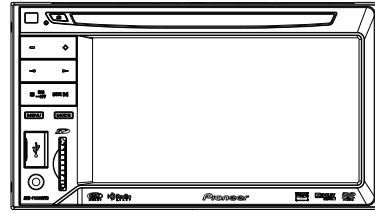


Pioneer

Service Manual



AVH-P3200BT/XNUC

ORDER NO.
CRT4519

DVD AV RECEIVER

AVH-P3200BT /XNUC

AVH-P3250BT /XNRD

AVH-P3200DVD /XNUC

AVH-P3250DVD /XNRC

AVH-P3250DVD /XNRD

AVH-P3250DVD /XNRI

This service manual should be used together with the following manual(s):

Model No.	Order No.	Mech.Module	Remarks
CX-3250	CRT4300	LS1	DVD Mech. Module : Circuit Descriptions, Mech. Descriptions, Disassembly



For details, refer to "Important Check Points for Good Servicing".

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K-ZZZ. JAN. 2010 Printed in Japan

SAFETY INFORMATION

CAUTION

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

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

WARNING

This product may contain a chemical known to the State of California to cause cancer, or birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65

Where in a manufacturer's service documentation, for example in circuit diagrams or lists of components, a symbol is used to indicate that a specific component shall be replaced only by the component specified in that documentation for safety reasons, the following symbol shall be used:



● Safety Precautions for those who Service this Unit.

When checking or adjusting the emitting power of the laser diode exercise caution in order to get safe, reliable results.

Caution:

1. During repair or tests, minimum distance of 13 cm from the focus lens must be kept.
2. During repair or tests, do not view laser beam for 10 seconds or longer.

**CAUTION:
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.**

CAUTION

CLASS 1M INVISIBLE LASER RADIATION WHEN OPEN. DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS

WARNING!

The AEL (accessible emission level) of the laser power output is less than CLASS 1 but the laser component is capable of emitting radiation exceeding the limit for CLASS 1.

A specially instructed person should do servicing operation of the apparatus.

Laser diode characteristics

Wave length:

DVD:660 nm to 670 nm

CD:780 nm to 800 nm

Focus lens on Maximum output:

CD:6.26 mW(Emitting period :9 sec.)

DVD:1.27 mW (Emitting period : unlimited)

Additional Laser Caution

Transistors Q1103 and Q1104 in PCB drive the laser diodes for DVD and CD respectively. When Q1103 or Q1104 is shorted between their terminals, the laser diodes for DVD or CD will radiate beam. If the top cover is removed with no disc loaded while such short-circuit is continued, the naked eyes may be exposed to the laser beam.

[Important Check Points for Good Servicing]

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

1. Product safety



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

- ① Use specified parts for repair.

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

- ② Do not perform modifications without proper instructions.

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

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

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

- ④ Make sure the screws are tightly fastened.

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

- ⑤ Make sure each connectors are correctly inserted.

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

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

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

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

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

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

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

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

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

- ⑩ Safe environment should be secured during servicing.

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

2. Adjustments



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

3. Lubricants, Glues, and Replacement parts



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

4. Cleaning



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

5. Shipping mode and Shipping screws



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

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1. SERVICE PRECAUTIONS

1.1 SERVICE PRECAUTIONS



1. You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.
2. Be careful in handling ICs. Some ICs such as MOS type are so fragile that they can be damaged by electrostatic induction.
3. Before disassembling the unit, be sure to turn off the power. Unplugging and plugging the connectors during power-on mode may damage the ICs inside the unit.
4. To protect the pickup unit from electrostatic discharge during servicing, take an appropriate treatment (shorting-solder) by referring to "the DISASSEMBLY" .
5. After replacing the pickup unit, be sure to skew adjustment.
6. During disassembly, be sure to turn the power off since an internal IC might be destroyed when a connector is plugged or unplugged.
7. Countermeasures to user complaints on iPhone/iPod touch lip synchronization
When a video is replayed, the video and audio may be out of synchronization depending on the connected iPod or iPhone.
If it is annoying, perform the following operation.
However, this operation will slightly deteriorate the sound quality of the iPod source.
Also, it will disable the ASR function when the iPod source is used.

[Default]

Audio digital mode

[Switching procedure]

Press MODE and EJECT and turn on Accessory simultaneously

The above switches the "Audio digital mode" to the "Audio analog mode".

When the mode is switching, the BEEP1 sound will be heard.

[Supplement]

- The mode switching operation can only switch the "Audio digital mode" to the "Audio analog mode".
(The BEEP1 sound will be heard every time.)
- No indication of the mode is provided.

[Resetting the mode]

Reset or BackUP OFF

The above resets the mode to the "Audio digital mode".

8. recautions for AEQ measurement
If the microphone is not connected securely, the microphone input signals may become inaccurate and an error message "Plug the supplied microphone securely into the jack" may appear due to the measurement failure.
9. EJECT LOCK MODE for DVD mechanism
How to enter : Press RESET while pressing [FORWARD] and [EJECT] keys together.
How to exit : Same procedure to enter this mode.
10. When EEPROM is initialized, eject lock may be enabled. Please cancel eject lock in this case.

1.2 NOTES ON SOLDERING

- A
 - 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.

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).

- B 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.

C

D

E

F

2. SPECIFICATIONS

2.1 SPECIFICATIONS

AVH-P3200BT/XNUC, AVH-P3200DVD/XNUC

General

Power source	14.4 V DC (10.8 V to 15.1 V allowable)
Grounding system	Negative type
Maximum current consumption	10.0 A
Backup current	5.0 mA or less
Dimensions (W × H × D):	
D	
Chassis	178 mm × 100 mm × 165 mm (7 in. × 3-7/8 in. × 6-1/2 in.)
Nose	171 mm × 97 mm × 7 mm (6-3/4 in. × 3-7/8 in. × 1/4 in.)
Weight	1.8 kg (4.0 lbs)

Display

Screen size/aspect ratio	5.8 inch wide/16:9 (effective display area: 128.4 × 70.9 mm)
Pixels	345 600 (1 440 × 240)
Display method	TFT active matrix, driving type
Color system	NTSC
Durable temperature range (power off)	-20 °C to +80 °C

Audio

Maximum power output	50 W × 4 70 W × 1/2 ohm (for subwoofer)
Continuous power output	22 W × 4 (50 Hz to 15 000 Hz, 5 % THD, 4 ohm load, both channels driven)
Load impedance	4 ohm (4 ohm to 8 ohm (2 ohm for 1 ch) allowable)
Preout maximum output level	4.0 V

Equalizer (8-Band Graphic Equalizer):

Frequency	40/80/200/400/1k/2.5k/8k/10k Hz
Gain	±12 dB

HPF:

Frequency	50/63/80/100/125 Hz
Slope	-12 dB/oct

Subwoofer (mono):

Frequency	50/63/80/100/125 Hz
Slope	-18 dB/oct
Gain	+6 dB to -24 dB
Phase	Normal/Reverse

Bass boost:

Gain	+12 dB to 0 dB
------	----------------

DVD Player

System	DVD video, Video CD, CD, WMA, MP3, AAC, DivX, JPEG system
Usable discs	DVD video, Video CD, CD, CD-R/RW, DVD-R/RW/RDL
Region number	1
Frequency response	5 Hz to 44 000 Hz (with DVD, at sampling frequency 96 kHz)
Signal-to-noise ratio	96 dB (1 kHz) (IEC-A network) (RCA level)
Output level:	
Video	1.0 Vp-p/75 ohm (±0.2 V)
Number of channels	2 (stereo)
MP3 decoding format	MPEG-1 & 2 Audio Layer 3
WMA decoding format	Ver. 7, 7.1, 8, 9, 10, 11 (2ch audio) (Windows Media Player)
AAC decoding format	MPEG-4 AAC (iTunes encoded only) (.m4a) (Ver. 8.2 and earlier)
DivX decoding format	Home Theater Ver. 3, 4, 5.2, 6 (.avi, .divx)

USB

USB standard specification	USB 1.1, USB 2.0 full speed
Maximum current supply	500 mA
USB Class	MSC (Mass Storage Class)
File system	FAT16, FAT32
MP3 decoding format	MPEG-1 & 2 Audio Layer 3
WMA decoding format	Ver. 7, 7.1, 8, 9, 10, 11 (2ch audio) (Windows Media Player)
AAC decoding format	MPEG-4 AAC (iTunes encoded only) (Ver. 8.2 and earlier)

A DivX decoding format.....Home Theater Ver. 3, 4, 5.2, 6 (.avi, .divx)

SD

Compatible physical formatVersion 1.10
Maximum memory capacity2 GB
File system.....FAT12, FAT16, FAT32
MP3 decoding formatMPEG-1 & 2 Audio Layer 3
WMA decoding formatVer. 7, 7.1, 8, 9, 10, 11 (2ch audio)
B (Windows Media Player)
AAC decoding format.....MPEG-4 AAC (iTunes encoded only)
(Ver. 8.2 and earlier)
DivX decoding format.....Home Theater Ver. 3, 4, 5.2, 6 (.avi, .divx)

FM tuner

Frequency range.....87.9 MHz to 107.9 MHz
Usable sensitivity.....9 dBf (0.8 µV/75 ohm, mono, S/N: 30 dB)
C Signal-to-noise ratio.....72 dB (IEC-A network)

AM tuner

Frequency range.....530 kHz to 1 710 kHz (10 kHz)
Usable sensitivity.....25 µV (S/N: 20 dB)
Signal-to-noise ratio.....62 dB (IEC-A network)

Bluetooth


(AVH-P3200BT)
D Version.....Bluetooth 2.0 certified
Output power+4 dBm Max.
(Power class 2)

CEA2006 Specifications



E Power output14 W RMS × 4 Channels (4 ohm and ≤1 % THD+N)
S/N ratio91 dBA (reference: 1 W into 4 ohm)

 **Note**

Specifications and the design are subject to modifications without notice. 

AVH-P3250BT/XNRD, AVH-P3250DVD/XNRC, AVH-P3250DVD/XNRD, AVH-P3250DVD/XNRI

General

Rated power source.....	14.4 V DC (allowable voltage range: 12.0 V to 14.4 V DC)
Grounding system.....	Negative type
Maximum current consumption	10.0 A
Backup current.....	5.0 mA or less
Dimensions (W × H × D): D	
Chassis.....	178 mm × 100 mm × 165 mm
Nose.....	171 mm × 97 mm × 7 mm
Weight	1.8 kg

Display

Screen size/aspect ratio.....	5.8 inch wide/16:9 (effective display area: 128.4 × 70.9 mm)
Pixels	345 600 (1 440 × 240)
Display method	TFT active matrix, driving type
Color system.....	NTSC/PAL/PAL-M/SECAM compatible
Durable temperature range (power off)	-20 °C to +80 °C

Audio

Maximum power output	50 W × 4 70 W × 1/2 ohm (for subwoofer)
Continuous power output ...	22 W × 4 (50 Hz to 15 000 Hz, 5 % THD, 4 ohm load, both channels driven)
Load impedance	4 ohm (4 ohm to 8 ohm (2 ohm for 1 ch) allowable)
Preout maximum output level	4.0 V
Equalizer (8-Band Graphic Equalizer): Frequency.....	40/80/200/400/1k/2.5k/8k/ 10k Hz
Gain	±12 dB
HPF:	
Frequency.....	50/63/80/100/125 Hz
Slope.....	-12 dB/oct
Subwoofer (mono): Frequency.....	50/63/80/100/125 Hz
Slope.....	-18 dB/oct
Gain.....	+6 dB to -24 dB
Phase	Normal/Reverse
Bass boost:	
Gain.....	+12 dB to 0 dB

DVD Player

System	DVD video, Video CD, CD, WMA, MP3, AAC, DivX, JPEG system
Usable discs	DVD video, Video CD, CD, CD-R/RW, DVD-R/RW/RDL
Region number :	
for Middle East Asian and South African models	2
for Southeast Asian models	3
for South American and Oceanian models	4
Frequency response.....	5 Hz to 44 000 Hz (with DVD), at sampling frequency 96 kHz)
Signal-to-noise ratio.....	96 dB (1 kHz) (IEC-A net- work) (RCA level)
Output level:	
Video.....	1.0 Vp-p/75 ohm (±0.2 V)
Number of channels	2 (stereo)
MP3 decoding format	MPEG-1 & 2 Audio Layer 3
WMA decoding format	Ver. 7, 7.1, 8, 9, 10, 11 (2ch audio) (Windows Media Player)
AAC decoding format.....	MPEG-4 AAC (iTunes en- coded only) (.m4a) (Ver. 8.2 and earlier)
DivX decoding format.....	Home Theater Ver. 3, 4, 5.2, 6 (.avi, .divx)

USB

USB standard specification	USB 1.1, USB 2.0 full speed
Maximum current supply ...	500 mA
USB Class.....	MSC (Mass Storage Class)
File system.....	FAT16, FAT32
MP3 decoding format	MPEG-1 & 2 Audio Layer 3
WMA decoding format	Ver. 7, 7.1, 8, 9, 10, 11 (2ch audio) (Windows Media Player)
AAC decoding format.....	MPEG-4 AAC (iTunes en- coded only) (Ver. 8.2 and earlier)
DivX decoding format.....	Home Theater Ver. 3, 4, 5.2, 6 (.avi, .divx)

A

Compatible physical format
Version 1.10

Maximum memory capacity
 2 GB

File system..... FAT12, FAT16, FAT32

MP3 decoding format MPEG-1 & 2 Audio Layer 3

WMA decoding format Ver. 7, 7.1, 8, 9, 10, 11 (2ch
 audio)
 (Windows Media Player)

AAC decoding format..... MPEG-4 AAC (iTunes en-
 coded only)
 (Ver. 8.2 and earlier)

DivX decoding format..... Home Theater Ver. 3, 4, 5.2,
 6 (.avi, .divx)

B

FM tuner

Frequency range..... 87.5 MHz to 108.0 MHz

Usable sensitivity..... 9 dBf (0.8 μ V/75 ohm,
 mono, S/N: 30 dB)

Signal-to-noise ratio..... 72 dB (IEC-A network)

C

AM tuner

Frequency range..... 531 kHz to 1 602 kHz (9 kHz)
 530 kHz to 1 640 kHz (10
 kHz)

Usable sensitivity..... 25 μ V (S/N: 20 dB)

Signal-to-noise ratio..... 62 dB (IEC-A network)

Bluetooth

(AVH-P3250BT)

Version..... Bluetooth 2.0 certified

Output power +4 dBm Max.
 (Power class 2)

D


Infrared remote control

Wavelength..... 945 nm

Output typ; 10 mw/sr per Infrared
 LED



Note

Specifications and the design are subject to mod-
 ifications without notice. 

E

F

2.2 DISC/CONTENT FORMAT



 is a trademark of DVD Format/Logo Licensing Corporation.



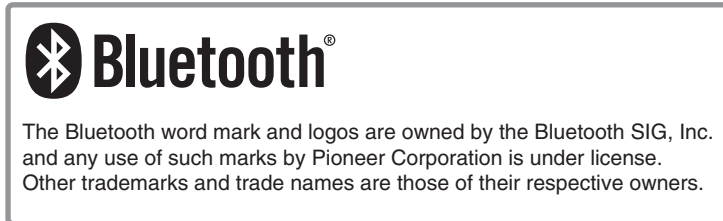
(RC, RD, RI models)



(UC model only)

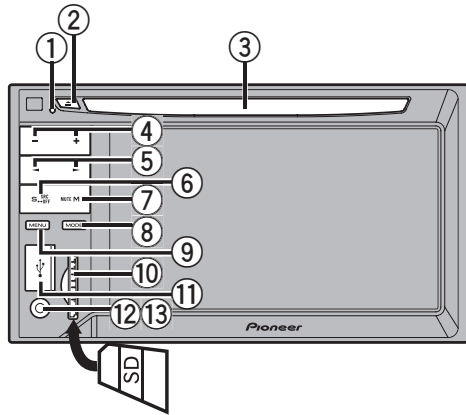


(BT model only)



2.3 PANEL FACILITIES

Head unit



Part	Part
① RESET	⑧ MODE Turning the information display off.
② ▲ (eject)	⑨ MENU Displaying the menu. Returning to the normal display.
③ Disc loading slot	⑩ SD memory card slot
④ + /- (VOLUME/ VOL)	⑪ USB port When connecting, open the USB connector lid.
⑤ ◀/▶ (TRACK/ SEEK)	⑫ AUX input jack (3.5 mm stereo/video jack) Use to connect an auxiliary device.
⑥ SRC/OFF	⑬ Auto EQ microphone input jack Use to connect an auto EQ microphone.
⑦ MUTE	

⚠ CAUTION

- Use an optional Pioneer USB cable (CD-U50E) to connect the USB audio player/USB memory as any device connected directly to the unit will protrude out from the unit and may be dangerous.
- Do not use unauthorized products.
- When inserting an SD card into the card slot, make sure that the label is facing the left.

(UC model only)

- For details on how to operate a navigation unit from this unit, refer to its operation manual.

📝 Note

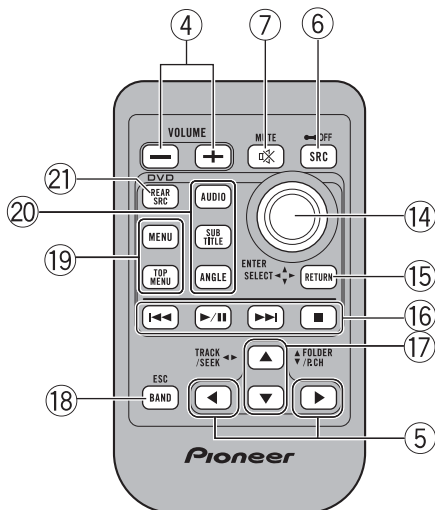
When the navigation unit is connected, press **MODE** to switch to the navigation display. Press **MODE** and hold to turn the display off. Press **MODE** again to turn the display on. ■

Optional remote control

The remote control CD-R55 is sold separately. For details concerning operations, see the remote control manual. ■

**AVH-P3250BT/XNRD,
AVH-P3250DVD/XNRC, AVH-P3250DVD/XNRD, AVH-P3250DVD/XNRI**

Remote control



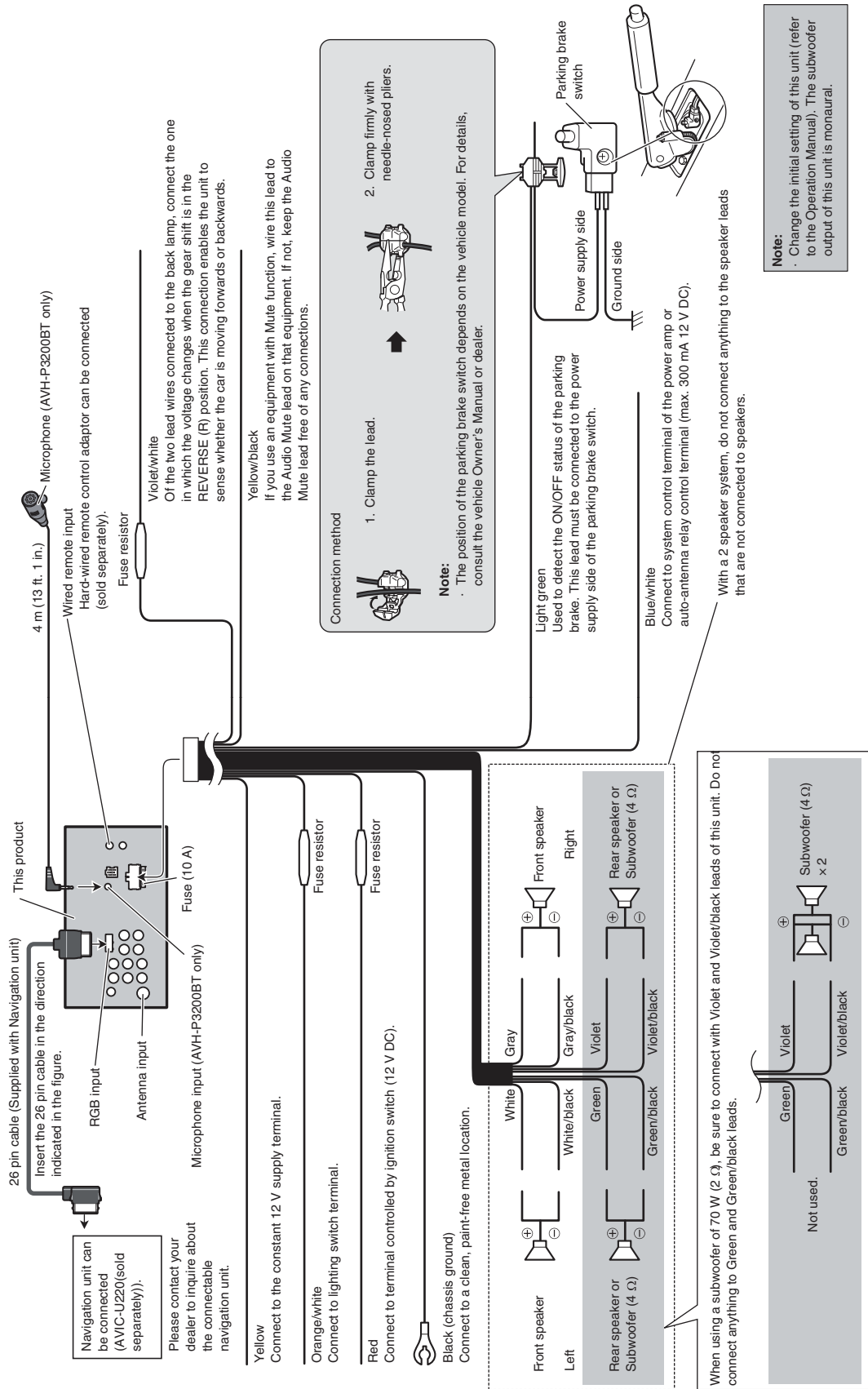
Part	Operation
⑭ Thumb pad	Click to recall Menu . Use to select a menu on the DVD menu.
⑮ RETURN	Press to display the PBC (playback control) menu during PBC playback.
▶/⏸	Press to pause or resume playback.
⏮	Press to return to the previous track (chapter).
⑯ ▶▶	Press to go to the next track (chapter).
■	Press to stop playback.
⑰ ▲/▼(FOLDER/P.CH)	Press to select the next/previous disc/folder. Press to recall radio station frequencies assigned to preset tuning keys.

Part	Operation
⑱ BAND/ESC	Press to select the tuner band when tuner is selected as a source. Also used to cancel the control mode of functions. Press to switch between modes when playing discs with compressed audio and audio data (CD-DA) such as CD-EXTRA and MIXED-MODE CDs.
MENU	Press to display the DVD menu during DVD playback.
⑲ TOP MENU	Press to return to the top menu during DVD playback.
AUDIO	Press to change the audio language during DVD playback. Press to switch audio output for Video CD/DivX.
⑳ SUBTITLE	Press to change the subtitle language during DVD playback.
ANGLE	Press to change the viewing angle during DVD playback.
㉑ REAR SRC	Press to cycle through all the available rear sources. Press and hold to turn the rear source off.

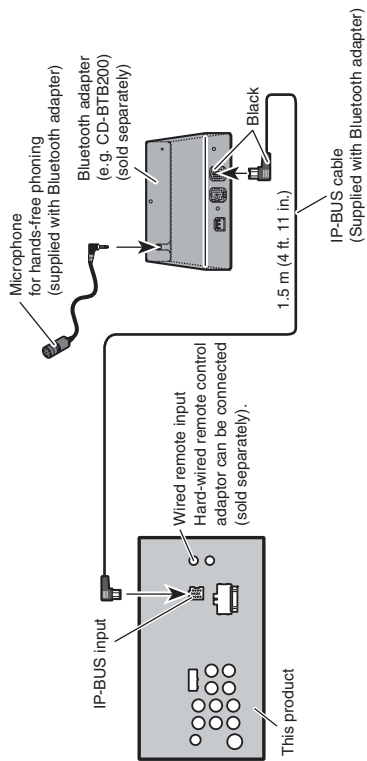
2.4 CONNECTION DIAGRAM

AVH-P3200BT/XNUC, AVH-P3200DVD/XNUC

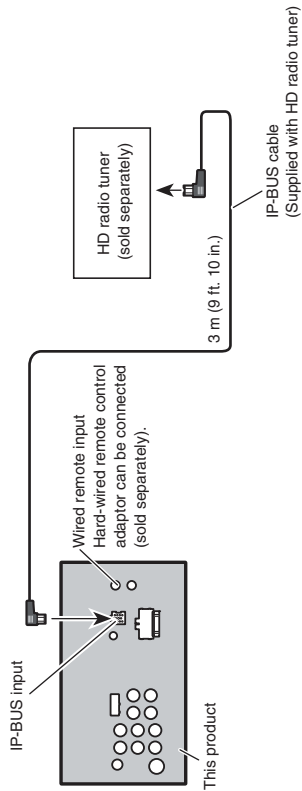
Connecting the power cord



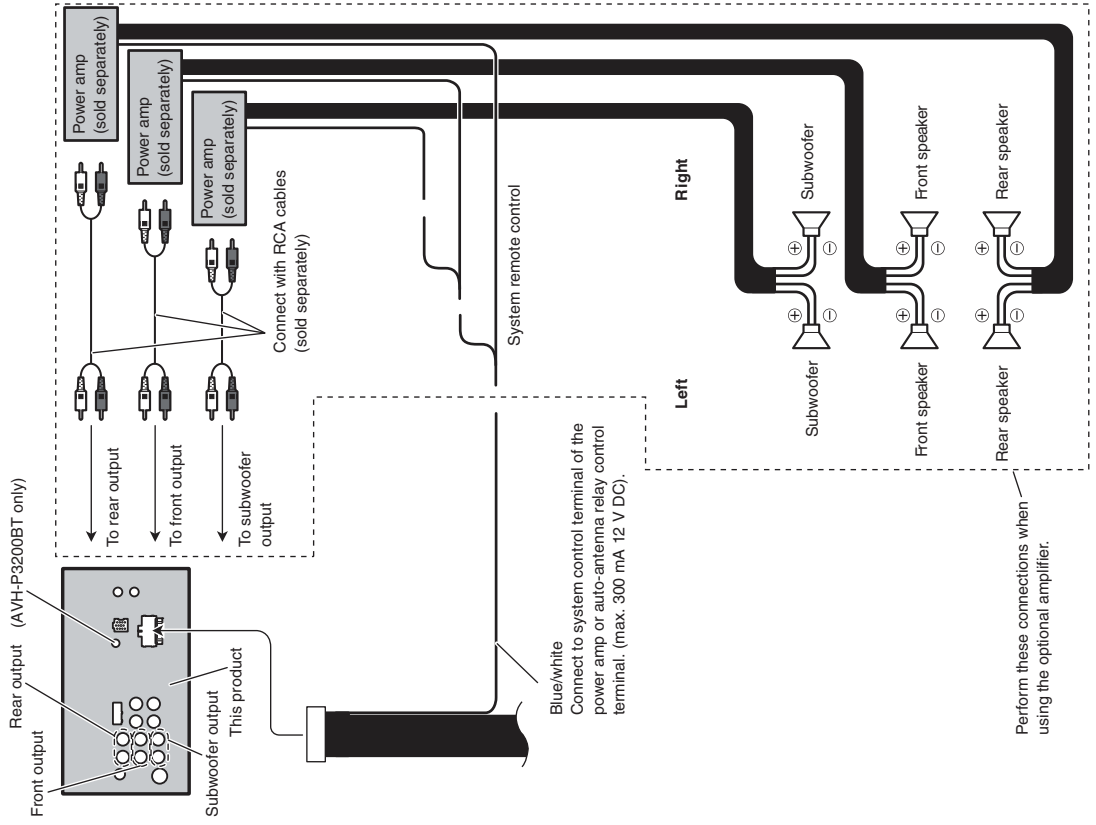
Connecting the system (AVH-P3200DVD)



Connecting the system (AVH-P3200BT)



When connecting to separately sold power amp



When connecting with a rear view camera

When this product is used with a rear view camera, it is possible to automatically switch from the video to rear view image when the gear shift is moved to REVERSE (R).

⚠ WARNING

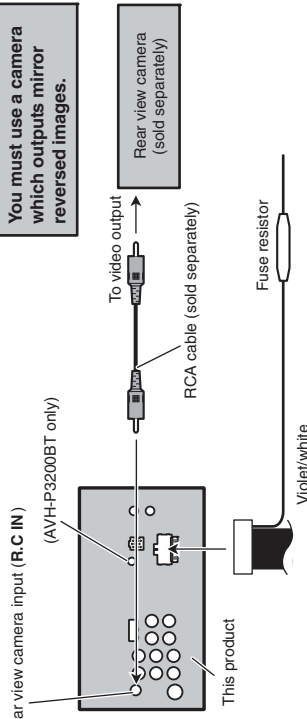
USE INPUT ONLY FOR REVERSE OR MIRROR IMAGE REAR VIEW CAMERA. OTHER USE MAY RESULT IN INJURY OR DAMAGE.

⚠ CAUTION

- The screen image may appear reversed.
- The rear view camera function is to be used as an aid for backing into a tight parking spot. Do not use this function for entertainment purposes.
- Objects in the rear view may appear closer or more distant than they actually are.

⚠ CAUTION

You must use a camera which outputs mirror reversed images.

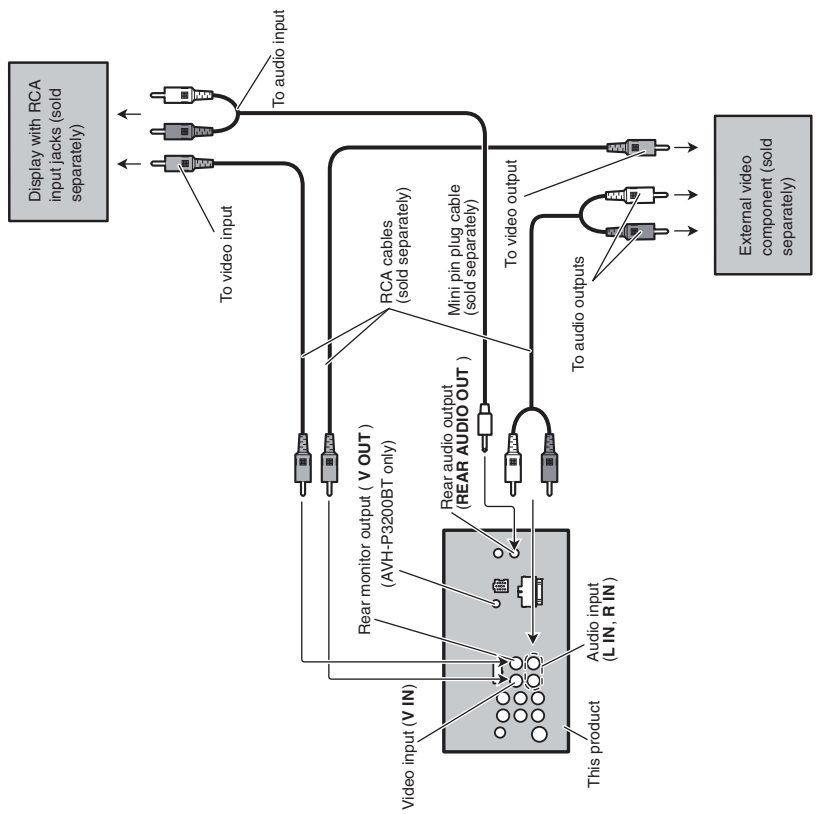


Violet/white
Of the two lead wires connected to the back lamp, connect the one in which the voltage changes when the gear shift is in the REVERSE (R) position. This connection enables the unit to sense whether the car is moving forwards or backwards.

- It is necessary to set **Camera Polarity** properly in **System** when connecting the rear view camera.

AVH-P3200BT/XNUC

When connecting the external video component and the display



- It is necessary to change **AV Input** in **System** when connecting the external video component.

When using a display connected to rear video output

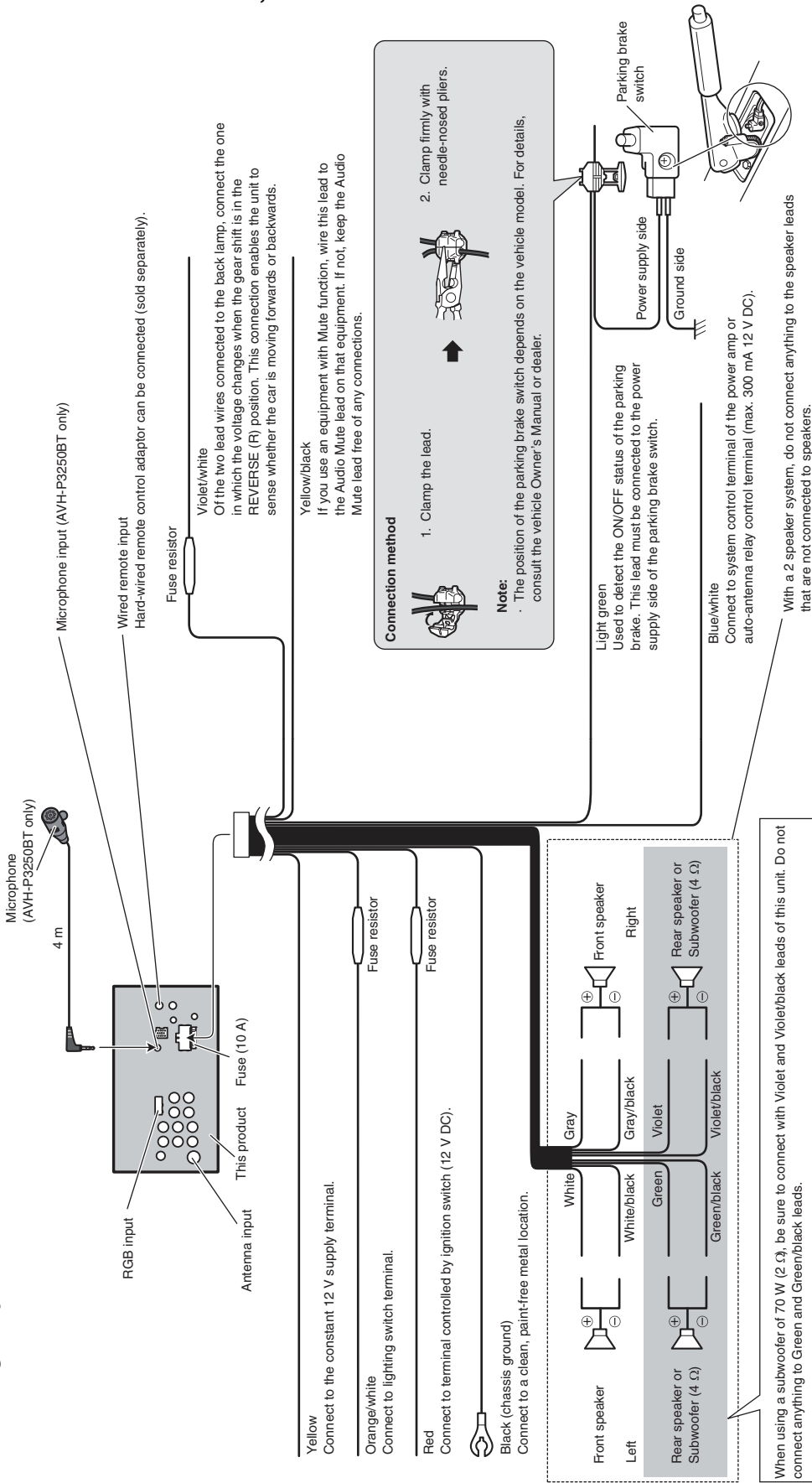
This product's rear video output and rear audio output are for connection of a display to enable passengers in the rear seats to watch the DVD, etc.

⚠ WARNING

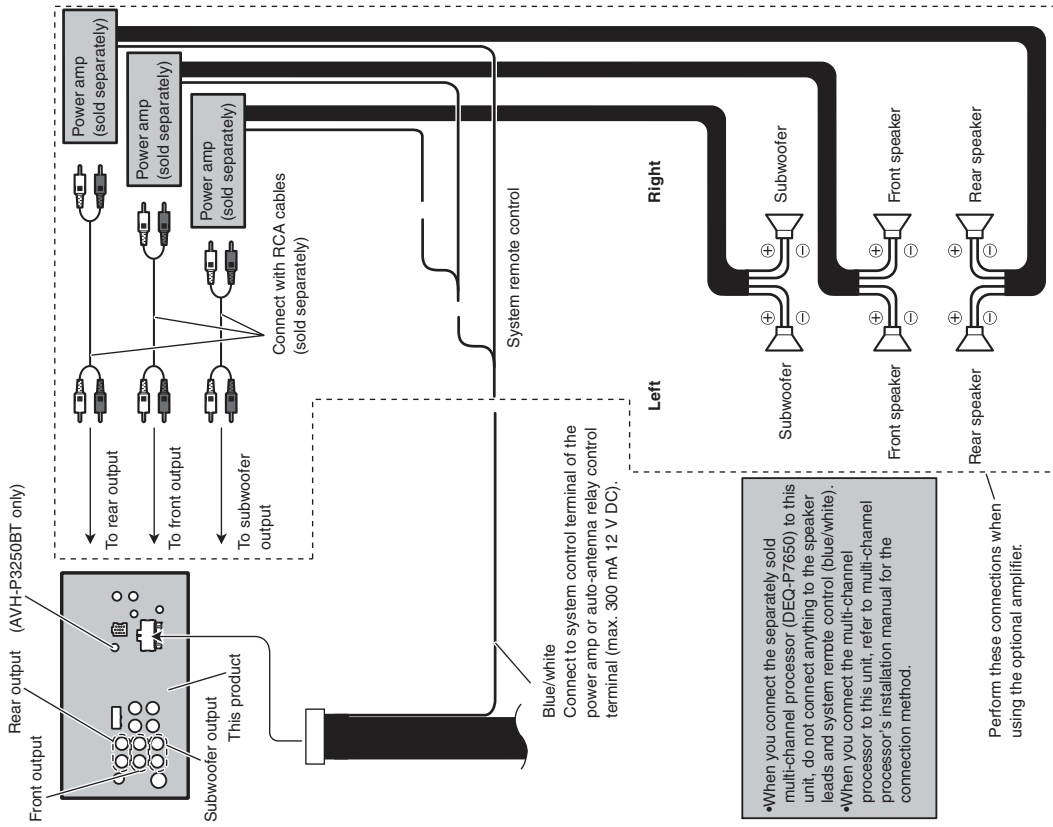
Never install the display in a location where it is visible to the driver while driving.

AVH-P3250BT/XNRD, AVH-P3250DVD/XNRC, AVH-P3250DVD/XNRD, AVH-P3250DVD/XNRI

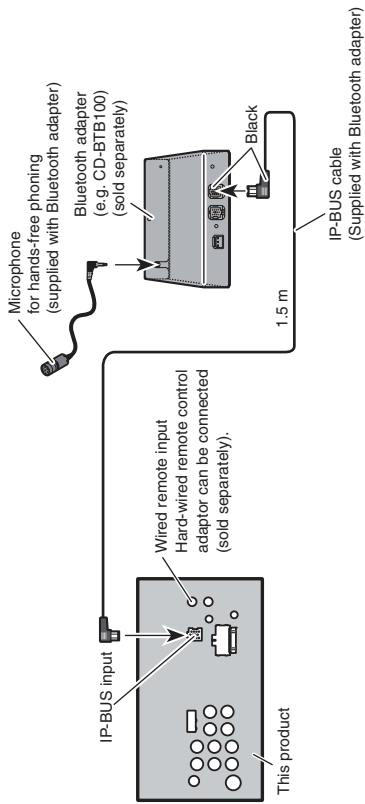
Connecting the power cord



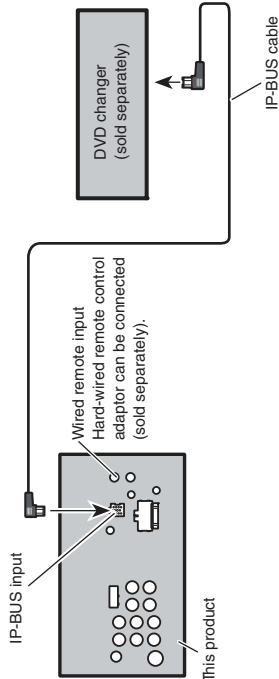
When connecting to separately sold power amp



Connecting the system (AVH-P3250DVD)



Connecting the system (AVH-P3250BT)



When connecting with a rear view camera

When this product is used with a rear view camera, it is possible to automatically switch from the video to rear view image when the gear shift is moved to REVERSE (R).



WARNING

USE INPUT ONLY FOR REVERSE OR MIRROR IMAGE REAR VIEW CAMERA. OTHER USE MAY RESULT IN INJURY OR DAMAGE.



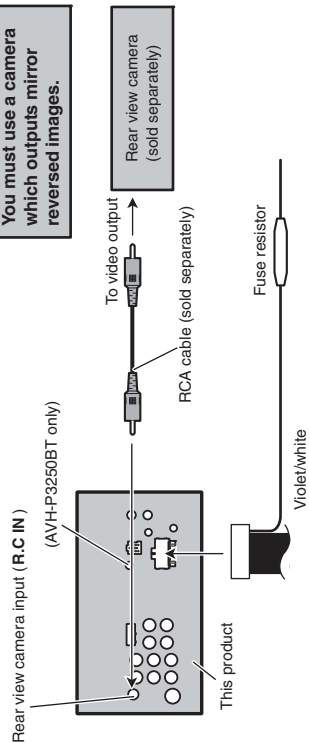
CAUTION

- The screen image may appear reversed.
- The rear view camera function is to be used as an aid for backing into a tight parking spot. Do not use this function for entertainment purposes.
- Objects in the rear view may appear closer or more distant than they actually are.



CAUTION

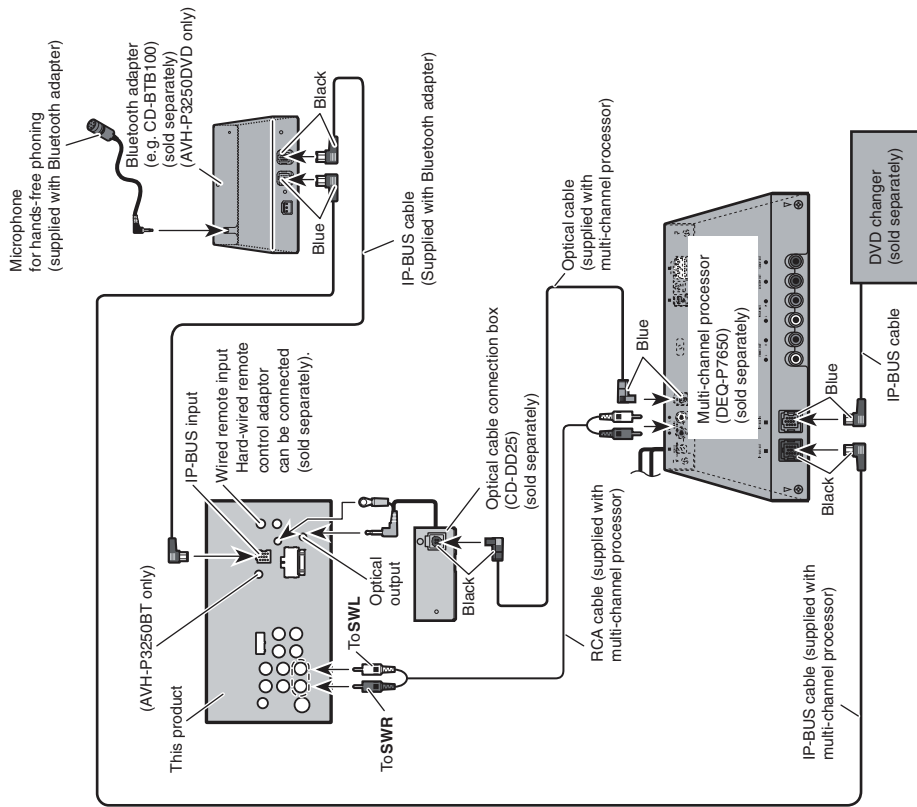
You must use a camera which outputs mirror reversed images.



Of the two lead wires connected to the back lamp, connect the one in which the voltage changes when the gear shift is in the REVERSE (R) position. This connection enables the unit to sense whether the car is moving forwards or backwards.

- It is necessary to set **Camera Polarity** property in **System** when connecting the rear view camera.

When connecting with a multi-channel processor



Connecting and installing the optical cable connection box

⚠ WARNING

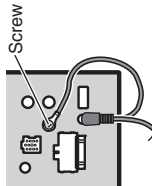
- Avoid installing the optical cable connection box in locations where the operation of safety devices such as airbags is prevented by this unit. Otherwise, there is a danger of a fatal accident.
- Avoid installing the optical cable connection box in locations where the operation of the brake may be prevented. Otherwise, it may result in a traffic accident.
- Fix the optical cable connection box securely with the hook and loop fastener or lock tie. If the unit is loose, it disturbs driving stability, which may result in a traffic accident.

⚠ CAUTION

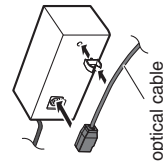
- Install this unit using only the parts supplied with this unit. If other parts are used, this unit may be damaged or could dismount itself, which leads to an accident or other problems.
- Do not install this unit near the doors where rainwater is likely to be spilled on the unit. Incurison of water into the unit may cause smoke or fire.

Connecting the optical cable

1. Connect the optical cable and ground lead to the main unit.
Connect the optical cable so that it does not protrude from the main unit, as shown in the illustration. Fasten the ground lead to the protrusion on the back of the main unit.



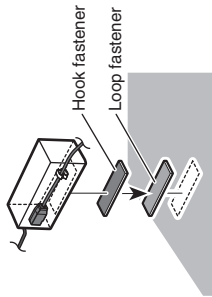
2. Connect the optical cable to the optical cable connection box.



Installing the optical cable connection box

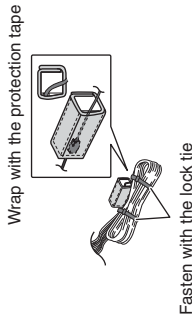
When installing the optical cable connection box with the hook and loop fastener.

- Install the optical cable connection box using the hook and loop fastener in the ample space of the console box.

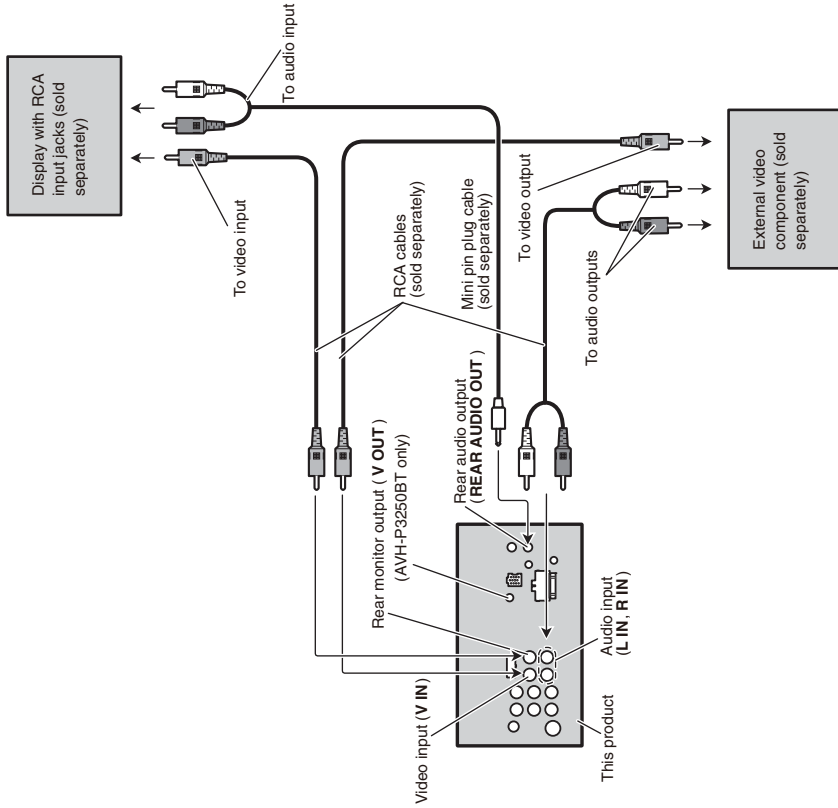


When installing the optical cable connection box with the lock tie.

- Wrap the optical cable and connection box with the protection tape and fasten with the power code using the lock tie.



When connecting the external video component and the display



- It is necessary to change **AV Input** in **System** when connecting the external video component.

When using a display connected to rear video output

This product's rear video output and rear audio output are for connection of a display to enable passengers in the rear seats to watch the DVD, etc.

⚠ WARNING

Never install the display in a location where it is visible to the driver while driving.

3. BASIC ITEMS FOR SERVICE

3.1 CHECK POINTS AFTER SERVICING

To keep the product quality after servicing, please confirm following check points.

No.		Procedures	Item to be confirmed
1		Confirm whether the customer complain has been solved. If the customer complain occurs with the specific media, use it for the operation check.	The customer complain must not be reappeared. Display, video, audio and operations must be normal.
2	DVD	Measure playback error rates at the innermost and outermost tracks by using the test mode with the following disc. DVD test disc (TDV-582)	Deterioration of mecha-drive can be checked. The error rate must be less than the threshold value. (Refer to the chapter of DIAGNOSIS for the threshold value.)
3	DVD	Play back a DVD. (Menu operation; Title/chapter search)	Display, video, audio and operations must be normal.
4	CD	Play back a CD. (Track search)	Display, audio and operations must be normal.
5	FM/AM tuner	Check FM/AM tuner action. (Seek, Preset) Switch band to check both FM and AM.	Display, audio and operations must be normal. * If the reception sensitivity is poorer than normal, the gasket on the FM/AM tuner unit may be damaged or lost.
6		Check whether no disc is inside the product.	The media used for the operating check must be ejected.
7		Appearance check	No scratches or dirt on its appearance after receiving it for service.

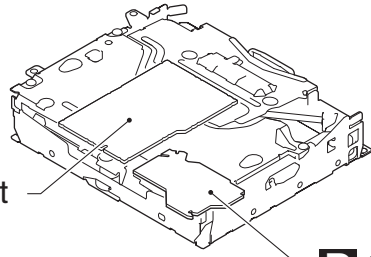
For check items concerning image and voice, please refer to the followings:

Check items concerning image	Check items concerning voice
Block-noise	Distortion
Crosscut noise	Noise
Dot noise	Low volume
Distorted image (Image skip)	High volume
Low brightness	Changes in level
Too bright	Pause of sound
Color fading	
Partial discoloration	

3.2 PCB LOCATIONS

A

C DVD Core Unit



D Connect PCB

B

G SD PCB

H BT ANT PCB

B Interface PCB

E Keyboard PCB

C

F Monitor PCB

A Mother Unit

P:AVH-P3200BT/XNUC
 Q:AVH-P3250BT/XNRD
 J:AVH-P3200DVD/XNUC
 K:AVH-P3250DVD/XNRC
 L:AVH-P3250DVD/XNRD
 M:AVH-P3250DVD/XNRI

Unit Number : (P)
 Unit Number : (Q)
 Unit Number : (J)
 Unit Number : (K)
 Unit Number : (L)
 Unit Number : (M)
 Unit Name : Mother Unit

Monitor I/F Unit
 Consists of
 Interface PCB
 Keyboard PCB
 Monitor PCB
 SD PCB

BT ANT PCB
 Unit Number : (P,Q)
 Unit Number : (J,K,L,M)
 Unit Name : Monitor I/F Unit
 Unit Number : YWX5013
 Unit Name : DVD Core Unit
 Unit Number :
 Unit Name : Connect PCB

F

3.3 JIGS LIST

● Jigs List

Name	Jig No.	Remarks
Disc	TDV-582	Skew adjustment, Check points after servicing, Inspection method of Pickup Unit
Disc	TCD-782	Inspection method of Pickup Unit
	GGF1539	Disconnect the Cord Assy of the BT ANT PCB

● Grease List

Name	Jig No.	Remarks
Grease	GEM1024	DVD Mechanism Module
Grease	GEM1038	DVD Mechanism Module
Grease	GEM1045	DVD Mechanism Module
Locking agents	1401M	Skew adjustment (1401M:produced by THREE BOND)
Bond	GEM1033	Skew adjustment
Bond	1530	Skew adjustment (1530:produced by THREE BOND)

3.4 CLEANING



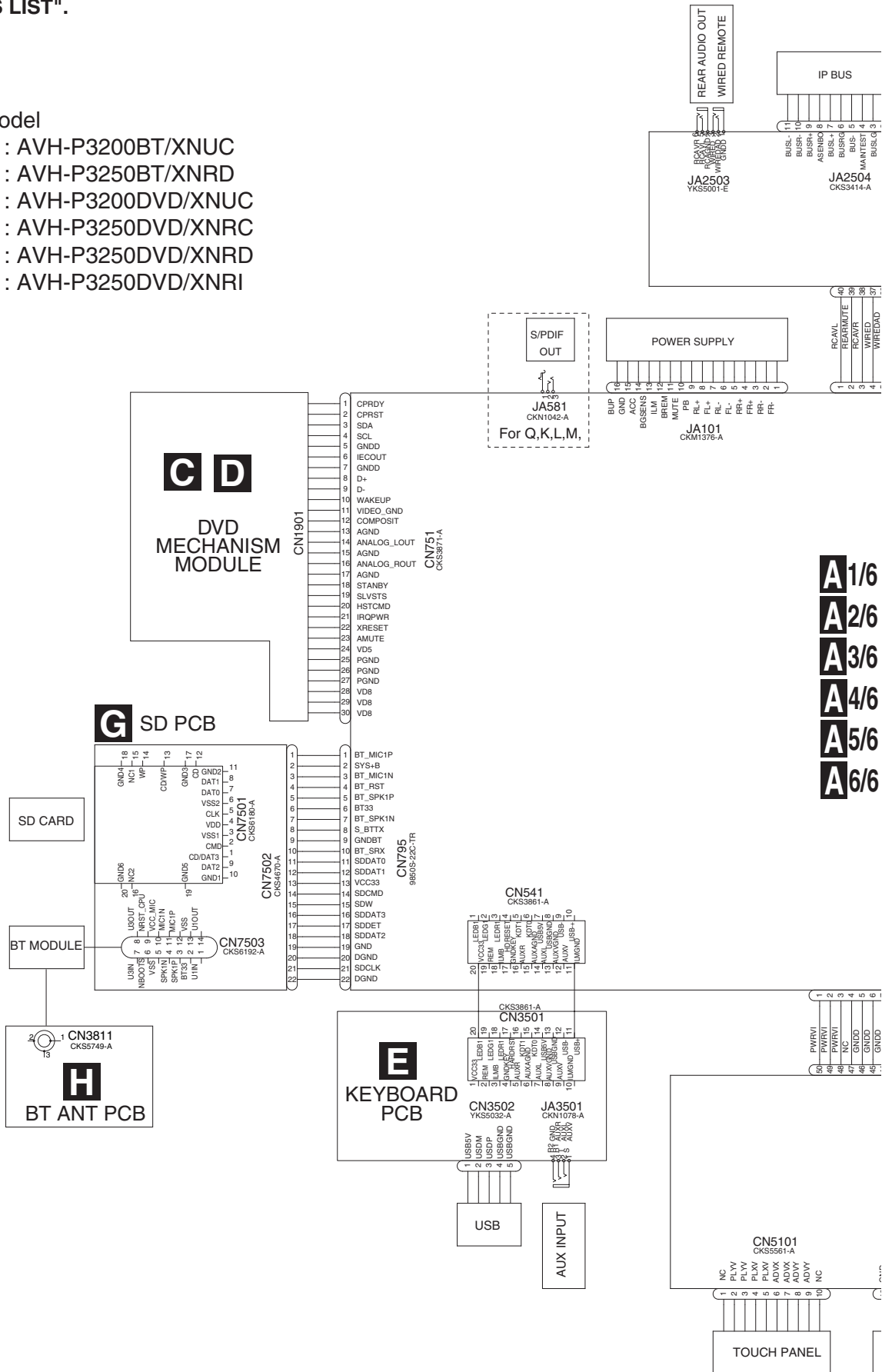
Before shipping out the product, be sure to clean the following portions by using the prescribed cleaning tools:

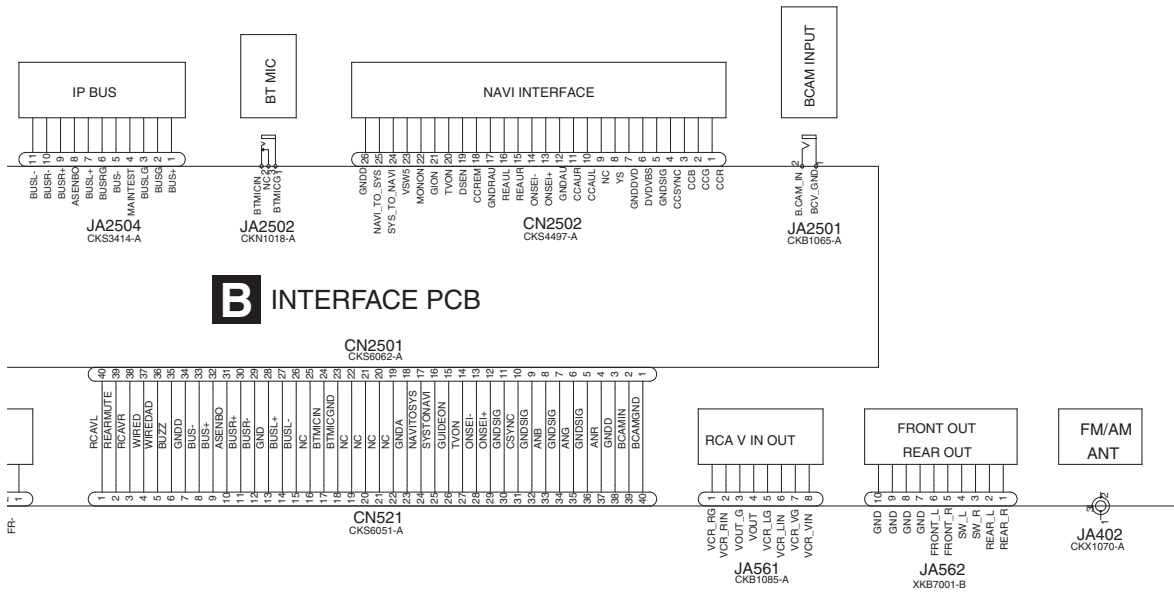
Portions to be cleaned	Cleaning tools
DVD pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

4. BLOCK DIAGRAM

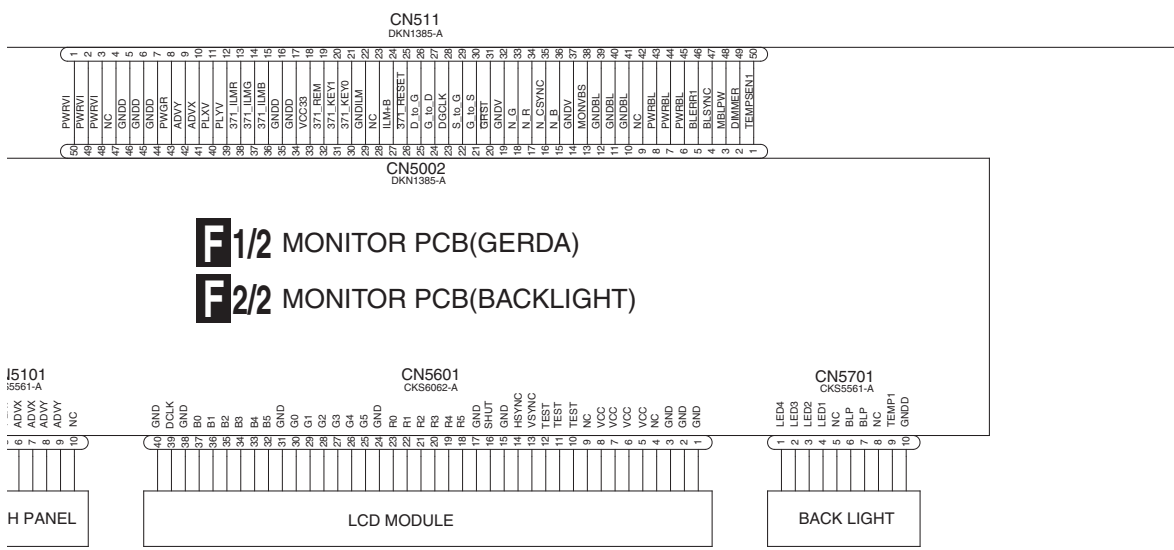
Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".

model
 P : AVH-P3200BT/XNUC
 Q : AVH-P3250BT/XNRD
 J : AVH-P3200DVD/XNUC
 K : AVH-P3250DVD/XNRC
 L : AVH-P3250DVD/XNRD
 M : AVH-P3250DVD/XNRI

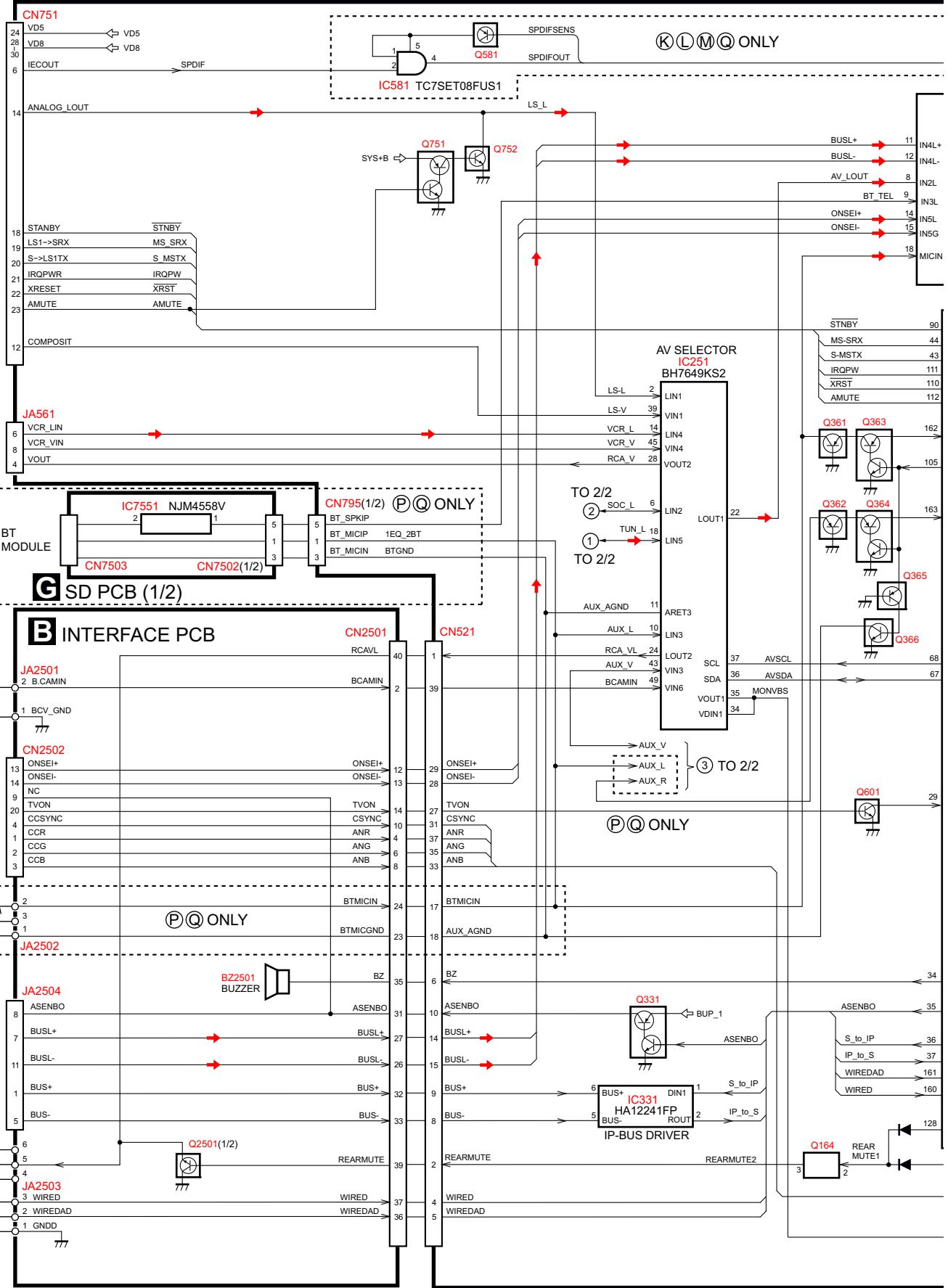


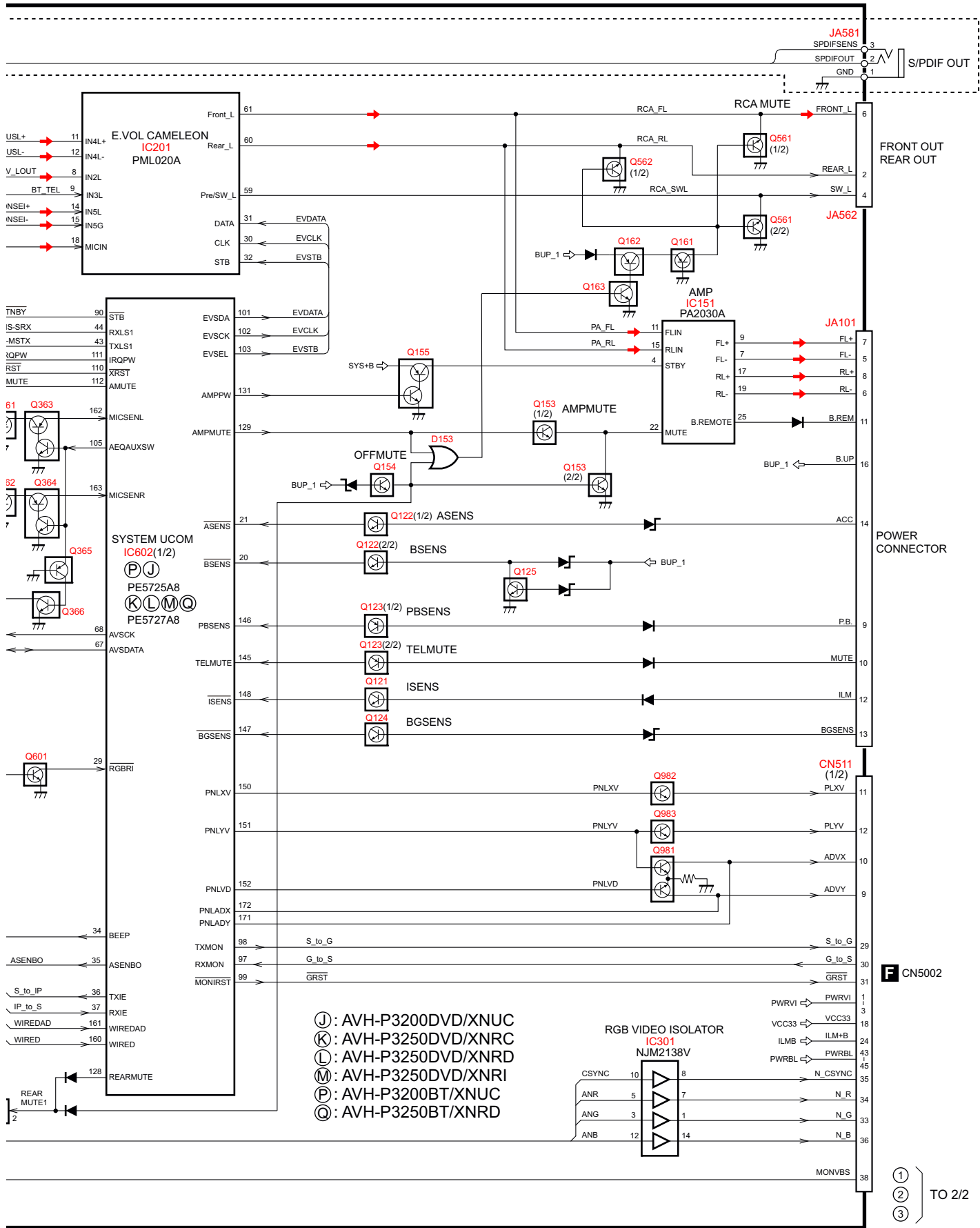


- A1/6** MOTHER UNIT(AUDIO)
- A2/6** MOTHER UNIT(SYSTEM)
- A3/6** MOTHER UNIT(POWER SUPPLY)
- A4/6** MOTHER UNIT(DV5U)
- A5/6** MOTHER UNIT(IN/OUT PUT)
- A6/6** MOTHER UNIT(TUNER)



A MOTHER UNIT (1/2)





(J) : AVH-P3200DVD/XNUC
 (K) : AVH-P3250DVD/XNRC
 (L) : AVH-P3250DVD/XNRD
 (M) : AVH-P3250DVD/XNRI
 (P) : AVH-P3200BT/XNUC
 (Q) : AVH-P3250BT/XNRD

RGB VIDEO ISOLATOR
 IC301
 NJM2138V

(1)
 (2)
 (3) TO 2/2

A MOTHER UNIT (2/2)

A

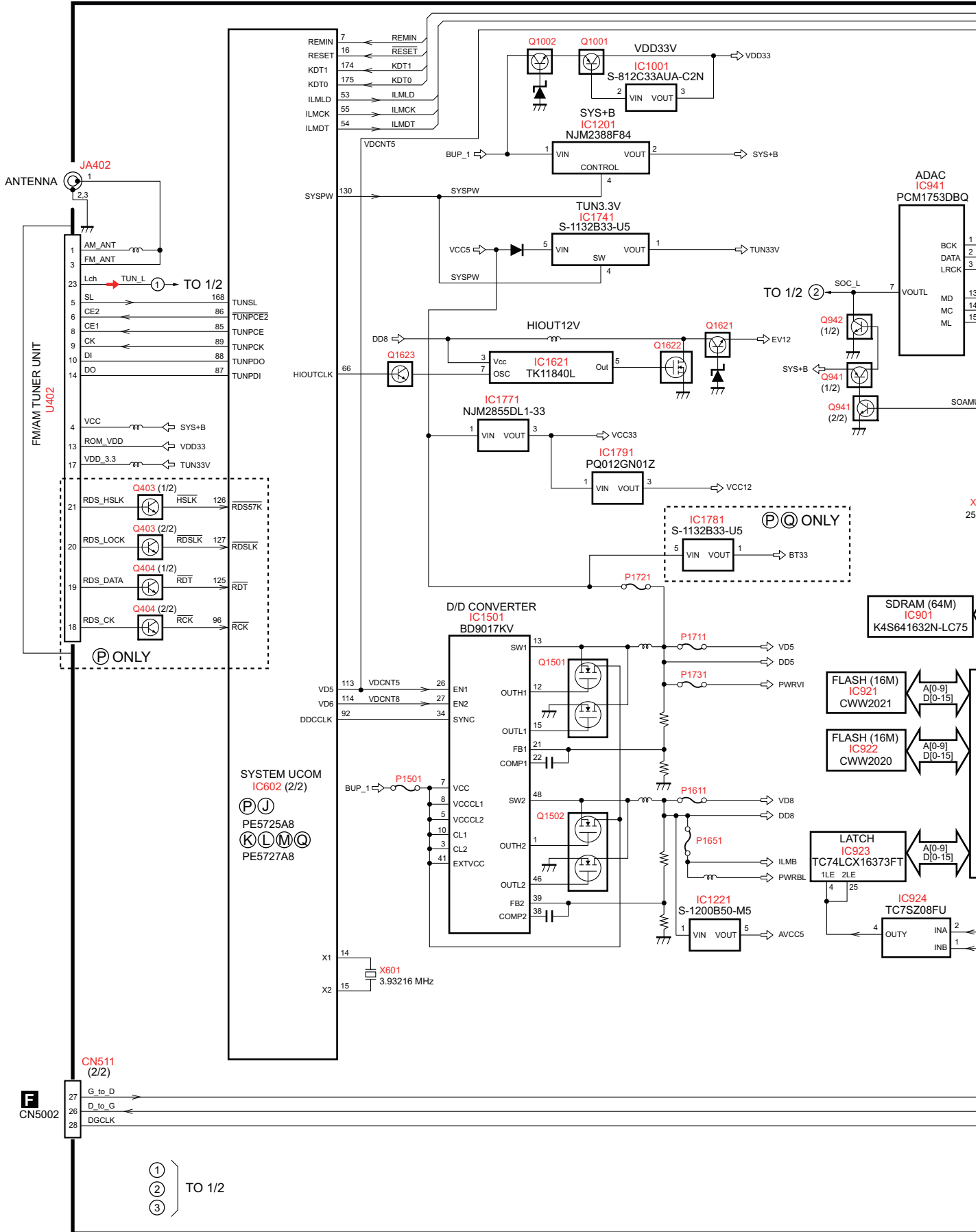
B

C

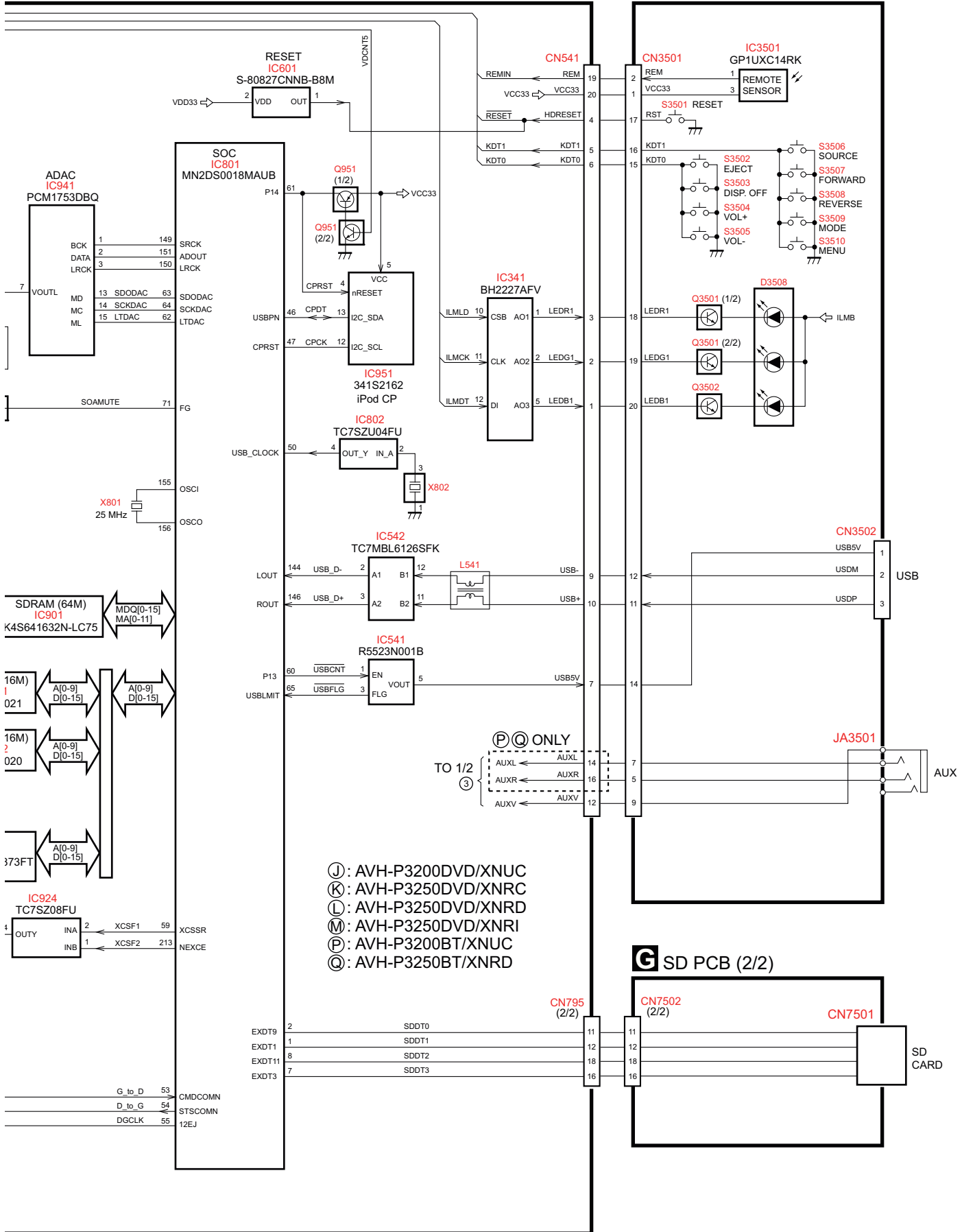
D

E

F

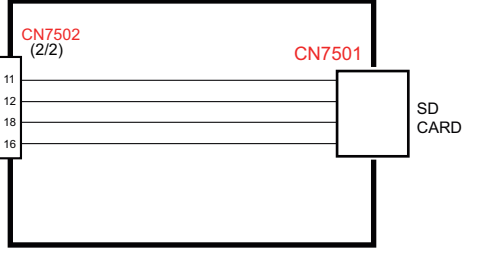


E KEYBOARD PCB



- Ⓧ : AVH-P3200DVD/XNUC
- Ⓨ : AVH-P3250DVD/XNRC
- Ⓩ : AVH-P3250DVD/XNRD
- ⓓ : AVH-P3250DVD/XNRI
- Ⓟ : AVH-P3200BT/XNUC
- Ⓠ : AVH-P3250BT/XNRD

G SD PCB (2/2)



