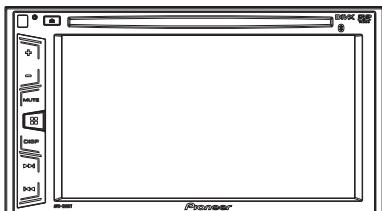


Pioneer

Service Manual



ORDER NO.
CRT5859

DVD RDS AV RECEIVER

AVH-280BT /XNUC

AVH-280BT /XNEU5

AVH-285BT /XNRC

AVH-285BT /XNRD

AVH-285BT /XNRI

AVH-289BT /XNID

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

Model No.	Order No.	Mech.Module	Remarks
CX-3311	CRT5651	LS2.5	DVD Mech. Module : Circuit Descriptions, Mech. Descriptions, Disassembly, Diagnosis , Each Setting and Adjustment



PIONEER CORPORATION 1-1, Shin-ogura, Saiwai-ku, Kawasaki-shi, Kanagawa 212-0031, Japan

PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.

PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium

PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 2 Jalan Kilang Barat, #07-01, Singapore 159346

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SAFETY INFORMATION

A 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

B 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.

C 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.**

D **CAUTION**

This product is a class 1 laser product classified under the Safety of laser products, IEC 60825-1:2007, and contains a class 1M laser module. To ensure continued safety, do not remove any covers or attempt to gain access to the inside of the product. Refer all servicing to qualified personnel.

CLASS 1 LASER PRODUCT

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

F **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.

CAUTION

Danger of explosion if battery is incorrectly replaced.

Replaced only with the same or equivalent type recommended by the manufacturer.

Discard used batteries according to the manufacturer's instructions.

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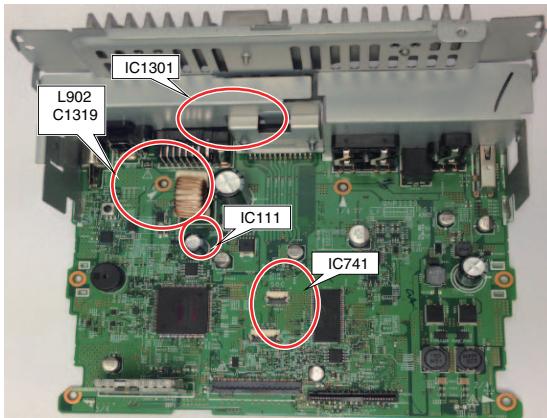
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1. SERVICE PRECAUTIONS

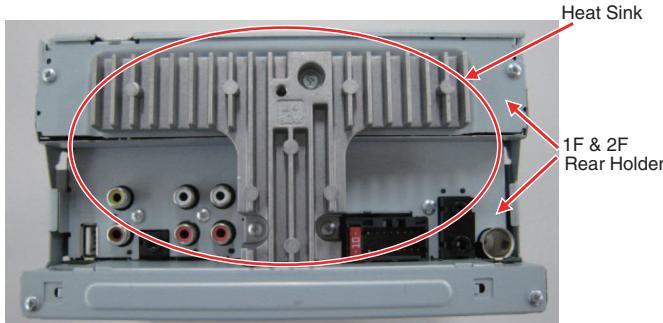
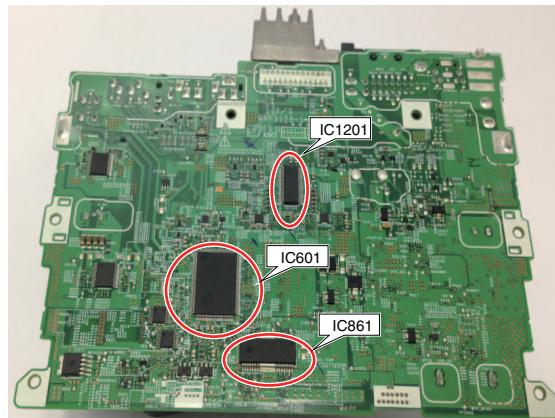
1.1 SERVICE PRECAUTIONS

- 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.
- Please keep the distance of more than 13 cm from focus lens for safety when you check pickup and make adjustment, and do not look straight at Laser Beam for more than 10 seconds.
-  area and a heat sink becomes hot areas. Be careful not to burn yourself.

MOTHER PCB (Side A)



MOTHER PCB (Side B)

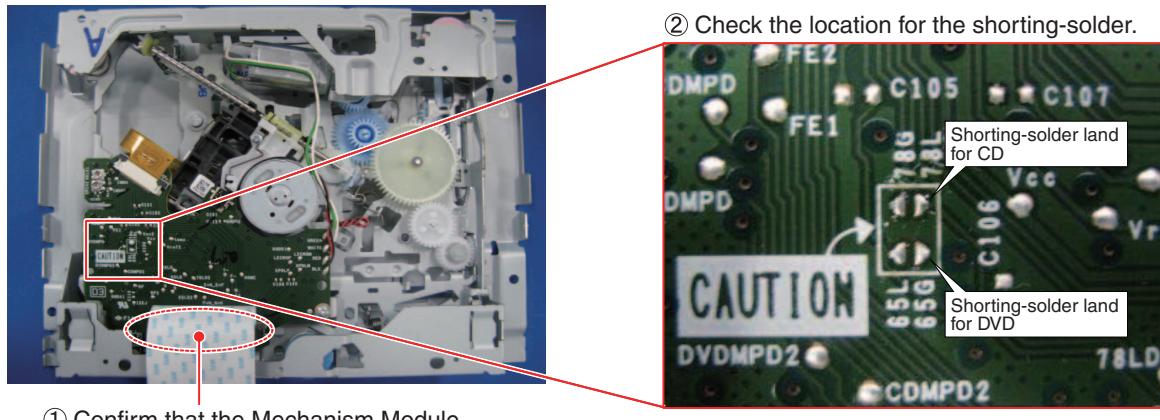


1.2 NOTES ON DISASSEMBLY / ASSEMBLY

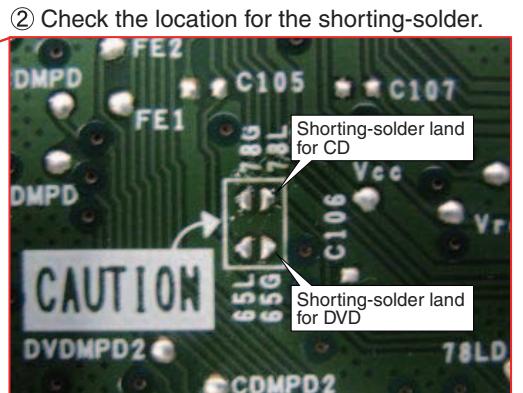
- Before disassembling the unit, be sure to turn off the power. Unplugging and plugging the connectors during power-on mode may damage the ICs inside the unit.
- Please be sure to conduct line process to original status if you make assembling after repair.
- The shorting-solder protects the laser diode (LD) from the static electricity. When replacing the DVD Mechanism Module, please take an appropriate treatment (shorting-solder) by referring to the procedure below.

1. Procedure for removing the DVD Mechanism Module of the product

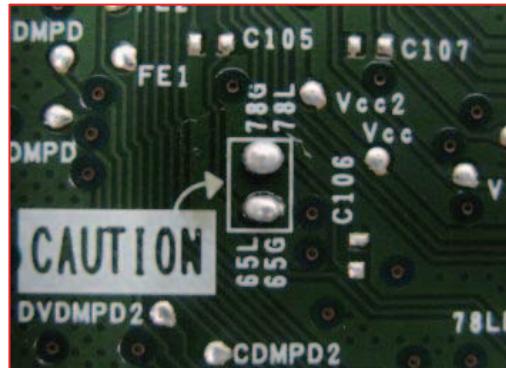
- (1) To protect the LD, short-circuit the solder while the Mechanism Module remains connected to the product.



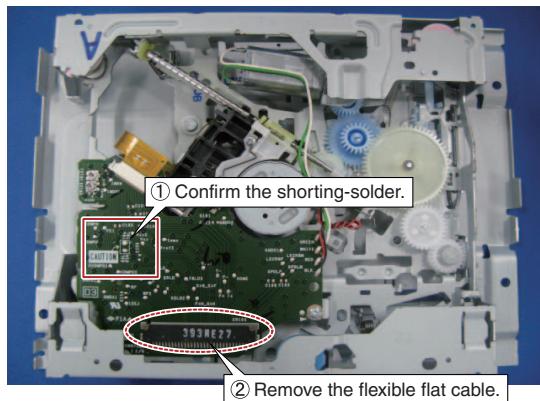
① Confirm that the Mechanism Module is connected to the product.



③ Short-circuit the solder to be ready to remove the DVD Mechanism Module.



- (2) After confirming the shorting-solder has been done securely, remove the DVD Mechanism Module of the product.



2. Procedure for connecting the DVD Mechanism Module to the product

For the Mechanism Module which is provided as service part, the shorting-solder has been done to protect the LD.

When replacing the Mechanism Module, please connect it to the product at first and then remove the shorting-solder in reverse order of the previous procedure for removing.

1.3 NOTES ON OPERATION CHECK / DIAGNOSIS

- EJECT LOCK MODE for DVD mechanism

< Procedure >

To enter EJECT LOCK MODE : Reset start while pressing [VOL+] key and [REVERSE] key.

To exit EJECT LOCK MODE : Follow the same steps to enter this mode.

A

- Notes for the memory backup

B.UP OFF or pressing [RESET] key stores the settings (i.e. EQ curve).

To delete the settings completely, you need to clear the settings using the Restore Setting menu in SYSTEM Setting.

1.4 NOTES ON REPLACING PARTS

- Be careful in handling ICs. Some ICs such as MOS type are so fragile that they can be damaged by electrostatic induction.

B

- Please be careful of not to apply static charge onto integrated circuits, etc, when you conduct repair work.

Especially, please use soldering iron with its tip grounded.

Also, please use a pair of tweezers with static charge protection capability if there is the possibility of contacting to device terminals, and avoid the use of metal-made tweezers.

- The part listed below is difficult to replace as a discrete component part.

When the part listed in the table is defective, replace whole Assy.

Unit	No.	Part No.	Reason
Mother PCB	IC2201	TEF6686HN	Heat pad
	IC401	MN103LF15RXW	Blank IC
Service Unit(Monitor)	IC5101	OZ527ILN	Heat pad
	IC5201	R1290K103A	Heat pad

C

- On this mechanism, Pickup and Spindle Motor can not be replaced at the Service Site, because a special facility is required for the adjustment after replacing them.

So, if Pickup or Spindle Motor is defective, replace the DVD Mechanism Module.

D

- The skew adjustment and LD power adjustment for the DVD Mechanism Module have already finished, so you cannot replace its Pickup unit or board unit separately.

1.5 NOTES ON ADJUSTMENT

- Some of the adjustment is required when the part is replaced.

Please refer to "8.1 ADJUSTMENT REQUIRED WHEN THE UNIT IS REPLACED".

E

1.6 OTHERS

- Notes on soldering

For environmental protection, lead-free solder is used on the printed circuit boards mounted in this unit.

E

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.

F

2. SPECIFICATIONS

2.1 SPECIFICATIONS

For all items except the backup current, refer to the Owner's Manual.

A

Backup current..... 5.0 mA or less

2.2 DISC/CONTENT FORMAT

B



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DVD is a trademark of DVD Format/Logo Licensing Corporation.

C



D

E

F

3. BASIC ITEMS FOR SERVICE

3.1 CHECK POINTS AFTER SERVICING

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

A

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:

B

C

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	

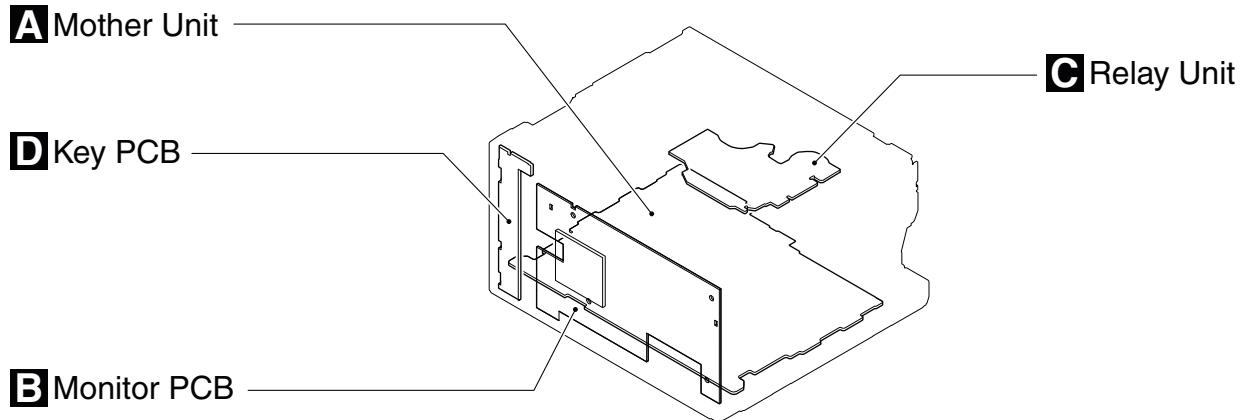
D

E

F

3.2 PCB LOCATIONS

A



B

C

A:AVH-280BT/XNUC

B:AVH-280BT/XNEU5

C:AVH-285BT/XNRC

D:AVH-285BT/XNRD

E:AVH-285BT/XNRI

F:AVH-289BT/XNID

Unit Name : Mother Unit

Unit Number : QWM4221(A)

Unit Number : QWM4220(B)

Unit Number : QWM4223(C)

Unit Number : QWM4224(D)

Unit Number : QWM4225(E)

Unit Number : QWM4226(F)

Monitor Key Unit

Consists of

Monitor PCB

Key PCB

Unit Name : Monitor Key Unit

Unit Number : QWM4236(A,C,D,E,F)

Unit Number : QWM4234(B)

Unit Name : Relay Unit (NSP)

D

E

F

3.3 JIGS LIST

● Jigs List

Name	Jig No.	Remarks
Disc(DVD-Video)	GGV1025 (TDV-582)	Check points after servicing, Inspection method of Pickup Unit
Disc(CD-DA)	TCD-782	Inspection method of Pickup Unit
30P FFC	GGD1222	RELAY UNIT <-> MOTHER UNIT

● Grease List

Name	Jig No.	Remarks
Grease	GEM1024	DVD Mechanism Module
Grease	GEM1045	DVD Mechanism Module
Grease	GEM1043	DVD Mechanism Modulet

A

B

C

D

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

E

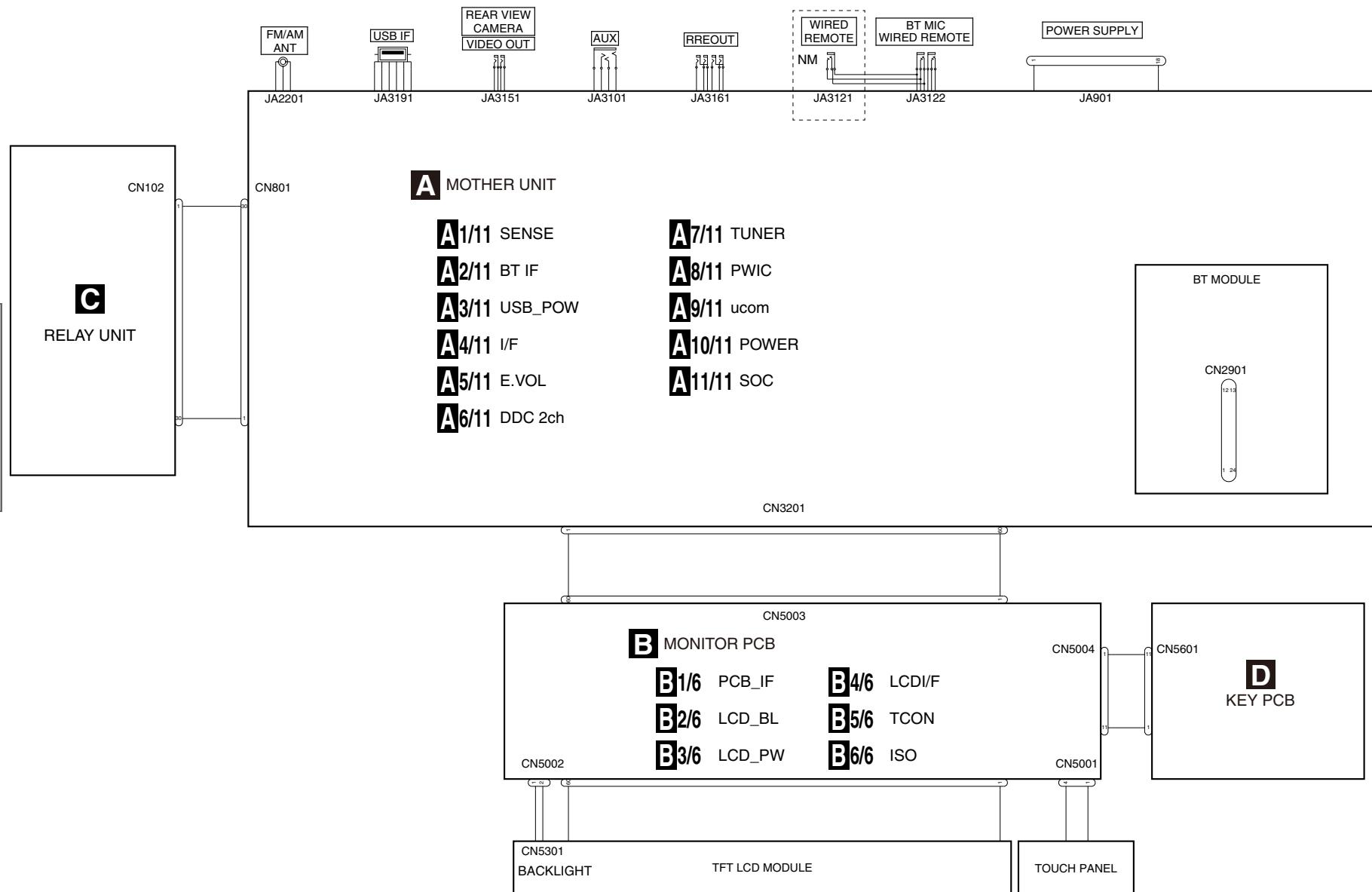
F

4. BLOCK DIAGRAM

4.1 OVERALL CONNECTION DIAGRAM

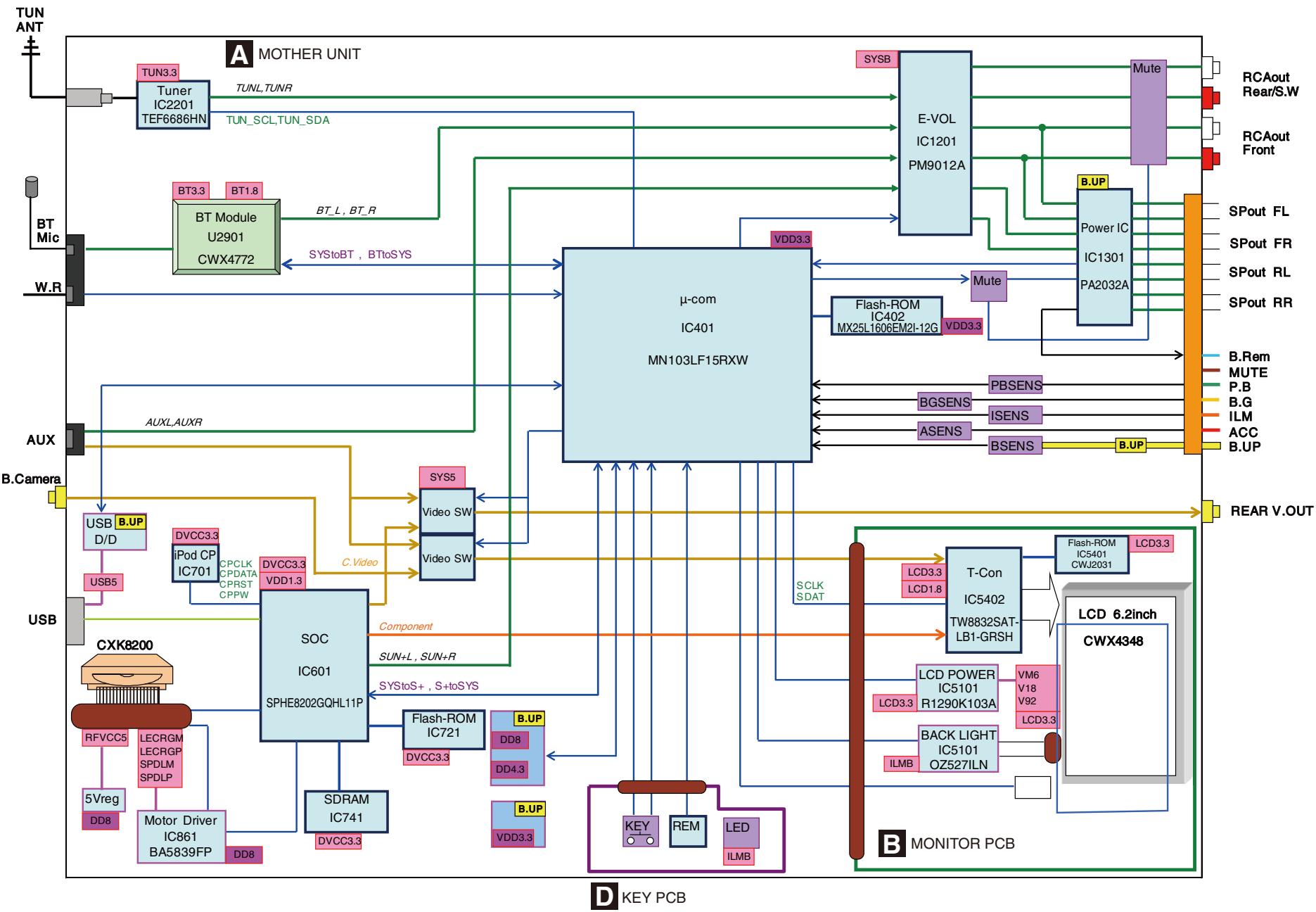
4. BLOCK DIAGRM

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

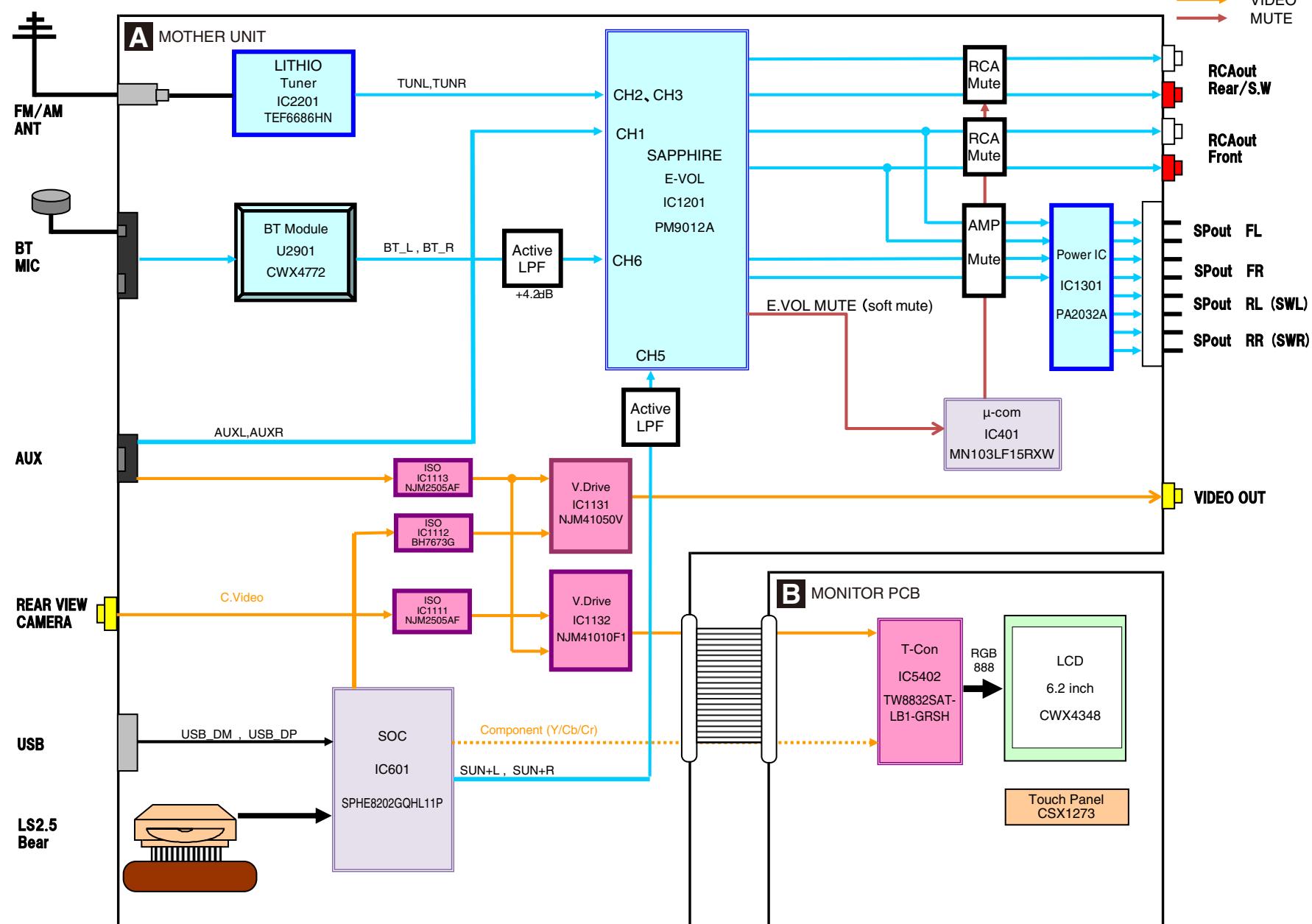


4.2 BLOCK DIAGRAM

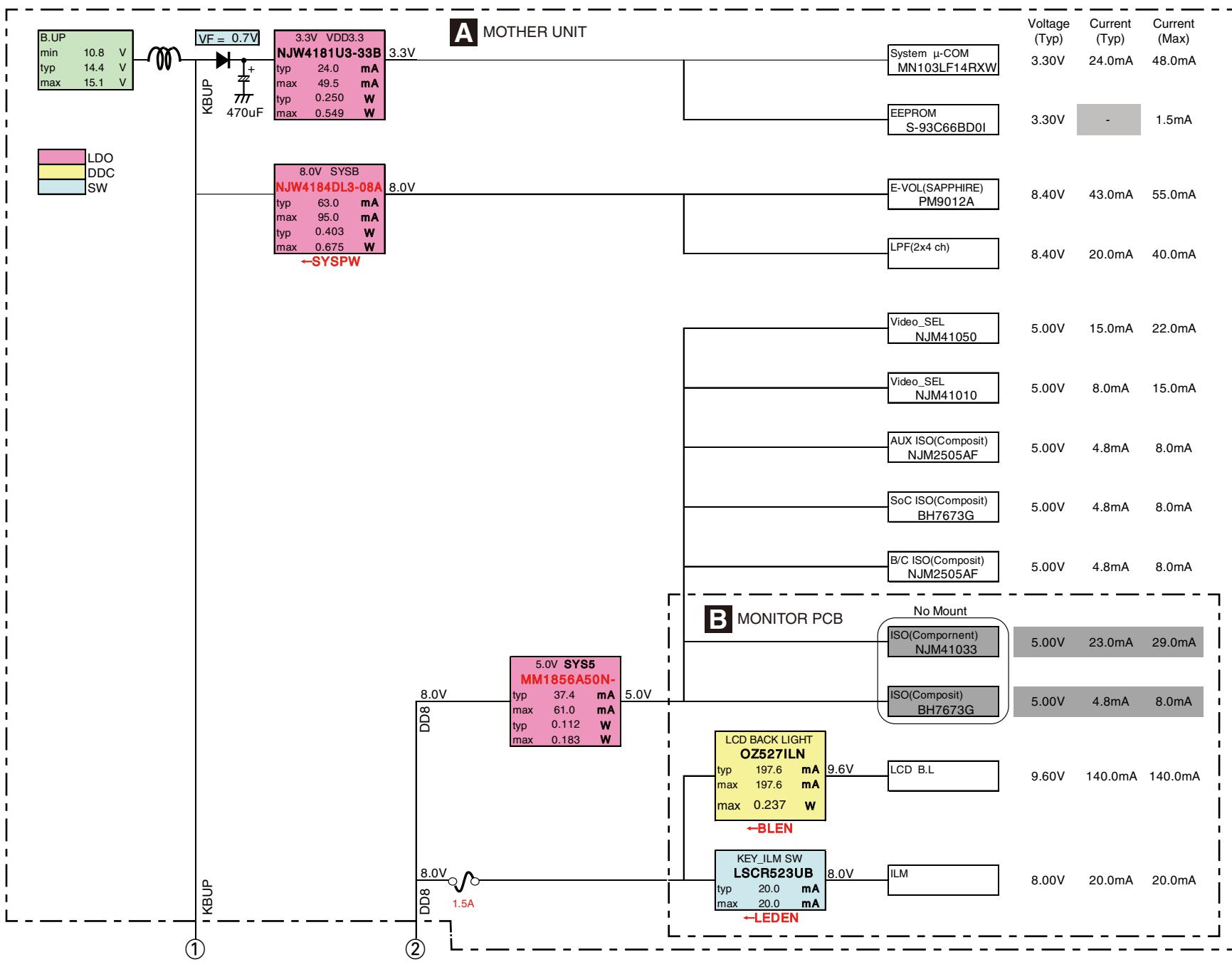
● SYSTEM BLOCK DIAGRAM

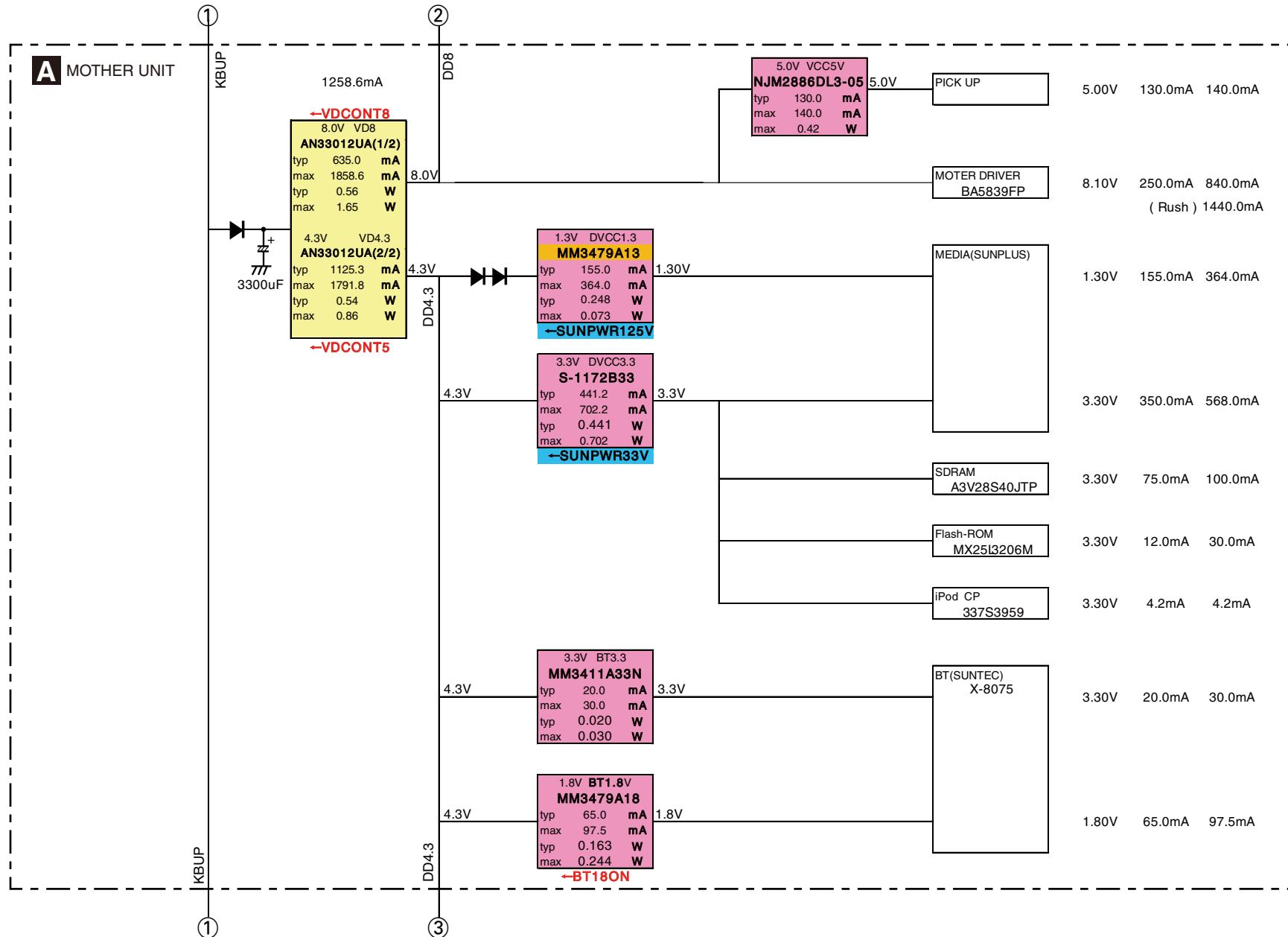


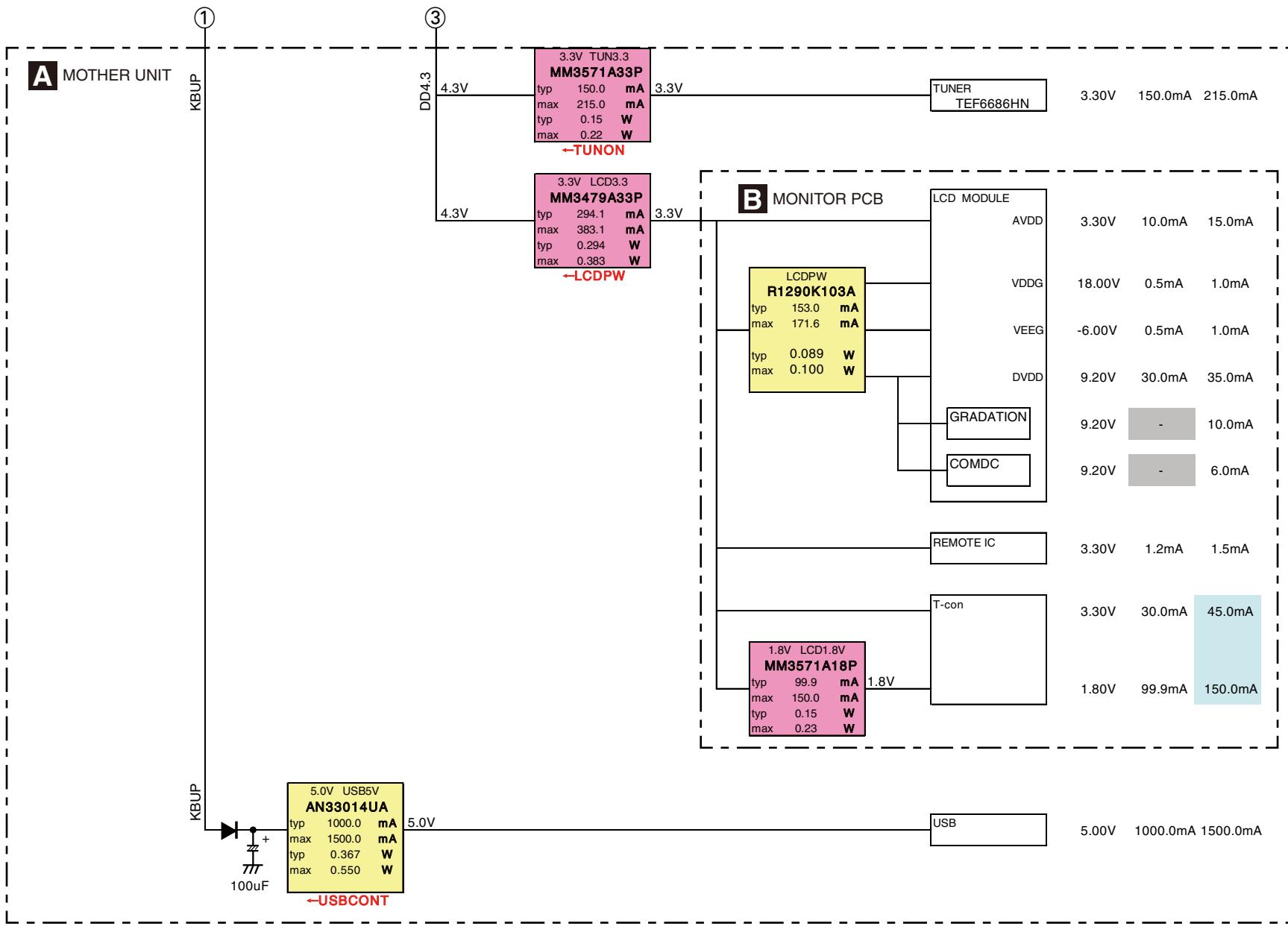
● AUDIO VIDEO BLOCK DIAGRAM



4.3 POWER SUPPLY SYSTEM FIGURE







5. DIAGNOSIS

5.1 OPERATIONAL FLOWCHART

A



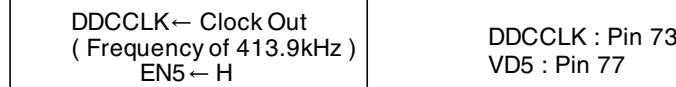
B



C



D



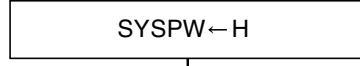
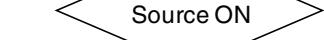
E



F



SUNSTBY : Pin 31



Completes power_on operation.
(After that, proceed to each source operation)

5.2 INSPECTION METHOD OF PICKUP UNIT

Disc to be used

CD-DA : TCD-782

DVD-Video : GGV1025 (TDV-582)

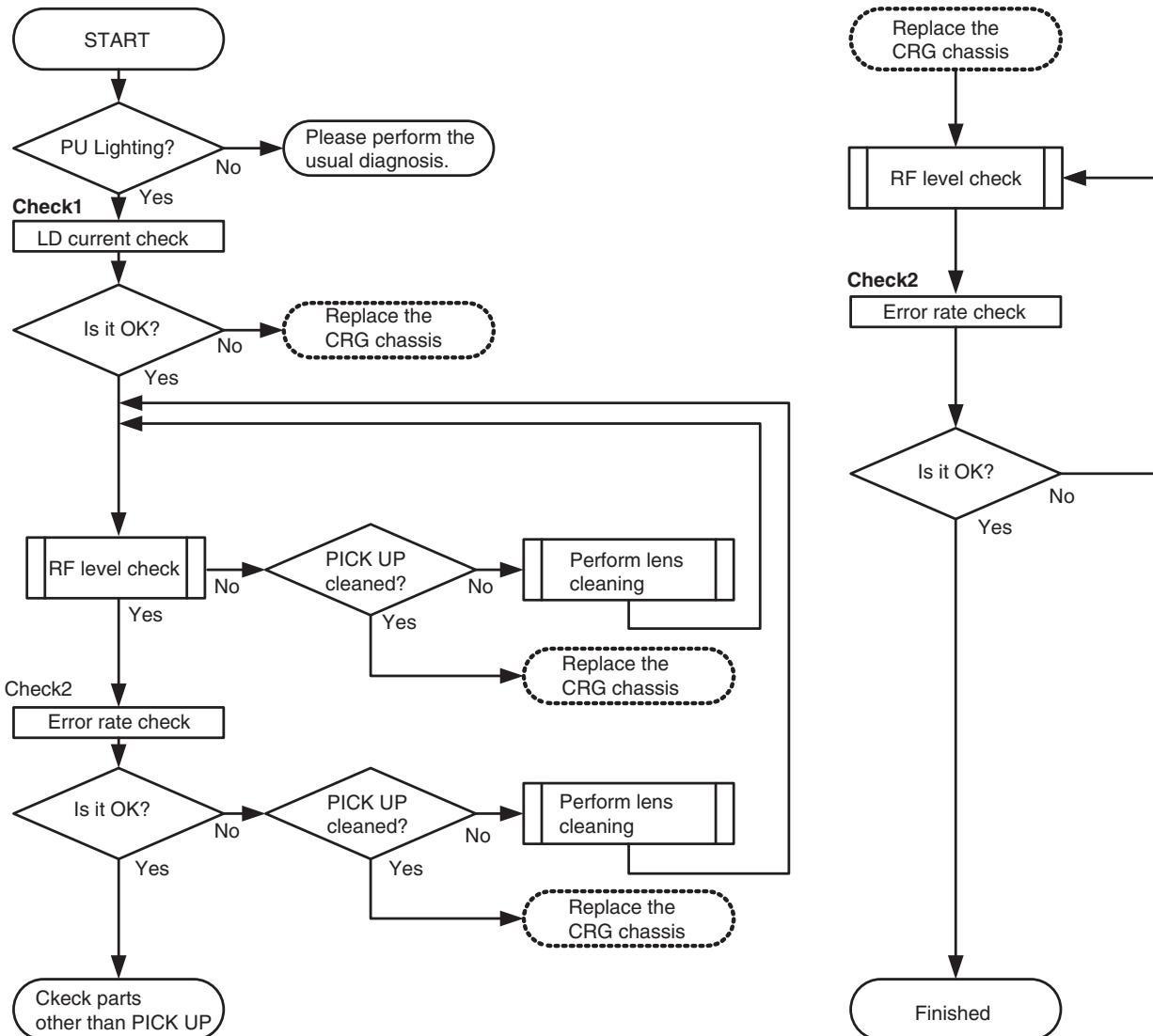
A

Exact judgment cannot be performed if the disk to be used has a crack and dirt.
Be careful of handling of a disk enough.

