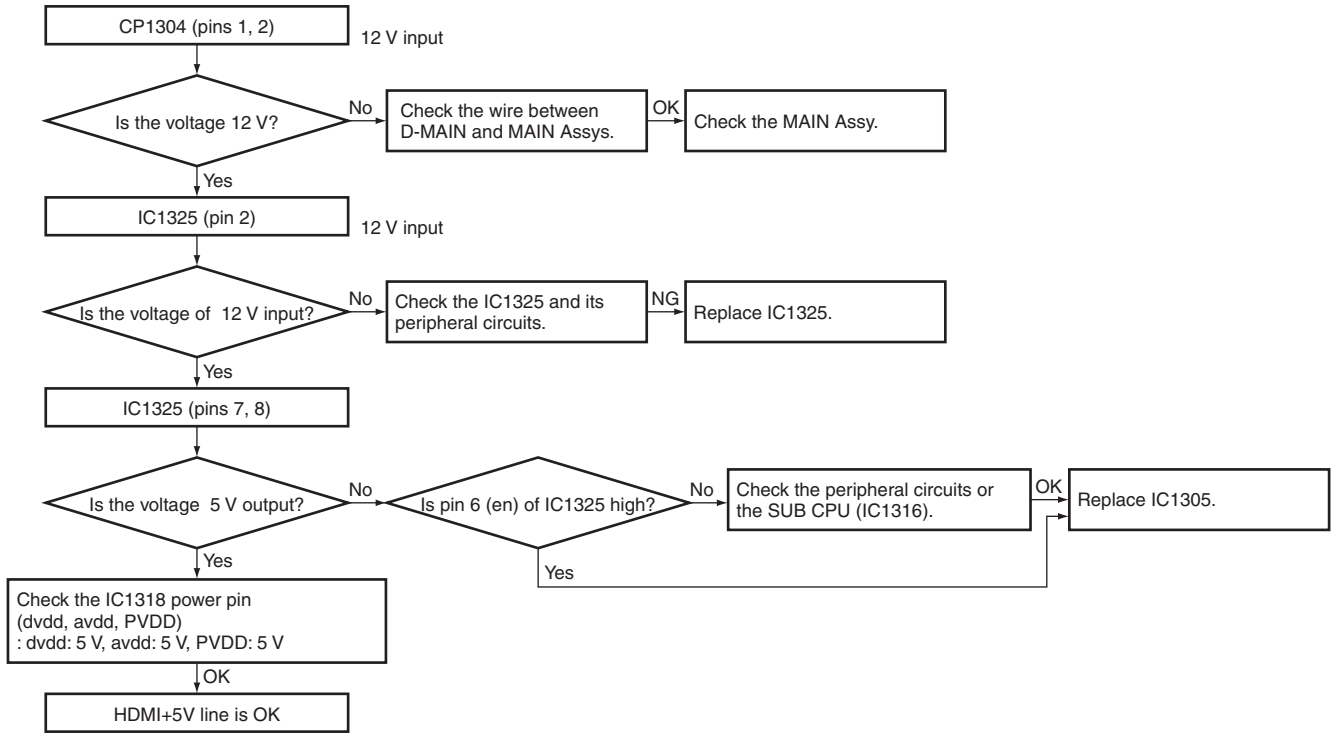


Note1: IC1306 - using the model VSX-921/40/826
Note2: IC1306 - non using the model VSX-821/521/421

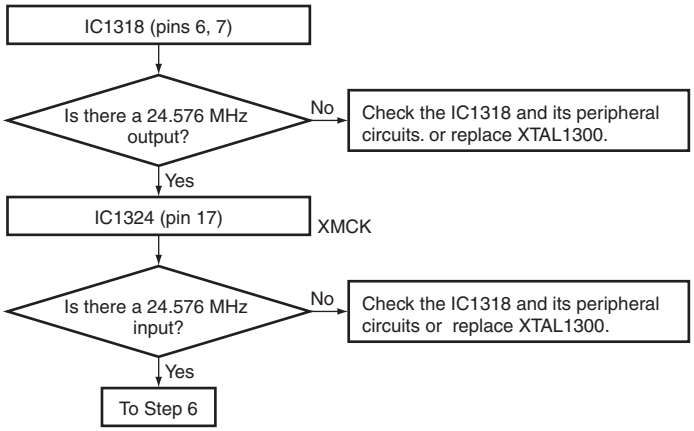
Step 3: Power supply



Step 4: Power supply

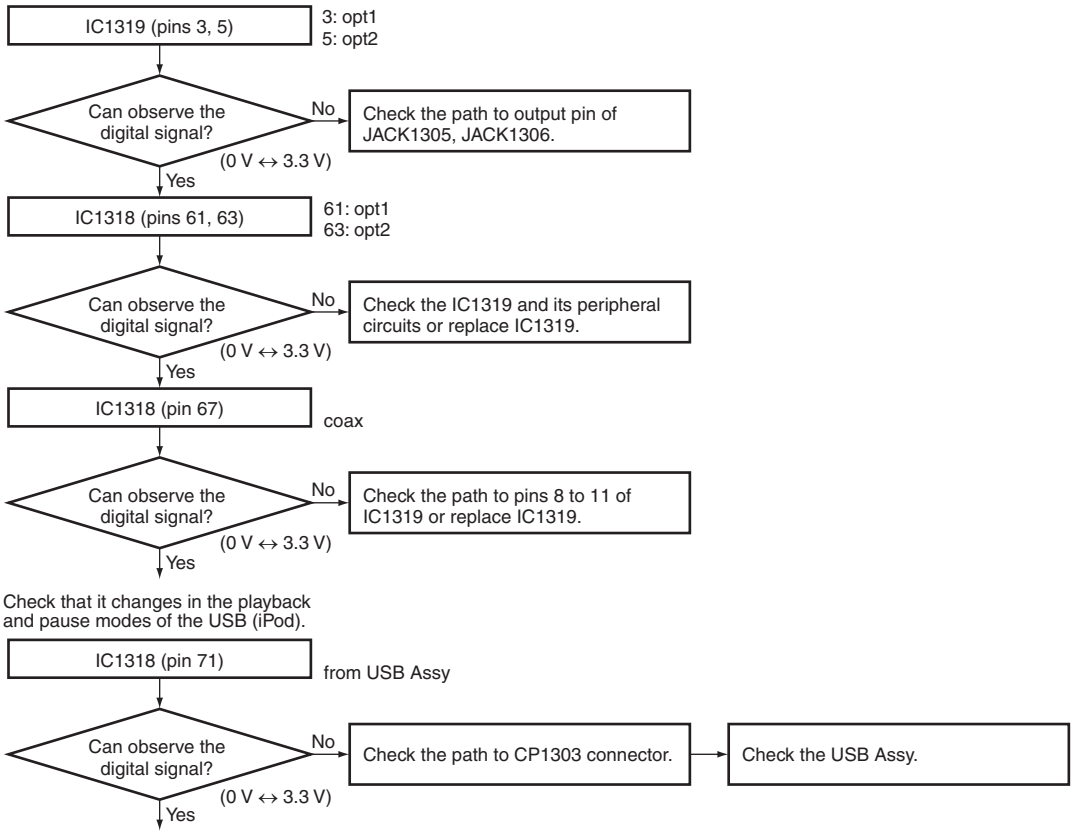


Step 5: X'tal



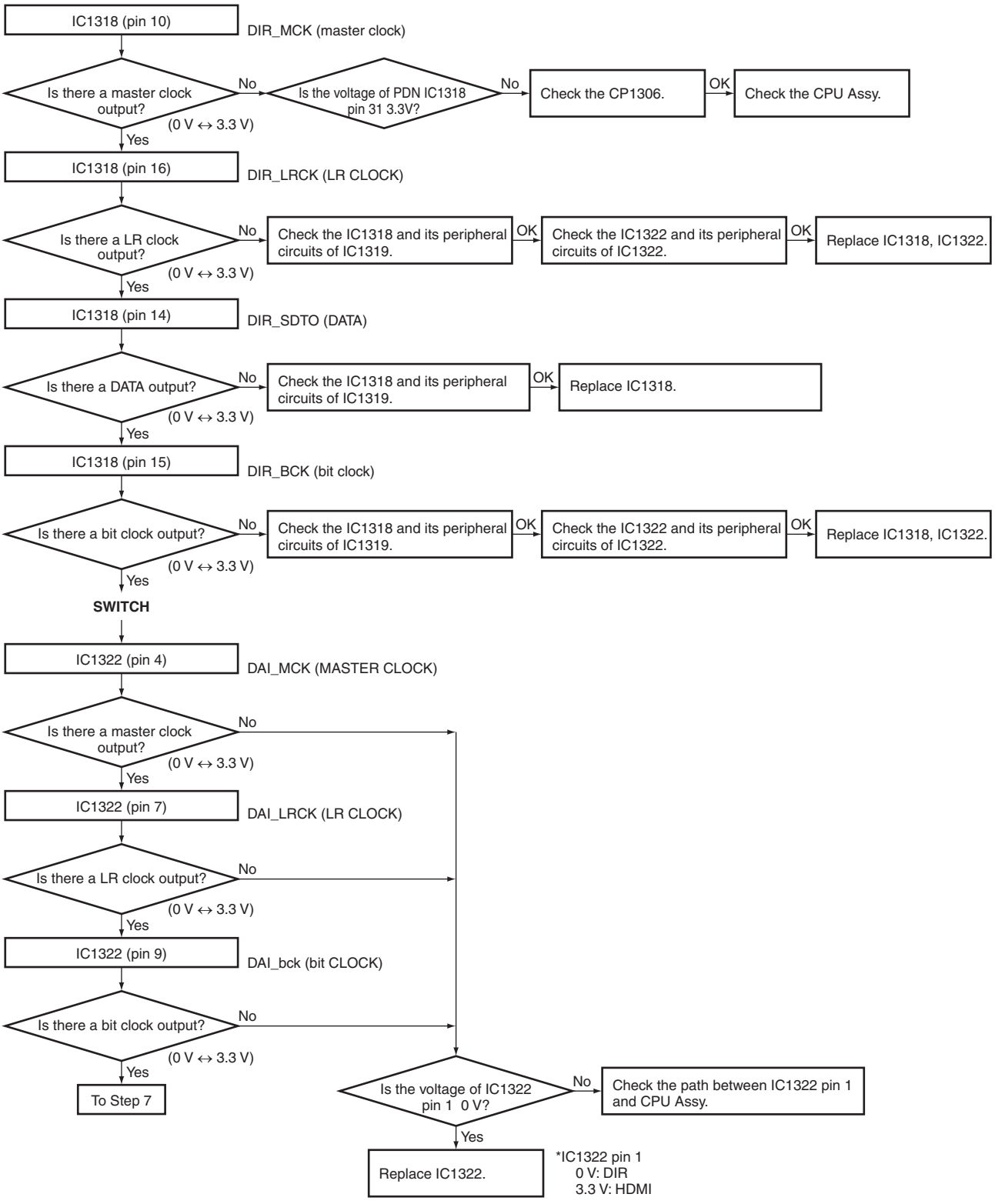
Step 6: DIR

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



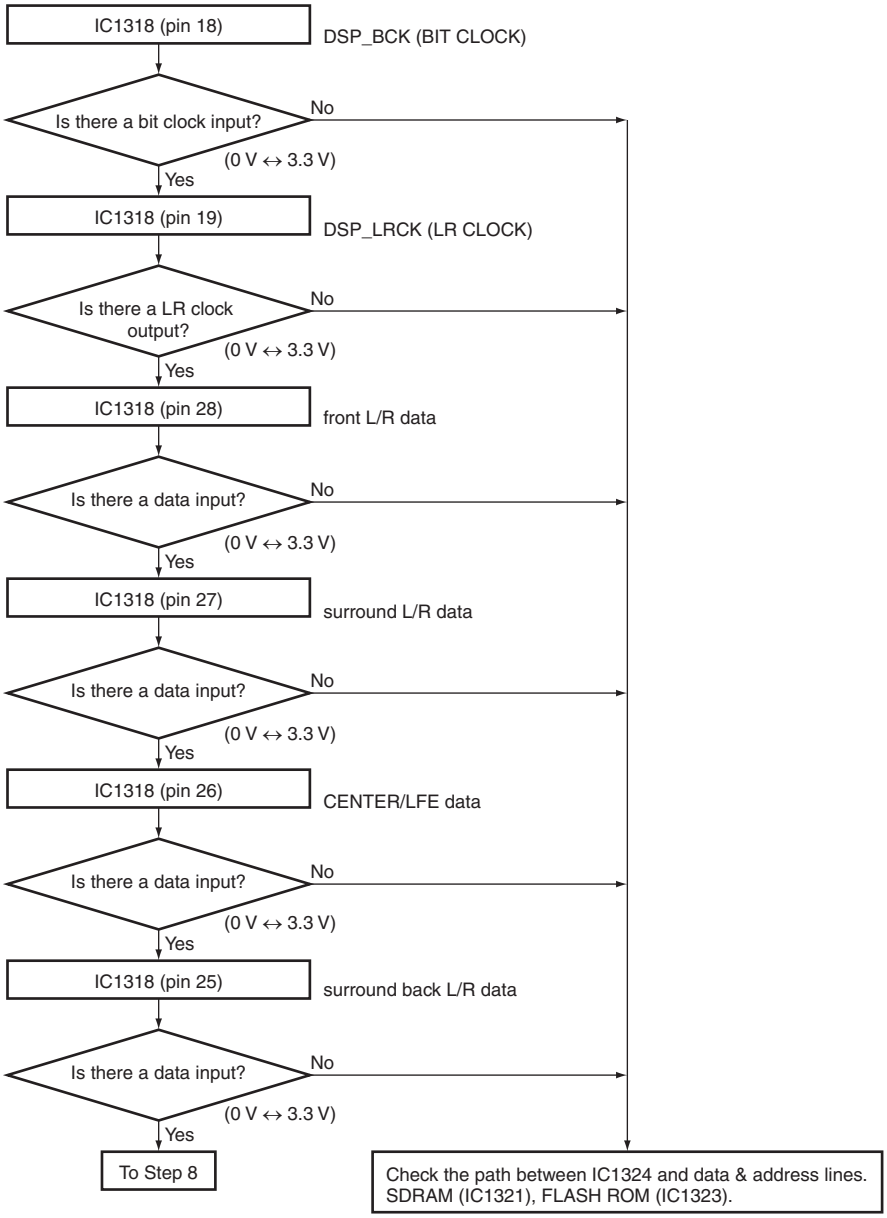
Check that it changes in the playback and pause modes of the USB (iPod).

Check that the data and clock signals are output.

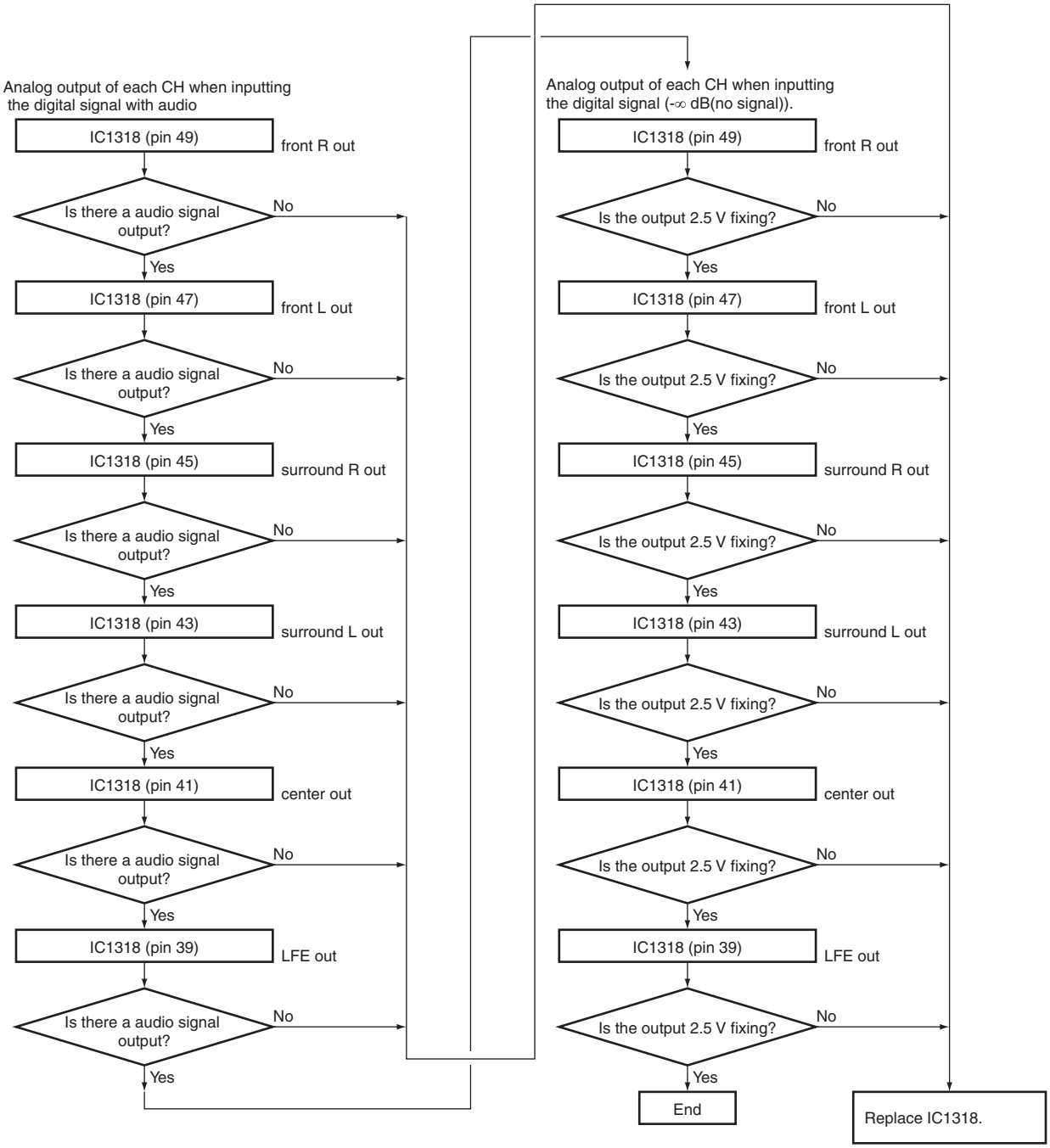

IC1318 (pin 10)
DIR_MCK (master clock)
Is there a master clock output?
(0 V ↔ 3.3 V)
No
Is the voltage of PDN IC1318 pin 31 3.3V?
No
Check the CP1306.
OK
Check the CPU Assy.
Yes
IC1318 (pin 16)
DIR_LRCK (LR CLOCK)
Is there a LR clock output?
(0 V ↔ 3.3 V)
No
Check the IC1318 and its peripheral circuits of IC1319.
OK
Check the IC1322 and its peripheral circuits of IC1322.
OK
Replace IC1318, IC1322.
Yes
IC1318 (pin 14)
DIR_SDTO (DATA)
Is there a DATA output?
(0 V ↔ 3.3 V)
No
Check the IC1318 and its peripheral circuits of IC1319.
OK
Replace IC1318.
Yes
IC1318 (pin 15)
DIR_BCK (bit clock)
Is there a bit clock output?
(0 V ↔ 3.3 V)
No
Check the IC1318 and its peripheral circuits of IC1319.
OK
Check the IC1322 and its peripheral circuits of IC1322.
OK
Replace IC1318, IC1322.
Yes
SWITCH
IC1322 (pin 4)
DAI_MCK (MASTER CLOCK)
Is there a master clock output?
(0 V ↔ 3.3 V)
No
Yes
IC1322 (pin 7)
DAI_LRCK (LR CLOCK)
Is there a LR clock output?
(0 V ↔ 3.3 V)
No
Yes
IC1322 (pin 9)
DAI_bck (bit CLOCK)
Is there a bit clock output?
(0 V ↔ 3.3 V)
No
Yes
To Step 7
Is the voltage of IC1322 pin 1 0 V?
No
Check the path between IC1322 pin 1 and CPU Assy.
Yes
Replace IC1322.
*IC1322 pin 1
0 V: DIR
3.3 V: HDMI

Step 7: DSP output (digital)

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



Step 8: CODEC output (ANALOG)



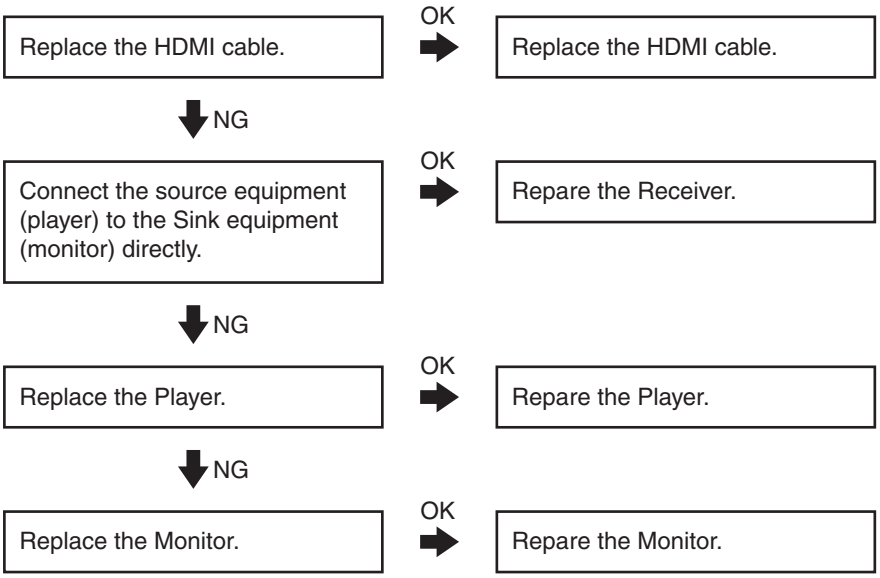
[3] HDMI TROUBLESHOOTING

HDMI Troubleshooting

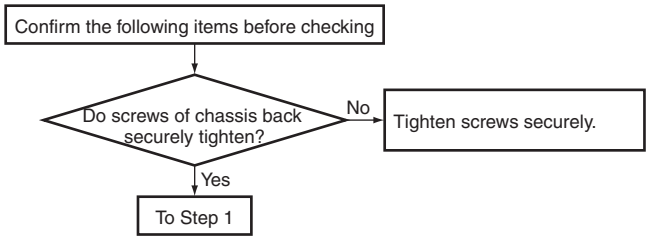
Cause for noncomplection of HDMI authentication between the source equipment and this unit.
(the HDMI indicator is unlit or flasher)

HDMI Simple Diagnosis

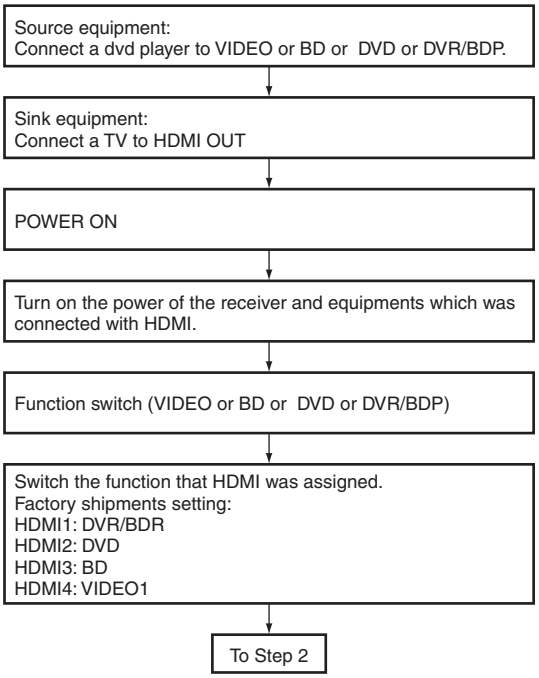
Causes for no display or sound from the monitor



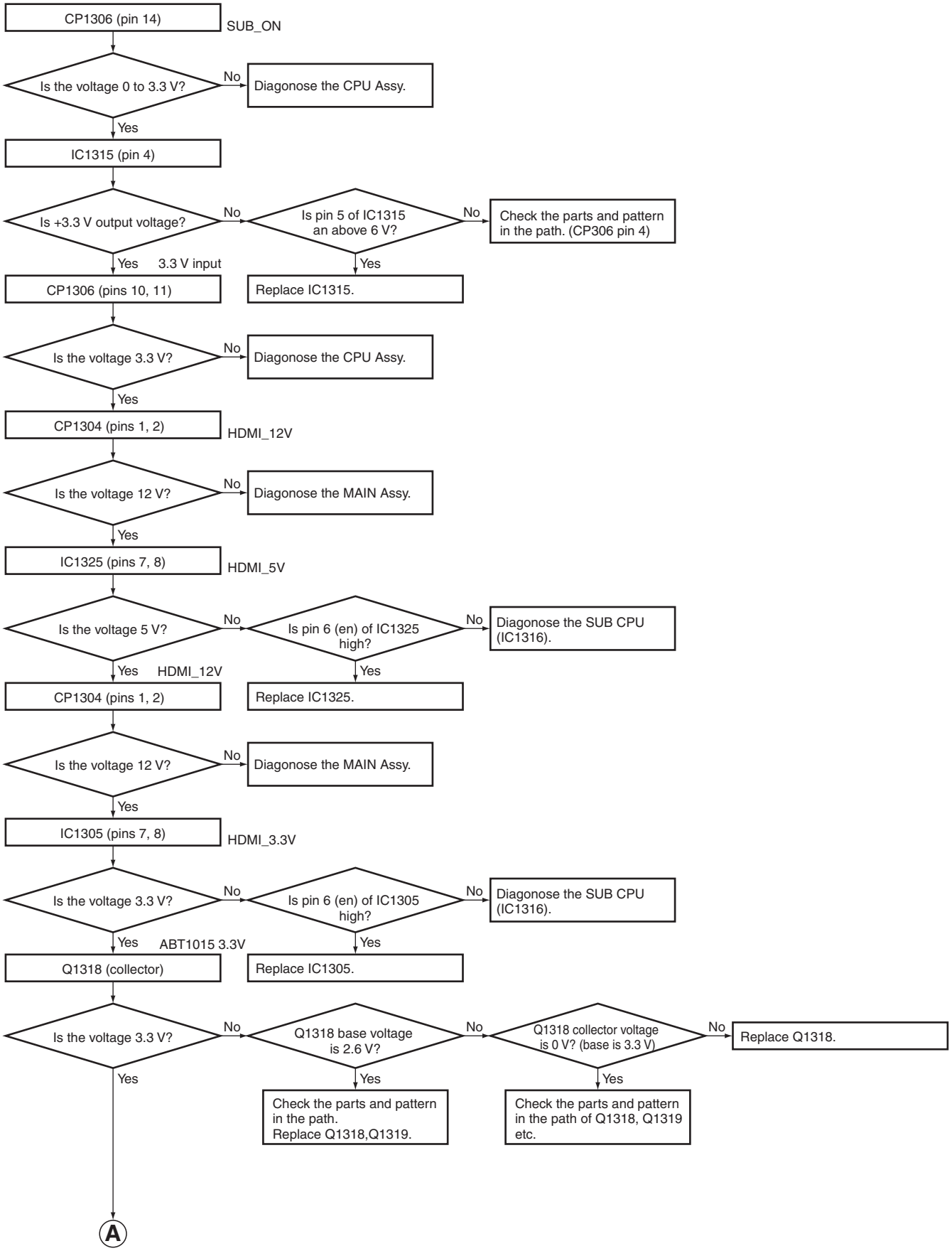
Step 0: Preliminary confirmation

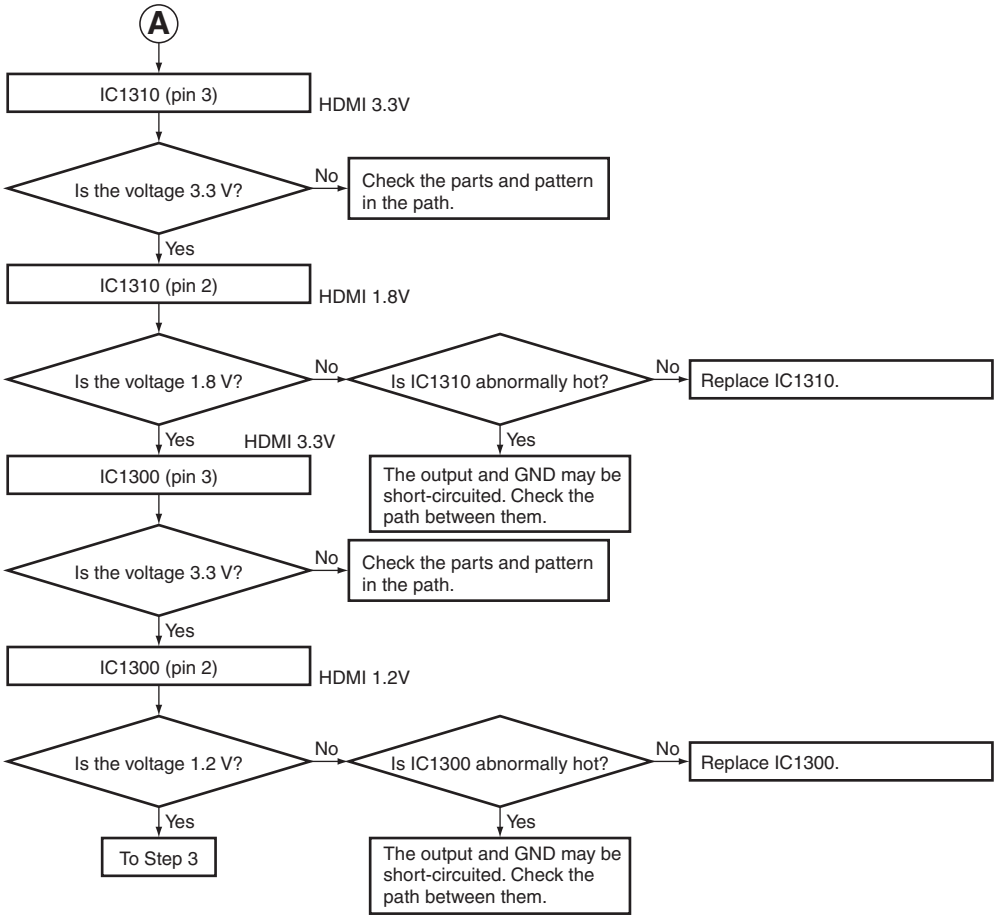


Step 1: Connect the HDMI equipment



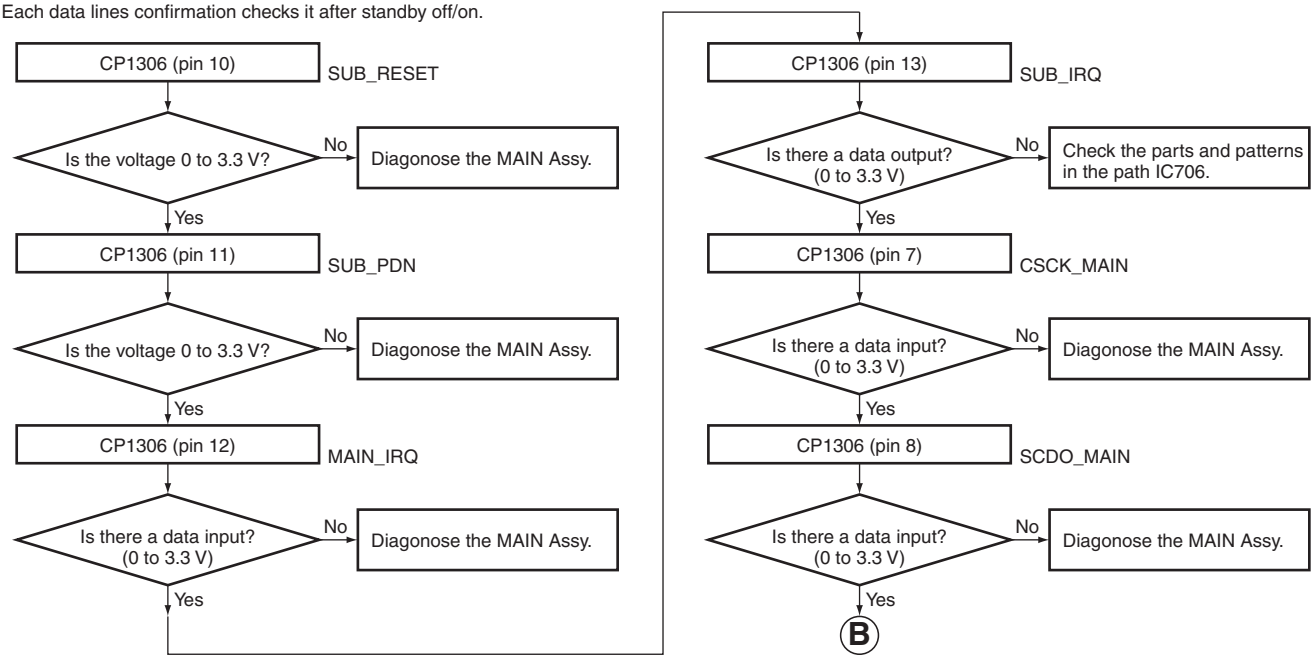
Step 2: Power supply

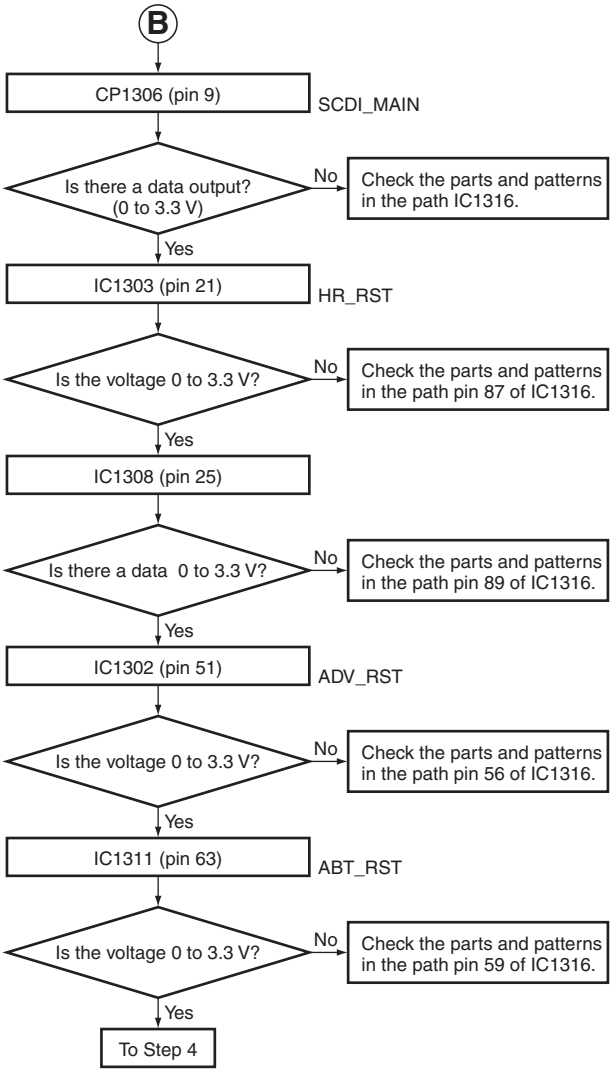




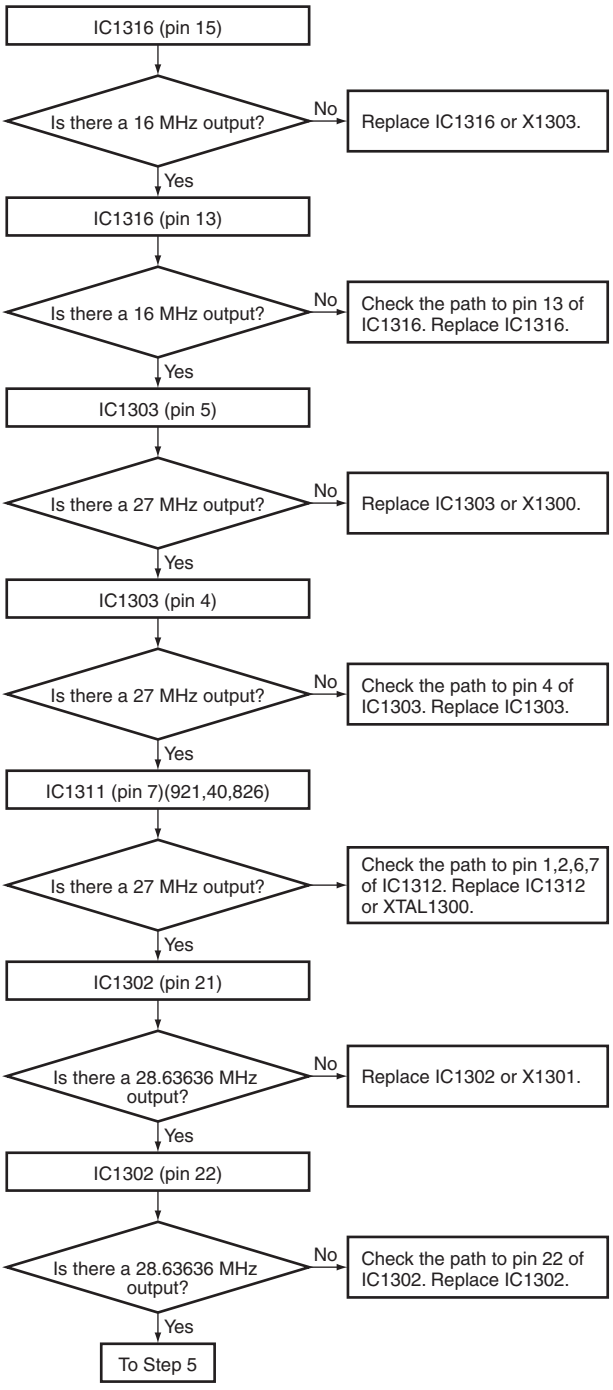
Step 3: Diagnosis

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

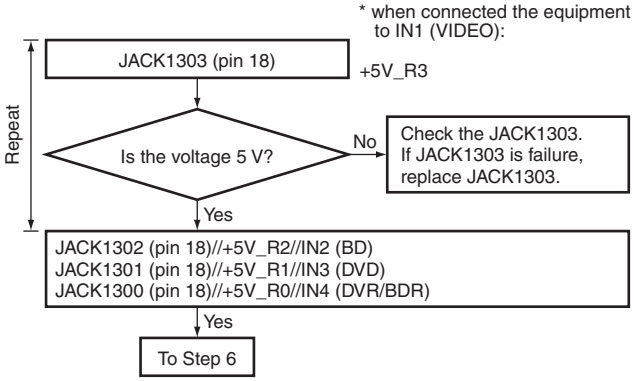



B
CP1306 (pin 9)
SCDI_MAIN
Is there a data output? (0 to 3.3 V)
No
Check the parts and patterns in the path IC1316.
Yes
IC1303 (pin 21)
HR_RST
Is the voltage 0 to 3.3 V?
No
Check the parts and patterns in the path pin 87 of IC1316.
Yes
IC1308 (pin 25)
Is there a data 0 to 3.3 V?
No
Check the parts and patterns in the path pin 89 of IC1316.
Yes
IC1302 (pin 51)
ADV_RST
Is the voltage 0 to 3.3 V?
No
Check the parts and patterns in the path pin 56 of IC1316.
Yes
IC1311 (pin 63)
ABT_RST
Is the voltage 0 to 3.3 V?
No
Check the parts and patterns in the path pin 59 of IC1316.
Yes
To Step 4

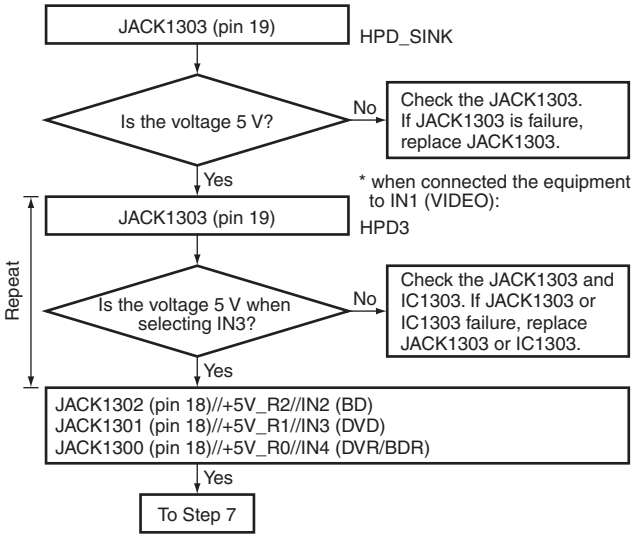
Step 4: X'TAL


IC1316 (pin 15)
Is there a 16 MHz output?
No
Replace IC1316 or X1303.
Yes
IC1316 (pin 13)
Is there a 16 MHz output?
No
Check the path to pin 13 of IC1316. Replace IC1316.
Yes
IC1303 (pin 5)
Is there a 27 MHz output?
No
Replace IC1303 or X1300.
Yes
IC1303 (pin 4)
Is there a 27 MHz output?
No
Check the path to pin 4 of IC1303. Replace IC1303.
Yes
IC1311 (pin 7)(921,40,826)
Is there a 27 MHz output?
Check the path to pin 1,2,6,7 of IC1312. Replace IC1312 or XTAL1300.
Yes
IC1302 (pin 21)
Is there a 28.63636 MHz output?
No
Replace IC1302 or X1301.
Yes
IC1302 (pin 22)
Is there a 28.63636 MHz output?
No
Check the path to pin 22 of IC1302. Replace IC1302.
Yes
To Step 5

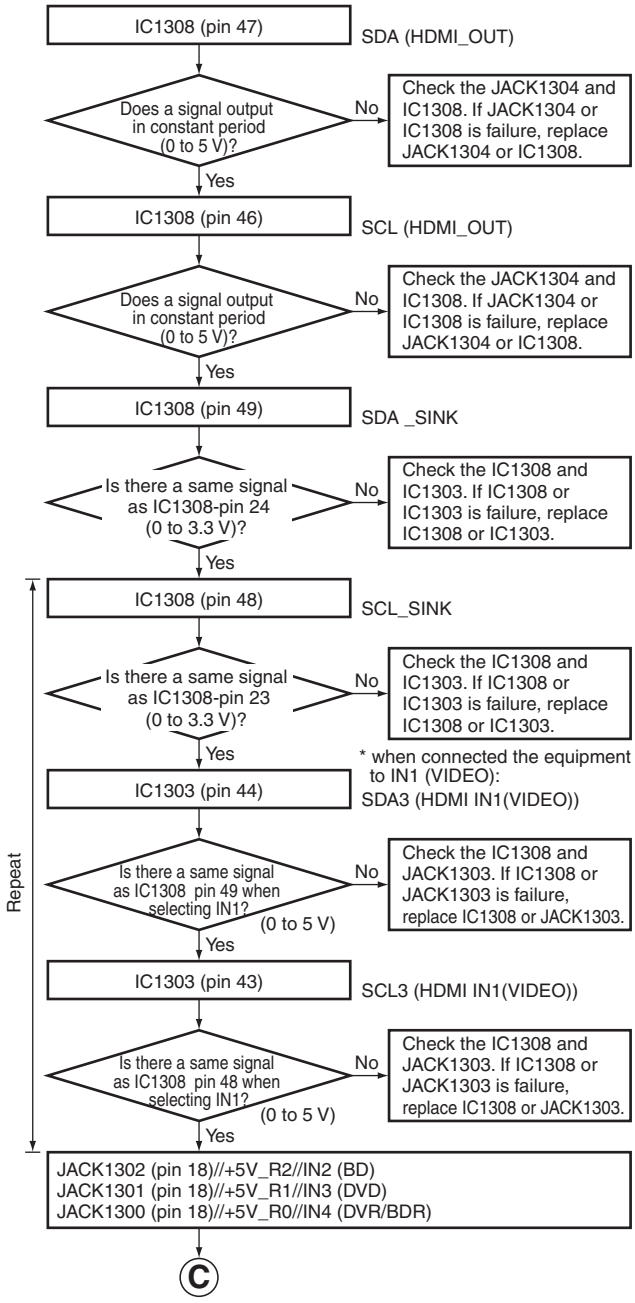
Step 5: INPUT/OUTPUT Diagnosis

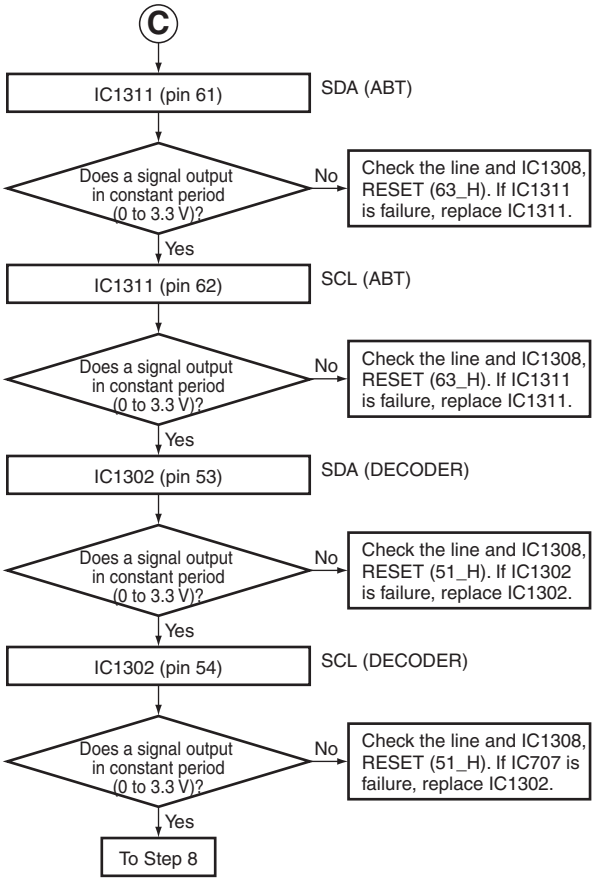


Step 6: Hot Plug Detect

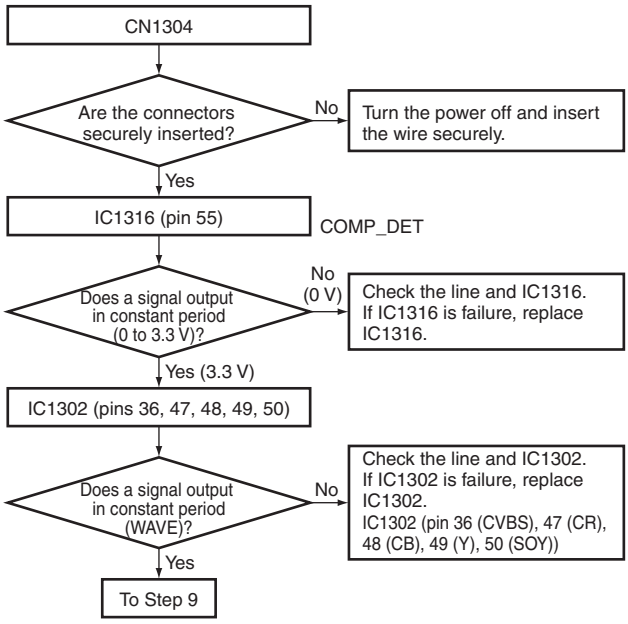


Step 7: SDA /SCL

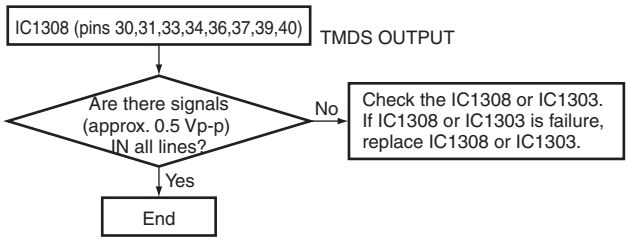




Step 8: ANALOG UP

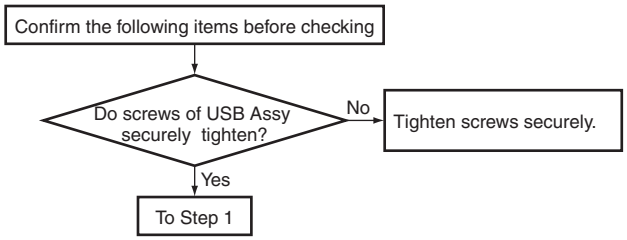


Step 9: TMDS

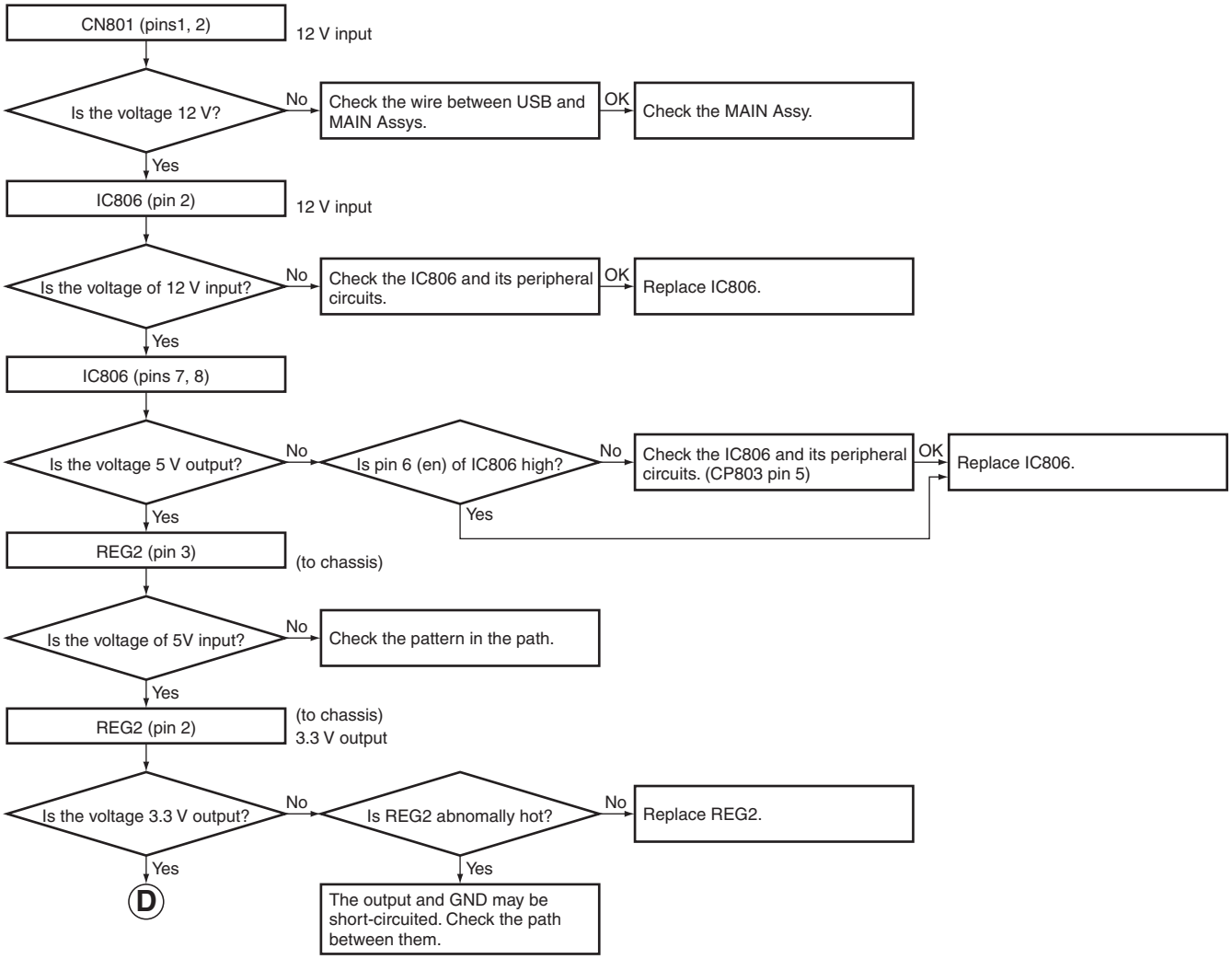


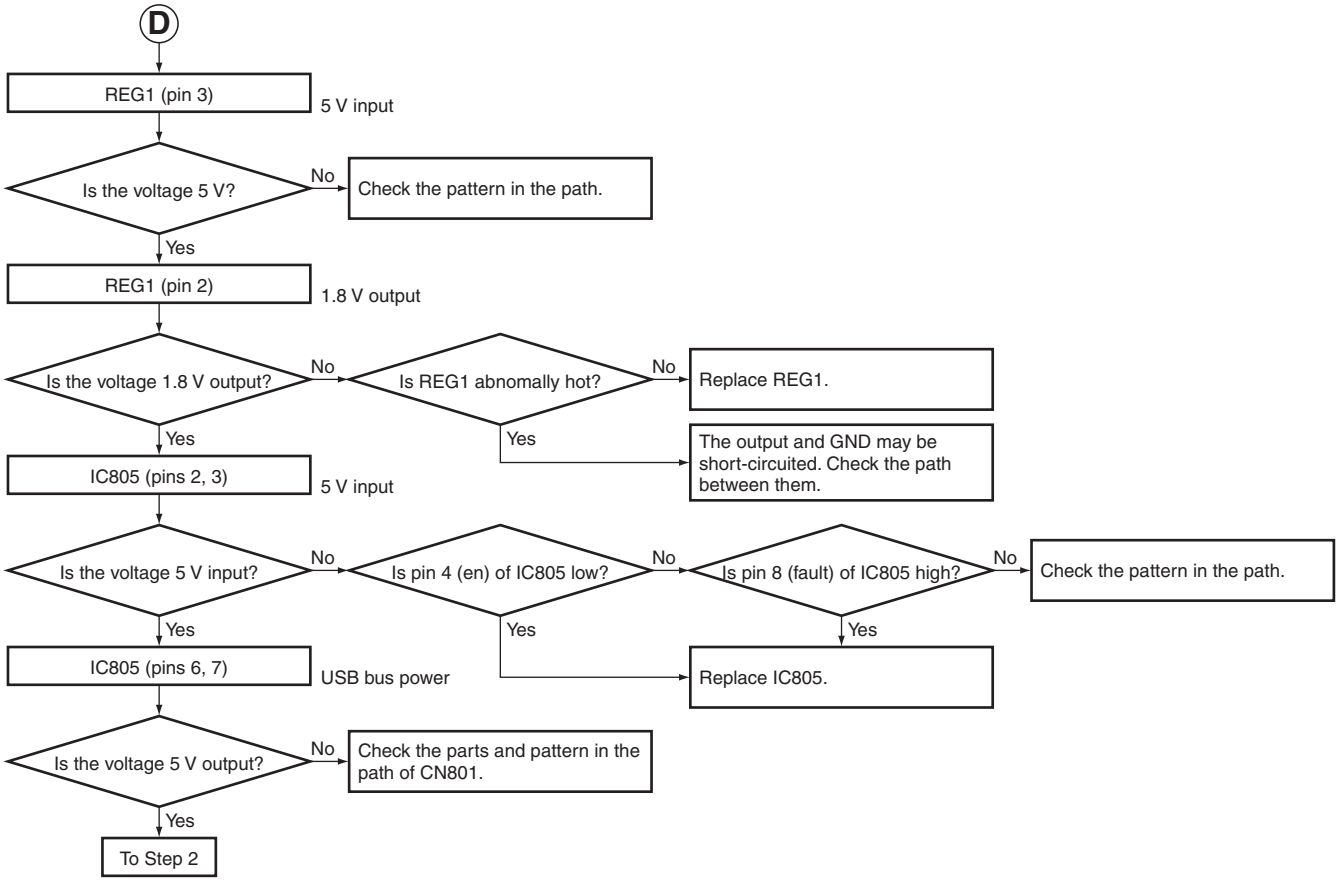
[4] iPod TROUBLESHOOTING

Step 0: Preliminary confirmation

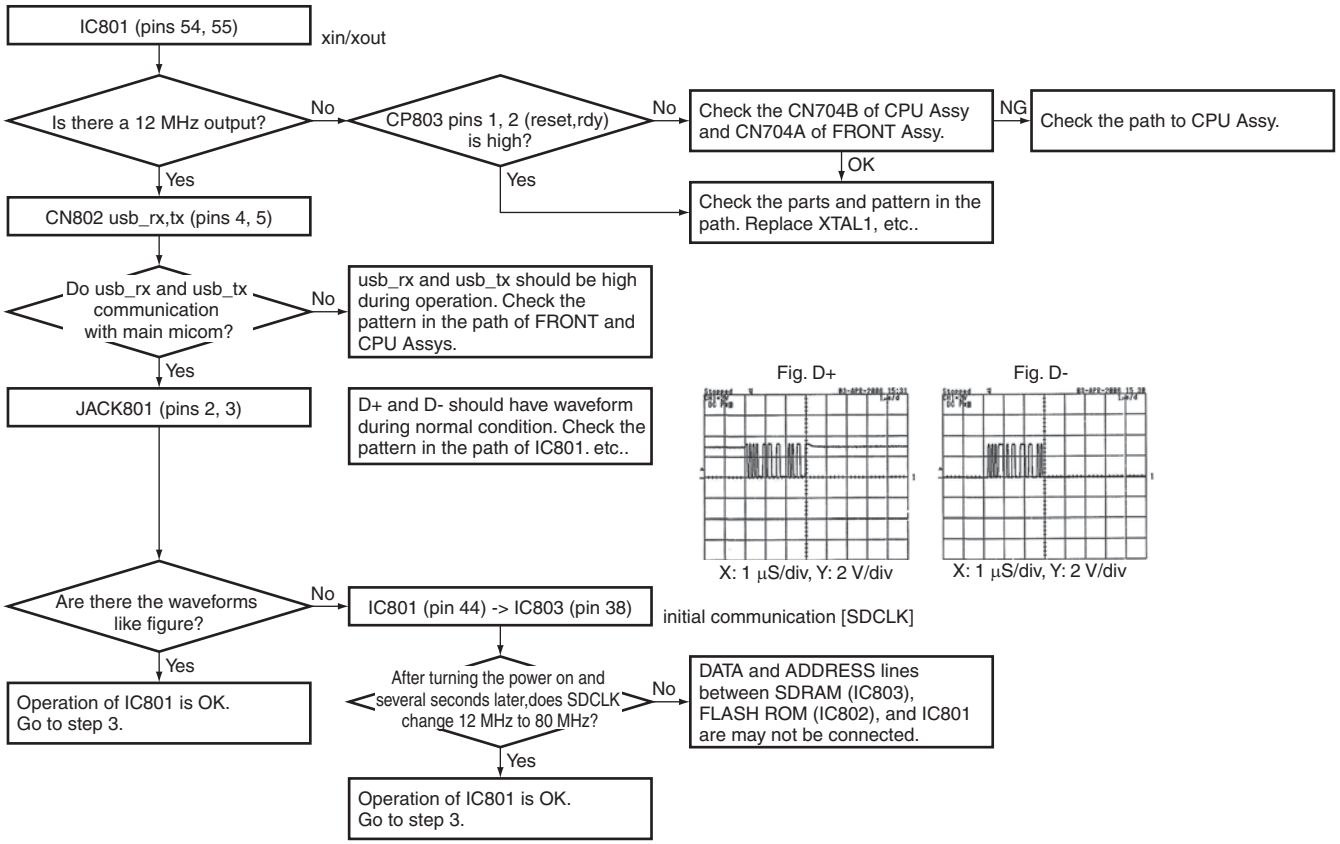


Step 1: Power supply

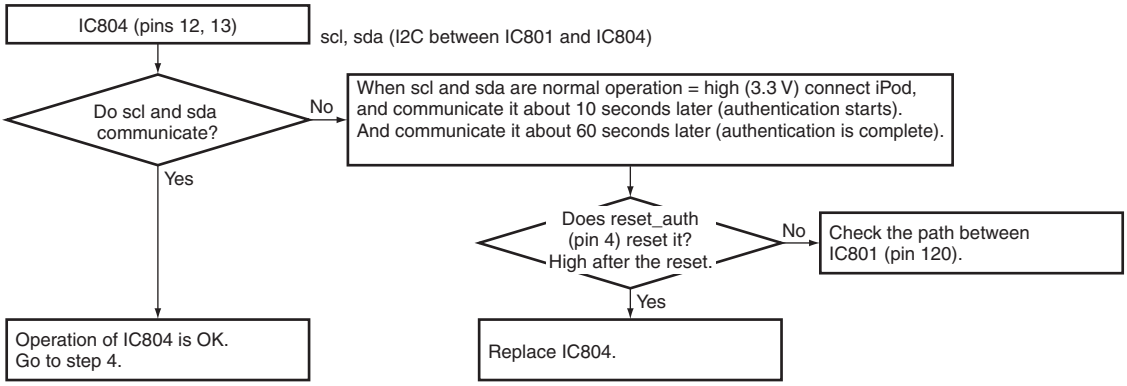




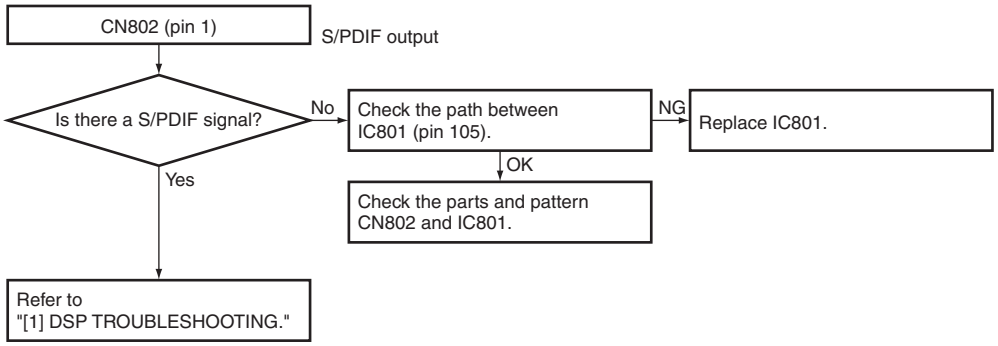
Step 2: Operation of USB Media Control IC



