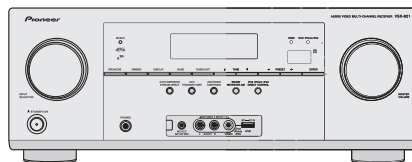


Pioneer

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".

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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

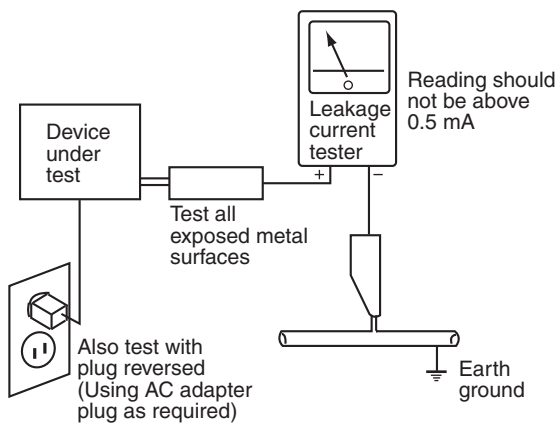
(FOR USA MODEL ONLY)

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.

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1. SERVICE PRECAUTIONS

1.1 NOTES ON SOLDERING

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

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

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

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

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

1.2 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".

A

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	

B

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

C

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

D

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.

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Manufactured under license under U.S. Patent #'s: 5,451,942; 5,956,674; 5,974,380; 5,978,762; 6,226,616; 6,487,535; 7,212,872; 7,333,929; 7,392,195; 7,272,567 & other U.S. and worldwide patents issued & pending. DTS and the Symbol are registered trademarks, & DTS-HD, DTS-HD Master Audio, and the DTS logos are trademarks of DTS, Inc. Product includes software. © DTS, Inc. All Rights Reserved.

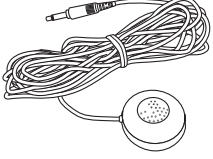
Accessories



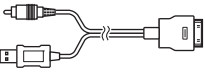
AM loop antenna
(E601019000010-IL)



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 k Ω

Output (Level/Impedance)

REC.....200 mV/2.2 k Ω

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

LINE.....98 dB

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

LINE.....79 dB

Video Section

Signal level

Composite.....1 Vp-p (75 Ω)

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)

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

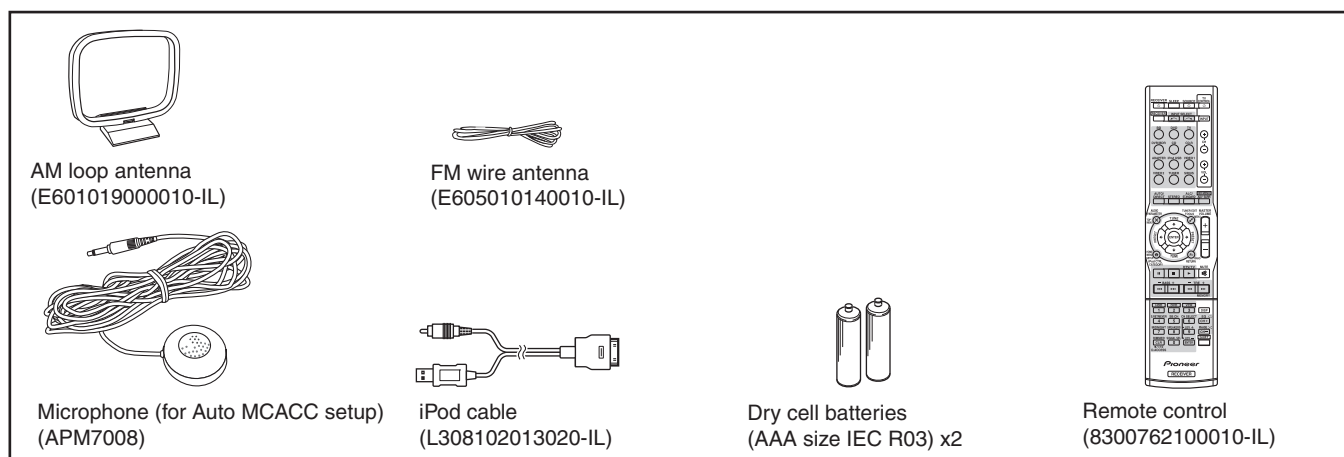
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Accessories



A 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

** Measured by Audio Spectrum Analyzer

B Audio Section

Input (Sensitivity/Impedance)

LINE.....200 mV/47 k Ω

Output (Level/Impedance)

REC.....200 mV/2.2 k Ω

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

LINE.....98 dB

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

LINE.....79 dB

Video Section

Signal level

Composite.....1 Vp-p (75 Ω)

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)

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

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

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Manufactured under license under U.S. Patent #'s: 5,451,942; 5,956,674; 5,974,380; 5,978,762; 6,226,616; 6,487,535; 7,212,872; 7,333,929; 7,392,195; 7,272,567 & other U.S. and worldwide patents issued & pending. DTS and the Symbol are registered trademarks, & DTS-HD, DTS-HD Master Audio, and the DTS logos are trademarks of DTS, Inc. Product includes software. © DTS, Inc. All Rights Reserved.

D

■

Accessories

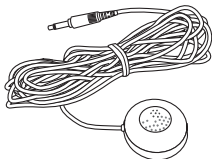
E



AM loop antenna
(E601019000010-IL)



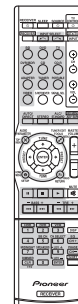
FM wire antenna
(E6050101400010-IL)



Microphone (for Auto MCACC setup)
(APM7008)



Dry cell batteries
(AAA size IEC R03) x2



Remote control
(8300761900010-IL)

F

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	

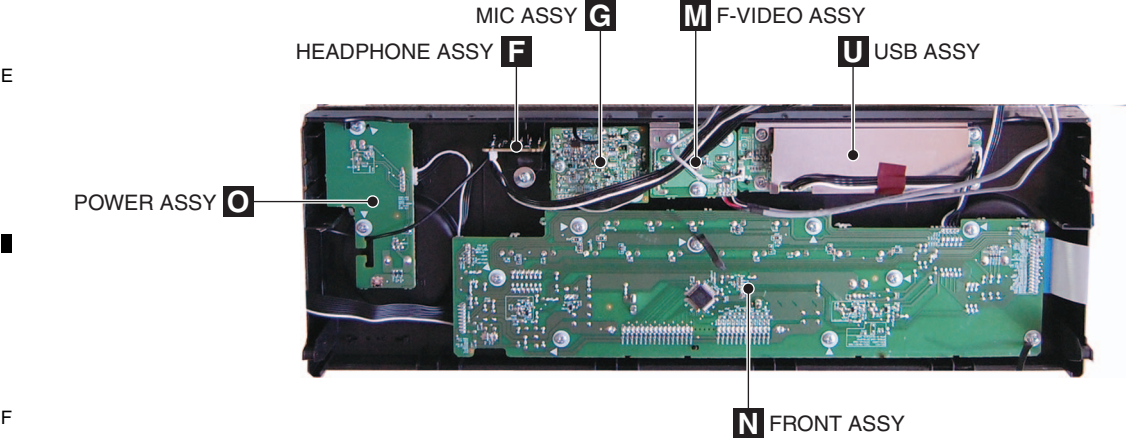
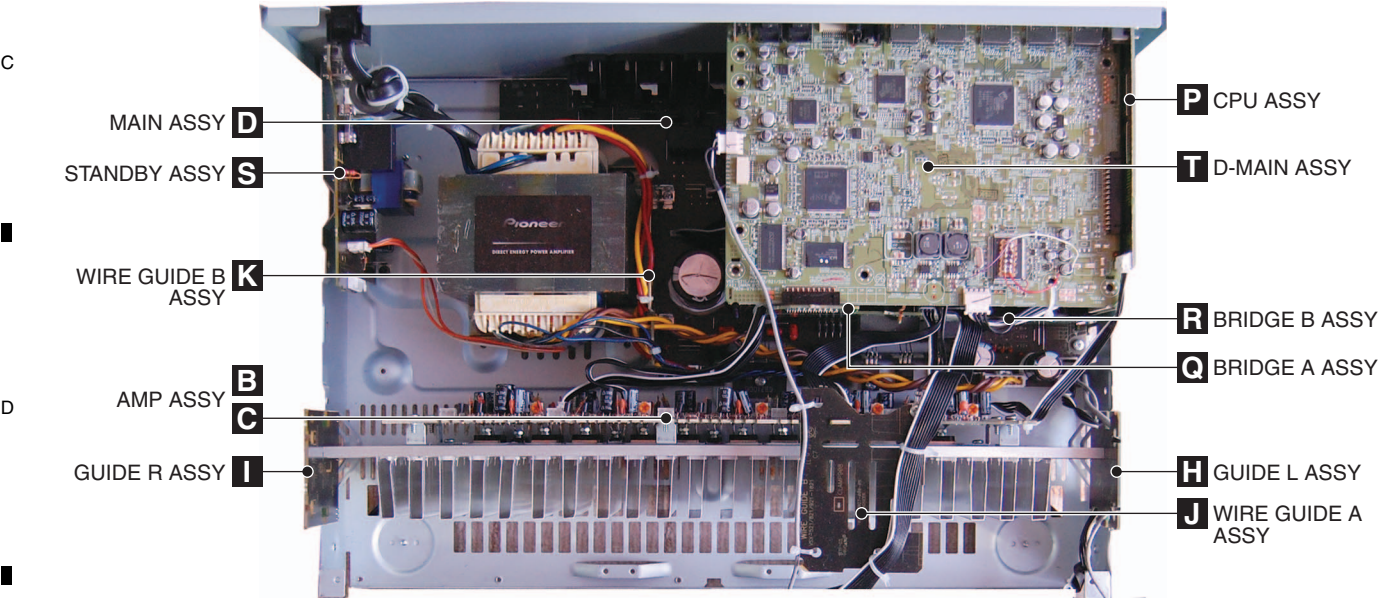
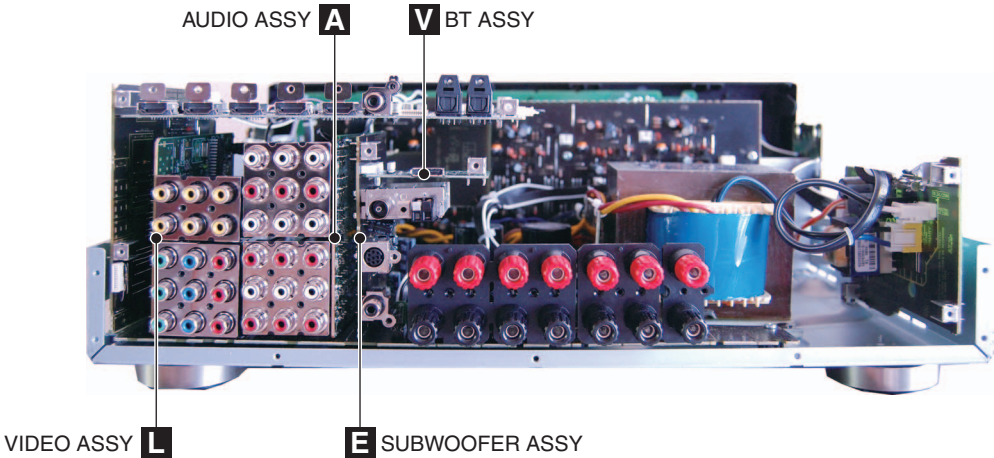
Lubricants and Glues List



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)".

A VSX-821-K, VSX-921-K

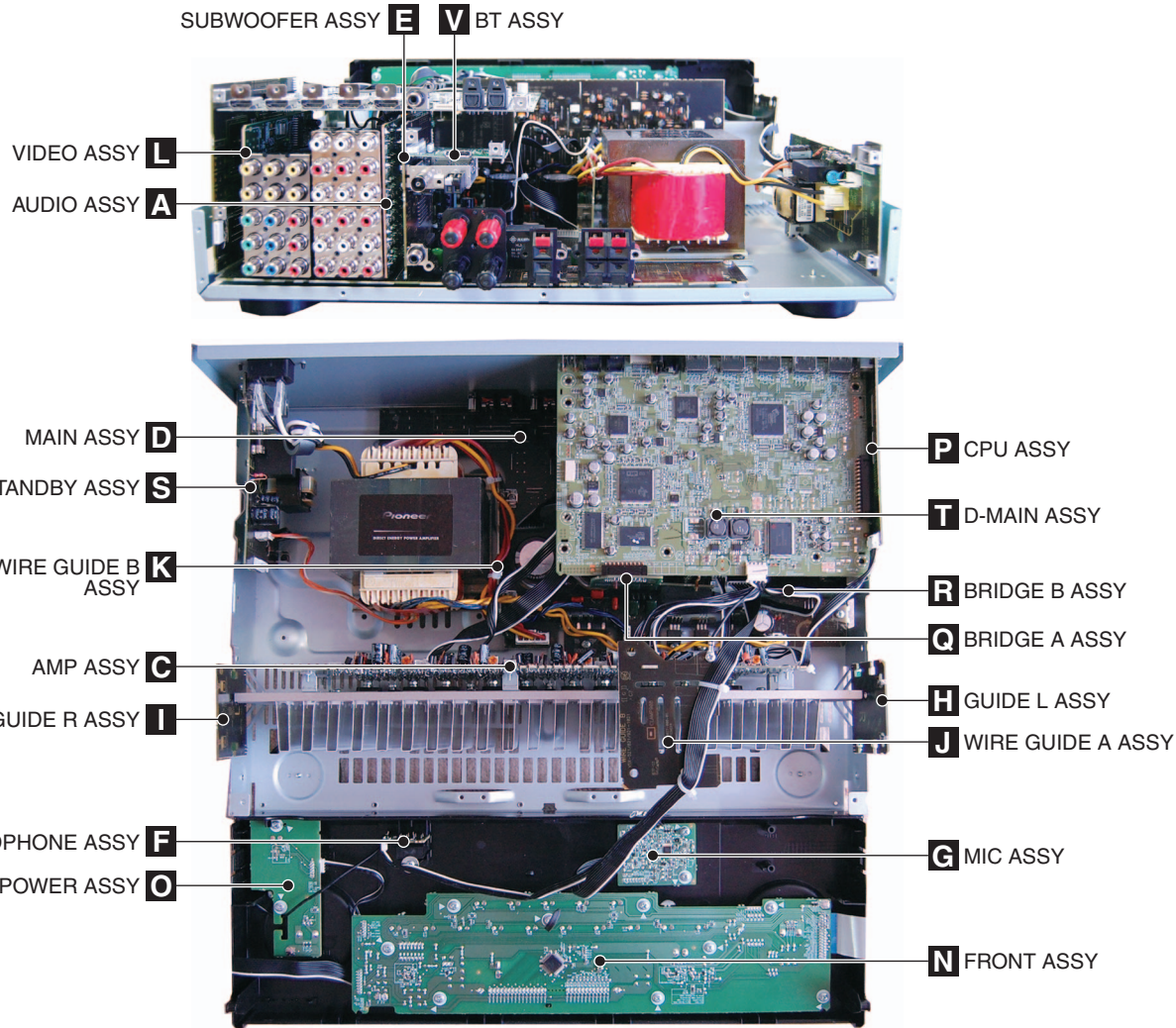
• This photo. is VSX-821-K.



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.

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

A VSX-521-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.

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

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VSX-821-K

△

4.1 OVERALL WIRING DIAGRAM

F



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

1/4- 4/4)
070191030-IL)
070191050-IL)
070191020-IL)

702807018030-IL)
807018050-IL)

) - IL)

R /
BRIDGE B ASSY
(7028070223070-IL)

CPU ASSY
(VSX-821-K)
(VSX-921-K)
(VSX-521-K)

H GUIDE L ASSY
(7028070273070-IL)

I GUIDE R ASSY
(7028070274070-IL)

J WIRE GUIDE A ASSY
(7028070276070-IL)

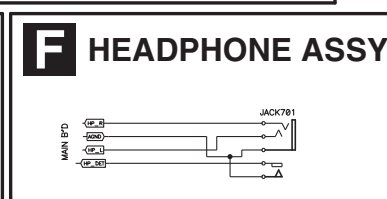
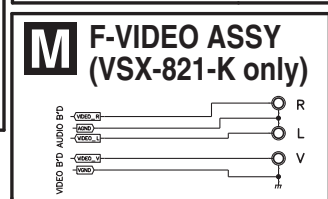
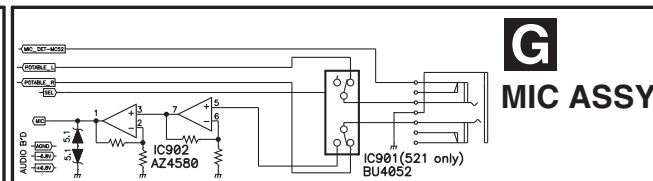
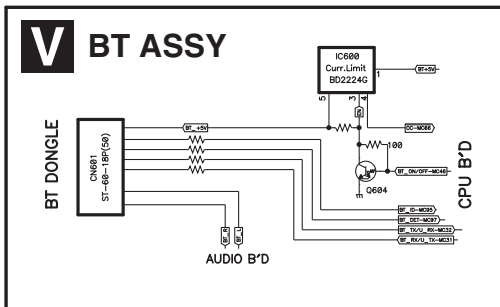
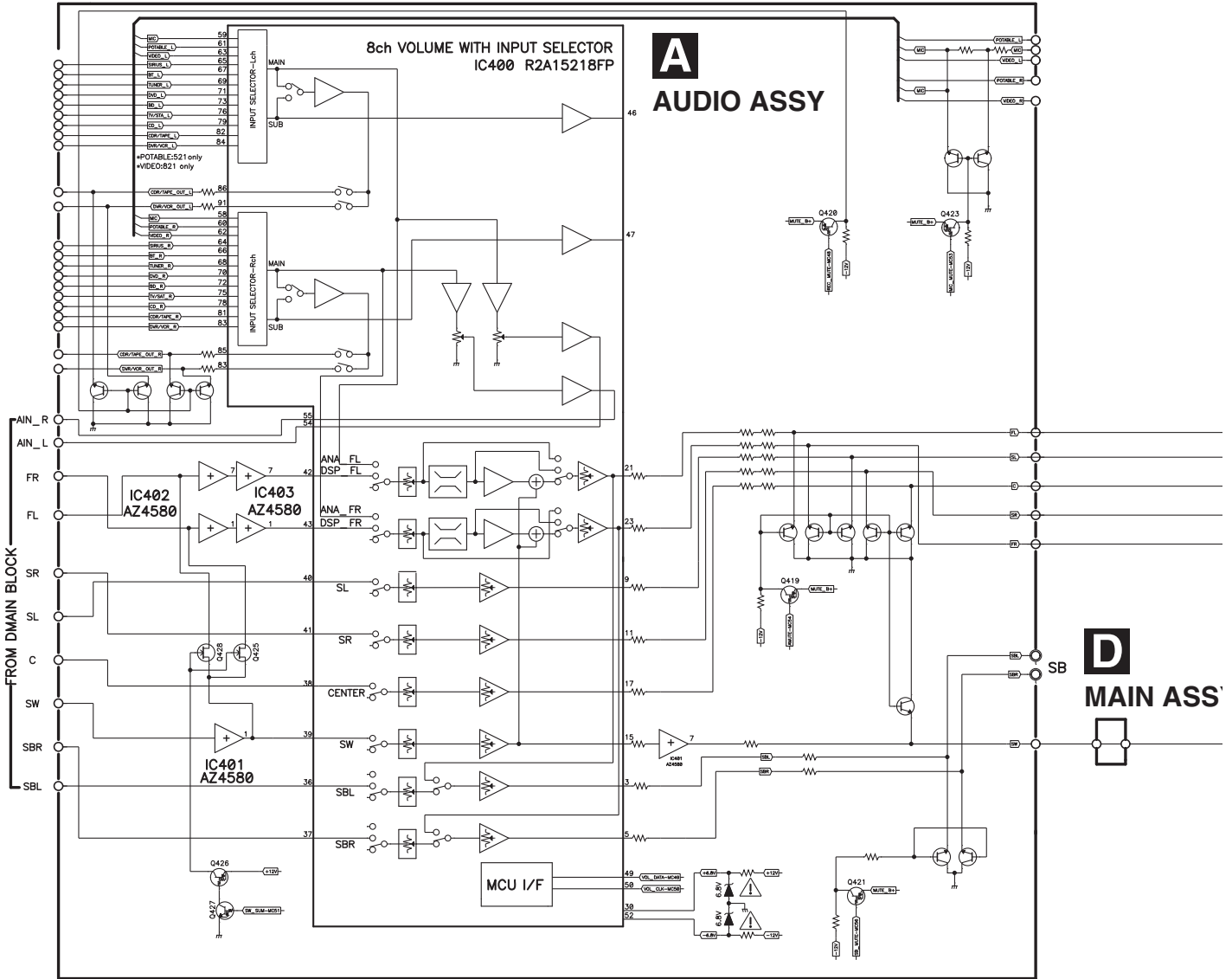
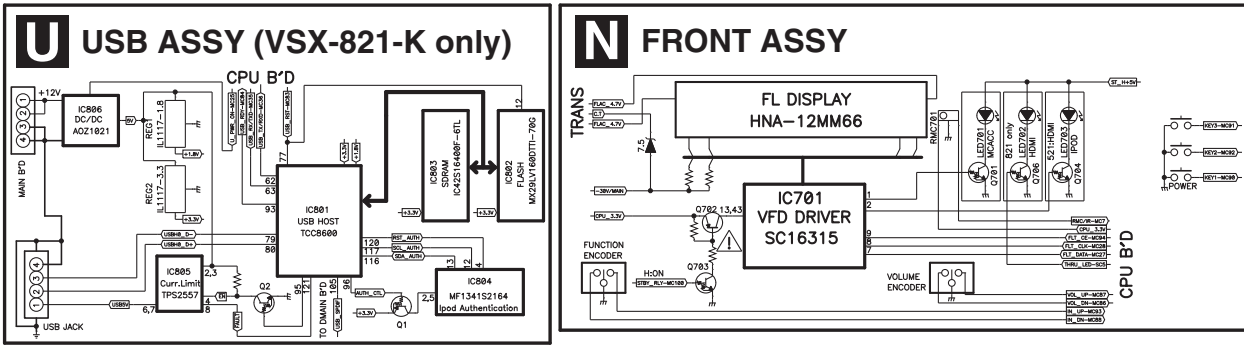
K WIRE GUIDE B ASSY
(7028070277070-IL)

3070214050-IL)

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

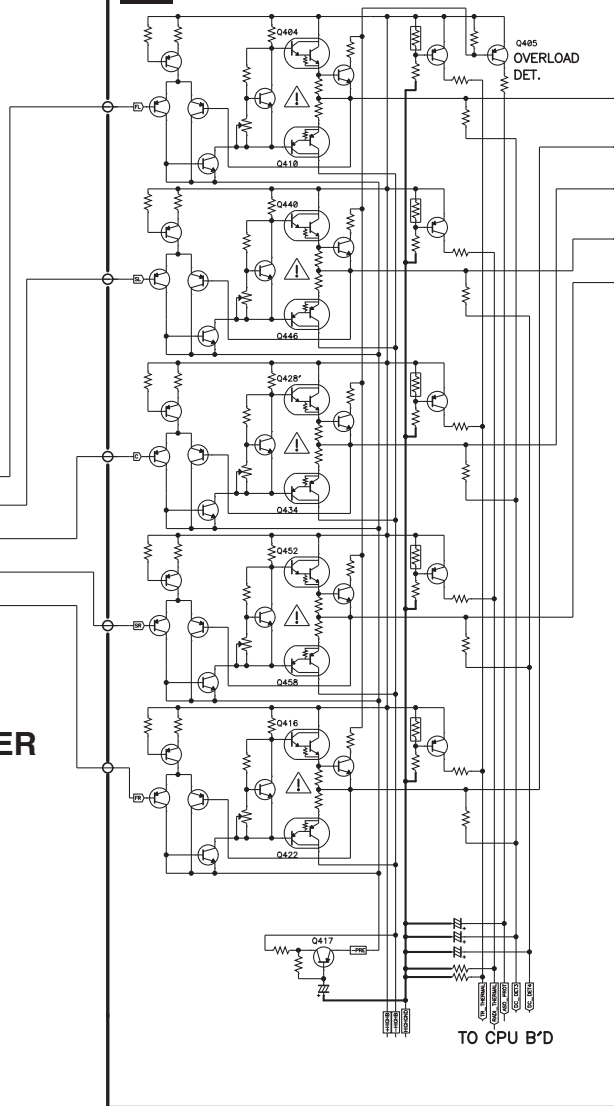
VSX-821-K

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

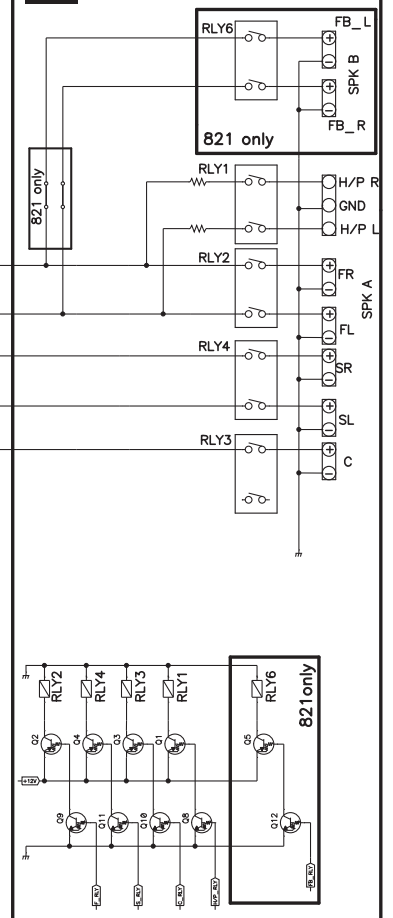


EX1-M001
 EX1-M002
 EX1-M003
 OMER

C AMP ASSY



D MAIN ASSY



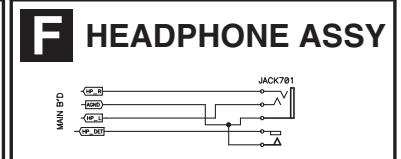
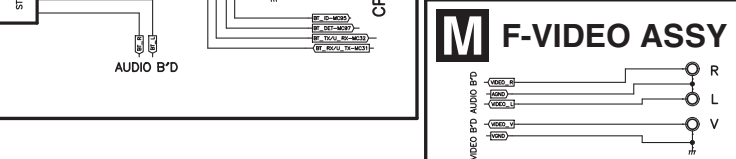
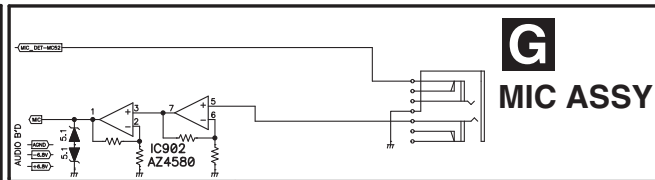
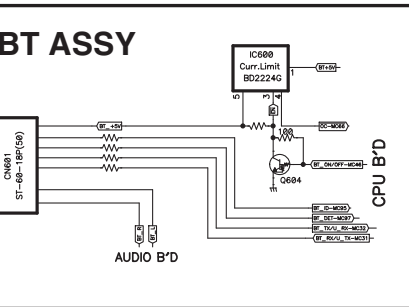
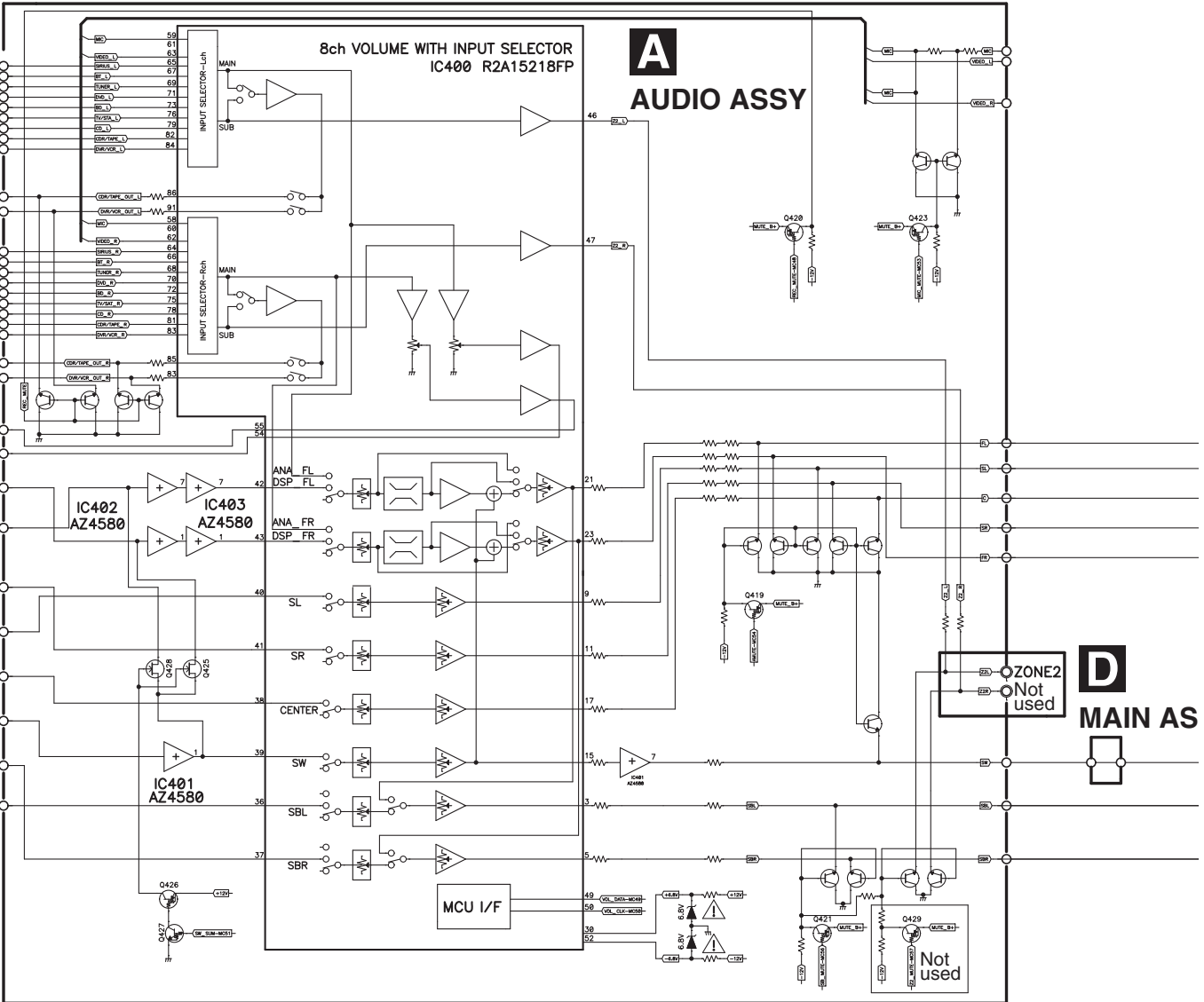
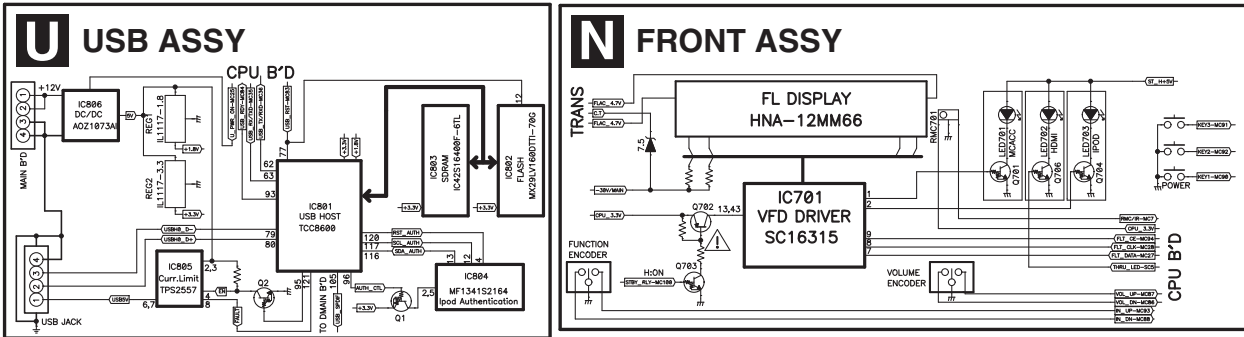
D MAIN ASSY



E SUBWOOFER ASSY

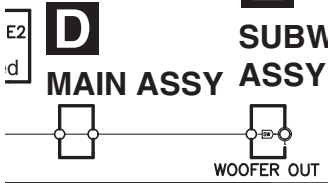


4.3 AUDIO BLOCK DIAGRAM (for VSX-921-K)

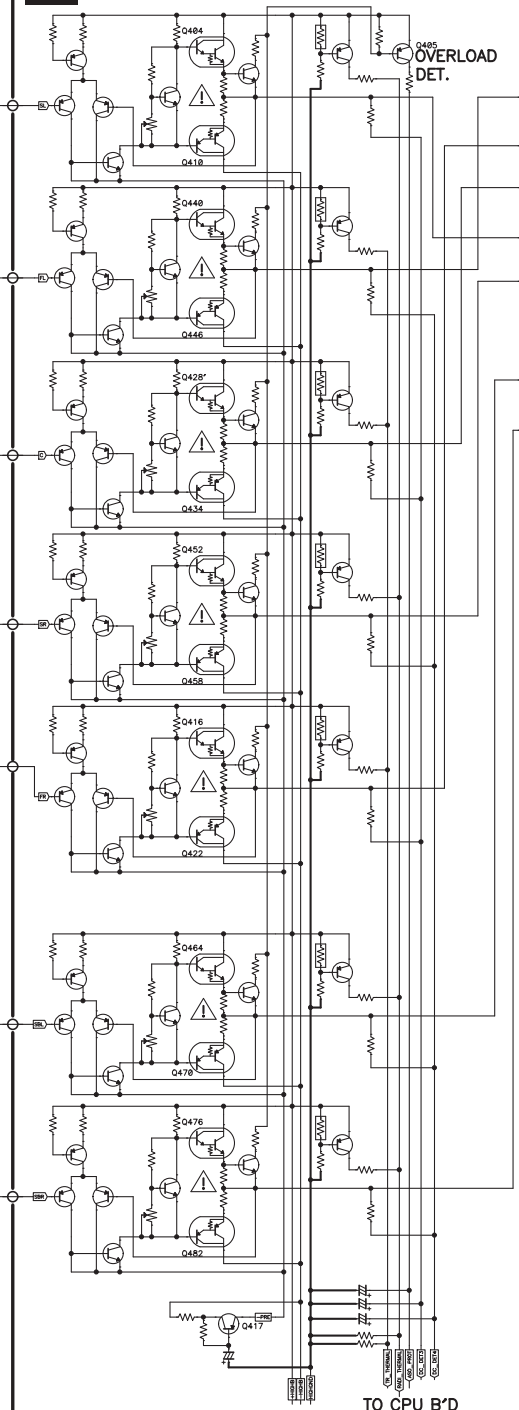


REV-3001
REV-3002
REV-3003
REV-3004

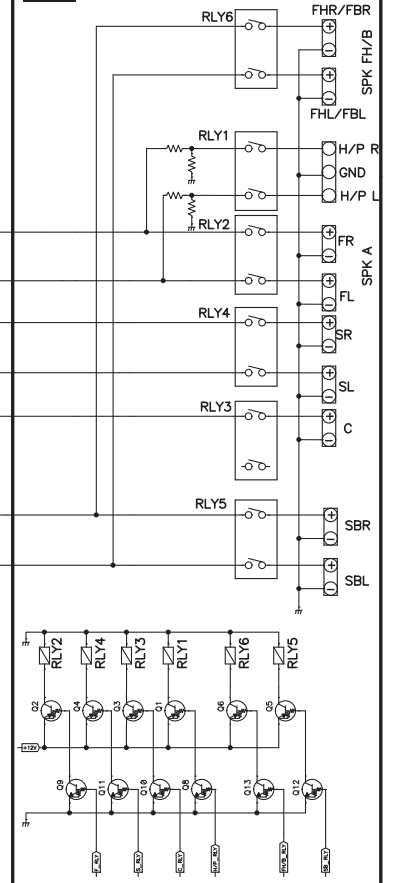
VSX-821-K



B AMP ASSY



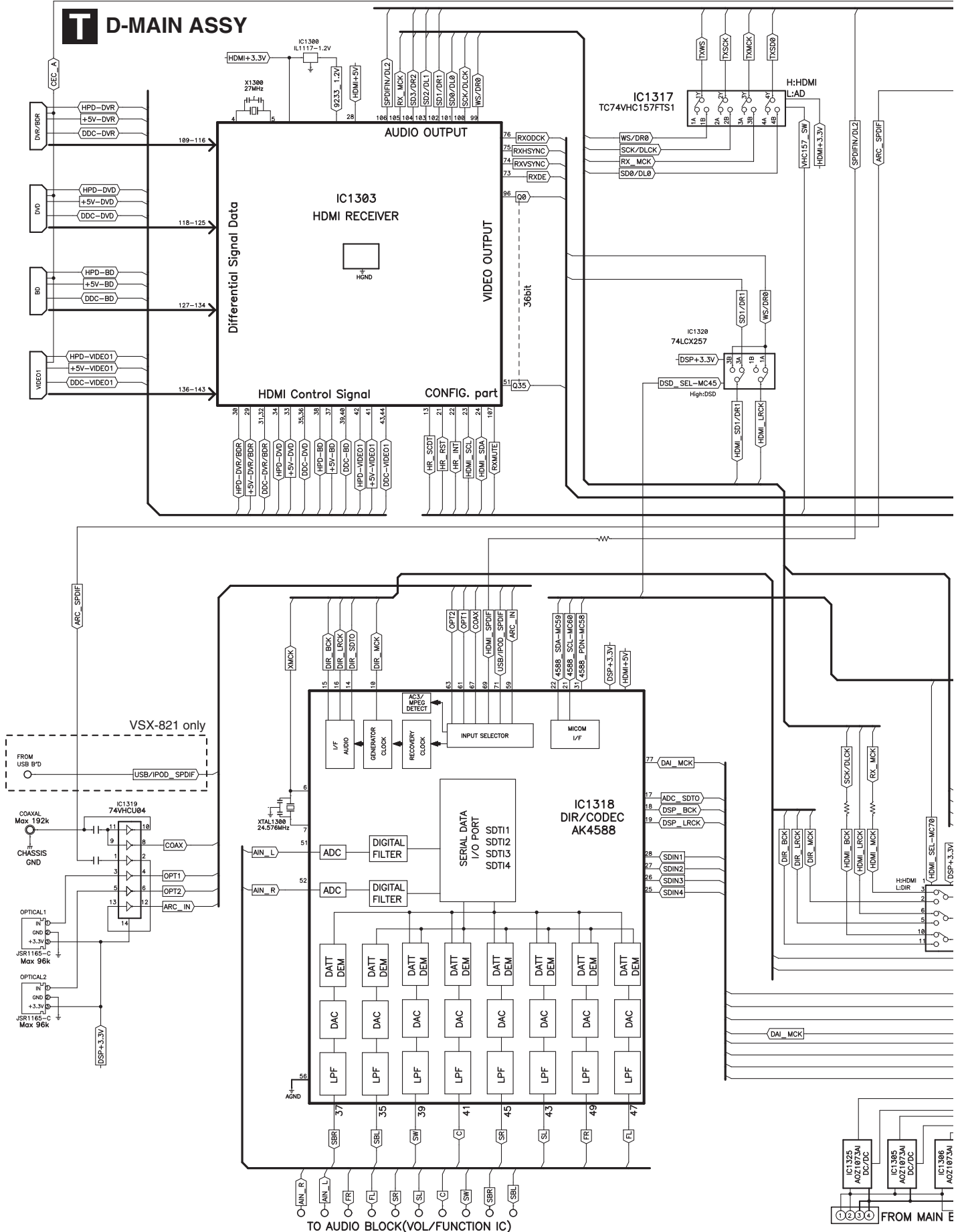
D MAIN ASSY



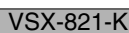
4.4 D-MAIN BLOCK DIAGRAM (for VSX-821-K, VSX-521-K)