Execution method

Refer to the following page for the details of the check 1 and the check 2.

B



C

D

E

F

A Check1 : LD current check

Notes:

Since LD current value tends to raise according to deterioration, please refer to maximum value for diagnosis.
LD current should not be beyond the maximum value.

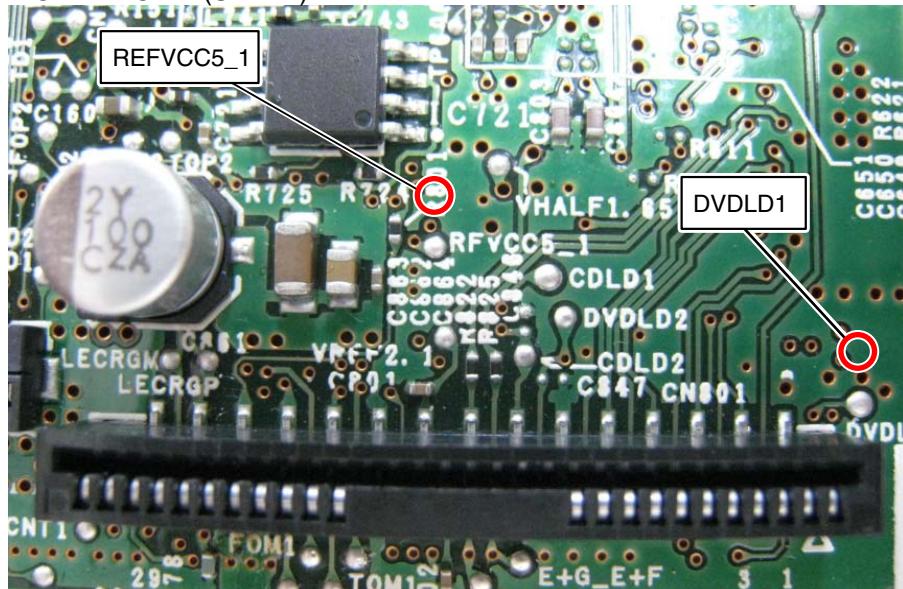
<Check>

Status: [Foucs closed] of TEST MODE

[DVD]

No.	Disc	Check Point	Criteria for voltage	Remarks: LD current
1	GGV1025	REFVCC5_1 - DVLD1	510 mV (Ave) 663 mV (Max)	50 mA (Ave) 65 mA (Max)

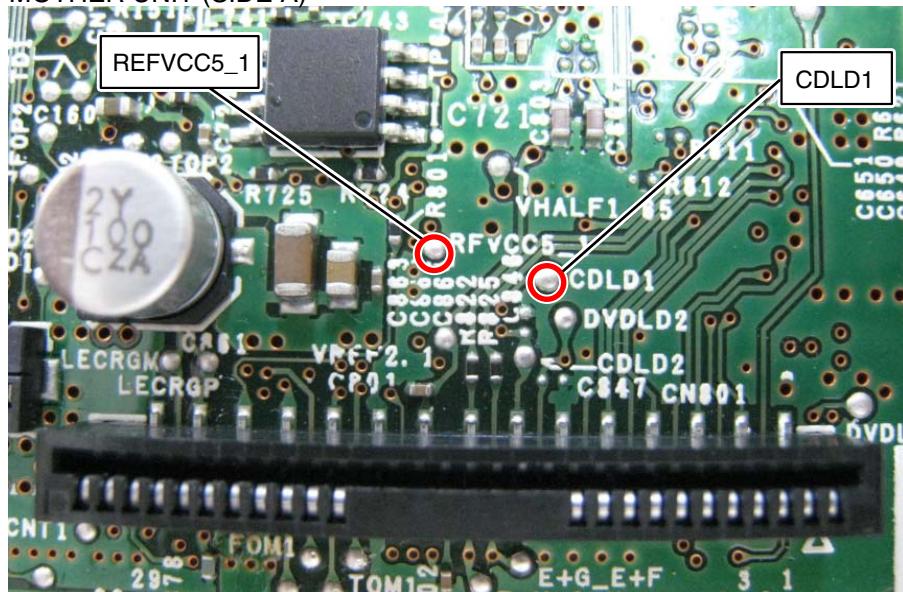
MOTHER UNIT (SIDE A)



[CD]

No.	Disc	Check Point	Criteria for voltage	Remarks: LD current
2	TCD-782	REFVCC5_1 - CDLD1	449 mV (Ave) 660 mV (Max)	45 mA (Ave) 60 mA (Max)

MOTHER UNIT (SIDE A)



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

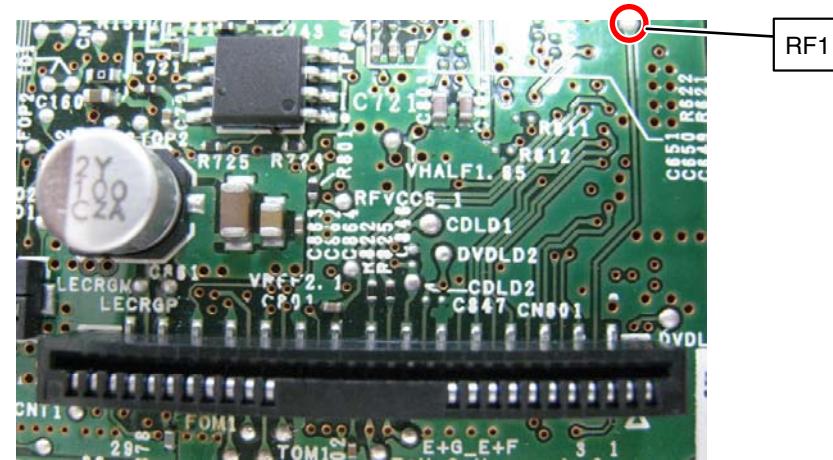
Check : RF level

<Check>

Check the RF level.

Status: Playback the test discs on the NORMAL MODE.

No.	Disc	Check Point	Threshold	Remarks (Disc Type)
1	GGV1025	RF1 - GND	740 - 1000 (mVp-p)	DVD
2	TCD-782	RF1 - GND	528 - 832 (mVp-p)	CD

**Check2 : Error rate check**

<Check>

Status: Error Rate Mode of DVD TEST MODE

No.	Disc	Check Point	Threshold	Remarks (Disc Type)
1	GGV1025	1. Inner Measurement	less than 1.000E-3	DVD
2	TCD-782	1. Inner Measurement	less than 2.500E-3	CD

5.3 ERROR CODE LIST

A	Error status	OSD *1 for example in display comment	Notice ID to MCU *2	Meaning	Source			Method of reset			
					Disc	USB (iPod)	USB (MSC)	ACC Off/On	Source Off/On	Eject/ With no device	Play Key
	NO_DISC	(No display)	40h	no disc/ bad disc/ error disc	X	-	-	*	*	*	*
	DISCID_ERROR	ERROR-02-AA	AAh	error disc / unknow disc	X	-	-	*	*	*	*
	ILLEGAL CMD	(No display)	B3h	Unknow or error ATAPI cmd	X	-	-	X	X	X	-
	ILLEGAL PARA	(No display)	B4h	error ATAPI cmd parameter	X	-	-	X	X	X	-
	FOCUS_ERROR	ERROR-02-9E	22h	cannot f-on after retry	X	-	-	X	X	X	-
	TRACK_ERROR	ERROR-02-A9	A9h	cannot t-on after retry	X	-	-	X	X	X	-
	LOADER ERROR	(No display)	50h	loading/eject timeout	X	-	-	X	X	X	-
	SLED ERROR	ERROR-02-92	25h	CRG HOME timeout	X	-	-	X	X	X	-
	SPINDLE ERROR	ERROR-02-91	24h	CAV/CLV timeout / CAV/CLV FNG	X	-	-	X	X	X	-
	SEEK ERROR	ERROR-02-80	23h	seek timeout/seek fail	X	-	-	X	X	X	-
	READQ ERROR	ERROR-02-94	26h	cannot read subQ/ID	X	-	-	X	X	X	-
	FATAL ERROR	ERROR-02-90	21h	cannot f-on after retry 30 times	X	-	-	X	X	X	-
	LAYERJUMP ERROR	ERROR-02-AB	ABh	cannot layer jump after retry	X	-	-	X	X	X	-
	SETUP TIMEOUT ERROR	ERROR-02-B5	B5h	setup time out by repeating retry	X	-	-	X	X	X	-

*1 -xx-xx : Assigning a code number

*2 B0-BFh : Notice IDs which are not listed in the LS Mechanism list

C0-FFh : Notice IDs such as ATN which attempt the servo system notice

X : Corresponding source

- : Not corresponding source

X : Cancel the error by operation.

- : Error is not cancelled by operation.

* : No setting

C

D

E

F

Common**AMP Error**

- This product fails to operate or the speaker connection is incorrect; the protective circuit is activated.
 - Check the speaker connection.
 - Check the power IC and its peripheral circuit.

Product overheated. System will be shut down automatically in 1 minute. Restart the product by ACC Off/On may fix this problem. If this message keep showing up, it is possible that some problem occurred in the product.

- The temperature is too high for this product to operate.
 - Follow the instructions displayed on the screen.

Disc**Error-02-XX/FF-FF**

- The disc is dirty.
 - Clean the disc.
- The disc is scratched.
 - Replace the disc.
- The disc is loaded upside down.
 - Check that the disc is loaded correctly.
- There is an electrical or mechanical error.
 - Press the **RESET** button.

Different Region Disc

- The disc does not have the same region number as this product.
 - Replace the DVD with one bearing the correct region number.

Unplayable Disc

- This type of disc cannot be played on this product.
 - Replace the disc with one that can be played on this product.

Unplayable File

- This type of file cannot be played on this product.
 - Select a file that can be played.

Skipped

- The inserted disc contains DRM protected files.
 - The protected files are skipped.

Protect

- All the files on the inserted disc are embedded with DRM.
 - Replace the disc.

TEMP

- The temperature of this product is outside the normal operating range.
 - Wait until this product returns to a temperature within the normal operating limits.

This DivX rental has expired.

- The inserted disc contains expired DivX VOD content.
 - Select a file that can be played.

Video resolution not supported

- Files that cannot be played on this product are included in the file.
 - Select a file that can be played.

Unable to write to flash memory.

- The playback history for VOD contents cannot be saved for some reason.
 - Retry.
 - If the message appears frequently, consult your dealer.

Your device is not authorized to play this DivX protected video.

- This product's DivX registration code has not been authorized by the DivX VOD contents provider.
 - Register this product to the DivX VOD contents provider.

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 product.
 - Select a file that can be played.

USB storage device**Error-02**

- Communication failed.
 - Turn the ignition switch OFF and back ON.
 - Disconnect the USB storage device.
 - Change to a different source. Then, return to the USB storage device.

Unplayable File

- This type of file cannot be played on this product.
 - Select a file that can be played.
- Security for the connected USB storage device is enabled.
 - Follow the USB storage device instructions to disable security.

Skipped

- The connected USB storage device contains DRM protected files.
 - The protected files are skipped.

Protect

- All the files on the connected USB storage device are embedded with DRM.
 - Replace the USB storage device.

Incompatible USB

- The connected USB storage device is not supported by this product.
 - Disconnect your device and replace it with a compatible USB storage device.

Check USB

- The USB connector or USB cable is short-circuited.
 - Check that the USB connector or USB cable is not caught in something or damaged.
- The connected USB storage device consumes more than maximum allowable current.
 - Disconnect the USB storage device and do not use it. Turn the ignition switch to OFF, then to ACC or ON and then connect a compliant USB storage device.

Video resolution not supported

- Files that cannot be played on this product are included in the file.
 - Select a file that can be played.

USB was disconnected for device protection. Do not re-insert this USB memory into the unit. Please restart the unit.

- The USB connector or USB cable is short-circuited.
 - Check that the USB connector or USB cable is not caught in something or damaged.
- The connected USB storage device consumes more than maximum allowable current.
 - Disconnect the USB storage device and do not use it. Turn the ignition switch to OFF, then to ACC or ON and then connect a compliant USB storage device.
- The USB interface cable for iPod / iPhone is short-circuited.
 - Confirm that the USB interface cable for iPod / iPhone or USB cable is not caught in something or damaged.

Audio Format not supported

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

iPod**Error-02-6X**

- iPod failure.
 - Disconnect the cable from the iPod. Once the iPod's main menu is displayed, reconnect the iPod and reset it.

Error-02-60

- The iPod firmware version is old.
 - Update the iPod version.

A

B

C

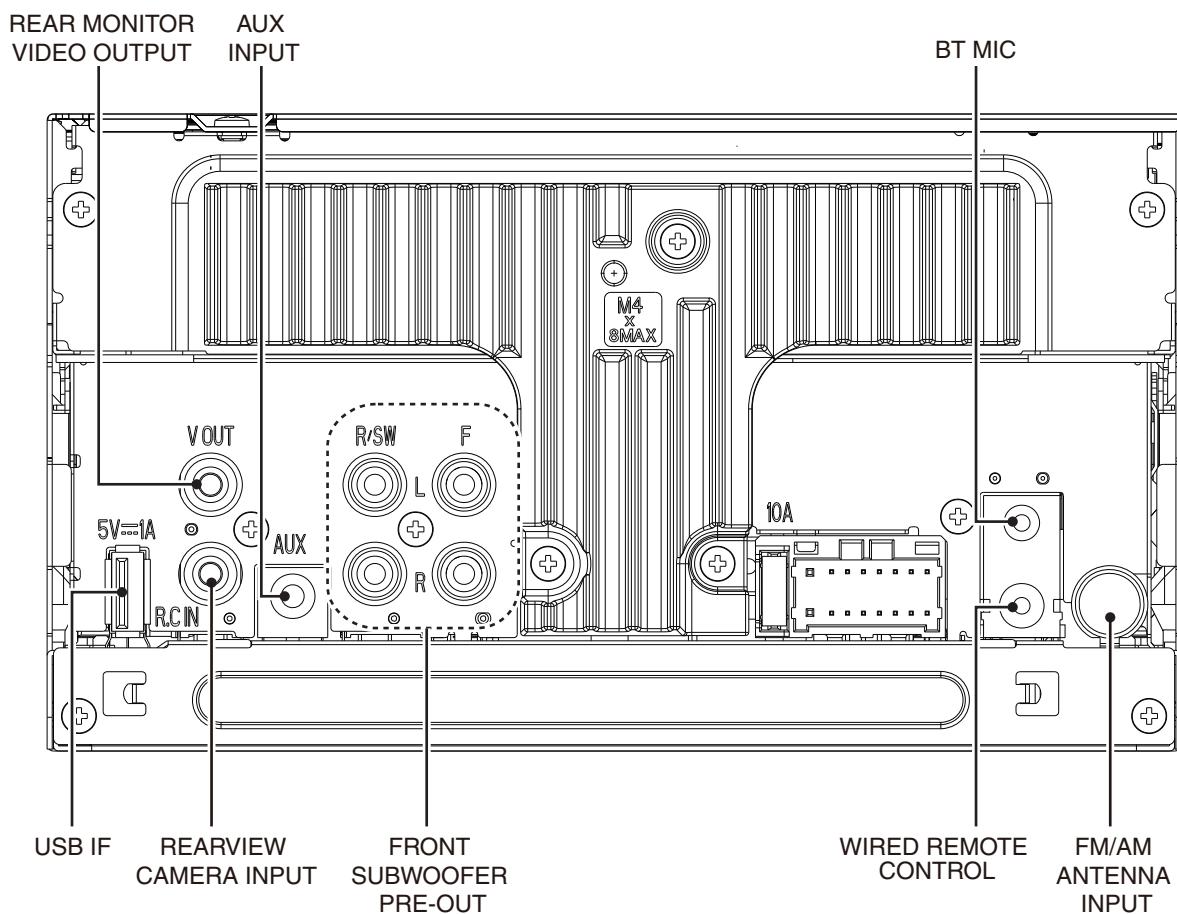
D

E

F

5.4 CONNECTOR FUNCTION DESCRIPTION

A



B

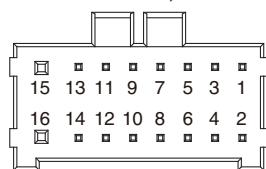
C

D

E

F

POWER SUPPLY, SPEAKER



- | | |
|--------|---------------|
| 1. FL+ | 9. P.BRAKE |
| 2. FR+ | 10. TELMUTE |
| 3. FL- | 11. ILM |
| 4. FR- | 12. BREM/AANT |
| 5. RL+ | 13. ACC |
| 6. RR+ | 14. REV |
| 7. RL- | 15. B.UP |
| 8. RR- | 16. GND |

6. SERVICE MODE

6.1 VERSION INFORMATION

Method for Mode IN

While pressing [VOL-] + [Reverse] key, restart the system.

Display specification

< Version Information >		
	Ver.	Unit No.
System	: XX.XX	XXXXXXX
SOC	: XX.XX	XXXXXXX
Bluetooth	: XXXXXXXXXXXXXXXX	
T-Flash	: XX.XX	XXXXXXX
< State >		
Eject Lock	: OFF	DVD Region: X

<Eject Lock>

When Eject Lock is on : ON

When Eject Lock is canceled : OFF

Operational description	Remote controller key
Page up	NEXT 
Page down	PREV 

6.2 SERVICE TEST MODE

SERVICE TEST MODE MENU SCREEN

Method for Mode IN

While pressing [VOL+] + [FORWARD] key, restart the system.

Display specification

< SERVICE TESTMODE >	
1. SWC TESTMODE	
2. TOUCH PANEL SETTING	
3. FLICKER ADJUSTMENT	
4. DVD TESTMODE	

Operational description	Remote controller key
Selection cursor up movement	Up 
Selection cursor down movement	Down 
Menu enter	Band

Description:

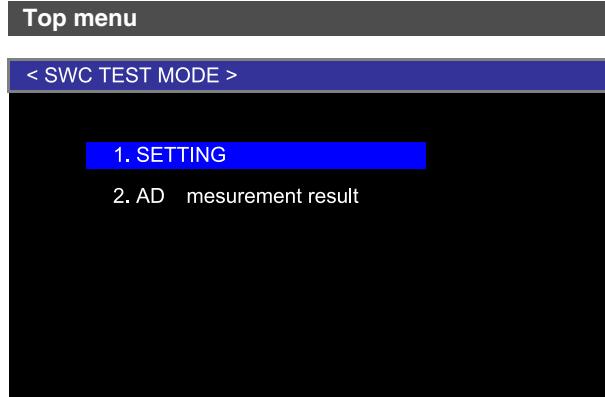
1. SWC TEST MODE : For checking Steering Wheel Control
2. TOUCH PANEL SETTING : For Touch Panel calibration
3. FLICKER ADJUSTMENT : For Flicker adjustment

1. SWC TEST MODE

A Method for Mode IN

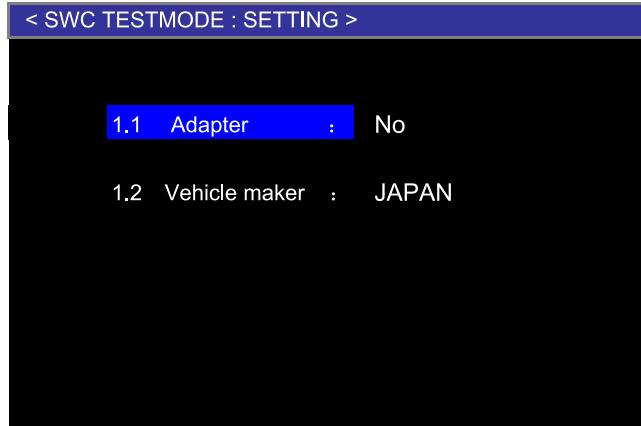
While pressing [VOL+] + [FORWARD] key, restart the system.
Select and enter "1. SWC TEST MODE" on SERVICE TEST MODE Menu screen.

B Display specification



Operational description	Remote controller key
Return to test mode menu	RETURN
Selection cursor up movement	Up
Selection cursor down movement	Down
Menu enter	Band

C 1. SETTING



E <Adapter>

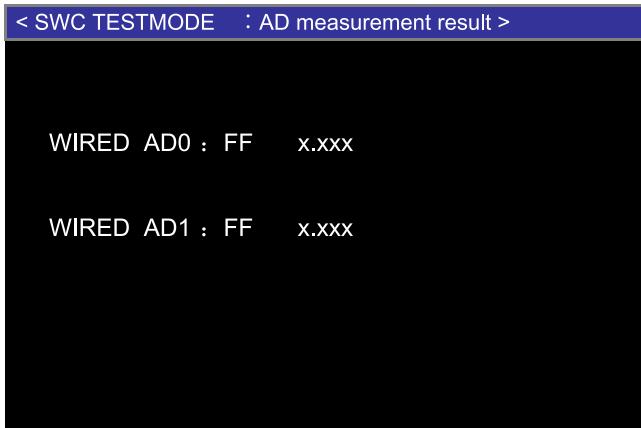
When Adapter is connected : Yes
When Adapter is not connected : No

<Vehicle marker>

When Adapter setting is "Yes" : Cannot be selected.
When Adapter setting is "No" : Select JAPAN or KOREAN.

Operational description	Remote controller key
Return to test mode menu	RETURN
Selection cursor up movement	Up
Selection cursor down movement	Down

2. AD Measurement result



Operational description	Remote controller key
Return to test mode menu	RETURN

Description:

When a key on the steering remote is pressed, the voltage value is displayed on the screen.

2. TOUCH PANEL SETTING

A Method for Mode IN

While pressing [VOL+] + [FORWARD] key, restart the system.
Select and enter "2. TOUCH PANEL SETTING" on SERVICE TEST MODE Menu screen.

B Display specification

Top menu

< Touch Panel Test >

- * 1. Effective Area Calibration
- * 2. 16 Point Calibration
- 3. Touch Panel Coordinates Test
- 4. Calibration Test
- 5. Data Initialize

Operational description	Remote controller key
Return to test mode menu	RETURN
Selection cursor up movement	Up 
Selection cursor down movement	Down 
Menu enter	Band

C Description:

When the touch keys do not respond correctly, perform the touch panel calibration by using this test mode.

For the touch panel calibration, perform "1. Effective Area Calibration" and "2. 16 Point Calibration".

1. Effective Area Calibration

Effective Area Calibration Screen

Description:

Touch the target points to calibrate effective area.

First point : Touch the lower right corner of the screen.



Second point : Touch the upper left corner of the screen.



Third point : Touch the upper right corner of the screen.



Fourth point : Touch the lower left corner of the screen.



Operational description	Remote controller key
Check is interrupted	Band

Effective Area Calibration result screen

Finished normally



Finished abnormally

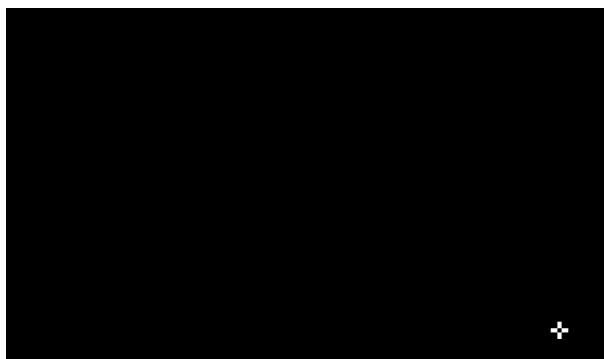


Operational description	Remote controller key
Return to Touch Panel Setting Menu	Band

When the calibration is completed correctly, "Result : OK" is displayed.
Press [BAND] key on Remote controller to return Touch Panel Setting Menu.

2. 16 Point Calibration

16 Point Calibration screen

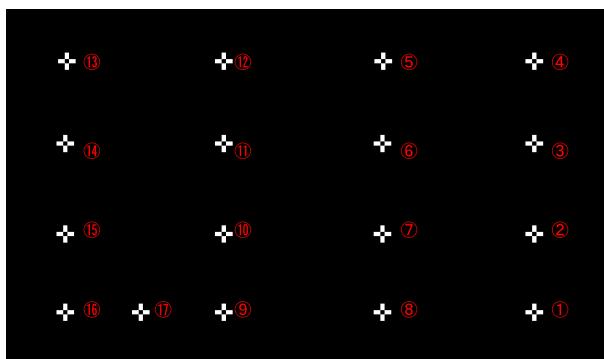


Description:

Touch the cursor [+] displayed on the screen. By touching it correctly, it disappears and another cursor appears.

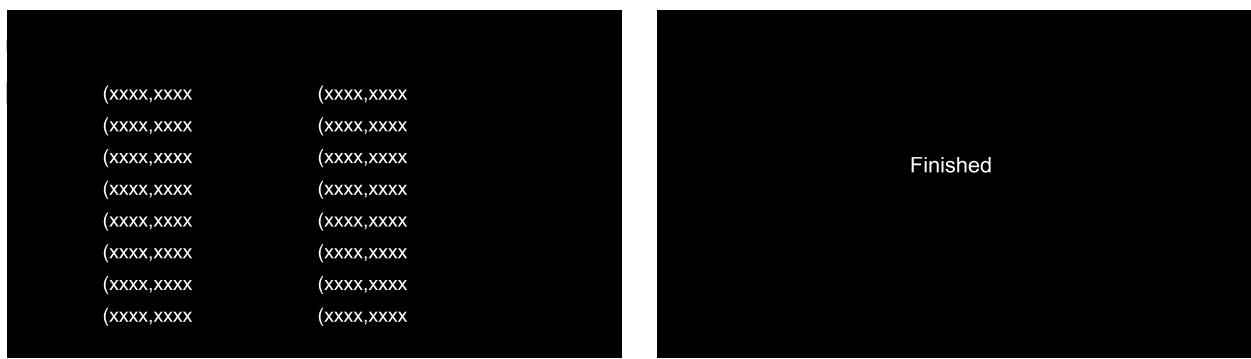
By repeating this action 16 times, obtain calibration value of each [+].

When touching the last 17th cursor, calibration values at 16 points and information of normal finish in 17 bytes are written in Flash ROM and the screen returns to Touch Panel Setting menu by pressing a key.



Operational description	Remote controller key
Return to Touch Panel Setting Menu	Band

16 Point Calibration result screen



Operational description	Remote controller key
Return to Touch Panel Setting Menu	Band

When the calibration is completed, "Finished" is displayed.

Press [BAND] key on Remote controller to return Touch Panel Setting Menu.

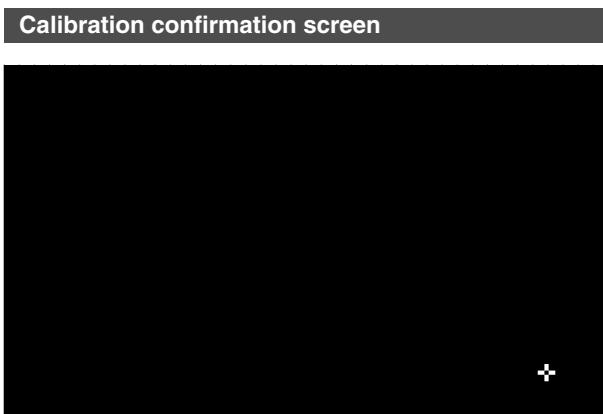
3. Touch Panel Coordinates Test

< Touch Panel Coordinates Test >	
Sampling	(FFFF, FFFF)
TRef	(FFFF, FFFF)
	Factory User
Sampling Max	(FFFF , FFFF)
Sampling Min	(FFFF , FFFF)
LowolCorrect	(FFFF , FFFF)
	(FFFF , FFFF)

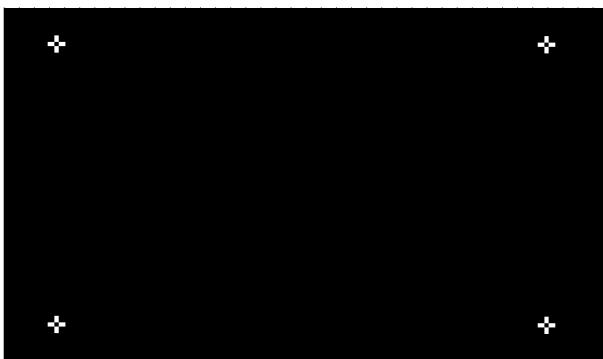
[+] is displayed at a touched place.
(Two [+] are displayed by touching two places.)

Operational description	Remote controller key
Return to top menu	RETURN

4. Calibration Test



Touch the cursor [+] displayed on the screen. By touching it correctly, it disappears and another cursor appears. Otherwise, the cursor is displayed in red.
Repeating this action for 4 points and by pressing the last 4th point, "O.K." is displayed.



Operational description	Remote controller key
Return to top menu	RETURN

Calibration confirmation result screen

A

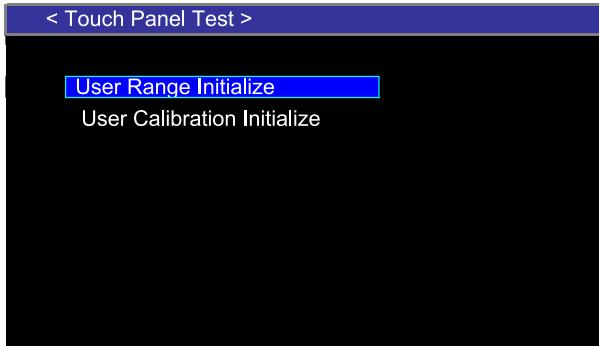


B

Operational description	Remote controller key
Return to top menu	RETURN

5. Data Initialize

C



D

Operational description	Remote controller key
Return to test mode menu	RETURN
Selection cursor up movement	Up
Selection cursor down movement	Down
Menu enter	Band

E

F

3. DVD TEST MODE

Method for Mode IN

While pressing [VOL+] + [FORWARD] key, restart the system.
Select and enter "4. DVD TEST MODE" on SERVICE TEST MODE Menu screen.

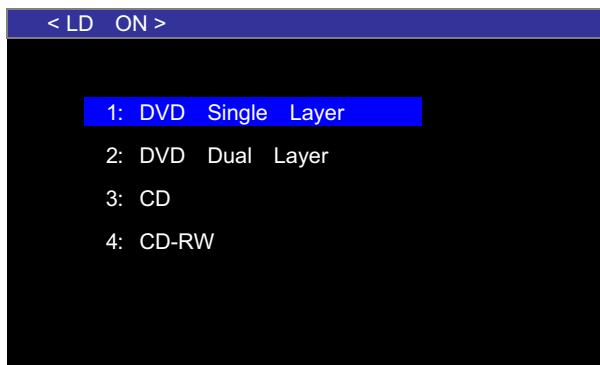
Display specification



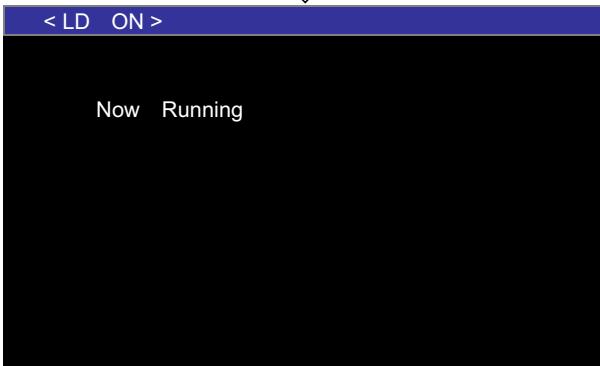
Operational description	Remote controller key
Return to test mode menu	RETURN
Selection cursor up movement	Up
Selection cursor down movement	Down
Menu enter	Band

* : Please put LOAD/EJECT of DISC into effect on this screen.

