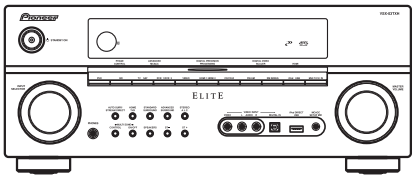
Pioneer sound.vision.soul

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".

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

T-ZZV MAY 2008 Printed in Japan

SAFETY INFORMATION

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

WARNING
This product 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.

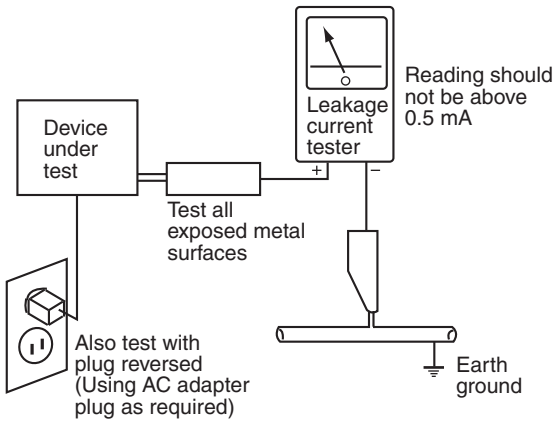
(FOR USA MODEL ONLY)

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

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:

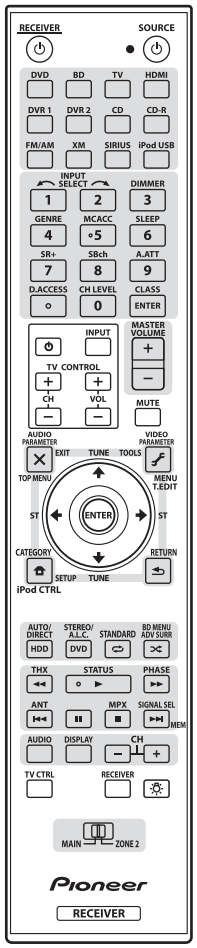
- Parts numbers of lead-free solder:
  GYP1006 1.0 in dia.
  GYP1007 0.6 in dia.
  GYP1008 0.3 in dia.

1.2 CAUTION

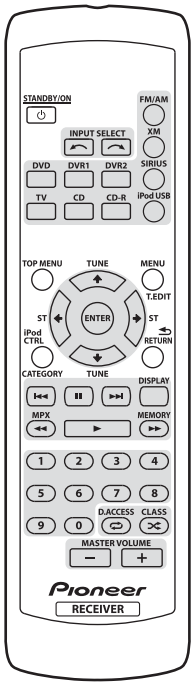
- Before removing the Power Amp Assy, it is neccessary to discharge C5721 and C5722.
  For more detail, please refer to page 67.

2. SPECIFICATIONS
2.1 ACCESSORIES

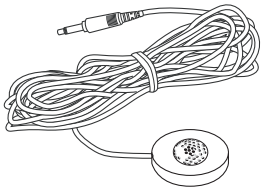
[1] Accessories



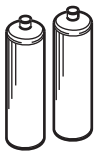
Remote Control Unit
(AXD7517: VSX-03TXH, VSX-01TXH)
(AXD7525: VSX-9130TXH, VSX-1018AH)



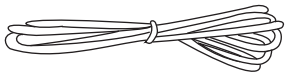
Sub Remote Control Unit
(AXD7529: VSX-03TXH)



Setup Microphone
(for Auto MCACC setup)
(APM7008)



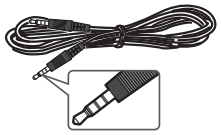
AA/LR6 Dry Cell Batteries
(VEM1031)



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 kΩ
Frequency Response (LINE) . . . . . 5 Hz to 100 000 Hz $^{+0}_{-3}$ dB
Output (Level/Impedance)
REC . . . . . 335 mV/2.2 kΩ
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 μV/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 μV/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

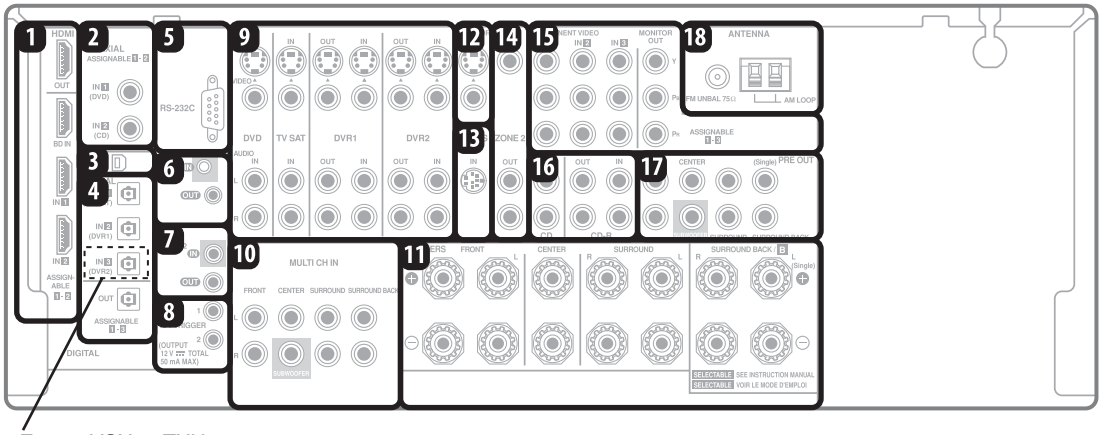
AA/IEC R6P dry cell batteries 2
(9130TXH-K, 01TXH, 1018AH-K)
Remote control unit 1
Sub room remote control unit **(VSX-03TXH)** 1
AM loop antenna 1
FM wire antenna 1
Warranty card 1
Operating instructions

Note

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

2.3 PANEL FACILITIES

[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 SIRIUS Radio input

14 ZONE 2 audio/video outputs
Use to connect a second receiver in a separate room.

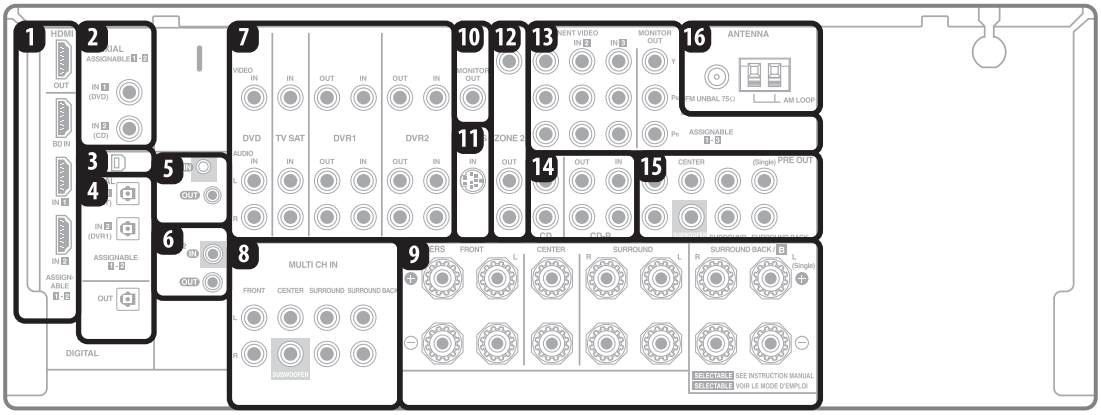
15 Component video connections (x4)
Use the inputs to connect any video source that has component video output, such as a DVD recorder. Use the output for connection to a monitor or TV.

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.

[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.

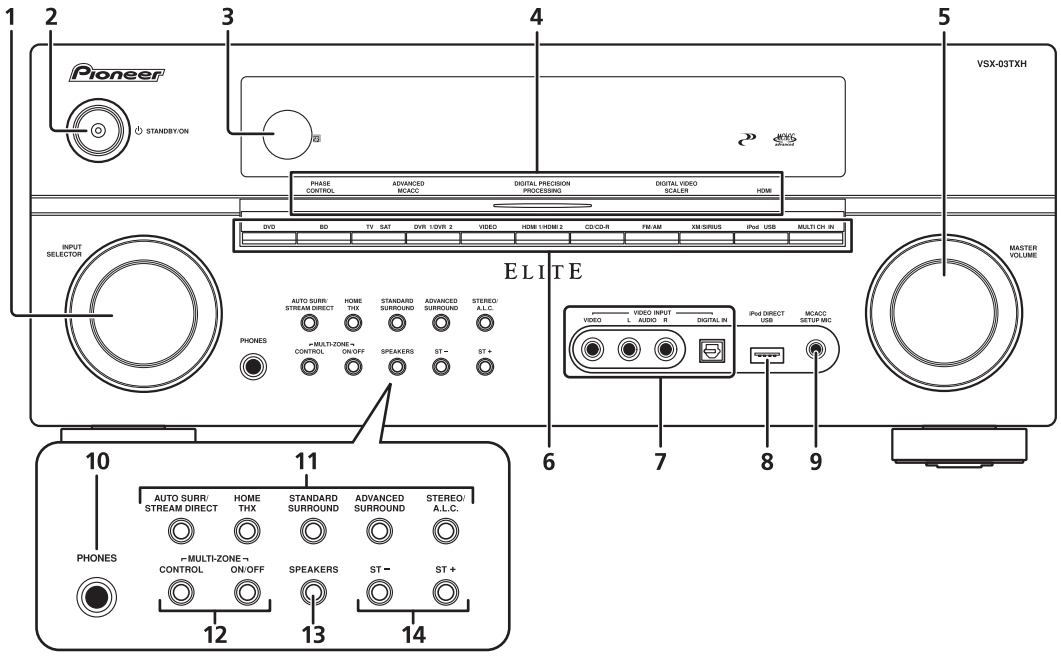
13 Component video connections (x4)
Use the inputs to connect any video source that has component video output, such as a DVD recorder. Use the output for connection to a monitor or TV.

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.

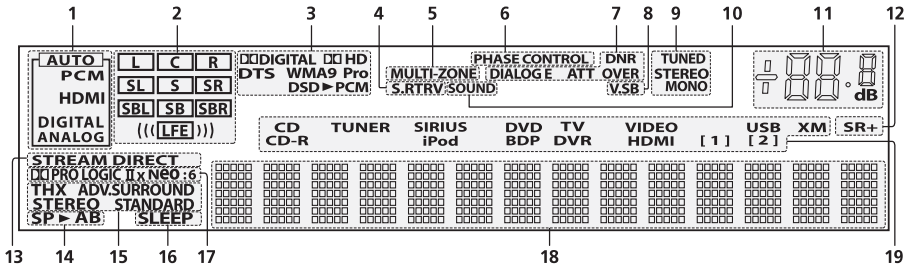
11 Listening mode buttons
AUTO SURR/STREAM DIRECT – Switches between Auto surround mode and Stream Direct playback. Stream Direct playback bypasses the bass/treble controls for the most accurate reproduction of a source.
HOME THX (Except 1018AH) – Press to select a Home THX listening mode.
SOUND RETRIEVER (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.

[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 **((( )))** 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►PCM** 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.

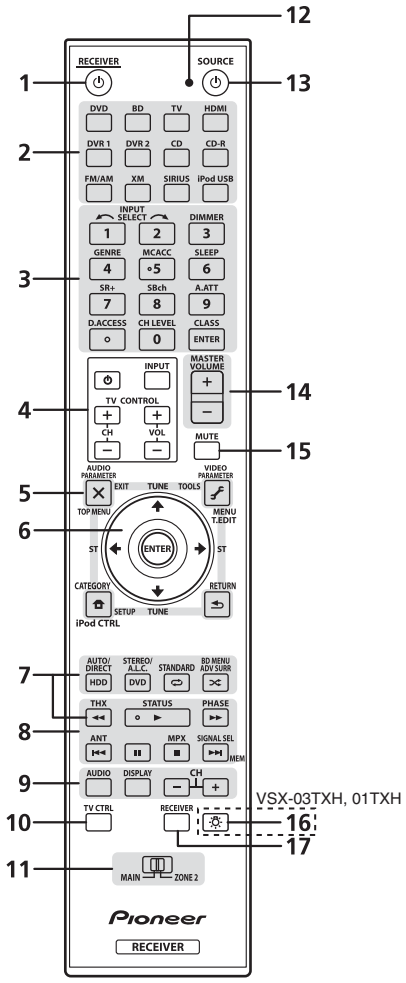
17 Matrix decoding format indicators
PRO LOGIC IIx – This lights to indicate Pro Logic II / Pro Logic IIx decoding.

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.

[5] Remote control



The remote has been conveniently color-coded according to component control using the following system (press the corresponding input source button to access):

- **White** – Receiver controls (see below)
- **Blue** – Other controls

1 RECEIVER⏻

This switches between standby and on for this receiver.

2 Input source buttons

Press to select control of other components.

3 Number buttons and other receiver/component controls

Use the number buttons to directly select a radio frequency or the tracks on a CD, DVD, etc.

ENTER can be used to enter commands for TV or DTV, and also to select a disc in a multi-CD player.

Press **RECEIVER** first to access:

INPUT SELECT – Use to select the input source.

DIMMER – Dims or brightens the display.

GENRE – Automatically selects the most appropriate Advanced Surround mode for the genre of the source currently being played back (this feature is available only when a Pioneer DVD recorder supporting HDMI Control is connected to this receiver via HDMI).

MCACC – Press to switch between MCACC presets.

SLEEP – Use to put the receiver in sleep mode and select the amount of time before sleep.

SR+ – Switches the SR+ mode on/off.

SBch – Use to select the surround/virtual back channel mode.

A.ATT – Attenuates (lowers) the level of an analog input signal to prevent distortion.

CH LEVEL – Press repeatedly to select a channel, then use ⬅/➡ to adjust the level.

Press **FM/AM** 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.

4 TV CONTROL buttons

These buttons are dedicated to control the TV assigned to the **TV CTRL** button. Thus if you only have one TV to hook up to this system assign it to the **TV CTRL** input source button. If you have two TVs, assign the main TV to the **TV CTRL** button.

TV⏻ – Use to turn on/off the power of the TV.

INPUT – Use to select the TV input signal.

CH +/– – Use to select channels.

VOL +/– – Use to adjust the volume on your TV.

5 Tuner/component control buttons/SETUP

These button controls can be accessed after you have selected the corresponding input source button (**DVD**, **DVR1**, **TV**, etc.).

Press **RECEIVER** first to access:

AUDIO PARAMETER – Use to access the Audio options.

VIDEO PARAMETER – Use to access the Video options.

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 DD 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)

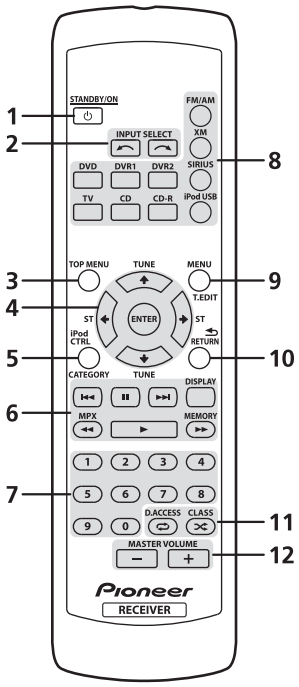
Press to turn on/off the illumination of some of the buttons. This function is convenient when operating in dark rooms.

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

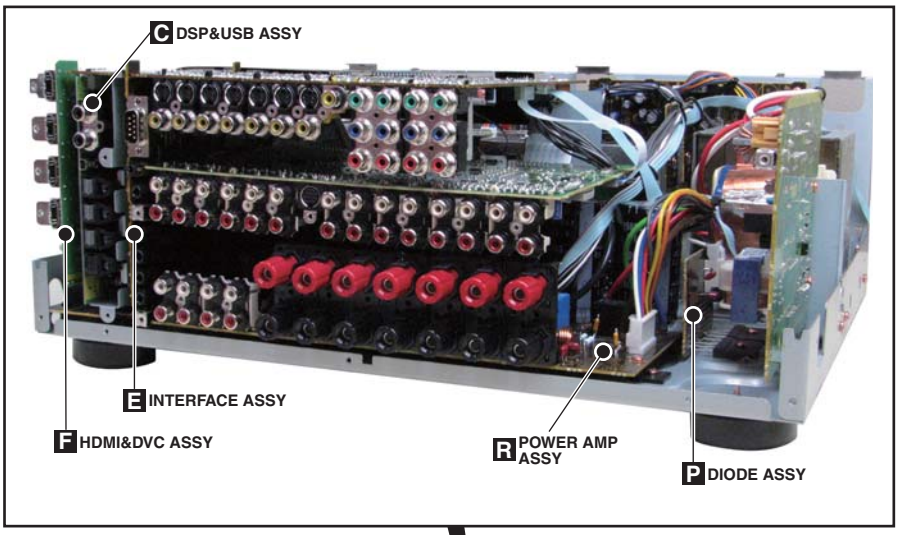
To keep the product quality after servicing, confirm recommended check points shown below.

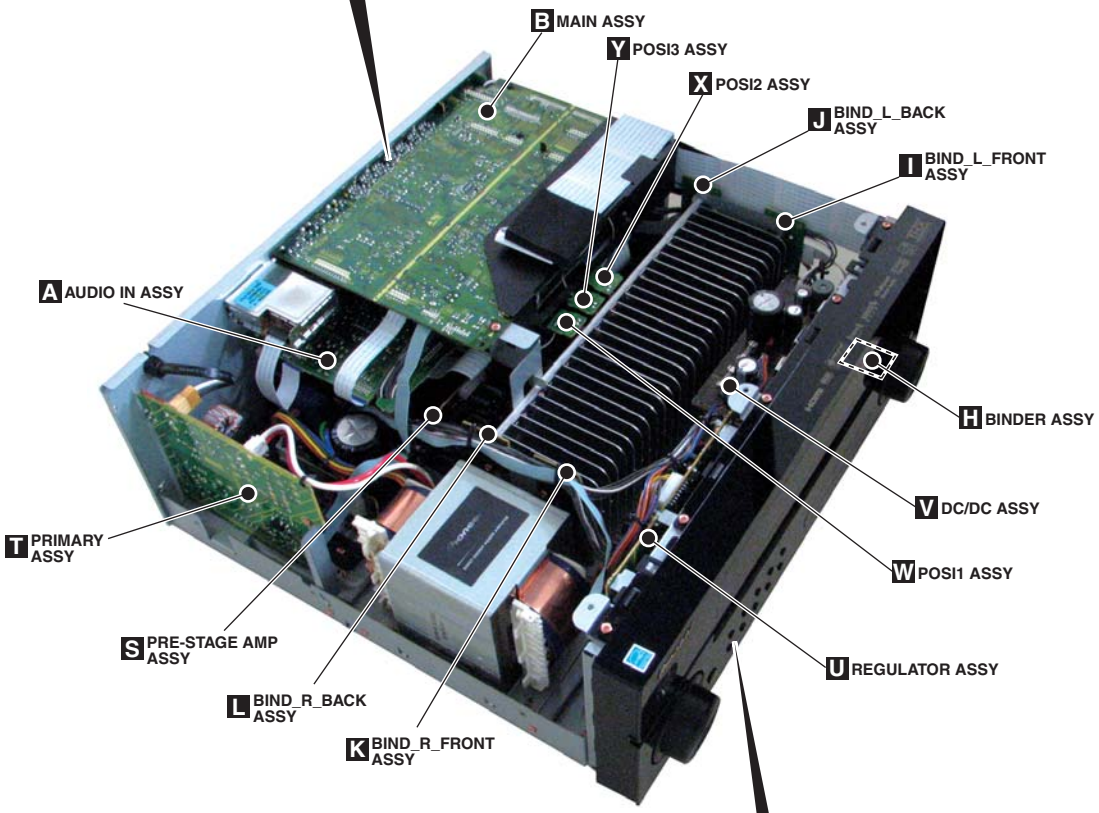
No.	Procedure	Check points
1	Confirm whether the customer complain has been solved. If the customer complain occurs with the particular source, such as Dolby Digital, DTS, AAC, DVD-A and HDMI, input it for the operation check.	The customer complain must not be reappeared. Video, Audio and operations 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.

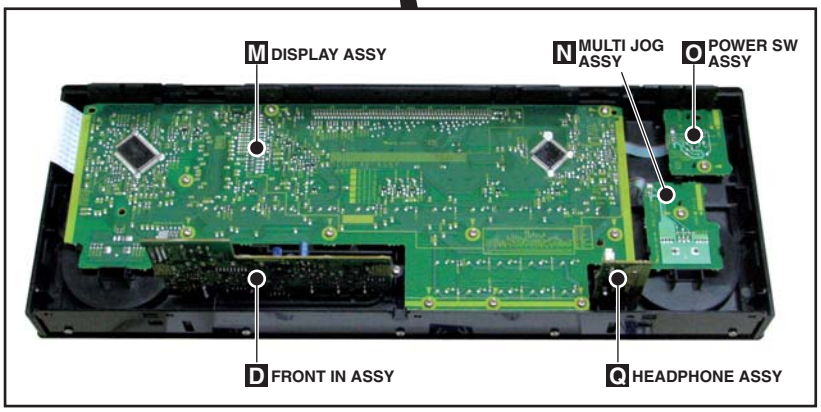
See the table below for the items to be checked regarding video and audio:

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	

3.2 PCB LOCATIONS







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

◆LIST OF ASSEMBLIES

Mark	Symbol and Description	VSX-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..POSI1 ASSY	AWX9132	AWX9132	AWX9132	AWX9132
	2..POSI2 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..POSI3 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

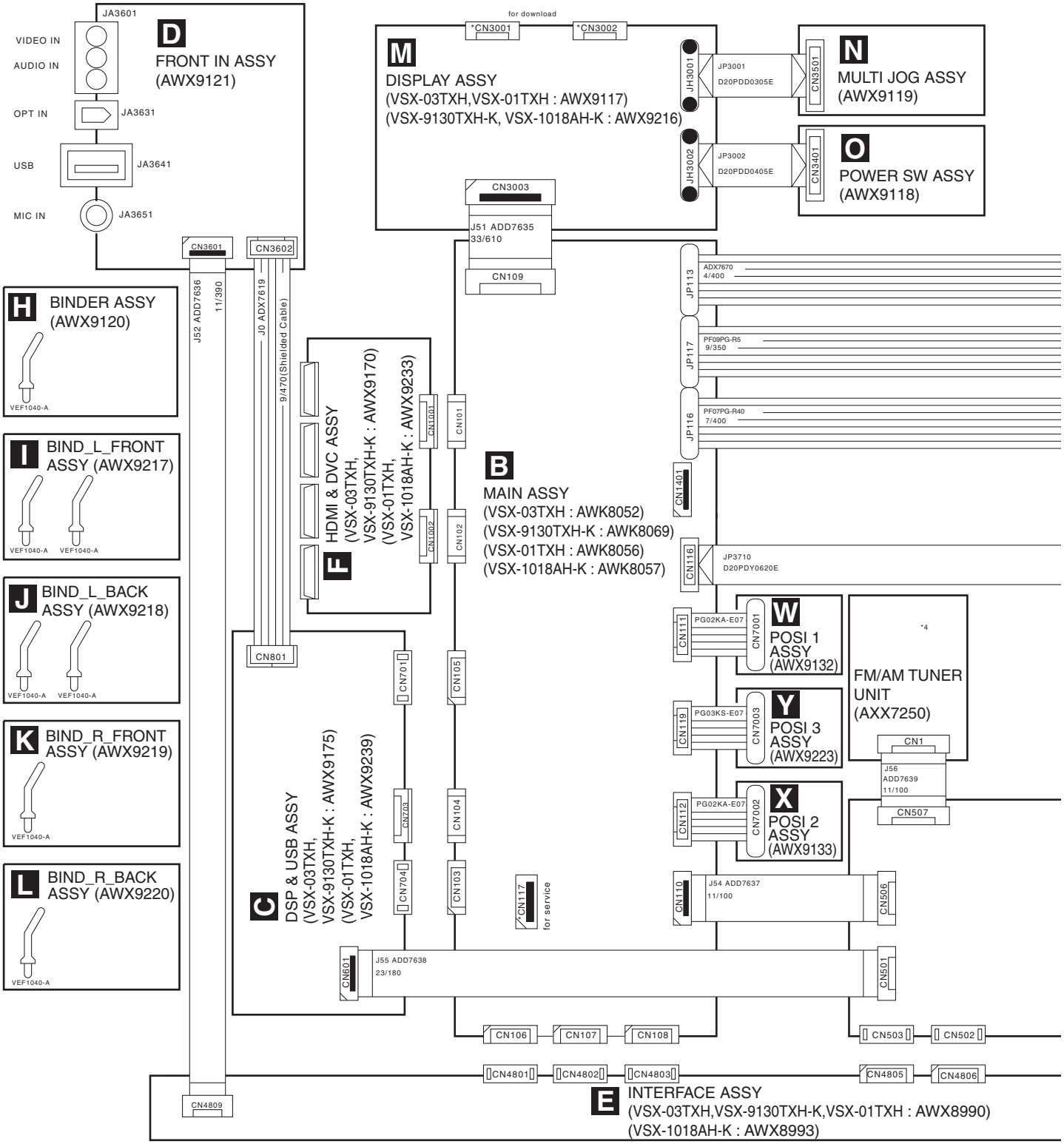
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

⚠ *1 *2

	T1501	AC CORD
KU	ATT7418	VDG1075

*3 ⚠

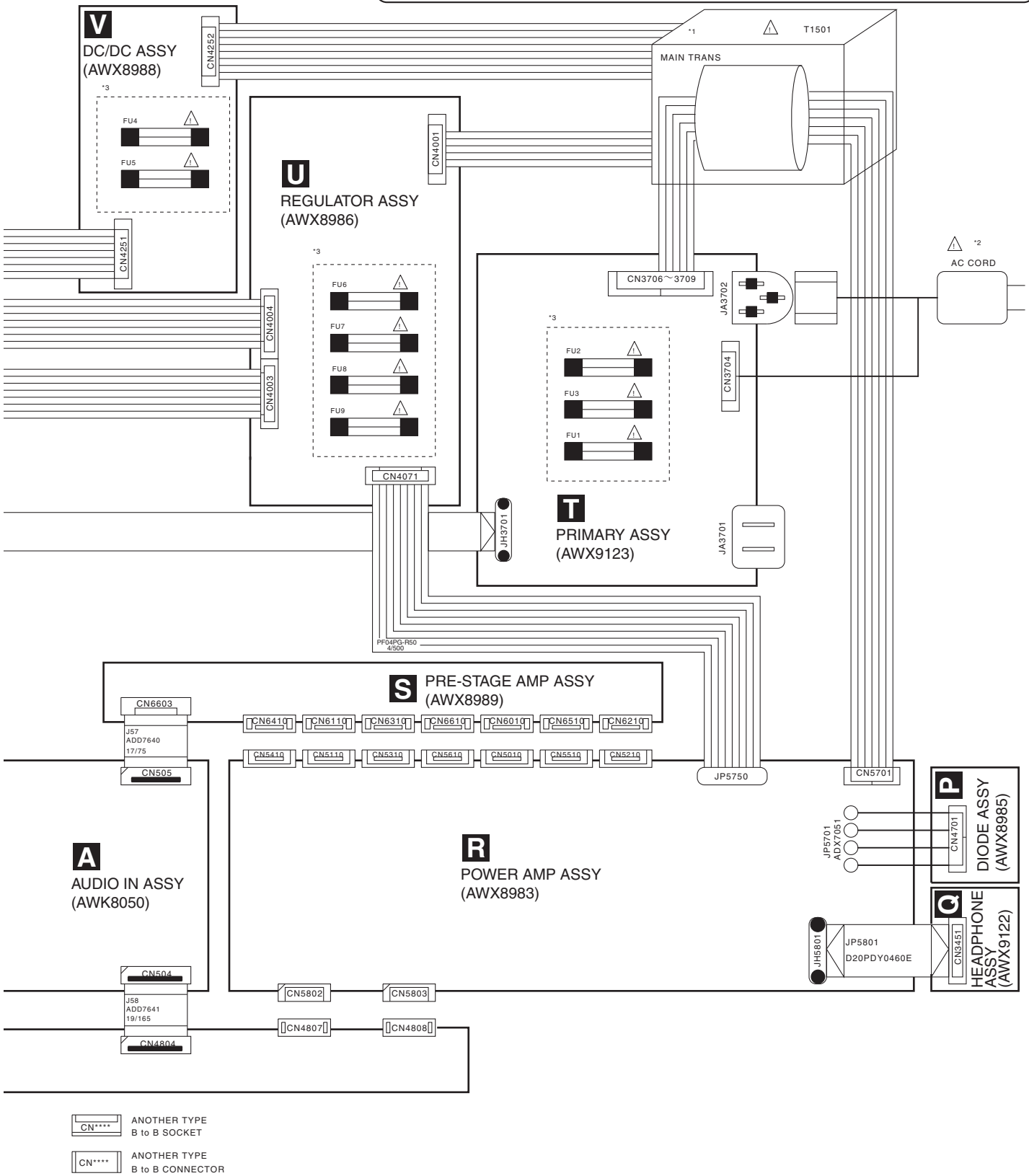
	FU1	FU2,3	FU4	FU5	FU6,7	FU8,9
KU	REK1154 (10A/125V)	-	REK1150 (5A/125V)	REK1155 (3.5A/125V)	REK1143 (1.25A/125V)	REK1146 (2.5A/125V)



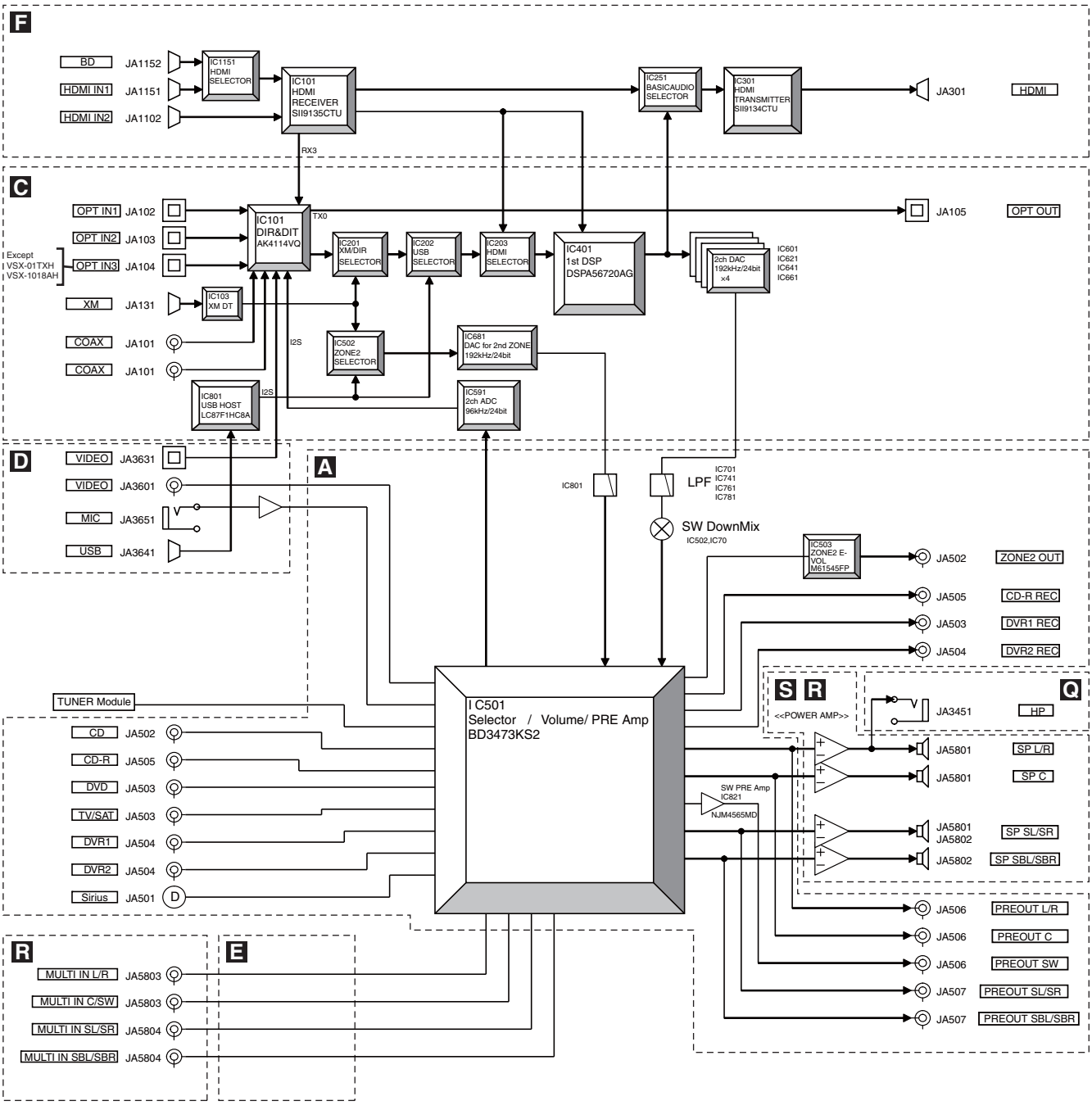
CN** CABLE WIRE
BOARD IN WIRE
J** 1.25mm FFC
JP**** 2.0mm FLAT CABLE
CN**** 1.25mm FFC CONNECTOR(L) (*1.00mm FFC CONNECTOR)
CN**** 1.25mm FFC CONNECTOR(I) (*1.00mm FFC CONNECTOR)
JH**** 2.0mm CABLE HOLDER
CN**** 2.0mm WIRE TRAP
CN**** KM200NA*
CN**** B*B-EH EH CONNECTOR
CN**** ANOTHER TYPE CODE SOCKET
CN**** XKM**** 1.25mm B to B
CN**** XKP**** 1.25mm B to B
CN**** TUC-P**X-B1 2.0mm B to B SOCKET
CN**** TUC-P**P-B1 2.0mm B to B CONNECTOR

	*4 TUNER MODULE	J56	*5 FAN	*6 D-TERMINAL	J59
KU	AXX7250	ADD7637	-	-	-

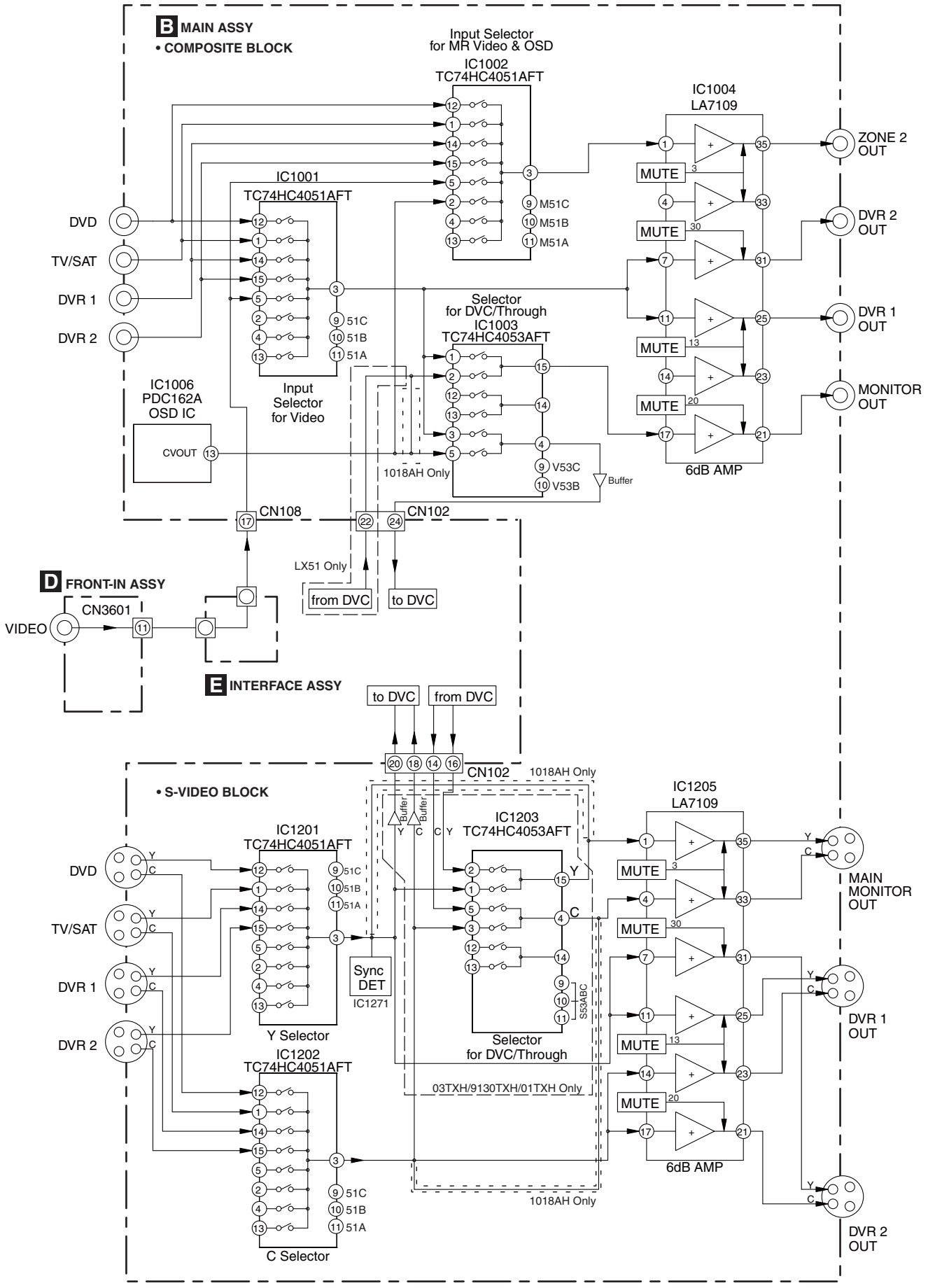
When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
: The power supply is shown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

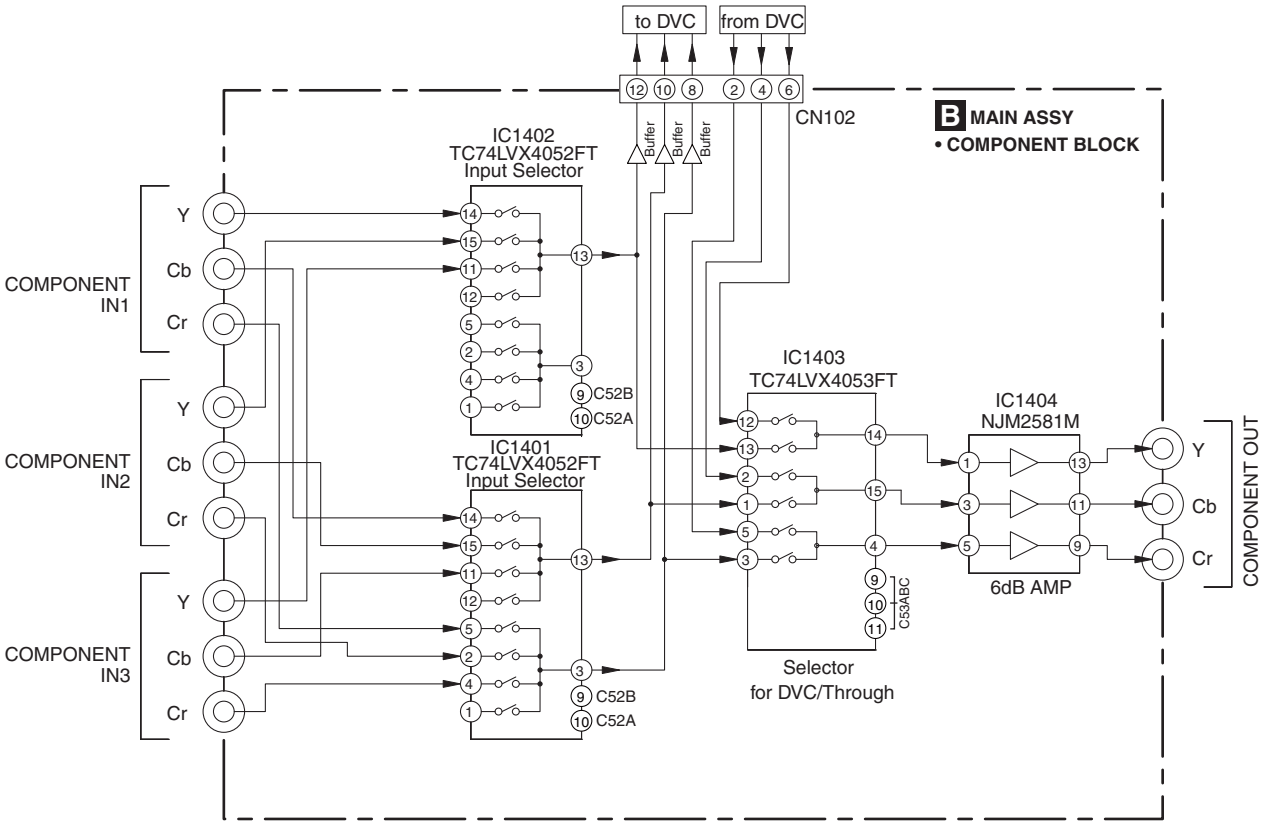


4.2 BLOCK DIAGRAM FOR AUDIO BLOCK

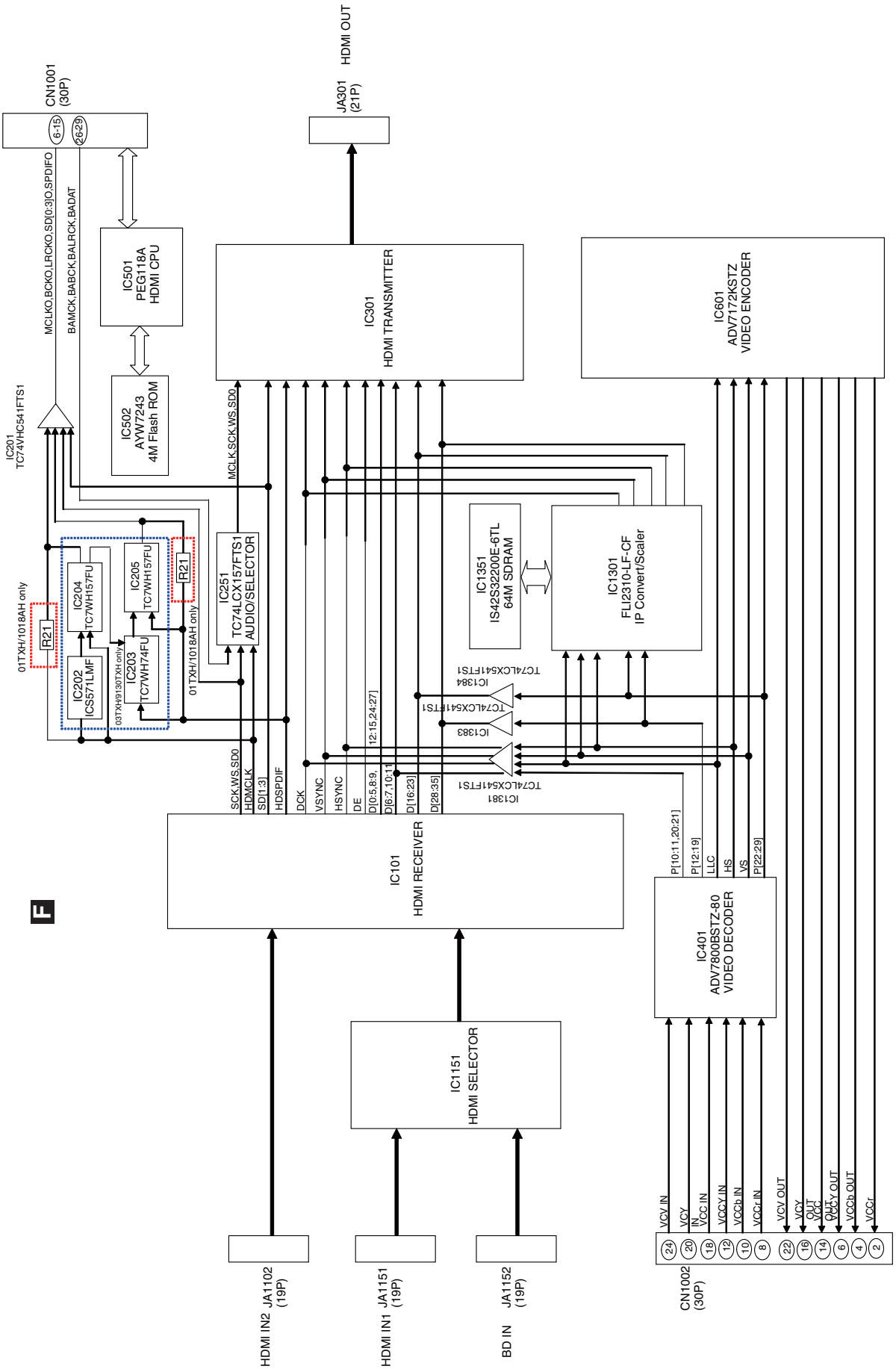


4.3 BLOCK DIAGRAM FOR VIDEO BLOCK

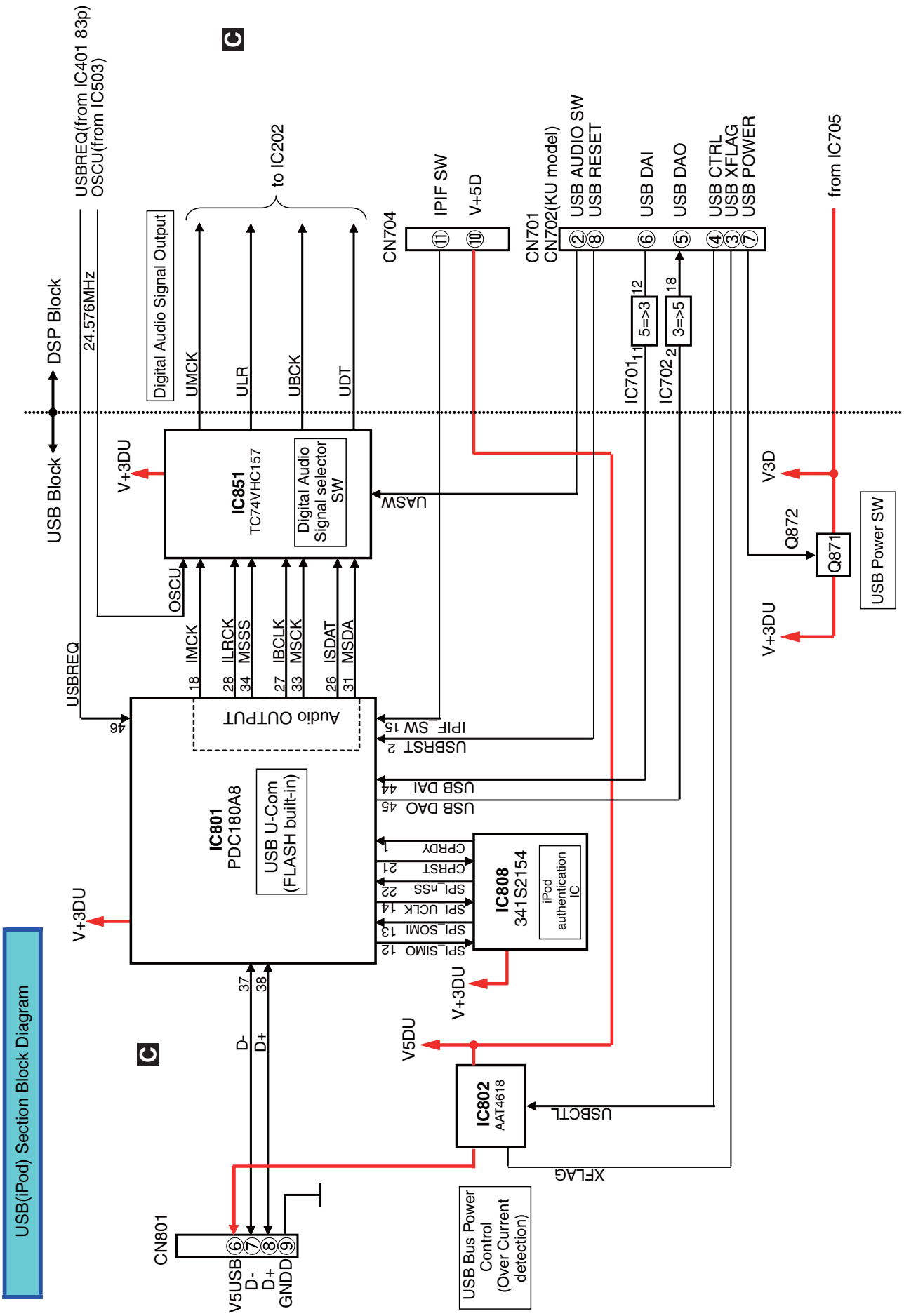



to DVC
from DVC
12 10 8 2 4 6
CN102
B MAIN ASSY
• COMPONENT BLOCK
IC1402
TC74LVX4052FT
Input Selector
Buffer
Buffer
Buffer
COMPONENT IN1
Y
Cb
Cr
C52B
C52A
IC1403
TC74LVX4053FT
IC1404
NJM2581M
COMPONENT IN2
IC1401
TC74LVX4052FT
Input Selector
C53ABC
6dB AMP
COMPONENT IN3
Selector
for DVC/Through
COMPONENT OUT

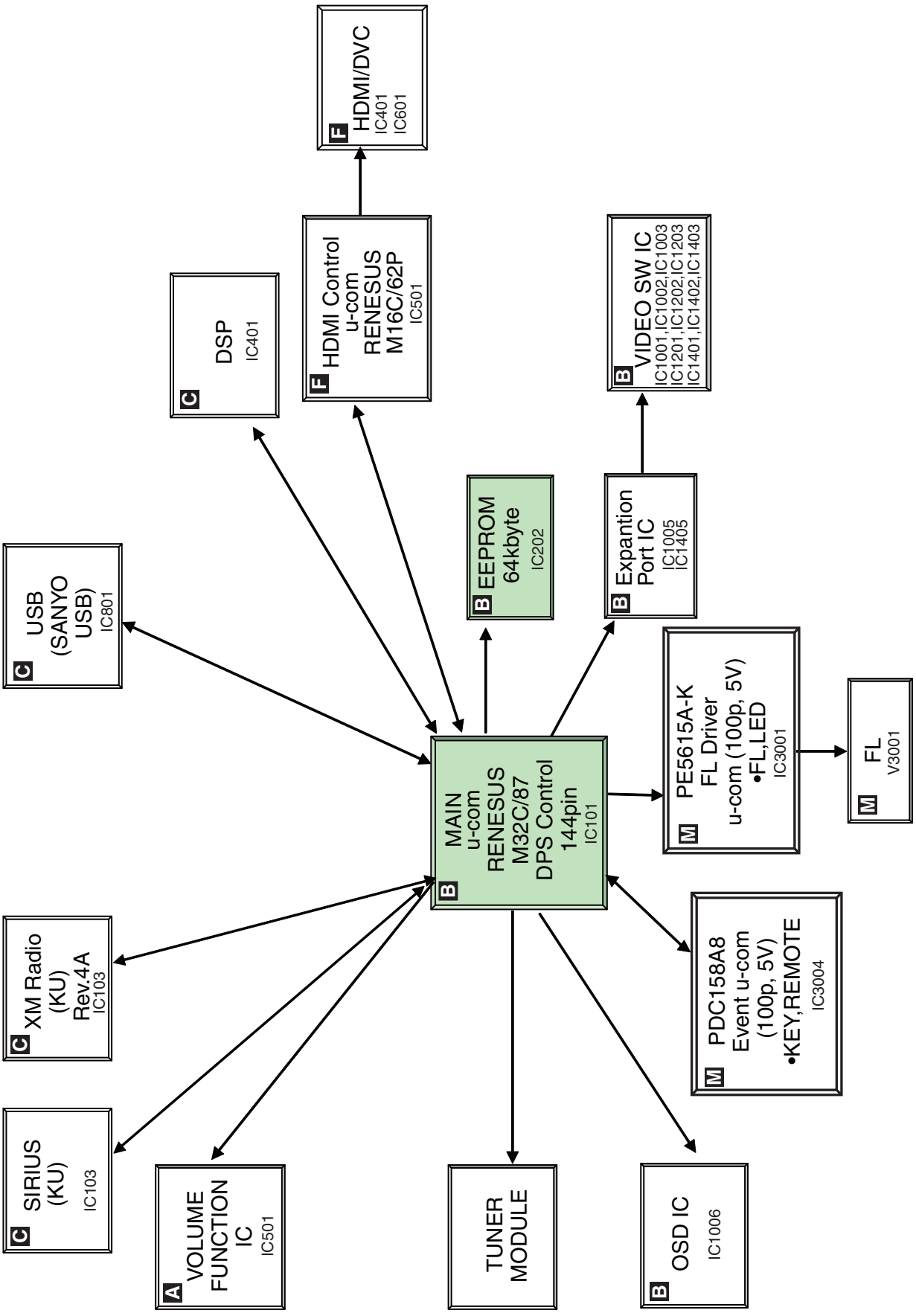
4.4 BLOCK DIAGRAM FOR HDMI & DVC



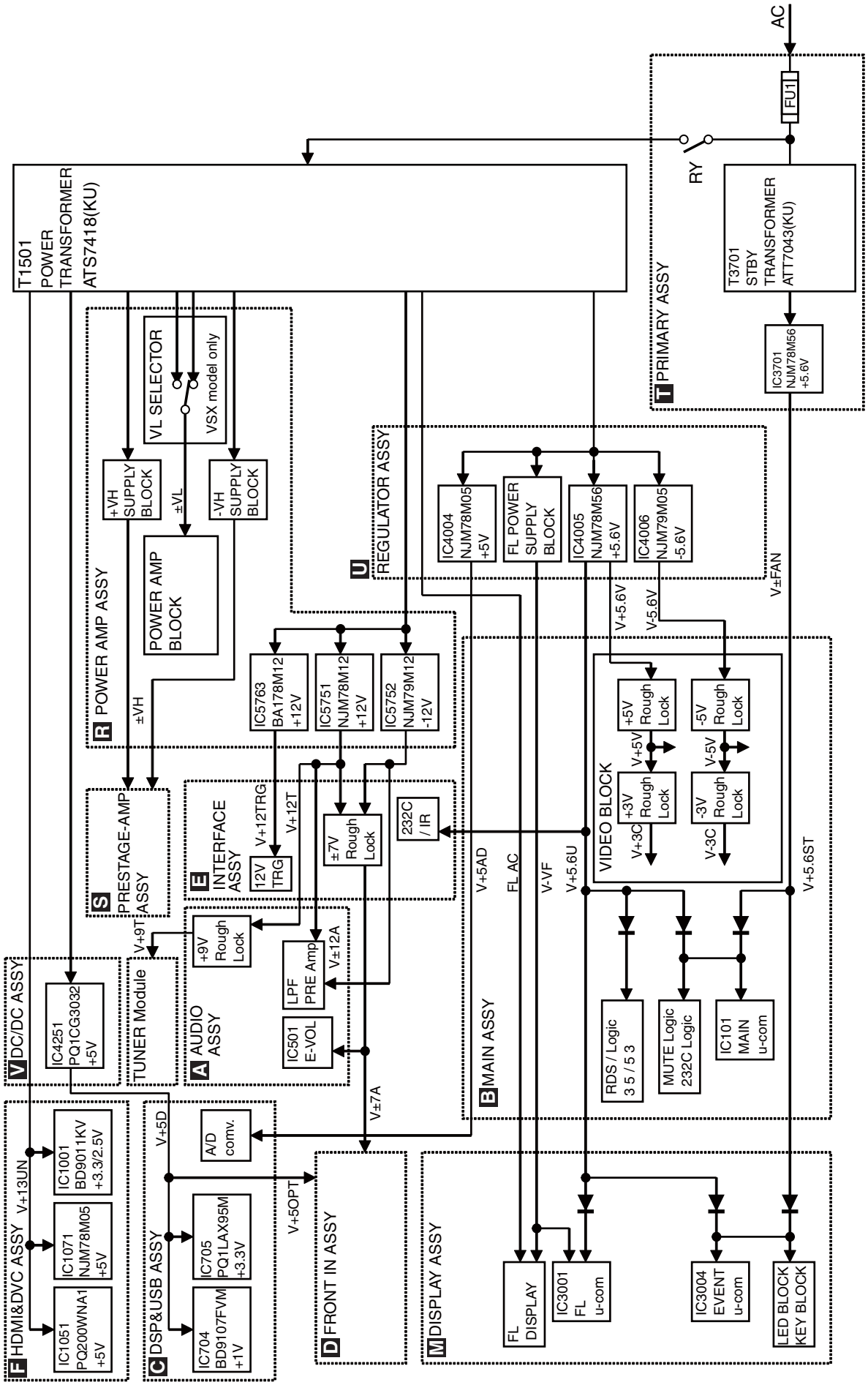
4.5 BLOCK DIAGRAM FOR USB BLOCK



4.6 BLOCK DIAGRAM FOR U-COM BLOCK



4.7 BLOCK DIAGRAM FOR POWER SUPPLY BLOCK



5. DIAGNOSIS
5.1 DIAGNOSIS FLOWCHART

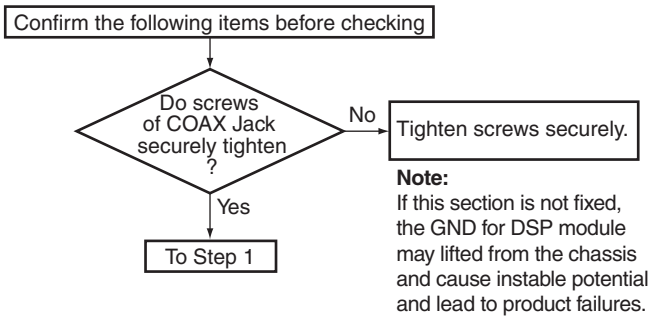
■ Simplified diagnosis

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

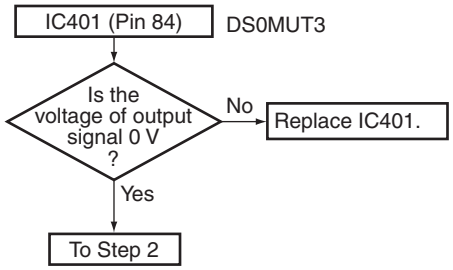
- Sound abnormality in Delay
  If sound abnormality does not occur in the Delay OFF state but occurs in the Delay ON state, it is most likely that a failure has occurred in SDRAM (IC301) or LATCH (IC303, IC304) in the 1st DSP Block.
- No sound at analog signal input
  If sound abnormality does not occur 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

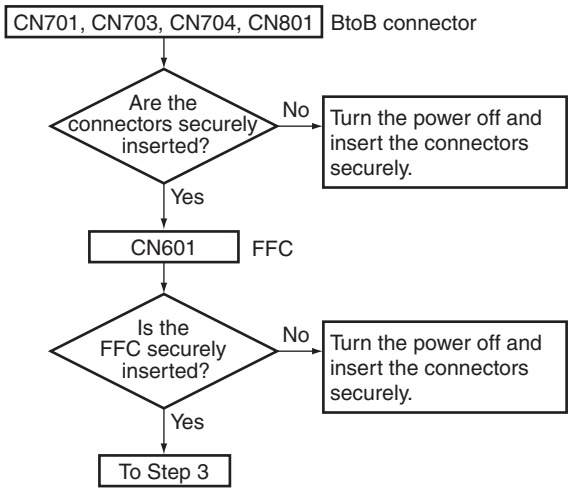
Step 0: Preliminary confirmation



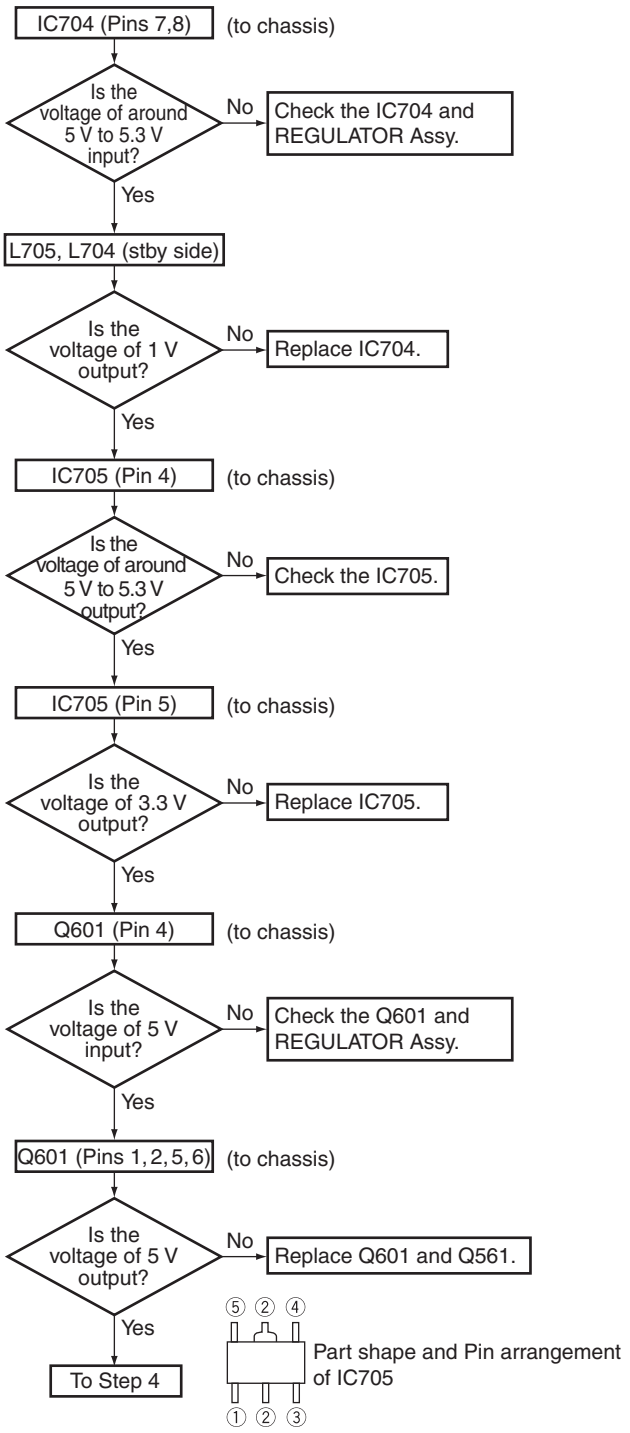
Step 1: MUTE pin



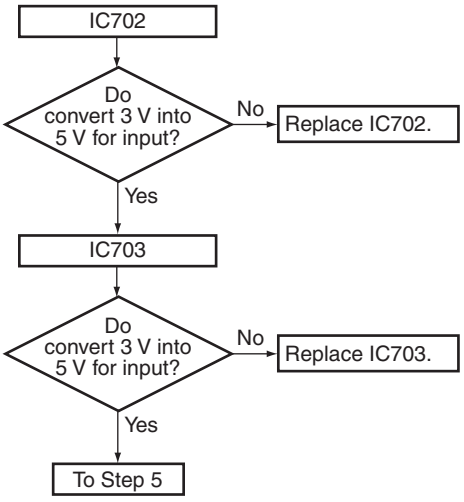
Step 2: BtoB connector and FFC



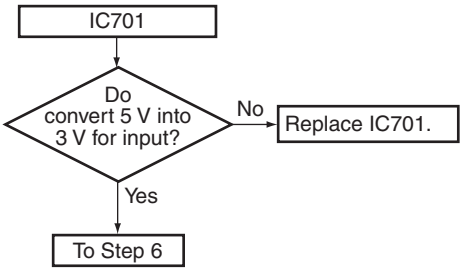
Step 3: Regulator IC



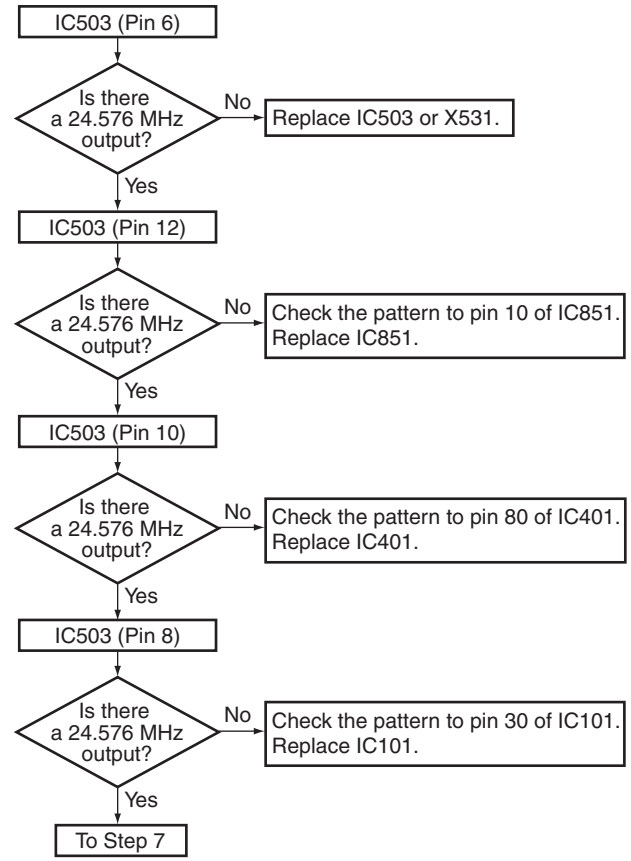
Step 4: 3 V to 5 V conversion



Step 5: 5 V to 3 V conversion



Step 6: X'tal

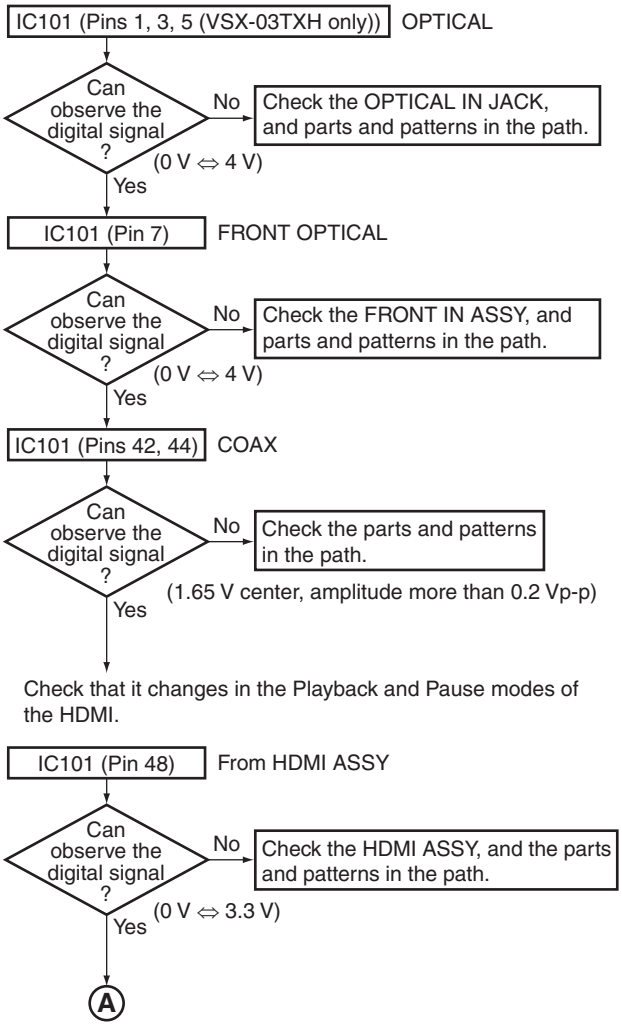


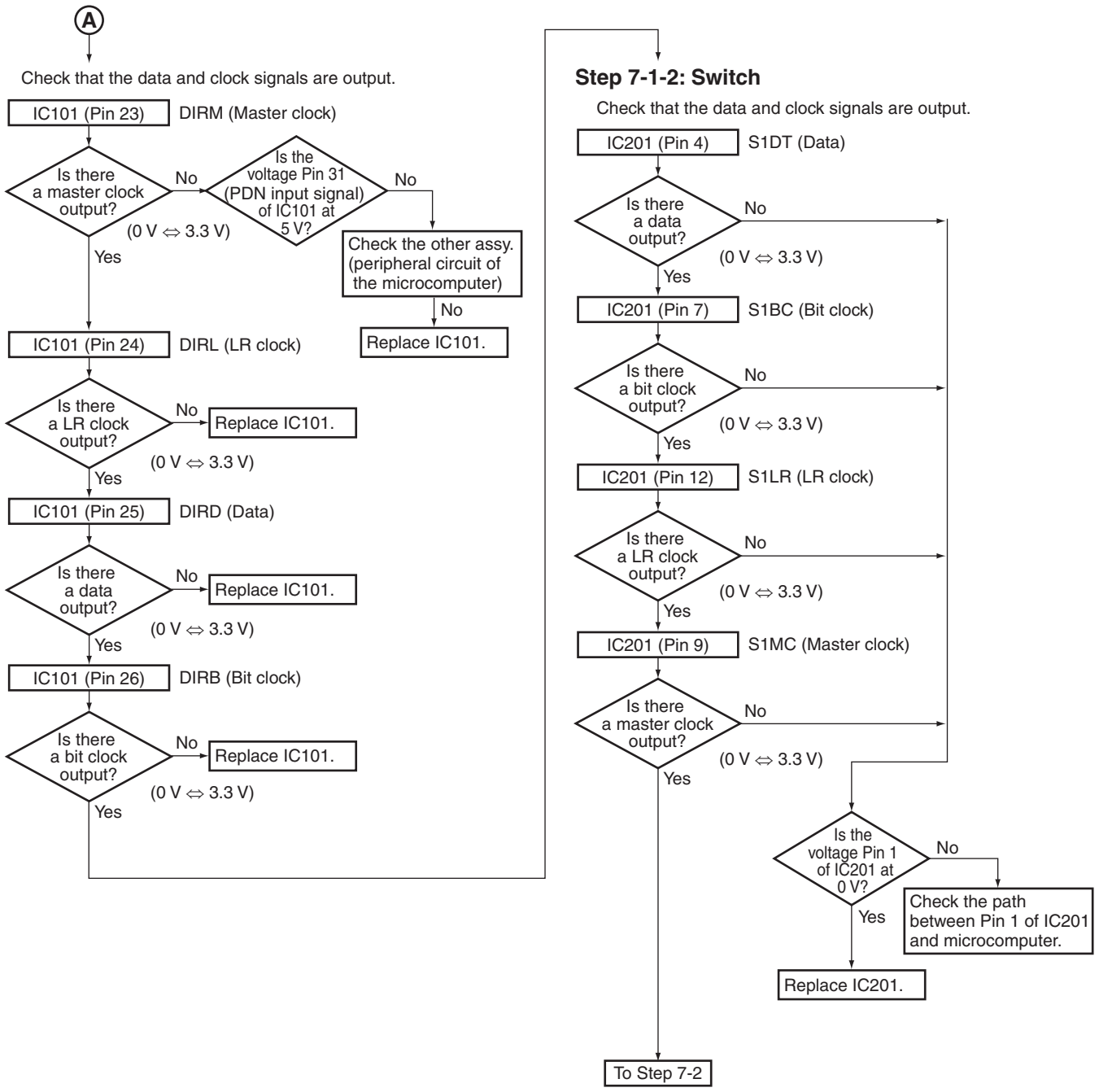
Step 7

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

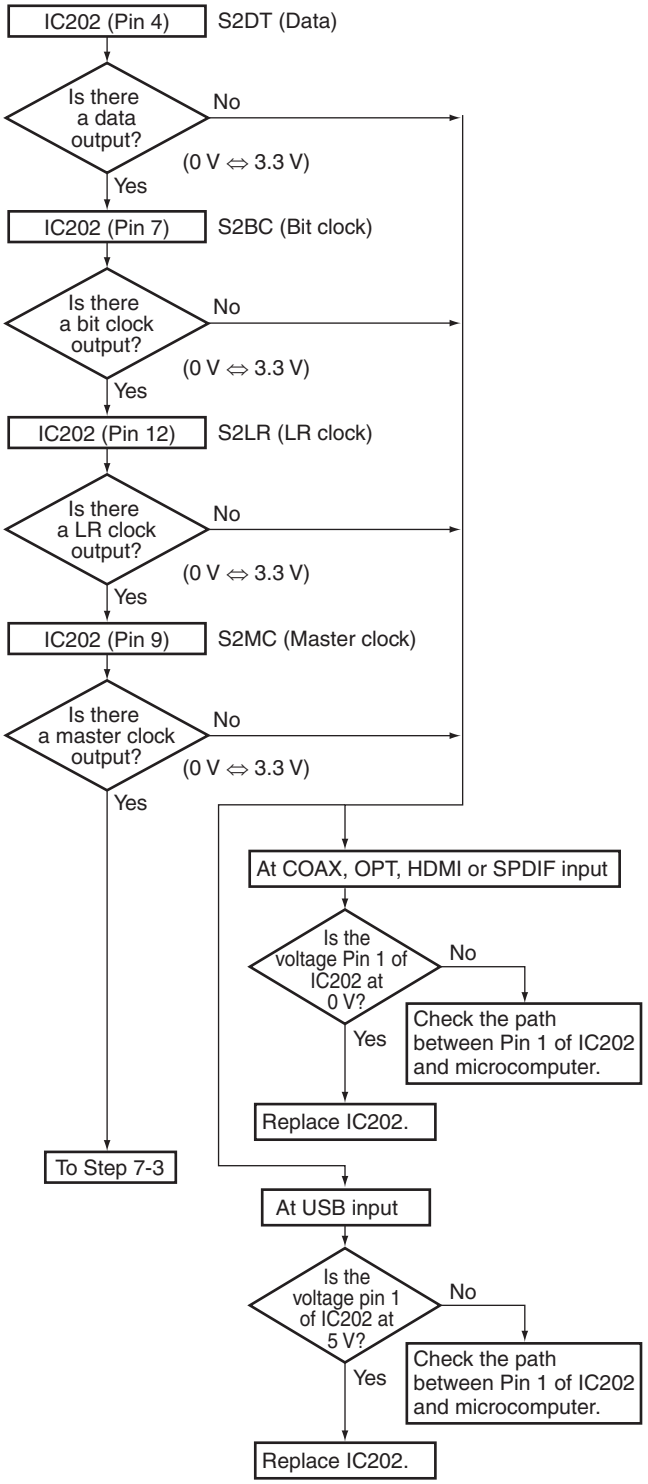
Check that the S/PDIF signal is output.
Check that changes by pulling out and inserting the digital input lines.




