

Pioneer

Service Manual



HTZ-121DVD

ORDER NO.
RRV4299

DVD SURROUND SYSTEM

HTZ-121DVD DCS-222K

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

Model	Type	Power Requirement	DVD Region No.	Serial No.	Remarks
HTZ-121DVD	LXE	AC 110 V to 240 V	3	&&TL#####LE	LE:Asean
HTZ-121DVD	TWXE	AC 220 V	3	&&TL#####TL	TL:Thailand
DCS-222K	YXE8	AC 220 V to 240 V	2	&&TL#####YY	YY:Europe



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SAFETY INFORMATION



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

Laser Pickup specifications and Laser characteristics

For DVD Wave length : 650 - 662 nm
 Output Power : Less than Class 1

For CD Wave length : 785 - 795 nm
 Output Power : Less than Class 1

LABEL CHECK

The following caution appears on your unit.
Location: inside of the unit

CAUTION: INVISIBLE LASER RADIATION WHEN OPEN
DO NOT STARE INTO BEAM

DANGER: INVISIBLE LASER RADIATION WHEN OPEN
AVOID DIRECT EXPOSURE TO THE BEAM

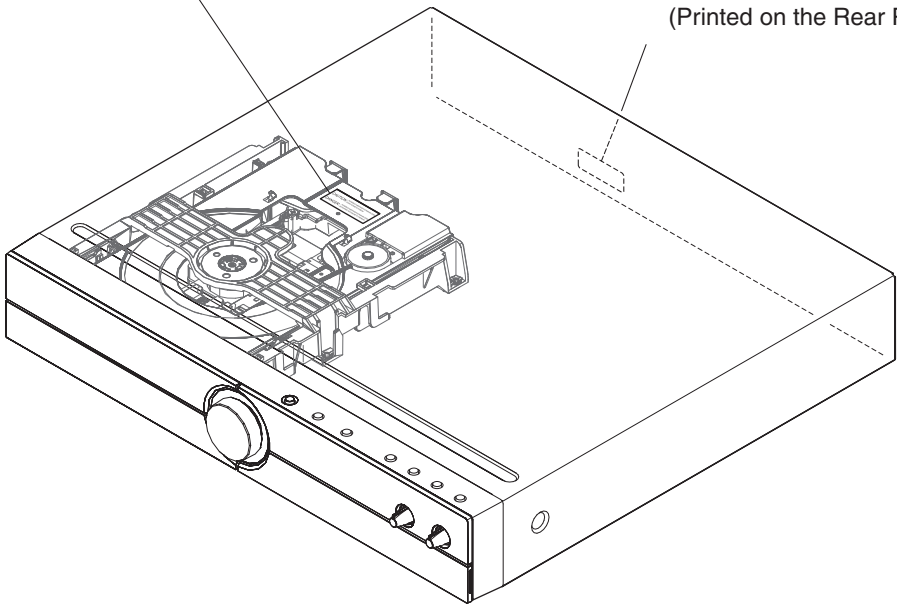
HTZ-121DVD/LXE, HTZ-121DVD/TWXE

CLASS 1
LASER PRODUCT
1 类激光产品

DCS-222K/YXE8

CLASS 1 LASER PRODUCT
APPAREIL À LASER DE CLASSE 1

(Printed on the Rear Panel)



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1. SERVICE PRECAUTIONS

1.1 NOTES ON SOLDERING

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

Do NOT use a soldering iron whose tip temperature cannot be controlled.

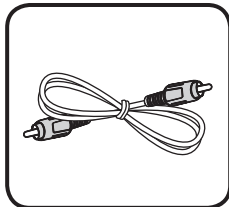
Compared with eutectic solders, lead-free solders have higher bond strengths but slower wetting times and higher melting temperatures (hard to melt/easy to harden).

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

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

2. SPECIFICATIONS

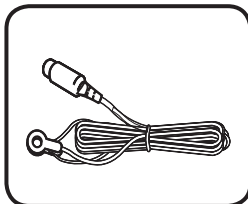
2.1 ACCESSORIES



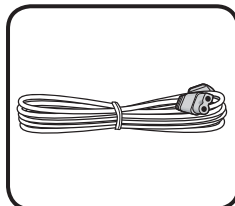
VIDEO cable
(41-UH1200-0KK1A)



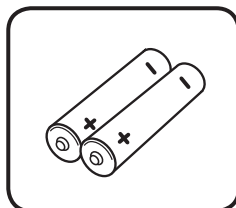
Remote Control Unit
(06-AX7653-A000 : HTZ-121DVD/LXE, HTZ-121DVD/TWXE)
(06-AX7652-A000 : DCS-222K/YXE8)



FM Antenna
(47-ANT022-XX0)

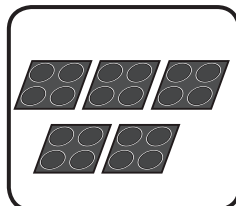


AC Power cord
(51-DC0120-0CRA3 : HTZ-121DVD/LXE, DCS-222K/YXE8)
(51-D50120-0CR03 : HTZ-121DVD/TWXE)

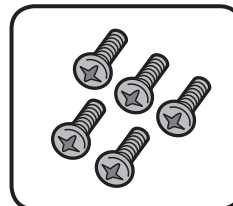


AAA/R03 dry cell batteries x2

ACCESSORIES (SPEAKER ASSY)



Non-skid pads x5



Screws M4x12 [Taping type] x5

- Operating instructions (HTZ-121DVD/LXE : 72-HTZ121-AS0B2)
(HTZ-121DVD/TWXE : 72-HTZ121-THAB1)
(DCS-222K/YXE8 : 72-DCS222-EU0B2)
- Warranty card (DCS-222K/YXE8)

2.2 SPECIFICATIONS

General

- Power requirements:
AC 110 V to 240 V, 50 Hz/60 Hz (HTZ-121DVD/LXE)
AC 220 V, 50 Hz/60 Hz (HTZ-121DVD/TWXE)
AC 220 V to 240 V, 50 Hz/60 Hz (DCS-222K/YXE8)
- Power consumption: 45 W
In Standby mode: Less than 0.5 W
- Dimensions (W x H x D):
360 mm x 64 mm x 351 mm
- Net Weight (Approx.): 2.6 kg
- Operating temperature: 5 °C to 35 °C
- Operating humidity: 5 % to 85 %
- Bus Power supply (USB):
DC 5 V 500 mA

Inputs/Outputs

- VIDEO OUTPUT:
1.0 V(p-p), 75 Ω ,sync negative, RCA jack x 1
- COMPONENT VIDEO OUT: (HTZ-121DVD)
(Y)1.0 V(p-p), 75 Ω ,sync negative, RCA jack x 1, (Pb)/(Pr) 0.7 V(p-p), 75 Ω , RCA jack x 2
- SCART OUTPUT (video) : 21pin (DCS-222K)
- HDMI OUT (video/audio):
19 pin (HDMI standard, TypeA)
- PORTABLE IN:
0.5 Vrms (3.5 mm stereo jack)
- MIC INPUT: Mic jack x 2
- USB: 4 pin A Type

Tuner

- FM Tuning Range:
87.5 MHz to 108.0 MHz

Amprifier

- Power output, (RMS), THD 30 %
Front 38 W x 2 (4 Ω)
Centre 75 W (8 Ω)
Surround 38 W x 2 (4 Ω)
Sub-Woofer 75 W (8 Ω ,Passive)

System

- Laser:Semiconductor laser
- Signal system:
Standard PAL/NTSC colour TV system

Speakers

- Front/Surround speaker (Left/Right)
Type: 1 Way
Impedance Rated: 4 Ω
Net Dimensions
(W x H x D): 95 mm x 80 mm x 90 mm
Net Weight: 0.33 kg
- Centre speaker
Type: 1 Way
Impedance Rated: 8 Ω
Net Dimensions
(W x H x D): 95 mm x 80 mm x 90 mm
Net Weight: 0.36 kg
- Subwoofer
Type: 1 Way
Impedance Rated: 8 Ω
Net Dimensions
(W x H x D): 200 mm x 340 mm x 270 mm
Net Weight: 3.4 kg

2.3 TYPES OF DISCS/FILES THAT CAN BE PLAYED

Playable Discs

DVD-Video	- DVD-Video discs - DVD-R/-RW/-R DL and DVD+R/+RW/+R DL discs recorded in the Video mode
DVD VR	DVD-R/-RW/-R DL discs recorded in the VR mode
Video CD	Video CDs (including Super VCDs)
CD(R/RW)	- Audio CDs - CD-R/-RW/-ROM discs containing music recorded in the CD-DA format
JPEG	JPEG files recorded on DVD-R/-RW/-R DL discs, CD-R/-RW/-ROM discs
DivX	DivX video files recorded on DVD-R/-RW/-R DL discs, CD-R/-RW/-ROM discs
WMA	WMA files recorded on DVD-R/-RW/-R DL discs, CD-R/-RW/-ROM discs
MP3	MP3 files recorded on DVD-R/-RW/-R DL discs, CD-R/-RW/-ROM discs

- Only the discs that have been finalized can be played.
- This unit is not compatible to CPRM.

Discs that cannot be played

- Blu-ray discs
- HD DVDs
- AVCHD
- AVCREC
- DVD-Audio discs
- DVD-RAM discs
- SACDs
- CD-G
- Discs recorded with packet writing
- Programs that can be recorded only once and that are (already) recorded on a DVD-R/-RW/-R DL

Regional Codes

This unit has a regional code printed on the rear of the unit. This unit can play only DVD discs labeled same as the rear of the unit or "All".

- Most DVD discs have a globe with one or more numbers in it clearly visible on the cover. This number must match your unit's regional code; or the disc cannot play.
- If you try to paly a DVD with a defferent regional code from your unit, the message "Incompatible disc region number Can't play disc" appears on the TV screen.

Playable files

- Only discs recorded in ISO9660 Level1, Level 2 and Joliet can be played.
- Files protected by DRM (Digital Rights Management) cannot be played.
- Files other than the ones below (WMV, MPEG4-AAC, etc.) are not guaranteed to play.

Supported video file formats

DivX

Extension: .divx .avi

Resolution: up to 720 x 480

- DivX is a media technology created by DivX, Inc. DivX media files contain image data.
- DivX files may also include such advanced playback functions as menu screens and selection of multiple subtitle languages/audio tracks.
- Files not containing DivX video signals cannot be played, even if they have the extension “.avi”.

Displaying external subtitle files

- The font sets listed below are available for external subtitle files.
- This player supports the following language groups:

Group 1	Afrikaans (af), Basque (eu), Catalan (ca), Danish (da), Dutch (nl), English (en), Faroese (fo), Finnish (fi), French (fr), German (de), Icelandic (is), Irish (ga), Italian (it), Norwegian (no), Portuguese (pt), Rhaeto-Romanic (rm), Scottish (gd), Spanish (es), Swedish (sv)
Group 2	Albanian (sq), Croatian (hr), Czech (cs), Hungarian (hu), Polish (pl), Romanian (ro), Slovak (sk), Slovenian (sl)
Group 3	Bulgarian (bg), Byelorussian (be), Macedonian (mk), Russian (ru), Serbian (sr), Ukrainian (uk)
Group 4	Hebrew (iw), Yiddish (ji)
Group 5	Turkish (tr)

- Some external subtitle files may be displayed incorrectly or not at all.
- For external subtitle files the following subtitle format filename extensions are supported (please note that these files are not shown within the disc navigation menu): .srt, .sub, .ssa, .smi
- The filename of the movie file has to be repeated at the beginning of the filename for the external subtitle file.
- The number of external subtitle files which can be switched for the same movie file is limited to a maximum of 10.

Supported image file formats

JPEG

Extension: .jpg .jpeg

- Resolution: Up to 3 072 x 2 048 pixels
- This player supports baseline JPEG.
- This player supports Exif Ver.2.2.

Supported audio file formats

- This player does not support VBR (Variable Bit Rate) and lossless encoding.

Windows Media™ Audio (WMA)

Extension: .wma

- Sampling frequencies: 32 kHz, 44.1 kHz and 48 kHz
- Bit rate: Up to 192 kbps
- This player supports files encoded using Windows Media Player Ver. 7/7.1, Windows Media Player for Windows XP and Windows Media Player 9 Series.
- Windows Media is either a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries.
- This product includes technology owned by Microsoft Corporation and cannot be used or distributed without a license from Microsoft Licensing, Inc.

MPEG-1 Audio Layer 3 (MP3)

Extension: .mp3

- Sampling frequencies: 32 kHz, 44.1 kHz and 48 kHz
- Bit-rates: 128 kbps or higher recommended
- This Player supports ID3 tag Ver1.1.

Compatible USB Devices

- MP3 Player: Flash type MP3 player.
- USB Flash Drive: Devices that support USB 2.0 or USB 1.1.
- The USB function of this unit does not support some USB devices.

USB device requirement

- Devices which require additional program installation connected to a computer, are not supported.
- Do not extract the USB device while in operation.
- For a large capacity USB, it may take longer than a few minute to be searched.
- To prevent data loss, back up all data.
- If you use a USB extension cable or USB hub, the USB device is not recognized.
- Using NTFS file system is not supported. (Only FAT(16/32) file system is supported.)
- This unit is not supported when the total number of files is 600 or more.
- External HDD, Card readers, Locked devices, or hard type USB devices are not guaranteed to support.
- USB port of the unit cannot be connected to PC. The unit can not be used as a storage device.
- Some copyright-protected files cannot be played.
- The maximum displayable number of characters for the folder and file names on the Disc Navigator is 14.
- The order of the folder and file names displayed on the Disc Navigator is dependant on the time and date when the folders or files were created on the USB device.

Trademarks and Licences

A



HDMI, the HDMI Logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

B



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



Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic", and the double-D symbol are trademarks of Dolby Laboratories.

C



DivX®, DivX Certified® and associated logos are trademarks of Rovi Corporation or its subsidiaries and are used under license.

This product includes technology owned by Microsoft Corporation and cannot be used or distributed without a license from Microsoft Licensing, Inc.

D

E

F

3. BASIC ITEMS FOR SERVICE

3.1 CHECK POINTS AFTER SERVICING

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

No.	Procedures	Check points
1	Confirm the firmware version on Test Mode.	The version of the firmware must be latest. Update firmware to the latest one, if it is not the latest.
2	Confirm whether the customer complain has been solved. If the customer complain occurs with the specific disc, use it for the operation check.	The customer complain must not be reappeared. Video, audio and operations must be normal.
3	Play back a CD. (track search)	Audio and operations must be normal.
4	Play back a DVD. (Menu operation, Title/chapter search)	Video, audio and operations must be normal.
5	Check the tuner (FM) operations.	Audio and operations (station search etc.) must be normal.
6	Check the appearance of the product.	No scratches or dirt on its appearance after receiving it for service.

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

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

Note

If checking audio output of the unit without an original speaker, please order GGP1199 (Speaker cable jig).
It is possible to connect a normal speaker to the unit by using GGP1199.

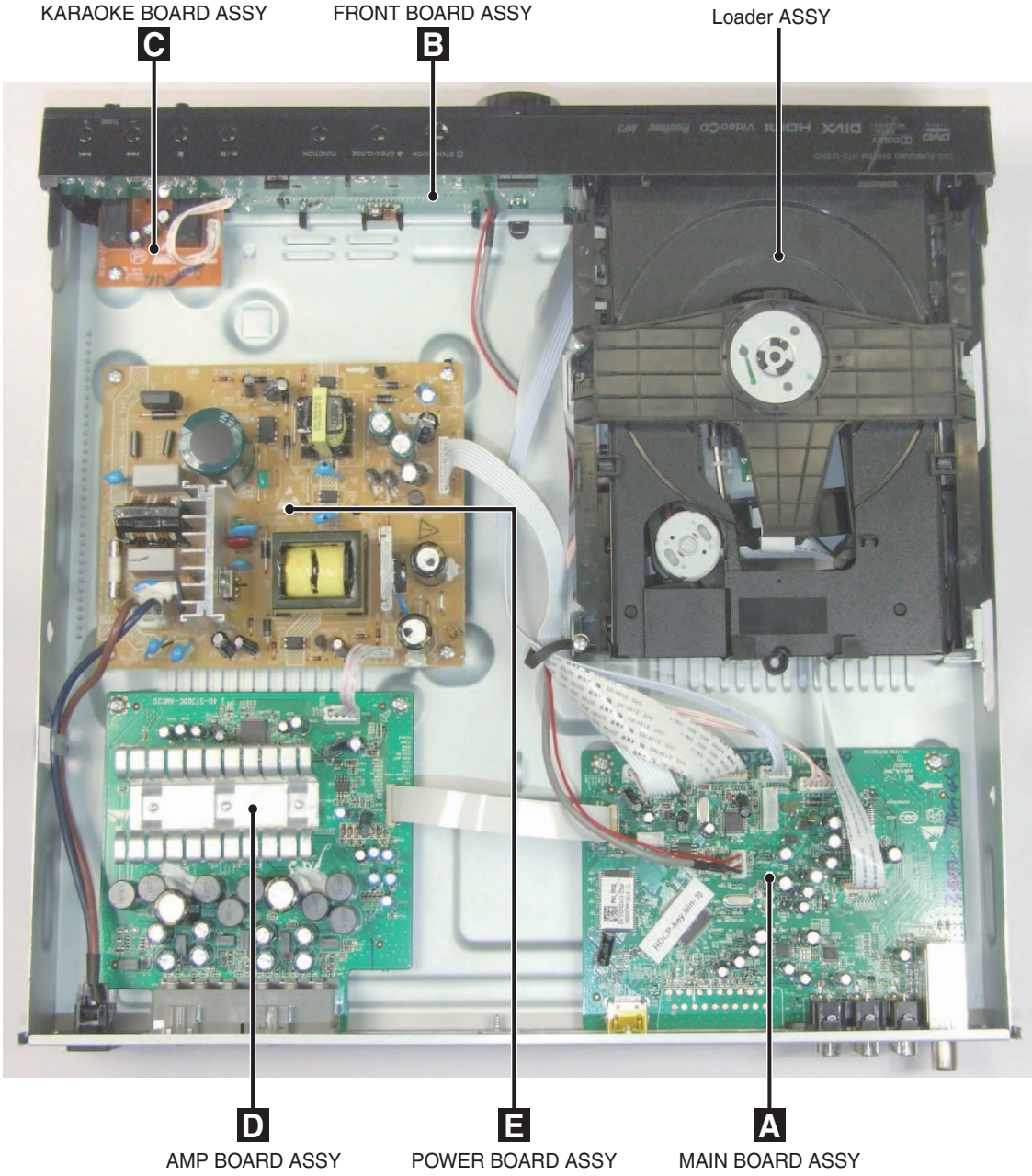
Cleaning



Be sure to clean the following positions by using the prescribed cleaning tools shown below as occasion demands.