Step 3: Operation of iPod (Authentication process)

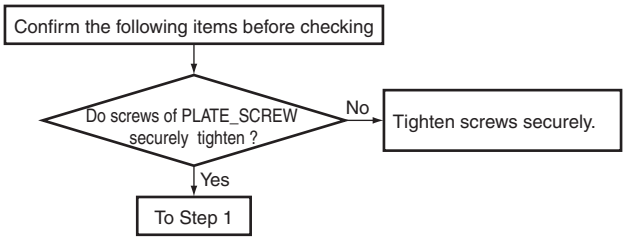


Step 4: Audio out check

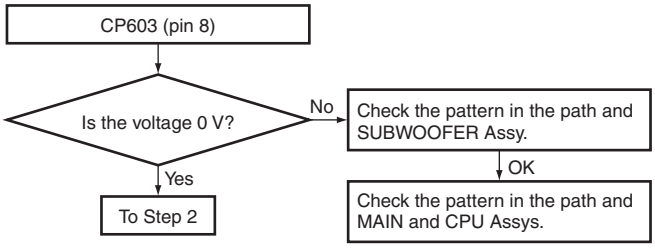


[5] BT (Bluetooth) TROUBLESHOOTING

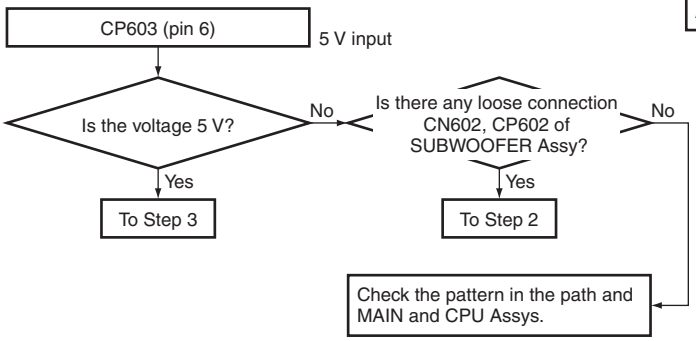
Step 0: Preliminary confirmation



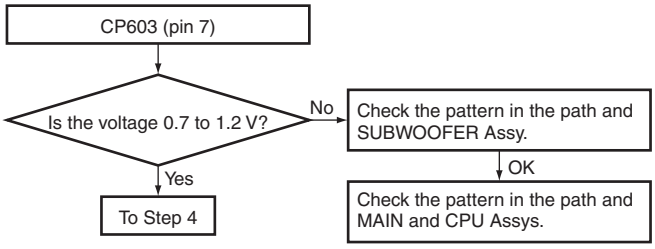
Step 1: BT_DET



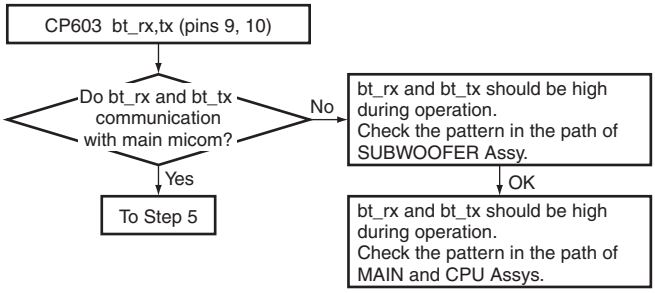
Step 2: Power supply



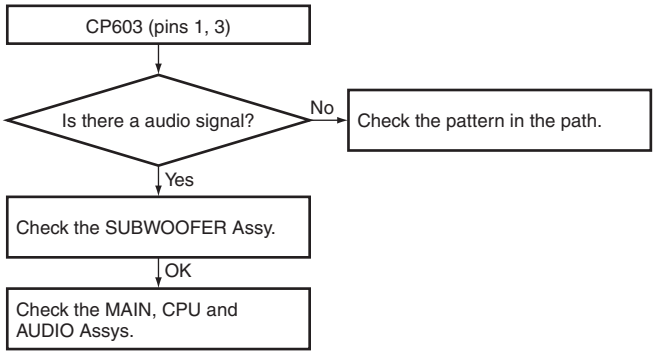
Step 3: BT_ID



Step 4: Communication



Step 5: Audio out check



5.2 ADAPTER ERROR MESSAGE

Functional Name
Adapter port overcurrent detection

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

Basic Operation

Front Key Sequence Change	Character Display	Time (sec.)	Icon Display (FL)	LED Display
When the overcurrent is detected	1 2 3 4 5 6 7 8 / A D P E R R ; 1 2 / *1 Check it after turning the power once off then back on again, and it becomes the normal operation if normal.	The display continues until the power is turned off.	—	—

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

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

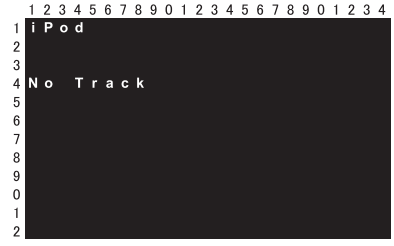
*2 It is assumed that it is fixed value of the 20 msec to 50 msec degree.

5.3 USB / iPod ERROR MESSAGE

Functional Name
iPod ERROR MESSAGE

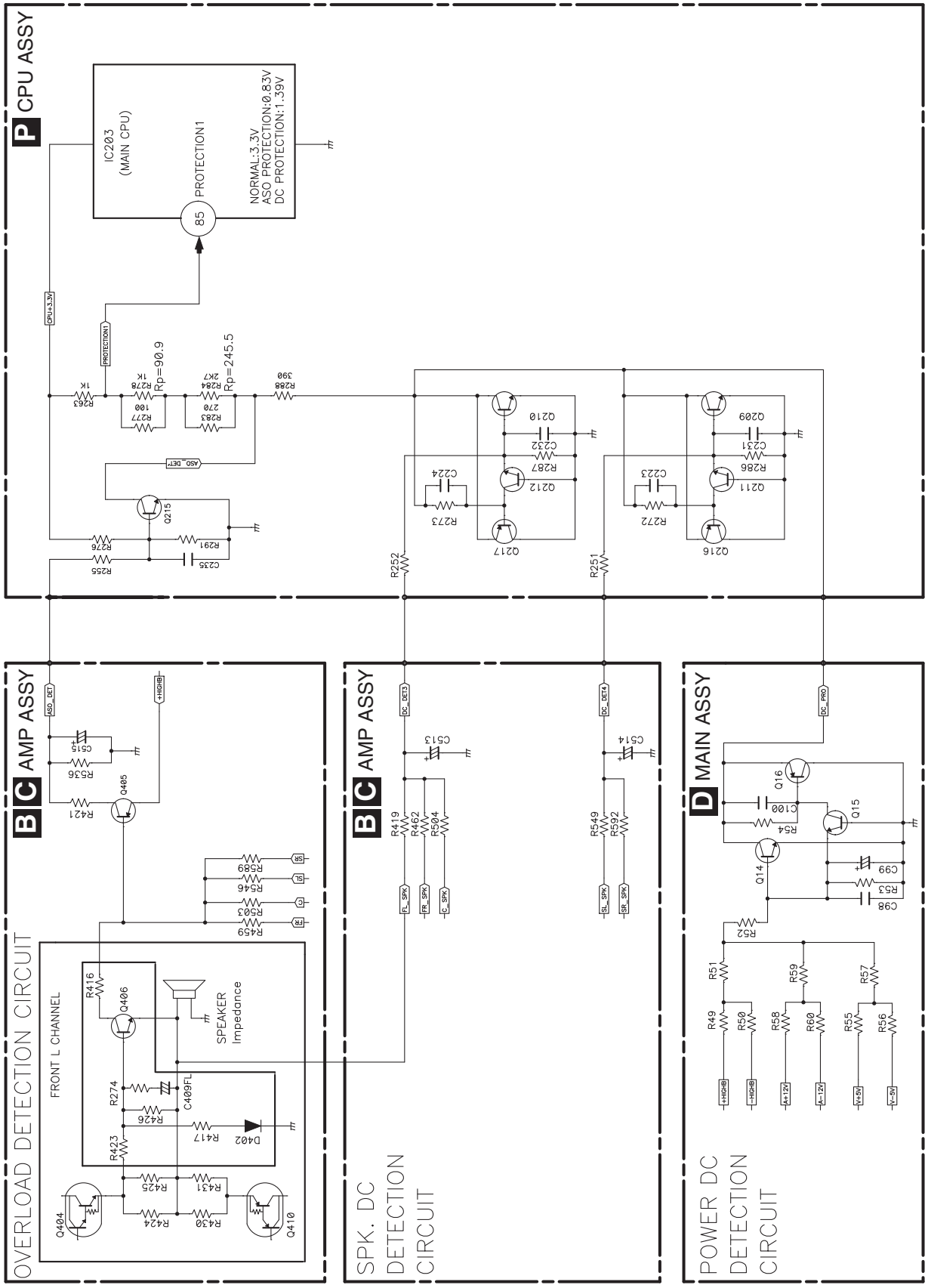
Outline
Error message is displayed at abnormality time.

Basic Operation

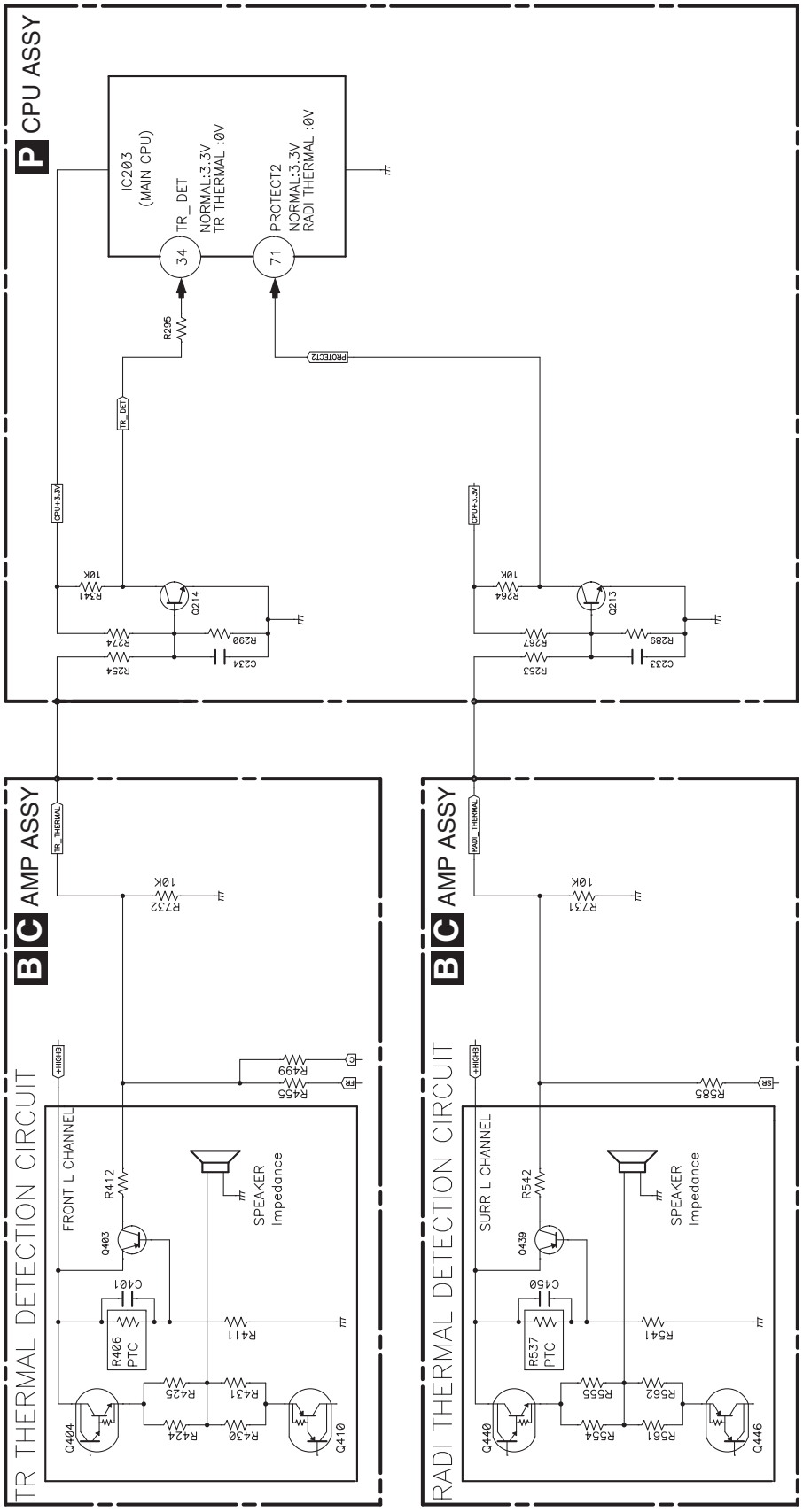
Front Key Sequence Change	OSD display	Time (sec)	FL Display
The communication error iPod/USB communication error			I/U ERR1
Generation error			I/U ERR2
Loading error			I/U ERR3
OverHeat error			I/U ERR4
No Track Caution			NO TRACK

5.4 DETECTION CIRCUIT

[1] Overload and DC Protection Circuit



[2] TEMP Protection Circuit



6. SERVICE MODE
6.1 SERVICE MODE

[1] Display mode for numbers of protection detections

[Purpose]

The numbers of detections for various protection processes are displayed.

[How to enter/exit]

During Standby mode, simultaneously press and hold the [PRESET –] and [STANDBY/ON] keys for 2 seconds to enter this mode.
The display will return to the normal indication when no key operation is performed for 5 seconds.

[Basic operations]

Key Operation	FL Display	Time (sec.)	Description of Indications
(STANDBY state)			
[PRESET –] + [STANDBY/ON] keys (Initial display)	DC 005 *2 → Counter	5 (-> normal) *1	Number of DC error detections
[ENTER] key			
[ENTER] key	OVER 003 *2 → Counter	5 (-> normal) *1	Number of OVERLOAD error detections
[ENTER] key	TEMP 007 *2 → Counter	5 (-> normal) *1	Number of abnormal-temperature error detections
(Initial display)			

*1 "5 (-> normal)" denotes that the display will return to the normal indication when no key operation is performed for 5 seconds.
*2 Variable range: 0 to 255

The above-mentioned Display mode is available only when the product operates properly.

If any protection function is activated while the product is in use, the product cannot be turned ON and enter the above Display mode. In such a case, cancel the protection function, referring to “3.4 How to cancel the status after detection of the DC error." If a protection function is activated immediately after the previous protection function is canceled, cancel that protection function again then enter STBY mode immediately. You can then see the error logs, following the above procedures, until a next protection function is activated.

[2] Reset mode for numbers of protection detections

[Purpose]

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

[How to enter/exit]

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

[Basic operations]

Key Operation	FL Display	Time (sec.)	Description of Indications
(STANDBY state)			
[ALC/STANDARD SURR] + [STANDBY/ON] keys (press and hold the keys for 10 seconds.)	CLEAR?	5 (-> normal) *1	
[ENTER] key ↓	↓		
(Counter Clear end)	0 K	5 (-> normal) *1	
(Normal display)	BD *2	usually	

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

[Detailed explanations]

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

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

[Purpose]

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

[Basic operations]

3.1 DC (AMP is abnormality) error detection

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

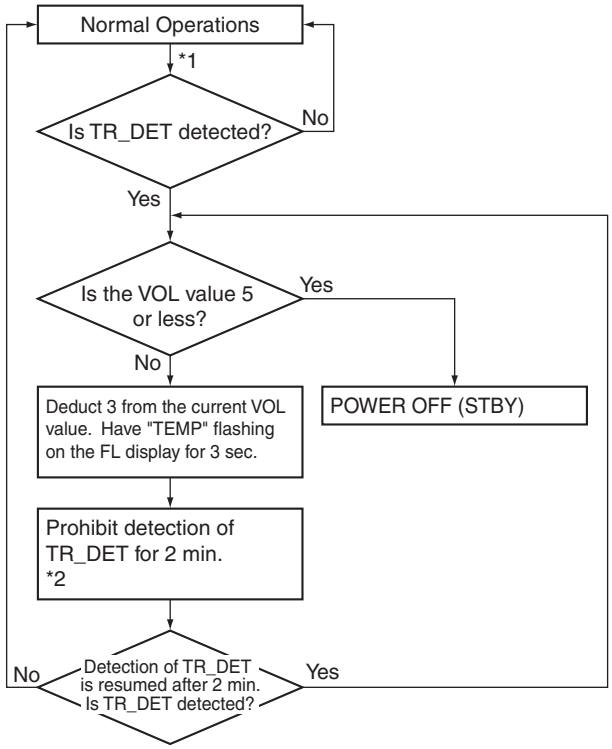
3.2 OVERLOAD (overcurrent) error detection

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

3.3 TEMP (AMP overheat) error detection

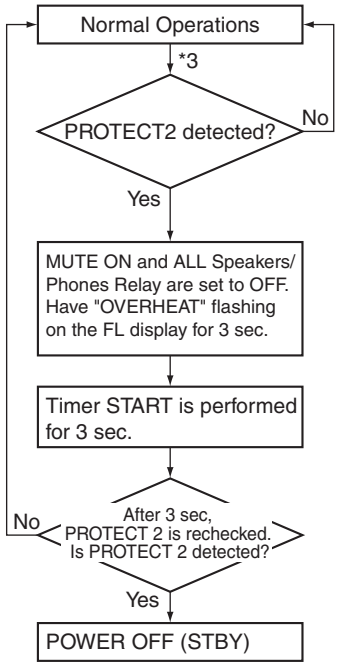
For detection of a TEMP error, the unit monitors both the TR_DET and PROTECT2 signals. If a TEMP error is detected, the processes shown below will be performed. The processes shown below are rough operational specifications and are not the actual commands from the mounted components.
After a TEMP error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

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



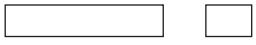
*1: The detection interval must be 1 sec or less.
*2: If PROTECT 2 is detected while TR_DET detection is prohibited for 2 min, the PROTECT 2 function will be activated.

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



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

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

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

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

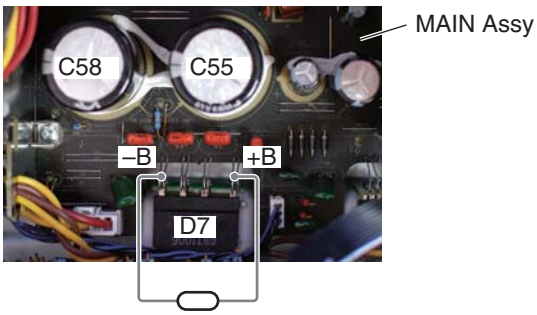
7. DISASSEMBLY

Note:
(1) Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.
(2) For performing the diagnosis shown below, the following jigs for service is required:
- Board to board extension jig cable (GGD1733)
- Board to board extension jig cable (GGD1734)
- 31P extension jig FFC (GGD1738)
- 9P extension jig cable (GGD1739)
- 13P extension jig cable (GGD1740)

1. Discharging

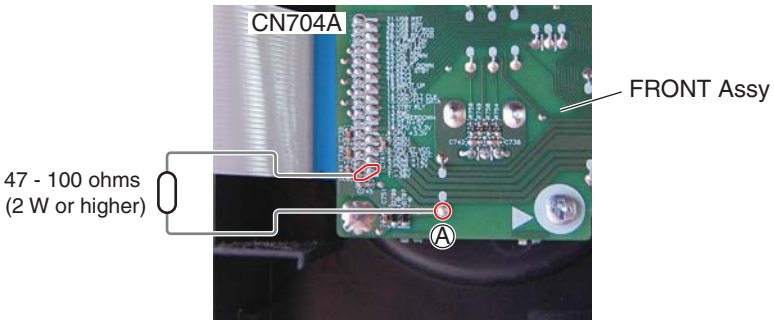
[1] MAIN Assy Capacitor (C55, C58)

[Procedures]
(1) Unplug the power cord.
(2) Disconnect the 10P connector from CP403 of the AMP 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 or 2 (–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).

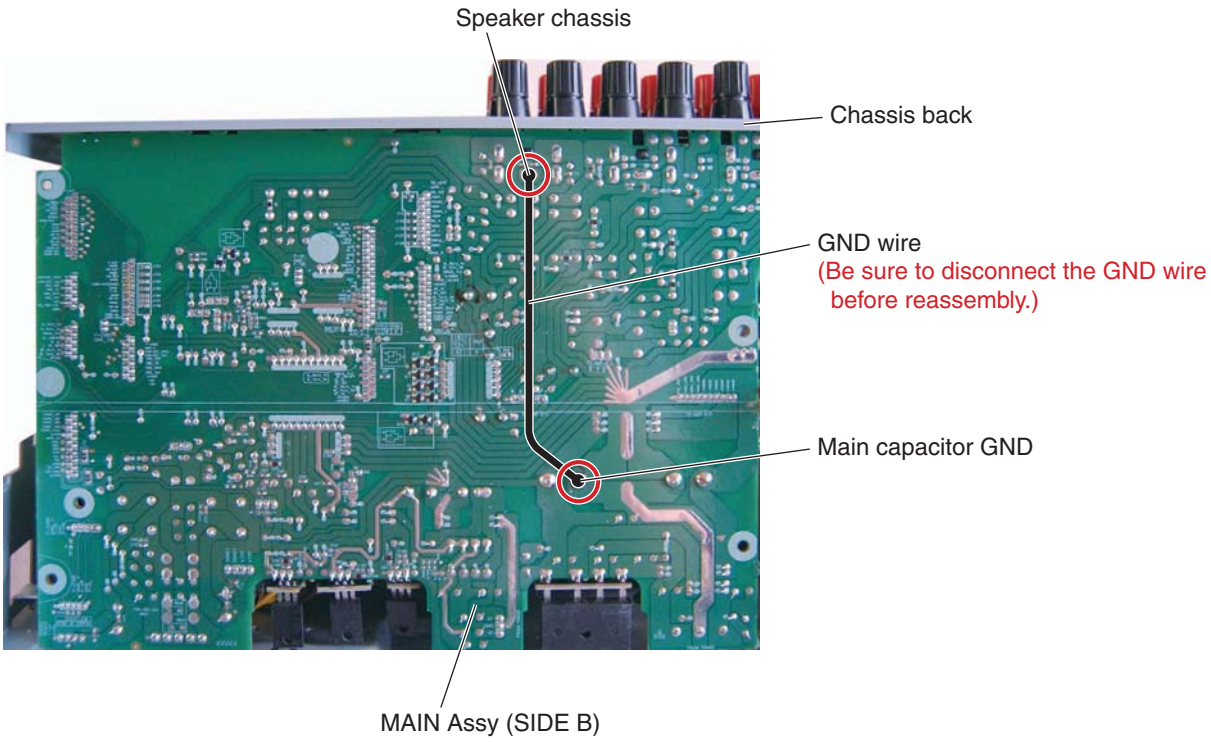


2. Notes on Ground Points Connection

[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 chassis back (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.



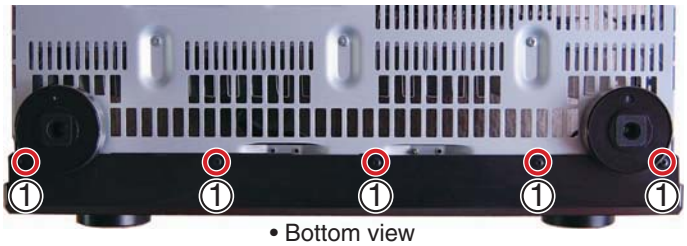
3. Disassembly

Note: The photo. without the explanatory note is VSX-821-K.

[1] Front Panel Section

Remove the cabinet by removing the 10 screws.

(1) Remove the five screws. (BBZ30P080FTB)

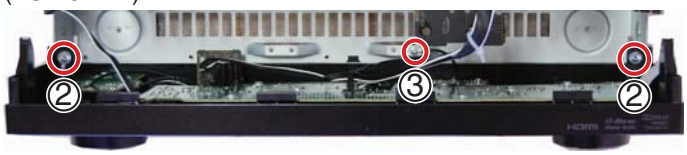


• Bottom view

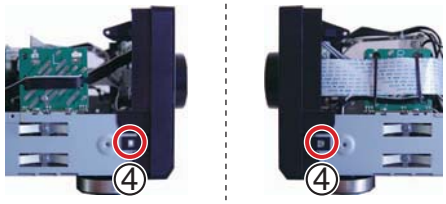
(2) Remove the two screws. (1500001206010-IL)
(3) Remove the one screw. (BBZ30P080FTC)

(VSX-821-K, VSX-921-K)

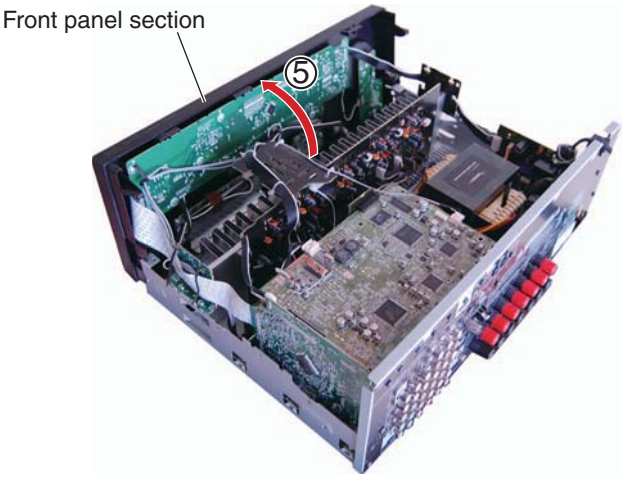
(VSX-521-K)



(4) Unhook the two hooks.



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

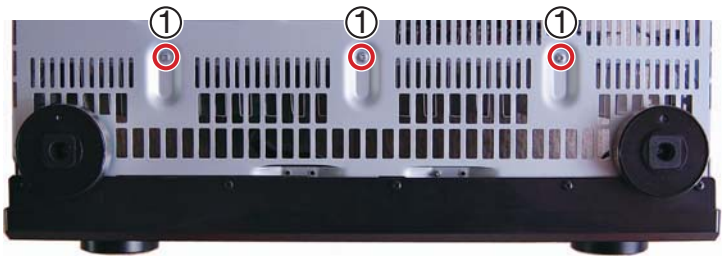


[2] Heatsink Section

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

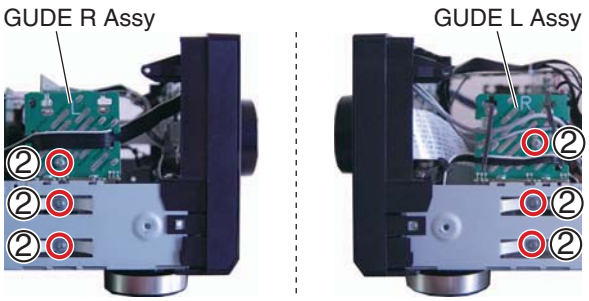
Remove the cabinet by removing the 10 screws.

(1) Remove the three screws. (BBZ30P080FTC)

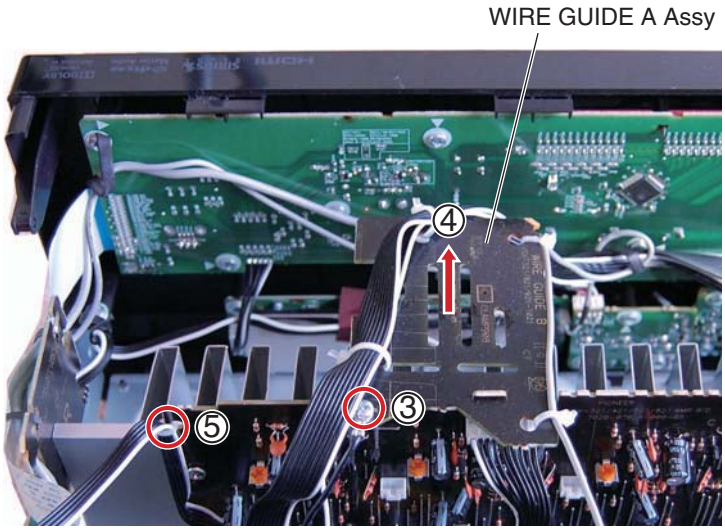


• Bottom view

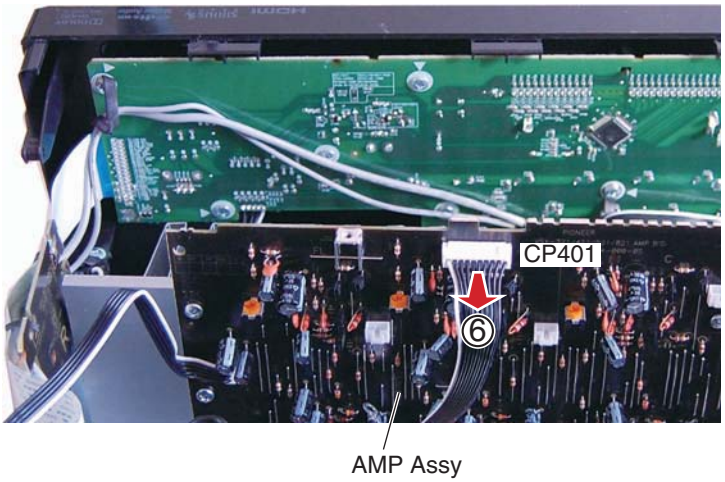
(2) Remove the six screws. (BBZ30P080FTC)



(3) Remove the one screw. (BBZ30P080FTC)
(4) Remove the WIRE GUIDE A Assy.
(5) Cut the binder.

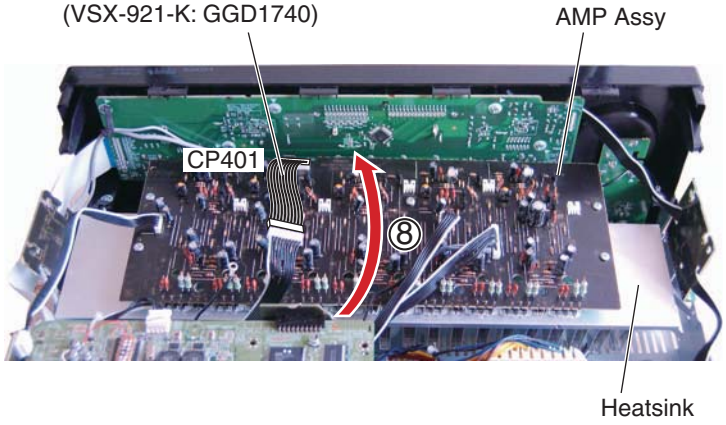


(6) Disconnect the one connector. (CP401)



(7) Connect the extension jig cable.
(8) Rotate the heatsink section in the direction of the arrow.

⑦ Extension jig cable
(VSX-821-K, VSX-521-K: GGD1739)
(VSX-921-K: GGD1740)

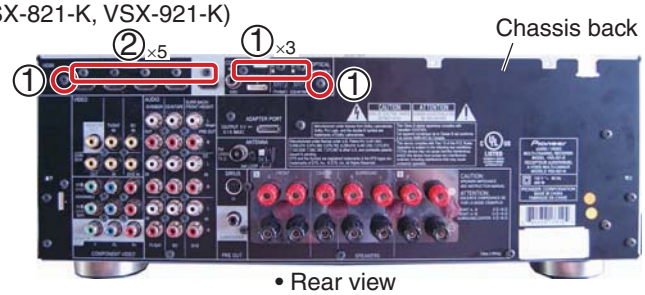


[3] D-MAIN Assy

Remove the cabinet by removing the 10 screws.

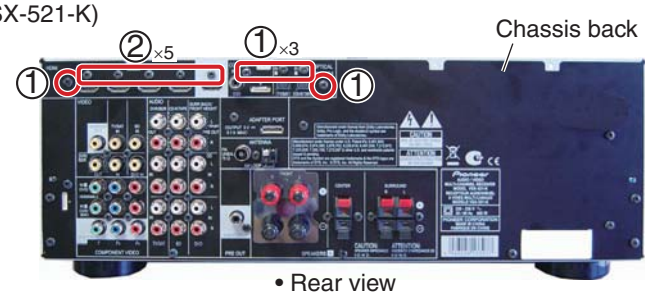
(1) Remove the five screws. (BBT30P100FTB)
(2) Remove the five screws. (BSZ30P040FTB)

(VSX-821-K, VSX-921-K)



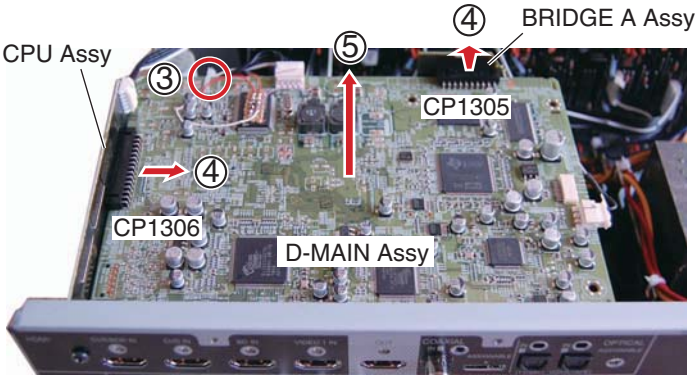
• Rear view

(VSX-521-K)



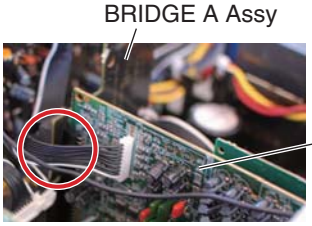
• Rear view

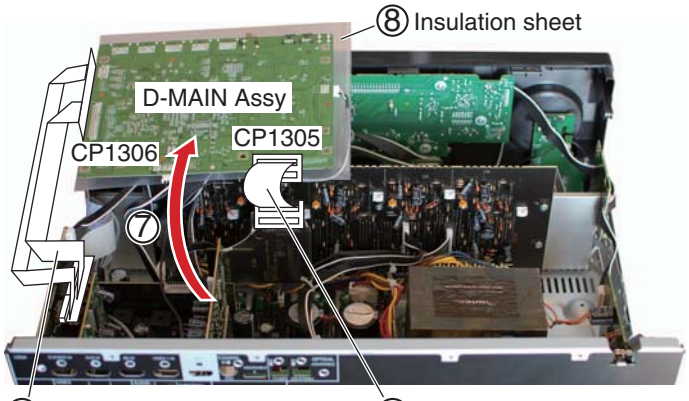
(3) Cut the binder.
(4) Disconnect the two B to B connectors. (CP1305, CP1306)
(5) Remove the D-MAIN Assy.



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

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





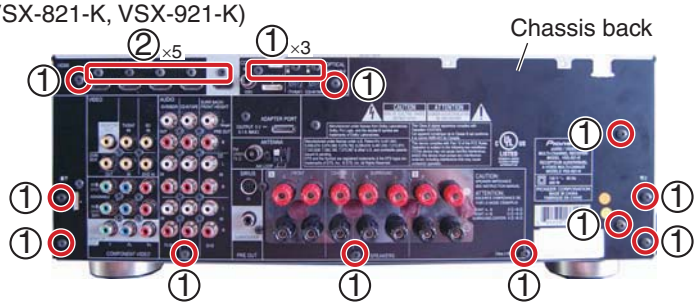
[4] MAIN Assy

Remove the cabinet by removing the 10 screws.

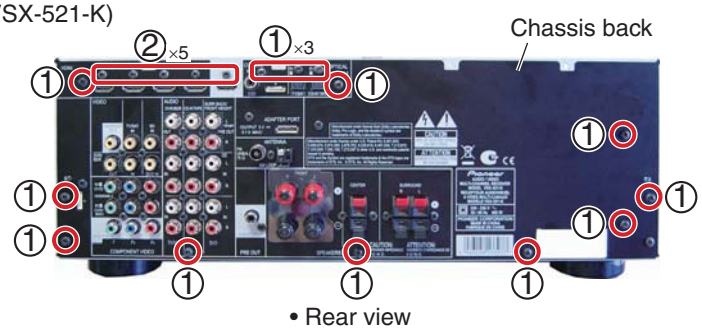
[4-1] Chassis back, D-MAIN Assy

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

(VSX-821-K, VSX-921-K)

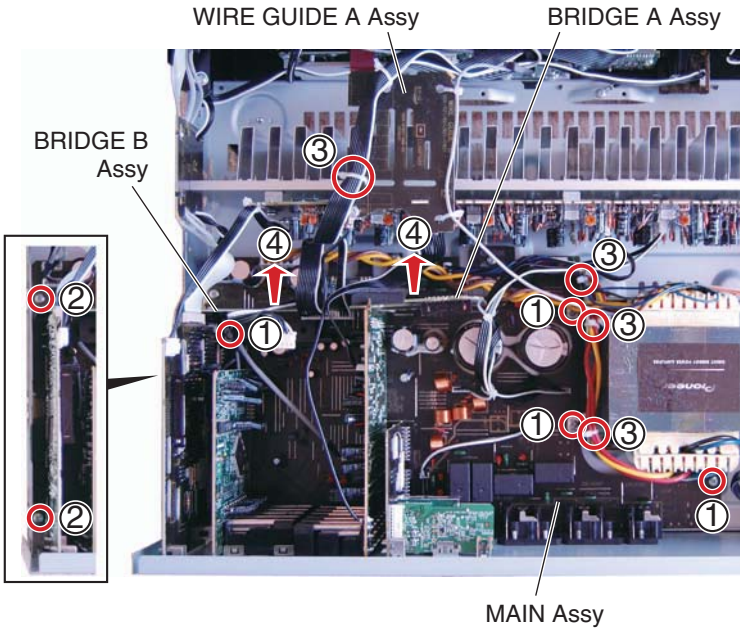


(VSX-521-K)

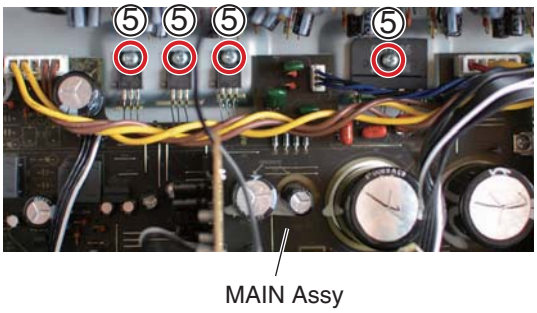


[4-2] MAIN Assy

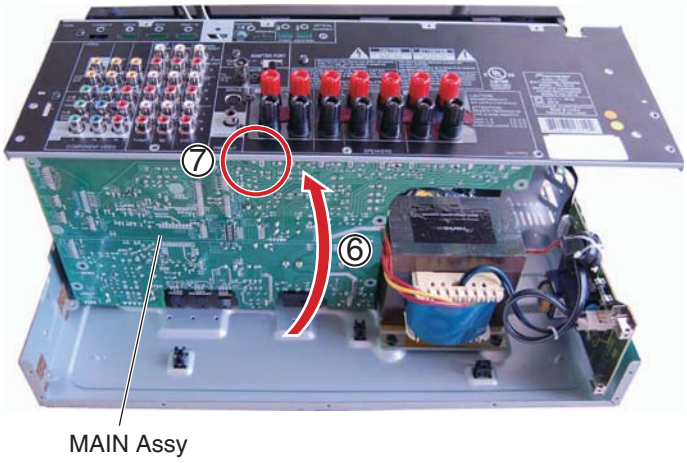
(1) Remove the four screws. (BBZ30P180FTC)
(2) Remove the two screws. (BBZ30P080FTC)
(3) Cut the four binders.
(4) Remove the BRIDGE A and B Assys.



(5) Remove the four screws. (BBZ30P080FTC)

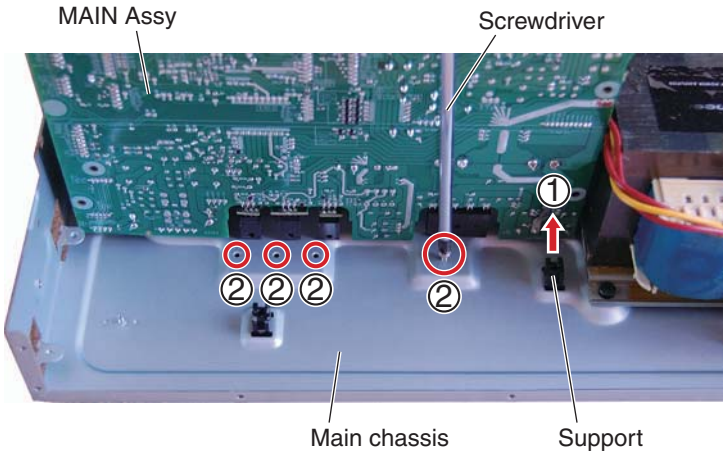


(6) Arrange the unit as shown in the photo below.
(7) Connect the chassis ground.
See “2. Notes on Ground Points Connection”.

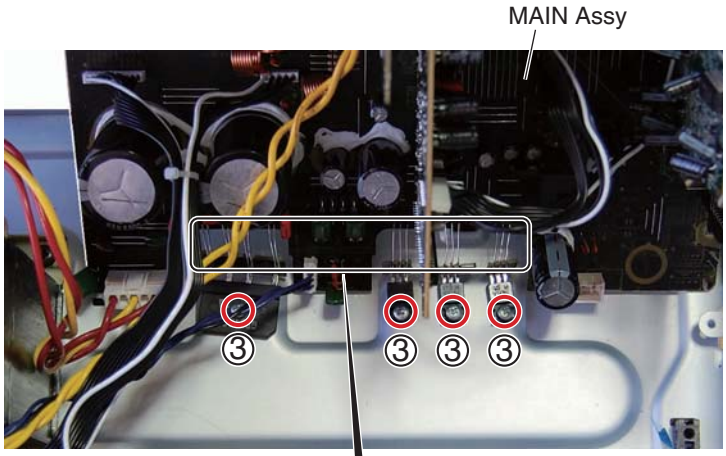


[4-3] Regulator ICs and Recifier diode

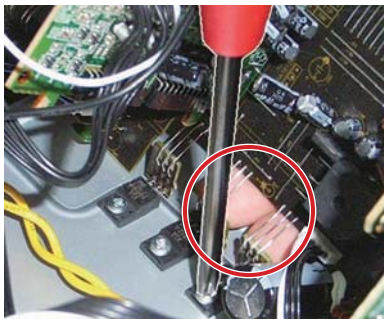
(1) Remove the support.
(2) Tighten then loosen the screw in each of the four holes for temporary joining that are located on the rear side of the main chassis. (This is for shaving the thread grooves to facilitate attachment in the next step.)



(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.

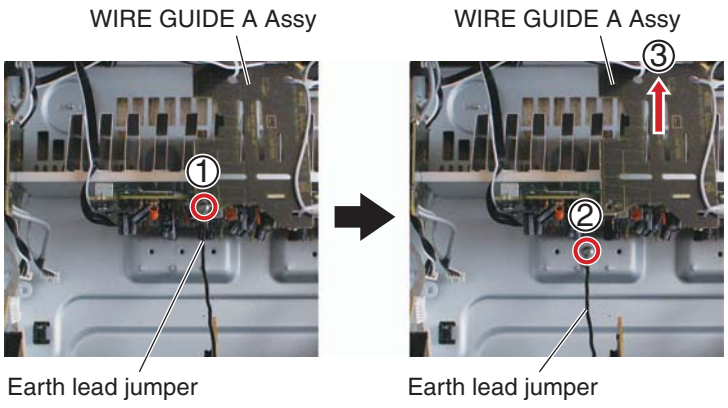


Note:
While securing the regulator ICs and rectifier diode to the holes for temporary joining, tighten the screws while holding the regulator ICs and rectifier diode with your fingers so that the jumper wires will not become distorted.

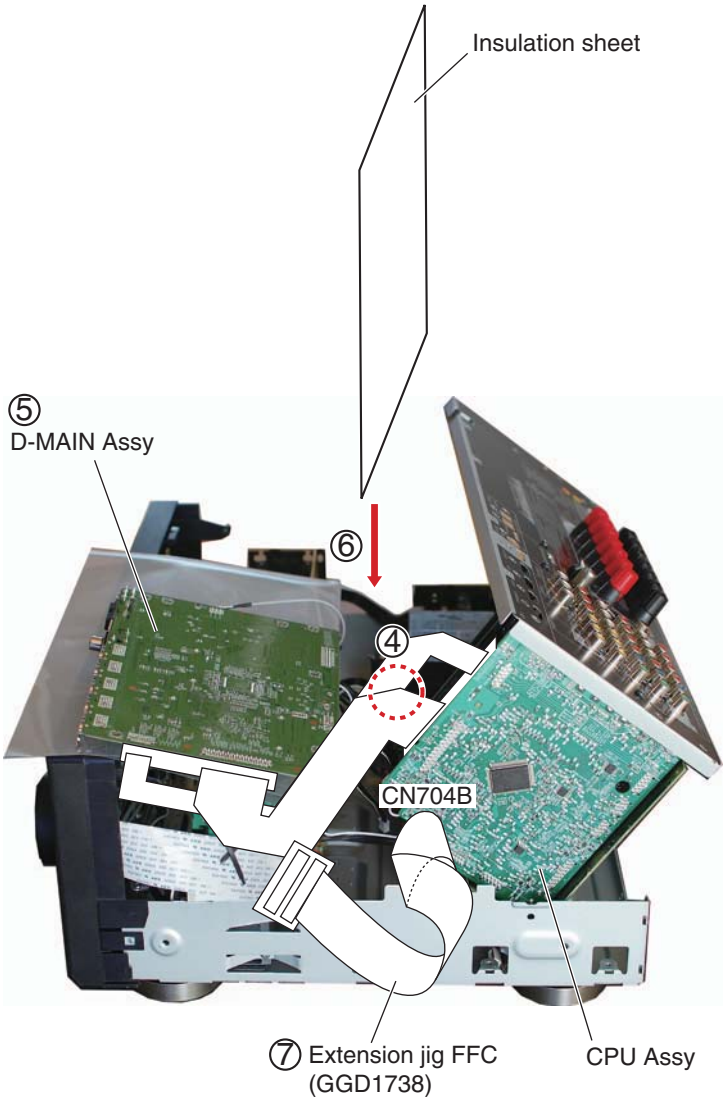


[4-4] Diagnosis

(1) Remove the one screw and remove the earth lead jumper. (BBZ30P080FTC)
(2) Reassemble the earth lead jumper.
(3) Remove the WIRE GUIDE A Assy.



(4) Reassemble the BRIDGE A and BRIDGE B Assys.
(5) Reassemble the D-MAIN Assy with extension jig cables. (See procedure [3].)
(6) Insert any insulation sheet between D-MAIN Assy and MAIN Assy.
(7) Connect the extension jig FFC.



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

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

■ When any of the following parts is replaced

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

8.2 UPDATING OF THE FIRMWARE

[Purpose]

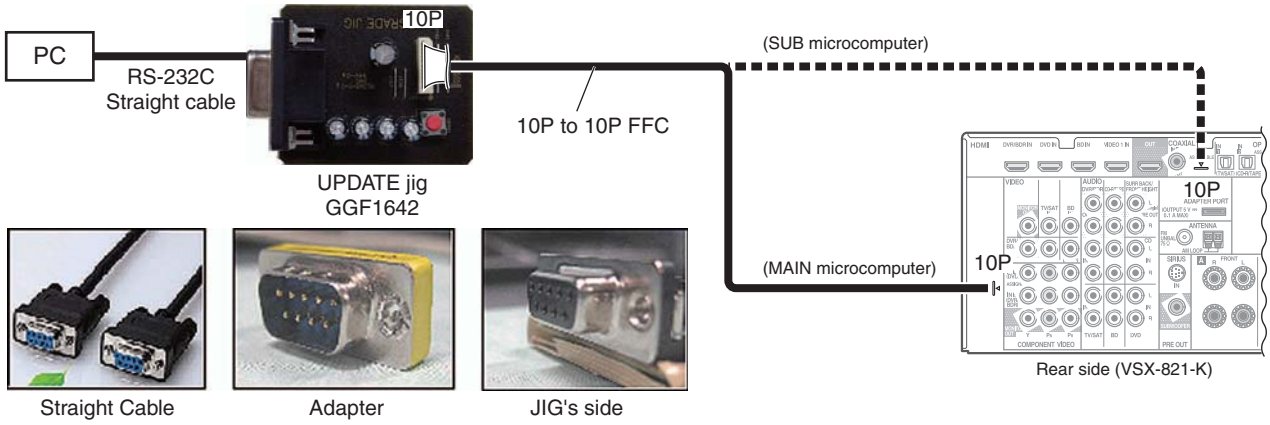
Refer to this section when updating the firmware of each microcomputer is required by the service information, etc.

[Necessary Tools]

- PC with a serial port
- RS-232C cable (9-pin to 9-pin, straight cable)
- RS-232C UPDATE jig: GGF1642 (Use FFC of GGF1642. (10P to 10P FFC))
- Firmware

[Connections]

Connect as shown in the figure below.
Insert the FFC with its contact surface facing the △ mark.



(1) MAIN and SUB microcomputers update

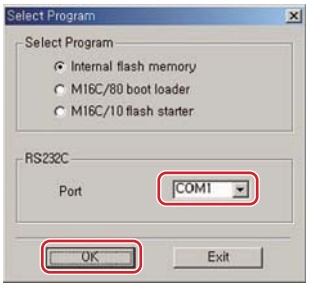
[Procedures]

■ for MAIN microcomputer

1. Unplug the AC cord.
   Connect the FFC cable. (MAIN microcomputer)
   Start up application FlashSta on the PC.

2. Plug the AC cord. (STANDBY mode)
   For updating of the MAIN microcomputer, proceed with the following steps in STANDBY mode.

3. Press the OK button.

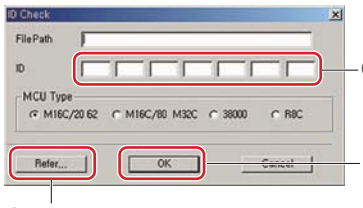


Select for COM port.

[if the following messages are displayed]

Please push the cancel button and press the JIG's RESET button.
And confirm a connection of FFC.
Please return to procedure 1.

4. Select the update file and enter ID.

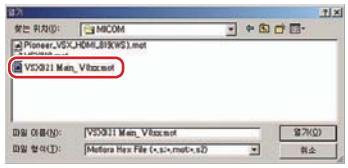


② Enter ID.
Enter "ff" in all field.

③ Press OK button to go to next step.

① Selection of upgrade file

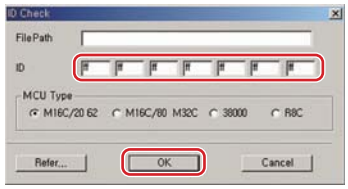
① Select the update file



Select "VSX821 Main V0xx.mot" file to update the MCU.

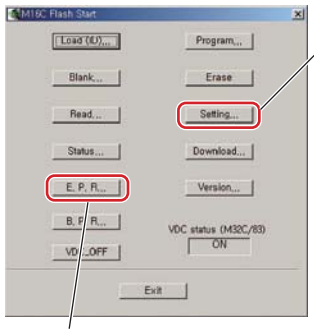
Press the OK button.

② Enter ID.



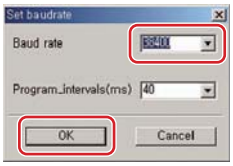
Press the OK button.

5. Set speed update and update the MCU.



① Set speed of update.

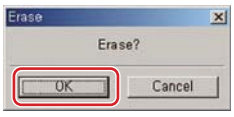
① Set speed of update.
Set Baud rate to 38400.
(Default Baud rate is 9600)



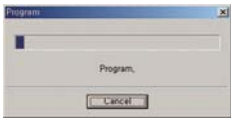
Press the OK button.

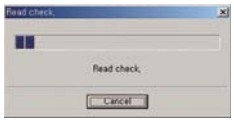
② Update the MCU.
E.P.R=>Erase+Program+Read

② Update the MCU
Press the E.P.R … button



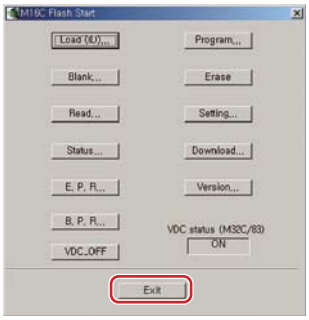
Press OK button.





6. Update Finished MAIN microcomputer.

Press the OK button.

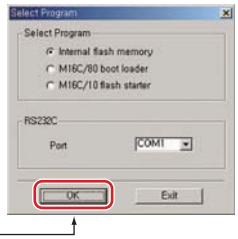


Press the Exit button.
Please wait for until this window disappears.

■ for SUB microcomputer

7. Unplug the AC cord.
Disconnect the FFC cable.
Connect the FFC cable. (SUB microcomputer)
Plug the AC cord. (STANDBY mode)
Turn the main unit on.
For updating of the SUB microcomputer, proceed with the following steps in POWER ON mode.
Push the (reset) button on the JIG's Board.
Start up application on the PC.

Press the OK button.

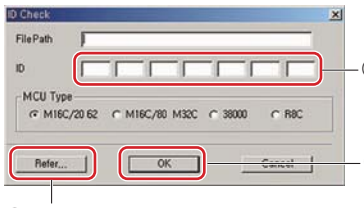


Press the OK button.

[if the following messages are displayed]

Please push the cancel button and press the JIG's RESET button.
And confirm a connection of FFC.
Please return to procedure 7.

8. Select the update file and enter ID.

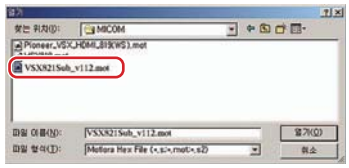


② Enter ID.
Enter "ff" in all field.