A

B

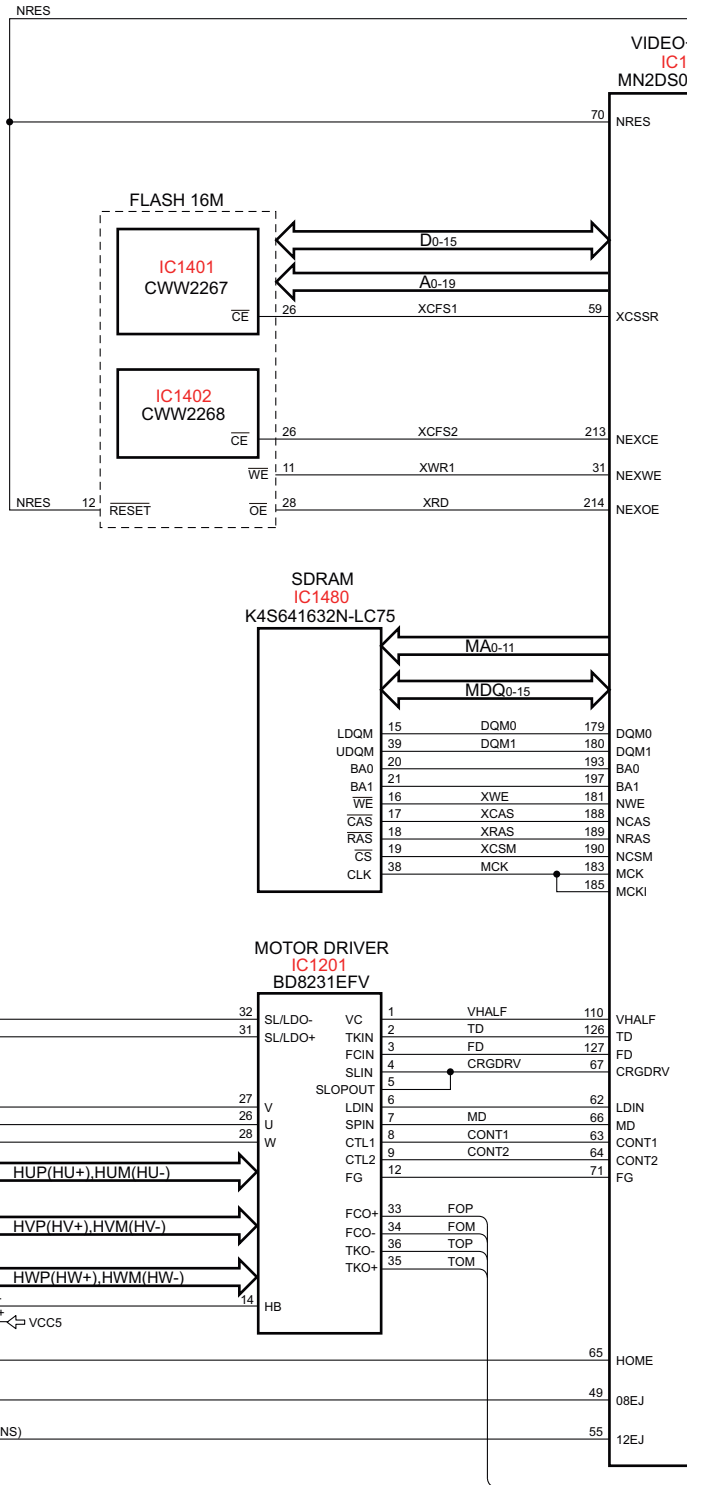
C

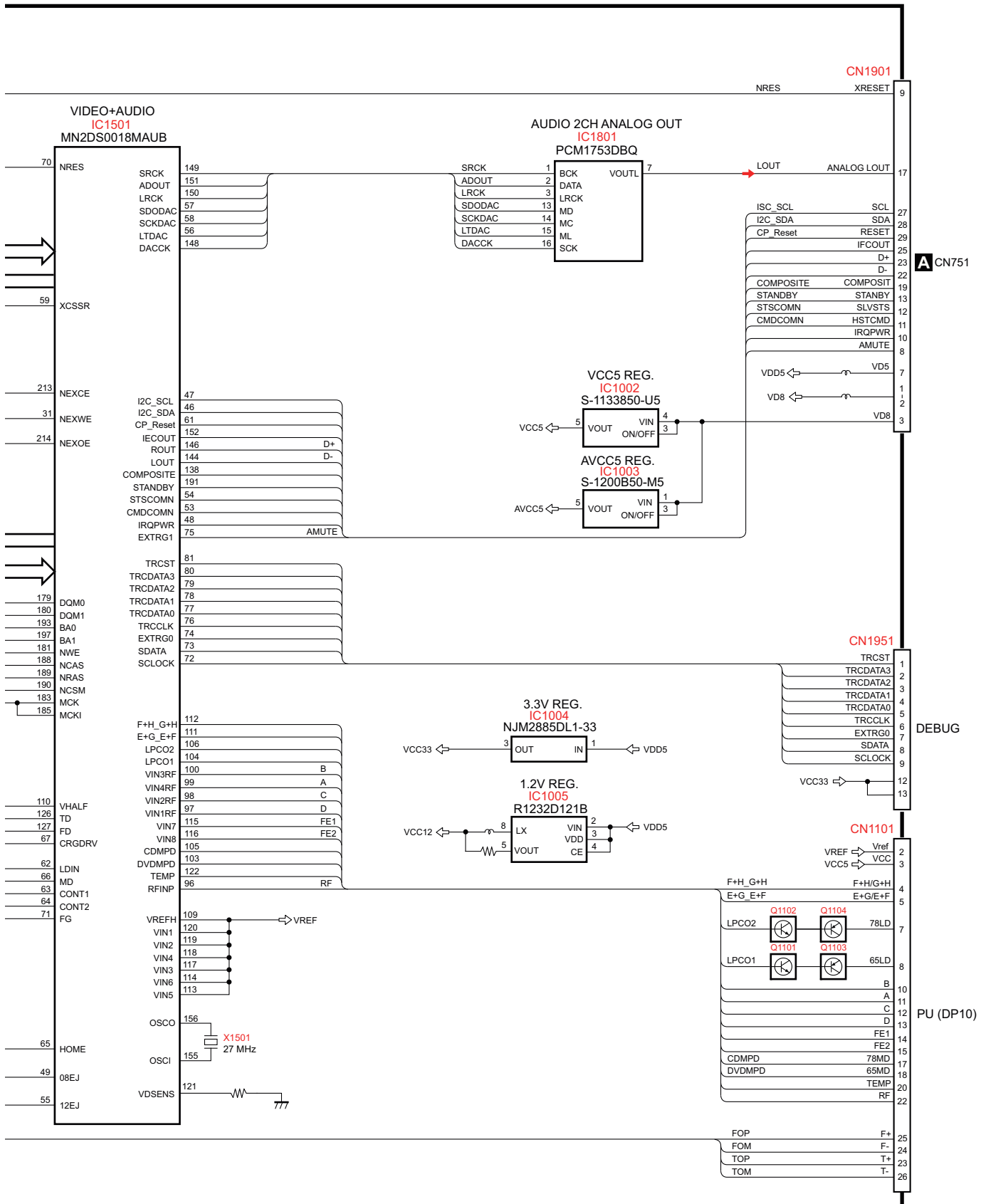
D

E

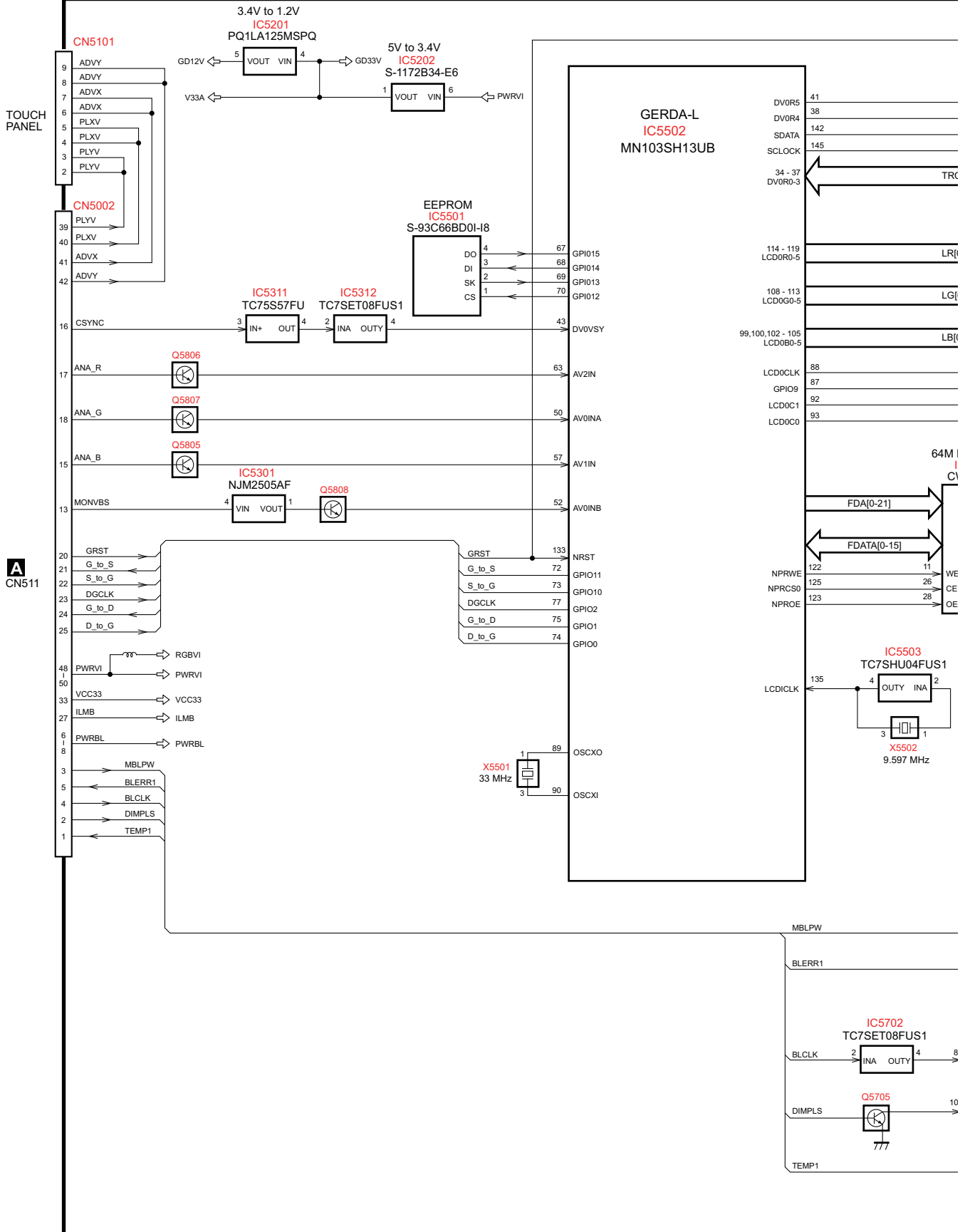
F

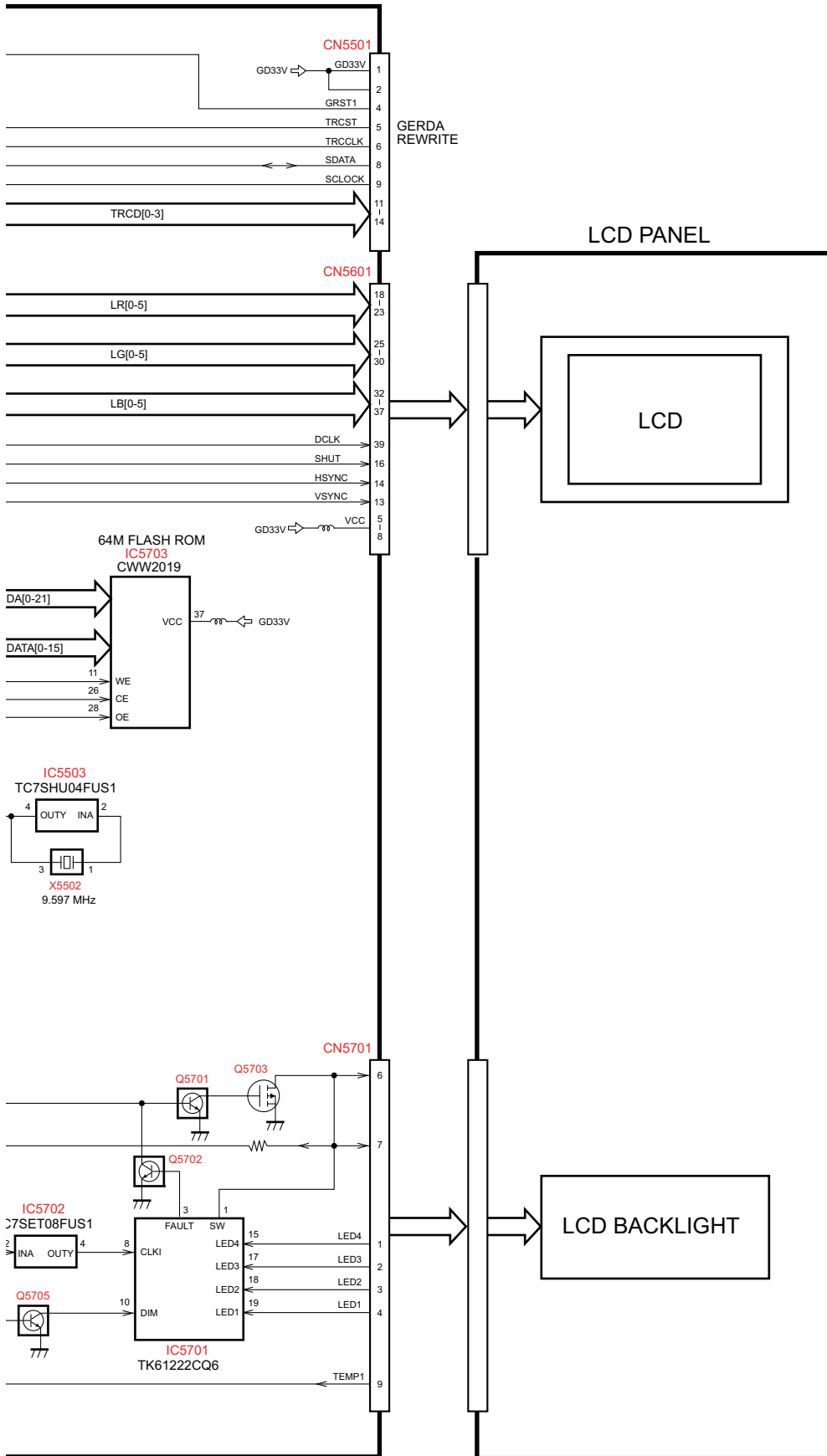
DVD CORE UNIT





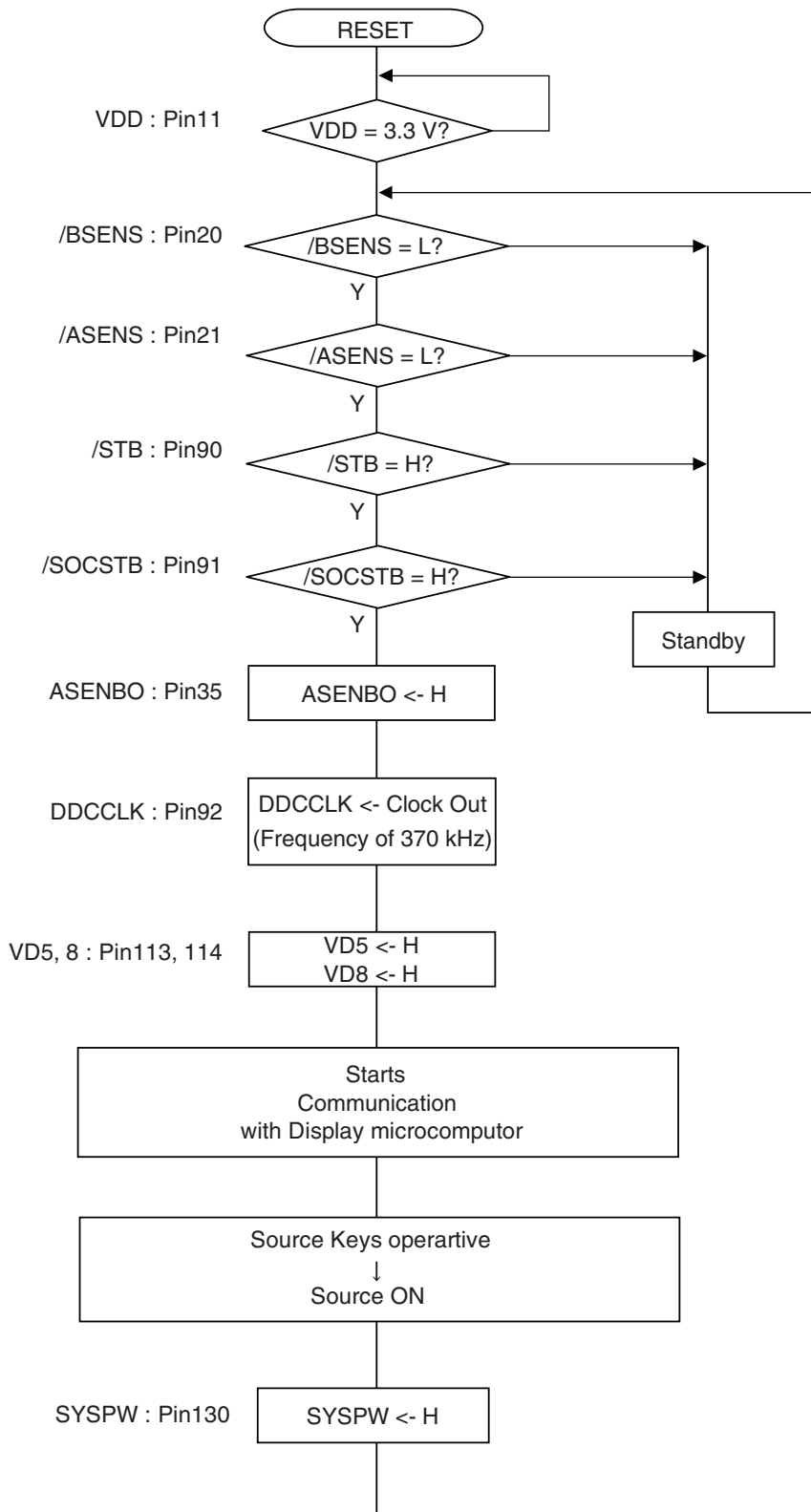
F MONITOR PCB





5. DIAGNOSIS

5.1 OPERATIONAL FLOWCHART



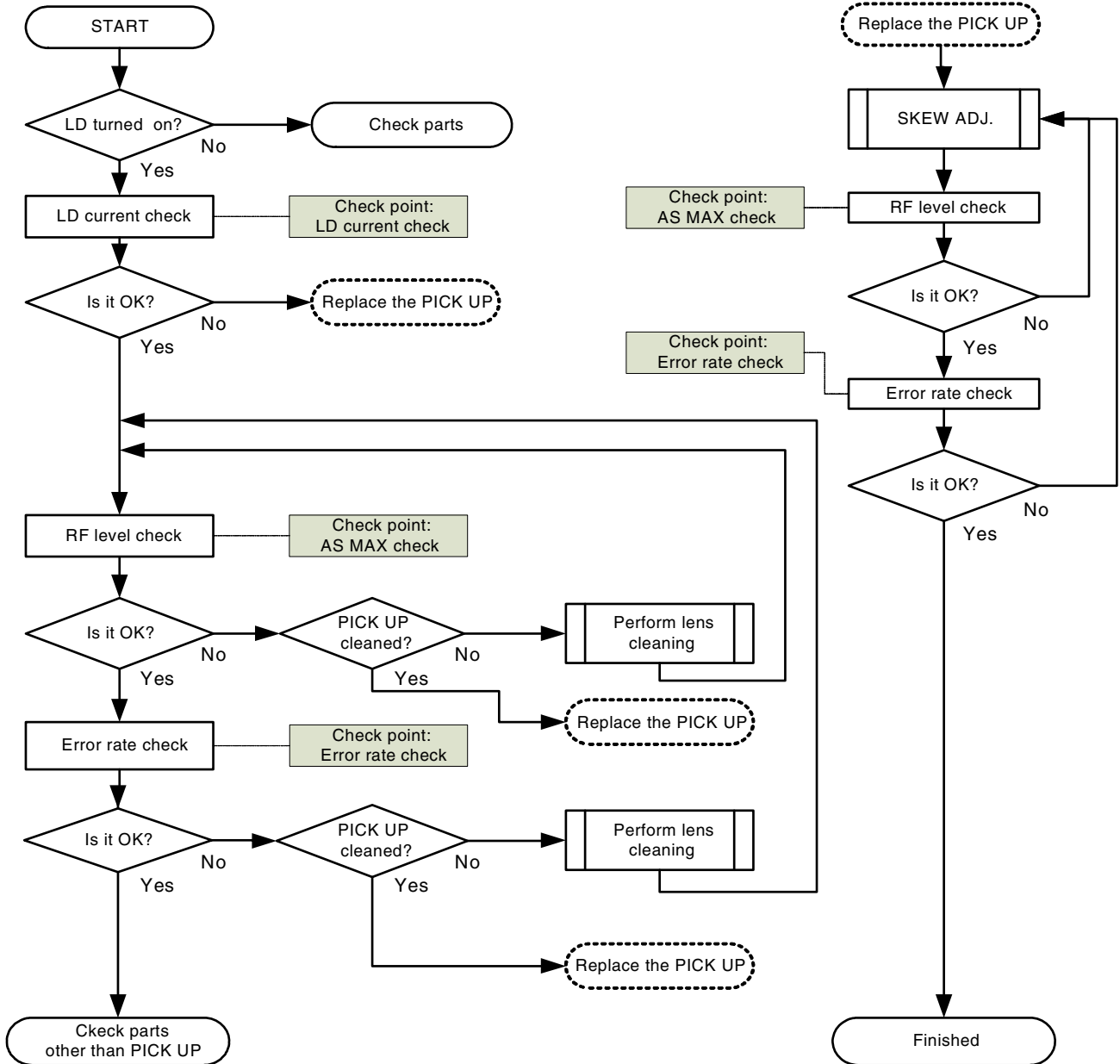
5.2 INSPECTION METHOD OF PICKUP UNIT

Disc to be used

CD-DA: TCD-782

DVD-Video: TDV-582

Execution method

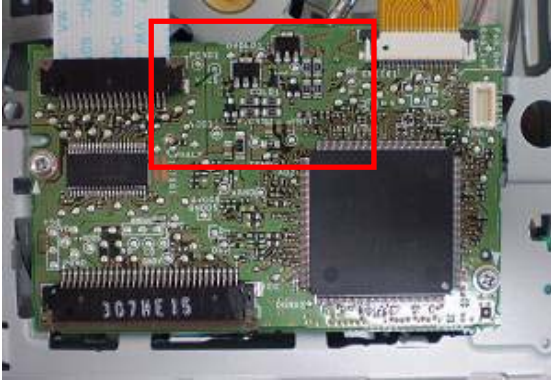


LD current check

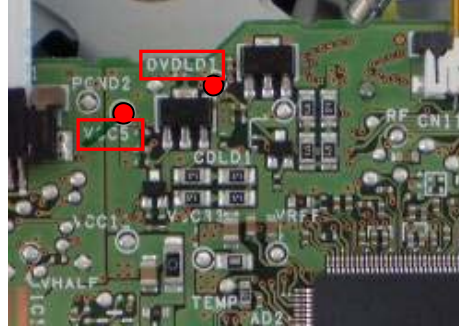
A Check
Status: [Foucs closed] of TEST MODE

NO.	Disc	Check Point	Threshold	Remarks: LD current
1	GGV1025	DVDLD1-VCC5_3	60 - 390 (mV)	10 - 65 (mA)

B



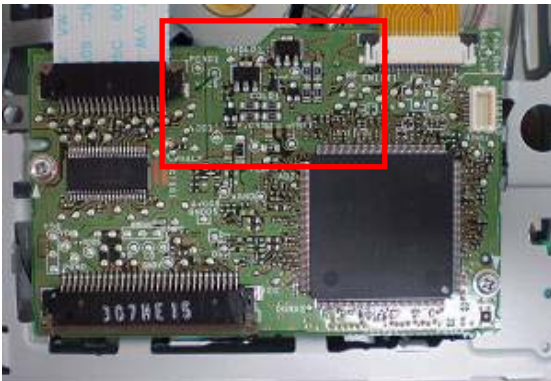
Expansion
→



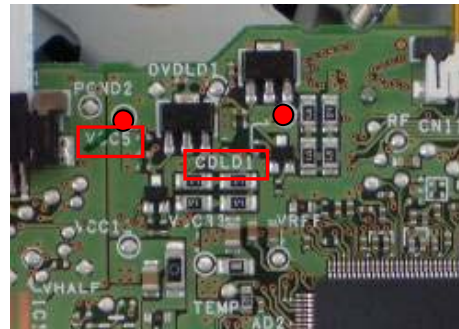
C

NO.	Disc	Check Point	Threshold	Remarks: LD current
2	TCD-782	CDLD1-VCC5_3	60 - 360 (mV)	10 - 60 (mA)

D



Expansion
→



Notes: Please pay attention to the laser diode damage by static electricity.

E

F

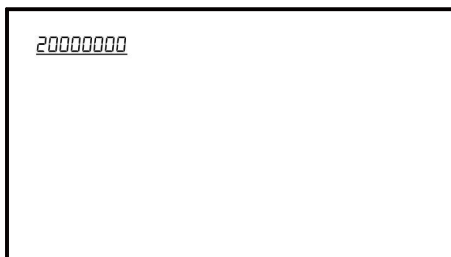
ASMAX check

ASMAX value shows the value of RF level.

Status: [Focus closed] of TEST MODE

No.	Disc	Check Point	Threshold	Remarks:
1	GGV1025	8 digits value of ASMAX on display	more than 0000 0B00	Only four last digits are displayed according to the product.
2	TCD-782	8 digits value of ASMAX on display	more than 0000 0C00	Only four last digits is displayed according to the product.

Test mode display will not appear on the display of this product. Connect the rear monitor output to a monitor.



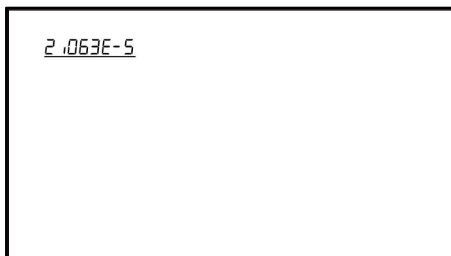
In this case, the value is displayed for a split second. When you tried to perform [FOCS CLOSE], the display will change automatically in the following order. [1FFF0000]->[FEMAX]->[FE MIN]->[AS MAX]->[ENV MAX]->[FE normal]->[Spindle gain]->[TEMAX]->[TEMIN]->[20000000] Watch carefully the value of ASMAX.

Error rate check

Status: [Tracking Closed] of TEST MODE

No.	Disc	Check Point	Threshold	Remarks:
1	GGV1025	ID: 40000	less than 1.000E-03	
2	GGV1025	ID: 200000	less than 1.000E-03	
3	TCD-782	ID: HOME Position	less than 2.500E-03	

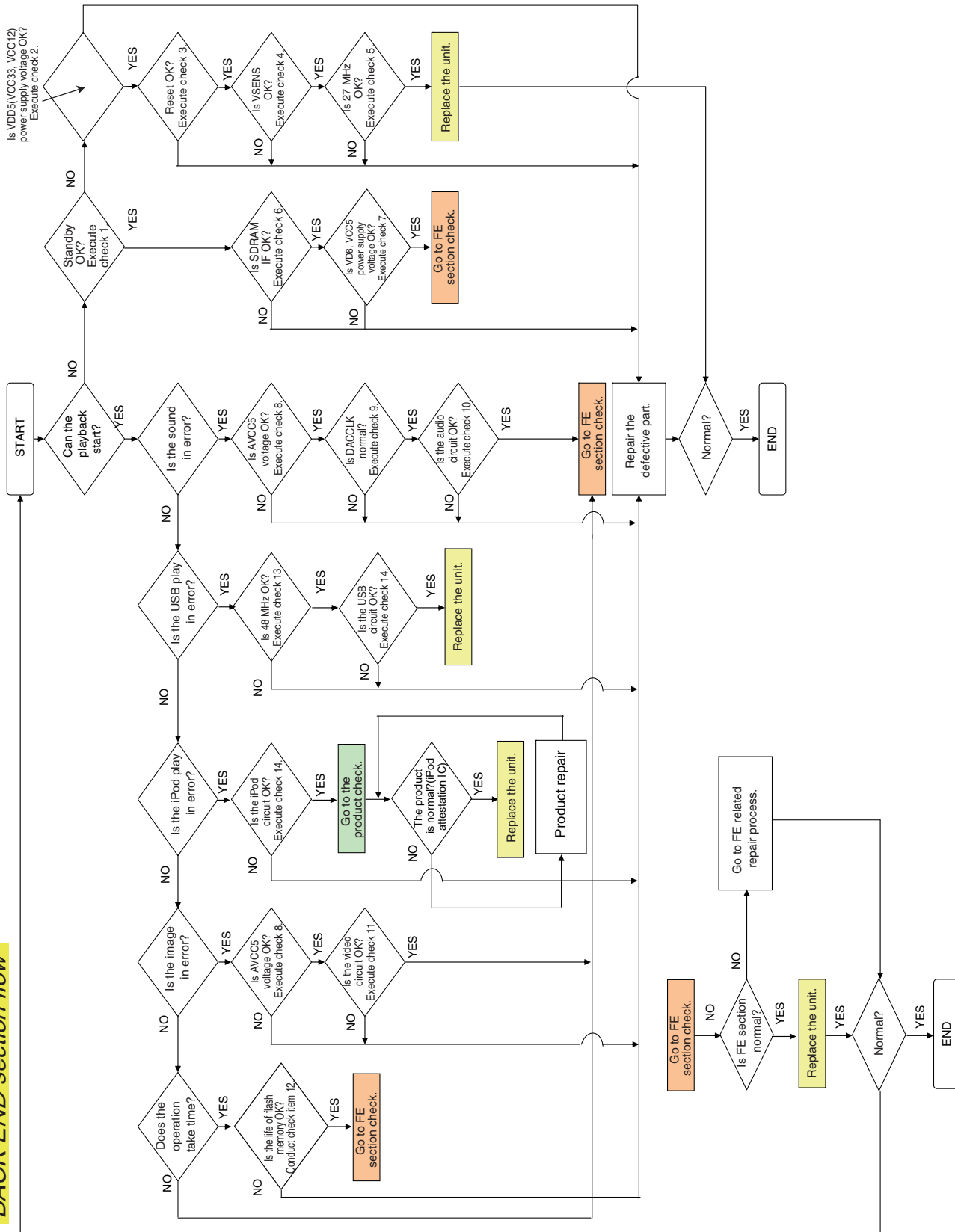
Test mode display will not appear on the display of this product. Connect the rear monitor output to a monitor.



5.3 DIAGNOSIS FLOWCHART

A
B
C
D
E
F

BACK END section flow



Check 1: Standby OK?

<Check> Check the voltage at the "STANBY" test point while the power is on.
Use the "DGND1" test point at the reference.

NO.	Check point	Module No.	Specification value	Unit
1	STANBY-DGND1	ALL	VCC33 V- 0.6 V or more	V

Side A

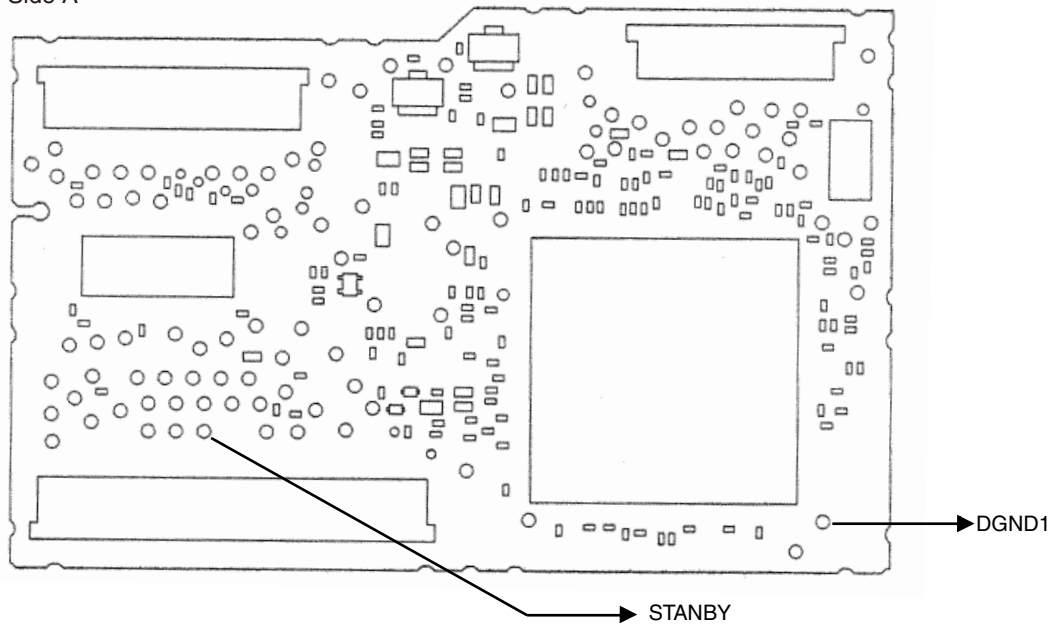


Fig 1.1: STANBY check point

Check 2: Is VDD5 (VCC33, VCC12) power supply voltage OK?

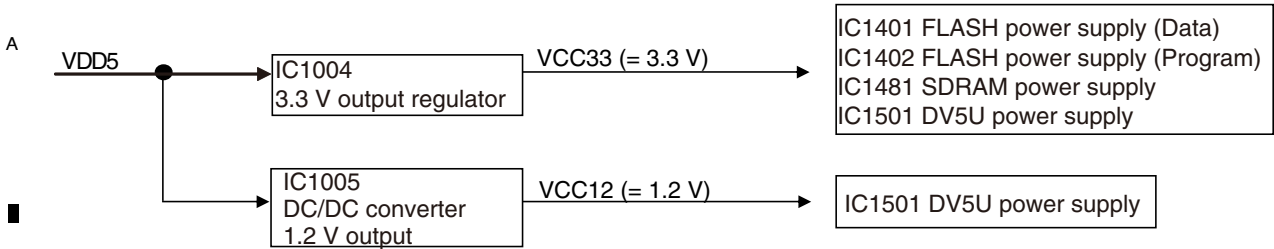


Fig 2.1: Power supply configuration

<Check> Check the voltage at the “VDD5_1, VCC33_1 and VCC12_1” test point while the power is on. Use the “DGND1” test point at the reference.

NO.	Check point	Module No.	Specification value	Unit
1	VDD5_1 - DGND1	ALL	5.0 ± 0.4	V
2	VCC33_1 - DGND1	ALL	3.3 ± 0.15	V
3	VCC12_1 - DGND1	ALL	1.2 ± 0.12	V

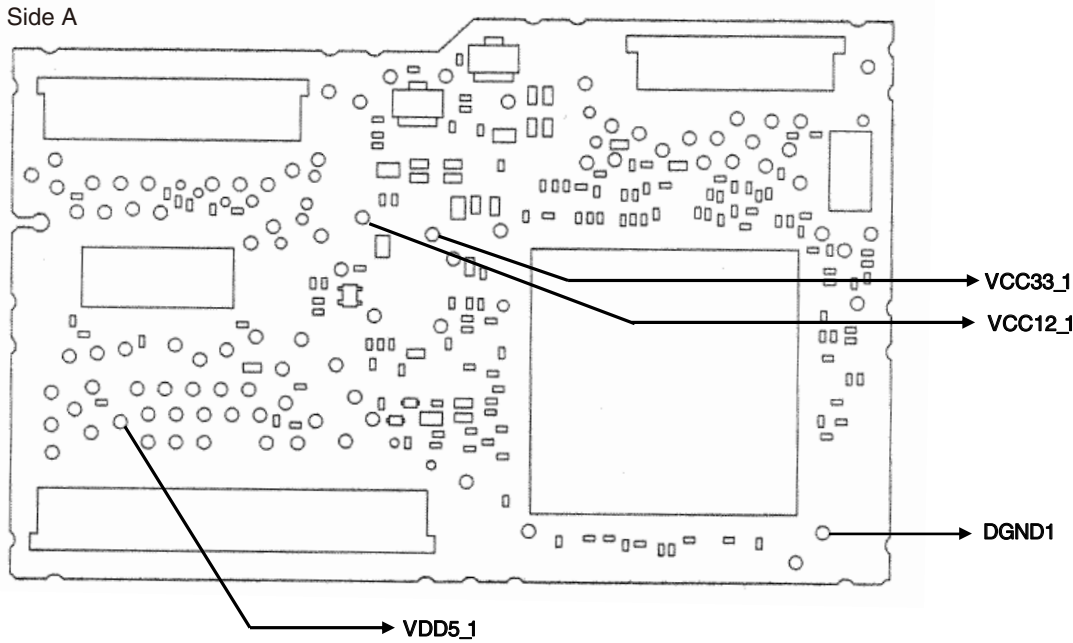


Fig 2.2: VDD5, VCC33, VCC12 voltage check points

Check 3: Reset OK?

<Check> Check the voltage at the "XRES" test point while the power is on.
Use the "DGND1" test point at the reference.

NO.	Check point	Module No.	Specification value	Unit
1	XRES-DGND1	ALL	VCC33 × 0.7 or more	V

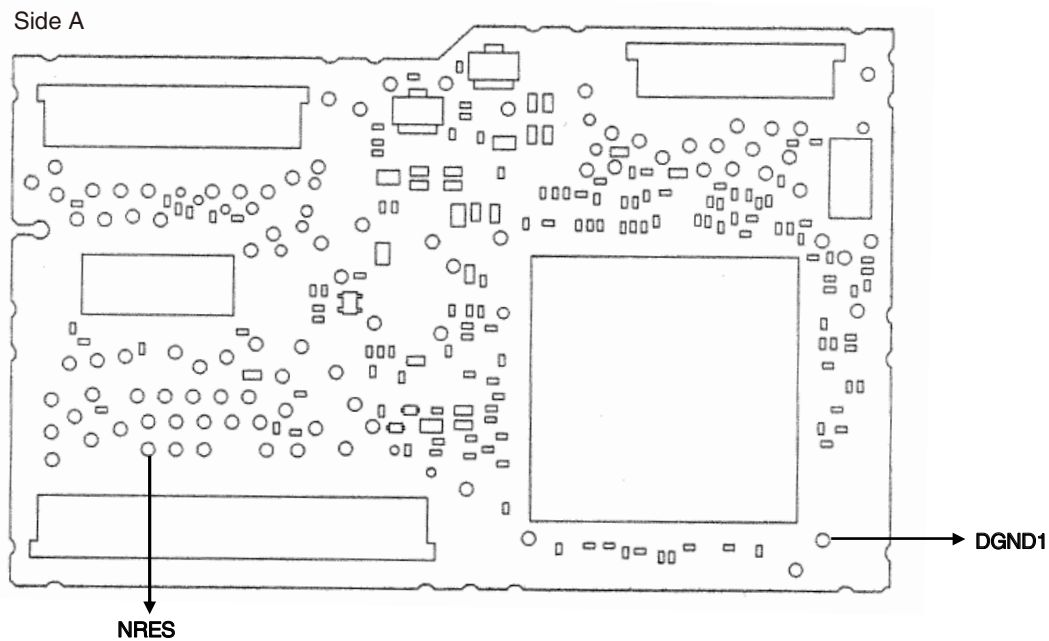


Fig 3.1: RESET check point

Check 4: Is VSENS OK?

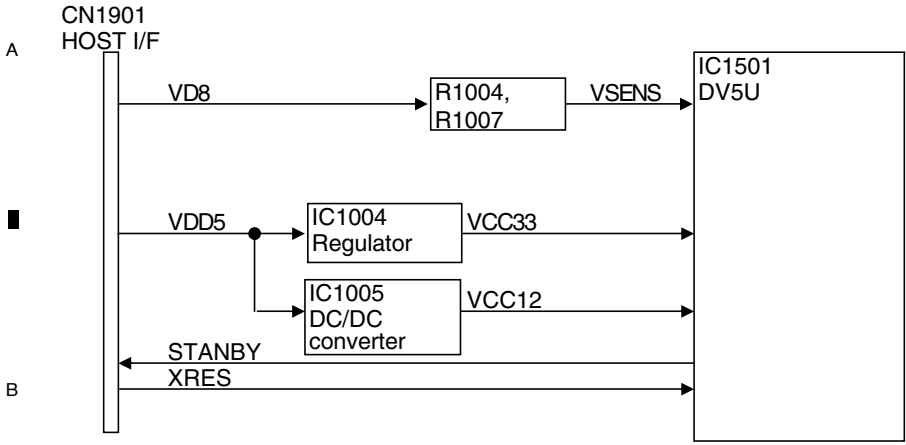


Fig 4.1: Power supply configuration and VSENS

<Check> Check the voltage at the “VSENS” test point while the power is on. Use the “DGND1” test point at the reference.

NO.	Check point	Module No.	Specification value	Unit
1	VSENS - DGND1	ALL	0.95 - 1.07	V

VD8 = 8.0 ± 0.4 V

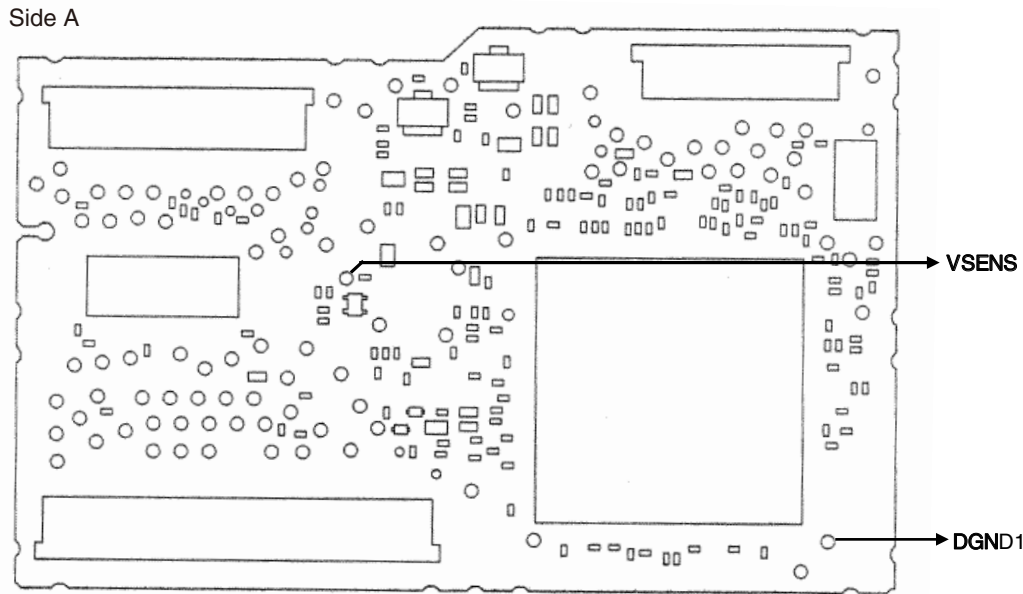


Fig 4.2: VSENS check point

Check 5: 27 MHz Normal?

<Outline> Each clock is created inside the IC1501 using the 27 MHz master crystal oscillator (X1501).

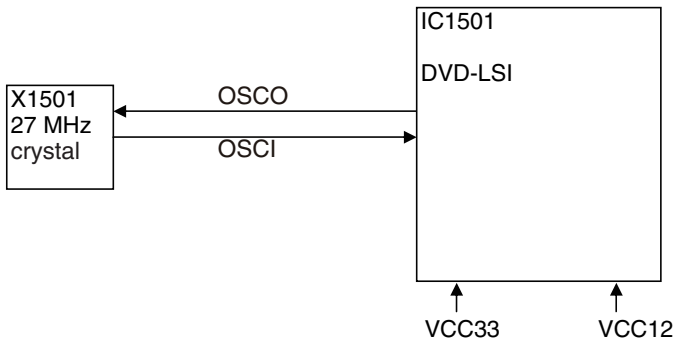


Fig 5.1: Clock configuration

<Check method> Turn the power on, and check with DGND being the reference.
 In case of NG, check the applicable line, periphery of IC1501, soldering of the peripheral components and defective components.

NO.	Check point	Module No.	Specification value	Unit
2	IC1501 169pin	ALL	27 MHz ± 50 ppm	ppm

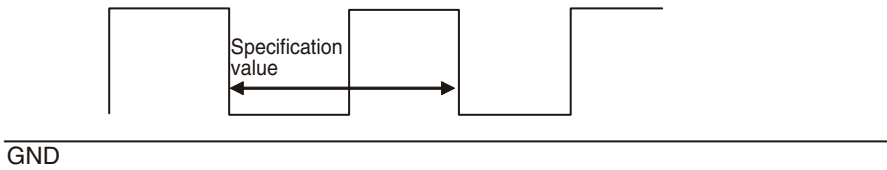


Fig 5.2: Clock specification value

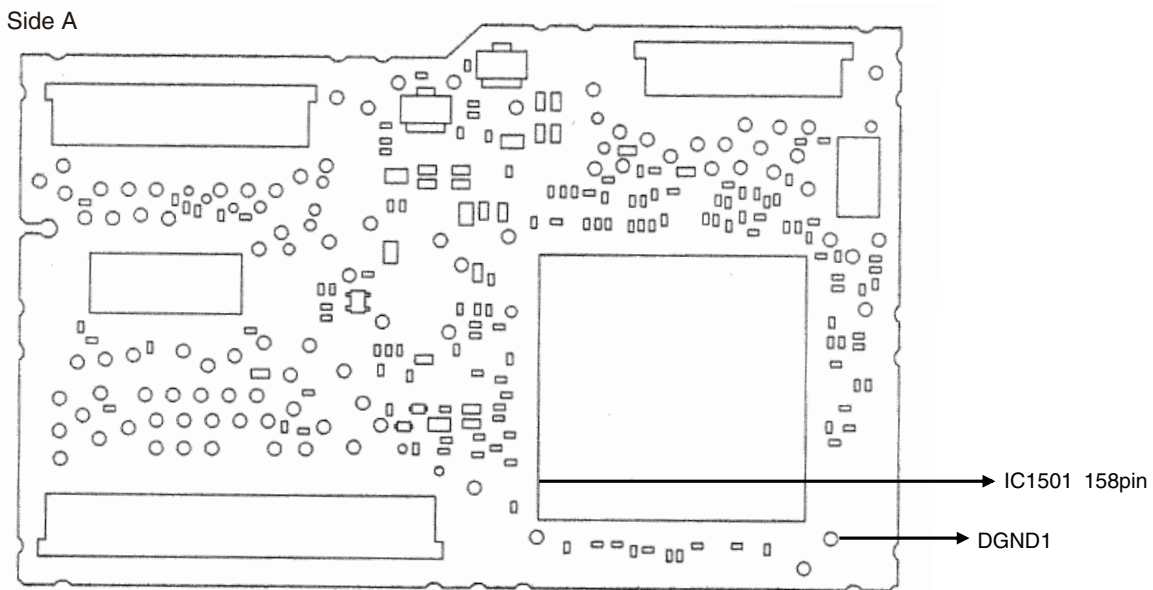


Fig 5.3: 27 MHz check point

Check 6: Is SDRAM I/F OK?

A <Outline> In order to secure the MPEG stream data as the buffer, the capacity of communication I/F SDRAM between the LSI and the memory is 64Mbit. Be careful as XCSM, XWE, XCAS and XRAS of IC1480 are called differently in IC1501, namely NCSM, NWE, NCAS, NRAS.

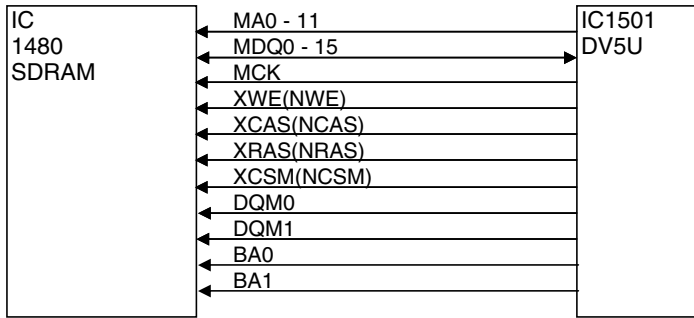


Fig 6.1: SDRAM I/F

B

C

D

E

F

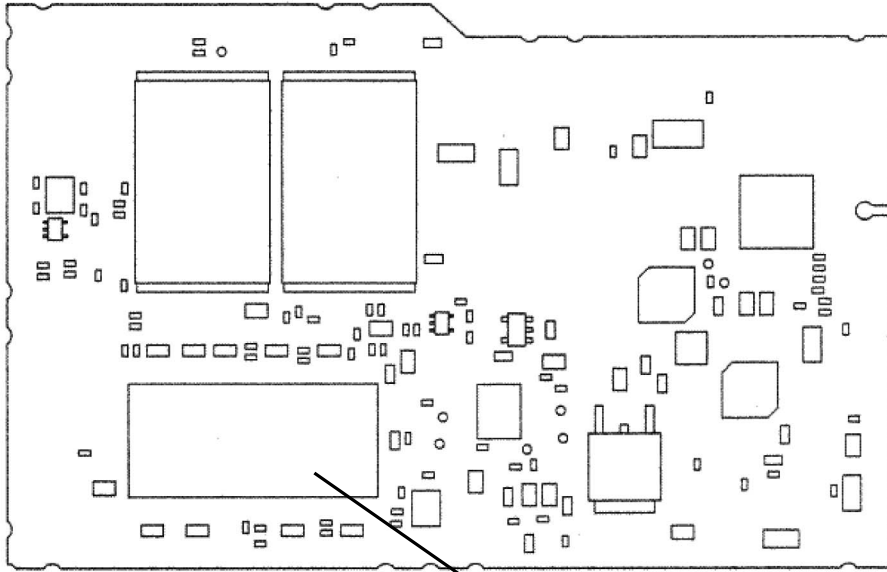
<Check> Check the conductivity at “check point 1” and “check point 2” without power.
In case of NG, check the soldering and defective components throughout the
“output → input” of the applicable section.

NO.	Signal name	Check point 1	Check point 2	Specification value
1	MA0	IC1480 23pin	IC1501 201pin	56 ohm ± 5 %
2	MA1	IC1480 24pin	IC1501 203pin	56 ohm ± 5 %
3	MA2	IC1480 25pin	IC1501 207pin	56 ohm ± 5 %
4	MA3	IC1480 29pin	IC1501 209pin	56 ohm ± 5 %
5	MA4	IC1480 30pin	IC1501 208pin	56 ohm ± 5 %
6	MA5	IC1480 31pin	IC1501 206pin	56 ohm ± 5 %
7	MA6	IC1480 32pin	IC1501 202pin	56 ohm ± 5 %
8	MA7	IC1480 33pin	IC1501 200pin	56 ohm ± 5 %
9	MA8	IC1480 34pin	IC1501 198pin	56 ohm ± 5 %
10	MA9	IC1480 33pin	IC1501 194pin	56 ohm ± 5 %
11	MA10	IC1480 22pin	IC1501 199pin	56 ohm ± 5 %
12	MA11	IC1480 35pin	IC1501 192pin	56 ohm ± 5 %
13	MDQ0	IC1480 2pin	IC1501 160pin	56 ohm ± 5 %
14	MDQ1	IC1480 4pin	IC1501 162pin	56 ohm ± 5 %
15	MDQ2	IC1480 5pin	IC1501 164pin	56 ohm ± 5 %
16	MDQ3	IC1480 7pin	IC1501 168pin	56 ohm ± 5 %
17	MDQ4	IC1480 8pin	IC1501 170pin	56 ohm ± 5 %
18	MDQ5	IC1480 10pin	IC1501 172pin	56 ohm ± 5 %
19	MDQ6	IC1480 11pin	IC1501 176pin	56 ohm ± 5 %
20	MDQ7	IC1480 13pin	IC1501 178pin	56 ohm ± 5 %
21	MDQ8	IC1480 42pin	IC1501 177pin	56 ohm ± 5 %
22	MDQ9	IC1480 44pin	IC1501 175pin	56 ohm ± 5 %
23	MDQ10	IC1480 45pin	IC1501 171pin	56 ohm ± 5 %
24	MDQ11	IC1480 47pin	IC1501 169pin	56 ohm ± 5 %
25	MDQ12	IC1480 48pin	IC1501 167pin	56 ohm ± 5 %
26	MDQ13	IC1480 50pin	IC1501 163pin	56 ohm ± 5 %
27	MDQ14	IC1480 51pin	IC1501 161pin	56 ohm ± 5 %
28	MDQ15	IC1480 53pin	IC1501 159pin	56 ohm ± 5 %
29	MCK	IC1480 38pin	IC1501 183pin	0.17 ohm or lower
30	XWE	IC1480 16pin	IC1501 181pin	56 ohm ± 5 %
31	XCAS	IC1480 17pin	IC1501 188pin	56 ohm ± 5 %
32	XRAS	IC1480 18pin	IC1501 189pin	56 ohm ± 5 %
33	XCSM	IC1480 19pin	IC1501 190pin	56 ohm ± 5 %
34	DQM0	IC1480 15pin	IC1501 179pin	56 ohm ± 5 %
35	DQM1	IC1480 39pin	IC1501 180pin	56 ohm ± 5 %
36	BA0	IC1480 20pin	IC1501 193pin	56 ohm ± 5 %
37	BA1	IC1480 21pin	IC1501 197pin	56 ohm ± 5 %

Side B

A

B

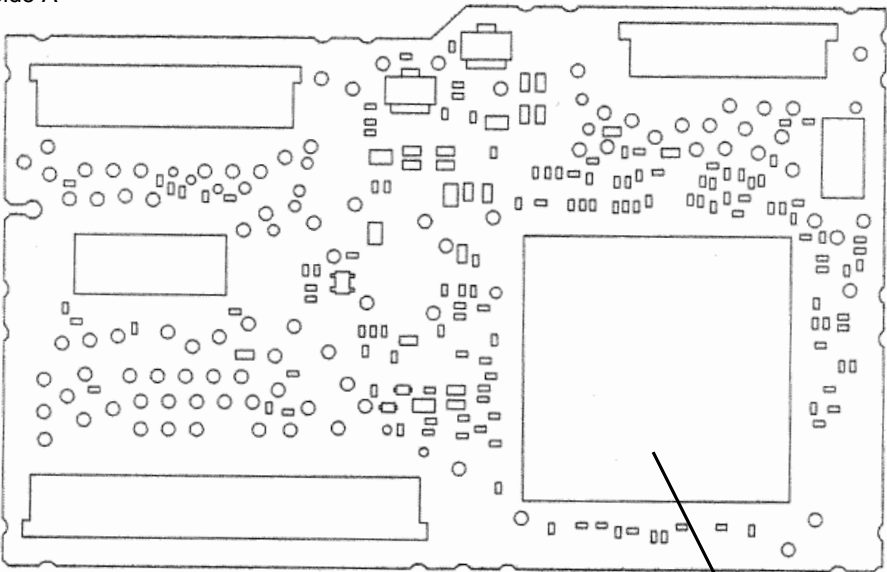


Check point 1 (IC1480)

Side A

C

D



Check point 2 (IC1501)

Fig 6.2: SDRAM I/F check point

E

F

Check 7: Is VD8, VCC5 power supply voltage OK?

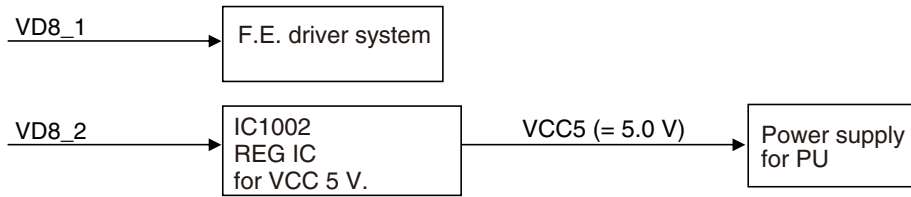


Fig 7.1: Power supply configuration

<Check> Check the voltage at the “VD8_1, VD and VCC5_1” test point while the power is on.
Use the “PGND3 and AGND1” test point at the reference.

NO.	Check point	Module No.	Specification value	Unit
1	VD8_1 - PGND3	ALL	8.0 ± 0.4	V
2	VD - PGND3	ALL	8.0 ± 0.4	V
3	VCC5_1- AGND1	ALL	5.0 ± 0.1	V

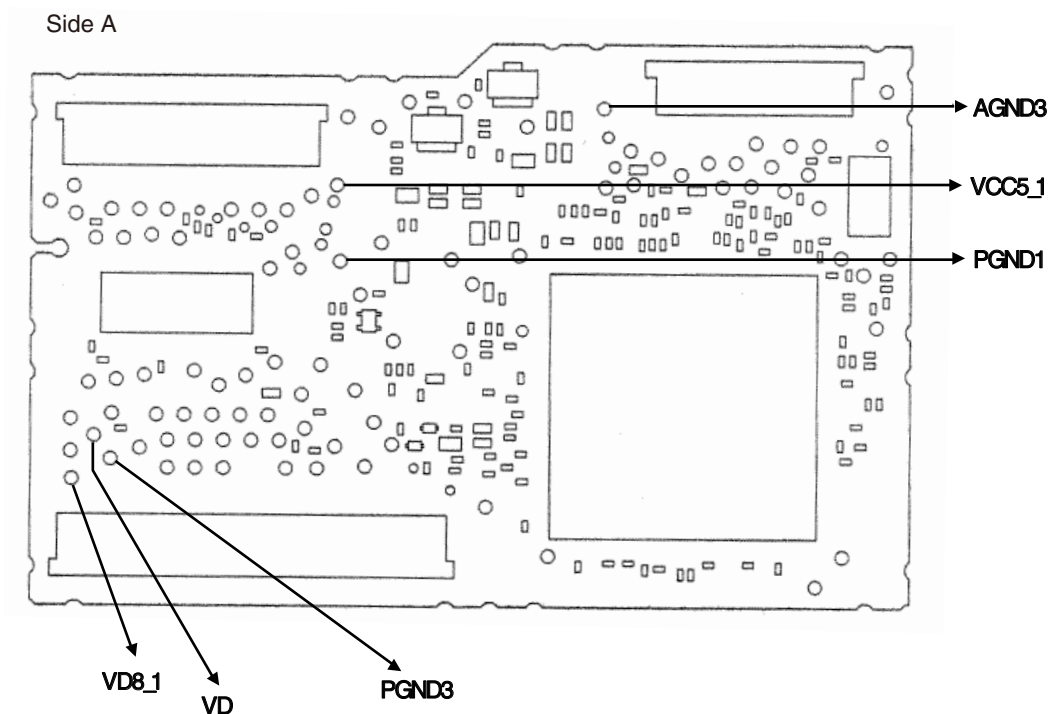


Fig 7.2: VD8, VCC5 voltage check points

Check 8: Is AVCC5 voltage OK?

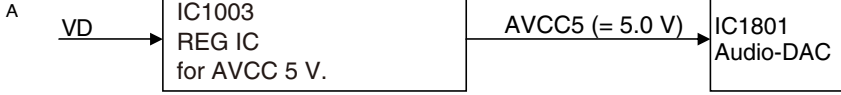


Fig 8.1: Power supply configuration

<Check> Playback DVD-REF-A1 TITLE 1 and check the voltage at the stylus.
Check with PGND and GND AU being the reference.

NO.	Check point	Module No.	Specification value	Unit
1	VD - PGND_3	ALL	8.0 ± 0.4	V
2	AVCC5 - GND AU1	ALL	5.0 ± 0.1	V

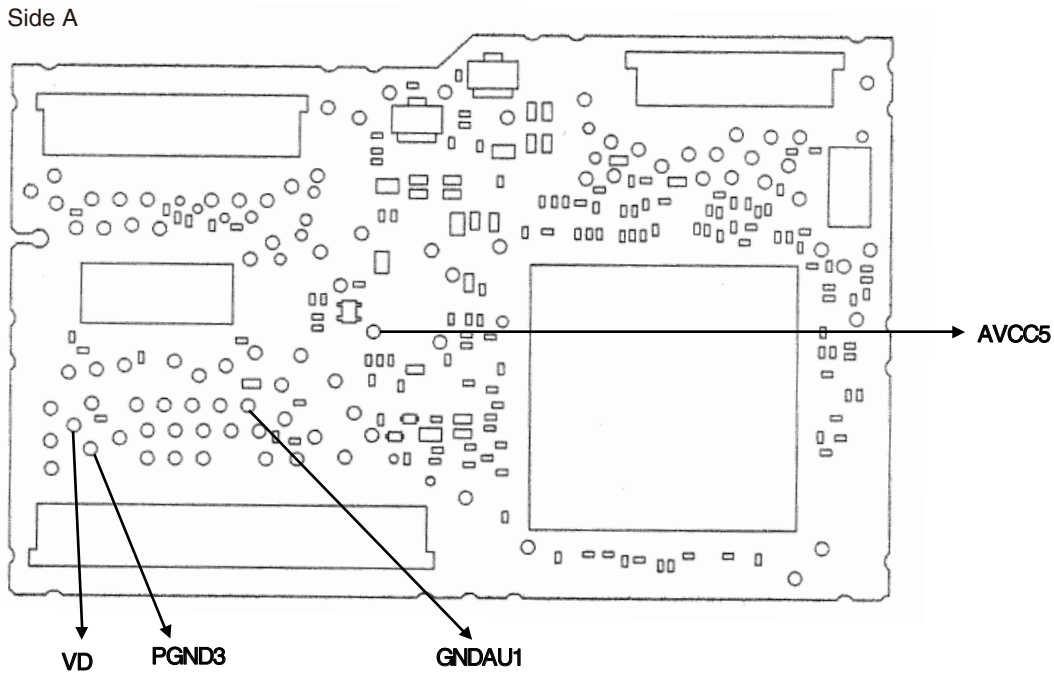


Fig 8.2: VD8, AVCC5 voltage check points

Check 9: Is DACCLK normal?

<Outline> DACCLK for Audio-DAC is created by IC1501 using the 27 MHz master crystal (X1501).

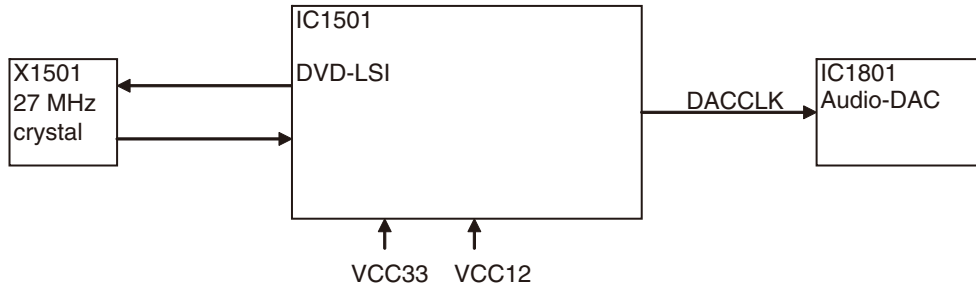


Fig 9.1: Clock configuration

<Check method>

DVD: DVD-REF-A1 TITLE 1

CD: Playback a normal CDDA.

Common to all DVD-V compatible modules.

Check with DGND being the reference.

In case of NG, check the applicable line, the periphery of IC1501, soldering of the peripheral components and defective components.

NO.	Check point 1 (stylus)	Media	Specification value 1	Specification value 2	Specification value 3
1	DACCK	DVD	2.0 V~VCC33 V	DGND~0.8 V	36.864 0 MHz ± 300 ppm
2	DACCK	CD	2.0 V~VCC33 V	DGND~0.8 V	33.868 8 MHz ± 300 ppm

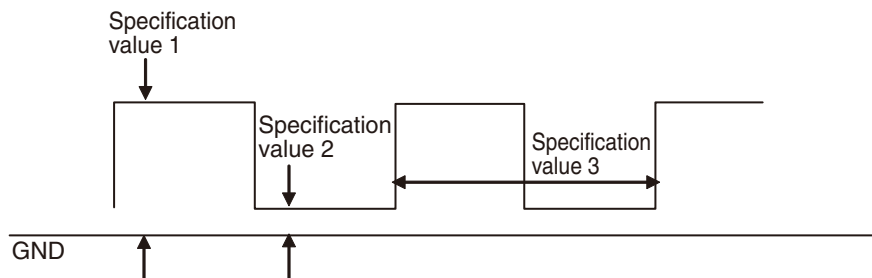
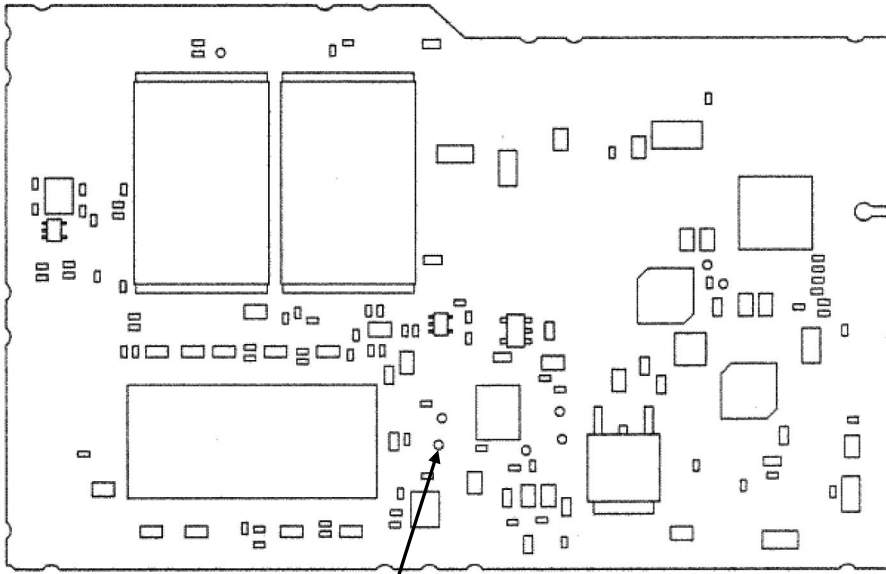


Fig 9.2: Clock specification value

Side B

A

B

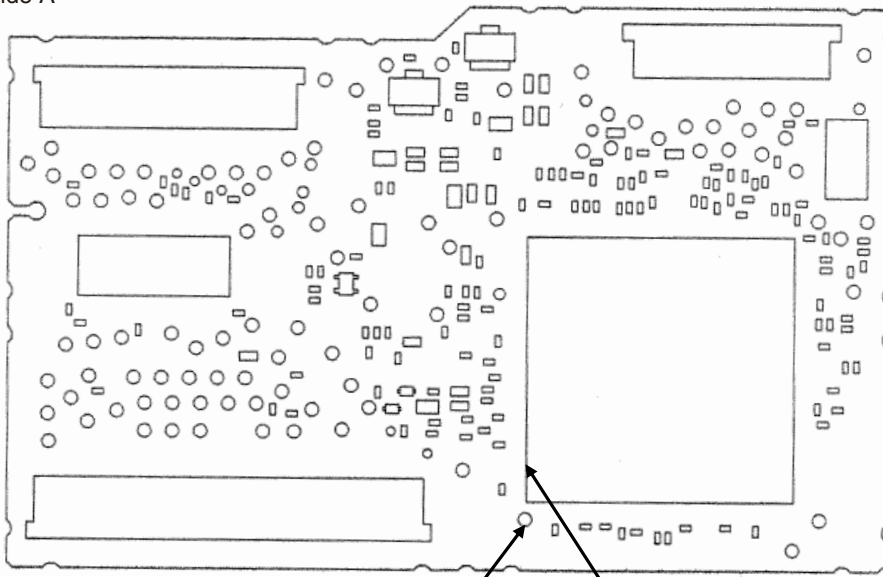


Check point 1 (DACCK stylus)

Side A

C

D



Check point 2 (IC1501 148 pin)

DGND2

Fig 9.3: 27 MHz, DACCLK check point

F

Check 10: Is the audio circuit OK?

<Outline> The serial 3 lines digital output + DACCLK, output from DVD-LSI (IC1501), are converted to analog audio signal at Audio-DAC (IC1801) and are output from the HOST I/F (CN1901).
Simultaneously, the analog MUTE signal is also output from DVD-LSI (IC1501) via the HOST I/F.
The digital audio signal (IECOUT), output from DVD-LSI (IC1501).

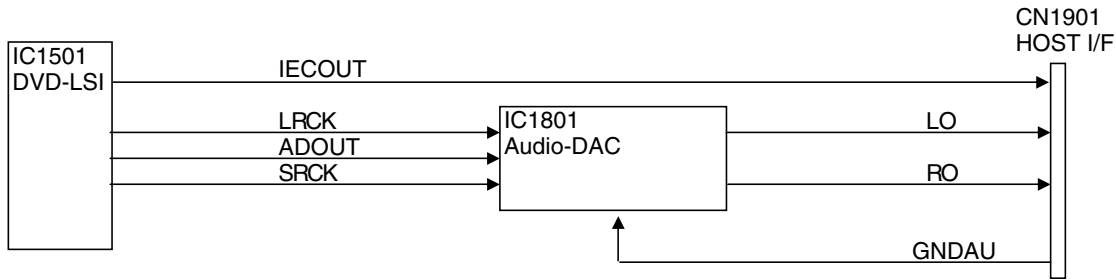


Fig 10.1: Audio circuit

<Check method> Playback DVD-REF-A1 TITLE 2 CHAPTER 1 (48 k/16 bit 1 kHz 0 dB), and check with DGND being the reference.

In case of NG, check the applicable line, periphery of major components as described in the above drawing, soldering of the peripheral components and defective components.

NO.	Check point 1 (stylus)	Specification value 1	Specification value 2	Reference waveform
1	ADOUT3	VCC33 V-0.6 V or higher	0.4 V or lower	Waveform 1
2	SRCK	VCC33 V-0.6 V or higher	0.4 V or lower	Waveform 2
3	LRCK	VCC33 V-0.6 V or higher	0.4 V or lower	Waveform 3

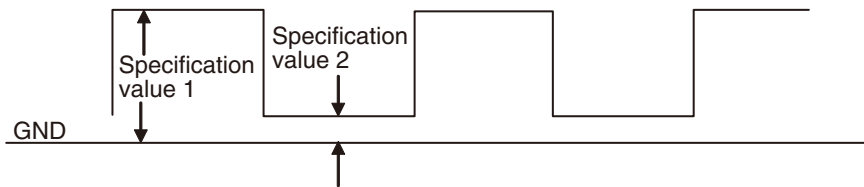
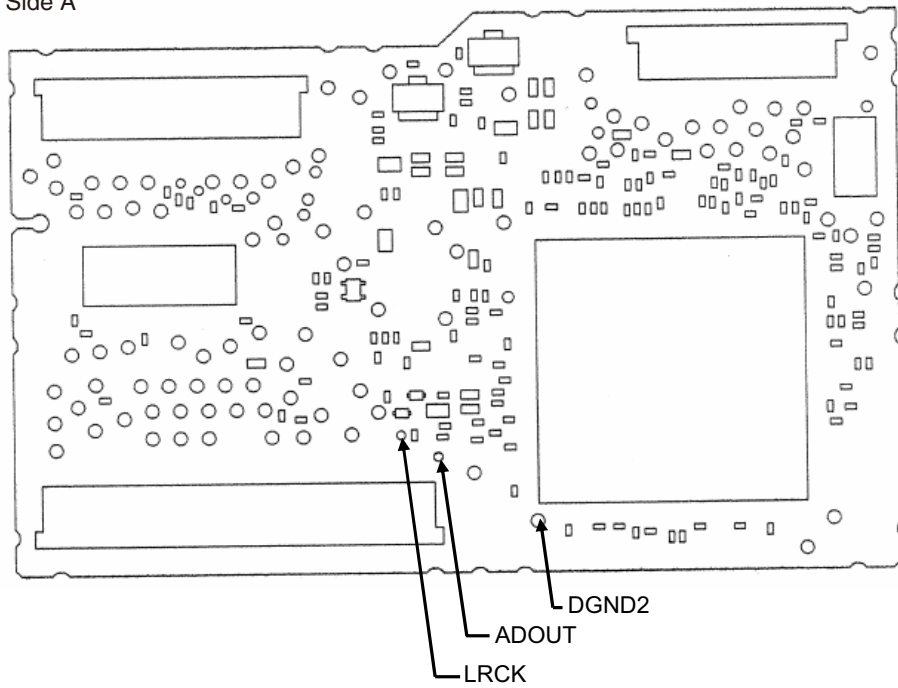


Fig 10.2: Serial 3 lines specification value

Side A

A

B



Side B

C

D

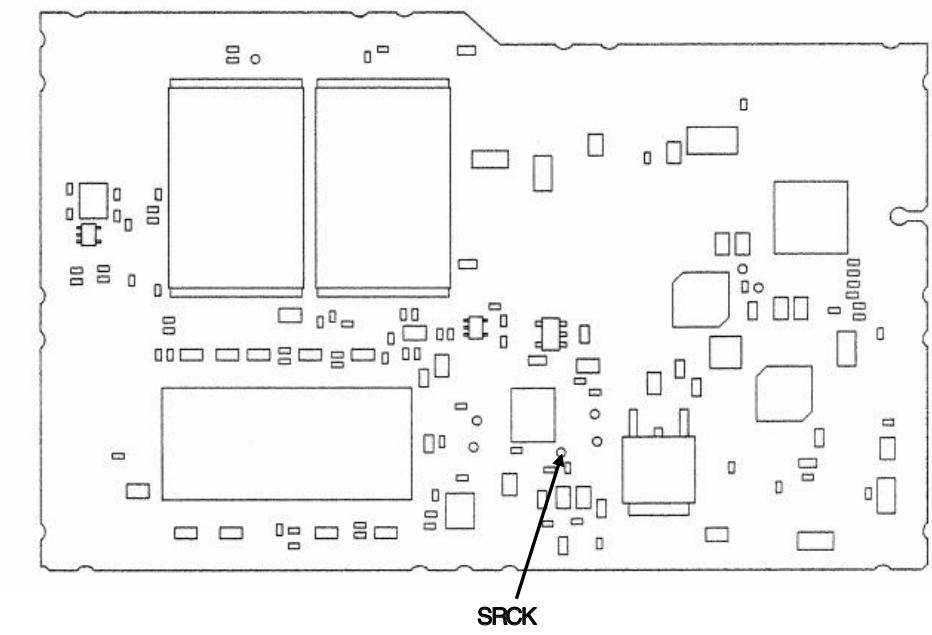
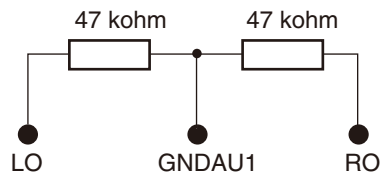


Fig 10.3: Serial 3 lines check points

E

F

The following checks shall be conducted using the following measurement circuits with GNDAU1 being the reference.



NO.	Check point 1 (stylus)	Specification value (rms)	Reference waveform
4	LO	1 400 ± 150 mV	Waveform 4
5	RO	1 400 ± 150 mV	Waveform 4

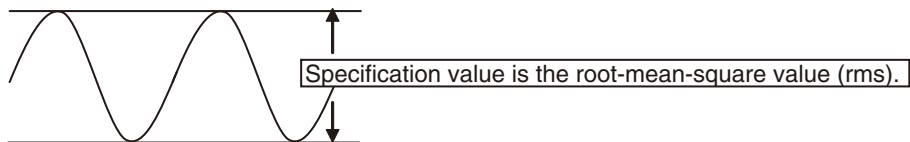


Fig 10.4: Analog audio out (LO, RO) specification value.

Side A

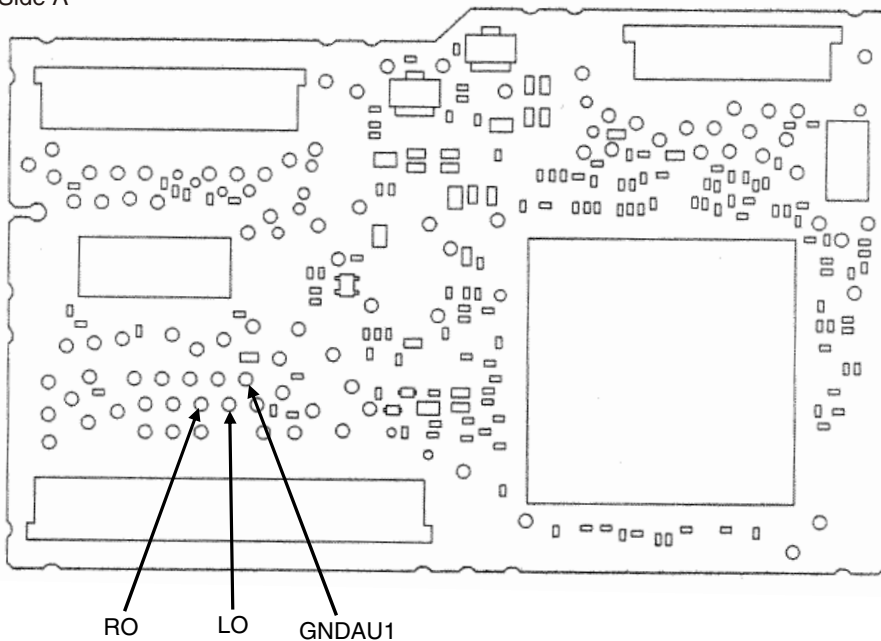


Fig 10.5: Analog audio out check point

Check with DGND being the reference.

NO.	Check point 1 (stylus)	Specification value 1	Specification value 2	Reference waveform
6	IEC	VCC33 V-0.6 V or higher	0.4 V or lower	Waveform 5

Side A

A

B

C

D

E

F

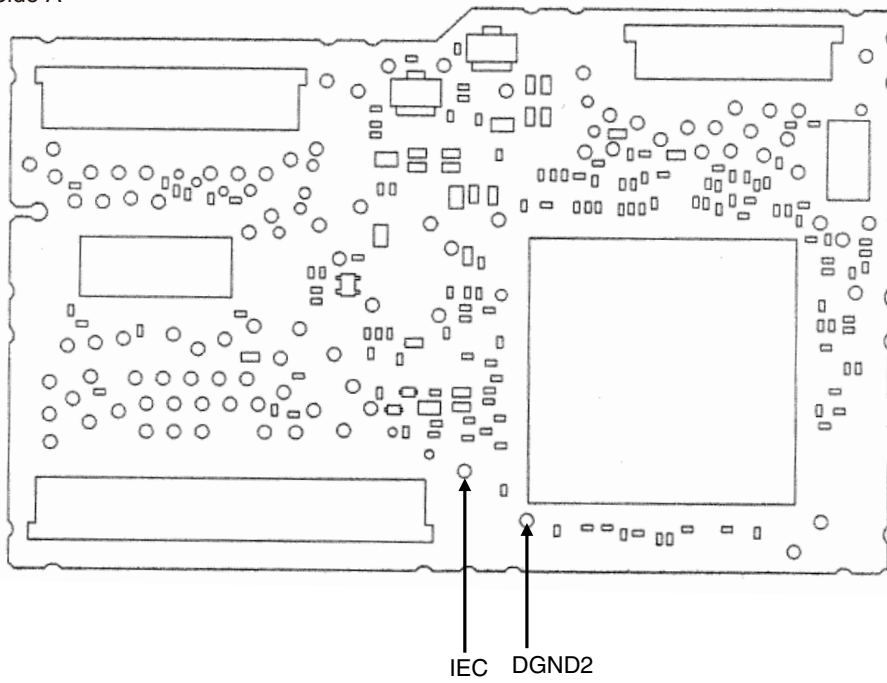


Fig 10.6: Digital audio signal (IECOUT) check point

Check 11: Is the video circuit OK?