Position to be cleaned	Name	Part No.	Remarks
Pickup lenses	Cleaning liquid	GEM1004	Refer to "7. DISASSEMBLY".
	Cleaning paper	GED-008	

3.2 PCB LOCATIONS



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

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
LIST OF ASSEMBLIES				⚠	1..	POWER BOARD ASSY (HTZ-121DVD/LXE, DCS-222K/YXE8)	08-DCS222-PW0
	1..	MAIN BOARD ASSY (HTZ-121DVD/LXE)	08-HTZ121-MA0	⚠	1..	POWER BOARD ASSY (HTZ-121DVD/TWXE)	08-P075HE-PW1
	1..	MAIN BOARD ASSY (HTZ-121DVD/TWXE)	08-H89GAU-MA1R		1..	Loader ASSY	08-LT3CMP-242230
	1..	MAIN BOARD ASSY (DCS-222K/YXE8)	08-DCS222-MA0				
	1..	FRONT BOARD ASSY	08-DCS222-FB0				
	1..	KARAOKE BOARD ASSY	08-DCS222-KU0				
	1..	AMP BOARD ASSY (HTZ-121DVD/LXE, DCS-222K/YXE8)	08-DCS222-AM0				
	1..	AMP BOARD ASSY(HTZ-121DVD/TWXE)	08-S301B6-AM1				

3.3 JIGS LIST

Name	Jig No.	Remarks
Service Remote Control Unit	GGF1381	Service Mode
DVD Test Disc (DVD-Video,NTSC)	GGV1025	Diagnosis
DVD Test Disc (DVD-Video,PAL)	GGV1101	Diagnosis
CD Test Disc	STD-905	Diagnosis
Speaker cable for AMP output check	GGP1199	AMP Check