③ Press OK button to go to next step.

① Selection of upgrade file

① Select the update file

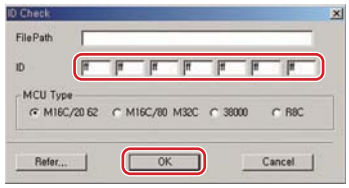


Select "VSX821Sub_v112.mot" file to update MCU.

Press the OK button.

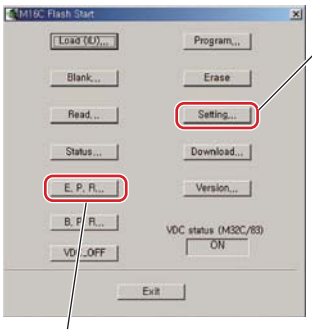
821 & 521 & 421: Select "VSX-x21Sub_v0xx.mot" file to update the MCU.
921/K & 40 & 826: Select "VSX-921Sub_v0zz.mot" file to update the MCU.

② Enter ID.



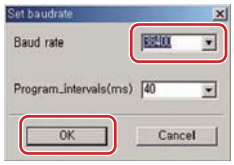
Press the OK button.

9. Set speed update and update the MCU.



① Set speed of update.

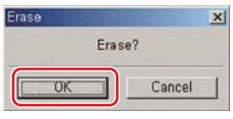
① Set speed of update.
Set Baud rate to 38400.
(Default Baud rate is 9600)



Press the OK button.

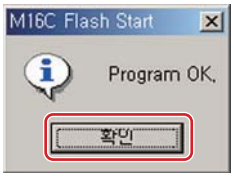
② Update the MCU.
E.P.R=>Erase+Program+Read

② Update the MCU
Press the E.P.R … button

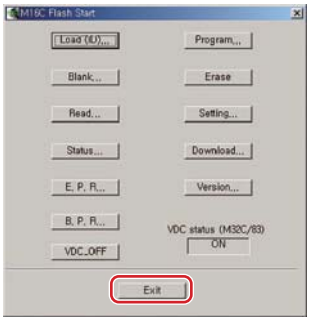


Press OK button.

10. Update Finished SUB microcomputer.



Press the OK button.



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

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

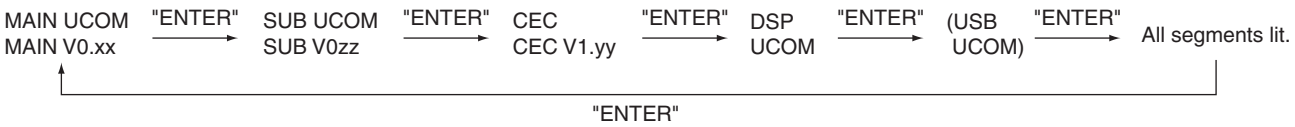
Push the (reset) button during 1sec on the JIG's Board.
Press the OK button.

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

11. Turn the main unit off. (STANDBY mode)
Disconnect the FFC cable.

■ Check to the software VER of MAIN & Sub microcomputers.

12. Make sure that the main unit is in STANDBY mode.
    Press and hold the "ENTER" and "STANDBY/ON" keys, then press the "ENTER" key to display each UCOM version.
    Each time the "ENTER" key is pressed, then indications on the FL display change as follows:



* The version of the USB UCOM is displayed only when USB/iPod FUNCTION is selected. (Except for VSX-521 & 421)

13. Turn the main unit off.

(2) How to Update the USB Microcomputer (VSX-821-K, VSX-921-K ONLY)

[Procedures]

1. Copy the "VSX_USB.rom" file to the root directory of a USB memory device.
2. Press the iPod USB key on the remote control unit to select iPod/USB function then connect the USB memory device.
3. After accessing the USB memory device, "UPG? NO" is displayed on the FL display and "UPDATE? NO" is displayed as an On-Screen display.
4. Press the iPod USB key on the remote control unit.
5. Send either iPod/USB Cursor Left or iPod/USB Cursor Right code.
6. "UPG? YES" is displayed on the FL display and "UPDATE? YES" is displayed as an On-Screen display.
7. After sending the iPod/USB Enter code, updating starts. ("UPDATE" is displayed on the FL display.)
8. When "UPG? NO" is displayed on the FL display and "UPDATE? NO" is displayed as the On-Screen display, updating is completed.
9. Disconnect the USB memory device then turn the unit off.

[How to Confirm the Version of the USB Microcomputer]

1. Select the iPod/USB function then turn the unit off.
2. While holding the ENTER key on the front panel pressed, press the STNADBY/ON key.
3. When the receiver is turned on, press the ENTER key on the main unit three times.
   (Each time the ENTER key is pressed, the indications on the FL display change as follows:
   Main -> Sub -> DSP -> USB -> All segments lit.)
4. The version is displayed on the FL display, as "USB:***."

Notes on updating

- If you perform updating of the same software twice, it may fail.
- If the indication "UPDATE" on the FL display does not change, let it sit for a few minutes.
  If the indication on the FL display changes to one other than "UPDATE," the unit becomes operable.
  Turn the unit off after it becomes operable.

(3) How to update the DSP Microcomputer

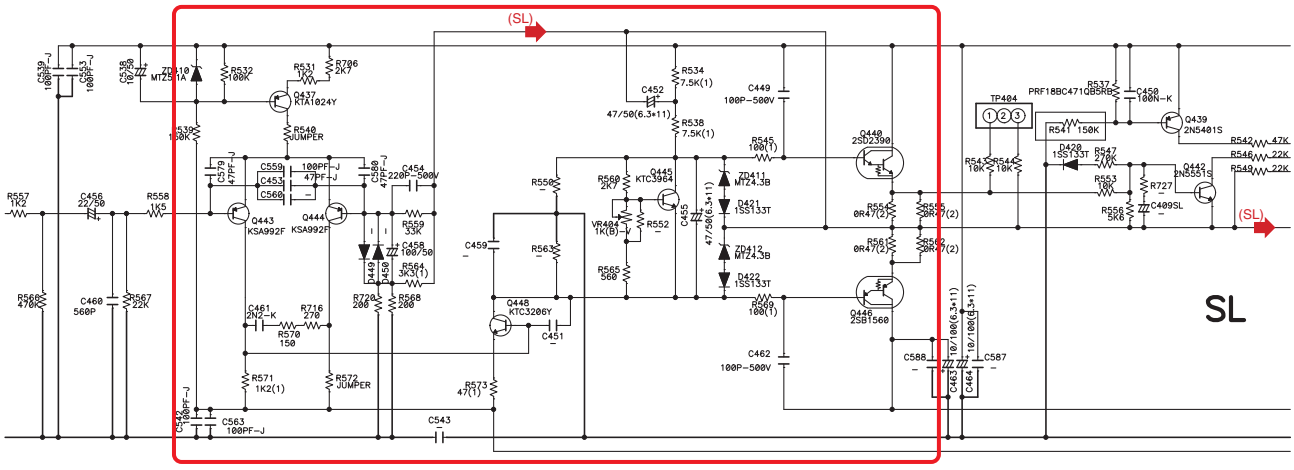
[Procedures]

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

8.3 IDLE CURRENT ADJUSTMENT

■ for VSX-821-K, VSX-521-K

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	TP401 pin 1 (+) TP401 pin 3 (–)	VR401	① Turn on the power. ② Perform aging for one minute. ③ Connect a digital voltmeter to the measurement point. ④ Turn the adjustment VR so that the voltage becomes in 2.0 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	TP404 pin 1 (+) TP404 pin 3 (–)	VR404	
SR	TP405 pin 1 (+) TP405 pin 3 (–)	VR405	

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

C AMP ASSY

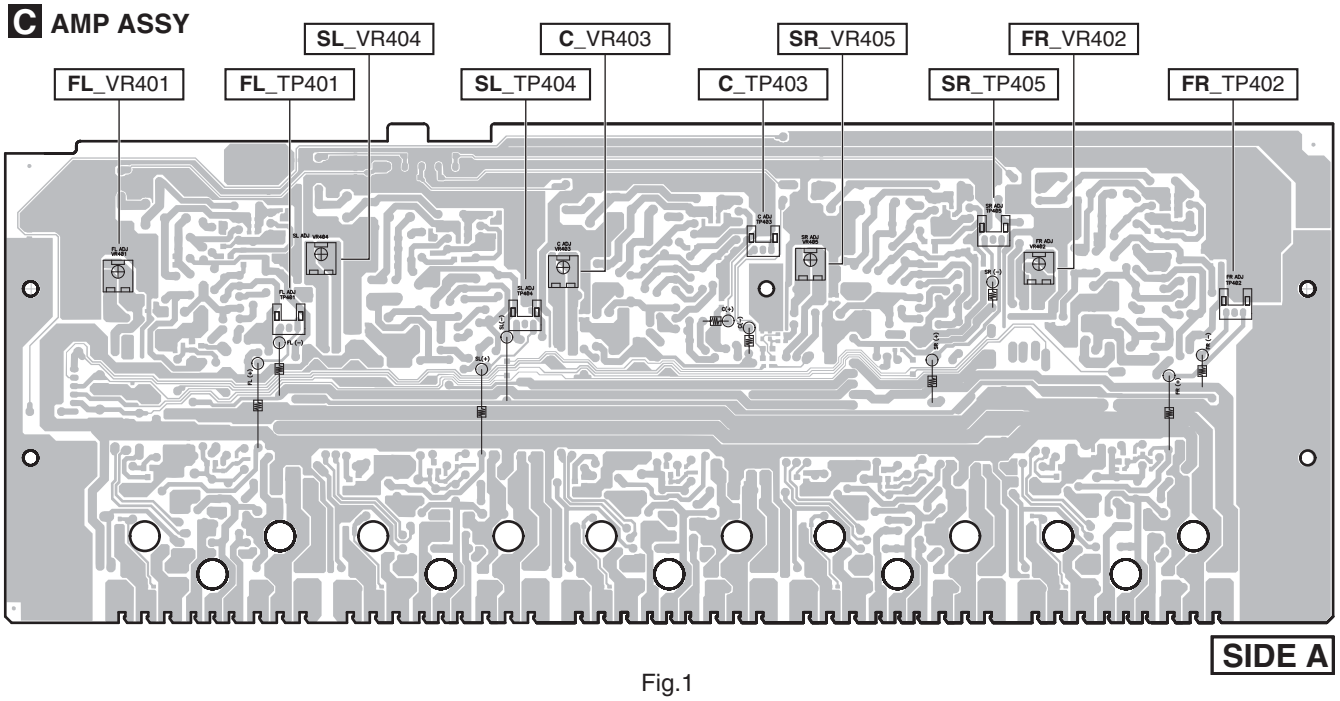
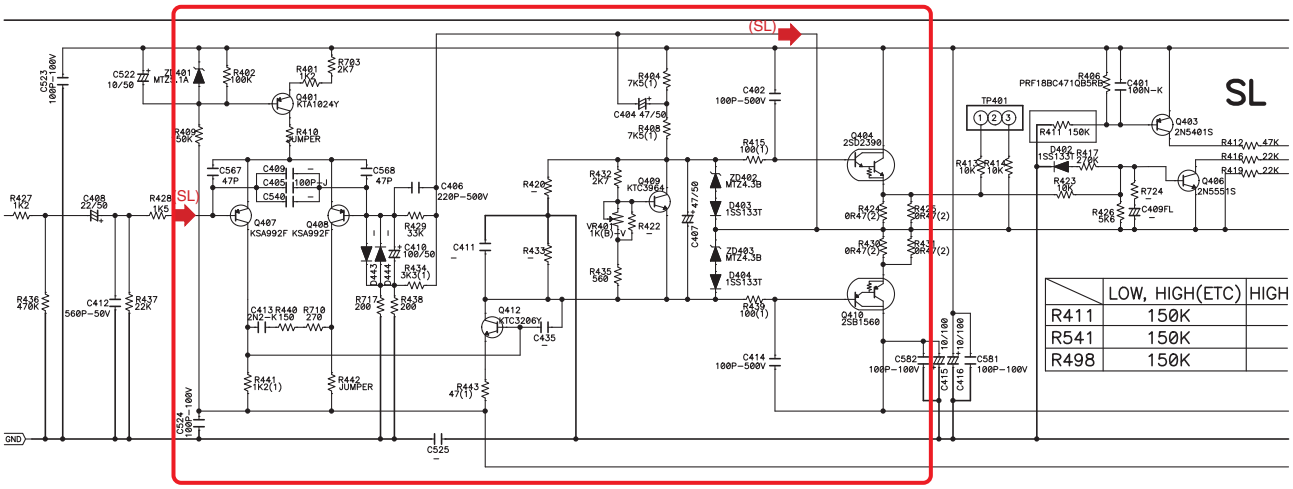


Fig.1

■ for VSX-921-K

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.2.

B AMP ASSY **SIDE A**

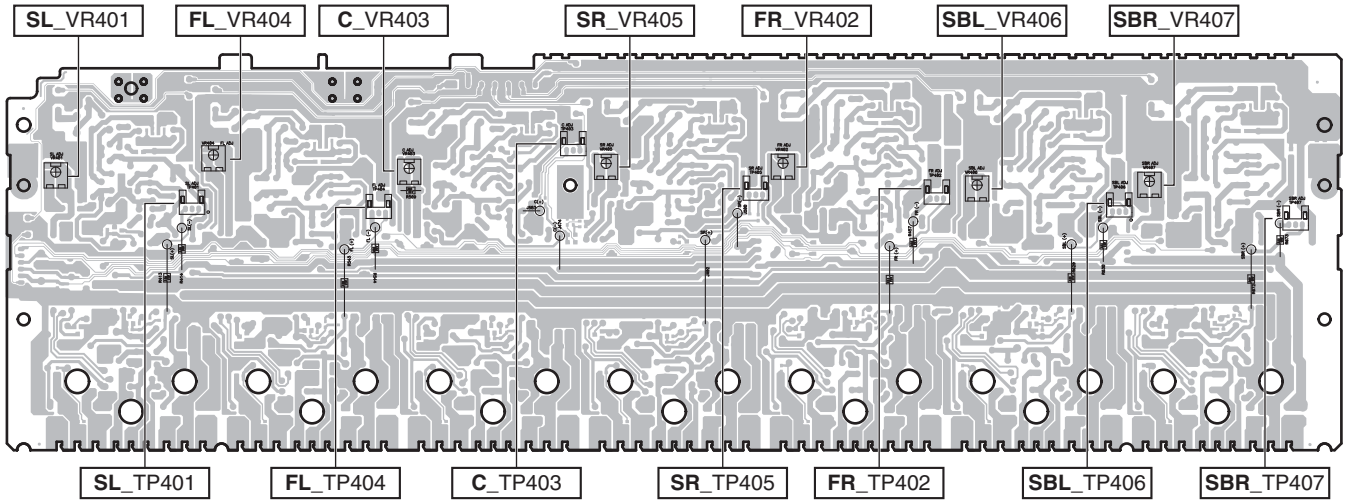


Fig.2

A

B

C

D

E

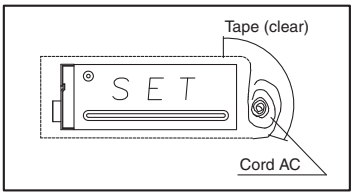
F

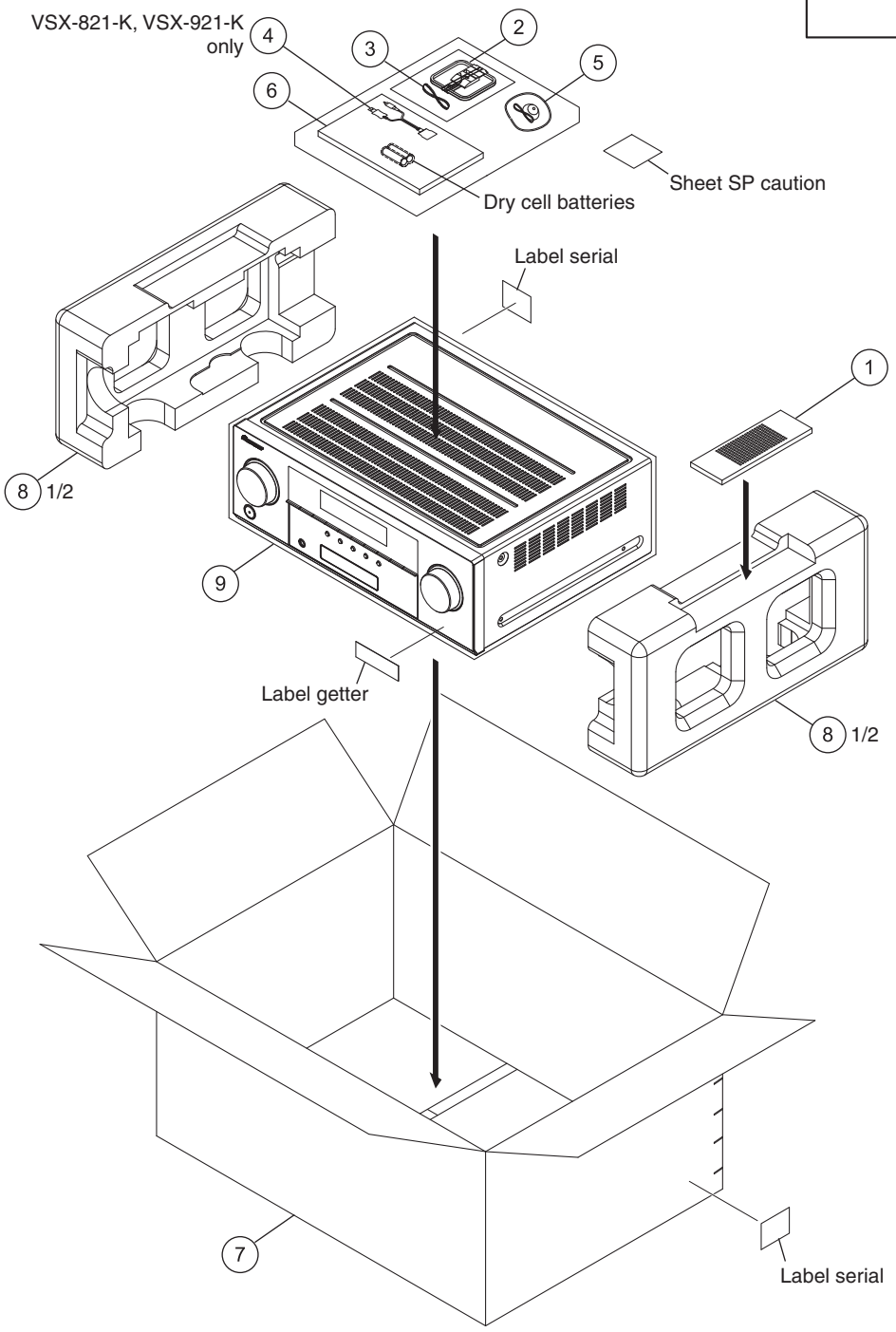
9. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

9.1 PACKING SECTION

Poly bag packing style





(1) PACKING SECTION PARTS LIST

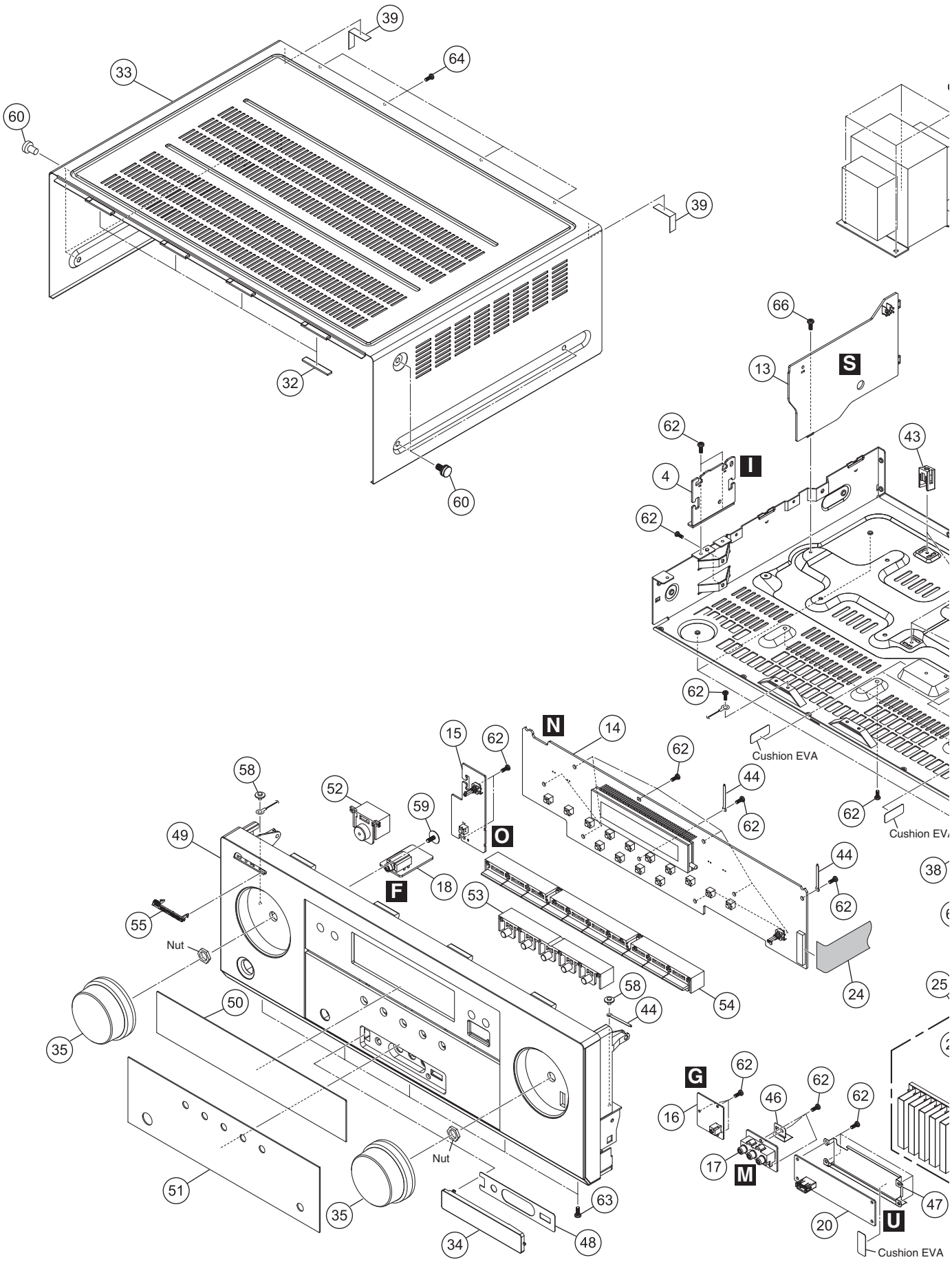
Mark	No.	Description	Part No.
	1	Remote Control	See Contrast table (2)
	2	AM Loop Antenna	E601019000010-IL
	3	FM Wire Antenna	E605010140010-IL
	4	iPod Cable	See Contrast table (2)
	5	Microphone (for Auto MCACC setup)	APM7008
	6	Operating Instructions (En, Frca, Es)	See Contrast table (2)
	7	Box, Gift	See Contrast table (2)
	8	Cushion, Snow	6230212914000-IL
	9	PE, Sheet	6327040059000-IL

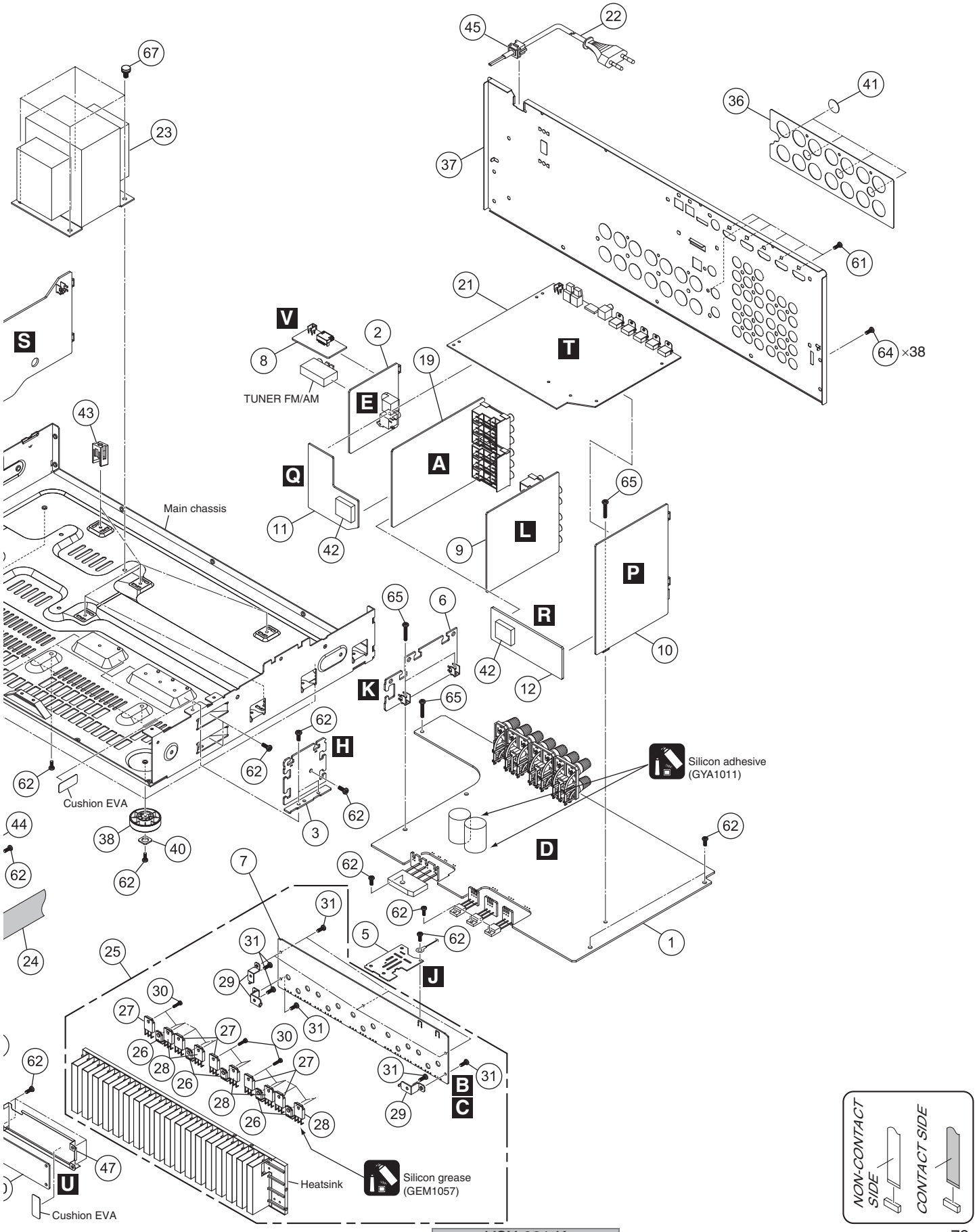
(2) CONTRAST TABLE

VSX-821-K/CUXCNSM, VSX-921-K/UXCNCB and VSX-521-K/CUXCNSM are constructed the same except for the following:

Mark	No.	Symbol and Description	VSX-821-K /CUXCNSM	VSX-921-K /UXCNCB	VSX-521-K /CUXCNSM
	1	Remote Control	8300762100010-IL	8300762100010-IL	8300761900010-IL
	4	iPod Cable	L308102013020-IL	L308102013020-IL	Not used
	6	Operating Instructions (En, Frca, Es)	5707000004990-IL	5707000004970-IL	5707000005040-IL
	7	Box, Gift	60072118200G0-IL	6007211820090-IL	60072118200P0-IL

9.2 EXTERIOR SECTION (for VSX-821-K, VSX-921-K)




TUNER FM/AM
Main chassis
Cushion EVA
Silicon adhesive (GYA1011)
Heatsink
Silicon grease (GEM1057)
Cushion EVA
NON-CONTACT SIDE
CONTACT SIDE

(1) EXTERIOR SECTION (for VSX-821-K, VSX-921-K) PARTS LIST

Mark	No.	Description	Part No.
	1	MAIN Assy	See Contrast table (2)
	2	SUBWOOFER Assy	7028070272070-IL
	3	GUIDE L Assy	7028070273070-IL
	4	GUIDE R Assy	7028070274070-IL
	5	WIRE GUIDE A Assy	7028070276070-IL
	6	WIRE GUIDE B Assy	7028070277070-IL
	7	AMP Assy	See Contrast table (2)
	8	BT Assy	7028070231010-IL
	9	VIDEO Assy	See Contrast table (2)
	10	CPU Assy	See Contrast table (2)
	11	BRIDGE A Assy	7028070222070-IL
	12	BRIDGE B Assy	7028070223070-IL
	13	STANDBY Assy	See Contrast table (2)
	14	FRONT Assy	7028070211050-IL
	15	POWER Assy	7028070212050-IL
	16	MIC Assy	7028070213050-IL
	17	F-VIDEO Assy	7028070214050-IL
	18	HEADPHONE Assy	7028070215050-IL
	19	AUDIO Assy	See Contrast table (2)
	20	USB Assy	7028070201050-IL
	21	D-MAIN Assy	See Contrast table (2)
⚠	22	Cord Assy	L068125101710-IL
⚠	23	Power Trans	See Contrast table (2)
	24	Cable, Flat Card 1.0 MM	N711312022480-IL
	25	Heatsink Assy	See Contrast table (2)
⚠	26	Semi, TR/GE PNP 2SB	J5011560Y0000-IL
⚠	27	Semi, TR/GE NPN 2SC	J502396400010-IL
⚠	28	Semi, TR/GE NPN 2SD	J5032390Y0000-IL
	29	Bracket	4010056906010-IL
	30	Screw, Tapping Assy	B018230141H11-IL
	31	Screw, Tap Tite	B020030081B10-IL
	32	Sheet	1210210235000-IL
	33	Cabinet	3007211846000-IL
	34	Cover	4317215111000-IL
	35	Knob	5080212431000-IL
	36	Sheet	1210211482000-IL
	37	Chassis Back	See Contrast table (2)
	38	Foot	4007210391000-IL
	39	Cushion	4050211385000-IL
	40	Cushion	4050211605000-IL
	41	Cushion	4050211745000-IL
	42	Cushion	4050212685100-IL
	43	Support	4070001601010-IL
	44	Clamp	4330000310000-IL
	45	Stopper	4380040162010-IL

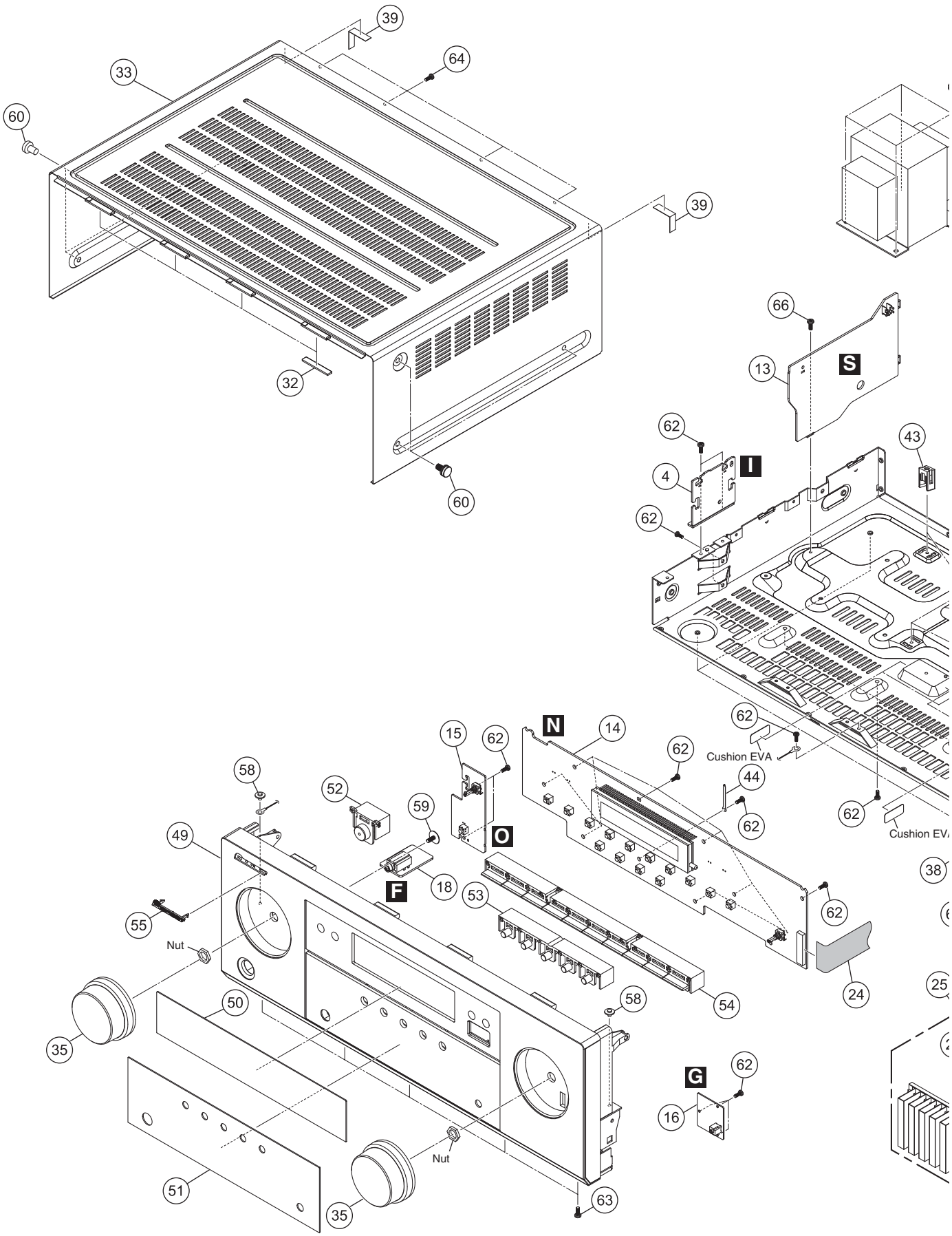
Mark	No.	Description	Part No.
	46	Plate	4470212096000-IL
	47	Plate	4470212066000-IL
	48	Sheet	1217211472000-IL
	49	Panel	See Contrast table (2)
	50	Window	5077213113020-IL
	51	Window	5077213123050-IL
	52	Button	5090213741100-IL
	53	Button	5090214561000-IL
	54	Button	5090214571000-IL
	55	Badge	XAM3006
	56	•••••	
	57	•••••	
	58	Screw	1500001206010-IL
	59	Screw	1500001456010-IL
	60	Screw	BBT40P080FTB
	61	Screw, Tap Tite	BSZ30P040FTB
	62	Screw, Tap Tite	BBZ30P080FTC
	63	Screw, Tap Tite	BBZ30P080FTB
	64	Screw, Tap Tite	BBT30P100FTB
	65	Screw, Tap Tite	BBZ30P180FTC
	66	Screw, Tap Tite	B020230063B10-IL
	67	Screw, Tap Tite Assy	B028940101B11-IL

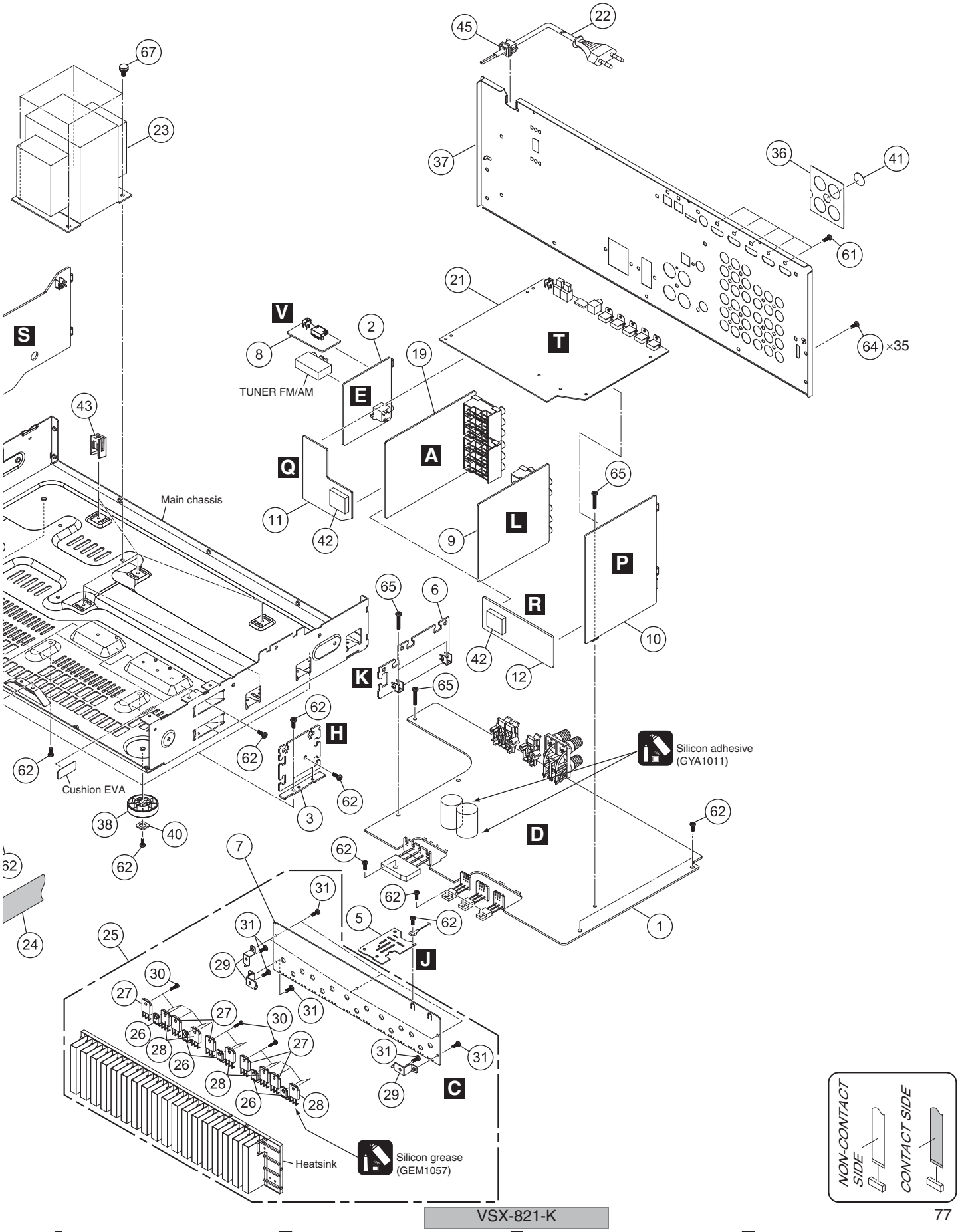
(2) CONTRAST TABLE

VSX-821-K/CUXCNSM and VSX-921-K/UXCNCB are constructed the same except for the following:

Mark	No.	Symbol and Description	VSX-821-K /CUXCNSM	VSX-921-K /UXCNCB
	1	MAIN ASSY	70280702710H0-IL	70280702710G0-IL
	7	AMP ASSY	7028070241030-IL	7028070251040-IL
	9	VIDEO ASSY	7028070261060-IL	7028070261070-IL
	10	CPU ASSY	7028070221030-IL	7028070221070-IL
	13	STANDBY ASSY	7028070225030-IL	7028070225070-IL
	19	AUDIO ASSY	7028070181030-IL	7028070181050-IL
	21	D-MAIN ASSY	7028070191030-IL	7028070191050-IL
⚠	23	Power Trans	8200960610850-IL	8200960610960-IL
	25	Heatsink Assy	2128211908000-IL	2128211918000-IL
	37	Chassis Back	3207213736000-IL	3207213746000-IL
	49	Panel	3067215091000-IL	3067215091010-IL

9.3 EXTERIOR SECTION (for VSX-521-K)




Main chassis
TUNER FM/AM
Cushion EVA
Heatsink
Silicon adhesive (GYA1011)
Silicon grease (GEM1057)
NON-CONTACT SIDE
CONTACT SIDE
×35

EXTERIOR SECTION (VSX-521-K) PARTS LIST

Mark	No.	Description	Part No.
	1	MAIN Assy	70280702710D0-IL
	2	SUBWOOFER Assy	7028070272050-IL
	3	GUIDE L Assy	7028070273070-IL
	4	GUIDE R Assy	7028070274070-IL
	5	WIRE GUIDE A Assy	7028070276070-IL
	6	WIRE GUIDE B Assy	7028070277070-IL
	7	AMP Assy	7028070241030-IL
	8	BT Assy	7028070231010-IL
	9	VIDEO Assy	7028070261060-IL
	10	CPU Assy	7028070221020-IL
	11	BRIDGE A Assy	7028070222070-IL
	12	BRIDGE B Assy	7028070223070-IL
	13	STANDBY Assy	7028070225030-IL
	14	FRONT Assy	7028070211020-IL
	15	POWER Assy	7028070212050-IL
	16	MIC Assy	7028070213020-IL
	17	•••••	
	18	HEADPHONE Assy	7028070275070-IL
	19	AUDIO Assy	7028070181030-IL
	20	•••••	
	21	D-MAIN Assy	7028070191020-IL
⚠	22	Cord Assy	L068125101710-IL
⚠	23	Power Trans	8200960610910-IL
	24	Cable, Flat Card 1.0 MM	N711272022480-IL
	25	Heatsink Assy	2128211908000-IL
⚠	26	Semi, TR/GE NPN 2SC	J502396400010-IL
⚠	27	Semi, TR/GE NPN 2SD	J5032390Y0000-IL
⚠	28	Semi, TR/GE PNP 2SB	J5011560Y0000-IL
	29	Bracket	4010056906010-IL
	30	Screw, Tapping Assy	B018230141H11-IL
	31	Screw, Tap Tite	B020030081B10-IL
	32	Sheet	1210210235000-IL
	33	Cabinet	3007211846000-IL
	34	•••••	
	35	Knob	5080212431000-IL
	36	Sheet	1210210772000-IL
	37	Chassis Back	3207213726000-IL
	38	Foot	4000210391000-IL
	39	Cushion	4050211385000-IL
	40	Cushion	4050211605000-IL
	41	Cushion	4050211745000-IL
	42	Cushion	4050212685100-IL
	43	Support	4070001601010-IL
	44	Clamp	4330000310000-IL
	45	Stopper	4380040162010-IL

Mark	No.	Description	Part No.
	46	•••••	
	47	•••••	
	48	•••••	
	49	Panel	3067215081000-IL
	50	Window	5077213113010-IL
	51	Window	5077213123110-IL
	52	Button	5090213741100-IL
	53	Button	5090214561000-IL
	54	Button	5090214571000-IL
	55	Badge	XAM3006
	56	••••	
	57	••••	
	58	Screw	1500001206010-IL
	59	Screw	1500001456010-IL
	60	Screw	BBT40P080FTB
	61	Screw, Tap Tite	BSZ30P040FTB
	62	Screw, Tap Tite	BBZ30P080FTC
	63	Screw, Tap Tite	BBZ30P080FTB
	64	Screw, Tap Tite	BBT30P100FTB
	65	Screw, Tap Tite	BBZ30P180FTC
	66	Screw, Tap Tite	B020230063B10-IL
	67	Screw, Tap Tite Assy	B028940101B11-IL

A

B

C

D

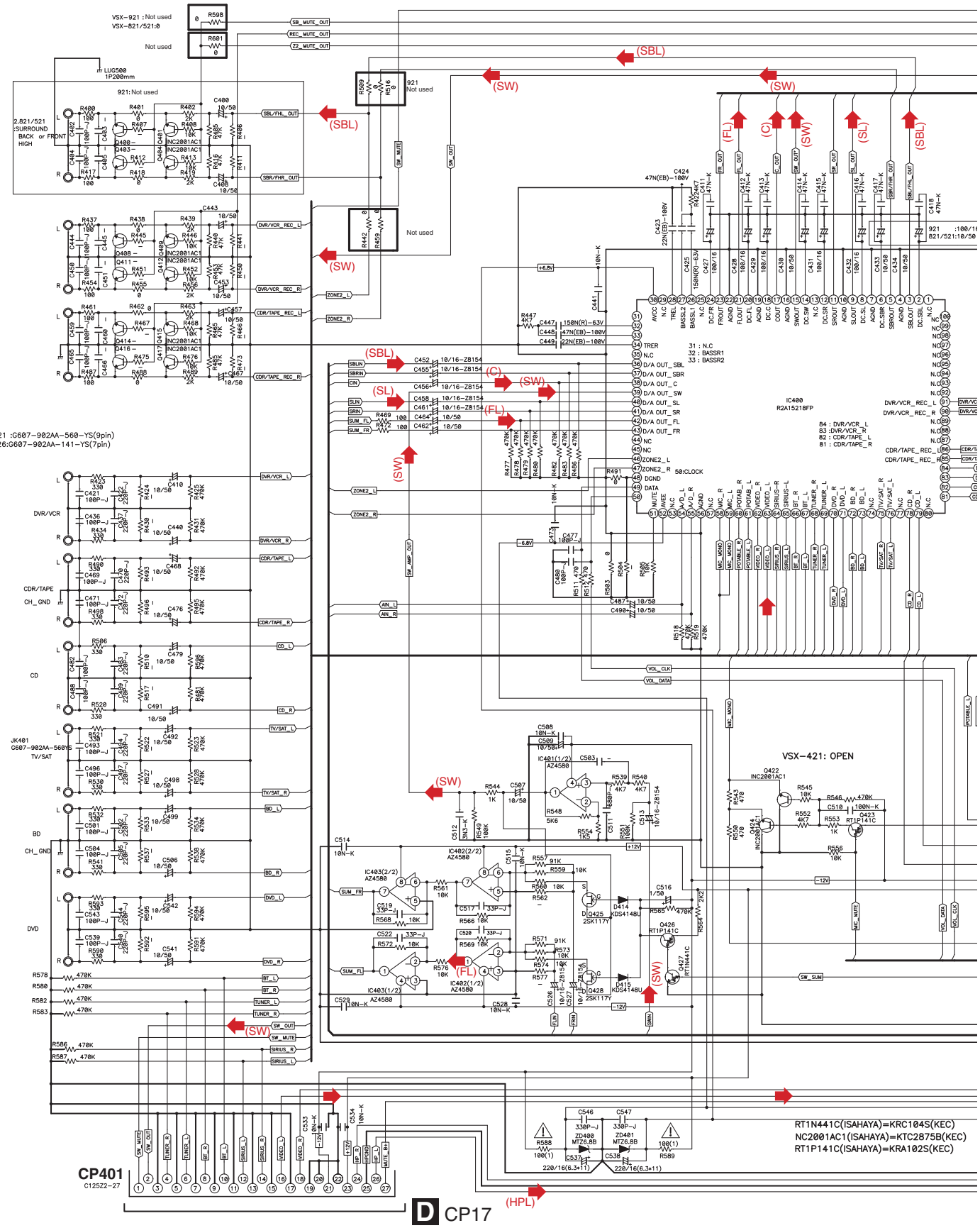
E

F

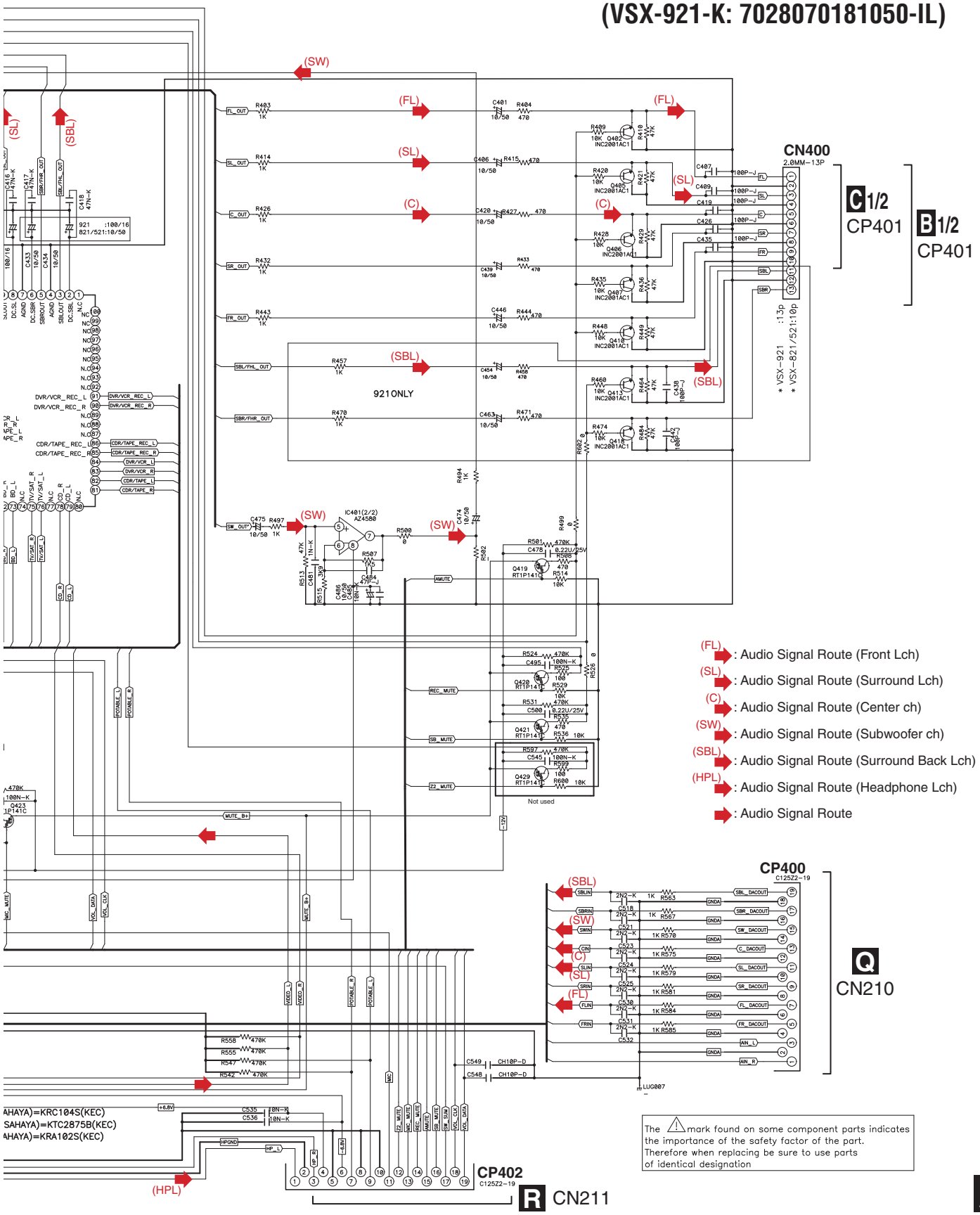
10. SCHEMATIC DIAGRAM

10.1 AUDIO ASSY

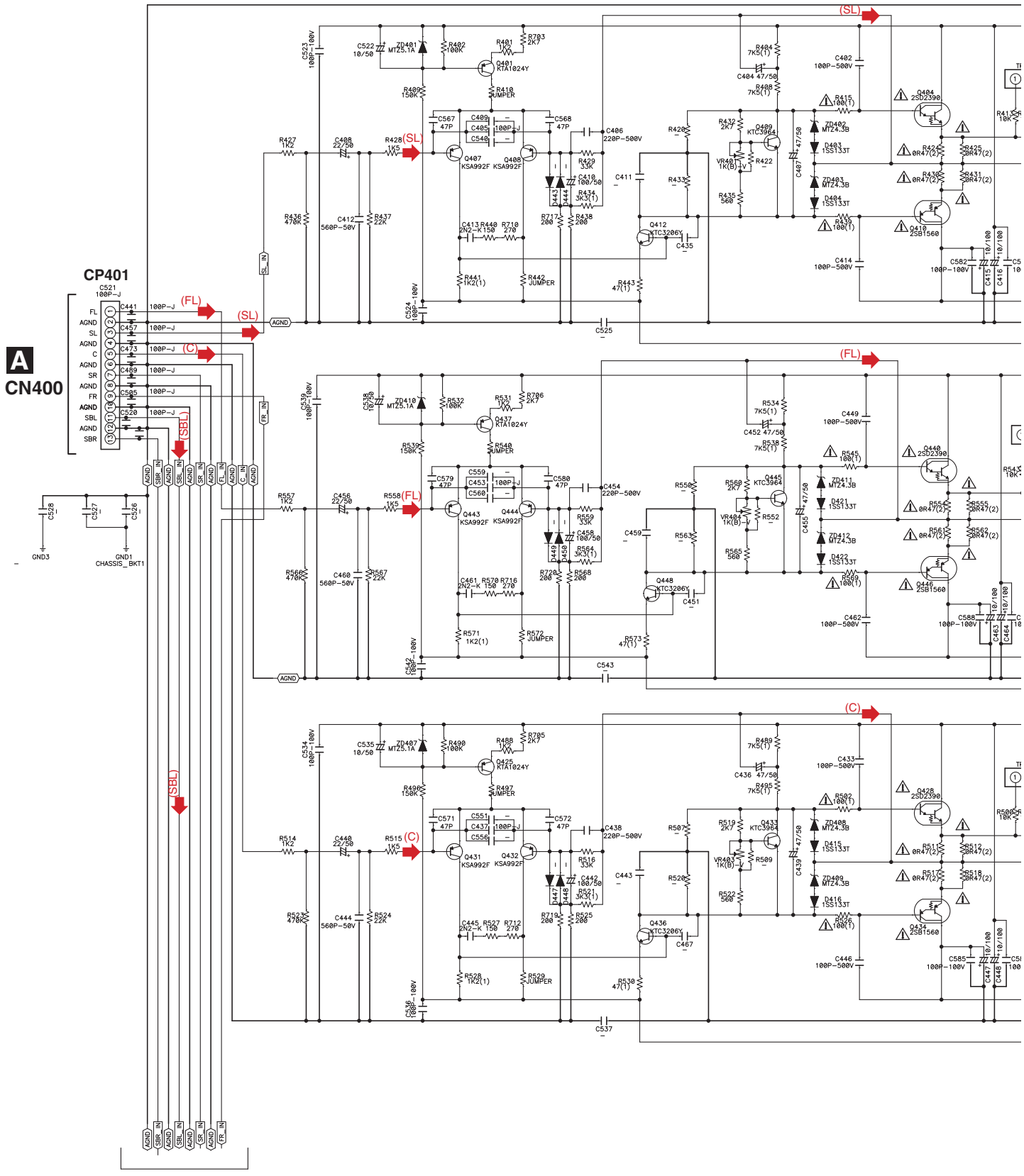
- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.



