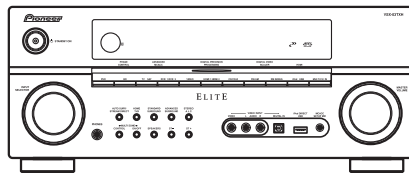


Service Manual



VSX-03TXH

ORDER NO.
RRV3766

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-03TXH

VSX-9130TXH-K

VSX-01TXH

VSX-1018AH-K

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

Model	Type	Power Requirement	Remarks
VSX-03TXH	KUXJ/CA	AC 120 V	
VSX-9130TXH-K	KUXJ	AC 120 V	
VSX-01TXH	KUXJ/CA	AC 120 V	
VSX-1018AH-K	KUXJ	AC 120 V	



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

SAFETY INFORMATION



This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.

Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65

NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

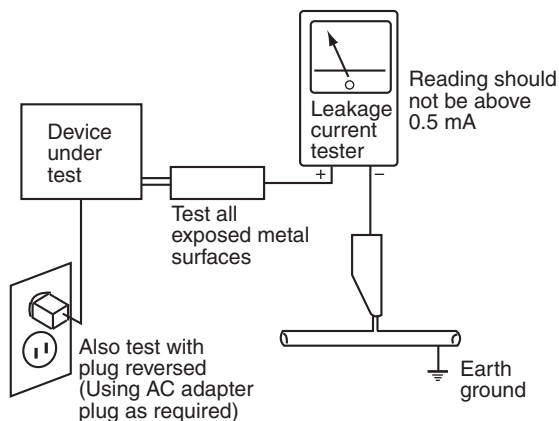
(FOR USA MODEL ONLY)

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



AC Leakage Test

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

2. PRODUCT SAFETY NOTICE

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

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

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

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

[Important Check Points for Good Servicing]

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

1. Product safety



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

- ① Use specified parts for repair.

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

- ② Do not perform modifications without proper instructions.

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

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

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

- ④ Make sure the screws are tightly fastened.

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

- ⑤ Make sure each connectors are correctly inserted.

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

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

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

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

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

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

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

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

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

- ⑩ Safe environment should be secured during servicing.

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

2. Adjustments



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

3. Lubricants, Glues, and Replacement parts



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

4. Cleaning



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

5. Shipping mode and Shipping screws



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

CONTENTS

	SAFETY INFORMATION	2
	1. SERVICE PRECAUTIONS	6
A	2. SPECIFICATIONS	7
	2.1 ACCESSORIES	7
	2.2 SPECIFICATIONS	8
	2.3 PANEL FACILITIES	9
	3. BASIC ITEMS FOR SERVICE	16
	3.1 CHECK POINTS AFTER SERVICING	16
	3.2 PCB LOCATIONS	17
	3.3 JIGS LIST	19
	4. BLOCK DIAGRAM	20
	4.1 OVERALL WIRING DIAGRAM	20
	4.2 BLOCK DIAGRAM FOR AUDIO BLOCK	22
	4.3 BLOCK DIAGRAM FOR VIDEO BLOCK	23
B	4.4 BLOCK DIAGRAM FOR HDMI & DVC	25
	4.5 BLOCK DIAGRAM FOR USB BLOCK	26
	4.6 BLOCK DIAGRAM FOR U-COM BLOCK	27
	4.7 BLOCK DIAGRAM FOR POWER SUPPLY BLOCK	28
	5. DIAGNOSIS	29
	5.1 DIAGNOSIS FLOWCHART	29
	5.2 CIRCUIT DESCRIPTION	61
	6. SERVICE MODE	64
	6.1 TEST MODE	64
	7. DISASSEMBLY	67
	8. EACH SETTING AND ADJUSTMENT	71
	8.1 HOW TO UPDATE FIRMWARE	71
C	9. EXPLODED VIEWS AND PARTS LIST	76
	9.1 PACKING SECTION	76
	9.2 EXTERIOR SECTION	78
	9.3 CHASSIS SECTION	80
	9.4 POWER AMP SECTION	82
	9.5 FRONT PANEL SECTION	84
	10. SCHEMATIC DIAGRAM	86
	10.1 AUDIO IN ASSY (1/2)	86
	10.2 AUDIO IN ASSY (2/2)	88
	10.3 MAIN ASSY (1/4)	90
	10.4 MAIN ASSY (2/4)	92
D	10.5 MAIN ASSY (3/4)	94
	10.6 MAIN ASSY (4/4)	96
	10.7 DSP & USB ASSY (1/5)	98
	10.8 DSP & USB ASSY (2/5)	100
	10.9 DSP & USB ASSY (3/5)	102
	10.10 DSP & USB ASSY (4/5)	104
	10.11 DSP & USB ASSY (5/5)	106
	10.12 FRONT IN ASSY	108
	10.13 INTERFACE ASSY	110
	10.14 HDMI & DVC ASSY (1/2)	112
	10.15 HDMI & DVC ASSY (2/2)	114
	10.16 BINDER, BIND L FRONT, BIND L BACK, BIND R FRONT and BIND R BACK ASSYS	116
E	10.17 POSI1, POSI2 and POSI3 ASSYS	117
	10.18 DISPLAY ASSY	118
	10.19 MULTI JOG, POWER SW, DIODE, HEADPHONE, PRIMARY and DC/DC ASSYS	120
	10.20 POWER AMP ASSY (1/2)	122
	10.21 POWER AMP ASSY (2/2)	124
	10.22 PRE-STAGE AMP ASSY	126
	10.23 REGULATOR ASSY	128
	11. PCB CONNECTION DIAGRAM	131
	11.1 AUDIO IN ASSY	132
	11.2 MAIN ASSY	136
	11.3 DSP & USB ASSY	140
	11.4 FRONT IN ASSY	142
F	11.5 INTERFACE ASSY	144
	11.6 HDMI & DVC ASSY	146
	11.7 BINDER, BIND L FRONT and BIND L BACK ASSYS	150
	11.8 BIND R FRONT, BIND R BACK ASSYS	151

■	5	■	6	■	7	■	8	■
	11.9	DISPLAY, MULTI JOG and POWER SW ASSYS	152					
	11.10	DIODE ASSY	156					
	11.11	HEADPHONE ASSY	157					
	11.12	POWER AMP ASSY	158					
	11.13	PRE-STAGE AMP ASSY	162					A
	11.14	PRIMARY ASSY	166					
	11.15	REGULATOR ASSY	168					
	11.16	DC/DC ASSY	170					
	11.17	POS11, POS12 and POS13 ASSYS	171					
	12.	PCB PARTS LIST	172	■				

B

C

D

E

F

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:

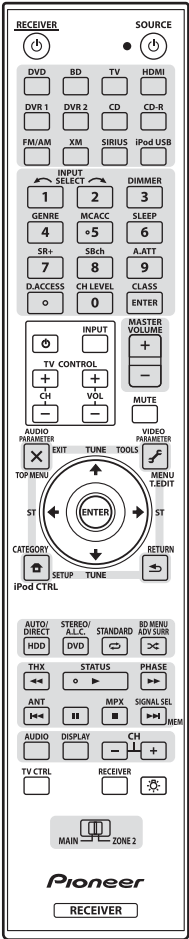
- Parts numbers of lead-free solder:
GYP1006 1.0 in dia.
GYP1007 0.6 in dia.
GYP1008 0.3 in dia.

1.2 CAUTION

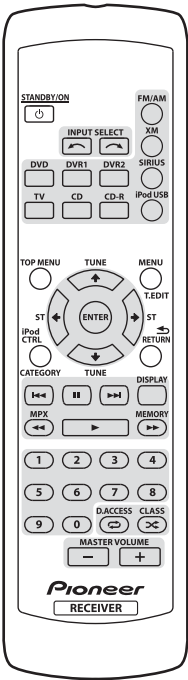
- Before removing the Power Amp Assy, it is necessary to discharge C5721 and C5722.
For more detail, please refer to page 67.

2. SPECIFICATIONS
2.1 ACCESSORIES

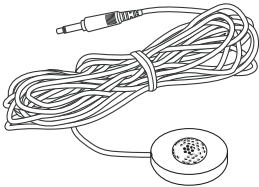
[1] Accessories



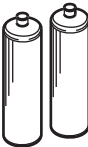
Remote Control Unit
(AXD7517: VSX-03TXH, VSX-01TXH)
(AXD7525: VSX-9130TXH, VSX-1018AH)



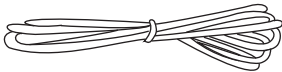
Sub Remote Control Unit
(AXD7529: VSX-03TXH)



Setup Microphone
(for Auto MCACC setup)
(APM7008)



AA/LR6 Dry Cell Batteries
(VEM1031)



FM Wire Antenna
(ADH7030)



AM Loop Antenna
(ATB7013)

SERVICE PARTS



SR+ mini-plug cable
(ADE7095)

2.2 SPECIFICATIONS

[1] Specifications

Amplifier section

Continuous average power output of 110 watts* per channel, min., at 8 ohms, from 20 Hz to 20 000 Hz with no more than 0.09 % total harmonic distortion (front).**

Continuous Power Output (20 Hz to 20 kHz, 8 Ω , 0.09 %)
Front 110 W + 110 W
Center 110 W
Surround 110 W + 110 W
Surround back 110 W + 110 W

Continuous Power Output (1 kHz, 6 Ω , 1.0 %)
Front 150 W + 150 W
Center 150 W
Surround 150 W + 150 W
Surround back 150 W + 150 W

Total harmonic distortion 0.09 %
(20 Hz to 20 kHz, 110 W, 8 Ω)

Related Power Output (1 kHz, 8 Ω , 0.05 %) (9130TXH-K)
Front 140 W per channel
Center 140 W
Surround 140 W per channel

Total harmonic distortion 0.09 %
(20 Hz to 20 kHz, 110 W, 8 Ω)

Related Power Output (1 kHz, 8 Ω , 0.05 %) (1018AH-K)
Front 130 W per channel
Center 130 W
Surround 130 W per channel

Total harmonic distortion 0.09 %
(20 Hz to 20 kHz, 110 W, 8 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 335 mV/47 k Ω
Frequency Response (LINE) 5 Hz to 100 000 Hz ± 3 dB
Output (Level/Impedance)
REC 335 mV/2.2 k Ω
Tone Control
BASS ± 6 dB (100 Hz)
TREBLE ± 6 dB (10 kHz)
LOUDNESS +4 dB/+2 dB (100 Hz/10 kHz)
(at volume position -40 dB)
Signal-to-Noise Ratio (IHF, short circuited, A network)
LINE 103 dB
Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]
LINE 83 dB

Composite Video/S-Video Section

Input (Sensitivity/Impedance) 1 Vp-p/75 Ω
Output (Level/Impedance) 1 Vp-p/75 Ω
Signal-to-Noise Ratio 65 dB
Frequency Response 5 Hz to 10 MHz

Component Video Section

Input (Sensitivity/Impedance) 1 Vp-p/75 Ω
Output (Level/Impedance) 1 Vp-p/75 Ω
Signal-to-Noise Ratio 65 dB
Frequency Response 5 Hz to 100 MHz

HDMI Section

Input 19-pin x 3
Output 19-pin (5 V, 100 mA)

FM Tuner Section

Frequency Range 87.5 MHz to 108 MHz
Usable Sensitivity Mono: 13.2 dBf, IHF (1.3 μ V/75 Ω)
50 dB Quieting Sensitivity Mono: 20.2 dBf
Stereo: 38.6 dBf
Signal-to-Noise Ratio Mono: 73 dB (at 85 dBf)
Stereo: 70 dB (at 85 dBf)
Distortion Stereo: 0.5 % (1 kHz)
Alternate Channel Selectivity 60 dB (400 kHz)
Stereo Separation 40 dB (1 kHz)
Frequency Response 30 Hz to 15 kHz ± 1 dB
Antenna Input 75 Ω unbalanced

AM Tuner Section

Frequency Range 530 kHz to 1 700 kHz
Sensitivity (IHF, Loop antenna) 350 μ V/m
Selectivity 25 dB
Signal-to-Noise Ratio 50 dB
Antenna Loop antenna

Miscellaneous

Power Requirements AC 120 V, 60 Hz
Power Consumption 390 W
In standby 0.6 W (HDMI Control OFF)
0.75 W (HDMI Control ON)
Dimensions 420 (W) mm x 173 (H) mm x 433 (D) mm
(16 ⁹/₁₆ (W) in. x 6 ¹³/₁₆ (H) in. x 17 ¹/₁₆ (D) in.)
Weight (without package) 13.5 kg (29 lbs 13 oz)
(03TXH, 9130TXH)
Weight (without package) 13.3 kg (29 lbs 6 oz)
(01TXH, 1018AH-K)

Furnished Parts

Setup microphone (for Auto MCACC setup) 1
AA/IEC R6P dry cell batteries 4
AA/IEC R6P dry cell batteries 2
(9130TXH-K, 01TXH, 1018AH-K)
Remote control unit 1
Sub room remote control unit (VSX-03TXH) 1
AM loop antenna 1
FM wire antenna 1
Warranty card 1
Operating instructions



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

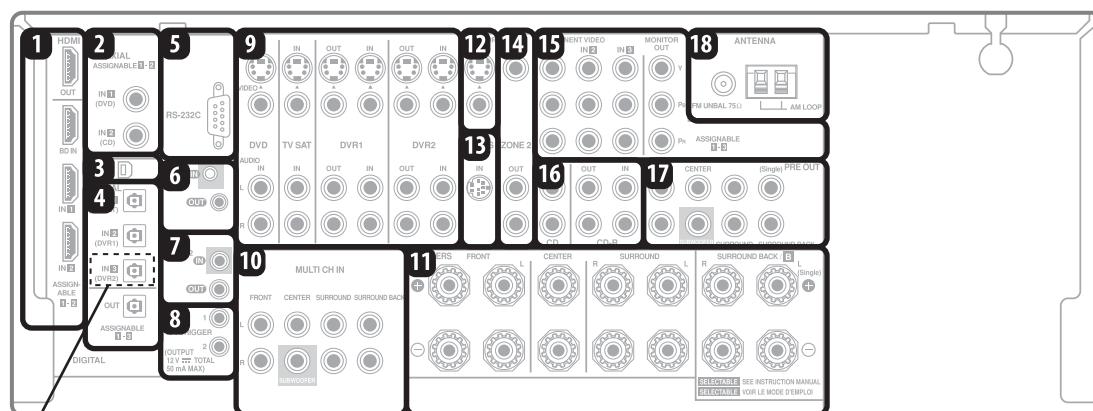
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[1] Rear panel (for VSX-03TXH, VSX-9130TXH, VSX-01TXH)



Except VSX-01TXH

Caution

- Before making or changing the connections, switch off the power and disconnect the power cord from the power outlet. Plugging in should be the final step.

1 HDMI connectors (x4)

Three inputs and one output for high-quality audio/video connection to compatible HDMI devices.

2 Coaxial digital audio inputs (x2)

Use for digital audio sources, including DVD players/recorders, digital satellite receivers, CD players, etc.

3 XM Radio input

4 Optical digital audio output/input(s) (x4) (VSX-03TXH, VSX-9130TXH) (x3) (VSX-01TXH)

Use the **OUT** jack for recording to a CD or MiniDisc recorder.

Use the **IN** jacks for digital audio sources, including DVD players/recorders, digital satellite receivers, CD players, etc.

5 RS-232C connector

Use for connection to a PC for graphical output when using Advanced MCACC.

6 Control input/output

Use to connect other Pioneer components so that you can control all your equipment from a single IR remote sensor.

7 Remote input/output (MULTI-ZONE)

Use for connection to an external remote control sensor for use in a MULTI-ZONE setup, for example.

8 12 V trigger jacks (total 50 mA max.) (x2)

Use to switch components in your system on and off according to the input function of the receiver.

9 Audio/video source inputs/(outputs) (x6)

Use for connection to audio/visual sources, such as DVD players/recorders, VCRs, etc. Each set of inputs has jacks for composite video, S-Video and stereo analog audio.

10 Multichannel analog audio inputs

7.1 channel inputs for connection to a DVD player with multichannel analog outputs.

11 Speaker terminals

Use for connection to the main front, center, surround and surround back speakers.

12 Composite and S-Video monitor outputs

Use to connect monitors and TVs.

13 SIRSUS Radio input

14 ZONE 2 audio/video outputs

Use to connect a second receiver in a separate room.

15 Component video connections (x4)

Use the inputs to connect any video source that has component video output, such as a DVD recorder. Use the output for connection to a monitor or TV.

16 Stereo analog audio source inputs/(outputs) (x3)

Use for connection to audio sources such as CD players, tape decks, turntables, etc.

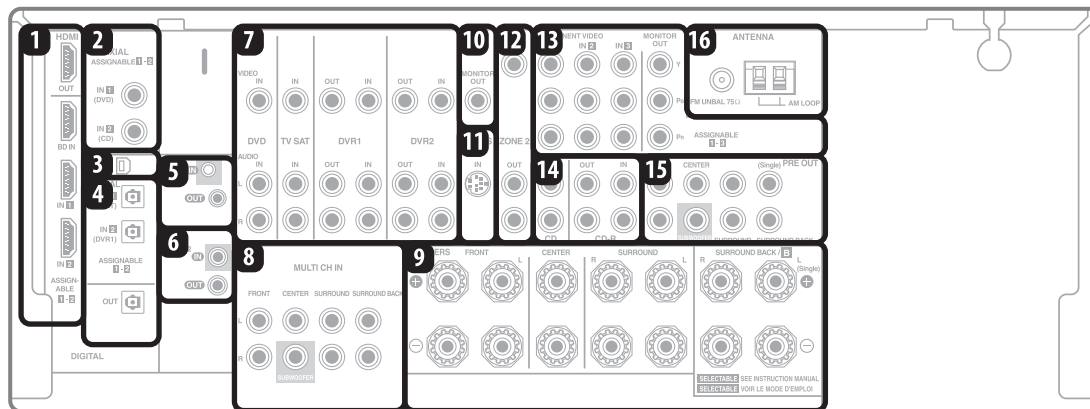
17 Multichannel pre-amplifier outputs

Use to connect separate amplifiers for front, center, surround, surround back and subwoofer channels.

18 AM and FM antenna terminals

Use to connect indoor or outdoor antennas for radio broadcasts.

A [2] Rear panel (for VSX-1018AH)



Caution

- Before making or changing the connections, switch off the power and disconnect the power cord from the power outlet. Plugging in should be the final step.

1 HDMI connectors (x4)

Three inputs and one output for high-quality audio/video connection to compatible HDMI devices.

2 Coaxial digital audio inputs (x2)

Use for digital audio sources, including DVD players/recorders, digital satellite receivers, CD players, etc.

3 XM Radio input

4 Optical digital audio output/input(s) (x3)

Use the **OUT** jack for recording to a CD or MiniDisc recorder.

Use the **IN** jacks for digital audio sources, including DVD players/recorders, digital satellite receivers, CD players, etc.

5 Control input/output

Use to connect other Pioneer components so that you can control all your equipment from a single IR remote sensor.

6 Remote input/output (MULTI-ZONE)

Use for connection to an external remote control sensor for use in a MULTI-ZONE setup, for example.

7 Audio/video source inputs/(outputs) (x6)

Use for connection to audio/visual sources, such as DVD players/recorders, VCRs, etc. Each set of inputs has jacks for composite video and stereo analog audio.

8 Multichannel analog audio inputs

7.1 channel inputs for connection to a DVD player with multichannel analog outputs.

9 Speaker terminals

Use for connection to the main front, center, surround and surround back speakers.

10 Composite monitor outputs

Use to connect monitors and TVs.

11 SIRIUS Radio input

12 ZONE 2 audio/video outputs

Use to connect a second receiver in a separate room.

13 Component video connections (x4)

Use the inputs to connect any video source that has component video output, such as a DVD recorder. Use the output for connection to a monitor or TV.

14 Stereo analog audio source inputs/(outputs) (x3)

Use for connection to audio sources such as CD players, tape decks, turntables, etc.

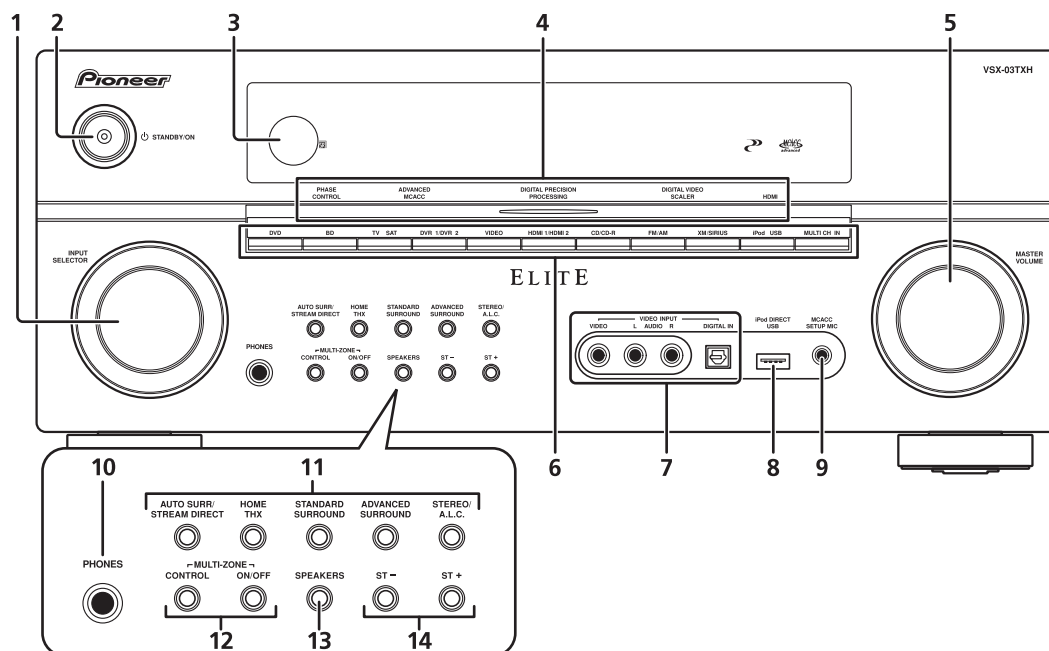
15 Multichannel pre-amplifier outputs

Use to connect separate amplifiers for front, center, surround, surround back and subwoofer channels.

16 AM and FM antenna terminals

Use to connect indoor or outdoor antennas for radio broadcasts.

[3] Front panel



1 INPUT SELECTOR dial

Use to select an input source.

2 STANDBY/ON

Switches the receiver between on and standby. Power indicator lights when the receiver is on.

3 Remote sensor

Receives the signals from the remote control.

4 PHASE CONTROL indicator – Lights when the Phase Control is switched on.

ADVANCED MCACC indicator – Lights when one of the MCACC presets is selected.¹

DIGITAL PRECISION PROCESSING indicator –

Lights to indicate digital processing (for example, it disappears when Pure Direct is on, or when listening through the multichannel analog inputs).

DIGITAL VIDEO SCALER indicator – Lights when Resolution is set to a setting other than **PURE** (for example, when the video input signal is upscaled).

HDMI indicator – Blinks when connecting an HDMI-equipped component; lights when the component is connected.

5 MASTER VOLUME dial

6 Input source buttons

Press to select an input source.

7 VIDEO INPUT

8 iPod DIRECT USB terminal

Use to connect your Apple iPod as an audio source, or connect a USB audio device for playback.

9 MCACC SETUP MIC jack

Use to connect the supplied microphone.

10 PHONES jack

Use to connect headphones. When the headphones are connected, there is no sound output from the speakers.

11 Listening mode buttons

AUTO SURR/STREAM DIRECT – Switches between Auto surround mode and Stream Direct playback. Stream Direct bypasses the bass/treble controls for the most accurate reproduction of a source.

HOME THX (Except 1018AH) –

Press to select a Home THX listening mode.

SOUND RETRIEVER (1018AH) – Press to restore CD quality sound to compressed audio sources.

STANDARD SURROUND – Press for Standard decoding and to switch between the various Pro Logic IIx and Neo:6 options.

ADVANCED SURROUND – Use to switch between the various surround modes.

STEREO/A.L.C. – Switches between stereo playback, Auto level control stereo mode and Front Stage Surround Advance modes.

12 MULTI-ZONE controls

If you've made MULTI-ZONE connections, use these controls to control the sub zone from the main zone.

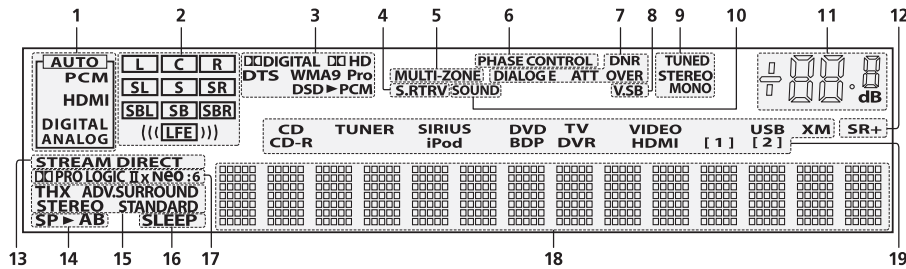
13 SPEAKERS

Use to change the speaker system.

14 ST +/-

Use to select preset radio stations.

A [4] Display



1 SIGNAL indicators

Light to indicate the currently selected input signal.

AUTO lights when the receiver is set to select the input signal automatically.

2 Program format indicators

These change according to which channels are active in digital sources.

L – Left front channel

C – Center channel

R – Right front channel

SL – Left surround channel

S – Surround channel (mono)

SR – Right surround channel

SBL – Left surround back channel

SB – Surround back channel (mono)

SBR – Right surround back channel

LFE – Low frequency effects channel (the **(LFE)** indicators light when an LFE signal is being input)

3 Digital format indicators

Light when a signal encoded in the corresponding format is detected (**DSD** lights during the DSD (Direct Stream Digital) to PCM conversion with SACDs).

4 S.RTRV

Lights when the Sound Retriever is switched on.

5 MULTI-ZONE

Lights when the MULTI-ZONE feature is active.

6 PHASE CONTROL

Lights when the Phase Control is switched on.

7 Sound processing indicators

Light according to the active Audio parameter(s) and/or **ANALOG ATT**.

8 V.SB

Lights during Virtual surround back processing.

9 TUNER indicators

TUNED – Lights when a broadcast is being received.

STEREO – Lights when a stereo FM broadcast is being received in auto stereo mode.

MONO – Lights when the mono mode is set using the **MPX** button.

10 SOUND

Lights when any of the Midnight, Loudness or bass/treble controls feature is selected.

11 Master volume level

12 SR+

Lights when the SR+ mode is switched on.

13 STREAM DIRECT

Lights when Direct/Pure Direct is selected.

14 Speaker indicators

Indicate the current speaker system, **A** and/or **B**.

15 Listening mode indicators

THX – Lights when a Home THX mode is selected.

ADV. SURROUND – Lights when an Advanced Surround mode has been selected.

STEREO – Lights when the stereo mode is selected.

STANDARD – Lights when a Standard Surround mode is switched on.

16 SLEEP

Lights when the receiver is in sleep mode.

17 Matrix decoding format indicators

PRO LOGIC IIx – This lights to indicate **Pro Logic II** / **Pro Logic IIx** decoding.

Neo:6 – When one of the Neo:6 modes of the receiver is on, this lights to indicate Neo:6 processing.

18 Character display

Displays various system information.

19 Input source indicators

Light to indicate the input source you have selected.

A



□

- 1

E

□

SETUP – Use to access the System Setup menu.

RETURN – Press to confirm and exit the current menu screen (also use to return to the previous menu with DVDs or to select closed captioning with DTV).

6 **↑/↓/←/→ (TUNE/ST) /ENTER**

Use the arrow buttons when setting up your surround sound system and the Audio or Video options. Also used to control DVD menus/options and for deck 1 of a double cassette deck player. Use the **TUNE** **↑/↓** buttons to find radio frequencies and use **ST** **←/→** to find preset stations.

7 **Receiver controls**

Press **RECEIVER** first to access:

AUTO/DIRECT – Press to select Auto Surround or Stream Direct listening.

STEREO/A.L.C. – Switches between the stereo playback mode and the Front Stage Surround Advance mode.

STANDARD – Press for Standard decoding and to switch between the various **□□** Pro Logic IIx and Neo:6 options.

ADV SURR – Use to switch among the various surround modes.

THX – Press to select a Home THX listening mode.

8 **Component control buttons**

The main buttons (**▶**, **■**, etc.) are used to control a component after you have selected it using the input source buttons.

The controls above these buttons can be accessed after you have selected the corresponding input source button (for example **DVD**, **DVR1** or **TV**). These buttons also function as described below.

Press **RECEIVER** first to access:

STATUS – Press to check selected receiver settings.

PHASE – Press to switch on/off Phase Control.

SIGNAL SEL – Use to select an input signal.

Press **TV** first to access:

ANT – Use to select the VHF/UHF antennas or Cable TV.

Press **FM/AM** first to access:

MPX – Switches between stereo and mono reception of FM broadcasts. If the signal is weak then switching to mono will improve the sound quality.

9 **AUDIO** – Changes the audio or channel on DVD discs.

DISPLAY – Switches between named station presets and radio frequencies.

CH +/- – Use to select channels for DVR units.

10 **TV CTRL**

Use this button to set preset code of your TV's manufacturer when controlling TV.

11 **MULTI-ZONE operation selector switch**

Switch to perform operations in the main zone and zone 2.

12 **Remote control LED**

Lights when a command is sent from the remote control.

13 **SOURCE**

Press to turn on/off other components connected to the receiver.

14 **MASTER VOLUME +/-**

Use to set the listening volume.

15 **MUTE**

Mutes the sound or restores the sound if it has been muted (adjusting the volume also restores the sound).

16 **Remote control illumination button (03TXH, 01TXH)**

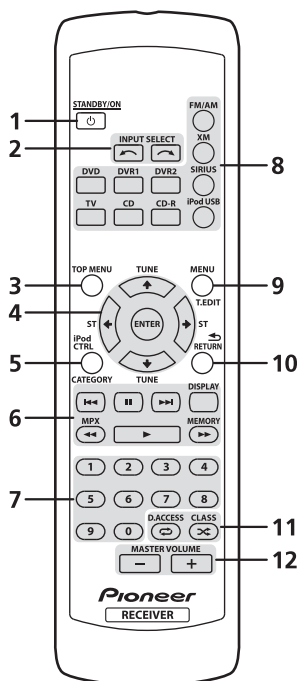
Press to turn on/off the illumination of some of the buttons. This function is convenient when operating in dark rooms.

17 **RECEIVER**

Switches the remote to control the receiver (used to select the white commands above the number buttons (**A.ATT**, etc.)). Also use this button to set up surround sound.

[6] Sub remote control unit (VSX-03TXH only)

The second remote control supplied with this receiver is for use with the MULTI-ZONE listening feature, as explained on page 62. Note that you must connect a separate IR receiver as explained in *Connecting an IR receiver* on page 64 for remote control in your sub room.



1 STANDBY/ON

This switches between standby and on for this receiver.

2 INPUT SELECT

Use to select the input source.

3 TOP MENU

Displays the top menu of an iPod, XM and SIRIUS Radio.

4 ↑/↓/←/→ (TUNE/ST) /ENTER

Use the arrow buttons when setting up your surround sound system and the Audio and Video options. Also used to control iPod, XM and SIRIUS Radio menus. Use the **TUNE** ↑/↓ buttons to find radio frequencies and use **ST** ←/→ to find preset stations.

5 iPod CTRL/CATEGORY

Press **iPod USB** first to access:

iPod CTRL – Switches between the iPod controls and the receiver controls.

Press **XM** or **SIRIUS** first to access:

CATEGORY – Selects XM or SIRIUS Radio genre search.

6 Component control buttons – These are available for **FM/AM**, **XM**, **SIRIUS** and **iPod USB** and used to control a component after you have selected it using the input source buttons.

DISPLAY – Switches between named station presets and radio frequencies.

Press **FM/AM** first to access:

MPX – Switches between stereo and mono reception of FM broadcasts. If the signal is weak then switching to mono will improve the sound quality.

Press **XM** or **SIRIUS** first to access:

MEMORY – Use to register a song title you are currently listening to.

7 Number buttons

These are available for **FM/AM**, **XM**, **SIRIUS** and **iPod USB** and used to directly select a radio frequency or the tracks.

8 Input source buttons

Press to select control of other components.

9 MENU

Displays the disc menu of DVD-Video discs.

Press **FM/AM**, **XM** or **SIRIUS** first to access:

T.EDIT – Use with ←/→ to memorize and name stations for recall.

10 RETURN

Press to confirm and exit the current menu screen.

11 D.ACCESS/CLASS

Press **FM/AM**, **XM** or **SIRIUS** first to access:

D.ACCESS – After pressing, you can access a radio station directly using the number buttons.

CLASS – Switches between the three banks (classes) of radio station presets.

Press **iPod USB** first to access:

↺ – Selects the repeat mode of an iPod.

↻ – Selects the shuffle mode of an iPod.

12 MASTER VOLUME +/-

Use to set the listening volume.

3. BASIC ITEMS FOR SERVICE

3.1 CHECK POINTS AFTER SERVICING

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

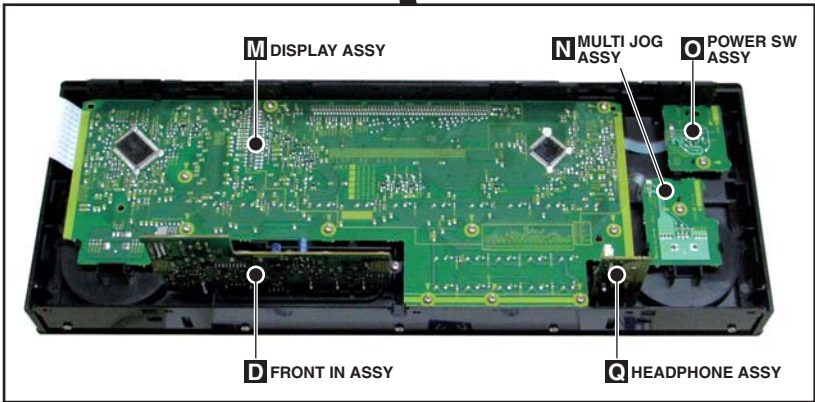
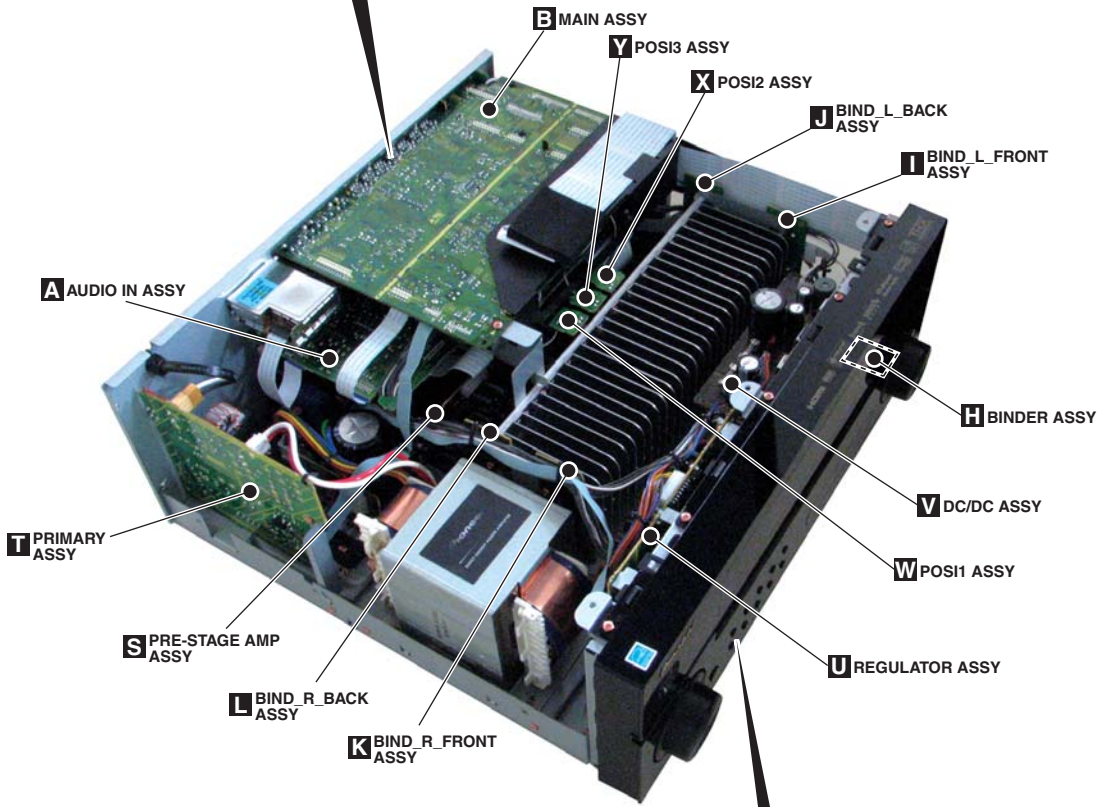
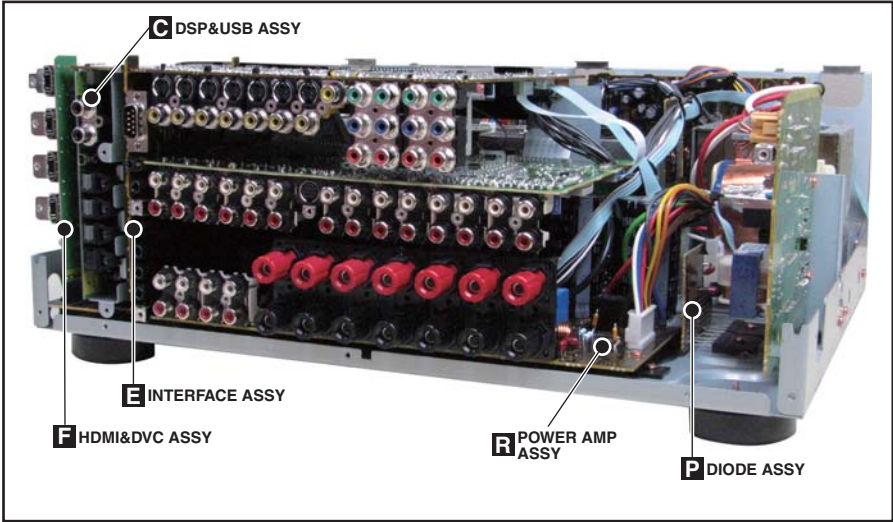
No.	Procedure	Check points
1	Confirm whether the customer complain has been solved. If the customer complain occurs with the particular source, such as Dolby Digital, DTS, AAC, DVD-A and HDMI, input it for the operation check.	The customer complain must not be reappeared. Video, Audio and operations 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 sound from headphone output.	Sound must be normal, without noise.
7	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:

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

5 6 7 8

3.2 PCB LOCATIONS



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.

◆ LIST OF ASSEMBLIES

Mark	Symbol and Description	VSX-03TXH /KUXJ/CA	VSX-9130TXH-K /KUXJ	VSX-01TXH /KUXJ/CA	VSX-1018AH-K /KUXJ
	1..MAIN ASSY	AWK8052	AWK8069	AWK8056	AWK8057
	1..AUDIO IN ASSY	AWK8050	AWK8050	AWK8050	AWK8050
NSP	1..COMPLEX ASSY	AWK8046	AWK8067	AWK8046	AWK8067
	2..DISPLAY ASSY	AWX9117	AWX9216	AWX9117	AWX9216
	2..POWER SW ASSY	AWX9118	AWX9118	AWX9118	AWX9118
	2..MULTI JOG ASSY	AWX9119	AWX9119	AWX9119	AWX9119
	2..BINDER ASSY	AWX9120	AWX9120	AWX9120	AWX9120
	2..FRONT IN ASSY	AWX9121	AWX9121	AWX9121	AWX9121
	2..HP ASSY	AWX9122	AWX9122	AWX9122	AWX9122
	2..PRIMARY ASSY	AWX9123	AWX9123	AWX9123	AWX9123
NSP	1..LOCAL POWER ASSY	AWK8041	AWK8041	AWK8041	AWK8043
	2..DIODE ASSY	AWX8985	AWX8985	AWX8985	AWX8985
	2..REGULATOR ASSY	AWX8986	AWX8986	AWX8986	AWX8986
	2..DC/DC ASSY	AWX8988	AWX8988	AWX8988	AWX8988
	2..PRE-STAGE AMP	AWX8989	AWX8989	AWX8989	AWX8989
	2..INTERFACE ASSY	AWX8990	AWX8990	AWX8990	AWX8993
NSP	1..AMP ASSY	AWK8037	AWK8037	AWK8037	AWK8037
	2..POWER AMP ASSY	AWX8983	AWX8983	AWX8983	AWX8983
	2..POS1 ASSY	AWX9132	AWX9132	AWX9132	AWX9132
	2..POS2 ASSY	AWX9133	AWX9133	AWX9133	AWX9133
	2..BIND_L_FRONT ASSY	AWX9217	AWX9217	AWX9217	AWX9217
	2..BIND_L_BACK ASSY	AWX9218	AWX9218	AWX9218	AWX9218
	2..BIND_R_FRONT ASSY	AWX9219	AWX9219	AWX9219	AWX9219
	2..BIND_R_BACK ASSY	AWX9220	AWX9220	AWX9220	AWX9220
	2..POS3 ASSY	AWX9223	AWX9223	AWX9223	AWX9223
	1..HDMI&DVC ASSY	AWX9170	AWX9170	AWX9233	AWX9233
	1..DSP&USB ASSY	AWX9175	AWX9175	AWX9239	AWX9239
	1..FM/AM TUNER UNIT	AXX7250	AXX7250	AXX7250	AXX7250

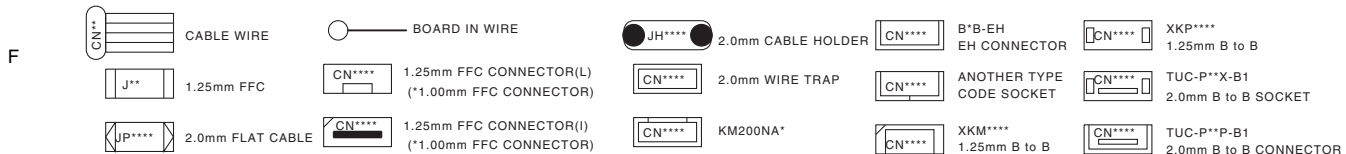
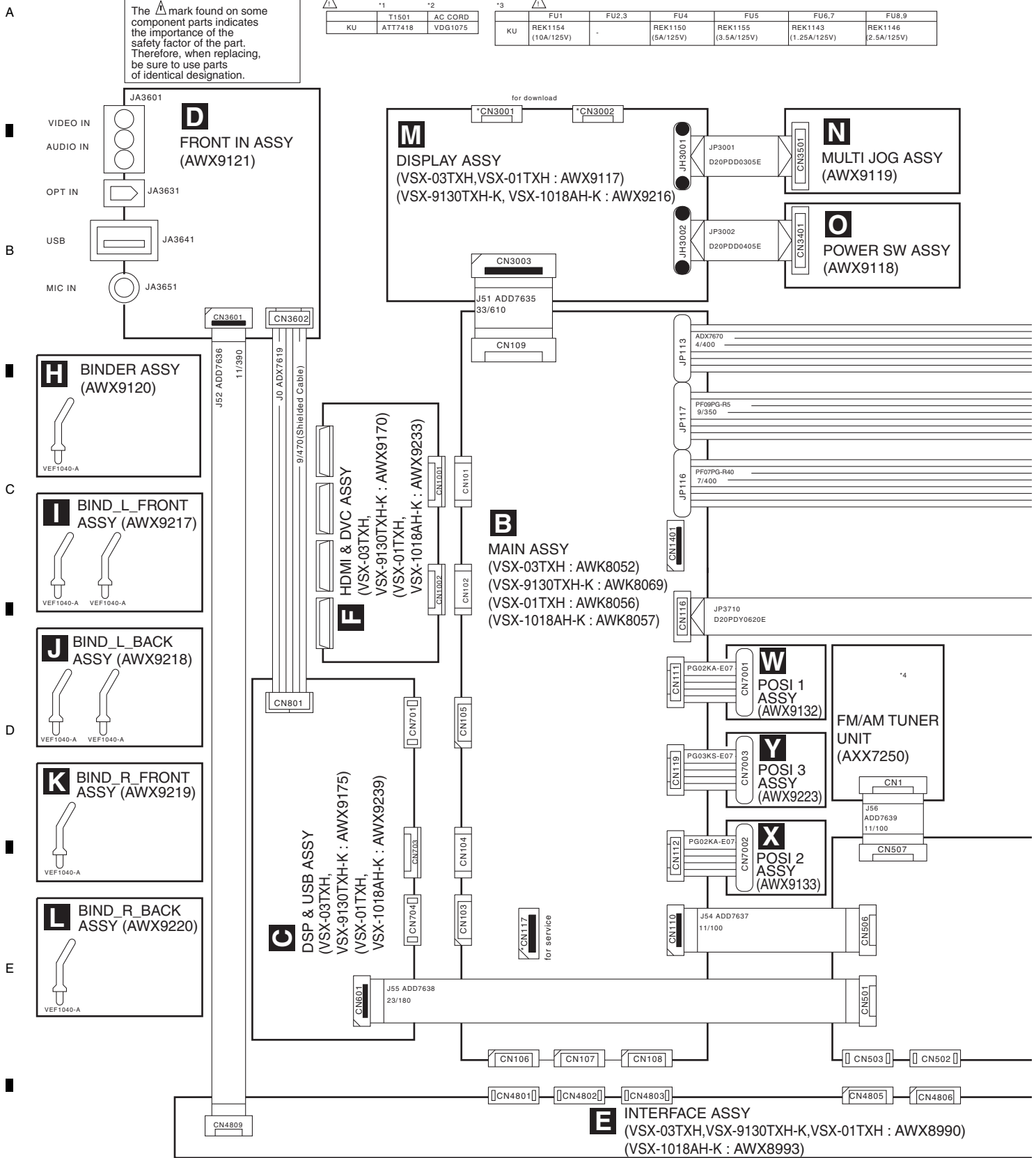
3.3 JIGS LIST

[1] Jigs list

Name	Jig No.	Remarks
11P board to board extension jig cable	GGD1576	Diagonosis
19P board to board extension jig cable	GGD1577	Diagonosis
30P board to board extension jig cable	GGD1492	Diagonosis
11P FFC	GGD1578	Diagonosis
RS-232C I/F jig	GGF1348	Update the Flash ROMS
7-pin FFC	VDA1681	Update the Flash ROMS

4. BLOCK DIAGRAM

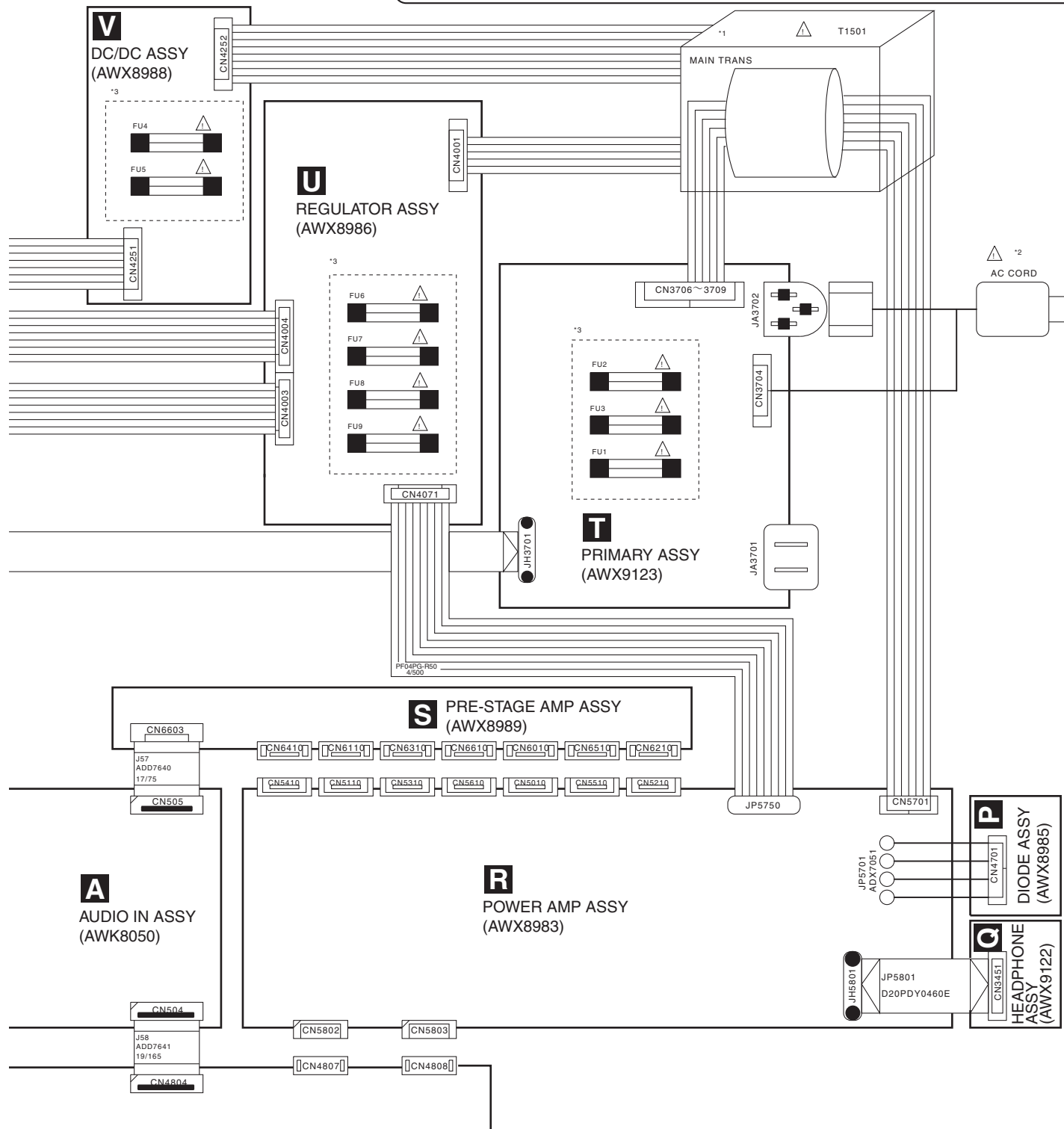
4.1 OVERALL WIRING DIAGRAM



*4	*5	*6
TUNER MODULE	J56	FAN
KU	AXX7250	ADD7637
		-
		-
		-

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

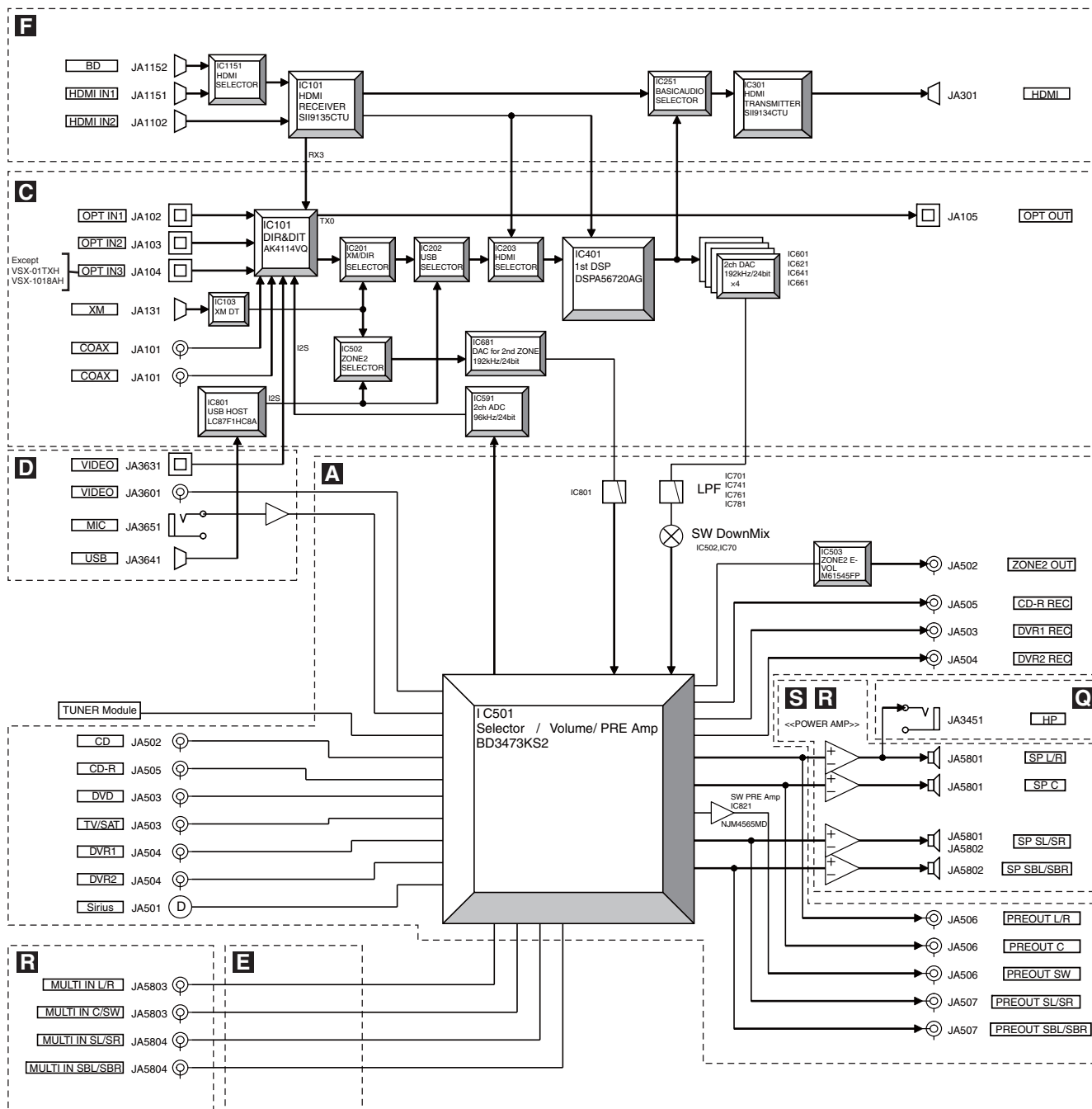
 : The power supply is shown with the marked box.



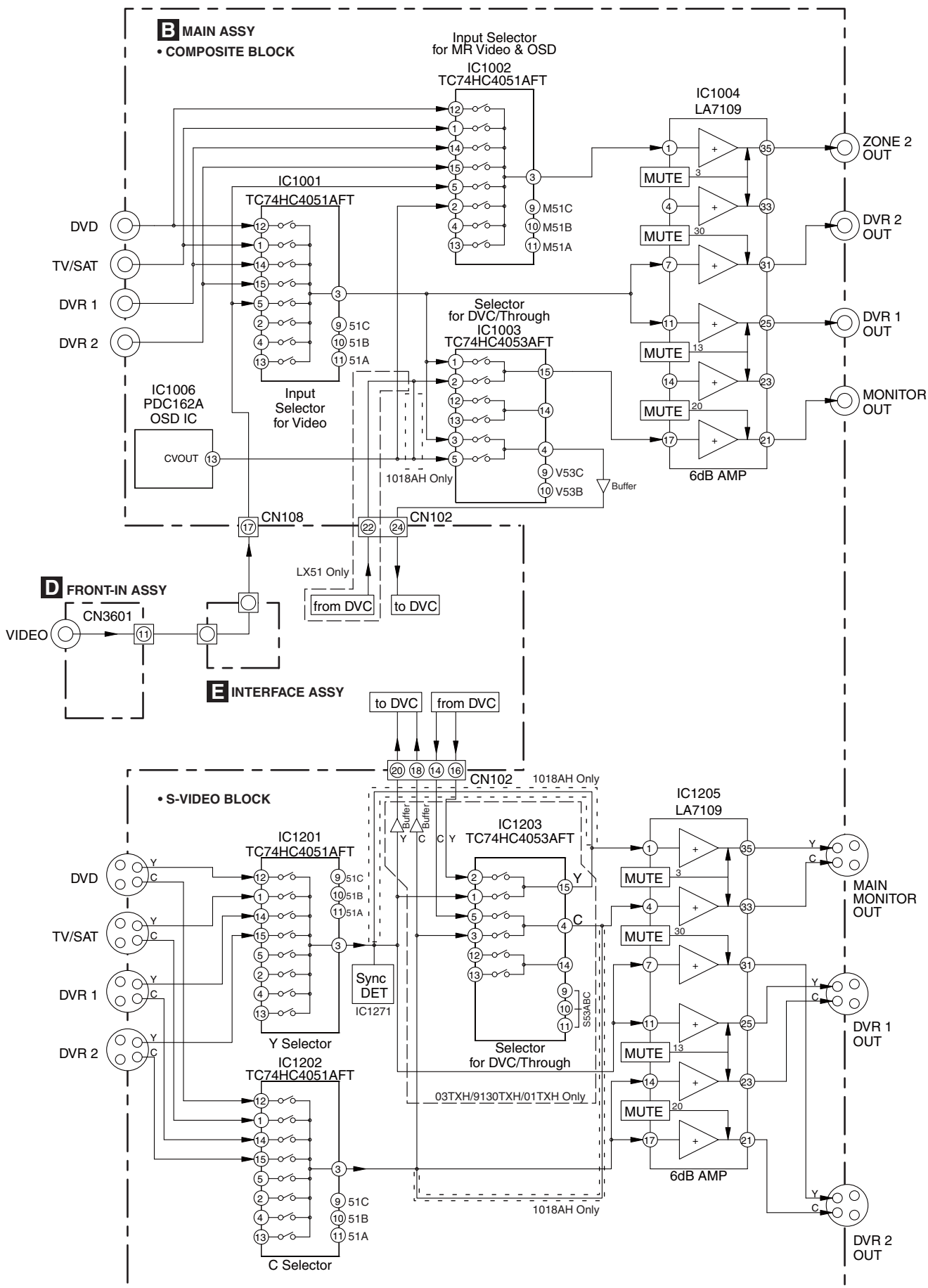
 ANOTHER TYPE
B to B SOCKET

 ANOTHER TYPE
B to B CONNECTOR

4.2 BLOCK DIAGRAM FOR AUDIO BLOCK



4.3 BLOCK DIAGRAM FOR VIDEO BLOCK



A

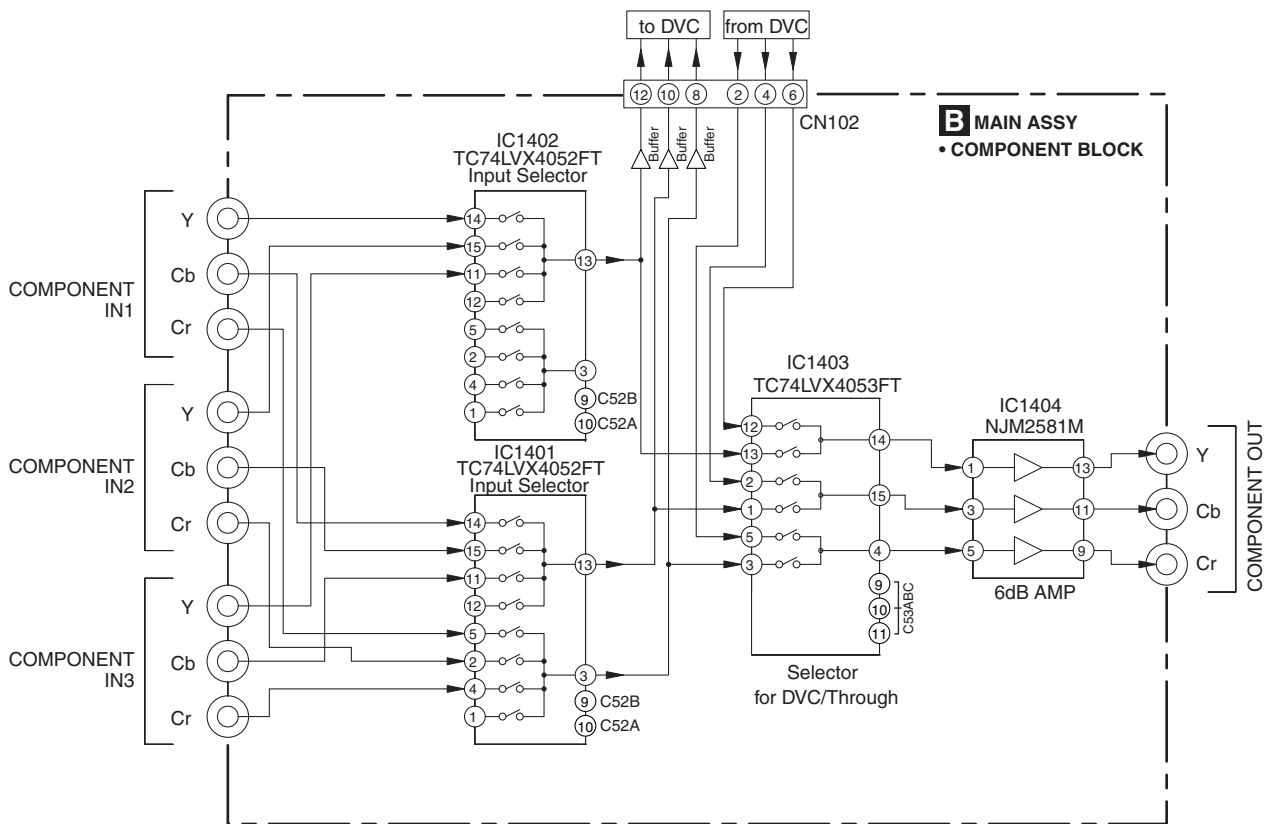
B

C

D

E

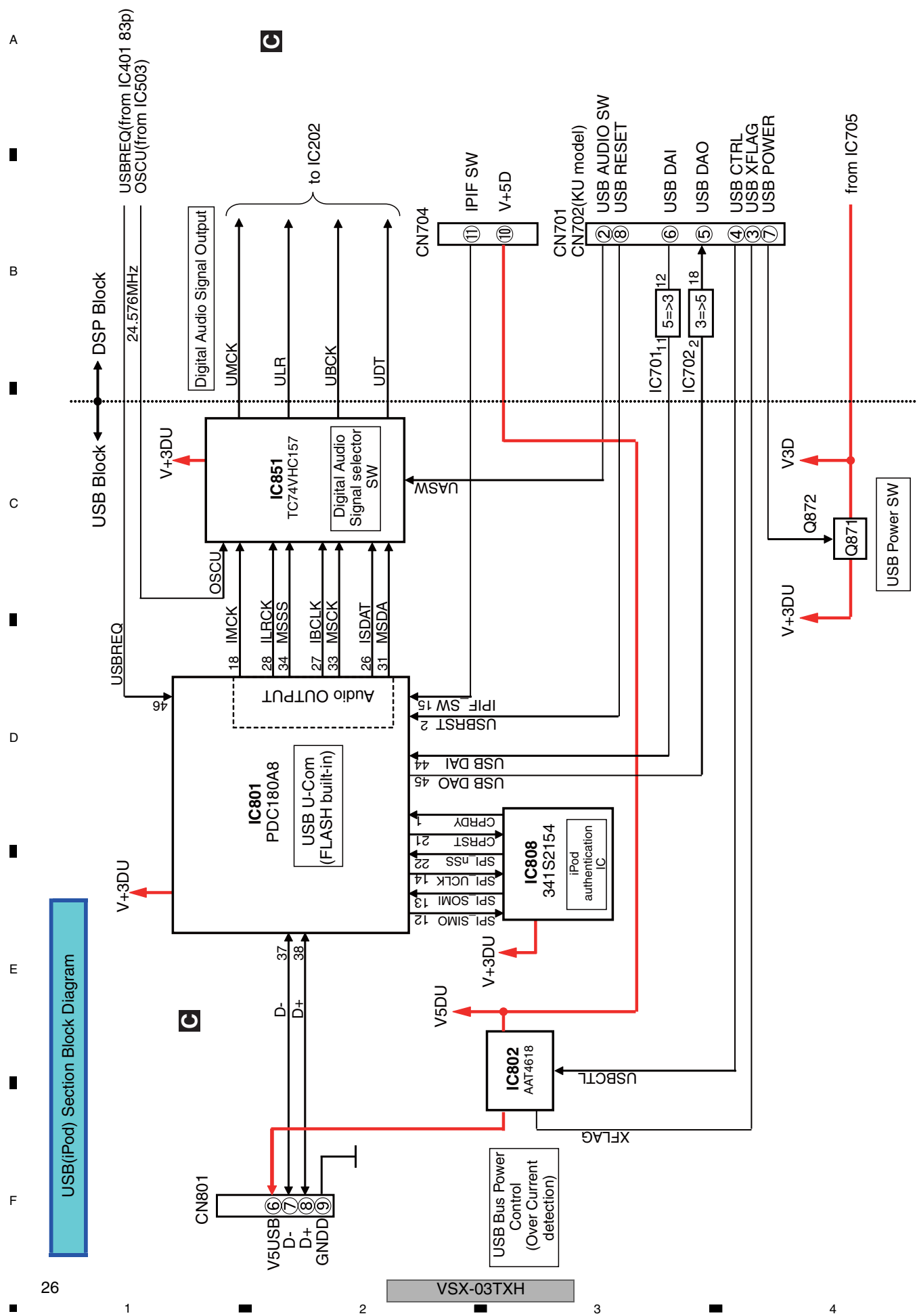
F



■ 5 ■ 6 ■ 7 ■ 8

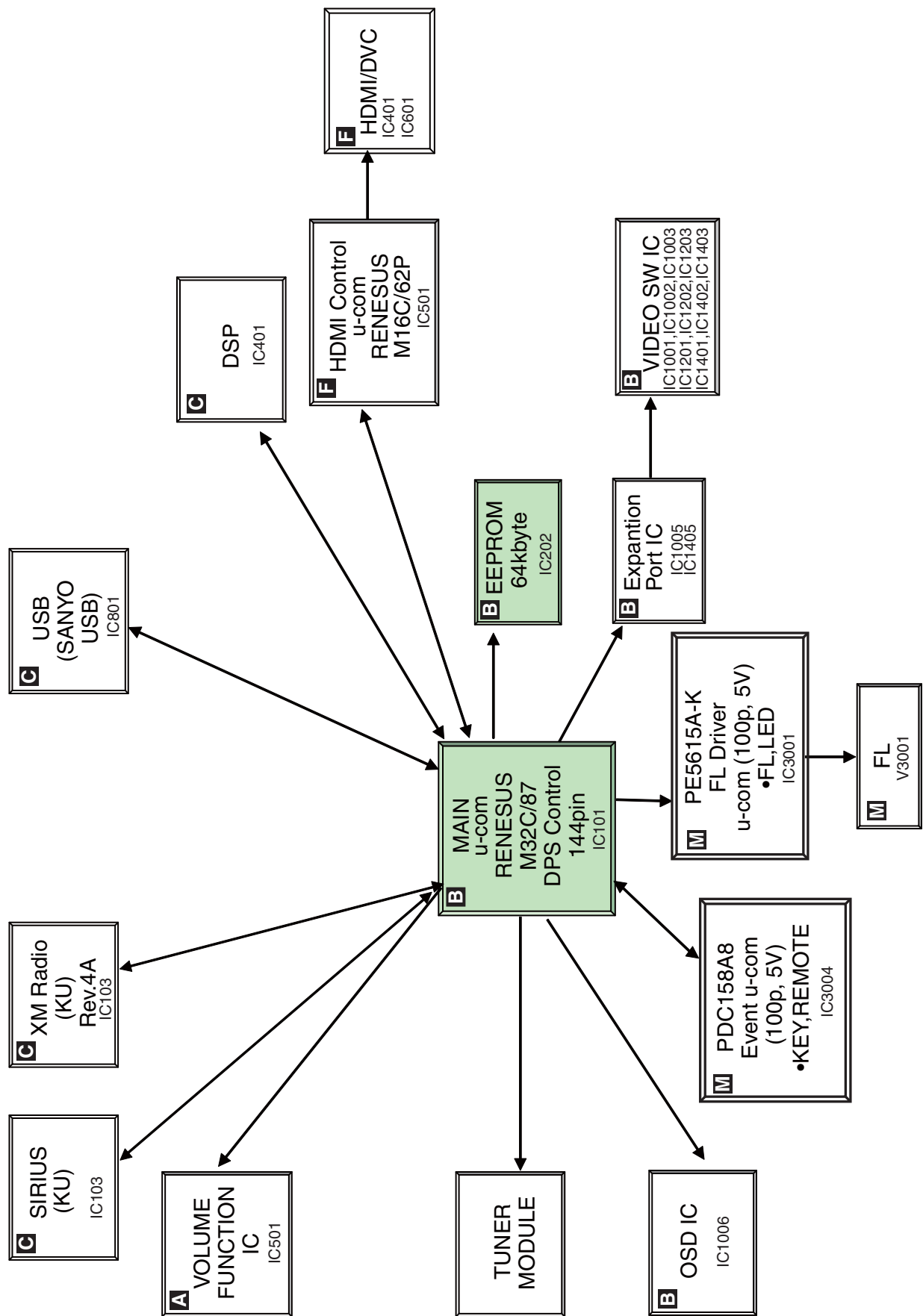


4.5 BLOCK DIAGRAM FOR USB BLOCK



USB(iPod) Section Block Diagram

4.6 BLOCK DIAGRAM FOR U-COM BLOCK



4



5. DIAGNOSIS

5.1 DIAGNOSIS FLOWCHART

Simplified diagnosis

Errors in DSP Assembly (Areas simply and roughly predictable by machine operation only)

• Sound abnormality in Delay

If sound abnormality does not occur in the Delay OFF state but occurs in the Delay ON state, it is most likely that a failure has occurred in SDRAM (IC301) or LATCH (IC303, IC304) in the 1st DSP Block.

