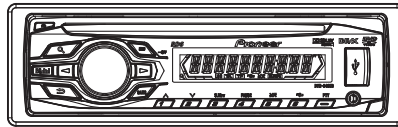


Service Manual



DVH-340UB/XMEW5

ORDER NO.
CRT4842

DVD RDS RECEIVER

DVH-340UB /XMEW5

DVH-340UB /XMUW5

DVH-345UB /XMRC

DVH-345UB /XMRD

DVH-345UB /XMRI

DVH-3490UB /XMID

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

Model No.	Order No.	Mech.Module	Remarks
CX-3283	CRT4843	LS2	DVD Mech. Module : Circuit Descriptions, Mech. Descriptions, Disassembly



A

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 safety 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 safety, you should not risk trying to do so and refer the repair to a qualified service technician.

■

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:



B

● **Safety Precautions for those who Service this Unit.**
When checking or adjusting the emitting power of the laser diode exercise caution in order to get safe, reliable results.

Caution:

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

C

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

■

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.

D

CLASS 1 LASER PRODUCT

■

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

WARNING!

E

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)

F

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 manufacture.
Discard used batteries according to the manufacture's instructions.

CONTENTS

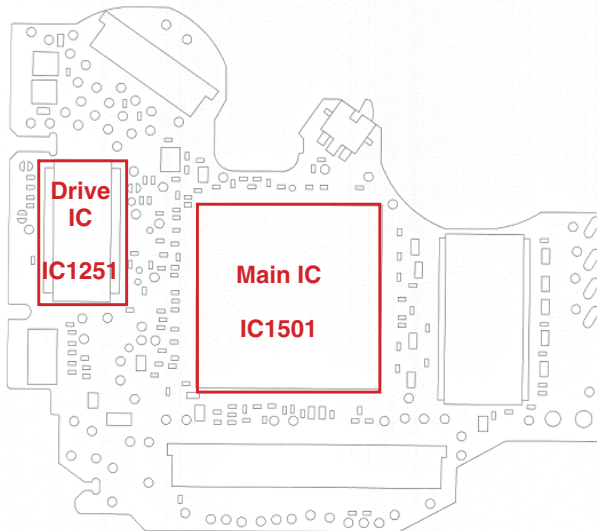
	SAFETY INFORMATION.....	2
	1. SERVICE PRECAUTIONS.....	5
A	1.1 SERVICE PRECAUTIONS	5
	1.2 NOTES ON SOLDERING	6
	2. SPECIFICATIONS.....	7
	2.1 SPECIFICATIONS	7
	2.2 DISC/CONTENT FORMAT	11
	3. BASIC ITEMS FOR SERVICE.....	12
	3.1 CHECK POINTS AFTER SERVICING.....	12
	3.2 PCB LOCATIONS	13
	3.3 JIGS LIST	13
	3.4 CLEANING.....	13
	4. BLOCK DIAGRAM.....	14
	4.1 BLOCK DIAGRAM	14
B	5. DIAGNOSIS.....	18
	5.1 OPERATIONAL FLOWCHART	18
	5.2 INSPECTION METHOD OF PICKUP UNIT.....	19
	5.3 DIAGNOSIS FLOWCHART	22
	5.4 ERROR CODE LIST	42
	5.5 CONNECTOR FUNCTION DESCRIPTION.....	44
	6. SERVICE MODE	46
	6.1 DVD TEST MODE	46
	7. DISASSEMBLY	51
	8. EACH SETTING AND ADJUSTMENT	55
	8.1 DVD ADJUSTMENT	55
	8.2 PCL OUTPUT CONFIRMATION.....	60
C	9. EXPLODED VIEWS AND PARTS LIST.....	62
	9.1 PACKING	62
	9.2 EXTERIOR.....	66
	9.3 DVD MECHANISM MODULE (1).....	68
	9.4 DVD MECHANISM MODULE (2).....	70
	10. SCHEMATIC DIAGRAM.....	72
	10.1 TUNER AMP UNIT (GUIDE PAGE)	72
	10.2 KEYBOARD UNIT	78
	10.3 DVD CORE UNIT (GUIDE PAGE)	80
	10.4 WAVEFORMS.....	86
	11. PCB CONNECTION DIAGRAM.....	88
D	11.1 TUNER AMP UNIT.....	88
	11.2 KEYBOARD UNIT	92
	11.3 DVD CORE UNIT	94
	12. ELECTRICAL PARTS LIST	96

1. SERVICE PRECAUTIONS

1.1 SERVICE PRECAUTIONS



1. You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.
2. Be careful in handling ICs. Some ICs such as MOS type are so fragile that they can be damaged by electrostatic induction.
3. Please be sure to conduct line process to original status if you make assembling after repair.
4. Please be careful of not to imply 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.
5. 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.
6. To protect the pickup unit from electrostatic discharge during servicing, take an appropriate treatment (shorting-solder) by referring to "the DISASSEMBLY".
7. 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.
8. Please power adjustment when you replaced mechanical area of DVD Mecha Module or DVD core unit.
9. Graphically-illustrated areas become hot. Be careful not to burn yourself.



10. When entering into test mode, discharge the electricity of BUP circuit completely and enter into test mode.
11. 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 Mechanism Unit.

1.2 NOTES ON SOLDERING

A

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

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

B

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

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

C

■

D

■

E

■

F

2. SPECIFICATIONS

2.1 SPECIFICATIONS

• EW5 Type

General

Rated power source.....	14.4 V DC (allowable voltage range: 10.8 V to 15.1 V DC)
Grounding system.....	Negative type
Maximum current consumption	10.0 A
Backup current	5 mA or less
Dimensions (W × H × D):	
DIN	
Chassis	178 mm × 50 mm × 165 mm
Nose	188 mm × 58 mm × 16 mm
D	
Chassis	178 mm × 50 mm × 165 mm
Nose	170 mm × 46 mm × 16 mm
Weight	1.4 kg

Audio

Maximum power output	50 W × 4 50 W × 2/4 Ω + 70 W × 1/ 2 Ω (for subwoofer)
Continuous power output ...	22 W × 4 (50 Hz to 15 000 Hz, 5 % THD, 4 Ω load, both channels dri- ven)
Load impedance	4 Ω (4 Ω to 8 Ω allowable)
Preout maximum output level	2.0 V
Tone controls:	
Bass	
Frequency.....	100 Hz
Gain	±12 dB
Mid	
Frequency.....	1 kHz
Gain	±12 dB
Treble	
Frequency.....	10 kHz
Gain	±12 dB
Subwoofer (mono):	
Frequency.....	50 Hz/63 Hz/80 Hz/100 Hz/ 125 Hz
Slope	−18 dB/oct
Gain	+6 dB to −24 dB
Phase	Normal/Reverse

DVD Player

System	DVD video, Video CD, CD, WMA, MP3, AAC, DivX, JPEG, MPEG system
Region number	2
Usable discs	DVD video, Video CD, CD, CD-R/RW, DVD-R/RW/R DL

Frequency response.....	5 Hz to 44 000 Hz (with DVD, at sampling frequency 96 kHz)
Signal-to-noise ratio.....	94 dB (1 kHz) (IEC-A net- work) (RCA level)
Number of channels	2 (stereo)
MP3 decoding format	MPEG-1 & 2 Audio Layer 3
WMA decoding format	Ver. 7, 7.1, 8, 9, 10, 11, 12 (2 ch audio) (Windows Media Player)
AAC decoding format.....	MPEG-4 AAC (iTunes en- coded only) (.m4a) (Ver. 9.0.3 and earlier)
MPEG video decoding format	MPEG1, MPEG2, MPEG4
DivX decoding format.....	Home Theater Ver. 3, 4, 5.2, 6 (.avi, .divx)

USB

USB standard specification	USB 2.0 full speed
Maximum current supply	1.0 A
USB Class	MSC (Mass Storage Class)
File system	FAT16, FAT32
MP3 decoding format	MPEG-1 & 2 Audio Layer 3
WMA decoding format	Ver. 7, 7.1, 8, 9, 10, 11, 12 (2 ch audio) (Windows Media Player)
AAC decoding format.....	MPEG-4 AAC (iTunes en- coded only) (.m4a) (Ver. 9.0.3 and earlier)
MPEG video decoding format	MPEG1, MPEG2, MPEG4
DivX decoding format.....	Home Theater Ver. 3, 4, 5.2, 6 (.avi, .divx)

FM tuner

Frequency range.....	87.5 MHz to 108.0 MHz
Usable sensitivity.....	9 dBf (0.8 μV/75 Ω, mono, S/N: 30 dB)
Signal-to-noise ratio.....	72 dB (IEC-A network)

MW tuner

Frequency range.....	531 kHz to 1 602 kHz (9 kHz)
Usable sensitivity.....	25 μV (S/N: 20 dB)
Signal-to-noise ratio.....	62 dB (IEC-A network)

LW tuner

Frequency range.....	153 kHz to 281 kHz
Usable sensitivity.....	28 μV (S/N: 20 dB)
Signal-to-noise ratio.....	62 dB (IEC-A network)

Note

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

• UW5 Type

General

Rated power source 14.4 V DC
(allowable voltage range:
10.8 V to 15.1 V DC)

Grounding system Negative type

Maximum current consumption
..... 10.0 A

Backup current 5 mA or less

Dimensions (W × H × D):

DIN

Chassis 178 mm × 50 mm ×
165 mm

Nose 188 mm × 58 mm ×
16 mm

D

Chassis 178 mm × 50 mm ×
165 mm

Nose 170 mm × 46 mm ×
16 mm

Weight 1.4 kg

Audio

Maximum power output ... 50 W × 4
50 W × 2/4 Ω + 70 W × 1/2 Ω
(for subwoofer)

Continuous power output
..... 22 W × 4 (50 Hz to 15 000 Hz,
5 % THD, 4 Ω load, both chan-
nels driven)

Load impedance 4 Ω (4 Ω to 8 Ω allowable)

Preout maximum output level
..... 2.0 V

Tone controls:

Bass

Frequency 100 Hz

Gain ±12 dB

Mid

Frequency 1 kHz

Gain ±12 dB

Treble

Frequency 10 kHz

Gain ±12 dB

Subwoofer (mono):

Frequency 50 Hz/63 Hz/80 Hz/100 Hz/
125 Hz

Slope -18 dB/oct

Gain +6 dB to -24 dB

Phase Normal/Reverse

DVD Player

System DVD video, Video CD, CD,
WMA, MP3, AAC, DivX, JPEG,
MPEG system

Region number 5

Usable discs DVD video, Video CD, CD, CD-
R/RW, DVD-R/RW/R DL

Frequency response 5 Hz to 44 000 Hz (with DVD,
at sampling frequency 96 kHz)

Signal-to-noise ratio 94 dB (1 kHz) (IEC-A network)
(RCA level)

Number of channels 2 (stereo)

MP3 decoding format MPEG-1 & 2 Audio Layer 3

WMA decoding format Ver. 7, 7.1, 8, 9, 10, 11, 12 (2 ch
audio)
(Windows Media Player)

AAC decoding format MPEG-4 AAC (iTunes encoded
only) (.m4a)
(Ver. 9.0.3 and earlier)

MPEG video decoding format

..... MPEG1, MPEG2, MPEG4

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

USB

USB standard specification

..... USB 2.0 full speed

Maximum current supply

..... 1.0 A

USB Class MSC (Mass Storage Class)

File system FAT16, FAT32

MP3 decoding format MPEG-1 & 2 Audio Layer 3

WMA decoding format Ver. 7, 7.1, 8, 9, 10, 11, 12 (2 ch
audio)
(Windows Media Player)

AAC decoding format MPEG-4 AAC (iTunes encoded
only) (.m4a)
(Ver. 9.0.3 and earlier)

MPEG video decoding format

..... MPEG1, MPEG2, MPEG4

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

FM tuner

Frequency range 87.5 MHz to 108.0 MHz

Usable sensitivity 9 dBf (0.8 μV/75 Ω, mono, S/N:
30 dB)

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

MW tuner

Frequency range 531 kHz to 1 602 kHz (9 kHz)

Usable sensitivity 25 μV (S/N: 20 dB)

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

LW tuner

Frequency range 153 kHz to 281 kHz

Usable sensitivity 28 μV (S/N: 20 dB)

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

Note

Specifications and the design are subject to
modifications without notice.

• RC, RD and RI Types

General

Rated power source 14.4 V DC
(allowable voltage range:
12.0 V to 14.4 V DC)

Grounding system Negative type

Maximum current consumption
..... 10.0 A

Backup current 5 mA or less

Dimensions (W × H × D):

DIN

Chassis 178 mm × 50 mm ×
165 mm

Nose 188 mm × 58 mm ×
16 mm

D

Chassis 178 mm × 50 mm ×
165 mm

Nose 170 mm × 46 mm ×
16 mm

Weight 1.4 kg

Audio

Maximum power output ... 50 W × 4
50 W × 2/4 Ω + 70 W × 1/2 Ω
(for subwoofer)

Continuous power output
..... 22 W × 4 (50 Hz to 15 000 Hz,
5 % THD, 4 Ω load, both chan-
nels driven)

Load impedance 4 Ω (4 Ω to 8 Ω allowable)

Preout maximum output level
..... 2.0 V

Tone controls:

Bass

Frequency 100 Hz

Gain ±12 dB

Mid

Frequency 1 kHz

Gain ±12 dB

Treble

Frequency 10 kHz

Gain ±12 dB

Subwoofer (mono):

Frequency 50 Hz/63 Hz/80 Hz/100 Hz/
125 Hz

Slope -18 dB/oct

Gain +6 dB to -24 dB

Phase Normal/Reverse

DVD Player

System DVD video, Video CD, CD,
WMA, MP3, AAC, DivX, JPEG,
MPEG system

Region number:

for Southeast Asian models

..... 3

for South American and Oceanian models

..... 4

for Middle East Asian and South African models

..... 2

Usable discs DVD video, Video CD, CD, CD-
R/RW, DVD-R/RW/R DL

Frequency response 5 Hz to 44 000 Hz (with DVD,
at sampling frequency 96 kHz)

Signal-to-noise ratio 94 dB (1 kHz) (IEC-A network)
(RCA level)

Number of channels 2 (stereo)

MP3 decoding format MPEG-1 & 2 Audio Layer 3

WMA decoding format Ver. 7, 7.1, 8, 9, 10, 11, 12 (2 ch
audio)
(Windows Media Player)

AAC decoding format MPEG-4 AAC (iTunes encoded
only) (.m4a)
(Ver. 9.0.3 and earlier)

MPEG video decoding format

..... MPEG1, MPEG2, MPEG4

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

USB

USB standard specification

..... USB 2.0 full speed

Maximum current supply

..... 1.0 A

USB Class MSC (Mass Storage Class)

File system FAT16, FAT32

MP3 decoding format MPEG-1 & 2 Audio Layer 3

WMA decoding format Ver. 7, 7.1, 8, 9, 10, 11, 12 (2 ch
audio)
(Windows Media Player)

AAC decoding format MPEG-4 AAC (iTunes encoded
only) (.m4a)
(Ver. 9.0.3 and earlier)

MPEG video decoding format

..... MPEG1, MPEG2, MPEG4

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

FM tuner

Frequency range 87.5 MHz to 108.0 MHz

Usable sensitivity 9 dBf (0.8 μV/75 Ω, mono, S/N:
30 dB)

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

AM tuner

Frequency range 531 kHz to 1 602 kHz (9 kHz)

530 kHz to 1 640 kHz (10 kHz)

Usable sensitivity 25 μV (S/N: 20 dB)

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

Note

Specifications and the design are subject to
modifications without notice.

• ID Type

General

Rated power source 14.4 V DC
(allowable voltage range:
12.0 V to 14.4 V DC)

Grounding system Negative type

Maximum current consumption
..... 10.0 A

Backup current 5 mA or less

Dimensions (W × H × D):

DIN

Chassis 178 mm × 50 mm ×
165 mm

Nose 188 mm × 58 mm ×
16 mm

D

Chassis 178 mm × 50 mm ×
165 mm

Nose 170 mm × 46 mm ×
16 mm

Weight 1.4 kg

Audio

Maximum power output ... 50 W × 4
50 W × 2/4 Ω + 70 W × 1/2 Ω
(for subwoofer)

Continuous power output
..... 22 W × 4 (50 Hz to 15 000 Hz,
5 % THD, 4 Ω load, both chan-
nels driven)

Load impedance 4 Ω (4 Ω to 8 Ω allowable)

Preout maximum output level
..... 2.0 V

Tone controls:

Bass

Frequency 100 Hz

Gain ±12 dB

Mid

Frequency 1 kHz

Gain ±12 dB

Treble

Frequency 10 kHz

Gain ±12 dB

Subwoofer (mono):

Frequency 50 Hz/63 Hz/80 Hz/100 Hz/
125 Hz

Slope -18 dB/oct

Gain +6 dB to -24 dB

Phase Normal/Reverse

DVD Player

System DVD video, Video CD, CD,
WMA, MP3, AAC, DivX, JPEG,
MPEG system

Region number 5

Usable discs DVD video, Video CD, CD, CD-
R/RW, DVD-R/RW/R DL

Frequency response 5 Hz to 44 000 Hz (with DVD,
at sampling frequency 96 kHz)

Signal-to-noise ratio 94 dB (1 kHz) (IEC-A network)
(RCA level)

Number of channels 2 (stereo)

MP3 decoding format MPEG-1 & 2 Audio Layer 3

WMA decoding format Ver. 7, 7.1, 8, 9, 10, 11, 12 (2 ch
audio)
(Windows Media Player)

AAC decoding format MPEG-4 AAC (iTunes encoded
only) (.m4a)
(Ver. 9.0.3 and earlier)

MPEG video decoding format

..... MPEG1, MPEG2, MPEG4

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

USB

USB standard specification

..... USB 2.0 full speed

Maximum current supply

..... 1.0 A

USB Class MSC (Mass Storage Class)

File system FAT16, FAT32

MP3 decoding format MPEG-1 & 2 Audio Layer 3

WMA decoding format Ver. 7, 7.1, 8, 9, 10, 11, 12 (2 ch
audio)
(Windows Media Player)

AAC decoding format MPEG-4 AAC (iTunes encoded
only) (.m4a)
(Ver. 9.0.3 and earlier)

MPEG video decoding format

..... MPEG1, MPEG2, MPEG4

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

FM tuner

Frequency range 87.5 MHz to 108.0 MHz

Usable sensitivity 9 dBf (0.8 μV/75 Ω, mono, S/N:
30 dB)

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

AM tuner

Frequency range 531 kHz to 1 602 kHz (9 kHz)

530 kHz to 1 640 kHz (10 kHz)

Usable sensitivity 25 μV (S/N: 20 dB)

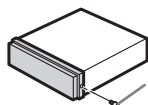
Signal-to-noise ratio 62 dB (IEC-A network)

Note

Specifications and the design are subject to
modifications without notice.

Fastening the front panel

If you do not plan to detach the front panel,
the front panel can be fastened with the supplied
screw.



Screw : XXX7020

2.2 DISC/CONTENT FORMAT



A

B

C

D

E

F

3. BASIC ITEMS FOR SERVICE

3.1 CHECK POINTS AFTER SERVICING

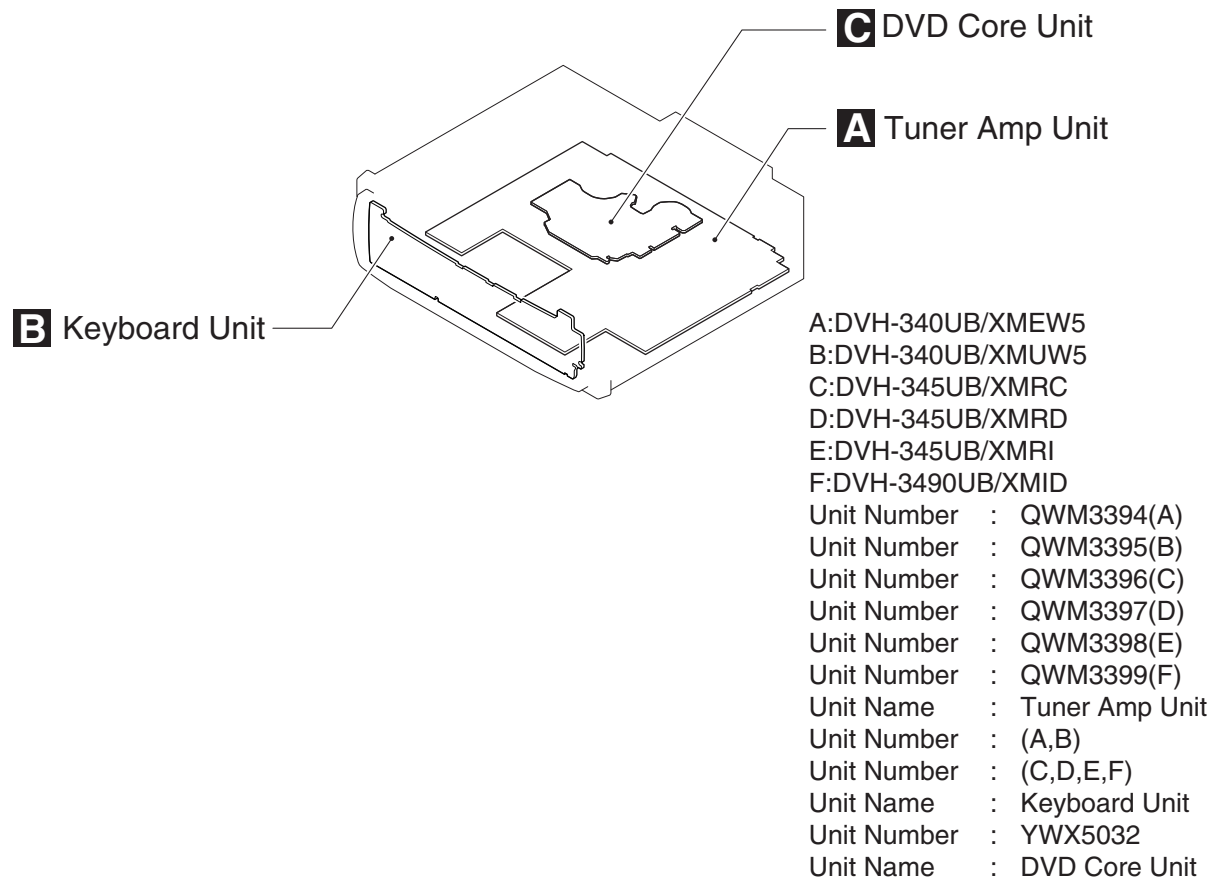
To keep the product quality after servicing, please confirm following check points.

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

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

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

3.2 PCB LOCATIONS



3.3 JIGS LIST

● Jigs List

Name	Jig No.	Remarks
Disc	TDV-582	Skew adjustment, Check points after servicing, Inspection method of Pickup Unit
Disc	TCD-782	Inspection method of Pickup Unit
30P FFC	GGD1222	DVD Core Unit <--> Tuner Amp Unit

● Grease List

Name	Jig No.	Remarks
Grease	GEM1024	DVD Mechanism Module
Grease	GEM1038	DVD Mechanism Module
Grease	GEM1045	DVD Mechanism Module

3.4 CLEANING



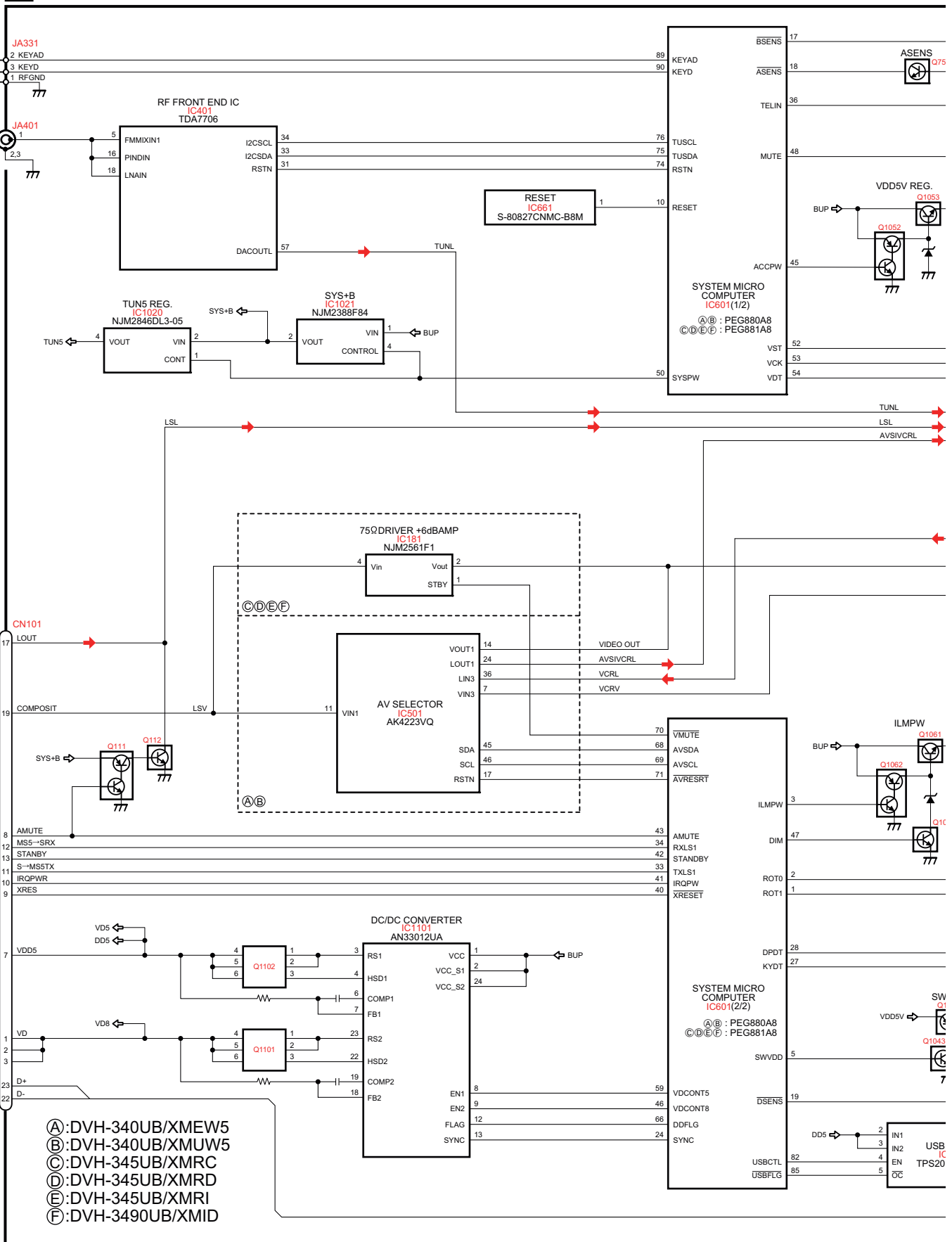
Before shipping out the product, be sure to clean the following portions by using the prescribed cleaning tools:

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

4. BLOCK DIAGRAM

4.1 BLOCK DIAGRAM

A TUNER AMP UNIT





C DVD CORE UNIT

A

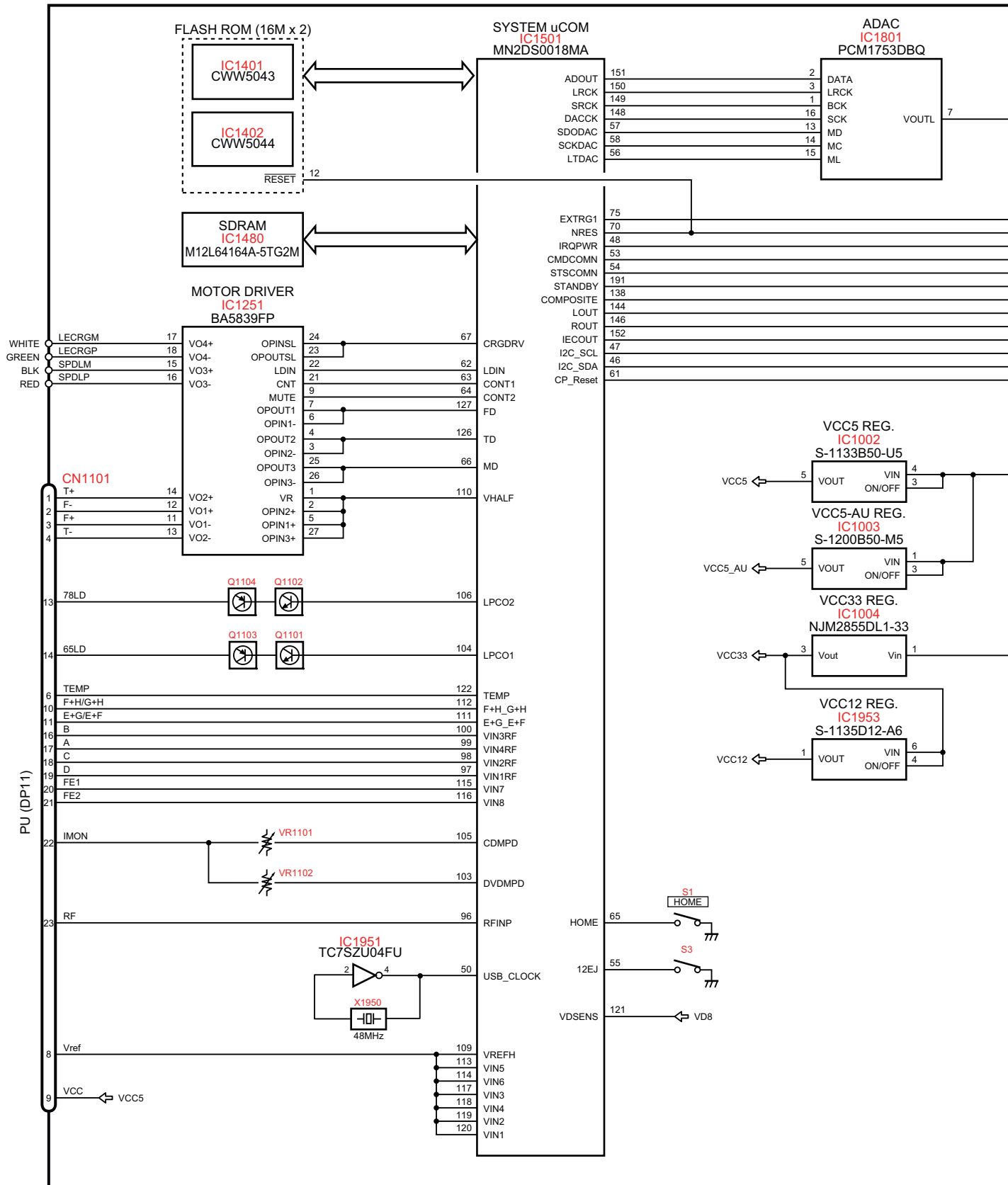
B

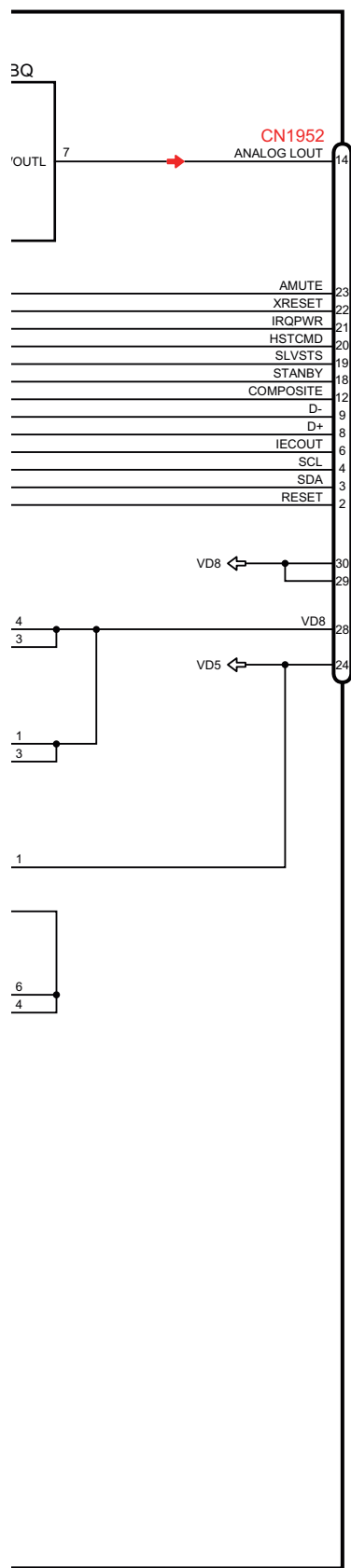
C

D

E

F





A

B

C

D

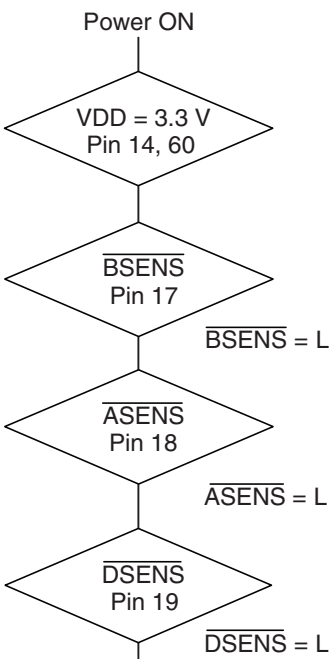
E

F

5. DIAGNOSIS

5.1 OPERATIONAL FLOWCHART

A

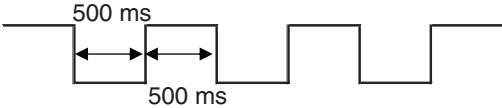
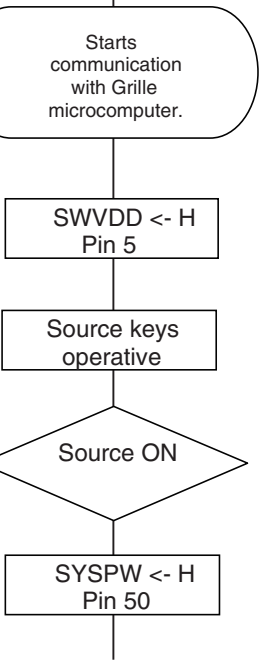


B

C

D

E



In case of the above signal, the communication with Grille microcomputer may fail.
If the time interval is not 500 msec, the oscillator may be defective.

F

Completes power-on operation.
(After that, proceed to each source operation)

■ 5 ■ 6 ■ 7 ■ 8 ■

A

CD-DA : TCD-782

DVD-Video : TDV-582(GGV1025)

B

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



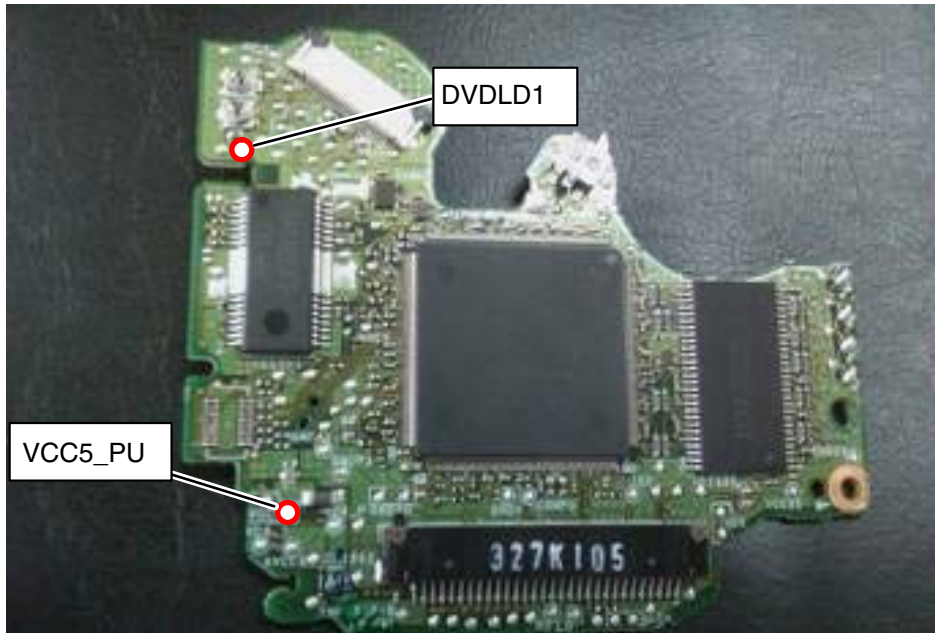
A

Check1 : LD current check

<Check>

Status: [Focus closed] of TEST MODE

No.	Disc	Check Point	Threshold	Remarks: LD current
1	GGV1025	DVDLD1 - VCC5_PU	120 - 780 (mV)	10 - 65 (mA)

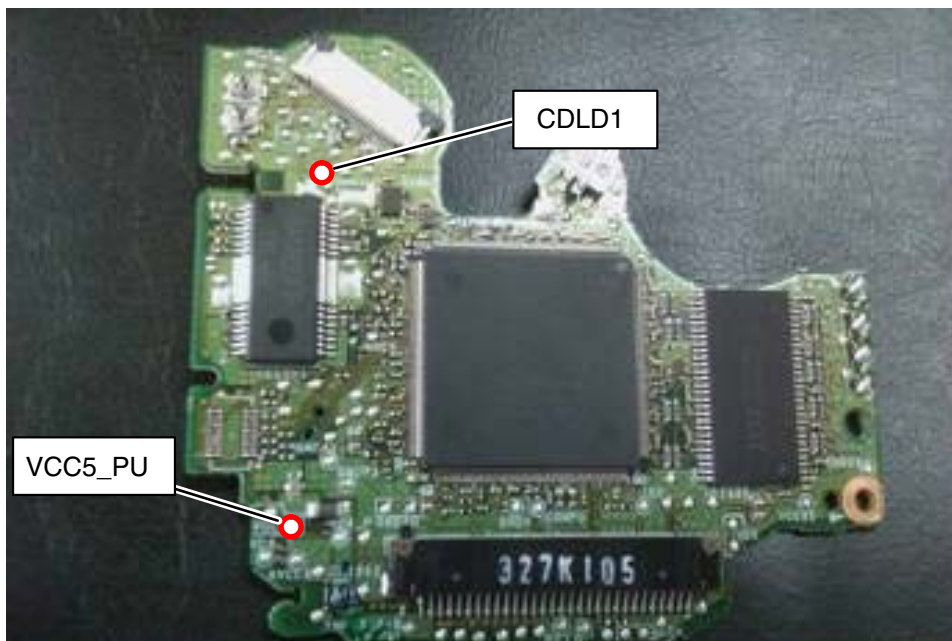


B

C

D

No.	Disc	Check Point	Threshold	Remarks: LD current
2	TCD-782	CDLD1 - VCC5_PU	150 - 900 (mV)	10 - 60 (mA)



E

F

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

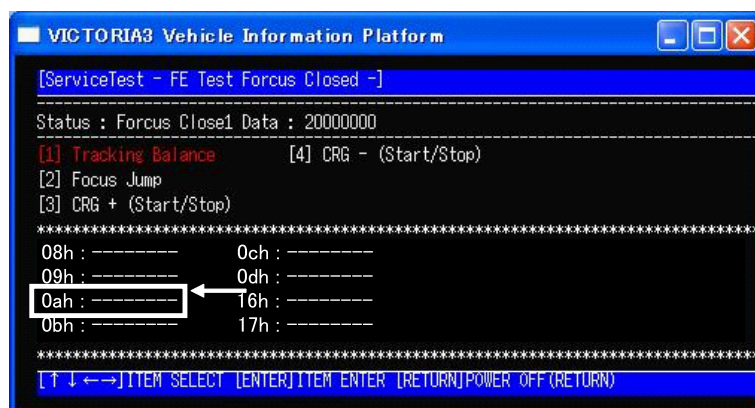
Check : RF level

<Check>

ASMAX value shows the value of RF level.