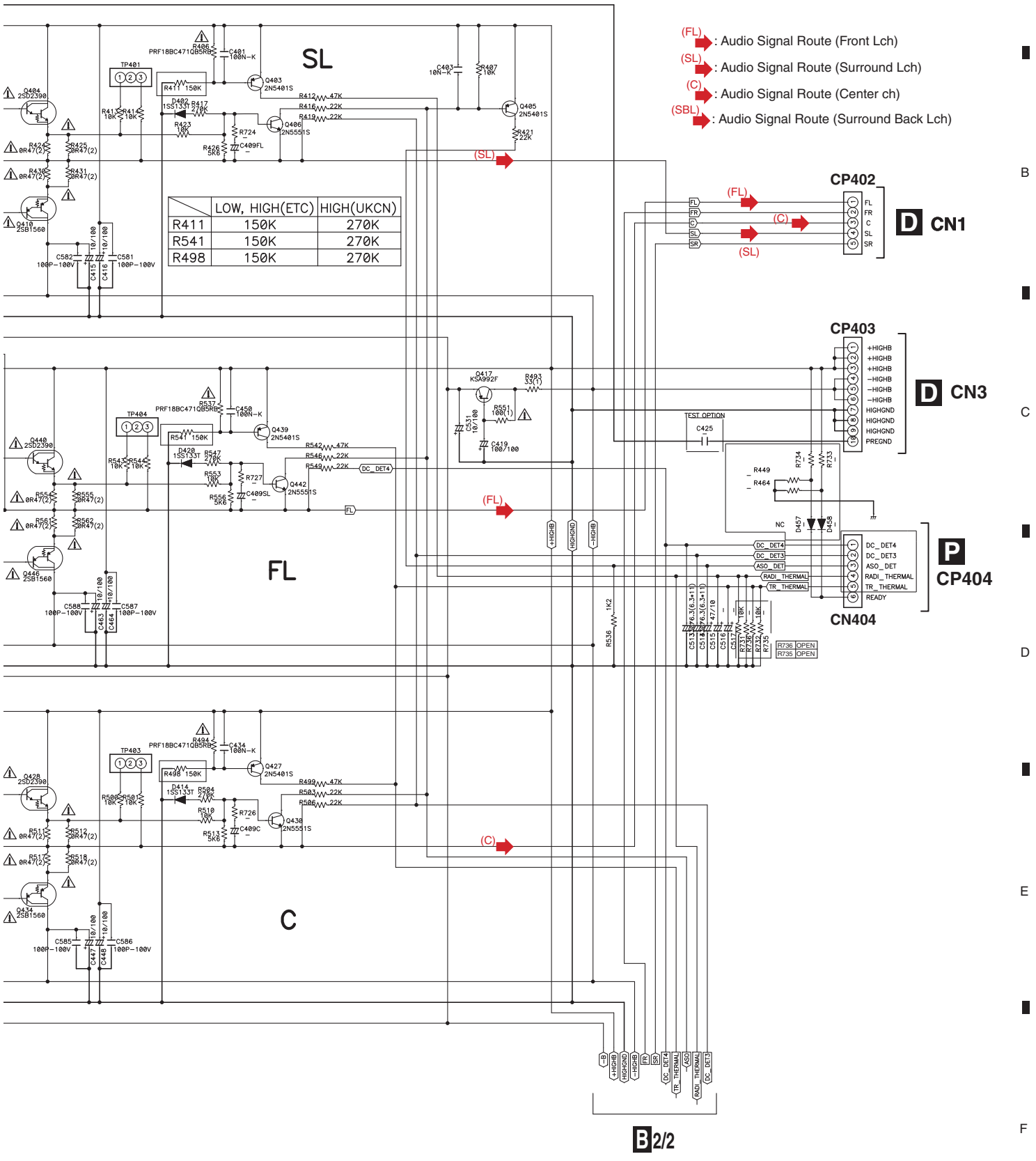
A AUDIO ASSY
(VSX-821-K/521: 7028070181030-IL)
(VSX-921-K: 7028070181050-IL)



10.2 AMP ASSY (1/2) (for VSX-921-K)

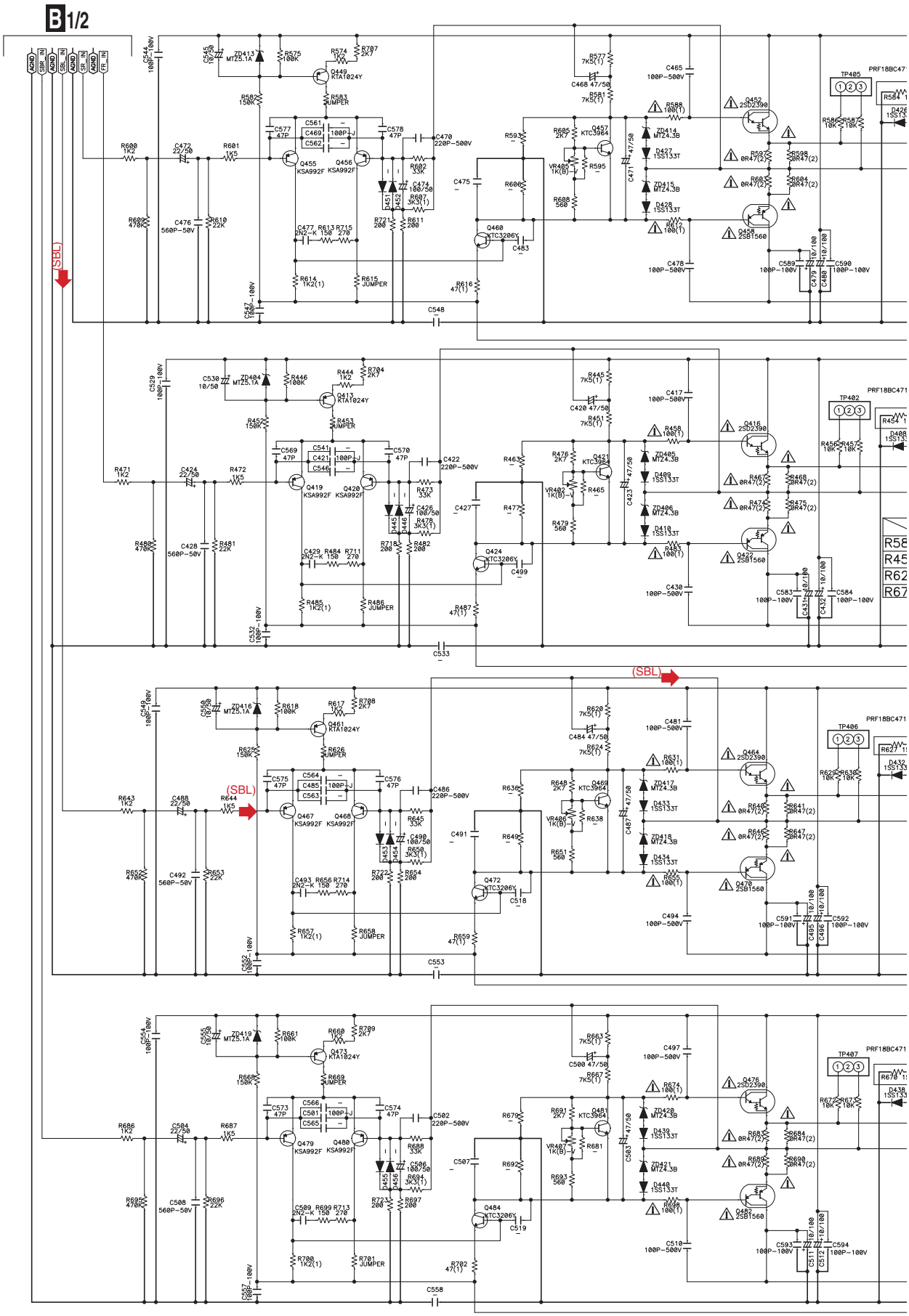


B 1/2 AMP ASSY (VSX-921-K: 7028070251040-IL)

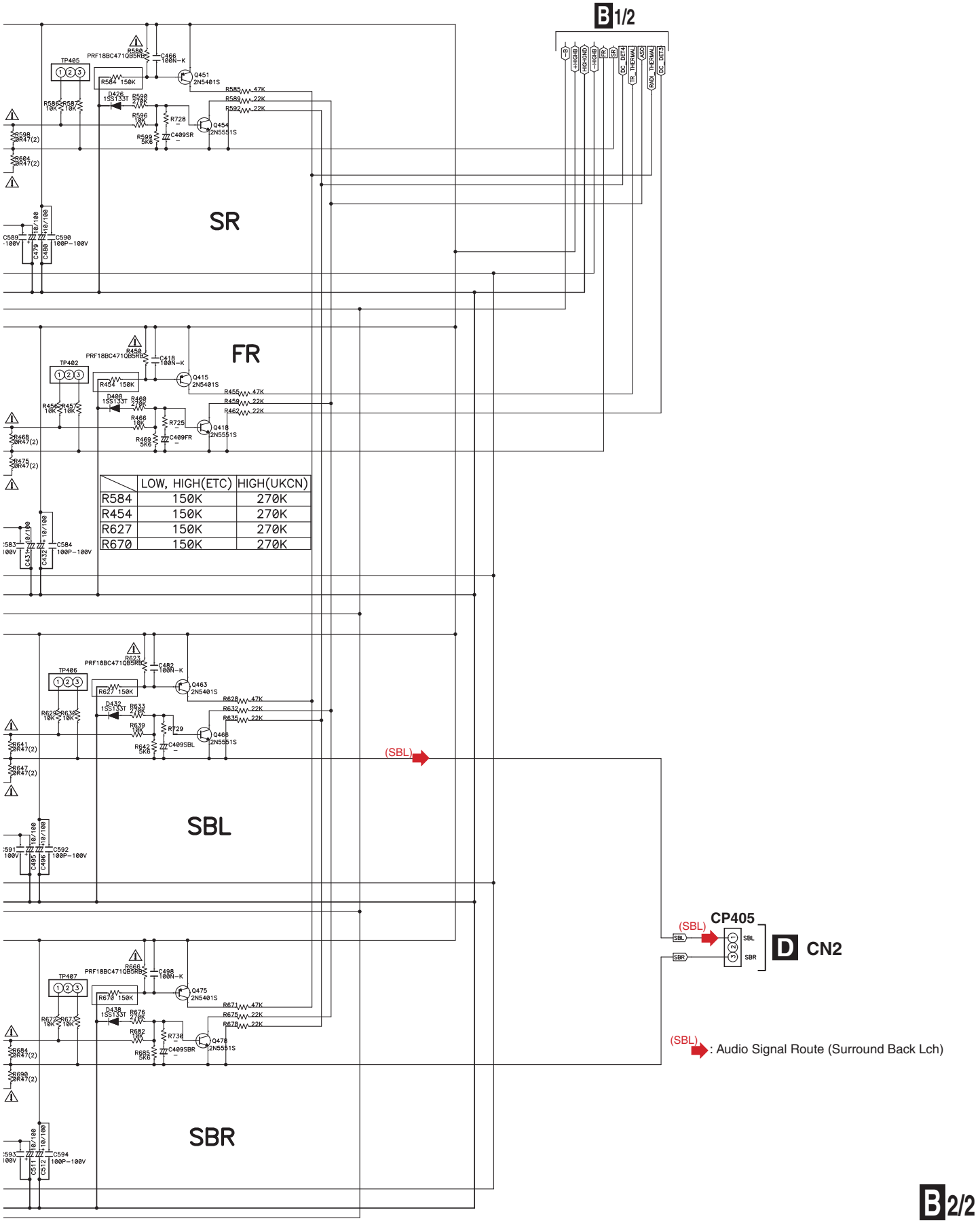


	LOW, HIGH(ETC)	HIGH(UKCN)
R411	150K	270K
R541	150K	270K
R498	150K	270K

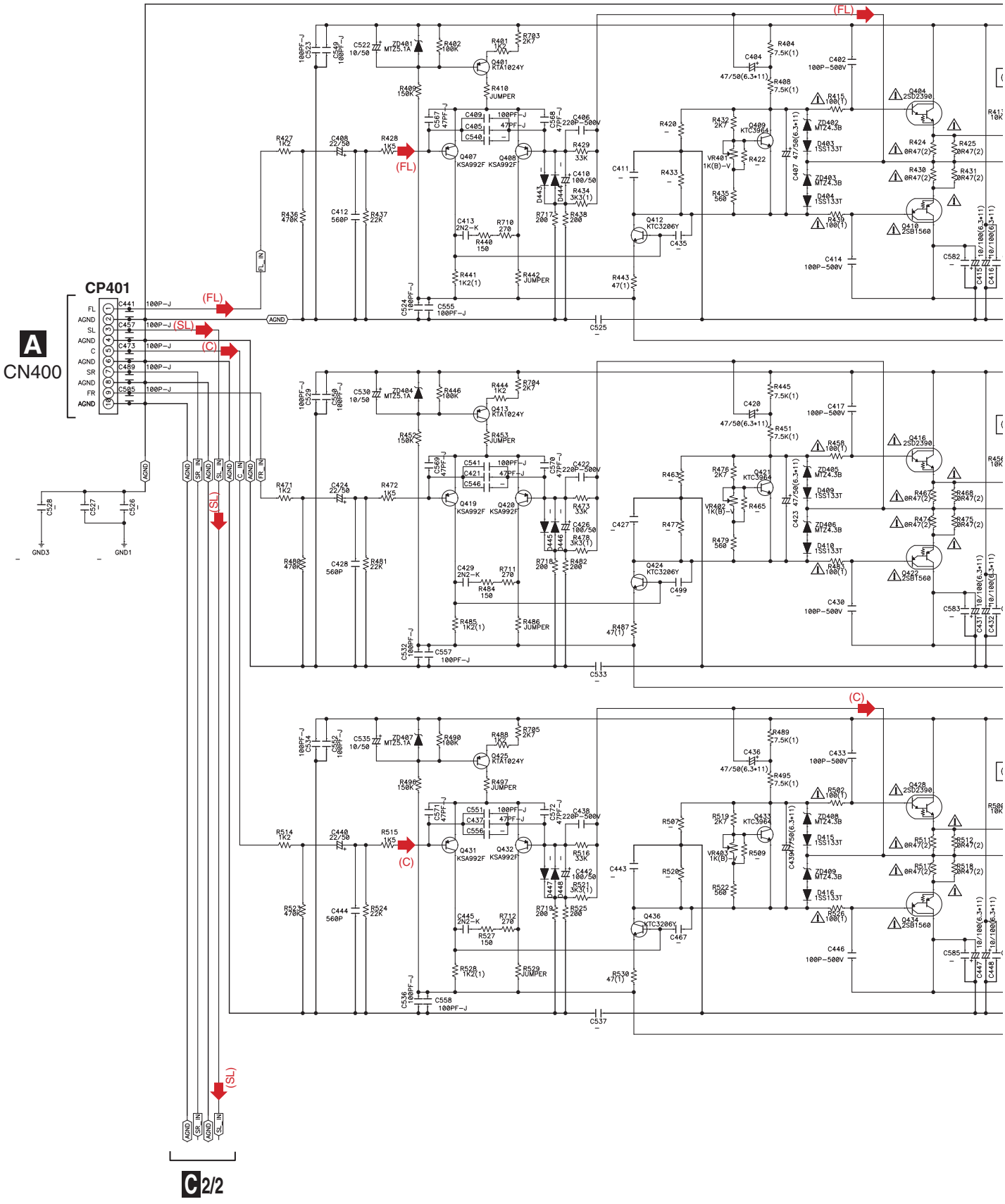
10.3 AMP ASSY (2/2) (for VSX-921-K)



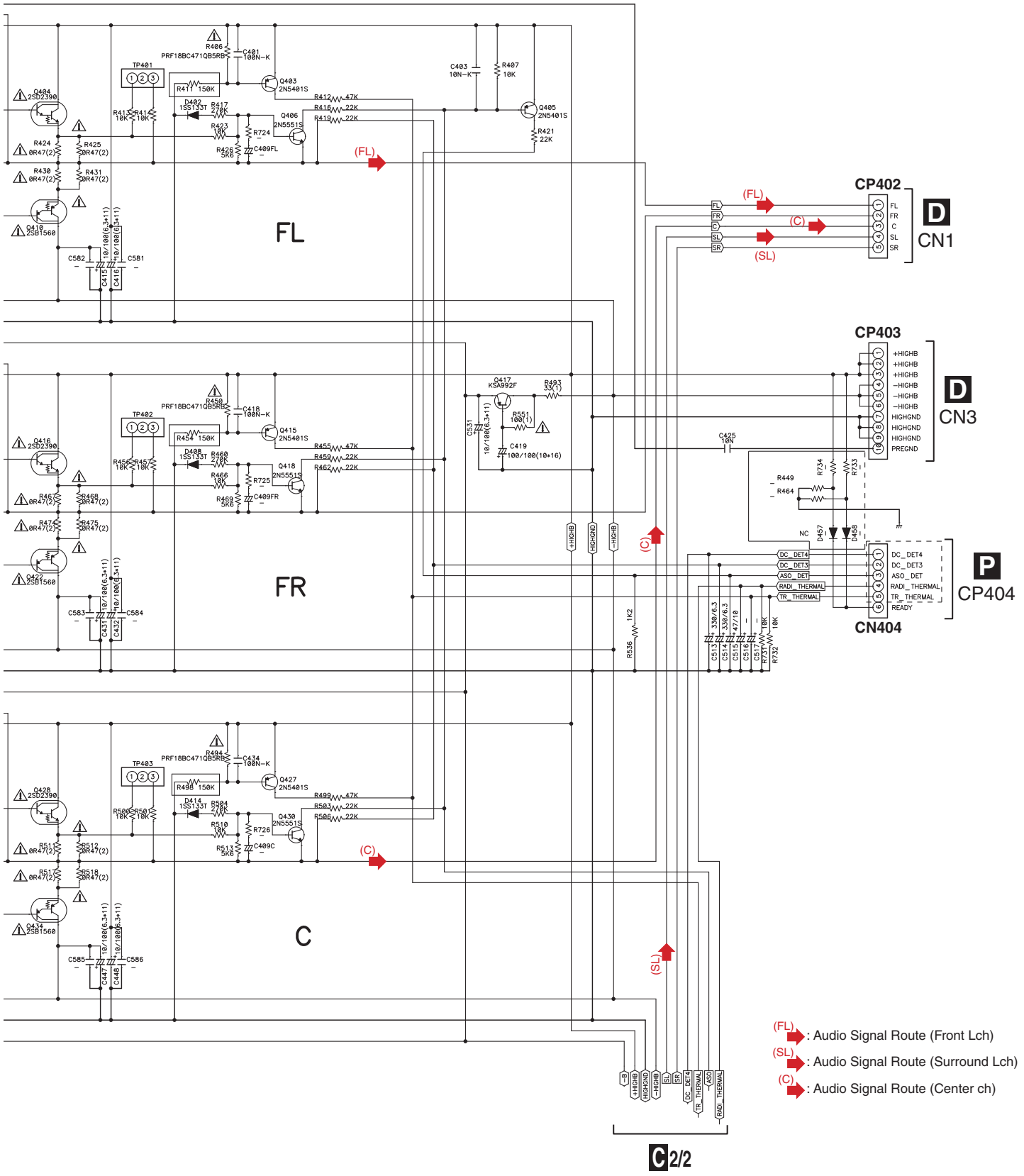
B2/2 AMP ASSY (VSX-921-K: 7028070251040-IL)



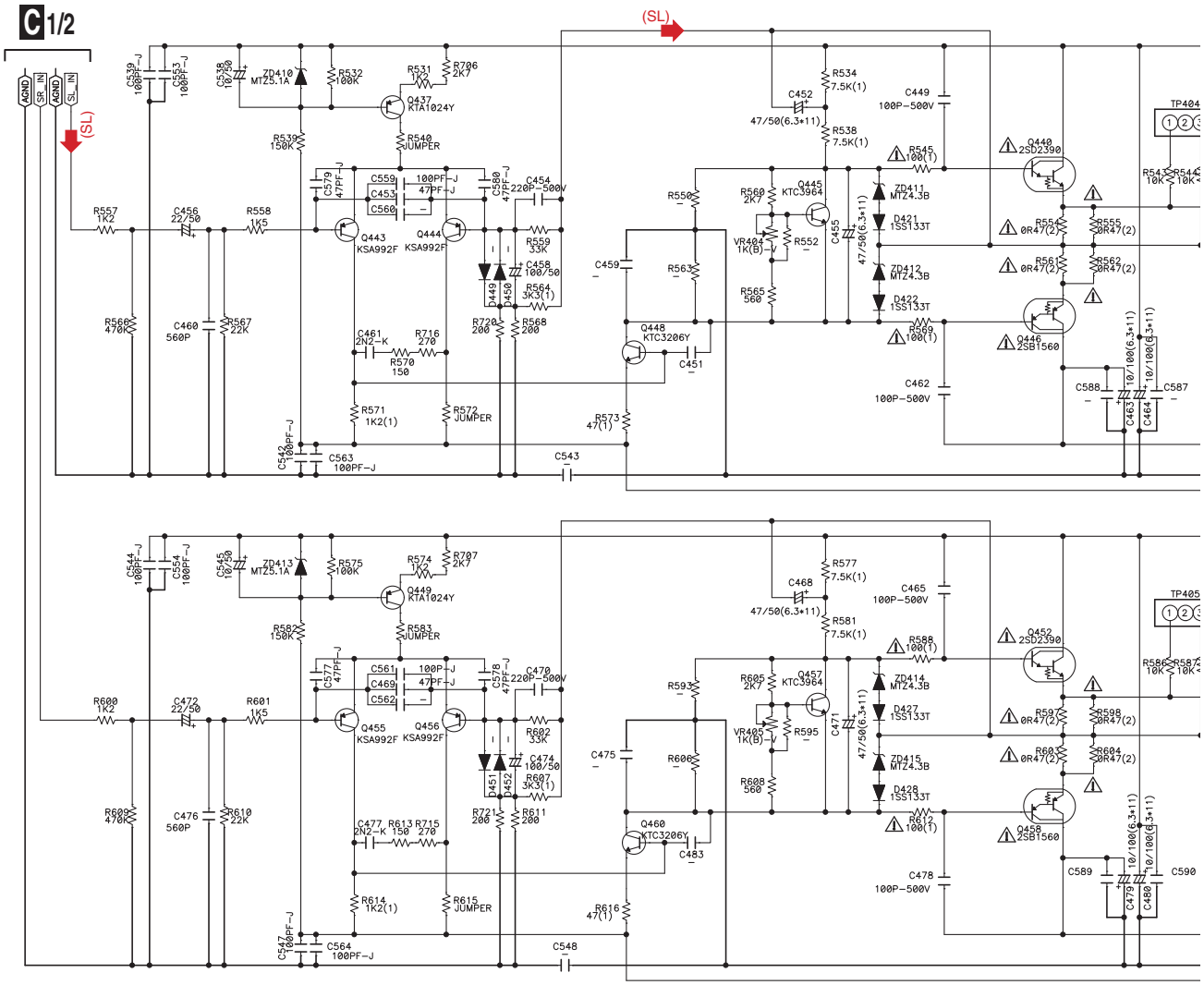
10.4 AMP ASSY (1/2) (for VSX-821-K, VSX-521-K)



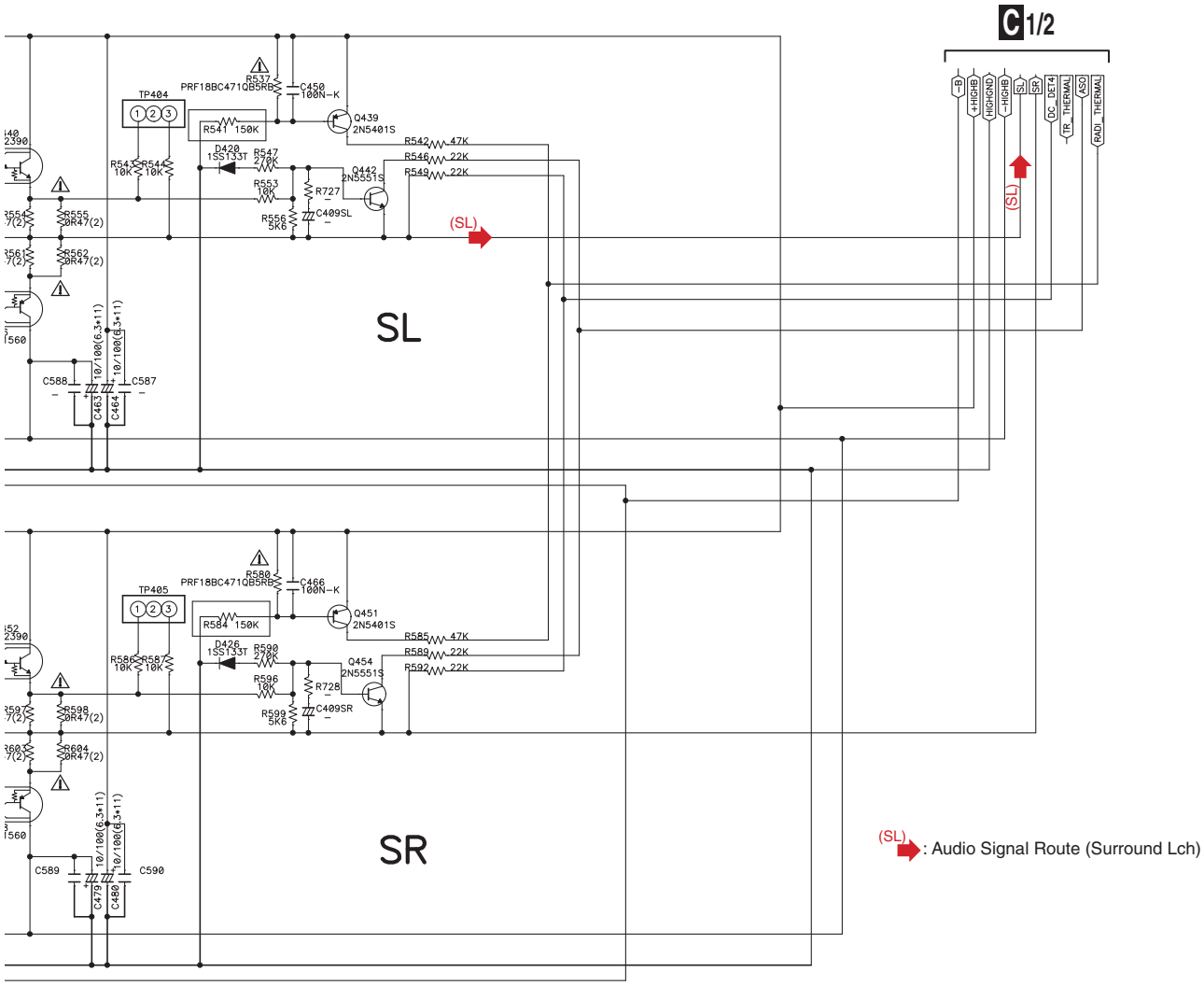
C1/2 AMP ASSY (VSX-821-K/521: 7028070241030-IL)



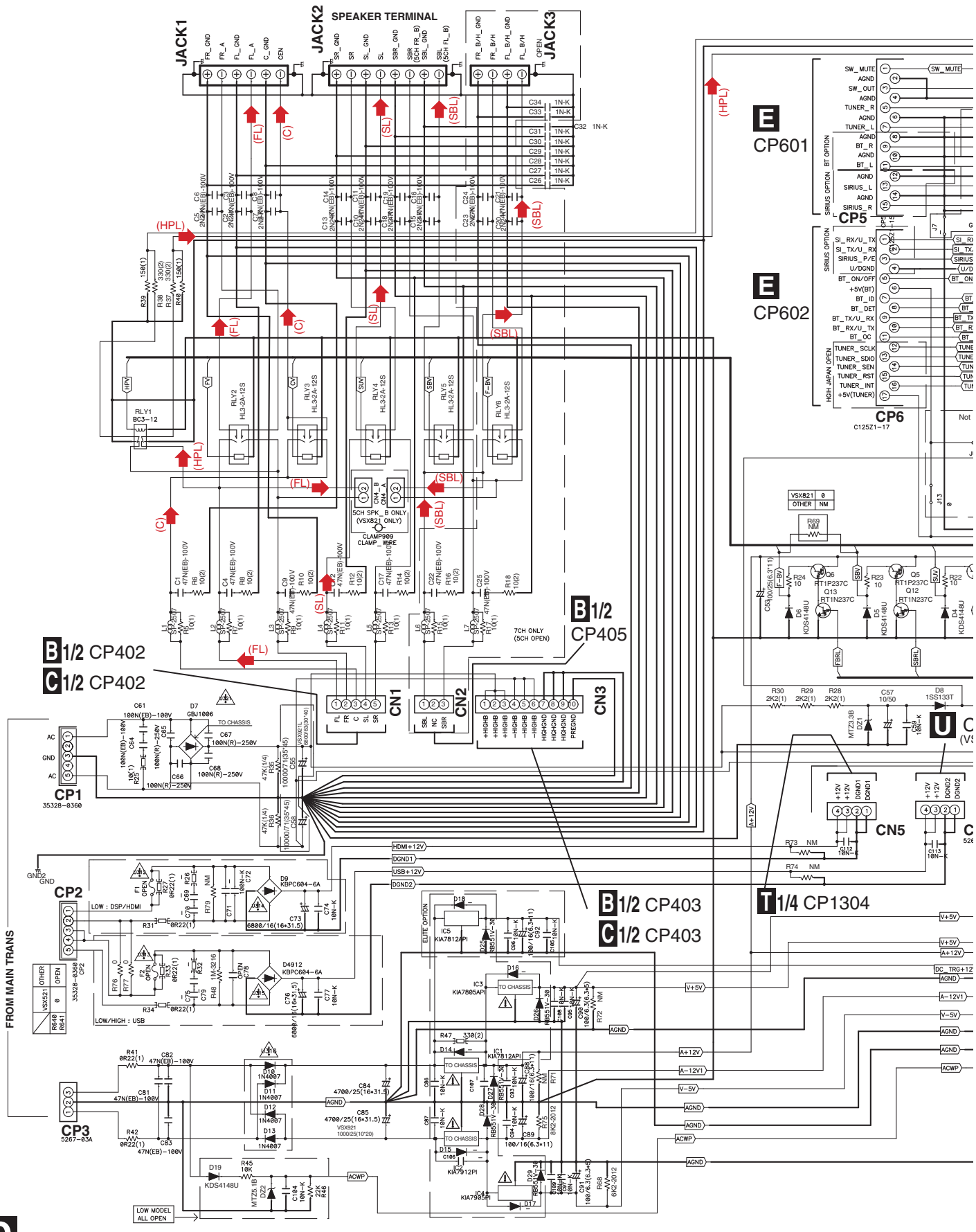
10.5 AMP ASSY (2/2) (for VSX-821-K, VSX-521-K)



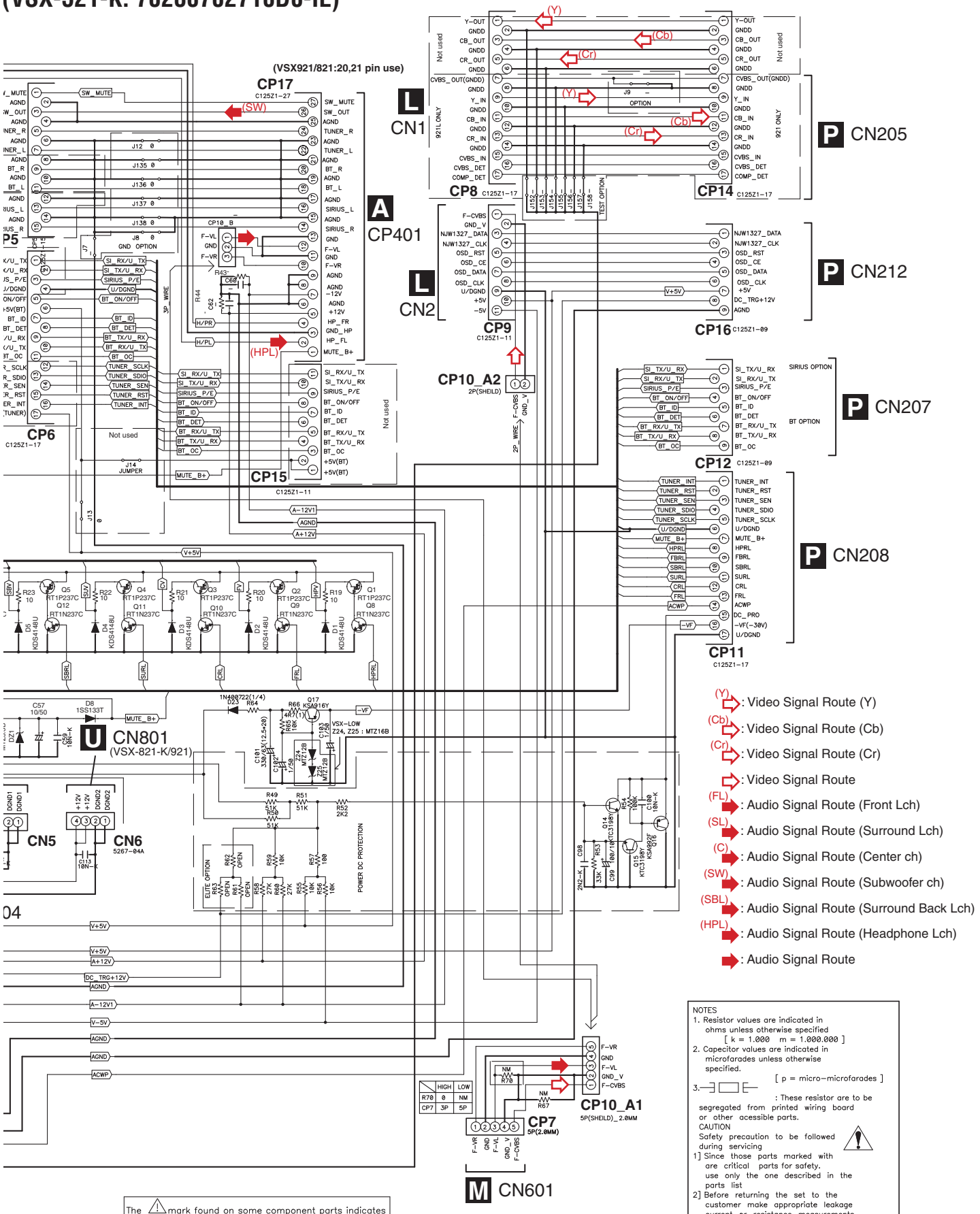
C2/2 AMP ASSY (VSX-821-K/521: 7028070241030-IL)



D MAIN ASSY (VSX-821-K: 70280702710H0-IL) (VSX-921-K: 70280702710G0-IL) (VSX-521-K



(VSX-521-K: 70280702710D0-IL)



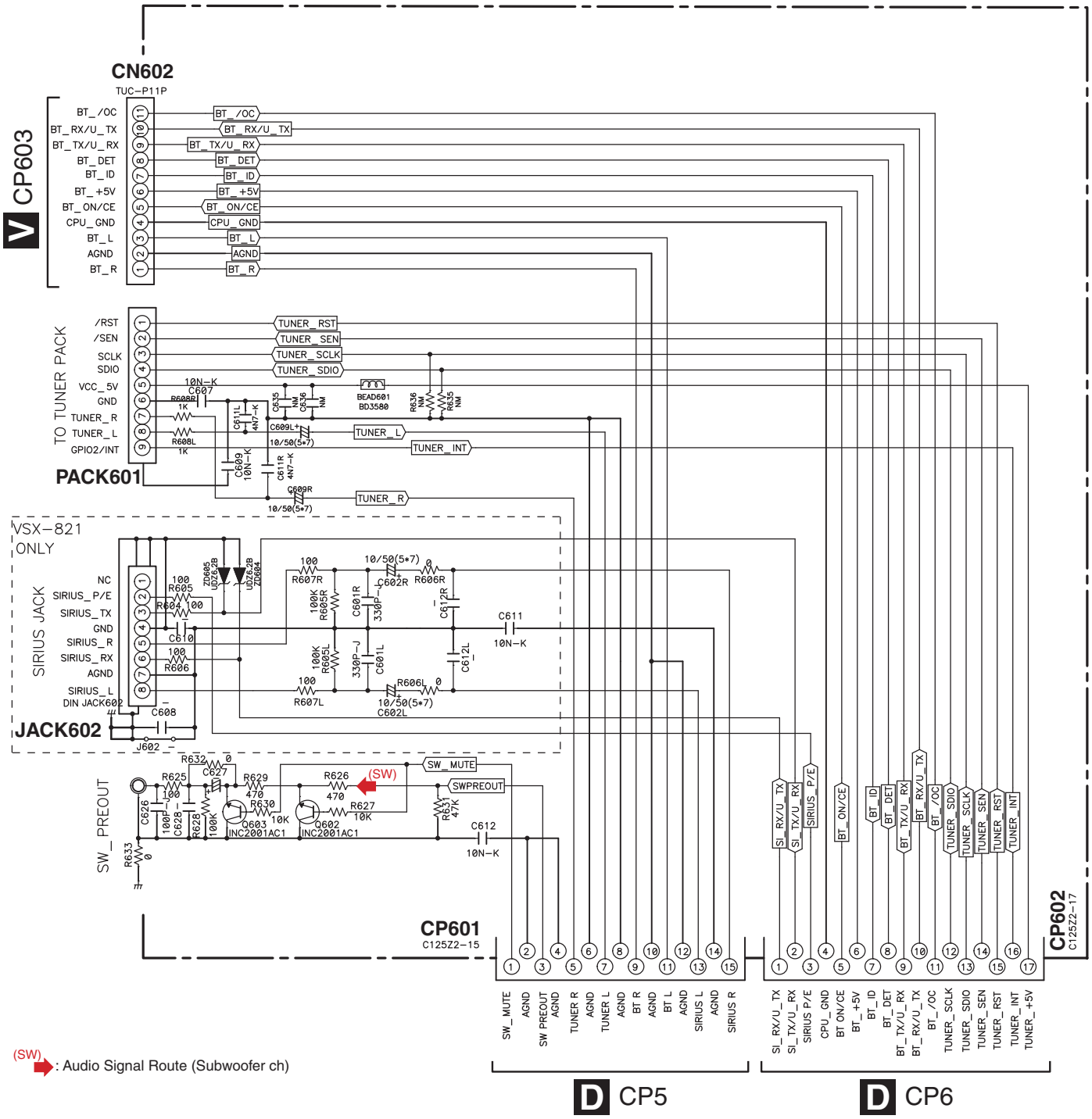
NOTES
1. Resistor values are indicated in ohms unless otherwise specified [k = 1.000 m = 1.000.000]
2. Capacitor values are indicated in microfarades unless otherwise specified. [p = micro-microfarades]
3. : These resistor are to be segregated from printed wiring board or other acessible parts.

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

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

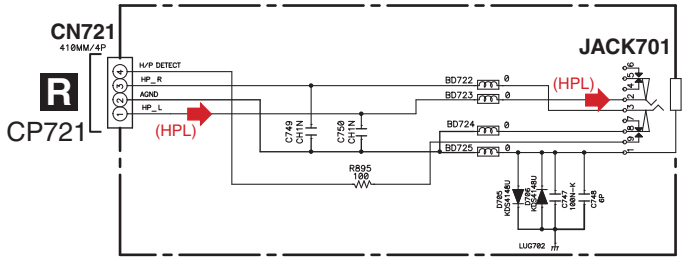
CAUTION
FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS OF FUSE.

E SUBWOOFER ASSY
(VSX-821-K/921: 7028070272070-IL)
(VSX-521-K: 7028070272050-IL)



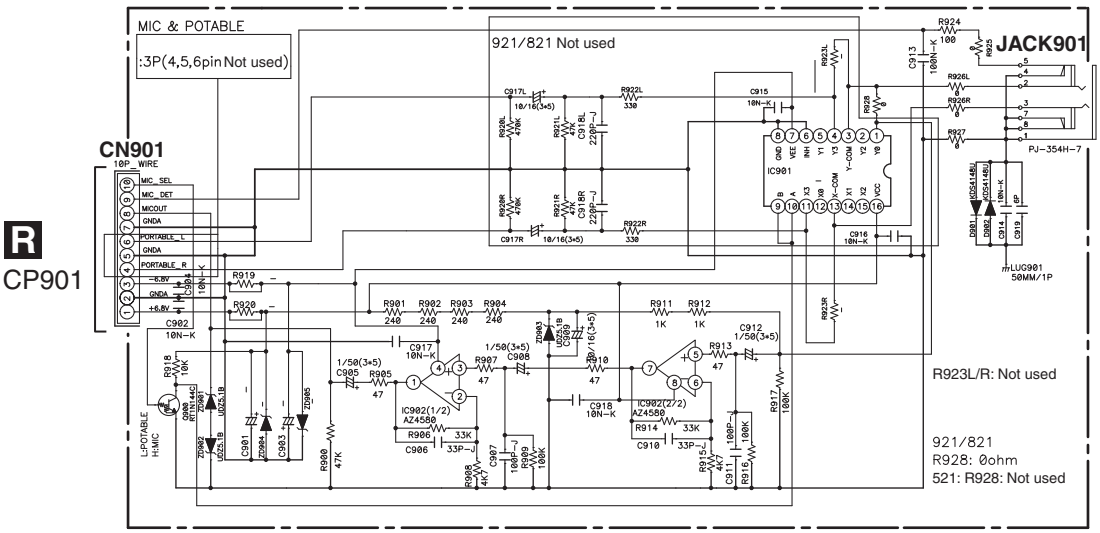
(SW) : Audio Signal Route (Subwoofer ch)

F HEADPHONE ASSY (7028070215050-IL)

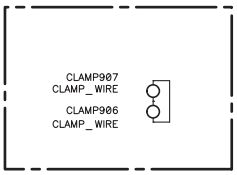


(HPL) : Audio Signal Route (Headphone Lch)

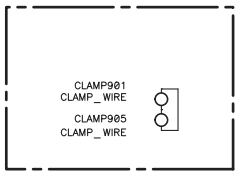
G MIC ASSY (VSX-821-K/921: 7028070213050-IL) (VSX-521-K: 7028070213020-IL)



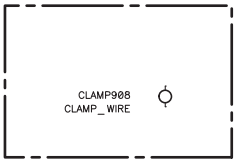
H GUIDE L ASSY (7028070273070-IL)



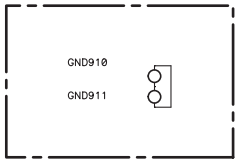
I GUIDE R ASSY (7028070274070-IL)

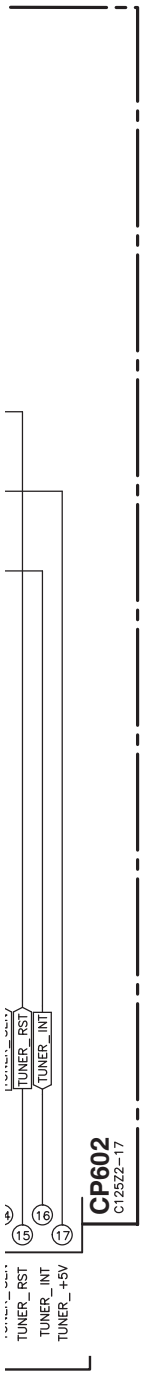


J WIRE GUIDE A ASSY (7028070276070-IL)

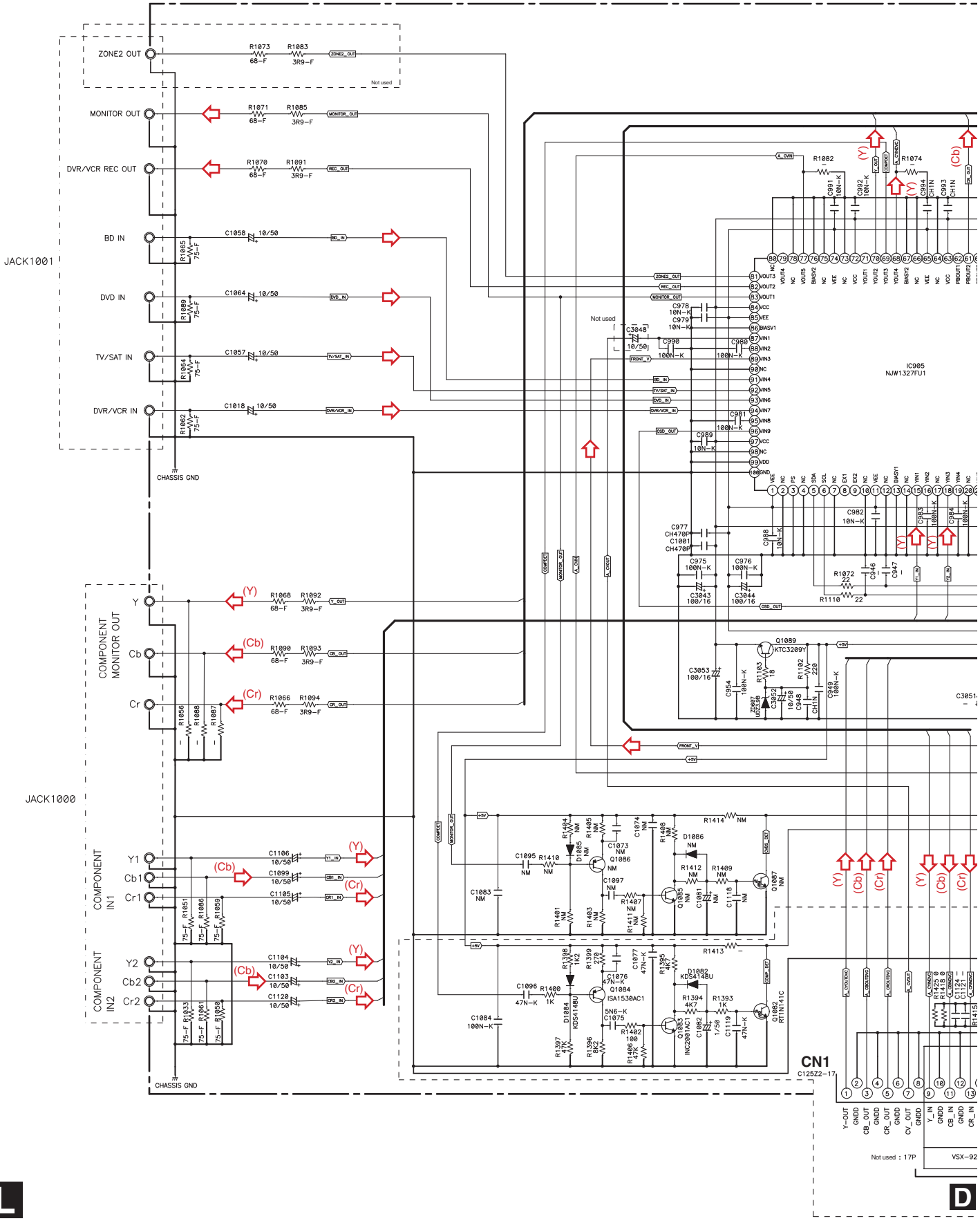


K WIRE GUIDE B ASSY (7028070277070-IL)

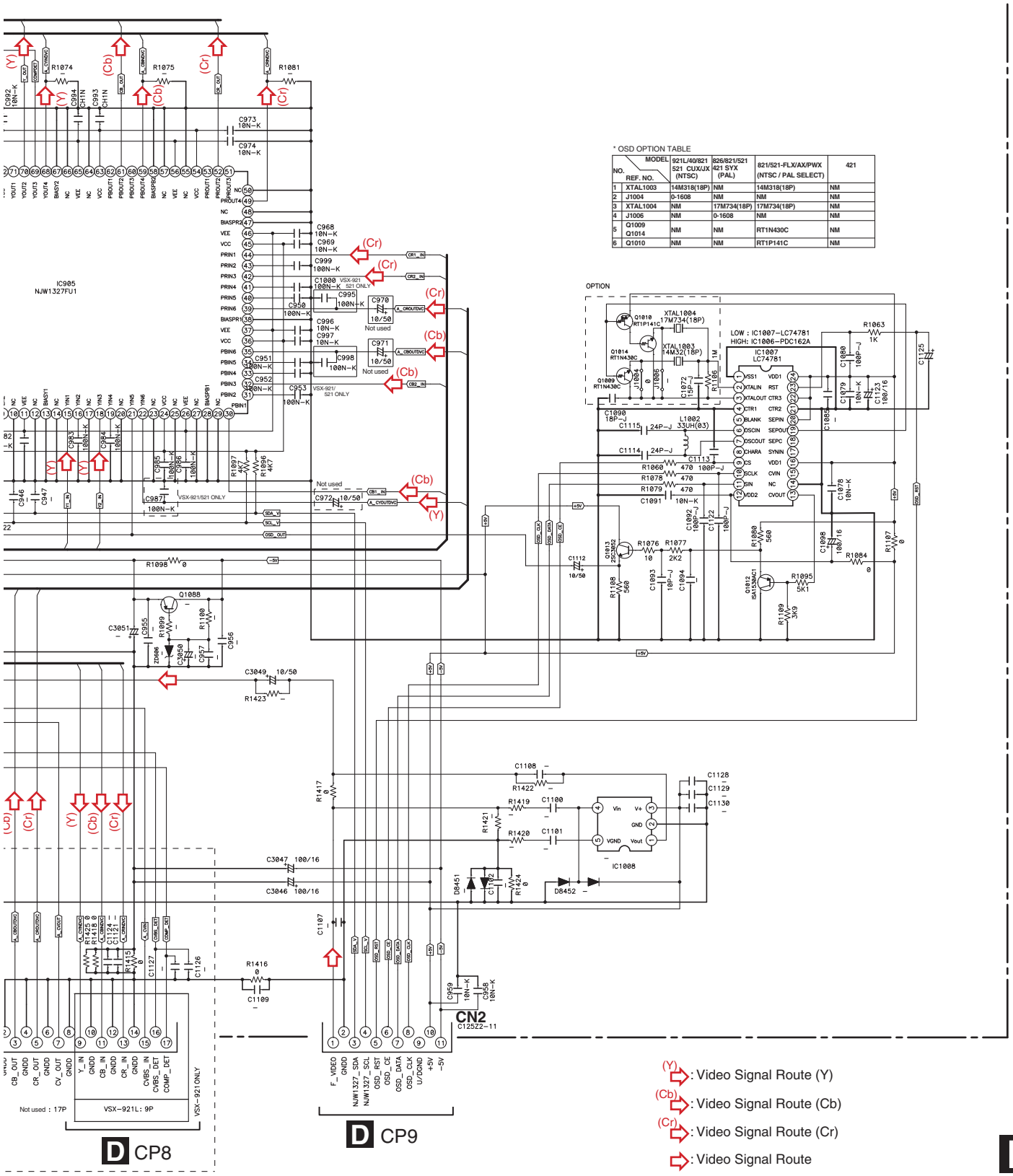




10.8 VIDEO ASSY



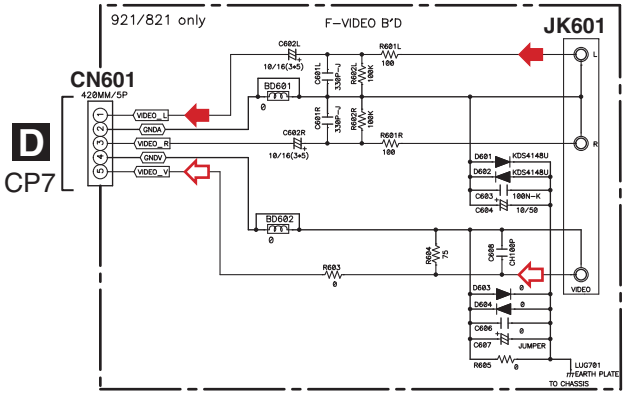
L VIDEO ASSY (VSX-821-K/521: 7028070261060-IL)
(VSX-921-K: 7028070261070-IL)



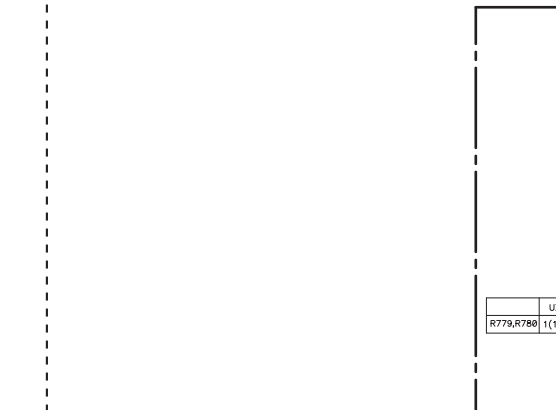
10.9 F-VIDEO, FRONT and POWER ASSYS

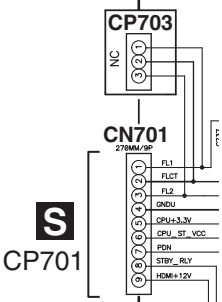
VSX-821-K, VSX-921-K only

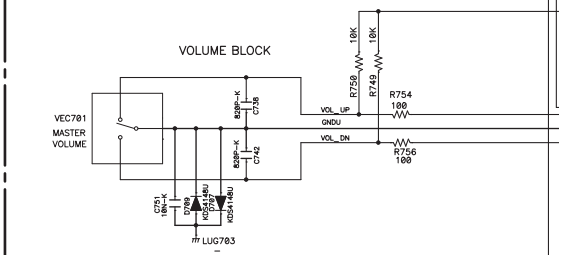
M F-VIDEO ASSY (VSX-821-K/921: 7028070214050-IL)

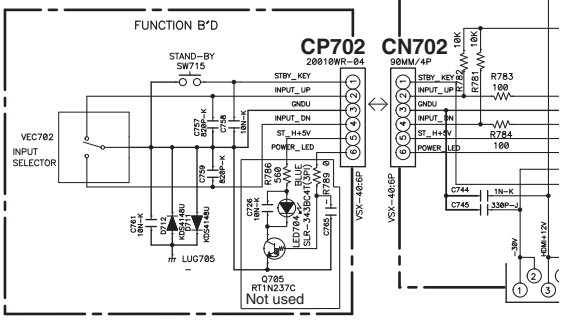


N F (V (V



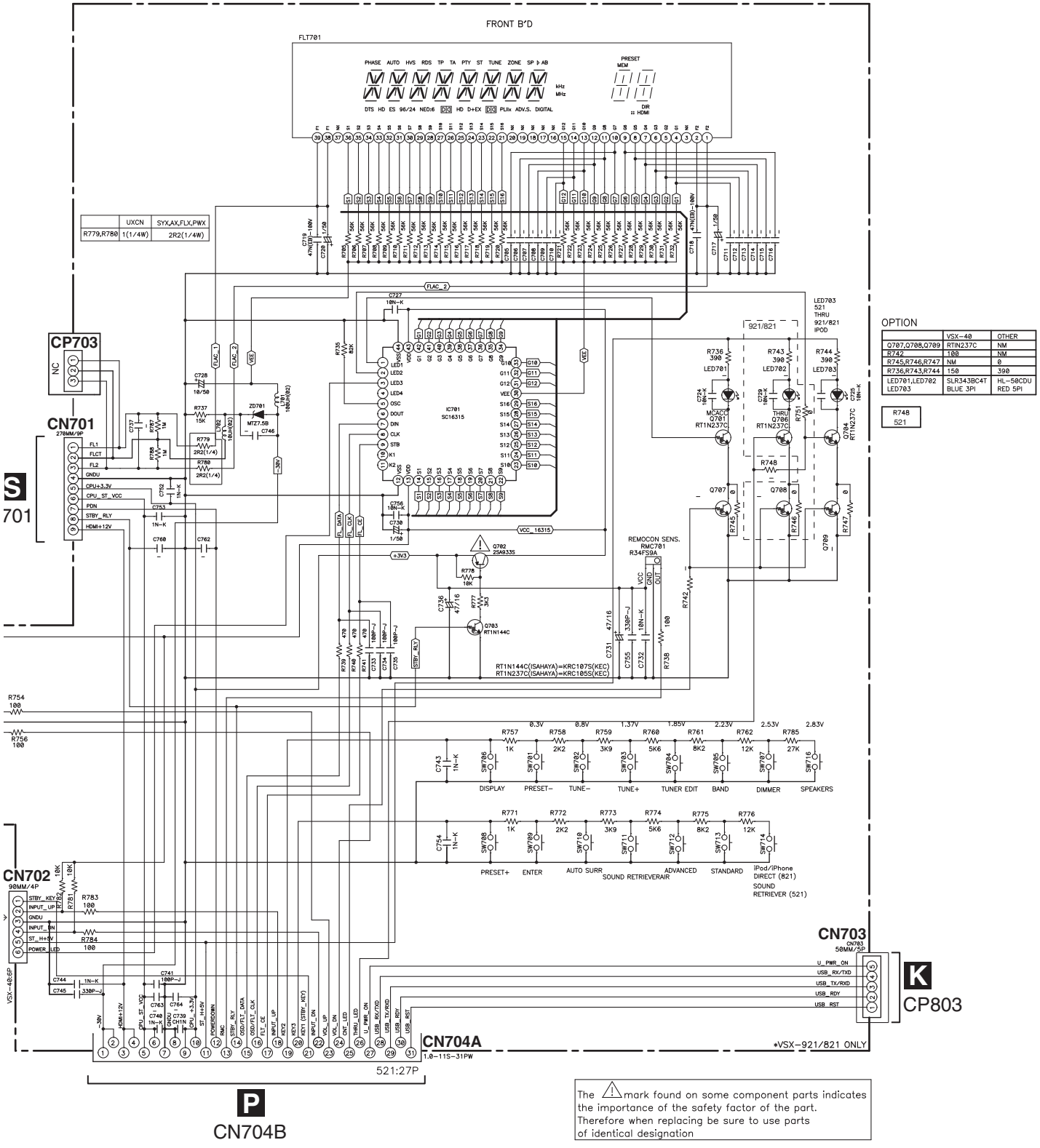






O POWER ASSY (7028070212050-IL)

N FRONT ASSY
(VSX-821-K/921: 7028070211050-IL)
(VSX-521-K: 7028070211020-IL)



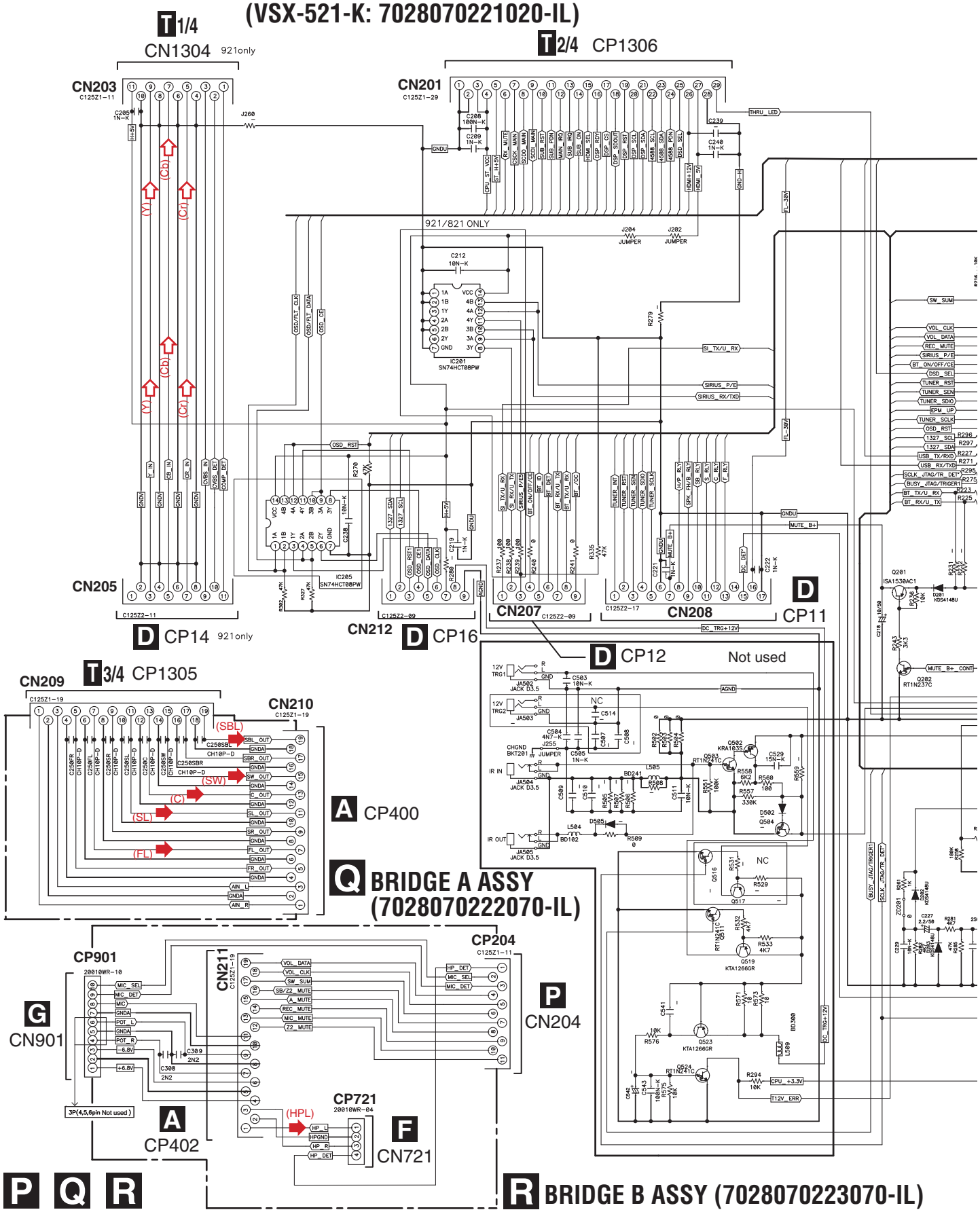
	UXCN	SYX,AX,FLX,PWX
R779,R780	1(1/4W)	2R2(1/4W)