<Outline> Composite signal and component signal are output from DVD-LSI (IC1501), and are output from the HOST I/F (CN1901) via a buffer circuit.



Fig 11.1: Video circuit

<Checking method> Playback DVD-REF-A1 TITLE2 CHAPTER5 (WHITE 100%), and monitor COMPOSITE signal with an oscilloscope with GNDV1 (stylus) being the reference. Set the trigger mode to "TV trigger" and the trigger line to "150 line".

Check point 1 (stylus)

NO.		Specification value	Reference waveform
1	COMPOSITE	1 000 mVpp \pm 5 %	Waveform 6

In case of NG, check the applicable line, the periphery of the major components in the drawing above, soldering of the peripheral components and defective components.

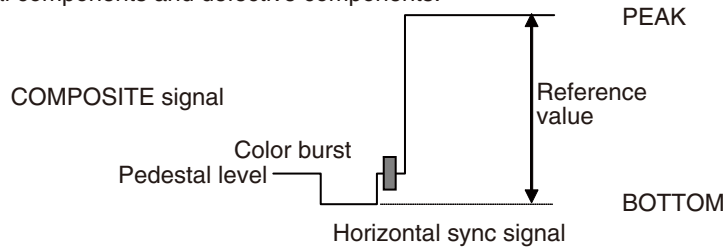


Fig 11.2: Waveform for the case of composite white 100% output

Side A

A

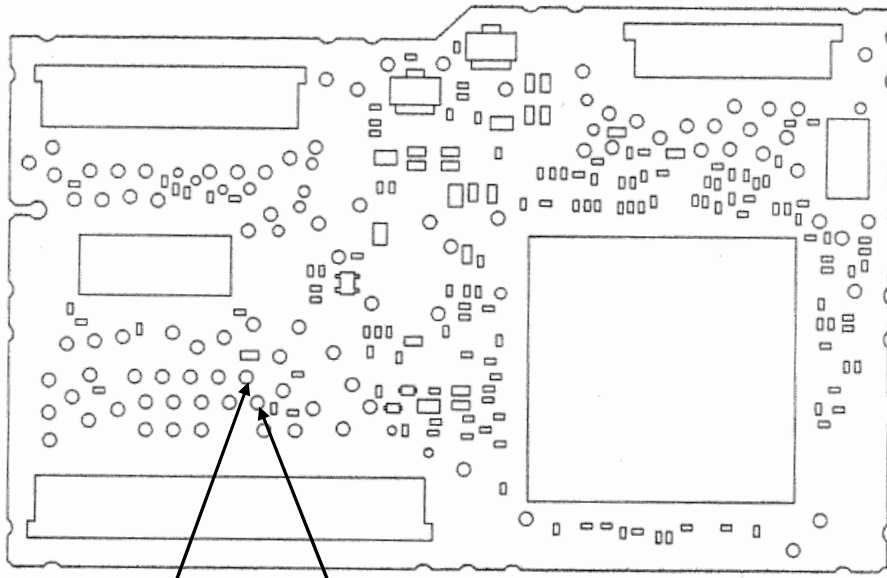
B

C

D

E

F



COMPOSITE GNDV

Fig 11.3: VIDEO signal check point

Check 12:How to judge whether the flash memory has reached its life or not.

If the reaction to user operation is slow or operation is slow in general, there is a possibility that the flash memory has reached its life.

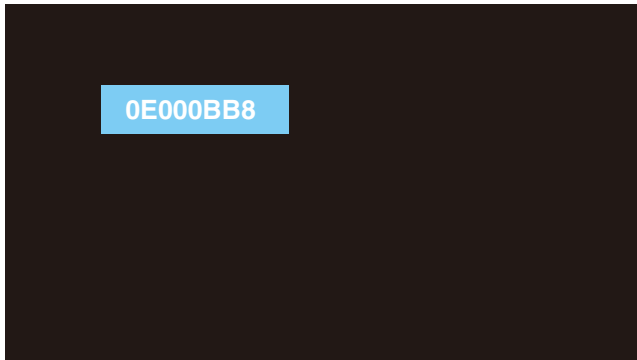
Make judgment regarding the flash memory life by looking at the display of the LD energizing time.

1.Let the LD energizing time displayed.

(Refer to the FE test mode for the method of displaying the LD energizing time.)

2.If the second digit from the left of the energizing time display is showing E, such as “*E** ** ** ”, it means that the flash memory has reached its life.

Example:

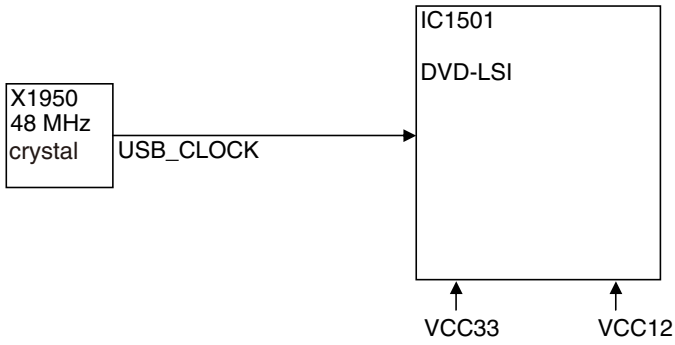


0E00BB8

Check 13: 48 MHz Normal?

<Outline> Each clock is created inside the IC1501 using the 48 MHz master crystal oscillator (X1501).

A



B

Fig 13.1: Clock configuration

<Check method> Turn the power on, and check with DGND1 being the reference.
 In case of NG, check the applicable line, periphery of IC1501,
 soldering of the peripheral components and defective components.

NO.	Check point	Module No.	Specification value	Unit
2	IC1501 50pin-DGND1	ALL	48 MHz ± 50 ppm	ppm

C

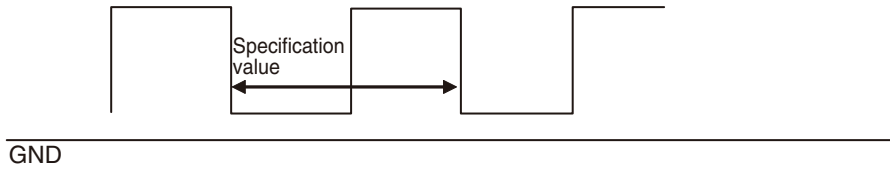


Fig 13.2: Clock specification value

D

E

F

Side A

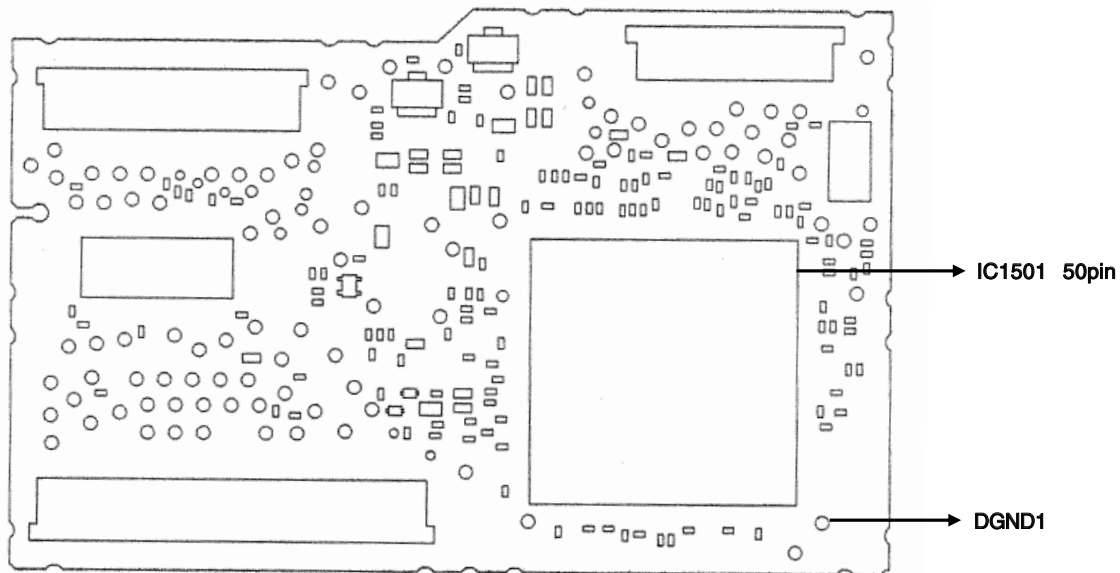


Fig 13.3: 48 MHz check point

Check 14: Is USB Circuit OK?

<Outline>

The data is transmitted through D+, D- and SDA of HOST I/F while playing USB/IPOD.

USB memory uses only D+ and D-, but IPOD uses SDA (DATA) and SCL (CLOCK) in addition to D+ and D-.

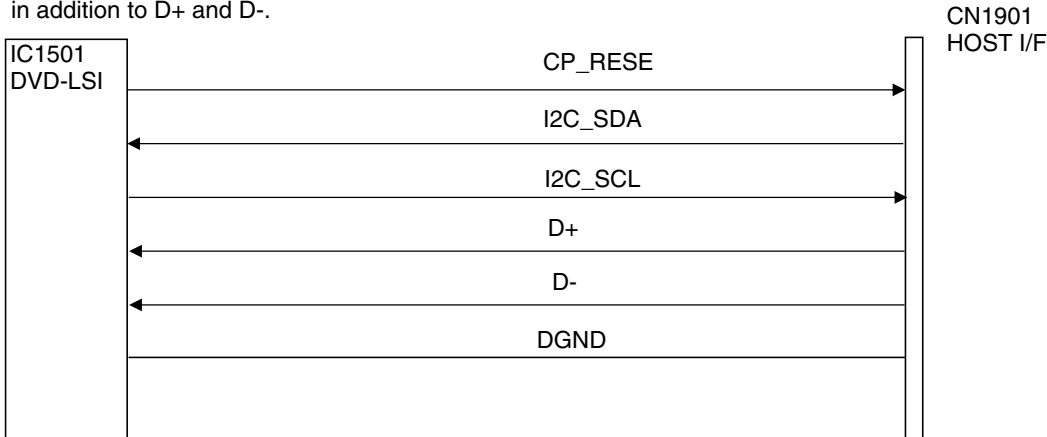


Fig. 14-1: USB Circuit

<Check Method>

- 1.USB Memory: Play a song from USB memory and check D+ and D- with the DGND standards.
 - 2.iPod: Connect iPod and check CP_RESET, SDA and SCL with the DGND standards until the pioneer log appears. Play a song from iPod and check D+/D- with the DGND standards.
- When it does not conform to the standards, check appropriate line, main parts shown in the above figure, soldering of peripheral parts and malfunctions in parts.

No.	Checking spot (stylus)	Standard value 1	Standard value 2
1	CP_RESET	VCC33*0.7or more	
2	SDATA	VCC33*0.7or more	VCC33*0.2 or less
3	SCLOCK	VCC33*0.7or more	VCC33*0.2 or less
4	D+	VCC33*0.7or more	VCC33*0.3 or less
5	D-	VCC33*0.7or more	VCC33*0.3 or less

*Until the pioneer log appears after connecting the iPod
 *Until the pioneer log appears after connecting the iPod

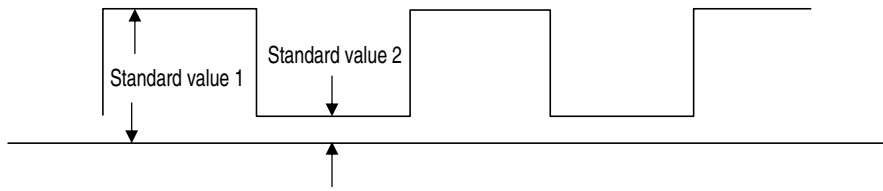
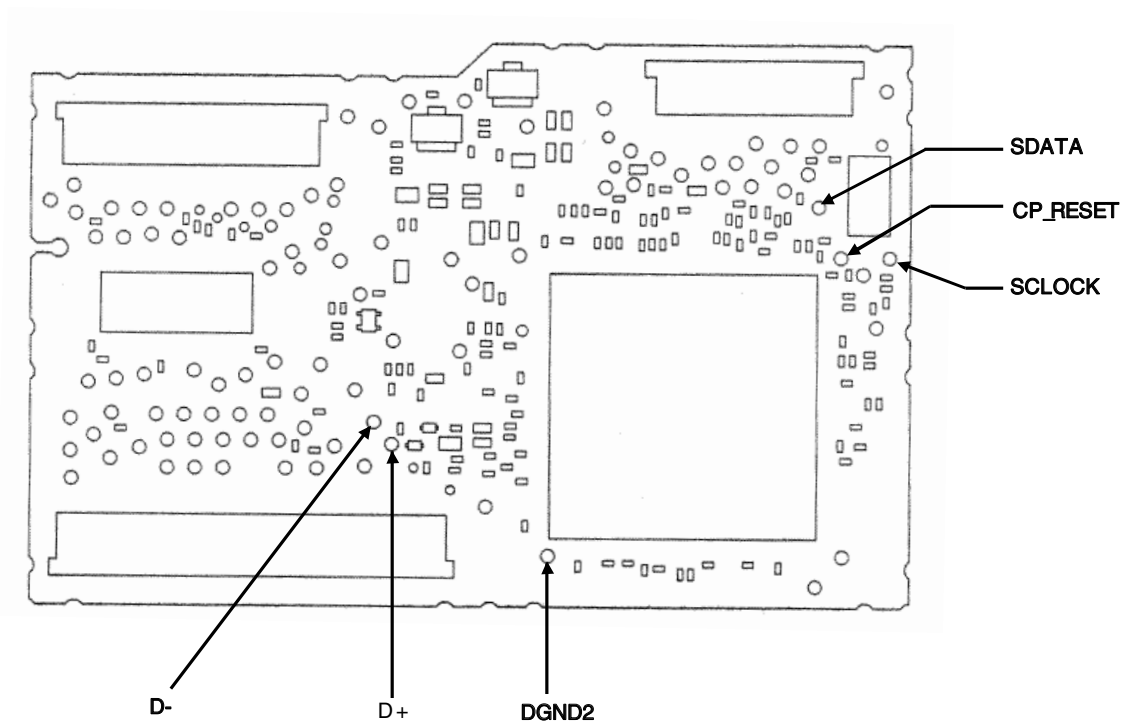


Fig. 14.2: USB Circuit Communication Wave

Side A



A

B

C

D

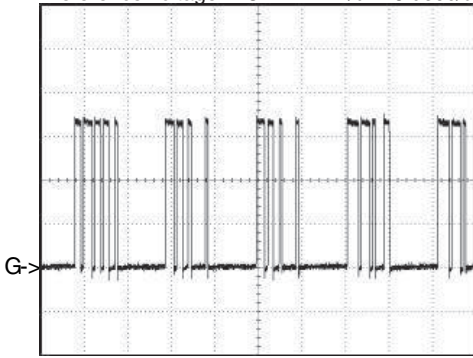
E

F

AUDIO

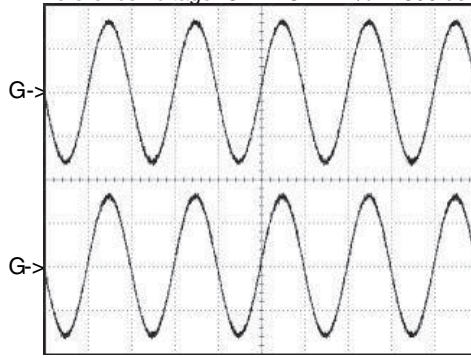
A

CH1:ADOUT3
Reference voltage: DGND2 1 V/div. 5 usec/div



Waveform 1

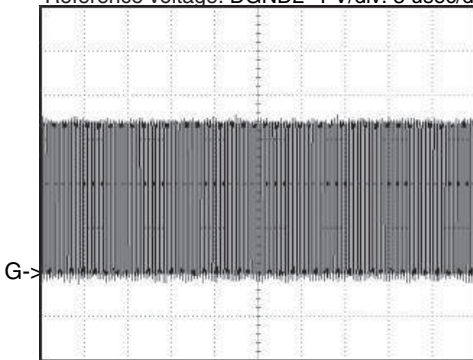
CH1:LO
CH2:RO
Reference voltage: GNDAU2 1 V/div. 500 usec/div



Waveform 4

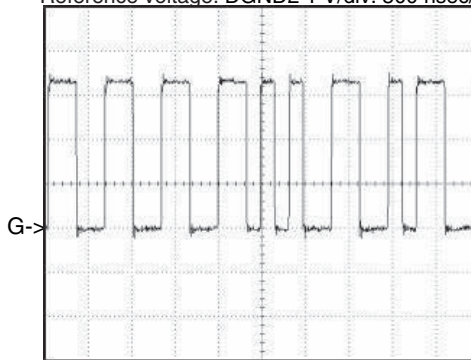
B

CH1:SRCK
Reference voltage: DGND2 1 V/div. 5 usec/div



Waveform 2

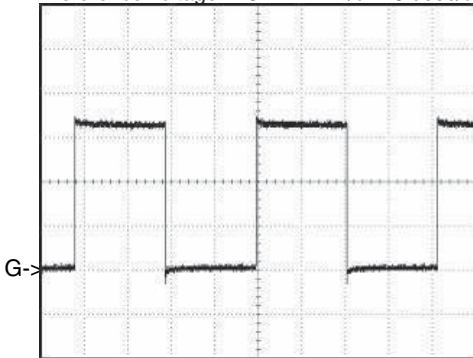
CH1:IECOUT
Reference voltage: DGND2 1 V/div. 500 nsec/div



Waveform 5

C

CH1:LRCK
Reference voltage: DGND2 1 V/div. 5 usec/div



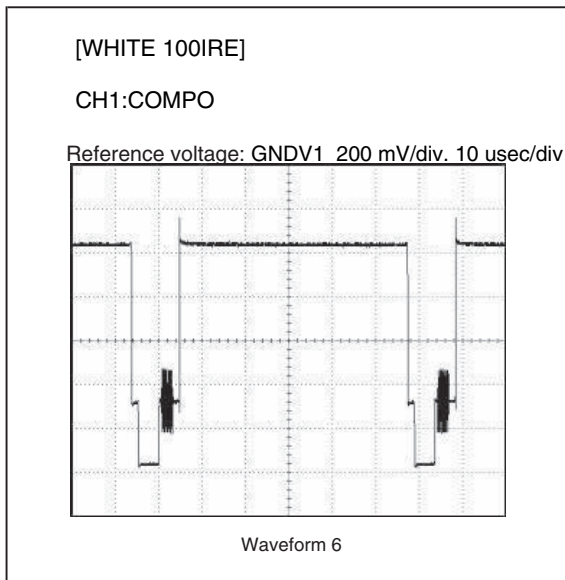
Waveform 3

D

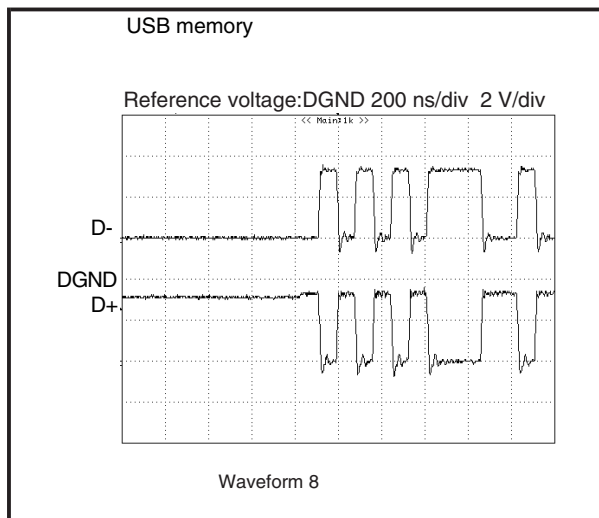
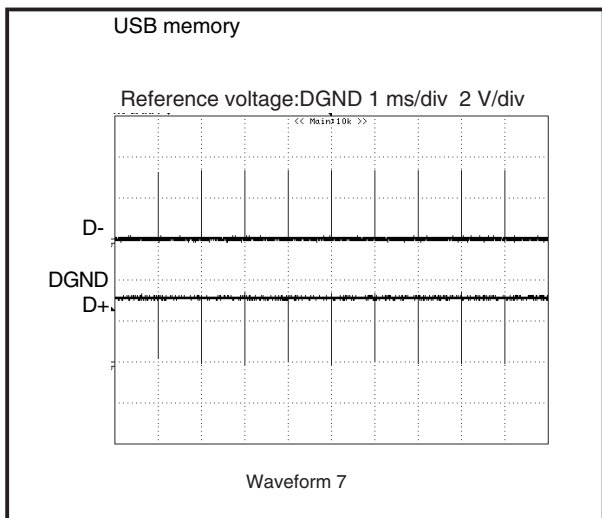
E

F

VIDEO

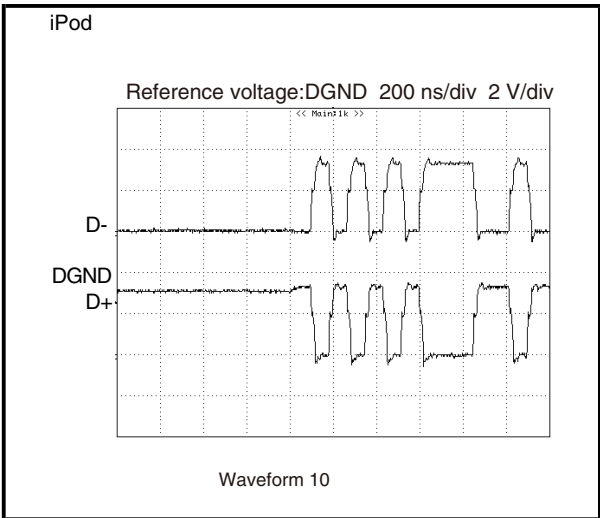
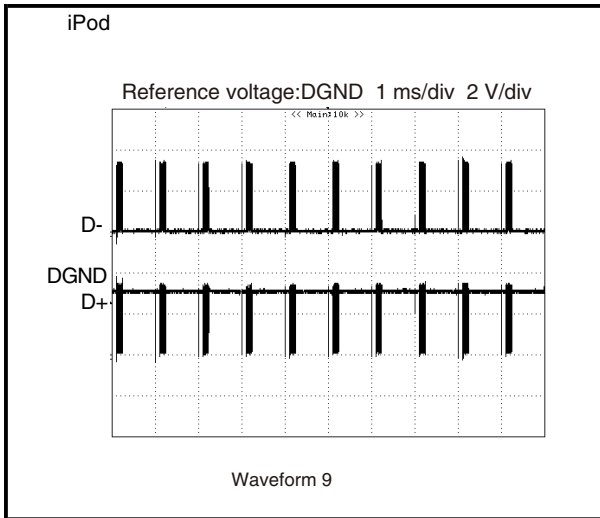


USB memory



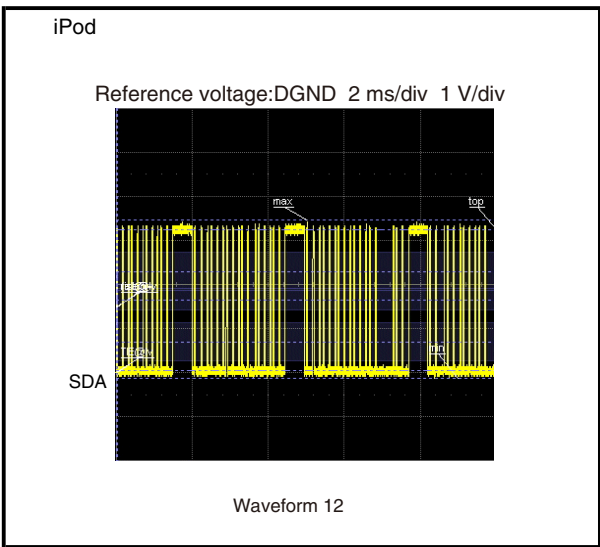
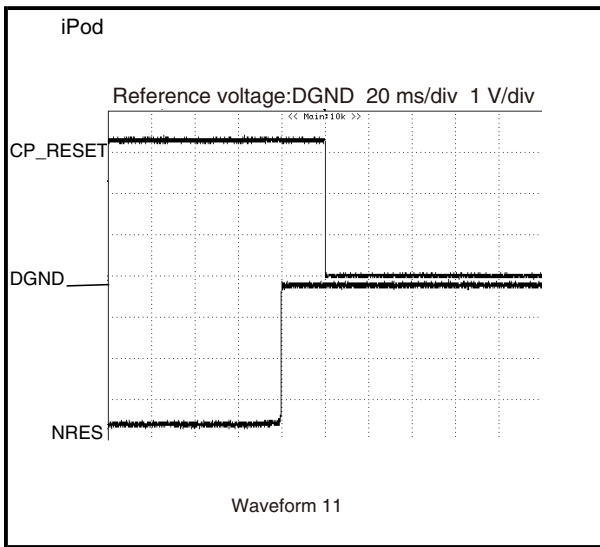
iPod

A



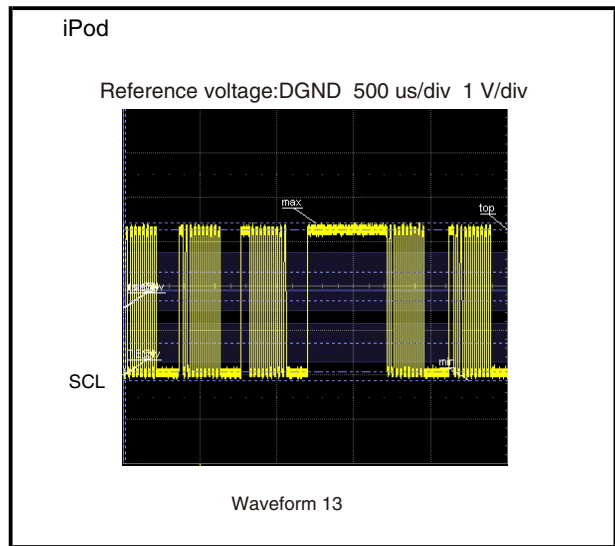
B

C



D

E



F

5.4 ERROR CODE LIST

Error status	OSD *1	UART *2	Meaning	Generation source			Method of reset			
				Disc	USB (MSC)	USB (iPod)	ACC Off/On	Source Off/On	Eject	Play Key
Media Error	NON-PLAYABLE DISC	00h	A disc containing the unplayable Format only	X	-	-	X	X	X	-
	INCOMPATIBLE DEVICE	00h	USB device that doesn't correspond	-	X	X	X	X	-	-
	UNPLAYABLE FILE	00h	USB device of format alone that cannot be reproduced	-	X	-	X	X	-	-
Open	(No display)	10h	Door open error	X	-	-	*	*	*	*
Read Error	ERROR-02-99	20h	Transfer start error	X	-	-	X	X	X	X
Focus Error(Focus Error in mechanism set up)	ERROR-02-90	21h	Focus error	X	-	-	X	X	X	X
Surface Error	ERROR-02-9E	22h	Focus error during set up (A focus has never been achieved with that disc.)	X	-	-	X	X	X	X
Address not found(Invalid Track)	ERROR-02-80	23h	Address not found.	X	-	-	X	X	X	X
Spindle Lock	ERROR-02-91	24h	Spindle lock NG (the disc cannot rotate)	X	-	-	X	X	X	X
Carriage HOME	ERROR-02-92	25h	Carriage home NG (The pick up tries to return to carriage home, but it cannot go back and stopped.)	X	-	-	X	X	X	X
ID/SUBCODE Read Error	ERROR-02-94	26h	ID/SUBCODE Read Error (ID/SUBCODE cannot be read due to scratch or stain.)	X	-	-	X	X	X	X
AV CHIP decode Error	ERROR-02-9A	2Ah	AV CHIP decode NG (AV chip cannot be decoded.)	X	X	-	X	X	X	X
AV CHIP Recovery NG	ERROR-02-9B	2Bh	AV CHIP recovery NG	X	X	X	X	X	X	X
Error of PLAY BACK Mode Status	ERROR-02-9C	2Ch	Playback state error (An error due to software bug.)	X	X	-	X	X	X	X
Disc Data Error	ERROR-02-9D	2Dh	Disc Data NG	X	-	-	X	X	X	X
Temp Error (In Case of High Temperature)	THERMAL PROTECTION IN MOTION	30h	High temperature (Playback is stopped because the pick up temperature is 89 C or higher.)	X	-	-	X	-	-	-
No Disc (including Disc loading and e jecting)	(No display)	40h	Disc has not been inserted. (Including Load in process or Eject in process.)	X	-	-	*	*	*	*
Loading_Mecha Error	(No display)	50h	Loading mechanism error (The disc cannot be clamped.)	X	X	X	X	-	X	-
Communication fault attesting iPod	ERROR-02-60	60h	Communication fault attesting iPod	X	-	X	-	-	X	-
iPod authentication data is abnormal	ERROR-02-61	61h	iPod authentication data is abnormal	X	-	X	-	-	X	-
iPod attestation retrying failure	ERROR-02-62	62h	iPod attestation retrying failure	X	-	X	-	-	X	-
iPod attestation time out	ERROR-02-63	63h	iPod attestation time out	X	-	X	-	-	X	-
Error when iPod is connected/ It is generated STALL by the USB communication	ERROR-02-64	64h	Error when iPod is connected/ It is generated STALL by the USB communication	-	-	X	-	-	X	-
Error setting iPod	ERROR-02-65	65h	Error setting iPod	-	-	X	-	-	X	-
Demand timeout when initial is communicated	ERROR-02-66	66h	Demand timeout when initial is communicated	-	-	X	-	-	X	-
Protocol version non-correspondence	ERROR-02-67	67h	Protocol version non-correspondence	-	-	X	-	-	X	-
Timeout when protocol version is judged	ERROR-02-68	68h	Timeout when protocol version is judged	-	-	X	-	-	X	-
No songs error	(No display)	69h	No songs error	-	-	X	-	-	X	-
iPod control forwarding/ Intraпта forwarding error	ERROR-02-6A	6Ah	iPod control forwarding/ Intraпта forwarding error	-	-	X	-	-	X	-
Demand timeout iPod's reproducing	ERROR-02-6B	6Bh	Demand timeout iPod's reproducing	-	-	X	-	-	X	-
Remote switch error	ERROR-02-6C	6Ch	Remote switch error	-	-	X	-	-	X	-
Remote switch demand timeout	ERROR-02-6D	6Dh	Remote switch demand timeout	-	-	X	-	-	X	-
DRM Error	PROTECTED DISC	70h	DRM error (All music cannot be played back due to DRM.)	X	-	-	-	-	X	-
	NO ACCESSIBLE DATA AVAILABL	70h	DRM error (All music cannot be played back due to DRM.)	-	X	-	-	-	-	-
Region code Error NG	DIFFERENT REGION DISC	90h	Region code NG (Unable to be played back due to incorrect mechanism region.)	X	-	-	-	-	X	-
CPRM*7 Key Error *8	NON-PLAYABLE DISC	93h	Key Error for playback	X	-	-	-	-	X	-
REQUEST error	ERROR-02-A0	A0h	REQUEST error	X	-	-	X	X	X	X
Failure in issuing read command (chip dependent)	ERROR-02-A1	A1h	Failure in issuing the read command	X	-	-	X	X	X	X
Adjustment of L0 is NG.	ERROR-02-A2	A2h	L0 adjustment is NG.	X	-	-	X	X	X	X
Adjustment of L1 is NG.	ERROR-02-A3	A3h	L1 adjustment is NG	X	-	-	X	X	X	X
LD system NG	ERROR-02-A4	A4h	LD system NG	X	-	-	X	X	X	X
Gain adjustment system NG.	ERROR-02-A5	A5h	Gain adjustment system NG.	X	-	-	X	X	X	X
Gain determining system NG.	ERROR-02-A6	A6h	Gain determining system NG.	X	-	-	X	X	X	X
Servo initial setting related items NG.	ERROR-02-A7	A7h	Servo initial setting related items NG.	X	-	-	X	X	X	X
Disc is not clamped yet.	ERROR-02-A8	A8h	Disc is not clamped yet.	X	-	-	X	X	X	X
Tracking system NG.	ERROR-02-A9	A9h	Tracking system NG	X	-	-	X	X	X	X
Media setting system NG.	ERROR-02-AA	AAh	Media setting system NG	X	-	-	X	X	X	X
Focus Error	ERROR-02-AB	ABh	JUMP over layers NG	X	-	-	X	X	X	X
Error of PLAY BACK Mode Status	ERROR-02-B0	B0h	Navigation command error	X	-	-	X	X	X	X
Error of PLAY BACK Mode Status	ERROR-02-B1	B1h	Retry over	X	-	-	X	X	X	X
Audio Property Timeout Error *9	ERROR-02-C0	C0h	Audio property timeout error	X	-	-	X	X	X	-
Error when MCS is connected/ It is generated STALL by the USB communication	ERROR-02-D0	D0h	Error when MCS is connected/ It is generated STALL by the USB communication	-	X	-	-	-	X	-
CBW and CSW forwarding error	ERROR-02-D1	D1h	CBW and CSW forwarding error	-	X	-	-	-	X	-
Audio class band securing failure	ERROR-02-D8	D8h	Audio class band securing failure	-	-	X	-	-	X	-
Audio class FS setting failure	ERROR-02-D9	D9h	Audio class FS setting failure	-	-	X	-	-	X	-
Undefined Error	ERROR-FF-FF	FFh	Undefined error	X	-	-	X	X	X	X

X: Cancel the error by operation. -: Error is not cancelled by operation. *: No setting

*1 A content displayed on OSD. As for the items having multiple display patterns, the upper row is for the Japanese version Full GUI, and the lower row is for the Touch Panel model and Full GUI (English version).

*2 A parameter of UART command, such as "receipt error notice", that the DVD mechanism transmits.

*3 CPPM(Content Protection for Prerecorded Media) : A copyright protection technique used in DVD-A. The protection is realized by using the keys recorded on the media and the device key held by the player.

*4 DVD-A compatible model only.

When an error has occurred, only the audio output will be muted but playback operation will continue. Furthermore, acceptance of the user operation will be the same as usual.

*5 AWM (Audio WaterMark): Electronic watermark. Information on the copyright owner or CCI (copy control information) are recorded so that illegally copied discs can be identified.

*6 Notice as an error status will not be given

*7 CPRM(Content Protection for Recordable Media) : A copyright protection technique for digital contents used for re-writable DVD or memory card. (DVD-VR model only)

A

B

C

D

E

F

External storage device (USB, SD)

Message	Cause	Action
Unplayable File	This type of file cannot be played on this unit.	Select a file that can be played.
	There are no songs.	Transfer the audio files to the USB portable audio player/USB memory and connect.
	Security for the connected USB memory is enabled.	Follow the USB memory instructions to disable security.
Format Read	Sometimes there is a delay between the start of playback and when you start to hear any sound.	Wait until the message disappears and you hear sound.
Skipped	The connected USB portable audio player/USB memory contains WMA files that are protected by Windows Media™ DRM 9/10.	Play an audio file not embedded with Windows Media DRM 9/10.
Protect	All the files on the connected USB portable audio player/USB memory are protected by Windows Media DRM 9/10.	Transfer audio files not protected by Windows Media DRM 9/10 to the USB portable audio player/USB memory and connect.
Incompatible USB	The USB device connected to is not supported by this unit.	Connect a USB portable audio player or USB memory that is USB Mass Storage Class compliant.
	The USB device is not formatted with FAT16 or FAT32.	The connected USB device should be formatted with FAT16 or FAT32.
Incompatible SD	Unsupported SD card is inserted.	Use the supported SD card.
	The SD card is not formatted with FAT16 or FAT32.	The SD card should be formatted with FAT16 or FAT32.

Check USB

Check USB	The USB connector or USB cable has short-circuited.	Check that the USB connector or USB cable is not caught in something or damaged.
	The connected USB portable audio player/USB memory consumes more than maximum allowable current.	Disconnect the USB portable audio player/USB memory and do not use it. Turn the ignition switch to OFF, then to ACC or ON and then connect a compliant USB portable audio player/USB memory.
Error-02-9X/-DX	Communication failed.	Perform one of the following operations. –Turn the ignition switch OFF and back ON. –Disconnect the USB portable audio player/USB memory. –Change to a different source. Then, return to the USB portable audio player/USB memory.
Rental Expired.	The inserted disc contains expired DivX VOD content.	Select a file that can be played.
Unplayable File-High Definition	The inserted disc contains a high definition DivX file.	Select a file that can be played.
It is not possible to write it in the flash.	This unit's flash memory used as the temporary storage area is full.	Select a file that can be played.
Authorization Error	This unit's DivX registration code has not been authorized by the DivX VOD contents provider.	Register this unit to the DivX VOD contents provider.
Unplayable File	This type of file cannot be played on this unit.	Select a file that can be played.

Format Read	Sometimes there is a delay between the start of playback and when you start to hear any sound.	Wait until the message disappears and you hear sound.
--------------------	--	---

Video frame rate not supported.	DivX file's frame rate is more than 30 fps.	Select a file that can be played.
--	---	-----------------------------------

Audio format not supported.	This type of file is not supported on this unit.	Select a file that can be played.
------------------------------------	--	-----------------------------------

iPod

Message	Cause	Action
Format Read/Ready	Sometimes there is a delay between the start of playback and when you start to hear any sound.	Wait until the message disappears and you hear sound.

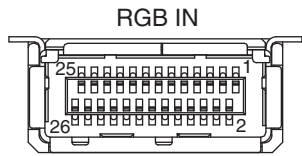
Error-02-6X/-9X/-DX	Communication failed.	Disconnect the cable from the iPod. Once the iPod's main menu is displayed, reconnect the iPod and reset it.
	iPod failure	Disconnect the cable from the iPod. Once the iPod's main menu is displayed, reconnect the iPod and reset it.

Error-02-67	The iPod firmware versions are old.	Update the iPod version.
--------------------	-------------------------------------	--------------------------

Stop	There are no songs.	Transfer songs to the iPod.
	There are no songs in the current list.	Select a list that contains songs.

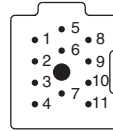


5.5 CONNECTOR FUNCTION DESCRIPTION



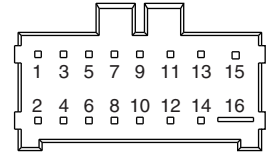
- | | | |
|------------|-------------|------------------|
| 1 : CCR | 10 : CCAUL | 19 : DSEN |
| 2 : CCG | 11 : CCAUR | 20 : TVON |
| 3 : CCB | 12 : GNDAU | 21 : GION |
| 4 : CCSYNC | 13 : ONSEI+ | 22 : MONON |
| 5 : GNDSIG | 14 : ONSEI- | 23 : VSW5 |
| 6 : DVDVBS | 15 : REAUR | 24 : SYS_TO_NAVI |
| 7 : GNDDVD | 16 : REAUL | 25 : NAVI_TO_SYS |
| 8 : YS | 17 : GNDRAU | 26 : GNDD |
| 9 : NC | 18 : CCREM | |

IP-BUS INPUT



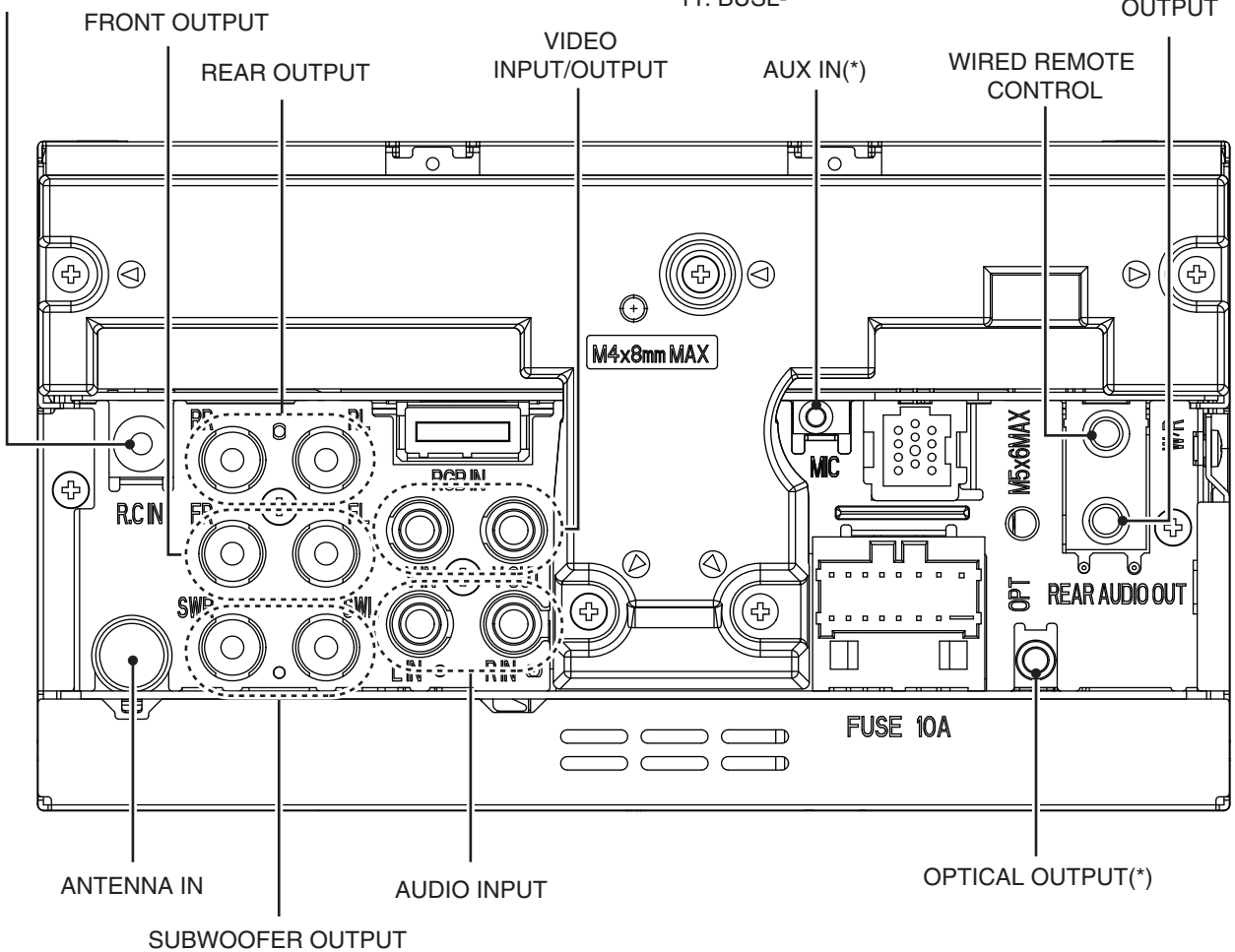
1. BUS+
2. BUSG
3. BUSLG
4. MAINTTEST
5. BUS-
6. BUSRG
7. BUSL+
8. ASENBO
9. BUSR+
10. BUSR-
11. BUSL-

POWER SUPPLY



- | | |
|--------|-------------|
| 1. FR- | 9. P. BRAKE |
| 2. RR- | 10. MUTE |
| 3. FR+ | 11. B.REM |
| 4. RR+ | 12. ILM |
| 5. FL- | 13. BGSENS |
| 6. RL- | 14. ACC |
| 7. FL+ | 15. GND |
| 8. RL+ | 16. B.UP |

REAR CAMERA IN



	AUX IN	OPTICAL OUTPUT
AVH-P3200BT/XNUC	×	×
AVH-P3250BT/XNRD	○	○
AVH-P3200DVD/XNUC	○	×
AVH-P3250DVD/XNRC	×	○
AVH-P3250DVD/XNRD	×	○
AVH-P3250DVD/XNRI	×	○

6. SERVICE MODE

6.1 MONITOR TEST MODE

[Method for Mode IN]

When the reset start is done while pushing REVERSE and EJECT, it shifts to the monitor test mode.

[Display specifications]

< Monitor test menu >

- 1. Version Check
- 2. Touch Panel Test
- 3. EEPROM Adjust
- 4. EEPROM Initialize
- 5. Display Test

[Operation specification]

Operational description	Remote controller key
Selection cursor up movement	2
Selection cursor down movement	8
Menu enter	5

1. Version Check

[Method for Mode IN]

Choose "Version Check" among the monitor test mode menu screen.

[Display specifications]

< Version Check Page:1 >

Ver	UNIT
SYS : 00.00	12345678
MMD : 00.00	12345678
	12345678
DISP : 00.00	12345678

When 8 digits of read number is strange, displayed with red.

[Operation specification]

Operational description	Remote controller key
Return to test mode mene	1
Page up	9
Page down	7

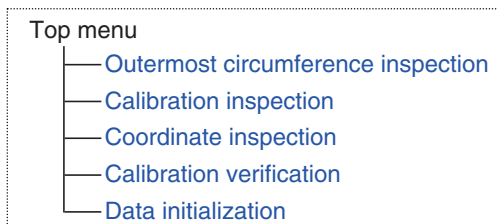
2. Touch Panel Test

[How to activate the touch panel test mode]

Choose "Touch Panel Test" among the monitor test mode menu screen.

[Menu types in the mode]

The calibration test mode consists of the following menus.



[Operation specification]

Operational description	Remote controller key
Selection cursor up movement	2
Selection cursor down movement	8
Return to test mode menu	1
Menu enter	5

[Description of the top menu]

[Display specification]

```

<Touch Panel Test>
*1. Setup Effective Area  EEPROM:OK 3C
*2. Setup Calibration
  3. TP Coordinates Test
  4. Calibration Test
  5. Data Initialize
  
```

Conditions for lighting of the adjustment complete mark “ * ”.

Outermost circumference inspection :

In case the outermost circumference inspection has been completed normally.

Calibration inspection :

In case the calibration has been completed normally.

Conditions for the adjustment complete mark “ * ” to go out.

Outermost circumference inspection :

In case the outermost circumference inspection has never been performed.

In case the EEPROM initialization has been performed.

In case the adjustment value has been initialized.

Calibration inspection :

In case the calibration inspection has never been performed.

In case the EEPROM initialization has been performed.

In case the adjustment value has been initialized.

[Outermost circumference inspection]

[Outline]

Outermost circumference value of X and Y is obtained by tracing the outermost circumference of the touch panel screen.

When exiting the menu screen by pressing 5 key, the captured value is stored in the EEPROM.

Furthermore, when storing the value, checking is made as to whether the value is within the range or not.

When the value is within the range.

Write the following value and adjustment information to the EEPROM, then "OK" is displayed.

1. The outermost value of X and Y(min/max) : 4 byte
2. The reference value for A/D correction of X,Y : 2 byte
3. Adjustment information(Adjustment OK) : 1 byte

When the value is within the range.

Write the following adjustment information to the EEPROM, then "NG" is displayed.

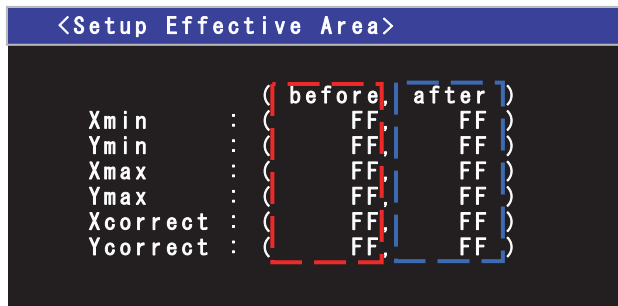
1. Adjustment information(Adjustment NG) : 1 byte

The initial value and the setting value allowable range are as follows.

	<Before initial value>	<After initial value>
① Outermost value	Xmin : 39h Ymin : 3Eh Xmax : F7h Ymax : EFh	① Outermost value Xmin : 78h Ymin : 78h Xmax : B4h Ymax : B4h
② A/D correction value	X : 33h Y : 38h	② A/D correction value X : 00h Y : 00h
③ Setting value allowable range	X direction Y direction	Minimum value : 00h to 80h Maximum value : 9Eh to FFh Maximum value - Minimum value : more then 73h Minimum value : 00h to 83h Maximum value : 9Ah to FFh Maximum value - Minimum value : more then 6Bh

[Display specifications]

Outermost circumference inspection in process



X/Y information of [MIN] and [MAX] of the outermost circumference are displayed.

[BEFOR] indicates the value stored in the EEPROM.

[AFTER] indicates MIN/MAX of the A/D value currently captured.

[Operation specification]

Operational description	Remote controller key
Return to top menu	5

[16 points adjustment]

[Outline]

When correctly touched, the cursor will disappear, and the next cursor will appear. Calibration is conducted by repeating this process 16 times.

When the 17th point has been finally touched, setting information for the 16 points and the normal ending information, total of 17 byte data, are written into the EEPROM, and the screen returns to the TOP menu.

[Display specifications]

16 points adjustment in process



Order of display of the locations to be pressed.



This point is intended to end the calibration inspection, and therefore, the corrected value of this point is not obtained.

[Operation specification]

Operational description	Remote controller key
Return to top menu	5

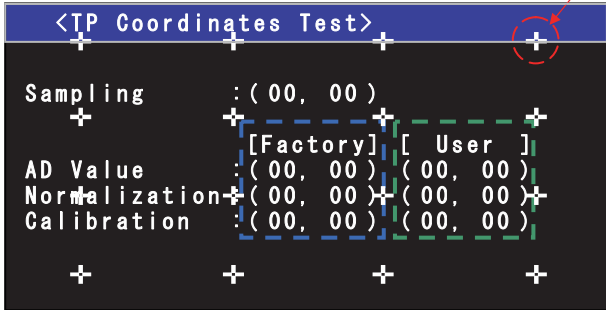
[Coordinate inspection]

A [Outline]

The coordinate before correction and after correction at the time of pressing the touch panel are displayed for coordinate verification. Furthermore, the red "+" cursor can be moved by the key operation mentioned below, and the coordinate of the cursor center is displayed.

B [Display specifications]

Fixed display



B

Each displayed coordinate is as follows.

The values under [Factory] are the corrected values in the Factory region and the values under [User] are the corrected values in the User region.

C

- Sampling : A/D value (X direction, Y direction) of the pressed point is displayed.
- AD Value : The coordinate (X direction, Y direction) of the A/D value of the pressed point corrected by the reference value for A/D correction is displayed.
- Normalization : The coordinate (X direction, Y direction) after normalizing the A/D corrected coordinate within the effective range is displayed. (0~255)
- Calibration : The coordinate (X direction, Y direction) which is the result of adding the correction by calibration to the normalized coordinate is displayed.

Movable "+" cursor is displayed in red.
16 calibration points are displayed in white.

D

[Operation specification]

Operational description	Remote controller key
Return to top menu	1

D

E

F

[Calibration verification]

[Outline]

Touch the cursor “+” displayed on the screen. The correct touch will delete the cursor and another cursor will be displayed. The incorrect touch will make the characters of cursor turn red. Repeat this for 4 points, and “OK” is displayed upon the last press of 4th point.

[Display specifications]

confirming



The pushing order



[Operation specification]

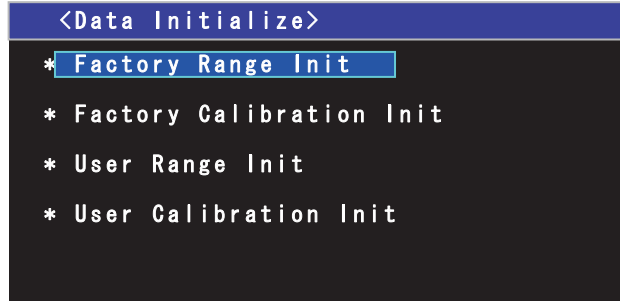
Operational description	Remote controller key
Return to top mene	1

[Data initialization]

[Outline]

Result of outermost circumference inspection and of calibration inspection (corrected value) are returned to their initial values.
As for the initialized items, the initial values are written into the EEPROM and the adjustment information is cleared.

[Display specifications]



Conditions for the adjustment completion mark (*) to be lighted up.

(The mark will be lighted up if one of the multiple conditions is met.)

Outermost circumference inspection

When the outermost circumference inspection of the calibration for line has been completed normally.

Calibration inspection

When the calibration inspection of the calibration for line has been completed normally.

User outermost circumference inspection

When the user outermost circumference inspection of the calibration for line has been completed normally.

User calibration inspection

When the user calibration inspection of the calibration for line has been completed normally.

Conditions for the adjustment completion mark (*) to go out.

Outermost circumference inspection

When the above mentioned lighting conditions are not applicable.

When the adjusted value has been initialized (Data initialize).

When the EEPROM has been initialized.

Calibration inspection

When the above mentioned lighting conditions are not applicable.

When the adjusted value has been initialized (Data initialize).

When the EEPROM has been initialized.

User outermost circumference inspection

When the above mentioned lighting conditions are not applicable.

In case the outermost circumference inspection of the calibration for line or the 16-point adjustment is normally terminated after normal termination of the outermost circumference inspection for user calibration.

When the adjusted value has been initialized (Data initialize).

When the EEPROM has been initialized.

User calibration inspection

When the above mentioned lighting conditions are not applicable.

In case the outermost circumference inspection of the calibration for line or the 16-point adjustment is normally terminated after normal termination of the outermost circumference inspection for user calibration.

When the adjusted value has been initialized (Data initialize).

When the EEPROM has been initialized.

[Operation specification]

Operational description	Remote controller key
Selection cursor up movement	2
Selection cursor down movement	8
Return to test mode menu	1
Menu enter	5

3. EEPROM Adjust

[Method for Mode IN]

Choose "EEPROM Adjust" among the monitor test mode menu screen.

[Display specifications]

The setting items and the adjusted values are displayed on each page.

*The adjusted value section indicates initial values stored in EEPROM.

*If writing a value fails, the indication will not change.

example)

Setting item	Adjustment value
LED REF 1	0
LED DIM 1	0
LED TARGET 1	6
LED REF 2	0
LED DIM 2	4
LED TARGET 2	6

[Operation specification]

Operational description	Remote controller key
Selection cursor up movement	2
Selection cursor down movement	8
Item content value up	6
Item content value down	4
Next menu page	9
Former menu page	7
Return to test mode mene	1

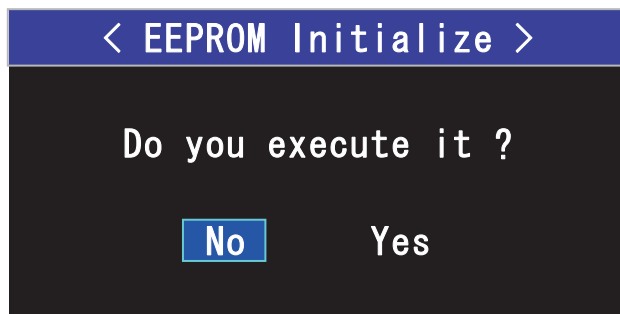
4. EEPROM Initialize

[Method for Mode IN]

Choose "EEPROM Initialize" among the monitor test mode menu screen.

[Display specifications]

When EEPROM is initialized, eject lock may be enabled. Please cancel eject lock in this case.



Default of a cursor is the location of "No".
Choose "YES" and decide, initialize a setting value.

***) Don't turn off power while initializing.**

When normally ends, "success" is displayed.

When will not end in four seconds, judged to be abnormal, "failure" is displayed.

[Operation specification]

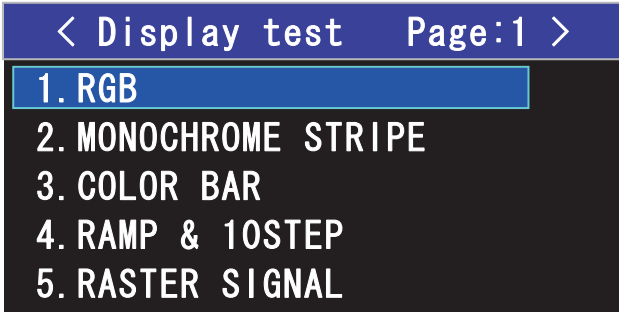
Operational description	Remote controller key
Selection cursor left movement	4
Selection cursor right movement	6
Return to test mode mene	1
Menu enter	5

5. Display Test

[Method for Mode IN]

Choose "Display Test (Test Pattern)" among the monitor test mode menu screen.

[Display specifications]



[Operation specification]

Operational description	Remote controller key
Selection cursor up movement	2
Selection cursor down movement	8
Page up	9
Page down	7
Return to test mode mene	1
Menu enter	5

[RGB]

RGB is plotted in the following pattern:
 R100% -> R50% -> G100% -> G50% -> B100% -> B50% -> BLACK -> GRAY -> WHITE -> GREEN and MAGENTA dot signal
 (The display of the screen will be changed in 1 second.)

[Operation specification]

Operational description	Remote controller key
Return to test mode mene	1
Stop/Restart	5

[MONOCHROME STRIPE]

Display of monochrome stripe signal (1dot Width)

[Operation specification]

Operational description	Remote controller key
Return to test mode mene	1

[COLOR BAR]

Display of color bar signal

[Operation specification]

Operational description	Remote controller key
Return to test mode mene	1

[RAMP & 10STEP]

Display of step signal and signal for alpha blend check

[Operation specification]

Operational description	Remote controller key
alpha blend rate up	2
alpha blend rate down	8
Return to test mode menu	1
Next signal	5

[RASTER SIGNAL]

Display of signal for step confirmation

[Operation specification]

Operational description	Remote controller key
Return to test mode menu	1
Next signal	5

[CONTRAST]

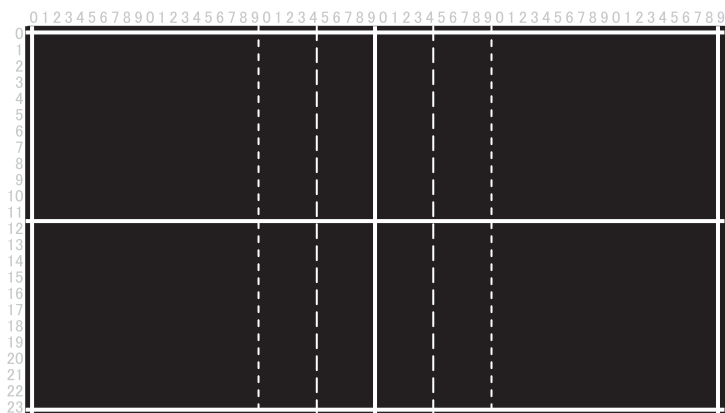
Display of Black/White signal

[Operation specification]

Operational description	Remote controller key
Return to test mode menu	1
Next signal	5

[CENTER MARKER]

Display of signal for screen central location setting.



[Operation specification]

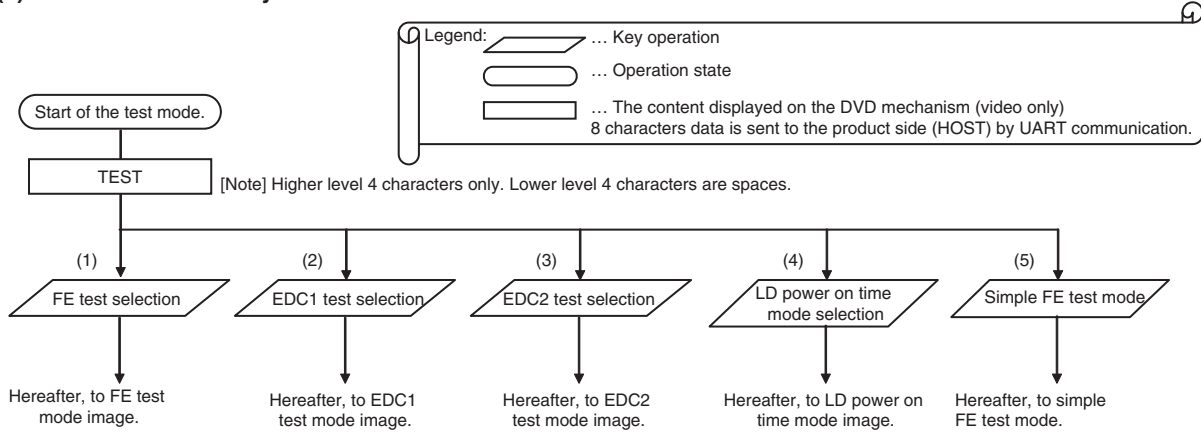
Operational description	Remote controller key
Return to test mode menu	1

6.2 DVD TEST MODE

Test mode display will not appear on the display of this product. Connect the rear monitor output to a monitor.

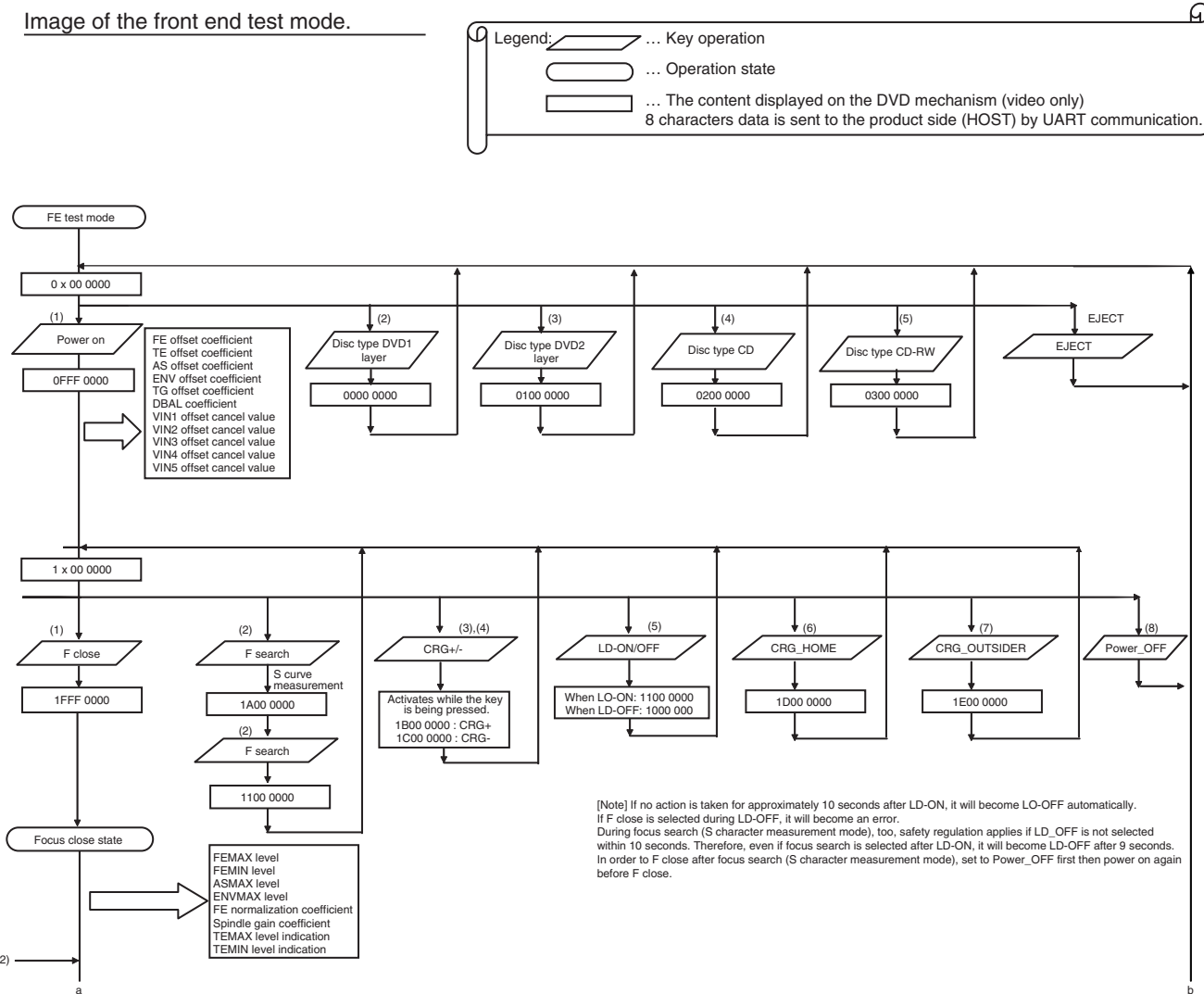
Image of the test mode.

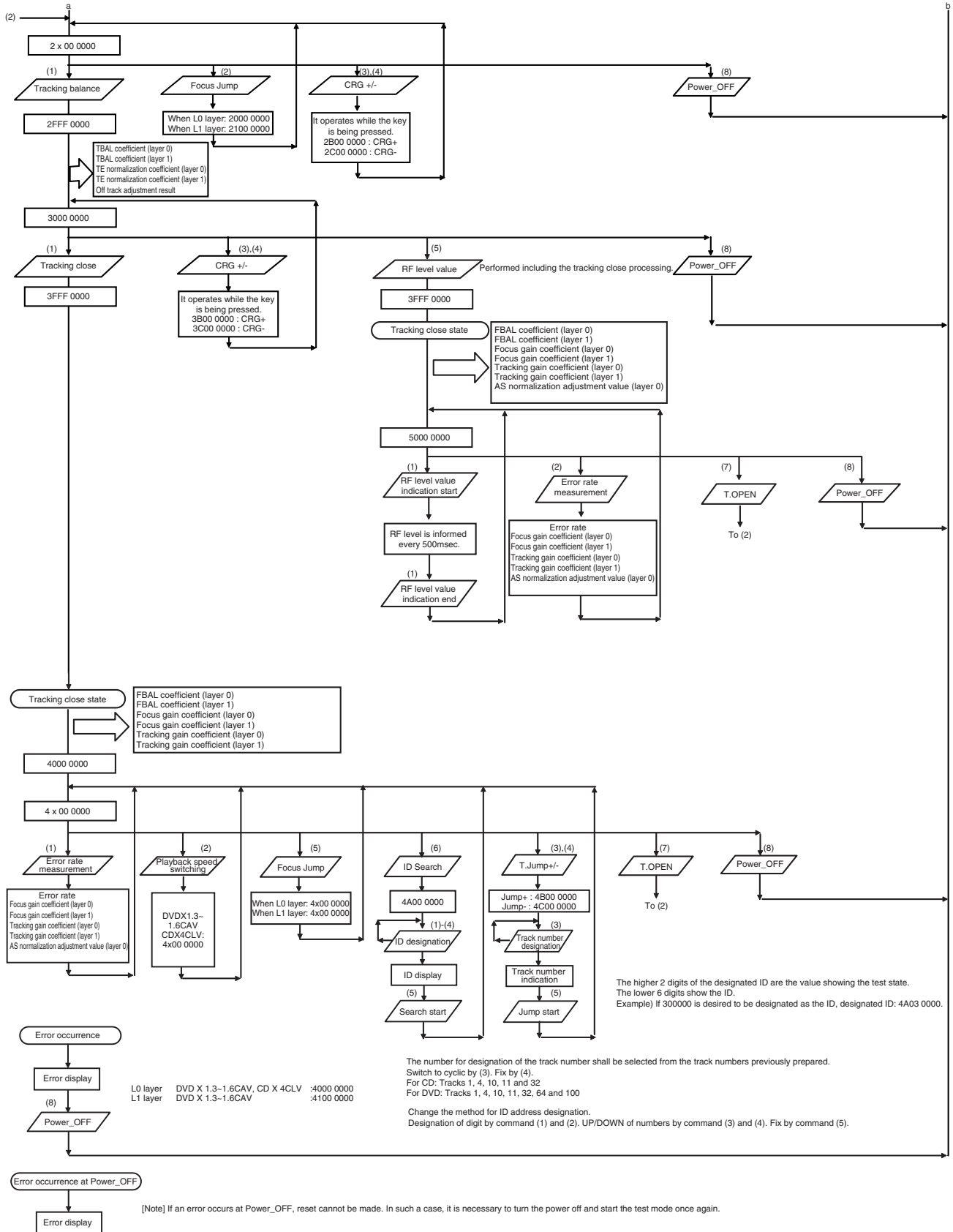
[MUTE] + [FORWARD] + Reset start
Switch position of the remote control unit.
[AVH mode]
(1)-(8) and EJECT is the key of remote control unit.



[Note] In order to move on to another test after selecting a test (FE/EDC1/EDC2), it is necessary to restart the DVD mechanism in the test mode.

Image of the front end test mode.





EDC. Image of the test mode

Legend:

- ▭ ... Key operation
- ▭ ... Operational state
- ▭ ... The content displayed on the DVD mechanism (video only)
8 characters data is sent to the product side (HOST) by UART communication.

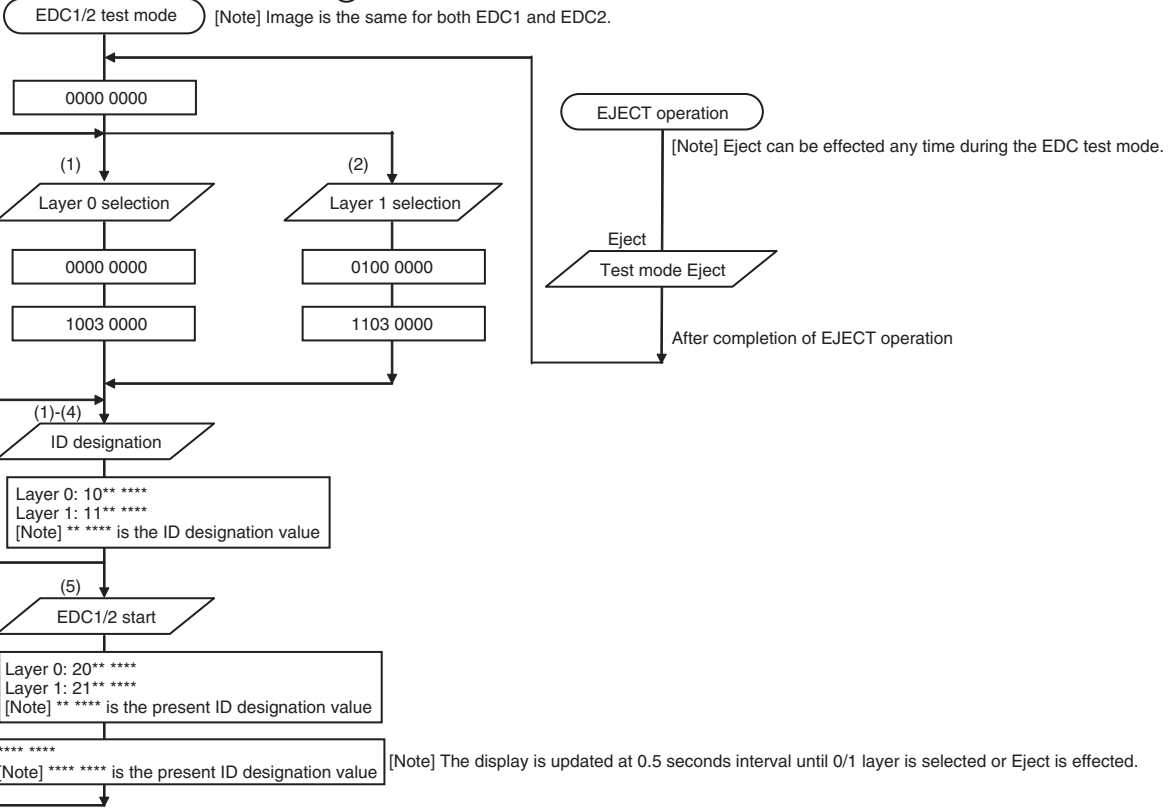
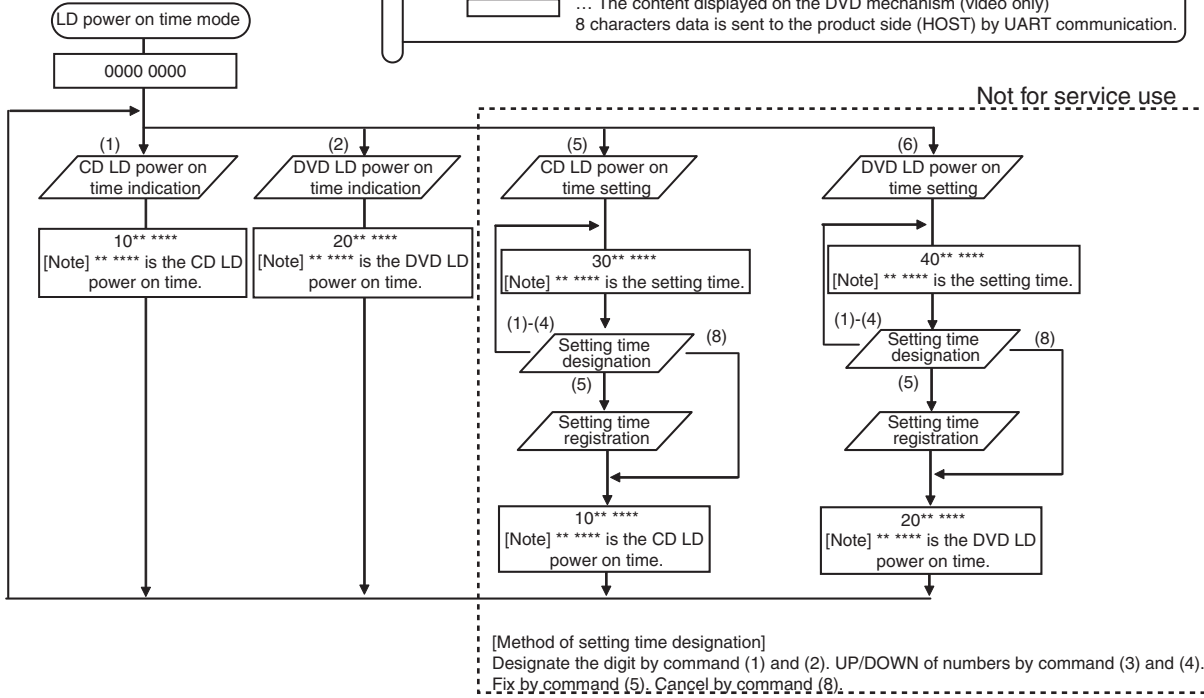


Image of the LD power on time mode.

Legend:

- ▭ ... Key operation
- ▭ ... Operational state
- ▭ ... The content displayed on the DVD mechanism (video only)
8 characters data is sent to the product side (HOST) by UART communication.

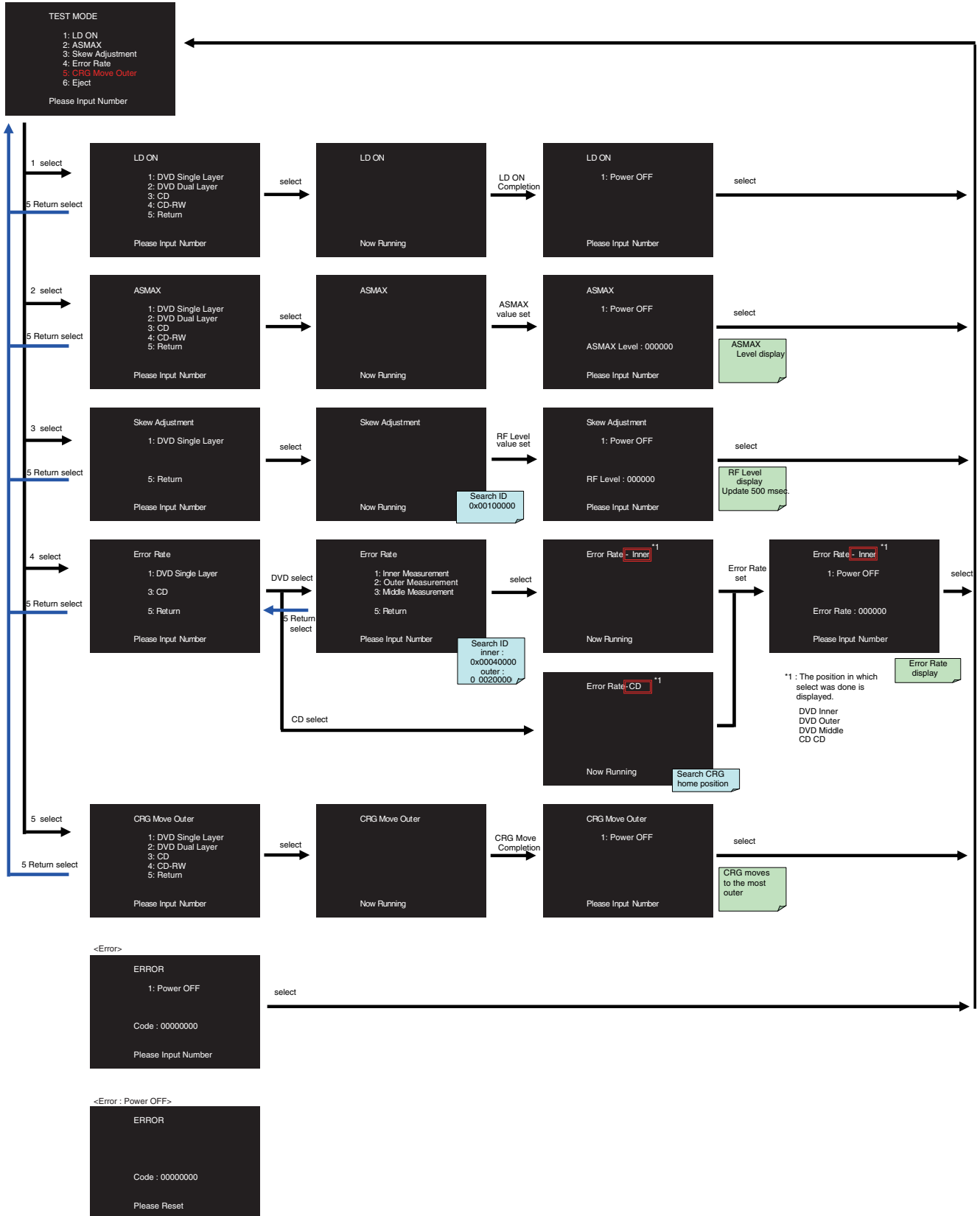


[Note] If the power on time is 999999 hours or more, it is always reported as 999999 hours.
 [Note] If the power on time is "E*****", the value may not be correct due to the life of the flash memory.

Simple test mode

The selection of the figure of each screen can be selected by "Key command for the test".