T D-MAIN ASSY

A
B
C
D
E
F



VSX-821-K



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

T D-MAIN ASSY

A

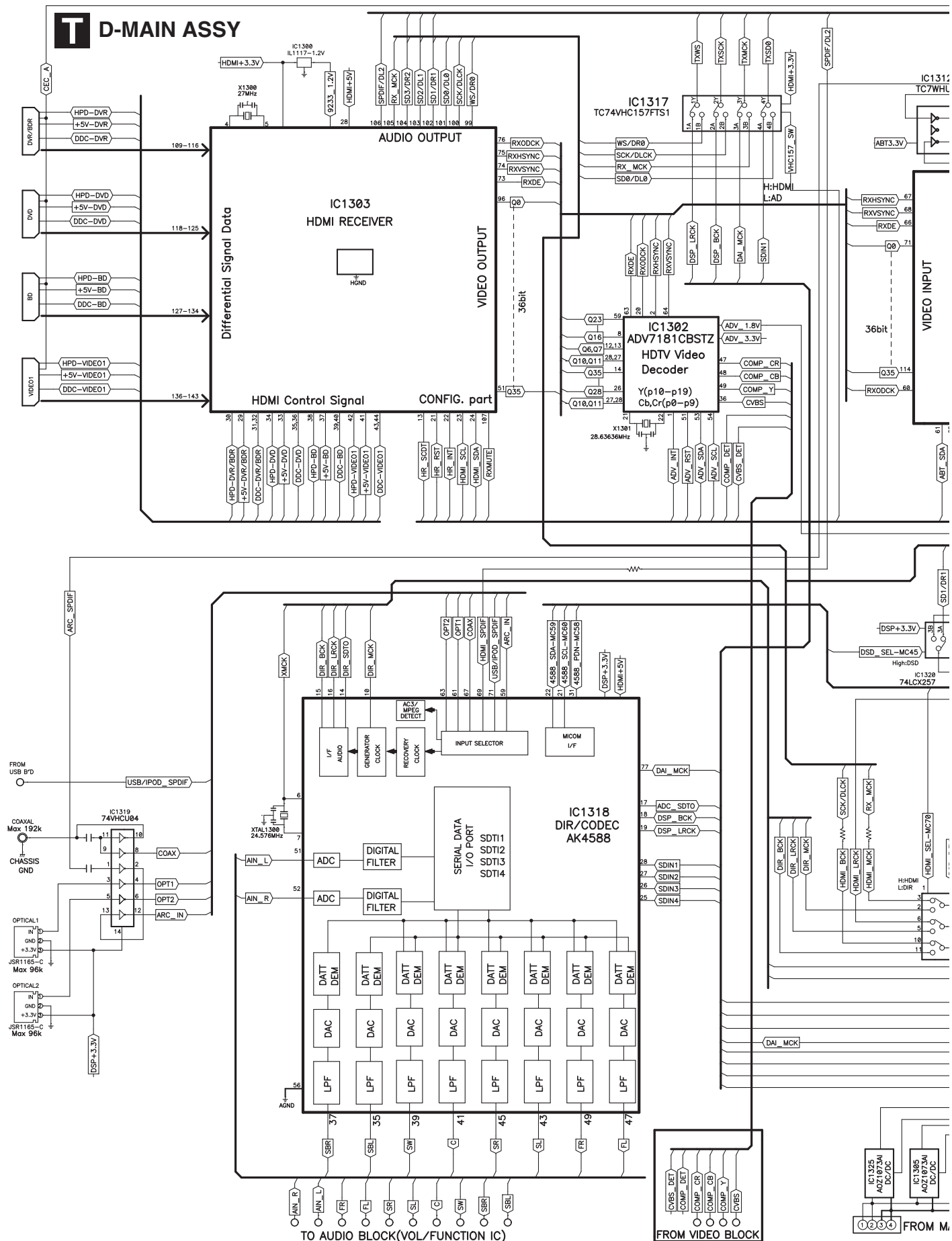
B

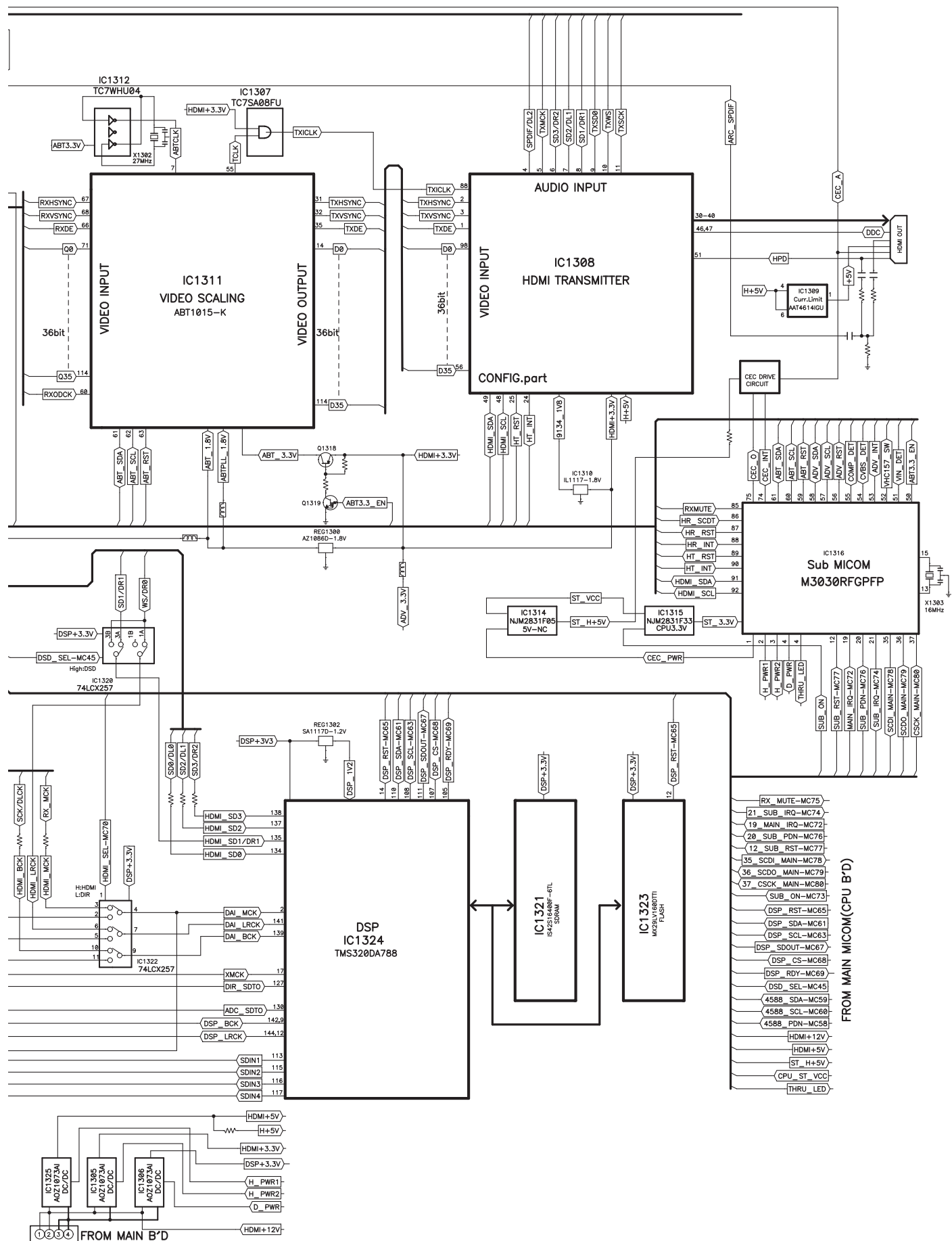
C

D

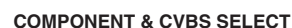
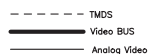
E

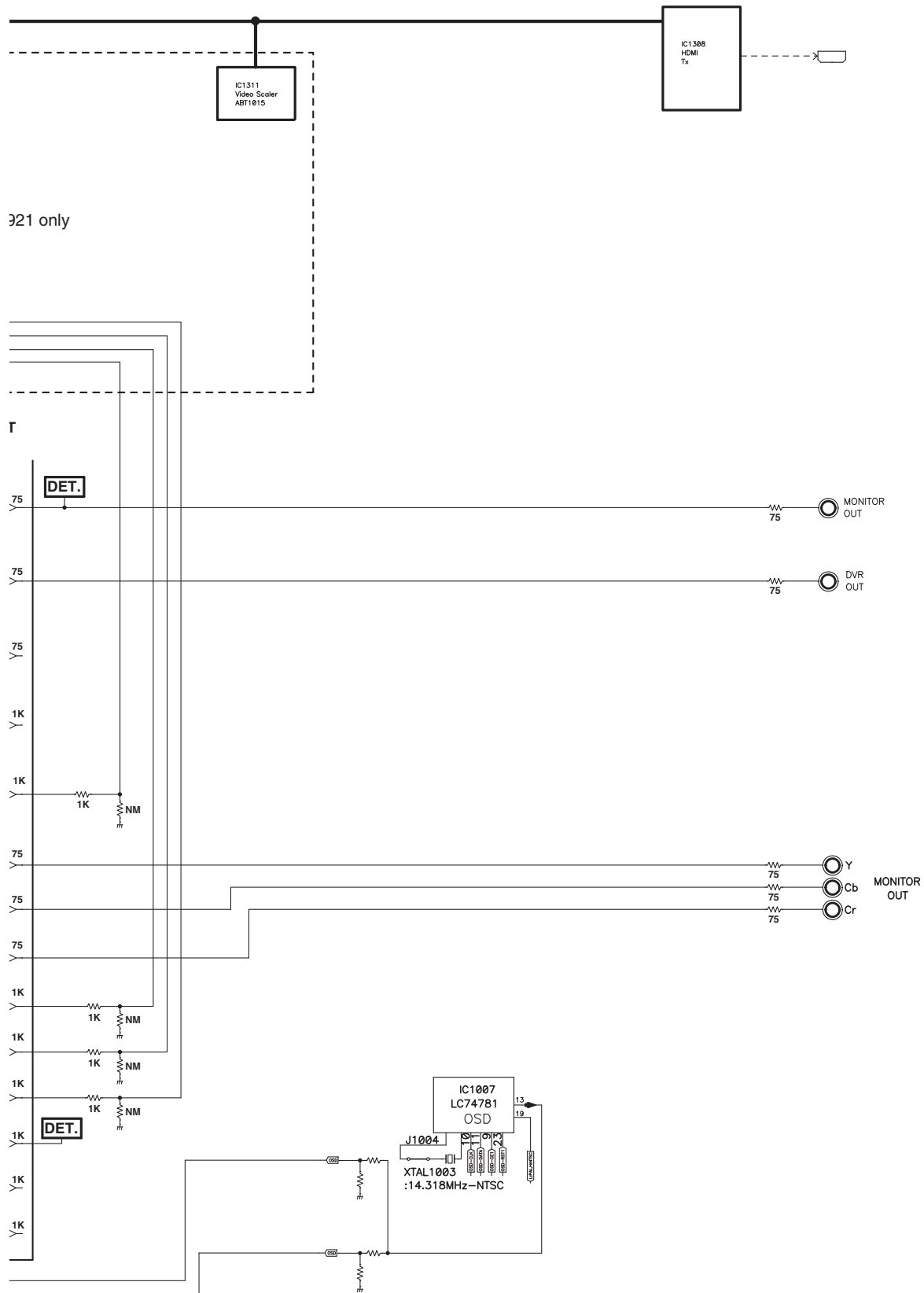
F





4



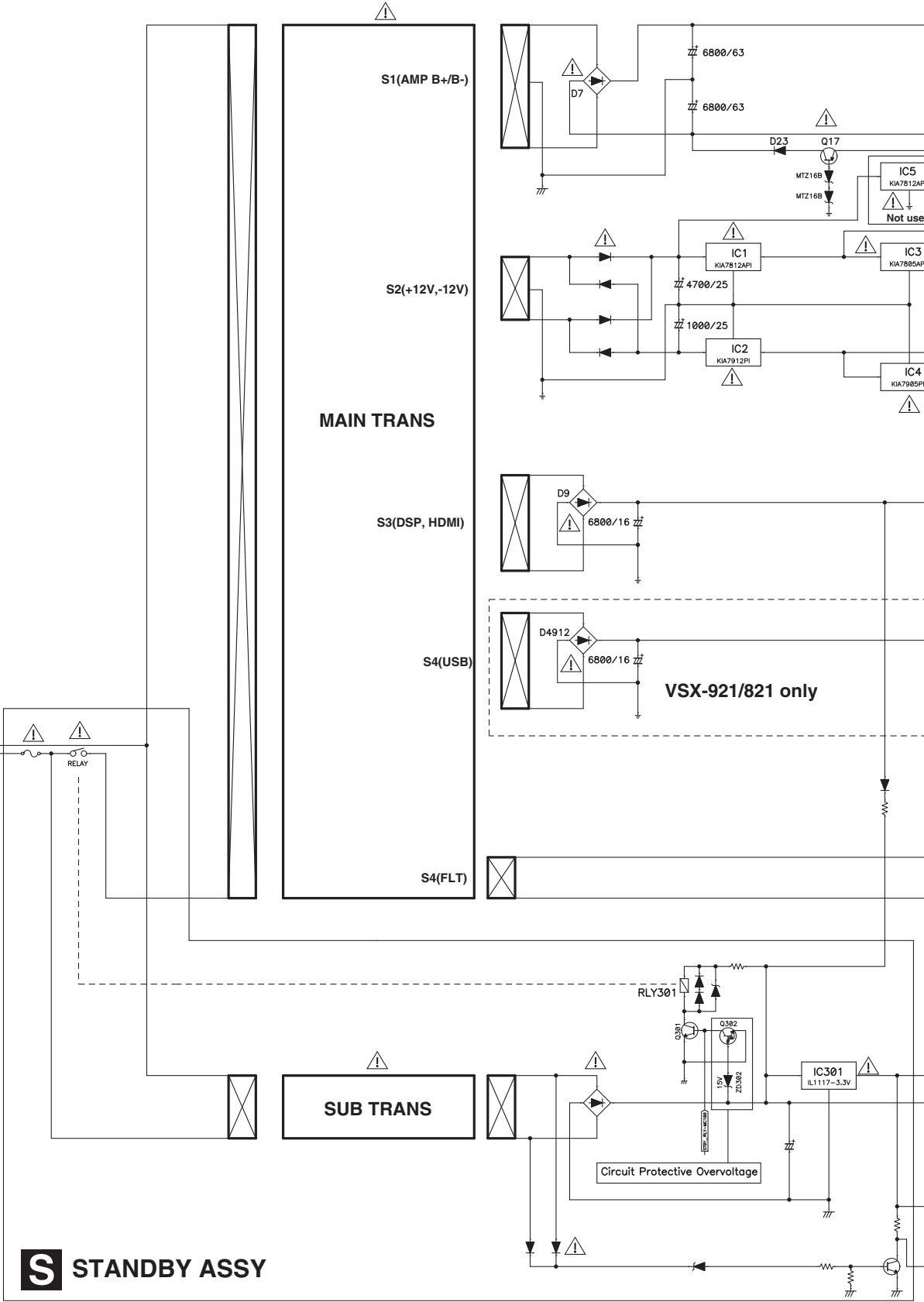


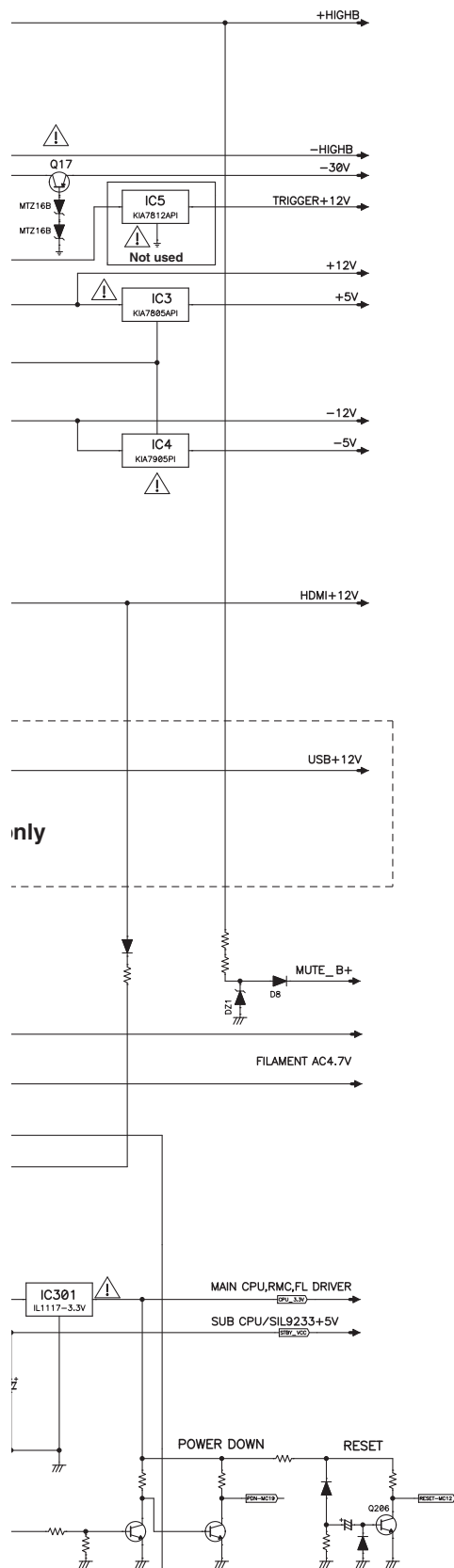
1 2 3 4

4.7 POWER SUPPLY and MAIN UCOM BLOCK DIAGRAM

A

D MAIN ASSY

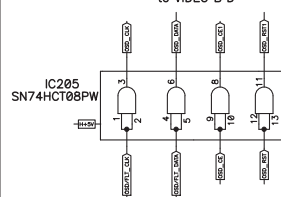




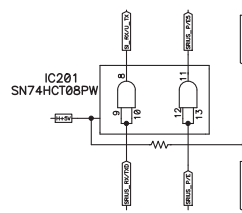
CPU ASSY

VSX-921: OSD DATA LEVEL SHIFT

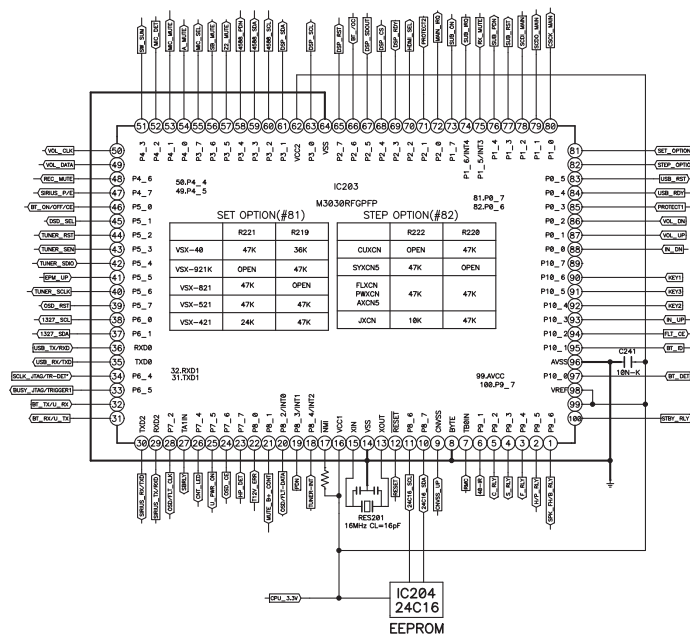
to VIDEO B'D



VSX-921/821 only SIRIUS DATA LEVEL SHIFT



MAIN MICOM

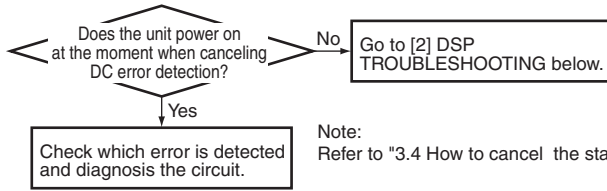


The mark found on some component parts indicates the importance of the safety factor of the part. Therefore when replacing be sure to use parts of identical designation

5. DIAGNOSIS

5.1 TROUBLESHOOTING

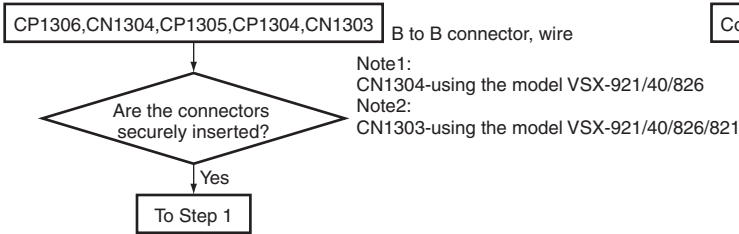
[1] No Power



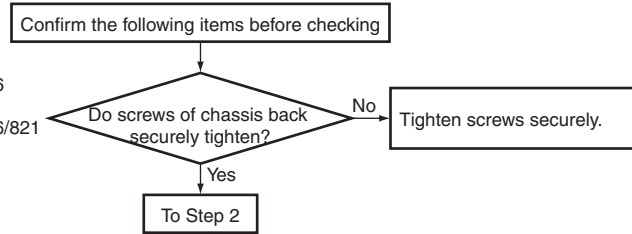
[2] DSP TROUBLESHOOTING

■ TROUBLESHOOTING FOR ALL DESTINATION

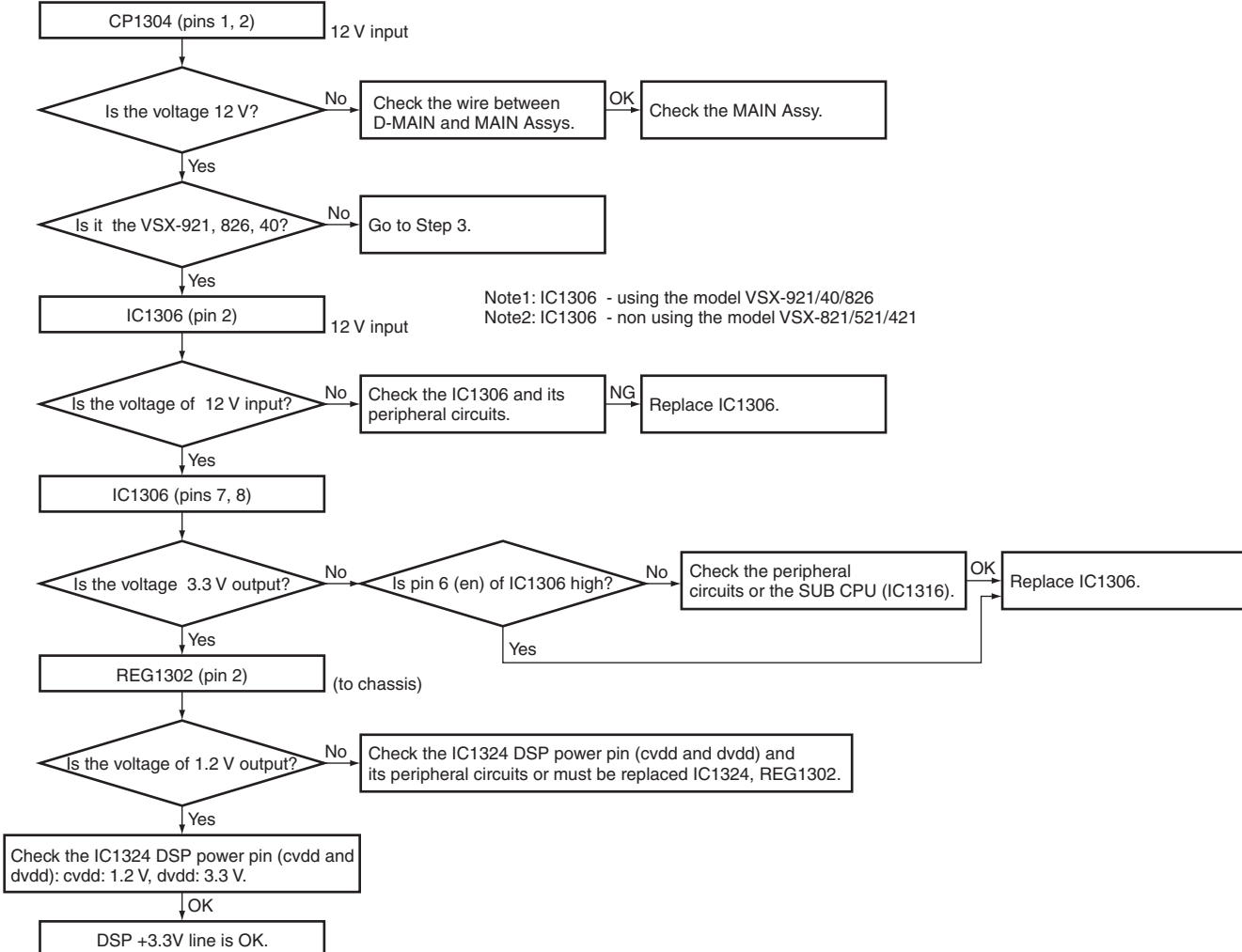
Step 0: Preliminary confirmation



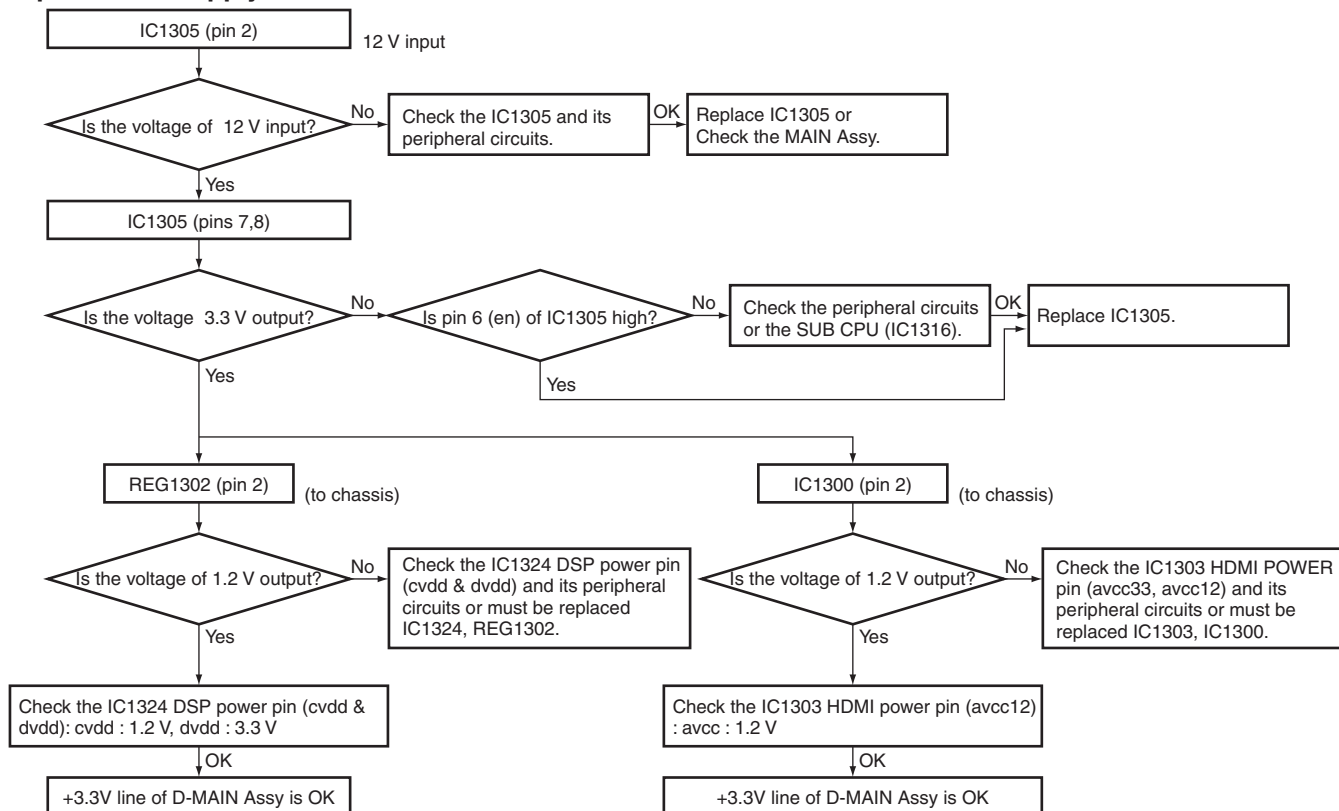
Step 1: Fixed board



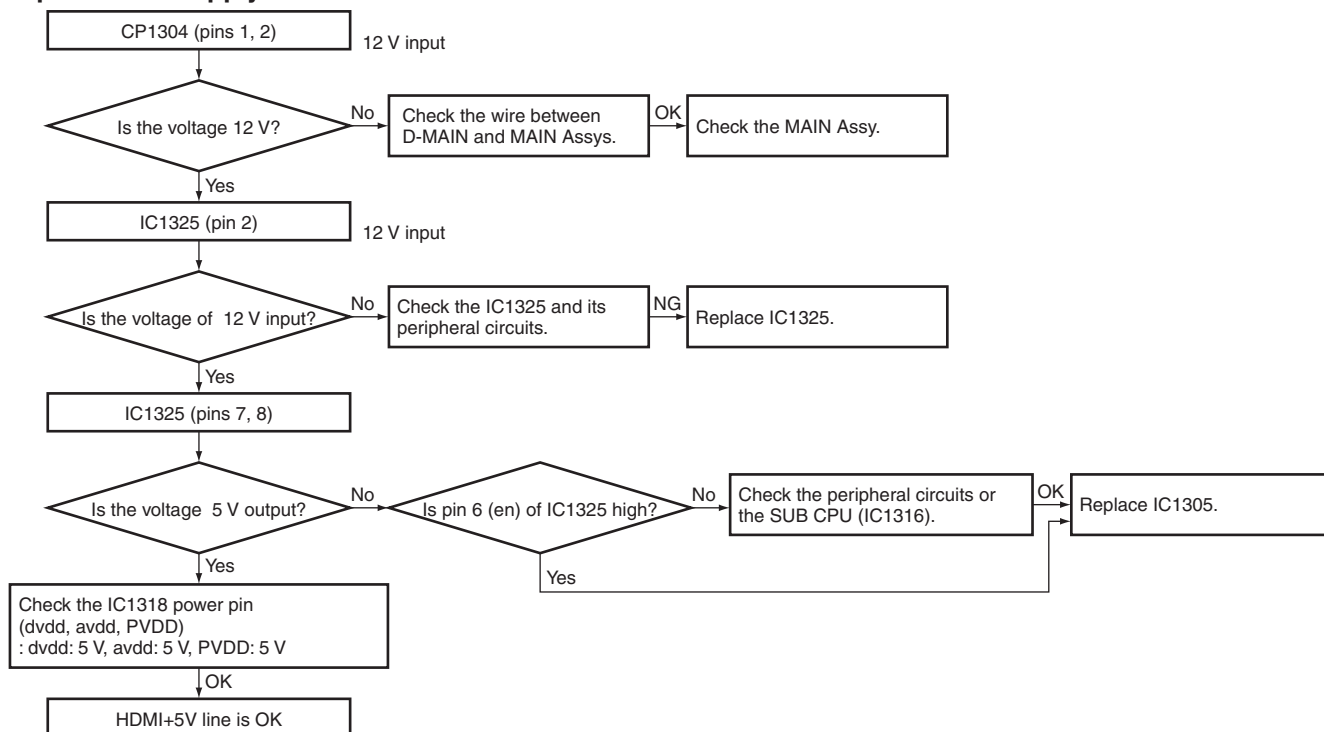
Step 2: Power supply



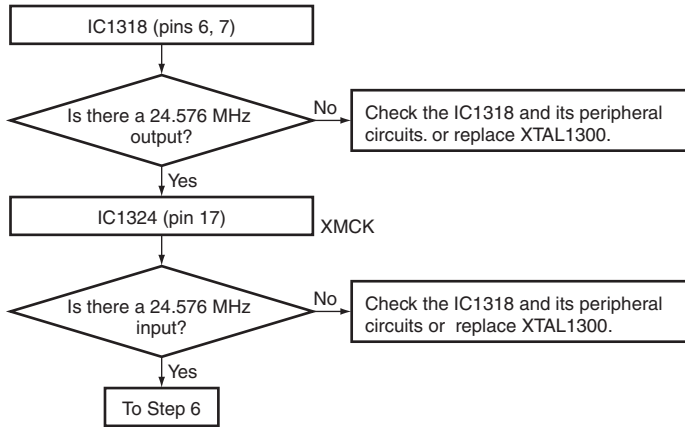
Step 3: Power supply



Step 4: Power supply

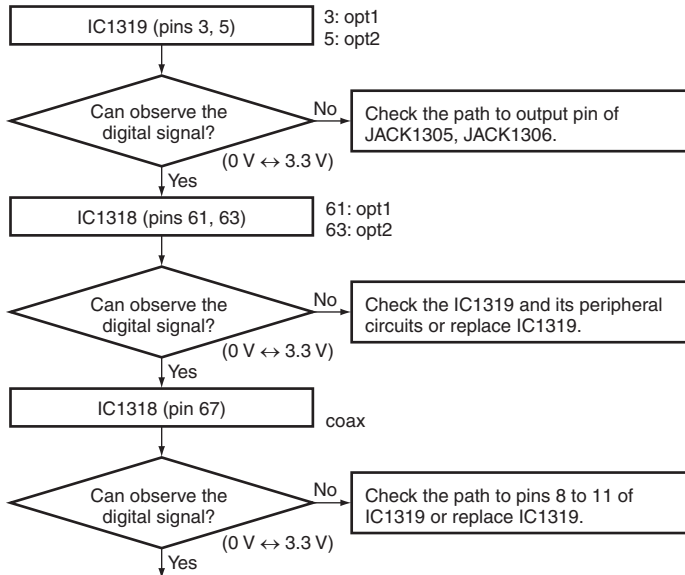


A Step 5: X'tal

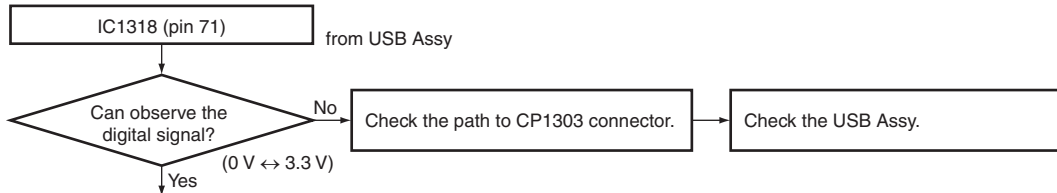


C Step 6: DIR

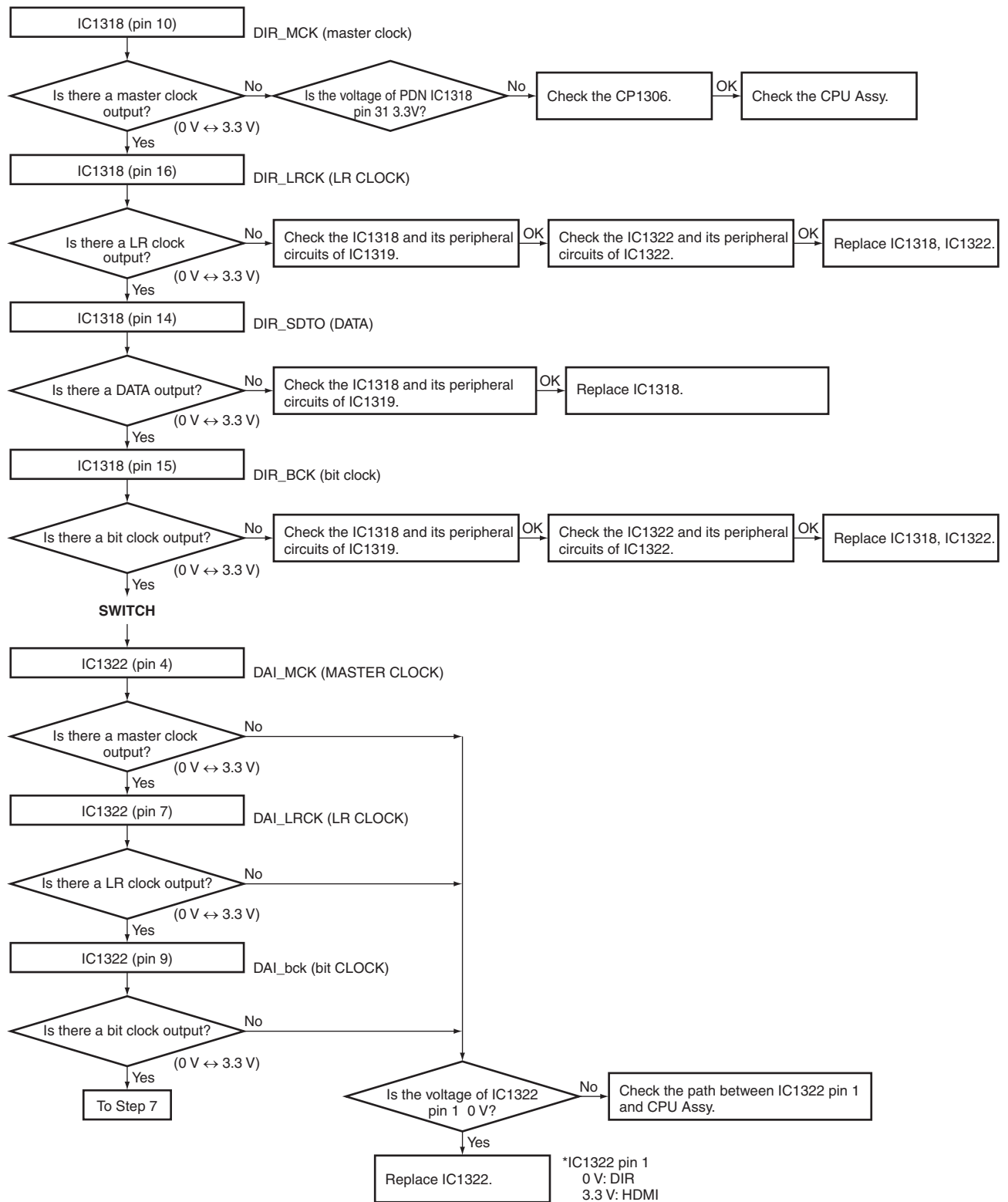
Check that the S/PDIF signal is output.
Check that changes by pulling out and inserting the digital input lines.



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

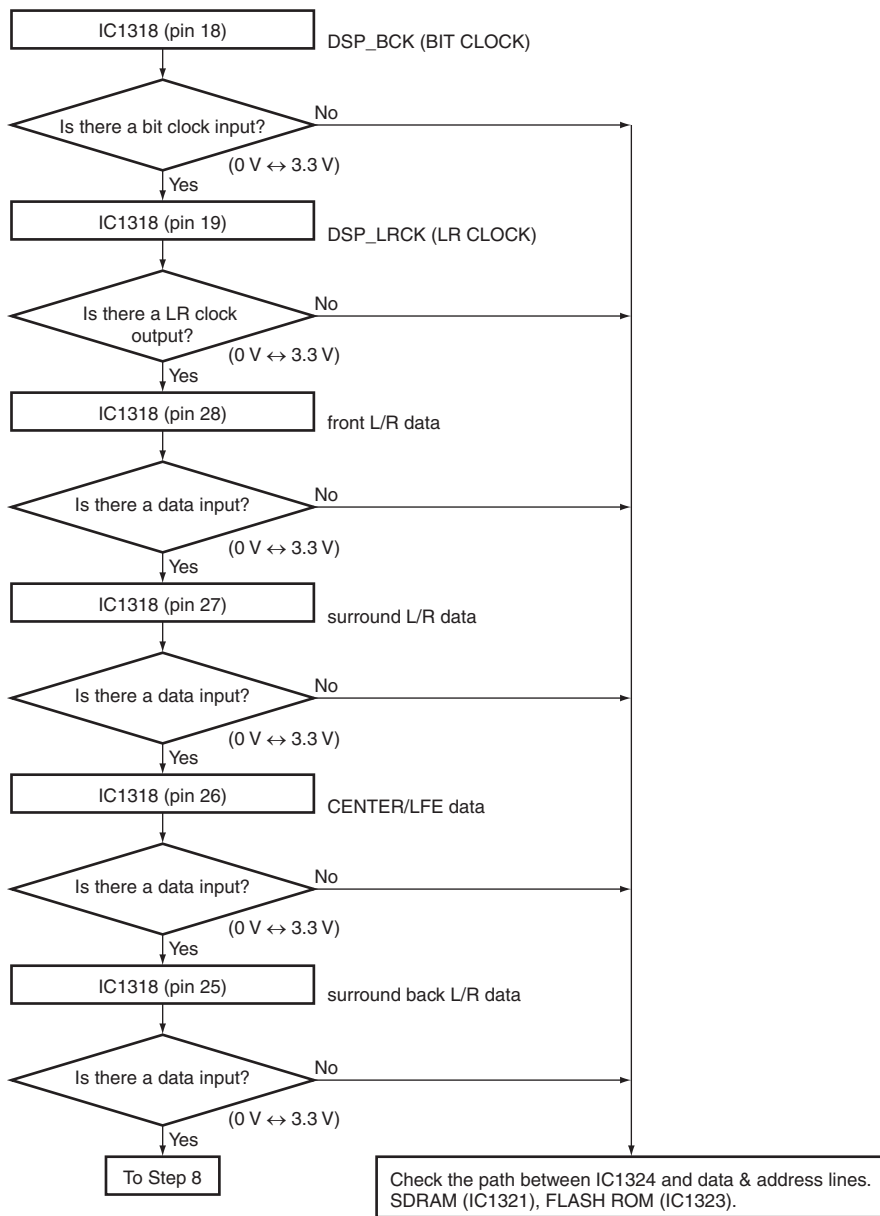


Check that the data and clock signals are output.