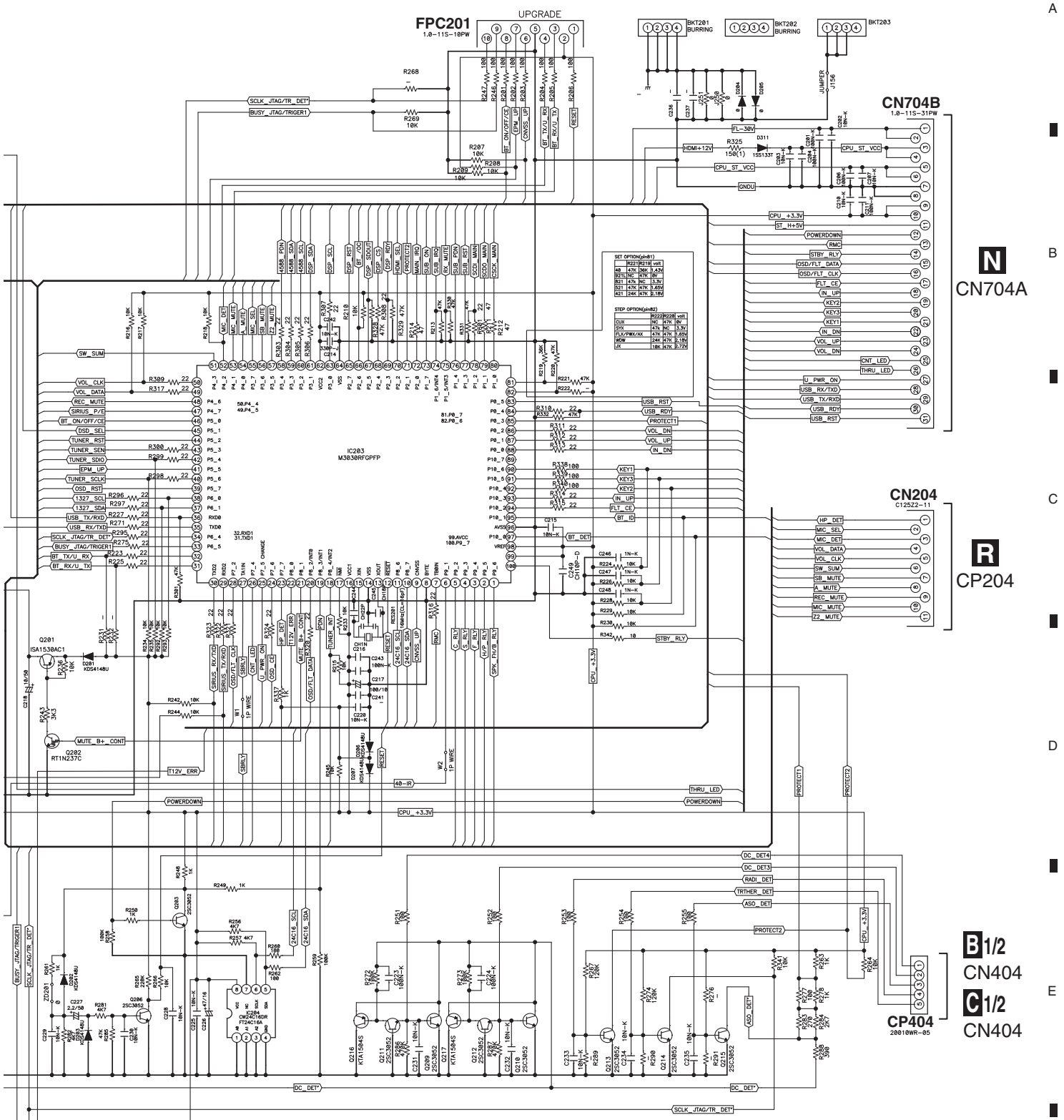
	VSX−40	OTHER
Q707,Q708,Q709	RT1N237C	NM
R742	100	NM
R745,R746,R747	NM	0
R736,R743,R744	150	390
LED701,LED702 LED703	SLR343BC4T BLUE 3PI	HL−50CDU RED 5PI

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

10.10 CPU, BRIDGE A and B ASSYS

P CPU ASSY (VSX-821-K: 7028070221030-IL)
(VSX-921-K: 7028070221070-IL)
(VSX-521-K: 7028070221020-IL)





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

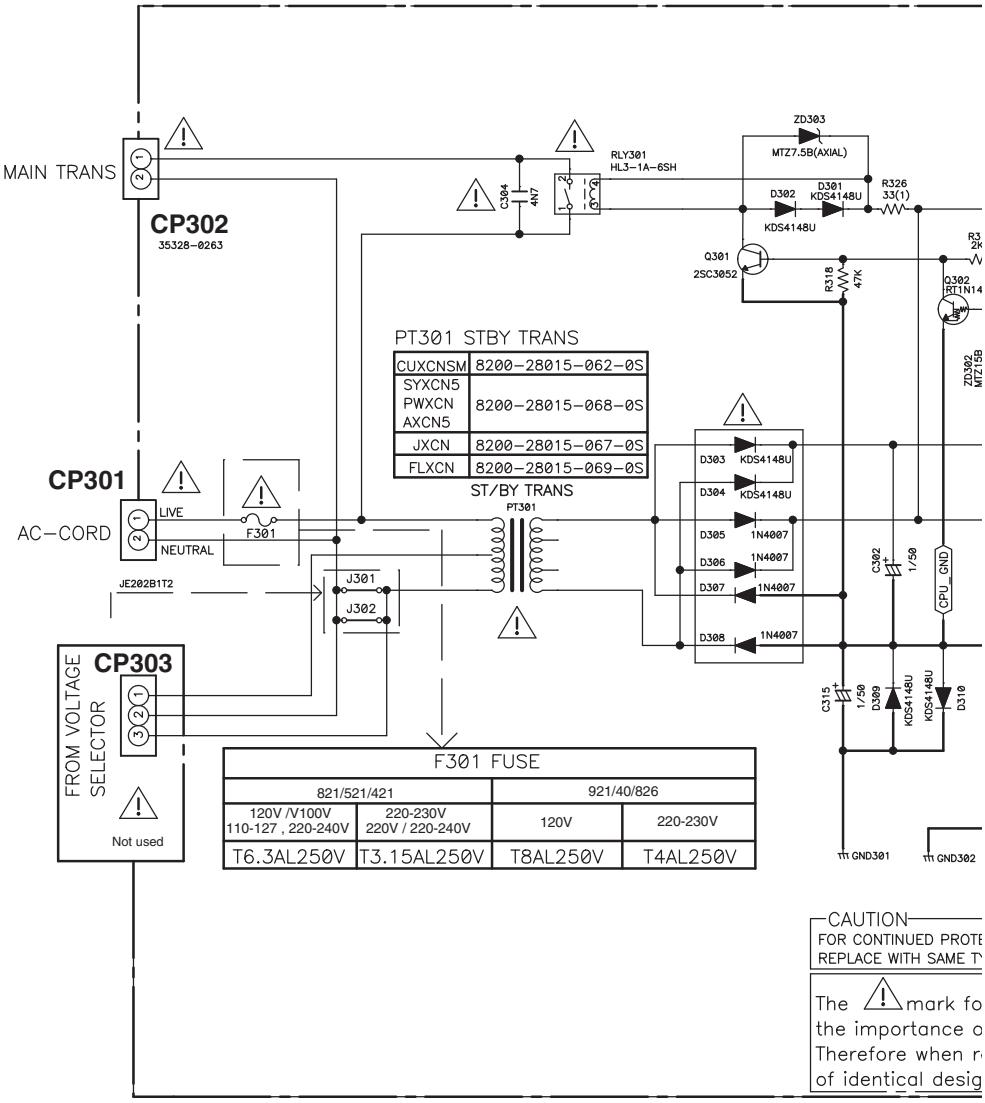
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore when replacing be sure to use parts of identical designation

)70-IL)

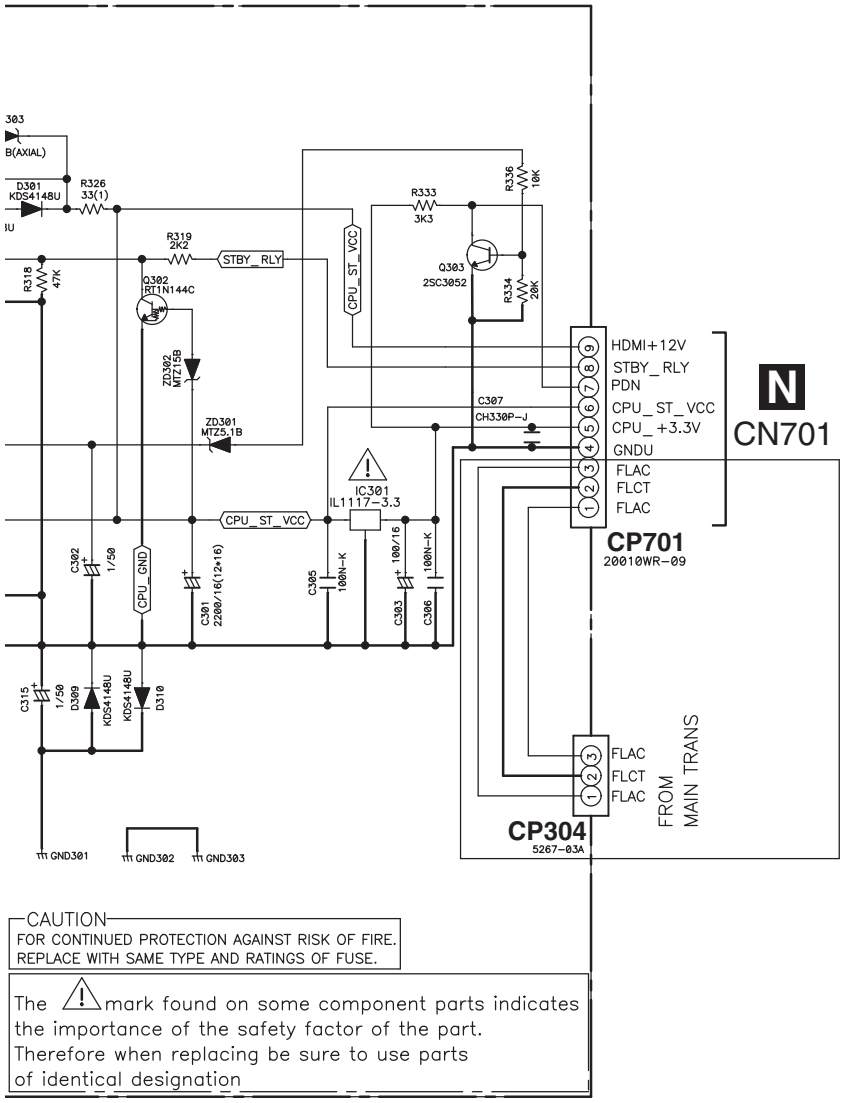
10.11 STANDBY ASSY

• NOTE FOR FUSE REPLACEMENT

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



S STANDBY ASSY
(VSX-821-K/521: 7028070225030-IL)
(VSX-921-K: 7028070225070-IL)



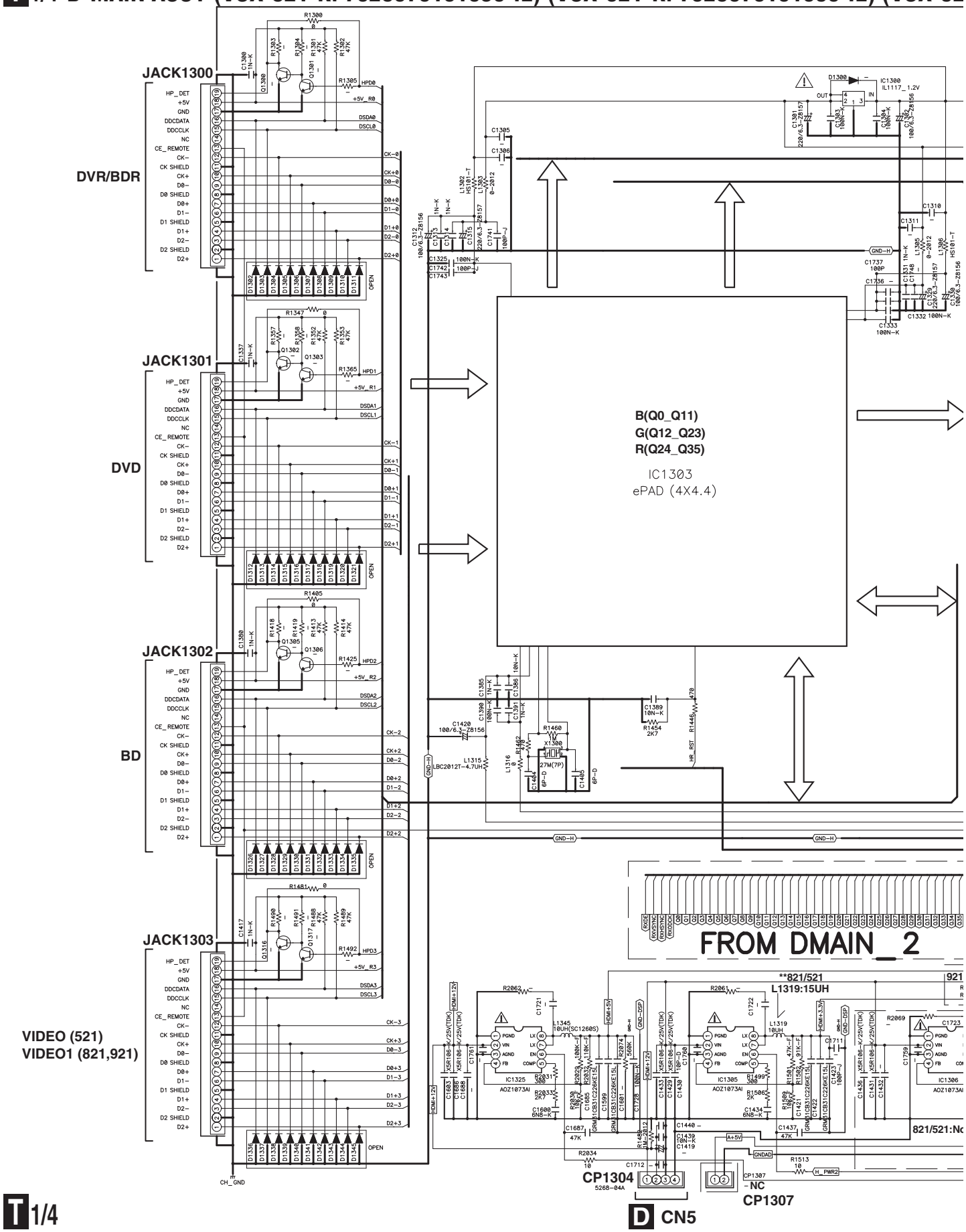
CAUTION
FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
REPLACE WITH SAME TYPE AND RATINGS OF FUSE.

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

NOTES
1. Resistor values are indicated in ohms unless otherwise specified
[k = 1.000 m = 1.000.000]
2. Capacitor values are indicated in 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.

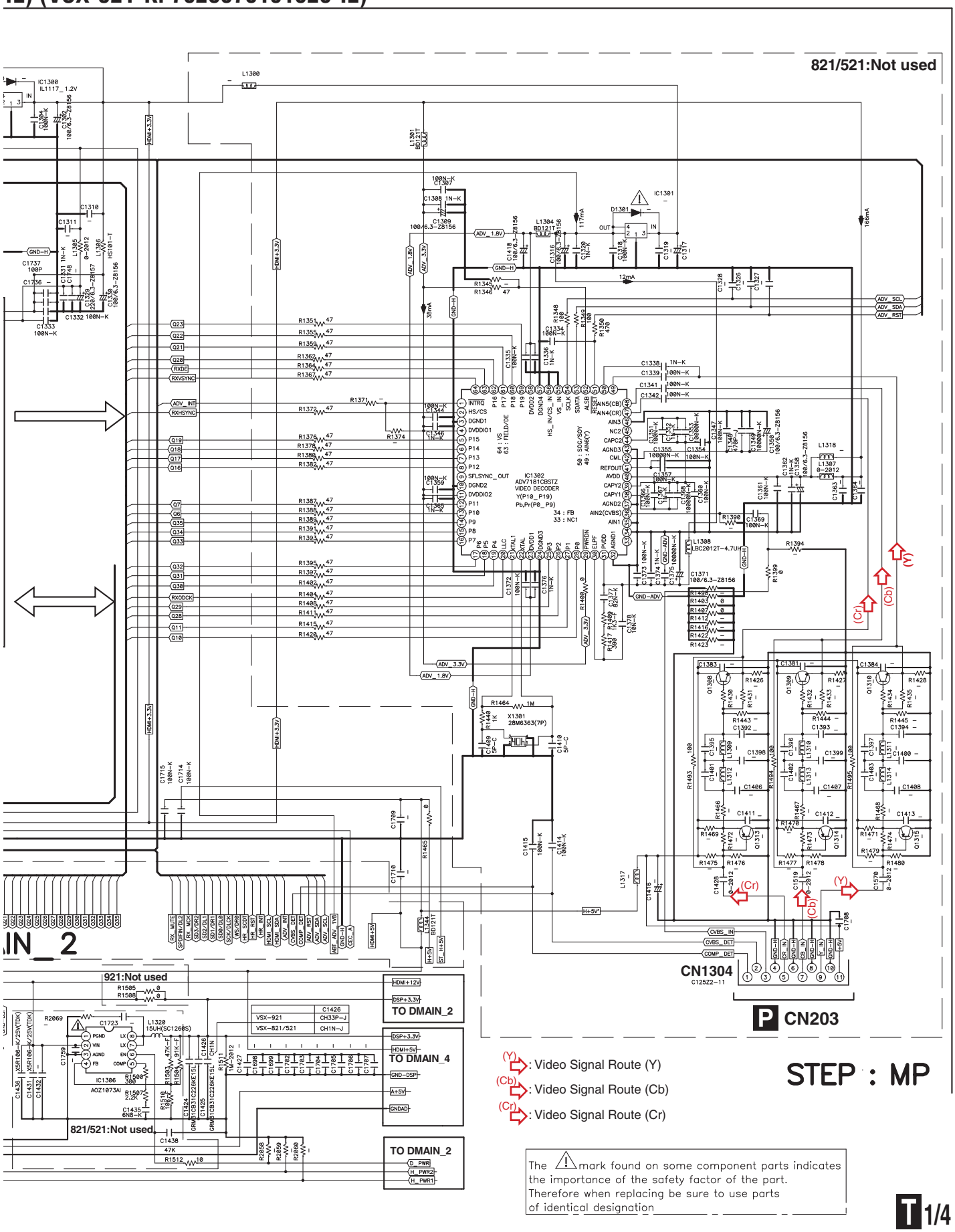
10.12 D-MAIN ASSY (1/4)

T 1/4 D-MAIN ASSY (VSX-821-K: 7028070191030-IL) (VSX-921-K: 7028070191050-IL) (VSX-52



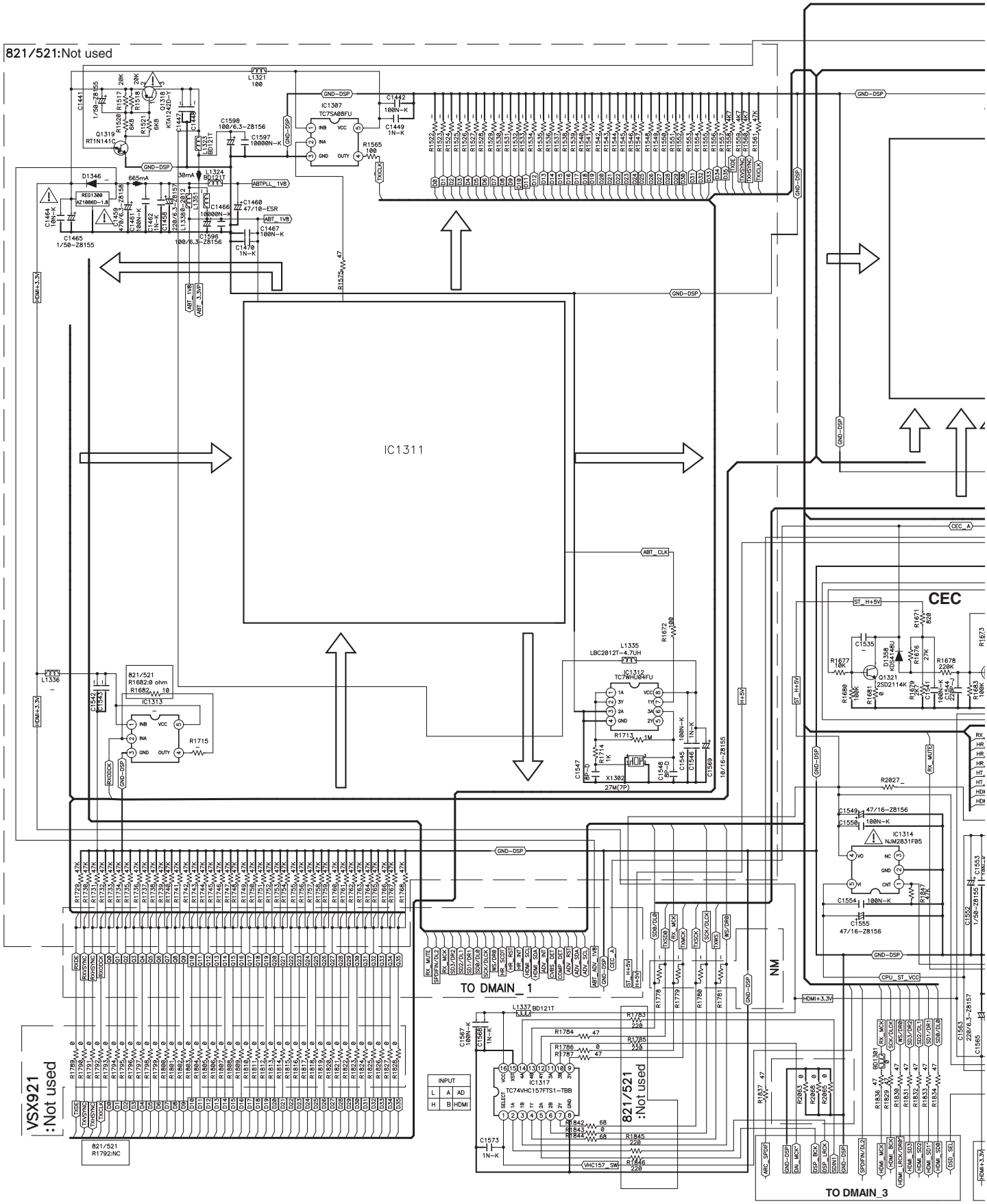
T 1/4

IL) (VSX-521-K: 7028070191020-IL)

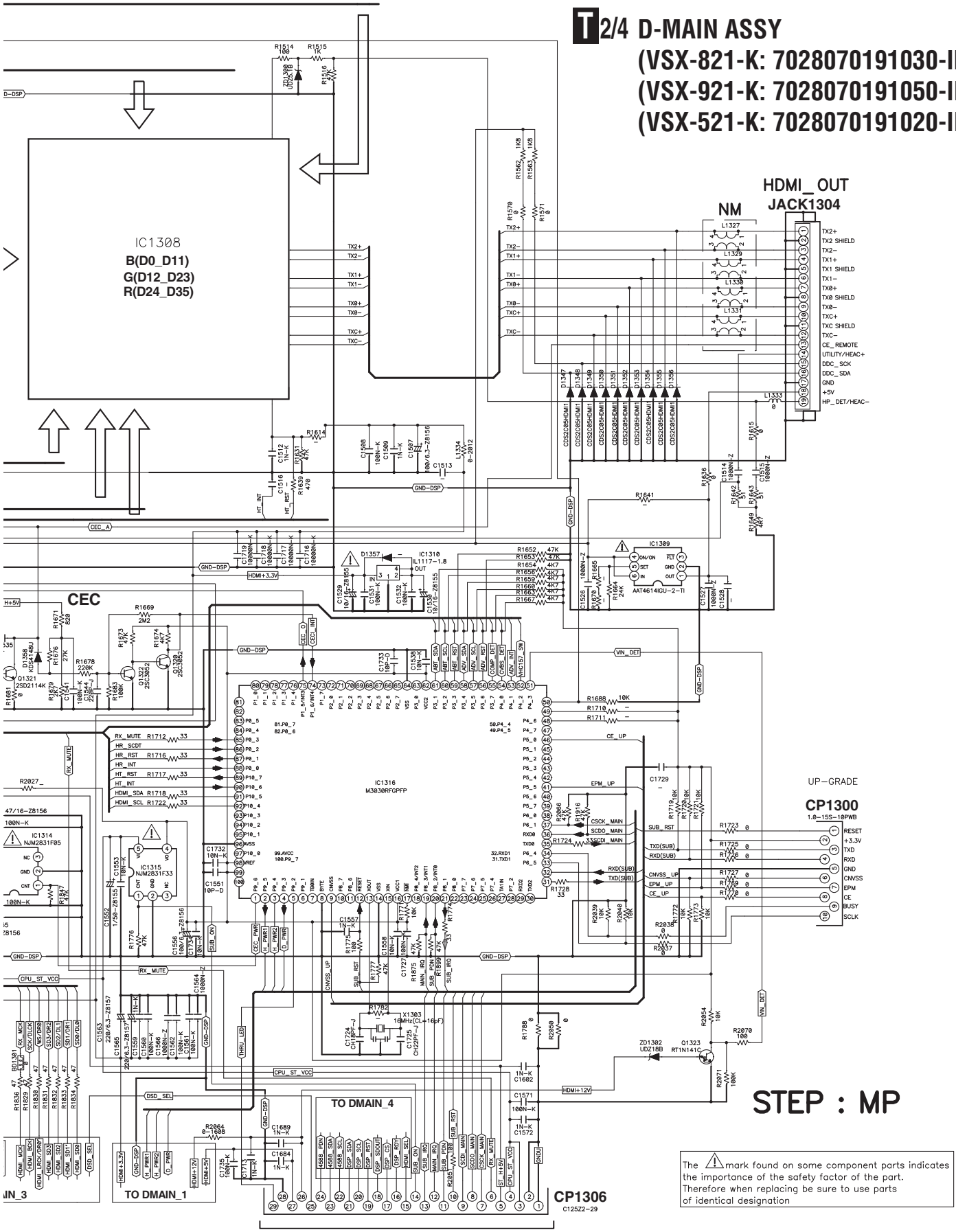


T 1/4

10.13 D-MAIN ASSY (2/4)



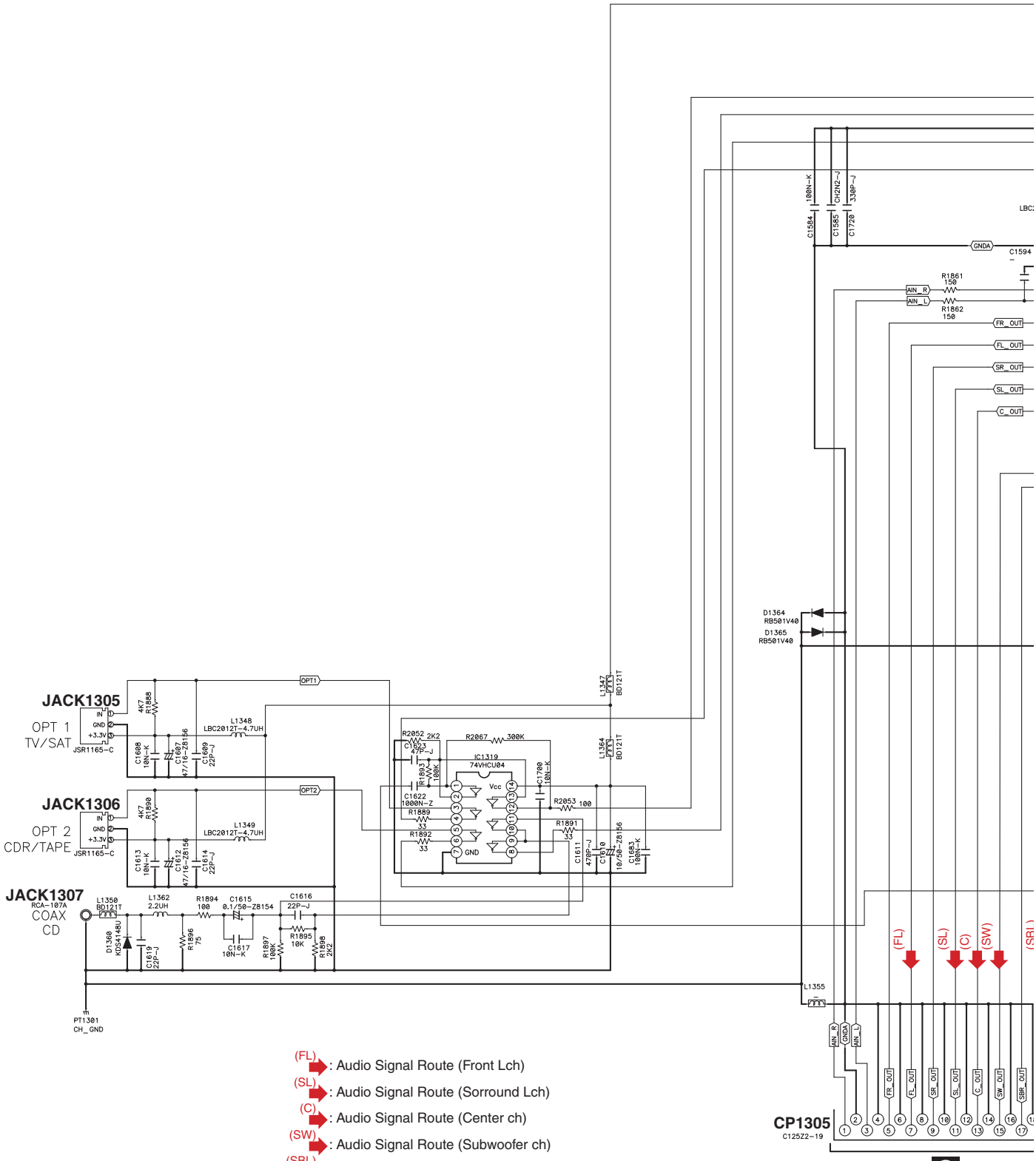
T2/4 D-MAIN ASSY
(VSX-821-K: 7028070191030-IL)
(VSX-921-K: 7028070191050-IL)
(VSX-521-K: 7028070191020-IL)



10.14 D-MAIN ASSY (3/4)

T 3/4 D-MAIN ASSY

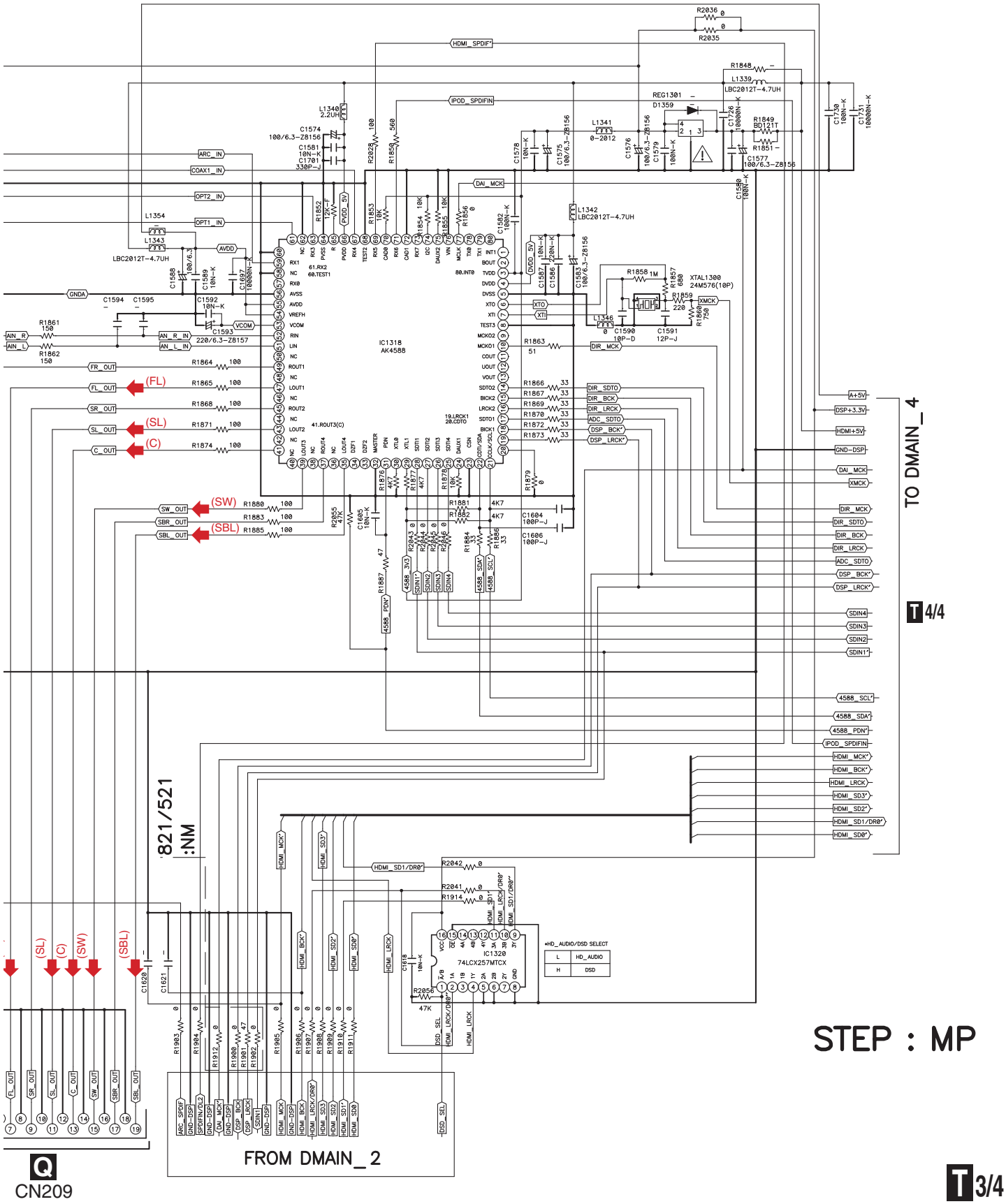
(VSX-821-K: 7028070191030-IL)
(VSX-921-K: 7028070191050-IL)
(VSX-521-: 7028070191020-IL)



(FL): Audio Signal Route (Front Lch)
(SL): Audio Signal Route (Sorround Lch)
(C): Audio Signal Route (Center ch)
(SW): Audio Signal Route (Subwoofer ch)
(SBL): Audio Signal Route (Sorround Back Lch)

T 3/4

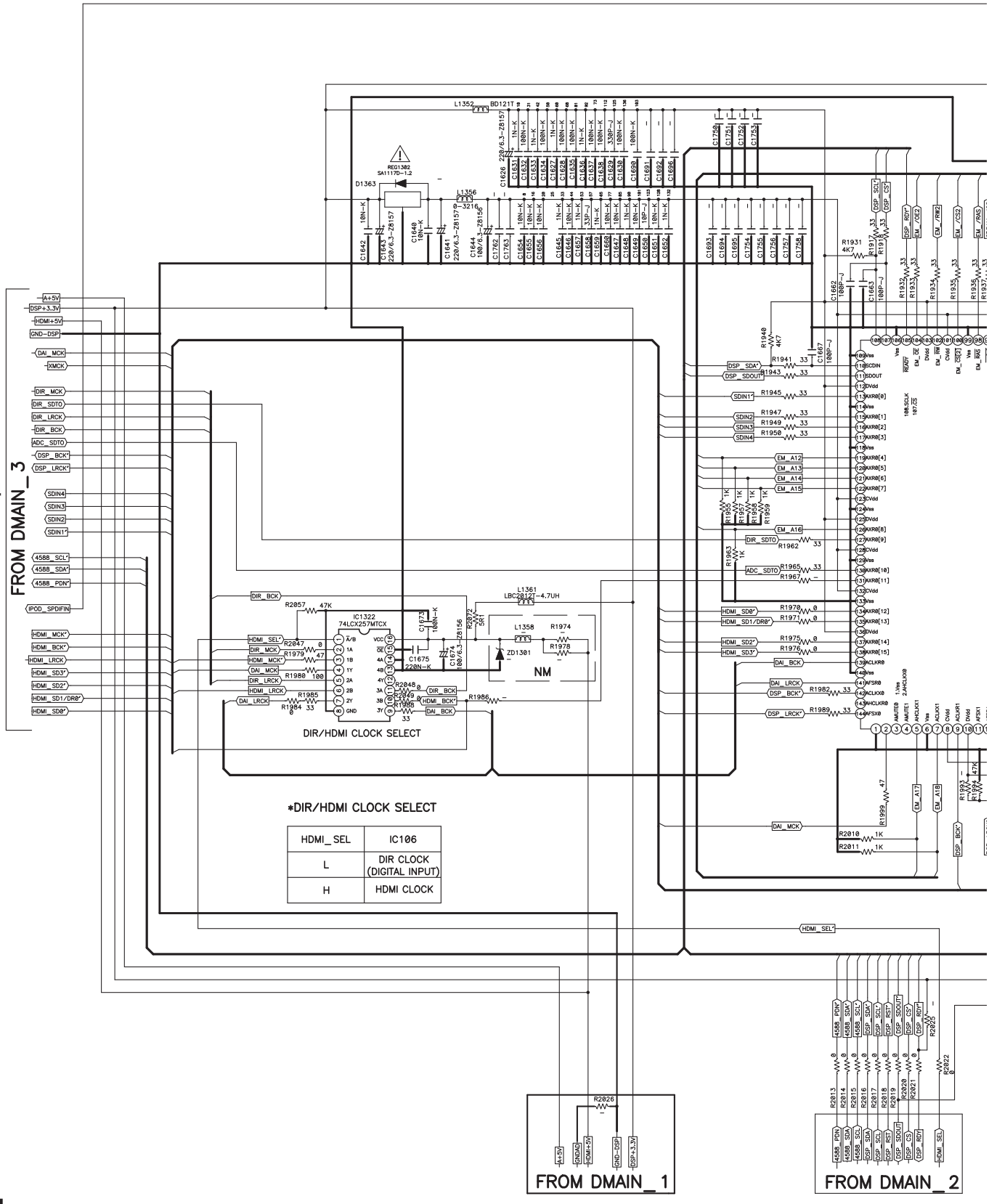
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore when replacing be sure to use parts of identical designation



10.15 D-MAIN ASSY (4/4)

T4/4 D-MAIN ASSY
(VSX-821-K: 7028070191030-IL)
(VSX-921-K: 7028070191050-IL)
(VSX-521-K: 7028070191020-IL)

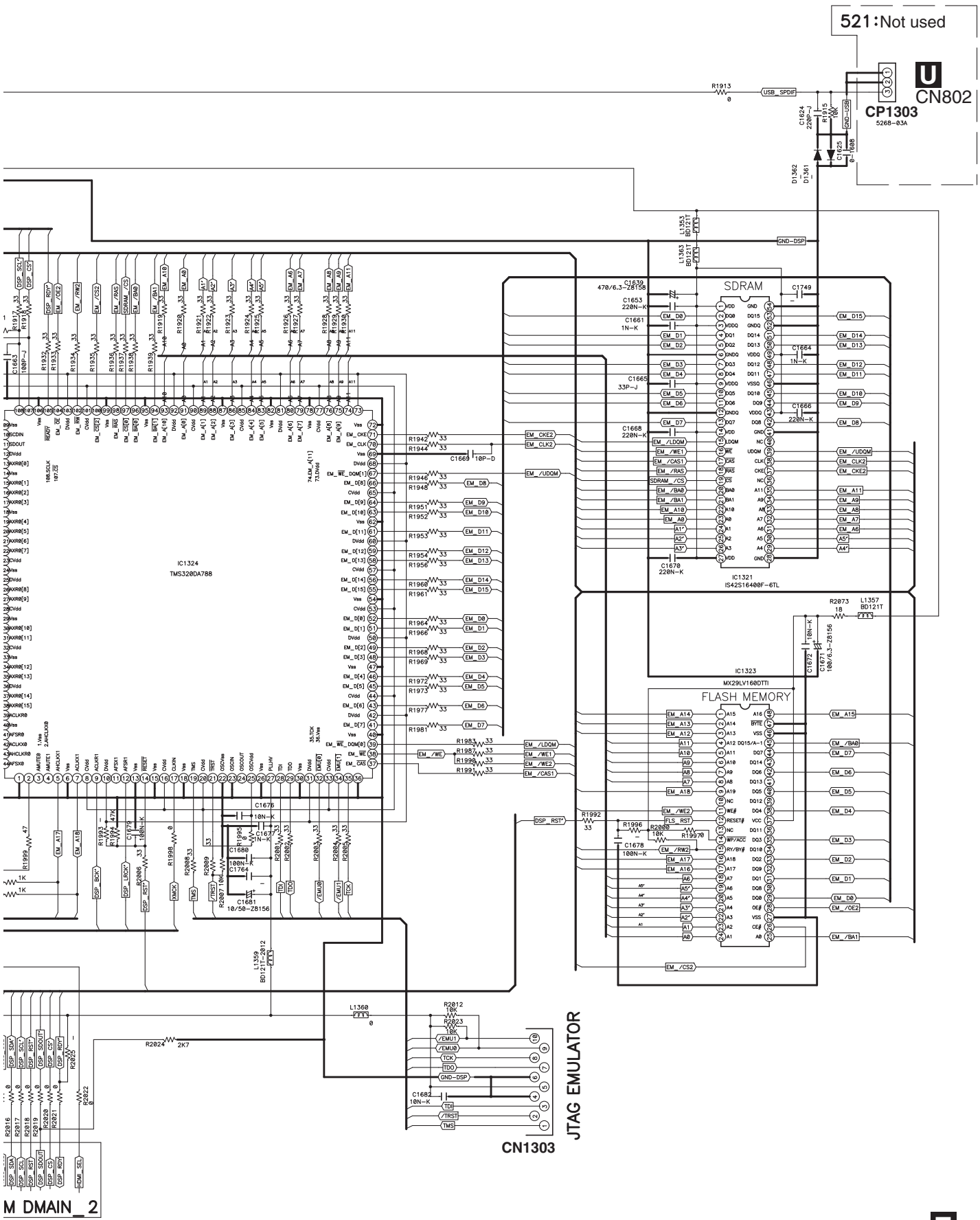
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore when replacing be sure to use parts of identical designation



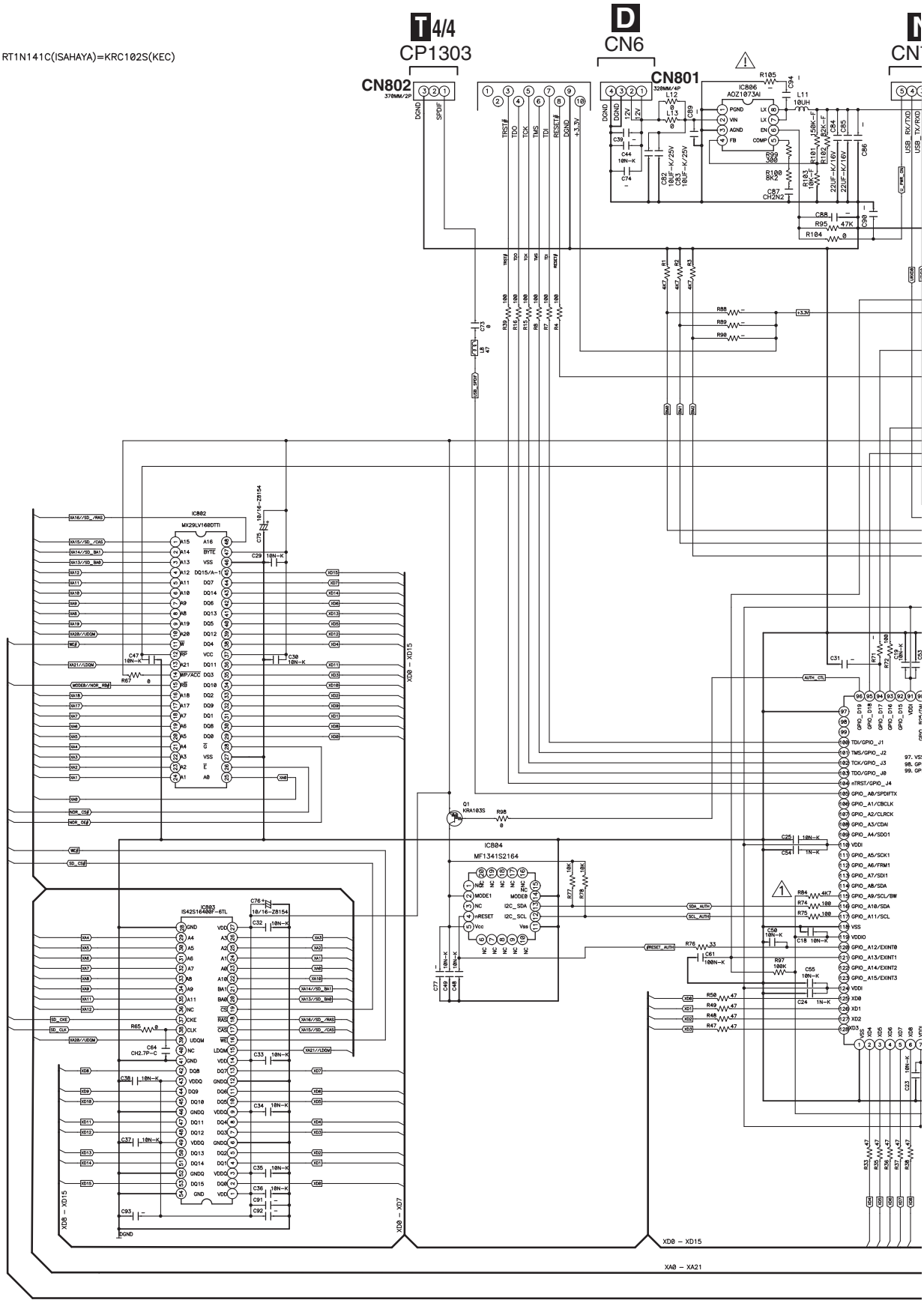
*DIR/HDMI CLOCK SELECT

HDMI_SEL	IC106
L	DIR CLOCK (DIGITAL INPUT)
H	HDMI CLOCK

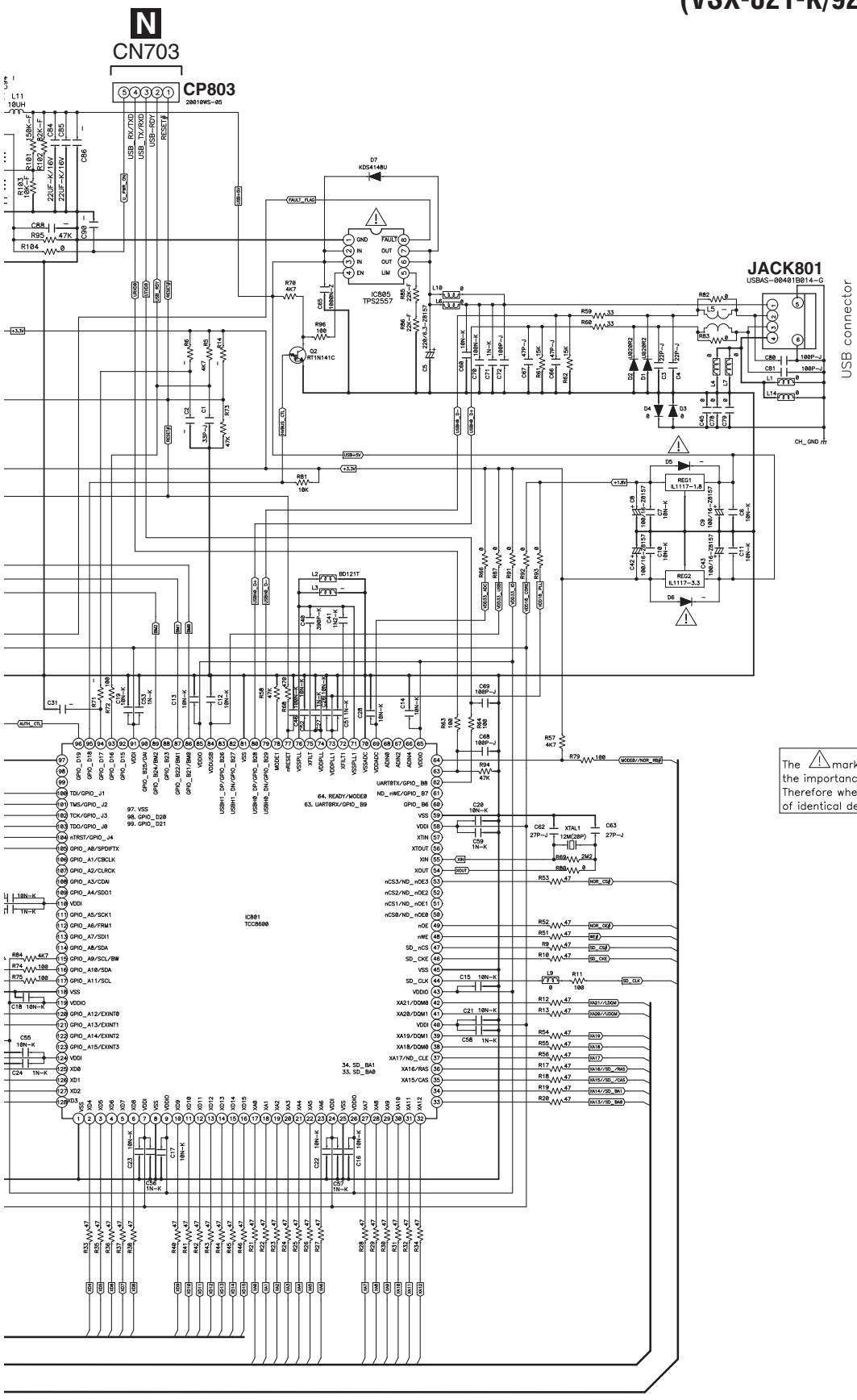
T4/4


521:Not used
CN802
CP1303
5268-03A
SDRAM
IC1321
IS42S16400F-6TL
IC1324
TMS320DA788
IC1323
MX29LV160DTTI
FLASH MEMORY
JTAG EMULATOR
CN1303
M DMAIN_2

10.16 USB ASSY (VSX-821-K, VSX-921-K only)

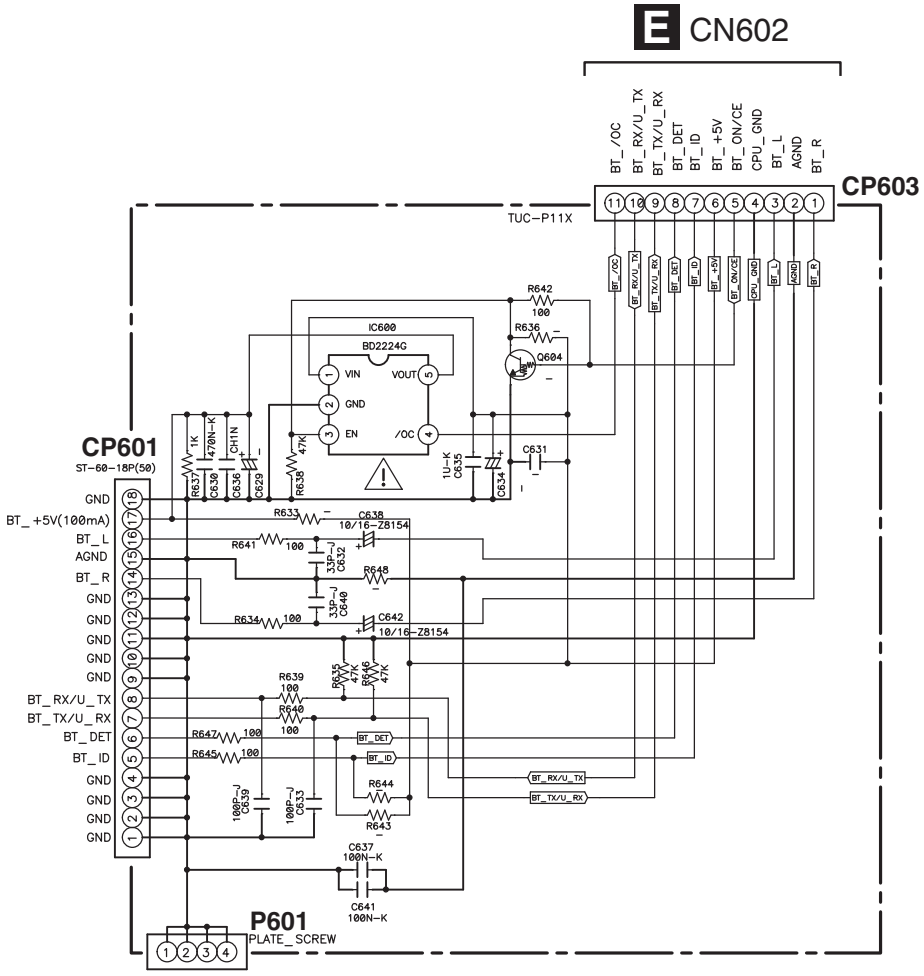


U USB ASSY
(VSX-821-K/921 : 7028070201050-IL)



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

V BT ASSY (7028070231010-IL)



A

B

C

D

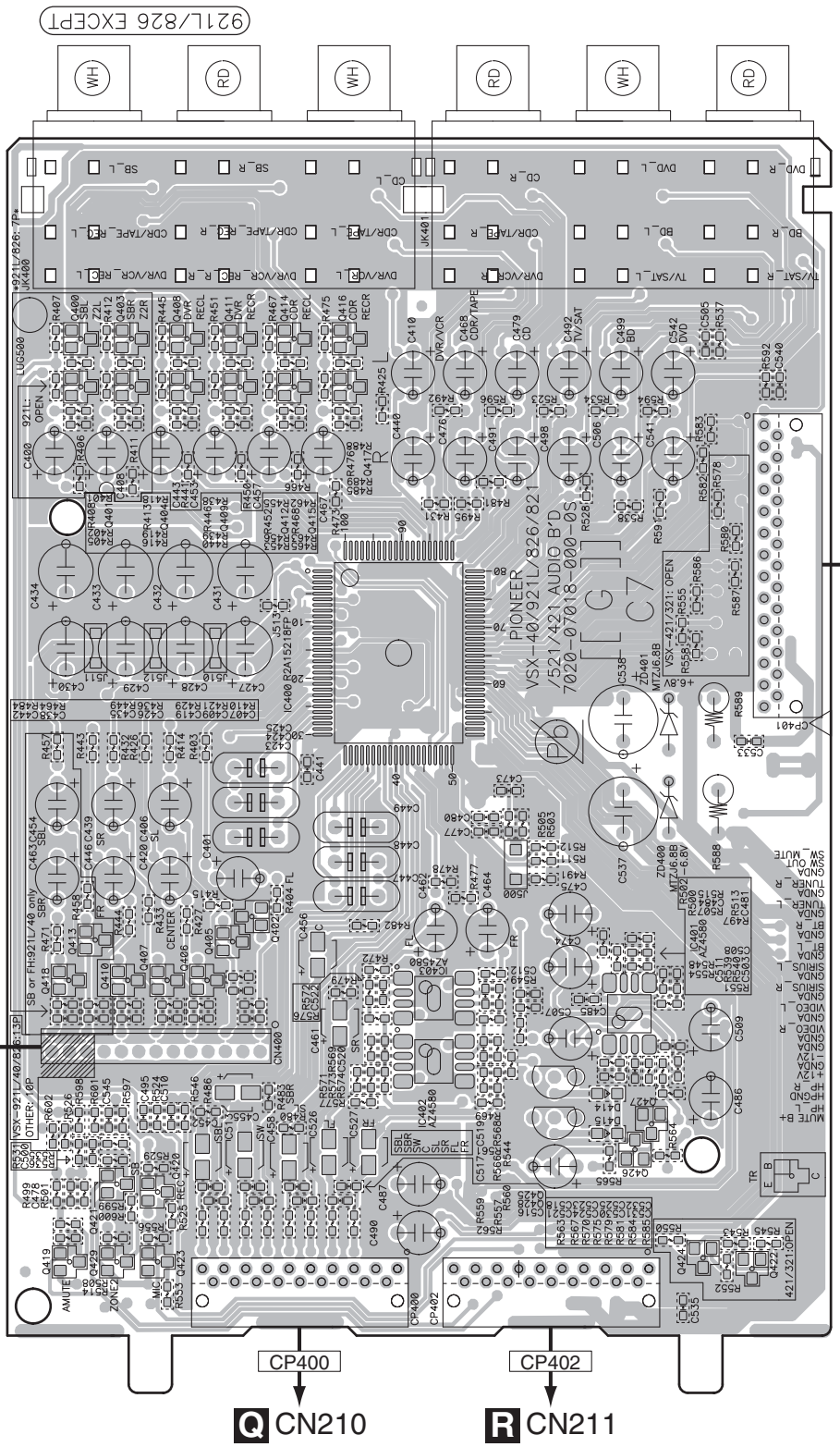
E

F

11. PCB CONNECTION DIAGRAM
11.1 AUDIO ASSY

SIDE A

A AUDIO ASSY



SIDE A

IC | Q

Q400 Q403 Q408 Q411 Q414 Q416 Q401 Q404 Q409 Q412 Q415 Q417

IC400

Q413 Q405 Q402 Q418 Q410 Q407 Q406

IC403 IC402 IC401

Q425 Q428 Q427 Q426

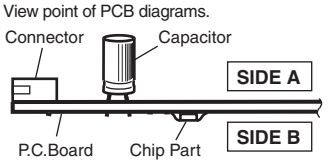
Q421 Q420 Q419 Q429 Q423

Q424 Q422

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.