<Flow chart>



7. DISASSEMBLY

● Removing the Monitor Assy (Fig.1)

Remove the Case.(Fig.1)

➔ 1 Remove the four screws.(Fig.1)

➔ 2 Remove the two hooks.(Fig.1)

➔ 3 Disconnect the two FFC and then remove the Monitor Assy.(Fig.2)

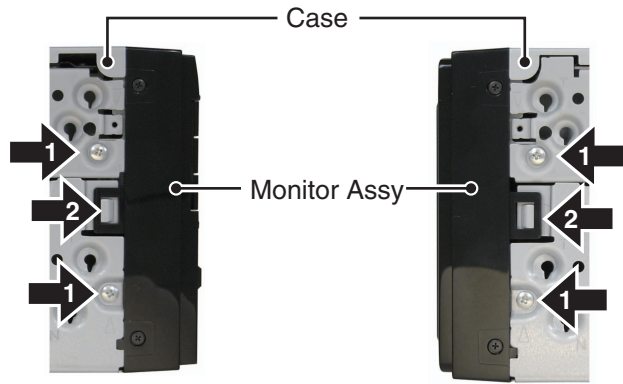


Fig.1

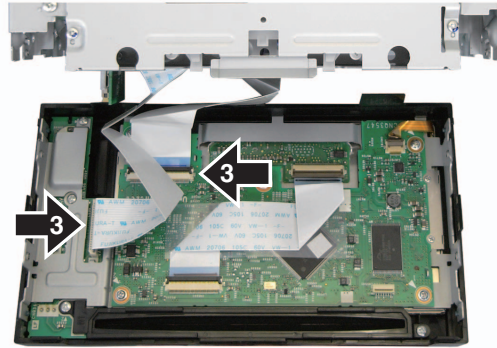


Fig.2

● Removing the LCD Assy (Fig.3)

➔ 1 Disconnect the FFC.

➔ 2 Remove the four screws.

➔ 3 Remove the two screws and then remove the Holder.

➔ 4 Remove the three hooks and then remove the LCD Assy.

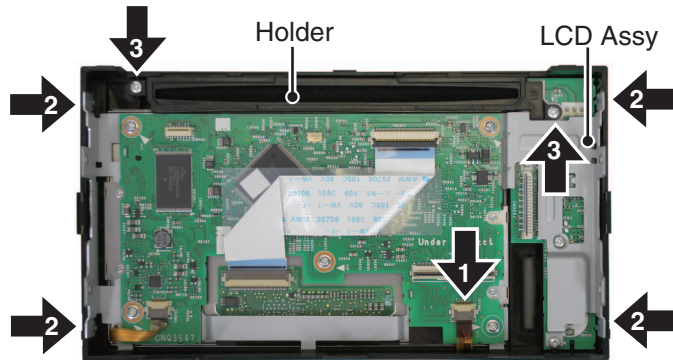


Fig.3

● Removing the Monitor PCB (Fig.4)

➔ 1 Disconnect the two FFC.

➔ 2 Remove the five screws and then remove the Monitor.

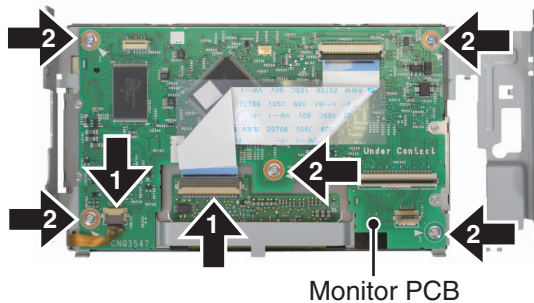


Fig.4

● Removing the Keyboard PCB (Fig.5)

➔ 1 Remove the screw and then remove the Keyboard PCB.

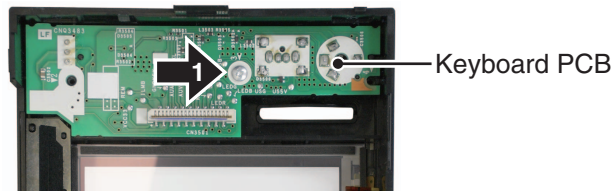


Fig.5

● Removing the DVD Mechanism Module (Fig.6)

➔ 1 Remove the four screws.

➔ 2 Disconnect the FFC and then remove the DVD Mechanism Module.

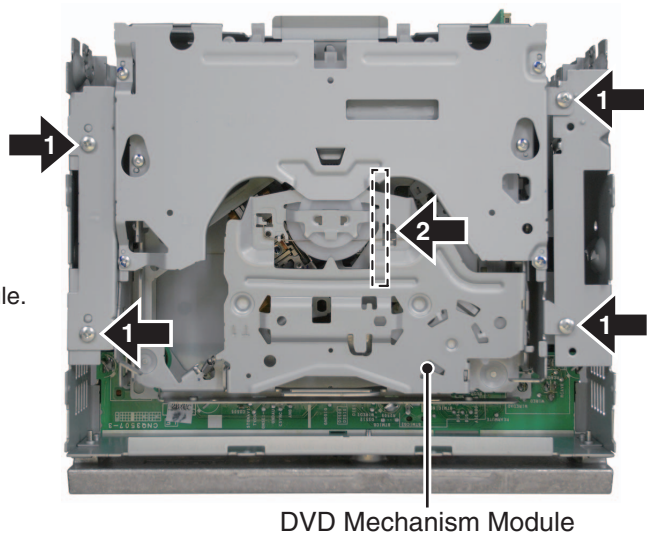


Fig.6

● Removing the Heat Sink and Holder (Fig.7)

➔ 1 Remove the two screws.

➔ 2 Remove the three screws and then remove the Heat Sink and Holder.

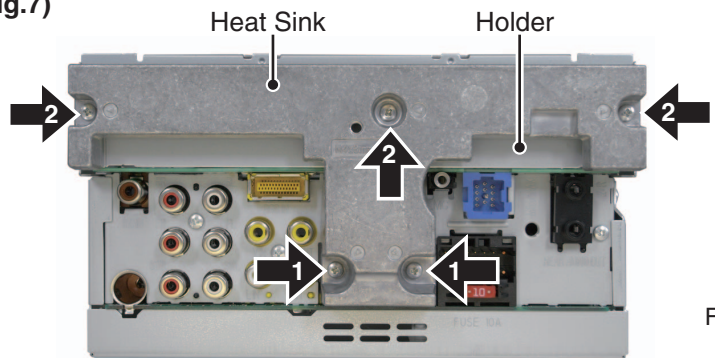


Fig.7

● Removing the the Upper Chassis (Fig.8, 9, 10)

➔ 1 Remove the screw.(Fig.8)

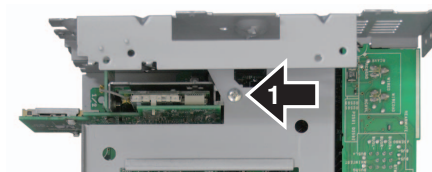


Fig.8

➔ 2 Remove the four screws and then remove the Upper Chassis.(Fig.9, 10)

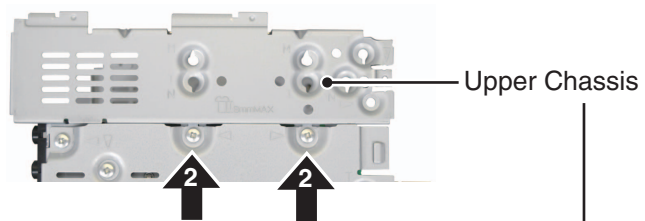


Fig.9

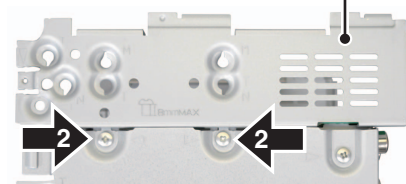


Fig.10

● Removing the Service Unit (Mother Assy) (Fig.11)

A

➔ 1 Remove the two screws.

➔ 2 Straighten the tabs at two locations indicated.

➔ 3 Remove the two screws and then remove the Service Unit (Mother Assy).

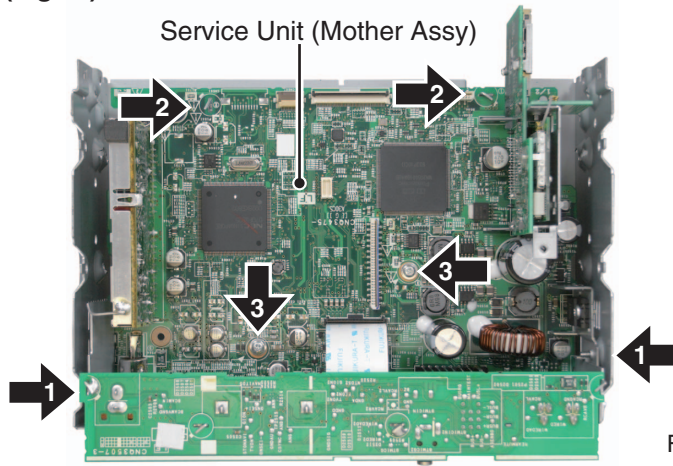


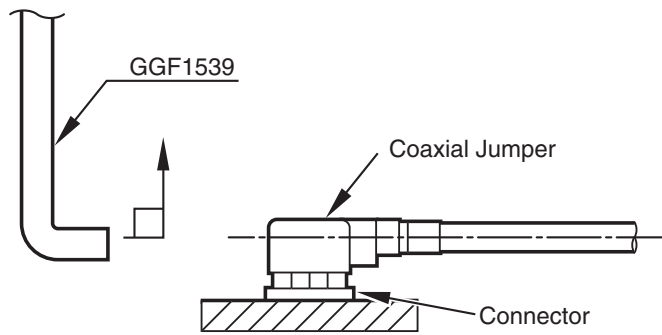
Fig.11

When unplugging the Coaxial Jumper, make sure to use jig GGF1539. If the antenna cable is directly unplugged without using jig GGF1539, you might damage your fingertip or fingernail.

● How to Remove the Coaxial Jumper

When unplugging Coaxial Jumper, hook the point of jig GGF1539 on the lid of Coaxial Jumper and vertically draw out along with the engagement axis of connector.

C



D

● How to Attach the Coaxial Jumper

For inserting Coaxial Jumper, adjust cord assy with the engagement axis of connector and insert it as vertically as possible.

Do not insert the Coaxial Jumper in extreme slant, as the connector might suffer damage.

● Removing the the BT ANT PCB (Fig.12)

E

➔ 1 Disconnect the Cord Assy using GGF1539.

➔ 2 Remove the screw and then remove the BT ANT PCB.

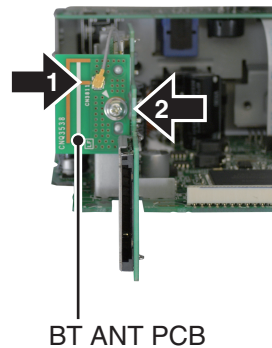


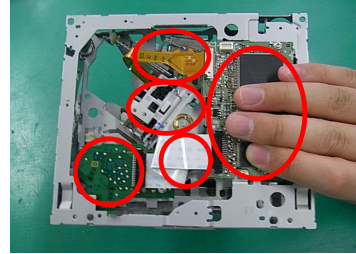
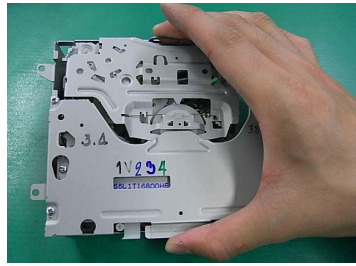
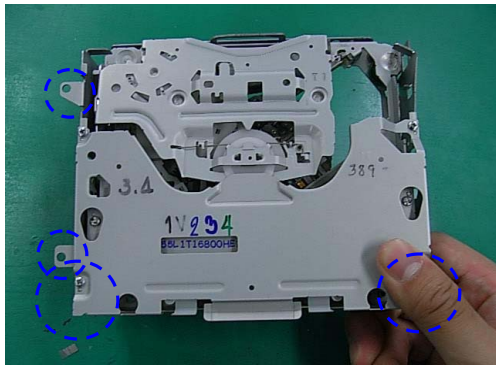
Fig.12

F

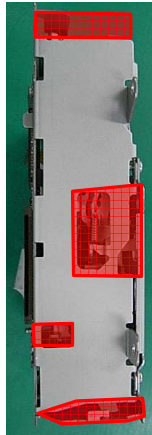
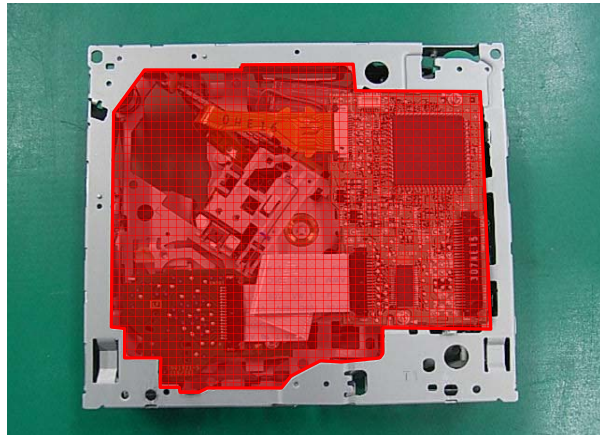
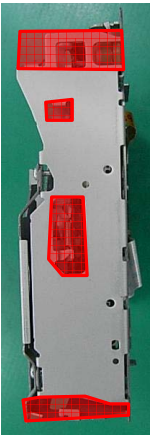
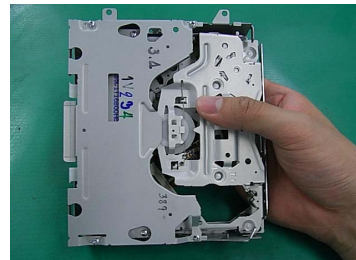
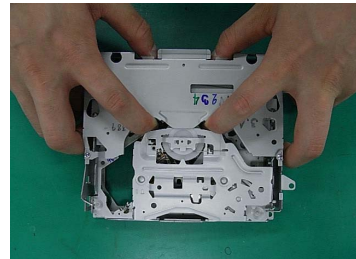
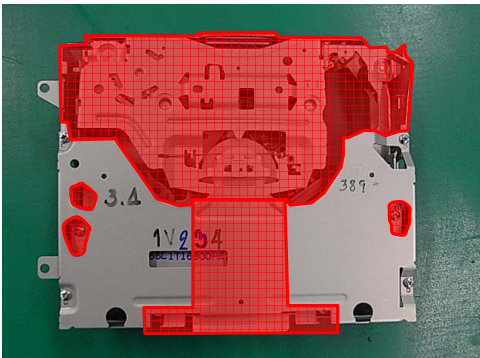
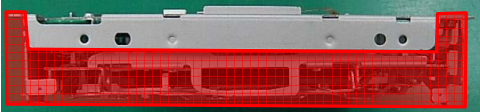
How to have it

1. Have a specified part.

Handling OK

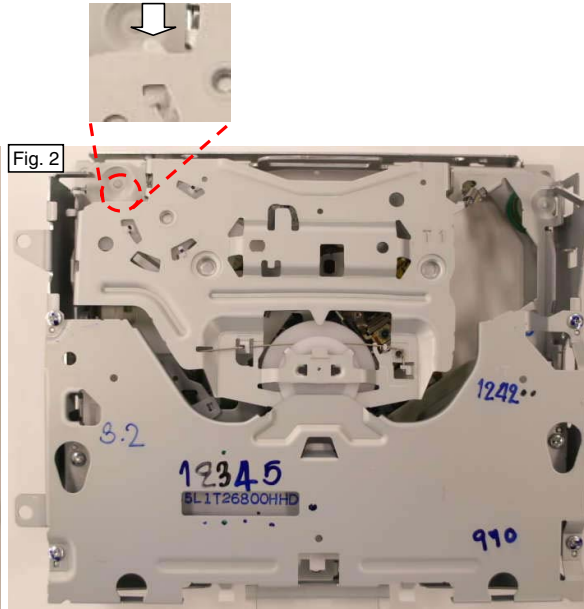
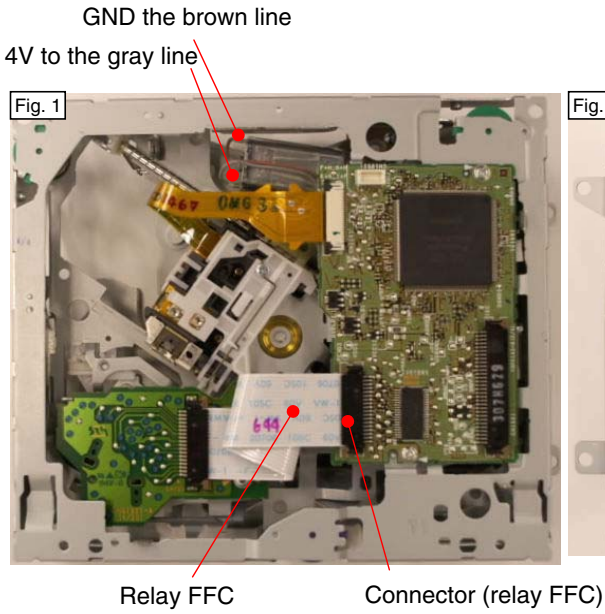


Handling NG



Mecha Module Bringing into the Clamp State with No Disc Loaded

1. Remove the relay FFC from the connector on the module PCB side (Fig. 1).
(Precaution) When it is difficult to apply 4V to the motor in procedure 2 below, remove the connector on the relay PCB side, then remove the FFC, and remove the solder of the CRG motor lead and apply voltage to the lead.
2. Push the Disc detection arm while applying 4V to the CRG motor (Fig. 2)
By this action, the mecha moves to the clamp state and the PU moves to the outer periphery.
3. Stop the motor when the PU comes to the vicinity of the intermediate periphery.
(Precaution) If the PU goes to the outer most periphery, it idles.
It is not a problem, but please try not to let it idle as much as possible.



CRG Mecha_Bringing into the Clamp State with No Disc Loaded

- 1.Remove the T-case washer and then remove the drive gear. (Fig. 1)
- 2.Lift the clamp arm assy until it is in the state shown in Fig. 2_b (open-lock state).
- 3.Put your finger on the area A of Fig. 2_c and then slide it to the direction of the arrow (the direction of the playing state).
- 4.Push down the clamp arm.

(Precaution) When bringing the CRG mecha into the ejecting state again, install the drive gear after sliding the drive lever and bringing it to the ejecting state, in order to prevent the cog of the pinion in the drive gear from chipping at the time of its installation.

Fig. 1

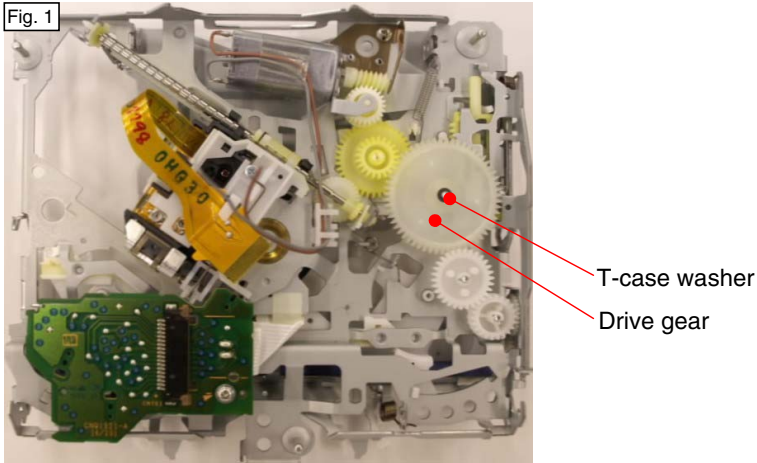
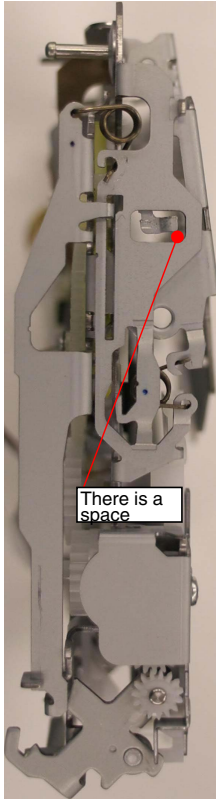
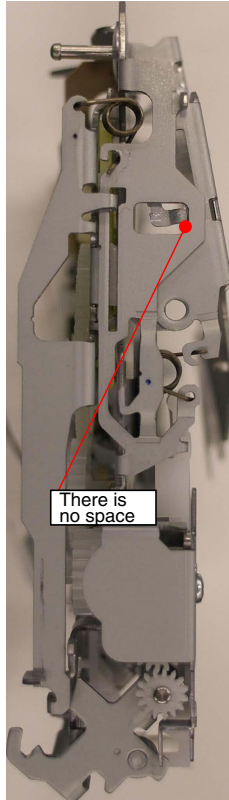


Fig. 2

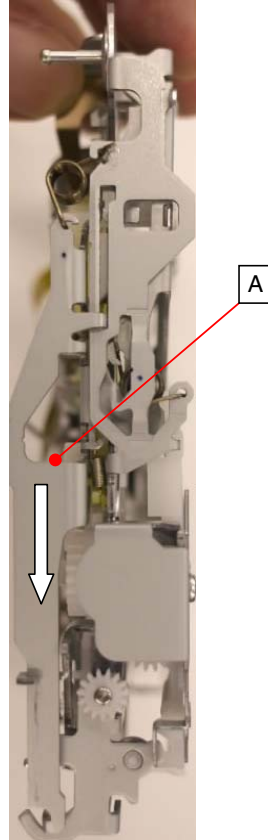
a. Ejecting state



b. Open-lock state



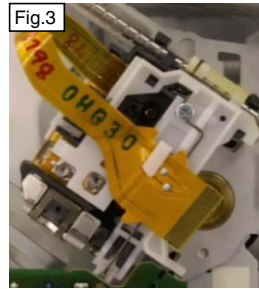
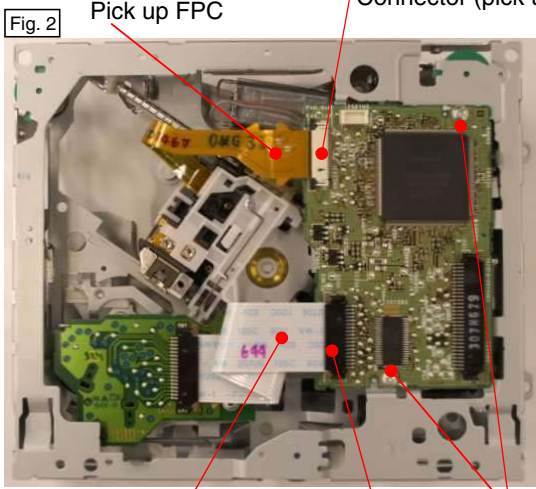
c. Clamp state with no disc loaded



Removing the Module PCB

- 1.Short-circuit two spots on the land of the pick up FPC. (Fig. 1)
- 2.Remove the pick up FPC and the relay FFC from the connector. (Fig. 2)
- 3.Temporarily attach the pick up FPC to the pick up rack. (Fig. 3)
(in order to prevent the damage to the pick up FPC)
- 4.Remove the two PCB clinch screws and then remove the module PCB. (Fig. 2)

Short-circuit

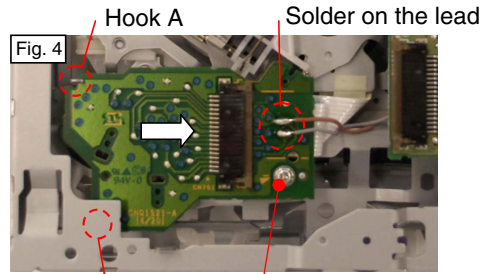


Relay FFC Connector (Relay FFC) PCB clinch screw

Removing/Installing the Relay PCB

Removing)

- 1.Remove the relay FFC from the connector (remove both sides so that the entire FFC will be removed). (Fig. 2)
- 2.Remove the solder on the lead for the CRG motor. (Fig. 4)
- 3.Remove the one relay PCB clinch screw. (Fig. 4)
- 4.Slide the relay PCB to the direction of the arrow and then remove the relay PCB from the hook A and the hook B. (Fig. 4)
- 5.Turn the relay PCB over and then remove the SPDL motor FFC from the connector.



Installing)

- 1.Check the mecha is in the ejecting state (disc-load suspended state).
When it is not in the ejecting state, apply 4V to the lead (motor) and then bring it to the ejecting state (4V to the brown line and GND the gray line).
- 2.Fit the SPDL motor FFC to the connector (back of the relay PCB).
- 3.Hold the relay PCB so that it does not touch the SW knob as in Fig. 5.
- 4.Insert it into the hook B as it is a little off to the clockwise direction.
(Precaution) This is to prevent the SW knob from getting into the NG position as in Fig. 6.
- 5.Push down the relay PCB lightly and then rotate it to the counterclockwise direction.
It sets the relay PCB in the hook A and the positioning dowel.
(Precaution) Pay attention so the SW knob will not get onto the PU rack. (Fig. 6)
- 6.As in the Figures, while supporting the location A with your fingers, screw the relay PCB. (Fig. 7 / Fig. 8)
- 7.Solder the lead for the CRG motor.
- 8.Fit the relay FFC to the connector.

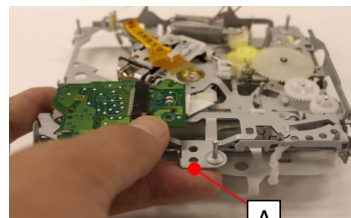
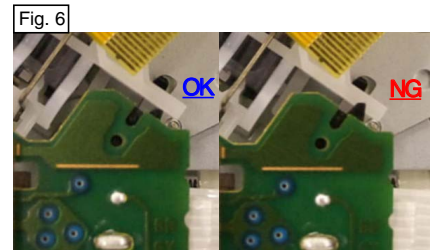
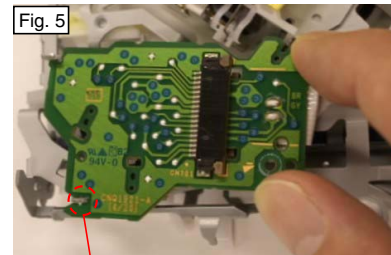


Fig. 7

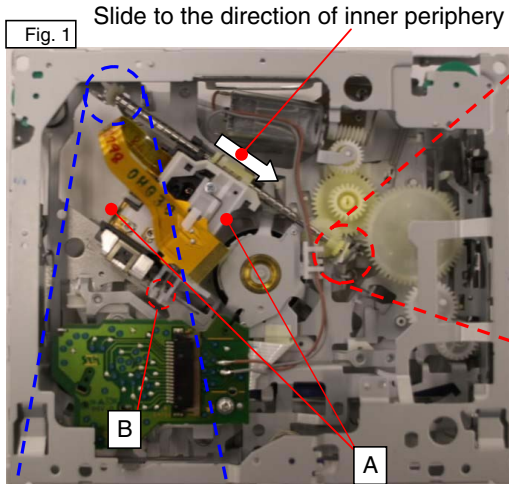
Fig. 8

A

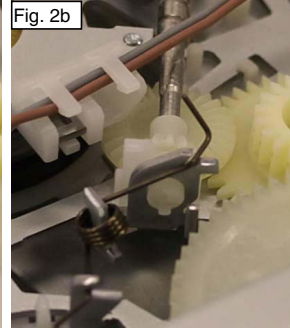
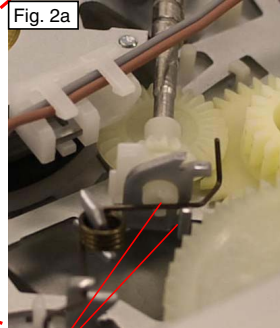
Removing the PU Unit

1. Hook the feed screw biasing spring on the temporary hook (Fig. 2b). Be careful not to get injured by the tip of the spring.
2. Hold the PU at the location A in Fig. 1 and slide and scoot it to the direction of the inner periphery.
3. As in Fig. 3, shift the back end of the feed screw to the side and then to above and remove it from the outside holder.
4. Remove the tucking joint for the chassis at the location B and the PU unit by lifting them up without changing their position and then remove the PU unit.

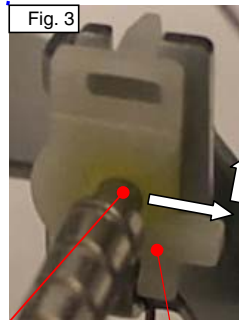
(Precaution) When installing the PU again, make sure to tuck the chassis in B and the PU unit (Fig. 4) first. Moreover, do not forget to permanently hook the feed screw biasing spring (Fig. 2a). Adjustments to the PU after its installation should be made according to the service manual.



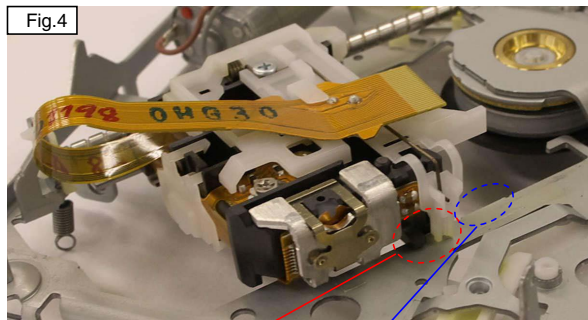
Slide to the direction of inner periphery



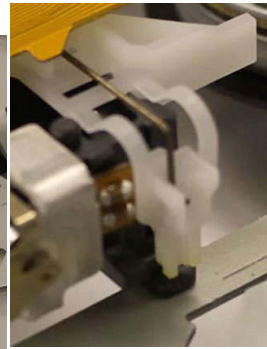
The spring is installed under the resin flange and inside the bended metal plate.



Back end of the feed screw Outside holder



Regularly installed position Install avoiding the area with blue broken line (the connected metal plate part)



[Installation NG] The chassis is not tucked between the PU case and the PU rack.

Sending the PU to the outer periphery

1. Bring to the clamp state with no disc loaded according to the "Mecha Module_Bringing into the Clamp State with No Disc Loaded" manual.
 - (Precaution) The relay FFC must be removed for certainty in order to prevent the IC damage.
2. Apply 1.5V to the CRG motor and then transfer the PU to the outer periphery.
 - (Precaution) Do not forget to reinstall the relay FFC after sending the PU to the outer periphery and take the necessary measures.

8. EACH SETTING AND ADJUSTMENT

8.1 DVD ADJUSTMENT



1) Precautions

This product uses 5 V and 3.3 V as standard voltages. The electrical potential that is the reference for signals, is not GND, but VREF (approximately 2.2 V) and VHALF (approximately 1.65 V) .

During product adjustments, if the reference voltage is mistakenly taken as GND, and a grounding contact is made, not only would it be impossible to measure the accurate electrical potential, but also the servo motor would malfunction, resulting in the application of a strong impact on the pick up. The following precautionary measures should be strictly adhered to, in order to avoid such problems.

The reference voltage and GND should not be confused when using the minus probe of a measurement device. When an oscilloscope is being used special care should be taken to make sure that the reference voltage is not connected to the probe of ch1 (on the minus side), while the probe of ch2 (on the minus side), is connected to GND. Further, since the body frame of most measurement devices have the same electrical potential as the minus side of the probe, the body frame of the measurement device should be set to floating ground.

If the reference voltage is connected to GND by mistake, turn the regulator OFF immediately, or turn the power OFF.

- Remove the filters and wires used for measurements only after the regulator has been turned OFF.
- After the power supply is turned on, regulator ON the following adjustment and measurement are promptly done.
- Whenever the product is in the test mode, the software will not take any protective action. For this reason, special care should be taken to make sure that no mechanical or electrical shock could be applied to the product when taking measurements in the test mode.
- Whenever the EJECT key is pressed to eject the disk, no other keys, other than the EJECT key, should be pressed until the disk eject action has been completed.
- Press the EJECT key only after the disk has stopped completely.
- If the product hangs up turn the power OFF immediately.
- Laser diodes may be damaged, if the volume switch for the laser power adjustment of the pick up unit, is turned.

● SKEW adjustment

When one of the following replacements has taken place, SKEW adjustment for the pick up will be required.

- (1) Replacement of the pick up unit
- (2) Replacement of the spindle motor
- (3) Replacement of the carriage chassis
- (4) Replacement of the main shaft of the pick up unit

Measurement equipment and tools/jigs: Oscilloscope

Driver for SKEW adjustment -> Driver

Bond for fixing the SKEW -> GEM1033

Bond for resonance -> 1530 (1530 : produced by THREE BOND)

Bond for locking the screw -> 1401M (1401M : produced by THREE BOND)

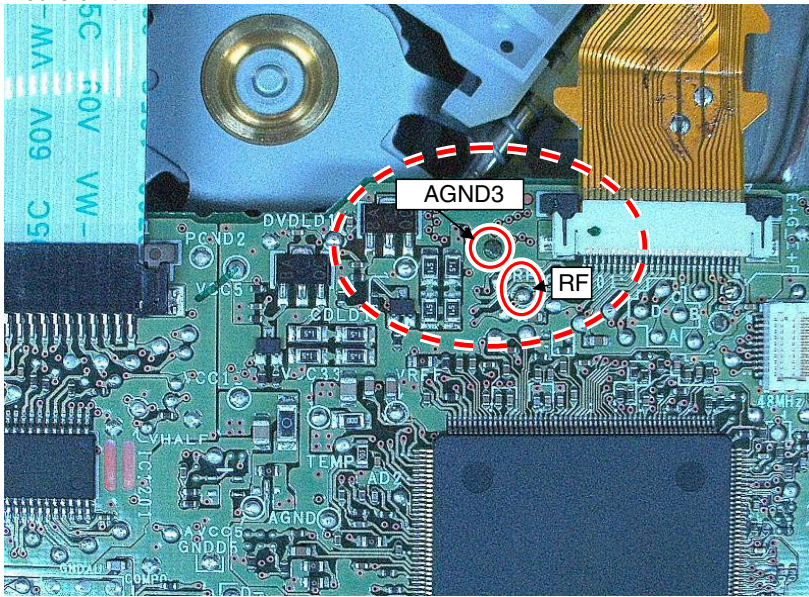
Disc used:GGV1025

Measurement reference: AGND3

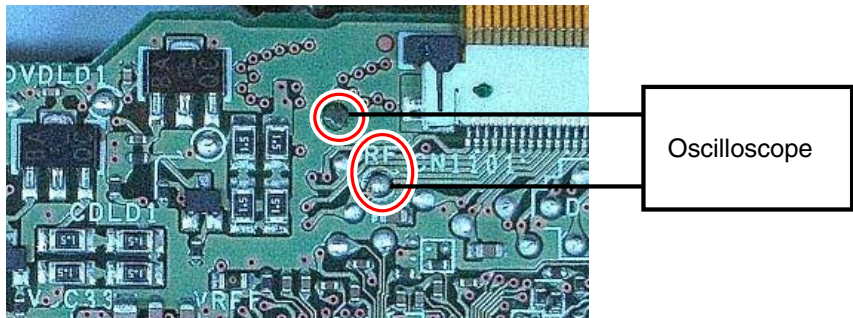
Measurement point: RF

Connection drawing

DVD core unit



Expansion



Symptom in case the adjustment is not adequate: Worsening of the error rate 10^{-3}
 (Normally 10^{-4} or less.)
 Large RF jitter
 RF waveform distortion
 Tracking drawing/Unstable servo

* Caution: Do not look into the laser light during adjustment.

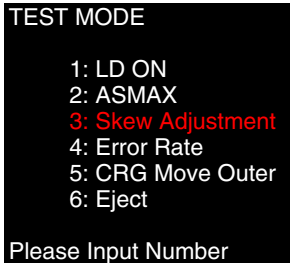
There are two methods of making adjustment: a method of making adjustment through monitoring RF waves by the oscilloscope (method 1) and a method of making adjustment through checking the numerical value of the RF level by OSD (method 2).

A Adjusting procedure is shown below, but regarding how to start the test mode and the operating procedure, please refer to the clause on the service test mode.

Adjusting Procedure:

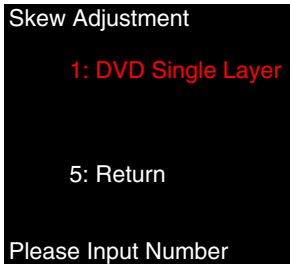
- 1. Install the pickup
(Refer to the removal of the pickup from the mecha unit.)
When handling the pickup, refer to the precautions on how to handle the PU listed below.
- 2. Method 1:
Connect the oscilloscope according to the AGND3 standards with reference to the connection diagram so that the RF signals can be monitored.
Method 2:
The device does not need to be set. Proceed to the procedure 3.
- 3. Turn ON the power of the product.
- 4. Start the simplified FE test mode.
(Regarding how to start the test mode and the operating procedure, refer to the clause on the service test mode.)
- 5. Load the disc for adjustment (GGV1025).
- 6. TEST MODE
Select "3: Skew Adjustment."

B



C

- 7. Skew Adjustment
Select "1: DVD Single Layer."



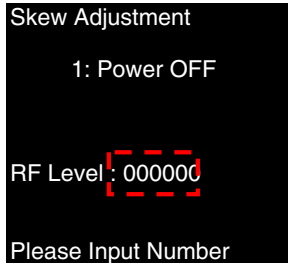
D

- 8. Adjust the Skew using a driver while checking the RF value.
Refer to the following pages concerning the locations to make SKEW adjustment.
Method 1:
Slightly turn the skew adjusting screw A while checking the RF wave level by the oscilloscope and make adjustment so the wave level would reach its maximum.
Next, slightly turn the skew adjusting screw B so the wave level would reach its maximum.
Slightly turn the skew adjusting screw A again so the wave level would reach its maximum.
(Make adjustment in the order of A->B->A and in the end complete adjustment by turning each screw in the clockwise direction.)

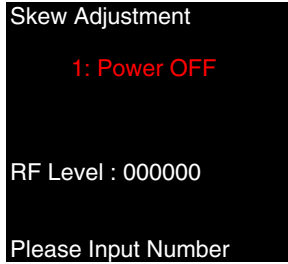
Method 2:
Slightly turn the skew adjusting screw A while checking the value of the RF level through the OSD display so the wave level would reach its maximum.
Next, slightly turn the skew adjusting screw B so the level would reach its maximum.
Slightly turn the skew adjusting screw A again so the level would reach its maximum.
(Make adjustment in the order of A->B->A and in the end complete adjustment by turning each screw in the clockwise direction.)

E

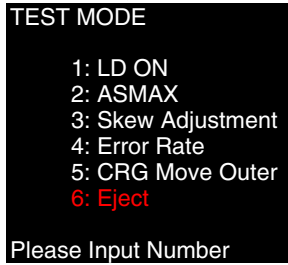
F



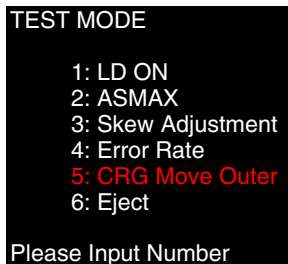
9. Skew Adjustment
Select "1: Power OFF."



10. TEST MODE
Select "6: Eject."



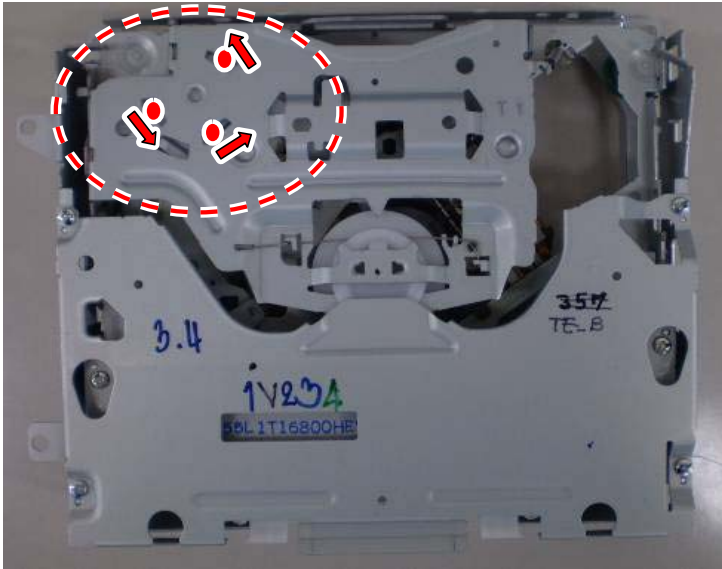
11. TEST MODE
Select "5: CRG Move Outer."



12. In order to produce the clamping state with no disc loaded, slightly move the disc detection arm in the counterclockwise direction while moving the switch arms outward.

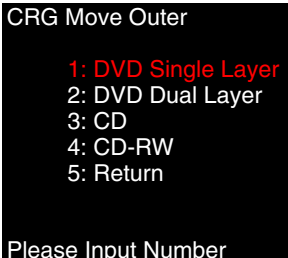


Switch arms



Disc Detection Arm

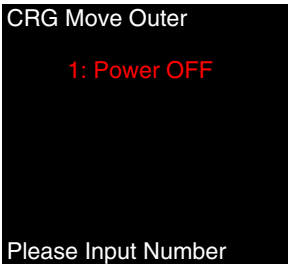
13. CRG Move Outer
 Select "1: DVD Single Layer."



Please Input Number

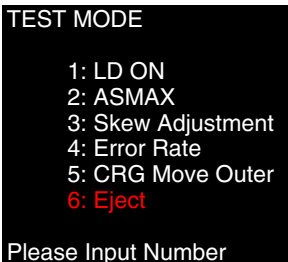
The pickup moves to the outer periphery.
 Apply the adhesive to fix the skew, the resonance adhesive and the screw lock.
 Refer to the next page regarding the locations of adhesive joining.

14. CRG Move Outer
 1: Power OFF



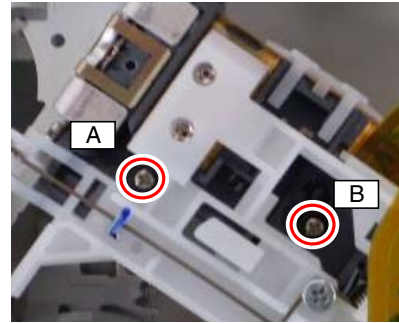
Please Input Number

15. TEST MODE
 Select "6: Eject."

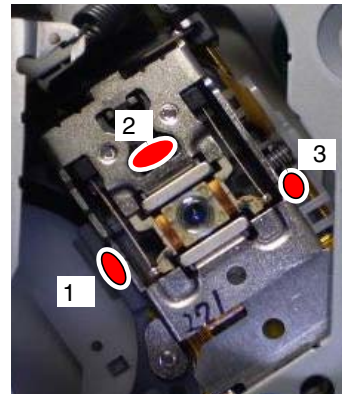


Please Input Number

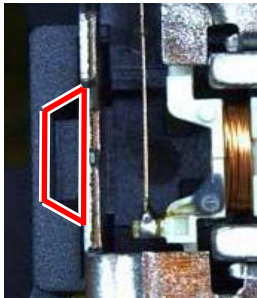
Locations to make SKEW adjustment



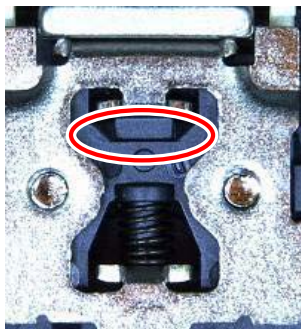
Locations to adhere the SKEW 1,2,3: GEM1033



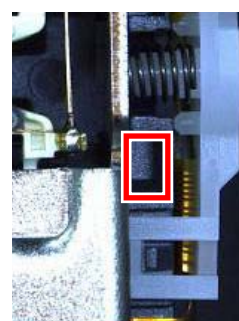
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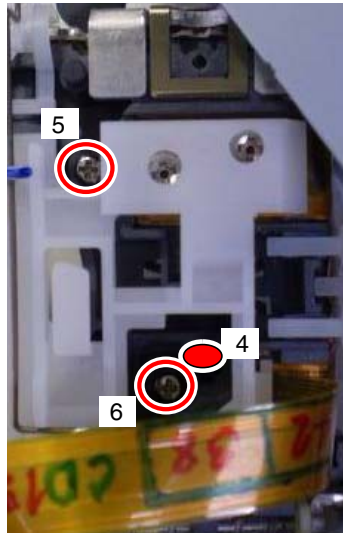
2



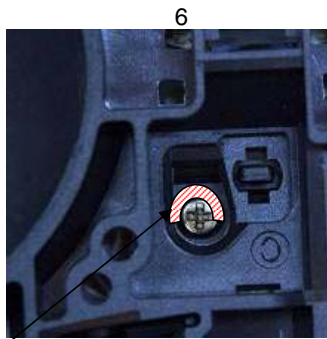
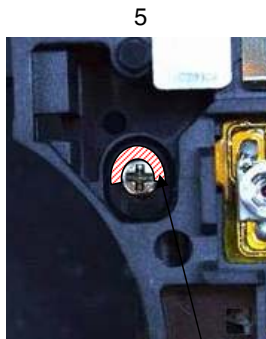
3



Bond for resonance 4:Three Bond 1530



Bond for locking the screw 5,6 : Three Bond 1401M

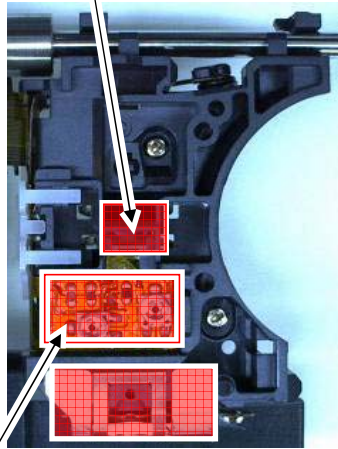


Bond for locking the screw

Precautions on handling the PU

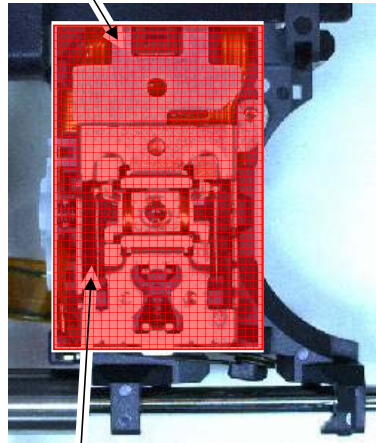
*Precaution: Do not touch those shaded areas in the following figures.

Do not touch the optical part



RF level adjusting part

Hologram (Beware of the static)



Do not touch the spring

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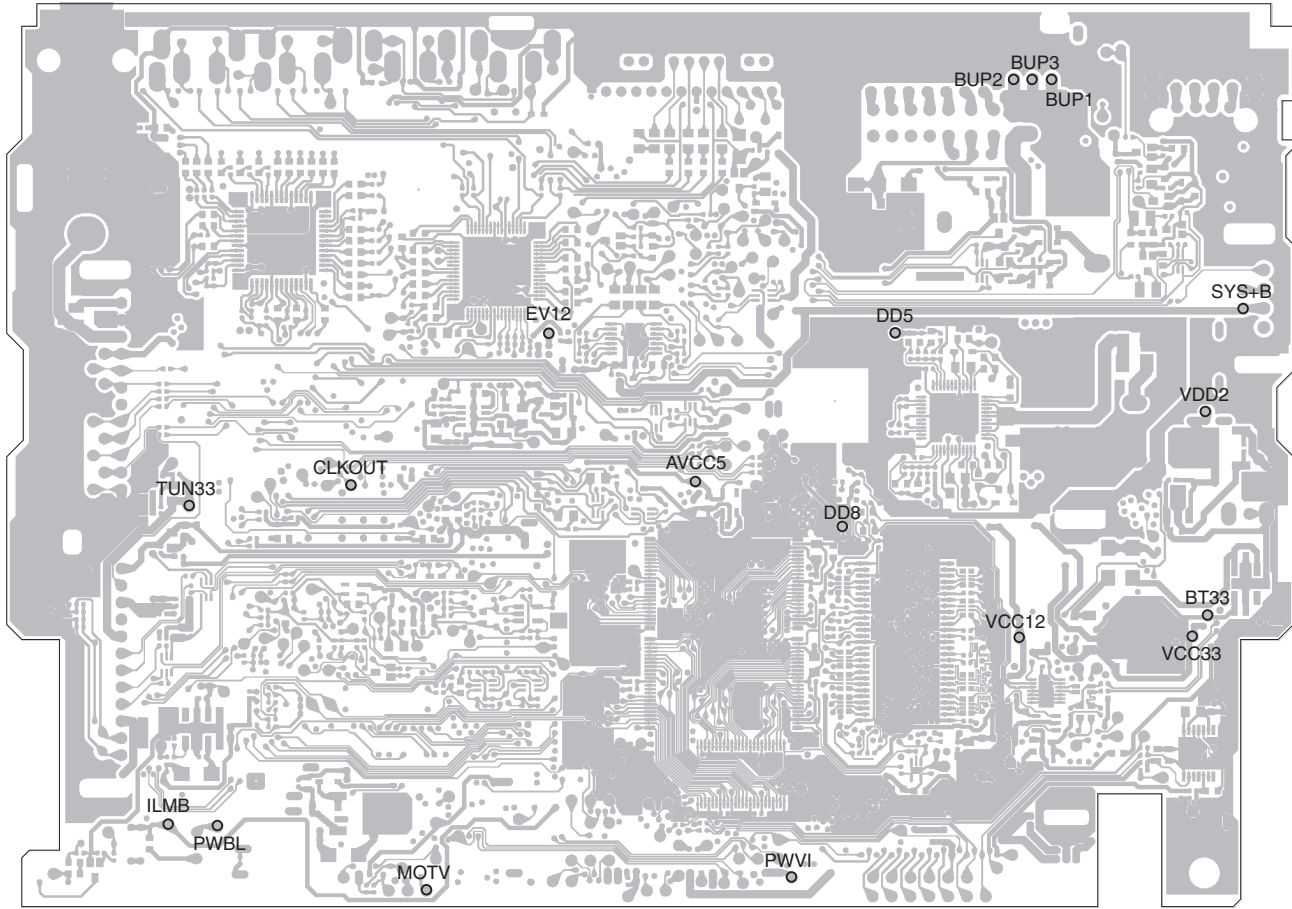
F

8.2 MOTHER UNIT ADJUSTMENT



● Adjustment Point

MOTHER UNIT(SIDE B)



DC/DC CONVERTER

No./Adjustment/Check Item	Input Point	Input signal	Measurement point	Check/Adjustment	Trigger	Control/Frequency	Note
1	IDD5	TP : BUP1,2,3 DC14.4 V ± 0.3 V	TP : DD5	5.0 V ± 0.4 V	VDCONT5	Internal oscillatory frequency : 300 kHz External oscillatory frequency DDCCLK : 365.8 kHz/413.9 kHz Operational frequency range : 346.5 kHz to 450 kHz SYNC INPUT DUTY 50%	Internal oscillatory /External frequency can't be changed, when it is operating. VDCONT5 and VDCONT8 conforms to the hardware specifications. Please give to me as a setting that flows as a load by 50 mA or more.
2	DD8	TP : BUP1,2,3 DC14.4 V ± 0.3 V	TP : DD8	8.0 V ± 0.4 V	VDCONT8	Internal oscillatory frequency : 365.1 kHz External oscillatory frequency HIOUTCLK : 476.6 kHz/515.7 kHz Operational frequency range : 467.5 kHz to 530.0 kHz SYNC INPUT DUTY 10%	Internal oscillatory /External frequency can be changed, when it is operating.
3	EV12V	TP : BUP1,2,3 DC14.4 V ± 0.3 V	TP : EV12	12.1 V ± 0.4 V	DD8		

REGULATOR

No./Adjustment/Check Item	Input Point	Input signal	Measurement point	Check/Adjustment	Trigger	Note
1	VDD3.3V	TP : BUP1,2,3 DC14.4 V ± 0.3 V	TP : VDD2	3.3 V ± 0.2 V	BUP	
2	SYSB	TP : BUP1,2,3 DC14.4 V ± 0.3 V	TP : SYS+B	8.4 V ± 0.3 V	SYSPW	
3	TUN3.3V	TP : BUP1,2,3 DC14.4 V ± 0.3 V	TP : TUN33	3.3 V ± 0.2 V	SYSPW (DD5 supply)	
4	PWRV1	TP : BUP1,2,3 DC14.4 V ± 0.3 V	TP : PWW1	5.2 V ± 0.3 V	DD5	
5	VCC3.3V	TP : BUP1,2,3 DC14.4 V ± 0.3 V	TP : VCC33	3.3 V ± 0.15-0.3 V	DD5	
6	VCC1.2V	TP : BUP1,2,3 DC14.4 V ± 0.3 V	TP : VCC12	1.2 V ± 0.12 V	DD5	
7	BT3.3V	TP : BUP1,2,3 DC14.4 V ± 0.3 V	TP : BT33	3.3 V ± 0.1 V	DD5	BT model ONLY
8	ILMB	TP : BUP1,2,3 DC14.4 V ± 0.3 V	TP : ILMB	8.1 V ± 0.3 V	DD8	
9	PWRBL	TP : BUP1,2,3 DC14.4 V ± 0.3 V	TP : PWBL	8.1 V ± 0.3 V	DD8	
10	AVCC5V	TP : BUP1,2,3 DC14.4 V ± 0.3 V	TP : AVCC5	5.0 V ± 0.3 V	DD8	

Please supply power to each power source basically from BU.

When checking the Multi Media Decoder (SoC) unit using the UART etc., conform to the product movement for the time from the power on to the reset cancellation/communication start, etc.

SYSTEM u-COM

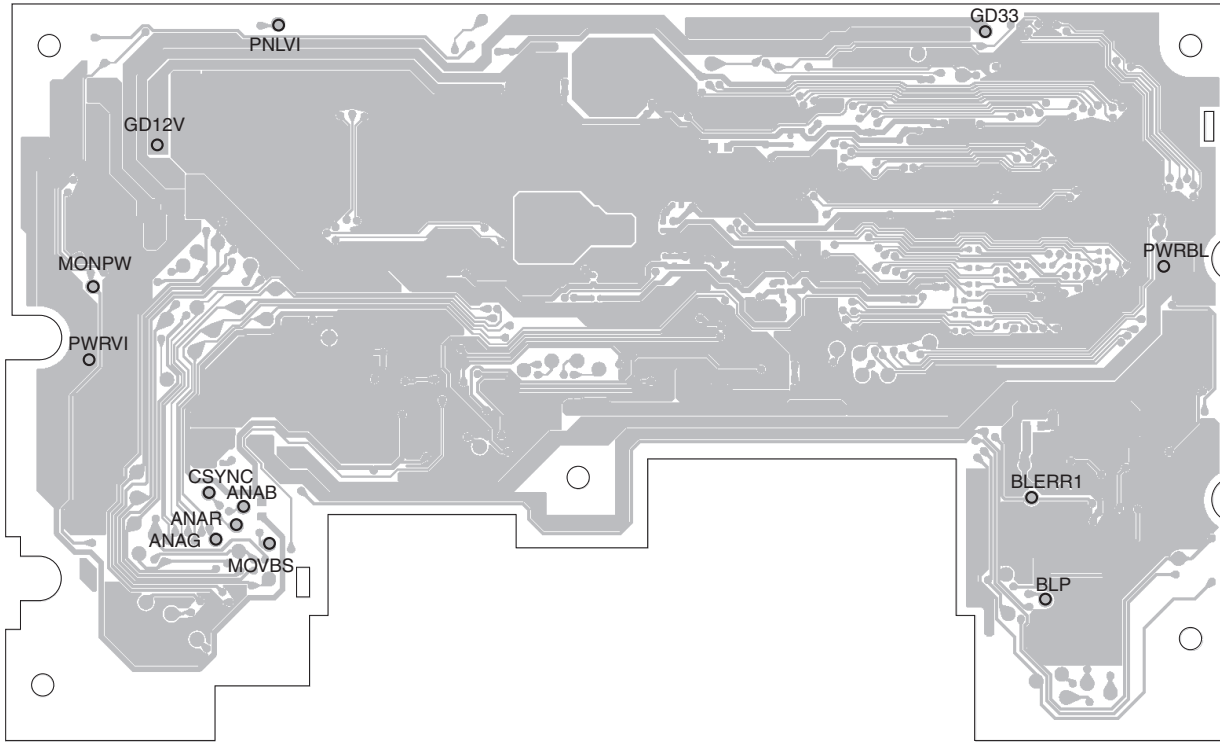
No./Adjustment Item	Input Point	Input signal	Measurement point	Check/Adjustment	Trigger	Note
1	PCL FREQUENCY	TP : BUP1,2,3 DC14.4 V ± 0.3 V	TP : CLKOUT	47,185.92 MHz ± 188 Hz (± 40 ppm less than)	-	After ACC, B,UP ON, Supply 3.3 V with IC602 : 149pin(TESTIN) and release reset.

8.3 MONITOR PCB ADJUSTMENT



MONITOR PCB(SIDE B)

● Adjustment Point



BACKLIGHT DRIVER

No Adjustment/Check Item	Input Point	Input signal	Measurement point	Check/Adjustment	Trigger	Control/Frequency	Note
1 BACKLIGHT	TP : PWRBL	DC 8.0 V ± 0.2 V	TP : BLP	16.3 V ± 3 V	DIMPLS Operational frequency : 200 Hz DIMMER is adjusted by the Duty.	Internal oscillatory frequency : 381.67 kHz External oscillatory frequency : 476.6 kHz/5/15.7 kHz (Operational frequency range : 430 kHz to 530 kHz) SYNC INPUT DUTY 90%	Internal oscillatory /External frequency can be changed, when it is operating. PWRBL, MBLPW, BLCLK, DIMPLS conforms to the hardware specifications.
2 BLERR	-	-	TP : BLERR1	0.981 V to 2.742 V	DIMPLS (Duty : 100%)	-	An output voltage range in product normal operation

REGULATOR

No Adjustment/Check Item	Input Point	Input signal	Measurement point	Check/Adjustment	Trigger	Note
1 GD33V	TP : PWRVI	DC8.1 V ± 0.2 V	TP : GD33V	3.4 V ± 0.2 V	MONPW	TP : MONPW +3.0 V to +3.3 V
2 GD12V	TP : PWRVI	DC8.1 V ± 0.2 V	TP : GD12V	1.2 V ± 0.1 V	MONPW (GD33V)	TP : MONPW +3.0 V to +3.3 V

A timing signal from the GERDA to the LCD module may destroy the built-in driver IC of the LCD module depending on its timing. Please pay attention if you are going to control the GERDA directly with jigs.

When executing the display test mode with the UART etc., conform to the product movement for the time from the power on to the reset cancellation/communication start, etc.

COMPOSITE SIGNAL

No Adjustment/Check Item	Input Point	Input signal	Measurement point	Check/Adjustment	Trigger	Note
1 composite	TP : MOVBS	composite signal 1.0 Vp-p ± 1%(at white 100%)	-	Display confirmation	-	Please do not input the signal when you don't turn on the power supply. Check signal : Color bar, 10step

ANALOG-RGB SIGNAL

No Adjustment/Check Item	Input Point	Input signal	Measurement point	Check/Adjustment	Trigger	Note
1 analog-RGB	TP : CSYNC TP : ANAG TP : ANAB TP : ANAR	csync signal HI Level 2.5 V more than 3.3 V less than LOW Level 1.5 V less than 1.1 Vp-p at +2.4 V offset signal	-	Display confirmation	-	Please do not input the signal when you don't turn on the power supply.

(1) PACKING SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	Cord Assy	CDP1301			
2	Screw Assy	See Contrast table (2)	11	Clip Holder	See Contrast table (2)
* 3	Polyethylene Bag	CEG-127	12	Cushion	See Contrast table (2)
4	Screw	See Contrast table (2)	13	Remote Control Unit	See Contrast table (2)
5	Screw	TRZ50P080FTC	14-1	Owner's Manual	See Contrast table (2)
			14-2	Owner's Manual	See Contrast table (2)
6	Cover	See Contrast table (2)			
7	Unit Box	See Contrast table (2)	14-3	Owner's Manual	See Contrast table (2)
8	Contain Box	See Contrast table (2)	14-4	Installation Manual	See Contrast table (2)
9	Protector	CHP3952	* 14-5	Warranty Card	See Contrast table (2)
10	Microphone Assy	See Contrast table (2)			

(2) CONTRAST TABLE

AVH-P3200BT/XNUC, AVH-P3250BT/XNRD, AVH-P3200DVD/XNUC, AVH-P3250DVD/XNRC, AVH-P3250DVD/XNRD and AVH-P3250DVD/XNRI are constructed the same except for the following:

<u>Mark</u>	<u>No.</u>	<u>Description</u>	<u>AVH-P3200BT/XNUC</u>	<u>AVH-P3250BT/XNRD</u>	<u>AVH-P3200DVD/XNUC</u>
	2	Screw Assy	CEA3559	CEC3542	CEA3559
	4	Screw	CRZ50P090FTC	Not used	CRZ50P090FTC
	6	Cover	CEG1359	CEG1356	CEG1359
	7	Unit Box	CHG7171	CHG7172	CHG7167
	8	Contain Box	CHL7171	CHL7172	CHL7167
	10	Microphone Assy	CPM1083	CPM1083	Not used
	11	Clip Holder	CZN7912	CZN7912	Not used
	12	Cushion	CZN7913	CZN7913	Not used
	13	Remote Control Unit	Not used	CXE2833	Not used
	14-1	Owner's Manual	CRB3174	CRB3180	CRB3174
	14-2	Owner's Manual	CRB3175	CRB3181	CRB3175
	14-3	Owner's Manual	CRB3176	CRB3276	CRB3176
	14-4	Installation Manual	CRD4452	CRD4454	CRD4452
*	14-5	Warranty Card	CRY1276	Not used	CRY1276

<u>Mark</u>	<u>No.</u>	<u>Description</u>	<u>AVH-P3250DVD/XNRC</u>	<u>AVH-P3250DVD/XNRD</u>	<u>AVH-P3250DVD/XNRI</u>
	2	Screw Assy	CEC3542	CEC3542	CEC3542
	4	Screw	Not used	Not used	Not used
	6	Cover	CEG1356	CEG1356	CEG1356
	7	Unit Box	CHG7168	CHG7169	CHG7170
	8	Contain Box	CHL7168	CHL7169	CHL7170
	10	Microphone Assy	Not used	Not used	Not used
	11	Clip Holder	Not used	Not used	Not used
	12	Cushion	Not used	Not used	Not used
	13	Remote Control Unit	CXE2833	CXE2833	CXE2833
	14-1	Owner's Manual	CRB3177	CRB3180	CRB3177
	14-2	Owner's Manual	CRB3178	CRB3181	CRB3182
	14-3	Owner's Manual	CRB3179	CRB3276	Not used
	14-4	Installation Manual	CRD4453	CRD4454	CRD4455
*	14-5	Warranty Card	Not used	Not used	Not used

Owner's Manual,Installation Manual

Part No.	Language
CRB3174	English
CRB3175	French
CRB3176	Spanish(Espanol)
CRD4452	English, French, Spanish(Espanol)
CRB3177	English
CRB3178	Traditional Chinese
CRB3179	Korean
CRD4453	English, Traditional Chinese, Korean
CRB3276	English
CRB3180	Spanish(Espanol)
CRB3181	Portuguese(B)
CRD4454	English, Spanish(Espanol), Portuguese(B)
CRB3182	Arabic
CRD4455	English, Arabic

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(1) EXTERIOR(1) SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	Screw	BMZ26P040FTC	20	Cushion	CNN3208
2	Screw	BSZ26P100FTC			
3	Screw	BSZ26P160FTC	21	Lighting Conductor	CNW1773
4	FFC	CDE9118	22	Holder	CNW1775
5	FFC	CDE9119	23	Touch Panel	CSX1153
			24	Grille Unit	See Contrast table (2)
6	Cord Assy	CDP1301	25	Door(USB)	CAT2914
7	Cap	CNS1472			
8	Resistor	RS1/2PMF102J	26	Screw	AMZ20P030FTC
9	Case	CNB3544	27	Screw(M2 x 2)	CBA1771
10	Holder	CND4809	28	FFC	CDE9139
			29	Holder	CND5462
11	Heat Sink	CNR2052	30	Holder	CND5463
12	Screw	BPZ20P080FTC			
13	Button(- +)	CAI2717	31	Insulator	CNN3205
14	Button(< >)	CAI2718	32	Service Unit(Monitor PCB)	CXX2763
15	Button(SRC, MUTE)	CAI2719	33	Cushion	CNN3049
			34	LCD	CWX3868
16	Button(MENU, MODE)	CAI2720	35	Remote Control Unit	See Contrast table (2)
17	Button(RESET, EJECT)	CAI2721			
18	Screw(M2 x 3)	CBA1877	36	Cover	See Contrast table (2)
19	Cover	CNN2628	37	Service Unit(Keyboard PCB)	CXX2764

(2) CONTRAST TABLE

AVH-P3200BT/XNUC, AVH-P3250BT/XNRD, AVH-P3200DVD/XNUC, AVH-P3250DVD/XNRC, AVH-P3250DVD/XNRD and AVH-P3250DVD/XNRI are constructed the same except for the following:

Mark	No.	Description	AVH-P3200BT/XNUC	AVH-P3250BT/XNRD	AVH-P3200DVD/XNUC
	24	Grille Unit	CXE2609	CXE2612	CXE2614
	35	Remote Control Unit	Not used	CXE2833	Not used
	36	Cover	Not used	CZN5357	Not used

Mark	No.	Description	AVH-P3250DVD/XNRC	AVH-P3250DVD/XNRD	AVH-P3250DVD/XNRI
	24	Grille Unit	CXE2616	CXE2616	CXE2616
	35	Remote Control Unit	CXE2833	CXE2833	CXE2833
	36	Cover	CZN5357	CZN5357	CZN5357

9.3 EXTERIOR(2)

A

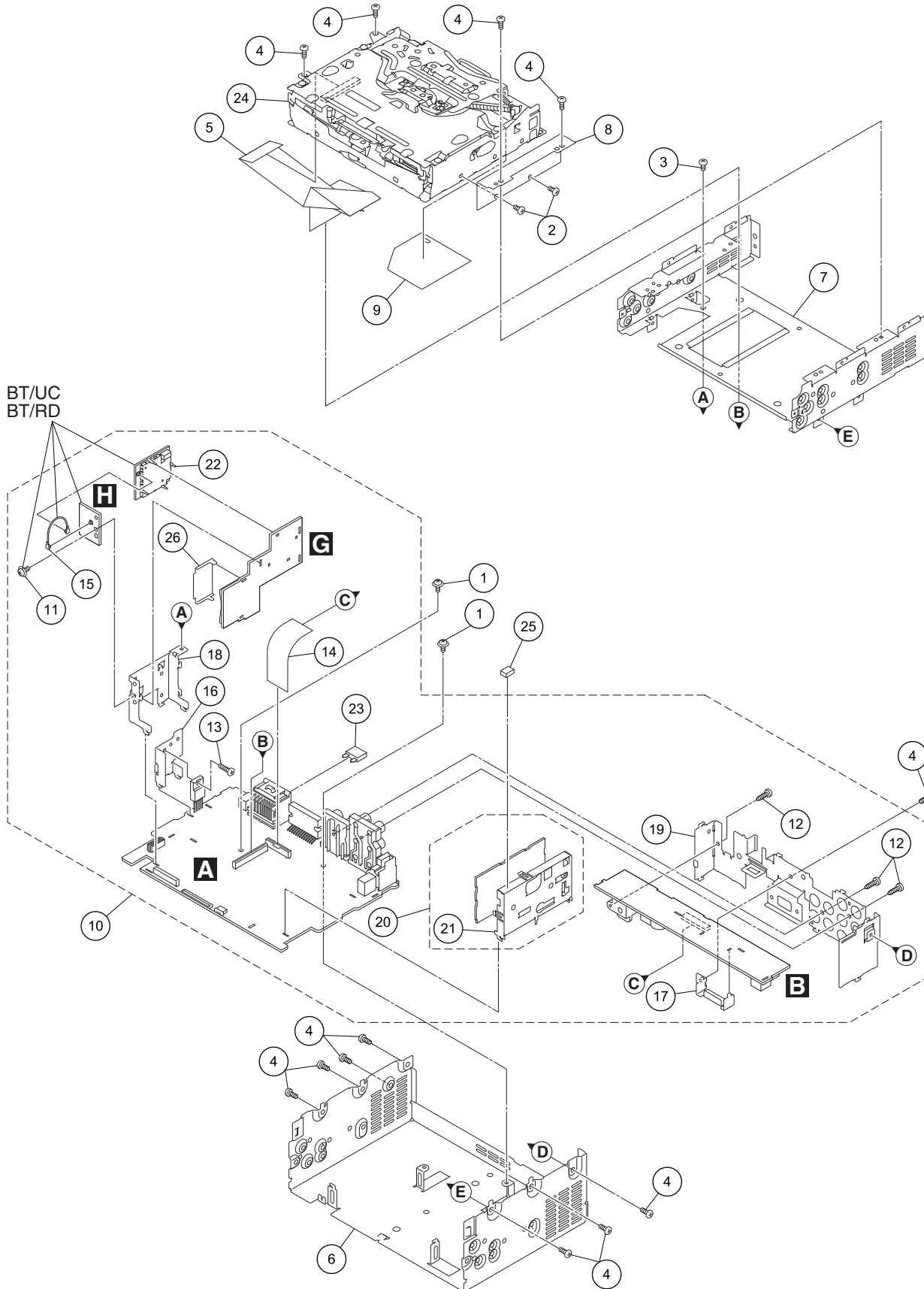
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(1) EXTERIOR(2) SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	Screw	ASZ26P050FTC	15	Cord Assy	See Contrast table (2)
2	Screw	BMZ25P040FTB	16	Holder	CND4811
3	Screw	BMZ26P040FTC	17	Holder	CND4814
4	Screw	BSZ26P060FTC	18	Holder	CND5475
5	FFC	CDE9121	19	Holder	See Contrast table (2)
6	Chassis	CNA3156	20	FM/AM Tuner Unit	See Contrast table (2)
7	Chassis	CNA3157	21	Holder	CND4324
8	Bracket	CND5470	22	Bluetooth Module	See Contrast table (2)
9	Insulator	CNN2764	23	Fuse(10 A)	YEK5001
10	Service Unit(Mother Assy)	See Contrast table (2)	24	DVD Mechanism Module(LS1)	CXK6811
11	Screw	See Contrast table (2)	25	Gasket	CNN3364
12	Screw	BPZ26P080FTC	26	Holder	CND5502
13	Screw	BSZ26P060FTC			
14	FFC	CDE8747			

(2) CONTRAST TABLE

AVH-P3200BT/XNUC, AVH-P3250BT/XNRD, AVH-P3200DVD/XNUC, AVH-P3250DVD/XNRC, AVH-P3250DVD/XNRD and AVH-P3250DVD/XNRI are constructed the same except for the following:

Mark	No.	Description	AVH-P3200BT/XNUC	AVH-P3250BT/XNRD	AVH-P3200DVD/XNUC
	10	Service Unit(Mother Assy)	CXX2760	CXX2759	CXX2757
	11	Screw	ASZ26P050FTC	ASZ26P050FTC	Not used
	15	Cord Assy	CDE9124	CDE9124	Not used
	19	Holder	CND5572	CND5473	CND5574
	20	FM/AM Tuner Unit	CWE2097	CWE2098	CWE2097
	22	Bluetooth Module	CWX3865	CWX3865	Not used

Mark	No.	Description	AVH-P3250DVD/XNRC	AVH-P3250DVD/XNRD	AVH-P3250DVD/XNRI
	10	Service Unit(Mother Assy)	CXX2754	CXX2755	CXX2756
	11	Screw	Not used	Not used	Not used
	15	Cord Assy	Not used	Not used	Not used
	19	Holder	CND5517	CND5517	CND5517
	20	FM/AM Tuner Unit	CWE2098	CWE2098	CWE2098
	22	Bluetooth Module	Not used	Not used	Not used

9.4 DVD MECHANISM MODULE

A

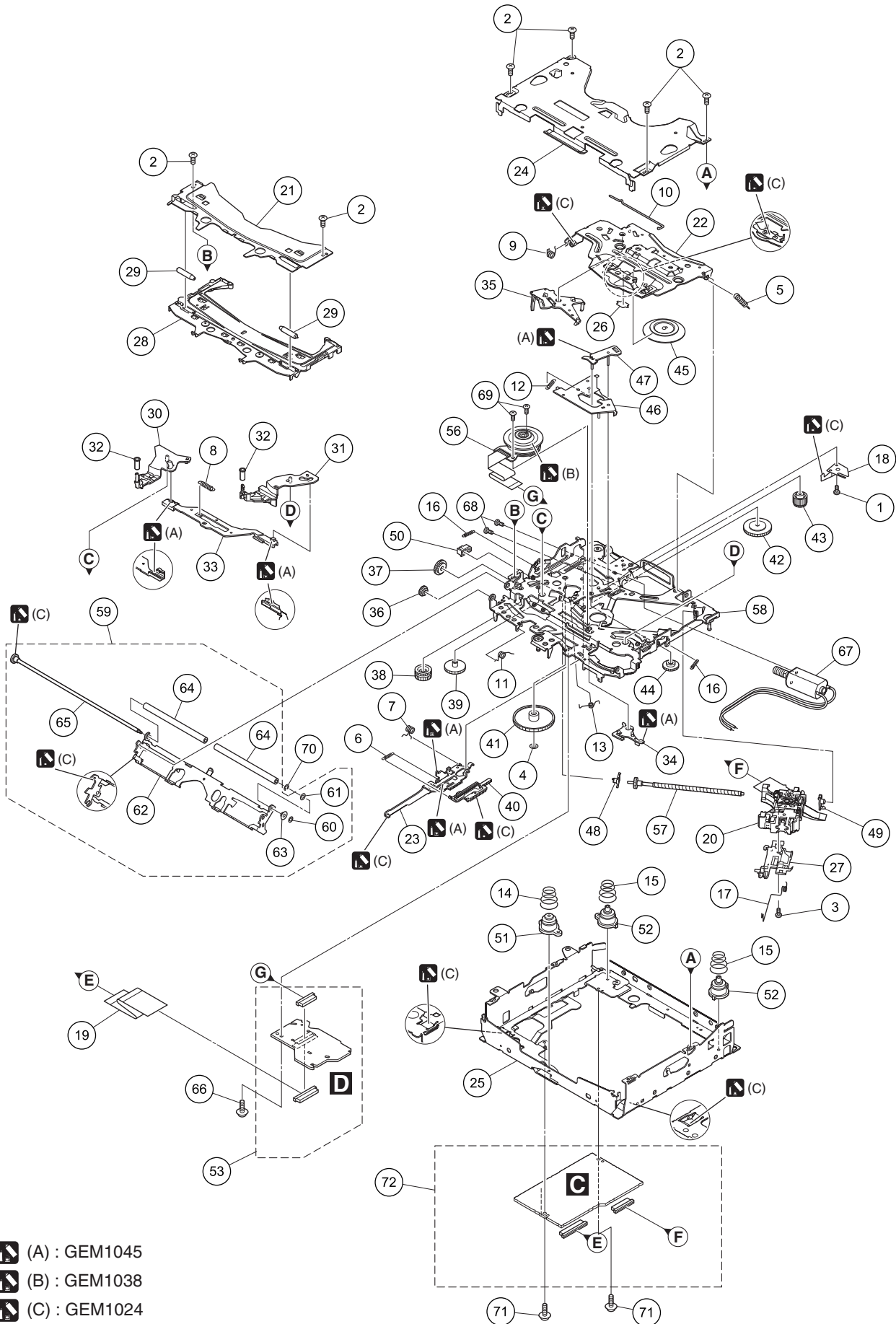
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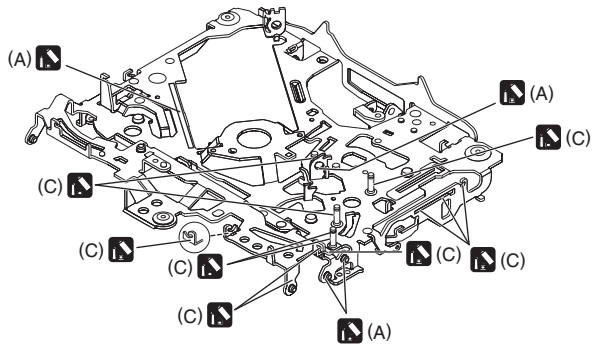


-  (A) : GEM1045
-  (B) : GEM1038
-  (C) : GEM1024

DVD MECHANISM MODULE SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	
1	Screw	BMZ20P020FTC	50	Holder	CNW1195	
2	Screw	BSZ20P040FTC				
3	Screw(M2 x 4)	CBA1835	51	Damper	CNW1197	A
4	Washer	CBF1038	52	Damper	CNW1198	
5	Spring	CBH2860	*	53 Connect PCB Unit	CWX3618	
			54		
6	Spring	CBH3010	55		
7	Spring	CBH3011				
8	Spring	CBH3012	56	Motor(M2)(SPINDLE)	EXM1050	
9	Spring	CBH3013	57	Screw Unit	CXC8894	
10	Spring	CBH3014	58	Chassis Unit	CXC8895	
			59	Arm Assy	CXC8896	
11	Spring	CBH3015	60	Washer	CBF1037	B
12	Spring	CBH3016				
13	Spring	CBH3017	61	Washer	CBF1038	
14	Spring	CBH3018	62	Arm	CND4554	
15	Spring	CBH3019	63	Collar	CNV6906	
			64	Roller	CNW1196	
16	Spring	CBH3020	65	Gear Unit	CXC8893	
17	Spring	CBH3030				
18	Plate Spring	CBL1797	66	Screw	IMS20P030FTC	
19	Cable	CDE8631	67	Motor Unit(M1)(LOAD/CRG)	CXC4026	
20	Pickup Unit(Service)	CXX2398	68	Screw	JFZ20P025FTC	
			69	Screw	JGZ17P022FTC	C
21	Bracket	CND4553	70	Washer	YE15FTC	
22	Arm	CND4555				
23	Lever	CND5398	71	Screw	IMS20P030FTC	
24	Frame	CND4557	72	DVD Core Unit	YWX5013	
25	Frame	CND4558				
26	Sheet	CNN2280				
27	Rack	CNW1170				
28	Guide	CNW1171				
29	Roller	CNW1172				
30	Arm	CNW1173				D
31	Arm	CNW1174				
32	Roller	CNW1175				
33	Lever	CNW1176				
34	Arm	CNW1177				
35	Arm	CNW1178				
36	Gear	CNW1180				
37	Gear	CNW1181				
38	Gear	CNW1182				E
39	Gear	CNW1183				
40	Rack	CNW1184				
41	Gear	CNW1185				
42	Gear	CNW1186				
43	Gear	CNW1187				
44	Gear	CNW1188				
45	Clamper	CNW1190				
46	Arm	CNW1191				
47	Arm	CNW1192				F
48	Holder	CNW1193				
49	Holder	CNW1194				

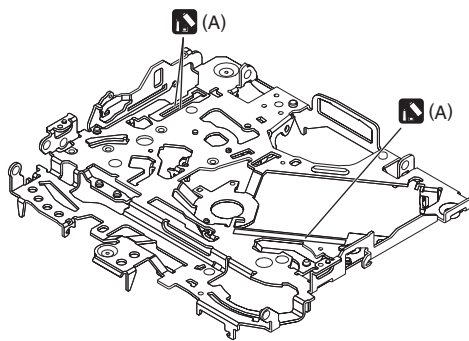
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- (A) : GEM1045
- (B) : GEM1038
- (C) : GEM1024

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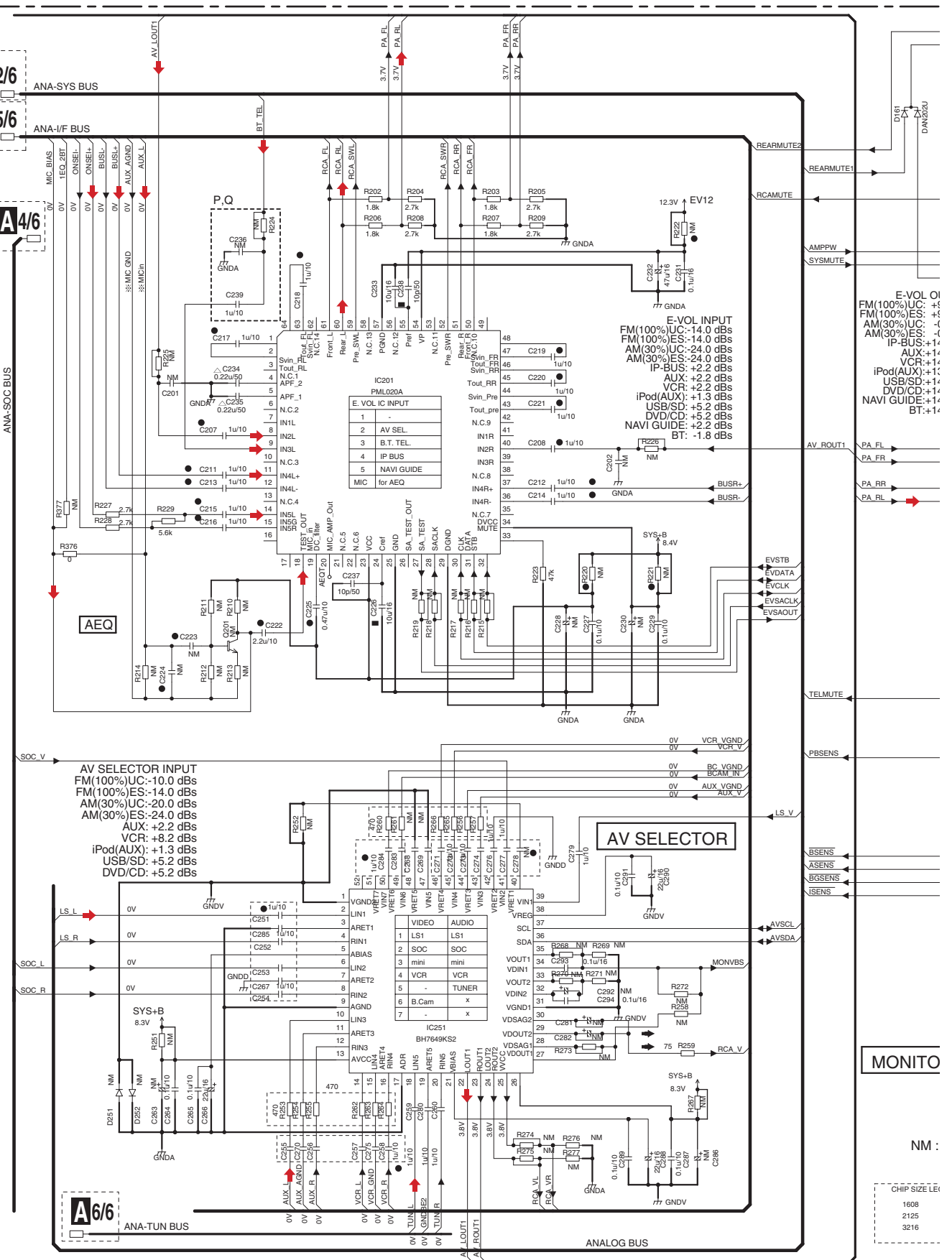
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10. SCHEMATIC DIAGRAM

10.1 MOTHER UNIT(AUDIO)

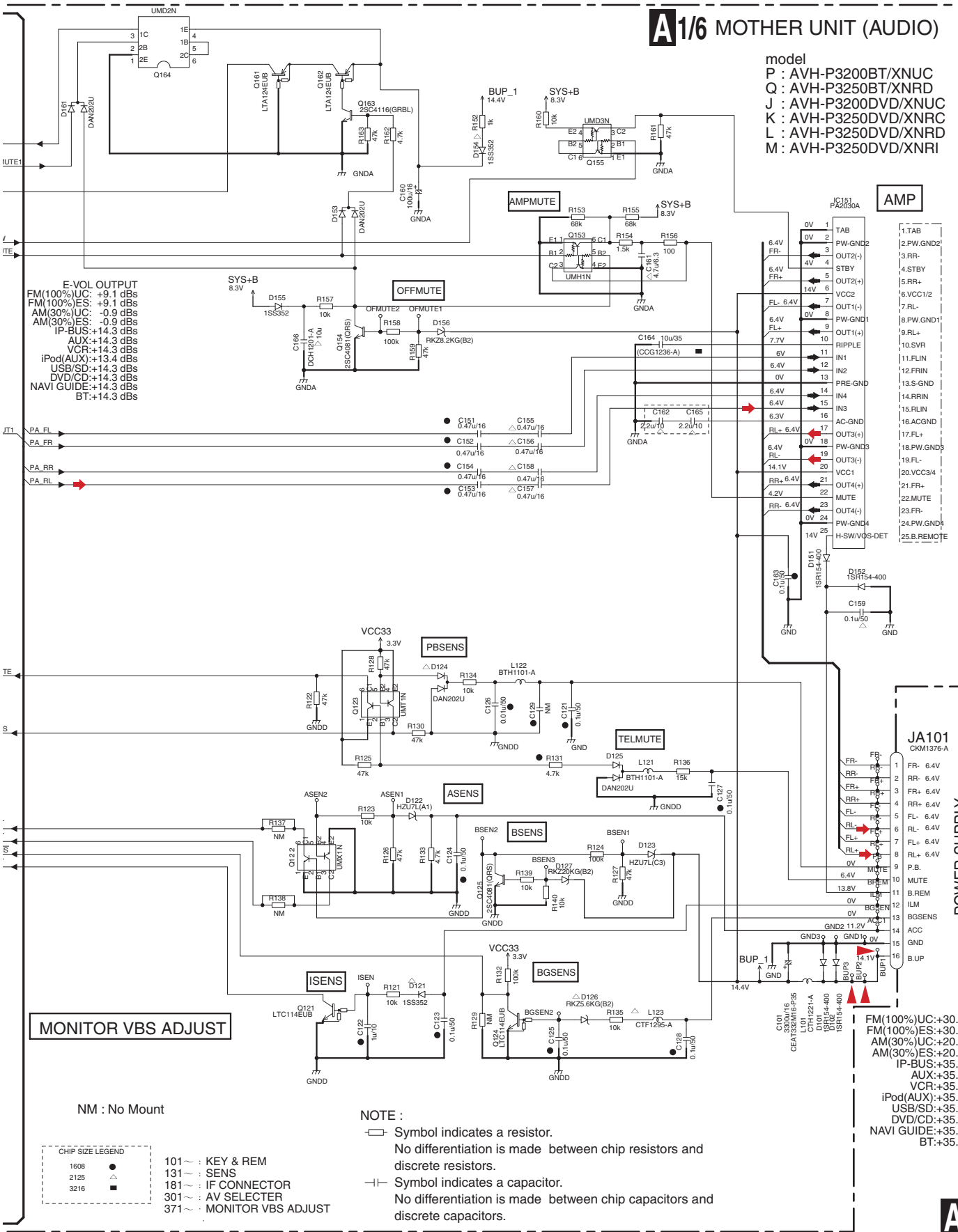
Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".