A

B

C

D

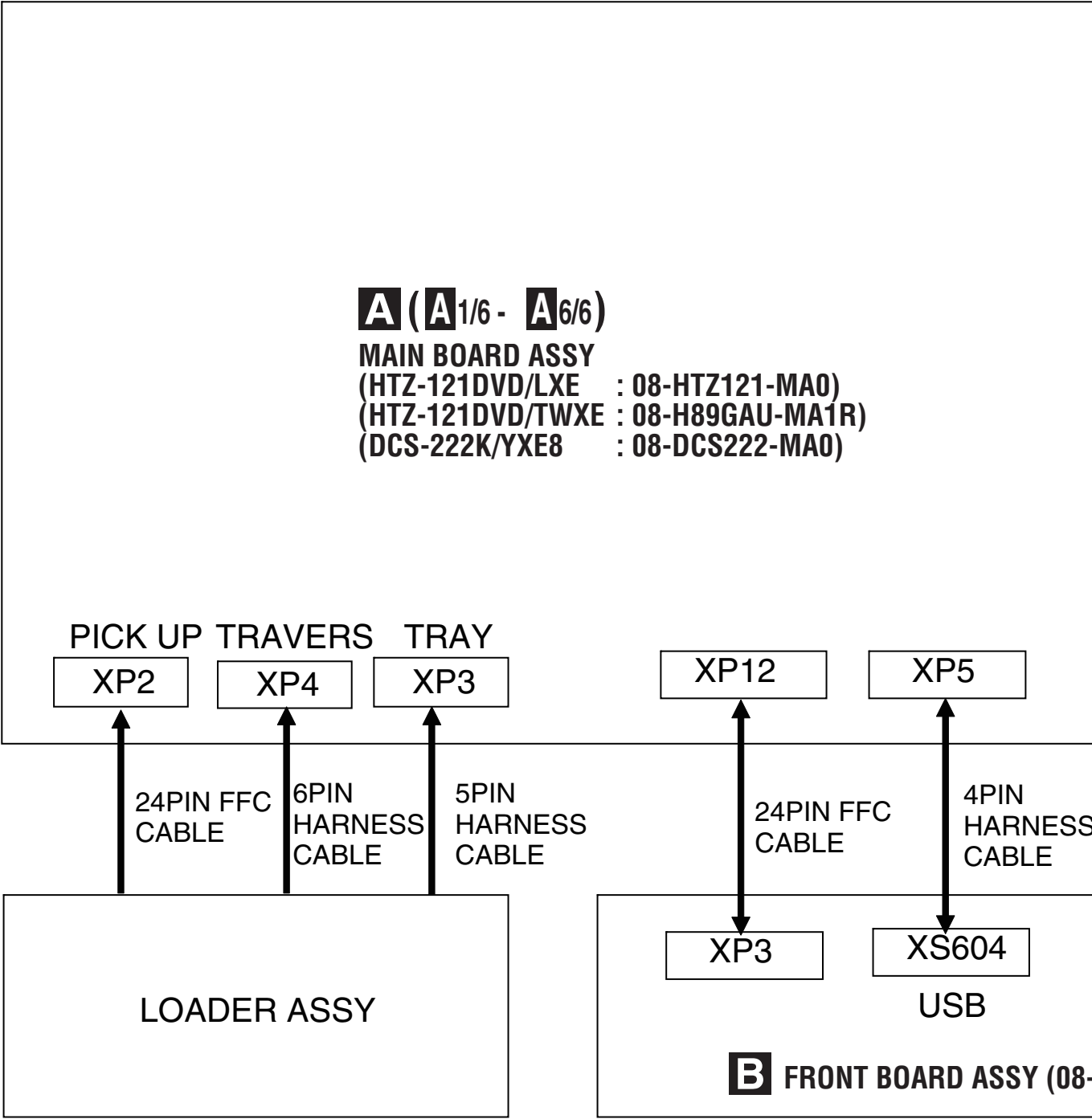
E

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4. BLOCK DIAGRAM

4.1 OVERALL CONNECTION DIAGRAM

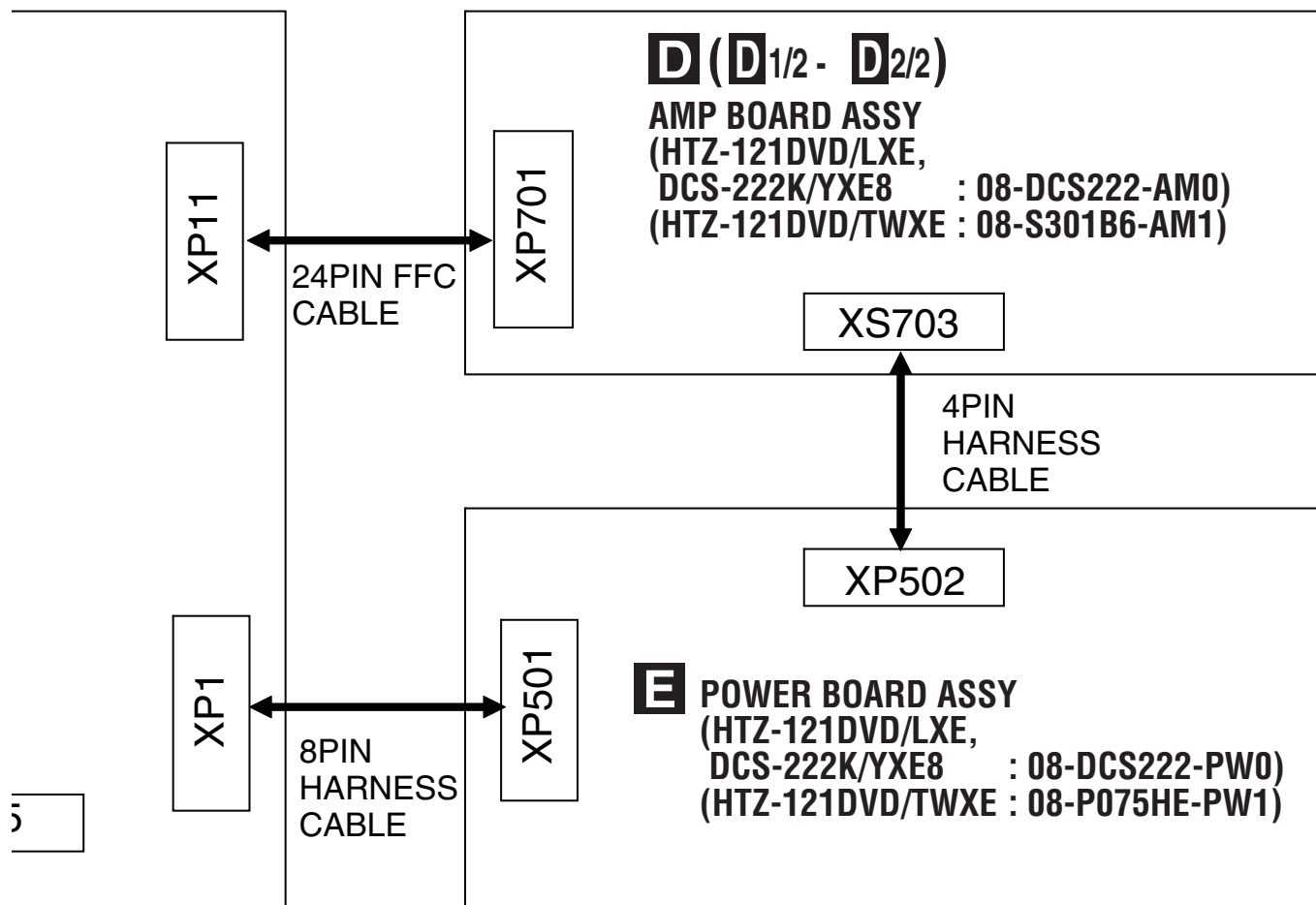
A



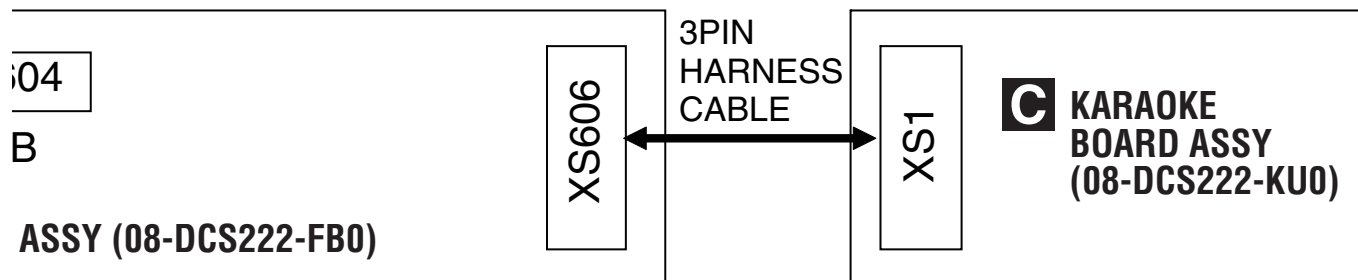
D

E

F

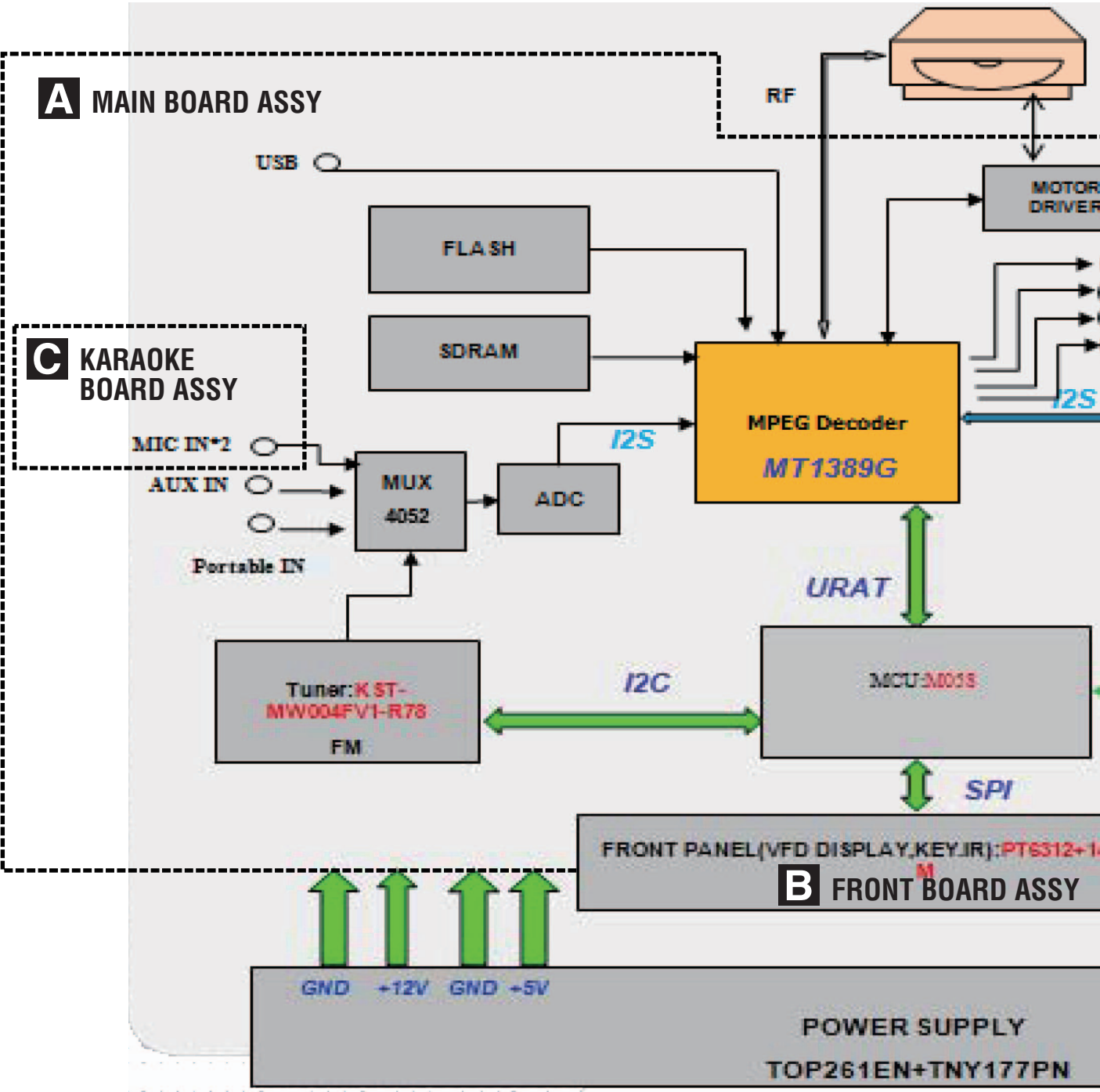


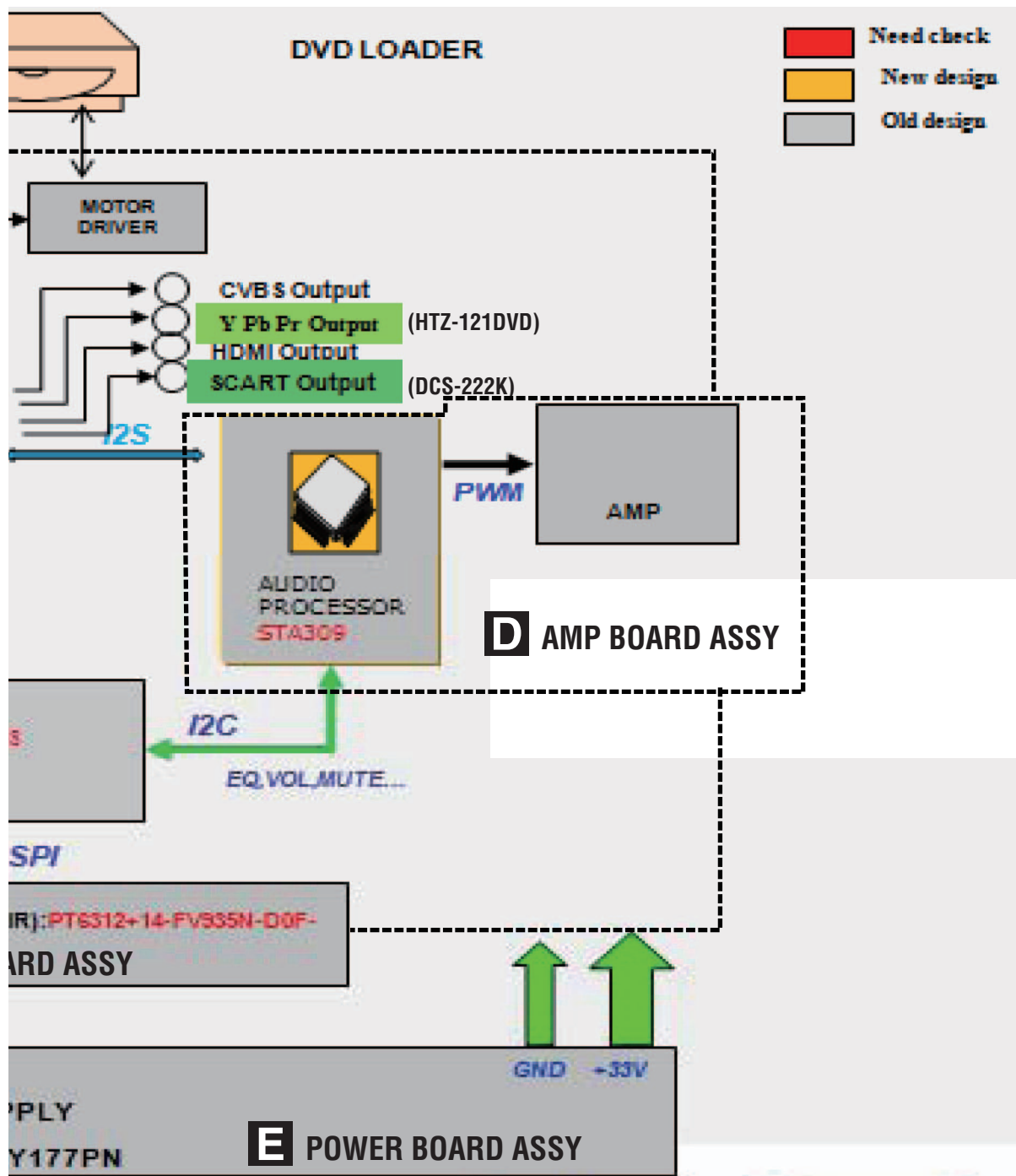
4PIN
HARNESS
CABLE



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

4.2 BLOCK DIAGRAM

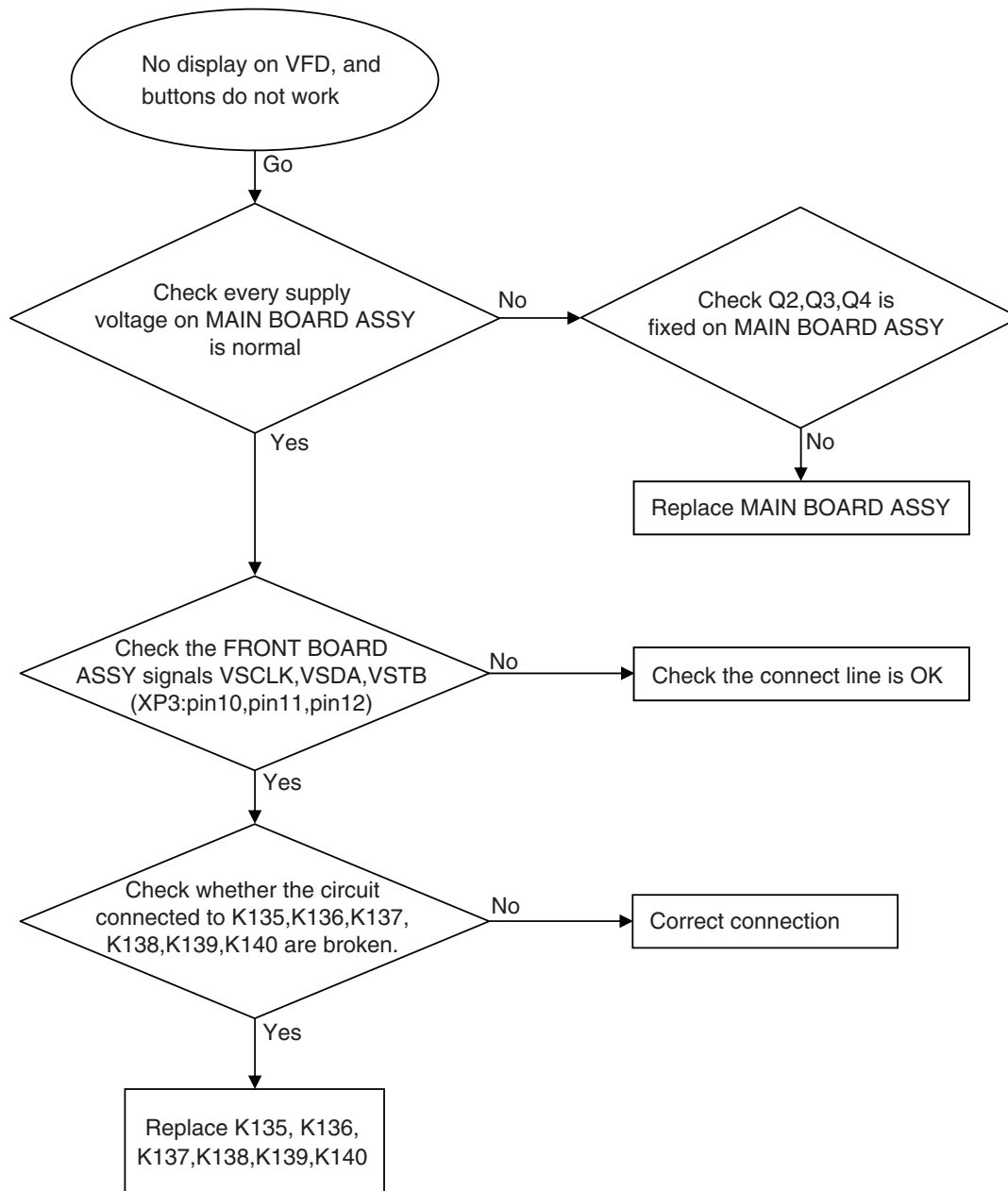




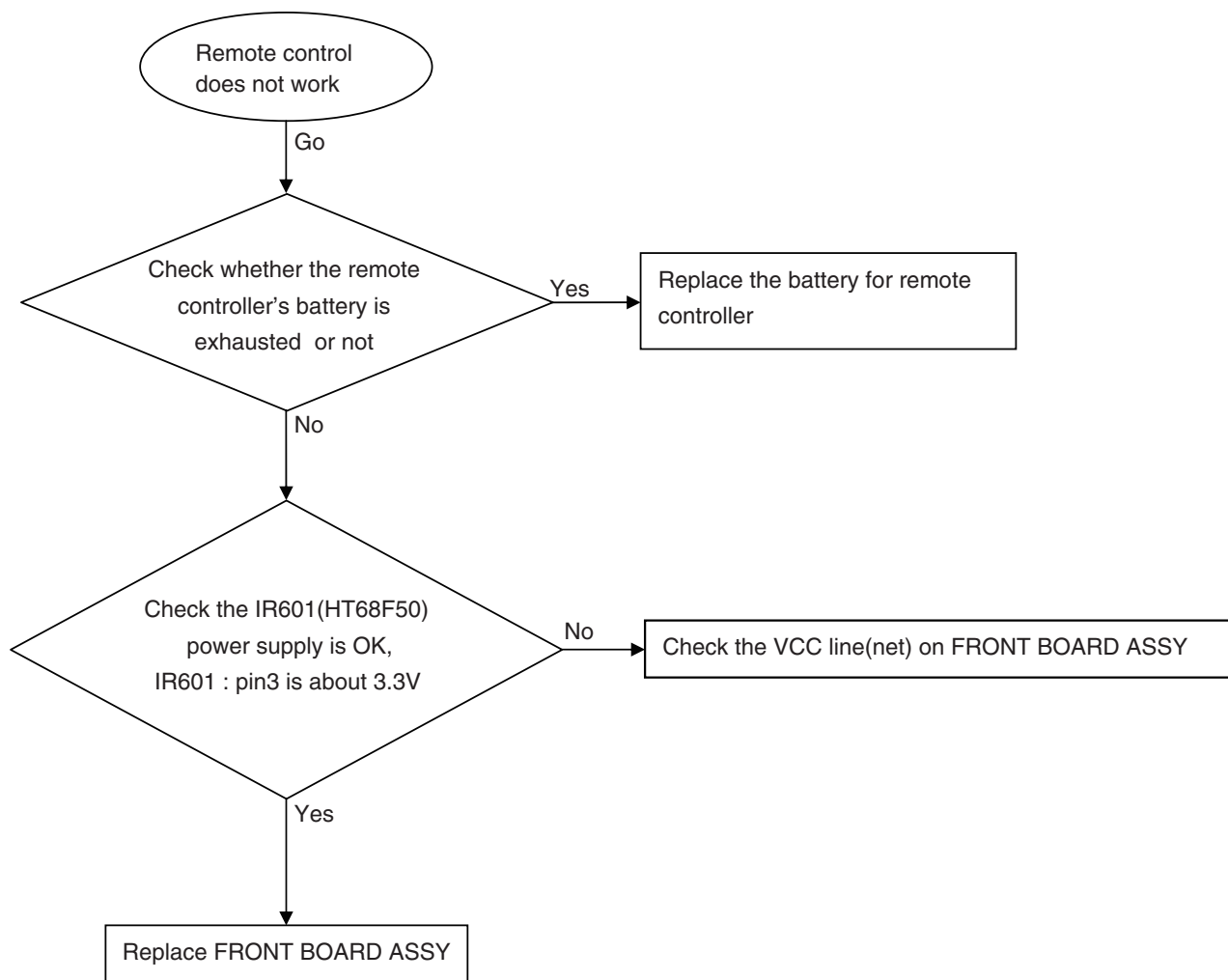
5. DIAGNOSIS

5.1 DIAGNOSIS FLOWCHART

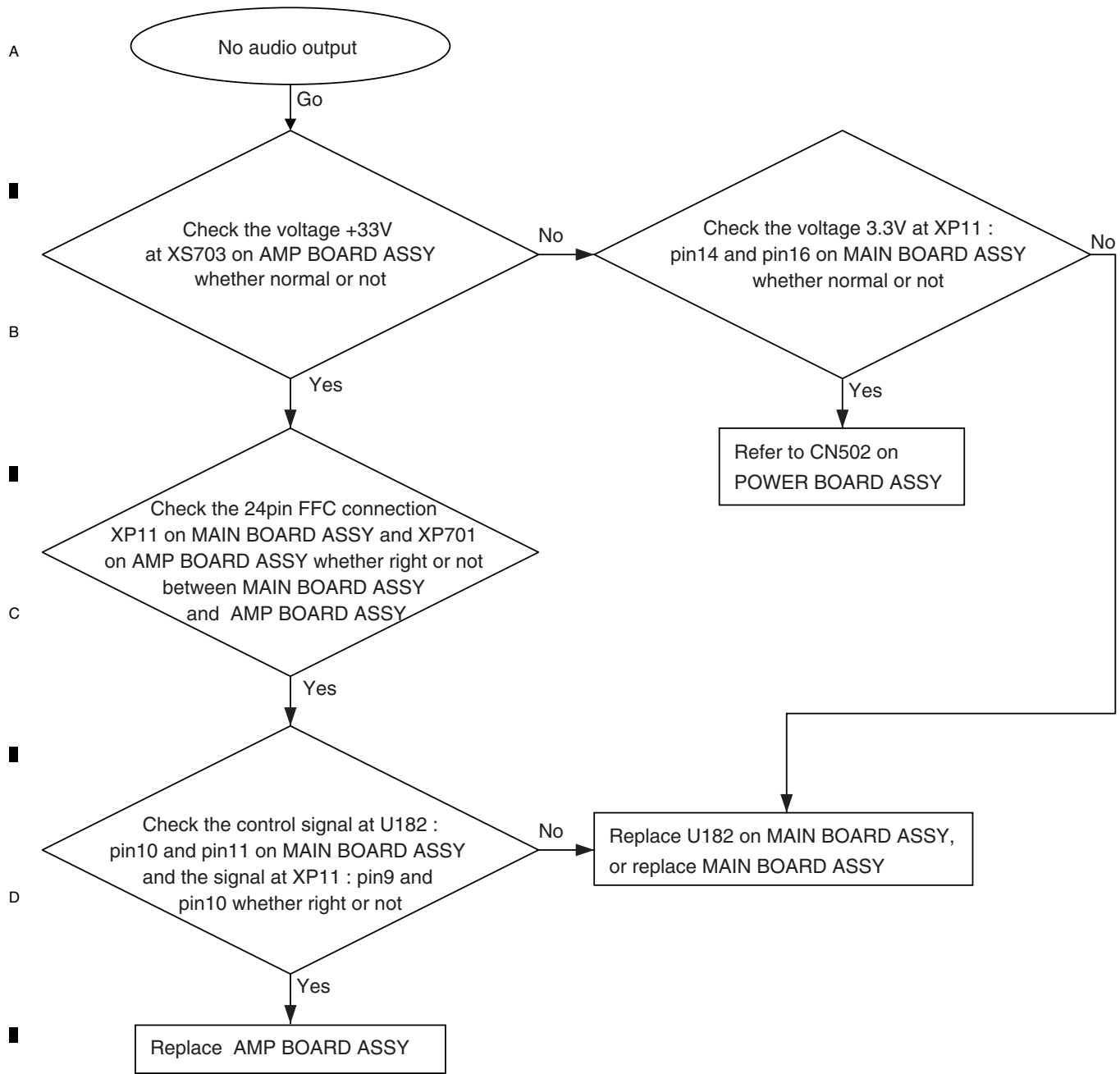
1) No display on VFD, and buttons do not work



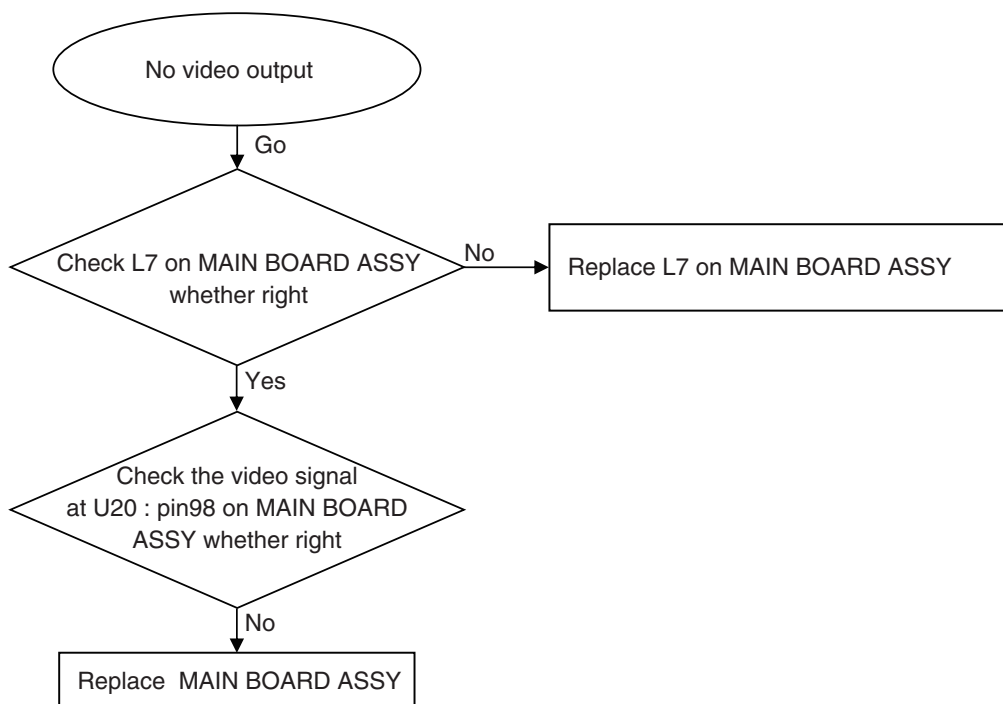
2) Remote control does not work



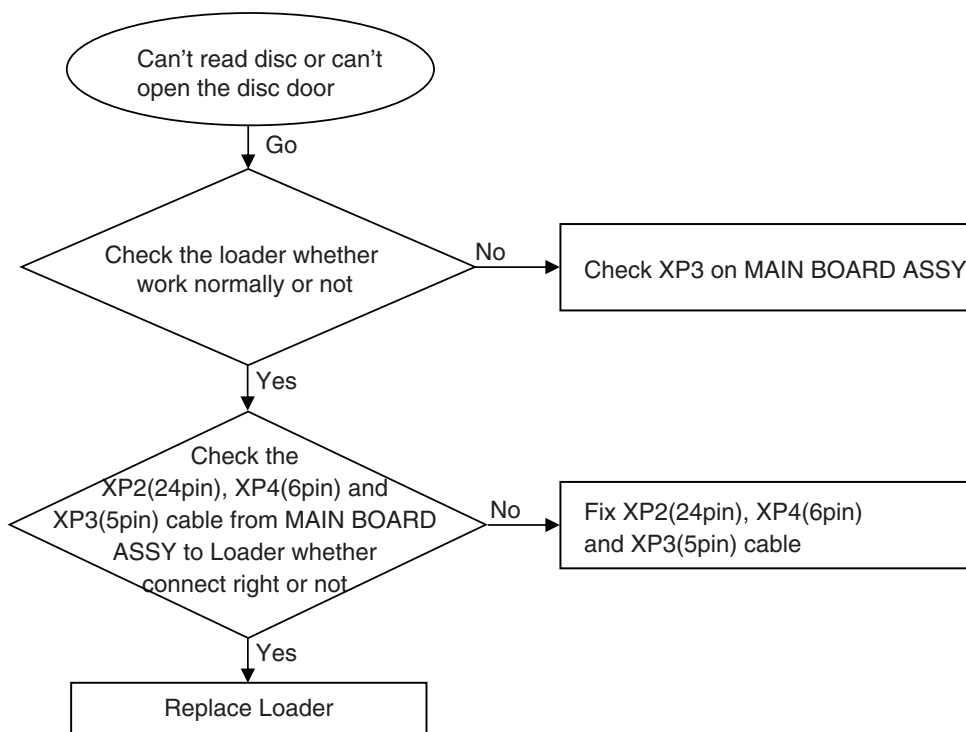
3) No audio output



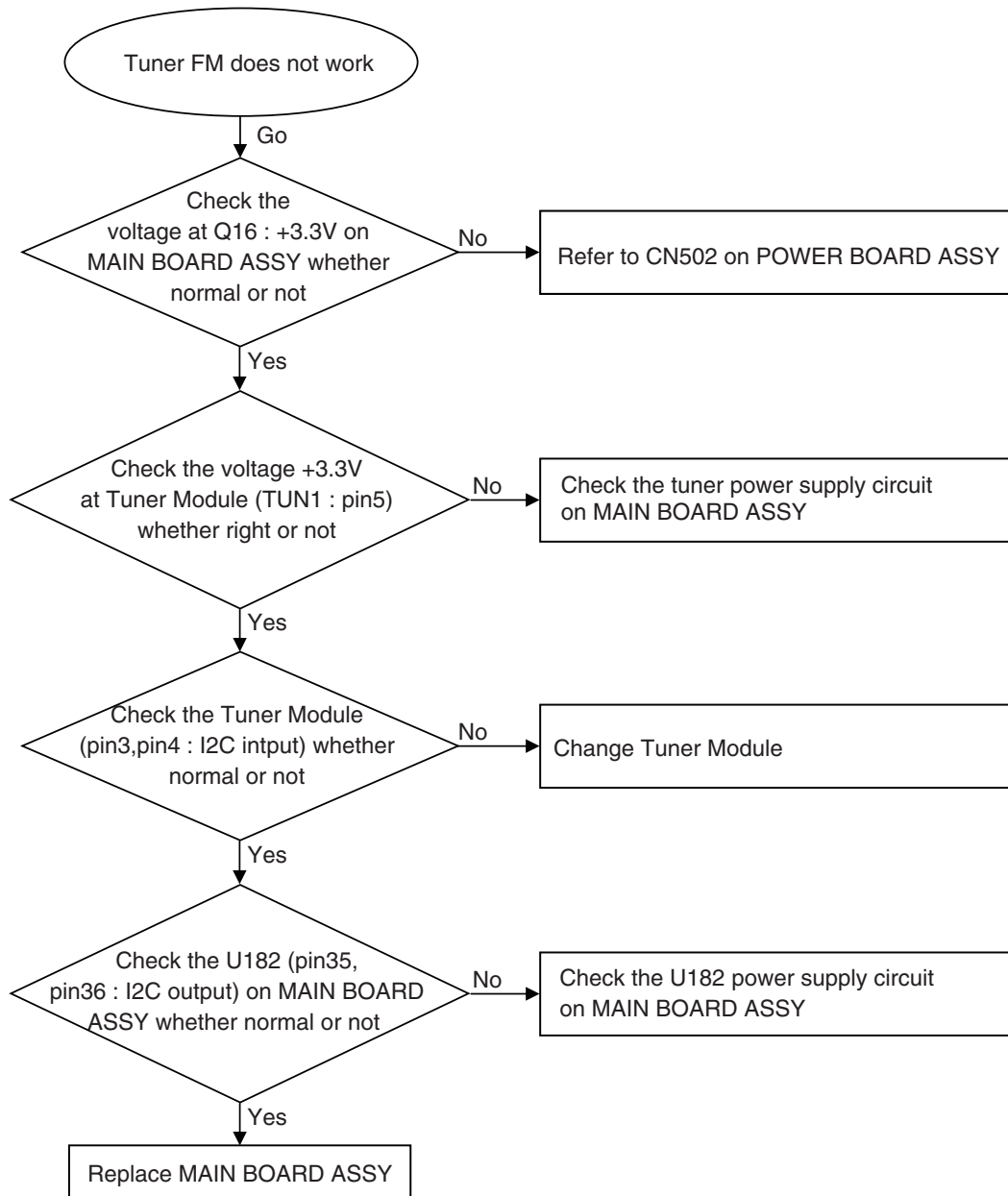
4) No video output



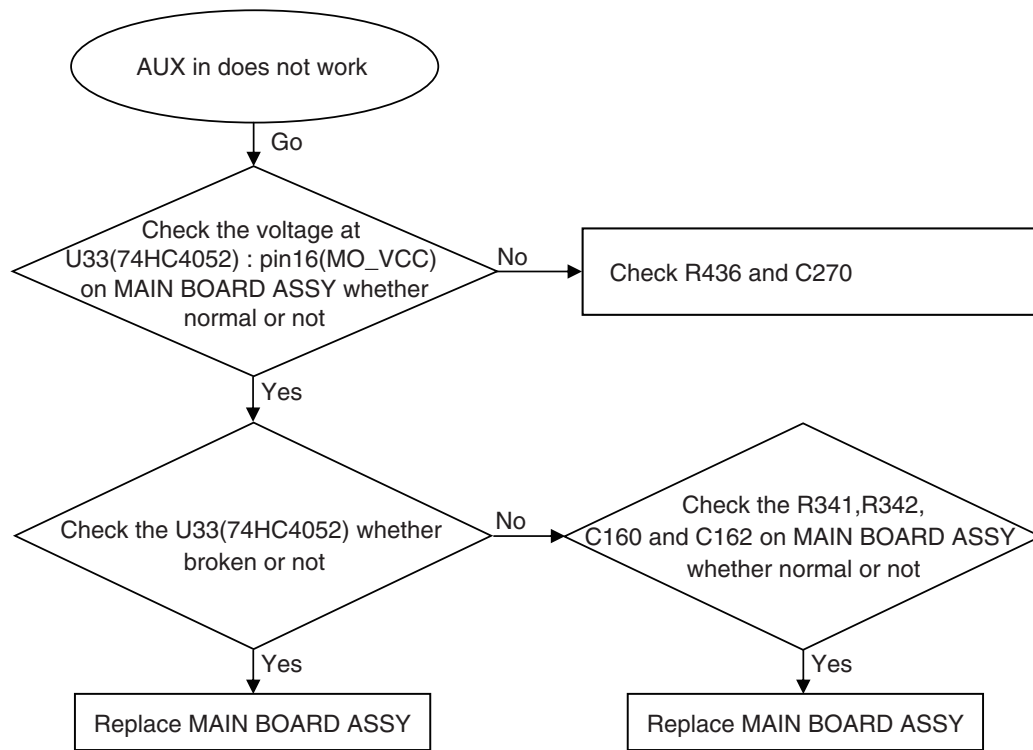
5) Can't read disc or can't open the disc door