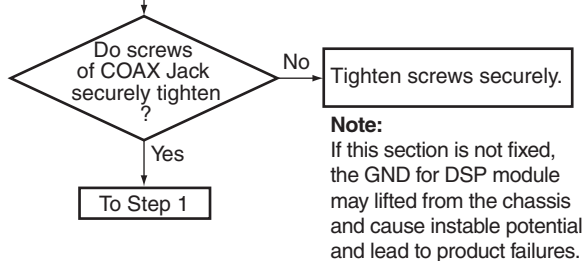
• No sound at analog signal input

If sound abnormality does not occur with a digital signal input (COAX, OPT) but occurs only with an analog signal input, it is most likely that a failure has occurred in the AD converter (IC591).

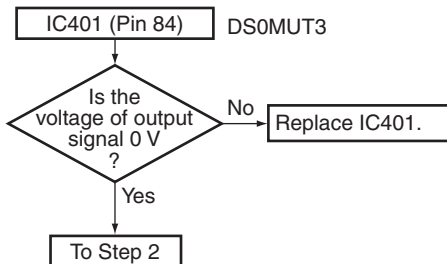
[1] DSP Troubleshooting

Step 0: Preliminary confirmation

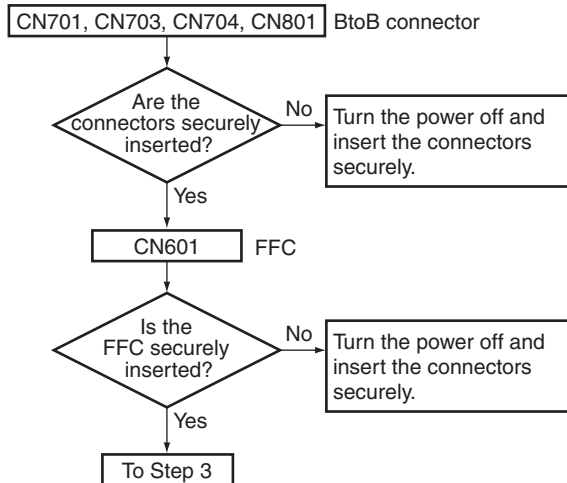
Confirm the following items before checking



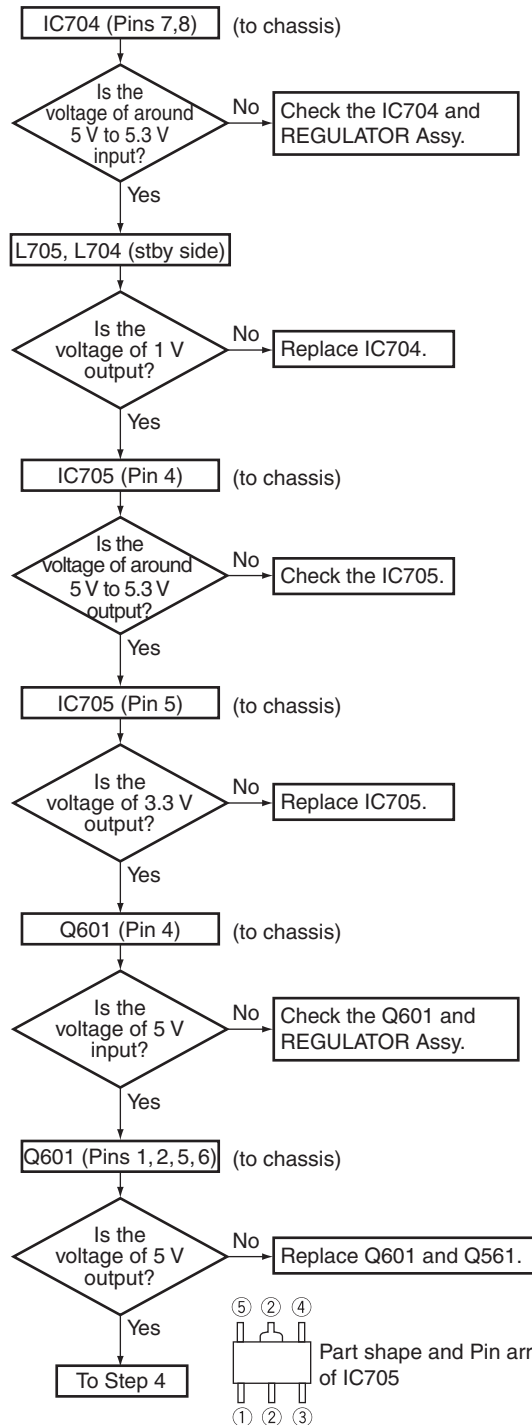
Step 1: MUTE pin



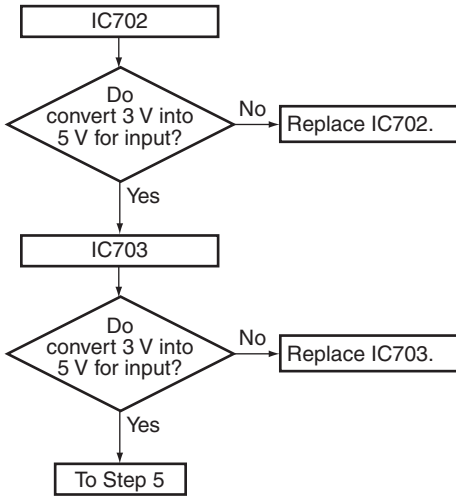
Step 2: BtoB connector and FFC



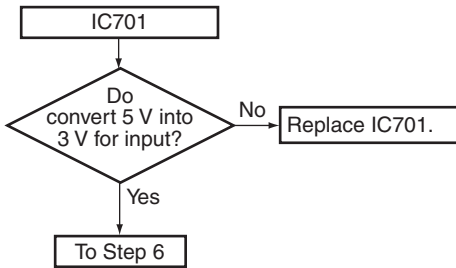
Step 3: Regulator IC



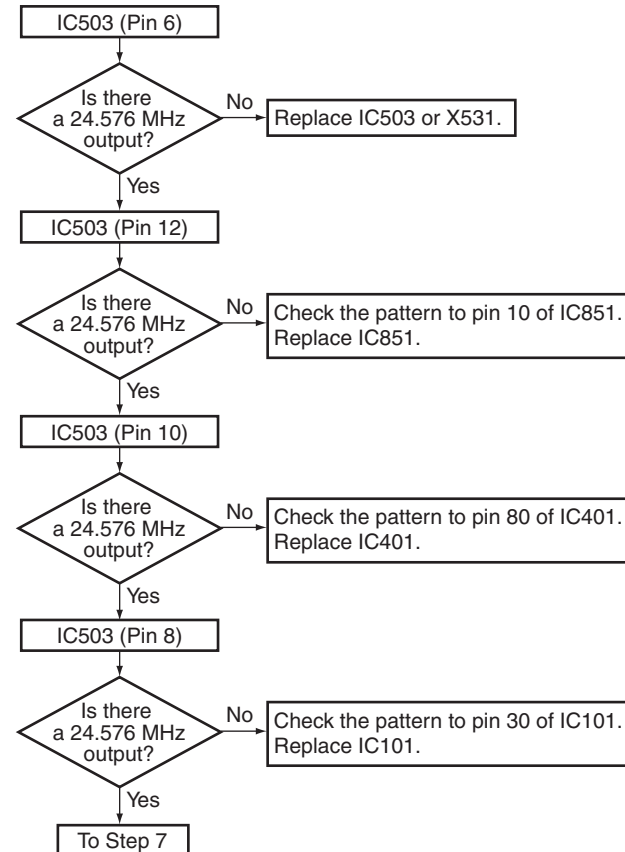
A Step 4: 3 V to 5 V conversion



Step 5: 5 V to 3 V conversion



Step 6: X'tal



Step 7

When the COAX or OPT is input, go to Step 7-1.

When the USB is input, go to Step 7-2.

When the HDMI (SPDIF line) is input, go to Step 7-1.

Used Source

[dts HD High Resolution Audio], [dts HD LBR],
[Dolby Digital Plus], [2ch of 48kHz sampling rate or less],
[Other compression stream]

When the HDMI (I2S line) is input, go to Step 7-3.

Used Source

[dts HD Master Audio], [Dolby True HD],
[PCM or LPCM of 88.2kHz sampling rate or more],
[LPCM Multi ch]

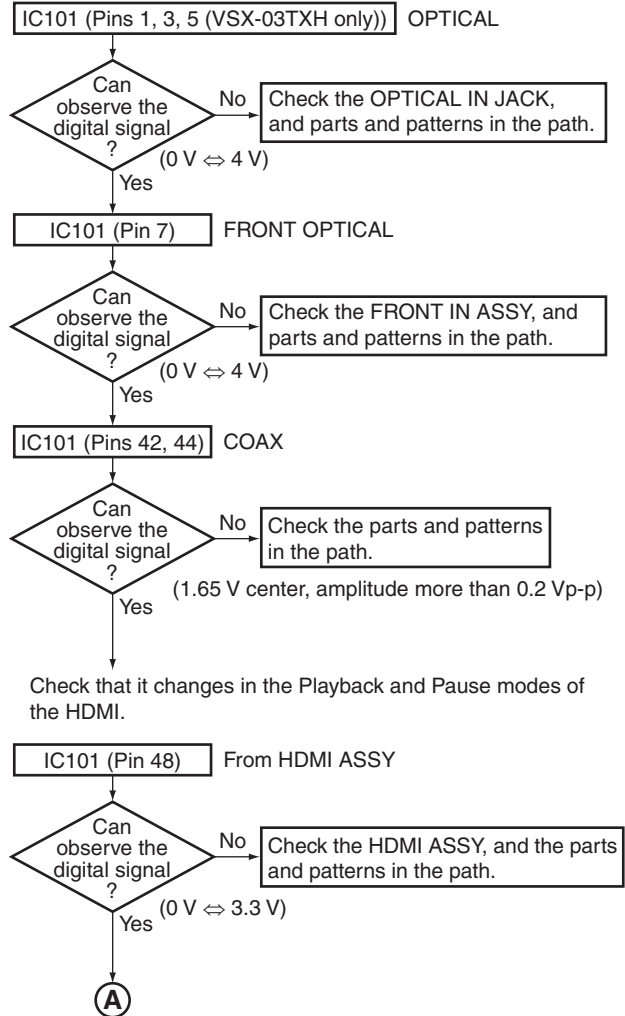
When the HDMI (SACD) is input, go to Step 7-5.

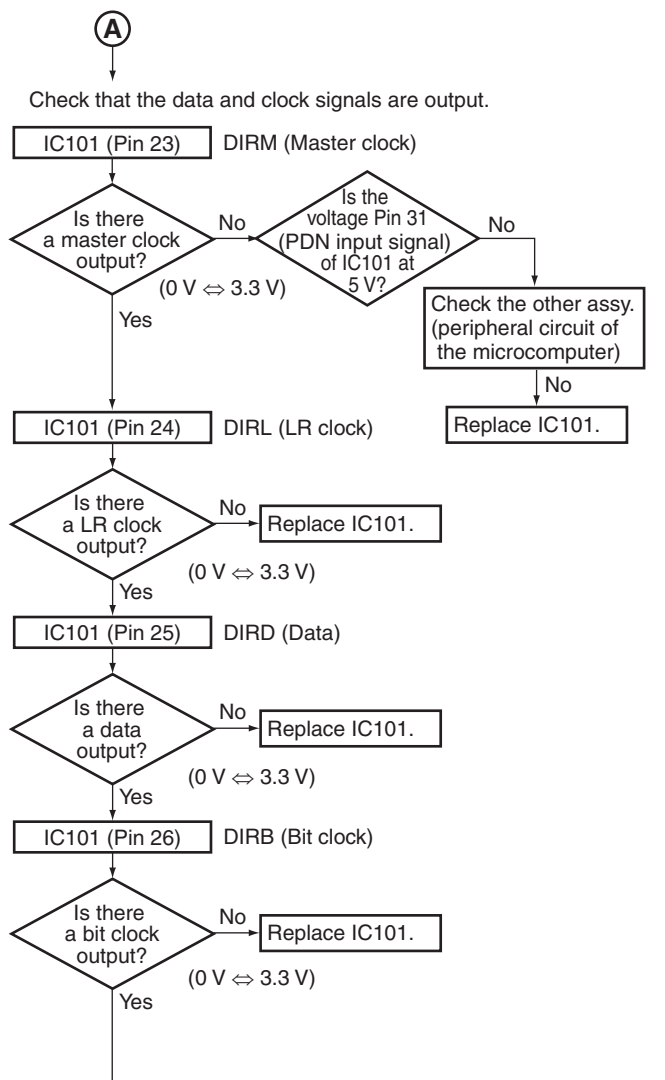
Used Source [SACD]

Step 7-1-1: DIR

Check that the S/PDIF signal is output.

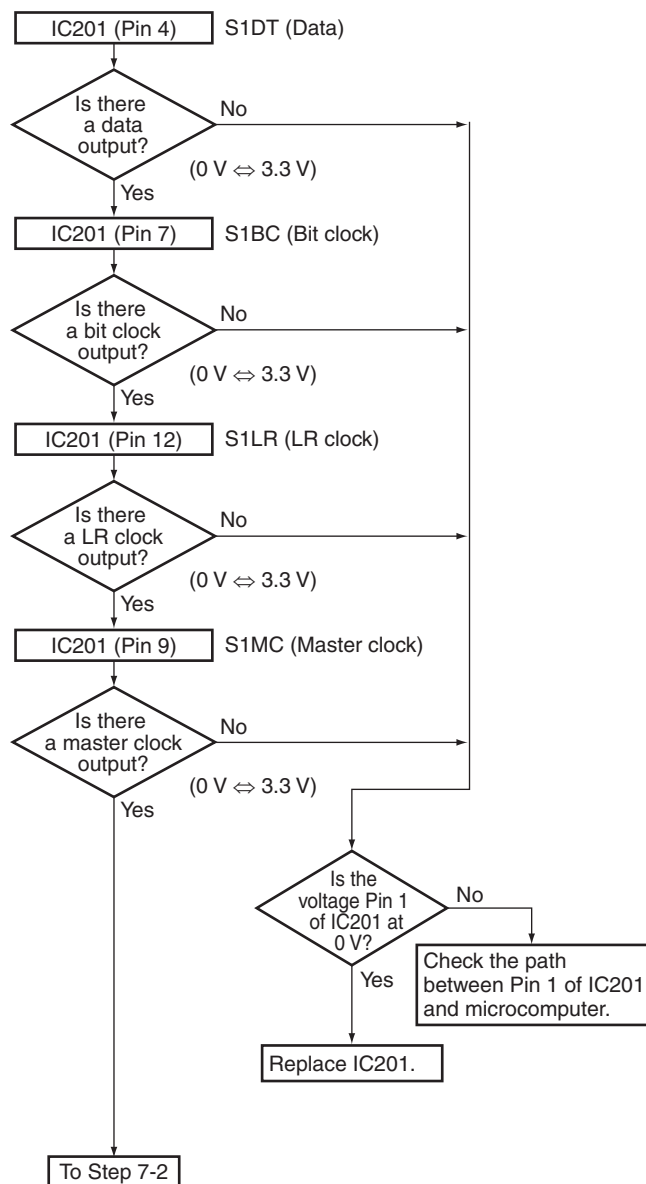
Check that changes by pulling out and inserting the digital input lines.





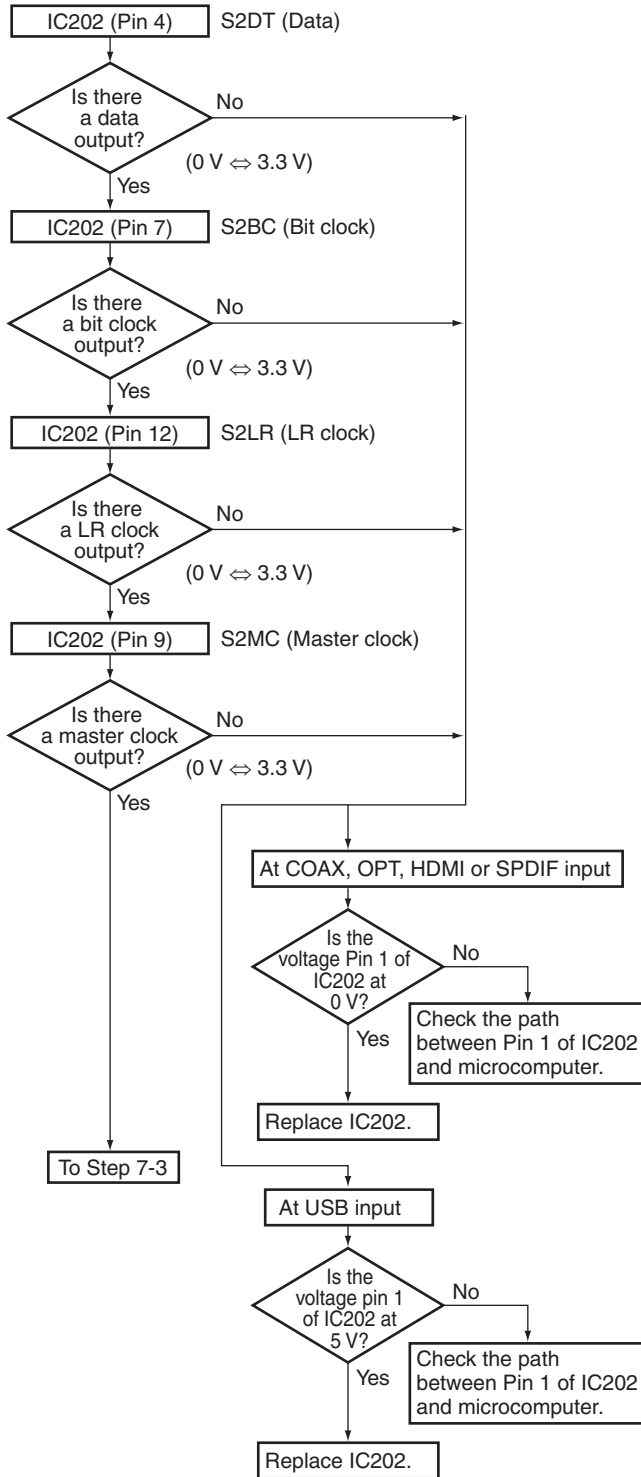
Step 7-1-2: Switch

Check that the data and clock signals are output.



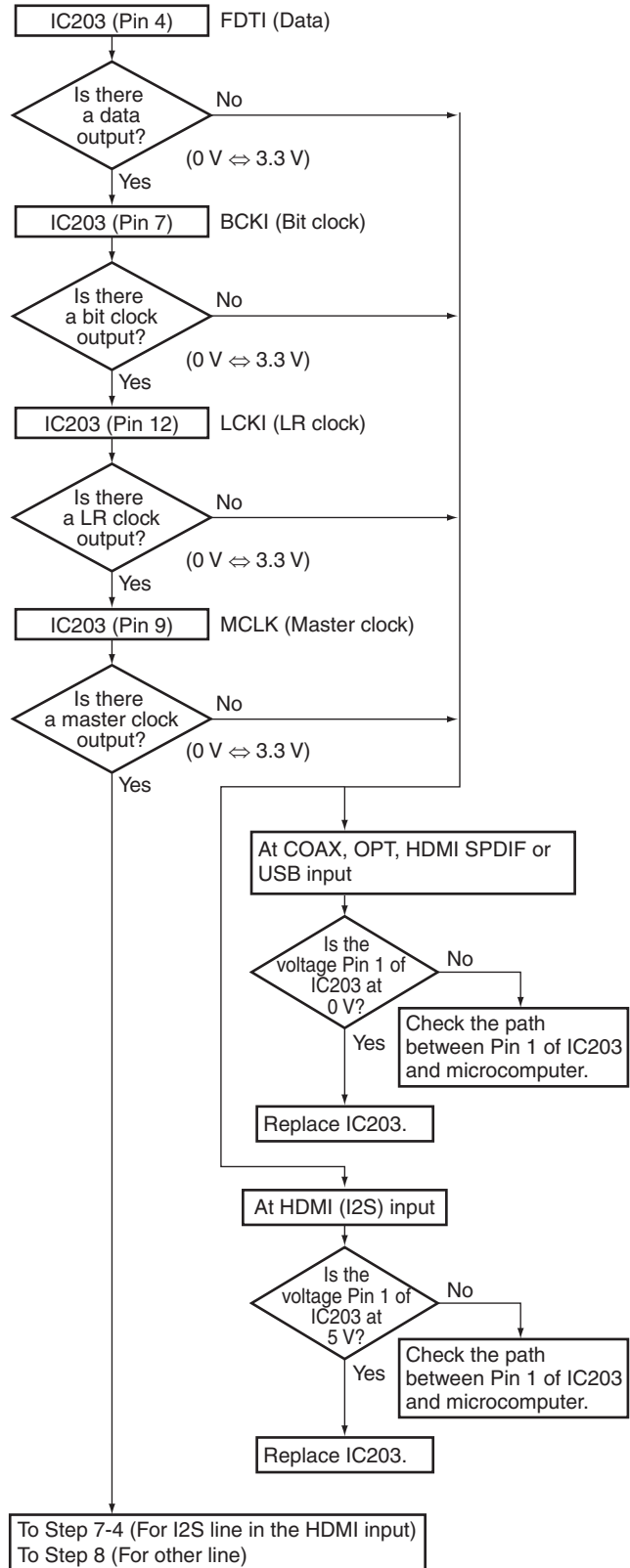
Step 7-2: Switch

Check that the data and clock signals are output.



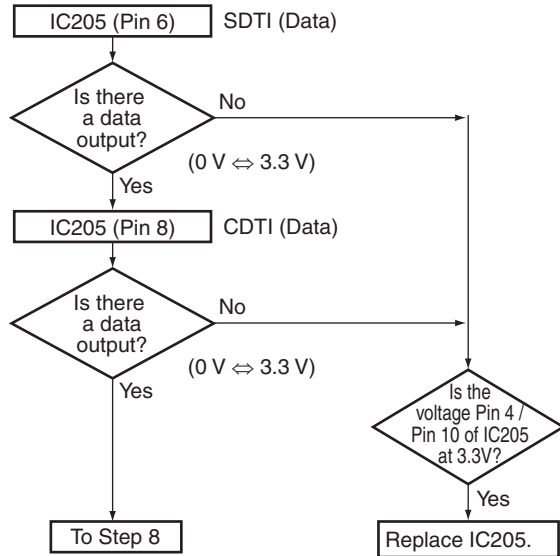
Step 7-3: Switch

Check that the data and clock signals are output.



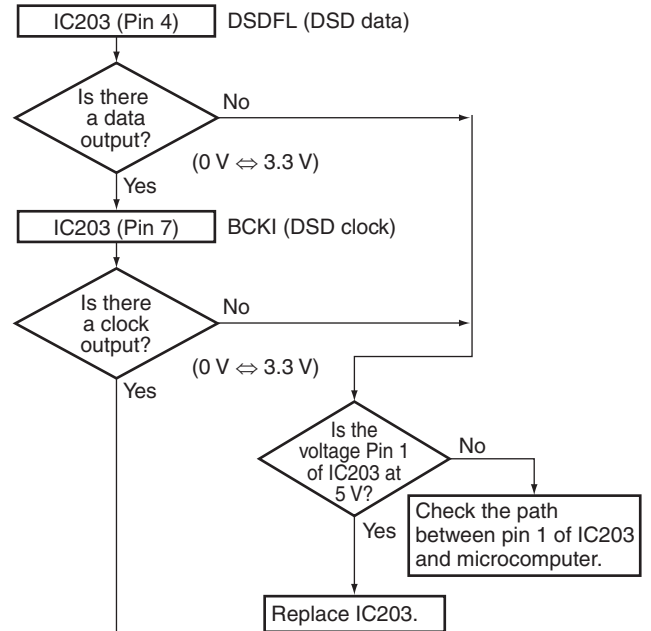
Step 7-4: Switch

Check that the data is output. (Sch and Cch Signal having)

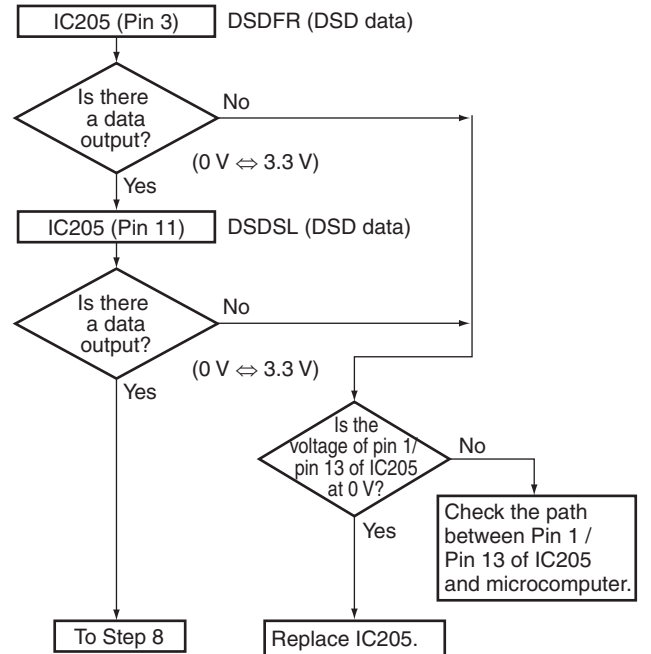


Step 7-5: Switch (SACD only)

Check that the data and clock signals are output.

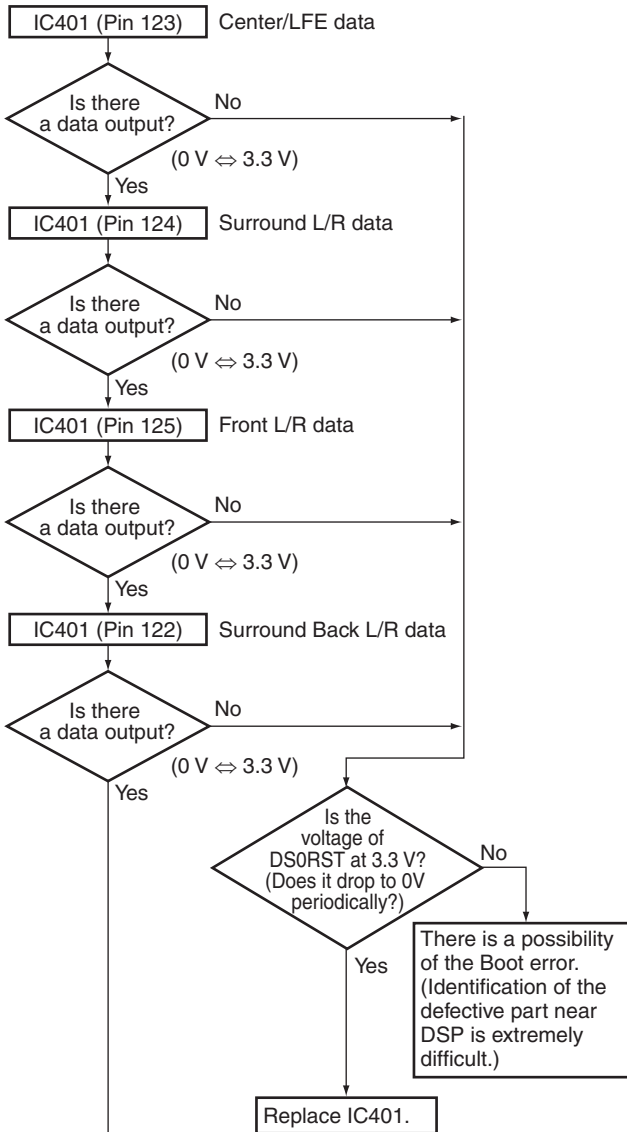


Check that the data signal is output.

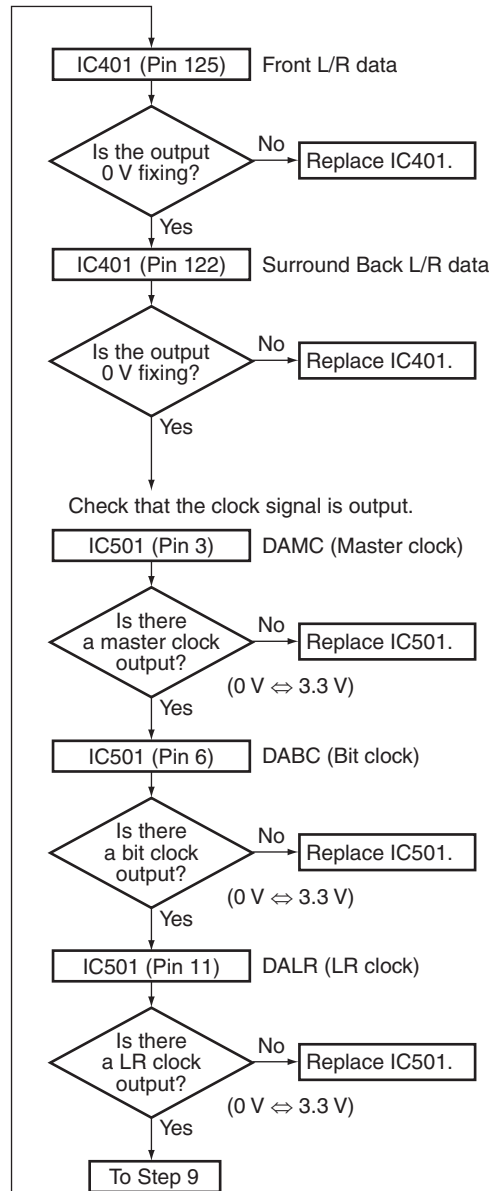
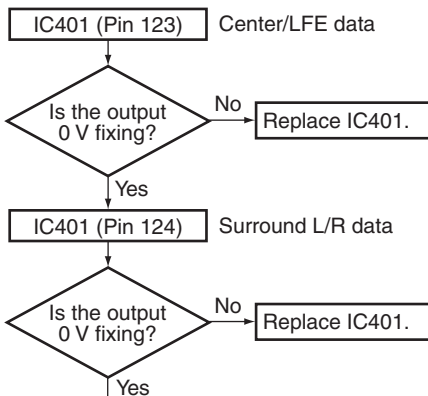


A Step 8: DSP output (digital)

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

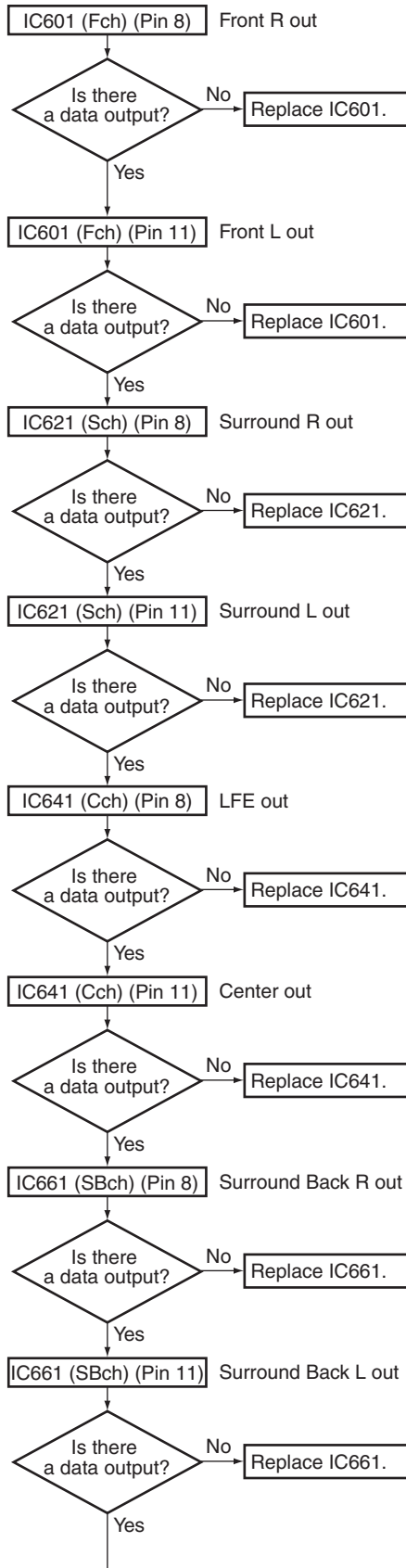


Digital output of each CH when inputting the digital signal (-∞ dB (no audio)).

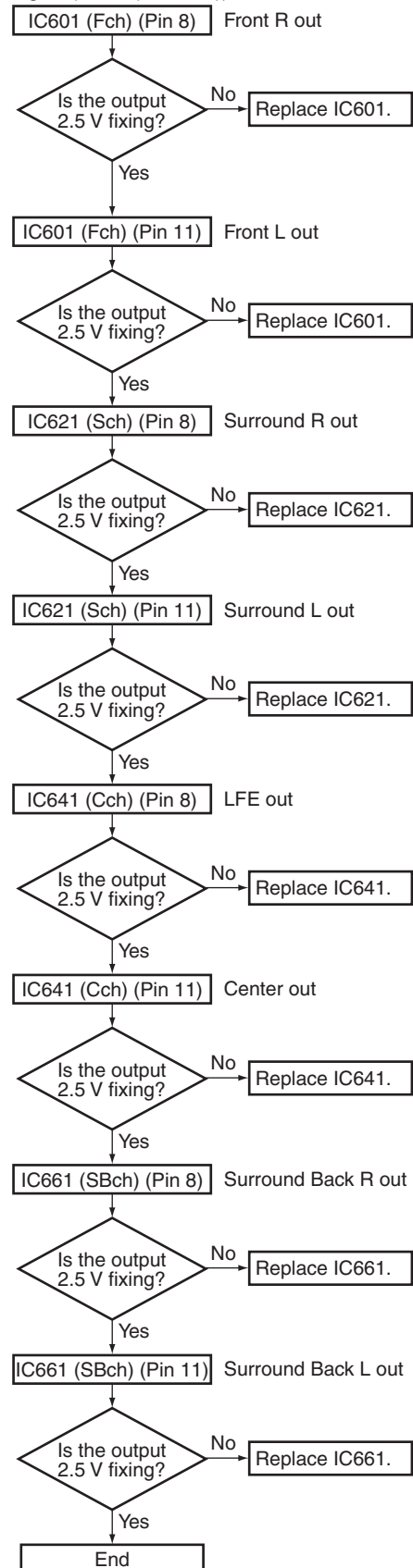


Step 9: DAC output (analog)

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



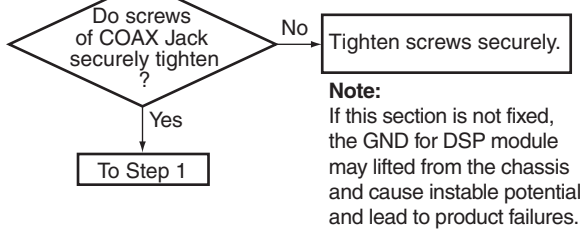
Analog output of each CH when inputting the digital signal ($-\infty$ dB (no audio)).



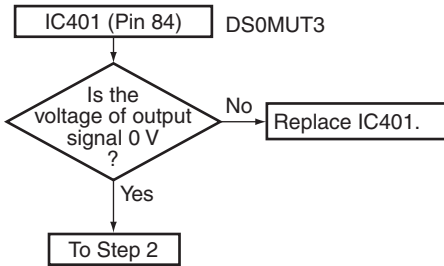
[2] DSP Troubleshooting in the XM mode

Step 0: Preliminary confirmation

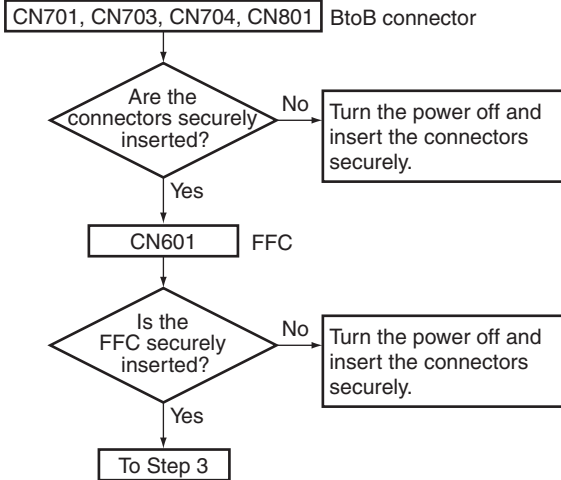
Confirm the following items before checking



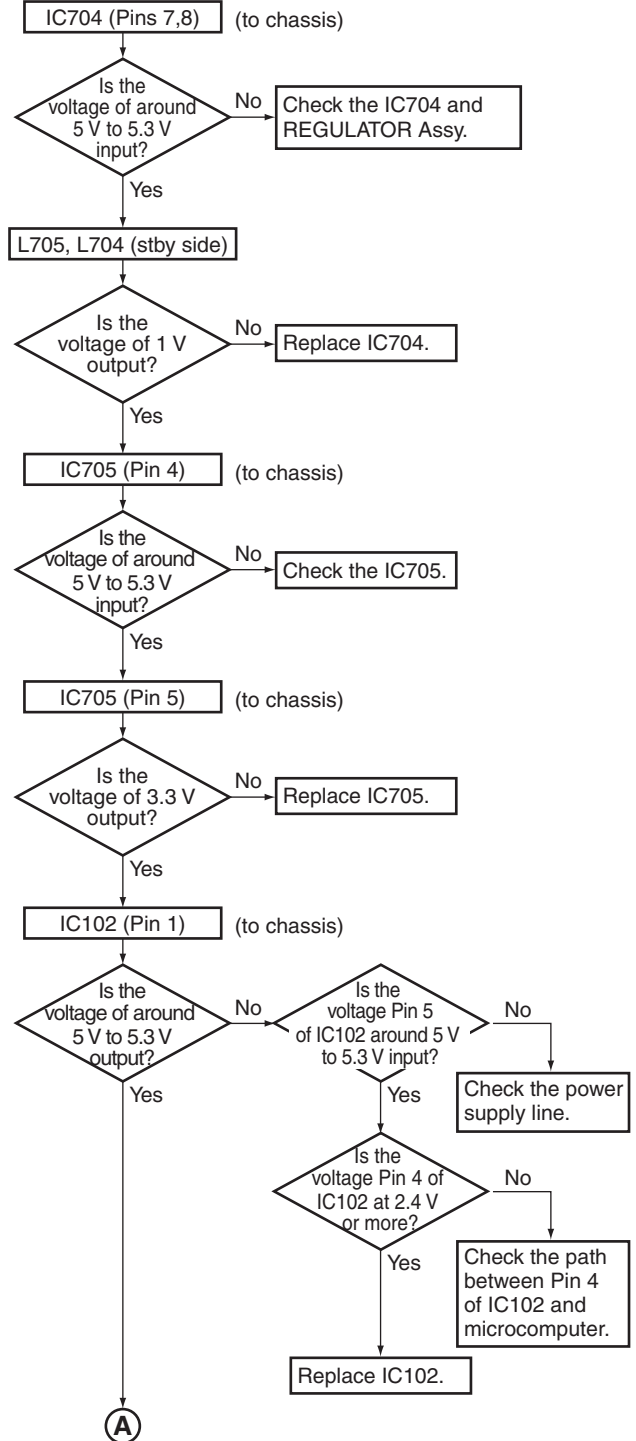
Step 1: MUTE pin

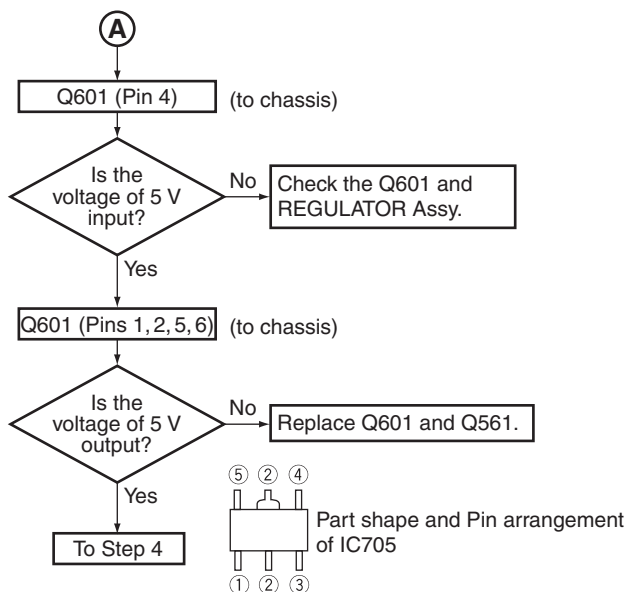


Step 2: BtoB connector and FFC

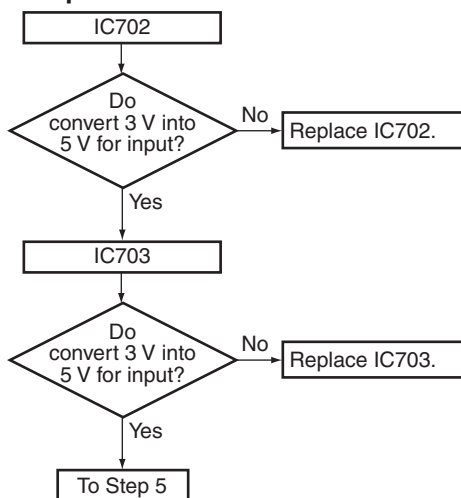


Step 3: Regulator IC

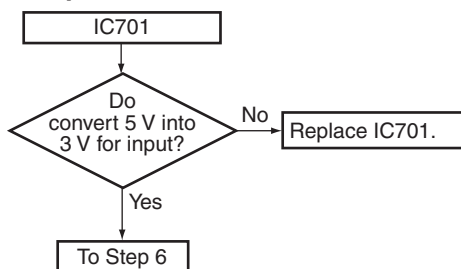




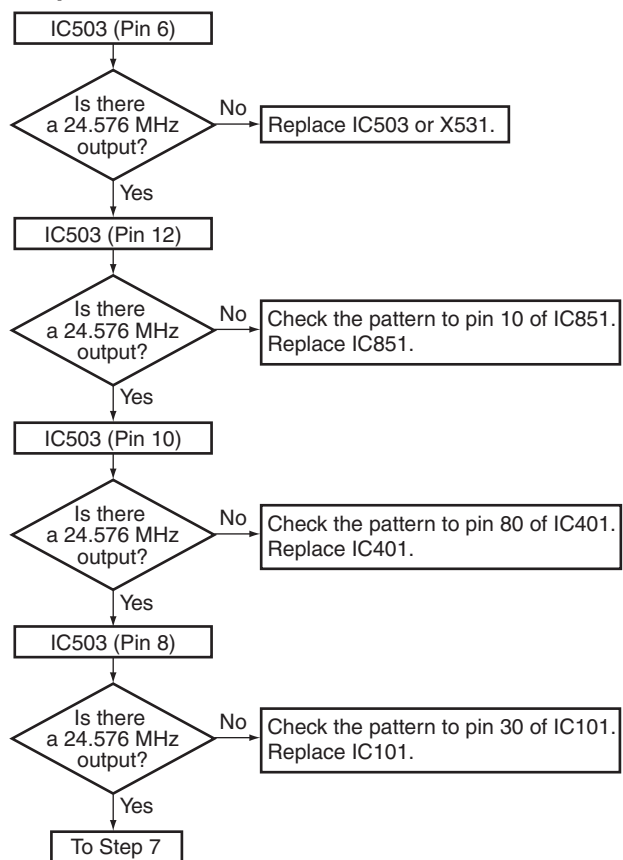
Step 4: 3 V to 5 V conversion



Step 5: 5 V to 3 V conversion

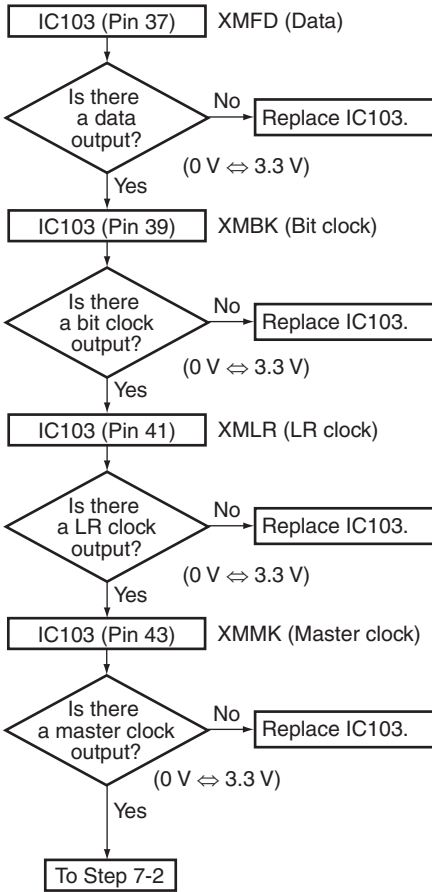


Step 6: X'tal



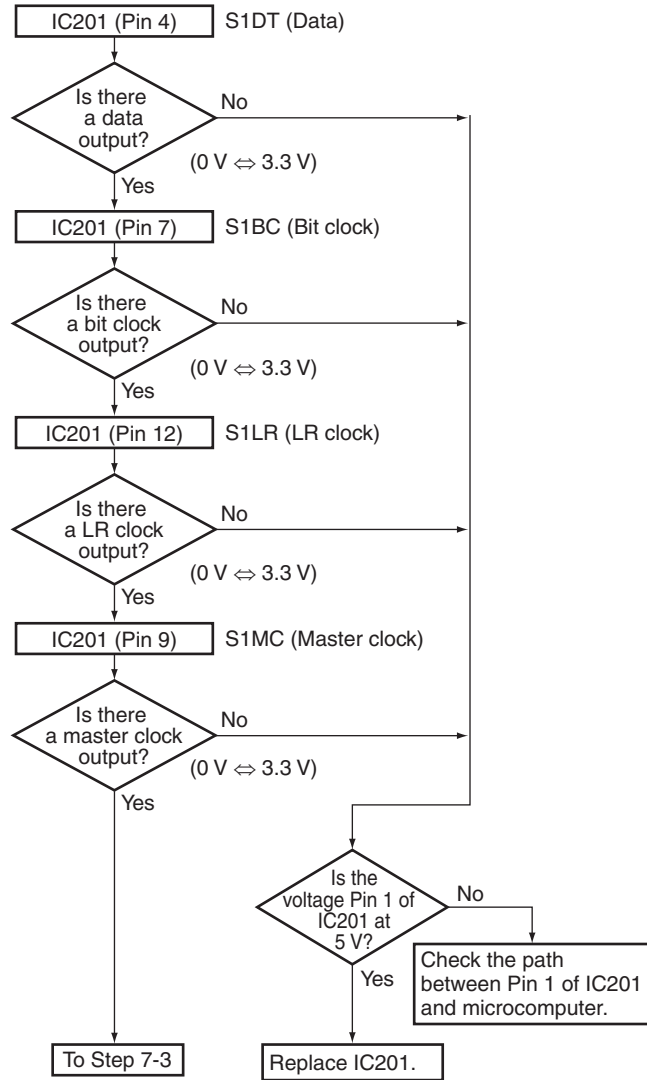
A Step 7-1: XM/DT

Check that the data and clock signals are output.



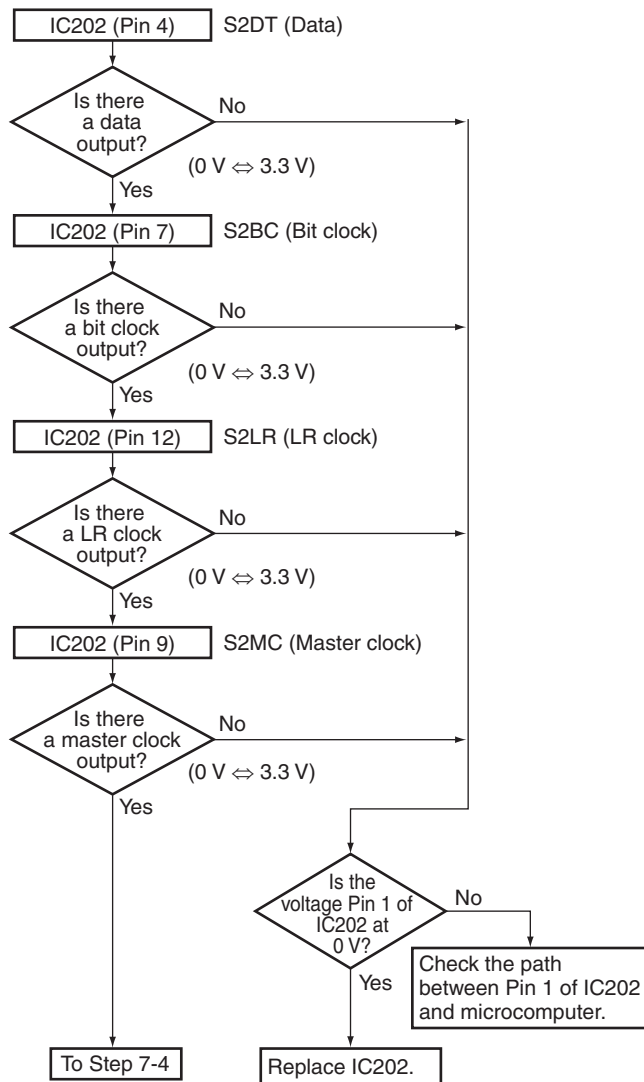
Step 7-2: Switch

Check that the data and clock signals are output.



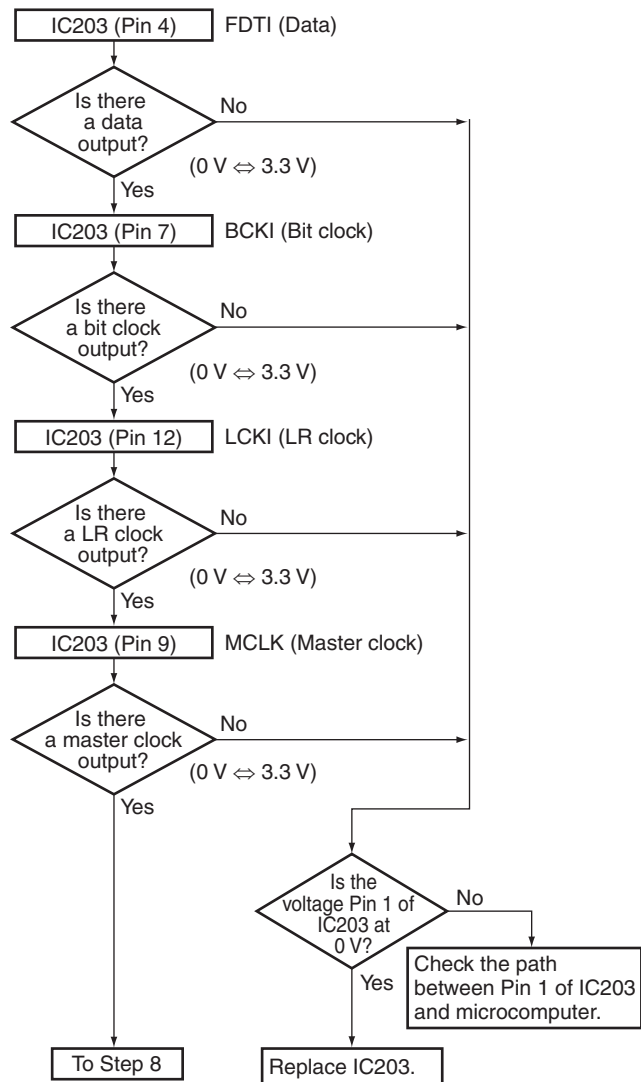
Step 7-3: Switch

Check that the data and clock signals are output.



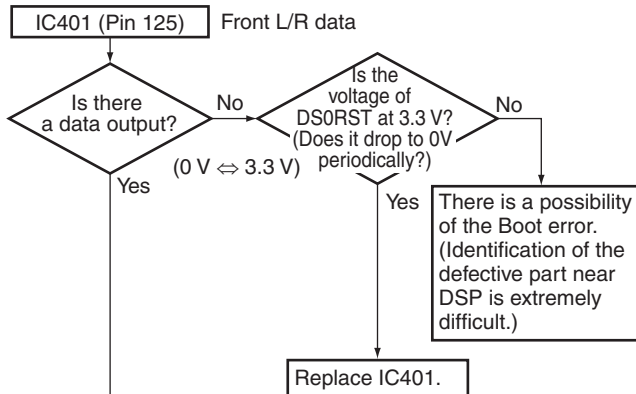
Step 7-4: Switch

Check that the data and clock signals are output.

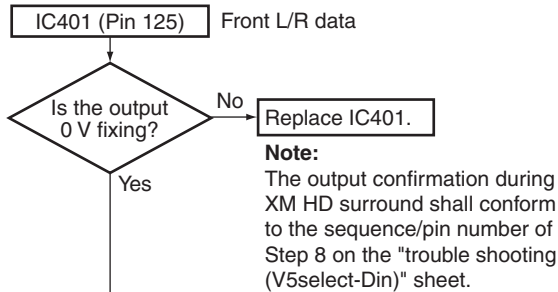


A Step 8: DSP output (digital)

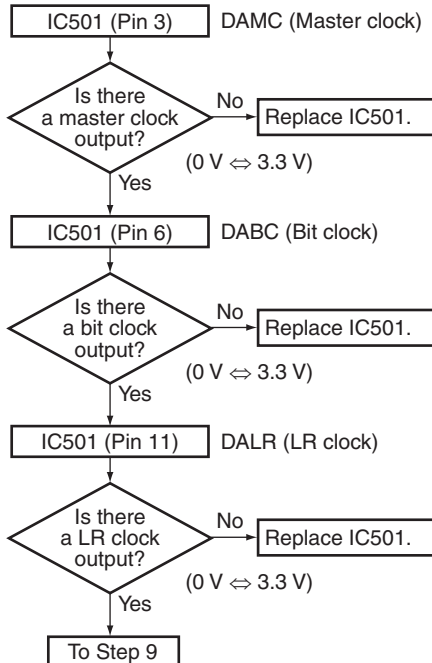
Digital output of each CH when inputting the digital signal with audio.



Digital output of each CH when inputting the digital signal (~∞ dB (no audio)).

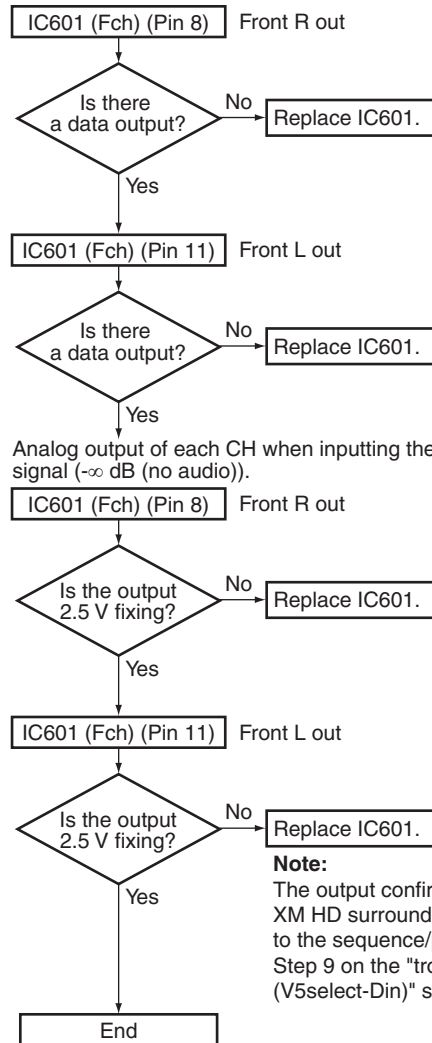


Check that the clock signal is output.