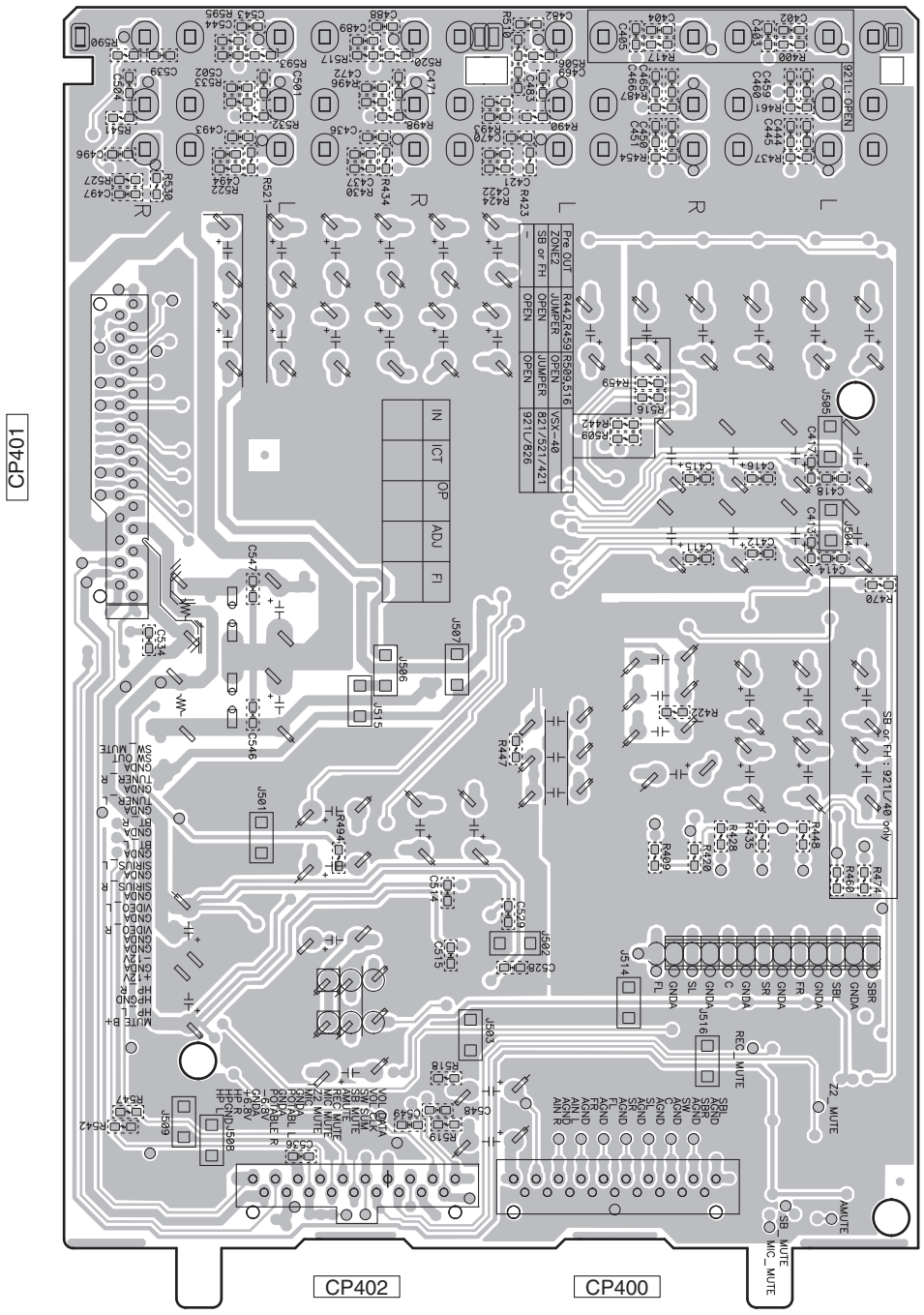
2. View point of PCB diagrams.



SIDE B

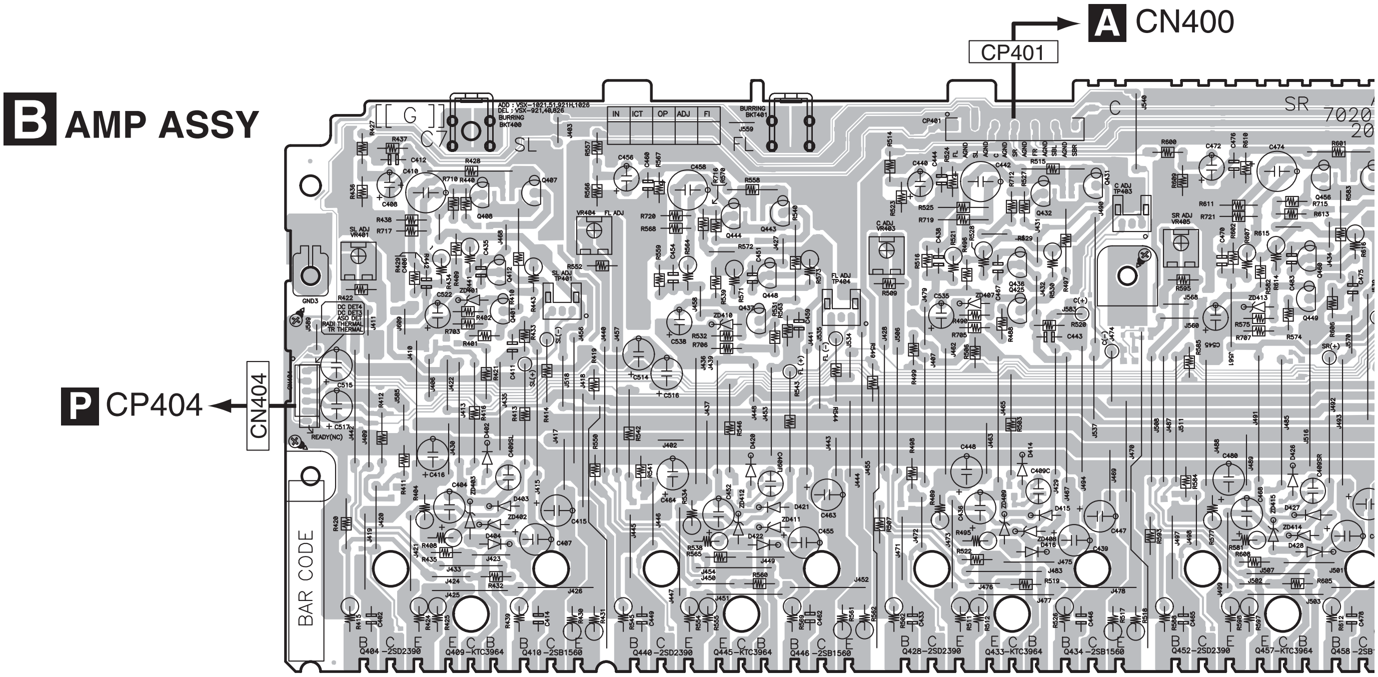
SIDE B

A AUDIO ASSY



11.2 AMP ASSY (for VSX-921-K)

SIDE A



IC

Q

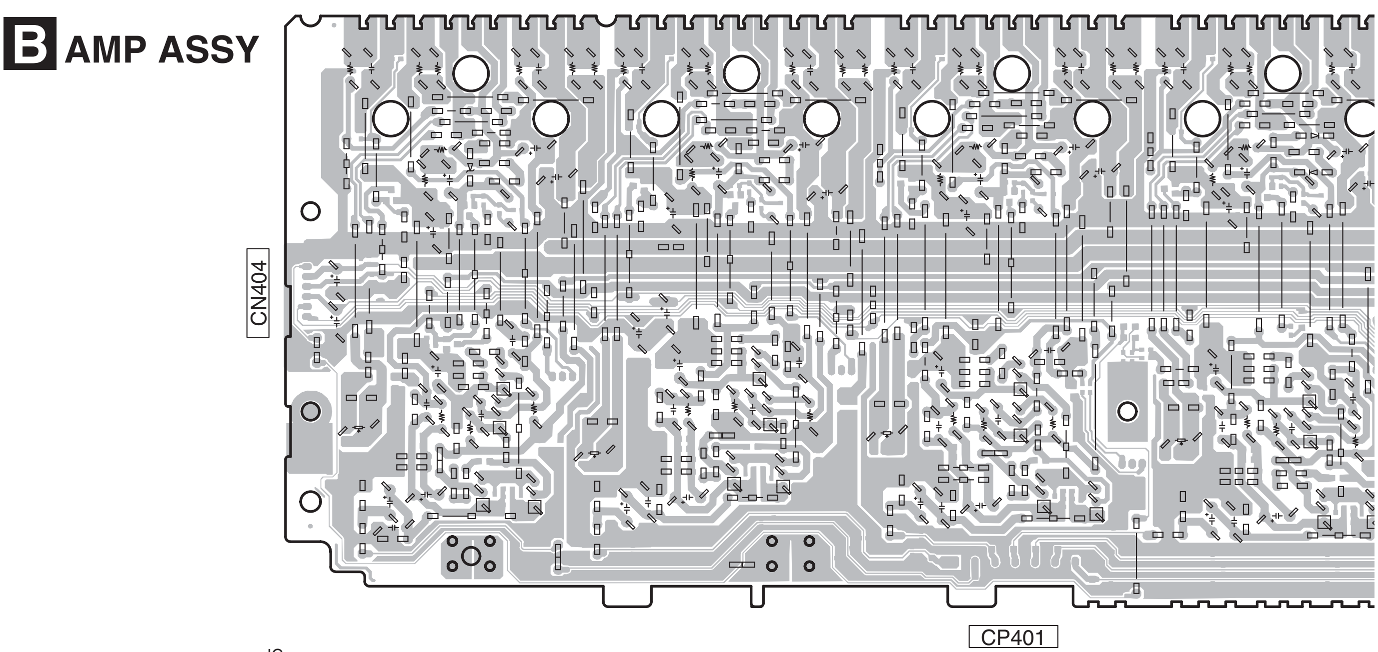
Q408 Q407 Q444 Q443 Q432 Q431 Q456

Q412 Q448 Q436 Q460

Q401 Q437 Q425 Q449

Q404 Q409 Q410 Q440 Q445 Q446 Q428 Q433 Q434 Q452 Q457

SIDE B



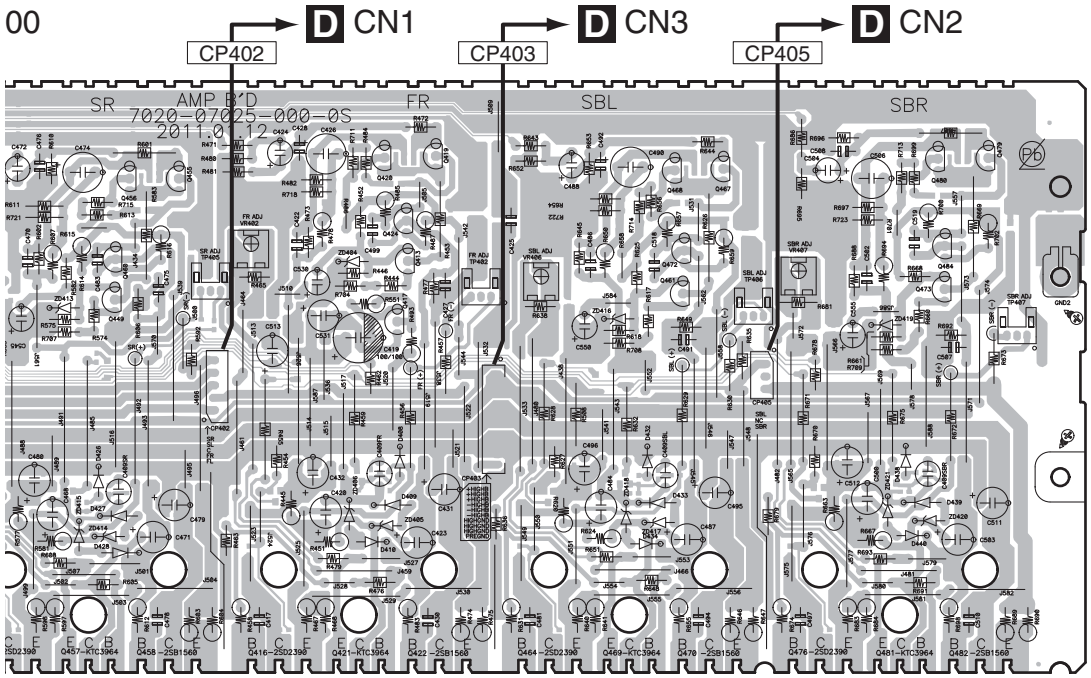
IC

Q

Q478 Q475 Q466 Q463 Q418 Q415 Q454

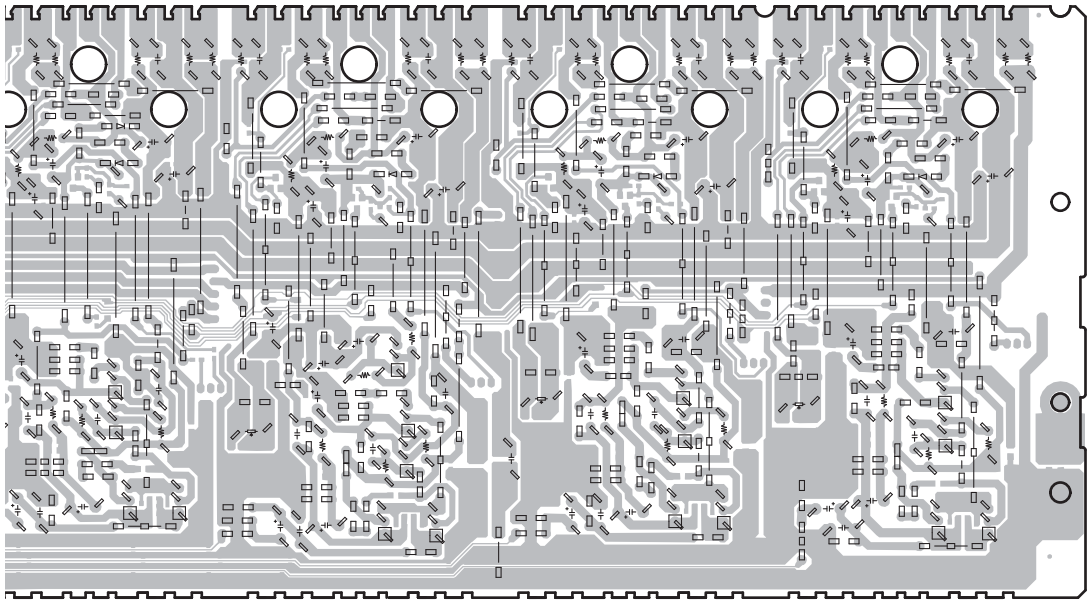
Q482 Q481 Q476 Q470 Q469 Q464 Q422 Q421 Q416 Q458 Q457

SIDE A



Q456 Q455 Q420 Q419 Q468 Q467 Q480 Q479
Q460 Q424 Q472 Q484
Q449 Q413 Q461 Q473
Q452 Q457 Q458 Q416 Q421 Q417 Q422 Q464 Q469 Q470 Q476 Q481 Q482

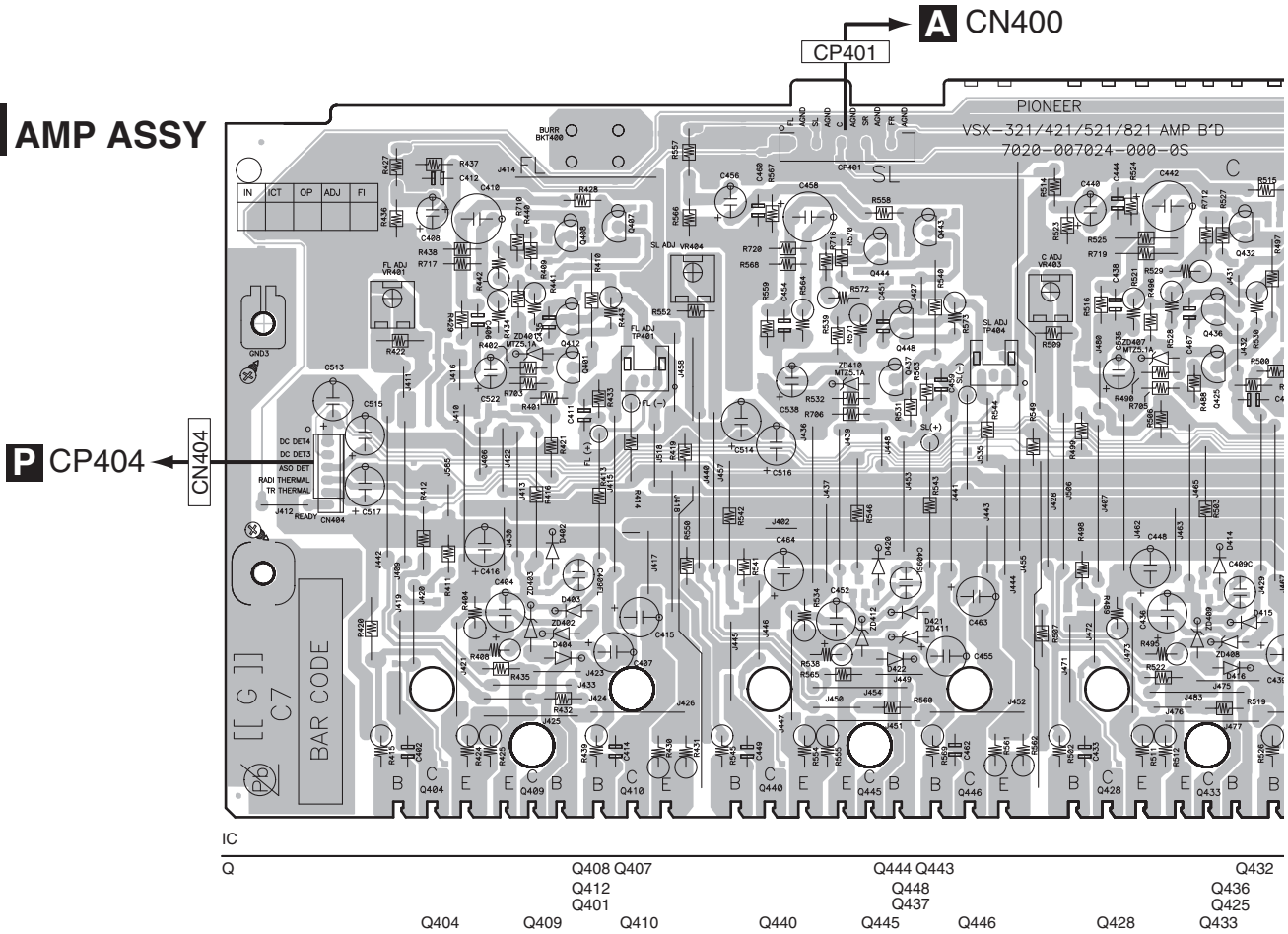
SIDE B



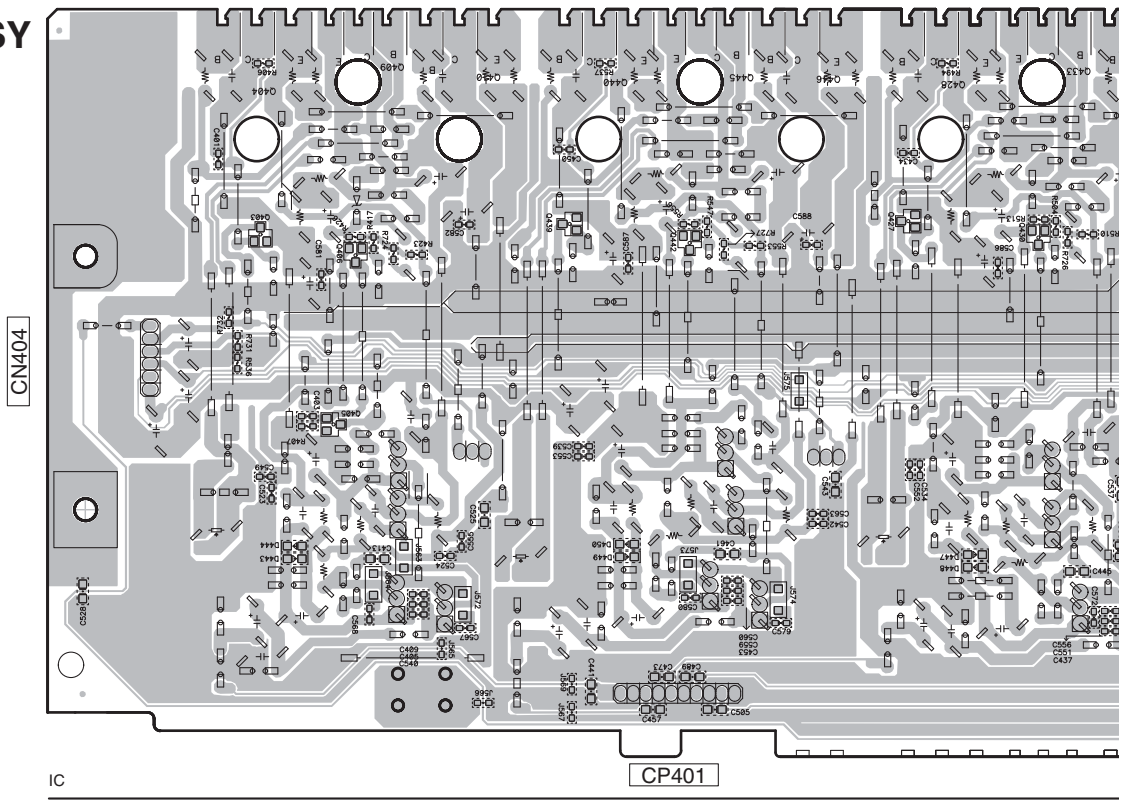
Q454 Q451 Q430 Q427 Q442 Q439 Q405
Q406 Q403
Q458 Q457 Q452 Q434 Q433 Q428 Q446 Q445 Q440 Q410 Q409 Q404

11.3 AMP ASSY (for VSX-821-K, VSX-521-K)

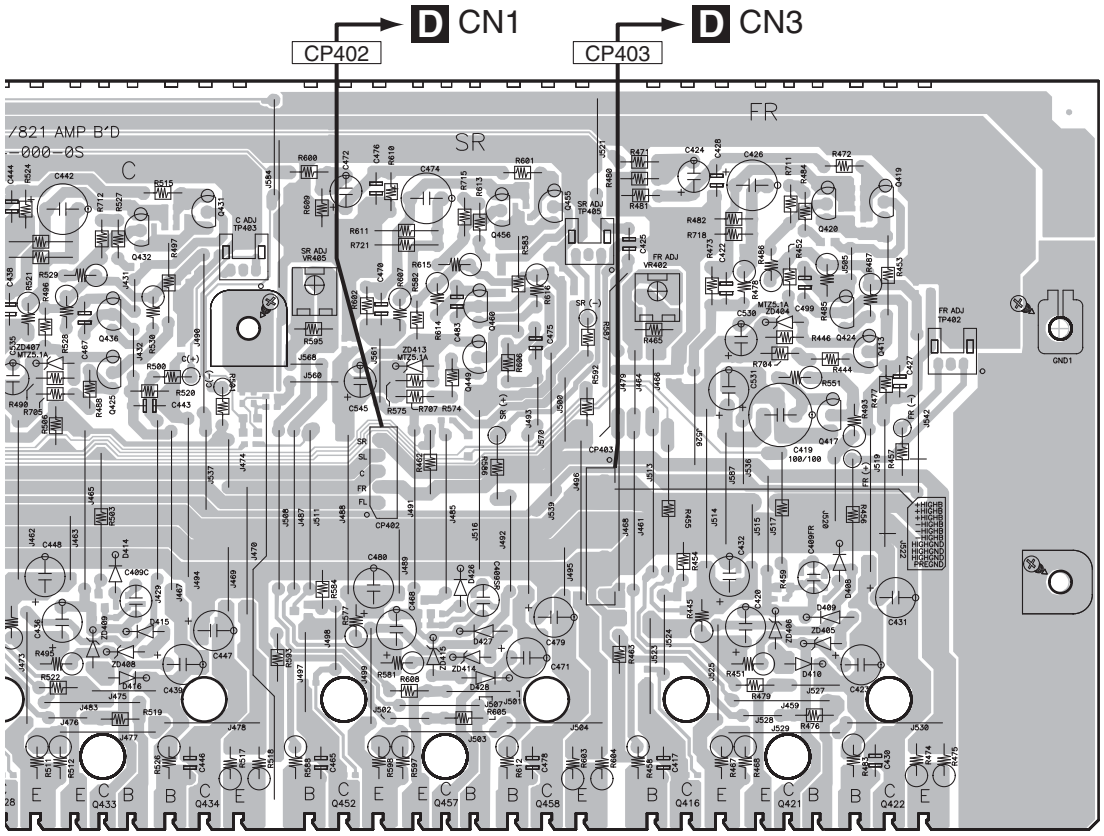
SIDE A



SIDE B

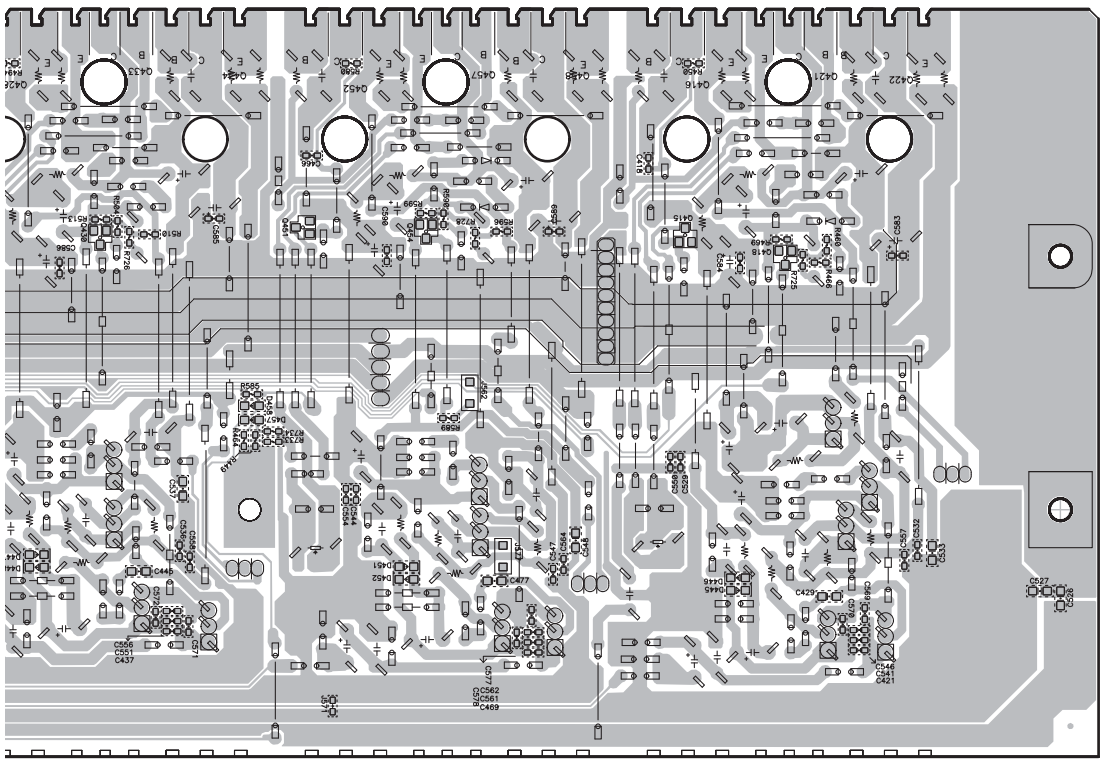


SIDE A



Q432 Q431 Q456 Q455 Q420 Q419
Q436 Q460 Q424
Q425 Q449 Q413
428 Q433 Q434 Q452 Q457 Q458 Q416 Q421 Q417 Q422

SIDE B

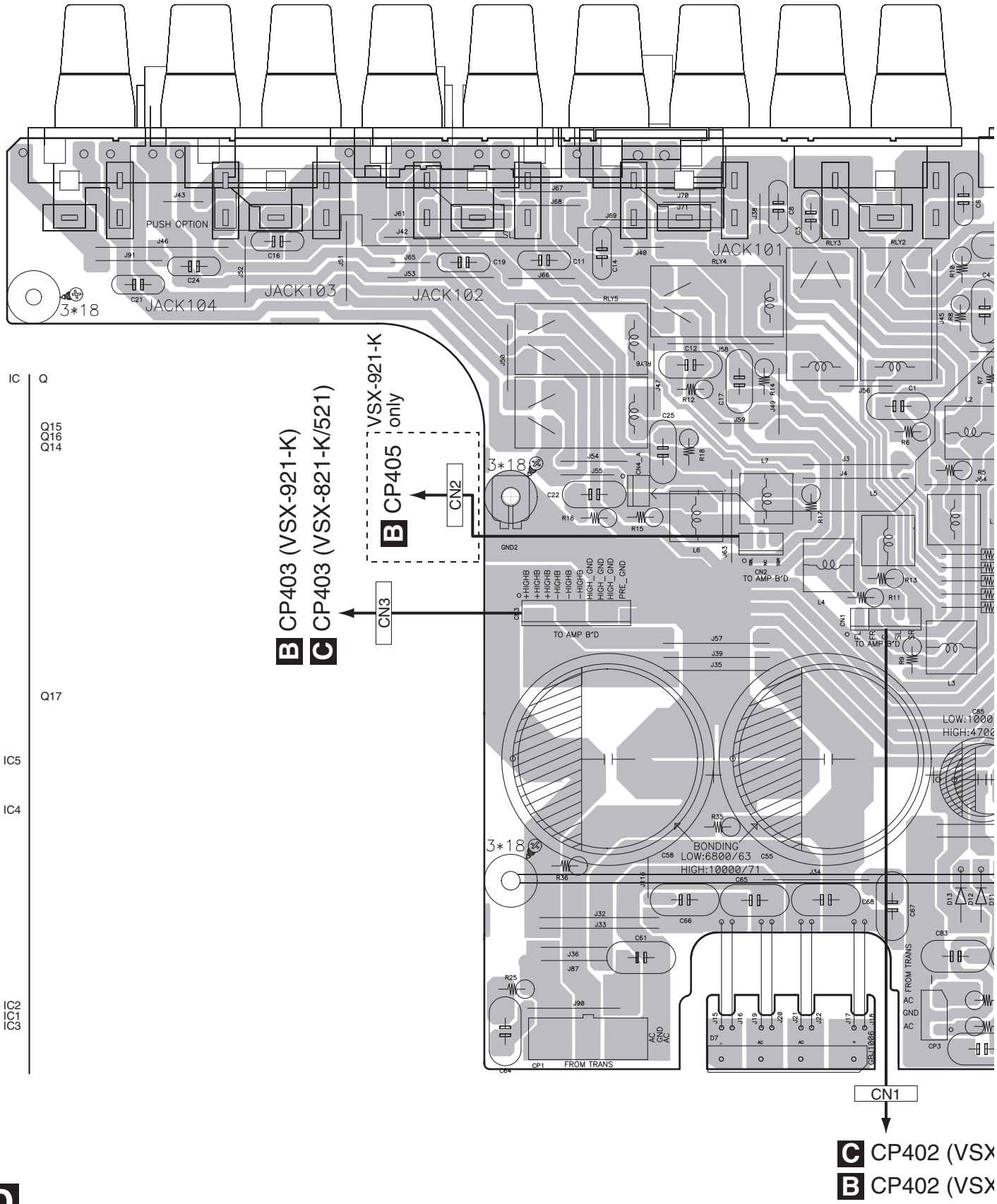


Q430 Q427 Q442 Q439 Q406 Q405 Q403
Q434 Q433 Q428 Q446 Q445 Q440 Q410 Q409 Q404

11.4 MAIN ASSY

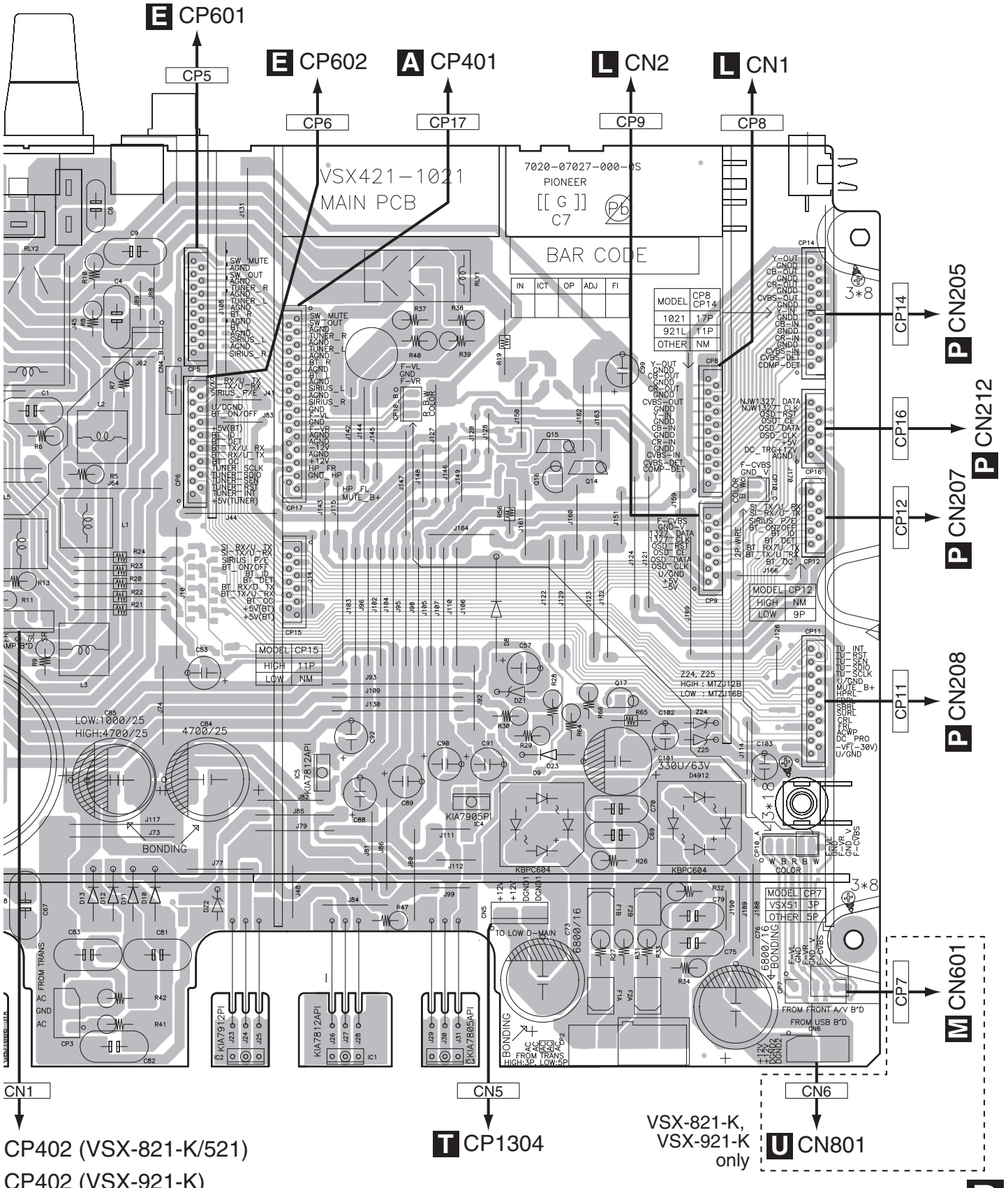
SIDE A

D MAIN ASSY



D

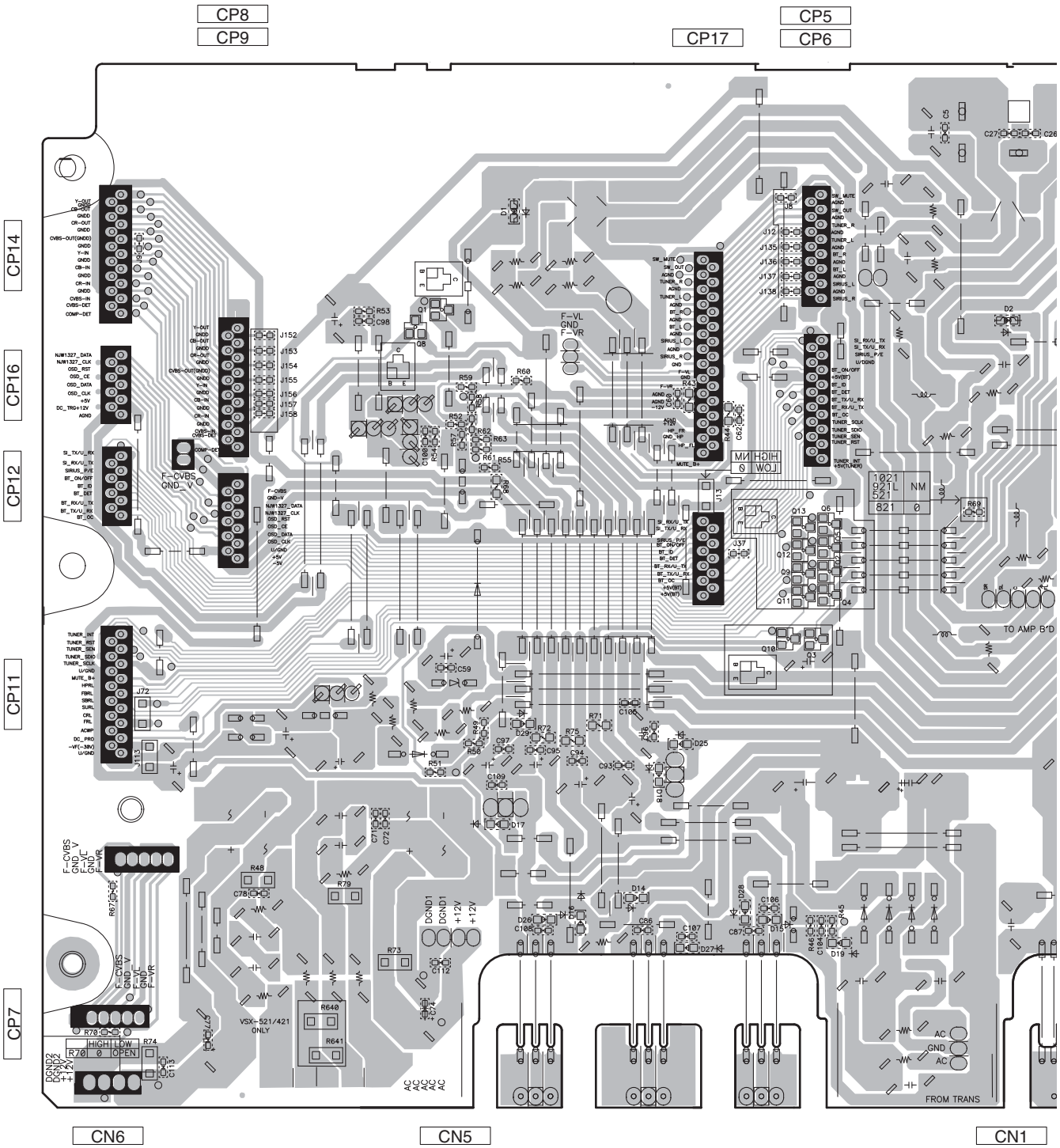
SIDE A


E CP601
E CP602
A CP401
L CN2
L 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
1021 17P
921L 11P
OTHER NM
MODEL CP15
HIGH 11P
LOW NM
MODEL CP12
HIGH NM
LOW 9P
MODEL CP7
VSX51 3P
OTHER 5P
P CN205
P CN212
P CN207
P CN208
M CN601
CP14
CP16
CP12
CP11
CP7
LOW:1000/25
HIGH:4700/25
4700/25
330U/63V
6800/16
BONDING
FROM TRANS
TO LOW D-MAIN
FROM FRONT A/V B'D
FROM USB B'D
KIA7912API
KIA7812API
KIA7905PI
KIA7805API
KBPC604
CN1
CN5
CN6
T CP1304
U CN801
VSX-821-K, VSX-921-K only
CP402 (VSX-821-K/521)
CP402 (VSX-921-K)

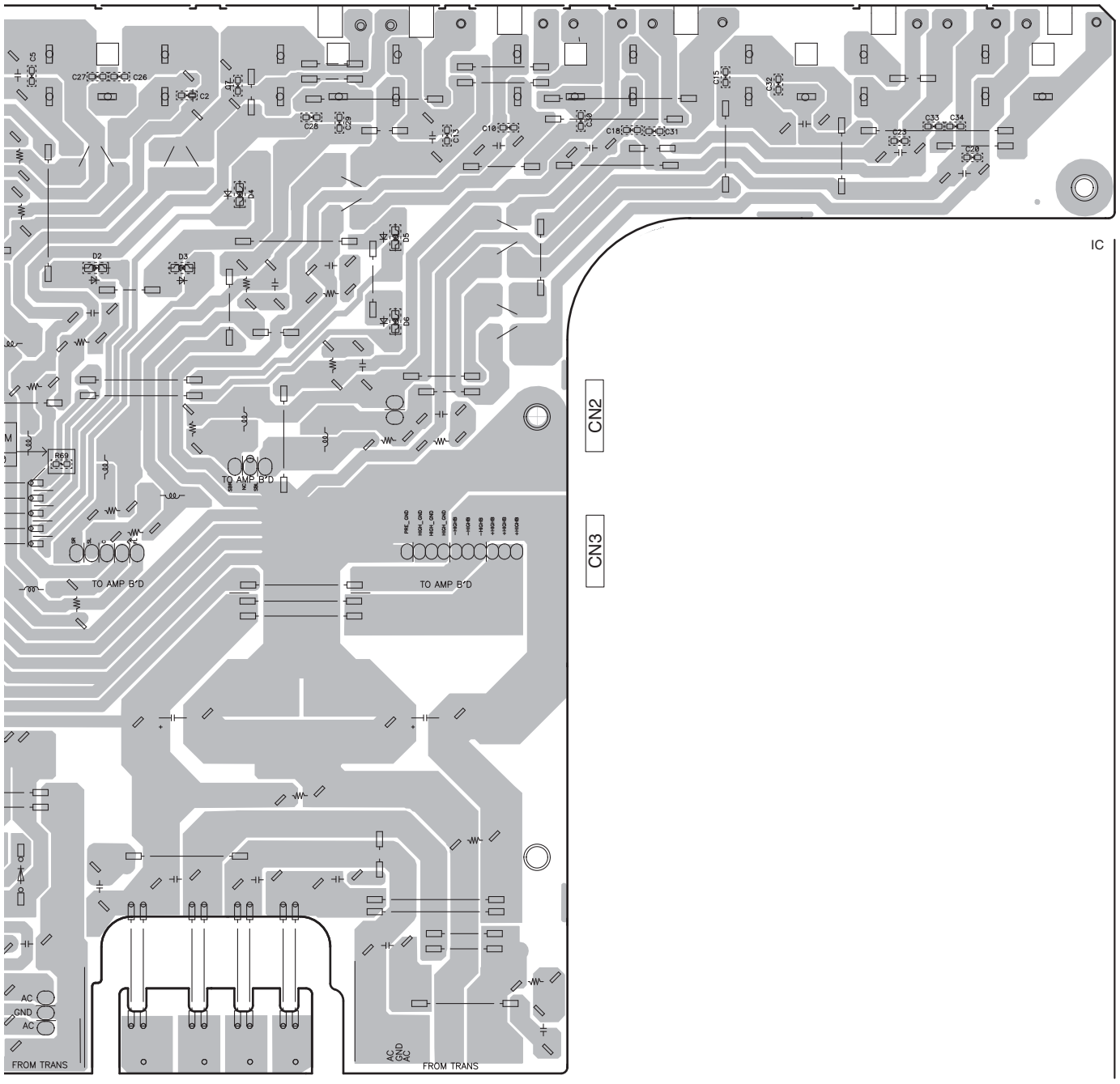
D

SIDE B

D MAIN ASSY



SIDE B

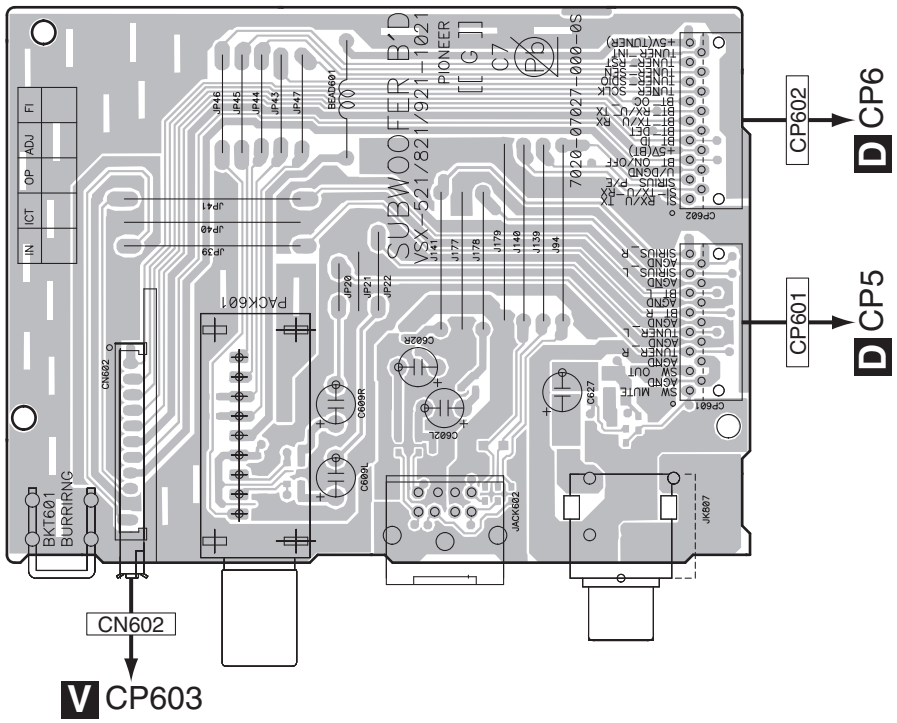

CN1
CN2
CN3
FROM TRANS
FROM TRANS
TO AMP B'D
TO AMP B'D
TO AMP B'D
AC
GND
AC
AC
GND
AC
IC Q
Q1
Q8
Q13
Q6
Q5
Q12
Q2
Q9
Q11
Q4
Q10
Q3