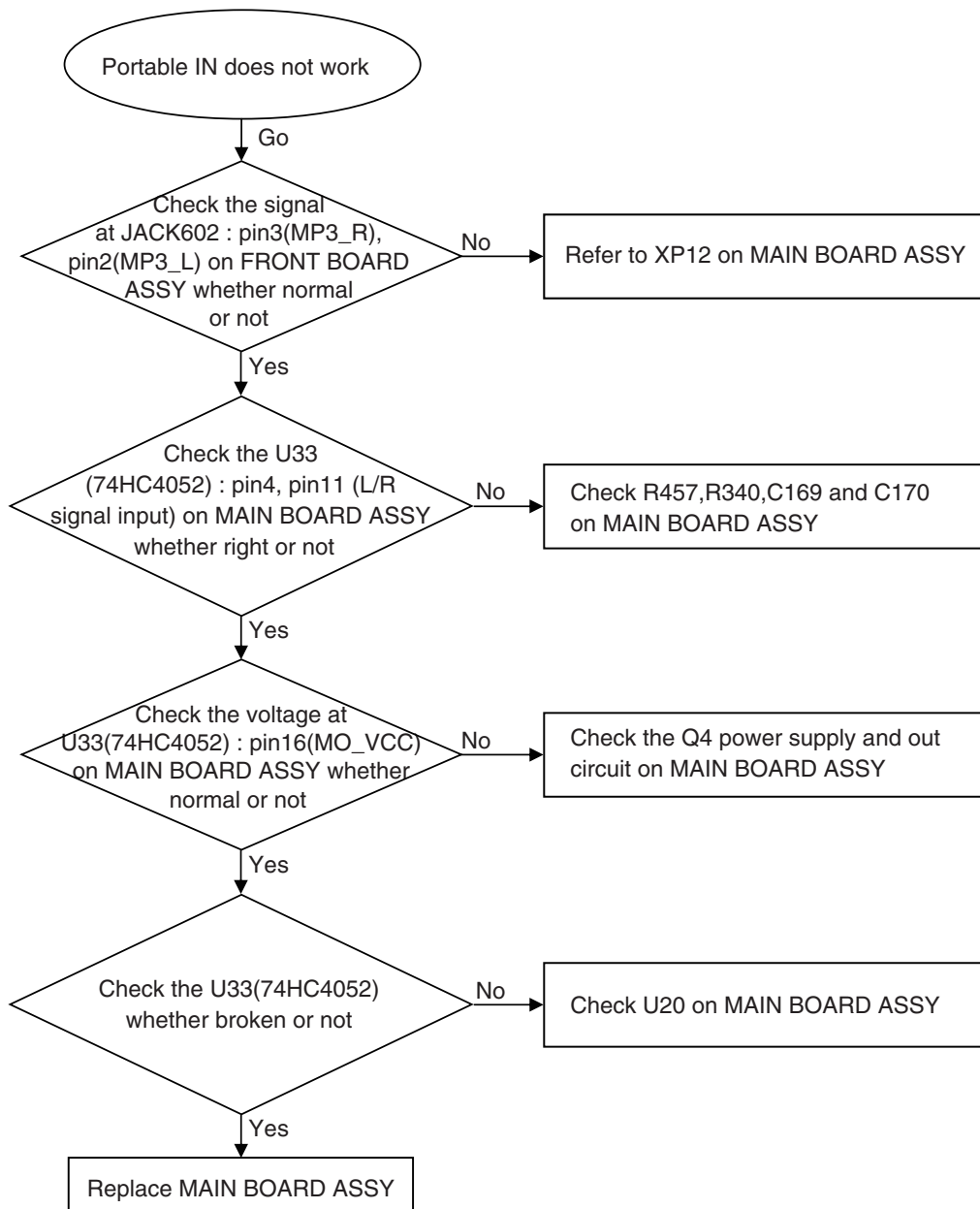
6) Tuner FM does not work



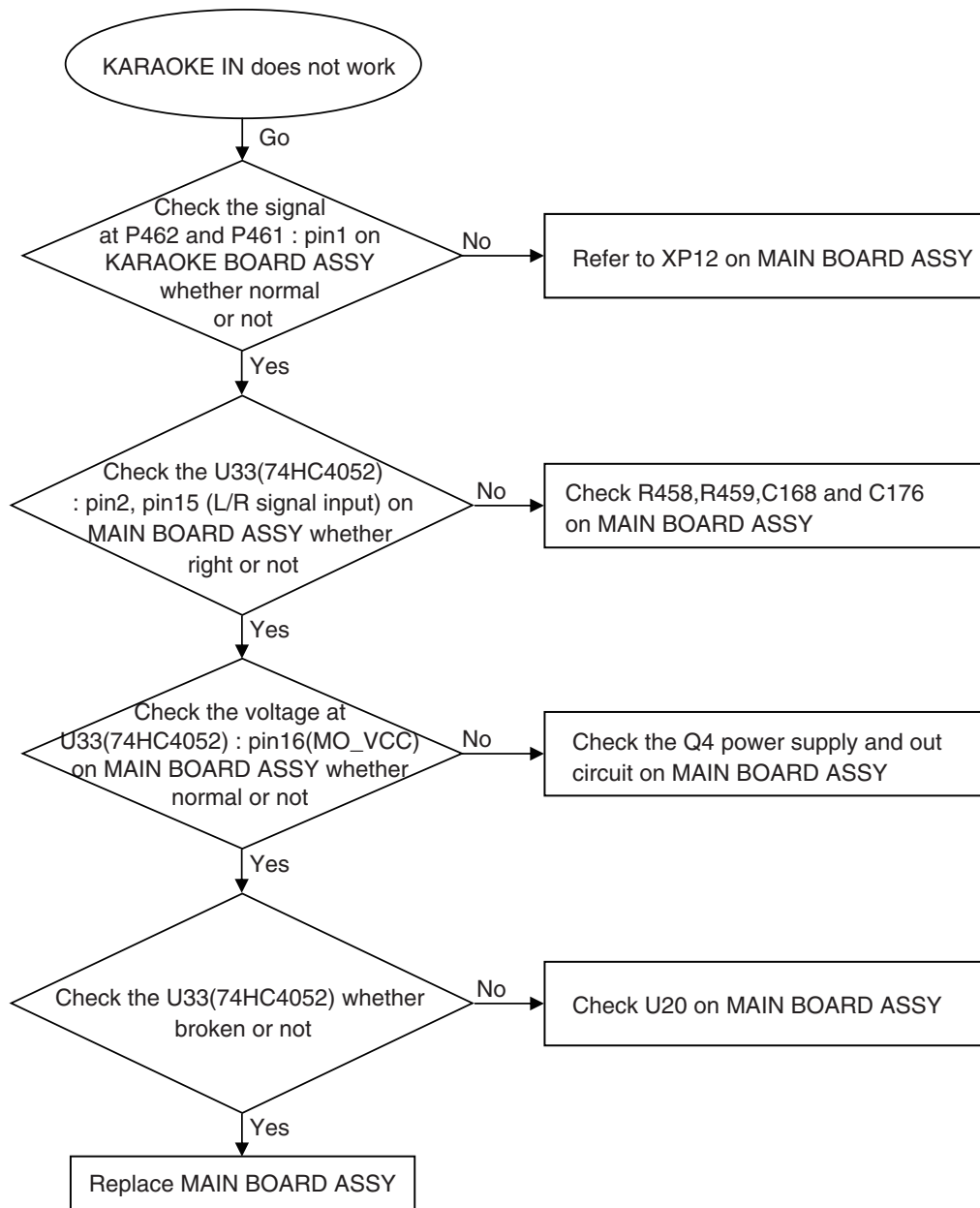
7) AUX in does not work



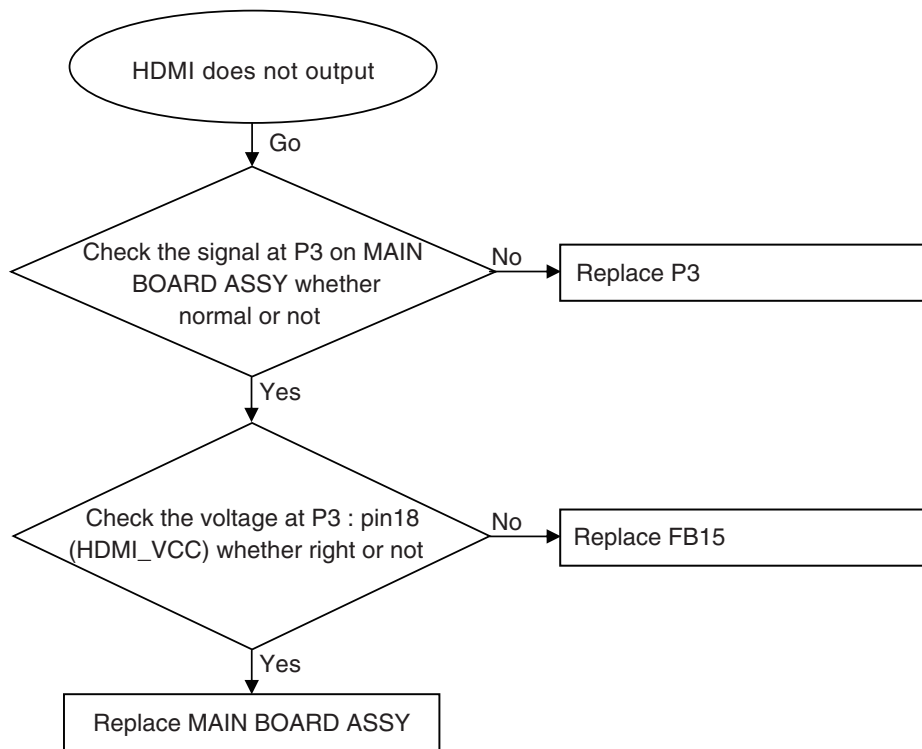
8) Portable IN does not work



9) KARAOKE IN does not work



10) HDMI does not output



Only during normal playback, the following shortcut keys can be assigned by pressing a required key after pressing the ESC key of the remote control unit. To quit, press the ESC key

Command Contents	Condition	Remote Control Key Name
Calculation of the average error rate (DVD and CD)		5(*1)
Progressive OFF	Only for progressive model	PREV
Progressive ON		NEXT
Display during Service Mode (error rate indication,etc)		CHP/TIM(*1)
Model information indication		CHAP(*1)

*1 : Service remote control unit

• Calculation of the average error rate

To calculate of the average error rate, press the 5 key while holding the ESC key pressed.
To quit, press the ESC key.

The average of the last eight error rates is calculated and indicated in exponential notation.
After the calculation is completed, if the resulet is OK, "OK" is displayed on screen.
If the result is NG, the disc tray will open automatically (for both DVDs and CDs).
For DVDs: OK with 5.0e-4 or less, for CDs: OK with 7.6e-3 or less

• Display during Service Mode

To enter Service Mode, press the CHP/TIM key while holding the ESC key pressed.
To quit, press the ESC key.

Service Mode display

- ① ID Address
 - ② Error rate (always displayed), in exponential notation
- ERROR RATE : * * * * *
(* * * *)

↑
Number of error

- Calculation of the average error rate
- For DVDs: OK with 5.0e-4 or less, for CDs: OK with 7.6e-3 or less
- ex) For DVDs

• Step 1	• Step 2
△△e-□	△△ e -4
△△ e -6 : OK	3.0e -4 : OK
△△ e -5 : OK	4.0e -4 : OK
△△ e -4 : Refer to Step 2	5.0e -4 : OK
△△ e -3 : NG	6.0e -4 : NG
△△ e -2 : NG	7.0e -4 : NG

③ EDC/ID error history (ID Address, EDC/ID errors, last eight errors)

Note:
* Error of AV1 is not supported in this player.

Indication plan contents

①

②

SERVICE MODE	ADDRESS	/ EDC	/ ID	/ AV
□□□□□□	□□□□□□	□□	□□	
□□□□□□	□□□□□□	□□	□□	
	□□□□□□	□□	□□	
	□□□□□□	□□	□□	
	□□□□□□	□□	□□	
	□□□□□□	□□	□□	
	□□□□□□	□□	□□	
	□□□□□□	□□	□□	

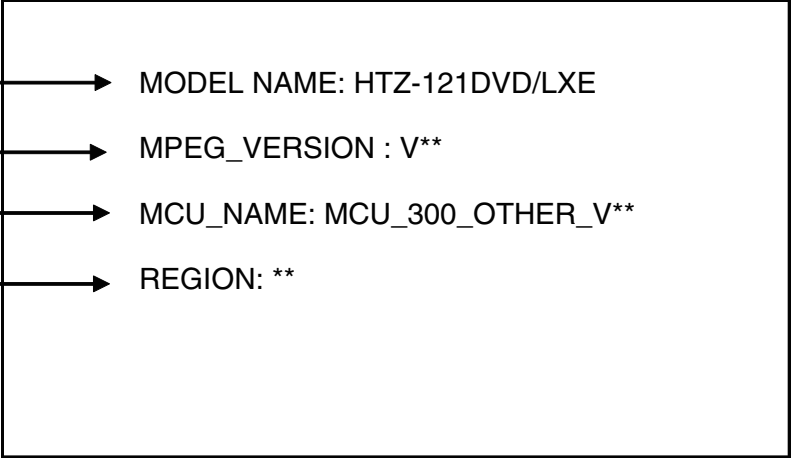
③

Character in bold : Item name
□ : Information display

• Indication of model information (ESC + CHAP keys)

To display model information, press the CHAP key while holding the ESC key pressed.

To quit, press the ESC key.

- 
- ① → MODEL NAME: HTZ-121DVD/LXE
- ② → MPEG_VERSION : V**
- ③ → MCU_NAME: MCU_300_OTHER_V**
- ④ → REGION: **

① : MODEL NAME

② : MPEG Software Version

③ : MCU Software Name and Version

(*) : MCU Software is different by model.

After upgrading MCU Software, please confirm MODEL_NAME and MCU_NAME by necessity.

④ : DVD REGION NUMBER

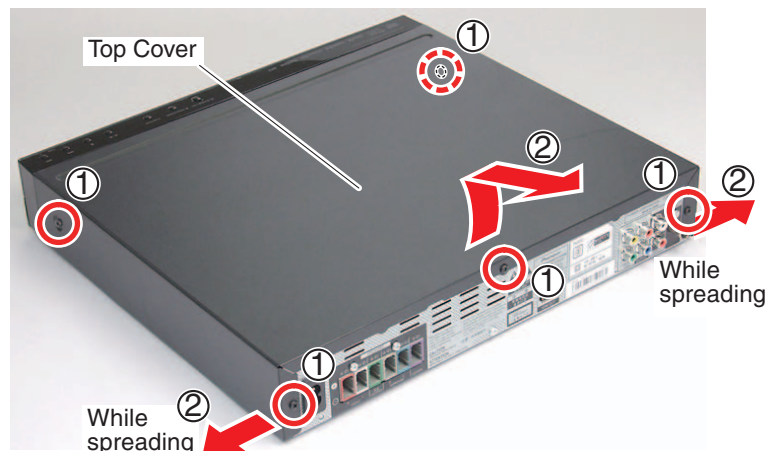
7. DISASSEMBLY

Note 1 : Do NOT look directly into the pickup lens. The laser beam may cause eye injury.

Note 2 : Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

[1] Top Cover

- (1) Remove the five screws.
(63-B30060-3H3)
- (2) Remove upward the Top Cover while spreading the rear side of Top Cover.

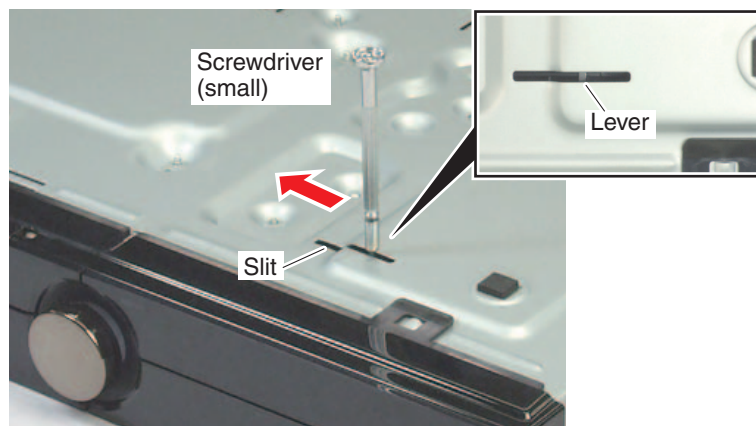


• How to open the Tray when the power cannot be turned on

If the Tray is not opened and the disc cannot be pulled out by operating ▲ OPEN/CLOSE button, open the Tray forcibly in the method shown below.

Insert a Screwdriver (small) into the Slit located at the bottom of the unit, and slide the Lever in the direction of the arrow, as indicated in the photo.

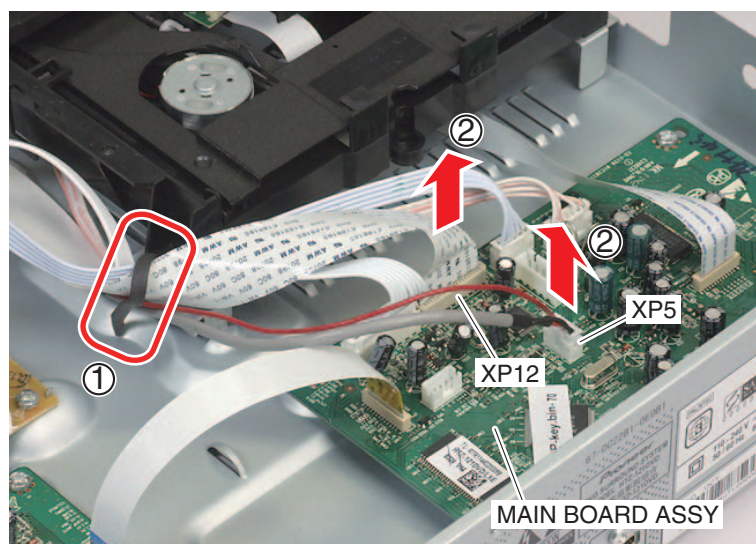
If the Tray is unlocked, slide it out by hand.



• Bottom view

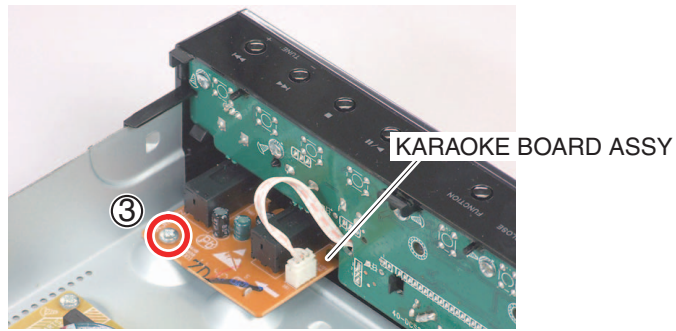
[2] Front Cabinet Section

- (1) Release the jumper wires from the Binder.
- (2) Disconnect the two connectors (XP5, XP12) from the MAIN BOARD ASSY.



- (3) Remove the screw. (63-B30070-3H4)

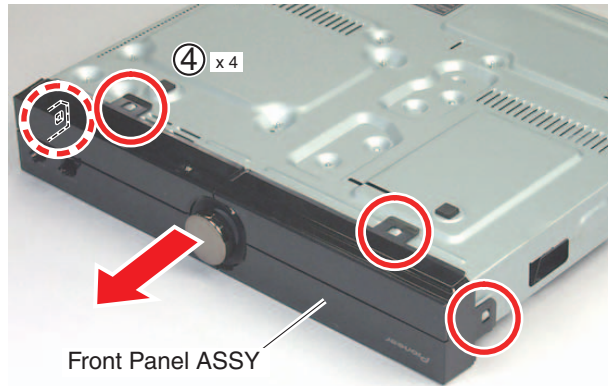
A



• Bottom view

- (4) Unhook the four hooks of the Front Panel ASSY and remove the Front Cabinet Section.

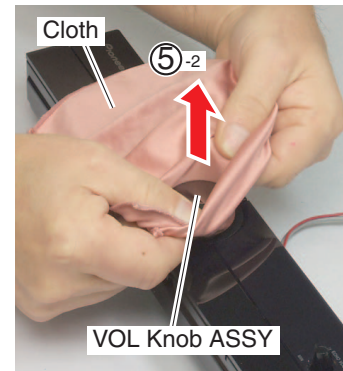
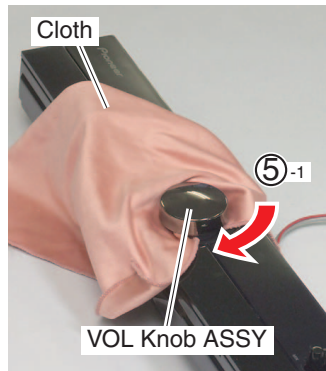
B



- (5) Remove the VOL Knob ASSY.

Note: The VOL Knob ASSY is difficult to remove. Wrap a piece of Cloth around the Knob for better grip, fitting one edge of the Cloth into the gap behind the Knob, then pull it straight out.