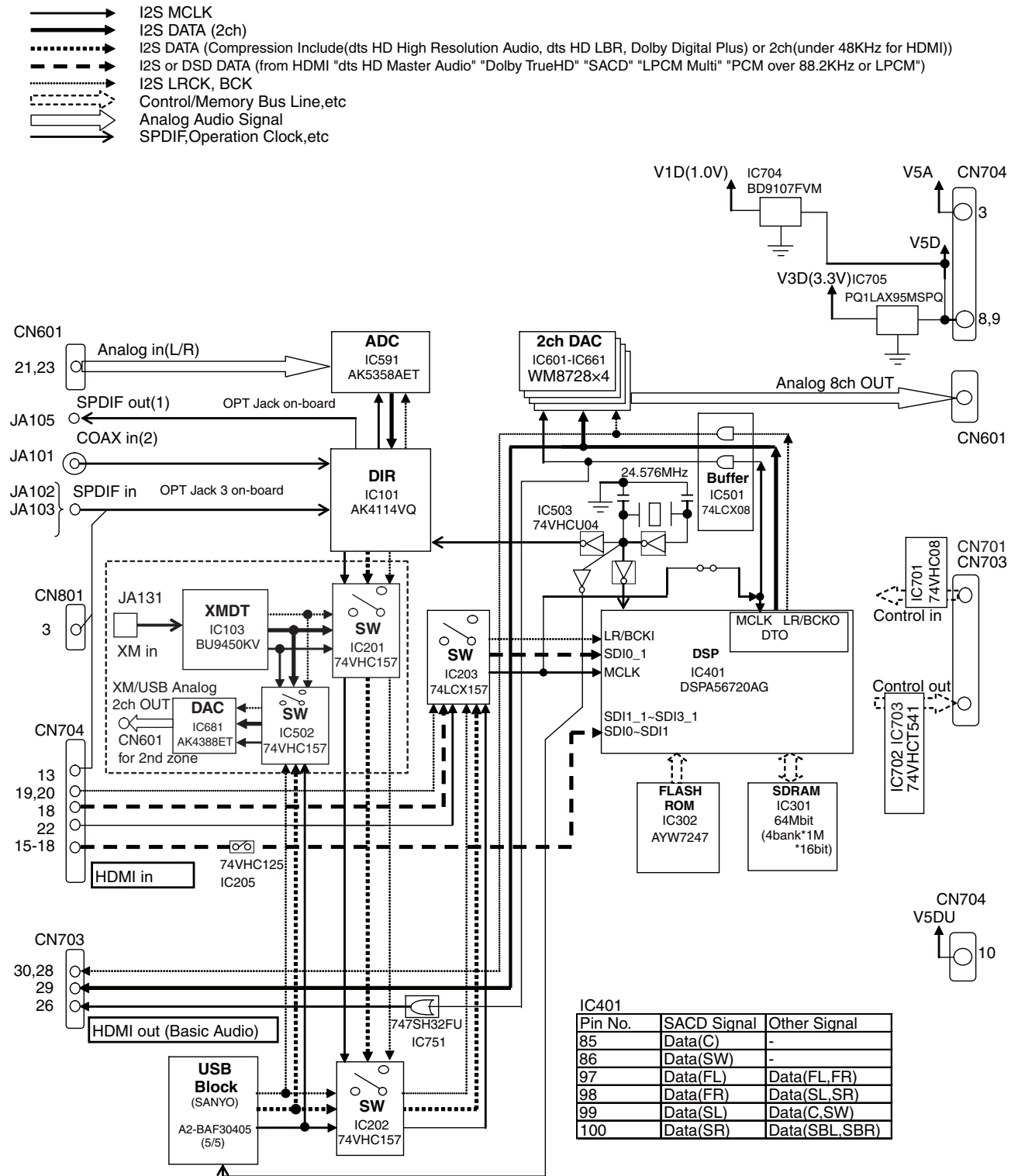
Step 9: DAC output (analog)

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



Note:
The output confirmation during XM HD surround shall conform to the sequence/pin number of Step 9 on the "trouble shooting (V5select-Din)" sheet.

DSP Block Diagram



A

DSP Power Block and GND MAP

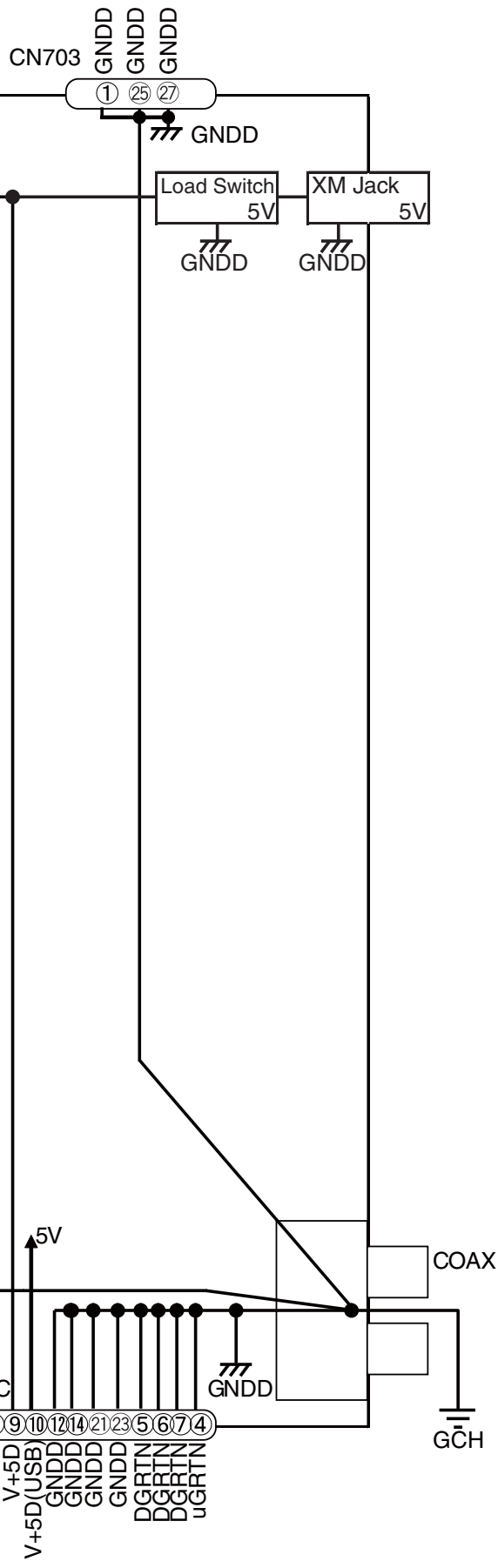
B

C

D

E

F



■ Conditions for selecting SPDIF or I2S output

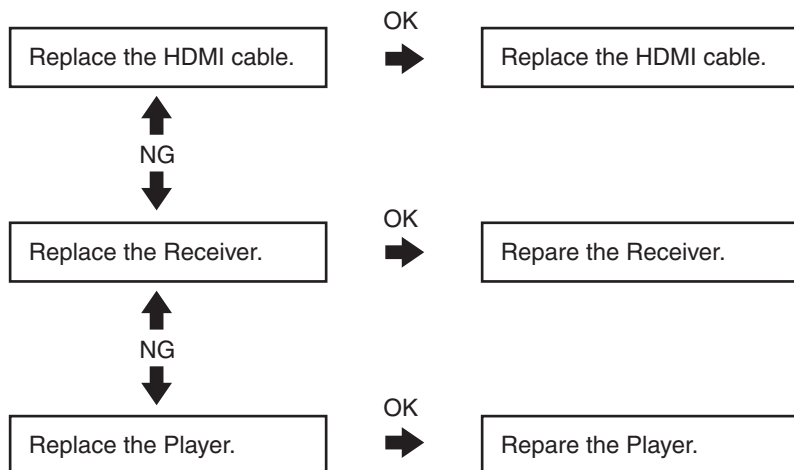
	pcm	fs(kHz)	Layout	SPDIF	I2S(3 lines)
Indistinguishable	Compression DVD-V	48	2ch	⊙	×
	Compression *.WAV	44	2ch	○	×
		48	2ch	○	×
	dts-CD	44	2ch	○	×
	PCM	44	2ch	○	×
		48	2ch	○	×
	DVD-V	96	2ch		○
	LPCM	44	2ch	○	
			Multi	×	○
		48	2ch	○	
			Multi	×	○
		88	2ch		○
			Multi	×	○
		96	2ch		○
			Multi	×	○
	DVD-A	176	2ch	×	○
			Multi	-	-
		192	2ch	×	○
			Multi	-	-

SACD	2ch	×	○	(DSD)
	Multi	×	○	(DSD)

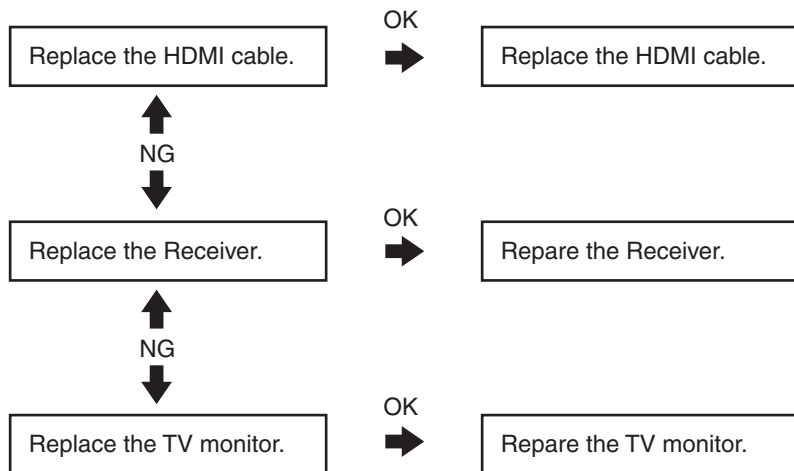
dts HD Master Audio	×	○
dts HD High Resolution Audio	○	×
dts HD LBR	○	×
Dolby TrueHD	×	○
Dolby Digital Plus	○	×

A [3] HDMI Simple Diagnosis

1. Causes for noncompletion of HDMI authentication between the source equipment and this unit (the HDMI indicator is unlit or flashes)



2. Causes for noncompletion of HDMI authentication between the monitor and this unit (no display or sound from the monitor)



[4] Preparations for HDMI diagnosis

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

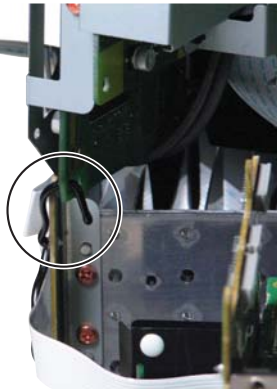
Jig cable

- Extension jig cable (GGD1492) x2
- 11P board to board extension jig cable (GGD1576)
- 19P board to board extension jig cable (GGD1577) x2
- 11P FFC (GGD1578)

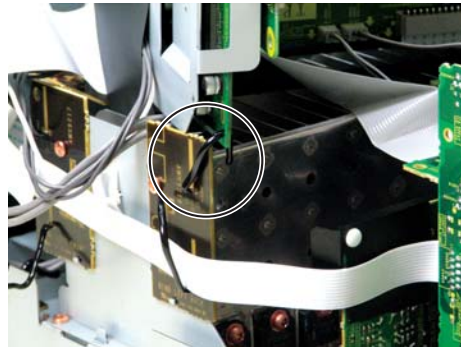
[Procedures]

- ① Remove the Rear Panel.
- ② Remove the screw that fix the MAIN Assy and the Wire Styling of the PCB Binder.
- ③ Remove the two screws that fix the HDMI Shield V5S.
- ④ Connect the four extension jig cables (two 19P board to board extension jig cable, one 11P board to board extension jig cable and 11P FFC).
- ⑤ Raise the MAIN Assy with the HDMI&DVC Assy and DSP&USB Assy attached and place it on the Heat Sink V5S. Fix the lower part of the HDMI&DVC Assy with the PCB Binder.

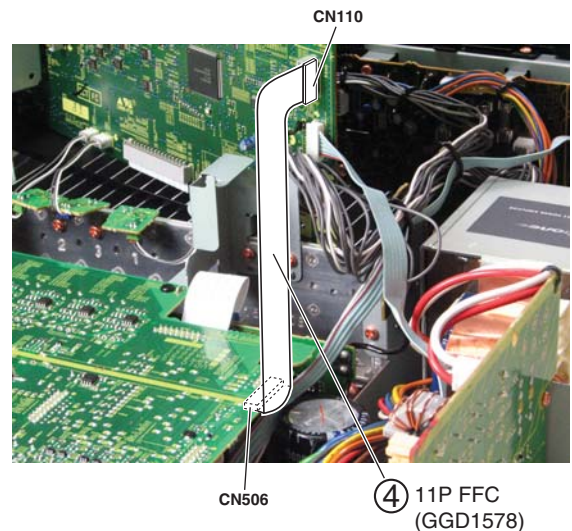
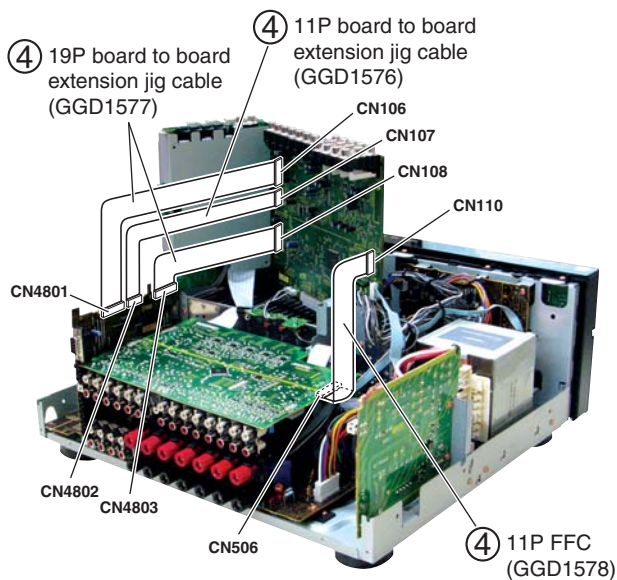
Position of Wire Styling



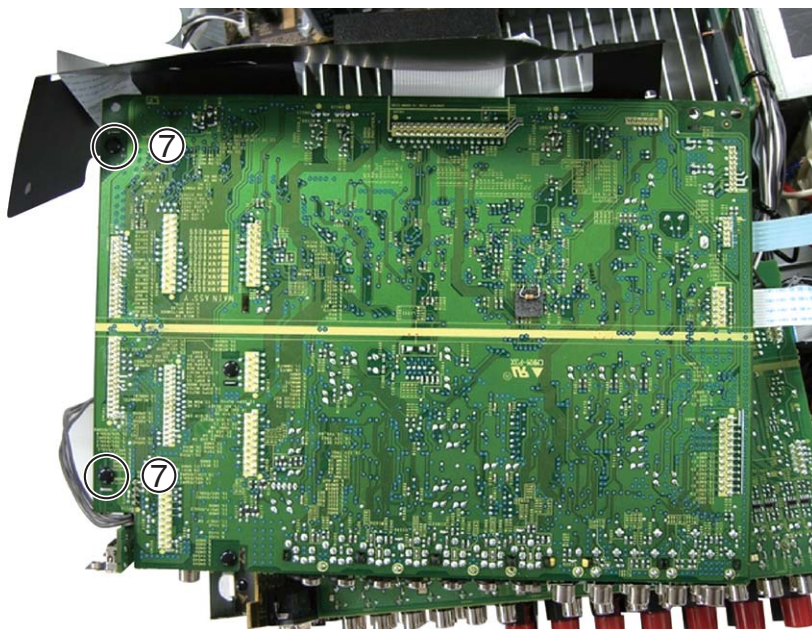
Position of Wire Styling (The above angle is different.)



- ⑥ Connect the earth point.

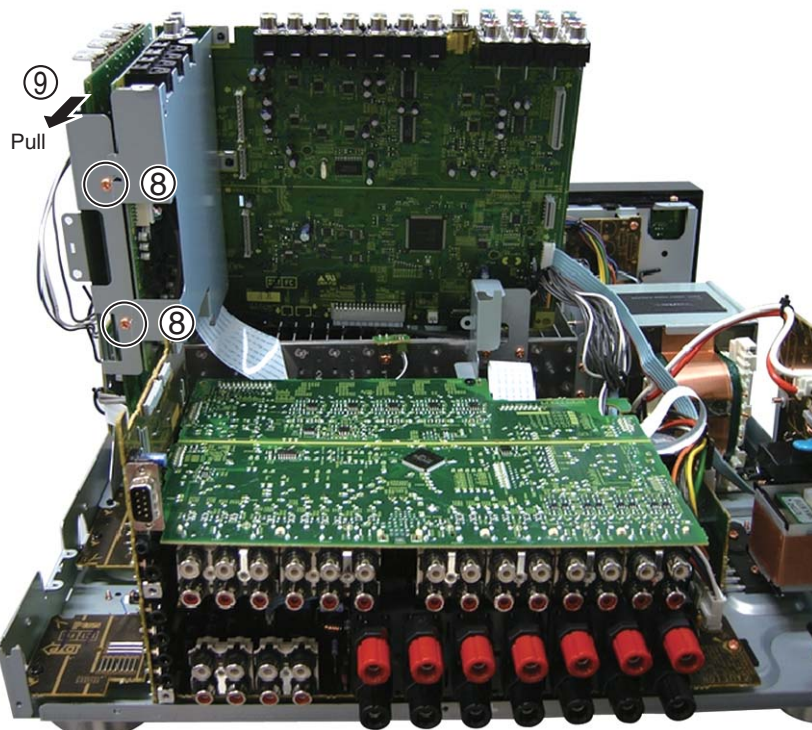


- ⑦ Remove the two Nylon Rivets fixing the HDMI Shield V5S on MAIN Assy.

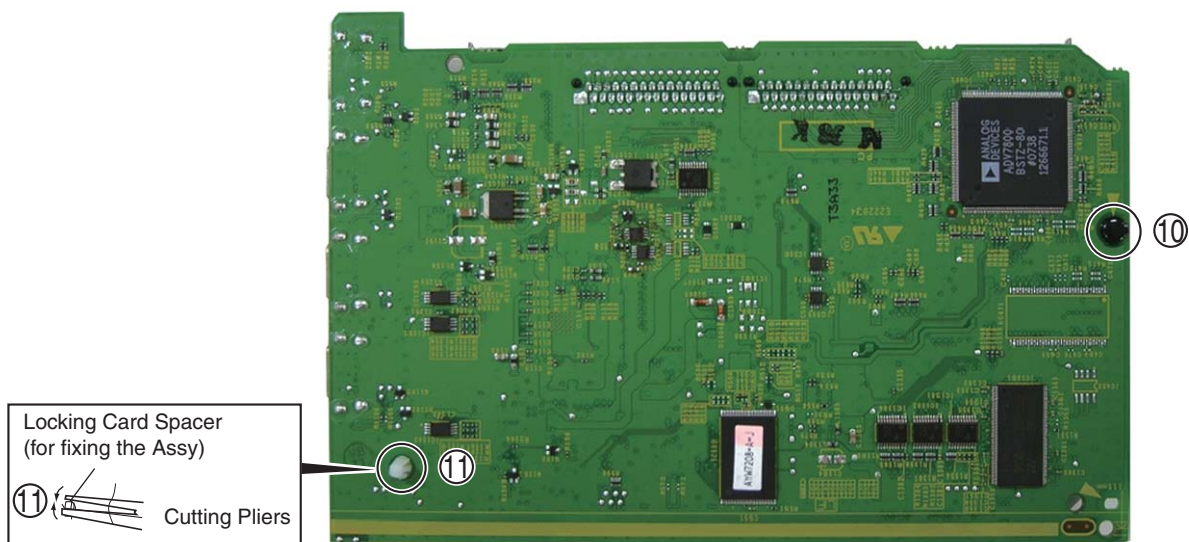


- ⑧ Remove the two screws from the HDMI Shield V5S.

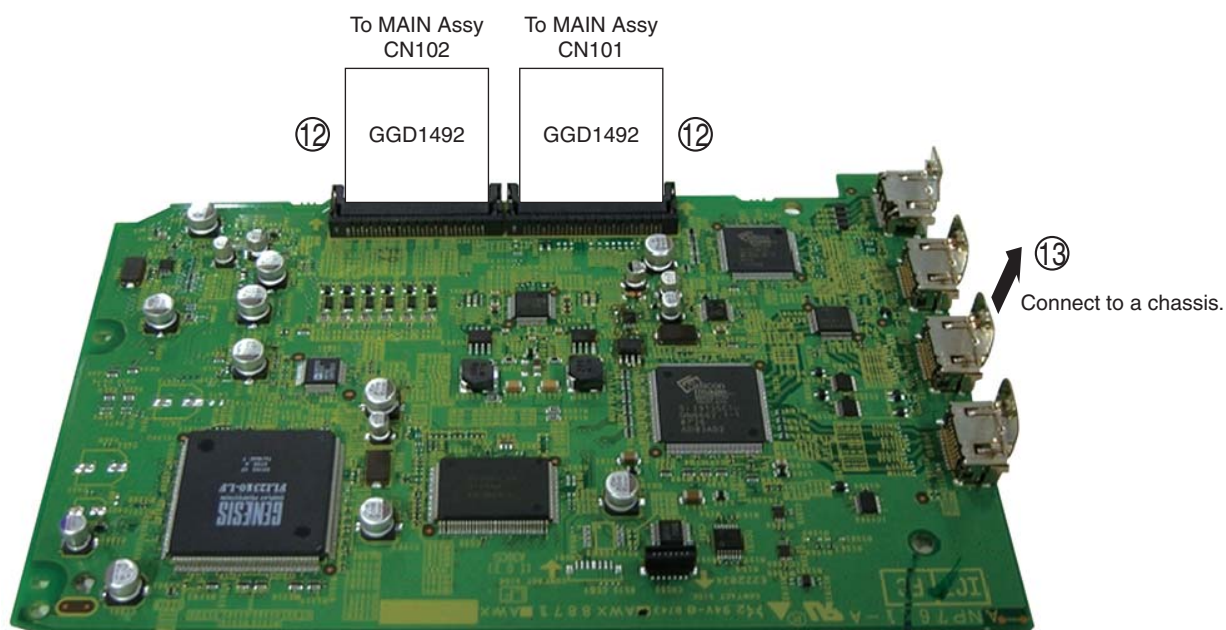
- ⑨ Remove the HDMI&DVC Assy and HDMI Shield V5S together from the MAIN Assy.



- ⑩ Remove the Nylon Rivet fixing the HDMI&DVC Assy and the HDMI Shield V5S.
- ⑪ Remove the HDMI&DVC Assy while holding the Locking Card Spacer with a Cutting Pliers.
- * Caution is required not to lose the Radiation Sheet between IC1301 and the HDMI Shield V5S.



- ⑫ HDMI&DVC Assy MAIN Assy
 CN1001 - CN101
 CN1002 - CN102
 Connect each combination above with an extension jig cable (GGD1492).
- ⑬ Connect one of the HDMI connectors and a chassis (connect GND).

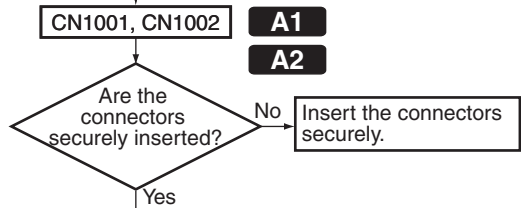


[5] HDMI Troubleshooting

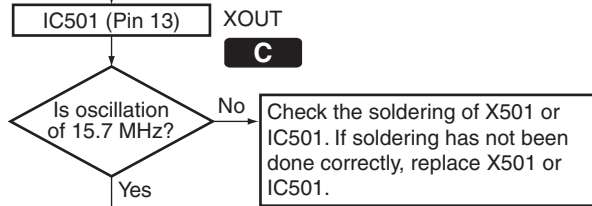
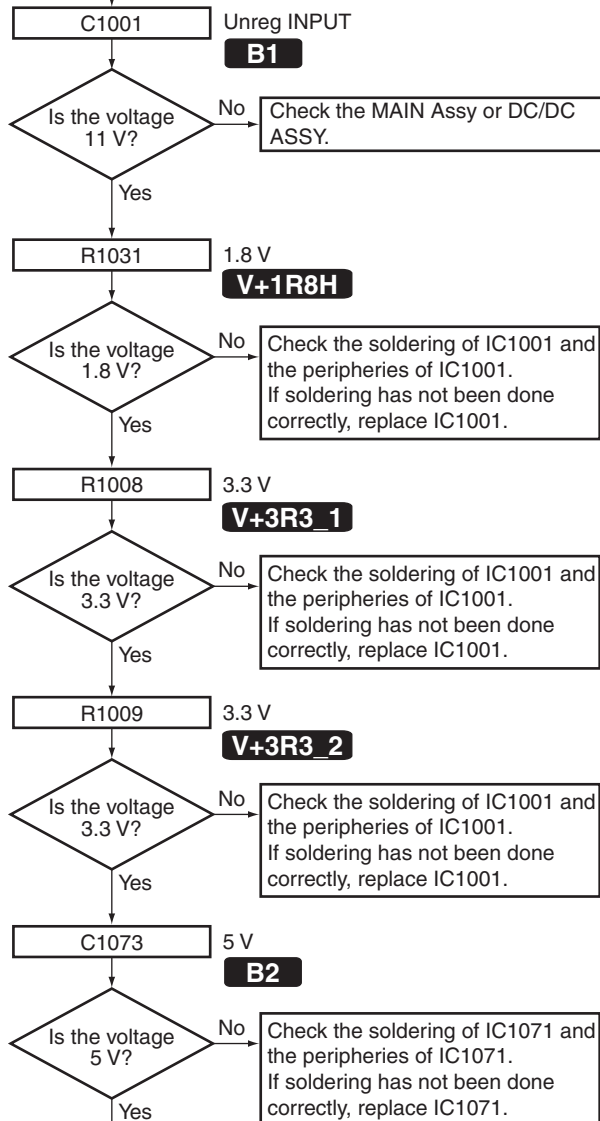
• The parts marked like **A1** in the following chart are located in "HDMI & DVC Assy Check Points".

Common section

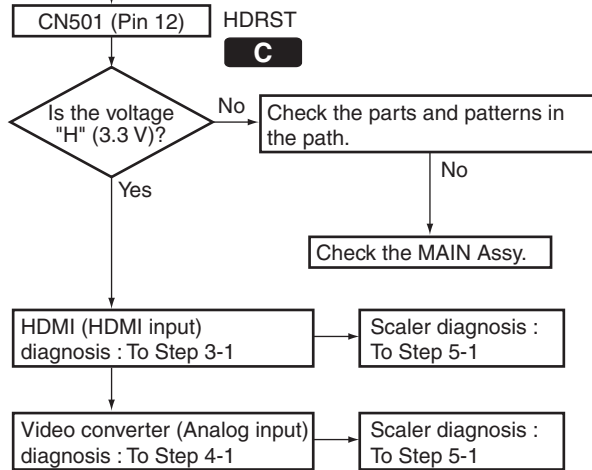
Step 1: Connections



Step 2-1: Power supply, CLK

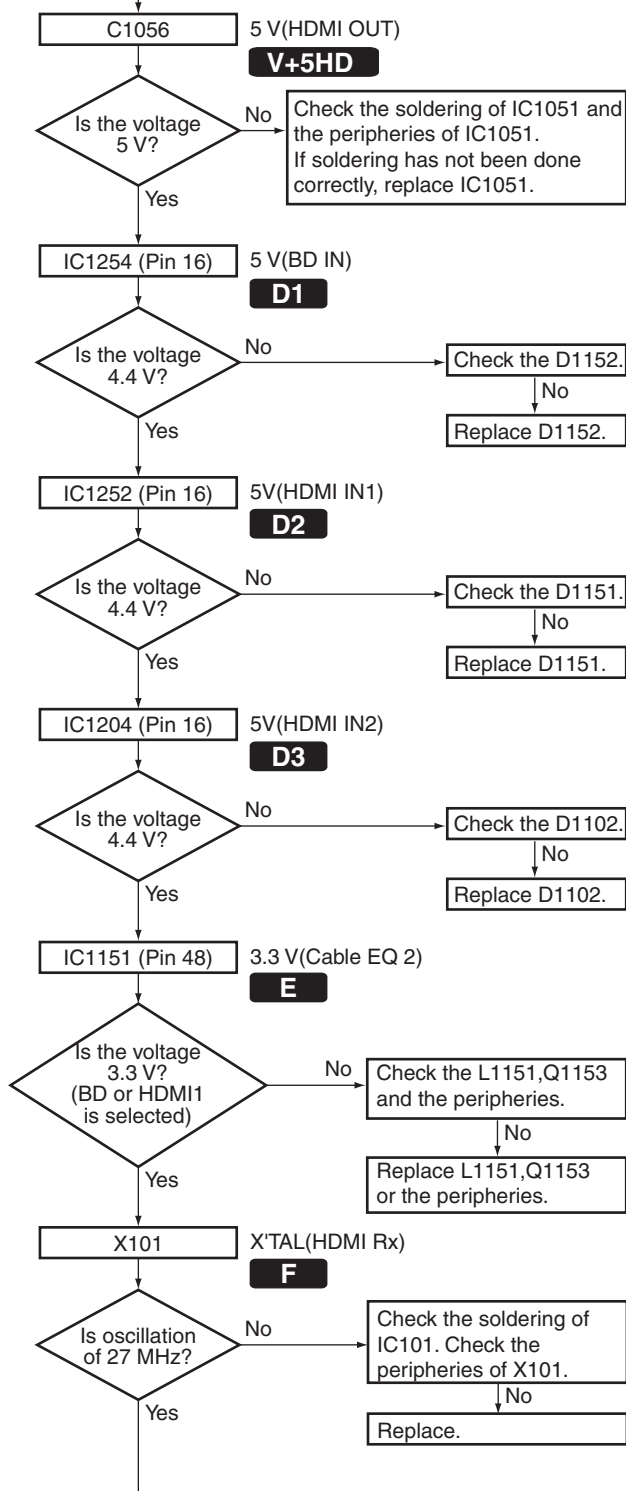


Step 2-2: Reset

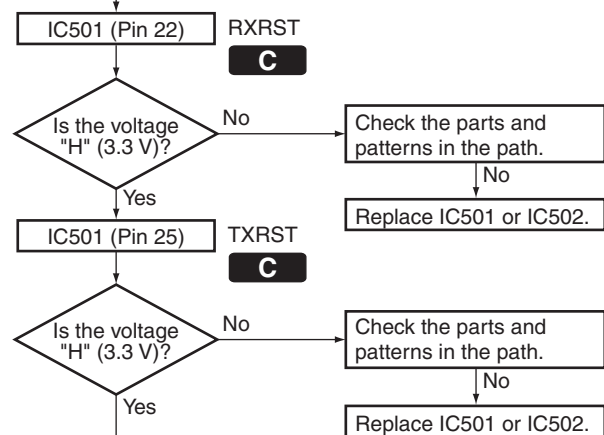


HDMI section

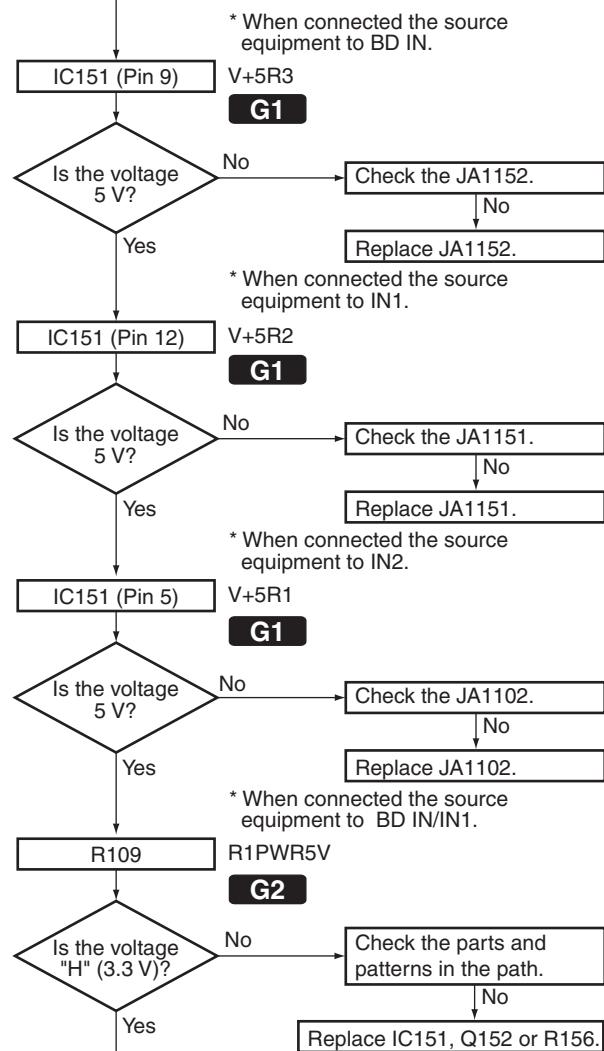
Step 3-1: Power supply, CLK



Step 3-2 : Reset



Step 3-3: Source 5V



A

A

R111

* When connected the source equipment to IN2.
R0PWR5V

G3

Is the voltage "H" (3.3 V)?

No

Check the parts and patterns in the path.

No

Replace IC151, Q151 or R155.

Yes

B

Step 3-4: Hot Plug Detect

* When connected the source equipment to BD IN.

IC501 (Pin 34)

HPDET3

C

Is the voltage "L" (0 V)?

No

Check the patterns in the path.

No

Replace IC501.

Yes

JA1152 (Pin 19)

HPD(BD)

H1

Is the voltage "H" (5 V)?

No

Check the patterns in the path.
Check the Q1152 and R1152.

No

Replace Q1152 or R1152.

Yes

* When connected the source equipment to IN1.

IC501 (Pin 91)

HPDET2

C

Is the voltage "L" (0 V)?

No

Check the patterns in the path.

No

Replace IC501.

Yes

JA1151 (Pin 19)

HPD(HDMI1)

H2

Is the voltage "H" (5 V)?

Check the patterns in the path.
Check the Q1151 and R1151.

No

Replace Q1151 or R1151.

Yes

* When connected the source equipment to IN2.

IC501 (Pin 93)

HPDET1

C

Is the voltage "L" (0 V)?

No

Check the patterns in the path.

No

Replace IC501.

Yes

E

F

JA1102 (Pin 19)

HPD(HDMI2)

H3

Is the voltage "H" (5 V)?

No

Check the patterns in the path.
Check the Q1102 and R1102.

No

Replace Q1102 or R1102.

Yes

JA301 (Pin 18)

HPD(HDMI OUT)

H4

Is the voltage "H" (5 V)?

No

Check the patterns in the path.
Check the JA301.

No

Replace JA301.

Yes

IC301 (Pin 51)

HPD(HDMI Tx)

H5

Is the voltage "H" (5 V)?

No

Check the patterns in the path.
Check the D301 and R313.

No

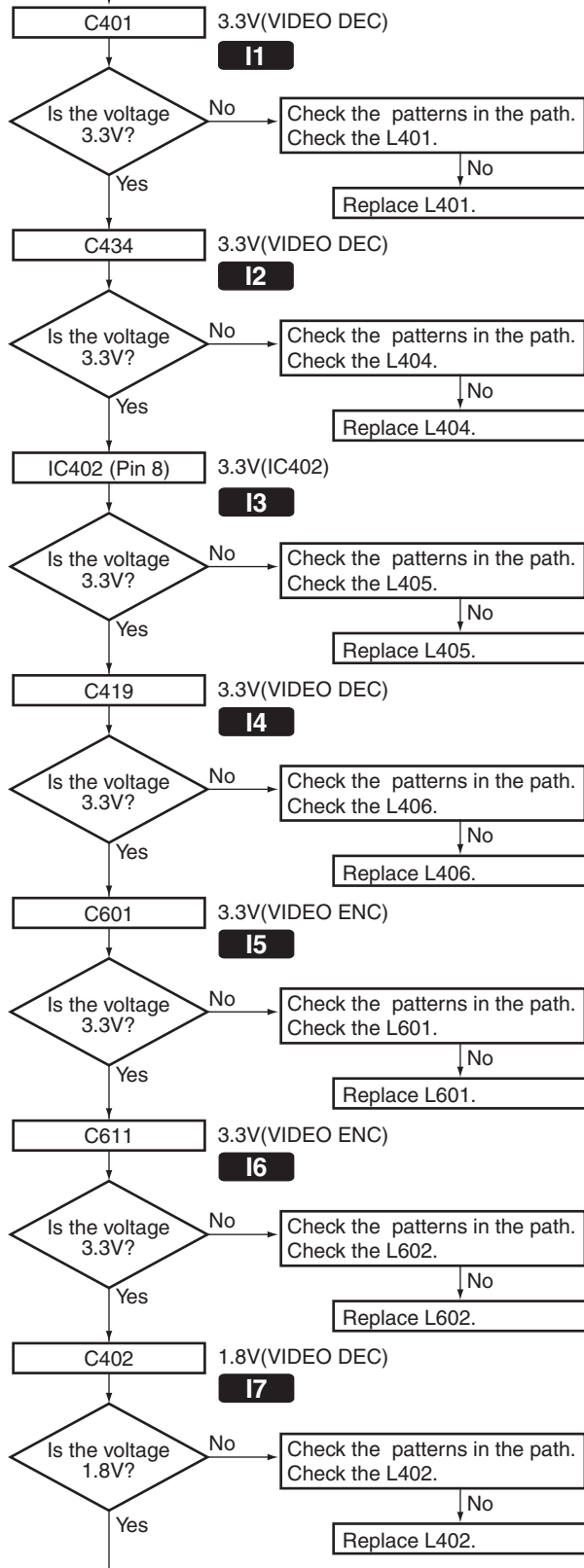
Replace D301 or R313.

Yes

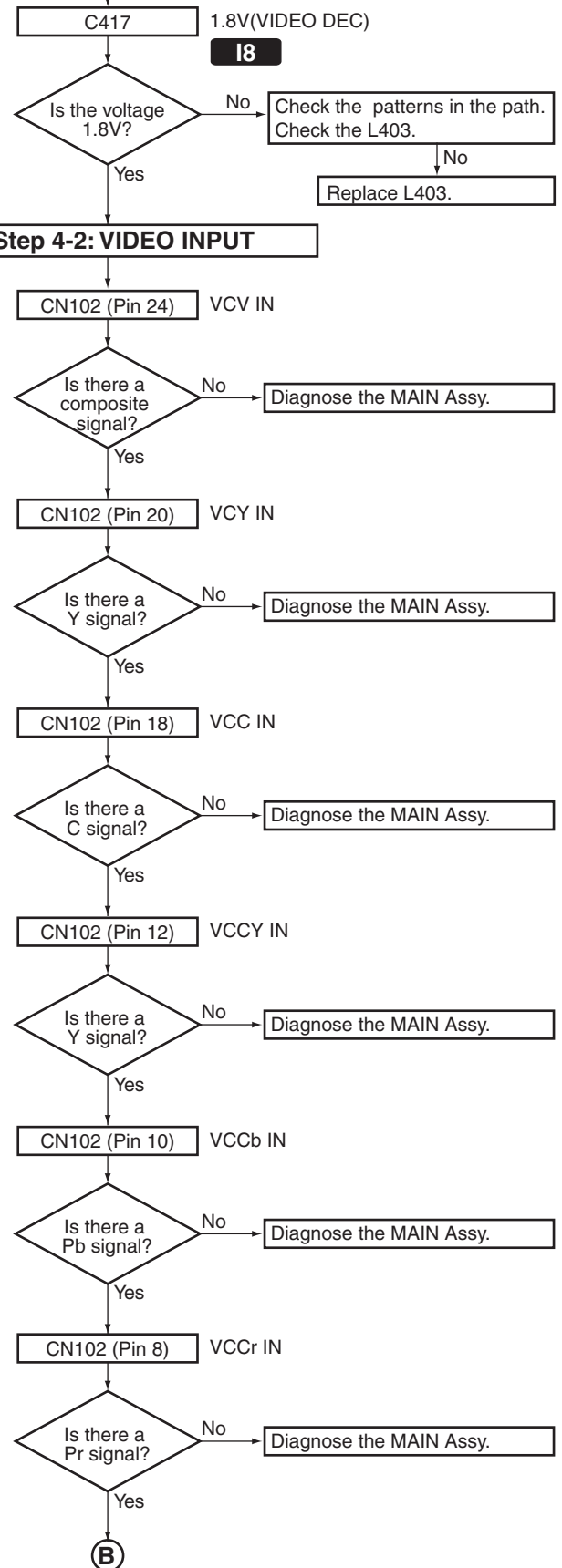
To Step 4-1

Video converter section

Step 4-1: Power supply



Step 4-2: VIDEO INPUT



A

(B)

Step 4-3: Reset, X'tal

IC501 (Pin 3)

XVCRST

C

Is the voltage "H" (3.3V)?

No

Check the parts and patterns in the path(IC501 - IC401).

No

Replace IC501.

Yes

IC402 (Pin 7)

XTAL

J

Is there a CLK (28.63636 MHz)?

No

Check the X401 or IC402.

No

Replace X401 or IC402.

Yes

Step 4-4: I2C

IC501 (Pin 30)

VCSDA

C

Does a signal output in constant period (0 - 3.3 V)?

No

Check the parts and patterns in the path(IC501 - IC401,601).

No

Replace IC501, IC401 or IC601.

Yes

IC501 (Pin 29)

VCSCS

C

Does a clock output in constant period (0 - 3.3 V)?

No

Check the parts and patterns in the path(IC501 - IC401,601).

No

Replace IC501, IC401 or IC601.

Yes

Step 4-5: VIDEO CLK, DATA

IC601 (Pin 48)

LLC

K

Is there a CLK?

No

Check the parts and patterns in the path(IC401 - IC1601).

No

Replace IC401.

Yes

IC601 (Pins 2-9)

P22-P29

K

Is there a DATA?

No

Check the parts and patterns in the path(IC401 - IC601).

No

Replace IC401.

Yes

B

C

D

E

F

Step 4-6: VIDEO OUTPUT

IC601 (Pin 35)

DAC A

K

*Only 480i/576i input.

Is there a composite signal?

No

Check the IC601.

No

Replace IC601.

Yes

Q631 (E)

CVBS OUT

L1

Is there a composite signal?

No

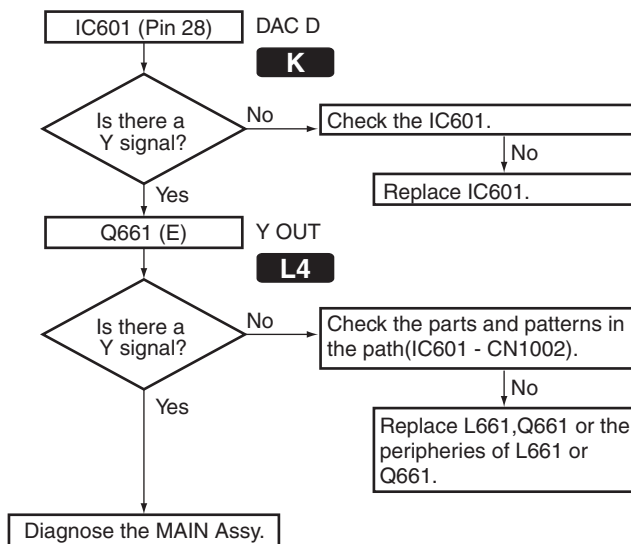
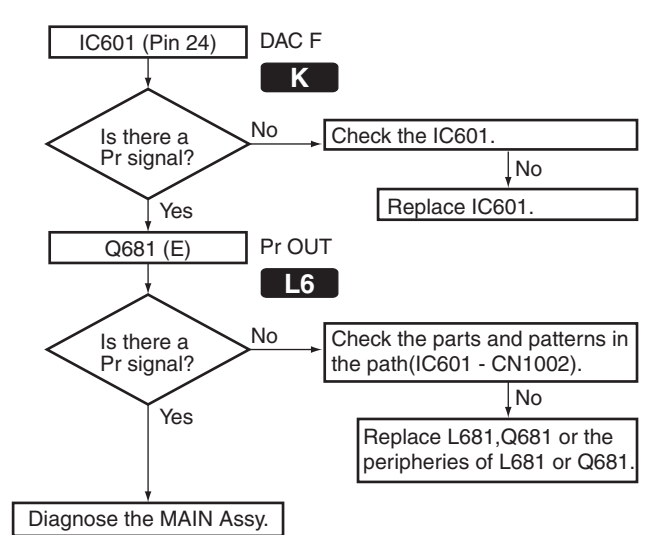
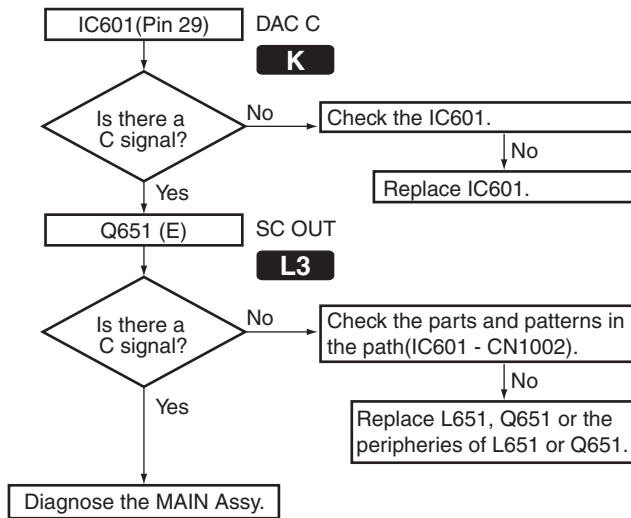
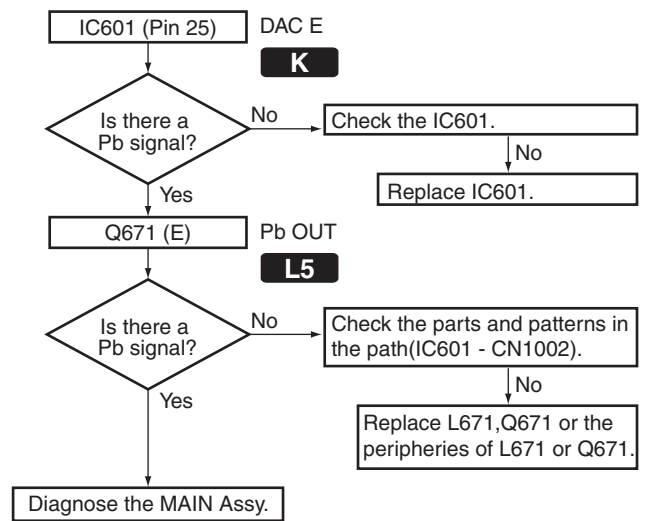
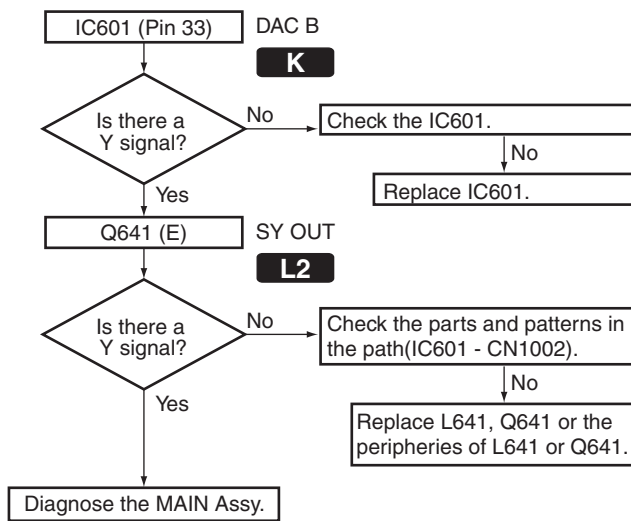
Check the parts and patterns in the path(IC601 - CN1002).

No

Replace L631, Q631 or the peripheries of L631 or Q631.

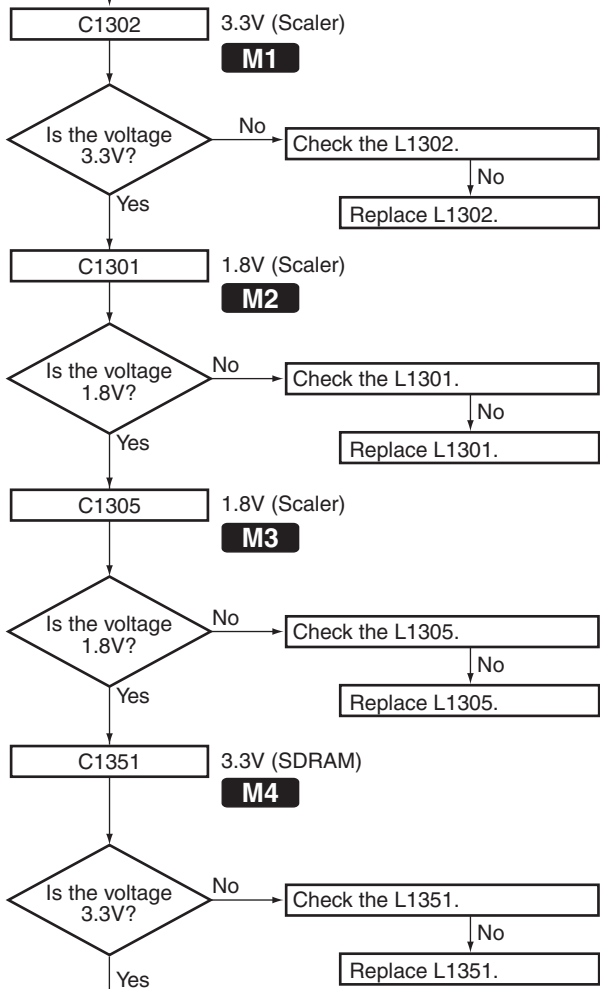
Yes

Diagnose the MAIN Assy.

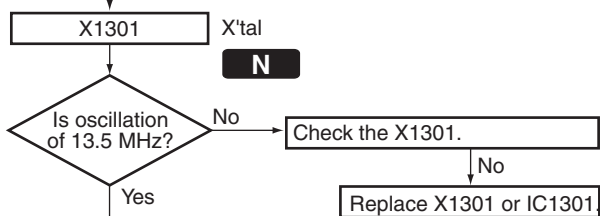


Scaler section

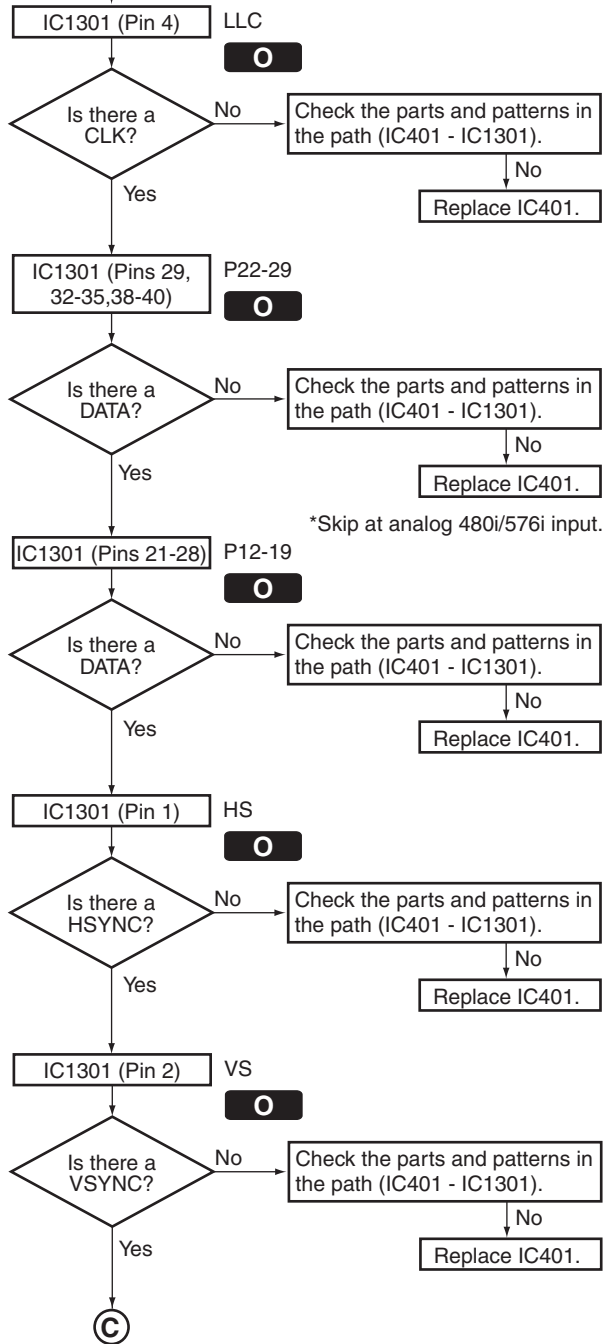
Step 5-1: Power supply

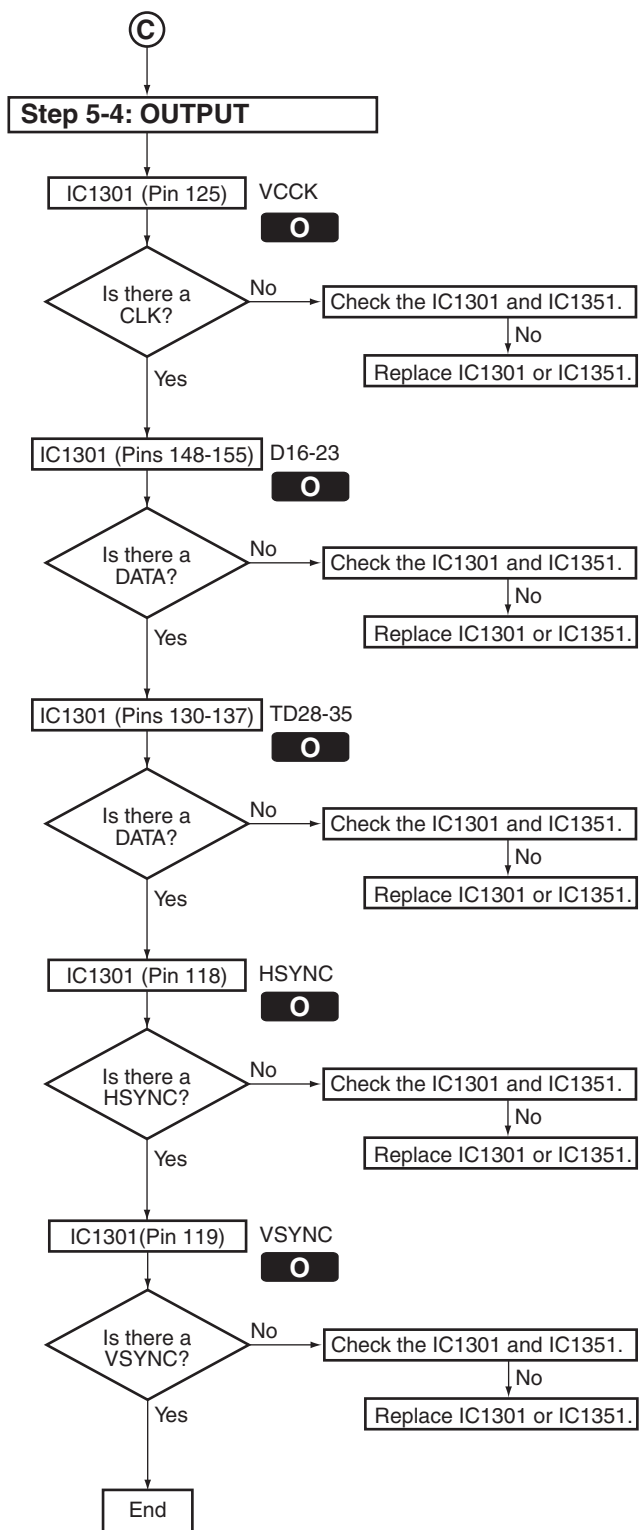


Step 5-2: X'tal



Step 5-3: INPUT



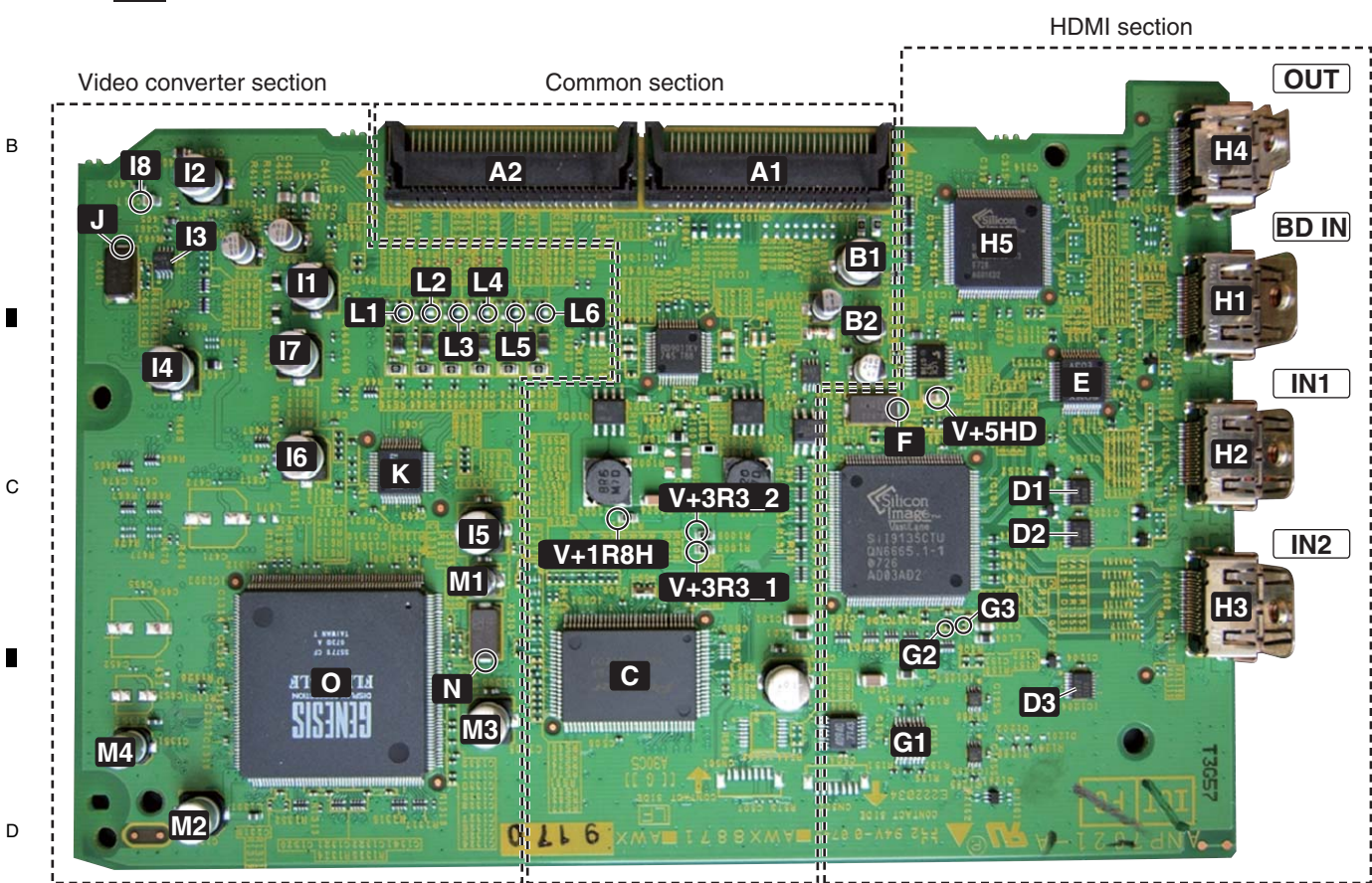


A

HDMI & DVC Assy Check Points

F

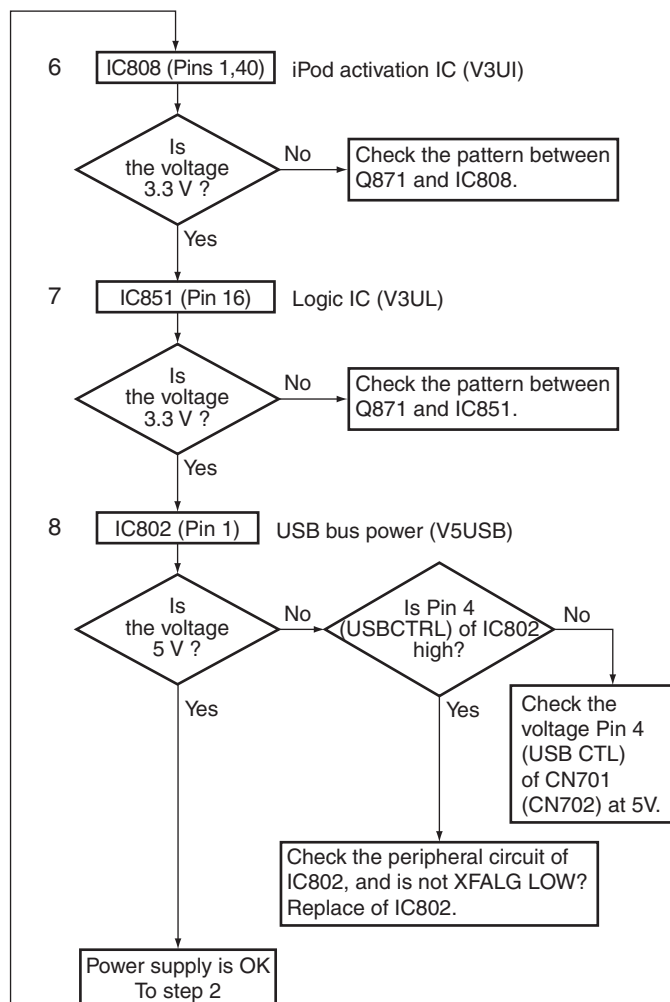
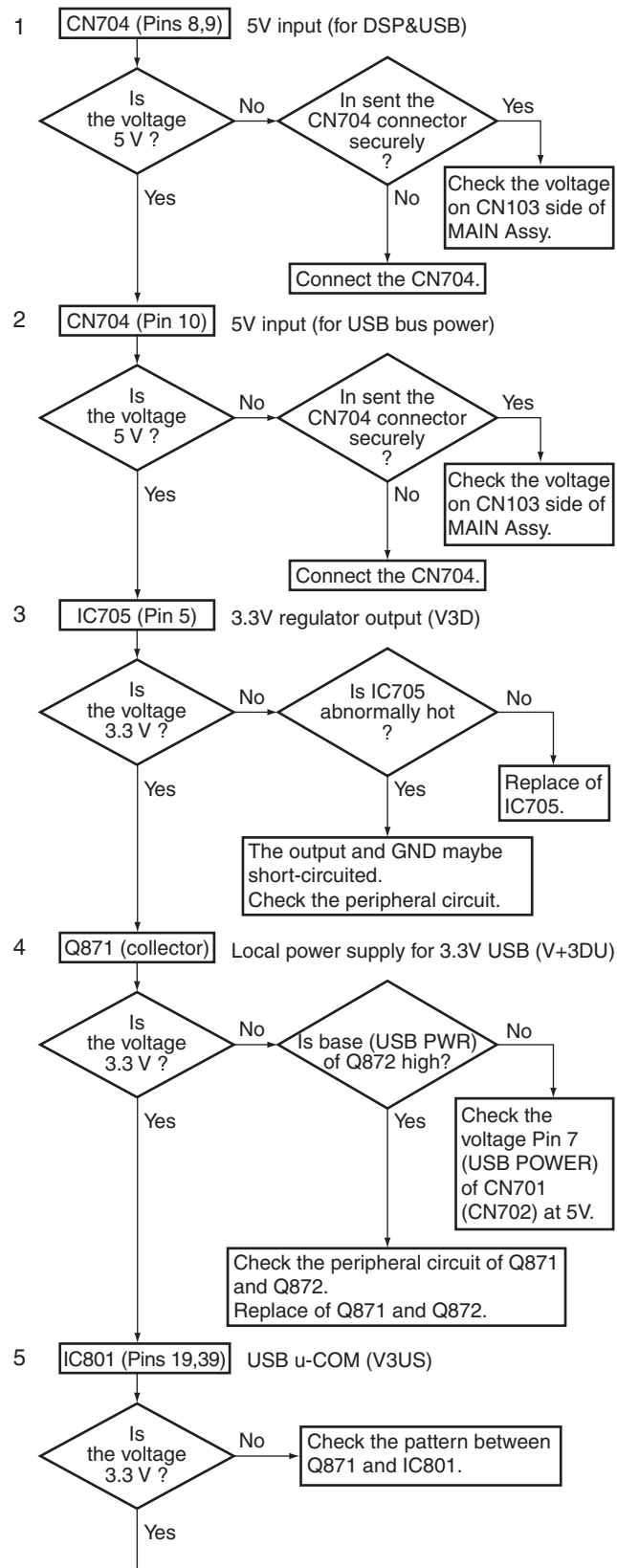
HDMI & DVC ASSY SIDE A



[6] USB/iPod Troubleshooting

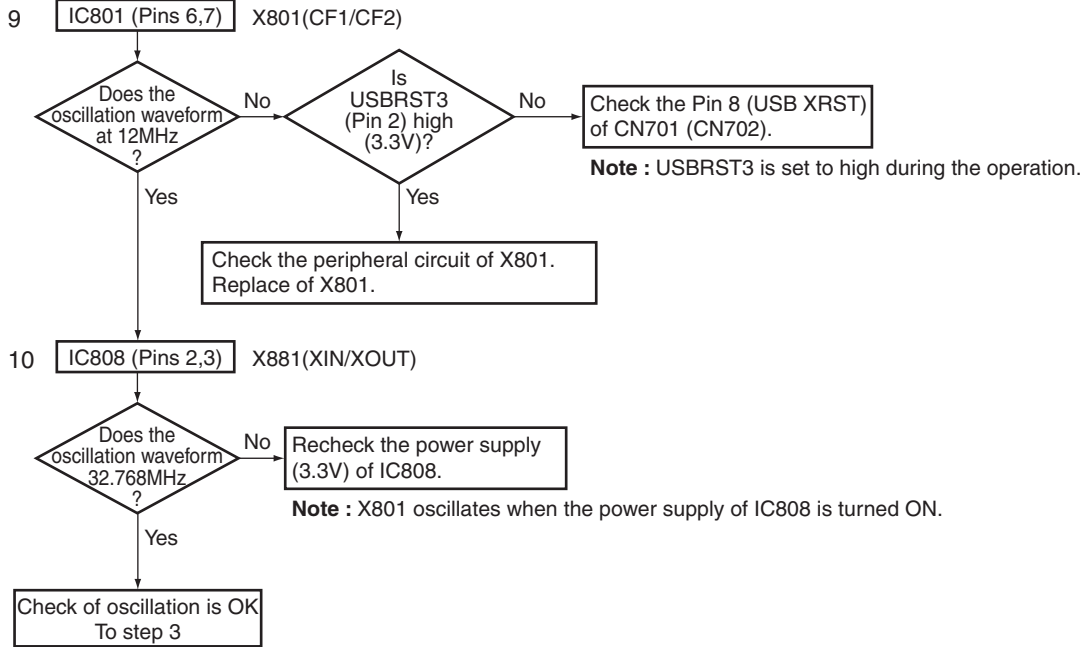
Step 1: Check of power supply

* Turn ON the power of product and check the power supply by USB iPod function.