Status: [Focus closed] of TEST MODE

No.	Disc	Check Point	Threshold	Remarks
1	GGV1025	8 digits value of ASMAX on display	more than 0000 0B00	
2	TCD-782	8 digits value of ASMAX on display	more than 0000 0E00	

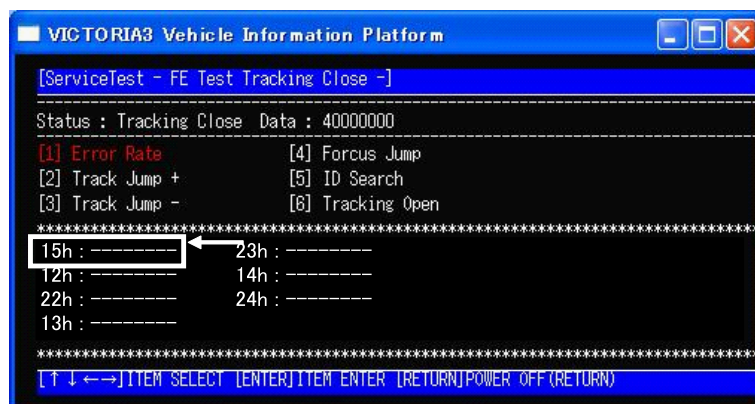


Check2 : Error rate check

<Check>

Status: [Tracking Closed] of TEST MODE

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



5.3 DIAGNOSIS FLOWCHART

A

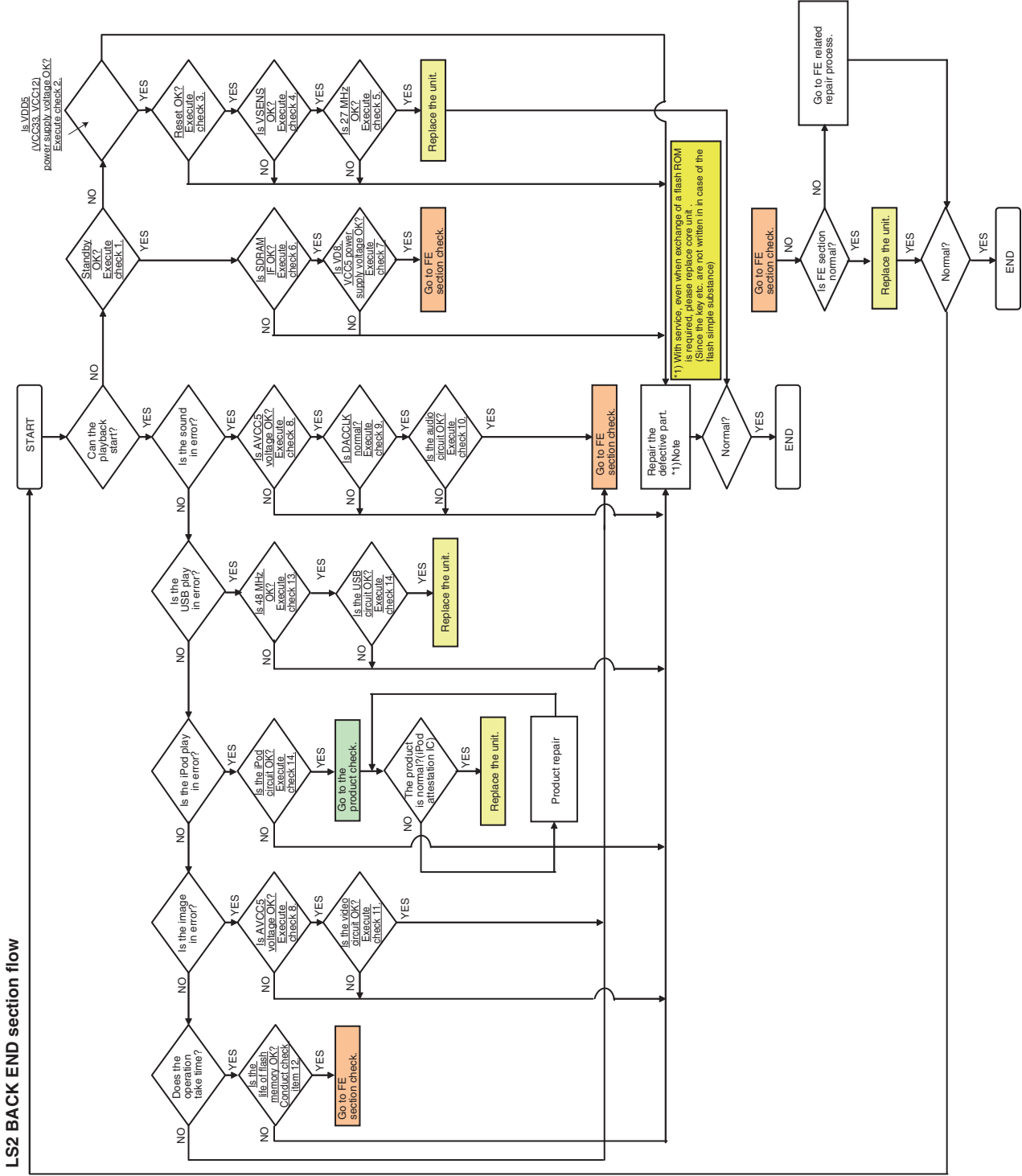
B

C

D

E

F



Check 1: Standby OK?

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

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

Side A

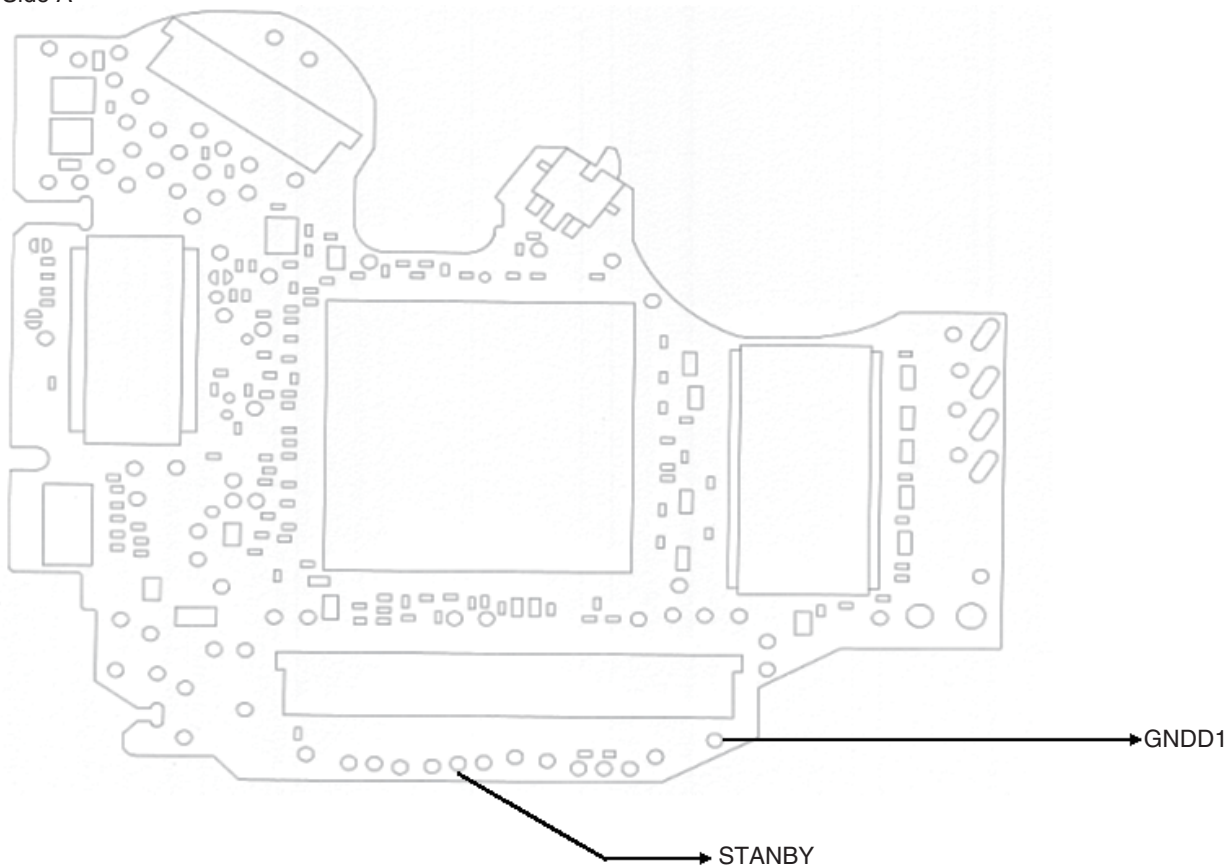


Fig 1.1: STANBY check point

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

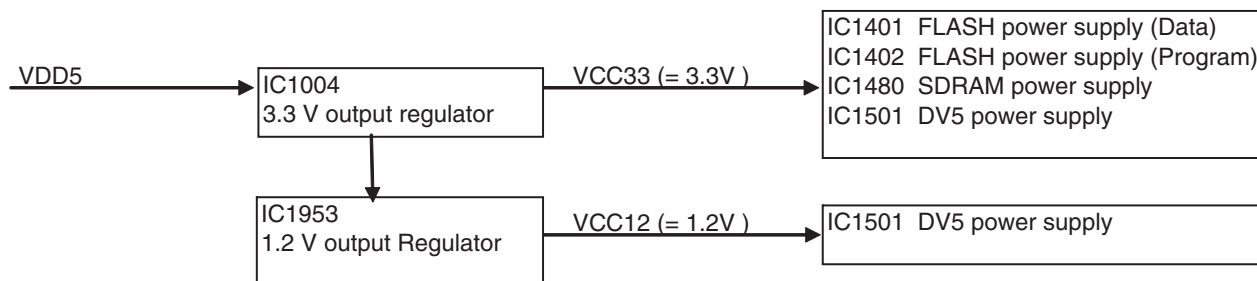


Fig 2.1: Power supply configuration

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

No.	Check point	Module No.	Specification value	Unit
1	VDD5_1 - DGND1	ALL	5.0 ± 0.4	V
2	VCC33_1 - DGND1	ALL	3.3 ± 0.033	V
3	VCC12_1 - DGND1	ALL	1.2 ± 0.015	V

Side A

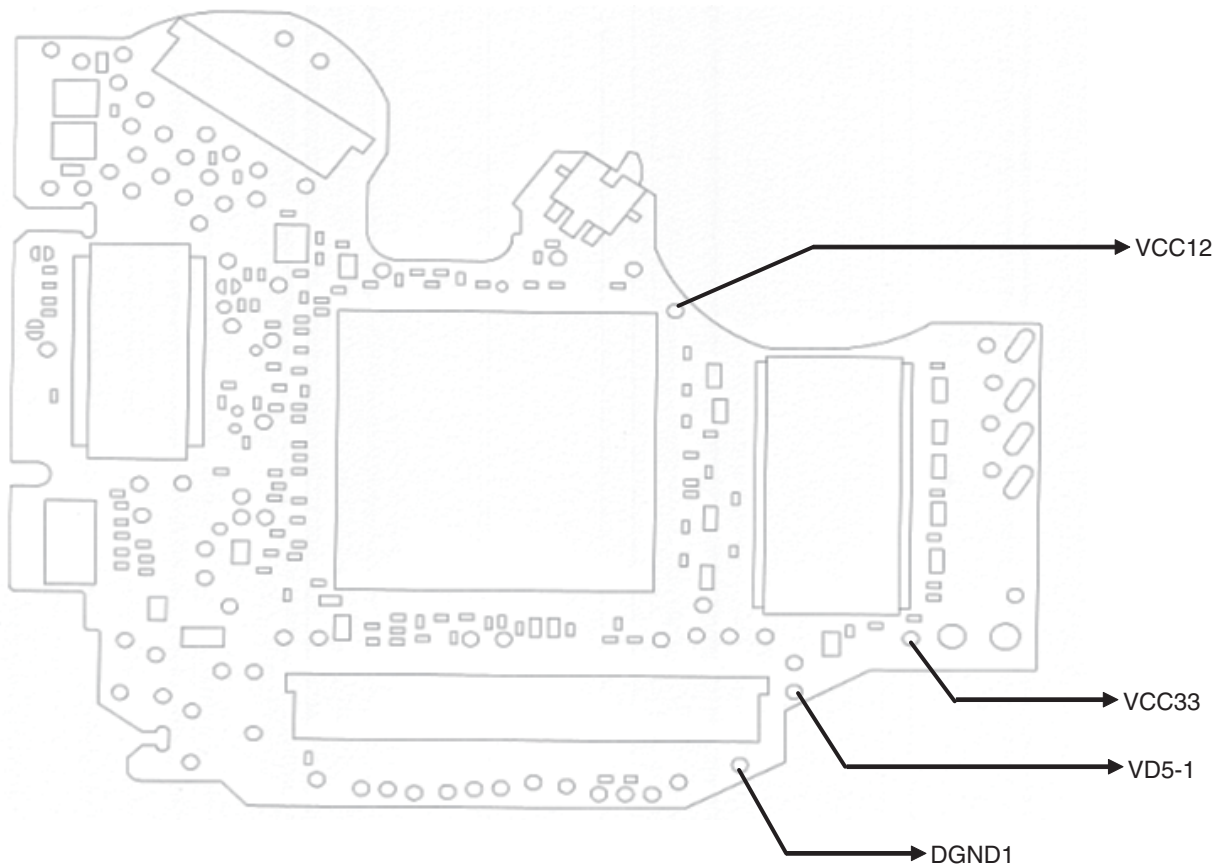


Fig 2.2: VDD5, VCC33, VCC12 voltage check points

Check 3: Reset OK?

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

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

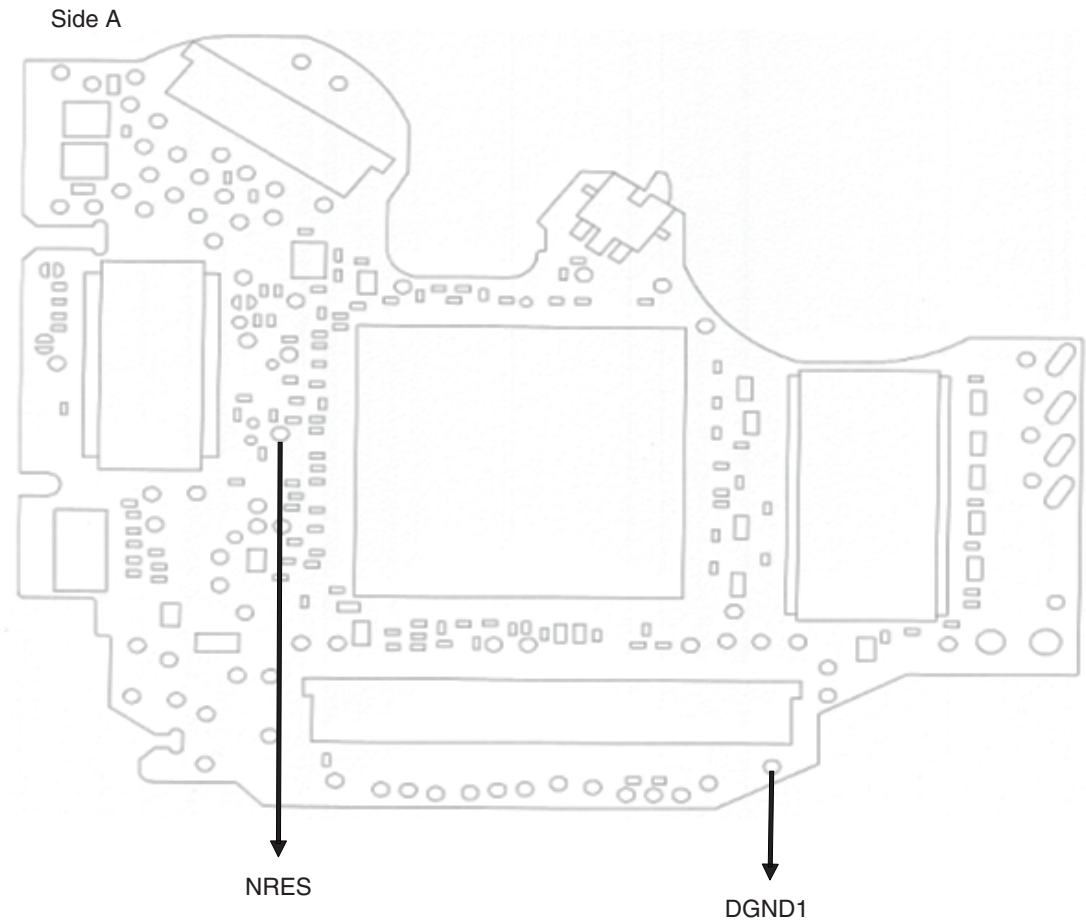
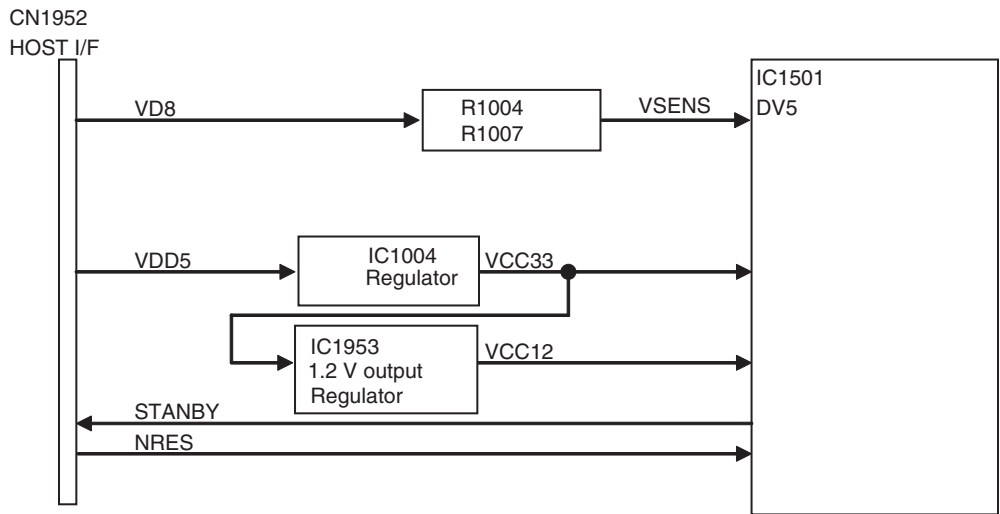


Fig 3.1: RESET check point

Check 4: Is VSENS OK?

A



B

Fig 4.1: Power supply configuration and VSENS

C

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

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

$VD8 = 8.0 \pm 0.4 \text{ V}$

Side A

D

E

F

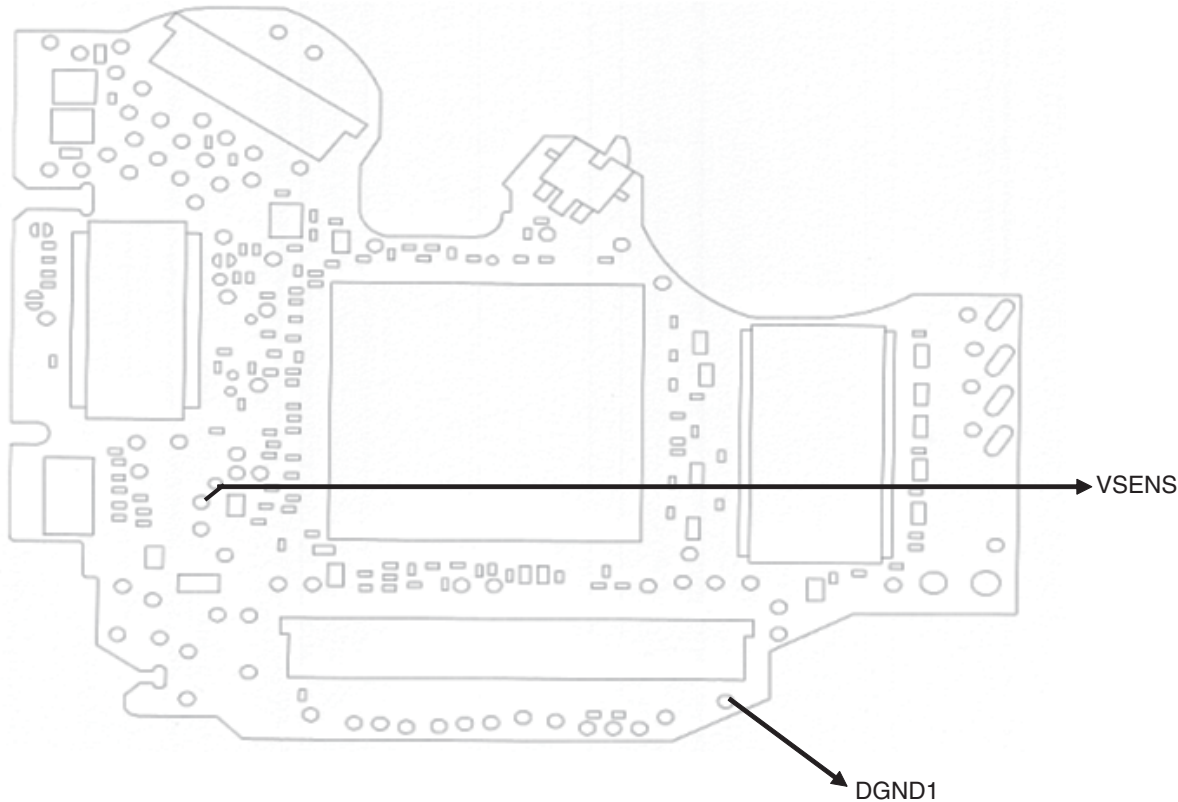


Fig 4.2: VSENS check point

Check 5: 27 MHz Normal?

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

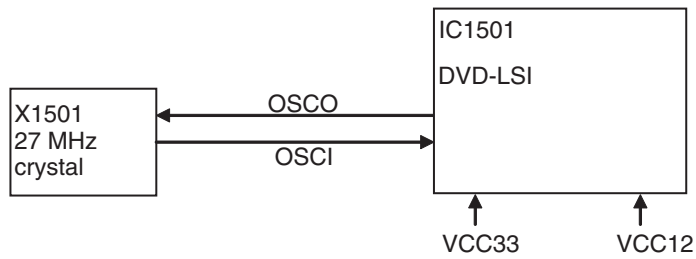


Fig 5.1: Clock configuration

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

No.	Check point	Module No.	Specification value	Unit
2	IC1501 156pin - DGND1	ALL	27 MHz \pm 50 ppm	ppm

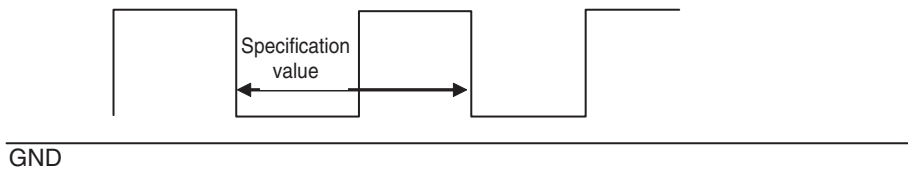


Fig 5.2: Clock specification value

Side A

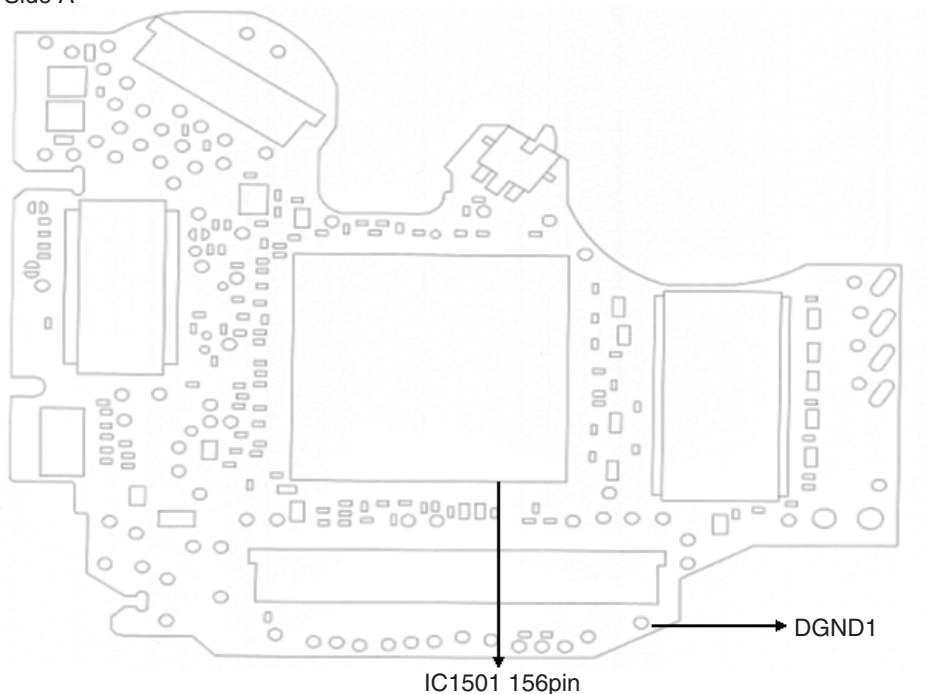
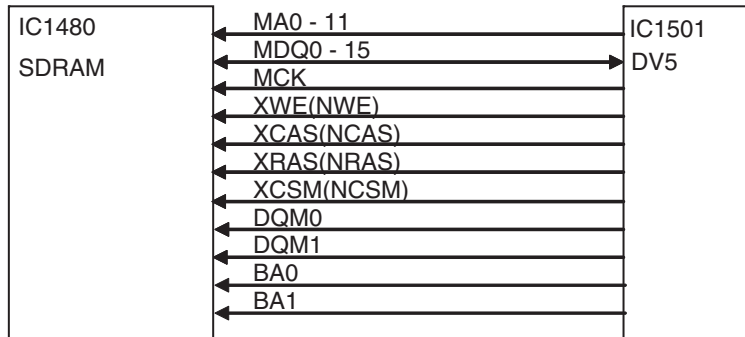


Fig 5.3: 27 MHz check point

Check 6: Is SDRAM I/F OK?

A

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



B

Fig 6.1: SDRAM I/F

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

C

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

D

E

F

Side A

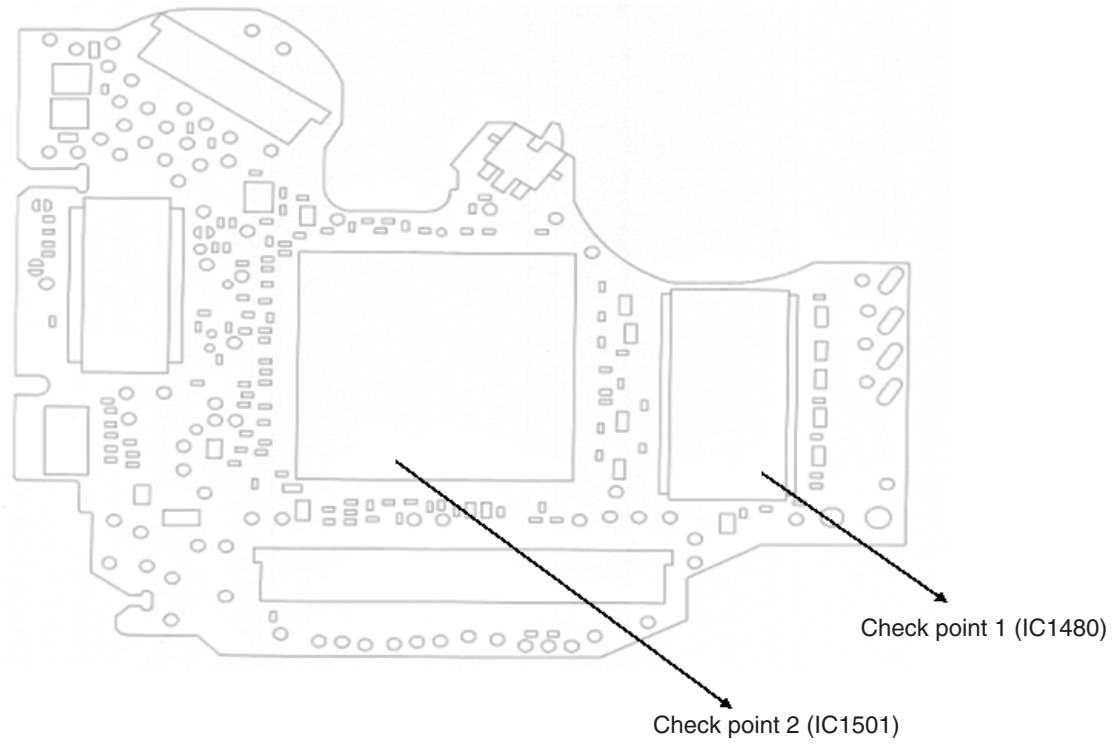


Fig 6.2: SDRAM I/F check point

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

A

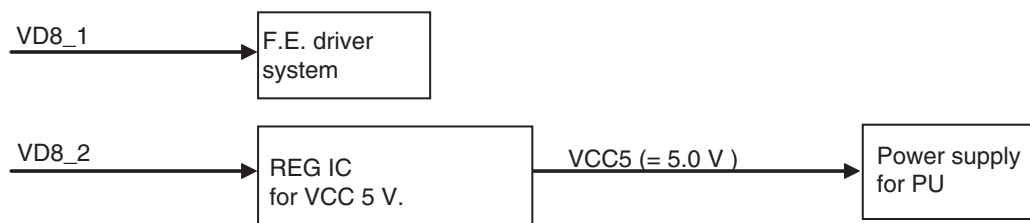


Fig 7.1: Power supply configuration

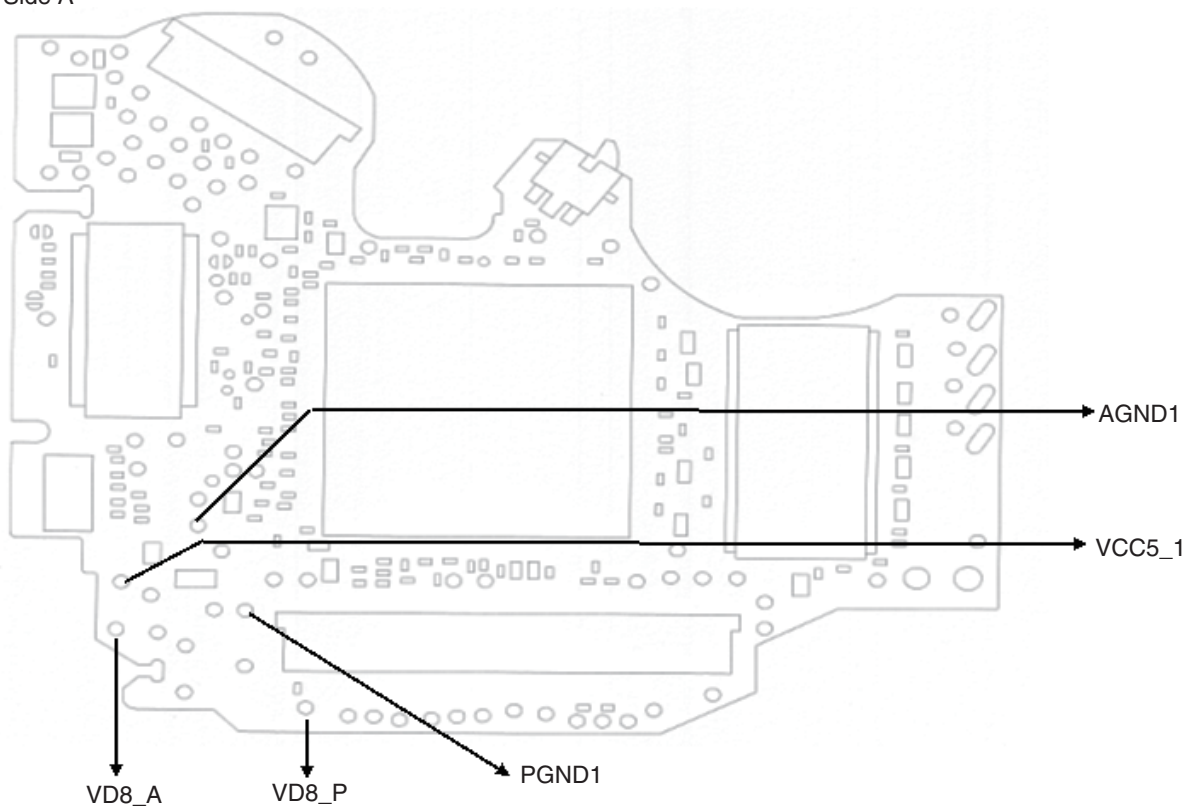
B

<Check> Check the voltage at the “VD8_P, VD8_A and VCC5_1” test point while the power is on.
Use the “PGND1 and AGND1” test point at the reference.

No.	Check point	Module No.	Specification value	Unit
1	VD8_P - PGND1	ALL	8.0 ± 0.4	V
2	VD8_A - AGND1	ALL	8.0 ± 0.4	V
3	VCC5_1 - AGND1	ALL	5.0 ± 0.05	V

C

Side A



D

E

Fig 7.2: VD8, VCC5 voltage check points

F

Check 8: Is AVCC5 voltage OK?

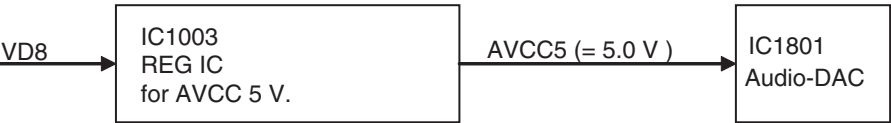


Fig 8.1: Power supply configuration

<Check> Playback DVD-REF-A1 TITLE 1 and check the voltage at the stylus.
Check with PGND_3 and GNDAU1 being the reference.

No.	Check point	Module No.	Specification value	Unit
1	VD8_A - PGND_3	ALL	8.0 ± 0.4	V
2	AVCC5 - GNDAU1	ALL	5.0 ± 0.05	V

Side A

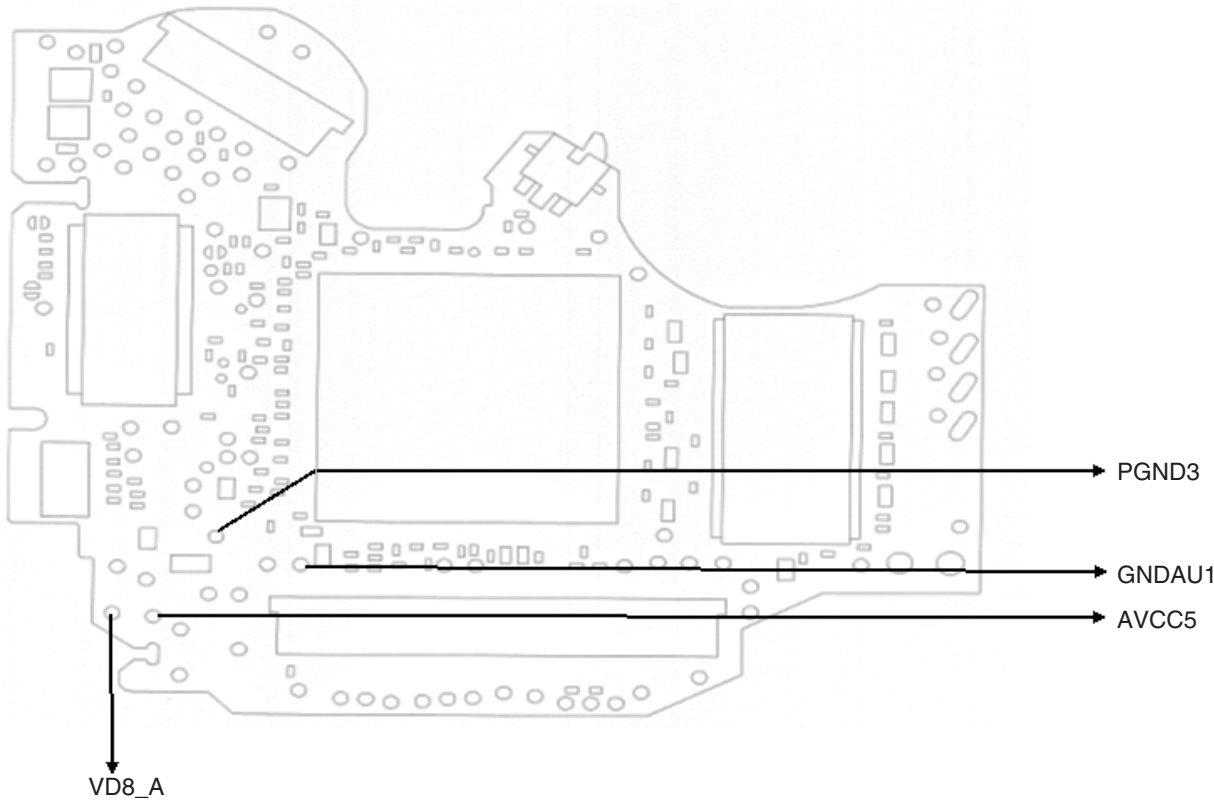


Fig 8.2: VD8, AVCC5 voltage check points

Check 9: Is DACCLK normal?

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

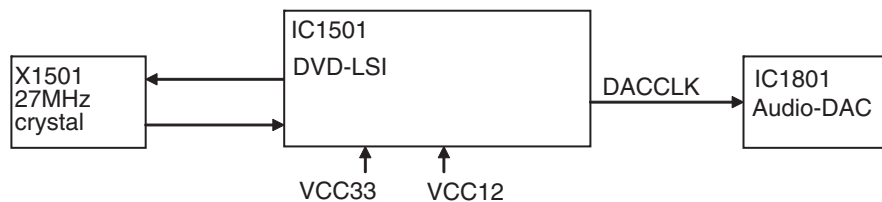


Fig 9.1: Clock configuration

<Check method>

DVD: DVD-REF-A1 TITLE 1

CD: Playback a normal CDDA.

Common to all DVD-V compatible modules.

Check with DGND being the reference.

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

No.	Check point 1 (stylus)	Media	Specification value 1	Specification value 2	Specification value 3
1	DACCK	DVD	2.0 V - VCC33V	DGND - 0.8 V	36.8640 MHz \pm 300 ppm
2	DACCK	CD	2.0 V - VCC33V	DGND - 0.8 V	33.8688 MHz \pm 300 ppm

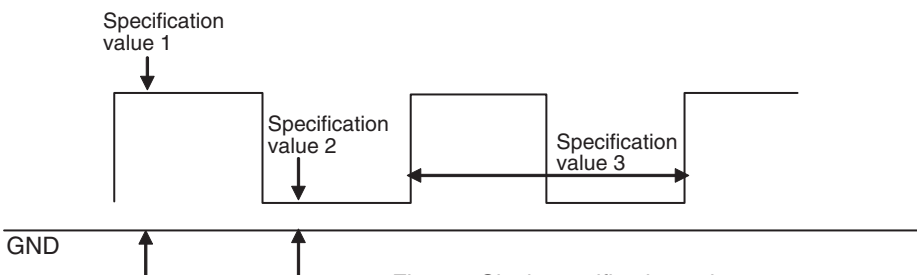


Fig 9.2: Clock specification value

Side A

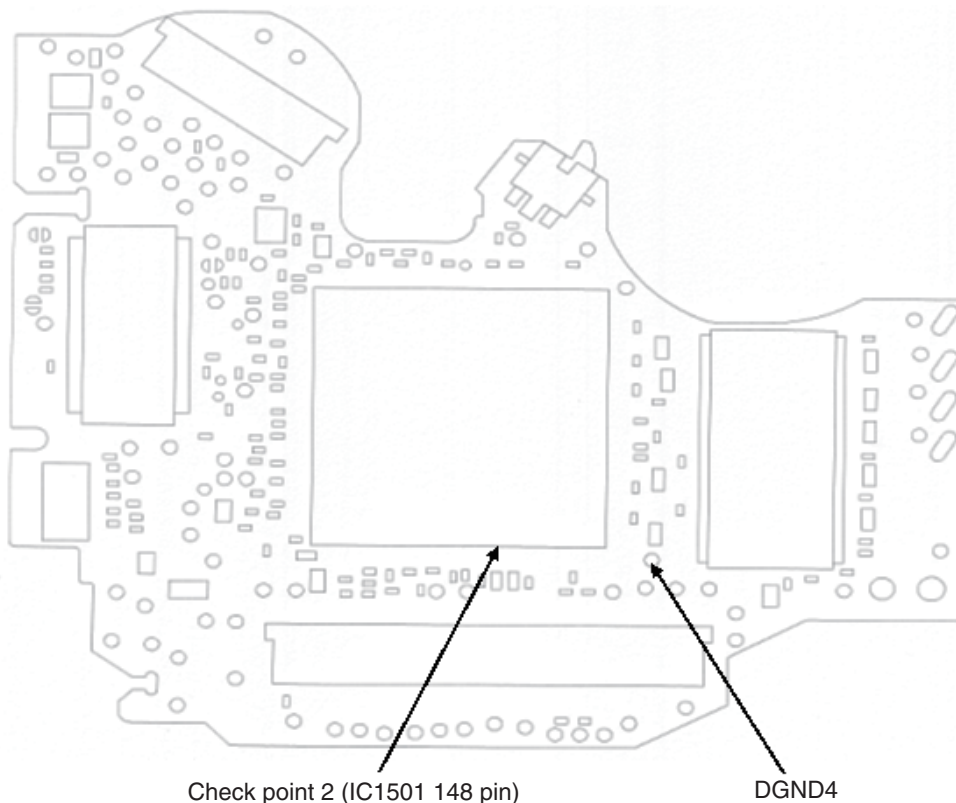


Fig 9.3: DACCLK check point

Check 10: Is the audio circuit OK?