A
Check that the data and clock signals are output.
IC101 (Pin 23)
DIRM (Master clock)
Is there a master clock output?
No
Is the voltage Pin 31 (PDN input signal) of IC101 at 5 V?
No
(0 V ⇔ 3.3 V)
Yes
Check the other assy. (peripheral circuit of the microcomputer)
No
Replace IC101.
IC101 (Pin 24)
DIRL (LR clock)
Is there a LR clock output?
No
Replace IC101.
(0 V ⇔ 3.3 V)
Yes
IC101 (Pin 25)
DIRD (Data)
Is there a data output?
No
Replace IC101.
(0 V ⇔ 3.3 V)
Yes
IC101 (Pin 26)
DIRB (Bit clock)
Is there a bit clock output?
No
Replace IC101.
(0 V ⇔ 3.3 V)
Yes
Step 7-1-2: Switch
Check that the data and clock signals are output.
IC201 (Pin 4)
S1DT (Data)
Is there a data output?
No
(0 V ⇔ 3.3 V)
Yes
IC201 (Pin 7)
S1BC (Bit clock)
Is there a bit clock output?
No
(0 V ⇔ 3.3 V)
Yes
IC201 (Pin 12)
S1LR (LR clock)
Is there a LR clock output?
No
(0 V ⇔ 3.3 V)
Yes
IC201 (Pin 9)
S1MC (Master clock)
Is there a master clock output?
No
(0 V ⇔ 3.3 V)
Yes
Is the voltage Pin 1 of IC201 at 0 V?
No
Check the path between Pin 1 of IC201 and microcomputer.
Yes
Replace IC201.
To Step 7-2

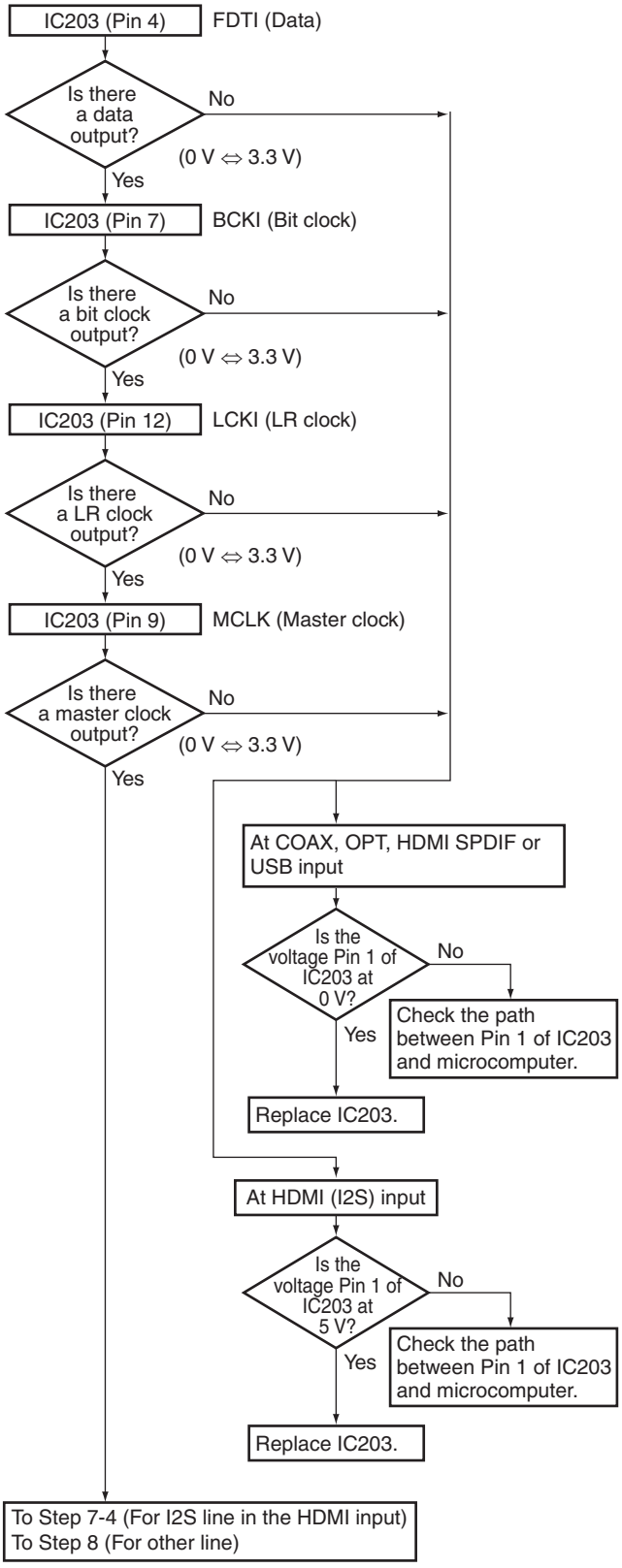
Step 7-2: Switch

Check that the data and clock signals are output.



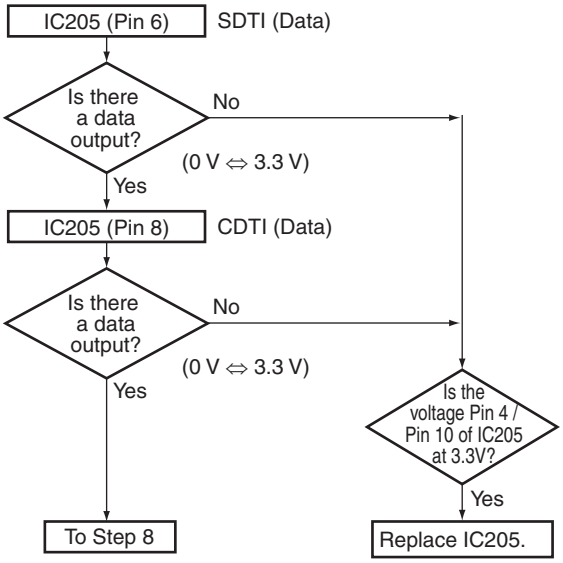
Step 7-3: Switch

Check that the data and clock signals are output.



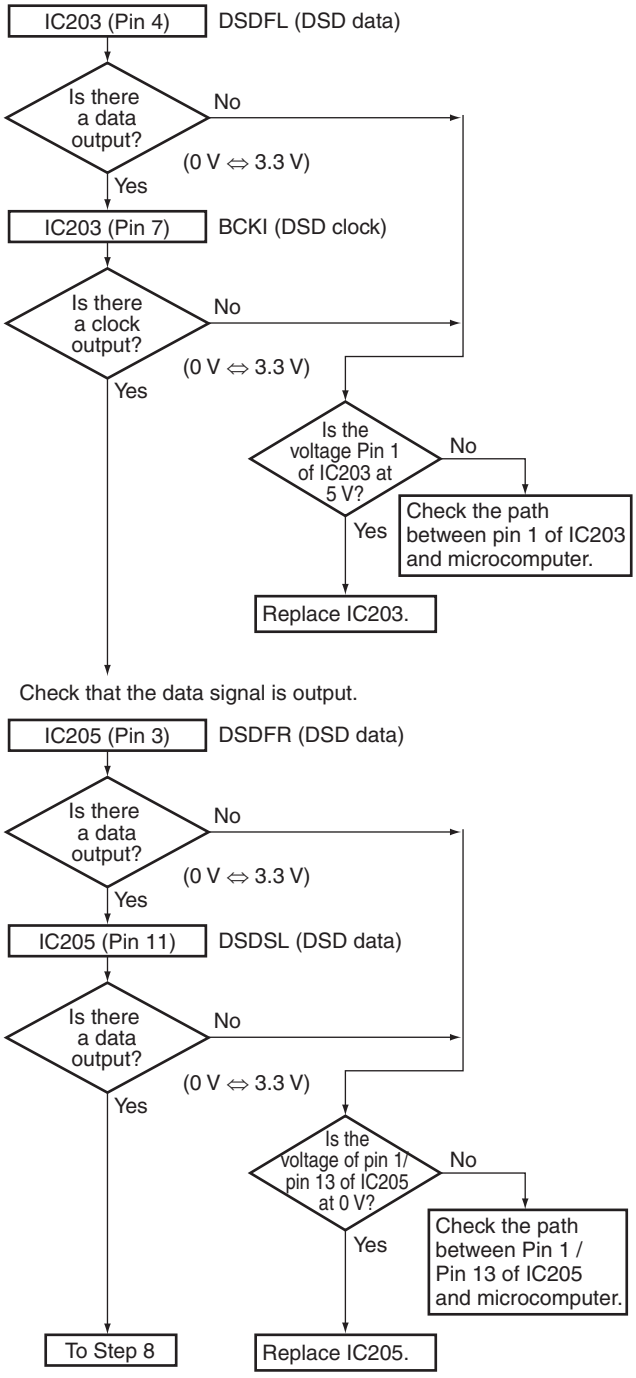
Step 7-4: Switch

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

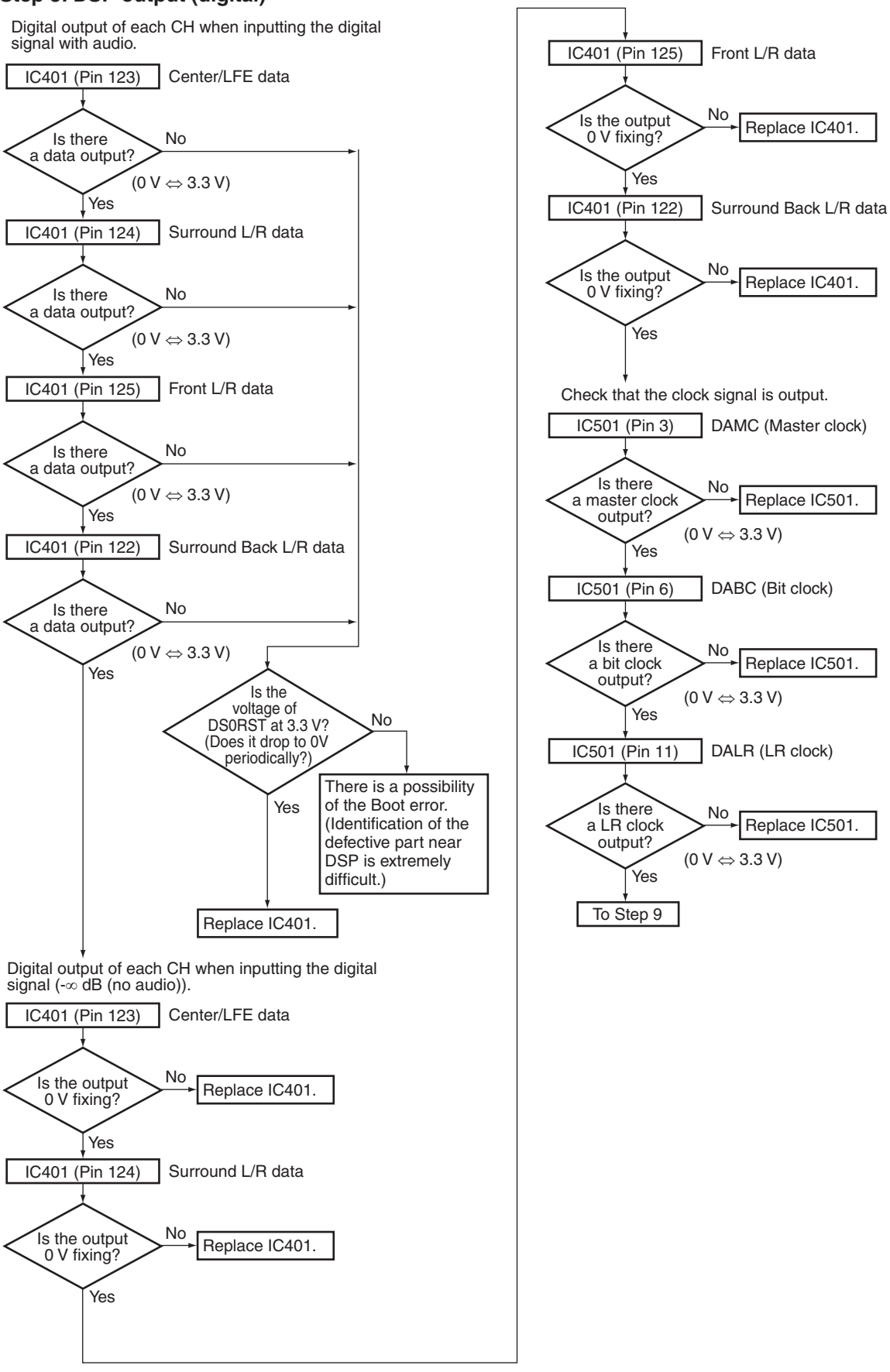


Step 7-5: Switch (SACD only)

Check that the data and clock signals are output.

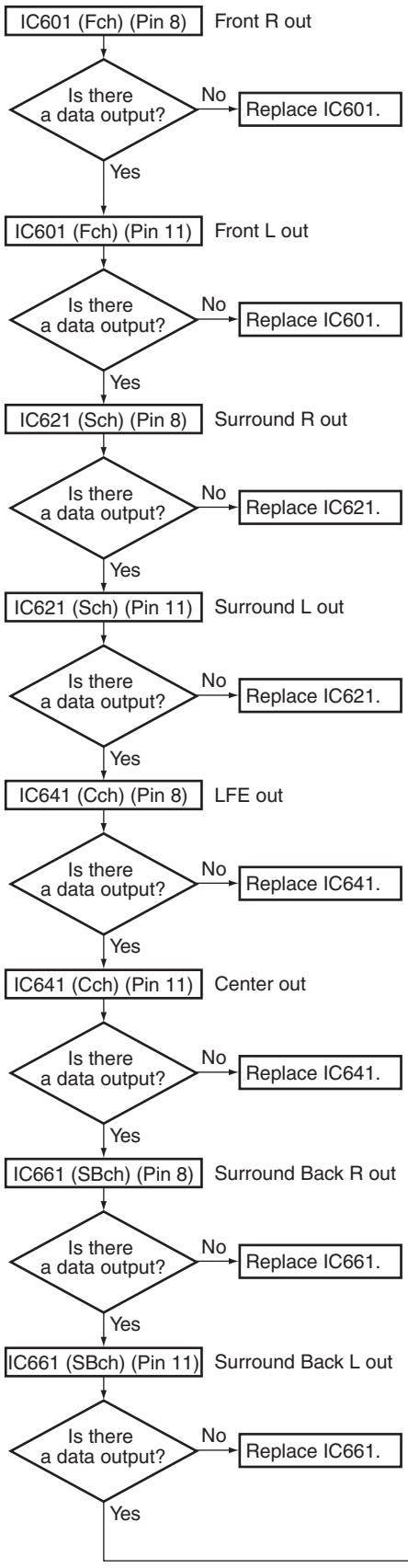


Step 8: DSP output (digital)

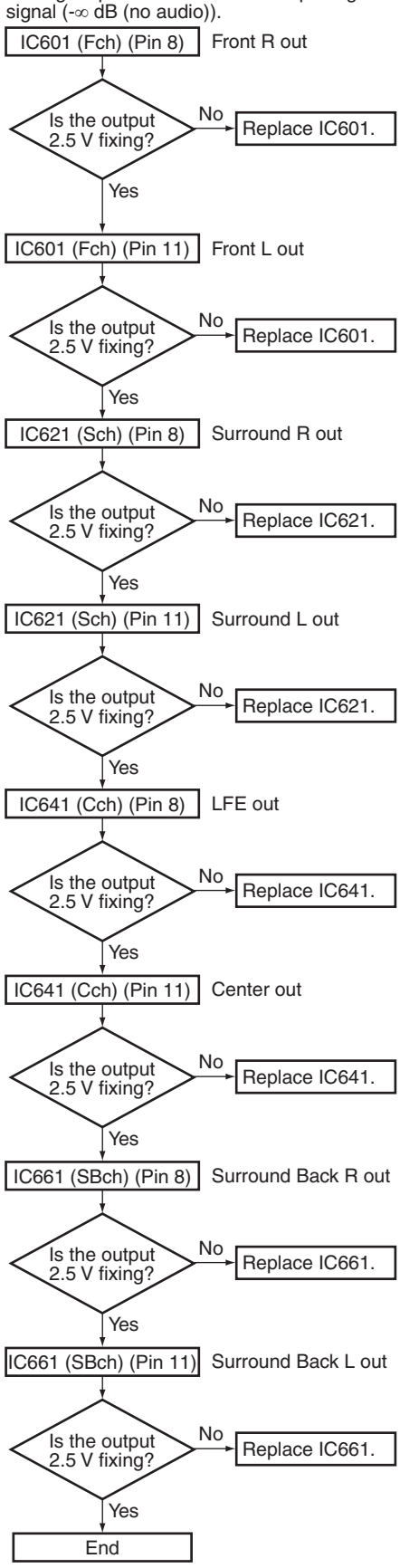


Step 9: DAC output (analog)

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

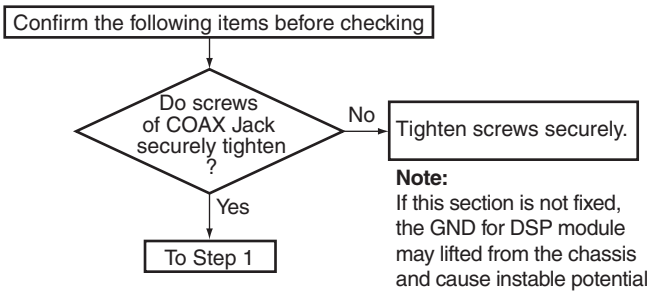


Analog output of each CH when inputting the digital signal (-∞ dB (no audio)).



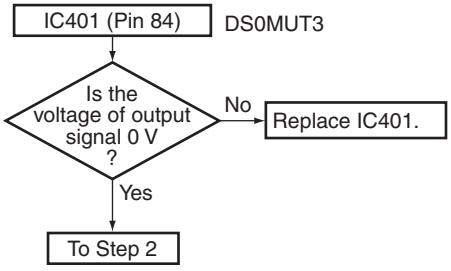
[2] DSP Troubleshooting in the XM mode

Step 0: Preliminary confirmation

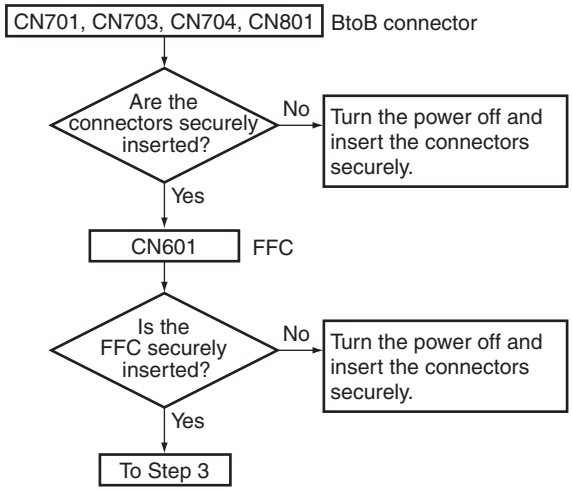


Note:
If this section is not fixed, the GND for DSP module may lifted from the chassis and cause instable potential and lead to product failures.

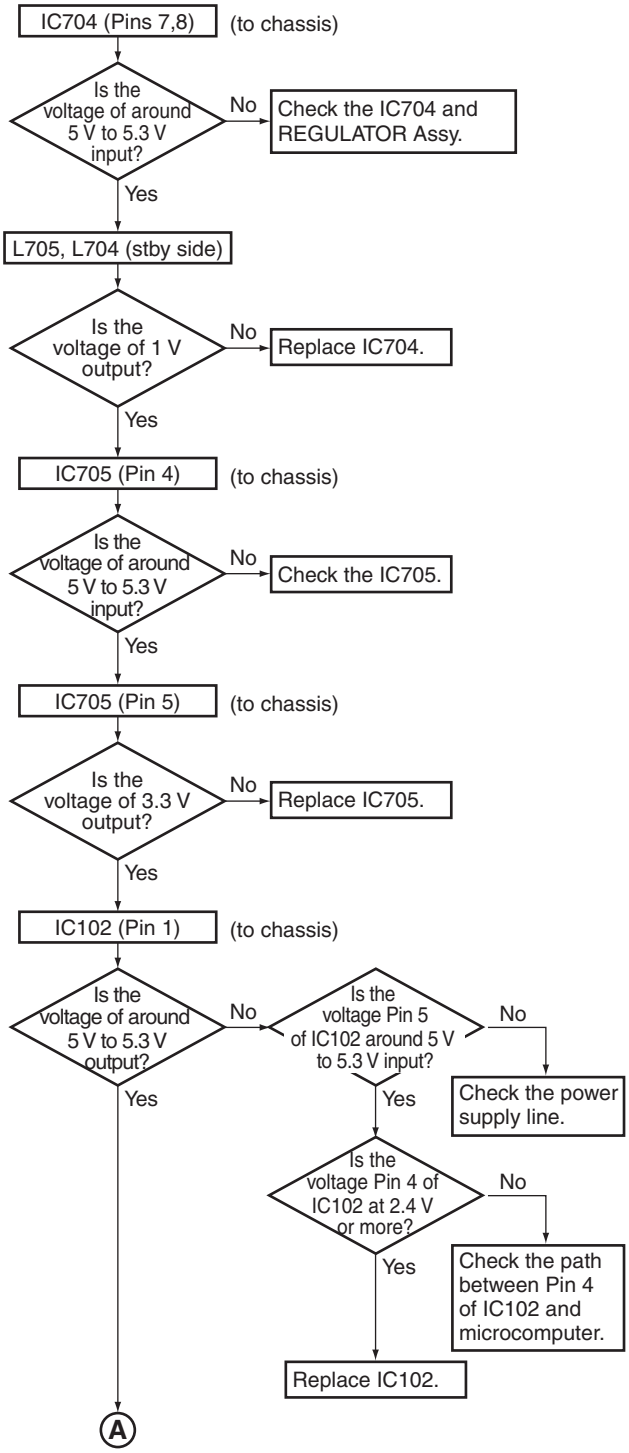
Step 1: MUTE pin

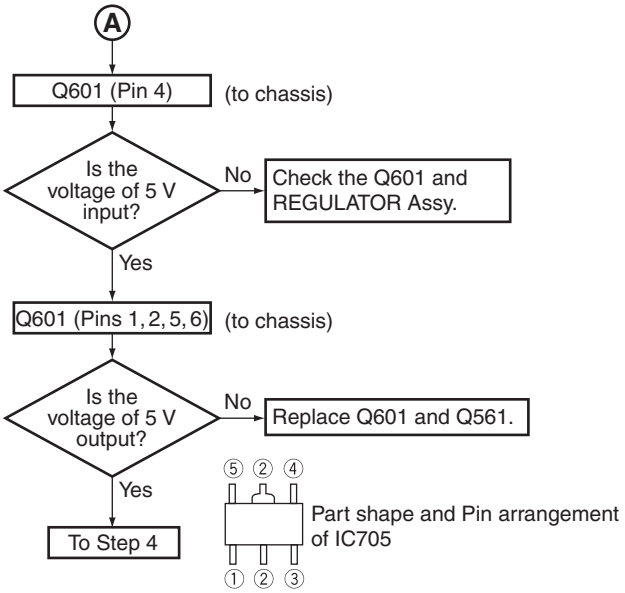


Step 2: BtoB connector and FFC

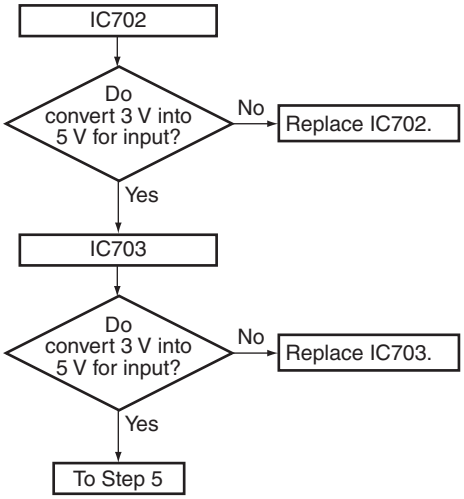


Step 3: Regulator IC

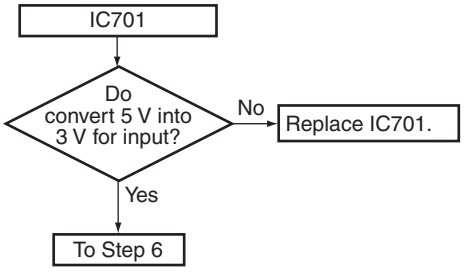




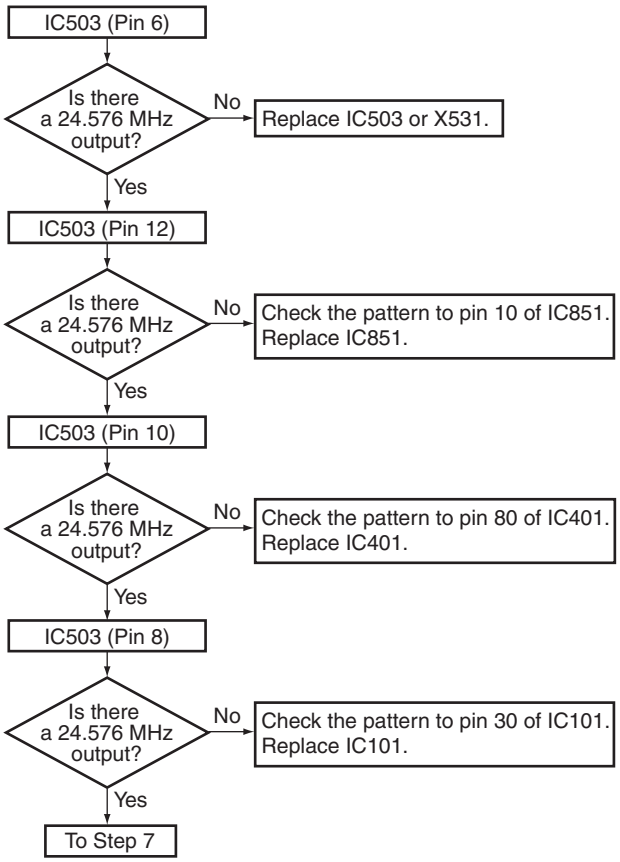
Step 4: 3 V to 5 V conversion



Step 5: 5 V to 3 V conversion

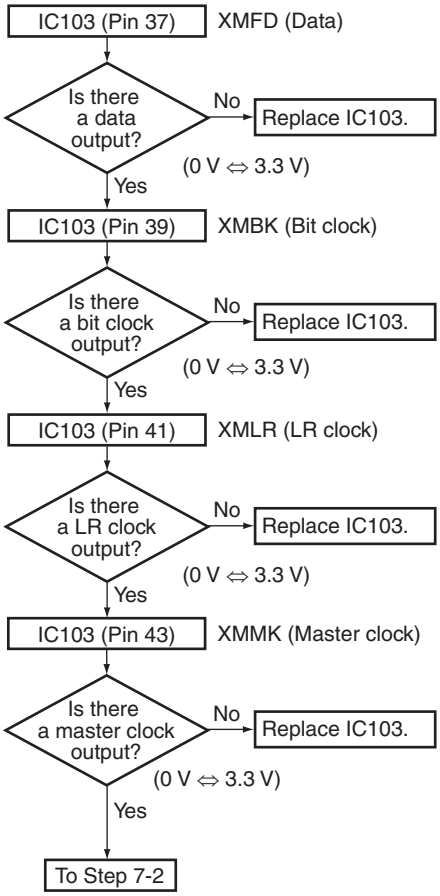


Step 6: X'tal



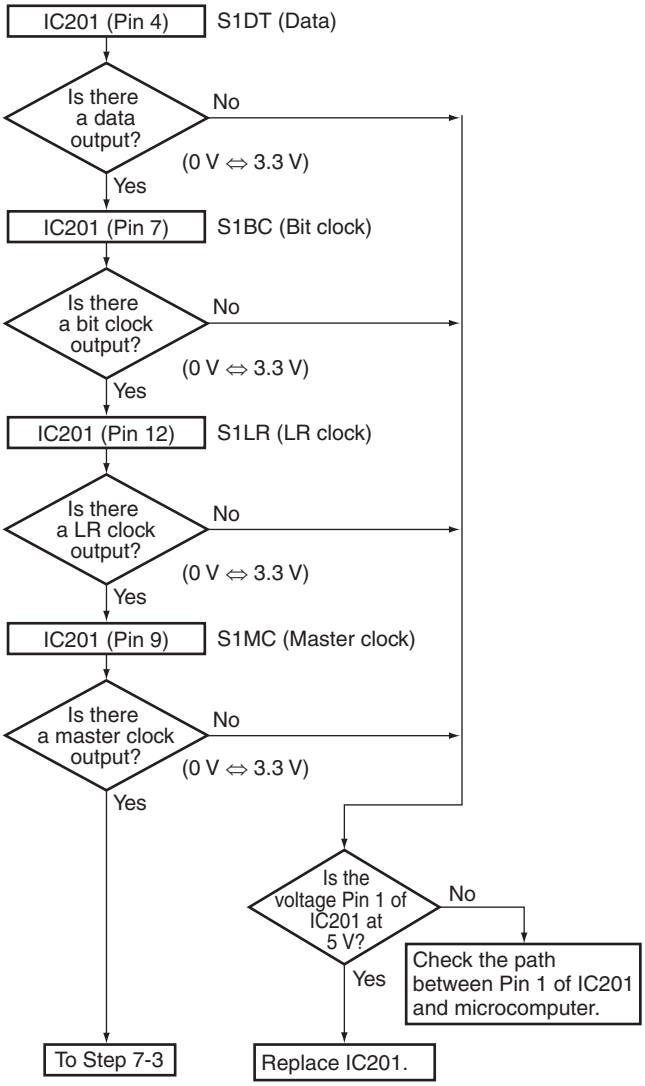
Step 7-1: XM/DT

Check that the data and clock signals are output.



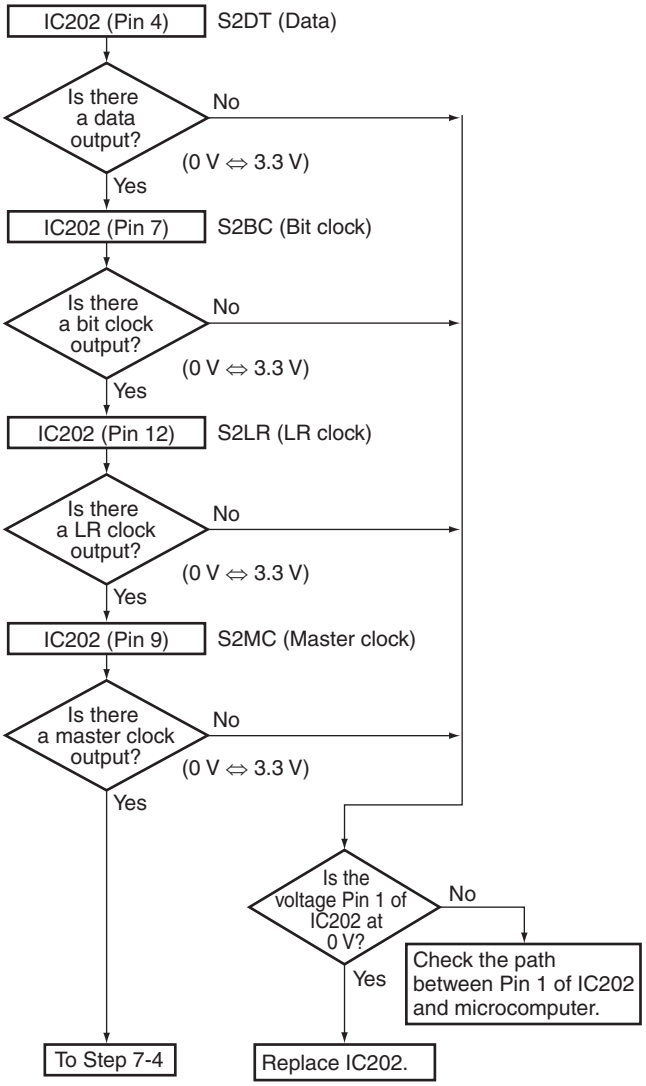
Step 7-2: Switch

Check that the data and clock signals are output.



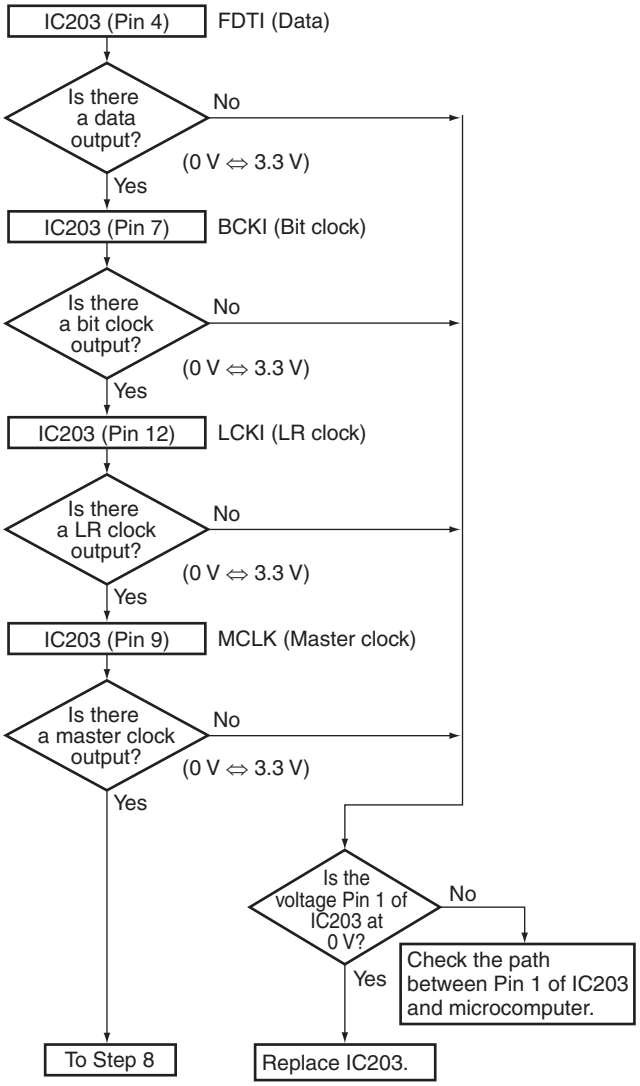
Step 7-3: Switch

Check that the data and clock signals are output.



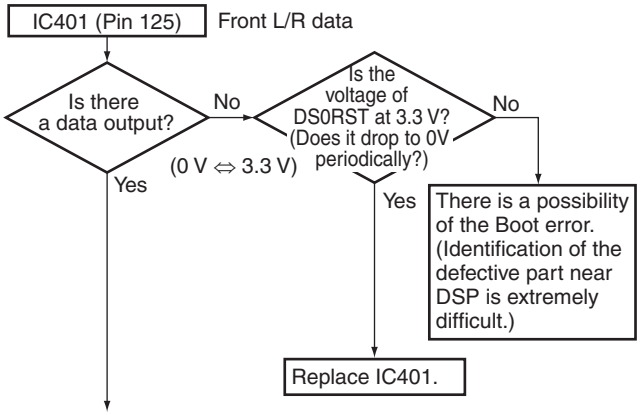
Step 7-4: Switch

Check that the data and clock signals are output.

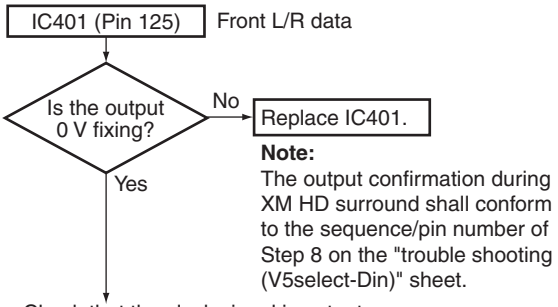


Step 8: DSP output (digital)

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

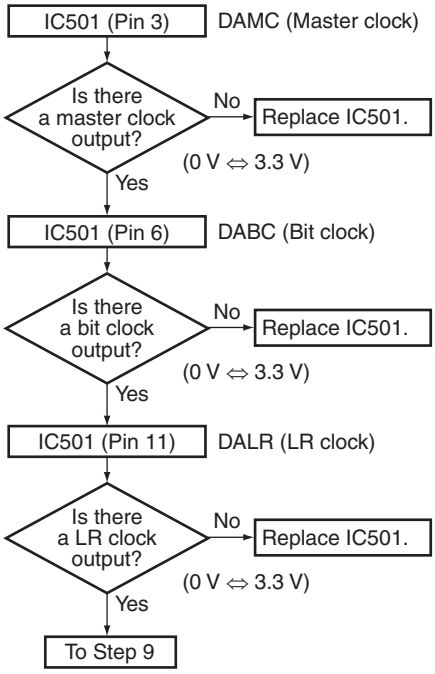


Digital output of each CH when inputting the digital signal (-∞ dB (no audio)).



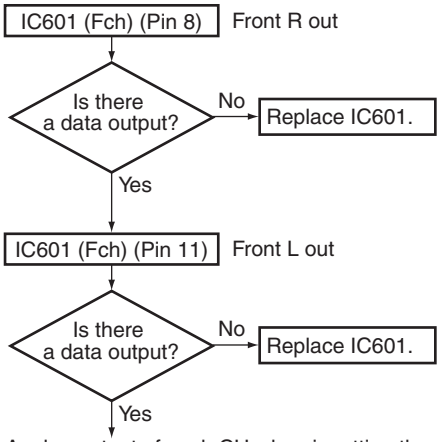
Note:
The output confirmation during XM HD surround shall conform to the sequence/pin number of Step 8 on the "trouble shooting (V5select-Din)" sheet.

Check that the clock signal is output.

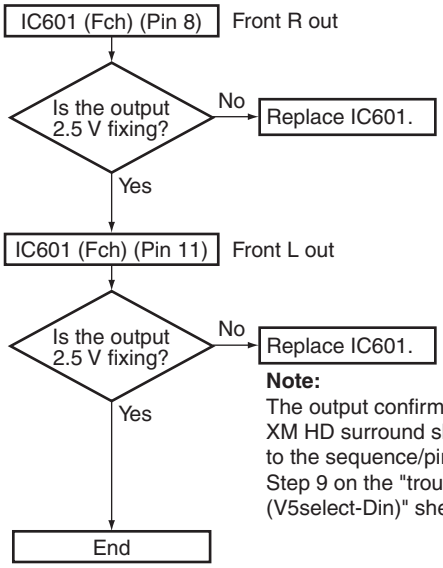


Step 9: DAC output (analog)

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

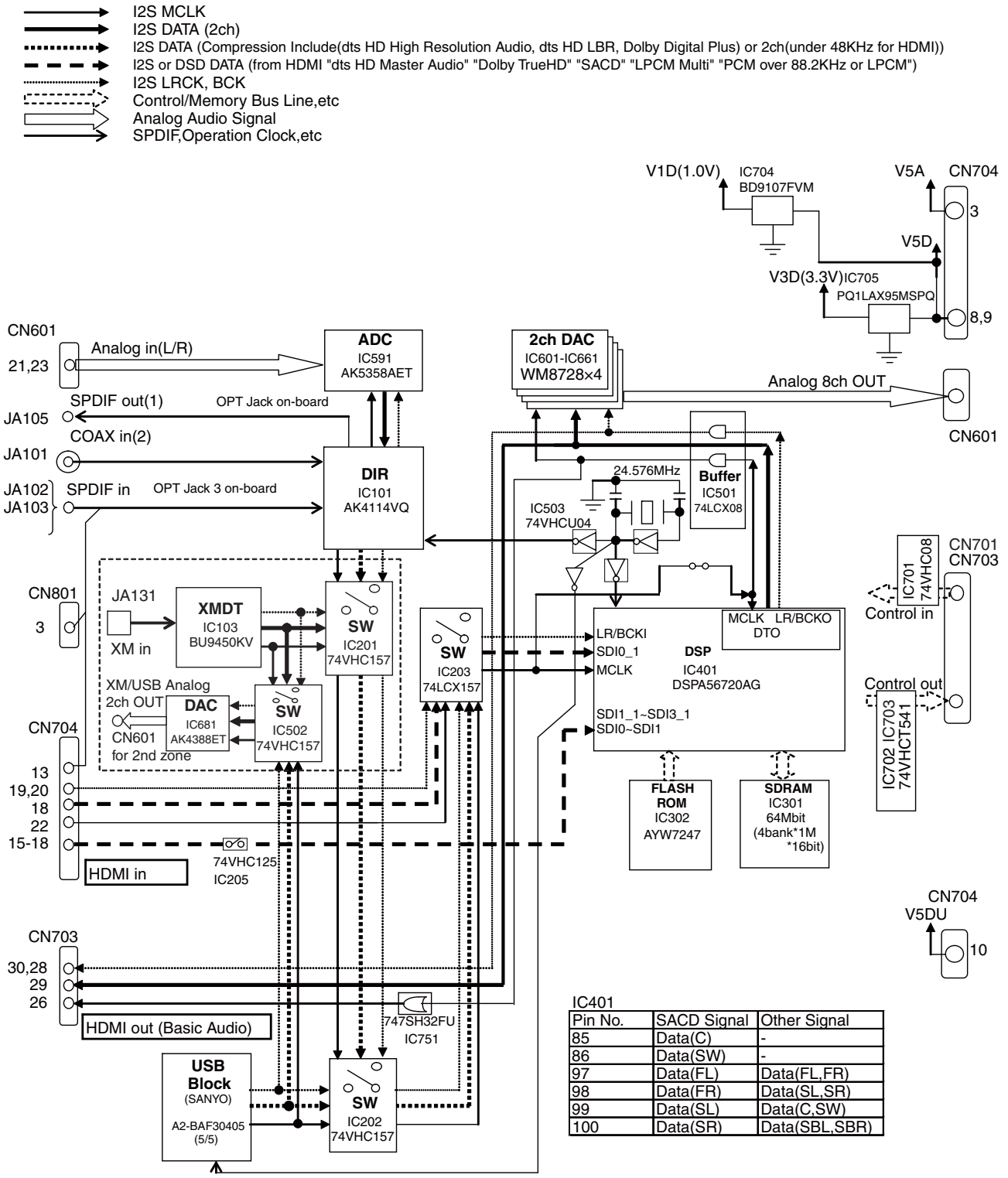


Analog output of each CH when inputting the digital signal (-∞ dB (no audio)).



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.

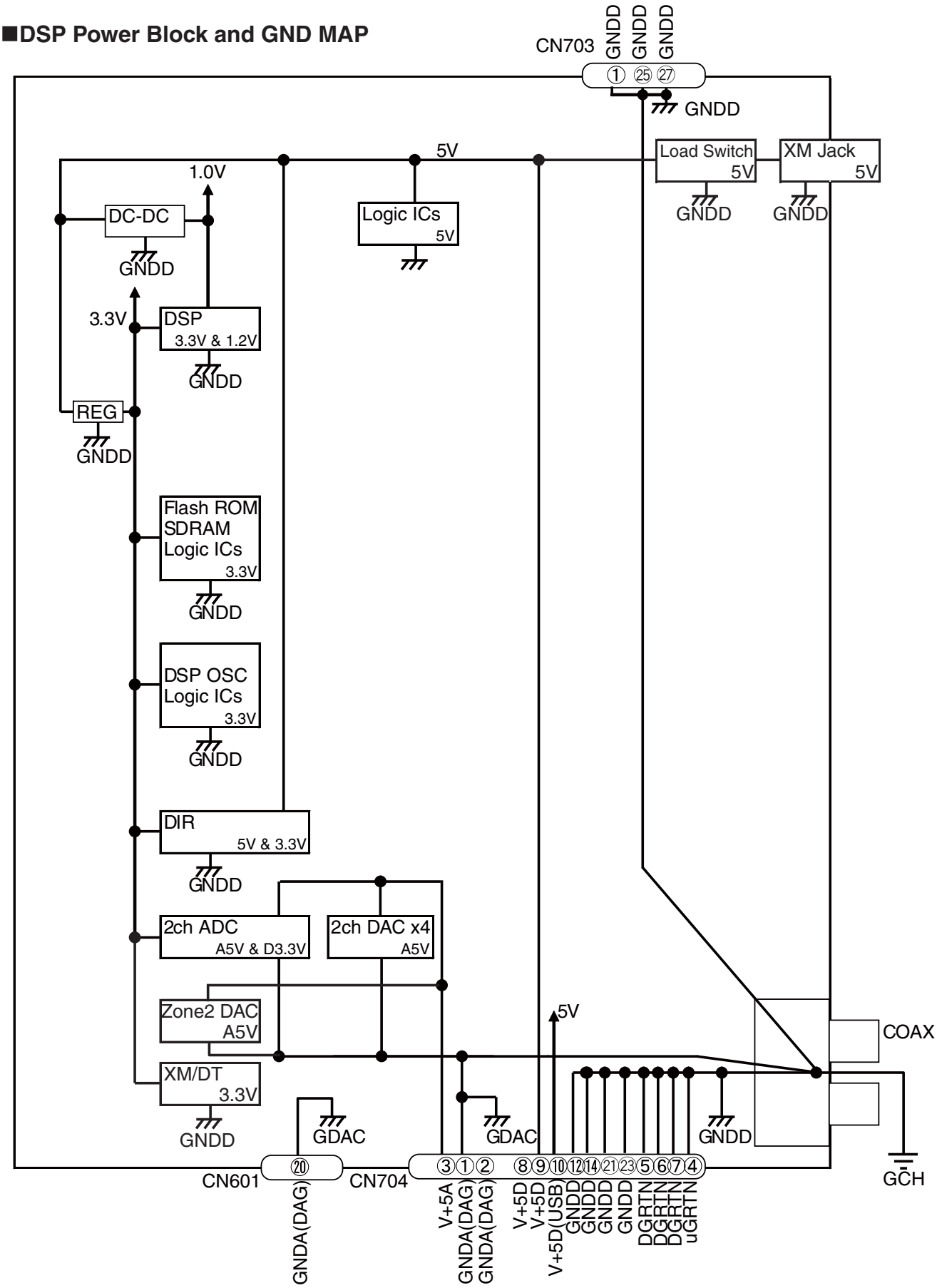
■ DSP Block Diagram



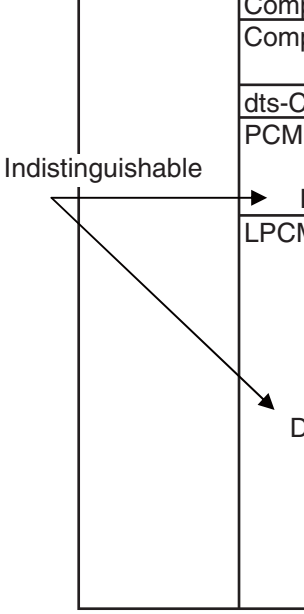
IC401

Pin No.	SACD Signal	Other Signal
85	Data(C)	-
86	Data(SW)	-
97	Data(FL)	Data(FL,FR)
98	Data(FR)	Data(SL,SR)
99	Data(SL)	Data(C,SW)
100	Data(SR)	Data(SBL,SBR)

■DSP Power Block and GND MAP



■ Conditions for selecting SPDIF or I2S output



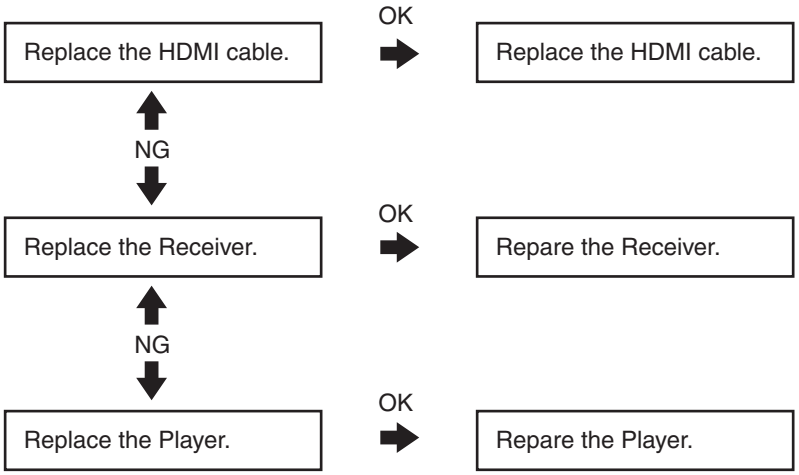
	pcm	fs(kHz)	Layout	SPDIF	I2S(3 lines)
	Compression DVD-V	48	2ch	◎	×
	Compression *.WAV	44	2ch	○	×
		48	2ch	○	×
	dts-CD	44	2ch	○	×
	PCM	44	2ch	○	×
		48	2ch	○	×
	DVD-V	96	2ch		○
	LPCM	44	2ch	○	
			Multi	×	○
		48	2ch	○	
			Multi	×	○
		88	2ch		○
			Multi	×	○
	DVD-A	96	2ch		○
			Multi	×	○
		176	2ch	×	○
	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

SACD	2ch	×	○	(DSD)
	Multi	×	○	(DSD)

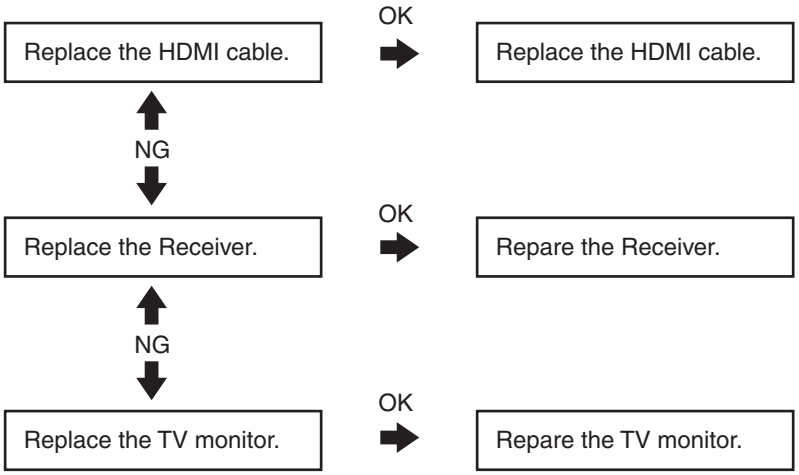
dts HD Master Audio	×	○
dts HD High Resolution Audio	○	×
dts HD LBR	○	×
Dolby TrueHD	×	○
Dolby Digital Plus	○	×

[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.

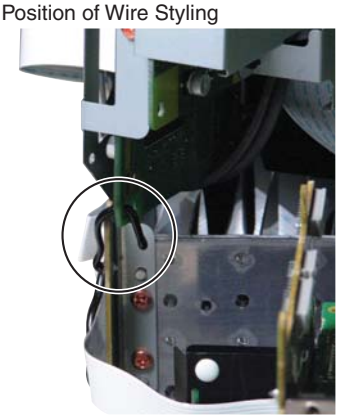
② Remove the screw that fix the MAIN Assy and the Wire Styling of the PCB Binder.

③ Remove the two screws that fix the HDMI Shield V5S.

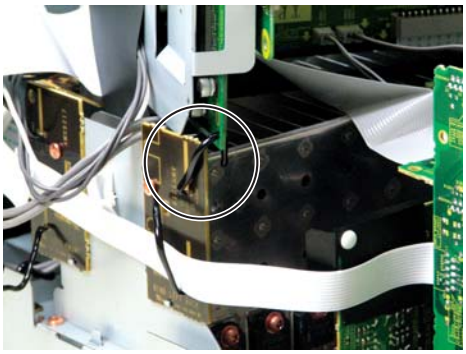
④ Connect the four extension jig cables (two 19P board to board extension jig cable, one 11P board to board extension jig cable and 11P FFC).

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.

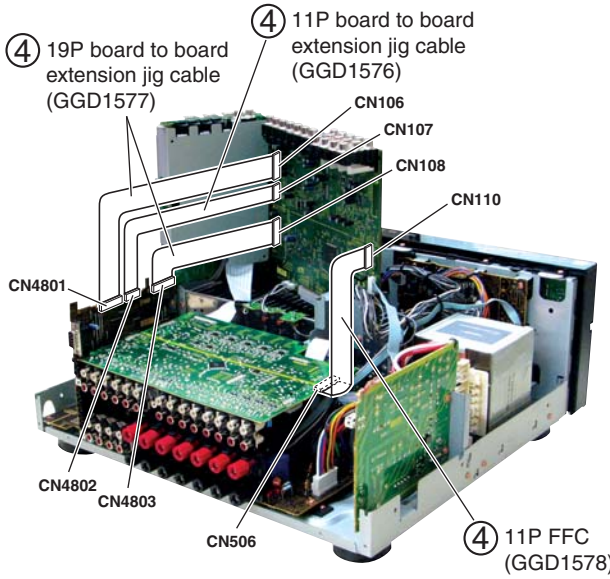
Position of Wire Styling

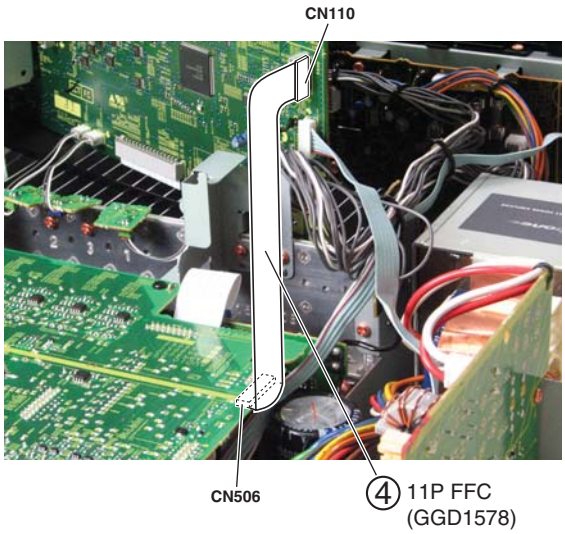


Position of Wire Styling (The above angle is different.)

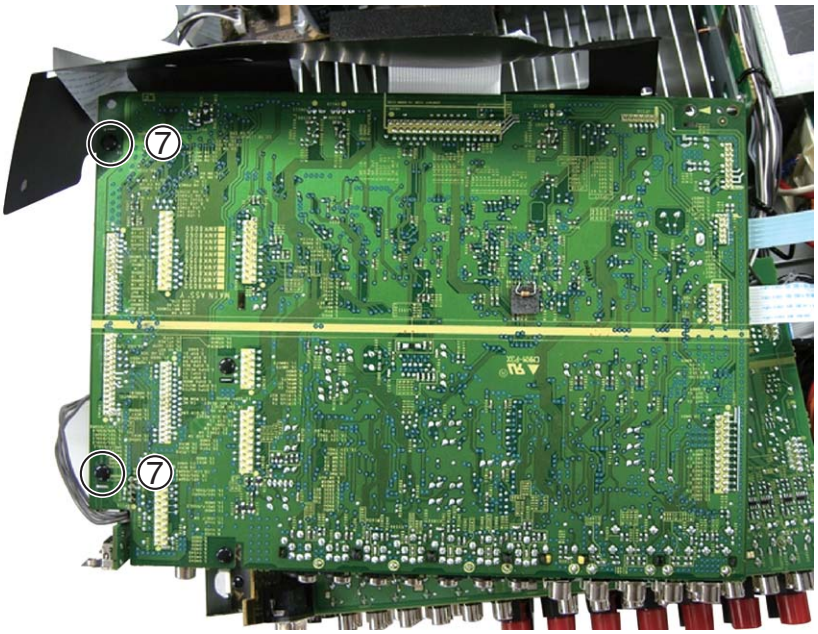


⑥ Connect the earth point.

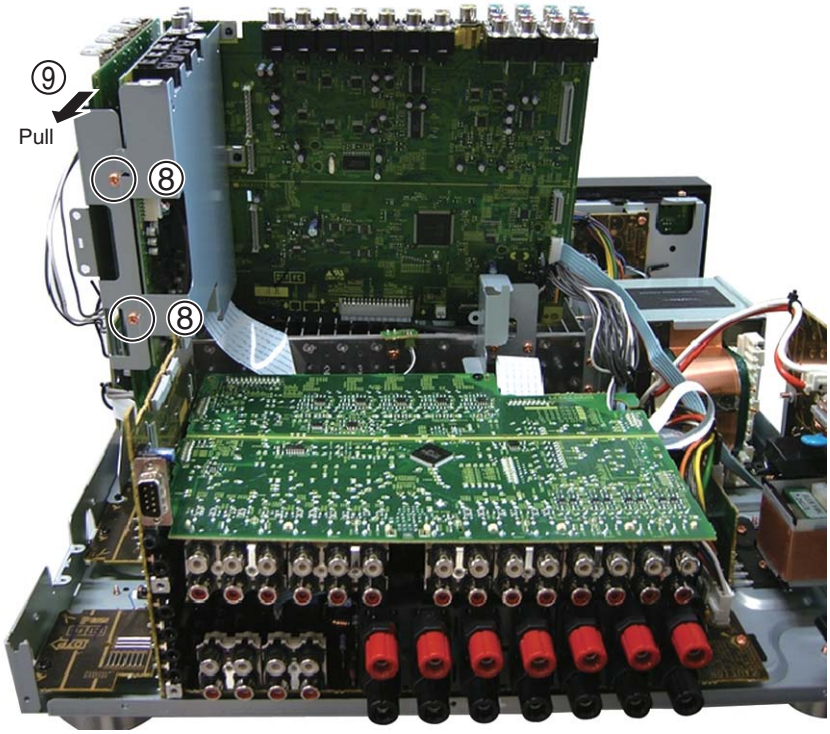




⑦ Remove the two Nylon Rivets fixing the HDMI Shield V5S on MAIN Assy.

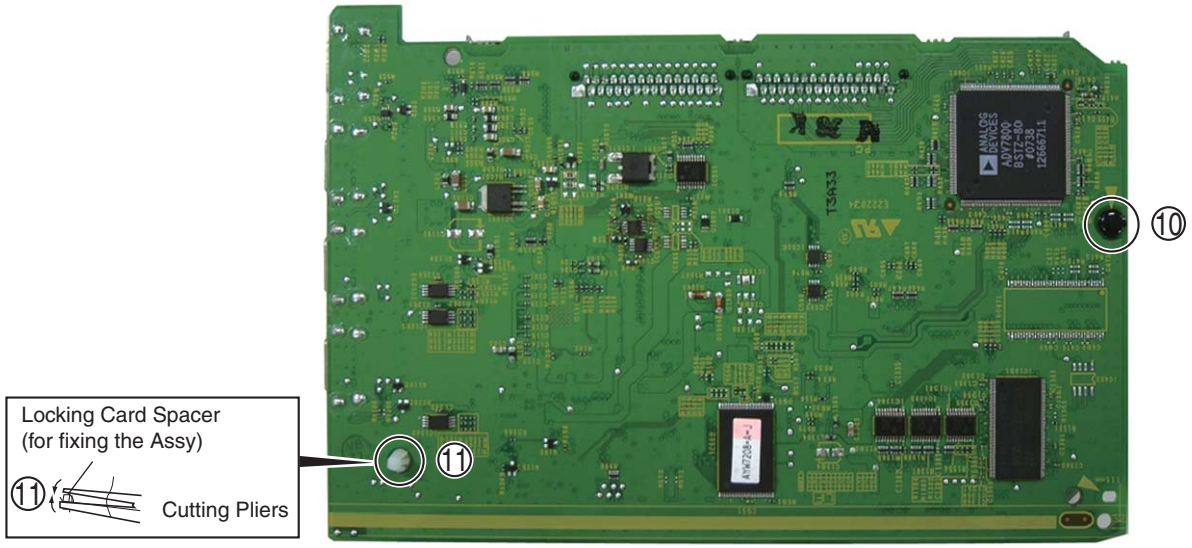


⑧ Remove the two screws from the HDMI Shield V5S.
⑨ Remove the HDMI&DVC Assy and HDMI Shield V5S together from the MAIN Assy.



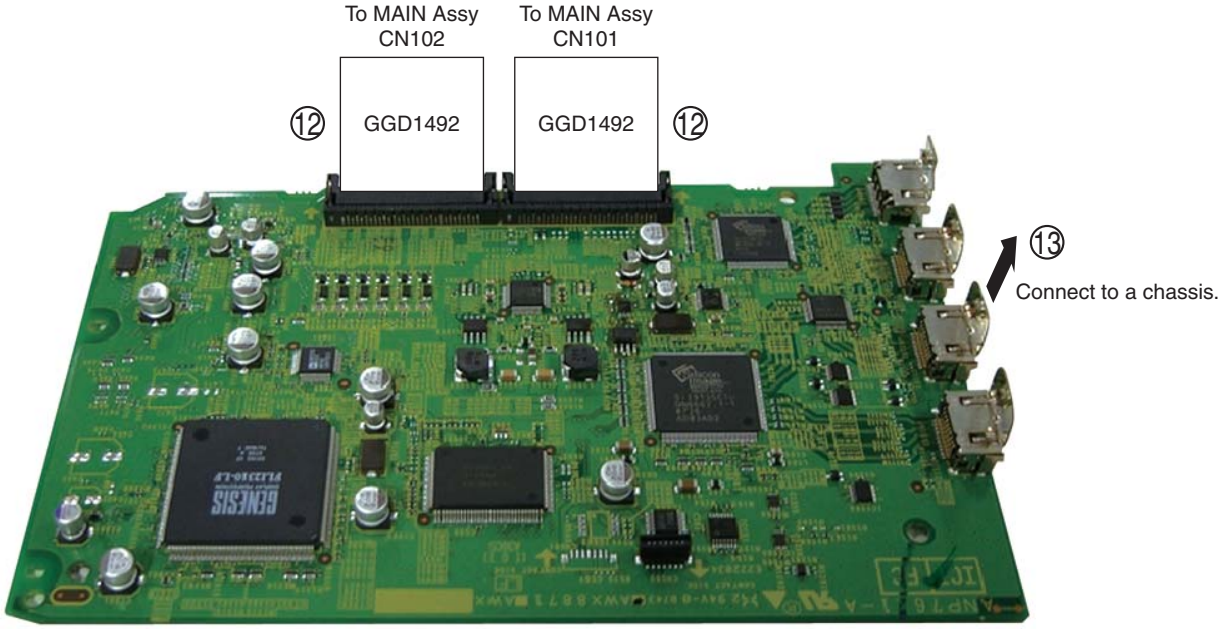
⑩ Remove the Nylon Rivet fixing the HDMI&DVC Assy and the HDMI Shield V5S.

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).

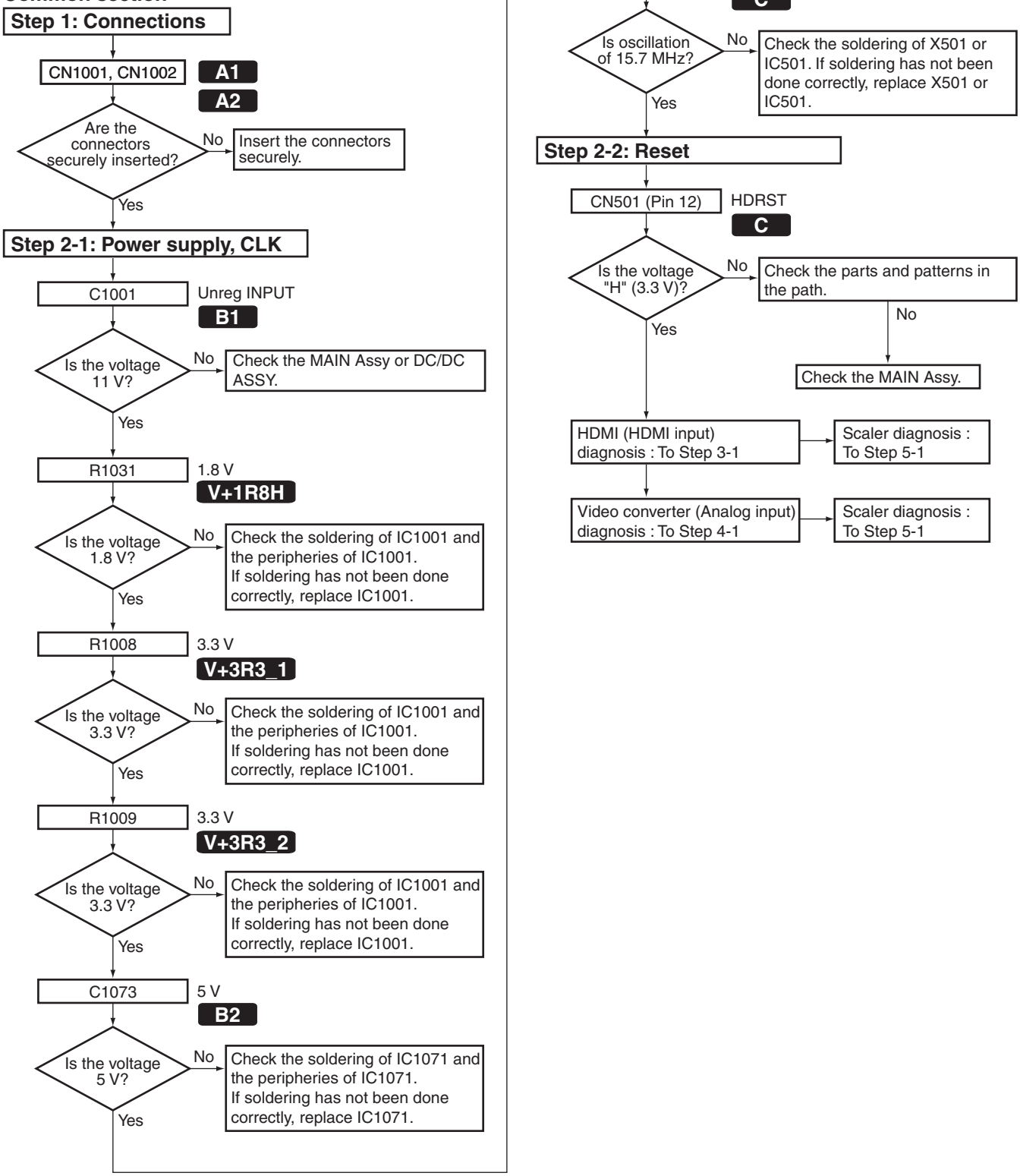
⑬ Connect one of the HDMI connectors and a chassis (connect GND).



[5] HDMI Troubleshooting

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

Common section



HDMI section

Step 3-1: Power supply, CLK

C1056 — 5 V(HDMI OUT) — **V+5HD**

Is the voltage 5 V?
- No → Check the soldering of IC1051 and the peripheries of IC1051. If soldering has not been done correctly, replace IC1051.
- Yes ↓

IC1254 (Pin 16) — 5 V(BD IN) — **D1**

Is the voltage 4.4 V?
- No → Check the D1152.
  - No → Replace D1152.
- Yes ↓

IC1252 (Pin 16) — 5V(HDMI IN1) — **D2**

Is the voltage 4.4 V?
- No → Check the D1151.
  - No → Replace D1151.
- Yes ↓

IC1204 (Pin 16) — 5V(HDMI IN2) — **D3**

Is the voltage 4.4 V?
- No → Check the D1102.
  - No → Replace D1102.
- Yes ↓

IC1151 (Pin 48) — 3.3 V(Cable EQ 2) — **E**

Is the voltage 3.3 V? (BD or HDMI1 is selected)
- No → Check the L1151,Q1153 and the peripheries.
  - No → Replace L1151,Q1153 or the peripheries.
- Yes ↓

X101 — X'TAL(HDMI Rx) — **F**

Is oscillation of 27 MHz?
- No → Check the soldering of IC101. Check the peripheries of X101.
  - No → Replace.
- Yes ↓

Step 3-2 : Reset

IC501 (Pin 22) — RXRST — **C**

Is the voltage "H" (3.3 V)?
- No → Check the parts and patterns in the path.
  - No → Replace IC501 or IC502.
- Yes ↓

IC501 (Pin 25) — TXRST — **C**

Is the voltage "H" (3.3 V)?
- No → Check the parts and patterns in the path.
  - No → Replace IC501 or IC502.
- Yes ↓

Step 3-3: Source 5V

* When connected the source equipment to BD IN.

IC151 (Pin 9) — V+5R3 — **G1**

Is the voltage 5 V?
- No → Check the JA1152.
  - No → Replace JA1152.
- Yes ↓

* When connected the source equipment to IN1.

IC151 (Pin 12) — V+5R2 — **G1**

Is the voltage 5 V?
- No → Check the JA1151.
  - No → Replace JA1151.
- Yes ↓

* When connected the source equipment to IN2.

IC151 (Pin 5) — V+5R1 — **G1**

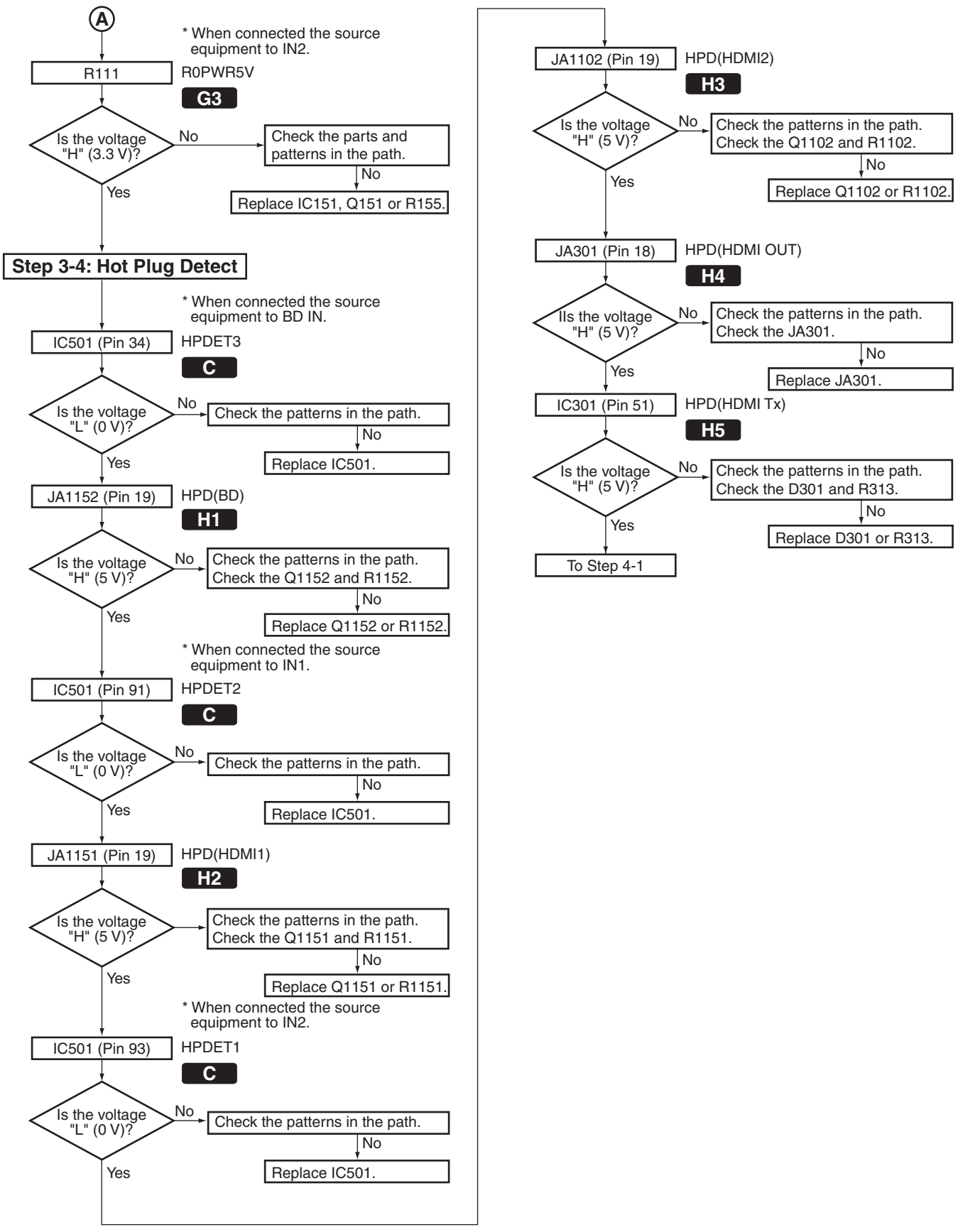
Is the voltage 5 V?
- No → Check the JA1102.
  - No → Replace JA1102.
- Yes ↓

* When connected the source equipment to BD IN/IN1.