A

Step 2: Check of oscillation * Turn ON the power of product and check the power supply by USB iPod function.



B

C

Step 3: Check of operation of USB u-COM

11 IC801 (Pins 44,45) Main u-COM communication (USBDAI, USBDAO)

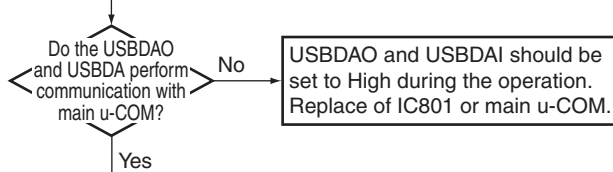
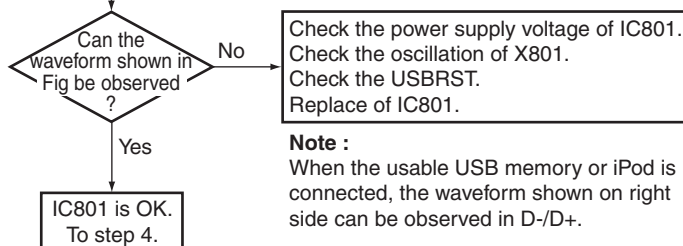


Fig. 1

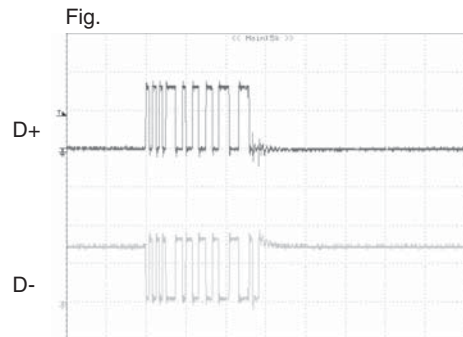
	IC801	IC701 (5 V → 3 V)	CN701 (CN702)
USBDAI	Pin 44	Pin 11	Pins 12,13
USBDAO	Pin 45	Pin 2	Pin 18

12 CN801 (Pins 7,8) D+/D-



* Make a confirmation with USB memory or iPod* connected.
* The iPod that can be used for this product is iPod 5G, iPod nano, iPod classic and iPod touch (as of April 1, 2008).

Note :
When the usable USB memory or iPod is connected, the waveform shown on right side can be observed in D-/D+.



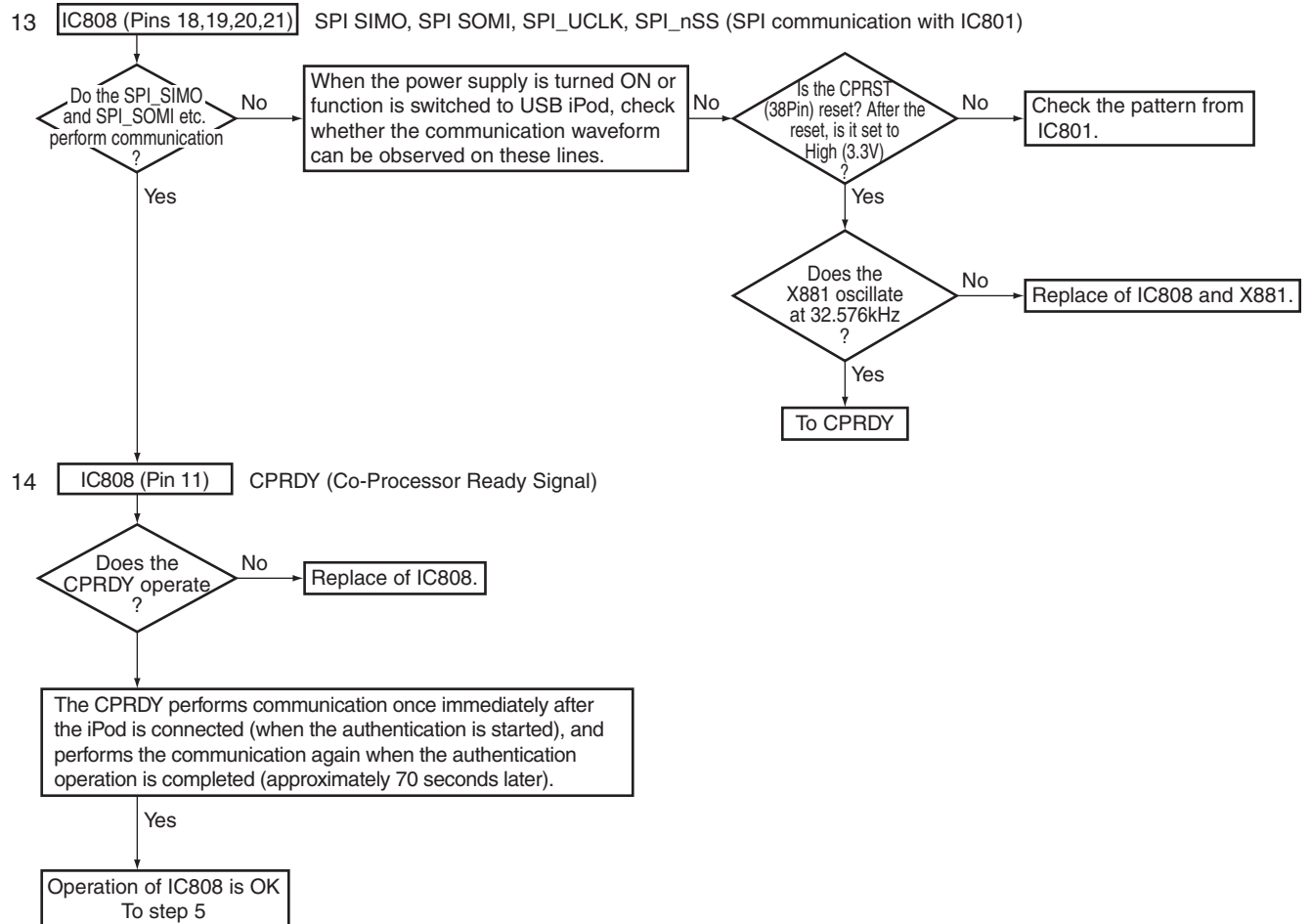
X: 1 μsec/div, Y: 2 V/div

As it is USB2.0 (FS),
the P-P value is approximately 3 to 3.5V.

F

Step 4: iPod authentication process

When the USB playback is available and only the iPod cannot be played
* Connect the iPod and make a confirmation.

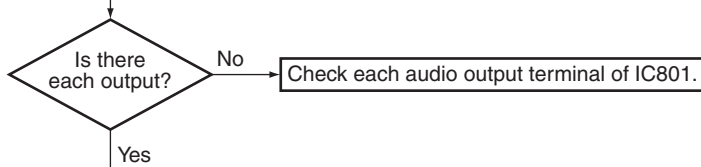


Step 5: Digital audio output switching

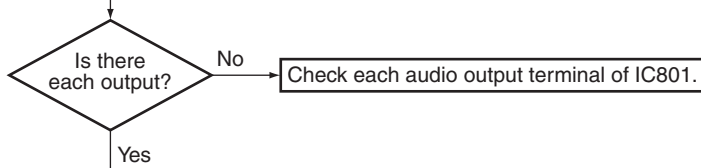
With this product, the digital audio signal output route from IC801 (USB host) varies depending the USB reproduction and iPod reproduction.
It is controlled and switched by USAW (USB Audio Switch) using the IC851 (logic IC).

	IC801 output Pin	Signal name	Meaning and details
USB playback	-	OSCU	Master clock (24.576MHz) from IC503 of DSP block is used.
	33,36	MSCK	Mass Strage Clock.
	31	MSDA	Mass Strage Data.
	34	MSSS	Mass Strage SS.
iPod playback	18	IMCK	iPod Master Clock.
	26	ISDAT	iPod Serial Data.
	27	IBCK	iPod Bit Clock.
	28	ILRCK	iPod LR Clock.

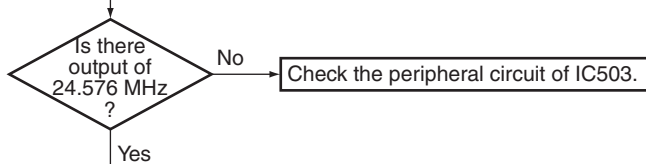
15 IC801 (Pins 18,26,27,28) IMCK, ISDAT, IBCK, ILRCK (when iPod reproduces)



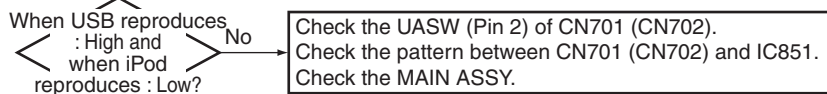
16 IC801 (Pins 31,33,34) MSDA, MSCK, MSSS (when USB reproduces)



17 IC503 (Pin 12) OSCU (24.576 MHz : when USB reproduces)



18 IC851 (Pin 1) UASW (USB Audio Switch)



For the output of IC851, each digital audio signal should be output at each reproduction.

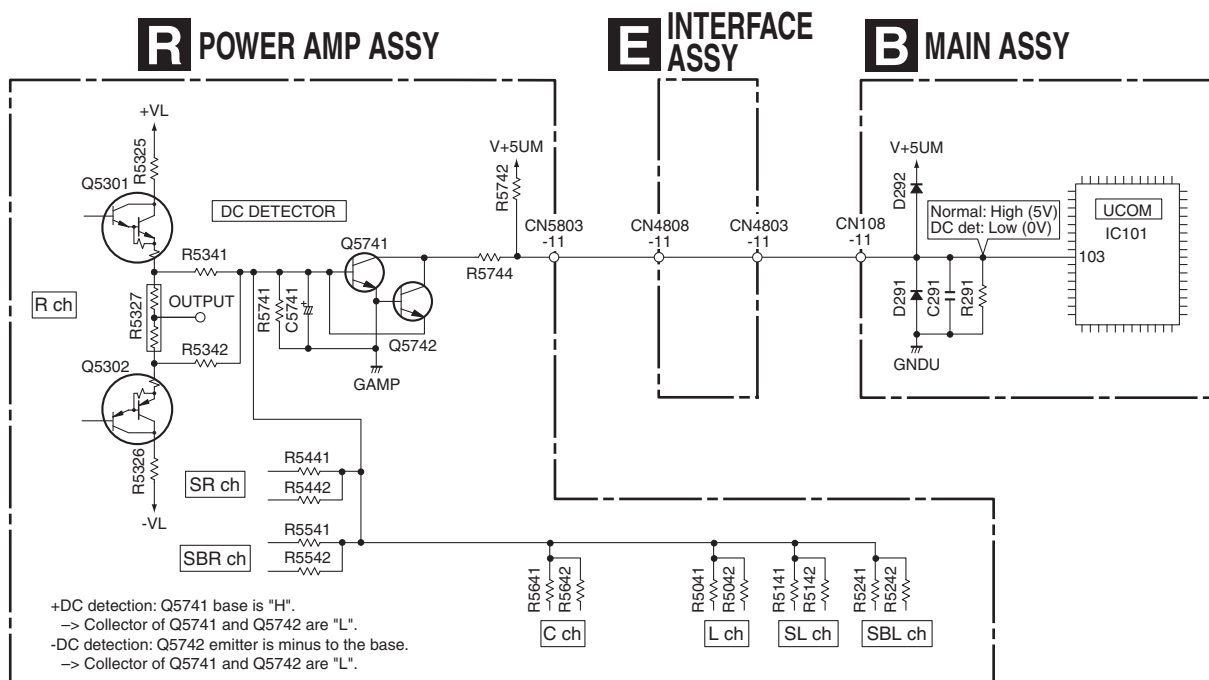
To diagnosis flow of DSP

5.2 CIRCUIT DESCRIPTION

[1] Protection Circuit Process List

Item	Purpose	Detection Method	Process	Warning Indication	Remarks
DC detection	To detect amplifier damage (defect status) A process to protect speakers (for protection of connected external devices)	Detects when the DC_PROTECT port becomes "L". (Pin 103 of IC101)	Turns muting on and speaker relay off, then turns off the power after 3 seconds. Then flashes MCACC indicator.	Flashing "AMP ERR" for 3 seconds.	Once detected and turned the power off, input a key never again. If the DC_DET port becomes "H" within 3 seconds, the unit returns to normal condition automatically.
AMP overload	To detect overloading (abnormal status) With low-load driving or a short circuit of the speaker terminals (for protection of the amplifier)	Detects when the OL_DET port becomes "L" (checks by interrupt). (Pin 26 of IC101)	Turns muting on and speaker relay off, and immediately turns off the power. Then flashes PHASE CONTROL indicator.	None	
Overheat detection	Self reset type protection feature by temperature-rise of heat sink	Detects when the TEMP2 port becomes "H". (Pin 24 of IC3004)	Turns muting on and speaker relay off, then turns off the power after 3 seconds.	Flashing "OVERHEAT" for 3 seconds.	If the TEMP2 port becomes "L" within 3 seconds, the unit returns to normal condition automatically.
12V trigger failure detection	To detect the shortcircuit of 12V trigger output (load more than 50mA) (for protection of the amplifier)	Detects when the 12VDET port becomes "H". (Pin 122 of IC101)	Turns 12V trigger output to off.	Flashing "12V TRG ERR"	Continue showing warning. Release the FL indication by switching the INPUT SEL or the turns the power off.

■ DC Detection Circuit

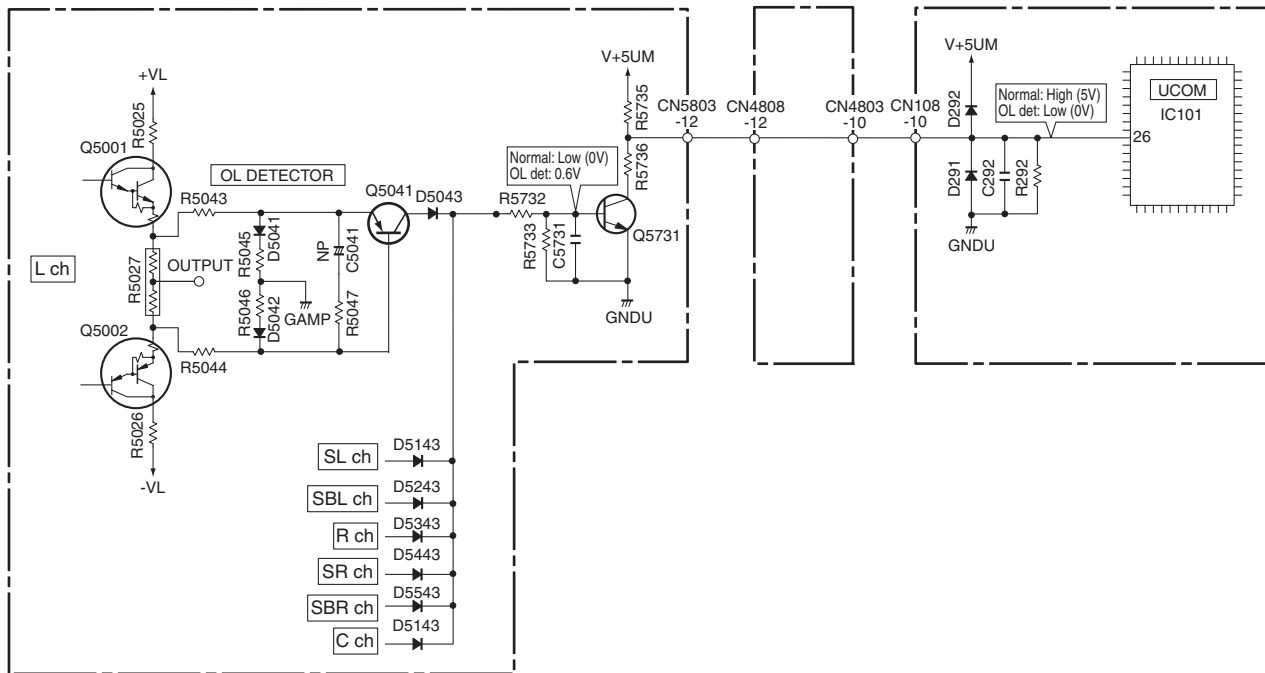


OL (Over Load) Detection Circuit

R POWER AMP ASSY

E INTERFACE ASSY

B MAIN ASSY

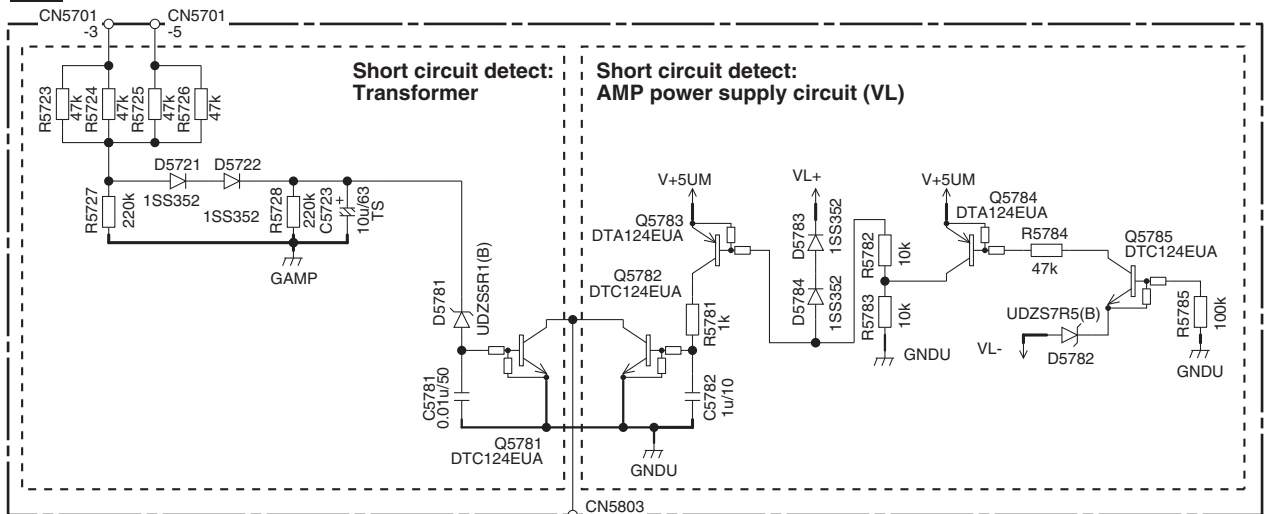


[2] Protection Circuit Process List (XPROTECT)

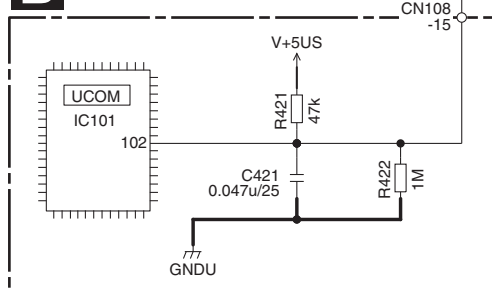
Item	Purpose	Detection Method	Process	Warning Indication	Remarks
XPROTECT	AMP power supply circuit and Transformer short circuit detect. (defect status) Observe CN5701 pin3 or pin5 voltage, VL+ and VL-	Detects when the XPROTECT port becomes "L". (Pin 102 of IC101)	Turns muting on and speaker relay off, and immediately turns off the power. Then flashes DIGITAL PRECISION PROCESSING indicator.	None	Once detected and turned the power off, input a key never again.

XPROTECT Circuit

R POWER AMP ASSY



B MAIN ASSY



E INTERFACE ASSY

6. SERVICE MODE

6.1 TEST MODE

A

[1] Version indication

[Purpose] The versions for various microcomputers and DSP firmware are displayed.											
[How to enter/exit] During Standby mode, simultaneously press and hold the “STANDBY/ON” and “MULTI CH IN” keys for 5 seconds to enter this mode. This mode is automatically exited when the indications of all versions have finished.											
[Basic operations] <table><tr><th>FL Display</th><th>Description of Version Indications</th><th>Duration (sec.)</th><th>Devices that can be considered generally normal, with the corresponding indications</th></tr><tr><td>POWER OFF ↓ M0.501 E0.501 ↓ H0.503 ↓ f0.515 ↓ 03TXH/KU/CA ↓ Normal display</td><td>Mx.xxx : Main microcomputer Ex.xxx : EVENT microcomputer Hx.xxx : HDMI microcomputer fx.xxx : DSP Firm version</td><td>5 5 5 5</td><td>Main microcomputer and EVENT microcomputer HDMI microcomputer DSP firmware model/destination</td></tr></table>				FL Display	Description of Version Indications	Duration (sec.)	Devices that can be considered generally normal, with the corresponding indications	POWER OFF ↓ M0.501 E0.501 ↓ H0.503 ↓ f0.515 ↓ 03TXH/KU/CA ↓ Normal display	Mx.xxx : Main microcomputer Ex.xxx : EVENT microcomputer Hx.xxx : HDMI microcomputer fx.xxx : DSP Firm version	5 5 5 5	Main microcomputer and EVENT microcomputer HDMI microcomputer DSP firmware model/destination
FL Display	Description of Version Indications	Duration (sec.)	Devices that can be considered generally normal, with the corresponding indications								
POWER OFF ↓ M0.501 E0.501 ↓ H0.503 ↓ f0.515 ↓ 03TXH/KU/CA ↓ Normal display	Mx.xxx : Main microcomputer Ex.xxx : EVENT microcomputer Hx.xxx : HDMI microcomputer fx.xxx : DSP Firm version	5 5 5 5	Main microcomputer and EVENT microcomputer HDMI microcomputer DSP firmware model/destination								
[Notes] 1. If the version indication becomes "***," a failure in communications between the corresponding microcomputers or a failure in the corresponding microcomputers is likely. 2. In this submode, the user settings will not be cleared.											

[2] Detected protection history

[Purpose]

The numbers of detections for various protection processes are displayed.

[How to enter/exit]

During Standby mode, simultaneously press and hold “STANDBY/ON” and “BD” keys for 5 seconds to enter this mode.

[Basic operations]

FL Display	Description of Indications	Duration (sec.)
POWER OFF ↓ DC : 000 ↓ OVER: 010 ↓ CON : 002 ↓ FAN : 000 (*) ↓ TEMP: 255 ↓ Normal display	Number of DC detections Number of overload detections Number of detections of cord disconnection (DC and OL DET line) (simultaneous detections of DC and OVERLOAD) Number of detections of fan abnormalities Number of detections of abnormal temperature	3 3 3 3 3

"FAN : 000" is always displayed. (This model has no FAN)

[Description]

When the keys are pressed, the numbers of DC detections, overload detections, detections of connectors disconnection inside unit (It is detected by both DC and OVERLOAD detections.), detections of fan abnormalities, and detections of abnormal temperature are displayed for 3 seconds each, in that order.
The maximum value of each detections is 255.

[3] Error indications when an abnormality in the amplifier system is detected

[Purpose]

An error message is displayed when an abnormality in the amplifier system is detected.

[Error Messages]

FL Display	Status	Duration (sec.)
AMP ERR	When AMP DC is detected	Flashes 3 times.
AMP OVERHEAT	When a thermal shutdown (abnormal temperature), etc. is detected	Flashes 3 times.
12V TRG ERR	When the 12V trigger circuit is short-circuited	Flashes
HDMI NG	When an error is detected during communication with the HDMI microcomputer	Flashes
HDCP ERROR	When an HDCP ERR is detected.	Flashes 5 seconds.
NOT SUPPORT	When the monitor outputs a non supported video format.	Flashes
USB ERROR1	When the overload USB device(over 500mA) is connected	Flashes

[Description]

AMP ERROR : After a failure in the amplifier block or high DC output is detected, the shutdown process starts, then the power will be shut off. Then the MCACC LED will flash. The power cannot be turned on again. If you wish to turn on the unit after a shutdown activated by DC detection, enter DC detection cancellation mode, by proceeding with the steps described in "How to enter release mode" below.

AMP OVERHEAT : The temperature of the amplifier is abnormally high.

12V TRG ERR : The 12V trigger output is short-circuited.

After a failure is detected, the shutdown process starts, then the power will be off. The power can be turned on again in Normal mode.

HDMI NG : There is no communication response from the HDMI u-com.

HDCP ERR : The monitor is non-HDCP type or the monitor is standby state.

NOT SUPPORT : The output resolution is not correspond to the monitor at analog. →HDMI(scaler exist)

USB ERROR1 : The connected USB device is overload

[How to enter release mode]

Press and hold "STANDBY/ON" and "AUTO SURR" keys on the front panel simultaneously for 2 seconds in standby mode.

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.

Note 2: For performing the diagnosis shown below, the following jigs for service is required:

- 11P board to board extension jig cable (GGD1576)
- 19P board to board extension jig cable (GGD1577X2)
- 11P FFC (GGD1578)

1. Before the Power Amp Assy is removed

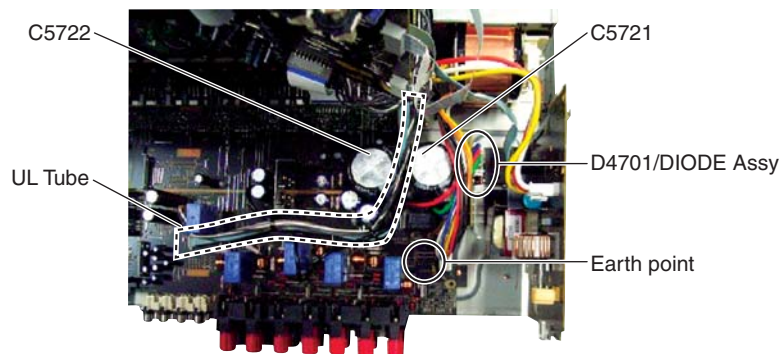
Before the Power Amp Assy is removed, discharge C5721 and C5722 on the POWER AMP Assy, as indicated below.

If you don't, the protectors (P5001 and P5002) on the POWER AMP Assy may be open, and DC voltage may be generated at the power amplifier output, which will result in "AMP ERR."

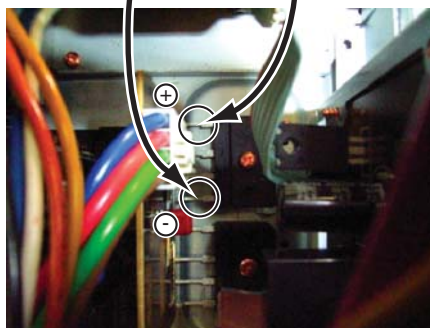
The discharge operation indicated below is performed when the MAIN Assy and the AUDIO IN Assy are removed temporarily to remove the screws of the Regulators attached to the Chassis for a diagnosis of the POWER AMP Assy B side.

[Procedure]

- ① Unplug the AC Power Cord.
- ② Discharge C5721 and C5722 on the POWER AMP Assy by discharging Pin 1 and Pin 4 of D4701 on the DIODE Assy to the earth point of POWER AMP Assy.
Note: For discharging, use a load of 100Ω, 3W or more, to protect the IC protectors. Do NOT discharge instantly by short-circuiting.
- ③ Check that the voltage between the electrodes of each C5721 and C5722 is 1V or less.



Enlarged view of the GND.



Enlarged view of the D4701 terminal discharge point.

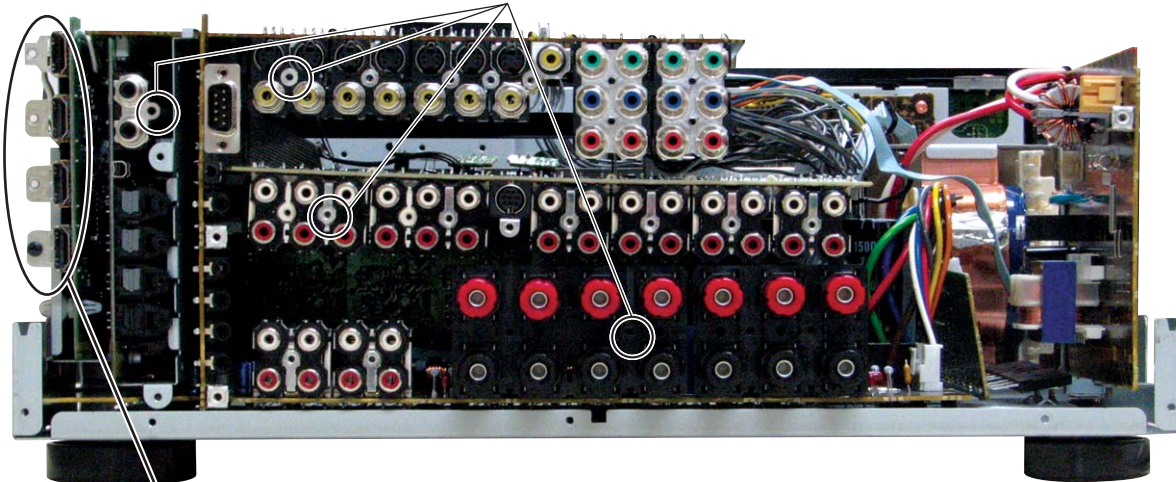
Diode lead
Caution shall be exercised when touching the lead with a short-circuit jig so as not to touch the lead and the chassis simultaneously.

A

Note : As mentioned below, detach the Rear Panel, re-fasten the screws at the corresponding points, and connect the Chassis to the ground.

Earth point

Points to be connected to the Chassis.



B

C

Points to be connected to the Chassis.
Either one.

D

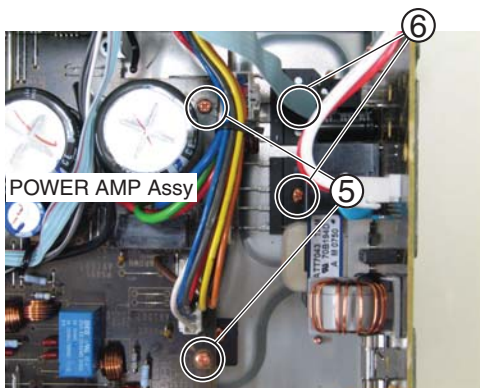
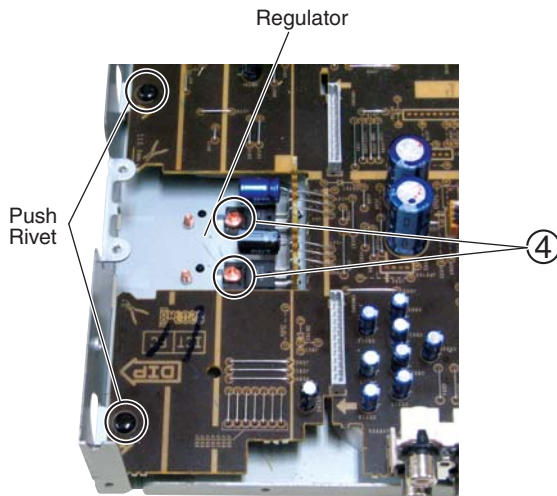
E

F

2. Diagnosis

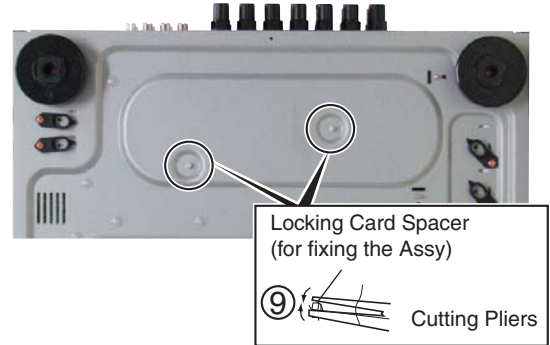
1 POWER AMP Assy

- ① Remove the Rear Panel.
- ② Remove the MAIN Assy (equipped with HDMI&DVC Assy and DSP&USB Assy) and the AUDIO IN Assy from the INTERFACE Assy.
- ③ Discharge C5721 and C5722.
(See the "discharge procedures.")
- ④ Remove the two screws that fix the Regulators attached to the Chassis.
- ⑤ Remove the two Push Rivets and the two screws that fix the POWER AMP Assy.

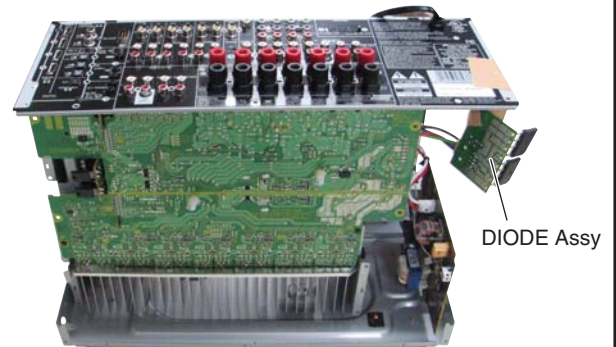


- ⑥ Remove the two screws that fix the diode of the DIODE Assy.
- ⑦ Reassembling the MAIN Assy (equipped with HDMI&DVC Assy and DSP&USB Assy) and the AUDIO IN Assy to the INTERFACE Assy.
- ⑧ Reassembling the Rear Panel.
(Keep a space for earth and about six to seven screws fixing places. Do not attach screws with the Chassis.)

- ⑨ Remove the Locking Card Spacer from the Chassis using Cutting Pliers.

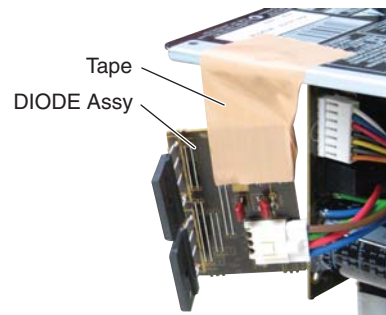


- ⑩ Remove the four screws that fix the Heat Sink V5S.
- ⑪ Cut the Binder.
- ⑫ Remove the four screws that fix the Power Transformer. Place a high insulating material under the Power Transformer to raise it.
- ⑬ Raise the block and diagnose the POWER AMP Assy B side.



Caution:

Fix the DIODE Assy to the Rear Panel with Tape so that it will not come closer to other Assy.

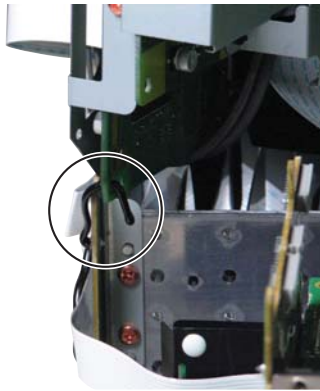


Diagnosis

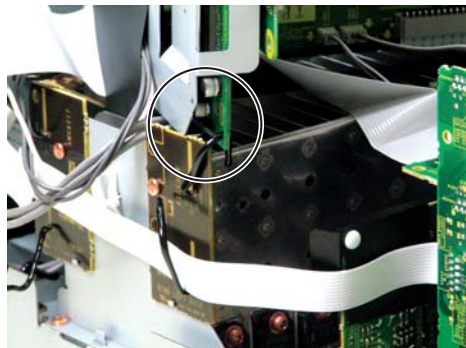
A 2 MAIN Assy, AUDIO IN Assy, INTERFACE Assy

- ① Remove the Rear Panel.
- ② Remove the screw that fix the MAIN Assy and the Wire Styling of the PCB Binder.
- ③ Remove the two screws that fix the HDMI Shield V5S.
- ④ Connect the four extension jig cables (two 19P board to board extension jig cable, one 11P board to board extension jig cable and 11P FFC).
- ⑤ Raise the MAIN Assy with the HDMI&DVC Assy and DSP&USB Assy attached and place it on the Heat Sink V5S. Fix the lower part of the HDMI&DVC Assy with the PCB Binder.

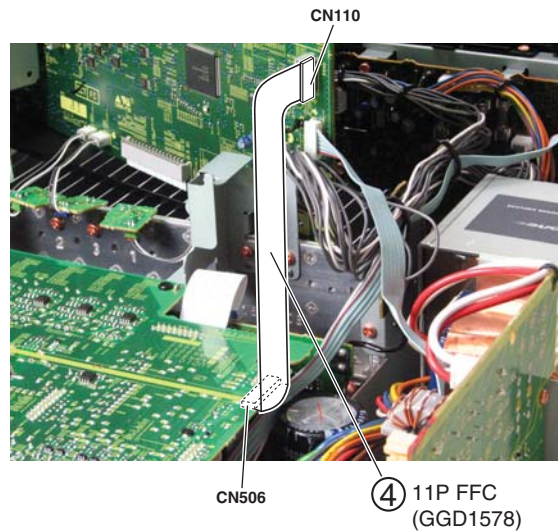
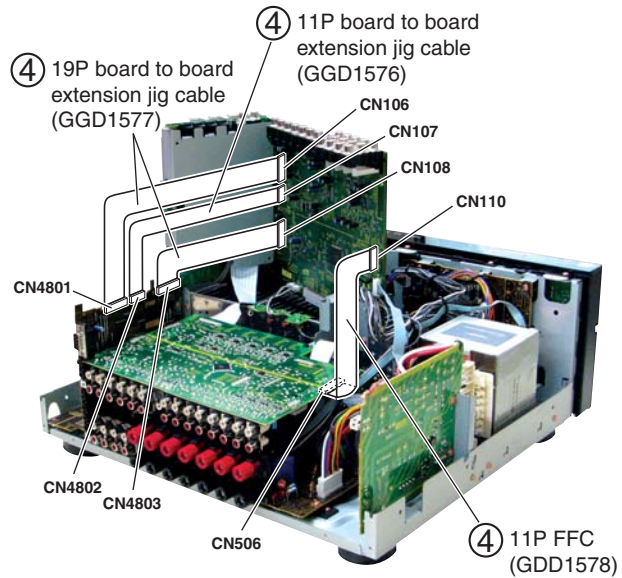
Position of Wire Styling



Position of Wire Styling (The above angle is different.)



- ⑥ Connect the earth point.
- ⑦ Diagnose the MAIN Assy A side or the AUDIO IN Assy B side, and the INTERFACE Assy.



↓
Diagnosis

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8. EACH SETTING AND ADJUSTMENT

8.1 HOW TO UPDATE FIRMWARE

[1] MAIN, HDMI and EVENT microcomputer

[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, cross)

• Firmware ("mot" extension)

• Program for updating (ufu.exe: ver. 1.08)

• RS-232C straight cable
(9pin female ↔ 25pin male)

• RS-232C Interface jig : GGF1348
• 7 pin FFC : VDA1681

for VSX-1018AH

[Connections (except VSX-1018AH)]

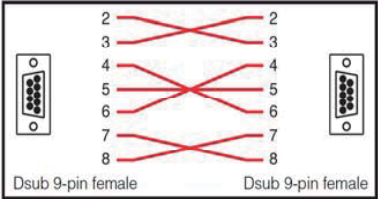
Connect as indicated in the figure right:
(MAIN microcomputer)
(EVENT microcomputer)
(HDMI microcomputer)

PC

RS-232C
cross cable
(9-pin to 9-pin)

This unit

Pin-out diagram of
RS-232C cross cable



[Connections for VSX-1018AH]

Connect as shown in the figure below.
(MAIN microcomputer)
(EVENT microcomputer)
(HDMI microcomputer)

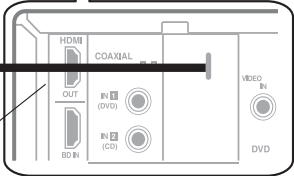
PC

RS-232C
Straight cable

GGF1348

FFC
(VDA1681)

Rear side
This unit



Slit for an HDMI
for downloading

FFC CONTACT SIDE : RIGHTWARD

5678

VSX-03TXH

71

[Note]

Do NOT disconnect the AC power cords of this unit nor the PC.

[Procedures]

1. Set the main volume level to "---dB" then turn off the unit (Standby mode).

2. Connect the PC and the unit as shown in "Connections".

3. MAIN ucom:

Simultaneously press and hold the "STANDBY/ON" and "iPod USB" keys for about 5seconds. The unit is turned on and "MAIN DOWNLOAD" is displayed.

HDMI ucom:

Simultaneously press and hold the "STANDBY/ON" and "FM/AM" keys for about 5seconds. The unit is turned on and "HDMI DOWNLOAD" is displayed.

EVENT ucom:

Simultaneously press and hold the "STANDBY/ON" and "VIDEO" keys for about 5seconds. The unit is turned on and "EVENT DOWNLOAD" is displayed.

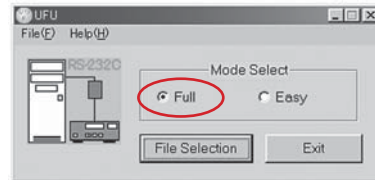
4. Double-click the "UFU.exe".
5. Check that "Full" is selected in Mode Select.
6. Select the firmware file (.mot file) for updating each ucom.

Note: Do NOT download the firmware file for other ucom.

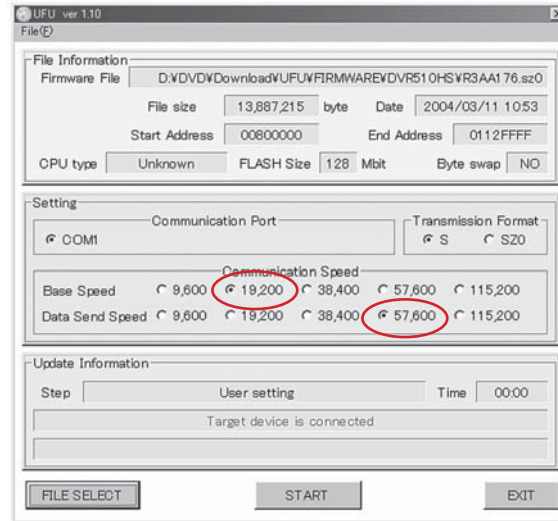
7. Select the communication speed.
 - Basic speed: 19200
 - Data transfer speed: 57600

8. Click the "START" button.
9. "Completed" is displayed in the "UFU.exe" window.
10. Disconnect then reconnect the AC power cord of the unit. If the unit is not reset, retry from step2.
11. Check the version.

Please refer to 6.1 TEST MODE "Version indication" and check that the version has been changed to a new one.



Check that "Full" is selected in Mode Select.



Select the communication speed.

- Base Speed: 19200
- Data Send Speed: 57600

[2] DSP FLASH ROM

[Purpose]

Refer to this section when updating the DSP flash ROM firmware is required by the service information, etc.
It is able to update the DSP flash ROM firmware by playing back a CD-R which is recorded a DSP firmware (.wav file) via digital connection.

[Necessary Tools]

- DVD player
- Coaxial cable or Optical cable
- Update disc (CD-R disc)

Note:

Please use DVD player based on MTK system (DV-270, 370, 373, 575K, 280, 380, 383, etc.), Mitsubishi system (DV-59AVi, 868AVi, S969AVi, 668AVi, etc.) and Fujitsu system (DV-343, 444, 545, etc.).

DO NOT use DVD player based on ST system (DV-353, 454, 250, 400, 555K, 260, 363, 464, 466, 563, etc.).

The factory confirmed that DVD players based on ST system cannot send the correct data to the receiver.

You can check the base system of our DVD players on the firmware version list at PSN web (Niis).

[Connections]

Connect as shown in the figure below.



[Preparations]

Burn the DSP flash ROM firmware (.wav file) to a CD-R disc using commercially available burning software.
It is necessary to select the writing format to "For music player", not "For PC data".

Note:

Depending on a burning software, data on a CD-R may not be worked for updating the DSP flash ROM.

If the HDMI indicator does not flash when playing back a update disc, the disc is not able to use for updating.

Burn the DSP flash ROM firmware to a CD-R disc, using other burning software.

[Note]

- Do NOT disconnect the AC power cords of this unit and the CD/DVD player during a updating.
- "OK" is appeared on the FL display when updating is completed.

If the "OK" is not appeared, updating has not been completed correctly. Be sure to perform the updating procedures again.

[Procedures]

1. Check the version of the DSP flash ROM (1st DSP) and the DSP ucom.
Please refer to 6.1 TEST MODE "Version indication".
2. Connect a CD or DVD player
 - (1) Connect the CD or DVD player for updating to any digital input jack of this unit.
 - (2) Select the input source to the connected source by pressing input source key.
(During the default setting, COAX-1 belongs to DVD, OPT-1 belongs to TV SAT.)
3. Confirm that the digital input signal is locked on the AV receiver.
 - (1) Play back the update disc on the CD/DVD player.
 - (2) Set the signal select setting of the AV receiver to the "Auto" then confirm that the Signal Select indicator is Digital.

[Procedures]

4. Enter the DSP flash ROM updating mode.

- (1) Skip to the beginning (time:0:00) of the first track of the update disc and set to Pause.
- (2) Set the main volume level of the AV receiver to "---dB" then turn off the unit (Standby mode).
- (3) Simultaneously press and hold the "STANDBY/ON" and "XM/SIRIUS" keys for about 5seconds.
The unit is turned on and "DSPF DOWNLOAD" is displayed.

5. Play back the first track of the update disc.

- (1) Release Pause mode of the CD/DVD player and start to play back the DSP update program stream.
- (2) After 5-10 seconds, the HDMI indicator starts flashing. Be sure to check it.
Flashing of the HDMI indicator means that the unit is receiving a correct stream and the updating is in progress.

Note:

Do NOT turn off the unit while the HDMI indicator is flashing. If the unit is turned off, be sure to go back to Step 4.
(As the Flash ROM goes into unusual status if the power is off during updating, the unit may not start properly.)
Even in such a case, you can restore the unit by performing Steps 4 to 7.

6. Wait until "OK" is appeared on the FL display.

- (1) It takes about 2 minutes for updating.
- (2) After confirming the "OK", stop or pause the CD/DVD player and wait for 5 seconds then turn off the power of the AV receiver (Standby mode).

7. Check the version of the DSP flash ROM (1st DSP).

Please refer to 6.1 TEST MODE "Version indication" and check that the version has been changed to a new one.

[3] Troubleshooting of DSP FLASH ROM UPDATE

Symptoms	Items to be checked
The HDMI indicator does not start flashing, and 10 seconds or more has elapsed after a updating stream is input.	Is DSP writing mode entered? (Simultaneously press and hold the "STANDBY/ON" and "XM/SIRIUS" keys.)
	Is DIR locked? -> You can check this on the Signal Select indicator if the input is set to Auto and Digital. If DIR is not locked, check the input function and digital connections between the player and this unit.
	Is the stream (Track No., etc.) being played back correct?
	Are compressed audio signals, such as WMA, being input when or after writing mode is entered ? -> As soon as the compressed audio signals are input, writing mode is exited. It is recommended that playback be paused at the beginning of the track of a updating stream then writing mode is entered by simultaneous pressing of the keys. Release Pause mode after entering of writing mode is confirmed.
Writing mode is not entered upon simultaneous pressing of the "STANDBY/ON" and "XM/SIRIUS" keys.	Is the volume control of the receiver set to -∞dB? If not, set it to -∞dB (- - -).
	Reset the receiver then enter writing mode. Note: All the user data stored in the receiver are cleared when the receiver is reset.
"OK" is not displayed.	Is the track played back from the beginning to the end? -> With the receiver in writing mode, be sure to play back the stream track twice.
	If an error is generated because any scratches on the disc, "OK" is not displayed. -> In such a case, play back the same stream stored on another track as backup.

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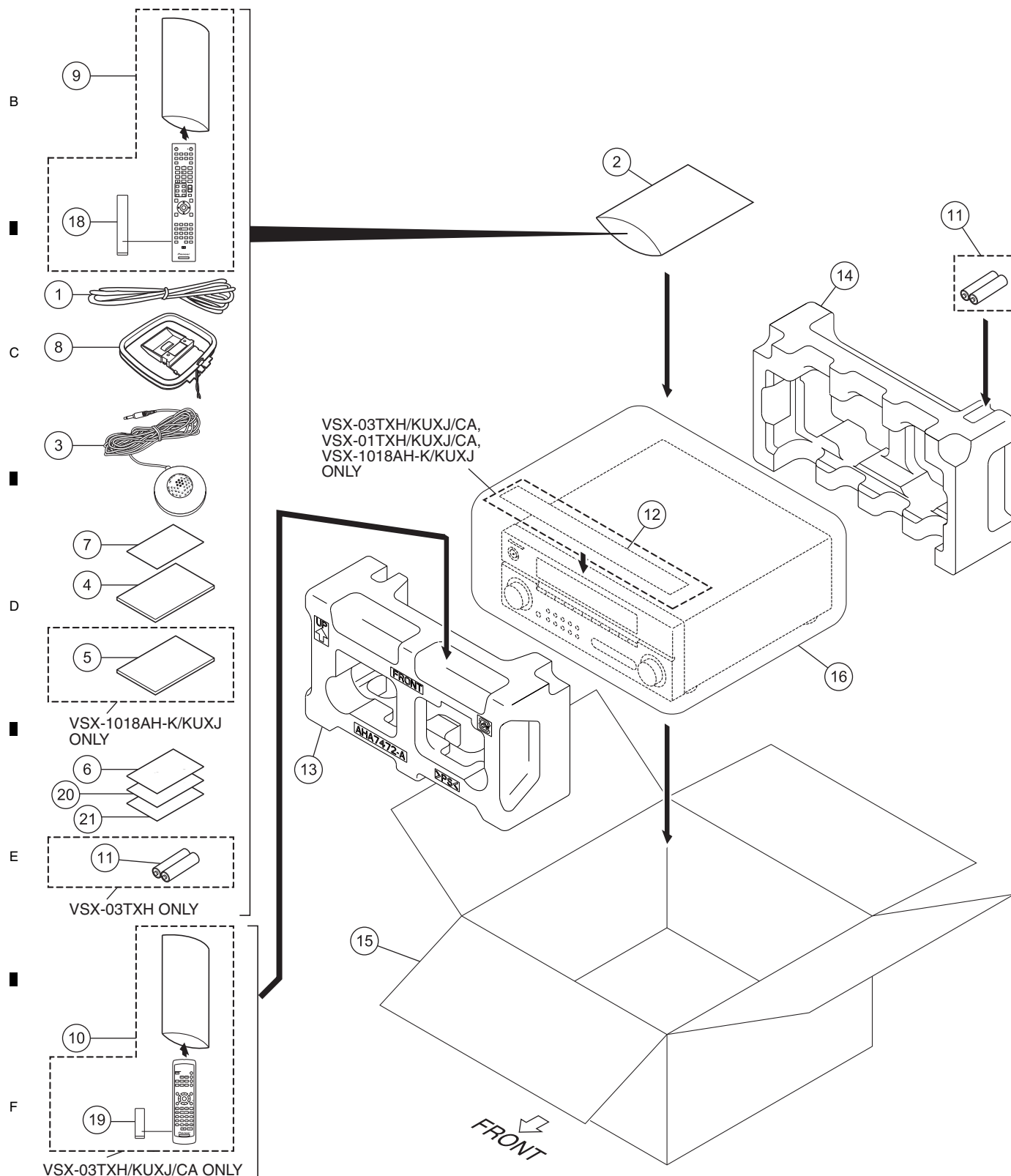
■

VSX-03TXH

9. EXPLODED VIEWS AND PARTS LIST

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

9.1 PACKING SECTION

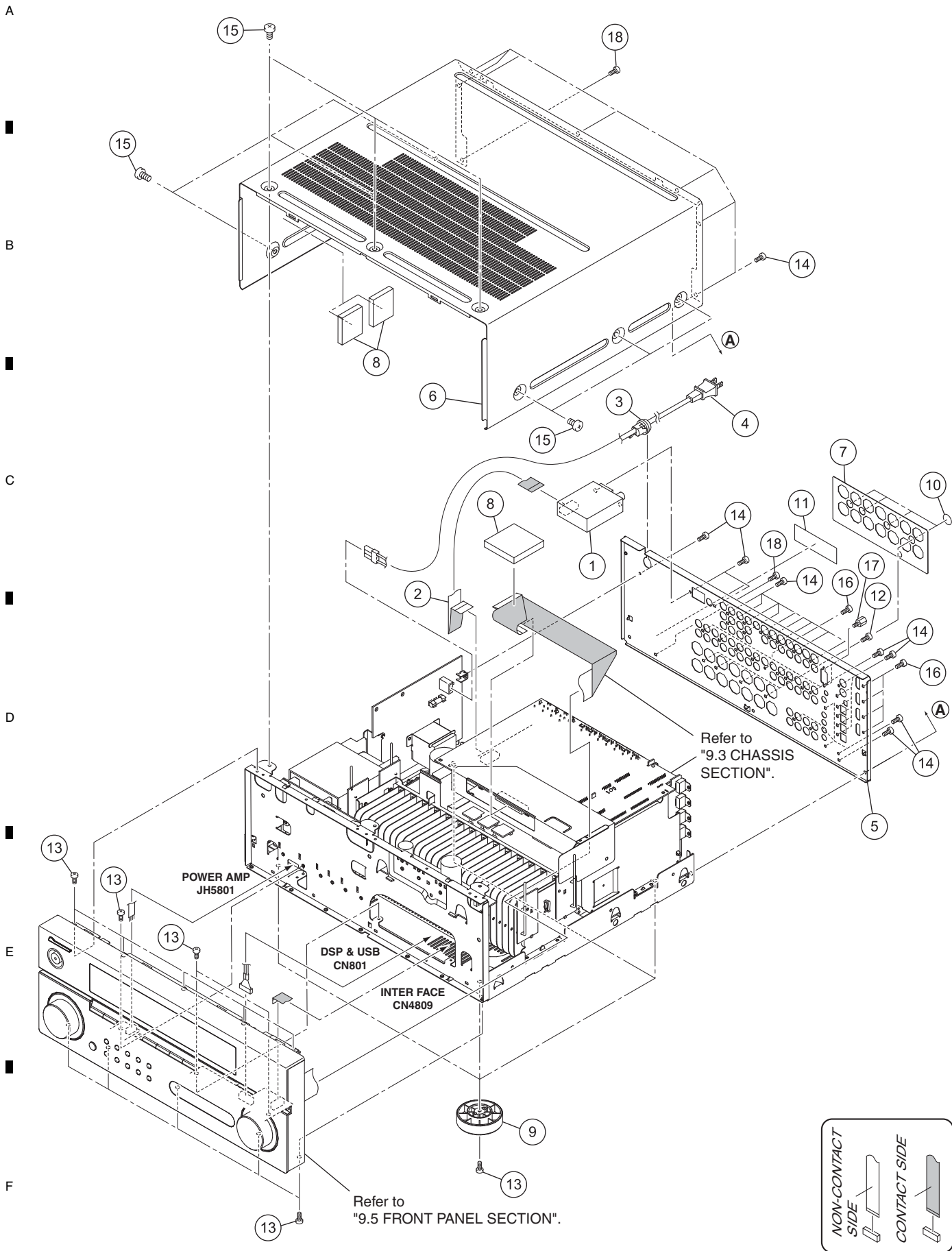


Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	FM Wire Antenna	ADH7030	15	Packing Case	See Contrast table(2)
NSP 2	Polyethylene Bag	AHG7117	16	Packing Sheet	RHC1023
3	Setup Microphone	APM7008	17	•••••	•••••
	(for Auto MCACC setup)		18	Battery Cover	VZN1025
4	Operating Instructions (English)	See Contrast table(2)	19	Battery Cover	AZN8018
5	Operating Instructions (Spanish)	See Contrast table(2)	20	Errata V5S KU	See Contrast table(2)
6	Caution Sheet (Spanish/English)	ARM7083	21	Errata V5S UL	See Contrast table(2)
NSP 7	Warranty Card	See Contrast table(2)			
8	AM Loop Antenna	ATB7013			
9	Remote Control Unit	See Contrast table(2)			
10	Sub Remote Control Unit	See Contrast table(2)			
NSP 11	Dry Cell Battery AA/LR6	VEM1031			
12	Protection Sheet LX	See Contrast table(2)			
13	Front Pad V5SEL	AHA7472			
14	Rear Pad V5SEL	AHA7473			

(2) CONTRAST TABLE
VSX-03TXH/KUXJ/CA, VSX-9130TXH-K/KUXJ, VSX-01TXH/KUXJ/CA and VSX-1018AH-K/KUXJ are constructed the same except for the following:

Mark	No.	Symbol and Description	VSX-03TXH/ KUXJ/CA	VSX-9130TXH-K/ KUXJ	VSX-01TXH/ KUXJ/CA	VSX-1018AH-K/ KUXJ
NSP	4	Operating Instructions (English)	ARB7395	ARB7396	ARB7399	ARB7400
	5	Operating Instructions (Spanish)	Not used	Not used	Not used	ARC7832
	7	Warranty Card	ARY7007	ARY7045	ARY7007	ARY7045
	9	Remote Control Unit	AXD7517	AXD7525	AXD7517	AXD7525
	10	Sub Remote Control Unit	AXD7529	Not used	Not used	Not used
	12	Protection Sheet LX	AEH7030	Not used	AEH7030	AEH7030
	15	Packing Case	AHD8574	AHD8575	AHD8580	AHD8581
	20	Errata V5S KU	Not used	Not used	Not used	ARX7112
	21	Errata V5S UL	Not used	ARX7116	Not used	ARX7116