<Outline> The serial 3 lines digital output + DACCLK, output from DVD-LSI (IC1501), are converted to analog audio signal at Audio-DAC (IC1801) and are output from the HOST I/F (CN1952). Simultaneously, the analog MUTE signal is also output from DVD-LSI (IC1501) via the HOST I/F. The digital audio signal (IECOUT), output from DVD-LSI (IC1501).

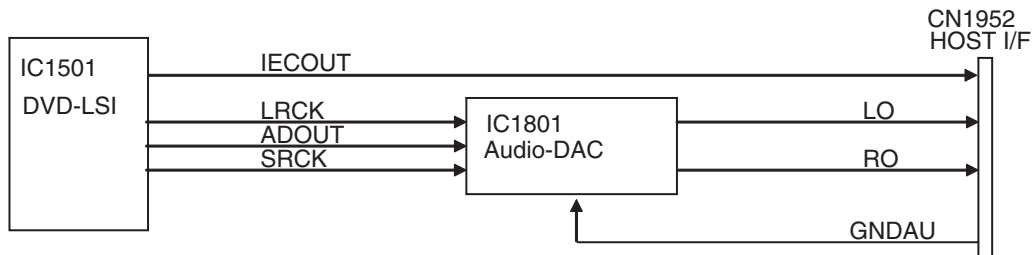


Fig 10.1: Audio circuit

<Check method> Playback DVD-REF-A1 TITLE 2 CHAPTER 1 (48 k/16 bit 1 kHz 0 dB), and check with DGND1 being the reference.

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

No.	Check point 1 (stylus)	Specification value 1	Specification value 2	Reference waveform
1	ADOUT	VCC33V - 0.6 V or higher	0.4 V or lower	Waveform 1
2	SRCK	VCC33V - 0.6 V or higher	0.4 V or lower	Waveform 2
3	LRCK	VCC33V - 0.6 V or higher	0.4 V or lower	Waveform 3

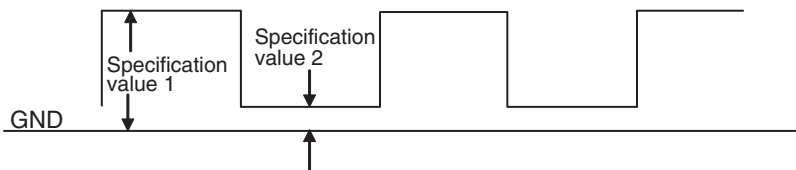


Fig 10.2: Serial 3 lines specification value

Side A

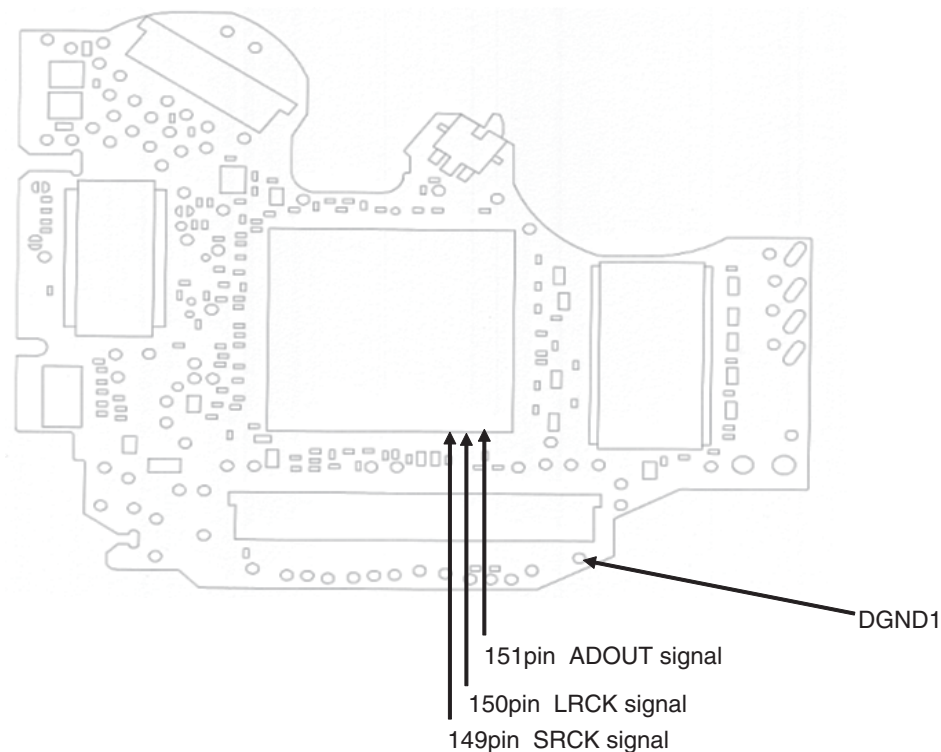
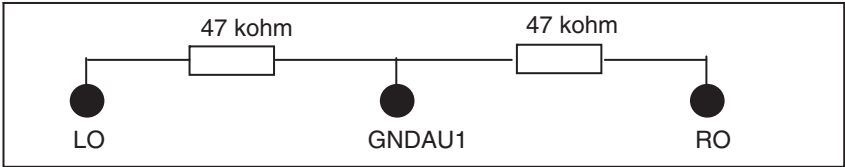


Fig 10.3: Serial 3 lines check points

A

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



B

No.	Check point 1 (stylus)	Specification value (rms)	Reference waveform
4	LO	1400 ± 150 mV	Waveform 4
5	RO	1400 ± 150 mV	Waveform 4

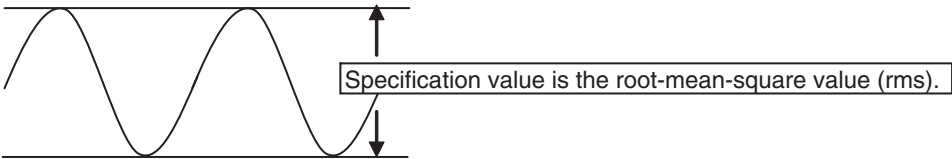


Fig 10.4: Analog audio out (LO, RO) specification value.

C

Side A

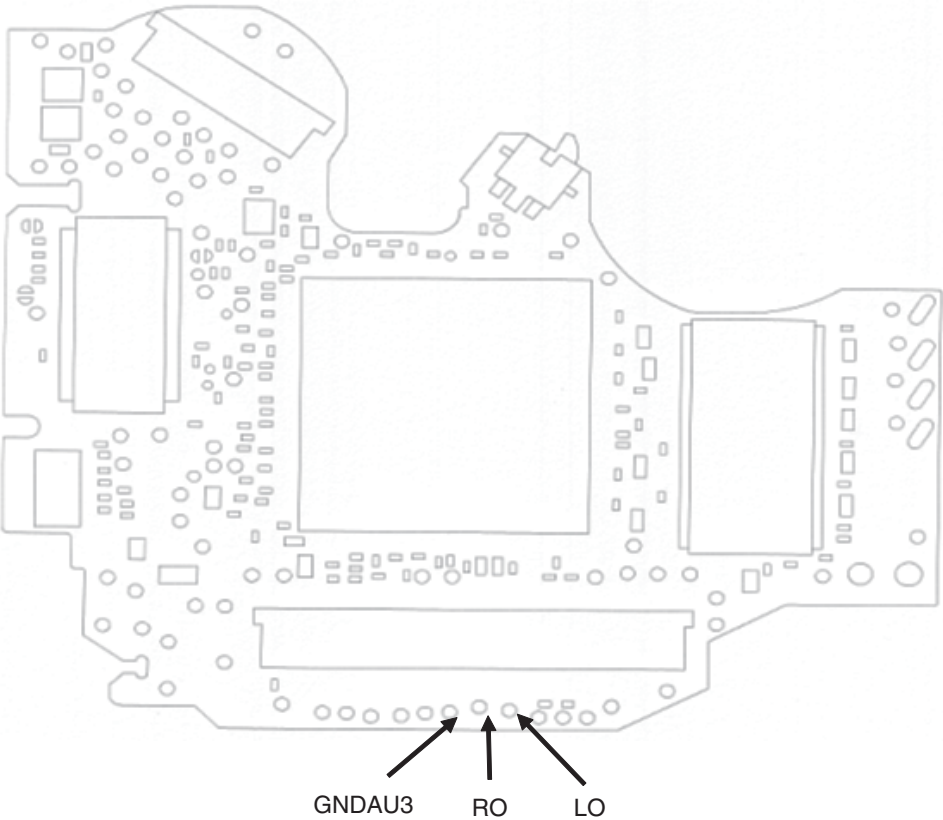
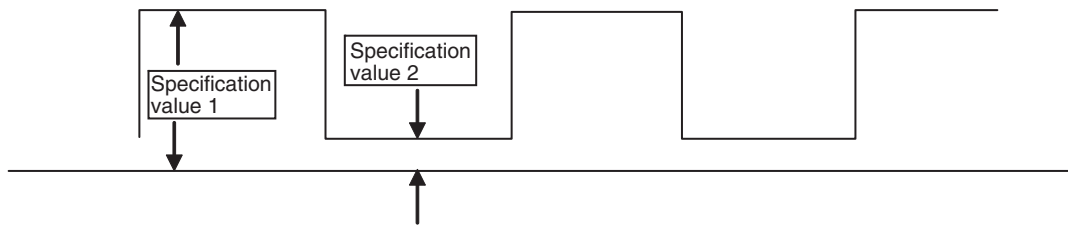


Fig 10.5: Analog audio out check point

F

Check with DGND1 being the reference.

No.	Check point 1 (stylus)	Specification value 1	Specification value 2	Reference waveform
6	IEC	VCC33V - 0.6 V or higher	0.4 V or lower	Waveform 5



10.6: Digital audio signal (IECOUT) specification value

Side A

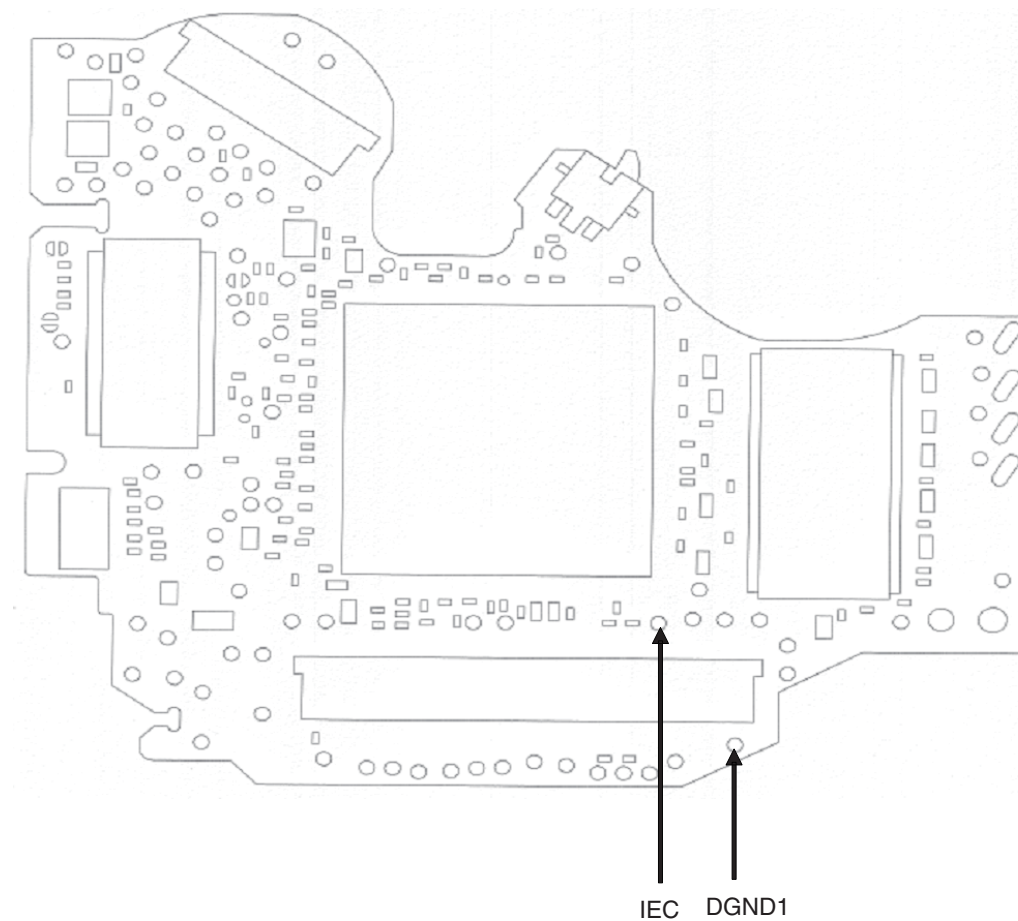
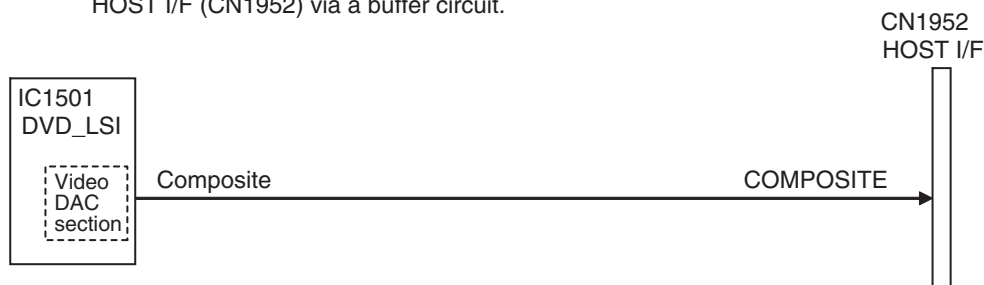


Fig 10.7: Digital audio signal (IECOUT) check point

Check 11: Is the video circuit OK?

A

<Outline> Composite signal and component signal are output from DVD-LSI (IC1501), and are output from the HOST I/F (CN1952) via a buffer circuit.



B

Fig 11.1: Video circuit

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

No.	Check point 1 (stylus)	Specification value	Reference waveform
1	COMPOSITE	1000 mVpp \pm 5%	Waveform 6

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

C

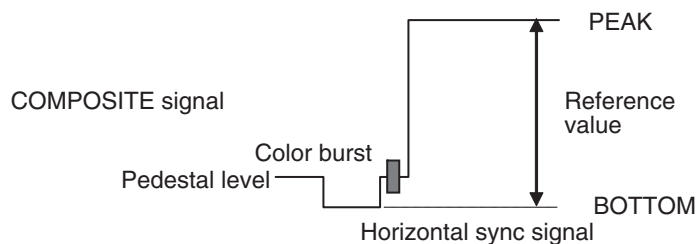
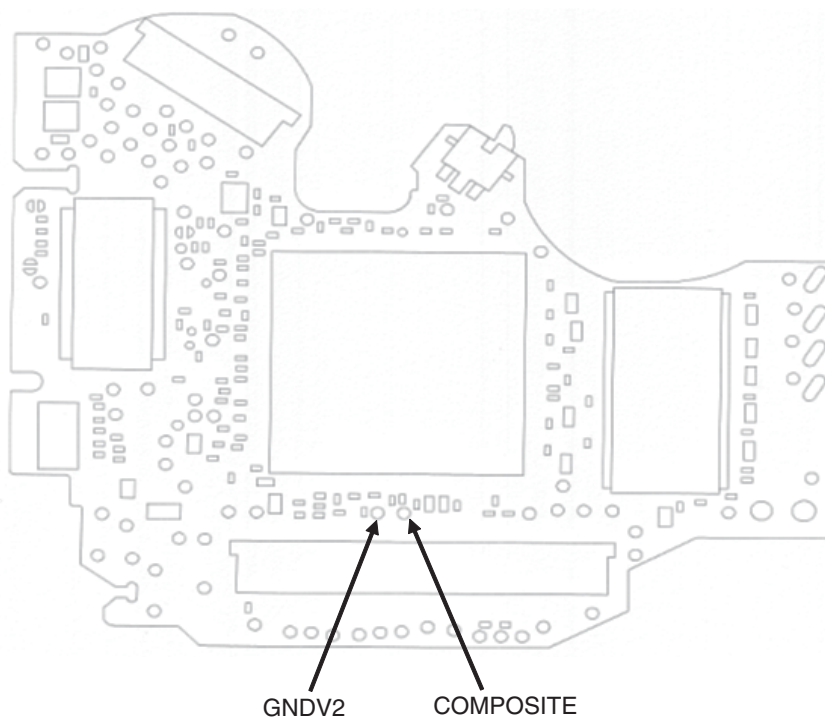


Fig 11.2: Waveform for the case of composite white 100% output

D

Side A



E

F

Fig 11.3: VIDEO signal check point

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

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

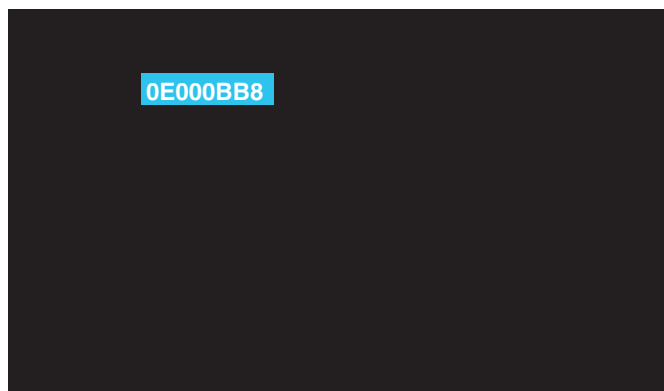
Make judgment regarding the flash memory life by looking at the display of the LD power on time mode.

1. Let the LD energizing time displayed.

(Refer to the LD power on time mode for the method of displaying the LD energizing time.)

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

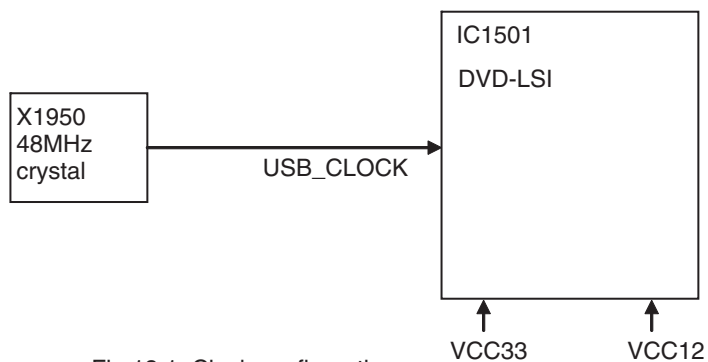
Example:



Check 13: 48 MHz Normal?

A

<Outline> CLOCK of a USB circuit is made using the 48 MHz master crystal oscillator (X1950).



B

Fig 13.1: Clock configuration

<Check method> Turn the power on, and check with DGND1 being the reference.

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

No.	Check point	Module No.	Specification value	Unit
2	IC1501 50pin - DGND1	ALL	48 MHz \pm 200 ppm	ppm

C

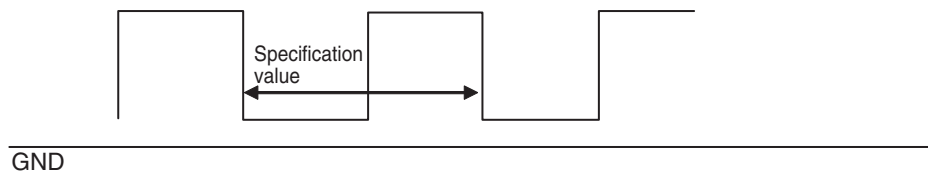
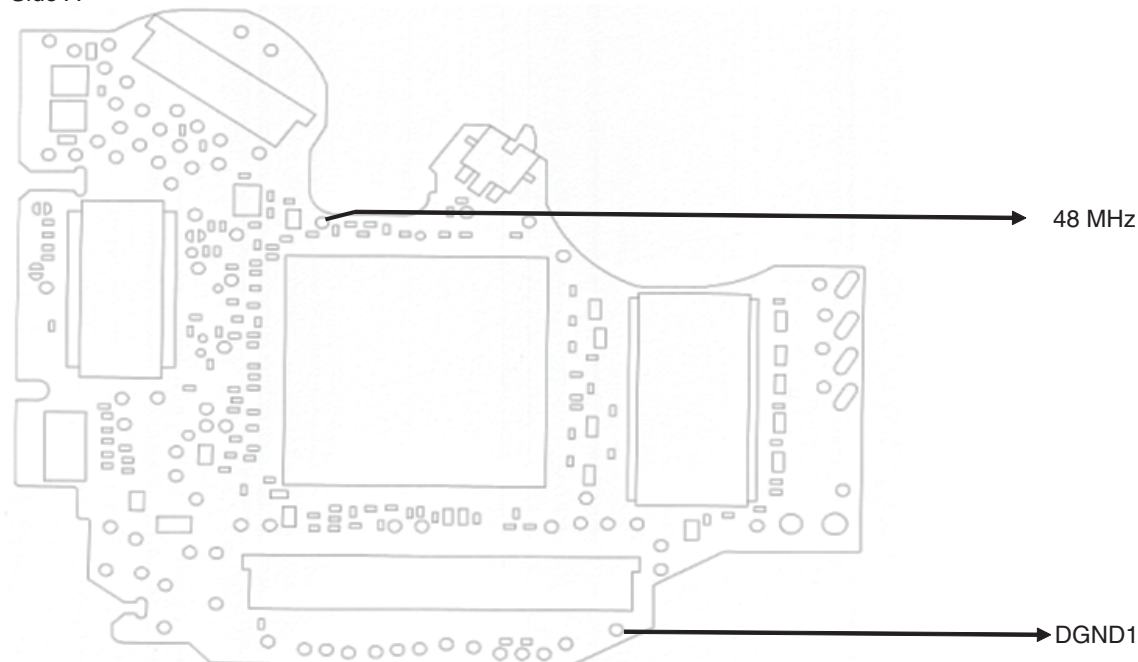


Fig 13.2: Clock specification value

D

Side A



E

F

Fig 13.3: 48 MHz check point

Check 14: Is USB Circuit OK?

<Outline>

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

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

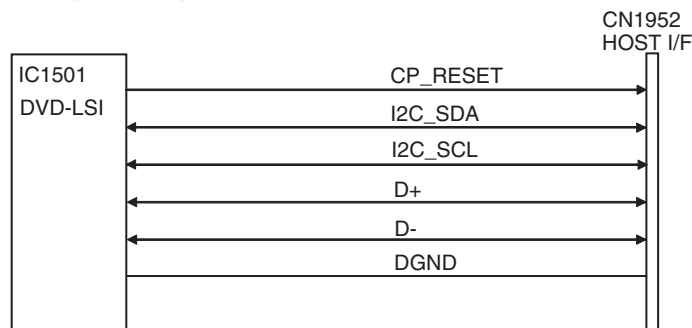


Fig. 14-1: USB Circuit

<Check Method>

1. USB Memory: Play a song from USB memory and check D+ and D- with the DGND1 standards.
2. iPod: Connect iPod and check CP_RESET, SDATA and SCLOCK with the DGND1 standards until the Pioneer log appears. When iPod Touch or iPhone is connected, the logo is not displayed but only a check mark is displayed. Play a song from iPod and check D+/D- with the DGND1 standards.

When it does not conform to the standards, check appropriate line, main parts shown in the above figure, soldering of peripheral parts and malfunctions in parts.

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

*Until the pioneer log appears after connecting the iPod

*Until the pioneer log appears after connecting the iPod

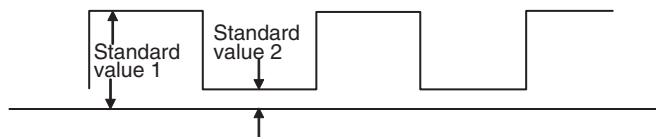
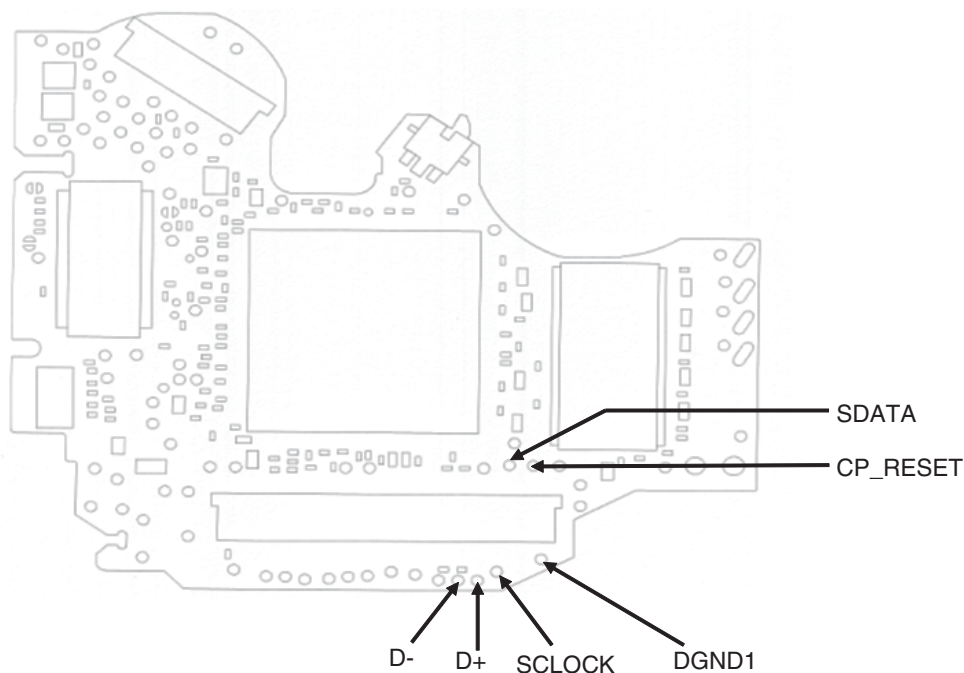


Fig.14.2: USB Circuit Communication Wave

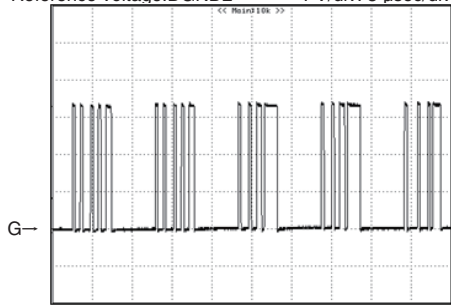
Side A



AUDIO

A

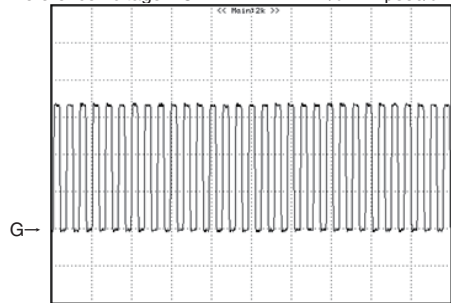
CH1 : ADOU3
Reference voltage:DGND2 1 V/div. 5 μ sec/div



Waveform 1

B

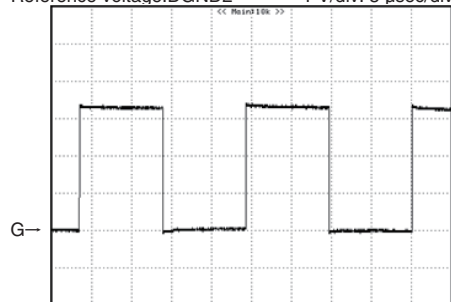
CH1 : SRCK
Reference voltage:DGND2 1 V/div. 1 μ sec/div



Waveform 2

C

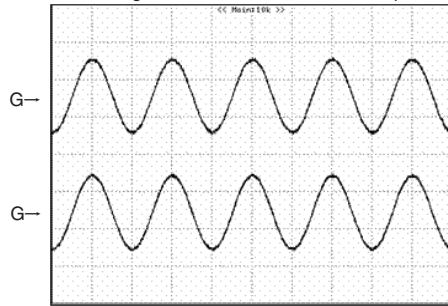
CH1 : LRCK
Reference voltage:DGND2 1 V/div. 5 μ sec/div



Waveform 3

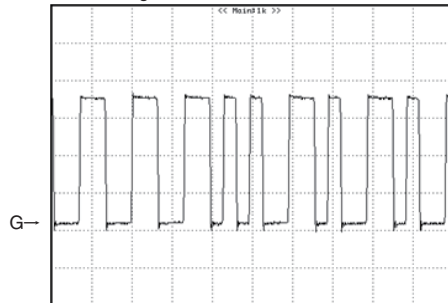
D

CH1 : LO
CH2 : RO
Reference voltage:GNDAU2 2 V/div. 500 μ sec/div



Waveform 4

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



Waveform 5

VIDEO

E

[WHITE 100IRE]
CH1 : COMPO
Reference voltage:GNDV1 200 mV/div. 10 μ sec/div

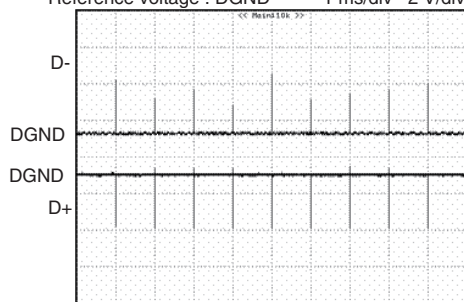


Waveform 6

F

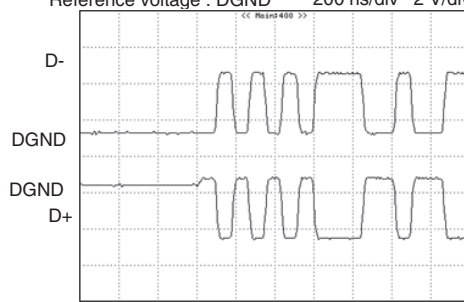
USB, IPOD

USB memory
D+/D- communication waveform
It checks with an oscilloscope.
Reference voltage : DGND 1 ms/div 2 V/div



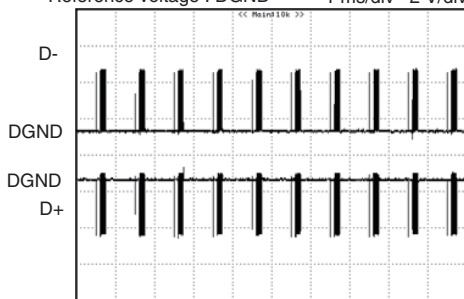
Waveform 7

USB memory
D+/D- communication waveform
It checks with an oscilloscope.
Reference voltage : DGND 200 ns/div 2 V/div



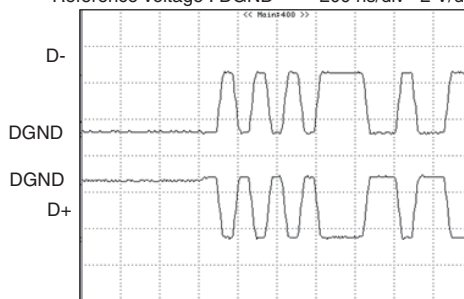
Waveform 8

IPOD
D+/D- communication waveform
It checks with an oscilloscope.
Reference voltage : DGND 1 ms/div 2 V/div



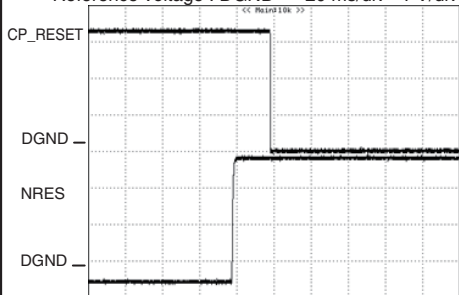
Waveform 9

IPOD
D+/D- communication waveform
It checks with an oscilloscope.
Reference voltage : DGND 200 ns/div 2 V/div



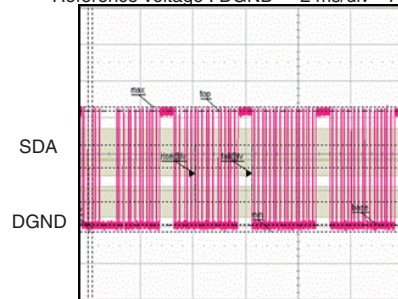
Waveform 10

IPOD
CP_RESET signal
A relation with NRES, At the time of RESET release
(It checks with an oscilloscope.)
Reference voltage : DGND 20 ms/div 1 V/div



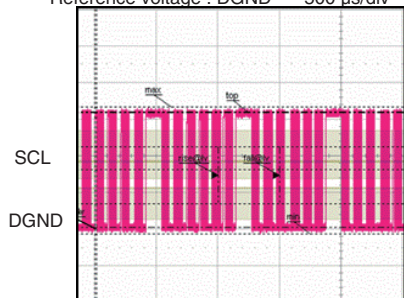
Waveform 11

IPOD
SDA signal
It checks by LECORY.
Reference voltage : DGND 2 ms/div 1 V/div



Waveform 12

IPOD
SCL signal
It checks by LECORY.
Reference voltage : DGND 500 μs/div 1 V/div



Waveform 13

5.4 ERROR CODE LIST

Error status	OSD *1	UART *2	Meaning	Generation source			Method of reset			
				Disc	USB (MSC)	USB (iPod)	ACC Off/On	Source Off/On	Eject/ With no device	Play Key
Media Error	UNPLAYABLE DISC	00h	A disc containing the unplayable format only	X	-	-	X	X	X	-
	INCOMPATIBLE DEVICE	00h	USB device that doesn't correspond	-	X	X	X	X	X	-
	UNPLAYABLE FILE	00h	USB device of format alone that cannot be reproduced	-	X	-	X	X	X	-
Open	(No display)	10h	Door open error	X	-	-	*	*	*	*
Read Error	ERROR-02-99	20h	Transfer start error	X	-	-	X	X	X	X
Focus Error(Focus Error in mechanism set up)	ERROR-02-90	21h	Focus error	X	-	-	X	X	X	X
Surface Error	ERROR-02-9E	22h	Focus error during set up (A focus has never been achieved with that disc.)	X	-	-	-	-	X	-
Address not found (Invalid Track)	ERROR-02-80	23h	Address not found.	X	-	-	X	X	X	X
Spindle Lock	ERROR-02-91	24h	Spindle lock NG(the disc cannot rotate)	X	-	-	X	X	X	X
Carriage HOME	ERROR-02-92	25h	Carriage home NG (The pick up tries to return to carriage home, but it cannot go back and stopped.)	X	-	-	X	X	X	X
ID/SUBCODE Read Error	ERROR-02-94	26h	ID/SUBCODE Read Error (ID/SUBCODE cannot be read due to scratch or stain.)	X	-	-	X	X	X	X
AV CHIP decode Error	ERROR-02-9A	2Ah	AV CHIP decode NG(AV chip cannot be decoded.)	X	X	X	X	X	X	X
AV CHIP Recovery NG	ERROR-02-9B	2Bh	AV CHIP recovery NG	X	X	-	X	X	X	X
Error of PLAY BACK Mode Status	ERROR-02-9C	2Ch	Playback state error (An error due to software bug.)	X	X	-	X	X	X	X
Disc Data Error	ERROR-02-9D	2Dh	Disc Data NG	X	-	-	X	X	X	X
Temp Error(In Case of High Temperature)	THERMAL PROTECTION IN MOTION	30h	High temperature(Playback is stopped because the pick up temperature is 89 C or higher.)	X	-	-	X	-	-	-
No Disc (including Disc loading and ejecting)	(No display)	40h	Disc has not been inserted. (Including Load in process or Eject in process.)	X	-	-	*	*	*	*
Loading_Mecha Error	(No display)	50h	Loading mechanism error (The disc cannot be clamped.)	X	X *11	X *11	X	-	X *12	-
Communication fault attesting iPod	ERROR-02-60	60h	Communication fault attesting iPod	X *13	-	X	X	-	X *14	-
iPod authentication data is abnormal	ERROR-02-61	61h	iPod authentication data is abnormal	X *13	-	X	X	-	X *14	-
iPod attestation retrying failure	ERROR-02-62	62h	iPod attestation retrying failure	X *13	-	X	X	-	X *14	-
iPod attestation time out	ERROR-02-63	63h	iPod attestation time out	X *13	-	X	X	-	X *14	-
Error when iPod is connected/ It is generated STALL by the USB communication	ERROR-02-64	64h	Error when iPod is connected/ It is generated STALL by the USB communication	-	-	X	X	-	X	-
Error setting iPod	ERROR-02-65	65h	Error setting iPod	-	-	X	X	-	X	-
Demand timeout when initial is communicated	ERROR-02-66	66h	Demand timeout when initial is communicated	-	-	X	X	-	X	-
Protocol version non-correspondence	ERROR-02-67	67h	Protocol version non-correspondence (It is necessary to Version Up the iPod by iTunes.)	-	-	X	X	-	X	-
Timeout when protocol version is judged	ERROR-02-68	68h	Timeout when protocol version is judged	-	-	X	X	-	X	-
No songs error	(No display)	69h	iPod does not have music. (It is necessary to put music into iPod by iTunes)	-	-	X	X	-	X	-
iPod control forwarding/ Intarapta forwarding error	ERROR-02-6A	6Ah	iPod control forwarding / Intarapta forwarding error	-	-	X	X	-	X	-
Demand timeout iPod's reproducing	ERROR-02-6B	6Bh	Demand timeout iPod's reproducing	-	-	X	X	-	X	-
Remote switch error	ERROR-02-6C	6Ch	Remote switch error	-	-	X	X	-	X	-
Remote switch demand timeout	ERROR-02-6D	6Dh	Remote switch demand timeout	-	-	X	X	-	X	-
Demand timeout to an iPodApi(Pandora)	ERROR-02-6E	6Eh	Demand timeout to an iPodApi(Pandora)	-	-	X	X	-	X	-
DRM Error	PROTECTED DISC	70h	DRM error (All music cannot be played back due to DRM.)	X	-	-	X	X	X	-
	NO ACCESSIBLE DATA AVAILABLE	70h	DRM error (All music cannot be played back due to DRM.)	-	X	-	X	X	X	-
Region code Error	DIFFERENT REGION DISC	90h	Region code NG (Unable to be played back due to incorrect mechanism region.)	X	-	-	X	X	X	-
CPRM*7 Key Error *8	UNPLAYABLE DISC	93h	Key Error for playback	X	-	-	X	-	X	-
REQUEST Error	ERROR-02-A0	A0h	REQUEST error	X	-	-	X	X	X	X
Failure in issuing read command (chip dependent)	ERROR-02-A1	A1h	Failure in issuing the read command	X	-	-	X	X	X	X
Adjustment of L0 is NG.	ERROR-02-A2	A2h	L0 adjustment is NG.	X	-	-	X	X	X	X
Adjustment of L1 is NG.	ERROR-02-A3	A3h	L1 adjustment is NG.	X	-	-	X	X	X	X
LD system NG	ERROR-02-A4	A4h	LD system NG	X	-	-	X	X	X	X
Gain adjustment system NG.	ERROR-02-A5	A5h	Gain adjustment system NG.	X	-	-	X	X	X	X
Gain determining system NG.	ERROR-02-A6	A6h	Gain determining system NG.	X	-	-	X	X	X	X
Servo initial setting related items NG.	ERROR-02-A7	A7h	Servo initial setting related items NG.	X	-	-	X	X	X	X
Disc is not clamped yet.	ERROR-02-A8	A8h	Disc is not clamped yet.	X	-	-	X	X	X	X
Tracking system NG.	ERROR-02-A9	A9h	Tracking system NG	X	-	-	X	X	X	X
Media setting system NG.	ERROR-02-AA	AAh	Media setting system NG	X	-	-	X	X	X	X
Focus Error	ERROR-02-AB	ABh	JUMP over layers NG	X	-	-	X	X	X	X
Error of PLAY BACK Mode Status	ERROR-02-B0	B0h	Navigation command error	X	-	-	X	X	X	X
Error of PLAY BACK Mode Status	ERROR-02-B1	B1h	Retry over	X	-	-	X	X	X	X
DivX DRM Information Update Error *10	ERROR-02-C1	C1h	DivX DRM information update error	X	-	-	X	-	-	-
Error when MCS is connected/ It is generated STALL by the USB communication	ERROR-02-D0	D0h	Error when MCS is connected / It is generated STALL by the USB communication	-	X	-	-	-	X	-
CBW and CSW forwarding error	ERROR-02-D1	D1h	CBW and CSW forwarding error	-	X	-	-	-	X	-
Audio class band securing failure	ERROR-02-D8	D8h	Audio class band securing failure	-	-	X	X	-	X	-
Audio class FS setting failure	ERROR-02-D9	D9h	Audio class FS setting failure	-	-	X	X	-	X	-
Undefined Error	ERROR-FF-FF	FFh	Undefined error	X	-	-	X	X	X	X

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

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

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

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

*8 DVD-VR model only.