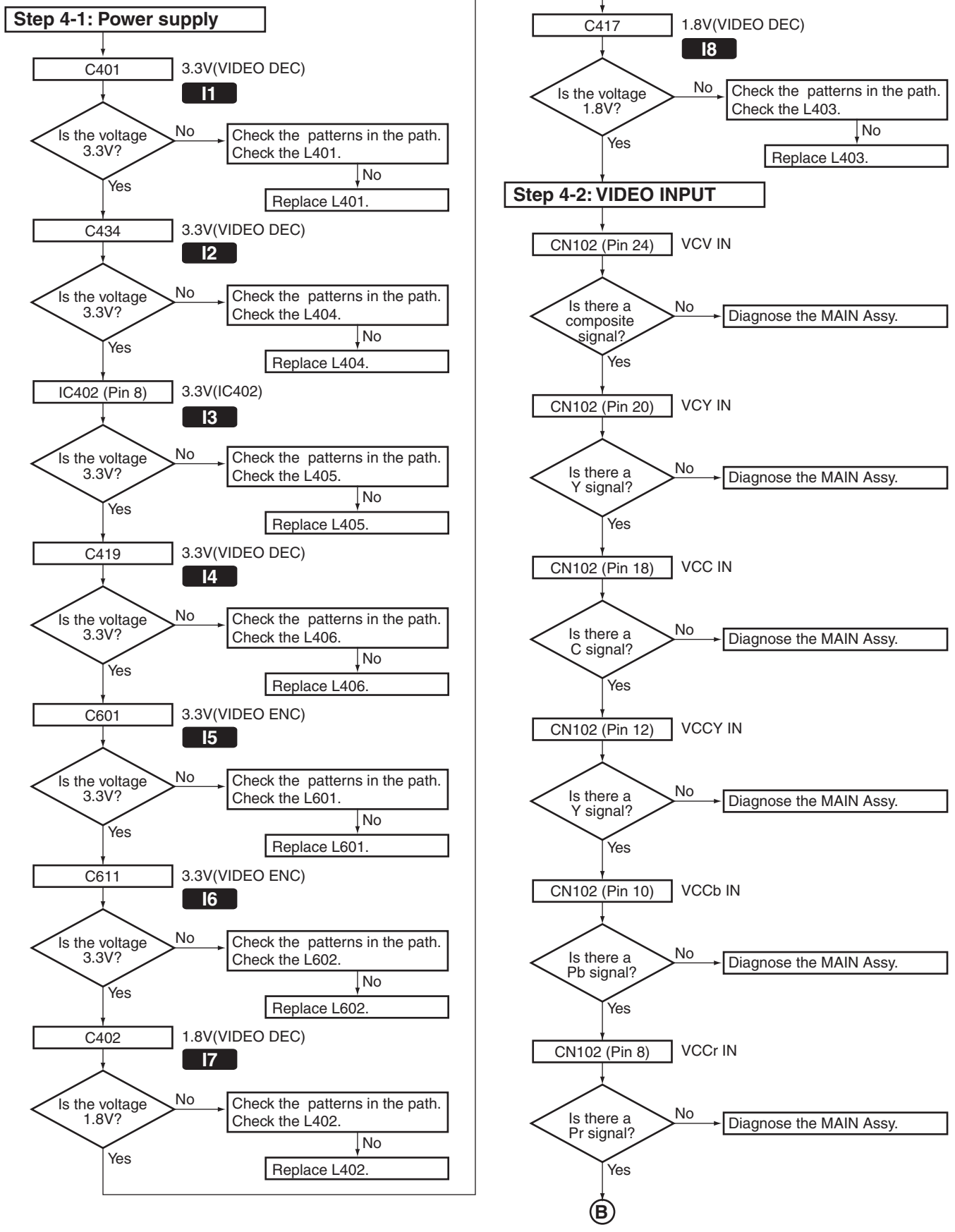
R109 — R1PWR5V — **G2**

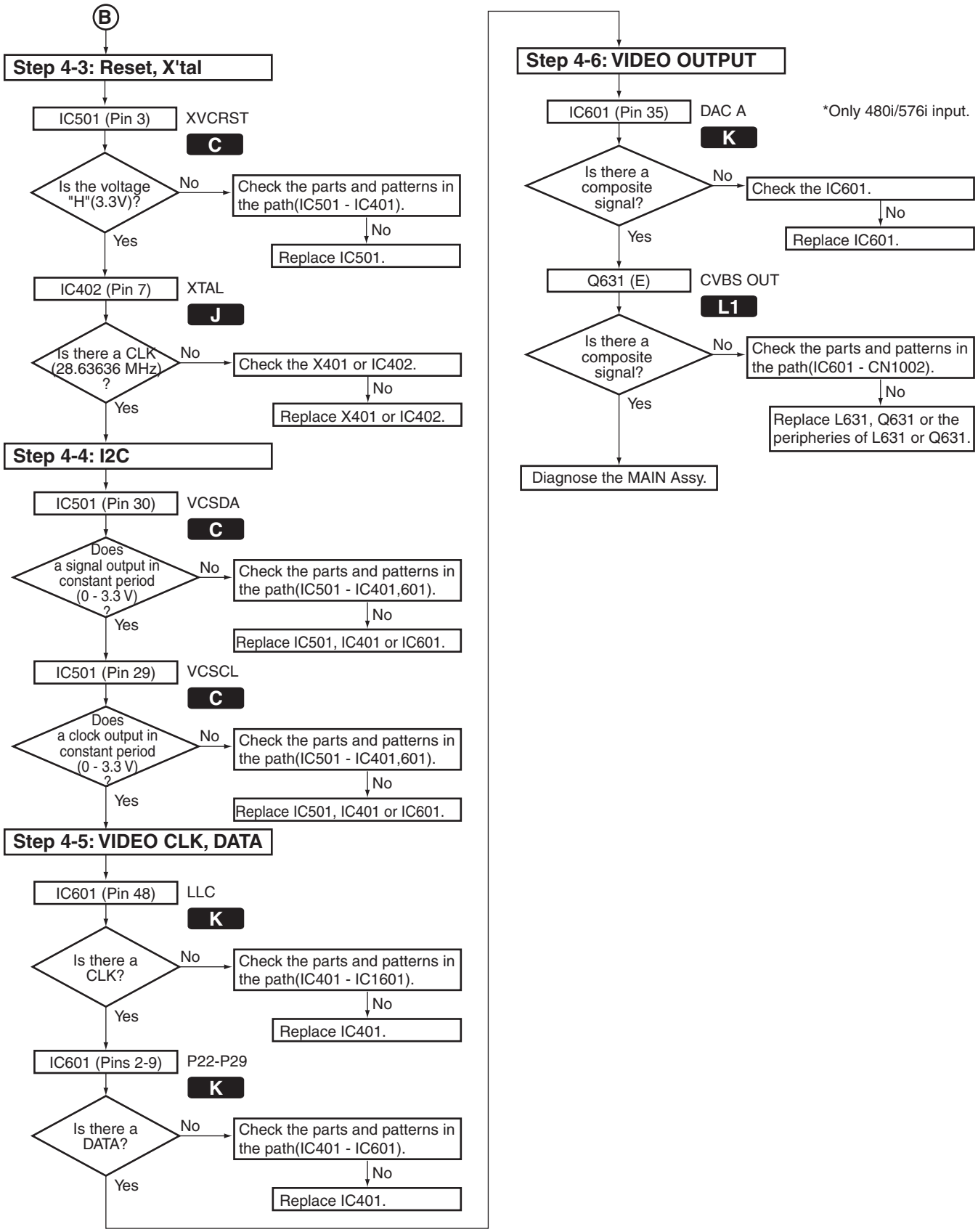
Is the voltage "H" (3.3 V)?
- No → Check the parts and patterns in the path.
  - No → Replace IC151, Q152 or R156.
- Yes ↓

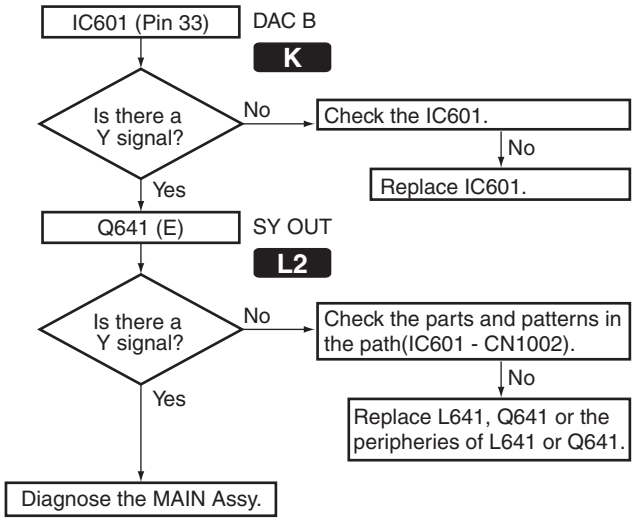
Ⓐ

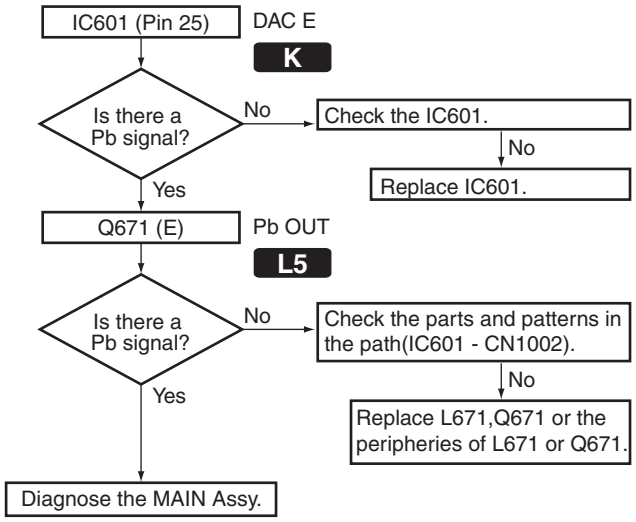

A
* When connected the source equipment to IN2.
R111
R0PWR5V
G3
Is the voltage "H" (3.3 V)?
No
Check the parts and patterns in the path.
No
Replace IC151, Q151 or R155.
Yes
B
Step 3-4: Hot Plug Detect
* When connected the source equipment to BD IN.
IC501 (Pin 34)
HPDET3
C
Is the voltage "L" (0 V)?
No
Check the patterns in the path.
No
Replace IC501.
Yes
C
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
D
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
E
* 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
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
IIs 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

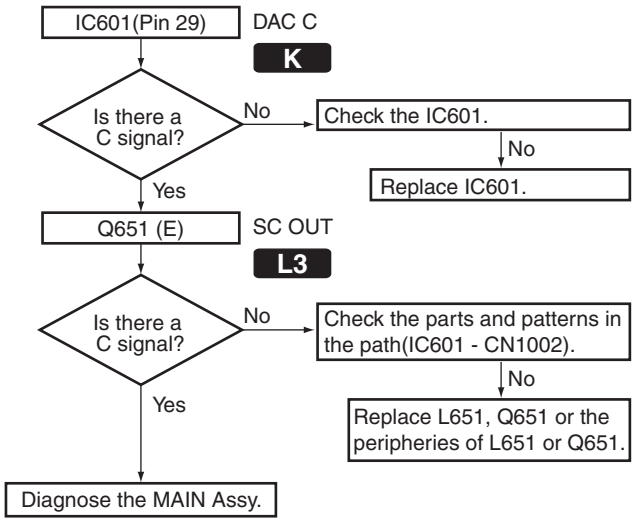
Video converter section

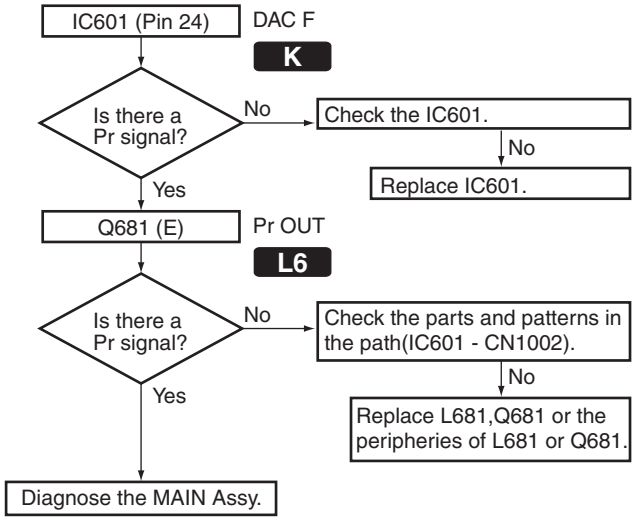


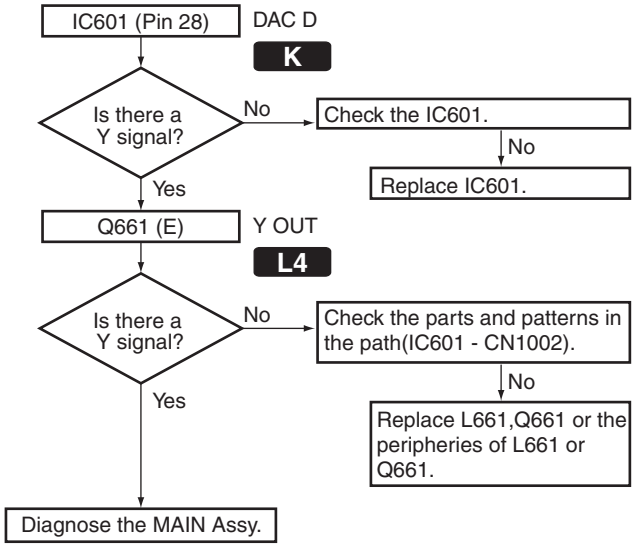

B
Step 4-3: Reset, X'tal
IC501 (Pin 3)
XVCRST
C
Is the voltage "H"(3.3V)?
No
Check the parts and patterns in the path(IC501 - IC401).
No
Replace IC501.
Yes
IC402 (Pin 7)
XTAL
J
Is there a CLK (28.63636 MHz) ?
No
Check the X401 or IC402.
No
Replace X401 or IC402.
Yes
Step 4-4: I2C
IC501 (Pin 30)
VCSDA
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)
VCSCL
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
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.


IC601 (Pin 33)
DAC B
K
Is there a Y signal?
No
Check the IC601.
No
Replace IC601.
Yes
Q641 (E)
SY OUT
L2
Is there a Y signal?
No
Check the parts and patterns in the path(IC601 - CN1002).
No
Replace L641, Q641 or the peripheries of L641 or Q641.
Yes
Diagnose the MAIN Assy.

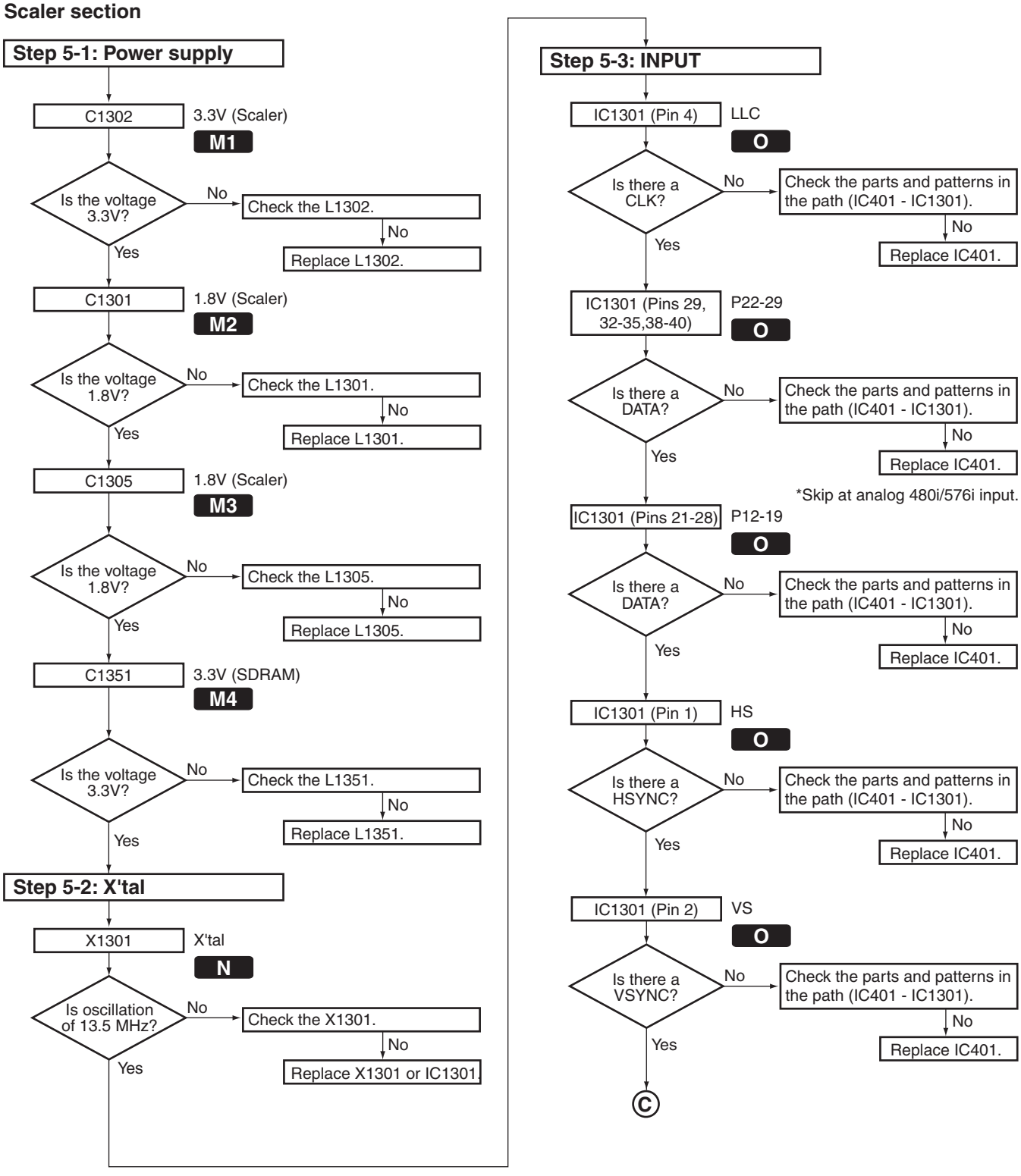

IC601 (Pin 25)
DAC E
K
Is there a Pb signal?
No
Check the IC601.
No
Replace IC601.
Yes
Q671 (E)
Pb OUT
L5
Is there a Pb signal?
No
Check the parts and patterns in the path(IC601 - CN1002).
No
Replace L671,Q671 or the peripheries of L671 or Q671.
Yes
Diagnose the MAIN Assy.

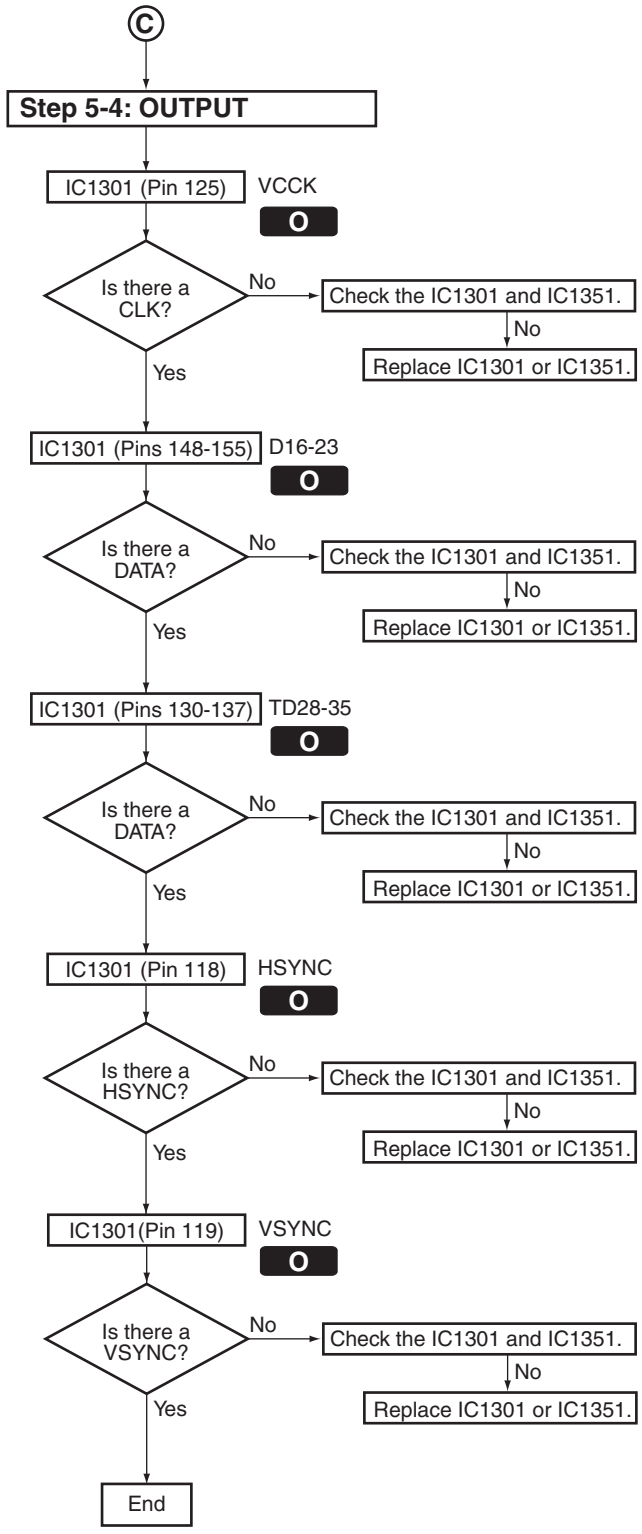

IC601(Pin 29)
DAC C
K
Is there a C signal?
No
Check the IC601.
No
Replace IC601.
Yes
Q651 (E)
SC OUT
L3
Is there a C signal?
No
Check the parts and patterns in the path(IC601 - CN1002).
No
Replace L651, Q651 or the peripheries of L651 or Q651.
Yes
Diagnose the MAIN Assy.


IC601 (Pin 24)
DAC F
K
Is there a Pr signal?
No
Check the IC601.
No
Replace IC601.
Yes
Q681 (E)
Pr OUT
L6
Is there a Pr signal?
No
Check the parts and patterns in the path(IC601 - CN1002).
No
Replace L681,Q681 or the peripheries of L681 or Q681.
Yes
Diagnose the MAIN Assy.


IC601 (Pin 28)
DAC D
K
Is there a Y signal?
No
Check the IC601.
No
Replace IC601.
Yes
Q661 (E)
Y OUT
L4
Is there a Y signal?
No
Check the parts and patterns in the path(IC601 - CN1002).
No
Replace L661,Q661 or the peripheries of L661 or Q661.
Yes
Diagnose the MAIN Assy.

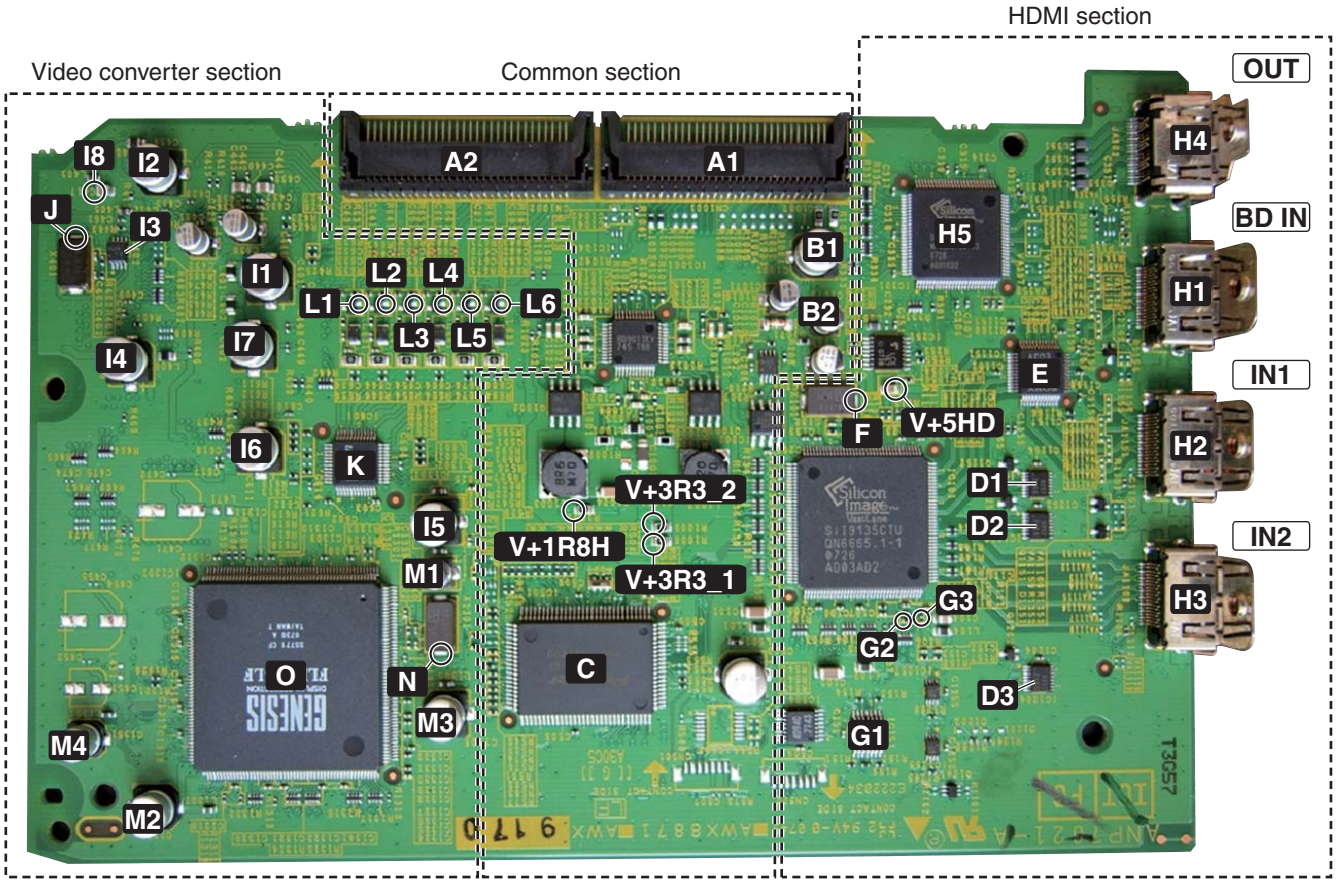
Scaler section




C
Step 5-4: OUTPUT
IC1301 (Pin 125)
VCCK
O
Is there a CLK?
No
Check the IC1301 and IC1351.
No
Replace IC1301 or IC1351.
Yes
IC1301 (Pins 148-155)
D16-23
O
Is there a DATA?
No
Check the IC1301 and IC1351.
No
Replace IC1301 or IC1351.
Yes
IC1301 (Pins 130-137)
TD28-35
O
Is there a DATA?
No
Check the IC1301 and IC1351.
No
Replace IC1301 or IC1351.
Yes
IC1301 (Pin 118)
HSYNC
O
Is there a HSYNC?
No
Check the IC1301 and IC1351.
No
Replace IC1301 or IC1351.
Yes
IC1301(Pin 119)
VSYNC
O
Is there a VSYNC?
No
Check the IC1301 and IC1351.
No
Replace IC1301 or IC1351.
Yes
End

■ HDMI & DVC Assy Check Points

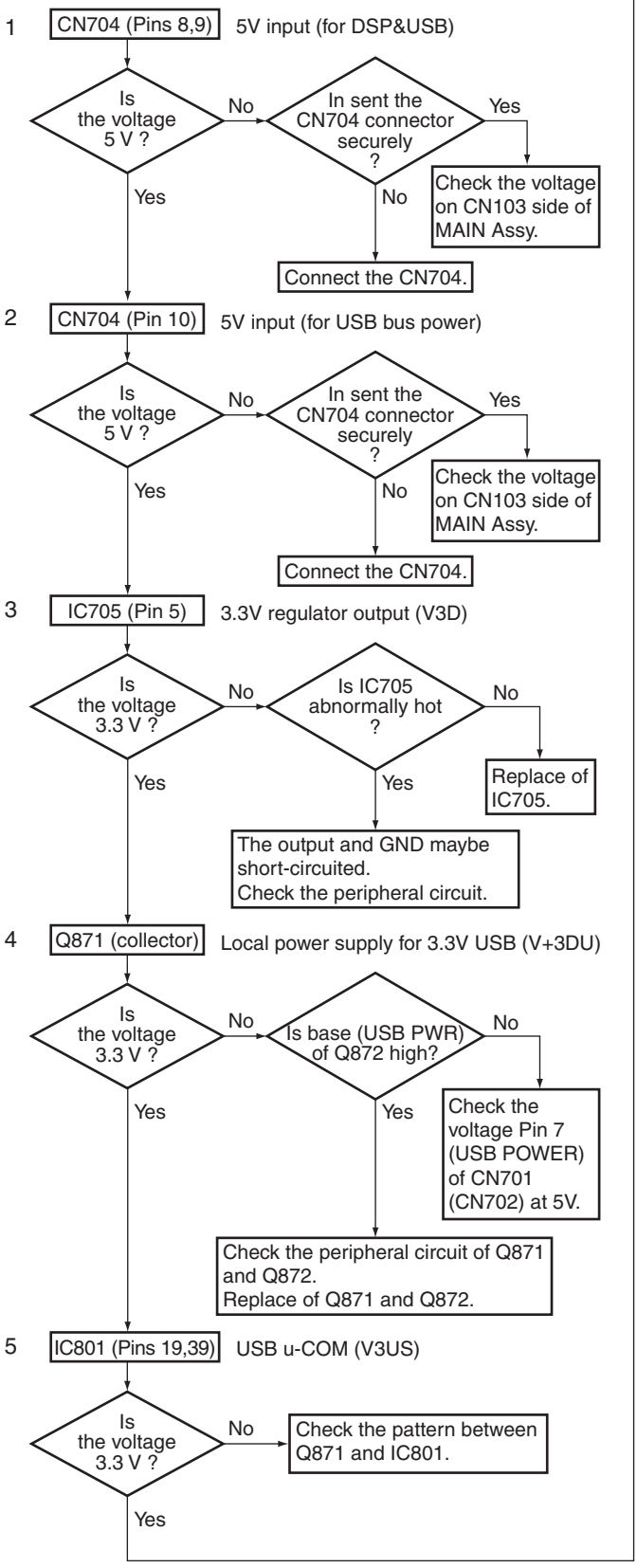
F HDMI & DVC ASSY SIDE A



[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.



Step 2: Check of oscillation

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

9 IC801 (Pins 6,7) X801(CF1/CF2)

Does the oscillation waveform at 12MHz ?

No → Is USBRST3 (Pin 2) high (3.3V)?

No → Check the Pin 8 (USB XRST) of CN701 (CN702).

Note : USBRST3 is set to high during the operation.

Yes

Yes → Check the peripheral circuit of X801. Replace of X801.

10 IC808 (Pins 2,3) X881(XIN/XOUT)

Does the oscillation waveform 32.768MHz ?

No → Recheck the power supply (3.3V) of IC808.

Note : X801 oscillates when the power supply of IC808 is turned ON.

Yes

Check of oscillation is OK
To step 3

Step 3: Check of operation of USB u-COM

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

Do the USBDAO and USBDA perform communication with main u-COM?

No → USBDAO and USBDAI should be set to High during the operation. Replace of IC801 or main u-COM.

Yes

Fig. 1

	IC801	IC701 (5 V → 3 V)		CN701 (CN702)
USBDAI	Pin 44	Pin 11	Pins 12,13	Pin 6

	IC801	IC702 (3 V → 5 V)		CN701 (CN702)
USBDAO	Pin 45	Pin 2	Pin 18	Pin 5

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).

Can the waveform shown in Fig be observed ?

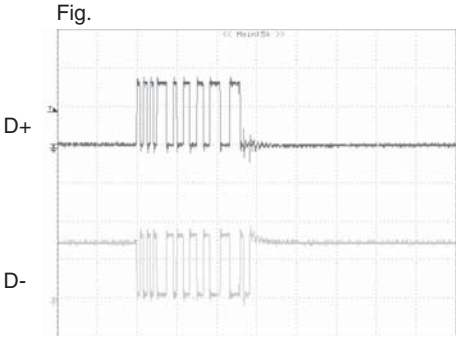
No → Check the power supply voltage of IC801.
Check the oscillation of X801.
Check the USBRST.
Replace of IC801.

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

Yes

IC801 is OK.
To step 4.

Fig.

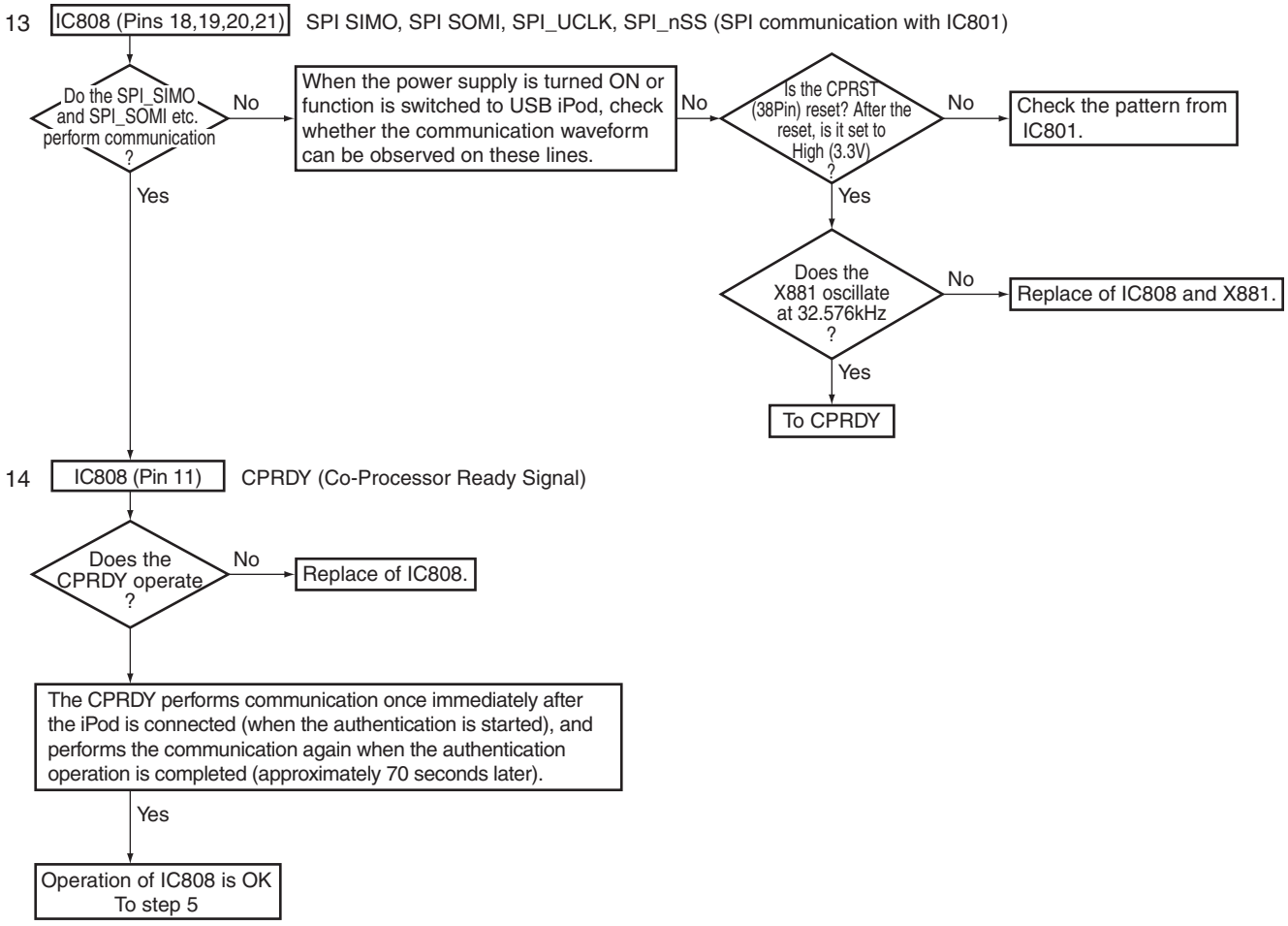


X: 1 μsec/div, Y: 2 V/div

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

Step 4: iPod authentication process

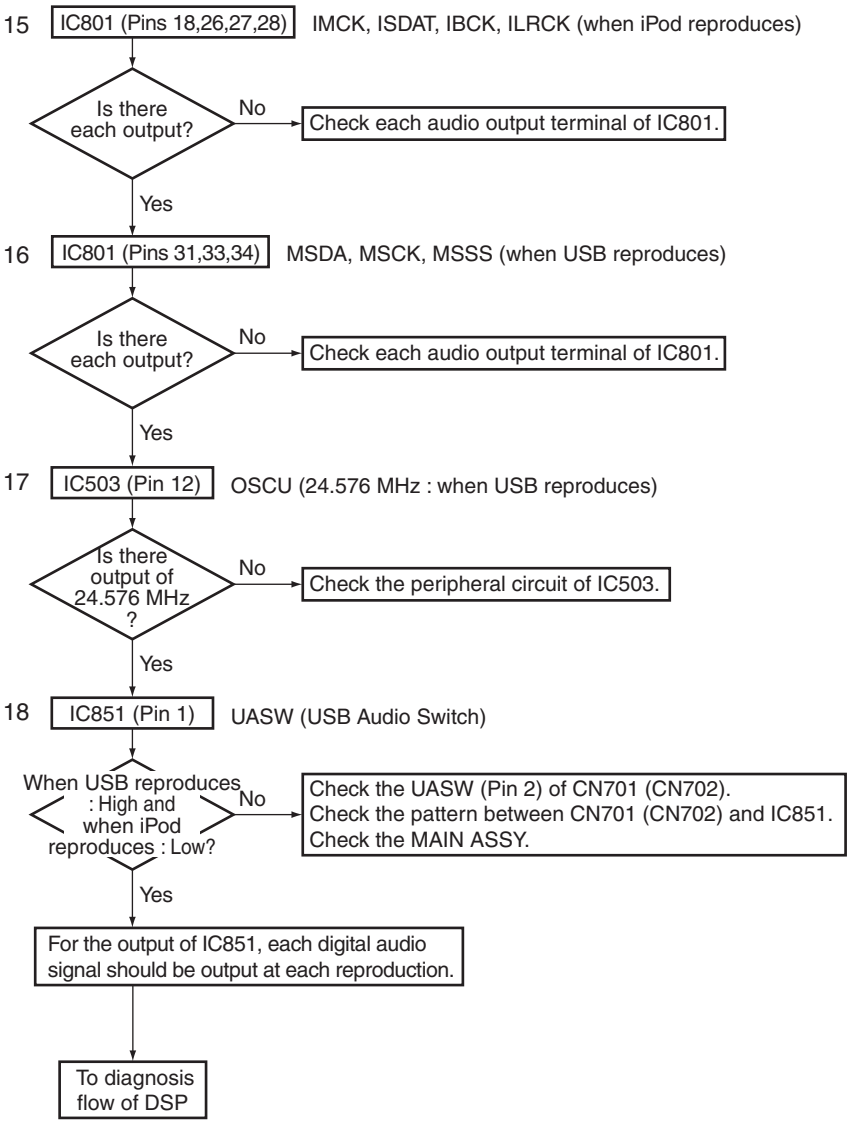
When the USB playback is available and only the iPod cannot be played
* Connect the iPod and make a confirmation.



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.

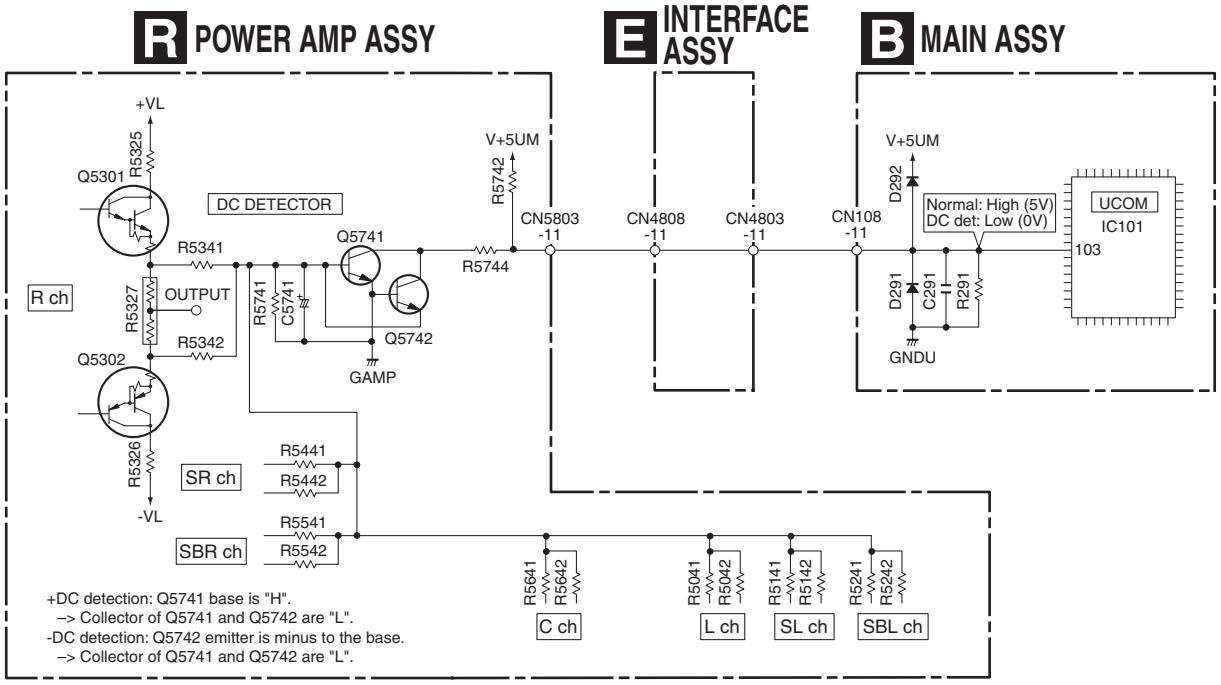


5.2 CIRCUIT DESCRIPTION

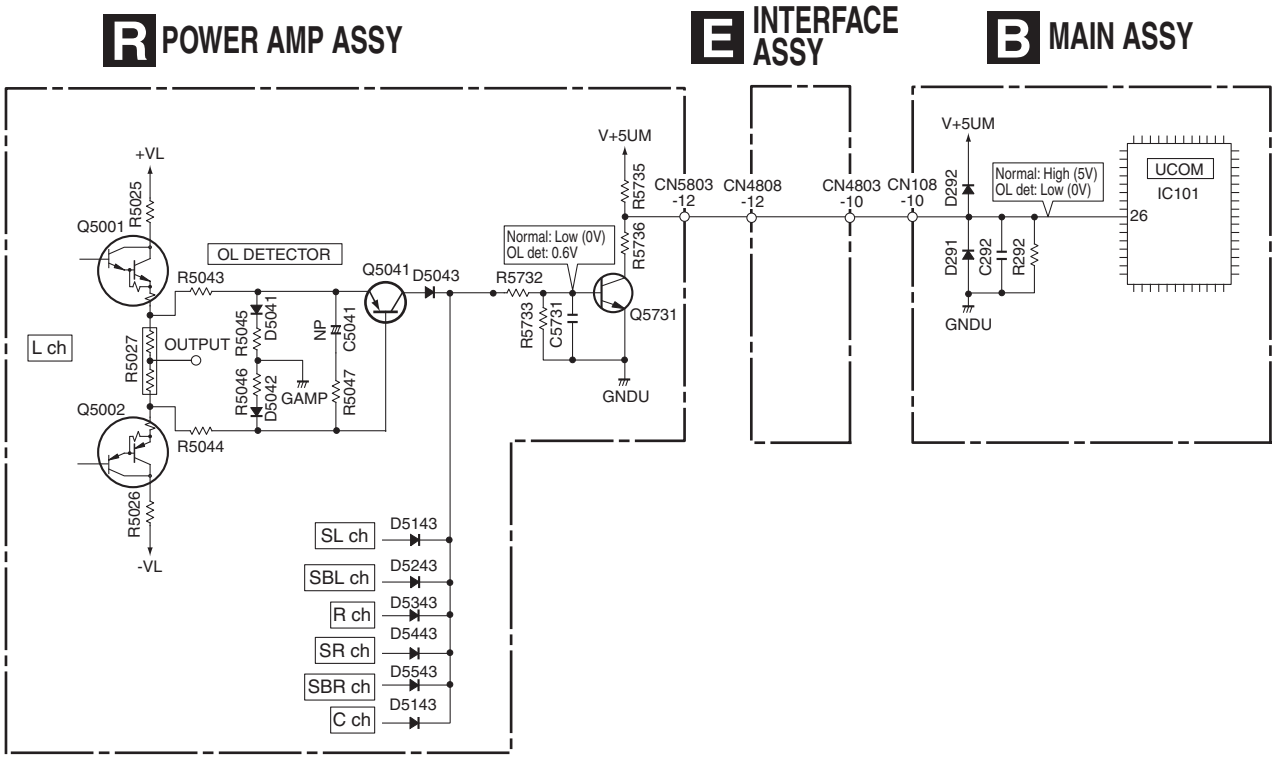
[1] Protection Circuit Process List

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 decoms "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



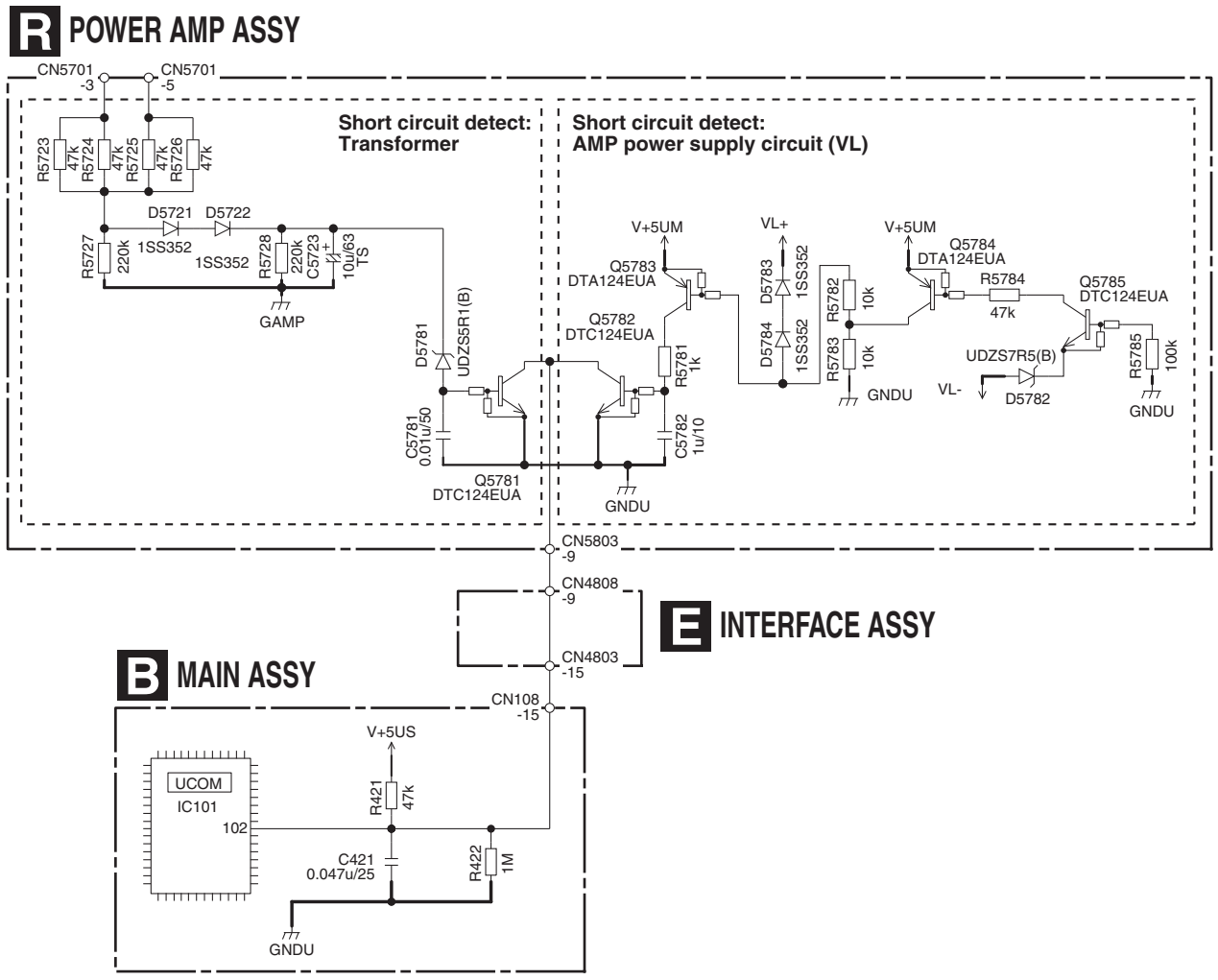
■ OL (Over Load) Detection Circuit



[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



6. SERVICE MODE
6.1 TEST MODE

[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]

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 ↓	Mx.xxx : Main microcomputer Ex.xxx : EVENT microcomputer	5	Main microcomputer and EVENT microcomputer
H0.503 ↓	Hx.xxx : HDMI microcomputer	5	HDMI microcomputer
f0.515 ↓	fx.xxx : DSP Firm version	5	DSP firmware
03TXH/KU/CA ↓		5	model/destination
Normal display			

[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	Number of DC detections	3
OVER: 010	Number of overload detections	3
CON : 002	Number of detections of cord disconnection (DC and OL DET line) (simultaneous detections of DC and OVERLOAD)	3
FAN : 000 (*)	Number of detections of fan abnormalities	3
TEMP: 255	Number of detections of abnormal temperature	3
Normal display		

(*) ”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

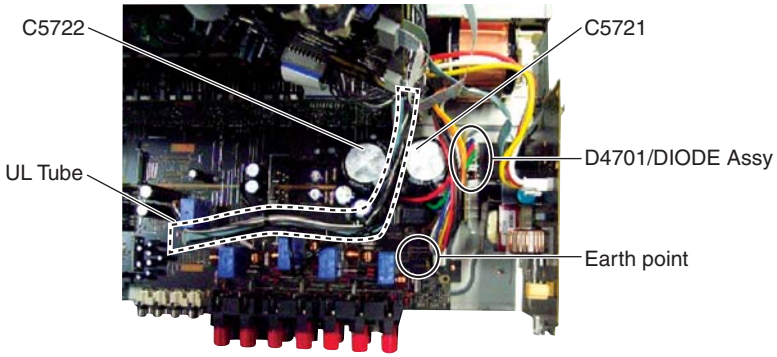
Before the Power Amp Assy is removed, discharge C5721 and C5722 on the POWER AMP Assy, as indicated below.
If you don't, the protectors (P5001 and P5002) on the POWER AMP Assy may be open, and DC voltage may be generated at the power amplifier output, which will result in "AMP ERR."
The discharge operation 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.

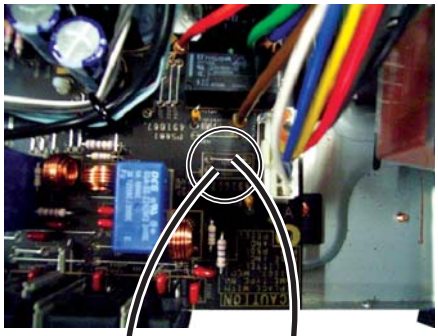
[Procedure]

① Unplug the AC Power Cord.

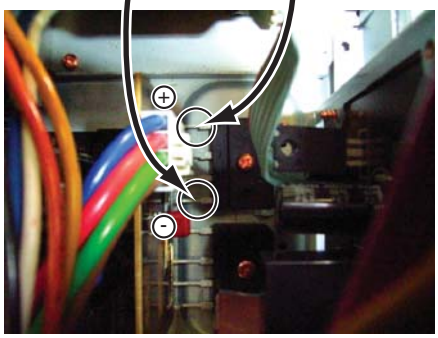
② Discharge C5721 and C5722 on the POWER AMP Assy by discharging Pin 1 and Pin 4 of D4701on the DIODE Assy to the earth point of POWER AMP Assy.
Note: For discharging, use a load of 100Ω, 3W or more, to protect the IC protectors. Do NOT discharge instantly by short-circuiting.

③ Check that the voltage between the electrodes of each C5721 and C5722 is 1V or less.





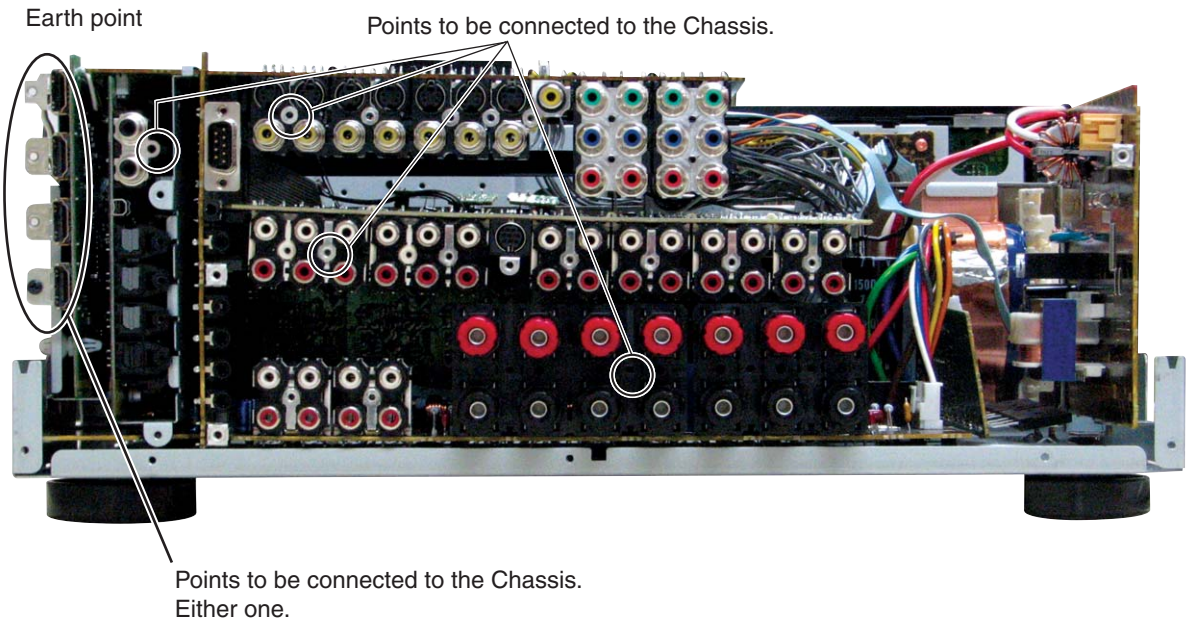
Enlarged view of the GND.



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.

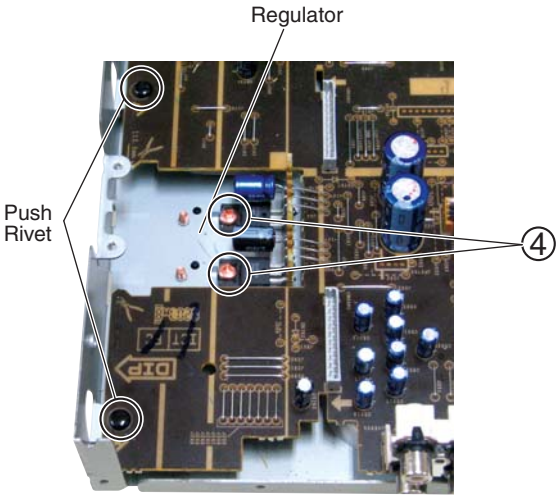
Note : As mentioned below, detach the Rear Panel, re-fasten the screws at the corresponding points, and connect the Chassis to the ground.

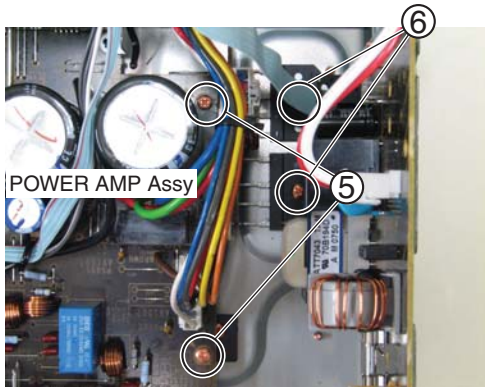


2. Diagnosis

1 POWER AMP Assy

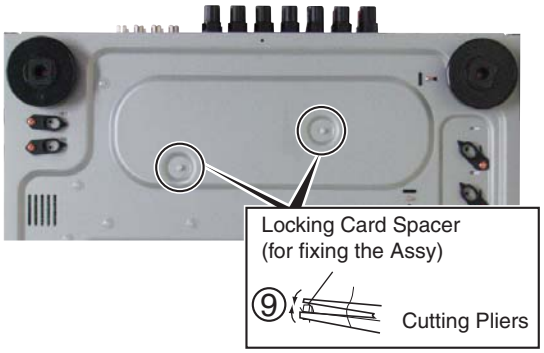
① Remove the Rear Panel.
② Remove the MAIN Assy (equipped with HDMI&DVC Assy and DSP&USB Assy) and the AUDIO IN Assy from the INTERFACE Assy.
③ Discharge C5721 and C5722.
(See the "discharge procedures.")
④ Remove the two screws that fix the Regulators attached to the Chassis.
⑤ Remove the two Push Rivets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



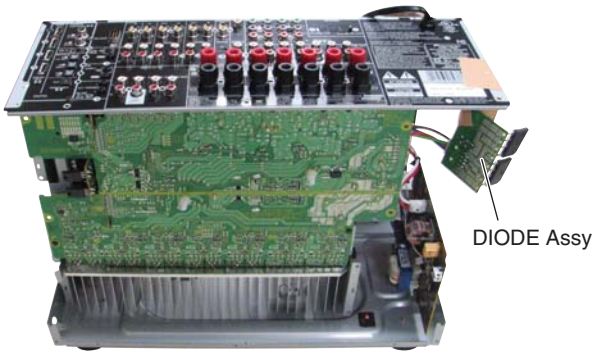


⑥ Remove the two screws that fix the diode of the DIODE Assy.
⑦ Reassembling the MAIN Assy (equipped with HDMI&DVC Assy and DSP&USB Assy) and the AUDIO IN Assy to the INTERFACE Assy.
⑧ Reassembling the Rear Panel.
(Keep a space for earth and about six to seven screws fixing places. Do not attach screws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

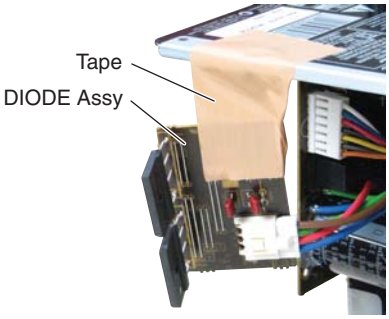
⑨ Remove the Locking Card Spacer from the Chassis using Cutting Pliers.



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

2 MAIN Assy, AUDIO IN Assy, INTERFACE Assy

① Remove the Rear Panel.

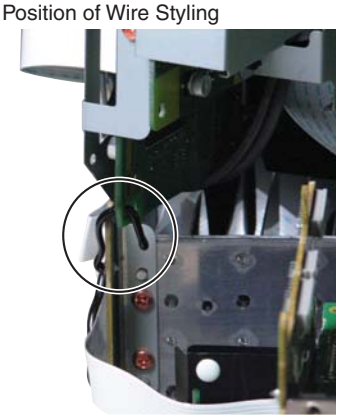
② Remove the screw that fix the MAIN Assy and the Wire Styling of the PCB Binder.

③ Remove the two screws that fix the HDMI Shield V5S.

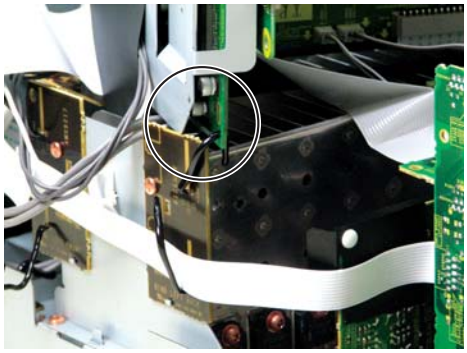
④ Connect the four extension jig cables (two 19P board to board extension jig cable, one 11P board to board extension jig cable and 11P FFC).

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

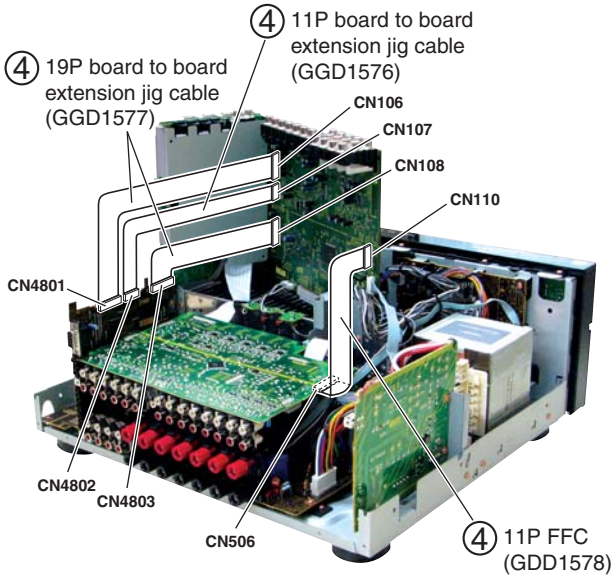


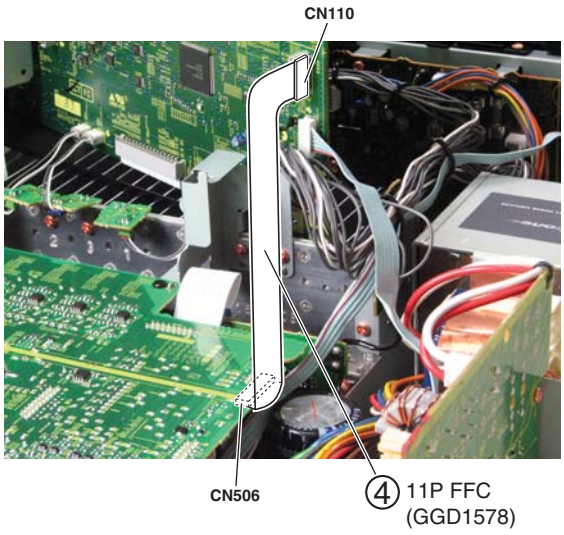
Position of Wire Styling (The above angle is different.)



⑥ Connect the earth point.

⑦ Diagnose the MAIN Assy A side or the AUDIO IN Assy B side, and the INTERFACE Assy.





Diagnosis

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)

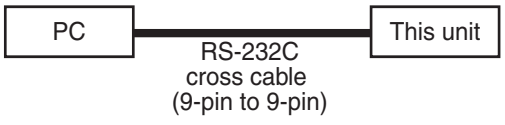
- RS-232C straight cable (9pin female ↔ 25pin male)
- RS-232C Interface jig : GGF1348
- 7 pin FFC : VDA1681

for VSX-1018AH

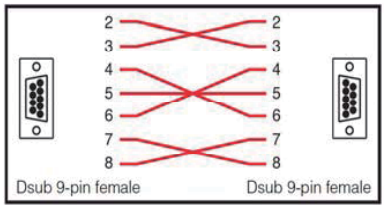
[Connections (except VSX-1018AH)]

Connect as indicated in the figure right:

(MAIN microcomputer)
(EVENT microcomputer)
(HDMI microcomputer)



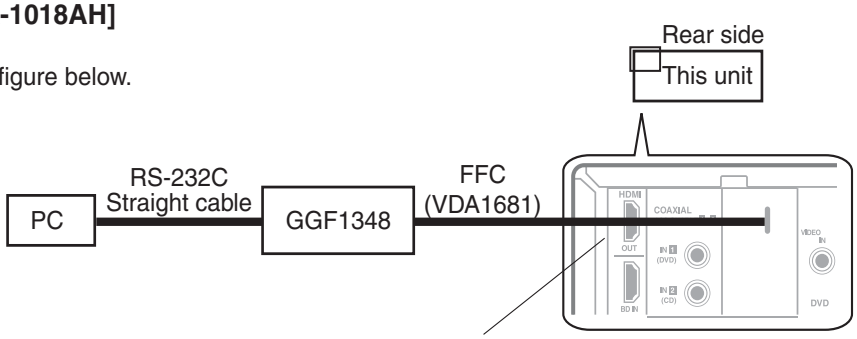
Pin-out diagram of
RS-232C cross cable



[Connections for VSX-1018AH]

Connect as shown in the figure below.

(MAIN microcomputer)
(EVENT microcomputer)
(HDMI microcomputer)



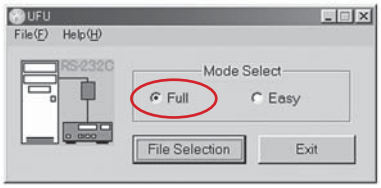
FFC CONTACT SIDE : RIGHTWARD

[Note]

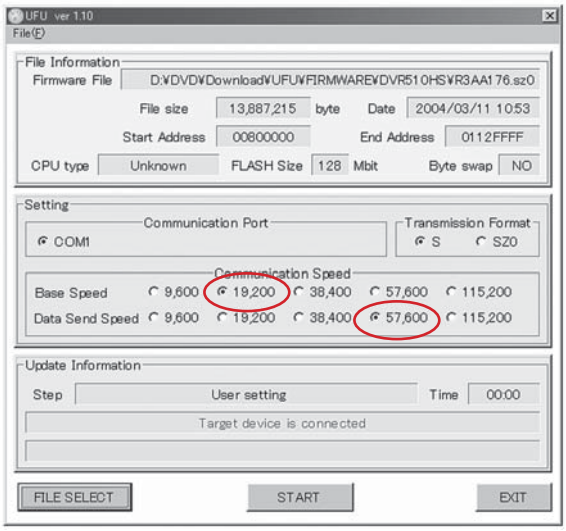
Do NOT disconnect the AC power cords of this unit nor the PC.

[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 "STANDOBY/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 "STANDOBY/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 "STANDOBY/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.

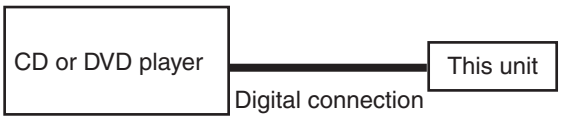
[Necessary Tools]

- 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 "STANDOBY/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 streem 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 "STANDOBY/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 "STANDOBY/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.

A

B

C

D

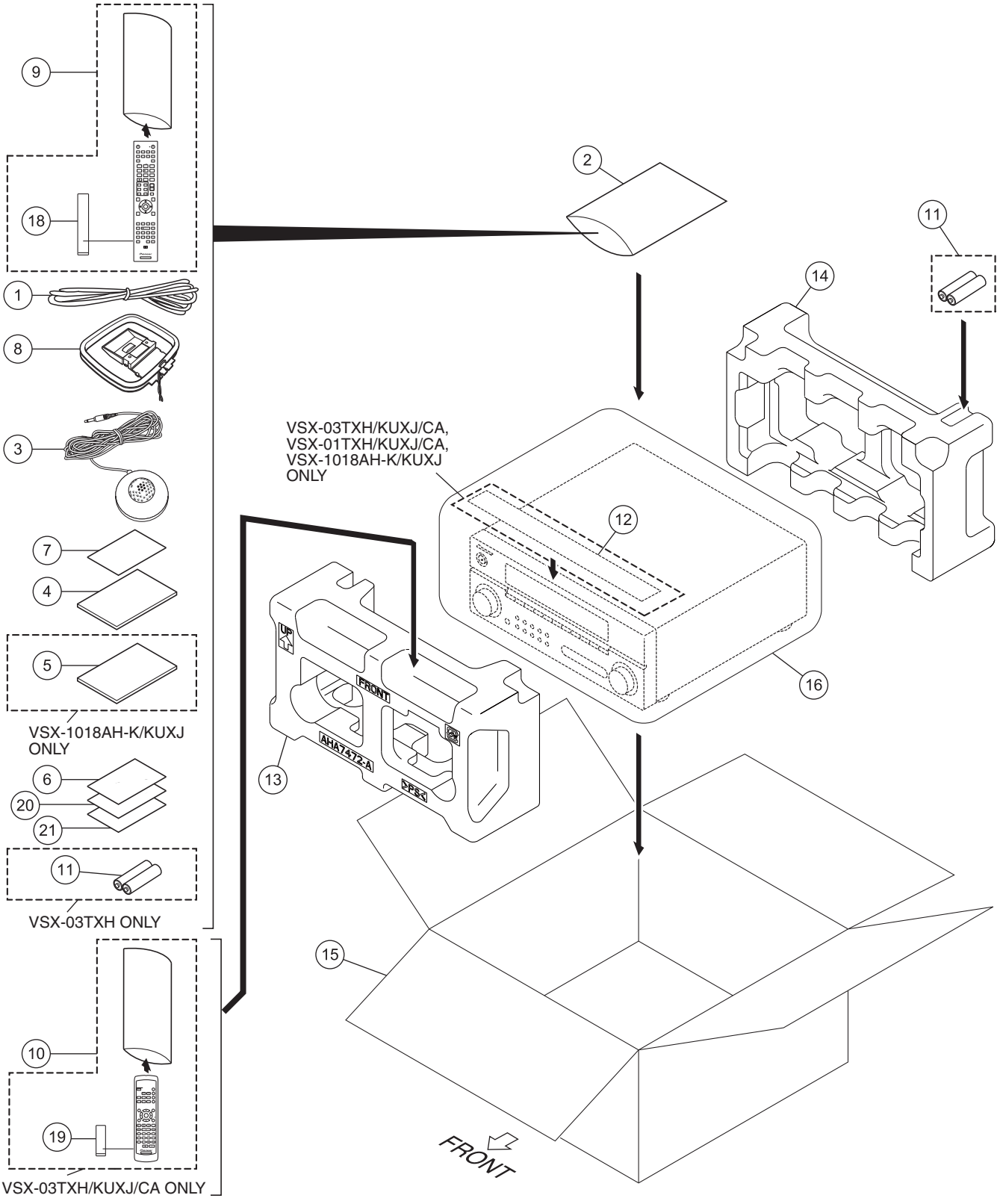
E

F

9. EXPLODED VIEWS AND PARTS LIST

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

9.1 PACKING SECTION



PACKING SECTION PARTS LIST

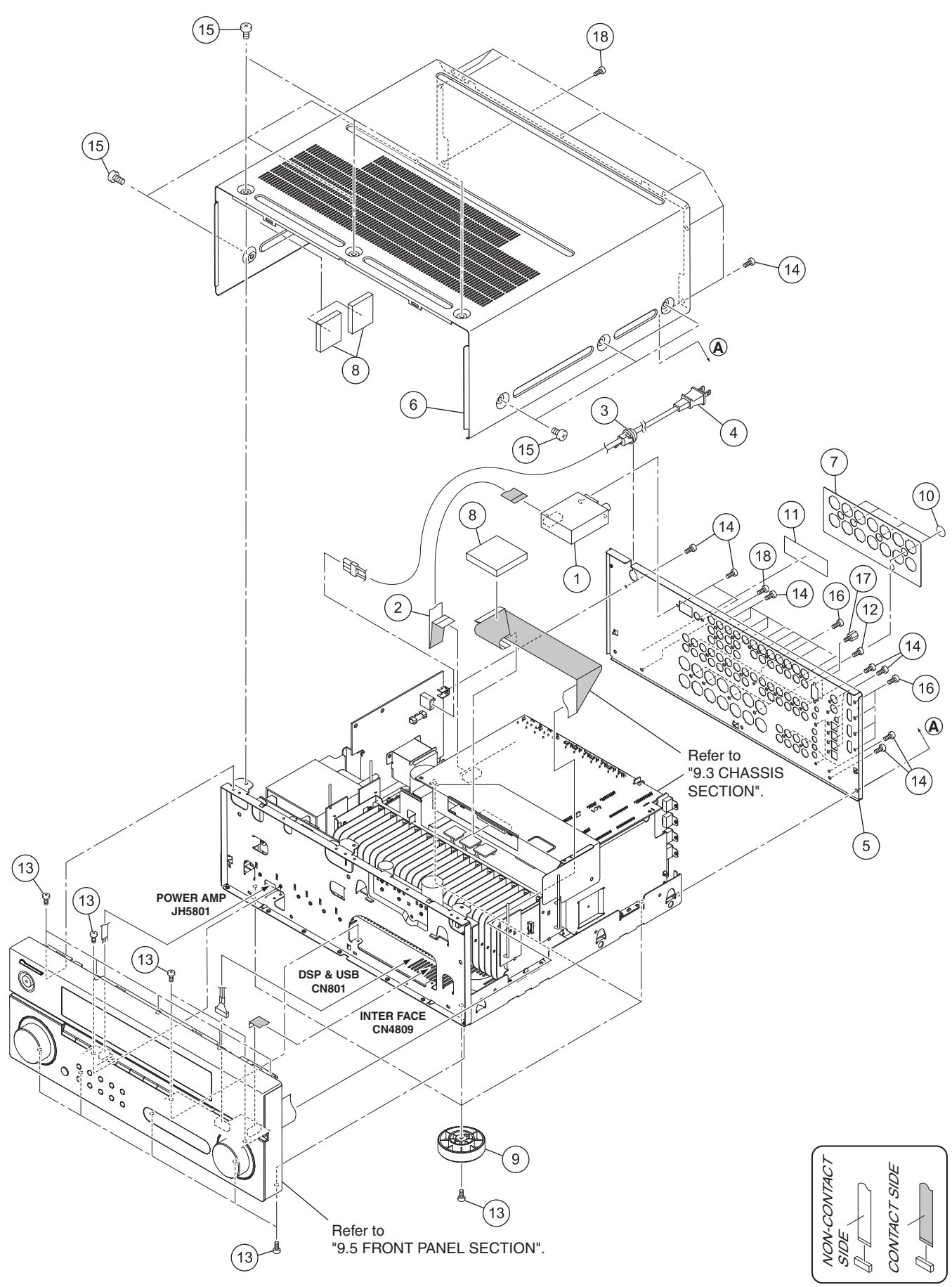
Mark	No.	Description	Part No.
	1	FM Wire Antenna	ADH7030
NSP	2	Polyethylene Bag	AHG7117
	3	Setup Microphone (for Auto MCACC setup)	APM7008
	4	Operating Instructions (English)	See Contrast table(2)
	5	Operating Instructions (Spanish)	See Contrast table(2)
	6	Caution Sheet (Spanish/English)	ARM7083
NSP	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
	15	Packing Case	See Contrast table(2)
	16	Packing Sheet	RHC1023
	17	•••••	•••••
	18	Battery Cover	VZN1025
	19	Battery Cover	AZN8018
	20	Errata V5S KU	See Contrast table(2)
	21	Errata V5S UL	See Contrast table(2)

(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
	4	Operating Instructions (English)	ARB7395	ARB7396	ARB7399	ARB7400
	5	Operating Instructions (Spanish)	Not used	Not used	Not used	ARC7832
NSP	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

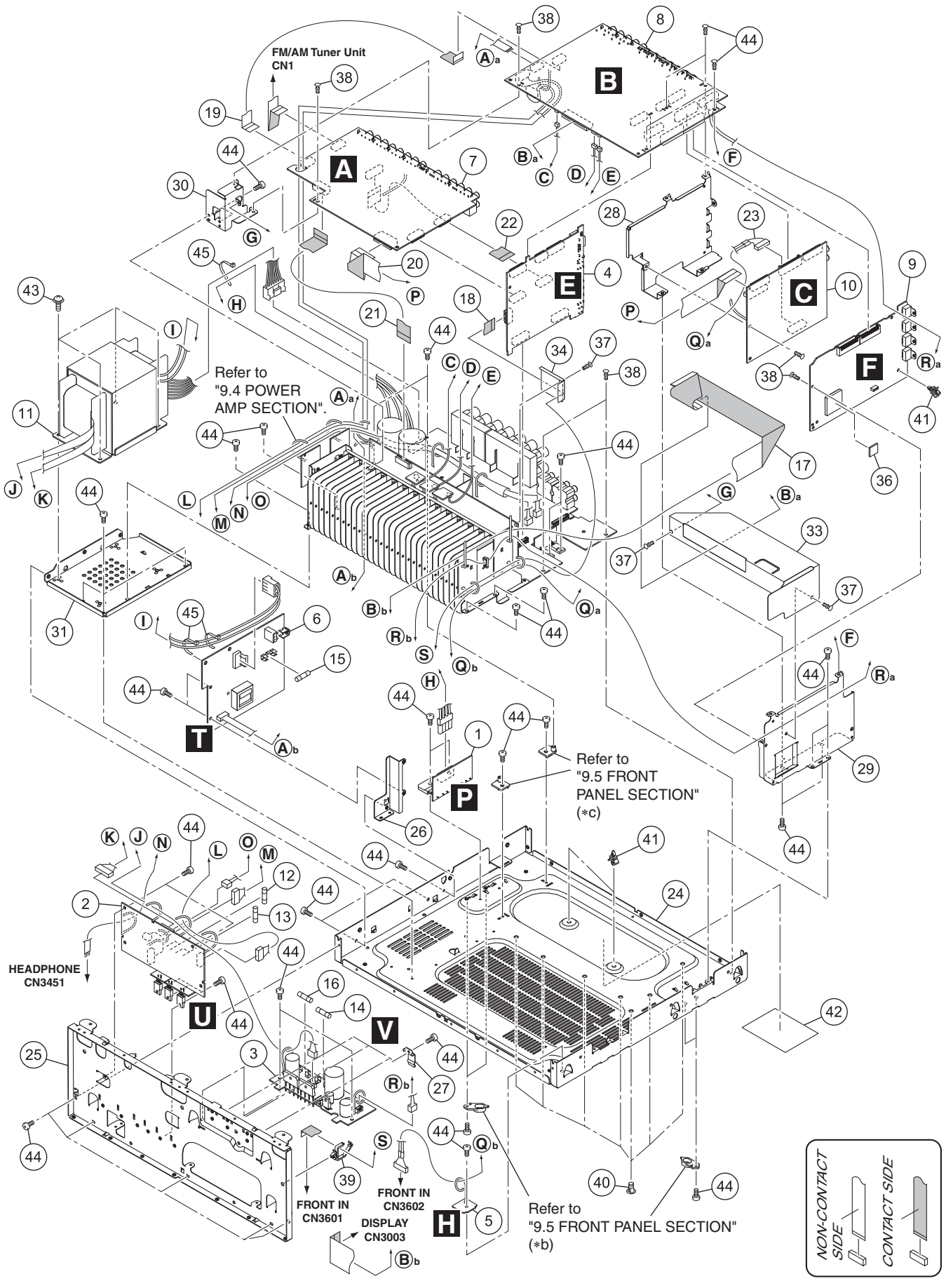
Mark	No.	Description	Part No.
	1	FM/AM Tuner Unit	AXX7250
	2	11P FFC/60V (J56)	ADD7639
	3	Cord Stopper	CM-22C
⚠	4	AC Power Cord	VDG1075
	5	Rear Panel	See Contrast table(2)
	6	Bonnet B V5SEL	AZN8034
	7	SP Sheet V5S	AEC7605
	8	Top Cushion	AED7121
	9	Insulator	See Contrast table(2)
	10	Cushion Circle 14B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