11.5 SUBWOOFER, HEADPHONE and MIC ASSYS

SIDE A

SIDE A

E SUBWOOFER ASSY

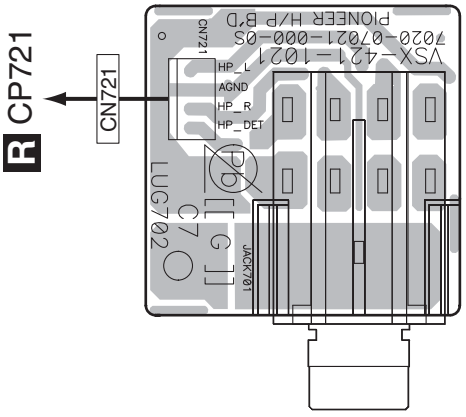


D CP6

D CP5

V CP603

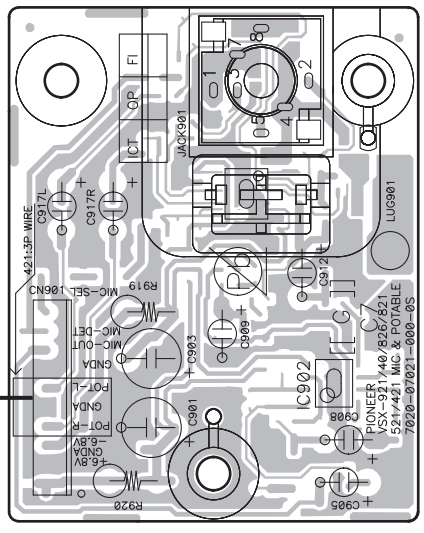
F HEADPHONE ASSY



R CP721

CN721

G MIC ASSY



R CP901

CN901

IC Q

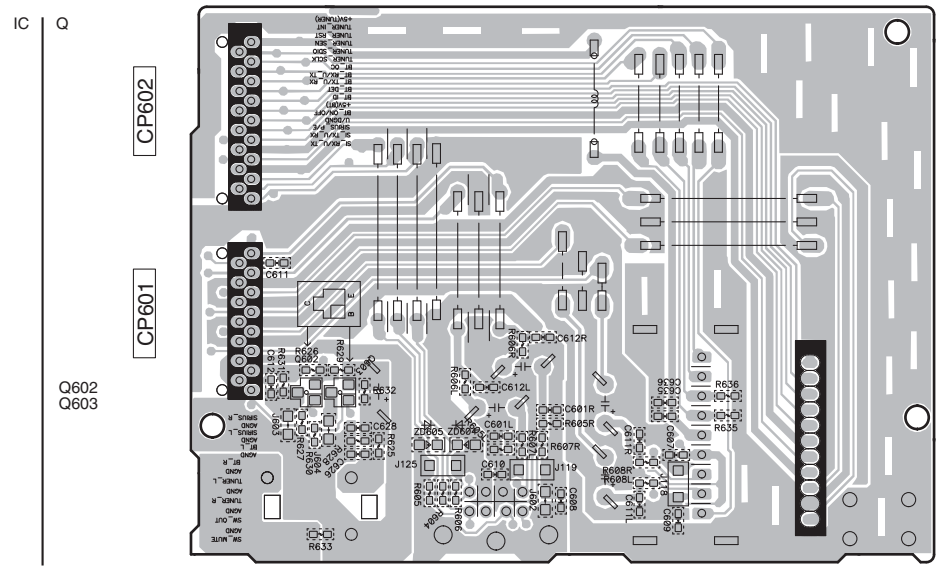
IC902

E F G

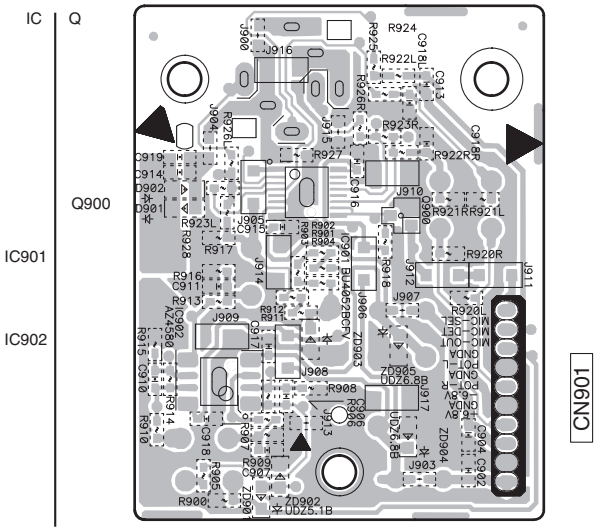
SIDE B

SIDE B

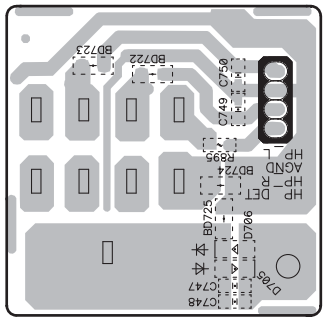
E SUBWOOFER ASSY



G MIC ASSY



F HEADPHONE ASSY

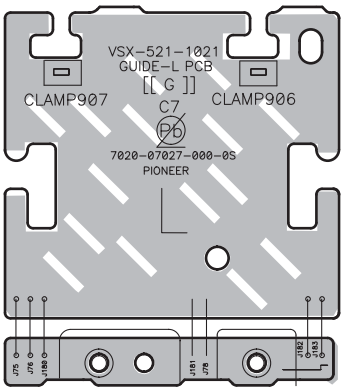


11.6 GUIDE L, R, WIRE GUIDE A and B ASSYS

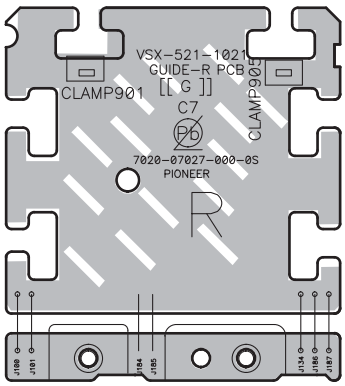
SIDE A

SIDE A

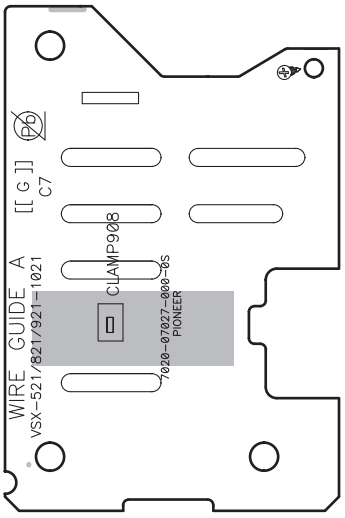
H GUIDE L ASSY



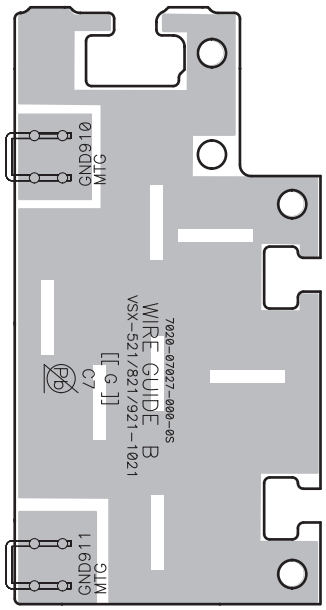
I GUIDE R ASSY



J WIRE GUIDE A ASSY



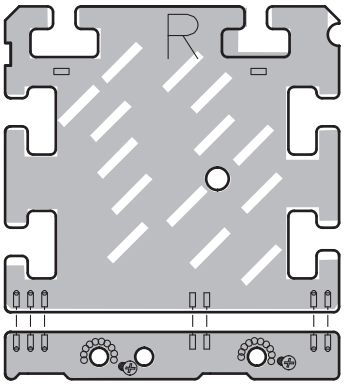
K WIRE GUIDE B ASSY



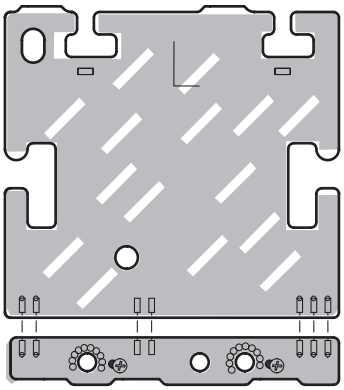
SIDE B

SIDE B

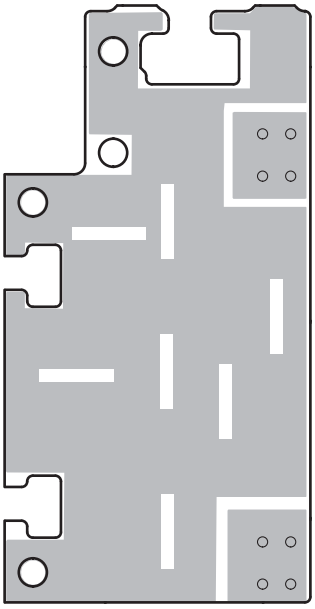
I GUIDE R ASSY



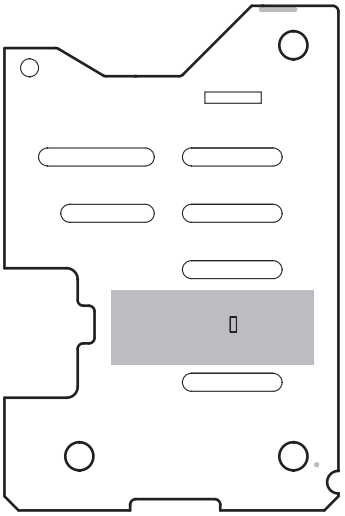
H GUIDE L ASSY



K WIRE GUIDE B ASSY



J WIRE GUIDE A ASSY

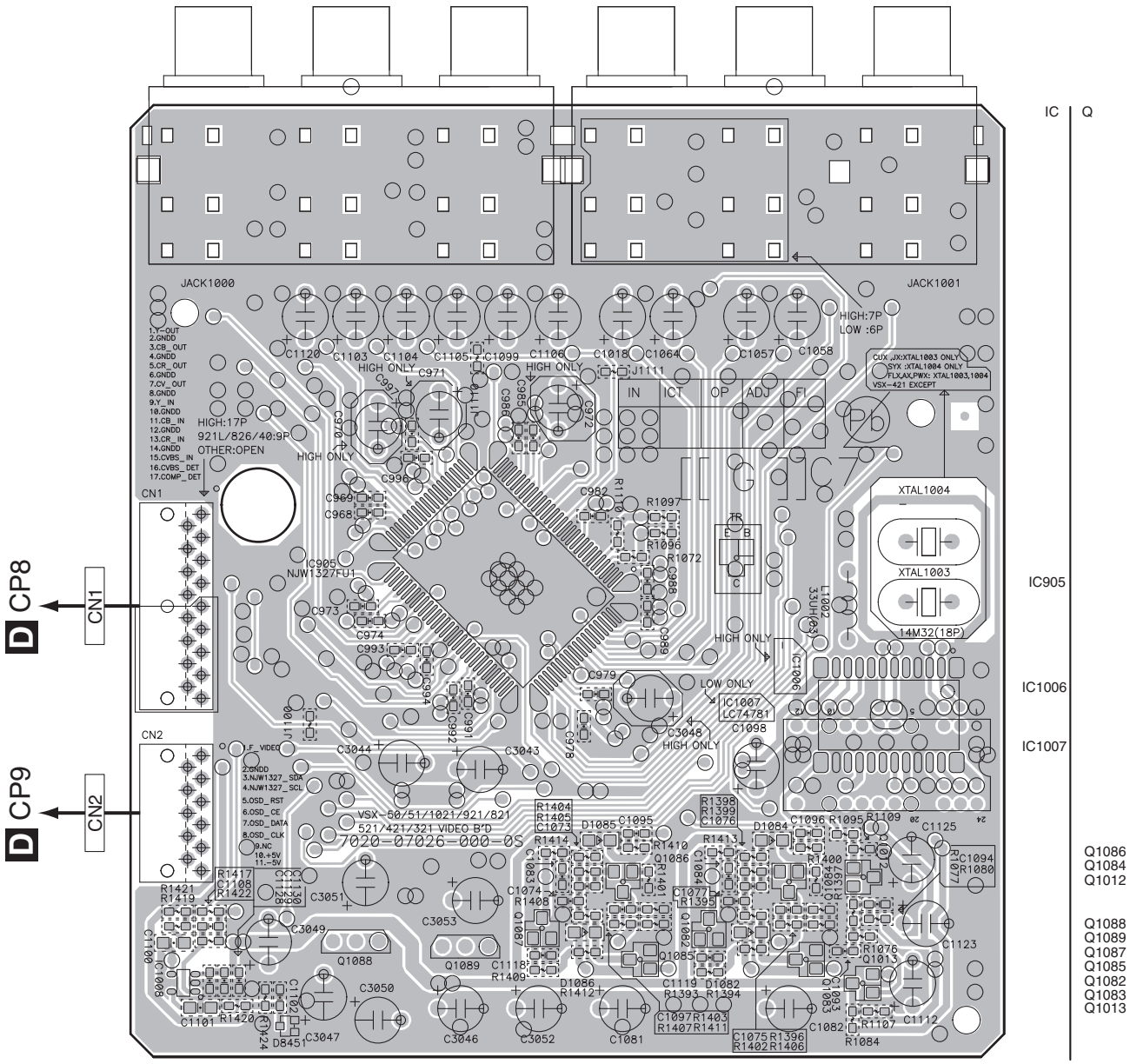


11.7 VIDEO ASSY

SIDE A

SIDE A

L VIDEO ASSY



D CP8 → CN1

D CP9 → CN2

SIDE B

SIDE B

A

L VIDEO ASSY

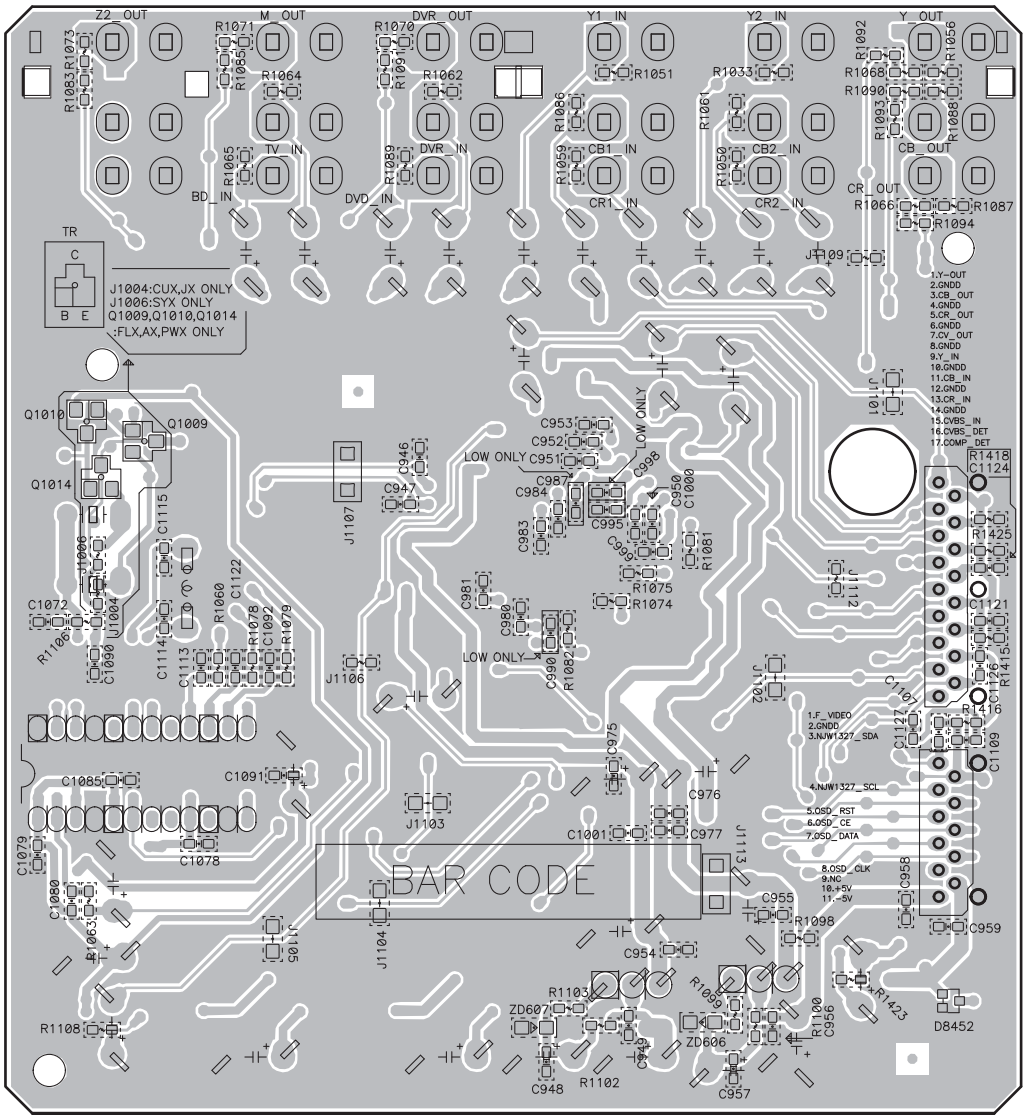
B

IC | Q

C

Q1010
Q1009

Q1014



CN1

CN2

D

E

F

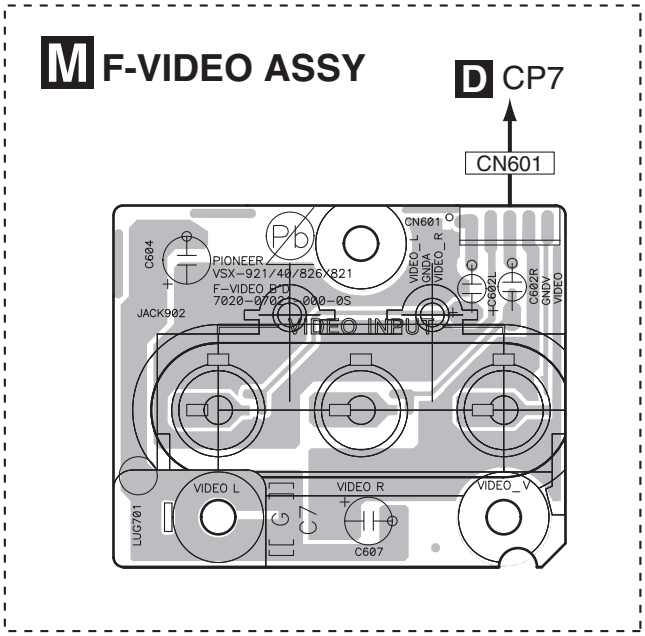
5 6 7 8

11.8 F-VIDEO, FRONT and POWER ASSYS

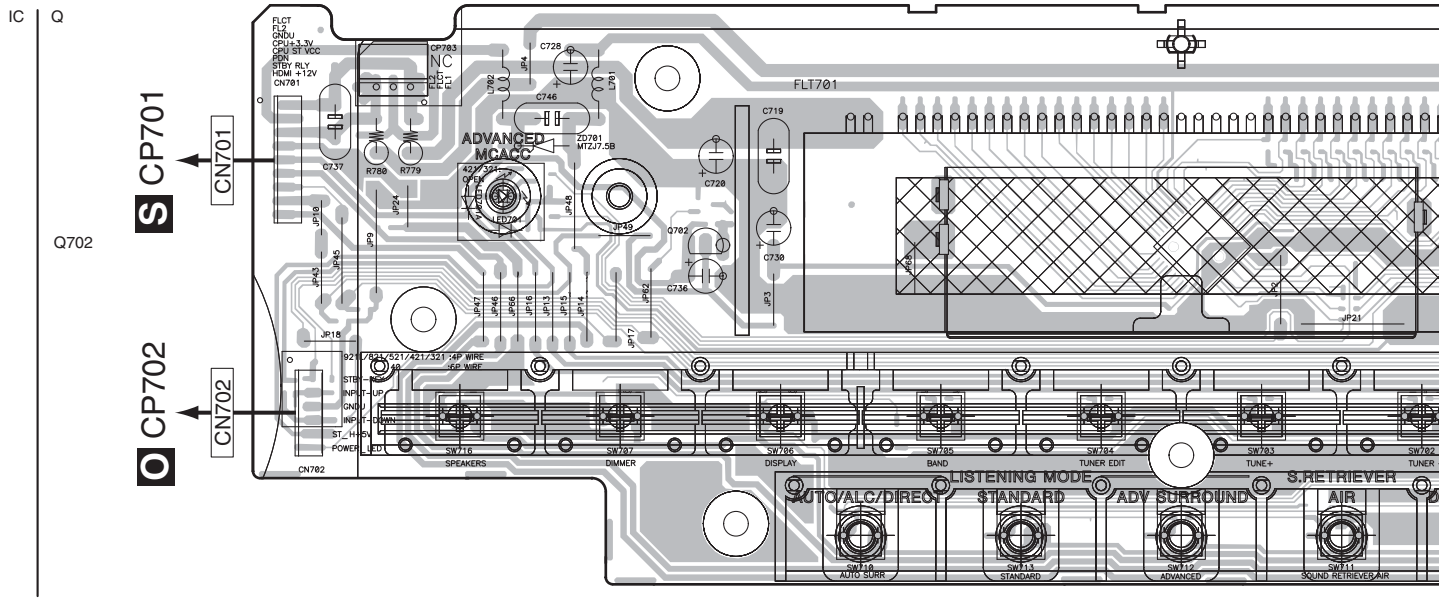
SIDE A

VSX-821-K, VSX-921-K only

M F-VIDEO ASSY



N FRONT ASSY

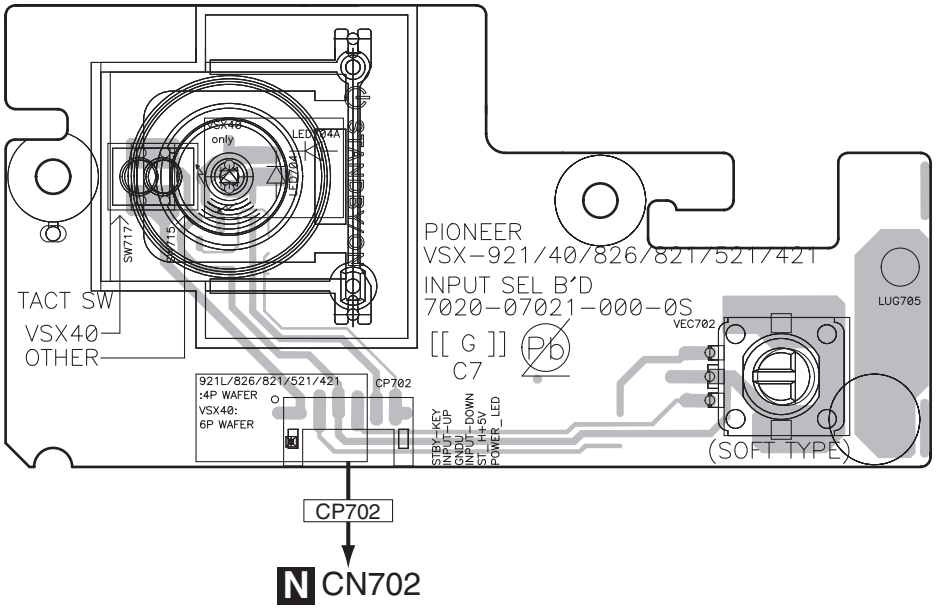


M N

SIDE A

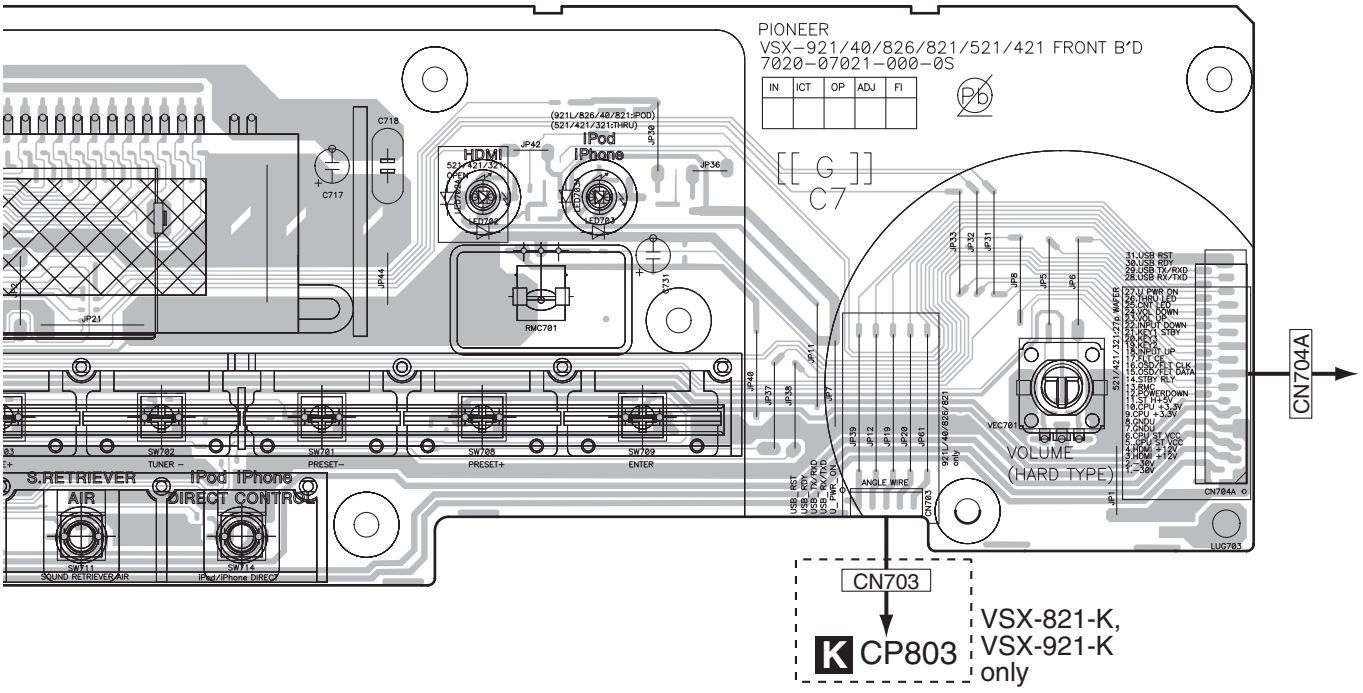
A

O POWER ASSY



B

C



D

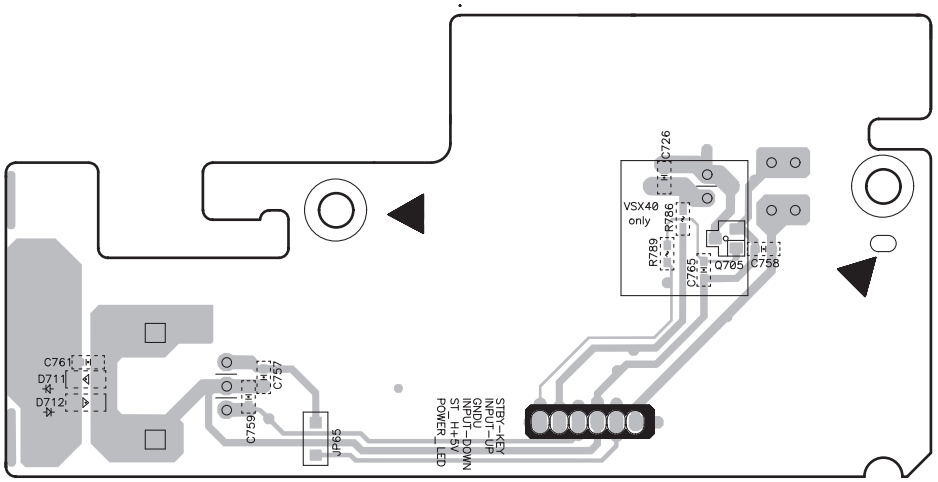
E

F

N O

SIDE B

O POWER ASSY



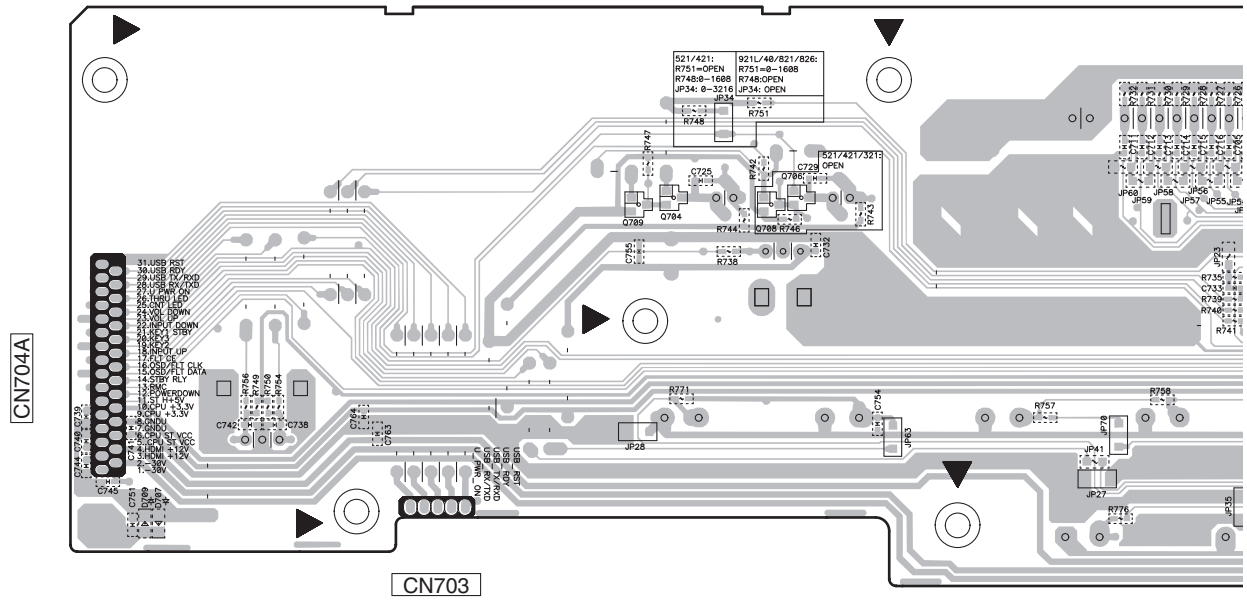
CP702

N FRONT ASSY

IC Q

Q709 Q703
Q704 Q701
Q708 Q707
Q706

IC701



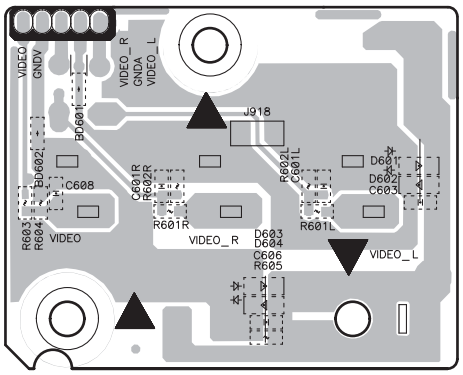
CN703

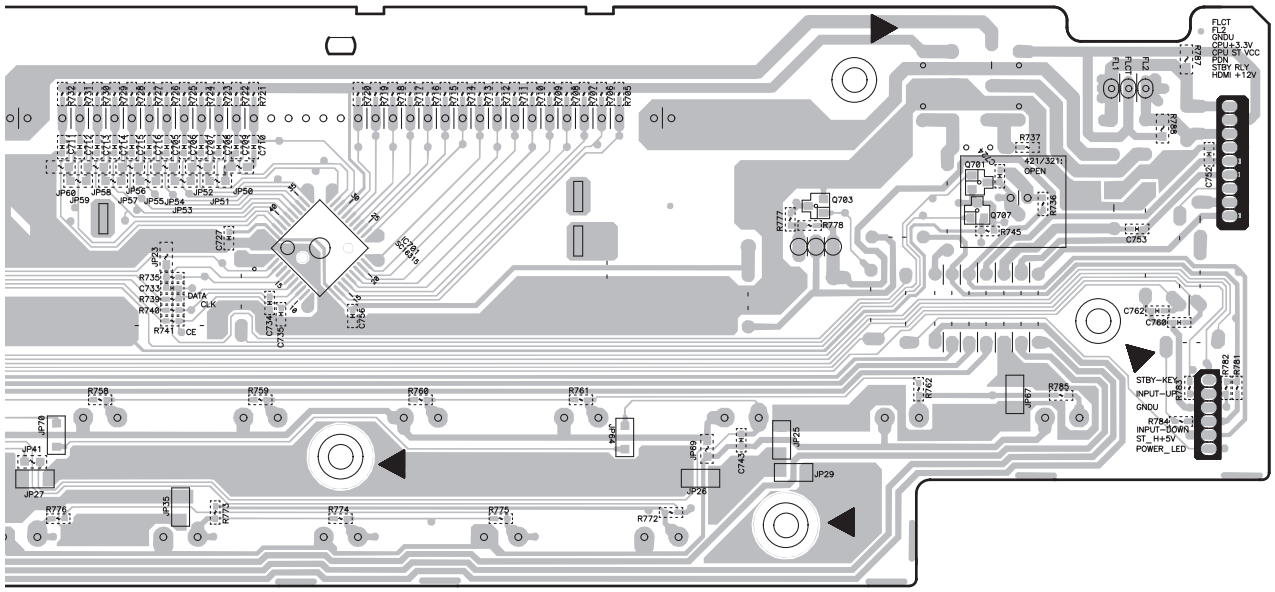
SIDE B

VSX-821-K, VSX-921-K only

M F-VIDEO ASSY

CN601





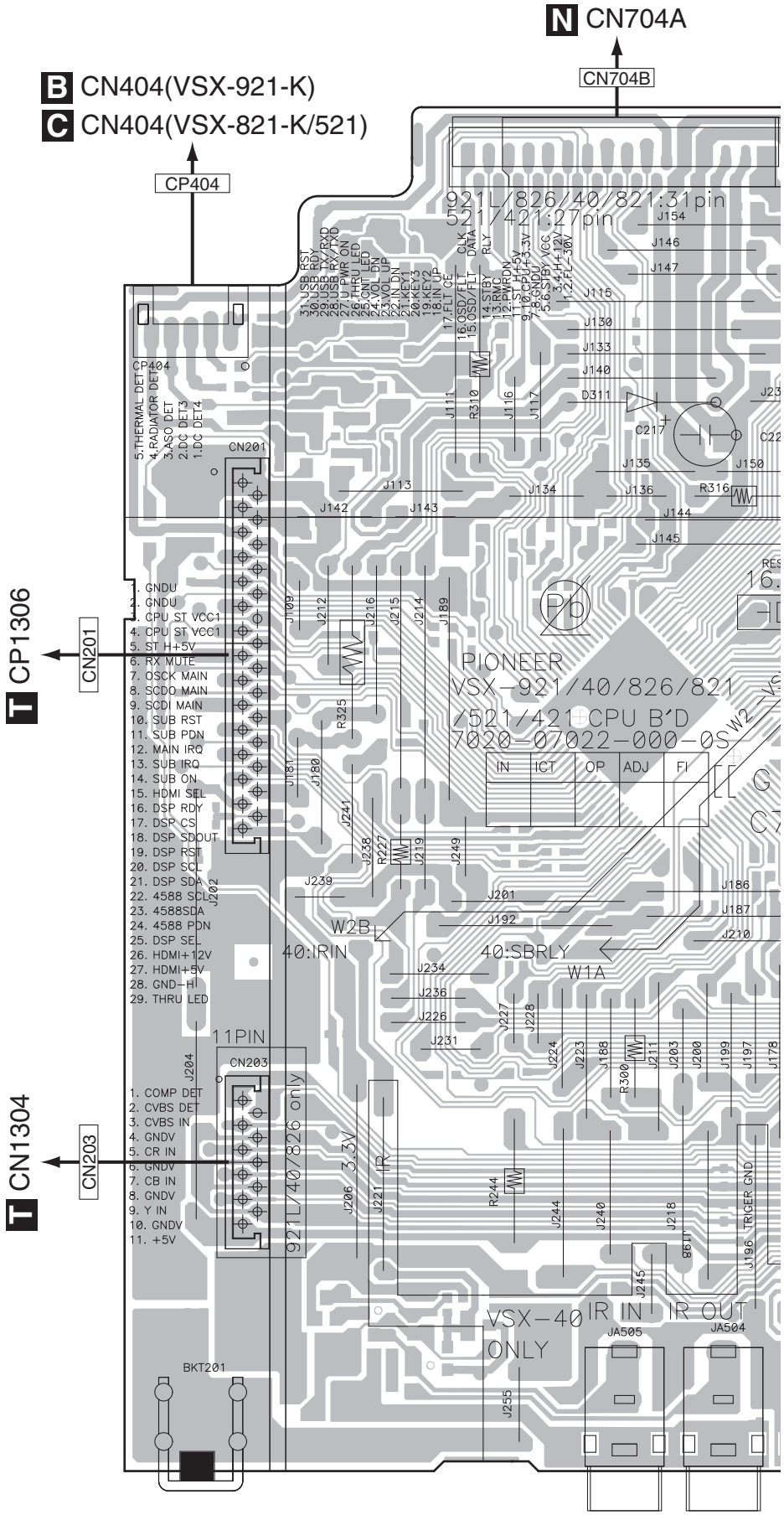
11.9 CPU ASSY

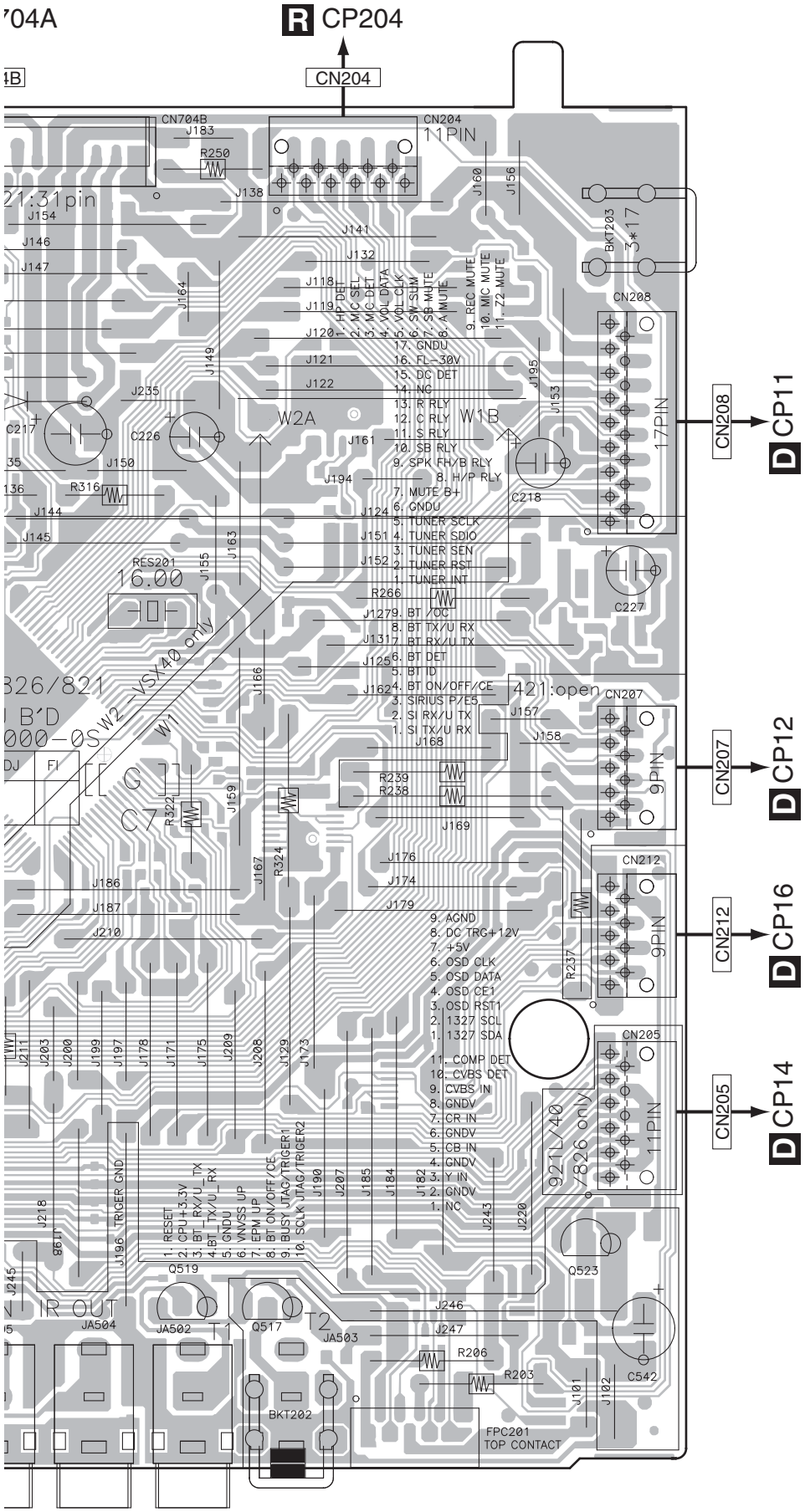
SIDE A

P CPU ASSY

B CN404(VSX-921-K)

C CN404(VSX-821-K/521)





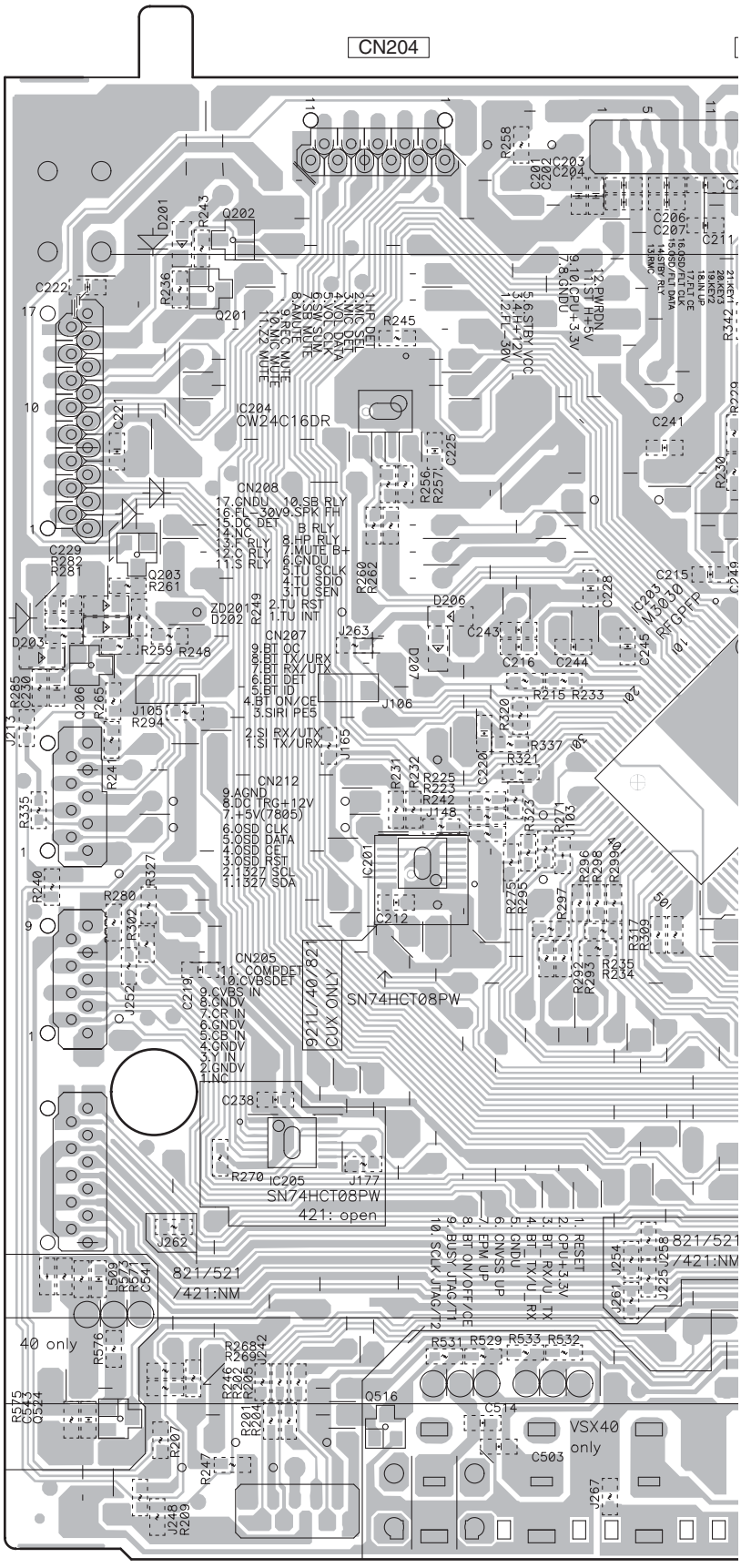
IC | Q

Q523

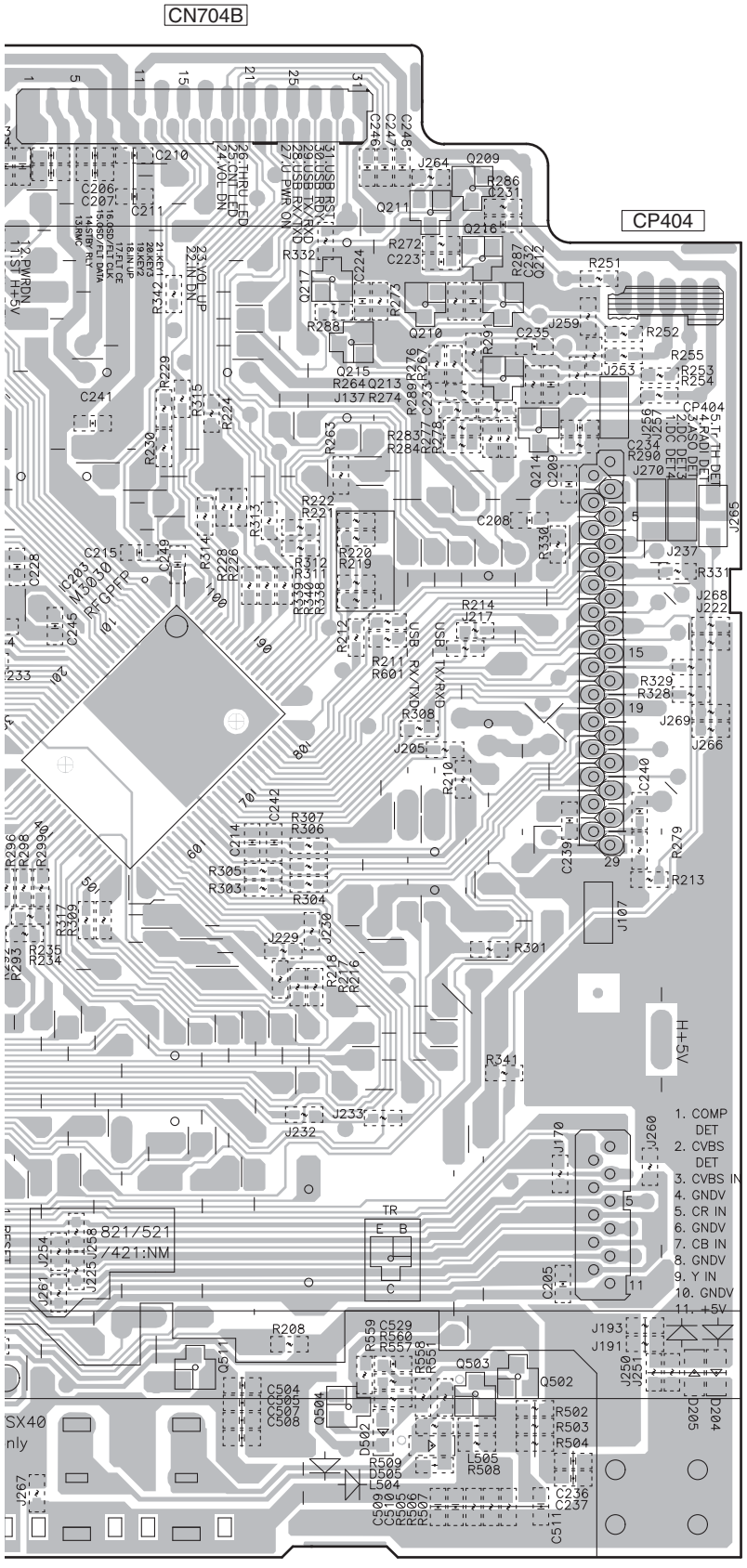
Q519
Q517

SIDE B

P CPU ASSY



SIDE B



IC | Q

IC204: Q209, Q202, Q211, Q201, Q216, Q217, Q210, Q212, Q215, Q213, Q214

IC203: Q203, Q206

IC201: Q524, Q516, Q511, Q504, Q503, Q502

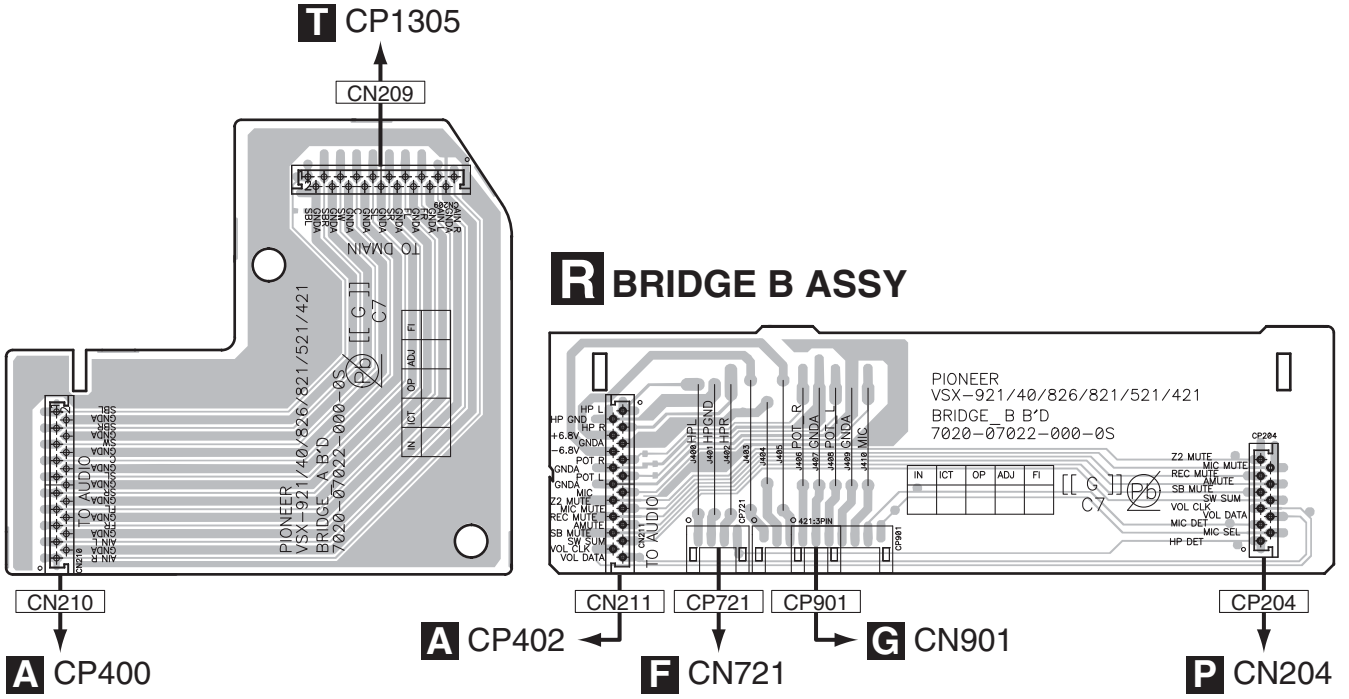
IC205

11.10 BRIDGE A and B ASSYS

SIDE A

SIDE A

Q BRIDGE A ASSY

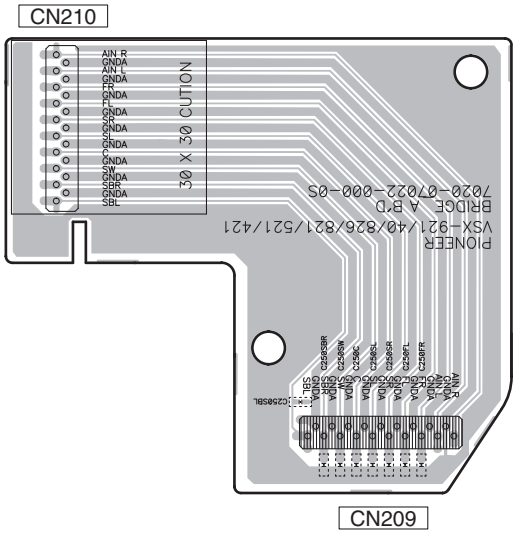


R BRIDGE B ASSY

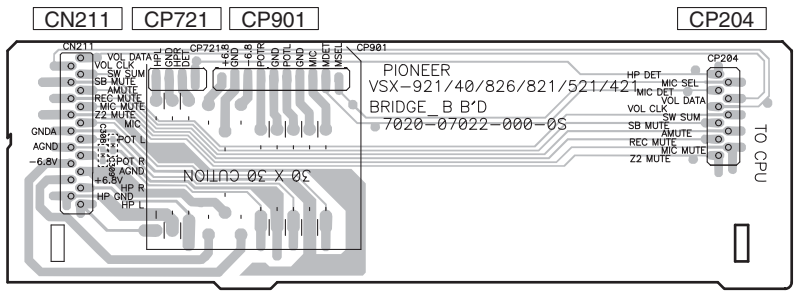
SIDE B

SIDE B

Q BRIDGE A ASSY



R BRIDGE B ASSY



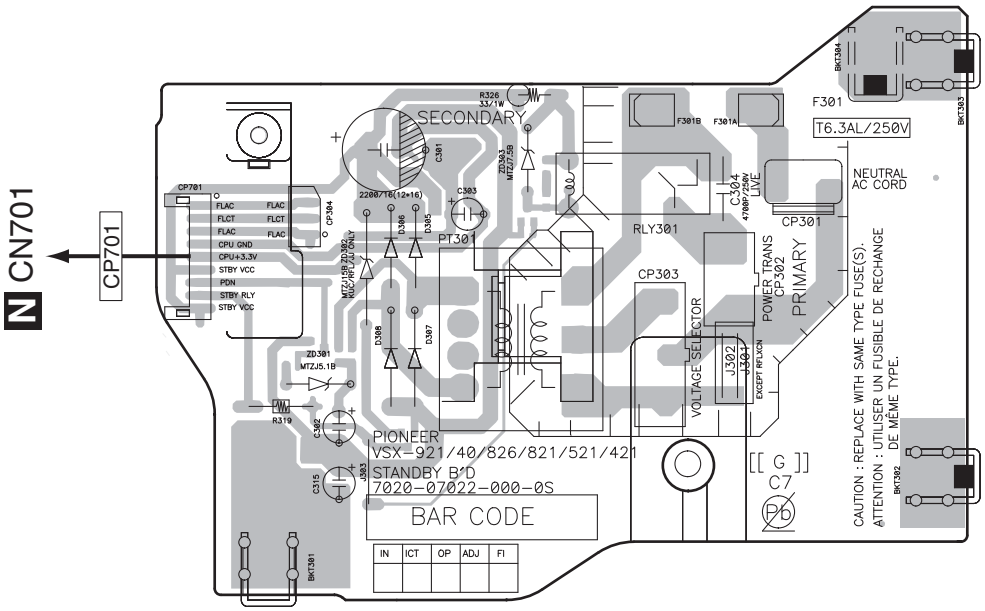
Q **R**

11.11 STANDBY ASSY

SIDE A

SIDE A

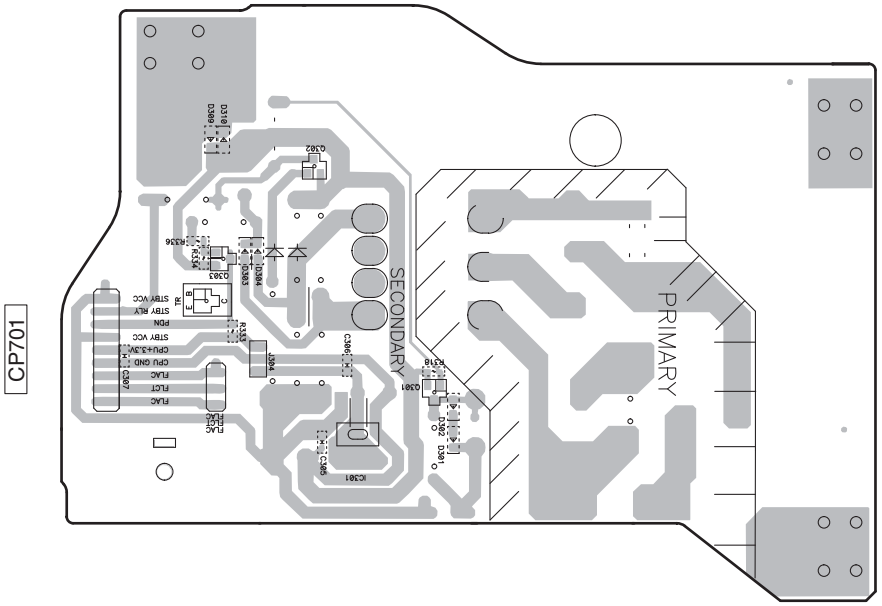
S STANDBY ASSY



SIDE B

SIDE B

S STANDBY ASSY



IC Q

Q302

Q303

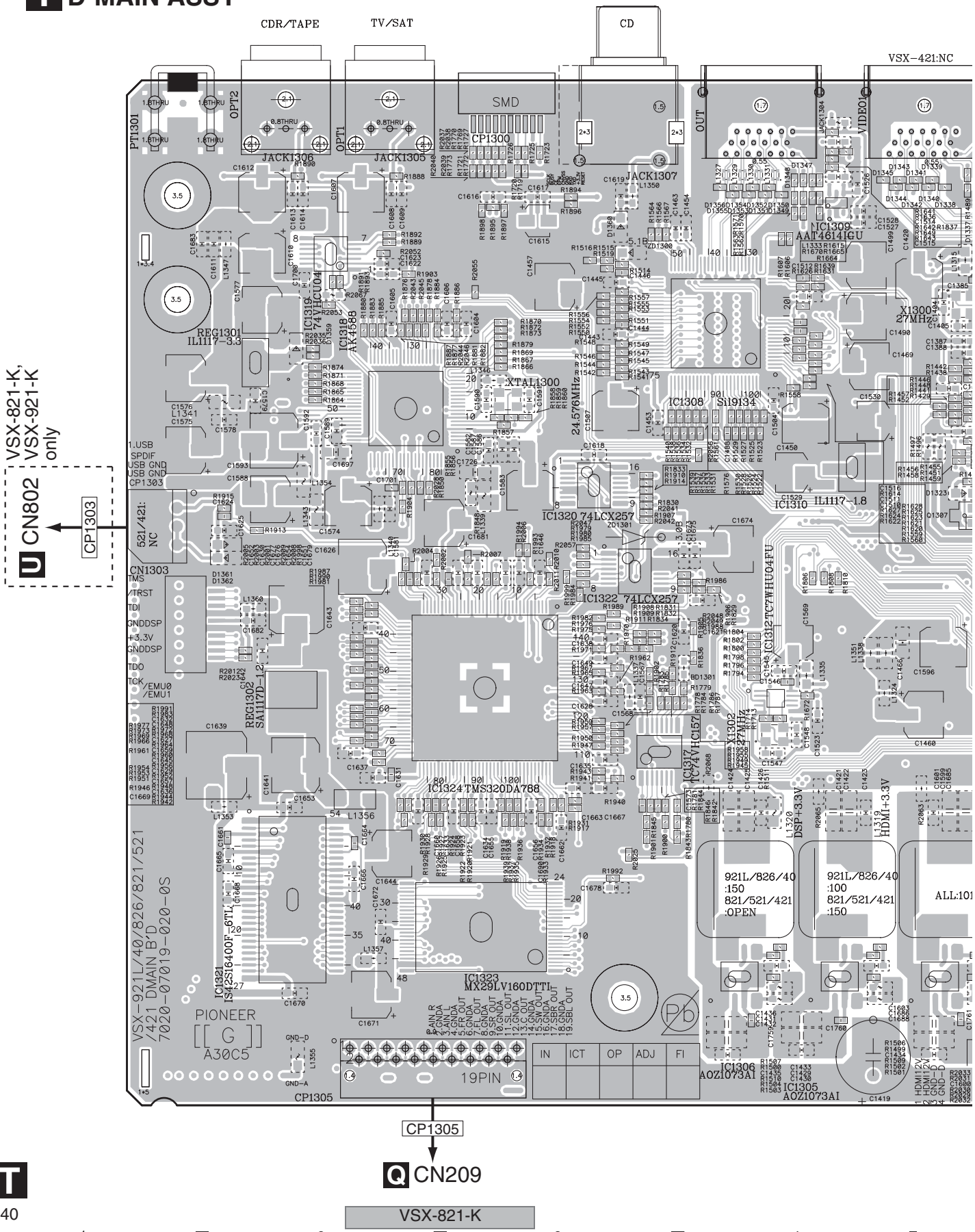
Q301

IC301

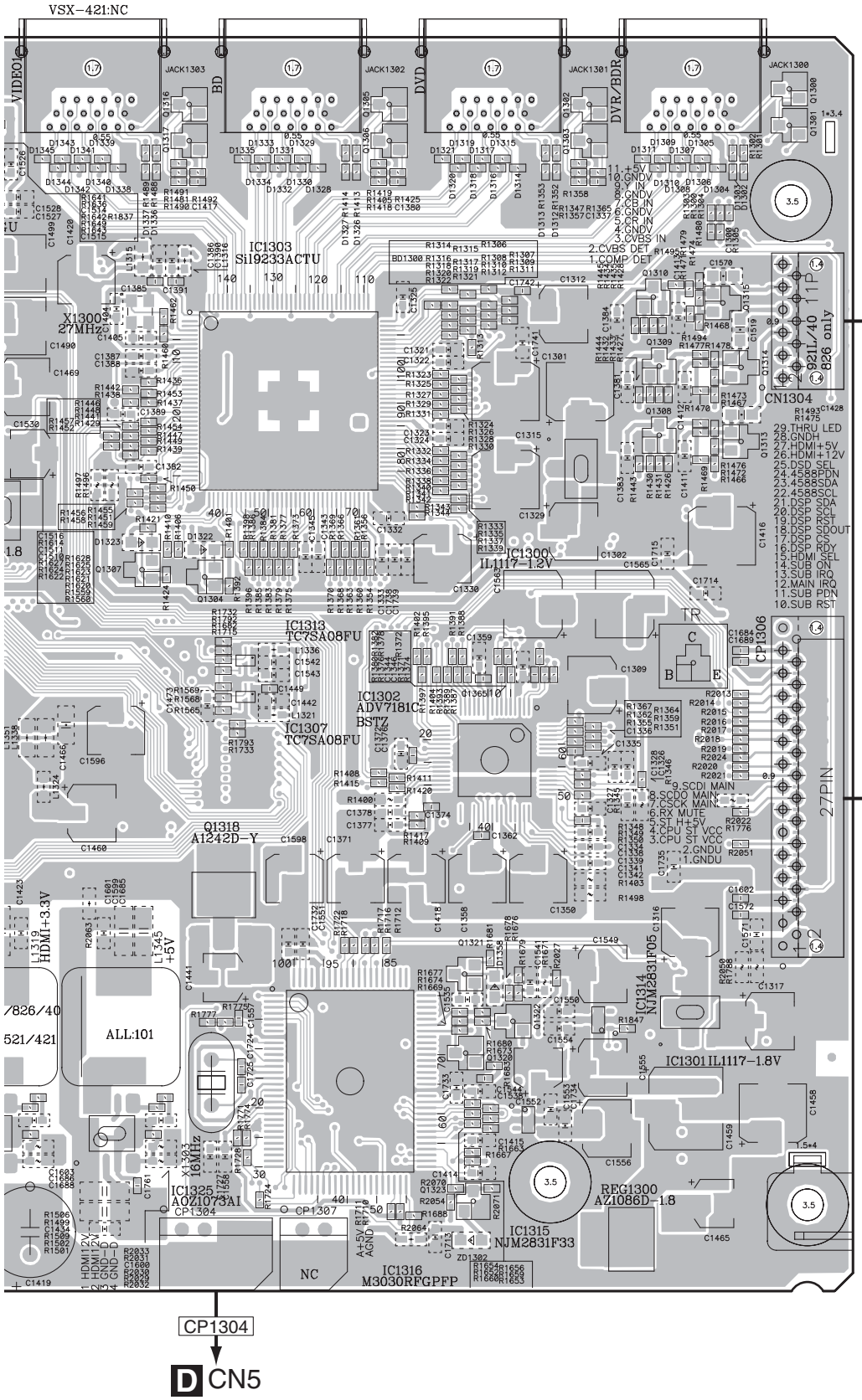
11.12 D-MAIN ASSY

SIDE A

T D-MAIN ASSY



SIDE A



CN1304 → P CN203

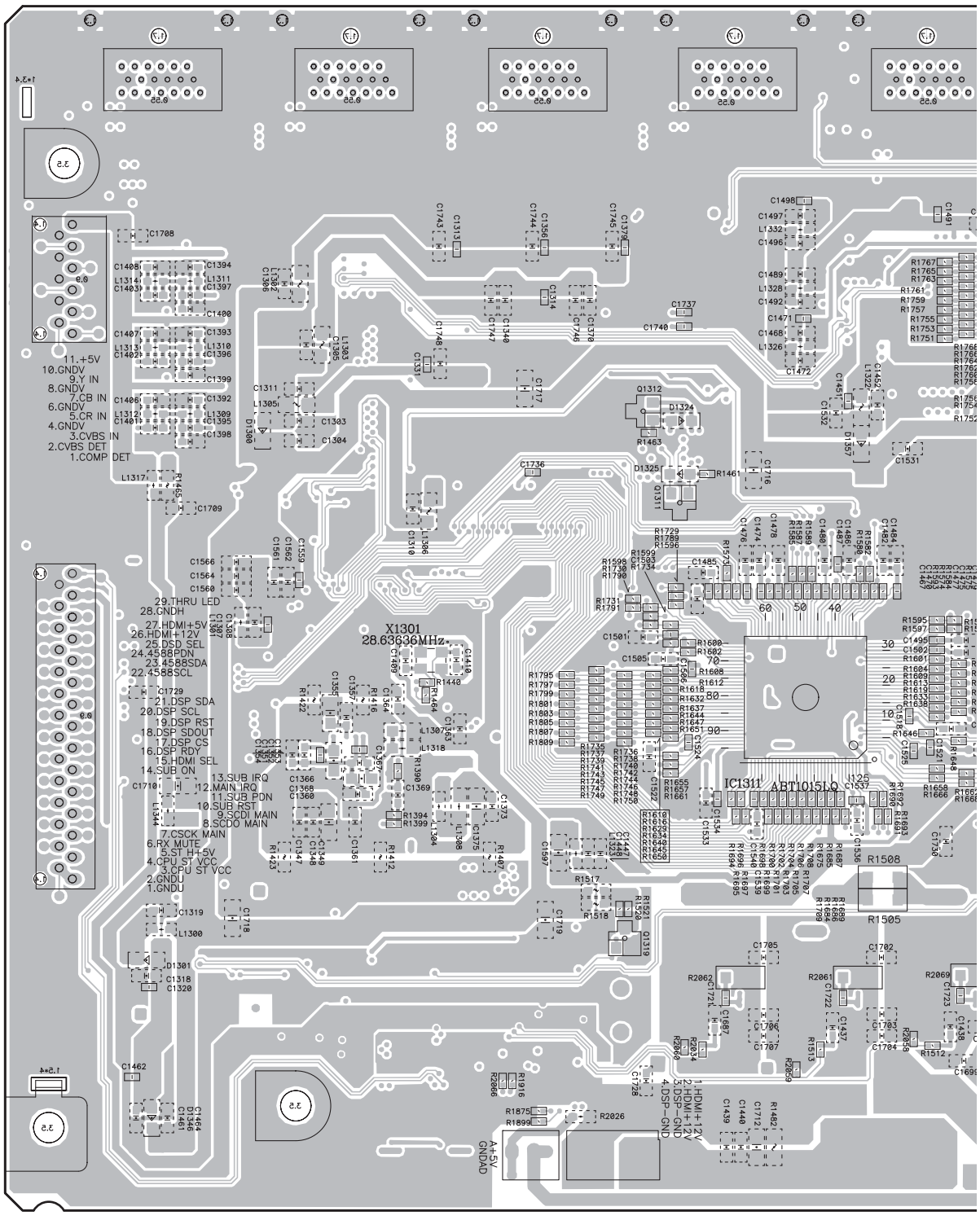
CN1306 → P CN201

CP1304 → D CN5

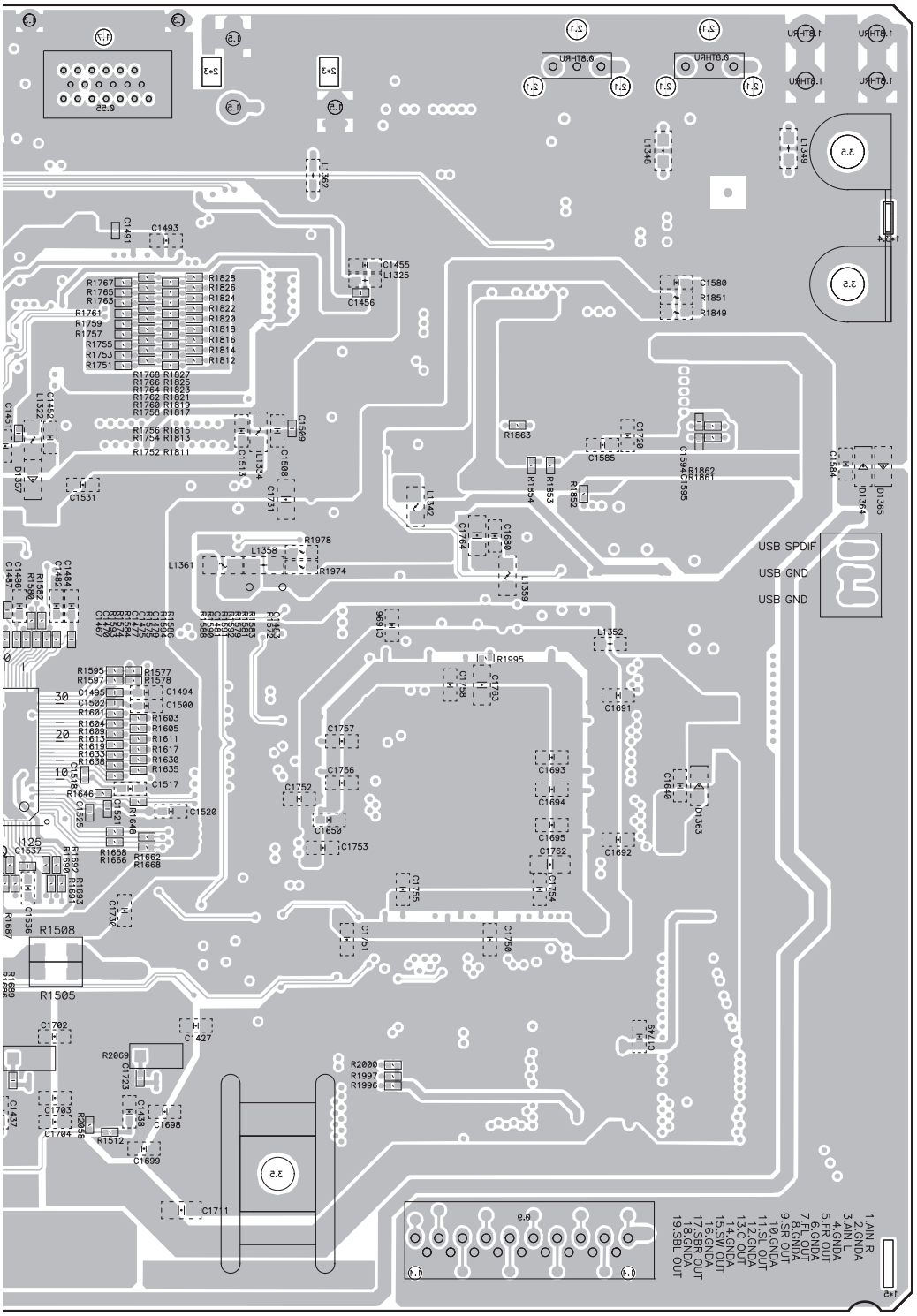
IC	Q
	Q1316 Q1317 Q1305 Q1306 Q1302 Q1303 Q1300 Q1301
IC1309	
IC1319	
	Q1310 Q1315
IC1308	
	Q1309 Q1314
IC1303	
	Q1308 Q1313
IC1318	
IC1310 IC1300	
IC1320	
	Q1307 Q1304
IC1322	IC1313 IC1307
	IC1302
IC1324	
IC1312	
IC1317	
	Q1318
	IC1314 IC1301 Q1321
	Q1322
IC1321 IC1323	Q1320
IC1316 IC1315	
IC1306 IC1305	IC1325
	Q1323