1. LD ON



Operational description	Remote controller key
Return to DVD test mode menu	RETURN
Selection cursor up movement	Up
Selection cursor down movement	Down
Menu enter	Band



< LD ON >

1: Power OFF

A

Operational description

Return to DVD test mode menu

Remote controller key

RETURN

Menu enter

Band

2. Error Rate

< DVD TESTMODE >

1. LD ON

2. Error Rate

3. CRG Move Outer

4. Eject

C

Operational description

Return to test mode menu

Remote controller key

RETURN

Selection cursor up movement



Selection cursor down movement



Menu enter

Band



< Error Rate >

1: DVD Single Layer

2: CD

< Error Rate >

1: DVD Single Layer

2: CD

E

Operational description

Return to DVD test mode menu

Remote controller key

RETURN

Selection cursor up movement

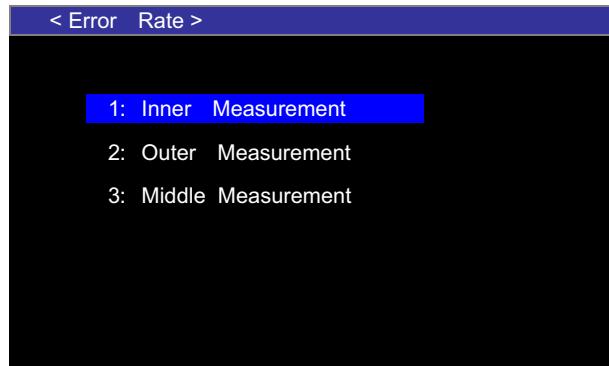


Selection cursor down movement



Menu enter

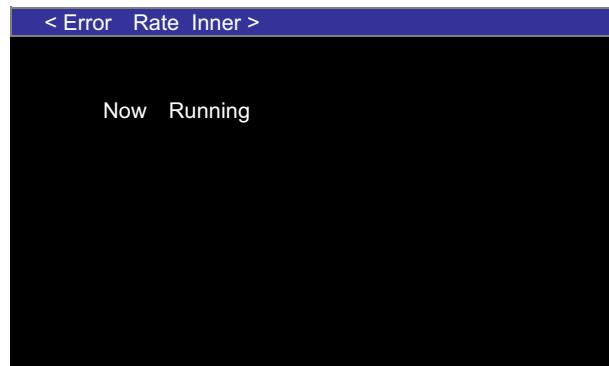
Band



A

Operational description	Remote controller key
Return to DVD test mode menu	RETURN
Selection cursor up movement	Up
Selection cursor down movement	Down
Menu enter	Band

B



C



D

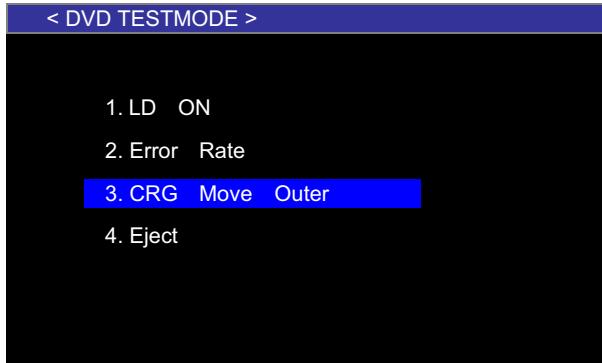
E

Operational description	Remote controller key
Return to DVD test mode menu	RETURN
Menu enter	Band

F

3. CRG Move Outer

A



B

Operational description	Remote controller key
Return to test mode menu	RETURN
Selection cursor up movement	Up
Selection cursor down movement	Down
Menu enter	Band



C

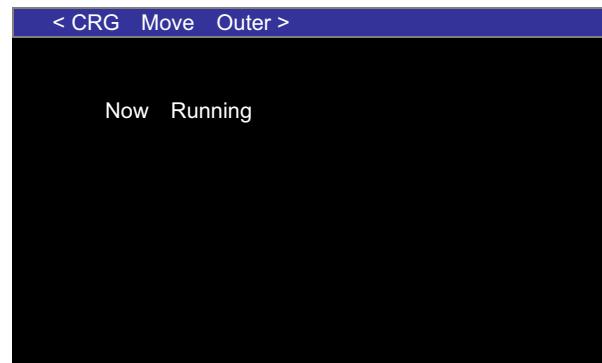


D

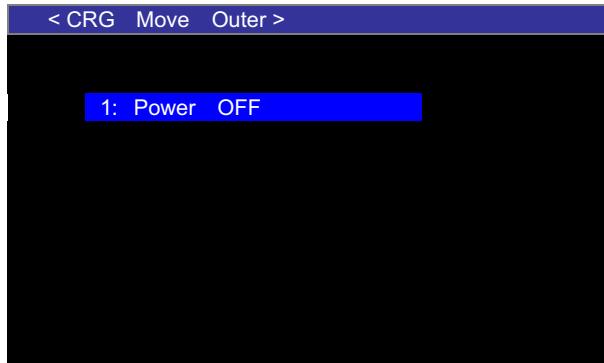
Operational description	Remote controller key
Return to DVD test mode menu	RETURN
Selection cursor up movement	Up
Selection cursor down movement	Down
Menu enter	Band



E



F



A

Operational description	Remote controller key
Return to DVD test mode menu	RETURN
Menu enter	Band

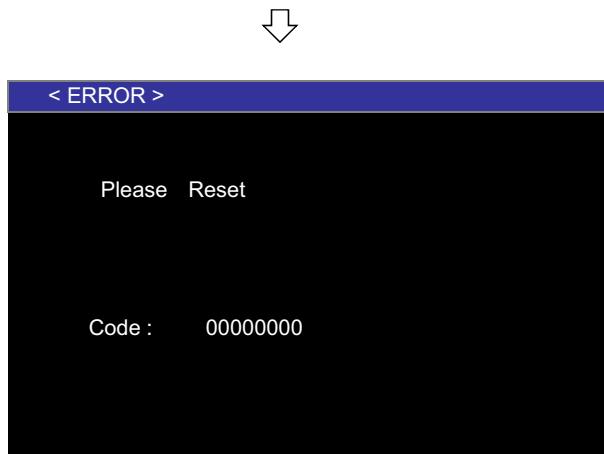
B



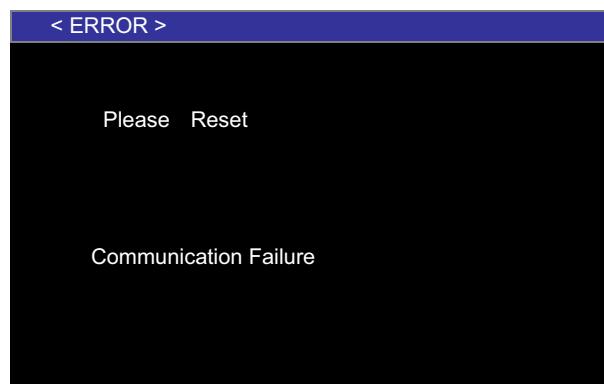
C

Operational description	Remote controller key
Return to test mode menu	RETURN
Menu enter	Band

D



E



F

6.3 FIRMWARE UPGRADE

UPDATE METHOD AND VERSION CHECK

A

Version UP

- Put a software file you want to rewrite in the USB memory stick. (Attention: Store only a file to rewrite.)
Please rewrite SOC and System ucom individually.

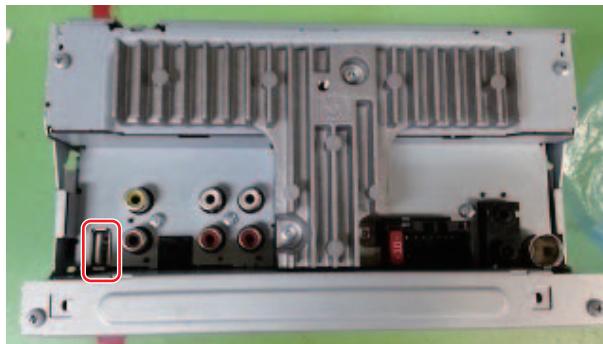
⚠ CAUTION:

Please rewrite SOC first, and then rewrite System ucom.
If you rewrite the system first, you cannot continue to rewrite the software.

- Turn on the power of the product and confirm that it is "ON".

Insert the USB memory stick prepared as Step 1 into the USB port on the rear side.

B



C

- Press the RESET key while pressing and holding the "VOL -" and "▶▶I" keys at the same time.



D

The system starts up in the Software upgrade mode, and the "CAUTION" screen is displayed.

ATTENTION:

If the system starts in other modes than the Software upgrade mode, the keys may not be pressed correctly.
In that case, press the "VOL -" and "▶▶I" key correctly and press the RESET key again.

E



CAUTION:

It takes about two minutes to update SOC and System ucom. Do not remove the USB memory stick or turn off the power until the updating procedure is completed. Removing the USB memory stick or turning off the power while the update is in progress may damage the software.

F

After the “CAUTION” screen, the “Update” screen appears and the updating operation starts automatically.

ATTENTION:

With some USB memory sticks, the update cannot be done correctly.
In that case, use other USB memory sticks and try again.

EX) Screen display when SOC upgrade



Confirm that the “It succeeded” screen appears and the updating procedure is completed.
Remove the USB memory stick and turn off the power.



4. Repeat Step 2 and Step 3 to update the remaining software.

EX) Screen display when System ucom upgrade



A Version Check

1. Turn on the power of the product and confirm that it is "ON".
2. Press the RESET key while pressing and holding the “ - ” and “  ” keys at the same time.



3. Check the software version on the screen after the system starts up in the Version Information mode.

< Version Information >		
	Ver.	Unit No.
System	: XX.XX	XXXXXXX
SOC	: XX.XX	XXXXXXX
	Ver.	
Bluetooth	: XXXXXXXXXXXXXXXXX	
T-Flash	: XX.XX	XXXXXXX
< State >		
Eject Lock	: OFF	DVD Region : X

7. DISASSEMBLY

While the photograph shown is slightly different from this model in shape, the disassembly procedure is the same.

● Removing the Monitor Assy (Fig.1)

- 1 Remove the two screws.
- 2 Release the eight latches.
- 3 Disconnect the connector and then remove the Monitor Assy.

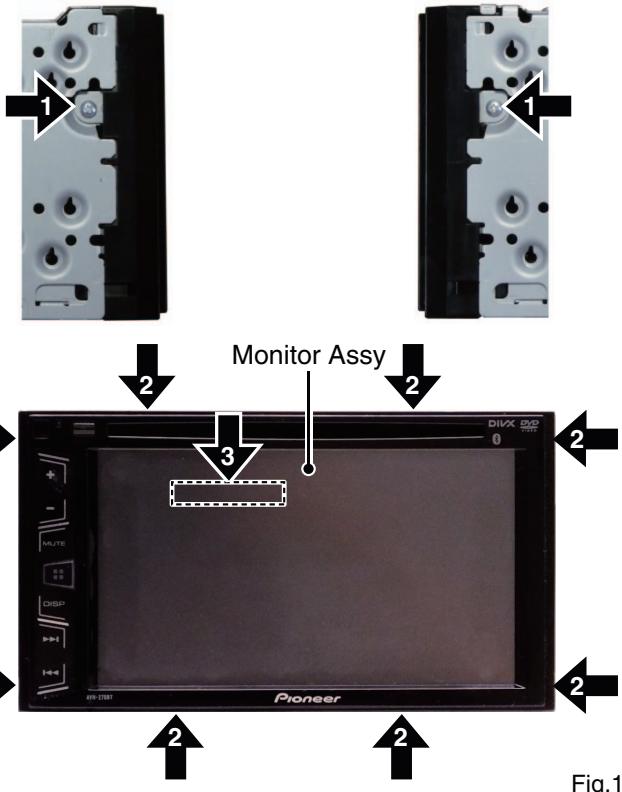
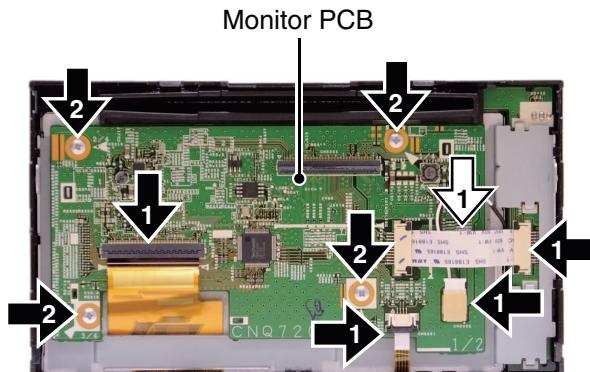


Fig.1

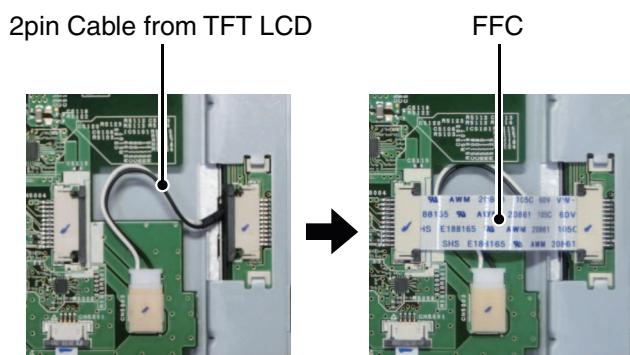
● Removing the Monitor PCB (Fig. 2)

- 1 Disconnect the four connectors.
- 2 Remove the four screws and then remove the Monitor PCB.



D

- 1 Attention at assembly:
When you connect the FFC and 2pin Cable from TFT LCD, set the 2pin Cable lower side.



E

Fig.2

A

● Removing the Key PCB (Fig.3)

Remove the Holder(1).

1 Release the seven latches and then remove the Holder(2).

Remove the Key PCB.

B

Note:

With this model, the Cushion of Touch Panel was attached using a jig in the factory line.

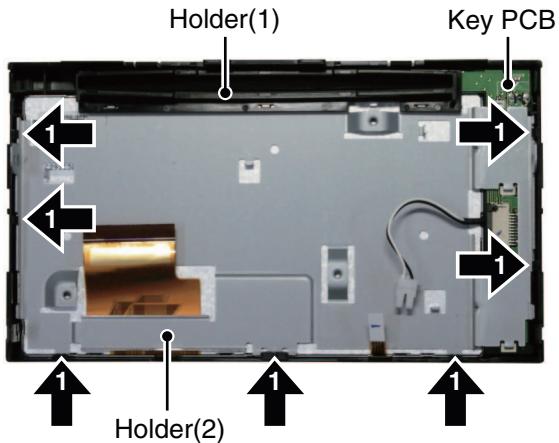


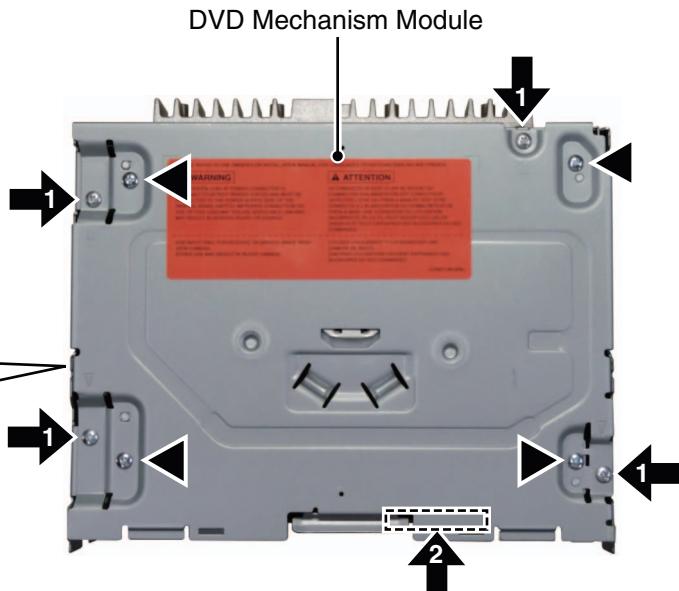
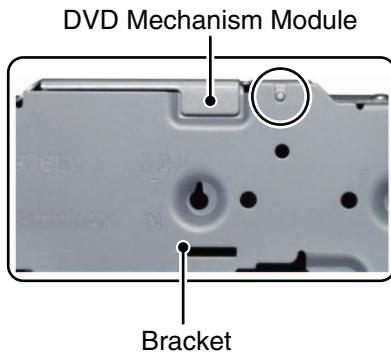
Fig.3

● Removing the DVD Mechanism Module (Fig.4)

1 Remove the four screws.

Short-circuit the solder while the Mechanism Module remains connected to the product.
(Please refer to page 7 "1.2 NOTES ON DISASSEMBLY / ASSEMBLY")

2 Disconnect the connector and then remove the DVD Mechanism Module.



Attention at assembly:

When installing the DVD Mechanism Module, pulling the Bracket to the DVD Mechanism Module, tighten the screws.

Put the dowels of the DVD Mechanism Module in the slits of the Bracket securely.

D

E

F

● Attention of removing

► Don't remove this screws excluding the dismantlement of the DVD Mechanism Module.

Fig.4

● Removing the Heat Sink and the Holder (Fig.5)

- 1 Remove the three screws.
- 2 Remove the two screws and then remove the Heat Sink and the Holder.

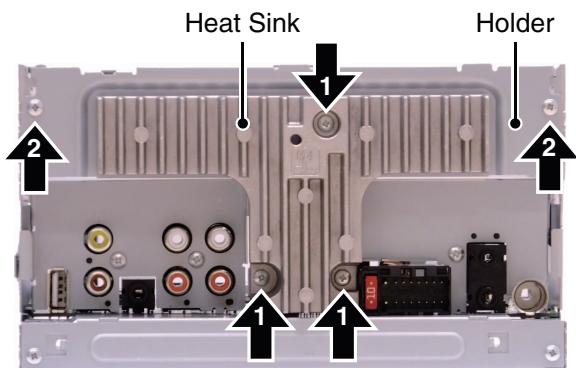
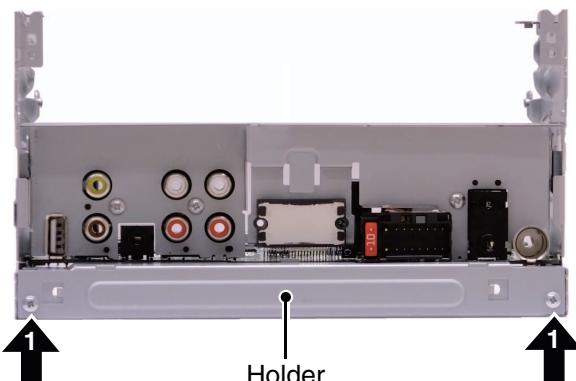


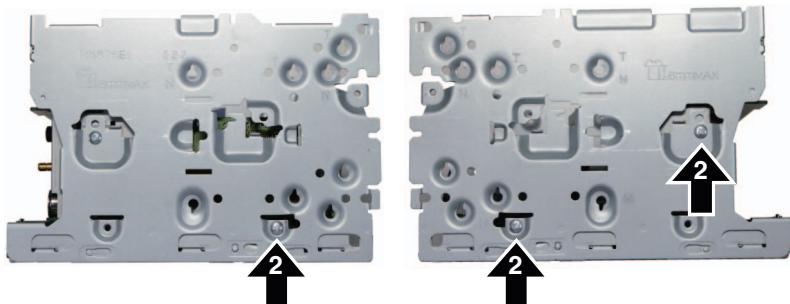
Fig.5

● Removing the Bracket and the Holder (Fig.6)

- 1 Remove the two screws and then remove the Holder.



- 2 Remove the three screws.



- 3 Slide the Bracket in the direction indicated by an arrow and then release the dowel.
(Left side and Right side)

Remove the Bracket.

Attention at assembly:
When installing the Bracket, put the
dowels of the Chassis in the slits of
the Bracket securely.

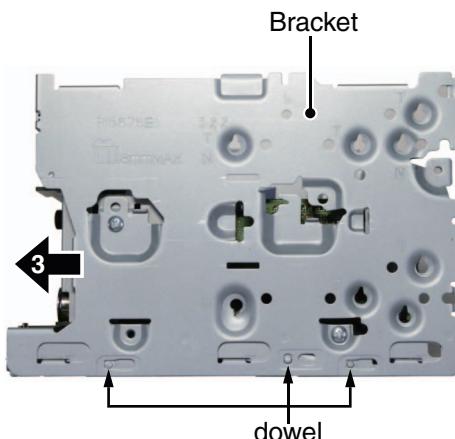


Fig.6

● Removing the Mother Unit (Fig.7)

A

- 1 Remove the four screws and then remove the Mother Unit.

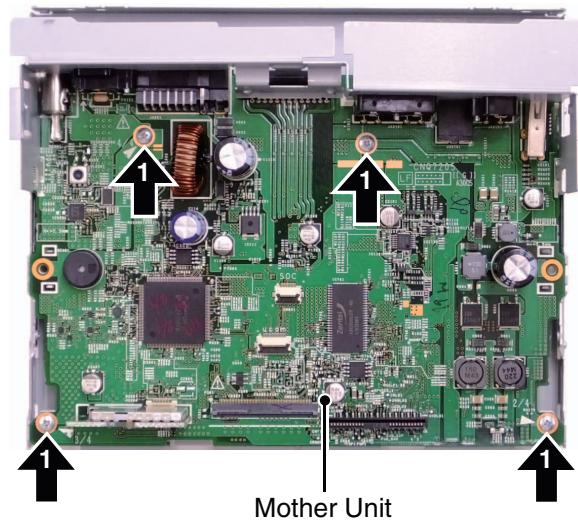


Fig.7

B

Points to Notice When Assembling:

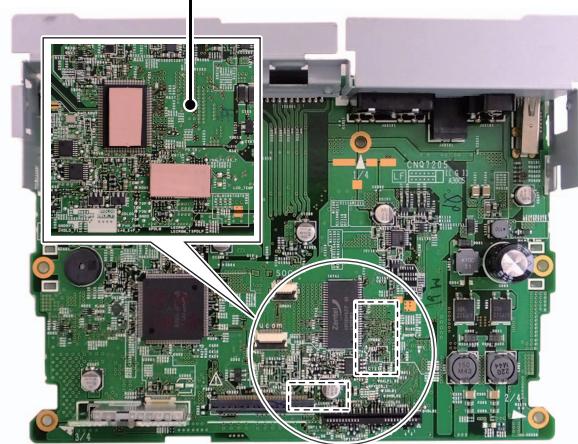
C

● When Stick the Sheets (2 locations) at Holder (Fig.8)

The two sheets are used for the heat radiation of the two IC chips. The heat of the IC chips radiates to the holder through the sheets. Stick them on the predetermined position not to protrude from the IC chips.

D

Back side of Mother Unit



E

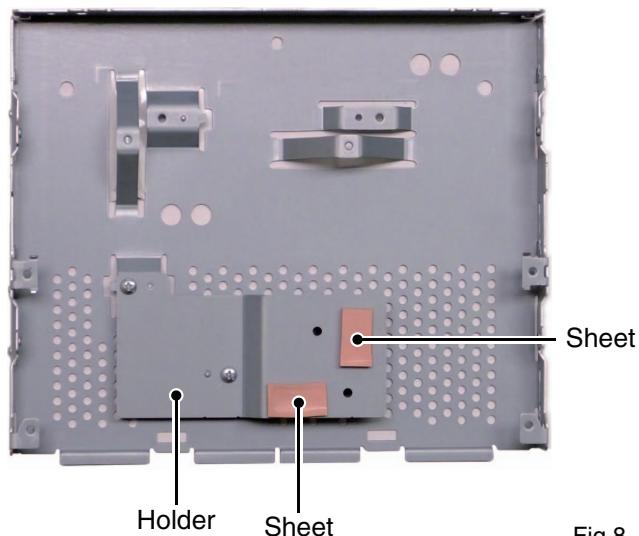


Fig.8

8. EACH SETTING AND ADJUSTMENT

8.1 ADJUSTMENT REQUIRED WHEN HTE UNIT IS REPLACED

- When any of the following assemblies is replaced, it is necessary to perform the adjustment.

LCD
Mother Unit
Monitor PCB



"8.2 FLICKER ADJUSTMENT"

A

B

C

D

E

F

8.2 FLICKER ADJUSTMENT



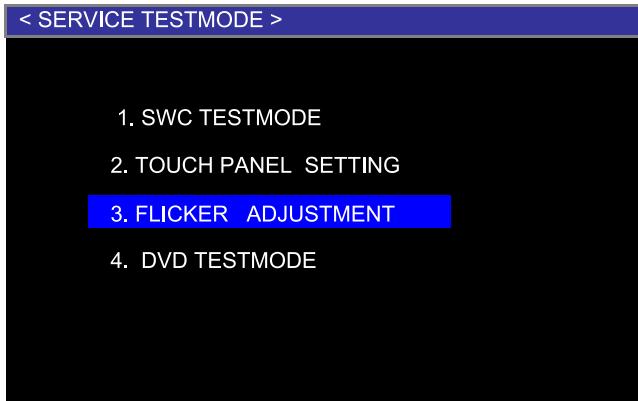
A

Method for Mode IN

While pressing [VOL+] + [FORWARD] key, restart the system.
Select and enter "3. FLICKER ADJUSTMENT" on SERVICE TEST MODE Menu screen.

B

Display specification



C

Operational description	Remote controller key
Selection cursor up movement	Up
Selection cursor down movement	Down
Menu enter	Band

D

Description:

- 1. SWC TEST MODE : For checking Steering Wheel Control
- 2. TOUCH PANEL SETTING : For Touch Panel calibration
- 3. FLICKER ADJUSTMENT : For Flicker adjustment
- 4. DVD TEST MODE : For DVD mechanism module test

E

Display specification

Description:

When the screen is flickering, perform the flicker adjustment by using this test mode.
Minimize the flicker by changing adjustment value.



COM DC : Flicker adjustment value

F

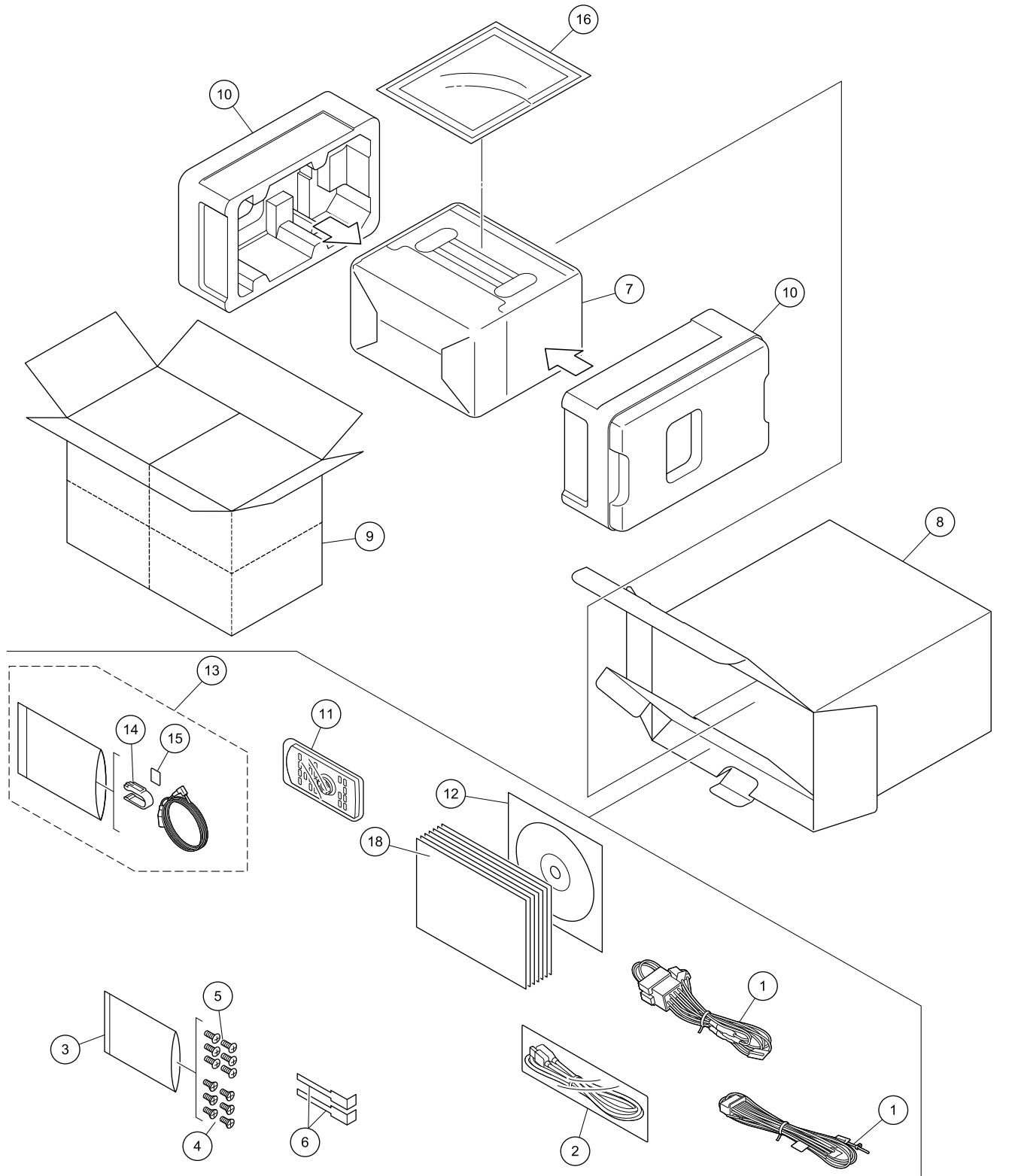
Operational description	Remote controller key
Return to test mode menu	RETURN
-1	Up
+1	Down

9. EXPLODED VIEWS AND PARTS LIST

NOTES :

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

9.1 PACKING



(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>
A	1	Cord Assy	See Contrast table (2)	13	Microphone Assy	CPM1083
	2	USB Extended Cable	CDP1587	14	Holder	CZN7192
	3	Polyethylene Bag	CEG1160	15	Cushion	CZN7193
	4	Screw	See Contrast table (2)			
	5	Screw	CBA2384	16	Panel	See Contrast table (2)
				17	*****	
	6	Handle	See Contrast table (2)	18-1	Owner's Manual	See Contrast table (2)
	7	Cover	See Contrast table (2)	* 18-2	Quick Start Guide	See Contrast table (2)
	8	Unit Box	See Contrast table (2)	18-3	Installation Manual	See Contrast table (2)
	9	Contain Box	See Contrast table (2)	* 18-4	Caution Card	See Contrast table (2)
	10	Protector	See Contrast table (2)	* 18-5	Service Network	See Contrast table (2)
	11	Card Remote Control Unit	See Contrast table (2)	* 18-6	Warranty Card	See Contrast table (2)
	12	IM CD-ROM	See Contrast table (2)			

(2) CONTRAST TABLE

AVH-280BT/XNUC, AVH-280BT/XNEU5, AVH-285BT/XNRC, AVH-285BT/XNRD, AVH-285BT/XNRI, and AVH-289BT/XNID are constructed the same except for the following:

Mark	No.	Description	AVH-280BT/ XNUC	AVH-280BT/ XNEU5	AVH-285BT/ XNRC	AVH-285BT/ XNRD	AVH-285BT/ XNRI	AVH-289BT/ XNID
C	1	Cord Assy	CDP1696	CDP1697	CDP1696	CDP1696	CDP1696	CDP1696
	4	Screw	CBA2383	CBA2383	Not used	Not used	Not used	Not used
	6	Handle	Not used	CND6289	Not used	Not used	CND6289	Not used
	7	Cover	CEG1359	CEG1356	CEG1356	CEG1356	CEG1356	CEG1356
	8	Unit Box	QHG3899	QHG3898	QHG3901	QHG3902	QHG3903	QHG3904
	9	Contain Box	QHL3899	QHL3898	QHL3901	QHL3902	QHL3903	QHL3904
	10	Protector	CHP4598	CHP4599	CHP4598	CHP4598	CHP4599	CHP4598
	11	Card Remote Control Unit	Not used	Not used	CXE5116	Not used	CXE5116	CXE5116
	12	IM CD-ROM	Not used	QPJ3034	Not used	Not used	Not used	Not used
	16	Panel	Not used	Not used	CNS9475	CNS9475	CNS9475	CNS9475
D	18-1	Owner's Manual	QRD3356	Not used	QRD3357	QRD3358	QRD3359	QRB3356
	* 18-2	Quick Start Guide	Not used	QRD3354	Not used	Not used	Not used	Not used
	18-3	Installation Manual	Not used	QRD3355	Not used	Not used	Not used	Not used
	* 18-4	Caution Card	Not used	CRP1441	Not used	Not used	Not used	Not used
	* 18-5	Service Network	Not used	Not used	Not used	Not used	Not used	CRY1305
	* 18-6	Warranty Card	QRY3001	CRY1376	Not used	Not used	Not used	CRY1304

Owner's Manual, Installation Manual

Part No.	Language
QRB3356	English
QRD3354	English, French, Italian, Spanish(Espanol), German, Dutch
QRD3355	English, French, Italian, Spanish(Espanol), German, Dutch
QRD3356	English, French, Spanish(Espanol)
QRD3357	English, Traditional Chinese
QRD3358	English, Spanish(Espanol), Portuguese(B)
QRD3359	English, Arabic, Persian

CONTENTS OF CD-ROM (Operation Manual), QPJ3034

Part No.	Language
*QRB3542	English
*QRB3543	French
*QRB3544	Italian
*QRB3545	Spanish(Espanol)
*QRB3546	German
*QRB3547	Dutch
*QRB3548	Swedish
*QRB3549	Norwegian
*QRB3550	Finnish
*QRB3551	Danish
*QRB3552	Portuguese
*QRB3553	Greek
*QRB3554	Turkish

**All operation manuals are supplied in PDF files by the CD-ROM.
Regarding the availability of paper manual, contact Pioneer Service representative in your region.**

A

B

C

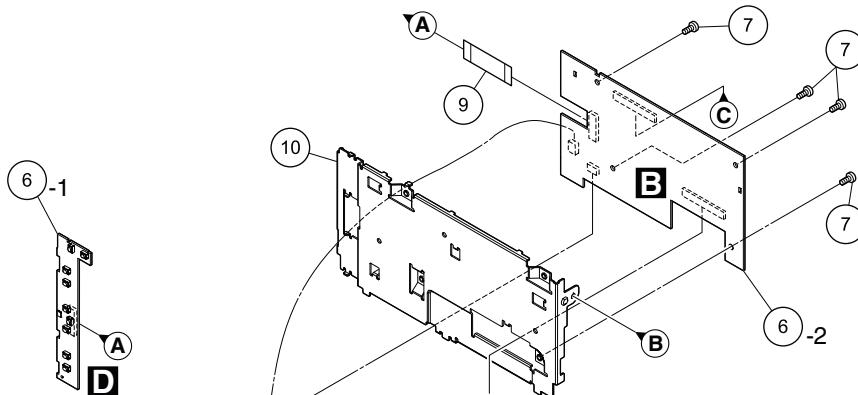
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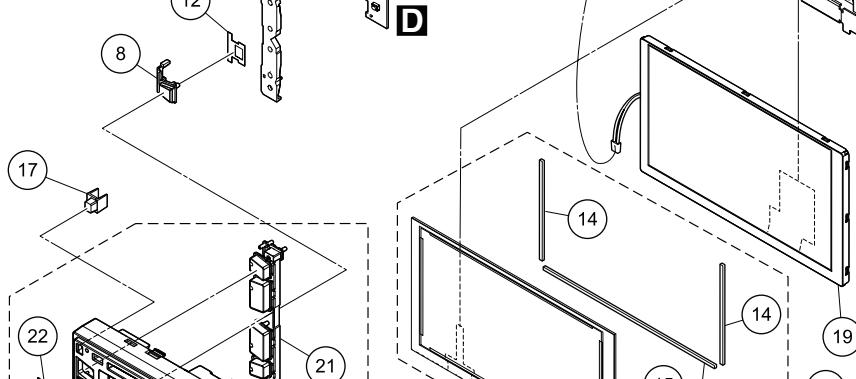
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■ 1 ■ 2 ■ 3 ■ 4
9.2 EXTERIOR(1)

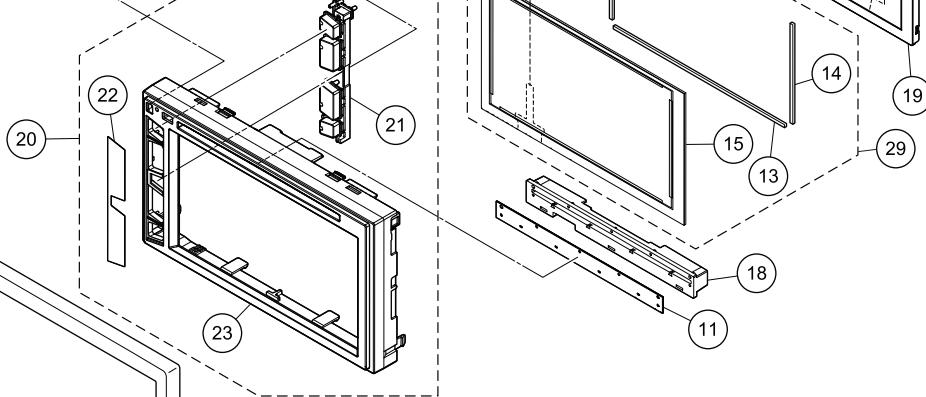
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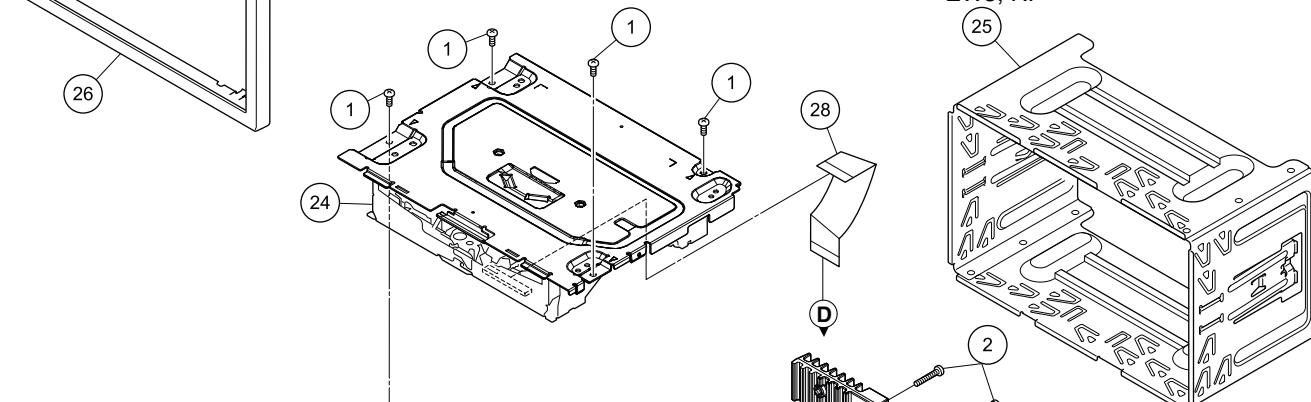
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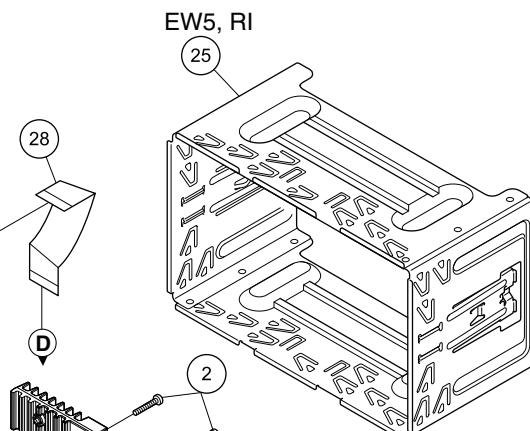
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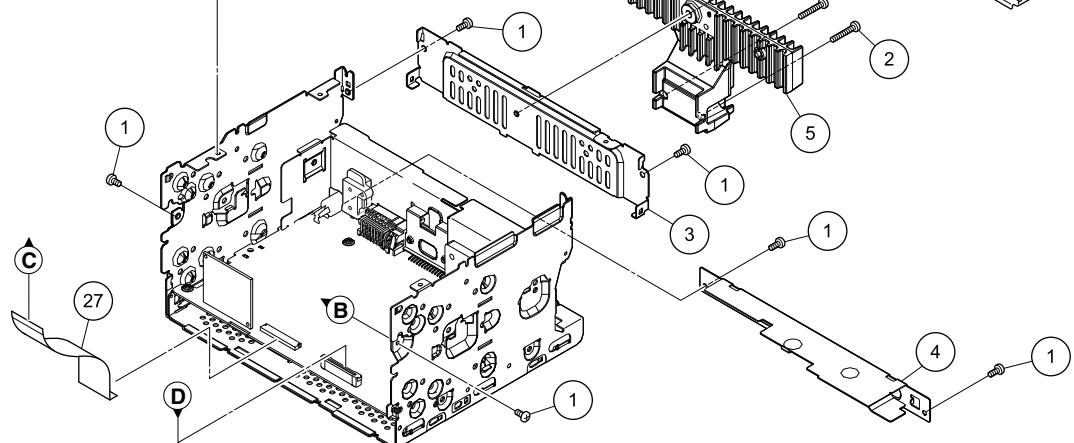
D