(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

9.3 CHASSIS SECTION



CHASSIS SECTION PARTS LIST

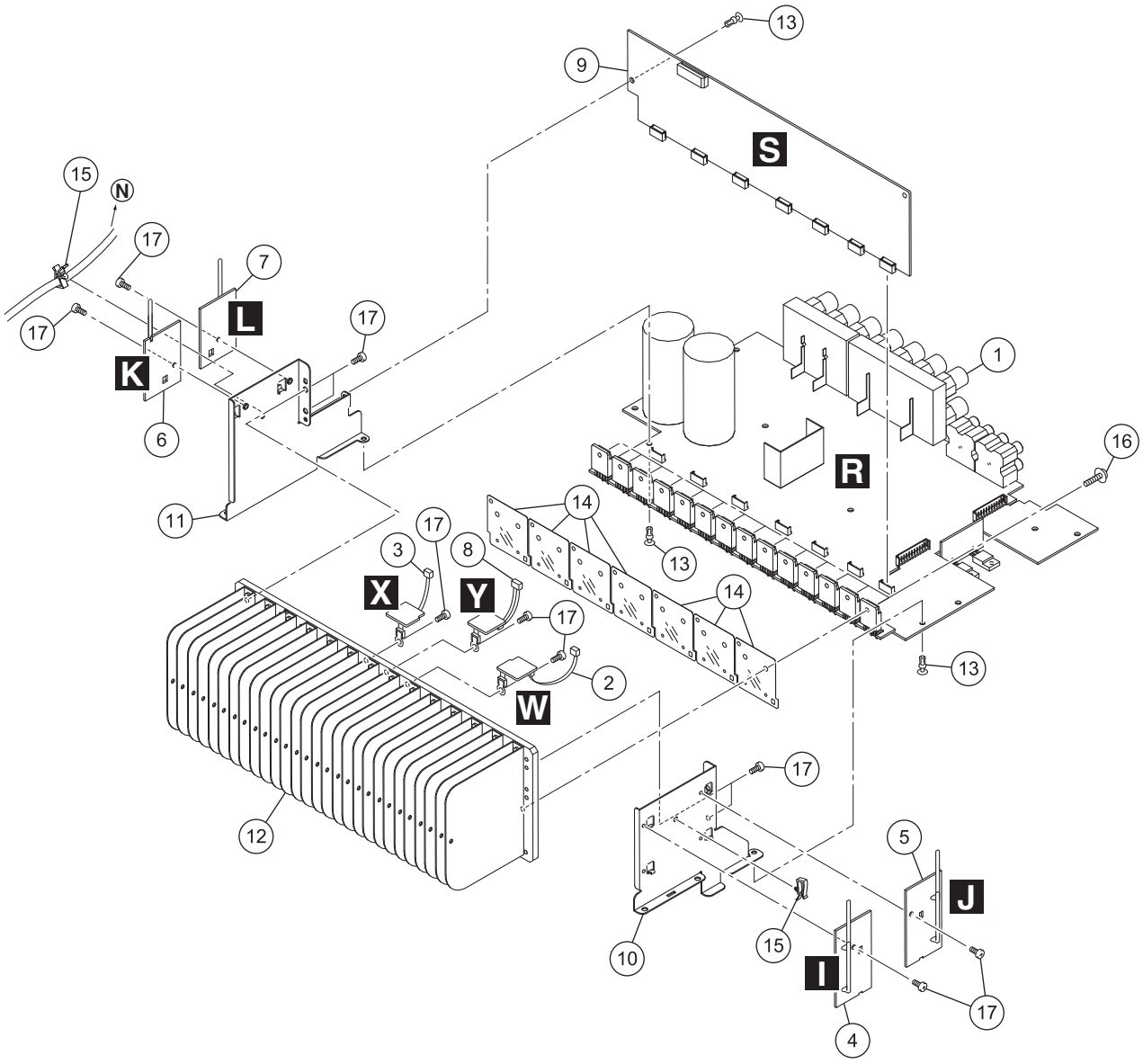
Mark	No.	Description	Part No.
	1	DIODE Assy	AWX8985
	2	REGULATOR Assy	AWX8986
	3	DC/DC Assy	AWX8988
	4	INTERFACE Assy	See Contrast table(2)
	5	BINDER Assy	AWX9120
	6	PRIMARY Assy	AWX9123
NSP	7	AUDIO IN Assy	AWK8050
NSP	8	MAIN Assy	See Contrast table(2)
	9	HDMI & DVC Assy	See Contrast table(2)
	10	DSP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

(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

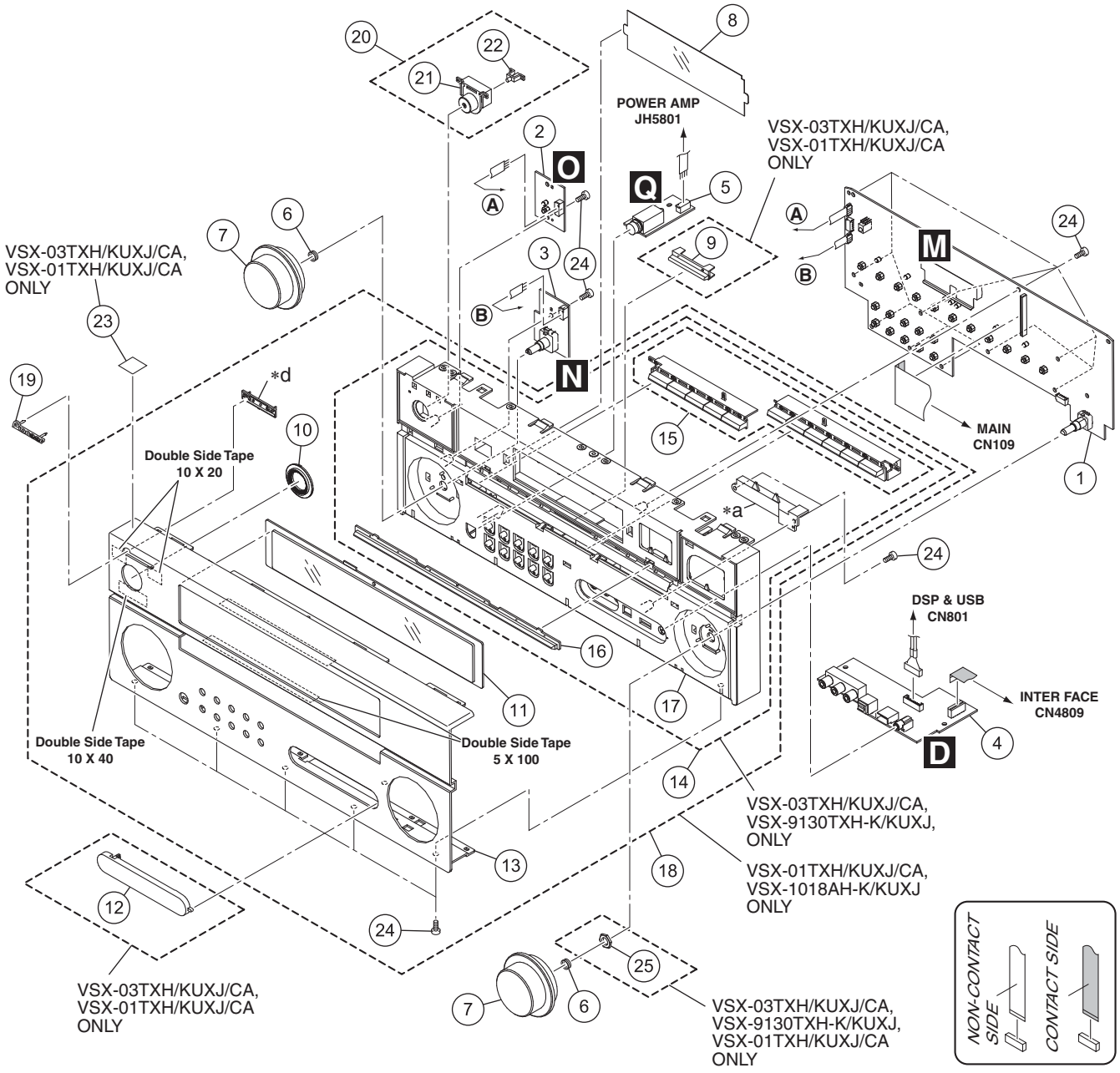
9.4 POWER AMP SECTION

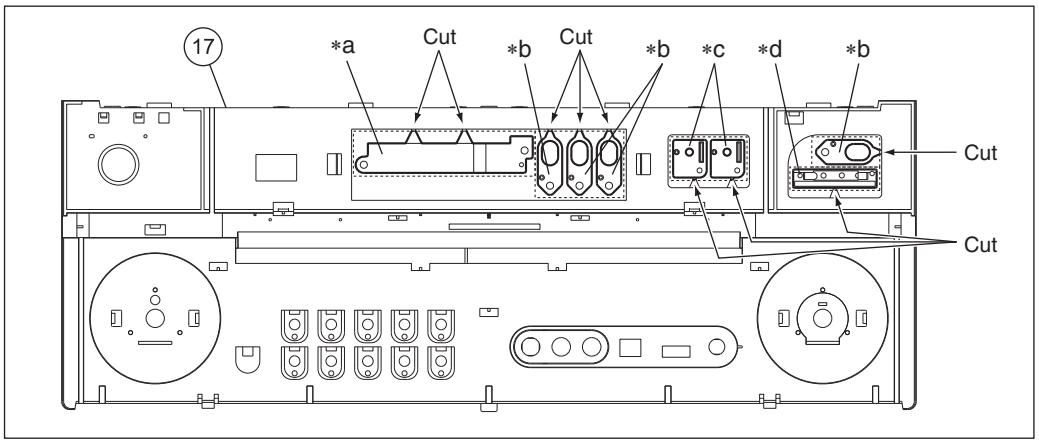


POWER AMP SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	POWER AMP Assy	AWX8983
	2	POSI1 Assy	AWX9132
	3	POSI2 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	POSI3 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

9.5 FRONT PANEL SECTION





FRONT PANEL SECTION PARTS LIST

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

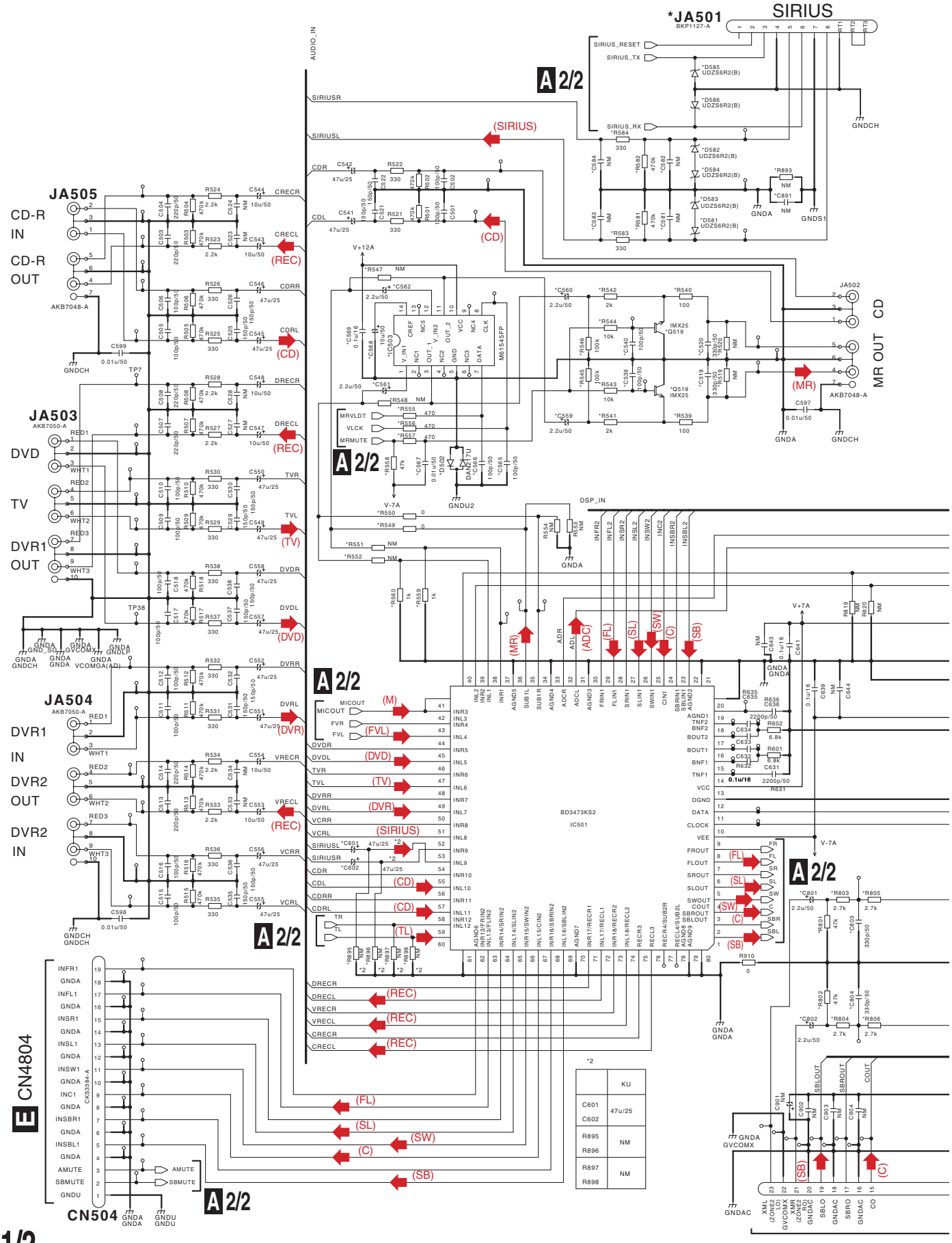
(2) CONTRAST TABLE

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
	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
	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
NSP	23	Energy Star Label	AAX8022	Not used	AAX8022	Not used

10. SCHEMATIC DIAGRAM

10.1 AUDIO IN ASSY (1/2)

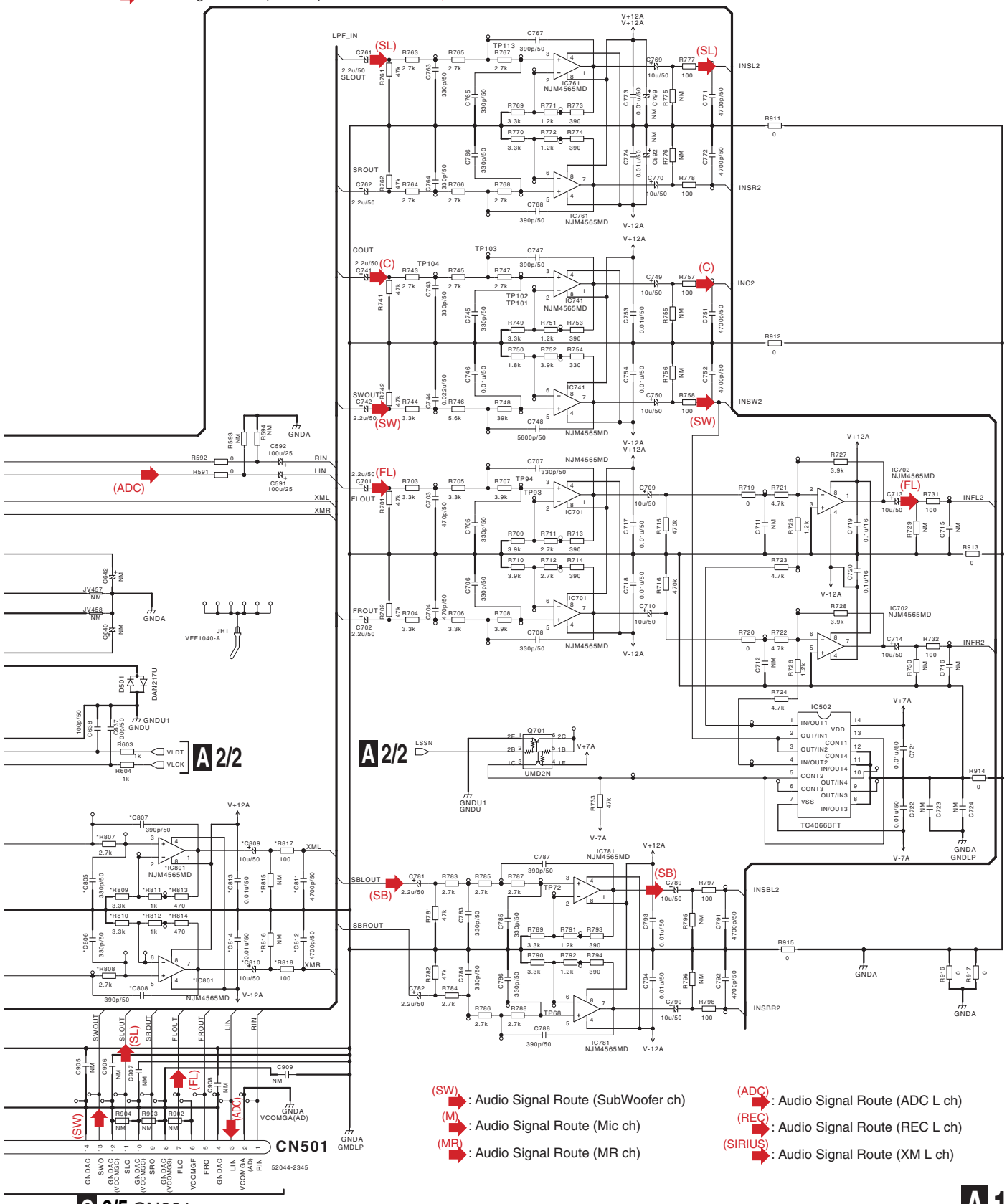


A 1/2

A 1/2 AUDIO IN ASSY (AWK8050)

(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)

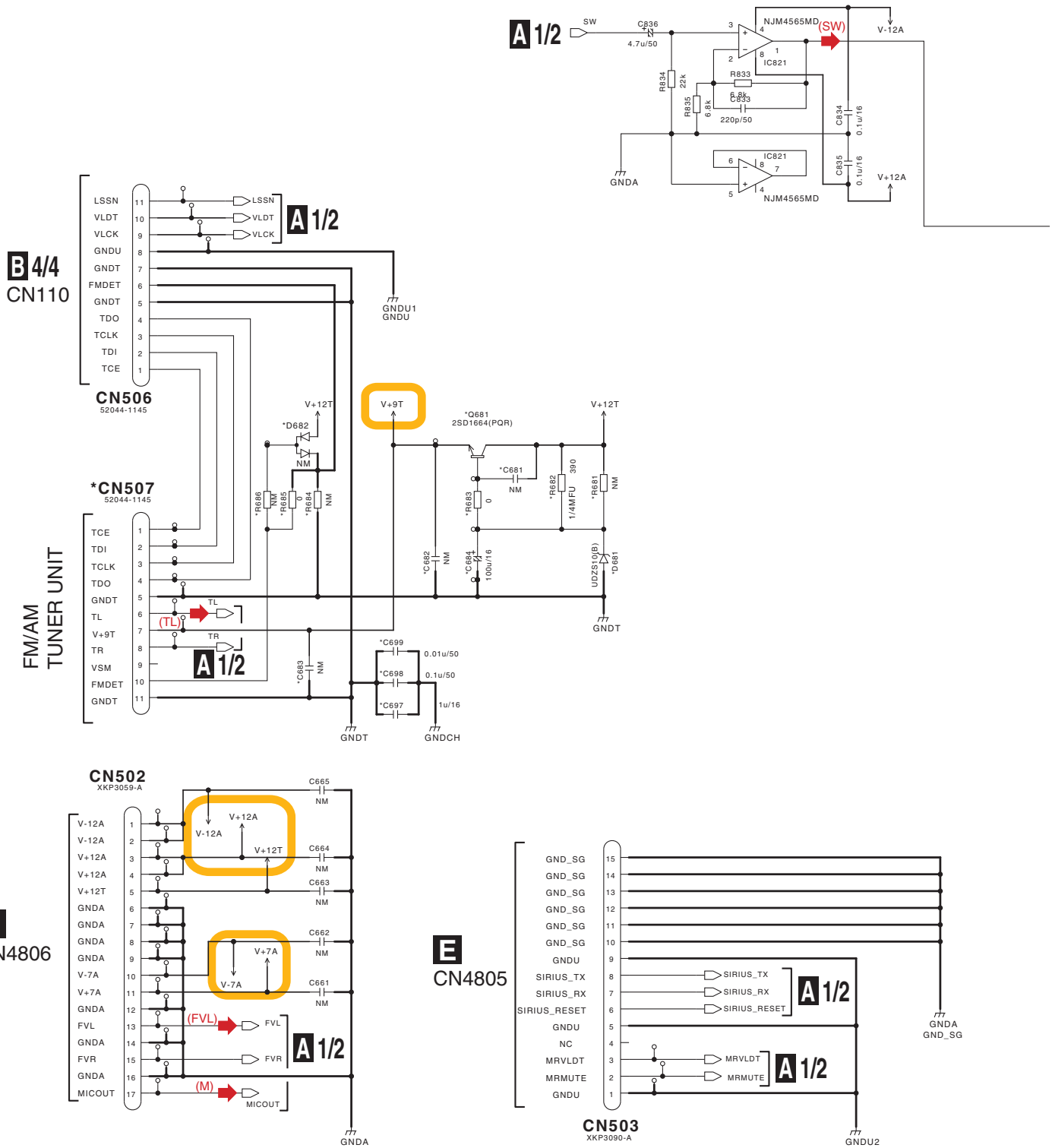


(SW): Audio Signal Route (SubWoofer ch)
(M): Audio Signal Route (Mic ch)
(MR): Audio Signal Route (MR ch)

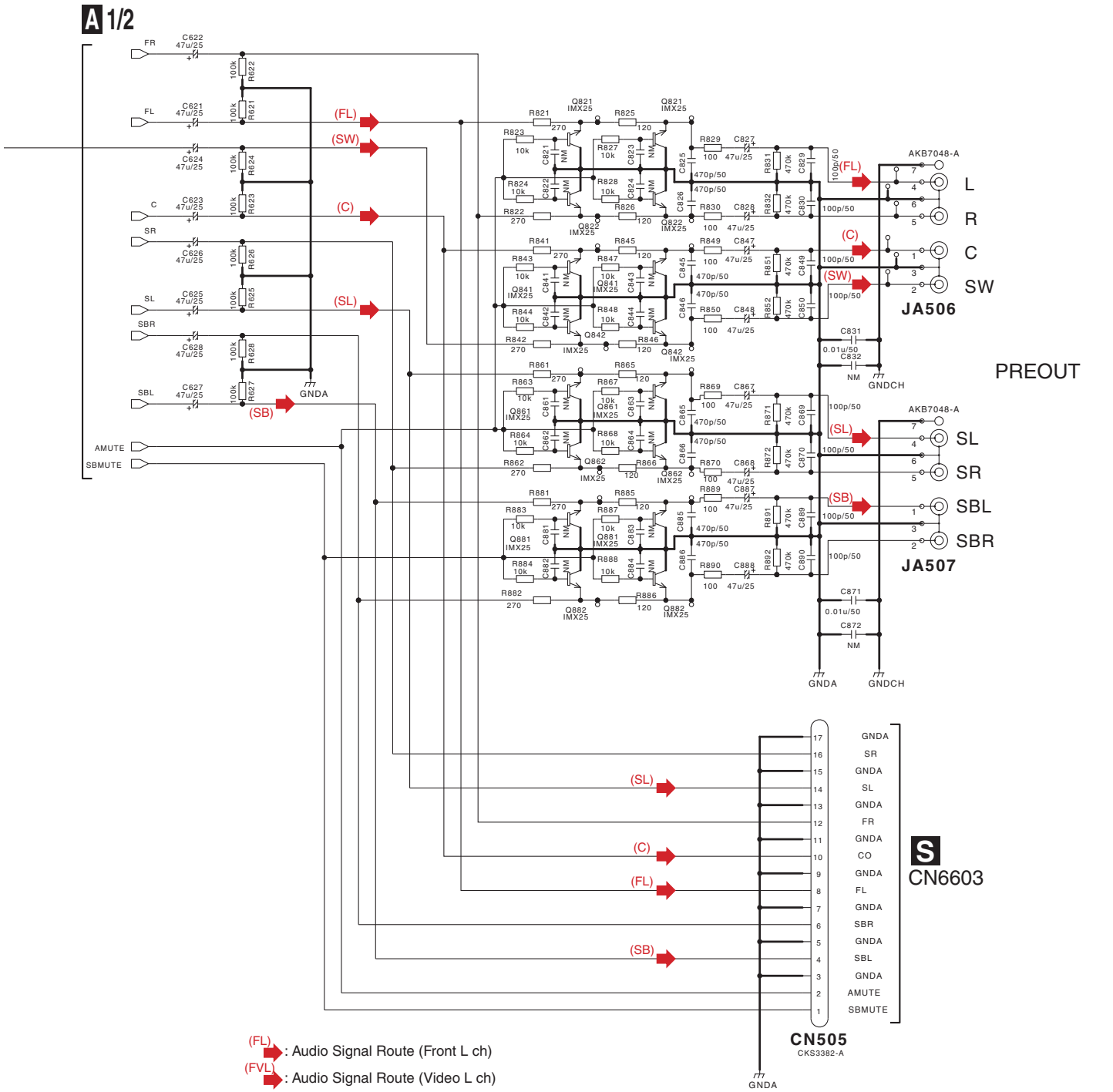
(ADC): Audio Signal Route (ADC L ch)
(REC): Audio Signal Route (REC L ch)
(SIRIUS): Audio Signal Route (XM L ch)

A 1/2

10.2 AUDIO IN ASSY (2/2)

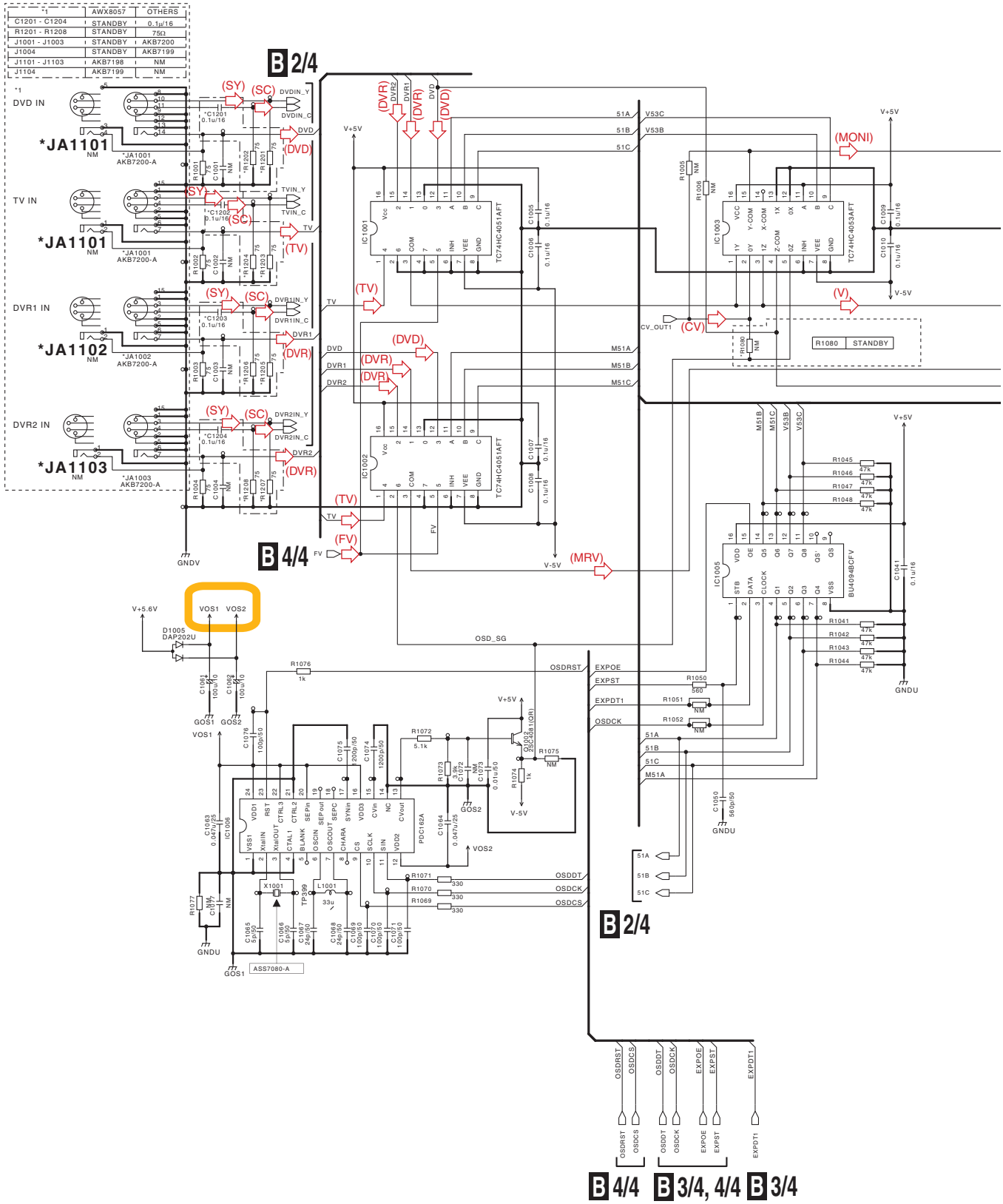


A 2/2



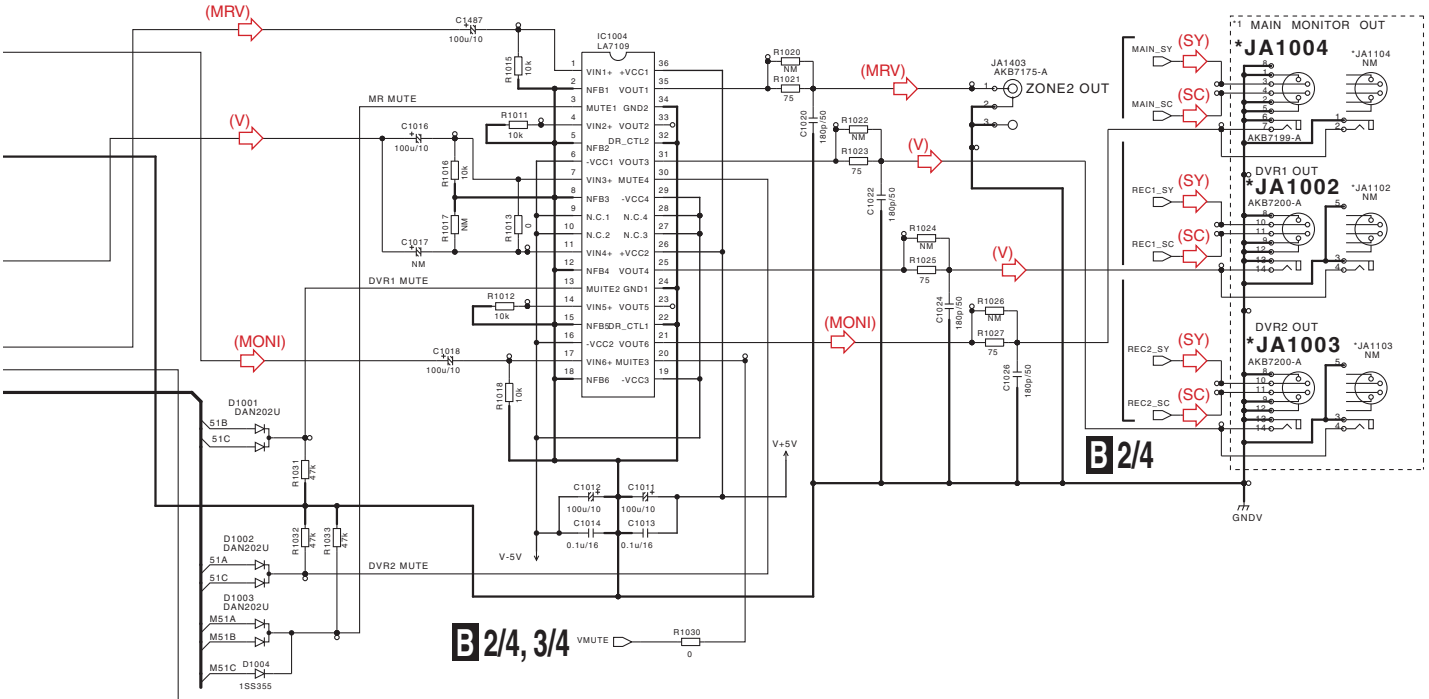
(FL): Audio Signal Route (Front L ch)
(FVL): Audio Signal Route (Video L ch)
(SL): Audio Signal Route (Surround L ch)
(C): Audio Signal Route (Center ch)
(SB): Audio Signal Route (Surround Back L ch)
(SW): Audio Signal Route (SubWoofer ch)
(TL): Audio Signal Route (Tuner L ch)

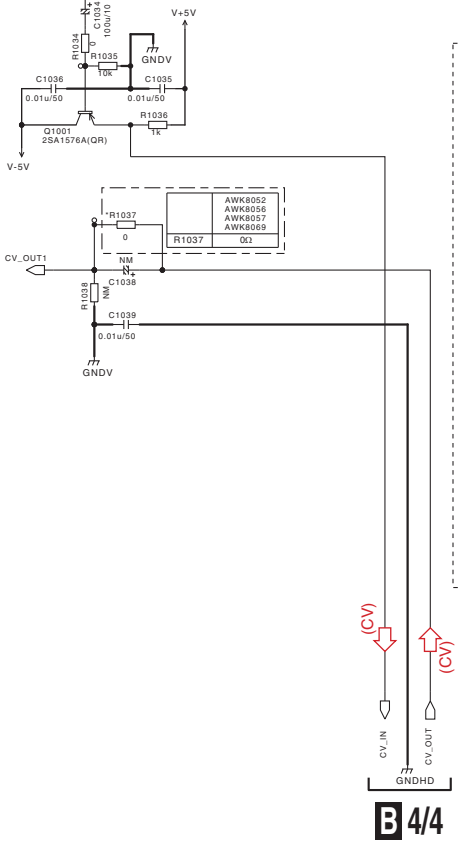
10.3 MAIN ASSY (1/4)

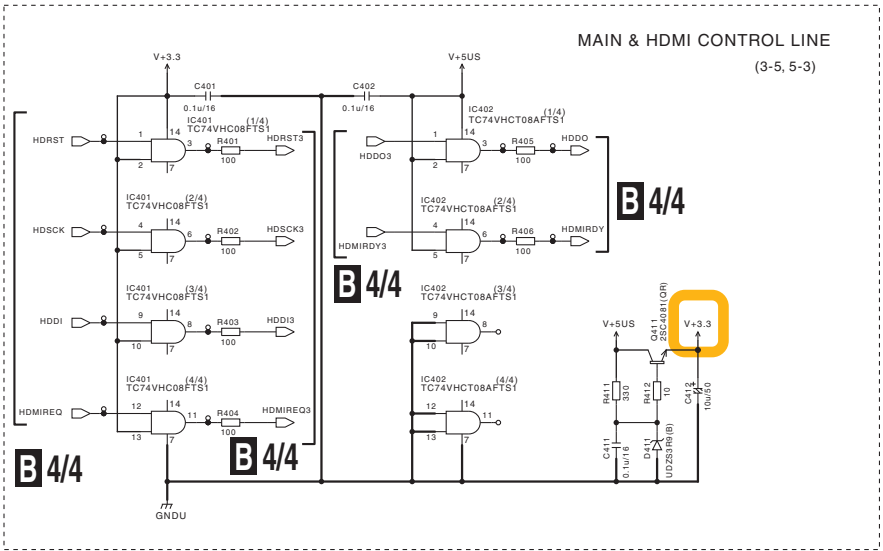


B 1/4 MAIN ASSY
(VSX-03TXH : AWK8052)
(VSX-9130TXH-K : AWK8069)
(VSX-01TXH : AWK8056)
(VSX-1018AH-K : AWK8057)

(V): Video Signal Route
(MRV): Video Signal Route (Zone)
(MONI): Video Signal Route (Monitor)



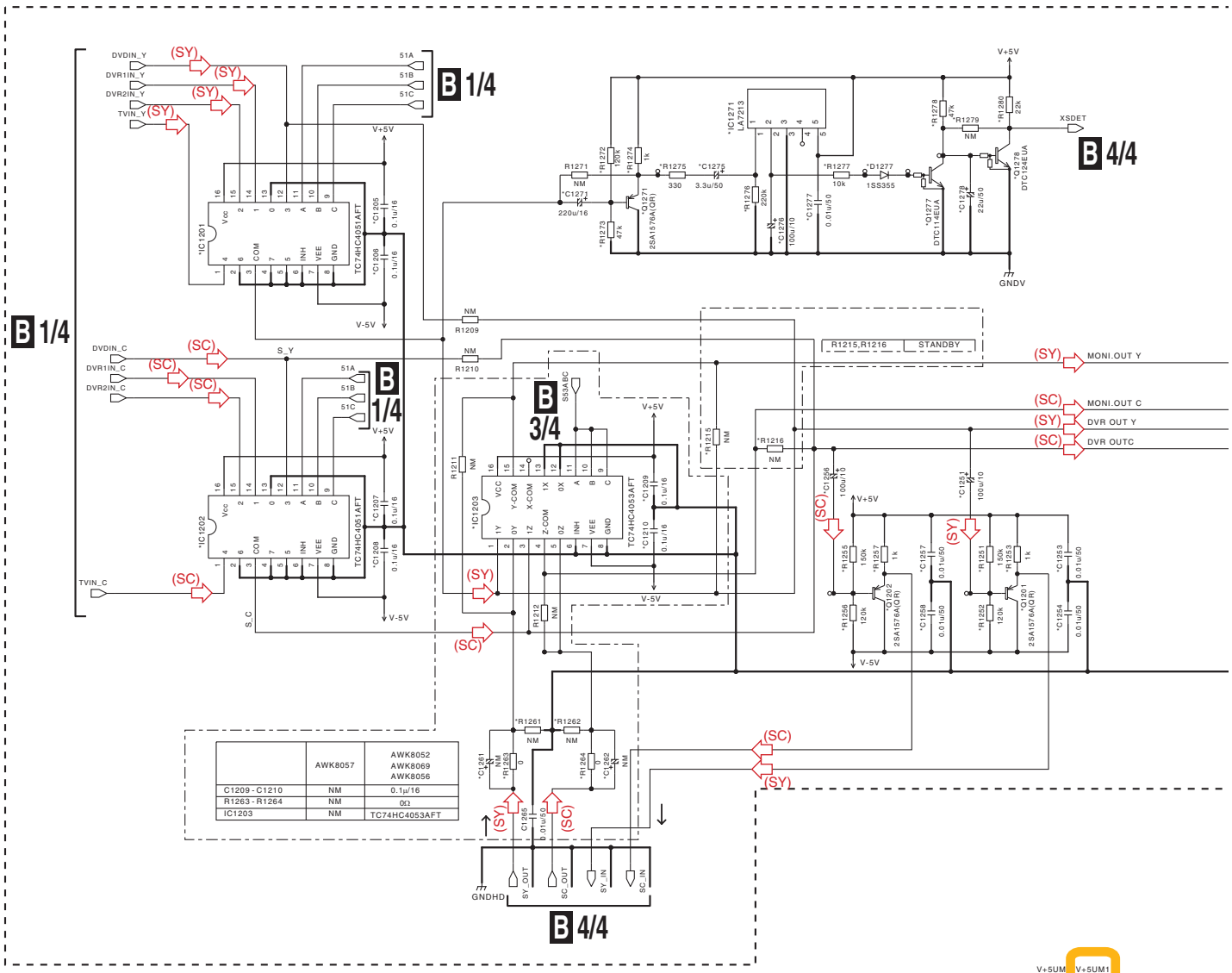


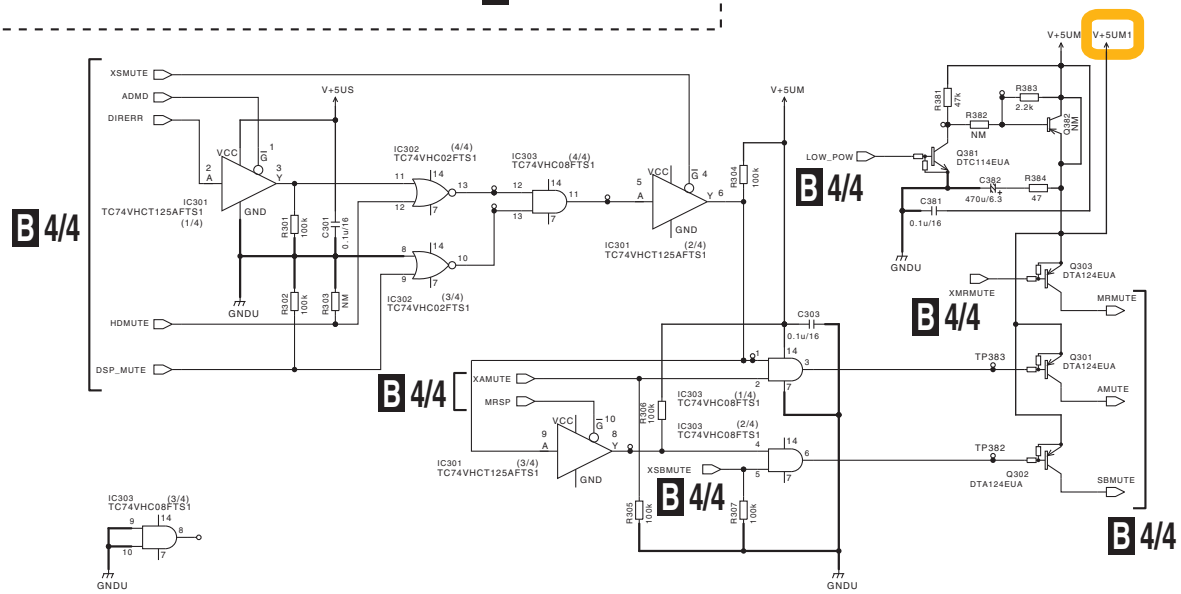


(DVD): Video Signal Route (DVD ch)
(TV): Video Signal Route (TV ch)
(DVR): Video Signal Route (DVR ch)
(FV): Video Signal Route (Video)
(CV): Video Signal Route (Component Video)
(SY): S-Video Signal Route (Y ch)
(SC): S-Video Signal Route (C ch)

B 1/4

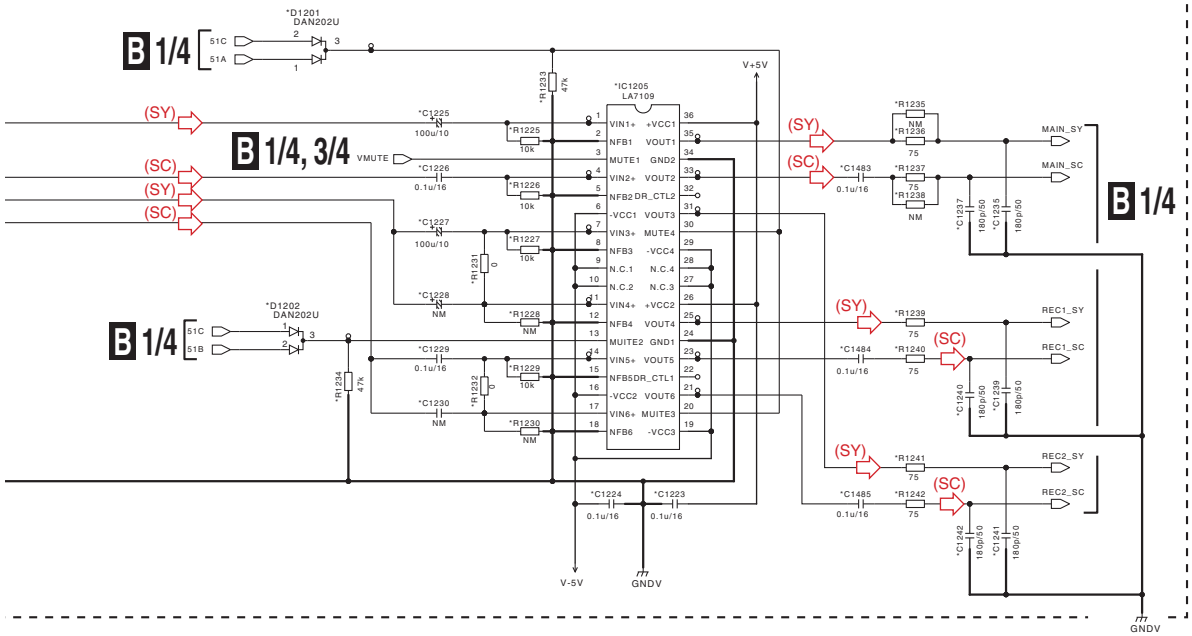
10.4 MAIN ASSY (2/4)

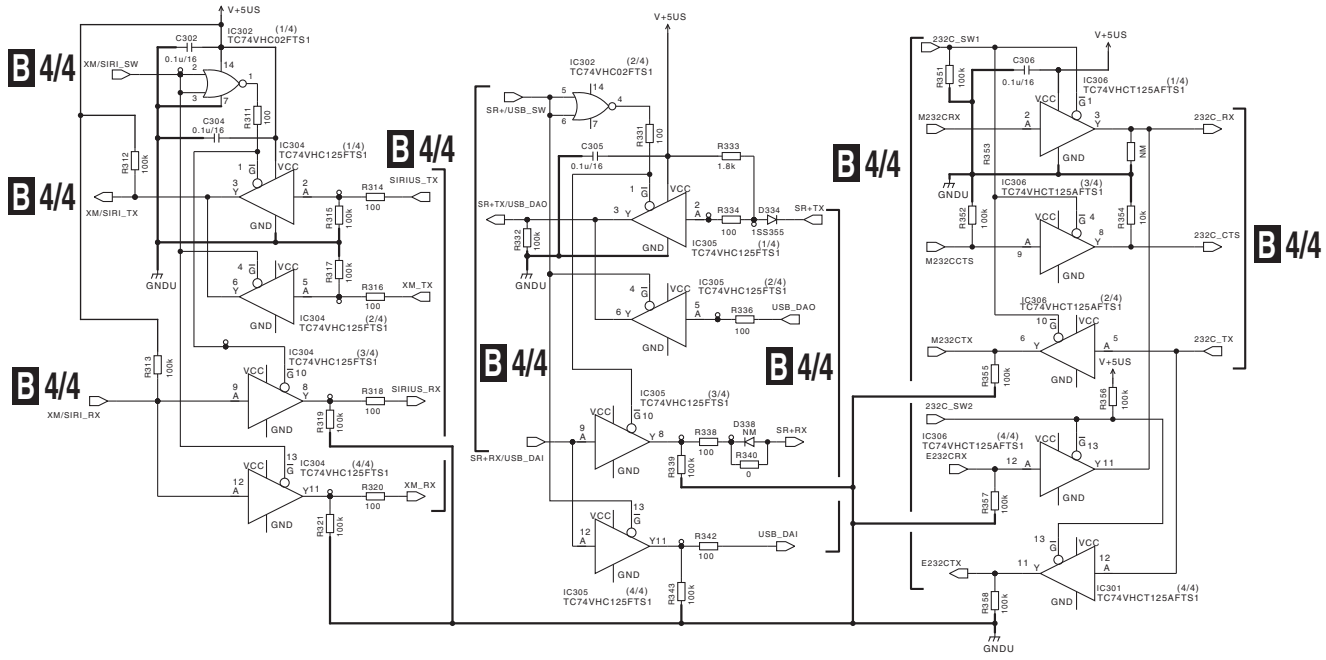




B 2/4 MAIN ASSY
(VSX-03TXH : AWK8052)
(VSX-9130TXH-K : AWK8069)
(VSX-01TXH : AWK8056)
(VSX-1018AH-K : AWK8057)

S-VIDEO PART	AWK8057	NO NEED
	AWK8052,AWK8069,AWK8056	NEED



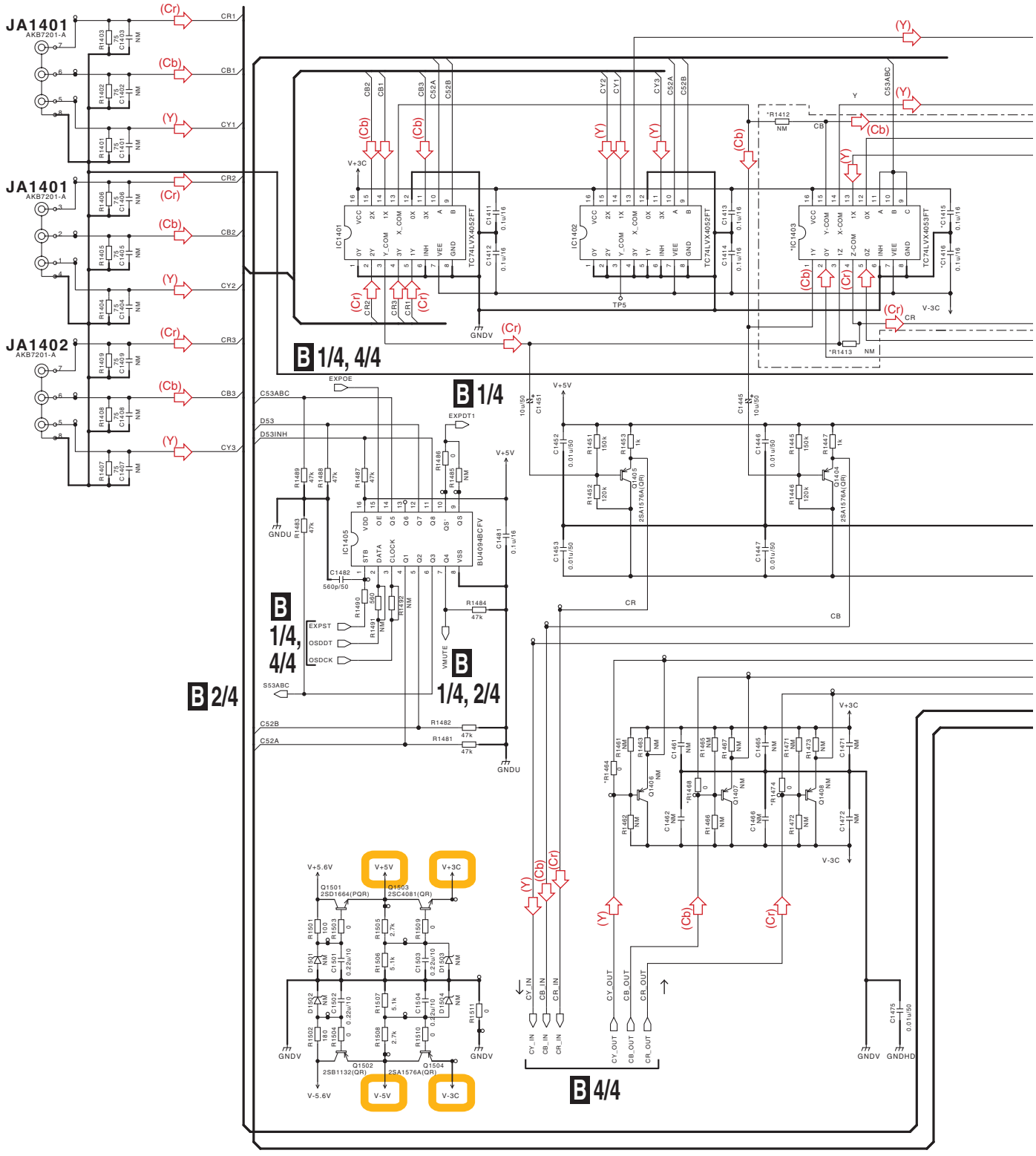


(SY): S-Video Signal Route (Y ch)

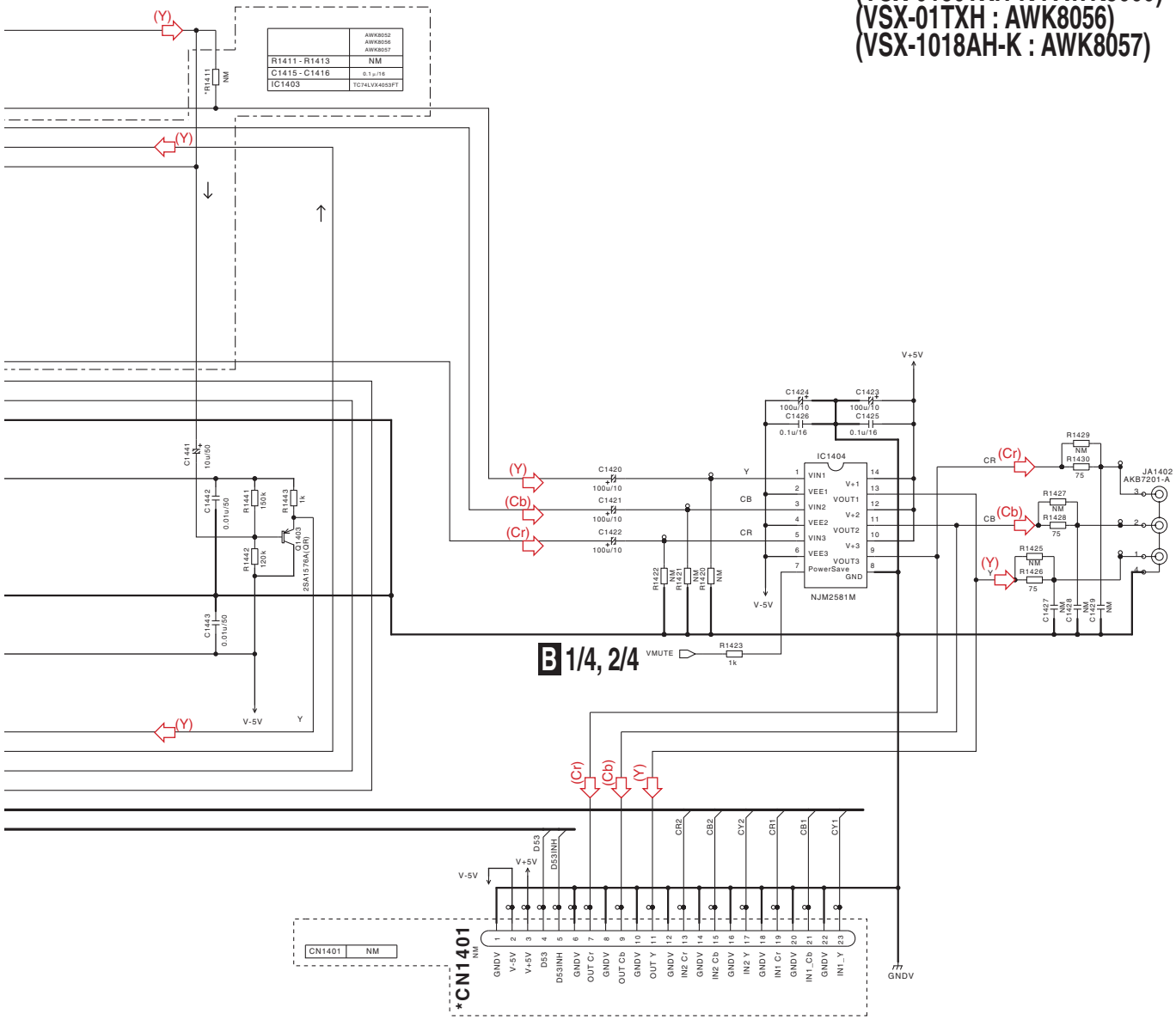
(SC): S-Video Signal Route (C ch)

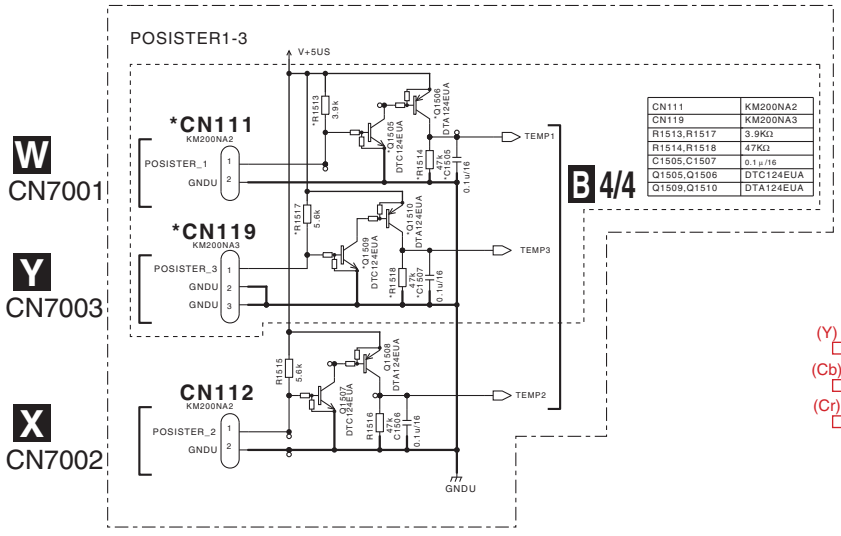
B 2/4

10.5 MAIN ASSY (3/4)



B 3/4 MAIN ASSY
(VSX-03TXH : AWK8052)
(VSX-9130TXH-K : AWK8069)
(VSX-01TXH : AWK8056)
(VSX-1018AH-K : AWK8057)





W CN7001

Y CN7003

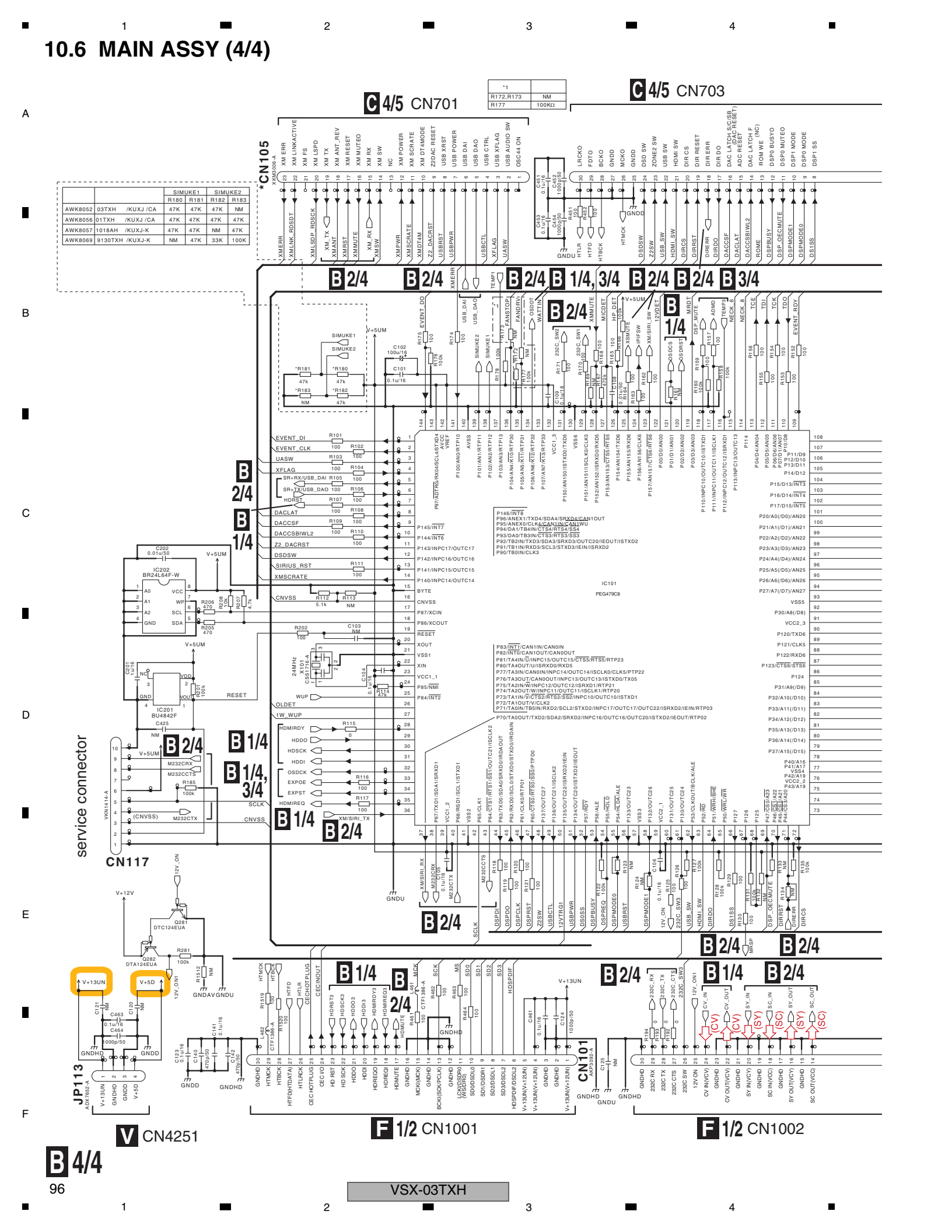
X CN7002

(Y) : Video Signal Route (Component Y ch)

(Cb) : Video Signal Route (Component Cb ch)

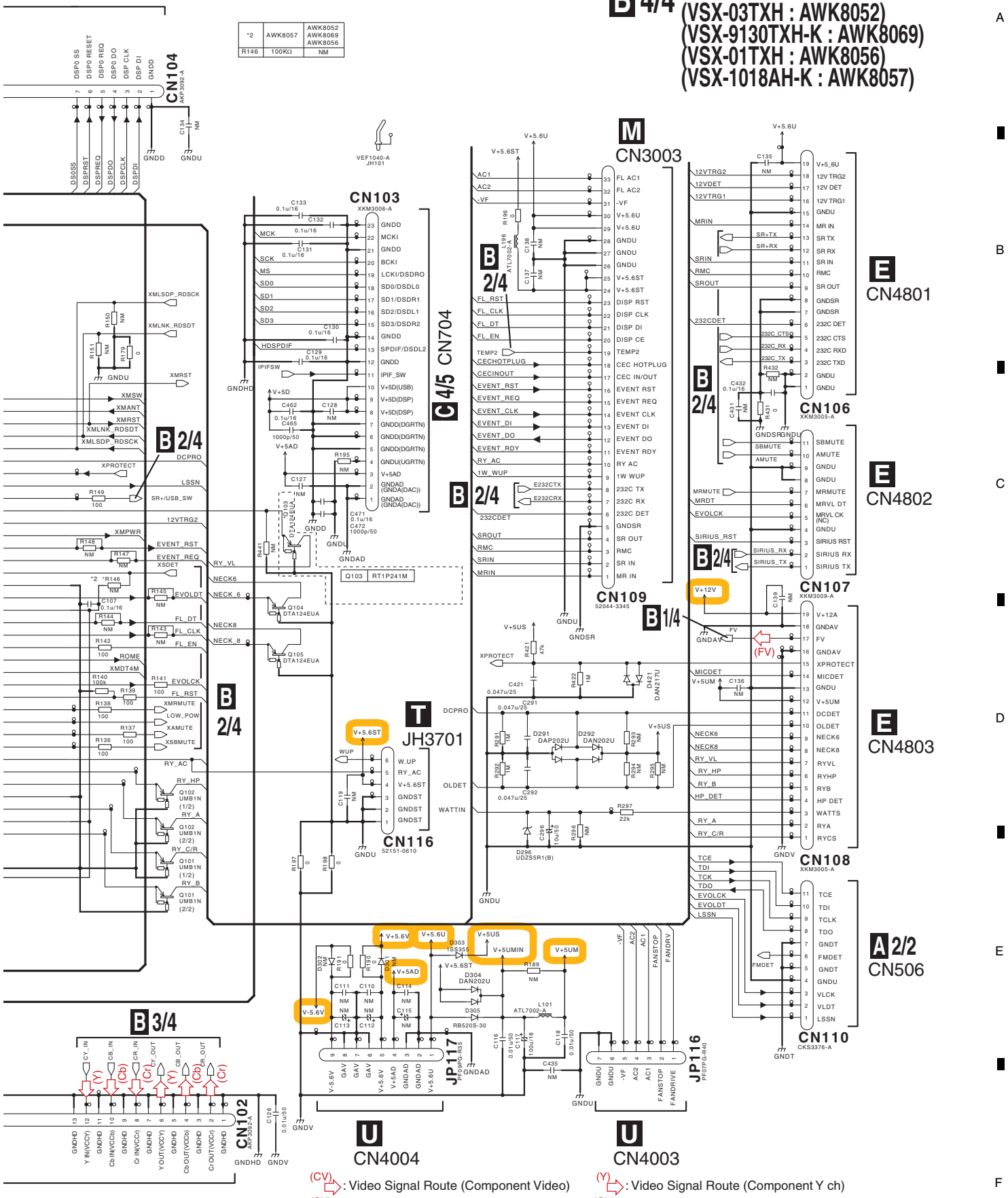
(Cr) : Video Signal Route (Component Cr ch)

10.6 MAIN ASSY (4/4)



B 4/4 MAIN ASSY
(VSX-03TXH : AWK8052)
(VSX-9130TXH-K : AWK8069)
(VSX-01TXH : AWK8056)
(VSX-1018AH-K : AWK8057)

*2	AWK8057	AWK8052 AWK8069 AWK8056
R146	100KΩ	NM



(FV): Video Signal Route (Video)

(CV): Video Signal Route (Component Video)

(SY): S-Video Signal Route (Y ch)

(SC): S-Video Signal Route (C ch)

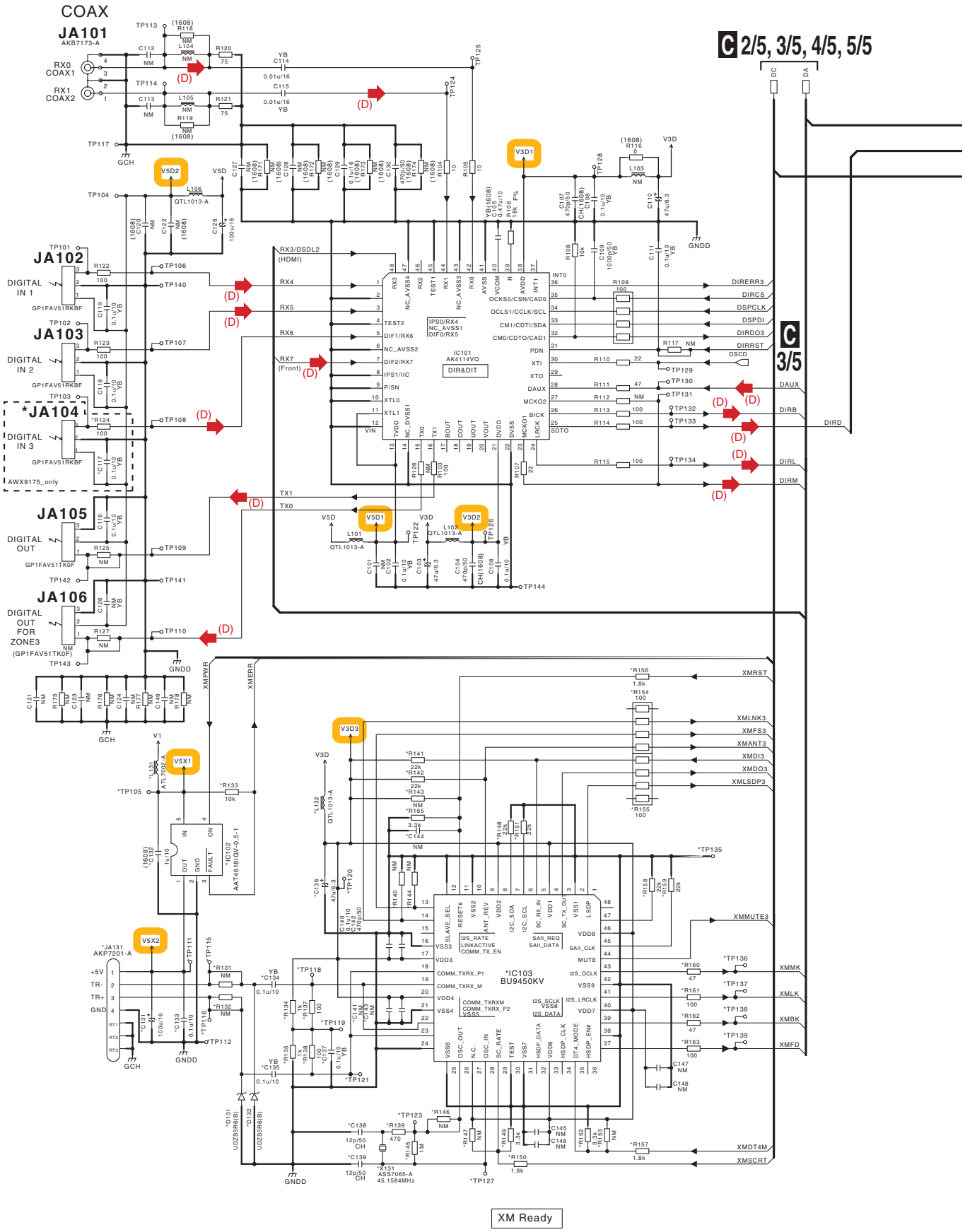
(Y): Video Signal Route (Component Y ch)

(Cb): Video Signal Route (Component Cb ch)

(Cr): Video Signal Route (Component Cr ch)