9.2 EXTERIOR SECTION



EXTERIOR SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.	
1	FM/AM Tuner Unit	AXX7250	12	Screw	BBT30P100FCC	
2	11P FFC/60V (J56)	ADD7639	13	Screw	BBZ30P080FCC	A
3	Cord Stopper	CM-22C	14	Screw	BBZ30P080FTB	
⚠	4 AC Power Cord	VDG1075	15	Screw	BCZ40P060FTB	
5	Rear Panel	See Contrast table(2)	16	Screw	PMZ30P060FTB	
6	Bonnet B V5SEL	AZN8034	17	Screw 2.85X7	See Contrast table(2)	■
7	SP Sheet V5S	AEC7605	18	Screw	IBP30P090FCC	
8	Top Cushion	AED7121				
9	Insulator	See Contrast table(2)				
10	Cushion Circle 14B	AED7081				
NSP 11	LABEL	VRW1629				B

(2) CONTRAST TABLE
VSX-03TXH/KUXJ/CA, VSX-9130TXH-K/KUXJ, VSX-01TXH/KUXJ/CA and VSX-1018AH-K/KUXJ are constructed the same except for the following:

Mark	No.	Symbol and Description	VSX-03TXH/ KUXJ/CA	VSX-9130TXH-K/ KUXJ	VSX-01TXH/ KUXJ/CA	VSX-1018AH-K/ KUXJ
	5	Rear Panel	ANC8512	ANC8513	ANC8518	ANC8519
	9	Insulator	AMR7198	PNW2766	AMR7198	PNW2766
	17	Screw 2.85X7	ABA7078	ABA7078	ABA7078	Not used

C

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9.3 CHASSIS SECTION

A

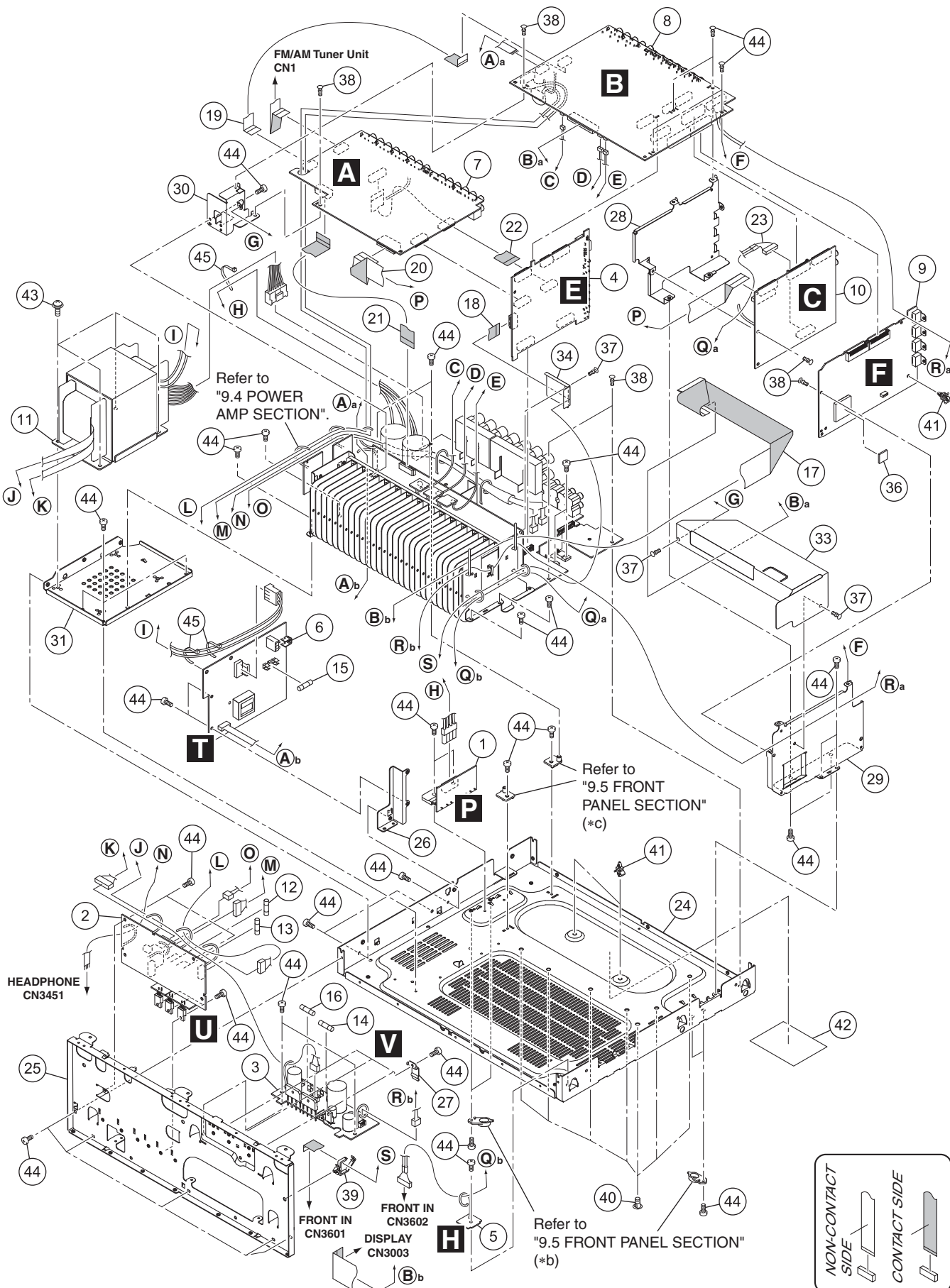
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CHASSIS SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.	
1	DIODE Assy	AWX8985	26	Primary Angle 56	ANG7526	
2	REGULATOR Assy	AWX8986	NSP 27	Transistor Holder	ANG7543	A
3	DC/DC Assy	AWX8988	28	DSP Shield V5SEL	ANG7614	
4	INTERFACE Assy	See Contrast table(2)	29	HDMI Shield V5S	ANG7616	
5	BINDER Assy	AWX9120	30	PCB Stay V5S	ANG7617	
6	PRIMARY Assy	AWX9123	NSP 31	Trans Frame V5S	ANG7629	
NSP 7	AUDIO IN Assy	AWK8050	32	•••••	•••••	
NSP 8	MAIN Assy	See Contrast table(2)	33	Main Barrier V5S	AEC7602	
9	HDMI & DVC Assy	See Contrast table(2)	34	PS Barrier	AEC7611	
10	DSP & USB Assy	See Contrast table(2)	35	•••••	•••••	
⚠ 11	Power Transformer (T1501)	ATS7418	36	Radiation Sheet	PEB1306	B
⚠ 12	Fuse (T1.25A) (FU6,FU7)	REK1143	37	Push Rivet	AEC7370	
⚠ 13	Fuse (T2.5A) (FU8,FU9)	REK1146	38	Nylon Rivet	AEC7406	
⚠ 14	Fuse (T5A) (FU4)	REK1150	39	Wire Saddle	DEC1450	
⚠ 15	Fuse (T10A) (FU1)	REK1154	40	Card Spacer	DNK2769	
⚠ 16	Fuse (T3.5A) (FU5)	REK1155	41	Locking Card Spacer	PNW2917	
17	33P FFC/60V (J51)	ADD7635	42	Lisence Label V5S	ARW7372	
18	11P FFC/60V (J52)	ADD7636	43	Screw 4X12	ABA7109	
19	11P FFC/60V (J54)	ADD7637	44	Screw	BBZ30P080FCC	
20	23P FFC/60V (J55)	ADD7638	NSP 45	Binder (BK-1)	ZCA-BK1	C
21	17P FFC/60V (J57)	ADD7640				
22	19P FFC/60V (J58)	ADD7641				
23	9P Housing Assy	ADX7619				
NSP 24	Chassis V5S	ANA7209				
NSP 25	Panel Stay V5SEL	AND7086				

(2) CONTRAST TABLE
VSX-03TXH/KUXJ/CA, VSX-9130TXH-K/KUXJ, VSX-01TXH/KUXJ/CA and VSX-1018AH-K/KUXJ are constructed the same except for the following:

Mark	No.	Symbol and Description	VSX-03TXH/ KUXJ/CA	VSX-9130TXH-K/ KUXJ	VSX-01TXH/ KUXJ/CA	VSX-1018AH-K/ KUXJ	
NSP	4	INTERFACE Assy	AWX8990	AWX8990	AWX8990	AWX8993	
	8	MAIN Assy	AWK8052	AWK8069	AWK8056	AWK8057	
	9	HDMI & DVC Assy	AWX9170	AWX9170	AWX9233	AWX9233	
	10	DSP & USB Assy	AWX9175	AWX9175	AWX9239	AWX9239	

1 2 3 4

9.4 POWER AMP SECTION

A

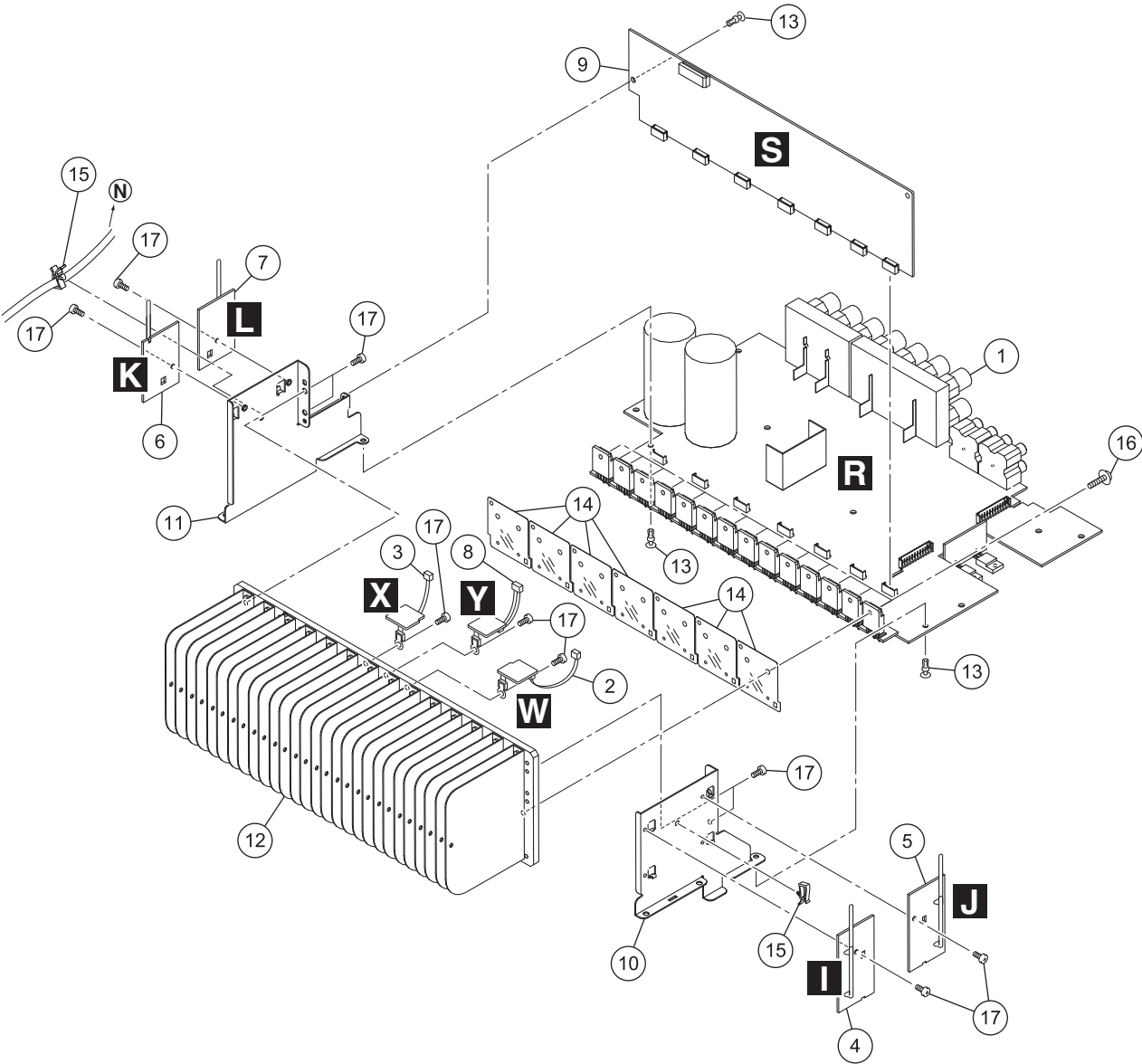
B

C

D

E

F



POWER AMP SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	POWER AMP Assy	AWX8983
2	POS11 Assy	AWX9132
3	POS12 Assy	AWX9133
4	BIND_L_FRONT Assy	AWX9217
5	BIND_L_BACK Assy	AWX9218
6	BIND_R_FRONT Assy	AWX9219
7	BIND_R_BACK Assy	AWX9220
8	POS13 Assy	AWX9223
9	PRE-STAGE AMP Assy	AWX8989
10	H.S.Angle V5S L	ANG7611
11	H.S.Angle V5S R	ANG7612
NSP 12	Heat Sink V5S	ANH7199
13	Nylon Rivet	AEC7406
14	Mica Sheet V5SEL	AEE7068
15	Side Clamp	DEC2007
16	SEMS Screw 3X19	ABA7085
17	Screw	BBZ30P080FCC

A

B

C

D

E

F

9.5 FRONT PANEL SECTION

A

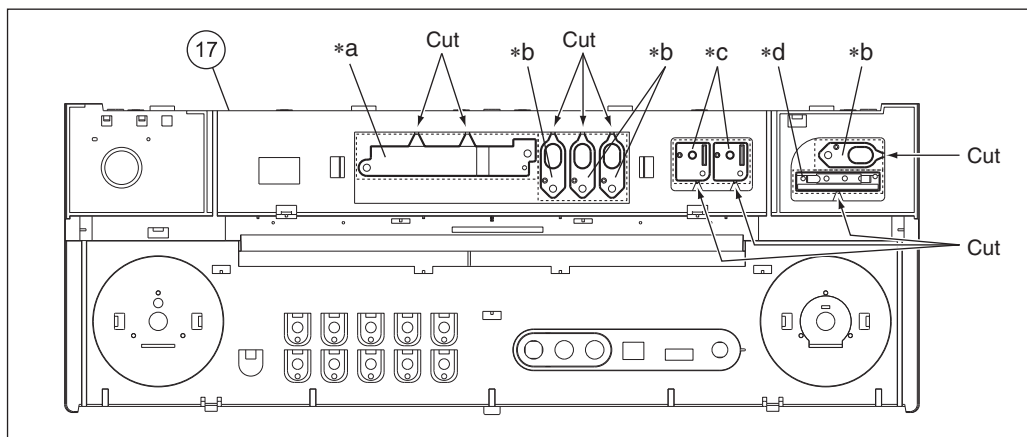
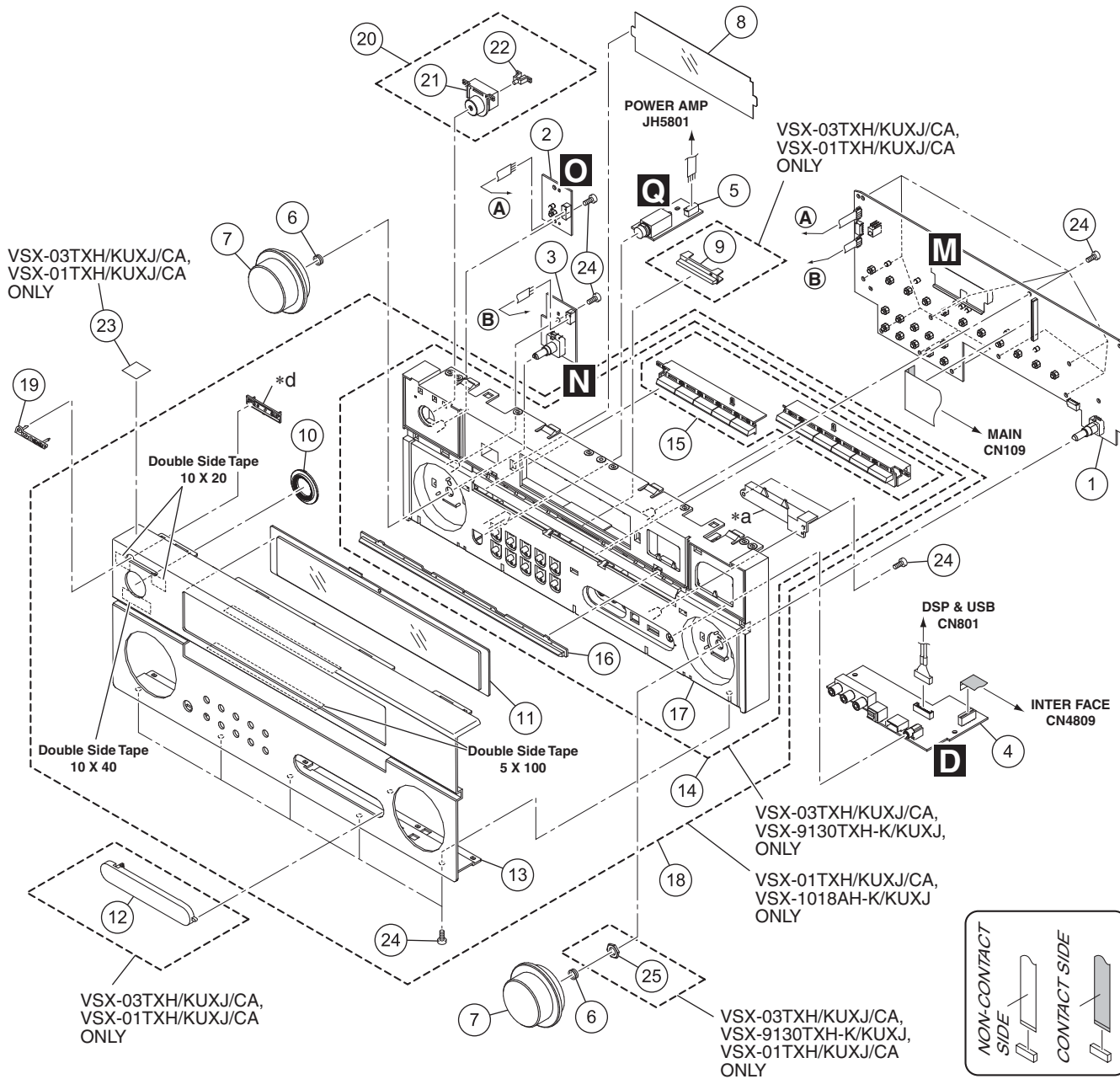
B

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5

6

7

8

FRONT PANEL SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	DISPLAY Assy	See Contrast table(2)	16	Center Lens	See Contrast table(2)
2	POWER SW Assy	AWX9118	17	Panel Base	See Contrast table(2)
3	MULTI JOG Assy	AWX9119	18	Panel Assy	See Contrast table(2)
4	FRONT IN Assy	AWX9121	19	Name Plate	See Contrast table(2)
5	HEADPHONE Assy	AWX9122	20	STDBY BTN 915K Assy	XAD3216
6	VOL Ring 60	ABH7249	NSP 21	Standby BTN 915K	XAD3200
7	VOL.Knob 1017B	AAA7049	NSP 22	Standby Lens V2	XAK3477
8	Filter	See Contrast table(2)	NSP 23	Energy Star Label	See Contrast table(2)
9	IB Lens	See Contrast table(2)	24	Screw	PPZ30P080FNI
10	Power Ring B	AAK8431			
11	Window	See Contrast table(2)			
12	Input Cover 01TX	See Contrast table(2)			
13	Front Panel	See Contrast table(2)			
14	Panel Base Assy	See Contrast table(2)			
NSP 15	Func BTN B V5S	AAD7786			

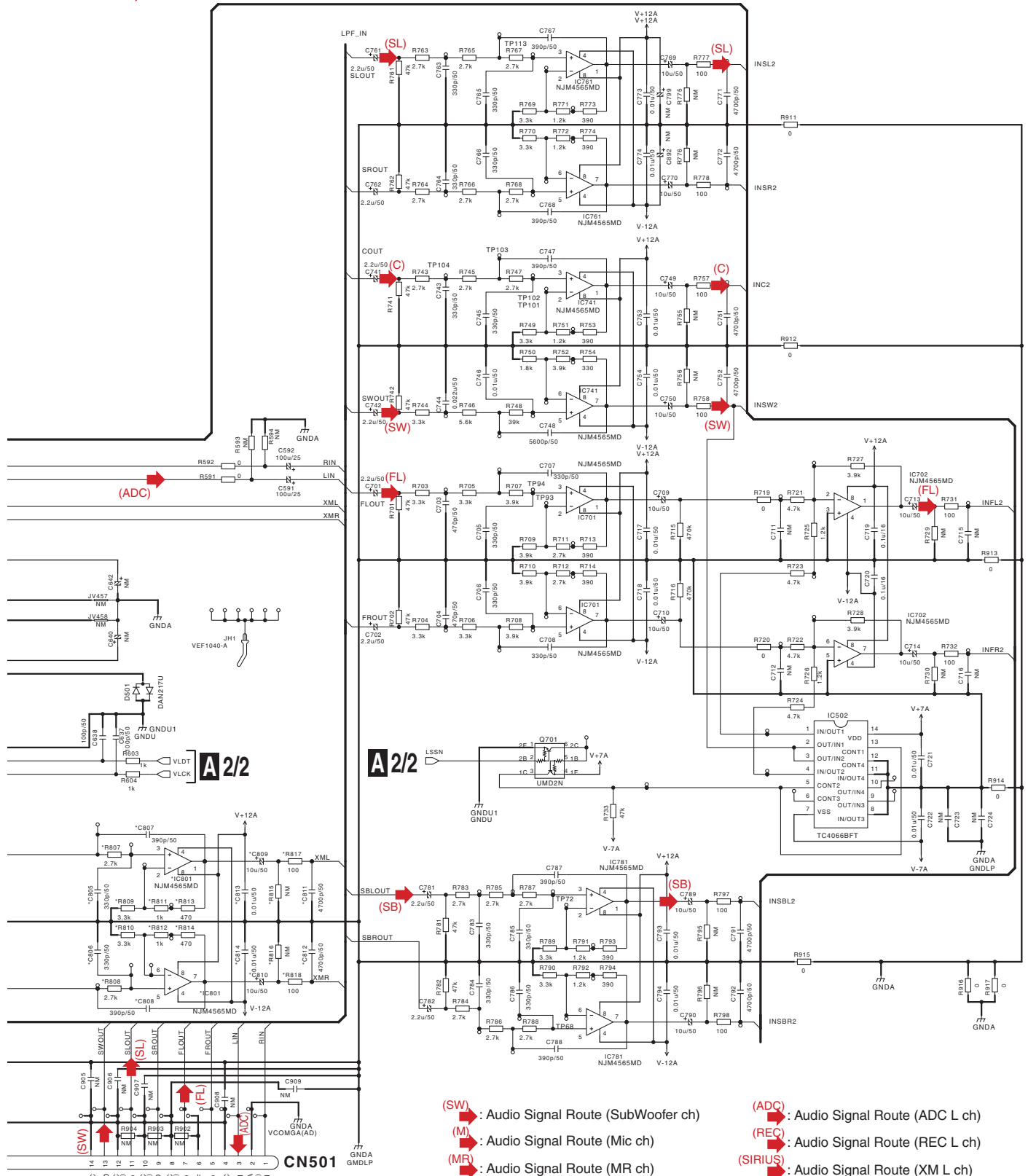
(2) CONTRAST TABLE
VSX-03TXH/KUXJ/CA, VSX-9130TXH-K/KUXJ, VSX-01TXH/KUXJ/CA and VSX-1018AH-K/KUXJ are constructed the same except for the following:

Mark	No.	Symbol and Description	VSX-03TXH/ KUXJ/CA	VSX-9130TXH-K/ KUXJ	VSX-01TXH/ KUXJ/CA	VSX-1018AH-K/ KUXJ	
	1	DISPLAY Assy	AWX9117	AWX9216	AWX9117	AWX9216	C
	8	Filter	AAK8412	AAK8413	AAK8412	AAK8413	
	9	IB Lens	AAK8430	Not used	AAK8430	Not used	
	11	Window	AAK8434	AAK8433	AAK8434	AAK8433	
	12	Input Cover 01TX	AAK8436	Not used	AAK8436	Not used	
	13	Front Panel	ANB7475	ANB7476	AMB7980	AMB7981	D
	14	Panel Base Assy	AXG7366	AXG7367	Not used	Not used	
	16	Center Lens	AAK8428	AAK8429	AAK8428	AAK8429	
	17	Panel Base	AMB7986	AMB7989	AMB7986	AMB7989	
	18	Panel Assy	Not used	Not used	AXG7370	AXG7371	
	19	Name Plate	PAN1376	AAN7218	PAN1376	XAM3006	F
NSP	23	Energy Star Label	AAX8022	Not used	AAX8022	Not used	

(DVD) : Audio Signal Route (DVD L ch)
 (DVR) : Audio Signal Route (DVR L ch)
 (TV) : Audio Signal Route (TV L ch)
 (TL) : Audio Signal Route (Tuner L ch)
 (CD) : Audio Signal Route (CD L ch)

(FL) : Audio Signal Route (Front L ch)
 (FVL) : Audio Signal Route (Video L ch)
 (SL) : Audio Signal Route (Surround L ch)
 (C) : Audio Signal Route (Center ch)
 (SB) : Audio Signal Route (Surround Back L ch)

A 1/2 AUDIO IN ASSY (AWK8050)



10.2 AUDIO IN ASSY (2/2)

A

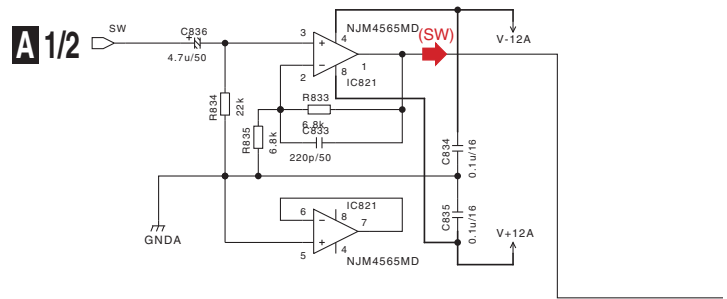
B

C

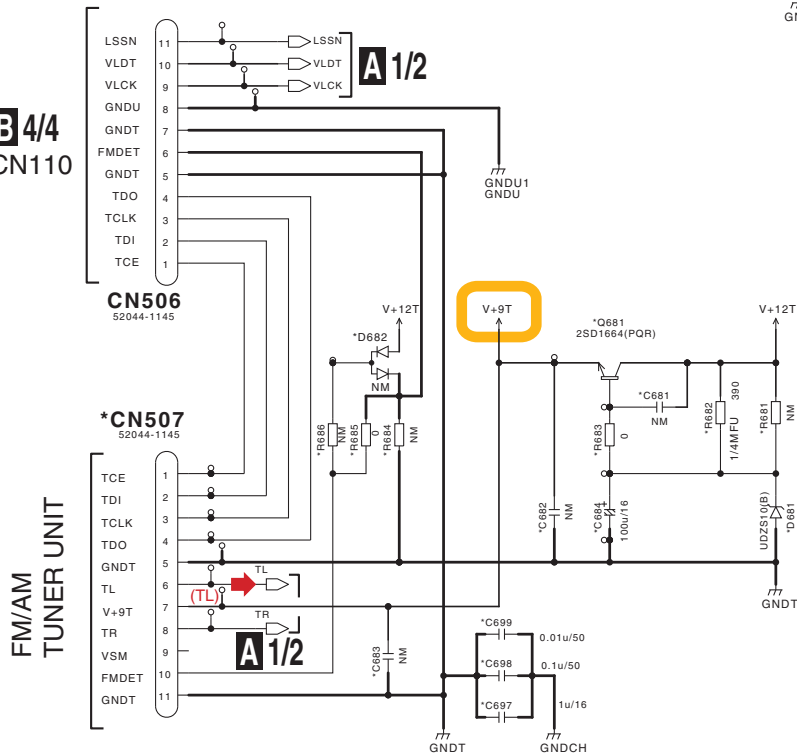
D

E

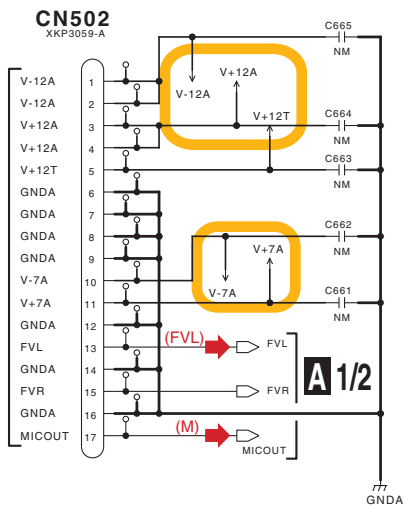
F



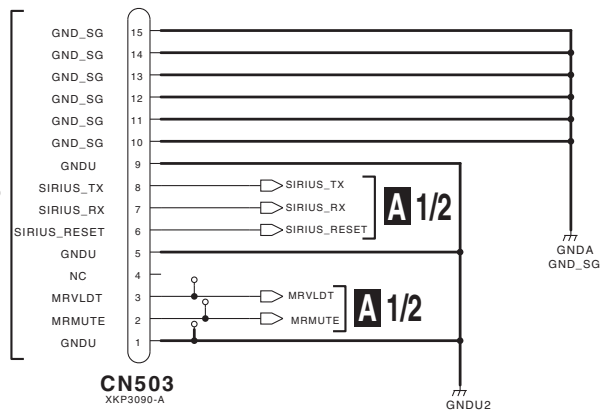
B 4/4
CN110



E
CN4806

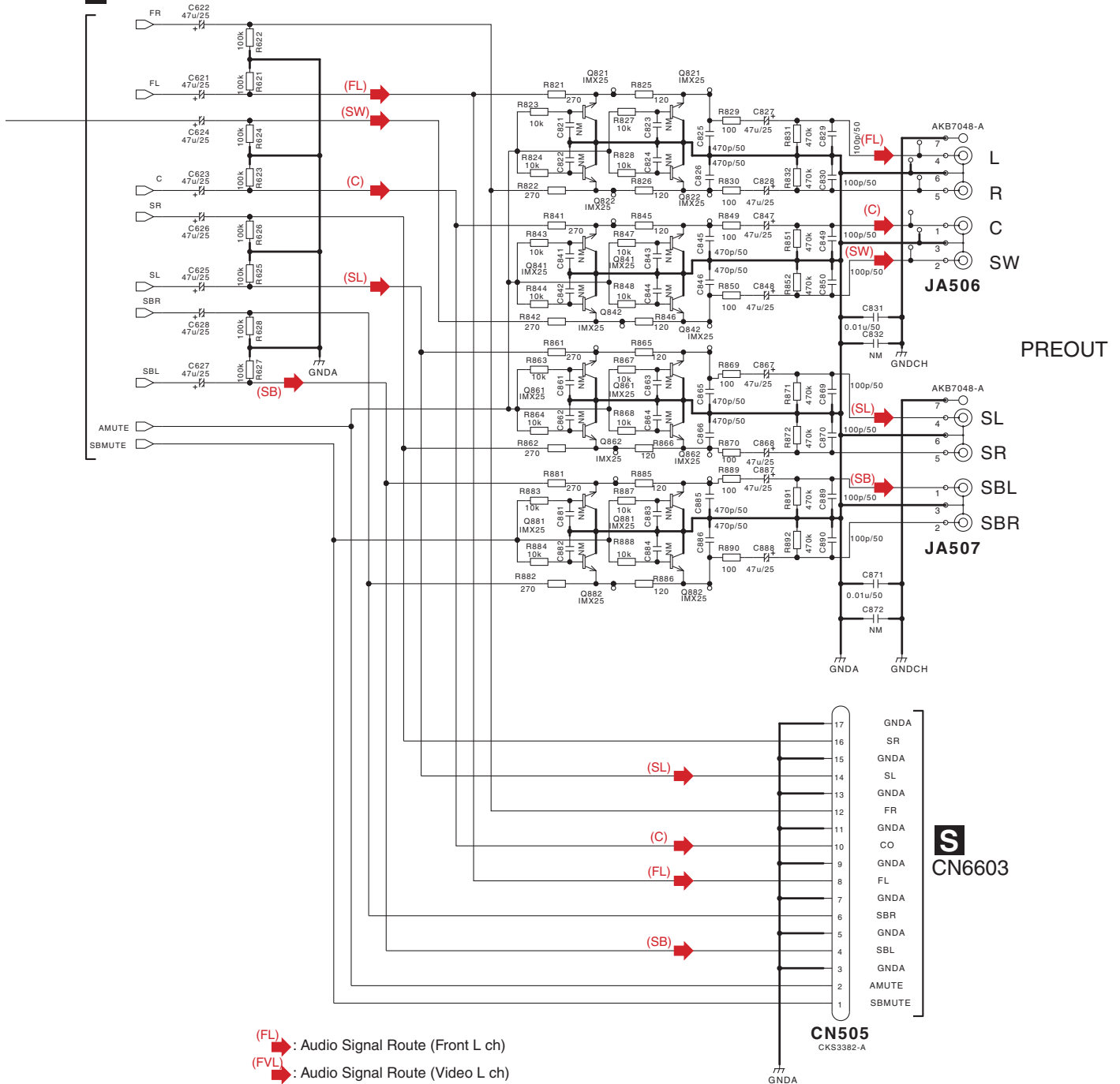


E
CN4805



A 2/2

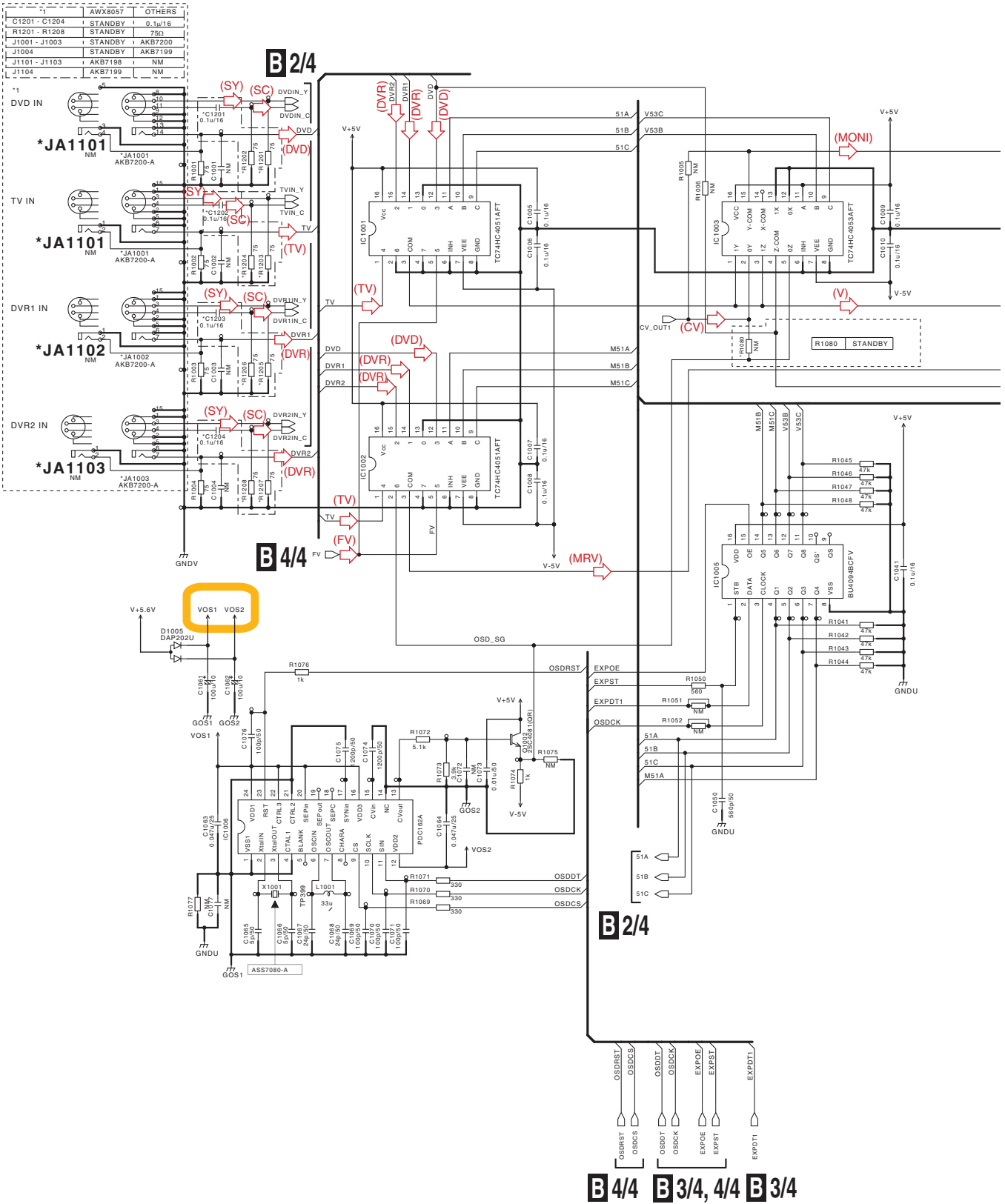
A 2/2 AUDIO IN ASSY (AWK8050)

A 1/2


- (FL) : Audio Signal Route (Front L ch)
- (FVL) : Audio Signal Route (Video L ch)
- (SL) : Audio Signal Route (Surround L ch)
- (C) : Audio Signal Route (Center ch)
- (SB) : Audio Signal Route (Surround Back L ch)
- (SW) : Audio Signal Route (SubWoofer ch)
- (TL) : Audio Signal Route (Tuner L ch)

VSX-03TXH
A 2/2

10.3 MAIN ASSY (1/4)



B 1/4

VSX-03TXH



A

E

D

E

F

4

F



F

**B 3/4**

10.6 MAIN ASSY (4/4)

A

C 4/5 CN701

C 4/5 CN703

*1	
R172, R173	NM
R177	100KΩ

B

C

D

E

F

		SIMUKE1	SIMUKE2
		R180 R181	R182 R183
AWK8052	03TXH /KUXJ/CA	47K 47K	47K NM
AWK8056	01TXH /KUXJ/CA	47K 47K	47K 47K
AWK8057	1018AH /KUXJ-K	47K 47K	NM 47K
AWK8069	9130TXH /KUXJ-K	NM 47K	33K 100K

service connector

CN117

JP113

V CN4251

F 1/2 CN1001

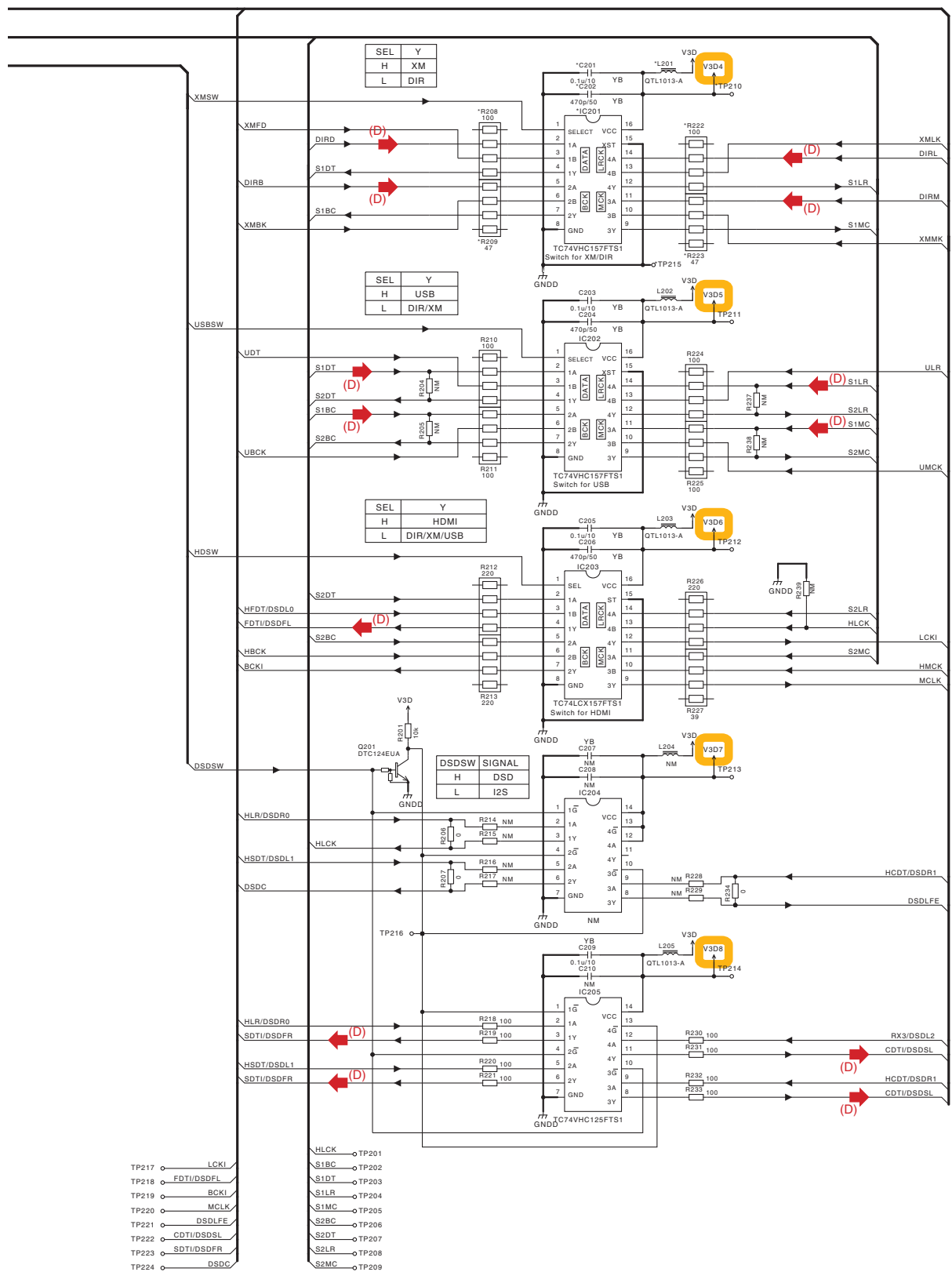
F 1/2 CN1002

B 4/4

VSX-03TXH

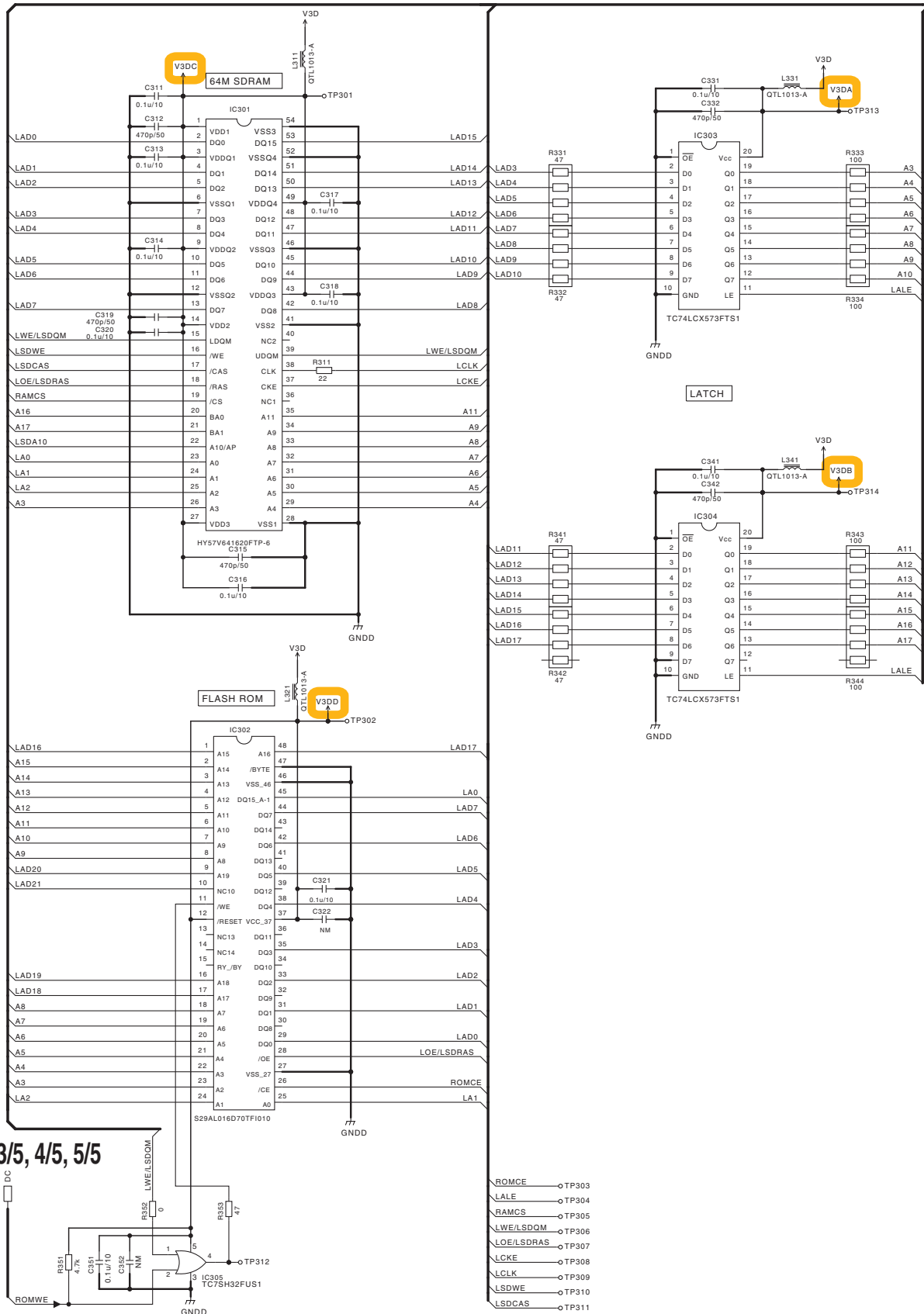
4

C 1/5 DSP & USB ASSY (VSX-03TXH, VSX-9130TXH-K : AWX9175) (VSX-01TXH, VSX-1018AH-K : AWX9239)



(D) : Audio Data Route

10.8 DSP & USB ASSY (2/5)

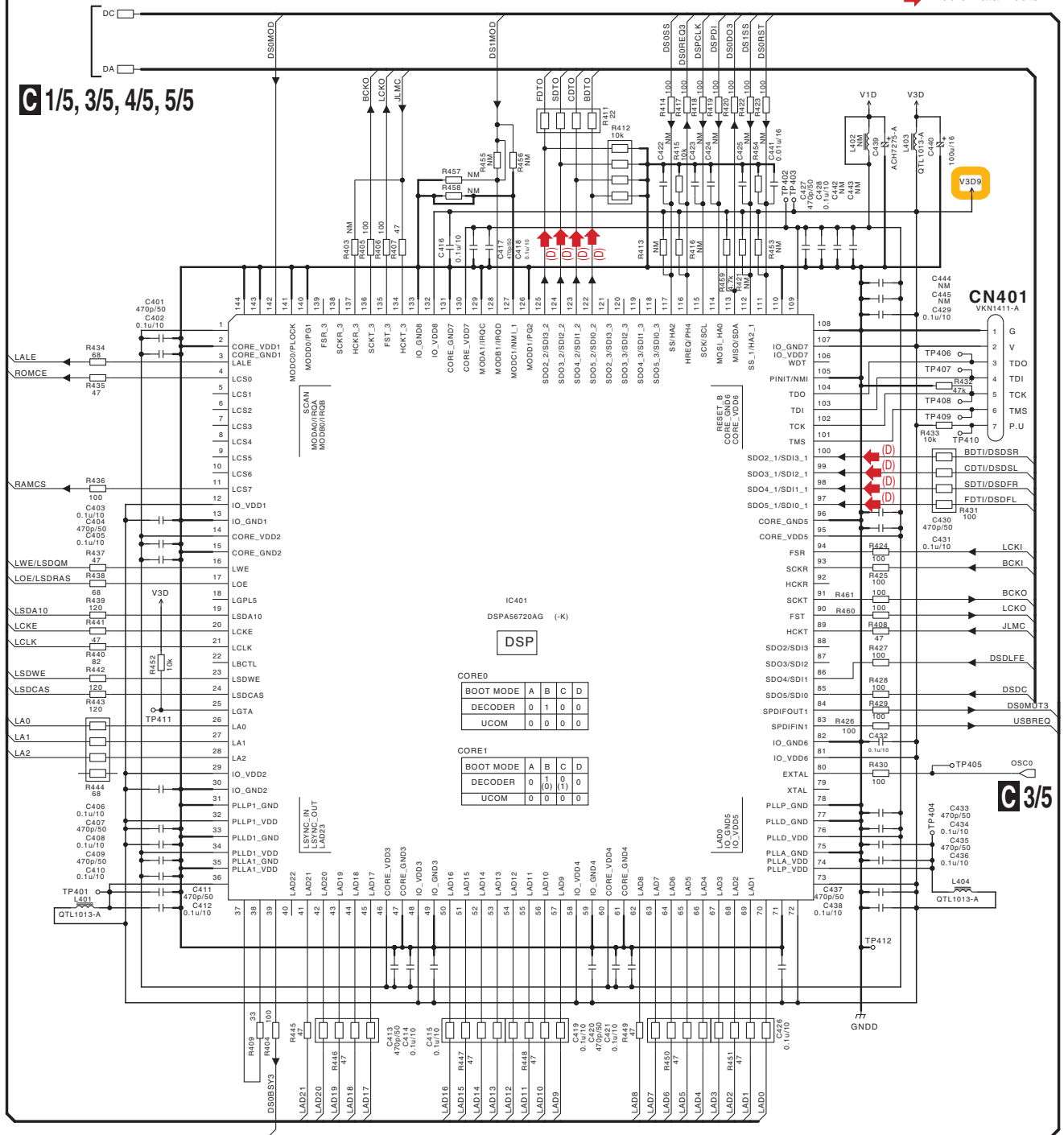


C 1/5, 3/5, 4/5, 5/5

C 2/5 DSP & USB ASSY
(VSX-03TXH, VSX-9130TXH-K : AWX9175)
(VSX-01TXH, VSX-1018AH-K : AWX9239)

(D) : Audio Data Route

C 1/5, 3/5, 4/5, 5/5



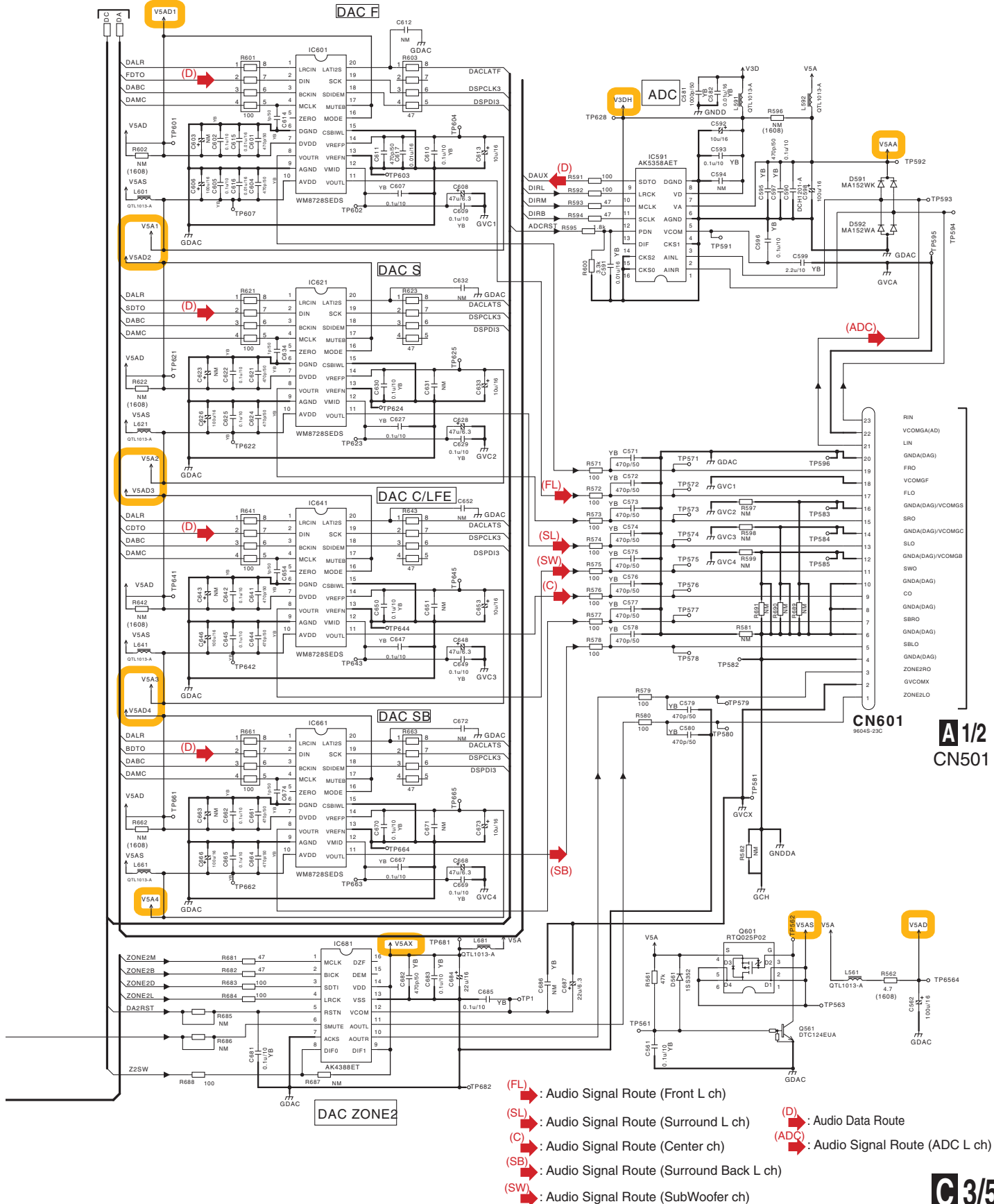
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4



4

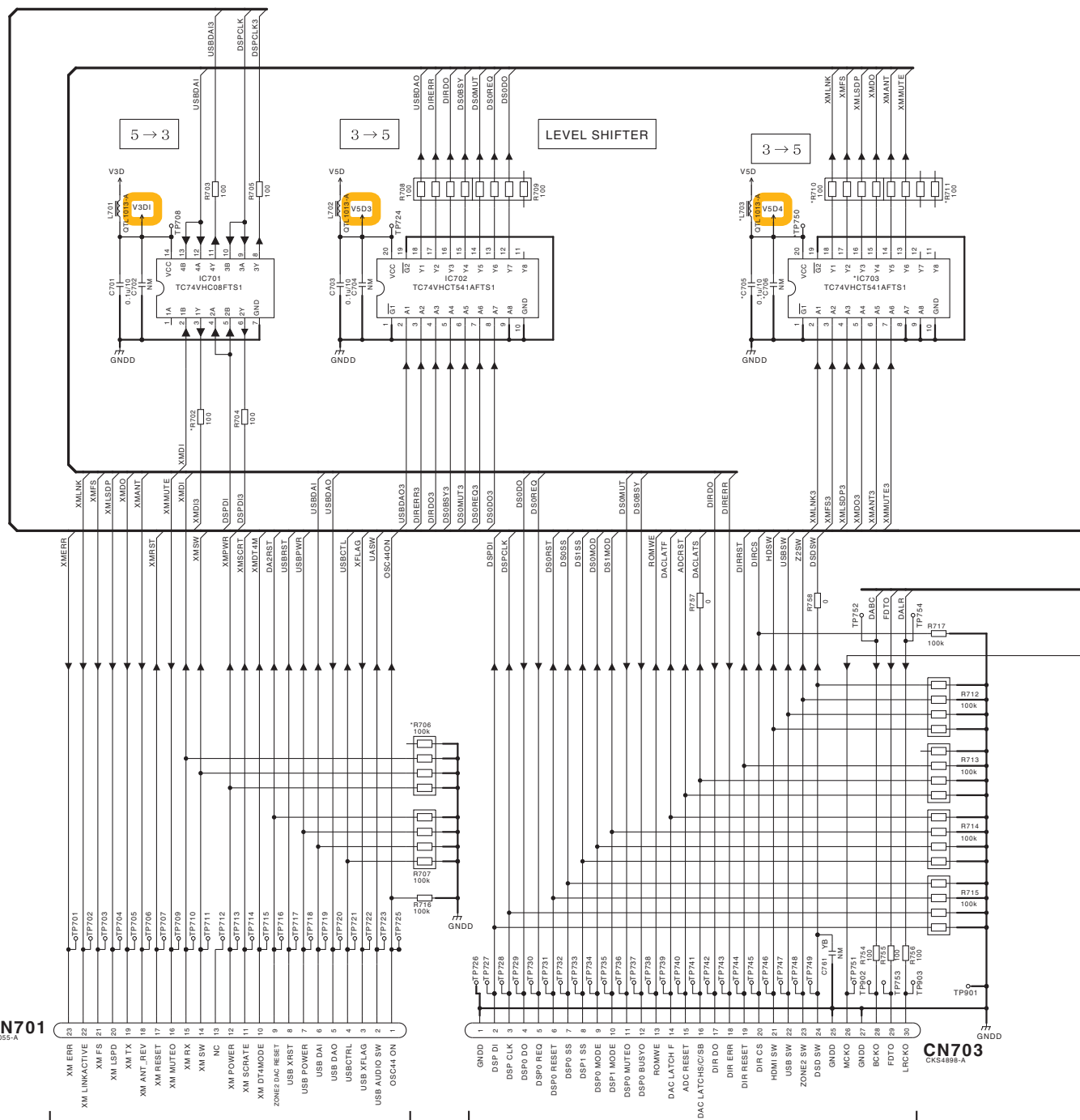
C 3/5 DSP & USB ASSY (VSX-03TXH, VSX-9130TXH-K : AWX9175) (VSX-01TXH, VSX-1018AH-K : AWX9239)

C 1/5, 2/5, 4/5, 5/5


VSX-03TXH

C 3/5

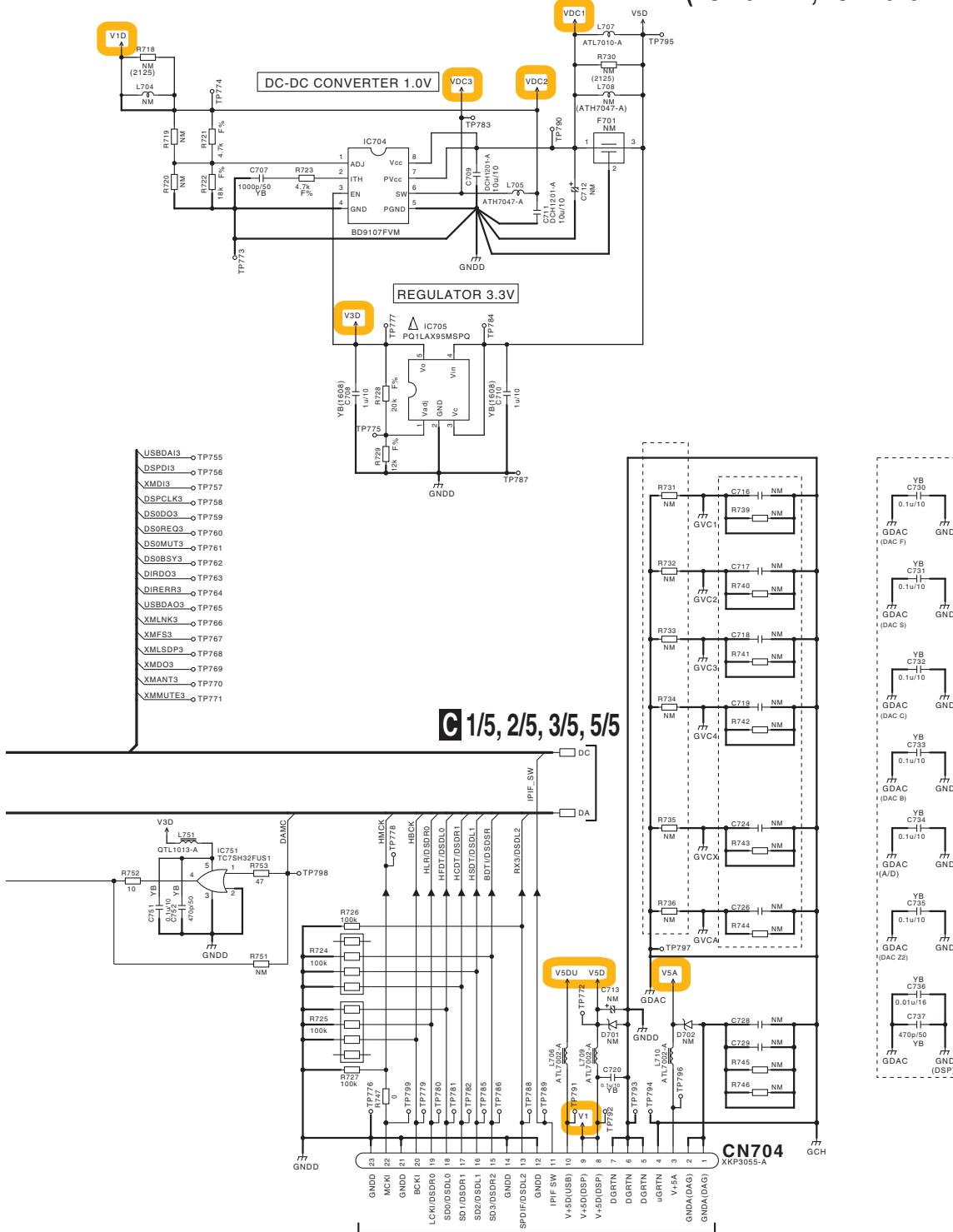
10.10 DSP & USB ASSY (4/5)



B 4/4 CN105

B 4/4 CN104

C 4/5 DSP & USB ASSY
(VSX-03TXH, VSX-9130TXH-K : AWX9175)
(VSX-01TXH, VSX-1018AH-K : AWX9239)