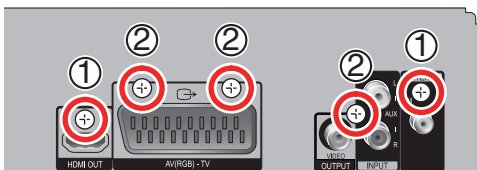
D



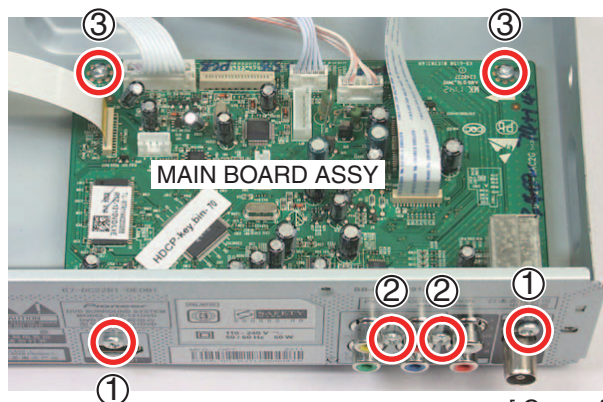
[3] MAIN BOARD ASSY and AMP BOARD ASSY

- (1) Remove the two screws on the rear side. (64-B30040-304)
 (2) Remove the screws on the rear side.
 [HTZ-121DVD: two screws]
 [DCS-222K: three screws]
 (63-B30070-3H4)

E



[Case of DCS-222K]



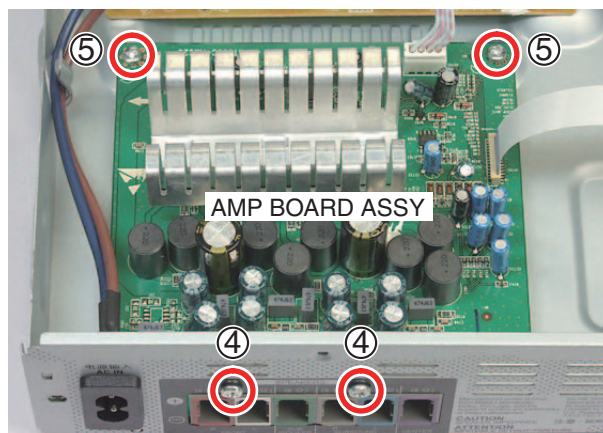
[Case of HTZ-121DVD]

- (3) Remove the two screws (63-B30070-3H4) of the MAIN BOARD ASSY.

F

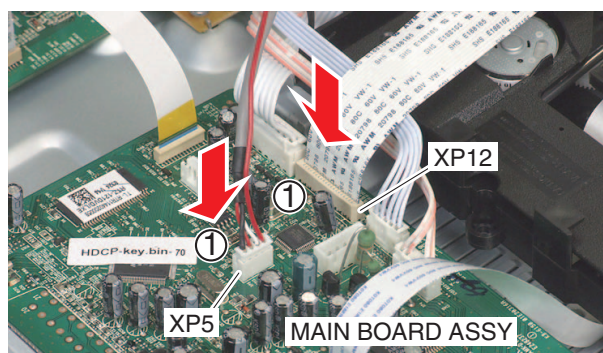


- (4) Remove the two screws on the rear side.
(63-B30070-3H4)
- (5) Remove the two screws (63-B30070-3H4) of
the AMP BOARD ASSY.

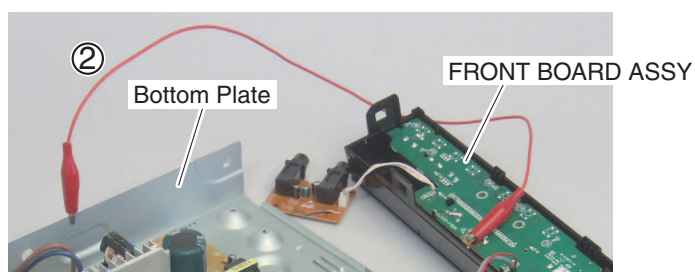


[4] Diagnosis

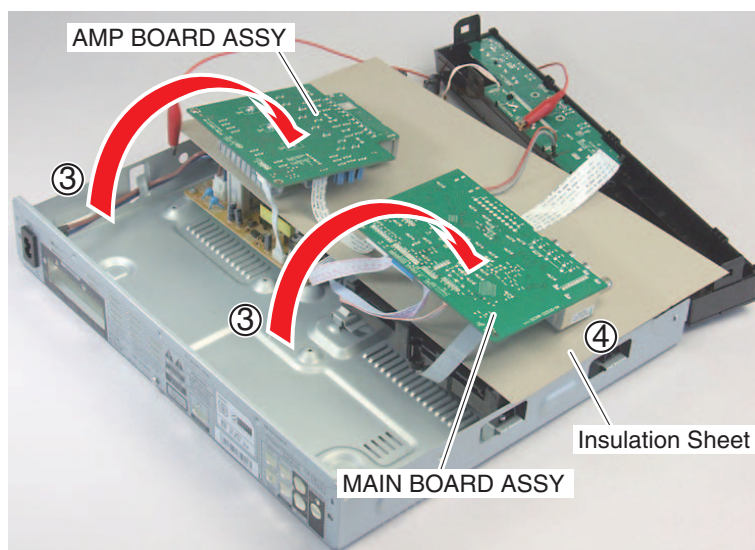
- (1) Connect the two cables of the FRONT
BOARD ASSY to the MAIN BOARD ASSY.



- (2) Connect the FRONT BOARD ASSY to the
ground of the Bottom Plate.



- (3) Reverse MAIN BOARD ASSY and AMP
BOARD ASSY and allocate each unit as
shown in the photo.
- (4) Insert the insulation sheet.

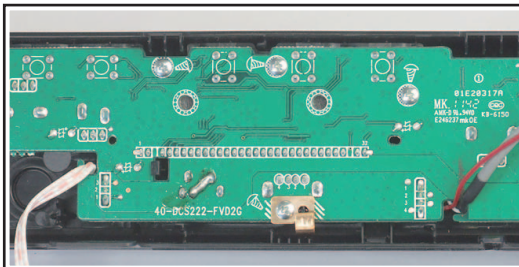


Styling of cables between units

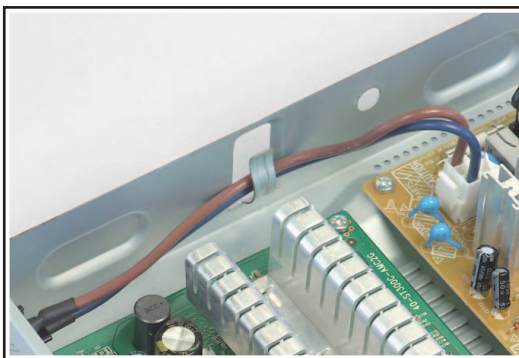
A

Caution 1:
When you attach each unit, make a styling and connection of cables as shown in the photo.

B



C

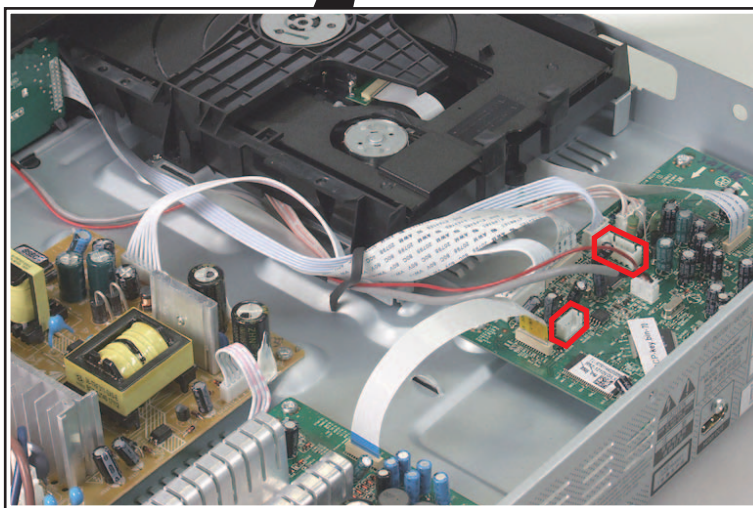
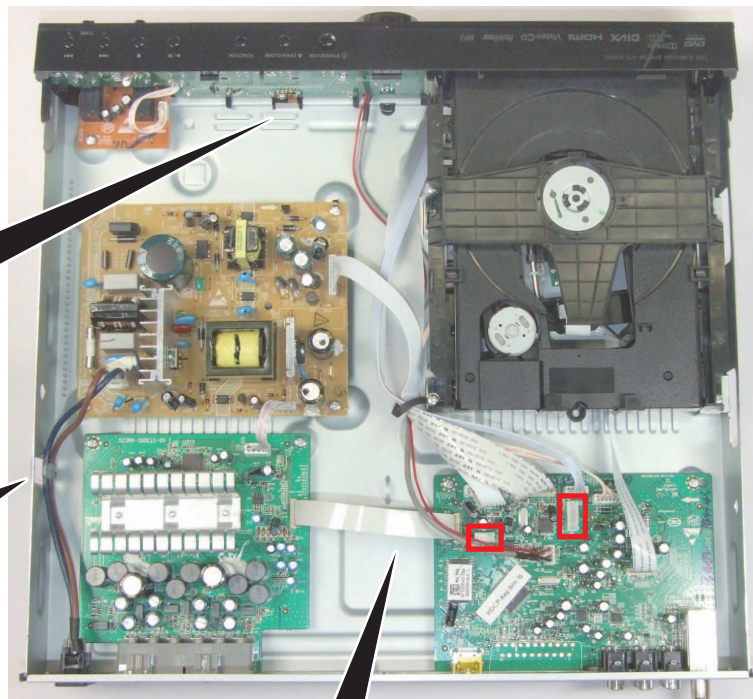


D

Caution 2:
Nothing should be connected to the connector part surrounded by red line.

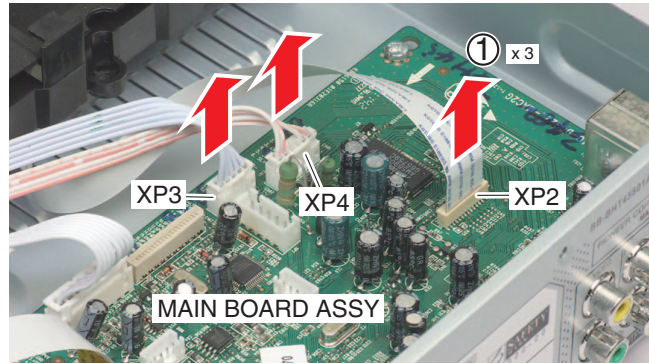
E

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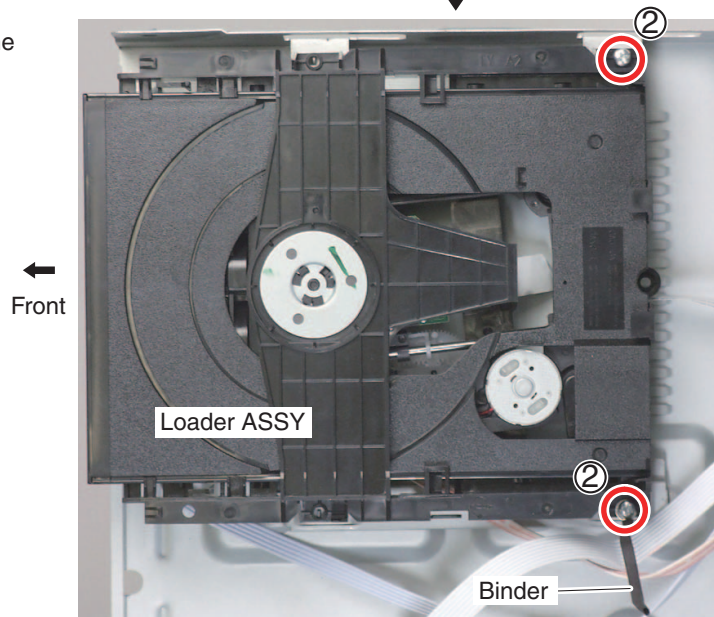


Cleaning the Pickup Lenses

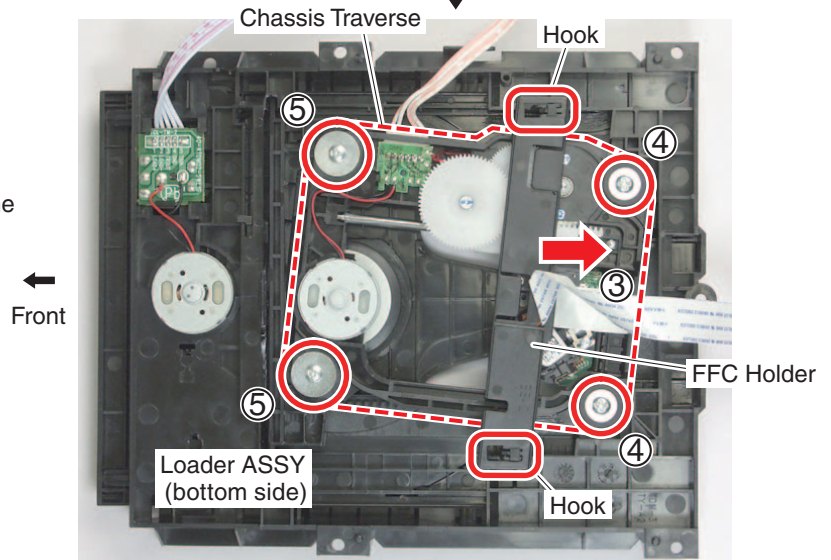
- (1) Disconnect the three connectors (XP2, XP3, XP4) from the MAIN BOARD ASSY.



- (2) Remove the two screws and then remove the Loader ASSY and the Binder. (63-B30070-3H4)



- (3) Remove the FFC Holder by removing the hooks at left and right hand side of the FFC Holder located at bottom side of the Loader ASSY.
 (4) Remove the two screws.
 (5) Remove the two screws and then remove the Chassis Traverse.



(6) Clean the pickup lenses when it is stained, using following cleaning materials:

A



Cleaning liquid : GEM1004
Cleaning paper : GED-008

Caution:

The pickup is a high-precision component; therefore, clean the lens with enough care so as not to cause a misalignment in the optical axis.

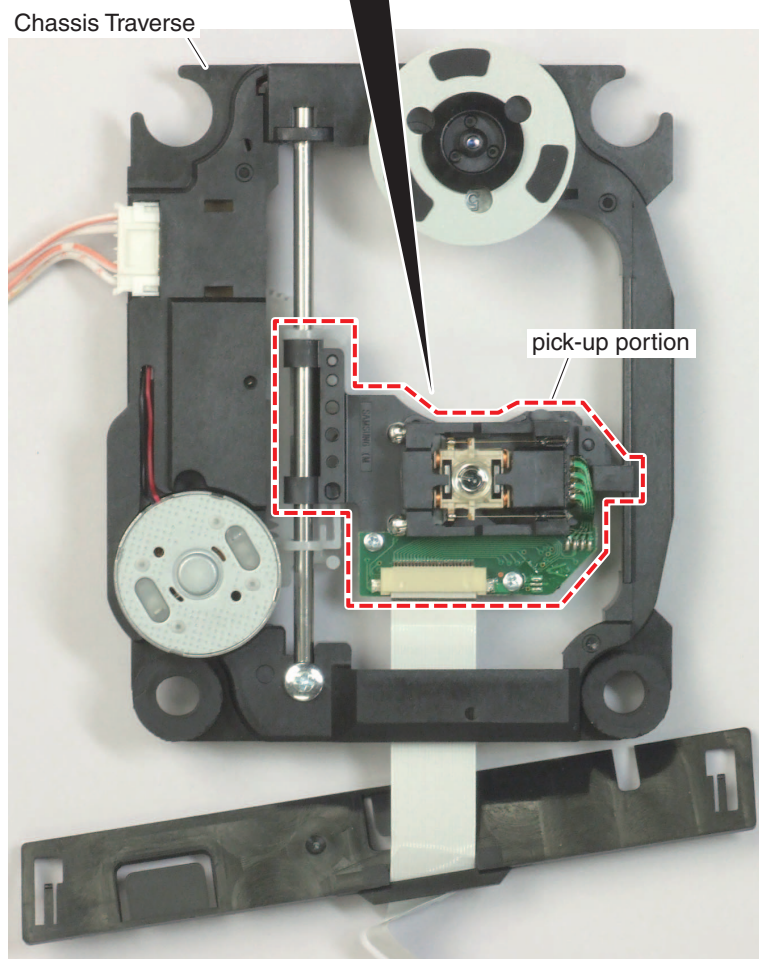
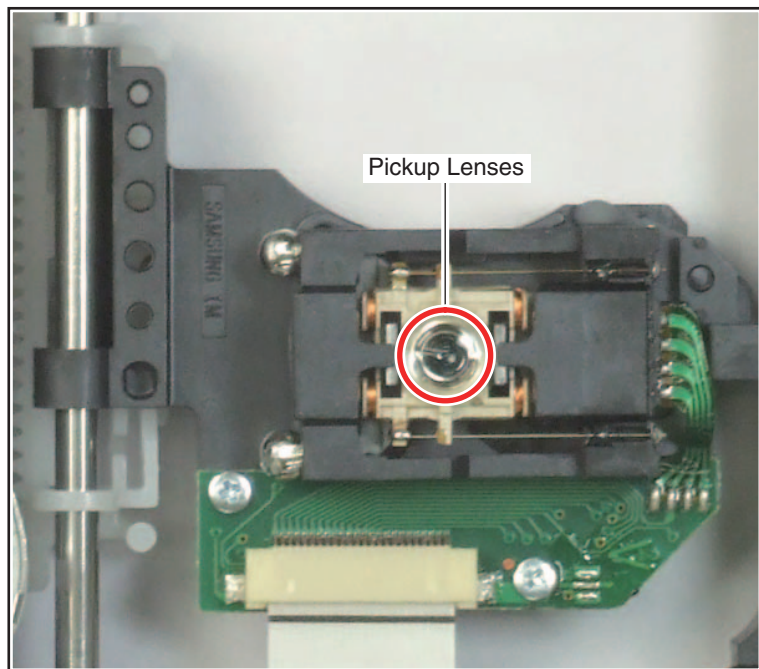
B

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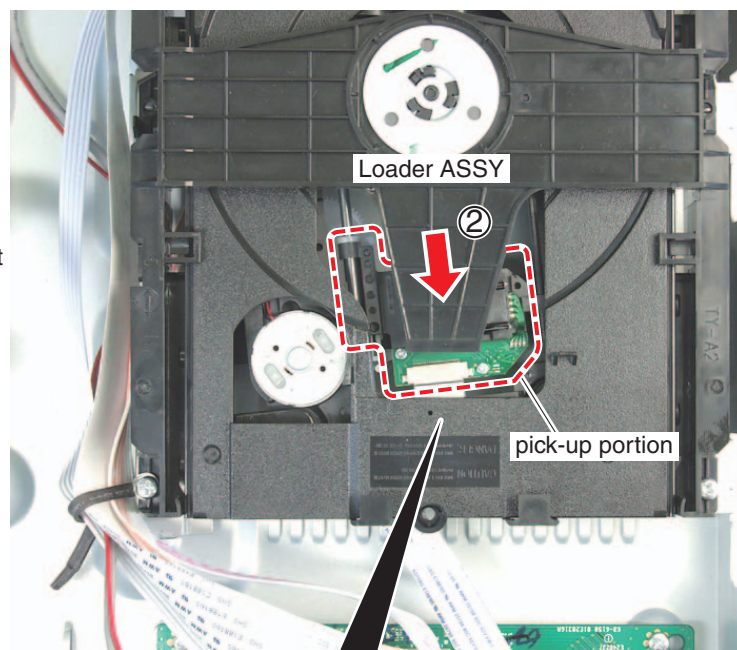
F



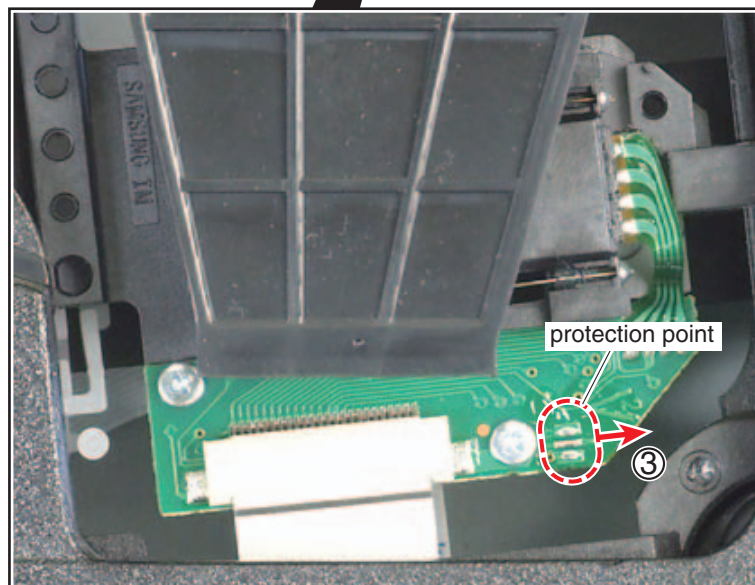
Replace the Loader ASSY

- (1) Replace the Loader ASSY.
(Refer to the step (1) to (2) of “Cleaning the Pickup Lenses.”)
- (2) Shift the Pick-Up Portion backward.