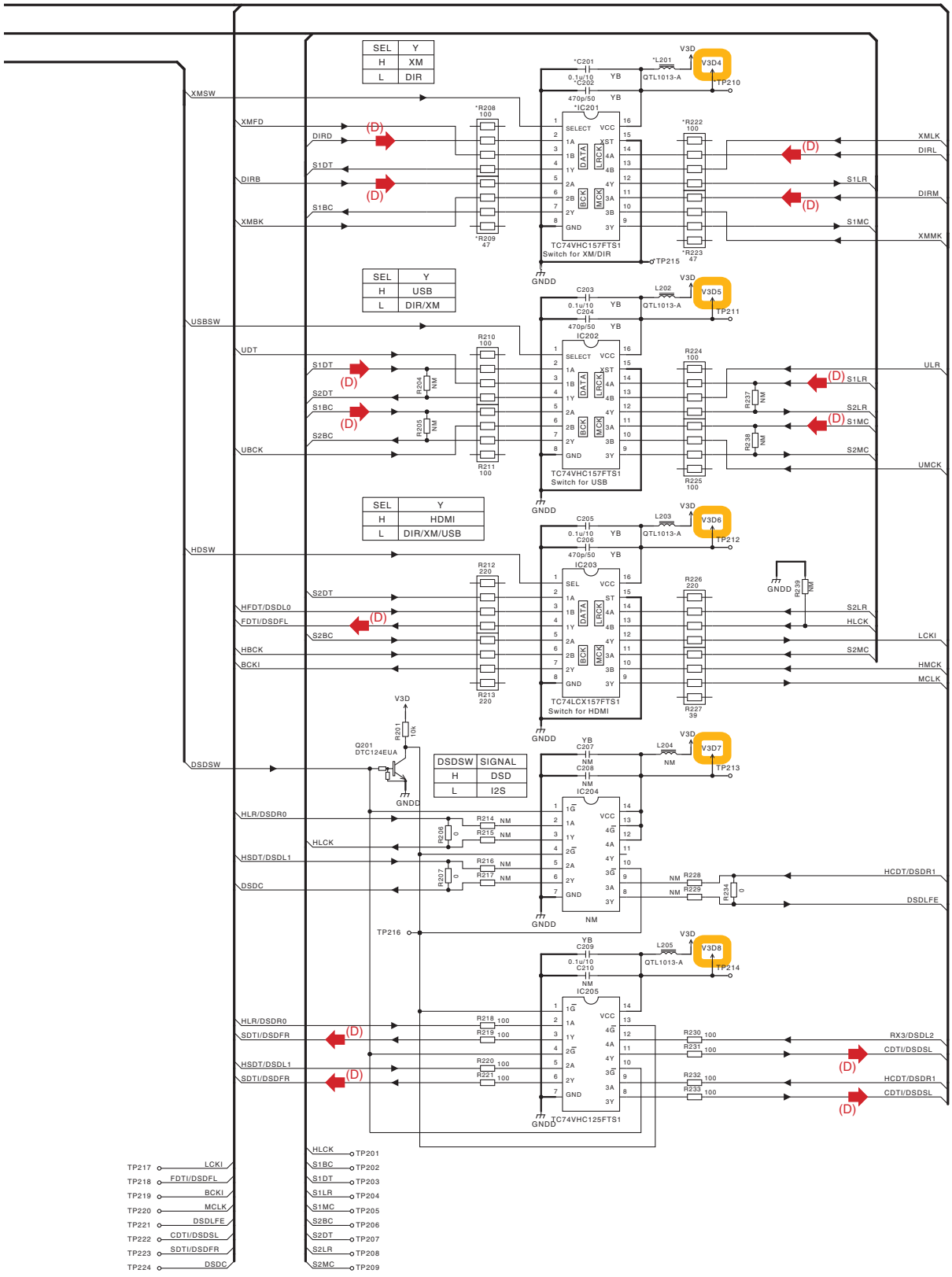
B 4/4

10.7 DSP & USB ASSY (1/5)

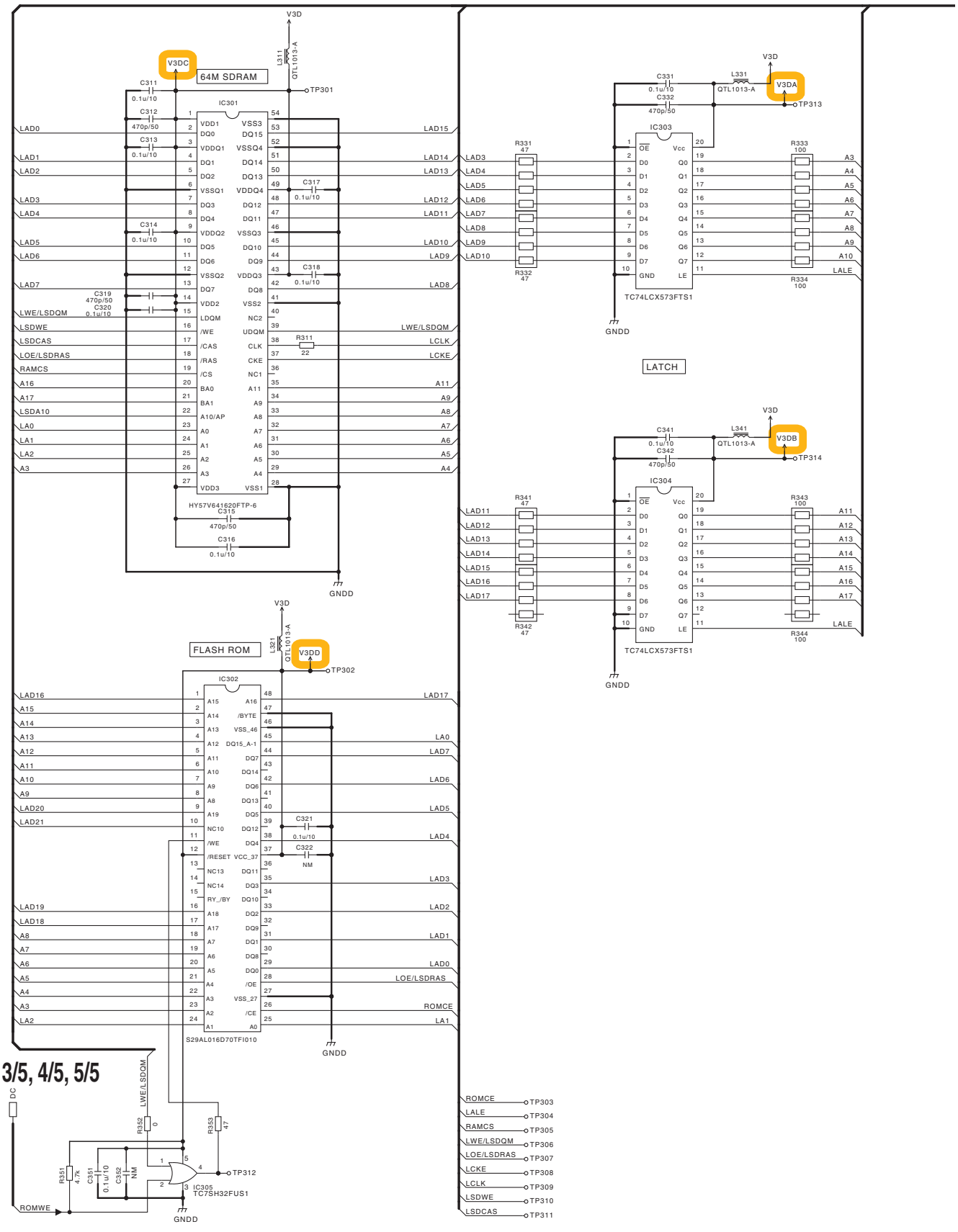


C 1/5

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

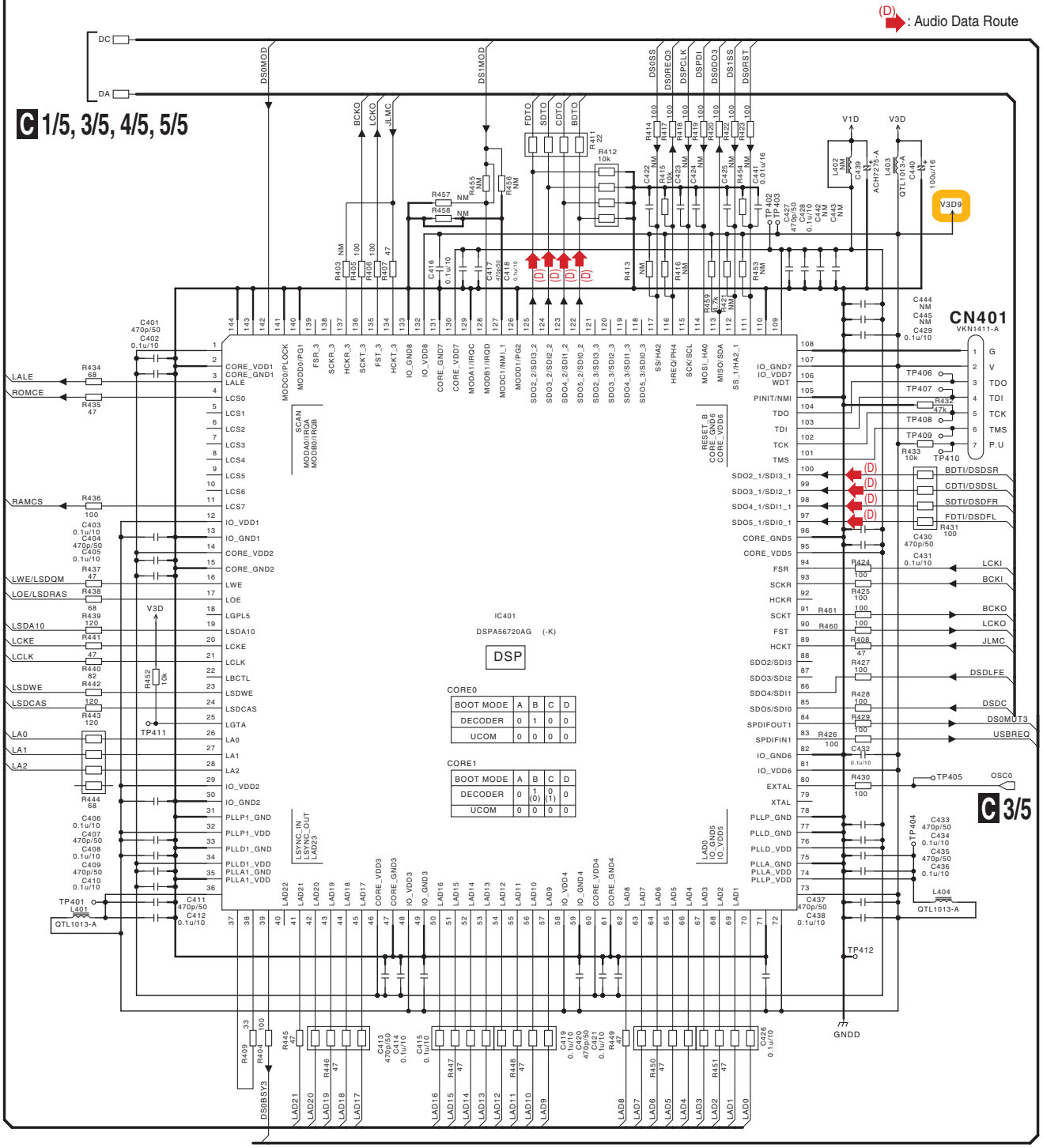


10.8 DSP & USB ASSY (2/5)

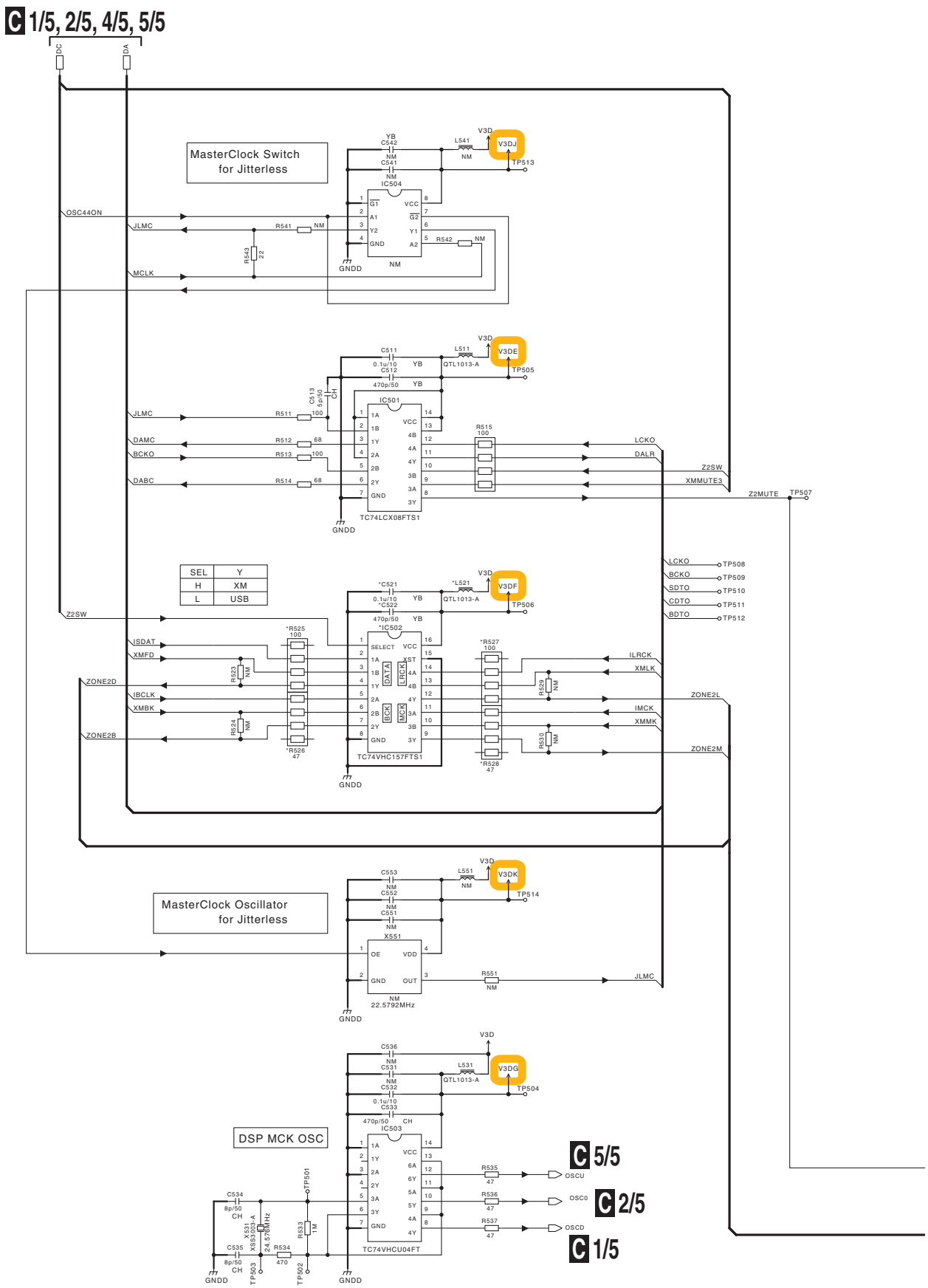


C 2/5

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

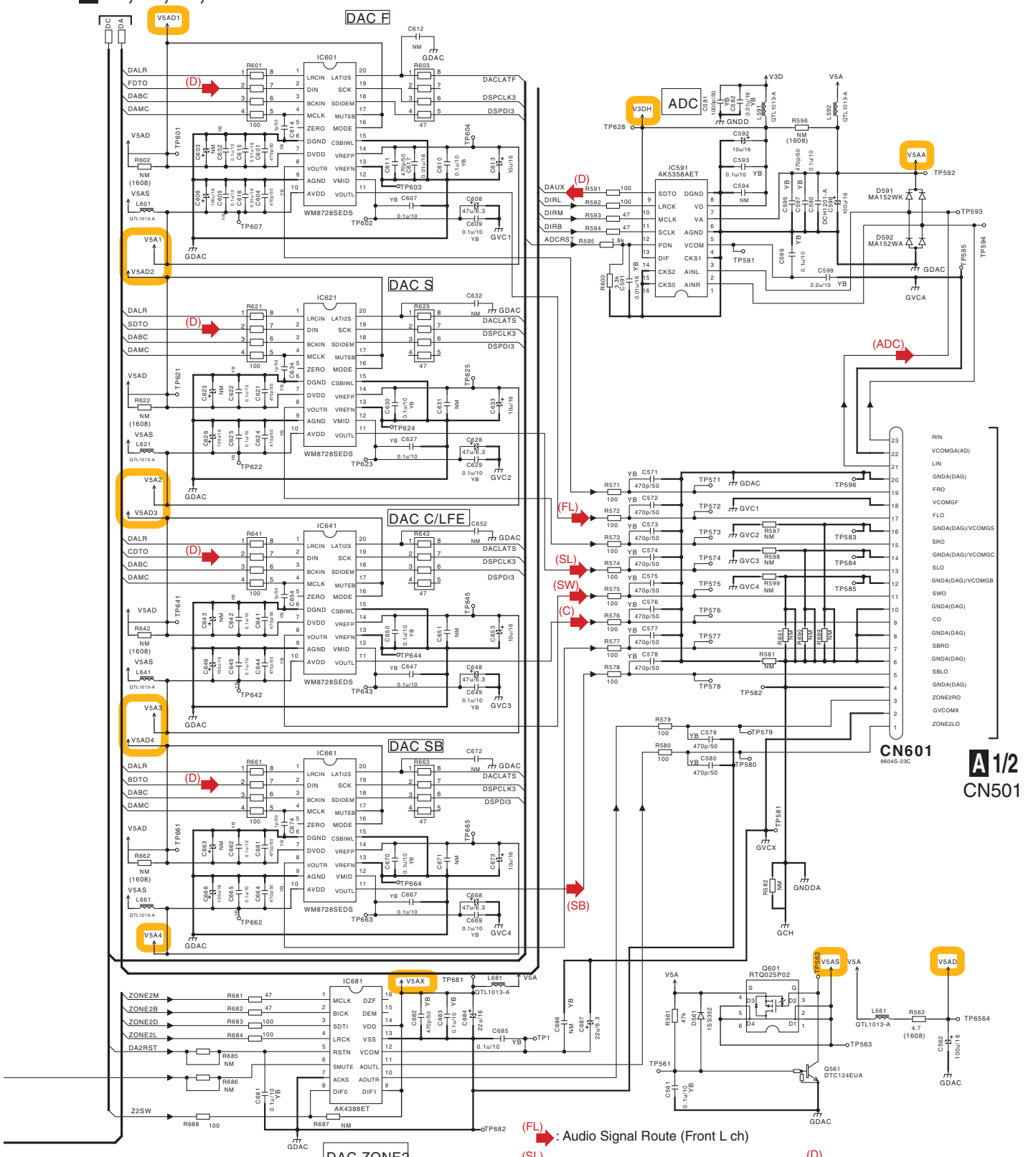


10.9 DSP & USB ASSY (3/5)



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

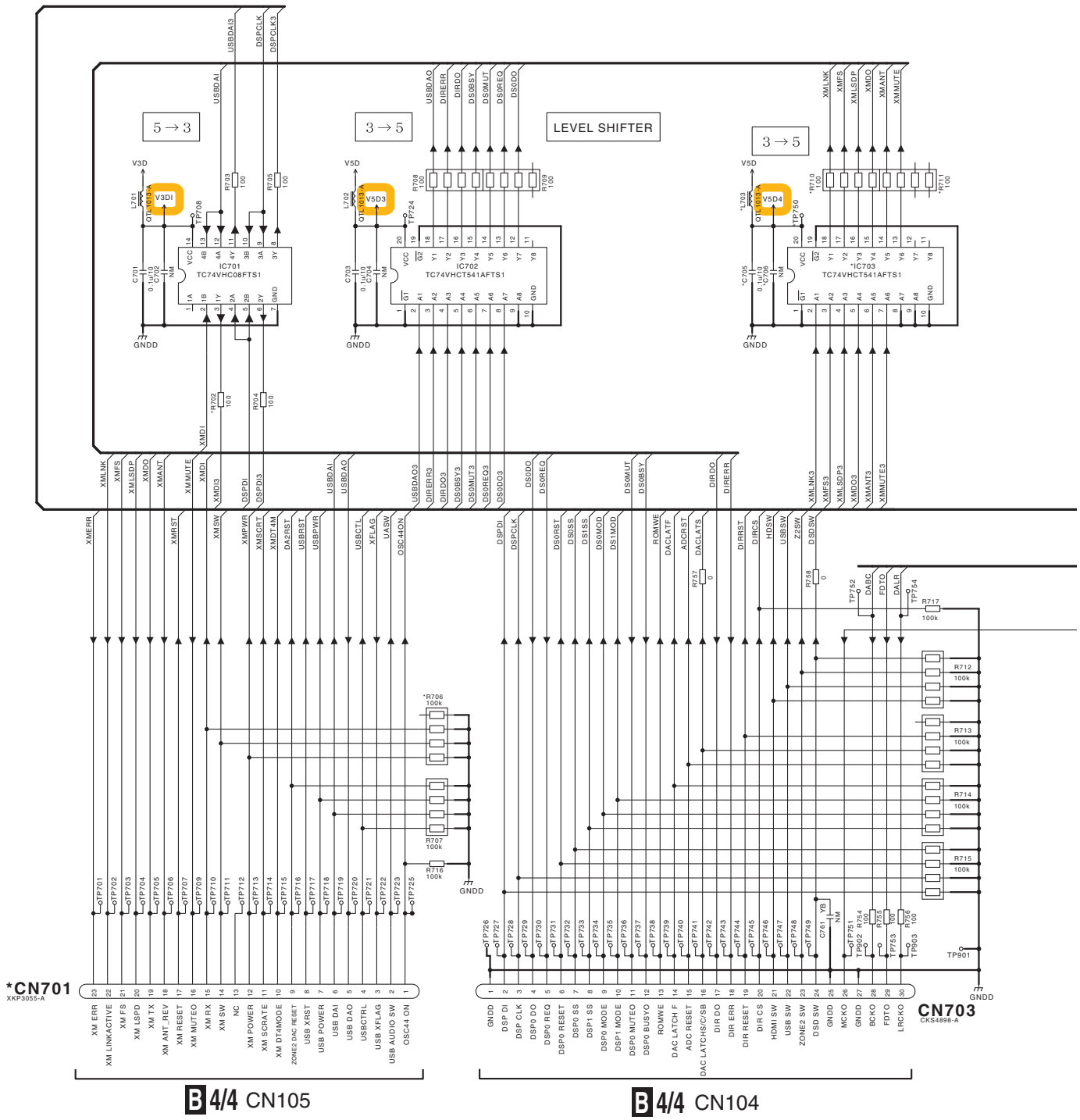


(FL): Audio Signal Route (Front L ch)
(SL): Audio Signal Route (Surround L ch)
(C): Audio Signal Route (Center ch)
(SB): Audio Signal Route (Surround Back L ch)
(SW): Audio Signal Route (SubWoofer ch)
(D): Audio Data Route
(ADC): Audio Signal Route (ADC L ch)

A 1/2
CN501

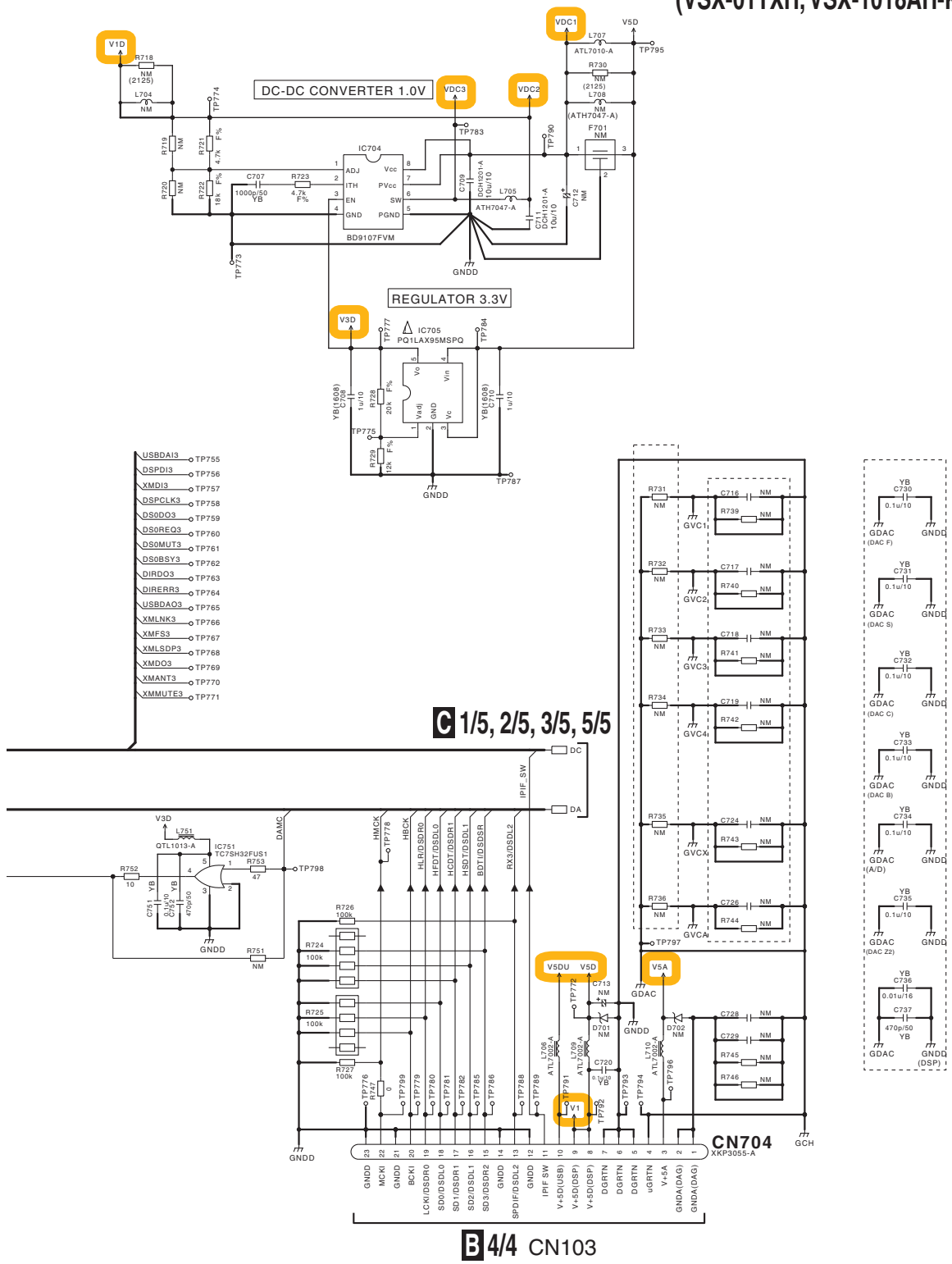
C 3/5

10.10 DSP & USB ASSY (4/5)

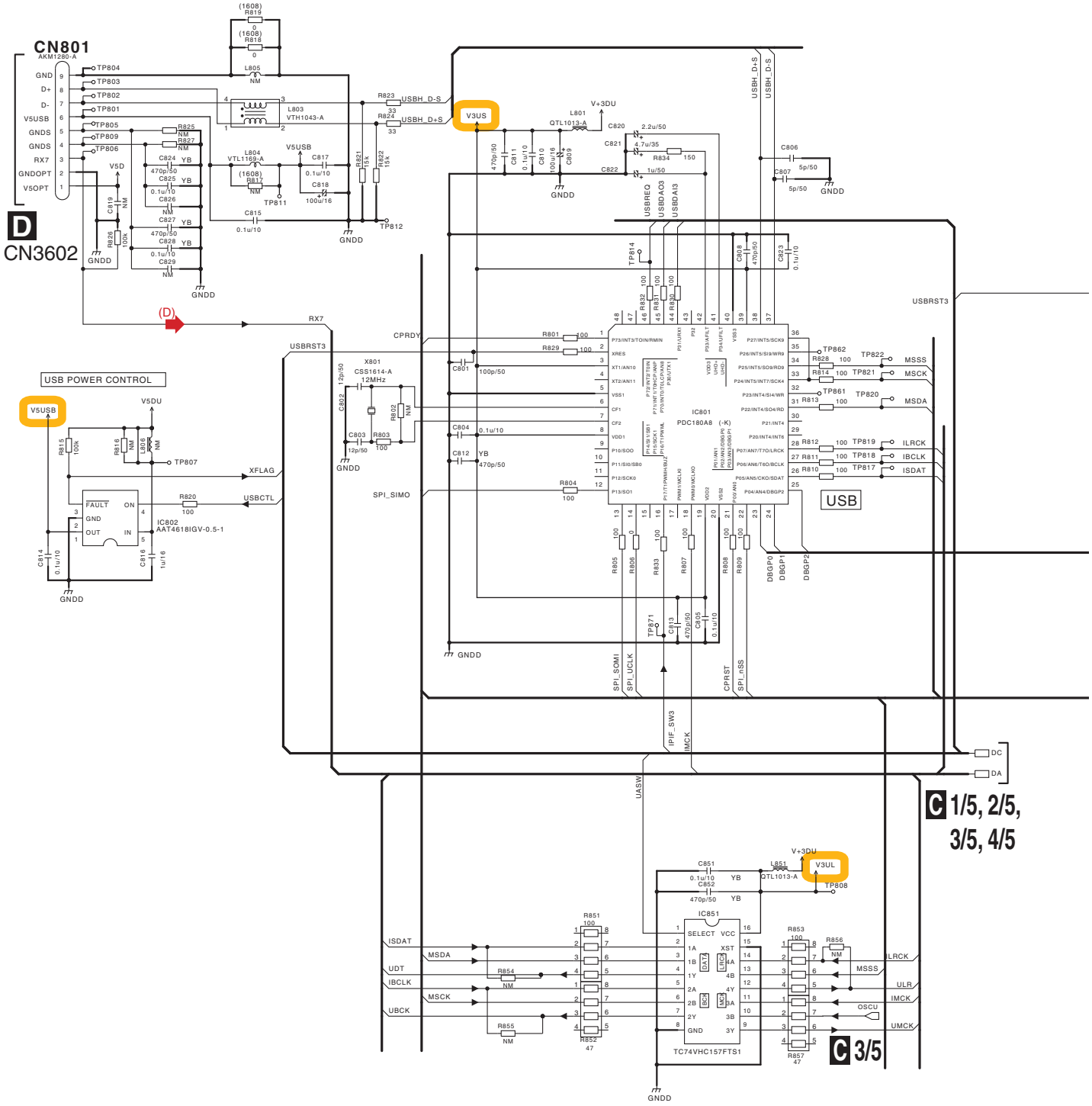


C 4/5

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



10.11 DSP & USB ASSY (5/5)

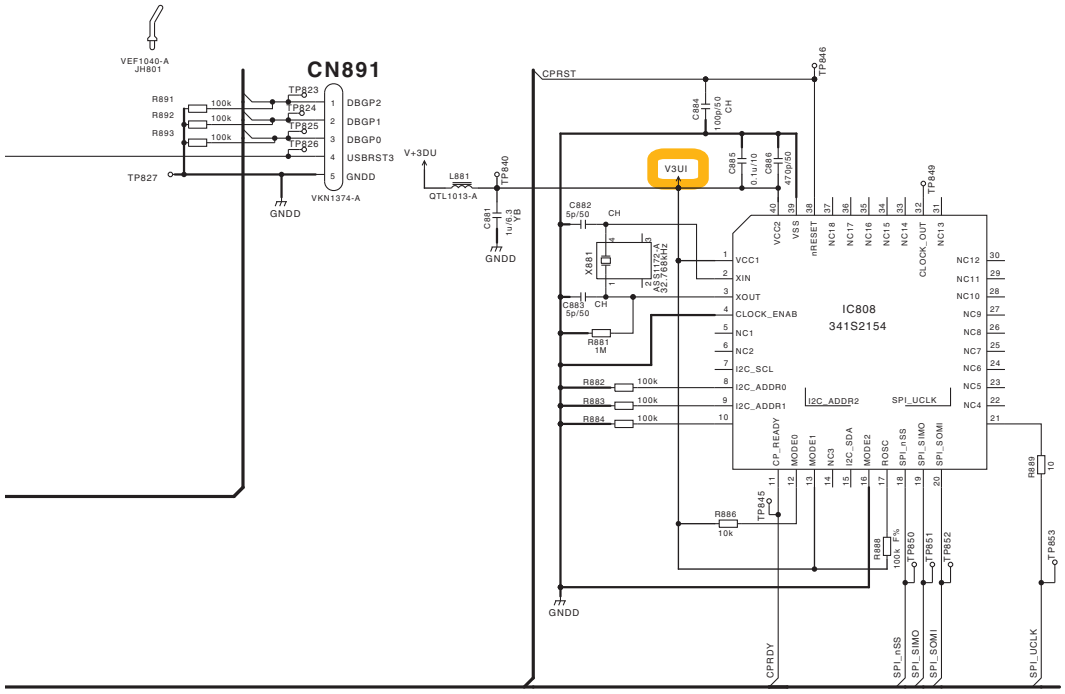


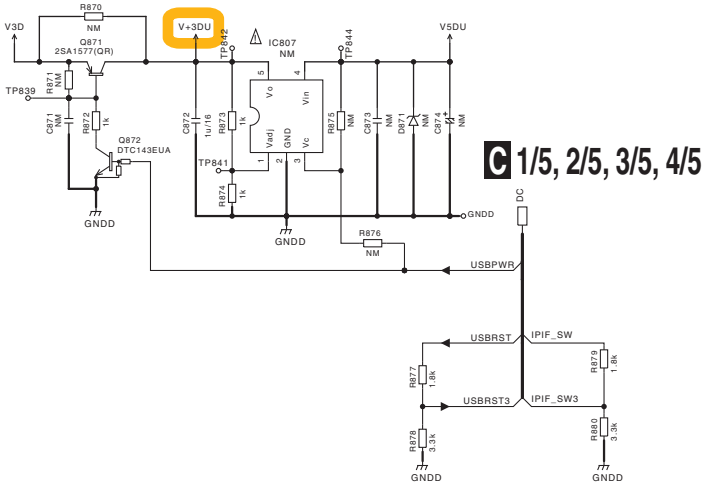
SEL	Y
H	MSC
L	iPod

(D): Audio Data Route

C 5/5

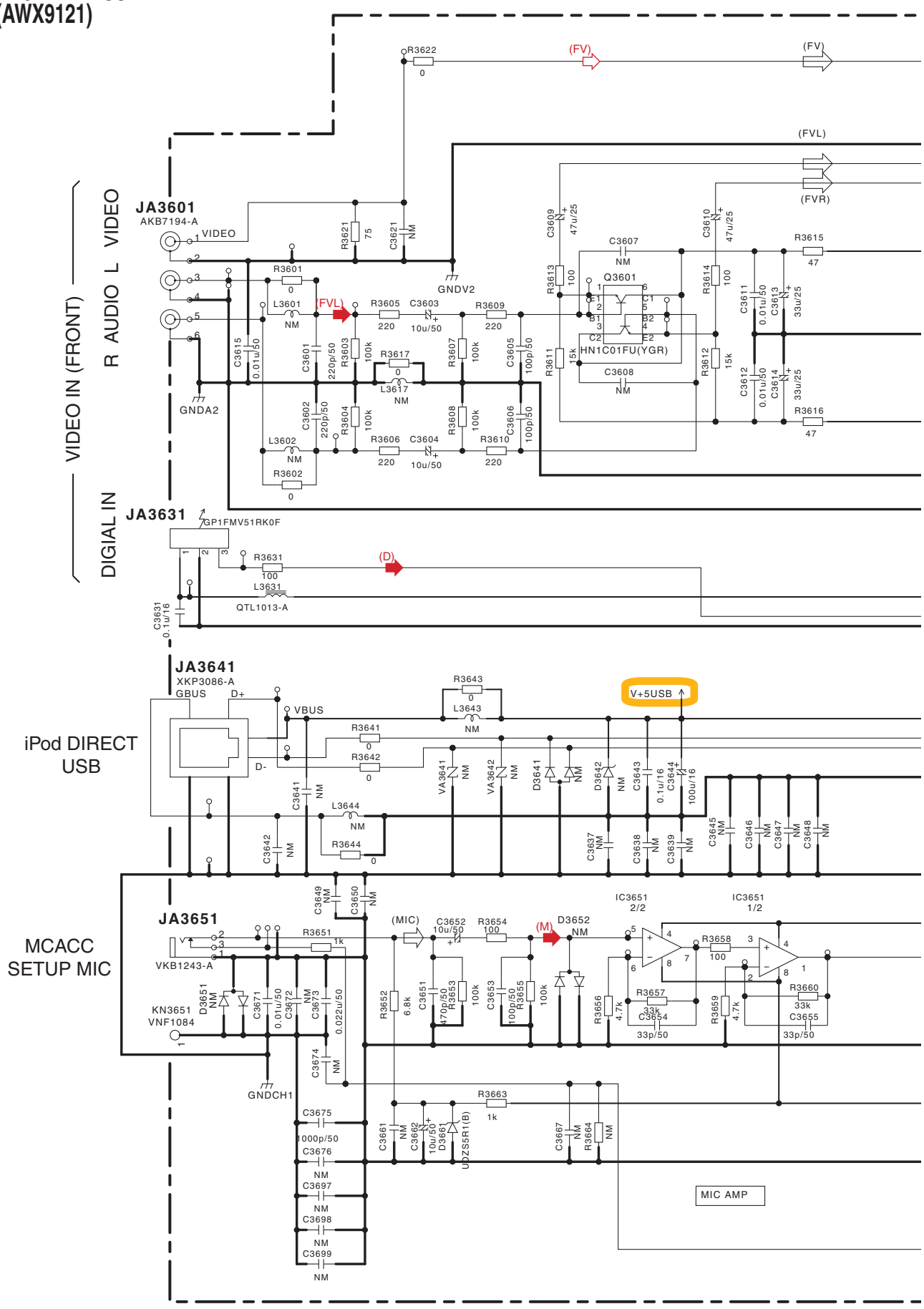
C 5/5 DSP & USB ASSY (VSX-03TXH,VSX-9130TXH-K : AWX9175) (VSX-01TXH, VSX-1018AH-K : AWX9239)

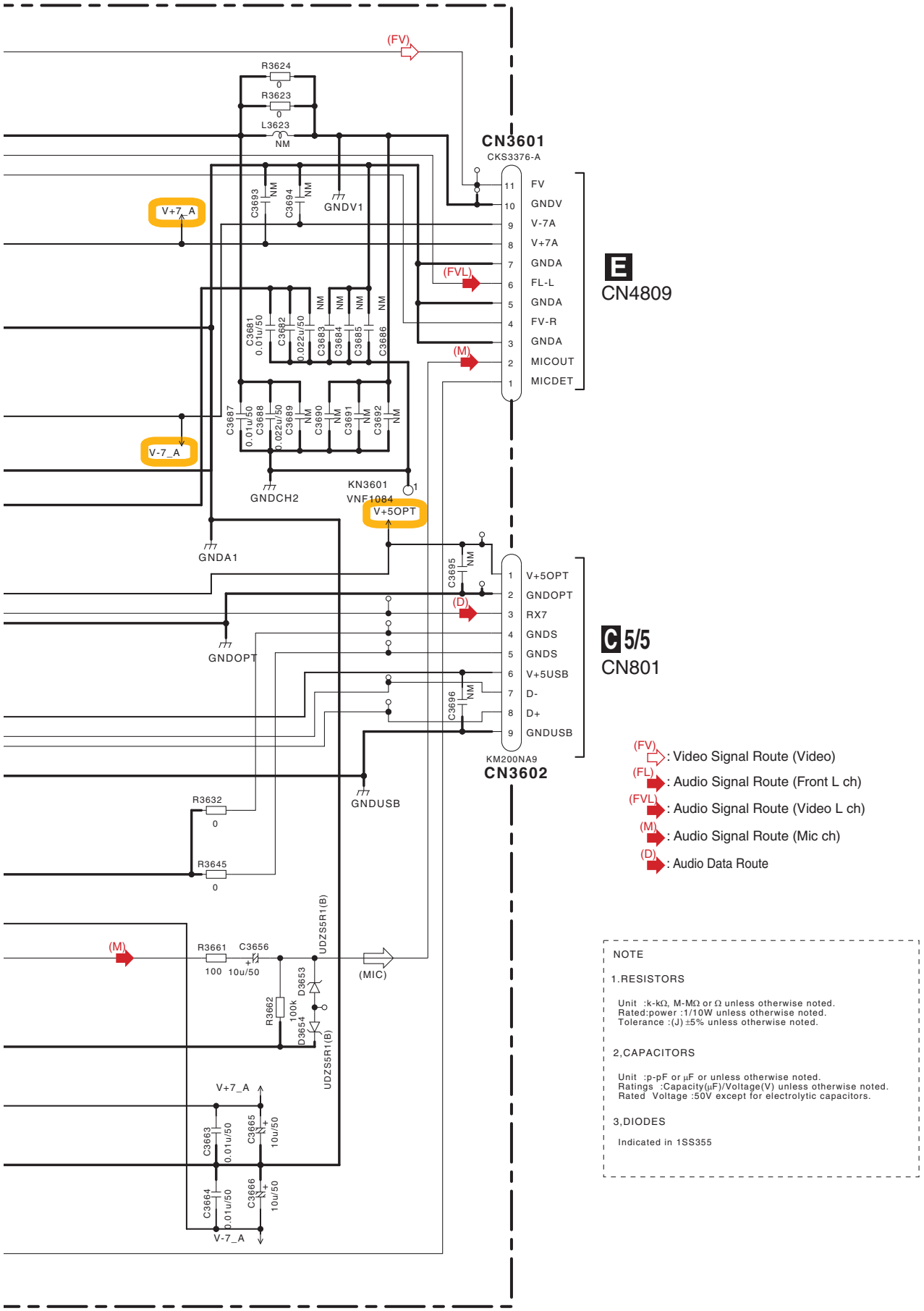




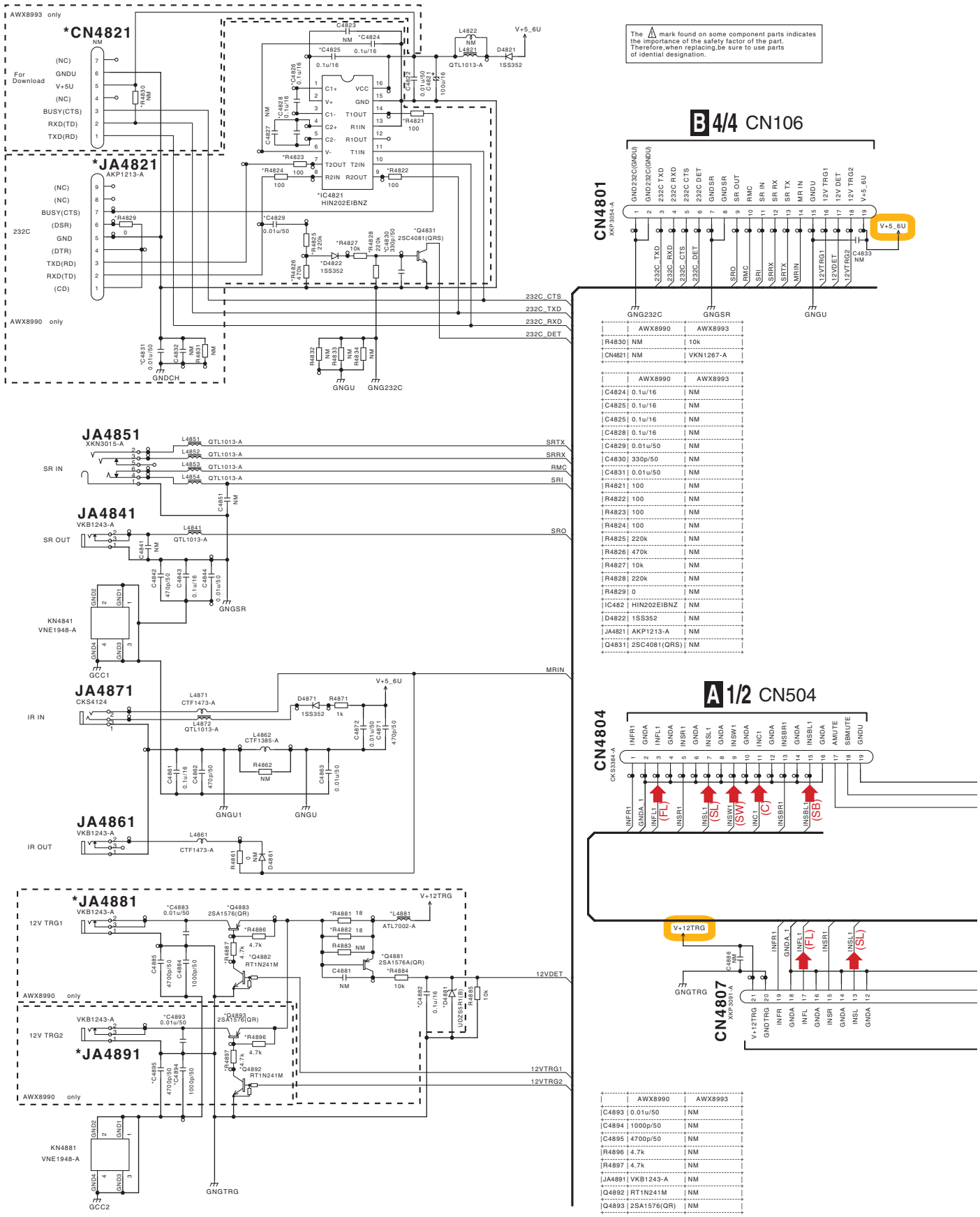
C 1/5, 2/5, 3/5, 4/5

D FRONT IN ASSY (AWX9121)




(FV)
R3624
0
R3623
0
L3623
NM
CN3601
CKS3376-A
11 FV
10 GNDV
9 V-7A
8 V+7A
7 GNDA
6 FL-L
5 GNDA
4 FV-R
3 GNDA
2 MICOUT
1 MICDET
E
CN4809
C3693 NM
C3694 NM
GNDV1
V+7_A
(FVL)
C3681 0.01u/50
C3682 0.022u/50
C3683 NM
C3684 NM
C3685 NM
C3686 NM
(M)
C3687 0.01u/50
C3688 NM
C3689 0.022u/50
C3690 NM
C3691 NM
C3692 NM
V-7_A
GNDCH2
KN3601
VNF1084
V+5OPT
GNDA1
C3695 NM
1 V+5OPT
2 GNDOPT
(D)
3 RX7
4 GNDS
5 GNDS
6 V+5USB
7 D-
8 D+
9 GNDUSB
C 5/5
CN801
GNDOPT
C3696 NM
KM200NA9
CN3602
GNDUSB
R3632
0
R3645
0
(M)
R3661 100
C3656 10u/50
UDZS5R1(B)
(MIC)
R3662 100k
D3653
D3654
UDZS5R1(B)
V+7_A
C3663 0.01u/50
C3665 10u/50
C3664 0.01u/50
C3666 10u/50
V-7_A
(FV) : Video Signal Route (Video)
(FL) : Audio Signal Route (Front L ch)
(FVL) : Audio Signal Route (Video L ch)
(M) : Audio Signal Route (Mic ch)
(D) : Audio Data Route
NOTE
1.RESISTORS
Unit :k-kΩ, M-MΩ or Ω unless otherwise noted.
Rated:power :1/10W unless otherwise noted.
Tolerance :(J) ±5% unless otherwise noted.
2,CAPACITORS
Unit :p-pF or μF or unless otherwise noted.
Ratings :Capacity(μF)/Voltage(V) unless otherwise noted.
Rated Voltage :50V except for electrolytic capacitors.
3,DIODES
Indicated in 1SS355

10.13 INTERFACE ASSY



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 idential designation.

B 4/4 CN106

	AWX8990	AWX8993
R4830	NM	10k
CN4821	NM	VKN1267-A

	AWX8990	AWX8993
C4824	0.1u/16	NM
C4825	0.1u/16	NM
C4825	0.1u/16	NM
C4828	0.1u/16	NM
C4829	0.01u/50	NM
C4830	330p/50	NM
C4831	0.01u/50	NM
R4821	100	NM
R4822	100	NM
R4823	100	NM
R4824	100	NM
R4825	220k	NM
R4826	470k	NM
R4827	10k	NM
R4828	220k	NM
R4829	0	NM
IC482	HIN202EIBNZ	NM
D4822	1SS352	NM
JA4821	AKP1213-A	NM
Q4831	2SC4081(QRS)	NM

A 1/2 CN504

	AWX8990	AWX8993
C4893	0.01u/50	NM
C4894	1000p/50	NM
C4895	4700p/50	NM
R4896	4.7k	NM
R4897	4.7k	NM
JA4891	VKB1243-A	NM
Q4892	RT1N241M	NM
Q4893	2SA1576(QR)	NM

E INTERFACE ASSY (VSX-03TXH,VSX-9130TXH-K,VSX-01TXH : AWX8990) (VSX-1018AH-K : AWX8993)

NOTE
1.RESISTORS
Unit :k-kΩ, M-MΩ or Ω unless otherwise noted.
Rated power: 1/16W unless otherwise noted.
Tolerance :(J) ±5% unless otherwise noted.
2.CAPACITORS
Unit: p-pF, or μF unless otherwise noted.
Ratings: Capacity(μF)/Voltage(V) unless otherwise noted.
3.DIODES
Indicated in 1ss355.

B 4/4 CN107

B 4/4 CN108

A 2/2 CN503

A 2/2 CN502

D CN3601

R 2/2 CN5802

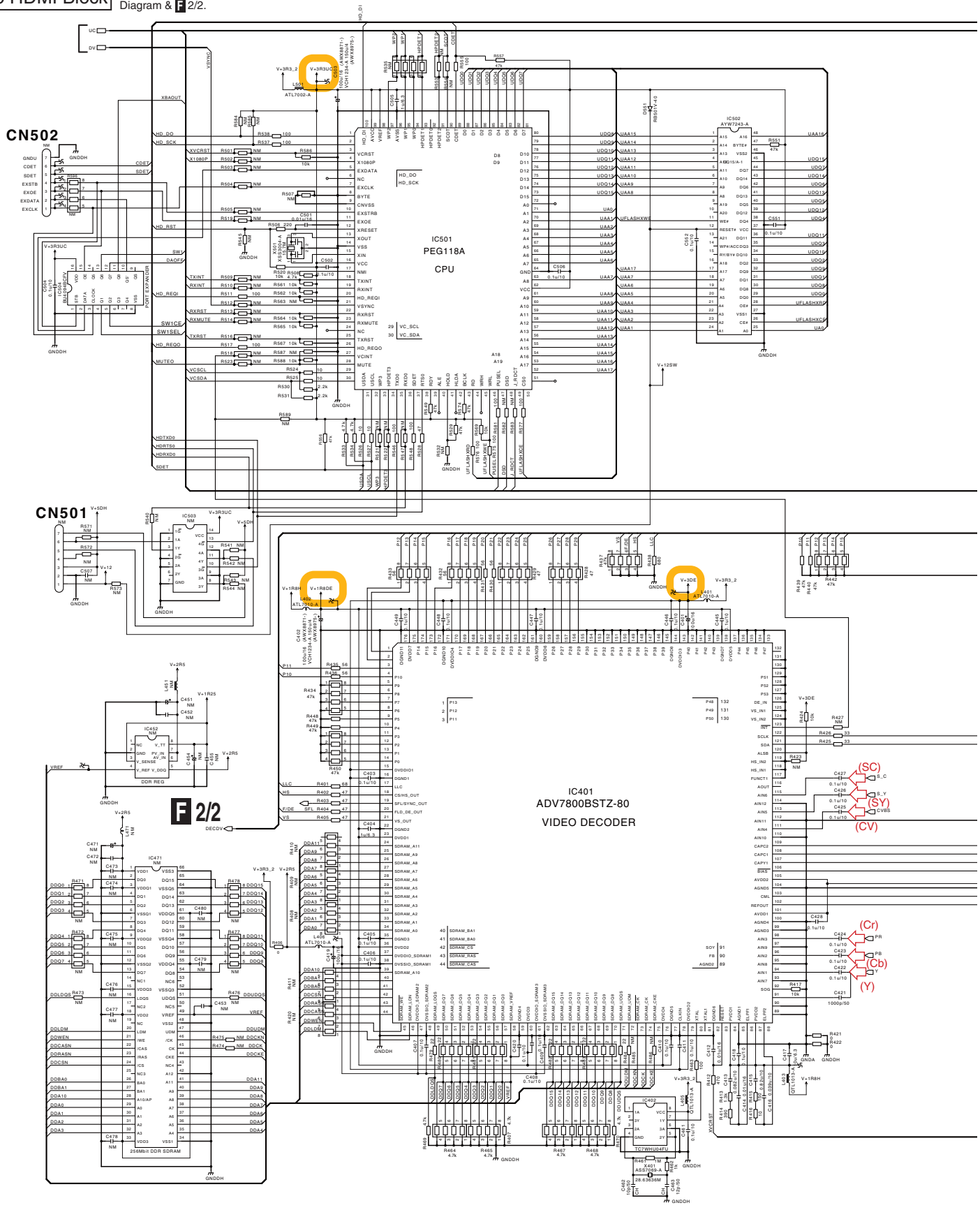
R 2/2 CN5803

	AWX8990	AWX8993
C4882	0.1u/16	NM
C4883	0.01u/50	NM
R4881	18	NM
R4882	18	NM
R4884	10k	NM
R4886	4.7k	NM
R4887	4.7k	NM
L4881	ATL7002-A	NM
D4881	UDZS5R1(B)	NM
JA4881	VKB1243-A	NM
Q4881	2SA1576A(QR)	NM
Q4882	RT1N241M	NM
Q4883	2SA1576(QR)	NM

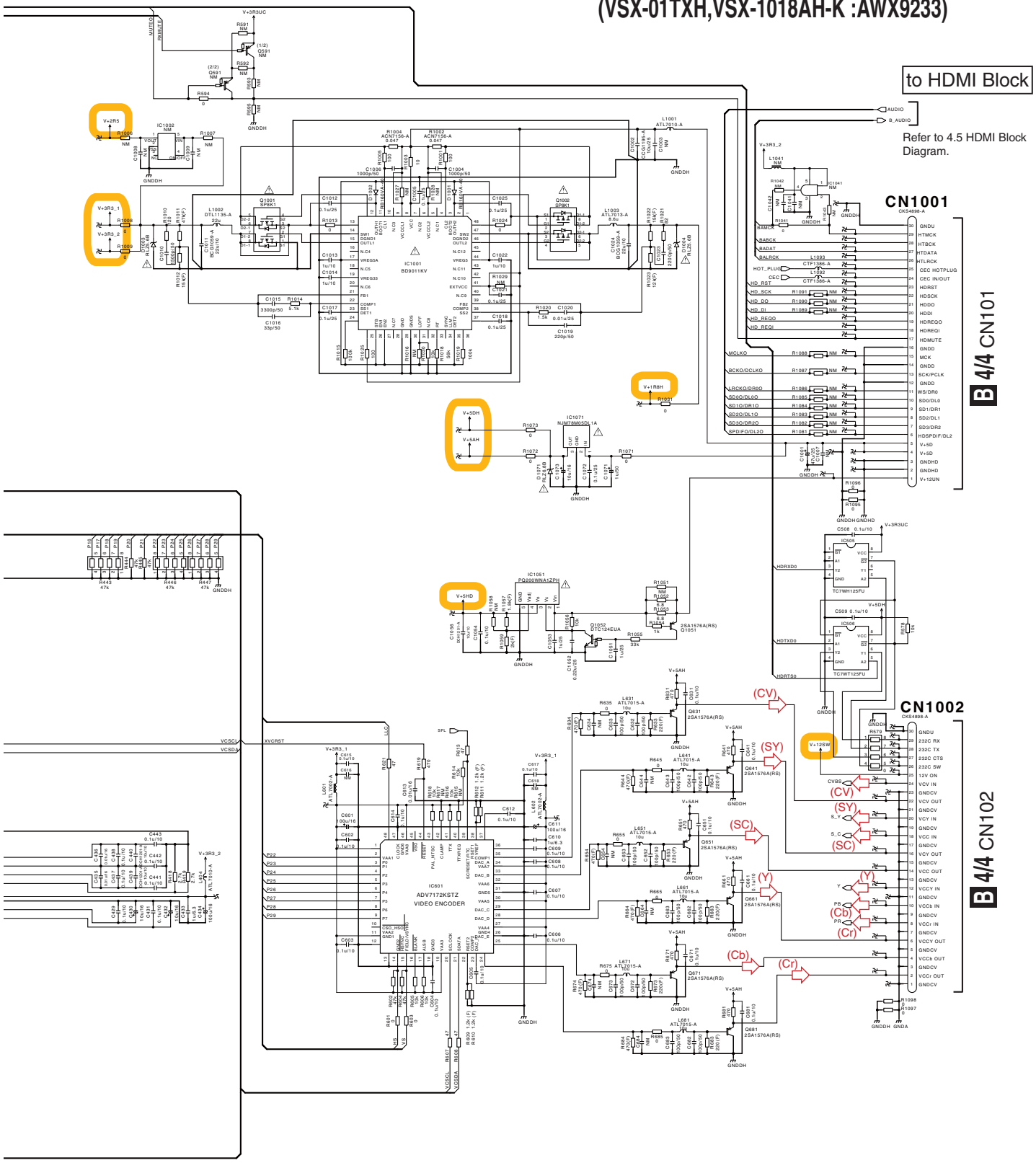
(FV) : Video Signal Route (Video)
(FL) : Audio Signal Route (Front L ch)
(FVL) : Audio Signal Route (Video L ch)
(SL) : Audio Signal Route (Surround L ch)
(C) : Audio Signal Route (Center ch)
(SB) : Audio Signal Route (Surround Back L ch)
(SW) : Audio Signal Route (SubWoofer ch)
(M) : Audio Signal Route (Mic ch)

10.14 HDMI & DVC ASSY (1/2)

to HDMI Block — Refer to 4.5 HDMI Block Diagram & F 2/2.

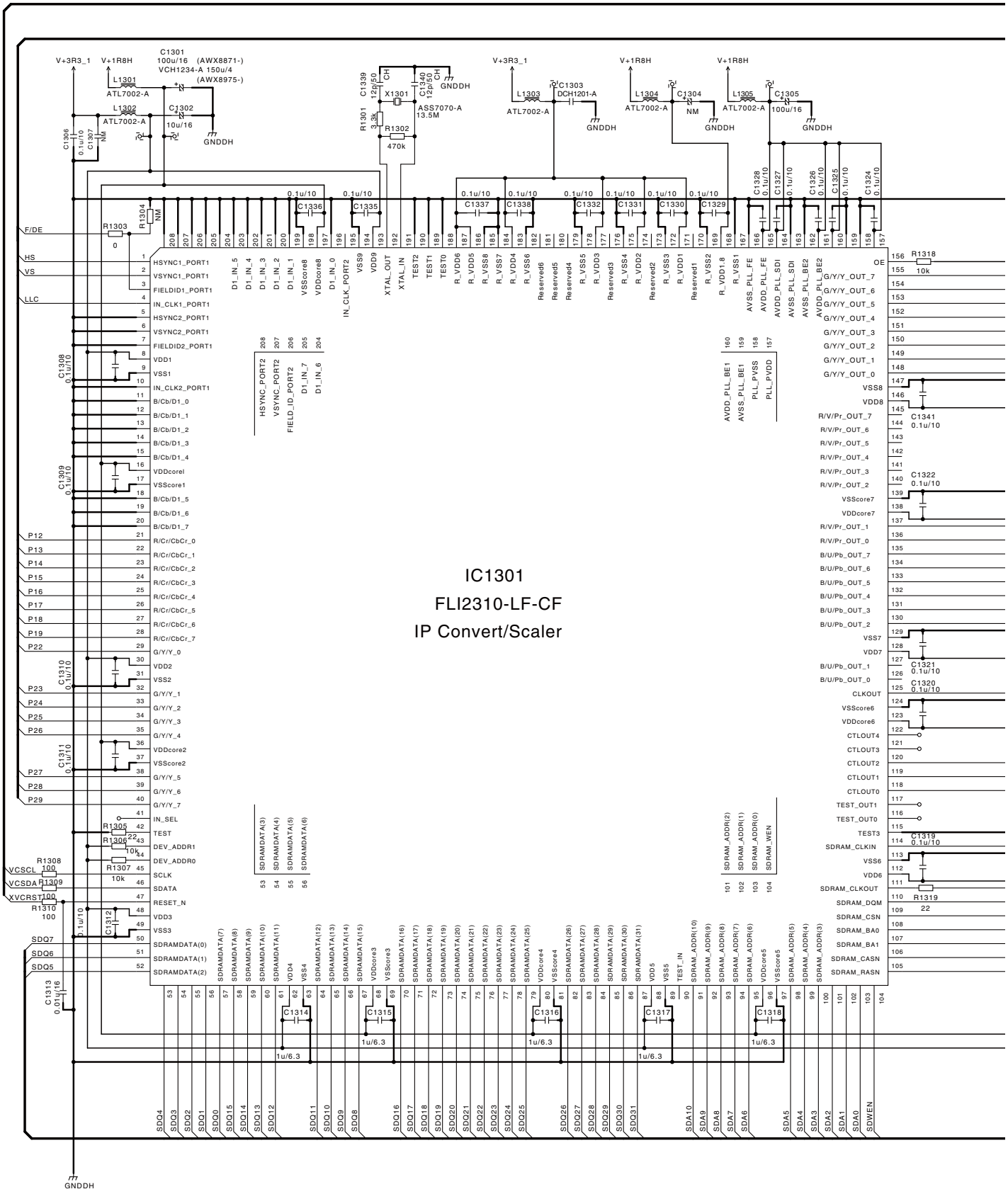


F 1/2 HDMI & DVC ASSY (VSX-03TXH,VSX-9130TXH-K :AWX9170) (VSX-01TXH,VSX-1018AH-K :AWX9233)

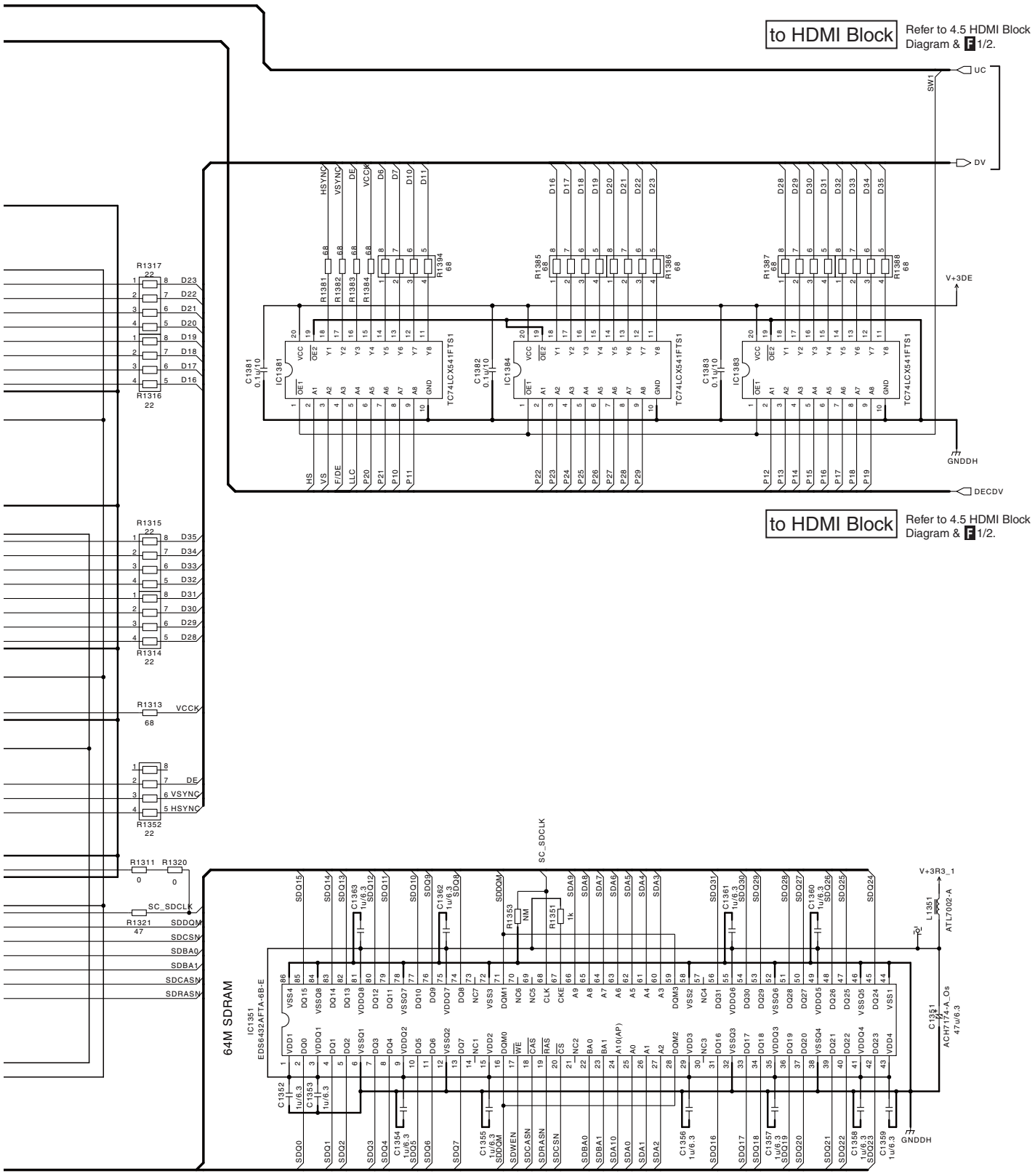


(Y): Video Signal Route (Component Y ch)
(Cb): Video Signal Route (Component Cb ch)
(Cr): Video Signal Route (Component Cr ch)
(CV): Video Signal Route (Component Video)
(SY): S-Video Signal Route (Y ch)
(SC): S-Video Signal Route (C ch)

10.15 HDMI & DVC ASSY (2/2)

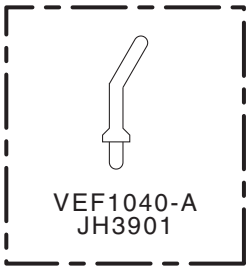


F 2/2 HDMI & DVC ASSY (VSX-03TXH,VSX-9130TXH-K :AWX9170) (VSX-01TXH,VSX-1018AH-K :AWX9233)

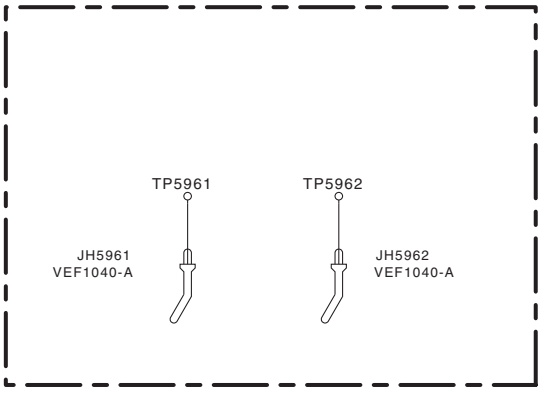


10.16 BINDER, BIND L FRONT, BIND L BACK, BIND R FRONT and BIND R BACK ASSYS

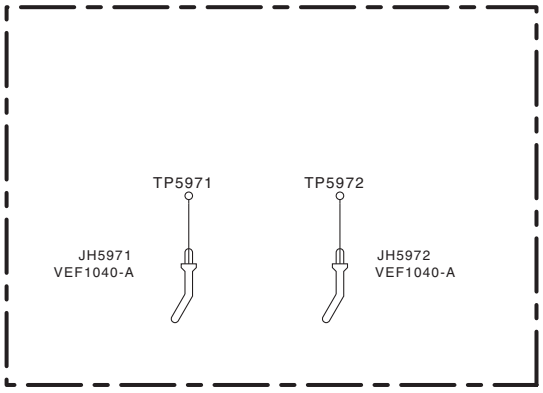
H BINDER ASSY (AWX9120)



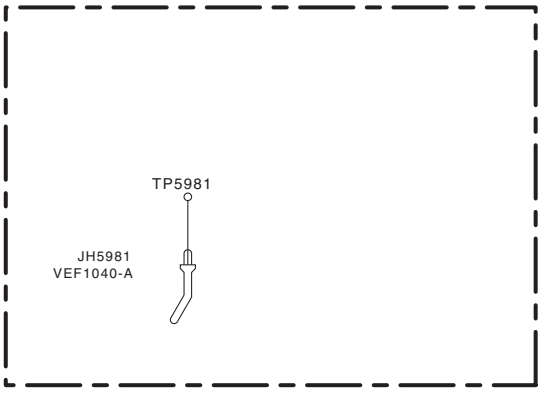
I BIND_L_FRONT ASSY (AWX9217)



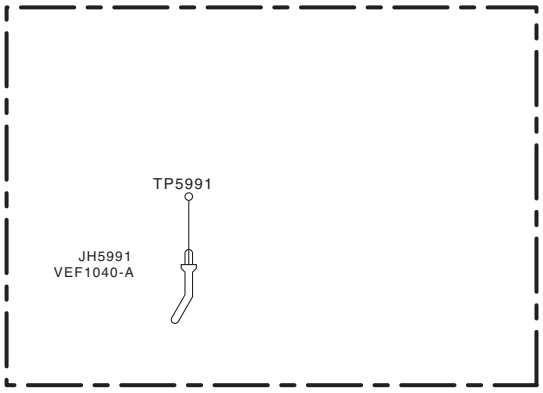
J BIND_L_BACK ASSY (AWX9218)



K BIND_R_FRONT ASSY (AWX9219)

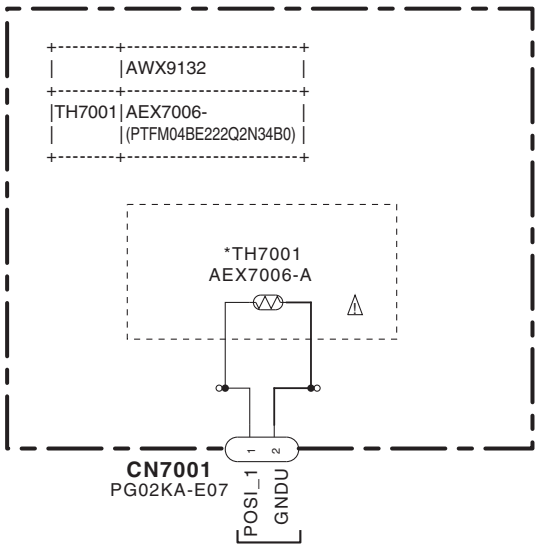


L BIND_R_BACK ASSY (AWX9220)

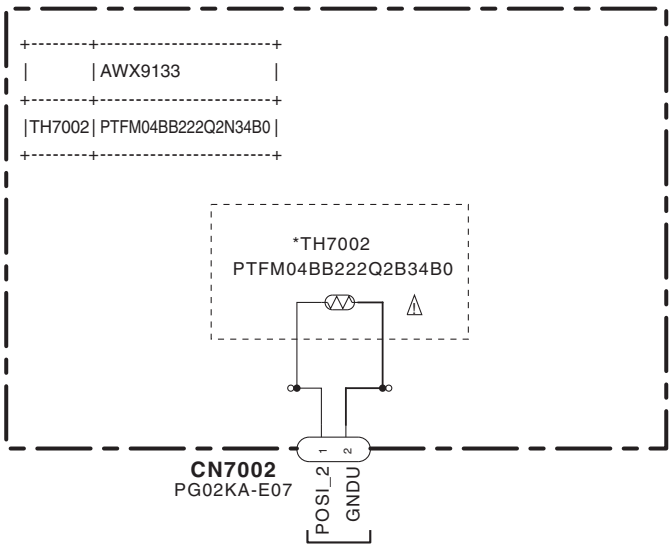


10.17 POSI1, POSI2 and POSI3 ASSYS

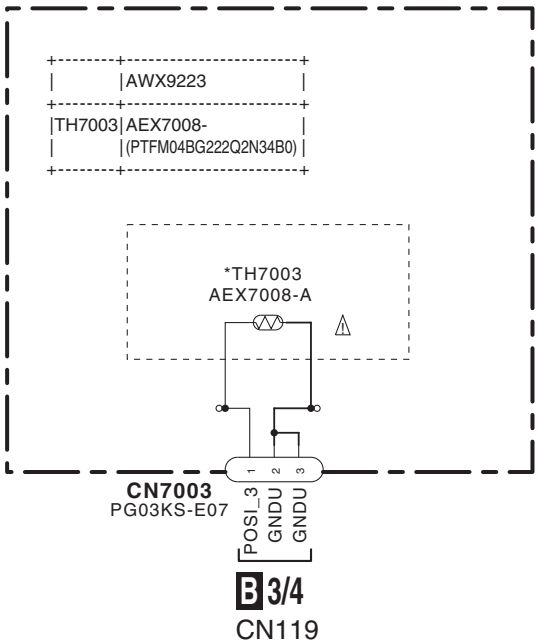
W POSI 1 ASSY (AWX9132)



X POSI 2 ASSY (AWX9133)



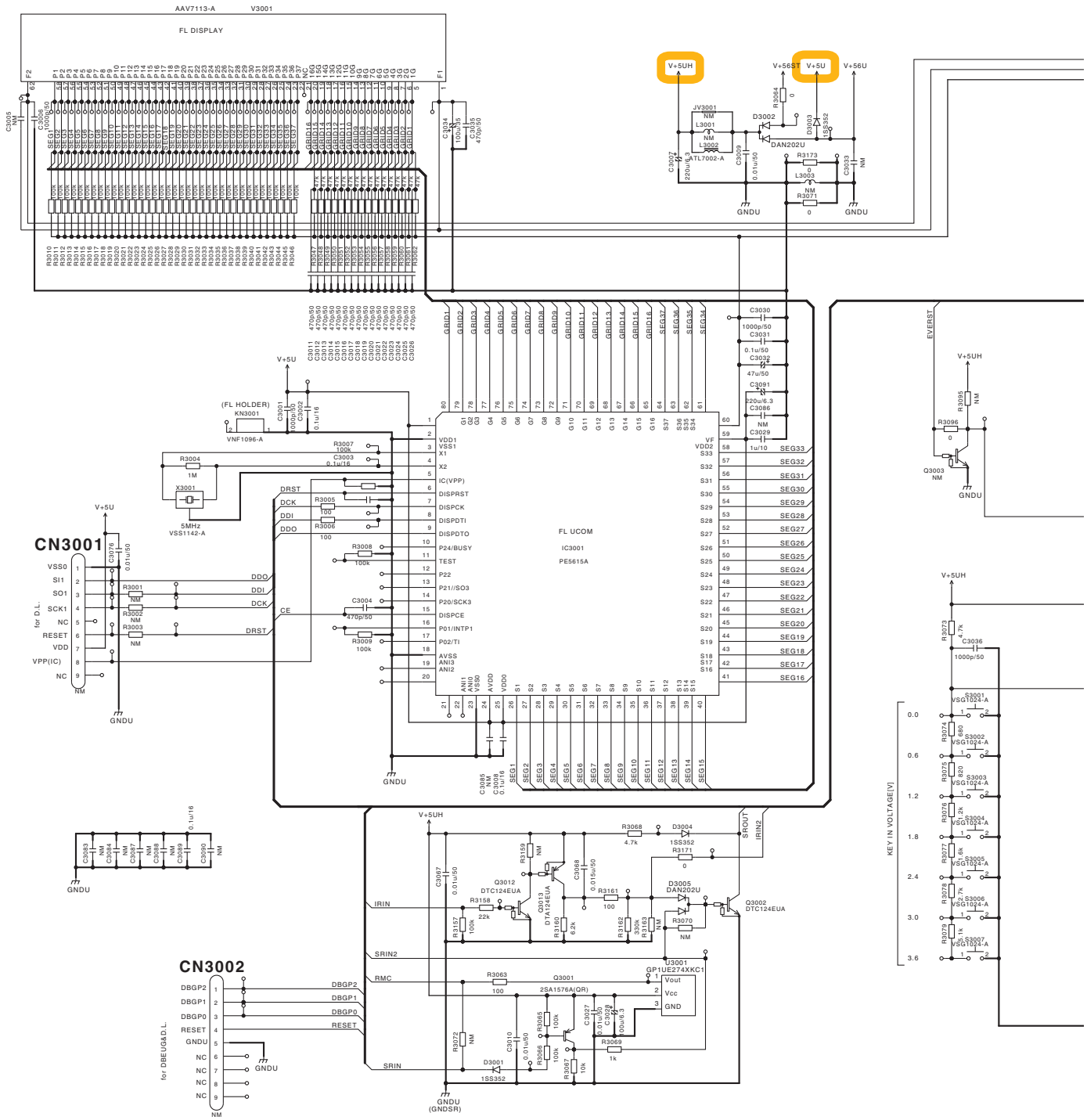
Y POSI 3 ASSY (AWX9223)



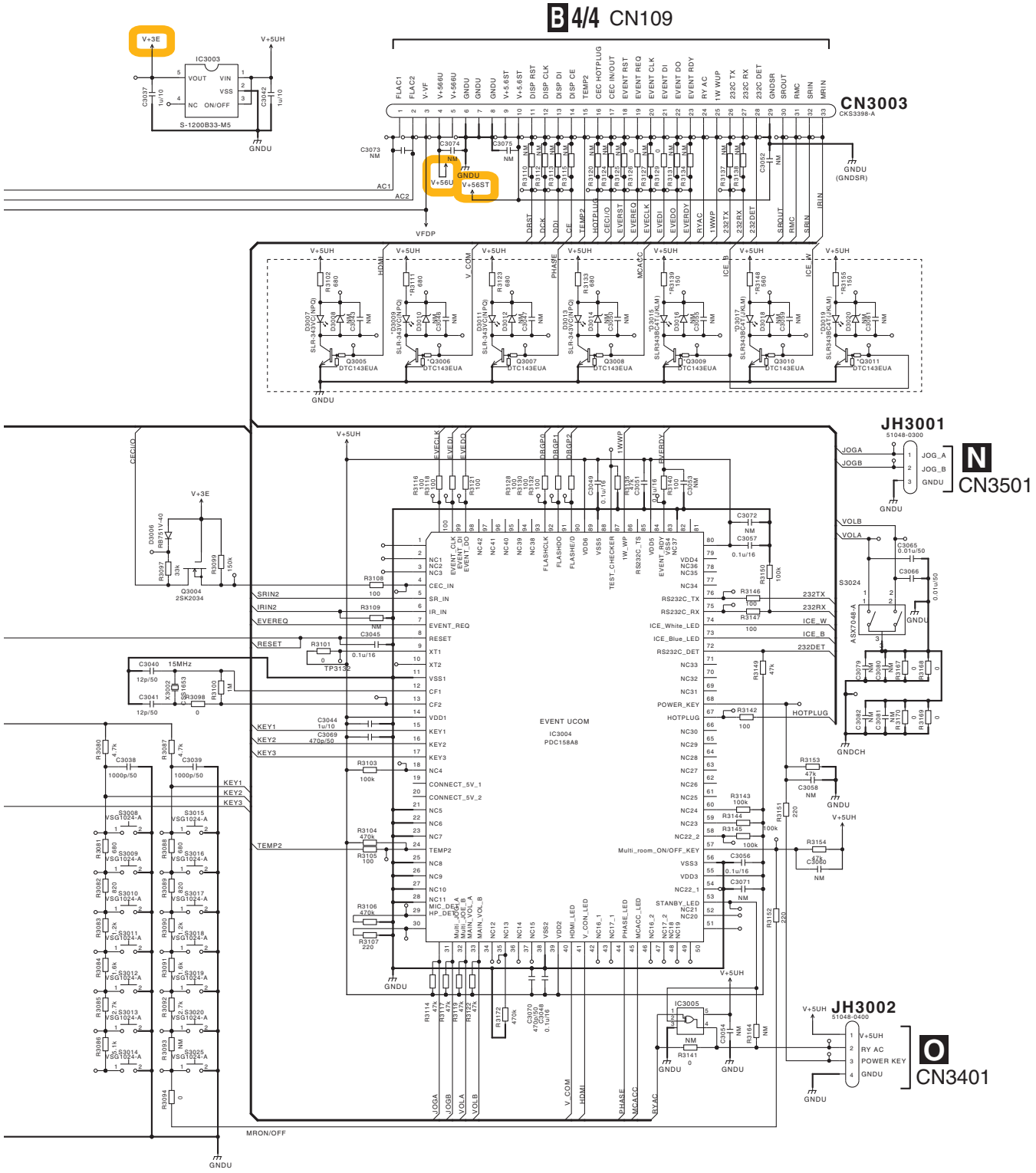
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore,when replacing ,be,sure to use parts of identical desigantion.