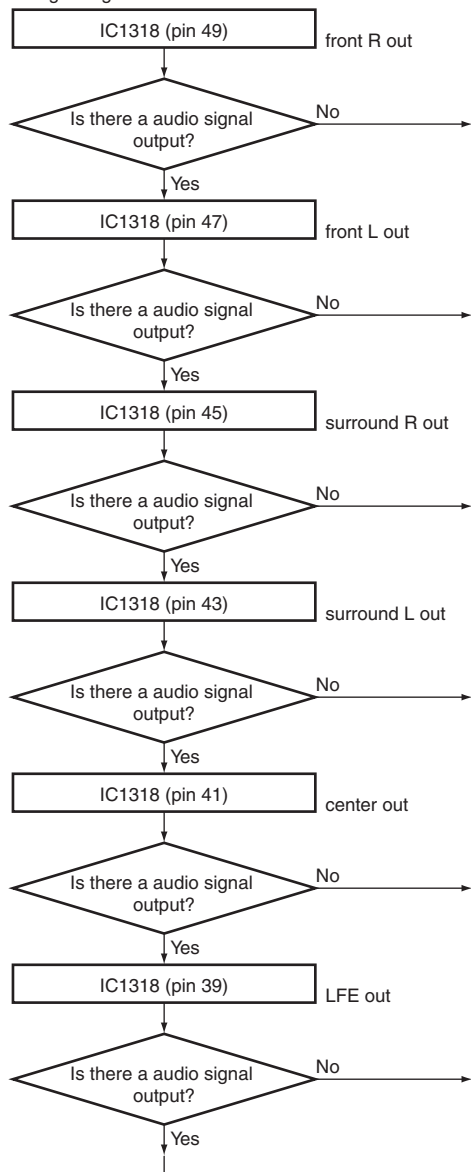
A Step 7: DSP output (digital)

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

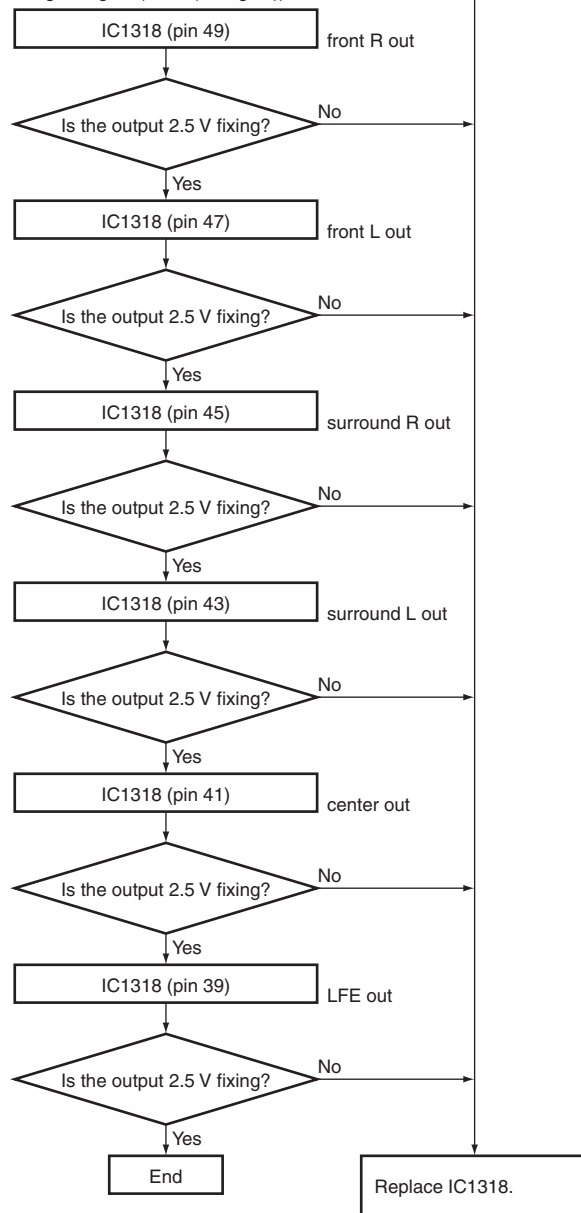


Step 8: CODEC output (ANALOG)

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



Analog output of each CH when inputting the digital signal (-∞ dB(no signal)).



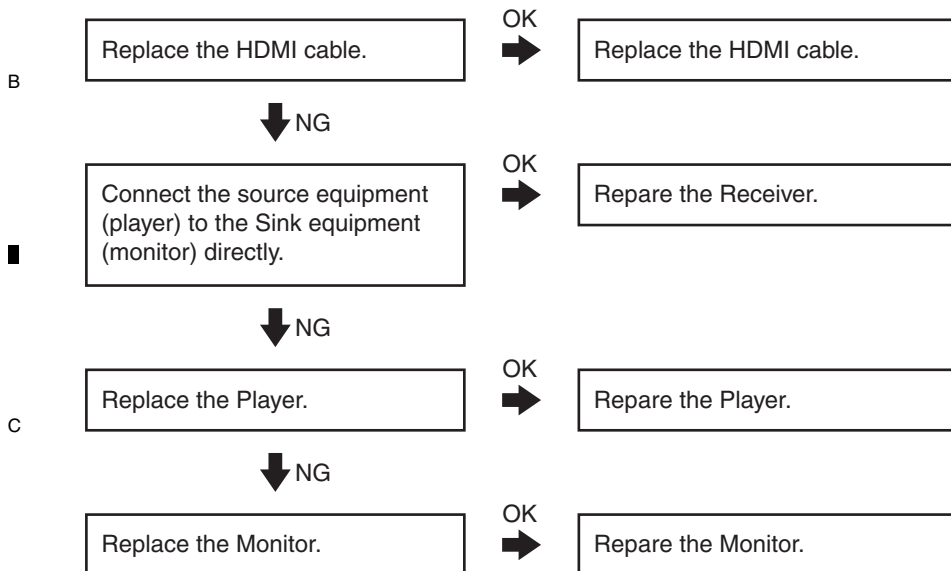
A [3] HDMI TROUBLESHOOTING

■ HDMI Troubleshooting

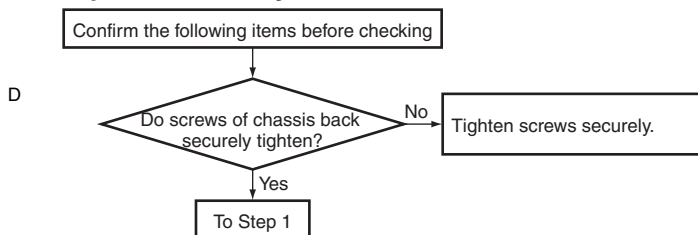
Cause for noncompletion of HDMI authentication between the source equipment and this unit.
(the HDMI indicator is unlit or flasher)

■ HDMI Simple Diagnosis

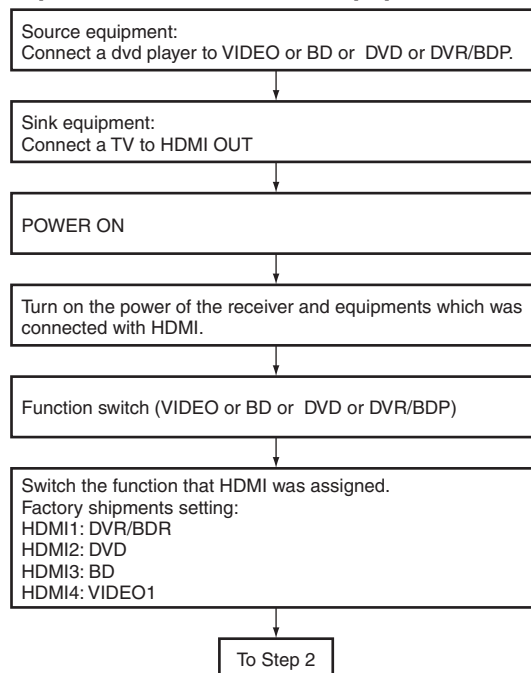
Causes for no display or sound from the monitor



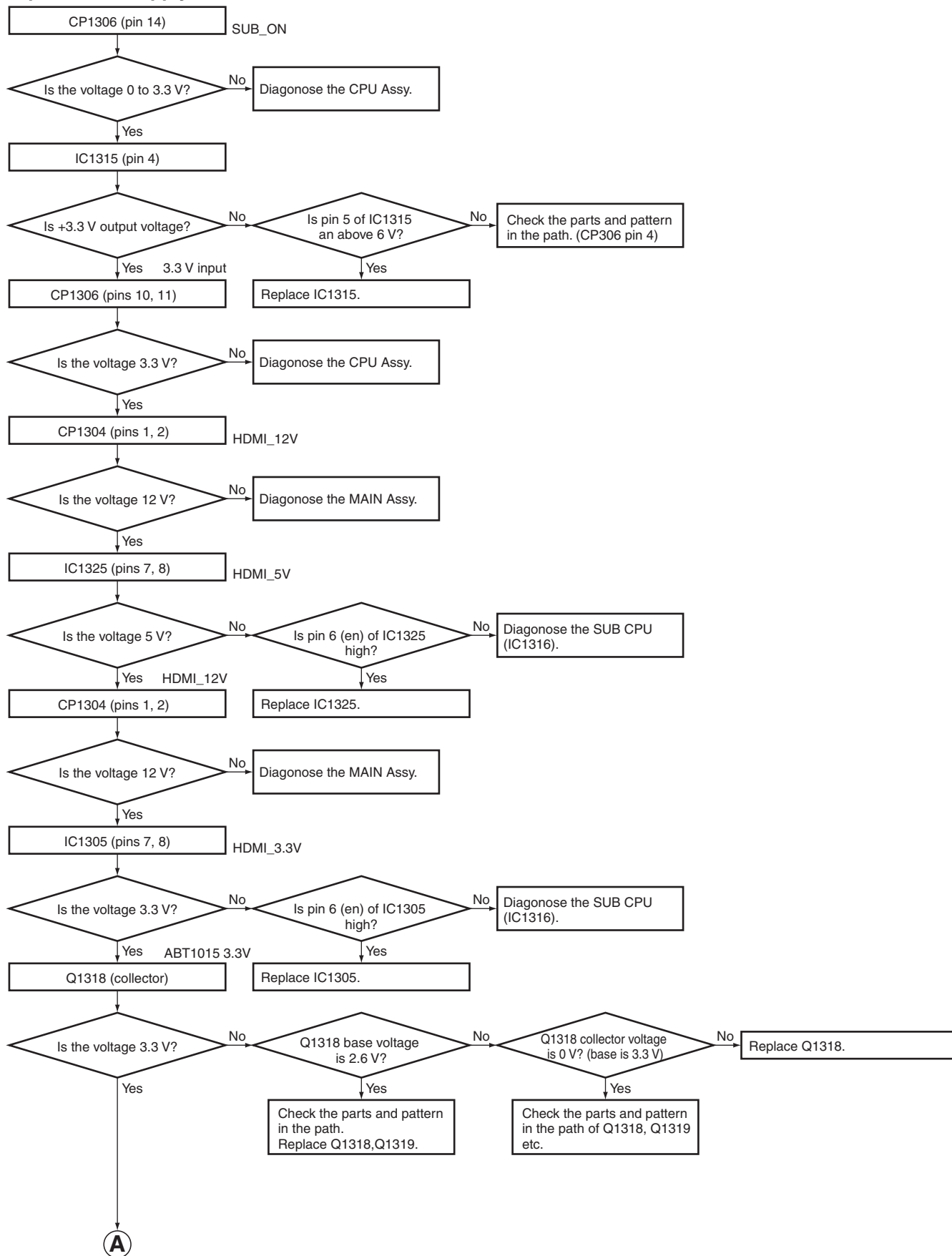
Step 0: Preliminary confirmation



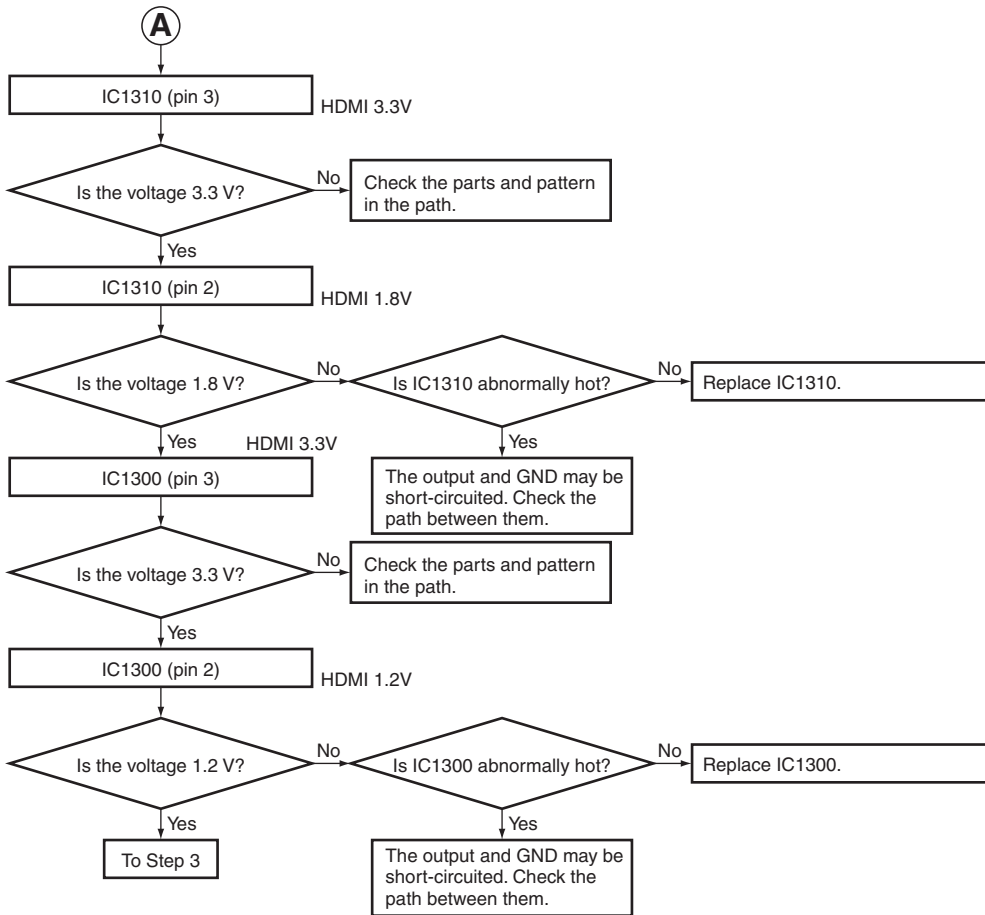
Step 1: Connect the HDMI equipment



Step 2: Power supply



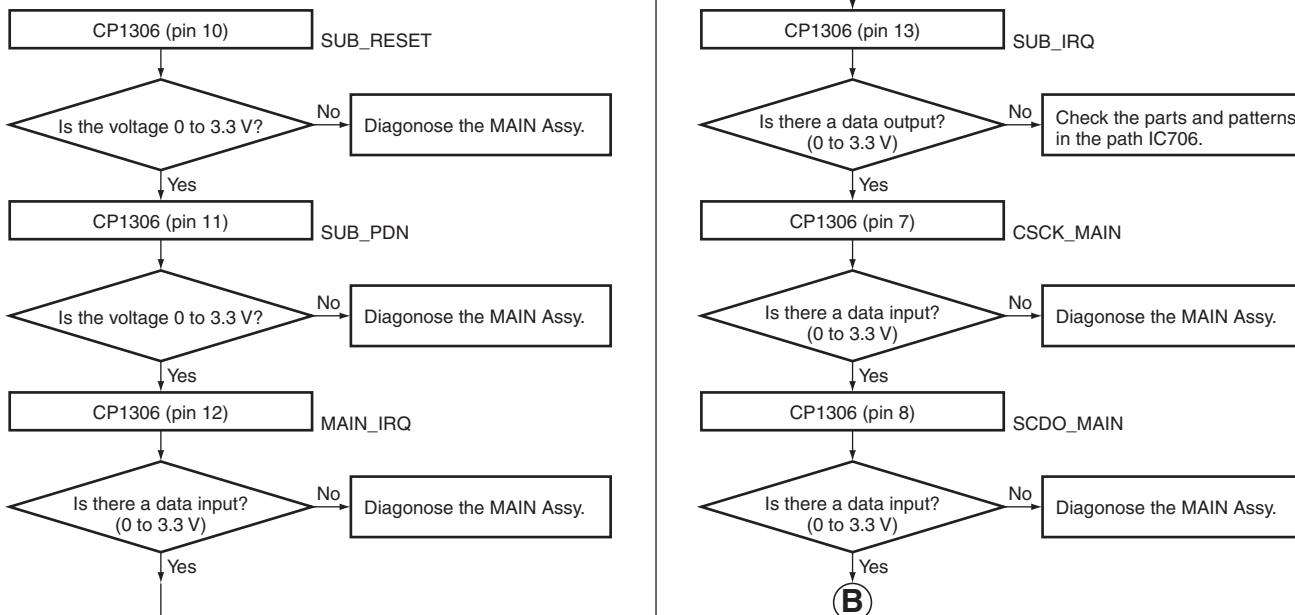
A



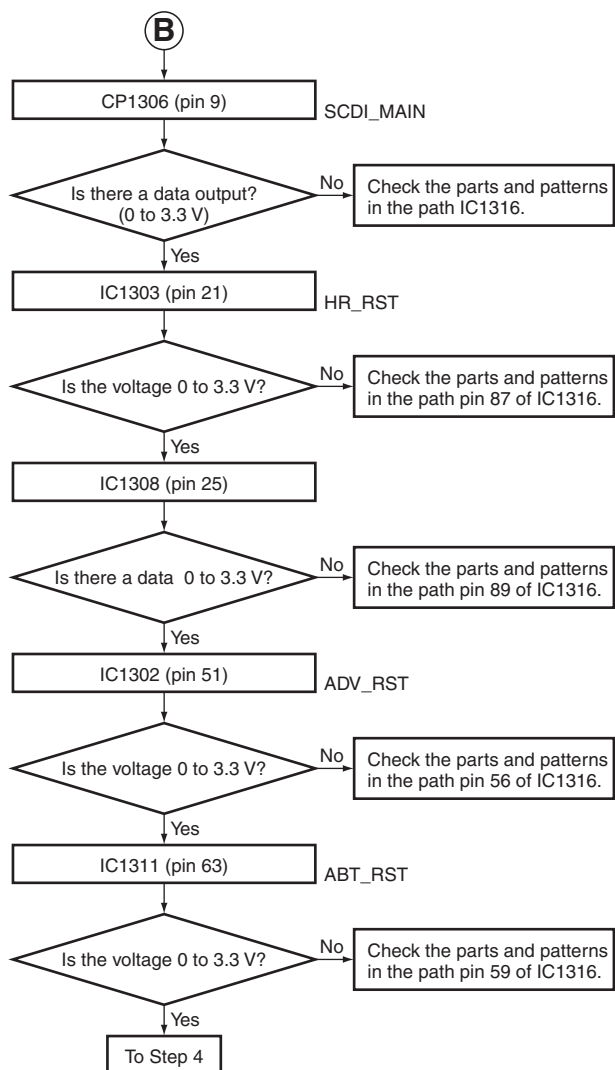
D

Step 3: Diagnosis

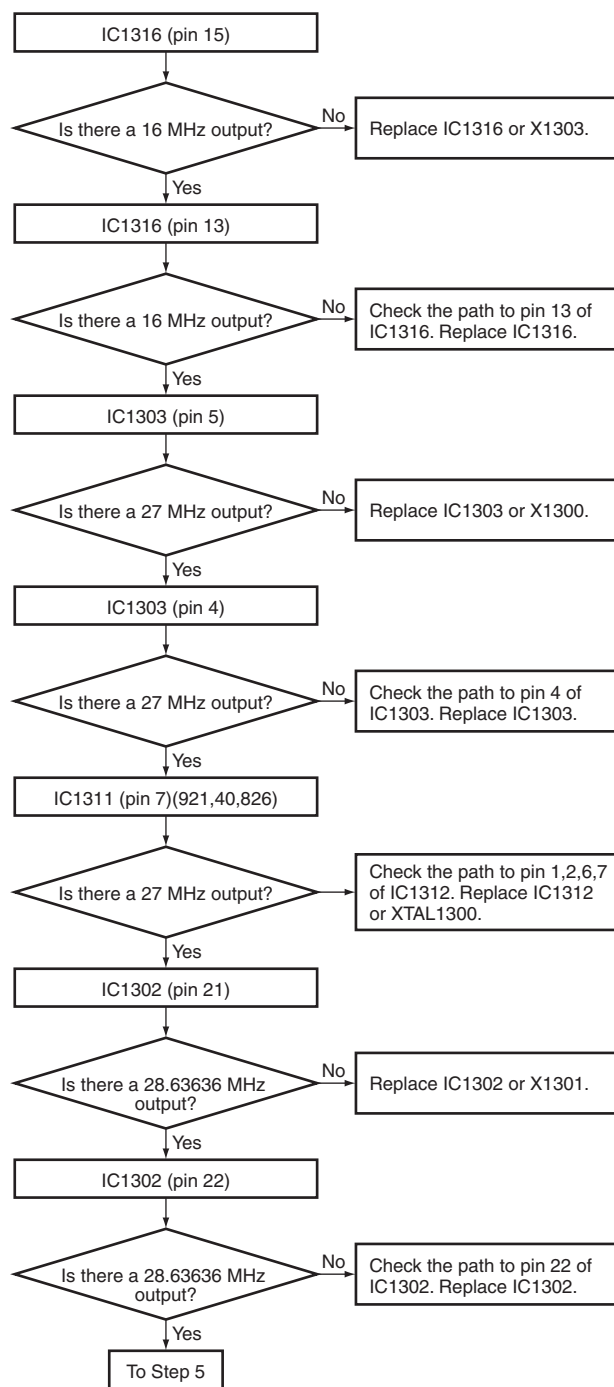
Each data lines confirmation checks it after standby off/on.



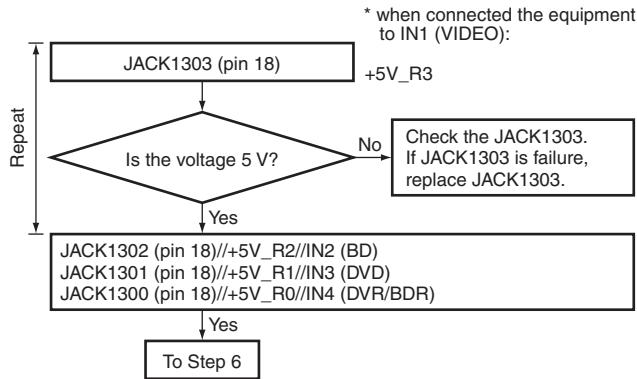
F



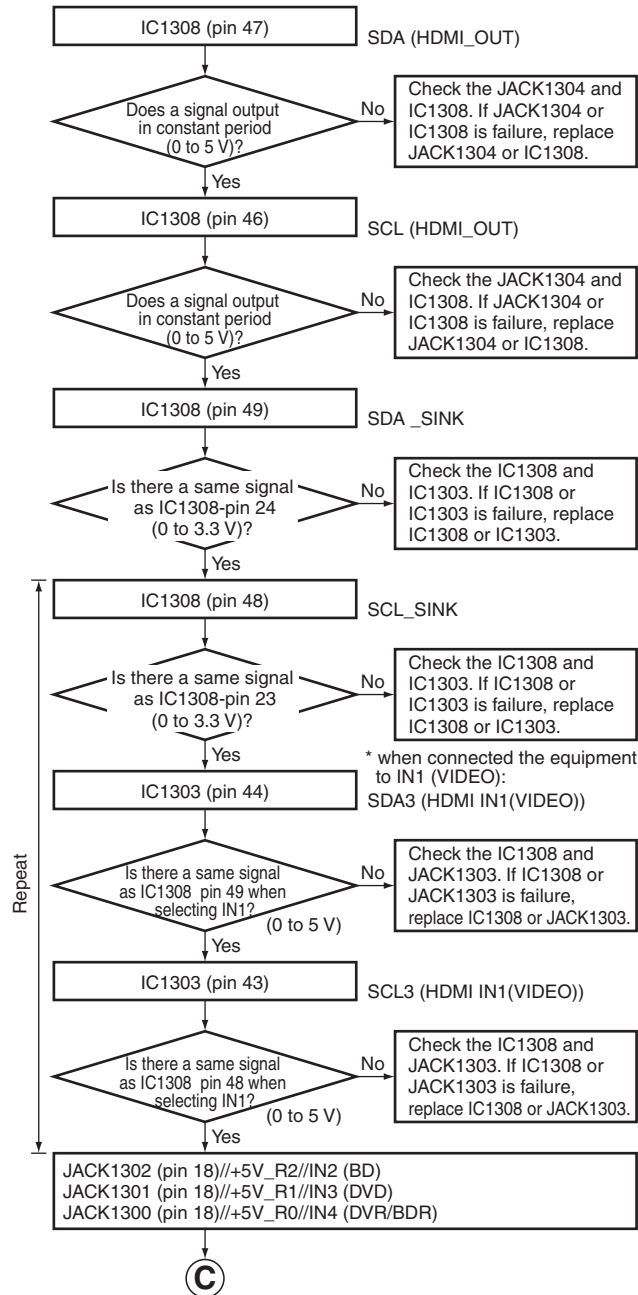
Step 4: X'TAL



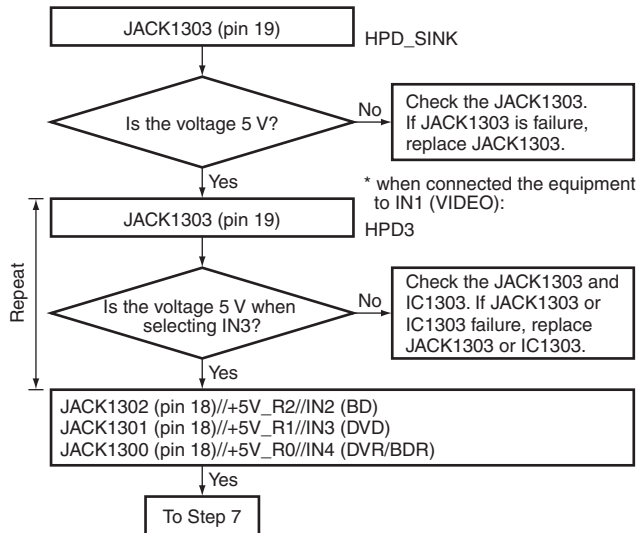
A Step 5: INPUT/OUTPUT Diagnosis

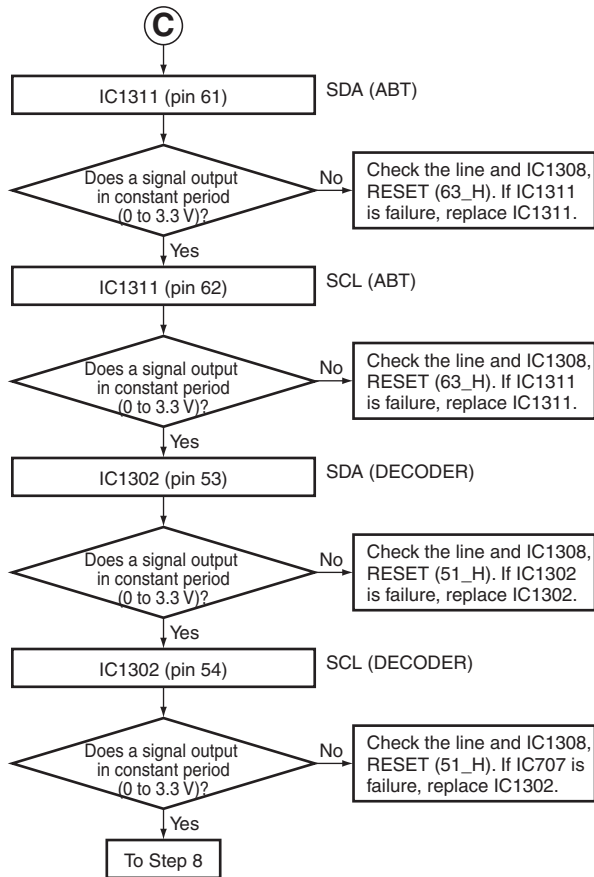


Step 7: SDA /SCL

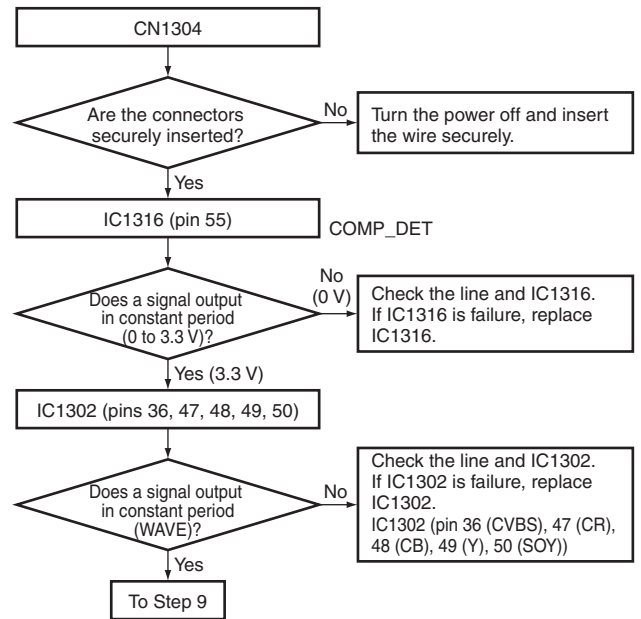


Step 6: Hot Plug Detect

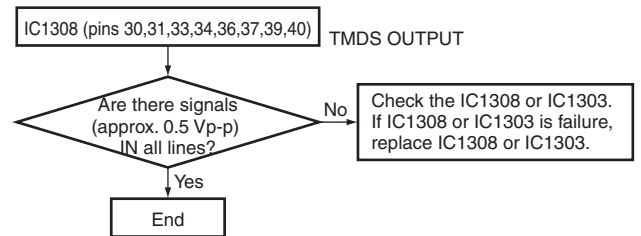




Step 8: ANALOG UP

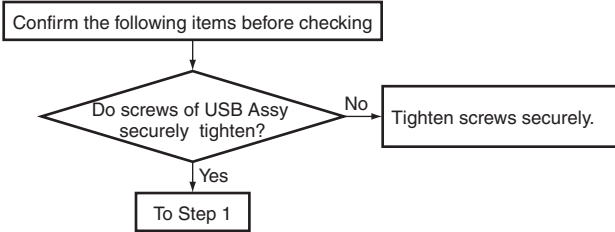


Step 9: TMDS

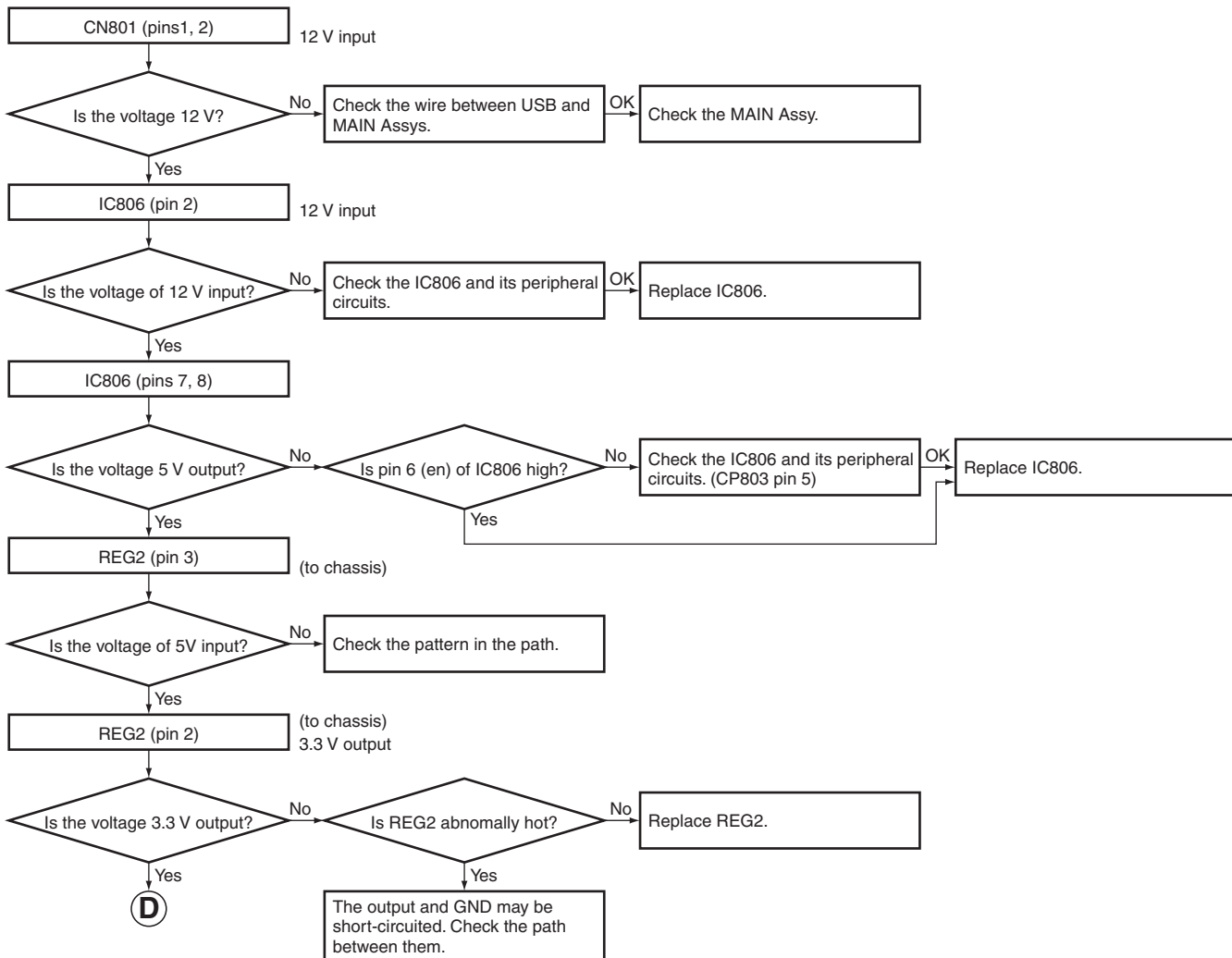


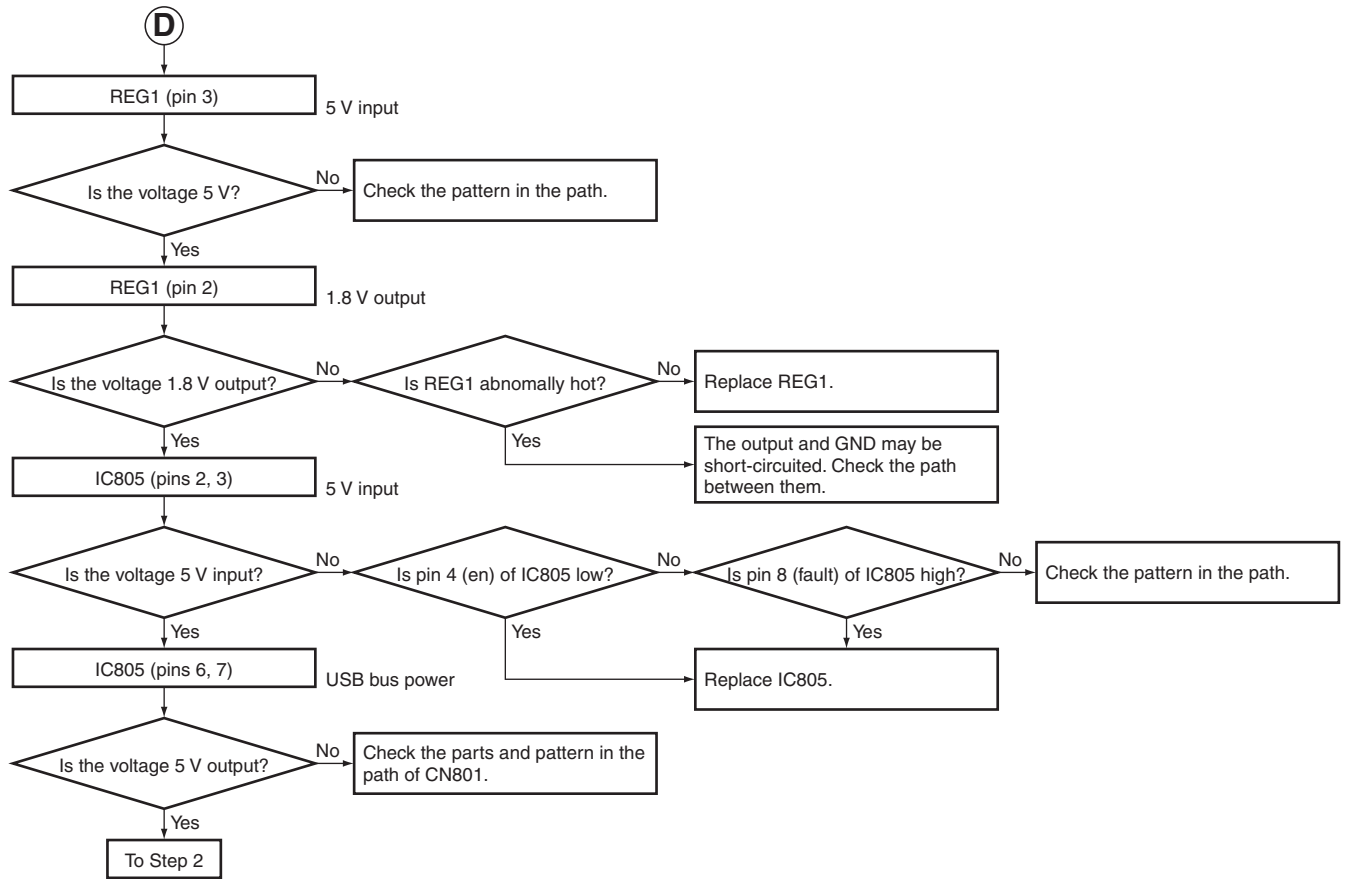
A [4] iPod TROUBLESHOOTING

Step 0: Preliminary confirmation

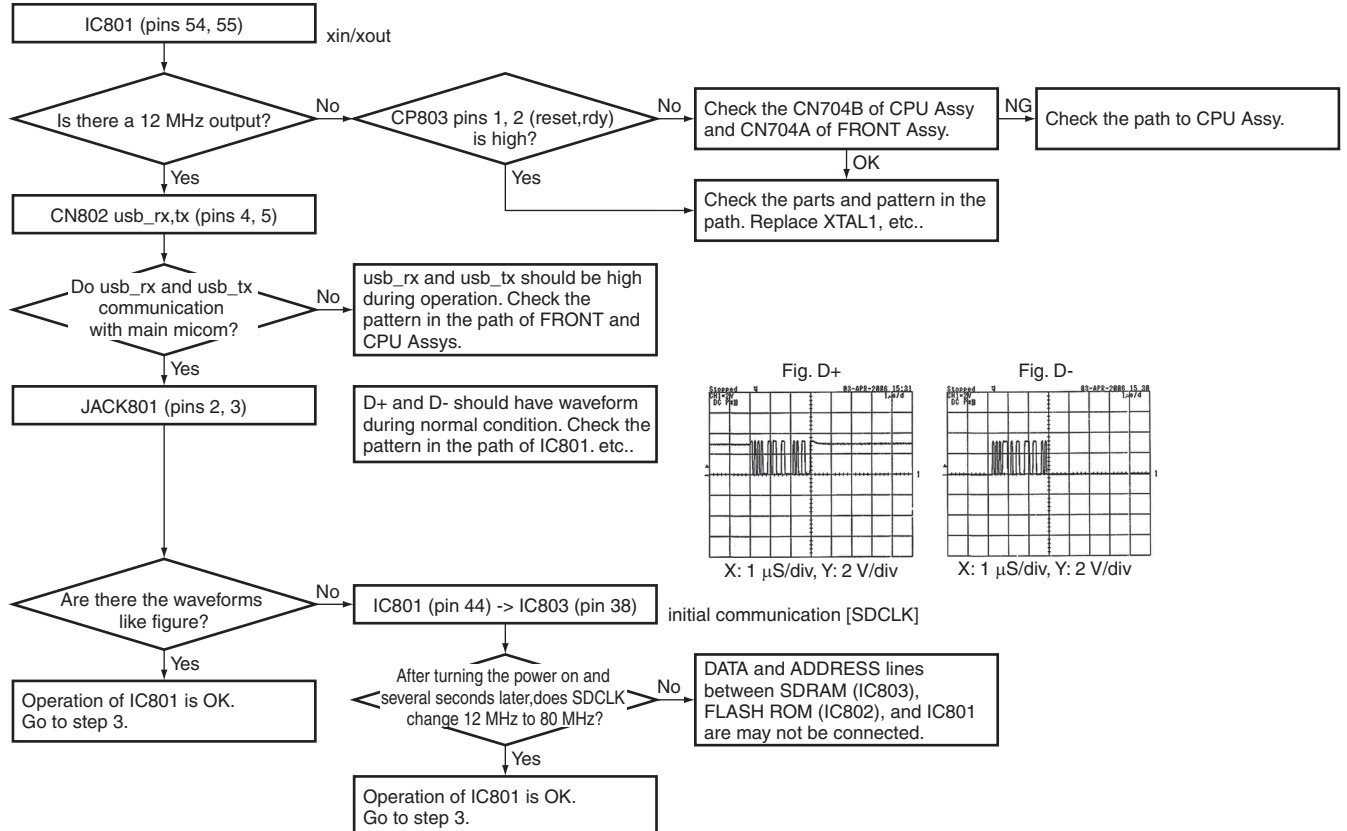


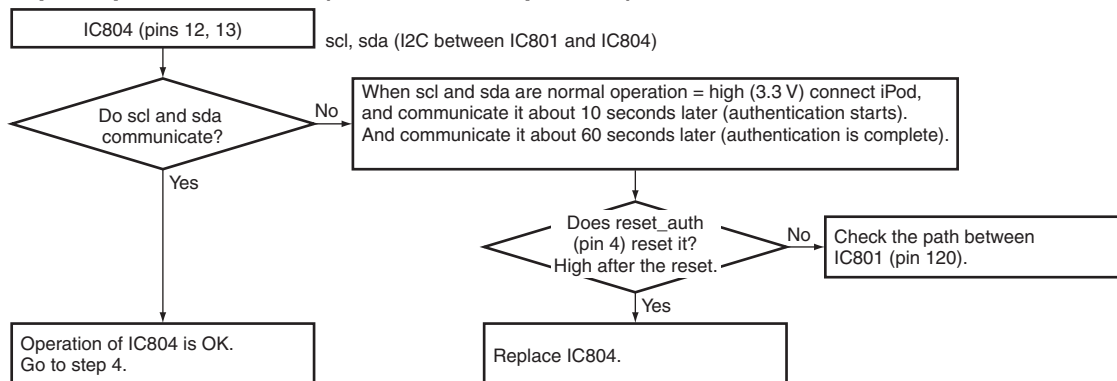
Step 1: Power supply



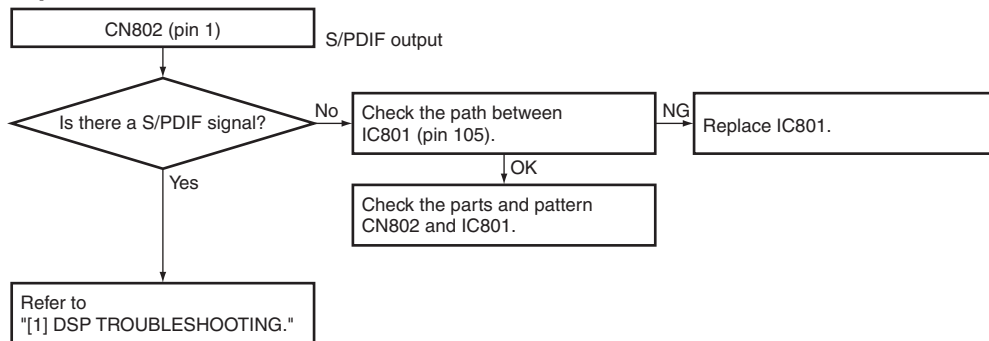


Step 2: Operation of USB Media Control IC



A Step 3: Operation of iPod (Authentication process)

B

Step 4: Audio out check

C

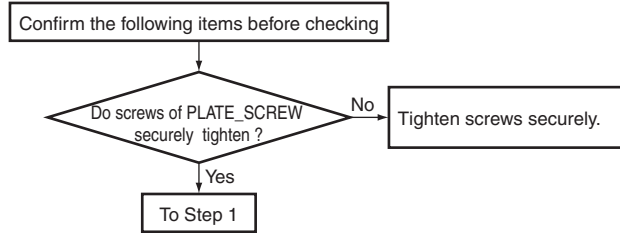
D

E

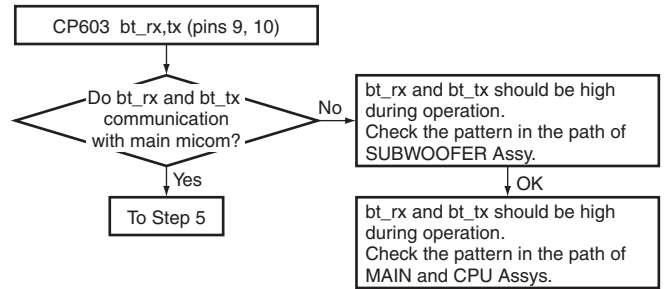
F

[5] BT (Bluetooth) TROUBLESHOOTING

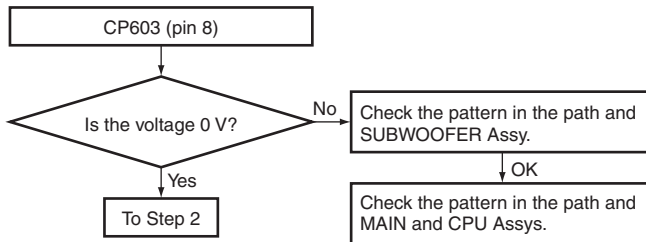
Step 0: Preliminary confirmation



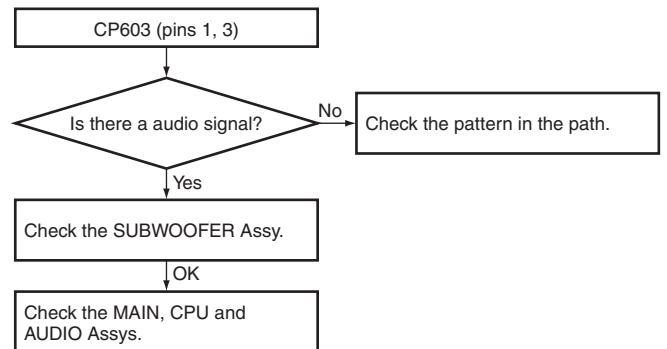
Step 4: Communication



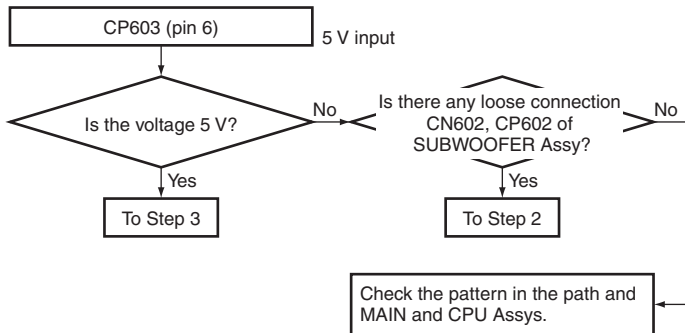
Step 1: BT_DET



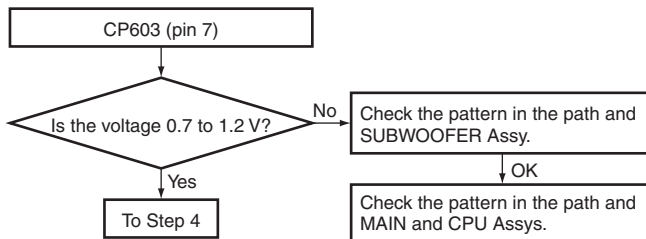
Step 5: Audio out check



Step 2: Power supply



Step 3: BT_ID



5.2 ADAPTER ERROR MESSAGE

A

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

B

Front Key Sequence Change	Character Display	Time (sec.)	Icon Display (FL)	LED Display
When the overcurrent is detected	12345678 A D P E R R 12 *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.