AVH-P3200BT/XNUC

A 1/6 MOTHER UNIT (AUDIO)

model
 P : AVH-P3200BT/XNUC
 Q : AVH-P3250BT/XNRD
 J : AVH-P3200DVD/XNUC
 K : AVH-P3250DVD/XNRD
 L : AVH-P3250DVD/XNRD
 M : AVH-P3250DVD/XNRI



E-VOL OUTPUT
 FM(100%)UC: +9.1 dBs
 FM(100%)ES: +9.1 dBs
 AM(30%)UC: -0.9 dBs
 AM(30%)ES: -0.9 dBs
 IP-BUS: +14.3 dBs
 AUX: +14.3 dBs
 VCR: +14.3 dBs
 iPod(AUX): +13.4 dBs
 USB/SD: +14.3 dBs
 DVD/CD: +14.3 dBs
 NAVI GUIDE: +14.3 dBs
 BT: +14.3 dBs

MONITOR VBS ADJUST

NM : No Mount

CHIP SIZE LEGEND

1608	▲
2125	●
181	■
301	□
371	◇

- 101 ~ : KEY & REM
- 131 ~ : SENS
- 181 ~ : IF CONNECTOR
- 301 ~ : AV SELECTER
- 371 ~ : MONITOR VBS ADJUST

NOTE :

- Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.
- |— Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.

AMP

1	TAB
2	PW-GND2
3	RR-
4	STBY
5	OUT2(+)
6	VCC2
7	OUT1(-)
8	PW-GND1
9	OUT1(+)
10	RIPPLE
11	IN1
12	IN2
13	PRE-GND
14	IN4
15	IN3
16	AC-GND
17	OUT3(+)
18	PW-GND3
19	OUT3(-)
20	VCC1
21	OUT4(+)
22	MUTE
23	OUT4(-)
24	PW-GND4
25	H-SW/VGS-DET

JA101
CKM1376-A

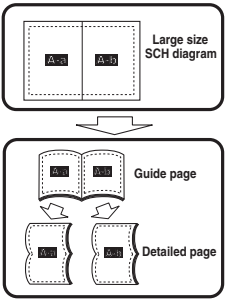
1	FR-	6.4V
2	RR-	6.4V
3	FR+	6.4V
4	RR+	6.4V
5	FL-	6.4V
6	RL-	6.4V
7	FL+	6.4V
8	RL+	6.4V
9	MUTE	6.4V
10	P.B.	13.8V
11	BREM	14V
12	ILM	0V
13	BGENS	0V
14	ACC	11.2V
15	GND	0V
16	BUP	14.1V

POWER SUPPLY

FM(100%)UC: +30.7 dBs
 FM(100%)ES: +30.7 dBs
 AM(30%)UC: +20.7 dBs
 AM(30%)ES: +20.7 dBs
 IP-BUS: +35.9 dBs
 AUX: +35.9 dBs
 VCR: +35.9 dBs
 iPod(AUX): +35.0 dBs
 USB/SD: +35.9 dBs
 DVD/CD: +35.9 dBs
 NAVI GUIDE: +35.9 dBs
 BT: +35.9 dBs

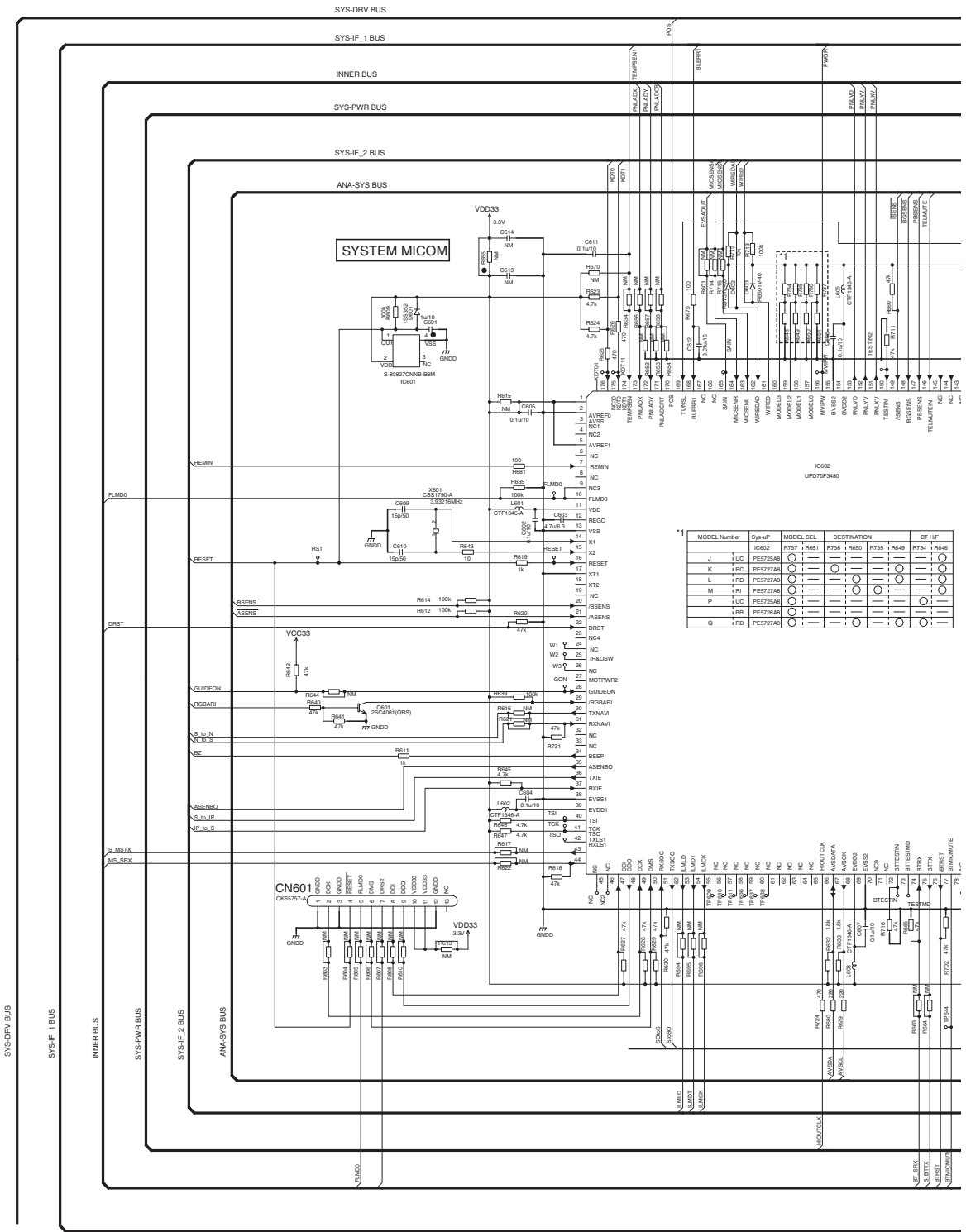
10.2 MOTHER UNIT(SYSTEM)(GUIDE PAGE)

A-a 2/6



CHIP SIZE LEGEND

1608	●
2125	○
3216	□



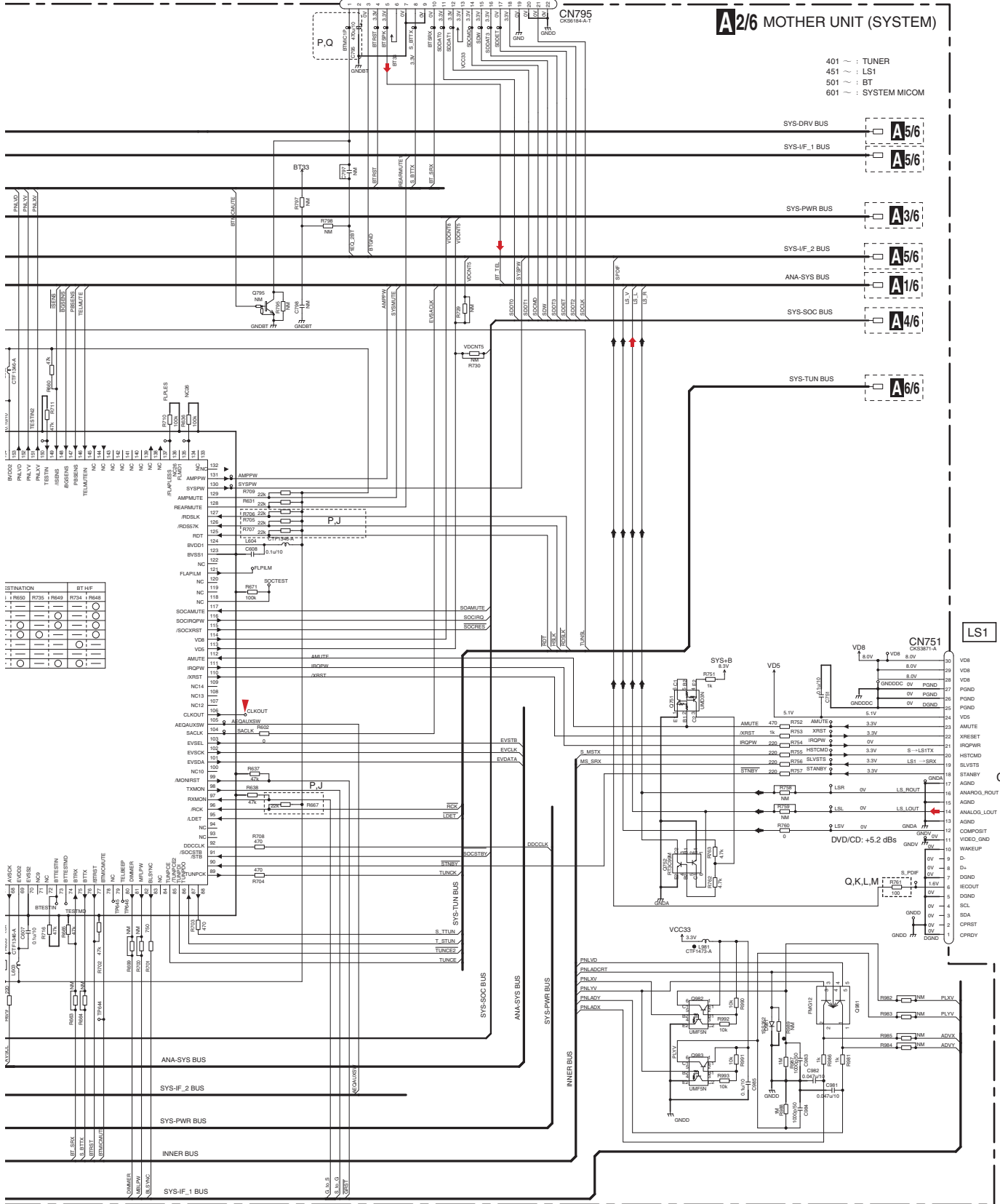
MODEL Number	Sys-UP	MODEL SEL	DESTINATION	BT HF
J	UC	PE5725AM	○	○
K	FC	PE5727AM	○	○
L	FD	PE5727AM	○	○
M	FI	PE5727AM	○	○
P	UC	PE5725AM	○	○
Y	FC	PE5725AM	○	○
Q	FD	PE5727AM	○	○

A-b 2/6

BT + SD

G CN7502

model
 P : AVH-P3200BT/XNUC
 Q : AVH-P3250BT/XNRD
 J : AVH-P3200DVD/XNRC
 K : AVH-P3250DVD/XNRD
 L : AVH-P3250DVD/XNRD
 M : AVH-P3250DVD/XNRI



STATION	BT HF
1	R735
2	R736
3	R737
4	R738
5	R739
6	R740
7	R741
8	R742
9	R743
10	R744
11	R745
12	R746
13	R747
14	R748
15	R749
16	R750
17	R751
18	R752
19	R753
20	R754
21	R755
22	R756
23	R757
24	R758
25	R759
26	R760
27	R761
28	R762
29	R763
30	R764
31	R765
32	R766
33	R767
34	R768
35	R769
36	R770
37	R771
38	R772
39	R773
40	R774
41	R775
42	R776
43	R777
44	R778
45	R779
46	R780
47	R781
48	R782
49	R783
50	R784
51	R785
52	R786
53	R787
54	R788
55	R789
56	R790
57	R791
58	R792
59	R793
60	R794
61	R795
62	R796
63	R797
64	R798
65	R799
66	R800
67	R801
68	R802
69	R803
70	R804
71	R805
72	R806
73	R807
74	R808
75	R809
76	R810
77	R811
78	R812
79	R813
80	R814
81	R815
82	R816
83	R817
84	R818
85	R819
86	R820
87	R821
88	R822
89	R823
90	R824
91	R825
92	R826
93	R827
94	R828
95	R829
96	R830
97	R831
98	R832
99	R833
100	R834

A/2/6 MOTHER UNIT (SYSTEM)

- 401 : TUNER
- 451 : LS1
- 501 : BT
- 601 : SYSTEM MICOM

LS1

CN1901

A-a A-b

A-b 2/6

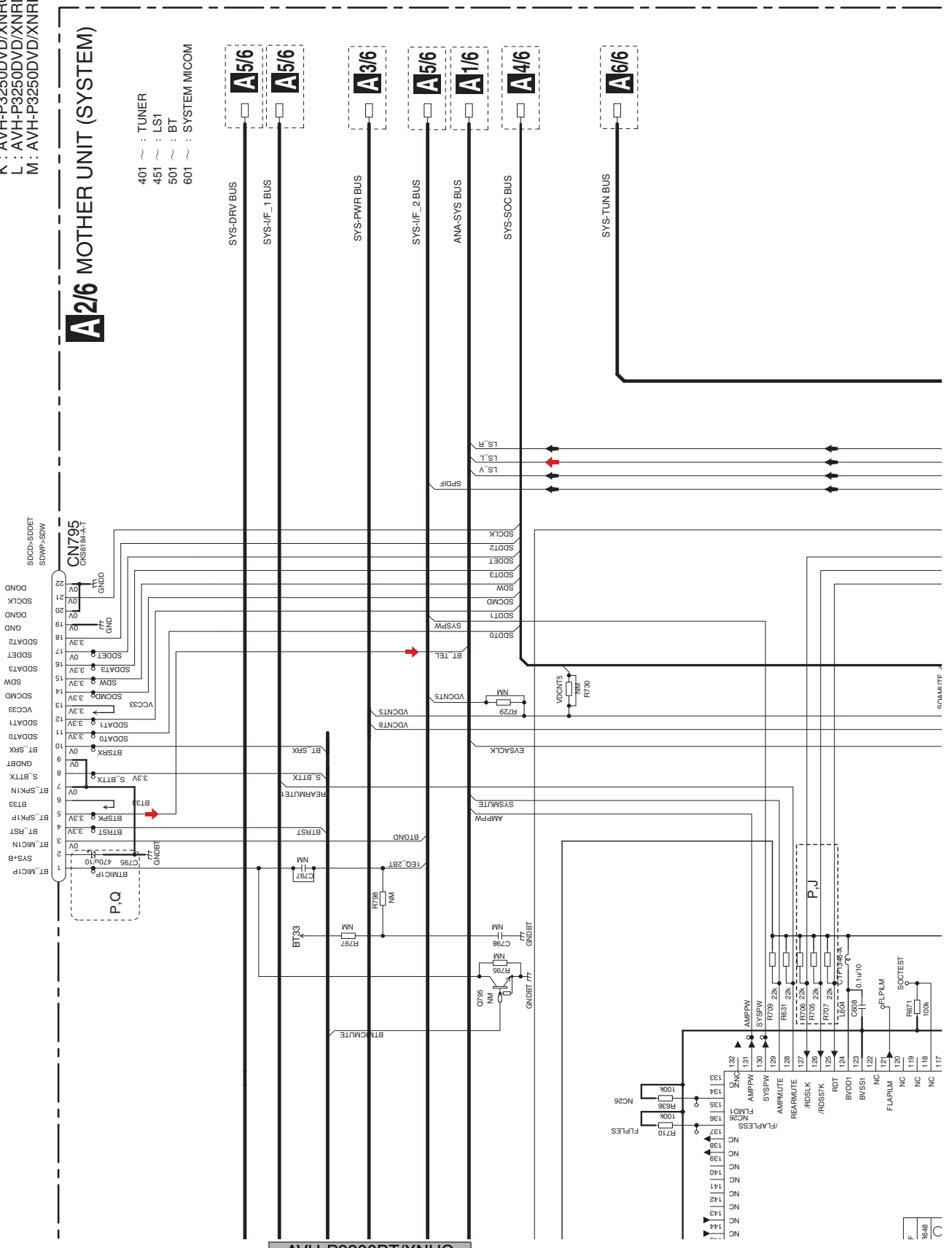
model
 P : AVH-P3200BT/XNUC
 Q : AVH-P3250BT/XNFD
 J : AVH-P3200DVD/XNUC
 K : AVH-P3250DVD/XNFC
 L : AVH-P3250DVD/XNFD
 M : AVH-P3250DVD/XNRI

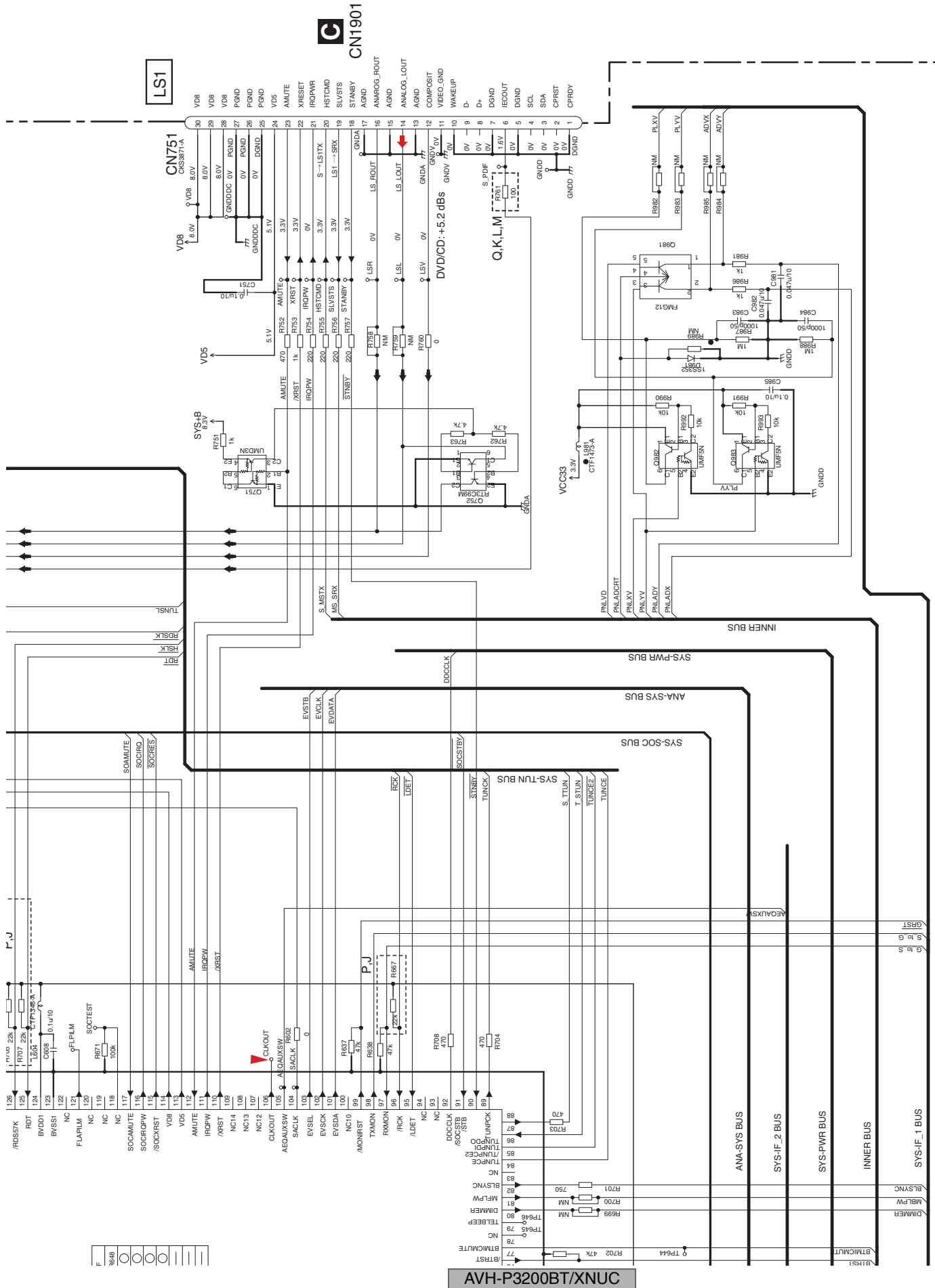
A2/6 MOTHER UNIT (SYSTEM)

401 ~ : TUNER
 451 ~ : LST
 501 ~ : BT
 601 ~ : SYSTEM MICOM

G CN7502

BT + SD





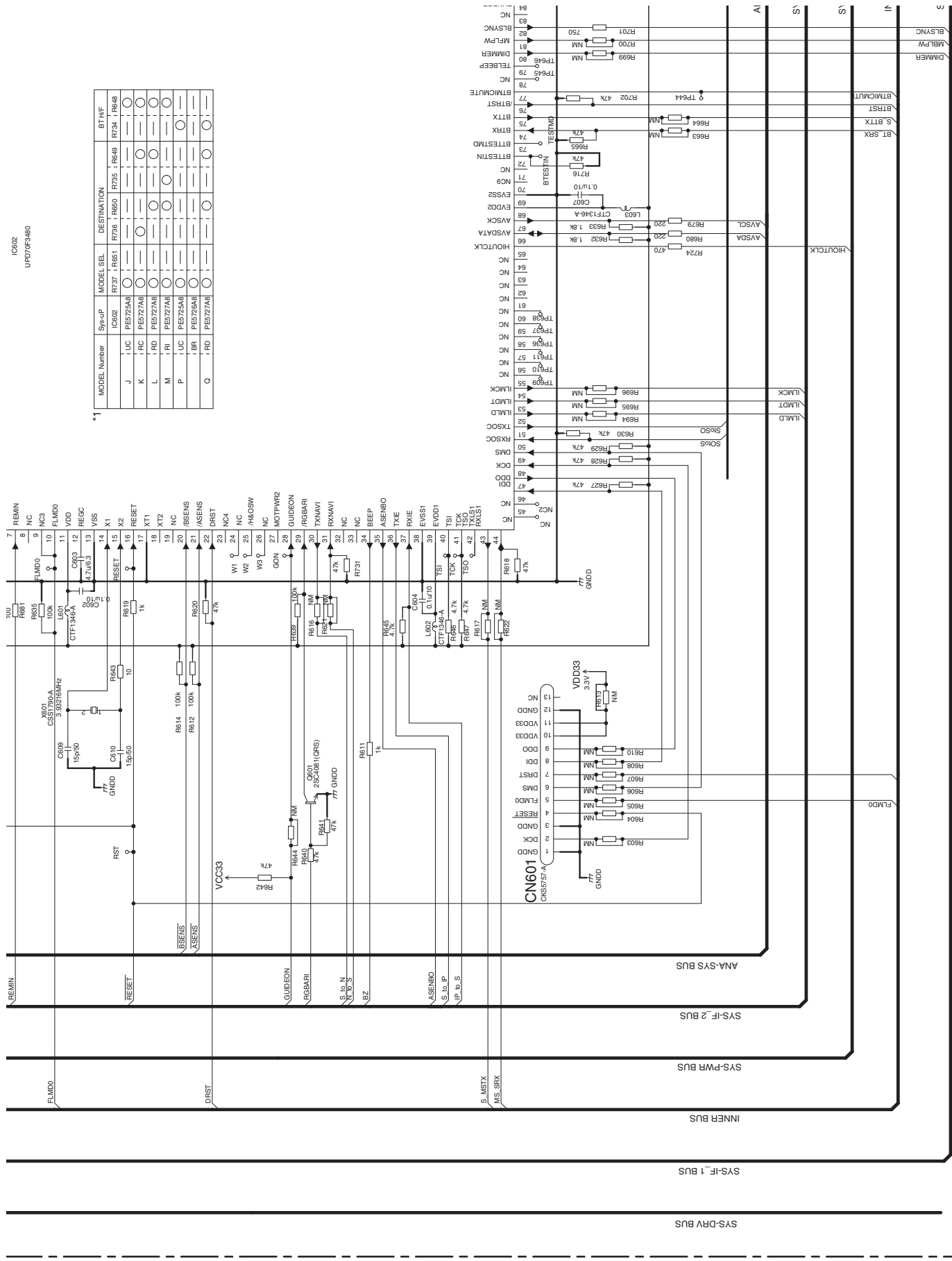
A-b

A-a

A-b/2/6

A B C D E F

AVH-P3200BT/XNUC



MODEL Number	System	MODEL SEL.	DESTINATION	BT/HF
J	IUC	R727	R735 - R649	R724 - R648
K	IHC	PE5727A8		
L	IRD	PE5727A8		
M	IRI	PE5727A8		
P	IUC	PE5725A8		
Q	IRI	PE5725A8		

IC602
UPD70F3460

10.3 MOTHER UNIT(POWER SUPPLY)

A
B
C
D
E
F

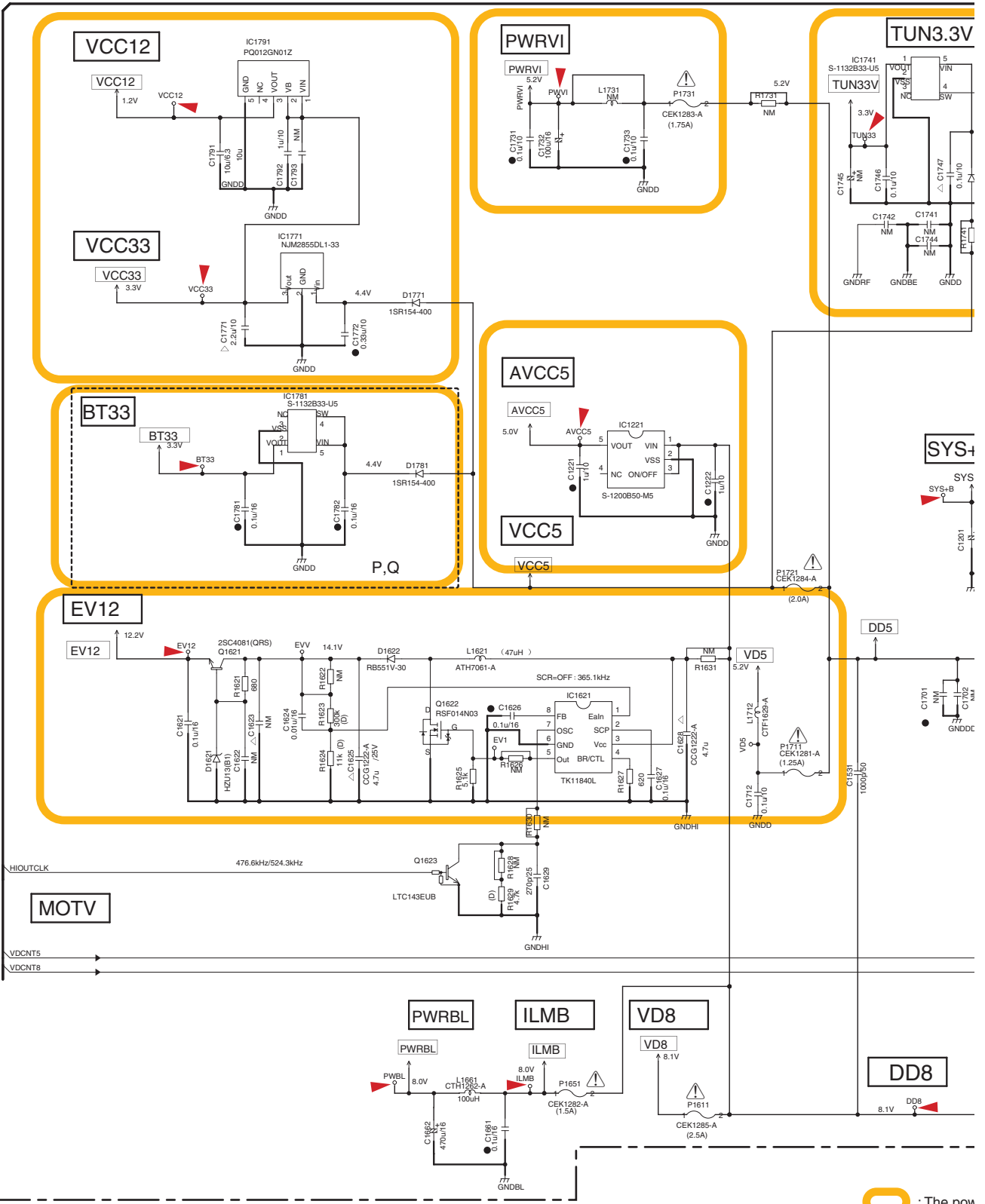
CHIP SIZE LEGEND

1608	●
2125	△
3216	■

LITTEL SERIES

CEK1276	0.5A
CEK1279	0.75A
CEK1280	1A
CEK1281	1.25A
CEK1282	1.5A
CEK1283	1.75A
CEK1284	2A
CEK1285	2.5A
CEK1286	3A
CEK1287	3.5A
CEK1288	4A
CEK1289	5A

1001	-	VDD33V
1021	-	PWBL_PWGR
1061	-	SYS-B_AVCC5
1061	-	SOC PW(VCC33, VC12)
1101	-	BT33
1101	-	TUN33
1151	-	DDC
1201	-	SWBLUP
1401	-	EV12
1501	-	MOTV
1601	-	DISP5_S033

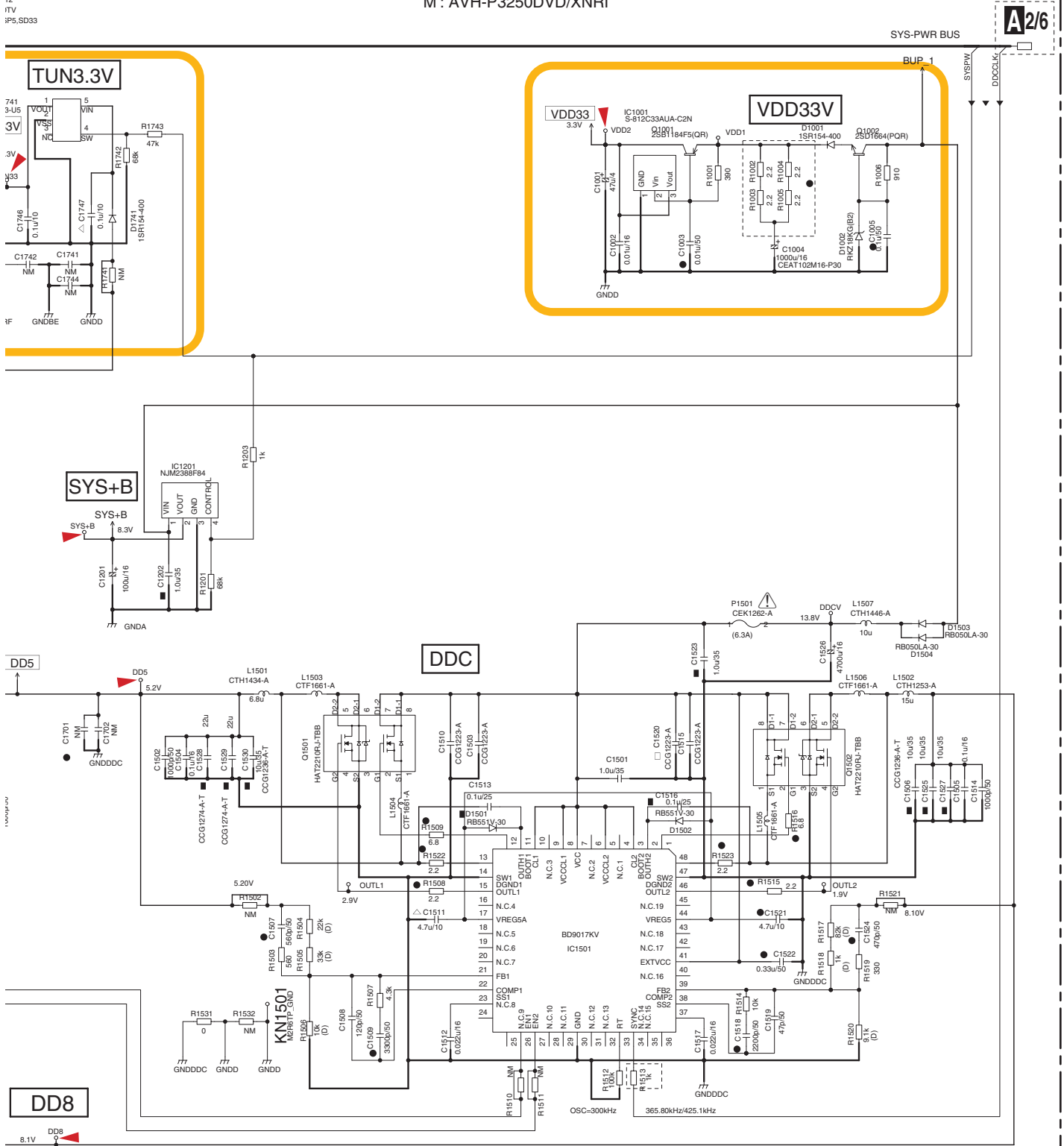



: The pow


D33V
 IBL_PWGR
 S+B_AVCC5
 CPW (VCC33_VC12)
 33
 NS3
 C
 BUP
 IS
 TV
 IFS_SD33

model
 P : AVH-P3200BT/XNUC
 Q : AVH-P3250BT/XNRD
 J : AVH-P3200DVD/XNUC
 K : AVH-P3250DVD/XNRC
 L : AVH-P3250DVD/XNRD
 M : AVH-P3250DVD/XNRI

A3/6 MOTHER UNIT (POWER SUPPLY)

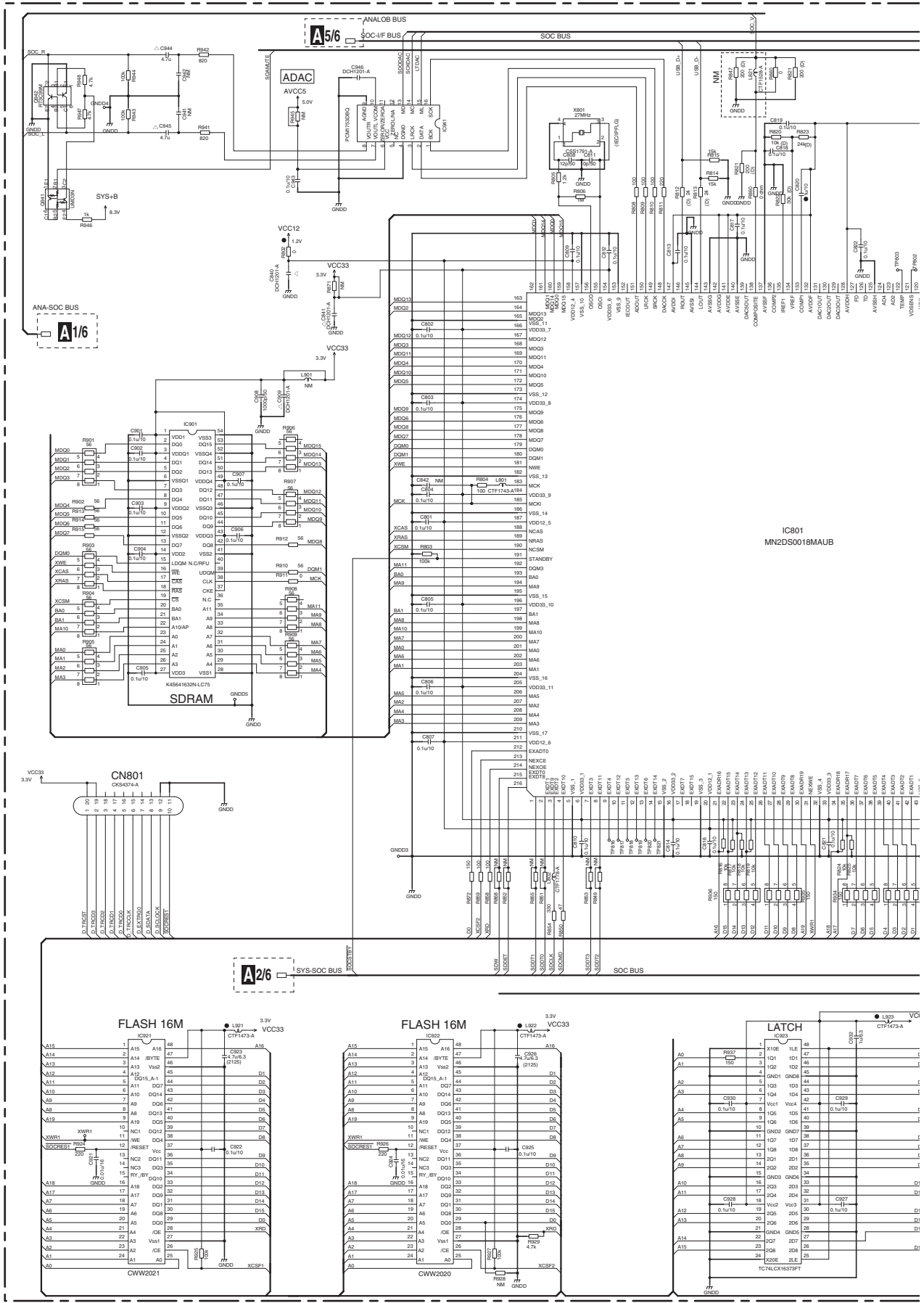


 : The power supply is shown with the marked box.

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

10.4 MOTHER UNIT(DV5U)(GUIDE PAGE)

A-a 4/6

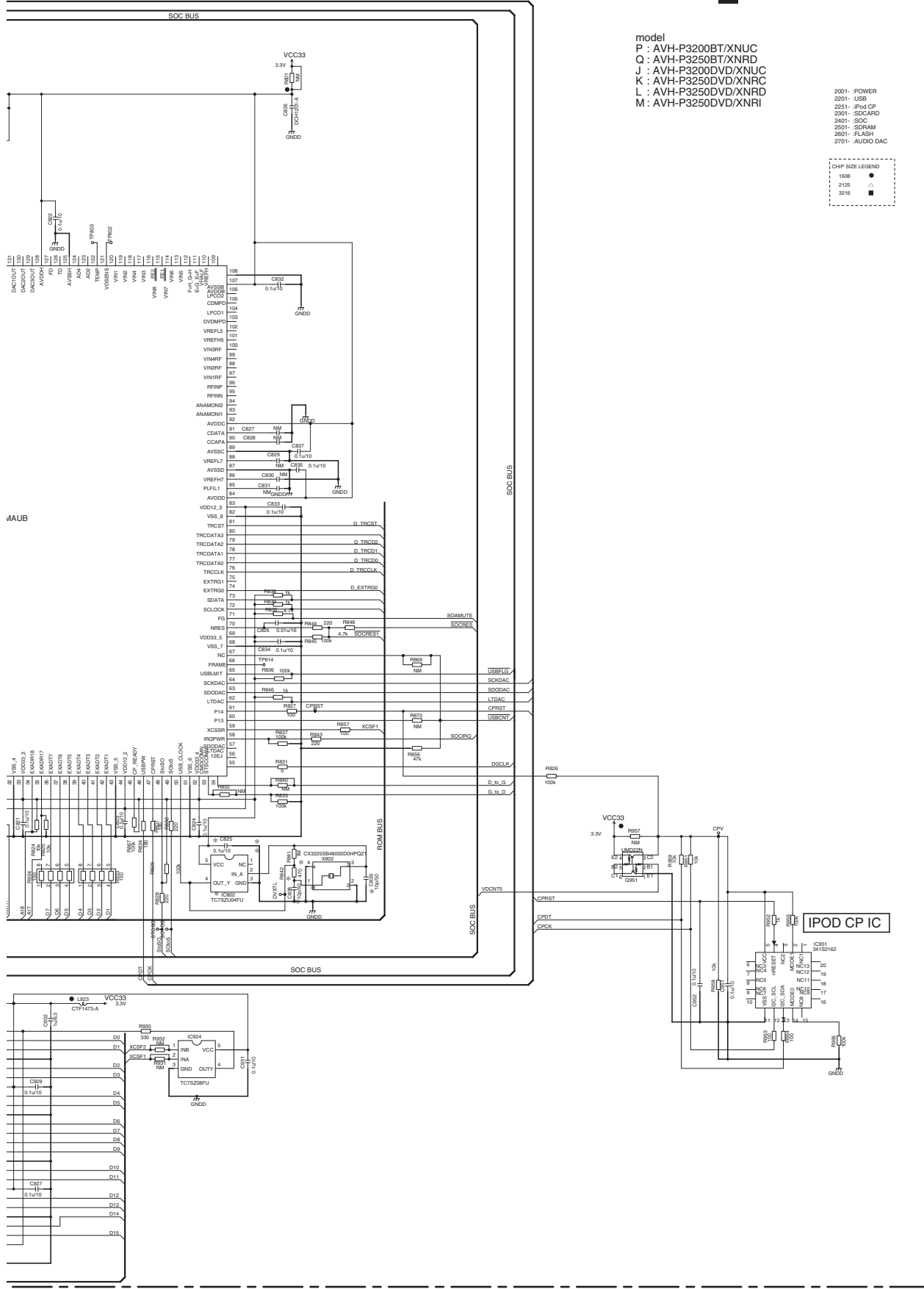


A4/6

AVH-P3200BT/XNUC

A-b 4/6

A/4/6 MOTHER UNIT (DV5U)

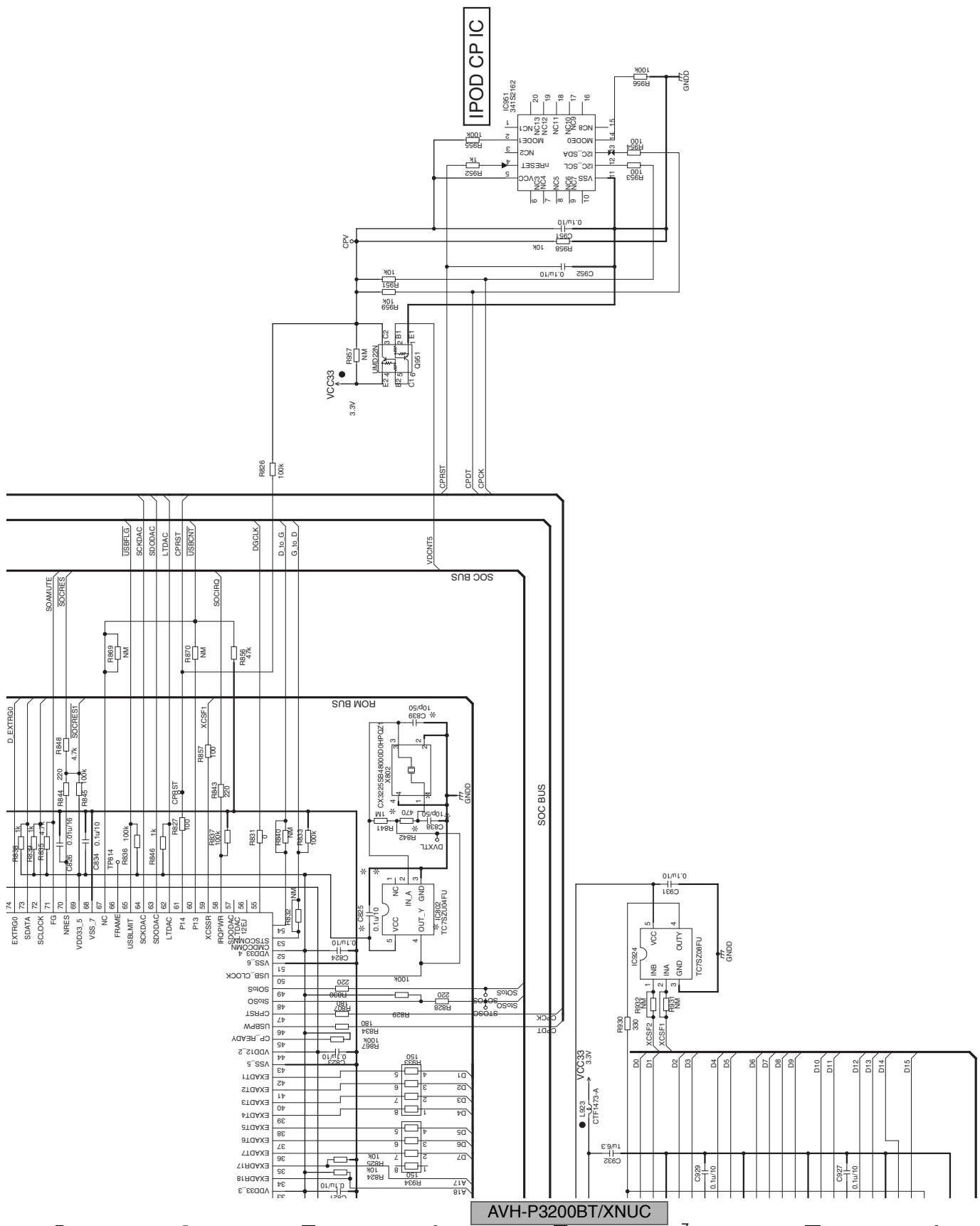


model
 P : AVH-P3200BT/XNUC
 Q : AVH-P3250BT/XNRD
 J : AVH-P3200D/DV/XNUC
 K : AVH-P3250D/DV/XNRD
 L : AVH-P3250D/DV/XNRD
 M : AVH-P3250D/DV/XNRI

- 2001- POWER
- 2201- USB
- 2251- iPod CP
- 2301- SDCARD
- 2401- SOC
- 2501- SDRAM
- 2601- FLASH
- 2701- AUDIO DAC



A
B
C
D
E
F



A-a A-b

A-b 4/6

1

2

3

4

F

E

D

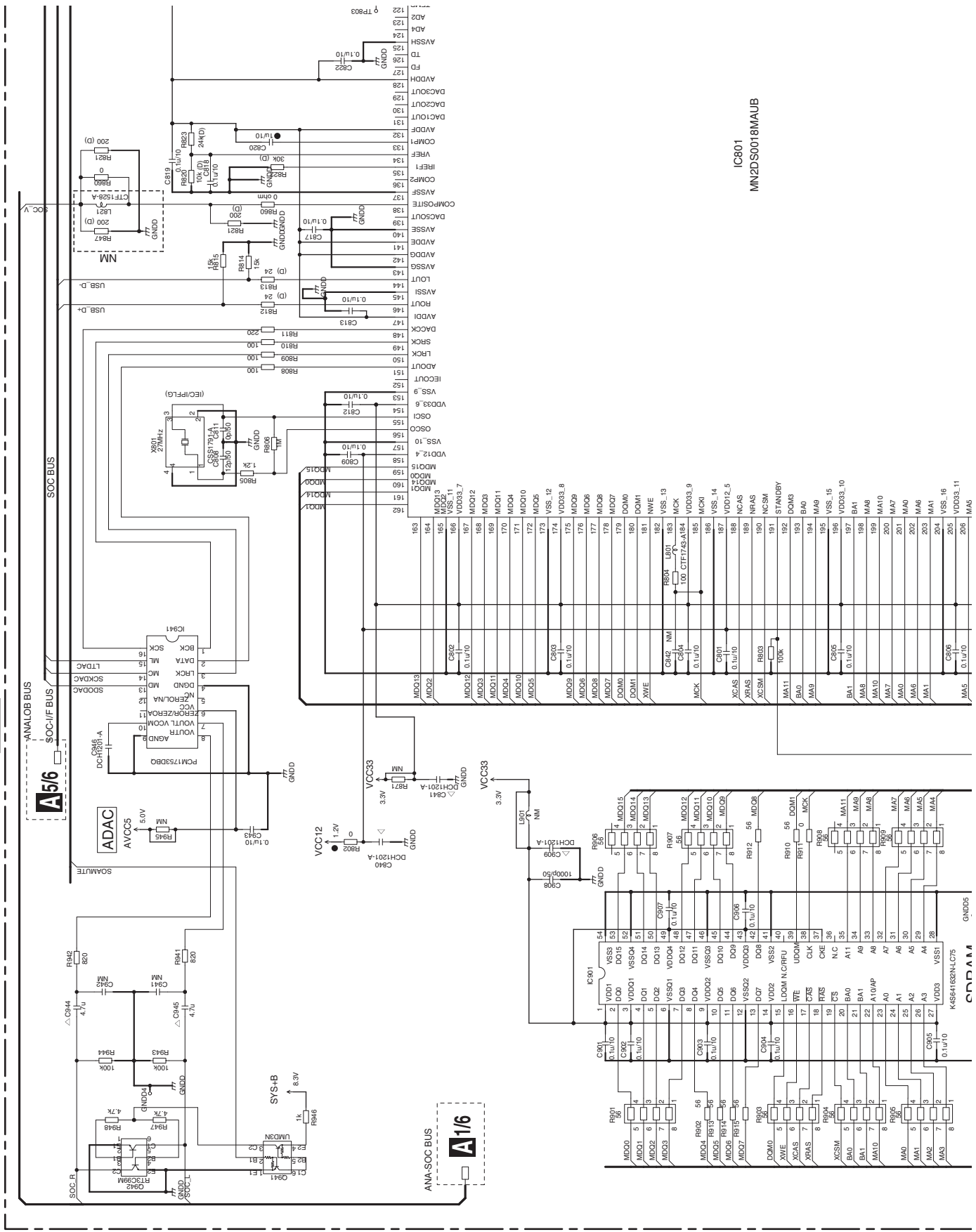
C

B

A

A-a A-b

A-b 4/6

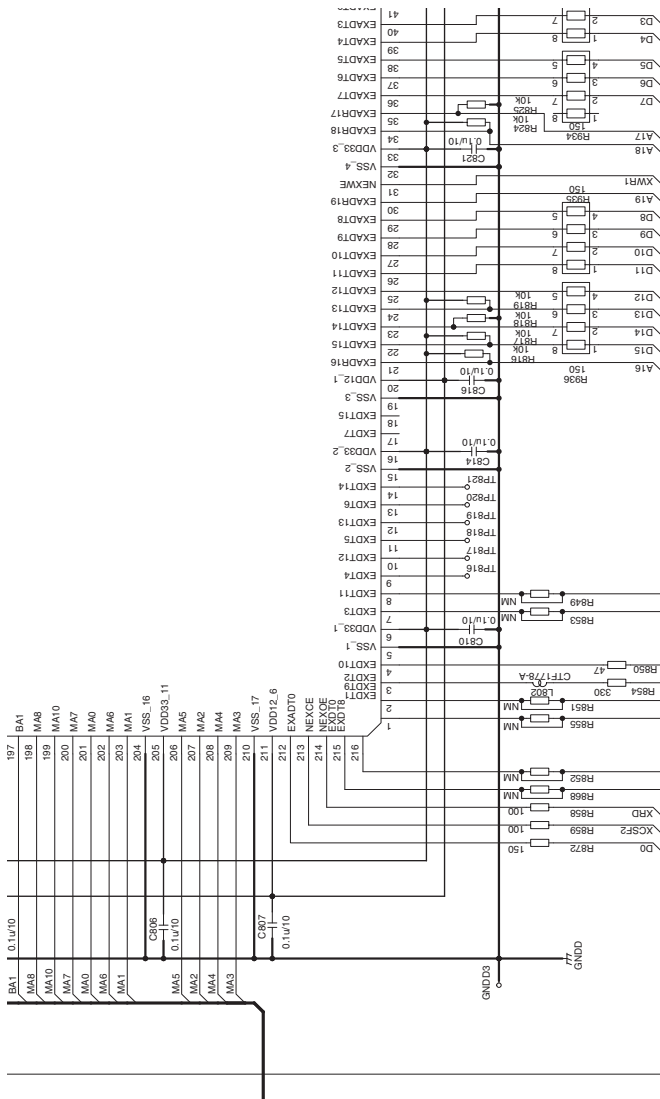
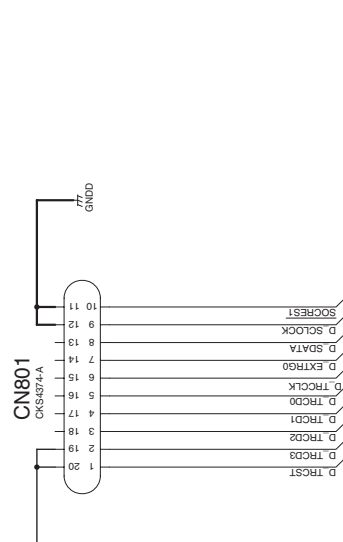
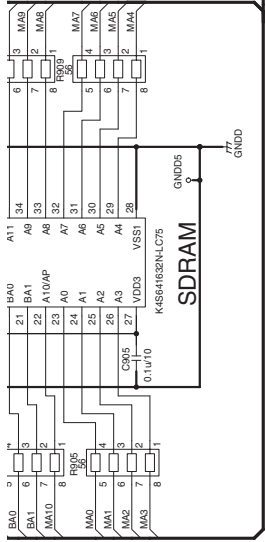


1

2

3

4



10.5 MOTHER UNIT(IN/OUT PUT)(GUIDE PAGE)

A-a 5/6

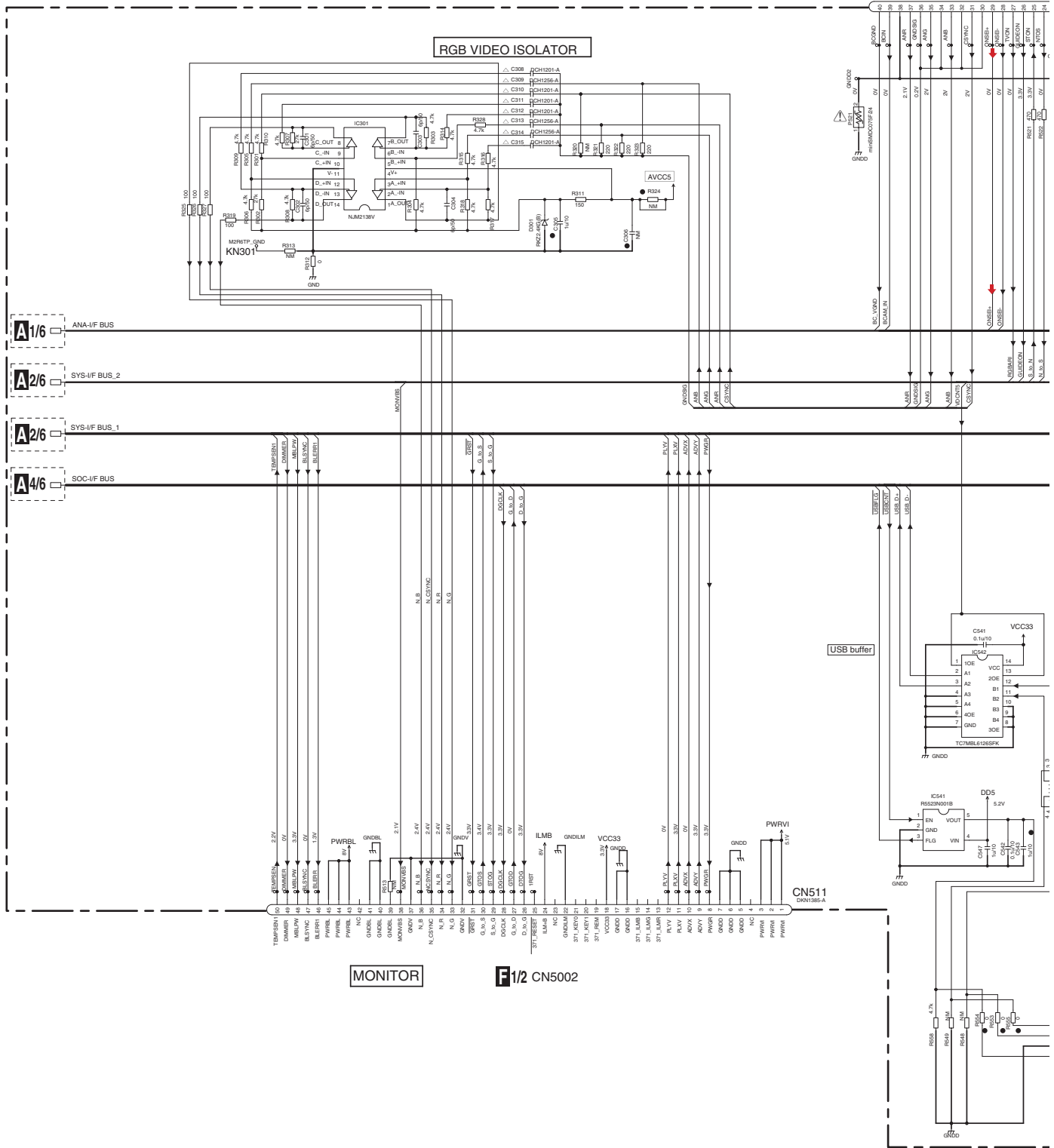
model
 P : AVH-P3200BT/XNUC
 Q : AVH-P3250BT/XNRD
 J : AVH-P3250DVT/XNUC
 K : AVH-P3250DVT/XNRC
 L : AVH-P3250DVT/XNRD
 M : AVH-P3250DVT/XNRI

A5/6 MOTHER UNIT (IN/OUT PUT)

IF

RGB VIDEO ISOLATOR

A
B
C
D
E
F



A 5/6

AVH-P3200BT/XNUC

A

B

C

D

E

F

- FM(100%)EW: +13.1 dBs
- FM(100%)UC: +9.1 dBs
- FM(100%): +9.1 dBs
- AM(30%)EW: +3.1 dBs
- AM(30%)UC: -0.9 dBs
- AM(30%): -0.9 dBs
- IP-BUS: +14.3 dBs
- AUX: +14.3 dBs
- VCR(AUX): +13.4 dBs
- USB/SD: +14.3 dBs
- DVD/CD: +14.3 dBs
- NAVI GUIDE: +14.3 dBs
- BT: +14.3 dBs

A-a A-b

CHIP SIZE LEGEND

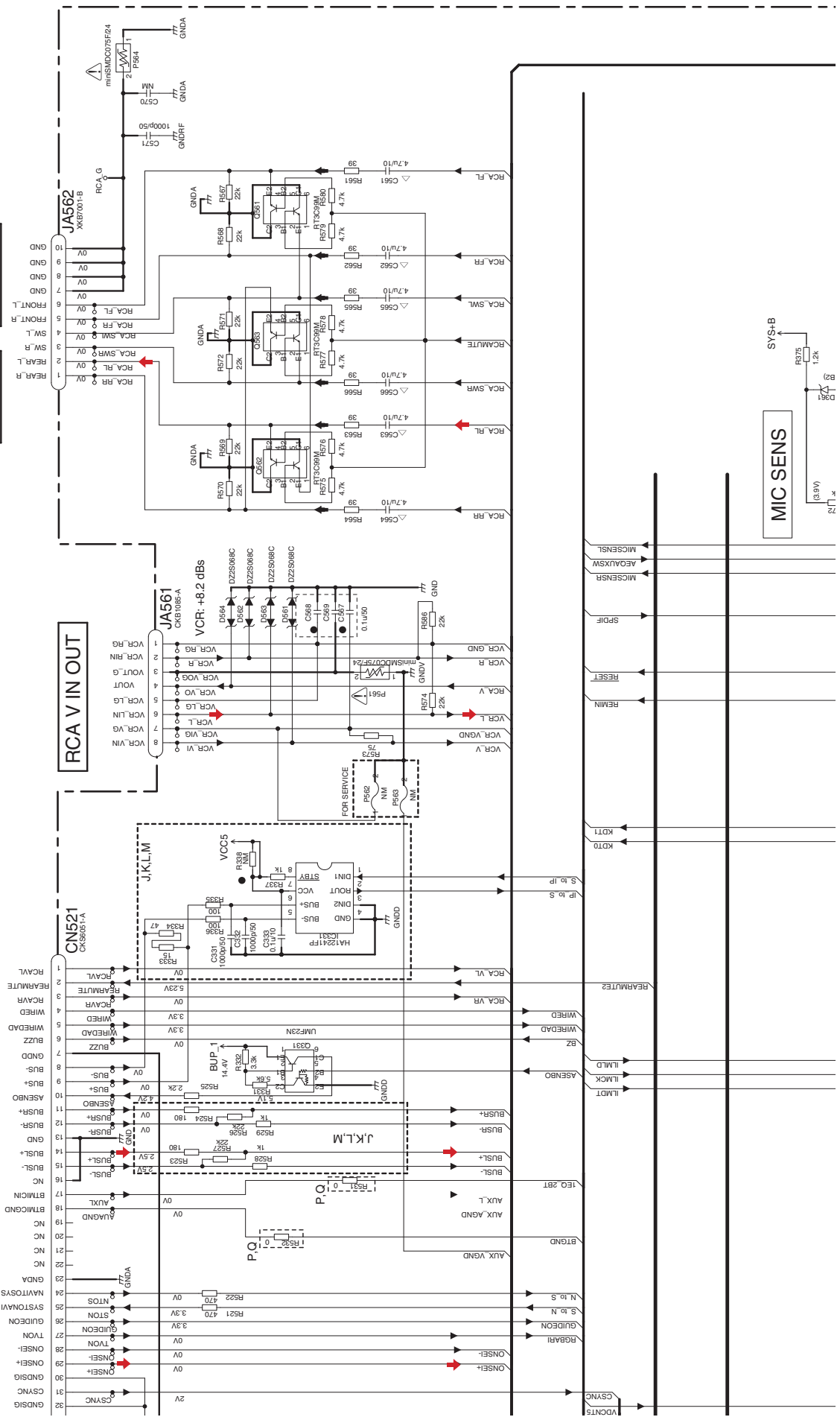
1608	2125	3216
------	------	------

B CN2501

FRONTOUT

REAROUT

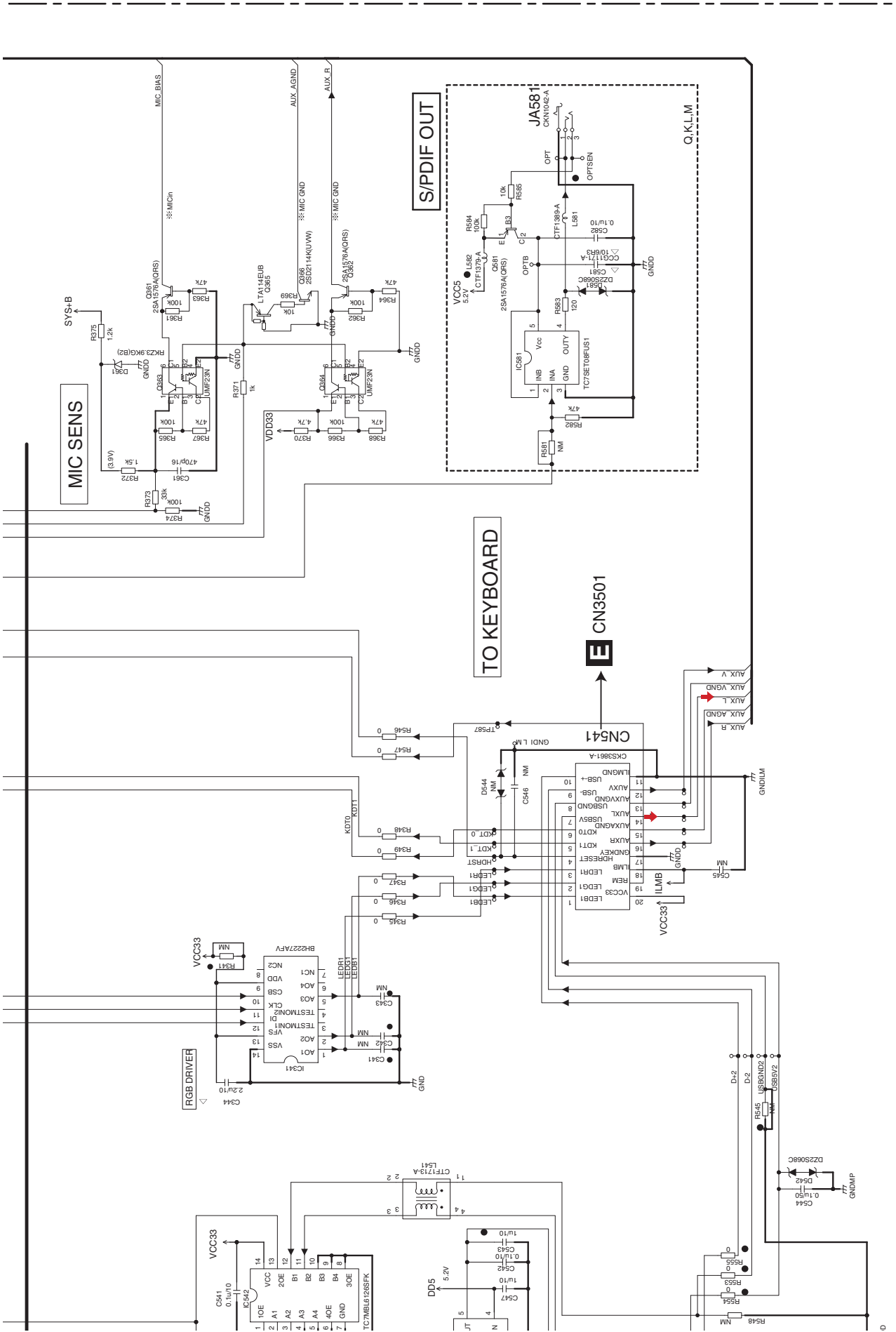
RCA V IN OUT



AVH-P3200BT/XNUC

A-a
A-b

A-b 5/6



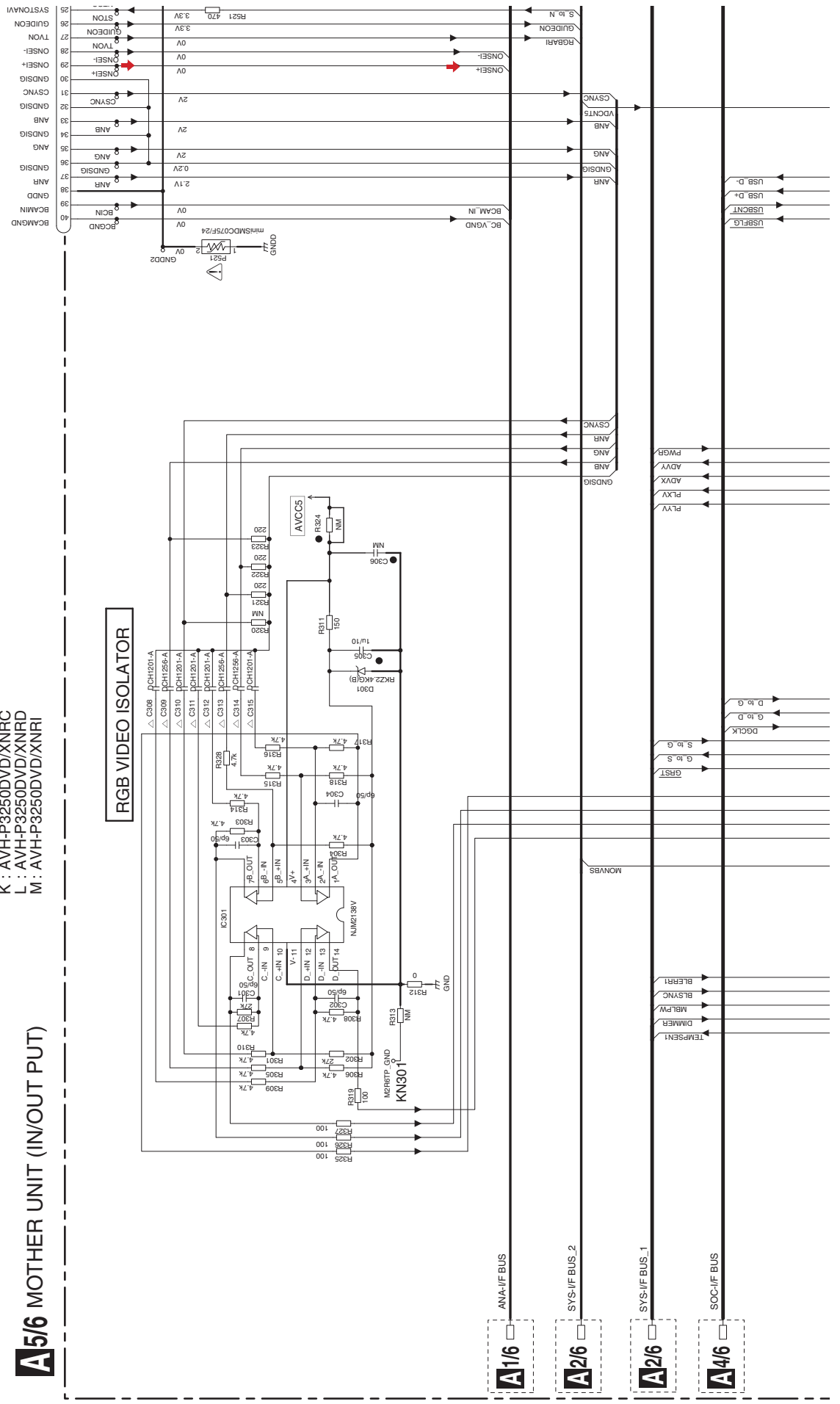
A-b 5/6

IF

model
 P : AVH-P3200BT/XNUC
 Q : AVH-P3250BT/XNRD
 J : AVH-P3200D/DV/XNUC
 K : AVH-P3250D/DV/XNRD
 L : AVH-P3250D/DV/XNRD
 M : AVH-P3250D/DV/XNRI