E



F



(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	BSZ26P060FTC	16	Lighting Conductor	CNW3302
2	Screw	BSZ26P120FTC	17	Lighting Conductor	CNW3303
3	Holder	CND7211	18	Holder	CNW3304
4	Holder	CND7212	19	TFT LCD	CWX4348
5	Heat Sink	CNR2170	20	Grille Assy	See Contrast table (2)
6	Monitor Key Unit	See Contrast table (2)	21	Button	CAI4447
7	Screw	BSZ26P060FTC	22	Plate	CNN4860
8	Button(HOME)	CAI4449	23	Grille	See Contrast table (2)
9	FFC	CDE9768	24	DVD Mechanism Module(LS2.5)	CXK8200
10	Holder	CND7198	25	Holder	See Contrast table (2)
11	Cover	CNN4865	26	Panel	See Contrast table (2)
12	Sheet	CNN4864	27	FFC	CDD1084
13	Cushion	CNN4273	28	FFC	CDD1085
14	Cushion	CNN4964	29	Touch Panel Unit	CXE8371
15	Touch Panel	CSX1273			

(2) CONTRAST TABLE

AVH-280BT/XNUC, AVH-280BT/XNEU5, AVH-285BT/XNRC, AVH-285BT/XNRD, AVH-285BT/XNRI, and AVH-289BT/XNID are constructed the same except for the following:

Mark	No.	Description	AVH-280BT/ XNUC	AVH-280BT/ XNEU5	AVH-285BT/ XNRC	AVH-285BT/ XNRD	AVH-285BT/ XNRI	AVH-289BT/ XNID
	6	Monitor Key Unit	QWN4236	QWN4234	QWN4236	QWN4236	QWN4236	QWN4236
	20	Grille Assy	QXA4650	QXA4649	QXA4652	QXA4652	QXA4652	QXA4655
	23	Grille	QNS4038	QNS4037	QNS4040	QNS4040	QNS4040	QNS4043
	25	Holder	Not used	CND7102	Not used	Not used	CND7102	Not used
	26	Panel	Not used	CNU2645	Not used	Not used	CNU2645	Not used

C

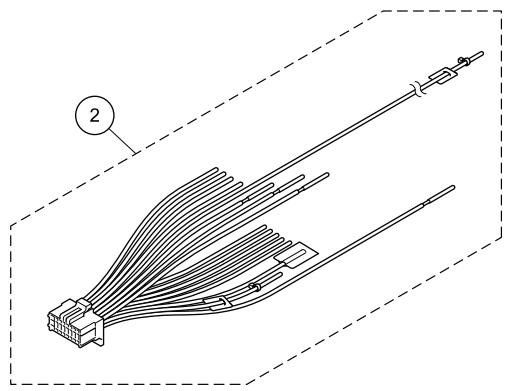
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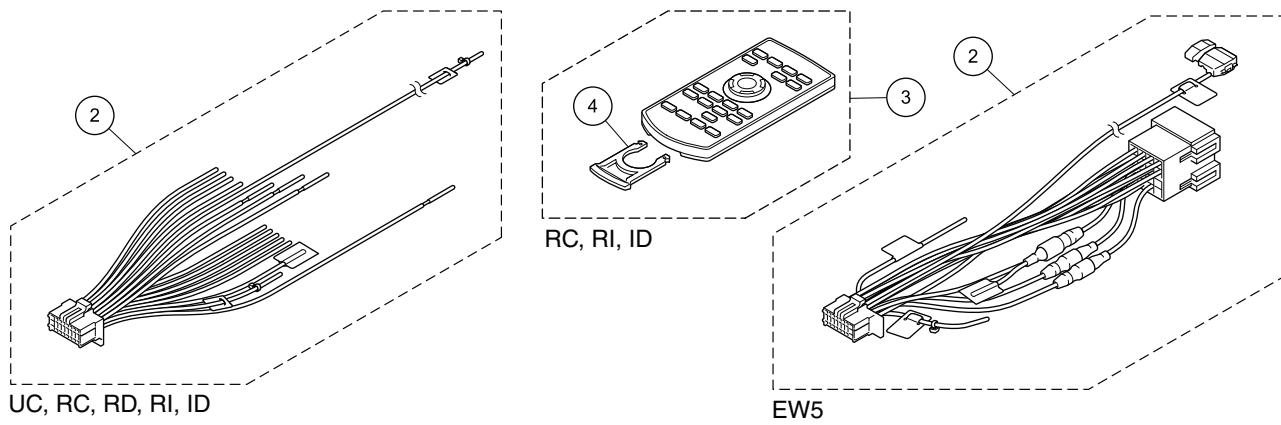
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■ 1 2 3 4
9.3 EXTERIOR(2)

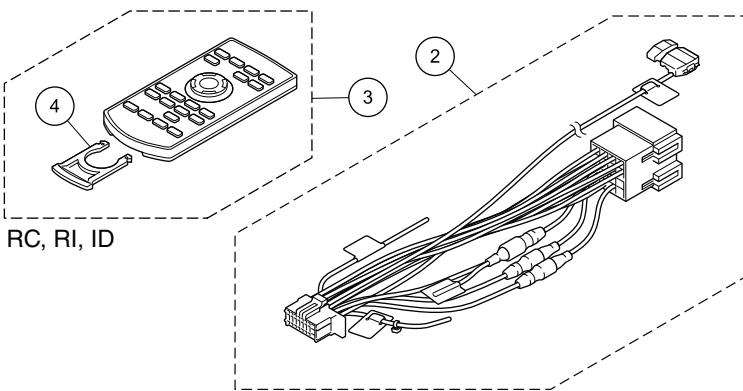
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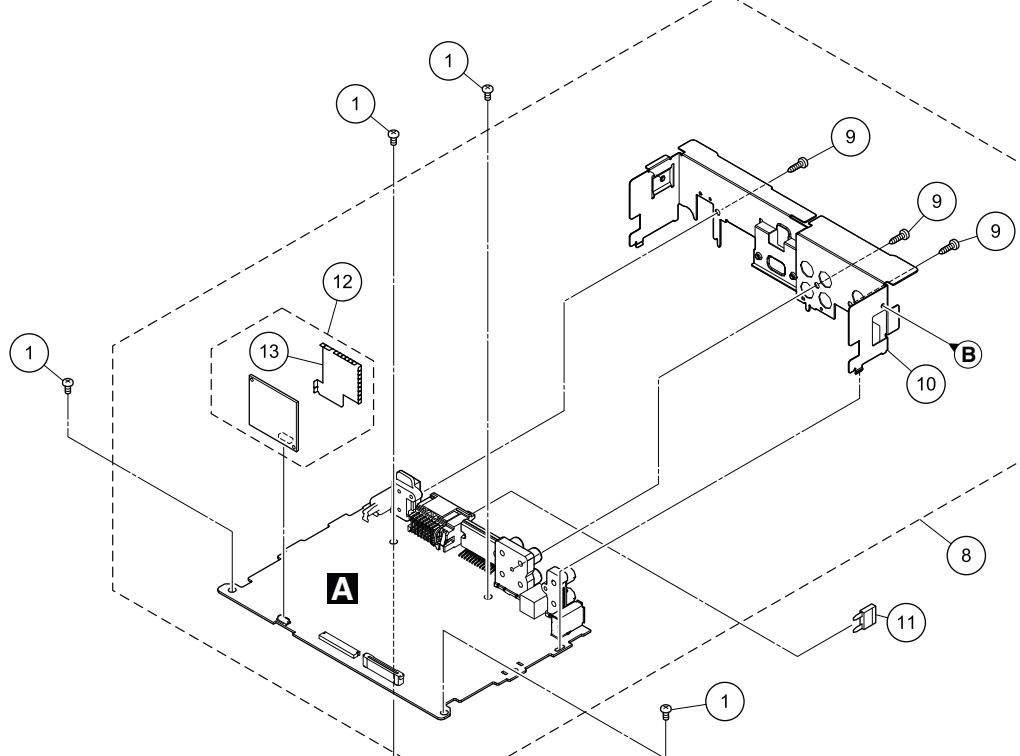
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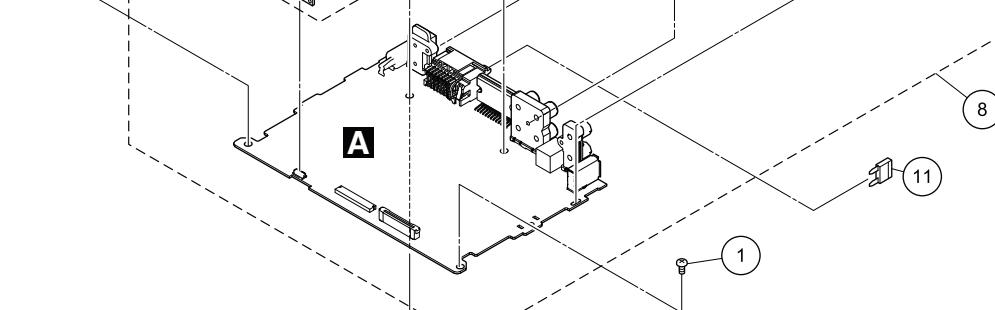
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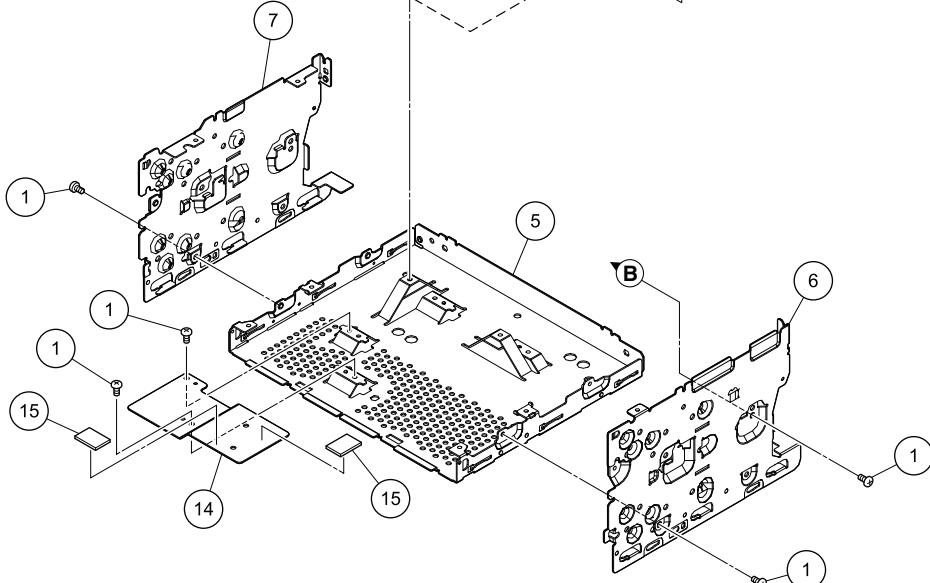
C



D



E



F

(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	BSZ26P060FTC	9	Screw	BPZ26P080FTC
2	Cord Assy	See Contrast table (2)	10	Holder	CND7250
3	Card Remote Control Unit	See Contrast table (2)			A
4	Battery Cover	See Contrast table (2)	11	Fuse(10 A)	YEK5001
5	Chassis	CNA3310	12	BT Module	CWX4772
6	Bracket	CND6985	13	Shield Case	YNC5123
7	Bracket	CND6986	14	Holder	CND7260
8	Mother Unit	See Contrast table (2)	15	Sheet	CNN5016

(2) CONTRAST TABLE

AVH-280BT/XNUC, AVH-280BT/XNEU5, AVH-285BT/XNRC, AVH-285BT/XNRD, AVH-285BT/XNRI, and AVH-289BT/XNID are constructed the same except for the following:

Mark	No.	Description	AVH-280BT/ XNUC	AVH-280BT/ XNEU5	AVH-285BT/ XNRC	AVH-285BT/ XNRD	AVH-285BT/ XNRI	AVH-289BT/ XNID
	2	Cord Assy	CDP1696	CDP1697	CDP1696	CDP1696	CDP1696	CDP1696
	3	Card Remote Control Unit	Not used	Not used	CXE5116	Not used	CXE5116	CXE5116
	4	Battery Cover	Not used	Not used	CNU1624	Not used	CNU1624	CNU1624
	8	Mother Unit	QWM4221	QWM4220	QWM4223	QWM4224	QWM4225	QWM4226

B

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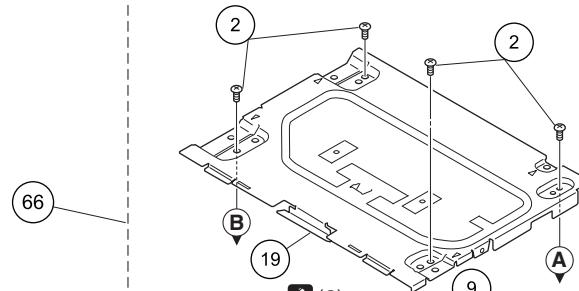
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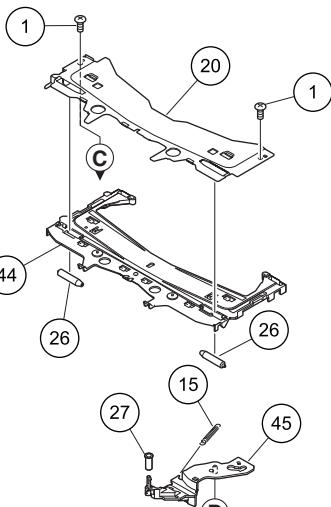
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9.4 DVD MECHANISM MODULE(1)

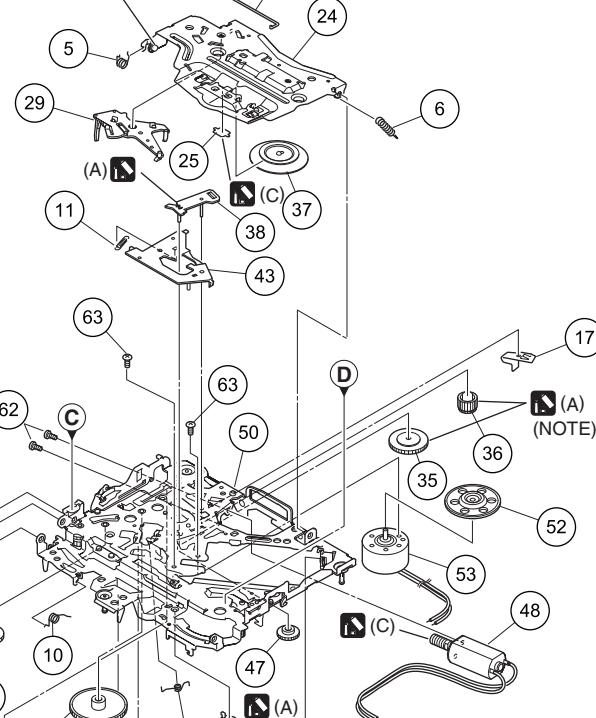
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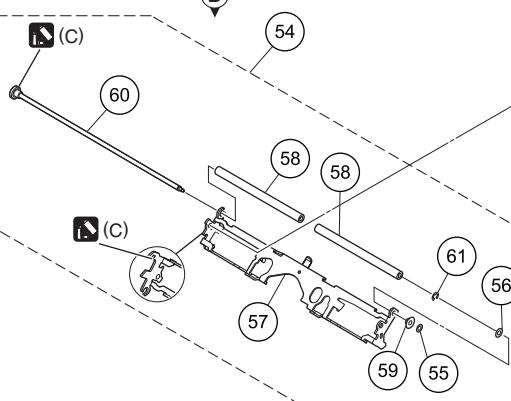
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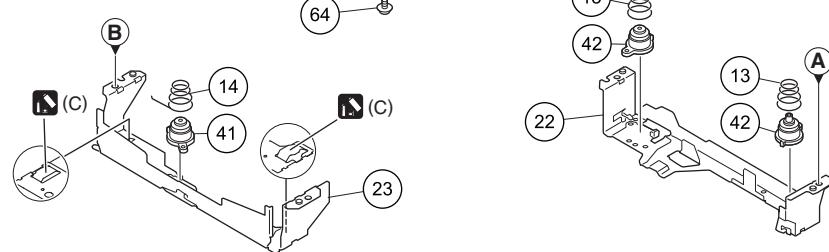
C



D



E



F

- (A) : GEM1043
- (B) : GEM1045
- (C) : GEM1024

(NOTE) Apply grease to the whole part.

DVD MECHANISM MODULE(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	BSZ20P040FTC	50	Chassis Unit	CXE8407
2	Screw	BSZ26P060FTC			
3	Screw (M2 x 4)	CBA1835	51	*****	
4	Washer	CBF1038	*	52 Support Wheel	CNW2052
5	Spring	CBH2855	*	53 Spindle Motor	EXM2002
			54	Arm Assy	CXE7890
6	Spring	CBH2860	55	Washer	CBF1037
7	Spring	CBH3010			
8	Spring	CBH3011	56	Washer	CBF1038
9	Spring	CBH3014	57	Arm	CND6779
10	Spring	CBH3015	58	Roller	CNW2500
			59	Collar	CNW2444
11	Spring	CBH3016	60	Gear Unit	CXE6225
12	Spring	CBH3017			
13	Spring	CBH3019	61	E Ring	YE15FTC
14	Spring	CBH3086	62	Screw	JFZ20P025FTC
15	Spring	CBH3095	63	Screw	JGZ17P020FTC
			64	Screw (M2 x 5)	EBA1028
16	Spring	CBH3096	*	65 Relay Unit	CWX4693
17	Plate Spring	CBL1824			
18	*****		66	Mechanism Unit(Service)	CXX7130
19	Case	CNB3928			
20	Bracket	CND4553			
21	Lever	CND7225			
22	Bracket	CND5710			
23	Bracket	CND6127			
24	Arm	CND7224			
25	Sheet	CNN3678			
26	Roller	CNW1172			
27	Roller	CNW1175			
28	Arm	CNW1177			
29	Arm	CNW1178			
30	Gear	CNW1180			
31	Gear	CNW1181			
32	Gear	CNW1183			
33	Rack	CNW1184			
34	Gear	CNW1185			
35	Gear	CNW1186			
36	Gear	CNW1187			
37	Clamper	CNW1190			
38	Arm	CNW1192			
39	Holder	CNW1193			
40	Holder	CNW1194			
41	Damper	CNW2439			
42	Damper	CNW2440			
43	Arm	CNW1726			
44	Guide	CNW3489			
45	Arm	CNW2241			
46	Rack	CNW2265			
47	Gear	CNW2287			
48	Motor Unit	CXC4026			
49	Screw Unit	CXC8894			

Pickup, Spindle Motor and Support Wheel are not available as service parts, because they need adjustment by special equipment after replacing.

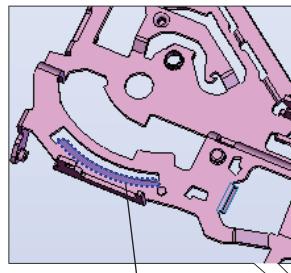
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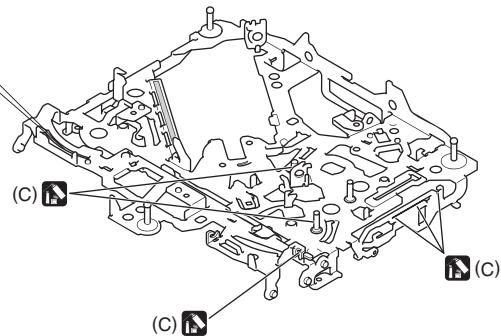
E

F

9.5 DVD MECHANISM MODULE(2)



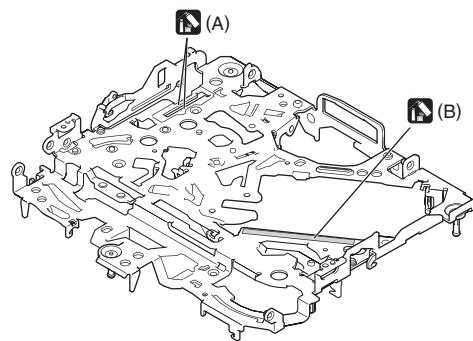
(A)



(C)

(C)

(C)



(A)

(B)

- (A) : GEM1043
- (B) : GEM1045
- (C) : GEM1024

A

B

C

D

E

F

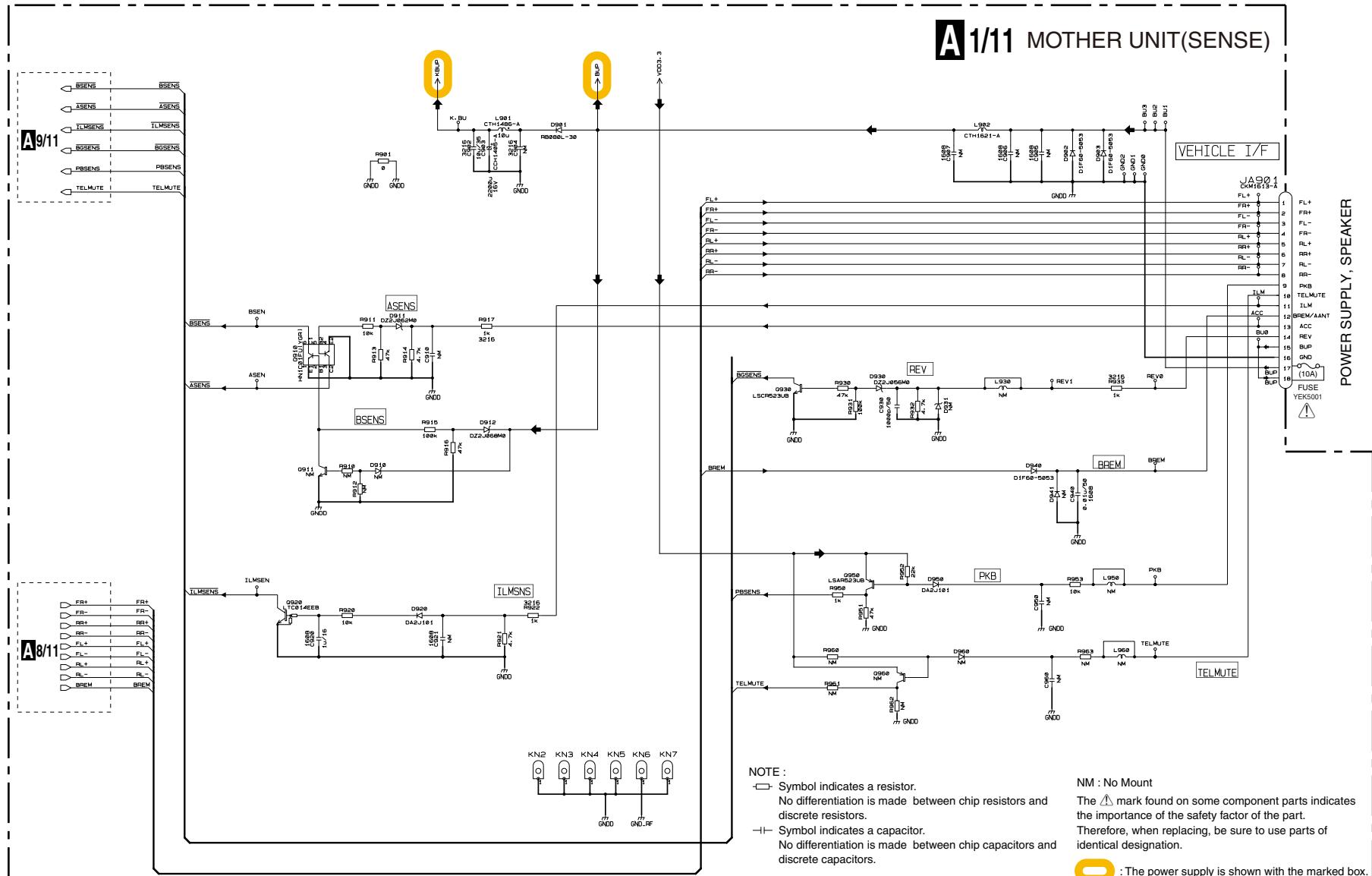
10. SCHEMATIC DIAGRAM

10.1 MOTHER UNIT (SENSE)

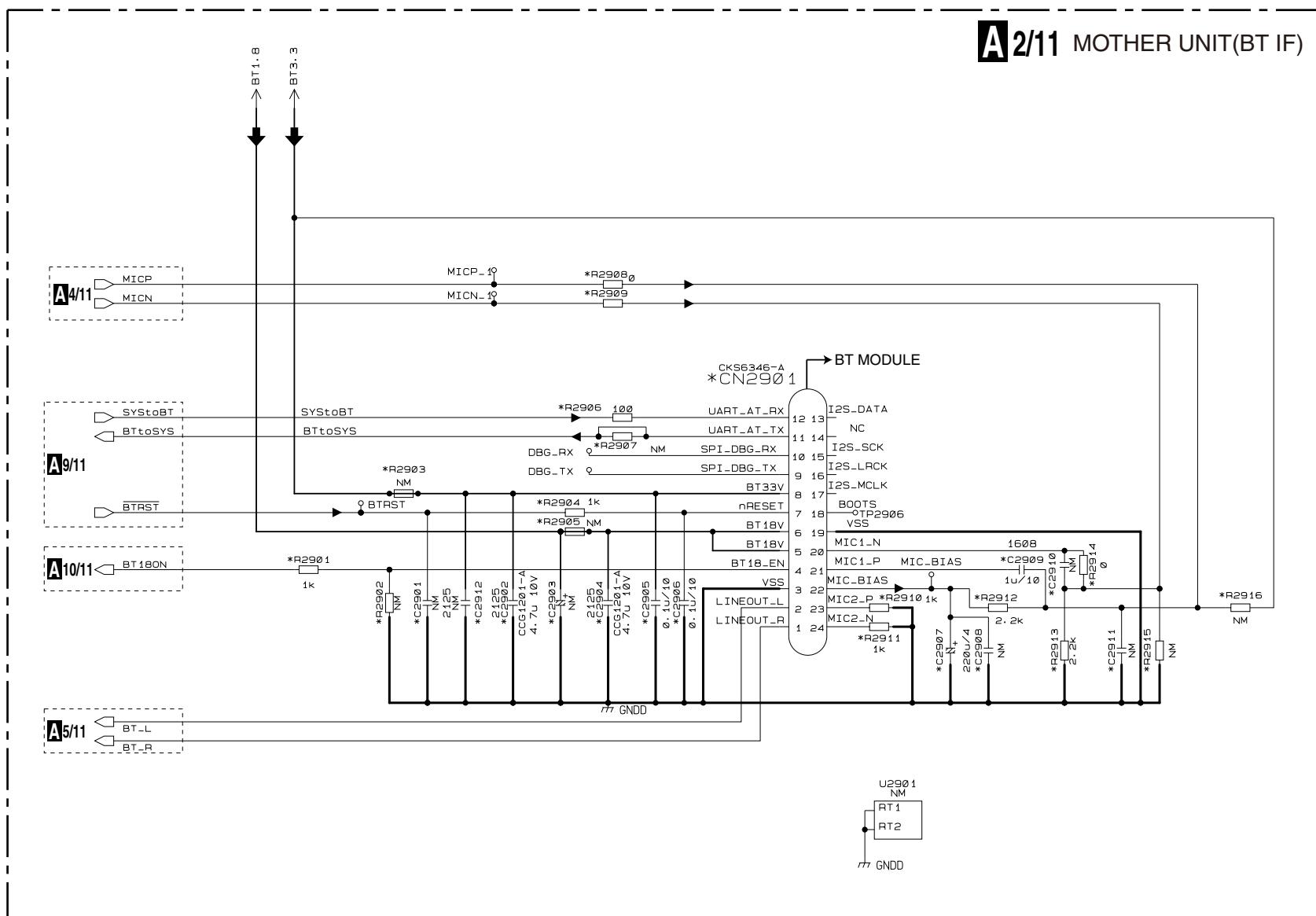
POWER SUPPLY, SPEAKER

10. SCHEMATIC DIAGRAM

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

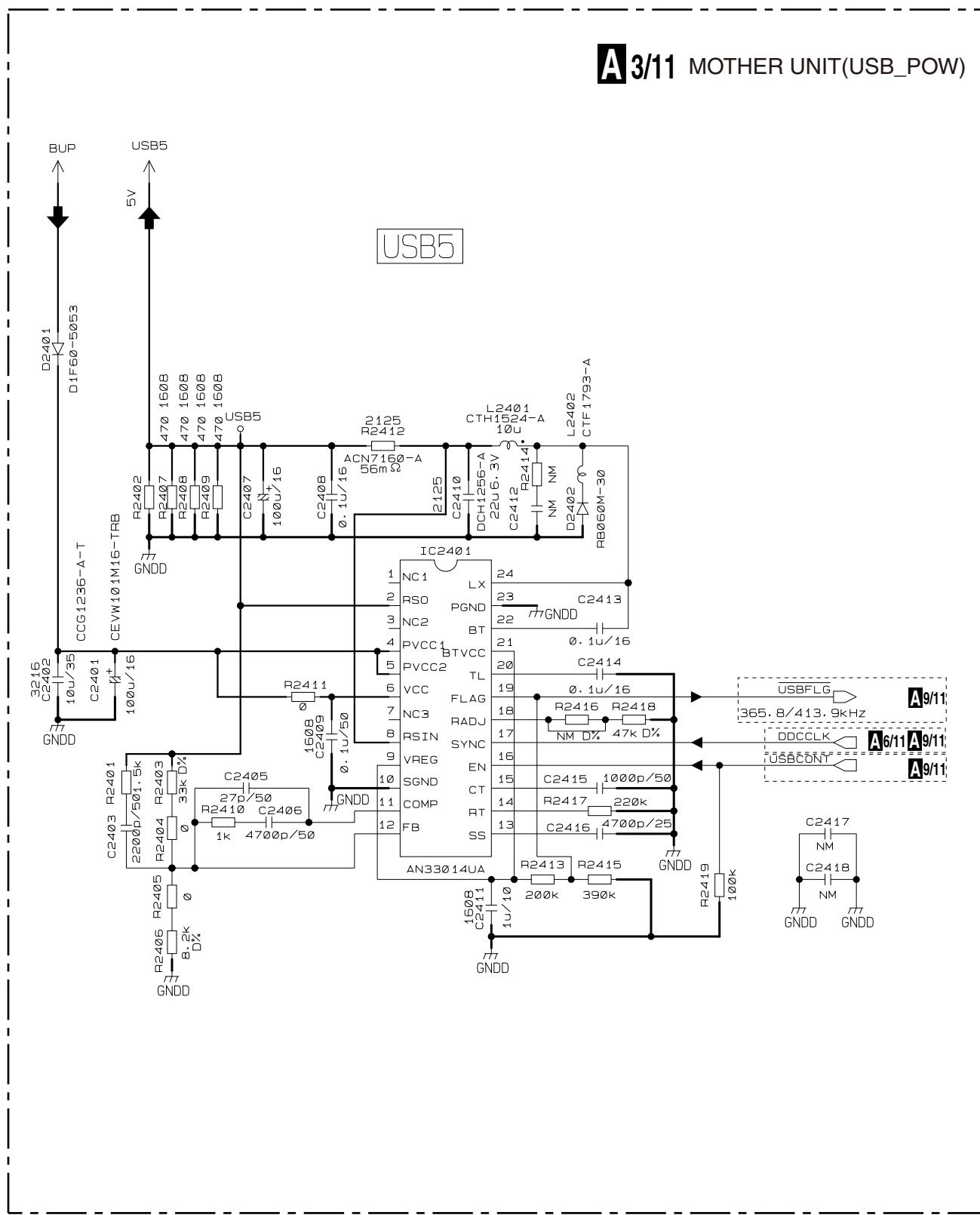


10.2 MOTHER UNIT (BT IF)



A2/11

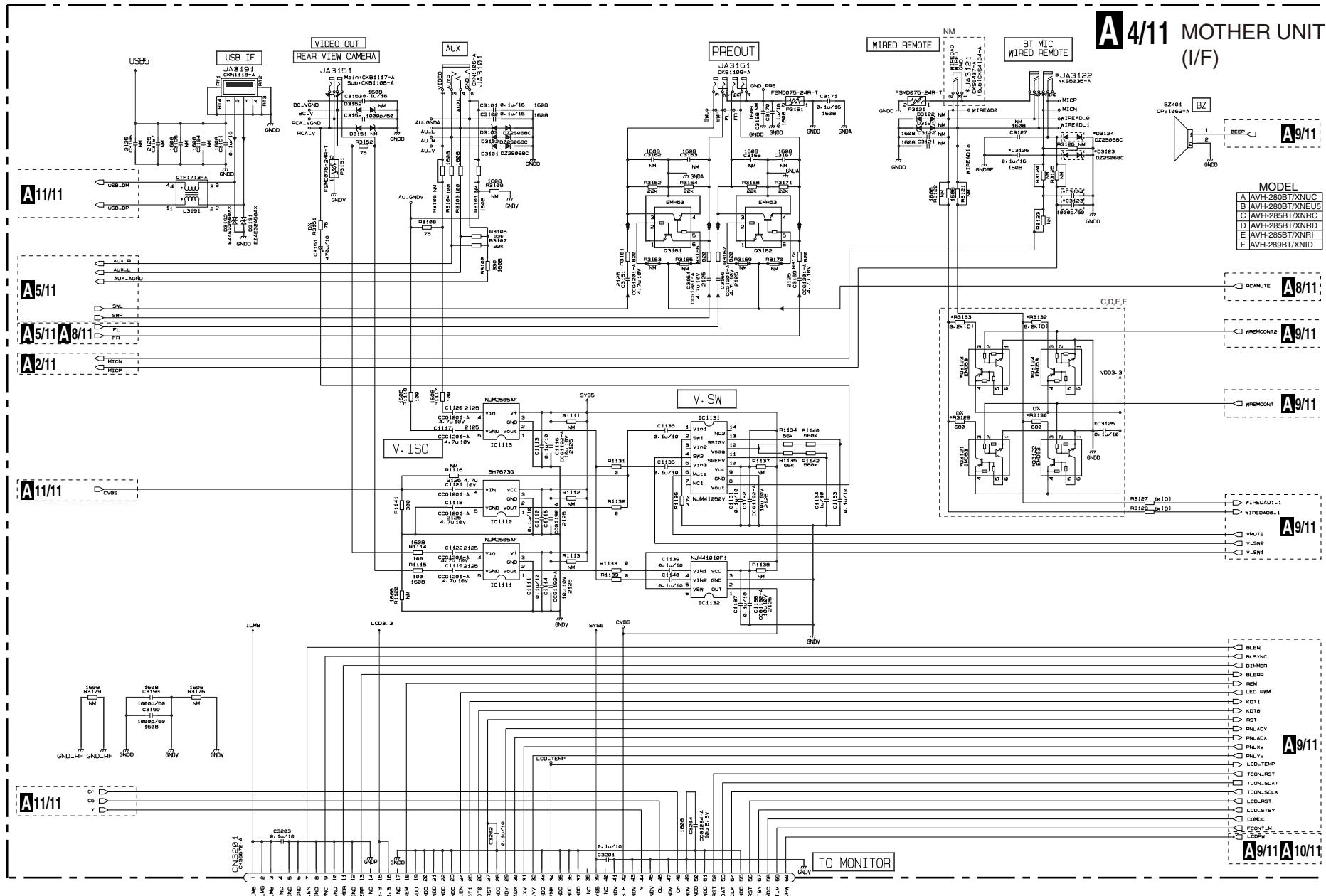
10.3 MOTHER UNIT (USB_POW)

**A 3/11****A 3/11**

A 4/11 MOTHER UNIT
(I/F)