↑
Front



- (3) Please remove solder at protection point to the arrow-mark direction by using soldering iron with your right-hand while holding the pick-up portion with your left-hand after the completion of all mounting.
(Photo shows the situation after the removal of solder)



8. EACH SETTING AND ADJUSTMENT

8.1 FIRMWARE UPDATE

Method of Software Upgrading:

Software includes 2 parts: MPEG Software and MCU Software.
Both of them can upgrade by USB.

Notice:

The system can't upgrade both MPEG Software and MCU Software at same time.

Method of MPEG Software Upgrading:

1. Change the name of MPEG Software file into "DCS-222K.BIN",
then put it in the root path of USB .

Notice: DCS-222K.BIN must be big letters.
(For example, if file name is "DCS-222K.bin", the system can't recognize it.)
Don't put MPEG Software file and MCU Software file at the same time,
otherwise the system upgrade only MCU Software.

2. Please insert USB into the system and turn power-on.
3. Select USB function by pressing USB key or pressing FUNCTION key on Remote Control Unit.
The system will search the upgrade file itself at this time, a dialog for upgrade is displayed on screen.
Then by pressing PLAY key on Remote Control Unit, "UPG - MPEG" is displayed on FL tube and the upgrade starts.
It takes about 5 minutes by finishing upgrade.

Notice: Please don't interruption the power supply and extraction USB during upgrading.

4. After upgrading successful, the system will restart.
Then if the system displays a dialog for upgrade again, please extract without pressing PLAY key.

Method of MCU Software Upgrading:

1. Change the name of MCU Software file into "MCU.BIN",
then put it in the root path of USB .

Notice: MCU.BIN must be big letters.

2. Please insert USB into the system and turn power-on.
3. Select USB function by pressing USB key or pressing FUNCTION key on Remote Control Unit.
The system will search the upgrade file itself at this time, a dialog for upgrade is displayed on screen.
Then by pressing PLAY key on Remote Control Unit, "UPG - MCU" is displayed on FL tube and the upgrade starts.
It takes about 5 minutes by finishing upgrade.

Notice: Please don't interruption the power supply and extraction USB during upgrading.

4. After upgrading successful, the system will standby.

(*) MCU Software is different by model.

After upgrading MCU Software, please confirm MODEL_NAME and MCU NAME. by necessity.
You can confirm model information by pressing ESC + CHAP keys on Service Remote Control Unit.

If you upgraded incorrect MCU software, please upgrade correct MCU software again.

Model Name	MCU NAME
DCS-222K/YXE8	MCU_300_EU_V**
HTZ-121DVD/LXE HTZ-121DVD/TWXE HTZ-121DVD/AXQ5 HTZ-120DVD/DXERB HTZ-121DVD/DXECS	MCU_300_OTHER_V**
HTZ-222DVD/LXE HTZ-222DVD/TWXE HTZ-222DVD/AXQ5 HTZ-222DVD/DXERB HTZ-221DVD/DXECS	MCU_600_OTHER_V**
DCS-424K/YXE8	MCU_1000_EU_V**
DCS-424K/SXE5 HTZ-424DVD/LXE HTZ-424DVD/TWXE HTZ-424DVD/DXERB HTZ-424DVD/AXQ5 HTZ-421DVD/DXECS	MCU_1000_OTHER_V**

** is version number

8.2 PROCEDURES FOR CHANGING THE DESTINATION SETTING AFTER THE MAIN BOARD IS REPLACED

1. Upgrading the MPEG Software for Service

- Upgrade the MPEG Software for service of the product.
Change the following file into "DCS-222K.BIN" and put it in the root path of USB.

DCS-222K series
• DCS-222K_SP.BIN

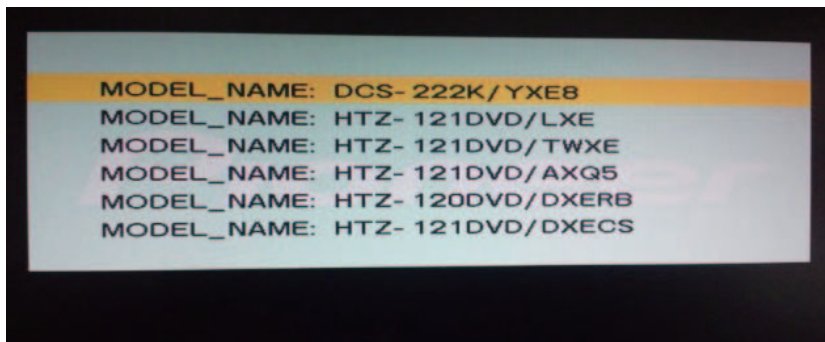
Please refer to "Method of MPEG Software Upgrading" of Software upgrade about the procedure of upgrading the MPEG Software.

Notice: The system has MPEG Software and MCU Software.
But the software for service is only MPEG Software.

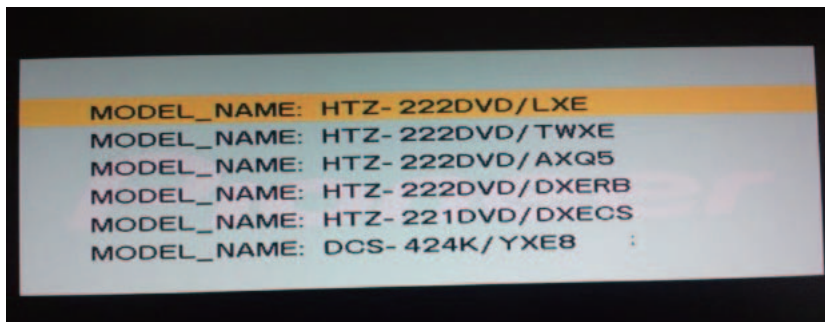
2. Changing the Destination Setting

- 1 At the Pioneer Logo screen, press OPEN/CLOSE button.
- 2 With Tray open, press AUDIO button and press the numeric buttons 1, 2, 3, then 4, in that order, on the supplied Remote Control Unit.
Then the Destination Setting screen is displayed on screen.

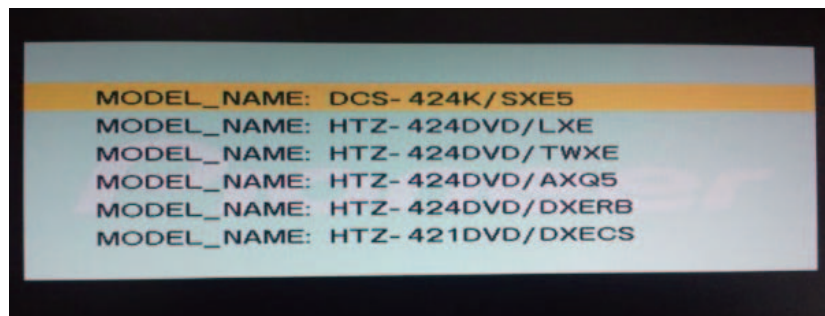
Page1:



Page2:



Page3:



3 Select your region by moving the UP button or the DOWN button, and press the ENTER button on the supplied Remote Control Unit.

Then the system turns power off automatically.

A

Note: DVD Region is set automatically according to the selected destination.

4 Power on and load default settings.

Press Home Menu button on the supplied Remote Control Unit and select Initial Settings after power on.

Then select options and load default.

When Yes is selected at Load default confirm screen, the system loads default settings according to the destination.

3. Confirming the Destination Change

Check if the Destination Setting has been properly changed.

Press ESC button , then press CHAP button on the Service Remote Control Unit.

B

On the Model Information screen, if the destination that was selected on step 3 in "2. Changing the Destination Setting" is displayed for the "MODEL NAME" item, destination change has been successfully finished.

Please refer to "Indication of model information" of Service Mode about Model Information screen.

4. Upgrading the Latest Software to the Product

1 Upgrade the latest Software for the product from the Website specially for service engineers to a USB storage device.

2 Perform updating in the same manner as that described in "Software Upgrade".

C

Notice: You must upgrade both MPEG Software and MCU Software.

Be sure to write the latest Software that suits the destination of the product, because the product will not operate properly with the Software for service, which is used for changing the Destination Setting.

D

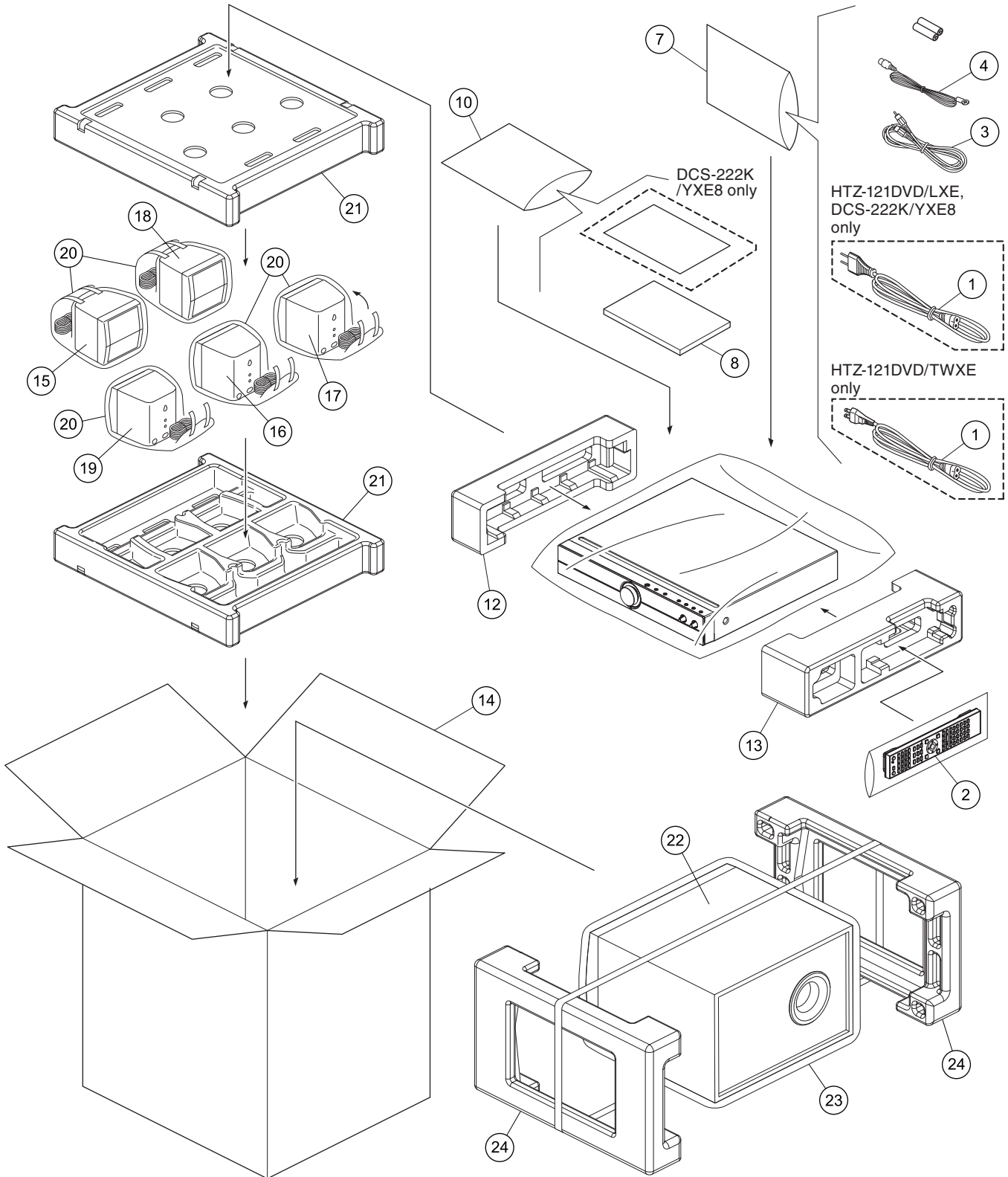
E

F

9. EXPLODED VIEWS AND PARTS LIST

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

9.1 PACKING SECTION



(1) PACKING SECTION PARTS LIST

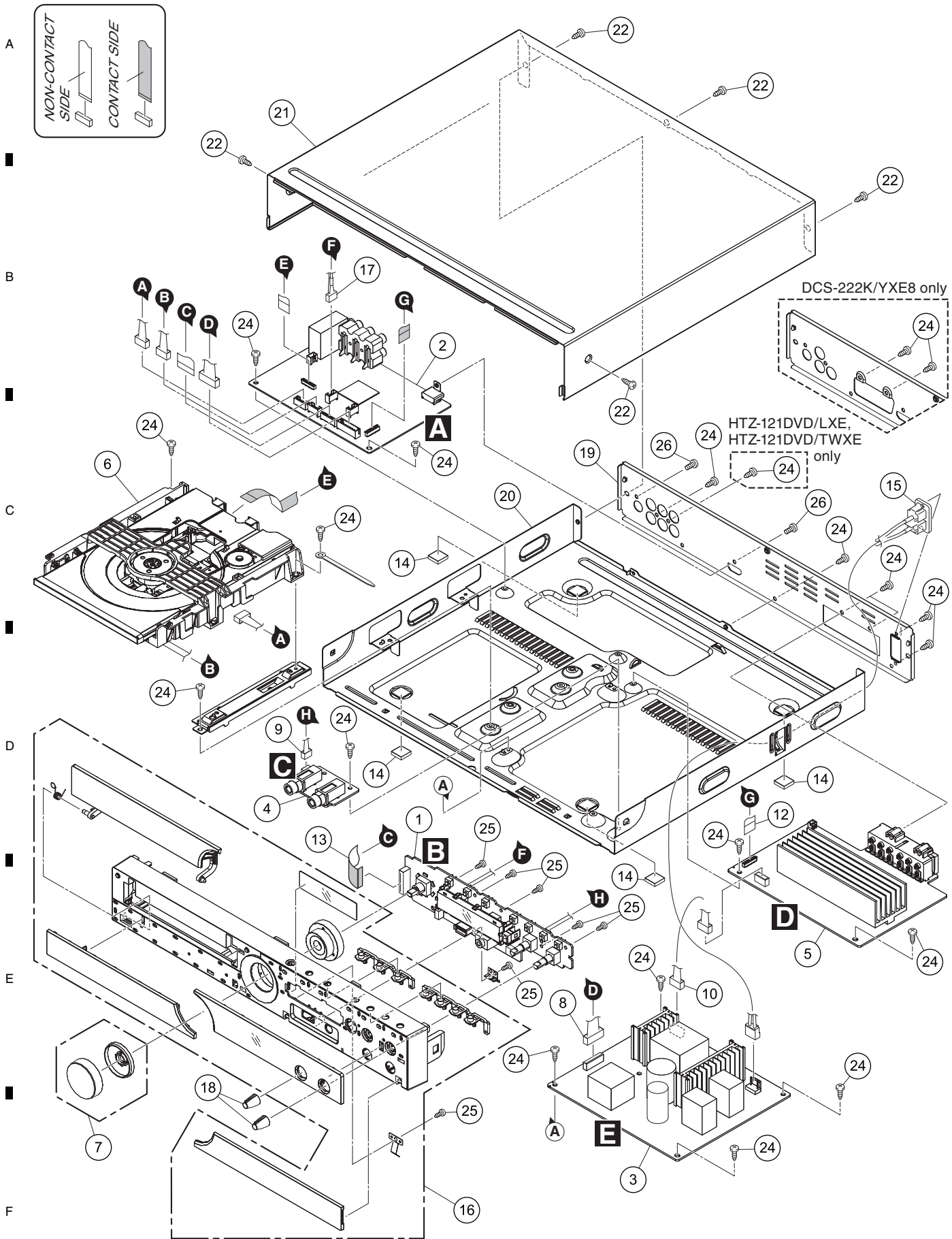
Mark No.	Description	Part No.	Mark No.	Description	Part No.	
⚠	1 AC Power Cord	See Contrast table (2)	11 •••••			
	2 Remote Control Unit	See Contrast table (2)	12 Pad Left		75-DC22L1-EA0	A
	3 Video Cable	41-UH1200-0KK1A	13 Pad Right		75-DC22R1-EA0	
	4 FM Antenna	47-ANT022-XX0	14 Packing Case		See Contrast table (2)	
	5 •••••		15 SPEAKER ASSY CENTER		SMX1124-C	
	6 •••••		16 SPEAKER ASSY FRONT L		SMX1124-F-L	
	7 Polyethylene Bag	74-018025-51C	17 SPEAKER ASSY FRONT R		SMX1124-F-R	
	8 Operating Instructions	See Contrast table (2)	18 SPEAKER ASSY SURROUND		SMX1124-S-L	
	9 •••••		19 SPEAKER ASSY SURROUND		SMX1124-S-R	
	10 Polyethylene Bag	74-050047-60GB1	20 Polyethylene Bag		3880V-S004A	
			21 Packing Top Bottom		3920V-0019A	
			22 SPEAKER ASSY SUB-WOOFER		SMX1128-W	B
			23 Soft Bag		MAF62208304	
			24 Packing Top Bottom		3920V-0002A	

(2) CONTRAST TABLE

HTZ-121DVD/LXE, HTZ-121DVD/TWXE and DCS-222K/YXE8 are constructed the same except for the following:

Mark No.	Symbol and Description	HTZ-121DVD/ LXE	HTZ-121DVD/ TWXE	DCS-222K/ YXE8	
⚠	1 AC Power Cord	51-DC0120-0CRA3	51-D50120-0CR03	51-DC0120-0CRA3	
	2 Remote Control Unit	06-AX7653-A000	06-AX7653-A000	06-AX7652-A000	
	8 Operating Instructions	72-HTZ121-AS0B2	72-HTZ121-THAB1	72-DCS222-EU0B2	
	14 Packing Case	76-111710-0ATB2	76-111710-0ATB3	76-111710-0ATB1	C

9.2 EXTERIOR SECTION



	5		6		7		8	
(1) EXTERIOR SECTION PARTS LIST								
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.	
	1	FRONT BOARD ASSY	08-DCS222-FB0	16	Front Panel ASSY	See Contrast table (2)		
	2	MAIN BOARD ASSY	See Contrast table (2)	17	TJC3-4Y/ASAN-4P	46-CD004T-04B		A
⚠	3	POWER BOARD ASSY	See Contrast table (2)	18	Mic Volume Knob	56-DC22N3-0HAB1		
	4	KARAOKE BOARD ASSY	08-DCS222-KU0	19	Rear Panel	See Contrast table (2)		
	5	AMP BOARD ASSY	See Contrast table (2)	20	Bottom Plate	67-DC22R1-0E0		
	6	Loader ASSY	08-LT3CMP-242230	21	Top Cover	67-DC22T1-0E0B1		
	7	VOL Knob ASSY	02-DC22N1-XX0B2	22	Screw	63-B30060-3H3		
	8	Cable 8pin 180mm	46-CD018T-08K	23	•••••			
	9	Cable 3pin 80mm	46-FH008T-03P	24	Screw	63-B30070-3H4		
	10	Cable 4pin	46-FH032F-04M	25	S/T Screw B 2.6 X 8	63-B26080-BF4		
	11	•••••		26	Triangle M/C Screw B	64-B30040-304		B
	12	FFC 24pin 110mm	46-KK011C-24AU					
	13	FFC 20pin 300mm	46-KK030C-20BV					
	14	Cushion	54-103870-000					
NSP	15	AC inlet	46-KL018T-03XD					