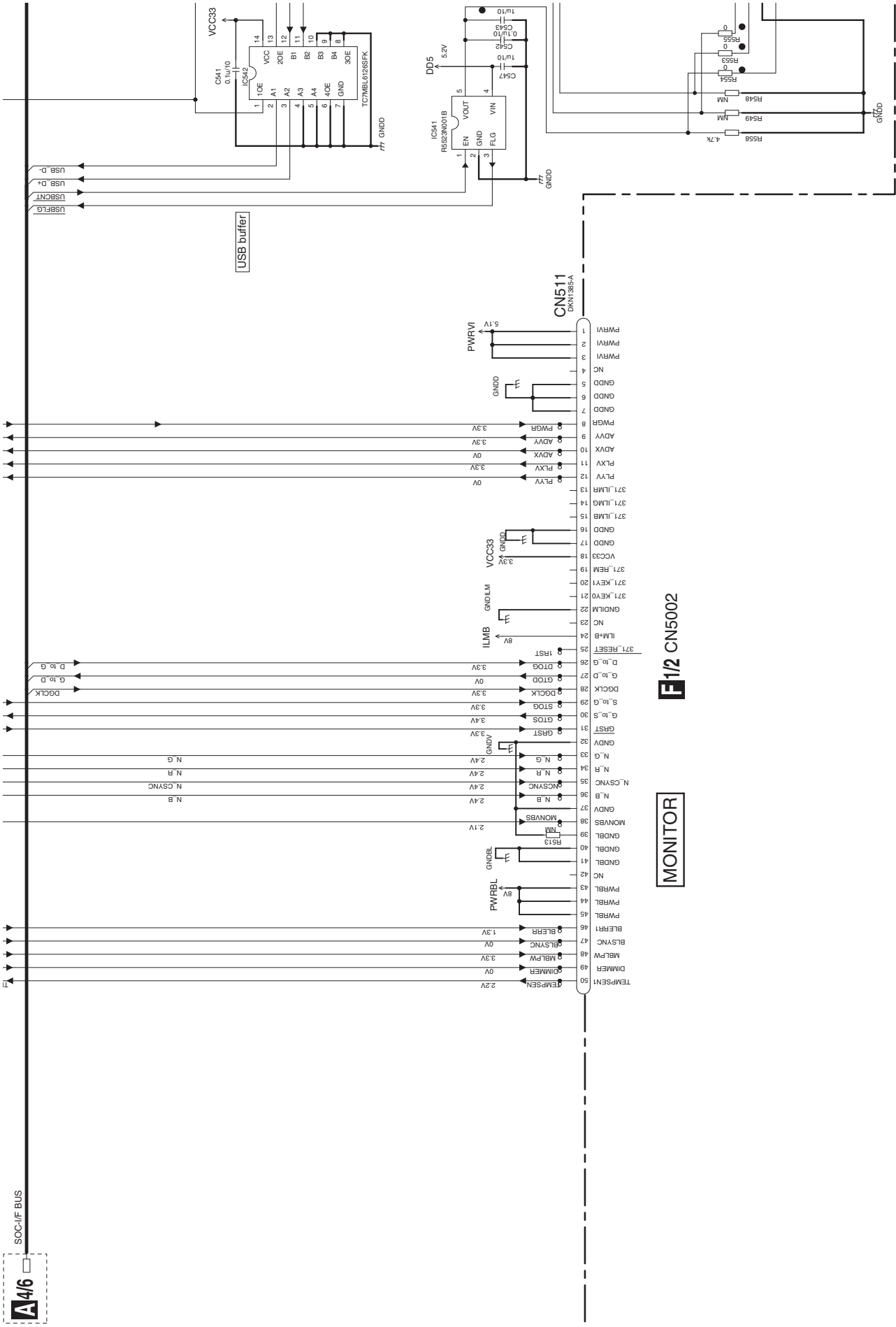
A5/6 MOTHER UNIT (IN/OUT PUT)

RGB VIDEO ISOLATOR



A-a A-b

A-a 5/6



A-b 5/6

A

B

C

D

E

F

A-a A-b

F1/2 CN5002

MONITOR

A-a 5/6

A 4/6

SOC-IF BUS

USB buffer

MONITOR

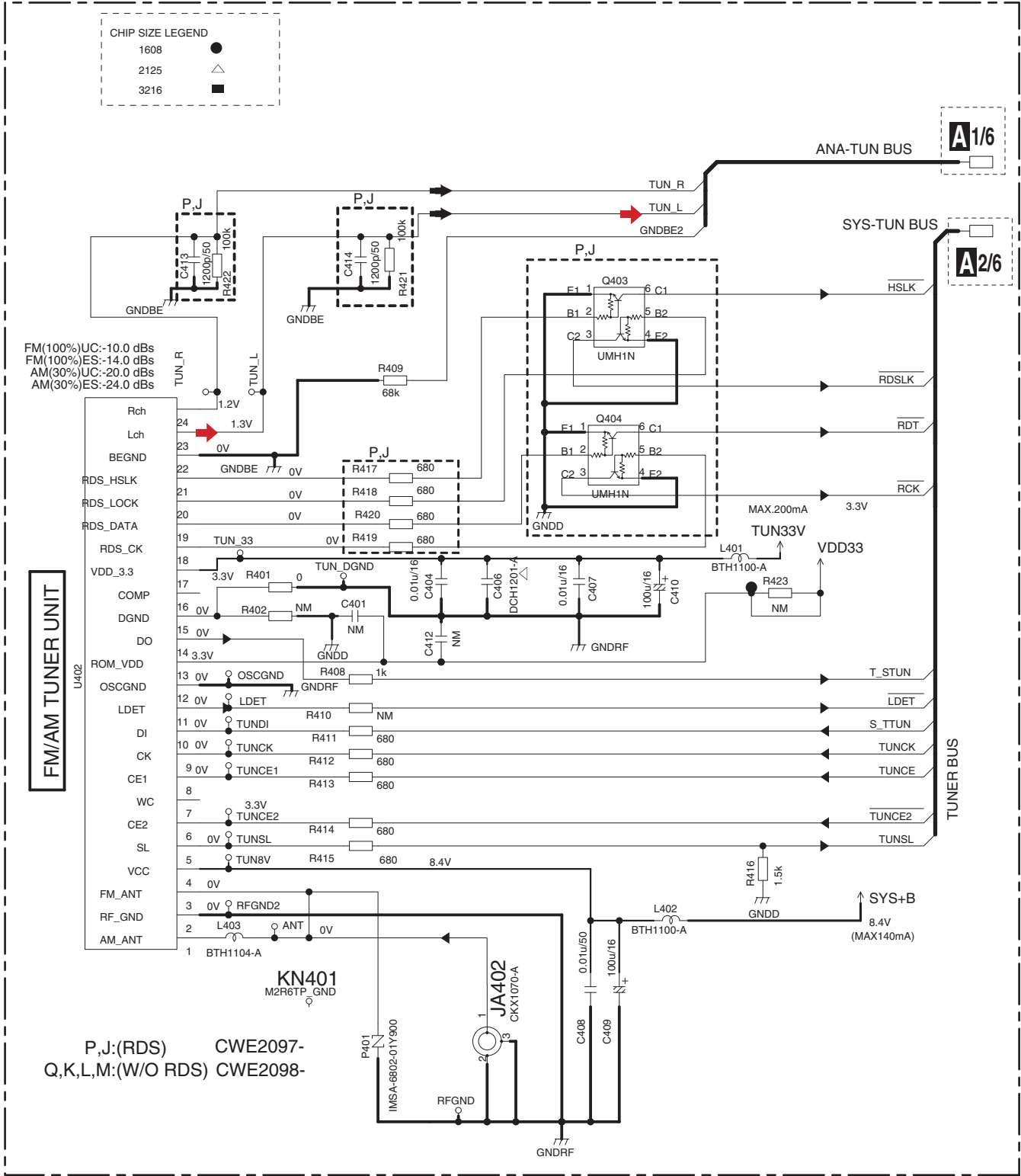
10.6 MOTHER UNIT(TUNER)

model
 P : AVH-P3200BT/XNUC
 Q : AVH-P3250BT/XNRD
 J : AVH-P3200DVD/XNUC
 K : AVH-P3250DVD/XNRC
 L : AVH-P3250DVD/XNRD
 M : AVH-P3250DVD/XNRI

A6/6 MOTHER UNIT (TUNER)

CHIP SIZE LEGEND

1608	●
2125	△
3216	■



P,J:(RDS) CWE2097-
 Q,K,L,M:(W/O RDS) CWE2098-

A

B

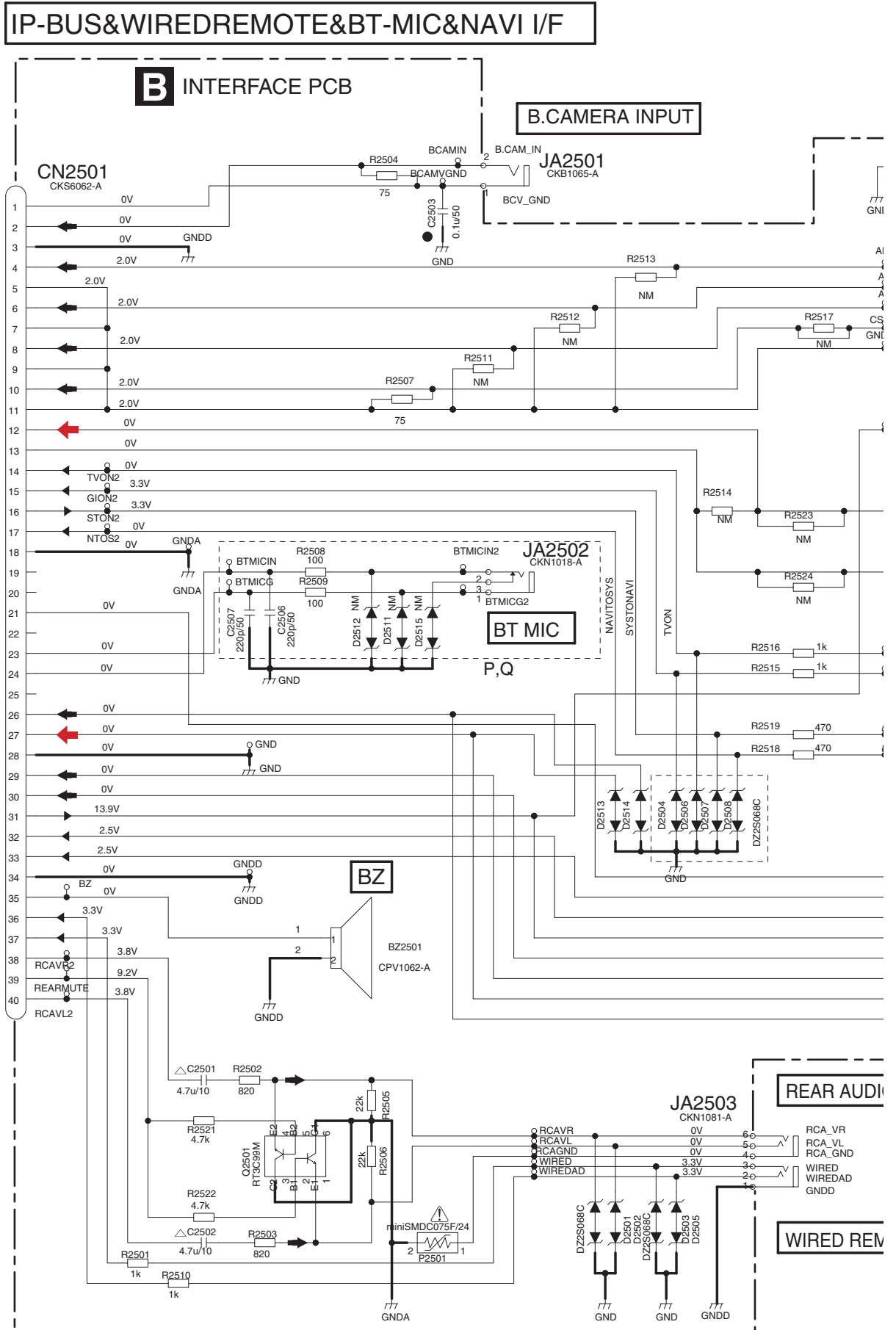
C

D

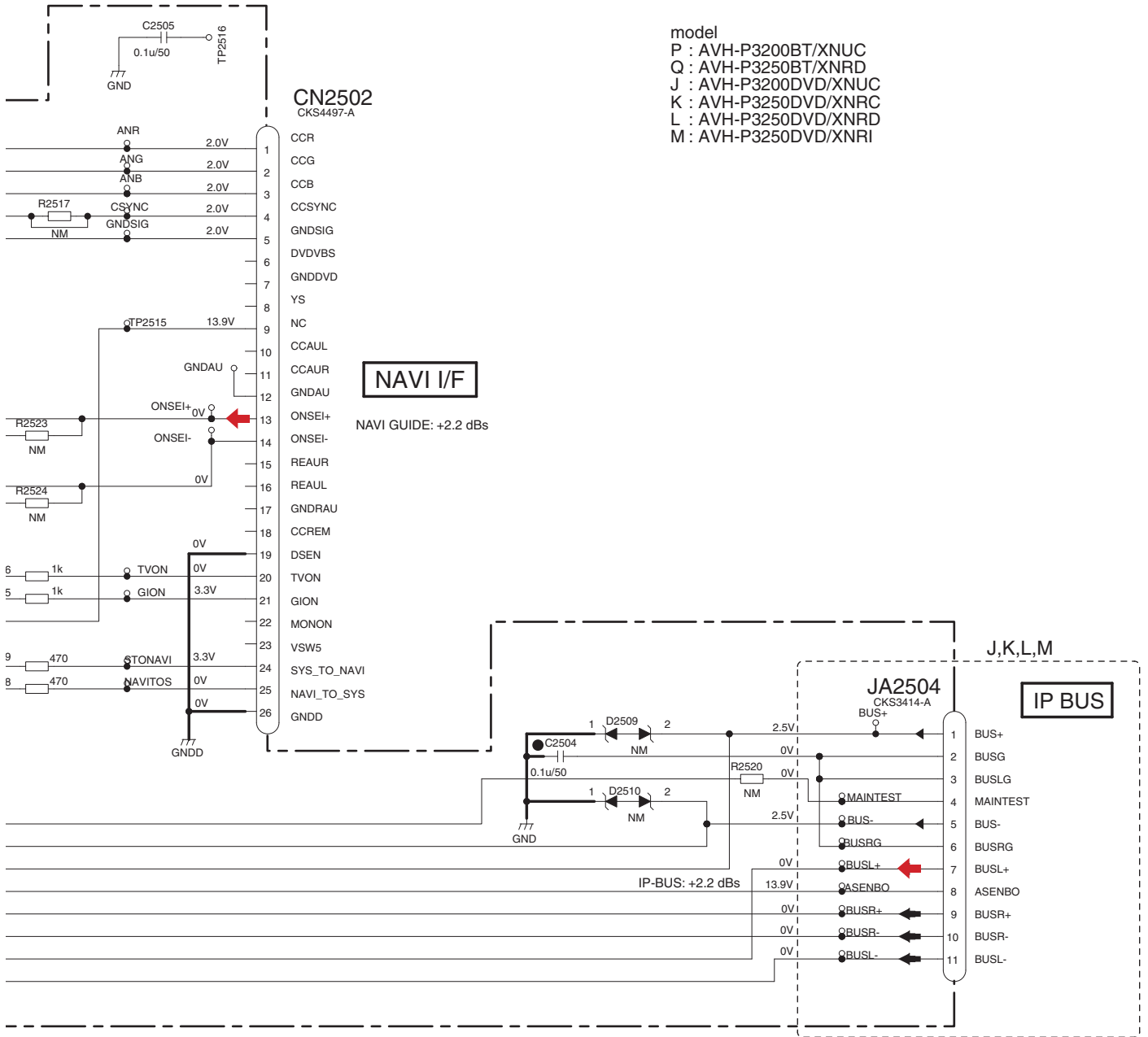
E

F

10.7 INTERFACE PCB



A5/6
CN521



model
 P : AVH-P3200BT/XNUC
 Q : AVH-P3250BT/XNRC
 J : AVH-P3200DVD/XNUC
 K : AVH-P3250DVD/XNRC
 L : AVH-P3250DVD/XNRD
 M : AVH-P3250DVD/XNRI

CN2502
 CKS4497-A

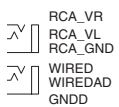
NAVI I/F

NAVI GUIDE: +2.2 dBs

J,K,L,M

IP BUS

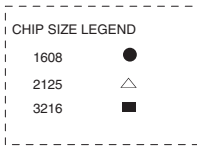
REAR AUDIO OUT



WIRED REMOTE

REFERENCE REGEND

2501 ~

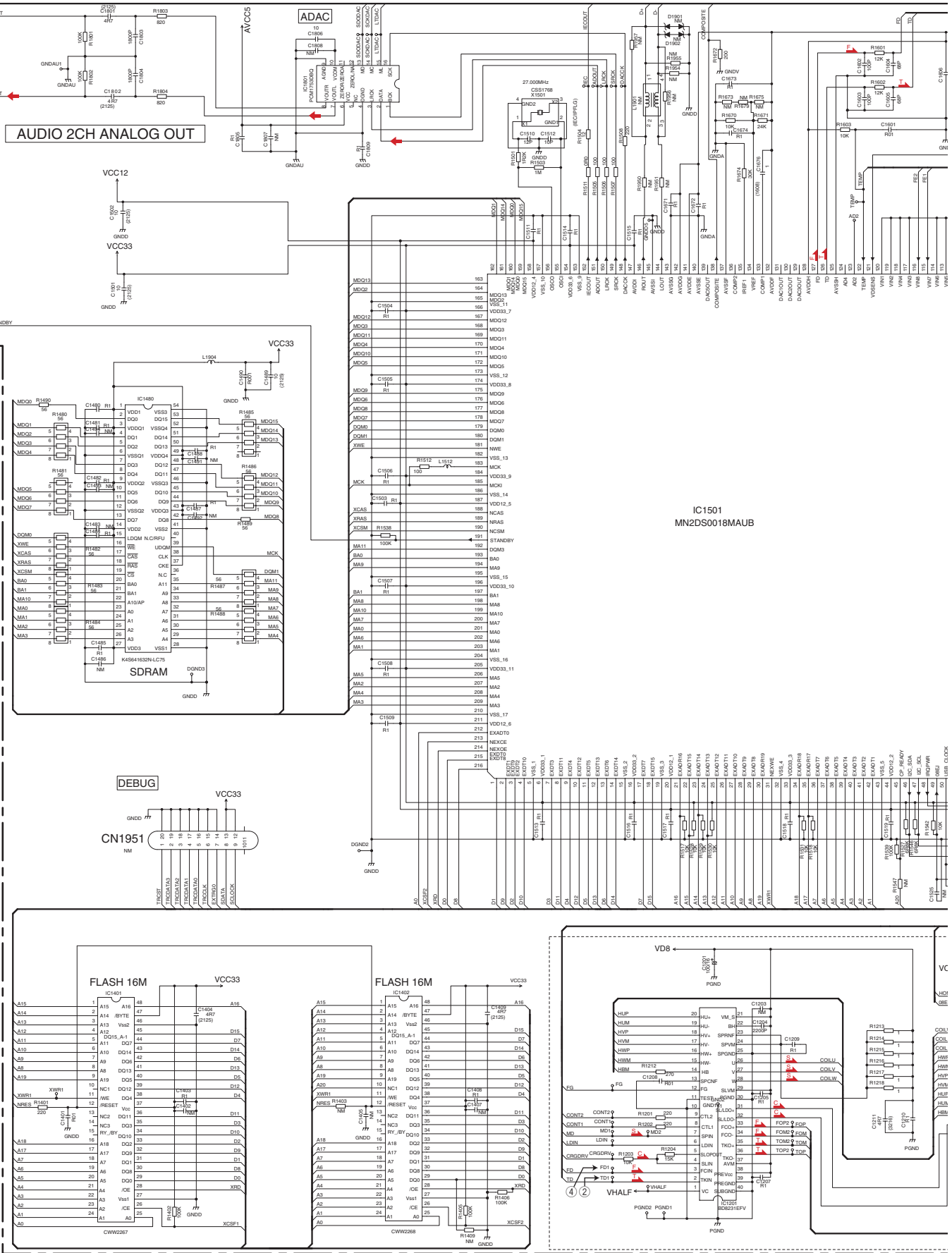


MONITOR I/F UNIT

Consists of
 INTERFACE PCB
 KEYBOARD PCB
 MONITOR PCB
 SD PCB
 BT ANT PCB

10.8 DVD CORE UNIT(GUIDE PAGE)

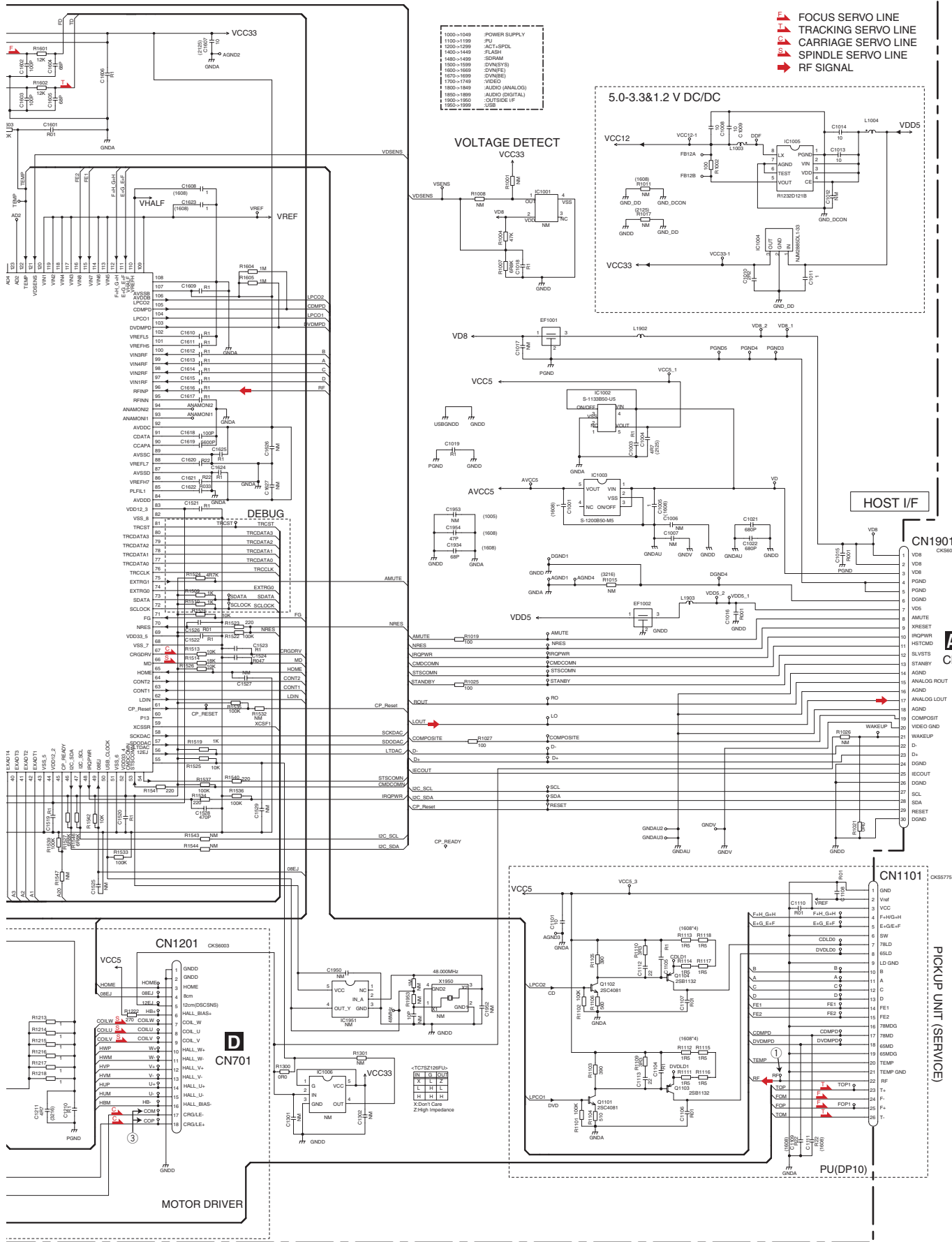
C-a



AVH-P3200BT/XNUC

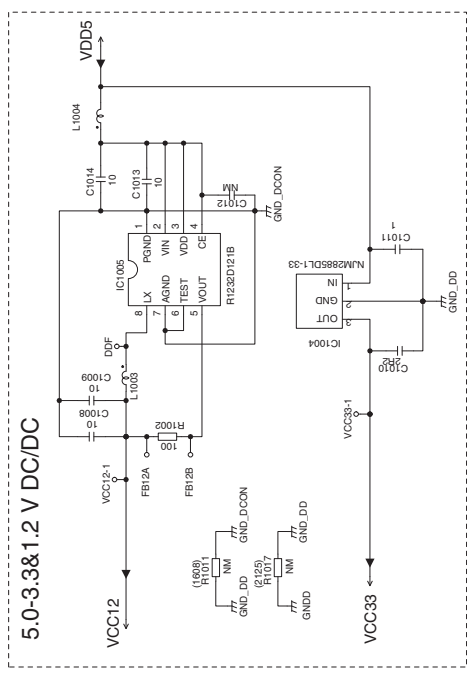
C-b

C DVD CORE UNIT



C DVD CORE UNIT

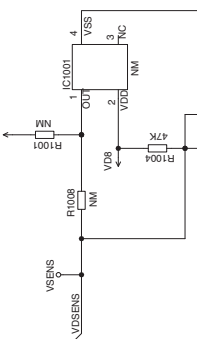
- FOCUS SERVO LINE
- TRACKING SERVO LINE
- CARRIAGE SERVO LINE
- SPINDLE SERVO LINE
- RF SIGNAL



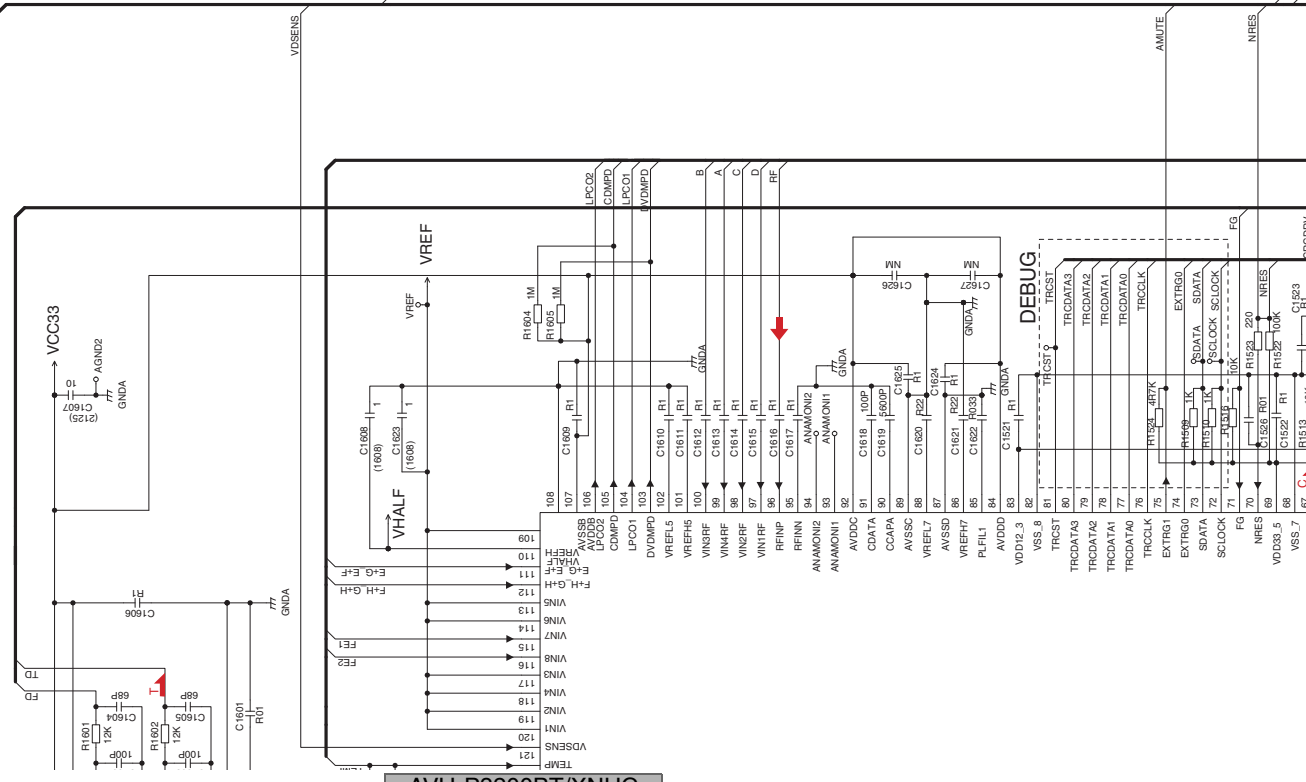
5.0-3.3&1.2 V DC/DC

POWER SUPPLY	ACT-SPDL	FLASH	SDRAM	EEPROM(S)	DYN(IBE)	DYN(BE)	VDD5	AUDIO (ANALOG)	AUDIO (DIGITAL)	OUTSIDE I/F	USP
1000->1049	1000->1049	1000->1049	1000->1049	1000->1049	1000->1049	1000->1049	1000->1049	1000->1049	1000->1049	1000->1049	1000->1049
1400->1499	1400->1499	1400->1499	1400->1499	1400->1499	1400->1499	1400->1499	1400->1499	1400->1499	1400->1499	1400->1499	1400->1499
1800->1899	1800->1899	1800->1899	1800->1899	1800->1899	1800->1899	1800->1899	1800->1899	1800->1899	1800->1899	1800->1899	1800->1899
1900->1999	1900->1999	1900->1999	1900->1999	1900->1999	1900->1999	1900->1999	1900->1999	1900->1999	1900->1999	1900->1999	1900->1999

VOLTAGE DETECT VCC33

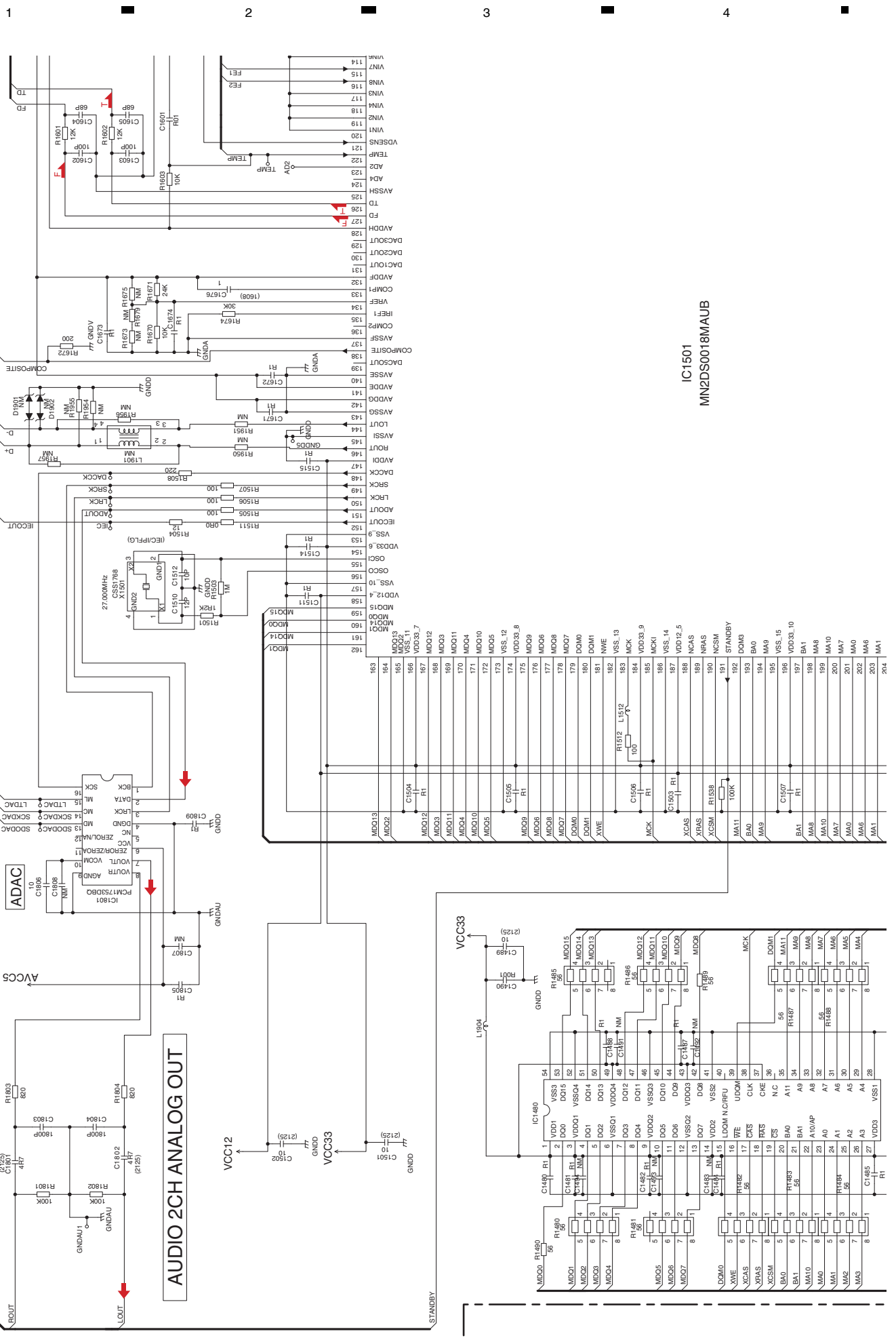


C-a C-b



AVH-P3200BT/XNUC

C-b



A B C D E F

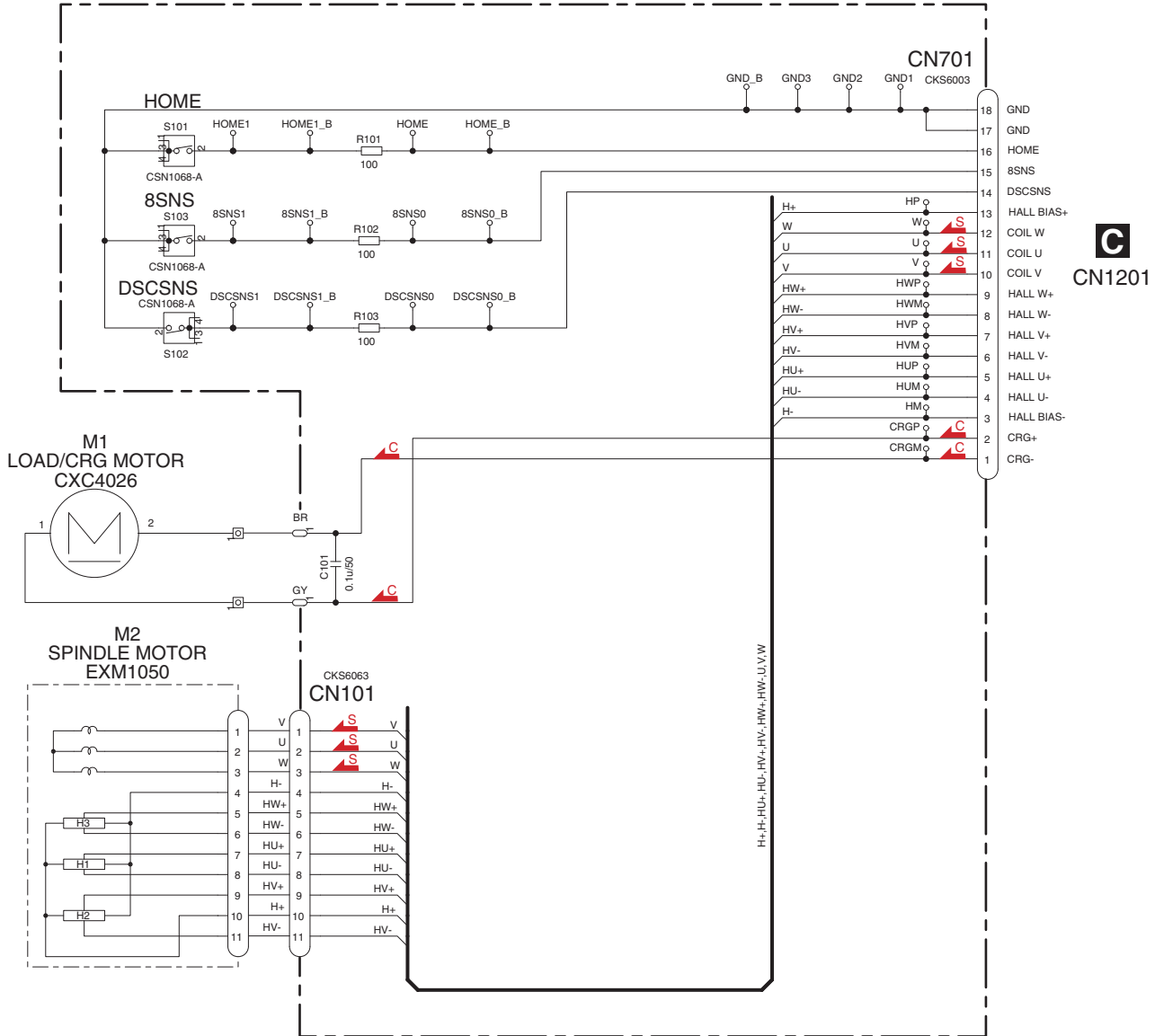
C-b

C-a C-b

C-a

10.9 CONNECT PCB

D CONNECT PCB



A

B

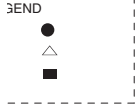
C

D

E

F

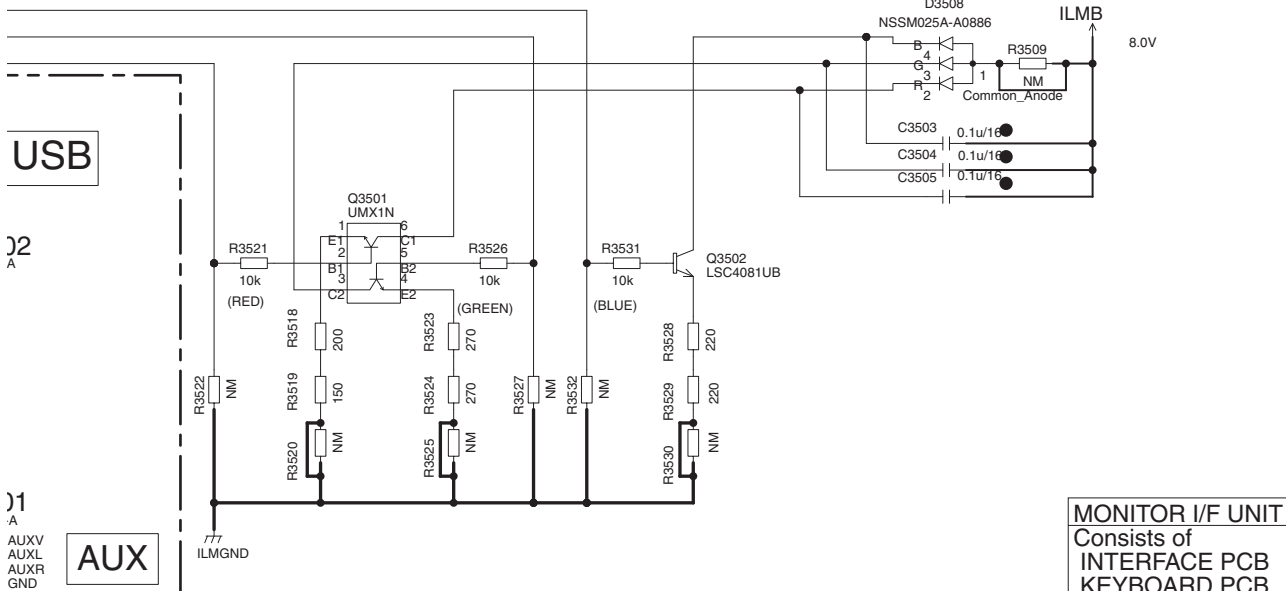
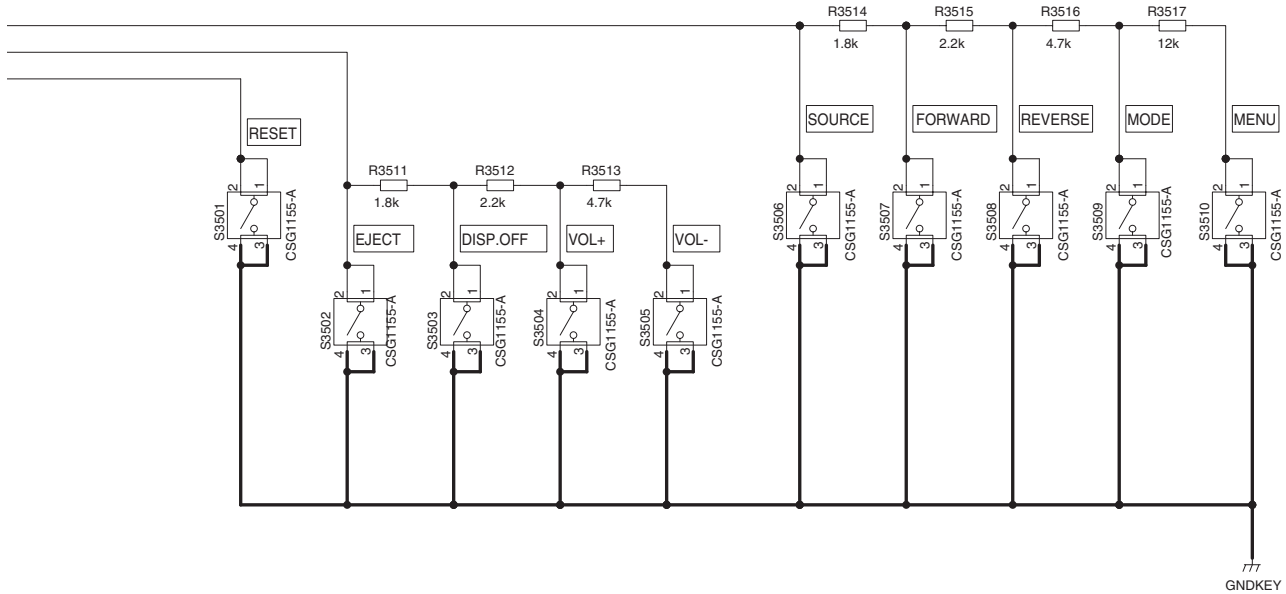
KEYBOARD PCB



VCC33

R3510 47

	0.0~0.5V	0.5~1.2V	1.2~1.8V	1.8~2.4V	2.4~3.0V	3.0~3.3V
KDT0	EJECT	DISP.OFF	VOL+	VOL-	x	x
KDT1	SOURCE	FORWARD	REVERSE	MODE	MENU	x



MONITOR I/F UNIT
 Consists of
 INTERFACE PCB
 KEYBOARD PCB
 MONITOR PCB
 SD PCB
 BT ANT PCB

USB

J2

J1

AUX

2 dBs



10.11 MONITOR PCB(GERDA)(GUIDE PAGE)

F-a 1/2

A

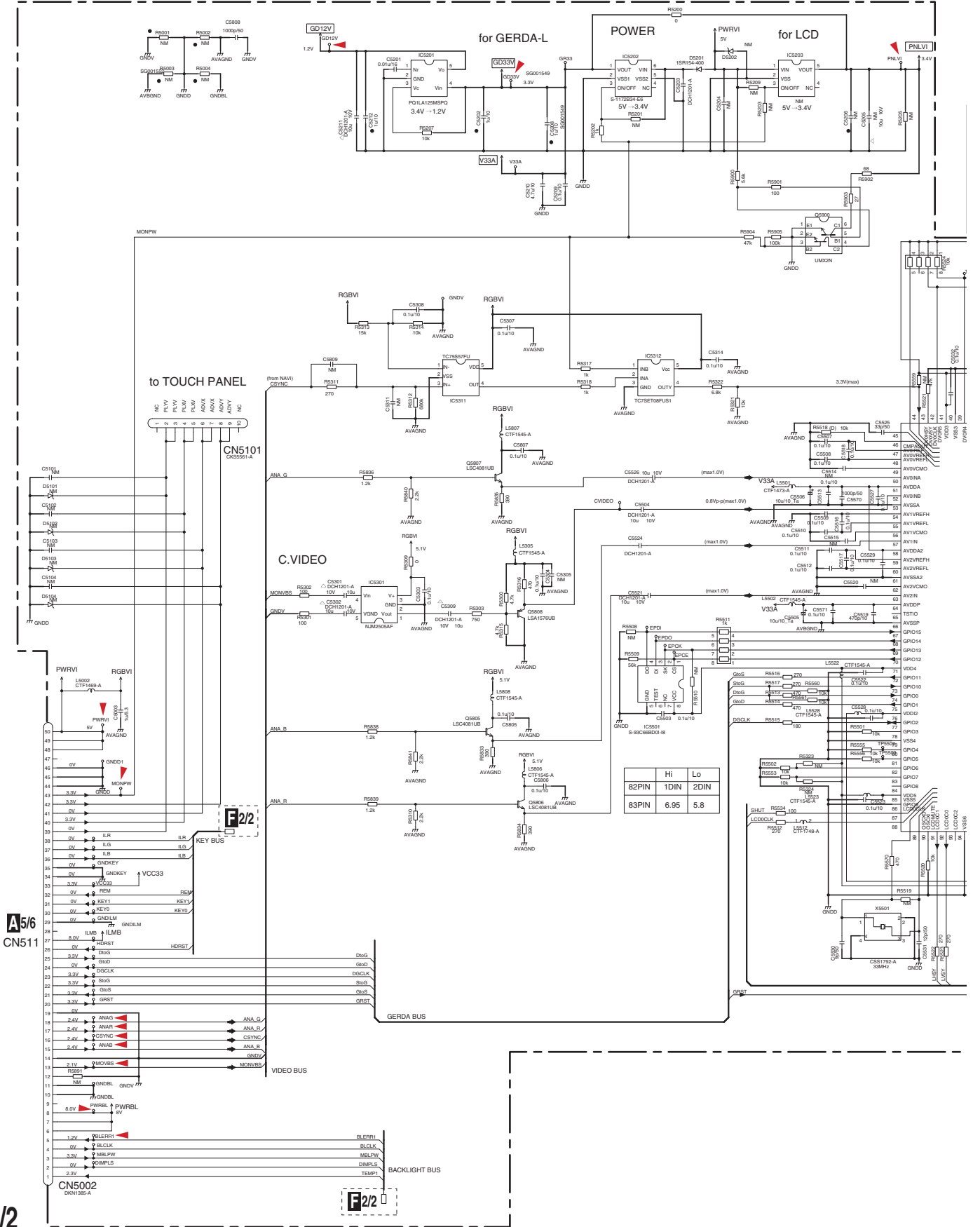
B

C

D

E

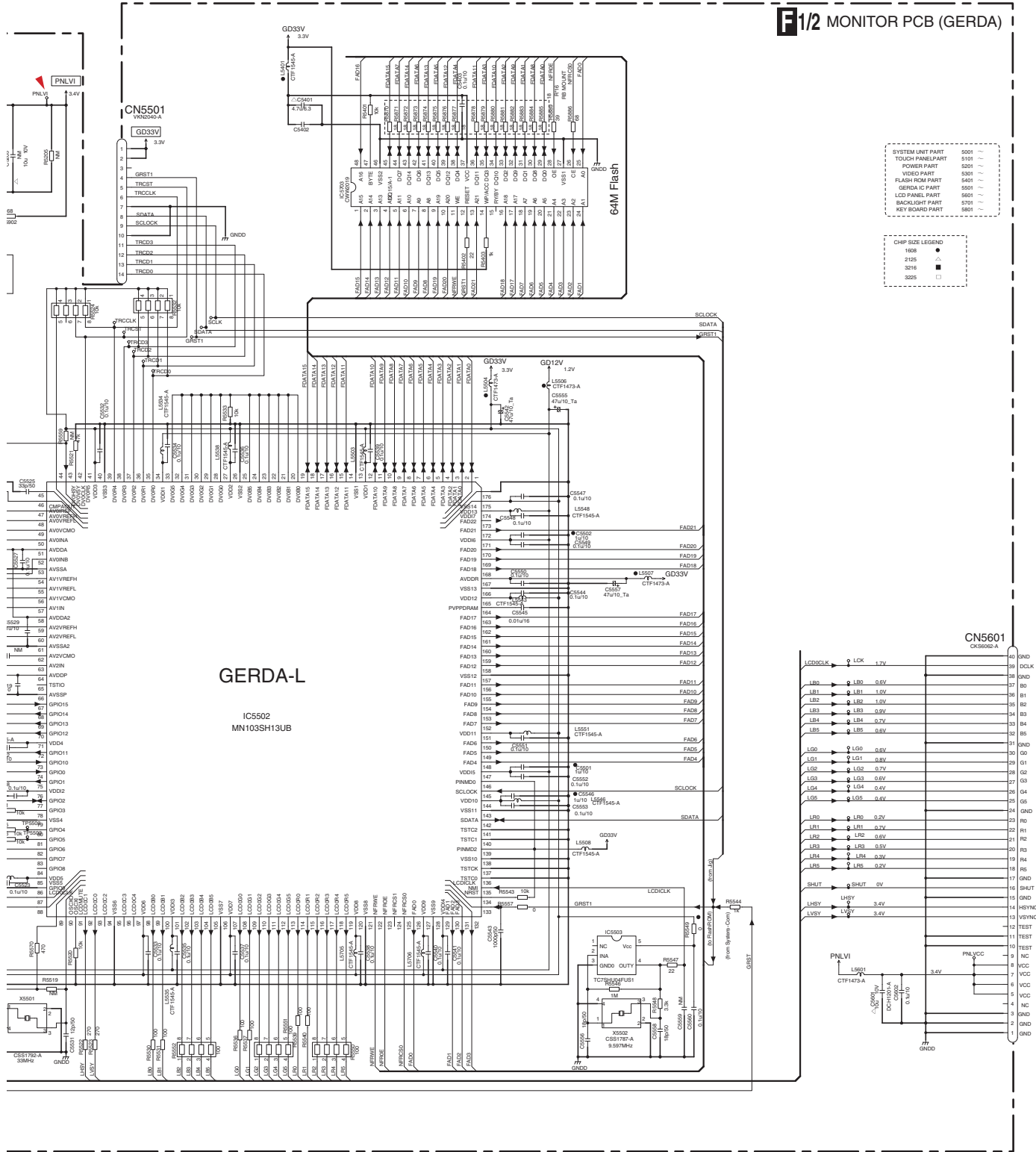
F



AVH-P3200BT/XNUC

F-b 1/2

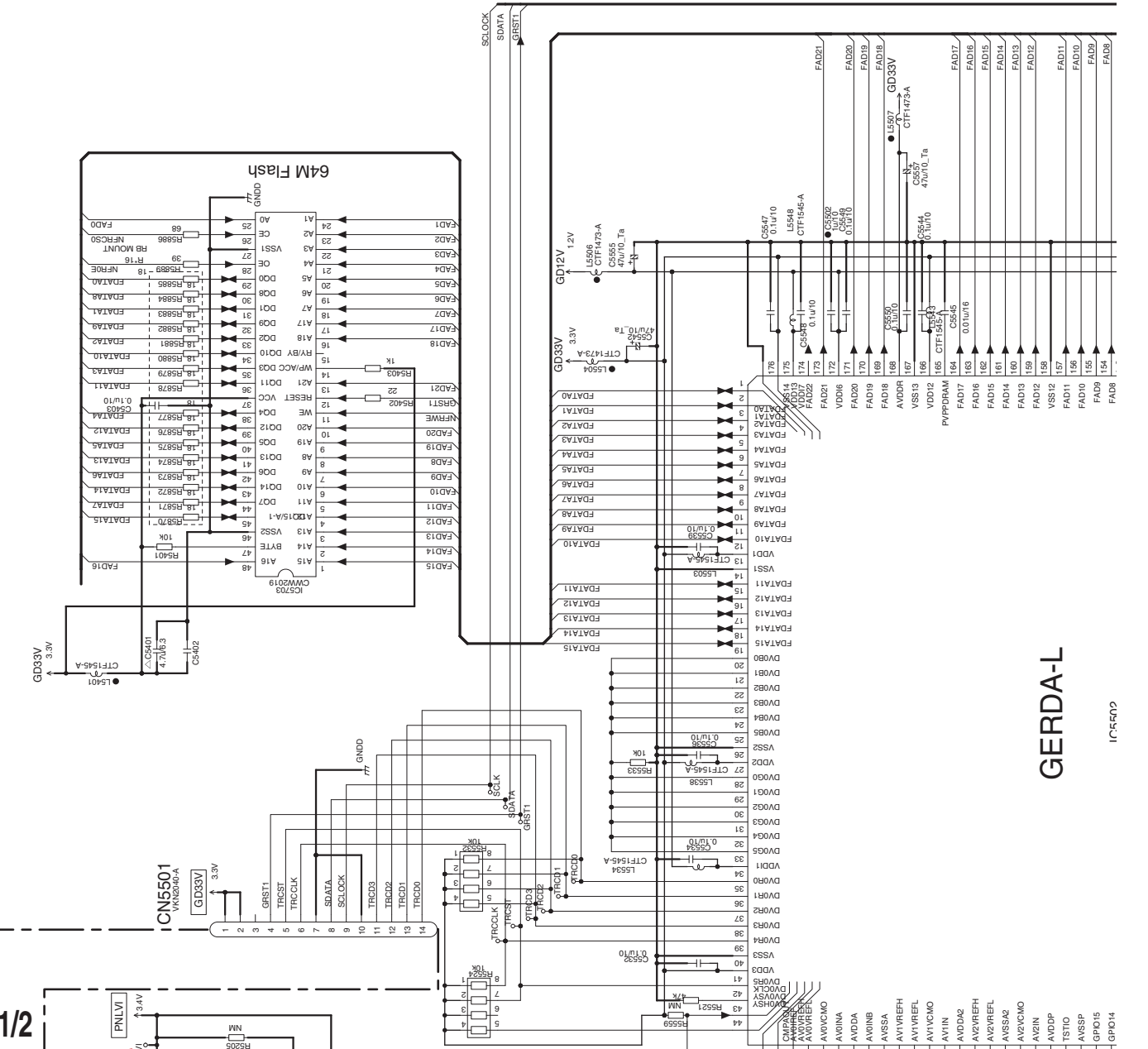
F1/2 MONITOR PCB (GERDA)



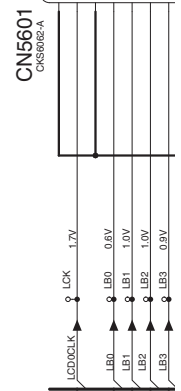
MONITOR I/F UNIT
 Consists of
 INTERFACE PCB
 KEYBOARD PCB
 MONITOR PCB
 SD PCB
 BT ANT PCB

A
B
C
D
E
F

F1/2 MONITOR PCB (GERDA)



- 5001 SYSTEM UNIT PART
 5101 TOUCH PANEL PART
 5201 CPU PART
 5301 FLASH ROM PART
 5401 GERDA IC PART
 5501 LCD PANEL PART
 5601 BACKLIGHT PART
 5701 KEY BOARD PART
 5801
- CHIP SIZE LEGEND
 1608 ●
 2125 ▲
 3218 ■
 3225 □



F-a F-b

F-b 1/2

GERDA-L

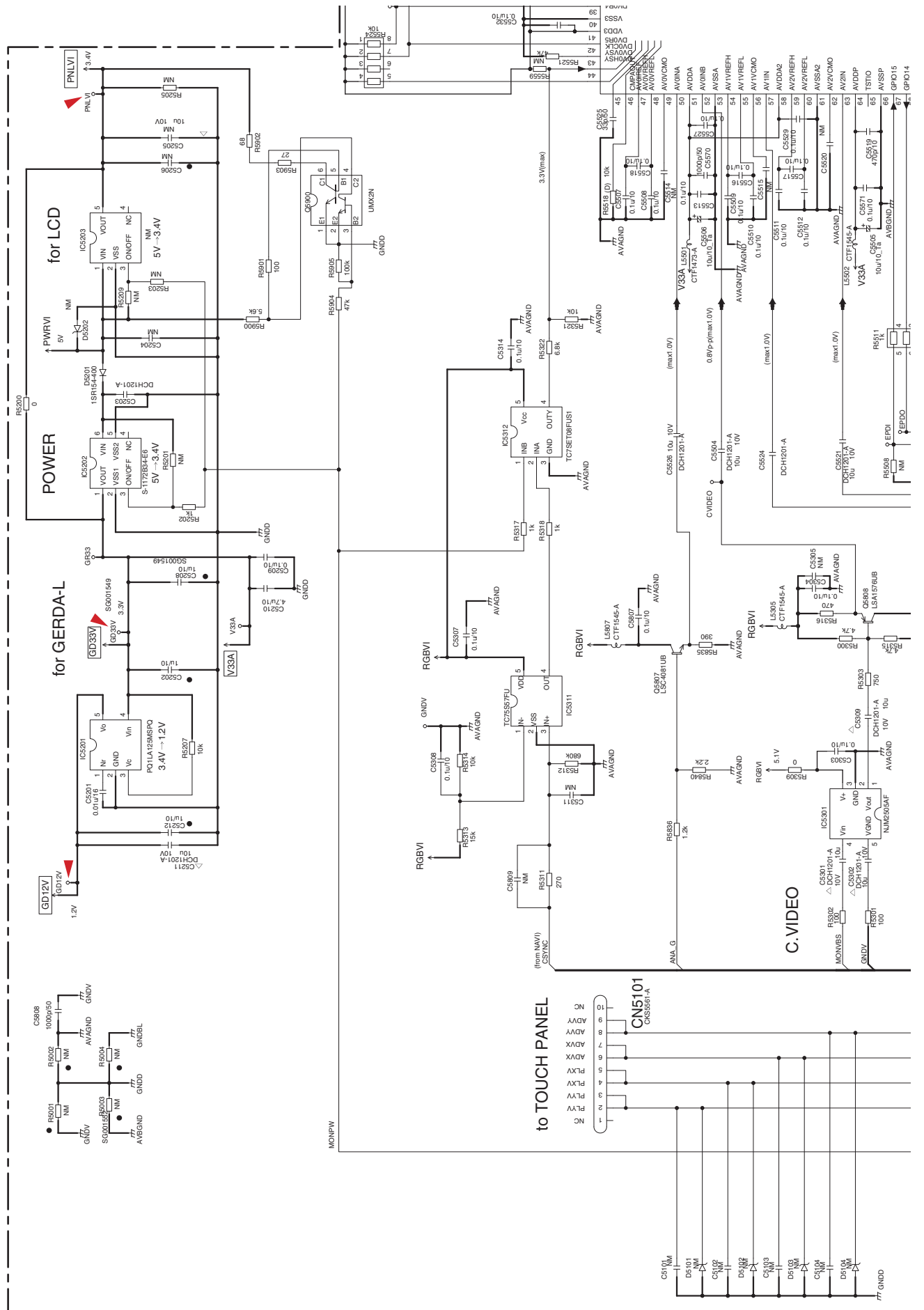
ICR502

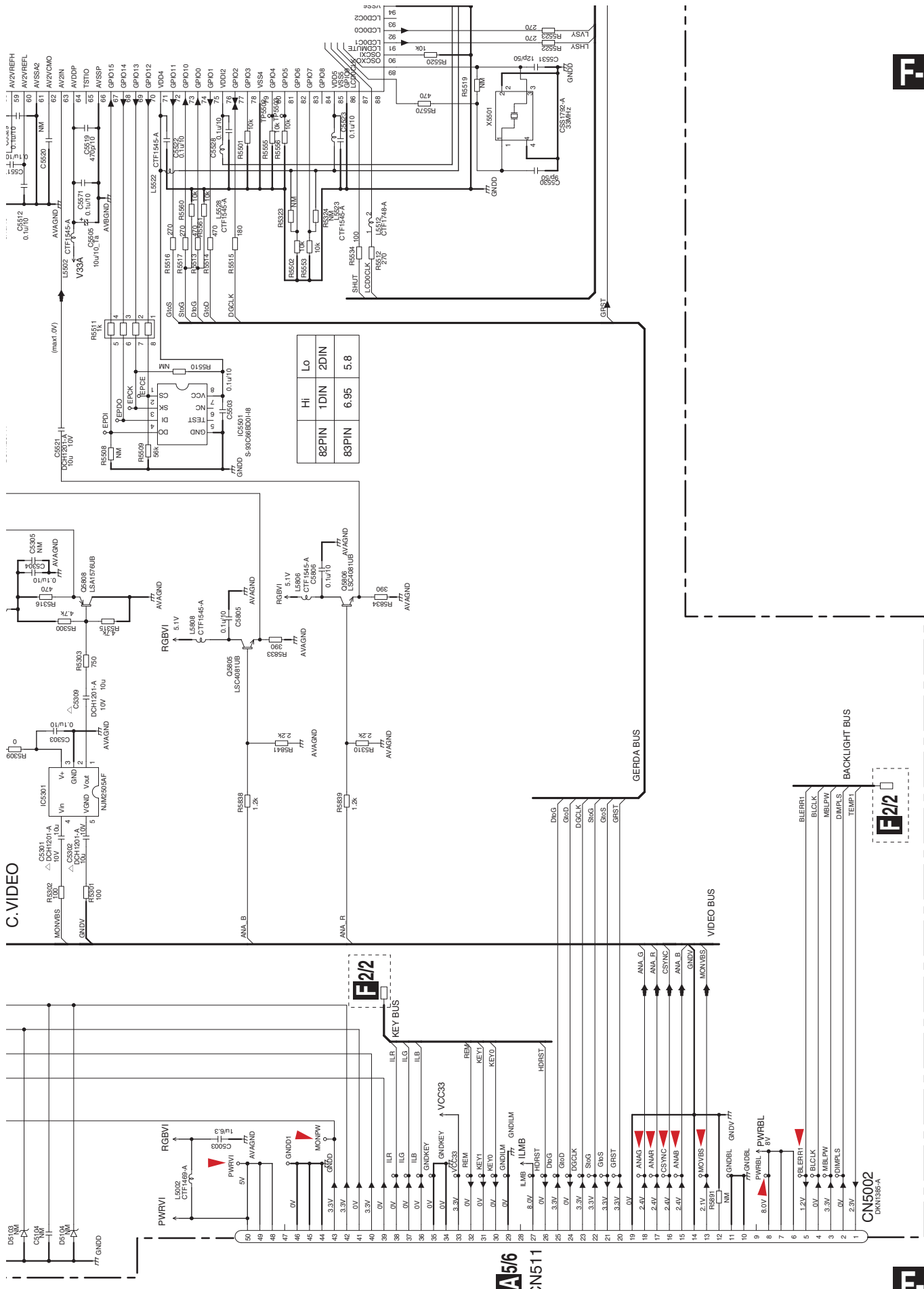
AVH-P3200BT/XNUC

F-b 1/2

F-a F-b

F-a 1/2





Hi	Lo	2DIN	5.8
82PIN	1DIN	6.95	83PIN

F-b 1/2

F-a F-b

F2/2

A5/6
CN511

AVH-P3200BT/XNUC

F-a 1/2

10.12 MONITOR PCB(BACKLIGHT)

A

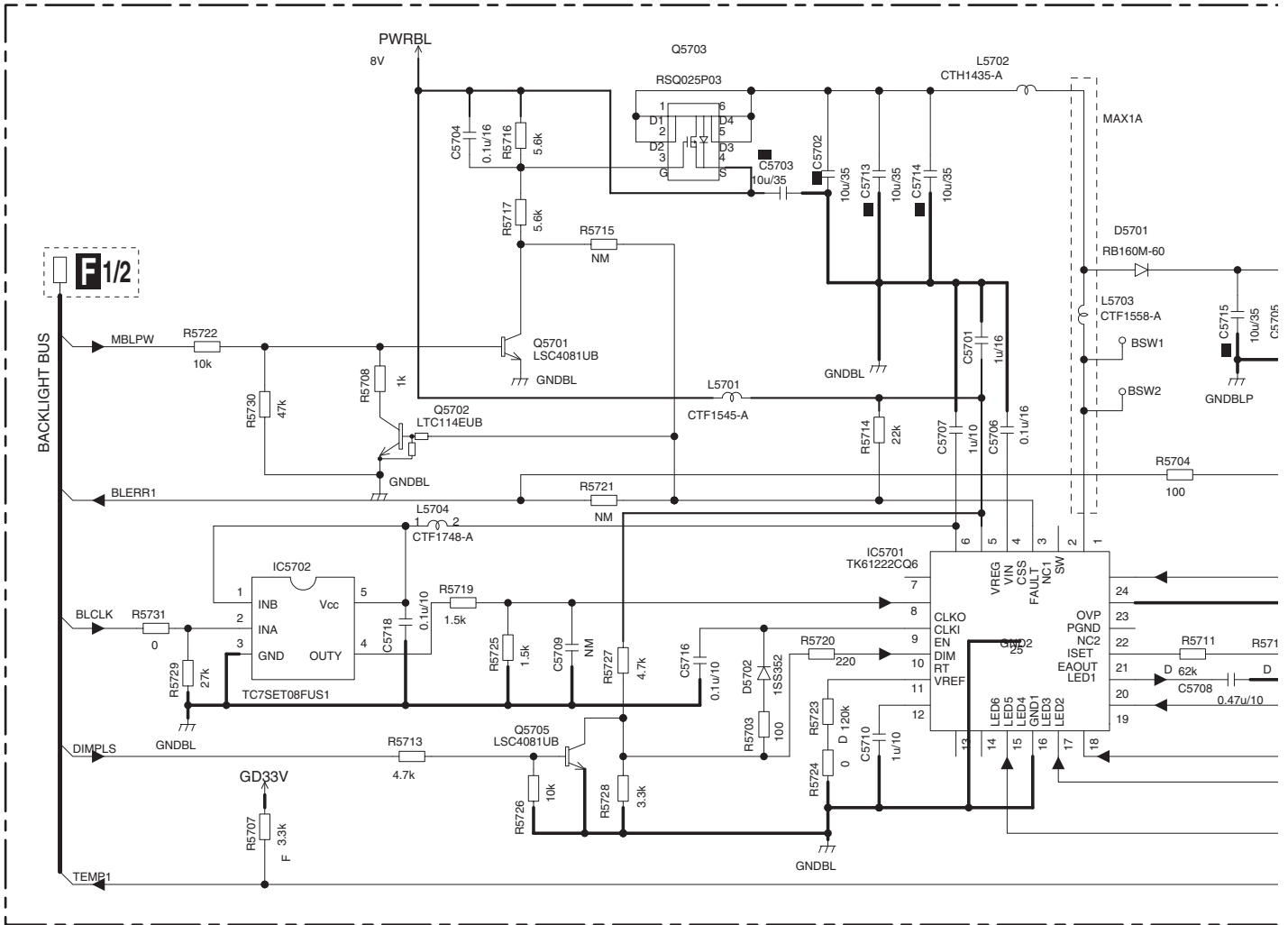
B

C

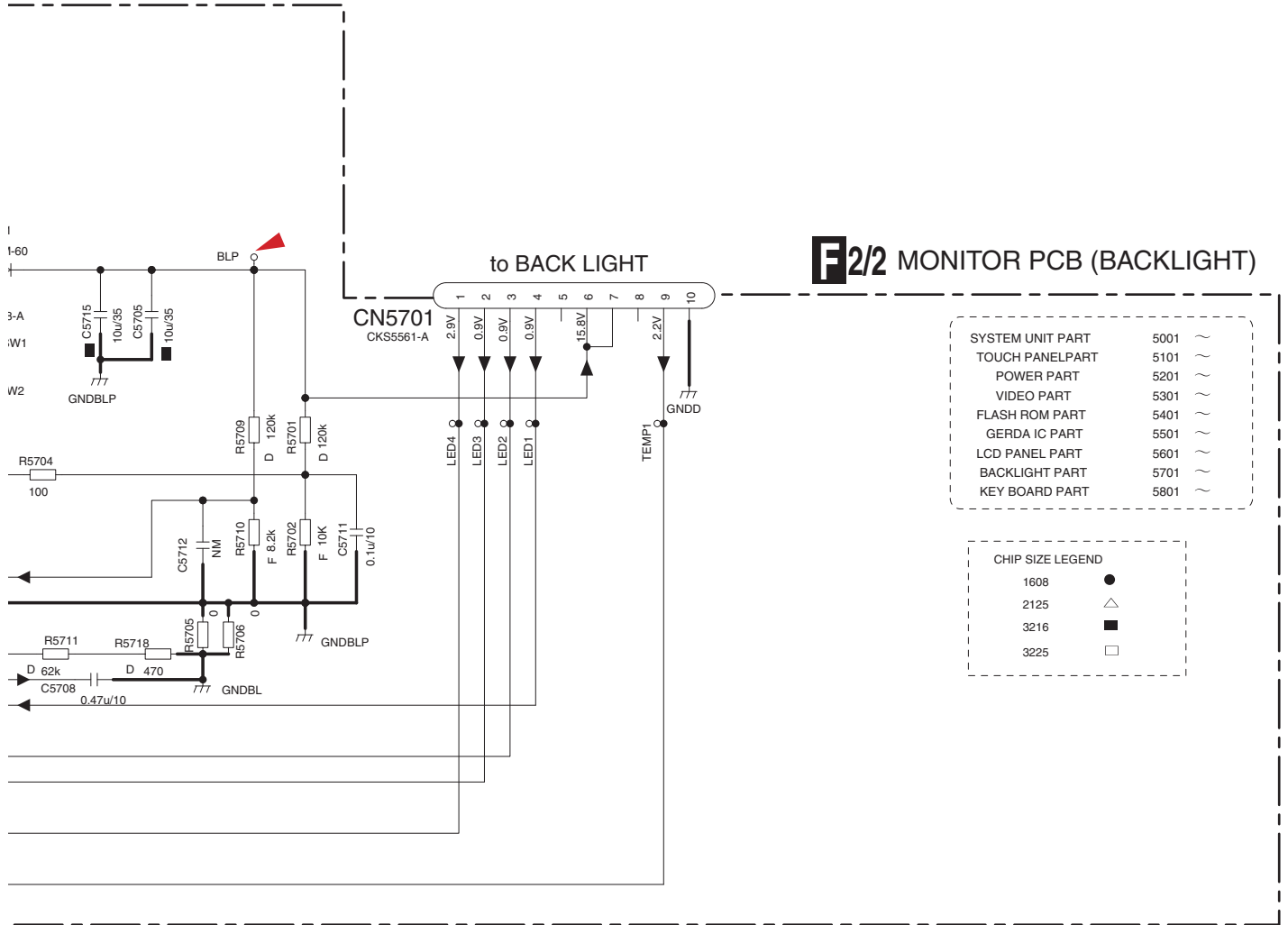
D

E

F



F2/2 MONITOR PCB (BACKLIGHT)



SYSTEM UNIT PART	5001	~
TOUCH PANELPART	5101	~
POWER PART	5201	~
VIDEO PART	5301	~
FLASH ROM PART	5401	~
GERDA IC PART	5501	~
LCD PANEL PART	5601	~
BACKLIGHT PART	5701	~
KEY BOARD PART	5801	~

CHIP SIZE LEGEND	
1608	●
2125	△
3216	■
3225	□

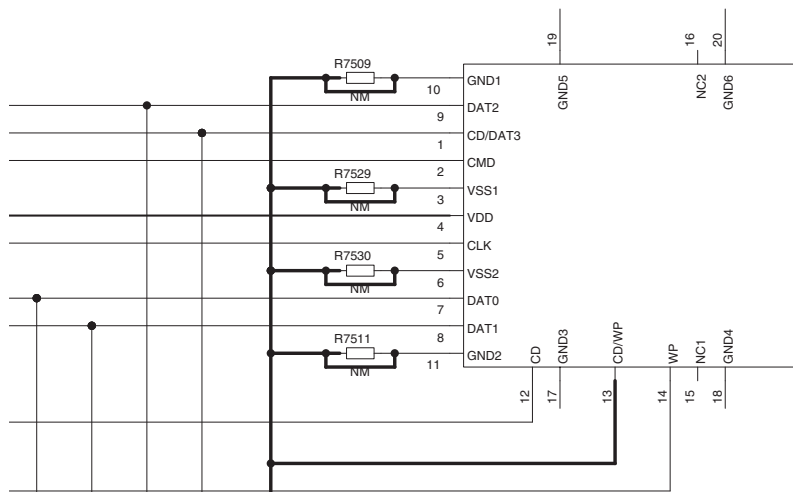
MONITOR I/F UNIT
 Consists of
 INTERFACE PCB
 KEYBOARD PCB
 MONITOR PCB
 SD PCB
 BT ANT PCB





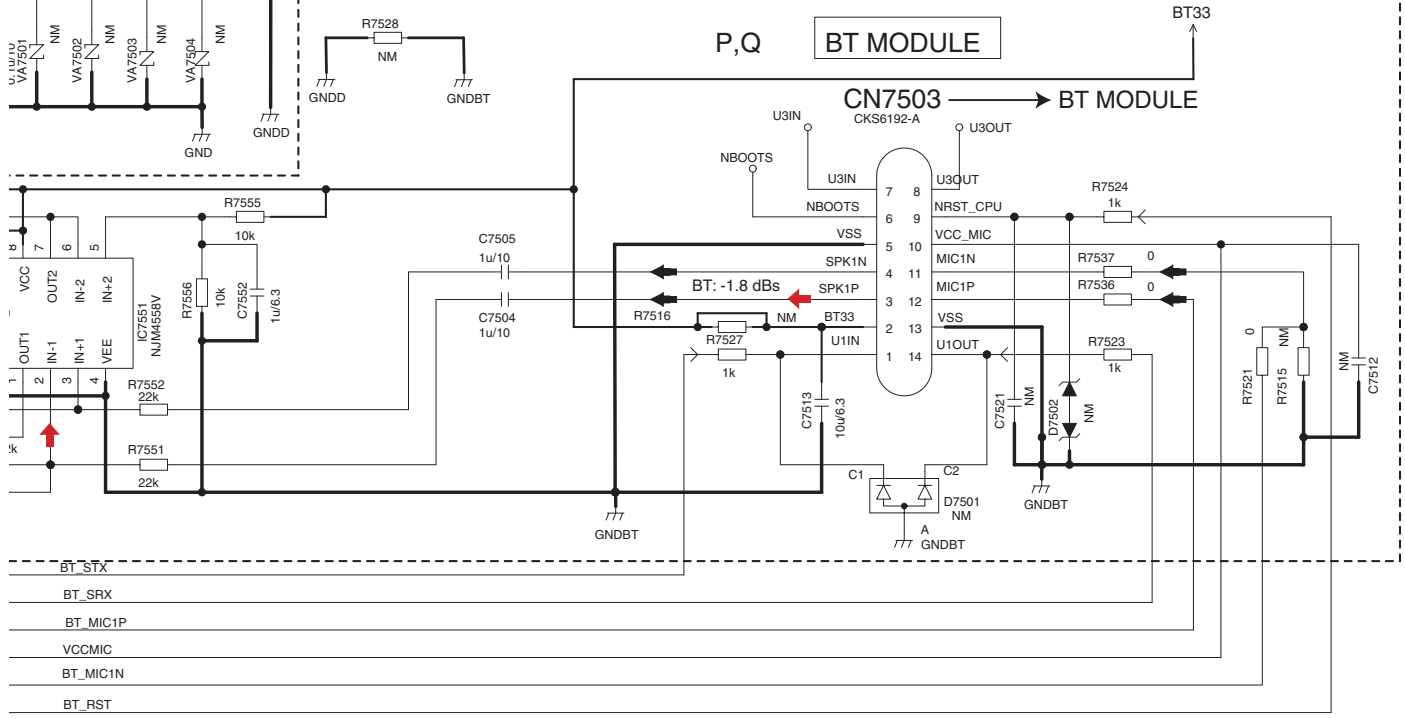
model
 P : AVH-P3200BT/XNUC
 Q : AVH-P3250BT/XNRD
 J : AVH-P3200DVD/XNUC
 K : AVH-P3250DVD/XNRC
 L : AVH-P3250DVD/XNRD
 M : AVH-P3250DVD/XNRI

SD CARD



CN7501
CKS6190-A

P,Q BT MODULE



MONITOR I/F UNIT
 Consists of
 INTERFACE PCB
 KEYBOARD PCB
 MONITOR PCB
 SD PCB
 BT ANT PCB

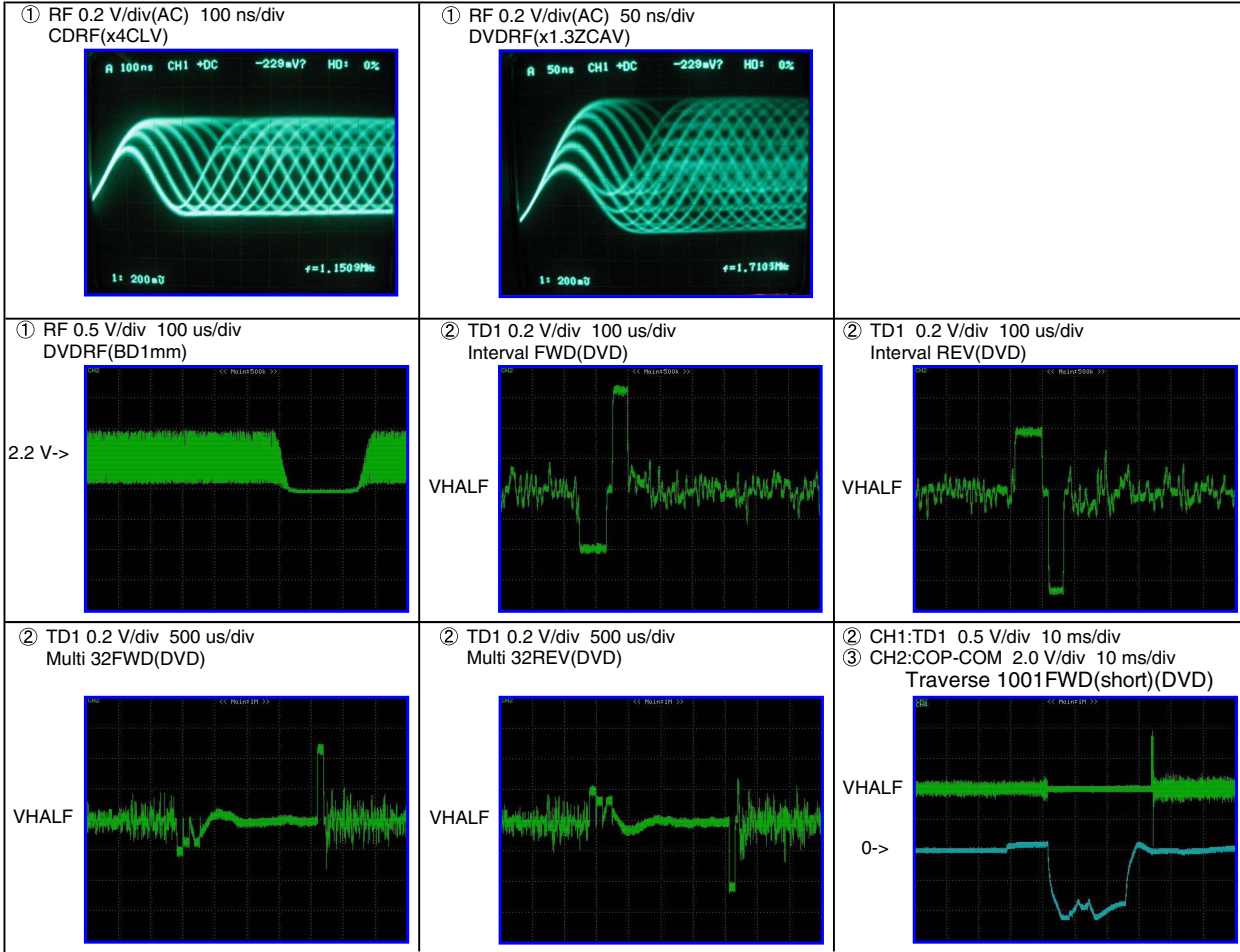


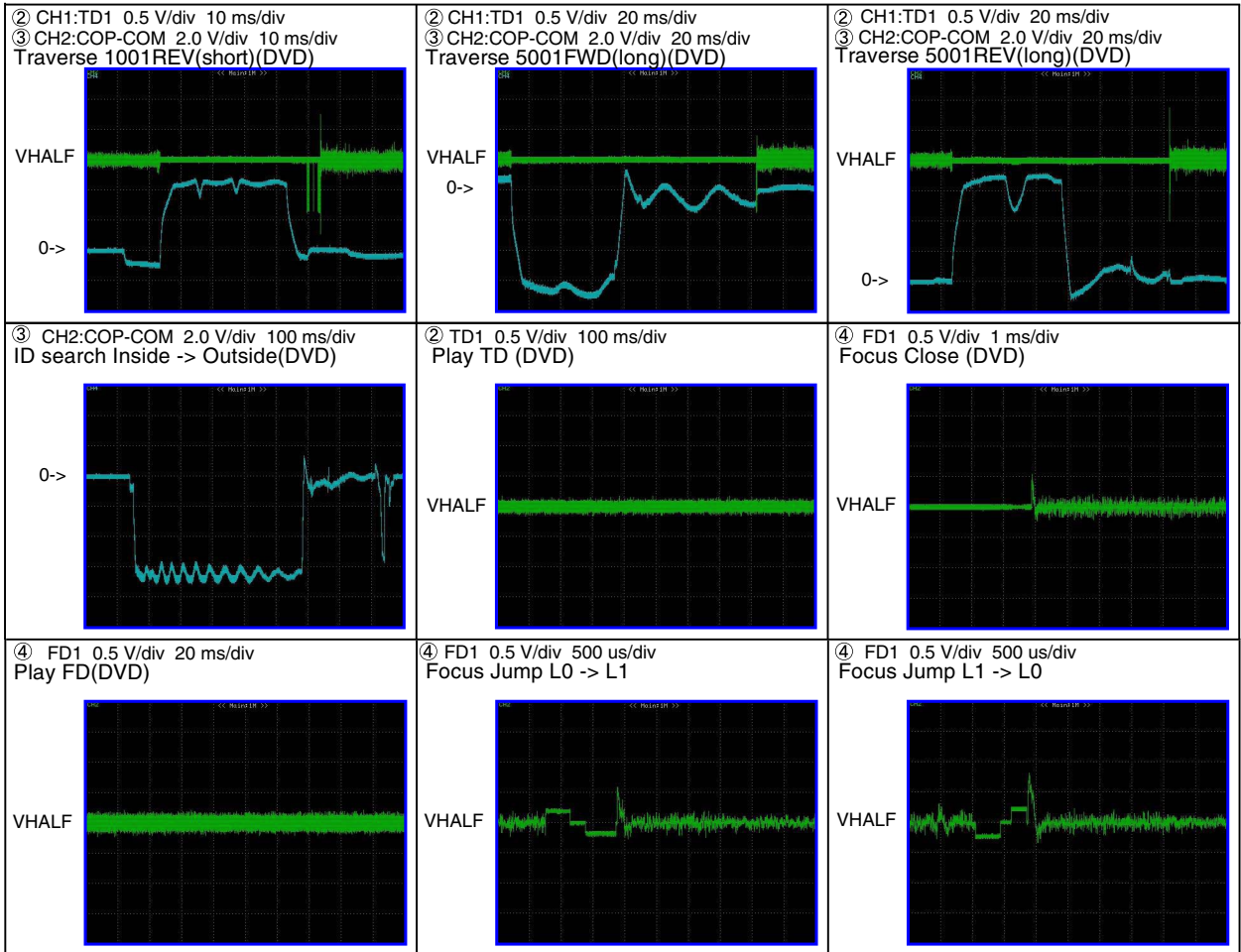
10.14 WAVEFORMS

DVD CORE UNIT

Note: 1. The encircled number denote measuring points in the circuit diagram.
 2. Reference voltage: 1.65 V(TD1,FD1)(=VHALF)
 2.2 V(RF)(=VREF)

In the waveform, it is seeing on the GND standard.
 Offset of 1.65 V or 2.2 V is put in.