MODEL

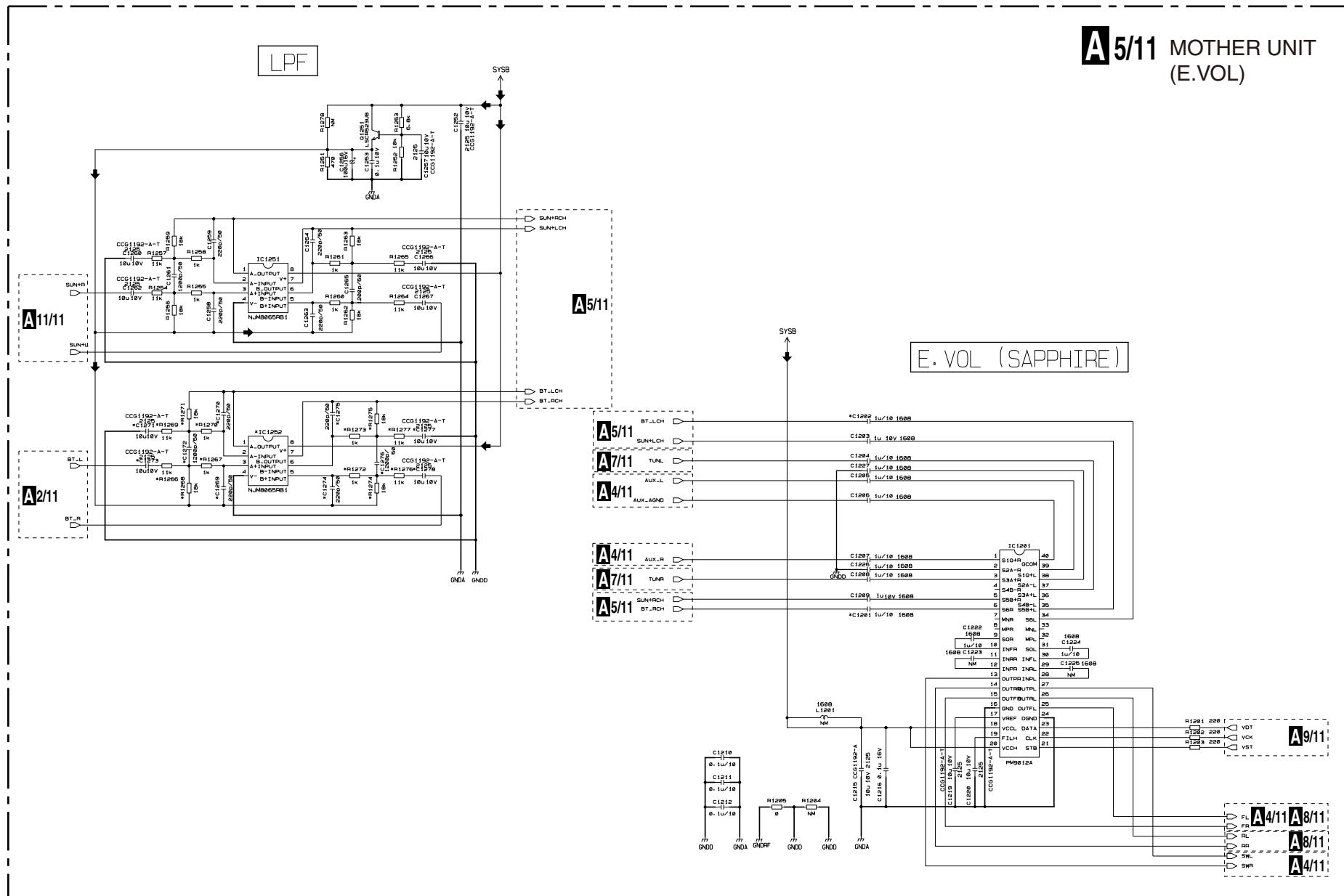
A	AVH-280BT/XNUC
B	AVH-280BT/XNEU5
C	AVH-285BT/XNRC
D	AVH-285BT/XNRD
E	AVH-285BT/XMRI



B1/6 CN5003

A 4/11

A 5/11 MOTHER UNIT (E.VOL)



A 5/11

A 6/11 MOTHER UNIT (DDC 2ch)

6/11

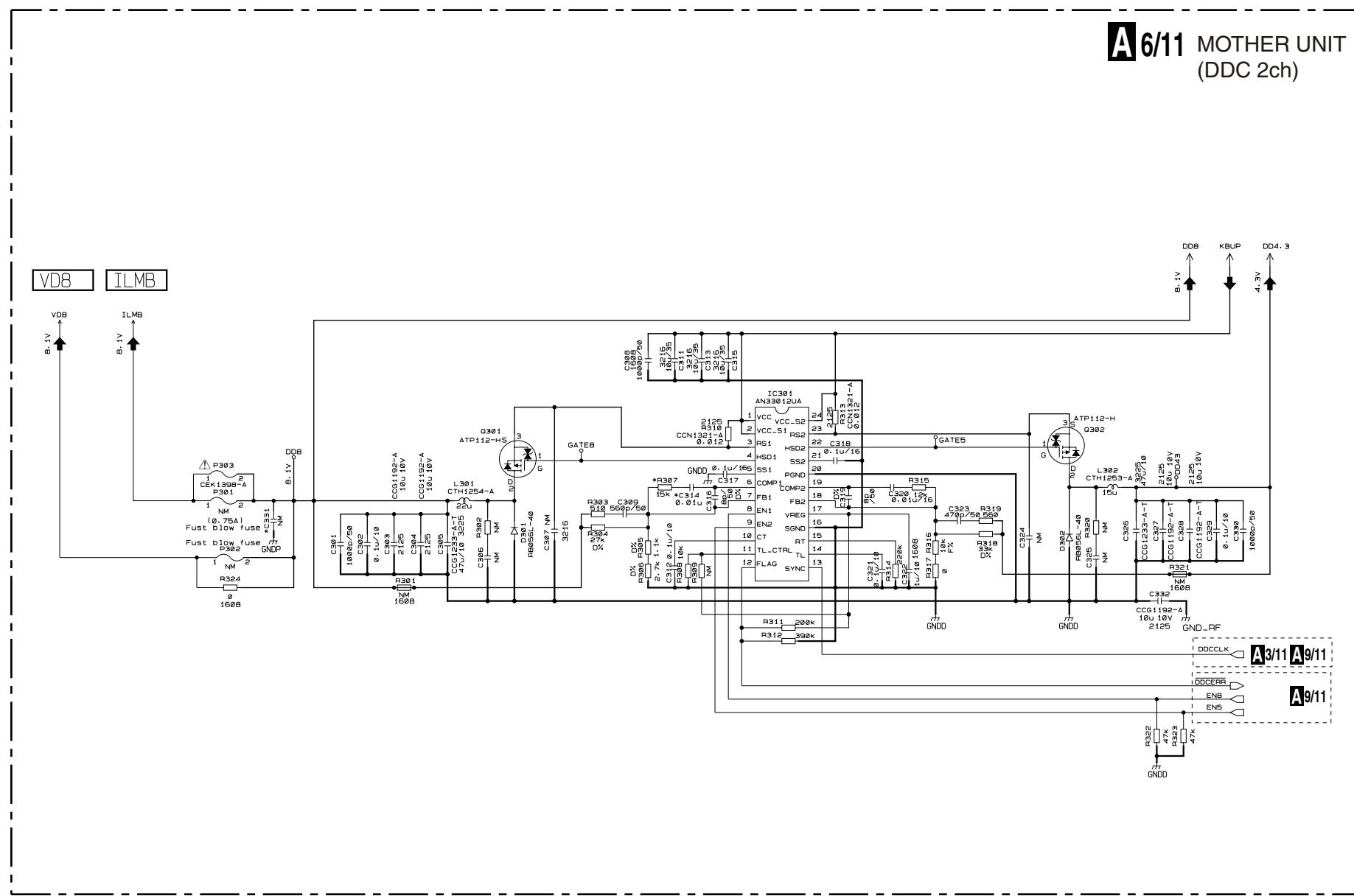
MARCH 1991

AVH-280BT/XNUC

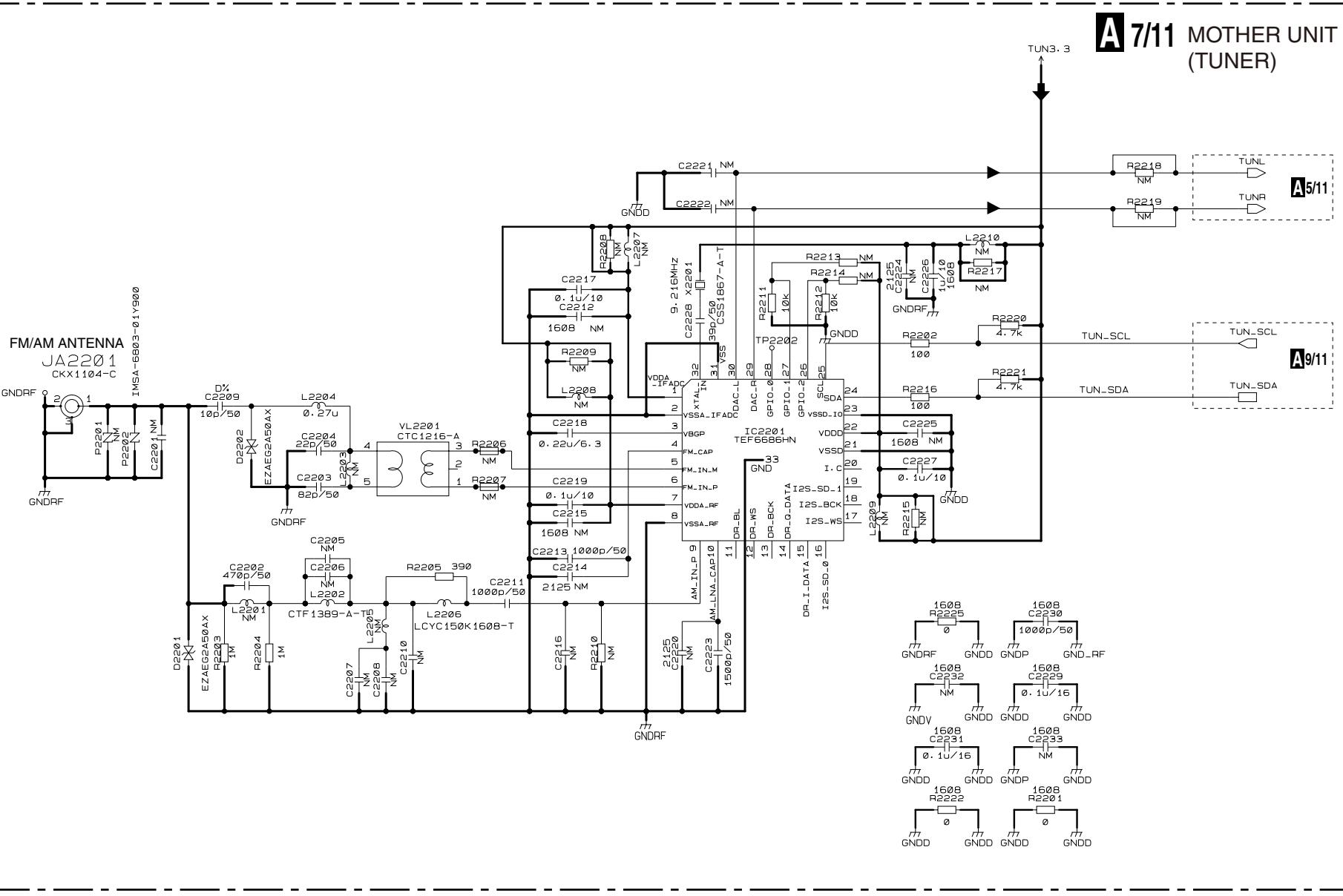
A6/11

6

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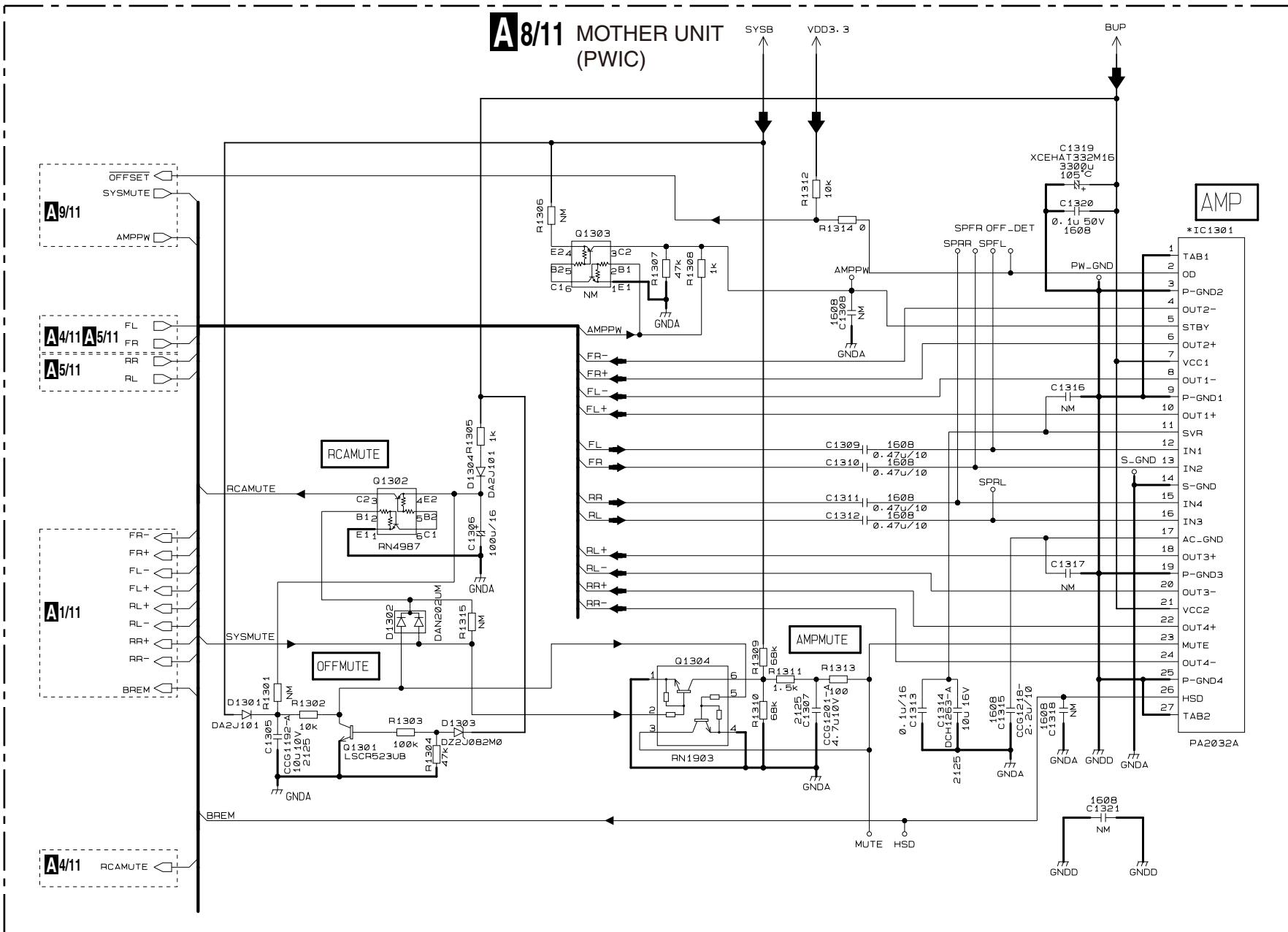


A 7/11 MOTHER UNIT (TUNER)



A 7/11

10.8 MOTHER UNIT (PWIC)



A 8/11

A 8/11

10.9 MOTHER UNIT (ucom)

5

6

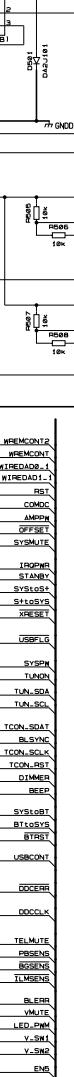
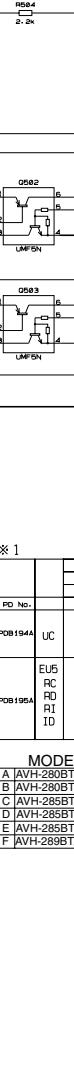
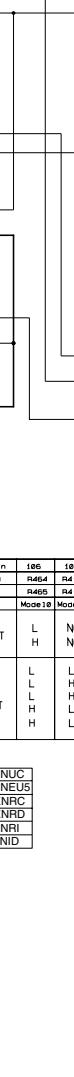
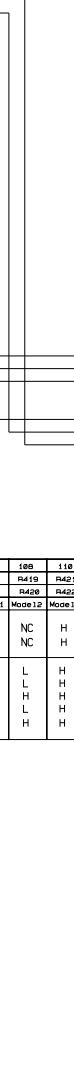
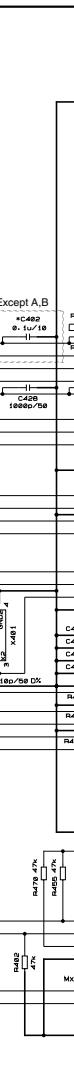
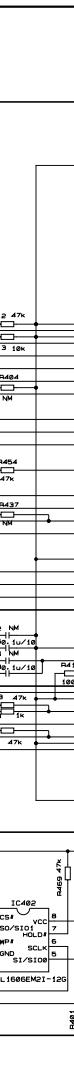
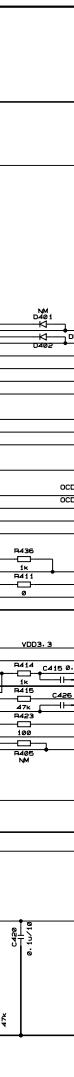
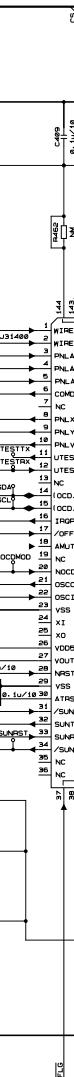
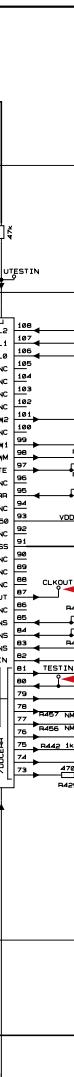
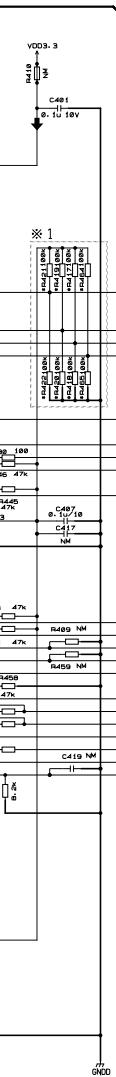
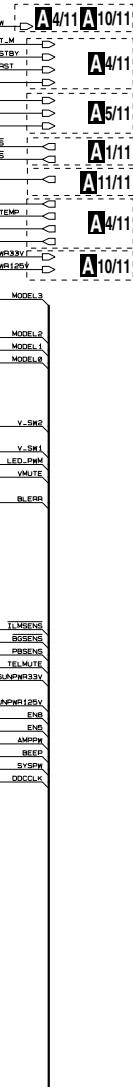
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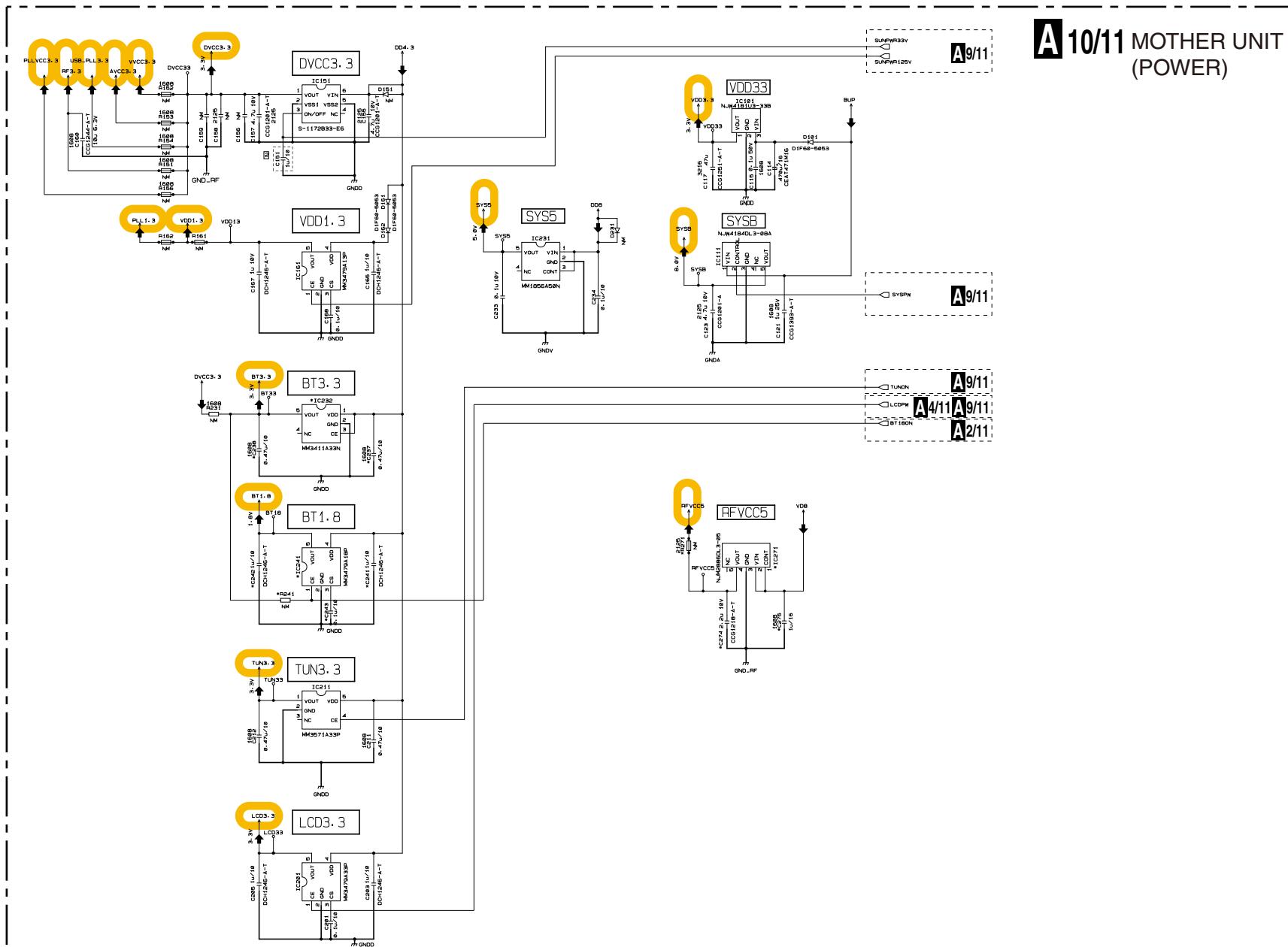
A
A9/11

A 9/11 MOTHER UNIT (ucom)



10.10 MOTHER UNIT (POWER)

**A 10/11 MOTHER UNIT
(POWER)**



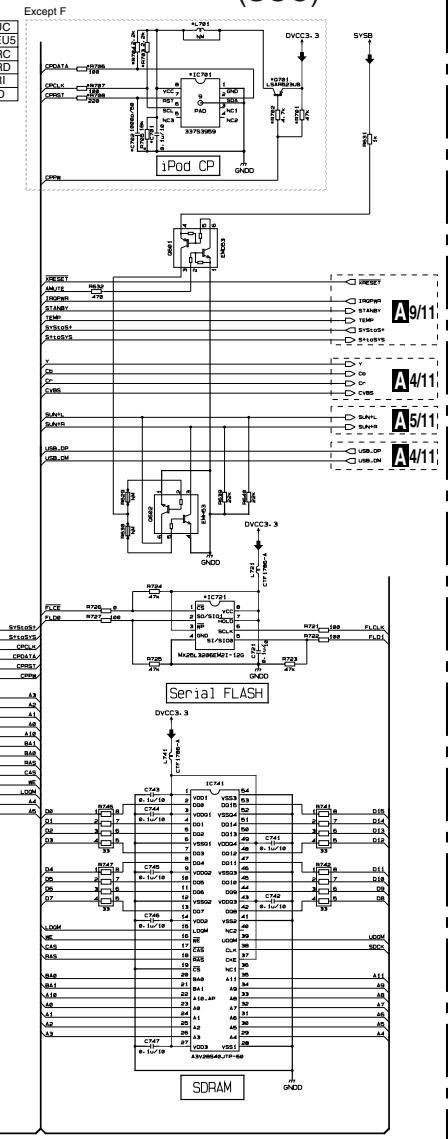
MARTIN

6

A 10/11

**A 11/11 MOTHER UNIT
(SOC)**

MODEL



CN

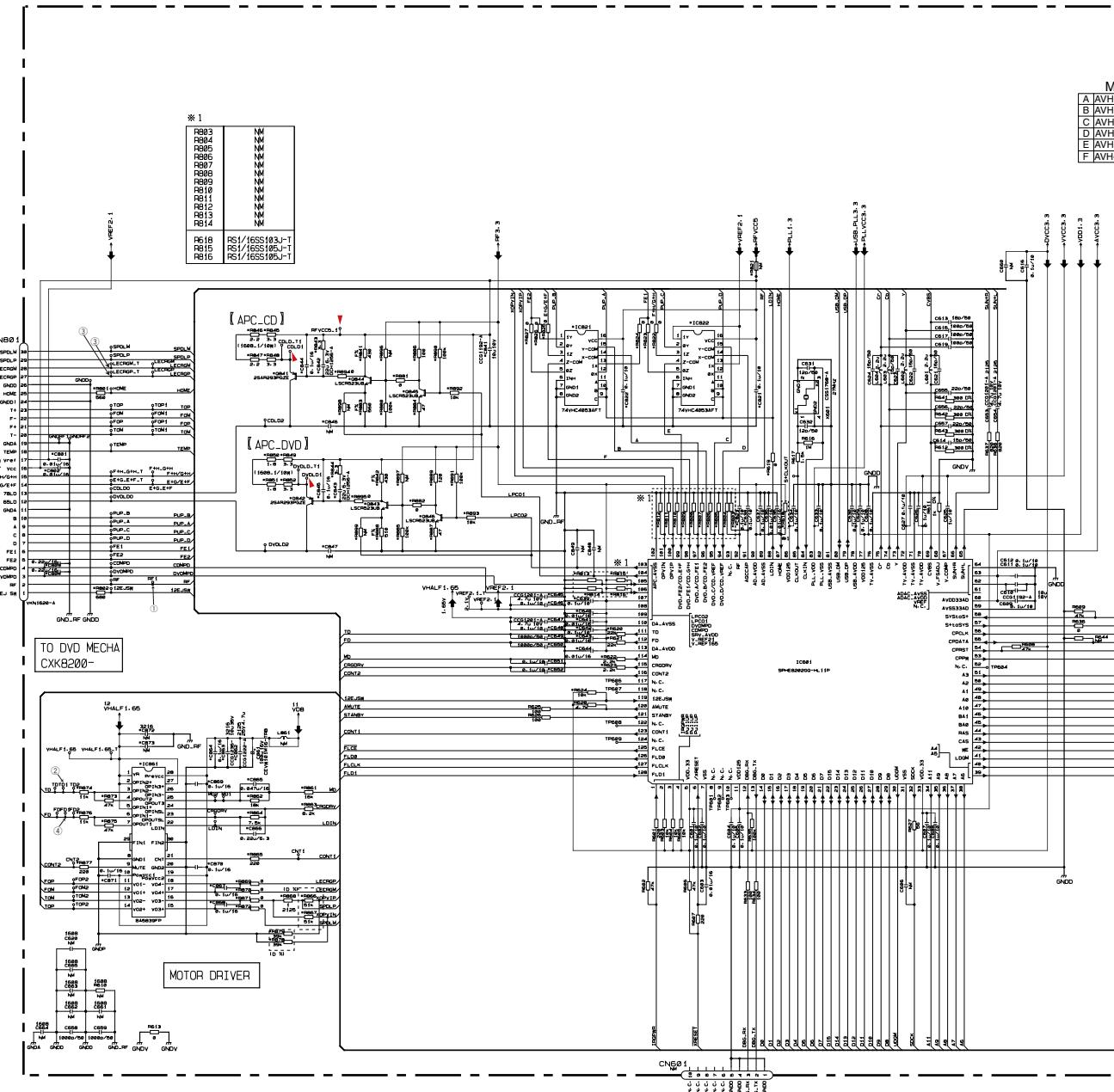
AVH-280BT/XNUC

7

8

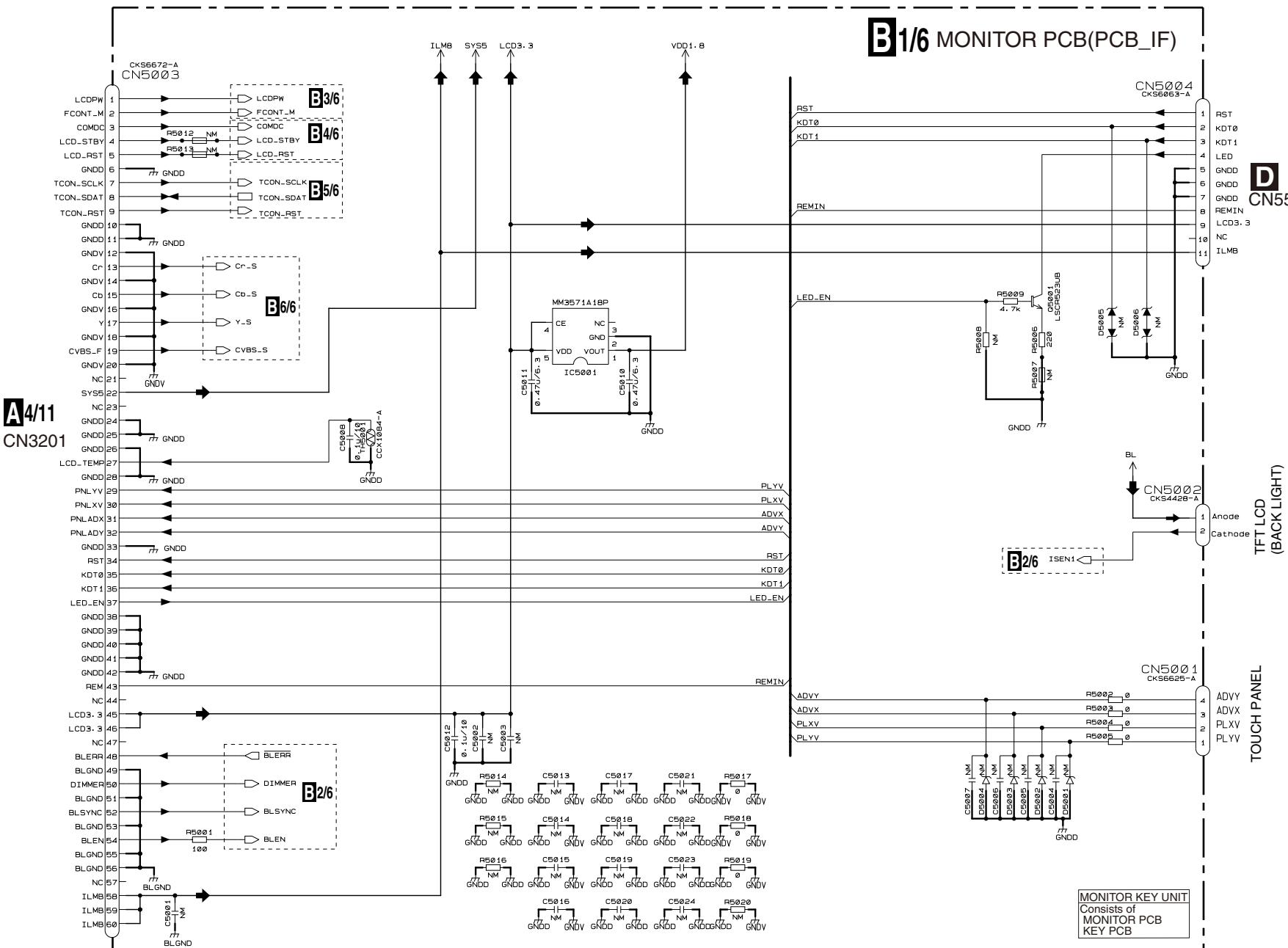
A 11/11

A 11/1



10.12 MONITOR PCB (PCB_IF)

B1/6 MONITOR PCB(PCB_IF)



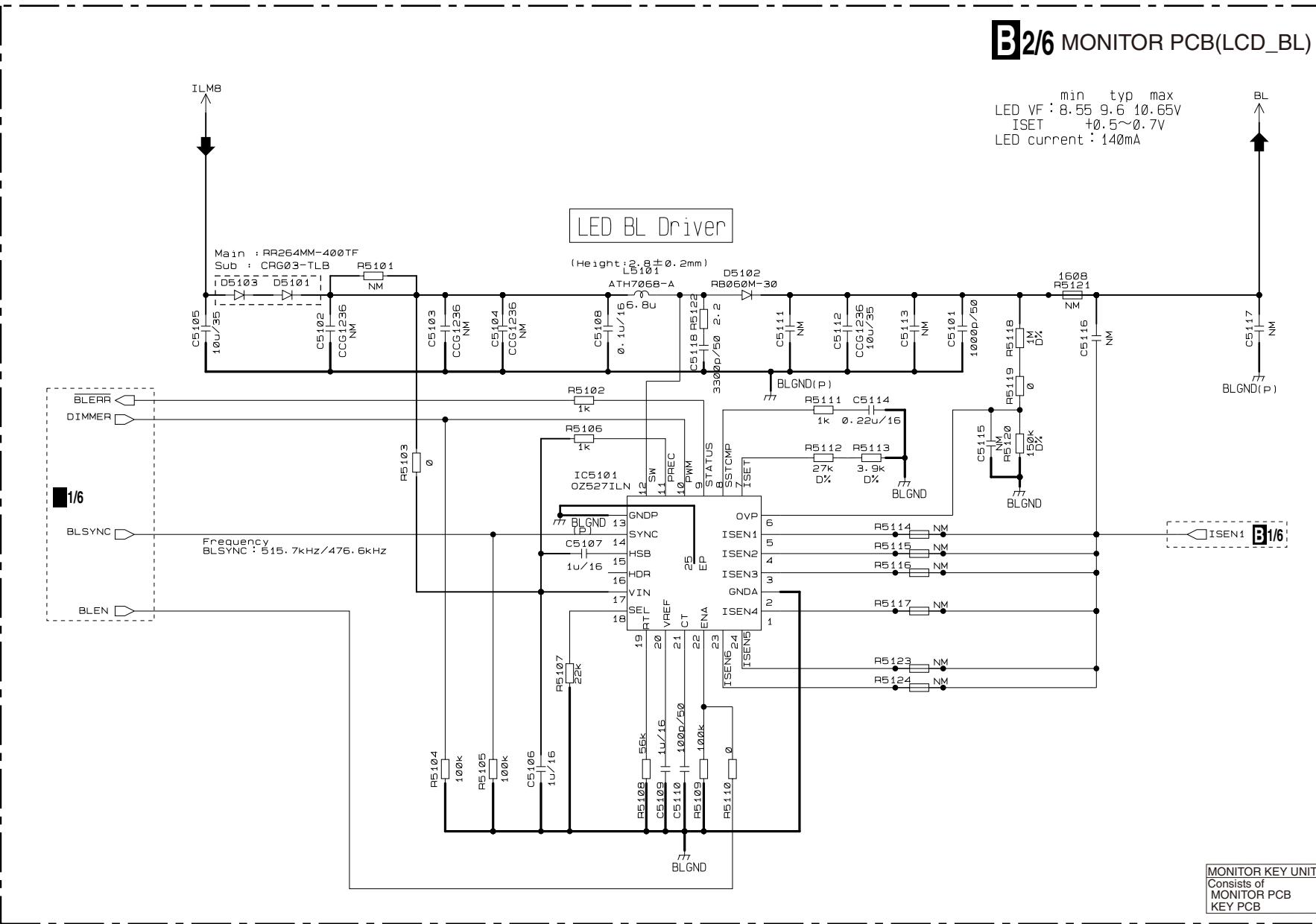
B1/6

B1/6

10.13 MONITOR PCB (LCD_BL)

B2/6 MONITOR PCB(LCD_BL)