C

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.

Functional Name
iPod ERROR MESSAGE

Outline
Error message is displayed at abnormality time.

Basic Operation

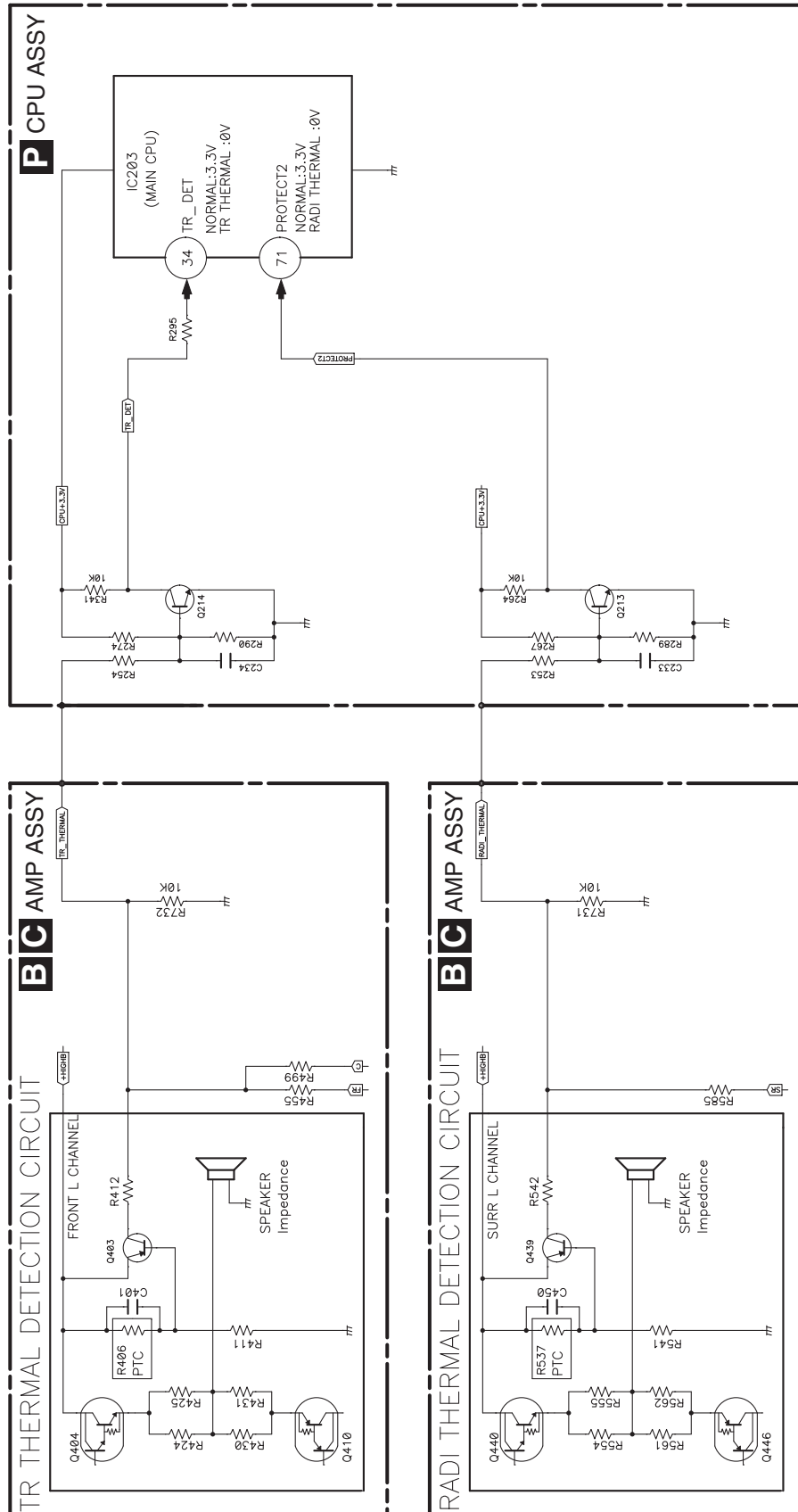
Front Key Sequence Change	OSD display	Time (sec)	FL Display
The communication error iPod/USB communication error	1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 1 iPod 2 3 iPod / USB Error 1 4 5 6 7 8 9 0 1 2		I / U ERR:1
Generation error	1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 1 iPod 2 3 iPod / USB Error 2 4 5 6 7 8 9 0 1 2		I / U ERR:2
Loading error	1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 1 iPod 2 3 4 iPod / USB Error 3 5 6 7 8 9 0 1 2		I / U ERR:3
OverHeat error	1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 1 iPod 2 3 4 iPod / USB Error 4 5 6 7 8 9 0 1 2		I / U ERR:4
No Track Caution	1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 1 iPod 2 3 4 No Track 5 6 7 8 9 0 1 2		NO TRACK

△

A



[2] TEMP Protection Circuit



6.1 SERVICE MODE

[Purpose]

[How to enter/exit]

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)			
[ENTER] key			
↓			
[ENTER] key			
↓			
[ENTER] key			
↓			
(Initial display)			

*2 Variable range: 0 to 255

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

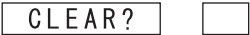
[Purpose]

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.)		5 (-> normal) *1	
[ENTER] key ↓		5 (-> normal) *1	
(Counter Clear end)			
(Normal display)	 *2	usually	

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

*2 Indication when the BD function is selected

[Detailed explanations]

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

A [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

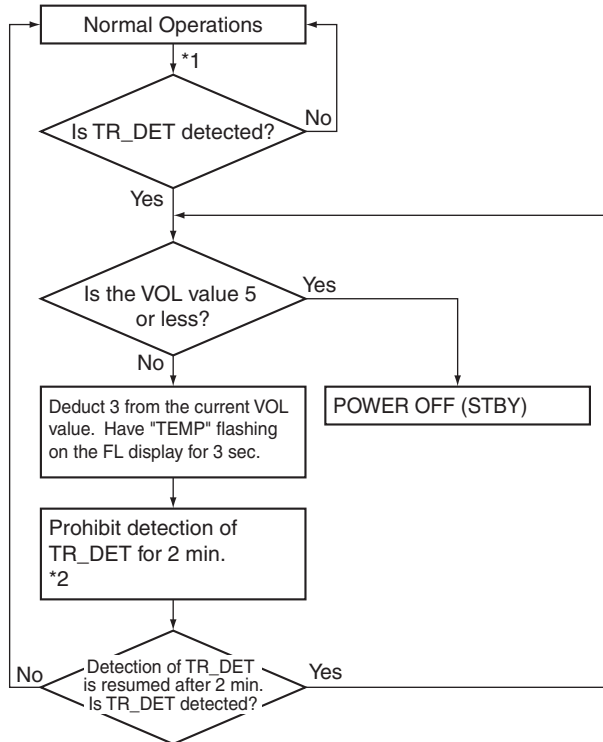
Key Operation	FL Display	Time (sec.)	Description of Indications
(Normal display)	B D ☐	usually	Normal display
(OVERLOAD detection)	B D ☐		
↓ (Auto) (RECEIVER POWER OFF) *1	☐		

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.

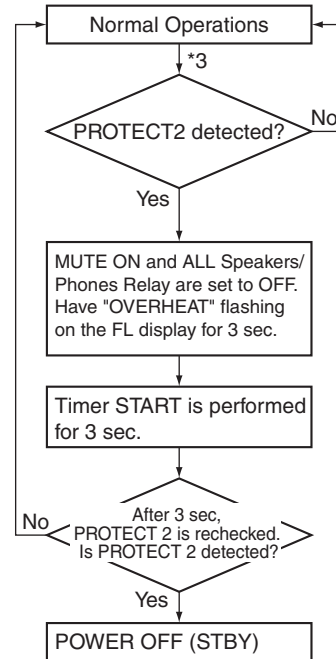
Counter: Temp2 TR_DET
P6_4 (34 pin)
(TRTHER_DET from AMP Assy)



*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)	BD	usually	Normal display

[Detailed explanations]

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

7. DISASSEMBLY

Note:

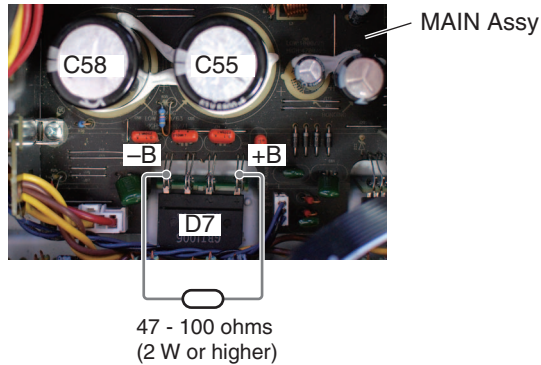
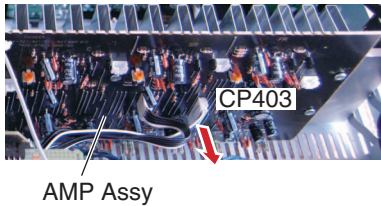
- (1) Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.
- (2) For performing the diagnosis shown below, the following jigs for service is required:
 - Board to board extension jig cable (GGD1733)
 - Board to board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

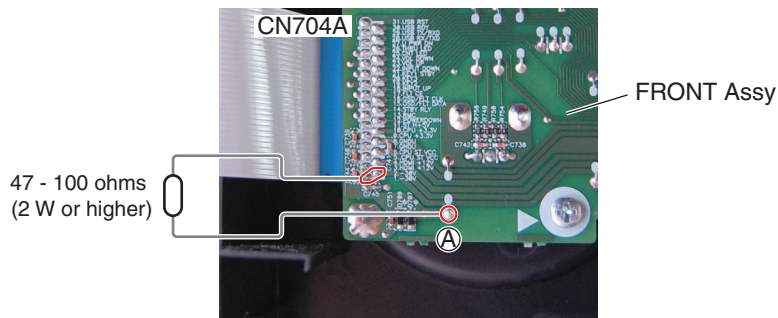
- (1) Unplug the power cord.
- (2) Disconnect the 10P connector from CP403 of the AMP Assy between CN3 of the MAIN Assy.
- (3) Connect +B and -B terminal of the D7, using resistor leads with 47 - 100 ohms (2 W or higher), for discharging.
 - * Discharging time: 30 - 60 seconds, depending on the level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

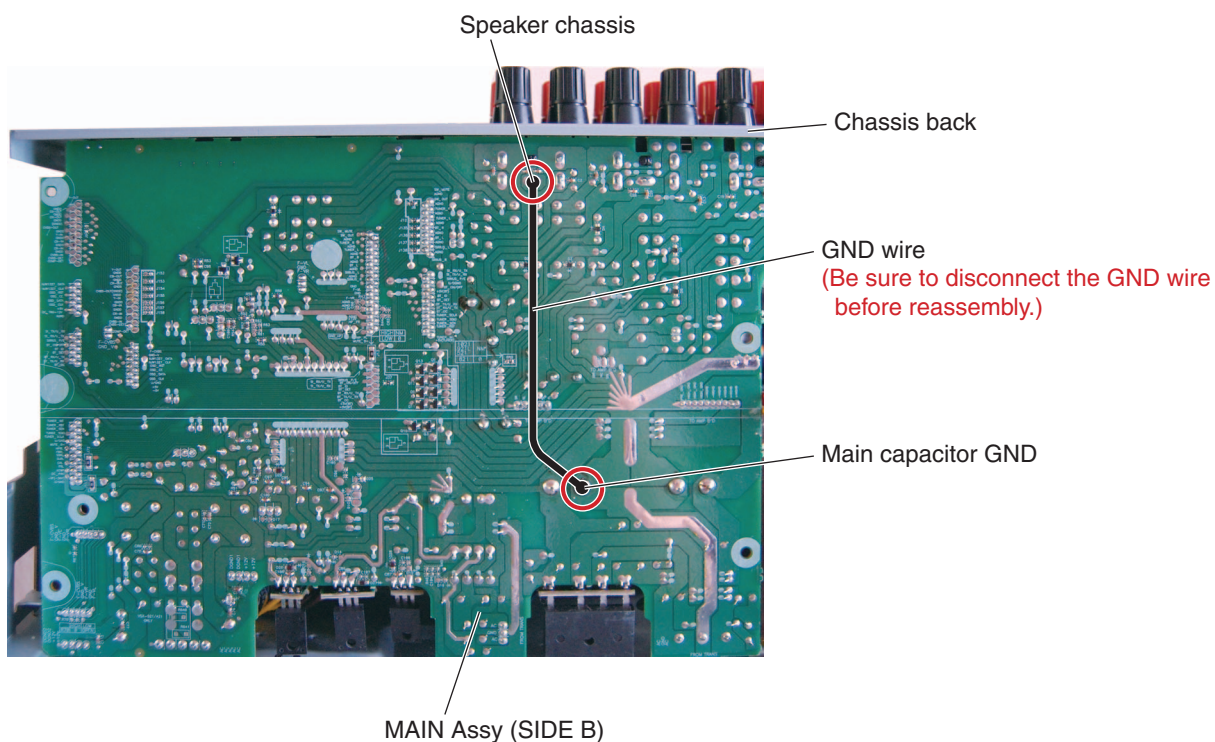


2. Notes on Ground Points Connection

[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.**



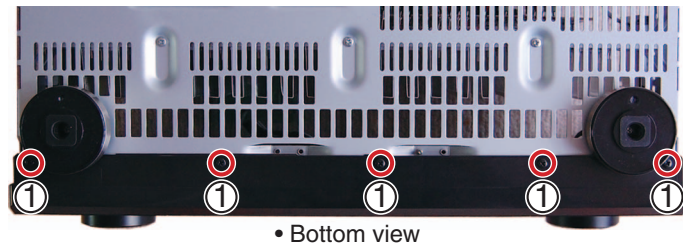
A 3. Disassembly

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

[1] Front Panel Section

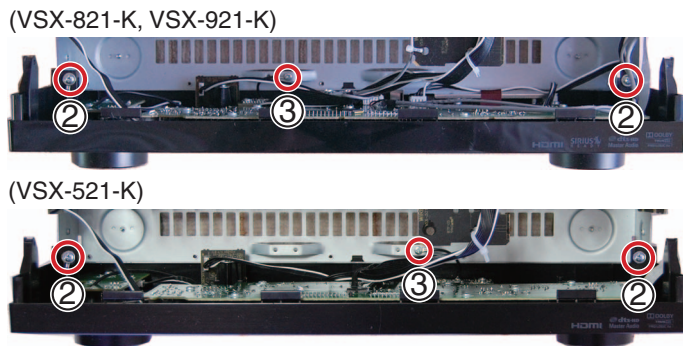
Remove the cabinet by removing the 10 screws.

(1) Remove the five screws. (BBZ30P080FTB)

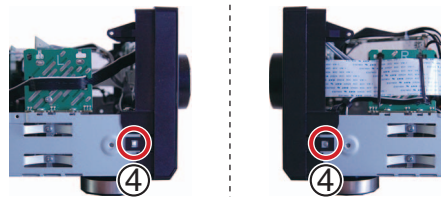


(2) Remove the two screws.
(1500001206010-IL)

(3) Remove the one screw. (BBZ30P080FTC)

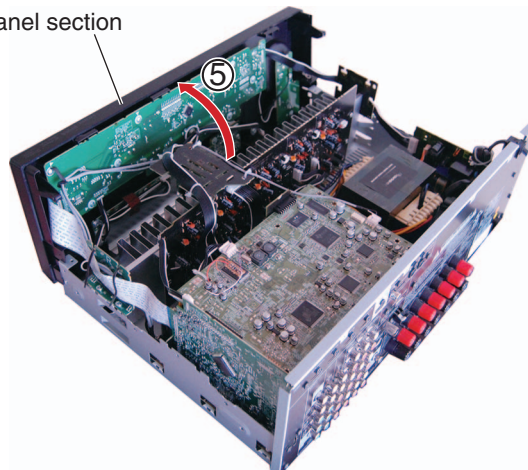


(4) Unhook the two hooks.



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

Front panel section

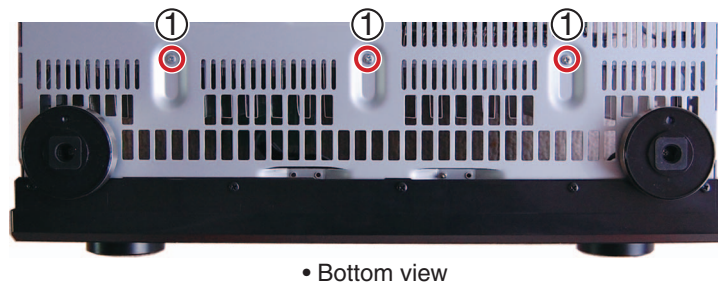


[2] Heatsink Section

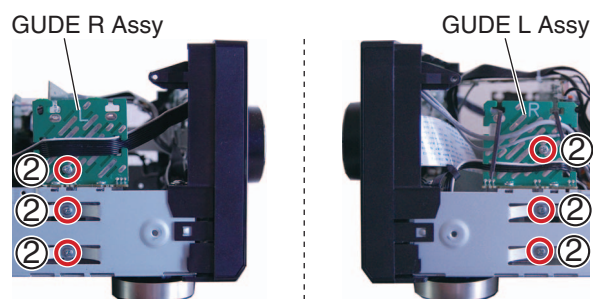
Caution: Heatsink section in work becomes hot, and be careful with it.

Remove the cabinet by removing the 10 screws.

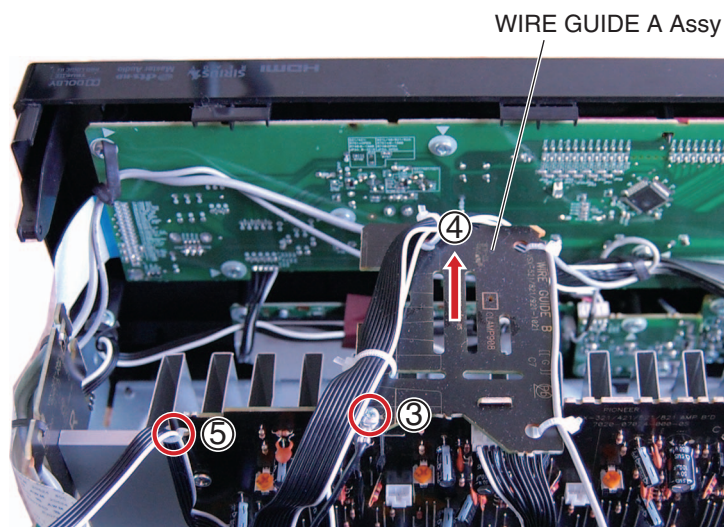
(1) Remove the three screws. (BBZ30P080FTC)



(2) Remove the six screws. (BBZ30P080FTC)

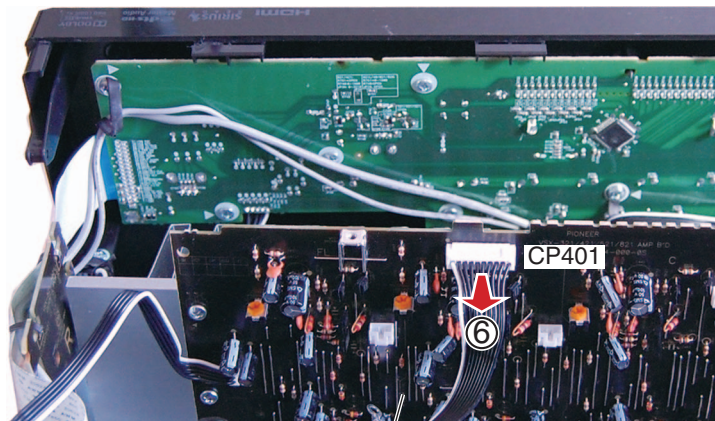


- (3) Remove the one screw. (BBZ30P080FTC)
- (4) Remove the WIRE GUIDE A Assy.
- (5) Cut the binder.



A

(6) Disconnect the one connector. (CP401)



AMP Assy



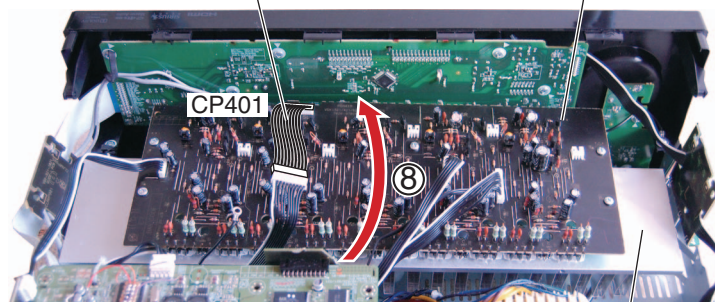
C

(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)

AMP Assy



Heatsink

D

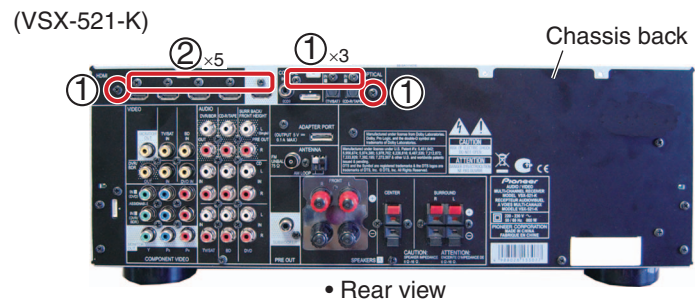
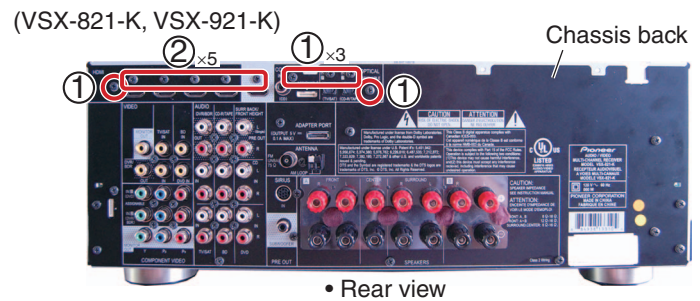
E

F

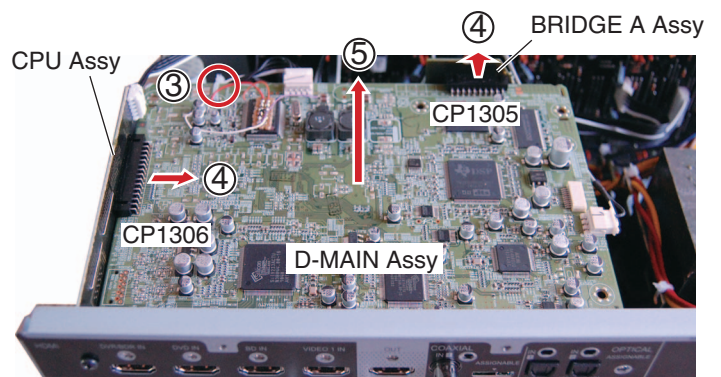
[3] D-MAIN Assy

Remove the cabinet by removing the 10 screws.

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



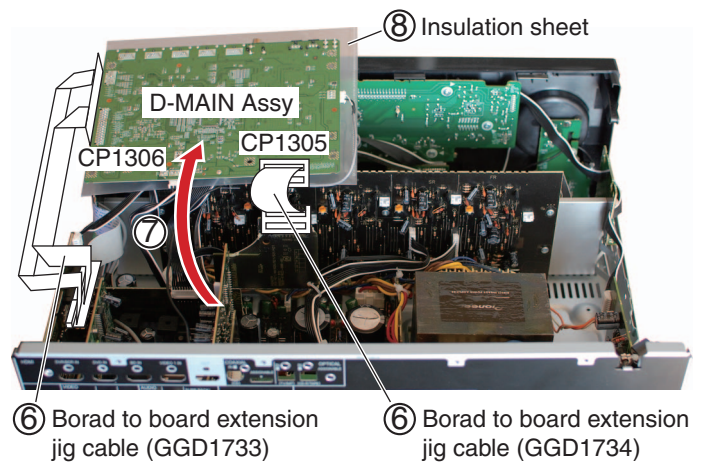
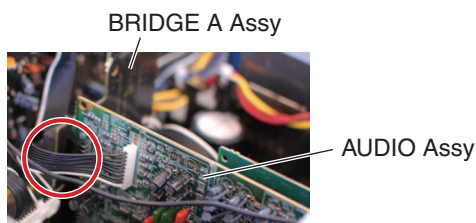
- (3) Cut the binder.
- (4) Disconnect the two B to B connectors. (CP1305, CP1306)
- (5) Remove the D-MAIN Assy.



- (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.

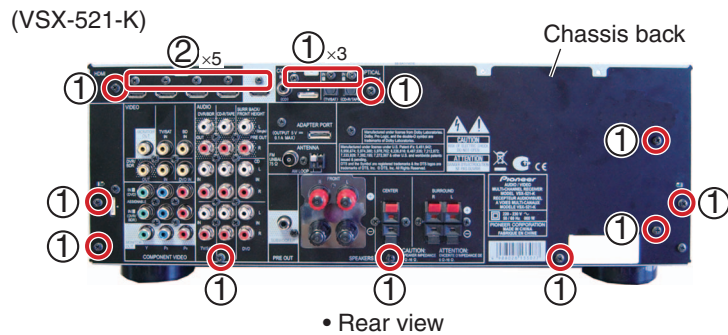
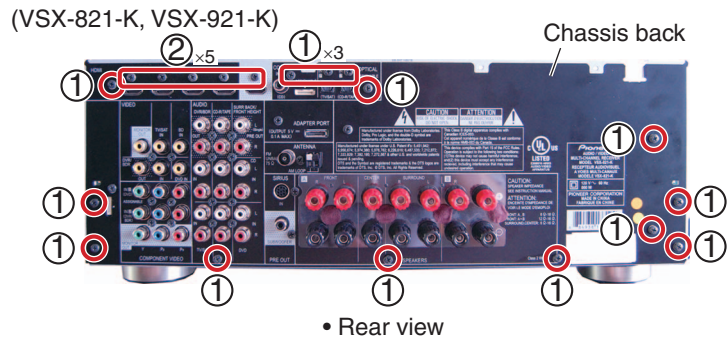


A [4] MAIN Assy

Remove the cabinet by removing the 10 screws.

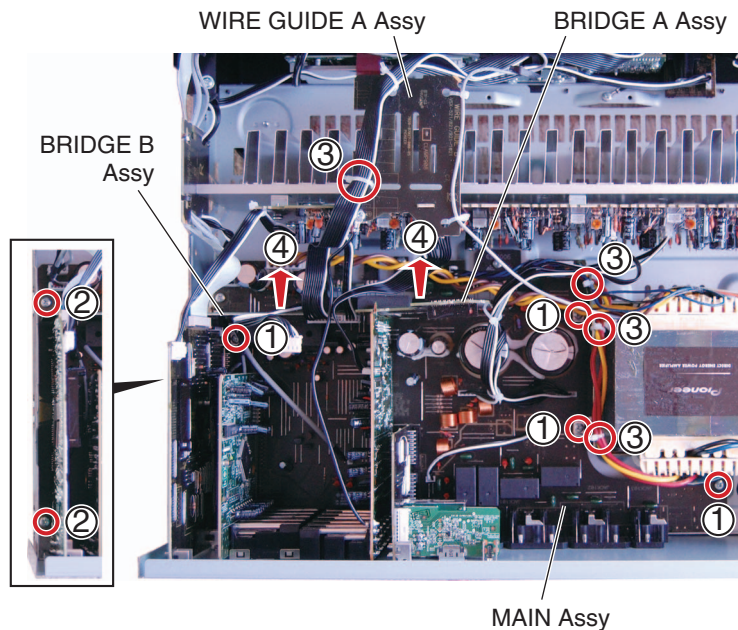
[4-1] Chassis back, D-MAIN Assy

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

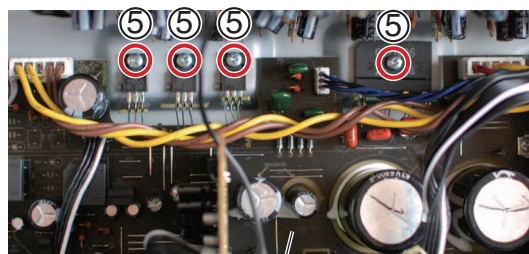


D [4-2] MAIN Assy

- (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)



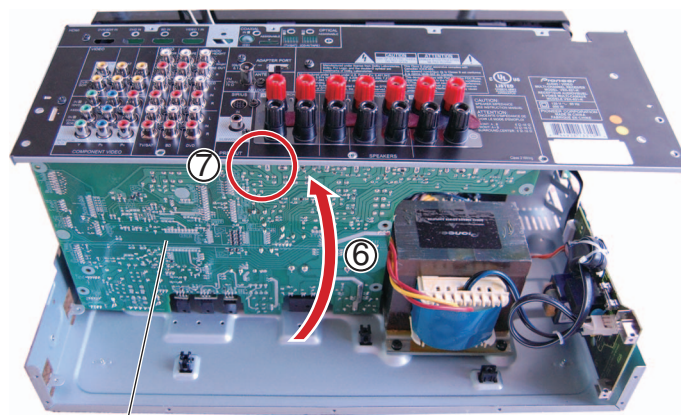
MAIN Assy



(6) Arrange the unit as shown in the photo below.

(7) Connect the chassis ground.

See "2. Notes on Ground Points Connection".



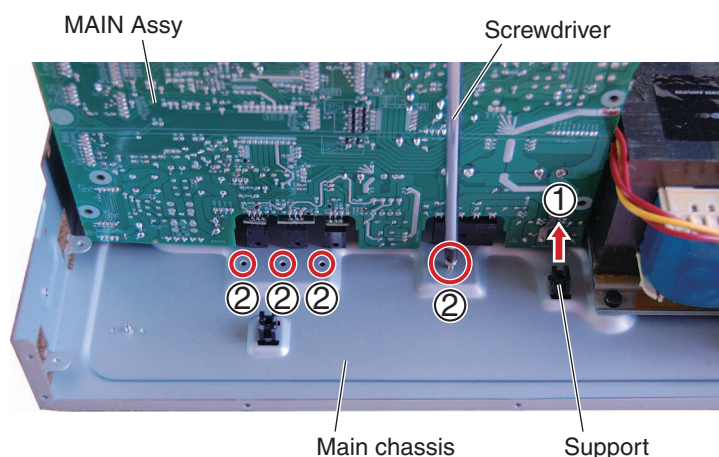
MAIN Assy



[4-3] Regulator ICs and Rectifier diode

(1) Remove the support.

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



Main chassis

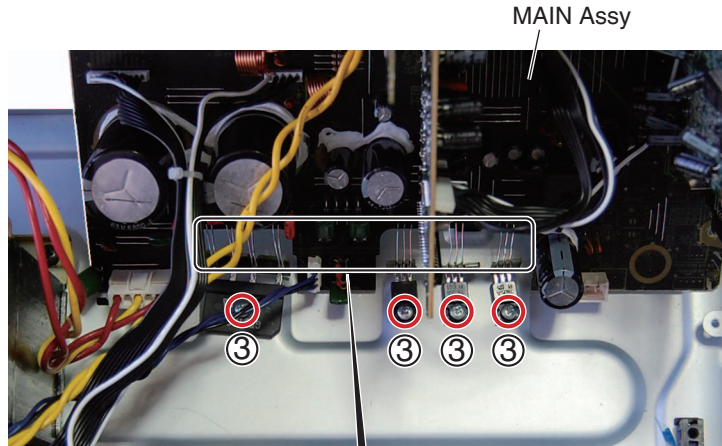
Support



A

- (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.

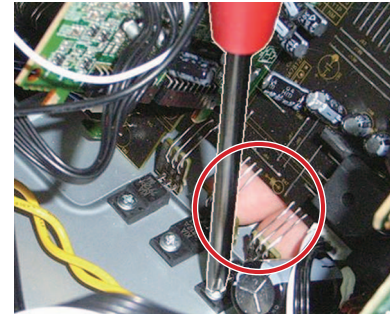
B



C

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.



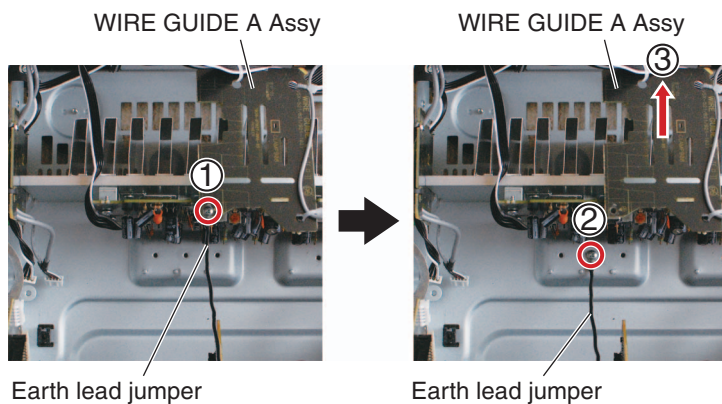
D



[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.

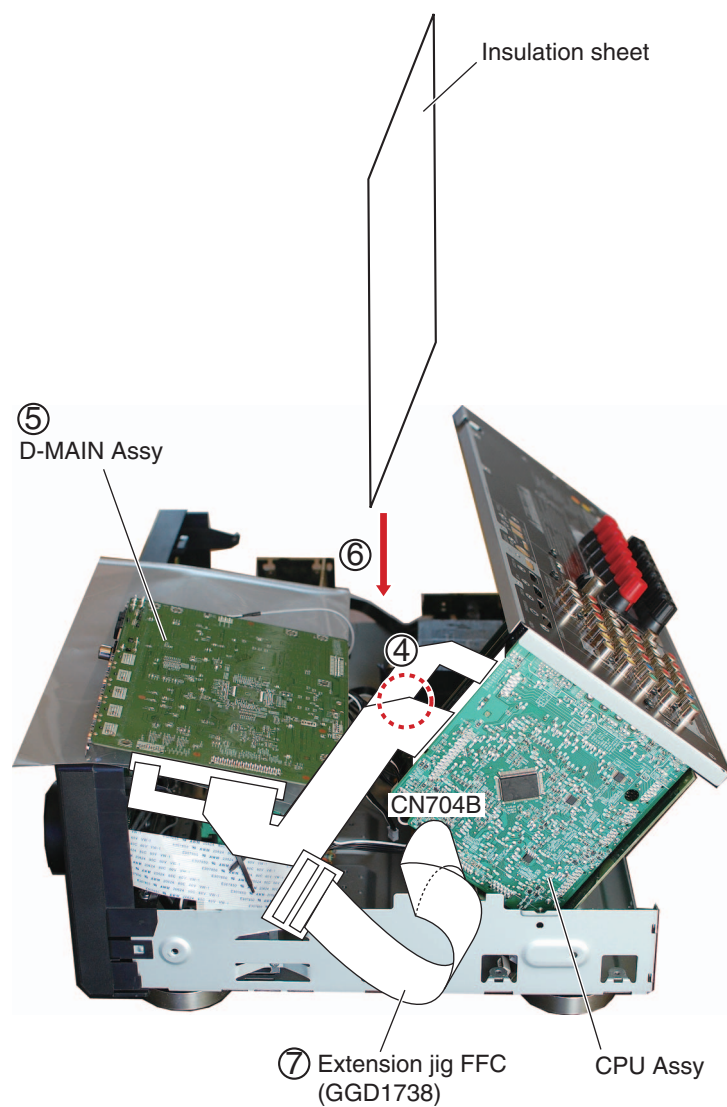
E



F



- (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.