A

B

C

D

E

F

11. PCB CONNECTION DIAGRAM

11.1 MOTHER UNIT

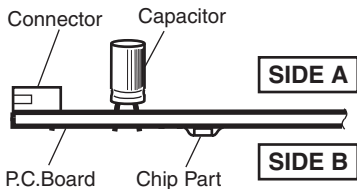
A MOTHER UNIT

NOTE FOR PCB DIAGRAMS

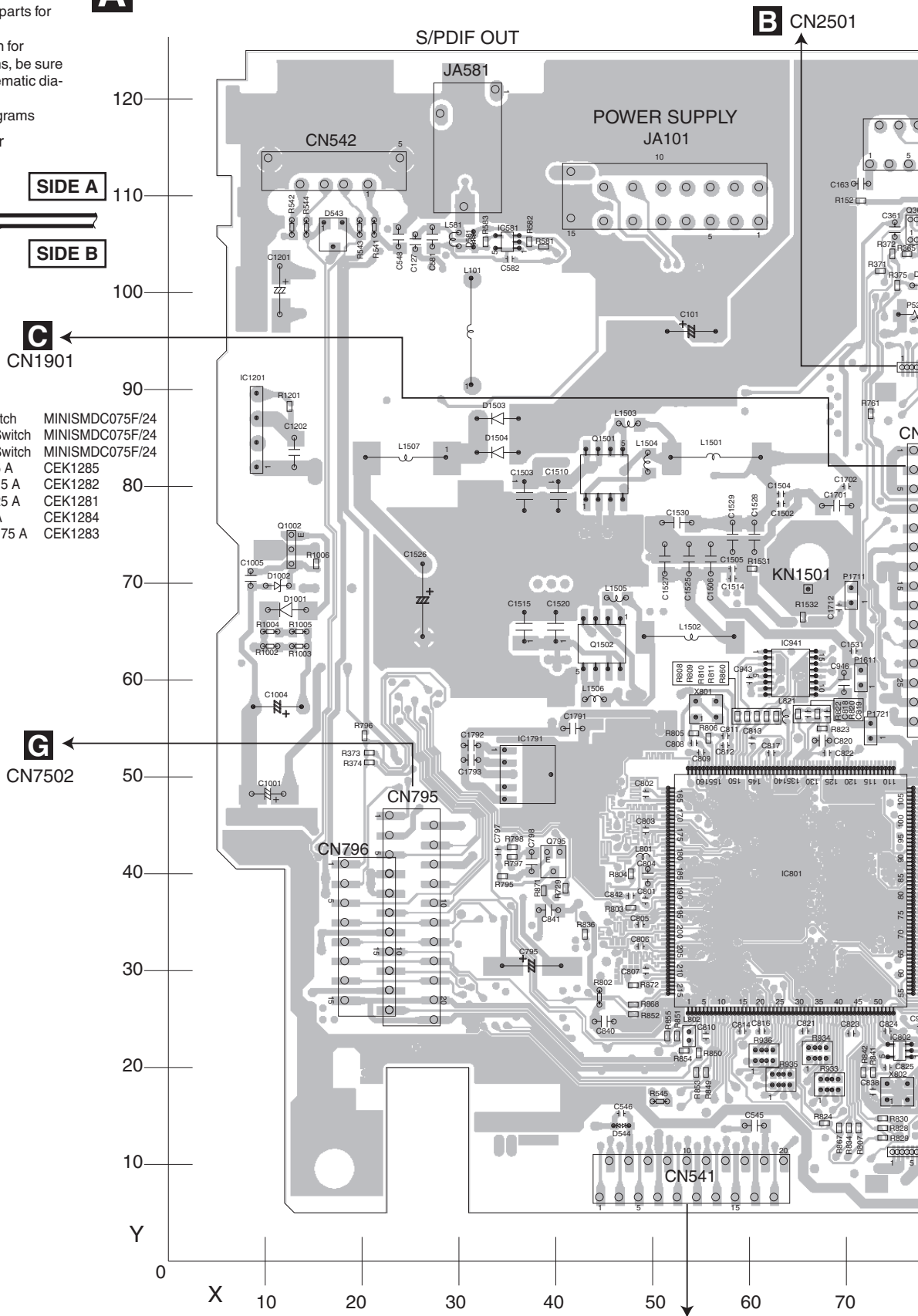
1. The parts mounted on this PCB include all necessary parts for several destination.

For further information for respective destinations, be sure to check with the schematic diagram.

2. Viewpoint of PCB diagrams



△ P 521 (A,78,98)	Poly Switch	MINISMDC075F/24
△ P 561 (A,104,111)	Poly Switch	MINISMDC075F/24
△ P 564 (A,157,104)	Poly Switch	MINISMDC075F/24
△ P 1611 (A,72,60)	Fuse 2.5 A	CEK1285
△ P 1651 (A,155,19)	Fuse 1.5 A	CEK1282
△ P 1711 (A,71,69)	Fuse 1.25 A	CEK1281
△ P 1721 (A,73,55)	Fuse 2 A	CEK1284
△ P 1731 (A,144,11)	Fuse 1.75 A	CEK1283



A

AVH-P3200BT/XNUC

E CN3501

FRONT

A

A MOTHER UNIT

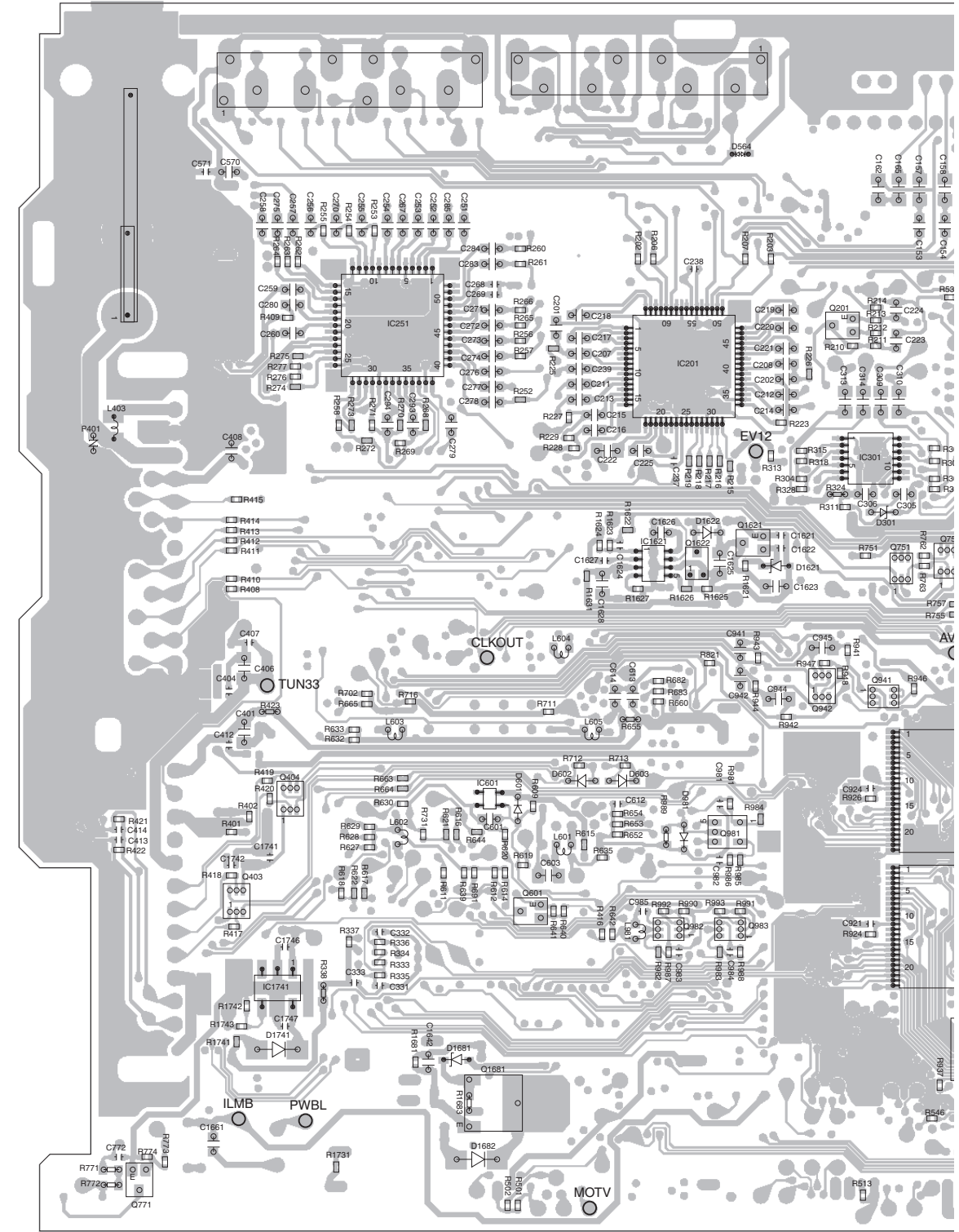
B

C

D

E

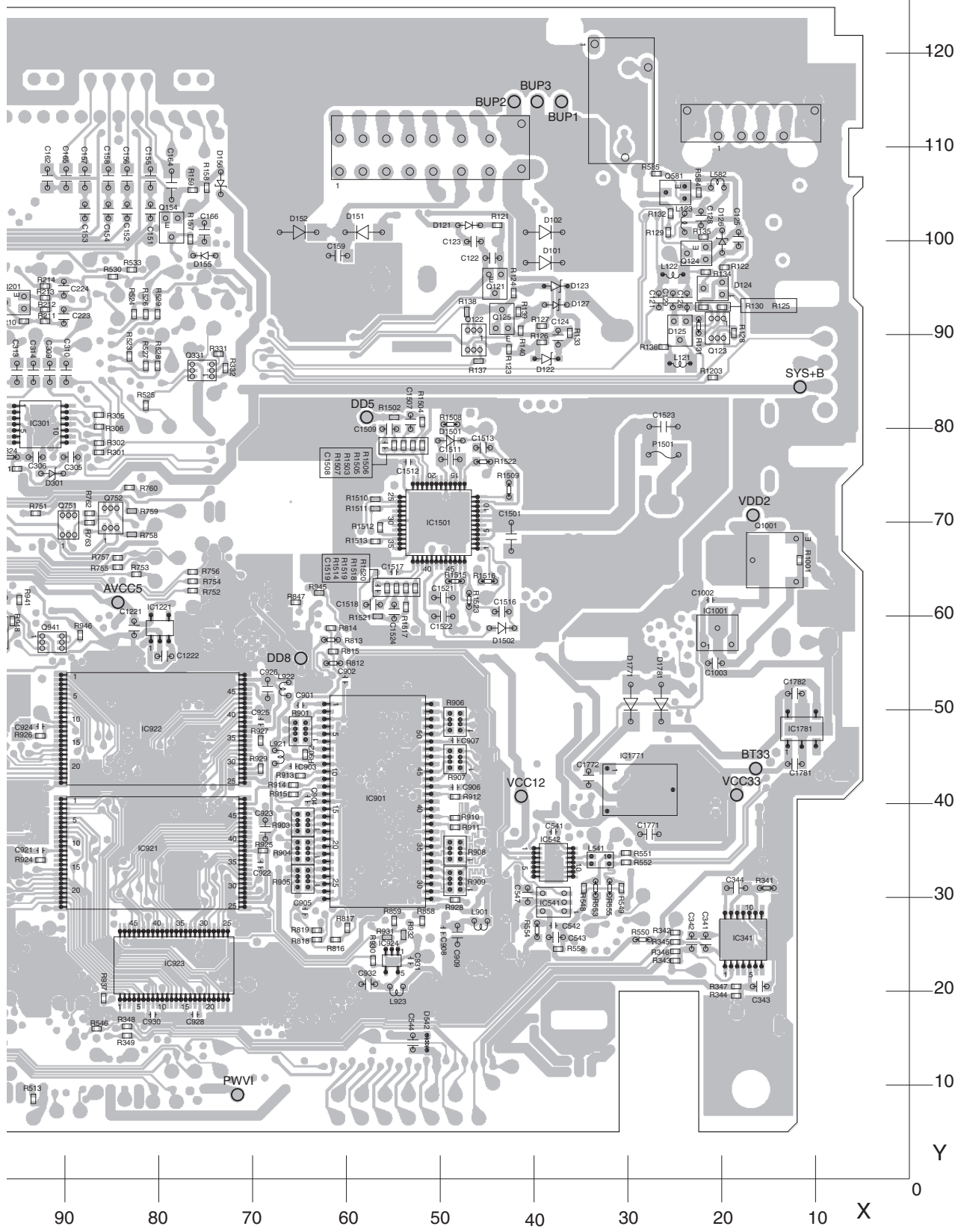
F



170 160 150 140 130 120 110 100 90

SIDE B

△ P 1501 (B,26,77) Fuse 6.3 A CEK1262



120
110
100
90
80
70
60
50
40
30
20
10
Y

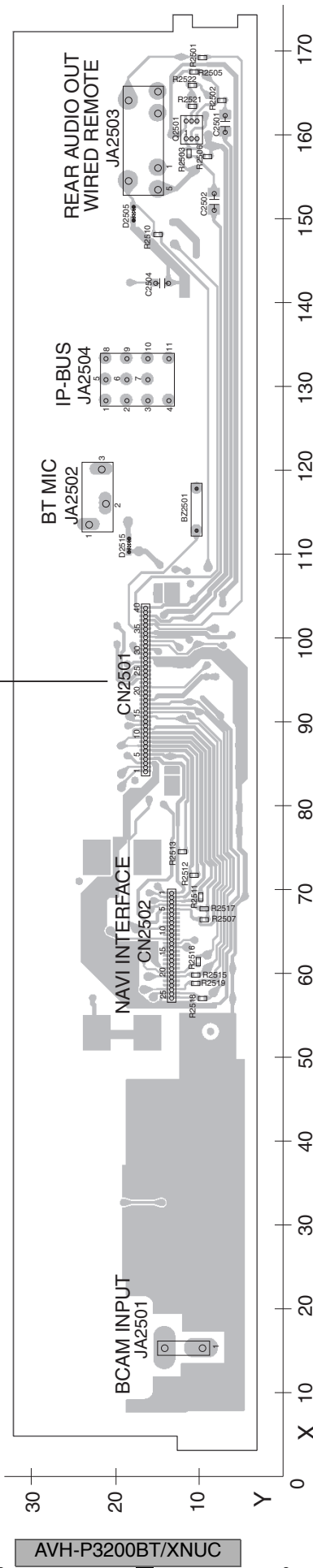
90 80 70 60 50 40 30 20 10 X

A

11.2 INTERFACE PCB

B INTERFACE PCB

SIDE A

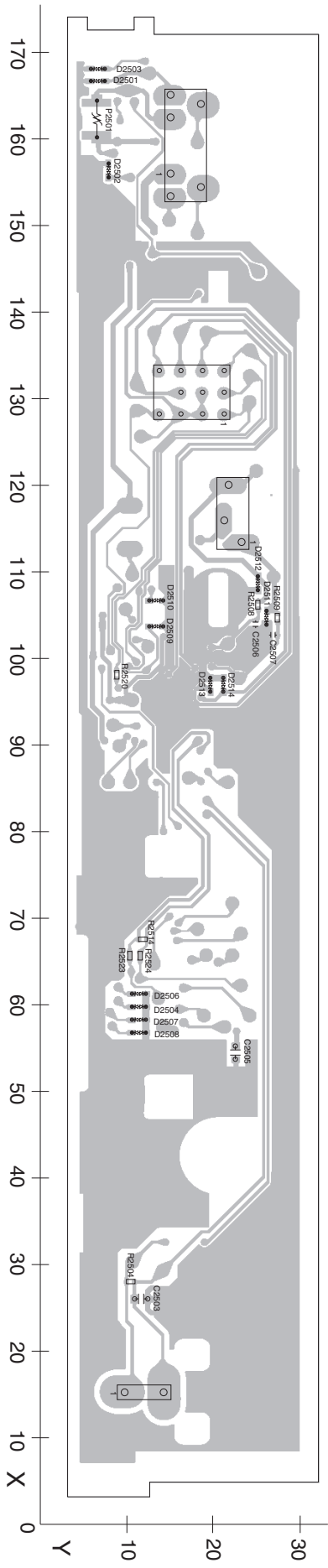


A CN521

B

B INTERFACE PCB

SIDE B



⚠ P 2501 (B,163,7) Poly Switch MINISMDC075F/24

A
B
C
D
E
F

B

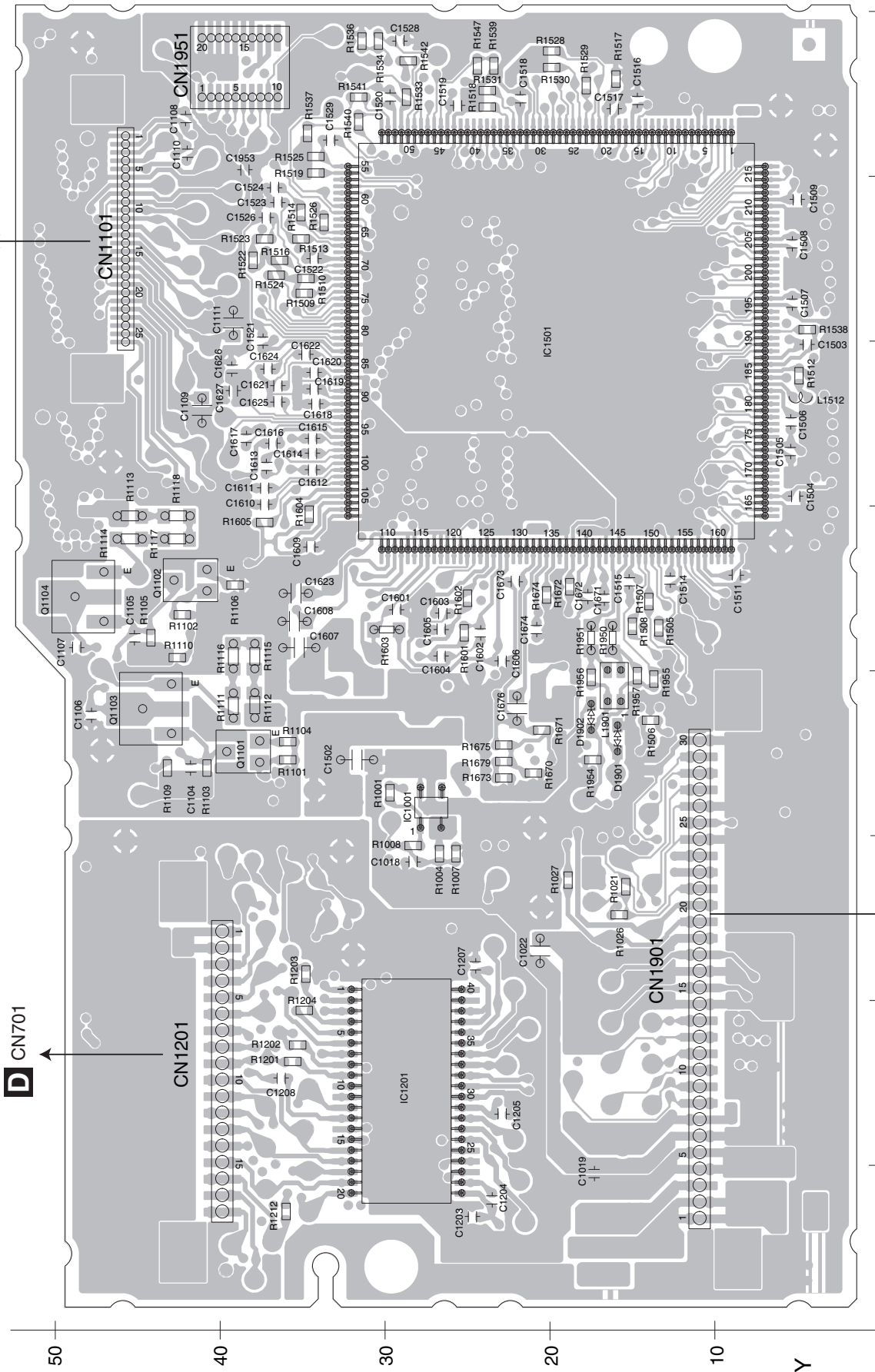
11.3 DVD CORE UNIT

C DVD CORE UNIT

SIDE A

A
B
C
D
E
F

PICKUP UNIT (SERVICE)



D CN701

A CN751

C

11.4 CONNECT PCB

D CONNECT PCB

SIDE A

A

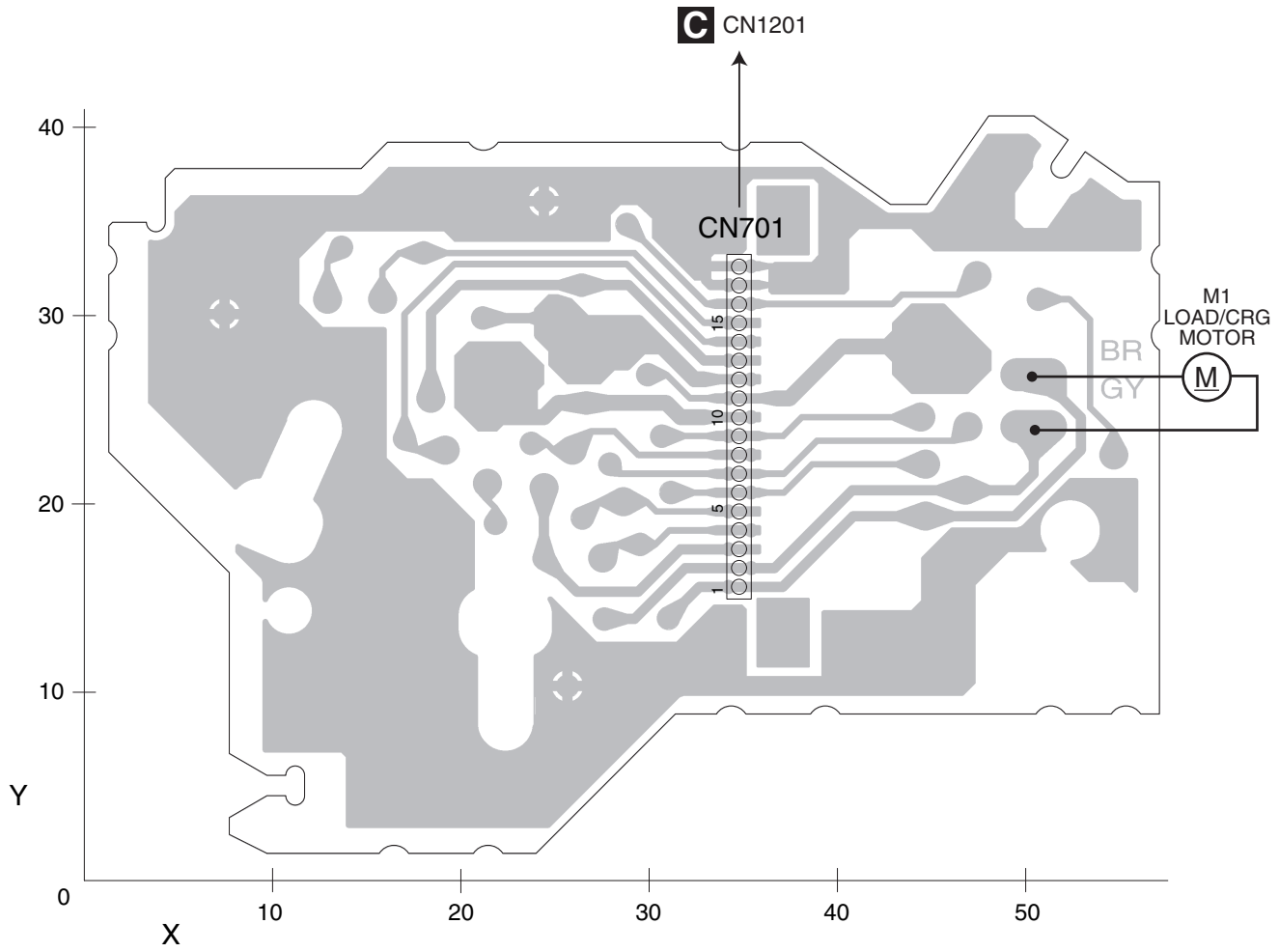
B

C

D

E

F



D

A

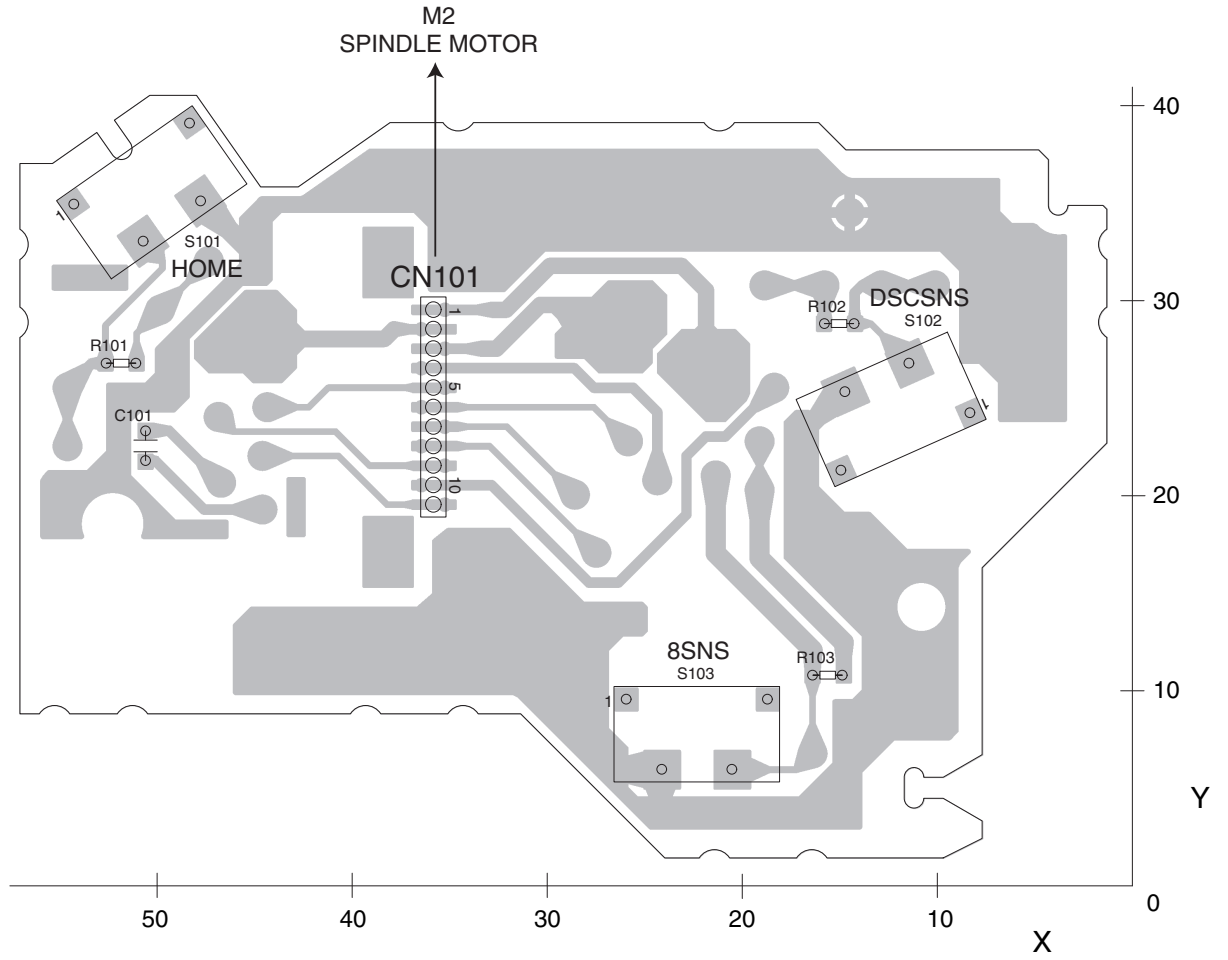
B

C

D

E

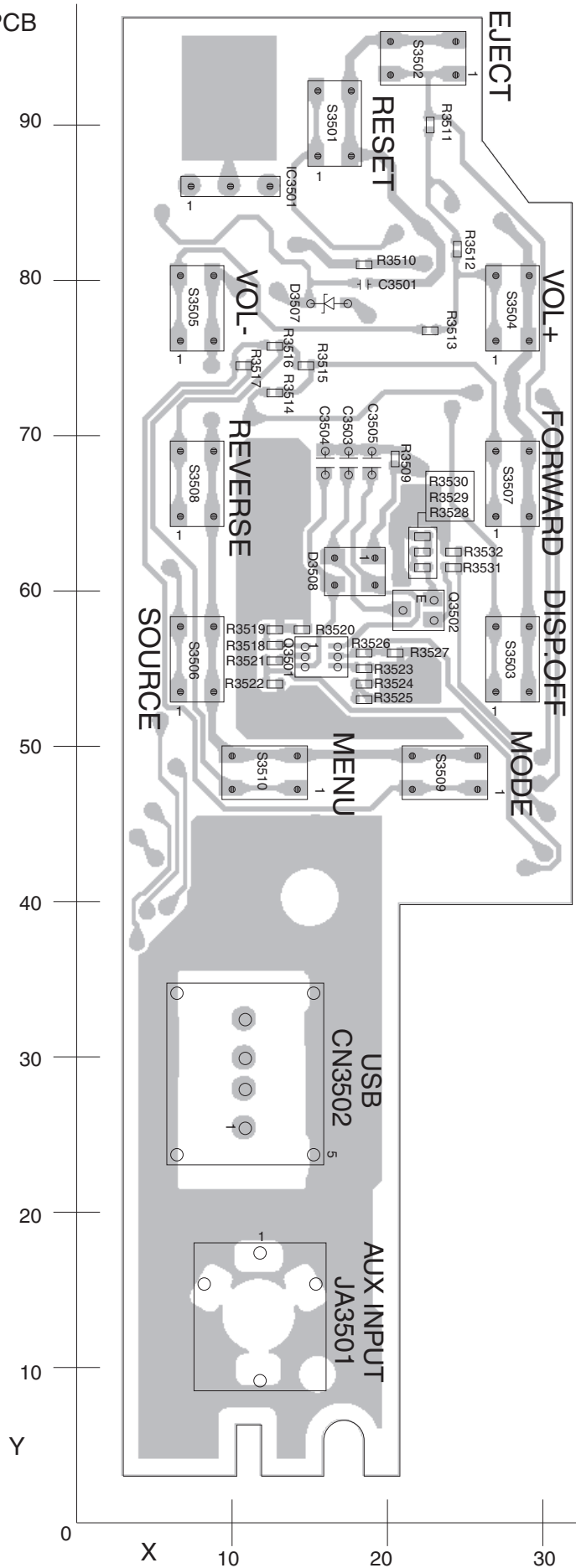
F



11.5 KEYBOARD PCB

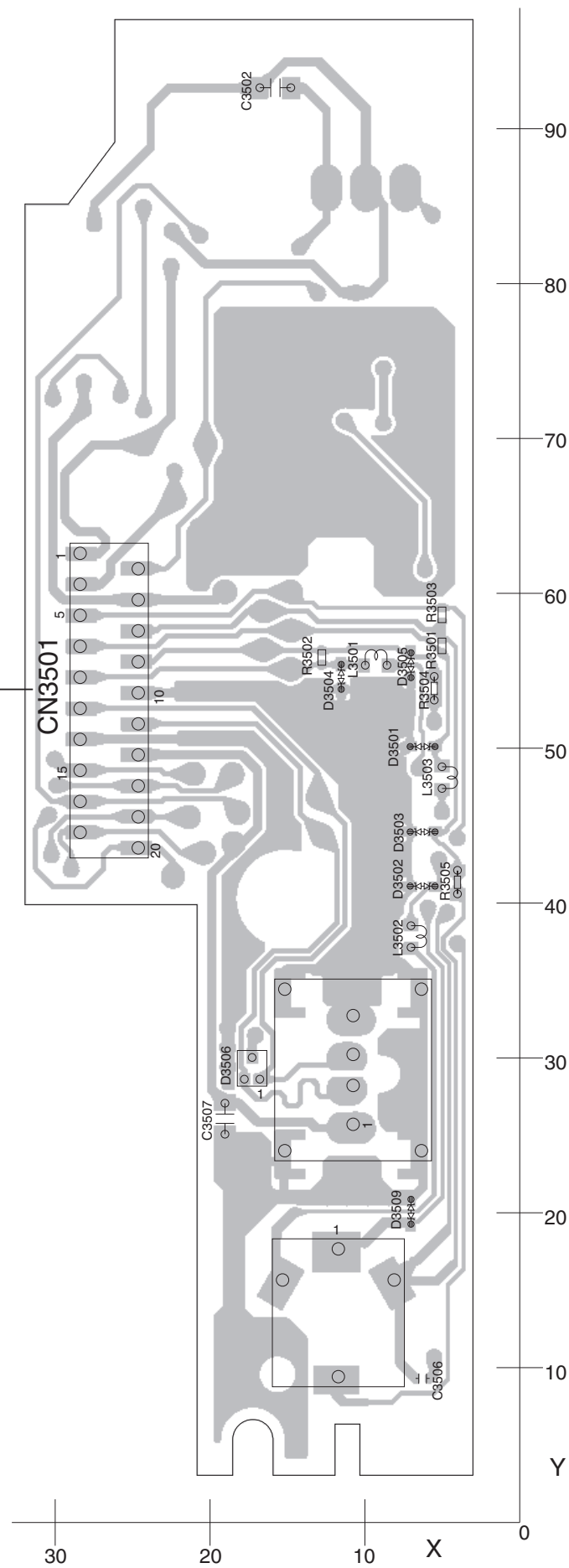
E KEYBOARD PCB

SIDE A



AVH-P3200BT/XNUC

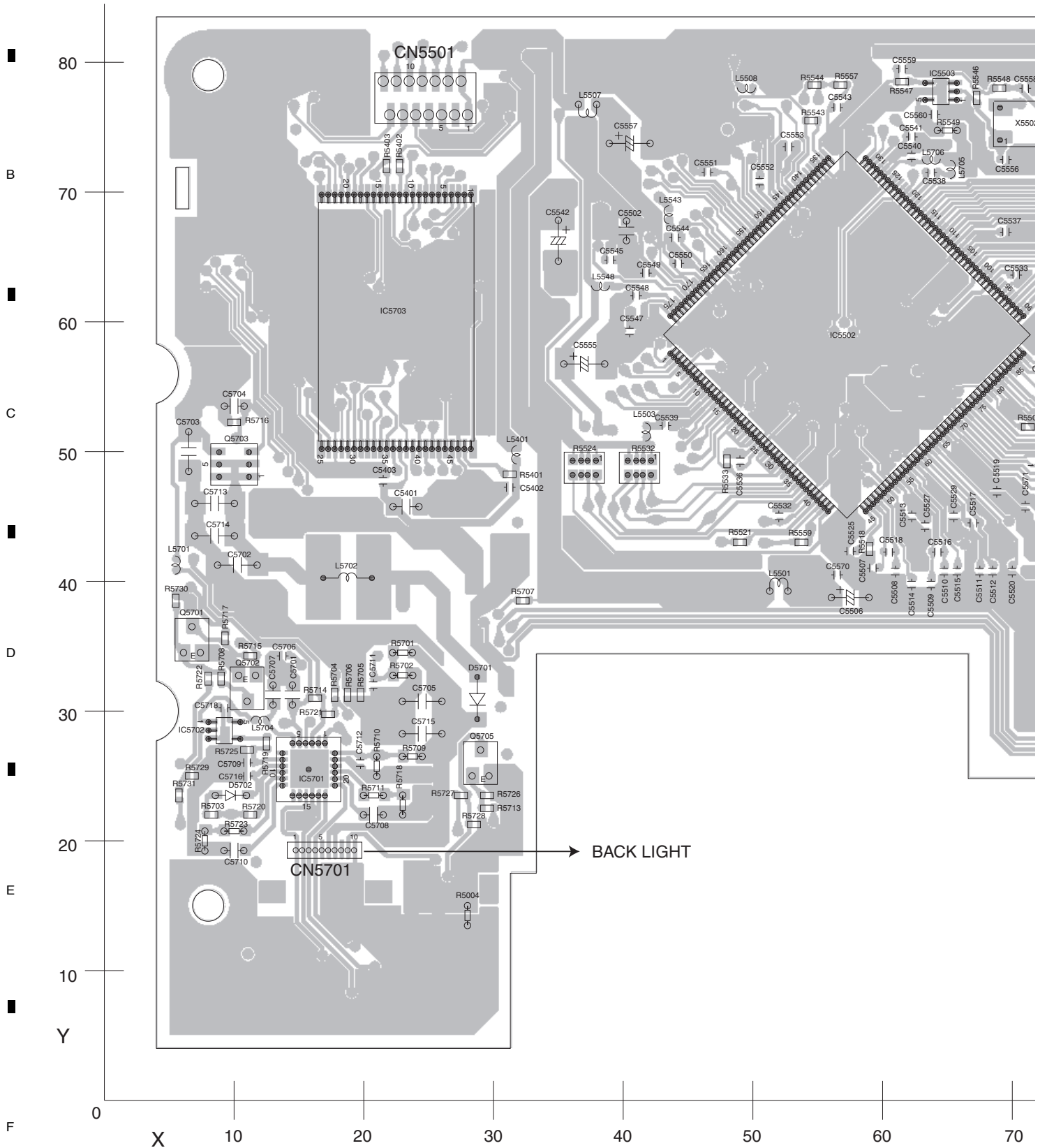
A CN541



11.6 MONITOR PCB

F MONITOR PCB

A

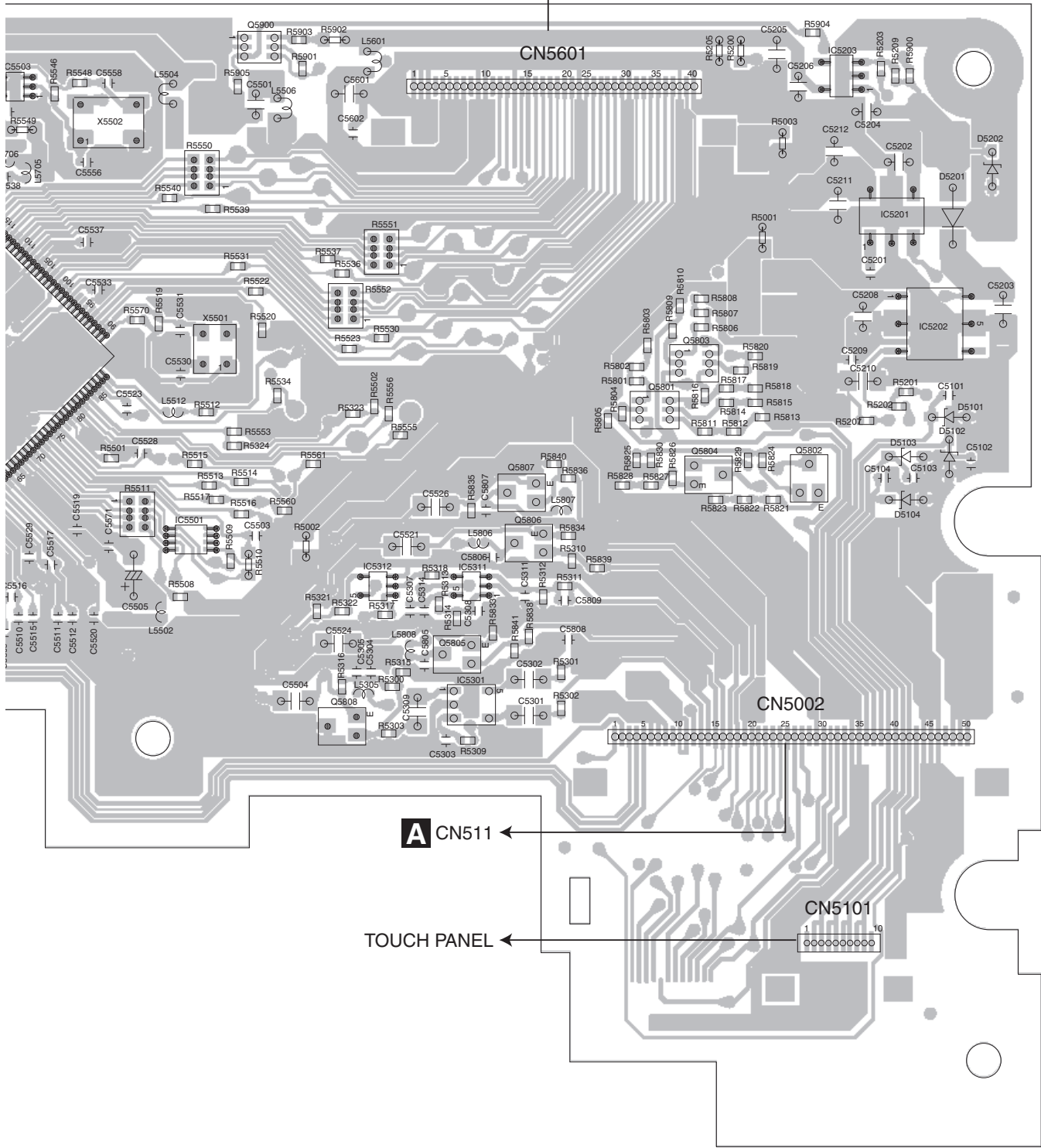


F



SIDE A

LCD MODULE



A CN511

TOUCH PANEL

F

F MONITOR PCB

A

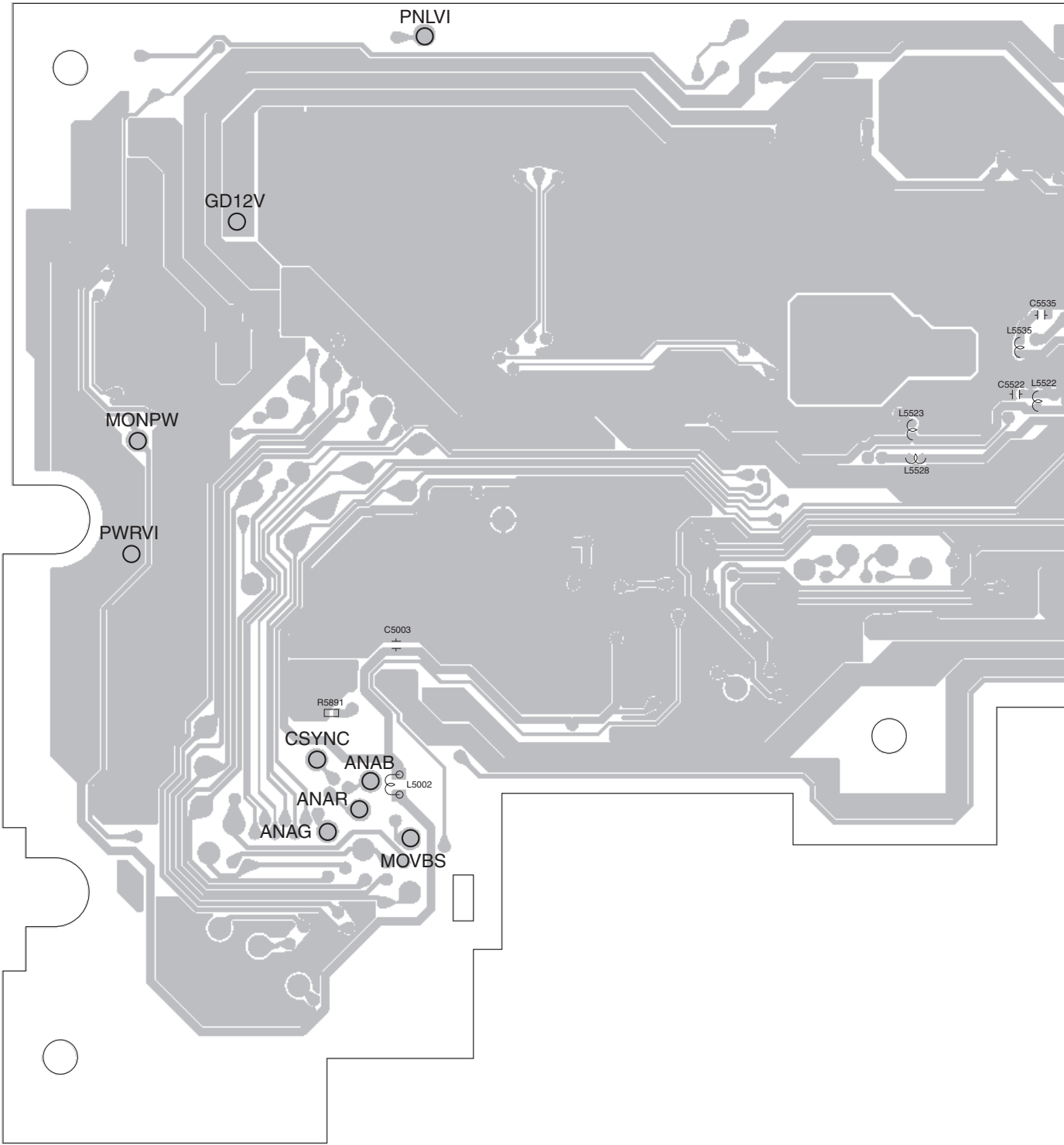
B

C

D

E

F



130

120

110

100

90

80

70

SIDE B

A

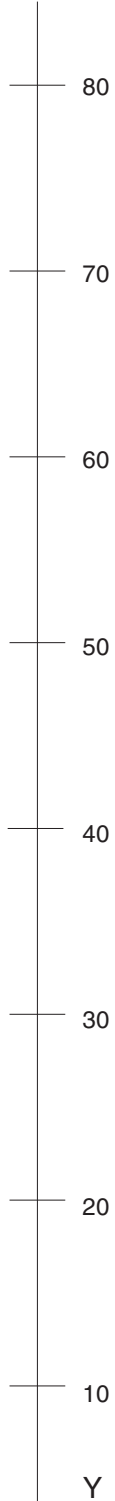
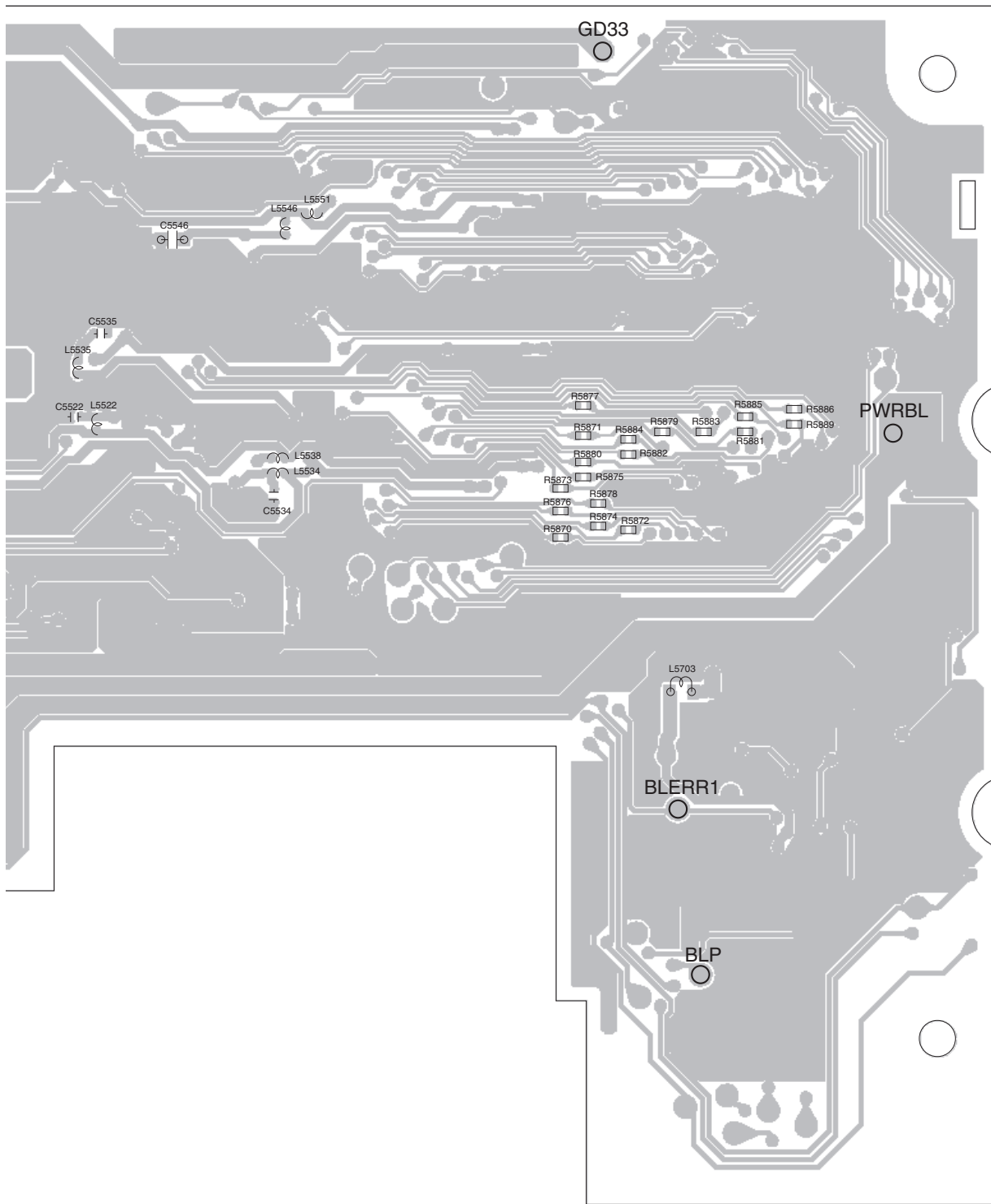
B

C

D

E

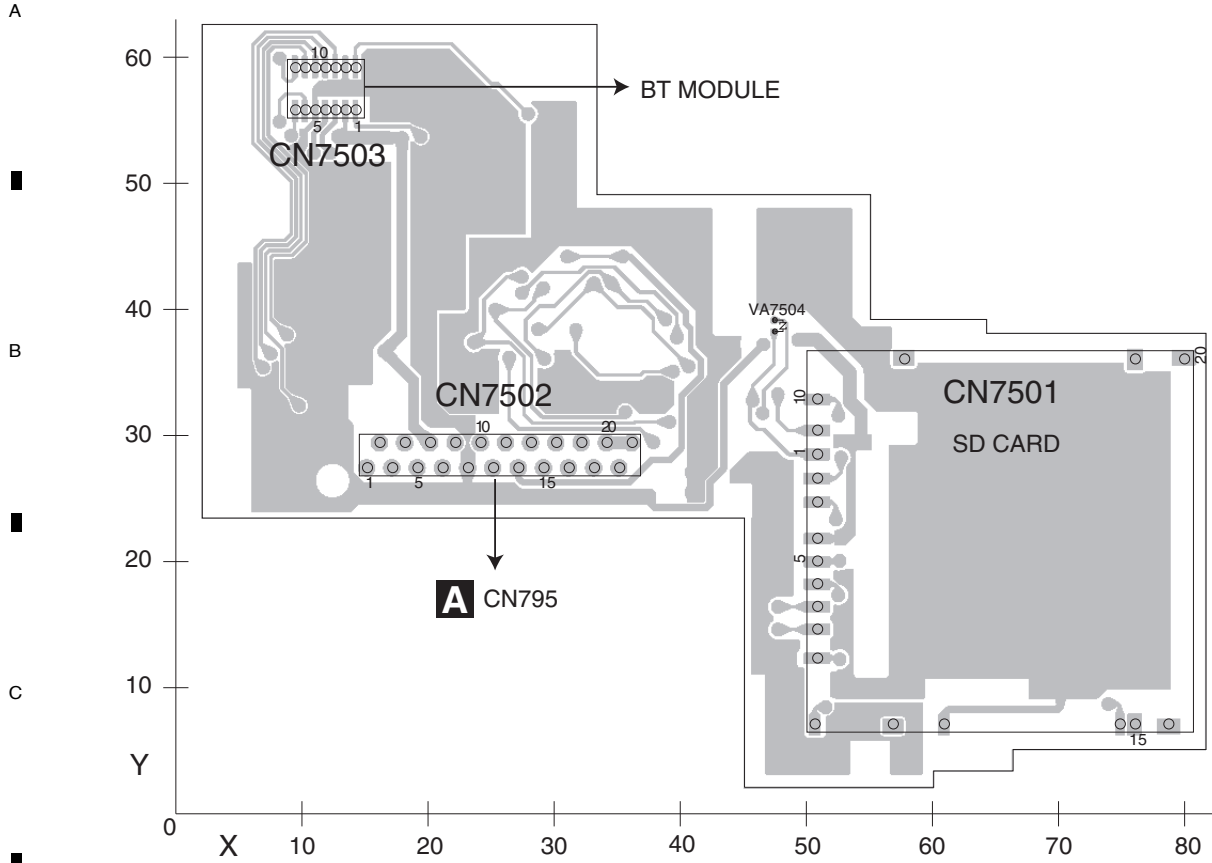
F



11.7 SD PCB

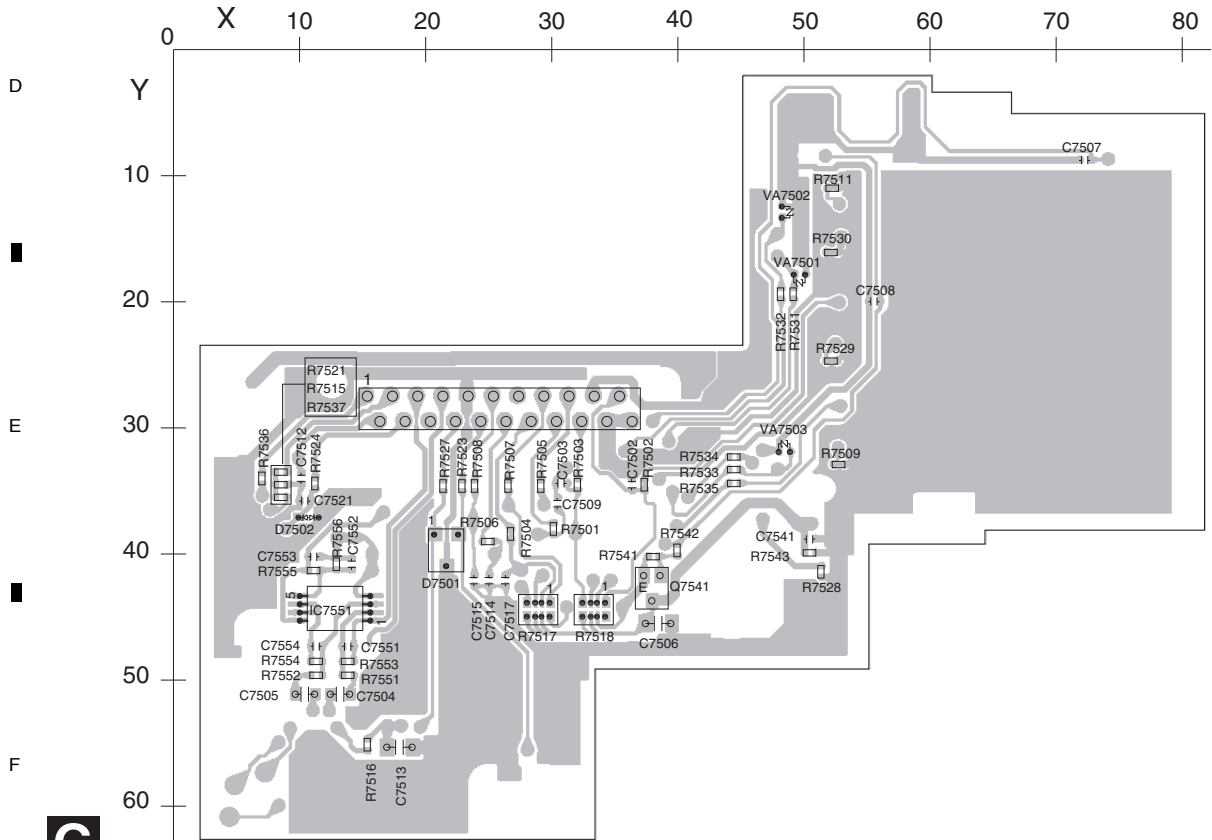
G SD PCB

SIDE A



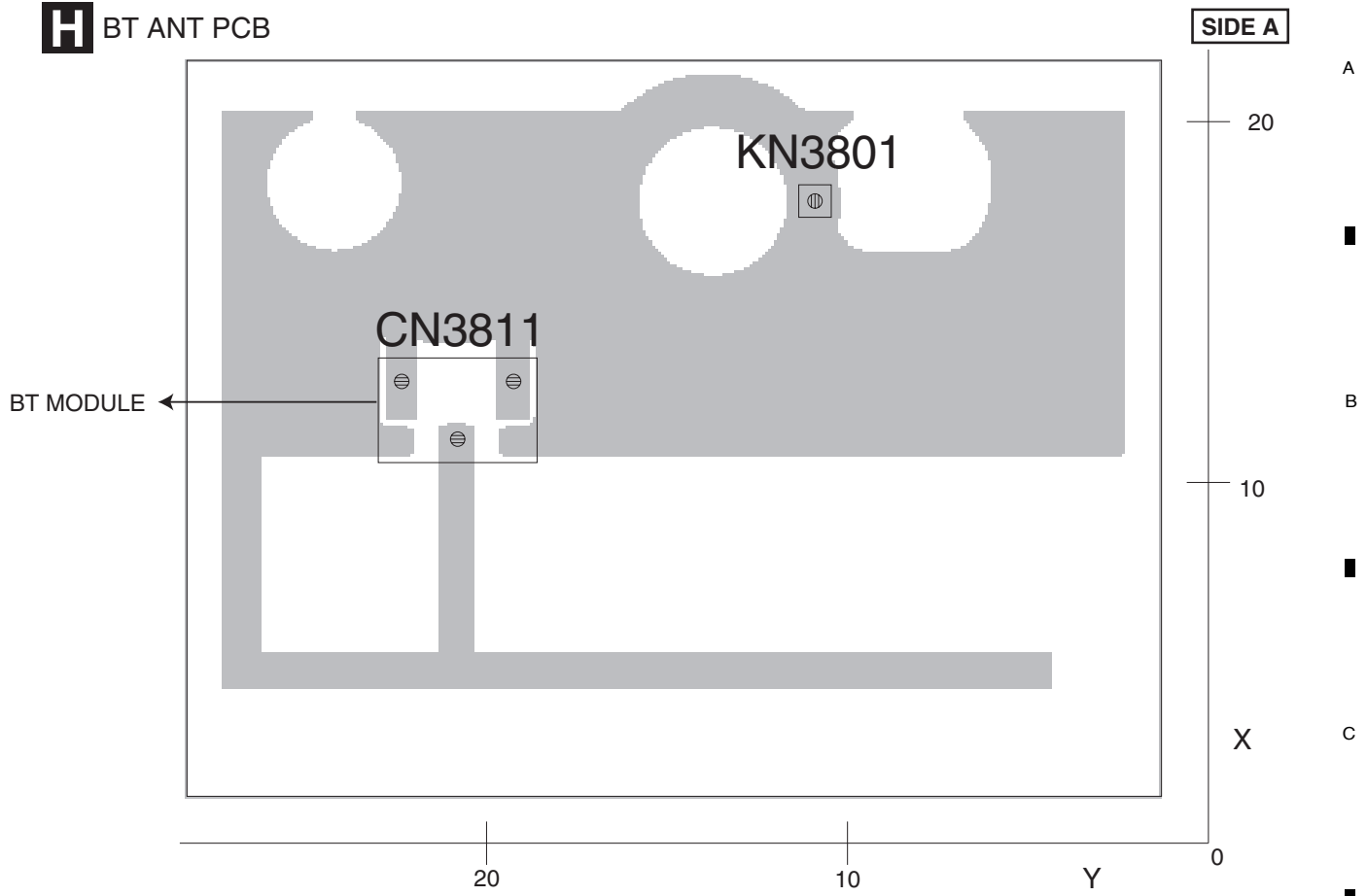
G SD PCB

SIDE B

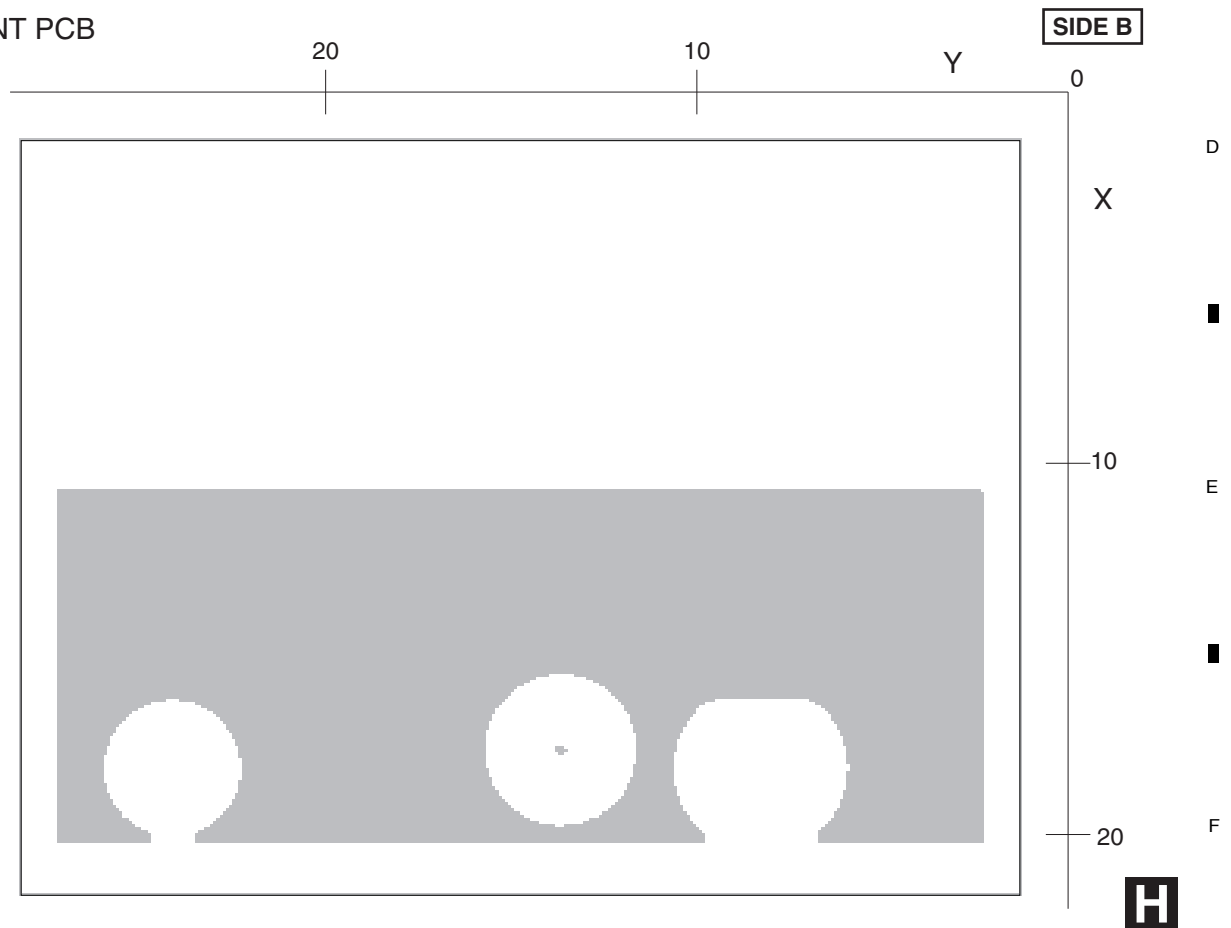


5 6 7 8
11.8 BT ANT PCB

H BT ANT PCB



H BT ANT PCB



12. ELECTRICAL PARTS LIST

NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

Chip Resistor

RS1/○S○○○○J,RS1/○○S○○○○J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

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

Circuit Symbol and No.

Part No.

Circuit Symbol and No.

Part No.