*10 This occurs when the DRM information update notice is sent from the DVD mecha but no DRM information update response is returned.

*11 Although it is USB source, it notifies as an error of DISC source.

*12 Although it is USB source, it cancels only by Disc eject.

*13 Although it is DISC source, it notifies as an error of USB source.

*14 Although it is DISC source, It cancels only without Device.

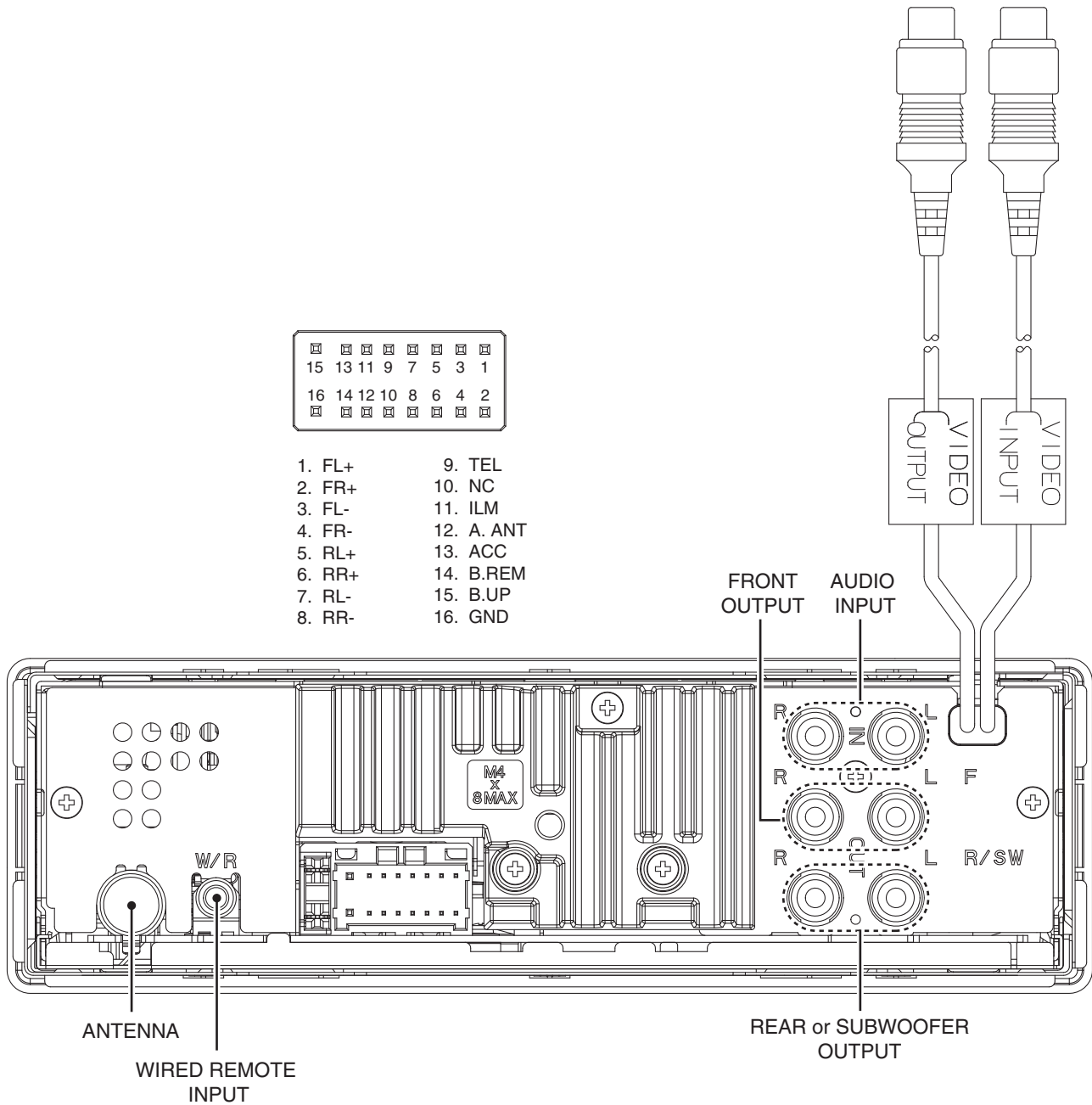
USB audio player/USB memory

Message	Cause	Action
NON-PLAY (UNPLAYABLE FILE)	This type of file cannot be played on this unit.	Select the playable file.
	There are no songs.	Transfer the audio files to the USB portable audio player/USB memory and connect.
	Security for the connected USB memory is enabled.	Follow the USB memory instructions to disable security.
FRMT READ (FORMAT READ)	Sometimes there is a delay between the start of playback and when you start to hear any sound.	Wait until the message disappears and you hear sound.
SKIPPED (FILE SKIPPED)	The connected USB portable audio player/USB memory contains WMA files that are protected by Windows Media™ DRM 9/10.	Play an audio file not embedded with Windows Media DRM 9/10.
PROTECT (NO ACCESSIBLE DATA AVAILABLE)	All the files on the connected USB portable audio player/USB memory are protected by Windows Media DRM 9/10.	Transfer audio files not protected by Windows Media DRM 9/10 to the USB portable audio player/USB memory and connect.
N/A USB (INCOMPATIBLE DEVICE)	The USB device connected to is not supported by this unit.	Connect a USB portable audio player or USB memory that is USB Mass Storage Class compliant.
	The USB device is not formatted with FAT16 or FAT32.	The connected USB device should be formatted with FAT16 or FAT32.
CHECK USB	The USB connector or USB cable has short-circuited.	Check that the USB connector or USB cable is not caught in something or damaged.
	The connected USB portable audio player/USB memory consumes more than maximum allowable current.	Disconnect the USB portable audio player/USB memory and do not use it. Turn the ignition switch to OFF, then to ACC or ON and then connect a compliant USB portable audio player/USB memory.
ERROR-02-DX	Communication failed.	Perform one of the following operations. –Turn the ignition switch OFF and back ON. –Disconnect the USB portable audio player/USB memory. –Change to a different source. Then, return to the USB portable audio player/USB memory.
EXPIRED (THIS DivX RENTAL HAS EXPIRED.)	The inserted external storage device contains expired DivX VOD content.	Select a file that can be played.
NON-PLAY (VIDEO RESOLUTION NOT SUPPORTED)	The inserted external storage device contains a high definition DivX/MPEG-1/MPEG-2/MPEG-4 file.	Select the playable file.
WRITE FAIL (CAN NOT SAVE DATA)	This unit's flash memory used as the temporary storage area is full.	Select a file that can be played.
ERROR (YOUR DEVICE IS NOT AUTHORIZED TO PLAY THIS DivX PROTECTED VIDEO)	This unit's DivX registration code has not been authorized by the DivX VOD contents provider.	Register this unit to the DivX VOD contents provider.
NON-PLAY (VIDEO FRAME-RATE NOT SUPPORTED)	DivX file's frame rate is more than 30 fps.	Select a file that can be played.
NO AUDIO (AUDIO FORMAT NOT SUPPORTED)	This type of file is not supported on this unit.	Select a file that can be played.

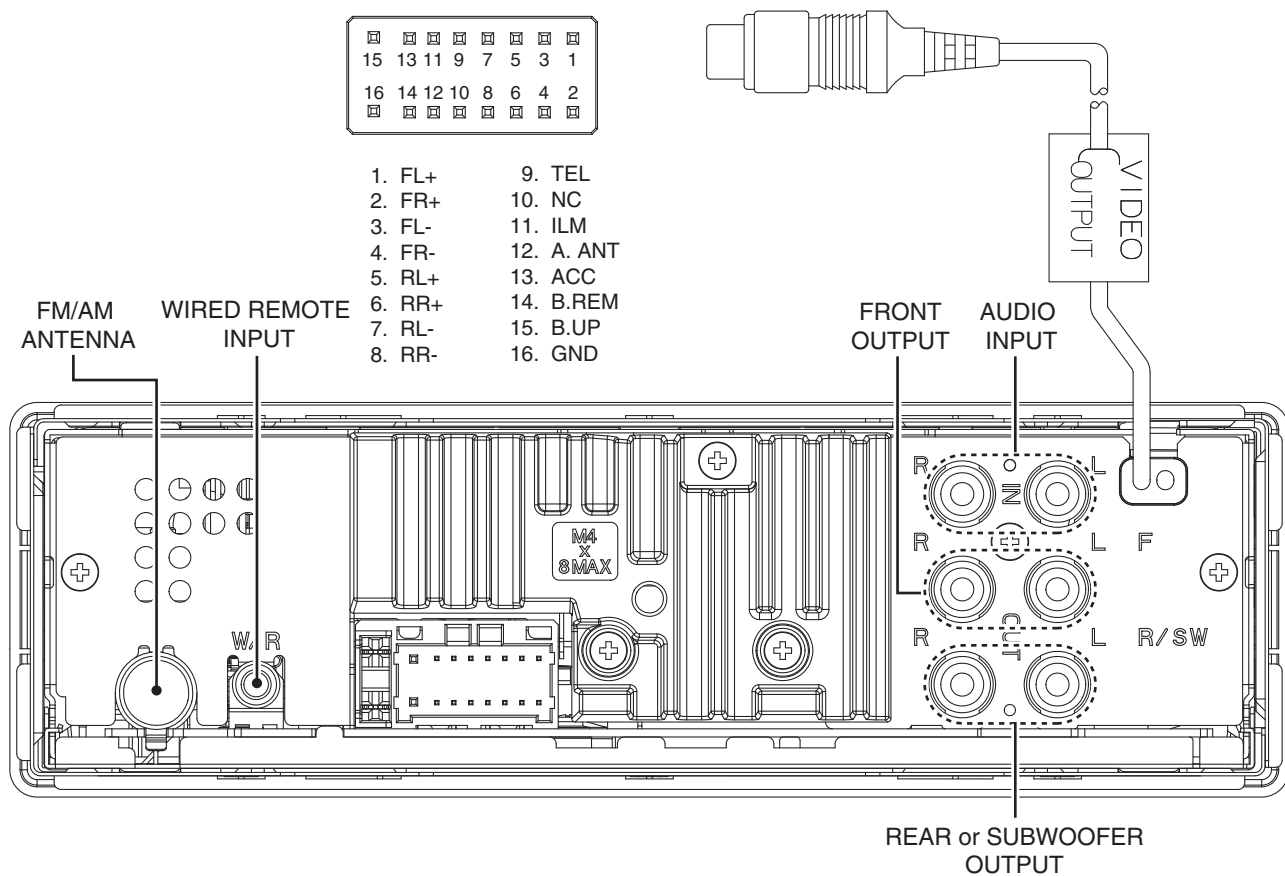
1 2 3 4

5.5 CONNECTOR FUNCTION DESCRIPTION

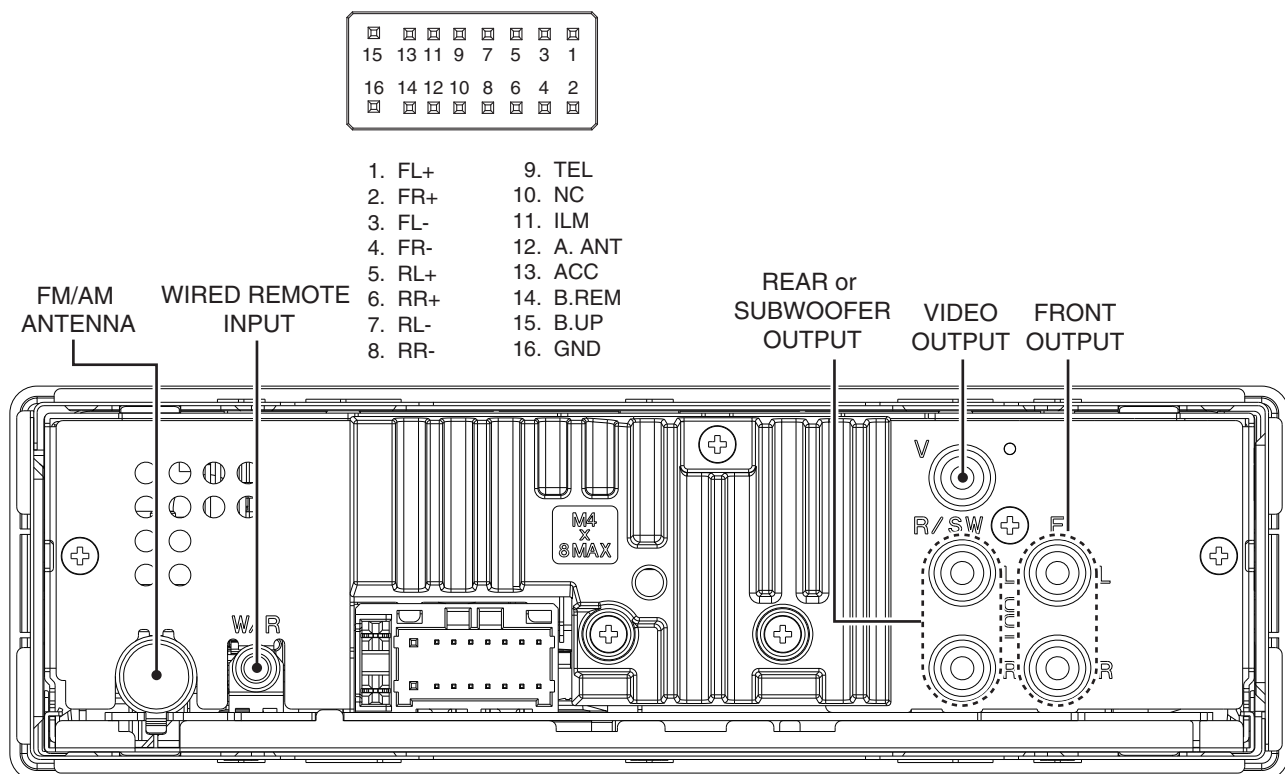
● DVH-340UB/XNEW5, DVH-340UB/XNUW5



● DVH-345UB/XNRC, DVH-3490UB/XNID



● DVH-345UB/XNRD, DVH-345UB/XNRI



6. SERVICE MODE

6.1 DVD TEST MODE

A

The service test mode is used to check functions in fault diagnosis by a serviceman in case of any defect found in the DVD mecha.

This mode is enabled only when the test mode is activated. At this time, no normal operation is executed.

■

1. Outline

The service test mode is used to check functions in fault diagnosis by a serviceman in case of any defect found in the DVD mecha. No general user goes into this mode.

The mode is implemented mainly to check the FE part. It is originally the test mode at the FE part implemented in the PC communication, which is modified to allow implementation in the HOST communication.

B

The command for the test mode received in the HOST communication is interpreted by the application part, converted to the PC communication command and transferred to the OS.

The OS transfers this command to the PC task as if it received the command in the PC communication.

The execution result is noticed to the application part by an e-mail instead of the PC communication.

The application part then transmits the result in the HOST communication to display OSD.

■

2. Conditions for operation

(1) This service test mode is enabled only when the test mode is activated. At this time, no normal operation is executed.

3. To enter the test mode.

(1) [*] key + [4] key -> Reset start or ACC ON

(2) DVD SOURCE -> ON

C

(3) Execute the test mode using each key.

Display on function flow	Operation Key
(1)	RIGHT
(2)	LEFT
(3)	1
(4)	2
(5)	3
(6)	4
(7)	5
(8)	6
EJECT	EJECT

D

[*] key

EW5,UW5	PTY
RC,RD,RI,ID	CLOCK

■

E

■

F

Image of the test mode.

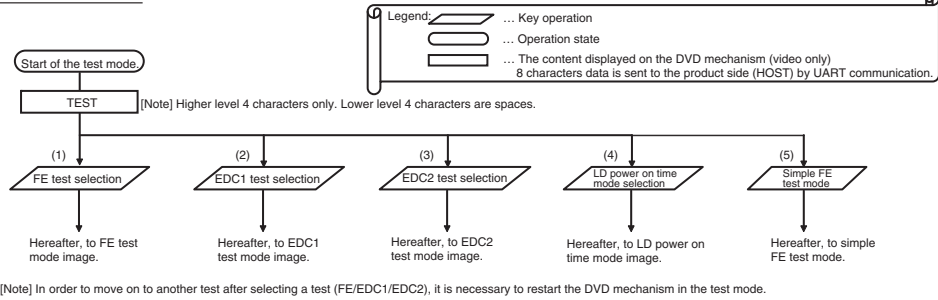
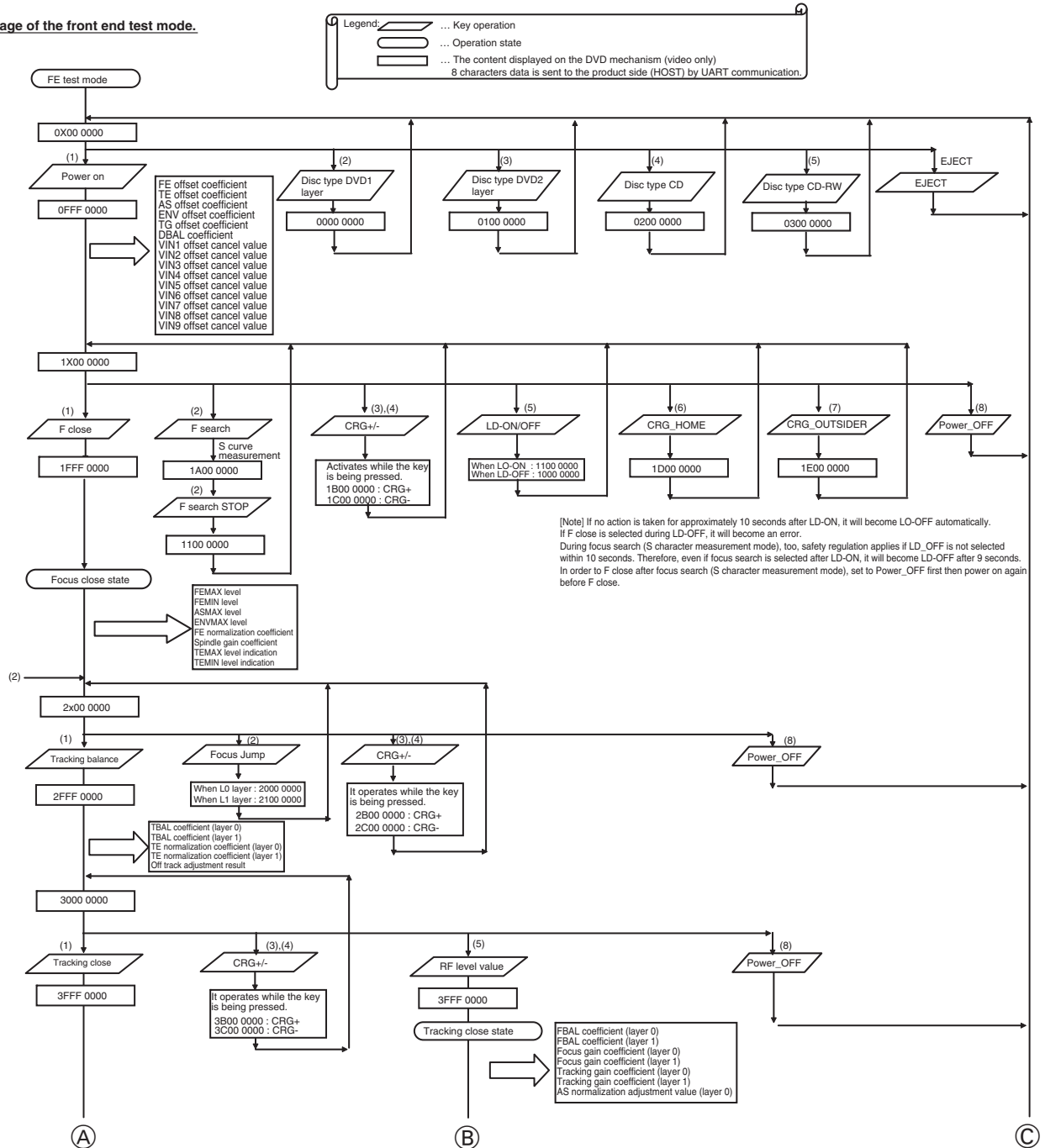


Image of the front end test mode.



A

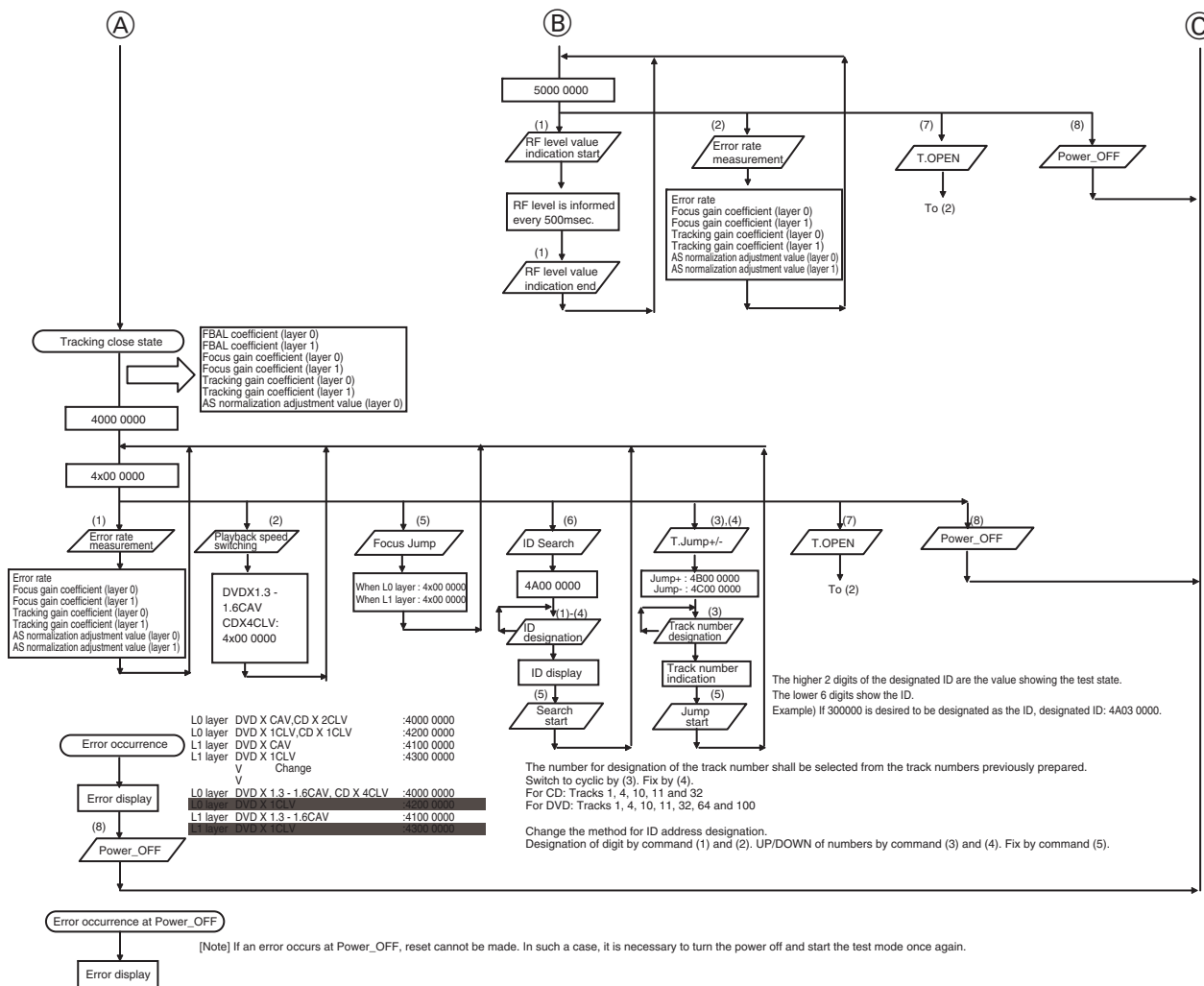
B

C

D

E

F



EDC. Image of the test mode

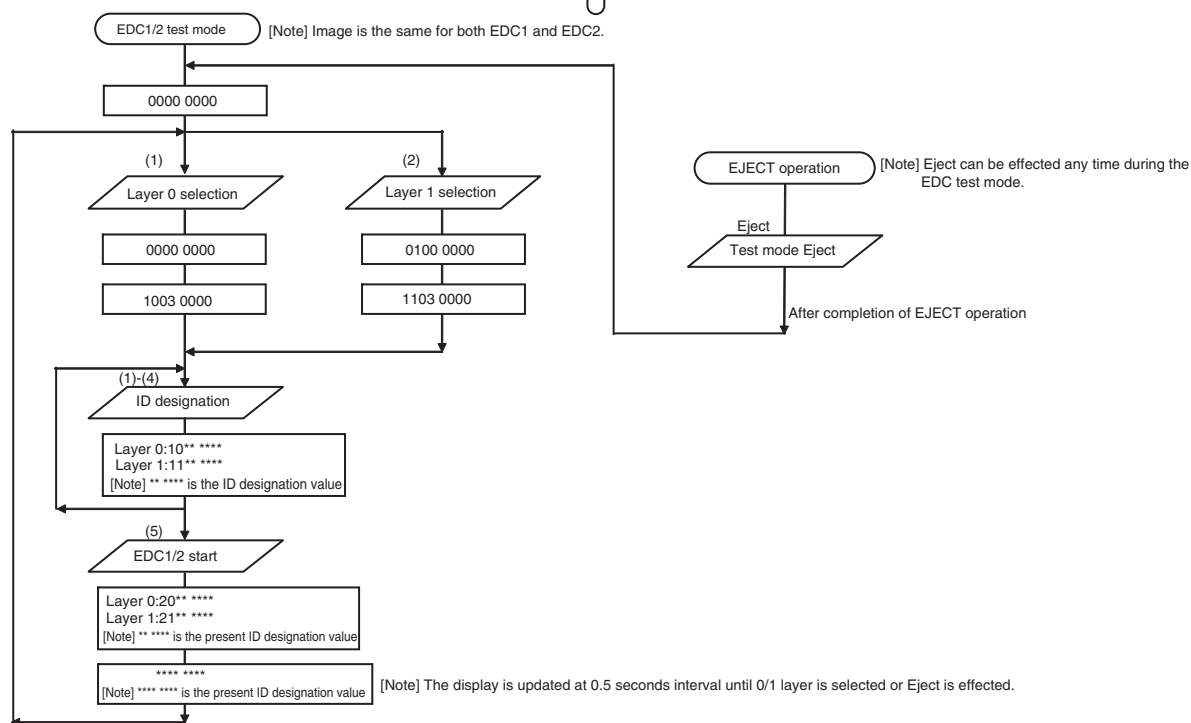
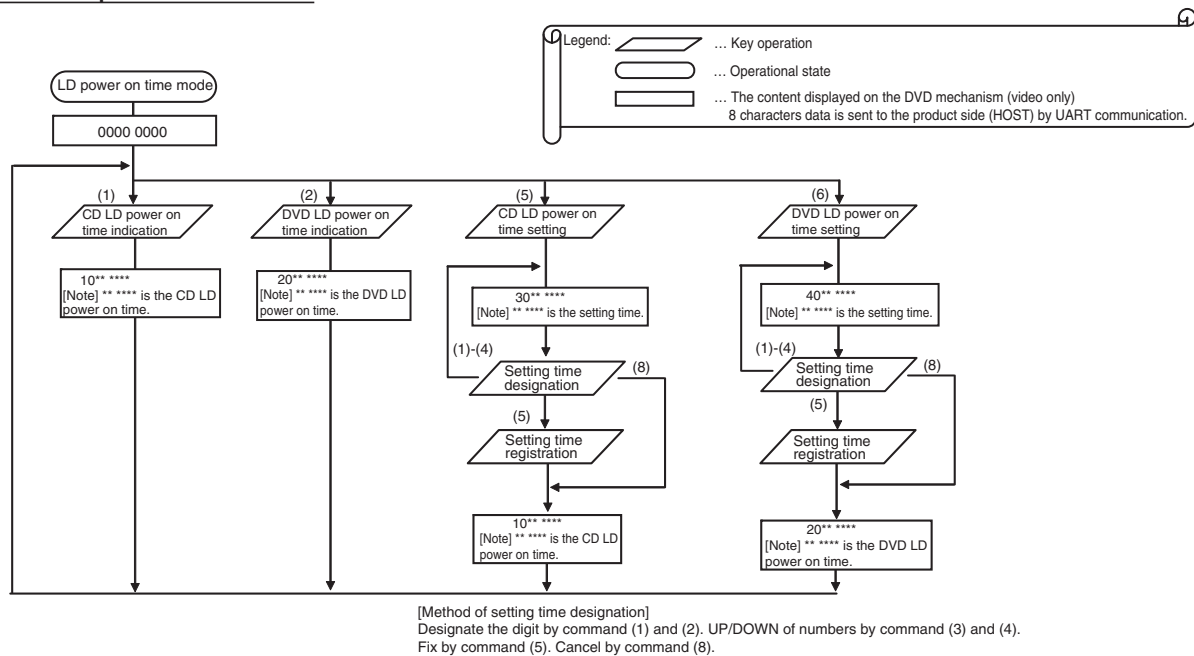


Image of the LD power on time mode.



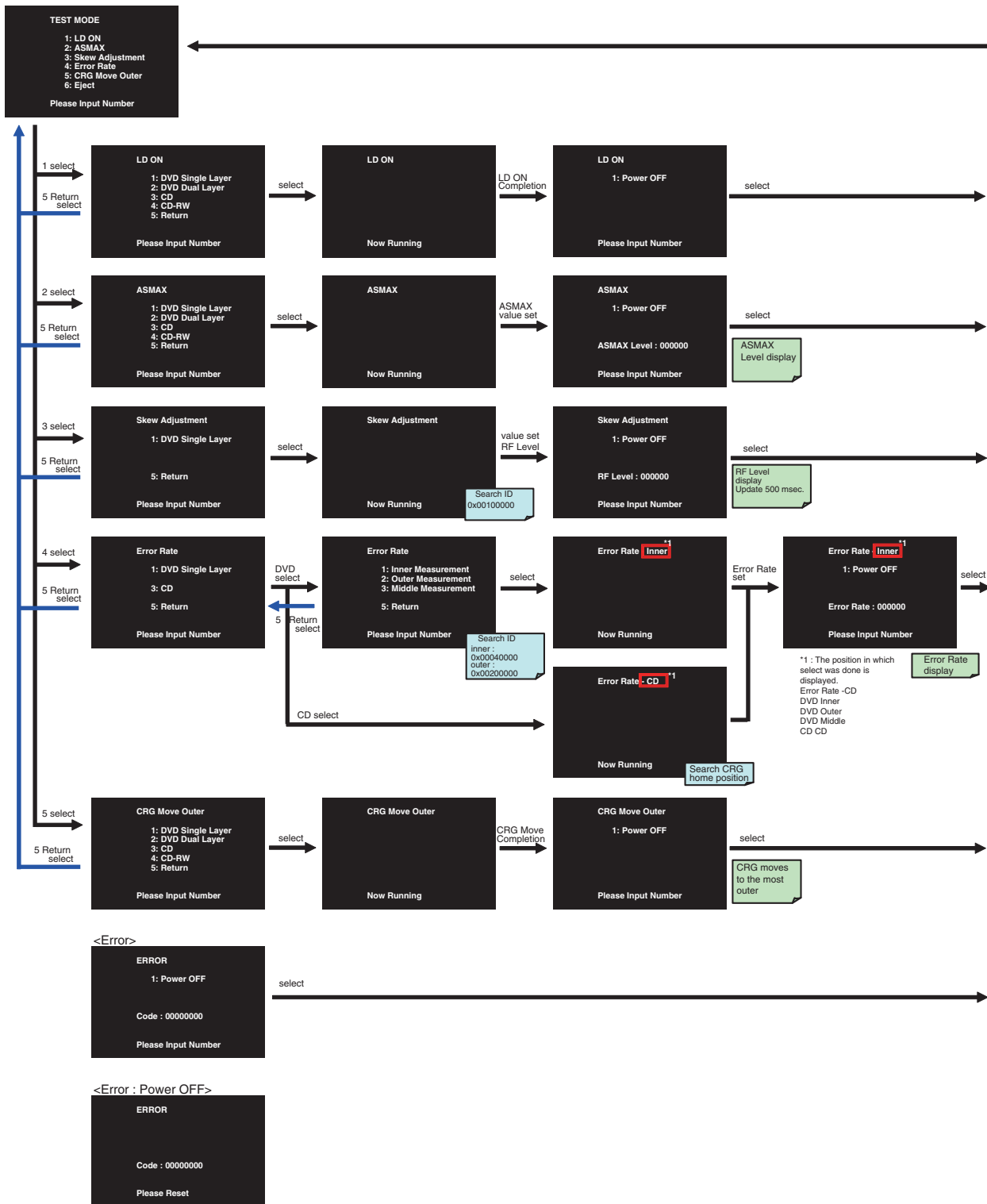
[Note] If the power on time is 999999 hours or more, it is always reported as 999999 hours.

[Note] If the power on time is "E*****", the value may not be correct due to the life of the flash memory.

Simple test mode

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

<Flow chart>



7. DISASSEMBLY

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

●Removing the Panel Assy (Fig.1)

- ➡ 1 Remove the two hooks.
- ➡ 2 Remove the two hooks and then remove the Panel Assy.

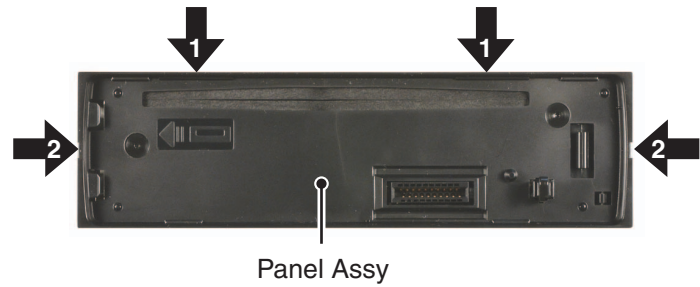


Fig.1

●Removing the DVD Mechanism Module (Fig.2, 3, 4)

- ➡ 1 Remove the screw.
- ➡ 2 Remove the two screws.

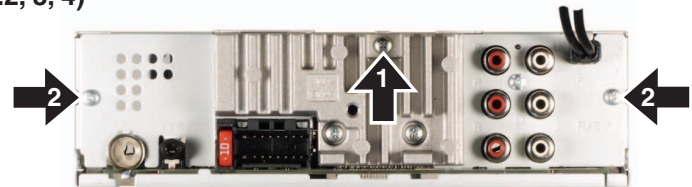


Fig.2

The DVD Mechanism Module side is made a bottom.

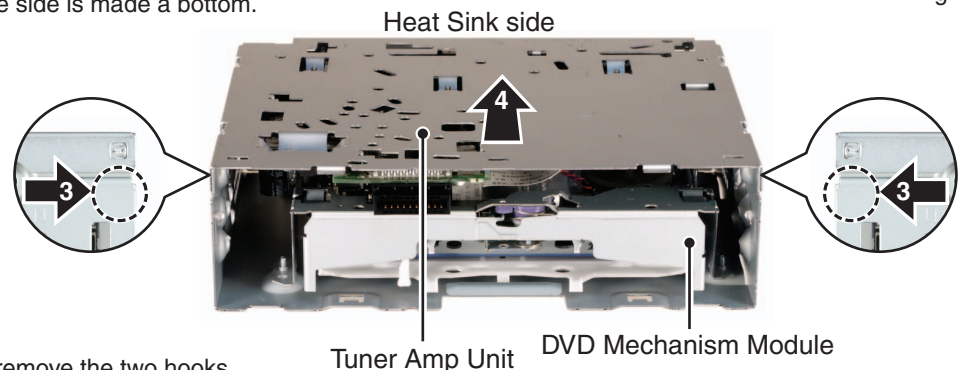


Fig.3

- ➡ 3 Push the area and remove the two hooks.
- ➡ 4 Slide the Tuner Amp Unit in the direction of the arrow and then remove the hooks of upper and lower.

Lift off the Tuner Amp Unit from the Heat Sink side.

- ➡ 5 The Tuner Amp Unit is fixed into the ditch.
- ➡ 6 Disconnect the FFC and then remove the DVD Mechanism Module.