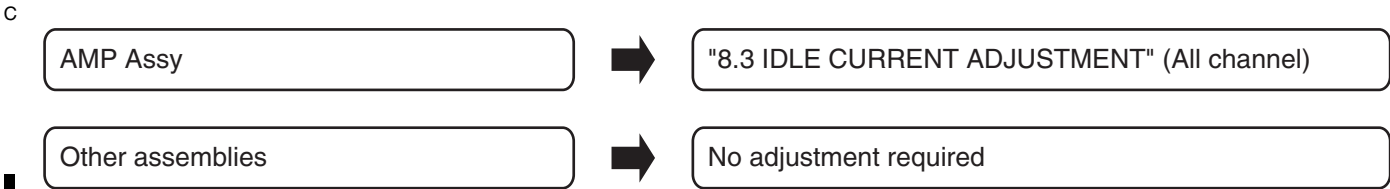


- A
- 
- If the adjustment is shifted or if it becomes necessary to readjust because of part replacement, etc., perform the adjustment as described below.
 - Any value changed in Adjustment mode will be stored in memory as soon as it is changed. Before readjustment, take note of the original values for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

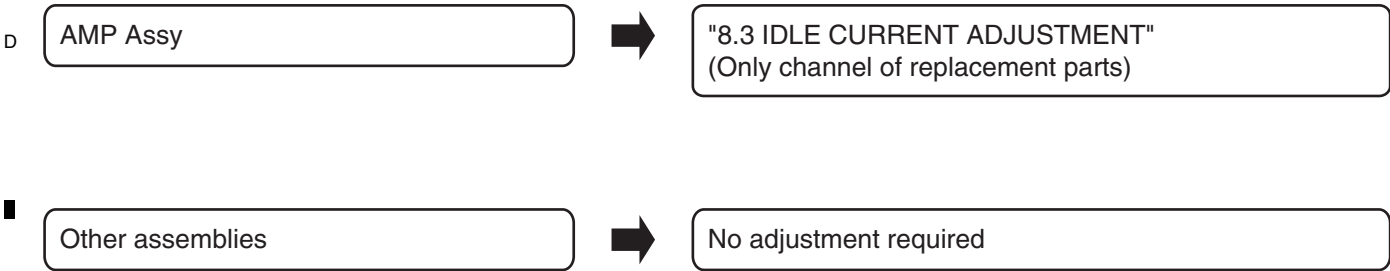
B

8.1 ADJUSTMENT REQUIRED WHEN THE UNIT IS REPAIRED OR REPLACED

■ When any of the following assemblies is replaced



■ When any of the following parts is replaced



E

F

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.

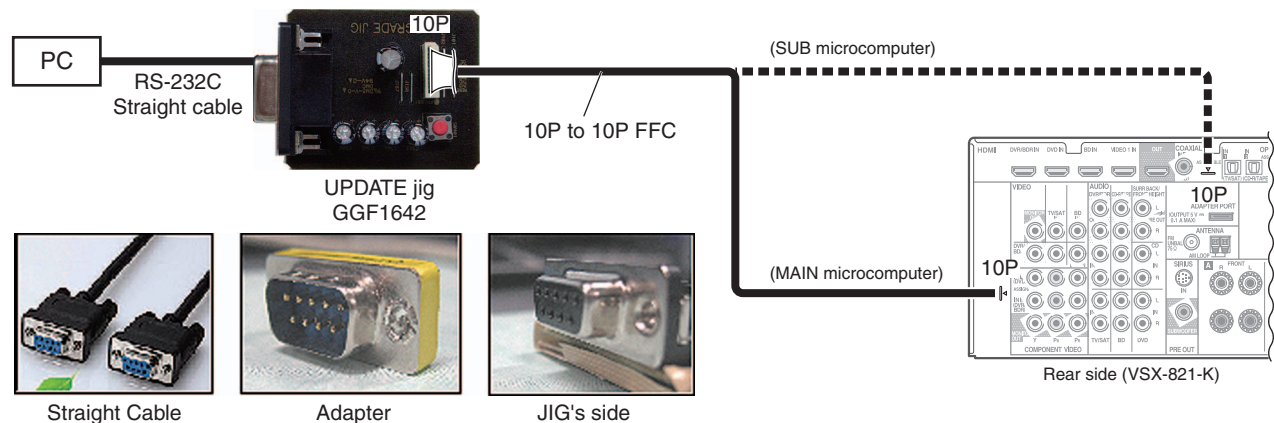
[Necessary Tools]

- 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 Δ mark.



(1) MAIN and SUB microcomputers update

[Procedures]

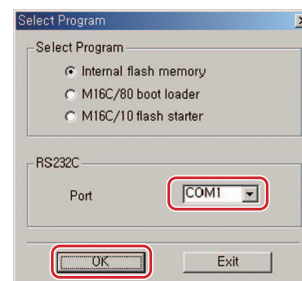
■ for MAIN microcomputer

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]



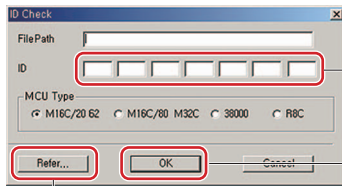
Please push the cancel button and press the JIG's RESET button.

And confirm a connection of FFC.

Please return to procedure 1.

A

4. Select the update file and enter ID.



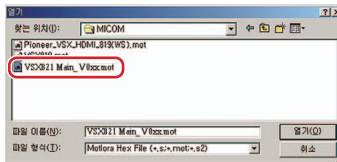
① Selection of upgrade file

② Enter ID.
Enter "ff" in all field.

③ Press OK button to go to next step.

B

① Select the update file

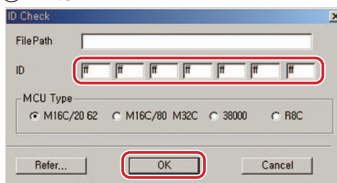


Select "VSX821 Main V0xx.mot" file to update the MCU.



Press the OK button.

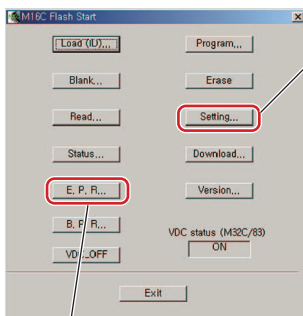
② Enter ID.



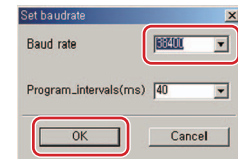
Press the OK button.

D

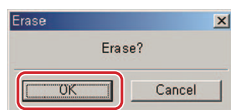
5. Set speed update and update the MCU.



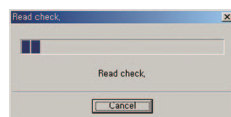
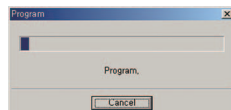
① Set speed of update.

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+Read② Update the MCU
Press the E.P.R ... button

Press OK button.

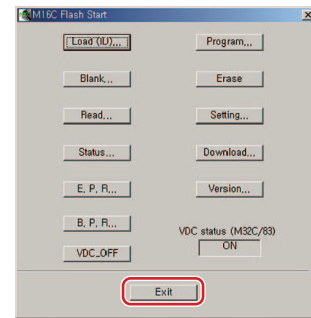


F

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.

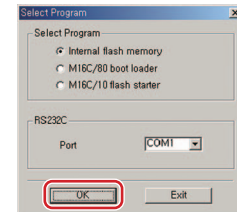
Push the (reset) button on the JIG's Board.

Start up application on the PC.



Press the OK button.

Press the OK button.



[if the following messages are displayed]

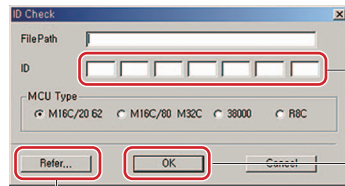


Please push the cancel button and press the JIG's RESET button.

And confirm a connection of FFC.

Please return to procedure 7.

8. Select the update file and enter ID.

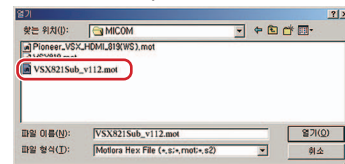


② Enter ID.
Enter "ff" in all field.

③ Press OK button to go to next step.

① Selection of update file

① Select the update file

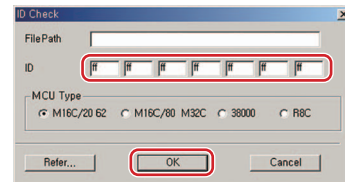


Select "VSX821Sub_v112.mot" file to update MCU.

Press the OK button.

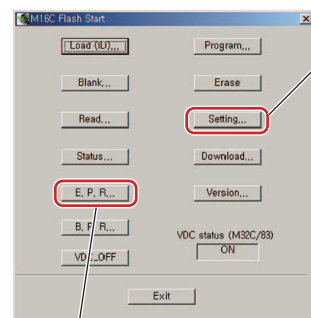
821 & 521 & 421: Select "VSX-x21Sub_v0xx.mot" file to update the MCU.
921/K & 40 & 826: Select "VSX-921Sub_v0zz.mot" file to update the MCU.

② Enter ID.



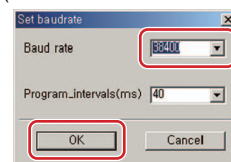
Press the OK button.

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)



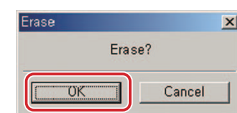
Press the OK button.

② Update the MCU.

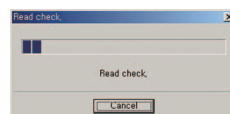
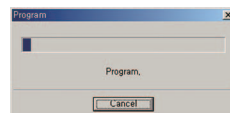
E.P.R=>Erase+Program+Read

② Update the MCU

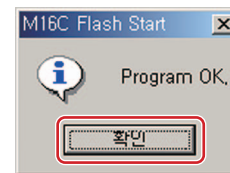
Press the E.P.R ... button



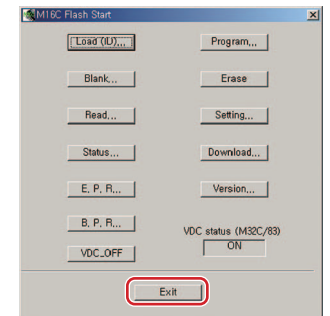
Press OK button.



10. Update Finished SUB microcomputer.



Press the OK button.

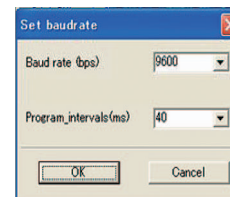


Press the Exit button.
Please wait for until this window disappears.

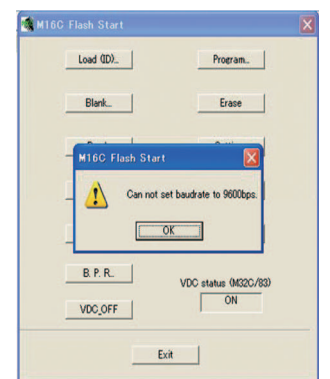
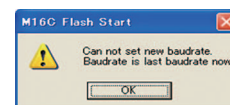
If the following messages are displayed, shut the update program down, and start the update again from step 1.



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.

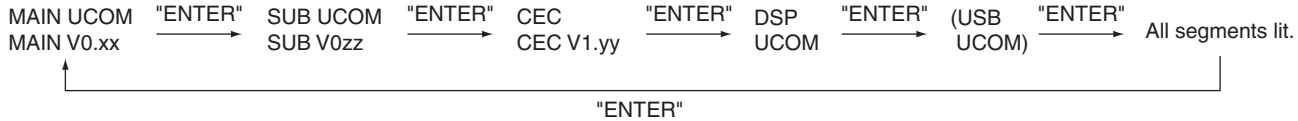
A

■ 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:



B

* 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 STANDBY/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.

E

(3) How to update the DSP Microcomputer

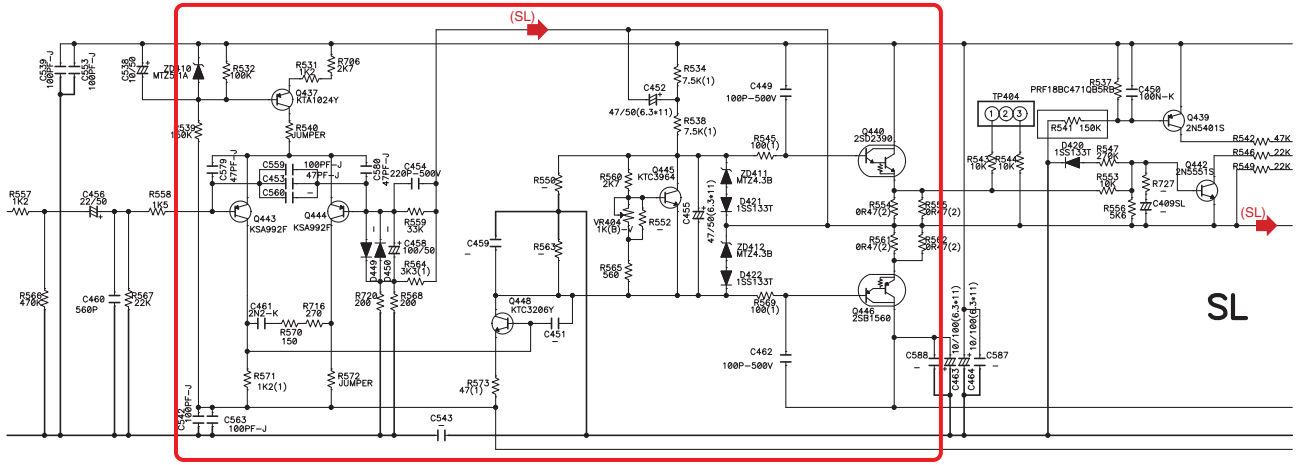
[Procedures]

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.

F

■ 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)



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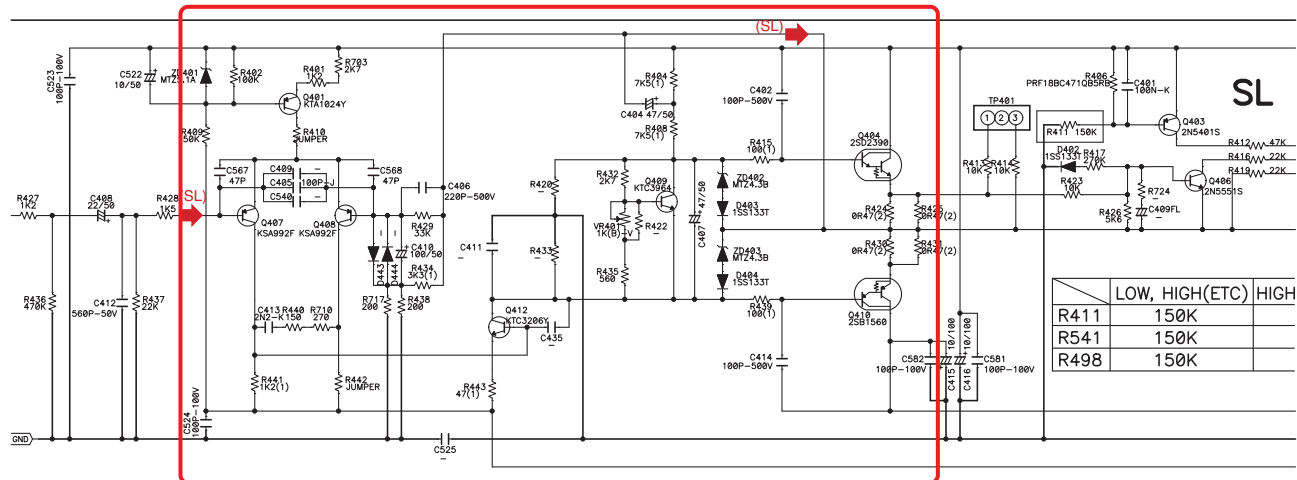
■ for VSX-921-K

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)

B



C

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 $\pm$ 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	

D

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

E

F

B AMP ASSY

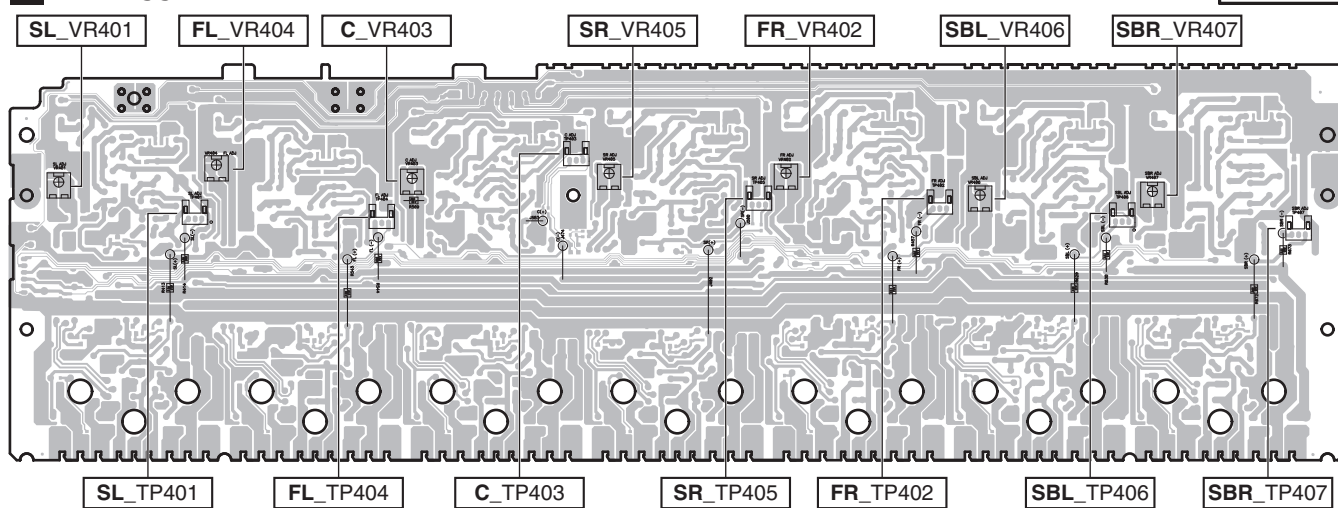
SIDE A


Fig.2

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VSX-821-K

(1) PACKING SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	Remote Control	See Contrast table (2)
2	AM Loop Antenna	E601019000010-IL
3	FM Wire Antenna	E605010140010-IL
4	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)

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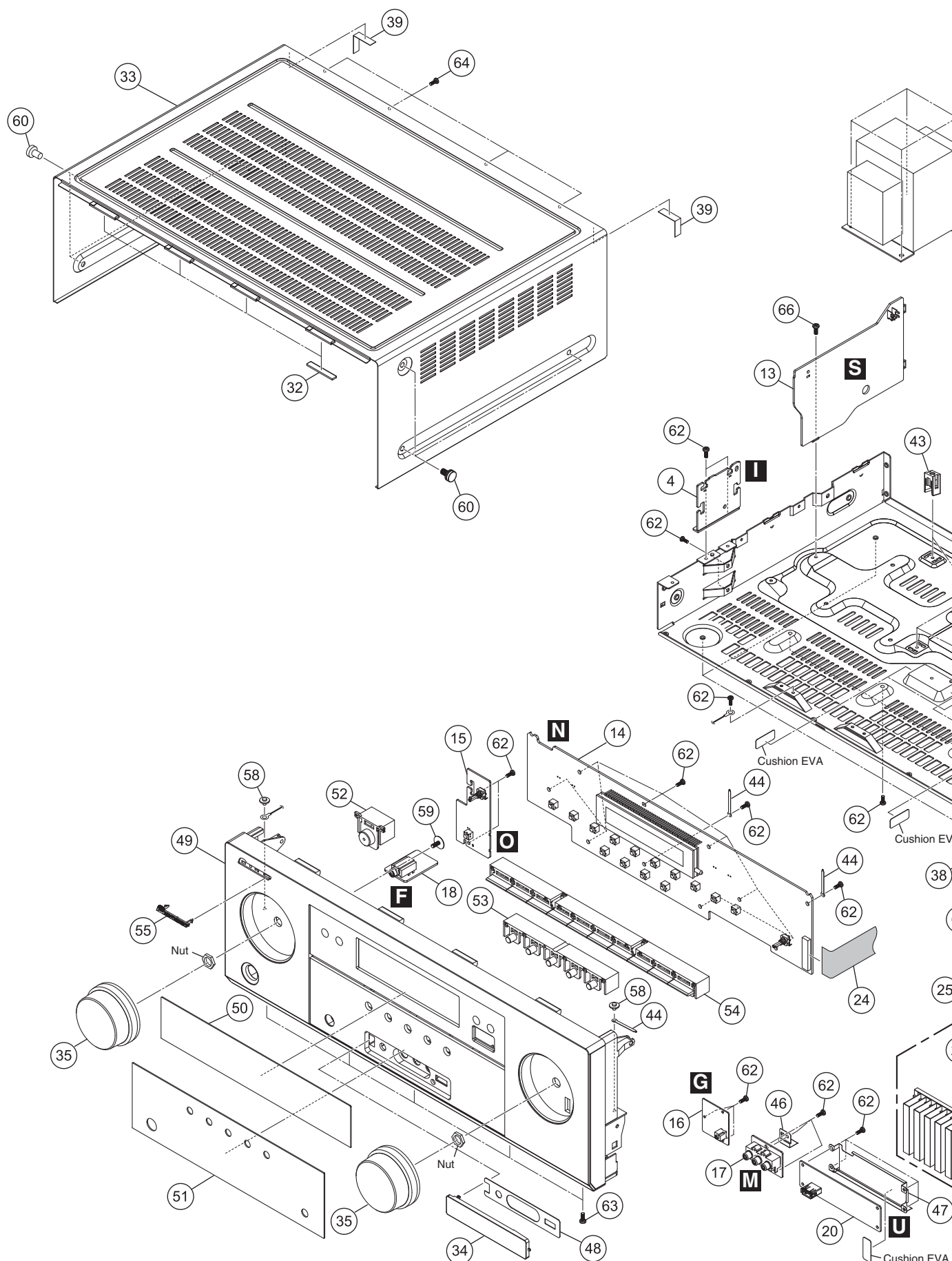
B

C

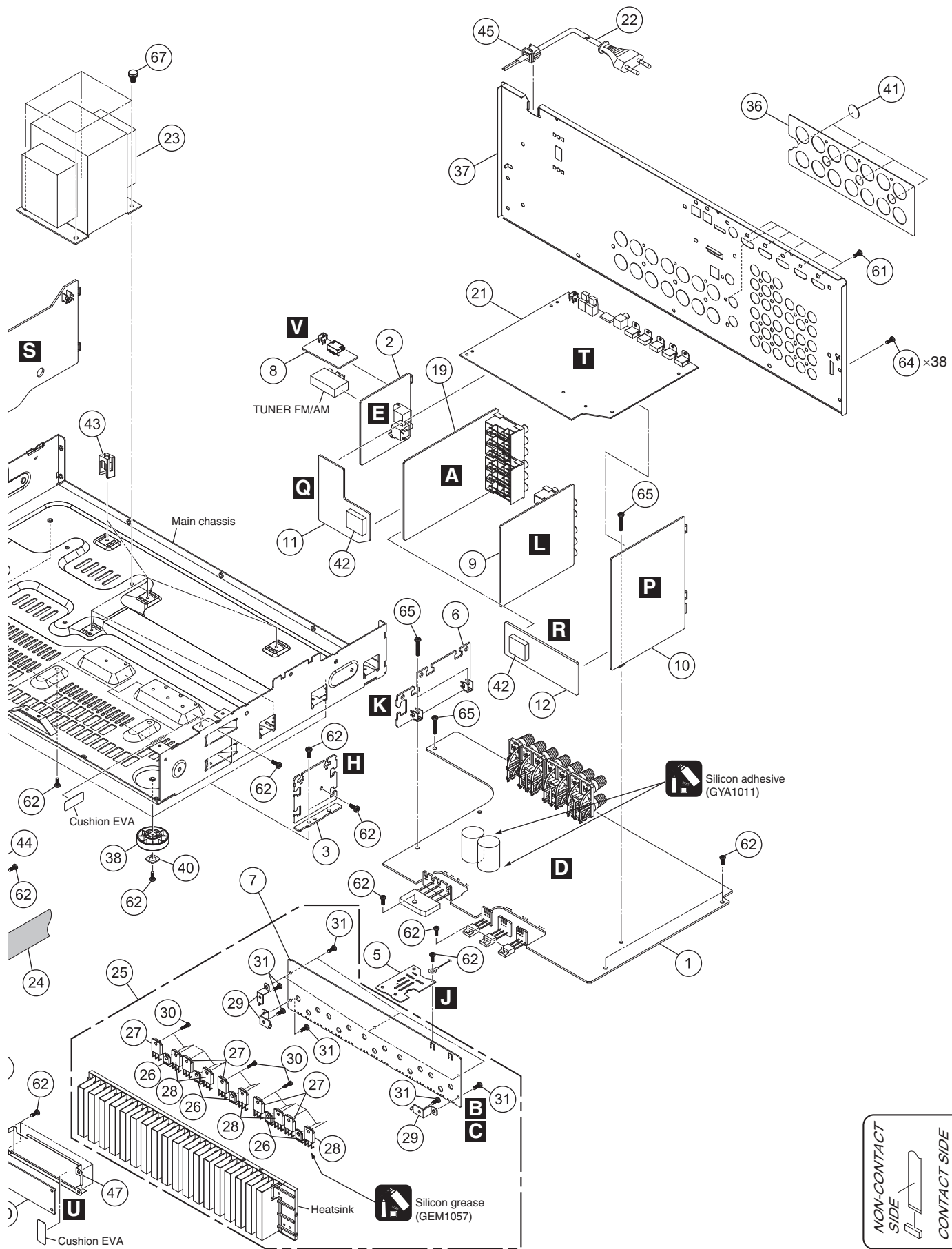
D

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VSX-821-K

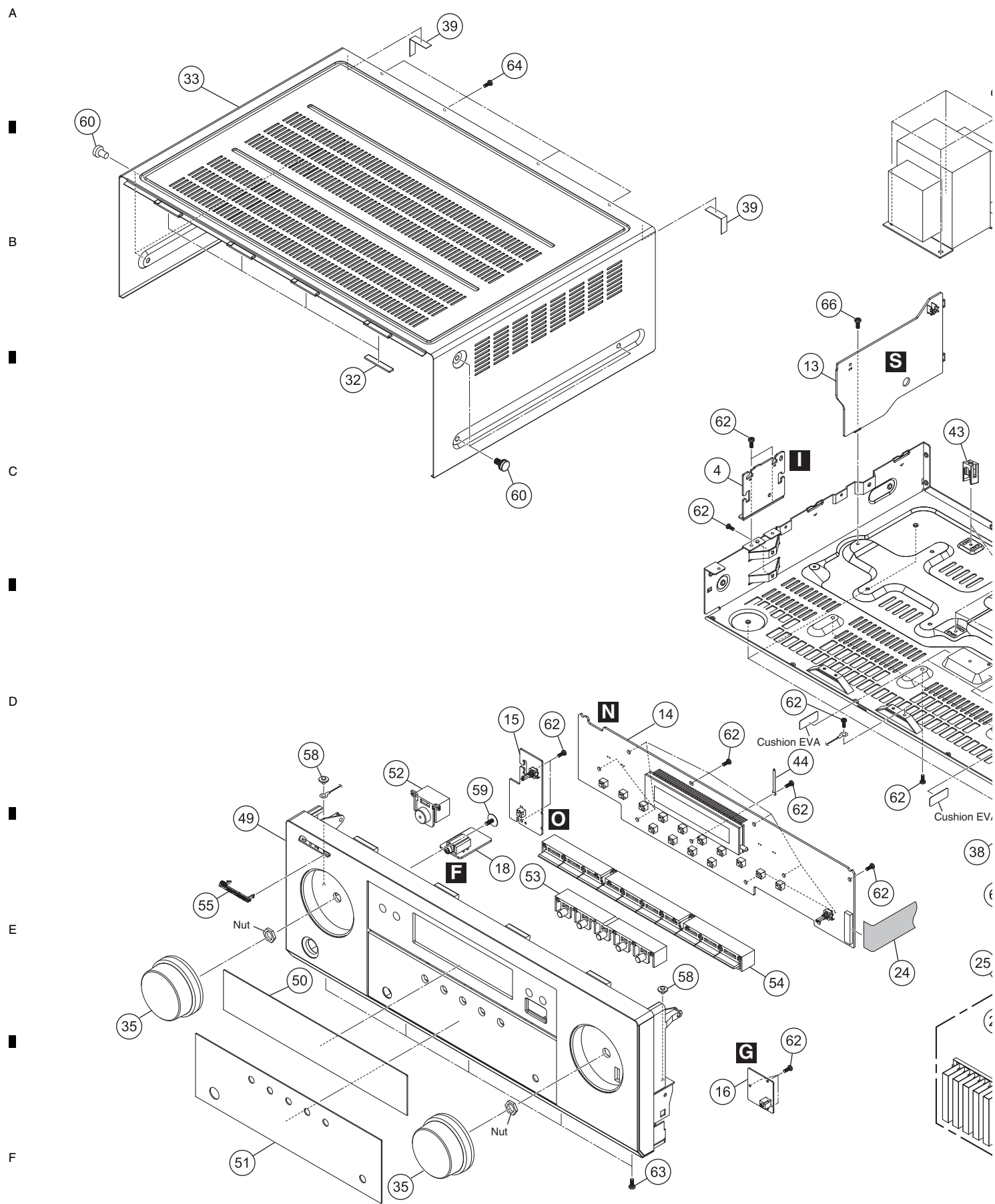


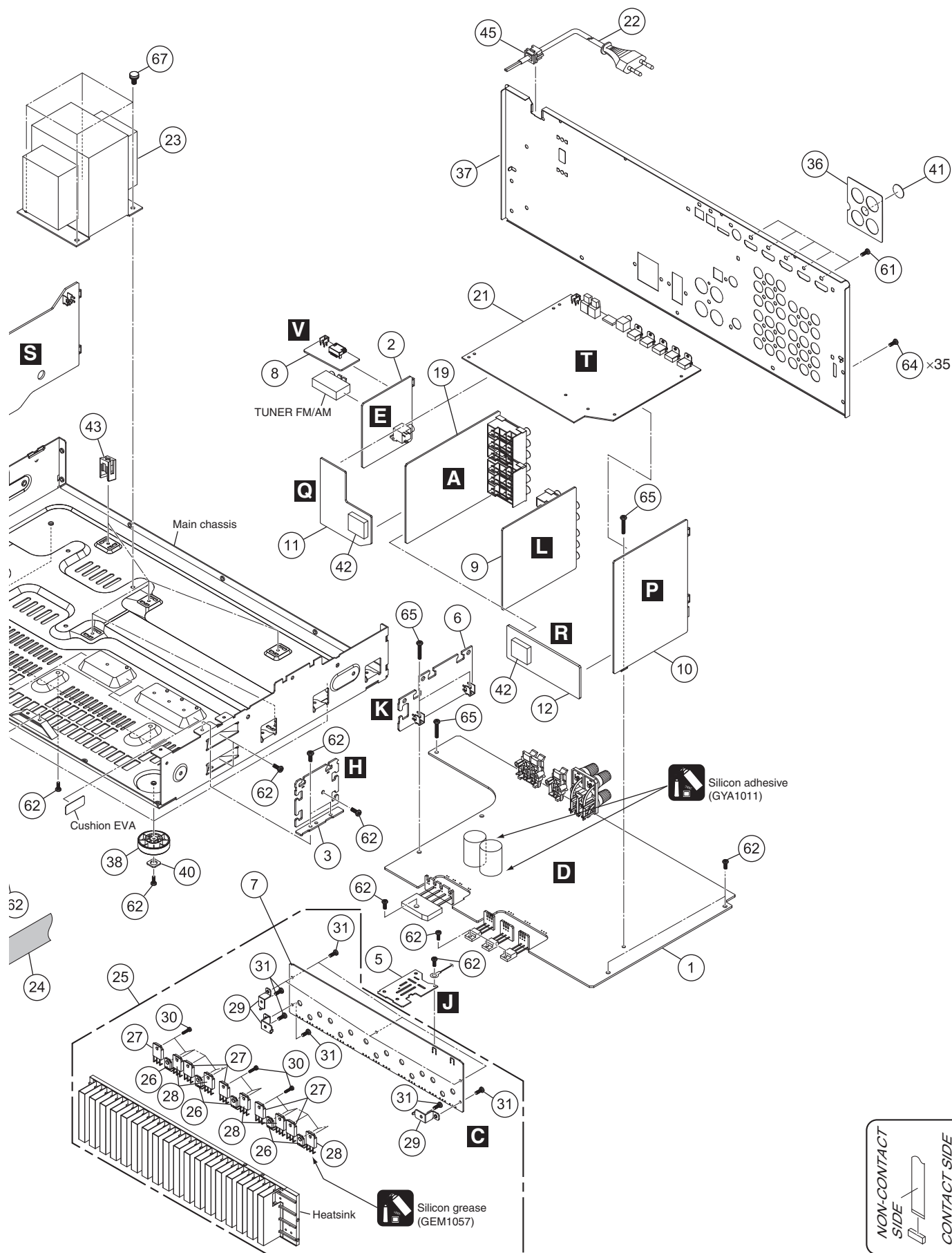
VSX-821-K

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

Mark No.	Description	Part No.	Mark No.	Description	Part No.
A	1 MAIN Assy	See Contrast table (2)	46	Plate	4470212096000-IL
	2 SUBWOOFER Assy	7028070272070-IL	47	Plate	4470212066000-IL
	3 GUIDE L Assy	7028070273070-IL	48	Sheet	1217211472000-IL
	4 GUIDE R Assy	7028070274070-IL	49	Panel	See Contrast table (2)
	5 WIRE GUIDE A Assy	7028070276070-IL	50	Window	5077213113020-IL
	6 WIRE GUIDE B Assy	7028070277070-IL	51	Window	5077213123050-IL
	7 AMP Assy	See Contrast table (2)	52	Button	5090213741100-IL
	8 BT Assy	7028070231010-IL	53	Button	5090214561000-IL
	9 VIDEO Assy	See Contrast table (2)	54	Button	5090214571000-IL
	10 CPU Assy	See Contrast table (2)	55	Badge	XAM3006
B	11 BRIDGE A Assy	7028070222070-IL	56	•••••	
	12 BRIDGE B Assy	7028070223070-IL	57	•••••	
	13 STANDBY Assy	See Contrast table (2)	58	Screw	1500001206010-IL
	14 FRONT Assy	7028070211050-IL	59	Screw	1500001456010-IL
	15 POWER Assy	7028070212050-IL	60	Screw	BBT40P080FTB
	16 MIC Assy	7028070213050-IL	61	Screw, Tap Tite	BSZ30P040FTB
	17 F-VIDEO Assy	7028070214050-IL	62	Screw, Tap Tite	BBZ30P080FTC
	18 HEADPHONE Assy	7028070215050-IL	63	Screw, Tap Tite	BBZ30P080FTB
	19 AUDIO Assy	See Contrast table (2)	64	Screw, Tap Tite	BBT30P100FTB
	20 USB Assy	7028070201050-IL	65	Screw, Tap Tite	BBZ30P180FTC
C	21 D-MAIN Assy	See Contrast table (2)	66	Screw, Tap Tite	B020230063B10-IL
	⚠ 22 Cord Assy	L068125101710-IL	67	Screw, Tap Tite Assy	B028940101B11-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			
D	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			
E	41 Cushion	4050211745000-IL			
	42 Cushion	4050212685100-IL			
	43 Support	4070001601010-IL			
	44 Clamp	4330000310000-IL			
	45 Stopper	4380040162010-IL			
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9.3 EXTERIOR SECTION (for VSX-521-K)





VSX-821-K

EXTERIOR SECTION (VSX-521-K) PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
A	1 MAIN Assy	70280702710D0-IL	46	•••••	
	2 SUBWOOFER Assy	7028070272050-IL	47	•••••	
	3 GUIDE L Assy	7028070273070-IL	48	•••••	
	4 GUIDE R Assy	7028070274070-IL	49	Panel	3067215081000-IL
	5 WIRE GUIDE A Assy	7028070276070-IL	50	Window	5077213113010-IL
	6 WIRE GUIDE B Assy	7028070277070-IL	51	Window	5077213123110-IL
	7 AMP Assy	7028070241030-IL	52	Button	5090213741100-IL
	8 BT Assy	7028070231010-IL	53	Button	5090214561000-IL
	9 VIDEO Assy	7028070261060-IL	54	Button	5090214571000-IL
	10 CPU Assy	7028070221020-IL	55	Badge	XAM3006
B	11 BRIDGE A Assy	7028070222070-IL	56	••••	
	12 BRIDGE B Assy	7028070223070-IL	57	••••	
	13 STANDBY Assy	7028070225030-IL	58	Screw	1500001206010-IL
	14 FRONT Assy	7028070211020-IL	59	Screw	1500001456010-IL
	15 POWER Assy	7028070212050-IL	60	Screw	BBT40P080FTB
	16 MIC Assy	7028070213020-IL	61	Screw, Tap Tite	BSZ30P040FTB
	17 •••••		62	Screw, Tap Tite	BBZ30P080FTC
	18 HEADPHONE Assy	7028070275070-IL	63	Screw, Tap Tite	BBZ30P080FTB
	19 AUDIO Assy	7028070181030-IL	64	Screw, Tap Tite	BBT30P100FTB
	20 •••••		65	Screw, Tap Tite	BBZ30P180FTC
C	21 D-MAIN Assy	7028070191020-IL	66	Screw, Tap Tite	B020230063B10-IL
	⚠ 22 Cord Assy	L068125101710-IL	67	Screw, Tap Tite Assy	B028940101B11-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			
D	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			
E	41 Cushion	4050211745000-IL			
	42 Cushion	4050212685100-IL			
	43 Support	4070001601010-IL			
	44 Clamp	4330000310000-IL			
	45 Stopper	4380040162010-IL			
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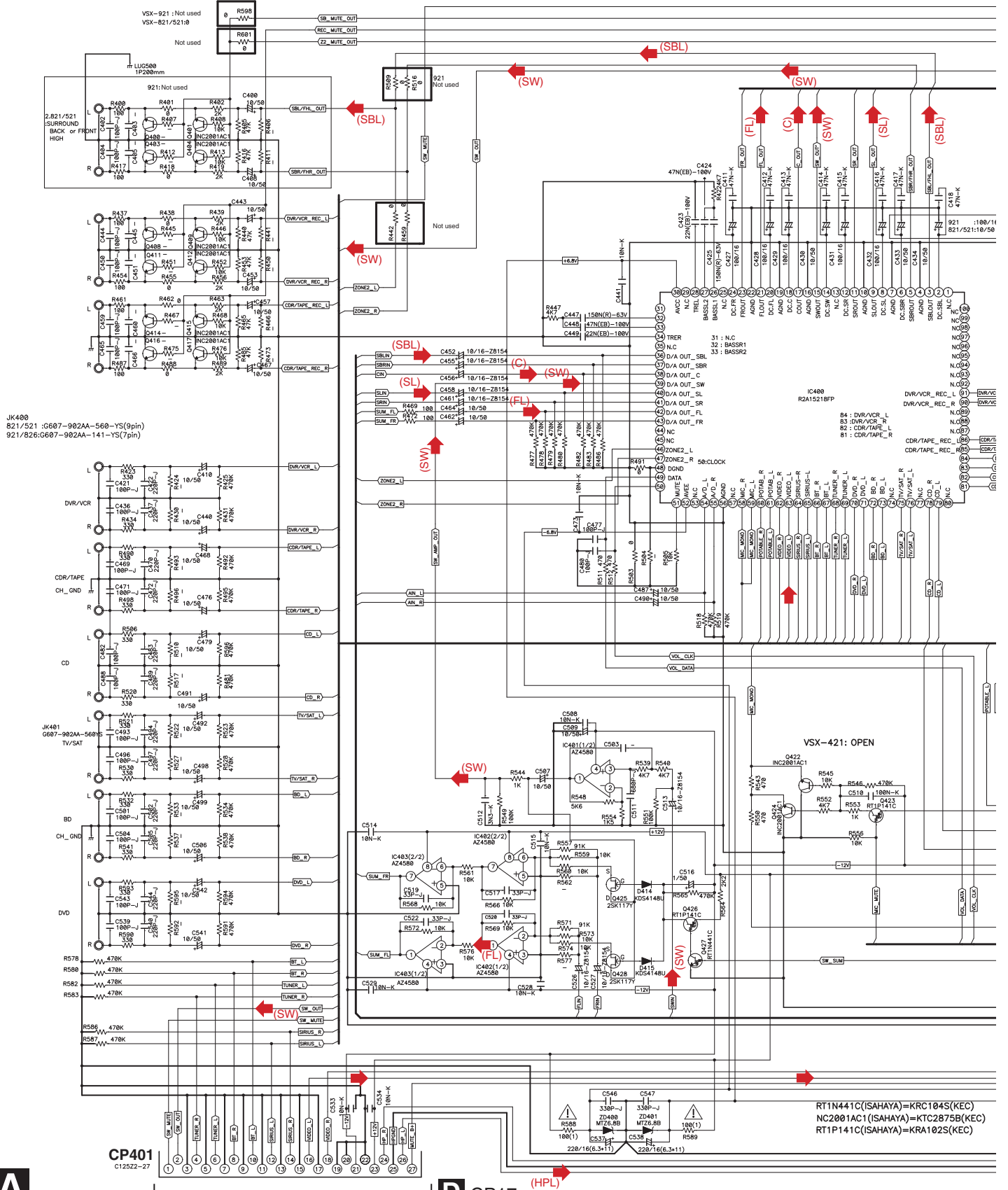
8

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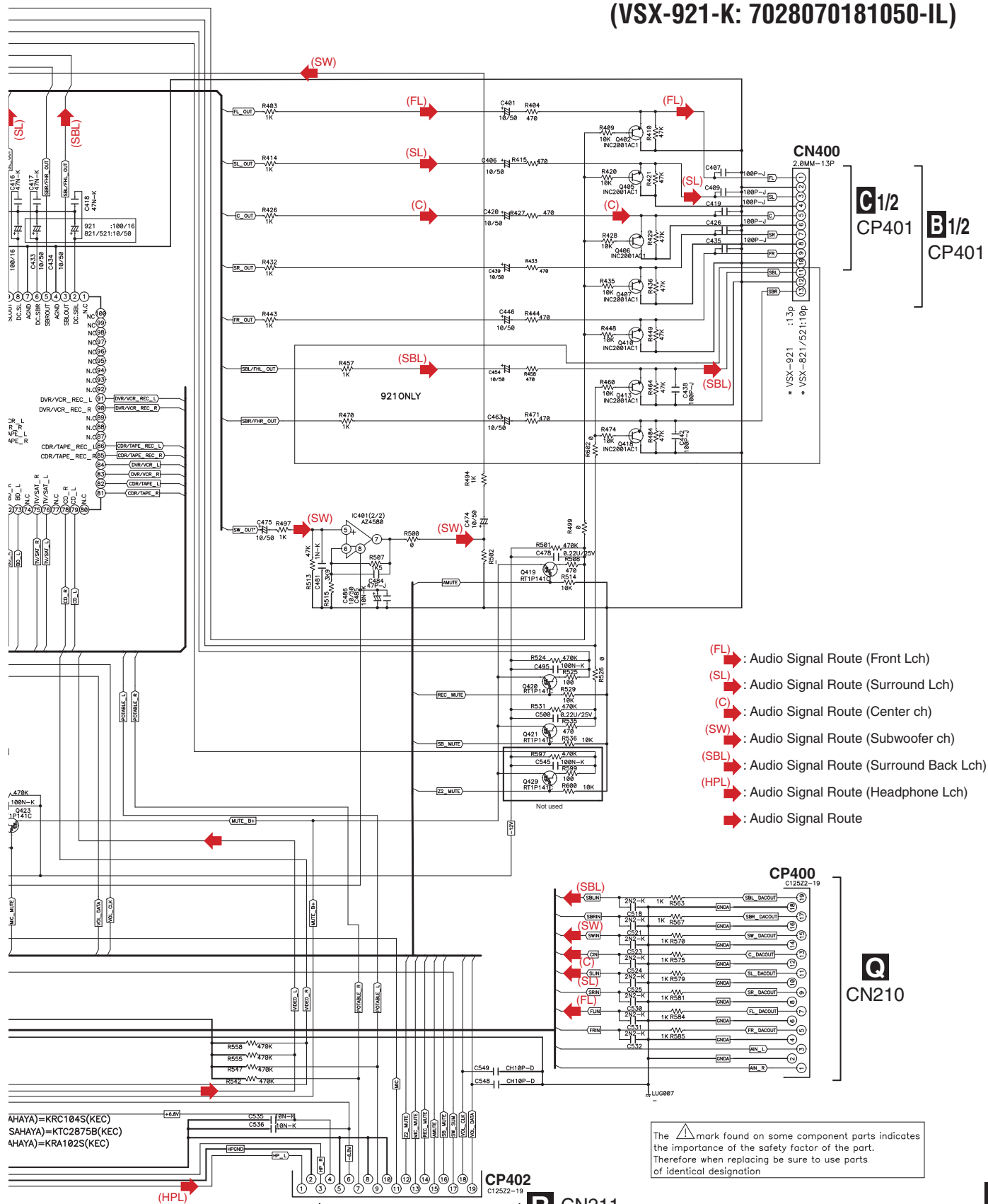
10. SCHEMATIC DIAGRAM

10.1 AUDIO ASSY

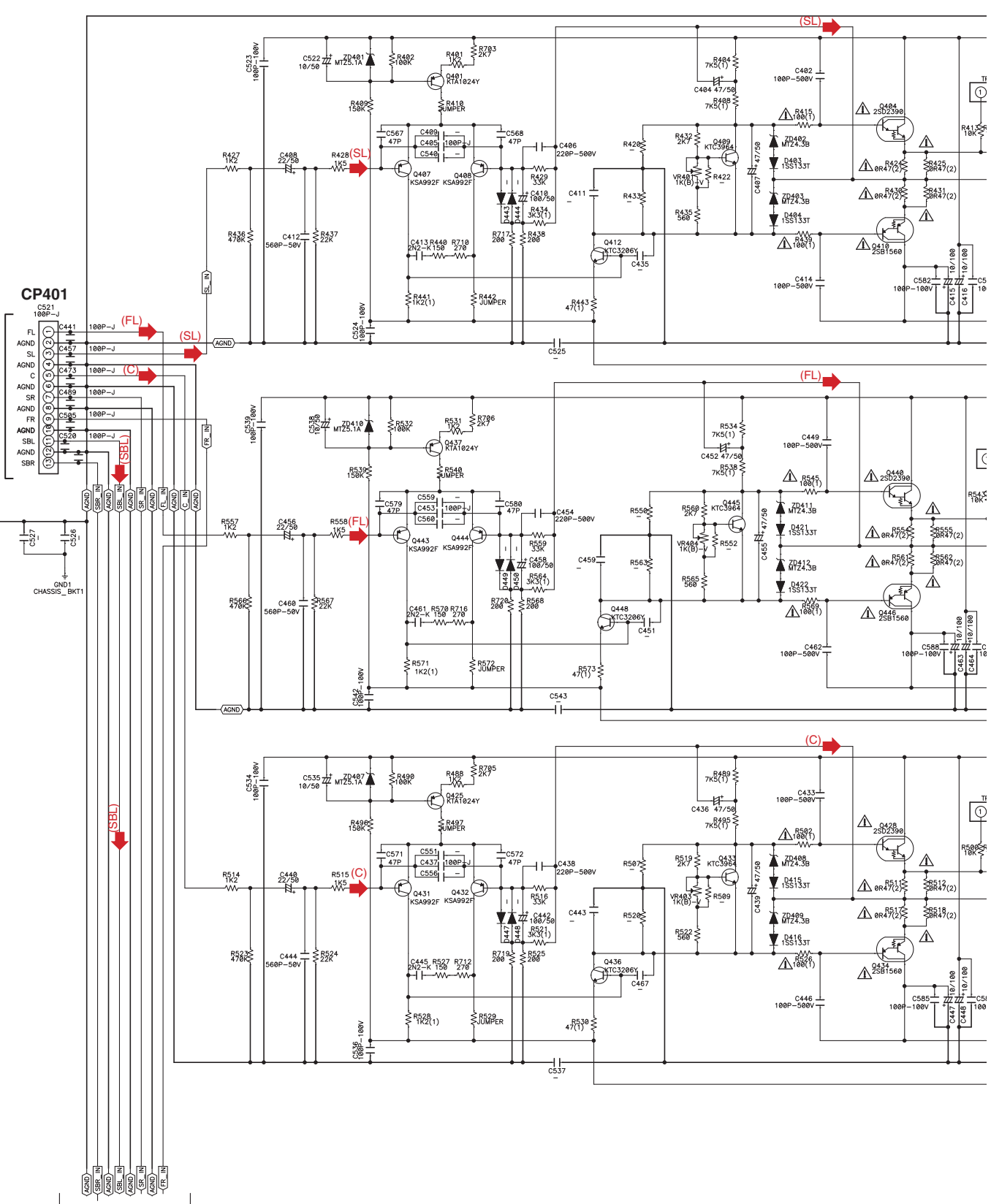
- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.