LED VF : min typ max
ISET $+0.5 \sim 0.7V$
LED current : 140mA

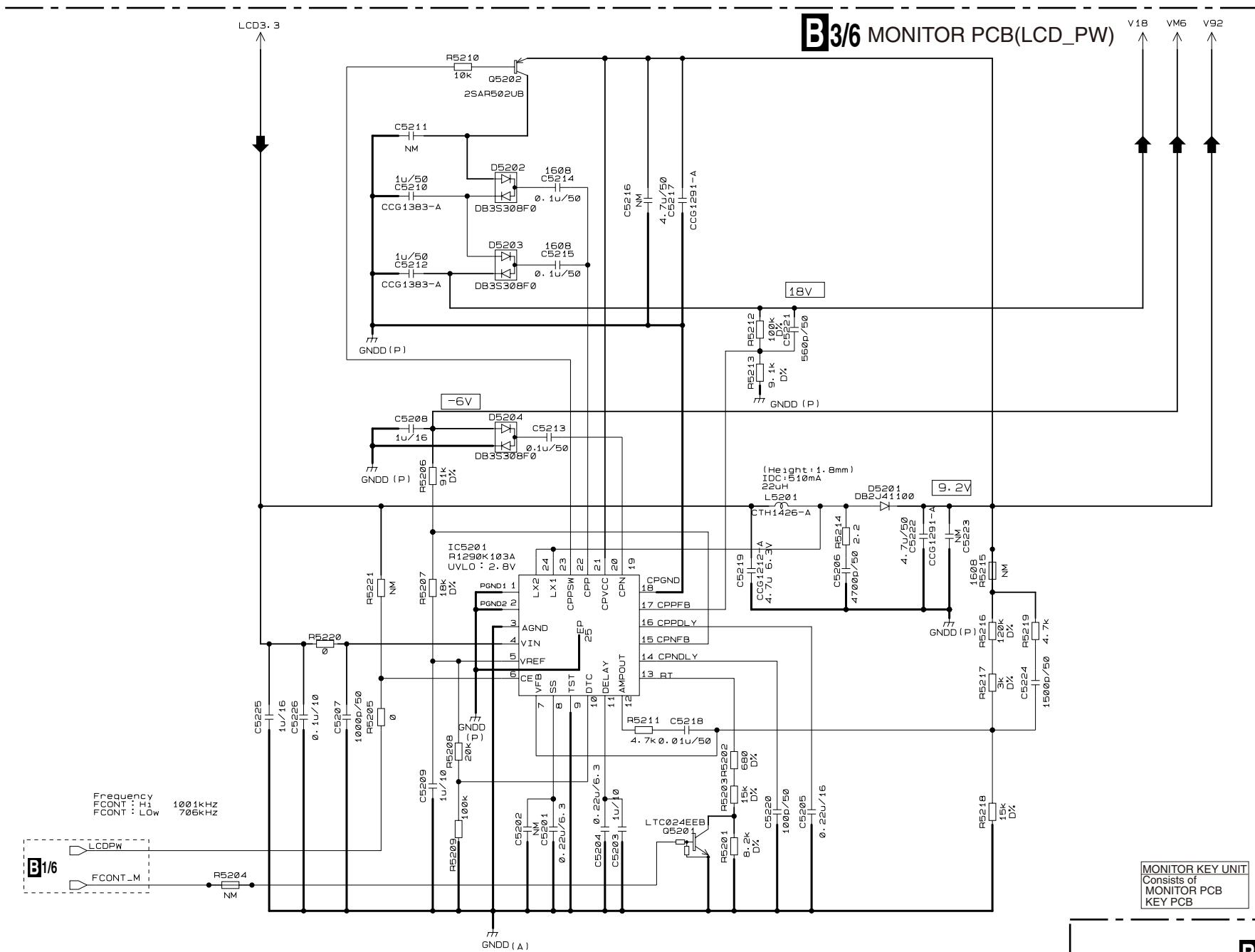


AVH-280BT/XNUC

B2/6

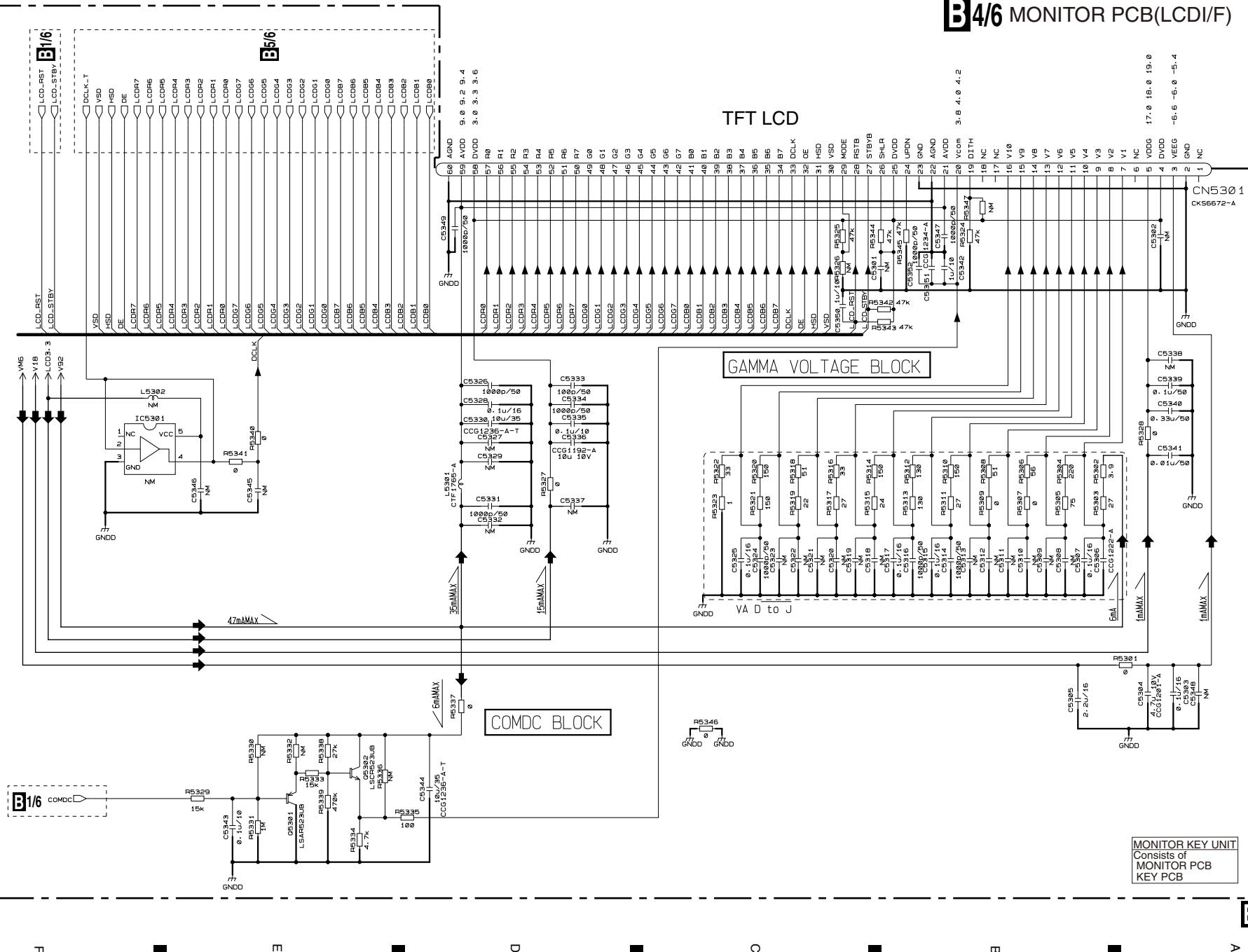
B2/6

10.14 MONITOR PCB (LCD_PW)

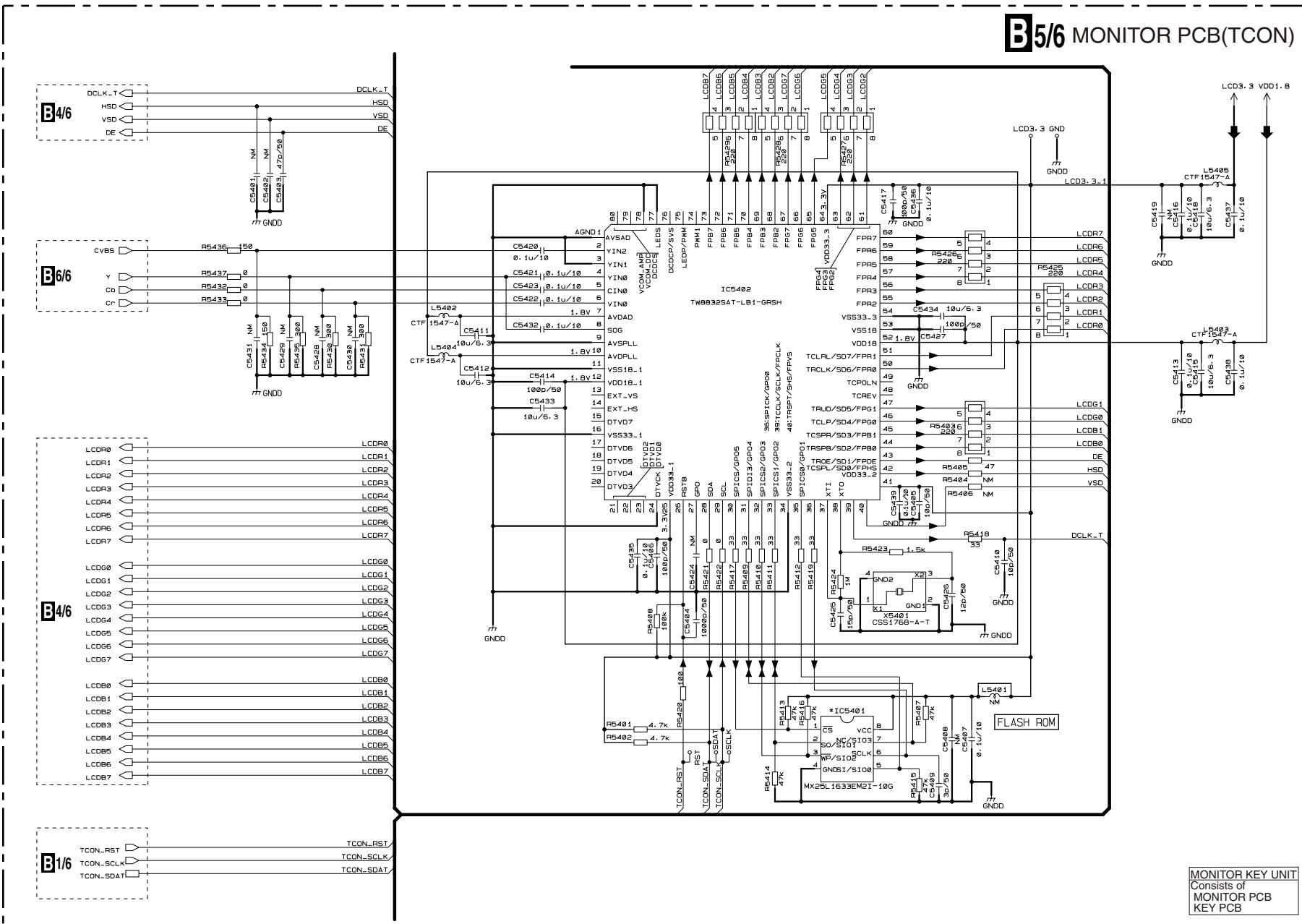


10.15 MONITOR PCB(LCDI/F)

5 6 7 8 9 10 11 12



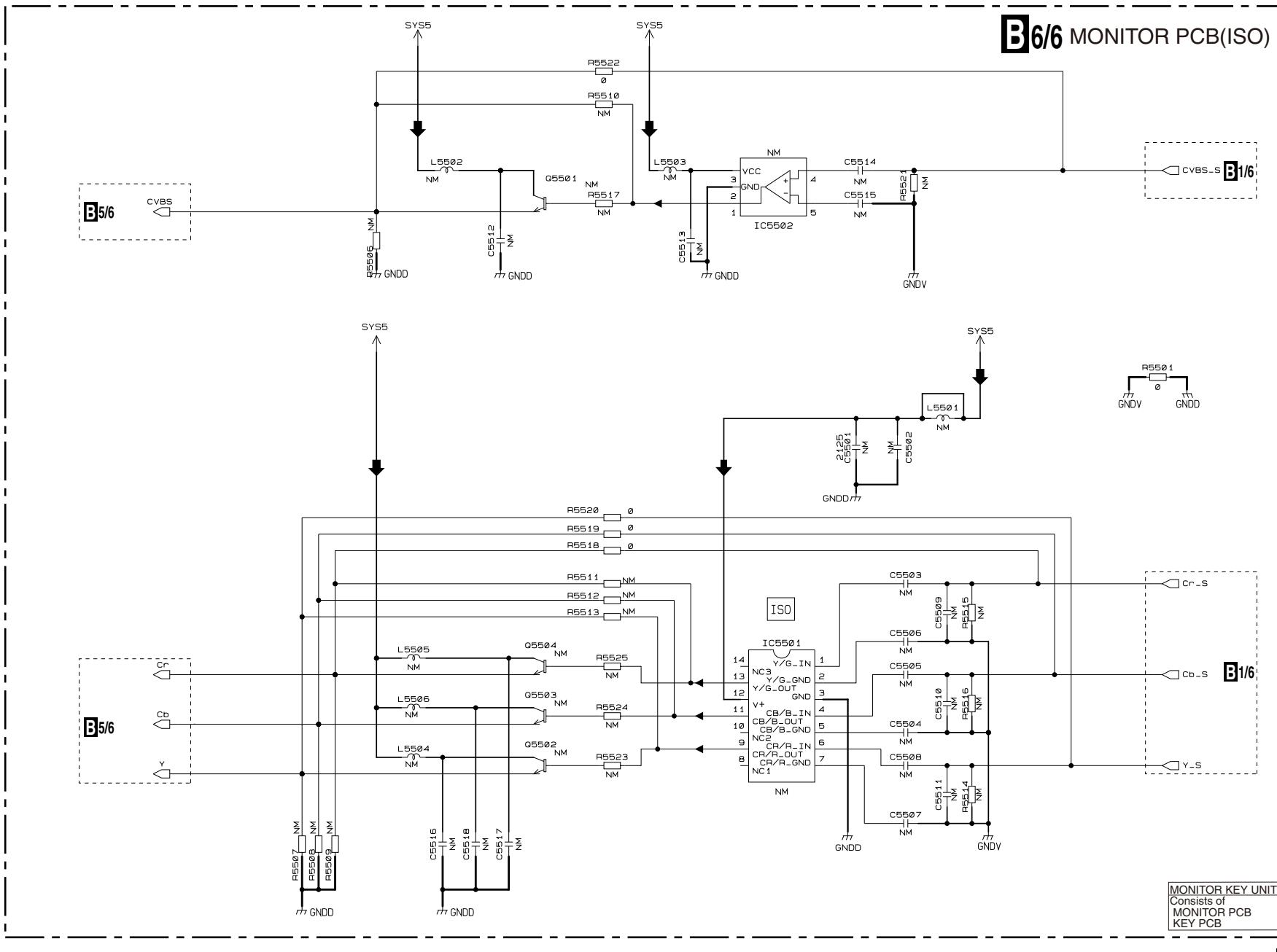
10.16 MONITOR PCB(TCON)



10.17 MONITOR PCB(ISO)

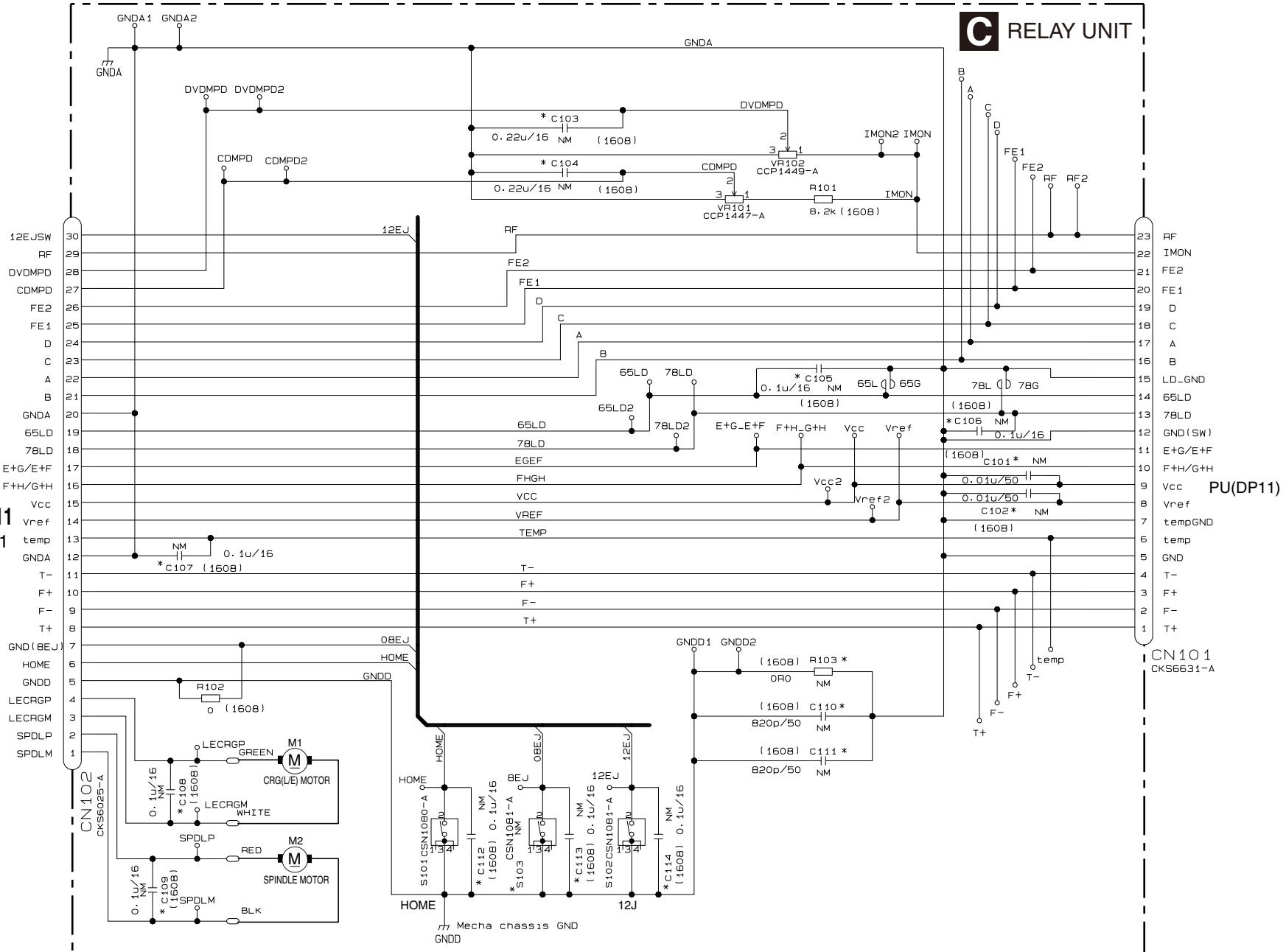
MONITOR KEY UNIT
Consists of
MONITOR PCB
KEY PCB

B6/6 MONITOR PCB(ISO)



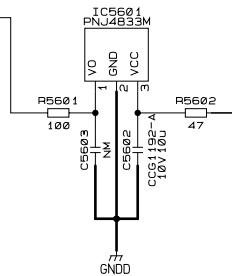
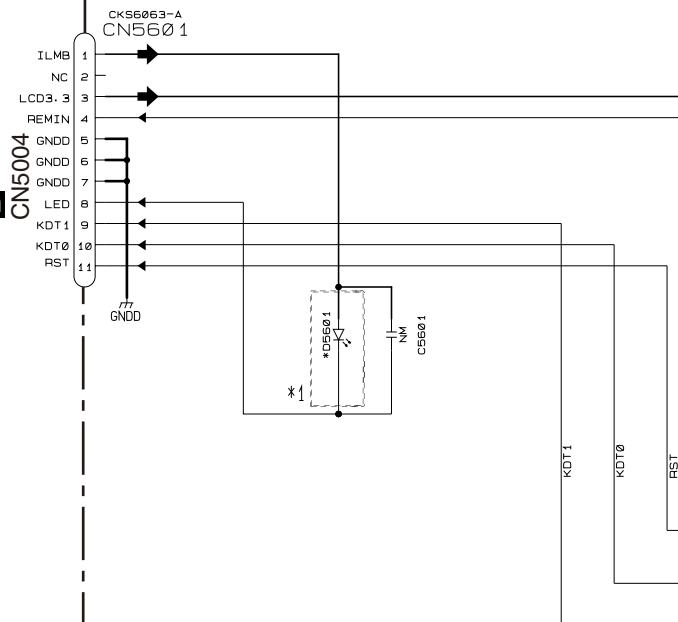
10.18 RELAY UNIT

C RELAY UNIT



D KEY PCB

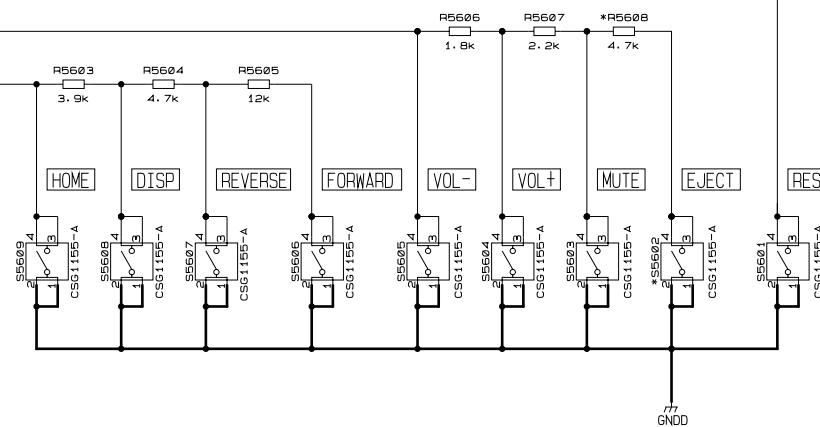
B16
CN5004
CN5601



	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	VOL-	VOL+	MUTE	EJECT	X	X
KDT1	HOME	X	DISP	REVERSE	FORWARD	X

ILL COLOR *1			
D5601	RED	FM-3528SXK620H08-TRB	B
	BLUE	FM-3528BK-470M-TRB	A C D E F

MODEL
A AVH-280BT/XNUC
B AVH-280BT/XNEU5
C AVH-285BT/XNRC
D AVH-285BT/XNRD
E AVH-285BT/XNRI
F AVH-289BT/XNID



MONITOR KEY UNIT
Consists of
MONITOR PCB
KEY PCB

10.20 WAVEFORMS

Mother Unit

Note:1. The encircled number denote measuring points in the circuit diagram.

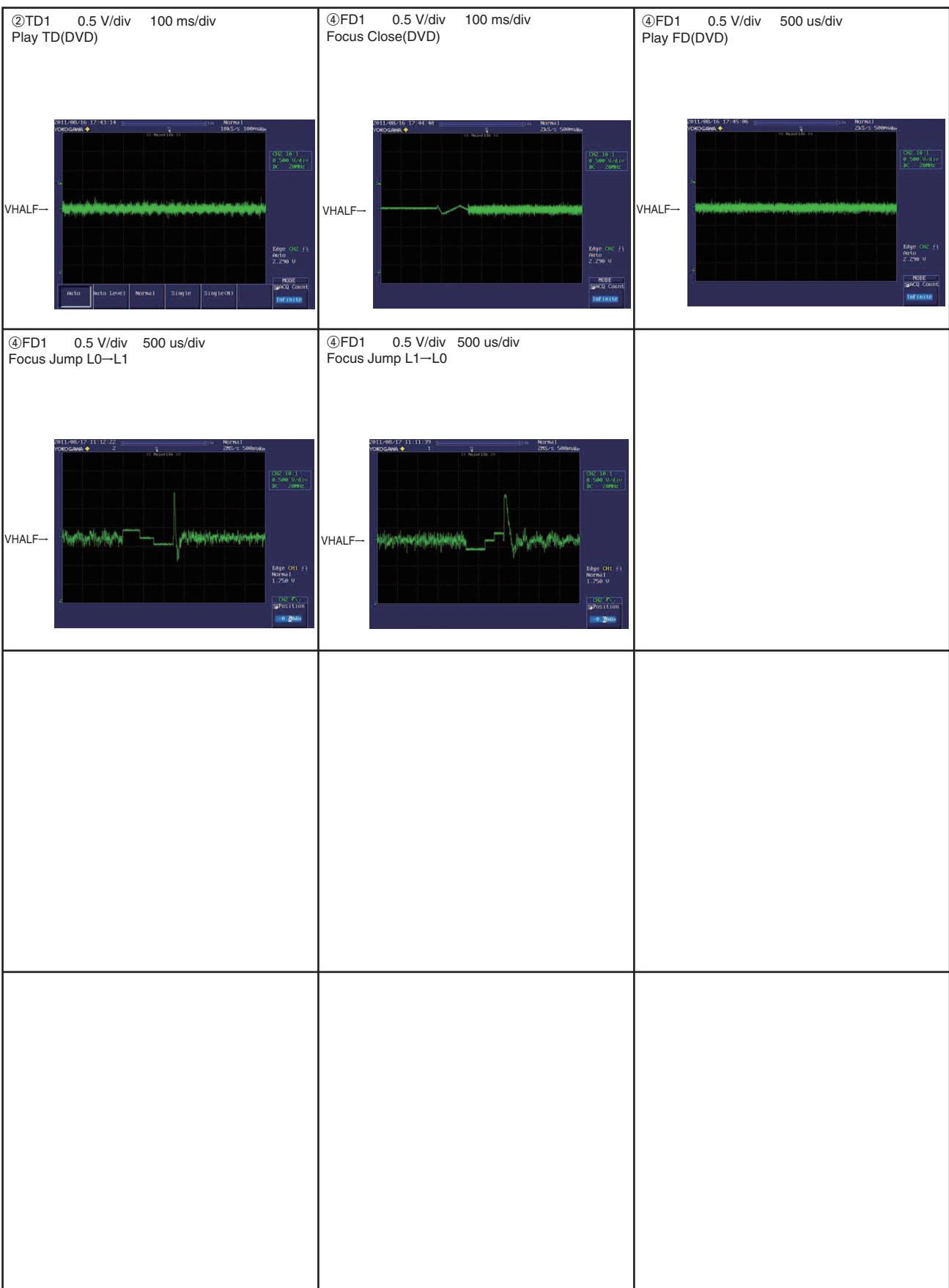
2. Reference voltage: 1.65 V(TD1,FD1)(=VHALF)
- 2.2 V(RF)(=VREF)

In the waveform, it is seeing on the GND standard.

Offset of 1.65 V or 2.2 V is put in.

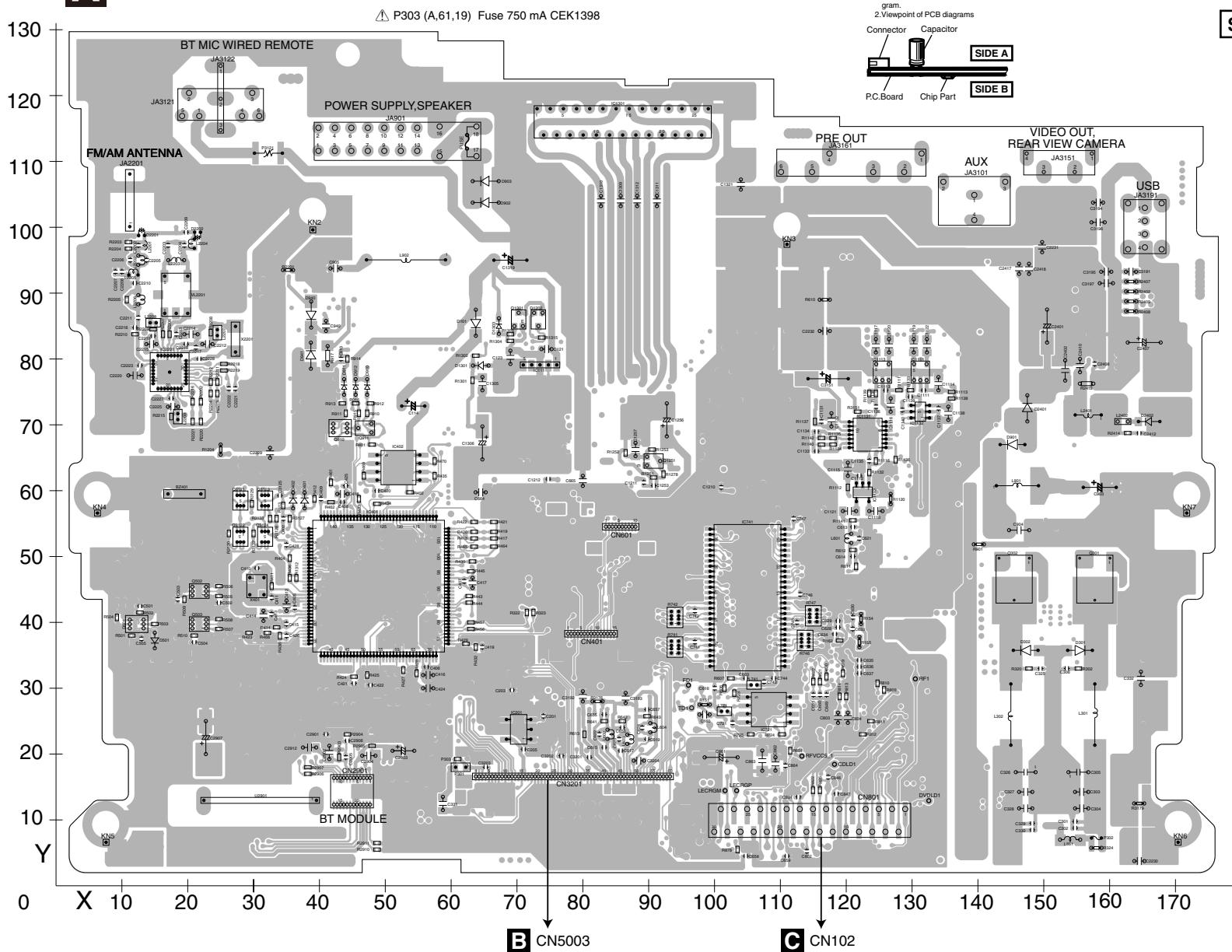
A





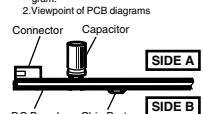
11. PCB CONNECTION DIAGRAM

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.