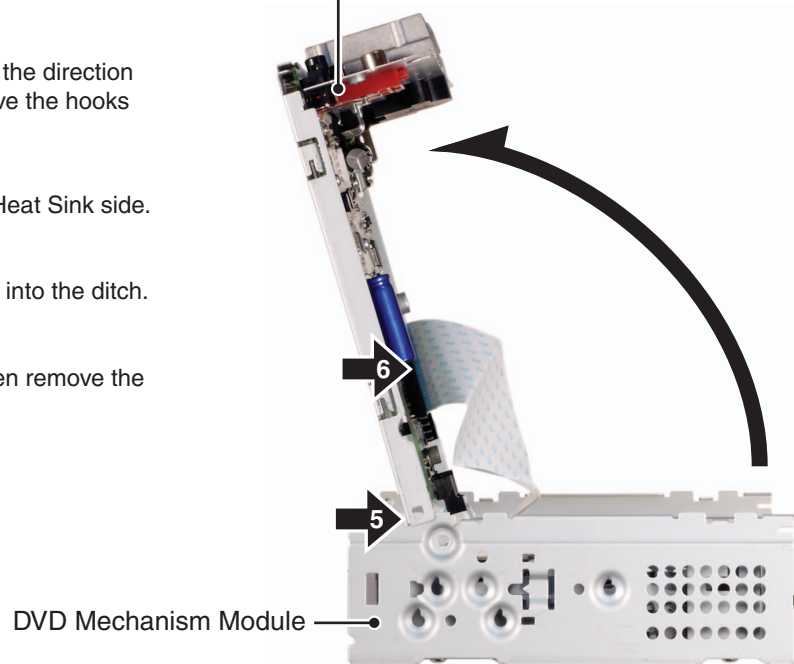


Fig.4

● Removing the Tuner Amp Unit (Fig.5)

1 Remove the screw.

2 Remove the three screws.

3 Straighten the tabs at two locations indicated and then remove the Tuner Amp Unit.

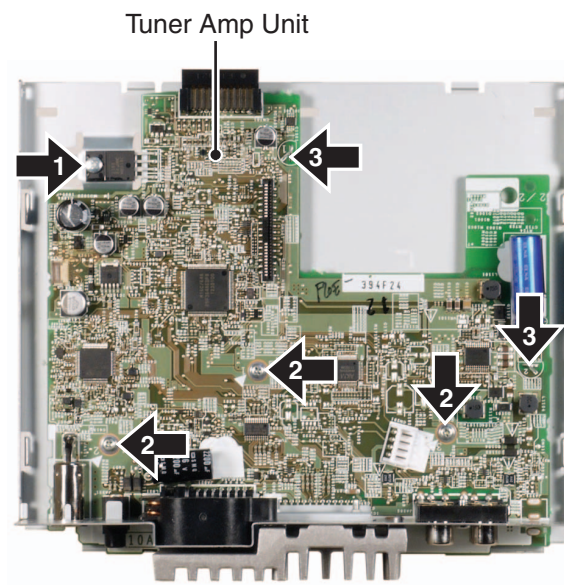


Fig.5

● Attention of removing (Fig.6)

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

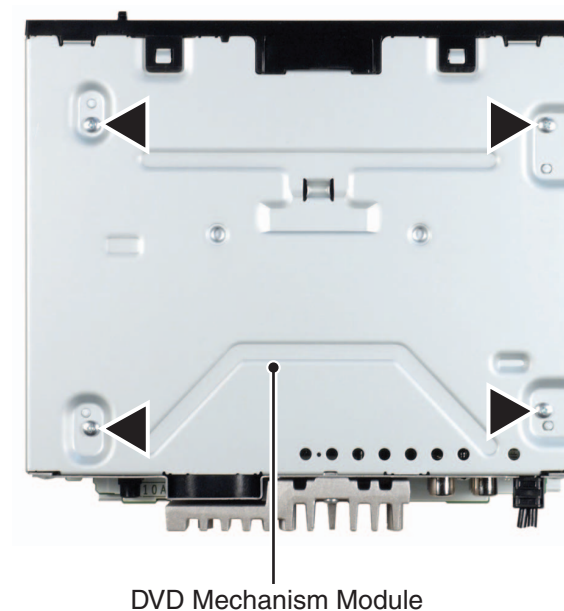


Fig.6

● Disassembling the Panel Part (Fig.7, 8)

1. Remove the arm while bending the rib of the panel upward.

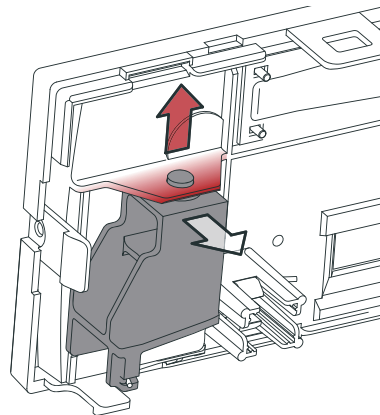


Fig.7

2. Press the upside hook and the bottom side hook of the button at the same time, and pull out the button.

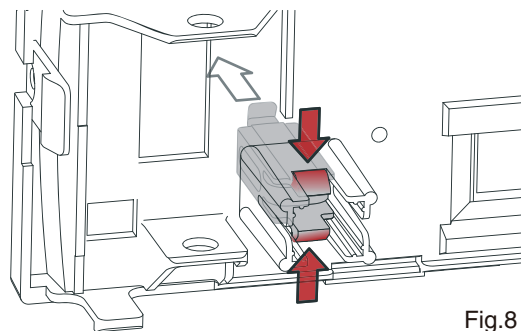


Fig.8

● Assembling the Panel Part (Fig.9, 10, 11)

1. Attach the button from the front side of the panel.

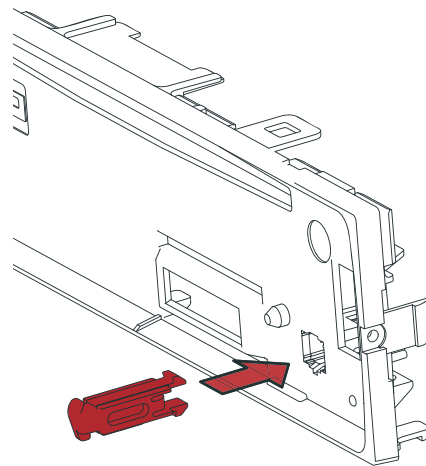


Fig.9

2. Attach the spring to the arm as shown in the figure.

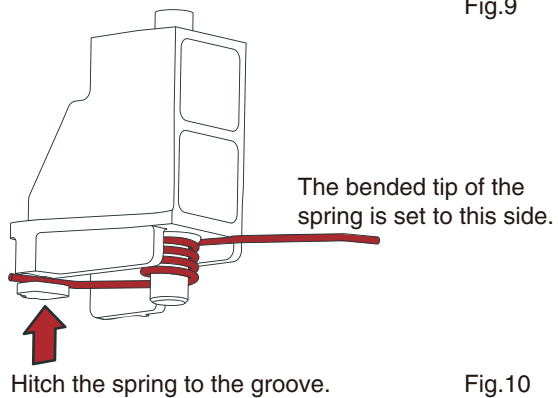


Fig.10

A 3. Fit the spring in the groove at the position shown in the figure.

4. Fit the boss on the lower side of the arm in the lower hole of the panel, and then warp the rib on the panel in the direction shown in the figure and fit the boss of the arm in the panel.

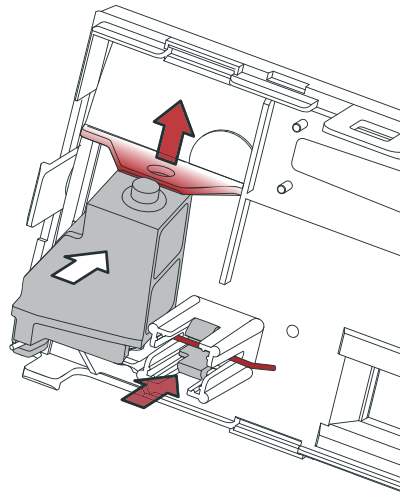


Fig.11

B

C

D

E

F

8. EACH SETTING AND ADJUSTMENT

8.1 DVD ADJUSTMENT



This product uses 5 V and 3.3 V as standard voltages.

The electrical potential that is the reference for signals, is not GND, but VREF (approximately 2.2 V) and VHALF (approximately 1.65 V) .

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

The following precautionary measures should be strictly adhered to, in order to avoid such problems.

The reference voltage and GND should not be confused when using the minus probe of a measurement device.

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

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

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

● Power Adjustment

■ Power Adjustment

To turn VR of the circuit for Power adjustment and adjust the optical output level of PU laser diode to make the level of signal (RF signal) read from the media appropriate level during the reproduction of media, CD and DVD.

It has been decided that Power adjustment circuit (circuit from IMON to CDMP, DVDMP) which adjusts the optical output level of PU laser diode should be installed on DVD Core Unit in the DVD mecha module.

Therefore, in the replacement of CRG mecha (with PU unit) and DVD Core Unit, Power adjustment should be implemented.

The Power adjustment method of mecha module is shown below.

■ Items to be Prepared

Measuring instrument: Oscilloscope (digital or analog)

Frequency band of oscilloscope in DVD whose frequency is higher than CD Adjustable 10 MHz and higher (enough to check the level)

(In LS2, DVD (x 1.5CLV) MAX RF 6.55 MHz / DVD (x 1.5CLV) MIN RF 1.40 MHz)

DISC: DVD TEST DISC (TDV-582 or TDV-520) Almedio

CD TEST DISC (TCD-782 or TCD-792) Almedio

Adjustment screwdriver : crosshead, No.0, nonmetal (ceramic screwdriver for adjustment)

■ Line Locating

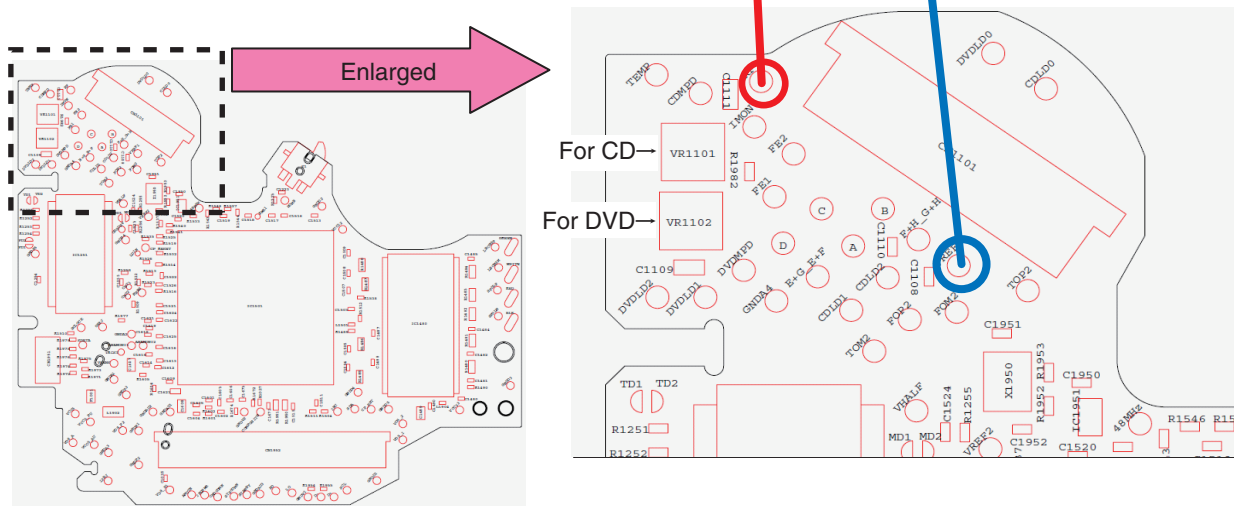
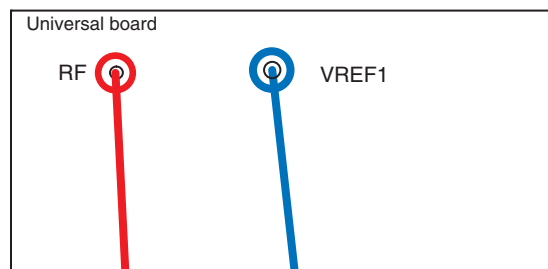
The following line locating is required.

1	RF	Power adjustment
2	VREF1	Power adjustment

■ Connection Diagram

○ : Checking terminal for oscilloscope

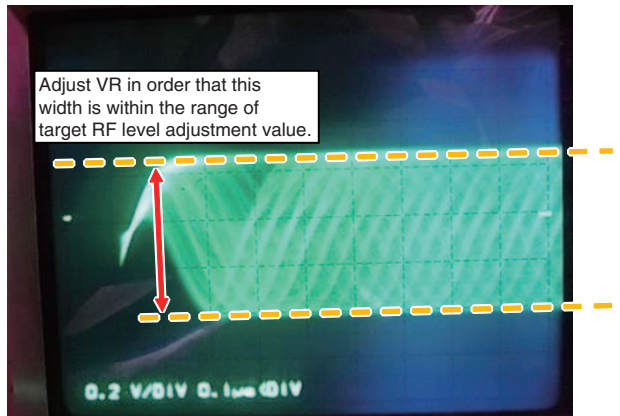
The figure in parentheses of resistor / capacitor is constant.



Method of Power Adjustment

1. Monitor RF by using the analog oscilloscope. (line locating of RF and VREF1)
2. Turn VR1101 and VR1102 to set the PP value of RF at the value shown in the right lower table.

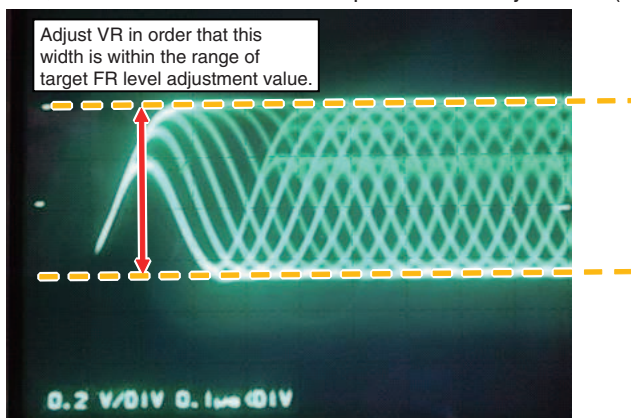
▼ RF waveform after F-ON / before T-ON (waveform measured by analog oscilloscope)



Power adjustment standard
RF level adjustment value
(F-ON STEP 10, 24)

DVD	200 mV to 1200 mV
CD	200 mV to 1200 mV

▼ RF waveform after the completion of all adjustment (waveform measured by analog oscilloscope)



Power adjustment standard
RF level adjustment value
(The setup is completed. STEP 12, 26)

DVD	848 mV to 892 mV
CD	658 mV to 702 mV

■ Procedure of Power Adjustment

■ Flow

1. DVD Power adjustment in the state where F is ON
2. DVD Power adjustment in the state where the setup is completed
3. CD Power adjustment in the state where F is ON
4. CD Power adjustment in the state where the setup is completed

■ Procedure of Adjustment

STEP No.

1. Set the mecha to clockwise.

2. Turn on power.

3. Test Mode In

[Refer to FE test mode function flow.](#)

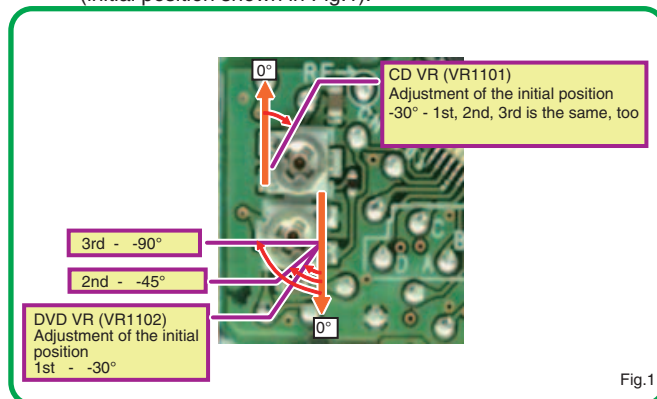
4. Insert DVD TDV-582 (or TDV-520).

5. Set the mecha to counterclockwise.

6. Adjustment of the initial position of VR for Power adjustment

Adjust the angle at the D cut position to the initial position (initial position shown in Fig.1).

	1st	2nd	3rd
CD (VR1101)		-30°	
DVD (VR1102)	-30°	-45°	-90°



7. Set DISC TYPE to DVD single layer.

8. Power on.

[Refer to FE test mode function flow.](#)

9. LD-ON

[Refer to FE test mode function flow.](#)

10. Execute until Focus close state is reached.

▼ If the waveform is similar to RF waveform after F-ON and before T-ON (waveform measured by analog oscilloscope), Focus Close is reached. Go to STEP 9.

If the RF waveform does not appear, Focus Close is not reached.

Return to STEP 7 and change the angle of initial position of DVD VR (VR 1102). If Focus Close is not reached after the 3rd VR adjustment, replace the whole CRG mecha (including PU unit) and start again from STEP 1.

DVD	200 mV to 1200 mV
-----	-------------------

11. Conduct Power adjustment. (Conduct the adjustment in the state of Focus Close.)

DVD	848 mV to 892 mV
-----	------------------

12. Execute until Tracking Close is reached.

13. Conduct Power adjustment. (Conduct the adjustment in the state of Tracking Close.)

DVD	2.0E - 4 and under
-----	--------------------

14. Check the ERR rate after Power adjustment.

DVD	820 mV to 917 mV
DVD	2.0E - 4 and under

15. Power off.

16. Return the state of mecha to clockwise.

17. Set up again (state of mecha to clockwise / setting of DVD single layer) and conduct the final check of RF level and ERR rate. (Check in the state of Tracking Close)

18. Eject.

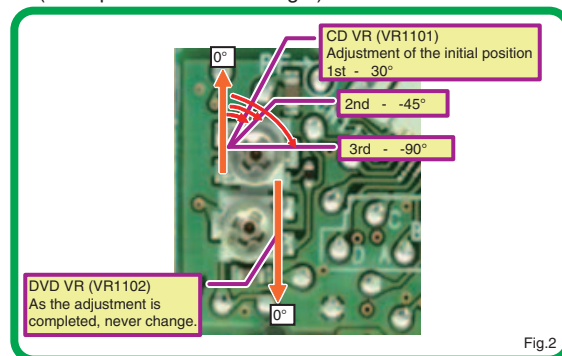
19. Take out DVD TDV-582 (or TDV-520).
Insert CD TCD-782 (or TCD-792).

20. Set the mecha counterclockwise.

21. Adjustment of the initial position of VR for Power adjustment

	1st	2nd	3rd
CD (VR1101)	-30°	-45°	-90°
DVD (VR1102)	As the adjustment is completed, never change.		

Adjust the angle at the D cut position to the initial position (initial position shown in Fig.2).



22. Set DISC TYPE to CD.

[Refer to FE test mode function flow.](#)

23. Power on.

[Refer to FE test mode function flow.](#)

24. Execute until Focus Close 1 is reached.

[Refer to FE test mode function flow.](#)

▼ If the waveform is similar to RF waveform after F-ON and before T-ON (waveform measured by analog oscilloscope), Focus Close is reached. Go to STEP 20.

If the RF waveform does not appear, Focus Close is not reached. Return to STEP 21 and change the angle of initial position of CD VR (VR1101).
If Focus Close is not reached after the 3rd VR adjustment, replace the whole CRG mecha (including PU unit) and start again from STEP 1.

25. Conduct Power adjustment. (Conduct the adjustment in the state of Focus Close.)

CD	200 mV to 1200 mV
----	-------------------

26. Execute until Tracking Close is reached.

[Refer to FE test mode function flow.](#)

27. Conduct Power adjustment. (Conduct the adjustment in the state of Focus Close.)

CD	658 mV to 702 mV
----	------------------

28. Check ERR rate.

CD	1.0E – 2 and under
----	--------------------

[Refer to FE test mode function flow.](#)

29. Power off.

[Refer to FE test mode function flow.](#)

30. Return the state of mecha to clockwise.

31. Set up again (state of mecha to clockwise / setting of CD layer), and conduct the final check of RF level and ERR rate.
(Check in the state of Tracking Close)

CD	528 mV to 832 mV
CD	1.0E – 2 and under

[Refer to FE test mode function flow.](#)

32. Eject.

[Refer to FE test mode function flow.](#)

33. Take out CD TCD-782 (or TCD-792).

34. Power off.

8.2 PCL OUTPUT CONFIRMATION

A



● PCL Output

In the normal operation mode (with the detachable panel installed, the ACC switched ON, the standby mode cancelled), shift the TESTIN IC601 (Pin 86) terminal to H.

The clock signal is output from the PCL terminal IC601 (Pin 37).

The frequency of the clock signal is 625 kHz that is one 32th of the fundamental frequency (20 MHz).

The clock signal should be 625 kHz (- 10 Hz, + 15 Hz)

If the clock signal out of the range, the X'tal (X601) should be replaced with new one.

B

C

D

E

F

■

5

■

6

■

7

■

8

■

A

■

B

■

C

■

D

■

E

■

F

■

5

■

6

■

7

■

8

■

4

A

- C

D



(1) PACKING SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	Cord Assy	See Contrast table (2)	*	12-1 Caution Card	See Contrast table (2)
2	Polyethylene Bag	QEG3001	*	12-2 Caution Card	See Contrast table (2)
3	Unit Box	See Contrast table (2)		12-3 Quick Start Guide	See Contrast table (2)
4	Contain Box	See Contrast table (2)		12-4 Quick Start Guide	See Contrast table (2)
5	Card Remote Control Unit	QXA3553			
				12-5 Installation Manual	See Contrast table (2)
6	Protector	QHP3016	*	12-6 Service Network	See Contrast table (2)
7	IM CD-ROM	See Contrast table (2)	*	12-7 Warranty Card	See Contrast table (2)
8	Polyethylene Bag	See Contrast table (2)		12-8 Owner's Manual	See Contrast table (2)
9	Handle	QNC3021		12-9 Owner's Manual	See Contrast table (2)
10	Screw	See Contrast table (2)			
				12-10 Owner's Manual	See Contrast table (2)
11	Case Assy	QXA3129			

(2) CONTRAST TABLE

DVH-340UB/XMEW5, DVH-340UB/XMUW5, DVH-345UB/XMRC, DVH-345UB/XMRD, DVH-345UB/XMRI and DVH-3490UB/XMID are constructed the same except for the following:

Mark	No.	Description	DVH-340UB/ XMEW5	DVH-340UB/ XMUW5	DVH-345UB/ XMRC	DVH-345UB/ XMRD	DVH-345UB/ XMRI
	1	Cord Assy	QDP3012	QDP3012	QDP1480	QDP1480	QDP1480
	3	Unit Box	CHG8037	CHG8038	CHG8039	CHG8040	CHG8041
	4	Contain Box	CHL8037	CHL8038	CHL8039	CHL8040	CHL8041
	7	IM CD-ROM	QPJ3010	Not used	Not used	Not used	Not used
	8	Polyethylene Bag	Not used	Not used	CEG1160	CEG1160	CEG1160
	10	Screw	Not used	Not used	TRZ50P080FTC	TRZ50P080FTC	TRZ50P080FTC
*	12-1	Caution Card	CRP1437	Not used	Not used	Not used	Not used
*	12-2	Caution Card	CRP1441	Not used	Not used	Not used	Not used
	12-3	Quick Start Guide	QRD3106	Not used	Not used	Not used	Not used
	12-4	Quick Start Guide	QRD3107	Not used	Not used	Not used	Not used
	12-5	Installation Manual	QRD3108	Not used	Not used	Not used	Not used
*	12-6	Service Network	Not used	Not used	Not used	Not used	Not used
*	12-7	Warranty Card	CRY1316	CRY1330	Not used	Not used	Not used
	12-8	Owner's Manual	Not used	QRB3216	QRB3219	QRB3221	QRB3223
	12-9	Owner's Manual	Not used	QRB3230	QRB3220	QRB3222	QRB3224
	12-10	Owner's Manual	Not used	Not used	QRB3218	QRB3218	QRB3218

Mark	No.	Description	DVH-3490UB/ XMID
	1	Cord Assy	QDP1480
	3	Unit Box	CHG8069
	4	Contain Box	CHL8069
	7	IM CD-ROM	Not used
	8	Polyethylene Bag	CEG1160
	10	Screw	TRZ50P080FTC
*	12-1	Caution Card	Not used
*	12-2	Caution Card	Not used
	12-3	Quick Start Guide	Not used
	12-4	Quick Start Guide	Not used
	12-5	Installation Manual	Not used
*	12-6	Service Network	CRY1305
*	12-7	Warranty Card	CRY1304
	12-8	Owner's Manual	QRB3226
	12-9	Owner's Manual	Not used
	12-10	Owner's Manual	Not used

Owner's Manual, Installation Manual

Part No.	Language
QRD3106	English, French, Italian, Spanish(Espanol)
QRD3107	German, Dutch
QRD3108	English, French, Italian, Spanish(Espanol), German, Dutch
QRB3216	English
QRB3218	English
QRB3219	Traditional Chinese
QRB3220	Korean
QRB3221	Spanish(Espanol)
QRB3222	Portuguese(B)
QRB3223	Arabic
QRB3224	Persian
QRB3226	English
QRB3230	Russian

CONTENTS OF CD-ROM (Operation Manual), QPJ3010

Part No.	Language
* QRB3203	English
* QRB3204	French
* QRB3205	Italian
* QRB3206	Spanish(Espanol)
* QRB3207	German
* QRB3208	Dutch
* QRB3209	Swedish
* QRB3210	Norwegian
* QRB3211	Finnish
* QRB3212	Danish
* QRB3213	Portuguese
* QRB3214	Greek
* QRB3215	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.

■

5

■

6

■

7

■

8

■

A

■

B

■

C

■

D

■

E

■

F

■

5

■

6

■

7

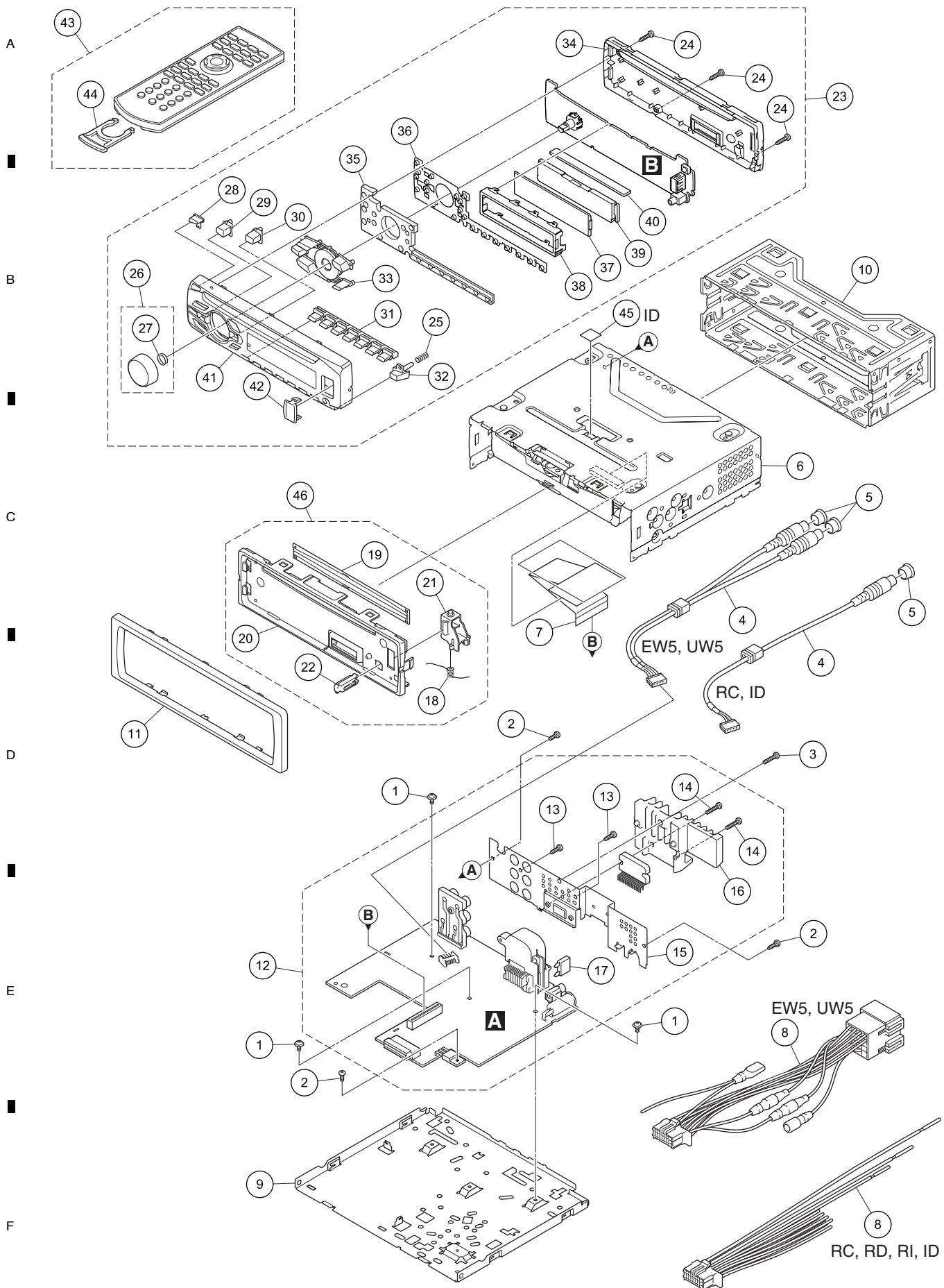
■

8

■

DVH-340UB/XMEW5

9.2 EXTERIOR



(1) EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Screw	ASZ26P050FTC	25	Spring		CBH2210
	2	Screw	BSZ26P060FTC				
	3	Screw	BSZ26P120FTC	26	Knob Unit		CXE3692
	4	Cord Assy	See Contrast table (2)	27	Spring		YBL5010
	5	Cap	See Contrast table (2)	28	Button (EJECT)		QAC3066
				29	Button (<)		QAC3068
	6	DVD Mechanism Module (LS2)	CXK8001	30	Button (>)		QAC3069
	7	FFC	QDE3025				
	8	Cord Assy	See Contrast table (2)	31	Button (1-6, PTY)		QAC3070
	9	Case	QNB3004	32	Button (DETACH)		QAC3071
	10	Holder	QNC3020	33	Button (SRC, BAND, EQ)		QAC3072
				34	Cover		QNS3226
	11	Panel	QNS3127	35	Lighting Conductor		QNV3038
	12	Tuner Amp Unit	See Contrast table (2)				
	13	Screw	BPZ26P080FTC	36	Contact Rubber		QNV3041
	14	Screw	BSZ26P120FTC	37	LCD (V1801)		CAW2018
	15	Holder	See Contrast table (2)	38	Holder		QNC3031
				39	Lighting Conductor		QNV3040
	16	Heat Sink	QNR3009	40	Rubber Connector		QNV3045
⚠	17	Fuse (10 A)	YEK5001				
	18	Spring	QBH3001	41	Grille Unit		See Contrast table (2)
*	19	Cover	CNN1665	42	Door		QAT3004
*	20	Panel	QNS3126	43	Card Remote Control Unit		QXA3553
				44	Battery Cover		CYN1003
*	21	Arm	QNV3025	45	Label		See Contrast table (2)
*	22	Button	QNV3026				
	23	Detach Grille Assy	See Contrast table (2)	46	Panel Unit		CXE3805
	24	Screw	BPZ20P100FTC				

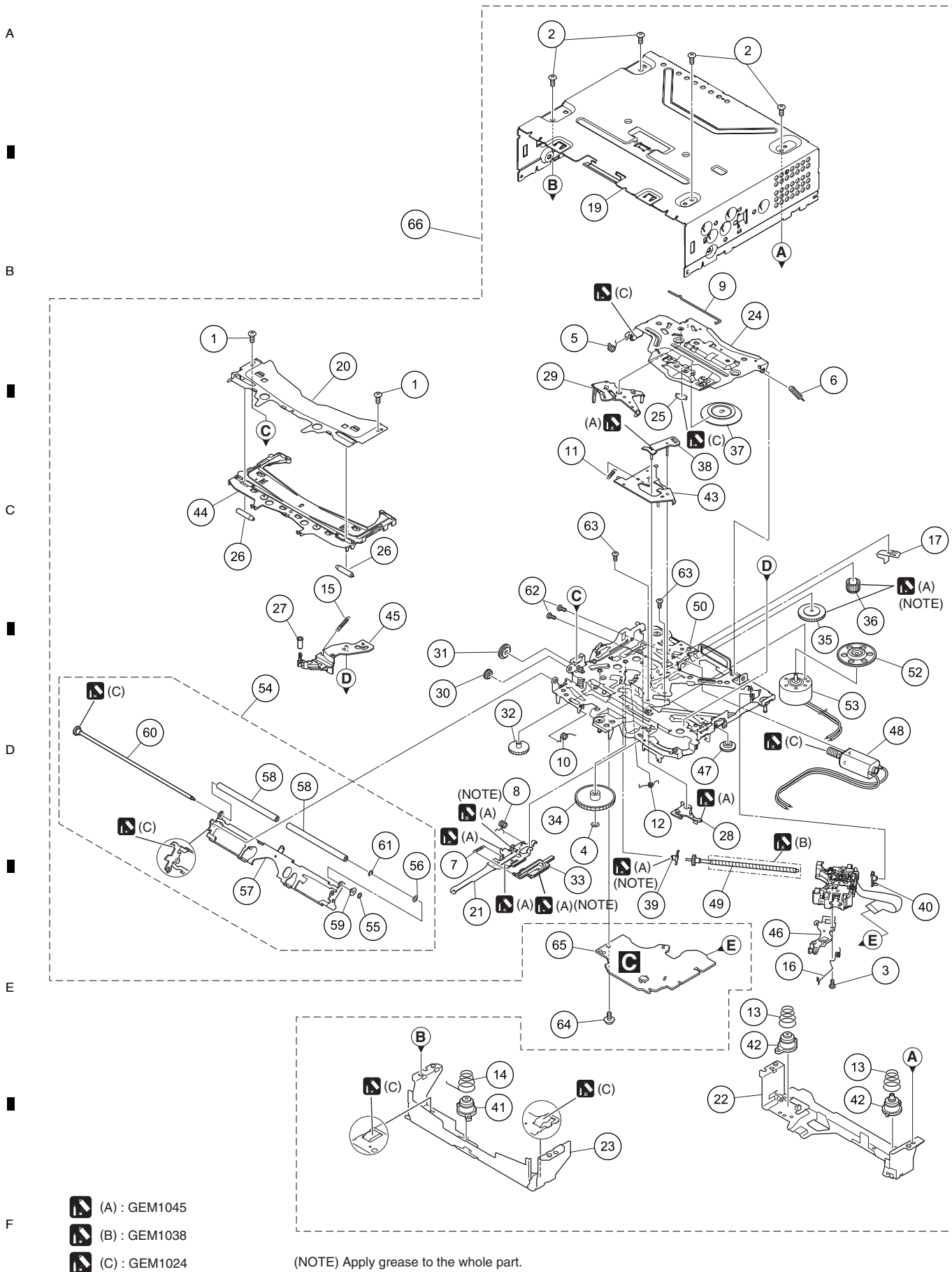
(2) CONTRAST TABLE

DVH-340UB/XMEW5, DVH-340UB/XMUW5, DVH-345UB/XMRC, DVH-345UB/XMRD, DVH-345UB/XMRI and DVH-3490UB/XMID are constructed the same except for the following:

Mark	No.	Description	DVH-340UB/ XMEW5	DVH-340UB/ XMUW5	DVH-345UB/ XMRC	DVH-345UB/ XMRD	DVH-345UB/ XMRI
	4	Cord Assy	CDE9615	CDE9615	QDP3028	Not used	Not used
	5	Cap	CNV6727 (x2)	CNV6727 (x2)	CNV6727 (x1)	Not used	Not used
	8	Cord Assy	QDP3012	QDP3012	QDP1480	QDP1480	QDP1480
	12	Tuner Amp Unit	QWM3394	QWM3395	QWM3396	QWM3397	QWM3398
	15	Holder	QNC3038	QNC3038	QNC3038	QNC3039	QNC3039
	23	Detach Grille Assy	QXA3542	QXA3542	QXA3543	QXA3543	QXA3543
	41	Grille Unit	CXE5471	CXE5471	CXE5473	CXE5473	CXE5473
	45	Label	Not used	Not used	Not used	Not used	Not used

Mark	No.	Description	DVH-3490UB/ XMID
	4	Cord Assy	QDP3028
	5	Cap	CNV6727 (x1)
	8	Cord Assy	QDP1480
	12	Tuner Amp Unit	QWM3399
	15	Holder	QNC3038
	23	Detach Grille Assy	QXA3544
	41	Grille Unit	CXE5475
	45	Label	CNN3533

9.3 DVD MECHANISM MODULE (1)

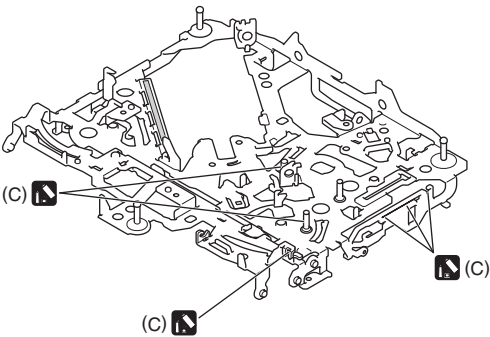


Mark No.	Description	Part No.	Mark No.	Description	Part No.	
1	Screw	BSZ20P040FTC	* 50	Chassis Unit	CXE4047	
2	Screw	BSZ26P060FTC				
3	Screw (M2 x 4)	CBA1835	51	*****		A
4	Washer	CBF1038	* 52	Support Wheel	CNW2052	
5	Spring	CBH2855	* 53	Spindle Motor(M2)(SPINDLE)	EXM2002	
			54	Arm Assy	CXE5027	
6	Spring	CBH2860	55	Washer	CBF1037	
7	Spring	CBH3010				
8	Spring	CBH3011	56	Washer	CBF1038	
9	Spring	CBH3014	57	Arm	CND6242	
10	Spring	CBH3015	58	Roller	CNW1196	
			59	Collar	CNW2444	
11	Spring	CBH3016	60	Gear Unit	CXC8893	B
12	Spring	CBH3017				
13	Spring	CBH3019	61	Washer	YE15FTC	
14	Spring	CBH3086	62	Screw	JFZ20P025FTC	
15	Spring	CBH3095	63	Screw	JGZ17P020FTC	
			64	Screw (M2 x 5)	EBA1028	
16	Spring	CBH3096	65	DVD Core Unit	YWX5032	
17	Plate Spring	CBL1824				
18	*****		66	Mechanism Unit(Service)	CXX4545	
19	Chassis	CNA3181				
20	Bracket	CND4553				C
21	Lever	CND5398				
22	Bracket	CND5710				
23	Bracket	CND6127				
24	Arm	CND6406				
25	Sheet	CNN3678				
26	Roller	CNW1172				
27	Roller	CNW1175				
28	Arm	CNW1177				
29	Arm	CNW1178				
30	Gear	CNW1180				D
31	Gear	CNW1181				
32	Gear	CNW1183				
33	Rack	CNW1184				
34	Gear	CNW1185				
35	Gear	CNW1186				
36	Gear	CNW1187				
37	Clamper	CNW1190				
38	Arm	CNW1192				E
39	Holder	CNW1193				
40	Holder	CNW1194				
41	Damper	CNW1197				
42	Damper	CNW1198				
43	Arm	CNW1726				
44	Guide	CNW2240				
45	Arm	CNW2241				
46	Rack	CNW2265				
47	Gear	CNW2287				F
48	Motor Unit(M1)(CRG(L/E))	CXC4026				
49	Screw Unit	CXC8894				