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



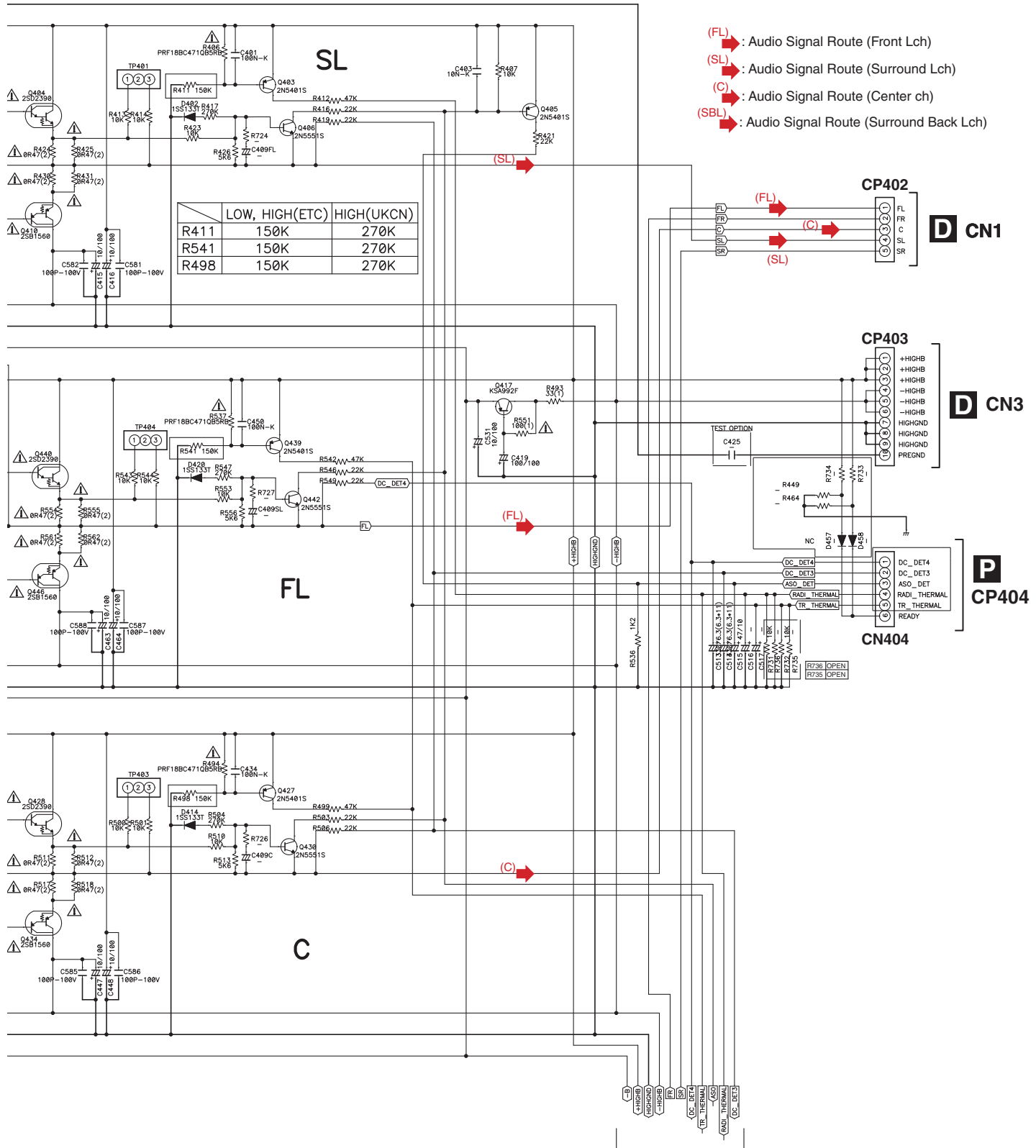
10.2 AMP ASSY (1/2) (for VSX-921-K)



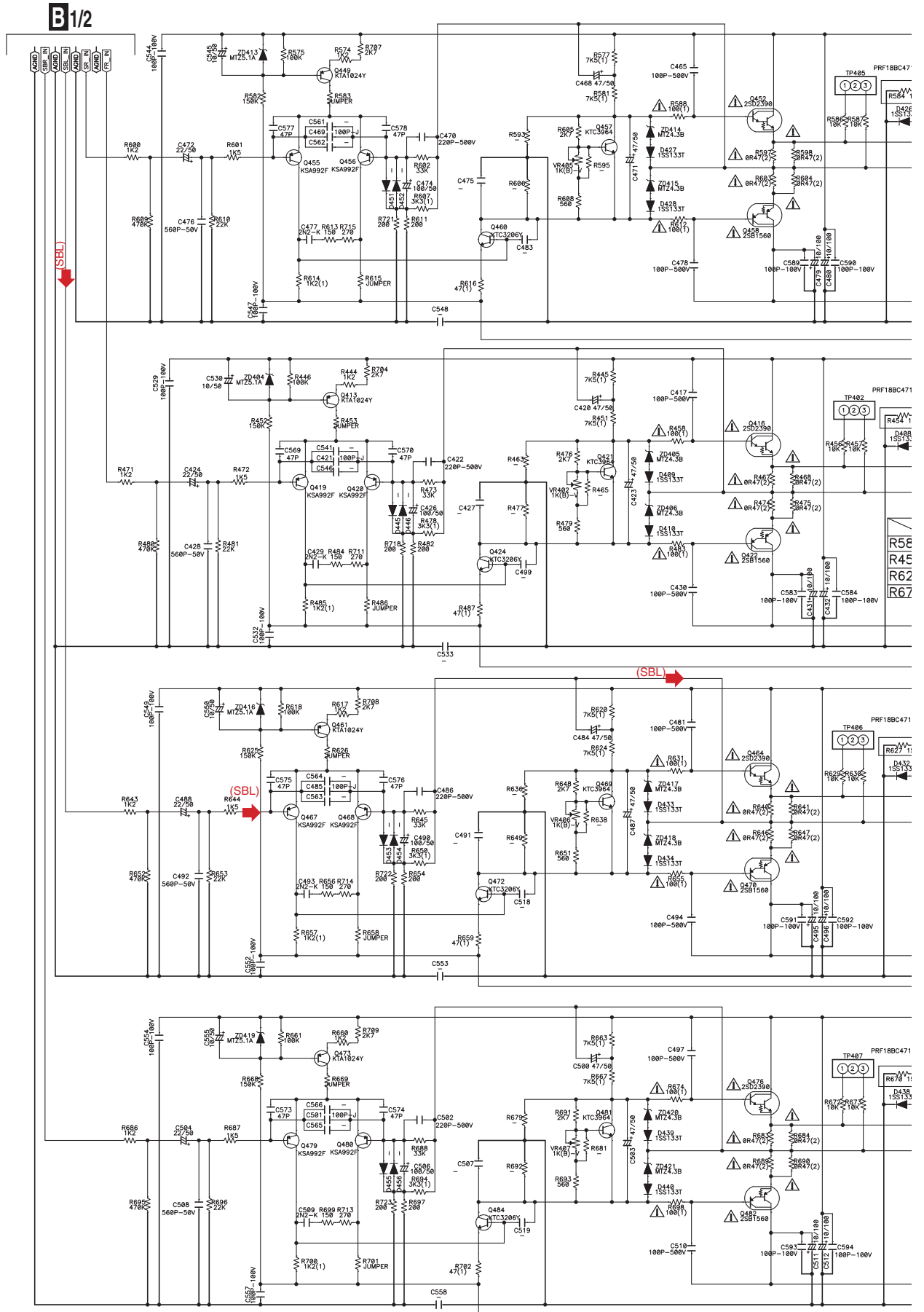
B1/2

B2/2

B_{1/2} AMP ASSY (VSX-921-K: 7028070251040-IL)

B_{2/2}

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



B2/2

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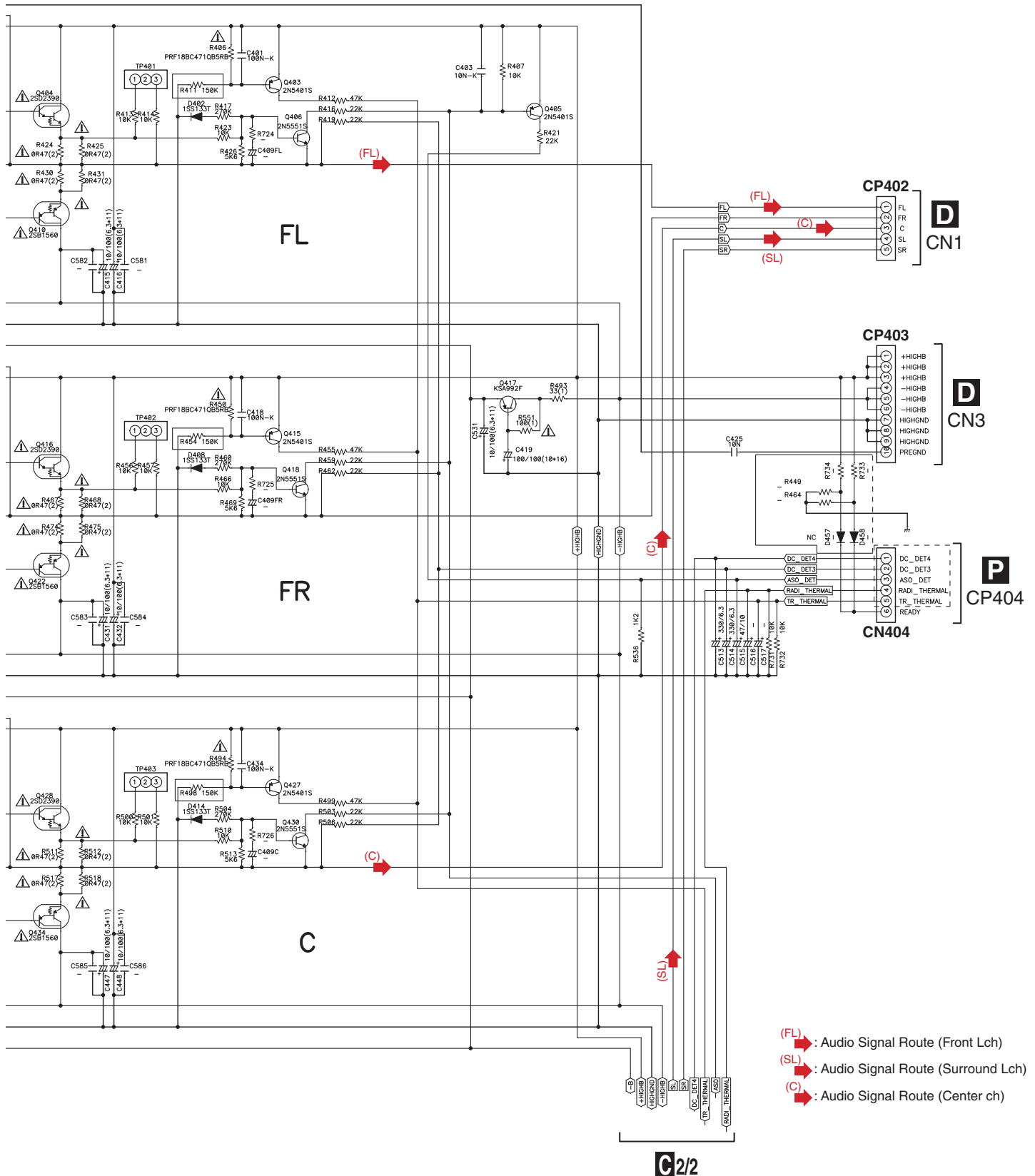
	LOW, HIGH(ETC)	HIGH(UKCN)
R584	150K	270K
R454	150K	270K
R627	150K	270K
R670	150K	270K

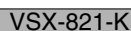
(SBL) : Audio Signal Route (Surround Back Lch)

△

F

C^{1/2} AMP ASSY (VSX-821-K/521: 7028070241030-IL)





A



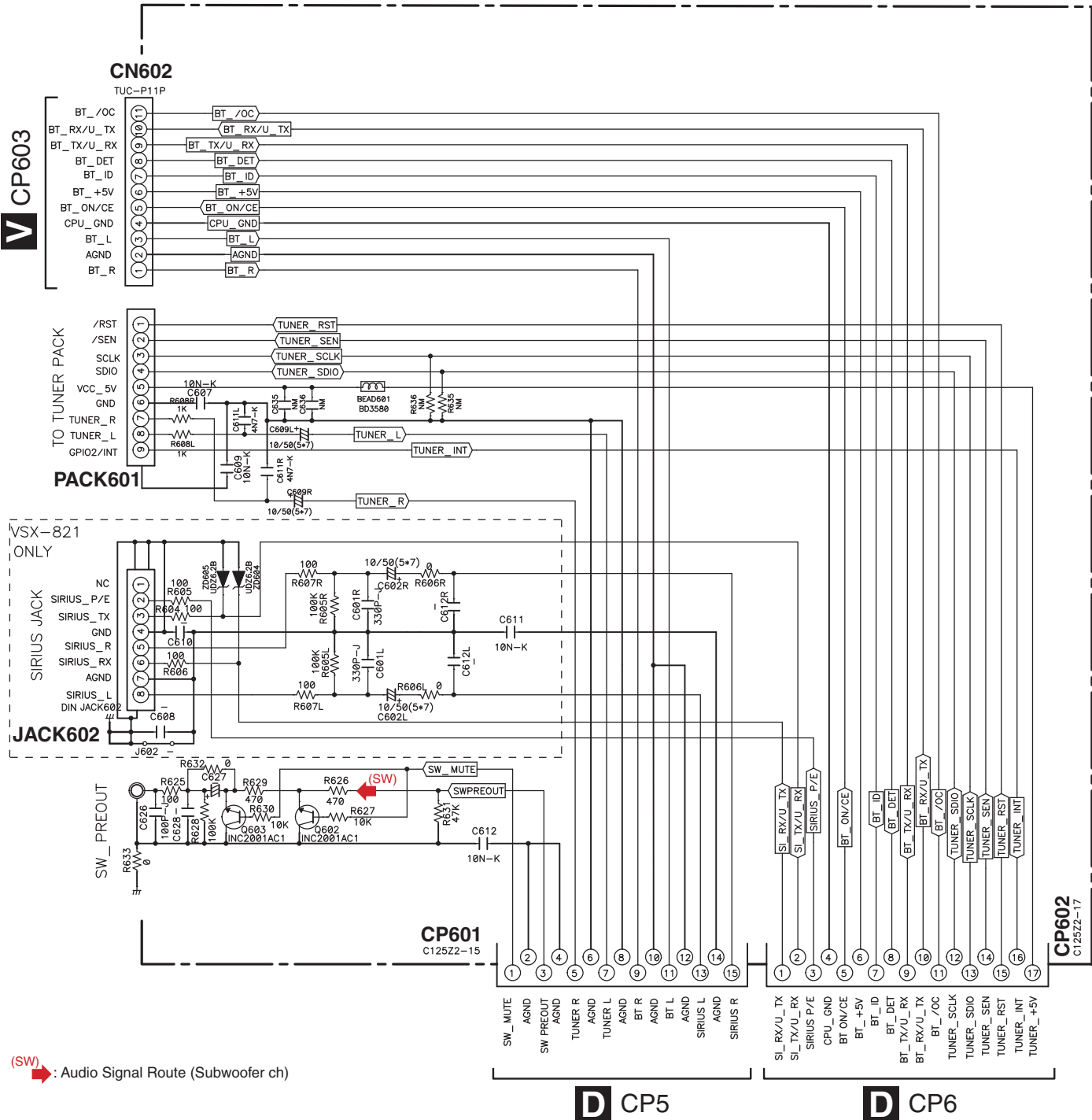
91

10.7 SUBWOOFER, HEADPHONE, MIC, GUIDE L, R, WIRE GUIDE A and B ASSYS

SUBWOOFER ASSY

(VSX-821-K/921: 7028070272070-IL)

(VSX-521-K: 7028070272050-IL)



(SW) → : Audio Signal Route (Subwoofer ch)

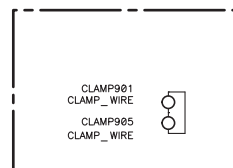
A



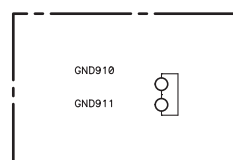
C



E



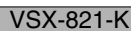
F



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F



A

B

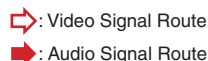
C

D

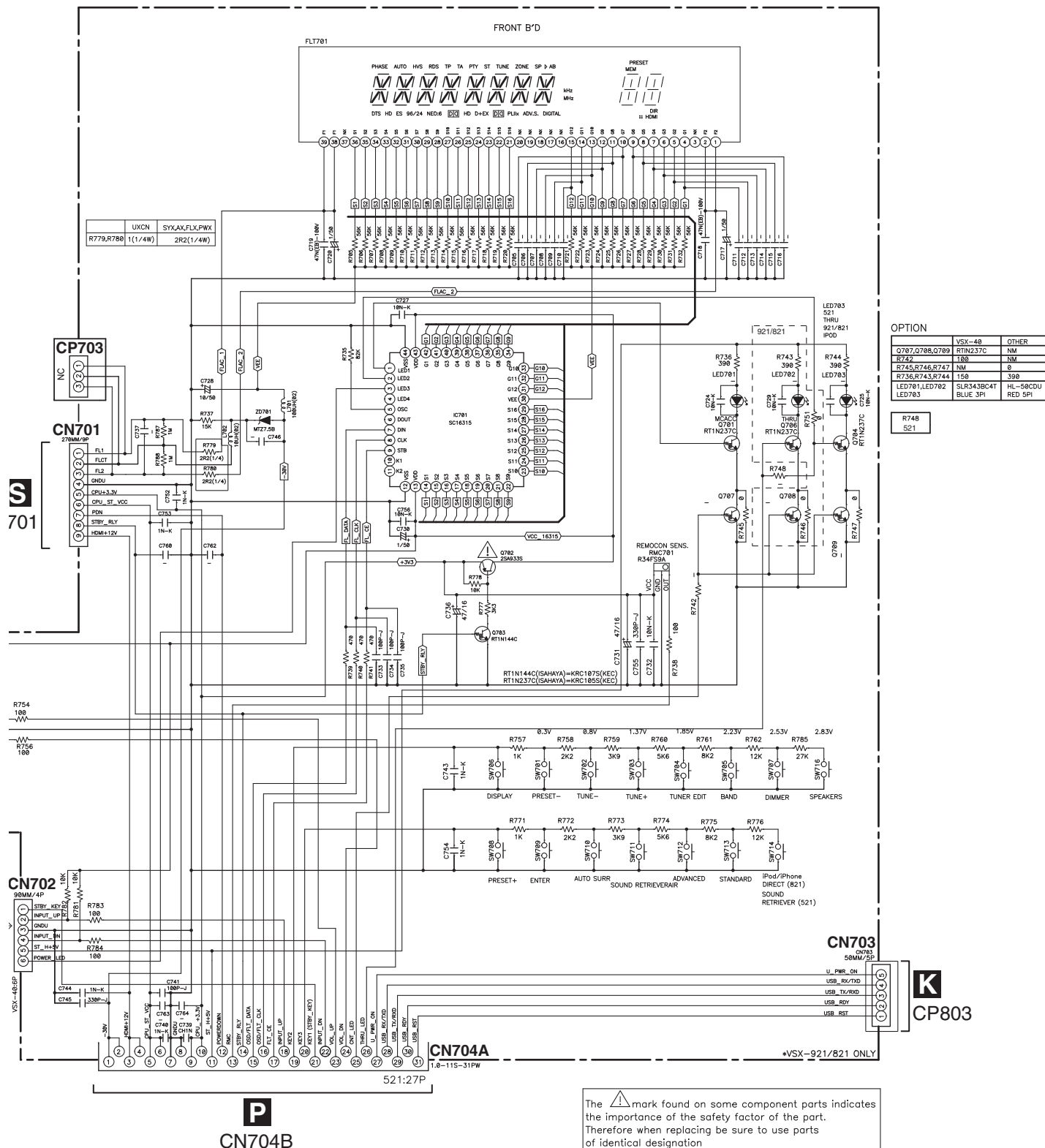
E

F

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



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



A

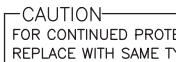




99

4

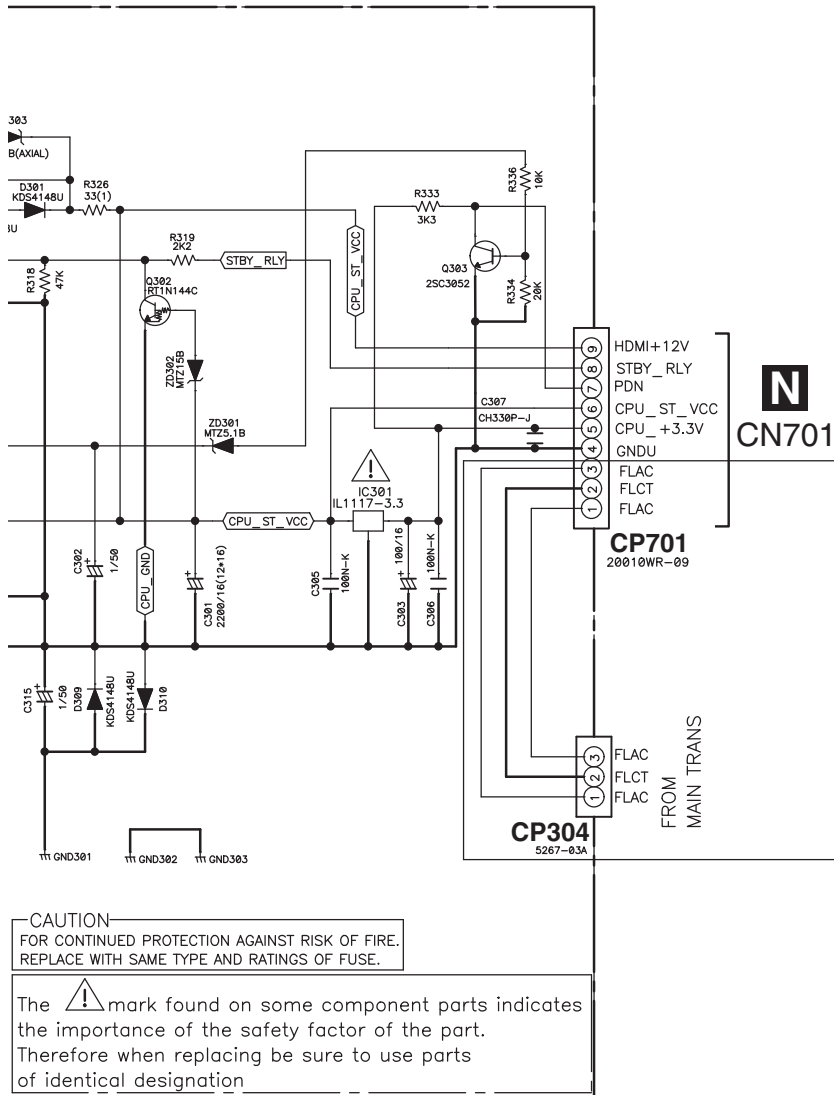
CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE,
REPLACE WITH SAME TYPE AND RATINGS OF FUSE.



The  mark for the importance of. Therefore when reviewing of identical design

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

IRE,



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

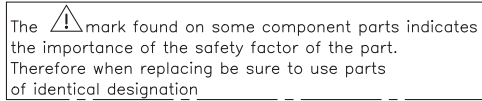
The mark found on some component parts indicates the importance of the safety factor of the part. Therefore when replacing be sure to use parts of identical designation

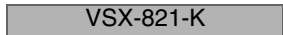
- NOTES**
1. Resistor values are indicated in ohms unless otherwise specified
 [k = 1.000 m = 1.000.000]
 2. Capacitor values are indicated in microfarads unless otherwise specified.
 [p = micro-microfarads]
 3. : These resistor are to be segregated from printed wiring board or other accessible parts.
- CAUTION**
 Safety precaution to be followed during servicing
- 1] Since those parts marked with are critical parts for safety, use only the one described in the parts list
 - 2] Before returning the set to the customer make appropriate leakage current or resistance measurements to determine the exposed parts are properly insulated from the supply circuit.

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



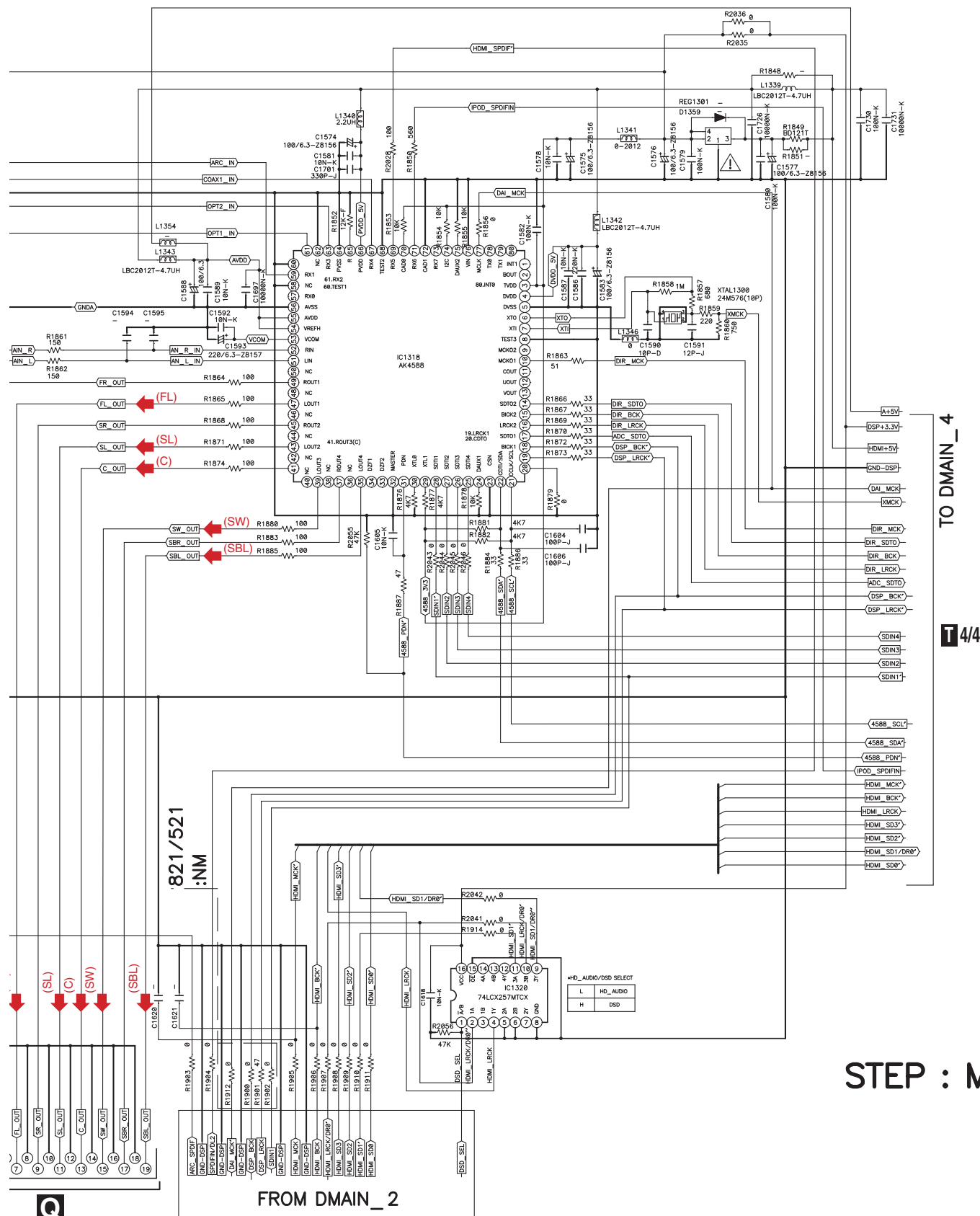
F



T_{2/4}

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

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



STEP : MP

CN209

FROM DMAIN_2

VSX-821-K

T3/4

T4/4 D-MAIN ASSY

(VSX-521-K: 7028070191020-IL)

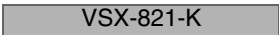
FROM DMAIN 1

FROM DMAIN 2

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



110



A



C

D

F

F

A

B

C

D

E

F



■

5

■

6

■

7

■

8

■

A

■

B

■

C

■

D

■

E

■

F

■

5

■

6

■

7

■

8

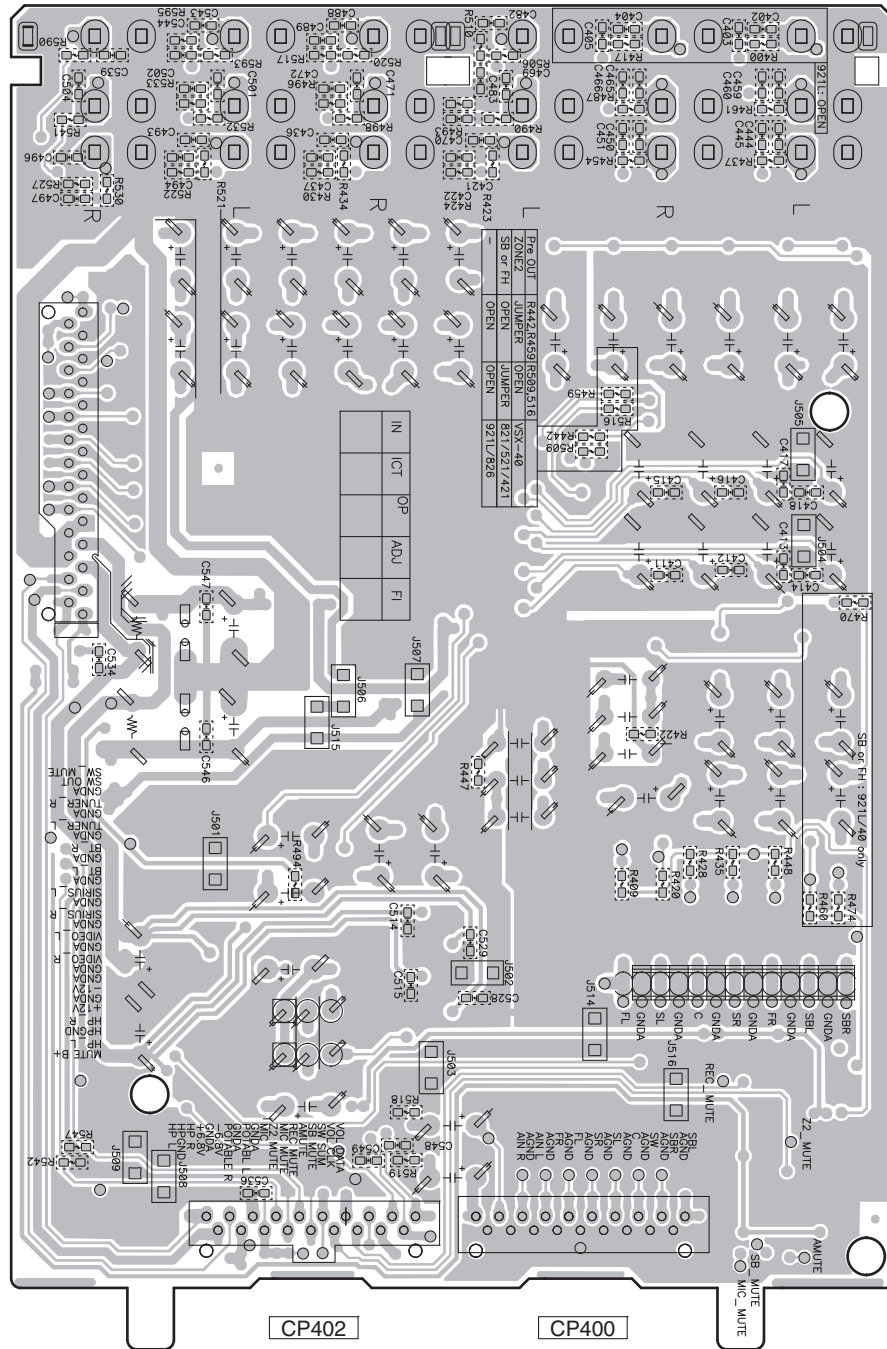
■

SIDE B

SIDE B

A AUDIO ASSY

CP401



CP402

CP400

CN400

VSX-821-K

11.2 AMP ASSY (for VSX-921-K)

SIDE A

A

A CN400

CP401

B AMP ASSY

P CP404

CN40.