(2) CONTRAST TABLE

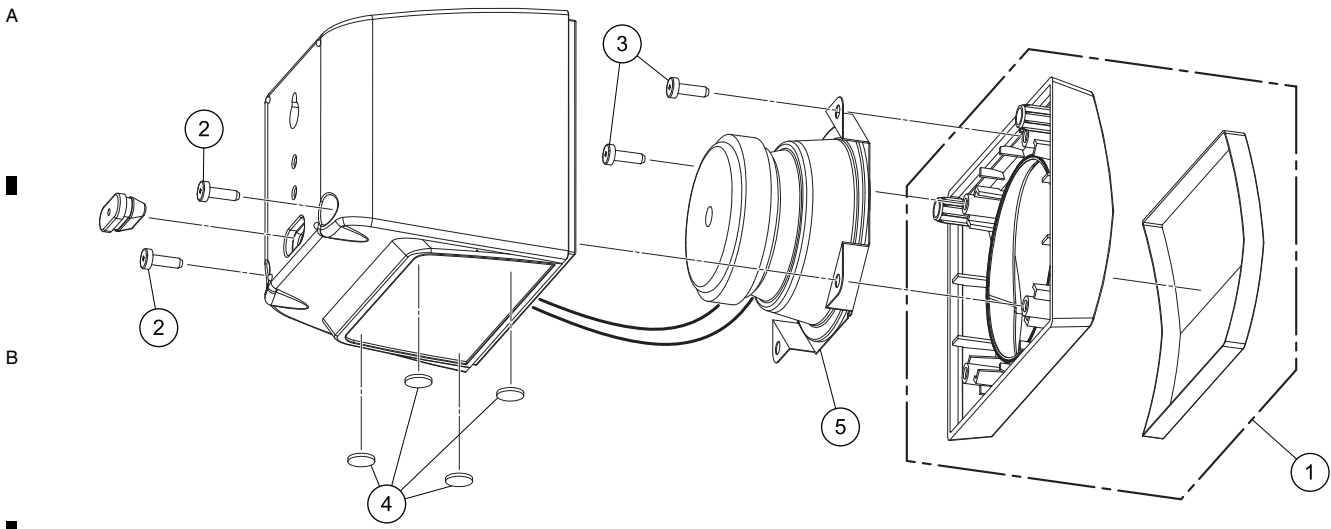
HTZ-121DVD/LXE, HTZ-121DVD/TWXE and DCS-222K/YXE8 are constructed the same except for the following:

Mark	No.	Symbol and Description	HTZ-121DVD/ LXE	HTZ-121DVD/ TWXE	DCS-222K/ YXE8
⚠	2	MAIN BOARD ASSY	08-HTZ121-MA0	08-H89GAU-MA1R	08-DCS222-MA0
	3	POWER BOARD ASSY	08-DCS222-PW0	08-P075HE-PW1	08-DCS222-PW0
	5	AMP BOARD ASSY	08-DCS222-AM0	08-S301B6-AM1	08-DCS222-AM0
	16	Front Panel ASSY	08-HTZ121-001	08-HTZ121-001	08-DCS222-001
	19	Rear Panel	67-DC22B1-0E0B1	67-DC22B1-0E0B1	67-DC22B2-0E0B1

1234

9.3 SATELLITE SPEAKER and SUBWOOFER SECTION

SATELLITE SPEAKER SECTION



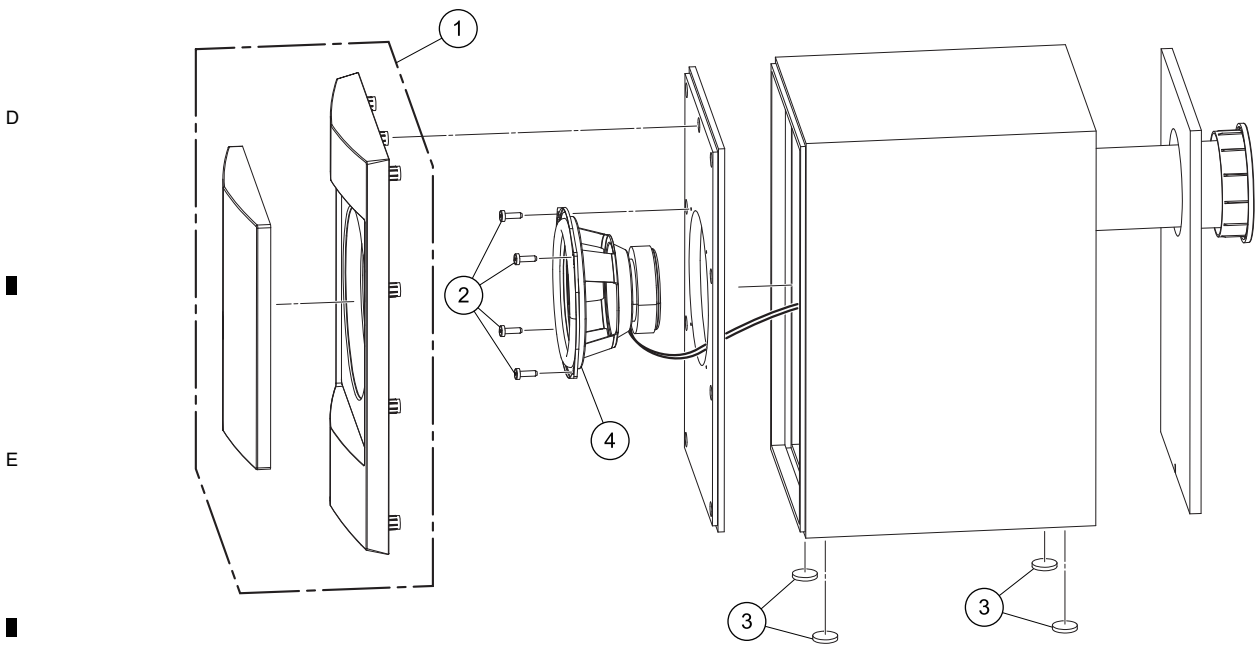
C

SATELLITE SPEAKER SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Panel Front ASSY	3721V-0004V	5	Unit Woofer(Shield) (Center)	6400V-0011A
2	Screw	4000V-0001U			
3	Screw Bind Head	4000V-0008G			
4	Cushion Foot	4850E-0036A			
5	Unit Woofer(N-Shield) (Front/Rear)	6400V-0010A			

D

SUBWOOFER SECTION



SUBWOOFER SECTION PARTS LIST

Mark No.	Description	Part No.
1	Panel Front ASSY	3721V-0007V
2	Screw	4000V-0009E
3	Foot Cushion	4850E-0033A
4	Unit Woofer(N-Shield)	6400V-0018A

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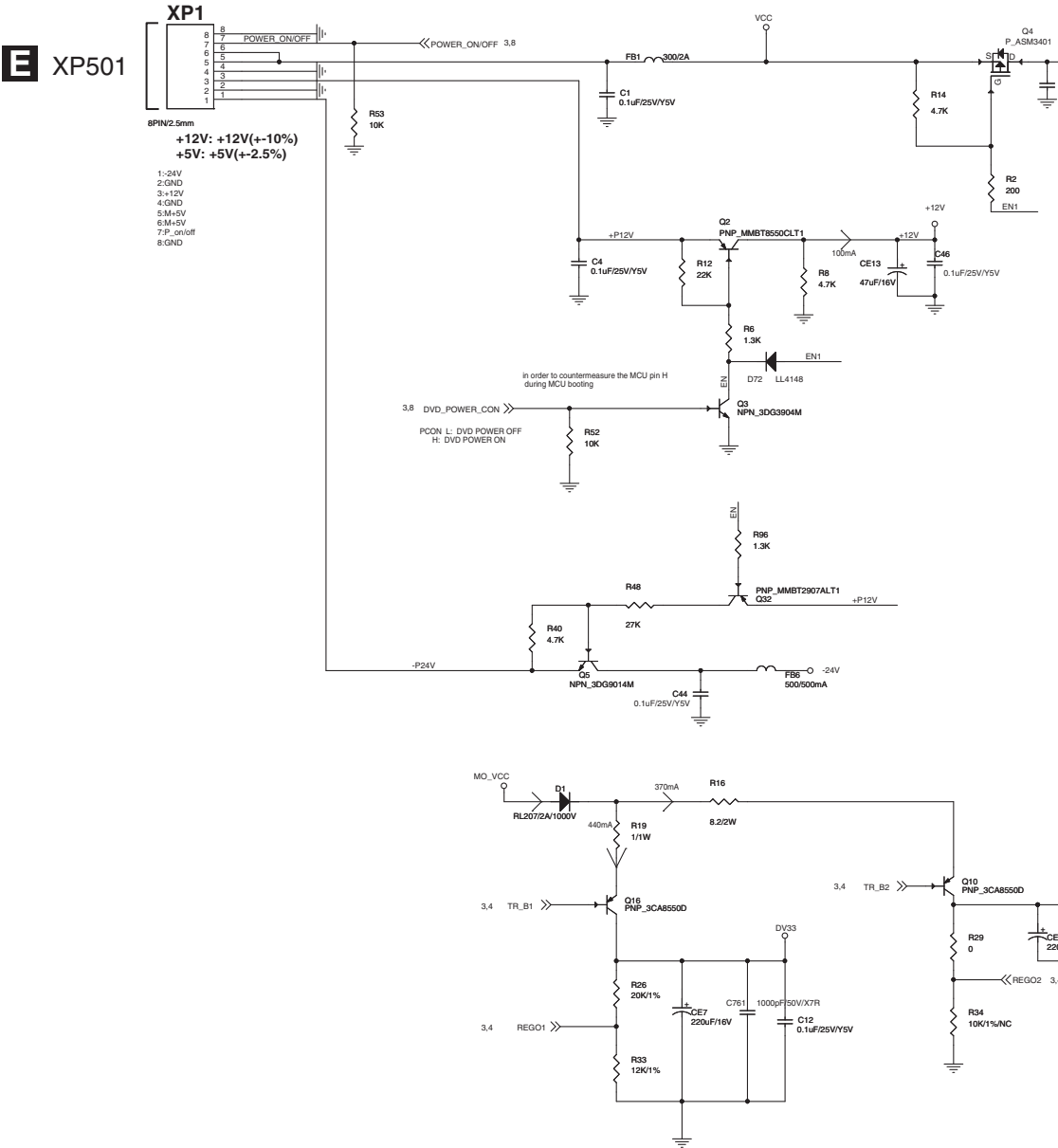
■

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■

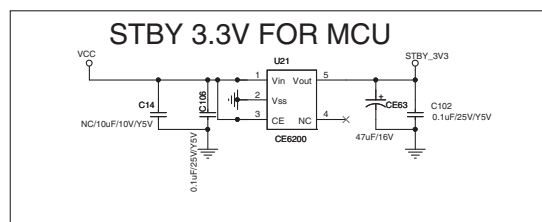
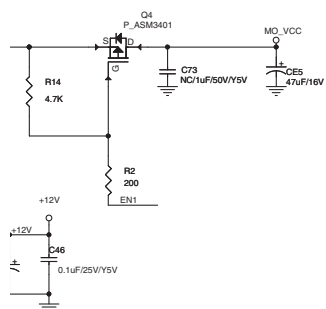
10. SCHEMATIC DIAGRAM
10.1 MAIN BOARD ASSY (1/6) : POWER SOURCE (Sheet No.3)

Main Board Circuit Diagram:Power Source



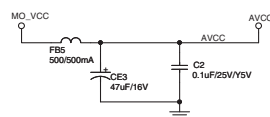
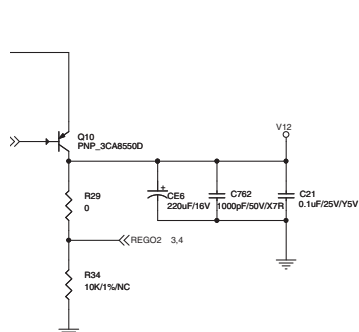
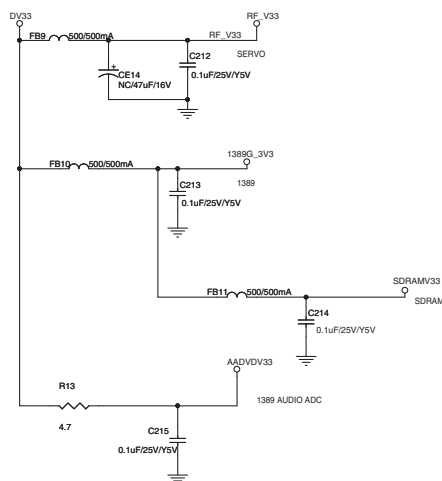
A^{1/6} MAIN BOARD ASSY (1/6) (HTZ-121DVD/LXE : 08-HTZ121-MA0) (HTZ-121DVD/TWXE : 08-H89GAU-MA1R) (DCS-222K/YXE8 : 08-DCS222-MA0)

ce



OFF-PAGE CONNECTION

POWER_ON/OFF	3,8
DVD_POWER_CON	3,8
EN1	3,4
TR_B1	3,4
TR_B2	3,4
REGO1	3,4
REGO2	3,4



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

4

C

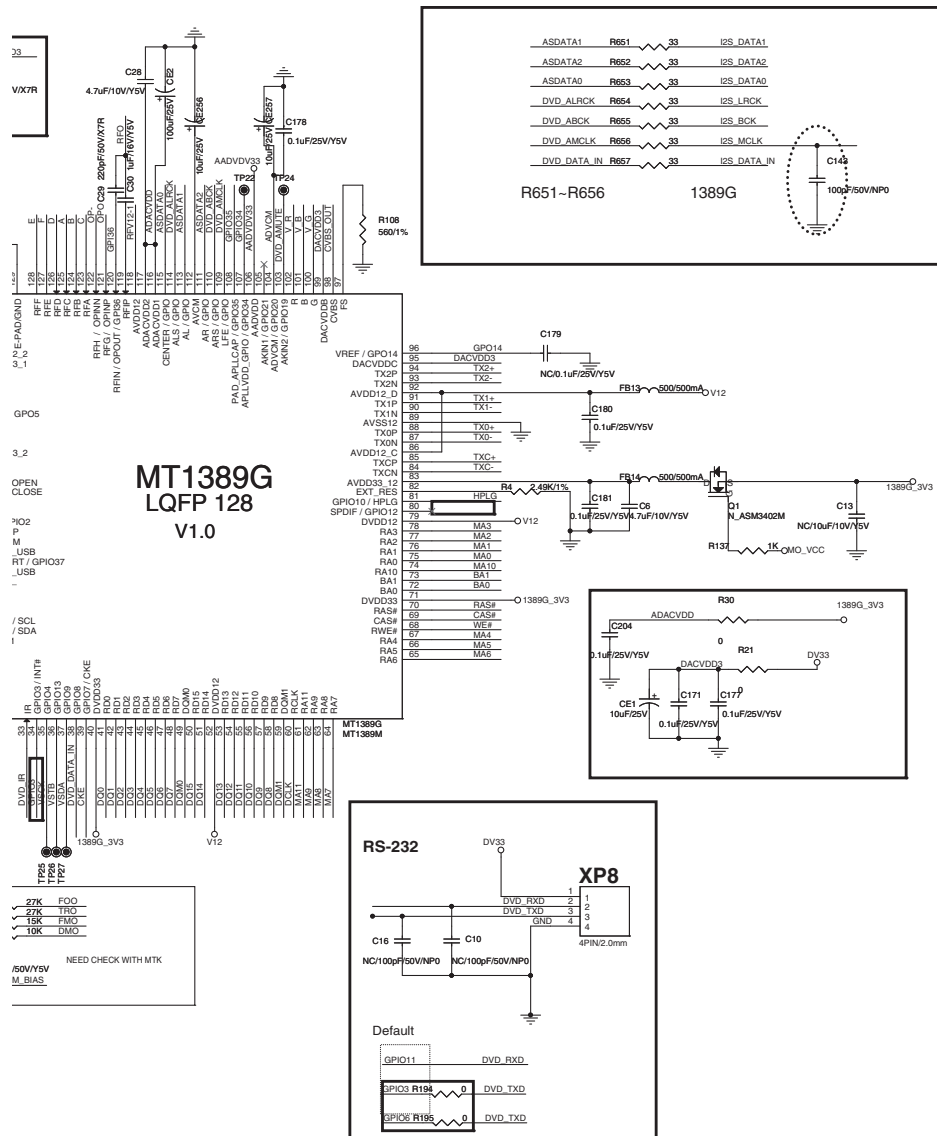


E

F

A_{2/6} **MAIN BOARD ASSY (2/6)** (HTZ-121DVD/LXE : 08-HTZ121-MA0) (HTZ-121DVD/TWXE : 08-H89GAU-MA1R) (DCS-222K/YXE8 : 08-DCS222-MA0)

MT1389FE/G And Servo



OFF-PAGE CONNECTION

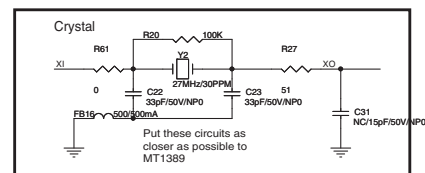
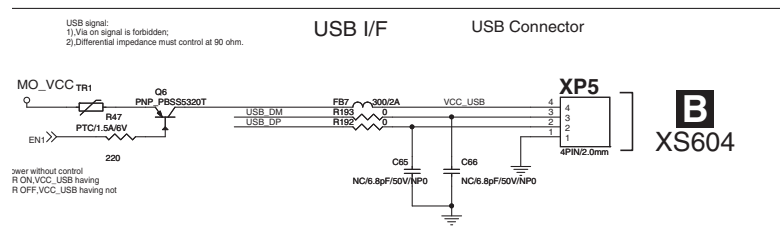
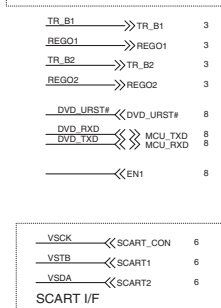
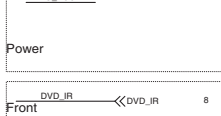
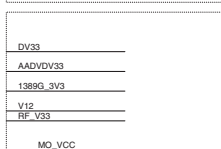
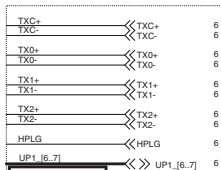
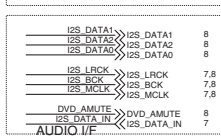
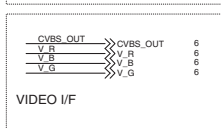
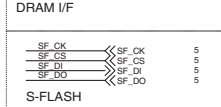
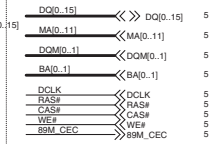
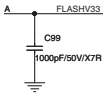
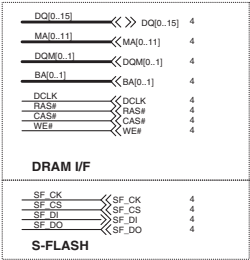


Diagram:SDRAM And Flash

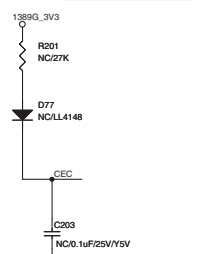
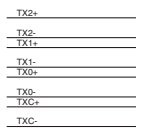
B

OFF-PAGE CONNECTION

C

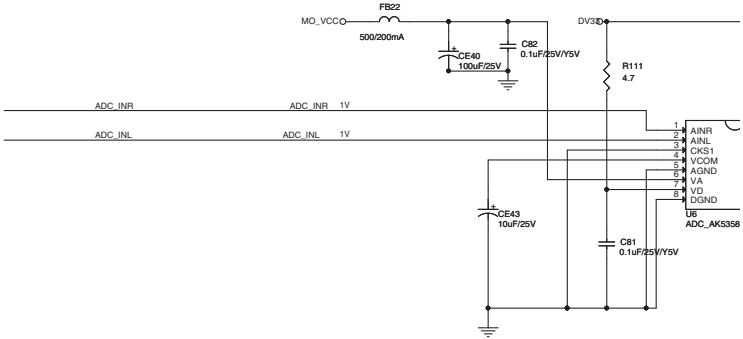
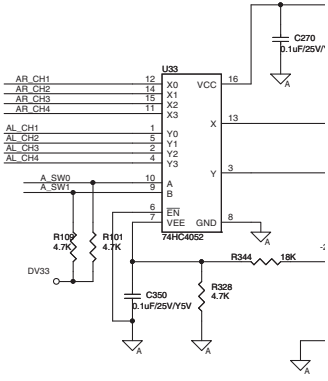
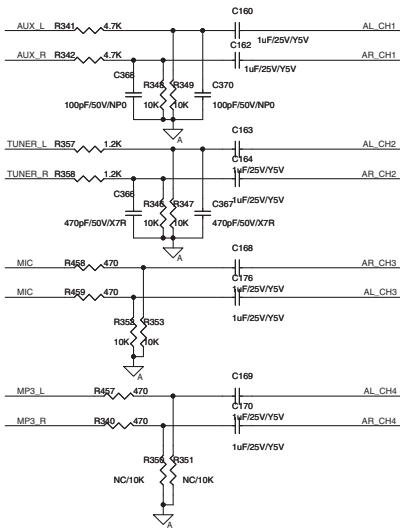