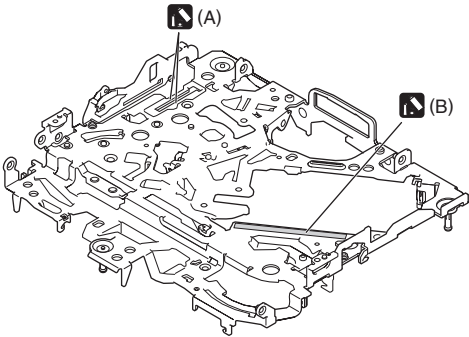
1 2 3 4

9.4 DVD MECHANISM MODULE (2)

A



B



C

D

E

F

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

■

5

■

6

■

7

■

8

■

A

■

B

■

C

■

D

■

E

■

F

■

5

■

6

■

7

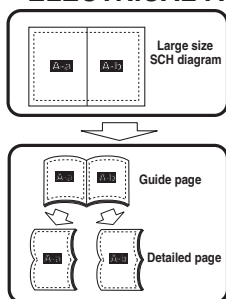
■

8

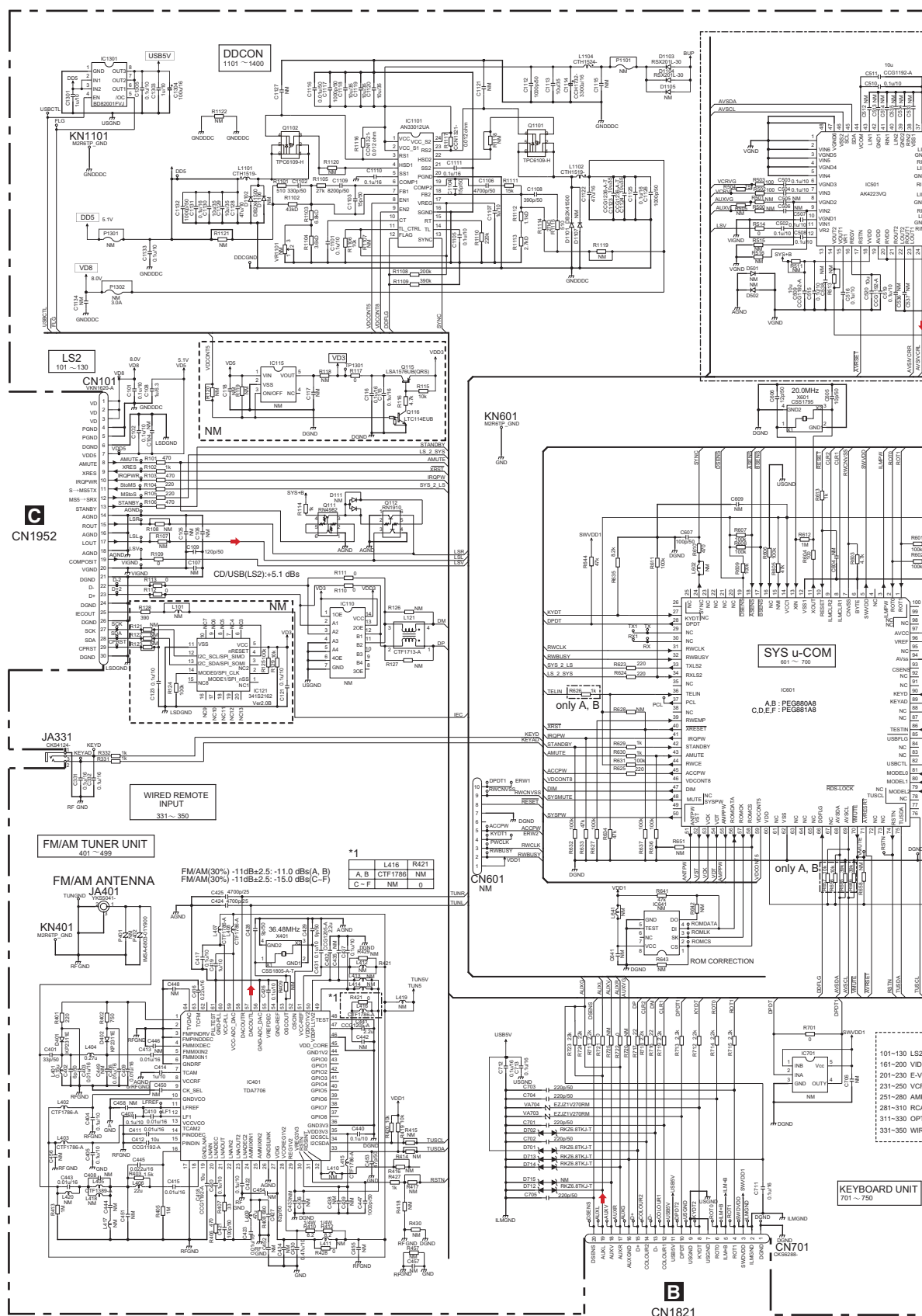
■

4

D



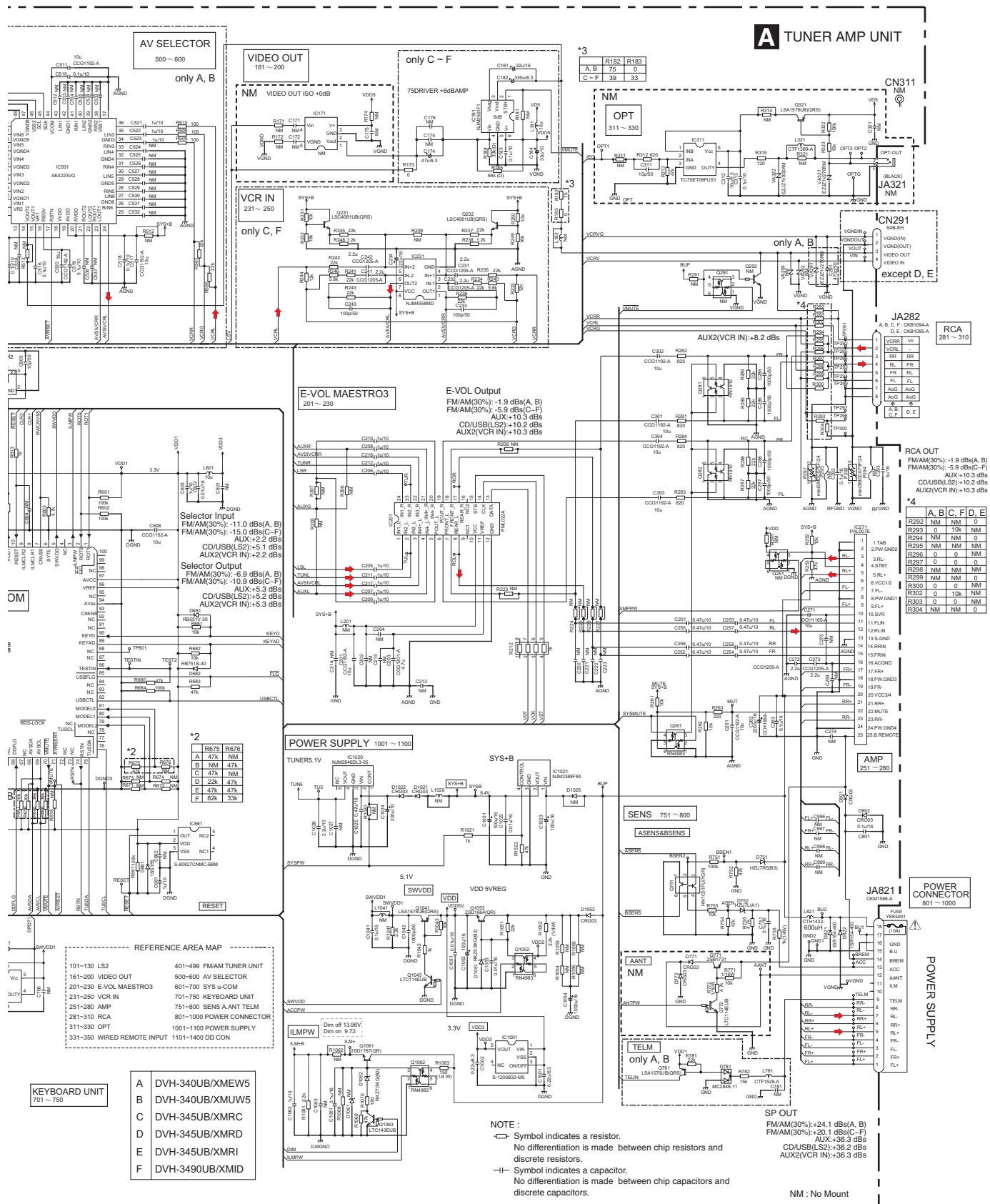
A-a

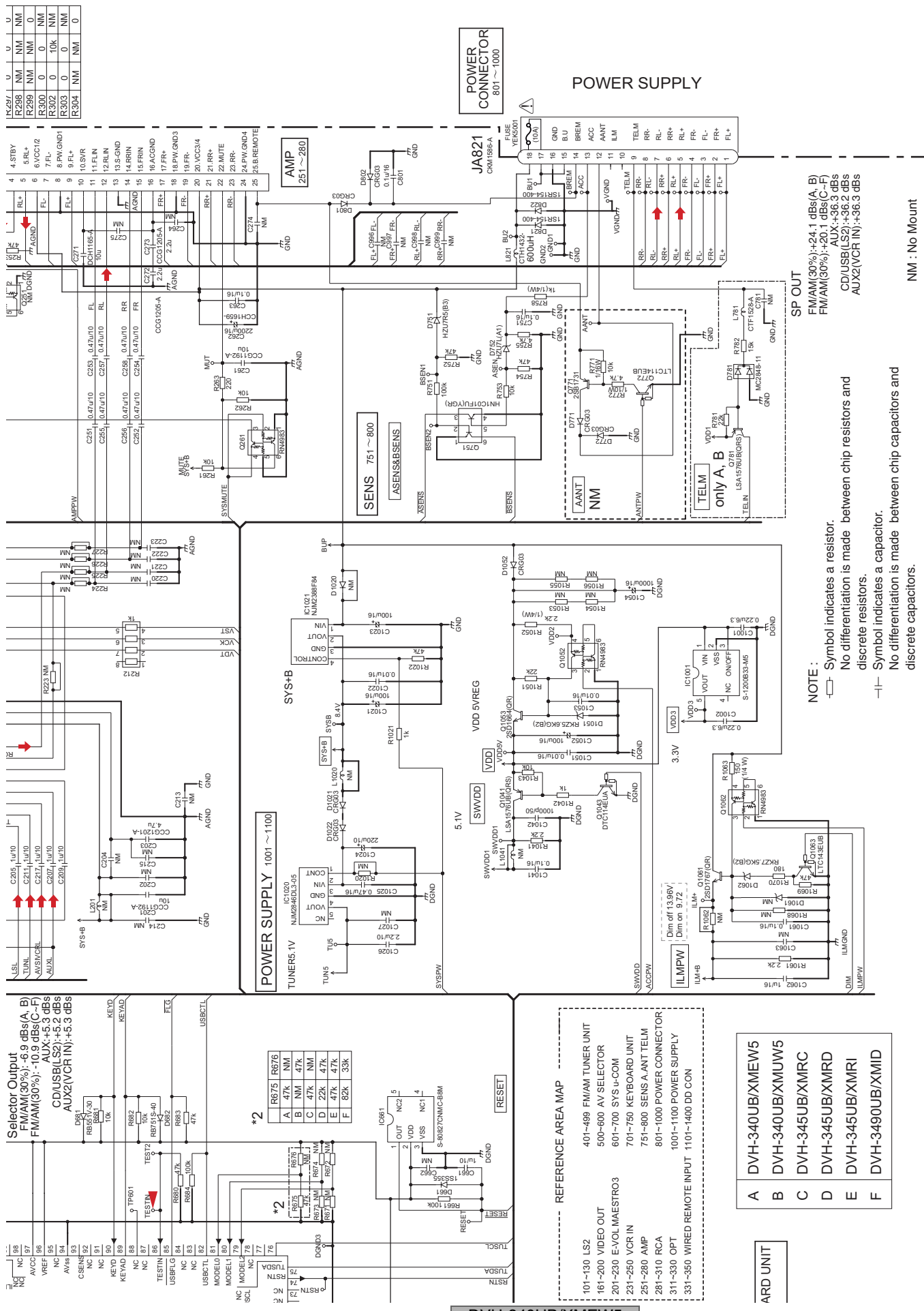


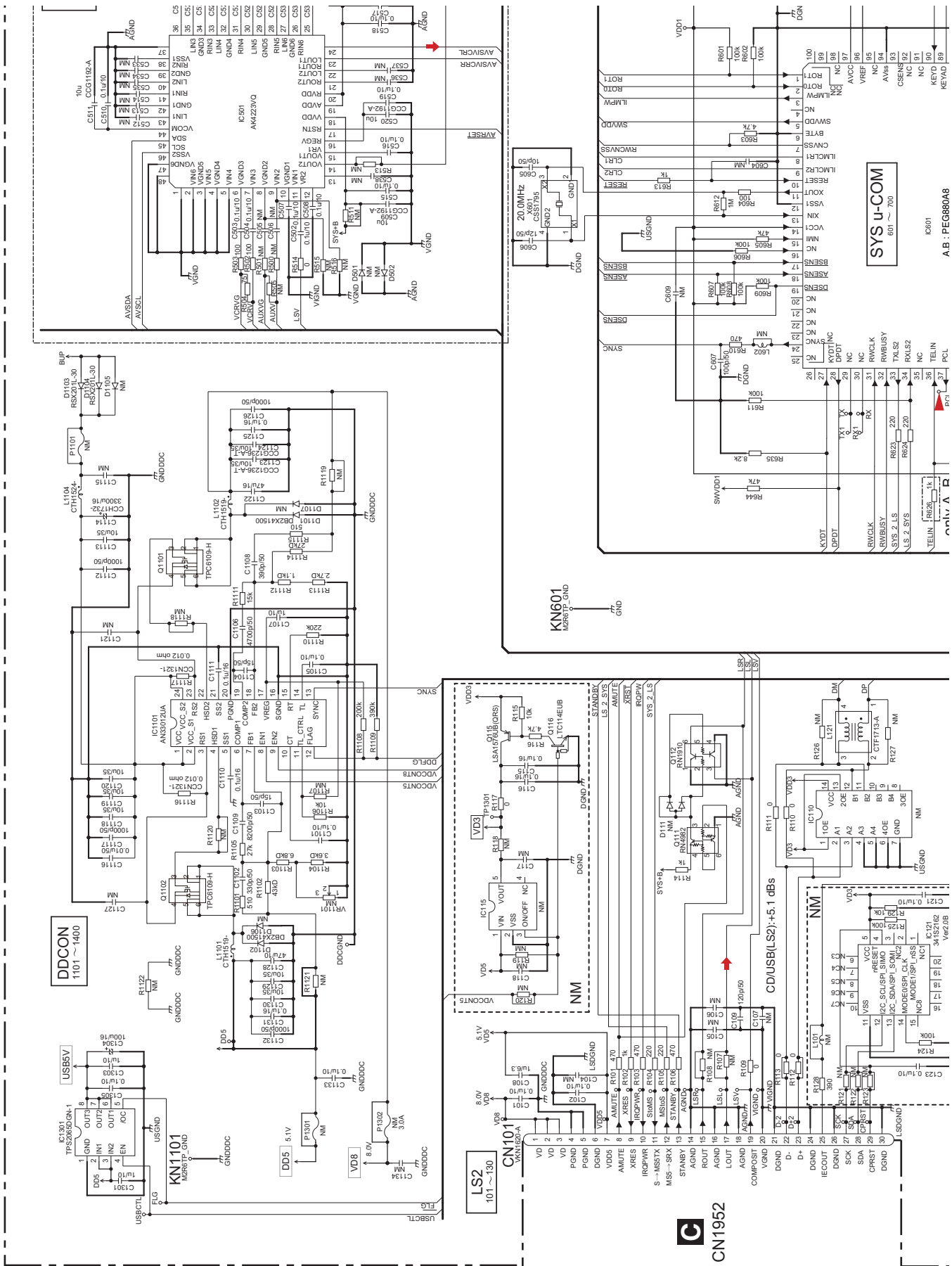
B
CN1821

DVH-340UB/XMEW5

A-b







10.2 KEYBOARD UNIT

A

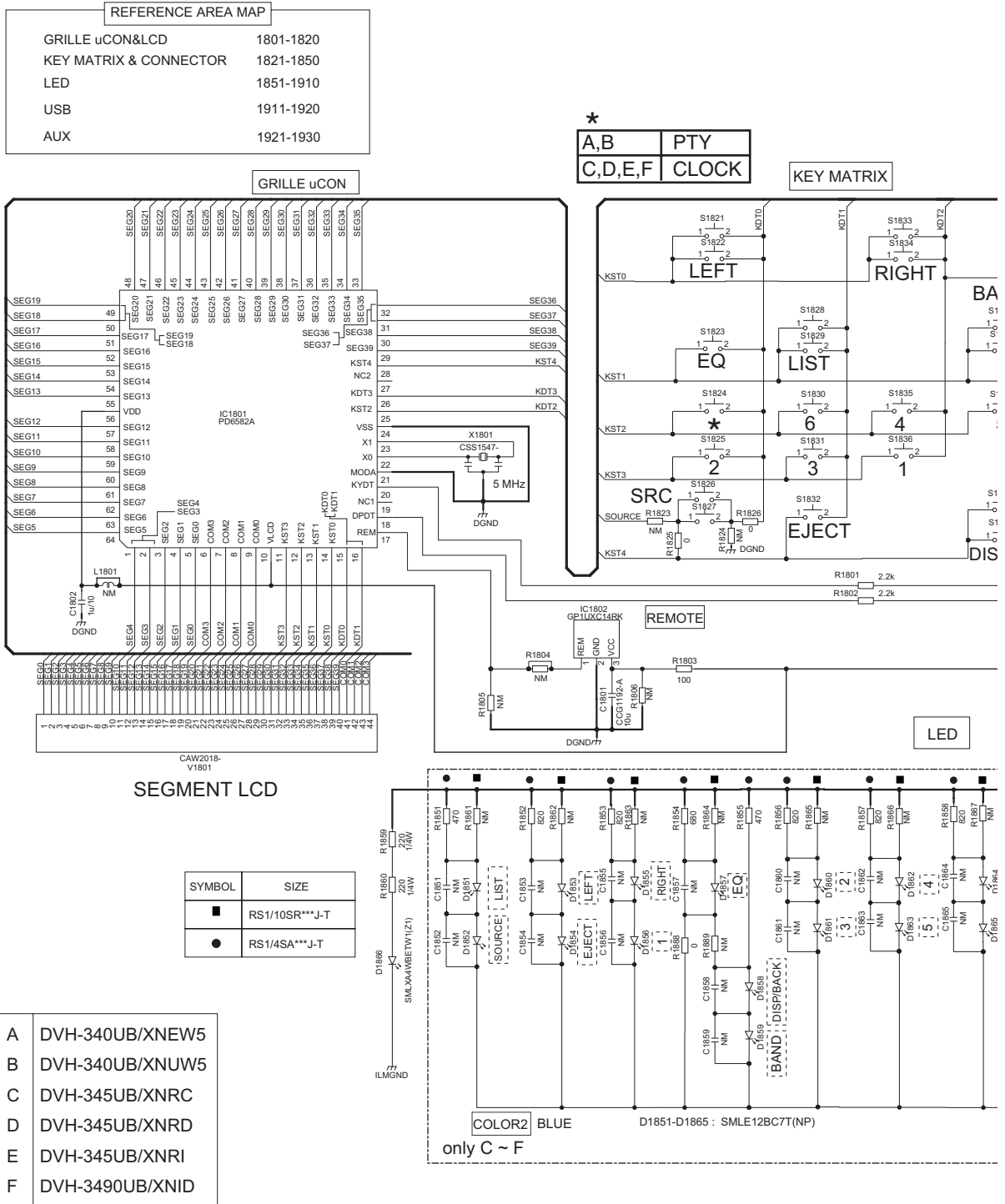
B

C

D

E

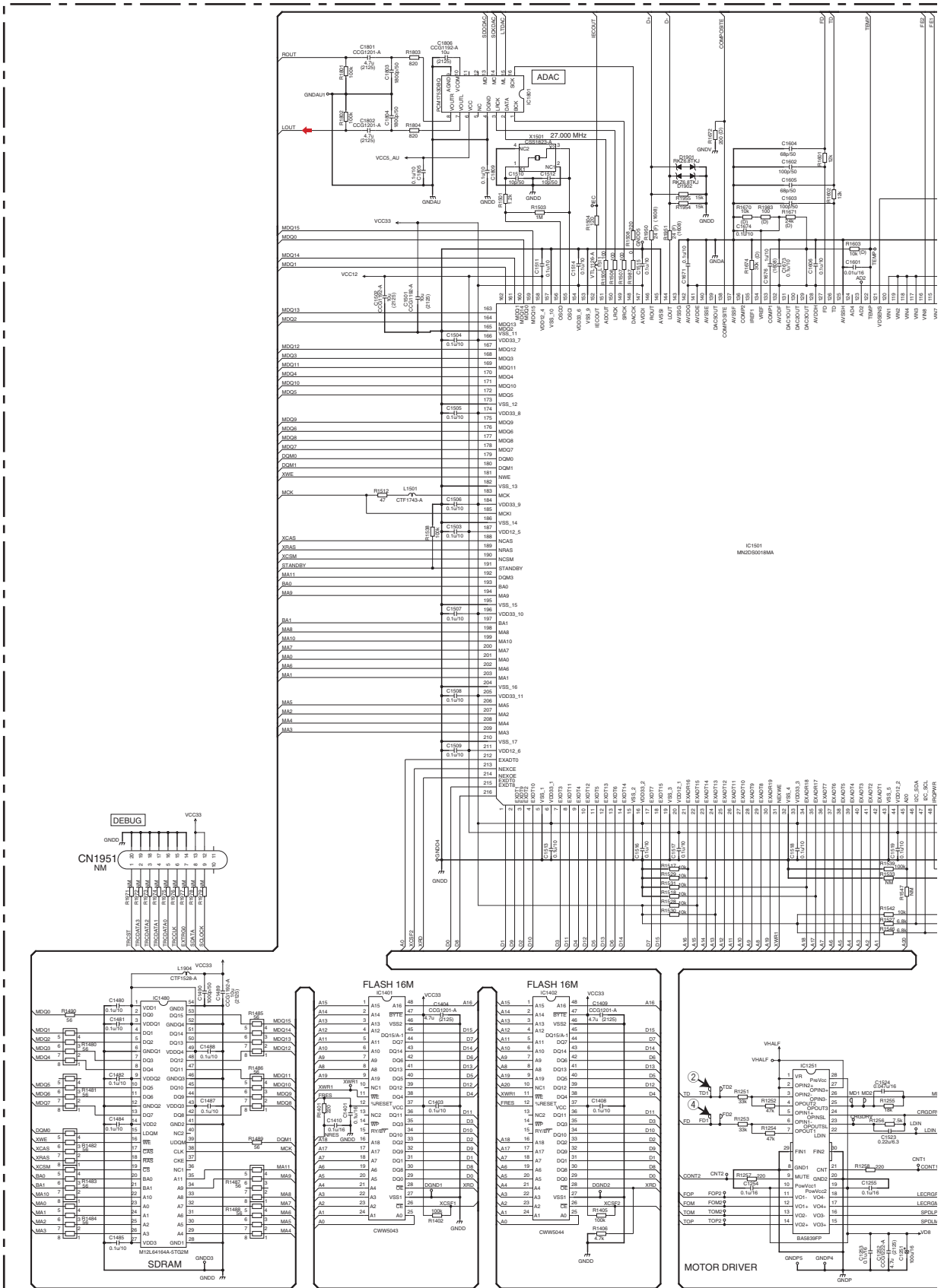
F



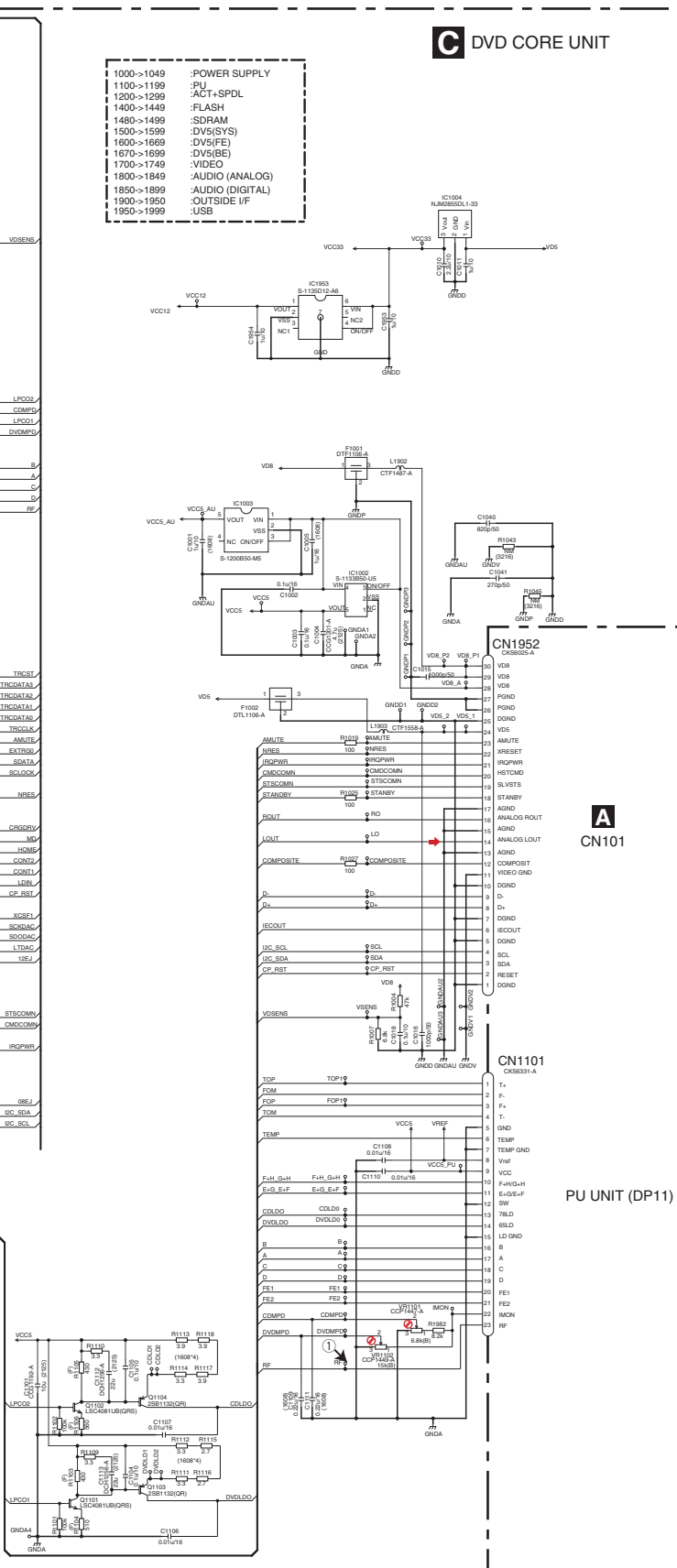
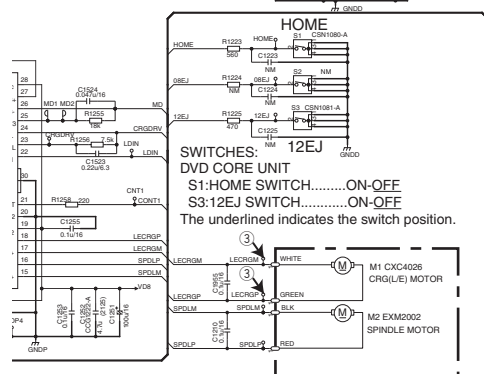
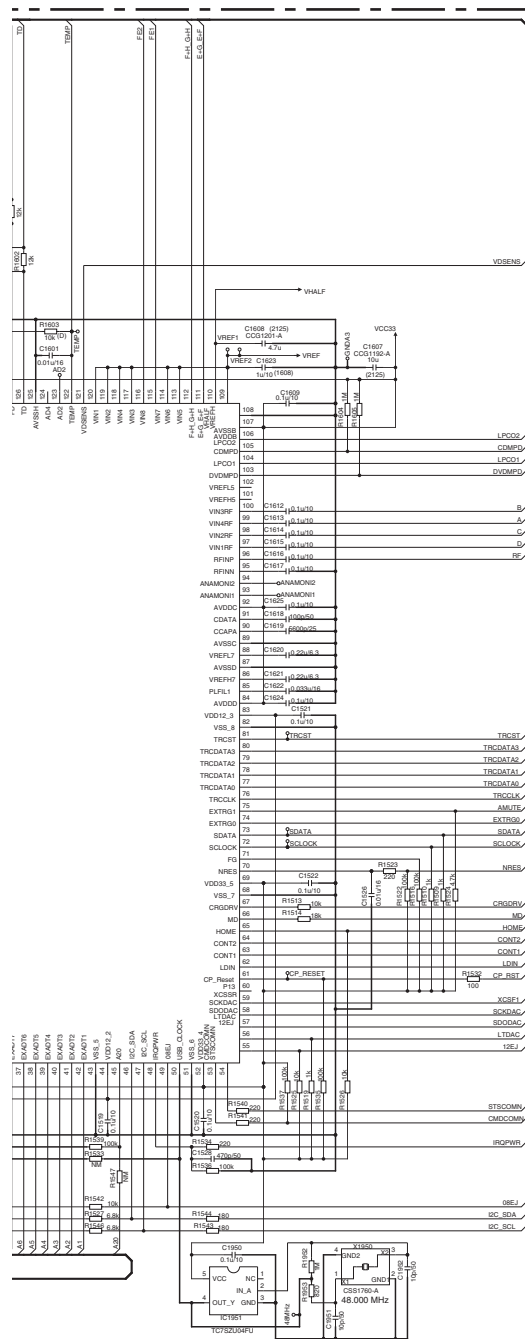


10.3 DVD CORE UNIT (GUIDE PAGE)

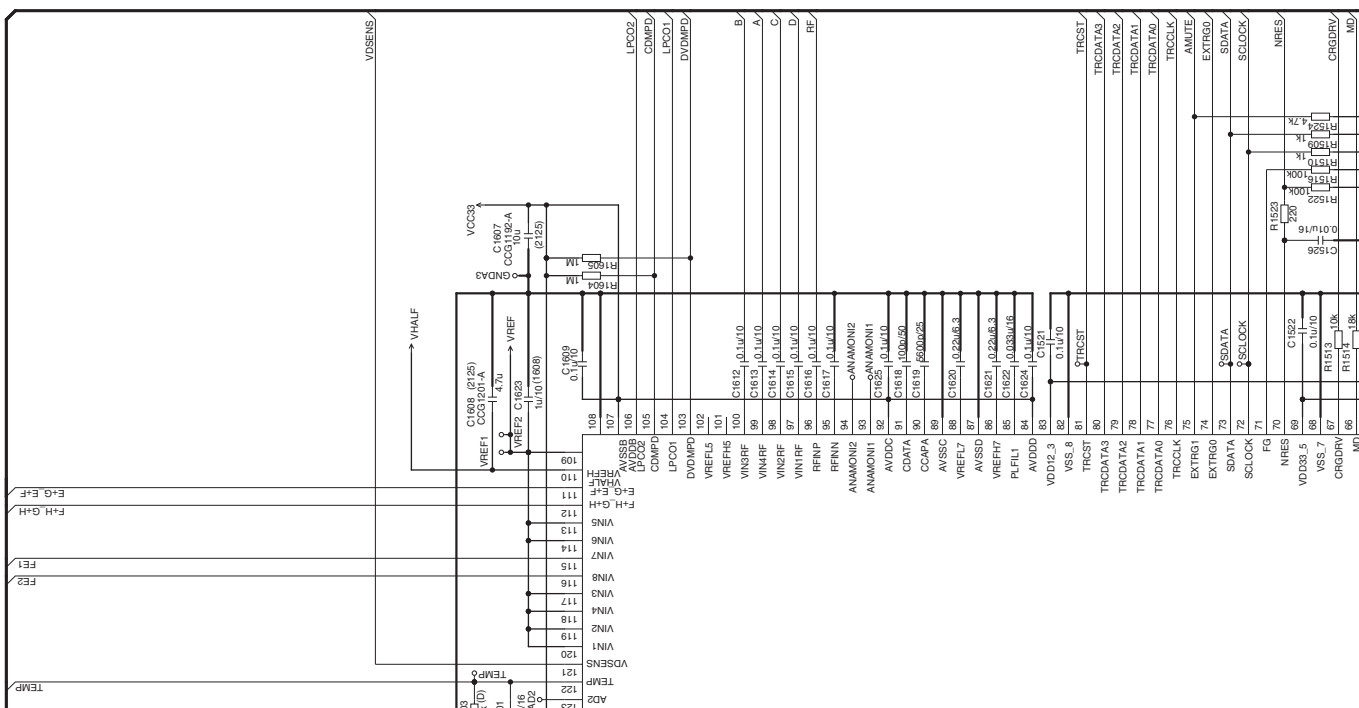
C-a

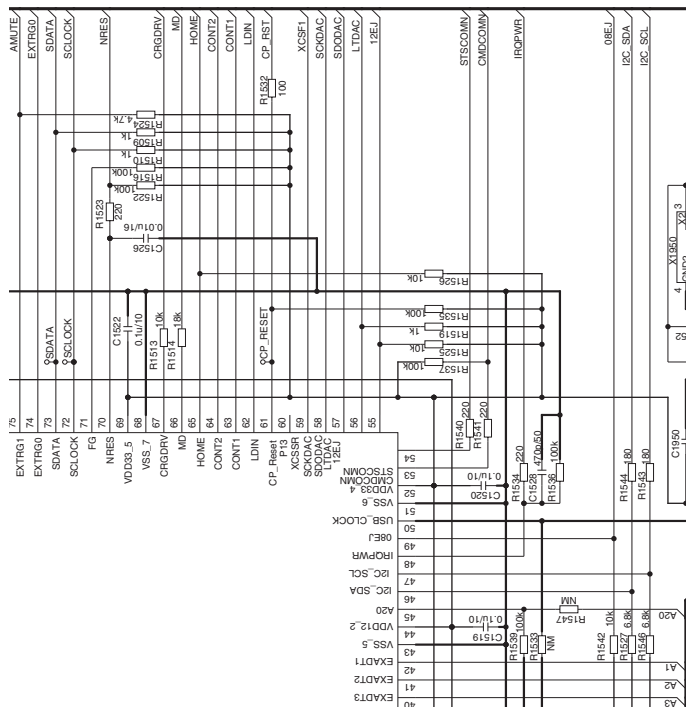


C-b

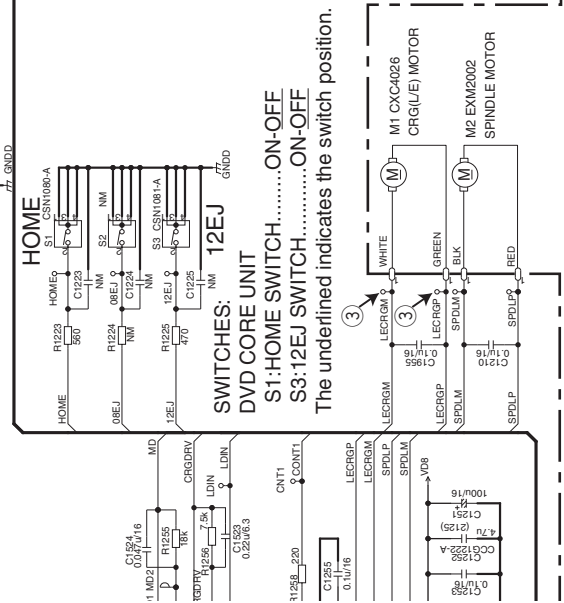


: The power supply is shown with the marked box.





DVH-340UB/XMEW5



A

C-b

B

C

D

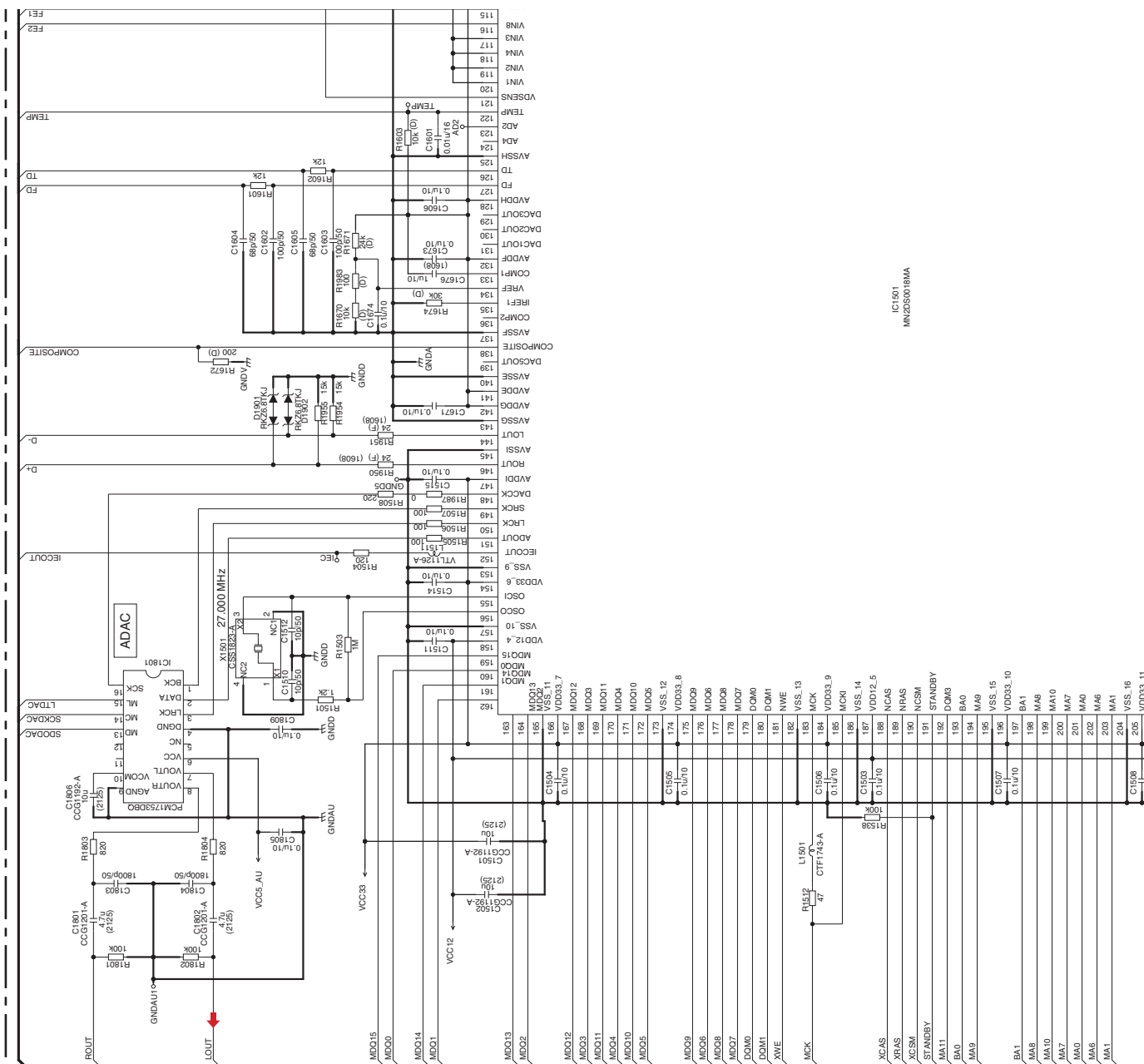
E

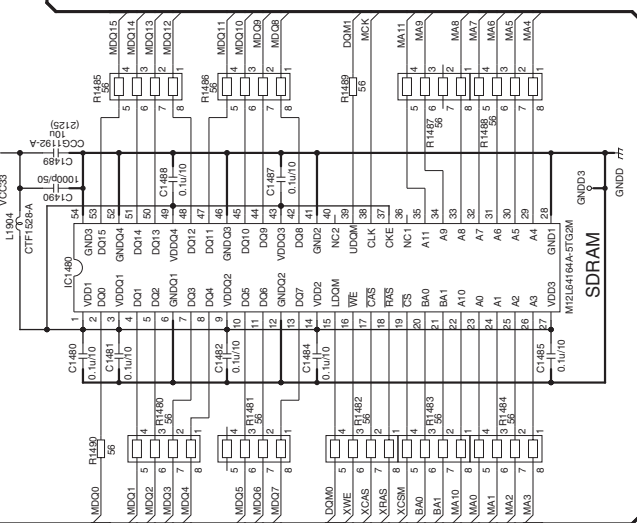
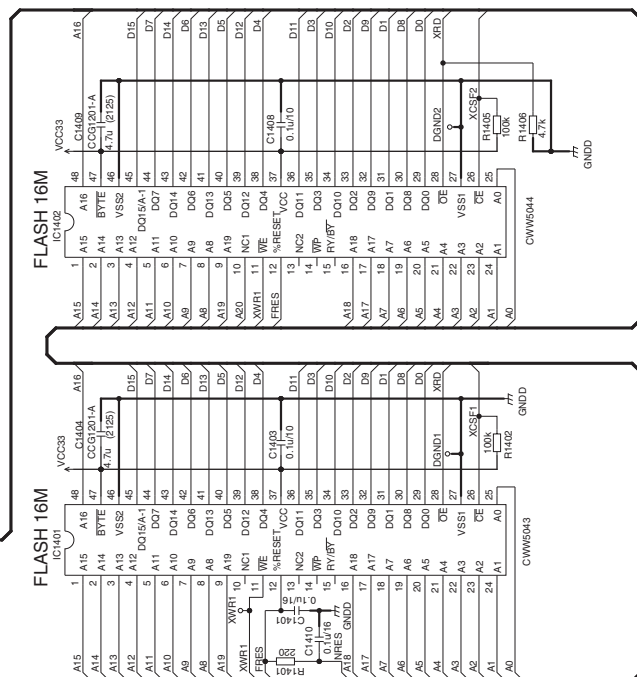
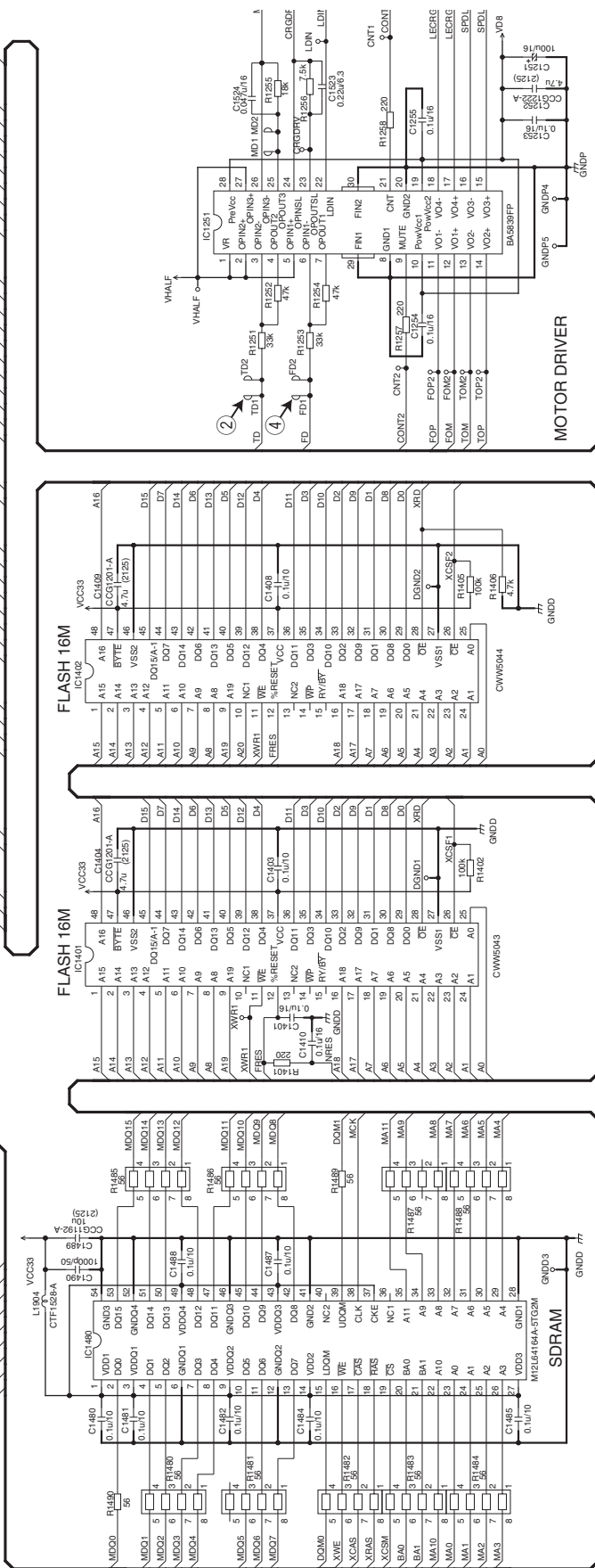
F