B

C

IC

Q

Q408 Q407
Q412
Q401
Q404 Q409 Q410

Q440 Q445 Q446

Q432 Q431
Q436
Q425
Q428 Q433 Q434

Q456
Q460
Q449
Q452 Q457 (

1

SIDE B

D

B AMP ASSY

N404

CP401

E

F

IC

Q

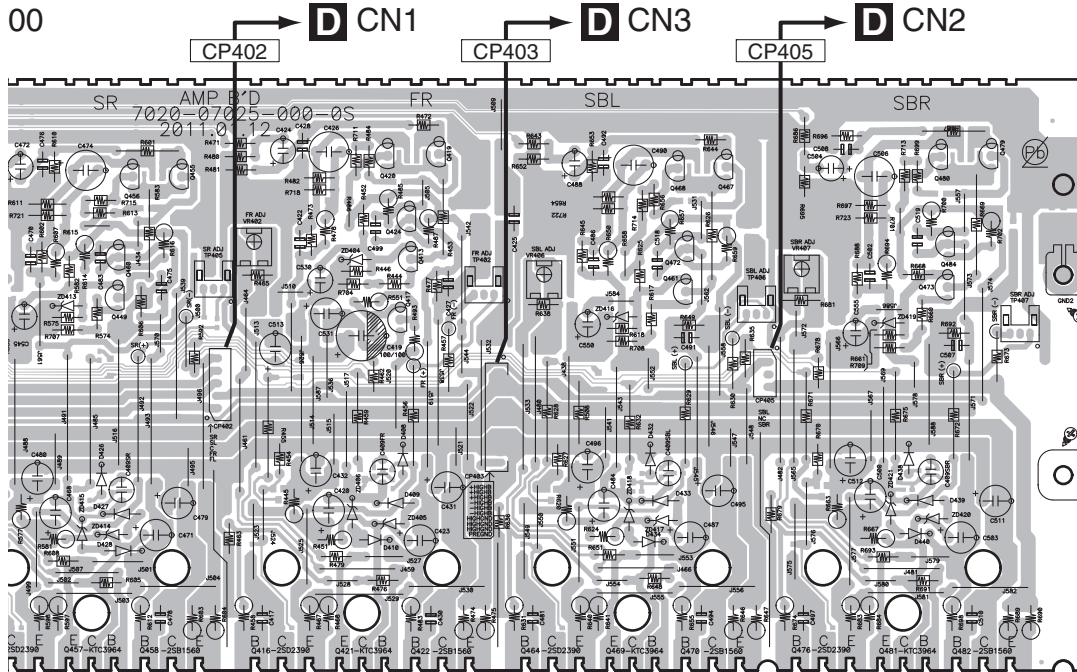
	Q478	Q475
Q482	Q481	Q476

Q466	Q463
Q469	Q464

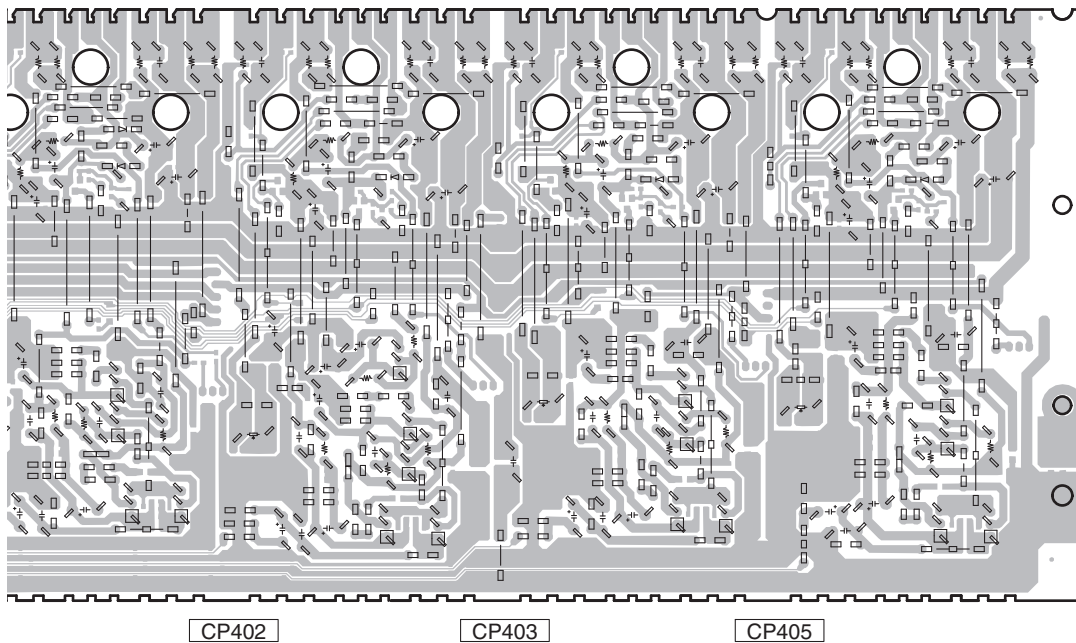
	Q418	Q415
Q422	Q421	Q416

	Q454
Q458	Q457

B

SIDE A

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

SIDE B

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

VSX-821-K

B

SIDE A

CAMP ASSY

P CP404

A CN400

SIDE B

CAMP ASSY

CN404

CP401

IC

Q

Q4

Q42

Q45

Q454

Q457

Q451

Q452

Q434

Q430

Q433

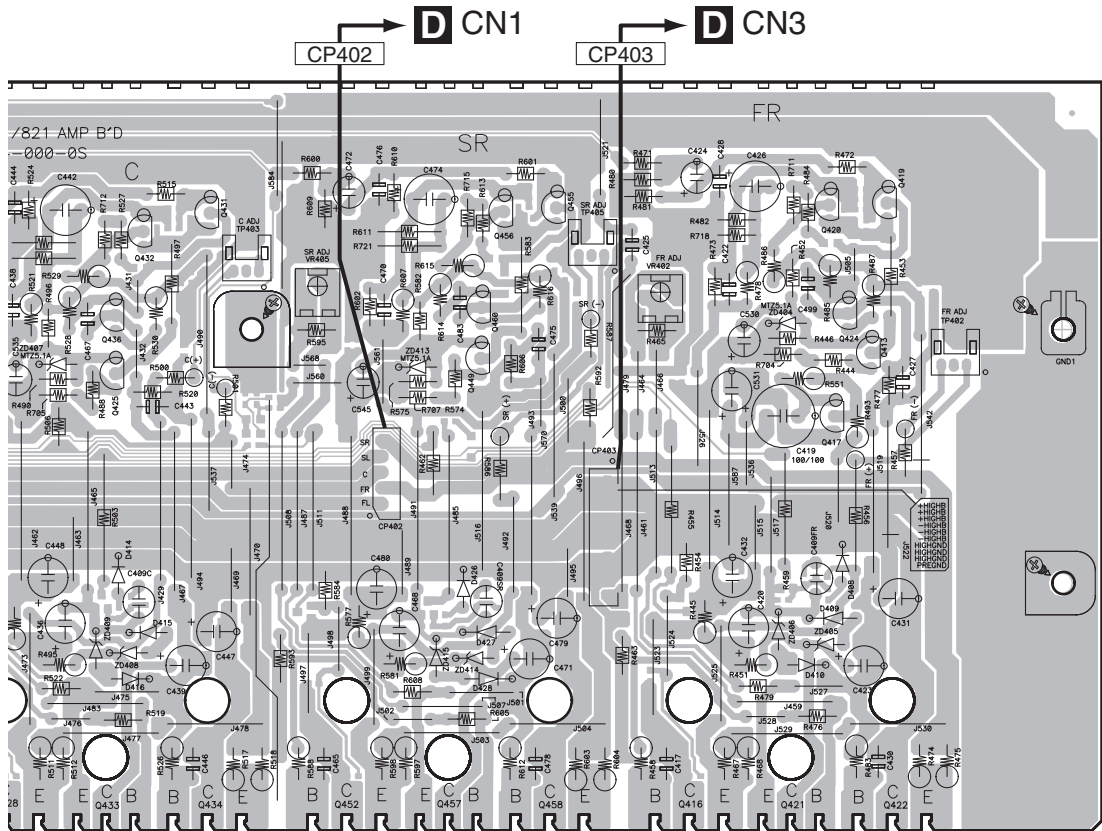
VSX-821-K

SIDE A

A

B

C



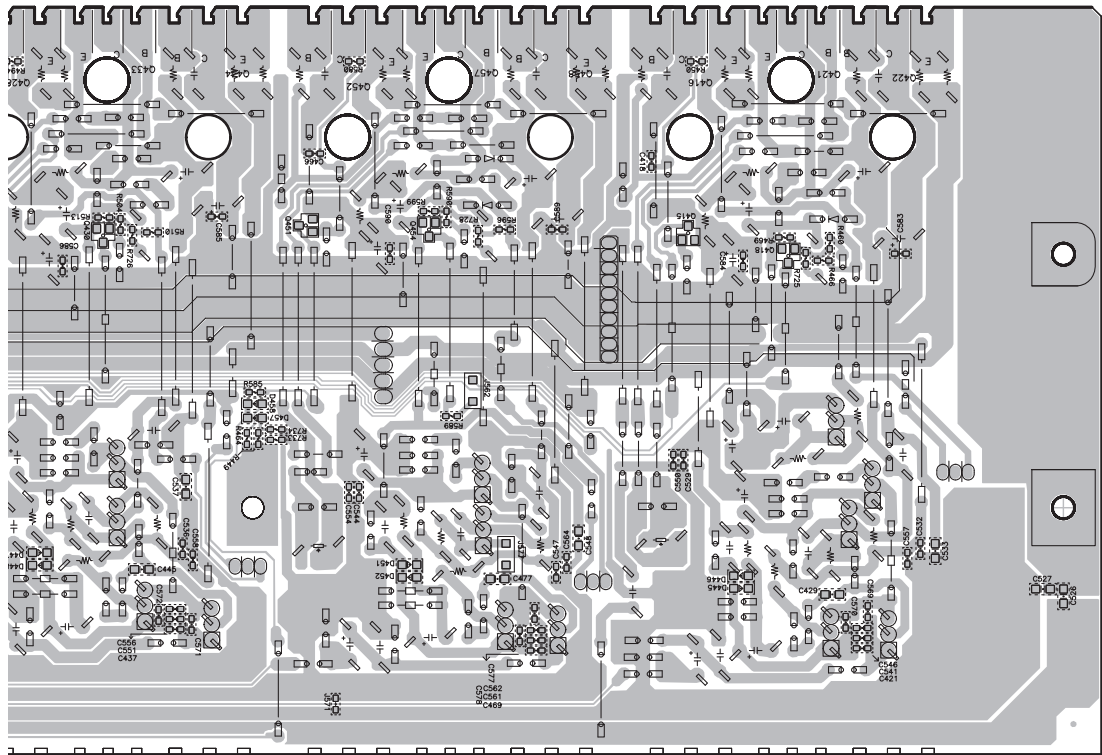
Q432 Q431 Q456 Q455 Q420 Q419
Q436 Q460 Q424
Q425 Q449 Q413
428 Q433 Q434 Q452 Q457 Q458 Q416 Q421 Q417 Q422

SIDE B

D

E

F



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

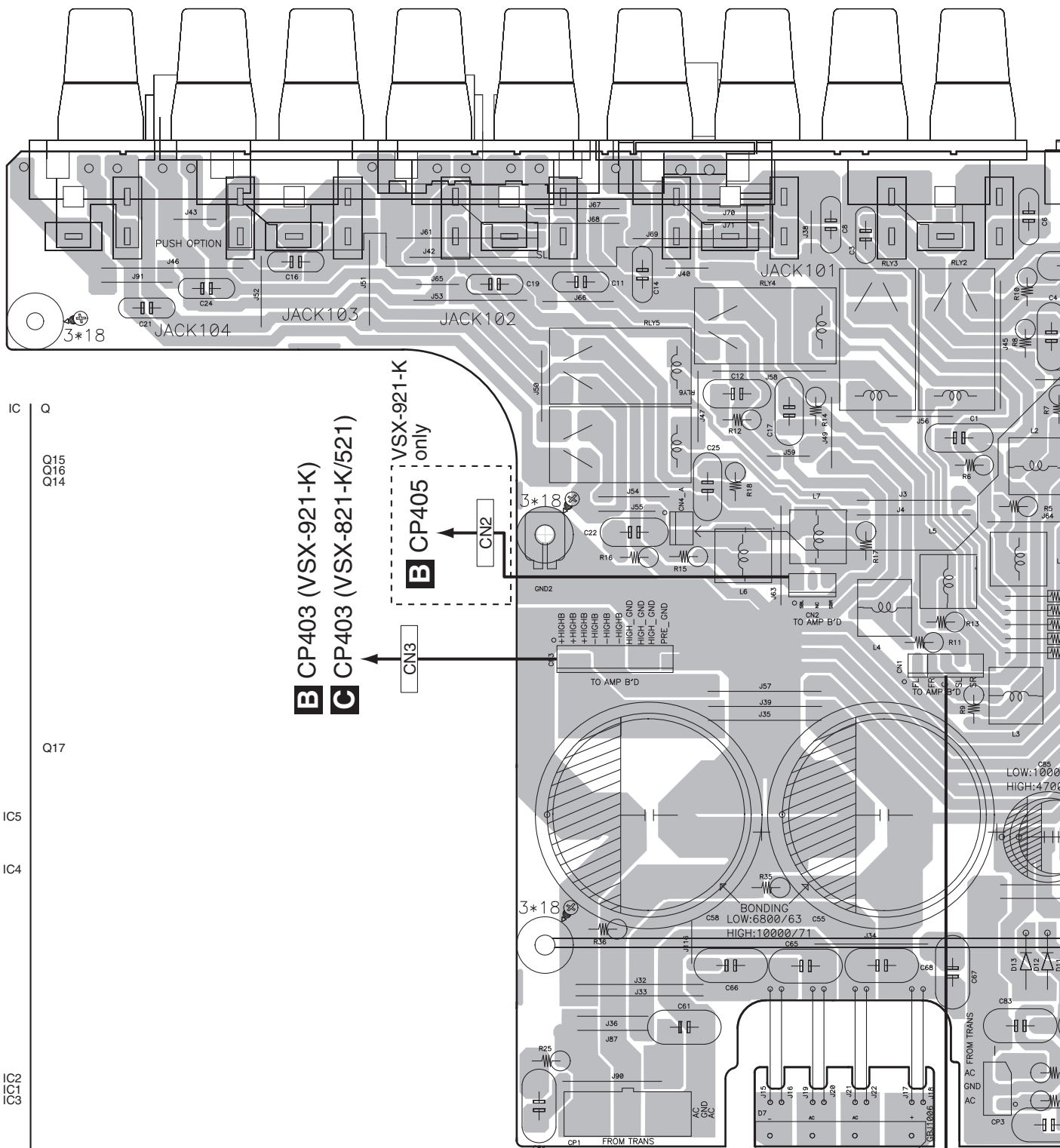
VSX-821-K

C

11.4 MAIN ASSY

SIDE A

D MAIN ASSY

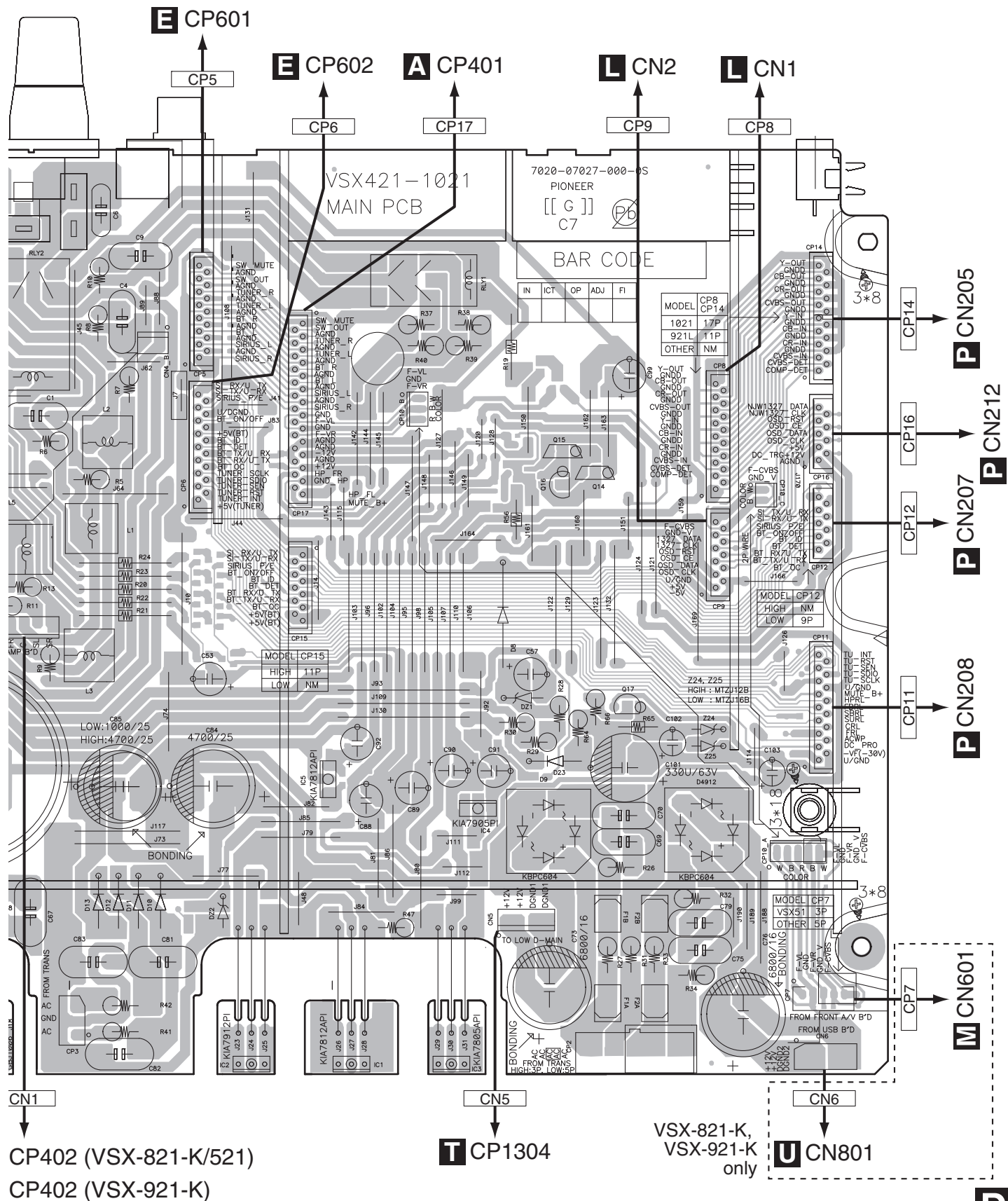


C CP402 (VSX
B CP402 (VSX

D

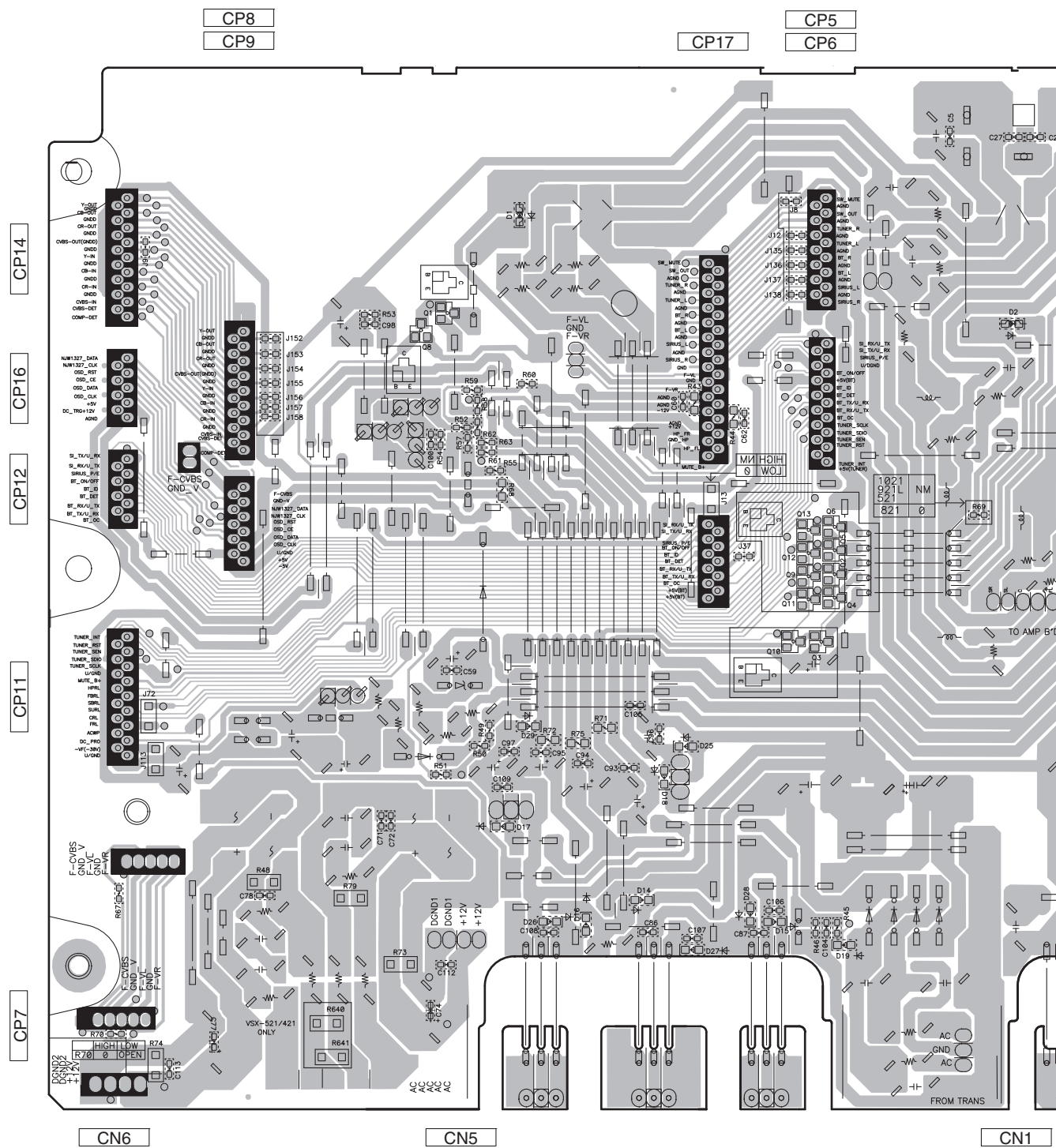
120

VSX-821-K



SIDE B

D MAIN ASSY



SIDE B

A

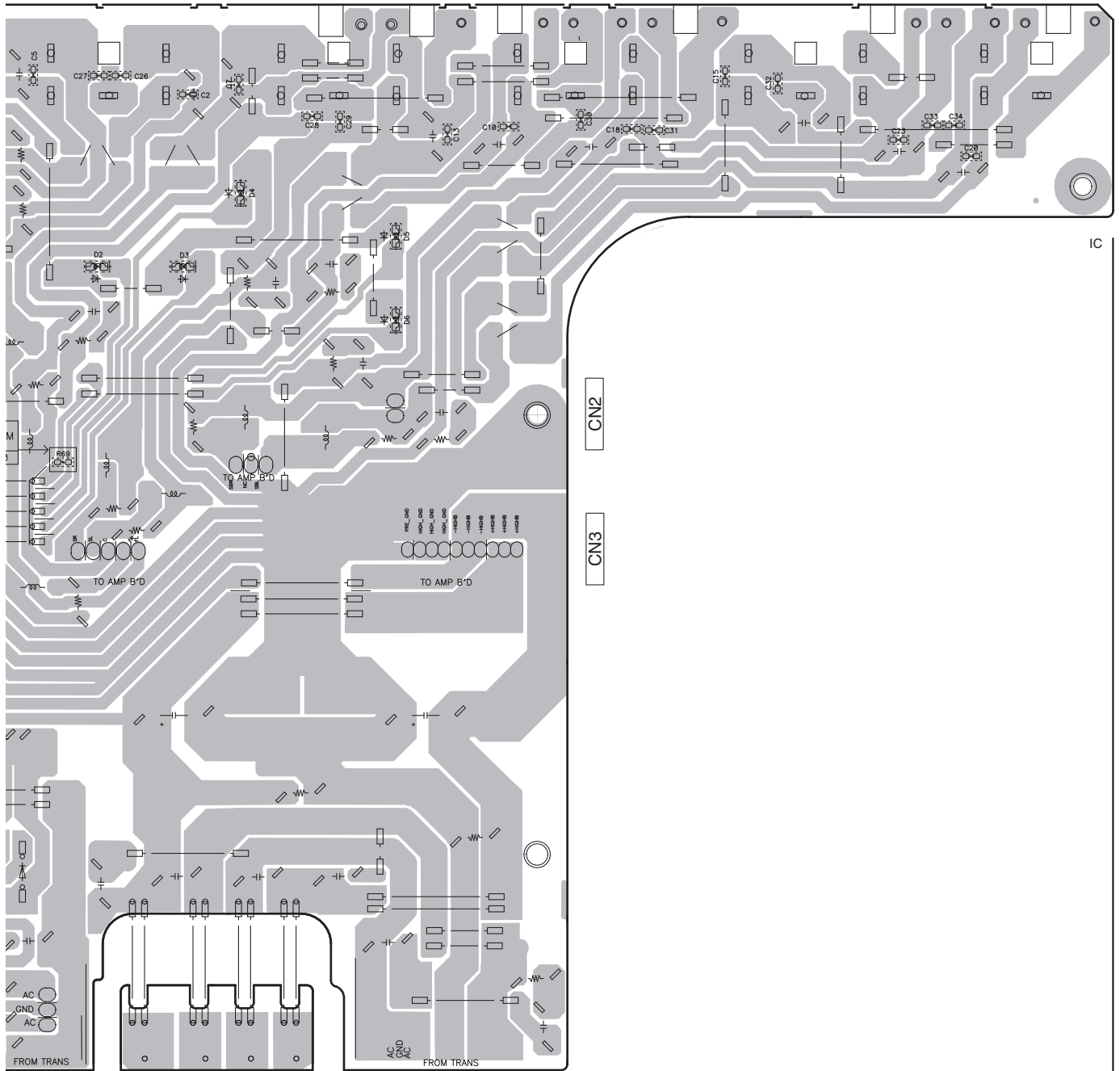
B

C

D

E

F



IC

Q

Q1

Q8

Q13

Q6

Q5

Q12

Q2

Q9

Q11

Q4

Q10

Q3

CN1

CN2

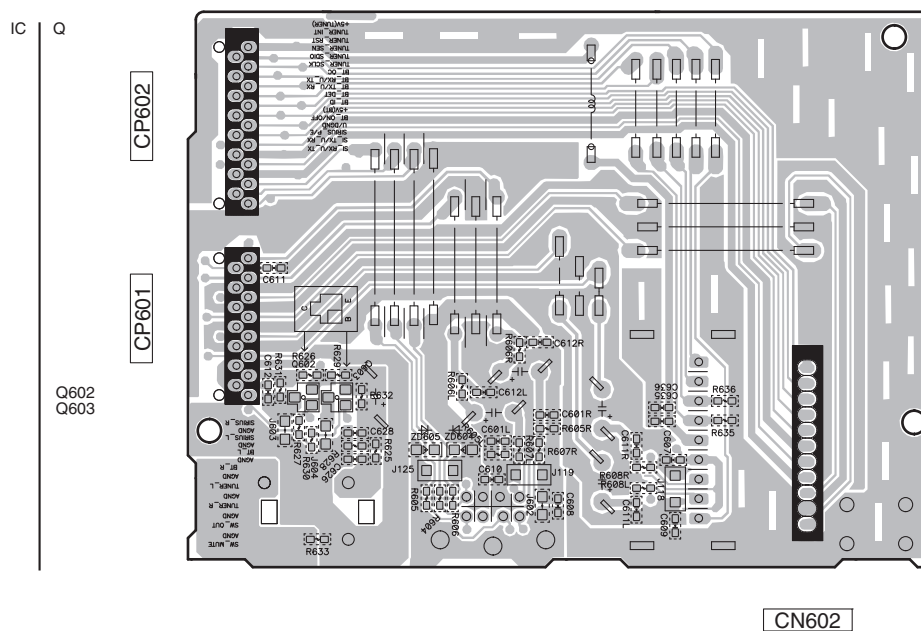
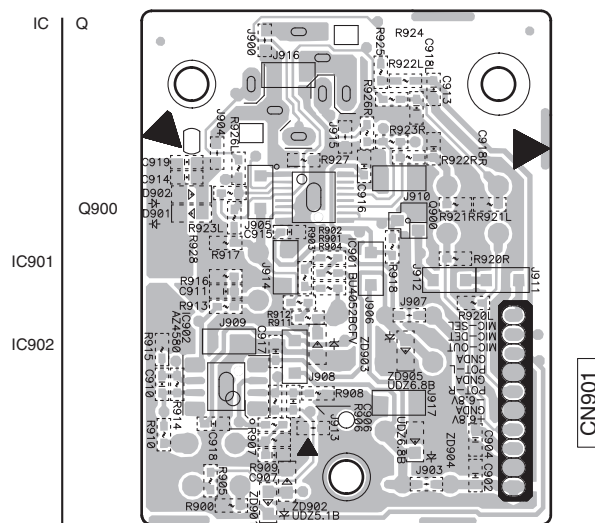
CN3