C 1/5, 2/5, 3/5, 5/5

B 4/4 CN103

10.11 DSP & USB ASSY (5/5)

A

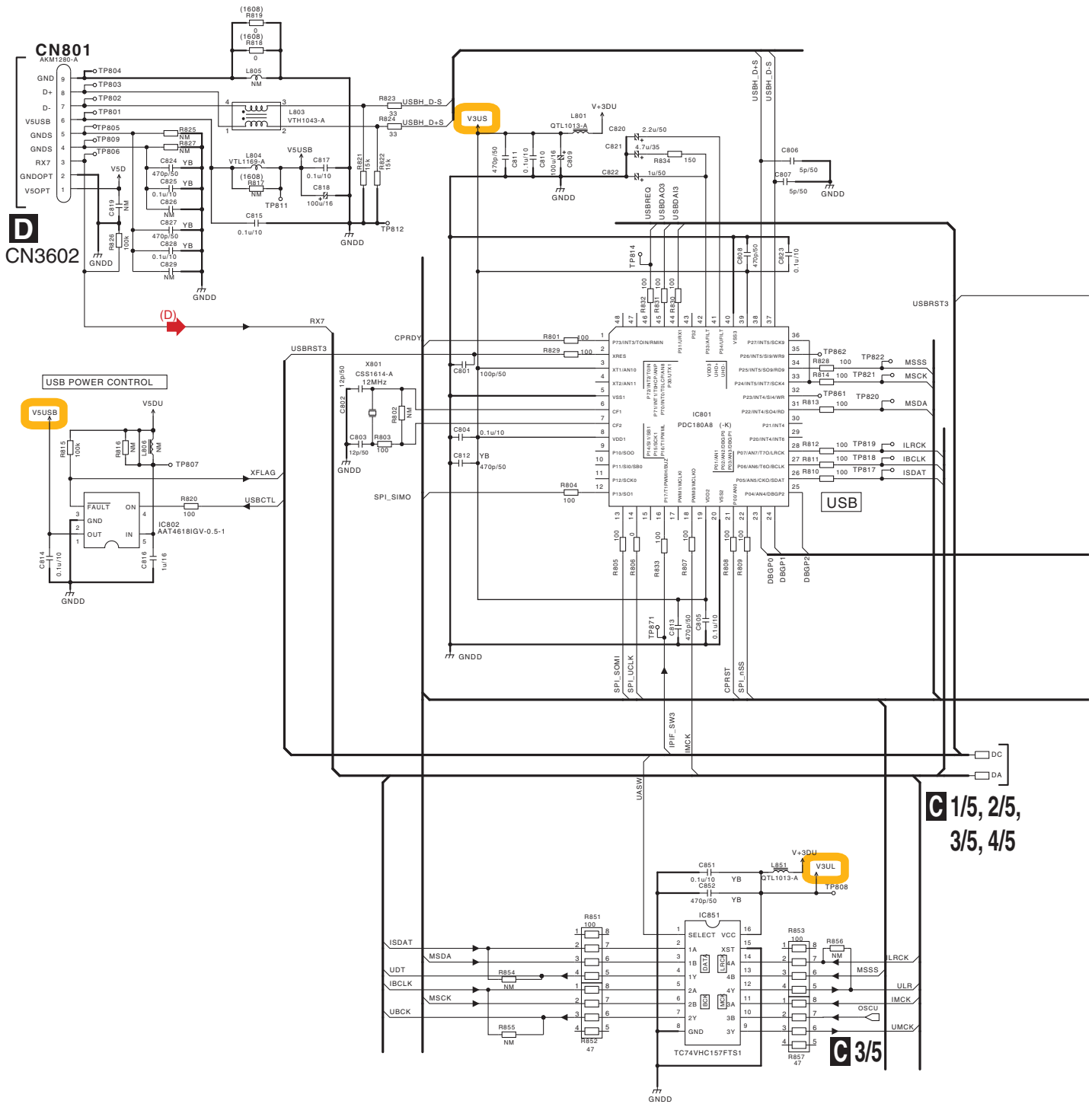
B

C

D

E

F

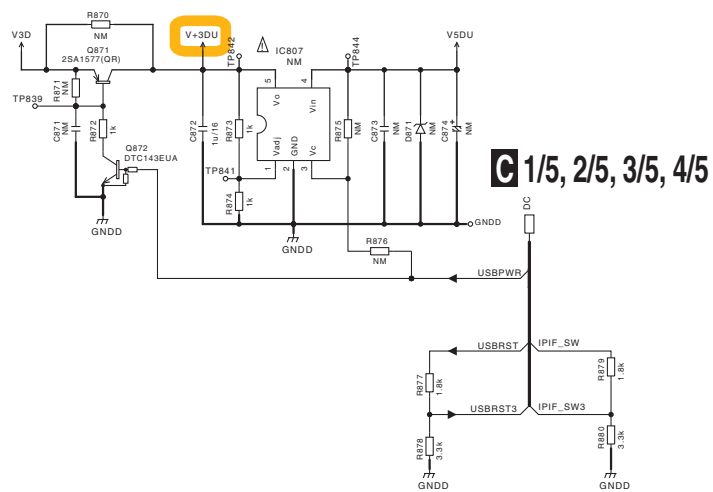
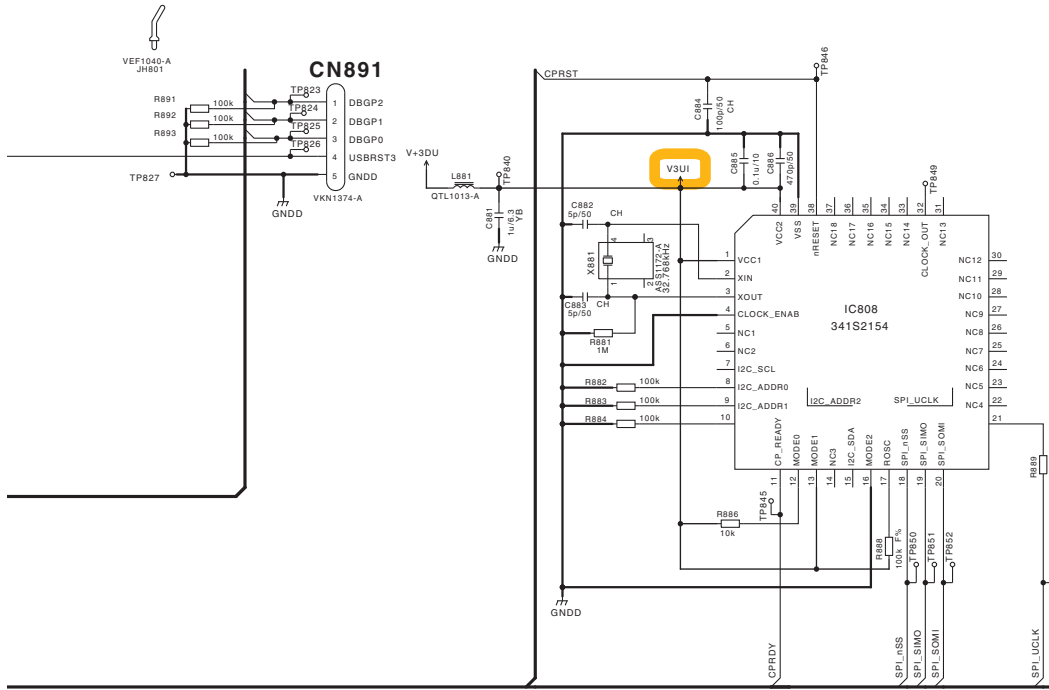


C 5/5

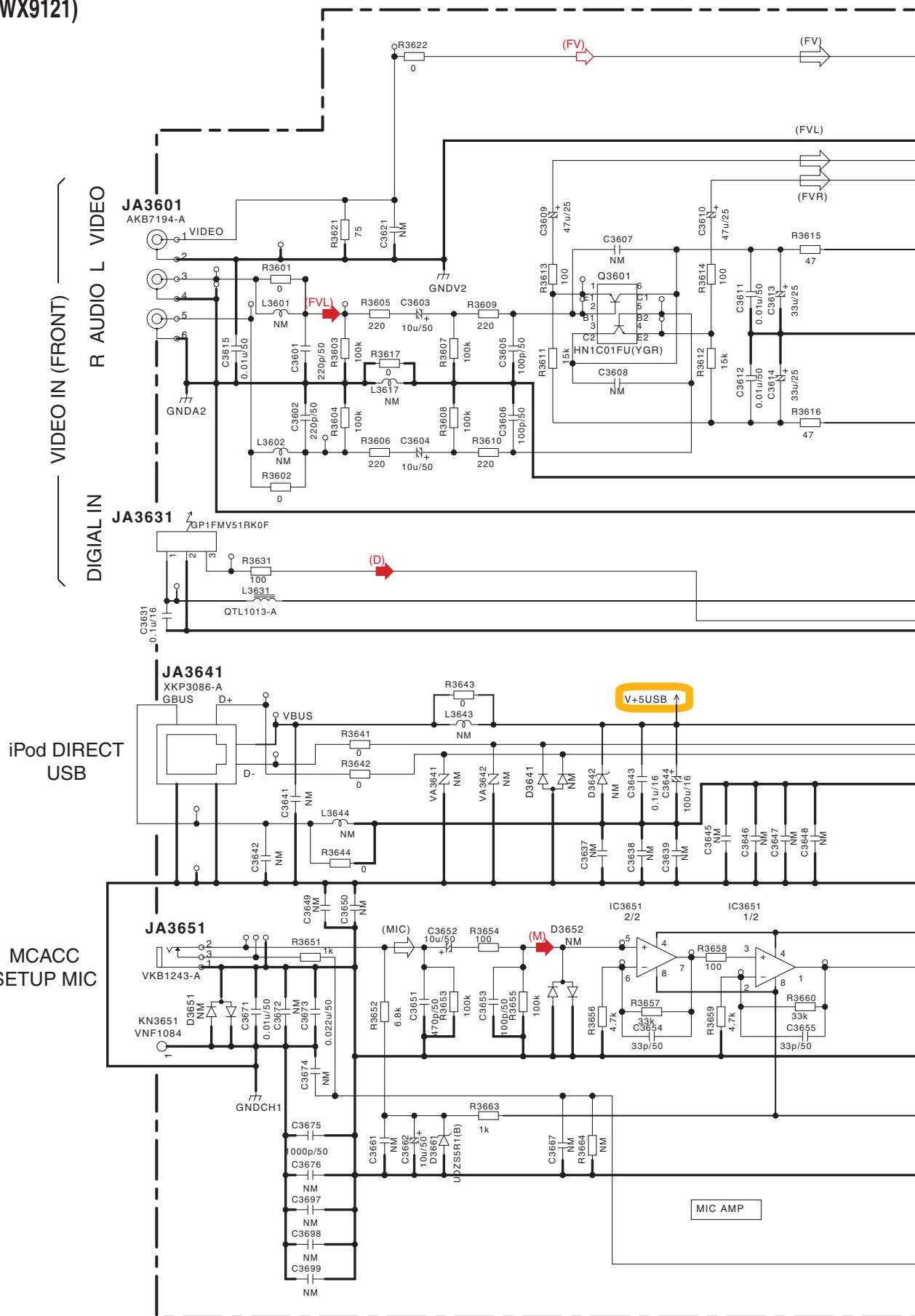
106

VSX-03TXH

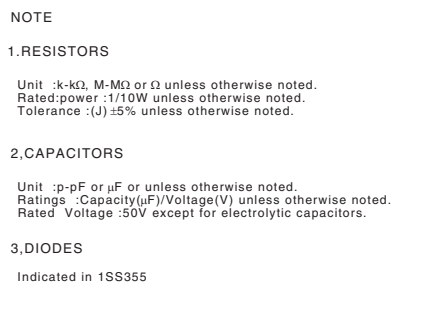
C 5/5 DSP & USB ASSY
(VSX-03TXH, VSX-9130TXH-K : AWX9175)
(VSX-01TXH, VSX-1018AH-K : AWX9239)



D FRONT IN ASSY
(AWX9121)



VSX-03TXH



4

F

△

A



B



C



D



F

4

A



- (CV) ➡ Video Signal Route (Component Video)
- (SY) ➡ S-Video Signal Route (Y ch)
- (SC) ➡ S-Video Signal Route (C ch)

10.15 HDMI & DVC ASSY (2/2)

A

B

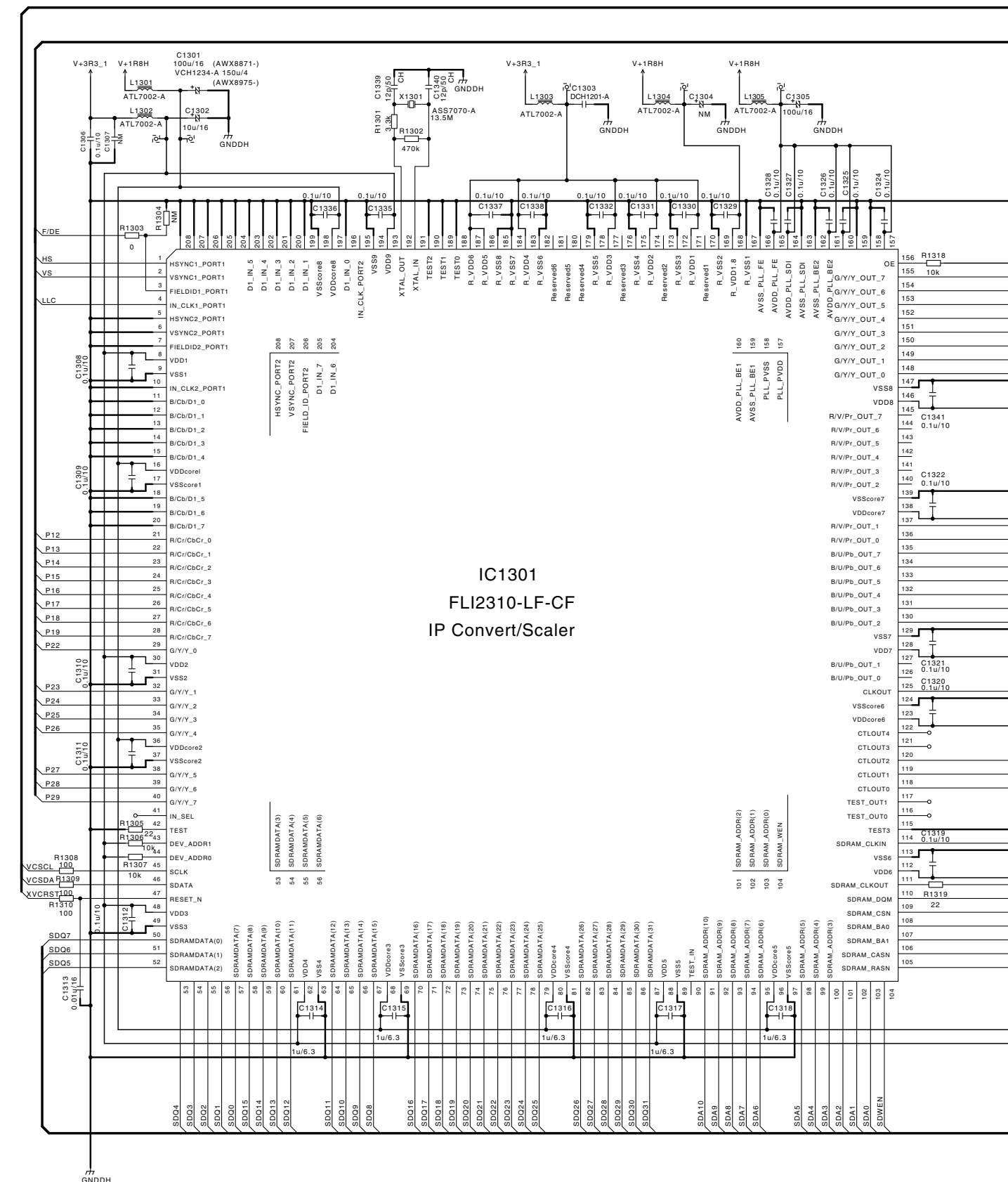
C

D

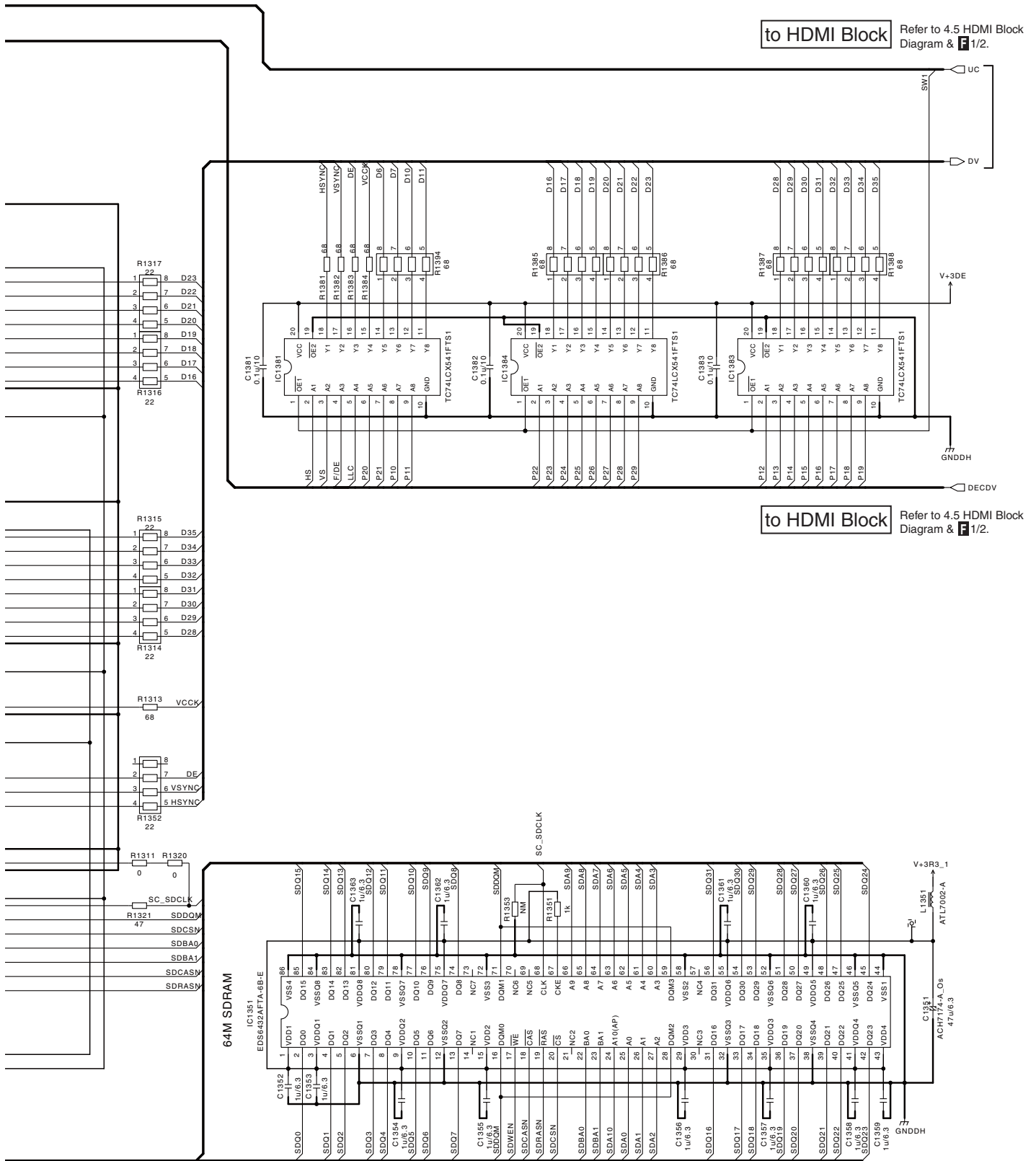
E

F

IC1301
FLI2310-LF-CF
IP Convert/Scaler



F 2/2 HDMI & DVC ASSY (VSX-03TXH, VSX-9130TXH-K :AWX9170) (VSX-01TXH, VSX-1018AH-K :AWX9233)



1

2

3

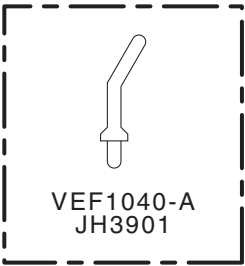
4

10.16 BINDER, BIND L FRONT, BIND L BACK, BIND R FRONT and BIND R BACK ASSYS

A

H

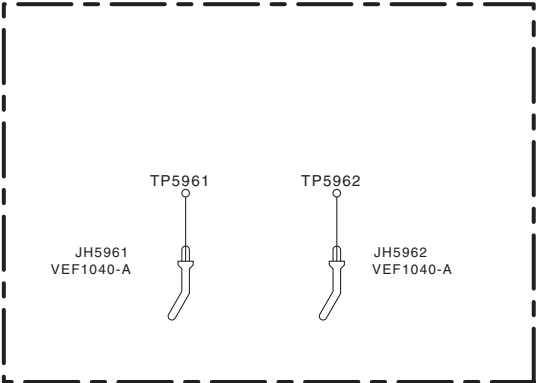
BINDER ASSY
(AWX9120)



B

I

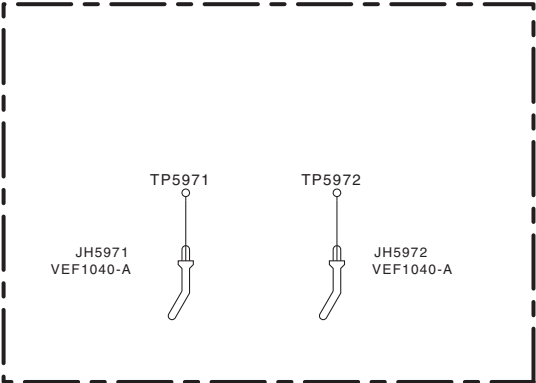
BIND L FRONT ASSY
(AWX9217)



C

J

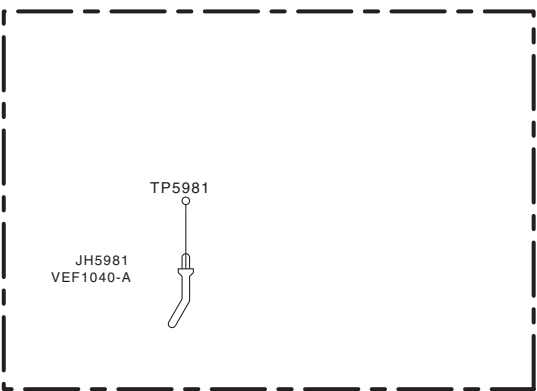
BIND L BACK ASSY
(AWX9218)



D

K

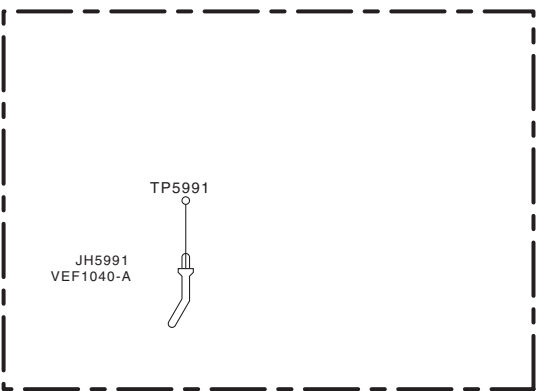
BIND R FRONT ASSY
(AWX9219)



E

L

BIND R BACK ASSY
(AWX9220)



F

H

I

J

K

L

H

I

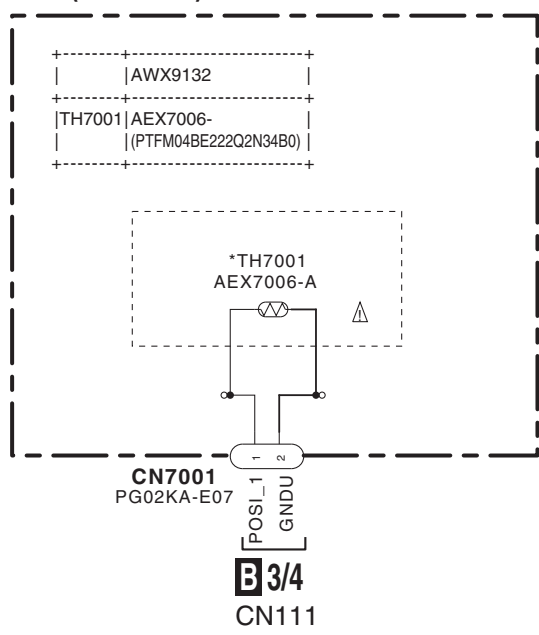
J

K

L

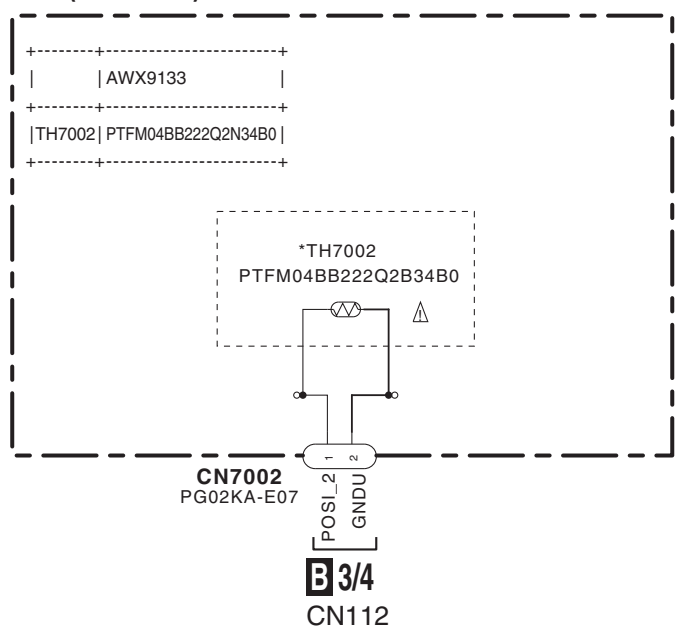
W

POSI 1 ASSY
(AWX9132)



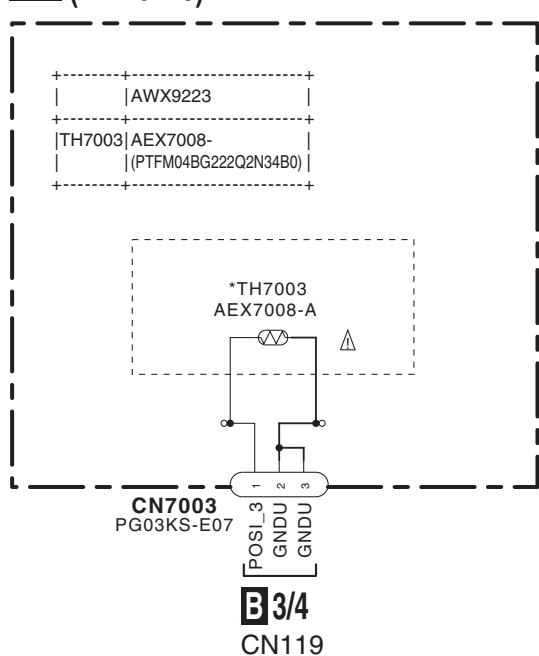
X

POSI 2 ASSY
(AWX9133)



Y

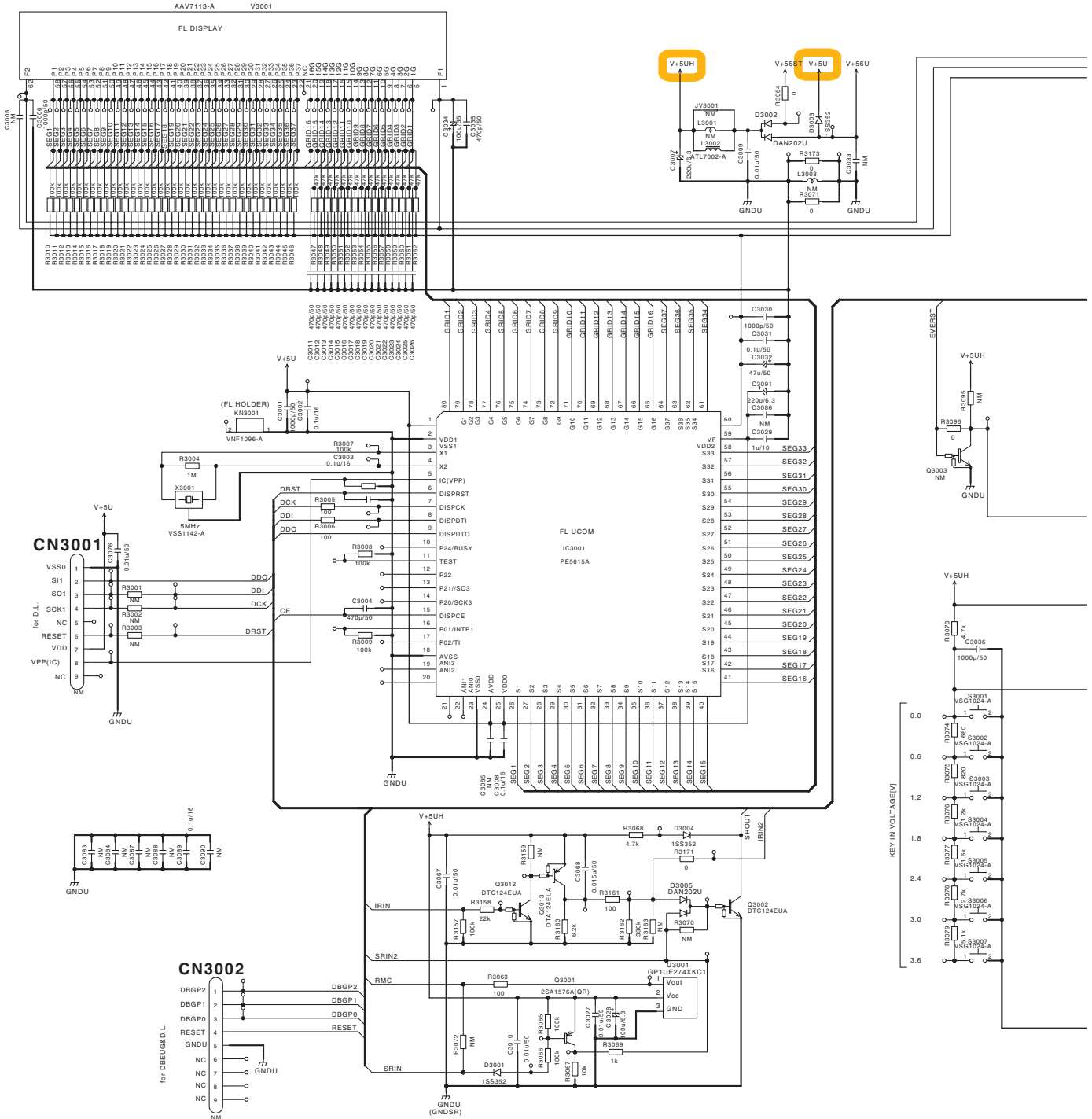
POSI 3 ASSY
(AWX9223)



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

10.18 DISPLAY ASSY

	awx9117	awx9216
[R3111]	680	680
[R3139]	150	NM
[R3148]	560	150
[R3155]	150	NM
[D3009]	SLR343VC(NPQ)	SLR343VC(NPQ)
[D3015]	SLR343BC4T(JKLM)	NM
[D3017]	SLR343BC4T(MNPQ)	SLR343BC4T(JKLM)
[D3019]	SLR343BC4T(JKLM)	NM
[Q3006]	DTC143EUA	DTC143EUA
[Q3009]	DTC143EUA	NM
[Q3011]	DTC143EUA	NM



A

E



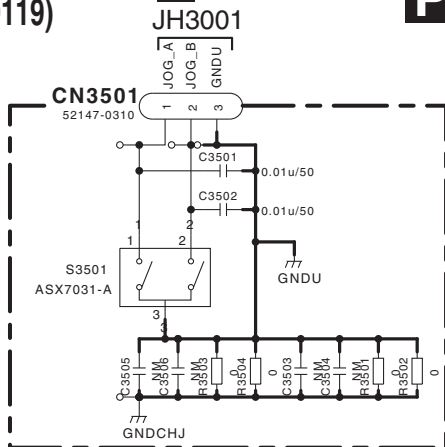
D

E

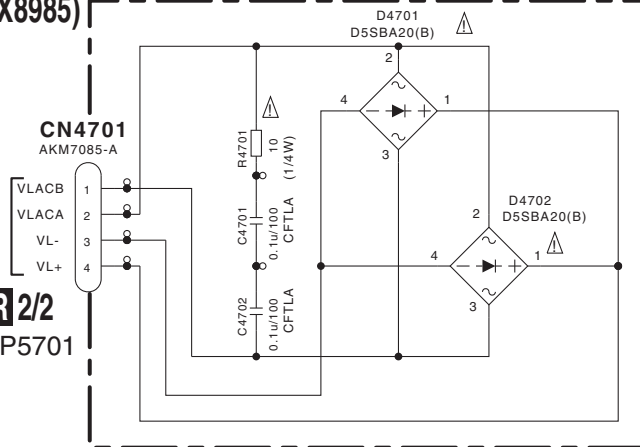
F

10.19 MULTI JOG, POWER SW, DIODE, HEADPHONE, PRIMARY and DC/DC ASSYS

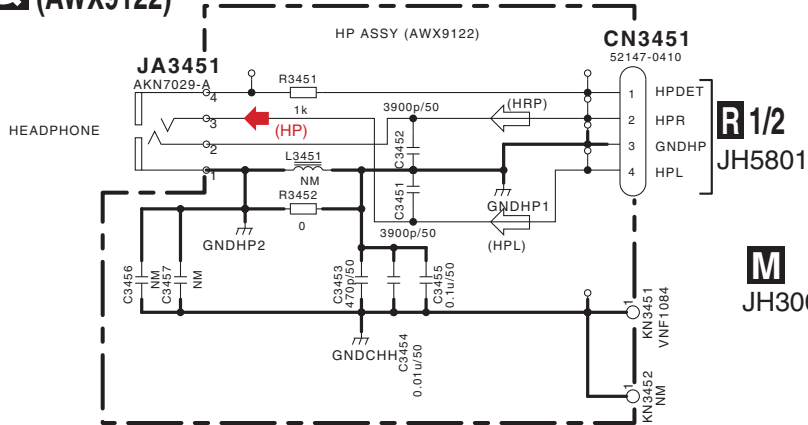
N MULTI JOG ASSY (AWX9119)



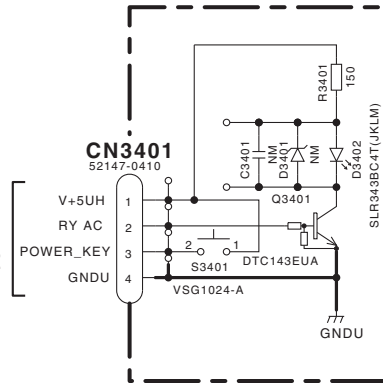
P DIODE ASSY (AWX8985)



Q HEADPHONE ASSY (AWX9122)

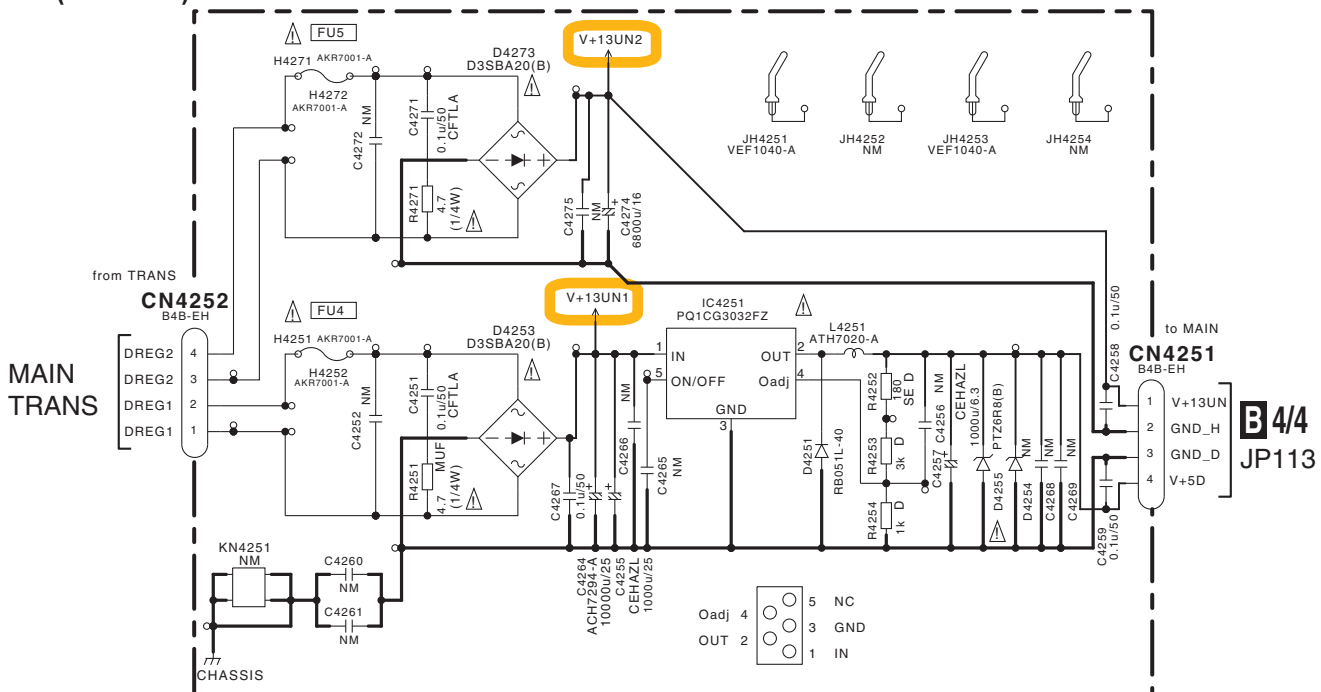


O POWER SW ASSY (AWX9118)

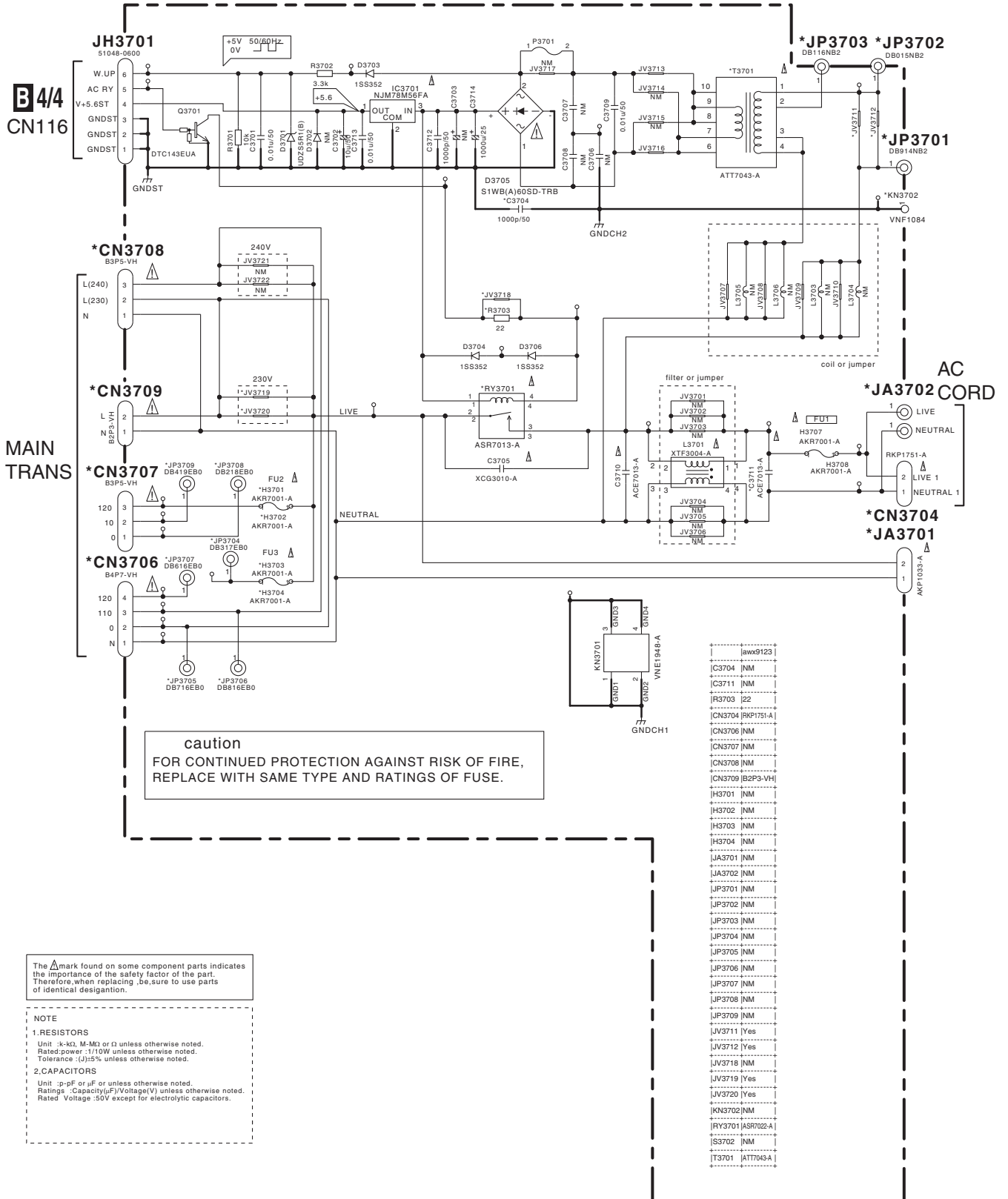


V DC/DC ASSY (AWX8988)

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



PRIMARY ASSY (AWX9123)



△



VSX-03TXH

A

E



□

F

4

F



125

4



VSX-03TXH

PRE-STAGE AMP ASSY (AWX8989)

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.

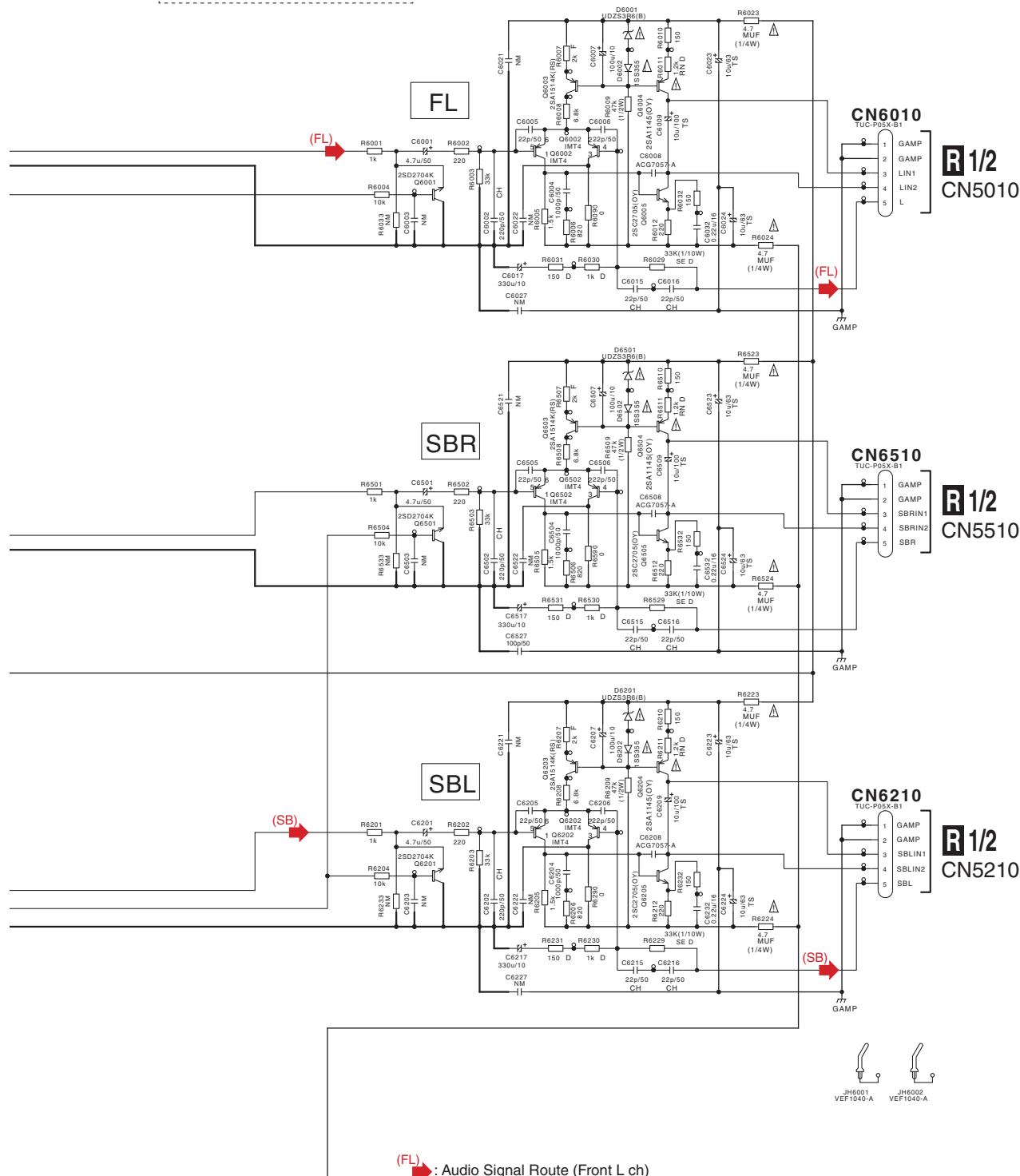
NOTE

1. RESISTORS

Unit: k Ω , M Ω or Ω unless otherwise noted.
Rated power: 1/16W unless otherwise noted.
Tolerance: (J):5% unless otherwise noted.

2. CAPACITORS

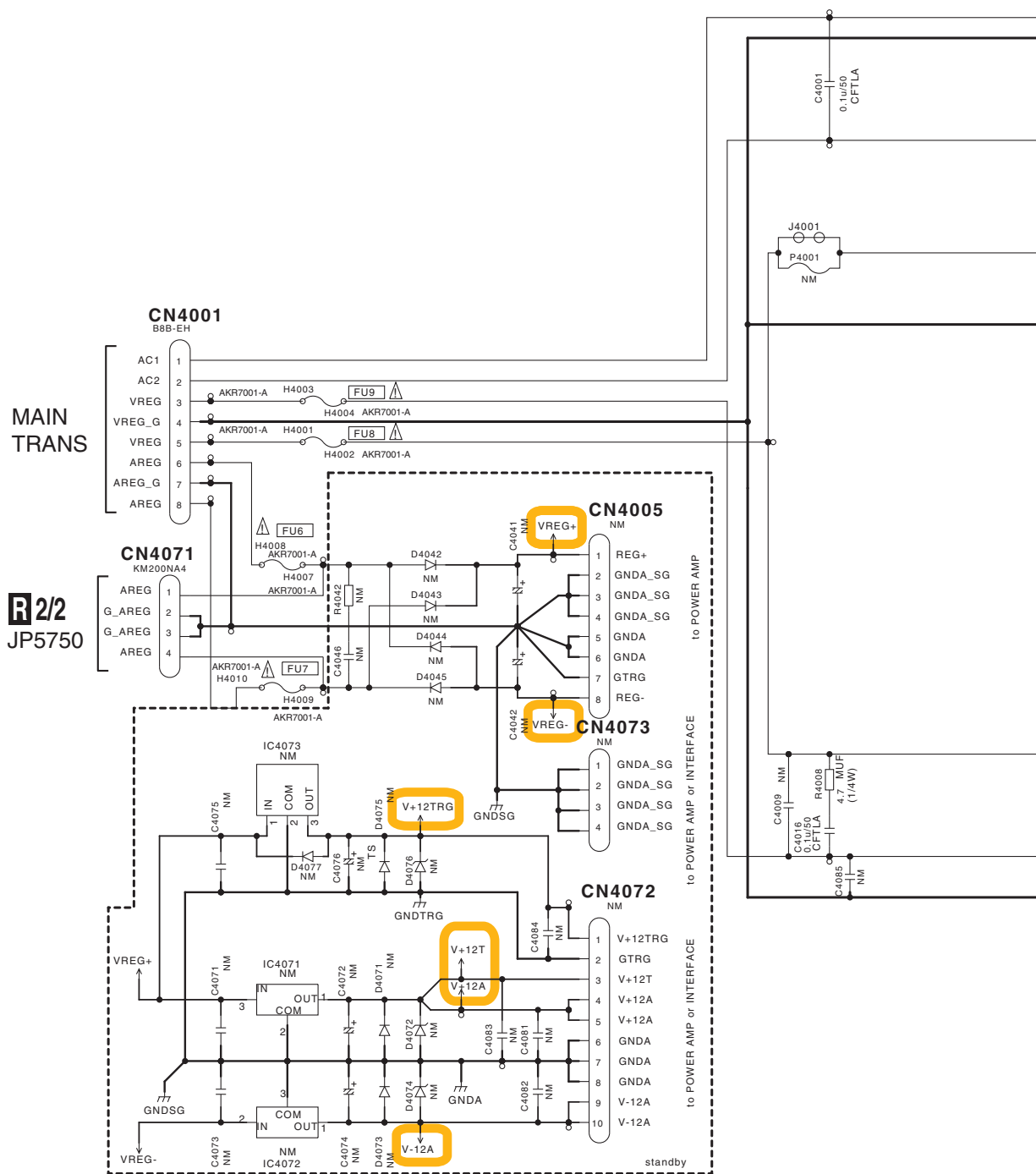
Unit: pF, or μ F unless otherwise noted.
Ratings: Capacity(μ F)/Voltage(V) unless otherwise noted.



(FL) : Audio Signal Route (Front L ch)
(SL) : Audio Signal Route (Surround L ch)
(O) : Audio Signal Route (Center ch)
(SB) : Audio Signal Route (Surround Back L ch)

VSX-03TXH

10.23 REGULATOR ASSY



A

Unit: p-pF, or μ F unless otherwise noted.
Ratings: Capacity(μ F)/Voltage(V) unless otherwise noted.



F



1



2



3



4



A



B



C



D



E



F



1



2



3



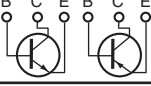
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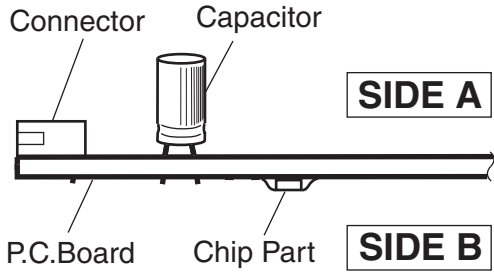
11. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

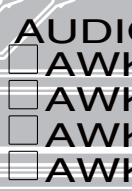
Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.

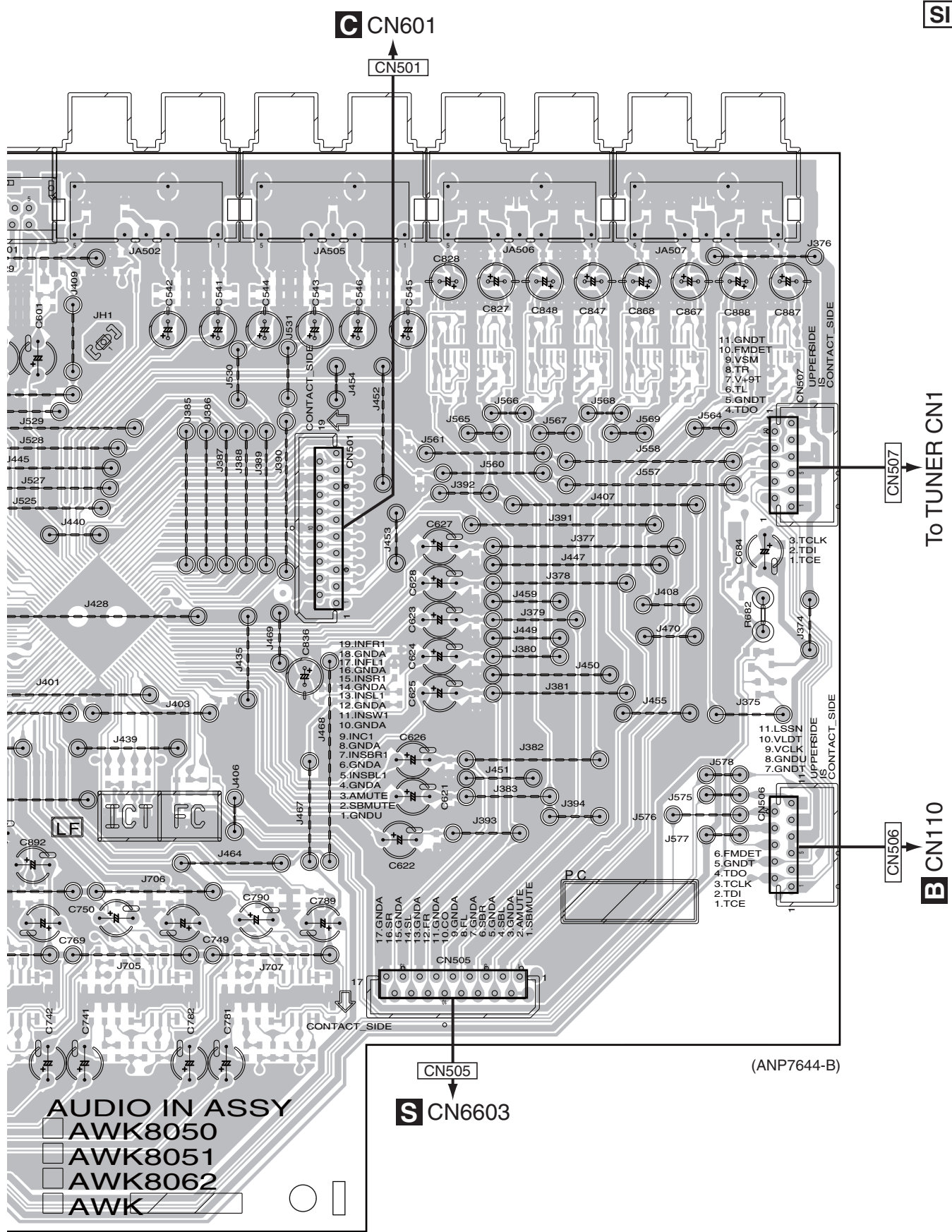


4

F



133



SIDE B

A AUDIO IN ASSY

CN501

IC Q

Q861
Q881
Q882
Q862Q842
Q841
Q821

Q519

Q681

IC501

IC503

IC821

IC502

IC702

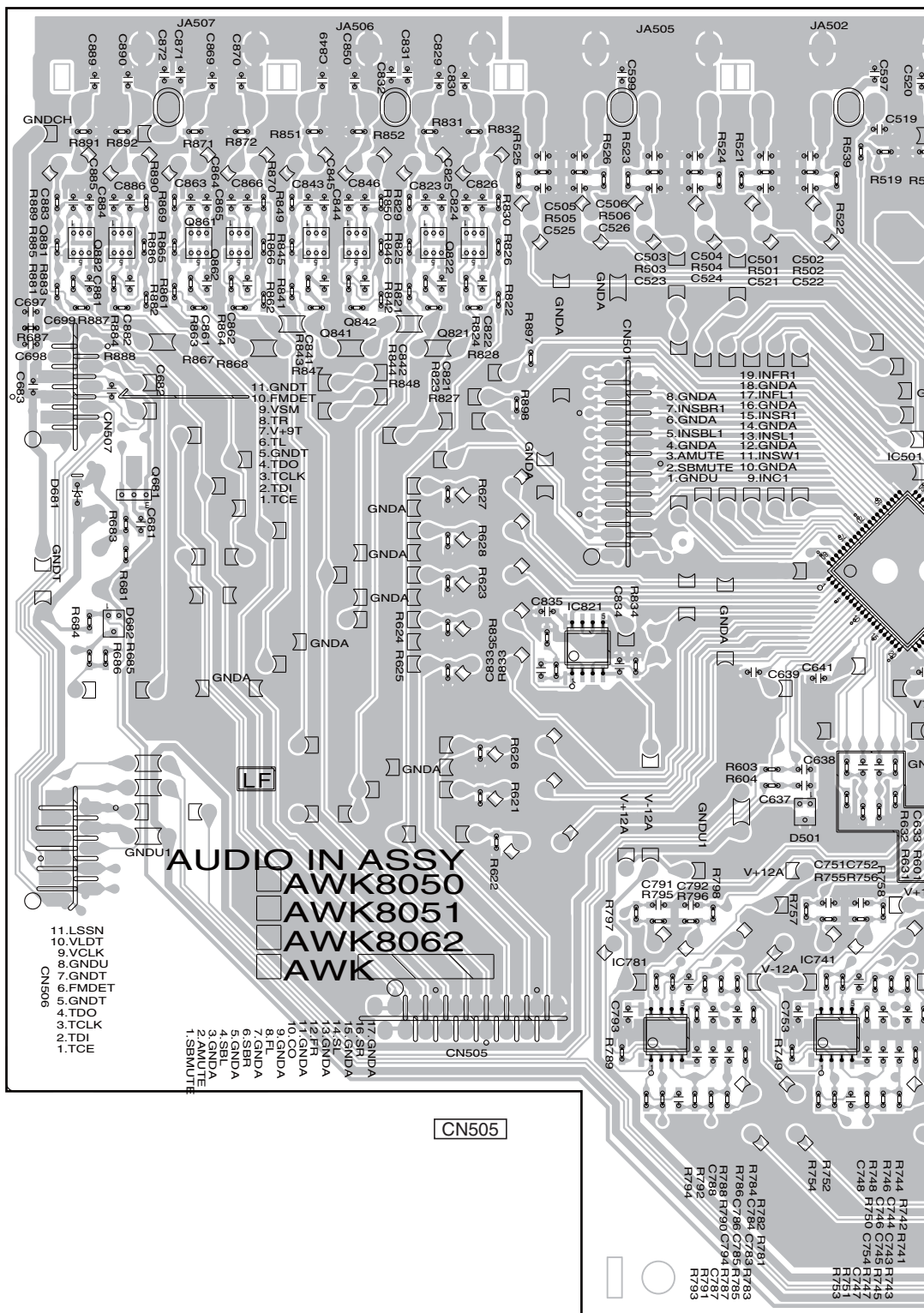
IC761
IC701 IC801
IC781 IC741

Q701

Q702

CN507

CN506



AUDIO IN ASSY
 AWK8050
 AWK8051
 AWK8062
 AWK

CN505

VSX-03TXH

A

11.2 MAIN ASSY

SIDE A

B MAIN ASSY

A

B

C

D

E

F

B

136

IC Q

IC1004
IC1001
IC1002
IC1271
IC1402
IC1401
IC1003
IC1205
IC1403
IC1404
IC1201
IC1202
IC1203
Q1201
Q1501
Q1503
Q1407
Q1405
Q1408
Q1406
Q1001
Q1404
Q1504
Q1502
Q1202
Q1403
IC1006
Q102
Q101
Q103
IC101
Q381
Q105
IC1405
Q303
Q104
Q382
IC304
Q302
Q301
IC1005
IC302
IC261
IC306
IC301
IC303
IC305
Q282
Q281
IC202
IC201
IC402
IC401