10.18 DISPLAY ASSY

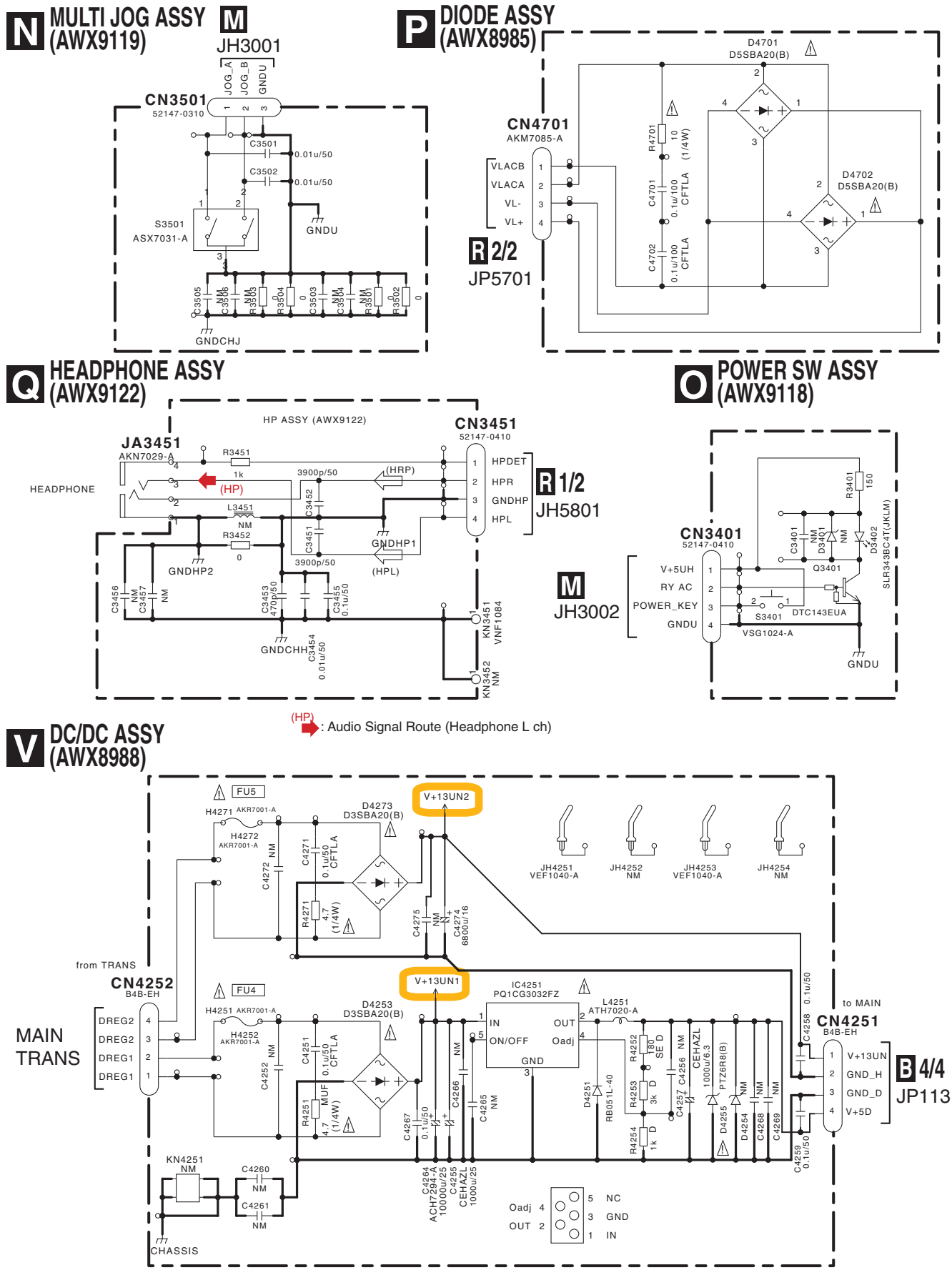
	awx9117	awx9216
R3111	680	680
R3139	150	NM
R3148	560	150
R3155	150	NM
D3009	SLR-343VC(NPQ)	SLR-343VC(NPQ)
D3015	SLR343BC4T(JKLM)	NM
D3017	SLR343WBCT(MNPQ)	SLR343BC4T(JKLM)
D3019	SLR343BC4T(JKLM)	NM
Q3006	DTC143EUA	DTC143EUA
Q3009	DTC143EUA	NM
Q3011	DTC143EUA	NM



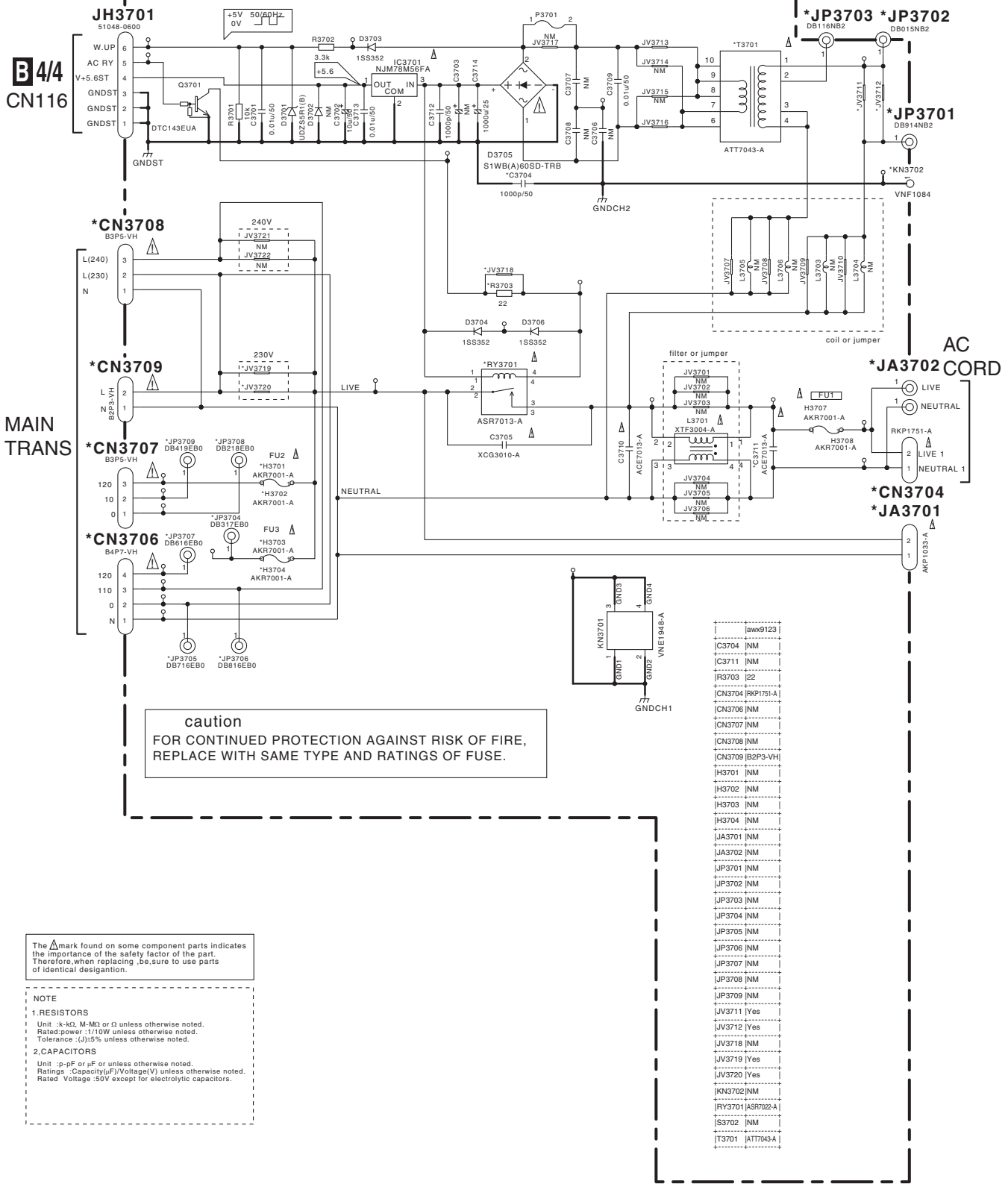
M DISPLAY ASSY
(VSX-03TXH,VSX-01TXH : AWX9117)
(VSX-9130TXH-K, VSX-1018AH-K : AWX9216)



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



T PRIMARY ASSY (AWX9123)



caution

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

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

NOTE

1.RESISTORS

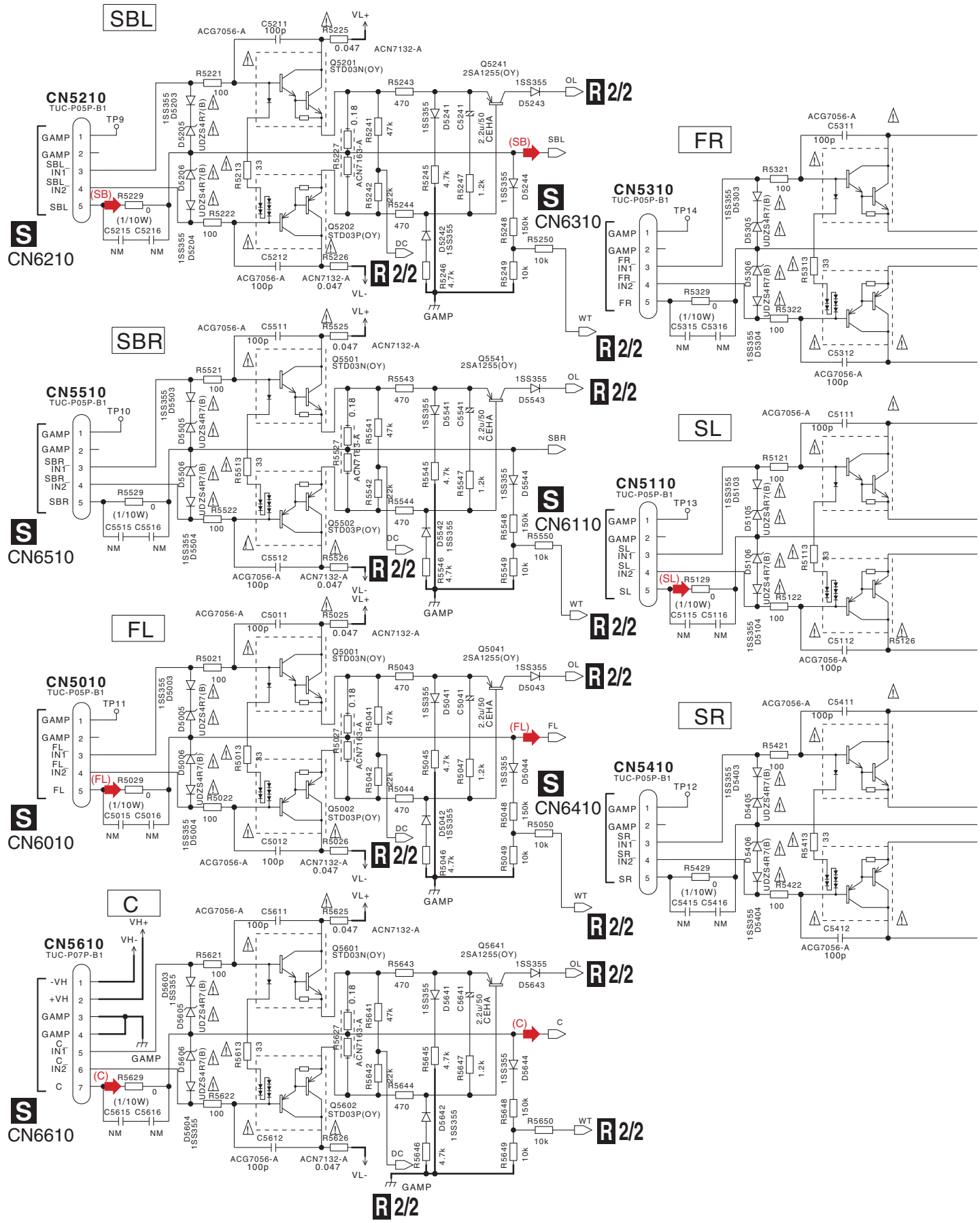
Unit :k-kΩ, M-MΩ or Ω unless otherwise noted.
Rated:power :1/10W unless otherwise noted.
Tolerance :(J)±5% unless otherwise noted.

2.CAPACITORS

Unit :p-pF or μF or unless otherwise noted.
Ratings :Capacity(μF)/Voltage(V) unless otherwise noted.
Rated Voltage :50V except for electrolytic capacitors.

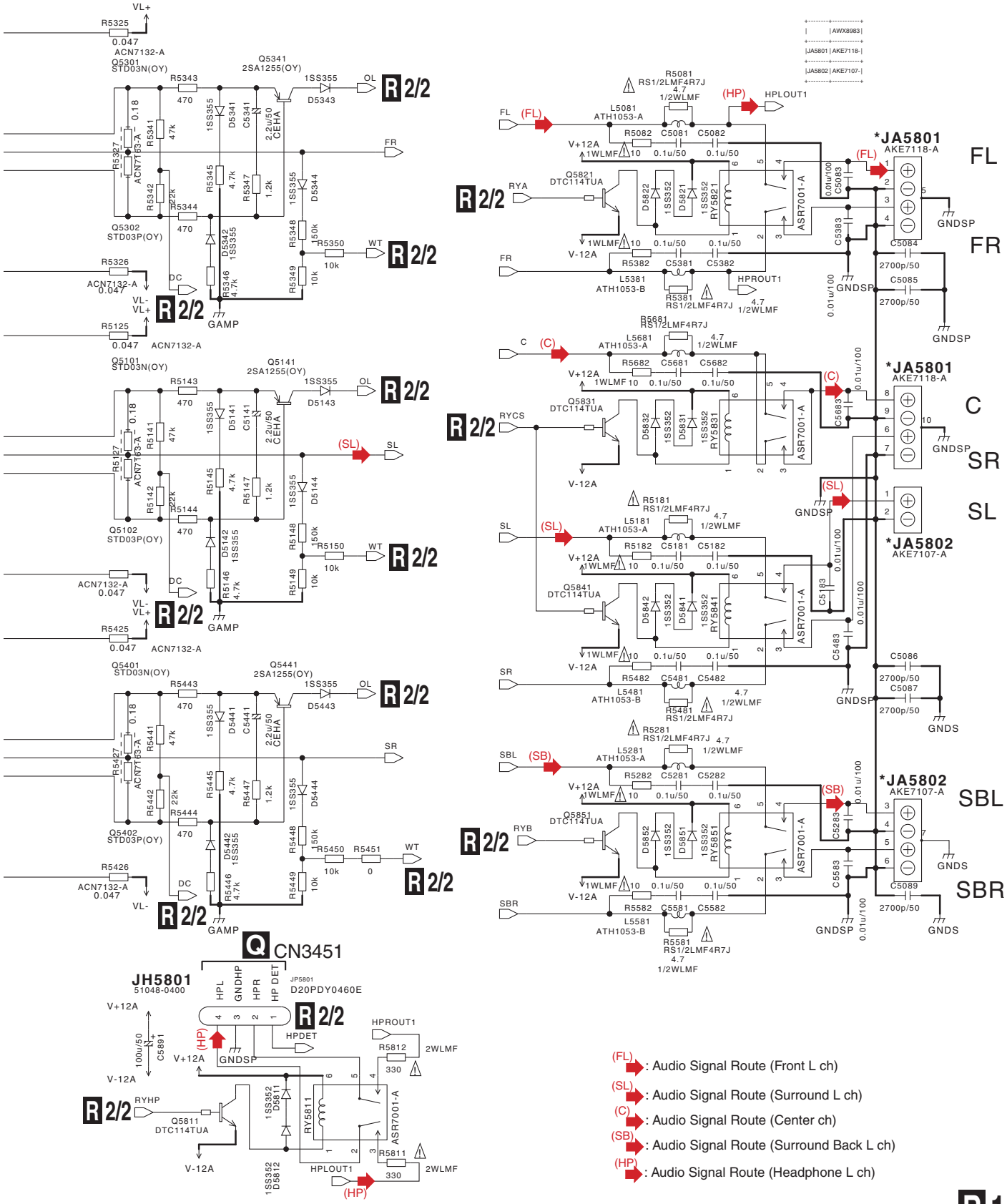
	awx9123
C3704	NM
C3711	NM
R3703	22
CN3704	RKP1751-A
CN3706	NM
CN3707	NM
CN3708	NM
CN3709	B2P3-VH
H3701	NM
H3702	NM
H3703	NM
H3704	NM
JA3701	NM
JA3702	NM
JP3701	NM
JP3702	NM
JP3703	NM
JP3704	NM
JP3705	NM
JP3706	NM
JP3707	NM
JP3708	NM
JP3709	NM
JV3711	Yes
JV3712	Yes
JV3718	NM
JV3719	Yes
JV3720	Yes
KN3702	NM
RY3701	ASR7022-A
S3702	NM
T3701	ATT7043-A

10.20 POWER AMP ASSY (1/2)

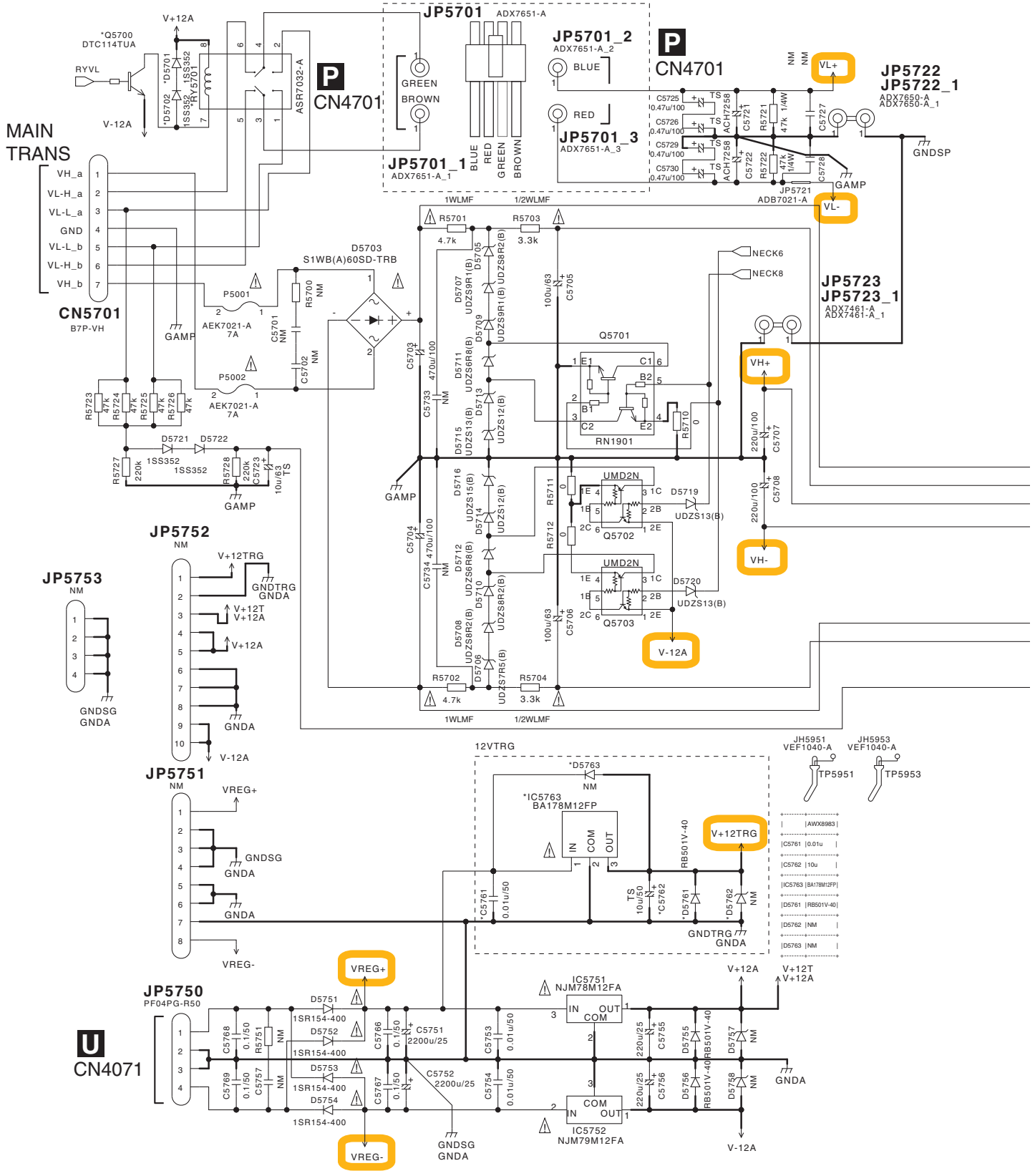


R 1/2 POWER AMP ASSY (AWX8983)

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 desigantion.



10.21 POWER AMP ASSY (2/2)



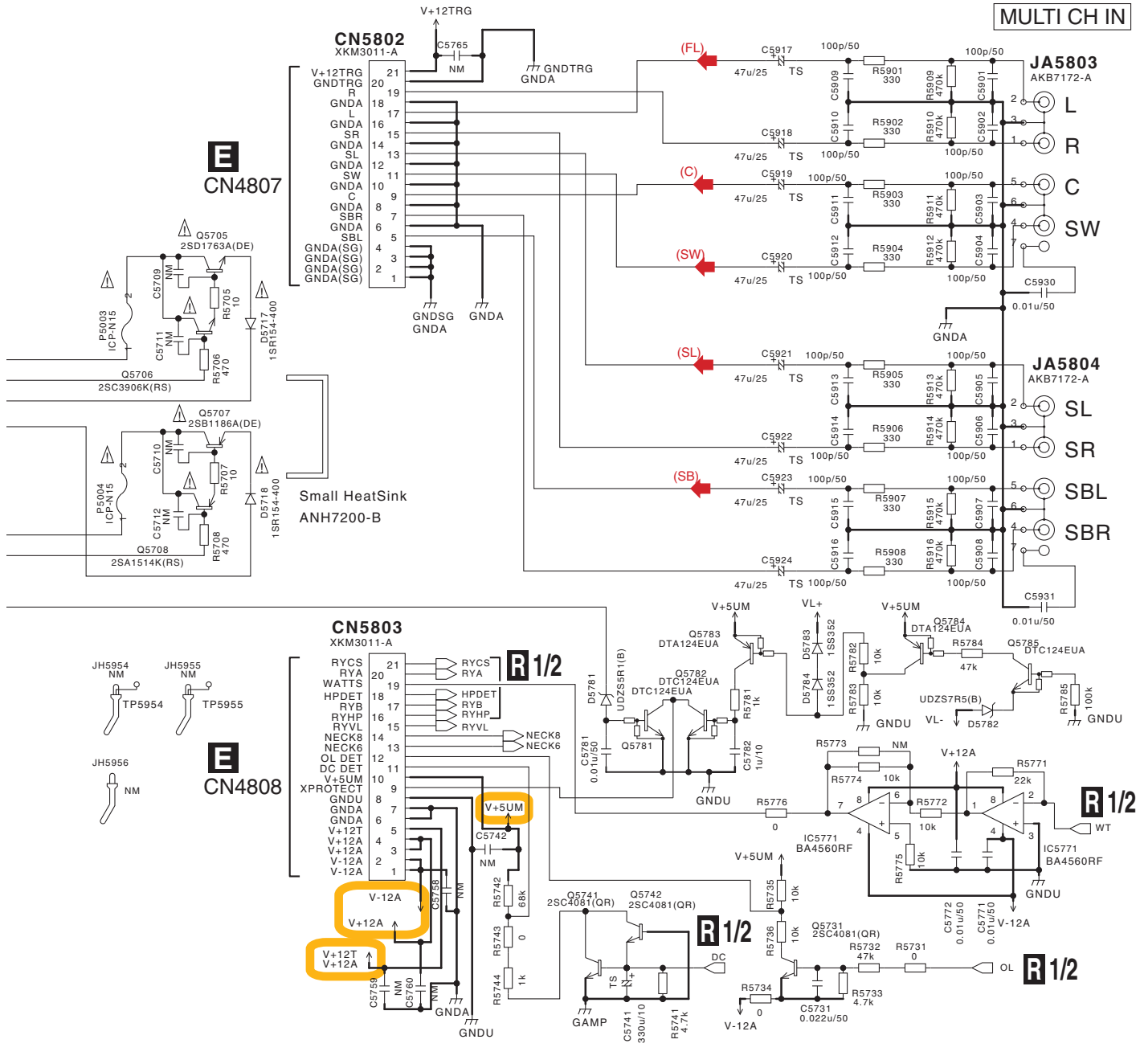
R 2/2 POWER AMP ASSY (AWX8983)

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 desigantion.

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

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491007 MFD, BY LITTELFUSE INK. FOR P5001 and P5002.

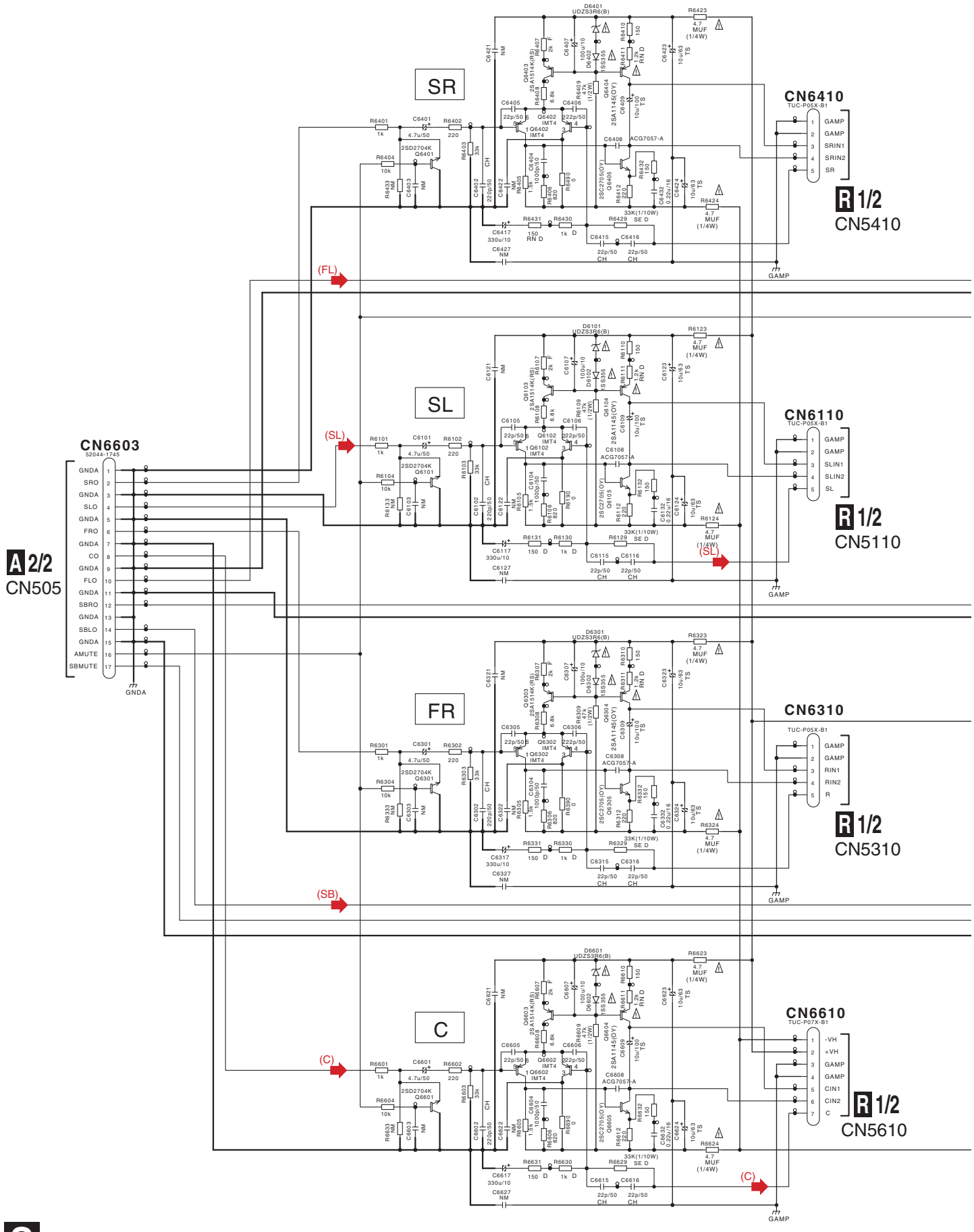
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. ICP-N15, MFD BY ROHM CO., LTD. FOR P5003 and P5004.



(FL) : Audio Signal Route (Front 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)

R 2/2

10.22 PRE-STAGE AMP ASSY



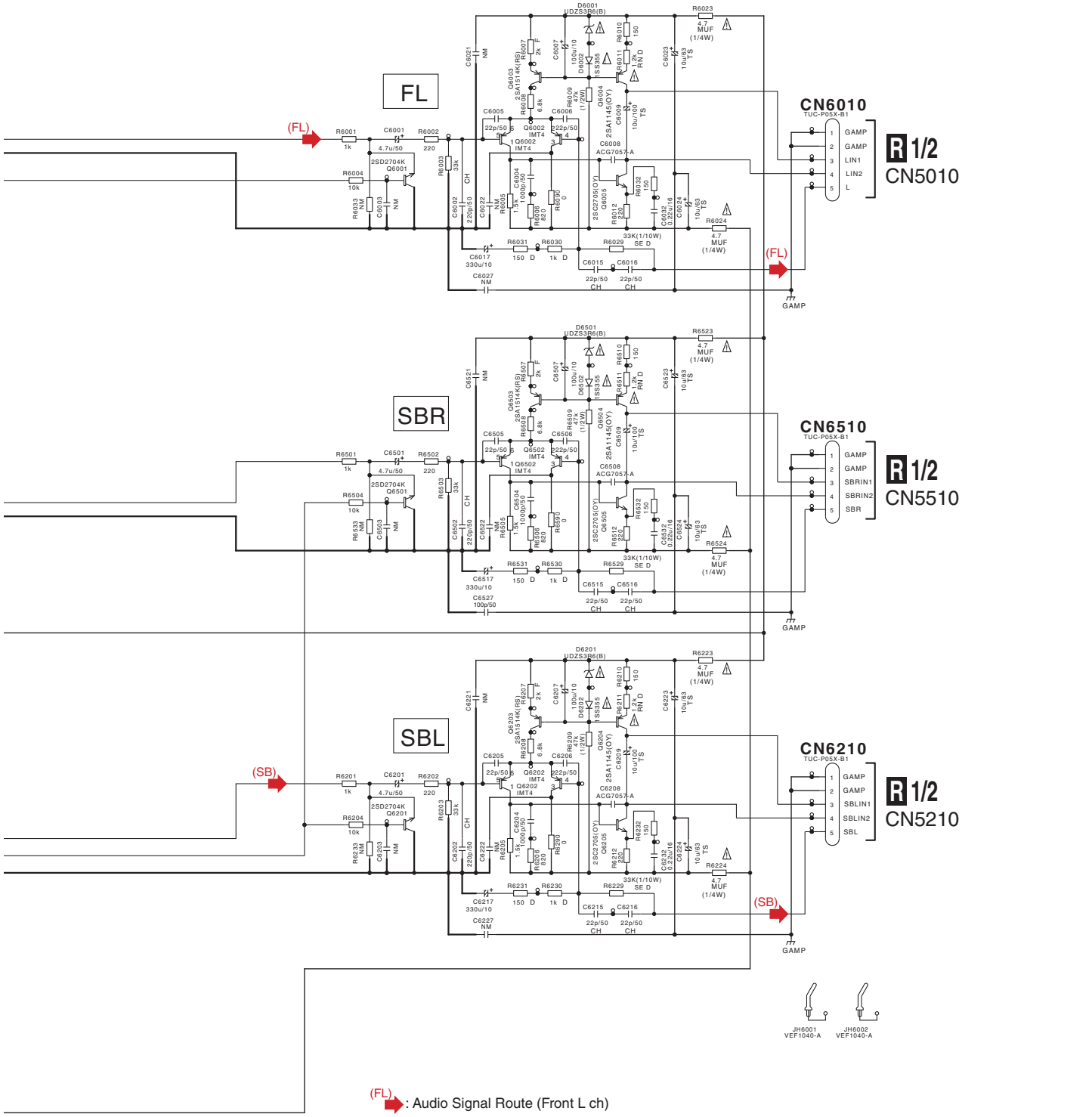
S PRE-STAGE AMP ASSY (AWX8989)

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 idential designation.

NOTE

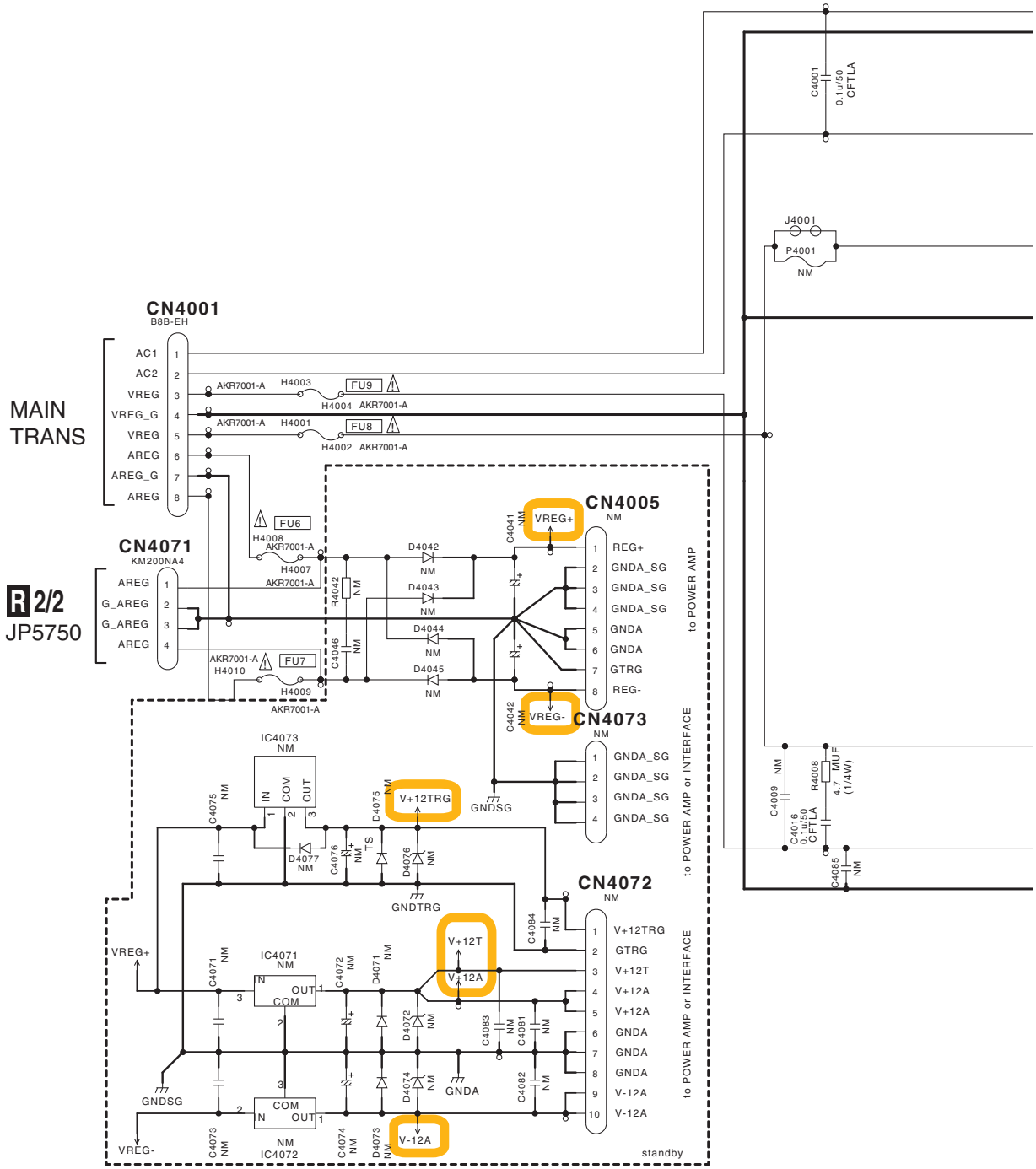
1.RESISTORS
Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
Rated power: 1/16W unless otherwise noted.
Tolerance: (J)±5% unless otherwise noted.

2.CAPACITORS
Unit: p-pF, or μF unless otherwise noted.
Ratings: Capacity(μF)/Voltage(V) unless otherwise noted.



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

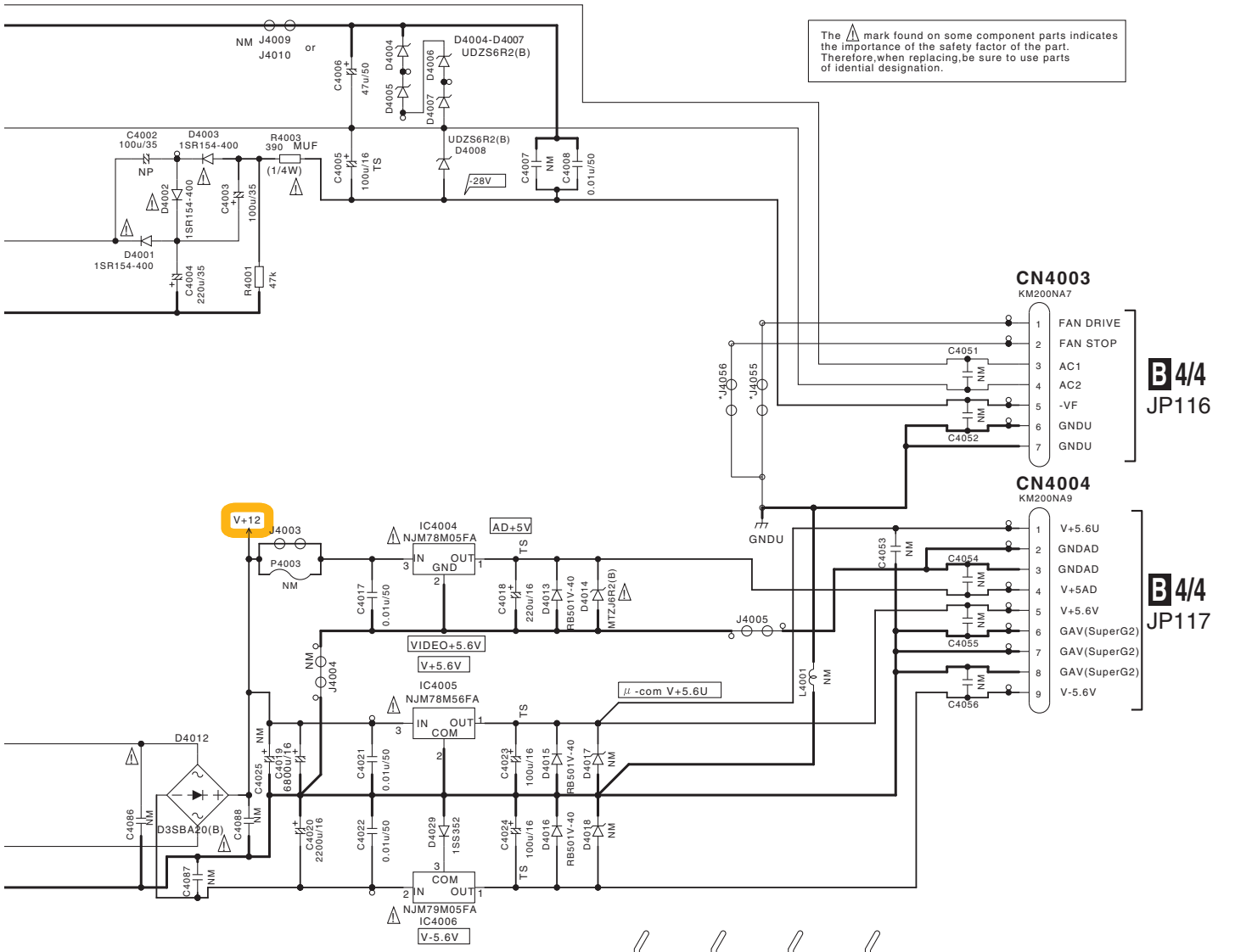
10.23 REGULATOR ASSY



NOTE

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

2.CAPACITORS
Unit: p-pF, or μF unless otherwise noted.
Ratings: Capacity(μF)/Voltage(V) unless otherwise noted.



Jumper not mount

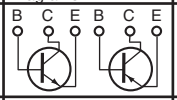
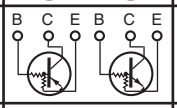
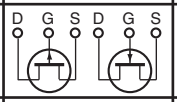
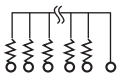
J4002	J4012	J4037
J4004	J4013	J4038
J4011	J4014	J4039
J4007	J4028	
J4009	J4054	
	J4048	
J4006	J4049	
	J4050	
J4022	J4051	
	J4052	
	J4053	

CAUTION
FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. ***** MFD. BY LITTELFUSE INC.FOR IC****.

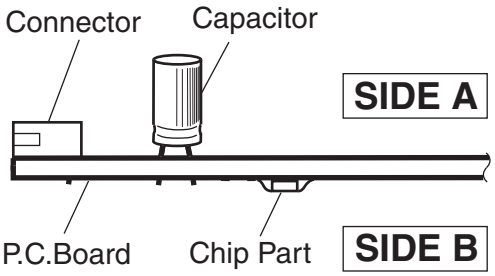
11. PCB CONNECTION DIAGRAM

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.

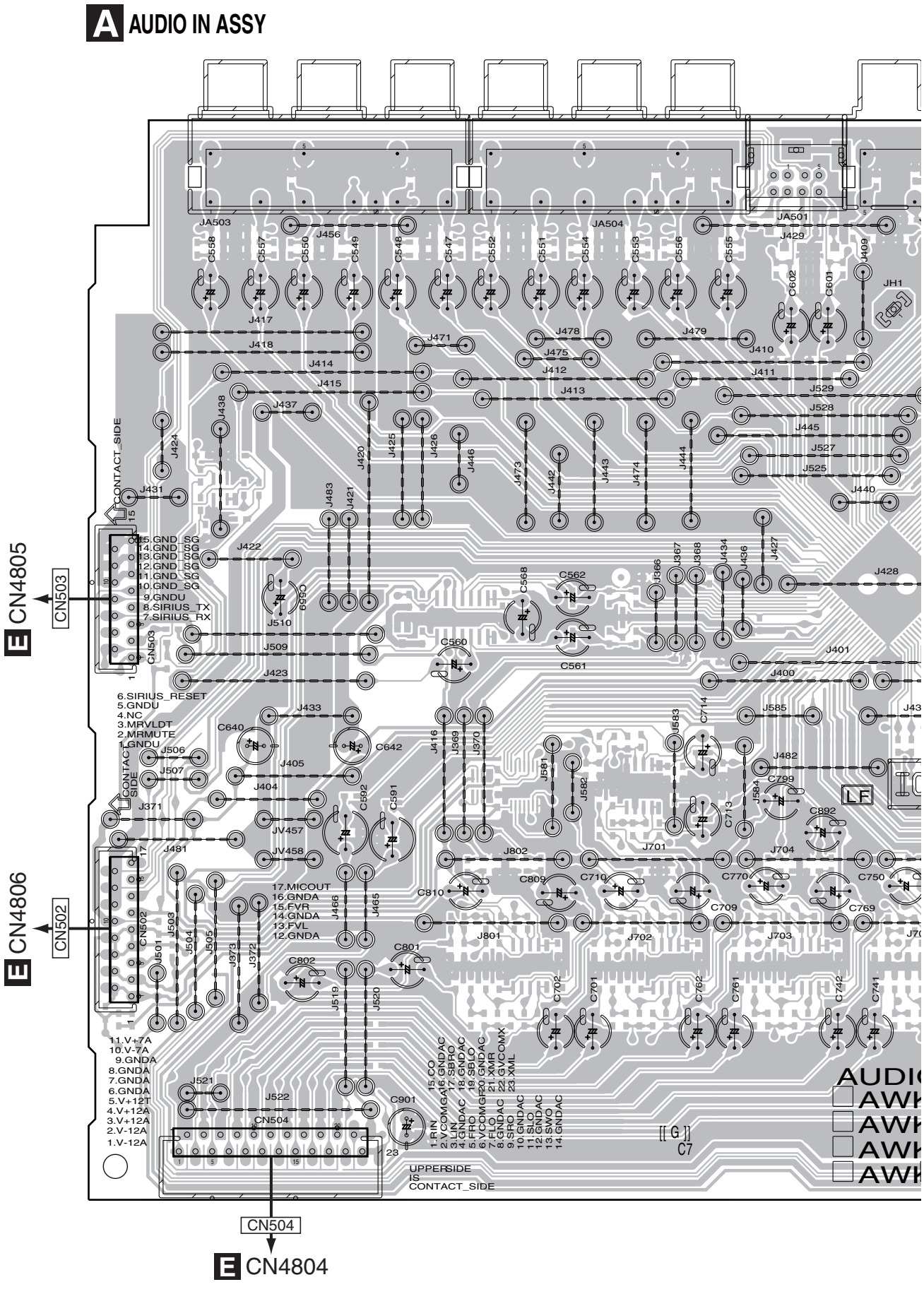
Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

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.

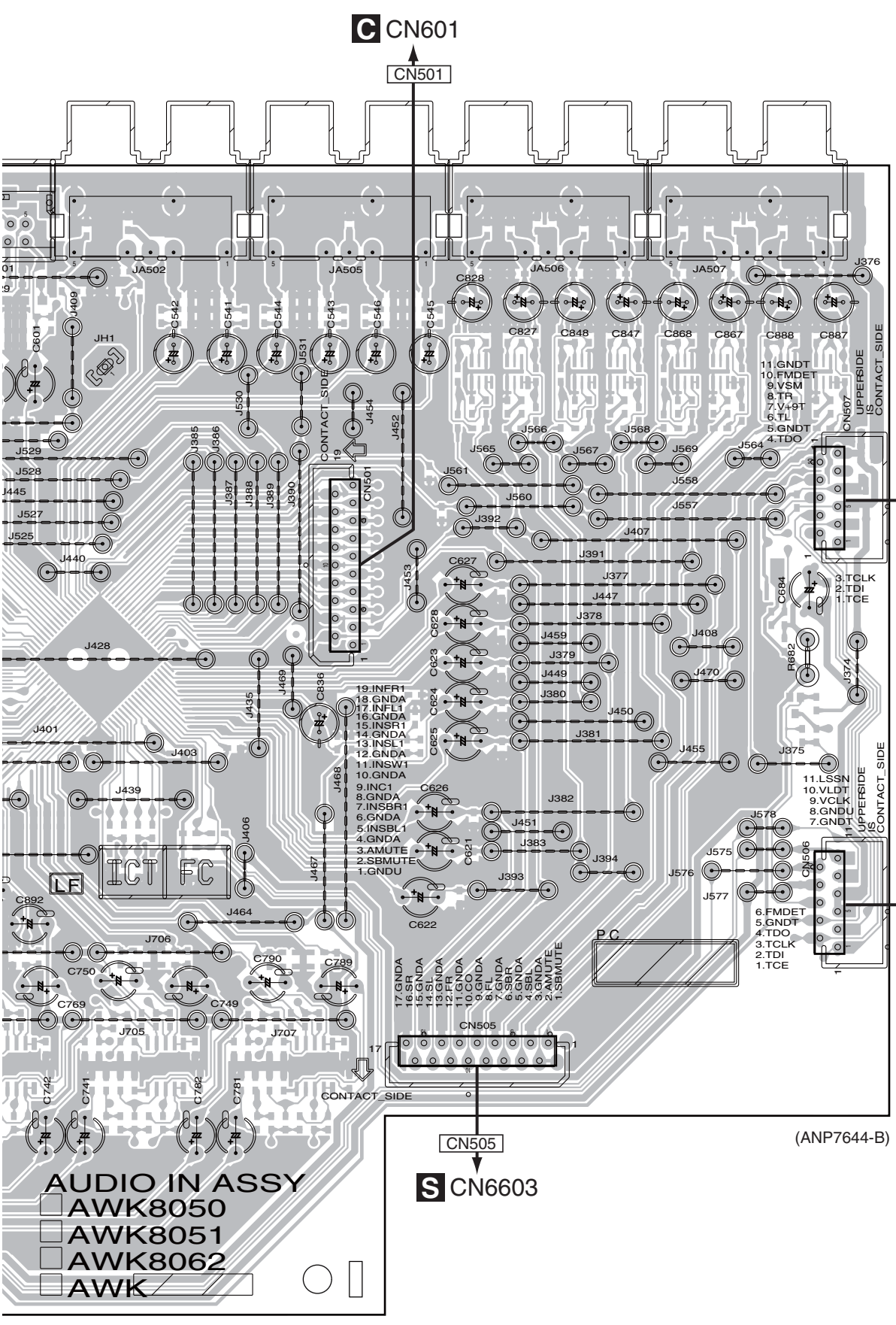


11.1 AUDIO IN ASSY

SIDE A

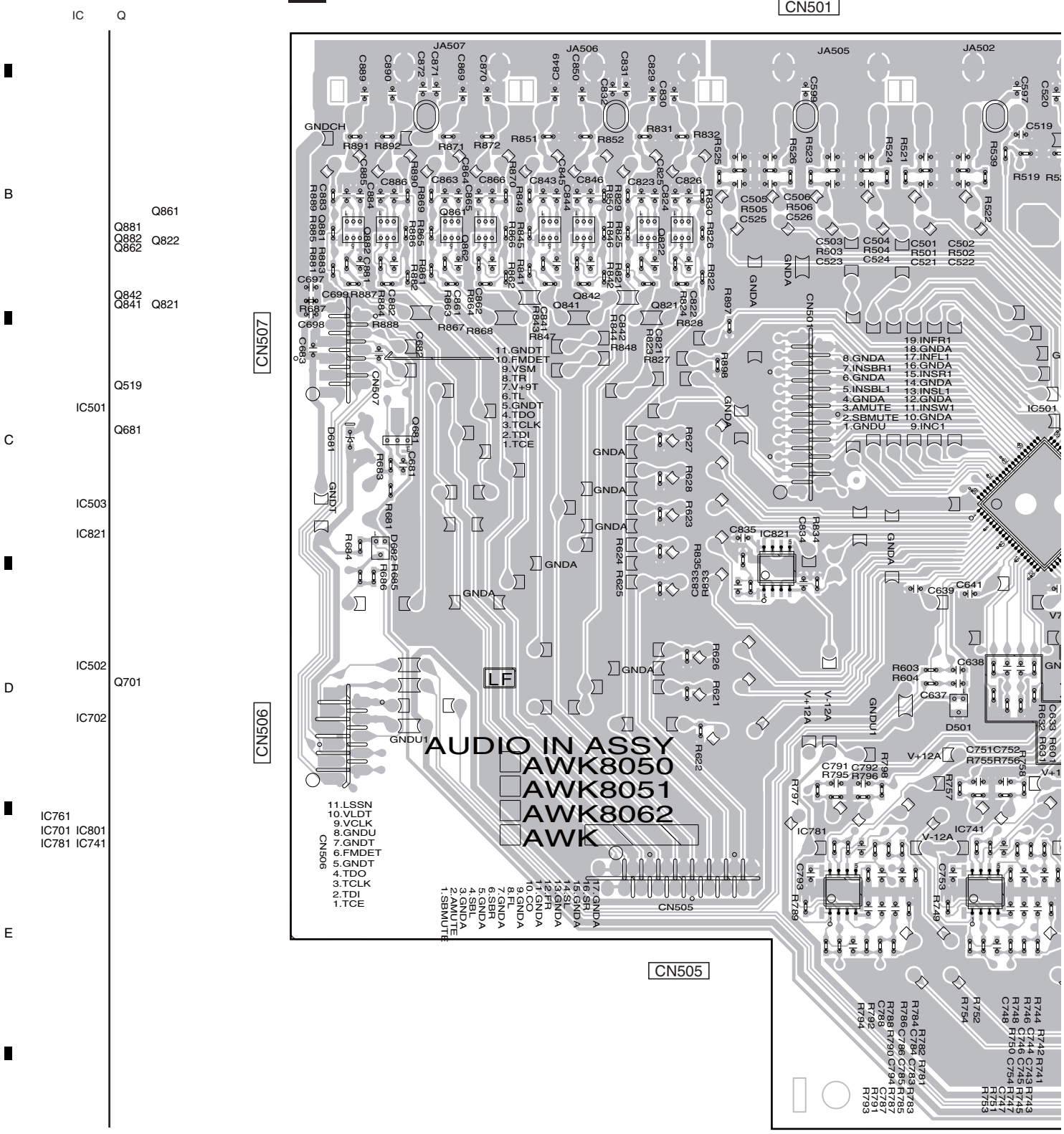


SIDE A

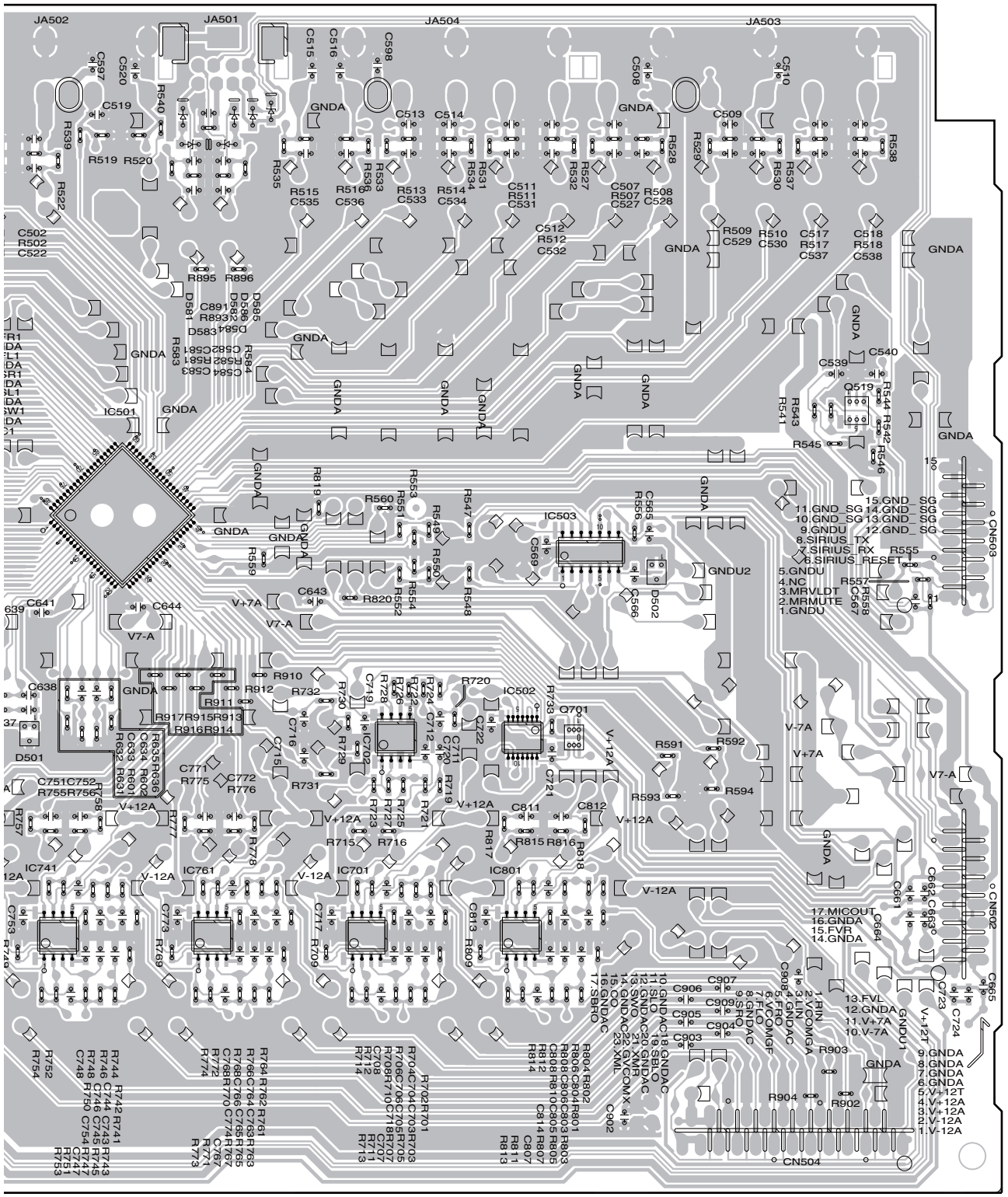

C CN601
CN501
JA502
JA505
JA506
JA507
C828
C827
C848
C847
C868
C867
C888
C887
J376
C542
C541
C544
C543
C546
C545
C601
J409
JH1
J531
J530
J454
J452
J529
J528
J445
J527
J525
J440
J385
J386
J387
J388
J389
J390
CONTACT_SIDE
CN501
J453
J428
J435
J469
C836
J401
J403
J439
J406
J468
J467
J464
C892
J706
C750
C790
C789
C769
C749
J705
J707
C742
C741
C782
C781
CONTACT_SIDE
19.INFR1
18.GNDA
17.INFL1
16.GNDA
15.INSR1
14.GNDA
13.INSL1
12.GNDA
11.INSW1
10.GNDA
9.INC1
8.GNDA
7.INSBR1
6.GNDA
5.INSBL1
4.GNDA
3.AMUTE
2.SBMUTE
1.GNDU
C626
C621
C622
J382
J451
J383
J394
J393
J566
J565
J567
J568
J569
J564
J561
J558
J560
J557
J392
J407
J391
J377
J447
J378
J459
J379
J449
J380
J450
J381
J455
J375
C627
C628
C623
C624
C625
C684
R682
J374
J408
J470
11.GNDT
10.FMDET
9.VSM
8.TR
7.V+9T
6.TL
5.GNDT
4.TDO
CN507
UPPERSIDE
CONTACT_SIDE
3.TCLK
2.TDI
1.TCE
CN507
To TUNER CN1
11.LSSN
10.VLDT
9.VCLK
8.GNDU
7.GNDT
IS
UPPERSIDE
CONTACT_SIDE
J578
J575
J576
J577
CN506
6.FMDET
5.GNDT
4.TDO
3.TCLK
2.TDI
1.TCE
CN506
B CN110
P.C
17.GNDA
16.SR
15.GNDA
14.SL
13.GNDA
12.FR
11.GNDA
10.C
9.GNDA
8.FL
7.GNDA
6.SBR
5.GNDA
4.SBL
3.GNDA
2.AMUTE
1.SBMUTE
CN505
CONTACT_SIDE
CN505
S CN6603
(ANP7644-B)
AUDIO IN ASSY
AWK8050
AWK8051
AWK8062
AWK

SIDE B

A AUDIO IN ASSY



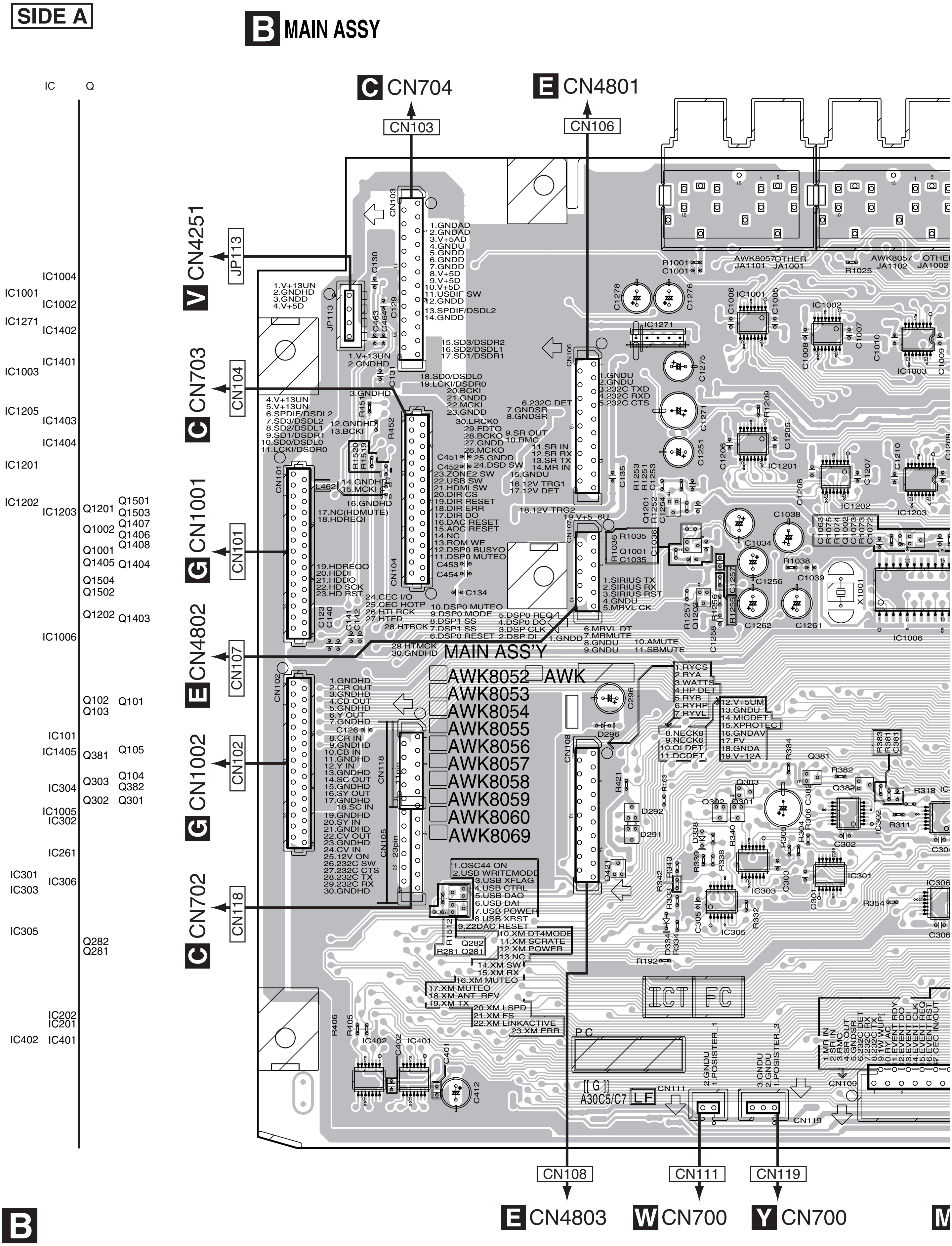
SIDE B



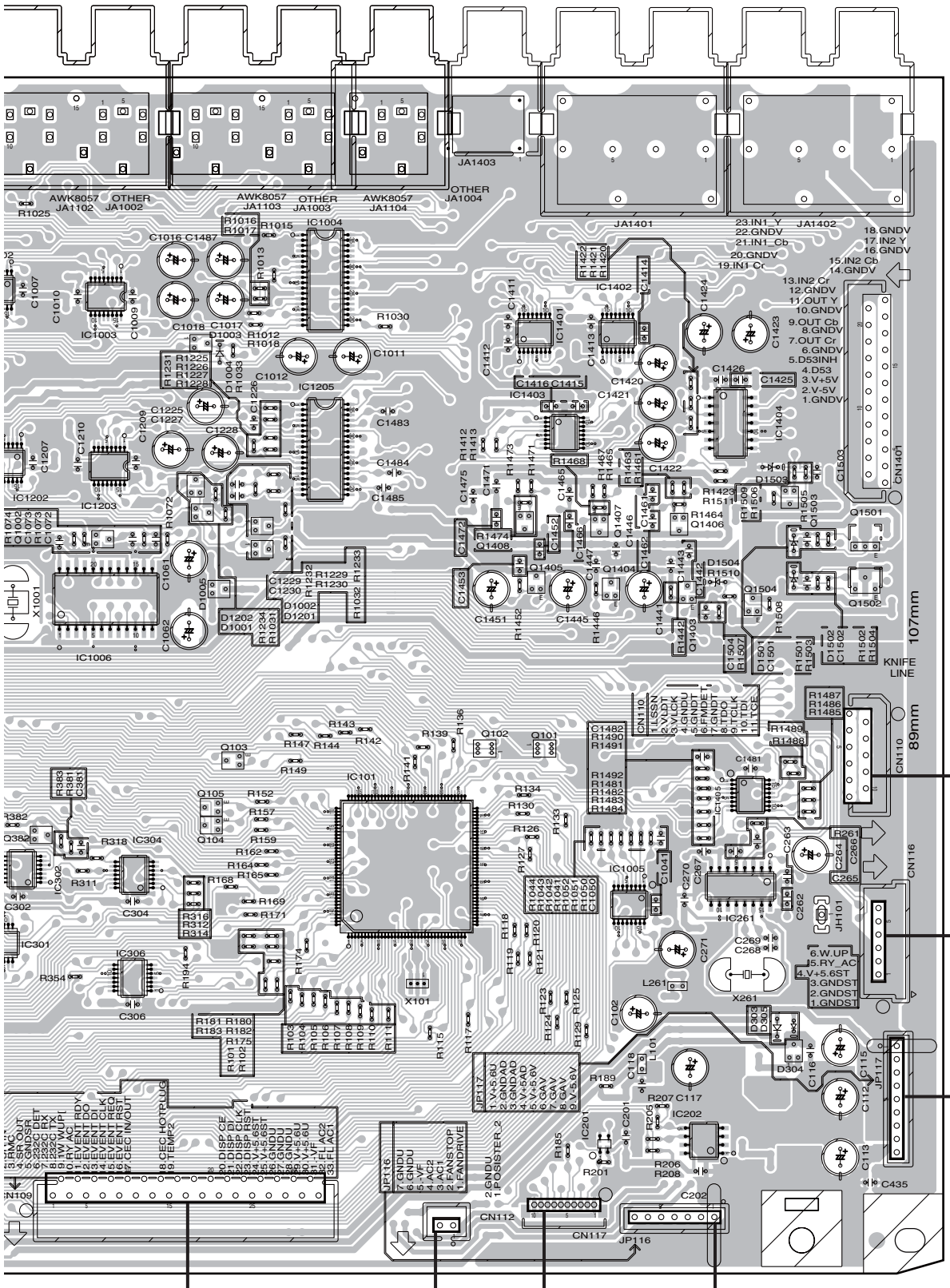
(ANP7644-B)

11.2 MAIN ASSY

SIDE A



SIDE A


CN110
A CN506
CN116
T JH3701
JP117
U CN4004
CN109
M CN3003
CN112
X For SERVICE
CN117
JP116
U CN4003
(ANP7645-B)
107mm
89mm
KNIFE LINE

SIDE B

B MAIN ASSY

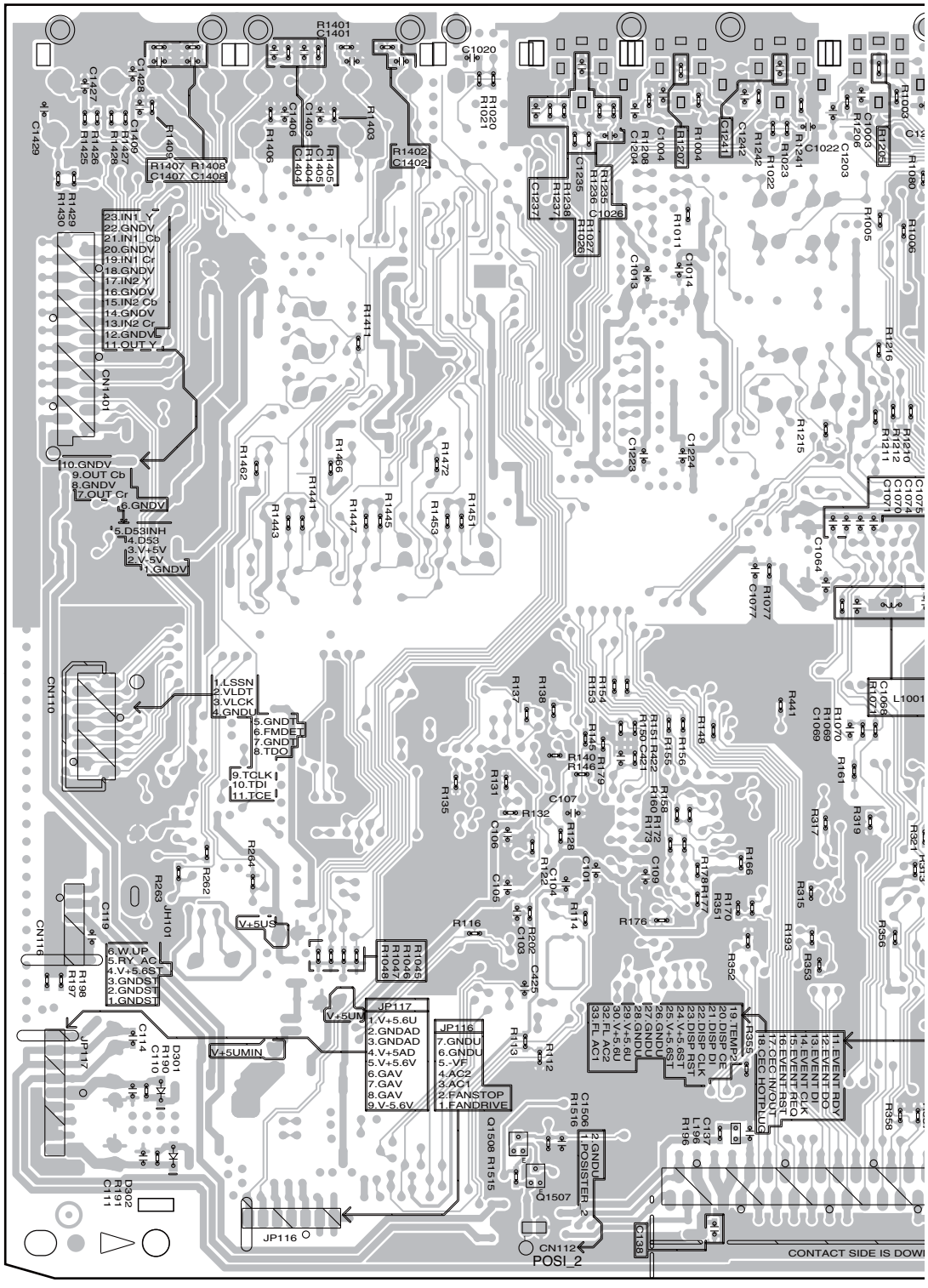
IC Q

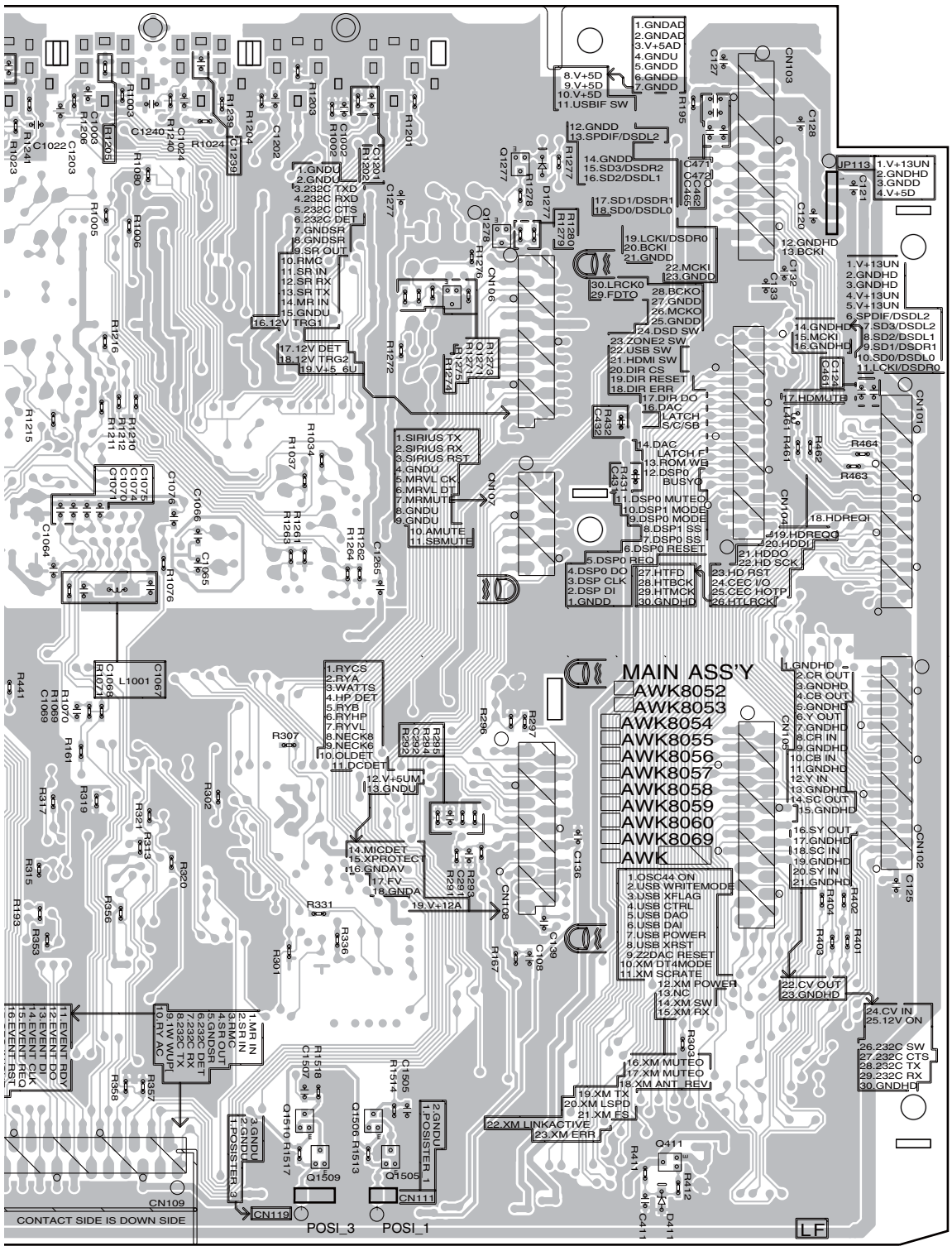
Q1277

Q1278

Q1271

Q1508
Q1510 Q1506
Q411
Q1507
Q1509 Q1505



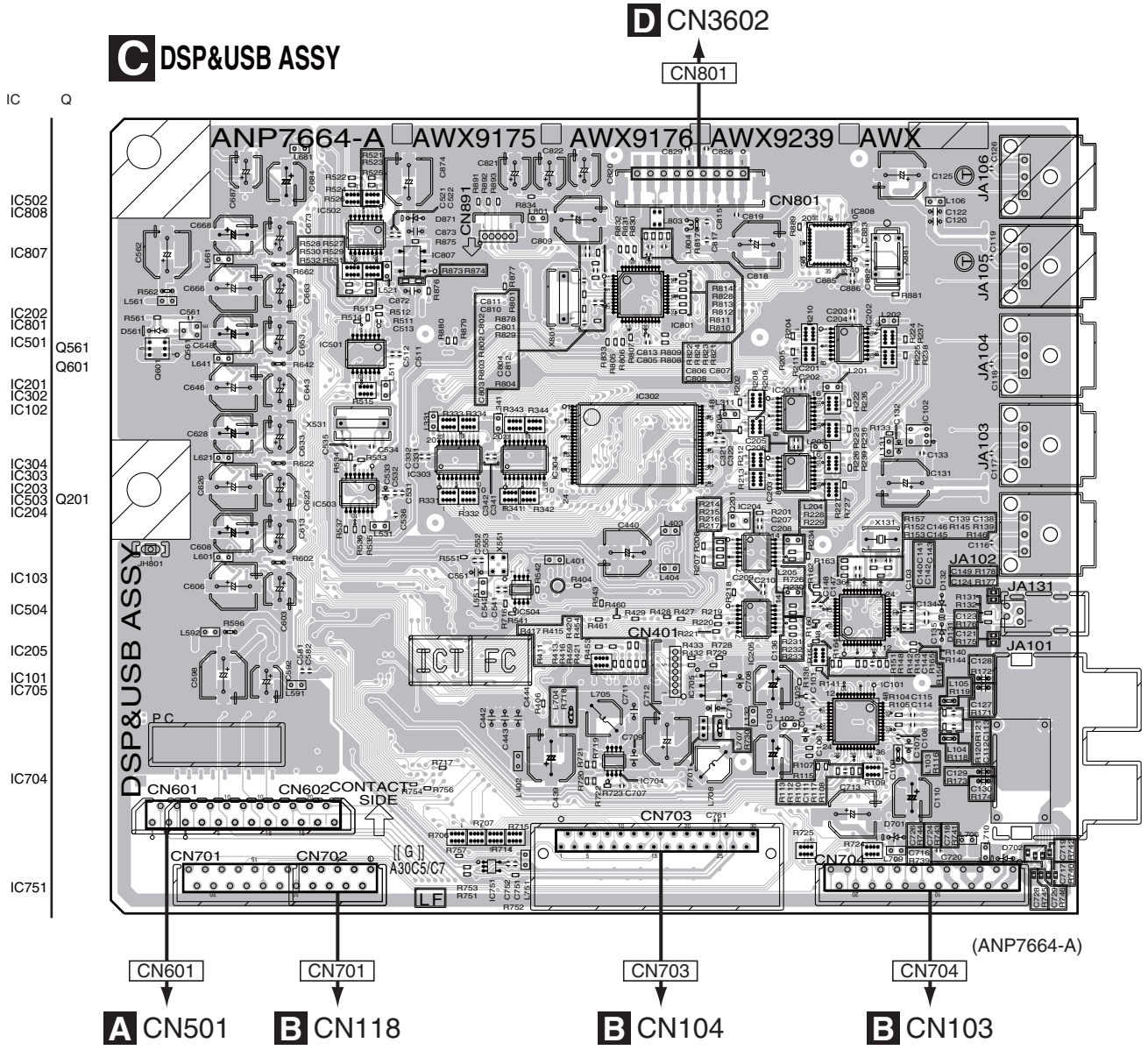

CN106
CN103
JP113
CN104
CN101
CN107
CN102
CN118
MAIN ASS'Y
AWK8052
AWK8053
AWK8054
AWK8055
AWK8056
AWK8057
AWK8058
AWK8059
AWK8060
AWK8069
AWK
CONTACT SIDE IS DOWN SIDE
POSI_3
POSI_1
LF
CN109
CN119
CN111
CN108

(ANP7645-B)

11.3 DSP & USB ASSY

SIDE A

SIDE A



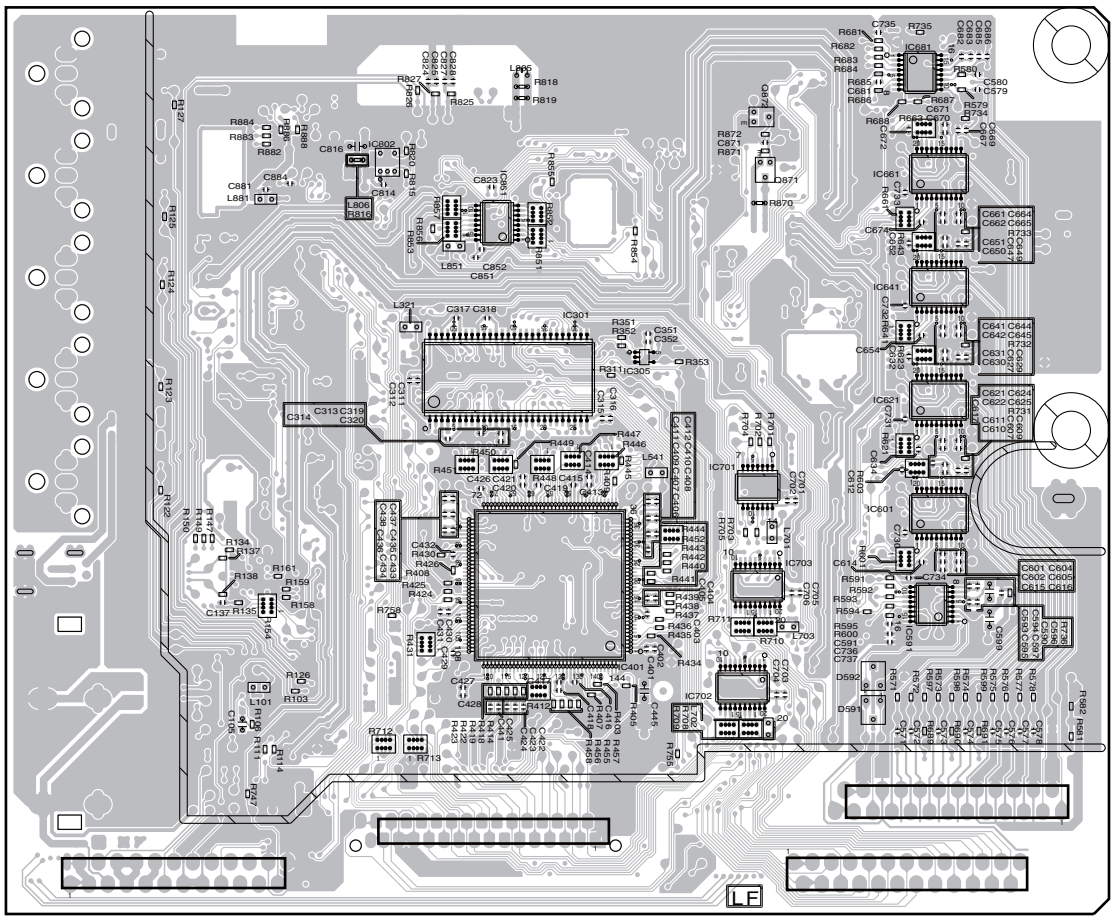
SIDE B

SIDE B

C DSP&USB ASSY

IC Q

IC681
Q872
IC802
IC661 Q871
IC851
IC641
IC301
IC305
IC621
IC701
IC601
IC703
IC591
IC401
IC702



(ANP7664-A)