C-a

C-a

DVH-340UB/XMEW5



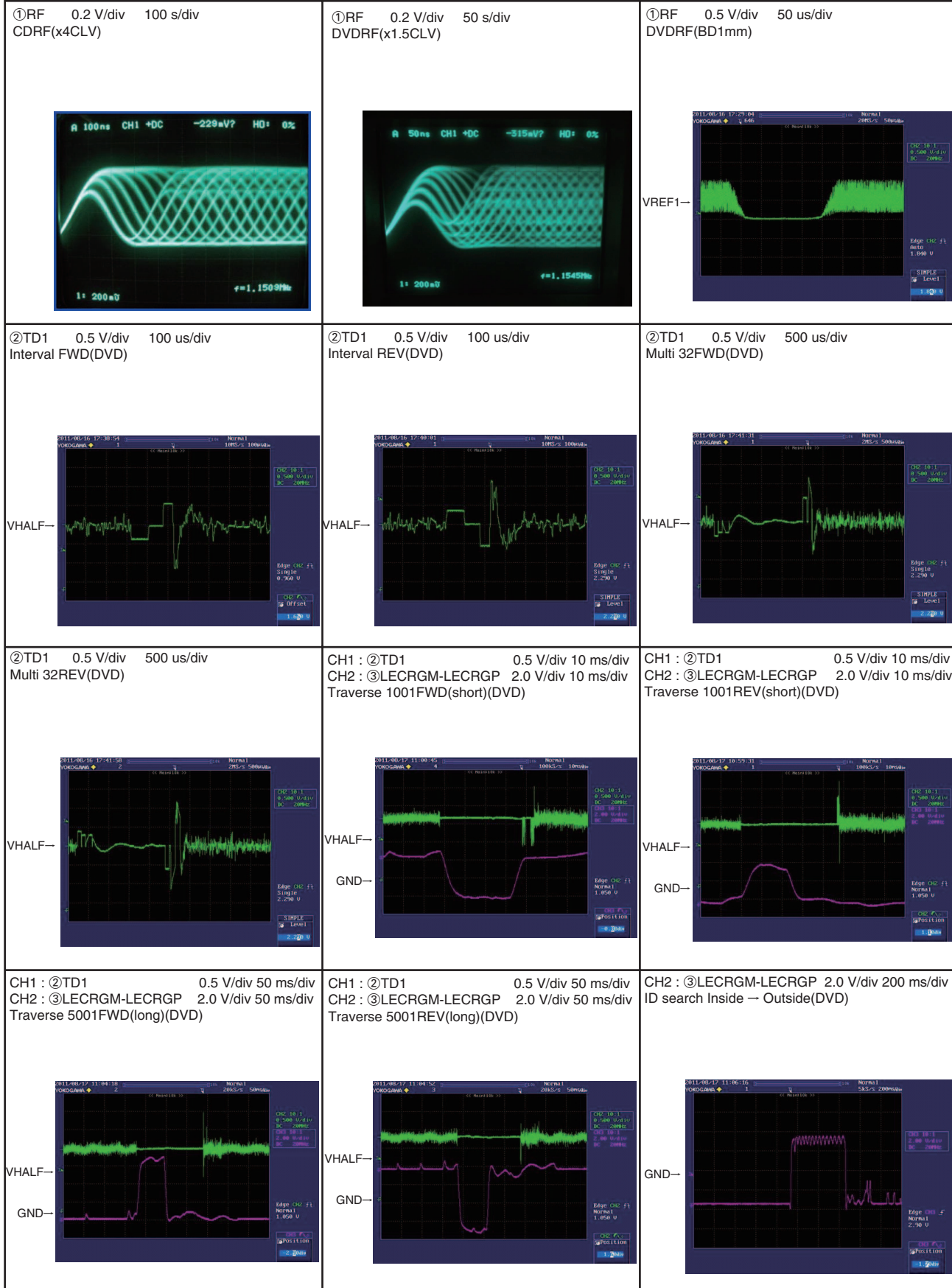


10.4 WAVEFORMS

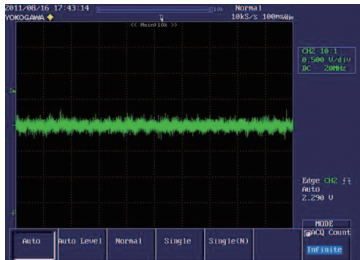
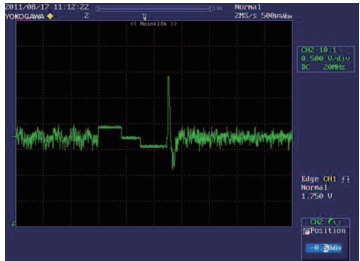
Waveforms

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

<p>②TD1 0.5 V/div 100 ms/div Play TD(DVD)</p> <p>VHALF—</p> 	<p>④FD1 0.5 V/div 100 ms/div Focus Close(DVD)</p> <p>VHALF—</p> 	<p>④FD1 0.5 V/div 500 us/div Play FD(DVD)</p> <p>VHALF—</p> 
<p>④FD1 0.5 V/div 500 us/div Focus Jump L0—L1</p> <p>VHALF—</p> 	<p>④FD1 0.5 V/div 500 us/div Focus Jump L1—L0</p> <p>VHALF—</p> 	

B

C

D

E

F

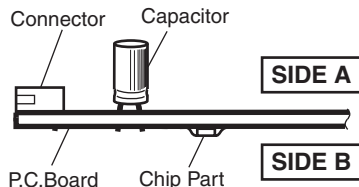
11. PCB CONNECTION DIAGRAM

11.1 TUNER AMP UNIT

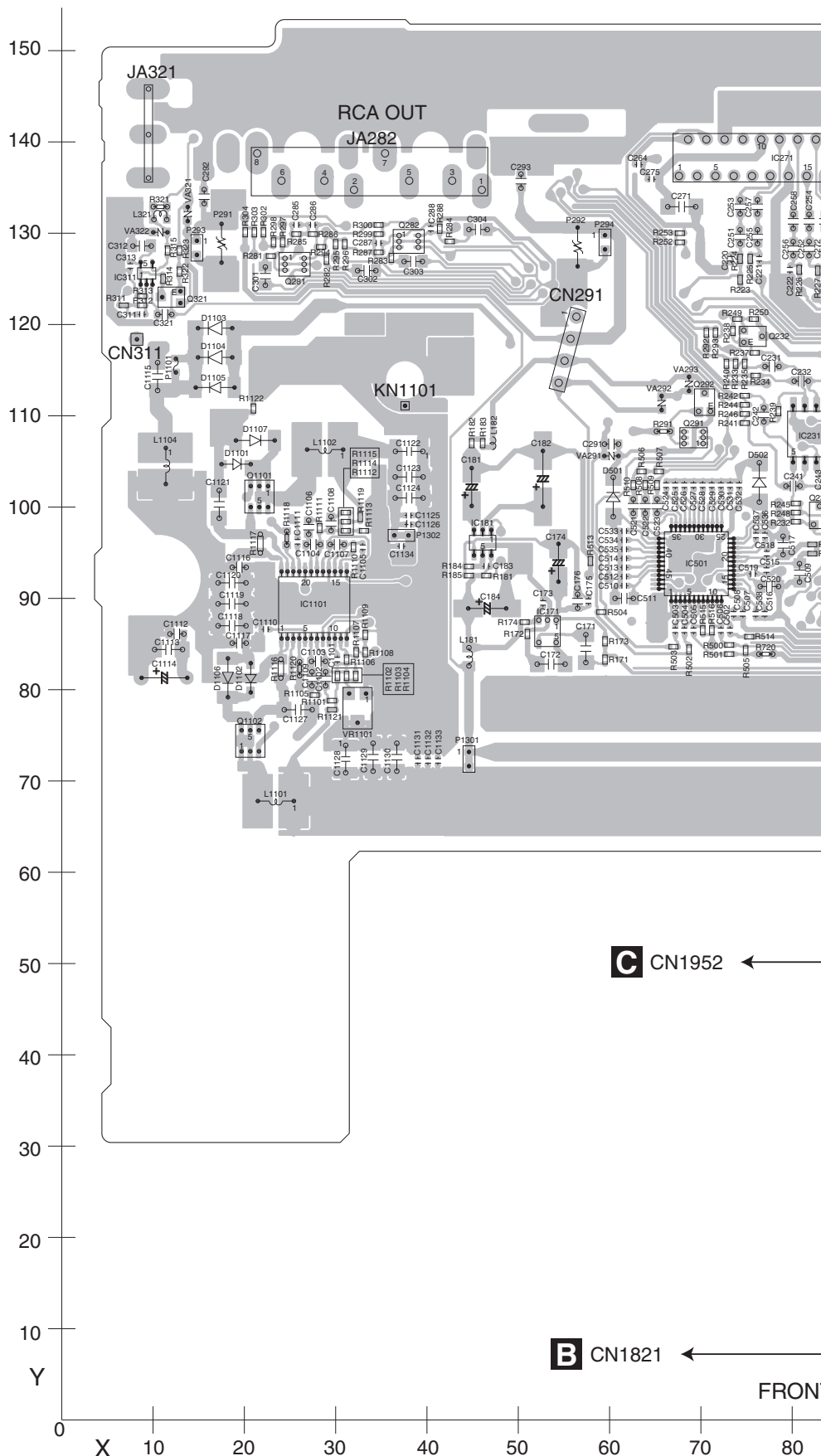
NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination.
For further information for respective destinations, be sure to check with the schematic diagram.

2. Viewpoint of PCB diagrams



A TUNER AMP UNIT



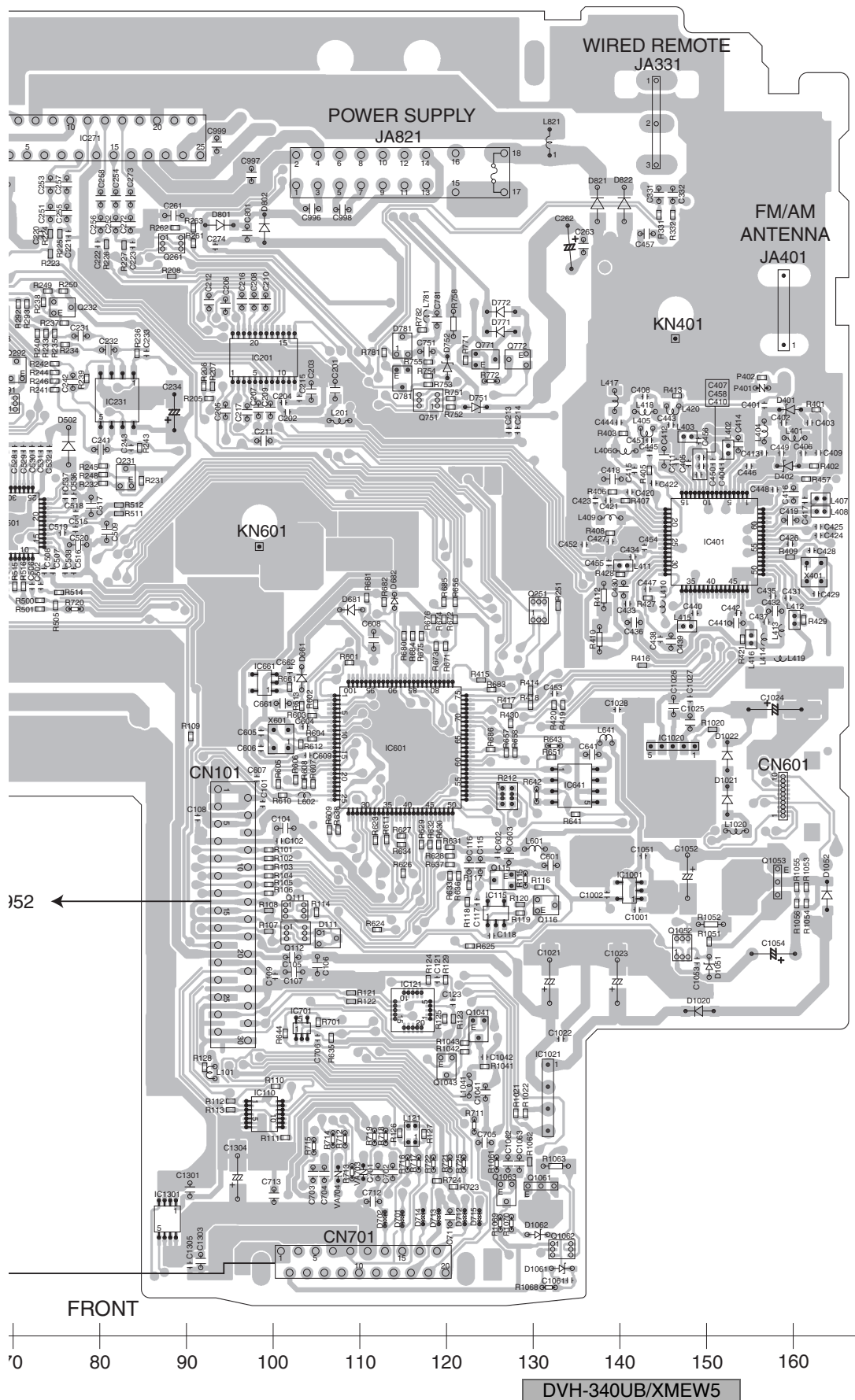
C CN1952

B CN1821

FRONT

A

SIDE A



1

2

3

4

A

A TUNER AMP UNIT

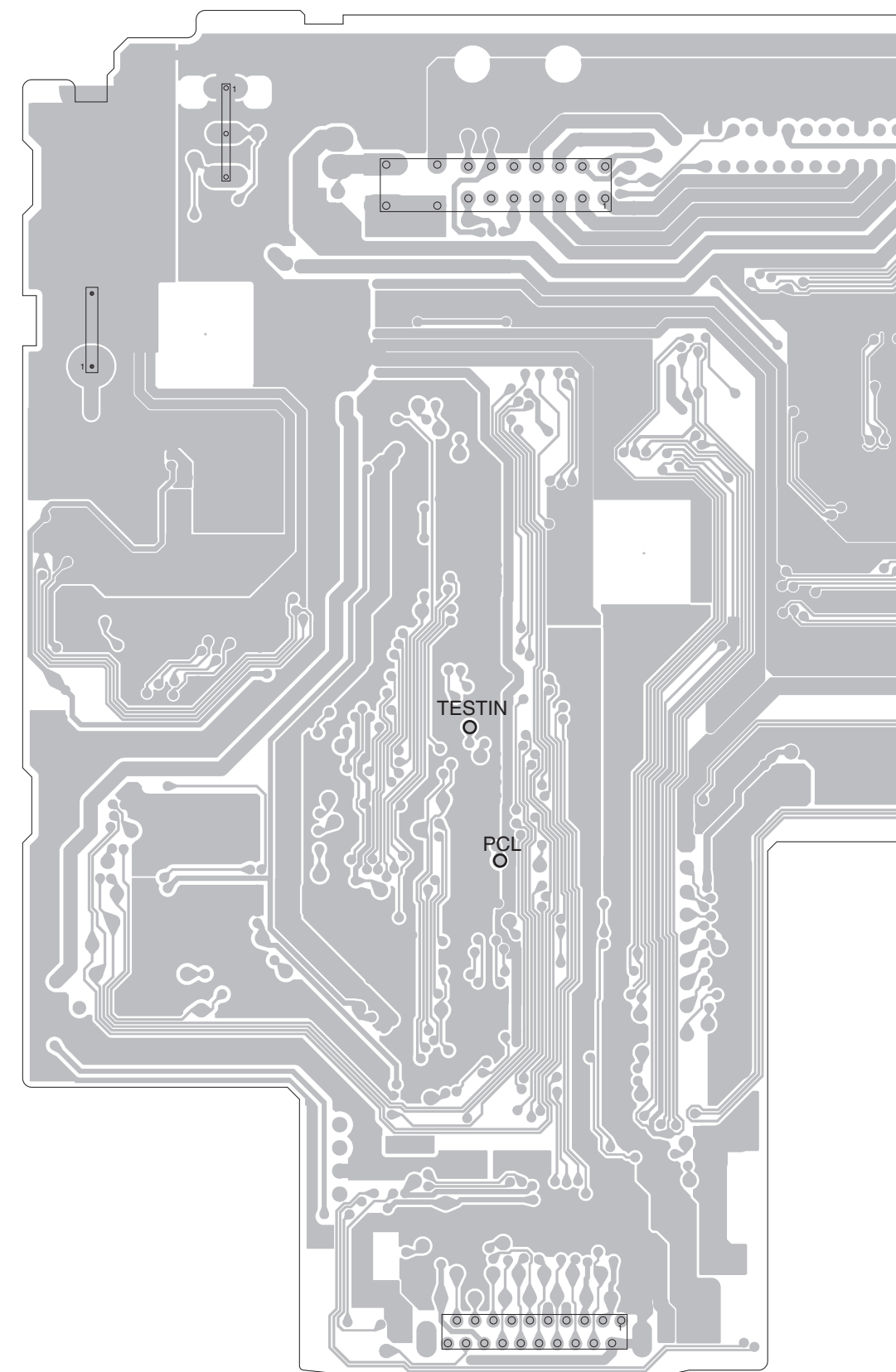
B

C

D

E

F



A

90

1

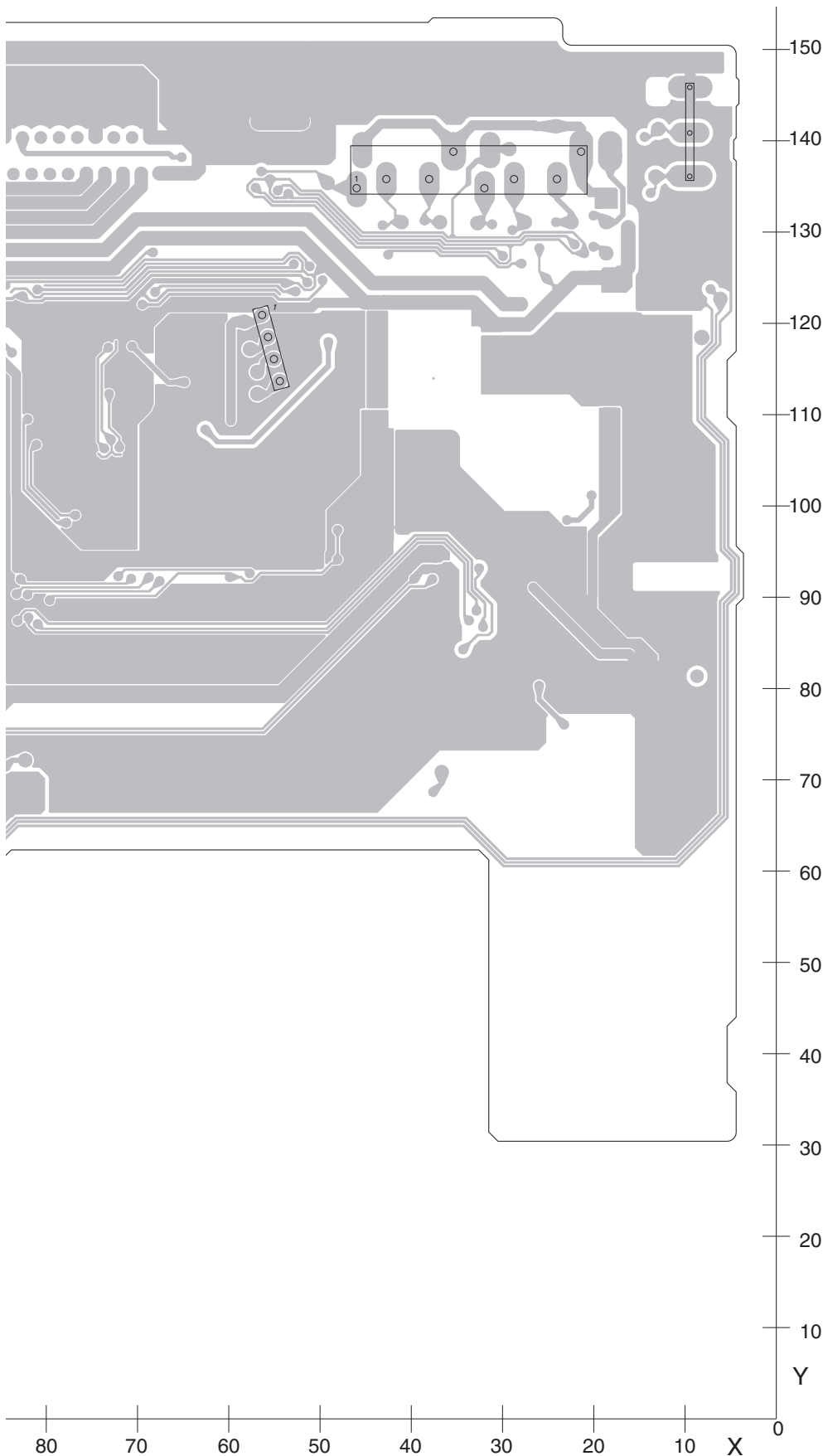
2

3

4

SIDE B

A



B

C

D

E

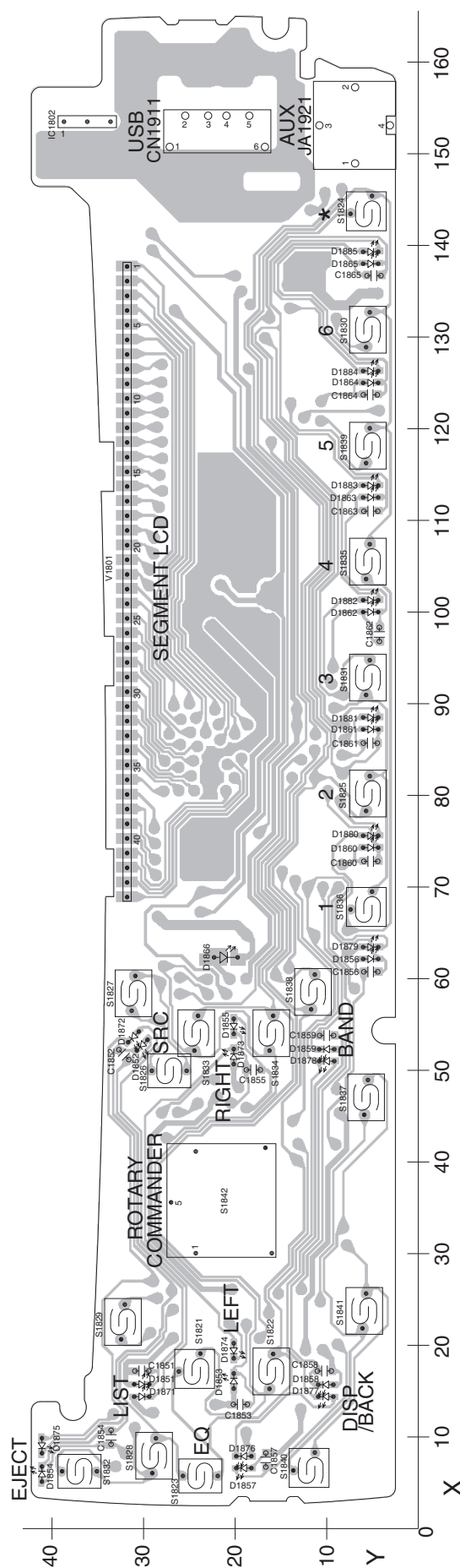
F

A

DVH-340UB/XMEW5

B KEYBOARD UNIT

SIDE A



EW5,UW5	PTY
RC,RD,RI,LD	CLOCK

C DVD CORE UNIT

SIDE B

A

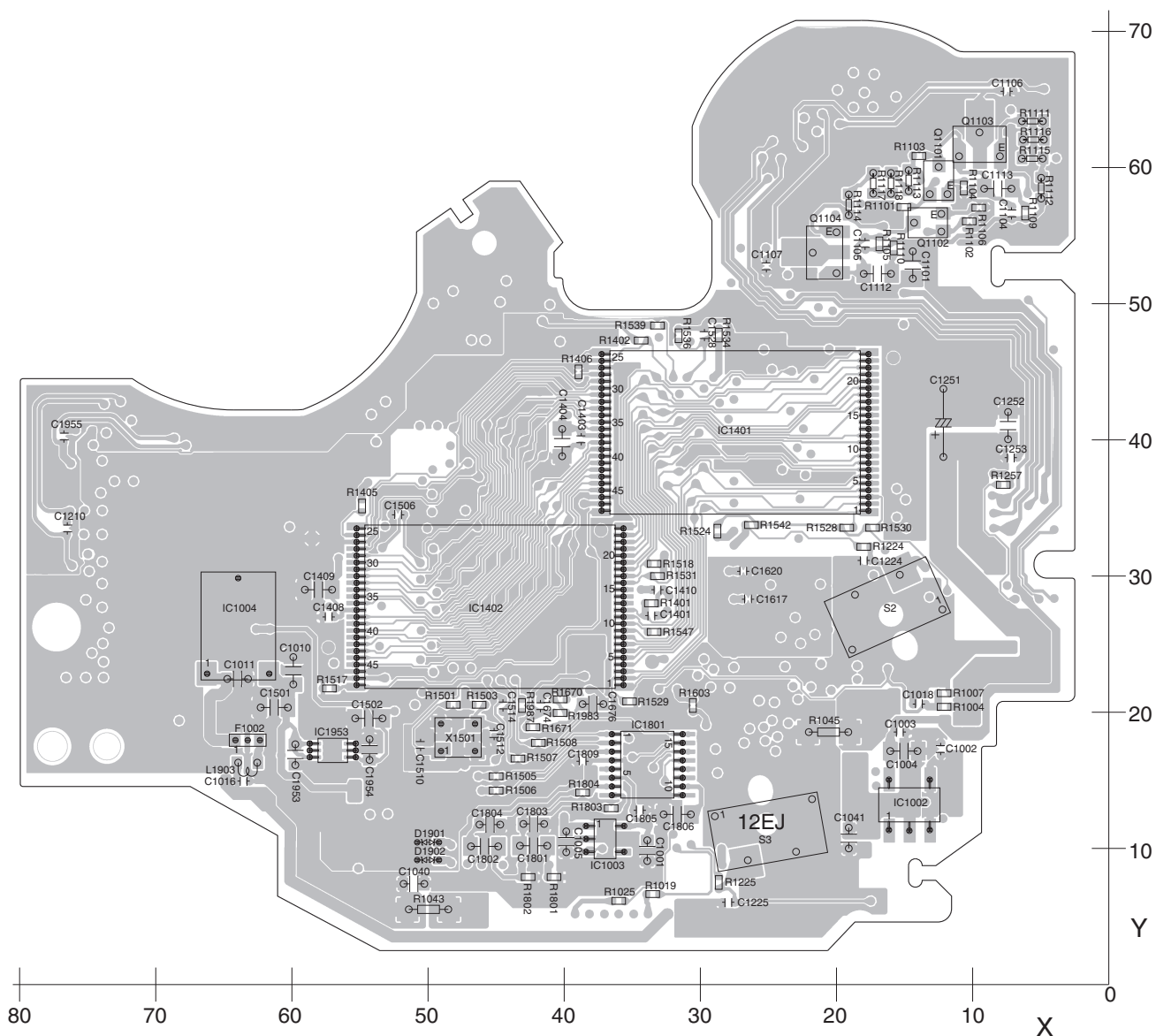
B

C

D

E

F



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/○○○○○J,RS1/○○○○○J

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

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

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

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

IC 301 (A, 91, 111) IC NJM2068V

- 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	A:DVH-340UB/XMEW5		MISCELLANEOUS	
	B:DVH-340UB/XMUW5		IC 181 (A,46,96) IC(C,D,E,F)	NJM2561F1
	C:DVH-345UB/XMRC		IC 201 (A,99,113) IC	PML022A
C	D:DVH-345UB/XMRD		IC 231 (A,82,108) IC(C,F)	NJM4558MD
	E:DVH-345UB/XMRI		IC 271 (A,80,142) IC	PAL007E
	F:DVH-3490UB/XMID		IC 401 (A,151,92) IC	TDA7706
	Unit Number : QWM3394(A)		IC 501 (A,70,94) IC(A,B)	AK4223VQ
	Unit Number : QWM3395(B)		IC 601 (A,115,68) IC(A,B)	PEG880A8
	Unit Number : QWM3396(C)		(A,115,68) IC(C,D,E,F)45	PEG881A8
	Unit Number : QWM3397(D)		IC 661 (A,99,75) IC	S-80827CNMC-B8M
D	Unit Number : QWM3398(E)		IC 1001 (A,141,51) IC	S-1200B33-M5
	Unit Number : QWM3399(F)		IC 1020 (A,146,63) IC	NJM2846DL3-05
	Unit Name : Tuner Amp Unit		IC 1021 (A,132,31) IC	NJM2388F84
	Unit Number : (A,B)		IC 1101 (A,28,89) IC	AN33012UA
	Unit Number : (C,D,E,F)		Q 111 (A,103,49) Chip Transistor	TPS2065DGN-1
	Unit Name : Keyboard Unit		Q 112 (A,103,47) Chip Transistor	RN4982
	Unit Number : YWX5032		Q 231 (A,83,99) Transistor(C,F)	RN1910
E	Unit Name : DVD Core Unit		Q 232 (A,76,119) Transistor(C,F)	LSC4081UB
			Q 261 (A,88,126) Chip Transistor	LSC4081UB
			Q 281 (A,26,127) Chip Transistor	RN4983
			Q 282 (A,38,129) Chip Transistor	RN1910
			Q 751 (A,118,108) Chip Transistor	HN1C01FU
			Q 781 (A,115,111) Transistor(A,B)	LSA1576UB
			Q 1041 (A,124,35) Transistor	LSA1576UB
			Q 1043 (A,120,31) Chip Transistor	DTC114EUA
			Q 1052 (A,147,45) Chip Transistor	RN4983
			Q 1053 (A,157,52) Transistor	2SD1664
			Q 1061 (A,131,16) Transistor	2SD1767
			Q 1062 (A,133,10) Chip Transistor	RN4983
			Q 1063 (A,127,17) Transistor	LTC143EUB
	Unit Number : QWM3394(A)		Q 1101 (A,22,101) FET	TPC6109-H
	Unit Number : QWM3395(B)		Q 1102 (A,21,75) FET	TPC6109-H
	Unit Number : QWM3396(C)		D 401 (A,160,107) Diode	KP2311E
	Unit Number : QWM3397(D)		D 402 (A,159,100) Diode	KP2311E
	Unit Number : QWM3398(E)		D 661 (A,103,76) Diode	1SS355
F	Unit Number : QWM3399(F)		D 681 (A,109,84) Diode	RB551V-30
	Unit Name : Tuner Amp Unit		D 682 (A,114,85) Diode	RB751S-40
			D 701 (A,115,14) Diode	RKZ6.8TKJ

5			6			7			8		
<u>Circuit Symbol and No.</u>			<u>Part No.</u>			<u>Circuit Symbol and No.</u>			<u>Part No.</u>		
D 702	(A,113,14)	Diode	RKZ6.8TKJ			R 102	(A,100,55)		RS1/16SS102J		
D 712	(A,122,14)	Diode	RKZ6.8TKJ			R 103	(A,100,54)		RS1/16SS471J		
						R 104	(A,100,53)		RS1/16SS221J		
D 713	(A,119,14)	Diode	RKZ6.8TKJ			R 105	(A,100,52)		RS1/16SS221J		A
D 714	(A,117,14)	Diode	RKZ6.8TKJ								
D 751	(A,123,107)	Diode	HZU7R5(B3)			R 106	(A,100,51)		RS1/16SS471J		
D 752	(A,120,112)	Diode	HZU7L(A1)			R 109	(A,91,69)		RS1/16SS0R0J		
D 781	(A,115,114)	Diode(A,B)	MC2848-11			R 110	(A,100,29)		RS1/16SS0R0J		
						R 111	(A,101,23)		RS1/16SS0R0J		
D 801	(A,94,128)	Diode	CRG03			R 114	(A,105,49)		RS1/16SS102J		
D 802	(A,99,128)	Diode	CRG03			R 173	(A,60,85) (C,D,E,F)		RS1/16SS0R0J		
D 821	(A,137,131)	Diode	1SR154-400								
D 822	(A,141,131)	Diode	1SR154-400			R 182	(A,45,107) (A,B)		RS1/16SS750J		
D 1021	(A,152,62)	Diode	CRG03				(A,45,107) (C,D,E,F)		RS1/16SS390J		
						R 183	(A,46,107) (A,B)		RS1/16SS0R0J		
D 1022	(A,152,67)	Diode	CRG03				(A,46,107) (C,D,E,F)		RS1/16SS330J		
D 1051	(A,150,43)	Diode	RKZ5.6KG(B2)			R 184	(A,45,94) (C,D,E,F)		RS1/16SS3302D		B
D 1052	(A,164,51)	Diode	CRG03								
D 1062	(A,131,12)	Diode	RKZ7.5KG(B2)			R 185	(A,45,93) (C,D,E,F)		RS1/16SS6802D		
D 1101	(A,19,105)	Diode	DB2X41500			R 212	(A,127,62)		RAB4CQ102J		
						R 231	(A,85,99) (C,F)		RS1/16SS103J		
D 1102	(A,21,81)	Diode	DB2X41500			R 232	(A,80,98) (C,F)		RS1/16SS163J		
D 1103	(A,17,120)	Diode	RSX201L-30			R 233	(A,74,116) (C,F)		RS1/16SS123J		
D 1104	(A,17,116)	Diode	RSX201L-30								
L 121	(A,116,23)	Inductor	CTF1713			R 234	(A,76,114) (C,F)		RS1/16SS223J		
L 181	(A,45,84)	Inductor(C,D,E,F)	LCYC100K2125			R 235	(A,75,116) (C,F)		RS1/16SS223J		
L 401	(A,160,104)	Chip Coil	LCTAWR15J2520			R 236	(A,84,113) (C,F)		RS1/16SS223J		
						R 237	(A,76,117) (C,F)		RS1/16SS223J		
L 402	(A,153,102)	Inductor	CTF1786			R 238	(A,74,119) (C,F)		RS1/16SS122J		C
L 403	(A,148,104)	Inductor	CTF1786								
L 404	(A,157,104)	Chip Coil	LCTAWR27J2520			R 240	(A,73,116) (C,F)		RS1/16SS562J		
L 405	(A,143,105)	Inductor	CTF1389			R 241	(A,75,109) (C,F)		RS1/16SS223J		
L 406	(A,141,102)	Inductor	LCTAW220J2520			R 242	(A,75,112) (C,F)		RS1/16SS223J		
						R 243	(A,85,103) (C,F)		RS1/16SS223J		
L 407	(A,163,97)	Inductor	CTF1786			R 244	(A,75,111) (C,F)		RS1/16SS123J		
L 408	(A,163,95)	Inductor	CTF1786								
L 409	(A,139,94)	Chip Coil	LCTAW470J2520			R 245	(A,80,100) (C,F)		RS1/16SS223J		
L 415	(A,148,82)	Inductor	CTF1786			R 246	(A,75,110) (C,F)		RS1/16SS562J		
L 416	(A,155,80)	Inductor(A,B)	CTF1786			R 248	(A,80,99) (C,F)		RS1/16SS122J		
						R 249	(A,74,121) (C,F)		RS1/16SS163J		
L 601	(A,130,56)	Chip Coil	LCTAW100J2520			R 250	(A,76,121) (C,F)		RS1/16SS103J		
L 781	(A,118,118)	Ferrite Bead(A,B)	CTF1528			R 252	(A,68,129)		RS1/16SS103J		
L 821	(A,113,142)	Choke Coil 600 uH	CTH1432			R 253	(A,68,130)		RS1/16SS473J		D
L 1101	(A,23,68)	Inductor	CTH1519								
L 1102	(A,29,106)	Inductor	CTH1519			R 261	(A,91,126)		RS1/16SS103J		
						R 262	(A,89,128)		RS1/16SS103J		
L 1104	(A,11,105)	Inductor	CTH1524			R 263	(A,91,128)		RS1/16SS221J		
X 401	(A,162,88)	Oscillator 36.48 MHz	CSS1805			R 281	(A,23,128)		RS1/16SS821J		
X 601	(A,101,69)	Oscillator 20.0 MHz	CSS1795			R 282	(A,29,127)		RS1/16SS821J		
P 291	(A,18,129)	Poly Switch	MINISMDC075F/24								
P 292	(A,57,129)	Poly Switch	MINISMDC075F/24			R 283	(A,36,127)		RS1/16SS821J		
						R 284	(A,43,129)		RS1/16SS821J		
P 402	(A,156,111)	Surge Absorber	IMSA-6803-01Y900			R 285	(A,26,130)		RS1/16SS223J		
VA291	(A,60,106)	Varistor(A,B)	EZJZ1V270RM			R 286	(A,28,130)		RS1/16SS223J		
VA703	(A,110,19)	Varistor	EZJZ1V270RM			R 287	(A,35,128)		RS1/16SS223J		
VA704	(A,108,19)	Varistor	EZJZ1V270RM								E
CN101	(A,95,49)	Connector	VKN1620			R 288	(A,41,131)		RS1/16SS223J		
						R 292	(A,71,119) (D,E)		RS1/16SS0R0J		
CN291	(A,55,117)	Connector(A,B,C,F)	S4B-EH			R 293	(A,72,119) (A,B)		RS1/16SS0R0J		
CN701	(A,110,4)	Connector	CKS6288				(A,72,119) (C,F)		RS1/16SS103J		
JA282	(A,34,138)	Pin Jack(A,B,C,F)	CKB1094			R 294	(A,28,129) (D,E)		RS1/16SS0R0J		
	(A,34,138)	Pin Jack(D,E)	CKB1095								
JA331	(A,144,140)	Connector	CKS4124			R 296	(A,31,129) (A,B,C,F)		RS1/16SS0R0J		
JA401	(A,159,129)	Antenna Jack	YKS5041			R 297	(A,24,129)		RS1/16SS0R0J		
						R 299	(A,35,130) (D,E)		RS1/16SS0R0J		
JA821	(A,115,142)	Plug	CKM1586			R 300	(A,35,131) (A,B,C,F)		RS1/16SS0R0J		
⚠	Fuse (10 A)		YEK5001								
RESISTORS						R 302	(A,22,130) (A,B)		RS1/16SS0R0J		F
							(A,22,130) (C,F)		RS1/16SS103J		
R 101	(A,100,56)		RS1/16SS471J			R 303	(A,21,130) (A,B,C,F)		RS1/16SS0R0J		
						R 304	(A,20,130) (D,E)		RS1/16SS0R0J		
						R 331	(A,145,129)		RS1/16SS102J		