P:AVH-P3200BT/XNUC

Q:AVH-P3250BT/XNRD

J:AVH-P3200DVD/XNUC

K:AVH-P3250DVD/XNRC

L:AVH-P3250DVD/XNRD

M:AVH-P3250DVD/XNRI

Unit Number : (P)

Unit Number : (Q)

Unit Number : (J)

Unit Number : (K)

Unit Number : (L)

Unit Number : (M)

Unit Name : Mother Unit

Unit Number : (P,Q)

Unit Number : (J,K,L,M)

Unit Name : Monitor I/F Unit

Unit Number : YWX5013

Unit Name : DVD Core Unit

Unit Number :

Unit Name : Connect PCB

Q:AVH-P3250BT/XNRD

J:AVH-P3200DVD/XNUC

K:AVH-P3250DVD/XNRC

L:AVH-P3250DVD/XNRD

M:AVH-P3250DVD/XNRI

Unit Number : (P)

Unit Number : (Q)

Unit Number : (J)

Unit Number : (K)

Unit Number : (L)

Unit Number : (M)

Unit Name : Mother Unit

MISCELLANEOUS

IC 151	(A,84,119) IC	PA2030A
IC 201	(B,111,90) IC	PML020A
IC 251	(B,140,94) IC	BH7649KS2
IC 301	(B,93,81) IC	NJM2138V
IC 331	(A,138,32) IC	HA12241FP
IC 341	(B,18,26) IC	BH2227AFV
IC 541	(B,38,30) IC	R5523N001B
IC 542	(B,38,34) IC	TC7MBL6126SFK
IC 581	(A,35,105) IC(Q,K,L,M)	TC7SET08FUS1
IC 601	(B,130,47) IC	S-80827CNNB-B8M
IC 602	(A,130,53) IC(P,J)	PE5725A8
	(A,130,53) IC(Q,K,L,M)	PE5727A8
IC 801	(A,64,38) IC	MN2DS0018MAUB
IC 802	(A,76,22) Logic IC	TC7SZU04FU
IC 901	(B,57,40) SDRAM(64M)	K4S641632N-LC75
IC 921	(B,81,35) Flash ROM Unit	CWW2021
IC 922	(B,81,48) Flash ROM Unit	CWW2020
IC 923	(B,79,23) IC	TC74LCX16373FT
IC 924	(B,55,23) IC	TC7SZ08FU
IC 941	(A,64,61) D/A Converter	PCM1753DBQ
IC 951	(A,92,22) IC	341S2162
IC 1001	(B,21,59) IC	S-812C33AUA-C2N
IC 1201	(A,9,82) IC	NJM2388F84
IC 1221	(B,80,59) IC	S-1200B50-M5
IC 1501	(B,50,70) IC	BD9017KV
IC 1621	(B,114,70) IC	TK11840L
IC 1741	(B,151,29) Regulator IC	S-1132B33-U5
IC 1771	(B,27,42) IC	NJM2855DL1-33
IC 1781	(B,12,48) Regulator IC(P,Q)	S-1132B33-U5
IC 1791	(A,40,50) IC	PQ012GN01Z

A

5		6		7		8	
<u>Circuit Symbol and No.</u>		<u>Part No.</u>		<u>Circuit Symbol and No.</u>		<u>Part No.</u>	
Q 121	(B,44,96) Transistor	LTC114EUB		D 561	(A,121,114) Diode	DZ2S068C	
Q 122	(B,47,90) Transistor	UMX1N		D 562	(A,114,113) Diode	DZ2S068C	
Q 123	(B,21,91) Transistor	UMT1N		D 563	(A,127,114) Diode	DZ2S068C	
Q 124	(B,23,99) Transistor	LTC114EUB					
Q 125	(B,44,92) Transistor	LSC4081UB		D 564	(B,106,110) Diode	DZ2S068C	A
				D 581	(A,32,106) Diode(Q,K,L,M)	DZ2S068C	
Q 153	(A,98,109) Transistor	UMH1N		D 601	(B,127,46) Diode	1SS352	
Q 154	(B,79,102) Transistor	LSC4081UB		D 602	(B,121,49) Diode	RB751V-40	
Q 155	(A,94,109) Transistor	UMD3N		D 603	(B,117,49) Diode	RB501V-40	
Q 161	(A,89,107) Chip Digital Transistor	LTA124EUB					
Q 162	(A,86,109) Chip Digital Transistor	LTA124EUB		D 981	(B,111,44) Diode	1SS352	
				D 1001	(A,12,67) Diode	1SR154-400	
Q 163	(A,90,111) Transistor	2SC4116		D 1002	(A,11,70) Diode	RKZ18KG(B2)	
Q 164	(A,97,100) Transistor	UMD2N		D 1501	(B,49,79) Diode	RB551V-30	
Q 331	(B,76,86) Transistor	UMF23N		D 1502	(B,44,59) Diode	RB551V-30	
Q 361	(A,83,107) Transistor	LSA1576UB					
Q 362	(A,83,101) Transistor	LSA1576UB		D 1503	(A,34,87) Diode	RB050LA-30	B
				D 1504	(A,34,84) Diode	RB050LA-30	
Q 363	(A,77,107) Transistor	UMF23N		D 1621	(B,102,70) Diode	HZU13(B1)	
Q 364	(A,83,104) Transistor	UMF23N		D 1622	(B,109,73) Diode	RB551V-30	
Q 365	(A,88,100) Transistor	LTA114EUB		D 1741	(B,151,23) Diode	1SR154-400	
Q 366	(A,92,100) Transistor	2SD2114K					
Q 403	(B,155,37) Transistor(P,J)	UMH1N		D 1771	(B,30,51) Diode	1SR154-400	
				D 1781	(B,27,51) Diode(P,Q)	1SR154-400	
Q 404	(B,150,47) Transistor(P,J)	UMH1N		L 101	(A,31,96) Choke Coil 600 uH	CTH1221	
Q 561	(A,135,111) Transistor	RT3C99M		L 121	(B,25,87) Chip Coil	BTH1101	
Q 562	(A,144,111) Transistor	RT3C99M		L 122	(B,25,97) Chip Coil	BTH1101	
Q 563	(A,153,111) Transistor	RT3C99M					
Q 581	(B,25,105) Transistor(Q,K,L,M)	LSA1576UB		L 123	(B,24,102) Inductor	CTF1295	
				L 401	(A,151,57) Chip Coil	BTH1100	C
Q 601	(B,126,36) Transistor	LSC4081UB		L 402	(A,145,78) Chip Coil	BTH1100	
Q 751	(B,90,70) Transistor	UMD3N		L 403	(B,167,84) Chip Coil	BTH1104	
Q 752	(B,85,71) Transistor	RT3C99M		L 541	(B,33,34) Inductor	CTF1713	
Q 941	(B,92,57) Transistor	UMD3N					
Q 942	(B,98,58) Transistor	RT3C99M		L 581	(A,30,106) Inductor(Q,K,L,M)	CTF1389	
				L 582	(B,21,106) Inductor(Q,K,L,M)	CTF1379	
Q 951	(A,97,26) Transistor	UMD22N		L 601	(B,123,43) Inductor	CTF1346	
Q 981	(B,107,44) Transistor	FMG12		L 602	(B,139,44) Inductor	CTF1346	
Q 982	(B,113,35) Transistor	UMF5N		L 603	(B,139,54) Inductor	CTF1346	
Q 983	(B,107,35) Transistor	UMF5N					
Q 1001	(B,17,66) Transistor	2SB1184F5		L 604	(B,123,62) Inductor	CTF1346	
				L 605	(B,120,54) Inductor	CTF1346	
Q 1002	(A,11,74) Transistor	2SD1664		L 801	(A,49,42) Inductor	CTF1743	D
Q 1501	(A,45,81) FET	HAT2210RJ		L 802	(A,54,23) Inductor	CTF1778	
Q 1502	(A,45,64) FET	HAT2210RJ		L 921	(B,68,45) Inductor	CTF1473	
Q 1621	(B,104,72) Transistor	LSC4081UB					
Q 1622	(B,110,70) FET	RSF014N03		L 922	(B,66,52) Inductor	CTF1473	
				L 923	(B,55,21) Inductor	CTF1473	
Q 1623	(A,120,72) Transistor	LTC143EUB		L 981	(B,116,34) Inductor	CTF1473	
D 101	(B,39,98) Diode	1SR154-400		L 1501	(A,57,83) Choke Coil 6.8 uH	CTH1434	
D 102	(B,39,101) Diode	1SR154-400		L 1502	(A,54,65) Inductor	CTH1253	
D 121	(B,47,102) Diode	1SS352					
D 122	(B,39,88) Diode	HZU7L(A1)		L 1503	(A,48,87) Inductor	CTF1661	
				L 1504	(A,50,83) Inductor	CTF1661	
D 123	(B,38,95) Diode	HZU7L(C3)		L 1505	(A,46,69) Inductor	CTF1661	
D 124	(B,21,95) Diode	DAN202U		L 1506	(A,44,58) Inductor	CTF1661	E
D 125	(B,25,91) Diode	DAN202U		L 1507	(A,25,83) Choke Coil 10 uH	CTH1446	
D 126	(B,20,100) Diode	RKZ5.6KG(B2)					
D 127	(B,38,93) Diode	RKZ20KG(B2)		L 1621	(A,114,71) Inductor	ATH7061	
				L 1661	(A,162,13) Inductor	CTH1262	
D 151	(B,58,101) Diode	1SR154-400		L 1712	(A,84,62) Inductor	CTF1629	
D 152	(B,65,101) Diode	1SR154-400		X 601	(A,126,33) Oscillator 3.932 16 MHz	CSS1790	
D 153	(A,101,105) Diode	DAN202U		X 801	(A,56,57) Oscillator 25.000 MHz	CSS1791	
D 154	(A,80,110) Diode	1SS352					
D 155	(B,75,99) Diode	1SS352		X 802	(A,75,18) Oscillator	CSS1793	
				P 401	(B,169,82) Surge Protector	IMSA-6802-01Y900	
D 156	(B,74,106) Diode	RKZ8.2KG(B2)		△P521	(A,78,98) Poly Switch	MINISMDC075F/24	
D 161	(A,98,95) Diode	DAN202U		△P561	(A,104,111) Poly Switch	MINISMDC075F/24	F
D 301	(B,92,75) Diode	RKZ2.4KG(B)		△P564	(A,157,104) Poly Switch	MINISMDC075F/24	
D 361	(A,78,101) Diode	RKZ3.9KG(B2)		△P1501	(B,26,77) Fuse 6.3 A	CEK1262	
D 542	(B,52,15) Diode	DZ2S068C		△P1611	(A,72,60) Fuse 2.5 A	CEK1285	

1

2

3

4

Circuit Symbol and No.**Part No.****Circuit Symbol and No.****Part No.**

△P1651 (A,155,19) Fuse 1.5 A
 △P1711 (A,71,69) Fuse 1.25 A
 △P1721 (A,73,55) Fuse 2 A

CEK1282
 CEK1281
 CEK1284

R 253 (B,141,103)
 R 254 (B,144,103)
 R 255 (B,146,103)
 R 256 (B,127,92)

RS1/16SS471J
 RS1/16SS471J
 RS1/16SS471J
 RS1/16SS471J

A △P1731 (A,144,11) Fuse 1.75 A
 CN511 (A,87,8) Connector
 CN521 (A,86,90) Connector
 CN541 (A,54,9) Connector
 CN751 (A,79,69) Connector

CEK1283
 DKN1385
 CKS6051
 CKS3861
 CKS3871

R 257 (B,127,91)
 R 259 (A,129,95)
 R 260 (B,127,101)
 R 261 (B,127,100)
 R 262 (B,149,100)

RS1/16SS471J
 RS1/16SS75R0F
 RS1/16SS471J
 RS1/16SS471J
 RS1/16SS471J

CN795 (A,25,36) Connector
 JA101 (A,51,116) Plug
 JA402 (A,165,109) Antenna Jack
 JA561 (A,115,120) Pin Jack
 JA562 (A,144,118) Pin Jack

CKS6184
 CKM1376
 CKX1070
 CKB1085
 XKB7001

R 263 (B,150,100)
 R 264 (B,151,100)
 R 265 (B,127,94)
 R 266 (B,127,95)
 R 301 (B,87,78)

RS1/16SS471J
 RS1/16SS471J
 RS1/16SS471J
 RS1/16SS471J
 RS1/16SS472J

B JA581 (A,31,116) Jack(Q,K,L,M)
 FM/AM Tuner Unit(P,J)
 FM/AM Tuner Unit(Q,K,L,M)

CKN1042
 CWE2097
 CWE2098

R 302 (B,87,79)
 R 303 (A,98,75)
 R 304 (B,100,79)
 R 305 (B,87,82)
 R 306 (B,87,80)

RS1/16SS273J
 RS1/16SS472J
 RS1/16SS472J
 RS1/16SS472J
 RS1/16SS472J

RESISTORS

R 121 (B,44,102)
 R 122 (B,20,97)
 R 123 (B,43,89)
 R 124 (B,42,95)
 R 125 (B,20,93)

RS1/16SS103J
 RS1/16SS473J
 RS1/16SS103J
 RS1/16SS104J
 RS1/16SS473J

R 307 (A,90,75)
 R 308 (A,90,80)
 R 309 (A,90,81)
 R 310 (A,93,81)
 R 311 (B,95,76)

RS1/16SS273J
 RS1/16SS472J
 RS1/16SS472J
 RS1/16SS472J
 RS1/16SS561J

C R 126 (B,39,89)
 R 127 (B,39,91)
 R 128 (B,19,90)
 R 130 (B,22,93)
 R 131 (B,23,91)

RS1/16SS473J
 RS1/16SS473J
 RS1/16SS473J
 RS1/16SS473J
 RS1/10SR472J

R 312 (A,82,86)
 R 314 (A,100,78)
 R 315 (B,100,81)
 R 316 (A,96,81)
 R 317 (A,96,80)

RS1/16SS0R0J
 RS1/16SS472J
 RS1/16SS472J
 RS1/16SS472J
 RS1/16SS472J

R 132 (B,26,103)
 R 133 (B,36,90)
 R 134 (B,22,97)
 R 135 (B,22,101)
 R 136 (B,26,89)

RS1/16SS104J
 RS1/16SS472J
 RS1/16SS103J
 RS1/16SS103J
 RS1/16SS153J

R 318 (B,100,80)
 R 319 (A,90,78)
 R 321 (A,95,87)
 R 322 (A,94,87)
 R 323 (A,92,87)

RS1/16SS472J
 RS1/16SS101J
 RS1/16SS221J
 RS1/16SS221J
 RS1/16SS221J

D R 139 (B,42,93)
 R 140 (B,42,91)
 R 152 (A,72,110)
 R 153 (A,96,109)
 R 154 (A,100,110)

RS1/16SS103J
 RS1/16SS103J
 RS1/16SS102J
 RS1/16SS683J
 RS1/16SS152J

R 325 (A,96,78)
 R 326 (A,96,75)
 R 327 (A,93,75)
 R 328 (B,100,78)
 R 331 (B,74,88)

RS1/16SS101J
 RS1/16SS101J
 RS1/16SS101J
 RS1/16SS472J
 RS1/16SS562J

R 155 (A,96,107)
 R 156 (A,100,112)
 R 157 (B,77,100)
 R 158 (B,75,106)
 R 159 (B,77,106)

RS1/16SS683J
 RS1/16SS101J
 RS1/16SS103J
 RS1/16SS104J
 RS1/16SS473J

R 332 (B,73,87)
 R 333 (B,141,31)
 R 334 (B,141,32)
 R 335 (B,141,30)
 R 336 (B,141,33)

RS1/16SS332J
 RS1/16SS150J
 RS1/16SS470J
 RS1/16SS101J
 RS1/16SS101J

E R 160 (A,96,106)
 R 161 (A,95,111)
 R 162 (A,92,107)
 R 163 (A,92,111)
 R 202 (B,116,100)

RS1/16SS103J
 RS1/16SS473J
 RS1/16SS472J
 RS1/16SS473J
 RS1/16SS182J

R 337 (B,144,33)
 R 345 (B,25,25)
 R 346 (B,25,24)
 R 347 (B,19,21)
 R 348 (B,84,16)

RS1/16SS102J
 RS1/16SS0R0J
 RS1/16SS0R0J
 RS1/16SS0R0J
 RS1/16SS0R0J

R 203 (B,103,100)
 R 204 (A,117,103)
 R 205 (A,103,104)
 R 206 (B,114,100)
 R 207 (B,105,100)

RS1/16SS182J
 RS1/16SS272J
 RS1/16SS272J
 RS1/16SS182J
 RS1/16SS182J

R 349 (B,84,15)
 R 361 (A,81,107)
 R 362 (A,83,99)
 R 363 (A,80,107)
 R 364 (A,80,105)

RS1/16SS0R0J
 RS1/16SS104J
 RS1/16SS104J
 RS1/16SS473J
 RS1/16SS473J

R 208 (A,116,103)
 R 209 (A,105,104)
 R 223 (B,102,84)
 F R 227 (B,122,85)
 R 228 (B,122,82)

RS1/16SS272J
 RS1/16SS272J
 RS1/16SS473J
 RS1/16SS272J
 RS1/16SS272J

R 365 (A,76,104)
 R 366 (A,86,102)
 R 367 (A,78,104)
 R 368 (A,86,104)
 R 369 (A,88,98)

RS1/16SS104J
 RS1/16SS104J
 RS1/16SS473J
 RS1/16SS473J
 RS1/16SS103J

R 229 (B,122,83)

RS1/16SS562J

R 370 (A,87,102)

RS1/16SS472J

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<u>Circuit Symbol and No.</u>		<u>Part No.</u>		<u>Circuit Symbol and No.</u>		<u>Part No.</u>	
R 371	(A,74,102)	RS1/16SS102J		R 584	(B,23,105) (Q,K,L,M)	RS1/16SS104J	
R 372	(A,75,104)	RS1/16SS152J		R 585	(B,27,107) (Q,K,L,M)	RS1/16SS103J	
R 373	(A,21,53)	RS1/16SS333J		R 586	(A,125,110)	RS1/16SS223J	
R 374	(A,21,52)	RS1/16SS104J		R 602	(A,132,70)	RS1/16SS0R0J	A
R 375	(A,75,101)	RS1/16SS122J		R 609	(B,126,47)	RS1/16SS104J	
R 376	(A,94,98)	RS1/16SS0R0J		R 611	(B,135,40)	RS1/16SS102J	
R 401	(B,155,44)	RS1/16SS0R0J		R 612	(B,130,40)	RS1/16SS104J	
R 408	(B,155,68)	RS1/16SS102J		R 614	(B,129,40)	RS1/16SS104J	
R 409	(B,150,94)	RS1/16SS683J		R 618	(B,145,38)	RS1/16SS473J	
R 411	(B,155,72)	RS1/16SS681J		R 619	(B,127,41)	RS1/16SS102J	
R 412	(B,155,73)	RS1/16SS681J		R 620	(B,129,44)	RS1/16SS473J	
R 413	(B,155,74)	RS1/16SS681J		R 623	(A,113,18)	RS1/16SS472J	
R 414	(B,155,75)	RS1/16SS681J		R 624	(A,114,18)	RS1/16SS472J	
R 415	(B,155,77)	RS1/16SS681J		R 625	(A,115,39)	RS1/16SS471J	
R 416	(B,119,34)	RS1/16SS152J		R 626	(A,114,39)	RS1/16SS471J	B
R 417	(B,155,35) (P,J)	RS1/16SS681J		R 627	(B,142,43)	RS1/16SS473J	
R 418	(B,155,40) (P,J)	RS1/16SS681J		R 628	(B,142,44)	RS1/16SS473J	
R 419	(B,152,49) (P,J)	RS1/16SS681J		R 629	(B,142,45)	RS1/16SS473J	
R 420	(B,152,47) (P,J)	RS1/16SS681J		R 630	(B,139,47)	RS1/16SS473J	
R 421	(B,166,45) (P,J)	RS1/16SS104J		R 631	(A,122,70)	RS1/16SS223J	
R 422	(B,166,42) (P,J)	RS1/16SS104J		R 632	(B,143,53)	RS1/16SS182J	
R 521	(A,86,83)	RS1/16SS471J		R 633	(B,143,54)	RS1/16SS182J	
R 522	(A,85,83)	RS1/16SS471J		R 635	(B,119,42)	RS1/16SS104J	
R 523	(B,83,88)	RS1/16SS181J		R 636	(A,113,66)	RS1/16SS104J	
R 524	(B,83,92)	RS1/16SS181J		R 637	(A,135,70)	RS1/16SS473J	C
R 525	(B,82,83)	RS1/16SS222J		R 638	(A,136,70)	RS1/16SS473J	
R 526	(B,82,92)	RS1/16SS223J		R 639	(B,133,40)	RS1/16SS104J	
R 527	(B,82,87)	RS1/16SS223J		R 640	(B,123,36)	RS1/16SS473J	
R 528	(B,80,87)	RS1/16SS102J		R 641	(B,124,36)	RS1/16SS473J	
R 529	(B,80,92)	RS1/16SS102J		R 642	(B,118,34)	RS1/16SS473J	
R 531	(A,83,86) (P,Q)	RS1/16SS0R0J		R 643	(A,127,37)	RS1/16SS100J	
R 532	(A,84,86) (P,Q)	RS1/16SS0R0J		R 645	(A,138,36)	RS1/16SS472J	
R 546	(B,87,16)	RS1/16SS0R0J		R 646	(A,139,36)	RS1/16SS472J	
R 547	(A,83,16)	RS1/16SS0R0J		R 647	(A,140,36)	RS1/16SS472J	
R 553	(B,34,31)	RS1/10SR0R0J		R 648	(A,111,36) (J,K,L,M)	RS1/16SS473J	
R 554	(B,40,27)	RS1/10SR0R0J		R 649	(A,111,38) (Q,K,L)	RS1/16SS473J	D
R 555	(B,32,31)	RS1/10SR0R0J		R 650	(A,111,40) (Q,L,M)	RS1/16SS473J	
R 558	(B,38,25)	RS1/16SS472J		R 660	(B,114,57)	RS1/16SS473J	
R 561	(A,131,109)	RS1/16SS390J		R 665	(B,142,57)	RS1/16SS473J	
R 562	(A,147,109)	RS1/16SS390J		R 667	(A,137,70) (P,J)	RS1/16SS223J	
R 563	(A,140,109)	RS1/16SS390J		R 671	(A,128,70)	RS1/16SS104J	
R 564	(A,157,109)	RS1/16SS390J		R 675	(A,113,47)	RS1/16SS101J	
R 565	(A,138,109)	RS1/16SS390J		R 679	(A,146,55)	RS1/16SS221J	
R 566	(A,150,109)	RS1/16SS390J		R 680	(A,147,55)	RS1/16SS221J	
R 567	(A,134,113)	RS1/16SS223J		R 681	(A,122,38)	RS1/16SS101J	
R 568	(A,145,112)	RS1/16SS223J		R 701	(A,145,62)	RS1/16SS751J	
R 569	(A,143,112)	RS1/16SS223J		R 702	(B,142,58)	RS1/16SS473J	E
R 570	(A,154,113)	RS1/16SS223J		R 703	(A,146,65)	RS1/16SS471J	
R 571	(A,136,113)	RS1/16SS223J		R 704	(A,141,70)	RS1/16SS471J	
R 572	(A,152,113)	RS1/16SS223J		R 705	(A,124,70) (P,J)	RS1/16SS223J	
R 573	(A,120,112)	RS1/16SS750J		R 706	(A,123,70) (P,J)	RS1/16SS223J	
R 574	(A,126,111)	RS1/16SS223J		R 707	(A,125,70) (P,J)	RS1/16SS223J	
R 575	(A,145,109)	RS1/16SS472J		R 708	(A,139,70)	RS1/16SS471J	
R 576	(A,143,109)	RS1/16SS472J		R 709	(A,121,70)	RS1/16SS223J	
R 577	(A,152,109)	RS1/16SS472J		R 710	(A,113,62)	RS1/16SS104J	
R 578	(A,154,109)	RS1/16SS472J		R 711	(B,124,56)	RS1/16SS473J	
R 579	(A,136,109)	RS1/16SS472J		R 712	(B,121,51)	RS1/16SS103J	
R 580	(A,133,109)	RS1/16SS472J		R 713	(B,117,51)	RS1/16SS104J	F
R 582	(A,37,105) (Q,K,L,M)	RS1/16SS473J		R 716	(B,138,57) (P,Q)	RS1/16SS473J	
R 583	(A,33,105) (Q,K,L,M)	RS1/16SS121J		R 724	(A,146,52)	RS1/16SS471J	

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Circuit Symbol and No.**Part No.****Circuit Symbol and No.****Part No.**

R 731	(B,137,44)	RS1/16SS473J	R 850	(A,55,22)	RS1/16SS470J
R 734	(A,109,36) (P,Q,J,L,M)	RS1/16SS473J	R 854	(A,53,22)	RS1/16SS331J
R 735	(A,109,38) (M)	RS1/16SS473J	R 856	(A,86,21)	RS1/16SS473J
R 736	(A,109,40) (K)	RS1/16SS473J	R 857	(A,80,27)	RS1/16SS101J
R 737	(A,109,41)	RS1/16SS473J	R 858	(B,52,28)	RS1/16SS101J
R 751	(B,93,71)	RS1/16SS102J	R 859	(B,55,28)	RS1/16SS101J
R 752	(B,77,63)	RS1/16SS471J	R 860	(A,63,56)	RS1/16SS0R0J
R 753	(B,83,65)	RS1/16SS102J	R 867	(A,69,14)	RS1/16SS104J
R 754	(B,77,64)	RS1/16SS221J	R 872	(A,48,29)	RS1/16SS151J
R 755	(B,85,65)	RS1/16SS221J	R 901	(B,65,48)	RAB4CQ560J
R 756	(B,77,65)	RS1/16SS221J	R 902	(B,65,45)	RS1/16SS560J
R 757	(B,85,66)	RS1/16SS221J	R 903	(B,65,38)	RAB4CQ560J
R 760	(B,83,74)	RS1/16SS0R0J	R 904	(B,65,35)	RAB4CQ560J
R 761	(A,73,88) (Q,K,L,M)	RS1/16SS101J	R 905	(B,65,32)	RAB4CQ560J
R 762	(B,88,71)	RS1/16SS472J	R 906	(B,49,49)	RAB4CQ560J
R 763	(B,88,70)	RS1/16SS472J	R 907	(B,49,45)	RAB4CQ560J
R 802	(A,45,27)	RS1/10SR0R0J	R 908	(B,49,35)	RAB4CQ560J
R 803	(A,48,37)	RS1/16SS104J	R 909	(B,49,32)	RAB4CQ560J
R 804	(A,48,40)	RS1/16SS101J	R 910	(B,49,39)	RS1/16SS560J
R 805	(A,54,55)	RS1/16SS122J	R 911	(B,49,38)	RS1/16SS0R0J
R 806	(A,56,54)	RS1/16SS105J	R 912	(B,49,41)	RS1/16SS560J
R 807	(A,71,14)	RS1/16SS181J	R 913	(B,65,43)	RS1/16SS560J
R 808	(A,59,56)	RS1/16SS101J	R 914	(B,66,42)	RS1/16SS560J
R 809	(A,60,56)	RS1/16SS101J	R 915	(B,66,41)	RS1/16SS560J
R 810	(A,61,56)	RS1/16SS101J	R 924	(B,93,34)	RS1/16SS221J
R 811	(A,62,56)	RS1/16SS221J	R 925	(B,69,35)	RS1/16SS104J
R 812	(B,62,55)	RS1/10SR24R0D	R 926	(B,93,47)	RS1/16SS221J
R 813	(B,62,58)	RS1/10SR24R0D	R 927	(B,69,47)	RS1/16SS104J
R 814	(B,62,59)	RS1/16SS153J	R 929	(B,69,44)	RS1/16SS472J
R 815	(B,62,56)	RS1/16SS153J	R 930	(B,57,23)	RS1/16SS331J
R 816	(B,61,26)	RS1/16SS103J	R 933	(A,68,18)	RAB4CQ151J
R 817	(B,60,27)	RS1/16SS103J	R 934	(A,67,22)	RAB4CQ151J
R 818	(B,63,26)	RS1/16SS103J	R 935	(A,63,19)	RAB4CQ151J
R 819	(B,63,27)	RS1/16SS103J	R 936	(A,62,21)	RAB4CQ151J
R 820	(A,67,57)	RS1/16SS1002D	R 937	(B,86,19)	RS1/16SS151J
R 821	(B,109,61)	RS1/16SS2000D	R 941	(B,95,62)	RS1/16SS821J
R 822	(A,65,57)	RS1/16SS3002D	R 942	(B,101,55)	RS1/16SS821J
R 823	(A,68,55)	RS1/16SS2402D	R 943	(B,104,61)	RS1/16SS104J
R 824	(A,68,14)	RS1/16SS103J	R 944	(B,104,58)	RS1/16SS104J
R 825	(A,96,34)	RS1/16SS103J	R 946	(B,89,58)	RS1/16SS102J
R 826	(A,87,26)	RS1/16SS104J	R 947	(B,97,61)	RS1/16SS472J
R 827	(A,87,29)	RS1/16SS101J	R 948	(B,96,60)	RS1/16SS472J
R 828	(A,74,14)	RS1/16SS221J	R 951	(A,90,19)	RS1/16SS103J
R 829	(A,74,13)	RS1/16SS104J	R 952	(A,91,26)	RS1/16SS102J
R 830	(A,74,15)	RS1/16SS221J	R 953	(A,91,18)	RS1/16SS101J
R 831	(A,85,24)	RS1/16SS0R0J	R 954	(A,92,18)	RS1/16SS101J
R 833	(A,83,24)	RS1/16SS104J	R 955	(A,92,26)	RS1/16SS104J
R 834	(A,70,14)	RS1/16SS181J	R 956	(A,93,18)	RS1/16SS1003F
R 835	(A,93,38)	RS1/16SS472J	R 958	(A,88,26)	RS1/16SS103J
R 836	(A,43,34)	RS1/16SS104J	R 959	(A,93,16)	RS1/16SS103J
R 837	(A,83,28)	RS1/16SS104J	R 981	(B,107,47)	RS1/16SS102J
R 838	(A,93,35)	RS1/16SS102J	R 986	(B,107,41)	RS1/16SS102J
R 839	(A,93,36)	RS1/16SS102J	R 987	(B,113,32)	RS1/16SS105J
R 841	(A,73,20)	RS1/16SS105J	R 988	(B,106,32)	RS1/16SS105J
R 842	(A,72,20)	RS1/16SS471J	R 990	(B,111,36)	RS1/16SS103J
R 843	(A,83,27)	RS1/16SS221J	R 991	(B,106,36)	RS1/16SS103J
R 844	(A,83,35)	RS1/16SS221J	R 992	(B,113,36)	RS1/16SS103J
R 845	(A,82,35)	RS1/16SS104J	R 993	(B,108,36)	RS1/16SS103J
R 846	(A,89,29)	RS1/16SS102J	R 1001	(B,12,66)	RS1/16SS391J
R 848	(A,86,34)	RS1/16SS472J	R 1002	(A,11,64)	RS1/10SR2R2J

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<u>Circuit Symbol and No.</u>		<u>Part No.</u>		<u>Circuit Symbol and No.</u>		<u>Part No.</u>	
R 1003	(A,14,64)	RS1/10SR2R2J					
R 1004	(A,11,65)	RS1/10SR2R2J		C 207	(B,121,91)	CKSRYB105K10	
R 1005	(A,14,65)	RS1/10SR2R2J		C 208	(B,101,90)	CKSRYB105K10	
R 1006	(A,15,72)	RS1/16SS911J		C 211	(B,121,88)	CKSRYB105K10	A
R 1201	(A,13,88)	RS1/16SS683J		C 212	(B,101,87)	CKSRYB105K10	
				C 213	(B,121,86)	CKSRYB105K10	
R 1203	(B,21,86)	RS1/16SS102J					
R 1503	(B,54,78)	RS1/16SS561J		C 214	(B,101,85)	CKSRYB105K10	
R 1504	(B,52,81)	RS1/16SS2202D		C 215	(B,120,85)	CKSRYB105K10	
R 1505	(B,53,78)	RS1/16SS3302D		C 216	(B,120,83)	CKSRYB105K10	
R 1506	(B,52,78)	RS1/16SS1002D		C 217	(B,121,92)	CKSRYB105K10	
				C 218	(B,121,95)	CKSRYB105K10	
R 1507	(B,55,78)	RS1/16SS432J					
R 1508	(B,49,81)	RS1/10SR2R2J		C 219	(B,101,95)	CKSRYB105K10	
R 1509	(B,43,74)	RS1/10SR6R8J		C 220	(B,101,93)	CKSRYB105K10	
R 1512	(B,57,70)	RS1/16SS104J		C 221	(B,101,91)	CKSRYB105K10	
R 1513	(B,57,68)	RS1/16SS102J		C 222	(B,119,81)	CKSQYB225K10	B
				C 225	(B,115,81)	CKSRYB474K10	
R 1514	(B,56,63)	RS1/16SS103J					
R 1515	(B,49,64)	RS1/10SR2R2J		C 226	(A,114,82)	CKSYB106K16	
R 1516	(B,45,64)	RS1/10SR6R8J		C 227	(A,116,84)	CKSSYB104K10	
R 1517	(B,54,61)	RS1/16SS8202D		C 229	(A,109,84)	CKSSYB104K10	
R 1518	(B,54,63)	RS1/16SS1001D		C 231	(A,108,100)	CKSSYB104K16	
				C 232	(A,107,96)	CEVW470M16	
R 1519	(B,55,63)	RS1/16SS331J					
R 1520	(B,53,63)	RS1/16SS9101D		C 233	(A,114,100)	CKSYB106K16	
R 1522	(B,46,77)	RS1/10SR2R2J		C 234	(A,115,96)	CCSQCH223J50	
R 1523	(B,47,62)	RS1/10SR2R2J		C 235	(A,115,94)	CCSQCH223J50	
R 1531	(A,60,72)	RS1/16SS0R0J		C 237	(B,112,80)	CCSSCH100D50	
				C 238	(B,110,99)	CCSSCH100D50	C
R 1621	(B,105,70)	RS1/16SS681J					
R 1623	(B,118,72)	RS1/16SS3003D		C 239	(B,121,89) (P,Q)	CKSRYB105K10	
R 1624	(B,119,72)	RS1/16SS1102D		C 251	(B,133,103)	CKSRYB105K10	
R 1625	(B,109,68)	RS1/16SS512J		C 252	(B,136,103)	CKSRYB105K10	
R 1627	(B,116,68)	RS1/16SS621J		C 253	(B,137,103)	CKSRYB105K10	
				C 254	(B,140,103)	CKSRYB105K10	
R 1629	(A,119,69)	RS1/16SS4701D					
R 1742	(B,154,27)	RS1/16SS683J		C 255	(B,143,103)	CKSRYB105K10	
R 1743	(B,154,25)	RS1/16SS473J		C 256	(B,148,103)	CKSRYB105K10	
				C 257	(B,149,103)	CKSRYB105K10	
				C 258	(B,152,103)	CKSRYB105K10	
				C 259	(B,149,97)	CKSRYB105K10	
<u>CAPACITORS</u>							
C 101	(A,54,96)	CEAT332M16(P35)					
C 121	(B,27,94)	CKSRYB104K50		C 260	(B,149,93)	CKSRYB105K10	D
C 122	(B,45,98)	CKSRYB105K10		C 264	(A,151,103)	CKSSYB104K10	
C 123	(B,47,100)	CKSRYB104K50		C 265	(A,136,104)	CKSSYB104K10	
C 124	(B,38,90)	CKSRYB104K50		C 266	(A,136,101)	CEVW220M16	
				C 267	(B,139,103)	CKSRYB105K10	
C 125	(B,18,100)	CKSRYB104K50					
C 126	(B,24,94)	CKSRYB103K50		C 270	(B,145,103)	CKSRYB105K10	
C 127	(A,26,105)	CKSRYB104K50		C 271	(B,130,95)	CKSRYB105K10	
C 128	(B,22,103)	CKSRYB104K50		C 272	(B,130,94)	CKSRYB105K10	
C 151	(B,81,103)	CKSRYB474K16		C 273	(B,130,92)	CKSRYB105K10	
				C 274	(B,130,91)	CKSRYB105K10	
C 152	(B,84,103)	CKSRYB474K16					
C 153	(B,88,103)	CKSRYB474K16		C 275	(B,151,103)	CKSRYB105K10	E
C 154	(B,86,103)	CKSRYB474K16		C 276	(B,130,89)	CKSRYB105K10	
C 155	(B,81,107)	CKSQYB474K16		C 277	(B,130,88)	CKSRYB105K10	
C 156	(B,84,107)	CKSQYB474K16		C 279	(B,134,84)	CKSRYB105K10	
				C 280	(B,149,96)	CKSRYB105K10	
C 157	(B,88,107)	CKSQYB474K16					
C 158	(B,86,107)	CKSQYB474K16		C 283	(B,130,100)	CKSRYB105K10	
C 159	(B,61,99)	CKSQYB104K50		C 284	(B,130,101)	CKSRYB105K10	
C 160	(A,114,108)	CEVW101M16		C 285	(B,134,103)	CKSRYB105K10	
C 161	(A,98,111)	CKSQYB475K6R3		C 287	(A,146,84)	CKSSYB104K10	
				C 288	(A,146,95)	CEVW220M16	
C 162	(B,92,107)	CKSQYB225K10					
C 163	(A,72,111)	CKSRYB104K50		C 289	(A,150,97)	CKSSYB104K10	F
C 164	(B,79,106) 10 uF	CCG1236		C 290	(A,136,95)	CEVW220M16	
C 165	(B,90,107)	CKSQYB225K10		C 291	(A,132,98)	CKSSYB104K10	
C 166	(B,75,101) 10 uF	DCH1201		C 293	(B,138,84)	CKSRYB104K16	
				C 294	(B,140,84)	CKSRYB104K16	

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	<u>Circuit Symbol and No.</u>		<u>Part No.</u>		<u>Circuit Symbol and No.</u>		<u>Part No.</u>	
A	C 301	(A,92,75)	CCSSCH6R0D50	C 804	(A,50,40)	CKSRYB104K10		
	C 302	(A,90,79)	CCSSCH6R0D50	C 805	(A,49,35)	CKSSYB104K10		
	C 303	(A,97,75)	CCSSCH6R0D50	C 806	(A,49,33)	CKSSYB104K10		
	C 304	(A,96,79)	CCSSCH6R0D50	C 807	(A,49,30)	CKSSYB104K10		
	C 305	(B,90,77)	CKSRYB105K10	C 808	(A,54,54)	CCSSCH120J50		
	C 308	(A,90,84) 10 uF	DCH1201	C 809	(A,55,53)	CKSSYB104K10		
	C 309	(B,92,86) 22 uF	DCH1256	C 810	(A,56,23)	CKSSYB104K10		
	C 310	(B,90,86) 10 uF	DCH1201	C 811	(A,58,54)	CCSSCH100D50		
	C 311	(A,92,84) 10 uF	DCH1201	C 812	(A,58,53)	CKSSYB104K10		
	C 312	(A,96,84) 10 uF	DCH1201	C 813	(A,60,54)	CKSSYB104K10		
	C 313	(B,95,86) 22 uF	DCH1256	C 814	(A,59,24)	CKSSYB104K10		
	C 314	(B,94,86) 22 uF	DCH1256	C 816	(A,61,24)	CKSSYB104K10		
	C 315	(A,94,84) 10 uF	DCH1201	C 817	(A,62,53)	CKSSYB104K10		
B	C 331	(B,141,29)	CKSSYB102K50	C 818	(A,66,57)	CKSSYB104K10		
	C 332	(B,141,34)	CKSSYB102K50	C 819	(A,68,57)	CKSSYB104K10		
	C 333	(B,143,29)	CKSSYB104K10	C 820	(A,68,54)	CKSRYB105K10		
	C 344	(B,19,31)	CKSQYB225K10	C 821	(A,66,24)	CKSSYB104K10		
	C 361	(A,75,107)	CKSRYB471K16	C 822	(A,68,53)	CKSSYB104K10		
	C 404	(B,156,58)	CKSSYB103K16	C 823	(A,71,24)	CKSSYB104K10		
	C 406	(B,154,60) 10 uF	DCH1201	C 824	(A,74,24)	CKSSYB104K10		
	C 407	(B,154,63)	CKSSYB103K16	C 825	(A,74,20)	CKSSYB104K10		
	C 408	(B,155,81)	CKSRYB103K50	C 826	(A,84,36)	CKSSYB103K16		
	C 409	(A,151,78)	CEVW101M16	C 832	(A,79,49)	CKSSYB104K10		
	C 410	(A,151,67)	CEVW101M16	C 833	(A,81,40)	CKSSYB104K10		
C	C 413	(B,166,43) (P,J)	CKSSYB122K50	C 834	(A,79,34)	CKSSYB104K10		
	C 414	(B,166,44) (P,J)	CKSSYB122K50	C 835	(A,81,41)	CKSSYB104K10		
	C 541	(B,38,37)	CKSSYB104K10	C 836	(A,81,50) 10 uF	DCH1201		
	C 542	(B,38,27)	CKSSYB104K10	C 837	(A,83,45)	CKSSYB104K10		
	C 543	(B,38,26)	CKSRYB105K10	C 838	(A,73,18)	CCSSCH100D50		
	C 544	(B,53,15)	CKSRYB104K50	C 839	(A,78,22)	CCSSCH100D50		
	C 547	(B,41,30)	CKSRYB105K10	C 840	(A,45,25) 10 uF	DCH1201		
	C 561	(A,131,111)	CKSQYB475K10	C 841	(A,39,36) 10 uF	DCH1201		
	C 562	(A,148,111)	CKSQYB475K10	C 901	(B,65,51)	CKSSYB104K10		
	C 563	(A,140,111)	CKSQYB475K10	C 902	(B,60,53)	CKSSYB104K10		
	C 564	(A,157,111)	CKSQYB475K10	C 903	(B,66,44)	CKSSYB104K10		
D	C 565	(A,138,111)	CKSQYB475K10	C 904	(B,64,41)	CKSSYB104K10		
	C 566	(A,150,111)	CKSQYB475K10	C 905	(B,65,29)	CKSSYB104K10		
	C 567	(A,124,114)	CKSRYB104K50	C 906	(B,49,42)	CKSSYB104K10		
	C 568	(A,117,114)	CKSRYB104K50	C 907	(B,49,47)	CKSSYB104K10		
	C 569	(A,114,114)	CKSRYB104K50	C 908	(B,50,27)	CKSSYB102K50		
	C 571	(B,158,109)	CKSSYB102K50	C 909	(B,48,26) 10 uF	DCH1201		
	C 581	(A,27,106) 10 uF(Q,K,L,M)	CCG1171	C 921	(B,93,35)	CKSSYB103K16		
	C 582	(A,35,104) 10 uF(Q,K,L,M)	CKSSYB104K10	C 922	(B,69,34)	CKSSYB104K10		
	C 601	(B,130,45)	CKSRYB105K10	C 923	(B,69,37)	CKSQYB475K6R3		
	C 602	(A,124,38)	CKSSYB104K10	C 924	(B,93,48)	CKSSYB103K16		
E	C 603	(B,124,40)	CKSQYB475K6R3	C 925	(B,69,49)	CKSSYB104K10		
	C 604	(A,138,38)	CKSSYB104K10	C 926	(B,69,52)	CKSQYB475K6R3		
	C 605	(A,119,38)	CKSSYB104K10	C 927	(A,78,24)	CKSSYB104K10		
	C 606	(A,115,53)	CKSSYB104K10	C 928	(B,76,18)	CKSSYB104K10		
	C 607	(A,144,55)	CKSSYB104K10	C 929	(A,83,29)	CKSSYB104K10		
	C 608	(A,123,67)	CKSSYB104K10	C 930	(B,81,18)	CKSSYB104K10		
	C 609	(A,125,36)	CCSSCH150J50	C 931	(B,53,23)	CKSSYB104K10		
	C 610	(A,127,36)	CCSSCH150J50	C 932	(B,58,21)	CKSRYB105K10		
	C 611	(A,113,20)	CKSSYB104K10	C 943	(A,60,60)	CKSSYB104K10		
	C 612	(B,118,47)	CKSSYB103K16	C 944	(B,102,57)	CKSQYB475K6R3		
F	C 751	(A,83,60)	CKSSYB104K10	C 945	(B,98,62)	CKSQYB475K6R3		
	C 795	(A,38,31) (P,Q)	CEVW471M10	C 946	(A,70,60) 10 uF	DCH1201		
	C 801	(A,49,37)	CKSSYB104K10	C 951	(A,89,26)	CKSSYB104K10		
	C 802	(A,49,48)	CKSSYB104K10	C 952	(A,86,26)	CKSSYB104K10		
	C 803	(A,49,45)	CKSSYB104K10	C 981	(B,108,47)	CKSSYB473K10		

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Circuit Symbol and No.

6
Part No.

7
Circuit Symbol and No.

8
Part No.

C 982	(B,108,41)	CKSSYB473K10
C 983	(B,112,32)	CKSSYB102K50
C 984	(B,107,32)	CKSSYB102K50
C 985	(B,115,36)	CKSSYB104K10
C 1001	(A,10,48)	CEVW470M4
C 1002	(B,21,62)	CKSSYB103K16
C 1003	(B,21,55)	CKSRYB103K50
C 1004	(A,11,57)	CEAT102M16(P30)
C 1005	(A,9,71)	CKSRYB104K50
C 1201	(A,12,100)	CEVW101M16
C 1202	(A,13,84)	CKSYB105K35
C 1221	(B,83,59)	CKSRYB105K10
C 1222	(B,80,56)	CKSRYB105K10
C 1501	(B,43,69)	CKSYB105K35
C 1502	(A,63,78)	CKSSYB102K50
C 1503	(A,37,79) 10 uF	CCG1223
C 1504	(A,63,79)	CKSSYB104K16
C 1505	(A,58,72)	CKSSYB104K16
C 1506	(A,56,73) 10 uF	CCG1236
C 1507	(B,53,81)	CCSRCH561J50
C 1508	(B,56,78)	CCSSCH121J50
C 1509	(B,56,80)	CKSRYB332K50
C 1510	(A,40,79) 10 uF	CCG1223
C 1511	(B,49,77)	CKSQYB475K10
C 1512	(B,54,77)	CKSSYB223K16
C 1513	(B,46,78)	CKSRYB104K25
C 1514	(A,58,71)	CKSSYB102K50
C 1515	(A,37,66) 10 uF	CCG1223
C 1516	(B,44,61)	CKSRYB104K25
C 1517	(B,55,65)	CKSSYB223K16
C 1518	(B,57,61)	CKSRYB222K50
C 1519	(B,57,63)	CCSSCH470J50
C 1520	(A,40,66) 10 uF	CCG1223
C 1521	(B,50,62)	CKSQYB475K10
C 1522	(B,50,60)	CKSQYB334K50
C 1523	(B,26,80)	CKSYB105K35
C 1524	(B,55,61)	CCSRCH471J50
C 1525	(A,54,73) 10 uF	CCG1236
C 1526	(A,26,68)	CEAT472M16(P30)
C 1527	(A,51,73) 10 uF	CCG1236
C 1528	(A,61,75) 22 uF	CCG1274
C 1529	(A,58,75) 22 uF	CCG1274
C 1530	(A,53,76) 10 uF	CCG1236
C 1531	(A,71,63)	CKSSYB102K50
C 1621	(B,102,73)	CKSSYB104K16
C 1624	(B,117,72)	CKSSYB103K16
C 1625	(B,108,70) 4.7 uF	CCG1222
C 1626	(B,113,73)	CKSRYB104K16
C 1627	(B,119,71)	CKSSYB104K16
C 1628	(B,119,68) 4.7 uF	CCG1222
C 1629	(A,119,75)	CCSSCH271J25
C 1661	(B,157,14)	CKSRYB104K16
C 1662	(A,151,13)	CEAT471M16(P35)
C 1712	(A,69,68)	CKSSYB104K10
C 1731	(A,146,19)	CKSSYB104K10
C 1732	(A,140,22)	CEVW101M16
C 1733	(A,145,19)	CKSSYB104K10
C 1746	(B,150,33)	CKSSYB104K10
C 1747	(B,150,25)	CKSSYB104K10
C 1771	(B,28,37)	CKSQYB225K10

C 1772	(B,34,43)	CKSRYB334K10
C 1781	(B,12,44) (P,Q)	CKSRYB104K16
C 1782	(B,12,52) (P,Q)	CKSRYB104K16
C 1791	(A,42,55)	CKSQYB106K6R3
C 1792	(A,31,53)	CKSRYB105K10

Monitor I/F Unit
Consists of
Interface PCB
Keyboard PCB
Monitor PCB
SD PCB
BT ANT PCB

B E F G H

Unit Number : (P,Q)

Unit Number : (J,K,L,M)

Unit Name : Monitor I/F Unit

MISCELLANEOUS

IC 3501	(A,10,91) Remote IC	GP1UXC14RK
IC 5201	(A,126,69) IC	PQ1LA125MSPQ
IC 5202	(A,129,61) IC	S-1172B34-E6
IC 5301	(A,96,35) IC	NJM2505AF
IC 5311	(A,96,43) IC	TC75S57FU
IC 5312	(A,90,43) L-MOS And Gate	TC7SET08FUS1
IC 5501	(A,77,46) IC	S-93C66BD0I-I8
IC 5502	(A,57,59) IC	MN103SH13UB
IC 5503	(A,65,78) Logic IC	TC7SHU04FUS1
IC 5701	(A,16,26) IC	TK61222CQ6
IC 5702	(A,9,29) L-MOS And Gate	TC7SET08FUS1
IC 5703	(A,23,60) Flash ROM Unit	CWW2019
IC 7551	(B,13,44) IC(P,Q)	NJM4558V
Q 2501	(A,161,11) Transistor	RT3C99M
Q 3501	(A,16,56) Transistor	UMX1N
Q 3502	(A,22,59) Transistor	LSC4081UB
Q 5701	(A,7,36) Transistor	LSC4081UB
Q 5702	(A,11,32) Transistor	LTC114EUB
Q 5703	(A,10,49) FET	RSQ025P03
Q 5705	(A,29,26) Transistor	LSC4081UB
Q 5805	(A,95,38) Transistor	LSC4081UB
Q 5806	(A,100,46) Transistor	LSC4081UB
Q 5807	(A,100,50) Transistor	LSC4081UB
Q 5808	(A,87,33) Transistor	LSA1576UB
Q 5900	(A,82,81) Transistor	UMX2N
Q 7541	(B,38,43) Chip Transistor	2SB1689
D 2501	(B,167,7) Diode	DZ2S068C
D 2502	(B,157,8) Diode	DZ2S068C
D 2503	(B,168,7) Diode	DZ2S068C
D 2504	(B,60,11) Diode	DZ2S068C
D 2505	(A,151,18) Diode	DZ2S068C
D 2506	(B,61,11) Diode	DZ2S068C
D 2507	(B,58,11) Diode	DZ2S068C
D 2508	(B,57,11) Diode	DZ2S068C
D 3501	(B,6,50) Diode	DZ2S068C
D 3502	(B,6,41) Diode	DZ2S068C
D 3504	(B,12,55) Diode	DZ2S068C
D 3506	(B,17,29) Diode	EMZC6.8N

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	<u>Circuit Symbol and No.</u>	<u>Part No.</u>	<u>Circuit Symbol and No.</u>	<u>Part No.</u>
	D 3508 (A,18,61) LED	NSSM025A-A0886	CN5701 (A,17,16) Connector	CKS5561
	D 5201 (A,130,69) Diode	1SR154-400	CN7501 (A,66,22) Connector	CKS6180
A	D 5701 (A,29,31) Diode	RB160M-60	CN7502 (A,26,24) Connector	CKS4670
	D 5702 (A,10,24) Diode	1SS352	CN7503 (A,12,58) Connector(P,Q)	CKS6192
	L 3501 (B,9,55) Inductor	CTF1346	JA2501 (A,15,12) Pin Jack	CKB1065
	L 3502 (B,7,38) Inductor	CTF1346	JA2502 (A,117,26) Jack(P,Q)	CKN1018
	L 3503 (B,5,48) Inductor	CTF1346	JA2503 (A,159,20) Jack	CKN1081
	L 5002 (B,108,29) Inductor	CTF1469	JA2504 (A,131,21) Connector	CKS3414
	L 5305 (A,89,36) Inductor	CTF1545	JA3501 (A,12,13) Jack	CKN1084
	L 5401 (A,32,50) Inductor	CTF1545		
	L 5501 (A,52,39) Inductor	CTF1473		
	L 5502 (A,75,41) Inductor	CTF1545		
	L 5503 (A,42,52) Inductor	CTF1545		
B	L 5504 (A,76,77) Inductor	CTF1473	R 2501 (A,169,10)	RS1/16SS102J
	L 5506 (A,83,76) Inductor	CTF1473	R 2502 (A,164,7)	RS1/16SS821J
	L 5507 (A,37,77) Inductor	CTF1473	R 2503 (A,158,11)	RS1/16SS821J
	L 5508 (A,50,78) Inductor	CTF1545	R 2504 (B,28,10)	RS1/16SS750J
	L 5512 (A,76,55) Inductor	CTF1748	R 2505 (A,168,11)	RS1/16SS223J
	L 5522 (B,64,56) Inductor	CTF1545	R 2506 (A,157,9)	RS1/16SS223J
	L 5523 (B,73,54) Inductor	CTF1545	R 2507 (A,66,9)	RS1/16SS750J
	L 5528 (B,72,52) Inductor	CTF1545	R 2508 (B,106,25) (P,Q)	RS1/16SS101J
	L 5534 (B,52,53) Inductor	CTF1545	R 2509 (B,105,27) (P,Q)	RS1/16SS101J
	L 5535 (B,65,60) Inductor	CTF1545	R 2510 (A,148,15)	RS1/16SS102J
	L 5538 (B,52,54) Inductor	CTF1545	R 2515 (A,60,10)	RS1/16SS102J
C	L 5543 (A,44,68) Inductor	CTF1545	R 2516 (A,61,10)	RS1/16SS102J
	L 5546 (B,51,69) Inductor	CTF1545	R 2518 (A,57,10)	RS1/16SS471J
	L 5548 (A,38,63) Inductor	CTF1545	R 2519 (A,59,10)	RS1/16SS471J
	L 5551 (B,50,70) Inductor	CTF1545	R 2521 (A,163,11)	RS1/16SS472J
	L 5601 (A,89,80) Inductor	CTF1473	R 2522 (A,166,11)	RS1/16SS472J
	L 5701 (A,6,41) Inductor	CTF1545	R 3501 (B,5,57)	RS1/16SS223J
	L 5702 (A,19,40) Choke Coil 10 uH	CTH1435	R 3502 (B,13,56)	RS1/16SS750J
	L 5703 (B,25,38) Inductor	CTF1558	R 3503 (B,5,59)	RS1/16SS223J
	L 5704 (A,12,29) Inductor	CTF1748	R 3510 (A,19,81)	RS1/16SS470J
	L 5705 (A,65,72) Inductor	CTF1545	R 3511 (A,23,90)	RS1/16SS182J
	L 5706 (A,64,73) Inductor	CTF1545	R 3512 (A,25,82)	RS1/16SS222J
D	L 5806 (A,97,46) Inductor	CTF1545	R 3513 (A,23,77)	RS1/16SS472J
	L 5807 (A,103,48) Inductor	CTF1545	R 3514 (A,13,73)	RS1/16SS182J
	L 5808 (A,92,39) Inductor	CTF1545	R 3515 (A,15,75)	RS1/16SS222J
	X 5501 (A,78,60) Oscillator 33 MHz	CSS1792	R 3516 (A,13,76)	RS1/16SS472J
	X 5502 (A,71,75) Oscillator 9.597 MHz	CSS1787	R 3517 (A,11,75)	RS1/16SS123J
	S 3501 (A,17,90) Push Switch	CSG1155	R 3518 (A,13,57)	RS1/16SS201J
	S 3502 (A,22,94) Push Switch	CSG1155	R 3519 (A,13,58)	RS1/16SS151J
	S 3503 (A,28,56) Push Switch	CSG1155	R 3521 (A,13,56)	RS1/16SS103J
	S 3504 (A,28,78) Push Switch	CSG1155	R 3523 (A,19,55)	RS1/16SS271J
	S 3505 (A,8,78) Push Switch	CSG1155	R 3524 (A,19,54)	RS1/16SS271J
	S 3506 (A,8,56) Push Switch	CSG1155	R 3526 (A,19,56)	RS1/16SS103J
E	S 3507 (A,28,67) Push Switch	CSG1155	R 3528 (A,22,62)	RS1/16SS221J
	S 3508 (A,8,67) Push Switch	CSG1155	R 3529 (A,22,63)	RS1/16SS221J
	S 3509 (A,24,48) Push Switch	CSG1155	R 3531 (A,24,62)	RS1/16SS103J
	S 3510 (A,12,48) Push Switch	CSG1155	R 5200 (A,115,80)	RS1/10SR0R0J
	P 2501 (B,163,7) Poly Switch	MINISMDC075F/24	R 5202 (A,126,56)	RS1/16SS102J
	BZ2501 (A,115,10) Buzzer	CPV1062	R 5207 (A,124,55)	RS1/16SS103J
	CN2501 (A,94,13) Connector	CKS6062	R 5300 (A,91,36)	RS1/16SS472J
	CN2502 (A,63,20) Connector	CKS4497	R 5301 (A,103,37)	RS1/16SS101J
	CN3501 (B,26,53) Connector	CKS3861	R 5302 (A,103,35)	RS1/16SS101J
	CN3502 (A,11,29) Connector	YKS5032	R 5303 (A,91,33)	RS1/16SS751J
F	CN3811 (A,13,21) Connector(P,Q)	CKS5749	R 5309 (A,96,32)	RS1/16SS0R0J
	CN5002 (A,119,29) Connector	DKN1385	R 5310 (A,103,45)	RS1/16SS222J
	CN5101 (A,122,15) Connector	CKS5561	R 5311 (A,103,43)	RS1/16SS271J
	CN5601 (A,102,75) Connector	CKS6062	R 5312 (A,101,42)	RS1/16SS684J
			R 5313 (A,94,42)	RS1/16SS1502D

RESISTORS

5		6		7		8	
<u>Circuit Symbol and No.</u>		<u>Part No.</u>		<u>Circuit Symbol and No.</u>		<u>Part No.</u>	
R 5314	(A,95,41)	RS1/16SS1002D		R 5710	(A,21,26)	RS1/10SR8201D	
R 5315	(A,92,37)	RS1/16SS472J		R 5711	(A,21,24)	RS1/10SR6202D	
R 5316	(A,87,36)	RS1/16SS471J		R 5713	(A,30,23)	RS1/16SS472J	A
R 5317	(A,90,41)	RS1/16SS102J		R 5714	(A,16,31)	RS1/16SS223J	
R 5318	(A,94,44)	RS1/16SS102J		R 5716	(A,10,52)	RS1/16SS562J	
R 5321	(A,86,41)	RS1/16SS103J		R 5717	(A,9,36)	RS1/16SS562J	
R 5322	(A,87,41)	RS1/16SS682J		R 5718	(A,23,23)	RS1/10SR4700D	
R 5401	(A,31,48)	RS1/16SS103J		R 5719	(A,13,28)	RS1/16SS152J	
R 5402	(A,23,72)	RS1/16SS220J		R 5720	(A,11,22)	RS1/16SS221J	
R 5403	(A,22,72)	RS1/16SS102J		R 5722	(A,8,33)	RS1/16SS103J	
R 5501	(A,71,52)	RS1/16SS103J		R 5723	(A,10,21)	RS1/10SR1203D	
R 5502	(A,90,56)	RS1/16SS103J		R 5724	(A,8,20)	RS1/10SR0R0J	
R 5509	(A,80,45)	RS1/16SS563J		R 5725	(A,11,27)	RS1/16SS152J	
R 5511	(A,73,48)	RAB4CQ102J		R 5726	(A,30,24)	RS1/16SS103J	B
R 5512	(A,78,55)	RS1/16SS271J		R 5727	(A,28,24)	RS1/16SS472J	
R 5513	(A,78,50)	RS1/16SS471J		R 5728	(A,29,21)	RS1/16SS332J	
R 5514	(A,80,50)	RS1/16SS471J		R 5729	(A,7,25)	RS1/16SS273J	
R 5515	(A,77,52)	RS1/16SS181J		R 5730	(A,6,39)	RS1/16SS473J	
R 5516	(A,80,48)	RS1/16SS271J		R 5731	(A,6,24)	RS1/16SS0R0J	
R 5517	(A,79,49)	RS1/16SS271J		R 5833	(A,98,40)	RS1/16SS391J	
R 5518	(A,59,43)	RS1/16SS1002D		R 5834	(A,103,47)	RS1/16SS391J	
R 5520	(A,82,61)	RS1/16SS103J		R 5835	(A,96,48)	RS1/16SS391J	
R 5521	(A,49,43)	RS1/16SS473J		R 5836	(A,103,51)	RS1/16SS122J	
R 5522	(A,81,64)	RS1/16SS271J		R 5838	(A,100,40)	RS1/16SS122J	
R 5523	(A,88,60)	RS1/16SS271J		R 5839	(A,105,44)	RS1/16SS122J	C
R 5524	(A,37,49)	RAB4CQ103J		R 5840	(A,102,52)	RS1/16SS222J	
R 5530	(A,90,60)	RS1/16SS101J		R 5841	(A,99,39)	RS1/16SS222J	
R 5531	(A,80,65)	RS1/16SS101J		R 5870	(B,33,48)	RS1/16SS180J	
R 5532	(A,41,49)	RAB4CQ103J		R 5871	(B,32,55)	RS1/16SS180J	
R 5533	(A,48,49)	RS1/16SS103J		R 5872	(B,29,49)	RS1/16SS180J	
R 5534	(A,83,56)	RS1/16SS101J		R 5873	(B,33,52)	RS1/16SS180J	
R 5536	(A,87,65)	RS1/16SS101J		R 5874	(B,31,49)	RS1/16SS180J	
R 5537	(A,86,66)	RS1/16SS101J		R 5875	(B,32,52)	RS1/16SS180J	
R 5539	(A,78,69)	RS1/16SS101J		R 5876	(B,33,50)	RS1/16SS180J	
R 5540	(A,75,70)	RS1/16SS101J		R 5877	(B,32,57)	RS1/16SS180J	
R 5543	(A,55,76)	RS1/16SS103J		R 5878	(B,31,51)	RS1/16SS180J	D
R 5544	(A,55,78)	RS1/16SS102J		R 5879	(B,26,55)	RS1/16SS180J	
R 5546	(A,67,77)	RS1/16SS105J		R 5880	(B,32,53)	RS1/16SS180J	
R 5547	(A,62,79)	RS1/16SS220J		R 5881	(B,21,55)	RS1/16SS180J	
R 5548	(A,69,78)	RS1/16SS332J		R 5882	(B,29,54)	RS1/16SS180J	
R 5549	(A,65,75)	RS1/10SR0R0J		R 5883	(B,24,55)	RS1/16SS180J	
R 5550	(A,78,72)	RAB4CQ101J		R 5884	(B,29,55)	RS1/16SS180J	
R 5551	(A,90,66)	RAB4CQ101J		R 5885	(B,21,56)	RS1/16SS180J	
R 5552	(A,88,63)	RAB4CQ101J		R 5886	(B,18,57)	RS1/16SS680J	
R 5553	(A,80,54)	RS1/16SS103J		R 5889	(B,18,56)	RS1/16SS390J	
R 5555	(A,91,54)	RS1/16SS103J		R 5900	(A,127,79)	RS1/16SS562J	
R 5556	(A,91,55)	RS1/16SS103J		R 5901	(A,85,79)	RS1/16SS101J	E
R 5557	(A,57,78)	RS1/16SS0R0J		R 5902	(A,87,81)	RS1/10SR680J	
R 5560	(A,83,48)	RS1/16SS103J		R 5903	(A,84,81)	RS1/16SS270J	
R 5561	(A,85,52)	RS1/16SS103J		R 5904	(A,120,82)	RS1/16SS473J	
R 5570	(A,73,62)	RS1/16SS471J		R 5905	(A,80,78)	RS1/16SS104J	
R 5701	(A,23,35)	RS1/10SR1203D		R 7501	(B,30,38)	RS1/16SS151J	
R 5702	(A,23,33)	RS1/10SR1002F		R 7503	(B,32,35)	RS1/16SS151J	
R 5703	(A,8,22)	RS1/16SS101J		R 7505	(B,29,35)	RS1/16SS151J	
R 5704	(A,18,31)	RS1/16SS101J		R 7506	(B,25,39)	RS1/16SS151J	
R 5705	(A,20,31)	RS1/16SS0R0J		R 7507	(B,27,35)	RS1/16SS151J	
R 5706	(A,19,31)	RS1/16SS0R0J		R 7508	(B,24,35)	RS1/16SS151J	F
R 5707	(A,32,39)	RS1/16SS3301F		R 7517	(B,29,44)	RAB4CQ223J	
R 5708	(A,9,33)	RS1/16SS102J		R 7518	(B,33,44)	RAB4CQ223J	
R 5709	(A,24,27)	RS1/10SR1103D		R 7521	(B,9,34) (P,Q)	RS1/16SS0R0J	

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Circuit Symbol and No.**Part No.****Circuit Symbol and No.****Part No.**

R 7523	(B,23,35) (P,Q)	RS1/16SS102J	C 5506	(A,58,39)	CSZS100M10
R 7524	(B,11,34) (P,Q)	RS1/16SS102J	C 5507	(A,59,41)	CKSSYB104K10
R 7527	(B,21,35) (P,Q)	RS1/16SS102J	C 5508	(A,61,41)	CKSSYB104K10
R 7531	(B,49,19)	RS1/16SS470J	C 5509	(A,64,40)	CKSSYB104K10
R 7532	(B,48,19)	RS1/16SS470J	C 5510	(A,65,41)	CKSSYB104K10
R 7533	(B,44,33)	RS1/16SS470J	C 5511	(A,68,41)	CKSSYB104K10
R 7534	(B,44,32)	RS1/16SS470J	C 5512	(A,69,41)	CKSSYB104K10
R 7535	(B,44,34)	RS1/16SS470J	C 5513	(A,62,45)	CKSSYB104K10
R 7536	(B,7,34) (P,Q)	RS1/16SS0R0J	C 5516	(A,64,42)	CKSSYB104K10
R 7537	(B,9,36) (P,Q)	RS1/16SS0R0J	C 5517	(A,67,45)	CKSSYB104K10
R 7541	(B,38,40)	RS1/16SS103J	C 5518	(A,61,42)	CKSSYB104K10
R 7542	(B,40,40)	RS1/16SS681J	C 5519	(A,69,47)	CKSSYB471K50
R 7543	(B,50,40)	RS1/16SS102J	C 5521	(A,92,46) 10 uF	DCH1201
R 7551	(B,14,50) (P,Q)	RS1/16SS223J	C 5522	(B,65,56)	CKSSYB104K10
R 7552	(B,11,50) (P,Q)	RS1/16SS223J	C 5523	(A,72,55)	CKSSYB104K10
R 7553	(B,14,49) (P,Q)	RS1/16SS223J	C 5524	(A,87,39) 10 uF	DCH1201
R 7554	(B,11,49) (P,Q)	RS1/16SS223J	C 5525	(A,58,42)	CCSSCH330J50
R 7555	(B,11,41) (P,Q)	RS1/16SS103J	C 5526	(A,94,49) 10 uF	DCH1201
R 7556	(B,13,41) (P,Q)	RS1/16SS103J	C 5527	(A,63,44)	CKSSYB104K10

CAPACITORS

C 2501	(A,161,7)	CKSQYB475K10	C 5531	(A,76,61)	CCSSCH120J50
C 2502	(A,152,8)	CKSQYB475K10	C 5532	(A,52,45)	CKSSYB104K10
C 2503	(B,26,12)	CKSRYB104K50	C 5533	(A,70,64)	CKSSYB104K10
C 2504	(A,142,14)	CKSRYB104K50	C 5534	(B,52,51)	CKSSYB104K10
C 2505	(B,55,23)	CKSRYB104K50	C 5535	(B,64,62)	CKSSYB104K10
C 2506	(B,104,25) (P,Q)	CCSSCH221J50	C 5536	(A,49,49)	CKSSYB104K10
C 2507	(B,103,27) (P,Q)	CCSSCH221J50	C 5537	(A,70,67)	CKSSYB104K10
C 3502	(B,16,93) 10 uF	DCH1201	C 5538	(A,64,72)	CKSSYB104K10
C 3503	(A,18,68)	CKSRYB104K16	C 5539	(A,43,52)	CKSSYB104K10
C 3504	(A,16,68)	CKSRYB104K16	C 5540	(A,62,73)	CKSSYB104K10
C 3505	(A,19,68)	CKSRYB104K16	C 5541	(A,62,74)	CKSSYB104K10
C 3506	(B,6,9)	CKSSYB104K10	C 5542	(A,35,66)	CSZSR470M10
C 3507	(B,19,26)	CKSQYB475K10	C 5543	(A,57,77)	CKSSYB102K50
C 5003	(B,109,39)	CKSSYB105K6R3	C 5544	(A,44,67)	CKSSYB104K10
C 5201	(A,124,65)	CKSSYB103K16	C 5545	(A,39,65)	CKSSYB103K16
C 5202	(A,126,73)	CKSRYB105K10	C 5546	(B,59,68)	CKSRYB105K10
C 5203	(A,133,62)	CKSQYB106K6R3	C 5547	(A,41,59)	CKSSYB104K10
C 5208	(A,124,62)	CKSRYB105K10	C 5548	(A,41,62)	CKSSYB104K10
C 5209	(A,123,59)	CKSSYB104K10	C 5549	(A,42,64)	CKSSYB104K10
C 5210	(A,124,57)	CKSQYB475K10	C 5550	(A,44,65)	CKSSYB104K10
C 5211	(A,122,70)	CKSQYB475K6R3	C 5551	(A,47,72)	CKSSYB104K10
C 5212	(A,122,73)	CKSRYB105K10	C 5552	(A,51,71)	CKSSYB104K10
C 5301	(A,100,34) 10 uF	DCH1201	C 5553	(A,53,74)	CKSSYB104K10
C 5302	(A,100,37) 10 uF	DCH1201	C 5555	(A,37,57)	CSZSR470M10
C 5303	(A,95,32)	CKSSYB104K10	C 5556	(A,70,73)	CCSSCH180J50
C 5304	(A,89,37)	CKSSYB104K10	C 5557	(A,41,74)	CSZSR470M10
C 5307	(A,92,41)	CKSSYB104K10	C 5558	(A,71,78)	CCSSCH180J50
C 5308	(A,97,41)	CKSSYB104K10	C 5560	(A,64,76)	CKSSYB104K10
C 5309	(A,93,34) 10 uF	DCH1201	C 5570	(A,57,41)	CKSSYB102K50
C 5314	(A,93,41)	CKSSYB104K10	C 5571	(A,71,46)	CKSSYB104K10
C 5401	(A,23,46)	CKSQYB475K6R3	C 5601	(A,88,77) 10 uF	DCH1201
C 5402	(A,31,47)	CKSSYB104K10	C 5602	(A,88,75)	CKSSYB104K10
C 5403	(A,22,48)	CKSSYB104K10	C 5701	(A,15,31)	CKSRYB105K16
C 5501	(A,81,77)	CKSRYB105K10	C 5702	(A,10,41) 10 uF	CCG1236
C 5502	(A,40,67)	CKSRYB105K10	C 5703	(A,7,50) 10 uF	CCG1236
C 5503	(A,81,47)	CKSSYB104K10	C 5704	(A,10,54)	CKSRYB104K16
C 5504	(A,84,35) 10 uF	DCH1201	C 5705	(A,25,31) 10 uF	CCG1236
C 5505	(A,73,44)	CSZS100M10	C 5706	(A,14,34)	CKSSYB104K16

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5		6		7		8	
<u>Circuit Symbol and No.</u>		<u>Part No.</u>		<u>Circuit Symbol and No.</u>		<u>Part No.</u>	
C 5707	(A,13,31)	CKSRYB105K10		CN1201	(A,16,44) Connector	CKS6003	
C 5708	(A,21,22)	CKSRYB474K10		CN1901	(A,21,7) Connector	CKS6025	
C 5710	(A,10,19)	CKSRYB105K10		RESISTORS			
C 5711	(A,21,32)	CKSSYB104K10		R 1002	(B,18,27)	RS1/16SS101J	
C 5713	(A,9,46) 10 uF	CCG1236		R 1004	(A,29,27)	RS1/16SS4702D	
C 5714	(A,9,44) 10 uF	CCG1236		R 1007	(A,29,26)	RS1/16SS6801D	
C 5715	(A,25,28) 10 uF	CCG1236		R 1019	(B,15,9)	RS1/16SS101J	
C 5716	(A,11,25)	CKSSYB104K10		R 1021	(A,27,15)	RS1/16SS0R0J	
C 5718	(A,9,30)	CKSSYB104K10		R 1025	(B,19,11)	RS1/16SS101J	
C 5805	(A,93,38)	CKSSYB104K10		R 1027	(A,27,19)	RS1/16SS101J	
C 5806	(A,98,45)	CKSSYB104K10		R 1101	(A,35,36)	RS1/16SS104J	
C 5807	(A,97,48)	CKSSYB104K10		R 1102	(A,43,42)	RS1/16SS104J	
C 5808	(A,103,39)	CKSSYB102K50		R 1103	(A,34,41)	RS1/16SS391J	
C 7503	(B,31,34)	CCSSCH180J50		R 1104	(A,36,36)	RS1/16SS511J	
C 7504	(B,13,51) (P,Q)	CKSRYB105K10		R 1105	(A,42,44)	RS1/16SS391J	
C 7505	(B,10,51) (P,Q)	CKSRYB105K10		R 1106	(A,45,39)	RS1/16SS561J	
C 7507	(B,72,9)	CKSSYB104K10		R 1109	(A,34,43)	RS1/16SS3R3J	
C 7508	(B,56,20)	CKSSYB104K10		R 1110	(A,41,43)	RS1/16SS3R3J	
C 7509	(B,30,36)	CCSSCH180J50		R 1111	(A,38,39)	RS1/10SR1R5J	
C 7513	(B,18,55) (P,Q)	CKSQYB106K6R3		R 1112	(A,38,38)	RS1/10SR1R5J	
C 7514	(B,25,42)	CCSSCH180J50		R 1113	(A,49,46)	RS1/10SR1R5J	
C 7515	(B,24,42)	CCSSCH180J50		R 1114	(A,48,46)	RS1/10SR1R5J	
C 7517	(B,26,42)	CCSSCH180J50		R 1115	(A,41,38)	RS1/10SR1R5J	
C 7541	(B,50,39)	CKSSYB104K10		R 1116	(A,41,39)	RS1/10SR1R5J	
C 7551	(B,14,47) (P,Q)	CCSSCH471J50		R 1117	(A,48,43)	RS1/10SR1R5J	
C 7552	(B,14,41) (P,Q)	CKSSYB105K6R3		R 1118	(A,49,43)	RS1/10SR1R5J	
C 7553	(B,11,40) (P,Q)	CKSSYB104K10		R 1201	(A,16,36)	RS1/16SS221J	
C 7554	(B,11,47) (P,Q)	CCSSCH471J50		R 1202	(A,17,35)	RS1/16SS221J	



Unit Number : YWX5013

Unit Name : DVD Core Unit

MISCELLANEOUS

IC 1002	(B,21,41) Regulator IC	S-1133B50-U5		R 1203	(A,22,35)	RS1/16SS103J	
IC 1003	(B,35,23) IC	S-1200B50-M5		R 1204	(A,19,35)	RS1/16SS153J	
IC 1004	(B,25,11) IC	NJM2885DL1-33		R 1212	(A,7,36)	RS1/16SS271J	
IC 1005	(B,19,21) IC	R1232D121B		R 1213	(B,8,29)	RS1/16SS1R0J	
IC 1201	(A,15,29) IC	BD8231EFV		R 1214	(B,8,27)	RS1/16SS1R0J	
*IC1401	(B,63,36) Flash ROM Unit	CWW2267		R 1215	(B,8,28)	RS1/16SS1R0J	
*IC1402	(B,50,36) Flash ROM Unit	CWW2268		R 1216	(B,8,24)	RS1/16SS1R0J	
IC 1480	(B,59,13) SDRAM(64M)	K4S641632N-LC75		R 1217	(B,8,25)	RS1/16SS1R0J	
IC 1501	(A,60,20) IC	MN2DS0018MAUB		R 1218	(B,8,26)	RS1/16SS1R0J	
IC 1801	(B,37,16) D/A Converter	PCM1753DBQ		R 1222	(B,26,39)	RS1/16SS271J	
Q 1101	(A,35,39) Transistor	2SC4081		R 1300	(B,39,24)	RS1/16SS0R0J	
Q 1102	(A,46,42) Transistor	2SC4081		R 1401	(B,63,49)	RS1/16SS221J	
Q 1103	(A,38,45) Transistor	2SB1132		R 1402	(B,70,27)	RS1/16SS104J	
Q 1104	(A,45,49) Transistor	2SB1132		R 1405	(B,56,24)	RS1/16SS104J	
L 1003	(B,22,26) Inductor	CTF1677		R 1406	(B,54,25)	RS1/16SS104J	
L 1004	(B,14,17) Inductor	CTF1678		R 1480	(B,52,21)	RAB4CQ560J	
L 1512	(A,57,5) Inductor	CTF1743		R 1481	(B,56,21)	RAB4CQ560J	
L 1902	(B,5,8) Inductor	CTF1487		R 1482	(B,61,21)	RAB4CQ560J	
L 1903	(B,12,11) Inductor	CTF1558		R 1483	(B,64,21)	RAB4CQ560J	
L 1904	(B,46,19) Inductor	CTF1473		R 1484	(B,67,21)	RAB4CQ560J	
X 1501	(B,43,7) Oscillator 27.000 MHz	CSS1768		R 1485	(B,50,5)	RAB4CQ560J	
EF1001	(B,5,12) Chip EMI Filter	DTF1106		R 1486	(B,55,5)	RAB4CQ560J	
EF1002	(B,11,13) Chip EMI Filter	DTL1106		R 1487	(B,64,5)	RAB4CQ560J	
CN1101	(A,66,49) Connector	CKS5775		R 1488	(B,68,5)	RAB4CQ560J	
				R 1489	(B,59,5)	RS1/16SS560J	
				R 1490	(B,50,21)	RS1/16SS560J	
				R 1501	(B,46,7)	RS1/16SS122J	
				R 1503	(B,45,8)	RS1/16SS105J	
				R 1504	(B,45,13)	RS1/16SS120J	
				R 1505	(A,43,13)	RS1/16SS101J	

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Circuit Symbol and No.**Part No.****Circuit Symbol and No.****Part No.**

R 1506	(A,37,14)	RS1/16SS101J	C 1015	(B,7,8)	CKSSYB102K50
R 1507	(A,44,14)	RS1/16SS101J	C 1016	(B,12,10)	CKSSYB102K50
R 1508	(A,43,15)	RS1/16SS221J	C 1018	(A,28,28)	CKSSYB104K10
R 1509	(A,63,35)	RS1/16SS102J	C 1019	(A,10,17)	CKSSYB104K10
R 1510	(A,64,35)	RS1/16SS102J	C 1021	(B,34,4)	CCSRCH681J50
R 1511	(B,46,13)	RS1/16S0R0J	C 1022	(A,23,21)	CCSRCH681J50
R 1512	(A,58,5)	RS1/16SS101J	C 1101	(B,31,40) 10 uF	DCH1201
R 1513	(A,66,35)	RS1/16SS103J	C 1104	(A,34,42)	CKSSYB104K10
R 1514	(A,68,35)	RS1/16SS183J	C 1105	(A,42,45)	CKSSYB104K10
R 1516	(A,65,36)	RS1/16SS103J	C 1106	(A,37,48)	CKSSYB103K16
R 1517	(A,76,16)	RS1/16SS103J	C 1107	(A,41,49)	CKSSYB103K16
R 1518	(A,74,24)	RS1/16SS103J	C 1108	(A,74,42)	CKSSYB103K16
R 1519	(A,70,34)	RS1/16SS102J	C 1109	(A,56,41)	CKSRYB224K10
R 1522	(A,65,38)	RS1/16SS104J	C 1110	(A,71,42)	CKSSYB103K16
R 1523	(A,66,37)	RS1/16SS221J	C 1111	(A,61,39)	CKSRYB224K10
R 1524	(A,64,37)	RS1/16SS472J	C 1112	(B,40,39) 22 uF	CCG1178
R 1525	(A,71,34)	RS1/16SS103J	C 1113	(B,36,38) 22 uF	CCG1178
R 1526	(A,67,34)	RS1/16SS103J	C 1201	(B,12,34)	CEVW101M16
R 1527	(B,77,29)	RS1/16SS682J	C 1204	(A,8,24)	CKSSYB222K50
R 1528	(A,78,20)	RS1/16SS103J	C 1205	(A,13,23)	CKSSYB104K16
R 1529	(A,76,18)	RS1/16SS103J	C 1207	(A,22,25)	CKSSYB104K16
R 1530	(A,77,20)	RS1/16SS103J	C 1208	(A,15,36)	CKSSYB103K16
R 1531	(A,75,24)	RS1/16SS103J	C 1209	(B,10,25)	CKSSYB104K16
R 1533	(A,75,29)	RS1/16SS104J	C 1210	(B,6,23)	CKSSYB104K16
R 1534	(A,78,30)	RS1/16SS221J	C 1211	(B,9,22)	CKSYB475K16
R 1535	(B,70,34)	RS1/16SS104J	C 1401	(B,63,48)	CKSSYB103K16
R 1536	(A,78,31)	RS1/16SS104J	C 1403	(B,69,23)	CKSSYB104K10
R 1537	(A,73,35)	RS1/16SS104J	C 1404	(B,58,25)	CKSQYB475K6R3
R 1538	(A,61,4)	RS1/16SS104J	C 1408	(B,47,25)	CKSSYB104K10
R 1539	(A,77,23)	RS1/16SS104J	C 1409	(B,47,23)	CKSQYB475K6R3
R 1540	(A,73,32)	RS1/16SS221J	C 1480	(B,47,21)	CKSSYB104K10
R 1541	(A,75,32)	RS1/16SS221J	C 1481	(B,49,23)	CKSSYB104K10
R 1542	(A,77,29)	RS1/16SS103J	C 1482	(B,54,21)	CKSSYB104K10
R 1546	(B,75,29)	RS1/16SS682J	C 1484	(B,59,20)	CKSSYB104K10
R 1601	(A,42,25)	RS1/16SS123J	C 1485	(B,69,21)	CKSSYB104K10
R 1602	(A,44,25)	RS1/16SS123J	C 1487	(B,58,4)	CKSSYB104K10
R 1603	(A,43,30)	RN1/16SE1002D	C 1488	(B,52,5)	CKSSYB104K10
R 1604	(A,50,35)	RS1/16SS105J	C 1489	(B,45,20)	CKSQYB106K6R3
R 1605	(A,49,37)	RS1/16SS105J	C 1490	(B,45,23)	CKSSYB102K50
R 1670	(A,34,21)	RS1/16SS1002D	C 1501	(B,72,9)	CKSQYB106K6R3
R 1671	(A,36,21)	RS1/16SS2402D	C 1502	(A,35,32)	CKSQYB106K6R3
R 1672	(A,45,19)	RS1/16SS2000D	C 1503	(A,60,4)	CKSSYB104K10
R 1674	(A,45,20)	RS1/16SS3002D	C 1504	(A,51,5)	CKSSYB104K10
R 1801	(B,35,6)	RS1/16SS104J	C 1505	(A,53,5)	CKSSYB104K10
R 1802	(B,33,6)	RS1/16SS104J	C 1506	(A,55,5)	CKSSYB104K10
R 1803	(B,35,11)	RS1/16SS821J	C 1507	(A,62,5)	CKSSYB104K10
R 1804	(B,34,11)	RS1/16SS821J	C 1508	(A,66,5)	CKSSYB104K10
			C 1509	(A,69,5)	CKSSYB104K10
			C 1510	(B,46,5)	CCSSCH120J50
			C 1511	(A,46,9)	CKSSYB104K10
			C 1512	(B,43,10)	CCSSCH100D50
			C 1513	(B,74,12)	CKSSYB104K10
			C 1514	(A,46,13)	CKSSYB104K10
			C 1515	(A,45,15)	CKSSYB104K10
			C 1516	(A,75,15)	CKSSYB104K10
			C 1517	(A,74,16)	CKSSYB104K10
			C 1518	(A,75,22)	CKSSYB104K10
			C 1519	(A,74,26)	CKSSYB104K10
			C 1520	(A,75,30)	CKSSYB104K10
			C 1521	(A,60,37)	CKSSYB104K10

CAPACITORS

C 1001	(B,36,21)	CKSRYB105K10	C 1512	(B,43,10)	CCSSCH100D50
C 1003	(B,18,44)	CKSSYB104K16	C 1513	(B,74,12)	CKSSYB104K10
C 1004	(B,24,40)	CKSQYB475K10	C 1514	(A,46,13)	CKSSYB104K10
C 1005	(B,32,23)	CKSRYB105K16	C 1515	(A,45,15)	CKSSYB104K10
C 1008	(B,20,31) 10 uF	DCH1201	C 1516	(A,75,15)	CKSSYB104K10
C 1009	(B,18,31) 10 uF	DCH1201			
C 1010	(B,26,18)	CKSQYB225K10	C 1517	(A,74,16)	CKSSYB104K10
C 1011	(B,22,18)	CKSRYB105K10	C 1518	(A,75,22)	CKSSYB104K10
C 1013	(B,15,25) 10 uF	DCH1201	C 1519	(A,74,26)	CKSSYB104K10
C 1014	(B,13,25) 10 uF	DCH1201	C 1520	(A,75,30)	CKSSYB104K10
			C 1521	(A,60,37)	CKSSYB104K10

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<u>Circuit Symbol and No.</u>		<u>Part No.</u>		<u>Circuit Symbol and No.</u>		<u>Part No.</u>	
C 1522	(A,65,34)	CKSSYB104K10					
C 1523	(A,68,37)	CKSSYB104K10			Pickup Unit(Service)	CXX2398	
C 1524	(A,69,37)	CKSSYB473K10		M 1	Motor Unit(LOAD/CRG)	CXC4026	
C 1526	(A,68,37)	CKSSYB103K16		M 2	Motor(SPINDLE)	EXM1050	A
C 1528	(A,78,29)	CCSSCH471J16					
C 1601	(A,44,29)	CKSSYB103K16					
C 1602	(A,42,24)	CCSSCH101J50					
C 1603	(A,44,27)	CCSSCH101J50					
C 1604	(A,41,27)	CCSSCH680J50					
C 1605	(A,43,27)	CCSSCH680J50					
C 1606	(A,41,23)	CKSSYB104K10					
C 1607	(A,41,35)	CKSQYB106K6R3					
C 1608	(A,43,36)	CKSRYB105K10					
C 1609	(A,48,35)	CKSSYB104K10					
C 1610	(A,50,37)	CKSSYB104K10					B
C 1611	(A,51,37)	CKSSYB104K10					
C 1612	(A,52,34)	CKSSYB104K10					
C 1613	(A,52,37)	CKSSYB104K10					
C 1614	(A,53,34)	CKSSYB104K10					
C 1615	(A,54,34)	CKSSYB104K10					
C 1616	(A,54,37)	CKSSYB104K10					
C 1617	(A,54,38)	CKSSYB104K10					
C 1618	(A,56,34)	CCSSCH101J50					
C 1619	(A,57,34)	CKSSYB562K25					
C 1620	(A,58,34)	CKSSYB224K6R3					C
C 1621	(A,57,37)	CKSSYB224K6R3					
C 1622	(A,59,35)	CKSSYB333K16					
C 1623	(A,45,35)	CKSRYB105K10					
C 1624	(A,58,37)	CKSSYB104K10					
C 1625	(A,56,37)	CKSSYB104K10					
C 1671	(A,44,17)	CKSSYB104K10					
C 1672	(A,45,18)	CKSSYB104K10					
C 1673	(A,45,22)	CKSSYB104K10					
C 1674	(A,43,21)	CKSSYB104K10					
C 1676	(A,38,22)	CKSRYB105K10					
C 1801	(B,34,8)	CKSQYB475K6R3					D
C 1802	(B,32,8)	CKSQYB475K6R3					
C 1803	(B,36,8)	CCSRCH182J50					
C 1804	(B,31,7)	CCSRCH182J50					
C 1805	(B,32,19)	CKSSYB104K10					
C 1806	(B,39,9) 10 uF	DCH1201					
C 1809	(B,43,16)	CKSSYB104K10					
C 1934	(B,42,29)	CCSRCH680J50					
C 1954	(B,43,49)	CCSRCH470J50					

D

Unit Number :

Unit Name : Connect PCB

MISCELLANEOUS

S 101	(B,51,37)	Switch(HOME)	CSN1068
S 102	(B,12,23)	Switch(DSCSNS)	CSN1068
S 103	(B,22,10)	Switch(8SNS)	CSN1068
R 101	(B,52,27)		RS1/16S101J
R 102	(B,15,29)		RS1/16S101J
R 103	(B,16,11)		RS1/16S101J
C 101	(B,51,23)		CKSRYB104K50

Miscellaneous Parts List