V CN4251

C CN703

G CN1001

E CN4802

G CN1002

C CN702

C CN704

E CN4801

MAIN ASSY

AWK8052
AWK8053
AWK8054
AWK8055
AWK8056
AWK8057
AWK8058
AWK8059
AWK8060
AWK8069

E CN4803

W CN700

Y CN700

M

VSX-03TXH

1

2

3

4

SIDE B

B MAIN ASSY

IC Q

Q1277

Q1278

Q1271

CN110

CN116

JP117

Q1508
Q1510 Q1506
Q411
Q1507
Q1509 Q1505

JP116

CN112

CN109

VSX-03TXH

1

2

3

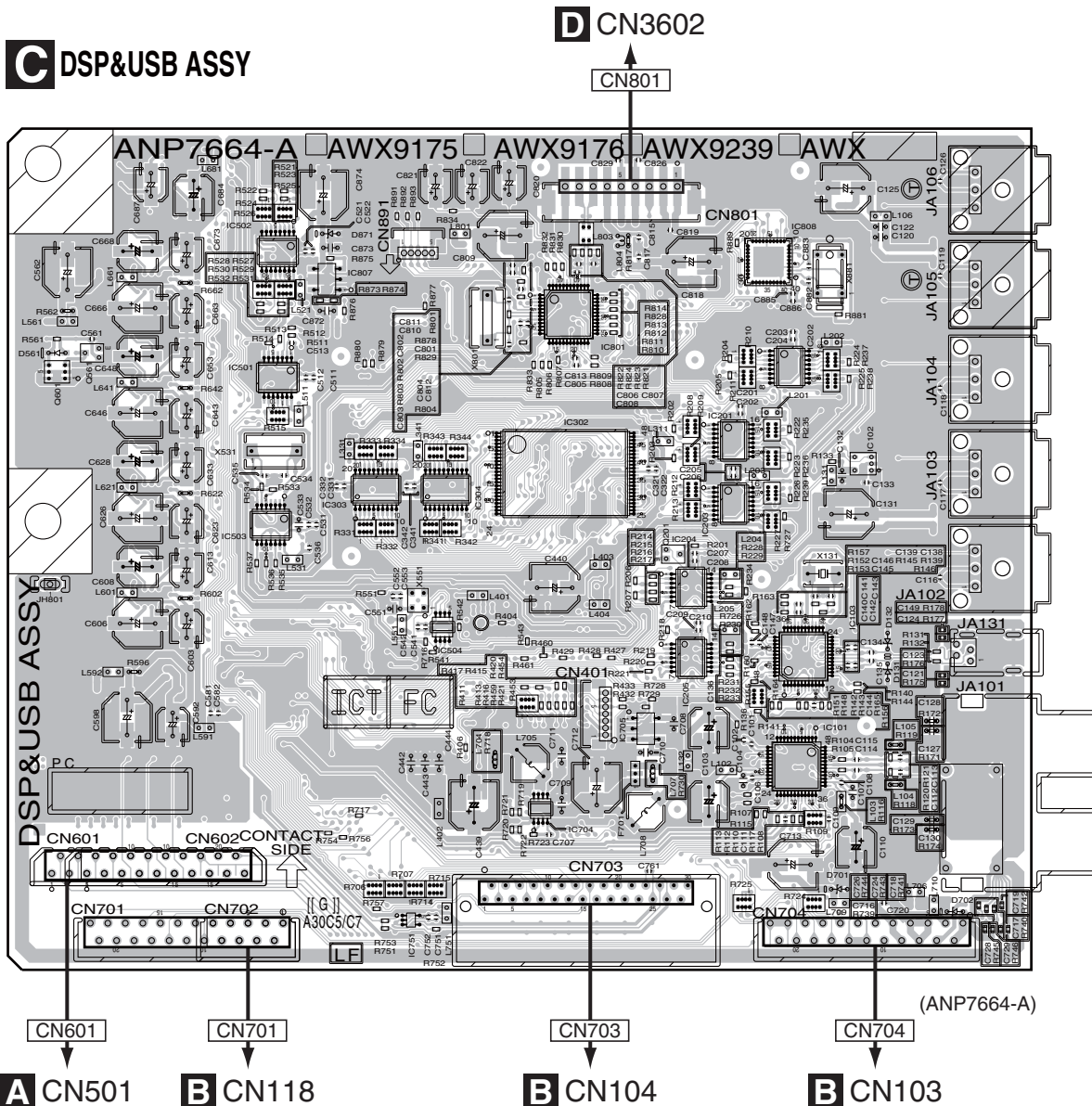
4

B

11.3 DSP & USB ASSY

SIDE A

SIDE A



C

C

SIDE B

SIDE B

A

B

C

D

E

F

DSP&USB ASSY

IC Q

IC681 Q872

IC802 Q871
IC661
IC851

IC641

IC301

IC305

IC621

IC701

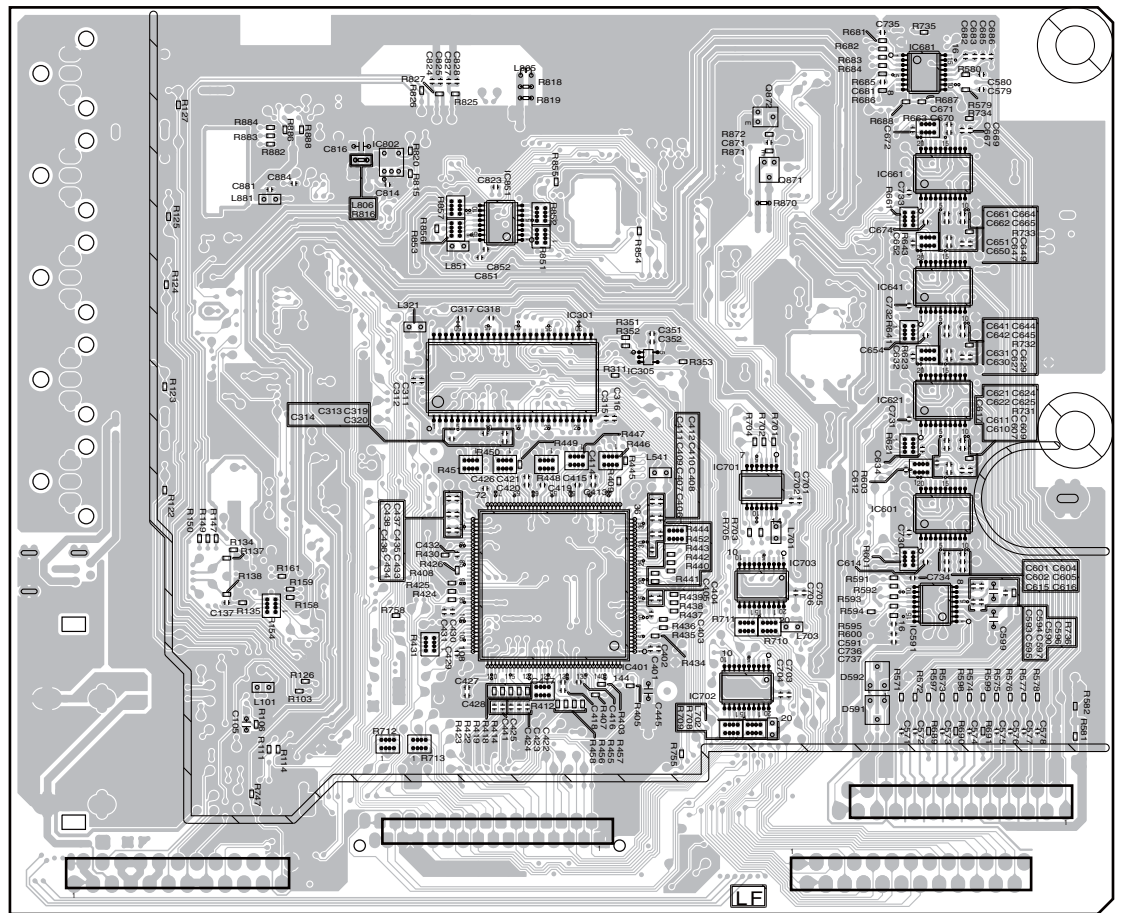
IC601

IC703

IC591

IC401

IC702



E CN4809

SIDE B

SIDE B

D FRONT IN ASSY

IC Q

Q3601

IC3651

CN3602

CN3601

(ANP7643-C)

VSX-03TXH

143

11.5 INTERFACE ASSY

SIDE A

SIDE A

INTERFACE ASSY

D CN3601

CN4809

R CN5803

CN4808

R CN5802

CN4807

INTERFACE ASSY AWX
 AWX8990- AWX8991-
 AWX8992- AWX8993-

A CN504

CN4806

B CN108

B CN107

B CN106

(ANP7642-B)

A CN502

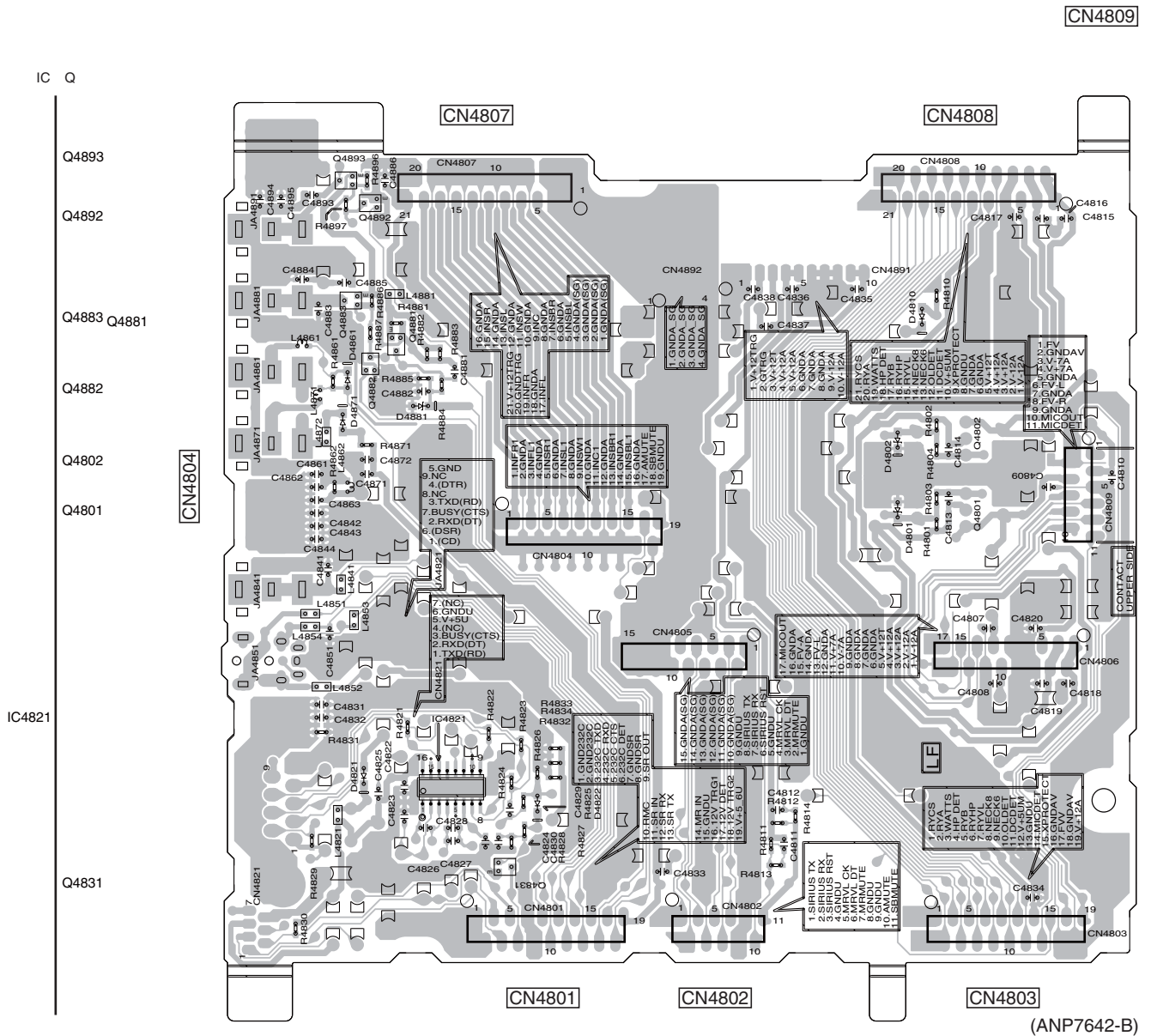
A CN503

VSX-03TXH

SIDE B

SIDE B

E INTERFACE ASSY



VSX-03TXH

145

A

F



SIDE B

A

B

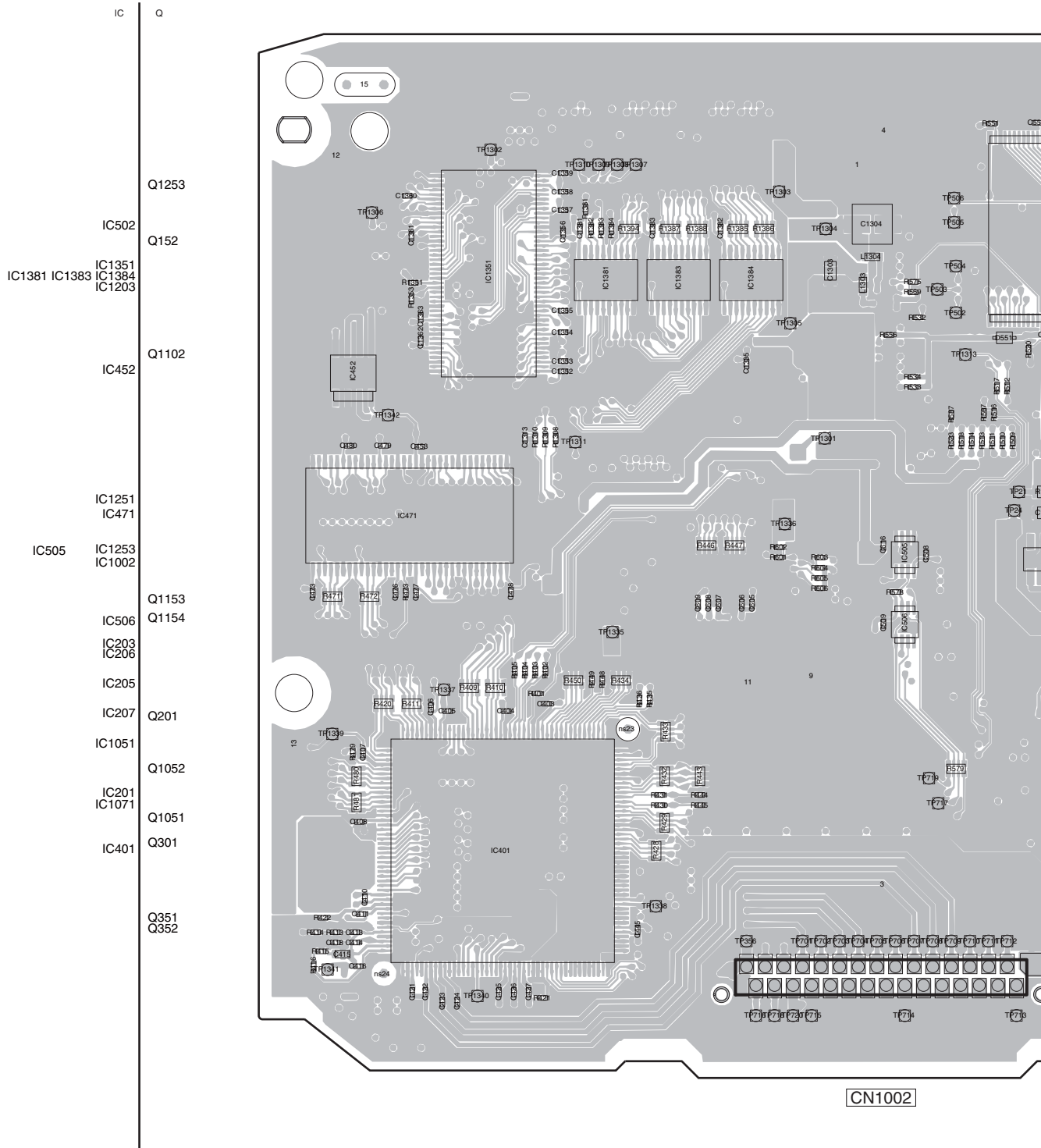
C

D

E

F

F HDMI & DVC ASSY



SIDE B

A

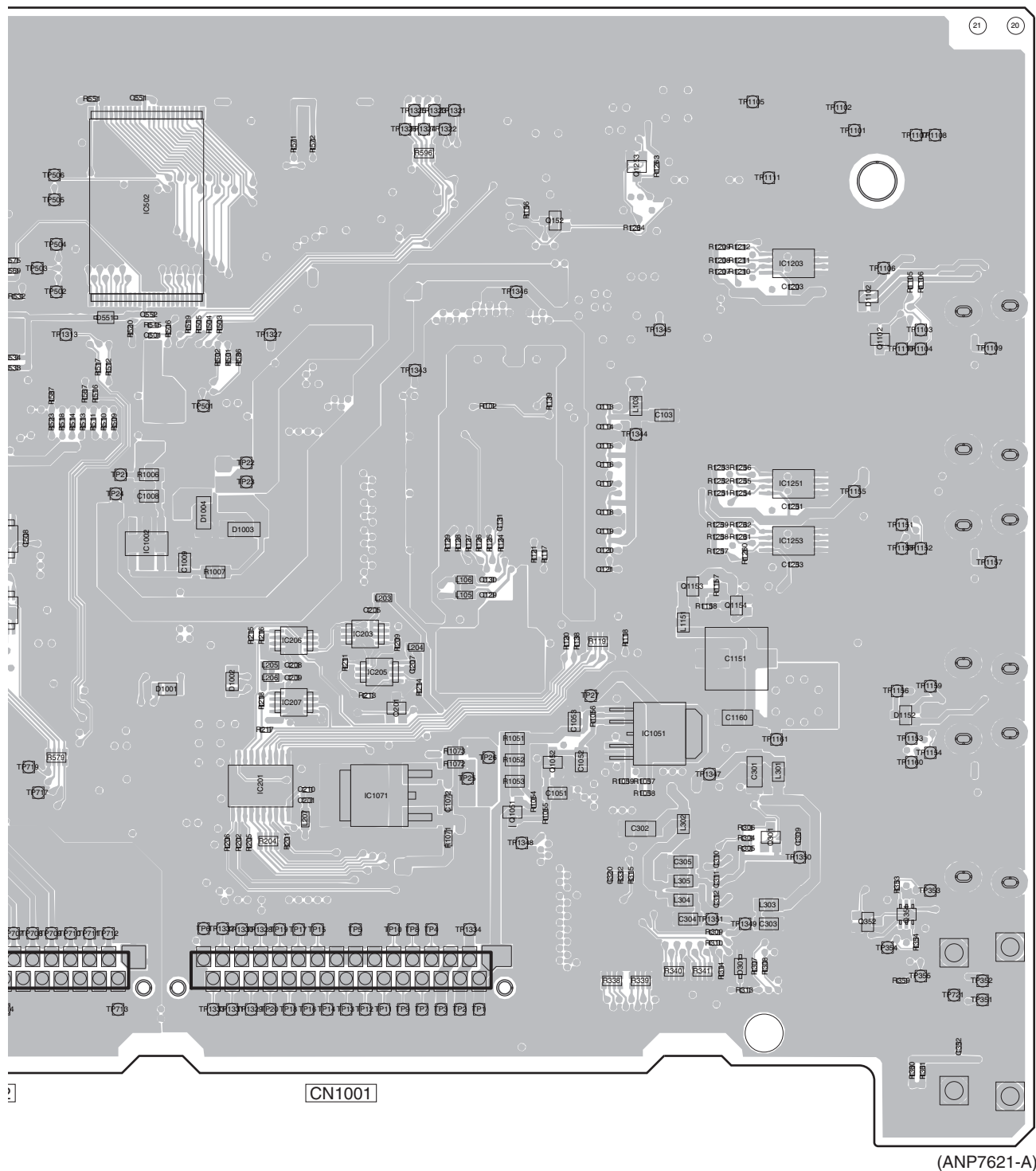
E

C

□

F

F



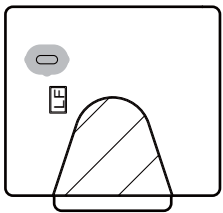
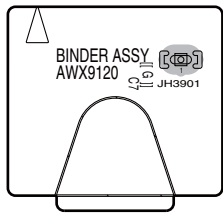
11.7 BINDER, BIND L FRONT and BIND L BACK ASSYS

SIDE A

SIDE B

H BINDER ASSY

H BINDER ASSY



(ANP7643-C)

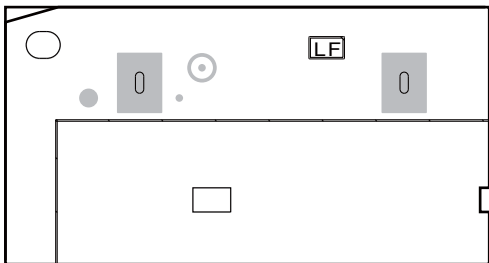
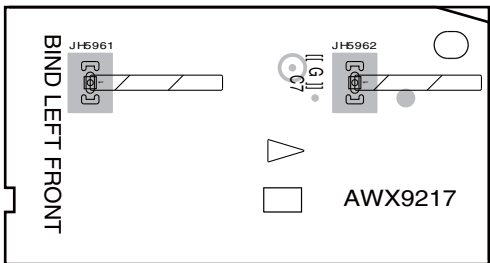
(ANP7643-C)

SIDE A

SIDE B

I BIND L FRONT ASSY

I BIND L FRONT ASSY



(ANP7641-C)

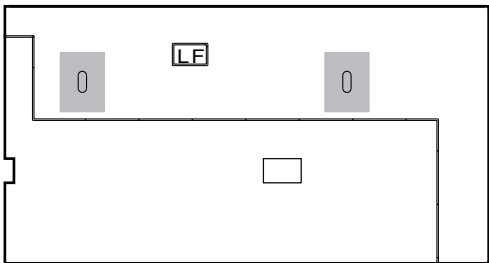
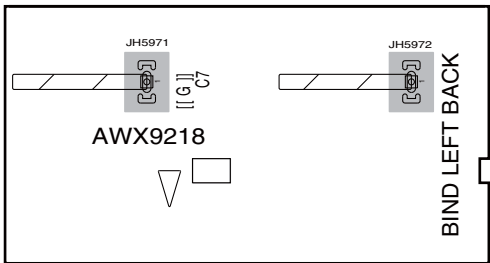
(ANP7641-C)

SIDE A

SIDE B

J BIND L BACK ASSY

J BIND L BACK ASSY



(ANP7641-C)

(ANP7641-C)

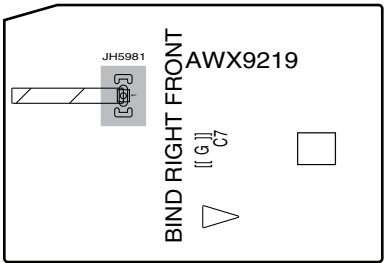
5 6 7 8

11.8 BIND R FRONT, BIND R BACK ASSYS

SIDE A

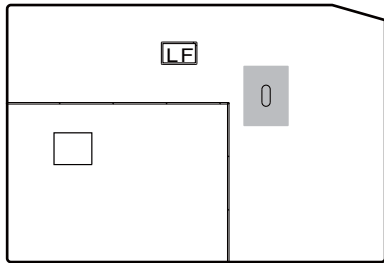
SIDE B

K BIND R FRONT ASSY



(ANP7641-C)

K BIND R FRONT ASSY

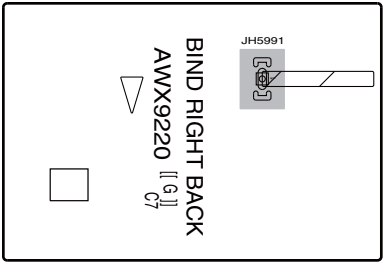


(ANP7641-C)

SIDE A

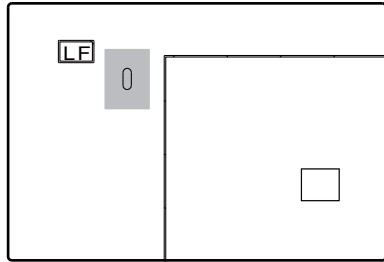
SIDE B

L BIND R BACK ASSY



(ANP7641-C)

L BIND R BACK ASSY



(ANP7641-C)

K L

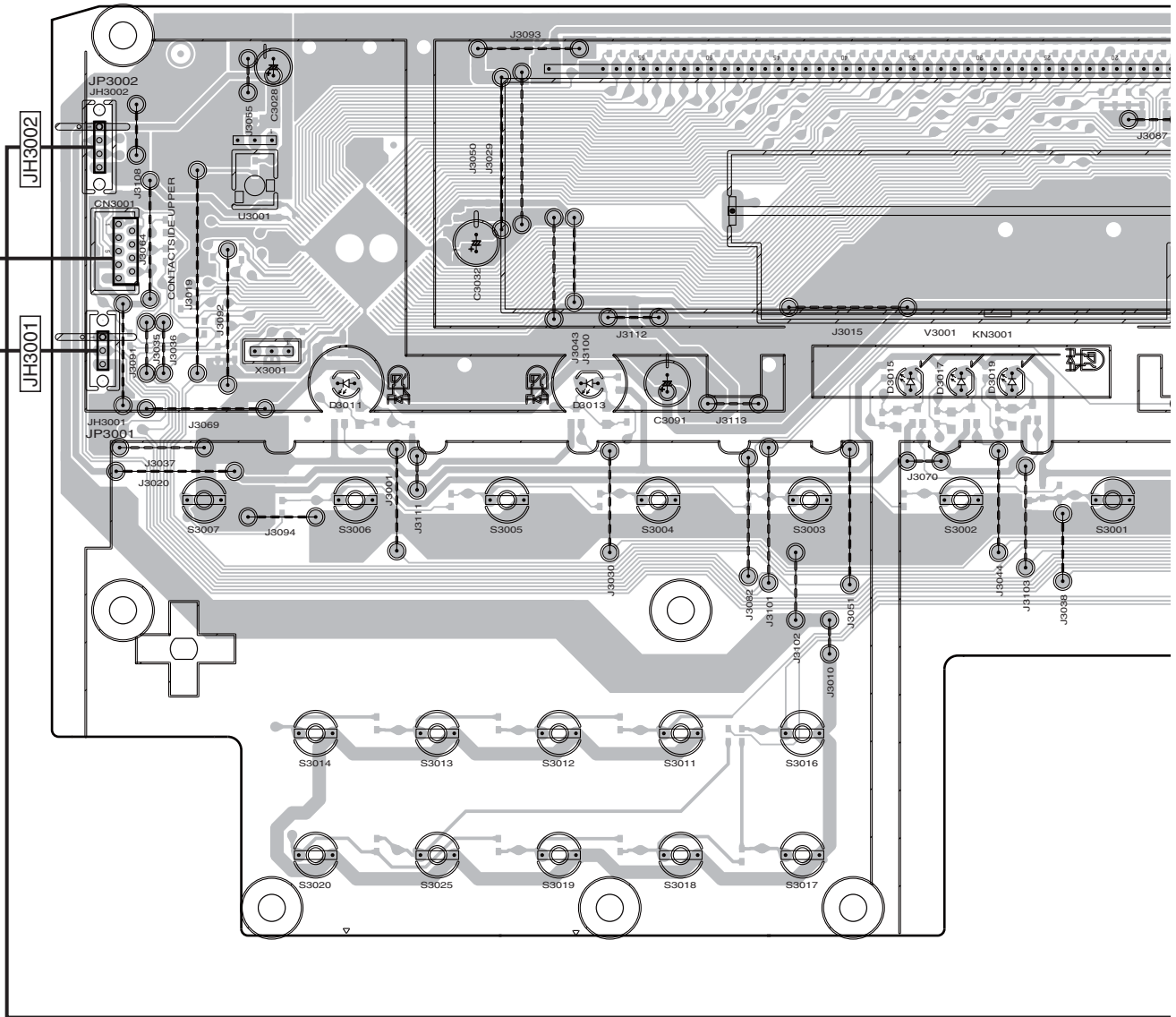
K L

11.9 DISPLAY, MULTI JOG and POWER SW ASSYS

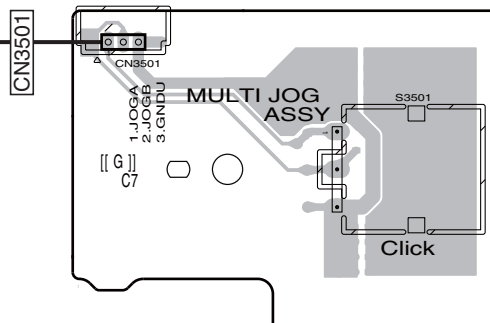
SIDE A

M DISPLAY ASSY

For SERVICE



N MULTI JOG ASSY



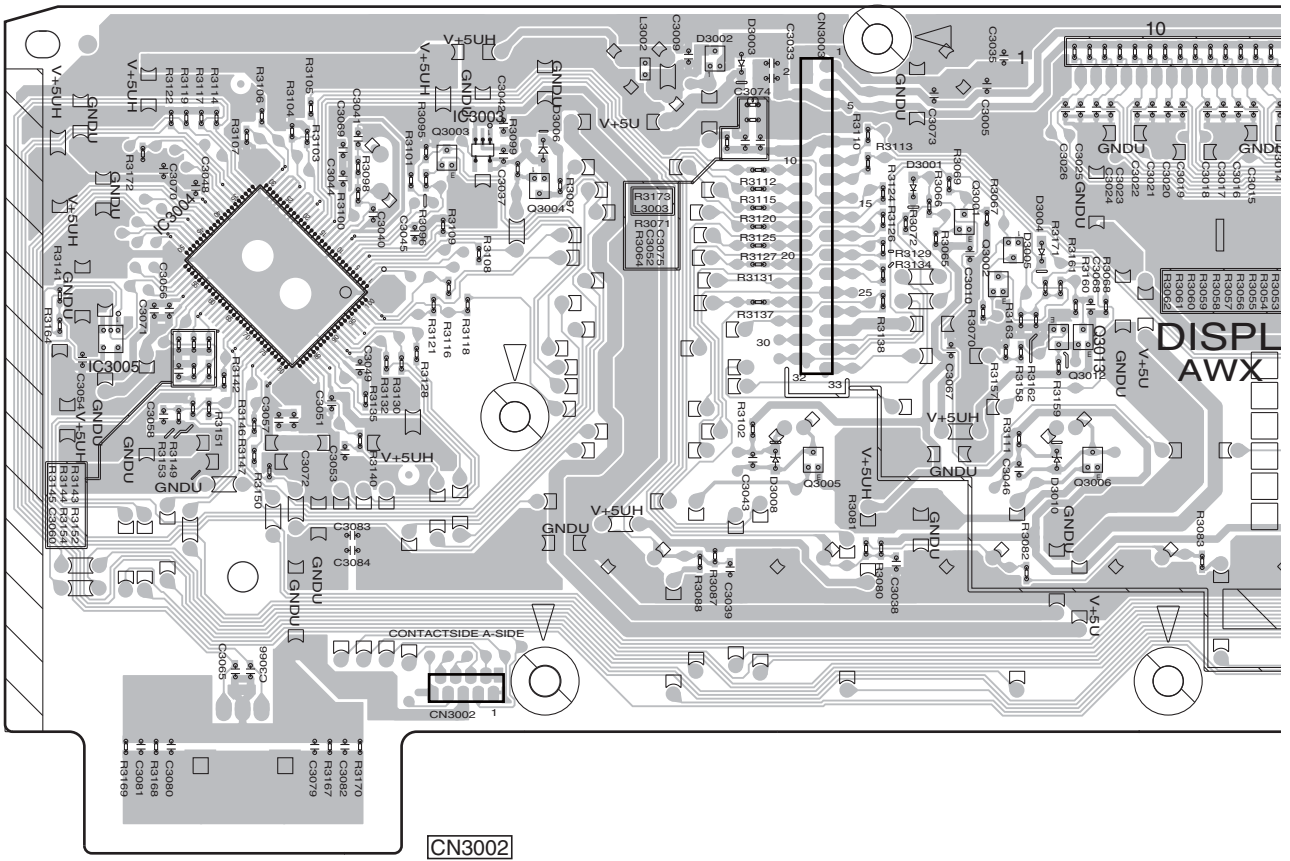
(ANP7643-C)

M N

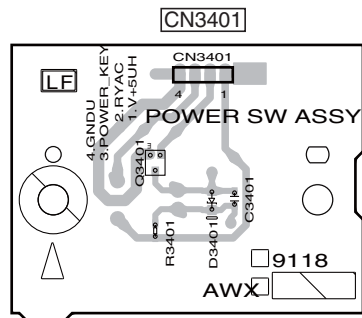
SIDE B

M DISPLAY ASSY

CN3003



O POWER SW ASSY



(ANP7643-C)

VSX-03TXH

SIDE B

A

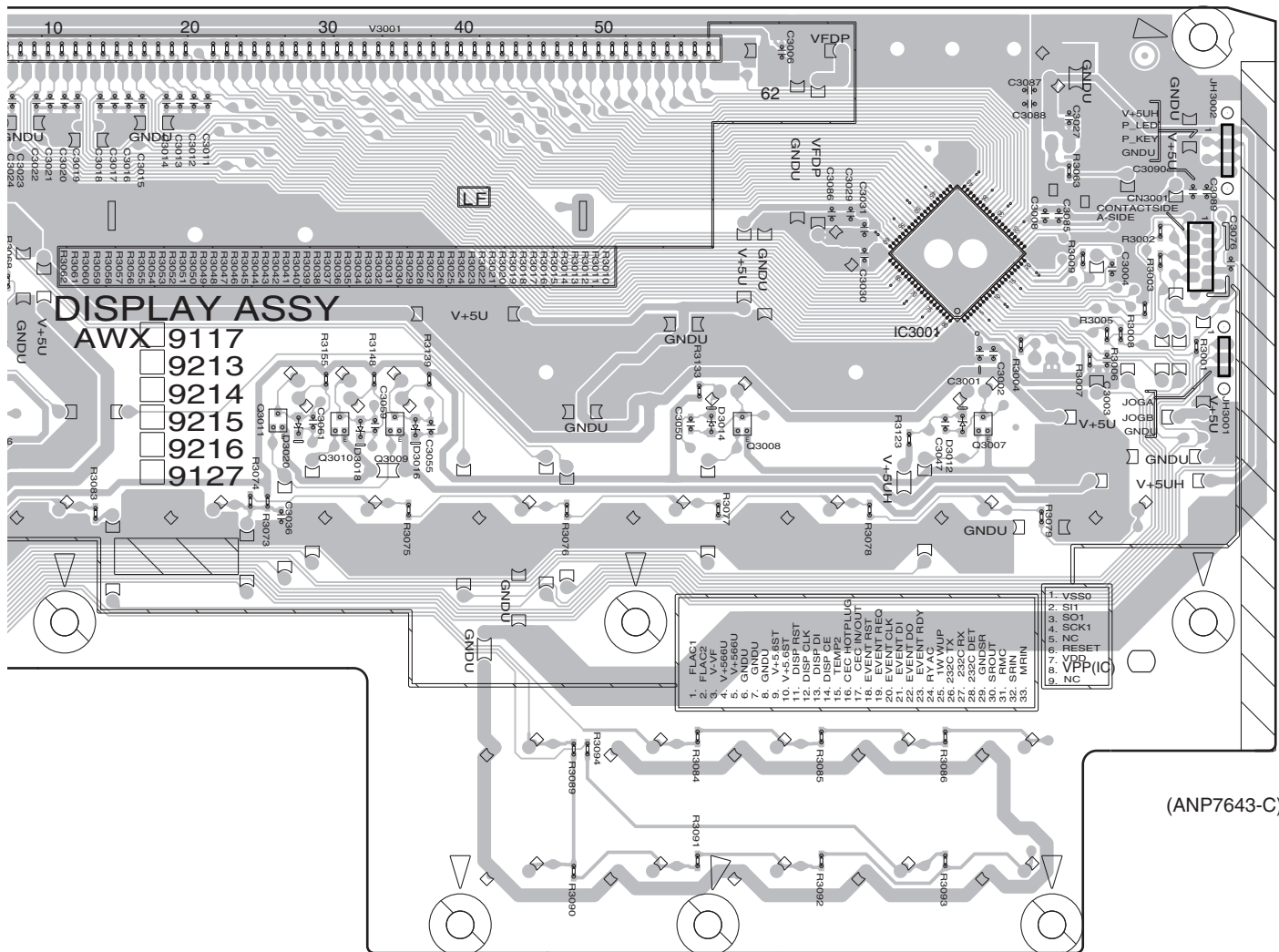
B

C

D

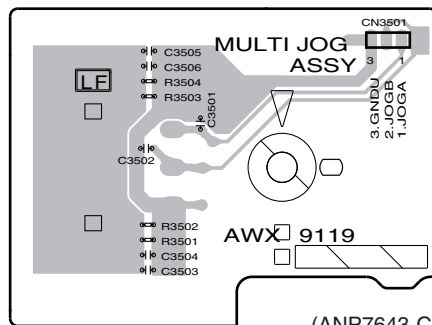
E

F



(ANP7643-C)

MULTI JOG ASSY



(ANP7643-C)

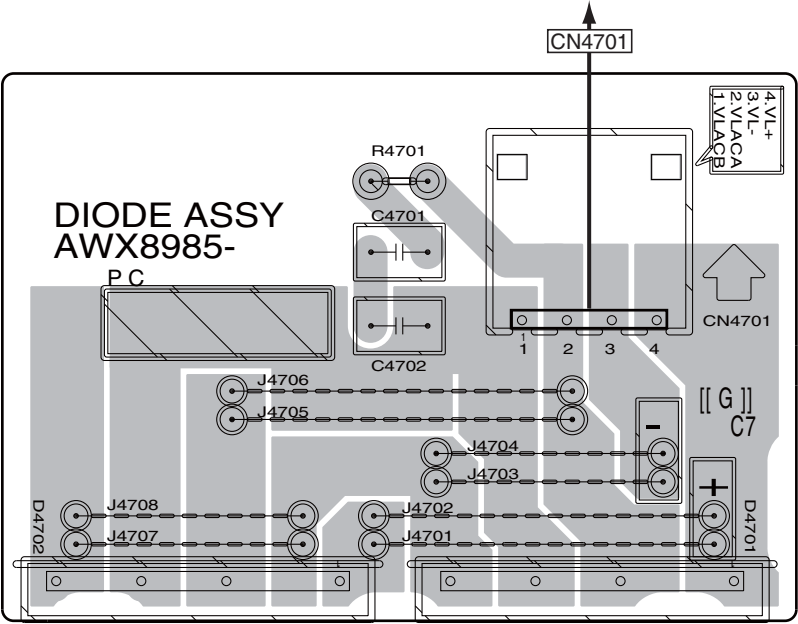
11.10 DIODE ASSY

SIDE A

SIDE A

P DIODE ASSY

R JP5701

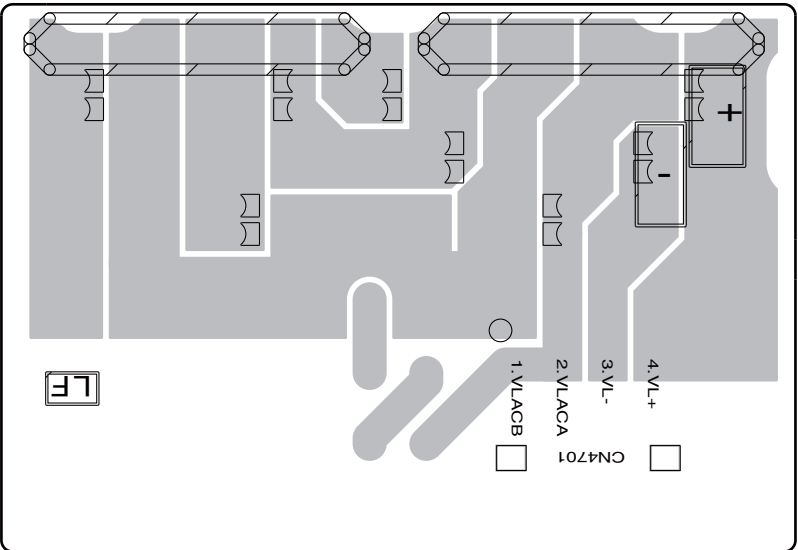


(ANP7642-B)

SIDE B

SIDE B

P DIODE ASSY



(ANP7642-B)

P

P

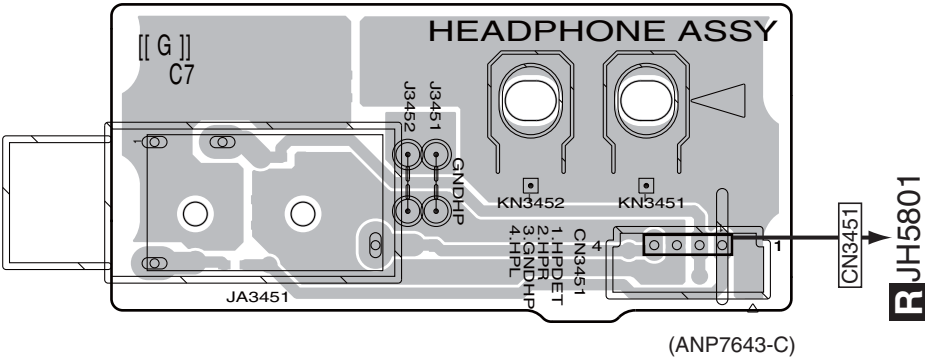
11.11 HEADPHONE ASSY

SIDE A

SIDE A

A

Q HEADPHONE ASSY



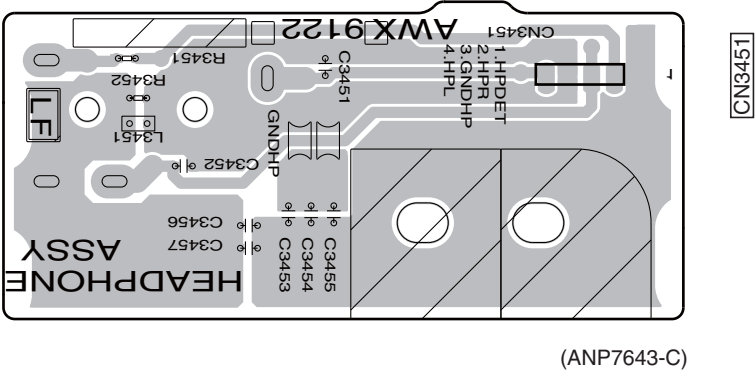
B

C

SIDE B

SIDE B

Q HEADPHONE ASSY



D

E

F

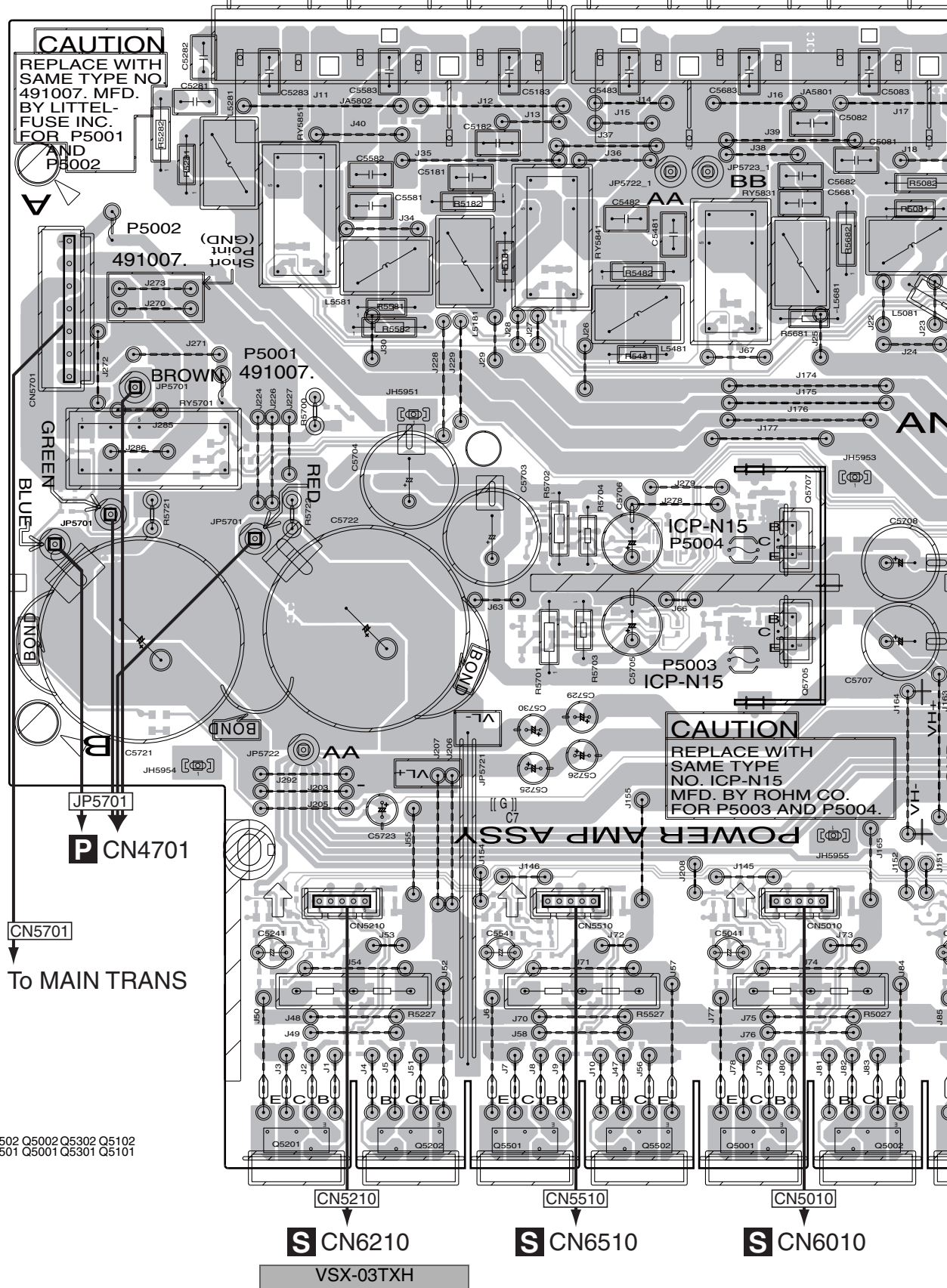
Q

Q

11.12 POWER AMP ASSY

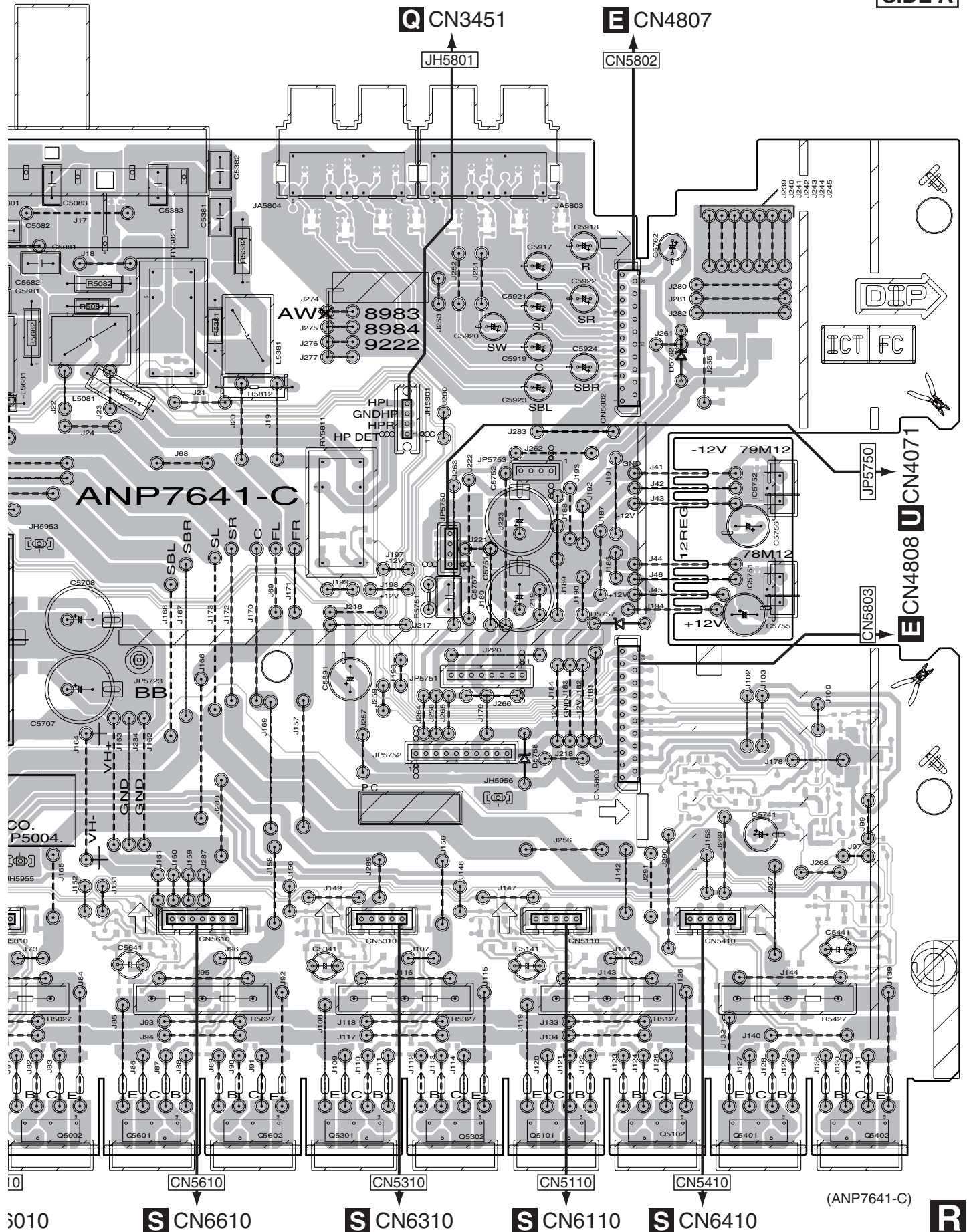
SIDE A

R POWER AMP ASSY



R

SIDE A



(ANP7641-C)

R

SIDE B

POWER AMP ASSY

CN5802

JH5801

IC Q

IC5763

Q5821
Q5841
Q5851

Q5831

Q5700
Q5811
Q5708

Q5703 Q5702

Q5706

Q5701

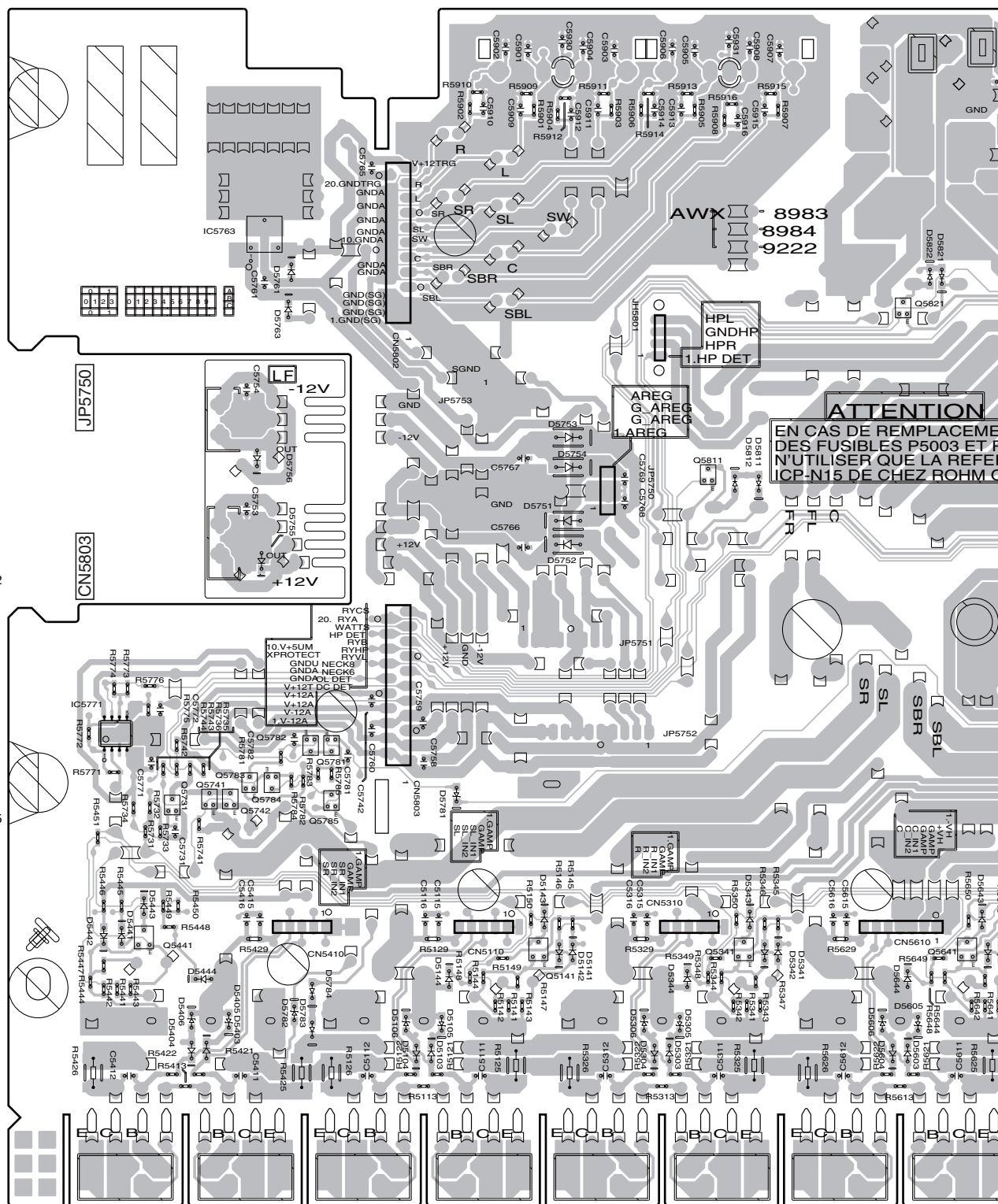
IC5771

Q5782
Q5781
Q5783
Q5741
Q5731
Q5784
Q5742
Q5785Q5541
Q5441 Q5041
Q5341 Q5641
Q5141 Q5241

F

R

160



CN5410

CN5110

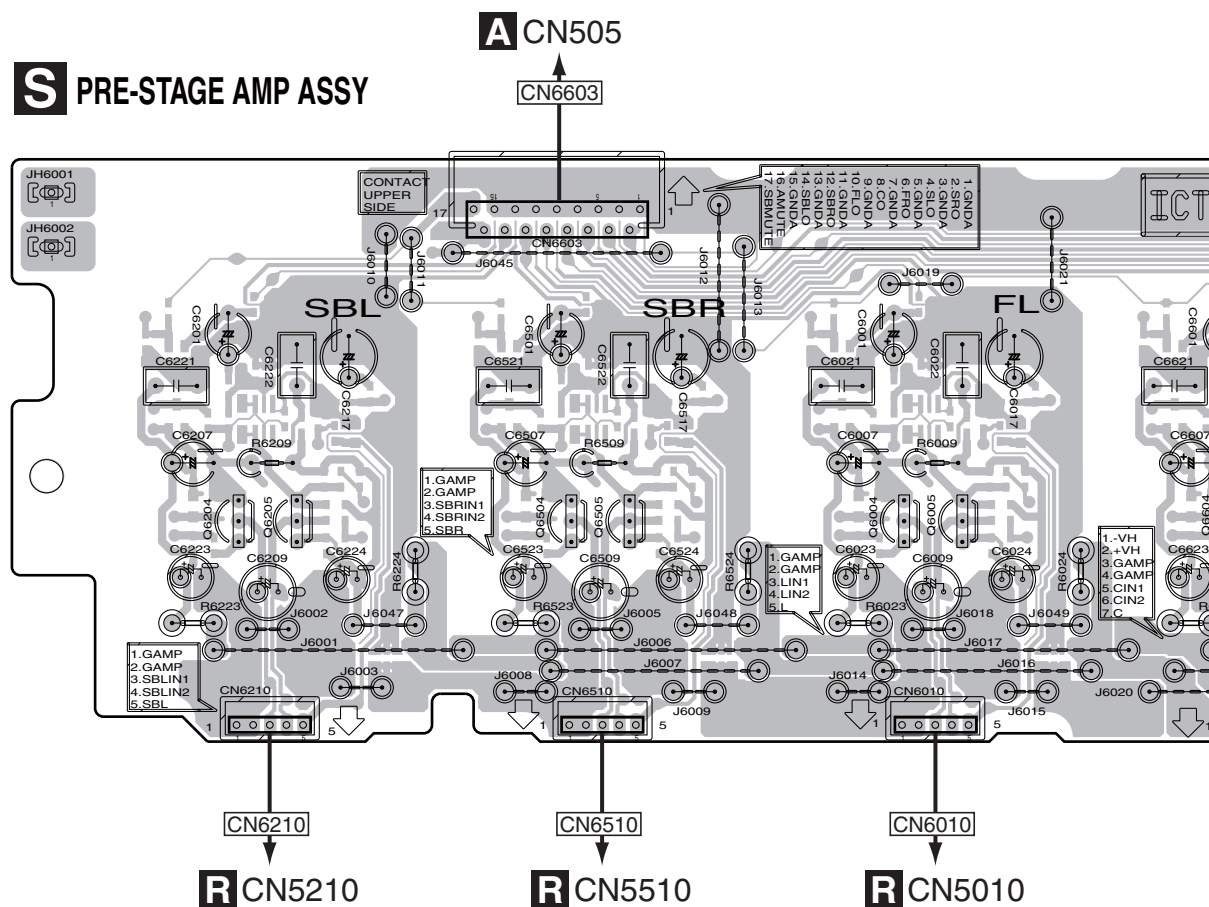
CN5310

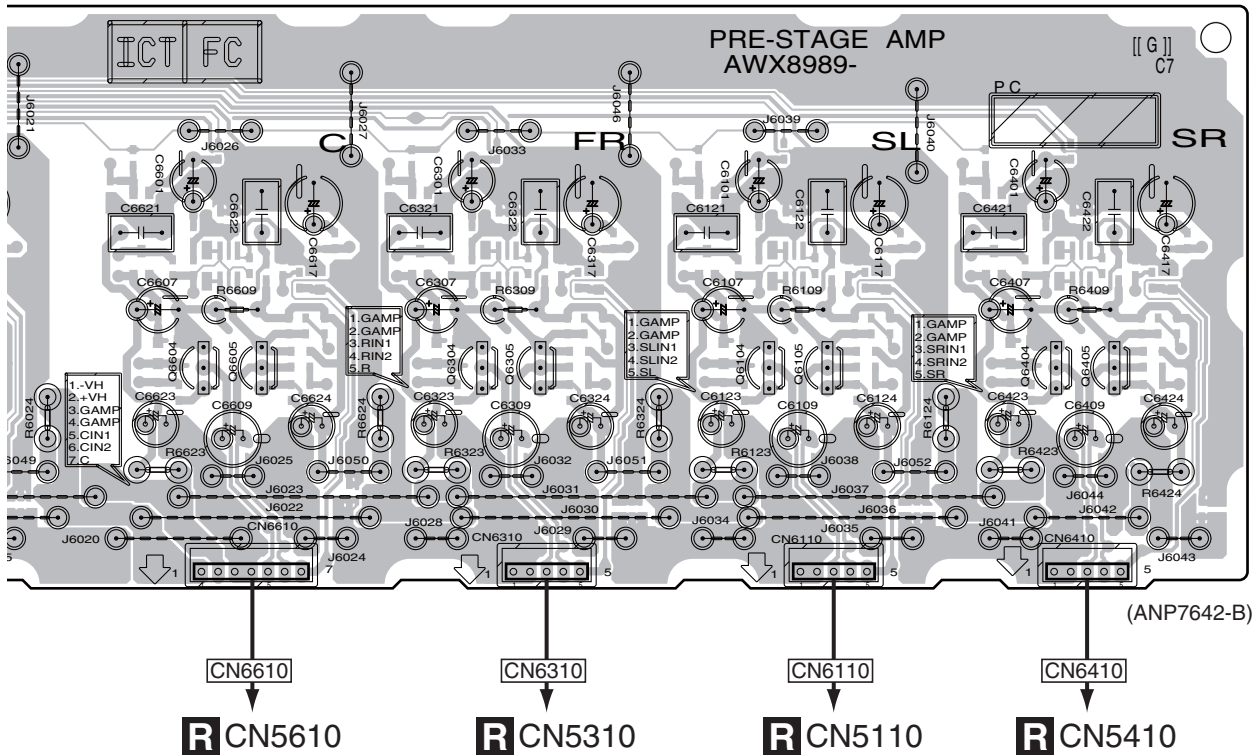
CN5610

VSX-03TXH

SIDE A

S PRE-STAGE AMP ASSY





SIDE B

A

B

C

D

E

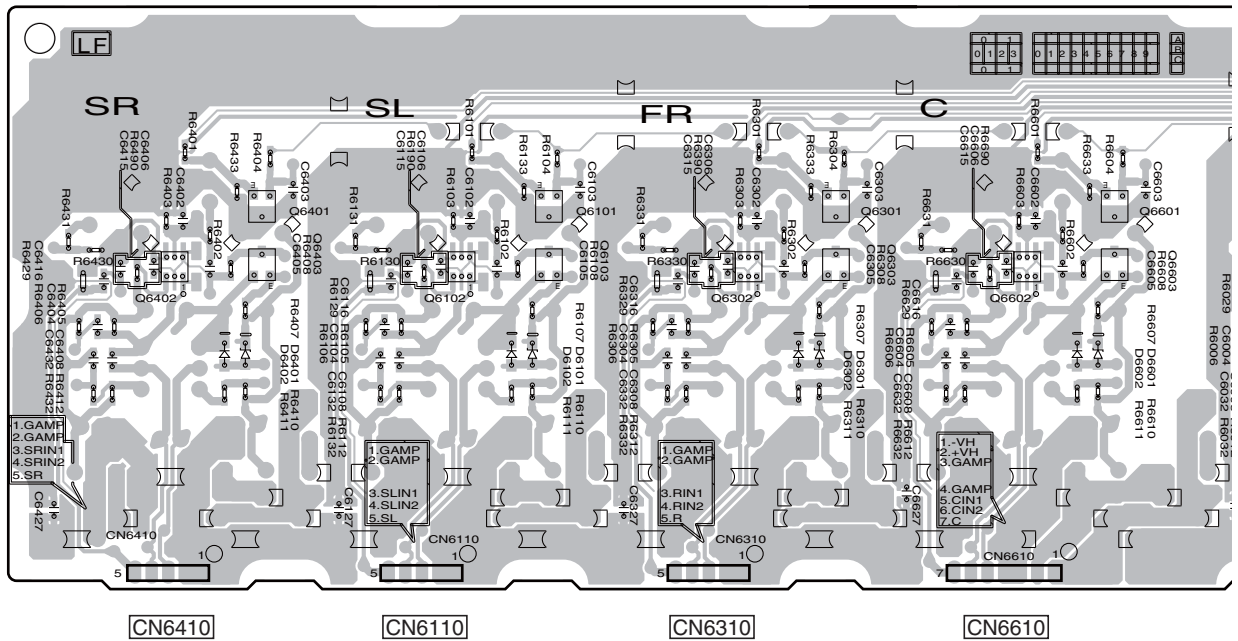
F

IC Q

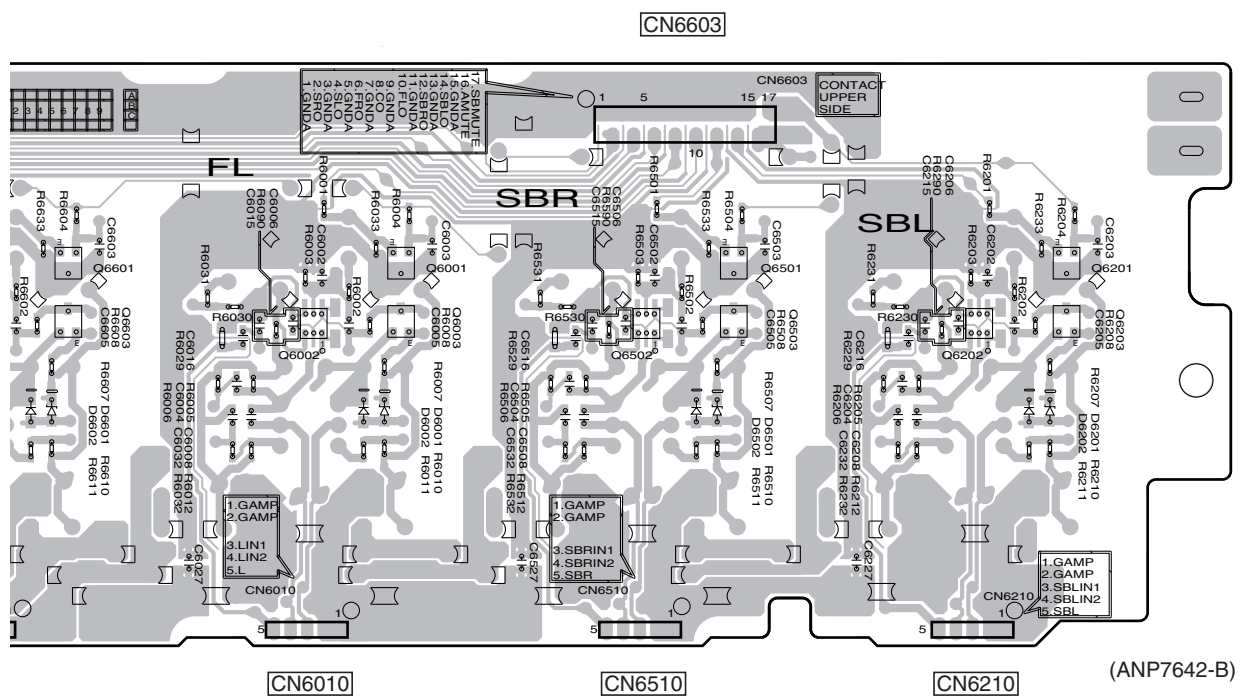
S PRE-STAGE AMP ASSY

Q6101 Q6601 Q6501
Q6401 Q6301 Q6001
Q6201

Q6403 Q6603 Q6503
Q6103 Q6303 Q6003
Q6203
Q6402 Q6302 Q6202
Q6102 Q6602 Q6002
Q6502



SIDE B



CN6603

(ANP7642-B)