VSX-821-K

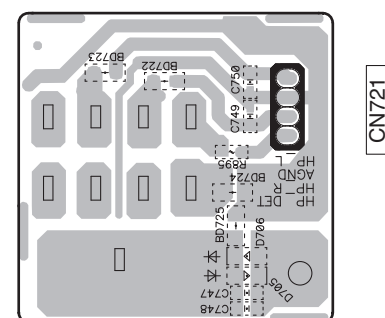
D

SIDE B**SIDE B**

E SUBWOOFER ASSY

**G MIC ASSY**

F HEADPHONE ASSY

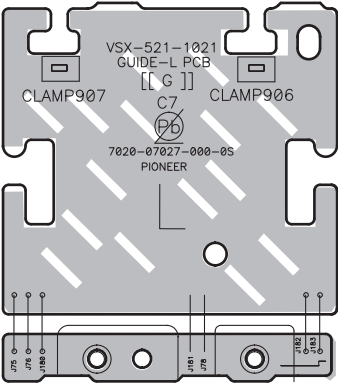


11.6 GUIDE L, R, WIRE GUIDE A and B ASSYS

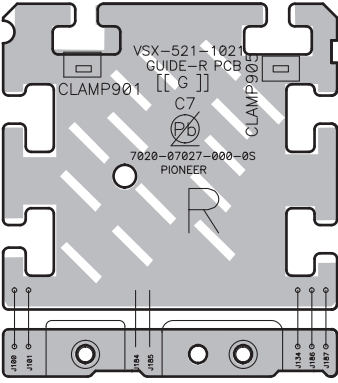
SIDE A

SIDE A

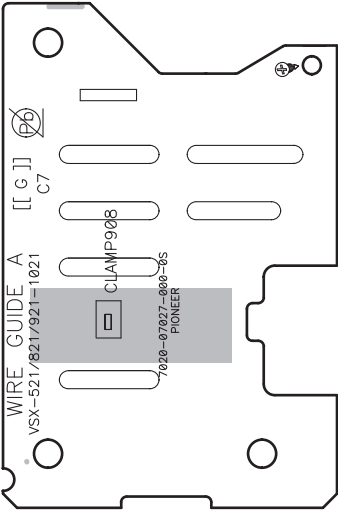
H GUIDE L ASSY



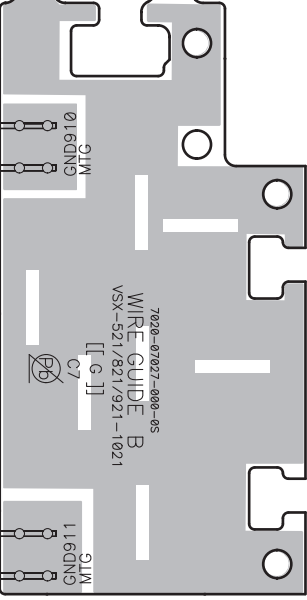
I GUIDE R ASSY



J WIRE GUIDE A ASSY



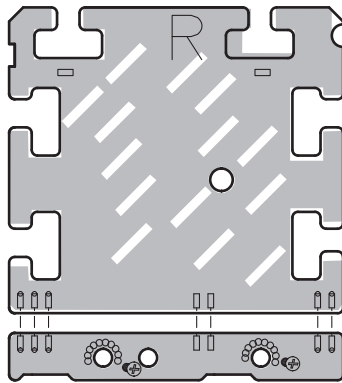
K WIRE GUIDE B ASSY



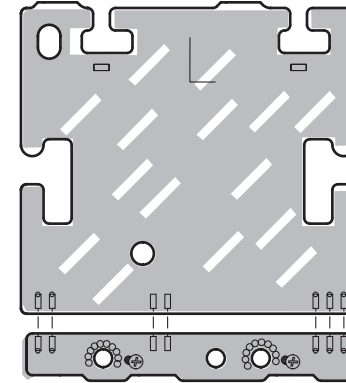
SIDE B

SIDE B

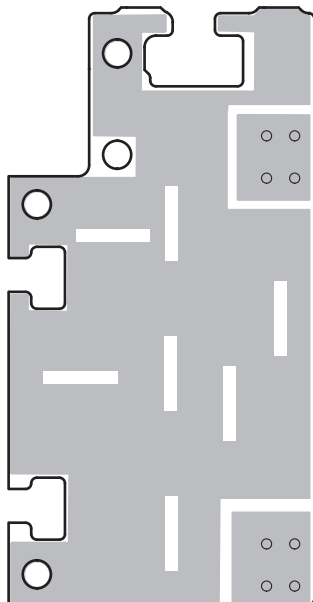
I GUIDE R ASSY



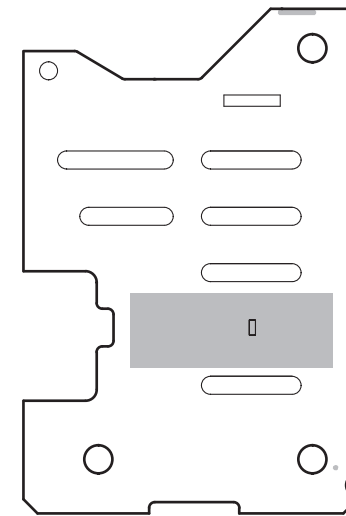
H GUIDE L ASSY



K WIRE GUIDE B ASSY



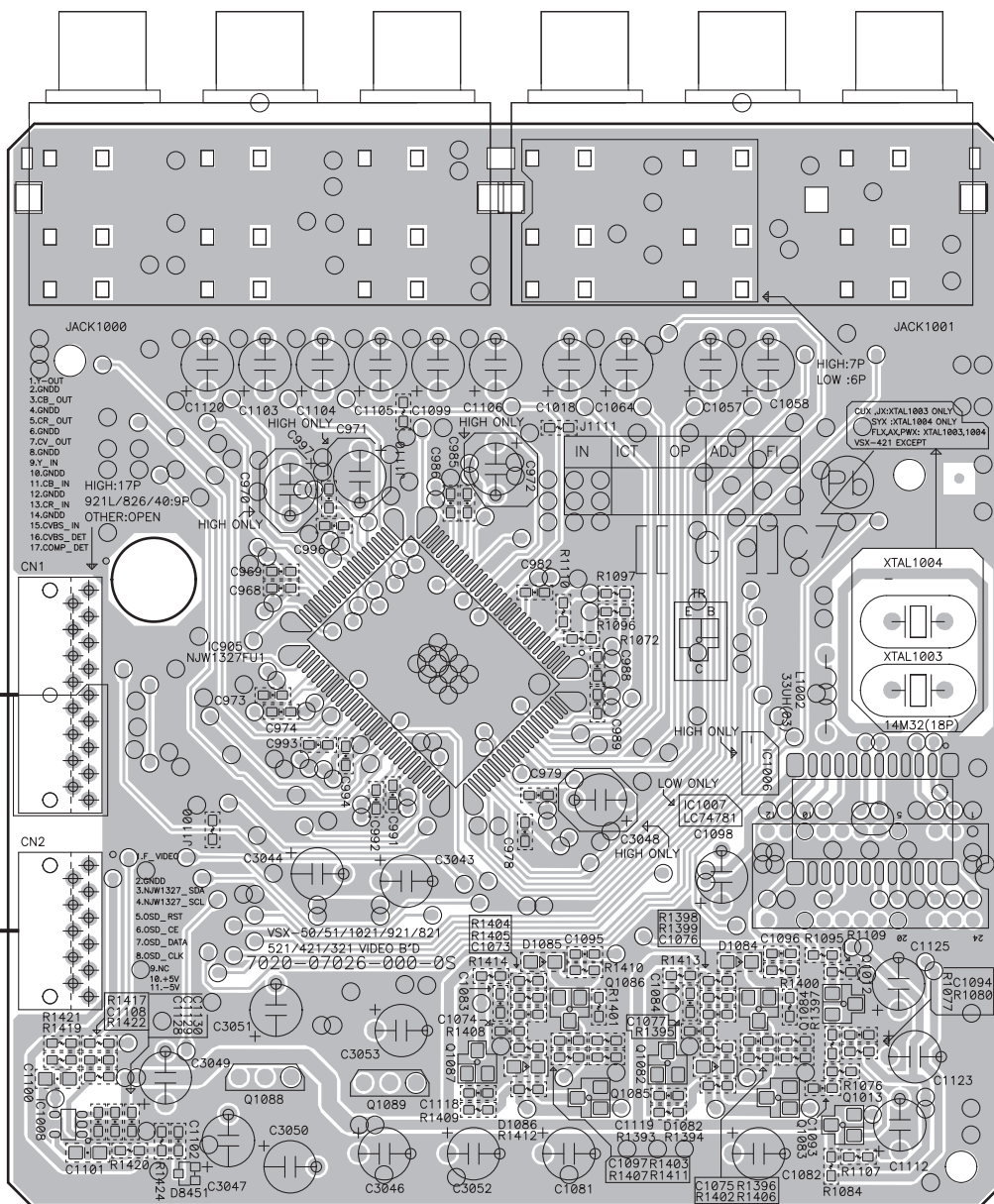
J WIRE GUIDE A ASSY



H I J K

CP8

CP9



IC | Q

IC905

IC1006

IC1007

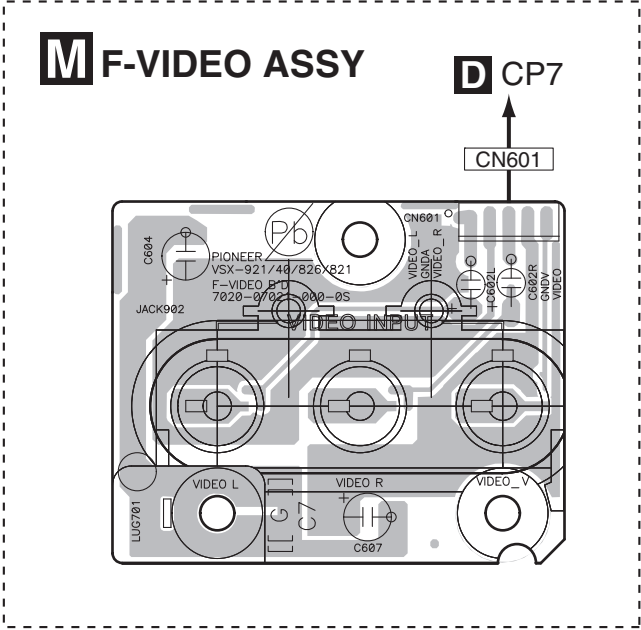
Q1086
Q1084
Q1012

Q1088
Q1089
Q1087
Q1085
Q1082
Q1083
Q1013

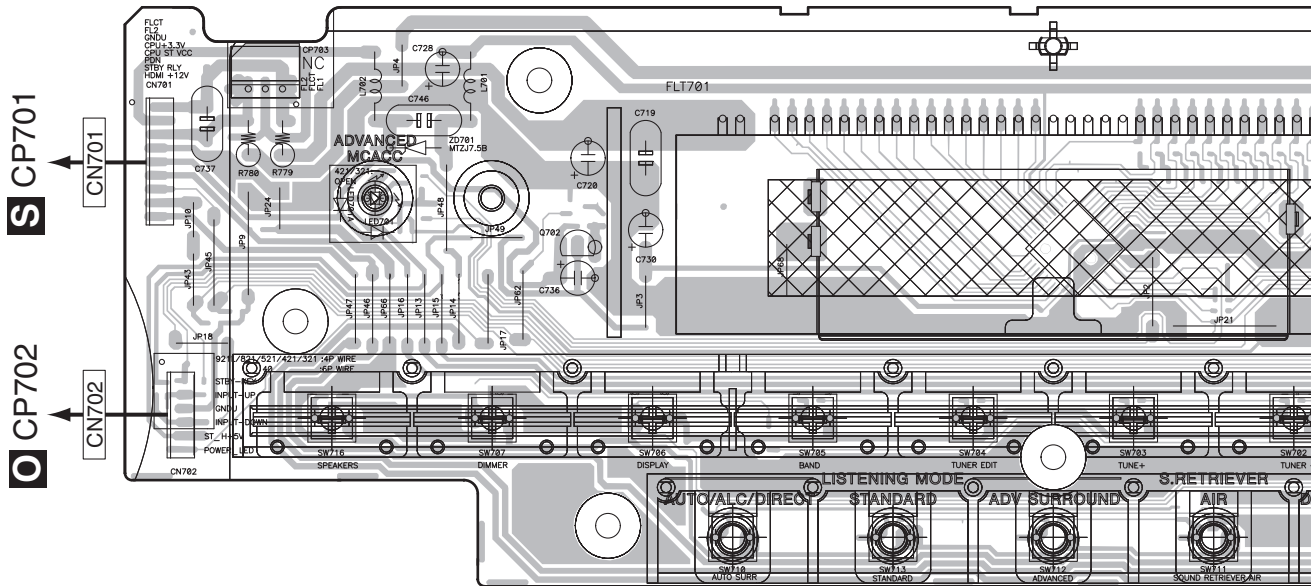
11.8 F-VIDEO, FRONT and POWER ASSYS

SIDE A

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



N FRONT ASSY

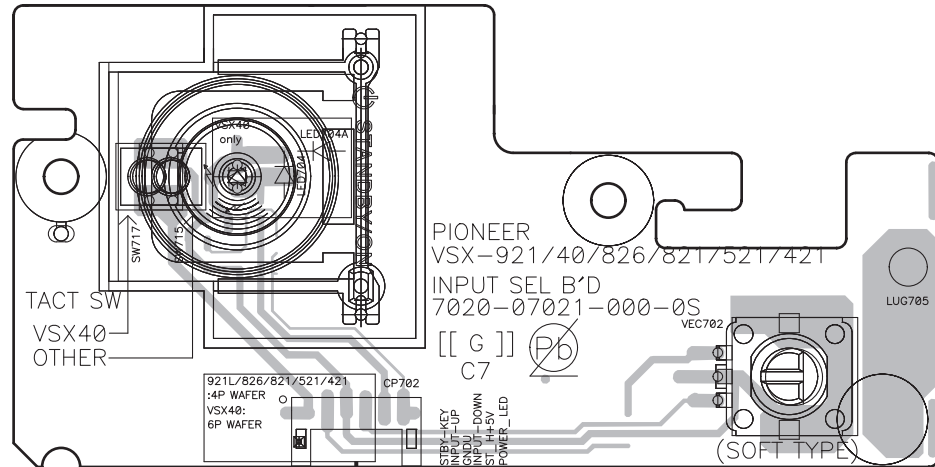


M N

SIDE A

A

O POWER ASSY

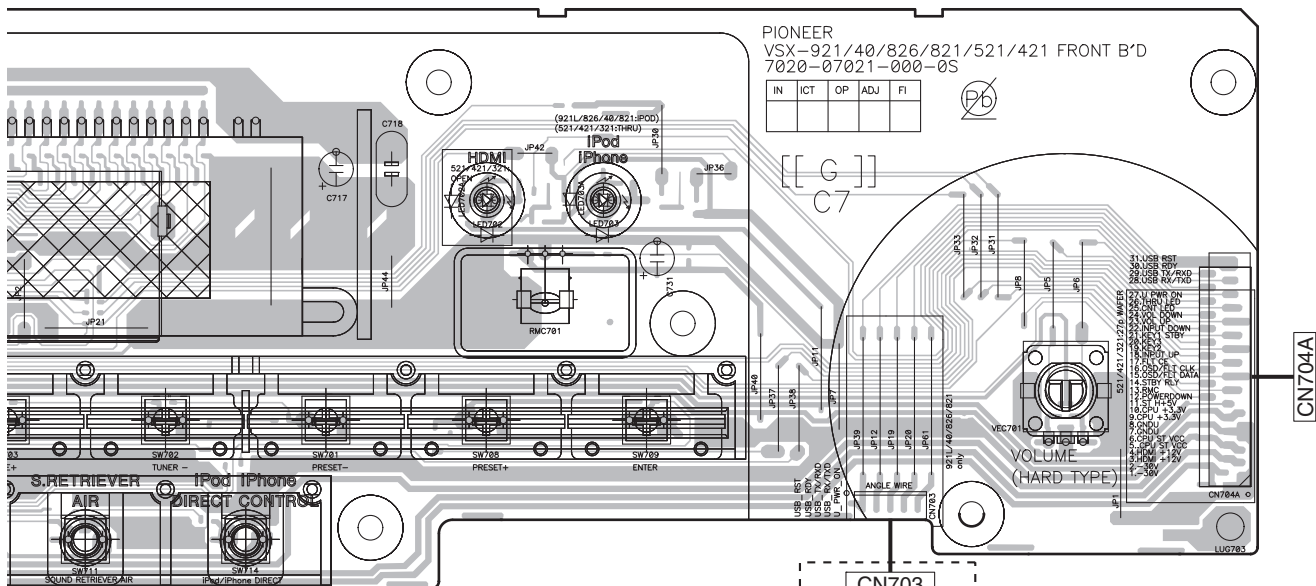


CP702

N CN702

B

C



SIDE B

A

B

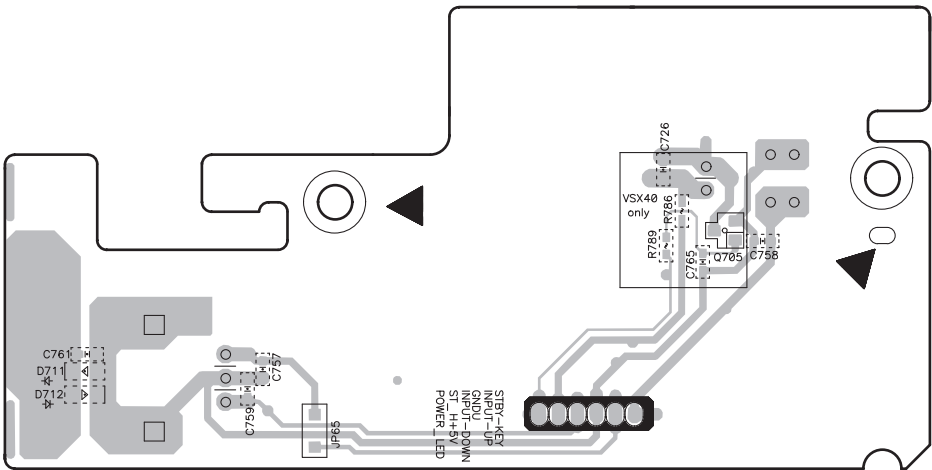
C

D

E

F

POWER ASSY



CP702

FRONT ASSY

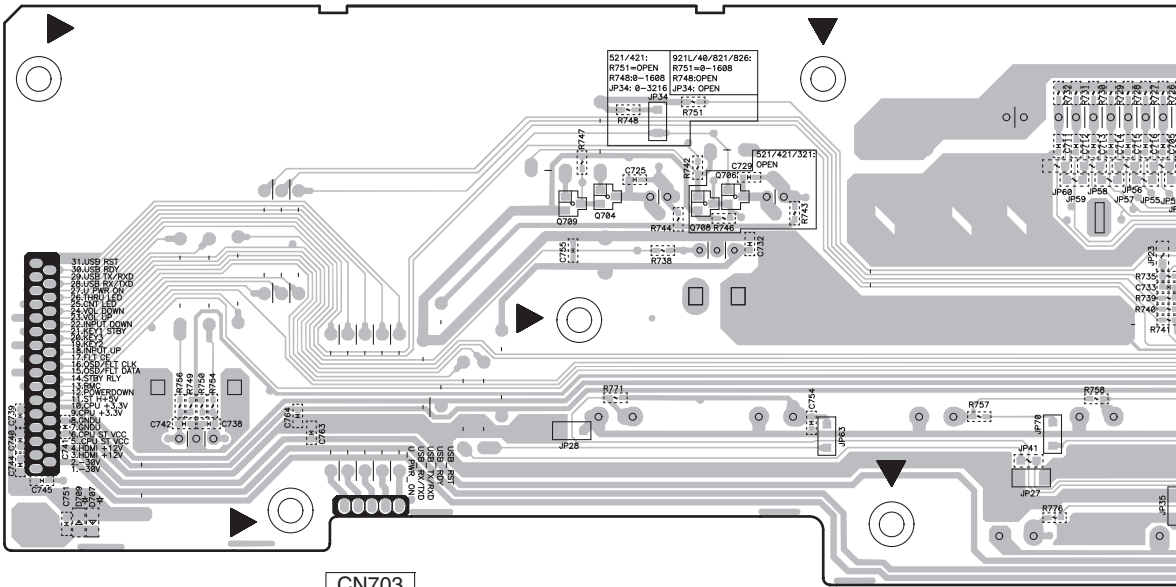
IC Q

IC701

Q709 Q703
Q704 Q701
Q708 Q707
Q706

CN704A

CN703



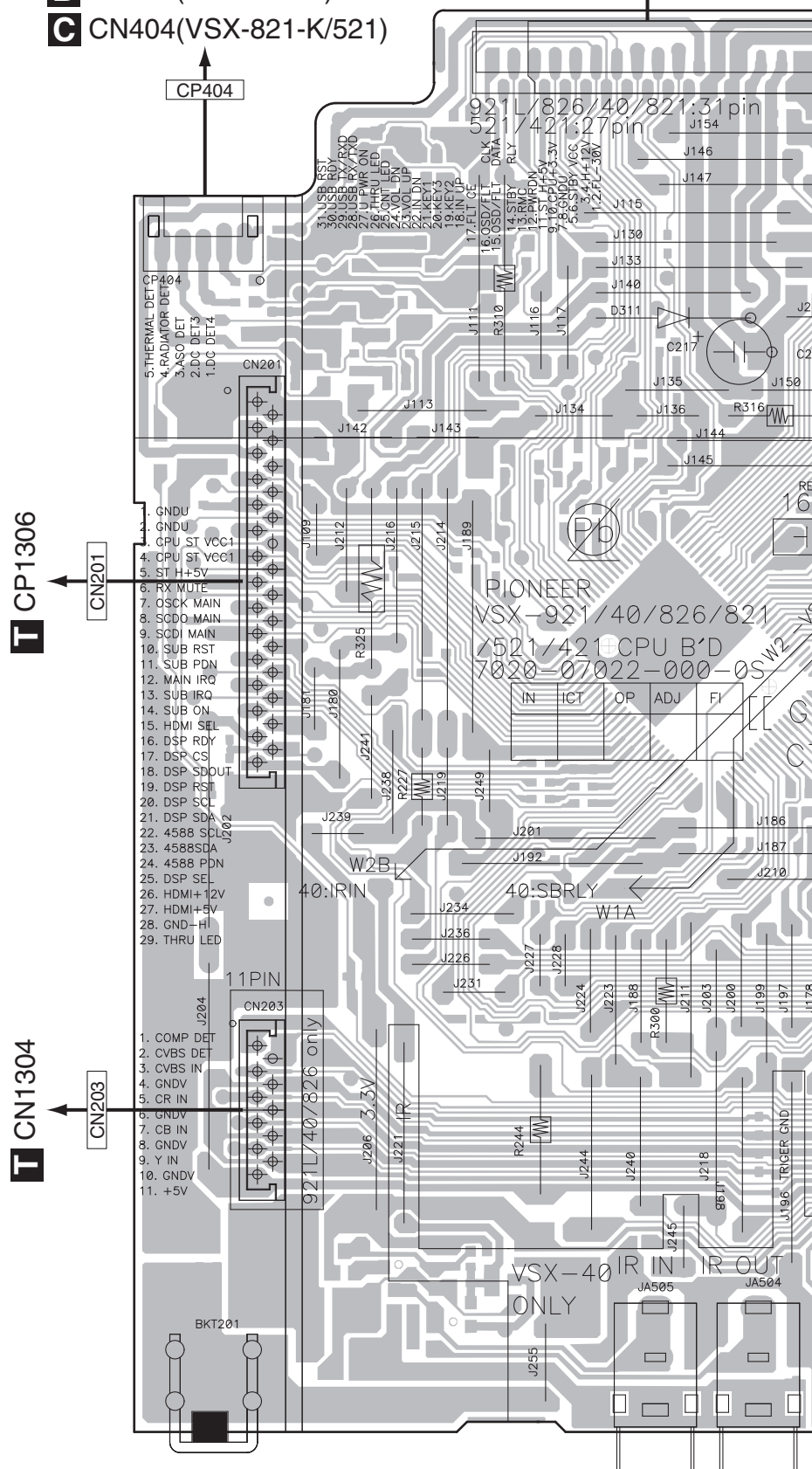
VSX-821-K

SIDE A

P CPU ASSY

B CN404(VSX-921-K)

C CN404(VSX-821-K/521)

N CN704A

VSX-821-K

SIDE B

A

B

C

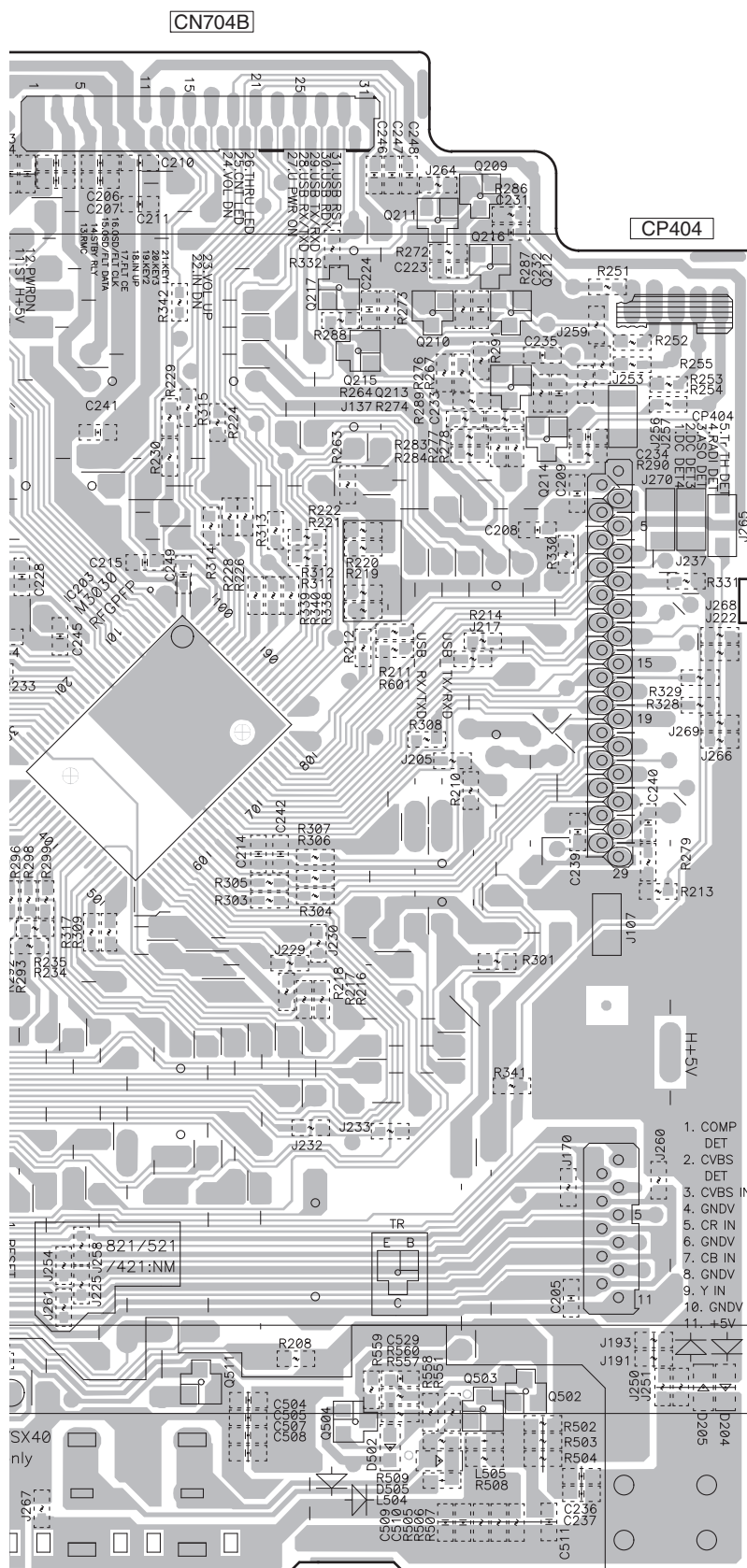
D

F

F

P

137



1. COMP
DET
2. CVBS
DET
3. CVBS IN
4. GNDV
5. CR IN
6. GNDV
7. CB IN
8. GNDV
9. Y IN
10. GNDV
11. +5V

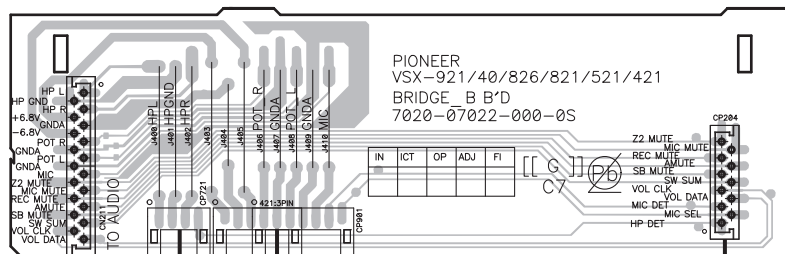
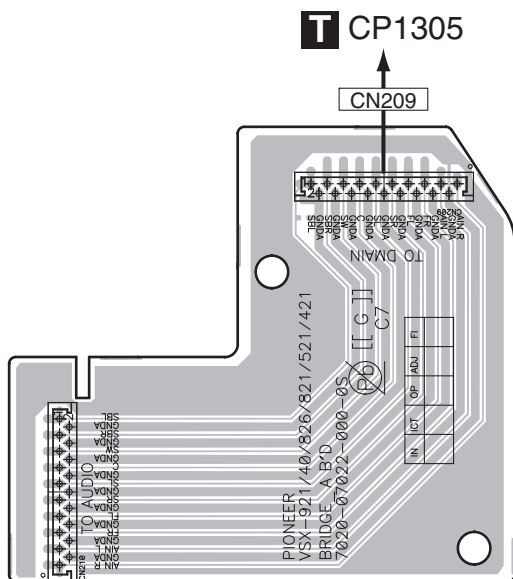
11.10 BRIDGE A and B ASSYS

SIDE A

SIDE A

Q BRIDGE A ASSY

R BRIDGE B ASSY



A CP400

A CP402

F CN721

G CN901

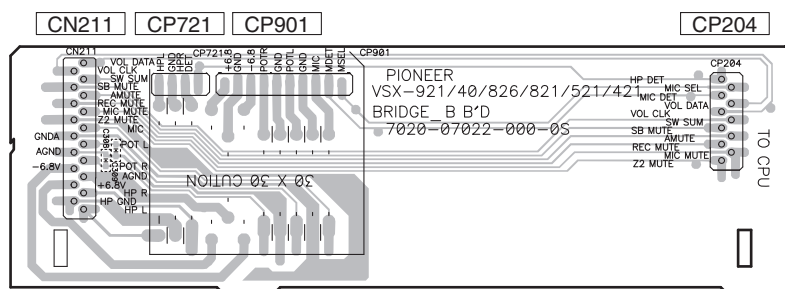
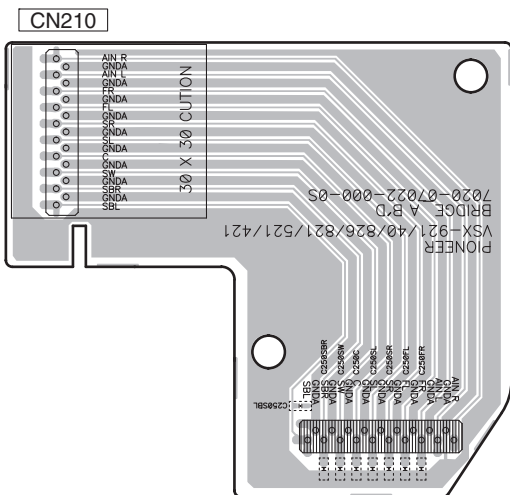
P CN204

SIDE B

SIDE B

Q BRIDGE A ASSY

R BRIDGE B ASSY



Q R

SIDE A

A

1

Q

1

1

E

F

139

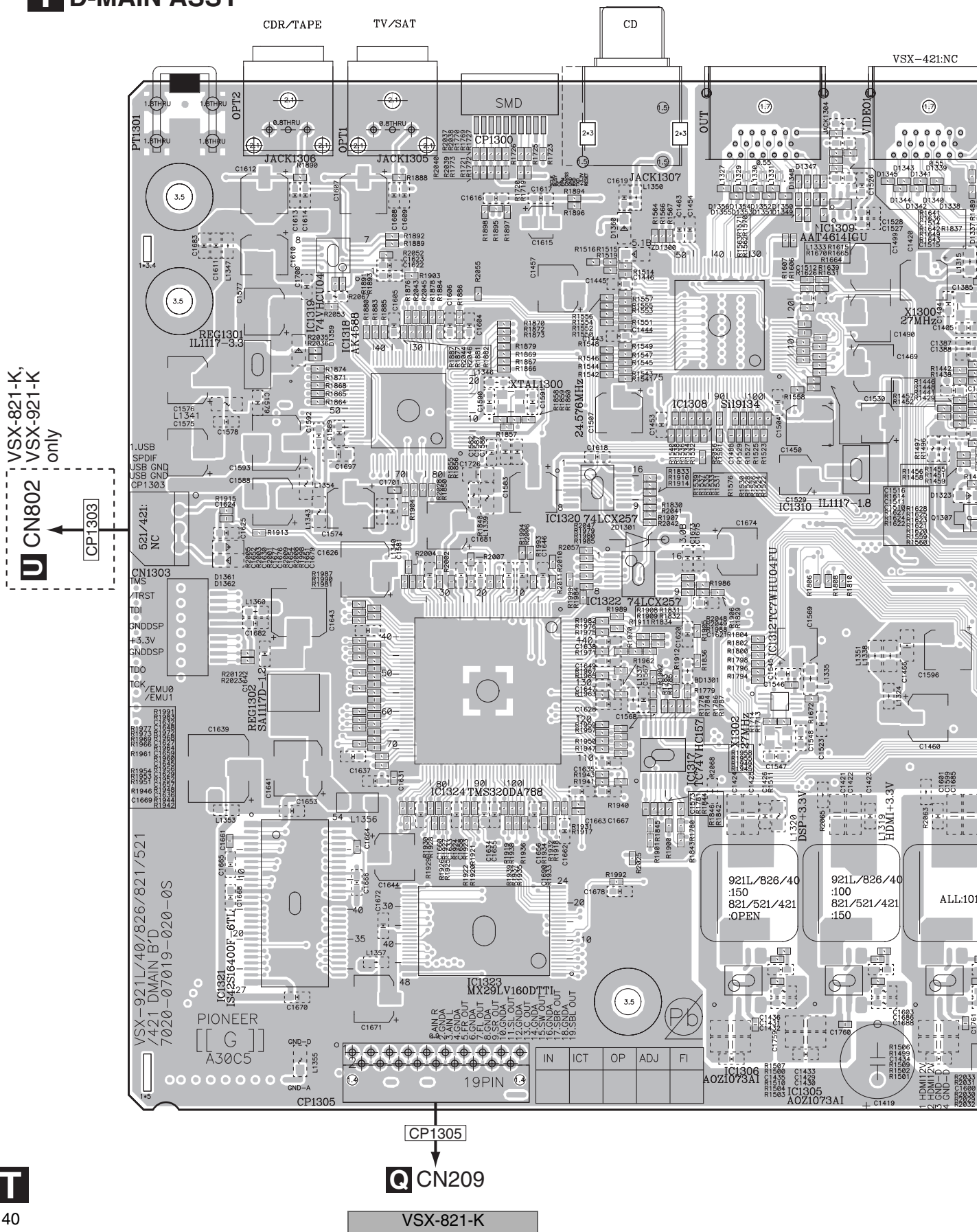
SIDE B

IC	Q
	Q302
	Q303
	Q301
IC301	

VSX-821-K

SIDE A

T D-MAIN ASSY

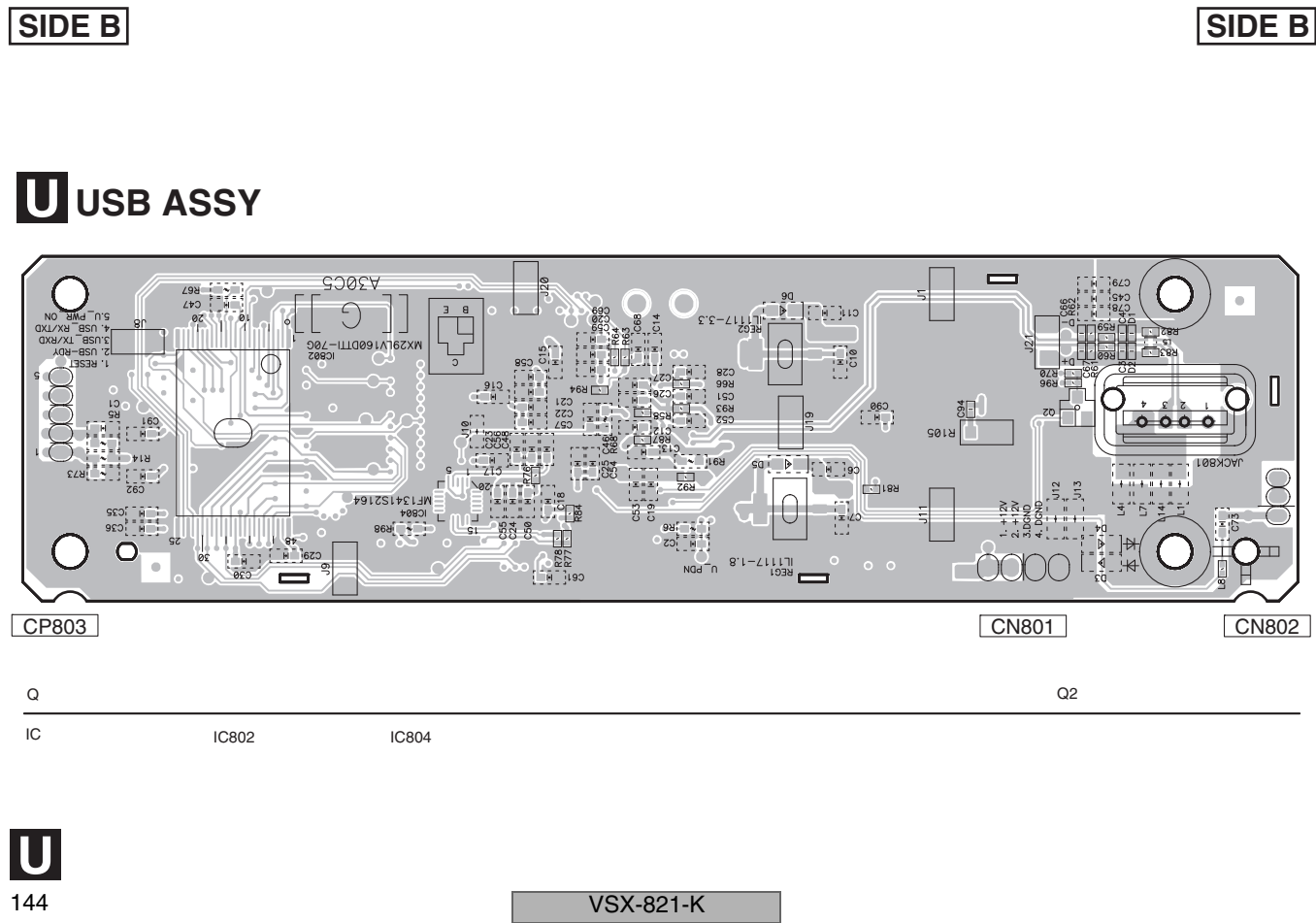
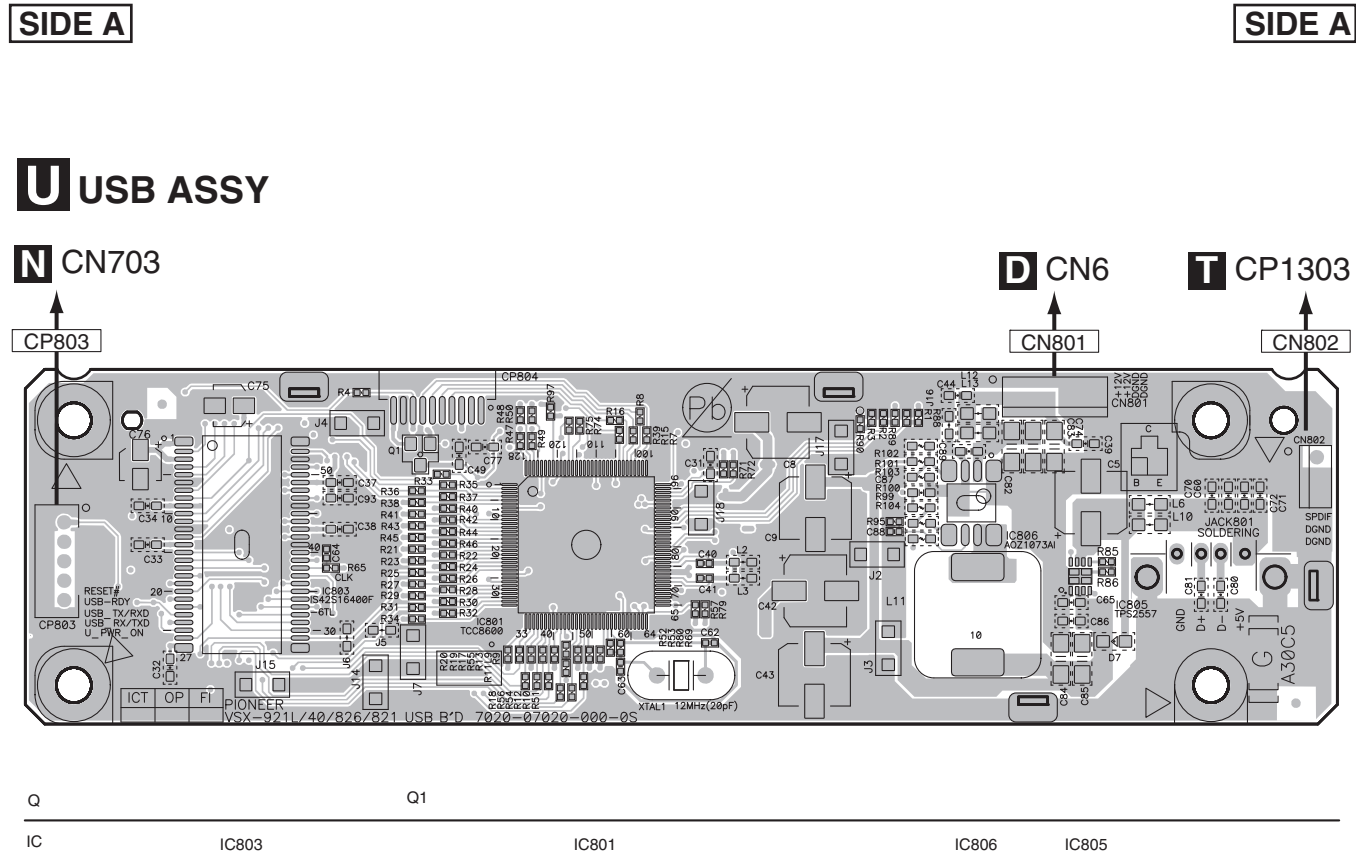


A



T

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

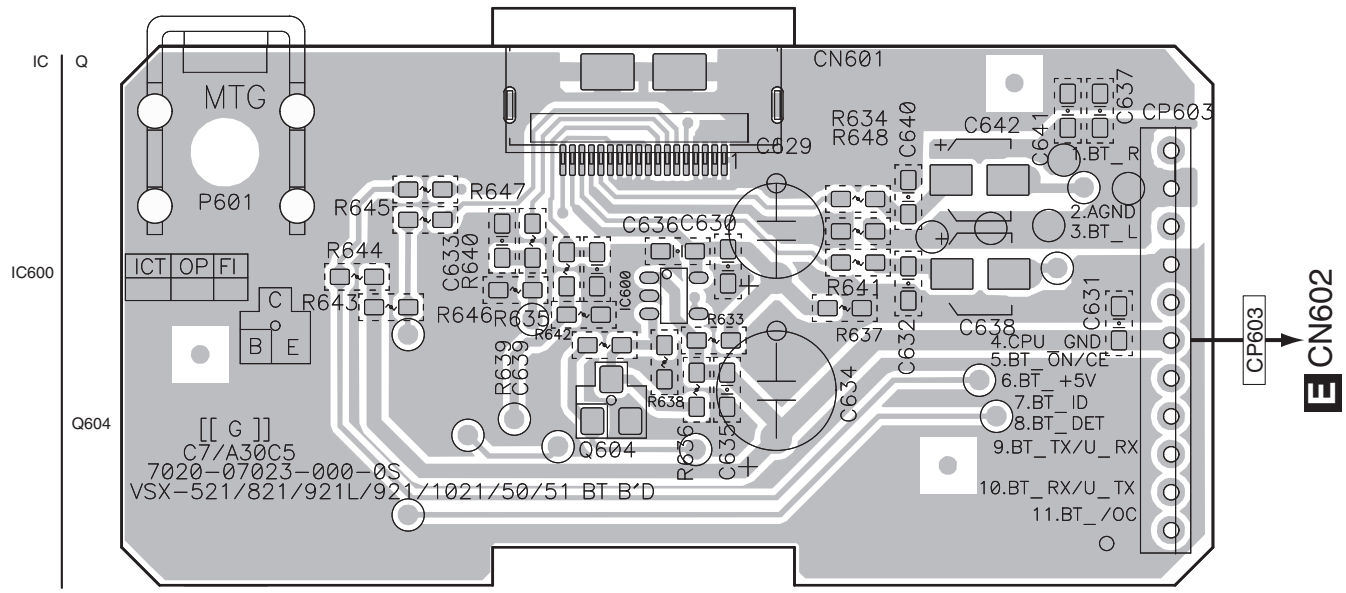


SIDE A

SIDE A

V

BT ASSY

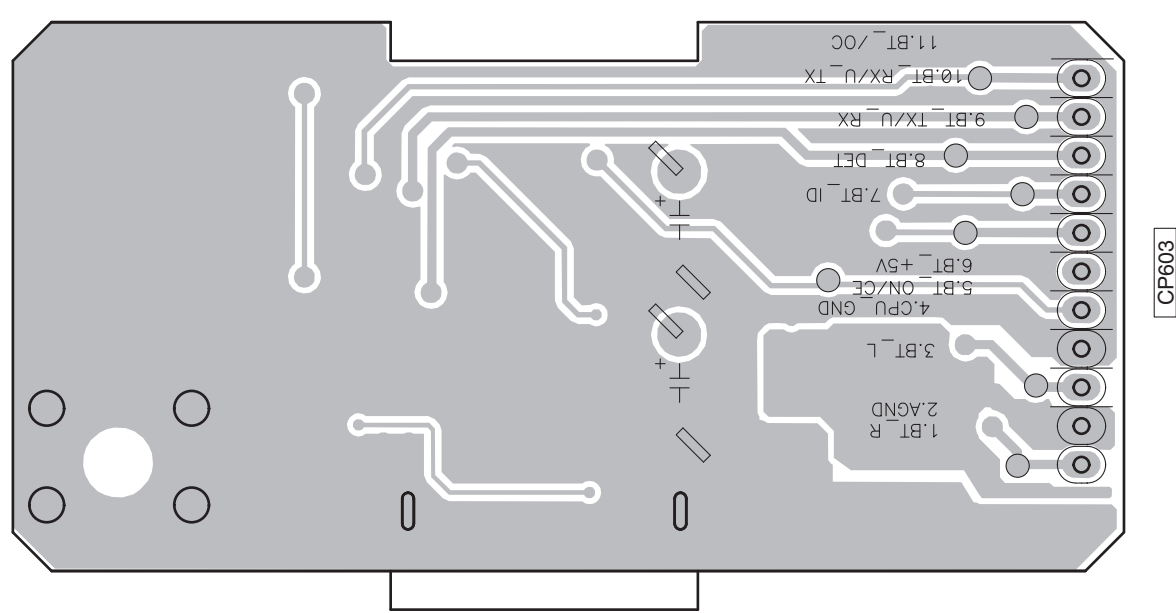


SIDE B

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

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

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

560 Ω $\rightarrow$ 56 $\times 10^1$ $\rightarrow$ 561.....RD1/4PU $\begin{bmatrix} 5 \\ 6 \end{bmatrix} \begin{bmatrix} 1 \\ 7 \end{bmatrix} J$

47 k Ω $\rightarrow$ 47 $\times 10^3$ $\rightarrow$ 473.....RD1/4PU $\begin{bmatrix} 4 \\ 7 \end{bmatrix} \begin{bmatrix} 3 \\ 3 \end{bmatrix} J$

0.5 Ω $\rightarrow$ R50.....RN2H $\begin{bmatrix} R \\ 5 \end{bmatrix} \begin{bmatrix} 0 \\ 0 \end{bmatrix} K$

1 Ω $\rightarrow$ 1R0.....RSIP $\begin{bmatrix} 1 \\ 7 \end{bmatrix} \begin{bmatrix} R \\ 0 \end{bmatrix} K$

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

5.62 k Ω $\rightarrow$ 562 $\times 10^1$ $\rightarrow$ 5621.....RN1/4PC $\begin{bmatrix} 5 \\ 6 \end{bmatrix} \begin{bmatrix} 2 \\ 2 \end{bmatrix} \begin{bmatrix} 1 \\ 7 \end{bmatrix} F$

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

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

IC 301 (A, 91, 111) IC NJM2068V

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

BKT $\rightarrow$ none

CLAMP $\rightarrow$ none

W $\rightarrow$ none

LUG $\rightarrow$ none

P $\rightarrow$ none

BEAD $\rightarrow$ L

F $\rightarrow$ FU

FLT $\rightarrow$ V

JACK $\rightarrow$ JA

JACK $\rightarrow$ JA9***

RLY $\rightarrow$ RY

RMC $\rightarrow$ U

RES $\rightarrow$ X

XTAL $\rightarrow$ X9***

BD $\rightarrow$ L7***

SW $\rightarrow$ S

VEC $\rightarrow$ S9***

PACK $\rightarrow$ 9***

CP $\rightarrow$ CN

CP $\rightarrow$ CN9***

FPC $\rightarrow$ CN9***

JK $\rightarrow$ JA

PT $\rightarrow$ T

REG $\rightarrow$ IC

REG $\rightarrow$ IC9***

LED $\rightarrow$ D8***

Z $\rightarrow$ D9***

ZD $\rightarrow$ D9***

DZ $\rightarrow$ D9***

Mark No. Description

Part No.

Mark No. Description

Part No.

LIST OF ASSEMBLIES

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 7028070272070-IL
(VSX-821-K, VSX-921-K)
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

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
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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
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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
A	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
B	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
E	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

Mark	No.	Description	Part No.
	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
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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
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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

	RY1 (RLY1) RELAY	G680240202030-IL
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Mark	No.	Description	Part No.
		RY 2-6 (RLY2-6) RELAY	G680120503020-IL
	CN1	CN,WIRE	L000231050040-IL
	CN2	CN,WIRE	L000311020030-IL
	CN3	CN,WIRE	L002241102620-IL

	CN5	CN,WIRE	L000151042250-IL
	CN6	CN.WAFER 2.5MM	L102526700400-IL
	CN9001 (CP1)	CONNECTOR	L108353280360-IL
	CN9002 (CP2)	CN.WAFER 3.96MM	L104353130560-IL
	CN9003 (CP3)	CONNECTOR (3P)	L102526700300-IL

	CN9005 (CP5)	CN,WAFER	L109012511510-IL
	CN9006,9011 (CP6,11)	CN,WAFER	L109012511710-IL
	CN9007 (CP7)	CN.WAFER 2.0MM	L101200100510-IL
	CN9008,9012,9016 (CP8,12,16)	CN.WAFER	L109012510910-IL
	CN9009,9014 (CP9,14)	CN,WAFER	L109012511110-IL

	CN9010 (CP10)	CN,WIRE	L002151050160-IL
	CN9017 (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.
A	⚠	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
RY1 (RLY1)	RELAY	G680240202030-IL

B	RY2-4 (RLY2-4)	RELAY	G680120503020-IL
	CN1	CN,WIRE	L000231050040-IL
	CN3	CN,WIRE	L002241102620-IL
	CN5	CN,WIRE	L000151042250-IL
	CN9001 (CP1)	CONNECTOR	L108353280360-IL

	CN9002 (CP2)	CN.WAFER 3.96MM	L104353130360-IL
	CN9003 (CP3)	CONNECTOR (3P)	L102526700300-IL
	CN9005 (CP5)	CN,WAFER	L109012511510-IL
	CN9006,9011 (CP6,11)	CN,WAFER	L109012511710-IL
	CN9009 (CP9)	CN,WAFER	L109012511110-IL

C	CN9012,9016 (CP12,16)	CN.WAFER	L109012510910-IL
	CN9017 (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
CN602	CN.WAFER 2.0MM	L101100041110-IL

Mark	No.	Description	Part No.
	CN9601 (CP601)	CN,WAFER	L109012521510-IL
	CN9602 (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
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MISCELLANEOUS

L 601 (BEAD601)	BEAD,COIL	7610010030000-IL
JA 807	TER,RCA 1PIN	G600107A0000Y-IL
CN602	CN.WAFER 2.0MM	L101100041110-IL
CN9601 (CP601)	CN,WAFER	L109012521510-IL
CN9602 (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
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MISCELLANEOUS

JA 701 (JACK701)	JACK,D6.5	G402PJ612AG0Y-IL
CN721	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
CN901	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
CN901	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.
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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
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MISCELLANEOUS

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

Mark	No.	Description	Part No.
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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
CN701 CN.WAFER 2MM	L002271092620-IL
CN702 CN.WAFER 2MM	L002900042621-IL
CN703 CN.WAFER 2MM	L002500050050-IL
CN704 CN.FPC 1.0MM	L130100113150-IL
U 701 (RMC701) MODULE,REMOCON	E940349003810-IL

CAPACITORS

C 718,719	D02047306C060-IL
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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
CN701 CN.WAFER 2MM	L002271092620-IL
CN702 CN.WAFER 2MM	L002900042621-IL
CN704 CN.FPC 1.0MM	L130100113150-IL
U 701 (RMC701) MODULE,REMOCON	E940349003810-IL

CAPACITORS

C 718,719	D02047306C060-IL
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O POWER ASSY

SEMICONDUCTORS

D 711,712	K005041480030-IL
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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

Mark	No.	Description	Part No.
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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
CN201 CN.WAFER	L109012512910-IL
CN204 CN.WAFER	L109012521110-IL
CN207,212 CN.WAFER	L109012520910-IL
CN208 CN.WAFER	L109012521710-IL
CN704 CN.FPC 1.0MM	L130100112750-IL
CN9201 (CP201) CN.FPC 1.0MM	L130100111050-IL
CN9404 (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
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Q BRIDGE A ASSY

MISCELLANEOUS

CN209,210 CN.WAFER	L109012511910-IL
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R BRIDGE B ASSY

MISCELLANEOUS

CN211 CN.WAFER	L109012511910-IL
CN9204 (CP204) CN.WAFER	L109012511110-IL
CN9721 (CP721) CN.WAFER 2.0MM	L101200100420-IL
CN9901 (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
⚠ CN9301 (CP301) CONNECTOR	L108202000220-IL
⚠ CN9302 (CP302) CN.WAFER 7.92MM	L108353280290-IL
CN9304 (CP304) CONNECTOR (3P)	L102526700300-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
CN201 CN.WAFER	L109012512910-IL
CN204 CN.WAFER	L109012521110-IL
CN207,212 CN.WAFER	L109012520910-IL
CN208 CN.WAFER	L109012521710-IL
CN704 CN.FPC 1.0MM	L130100113150-IL
CN9201 (CP201) CN.FPC 1.0MM	L130100111050-IL
CN9404 (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
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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
CN201 CN.WAFER	L109012512910-IL
CN203 CN.WAFER	L109012511110-IL
CN204,205 CN.WAFER	L109012521110-IL
CN207,212 CN.WAFER	L109012520910-IL
CN208 CN.WAFER	L109012521710-IL
CN704 CN.FPC 1.0MM	L130100113150-IL
CN9201 (CP201) CN.FPC 1.0MM	L130100111050-IL
CN9404 (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
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Mark	No.	Description	Part No.
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		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
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CAPACITORS

C 301	D040222083010-IL
C 304	D00847208H010-IL

S

STANDBY ASSY (VSX-921-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

		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
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CAPACITORS

C 301	D040222083010-IL
C 304	D00847208H010-IL

T

D-MAIN ASSY (VSX-821-K)

SEMICONDUCTORS

⚠	IC 1300	J126111712040-IL
	IC 1303	SI19233ACTU
⚠	IC 1305,1325	J048107300010-IL
	IC 1308	SI19134CTU
⚠	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	No.	Description	Part No.
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		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
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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
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T

D-MAIN ASSY (VSX-921-K)

SEMICONDUCTORS

⚠	IC 1300	J126111712040-IL
	IC 1302	J044718100010-IL
	IC 1303	SI19233ACTU
⚠	IC 1305,1306,1325	J048107300010-IL
	IC 1307	TC7SA08FU

	IC 1308	SI19134CTU
⚠	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.
A	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
B	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
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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	TC74VHC157FST1

Mark	No.	Description	Part No.
	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
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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

A

V

BT ASSY

SEMICONDUCTORS

⚠

IC 600

BD2224G

B

MISCELLANEOUS

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

C

D

E

F