SIDE B

T D-MAIN ASSY



SIDE B



CP1305

CP1303

IC | Q

Q1312

Q1311

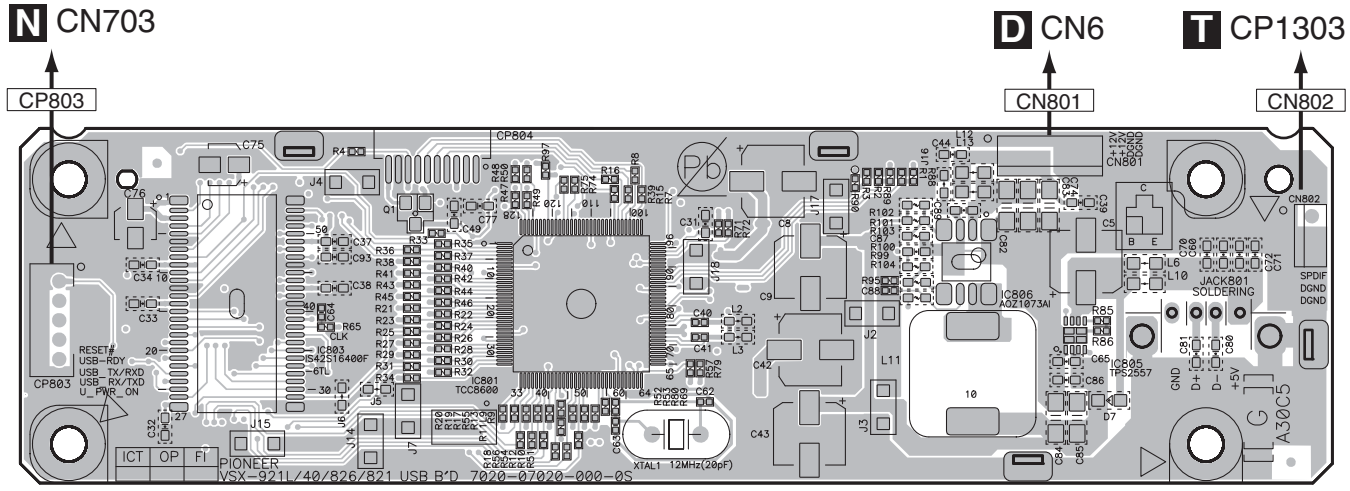
IC1311

Q1319

11.13 USB ASSY (VSX-821-K, VSX-921-K only)

SIDE A **SIDE A**

U USB ASSY

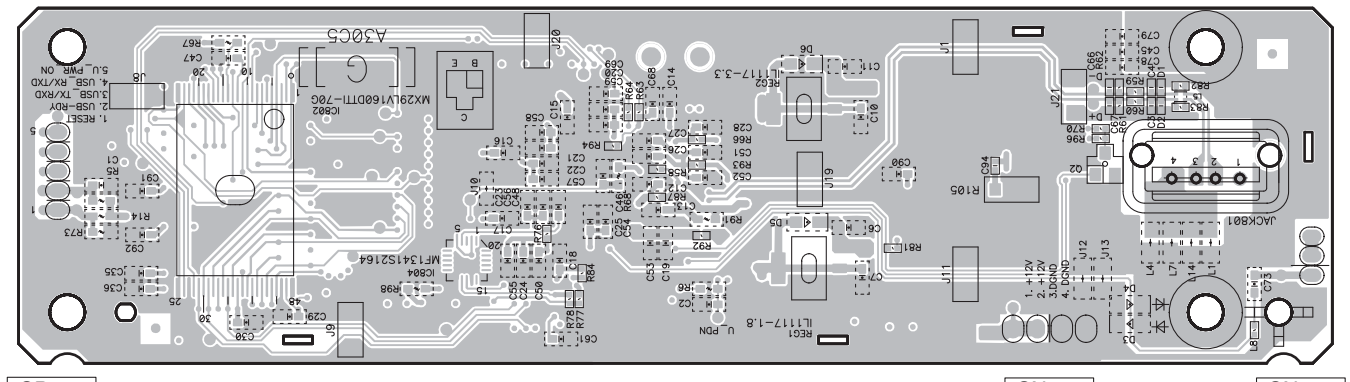


Q Q1

IC IC803 IC801 IC806 IC805

SIDE B **SIDE B**

U USB ASSY



Q Q2

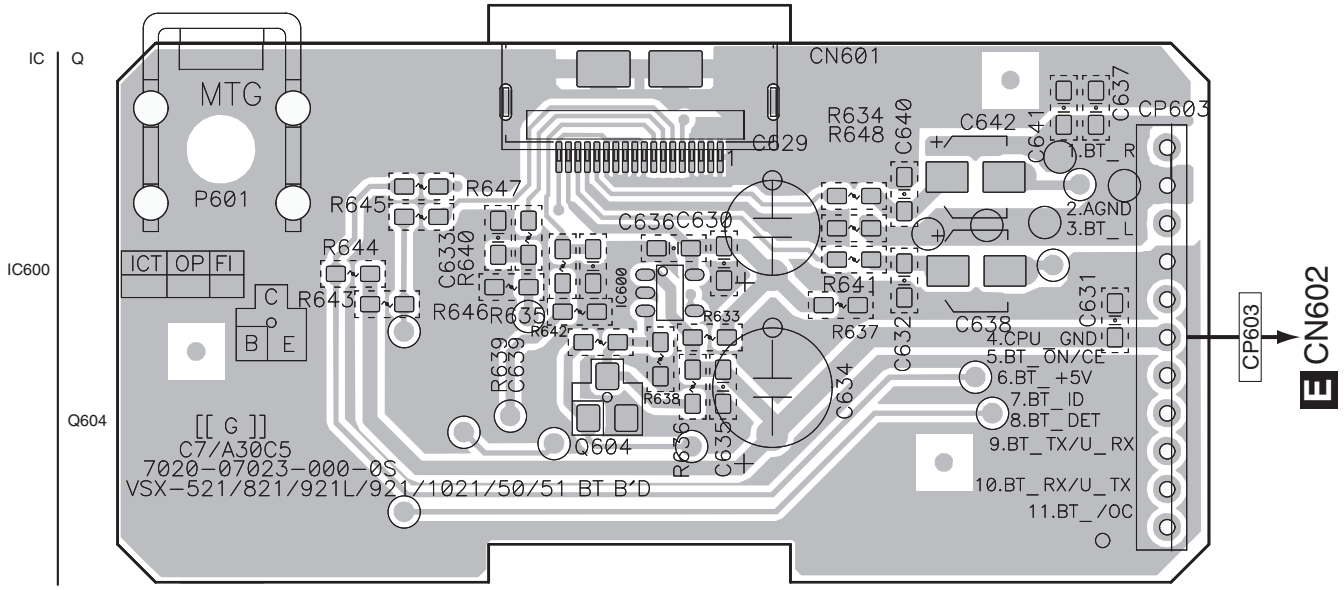
IC IC802 IC804

11.14 BT ASSY

SIDE A

SIDE A

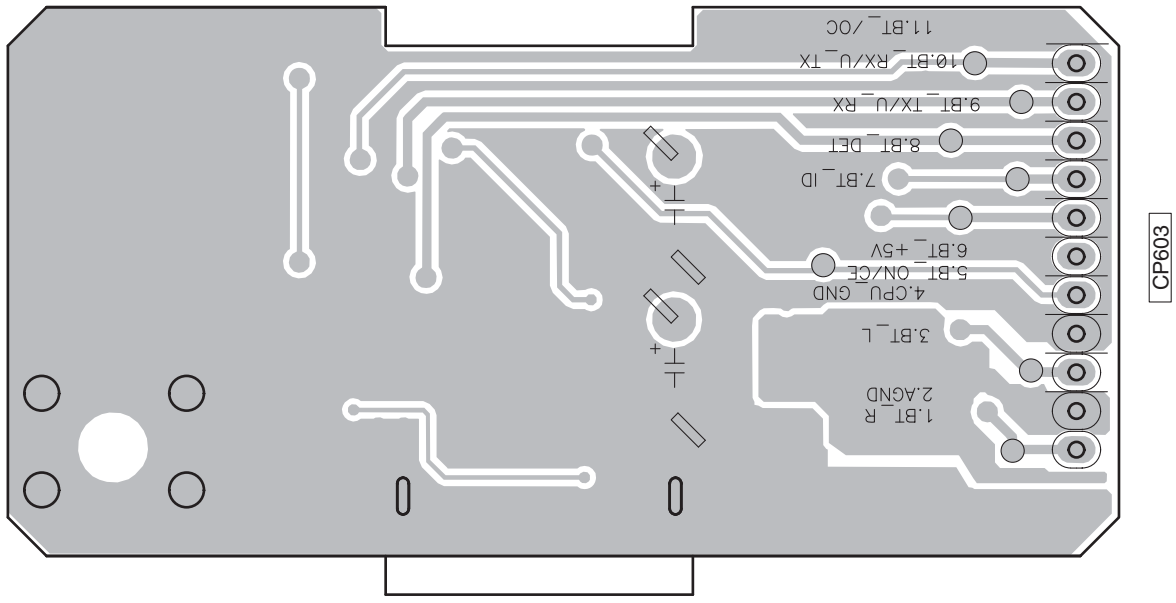
V BT ASSY



SIDE B

SIDE B

V BT ASSY



12. PCB PARTS LIST

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

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

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

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

560 Ω	→ *56 × 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 (VSX-821-K)	7025HK1011010-IL
NSP	1	MAIN ASSY (VSX-921-K)	7025HK1014010-IL
NSP	1	MAIN ASSY (VSX-521-K)	7025HK1012010-IL
	2	MAIN ASSY (VSX-821-K)	70280702710H0-IL
	2	MAIN ASSY (VSX-921-K)	70280702710G0-IL
	2	MAIN ASSY (VSX-521-K)	70280702710D0-IL
	2	SUBWOOFER ASSY (VSX-821-K, VSX-921-K)	7028070272070-IL
	2	SUBWOOFER ASSY (VSX-521-K)	7028070272050-IL
	2	GUIDE L ASSY	7028070273070-IL
	2	GUIDE R ASSY	7028070274070-IL
	2	WIRE GUIDE A ASSY	7028070276070-IL
	2	WIRE GUIDE B ASSY	7028070277070-IL
NSP	1	FRONT ASSY (VSX-821-K)	7025HK1011013-IL
NSP	1	FRONT ASSY (VSX-921-K)	7025HK1014013-IL
NSP	1	FRONT ASSY (VSX-521-K)	7025HK1012013-IL
	2	FRONT ASSY (VSX-821-K, VSX-921-K)	7028070211050-IL
	2	FRONT ASSY (VSX-521-K)	7028070211020-IL
	2	POWER ASSY	7028070212050-IL
	2	MIC ASSY (VSX-821-K, VSX-921-K)	7028070213050-IL
	2	MIC ASSY (VSX-521-K)	7028070213020-IL
	2	F-VIDEO ASSY (VSX-821-K, VSX-921-K)	7028070214050-IL
	2	HEADPHONE ASSY	7028070215050-IL
NSP	1	CPU ASSY (VSX-821-K)	7025HK1011011-IL
NSP	1	CPU ASSY (VSX-921-K)	7025HK1014014-IL
NSP	1	CPU ASSY (VSX-521-K)	7025HK1012011-IL
	2	CPU ASSY (VSX-821-K)	7028070221030-IL
	2	CPU ASSY (VSX-921-K)	7028070221070-IL
	2	CPU ASSY (VSX-521-K)	7028070221020-IL
	2	BRIDGE A ASSY	7028070222070-IL
	2	BRIDGE B ASSY	7028070223070-IL
	2	STANDBY ASSY (VSX-821-K, VSX-521-K)	7028070225030-IL
	2	STANDBY ASSY (VSX-921-K)	7028070225070-IL
NSP	1	AMP2 ASSY (VSX-921-K ONLY)	7025HK1014016-IL
	2	AMP ASSY (VSX-921-K ONLY)	7028070251040-IL
NSP	1	AMP1 ASSY (VSX-821-K, VSX-521-K ONLY)	7025HK1011017-IL
	2	AMP ASSY (VSX-821-K, VSX-521-K ONLY)	7028070241030-IL
NSP	1	AUDIO ASSY (VSX-821-K, VSX-521-K)	7025HK1011014-IL
NSP	1	AUDIO ASSY (VSX-921-K)	7025HK1014011-IL
	2	AUDIO ASSY (VSX-821-K, VSX-521-K)	7028070181030-IL
	2	AUDIO ASSY (VSX-921-K)	7028070181050-IL
NSP	1	VIDEO ASSY (VSX-821-K, VSX-521-K)	7025HK1011016-IL
NSP	1	VIDEO ASSY (VSX-921-K)	7025HK1014017-IL
	2	VIDEO ASSY (VSX-821-K, VSX-521-K)	7028070261060-IL
	2	VIDEO ASSY (VSX-921-K)	7028070261070-IL
NSP	1	D-MAIN ASSY (VSX-821-K)	7025HK1011012-IL
NSP	1	D-MAIN ASSY (VSX-921-K)	7025HK1014018-IL
NSP	1	D-MAIN ASSY (VSX-521-K)	7025HK1012012-IL
	2	D-MAIN ASSY (VSX-821-K)	7028070191030-IL
	2	D-MAIN ASSY (VSX-921-K)	7028070191050-IL
	2	D-MAIN ASSY (VSX-521-K)	7028070191020-IL
NSP	1	USB ASSY (VSX-821-K, VSX-921-K ONLY)	7025HK1014012-IL
	2	USB ASSY (VSX-821-K, VSX-921-K ONLY)	7028070201050-IL
NSP	1	BT ASSY	7025HK1009019-IL
	2	BT ASSY	7028070231010-IL

Mark	No.	Description	Part No.

A AUDIO ASSY (VSX-821-K, VSX-521-K)

SEMICONDUCTORS

	IC	400	J084152180010-IL
	IC	401-403	J121458000020-IL
	Q	401,402,404-407	J522020011210-IL
	Q	409,410,412,415	J522020011210-IL
	Q	417,422,424	J522020011210-IL
	Q	419-421,423,426	J520101411210-IL
	Q	425,428	J544117Y01150-IL
	Q	427	J522104411210-IL
	D	414,415	K005041480030-IL
	D	9400,9401 (ZD400,401)	K06006R844520-IL

MISCELLANEOUS

	JA	400 (JK400) TER,RCA 9PIN	G607902AA550Y-IL
	JA	401 (JK401) TER,RCA 9PIN	G607902AA560Y-IL
	CN	400 CN,WIRE 2MM	L002151102621-IL
	CN	9400,9402 (CP400, 402) CN,WAFER	L109012521910-IL
	CN	9401 (CP401) CN,WAFER	L109012522710-IL
		500 RING,TER WIRE	8410201010070-IL

RESISTORS

⚠	R	588,589	C060010165060-IL

CAPACITORS

	C	423,449	D02022306C060-IL
	C	424,448	D02047306C060-IL
	C	425,447	D020154078060-IL
	C	537,538	D040221083110-IL

A AUDIO ASSY (VSX-921-K)

SEMICONDUCTORS

	IC	400	J084152180010-IL
	IC	401-403	J121458000020-IL
	Q	402,405-407,409	J522020011210-IL
	Q	410,412,413,415	J522020011210-IL
	Q	417,418,422,424	J522020011210-IL
	Q	419-421,423,426	J520101411210-IL
	Q	425,428	J544117Y01150-IL
	Q	427	J522104411210-IL
	D	414,415	K005041480030-IL
	D	9400,9401 (ZD400,401)	K06006R844520-IL

MISCELLANEOUS

	JA	400 (JK400) TER,RCA 9PIN	G607902AA141Y-IL
	JA	401 (JK401) TER,RCA 9PIN	G607902AA560Y-IL
	CN	400 CN,WIRE 2MM	L002151132621-IL
	CN	9400,9402 (CP400, 402) CN,WAFER	L109012521910-IL
	CN	9401 (CP401) CN,WAFER	L109012522710-IL
		500 RING,TER WIRE	8410201010070-IL

RESISTORS

⚠	R	588,589	C060010165060-IL

CAPACITORS

	C	423,449	D02022306C060-IL
	C	424,448	D02047306C060-IL
	C	425,447	D020154078060-IL
	C	537,538	D040221083110-IL

Mark	No.	Description	Part No.

B AMP ASSY (VSX-921-K)

SEMICONDUCTORS

	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 (ZD401,404,407,410)	K06005R134520-IL
	D	9402,9403,9405,9406 (ZD402,403,405,406)	K06004R344520-IL
	D	9408,9409,9411,9412 (ZD408,409,411,412)	K06004R344520-IL
	D	9413,9416,9419 (ZD413,416,419)	K06005R134520-IL
	D	9414,9415,9417,9418 (ZD414,415,417,418)	K06004R344520-IL
	D	9420,9421 (ZD420,421)	K06004R344520-IL

MISCELLANEOUS

	VR	401-407 VR,SEMI CARBON MOLD	C541102315000-IL
	CN	404 CN,WIRE 2MM	L002151052620-IL
	CN	9401 (CP401) CN.WAFER 2.0MM	L101200101310-IL
	CN	9402 (CP402) CN.WAFER 2.5MM	L102526700500-IL
	CN	9403 (CP403) CONNECTOR (10P)	L101200101010-IL
	CN	9405 (CP405) CONNECTOR (3P)	L102526700300-IL
		400 BRACKET	4010210196100-IL
	TP	401-407 CN.WAFER 2.0MM	L101200100320-IL

RESISTORS

	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

Mark	No.	Description	Part No.
⚠	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

	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 AMP ASSY (VSX-821-K, VSX-521-K)

SEMICONDUCTORS

	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	J520254010010-IL
	Q	444,455,456	J5000992F0050-IL
	Q	449	J5001024Y0050-IL
	Q	454	J522255510010-IL
	Q	460	J5023206Y0050-IL
	D	402-404,408-410	K000013300520-IL
	D	414-416,420-422	K000013300520-IL
	D	426-428	K000013300520-IL
	D	9401,9404,9407,9410 (ZD401,404,407,410)	K06005R134520-IL
	D	9402,9403,9405,9406 (ZD402,403,405,406)	K06004R344520-IL
	D	9408,9409,9411,9412 (ZD408,409,411,412)	K06004R344520-IL
	D	9413 (ZD413)	K06005R134520-IL
	D	9414,9415 (ZD414,415)	K06004R344520-IL

MISCELLANEOUS

	VR	401-405 VR,SEMI CARBON MOLD	C541102315000-IL
	CN	404 CN,WIRE 2MM	L002151052620-IL
	CN	9401 (CP401) CN.WAFER 2.0MM	L101200101310-IL
	CN	9402 (CP402) CN.WAFER 2.5MM	L102526700500-IL
	CN	9403 (CP403) CONNECTOR (10P)	L101200101010-IL
		400 BRACKET	4010210196100-IL
	TP	401-405 CN.WAFER 2.0MM	L101200100320-IL

RESISTORS

	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	C060010165060-IL
	R	577,581	C060075265050-IL
⚠	R	580	F320184710050-IL
⚠	R	597,598,603,604	N113136647820-IL
	R	607	C060033265050-IL
	R	614	C060012265050-IL
	R	616	C060047065060-IL

CAPACITORS

	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	425	D004103597051-IL
	C	433,446,449,462	D00410107D051-IL
	C	465,478	D00410107D051-IL
	C	470	D00022106D051-IL
	C	476	D004561277051-IL
	C	513,514	D040331081050-IL

D MAIN ASSY (VSX-821-K)

SEMICONDUCTORS

⚠	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	K005041480030-IL
⚠	D	7	K047100600010-IL
	D	8	K000013300520-IL
⚠	D	9,4912	K047604000020-IL
⚠	D	10-13	K000400700010-IL
	D	23	K000400700010-IL
	D	26-29	RB551V-30
	D	9001 (ZD1)	K06003R344520-IL
	D	9024,9025 (ZD24,25)	K06016R044520-IL

MISCELLANEOUS

	L	1-5 COIL,FILTER-INDUCTOR	D330900001330-IL
	JA	101 (JACK1) TER,BOARD SCREW 8P	G614108V1010M-IL
	JA	102 (JACK2) TER,BOARD SCREW 4P	G612405E0200Y-IL
	JA	103 (JACK3) TER,BOARD SCREW 2P	G611201A0200Y-IL
	RY	1 (RLY1) RELAY	G680240202030-IL
	RY	2-5 (RLY2-5) RELAY	G680120503020-IL
	CN	1 CN,WIRE	L000231050040-IL
	CN	3 CN,WIRE	L002241102620-IL
	CN	4 CN,WIRE	L000101020310-IL
	CN	5 CN,WIRE	L000151042250-IL
	CN	6 CN.WAFER 2.5MM	L102526700400-IL
	CN	9001 (CP1) CONNECTOR	L108353280360-IL
	CN	9002 (CP2) CN.WAFER 3.96MM	L104353130560-IL
	CN	9003 (CP3) CONNECTOR (3P)	L102526700300-IL
	CN	9005 (CP5) CN,WAFER	L109012511510-IL

Mark	No.	Description	Part No.
	CN 9006,9011 (CP6,11)	CN,WAFER	L109012511710-IL
	CN 9007 (CP7)	CN.WAFER 2.0MM	L101200100510-IL
	CN 9009 (CP9)	CN,WAFER	L109012511110-IL
	CN 9010 (CP10)	CN,WIRE	L002151050160-IL
	CN 9012,9016 (CP12,16)	CN.WAFER	L109012510910-IL
	CN 9017 (CP17)	CN.WAFER	L109012512710-IL

RESISTORS

	R	5,7,9,11	C060010065050-IL
	R	6,8,10,12	C060010066050-IL
	R	13,25	C060010065050-IL
	R	14	C060010066050-IL
⚠	R	27,33	C060R22065050-IL
	R	28-30	C060022265050-IL
	R	31,34,41,42	C060R22065050-IL
	R	37,38	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	55,58	D040682088010-IL
	C	61,64	D02010406C060-IL
	C	65-68	D02010407H080-IL
	C	73,76	D040682083000-IL
	C	81-83	D02047306C060-IL
	C	84	D040472084020-IL
	C	85	D040102084060-IL
	C	101	D040331088230-IL

D MAIN ASSY (VSX-921-K)

SEMICONDUCTORS

⚠	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	K005041480030-IL
⚠	D	7	K047100600010-IL
	D	8	K000013300520-IL
⚠	D	9,4912	K047604000020-IL
⚠	D	10-13	K000400700010-IL
	D	23	K000400700010-IL
	D	26-29	RB551V-30
	D	9001 (ZD1)	K06003R344520-IL
	D	9024,9025 (ZD24,25)	K06016R044520-IL

MISCELLANEOUS

	L	1-7 COIL,FILTER-INDUCTOR	D330900001330-IL
	JA 101 (JACK1)	TER,BOARD SCREW 8P	G614108V1010M-IL
	JA 102 (JACK2)	TER,BOARD SCREW 4P	G612405E0200Y-IL
	JA 103 (JACK3)	TER,BOARD SCREW 2P	G611201A0200Y-IL
	JA 104 (JACK4)	TER,BOARD PUSH 4P	G594408SA030Y-IL
	RY 1 (RLY1)	RELAY	G680240202030-IL

Mark	No.	Description	Part No.
	RY 2-6 (RLY2-6)	RELAY	G680120503020-IL
	CN 1	CN,WIRE	L000231050040-IL
	CN 2	CN,WIRE	L000311020030-IL
	CN 3	CN,WIRE	L002241102620-IL
	CN 5	CN,WIRE	L000151042250-IL
	CN 6	CN.WAFER 2.5MM	L102526700400-IL
	CN 9001 (CP1)	CONNECTOR	L108353280360-IL
	CN 9002 (CP2)	CN.WAFER 3.96MM	L104353130560-IL
	CN 9003 (CP3)	CONNECTOR (3P)	L102526700300-IL
	CN 9005 (CP5)	CN,WAFER	L109012511510-IL
	CN 9006,9011 (CP6,11)	CN,WAFER	L109012511710-IL
	CN 9007 (CP7)	CN.WAFER 2.0MM	L101200100510-IL
	CN 9008,9012,9016 (CP8,12,16)	CN.WAFER	L109012510910-IL
	CN 9009,9014 (CP9,14)	CN,WAFER	L109012511110-IL
	CN 9010 (CP10)	CN,WIRE	L002151050160-IL
	CN 9017 (CP17)	CN.WAFER	L109012512710-IL

RESISTORS

	R	5,7,9,11	C060010065050-IL
	R	6,8,10,12	C060010066050-IL
	R	13,15,17,25	C060010065050-IL
	R	14,16	C060010066050-IL
⚠	R	18	C060010066050-IL
⚠	R	27,33	C060R22065050-IL
	R	28-30	C060022265050-IL
	R	31,34,41,42	C060R22065050-IL
⚠	R	35	C060047363050-IL
	R	36	C060047363050-IL
	R	37,38	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	D040682088010-IL
	C	61,64	D02010406C060-IL
	C	65-68	D02010407H080-IL
	C	73,76	D040682083000-IL
	C	81-83	D02047306C060-IL
	C	84	D040472084020-IL
	C	85	D040102084060-IL
	C	101	D040331088230-IL

D MAIN ASSY (VSX-521-K)

SEMICONDUCTORS

⚠	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	K005041480030-IL

Mark	No.	Description	Part No.
⚠	D	7	K047100600010-IL
	D	8	K000013300520-IL
⚠	D	9	K047604000020-IL
⚠	D	10-13	K000400700010-IL
	D	23	K000400700010-IL
	D	26-29	RB551V-30
	D	9001 (ZD1)	K06003R344520-IL
	D	9024,9025 (ZD24,25)	K06016R044520-IL

MISCELLANEOUS

	L	1-5 COIL,FILTER-INDUCTOR	D330900001330-IL
	JA	101 (JACK1) TER,BOARD SCREW 4P	G612405E0200Y-IL
	JA	102 (JACK2) TER,BOARD PUSH 4P	G594408SA030Y-IL
	JA	9101 TER,BOARD PUSH 2P	G592212A0300Y-IL
	RY	1 (RLY1) RELAY	G680240202030-IL
	RY	2-4 (RLY2-4) RELAY	G680120503020-IL
	CN	1 CN,WIRE	L000231050040-IL
	CN	3 CN,WIRE	L002241102620-IL
	CN	5 CN,WIRE	L000151042250-IL
	CN	9001 (CP1) CONNECTOR	L108353280360-IL
	CN	9002 (CP2) CN.WAFER 3.96MM	L104353130360-IL
	CN	9003 (CP3) CONNECTOR (3P)	L102526700300-IL
	CN	9005 (CP5) CN,WAFER	L109012511510-IL
	CN	9006,9011 (CP6,11) CN,WAFER	L109012511710-IL
	CN	9009 (CP9) CN,WAFER	L109012511110-IL
	CN	9012,9016 (CP12,16) CN.WAFER	L109012510910-IL
	CN	9017 (CP17) CN.WAFER	L109012512710-IL

RESISTORS

	R	5,7,9,11	C060010065050-IL
	R	6,8,10,12	C060010066050-IL
	R	13,25	C060010065050-IL
	R	14	C060010066050-IL
⚠	R	27	C060R22065050-IL
	R	28-30	C060022265050-IL
	R	31,41,42	C060R22065050-IL
	R	37,38	C060033166050-IL
	R	39,40	C060015165050-IL
	R	66	C0604R7065050-IL

CAPACITORS

	C	1,3,4,6	D02047306C060-IL
	C	8,9,11,12	D02047306C060-IL
	C	14,17,81-83	D02047306C060-IL
	C	55,58	D040682088010-IL
	C	61,64	D02010406C060-IL
	C	65-68	D02010407H080-IL
	C	73	D040682083000-IL
	C	84	D040472084020-IL
	C	85	D040102084060-IL
	C	101	D040331088230-IL

E SUBWOOFER ASSY (VSX-821-K, VSX-921-K)

SEMICONDUCTORS

	Q	602,603	J522020011210-IL
	D	9604,9605 (ZD604,605)	K06606R24P400-IL

MISCELLANEOUS

	L	601 (BEAD601) BEAD,COIL	7610010030000-IL
	JA	602 (JACK602) JACK,DIN	G403515397000-IL
	JA	807 TER,RCA 1PIN	G600107A0000Y-IL
	CN	602 CN.WAFER 2.0MM	L101100041110-IL
	CN	9601 (CP601) CN,WAFER	L109012521510-IL
	CN	9602 (CP602) CN,WAFER	L109012521710-IL
		601 BRACKET	4010210196100-IL
		9601 (PACK601) TUNER,FM/AM	E903004100780-IL

E SUBWOOFER ASSY (VSX-521-K)

SEMICONDUCTORS

	Q	602,603	J522020011210-IL

MISCELLANEOUS

	L	601 (BEAD601) BEAD,COIL	7610010030000-IL
	JA	807 TER,RCA 1PIN	G600107A0000Y-IL
	CN	602 CN.WAFER 2.0MM	L101100041110-IL
	CN	9601 (CP601) CN,WAFER	L109012521510-IL
	CN	9602 (CP602) CN,WAFER	L109012521710-IL
		601 BRACKET	4010210196100-IL
		9601 (PACK601) TUNER,FM/AM	E903004100780-IL

F HEADPHONE ASSY

SEMICONDUCTORS

	D	705,706	K005041480030-IL

MISCELLANEOUS

	JA	701 (JACK701) JACK,D6.5	G402PJ612AG0Y-IL
	CN	721 CN,WIRE 2MM	L002411042420-IL

G MIC ASSY (VSX-821-K, VSX-921-K)

SEMICONDUCTORS

	IC	902	J121458000020-IL
	Q	900	J522101441210-IL
	D	901,902	K005041480030-IL
	D	9901-9903 (ZD901-903)	K06605R14P400-IL

MISCELLANEOUS

	JA	901 (JACK901) JACK,D3.5	G401PJ354H70Y-IL
	CN	901 CN.WIRE 2.0MM	L002391102620-IL
		9901 (RUG901) RING,TER WIREM	8410500010040-IL

G MIC ASSY (VSX-521-K)

SEMICONDUCTORS

	IC	901	BU4052BCFV
	IC	902	J121458000020-IL
	Q	900	J522101441210-IL
	D	901,902	K005041480030-IL
	D	9901-9903 (ZD901-903)	K06605R14P400-IL

MISCELLANEOUS

	JA	901 (JACK901) JACK,D3.5	G401PJ354H70Y-IL
	CN	901 CN.WIRE 2.0MM	L002391100010-IL
		9901 (RUG901) RING,TER WIREM	8410500010040-IL

H GUIDE L ASSY

There is no service parts.

I GUIDE R ASSY

There is no service parts.

Mark	No.	Description	Part No.

J WIRE GUIDE A ASSY

There is no service parts.

K WIRE GUIDE B ASSY

There is no service parts.

L VIDEO ASSY (VSX-821-K, VSX-521-K)

SEMICONDUCTORS

	IC	905	NJW1327FU1
	IC	1007	J170747810010-IL
	Q	1012	J520015301210-IL
	Q	1013	J522305200050-IL
	Q	1089	J5023209Y0010-IL
	D	9607 (ZD607)	K06603R94P400-IL

MISCELLANEOUS

	L	1002 COIL,FILTER-INDUCTOR	D330330700520-IL
	JA	1000 (JACK1000) TER,RCA 9PIN	G607902AD013Y-IL
	JA	1001 (JACK1001) TER,RCA 6PIN	G603610D0400Y-IL
	X	1003 (XTAL1003) CRYSTAL	E80014R318080-IL
	CN	2 CN,WAFER	L109012521110-IL

L VIDEO ASSY (VSX-921-K)

SEMICONDUCTORS

	IC	905	NJW1327FU1
	IC	1007	J170747810010-IL
	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	9607 (ZD607)	K06603R94P400-IL

MISCELLANEOUS

	L	1002 COIL,FILTER-INDUCTOR	D330330700520-IL
	JA	1000 (JACK1000) TER,RCA 9PIN	G607902AA013Y-IL
	JA	1001 (JACK1001) TER,RCA 6PIN	G603610A0040Y-IL
	X	1003 (XTAL1003) CRYSTAL	E80014R318080-IL
	CN	1 CN,WAFER	L109012520910-IL
	CN	2 CN,WAFER	L109012521110-IL

M F-VIDEO ASSY (VSX-821-K, VSX-921-K ONLY)

SEMICONDUCTORS

	D	601,602	K005041480030-IL

MISCELLANEOUS

	JA	902 (JK601) TER,RCA 3PIN	G60603W0192GD-IL
	CN	601 CN.WIRE 2.0MM	L002421050070-IL

N FRONT ASSY (VSX-821-K, VSX-921-K)

SEMICONDUCTORS

	IC	701	J127163150010-IL
	Q	701,704,706	J522102371210-IL
⚠	Q	702	J5000933S0050-IL
	Q	703	J522101441210-IL
	D	707,709	K005041480030-IL
	D	8701-8703 (LED701-703)	K500052009011-IL
	D	9701 (ZD701)	K06007R544520-IL

MISCELLANEOUS

	L	701 COIL	D330101001020-IL
	L	702 COIL,FILTER-INDUCTOR	D330100700520-IL
	H	9999 FL HOLDER	4320211016000-IL
	V	701 (FLT701) DISPLAY,FLT	K530126600010-IL
	S	701-714,716 (SW701-714,716) SWITCH	G180501000010-IL
	S	9701 (VEC701) SW,ENCODER	G121123040011-IL
	CN	701 CN.WAFER 2MM	L002271092620-IL
	CN	702 CN.WAFER 2MM	L002900042621-IL
	CN	703 CN.WAFER 2MM	L002500050050-IL
	CN	704 CN.FPC 1.0MM	L130100113150-IL
	U	701 (RMC701) MODULE,REMOCON	E940349003810-IL

CAPACITORS

	C	718,719	D02047306C060-IL

N FRONT ASSY (VSX-521-K)

SEMICONDUCTORS

	IC	701	J127163150010-IL
	Q	701,704,706	J522102371210-IL
⚠	Q	702	J5000933S0050-IL
	Q	703	J522101441210-IL
	D	707,709	K005041480030-IL
	D	8701,8703 (LED701,703)	K500052009011-IL
	D	9701 (ZD701)	K06007R544520-IL

MISCELLANEOUS

	L	701 COIL	D330101001020-IL
	L	702 COIL,FILTER-INDUCTOR	D330100700520-IL
	H	9999 FL HOLDER	4320211016000-IL
	V	701 (FLT701) DISPLAY,FLT	K530126600010-IL
	S	701-714,716 (SW701,714,716) SWITCH	G180501000010-IL
	S	9701 (VEC701) SW,ENCODER	G121123040011-IL
	CN	701 CN.WAFER 2MM	L002271092620-IL
	CN	702 CN.WAFER 2MM	L002900042621-IL
	CN	704 CN.FPC 1.0MM	L130100113150-IL
	U	701 (RMC701) MODULE,REMOCON	E940349003810-IL

CAPACITORS

	C	718,719	D02047306C060-IL

O POWER ASSY

SEMICONDUCTORS

	D	711,712	K005041480030-IL

MISCELLANEOUS

	S	715 (SW715) SWITCH	G180501000010-IL
	S	9702 (VEC702) SW,ENCODER	G121123050021-IL

Mark	No.	Description	Part No.
	CN 9702 (CP702)	CN.WAFER 2.0MM	L101200100420-IL

P CPU ASSY (VSX-821-K)

SEMICONDUCTORS

	IC	201,205	J040740800240-IL
	IC	203	J020303020040-IL
	IC	204	J000241600170-IL
	Q	201	J520015301210-IL
	Q	202	J522102371210-IL
	Q	203,206,209-215	J522305200050-IL
	Q	216,217	J520015040150-IL
	D	201-203,206,207	K005041480030-IL
	D	311	K000013300520-IL

MISCELLANEOUS

	X	201 CRYSTAL	E80016R000030-IL
	CN	201 CN,WAFER	L109012512910-IL
	CN	204 CN,WAFER	L109012521110-IL
	CN	207,212 CN,WAFER	L109012520910-IL
	CN	208 CN,WAFER	L109012521710-IL
	CN	704 CN.FPC 1.0MM	L130100113150-IL
	CN	9201 (CP201) CN.FPC 1.0MM	L130100111050-IL
	CN	9404 (CP404) CN.WAFER 2.0MM	L101200100520-IL
		1 CN,WIRE	L000101010140-IL
		201,202 BRACKET	4010210196100-IL
		203 BRACKET	4010210196000-IL

RESISTORS

	R	325	C060015165520-IL

P CPU ASSY (VSX-921-K)

SEMICONDUCTORS

	IC	201,205	J040740800240-IL
	IC	203	J020303020040-IL
	IC	204	J000241600170-IL
	Q	201	J520015301210-IL
	Q	202	J522102371210-IL
	Q	203,206,209-215	J522305200050-IL
	Q	216,217	J520015040150-IL
	D	201-203,206,207	K005041480030-IL
	D	311	K000013300520-IL

MISCELLANEOUS

	X	201 CRYSTAL	E80016R000030-IL
	CN	201 CN,WAFER	L109012512910-IL
	CN	203 CN,WAFER	L109012511110-IL
	CN	204,205 CN,WAFER	L109012521110-IL
	CN	207,212 CN,WAFER	L109012520910-IL
	CN	208 CN,WAFER	L109012521710-IL
	CN	704 CN.FPC 1.0MM	L130100113150-IL
	CN	9201 (CP201) CN.FPC 1.0MM	L130100111050-IL
	CN	9404 (CP404) CN.WAFER 2.0MM	L101200100520-IL
		1 CN,WIRE	L000101010140-IL
		201,202 BRACKET	4010210196100-IL
		203 BRACKET	4010210196000-IL

RESISTORS

	R	325	C060015165520-IL

P CPU ASSY (VSX-521-K)

SEMICONDUCTORS

	IC	203	J020303020040-IL
	IC	204	J000241600170-IL
	IC	205	J040740800240-IL
	Q	201	J520015301210-IL
	Q	202	J522102371210-IL
	Q	203,206,209-215	J522305200050-IL
	Q	216,217	J520015040150-IL
	D	201-203,206,207	K005041480030-IL
	D	311	K000013300520-IL

MISCELLANEOUS

	X	201 CRYSTAL	E80016R000030-IL
	CN	201 CN,WAFER	L109012512910-IL
	CN	204 CN,WAFER	L109012521110-IL
	CN	207,212 CN,WAFER	L109012520910-IL
	CN	208 CN,WAFER	L109012521710-IL
	CN	704 CN.FPC 1.0MM	L130100112750-IL
	CN	9201 (CP201) CN.FPC 1.0MM	L130100111050-IL
	CN	9404 (CP404) CN.WAFER 2.0MM	L101200100520-IL
		1 CN,WIRE	L000101010140-IL
		201,202 BRACKET	4010210196100-IL
		203 BRACKET	4010210196000-IL

RESISTORS

	R	325	C060015165520-IL

Q BRIDGE A ASSY

MISCELLANEOUS

	CN	209,210 CN,WAFER	L109012511910-IL

R BRIDGE B ASSY

MISCELLANEOUS

	CN	211 CN,WAFER	L109012511910-IL
	CN	9204 (CP204) CN,WAFER	L109012511110-IL
	CN	9721 (CP721) CN.WAFER 2.0MM	L101200100420-IL
	CN	9901 (CP901) CN.WAFER 2.0MM	L101200101020-IL

S STANDBY ASSY (VSX-821-K, VSX-521-K)

SEMICONDUCTORS

⚠	IC	301	J126111700041-IL
	Q	301,303	J522305200050-IL
	Q	302	J522101441210-IL
	D	301,302,309,310	K005041480030-IL
⚠	D	303,304	K005041480030-IL
⚠	D	305-308	K000400700010-IL
	D	9301 (ZD301)	K06005R144520-IL
	D	9302 (ZD302)	K06015R044520-IL
	D	9303 (ZD303)	K06007R544520-IL

MISCELLANEOUS

⚠	RY	301(RLY301) RELAY	G680060102020-IL
⚠	T	301 (PT301) POWER TRANS	8200280150620-IL
⚠	CN	9301 (CP301) CONNECTOR	L108202000220-IL
⚠	CN	9302 (CP302) CN.WAFER 7.92MM	L108353280290-IL
	CN	9304 (CP304) CONNECTOR (3P)	L102526700300-IL

Mark	No.	Description	Part No.
	CN 9701 (CP701)	CN.WAFER 2.0MM	L101200100920-IL
	301	BRACKET	4010210196000-IL
	302-304	BRACKET	4010210196100-IL
⚠	FU 301 (F301)	FUSE GLASS TUBE 20MM	N751506301160-IL
	FU 9301	HOLDER,FUSE CLIP	G645000050010-IL

RESISTORS

	R	326	C060033065050-IL

CAPACITORS

	C	301	D040222083010-IL
	C	304	D00847208H010-IL

S STANDBY ASSY (VSX-921-K)

SEMICONDUCTORS

Mark			
⚠	IC	301	J126111700041-IL
	Q	301,303	J522305200050-IL
	Q	302	J522101441210-IL
	D	301,302,309,310	K005041480030-IL
⚠	D	303,304	K005041480030-IL
⚠	D	305-308	K000400700010-IL
	D	9301 (ZD301)	K06005R144520-IL
	D	9302 (ZD302)	K06015R044520-IL
	D	9303 (ZD303)	K06007R544520-IL

MISCELLANEOUS

⚠	RY 301 (RLY301)	RELAY	G680060102020-IL
⚠	T 301 (PT301)	POWER TRANS	8200280150620-IL
⚠	CN 9301 (CP301)	CONNECTOR	L108202000220-IL
⚠	CN 9302 (CP302)	CN.WAFER 7.92MM	L108353280290-IL
	CN 9304 (CP304)	CONNECTOR(3P)	L102526700300-IL
	CN 9701 (CP701)	CN.WAFER 2.0MM	L101200100920-IL
	301	BRACKET	4010210196000-IL
	302-304	BRACKET	4010210196100-IL
⚠	FU 301 (F301)	FUSE GLASS TUBE 20MM	N751506301160-IL
	FU 9301	HOLDER,FUSE CLIP	G645000050010-IL

RESISTORS

	R	326	C060033065050-IL

CAPACITORS

	C	301	D040222083010-IL
	C	304	D00847208H010-IL

T D-MAIN ASSY (VSX-821-K)

SEMICONDUCTORS

Mark			
⚠	IC	1300	J126111712040-IL
	IC	1303	SII9233ACTU
⚠	IC	1305,1325	J048107300010-IL
	IC	1308	SII9134CTU
⚠	IC	1309	AAT4614AIGU-2
⚠	IC	1310	J126111710011-IL
⚠	IC	1314	NJM2831F05
⚠	IC	1315	NJM2831F33
	IC	1316	J020303020040-IL
	IC	1317	TC74VHC157FTS1
	IC	1318	AK4588VQ
	IC	1319	J040740400270-IL
	IC	1320,1322	J040742570040-IL
	IC	1321	J001421640060-IL
	IC	1323	J005291607010-IL

Mark			
	IC	1324	J080320788010-IL
⚠	IC	9302	J126111712070-IL
	Q	1320,1322	J522305200050-IL
	Q	1321	J5232114K0010-IL
	Q	1323	J522101411210-IL
	D	1300	K06605R14P400-IL
	D	1302	K06618R04P400-IL
	D	1347-1356	K067020500010-IL
	D	1358,1360	K005041480030-IL
	D	1364,1365	K120501000010-IL
	D	7300	D340100562410-IL

MISCELLANEOUS

	L	1302,1306 CHIP BEAD	D340212561010-IL
	L	1315,1339,1342 COIL,INDUCTOR	D3104R7010200-IL
	L	1319 COIL,CHIP	D311126000030-IL
	L	1337,1344,1347,1350 CHIP BEAD	D340160811210-IL
	L	1340,1362 COIL,CHIP	D311160802220-IL
	L	1343,1348,1349 COIL,INDUCTOR	D3104R7010200-IL
	L	1345 COIL,CHIP	D311120601030-IL
	L	1352,1353,1357 CHIP BEAD	D340160811210-IL
	L	1359 CHIP BEAD	D340201221210-IL
	L	1361 COIL,INDUCTOR	D3104R7010200-IL
	JA	1300-1304 (JACK1300-1304) CN.WAFER	L109100190160-IL
	JA	1305,1306 (JACK1305,1306) OPTICAL RECEIVER	E100116500040-IL
	JA	1307 (JACK1307) TER,RCA 1PIN	G600107A0000Y-IL
	X	1300 CRYSTAL CHIP	E80524R576050-IL
	X	1303 CRYSTAL	E80016R000030-IL
	X	9300 (XTAL300) CRYSTAL CHIP	E80527R000050-IL
	CN	1300 (CP1300) CN.FPC 1.0MM	L130100151040-IL
	CN	1303 (CP1303) CONNECTOR (3P)	L102526803010-IL
	CN	1304 (CP1304) CN.WAFER 2.5MM	L102526800400-IL
	CN	1305 (CP1305) CN,WAFER	L109012521910-IL
	CN	1306 (CP1306) CN.WAFER	L109012522910-IL
	1301	BRACKET	4010210196100-IL

RESISTORS

	R	1849	D340160811210-IL

T D-MAIN ASSY (VSX-921-K)

SEMICONDUCTORS

Mark			
⚠	IC	1300	J126111712040-IL
	IC	1302	J044718100010-IL
	IC	1303	SII9233ACTU
⚠	IC	1305,1306,1325	J048107300010-IL
	IC	1307	TC7SA08FU
	IC	1308	SII9134CTU
⚠	IC	1309	AAT4614AIGU-2
⚠	IC	1310	J126111710011-IL
	IC	1311	J080101500010-IL
	IC	1312	TC7WHU04FU
⚠	IC	1314	NJM2831F05
⚠	IC	1315	NJM2831F33
	IC	1316	J020303020040-IL
	IC	1317	TC74VHC157FTS1
	IC	1318	AK4588VQ
	IC	1319	J040740400270-IL
	IC	1320,1322	J040742570040-IL

Mark	No.	Description	Part No.
	IC	1321	J001421640060-IL
	IC	1323	J005291607010-IL
	IC	1324	J080320788010-IL
⚠	IC	9300	J126108618080-IL
⚠	IC	9302	J126111712070-IL
⚠	Q	1318	J500124200010-IL
	Q	1319,1323	J522101411210-IL
	Q	1320,1322	J522305200050-IL
	Q	1321	J5232114K0010-IL
	D	1300	K06605R14P400-IL
	D	1302	K06618R04P400-IL
	D	1347-1356	K067020500010-IL
	D	1358,1360	K005041480030-IL
	D	1364,1365	K120501000010-IL
	D	7300	D340100562410-IL

MISCELLANEOUS

	L	1301,1304,1323,1324 CHIP BEAD	D340160811210-IL
	L	1302,1306 CHIP BEAD	D340212561010-IL
	L	1308,1315,1335 COIL,INDUCTOR	D3104R7010200-IL
	L	1319,1320 COIL,CHIP	D311126000030-IL
	L	1337,1344,1347,1350 CHIP BEAD	D340160811210-IL
	L	1339,1342,1343 COIL,INDUCTOR	D3104R7010200-IL
	L	1340,1362 COIL,CHIP	D311160802220-IL
	L	1345 COIL,CHIP	D311120601030-IL
	L	1348,1349,1361 COIL,INDUCTOR	D3104R7010200-IL
	L	1352,1353,1357 CHIP BEAD	D340160811210-IL
	L	1359 CHIP BEAD	D340201221210-IL
	JA	1300-1304 (JACK1300-1304) CN.WAFER	L109100190160-IL
	JA	1305,1306 (JA1305,1306) OPTICAL RECEIVER	E100116500040-IL
	JA	1307 (JACK1307) TER,RCA 1PIN	G600107A0000Y-IL
	X	1300 CRYSTAL CHIP	E80524R576050-IL
	X	1301 CRYSTAL CHIP	E80528R636360-IL
	X	1302 CRYSTAL CHIP	E80527R000050-IL
	X	9300 (XTAL300) CRYSTAL CHIP	E80527R000050-IL
	X	1303 CRYSTAL	E80016R000030-IL
	CN	1300 (CP1300) CN.FPC 1.0MM	L130100151040-IL
	CN	1303 (CP1303) CONNECTOR (3P)	L102526803010-IL
	CN	1304 (CP1304) CN,WAFER	L109012521110-IL
	CN	1305 (CP1305) CN,WAFER	L109012521910-IL
	CN	1306 (CP1306) CN.WAFER	L109012522910-IL
	CN	9304 (CP304) CN.WAFER 2.5MM	L102526800400-IL
		1301 BRACKET	4010210196100-IL

RESISTORS

	R	1849	D340160811210-IL

T D-MAIN ASSY (VSX-521-K)

SEMICONDUCTORS

⚠	IC	1300	J126111712040-IL
	IC	1303	SII9233ACTU
⚠	IC	1305,1325	J048107300010-IL
	IC	1308	SII9134CTU
⚠	IC	1309	AAT4614AIGU-2
⚠	IC	1310	J126111710011-IL
⚠	IC	1314	NJM2831F05
⚠	IC	1315	NJM2831F33
	IC	1316	J020303020040-IL
	IC	1317	TC74VHC157FTS1
	IC	1318	AK4588VQ
	IC	1319	J040740400270-IL
	IC	1320,1322	J040742570040-IL
	IC	1321	J001421640060-IL
	IC	1323	J005291607010-IL
	IC	1324	J080320788010-IL
⚠	IC	9302	J126111712070-IL
	Q	1320,1322	J522305200050-IL
	Q	1321	J5232114K0010-IL
	Q	1323	J522101411210-IL
	D	1300	K06605R14P400-IL
	D	1302	K06618R04P400-IL
	D	1347-1356	K067020500010-IL
	D	1358,1360	K005041480030-IL
	D	1364,1365	K120501000010-IL
	D	7300	D340100562410-IL

MISCELLANEOUS

	L	1302,1306 CHIP BEAD	D340212561010-IL
	L	1315,1339,1342 COIL,INDUCTOR	D3104R7010200-IL
	L	1319 COIL,CHIP	D311126000030-IL
	L	1337,1344,1347,1350 CHIP BEAD	D340160811210-IL
	L	1340,1362 COIL,CHIP	D311160802220-IL
	L	1343,1348,1349 COIL,INDUCTOR	D3104R7010200-IL
	L	1345 COIL,CHIP	D311120601030-IL
	L	1352,1353,1357 CHIP BEAD	D340160811210-IL
	L	1359 CHIP BEAD	D340201221210-IL
	L	1361 COIL,INDUCTOR	D3104R7010200-IL
	JA	1300-1304 (JACK1300-1304) CN.WAFER	L109100190160-IL
	JA	1305,1306 (JACK1305,1306) OPTICAL RECEIVER	E100116500040-IL
	JA	1307 (JACK1307) TER,RCA 1PIN	G600107A0000Y-IL
	X	1300 CRYSTAL CHIP	E80524R576050-IL
	X	1303 CRYSTAL	E80016R000030-IL
	X	9300 (XTAL300) CRYSTAL CHIP	E80527R000050-IL
	CN	1300 (CP1300) CN.FPC 1.0MM	L130100151040-IL
	CN	1304 (CP1304) CN.WAFER 2.5MM	L102526800400-IL
	CN	1305 (CP1305) CN,WAFER	L109012521910-IL
	CN	1306 (CP1306) CN.WAFER	L109012522910-IL
		1301 BRACKET	4010210196100-IL

RESISTORS

	R	1849	D340160811210-IL

U USB ASSY (VSX-821-K, VSX-921-K ONLY)

SEMICONDUCTORS

	IC	801	J085860000010-IL
	IC	802	J005291607010-IL
	IC	803	J001421640060-IL
	IC	804	341S2164
⚠	IC	805	J046255700010-IL
⚠	IC	806	J048107300010-IL
⚠	IC	9001 (REG1)	J126111710011-IL
⚠	IC	9002 (REG2)	J126111700041-IL
	Q	1	J520103S00210-IL
	Q	2	J522101411210-IL
	D	1,2	K067012020020-IL

Mark	No.	Description	Part No.
	D 7		K005041480030-IL

MISCELLANEOUS

	L 2	CHIP BEAD	D340160811210-IL
	L 11	COIL,CHIP	D311120601030-IL
	JA 801 (JACK801)	CN,PLUG CONTACT	G480040040040-IL
	X 1 XTAL1)	CRYSTAL	E80012R000010-IL
	CN 801	CN,WIRE	L000321042250-IL
	CN 802	CN,WIRE	L000371020080-IL
	CN 9803 (CP803)	CN.WAFER 2.0MM	L101200100510-IL

V BT ASSY

SEMICONDUCTORS

⚠	IC 600		BD2224G

MISCELLANEOUS

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