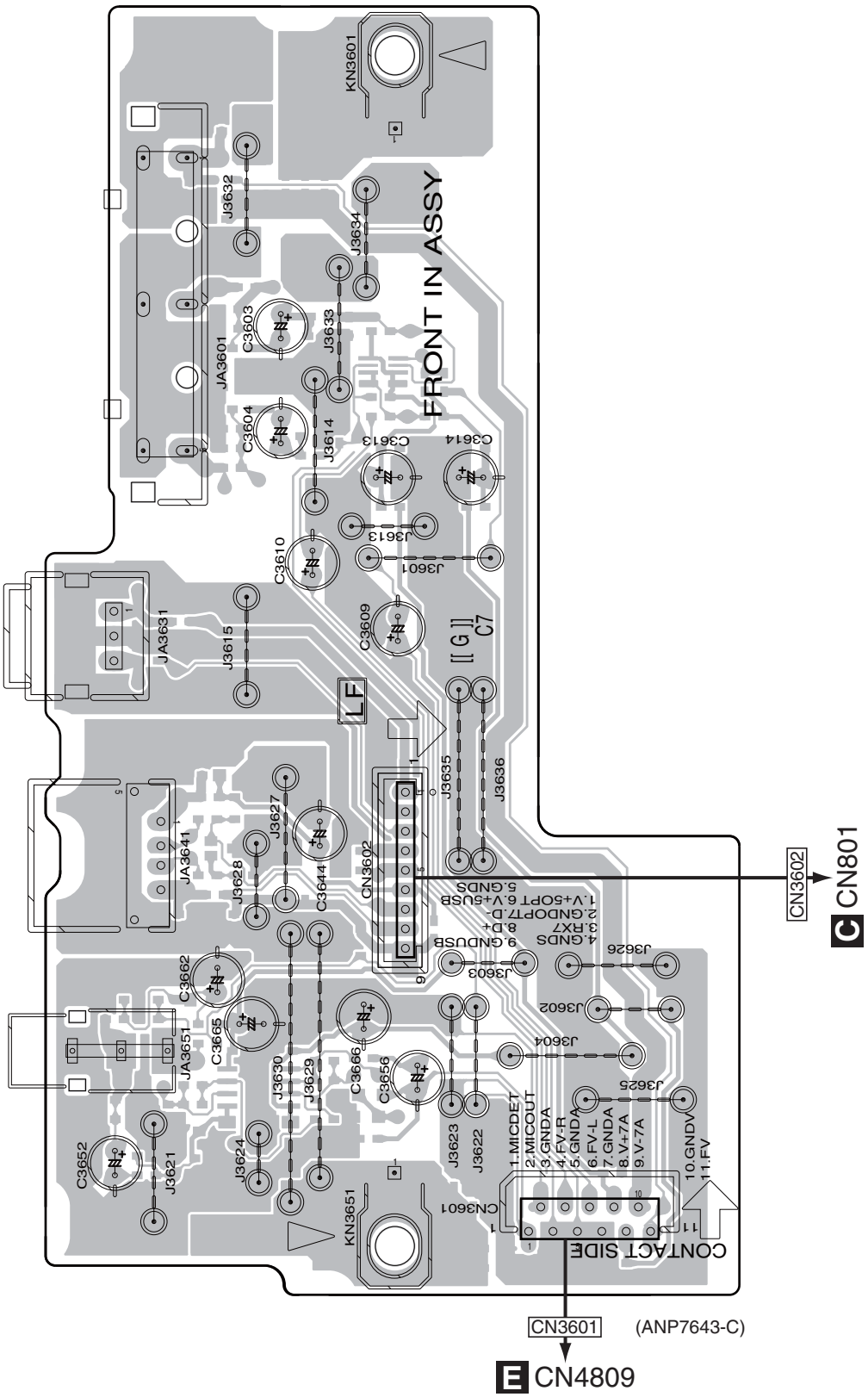
CN704 CN703 CN701 CN601

11.4 FRONT IN ASSY

SIDE A

SIDE A

D FRONT IN ASSY



CN3602 → C CN801

CN3601 (ANP7643-C) → E CN4809

D

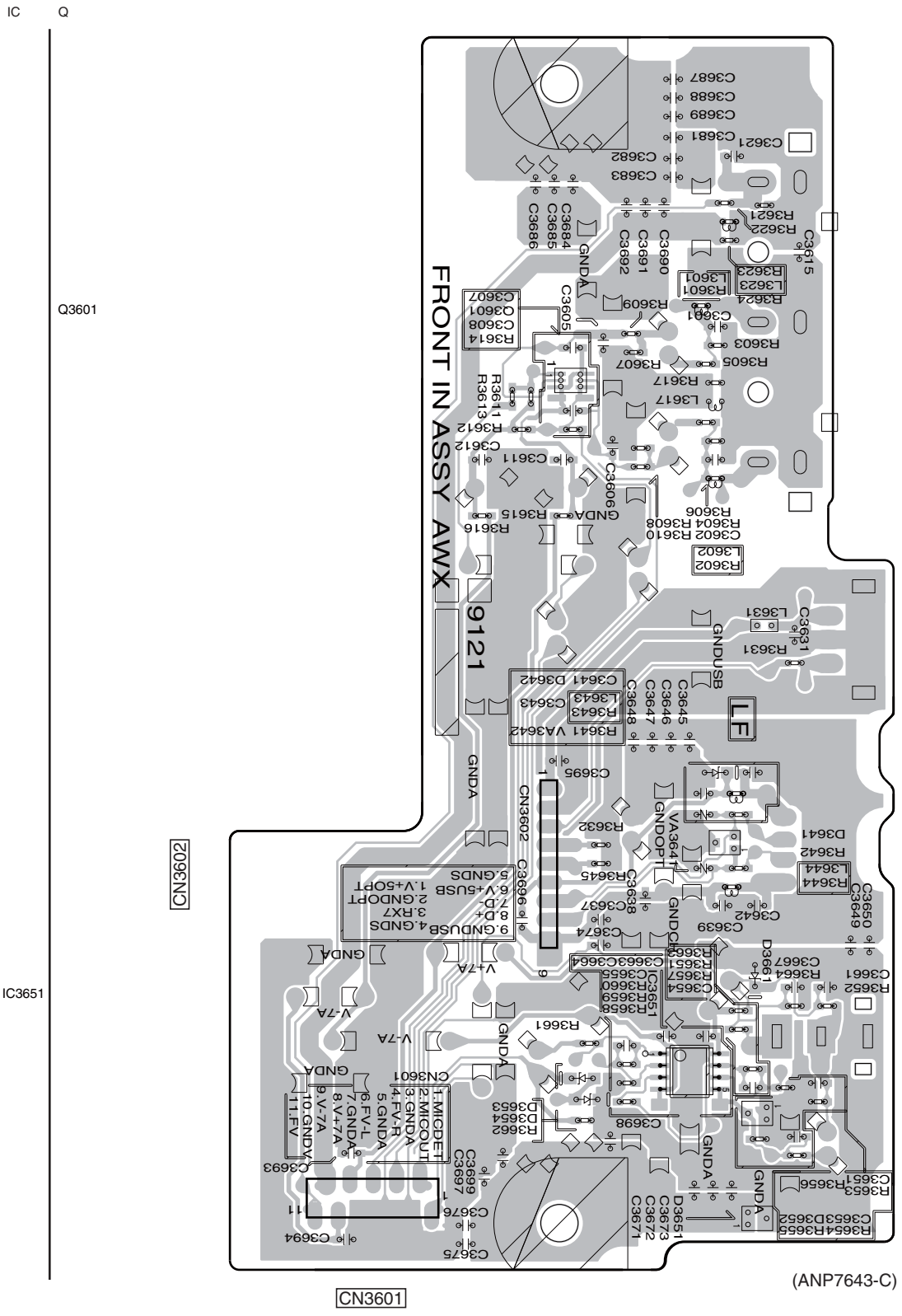
D

SIDE B

SIDE B

A B C D E F

D FRONT IN ASSY

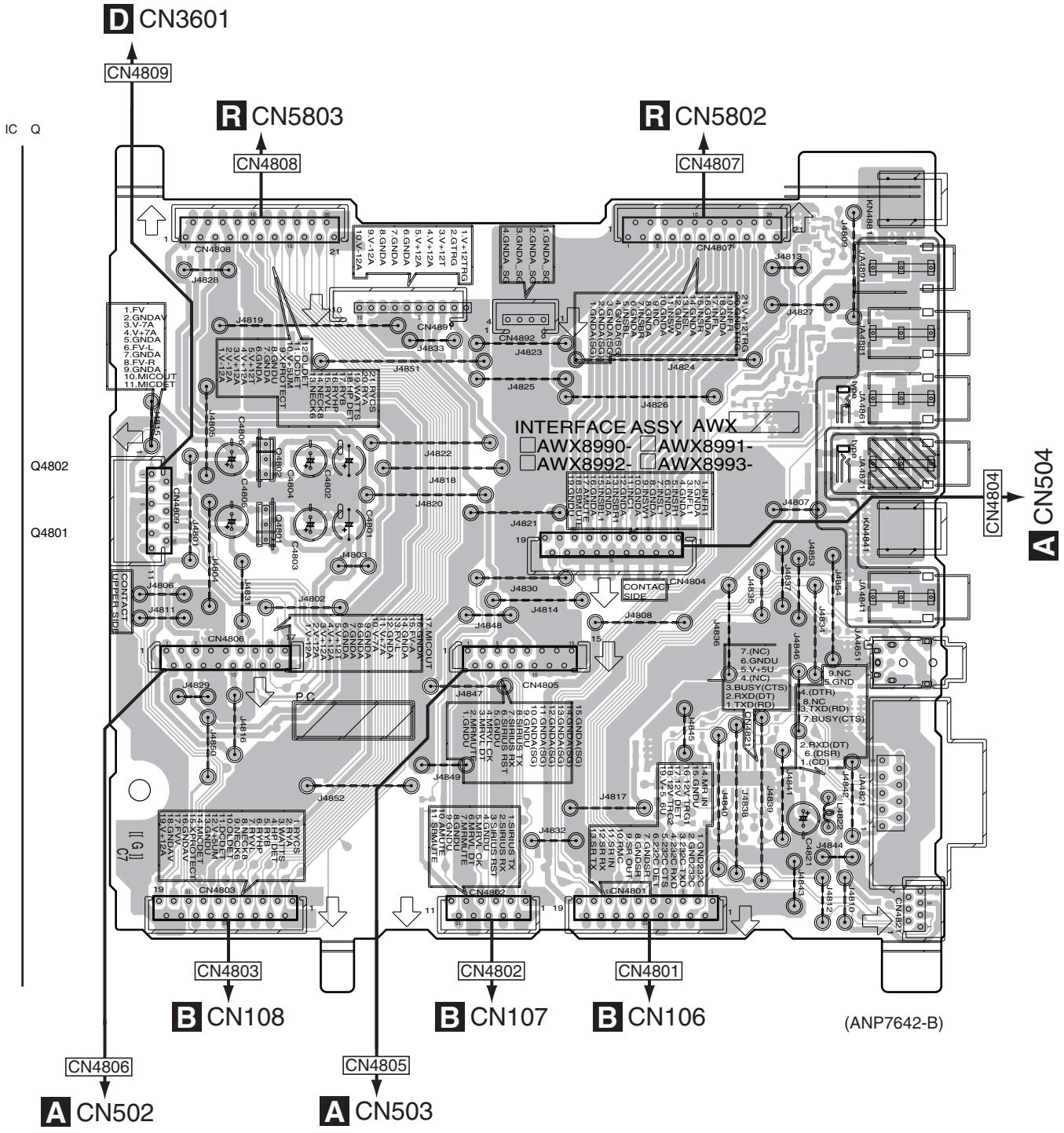


11.5 INTERFACE ASSY

SIDE A

SIDE A

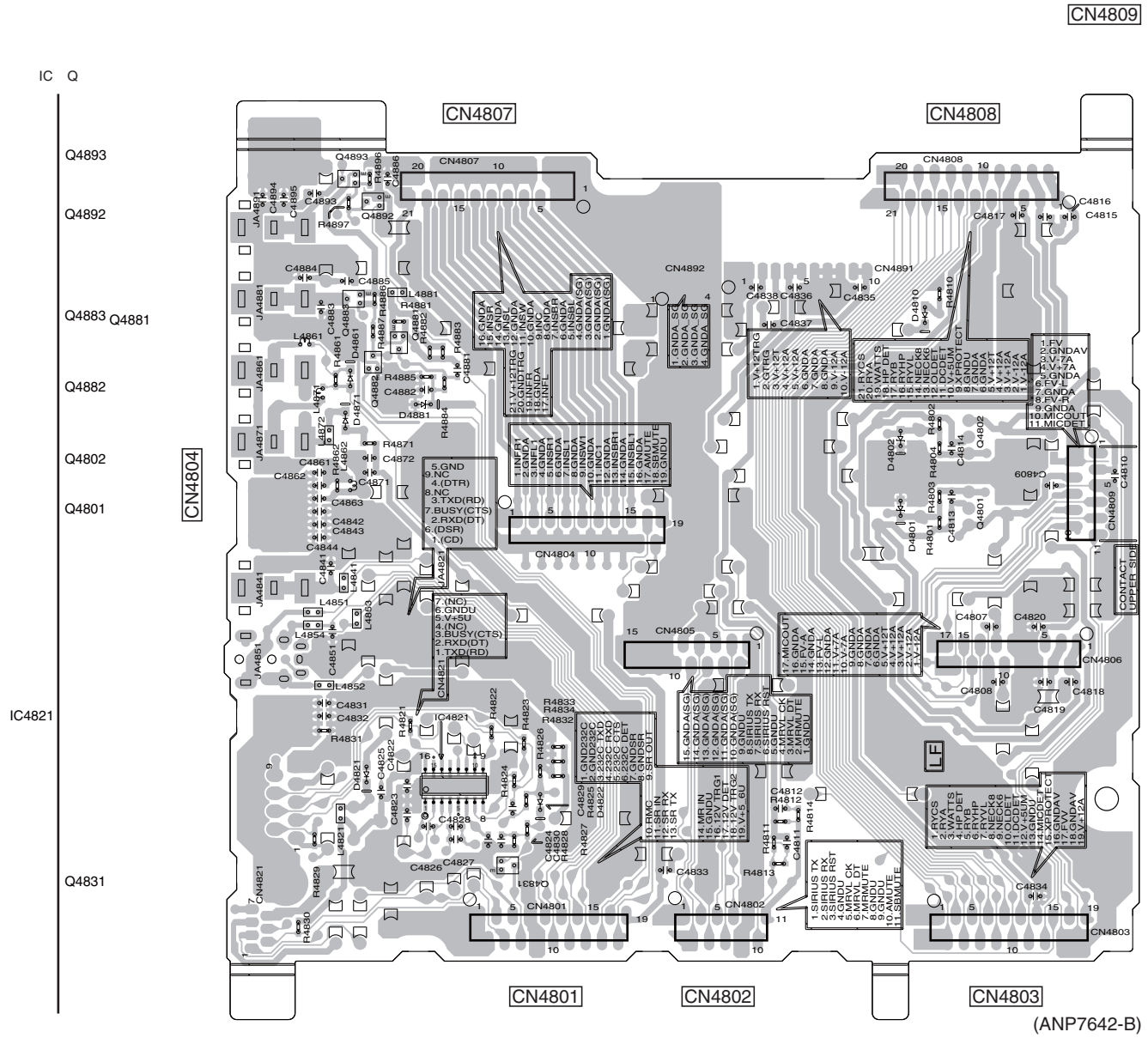
E INTERFACE ASSY



SIDE B

SIDE B

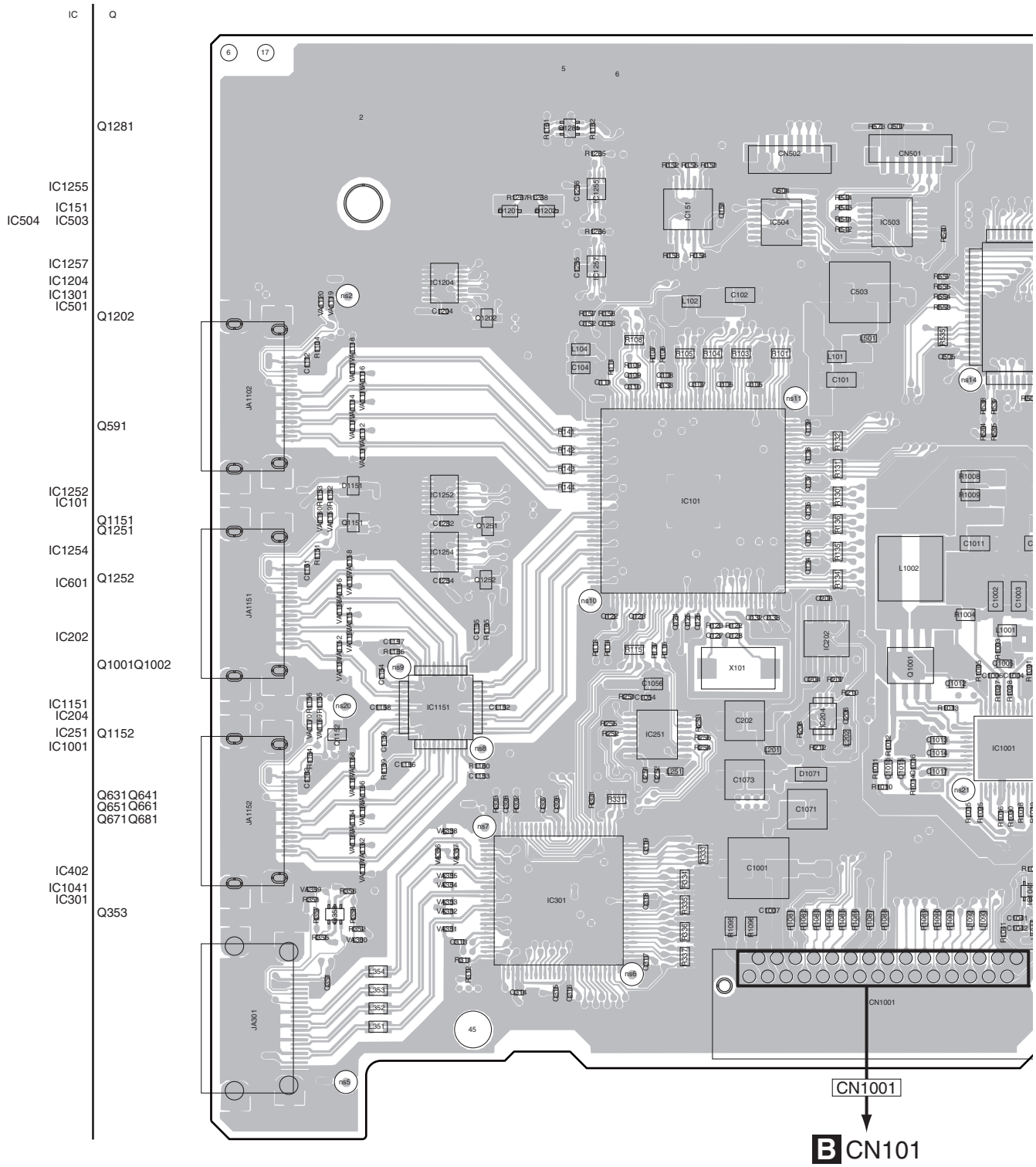
E INTERFACE ASSY



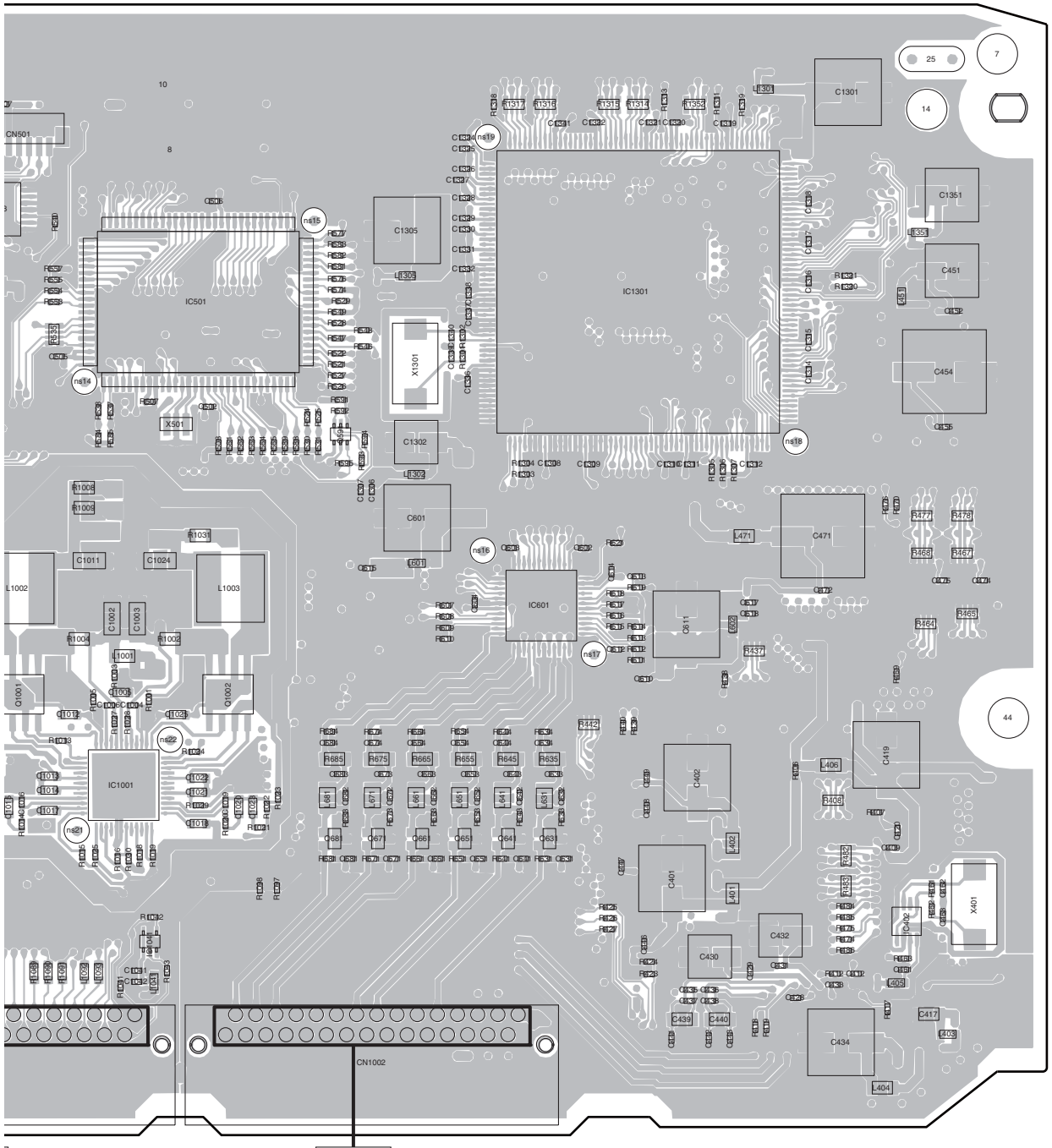
11.6 HDMI & DVC ASSY

SIDE A

F HDMI & DVC ASSY



SIDE A



CN1002

(ANP7621-A)

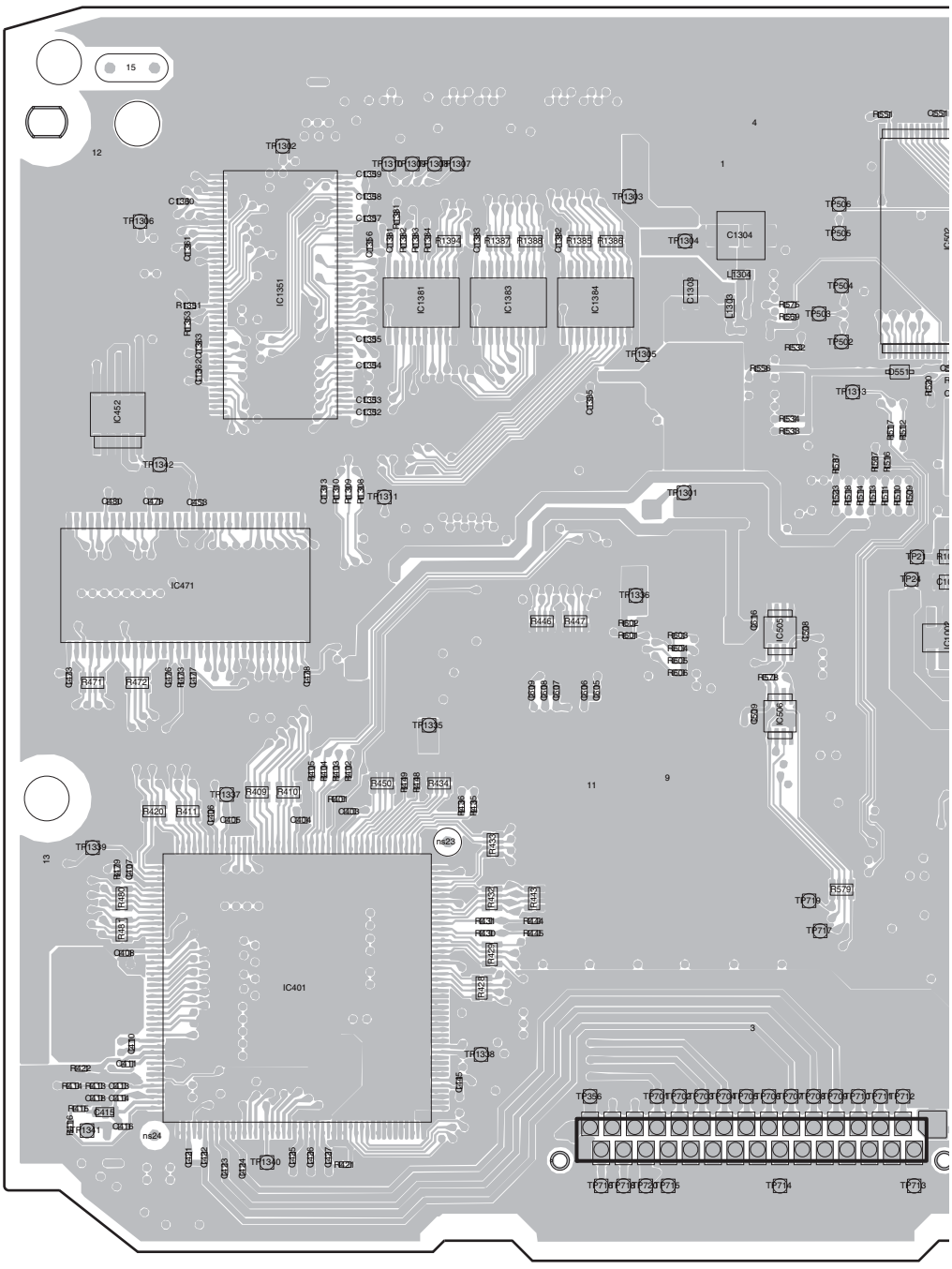
01

B CN102

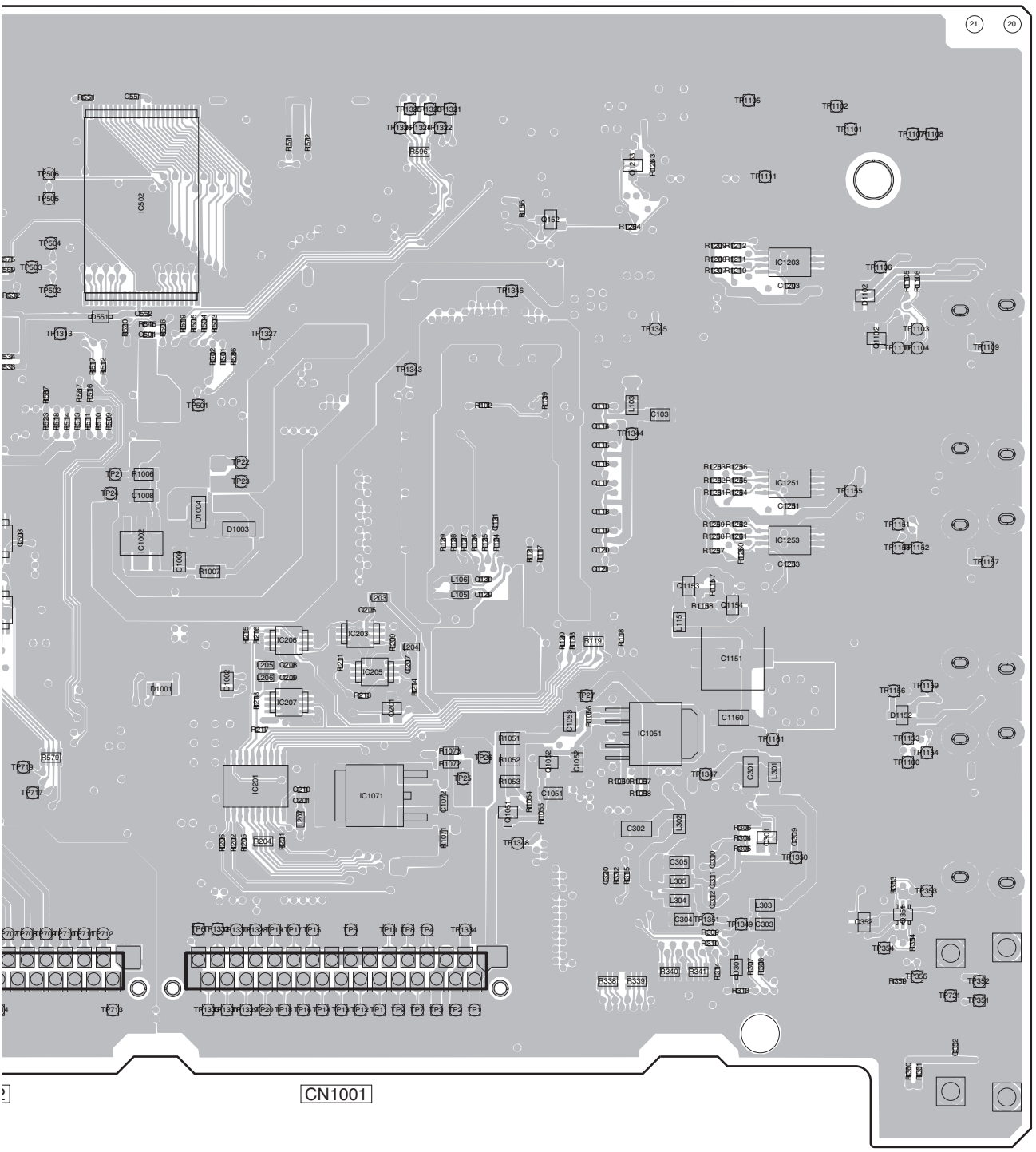
SIDE B

F HDMI & DVC ASSY

IC	Q
	Q1253
IC502	Q152
IC1351	
IC1381 IC1383 IC1384	
IC1203	
	Q1102
IC452	
IC1251	
IC471	
IC505 IC1253	
IC1002	
	Q1153
IC506	Q1154
IC203	
IC206	
IC205	
IC207	Q201
IC1051	
	Q1052
IC201	
IC1071	
	Q1051
IC401	Q301
	Q351
	Q352



SIDE B



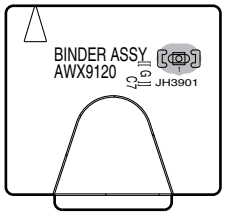
(ANP7621-A)

11.7 BINDER, BIND L FRONT and BIND L BACK ASSYS

SIDE A

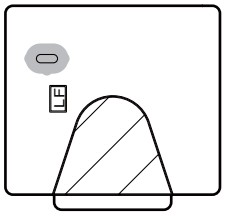
SIDE B

H BINDER ASSY



(ANP7643-C)

H BINDER ASSY

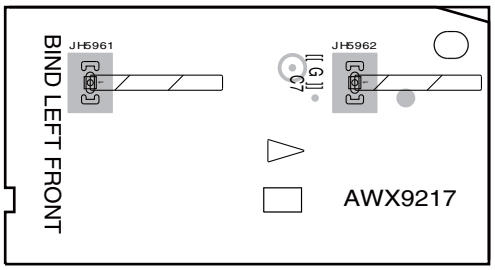


(ANP7643-C)

SIDE A

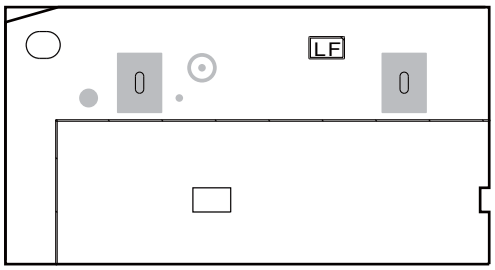
SIDE B

I BIND L FRONT ASSY



(ANP7641-C)

I BIND L FRONT ASSY

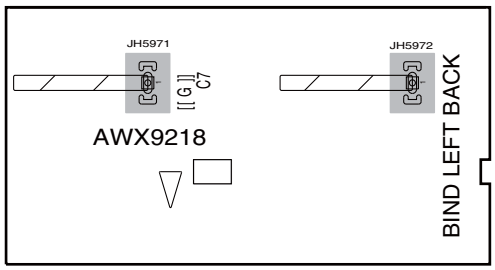


(ANP7641-C)

SIDE A

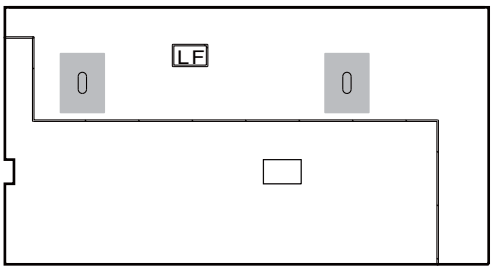
SIDE B

J BIND L BACK ASSY



(ANP7641-C)

J BIND L BACK ASSY



(ANP7641-C)

H I J

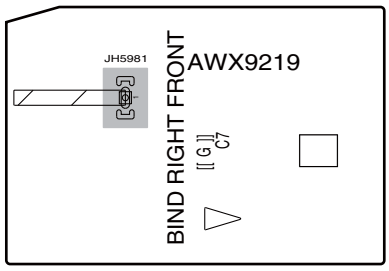
H I J

11.8 BIND R FRONT, BIND R BACK ASSYS

SIDE A

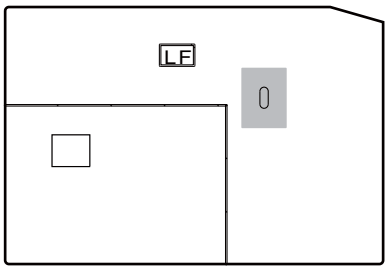
SIDE B

K BIND R FRONT ASSY



(ANP7641-C)

K BIND R FRONT ASSY

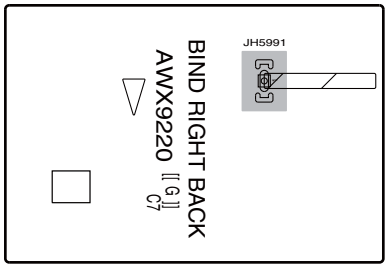


(ANP7641-C)

SIDE A

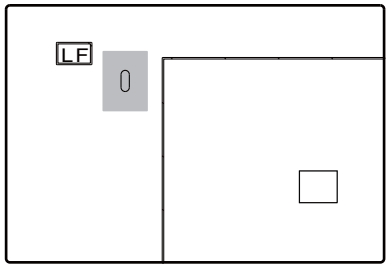
SIDE B

L BIND R BACK ASSY



(ANP7641-C)

L BIND R BACK ASSY



(ANP7641-C)

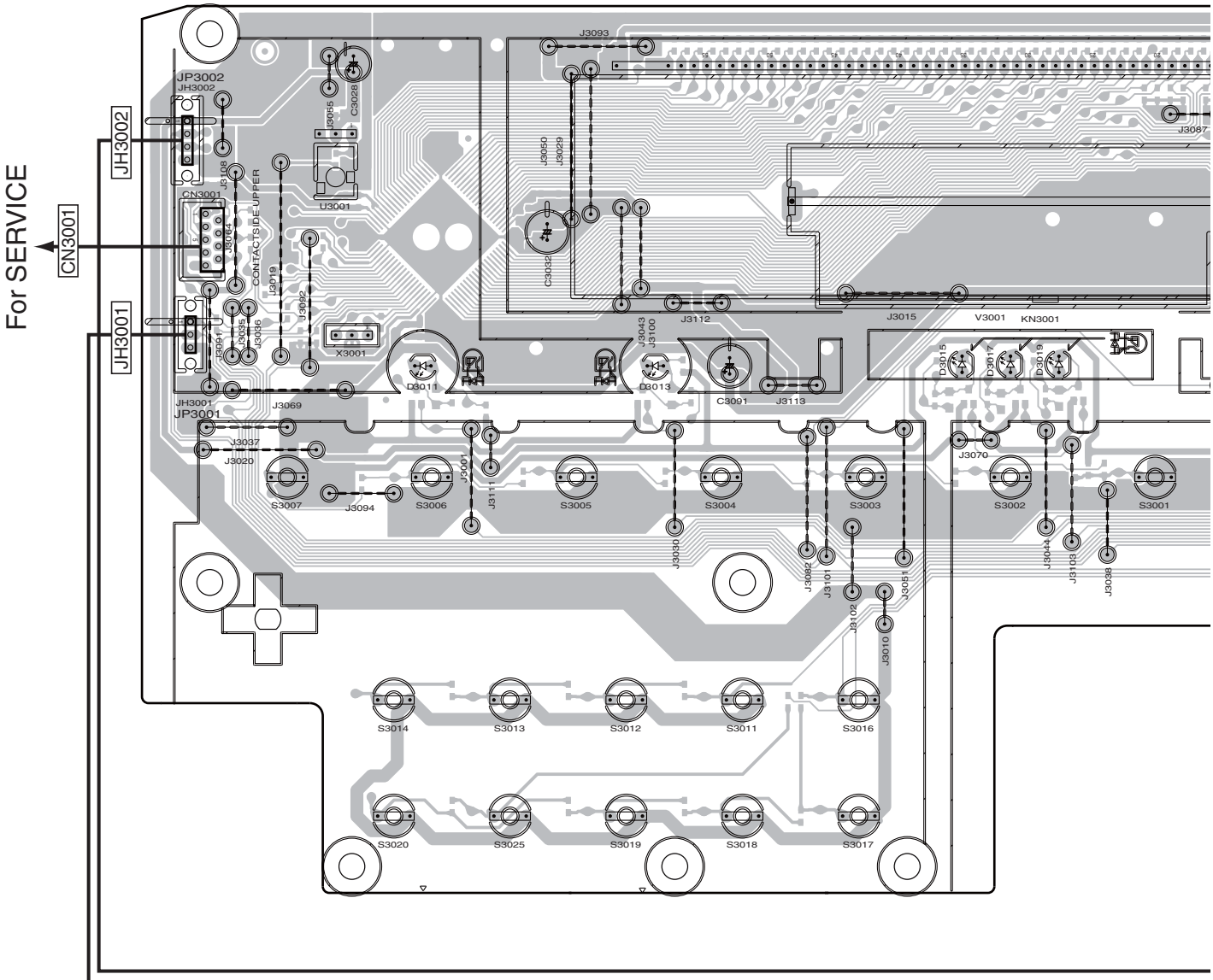
K L

K L

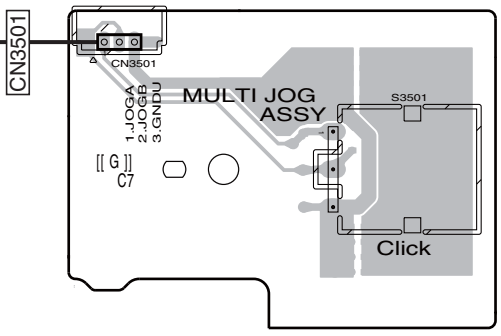
11.9 DISPLAY, MULTI JOG and POWER SW ASSYS

SIDE A

M DISPLAY ASSY



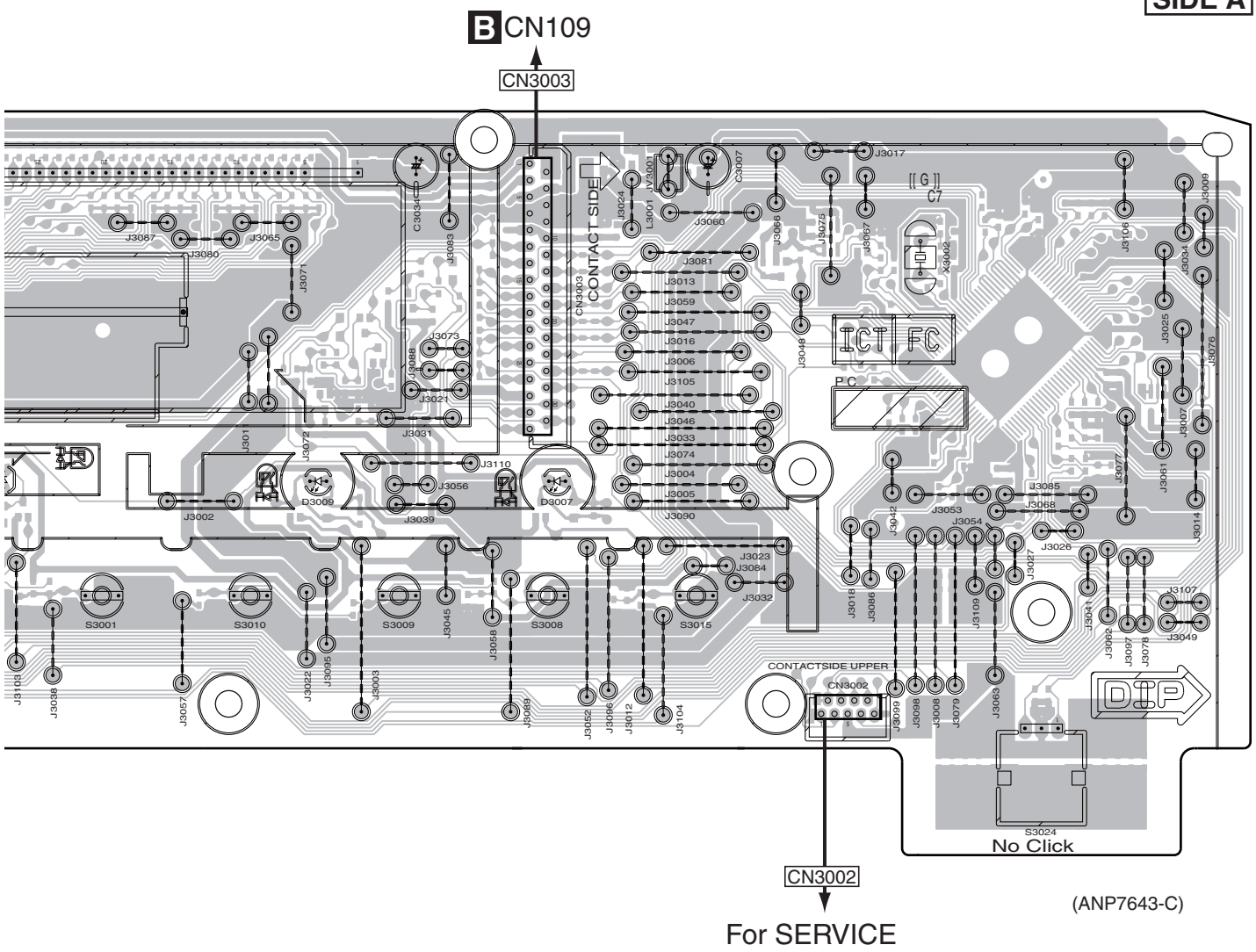
N MULTI JOG ASSY

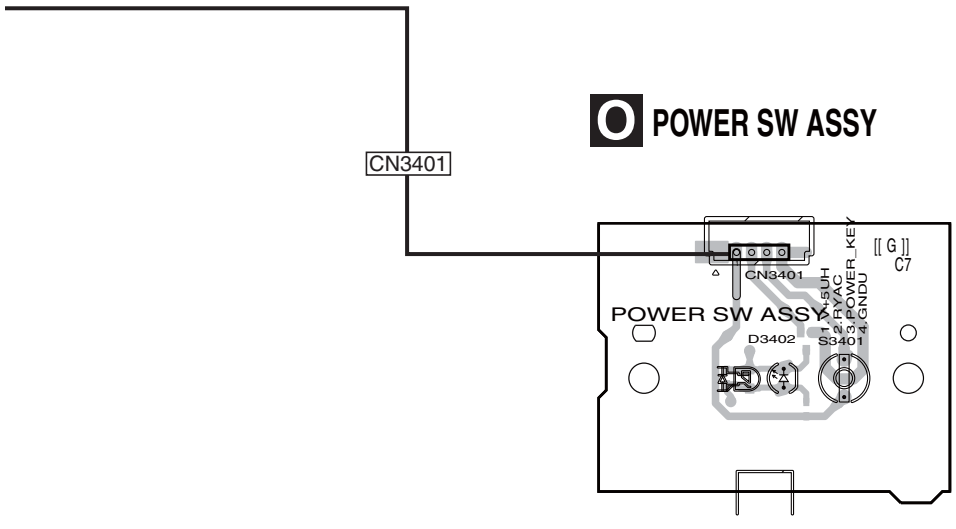


(ANP7643-C)

M N

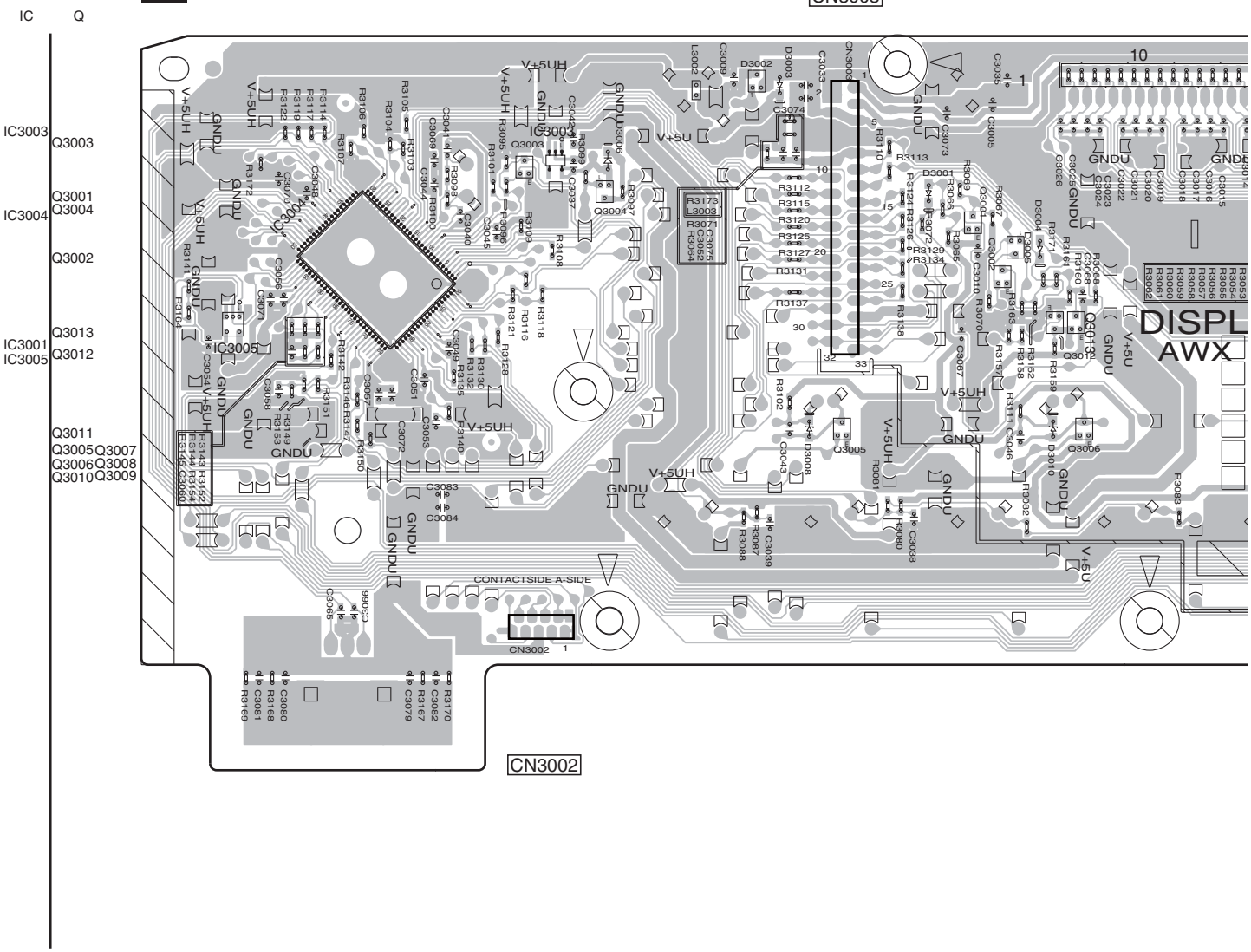
SIDE A


B CN109
CN3003
CONTACT SIDE
CN3003
ICT FC
P.C
CONTACTSIDE UPPER
CN3002
DIP
S3024
No Click
CN3002
For SERVICE
(ANP7643-C)

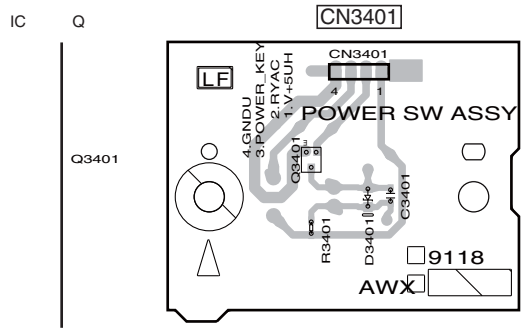

O POWER SW ASSY
CN3401
CN3401
POWER SW ASSY
D3402
S3401
1.+5DH
2.POWER_KEY
3.POWER
4.GNDU
(ANP7643-C)

SIDE B

M DISPLAY ASSY

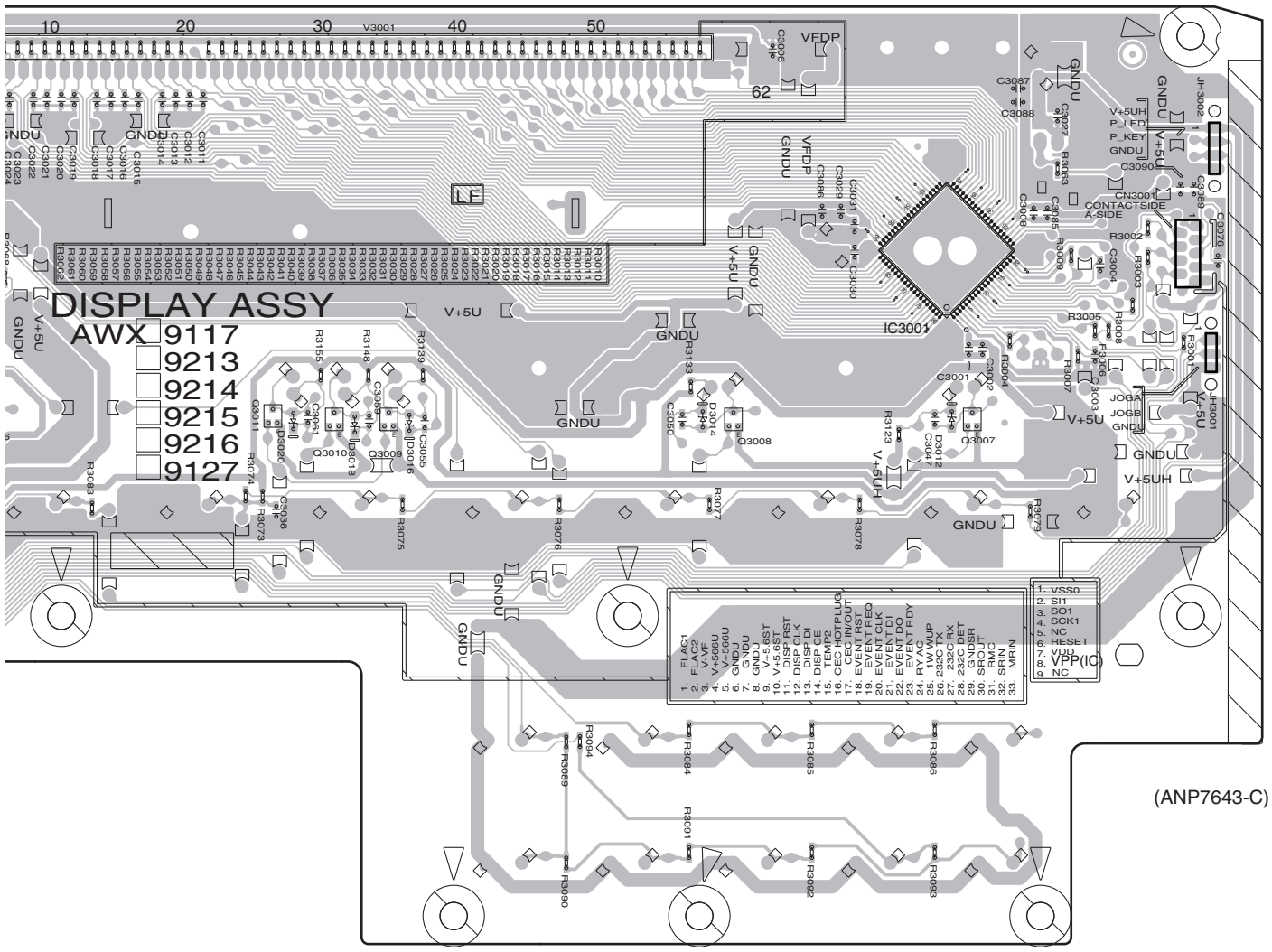


O POWER SW ASSY

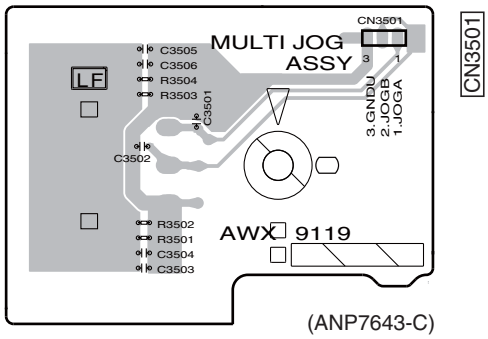


(ANP7643-C)

SIDE B



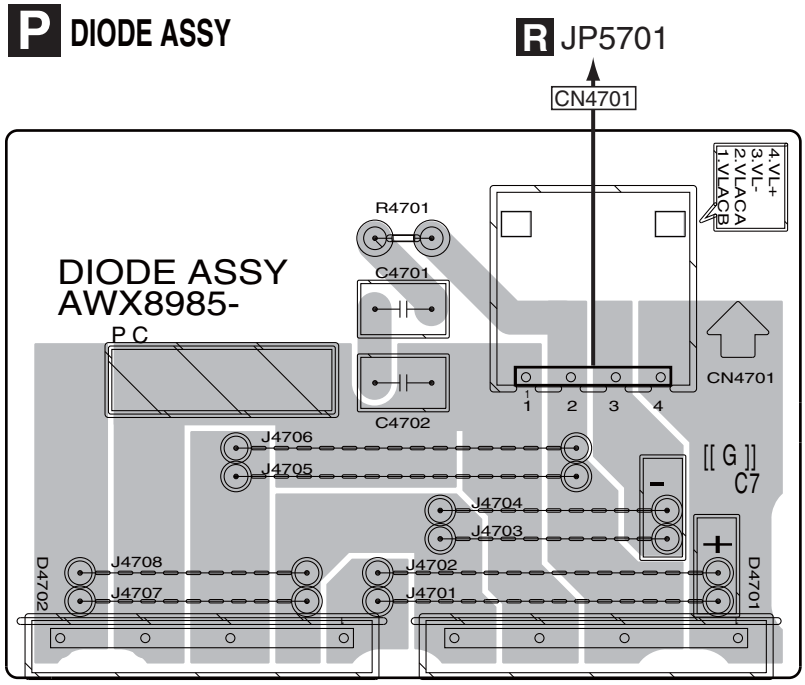
N MULTI JOG ASSY



11.10 DIODE ASSY

SIDE A **SIDE A**

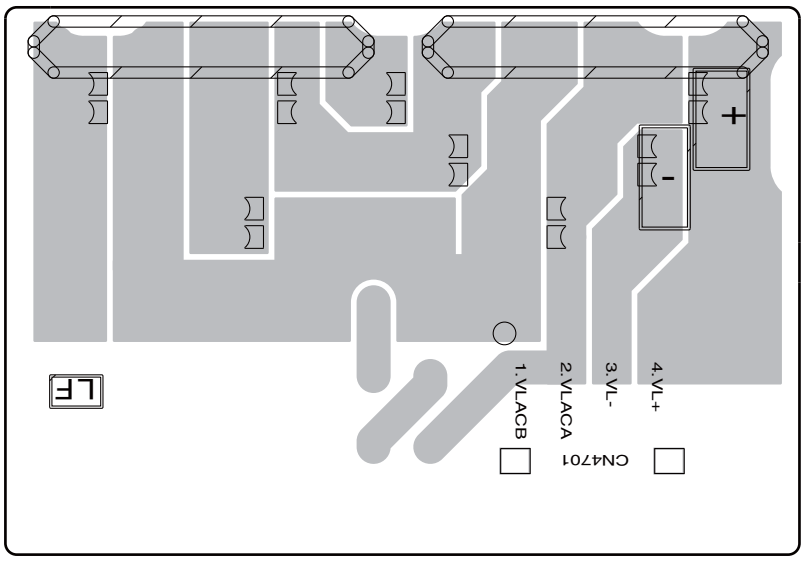
P DIODE ASSY



(ANP7642-B)

SIDE B **SIDE B**

P DIODE ASSY



(ANP7642-B)

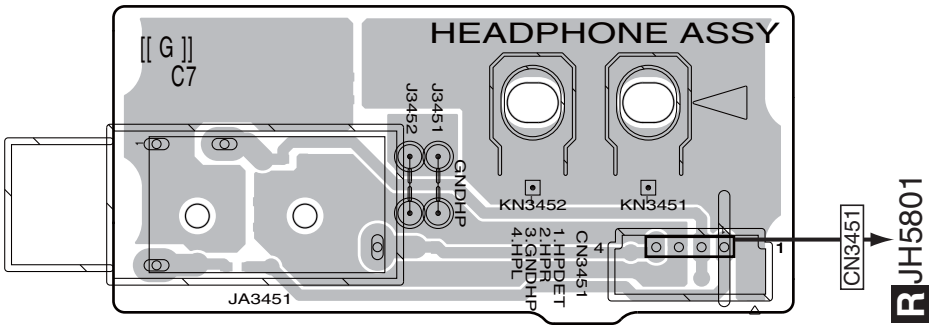
P **P**

11.11 HEADPHONE ASSY

SIDE A

SIDE A

Q HEADPHONE ASSY

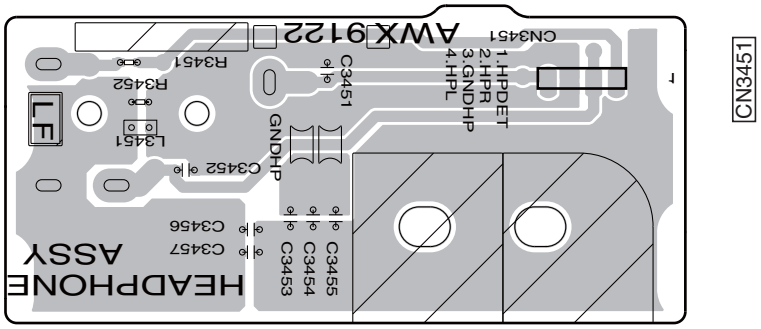


(ANP7643-C)

SIDE B

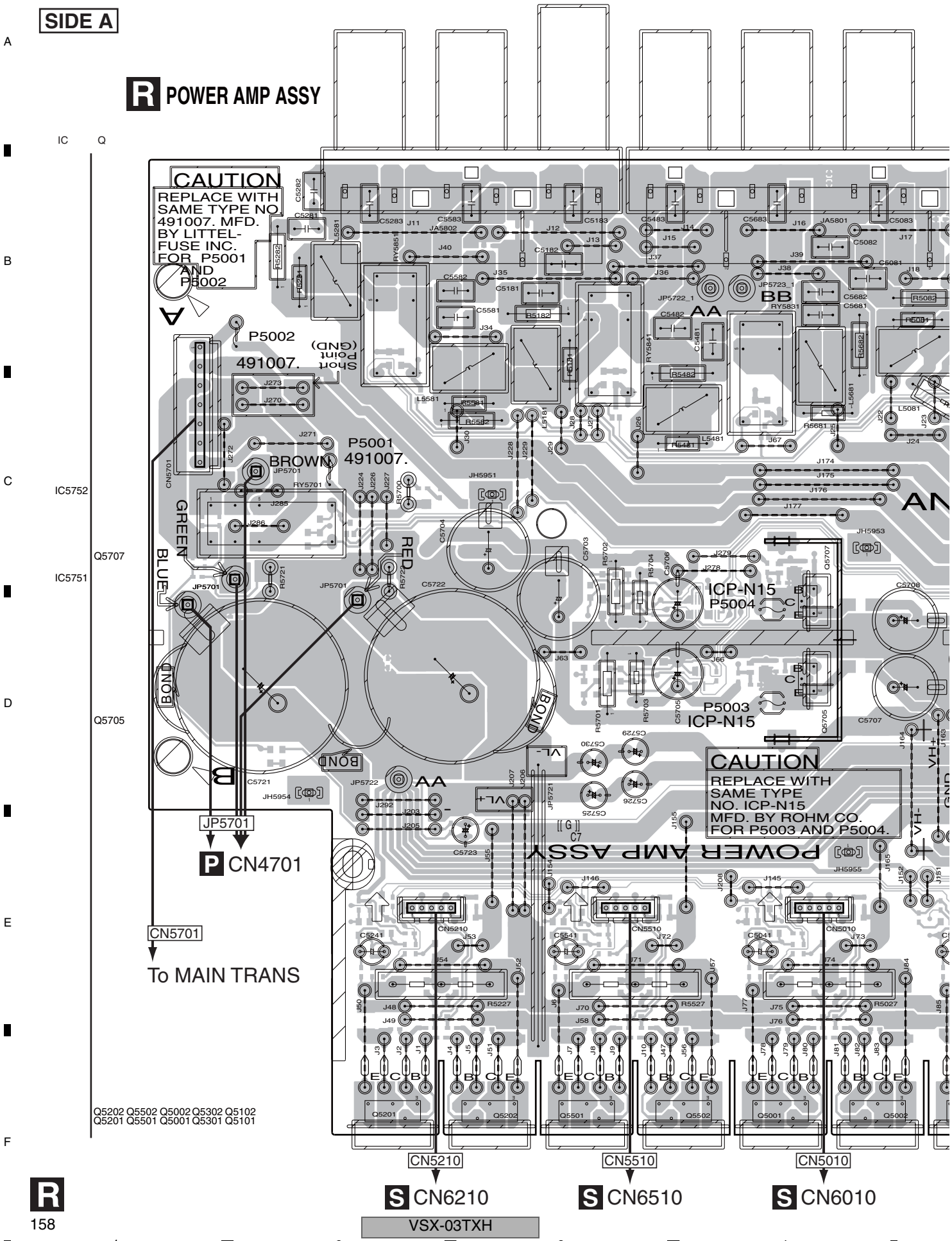
SIDE B

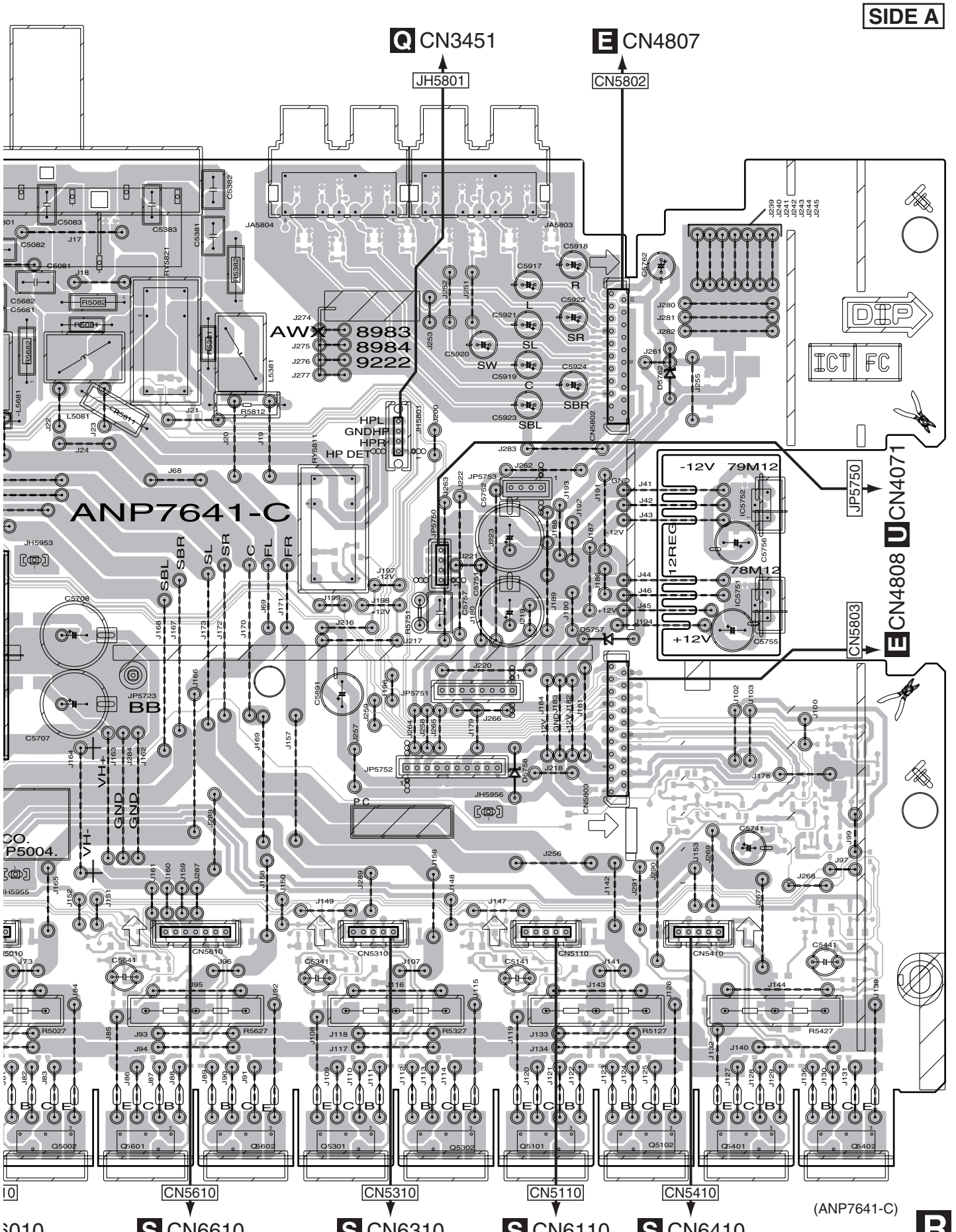
Q HEADPHONE ASSY



(ANP7643-C)

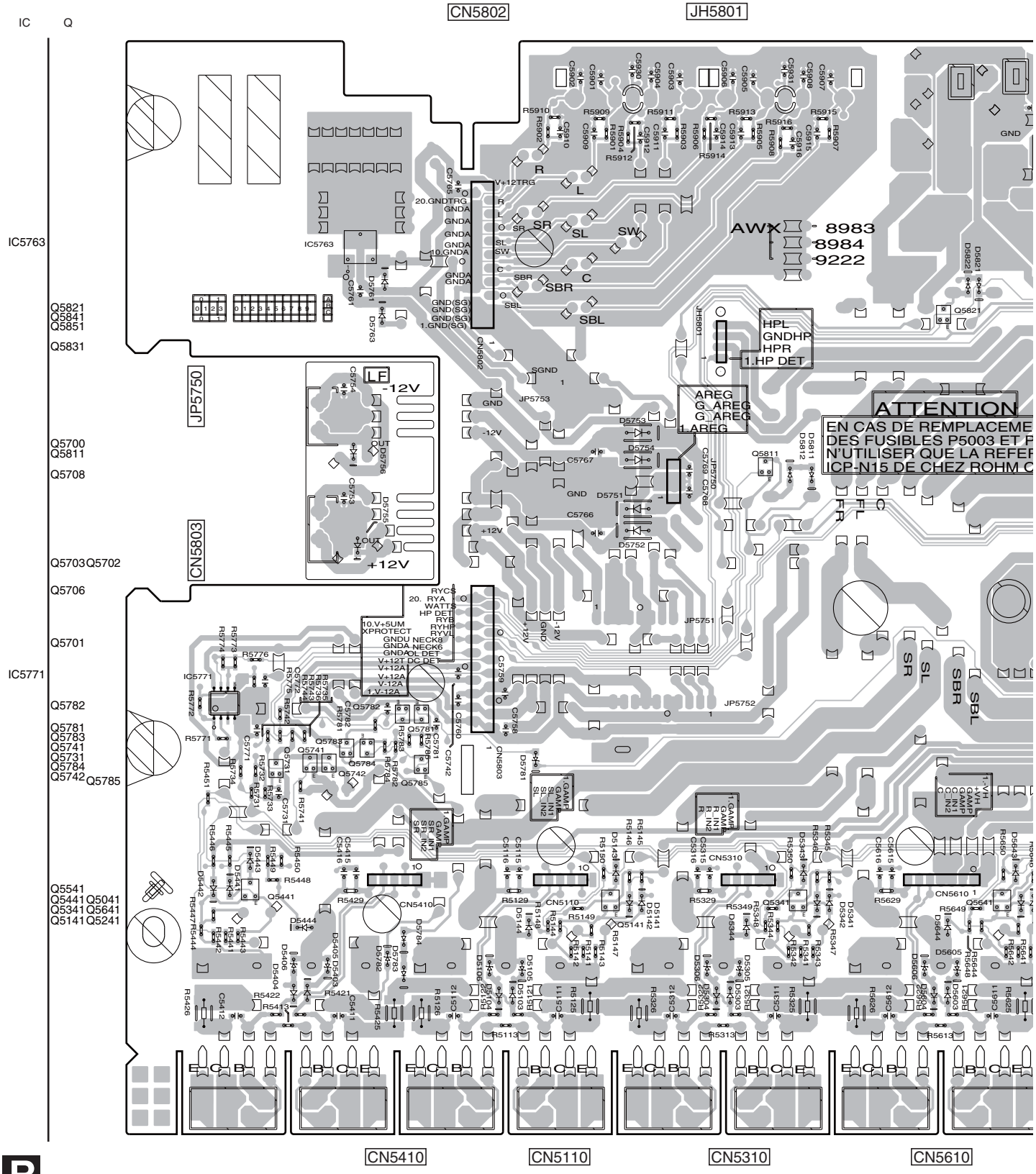
11.12 POWER AMP ASSY



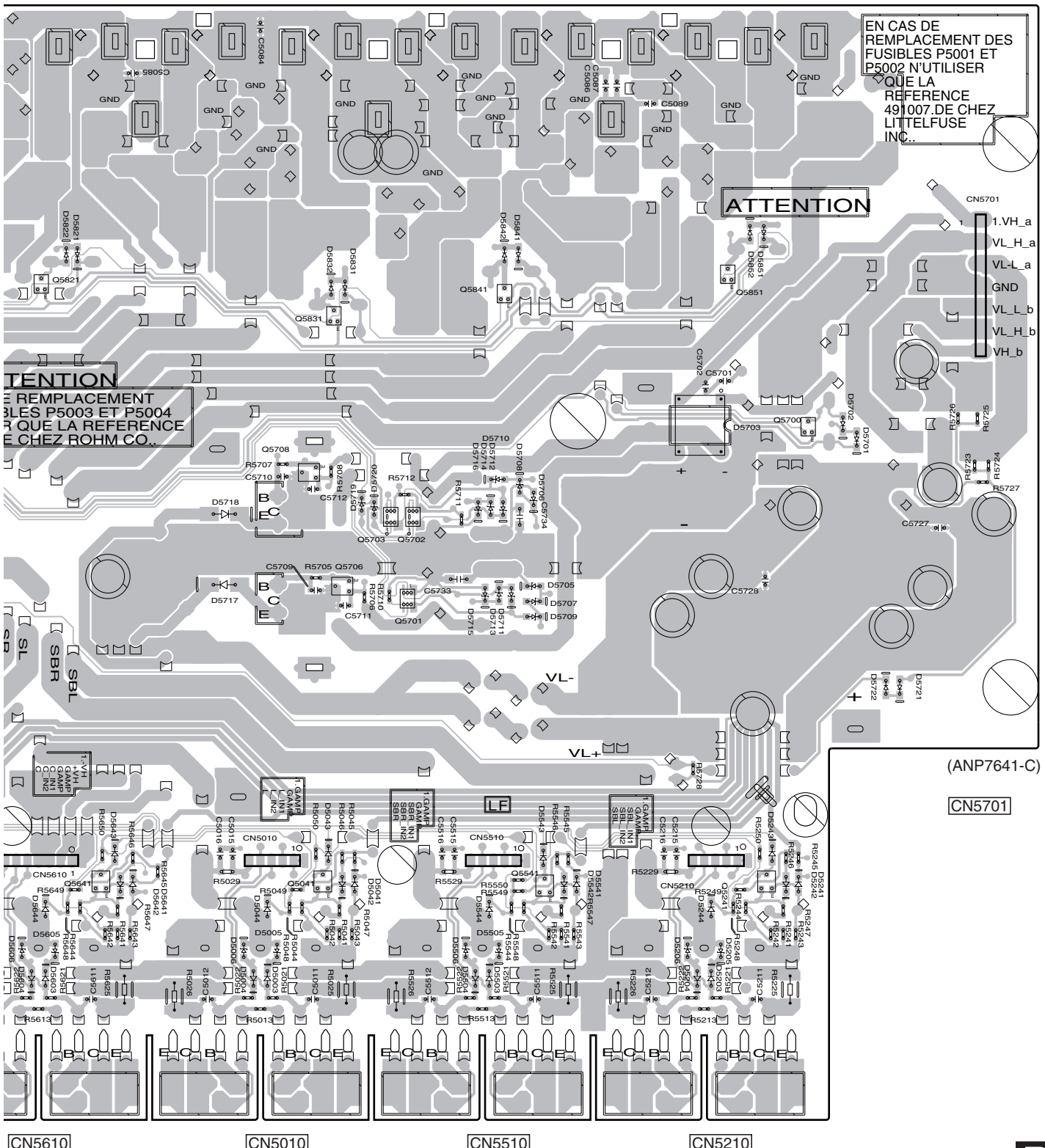

SIDE A
Q CN3451
E CN4807
JH5801
CN5802
ANP7641-C
AWX
8983
8984
9222
DIP
ICT
FC
-12V 79M12
12REG
78M12
+12V
JP5750
U CN4071
E CN4808
CN5803
BB
P.C
CN5610
CN5310
CN5110
CN5410
S CN6610
S CN6310
S CN6110
S CN6410
(ANP7641-C)
VSX-03TXH
159