	1	2	3	4
	<u>Circuit Symbol and No.</u>	<u>Part No.</u>	<u>Circuit Symbol and No.</u>	<u>Part No.</u>
	R 332 (A,146,129)	RS1/16SS102J	R 676 (A,119,83) (B,D,E)	RS1/16SS473J
	R 401 (A,163,107)	RS1/16SS221J	(A,119,83) (F)	RS1/16SS333J
A	R 402 (A,162,100)	RS1/16SS751J	R 680 (A,115,81)	RS1/16SS473J
	R 403 (A,140,104)	RS1/16SS152J	R 681 (A,111,85)	RS1/16SS103J
	R 405 (A,143,100)	RS1/16SS105J	R 682 (A,113,85)	RS1/16SS103J
	R 406 (A,139,97)	RS1/16SS471J	R 683 (A,125,75)	RS1/16SS473J
	R 407 (A,141,96)	RS1/16SS330J	R 684 (A,116,81)	RS1/16SS104J
	R 408 (A,139,93)	RS1/16SS681J	R 685 (A,120,85) (A,B)	RS1/16SS393J
	R 410 (A,138,80)	RS1/4SA8R2J	R 686 (A,125,68) (A,B)	RS1/16SS393J
	R 412 (A,138,85)	RS1/4SA8R2J	R 701 (A,105,36)	RS1/16SS0R0J
	R 413 (A,147,109)	RS1/16SS105J	R 711 (A,123,24)	RS1/10SR222J
	R 419 (A,133,73)	RS1/16SS103J	R 712 (A,108,23)	RS1/10SR222J
	R 420 (A,132,73)	RS1/16SS103J	R 713 (A,109,19)	RS1/10SR222J
B	R 421 (A,154,80) (C,D,E,F)	RS1/16SS0R0J	R 714 (A,107,23)	RS1/10SR222J
	R 427 (A,143,85)	RS1/16SS102J	R 715 (A,105,22)	RS1/10SR222J
	R 428 (A,140,88)	RS1/16SS0R0J	R 716 (A,116,20)	RS1/10SR220J
	R 502 (A,69,84) (A,B)	RS1/16SS101J	R 717 (A,117,20)	RS1/10SR220J
	R 503 (A,67,85) (A,B)	RS1/16SS101J	R 718 (A,113,23)	RS1/10SR222J
	R 504 (A,59,89) (A,B)	RS1/16SS750J	R 719 (A,112,23)	RS1/10SR222J
	R 506 (A,64,104) (A,B)	RS1/16SS223J	R 721 (A,120,20)	RS1/10SR0R0J
	R 507 (A,65,104) (A,B)	RS1/16SS223J	R 722 (A,119,20)	RS1/10SR0R0J
	R 508 (A,64,102) (A,B)	RS1/16SS101J	R 723 (A,121,17)	RS1/16SS223J
	R 509 (A,65,102) (A,B)	RS1/16SS101J	R 724 (A,119,18)	RS1/16SS223J
	R 510 (A,63,102) (A,B)	RS1/16SS101J	R 751 (A,121,108)	RS1/16SS104J
C	R 514 (A,75,86) (A,B)	RS1/16SS0R0J	R 752 (A,121,107)	RS1/16SS473J
	R 601 (A,109,78)	RS1/16SS104J	R 753 (A,118,110)	RS1/16SS103J
	R 602 (A,105,73)	RS1/16SS104J	R 754 (A,118,111)	RS1/16SS473J
	R 603 (A,105,72)	RS1/16SS472J	R 755 (A,118,112)	RS1/16SS472J
	R 604 (A,105,69)	RS1/16SS101J	R 758 (A,121,117)	RS1/4SA102J
	R 605 (A,101,64)	RS1/16SS473J	R 781 (A,113,114) (A,B)	RS1/16SS223J
	R 606 (A,103,64)	RS1/16SS104J	R 782 (A,117,116) (A,B)	RS1/16SS153J
	R 607 (A,105,64)	RS1/16SS104J	R 1021 (A,128,26)	RS1/16SS102J
	R 608 (A,104,64)	RS1/16SS104J	R 1022 (A,129,26)	RS1/16SS473J
	R 609 (A,107,58)	RS1/16SS104J	R 1041 (A,124,31)	RS1/16SS222J
D	R 610 (A,101,62)	RS1/16SS471J	R 1042 (A,122,33)	RS1/16SS102J
	R 611 (A,113,57)	RS1/16SS104J	R 1043 (A,122,34)	RS1/16SS103J
	R 612 (A,103,68)	RS1/16SS105J	R 1051 (A,150,46)	RS1/16SS223J
	R 613 (A,103,73)	RS1/16SS102J	R 1052 (A,151,48)	RS1/4SA222J
	R 623 (A,112,57)	RS1/16SS221J	R 1061 (A,126,20)	RS1/10SR222J
	R 624 (A,112,47)	RS1/16SS221J	R 1063 (A,133,20)	RS1/4SA151J
	R 625 (A,123,45)	RS1/16SS221J	R 1069 (A,126,13)	RS1/10SR473J
	R 626 (A,115,53) (A,B)	RS1/16SS102J	R 1070 (A,128,13)	RS1/10SR181J
	R 627 (A,115,58)	RS1/16SS104J	R 1101 (A,30,79)	RS1/16SS511J
	R 629 (A,117,57)	RS1/16SS102J	R 1102 (A,30,82)	RS1/16SS4302D
	R 630 (A,119,57)	RS1/16SS102J	R 1103 (A,31,82)	RS1/16SS6801D
E	R 631 (A,120,56)	RS1/16SS104J	R 1104 (A,32,82)	RS1/16SS3601D
	R 632 (A,118,57)	RS1/16SS104J	R 1105 (A,28,79)	RS1/16SS273J
	R 633 (A,120,53)	RS1/16SS473J	R 1106 (A,31,83)	RS1/16SS103J
	R 634 (A,115,57)	RS1/16SS473J	R 1108 (A,33,84)	RS1/16SS204J
	R 635 (A,107,34)	RS1/16SS822J	R 1109 (A,33,86)	RS1/16SS394J
	R 636 (A,121,53)	RS1/16SS104J	R 1110 (A,32,96)	RS1/16SS224J
	R 637 (A,120,54)	RS1/16SS104J	R 1111 (A,28,98)	RS1/16SS153J
	R 641 (A,135,60)	RS1/16SS473J	R 1112 (A,31,97)	RS1/16SS1101D
	R 644 (A,101,35)	RS1/16SS473J	R 1113 (A,33,97)	RS1/16SS2701D
	R 656 (A,121,85) (A,B)	RS1/16SS103J	R 1114 (A,31,98)	RS1/16SS2702D
	R 657 (A,127,67) (A,B)	RS1/16SS103J	R 1115 (A,31,99)	RS1/16SS511J
F	R 661 (A,102,75)	RS1/16SS104J	R 1116 (A,24,82) 0.012 ohm	CCN1321
	R 675 (A,117,81) (A,C,E)	RS1/16SS473J	R 1117 (A,22,96) 0.012 ohm	CCN1321
	(A,117,81) (D)	RS1/16SS223J		
	(A,117,81) (F)	RS1/16SS823J		

5	6	7	8	
<u>Circuit Symbol and No.</u>	<u>Part No.</u>	<u>Circuit Symbol and No.</u>	<u>Part No.</u>	
<u>CAPACITORS</u>				
C 101 (A,99,61)	CKSSYB104K10	C 404 (A,152,101)	CKSSYB104K10	A
C 102 (A,101,57)	CKSSYB104K10	C 405 (A,148,101)	CKSSYB104K10	
C 108 (A,91,60)	CKSSYB105K6R3	C 406 (A,161,102)	CKSSYB103K16	
C 109 (A,100,42)	CCSSCH121J50	C 407 (A,149,101)	CKSSYB104K10	
C 174 (A,54,94) (C,D,E,F)	CEVW470M6R3			
C 181 (A,45,102) (C,D,E,F)	CEVW220M16	C 409 (A,163,102)	CKSSYB103K16	
C 182 (A,53,103) (C,D,E,F)	CEVW331M6R3	C 410 (A,149,99)	CKSSYB103K16	
C 183 (A,47,94) (C,D,E,F)	CKSSYB104K10	C 411 (A,147,101)	CKSSYB103K16	
C 184 (A,47,89) (C,D,E,F)	CEVW330M10	C 412 (A,145,101) 10 uF	CCG1192	
C 201 (A,107,109) 10 uF	CCG1192	C 413 (A,157,102)	CKSSYB103K16	
C 203 (A,104,109) 4.7 uF	CCG1201			B
C 205 (A,95,107)	CKSRYB105K10	C 414 (A,154,103)	CKSRYB105K10	
C 206 (A,95,119)	CKSRYB105K10	C 415 (A,142,100)	CKSSYB103K16	
C 207 (A,98,107)	CKSRYB105K10	C 416 (A,160,97)	CKSRYB224K16	
C 208 (A,98,119)	CKSRYB105K10	C 417 (A,161,96)	CKSSYB104K10	
		C 418 (A,139,99) 10 uF	CCG1192	
C 209 (A,100,107)	CKSRYB105K10			
C 210 (A,99,119)	CKSRYB105K10	C 419 (A,160,94)	CKSRYB105K10	
C 211 (A,99,103)	CKSRYB105K10	C 420 (A,141,97)	CKSSYB104K10	
C 212 (A,93,119)	CKSRYB105K10	C 421 (A,139,96)	CCSSCH101J50	
C 216 (A,96,119)	CKSRYB105K10	C 422 (A,144,98)	CKSSYB104K10	C
		C 423 (A,137,96)	CKSSYB103K16	
C 217 (A,97,107)	CKSRYB105K10			
C 231 (A,78,115) 2.2 uF(C,F)	CCG1205	C 424 (A,163,92)	CKSSYB472K25	
C 232 (A,81,114) 2.2 uF(C,F)	CCG1205	C 425 (A,163,93)	CKSSYB472K25	
C 233 (A,85,113) (C,F)	CCSSCH101J50	C 426 (A,160,91)	CKSSYB104K10	
C 234 (A,89,107) (C,F)	CEVW220M16	C 427 (A,139,92)	CCSSCH820J50	
		C 428 (A,162,91)	CCSSCH9R0D50	
C 241 (A,80,102) 2.2 uF(C,F)	CCG1205			
C 242 (A,77,110) 2.2 uF(C,F)	CCG1205	C 429 (A,163,86)	CCSSCH9R0D50	D
C 243 (A,84,103) (C,F)	CCSSCH101J50	C 430 (A,140,86)	CKSRYB474K10	
C 251 (A,74,130)	CKSRYB474K10	C 431 (A,159,85)	CKSSYB104K10	
C 252 (A,82,128)	CKSRYB474K10	C 432 (A,158,84) 2.2 uF	CCG1205	
C 253 (A,74,133)	CKSRYB474K10	C 437 (A,157,82)	CKSSYB104K10	
C 254 (A,82,131)	CKSRYB474K10			
C 255 (A,76,130)	CKSRYB474K10	C 440 (A,149,83)	CKSSYB104K10	
C 256 (A,80,128)	CKSRYB474K10	C 441 (A,153,82) 2.2 uF	CCG1205	
C 257 (A,76,133)	CKSRYB474K10	C 443 (A,146,105)	CKSSYB103K16	
C 258 (A,80,131)	CKSRYB474K10	C 445 (A,143,102)	CKSSYB223K16	
C 261 (A,89,129) 10 uF	CCG1192	C 447 (A,143,86)	CKSSYB102K50	E
C 262 (A,134,126) 2 200 uF/16V	CCH1659			
C 263 (A,136,126)	CKSRYB104K16	C 453 (A,132,74)	CCSSCH470J50	
C 271 (A,68,133) 10 uF	DCH1165	C 502 (A,73,87) (A,B)	CKSSYB104K10	
C 272 (A,84,128) 2.2 uF	CCG1205	C 503 (A,67,87) (A,B)	CKSSYB104K10	
C 273 (A,84,131) 2.2 uF	CCG1205	C 504 (A,68,87) (A,B)	CKSSYB104K10	
		C 507 (A,75,88) (A,B)	CKSSYB104K10	
C 285 (A,26,131)	CKSSYB102K50			
C 286 (A,28,131)	CKSSYB102K50	C 508 (A,74,88) (A,B)	CKSSYB104K10	
C 287 (A,35,129)	CKSSYB102K50	C 509 (A,81,93) 10 uF(A,B)	CCG1192	F
C 288 (A,40,131)	CKSSYB102K50	C 510 (A,62,91) (A,B)	CKSSYB104K10	
C 291 (A,60,107) (A,B)	CKSRYB471K50	C 511 (A,62,90) 10 uF(A,B)	CCG1192	
		C 515 (A,77,93) (A,B)	CKSSYB104K10	
C 292 (A,16,134)	CKSRYB104K16			
C 293 (A,50,136)	CKSRYB105K16	C 516 (A,77,88) (A,B)	CKSSYB104K10	
C 301 (A,22,125) 10 uF	CCG1192	C 517 (A,79,96) 10 uF(A,B)	CCG1192	
C 302 (A,33,126) 10 uF	CCG1192	C 518 (A,77,95) (A,B)	CKSSYB104K10	
C 303 (A,39,127) 10 uF	CCG1192	C 519 (A,76,93) (A,B)	CKSSYB104K10	
		C 520 (A,78,91) 10 uF(A,B)	CCG1192	
C 304 (A,46,130) 10 uF	CCG1192			
C 331 (A,145,132)	CKSRYB104K16	C 521 (A,63,100) (A,B)	CKSRYB105K10	
C 332 (A,146,132)	CKSRYB104K16	C 522 (A,64,100) (A,B)	CKSRYB105K10	
C 401 (A,157,107)	CCSSCH330J50	C 523 (A,65,100) (A,B)	CKSRYB105K10	
C 402 (A,159,105)	CCSSCH6R0D50	C 602 (A,126,56)	CKSSYB103K16	
		C 603 (A,127,55)	CKSRYB105K10	
C 403 (A,162,105)	CKSSYB103K16			
		C 605 (A,99,70)	CCSSCH100D50	
		C 606 (A,99,68)	CCSSCH120J50	
		C 607 (A,98,64)	CCSSCH101J50	
		C 608 (A,112,80) 10 uF	CCG1192	
		C 661 (A,101,73)	CKSRYB105K10	
		C 701 (A,112,19)	CCSRCH221J50	

1

2

3

4

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

C 702	(A, 114, 19)	CCSRCH221J50
C 703	(A, 105, 19)	CCSRCH221J50
C 704	(A, 106, 19)	CCSRCH221J50
C 705	(A, 124, 22)	CCSRCH221J50

A

C 711	(A, 120, 14)	CKSRYB104K16
C 712	(A, 112, 16)	CKSRYB104K16
C 713	(A, 100, 16)	CKSRYB104K16
C 751	(A, 118, 114)	CKSRYB104K16
C 801	(A, 97, 127)	CKSRYB104K16

C 1001	(A, 142, 49)	CKSSYB224K6R3
C 1002	(A, 139, 51)	CKSSYB224K6R3
C 1021	(A, 132, 41)	CEVW101M16
C 1022	(A, 133, 34)	CKSSYB103K16
C 1023	(A, 140, 41)	CEVW101M16

B

C 1024	(A, 158, 72) Capacitor	CEVW221M10
C 1025	(A, 148, 71)	CKSRYB474K16
C 1026	(A, 146, 73)	CKSQYB225K10
C 1041	(A, 125, 28)	CKSRYB104K16
C 1042	(A, 124, 32)	CKSSYB102K50

C 1051	(A, 143, 55)	CKSSYB103K16
C 1052	(A, 148, 53)	CEVW101M16
C 1053	(A, 149, 43)	CKSSYB103K16
C 1054	(A, 158, 44)	CEAT102M16
C 1061	(A, 134, 6)	CKSSYB104K16

C

C 1062	(A, 127, 20)	CKSRYB105K16
C 1101	(A, 30, 83)	CKSSYB104K10
C 1102	(A, 29, 81)	CKSRYB331K50
C 1103	(A, 28, 83)	CCSRCH150J50
C 1104	(A, 28, 96)	CCSRCH150J50

C 1105	(A, 33, 96)	CKSSYB104K10
C 1106	(A, 27, 98)	CKSRYB472K50
C 1107	(A, 30, 96)	CKSRYB105K10
C 1108	(A, 30, 98)	CKSRYB391K50
C 1109	(A, 27, 81)	CKSRYB822K50

D

C 1110	(A, 22, 87)	CKSSYB104K16
C 1111	(A, 26, 96)	CKSSYB104K16
C 1112	(A, 13, 86)	CKSRYB102K50
C 1113	(A, 12, 84) 10 uF	CCG1236
C 1114	(A, 11, 81) 3 300 uF/16 V	CCH1732

C 1116	(A, 19, 93)	CKSRYB103K50
C 1117	(A, 19, 85)	CKSRYB102K50
C 1118	(A, 19, 87) 10 uF	CCG1236
C 1119	(A, 19, 89) 10 uF	CCG1236
C 1120	(A, 19, 92) 10 uF	CCG1236

E

C 1122	(A, 38, 106) 47 uF	CCG1256
C 1123	(A, 38, 103) 10 uF	CCG1236
C 1124	(A, 38, 101) 10 uF	CCG1236
C 1125	(A, 38, 99)	CKSSYB104K16
C 1126	(A, 38, 98)	CKSSYB102K50

C 1128	(A, 31, 72) 47 uF	CCG1233
C 1129	(A, 34, 73) 10 uF	CCG1236
C 1130	(A, 37, 73) 10 uF	CCG1236
C 1131	(A, 39, 72)	CKSSYB104K16
C 1132	(A, 40, 72)	CKSSYB102K50

F

C 1133	(A, 41, 72)	CKSSYB104K10
C 1301	(A, 90, 17)	CKSRYB105K10
C 1303	(A, 92, 12)	CKSRYB105K10
C 1304	(A, 96, 18)	CEVW101M16
C 1305	(A, 90, 12)	CKSSYB104K10

B**Unit Number : (A,B)****Unit Number : (C,D,E,F)****Unit Name : Keyboard Unit****MISCELLANEOUS**

IC 1801	(B, 85, 23) IC	PD6582A
IC 1802	(A, 159, 36) Remote IC	GP1UXC14RK
D 1866	(A, 63, 21) White LED	SMLXA4WBETW1(Z2)
D 1851	(A, 16, 30) LED(C,D,E,F)	SMLE12BC7T(NP)
D 1852	(A, 53, 30) LED(C,D,E,F)	SMLE12BC7T(NP)
D 1853	(A, 16, 20) LED(C,D,E,F)	SMLE12BC7T(NP)
D 1854	(A, 6, 41) LED(C,D,E,F)	SMLE12BC7T(NP)
D 1855	(A, 55, 20) LED(C,D,E,F)	SMLE12BC7T(NP)
D 1856	(A, 62, 5) LED(C,D,E,F)	SMLE12BC7T(NP)
D 1857	(A, 7, 19) LED(C,D,E,F)	SMLE12BC7T(NP)
D 1858	(A, 16, 10) LED(C,D,E,F)	SMLE12BC7T(NP)
D 1859	(A, 52, 10) LED(C,D,E,F)	SMLE12BC7T(NP)
D 1860	(A, 74, 5) LED(C,D,E,F)	SMLE12BC7T(NP)
D 1861	(A, 87, 5) LED(C,D,E,F)	SMLE12BC7T(NP)
D 1862	(A, 100, 5) LED(C,D,E,F)	SMLE12BC7T(NP)
D 1863	(A, 113, 5) LED(C,D,E,F)	SMLE12BC7T(NP)
D 1864	(A, 125, 5) LED(C,D,E,F)	SMLE12BC7T(NP)
D 1865	(A, 138, 5) LED(C,D,E,F)	SMLE12BC7T(NP)
D 1871	(A, 14, 30) LED(Red) (A,B)	SML-D12V8W(PQ)
D 1872	(A, 54, 31) LED(Red) (A,B)	SML-D12V8W(PQ)
D 1873	(A, 52, 20) LED(Red) (A,B)	SML-D12V8W(PQ)
D 1874	(A, 19, 20) LED(Red) (A,B)	SML-D12V8W(PQ)
D 1875	(A, 9, 41) LED(Red) (A,B)	SML-D12V8W(PQ)
D 1876	(A, 8, 19) LED(Red) (A,B)	SML-D12V8W(PQ)
D 1877	(A, 14, 10) LED(Red) (A,B)	SML-D12V8W(PQ)
D 1878	(A, 51, 10) LED(Red) (A,B)	SML-D12V8W(PQ)
D 1879	(A, 63, 5) LED(Red) (A,B)	SML-D12V8W(PQ)
D 1880	(A, 76, 5) LED(Red) (A,B)	SML-D12V8W(PQ)
D 1881	(A, 89, 5) LED(Red) (A,B)	SML-D12V8W(PQ)
D 1882	(A, 101, 5) LED(Red) (A,B)	SML-D12V8W(PQ)
D 1883	(A, 114, 5) LED(Red) (A,B)	SML-D12V8W(PQ)
D 1884	(A, 126, 5) LED(Red) (A,B)	SML-D12V8W(PQ)
D 1885	(A, 139, 5) LED(Red) (A,B)	SML-D12V8W(PQ)
X 1801	(B, 74, 22) Ceramic Resonator 5.00 MHz	CSS1547
S 1842	(A, 36, 20) Encoder(ROTARY COMMANDER)	CSD1168
CN1821	(B, 108, 9) Connector	CKS6287
CN1911	(A, 154, 22) Connector	CKS6267
JA 1921	(A, 153, 7) Jack	CKN1090
V 1801	(A, 138, 32) Segment LCD	CAW2018

RESISTORS

R 1801	(B, 73, 19)	RS1/10SR222J
R 1802	(B, 73, 17)	RS1/10SR222J
R 1803	(B, 144, 29)	RS1/10SR101J
R 1822	(B, 54, 24)	RS1/10SR273J
R 1825	(B, 53, 27)	RS1/10SR0R0J
R 1826	(B, 57, 29)	RS1/10SR0R0J
R 1851	(B, 18, 27) (C,D,E,F)	RS1/4SA471J
R 1852	(B, 18, 22) (C,D,E,F)	RS1/4SA821J
R 1853	(B, 48, 16) (C,D,E,F)	RS1/4SA821J
R 1854	(B, 17, 16) (C,D,E,F)	RS1/4SA681J

5		6
<u>Circuit Symbol and No.</u>		<u>Part No.</u>
R 1855 (B,22,12) (C,D,E,F)		RS1/4SA471J
R 1856 (B,48,12) (C,D,E,F)		RS1/4SA821J
R 1857 (B,56,10) (C,D,E,F)		RS1/4SA821J
R 1858 (B,140,18) (C,D,E,F)		RS1/4SA821J
R 1859 (B,57,16)		RS1/4SA221J
R 1860 (B,55,16)		RS1/4SA221J
R 1871 (B,14,26) (A,B)		RS1/4SA681J
R 1872 (B,51,16) (A,B)		RS1/4SA821J
R 1873 (B,17,20) (A,B)		RS1/4SA561J
R 1874 (B,61,10) (A,B)		RS1/4SA821J
R 1875 (B,52,10) (A,B)		RS1/4SA102J
R 1876 (B,142,18) (A,B)		RS1/4SA102J
R 1888 (B,23,7) (C,D,E,F)		RS1/10SR0R0J
R 1894 (B,65,16) (C,D,E,F)		RS1/10SR0R0J
R 1895 (B,69,17) (A,B)		RS1/10SR0R0J

CAPACITORS

C 1801 (B,147,32) 10 uF	CCG1192
C 1802 (B,95,23)	CKSRYB105K10
C 1911 (B,147,20)	CKSRYB104K50
C 1912 (B,130,27)	CKSRYB104K50



Unit Number : YWX5032

Unit Name : DVD Core Unit

MISCELLANEOUS

IC 1002 (B,15,13) Regulator IC	S-1133B50-U5
IC 1003 (B,37,11) IC	S-1200B50-M5
IC 1004 (B,64,28) IC	NJM2855DL1-33
IC 1251 (A,12,42) IC	BA5839FP
IC 1401 (B,27,41) Flash ROM Unit	CWW5043
IC 1402 (B,45,28) Flash ROM Unit	CWW5044
IC 1480 (A,64,30) SDRAM(16M)	M12L64164A-5TG2M
IC 1501 (A,39,33) IC	MN2DS0018MA
IC 1801 (B,34,16) D/A Converter	PCM1753DBQ
IC 1951 (A,28,49) Logic IC	TC7SZU04FU
IC 1953 (B,57,17) IC	S-1135D12-A6
Q 1101 (B,13,59) Transistor	LSC4081UB
Q 1102 (B,13,56) Transistor	LSC4081UB
Q 1103 (B,10,63) Transistor	2SB1132
Q 1104 (B,22,54) Transistor	2SB1132
D 1901 (B,50,10) Diode	RKZ6.8TKJ
D 1902 (B,50,9) Diode	RKZ6.8TKJ
L 1501 (A,54,31) Inductor	CTF1743
L 1511 (A,48,17) Chip Beads	VTL1126
L 1902 (A,17,17) Inductor	CTF1487
L 1903 (B,63,16) Inductor	CTF1558
L 1904 (A,68,18) Ferrite Bead	CTF1528
X 1501 (B,48,18) Oscillator 27.000 MHz	CSS1823
X 1950 (A,23,51) Oscillator 48.000 MHz	CSS1760
F 1001 (A,14,19) Chip EMI Filter	DTF1106
F 1002 (B,63,18) Chip EMI Filter	DTL1106
S 1 (A,47,55) Spring Switch(HOME)	CSN1080
S 3 (B,25,13) Spring Switch(12EJ)	CSN1081
VR1101 (A,7,63) Semi-fixed 6.8 kohm(B)	CCP1447
VR1102 (A,7,60) Semi-fixed 15 kohm(B)	CCP1449

7		8
<u>Circuit Symbol and No.</u>		<u>Part No.</u>
CN1101 (A,21,63) Connector		CKS6331
CN1952 (A,42,11) Connector		CKS6025

RESISTORS

R 1004 (B,12,20)	RS1/16SS4702D
R 1007 (B,12,21)	RS1/16SS6801D
R 1019 (B,34,7)	RS1/16SS101J
R 1025 (B,36,6)	RS1/16SS101J
R 1027 (A,40,18)	RS1/16SS101J
R 1101 (B,15,57)	RS1/16SS104J
R 1102 (B,10,56)	RS1/16SS104J
R 1103 (B,14,61)	RS1/16SS4300F
R 1104 (B,11,59)	RS1/16SS5100F
R 1105 (B,17,54)	RS1/16SS4300F
R 1106 (B,10,57)	RS1/16SS5600F
R 1109 (B,6,57)	RS1/16SS3R3J
R 1110 (B,16,54)	RS1/16SS3R3J
R 1111 (B,6,63)	RS1/10SR3R3J
R 1112 (B,5,58)	RS1/10SR3R3J
R 1113 (B,15,59)	RS1/10SR3R9J
R 1114 (B,19,57)	RS1/10SR3R3J
R 1115 (B,6,61)	RS1/10SR2R7J
R 1116 (B,6,62)	RS1/10SR2R7J
R 1117 (B,17,59)	RS1/10SR3R9J
R 1118 (B,16,59)	RS1/10SR3R9J
R 1223 (A,42,50)	RS1/16SS561J
R 1225 (B,29,8)	RS1/16SS471J
R 1251 (A,5,48)	RS1/16SS333J
R 1252 (A,5,47)	RS1/16SS473J
R 1253 (A,5,46)	RS1/16SS333J
R 1254 (A,5,45)	RS1/16SS473J
R 1255 (A,21,48)	RS1/16SS183J
R 1256 (A,21,46)	RS1/16SS752J
R 1257 (B,8,37)	RS1/16SS221J
R 1258 (A,19,39)	RS1/16SS221J
R 1401 (B,34,28)	RS1/16SS221J
R 1402 (B,34,47)	RS1/16SS104J
R 1405 (B,55,35)	RS1/16SS104J
R 1406 (B,39,45)	RS1/16SS472J
R 1480 (A,72,24)	RAB4CQ560J
R 1481 (A,72,28)	RAB4CQ560J
R 1482 (A,72,32)	RAB4CQ560J
R 1483 (A,72,35)	RAB4CQ560J
R 1484 (A,72,39)	RAB4CQ560J
R 1485 (A,55,22)	RAB4CQ560J
R 1486 (A,55,28)	RAB4CQ560J
R 1487 (A,56,37)	RAB4CQ560J
R 1488 (A,55,40)	RAB4CQ560J
R 1489 (A,54,30)	RS1/16SS560J
R 1490 (A,72,21)	RS1/16SS560J
R 1501 (B,48,21)	RS1/16SS122J
R 1503 (B,46,21)	RS1/16SS105J
R 1504 (A,50,17)	RS1/16SS121J
R 1505 (B,45,15)	RS1/16SS101J
R 1506 (B,45,14)	RS1/16SS101J
R 1507 (B,43,17)	RS1/16SS101J
R 1508 (B,42,18)	RS1/16SS221J
R 1509 (A,20,34)	RS1/16SS102J
R 1510 (A,11,29)	RS1/16SS102J

1

2

3

4

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

R 1512 (A,55,32)
 R 1513 (A,23,38)
 R 1514 (A,24,40)
 R 1516 (A,24,36)
 R 1517 (B,57,22)

RS1/16SS470J
 RS1/16SS103J
 RS1/16SS183J
 RS1/16SS104J
 RS1/16SS103J

C 1010 (B,60,23)
 C 1011 (B,64,22)
 C 1015 (A,25,7)
 C 1016 (B,64,15)
 C 1018 (B,14,21)

CKSQYB225K10
 CKSRYB105K10
 CKSSYB102K50
 CKSSYB102K50
 CKSSYB104K10

R 1518 (B,33,31)
 R 1519 (A,24,43)
 R 1522 (A,21,37)
 R 1523 (A,22,37)
 R 1524 (B,29,33)

RS1/16SS103J
 RS1/16SS102J
 RS1/16SS104J
 RS1/16SS221J
 RS1/16SS472J

C 1040 (B,51,7)
 C 1041 (B,19,11)
 C 1101 (B,14,53) 10 uF
 C 1104 (B,7,57)
 C 1105 (B,18,54)

CCSRCH821J50
 CCSRCH271J50
 CCG1192
 CKSSYB104K10
 CKSSYB104K10

R 1525 (A,24,44)
 R 1526 (A,22,40)
 R 1527 (A,35,49)
 R 1528 (B,19,34)
 R 1529 (B,35,21)

RS1/16SS103J
 RS1/16SS103J
 RS1/16SS682J
 RS1/16SS103J
 RS1/16SS103J

C 1106 (B,8,66)
 C 1107 (B,25,53)
 C 1108 (A,19,57)
 C 1109 (A,7,57)
 C 1110 (A,17,58)

CKSSYB103K16
 CKSSYB103K16
 CKSSYB103K16
 CKSRYB224K16
 CKSSYB103K16

R 1530 (B,17,34)
 R 1531 (B,33,30)
 R 1532 (A,24,42)
 R 1534 (B,29,48)
 R 1535 (A,22,44)

RS1/16SS103J
 RS1/16SS103J
 RS1/16SS101J
 RS1/16SS221J
 RS1/16SS104J

C 1111 (A,9,66)
 C 1112 (B,17,52) 22 uF
 C 1113 (B,8,58) 22 uF
 C 1210 (B,77,34)
 C 1251 (B,12,41)

CKSRYB224K16
 DCH1256
 DCH1256
 CKSSYB104K16
 CEVW101M16

R 1536 (B,32,48)
 R 1537 (A,24,46)
 R 1538 (A,55,35)
 R 1539 (B,33,48)
 R 1540 (A,26,46)

RS1/16SS104J
 RS1/16SS104J
 RS1/16SS104J
 RS1/16SS104J
 RS1/16SS221J

C 1252 (B,7,41) 4.7 uF
 C 1253 (B,7,39)
 C 1254 (A,6,38)
 C 1255 (A,18,37)
 C 1401 (B,34,27)

CCG1222
 CKSSYB104K16
 CKSSYB104K16
 CKSSYB104K16
 CKSSYB104K16

R 1541 (A,26,45)
 R 1542 (B,26,34)
 R 1543 (A,32,48)
 R 1544 (A,36,48)
 R 1546 (A,33,49)

RS1/16SS221J
 RS1/16SS103J
 RS1/16SS181J
 RS1/16SS181J
 RS1/16SS682J

C 1403 (B,39,40)
 C 1404 (B,40,40) 4.7 uF
 C 1408 (B,57,27)
 C 1409 (B,58,29) 4.7 uF
 C 1410 (B,33,29)

CKSSYB104K10
 CCG1201
 CKSSYB104K10
 CCG1201
 CKSSYB104K16

R 1601 (A,32,17)
 R 1602 (A,32,18)
 R 1603 (B,31,21)
 R 1604 (A,23,21)
 R 1605 (A,22,23)

RS1/16SS123J
 RS1/16SS123J
 RS1/16SS1002D
 RS1/16SS105J
 RS1/16SS105J

C 1480 (A,71,19)
 C 1481 (A,72,22)
 C 1482 (A,72,26)
 C 1484 (A,72,30)
 C 1485 (A,72,41)

CKSSYB104K10
 CKSSYB104K10
 CKSSYB104K10
 CKSSYB104K10
 CKSSYB104K10

R 1670 (B,40,21)
 R 1671 (B,42,19)
 R 1672 (A,39,18)
 R 1674 (A,36,17)
 R 1801 (B,41,8)

RS1/16SS1002D
 RS1/16SS2402D
 RS1/16SS2000D
 RS1/16SS3002D
 RS1/16SS104J

C 1487 (A,57,29)
 C 1488 (A,57,25)
 C 1489 (A,64,17) 10 uF
 C 1490 (A,66,18)
 C 1501 (B,61,20) 10 uF

CKSSYB104K10
 CKSSYB104K10
 CCG1192
 CKSSYB102K50
 CCG1192

R 1802 (B,43,8)
 R 1803 (B,37,13)
 R 1804 (B,39,14)
 R 1950 (A,44,18)
 R 1951 (A,42,18)

RS1/16SS104J
 RS1/16SS821J
 RS1/16SS821J
 RS1/10SR24R0F
 RS1/10SR24R0F

C 1502 (B,54,20) 10 uF
 C 1503 (A,54,33)
 C 1504 (A,53,24)
 C 1505 (A,53,27)
 C 1506 (B,52,35)

CCG1192
 CKSSYB104K10
 CKSSYB104K10
 CKSSYB104K10
 CKSSYB104K10

R 1952 (A,26,50)
 R 1953 (A,26,51)
 R 1954 (A,48,5)
 R 1955 (A,50,5)
 R 1982 (A,10,62)

RS1/16SS105J
 RS1/16SS821J
 RS1/16SS153J
 RS1/16SS153J
 RS1/16SS822J

C 1507 (A,53,36)
 C 1508 (A,53,39)
 C 1509 (A,53,42)
 C 1510 (B,51,18)
 C 1511 (A,48,18)

CKSSYB104K10
 CKSSYB104K10
 CKSSYB104K10
 CCSSCH100D50
 CKSSYB104K10

R 1983 (B,40,20)
 R 1987 (B,43,21)

RS1/16SS1000D
 RS1/16SS0R0J

C 1512 (B,45,18)
 C 1513 (A,48,48)
 C 1514 (B,45,21)
 C 1515 (A,45,18)
 C 1516 (A,43,48)

CCSSCH100D50
 CKSSYB104K10
 CKSSYB104K10
 CKSSYB104K10
 CKSSYB104K10

CAPACITORS

C 1001 (B,34,10)
 C 1002 (B,12,17)
 C 1003 (B,15,19)
 C 1004 (B,15,17) 4.7 uF
 C 1005 (B,40,11)

CKSRYB105K10
 CKSSYB104K16
 CKSSYB104K16
 CCG1201
 CKSRYB105K16

C 1517 (A,42,48)
 C 1518 (A,38,48)
 C 1519 (A,34,47)
 C 1520 (A,27,47)
 C 1521 (A,24,34)

CKSSYB104K10
 CKSSYB104K10
 CKSSYB104K10
 CKSSYB104K10
 CKSSYB104K10

5		6	7	8
<u>Circuit Symbol and No.</u>		<u>Part No.</u>		
C 1522	(A,25,38)	CKSSYB104K10		
C 1523	(A,20,46)	CKSSYB224K6R3		
C 1524	(A,20,48)	CKSSYB473K16		
C 1526	(A,24,37)	CKSSYB103K16		
C 1528	(B,30,48)	CCSSCH471J50		A
C 1601	(A,32,19)	CKSSYB103K16		
C 1602	(A,34,17)	CCSSCH101J50		
C 1603	(A,33,18)	CCSSCH101J50		
C 1604	(A,30,17)	CCSSCH680J50		
C 1605	(A,30,18)	CCSSCH680J50		
C 1606	(A,35,19)	CKSSYB104K10		
C 1607	(A,20,24) 10 uF	CCG1192		
C 1608	(A,28,18) 4.7 uF	CCG1201		
C 1609	(A,26,22)	CKSSYB104K10		
C 1612	(A,24,24)	CKSSYB104K10		B
C 1613	(A,24,25)	CKSSYB104K10		
C 1614	(A,22,24)	CKSSYB104K10		
C 1615	(A,23,26)	CKSSYB104K10		
C 1616	(A,24,27)	CKSSYB104K10		
C 1617	(B,27,28)	CKSSYB104K10		
C 1618	(A,22,29)	CCSSCH101J50		
C 1619	(A,23,30)	CKSSYB562K25		
C 1620	(B,27,30)	CKSSYB224K6R3		
C 1621	(A,22,31)	CKSSYB224K6R3		
C 1622	(A,24,31)	CKSSYB333K16		C
C 1623	(A,27,20)	CKSRYB105K10		
C 1624	(A,24,32)	CKSSYB104K10		
C 1625	(A,24,29)	CKSSYB104K10		
C 1671	(A,41,18)	CKSSYB104K10		
C 1673	(A,37,19)	CKSSYB104K10		
C 1674	(B,42,20)	CKSSYB104K10		
C 1676	(B,38,21)	CKSRYB105K10		
C 1801	(B,42,10) 4.7 uF	CCG1201		
C 1802	(B,46,10) 4.7 uF	CCG1201		
C 1803	(B,42,12)	CCSRCH182J50		
C 1804	(B,45,12)	CCSRCH182J50		D
C 1805	(B,34,13)	CKSSYB104K10		
C 1806	(B,32,13) 10 uF	CCG1192		
C 1809	(B,39,16)	CKSSYB104K10		
C 1950	(A,27,51)	CKSSYB104K10		
C 1951	(A,23,54)	CCSSCH100D50		
C 1952	(A,24,48)	CCSSCH100D50		
C 1953	(B,60,17)	CKSRYB105K10		
C 1954	(B,54,17)	CKSRYB105K10		
C 1955	(B,77,40)	CKSSYB104K16		

Miscellaneous Parts List

M 1	DVD Pickup Unit	CGY5100
*M 2	Motor Unit(CRG(L/E))	CXC4026
	Spindle Motor(SPINDLE)	EXM2002