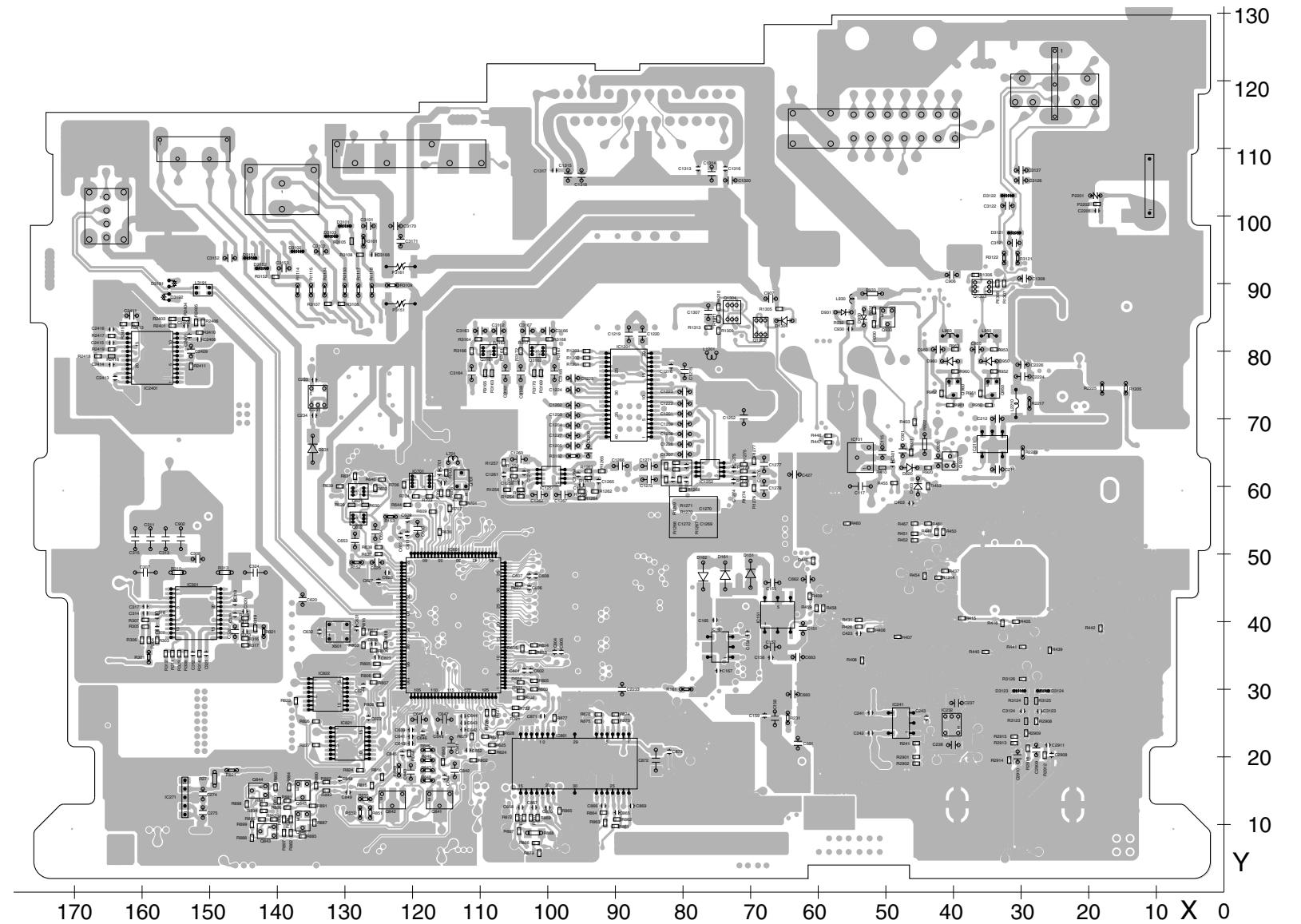


SIDE A

MARCH 1990

A MOTHER UNIT

SIDE B



A

A

5

6

7

8

9

130

120

110

100

90

80

70

60

50

40

30

20

10

Y

F

E

D

C

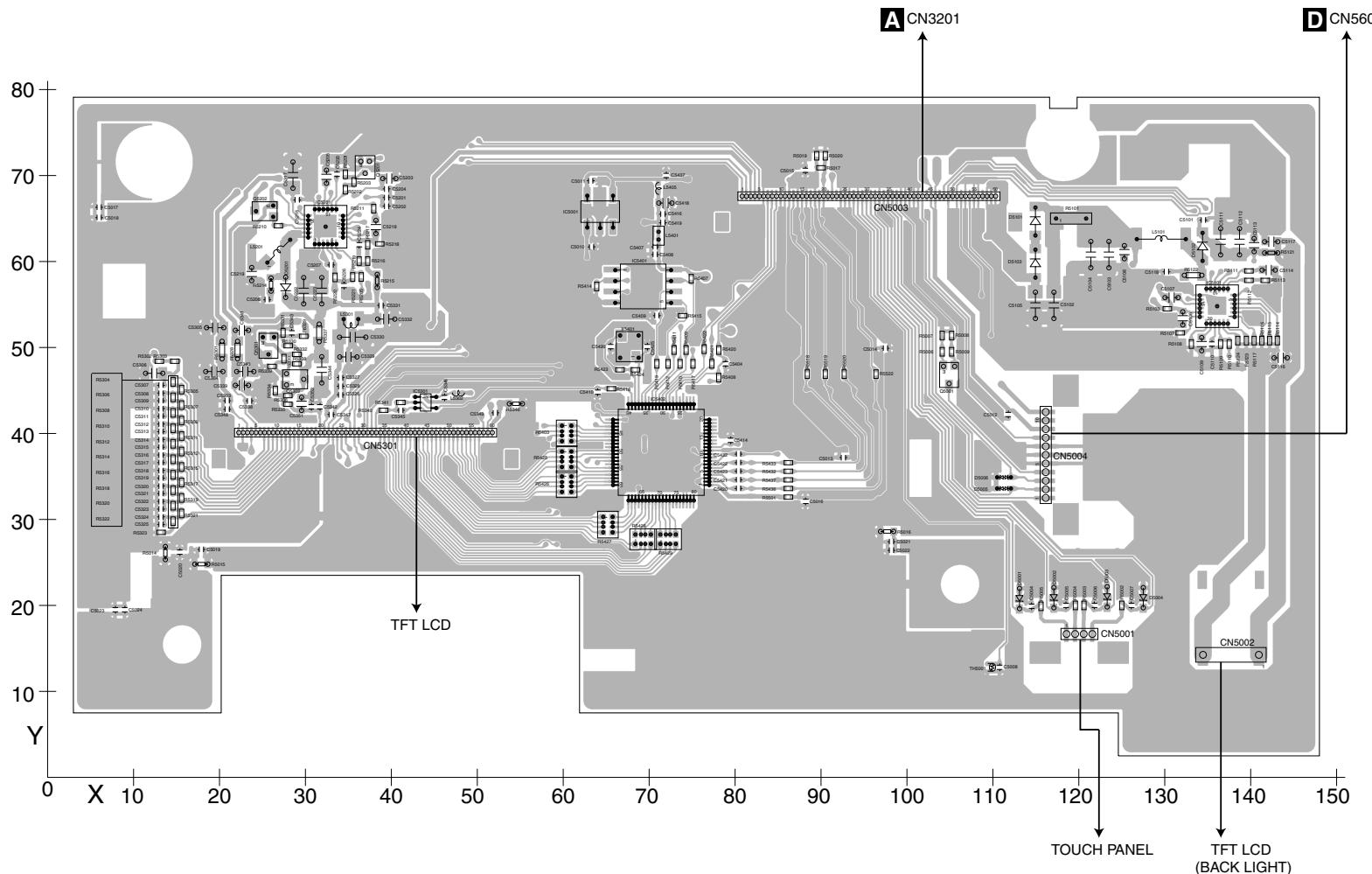
B

A

11.2 MONITOR PCB

B MONITOR PCB

SIDE A

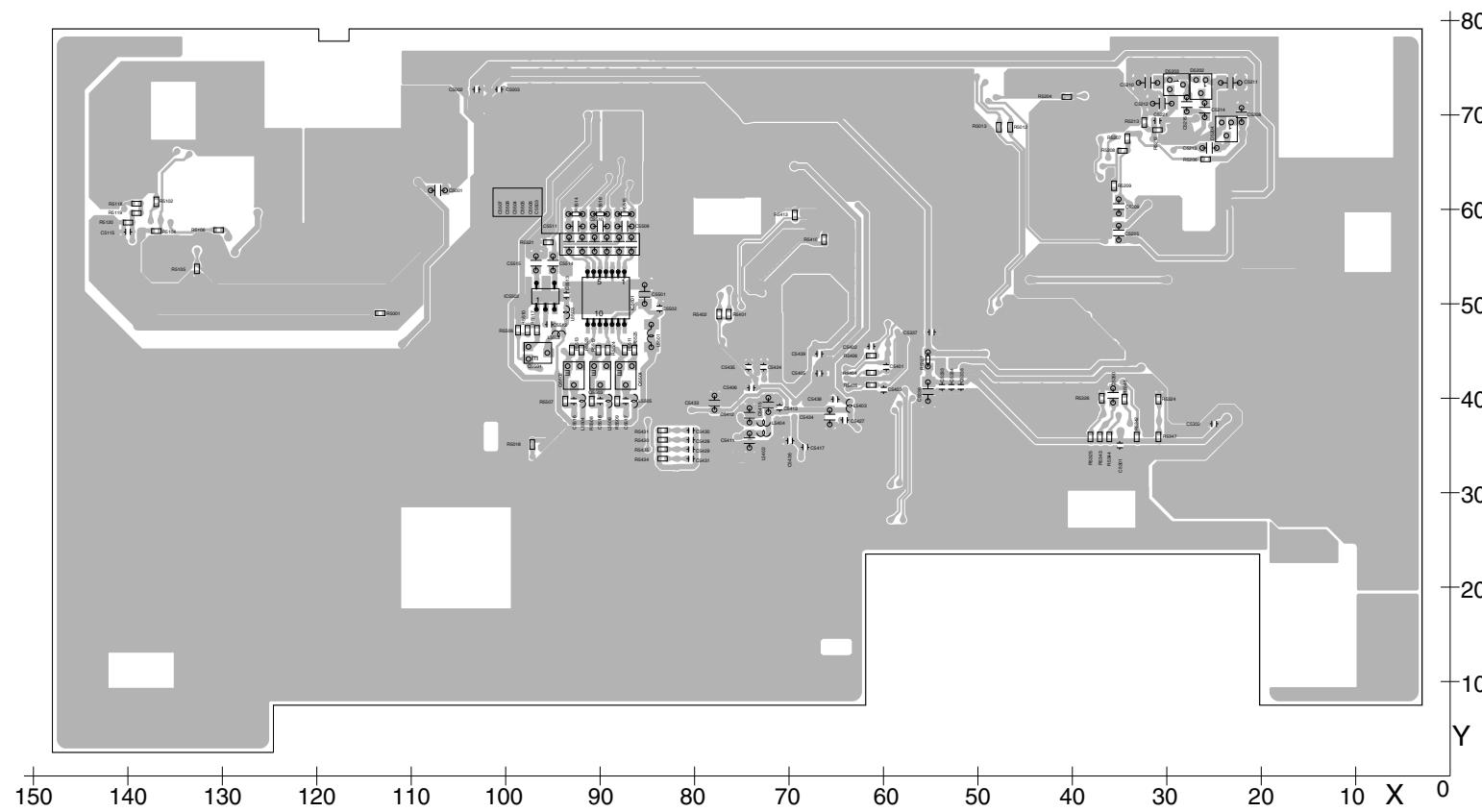


B

B

B MONITOR PCB

SIDE B

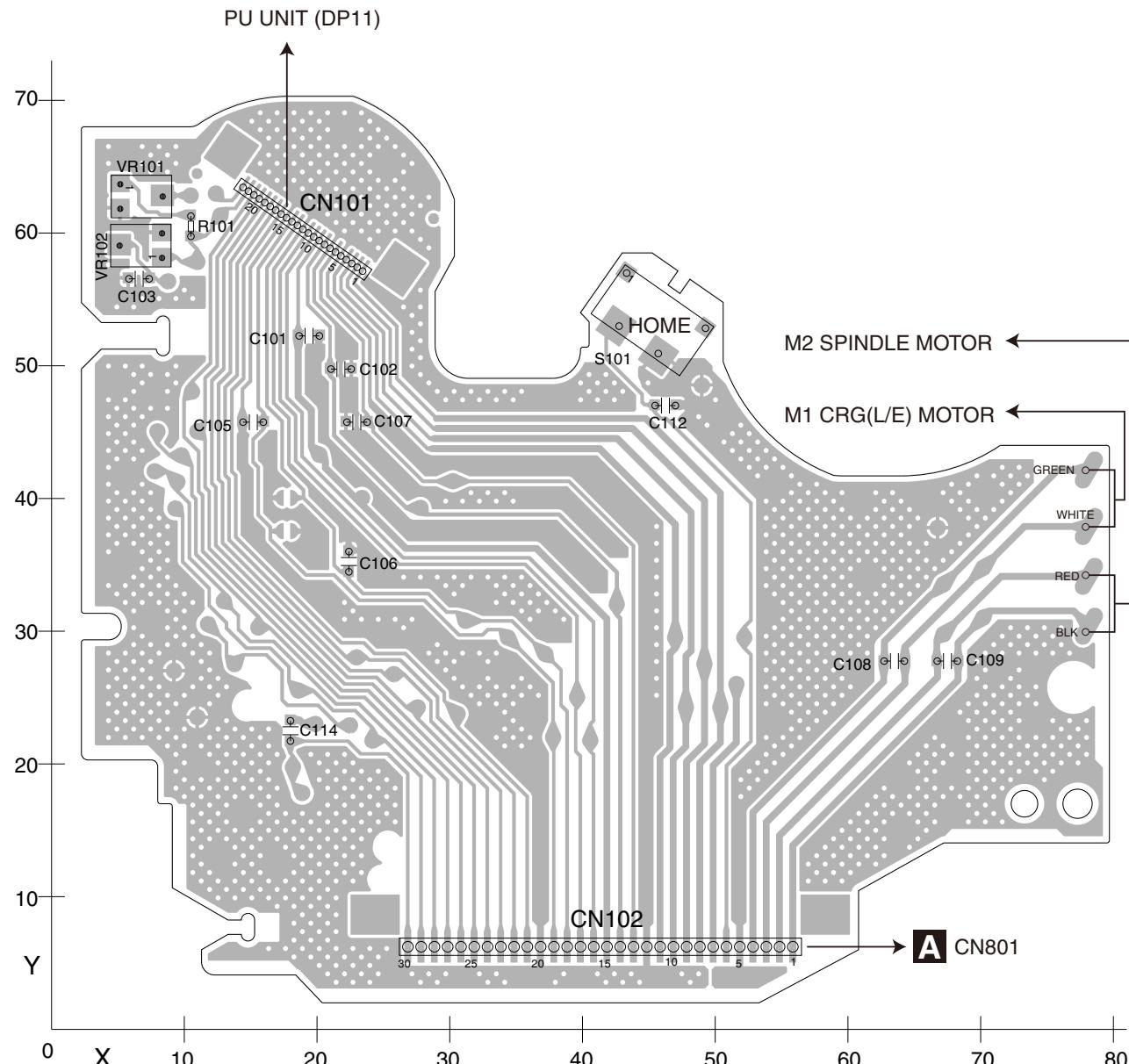


B

11.3 RELAY UNIT

C RELAY UNIT

SIDE A



C

82

AVH-280BT/XNUC

C

4

5

6

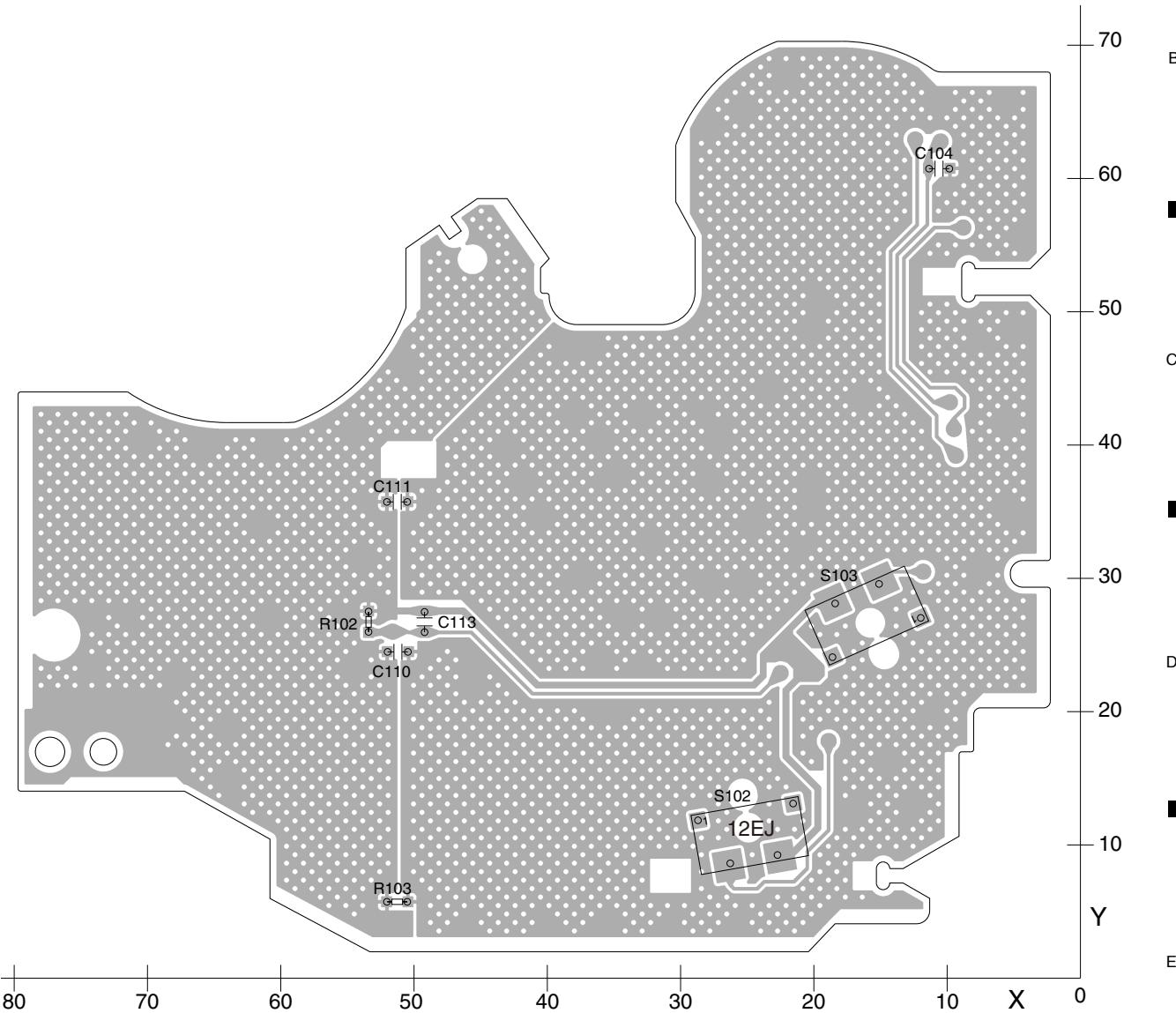
7

8

C RELAY UNIT

SIDE B

A

**C****C**

5

6

7

8

AVH-280BT/XNUC

83

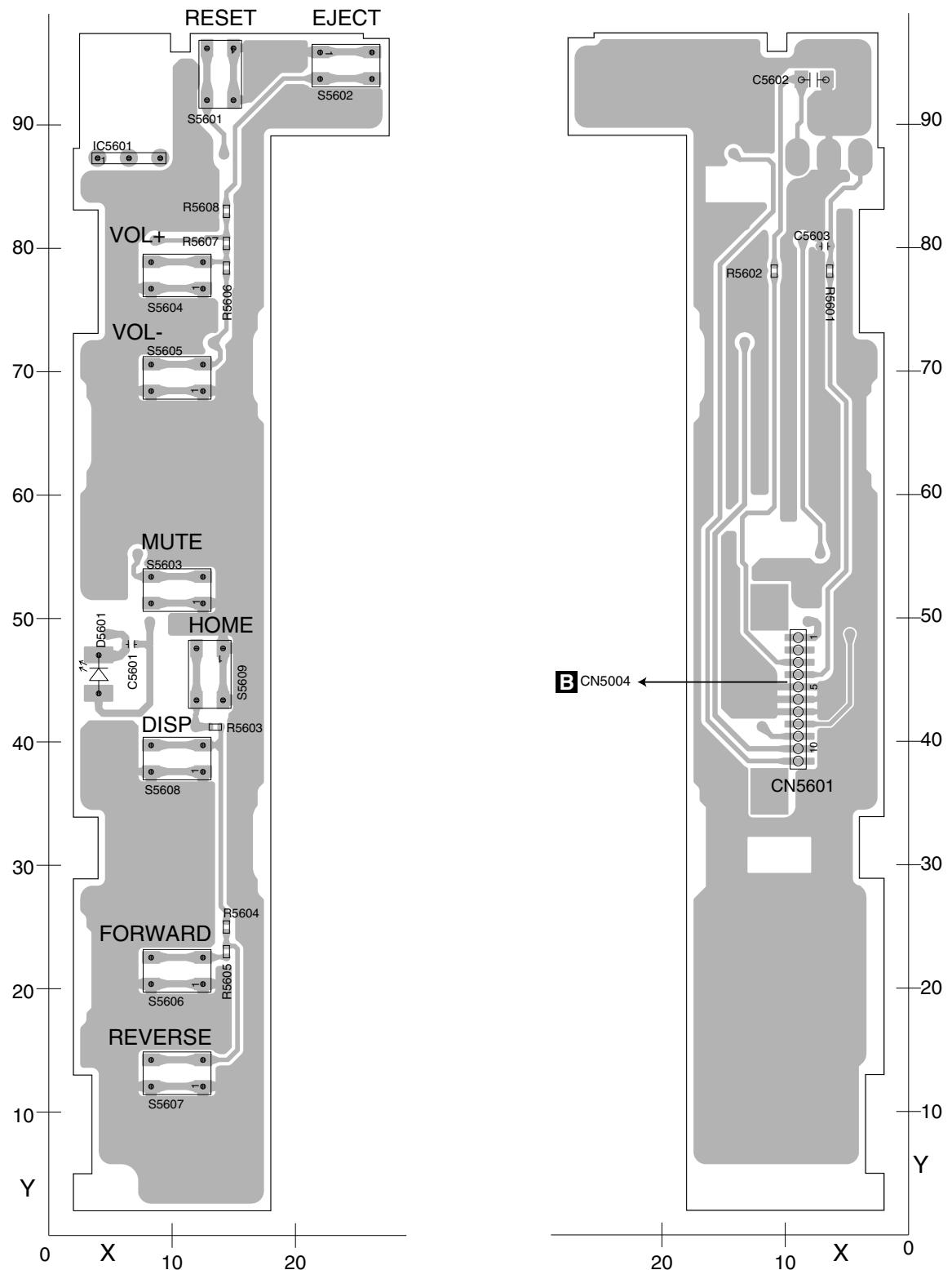
11.4 KEY PCB

D KEY PCB

SIDE A

D KEY PCB

SIDE B



D

D

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.....

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

- The expression of the unit in this manual is shown by u instead of μ . Please do not make a mistake.

<u>Circuit Symbol and No.</u>	<u>Part No.</u>	<u>Circuit Symbol and No.</u>	<u>Part No.</u>
A:AVH-280BT/XNUC			MISCELLANEOUS
B:AVH-280BT/XNEU5	IC 101 (B,54,64) Regulator IC		NJW4181U3-33B
C:AVH-285BT/XNRC	IC 111 (A,74,74) Regulator IC		NJW4184DL3-08A
D:AVH-285BT/XNRD	IC 151 (B,66,41) Regulator IC		S-1172B33-E6
	IC 161 (B,75,36) Regulator IC		MM3479A13P
	IC 201 (A,70,24) Regulator IC		MM3479A33P
E:AVH-285BT/XNRI	IC 211 (B,34,66) Regulator IC		MM3571A33P
F:AVH-289BT/XNID	IC 231 (B,134,73) IC		MM1856A50N
Unit Number: QWM4221(A)	IC 232 (B,40,25) IC		MM3411A33N
Unit Number: QWM4220(B)	IC 241 (B,48,25) Regulator IC		MM3479A18P
	IC 271 (B,159,14) IC		NJM2886DL3-05
Unit Number: QWM4223(C)	IC 301 (B,152,41) IC		AN33012UA
Unit Number: QWM4224(D)	*IC401 (A,49,46) Flash Blank UC IC		MN103LF15RXW
Unit Number: QWM4225(E)	IC 402 (A,52,64) Serial Flash Memory IC		MX25L1606EM2I-12G
Unit Number: QWM4226(F)	IC 601 (B,114,39) AUD DSP SYS LSI		SPHE8202GQ-HL11P
Unit Name : Mother Unit	IC 701 (B,119,61) IC(A,B,C,D,E)		337S3959
Unit Name : Monitor Key Unit	IC 721 (A,108,27) Flash ROM Unit(A)		CWJ1998
Unit Number: QWM4236(A,C,D,E,F)	IC 721 (A,108,27) Flash ROM Unit(B)		CWJ1997
Unit Number: QWM4234(B)	IC 721 (A,108,27) Flash ROM Unit(C)		CWJ2000
Unit Name : Relay Unit	IC 721 (A,108,27) Flash ROM Unit(D)		CWJ2001
	IC 721 (A,108,27) Flash ROM Unit(E)		CWJ2002
A	IC 721 (A,108,27) Flash ROM Unit(F)		CWJ2003
Unit Number: QWM4221(A)	IC 741 (A,105,44) RAM IC		A3V28S40JTP-60
Unit Number: QWM4220(B)	IC 821 (B,129,22) Logic IC		74VHC4053AFT
Unit Number: QWM4223(C)	IC 822 (B,133,29) Logic IC		74VHC4053AFT
Unit Number: QWM4224(D)	IC 861 (B,96,19) IC		BA5839FP
Unit Number: QWM4225(E)	IC 1111 (A,131,78) IC		NJM2505AF
Unit Number: QWM4226(F)	IC 1112 (A,123,60) V AMP IC		BH7673G
Unit Name : Mother Unit	IC 1113 (A,126,78) IC		NJM2505AF
	IC 1131 (A,123,69) IC		NJM41050V
	IC 1132 (A,131,72) IC		NJM41010F1
Unit Number: QWM4201	IC 1201 (B,88,74) IC		PM9012A
Unit Number: QWM4251	IC 1251 (B,100,62) IC		NJM8065RB1
Unit Number: QWM4252	IC 1252 (B,76,63) IC		NJM8065RB1
Unit Number: QWM4301	IC 1301 (A,86,120) IC		PA2032A
Unit Number: QWM4220	IC 2201 (A,17,78) IC		TEF6686HN
Unit Name : DC/DC CONV IC	IC 2401 (B,159,79) DC/DC CONV IC		AN33014UA
Unit Name : Transistor	Q 301 (A,158,45) Transistor		ATP112-H
	Q 302 (A,146,45) Transistor		ATP112-H

1 Circuit Symbol and No.**2 Part No.****3 Circuit Symbol and No.****4 Part No.**

A	Q 501	(A,12,40) Chip Transistor	HN1C03FU	L 601	(A,121,53) Inductor	LCTC2R2K1608
	Q 502	(A,22,45) Transistor	UMF5N	L 602	(A,84,23) Inductor	LCTC2R2K1608
B	Q 503	(A,22,40) Transistor	UMF5N	L 603	(A,87,22) Inductor	LCTC2R2K1608
	Q 601	(B,128,59) Transistor	EMD53	L 604	(A,90,24) Inductor	LCTC2R2K1608
	Q 602	(B,128,55) Transistor	EMH53	L 721	(A,102,27) Inductor	CTF1786
	Q 701	(B,113,61) Transistor(A,B,C,D,E)	LSAR523UB	L 741	(A,106,31) Inductor	CTF1786
	Q 841	(B,116,13) Transistor	2SAR293PGZE	L 901	(A,146,61) Choke Coil 10 uH	CTH1486
	Q 842	(B,123,13) Transistor	2SAR293PGZE	L 902	(A,53,95) Choke Coil	CTH1621
C	Q 843	(B,142,9) Transistor	LSCR523UB	L 2202	(A,13,95) Inductor	CTF1389
	Q 844	(B,143,15) Transistor	LSCR523UB	L 2204	(A,21,98) Inductor	LCMAR27J1608
	Q 845	(B,136,15) Transistor	LSCR523UB	L 2206	(A,13,89) Inductor	LCYC150K1608
	Q 846	(B,136,11) Transistor	LSCR523UB	L 2401	(A,157,72) SMD SPL Inductor	CTH1524
	Q 910	(A,43,70) Chip Transistor	HN1C01FU	L 2402	(A,162,71) Inductor	CTF1793
	Q 920	(B,41,64) Transistor	LTC014EEB	L 3191	(B,151,89) Inductor	CTF1713
D	Q 930	(B,50,85) Transistor	LSCR523UB	X 401	(A,31,46) Crystal Resonator 12.500 MHz	CSS1839
	Q 950	(B,34,75) Transistor	LSAR523UB	X 601	(B,131,39) Resonator 27.000 MHz	CSS1768
	Q 1251	(A,91,65) Transistor	LSCR523UB	X 2201	(A,27,83) Crystal Resonator 9.216 MHz	CSS1867
	Q 1301	(A,70,86) Transistor	LSCR523UB	▲P303	(A,61,19) Fuse 750mA	CEK1398
	Q 1302	(B,69,84) Transistor	RN4987	P 2202	(B,19,102) Surge Absorber	IMSA-6803-01Y900
	Q 1304	(B,73,86) Chip Transistor	RN1903	P 3121	(A,32,111) Poly Switch	FSMD075-24R
E	Q 3121	(A,28,59) Transistor(C,D,E,F)	EMD53	P 3151	(B,122,87) Poly Switch	FSMD075-24R
	Q 3122	(A,28,53) Transistor(C,D,E,F)	EMD53	P 3161	(B,122,93) Poly Switch	FSMD075-24R
	Q 3123	(A,32,59) Transistor(C,D,E,F)	EMD53	BZ401	(A,20,60) Buzzer	CPV1062
	Q 3124	(A,32,53) Transistor(C,D,E,F)	EMD53	U 2901	(A,45,14) BT Module	CWX4772
	Q 3161	(B,109,80) Transistor	EMH53	CN801	(A,114,10) 30P Connector	VKN1620
	Q 3162	(B,102,80) Transistor	EMH53	CN2901	(A,45,14) B TO B Connector	CKS6346
F	D 101	(A,64,86) Diode	D1F60-5053	CN3201	(A,79,14) FFC/FPC Connector	CKS6672
	D 161	(B,74,47) Diode	D1F60-5053	JA901	(A,52,120) Connector	CKM1613
	D 162	(B,77,47) Diode	D1F60-5053	JA2201	(A,11,115) Antenna Jack	CKX1104
	D 301	(A,156,36) Diode	RB056L-40	JA3101	(A,139,116) Jack	CKN1106
	D 302	(A,147,36) Diode	RB056L-40	JA3122	(A,25,122) Jack	YKS5035
	D 402	(A,36,59) Schottky Diode	DB2J31400	JA3151	(A,152,114) Jack	CKB1117
G	D 403	(B,45,60) Schottky Diode	DB2J31400	JA3161	(A,119,111) Jack	CKB1109
	D 501	(A,15,37) Rectifier Diode	DA2J101	JA3191	(A,165,97) Jack	CKN1118
	D 901	(A,145,67) Diode	RB080L-30	VL2201	(A,18,90) Variable Coil	CTC1216
	D 902	(A,65,104) Diode	D1F60-5053	RESISTORS		
	D 903	(A,65,107) Diode	D1F60-5053	R 303	(B,158,37)	RS1/16SS511J
	D 911	(A,44,76) Diode	DZ2J062M0	R 304	(B,159,37)	RS1/16SS2702D
H	D 912	(A,46,76) Diode	DZ2J068M0	R 305	(B,160,39)	RS1/16SS1101D
	D 920	(B,47,63) Rectifier Diode	DA2J101	R 306	(B,160,37)	RS1/16SS2701D
	D 930	(B,53,85) Diode	DZ2J056M0	R 307	(B,160,40)	RS1/16SS153J
	D 940	(A,39,87) Diode	D1F60-5053	R 308	(B,154,35)	RS1/16SS103J
	D 950	(B,35,79) Rectifier Diode	DA2J101	R 310	(B,155,47) 12 mohm	CCN1321
	D 1301	(A,65,79) Rectifier Diode	DA2J101	R 311	(B,156,35)	RS1/16SS204J
I	D 1302	(A,73,86) Diode	DAN202UM	R 312	(B,157,35)	RS1/16SS394J
	D 1303	(A,67,85) Diode	DZ2J082M0	R 313	(B,148,47) 12 mohm	CCN1321
	D 1304	(B,65,85) Rectifier Diode	DA2J101	R 314	(B,152,35)	RS1/16SS224J
	D 2201	(A,13,99) Diode	EZAEG2A50AX	R 315	(B,145,41)	RS1/16SS123J
	D 2202	(A,22,99) Diode	EZAEG2A50AX	R 316	(B,145,38)	RS1/16SS1002F
	D 2401	(A,148,73) Diode	D1F60-5053	R 317	(B,145,37)	RS1/16SS0R0J
J	D 2402	(A,166,71) Diode	RB060M-30	R 318	(B,145,40)	RS1/16SS3302D
	D 3101	(B,130,99) Diode	DZ2S068C	R 319	(B,143,39)	RS1/16SS561J
	D 3102	(B,137,95) Diode	DZ2S068C	R 322	(A,72,42)	RS1/16SS473J
	D 3103	(B,132,97) Diode	DZ2S068C	R 323	(A,73,42)	RS1/16SS473J
	D 3123	(B,30,30) Diode	DZ2S068C	R 324	(A,158,6)	RS1/10SR0R0J
	D 3124	(B,27,30) Diode	DZ2S068C	R 401	(A,48,67)	RS1/16SS473J
K	D 3191	(B,156,90) Diode	EZAEG2A50AX	R 402	(A,54,60)	RS1/16SS473J
	D 3192	(B,156,88) Diode	EZAEG2A50AX	R 403	(B,46,70)	RS1/16SS473J
	L 301	(A,158,26) Inductor	CTH1254			
	L 302	(A,145,26) Inductor	CTH1253			

Circuit Symbol and No.

R 406 (B,52,39)
 R 407 (B,48,38)
 R 408 (B,54,34)

R 411 (A,33,46)
 R 412 (A,39,59)
 R 413 (A,35,58)
 R 414 (A,34,39)
 R 415 (B,39,41)

R 416 (B,33,40)
 R 417 (A,67,53) (C,D)
 R 418 (A,64,53) (B,E,F)
 R 419 (A,67,54) (D,F)
 R 420 (A,64,54) (B,C,E)

R 421 (A,67,55)
 R 423 (A,29,38)
 R 424 (A,45,32)
 R 425 (A,47,32)
 R 426 (B,54,39)

R 427 (A,53,33)
 R 428 (A,55,32)
 R 429 (A,62,37)
 R 430 (A,63,49)
 R 431 (B,54,40)

R 432 (A,64,36)
 R 433 (A,46,59)
 R 434 (A,49,58)
 R 435 (A,58,62)
 R 436 (A,36,47)

R 438 (A,34,38)
 R 439 (B,26,36)
 R 440 (B,35,36)
 R 441 (B,30,36)
 R 442 (B,18,39)

R 443 (A,63,44)
 R 444 (A,63,43)
 R 445 (A,63,48)
 R 446 (B,61,49)
 R 447 (B,59,67)

R 448 (B,59,68)
 R 449 (B,43,53)
 R 450 (B,42,53)
 R 451 (B,46,53)
 R 452 (B,46,52)

R 453 (B,44,60)
 R 454 (B,44,47)
 R 455 (B,49,61)
 R 458 (B,59,42)
 R 460 (B,56,55)

R 461 (A,42,61)
 R 464 (A,67,52) (F)
 R 465 (A,64,52) (A,B,C,D)
 R 466 (B,44,55)
 R 467 (B,46,55)

R 468 (A,32,38)
 R 469 (A,47,62)
 R 470 (A,58,65)
 R 501 (A,12,38)
 R 502 (A,13,42)

R 503 (A,15,40)
 R 504 (A,9,41)

Part No.

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

RS1/16SS0R0J
 RS1/16SS473J
 RS1/16SS103J
 RS1/16SS102J
 RS1/16SS473J

RS1/16SS104J
 RS1/16SS104J
 RS1/16SS104J
 RS1/16SS104J
 RS1/16SS104J

RS1/16SS104J
 RS1/16SS101J
 RS1/16SS101J
 RS1/16SS101J
 RS1/16SS101J

RS1/16SS101J
 RS1/16SS561J
 RS1/16SS471J
 RS1/16SS101J
 RS1/16SS101J

RS1/16SS822J
 RS1/16SS101J
 RS1/16SS101J
 RS1/16SS101J
 RS1/16SS102J

RS1/16SS473J
 RS1/16SS473J
 RS1/16SS473J
 RS1/16SS473J
 RS1/16SS102J

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

RS1/16SS104J
 RS1/16SS471J
 RS1/16SS471J
 RS1/16SS472J
 RS1/16SS472J

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

RS1/16SS1002D
 RS1/16SS104J
 RS1/16SS104J
 RS1/16SS0R0J
 RS1/16SS183J

RS1/16SS102J
 RS1/16SS473J
 RS1/16SS473J
 RS1/16SS102J
 RS1/16SS102J

RS1/16SS222J
 RS1/16SS222J

Circuit Symbol and No.

R 505 (A,25,44)
 R 506 (A,25,46)
 R 507 (A,25,39)

R 508 (A,25,41)
 R 509 (A,20,44)
 R 510 (A,21,38)
 R 601 (B,104,30)
 R 602 (B,104,29)

R 603 (B,102,30)
 R 604 (B,104,31)
 R 605 (B,102,31)
 R 606 (A,102,30)
 R 607 (A,103,32)

R 608 (B,115,59)
 R 609 (B,117,56)
 R 611 (A,122,49)
 R 612 (A,121,51)
 R 613 (A,80,23)

R 616 (B,127,39)
 R 617 (B,126,38)
 R 618 (B,124,37)
 R 619 (A,120,32)
 R 620 (A,117,32)

R 621 (A,116,31)
 R 622 (A,115,31)
 R 623 (B,111,23)
 R 624 (B,108,21)
 R 625 (B,108,22)

R 626 (B,109,23)
 R 627 (B,104,46)
 R 628 (B,107,24)
 R 631 (B,129,62)
 R 632 (B,126,60)

R 633 (B,102,36)
 R 634 (B,102,37)
 R 635 (B,104,36)
 R 636 (B,116,53)
 R 637 (B,125,50)

R 638 (B,125,51)
 R 639 (B,131,60)
 R 640 (B,125,61)
 R 641 (A,83,25)
 R 642 (A,86,25)

R 643 (A,90,26)
 R 701 (B,113,58) (A,B,C,D,E)
 R 702 (B,113,59) (A,B,C,D,E)
 R 703 (B,118,59) (A,B,C,D,E)
 R 704 (B,120,59) (A,B,C,D,E)

R 705 (B,115,62) (A,B,C,D,E)
 R 706 (B,121,60) (A,B,C,D,E)
 R 707 (B,115,57) (A,B,C,D,E)
 R 708 (B,116,59) (A,B,C,D,E)
 R 721 (B,105,26)

R 722 (B,105,27)
 R 723 (A,103,29)
 R 724 (A,110,23)
 R 725 (A,106,23)
 R 726 (B,109,27)

R 727 (B,108,27)
 R 741 (A,94,36)

Part No.
 RS1/16SS103J
 RS1/16SS103J
 RS1/16SS103J

RS1/16SS103J
 RS1/16SS105J
 RS1/16SS105J
 RS1/16SS221J
 RS1/16SS473J

RS1/16SS103J
 RS1/16SS103J
 RS1/16SS103J
 RS1/16SS473J
 RS1/16SS221J

RS1/16SS473J
 RS1/16SS473J
 RS1/16SS1001D
 RS1/16SS3000D
 RS1/16SS0R0J

RS1/16SS105J
 RS1/16SS152J
 RS1/16SS103J
 RS1/16SS0R0J
 RS1/16SS223J

RS1/16SS223J
 RS1/16SS222J
 RS1/16SS222J
 RS1/16SS103J
 RS1/16SS101J

RS1/16SS101J
 RS1/16SS560J
 RS1/16SS472J
 RS1/16SS102J
 RS1/16SS471J

RS1/16SS101J
 RS1/16SS101J
 RS1/16SS104J
 RS1/16SS0R0J
 RS1/16SS821J

RS1/16SS821J
 RS1/16SS223J
 RS1/16SS223J
 RS1/16SS3000D
 RS1/16SS3000D

RS1/16SS3000D
 RS1/16SS473J
 RS1/16SS472J
 RS1/16SS222J
 RS1/16SS222J

RS1/16SS183J
 RS1/16SS101J
 RS1/16SS101J
 RS1/16SS221J
 RS1/16SS101J

RS1/16SS101J
 RS1/16SS473J
 RS1/16SS473J
 RS1/16SS473J
 RS1/16SS0R0J

RS1/16SS101J
 RAB4CQ330J

1 <u>Circuit Symbol and No.</u>	2 <u>Part No.</u>	3 <u>Circuit Symbol and No.</u>	4 <u>Part No.</u>
R 742 (A,94,41)	RAB4CQ330J	R 911 (A,44,72)	RS1/16SS103J
R 746 (A,114,37)	RAB4CQ330J	R 913 (A,44,73)	RS1/16SS473J
R 747 (A,115,41)	RAB4CQ330J	R 914 (A,44,80)	RS1/16SS472J
A R 801 (A,112,21)	RS1/16SS561J	R 915 (A,46,72)	RS1/16SS104J
R 802 (B,111,20)	RS1/16SS681J	R 916 (A,46,73)	RS1/16SS473J
R 815 (B,126,16)	RS1/16SS105J	R 917 (A,41,81)	RS1/4SA102J
R 816 (B,125,17)	RS1/16SS105J	R 920 (B,44,63)	RS1/16SS103J
R 822 (A,115,15)	RS1/16SS0R0J	R 921 (B,46,65)	RS1/16SS472J
R 823 (B,137,28)	RS1/16SS0R0J	R 922 (B,44,66)	RS1/4SA102J
R 824 (B,128,18)	RS1/16SS0R0J	R 930 (B,52,84)	RS1/16SS473J
R 825 (A,116,15)	RS1/16SS0R0J	R 931 (B,52,86)	RS1/16SS104J
R 826 (B,134,25)	RS1/16SS0R0J	R 932 (B,55,84)	RS1/16SS472J
R 827 (B,134,22)	RS1/16SS0R0J	R 933 (B,52,89)	RS1/4SA102J
B R 841 (B,142,13)	RS1/16SS4300F	R 950 (B,35,72)	RS1/16SS102J
R 842 (B,141,11)	RS1/16SS4300F	R 951 (B,36,74)	RS1/16SS473J
R 843 (B,116,19)	RS1/16SS3R3J	R 952 (B,34,77)	RS1/16SS223J
R 844 (B,121,21)	RS1/16SS3R3J	R 953 (B,34,80)	RS1/16SS103J
R 845 (B,118,21)	RS1/10SR3R3J	R 1114 (B,137,89)	RS1/10SR101J
R 846 (B,118,20)	RS1/10SR2R2J	R 1115 (B,135,89)	RS1/10SR101J
R 847 (B,118,18)	RS1/10SR2R2J	R 1117 (B,128,89)	RS1/10SR101J
R 848 (B,118,17)	RS1/10SR3R3J	R 1118 (B,126,89)	RS1/10SR101J
R 849 (B,122,18)	RS1/10SR3R3J	R 1131 (A,125,75)	RS1/16SS0R0J
R 850 (B,127,14)	RS1/10SR1R8J	R 1132 (A,124,63)	RS1/16SS0R0J
C R 851 (B,126,12)	RS1/10SR1R8J	R 1133 (A,130,75)	RS1/16SS0R0J
R 852 (B,128,12)	RS1/10SR3R3J	R 1134 (A,118,67)	RS1/16SS563J
R 861 (B,90,10)	RS1/16SS163J	R 1135 (A,118,68)	RS1/16SS563J
R 862 (B,90,11)	RS1/16SS183J	R 1136 (A,128,65)	RS1/16SS473J
R 863 (B,92,10)	RS1/16SS822J	R 1139 (A,124,75)	RS1/16SS0R0J
R 864 (B,92,12)	RS1/16SS752J	R 1140 (A,116,67)	RS1/16SS564J
R 865 (B,98,12)	RS1/16SS221J	R 1141 (A,121,56)	RS1/16SS3000D
R 866 (B,102,7)	RS1/16SS5102D	R 1142 (A,116,68)	RS1/16SS564J
R 867 (B,104,9)	RS1/16SS5102D	R 1201 (B,94,78)	RS1/16SS221J
R 868 (B,102,9)	RS1/8SQ1R0J	R 1202 (B,94,79)	RS1/16SS221J
D R 869 (B,102,11)	RS1/16SS0R0J	R 1203 (B,94,80)	RS1/16SS221J
R 870 (B,103,11)	RS1/16SS0R0J	R 1205 (B,15,75)	RS1/10SR0R0J
R 871 (B,104,11)	RS1/16SS0R0J	R 1251 (A,91,62)	RS1/16SS471J
R 872 (B,105,11)	RS1/16SS0R0J	R 1252 (A,87,66)	RS1/16SS103J
R 873 (B,90,25)	RS1/16SS473J	R 1253 (A,91,66)	RS1/16SS682J
R 874 (B,90,26)	RS1/16SS113J	R 1254 (B,104,59)	RS1/16SS113J
R 875 (B,93,25)	RS1/16SS473J	R 1255 (B,104,60)	RS1/16SS102J
R 876 (B,93,26)	RS1/16SS113J	R 1256 (B,106,60)	RS1/16SS183J
R 877 (B,99,26)	RS1/16SS221J	R 1257 (B,107,64)	RS1/16SS113J
R 878 (A,104,6)	RS1/16SS3902D	R 1258 (B,105,62)	RS1/16SS102J
E R 879 (B,101,6)	RS1/16SS3902D	R 1259 (B,105,63)	RS1/16SS183J
R 880 (B,140,14)	RS1/16SS104J	R 1260 (B,95,59)	RS1/16SS102J
R 881 (B,139,14)	RS1/16SS0R0J	R 1261 (B,94,61)	RS1/16SS102J
R 882 (B,138,9)	RS1/16SS0R0J	R 1262 (B,93,59)	RS1/16SS183J
R 883 (B,140,16)	RS1/16SS5600F	R 1263 (B,94,62)	RS1/16SS183J
R 884 (B,138,16)	RS1/16SS470J	R 1264 (B,95,58)	RS1/16SS113J
R 885 (B,136,8)	RS1/16SS104J	R 1265 (B,92,62)	RS1/16SS113J
R 886 (B,139,13)	RS1/16SS101J	R 1266 (B,83,61)	RS1/16SS113J
R 887 (B,135,10)	RS1/16SS470J	R 1267 (B,81,61)	RS1/16SS102J
R 888 (B,144,8)	RS1/16SS5100F	R 1268 (B,80,60)	RS1/16SS183J
F R 889 (B,138,11)	RS1/16SS121J	R 1269 (B,83,63)	RS1/16SS113J
R 890 (B,134,16)	RS1/16SS104J	R 1270 (B,81,63)	RS1/16SS102J
R 891 (B,135,13)	RS1/16SS104J	R 1271 (B,81,64)	RS1/16SS183J
R 892 (B,133,16)	RS1/16SS103J	R 1272 (B,71,61)	RS1/16SS102J
R 893 (B,133,15)	RS1/16SS103J	R 1273 (B,71,62)	RS1/16SS102J
R 894 (B,142,12)	RS1/16SS0R0J	R 1274 (B,71,60)	RS1/16SS183J
R 895 (B,142,11)	RS1/16SS0R0J	R 1275 (B,71,63)	RS1/16SS183J

Circuit Symbol and No.