SIDE B

R POWER AMP ASSY

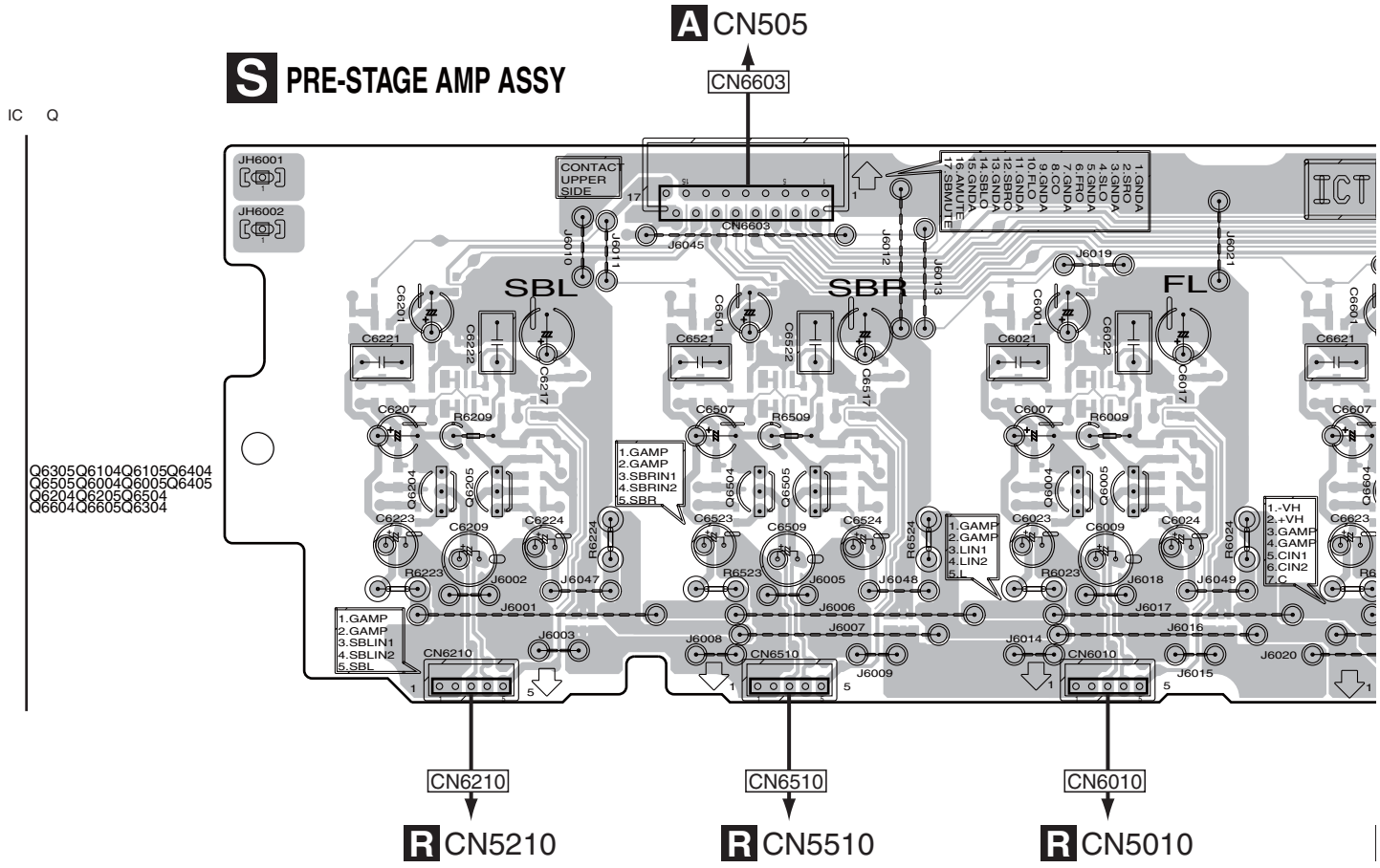


SIDE B

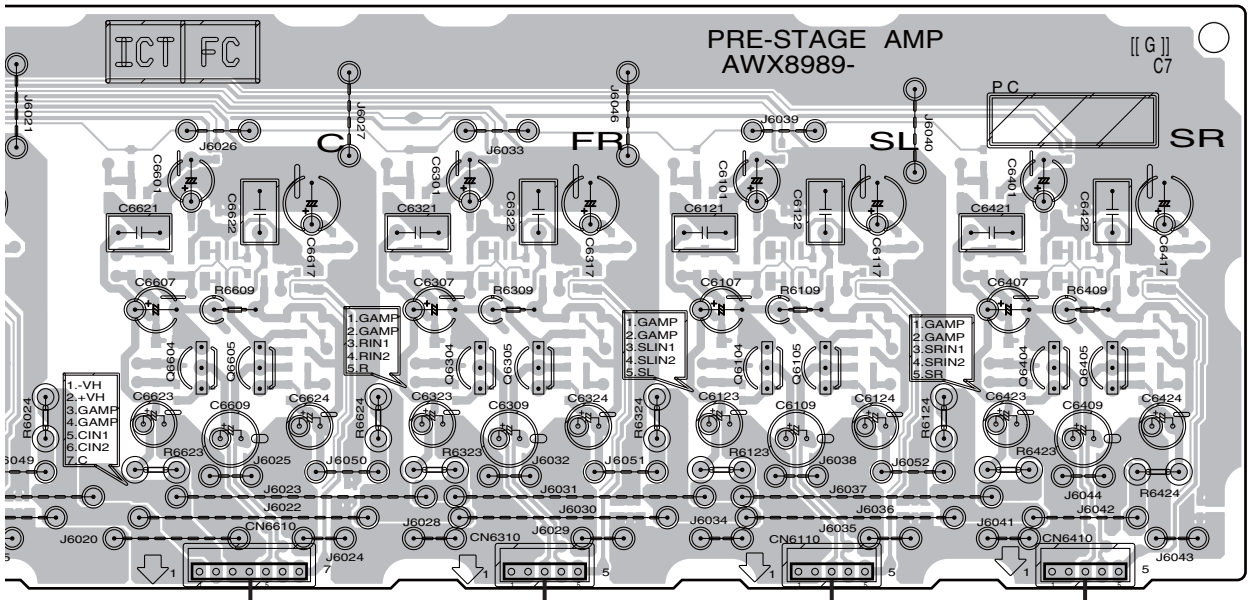

EN CAS DE REMPLACEMENT DES FUSIBLES P5001 ET P5002 N'UTILISER QUE LA REFERENCE 491007.DE CHEZ LITTELFUSE INC..
ATTENTION
CN5701
1.VH_a
VL_H_a
VL-L_a
GND
VL_L_b
VL_H_b
VH_b
TENTION
E REMPLACEMENT
BLES P5003 ET P5004
R QUE LA REFERENCE
E CHEZ ROHM CO..
VL-
VL+
LF
SL
SBR
SBL
(ANP7641-C)
CN5701
CN5610
CN5010
CN5510
CN5210

11.13 PRE-STAGE AMP ASSY

SIDE A



SIDE A



(ANP7642-B)

R CN5610 R CN5310 R CN5110 R CN5410

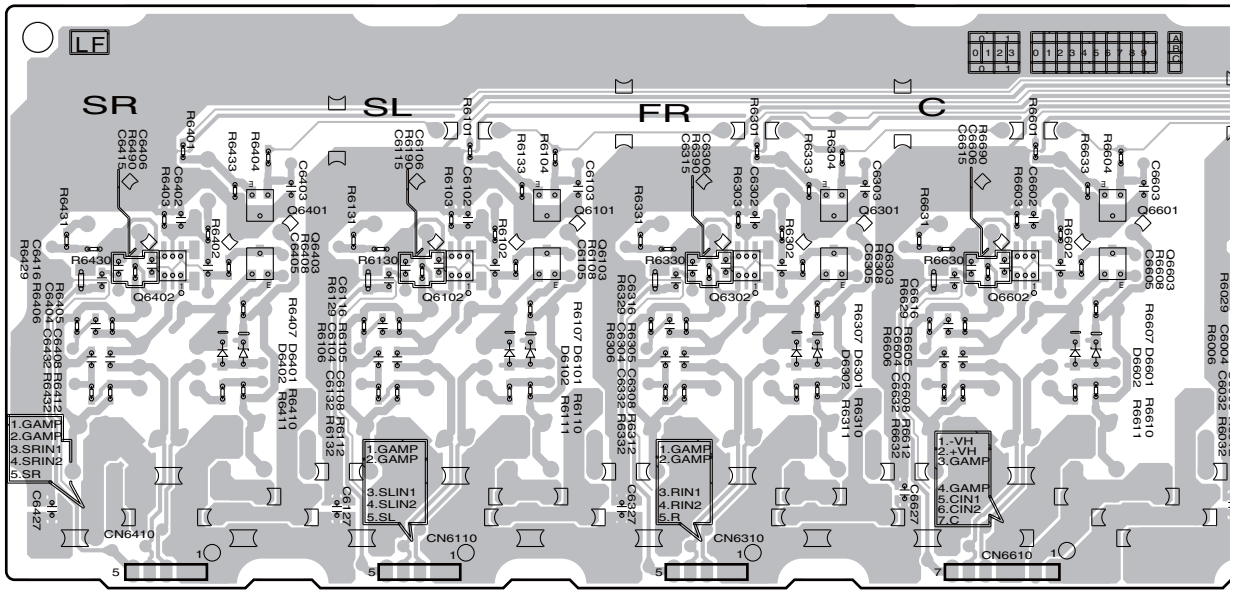
SIDE B

S PRE-STAGE AMP ASSY

IC Q

Q6101 Q6601 Q6501
Q6401 Q6301 Q6001
Q6201

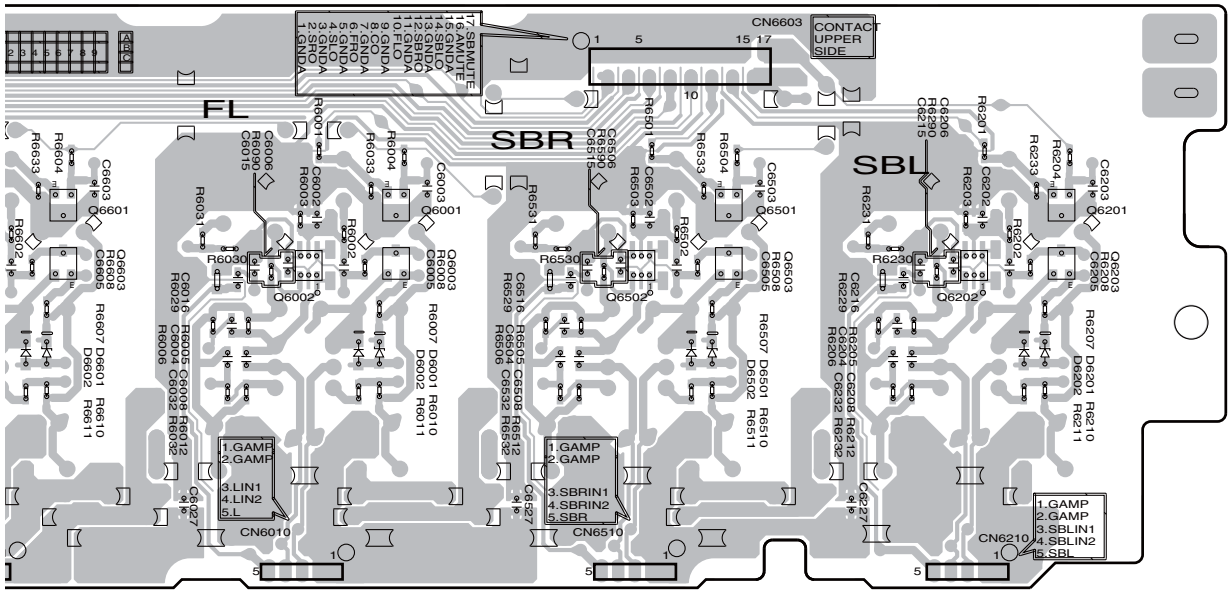
Q6403 Q6603 Q6503
Q6103 Q6303 Q6003
Q6203
Q6402 Q6302 Q6202
Q6102 Q6602 Q6002
Q6502



CN6410 CN6110 CN6310 CN6610

SIDE B

CN6603



CN6010 CN6510 CN6210

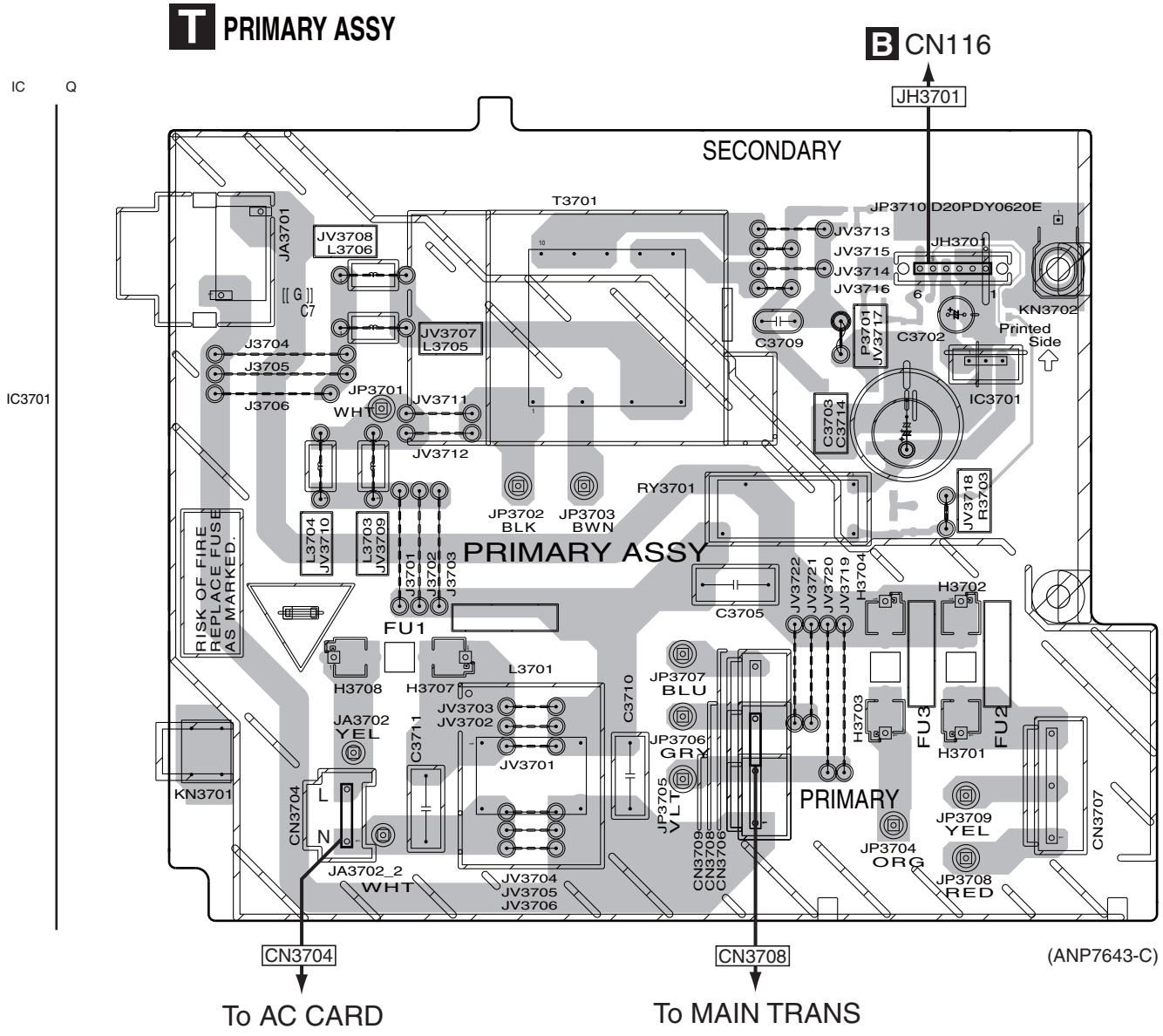
(ANP7642-B)

11.14 PRIMARY ASSY

SIDE A

SIDE A

T PRIMARY ASSY



To AC CARD

To MAIN TRANS

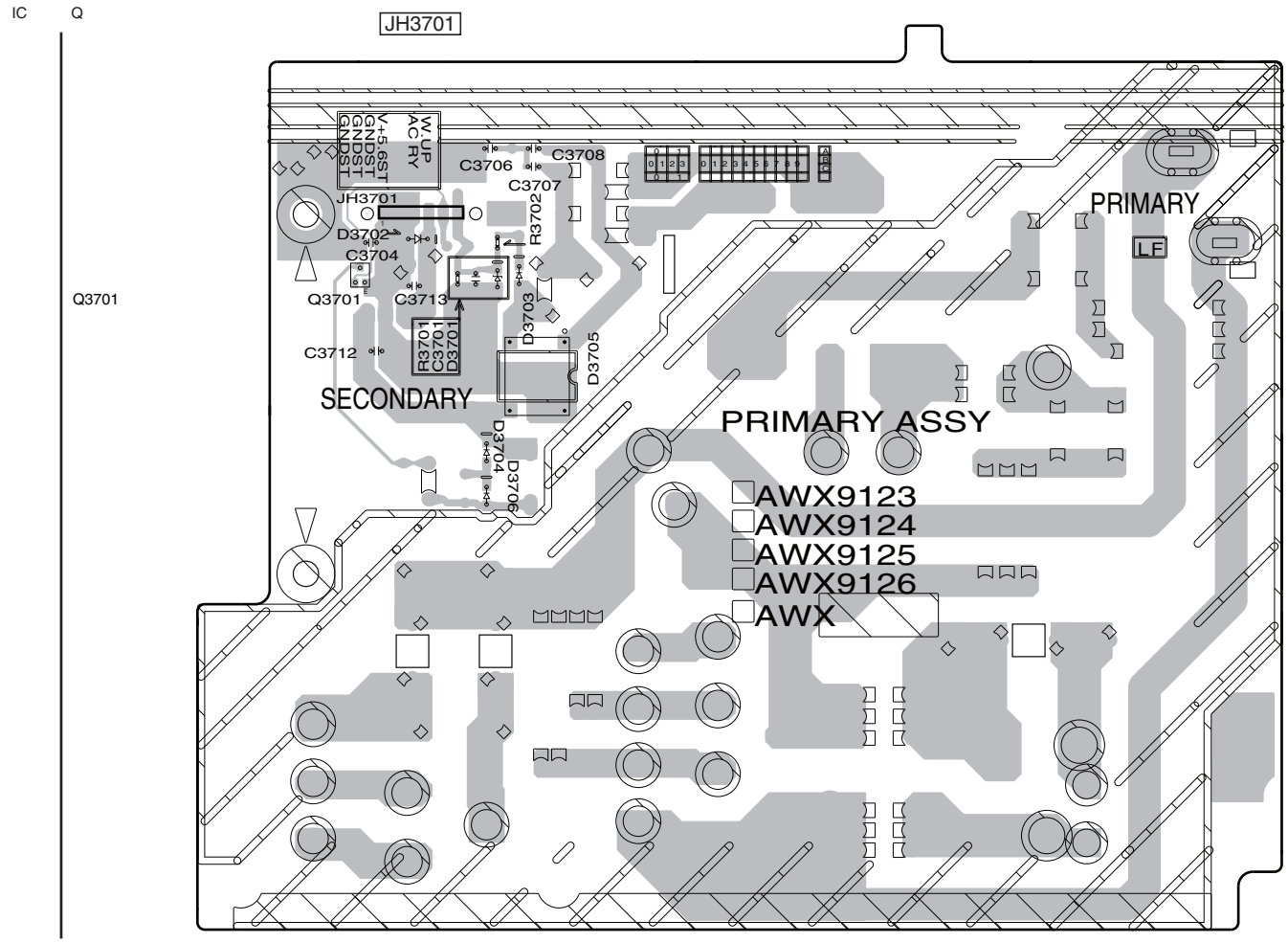
T

T

SIDE B

SIDE B

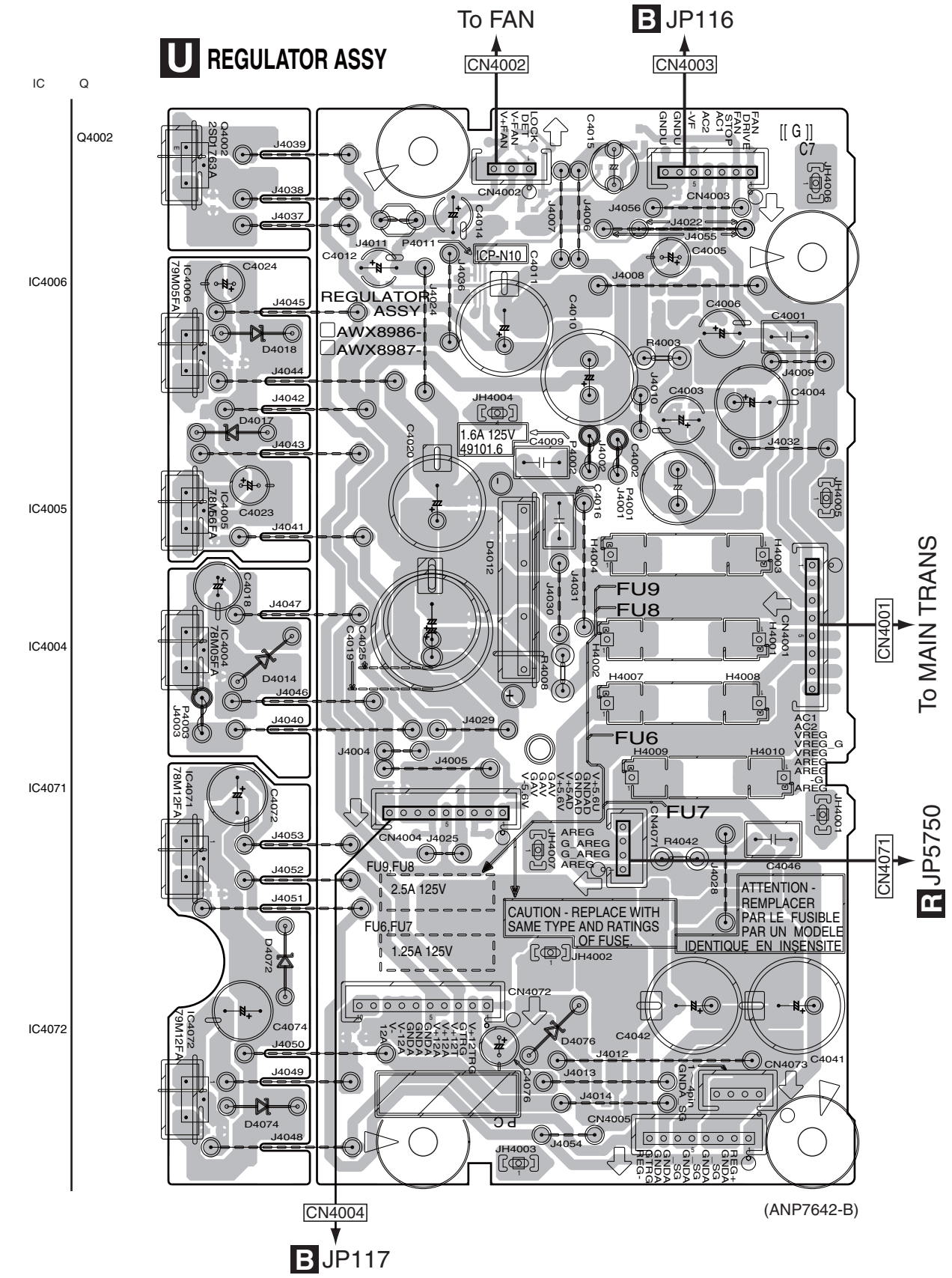
T PRIMARY ASSY



(ANP7643-C)

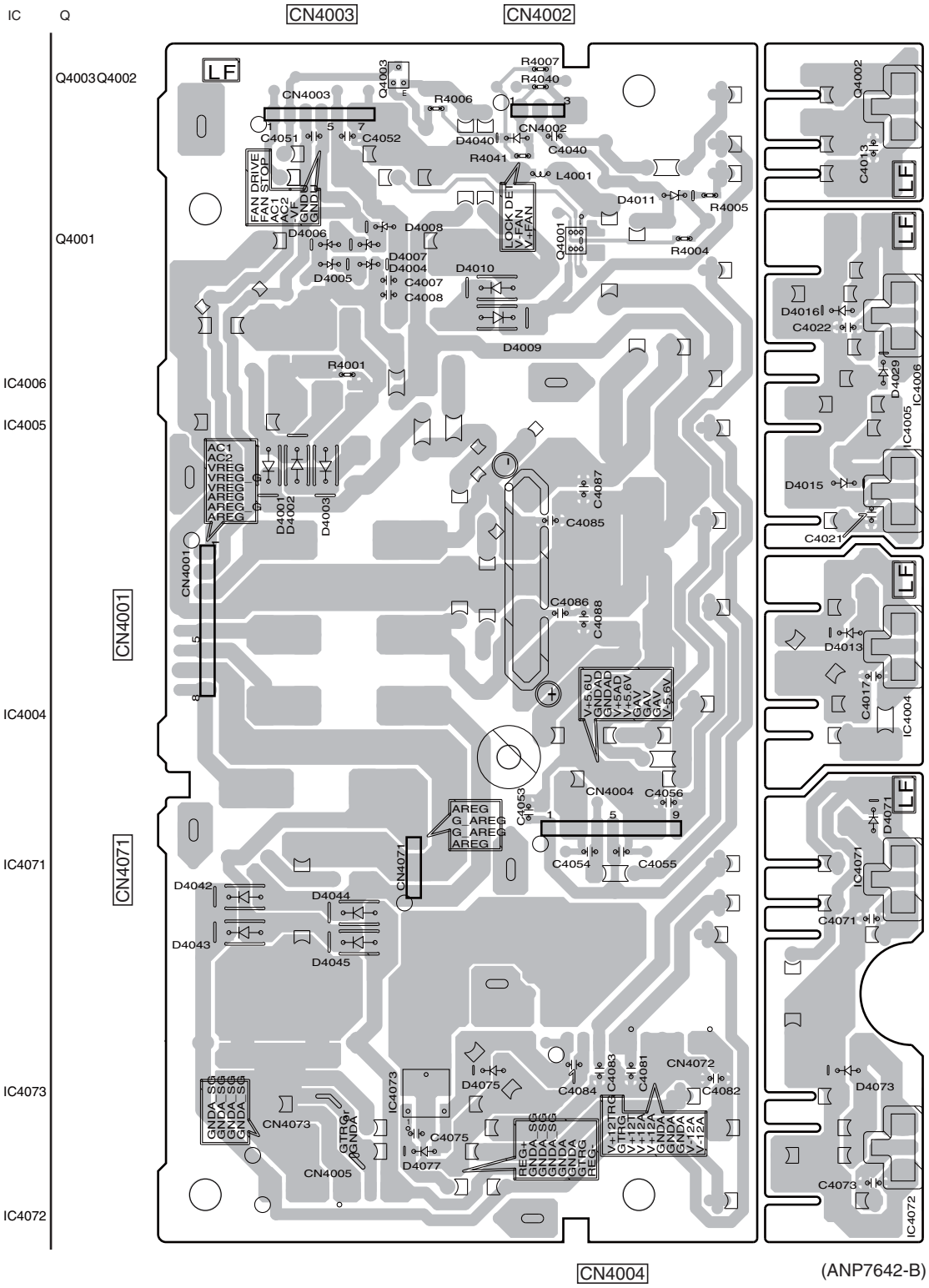
11.15 REGULATOR ASSY

SIDE A **SIDE A**



SIDE B

U REGULATOR ASSY

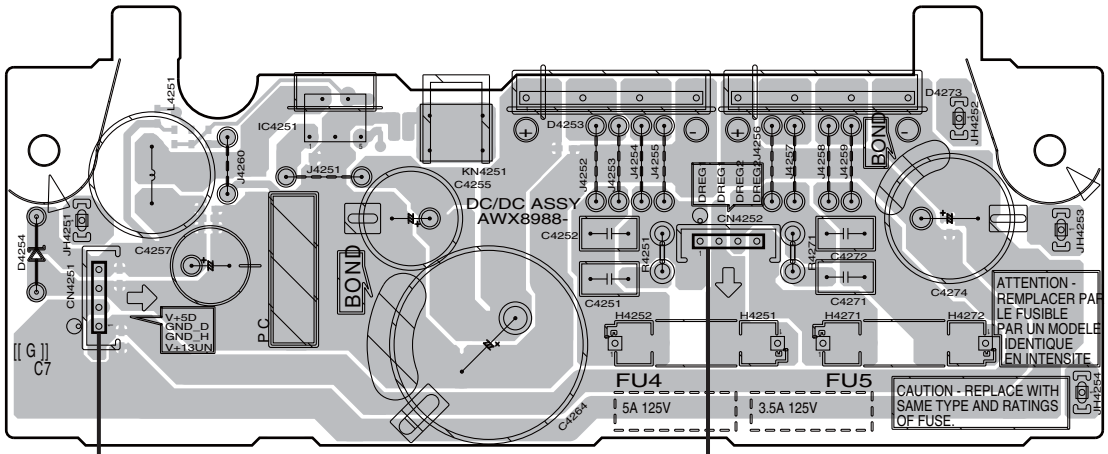


(ANP7642-B)

11.16 DC/DC ASSY

SIDE A **SIDE A**

V DC/DC ASSY



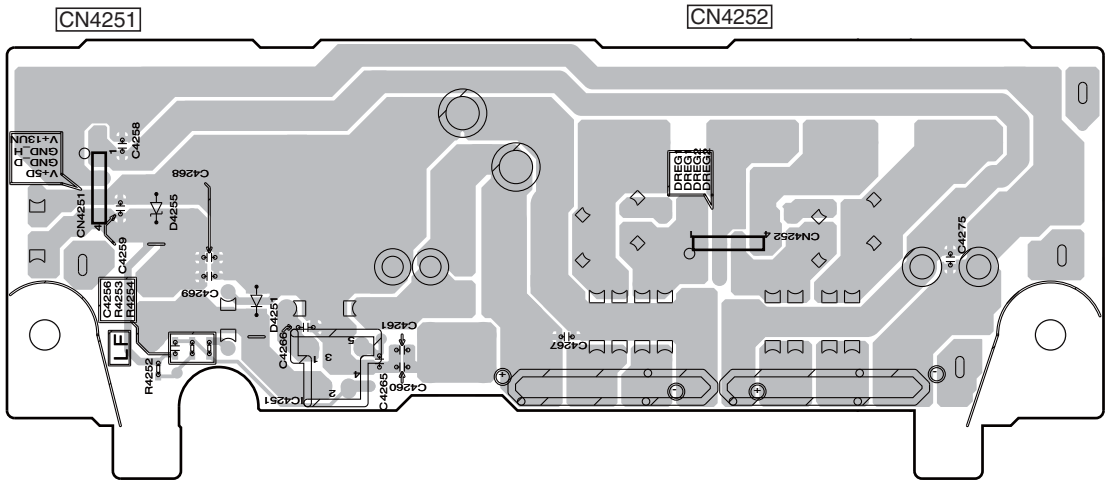
(ANP7642-B)

B JP113

To MAIN TRANS

SIDE B **SIDE B**

V DC/DC ASSY



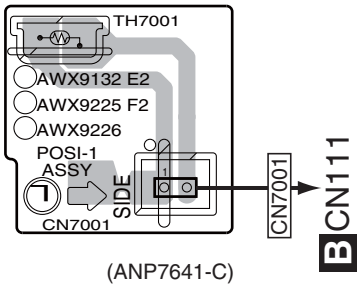
(ANP7642-B)

11.17 POSI1, POSI2 and POSI3 ASSYS

SIDE A

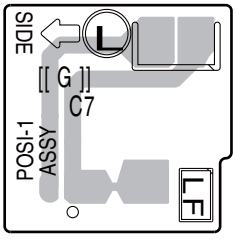
SIDE B

W POSI-1 ASSY



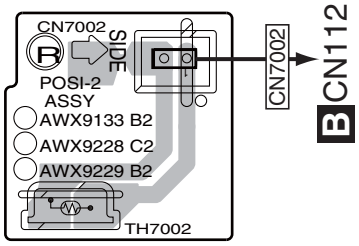
(ANP7641-C)

W POSI-1 ASSY



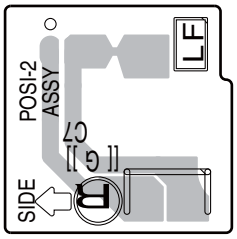
(ANP7641-C)

X POSI-2 ASSY



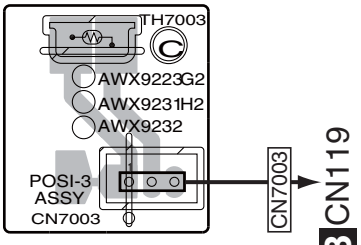
(ANP7641-C)

X POSI-2 ASSY



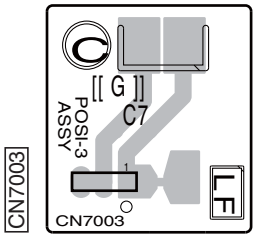
(ANP7641-C)

Y POSI-3 ASSY



(ANP7641-C)

Y POSI-3 ASSY



(ANP7641-C)

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

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

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

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

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

5.62 kΩ → 562 × 10^1 → 5621 ..... RN1/4PC [5][6][2][1] F

● *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

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
	1..	MAIN ASSY(VSX-03TXH)	AWK8052
	1..	MAIN ASSY(VSX-9130TXH)	AWK8069
	1..	MAIN ASSY(VSX-01TXH)	AWK8056
	1..	MAIN ASSY(VSX-1018AH)	AWK8057
	1..	AUDIO IN ASSY	AWK8050
NSP	1..	COMPLEX ASSY(VSX-03TXH, 01TXH)	AWK8046
	1..	COMPLEX ASSY(VSX-9130TXH, 1018AH)	AWK8067
	2..	DISPLAY ASSY(VSX-03TXH, 01TXH)	AWX9117
	2..	DISPLAY ASSY(VSX-9130TXH, 1018AH)	AWX9216
	2..	POWER SW ASSY	AWX9118
	2..	MULTI JOG ASSY	AWX9119
	2..	BINDER ASSY	AWX9120
	2..	FRONT IN ASSY	AWX9121
	2..	HEADPHONE ASSY	AWX9122
	2..	PRIMARY ASSY	AWX9123
NSP	1..	LOCAL POWER ASSY(Except VSX-1018AH)	AWK8041
NSP	1..	LOCAL POWER ASSY(VSX-1018AH)	AWK8043
	2..	DIODE ASSY	AWX8985
	2..	REGULATOR ASSY	AWX8986
	2..	DC/DC ASSY	AWX8988
	2..	PRE-STAGE AMP	AWX8989
	2..	INTERFACE ASSY(Except VSX-1018AH)	AWX8990
	2..	INTERFACE ASSY(VSX-1018AH)	AWX8993
NSP	1..	AMP ASSY	AWK8037
	2..	POWER AMP ASSY	AWX8983
	2..	POSI1 ASSY	AWX9132
	2..	POSI2 ASSY	AWX9133
	2..	BIND_L_FRONT ASSY	AWX9217
	2..	BIND_L_BACK ASSY	AWX9218
	2..	BIND_R_FRONT ASSY	AWX9219
	2..	BIND_R_BACK ASSY	AWX9220
	2..	POSI3 ASSY	AWX9223
	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
	1..	FM/AM TUNER UNIT	AXX7250

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

C 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

E 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
	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
	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
	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
	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
	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.
A		**AUDIO IN ASSY**	
		SEMICONDUCTORS	
	IC 501		BD3473KS2
	IC 502		TC4066BFT
	IC 503		M61545FP
	IC 701,702,741,761		NJM4565MD
	IC 781,801,821		NJM4565MD
	Q 519,821,822,841		IMX25
	Q 681		2SD1664
	Q 701		UMD2N
	Q 842,861,862,881		IMX25
	Q 882		IMX25
	D 501,502		DAN217U
	D 581-586		UDZS6R2(B)
	D 681		UDZS10(B)
		MISCELLANEOUS	
	JA 501	SOCKET	BKP1127
	JA 502,505-507	PIN JACK(4P)	AKB7048
	JA 503,504	PIN JACK(6P)	AKB7050
	CN 501	CONNECTOR	CKS3384
	CN 502	17P SOCKET	XKP3059
	CN 503	15P SOCKET	XKP3090
	CN 504	23P CONNECTOR	52044-2345

Mark	No.	Description	Part No.
CN	505	CONNECTOR	CKS3382
CN	506,507	11P CONNECTOR	52044-1145
JH	1	PCB BINDER	VEF1040

RESISTORS

R	682		RD1/4MUF391J
Other Resistors			RS1/16S###J

CAPACITORS

C	501,502,505,506	CCSRCH101J50
C	503,504,507,508	CCSRCH221J50
C	509-512,515-518	CCSRCH101J50
C	513,514,833	CCSRCH221J50
C	519,520,705-708	CCSRCH331J50
C	521,522,525,526	CCSRCH151J50
C	529-532,535-538	CCSRCH151J50
C	539,540,565,566	CCSRCH101J50
C	541,542,545,546	CEAT470M25
C	543,544,547,548	CEAT100M50
C	549-552,555-558	CEAT470M25
C	553,554,568,709	CEAT100M50
C	559-562,701,702	CEAT2R2M50
C	567,597-599,699	CKSRYB103K50
C	569,632-635,639	CKSRYB104K16
C	591,592	CEAT101M25
C	601,602,621-628	CEAT470M25
C	631,636	CKSRYB222K50
C	637,638,829,830	CCSRCH101J50
C	641,719,720,832	CKSRYB104K16
C	684	CEAT101M16
C	697	CKSRYB105K16
C	698	CKSRYB104K50
C	703,704,825,826	CCSRCH471J50
C	710,713,714,749	CEAT100M50
C	717,718,721,722	CKSRYB103K50
C	741,742,761,762	CEAT2R2M50
C	743,745,763-766	CCSRCH331J50
C	744	CKSRYB223K50
C	746,753,754,773	CKSRYB103K50
C	747,767,768,787	CCSRCH391J50
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	Part No.

B MAIN ASSY

SEMICONDUCTORS

IC	101	PEG479A8
IC	201	BU4842F
IC	202	BR24L64F-W
IC	301,306	TC74VHCT125AFTS1
IC	302	TC74VHC02FTS1
IC	303,401	TC74VHC08FTS1
IC	304,305	TC74VHC125FTS1
IC	402	TC74VHCT08AFTS1
IC	1001,1002,1201,1202	TC74HC4051AFT
IC	1003,1203	TC74HC4053AFT
IC	1004,1205	LA7109
IC	1005,1405	BU4094BCFV
IC	1006	PDC162A
IC	1271	LA7213
IC	1401,1402	TC74LVX4052FT
IC	1403	TC74LVX4053FT
IC	1404	NJM2581M
Q	101,102	UMB1N
Q	103-105,282	DTA124EUA
Q	281,1278,1505,1507	DTC124EUA
Q	301-303,1506,1508	DTA124EUA
Q	381,1277	DTC114EUA
Q	411,1002,1503	2SC4081
Q	1001,1201,1202,1271	2SA1576A
Q	1403-1405,1504	2SA1576A
Q	1501	2SD1664
Q	1502	2SB1132
Q	1509	DTC124EUA
Q	1510	DTA124EUA
D	291,1005	DAP202U
D	292,304,1001-1003	DAN202U
D	296	UDZS5R1(B)
D	303,334,1004,1277	1SS355
D	305	RB520S-30
D	411	UDZS3R9(B)
D	1201,1202	DAN202U

MISCELLANEOUS

L	101,196 CHIP SOLID INDUCTOR	ATL7002
L	461,462 INDUCTOR	CTF1386
L	1001 CHIP COIL	LCYA330J2520
JA	1001-1003 COMB.JACK(2S+2P)	AKB7200
JA	1004 COMB.JACK(S+1P)	AKB7199
JA	1401,1402 6P RCA PINJACK	AKB7201
JA	1403 PIN JACK(1P)	AKB7175
X	101 RESONATOR (24MHz)	CSS1716
X	1001 CRYSTAL RESONATOR (14.31818MHz)	ASS7080
CN	101,102,104 30P SOCKET	XKP3092
CN	103,105 23P PLUG	XKM3006
CN	106,108 19P PLUG	XKM3005
CN	107 11P PLUG	XKM3009
CN	109 33P CONNECTOR	52044-3345
CN	110 CONNECTOR	CKS3376
CN	111,112 PLUG(2P)	KM200NA2
CN	116 6PJUMPER CONNECTOR	52151-0610
CN	117 10P CONNECTOR	VKN1414
CN	119 PLUG(3P)	KM200NA3

Mark	No.	Description	Part No.
	JH 101	PCB BINDER	VEF1040
	JP 113	4P HOUSING WIRE ASSY	ADX7652
	JP 116	CONNECTOR ASSY	PF07PG-R40
A	JP 117	CONNECTOR ASSY	PF09PG-R35

RESISTORS

	All Resistors		RS1/16S###J

CAPACITORS

	C	101,104-107,109	CKSRYB104K16
	C	102,117	CEAT101M16
	C	108,116,118,126	CKSRYB103K50
	C	123,129-133,141	CKSRYB104K16
	C	124,452,454,464	CKSRYB102K50
B	C	140,142	CCSRCH471J50
B	C	201	CKSRYB105K16
	C	202,1035,1036,1039	CKSRYB103K50
	C	291,292,421,1063	CKSRYB473K25
	C	296,412,1441,1445	CEAT100M50
	C	301-306,381,401	CKSRYB104K16
	C	382	CEAT471M6R3
	C	402,411,432,451	CKSRYB104K16
	C	453,461-463,471	CKSRYB104K16
	C	465,472	CKSRYB102K50
	C	1005-1010,1013,1014	CKSRYB104K16
C	C	1011,1012,1016,1018	CEAT101M10
	C	1020,1022,1024,1026	CCSRCH181J50
	C	1034,1061,1062,1225	CEAT101M10
	C	1041,1201-1210,1223	CKSRYB104K16
	C	1050	CCSRCH561J50
	C	1064	CKSRYB473K25
	C	1065,1066	CCSRCH5R0C50
	C	1067,1068	CCSRCH240J50
	C	1069-1071,1076	CCSRCH101J50
	C	1073,1253,1254,1257	CKSRYB103K50
	C	1074,1075	CKSRYB122K50
D	C	1224,1226,1229	CKSRYB104K16
	C	1227,1251,1256,1276	CEAT101M10
	C	1235,1237,1239-1242	CCSRCH181J50
	C	1258,1265,1277,1442	CKSRYB103K50
	C	1271	CEAT221M16
	C	1275	CEAT3R3M50
	C	1278	CEAT220M50
	C	1411-1416,1425,1426	CKSRYB104K16
	C	1420-1424,1487	CEAT101M10
	C	1443,1446,1447,1452	CKSRYB103K50
	C	1451	CEAT100M50
E	C	1453,1475	CKSRYB103K50
	C	1481,1483-1485	CKSRYB104K16
	C	1482	CKSRYB561K50
	C	1501-1504	CKSRYB224K10
	C	1505-1507	CKSRYB104K16

C DSP & USB ASSY

SEMICONDUCTORS

	IC	101	AK4114VQ
⚠	IC	102,802	AAT4618IGV-0.5-1
F	IC	103	BU9450KV
	IC	201,202,502,851	TC74VHC157FTS1
	IC	203	TC74LCX157FTS1
	IC	205	TC74VHC125FTS1
	IC	301	HY57V641620FTP-6
	IC	302	AYW7213
	IC	303,304	TC74LCX573FTS1
	IC	305,751	TC7SH32FUS1
	IC	401	DSPA56720AG
	IC	501	TC74LCX08FTS1
	IC	503	TC74VHCU04FT
	IC	591	AK5358AET
	IC	601,621,641,661	WM8728SEDS
	IC	681	AK4388ET
	IC	701	TC74VHC08FTS1
	IC	702,703	TC74VHCT541AFTS1
⚠	IC	704	BD9107FVM
⚠	IC	705	PQ1LAX95MSPQ
	IC	801	PDC180A8
	IC	808	341S2154
	Q	201,561	DTC124EUA
	Q	601	RTQ025P02
	Q	871	2SA1577
	Q	872	DTC143EUA
	D	131,132	UDZS5R6(B)
	D	561	1SS352
	D	591	MA152WK
	D	592	MA152WA

MISCELLANEOUS

	L	101,102 CHIP SOLID INDUCTOR	QTL1013
	L	106,132 CHIP SOLID INDUCTOR	QTL1013
	L	131,706 CHIP SOLID INDUCTOR	ATL7002
	L	201-203 CHIP SOLID INDUCTOR	QTL1013
	L	205,311 CHIP SOLID INDUCTOR	QTL1013
	L	321,331 CHIP SOLID INDUCTOR	QTL1013
	L	341,401 CHIP SOLID INDUCTOR	QTL1013
	L	403,404 CHIP SOLID INDUCTOR	QTL1013
	L	511,521 CHIP SOLID INDUCTOR	QTL1013
	L	531,561 CHIP SOLID INDUCTOR	QTL1013
	L	591,592 CHIP SOLID INDUCTOR	QTL1013
	L	601,621 CHIP SOLID INDUCTOR	QTL1013
	L	641,661 CHIP SOLID INDUCTOR	QTL1013
	L	681 CHIP SOLID INDUCTOR	QTL1013
	L	701-703 CHIP SOLID INDUCTOR	QTL1013
	L	705 POWER INDUCTOR	ATH7047
	L	707 CHIP BEADS	ATL7010
	L	709,710 CHIP SOLID INDUCTOR	ATL7002
	L	751,801 CHIP SOLID INDUCTOR	QTL1013
	L	803 COIL	VTH1043
	L	804 CHIP FERRITE BEADS	VTL1169
	L	851,881 CHIP SOLID INDUCTOR	QTL1013
	JA	101 PIN JACK(2P)	AKB7173
	JA	102-104 OPT. LINK IN	GP1FAV51RKBF
	JA	105 OPT. LINK IN	GP1FAV51TK0F
	JA	131 4P SOCKET	AKP7201
	X	131 CRYSTAL RESONATOR (45.1584MHz)	ASS7065
	X	531 CRYSTAL RESONATOR (24.576MHz)	XSS3003
	X	801 CRYSTAL OSCILLATOR (12MHz)	CSS1614
	X	881 CRYSTAL OSCILLATOR (32.768kHz)	ASS1172
	CN	401 7P CONNECTOR	VKN1411
	CN	601 CONNECTOR	9604S-23C
	CN	701,704 23P SOCKET	XKP3055
	CN	703 CONNECTOR	CKS4898

Mark	No.	Description	Part No.
CN	801	CONNECTOR	AKM1280
CN	891	5P CONNECTOR	VKN1374
JH	801	PCB BINDER	VEF1040

RESISTORS

R	106,722		RS1/16SS1802F
R	109,154,155,208		RAB4CQ101J
R	116,818,819		RS1/16S0R0J
R	209,223,331,332		RAB4CQ470J
R	210,211,222,224		RAB4CQ101J
R	212,213,226		RAB4CQ221J
R	225,333,334,343		RAB4CQ101J
R	227		RAB4CQ390J
R	341,342,446-448		RAB4CQ470J
R	344,431,515,525		RAB4CQ101J
R	411		RAB4CQ220J
R	412		RAB4CQ103J
R	444		RAB4CQ680J
R	450,451,526,528		RAB4CQ470J
R	527,601,621,641		RAB4CQ101J
R	562		RS1/16S4R7J
R	603,623,643,663		RAB4CQ470J
R	661,708-711,851		RAB4CQ101J
R	706,707,712-715		RAB4CQ104J
R	721,723		RS1/16SS4701F
R	724,725		RAB4CQ104J
R	728		RS1/16SS2002F
R	729		RS1/16SS1202F
R	852,857		RAB4CQ470J
R	853		RAB4CQ101J
R	888		RS1/16SS1003F
Other Resistors			RS1/16SS###J

CAPACITORS

C	102,106,108,111		CKSSYB104K10
C	103,110,136,608		CEVW470M6R3
C	104,107,533		CCSRCH471J50
C	105		CKSRYB474K10
C	109,581,707		CKSSYB102K50
C	114,115,441,582		CKSSYB103K16
C	116-119,133-135		CKSSYB104K10
C	125,131,440,562		CEVW101M16
C	129		CKSRYB104K16
C	130		CKSRYB471K50
C	132,708,710		CKSRYB105K10
C	137,140,201,203		CKSSYB104K10
C	138,139,802,803		CCSSCH120J50
C	142,202,204,206		CKSSYB471K50
C	205,209,311,313		CKSSYB104K10
C	312,315,319,332		CKSSYB471K50
C	314,316-318,320		CKSSYB104K10
C	321,331,341,351		CKSSYB104K10
C	342,401,404,407		CKSSYB471K50
C	402,403,405,406		CKSSYB104K10
C	408,410,412		CKSSYB104K10
C	409,411,413,417		CKSSYB471K50
C	414-416,418,419		CKSSYB104K10
C	420,427,430,433		CKSSYB471K50
C	421,426,428,429		CKSSYB104K10
C	431,432,434,436		CKSSYB104K10
C	435,437,512,522		CKSSYB471K50
C	438,511,521,532		CKSSYB104K10
C	439		ACH7275
C	513,806,807,882		CCSSCH5R0C50
C	534,535		CCSSCH8R0D50
C	561,593,596,597		CKSSYB104K10
C	571-580,595,601		CKSSYB471K50
C	590,709,711		DCH1201
C	591,615-617,736		CKSSYB103K16
C	592,613,633,653		CEVW100M16
C	598,606,626,646		CEVW101M16
C	599		CKSQYB225K10
C	602,605,607,609		CKSSYB104K10
C	604,611,621,624		CKSSYB471K50
C	610,622,625,627		CKSSYB104K10
C	614,634,654,674		CCSSCK1R0C50
C	628,648,668		CEVW470M6R3
C	629,630,642,645		CKSSYB104K10
C	641,644,661,664		CKSSYB471K50
C	647,649,650,662		CKSSYB104K10
C	665,667,669,670		CKSSYB104K10
C	666,809,818		CEVW101M16
C	673		CEVW100M16
C	681,683,685,701		CKSSYB104K10
C	682,737,752,808		CKSSYB471K50
C	684		CEVW220M16
C	687		CEVW220M6R3
C	703,705,720		CKSSYB104K10
C	730-735,751,804		CKSSYB104K10
C	801,884		CCSSCH101J50
C	805,810,814,815		CKSSYB104K10
C	811-813,824,827		CKSSYB471K50
C	816,872		CKSQYB105K16
C	817,823,825,828		CKSSYB104K10
C	820		CEVW2R2M50
C	821		CEVW4R7M35
C	822		CEVW1R0M50
C	851,885		CKSSYB104K10
C	852,886		CKSSYB471K50
C	881		CKSSYB105K6R3
C	883		CCSSCH5R0C50

D FRONT IN ASSY

SEMICONDUCTORS

IC	3651		NJM4565MD
Q	3601		HN1C01FU
D	3653,3654,3661		UDZS5R1(B)

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

RESISTORS

All Resistors			RS1/16S###J

Mark	No.	Description	Part No.
CAPACITORS			
	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
	C	3613,3614	CEAT330M25
	C	3631,3643	CKSRYB104K16
	C	3644	CEAT101M16
	C	3651	CKSRYB471K50
	C	3654,3655	CCSRCH330J50
	C	3662,3665,3666	CEAT100M50
	C	3664,3671,3681,3687	CKSRYB103K50
	C	3673,3682,3688	CKSRYB223K50
	C	3675	CKSRYB102K50

E INTERFACE ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	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			
	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
	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
CAPACITORS			
	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
	C	4863,4872,4883,4893	CKSRYB103K50
	C	4884,4894	CKSRYB102K50

F HDMI & DVC ASSY

Mark	No.	Description	Part No.
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

Mark	No.	Description	Part No.
L	602	CHIP SOLID INDUCTOR	ATL7002
L	631,641,651,661	INDUCTOR	ATL7015
L	671,681	INDUCTOR	ATL7015
L	1001,1151	CHIP BEADS	ATL7010
L	1002	INDUCTOR	DTL1135
L	1003	INDUCTOR	ATL7013
L	1092,1093	INDUCTOR	CTF1386
L	1301-1305	CHIP SOLID INDUCTOR	ATL7002
L	1351	CHIP SOLID INDUCTOR	ATL7002
JA	301	HDMI CONNECTOR	AKP7220
JA	1102,1151,1152	HDMI CONNECTOR	AKP1318
X	101	CRYSTAL RESONATOR (28.322MHz)	ASS7085
X	401	CRYSTAL RESONATOR (28.63636MHz)	ASS7069
X	501	CERAMIC RESONATOR (15.7MHz)	XSS3004
X	1301	CRYSTAL RESONATOR (13.5MHZ)	ASS7070
CN	1001,1002	CONNECTOR	CKS4898

RESISTORS

R	101,103-105		RAB4CQ220J
R	108		RAB4CQ100J
R	115,1385-1388,1394		RAB4CQ680J
R	119,331,333-341		RAB4CQ473J
R	130-132,134-136		RAB4CQ220J
R	141-144		ACN1275
R	204		RAB4CQ330J
R	304		RS1/16SS6800F
R	428,429		RAB4CQ470J
R	432,433		RAB4CQ560J
R	434,437,442,443		RAB4CQ473J
R	446,447,450		RAB4CQ473J
R	464,465,467,468		RAB4CQ472J
R	480-483,1314-1317		RAB4CQ220J
R	579		RAB4CQ0R0J
R	596		RAB4CQ101J
R	609-612		RS1/16SS1201F
R	633,643,653,663		RS1/16SS2200F
R	634,644,654,664		RS1/16SS4700F
R	635,645,655,665		RS1/10S0R0J
R	673,683		RS1/16SS2200F
R	674,684		RS1/16SS4700F
R	675,685,1008,1009		RS1/10S0R0J
R	1002,1004		ACN7156
R	1011		RS1/16SS4702F
R	1012,1022		RS1/16SS1502F
R	1023		RS1/16SS1202F
R	1031,1095,1096		RS1/10S0R0J
R	1052,1053		RS1/10S6R8J
R	1057		RS1/16SS1801F
R	1059		RS1/16SS2001F
R	1071-1073		RS1/16S0R0J
R	1160		RS1/16SS4701F
R	1352		RAB4CQ220J
	Other Resistors		RS1/16SS###J

CAPACITORS

C	101,102,301,302		DCH1165
C	103,104,303-305		CKSQYB106K6R3
C	105,113,121,122		CKSSYB105K6R3
C	106-108,110		CKSSYB104K10
C	109,111,131,152		CKSSYB103K16
C	114-120,123-126		CKSSYB104K10
C	127,320,463,1339		CCSSCH120J50
C	128,462		CCSSCH100D50
C	129,130,133,307		CKSSYB105K6R3
C	132,134-139,151		CKSSYB104K10
C	153,203,204,308		CKSSYB103K16
C	201,205-207,251		CKSSYB104K10
C	202		CEVW4R7M35
C	210		CKSSYB471K50
C	306,309,311,313		CKSSYB104K10
C	310,312,314		CKSSYB105K6R3
C	315,316,351,403		CKSSYB104K10
C	317-319,404,433		CKSSYB105K6R3
C	401,402,419,434		CEVW101M16
C	405-411,418,420		CKSSYB104K10
C	412,414,435,436		CKSSYB103K16
C	413		CKSSYB823K10
C	415		CKSRYB824K10
C	416		CKSSYB393K10
C	417		CKSQYB106K6R3
C	421,1004,1006		CKSSYB102K50
C	422-429,431,437		CKSSYB104K10
C	430,432,1073,1302		CEVW100M16
C	438,441-443		CKSSYB104K10
C	439,440,1056,1303		DCH1201
C	445-449,461,502		CKSSYB104K10
C	501,613,1313		CKSSYB103K16
C	503,601,611,1301		CEVW101M16
C	504,506,508,509		CKSSYB104K10
C	505,610,1314-1318		CKSSYB105K6R3
C	551,552,602-609		CKSSYB104K10
C	612,614,615,617		CKSSYB104K10
C	631,641,651,661		CKSSYB104K10
C	632,633,642,643		CCSSCH101J50
C	652,653,662,663		CCSSCH101J50
C	671,681,1054		CKSSYB104K10
C	672,673,682,683		CCSSCH101J50
C	1001		CEVW470M25
C	1002		CCG1195
C	1005,1012,1017,1018		CKSRYB104K25
C	1010		CKSRYB152K50
C	1011,1024		BCG1059
C	1013,1014,1022		CKSRYB105K10
C	1015		CKSRYB332K50
C	1016		CCSSCH330J50
C	1019		CCSSCH221J50
C	1020		CKSRYB103K25
C	1021,1025,1072		CKSRYB104K25
C	1023		CKSRYB222K50
C	1051,1053		CKSQYB105K25
C	1052		CKSQYB224K25
C	1071		CEVW1R0M50
C	1152-1159,1203,1204		CKSSYB104K10
C	1160		DCH1165
C	1251-1256,1306		CKSSYB104K10
C	1305		CEVW101M16
C	1308-1312,1319-1322		CKSSYB104K10
C	1324-1332,1335-1338		CKSSYB104K10
C	1340		CCSSCH120J50
C	1341,1381-1383		CKSSYB104K10

Mark	No.	Description	Part No.
C	1351		ACH7174
C	1352-1363		CKSSYB105K6R3

H BINDER ASSY

MISCELLANEOUS

JH	3901	PCB BINDER	VEF1040

I BIND L FRONT ASSY

MISCELLANEOUS

JH	5961,5962	PCB BINDER	VEF1040

J BIND L BACK ASSY

MISCELLANEOUS

JH	5971,5972	PCB BINDER	VEF1040

K BIND R FRONT ASSY

MISCELLANEOUS

JH	5981	PCB BINDER	VEF1040

L BIND R BACK ASSY

MISCELLANEOUS

JH	5991	PCB BINDER	VEF1040

M DISPLAY ASSY

SEMICONDUCTORS

IC	3001		PE5615A
IC	3003		S-1200B33-M5
IC	3004		PDC158A8
Q	3001		2SA1576A
Q	3002,3012		DTC124EUA
Q	3004		2SK2034
Q	3005-3011		DTC143EUA
Q	3013		DTA124EUA
D	3001,3003,3004		1SS352
D	3002,3005		DAN202U
D	3006		RB751V-40
D	3007,3009,3011,3013		SLR-343VC(NPQ)
D	3015,3019		SLR343BC4T(JKLM)
D	3017		SLR343WBCT(MNPQ)

MISCELLANEOUS

L	3002	CHIP SOLID INDUCTOR	ATL7002
KN	3001	FL HOLDER(FE)	VNF1096
V	3001	FL TUBE DISPLAY	AAV7113
S	3001-3020,3025	SWITCH	VSG1024
S	3024	ROTARY ENCODER	ASX7048
X	3001	CERAMIC RESONATOR (15.0MHz)	VSS1142
X	3002	CRYSTAL OSCILLATOR (5.00MHz)	CSS1653
CN	3003	CONNECTOR	CKS3398
JH	3001	3P CABLE HOLDER	51048-0300
JH	3002	4P CABLE HOLDER	51048-0400
JP	3001	JUMPER WIRE	D20PDY0305E
JP	3002	JUMPER WIRE	D20PDY0405E
U	3001	REMOTE RECEIVER UNIT	GP1UE274XKC1

Mark	No.	Description	Part No.

RESISTORS

All Resistors			RS1/16S###J

CAPACITORS

C	3001,3006,3030,3036		CKSRYB102K50
C	3002,3003,3008,3045		CKSRYB104K16
C	3004		CCSRCH471J50
C	3007,3091		CEJQ221M6R3
C	3009,3010,3027		CKSRYB103K50
C	3011-3026,3035,3069		CKSRYB471K50
C	3028		CEJQ101M6R3
C	3029,3037,3042,3044		CKSRYB105K10
C	3031		CKSRYB104K50
C	3032		CEAT470M50
C	3034		CEAT101M35
C	3038,3039		CKSRYB102K50
C	3040,3041		CCSRCH120J50
C	3048,3049,3051,3056		CKSRYB104K16
C	3057,3089		CKSRYB104K16
C	3065-3067,3076		CKSRYB103K50
C	3068		CKSRYB153K50
C	3070		CKSRYB471K50

N MULTI JOG ASSY

MISCELLANEOUS

S	3501	ROTARY ENCODER	ASX7031
CN	3501	3P JUMPER CONNECTOR	52147-0310

RESISTORS

All Resistors RS1/16S###J

CAPACITORS

C	3501,3502		CKSRYB103K50

O POWER SW ASSY

SEMICONDUCTORS

Q	3401		DTC143EUA
D	3402		SLR343BC4T(JKLM)

MISCELLANEOUS

S	3401	SWITCH	VSG1024
CN	3401	4P JUMPER CONNECTOR	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

Mark	No.	Description	Part No.

Q HEADPHONE ASSY

MISCELLANEOUS

JA	3451	PHONE JACK	AKN7029
KN	3451	WRAPPING TERMINAL	VNF1084
CN	3451	4P JUMPER CONNECTOR	52147-0410

RESISTORS

		All Resistors	RS1/16S###J

CAPACITORS

C	3451,3452		CKSRYB392K50
C	3453		CKSRYB471K50
C	3454		CKSRYB103K50
C	3455		CKSRYB104K50

R POWER AMP ASSY

SEMICONDUCTORS

⚠ IC	5751		NJM78M12FA
⚠ IC	5752		NJM79M12FA
⚠ IC	5763		BA178M12FP
IC	5771		BA4560RF
⚠ Q	5001,5101,5201,5301		STD03N
⚠ Q	5002,5102,5202,5302		STD03P
Q	5041,5141,5241,5341		2SA1255
⚠ Q	5401,5501,5601		STD03N
⚠ Q	5402,5502,5602		STD03P
Q	5441,5541,5641		2SA1255
Q	5700,5811,5821,5831		DTC114TUA
Q	5701		RN1901
Q	5702,5703		UMD2N
⚠ Q	5705		2SD1763A
⚠ Q	5706		2SC3906K
⚠ Q	5707		2SB1186A
⚠ Q	5708		2SA1514K
Q	5731,5741,5742		2SC4081
Q	5781,5782,5785		DTC124EUA
Q	5783,5784		DTA124EUA
Q	5841,5851		DTC114TUA
⚠ D	5003,5004,5103,5104		1SS355
⚠ D	5005,5006,5105,5106		UDZS4R7(B)
D	5041-5044,5141-5144		1SS355
⚠ D	5203,5204,5303,5304		1SS355
⚠ D	5205,5206,5305,5306		UDZS4R7(B)
D	5241-5244,5341-5344		1SS355
⚠ D	5403,5404,5503,5504		1SS355
⚠ D	5405,5406,5505,5506		UDZS4R7(B)
D	5441-5444,5541-5544		1SS355
⚠ D	5603,5604		1SS355
⚠ D	5605,5606		UDZS4R7(B)
D	5641-5644		1SS355
D	5701,5702,5721,5722		1SS352
⚠ D	5703		S1WB(A)60SD
D	5705,5708,5710		UDZS8R2(B)
D	5706,5782		UDZS7R5(B)
D	5707,5709		UDZS9R1(B)
D	5711,5712		UDZS6R8(B)
D	5713,5714		UDZS12(B)
D	5715,5719,5720		UDZS13(B)
D	5716		UDZS15(B)
⚠ D	5717,5718,5751-5754		1SR154-400
D	5755,5756,5761		RB501V-40
D	5781		UDZS5R1(B)
D	5783,5784,5811,5812		1SS352
D	5821,5822,5831,5832		1SS352
D	5841,5842,5851,5852		1SS352

MISCELLANEOUS

L	5081,5181,5281,5381	COIL	ATH1053
L	5481,5581,5681	COIL	ATH1053
JA	5801	SPEAKER TERMINAL 8-P	AKE7118
JA	5802	SPEAKER TERMINAL 6-P	AKE7107
JA	5803,5804	PIN JACK(4P)	AKB7172
RY	5701	RELAY	ASR7032
RY	5811,5821,5831,5841	RELAY	ASR7001
RY	5851	RELAY	ASR7001
CN	5010,5110,5210	CONNECTOR(05P)	TUC-P05P-B1
CN	5310,5410,5510	CONNECTOR(05P)	TUC-P05P-B1
CN	5610	CONNECTOR(07P)	TUC-P07P-B1
CN	5701	CONNECTOR	B7P-VH
CN	5802,5803	21P PLUG	XKM3011
	5000	SMALL HEATSINK V5S(M	ANH7200
	5001,5002	SCREW	BBZ30P080FCC
JH	5801	4P CABLE HOLDER	51048-0400
JH	5951,5953	PCB BINDER	VEF1040
JP	5701	LEAD WITH HOUSING	ADX7651
JP	5722	AWG14 BOARD IN	ADX7650
JP	5723	AWG14 BOARD IN	ADX7461
JP	5750	CONNECTOR ASSY	PF04PG-R50
JP	5801	JUMPER WIRE	D20PDY0460E
⚠ P	5001,5002	PROTECTOR(7A)	AEK7021
⚠ P	5003,5004	IC PROTECTOR	ICP-N15

RESISTORS

⚠ R	5025,5026,5125,5126		ACN7132
⚠ R	5027,5127,5227,5327		ACN7163
R	5029,5129,5229,5329		RS1/10S0R0J
⚠ R	5081,5181,5281,5381		RS1/2LMF4R7J
⚠ R	5082,5182,5282,5382		RS1LMF100J
⚠ R	5225,5226,5325,5326		ACN7132
⚠ R	5425,5426,5525,5526		ACN7132
⚠ R	5427,5527,5627		ACN7163
R	5429,5529,5629		RS1/10S0R0J
⚠ R	5481,5581,5681		RS1/2LMF4R7J
⚠ R	5482,5582,5682		RS1LMF100J
⚠ R	5625,5626		ACN7132
⚠ R	5701,5702		RS1LMF472J
⚠ R	5703,5704		RS1/2LMF332J
R	5721,5722		RD1/4MUF473J
⚠ R	5811,5812		RS2LMF331J
		Other Resistors	RS1/16S###J

CAPACITORS

C	5011,5012,5111,5112		ACG7056
C	5041,5141,5241,5341		CEHANP2R2M50
C	5081,5082,5181,5182		CFTLA104J50
C	5083,5183,5283,5383		CFTLA103J2A
C	5084-5087,5089		CKSRYB272K50
C	5211,5212,5311,5312		ACG7056
C	5281,5282,5381,5382		CFTLA104J50
C	5411,5412,5511,5512		ACG7056
C	5441,5541,5641		CEHANP2R2M50
C	5481,5482,5581,5582		CFTLA104J50

Mark	No.	Description	Part No.
	C	5483,5583,5683	CFTLA103J2A
	C	5611,5612	ACG7056
	C	5681,5682	CFTLA104J50
	C	5703,5704	CEAT471M2A
	C	5705,5706	CEAT101M63
	C	5707,5708	CEAT221M2A
	C	5721,5722	ACH7258
	C	5723	CEAT100M63
	C	5725,5726,5729,5730	CEATR47M2A
	C	5731	CKSRYB223K50
	C	5741	CEAT331M10
	C	5751,5752	CEAT222M25
	C	5753,5754,5761,5771	CKSRYB103K50
	C	5755,5756	CEAT221M25
	C	5762	CEAT100M50
	C	5766-5769	CKSRYB104K50
	C	5772,5781,5930,5931	CKSRYB103K50
	C	5782	CKSRYB105K10
	C	5891	CEAT101M50
	C	5901-5916	CCSRCH101J50
	C	5917-5924	CEAT470M25

S PRE-STAGE AMP ASSY

SEMICONDUCTORS

	Q	6001,6101,6201,6301	2SD2704K
	Q	6002,6102,6202,6302	IMT4
	Q	6003,6103,6203,6303	2SA1514K
⚠	Q	6004,6104,6204,6304	2SA1145
	Q	6005,6105,6205,6305	2SC2705
	Q	6401,6501,6601	2SD2704K
	Q	6402,6502,6602	IMT4
	Q	6403,6503,6603	2SA1514K
⚠	Q	6404,6504,6604	2SA1145
	Q	6405,6505,6605	2SC2705
⚠	D	6001,6101,6201,6301	UDZS3R6(B)
⚠	D	6002,6102,6202,6302	1SS355
⚠	D	6401,6501,6601	UDZS3R6(B)
⚠	D	6402,6502,6602	1SS355

MISCELLANEOUS

	CN	6010,6110,6210 CONNECTOR(05P)	TUC-P05X-B1
	CN	6310,6410,6510 CONNECTOR(05P)	TUC-P05X-B1
	CN	6603 17P CONNECTOR	52044-1745
	CN	6610 CONNECTOR(07P)	TUC-P07X-B1
		6001,6002 PCB BINDER	VEF1040

RESISTORS

	R	6007,6107,6207,6307	RS1/16S2001F
	R	6009,6109,6209,6309	RD1/2VM473J
	R	6011,6111,6211,6311	RN1/16SE1201D
	R	6023,6024,6123,6124	RD1/4MUF4R7J
	R	6029,6129,6229,6329	RN1/10SE3302D
	R	6030,6130,6230,6330	RN1/16SE1001D
	R	6031,6131,6231,6331	RN1/16SE1500D
	R	6223,6224,6323,6324	RD1/4MUF4R7J
	R	6407,6507,6607	RS1/16S2001F
	R	6409,6509,6609	RD1/2VM473J
	R	6411,6511,6611	RN1/16SE1201D
	R	6423,6424,6523,6524	RD1/4MUF4R7J
	R	6429,6529,6629	RN1/10SE3302D
	R	6430,6530,6630	RN1/16SE1001D
	R	6431,6531,6631	RN1/16SE1500D
	R	6623,6624	RD1/4MUF4R7J
	Other Resistors		RS1/16S###J

CAPACITORS

	C	6001,6101,6201,6301	CEHAT4R7M50
	C	6002,6102,6202,6302	CCSRCH221J50
	C	6004,6104,6204,6304	CKSRYB102K50
	C	6005,6006,6015,6016	CCSRCH220J50
	C	6007,6107,6207,6307	CEHAT101M10
	C	6008,6108,6208,6308	ACG7057
	C	6009,6109,6209,6309	CEHAT100M2A
	C	6017,6117,6217,6317	CEHAT331M10
	C	6023,6024,6123,6124	CEHAT100M63
	C	6032,6132,6232,6332	CKSRYB224K16
	C	6105,6106,6115,6116	CCSRCH220J50
	C	6205,6206,6215,6216	CCSRCH220J50
	C	6223,6224,6323,6324	CEHAT100M63
	C	6305,6306,6315,6316	CCSRCH220J50
	C	6401,6501,6601	CEHAT4R7M50
	C	6402,6502,6602	CCSRCH221J50
	C	6404,6504,6604	CKSRYB102K50
	C	6405,6406,6415,6416	CCSRCH220J50
	C	6407,6507,6607	CEHAT101M10
	C	6408,6508,6608	ACG7057
	C	6409,6509,6609	CEHAT100M2A
	C	6417,6517,6617	CEHAT331M10
	C	6423,6424,6523,6524	CEHAT100M63
	C	6432,6532,6632	CKSRYB224K16
	C	6505,6506,6515,6516	CCSRCH220J50
	C	6527	CCSRCH101J50
	C	6605,6606,6615,6616	CCSRCH220J50
	C	6623,6624	CEHAT100M63

T PRIMARY ASSY

SEMICONDUCTORS

⚠	IC	3701	NJM78M56FA
	Q	3701	DTC143EUA
	D	3701	UDZS5R1(B)
	D	3703,3704,3706	1SS352
⚠	D	3705	S1WB(A)60SD

MISCELLANEOUS

⚠	L	3701 LINE FILTER	XTF3004
	H	3707,3708 FUSE CLIP	AKR7001
	KN	3701 SCREW PLATE	VNE1948
⚠	RY	3701 POWER RELAY	ASR7022
⚠	T	3701 STANDBY TRANSFORMER	ATT7043
⚠	CN	3704 AC CODE SOCKET	RKP1751
⚠	CN	3709 CONNECTOR	B2P3-VH
	JH	3701 6P CABLE HOLDER	51048-0600
	JP	3710 JUMPER WIRE	D20PDY0620E

RESISTORS

	R	3703	RD1/4MUF220J
	Other Resistors		RS1/16S###J

CAPACITORS

	C	3701,3713	CKSRYB103K50
	C	3702	CEAT100M50
⚠	C	3705	XCG3010

Mark	No.	Description	Part No.
	C 3709		CFTLA103J50
⚠	C 3710		ACE7013
	C 3712		CKSRYB102K50
	C 3714		CEAT102M25

U REGULATOR ASSY

SEMICONDUCTORS

⚠	IC 4004		NJM78M05FA
⚠	IC 4005		NJM78M56FA
⚠	IC 4006		NJM79M05FA
⚠	D 4001-4003		1SR154-400
	D 4004-4008		UDZS6R2(B)
⚠	D 4012		D3SBA20(B)
	D 4013,4015,4016		RB501V-40
⚠	D 4014		MTZJ6R2(B)
	D 4029		1SS352

MISCELLANEOUS

H	4001-4004,4007-4010 FUSE CLIP	AKR7001
CN	4001 8P TOP POST	B8B-EH
CN	4003 PLUG(7P)	KM200NA7
CN	4004 PLUG(9P)	KM200NA9
CN	4071 PLUG(4P)	KM200NA4
	4001-4003,4005,4006 PCB BINDER	VEF1040

RESISTORS

	R 4001	RS1/16S473J
⚠	Other Resistors	RD1/4MUF###J

CAPACITORS

	C 4001,4016	CFTLA104J50
	C 4002	CEANP101M35
	C 4003	CEAT101M35
	C 4004	CEAT221M35
	C 4005,4023,4024	CEAT101M16
	C 4006	CEAT470M50
	C 4008,4017,4021,4022	CKSRYB103K50
	C 4018	CEAT221M16
	C 4019	CEAT682M16
	C 4020	CEAT222M16

V DC/DC ASSY

SEMICONDUCTORS

⚠	IC 4251		PQ1CG3032FZ
	D 4251		RB051L-40
⚠	D 4253,4273		D3SBA20(B)
⚠	D 4255		PTZ6R8(B)

MISCELLANEOUS

L	4251 INDUCTOR	ATH7020
H	4251,4252,4271,4272 FUSE CLIP	AKR7001
CN	4251,4252 CONNECTOR	B4B-EH
	4251,4253 PCB BINDER	VEF1040

RESISTORS

⚠	R 4251,4271	RD1/4MUF4R7J
	R 4252	RN1/16SE1800D
	Other Resistors	RS1/16S####D

CAPACITORS

	C 4251,4271	CFTLA104J50
	C 4255	CEHAZL102M25
	C 4257	CEHAZL102M6R3
	C 4258,4259,4267,4275	CKSRYB104K50
	C 4264	ACH7294
	C 4274	CEAT682M16

W POSI1 ASSY

SEMICONDUCTORS

⚠	TH 7001	AEX7006

MISCELLANEOUS

CN	7001 CONNECTOR ASS'Y	PG02KA-E07

X POSI2 ASSY

SEMICONDUCTORS

⚠	TH 7002	PTFM04BB222Q2N34B0

MISCELLANEOUS

CN	7002 CONNECTOR ASS'Y	PG02KA-E07

Y POSI3 ASSY

SEMICONDUCTORS

⚠	TH 7003	AEX7008

MISCELLANEOUS

CN	7003 CONNECTOR ASS'Y	PG03KS-E07

FM/AM TUNER UNIT

FM/AM TUNER UNIT has no service part.