VSX-03TXH

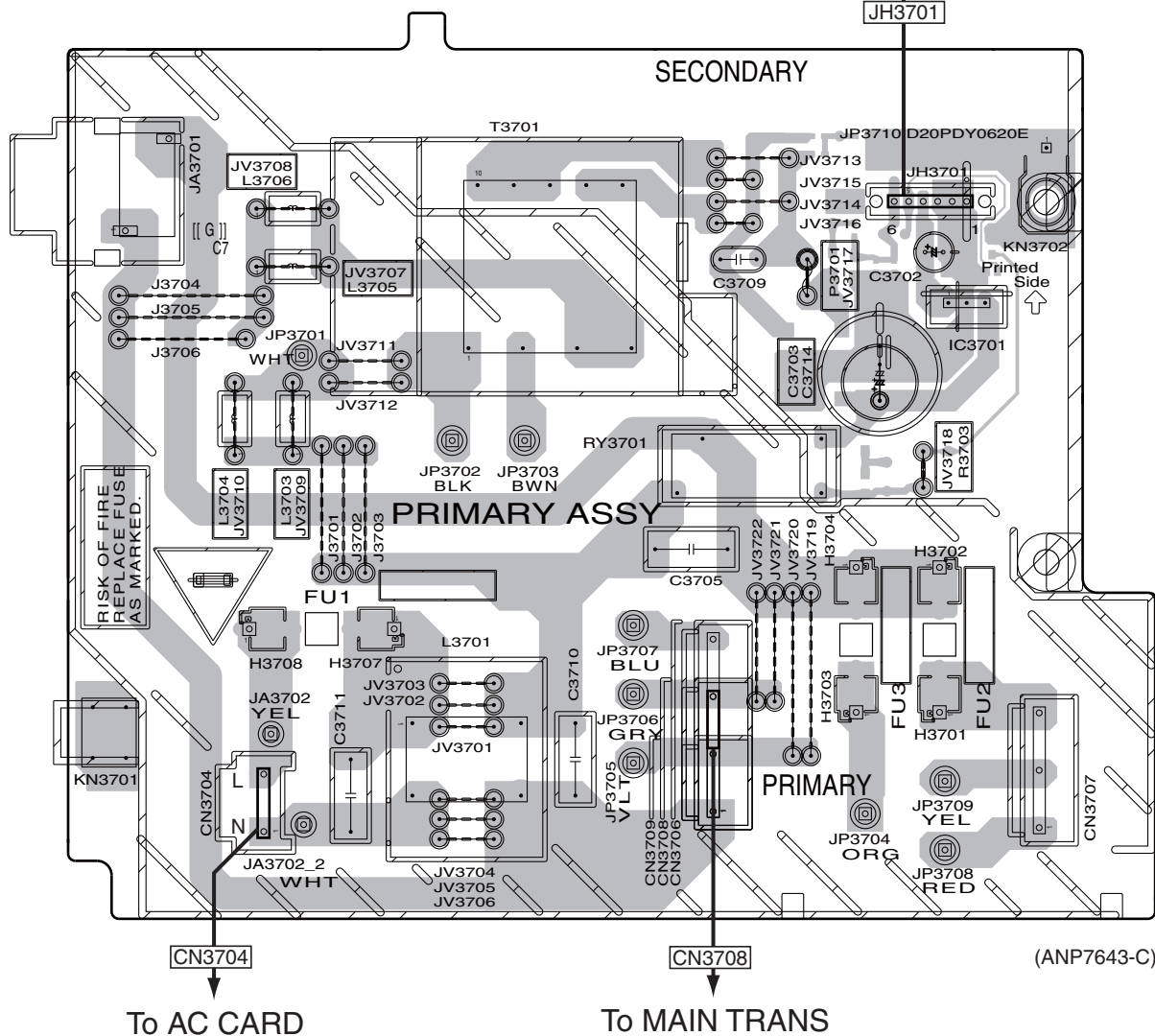
11.14 PRIMARY ASSY

SIDE A

SIDE A

T PRIMARY ASSY

B CN116



T

T

SIDE B

SIDE B

A

B

C

D

F

F

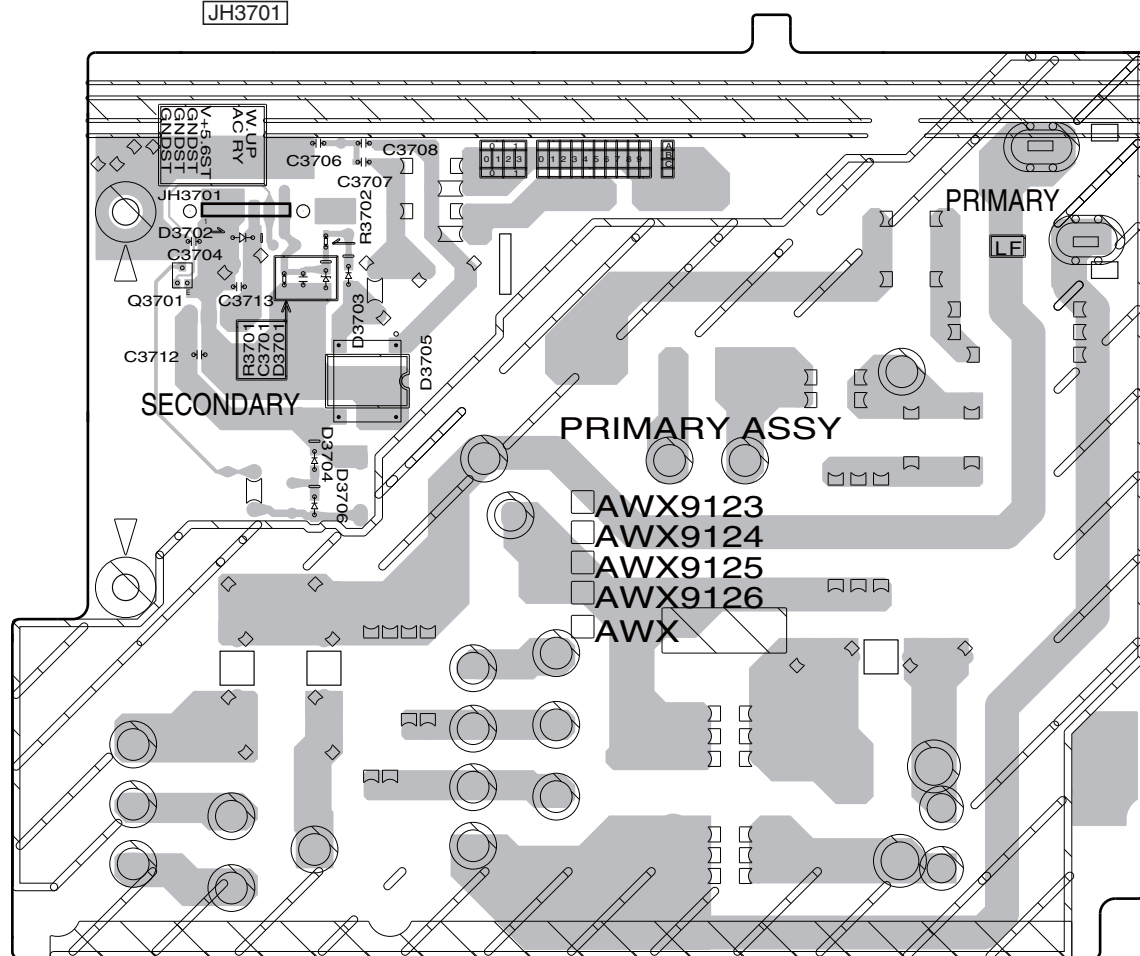
T PRIMARY ASSY

IC

Q

JH3701

Q3701



(ANP7643-C)

T

5

6

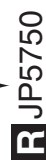
7

8

VSX-03TXH

T

SIDE A

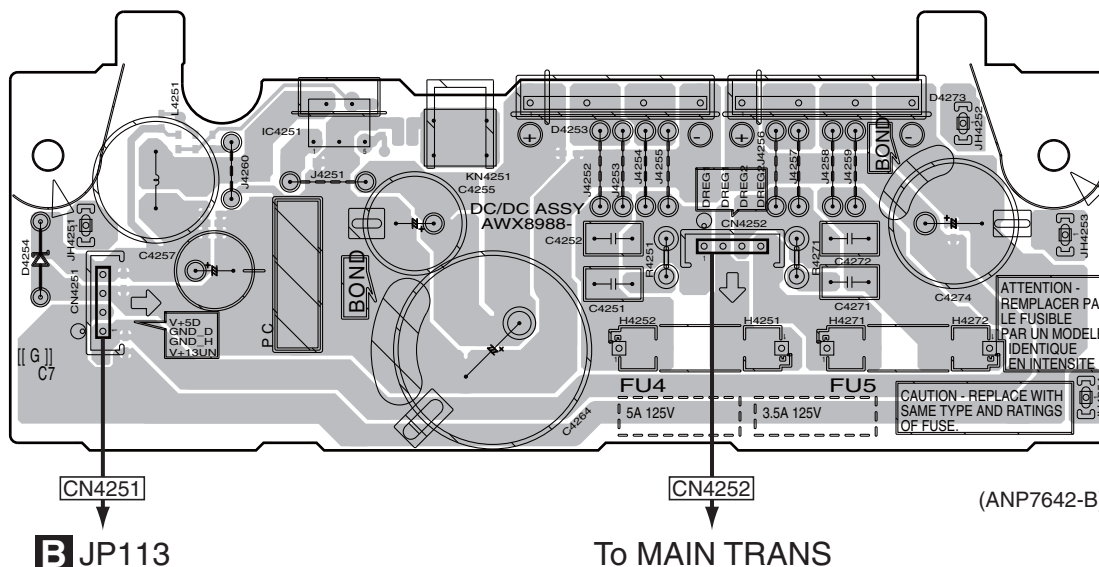
SIDE A

11.16 DC/DC ASSY

SIDE A

SIDE A

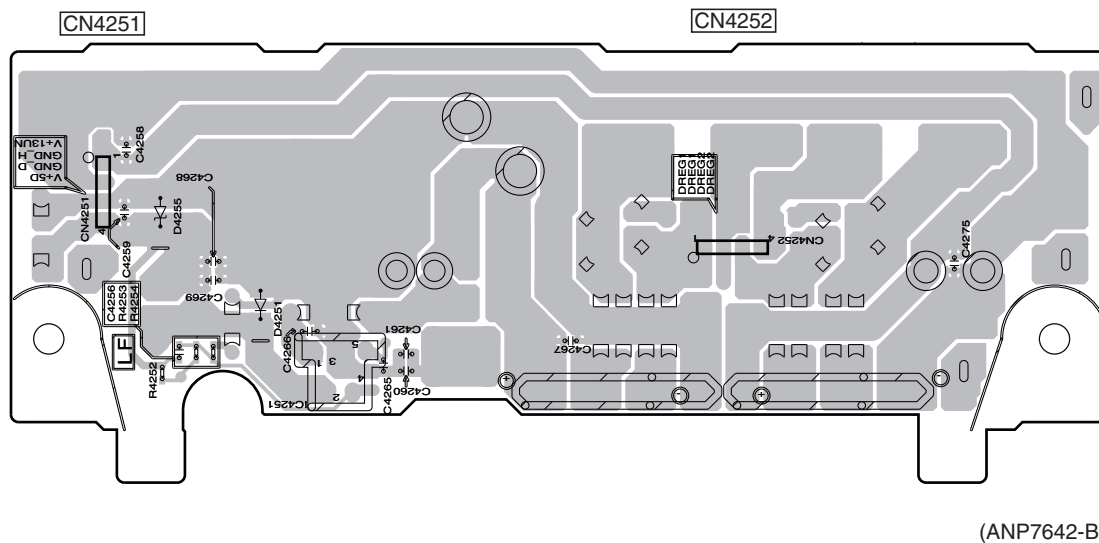
V DC/DC ASSY



SIDE B

SIDE B

V DC/DC ASSY



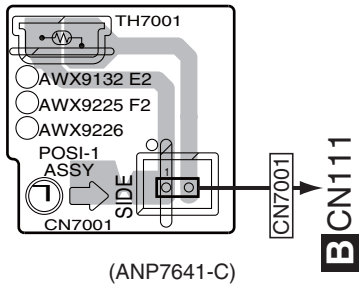
V

V

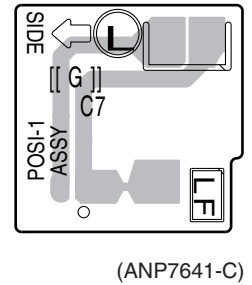
SIDE A

SIDE B

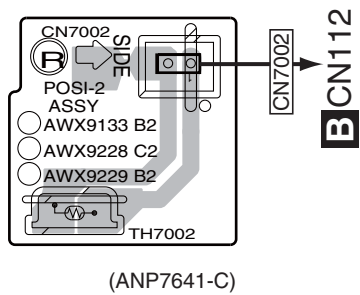
W POSI-1 ASSY



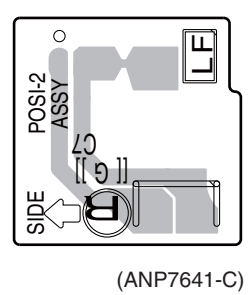
W POSI-1 ASSY



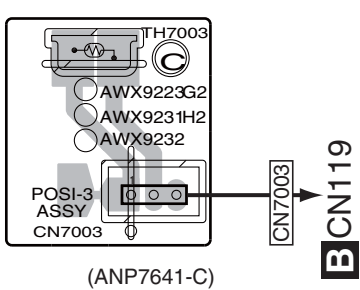
X POSI-2 ASSY



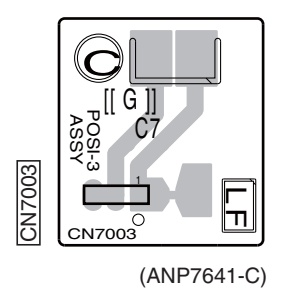
X POSI-2 ASSY



Y POSI-3 ASSY



Y POSI-3 ASSY



W X Y

W X Y

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

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
LIST OF ASSEMBLIES							
		1..MAIN ASSY(VSX-03TXH)	AWK8052			2..DC/DC ASSY	AWX8988
		1..MAIN ASSY(VSX-9130TXH)	AWK8069			2..PRE-STAGE AMP	AWX8989
		1..MAIN ASSY(VSX-01TXH)	AWK8056			2..INTERFACE ASSY(Except VSX-1018AH)	AWX8990
		1..MAIN ASSY(VSX-1018AH)	AWK8057			2..INTERFACE ASSY(VSX-1018AH)	AWX8993
		1..AUDIO IN ASSY	AWK8050				
NSP		1..COMPLEX ASSY(VSX-03TXH, 01TXH)	AWK8046	NSP		1..AMP ASSY	AWK8037
		1..COMPLEX ASSY(VSX-9130TXH, 1018AH)	AWK8067			2..POWER AMP ASSY	AWX8983
		2..DISPLAY ASSY(VSX-03TXH, 01TXH)	AWX9117			2..POS11 ASSY	AWX9132
		2..DISPLAY ASSY(VSX-9130TXH, 1018AH)	AWX9216			2..POS12 ASSY	AWX9133
		2..POWER SW ASSY	AWX9118			2..BIND_L_FRONT ASSY	AWX9217
		2..MULTI JOG ASSY	AWX9119			2..BIND_L_BACK ASSY	AWX9218
		2..BINDER ASSY	AWX9120			2..BIND_R_FRONT ASSY	AWX9219
		2..FRONT IN ASSY	AWX9121			2..BIND_R_BACK ASSY	AWX9220
		2..HEADPHONE ASSY	AWX9122			2..POS13 ASSY	AWX9223
		2..PRIMARY ASSY	AWX9123				
						1..HDMI & DVC ASSY(VSX-03TXH, 9130TXH)	AWX9170
						1..HDMI & DVC ASSY(VSX-01TXH, 1018AH)	AWX9233
						1..DSP & USB ASSY(VSX-03TXH, 9130TXH)	AWX9175
						1..DSP & USB ASSY(VSX-01TXH, 1018AH)	AWX9239
NSP		1..LOCAL POWER ASSY(Except VSX-1018AH)	AWK8041			1..FM/AM TUNER UNIT	AXX7250
NSP		1..LOCAL POWER ASSY(VSX-1018AH)	AWK8043				
		2..DIODE ASSY	AWX8985				
		2..REGULATOR ASSY	AWX8986				

CONTRAST OF PCB ASSEMBLIES

B MAIN ASSY

AWK8052, AWK8069, AWK8056 and AWK8057 are constructed the same except for the following:

Mark	Symbol and Description	AWK8052	AWK8069	AWK8056	AWK8057
	IC1201 Logic IC	TC74HC4051AFT	TC74HC4051AFT	TC74HC4051AFT	Not used
	IC1202 Logic IC	TC74HC4051AFT	TC74HC4051AFT	TC74HC4051AFT	Not used
	IC1203	TC74HC4053AFT	TC74HC4053AFT	TC74HC4053AFT	Not used
	IC1205 Video Amp IC	LA7109	LA7109	LA7109	Not used
	IC1271	LA7213	LA7213	LA7213	Not used
	Q1201,Q1202,Q1271	2SA1576A(QR)	2SA1576A(QR)	2SA1576A(QR)	Not used
	Q1277 Chip Transistor	DTC114EUA	DTC114EUA	DTC114EUA	Not used
	Q1278 Digital Transistor	DTC124EUA	DTC124EUA	DTC124EUA	Not used
	D1201,D1202	DAN202U	DAN202U	DAN202U	Not used
	D1277	1SS355	1SS355	1SS355	Not used

Mark	Symbol and Description	AWK8052	AWK8069	AWK8056	AWK8057
	JA1001,JA1002,JA1003 Comb.jack(2s+2p)	AKB7200	AKB7200	AKB7200	Not used
	JA1004 Comb.jack(s+1p)	AKB7199	AKB7199	AKB7199	Not used
	JA1101 Comb.jack(2p)	Not used	Not used	Not used	AKB7198
	JA1102 Comb.jack(2p)	Not used	Not used	Not used	AKB7198
	JA1103 Comb.jack(2p)	Not used	Not used	Not used	AKB7198
	JA1104 Comb.jack(1p)	Not used	Not used	Not used	AKB7197
	R180	RS1/16S473J	Not used	RS1/16S473J	Not used
	R182	RS1/16S473J	RS1/16S333J	RS1/16S473J	Not used
	R146,R183	Not used	RS1/16S104J	RS1/16S473J	RS1/16S473J
	R1201,R1202,R1203,R1204,R1205,R1206	RS1/16S750J	RS1/16S750J	RS1/16S750J	Not used
	R1207,R1208	RS1/16S750J	RS1/16S750J	RS1/16S750J	Not used
	R1225,R1226,R1227,R1229	RS1/16S103J	RS1/16S103J	RS1/16S103J	Not used
	R1231,R1232	RS1/16S0R0J	RS1/16S0R0J	RS1/16S0R0J	Not used
	R1233,R1234	RS1/16S473J	RS1/16S473J	RS1/16S473J	Not used
	R1236,R1237,R1239,R1240,R1241,R1242	RS1/16S750J	RS1/16S750J	RS1/16S750J	Not used
	R1251,R1255	RS1/16S154J	RS1/16S154J	RS1/16S154J	Not used
	R1252,R1256,R1272	RS1/16S124J	RS1/16S124J	RS1/16S124J	Not used
	R1253,R1257,R1274	RS1/16S102J	RS1/16S102J	RS1/16S102J	Not used
	R1263,R1264	RS1/16S0R0J	RS1/16S0R0J	RS1/16S0R0J	Not used
	R1273	RS1/16S473J	RS1/16S473J	RS1/16S473J	Not used
	R1275	RS1/16S331J	RS1/16S331J	RS1/16S331J	Not used
	R1276	RS1/16S224J	RS1/16S224J	RS1/16S224J	Not used
	R1277	RS1/16S103J	RS1/16S103J	RS1/16S103J	Not used
	R1278	RS1/16S473J	RS1/16S473J	RS1/16S473J	Not used
	R1280	RS1/16S223J	RS1/16S223J	RS1/16S223J	Not used
	C1201,C1202,C1203,C1204,C1205,C1206,C1207	CKSRYB104K16	CKSRYB104K16	CKSRYB104K16	Not used
	C1208,C1209,C1210,C1223,C1224,C1226,C1229	CKSRYB104K16	CKSRYB104K16	CKSRYB104K16	Not used
	C1225,C1227,C1251,C1256,C1276	CEAT101M10	CEAT101M10	CEAT101M10	Not used
	C1235,C1237,C1239,C1240,C1241,C1242	CCSRCH181J50	CCSRCH181J50	CCSRCH181J50	Not used
	C1253,C1254,C1257,C1258,C1277	CKSRYB103K50	CKSRYB103K50	CKSRYB103K50	Not used
	C1271	CEAT221M16	CEAT221M16	CEAT221M16	Not used
	C1483,C1484,C1485	CKSRYB104K16	CKSRYB104K16	CKSRYB104K16	Not used
	C1275 Elect. Capacitor	CEAT3R3M50	CEAT3R3M50	CEAT3R3M50	Not used
	C1278 Elect. Capacitor	CEAT220M50	CEAT220M50	CEAT220M50	Not used



DSP & USB ASSY

AWX9175 and AWX9239 are constructed the same except for the following:

Mark	Symbol and Description	AWX9175	AWX9239
	JA104 Opt. Link In	GP1FAV51RKBF	Not used
	R124 Resistor	RS1/16SS101J	Not used
	C118 Capacitor	CKSSYB104K10	Not used



INTERFACE ASSY

AWX8990 and AWX8993 are constructed the same except for the following:

Mark	Symbol and Description	AWX8990	AWX8993
	IC4821 RS232 IC	HIN202EIBNZ	Not used
	Q4831	2SC4081(QRS)	Not used
	Q4881,Q4883,Q4893	2SA1576A(QR)	Not used
	Q4882,Q4892	RT1N241M	Not used
	D4881	UDZS5R1(B)	Not used
	D4822	1SS352	Not used
	L4881 Chip Solid Inductor	ATL7002	Not used
	JA4821 9p D-sub Socket	AKP1213	Not used
	JA4881,JA4891	VKB1243	Not used
	CN4821 7p Connector	Not used	VKN1267

Mark	Symbol and Description	AWX8990	AWX8993
A	R4821,R4822,R4823,R4824	RS1/16S101J	Not used
	R4825,R4828	RS1/16S224J	Not used
	R4826	RS1/16S474J	Not used
	R4827,R4884	RS1/16S103J	Not used
	R4829	RS1/16S0R0J	Not used
	R4830	Not used	RS1/16S103J
	R4881	RS1/16S180J	Not used
	R4882	RS1/16S180J	Not used
	R4886,R4887,R4896,R4897	RS1/16S472J	Not used
	C4824,C4825,C4826,C4828,C4882	CKSRYB104K16	Not used
B	C4829,C4831,C4883,C4893	CKSRYB103K50	Not used
	C4830	CCSRCH331J50	Not used
	C4894	CKSRYB102K50	Not used
	C4895	CKSRYB472K50	Not used

F HDMI & DVC ASSY

AWX9170 and AWX9233 are constructed the same except for the following:

Mark	Symbol and Description	AWX9170	AWX9233
C	IC202 Zero Delay Buffer	ICS571MLF	Not used
	IC203	TC7WH74FU	Not used
	IC204,IC205	TC7WH157FU	Not used
	Q201 Chip Digital Trans.	DTA124EUA	Not used
	L201 Inductor	CTF1379	Not used
	L202,L203,L204 Chip Solid Inductor	ATL7002	Not used
	R207	RS1/16SS221J	Not used
	R208	RS1/16SS680J	Not used
	R209	RS1/16SS151J	Not used
	R210,R211	Not used	RS1/16SS0R0J
D	R212,R213	RS1/16SS101J	Not used
	R214	RS1/16SS473J	Not used
	R582,R583	RS1/16SS0R0J	Not used
	C203,C204 Capacitor	CKSSYB103K16	Not used
	C205,C206,C207 Capacitor	CKSSYB104K10	Not used
	C202	CEVW4R7M35	Not used

M DISPLAY ASSY

AWX9117 and AWX9216 are constructed the same except for the following:

Mark	Symbol and Description	AWX9117	AWX9216
E	Q3009,Q3011 Digital Transistor	DTC143EUA	Not used
	D3015,D3019 LED(blue)	SLR343BC4T(JKLM)	Not used
	D3017 LED(white)	SLR343WBCT(MNPQ)	SLR343BC4T(JKLM)
	R3139,R3155	RS1/16S151J	Not used
	R3148	RS1/16S561J	RS1/16S151J

PCB PARTS LIST FOR VSX-03TXH/KUXJ/CA UNLESS OTHER WISE NOTED

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
A		AUDIO IN ASSY					
		SEMICONDUCTORS					
	IC 501		BD3473KS2	D 501,502			DAN217U
	IC 502		TC4066BFT	D 581-586			UDZS6R2(B)
	IC 503		M61545FP	D 681			UDZS10(B)
	IC 701,702,741,761		NJM4565MD	MISCELLANEOUS			
	IC 781,801,821		NJM4565MD	JA 501 SOCKET			BKP1127
				JA 502,505-507 PIN JACK(4P)			AKB7048
F	Q 519,821,822,841		IMX25	JA 503,504 PIN JACK(6P)			AKB7050
	Q 681		2SD1664	CN 501 CONNECTOR			CKS3384
	Q 701		UMD2N	CN 502 17P SOCKET			XKP3059
	Q 842,861,862,881		IMX25	CN 503 15P SOCKET			XKP3090
	Q 882		IMX25	CN 504 23P CONNECTOR			52044-2345

5			7			8		
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.	
	CN 505	CONNECTOR	CKS3382	B	MAIN ASSY SEMICONDUCTORS			
	CN 506,507	11P CONNECTOR	52044-1145					
	JH 1	PCB BINDER	VEF1040					
RESISTORS								
	R 682		RD1/4MUF391J			IC 101	PEG479A8	
Other Resistors			RS1/16S###J			IC 201	BU4842F	
						IC 202	BR24L64F-W	
						IC 301,306	TC74VHCT125AFTS1	
						IC 302	TC74VHC02FTS1	
CAPACITORS						IC 303,401	TC74VHC08FTS1	
	C 501,502,505,506		CCSRCH101J50			IC 304,305	TC74VHC125FTS1	
	C 503,504,507,508		CCSRCH221J50			IC 402	TC74VHCT08AFTS1	
	C 509-512,515-518		CCSRCH101J50			IC 1001,1002,1201,1202	TC74HC4051AFT	
	C 513,514,833		CCSRCH221J50			IC 1003,1203	TC74HC4053AFT	
	C 519,520,705-708		CCSRCH331J50					
	C 521,522,525,526		CCSRCH151J50			IC 1004,1205	LA7109	
	C 529-532,535-538		CCSRCH151J50			IC 1005,1405	BU4094BCFV	
	C 539,540,565,566		CCSRCH101J50			IC 1006	PDC162A	
	C 541,542,545,546		CEAT470M25			IC 1271	LA7213	
	C 543,544,547,548		CEAT100M50	IC 1401,1402	TC74LVX4052FT			
	C 549-552,555-558		CEAT470M25	IC 1403	TC74LVX4053FT			
	C 553,554,568,709		CEAT100M50	IC 1404	NJM2581M			
	C 559-562,701,702		CEAT2R2M50	Q 101,102	UMB1N			
	C 567,597-599,699		CKSRYB103K50	Q 103-105,282	DTA124EUA			
	C 569,632-635,639		CKSRYB104K16	Q 281,1278,1505,1507	DTC124EUA			
	C 591,592		CEAT101M25	Q 301-303,1506,1508	DTA124EUA			
	C 601,602,621-628		CEAT470M25	Q 381,1277	DTC114EUA			
	C 631,636		CKSRYB222K50	Q 411,1002,1503	2SC4081			
	C 637,638,829,830		CCSRCH101J50	Q 1001,1201,1202,1271	2SA1576A			
	C 641,719,720,832		CKSRYB104K16	Q 1403-1405,1504	2SA1576A			
	C 684		CEAT101M16	Q 1501	2SD1664			
	C 697		CKSRYB105K16	Q 1502	2SB1132			
	C 698		CKSRYB104K50	Q 1509	DTC124EUA			
	C 703,704,825,826		CCSRCH471J50	Q 1510	DTA124EUA			
	C 710,713,714,749		CEAT100M50	D 291,1005	DAP202U			
	C 717,718,721,722		CKSRYB103K50	D 292,304,1001-1003	DAN202U			
	C 741,742,761,762		CEAT2R2M50	D 296	UDZS5R1(B)			
	C 743,745,763-766		CCSRCH331J50	D 303,334,1004,1277	1SS355			
	C 744		CKSRYB223K50	D 305	RB520S-30			
	C 746,753,754,773		CKSRYB103K50	D 411	UDZS3R9(B)			
	C 747,767,768,787		CCSRCH391J50	D 1201,1202	DAN202U			
	C 748		CKSRYB562K50					
	C 750,769,770,789		CEAT100M50					
	C 751,752,771,772		CKSRYB472K50					
	C 774,793,794,813		CKSRYB103K50					
	C 781,782,801,802		CEAT2R2M50					
	C 783-786,803-806		CCSRCH331J50					
	C 788,807,808		CCSRCH391J50					
	C 790,809,810		CEAT100M50					
	C 791,792,811,812		CKSRYB472K50					
	C 814,831,871		CKSRYB103K50					
	C 827,828,847,848		CEAT470M25					
	C 834,835,872		CKSRYB104K16					
	C 836		CEAT4R7M50					
	C 845,846,865,866		CCSRCH471J50					
	C 849,850,869,870		CCSRCH101J50					
	C 867,868,887,888		CEAT470M25					
	C 885,886		CCSRCH471J50					
	C 889,890		CCSRCH101J50					
	C 902-909		CCSRCH391J50					

Mark No. Description

JH 101 PCB BINDER
 JP 113 4P HOUSING WIRE ASSY
 JP 116 CONNECTOR ASSY
 JP 117 CONNECTOR ASSY

RESISTORS

All Resistors

CAPACITORS

C 101,104-107,109
 C 102,117
 C 108,116,118,126
 C 123,129-133,141
 C 124,452,454,464

C 140,142
 C 201
 C 202,1035,1036,1039
 C 291,292,421,1063
 C 296,412,1441,1445

C 301-306,381,401
 C 382
 C 402,411,432,451
 C 453,461-463,471
 C 465,472

C 1005-1010,1013,1014
 C 1011,1012,1016,1018
 C 1020,1022,1024,1026
 C 1034,1061,1062,1225
 C 1041,1201-1210,1223

C 1050
 C 1064
 C 1065,1066
 C 1067,1068
 C 1069-1071,1076

C 1073,1253,1254,1257
 C 1074,1075
 C 1224,1226,1229
 C 1227,1251,1256,1276
 C 1235,1237,1239-1242

C 1258,1265,1277,1442
 C 1271
 C 1275
 C 1278
 C 1411-1416,1425,1426

C 1420-1424,1487
 C 1443,1446,1447,1452
 C 1451
 C 1453,1475
 C 1481,1483-1485

C 1482
 C 1501-1504
 C 1505-1507

Part No.

VEF1040
 ADX7652
 PF07PG-R40
 PF09PG-R35

RS1/16S###J

CKSRYB104K16
 CEAT101M16
 CKSRYB103K50
 CKSRYB104K16
 CKSRYB102K50

CCSRCH471J50
 CKSRYB105K16
 CKSRYB103K50
 CKSRYB473K25
 CEAT100M50

CKSRYB104K16
 CEAT471M6R3
 CKSRYB104K16
 CKSRYB104K16
 CKSRYB102K50

CKSRYB104K16
 CEAT101M10
 CCSRCH181J50
 CEAT101M10
 CKSRYB104K16

CCSRCH561J50
 CKSRYB473K25
 CCSRCH5R0C50
 CCSRCH240J50
 CCSRCH101J50

CKSRYB103K50
 CKSRYB122K50
 CKSRYB104K16
 CEAT101M10
 CCSRCH181J50

CKSRYB103K50
 CEAT221M16
 CEAT3R3M50
 CEAT220M50
 CKSRYB104K16

CEAT101M10
 CKSRYB103K50
 CEAT100M50
 CKSRYB103K50
 CKSRYB104K16

CKSRYB561K50
 CKSRYB224K10
 CKSRYB104K16

AK4114VQ
 AAT4618IGV-0.5-1
 BU9450KV
 TC74VHC157FTS1
 TC74LCX157FTS1

Mark No. Description

IC 205
 IC 301
 IC 302
 IC 303,304
 IC 305,751

IC 401
 IC 501
 IC 503
 IC 591
 IC 601,621,641,661

IC 681
 IC 701
 IC 702,703
 ⚠ IC 704
 ⚠ IC 705

IC 801
 IC 808
 Q 201,561
 Q 601
 Q 871

Q 872
 D 131,132
 D 561
 D 591
 D 592

MISCELLANEOUS

L 101,102 CHIP SOLID INDUCTOR
 L 106,132 CHIP SOLID INDUCTOR
 L 131,706 CHIP SOLID INDUCTOR
 L 201-203 CHIP SOLID INDUCTOR
 L 205,311 CHIP SOLID INDUCTOR

L 321,331 CHIP SOLID INDUCTOR
 L 341,401 CHIP SOLID INDUCTOR
 L 403,404 CHIP SOLID INDUCTOR
 L 511,521 CHIP SOLID INDUCTOR
 L 531,561 CHIP SOLID INDUCTOR

L 591,592 CHIP SOLID INDUCTOR
 L 601,621 CHIP SOLID INDUCTOR
 L 641,661 CHIP SOLID INDUCTOR
 L 681 CHIP SOLID INDUCTOR
 L 701-703 CHIP SOLID INDUCTOR

L 705 POWER INDUCTOR
 L 707 CHIP BEADS
 L 709,710 CHIP SOLID INDUCTOR
 L 751,801 CHIP SOLID INDUCTOR
 L 803 COIL

L 804 CHIP FERRITE BEADS
 L 851,881 CHIP SOLID INDUCTOR
 JA 101 PIN JACK(2P)
 JA 102-104 OPT. LINK IN
 JA 105 OPT. LINK IN

JA 131 4P SOCKET
 X 131 CRYSTAL RESONATOR (45.1584MHz)
 X 531 CRYSTAL RESONATOR (24.576MHz)
 X 801 CRYSTAL OSCILLATOR (12MHz)
 X 881 CRYSTAL OSCILLATOR (32.768kHz)

CN 401 7P CONNECTOR
 CN 601 CONNECTOR
 CN 701,704 23P SOCKET
 CN 703 CONNECTOR

Part No.

TC74VHC125FTS1
 HY57V641620FTP-6
 AYW7213
 TC74LCX573FTS1
 TC7SH32FUS1

DSPA56720AG
 TC74LCX08FTS1
 TC74VHC04FT
 AK5358AET
 WM8728SEDS

AK4388ET
 TC74VHC08FTS1
 TC74VHCT541AFTS1
 BD9107FVM
 PQ1LAX95MSPQ

PDC180A8
 341S2154
 DTC124EUA
 RTQ025P02
 2SA1577

DTC143EUA
 UDZS5R6(B)
 1SS352
 MA152WK
 MA152WA

QTL1013
 QTL1013
 ATL7002
 QTL1013
 QTL1013

QTL1013
 QTL1013
 QTL1013
 QTL1013
 QTL1013

QTL1013
 QTL1013
 QTL1013
 QTL1013
 QTL1013

ATH7047
 ATL7010
 ATL7002
 QTL1013
 VTH1043

VTL1169
 QTL1013
 AKB7173
 GP1FAV51RKB
 GP1FAV51TK0F

AKP7201
 ASS7065
 XSS3003
 CSS1614
 ASS1172

VKN1411
 9604S-23C
 XKP3055
 CKS4898

DSP & USB ASSY
SEMICONDUCTORS

IC 101
 ⚠ IC 102,802
 IC 103
 IC 201,202,502,851
 IC 203

D FRONT IN ASSY
SEMICONDUCTORS

MISCELLANEOUS

L 3631	CHIP SOLID INDUCTOR	QTL1013	
JA 3601	PIN JACK(3P)	AKB7194	
JA 3631	OPTICAL IN MOD.	GP1FMV51RK0F	
JA 3641	USB CONNECTOR	XKP3086	
JA 3651	JACK	VKB1243	
KN 3601,3651	WRAPPING TERMINAL	VNF1084	
CN 3601	CONNECTOR	CKS3376	
CN 3602	PLUG(9P)	KM200NA9	F

RESISTORS

All Resistors RS1/16S###J

Mark No. Description**Part No.****Mark No. Description****Part No.****CAPACITORS**

A

C 3601,3602	CKSRYB221K50
C 3603,3604,3652,3656	CEAT100M50
C 3605,3606,3653	CCSRCH101J50
C 3609,3610	CEAT470M25
C 3611,3612,3615,3663	CKSRYB103K50

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C 3613,3614	CEAT330M25
C 3631,3643	CKSRYB104K16
C 3644	CEAT101M16
C 3651	CKSRYB471K50
C 3654,3655	CCSRCH330J50

B

C 3662,3665,3666	CEAT100M50
C 3664,3671,3681,3687	CKSRYB103K50
C 3673,3682,3688	CKSRYB223K50
C 3675	CKSRYB102K50

**INTERFACE ASSY
SEMICONDUCTORS**

C

IC 4821	HIN202EIBNZ
⚠ Q 4801	2SD1858X
⚠ Q 4802	2SB1238X
Q 4831	2SC4081
Q 4881,4883,4893	2SA1576A
Q 4882,4892	RT1N241M
D 4801,4802	UDZS7R5(B)
D 4821,4822,4871	1SS352
D 4881	UDZS5R1(B)

MISCELLANEOUS

D

L 4821,4841 CHIP SOLID INDUCTOR	QTL1013
L 4851-4854 CHIP SOLID INDUCTOR	QTL1013
L 4861,4871 INDUCTOR	CTF1473
L 4862 INDUCTOR	CTF1385
L 4872 CHIP SOLID INDUCTOR	QTL1013

■

L 4881 CHIP SOLID INDUCTOR	ATL7002
JA 4821 9P D-SUB SOCKET	AKP1213
JA 4841,4861,4881,4891 JACK	VKB1243
JA 4851 MINI JACK(4P) /W SW	XKN3015
JA 4871 CONNECTOR	CKS4124

E

KN 4841,4881 SCREW PLATE	VNE1948
CN 4801,4803 19P SOCKET	XKP3054
CN 4802 11P SOCKET	XKP3089
CN 4804 CONNECTOR	CKS3384
CN 4805 15P PLUG	XKM3010
CN 4806 17P PLUG	XKM3007
CN 4807,4808 21P SOCKET	XKP3091
CN 4809 11P CONNECTOR	52044-1145

RESISTORS

All Resistors	RS1/16S###J
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CAPACITORS

F

C 4803,4804	CEAT2R2M50
C 4805,4806	CEAT100M50
C 4811,4812,4885,4895	CKSRYB472K50
C 4821	CEAT101M16
C 4822,4829,4831,4844	CKSRYB103K50

C 4824-4826,4828,4843	CKSRYB104K16
C 4830	CCSRCH331J50
C 4842,4862,4871	CCSRCH471J50
C 4861,4882	CKSRYB104K16

**HDMI & DVC ASSY
SEMICONDUCTORS**

IC 101	SII9135CTU
IC 151	TC74VHC126FTS1
IC 201	TC74VHC541FTS1
IC 202	ICS571MLF
IC 203	TC7WH74FU

IC 204,205	TC7WH157FU
IC 251	TC74LCX157FTS1
IC 301	SII9134CTU
IC 401	ADV7800BSTZ-80
IC 402	TC7WHU04FU

IC 501	PEG118A
IC 502	AYW7243
IC 504	BU4094BCFV
IC 505	TC7WH125FU
IC 506	TC7WT125FU

IC 601	ADV7172KSTZ
⚠ IC 1001	BD9011KV
⚠ IC 1051	PQ200WNA1ZPH
⚠ IC 1071	NJM78M05DL1A
IC 1151	CXB1442AR

IC 1203,1251,1253	S-24CS02AFT
IC 1204,1252,1254	TC7MB3257FK
IC 1255,1257	TC7WBD125AFK
IC 1301	FLI2310-LF-CF
IC 1351	IS42S32200E-6TL

IC 1381,1383,1384	TC74LCX541FTS1
Q 152,352,1102,1151	DTC114YUA
Q 201	DTA124EUA
Q 351	UMB1N
Q 631,641,651,661	2SA1576A

Q 671,681,1051	2SA1576A
⚠ Q 1001,1002	SP8K1
Q 1052	DTC124EUA
Q 1152,1154,1202	DTC114YUA
Q 1153	2SB1689

Q 1251-1253	DTC114YUA
Q 1281	HN1K02FU
D 301	UDZS5R1(B)
D 551	RB501V-40
D 1001,1002	RB160VA-40

⚠ D 1003,1004	RLZ5.6B
⚠ D 1071	RLZ6.8B
D 1102,1151,1152	DAN202U

MISCELLANEOUS

L 101-104,301-305 CHIP BEADS	ATL7010
L 105,106 CHIP SOLID INDUCTOR	QTL1013
L 201 INDUCTOR	CTF1379
L 202-204 CHIP SOLID INDUCTOR	ATL7002
L 207,251 CHIP FERRITE BEADS	VTL1169

L 351-354 COIL	ATH7022
L 401,402,404,406 CHIP BEADS	ATL7010
L 403,405 CHIP SOLID INDUCTOR	QTL1013
L 501,601 CHIP SOLID INDUCTOR	ATL7002

5			7			8		
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.	
L	602	CHIP SOLID INDUCTOR	ATL7002	C	127,320,463,1339		CCSSCH120J50	
L	631,641,651,661	INDUCTOR	ATL7015	C	128,462		CCSSCH100D50	
L	671,681	INDUCTOR	ATL7015	C	129,130,133,307		CKSSYB105K6R3	
L	1001,1151	CHIP BEADS	ATL7010	C	132,134-139,151		CKSSYB104K10	
L	1002	INDUCTOR	DTL1135					
L	1003	INDUCTOR	ATL7013	C	153,203,204,308		CKSSYB103K16	
				C	201,205-207,251		CKSSYB104K10	
				C	202		CEVW4R7M35	
L	1092,1093	INDUCTOR	CTF1386	C	210		CKSSYB471K50	
L	1301-1305	CHIP SOLID INDUCTOR	ATL7002	C	306,309,311,313		CKSSYB104K10	
L	1351	CHIP SOLID INDUCTOR	ATL7002					
JA	301	HDMI CONNECTOR	AKP7220	C	310,312,314		CKSSYB105K6R3	
JA	1102,1151,1152	HDMI CONNECTOR	AKP1318	C	315,316,351,403		CKSSYB104K10	
				C	317-319,404,433		CKSSYB105K6R3	
X	101	CRYSTAL RESONATOR (28.322MHz)	ASS7085	C	401,402,419,434		CEVW101M16	
X	401	CRYSTAL RESONATOR (28.63636MHz)	ASS7069	C	405-411,418,420		CKSSYB104K10	
X	501	CERAMIC RESONATOR (15.7MHz)	XSS3004					
X	1301	CRYSTAL RESONATOR (13.5MHZ)	ASS7070	C	412,414,435,436		CKSSYB103K16	
CN	1001,1002	CONNECTOR	CKS4898	C	413		CKSSYB823K10	
				C	415		CKSRYB824K10	
				C	416		CKSSYB393K10	
				C	417		CKSQYB106K6R3	
RESISTORS								
R	101,103-105		RAB4CQ220J					
R	108		RAB4CQ100J					
R	115,1385-1388,1394		RAB4CQ680J	C	421,1004,1006		CKSSYB102K50	
R	119,331,333-341		RAB4CQ473J	C	422-429,431,437		CKSSYB104K10	
R	130-132,134-136		RAB4CQ220J	C	430,432,1073,1302		CEVW100M16	
				C	438,441-443		CKSSYB104K10	
				C	439,440,1056,1303		DCH1201	
R	141-144		ACN1275					
R	204		RAB4CQ330J					
R	304		RS1/16SS6800F	C	445-449,461,502		CKSSYB104K10	
R	428,429		RAB4CQ470J	C	501,613,1313		CKSSYB103K16	
R	432,433		RAB4CQ560J	C	503,601,611,1301		CEVW101M16	
				C	504,506,508,509		CKSSYB104K10	
				C	505,610,1314-1318		CKSSYB105K6R3	
R	434,437,442,443		RAB4CQ473J					
R	446,447,450		RAB4CQ473J					
R	464,465,467,468		RAB4CQ472J	C	551,552,602-609		CKSSYB104K10	
R	480-483,1314-1317		RAB4CQ220J	C	612,614,615,617		CKSSYB104K10	
R	579		RAB4CQ0R0J	C	631,641,651,661		CKSSYB104K10	
				C	632,633,642,643		CCSSCH101J50	
				C	652,653,662,663		CCSSCH101J50	
R	596		RAB4CQ101J					
R	609-612		RS1/16SS1201F					
R	633,643,653,663		RS1/16SS2200F	C	671,681,1054		CKSSYB104K10	
R	634,644,654,664		RS1/16SS4700F	C	672,673,682,683		CCSSCH101J50	
R	635,645,655,665		RS1/10S0R0J	C	1001		CEVW470M25	
				C	1002		CCG1195	
				C	1005,1012,1017,1018		CKSRYB104K25	
R	673,683		RS1/16SS2200F					
R	674,684		RS1/16SS4700F					
R	675,685,1008,1009		RS1/10S0R0J	C	1010		CKSRYB152K50	
R	1002,1004		ACN7156	C	1011,1024		BCG1059	
R	1011		RS1/16SS4702F	C	1013,1014,1022		CKSRYB105K10	
				C	1015		CKSRYB332K50	
				C	1016		CCSSCH330J50	
R	1012,1022		RS1/16SS1502F					
R	1023		RS1/16SS1202F					
R	1031,1095,1096		RS1/10S0R0J	C	1019		CCSSCH221J50	
R	1052,1053		RS1/10S6R8J	C	1020		CKSRYB103K25	
R	1057		RS1/16SS1801F	C	1021,1025,1072		CKSRYB104K25	
				C	1023		CKSRYB222K50	
				C	1051,1053		CKSQYB105K25	
R	1059		RS1/16SS2001F					
R	1071-1073		RS1/16S0R0J					
R	1160		RS1/16SS4701F	C	1052		CKSQYB224K25	
R	1352		RAB4CQ220J	C	1071		CEVW1R0M50	
Other Resistors			RS1/16SS###J	C	1152-1159,1203,1204		CKSSYB104K10	
				C	1160		DCH1165	
				C	1251-1256,1306		CKSSYB104K10	
CAPACITORS								
C	101,102,301,302		DCH1165					
C	103,104,303-305		CKSQYB106K6R3	C	1305		CEVW101M16	
C	105,113,121,122		CKSSYB105K6R3	C	1308-1312,1319-1322		CKSSYB104K10	
C	106-108,110		CKSSYB104K10	C	1324-1332,1335-1338		CKSSYB104K10	
C	109,111,131,152		CKSSYB103K16	C	1340		CCSSCH120J50	
				C	1341,1381-1383		CKSSYB104K10	
C	114-120,123-126		CKSSYB104K10					

Mark No. Description

C 1351
C 1352-1363

Part No.

ACH7174
CKSSYB105K6R3

Mark No. Description**Part No.****RESISTORS**

All Resistors

RS1/16S###J

CAPACITORS

C 3001,3006,3030,3036
C 3002,3003,3008,3045
C 3004
C 3007,3091
C 3009,3010,3027

CKSRYB102K50
CKSRYB104K16
CCSRCH471J50
CEJQ221M6R3
CKSRYB103K50

C 3011-3026,3035,3069
C 3028
C 3029,3037,3042,3044
C 3031
C 3032

CKSRYB471K50
CEJQ101M6R3
CKSRYB105K10
CKSRYB104K50
CEAT470M50

C 3034
C 3038,3039
C 3040,3041
C 3048,3049,3051,3056
C 3057,3089

CEAT101M35
CKSRYB102K50
CCSRCH120J50
CKSRYB104K16
CKSRYB104K16

C 3065-3067,3076
C 3068
C 3070

CKSRYB103K50
CKSRYB153K50
CKSRYB471K50

**N MULTI JOG ASSY
MISCELLANEOUS**

S 3501 ROTARY ENCODER
CN 3501 3P JUMPER CONNECTOR

ASX7031
52147-0310

RESISTORS

All Resistors RS1/16S###J

CAPACITORS

C 3501,3502

CKSRYB103K50

**O POWER SW ASSY
SEMICONDUCTORS**

Q 3401
D 3402

DTC143EUA
SLR343BC4T(JKLM)

MISCELLANEOUS

S 3401 SWITCH
CN 3401 4P JUMPER CONNECTOR

VSG1024
52147-0410

RESISTORS

All Resistors

RS1/16S###J

**P DIODE ASSY
SEMICONDUCTORS**

⚠ D 4701,4702

D5SBA20(B)

MISCELLANEOUS

CN 4701 CONNECTOR4P

AKM7085

RESISTORS

⚠ All Resistors

RD1/4MUF###J

CAPACITORS

C 4701,4702

CFTLA104J2A

5	6	7	8	
Mark No. Description	Part No.	Mark No. Description	Part No.	
Q HEADPHONE ASSY		D 5755,5756,5761	RB501V-40	
MISCELLANEOUS		D 5781	UDZS5R1(B)	
JA 3451 PHONE JACK	AKN7029	D 5783,5784,5811,5812	1SS352	A
KN 3451 WRAPPING TERMINAL	VNF1084	D 5821,5822,5831,5832	1SS352	
CN 3451 4P JUMPER CONNECTOR	52147-0410	D 5841,5842,5851,5852	1SS352	
RESISTORS		MISCELLANEOUS		
All Resistors	RS1/16S###J	L 5081,5181,5281,5381 COIL	ATH1053	
CAPACITORS		L 5481,5581,5681 COIL	ATH1053	
C 3451,3452	CKSRYB392K50	JA 5801 SPEAKER TERMINAL 8-P	AKE7118	
C 3453	CKSRYB471K50	JA 5802 SPEAKER TERMINAL 6-P	AKE7107	
C 3454	CKSRYB103K50	JA 5803,5804 PIN JACK(4P)	AKB7172	
C 3455	CKSRYB104K50			
R POWER AMP ASSY		RY 5701 RELAY	ASR7032	
SEMICONDUCTORS		RY 5811,5821,5831,5841 RELAY	ASR7001	B
△ IC 5751	NJM78M12FA	RY 5851 RELAY	ASR7001	
△ IC 5752	NJM79M12FA	CN 5010,5110,5210 CONNECTOR(05P)	TUC-P05P-B1	
△ IC 5763	BA178M12FP	CN 5310,5410,5510 CONNECTOR(05P)	TUC-P05P-B1	
IC 5771	BA4560RF			
△ Q 5001,5101,5201,5301	STD03N	CN 5610 CONNECTOR(07P)	TUC-P07P-B1	
		CN 5701 CONNECTOR	B7P-VH	
△ Q 5002,5102,5202,5302	STD03P	CN 5802,5803 21P PLUG	XKM3011	
Q 5041,5141,5241,5341	2SA1255	5000 SMALL HEATSINK V5S(M)	ANH7200	
△ Q 5401,5501,5601	STD03N	5001,5002 SCREW	BBZ30P080FCC	
△ Q 5402,5502,5602	STD03P			
Q 5441,5541,5641	2SA1255	JH 5801 4P CABLE HOLDER	51048-0400	
		JH 5951,5953 PCB BINDER	VEF1040	
Q 5700,5811,5821,5831	DTC114TUA	JP 5701 LEAD WITH HOUSING	ADX7651	C
Q 5701	RN1901	JP 5722 AWG14 BOARD IN	ADX7650	
Q 5702,5703	UMD2N	JP 5723 AWG14 BOARD IN	ADX7461	
△ Q 5705	2SD1763A			
△ Q 5706	2SC3906K	JP 5750 CONNECTOR ASSY	PF04PG-R50	
		JP 5801 JUMPER WIRE	D20PDY0460E	
△ Q 5707	2SB1186A	△ P 5001,5002 PROTECTOR(7A)	AEK7021	
△ Q 5708	2SA1514K	△ P 5003,5004 IC PROTECTOR	ICP-N15	
Q 5731,5741,5742	2SC4081	RESISTORS		
Q 5781,5782,5785	DTC124EUA	△ R 5025,5026,5125,5126	ACN7132	
Q 5783,5784	DTA124EUA	△ R 5027,5127,5227,5327	ACN7163	
		R 5029,5129,5229,5329	RS1/10S0R0J	
Q 5841,5851	DTC114TUA	△ R 5081,5181,5281,5381	RS1/2LMF4R7J	D
△ D 5003,5004,5103,5104	1SS355	△ R 5082,5182,5282,5382	RS1LMF100J	
△ D 5005,5006,5105,5106	UDZS4R7(B)			
D 5041-5044,5141-5144	1SS355	△ R 5225,5226,5325,5326	ACN7132	
△ D 5203,5204,5303,5304	1SS355	△ R 5425,5426,5525,5526	ACN7132	
		△ R 5427,5527,5627	ACN7163	
△ D 5205,5206,5305,5306	UDZS4R7(B)	R 5429,5529,5629	RS1/10S0R0J	
D 5241-5244,5341-5344	1SS355	△ R 5481,5581,5681	RS1/2LMF4R7J	
△ D 5403,5404,5503,5504	UDZS4R7(B)			
△ D 5405,5406,5505,5506	1SS355	△ R 5482,5582,5682	RS1LMF100J	
D 5441-5444,5541-5544		△ R 5625,5626	ACN7132	
		△ R 5701,5702	RS1LMF472J	
△ D 5603,5604	1SS355	△ R 5703,5704	RS1/2LMF332J	
△ D 5605,5606	UDZS4R7(B)	R 5721,5722	RD1/4MUF473J	E
D 5641-5644	1SS355			
D 5701,5702,5721,5722	1SS352	△ R 5811,5812	RS2LMF331J	
△ D 5703	S1WB(A)60SD	Other Resistors	RS1/16S###J	
		CAPACITORS		
D 5705,5708,5710	UDZS8R2(B)	C 5011,5012,5111,5112	ACG7056	
D 5706,5782	UDZS7R5(B)	C 5041,5141,5241,5341	CEHANP2R2M50	
D 5707,5709	UDZS9R1(B)	C 5081,5082,5181,5182	CFTLA104J50	
D 5711,5712	UDZS6R8(B)	C 5083,5183,5283,5383	CFTLA103J2A	
D 5713,5714	UDZS12(B)	C 5084-5087,5089	CKSRYB272K50	
D 5715,5719,5720	UDZS13(B)	C 5211,5212,5311,5312	ACG7056	F
D 5716	UDZS15(B)	C 5281,5282,5381,5382	CFTLA104J50	
△ D 5717,5718,5751-5754	1SR154-400	C 5411,5412,5511,5512	ACG7056	
		C 5441,5541,5641	CEHANP2R2M50	
		C 5481,5482,5581,5582	CFTLA104J50	

Mark No. Description**Part No.****Mark No. Description****Part No.**

C 5483,5583,5683
C 5611,5612
C 5681,5682
C 5703,5704
C 5705,5706

CFTLA103J2A
ACG7056
CFTLA104J50
CEAT471M2A
CEAT101M63

R 6430,6530,6630
R 6431,6531,6631

RN1/16SE1001D
RN1/16SE1500D

R 6623,6624
Other Resistors

RD1/4MUF4R7J
RS1/16S###J

CAPACITORS

C 6001,6101,6201,6301
C 6002,6102,6202,6302
C 6004,6104,6204,6304
C 6005,6006,6015,6016
C 6007,6107,6207,6307

CEHAT4R7M50
CCSRCH221J50
CKSRYB102K50
CCSRCH220J50
CEHAT101M10

C 6008,6108,6208,6308
C 6009,6109,6209,6309
C 6017,6117,6217,6317
C 6023,6024,6123,6124
C 6032,6132,6232,6332

ACG7057
CEHAT100M2A
CEHAT331M10
CEHAT100M63
CKSRYB224K16

C 5741
C 5751,5752
C 5753,5754,5761,5771
C 5755,5756
C 5762

CEAT331M10
CEAT222M25
CKSRYB103K50
CEAT221M25
CEAT100M50

C 6105,6106,6115,6116
C 6205,6206,6215,6216
C 6223,6224,6323,6324
C 6305,6306,6315,6316
C 6401,6501,6601

CCSRCH220J50
CCSRCH220J50
CEHAT100M63
CCSRCH220J50
CEHAT4R7M50

C 5766-5769
C 5772,5781,5930,5931
C 5782
C 5891
C 5901-5916

CKSRYB104K50
CKSRYB103K50
CKSRYB105K10
CEAT101M50
CCSRCH101J50

C 5917-5924

CEAT470M25

C 6402,6502,6602
C 6404,6504,6604
C 6405,6406,6415,6416
C 6407,6507,6607
C 6408,6508,6608

CCSRCH221J50
CKSRYB102K50
CCSRCH220J50
CEHAT101M10
ACG7057

S PRE-STAGE AMP ASSY

SEMICONDUCTORS

Q 6001,6101,6201,6301
Q 6002,6102,6202,6302
Q 6003,6103,6203,6303
Q 6004,6104,6204,6304
Q 6005,6105,6205,6305

2SD2704K
IMT4
2SA1514K
2SA1145
2SC2705

C 6409,6509,6609
C 6417,6517,6617
C 6423,6424,6523,6524
C 6432,6532,6632
C 6505,6506,6515,6516

CEHAT100M2A
CEHAT331M10
CEHAT100M63
CKSRYB224K16
CCSRCH220J50

Q 6401,6501,6601
Q 6402,6502,6602
Q 6403,6503,6603
Q 6404,6504,6604
Q 6405,6505,6605

2SD2704K
IMT4
2SA1514K
2SA1145
2SC2705

C 6527
C 6605,6606,6615,6616
C 6623,6624

CCSRCH101J50
CCSRCH220J50
CEHAT100M63

D 6001,6101,6201,6301
D 6002,6102,6202,6302
D 6401,6501,6601
D 6402,6502,6602

UDZS3R6(B)
1SS355
UDZS3R6(B)
1SS355

T PRIMARY ASSY

SEMICONDUCTORS

IC 3701
Q 3701
D 3701
D 3703,3704,3706
D 3705

NJM78M56FA
DTC143EUA
UDZS5R1(B)
1SS352
S1WB(A)60SD

MISCELLANEOUS

L 3701 LINE FILTER
H 3707,3708 FUSE CLIP
KN 3701 SCREW PLATE
RY 3701 POWER RELAY
T 3701 STANDBY TRANSFORMER

XTF3004
AKR7001
VNE1948
ASR7022
ATT7043

CN 3704 AC CODE SOCKET
CN 3709 CONNECTOR
JH 3701 6P CABLE HOLDER
JP 3710 JUMPER WIRE

RKP1751
B2P3-VH
51048-0600
D20PDY0620E

RESISTORS

R 3703
Other Resistors

RD1/4MUF220J
RS1/16S###J

CAPACITORS

C 3701,3713
C 3702
C 3705

CKSRYB103K50
CEAT100M50
XCG3010

5

6

7

8

Mark

No.

Description

C

3709

⚠ C

3710

C

3712

C

3714

Part No.

CFTLA103J50

ACE7013

CKSRYB102K50

CEAT102M25

Mark

No.

Description

C

4257

C

4258,4259,4267,4275

C

4264

C

4274

Part No.

CEHAZL102M6R3

CKSRYB104K50

ACH7294

CEAT682M16

U

REGULATOR ASSY

SEMICONDUCTORS

⚠ IC 4004

⚠ IC 4005

⚠ IC 4006

⚠ D 4001-4003

D 4004-4008

⚠ D 4012

D 4013,4015,4016

⚠ D 4014

D 4029

NJM78M05FA

NJM78M56FA

NJM79M05FA

1SR154-400

UDZS6R2(B)

D3SBA20(B)

RB501V-40

MTZJ6R2(B)

1SS352

AKR7001

B8B-EH

KM200NA7

KM200NA9

KM200NA4

VEF1040

MISCELLANEOUS

H 4001-4004,4007-4010 FUSE CLIP

CN 4001 8P TOP POST

CN 4003 PLUG(7P)

CN 4004 PLUG(9P)

CN 4071 PLUG(4P)

4001-4003,4005,4006 PCB BINDER

RESISTORS

R 4001

⚠ Other Resistors

CAPACITORS

C 4001,4016

C 4002

C 4003

C 4004

C 4005,4023,4024

C 4006

C 4008,4017,4021,4022

C 4018

C 4019

C 4020

V

DC/DC ASSY

SEMICONDUCTORS

⚠ IC 4251

D 4251

⚠ D 4253,4273

⚠ D 4255

PQ1CG3032FZ

RB051L-40

D3SBA20(B)

PTZ6R8(B)

ATH7020

AKR7001

B4B-EH

VEF1040

MISCELLANEOUS

L 4251 INDUCTOR

H 4251,4252,4271,4272 FUSE CLIP

CN 4251,4252 CONNECTOR

4251,4253 PCB BINDER

RESISTORS

⚠ R 4251,4271

R 4252

Other Resistors

CAPACITORS

C 4251,4271

C 4255

W

POSI1 ASSY

SEMICONDUCTORS

⚠ TH 7001

AEX7006

MISCELLANEOUS

CN 7001 CONNECTOR ASS'Y

X

POSI2 ASSY

SEMICONDUCTORS

⚠ TH 7002

PTFM04BB222Q2N34B0

MISCELLANEOUS

CN 7002 CONNECTOR ASS'Y

Y

POSI3 ASSY

SEMICONDUCTORS

⚠ TH 7003

AEX7008

MISCELLANEOUS

CN 7003 CONNECTOR ASS'Y

FM/AM TUNER UNIT

FM/AM TUNER UNIT has no service part.

F

FM/AM TUNER UNIT

SEMICONDUCTORS

CFTLA104J50

CEHAZL102M25