R 1276 (B,70,60)
 R 1277 (B,70,64)
 R 1302 (A,64,81)

R 1303 (A,69,84)
 R 1304 (A,69,83)
 R 1305 (B,66,86)
 R 1307 (B,33,90)
 R 1308 (B,34,90)

R 1309 (B,75,83)
 R 1310 (B,75,87)
 R 1311 (B,75,85)
 R 1312 (A,37,47)
 R 1313 (B,76,84)

R 1314 (B,42,47)
 R 2201 (A,35,94)
 R 2202 (A,22,74)
 R 2203 (A,11,98)
 R 2204 (A,11,97)

R 2205 (A,11,89)
 R 2211 (A,25,77)
 R 2212 (A,24,77)
 R 2216 (A,21,74)
 R 2220 (A,22,71)

R 2221 (A,21,71)
 R 2222 (B,30,65)
 R 2225 (B,18,75)
 R 2401 (B,156,84)
 R 2402 (A,163,90)

R 2403 (B,156,85)
 R 2404 (B,154,85)
 R 2405 (B,152,84)
 R 2406 (B,151,84)
 R 2407 (A,163,92)

R 2408 (A,163,87)
 R 2409 (A,163,89)
 R 2410 (B,152,83)
 R 2411 (B,153,78)
 R 2412 (A,157,76) 56 mohm

R 2413 (B,161,84)
 R 2415 (B,163,84)
 R 2417 (B,165,82)
 R 2418 (B,167,79)
 R 2419 (B,165,80)

R 2901 (B,46,20)
 R 2904 (A,44,23)
 R 2906 (A,38,17)
 R 2908 (B,28,25)
 R 2909 (B,29,24)

R 2910 (A,49,6)
 R 2911 (A,49,7)
 R 2912 (B,27,20)
 R 2913 (B,31,22)
 R 2914 (B,32,20)

R 3102 (B,96,65)
 R 3103 (B,130,89)
 R 3104 (B,133,89)
 R 3106 (B,131,87)
 R 3107 (B,133,87)

R 3108 (B,128,94)
 R 3127 (A,36,56)

Part No.

RS1/16SS113J
 RS1/16SS113J
 RS1/16SS103J

RS1/16SS104J
 RS1/16SS473J
 RS1/16SS102J
 RS1/16SS473J
 RS1/16SS102J

RS1/16SS683J
 RS1/16SS683J
 RS1/16SS152J
 RS1/16SS103J
 RS1/16SS101J

RS1/16SS0R0J
 RS1/10SR0R0J
 RS1/16SS101J
 RS1/16SS105J
 RS1/16SS105J

RS1/16SS391J
 RS1/16SS103J
 RS1/16SS103J
 RS1/16SS101J
 RS1/16SS472J

RS1/16SS472J
 RS1/10SR0R0J
 RS1/10SR0R0J
 RS1/16SS152J
 RS1/10SR471J

RS1/16SS3302D
 RS1/16SS0R0J
 RS1/16SS0R0J
 RS1/16SS8201D
 RS1/10SR471J

RS1/10SR471J
 RS1/10SR471J
 RS1/16SS102J
 RS1/16SS0R0J
 ACN7160

RS1/16SS204J
 RS1/16SS394J
 RS1/16SS224J
 RS1/16SS4702D
 RS1/16SS104J

RS1/16SS102J
 RS1/16SS102J
 RS1/16SS101J
 RS1/16SS0R0J
 RS1/16SS0R0J

RS1/16SS102J
 RS1/16SS102J
 RS1/16SS222J
 RS1/16SS222J
 RS1/16SS0R0J

RS1/10SR331J
 RS1/10SR101J
 RS1/10SR101J
 RS1/16SS223J
 RS1/16SS223J

RS1/16SS750J
 RS1/16SS1001D

Circuit Symbol and No.

R 3128 (A,34,56)
 R 3129 (A,30,58)
 R 3130 (A,26,54)

R 3132 (A,30,54)
 R 3133 (A,33,56)
 R 3151 (A,122,72)
 R 3152 (B,140,91)
 R 3161 (B,106,80)

R 3162 (B,107,82)
 R 3164 (B,110,82)
 R 3166 (B,111,80)
 R 3167 (B,99,80)
 R 3168 (B,100,82)

R 3171 (B,103,82)
 R 3172 (B,104,80)

CAPACITORS

C 114 (A,54,73)
 C 114 (A,18,23)
 C 115 (B,51,65)
 C 117 (B,54,60) 47 uF
 C 121 (A,75,82) 10 uF
 C 123 (A,69,80) 4.7 uF

C 155 (B,67,46) 4.7 uF
 C 157 (B,67,36) 4.7 uF
 C 160 (A,99,26) 10 uF
 C 165 (B,75,40) 1 uF
 C 167 (B,75,33) 1 uF

C 168 (B,71,38)
 C 201 (A,74,26)
 C 203 (A,69,30) 1 uF
 C 205 (A,71,21) 1 uF
 C 211 (B,34,63)

C 212 (B,34,70)
 C 233 (B,135,76)
 C 234 (B,135,71)
 C 237 (B,40,28)
 C 238 (B,40,22)

C 241 (B,52,27) 1 uF
 C 242 (B,52,24) 1 uF
 C 243 (B,44,26)
 C 274 (B,151,15) 2.2 uF
 C 275 (B,151,12)

C 301 (A,155,10)
 C 302 (A,155,9)
 C 303 (A,156,14) 10 uF
 C 304 (A,156,12) 10 uF
 C 305 (A,155,17) 47 uF

C 308 (B,152,49)
 C 309 (B,158,39)
 C 311 (B,159,52) 10 uF
 C 312 (B,153,35)
 C 313 (B,157,52) 10 uF

C 314 (B,160,41)
 C 315 (B,161,52) 10 uF
 C 316 (B,158,41)
 C 317 (B,160,42)
 C 318 (B,146,43)

C 319 (B,146,41)

Part No.

RS1/16SS1001D
 RS1/16SS6800D
 RS1/16SS6800D

RS1/16SS8201D
 RS1/16SS8201D
 RS1/16SS75R0D
 RS1/16SS750J
 RS1/16SS821J

RS1/16SS223J
 RS1/16SS223J
 RS1/16SS821J
 RS1/16SS821J
 RS1/16SS223J

RS1/16SS223J
 RS1/16SS821J

CEAT471M16
 CEAT471M16
 CKSRYB104K50
 CCG1251
 CCG1393
 CCG1201

CCG1201
 CCG1201
 CCG1244
 DCH1246
 DCH1246

CKSSYB104K10
 CKSSYB104K10
 DCH1246
 DCH1246
 CKSRYB474K10

CKSRYB474K10
 CKSSYB104K10
 CKSSYB104K10
 CKSRYB474K10
 CKSRYB474K10

DCH1246
 DCH1246
 CKSSYB104K10
 CCG1218
 CKSRYB105K16

CKSSYB102K50
 CKSSYB104K10
 CCG1192
 CCG1192
 CCG1233

CKSRYB102K50
 CCG1236
 CCG1236
 CKSSYB104K10
 CCG1236

CKSSYB103K16
 CCG1236
 CCSSCH8R0D50
 CKSSYB104K16
 CKSSYB104K16

CCSSCH8R0D50

1
Circuit Symbol and No.2
Part No.3
Circuit Symbol and No.4
Part No.

A	C 320	(B,145,42)	CKSSYB103K16	C 631	(B,128,39)	CCSSCH120J50
	C 321	(B,151,35)	CKSSYB104K10	C 632	(B,134,39)	CCSSCH120J50
	C 322	(B,146,39)	CKSRYB105K10	C 633	(A,121,39)	CKSSYB104K10
	C 323	(B,145,39)	CKSSYB471K50	C 634	(A,118,38)	CKSSYB104K10
B	C 326	(A,147,17) 47 uF	CCG1233	C 635	(A,122,34)	CKSSYB103K16
	C 327	(A,147,14) 10 uF	CCG1192	C 636	(A,122,33)	CKSSYB103K16
	C 328	(A,147,12) 10 uF	CCG1192	C 637	(A,122,32)	CKSSYB104K10
	C 329	(A,148,10)	CKSSYB104K10	C 638	(B,126,37)	CKSSYB104K10
	C 330	(A,148,9)	CKSSYB102K50	C 639	(B,120,24)	CKSSYB104K10
C	C 332	(A,165,32) 10 uF	CCG1192	C 640	(B,120,22)	CKSSYB103K16
	C 401	(B,49,63)	CKSSYB104K10	C 641	(B,120,23)	CKSSYB103K16
	C 402	(A,35,56) (C,D,E,F)	CKSSYB104K10	C 642	(B,113,24)	CKSSYB104K10
	C 403	(B,46,58) (C,D,E,F)	CKSSYB104K10	C 643	(B,113,25)	CKSSYB103K16
	C 405	(A,36,42)	CKSSYB104K10	C 644	(B,113,26)	CKSSYB103K16
D	C 406	(A,56,33)	CKSSYB104K10	C 645	(B,119,26) 4.7 uF	CCG1201
	C 407	(A,62,46)	CKSSYB104K10	C 646	(B,119,24)	CKSSYB104K10
	C 408	(A,44,58)	CKSSYB104K10	C 647	(B,115,26) 4.7 uF	CCG1201
	C 409	(A,40,59)	CKSSYB104K10	C 648	(B,116,24)	CKSSYB104K10
	C 410	(A,31,48)	CCSSCH8R0D50	C 649	(A,117,29)	CKSSYB102K50
E	C 411	(A,33,44)	CCSSCH100D50	C 650	(A,116,29)	CKSSYB102K50
	C 413	(A,33,41)	CKSSYB104K10	C 651	(A,115,29)	CKSSYB104K10
	C 415	(A,35,40)	CKSSYB104K10	C 652	(B,112,21)	CKSSYB104K10
	C 420	(A,49,60)	CKSSYB104K10	C 653	(B,129,52) 4.7 uF	CCG1201
	C 424	(A,57,30)	CKSRYB103K50	C 654	(B,126,53) 4.7 uF	CCG1201
F	C 425	(A,44,61)	CKSSYB103K16	C 655	(A,83,26)	CCSSCH220J50
	C 426	(A,35,38)	CKSSYB104K10	C 656	(A,86,24)	CCSSCH220J50
	C 427	(B,64,62)	CKSRYB104K16	C 657	(A,90,27)	CCSSCH220J50
	C 428	(A,35,52)	CKSSYB102K50	C 658	(A,105,5)	CKSSYB102K50
	C 501	(A,13,43)	CKSSYB473K16	C 659	(A,111,5)	CKSSYB102K50
G	C 502	(A,25,43)	CKSSYB104K10	C 701	(B,116,62) (A,B,C,D,E)	CKSSYB104K10
	C 503	(A,19,44)	CKSSYB102K50	C 702	(B,116,61) (A,B,C,D,E)	CKSSYB102K50
	C 504	(A,21,37)	CKSSYB102K50	C 721	(A,103,25)	CKSSYB104K10
	C 505	(A,13,38)	CKSSYB473K16	C 741	(A,97,37)	CKSSYB104K10
	C 601	(B,104,33)	CKSSYB104K10	C 742	(A,97,42)	CKSSYB104K10
H	C 602	(B,103,33)	CKSSYB104K10	C 743	(A,108,31)	CKSSYB104K10
	C 603	(A,105,32)	CKSSYB103K16	C 744	(A,109,32)	CKSSYB104K10
	C 604	(B,99,36)	CKSSYB104K10	C 745	(A,113,40)	CKSSYB104K10
	C 605	(B,98,36)	CKSSYB104K10	C 746	(A,113,44)	CKSSYB104K10
	C 607	(B,103,47)	CKSSYB104K10	C 747	(A,112,56)	CKSSYB104K10
I	C 608	(B,102,47)	CKSSYB104K10	C 801	(A,113,14)	CKSSYB103K16
	C 609	(B,121,55)	CKSSYB104K10	C 802	(A,114,5)	CKSSYB103K16
	C 610	(B,119,54) 10 uF	CCG1192	C 803	(A,119,26)	CKSRYB224K16
	C 611	(B,121,53)	CKSSYB104K10	C 804	(A,120,26)	CKSRYB224K16
	C 612	(B,122,53)	CKSSYB104K10	C 821	(B,127,31)	CKSSYB104K10
J	C 613	(A,121,55)	CCSSCH180J50	C 822	(B,127,26)	CKSSYB104K10
	C 614	(A,121,50)	CCSSCH150J50	C 823	(B,125,35)	CKSSYB104K10
	C 615	(A,83,21)	CCSSCH101J50	C 841	(B,114,22) 10 uF	CCG1192
	C 616	(A,100,30)	CKSSYB104K10	C 842	(B,114,18) 22 uF	DCH1256
	C 617	(A,86,21)	CCSSCH101J50	C 843	(B,120,18) 22 uF	DCH1256
K	C 619	(A,90,22)	CCSSCH101J50	C 844	(B,115,17)	CKSSYB104K16
	C 621	(A,122,53)	CCSSCH150J50	C 845	(B,122,21)	CKSSYB104K16
	C 622	(A,83,23)	CCSSCH150J50	C 861	(A,101,20)	CEVW101M16
	C 623	(A,86,22)	CCSSCH150J50	C 862	(A,109,19) 4.7 uF	CCG1222
	C 624	(A,89,24)	CCSSCH150J50	C 863	(A,107,19) 10 uF	CCG1236
L	C 625	(B,125,49)	CKSRYB105K10	C 864	(A,111,18)	CKSSYB104K16
	C 626	(B,124,47)	CKSSYB104K10	C 865	(B,90,12)	CKSSYB473K16
	C 627	(B,125,46)	CKSSYB104K10	C 866	(B,92,13)	CKSSYB224K6R3
	C 628	(A,119,39)	CKSSYB104K10	C 867	(B,102,13)	CKSSYB104K16
	C 629	(A,119,40)	CKSSYB104K10	C 868	(B,104,13)	CKSSYB104K16
M	C 630	(A,121,41)	CKSSYB104K10	C 869	(B,88,13)	CKSSYB104K16
	90	1	AVH-280BT/XNUC	2	3	4

Circuit Symbol and No.

C 870	(B,100,13)
C 871	(B,101,26)
C 902	(B,154,52) 10 uF
C 903	(A,159,61) 2 200 uF/16 V

Part No.

CKSSYB104K16
CKSSYB104K16
CCG1236
CCH1405

Circuit Symbol and No.

C 1265	(B,93,61)
C 1266	(B,89,63) 10 uF
C 1267	(B,98,59) 10 uF
C 1269	(B,80,61)

Part No.

CKSSYB122K50
CCG1192
CCG1192
CCSSCH221J50

C 920	(B,42,64)
C 930	(B,55,83)
C 940	(A,41,85)
C 1111	(A,132,75)
C 1112	(A,122,62)

C 1270	(B,80,63)
C 1271	(B,85,63) 10 uF
C 1272	(B,82,61)
C 1273	(B,85,61) 10 uF
C 1274	(B,73,61)

C 1113	(A,126,75)
C 1114	(A,134,76) 10 uF
C 1115	(A,120,63) 10 uF
C 1116	(A,127,73) 10 uF
C 1117	(A,125,82) 4.7 uF

C 1275	(B,73,63)
C 1276	(B,70,62)
C 1277	(B,68,63) 10 uF
C 1278	(B,68,60) 10 uF
C 1305	(A,65,76) 10 uF

C 1118	(A,125,57) 4.7 uF
C 1119	(A,130,82) 4.7 uF
C 1120	(A,127,82) 4.7 uF
C 1121	(A,121,57) 4.7 uF
C 1122	(A,132,82) 4.7 uF

C 1306	(A,65,67)
C 1307	(B,76,86) 4.7 uF
C 1309	(A,86,104)
C 1310	(A,83,104)
C 1311	(A,91,104)

C 1131	(A,116,71)
C 1132	(A,118,71) 10 uF
C 1133	(A,116,66)
C 1134	(A,116,69) 1 uF
C 1135	(A,124,65)

C 1312	(A,88,104)
C 1313	(B,78,107)
C 1314	(B,76,106) 10 uF/16 V
C 1315	(B,97,106) 2.2 uF
C 1319	(A,69,95)

C 1136	(A,125,73)
C 1137	(A,134,73)
C 1138	(A,136,72) 10 uF
C 1139	(A,130,74)
C 1140	(A,129,72)

C 1320	(B,73,105)
C 2202	(A,13,97)
C 2203	(A,17,97)
C 2204	(A,20,97)
C 2209	(A,20,99)

C 1201	(B,80,71)
C 1202	(B,96,72)
C 1203	(B,96,71)
C 1204	(B,96,69)
C 1205	(B,96,66)

C 2211	(A,13,86)
C 2213	(A,18,84)
C 2217	(A,21,82)
C 2218	(A,20,82)
C 2219	(A,15,84)

C 1206	(B,94,65)
C 1207	(B,80,65)
C 1208	(B,80,68)
C 1209	(B,80,69)
C 1210	(A,101,61)

C 2223	(A,13,79)
C 2226	(B,30,78)
C 2227	(A,18,74)
C 2228	(A,22,80)
C 2229	(A,33,66)

C 1211	(A,89,61)
C 1212	(A,75,62)
C 1215	(B,80,77) 10 uF
C 1216	(B,82,78)
C 1219	(B,88,83) 10 uF

C 2230	(A,165,4)
C 2231	(A,150,97)
C 2401	(A,151,85)
C 2402	(A,153,78) 10 uF
C 2403	(B,154,84)

C 1220	(B,86,83) 10 uF
C 1222	(B,80,72)
C 1224	(B,96,74)
C 1226	(B,80,66)
C 1227	(B,96,68)

C 2405	(B,153,82)
C 2406	(B,152,82)
C 2407	(A,165,83)
C 2408	(A,158,79)
C 2409	(B,153,80)

C 1252	(B,71,70) 10 uF
C 1253	(A,91,61)
C 1256	(A,93,71)
C 1257	(A,88,66) 10 uF
C 1258	(B,104,61)

C 2410	(A,156,79) 22 uF
C 2411	(B,162,85)
C 2413	(B,164,76)
C 2414	(B,165,78)
C 2415	(B,165,81)

C 1259	(B,104,62)
C 1260	(B,104,64) 10 uF
C 1261	(B,107,62)
C 1262	(B,101,59) 10 uF
C 1263	(B,95,60)

C 2416	(B,165,83)
C 2902	(A,42,20) 4.7 uF
C 2904	(A,48,20) 4.7 uF
C 2905	(A,44,20)
C 2906	(A,44,22)

C 1264	(B,96,62)
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CEVW221M4

1 Circuit Symbol and No.**2 Part No.****3 Circuit Symbol and No.****4 Part No.**

A	C 2909 (B,28,21)	CKSRYB105K10	L 5403 (B,64,39) Inductor	CTF1547
	C 3101 (B,127,99)	CKSRYB104K16	L 5404 (B,73,37) Inductor	CTF1547
	C 3102 (B,134,95)	CKSRYB104K16	L 5405 (A,71,69) Inductor	CTF1547
	C 3123 (B,27,27)	CKSSYB102K50	TH5001 (A,109,13) Thermistor	CCX1084
B	C 3124 (B,30,27)	CKSSYB102K50	X 5401 (A,68,50) Resonator 27.000 MHz	CSS1768
	C 3125 (A,34,59) (C,D,E,F)	CKSSYB104K10	S 5601 (A,14,94) Push Switch	CSG1155
	C 3126 (B,30,105)	CKSRYB104K16	S 5602 (A,24,95) Push Switch	CSG1155
	C 3151 (A,117,77)	CEVW471M10	S 5603 (A,10,52) Push Switch	CSG1155
	C 3152 (B,147,94)	CKSRYB102K50	S 5604 (A,10,78) Push Switch	CSG1155
	C 3153 (B,139,92)	CKSRYB104K16	S 5605 (A,10,70) Push Switch	CSG1155
	C 3161 (B,106,77) 4.7 uF	CCG1201	S 5606 (A,10,21) Push Switch	CSG1155
	C 3164 (B,111,77) 4.7 uF	CCG1201	S 5607 (A,10,13) Push Switch	CSG1155
	C 3165 (B,99,77) 4.7 uF	CCG1201	S 5608 (A,10,39) Push Switch	CSG1155
	C 3169 (B,104,77) 4.7 uF	CCG1201	S 5609 (A,13,45) Push Switch	CSG1155
C	C 3170 (B,123,99)	CKSRYB104K16	CN5001 (A,120,13) Connector	CKS6625
	C 3171 (B,122,96)	CKSRYB104K16	CN5002 (A,138,19) Connector	CKS4428
	C 3191 (A,163,93)	CKSRYB104K16	CN5003 (A,96,65) Connector	CKS6672
	C 3192 (A,80,29)	CKSRYB102K50	CN5004 (A,120,38) Connector	CKS6063
	C 3193 (A,87,29)	CKSRYB102K50	CN5301 (A,37,37) Connector	CKS6672
D	C 3201 (A,81,20)	CKSSYB104K10	CN5601 (B,13,43) Connector	CKS6063
	C 3202 (A,77,20)	CKSSYB104K10		
	C 3203 (A,65,18)	CKSSYB104K10		
	C 3204 (A,89,19) 10 uF	CCG1234		
E	Monitor Key Unit		RESISTORS	
	Consists of		R 5001 (B,113,49)	RS1/16SS101J
	Monitor PCB		R 5002 (A,125,20)	RS1/16SS0R0J
	Key PCB		R 5003 (A,121,20)	RS1/16SS0R0J
			R 5004 (A,120,20)	RS1/16SS0R0J
F			R 5005 (A,116,20)	RS1/16SS0R0J
			R 5006 (A,104,50)	RS1/16SS221J
			R 5009 (A,105,50)	RS1/16SS472J
			R 5017 (A,90,71)	RS1/16SS0R0J
			R 5018 (B,97,35)	RS1/16SS0R0J
			R 5019 (A,90,72)	RS1/16SS0R0J
			R 5102 (B,137,61)	RS1/16SS102J
			R 5103 (A,130,55)	RS1/16SS0R0J
			R 5104 (B,137,58)	RS1/16SS104J
			R 5105 (B,133,54)	RS1/16SS104J
E			R 5106 (B,130,58)	RS1/16SS102J
	IC 5001 (A,64,66) Regulator IC	MM3571A18P	R 5107 (A,132,52)	RS1/16SS223J
	IC 5101 (A,136,55) Display IC	OZ527ILN	R 5108 (A,133,50)	RS1/16SS563J
	IC 5201 (A,32,64) DC/DC CONV IC	R1290K103A	R 5109 (A,137,50)	RS1/16SS104J
	IC 5401 (A,69,57) Flash ROM Unit	CWJ2031	R 5110 (A,138,50)	RS1/16SS0R0J
	IC 5402 (A,71,38) Display IC	TW8832SAT-LB1-GRSH	R 5111 (A,140,59)	RS1/16SS102J
	IC 5601 (A,7,93) IR RC Rec Module	PNJ4833M	R 5112 (A,140,58)	RS1/16SS2702D
	Q 5001 (A,105,47) Transistor	LSCR523UB	R 5113 (A,142,58)	RS1/16SS3901D
	Q 5201 (A,37,71) Transistor	LTC024EEB	R 5118 (B,139,61)	RS1/16SS1004D
	Q 5202 (A,25,66) Transistor	2SAR502UB	R 5119 (B,139,60)	RS1/16SS0R0J
F	Q 5301 (A,26,50) Transistor	LSAR523UB	R 5120 (B,140,59)	RS1/16SS1503D
	Q 5302 (A,29,46) Transistor	LSCR523UB	R 5122 (A,133,58)	RS1/8SQ2R2J
	D 5101 (A,115,65) Diode	CRG03	R 5201 (A,35,70)	RS1/16SS8201D
	D 5102 (A,134,62) Diode	RB060M-30	R 5202 (A,35,68)	RS1/16SS6800D
	D 5103 (A,115,60) Diode	CRG03	R 5203 (A,36,69)	RS1/16SS1502D
D	D 5201 (A,28,57) Schottky Diode	DB2J41100	R 5205 (A,37,58)	RS1/16SS0R0J
	D 5202 (B,26,73) Schottky Diode	DB3S308F0	R 5206 (B,26,65)	RS1/16SS9102D
	D 5203 (B,29,73) Schottky Diode	DB3S308F0	R 5207 (B,34,68)	RS1/16SS1802D
	D 5204 (B,24,69) Schottky Diode	DB3S308F0	R 5208 (B,35,66)	RS1/16SS203J
	D 5601 (A,4,45) Blue LED(A,C,D,E,F)	FM-3528BK-470M	R 5209 (B,36,63)	RS1/16SS104J
F	D 5601 (A,4,45) Red LED(B)	FM-3528SXK620H08	R 5210 (A,27,64)	RS1/16SS103J
	L 5101 (A,130,63) Inductor	ATH7068	R 5211 (A,38,66)	RS1/16SS472J
	L 5201 (A,27,61) Choke Coil 22 uH	CTH1426	R 5212 (B,31,68)	RS1/16SS1003D
	L 5301 (A,35,53) Inductor	CTF1765		
	L 5402 (B,73,36) Inductor	CTF1547		

Circuit Symbol and No.

R 5213 (B,32,69)
 R 5214 (A,26,57)
 R 5216 (A,37,60)

R 5217 (A,37,62)
 R 5218 (A,39,62)
 R 5219 (A,36,60)
 R 5220 (A,33,58)
 R 5301 (A,20,50)

R 5302 (A,13,48)
 R 5303 (A,15,48)
 R 5304 (A,15,46)
 R 5305 (A,16,45)
 R 5306 (A,15,44)

R 5307 (A,16,43)
 R 5308 (A,15,42)
 R 5309 (A,16,42)
 R 5310 (A,15,41)
 R 5311 (A,16,40)

R 5312 (A,15,39)
 R 5313 (A,16,38)
 R 5314 (A,15,37)
 R 5315 (A,16,36)
 R 5316 (A,15,35)

R 5317 (A,16,34)
 R 5318 (A,15,33)
 R 5319 (A,16,33)
 R 5320 (A,15,32)
 R 5321 (A,16,31)

R 5322 (A,15,30)
 R 5323 (A,13,29)
 R 5324 (B,31,40)
 R 5325 (B,38,36)
 R 5327 (B,55,44)

R 5328 (A,22,50)
 R 5329 (A,30,51)
 R 5331 (A,27,52)
 R 5333 (A,28,49)
 R 5334 (A,27,45)

R 5335 (A,28,43)
 R 5337 (A,32,52)
 R 5338 (A,29,48)
 R 5339 (A,26,48)
 R 5340 (A,39,43)

R 5341 (A,41,44)
 R 5342 (B,33,36)
 R 5343 (B,37,36)
 R 5344 (B,36,36)
 R 5345 (B,35,40)

R 5346 (A,55,43)
 R 5401 (B,76,49)
 R 5402 (B,77,49)
 R 5403 (A,60,40)
 R 5405 (B,61,41)

R 5407 (A,75,58)
 R 5408 (A,78,47)
 R 5409 (A,74,50)
 R 5410 (A,74,48)
 R 5411 (A,73,50)

R 5412 (A,72,48)
 R 5413 (B,69,59)

Part No.

RS1/16SS9101D
 RS1/10SR2R2J
 RS1/16SS1203D

RS1/16SS3001D
 RS1/16SS1502D
 RS1/16SS472J
 RS1/16SS0R0J
 RS1/8SQ0R0J

RS1/16SS3R9J
 RS1/16SS270J
 RS1/16SS221J
 RS1/16SS750J
 RS1/16SS560J

RS1/16SS0R0J
 RS1/16SS510J
 RS1/16SS0R0J
 RS1/16SS151J
 RS1/16SS270J

RS1/16SS131J
 RS1/16SS131J
 RS1/16SS151J
 RS1/16SS240J
 RS1/16SS330J

RS1/16SS270J
 RS1/16SS510J
 RS1/16SS220J
 RS1/16SS151J
 RS1/16SS151J

RS1/16SS330J
 RS1/16SS1R0J
 RS1/16SS473J
 RS1/16SS473J
 RS1/10SR0R0J

RS1/8SQ0R0J
 RS1/16SS153J
 RS1/16SS105J
 RS1/16SS153J
 RS1/16SS472J

RS1/16SS101J
 RS1/8SQ0R0J
 RS1/16SS273J
 RS1/16SS474J
 RS1/16SS0R0J

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

RS1/10SR0R0J
 RS1/16SS472J
 RS1/16SS472J
 RAB4CQ221J
 RS1/16SS470J

RS1/16SS473J
 RS1/16SS104J
 RS1/16SS330J
 RS1/16SS330J
 RS1/16SS330J

RS1/16SS330J
 RS1/16SS473J

Circuit Symbol and No.

R 5414 (A,64,57)
 R 5415 (A,74,54)
 R 5416 (B,66,57)

R 5417 (A,75,48)
 R 5418 (A,66,45)
 R 5419 (A,71,48)
 R 5420 (A,78,50)
 R 5421 (A,77,48)

R 5422 (A,76,50)
 R 5423 (A,67,47)
 R 5424 (A,68,47)
 R 5425 (A,60,37)
 R 5426 (A,60,34)

R 5427 (A,65,29)
 R 5428 (A,69,28)
 R 5429 (A,72,28)
 R 5430 (B,83,36)
 R 5431 (B,83,37)

R 5432 (A,86,36)
 R 5433 (A,86,37)
 R 5434 (B,83,34)
 R 5435 (B,83,35)
 R 5436 (A,86,34)

R 5437 (A,86,35)
 R 5501 (A,86,33)
 R 5518 (A,88,47)
 R 5519 (A,91,47)
 R 5520 (A,93,47)

R 5522 (A,96,47)
 R 5601 (B,6,78)
 R 5602 (B,11,78)
 R 5603 (A,14,41)
 R 5604 (A,14,25)

R 5605 (A,14,23)
 R 5606 (A,14,78)
 R 5607 (A,14,80)
 R 5608 (A,14,83)

CAPACITORS

C 5008 (A,111,13)
 C 5010 (A,63,62)
 C 5011 (A,63,69)
 C 5012 (A,112,42)
 C 5101 (A,135,65)

C 5105 (A,115,55) 10 uF
 C 5106 (A,132,53)
 C 5107 (A,131,56)
 C 5108 (A,125,61)
 C 5109 (A,134,50)

C 5110 (A,136,50)
 C 5112 (A,139,62) 10 uF
 C 5114 (A,142,59)
 C 5118 (A,130,59)
 C 5201 (A,39,67)

CCSCH101J50
 CCG1236
 CKSRYB105K16
 CKSRYB105K16
 CKSRYB104K10
 CKSSYB102K50
 CCG1236
 CKSRYB224K16
 CKSSYB332K50
 CKSSYB224K6R3

CKSRYB105K10
 CKSSYB224K6R3
 CKSRYB224K16
 CKSSYB472K50
 CKSSYB102K50

Part No.

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

A

B

D

E

F

1 Circuit Symbol and No.**2 Part No.****3 Circuit Symbol and No.****4 Part No.**

A	C 5208 (B,22,70)	CKSRYB105K16	C 5418 (A,72,67) 10 uF	CCG1244
	C 5209 (B,35,60)	CKSRYB105K10	C 5420 (A,80,34)	CKSSYB104K10
	C 5210 (B,32,73) 1 uF	CCG1383	C 5421 (A,80,35)	CKSSYB104K10
	C 5212 (B,31,71) 1 uF	CCG1383	C 5422 (A,80,37)	CKSSYB104K10
	C 5213 (B,26,67)	CKSRYB104K50	C 5423 (A,80,36)	CKSSYB104K10
	C 5214 (B,26,71)	CKSRYB104K50	C 5425 (A,70,50)	CCSSCH150J50
	C 5215 (B,28,71)	CKSRYB104K50	C 5426 (A,66,50)	CCSSCH120J50
	C 5217 (A,29,70) 4.7 uF	CCG1291	C 5427 (B,64,38)	CCSSCH101J50
	C 5218 (A,38,64)	CKSRYB103K50	C 5432 (A,80,38)	CKSSYB104K10
	C 5219 (A,24,59) 4.7 uF	CCG1212	C 5433 (B,78,40) 10 uF	CCG1244
B	C 5220 (A,34,70)	CCSSCH101J50	C 5434 (B,66,38) 10 uF	CCG1244
	C 5221 (B,31,69)	CKSSYB561K50	C 5435 (B,74,43)	CKSSYB104K10
	C 5222 (A,30,57) 4.7 uF	CCG1291	C 5436 (B,70,36)	CKSSYB104K10
	C 5224 (A,36,62)	CKSSYB152K50	C 5437 (A,72,70)	CKSSYB104K10
	C 5225 (B,35,58)	CKSRYB105K16	C 5438 (B,65,40)	CKSSYB104K10
	C 5226 (A,35,57)	CKSSYB104K10	C 5439 (B,67,45)	CKSSYB104K10
	C 5303 (A,21,44)	CKSSYB104K16	C 5602 (B,8,94) 10 uF	CCG1192
	C 5304 (A,19,47) 4.7 uF	CCG1201		
	C 5305 (A,20,52)	CKSQYB225K16		
	C 5306 (A,12,47) 4.7 uF	CCG1222		
C	C 5307 (A,13,46)	CKSSYB104K16		
	C 5314 (A,13,39)	CKSSYB102K50		
	C 5315 (A,13,38)	CKSSYB104K16		
	C 5316 (A,13,38)	CKSSYB102K50		
	C 5317 (A,13,37)	CKSSYB104K16		
	C 5324 (A,13,30)	CKSSYB102K50	S 101 (A,46,55) Spring Switch	CSN1080
	C 5325 (A,13,29)	CKSSYB104K16	S 102 (B,25,12) Spring Switch	CSN1081
	C 5326 (A,34,45)	CKSSYB102K50	VR101 (A,7,63) Semi-fixed 6.8kohm(B)	CCP1447
	C 5328 (A,34,46)	CKSSYB104K16	VR102 (A,7,59) Semi-fixed 15 kohm(B)	CCP1449
	C 5330 (A,36,51) 10 uF	CCG1236	CN101 (A,21,63) Connector	CKS6631
	C 5331 (A,39,55)	CKSSYB102K50	CN102 (A,41,11) Connector	CKS6025
	C 5333 (B,54,41)	CCSSCH101J50		
	C 5334 (B,53,41)	CKSSYB102K50		
	C 5335 (B,52,41)	CKSSYB104K10	R 101 (A,11,61)	RS1/10SR822J
	C 5336 (B,55,41) 10 uF	CCG1192	R 102 (B,53,27)	RS1/10SR0R0J
D	C 5339 (A,23,46)	CKSRYB104K50		
	C 5340 (A,23,47)	CKSQYB334K50		
	C 5341 (A,23,52)	CKSRYB103K50		
	C 5342 (A,32,43) 1 uF	DCH1246		
	C 5343 (A,28,52)	CKSSYB104K10		
	C 5344 (A,32,47) 10 uF	CCG1236		
	C 5347 (A,33,42)	CKSSYB102K50		
	C 5349 (A,52,42)	CKSSYB102K50		
	C 5350 (B,36,40)	CKSRYB105K10		
	C 5351 (A,30,43) 10 uF	CCG1234		
E	C 5352 (A,31,43)	CKSSYB102K50		
	C 5403 (B,60,41)	CCSSCH470J50		
	C 5404 (A,79,48)	CKSSYB102K50		
	C 5405 (B,67,43)	CCSSCH100D50		
	C 5406 (B,74,41)	CCSSCH101J50		
	C 5407 (A,71,62)	CKSSYB104K10		
	C 5409 (A,71,54)	CCSSCJ3R0C50		
	C 5410 (A,64,45)	CCSSCH100D50		
	C 5411 (B,74,36) 10 uF	CCG1244		
	C 5412 (B,74,38) 10 uF	CCG1244		
F	C 5413 (B,71,39)	CKSSYB104K10		
	C 5414 (A,80,39)	CCSSCH101J50		
	C 5415 (B,72,39) 10 uF	CCG1244		
	C 5416 (A,72,66)	CKSSYB104K10		
	C 5417 (B,68,35)	CCSSCH101J50		

C**Unit Number :
Unit Name : Relay Unit****MISCELLANEOUS**

S 101 (A,46,55) Spring Switch	CSN1080
S 102 (B,25,12) Spring Switch	CSN1081
VR101 (A,7,63) Semi-fixed 6.8kohm(B)	CCP1447
VR102 (A,7,59) Semi-fixed 15 kohm(B)	CCP1449
CN101 (A,21,63) Connector	CKS6631
CN102 (A,41,11) Connector	CKS6025

RESISTORS

R 101 (A,11,61)	RS1/10SR822J
R 102 (B,53,27)	RS1/10SR0R0J