F



10.5 MAIN BOARD ASSY (5/6) : AUDIO INPUT (Sheet No.7)

Main Board Circuit Diagram:Audio Input

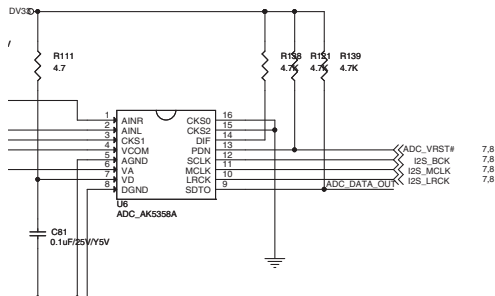
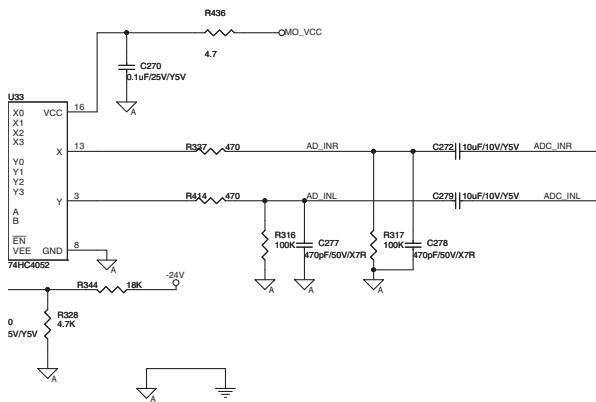


A5/6 MAIN BOARD ASSY (5/6) (HTZ-121DVD/LXE : 08-HTZ121-MA0) (HTZ-121DVD/TWXE : 08-H89GAU-MA1R) (DCS-222K/YXE8 : 08-DCS222-MA0)

dio Input

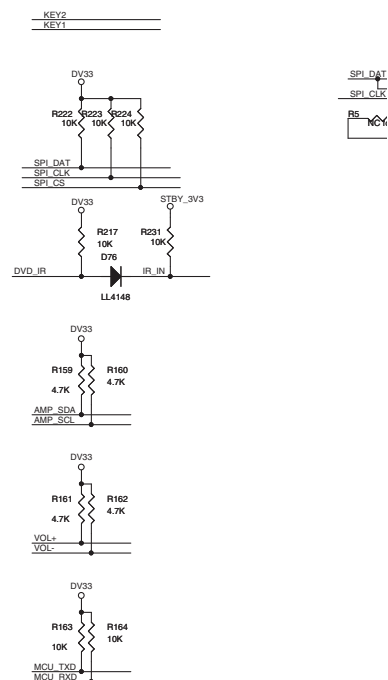
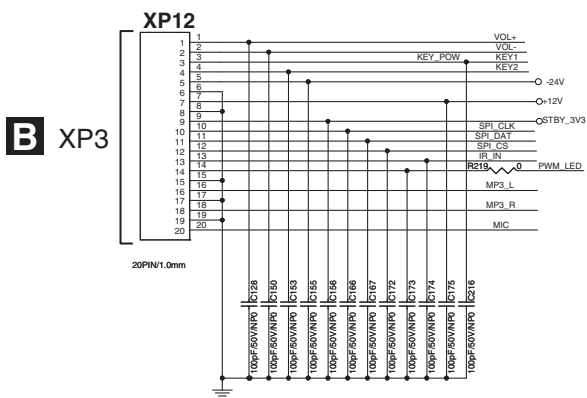
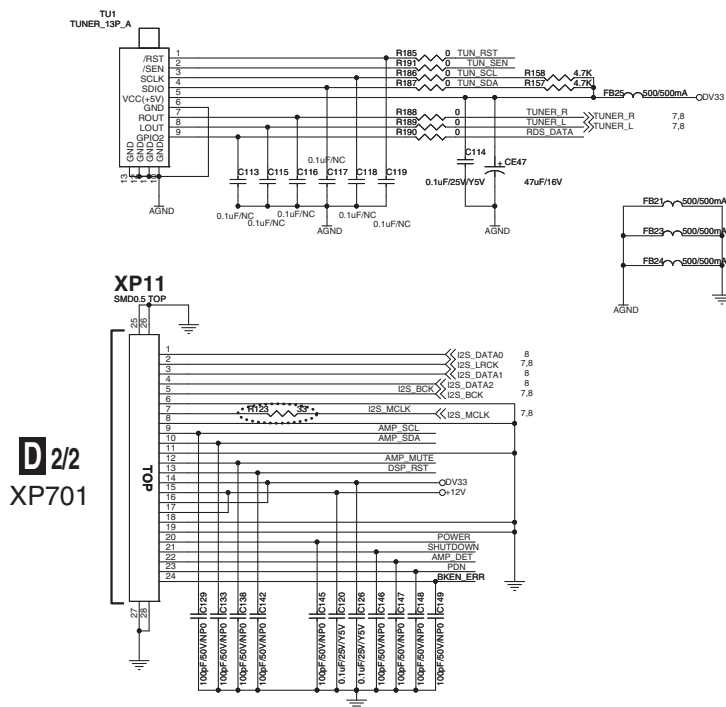
OFF-PAGE CONNECTION

I2S_LRCK	I2S_LRCK	7.8
I2S_BCK	I2S_BCK	7.8
I2S_MCLK	I2S_MCLK	7.8
ADC_DATA_OUT	I2S_DATA_IN	4
ADC_VRST#	ADC_VRST#	7.8
A_SW0	MS2_SLCTA	8
A_SW1	MS2_SLCTB	8
TUNER_L	TUNER_L	8
TUNER_R	TUNER_R	8
MP3_L	MP3_L	8
MP3_R	MP3_R	8
MIC	MIC	8
AUX_L	AUX_L	8
AUX_R	AUX_R	8
ADC & SW I/F		



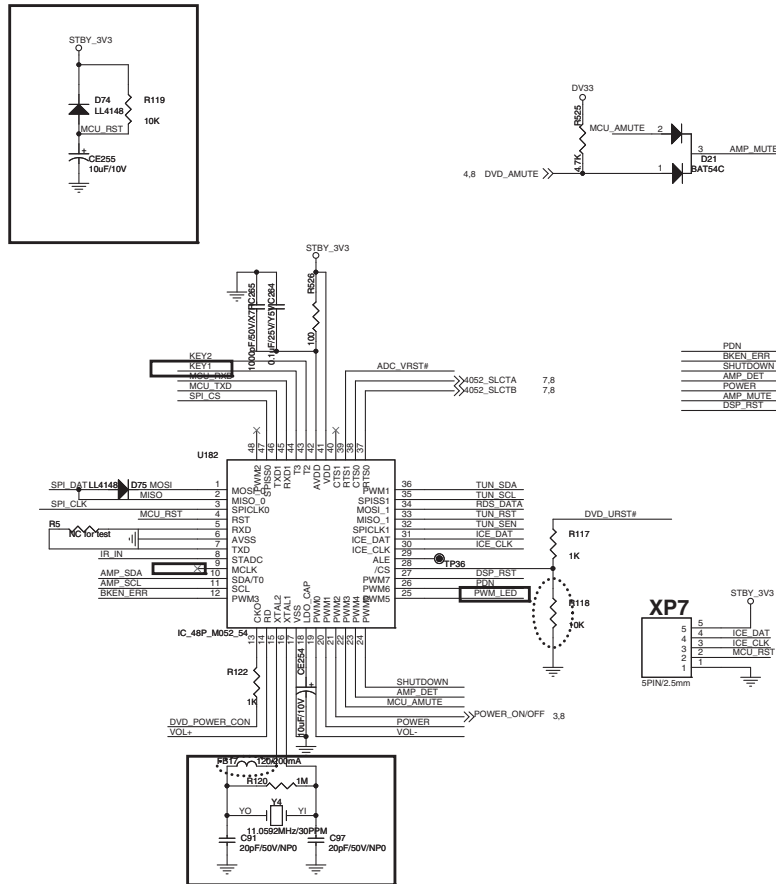
10.6 MAIN BOARD ASSY (6/6) : MCU (Sheet No.8)

Main Board Circuit Dia



A^{6/6} MAIN BOARD ASSY (6/6) (HTZ-121DVD/LXE : 08-HTZ121-MA0) (HTZ-121DVD/TWXE : 08-H89GAU-MA1R) (DCS-222K/YXE8 : 08-DCS222-MA0)

cuit Diagram:MCU



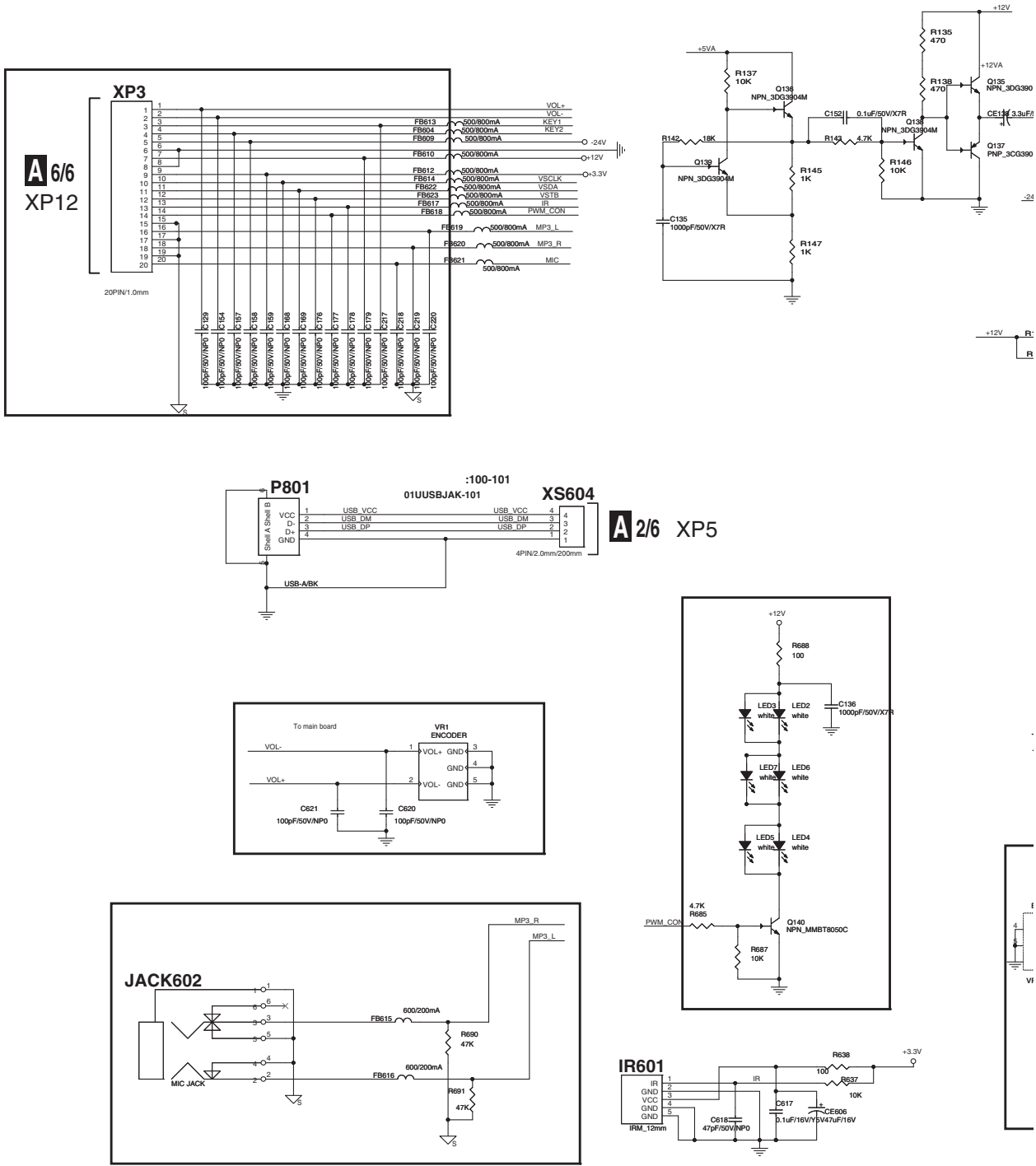
IC2S_LRCK	IC2S_LRCK	7,8
IC2S_BCK	IC2S_BCK	7,8
IC2S_MCLK	IC2S_MCLK	7,8
IC2S_DATA0	IC2S_DATA0	8
IC2S_DATA1	IC2S_DATA1	8
IC2S_DATA2	IC2S_DATA2	8
ADC_VRST#	ADC_VRST#	7
A_SW0	A052_SCLTA	7,8
A_SW1	A052_SCLTB	7,8
TUNER_L	TUNER_L	7,8
TUNER_R	TUNER_R	7,8
MP3_L	MP3_L	7,8
MP3_R	MP3_R	7,8
MIC	MIC	7,8

MCU_TXD	MCU_TXD	4
MCU_RXD	MCU_RXD	4
DVD_LRST#	DVD_LRST#	4
DVD_AMUTE	DVD_AMUTE	4,8
DVD_IR	DVD_IR	4

DVD_POWER_CON	3
POWER_ON/OFF	3,8

10.7 FRONT BOARD ASSY

Front Board circuit Diagram:



A

E

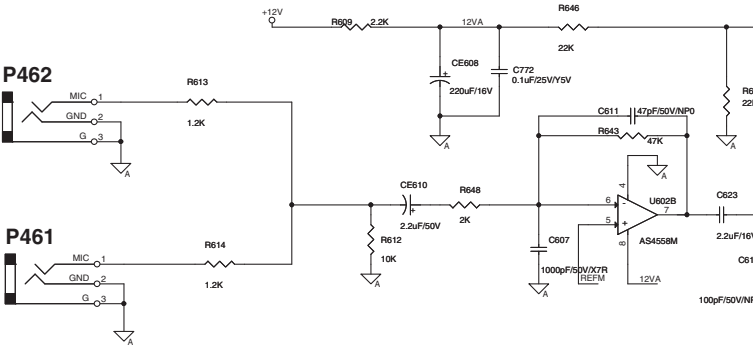


D

E

F

Karaoke Circuit



C KARAOKE BOARD ASSY (08-DCS222-KU0)

A

B

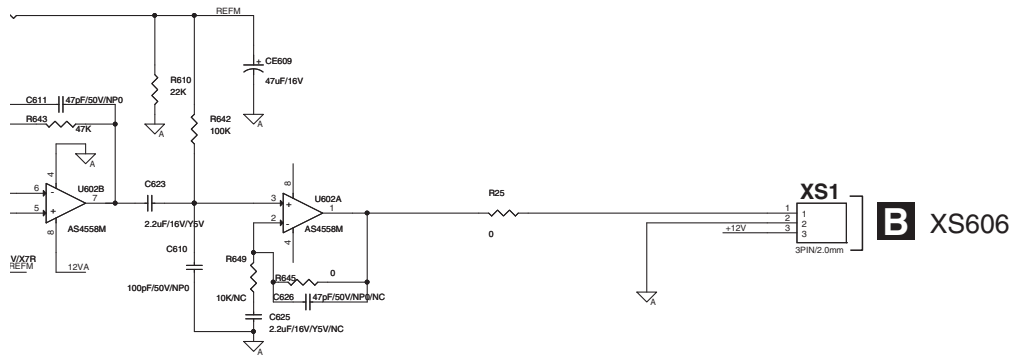
C

D

E

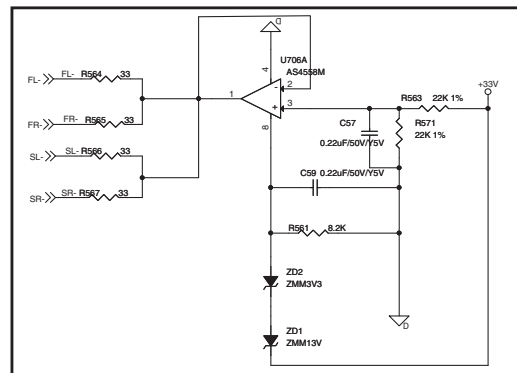
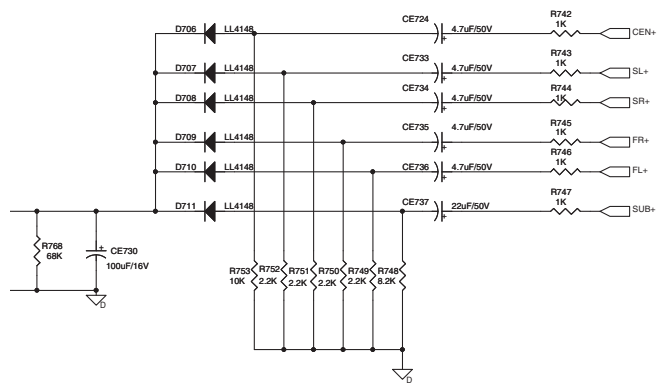
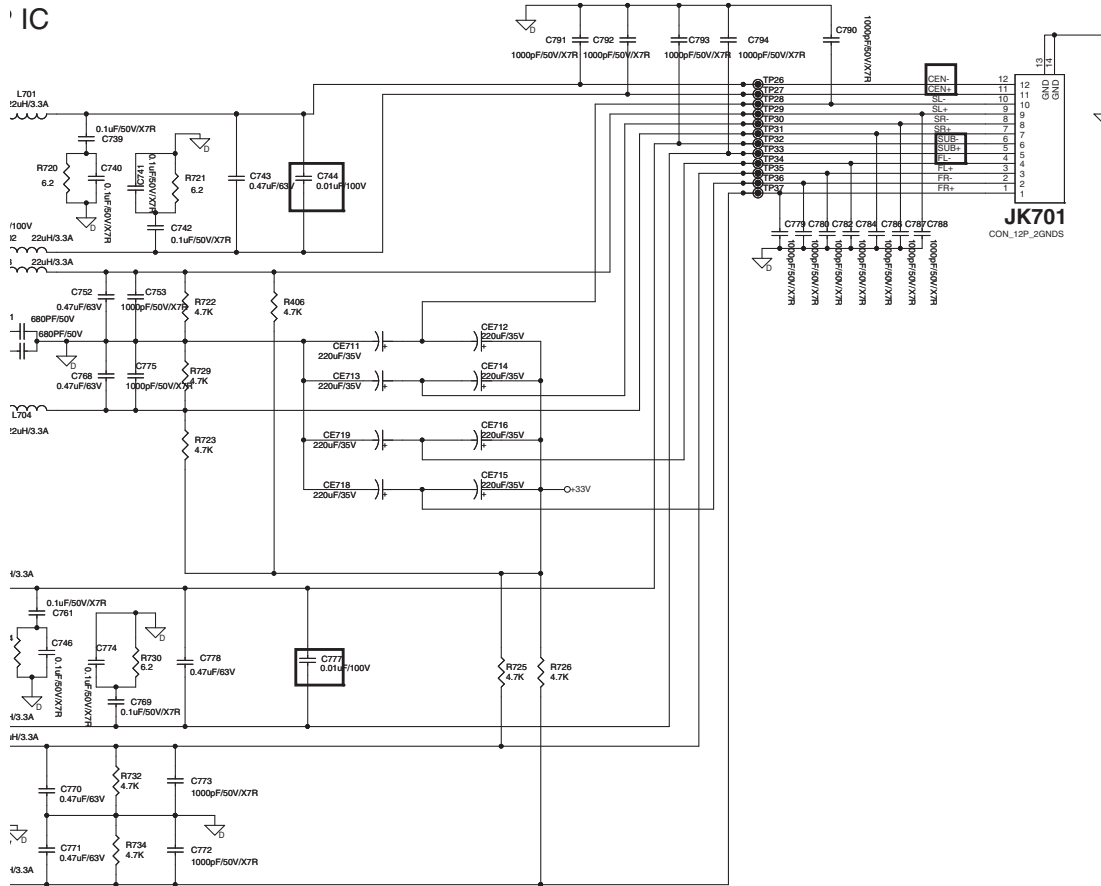
F

e Circuit Diagram



D^{1/2} AMP BOARD ASSY (1/2) (HTZ-121DVD/LXE, (DCS-222K/YXE8 : 08-DCS222-MA0) (HTZ-121DVD/TWXE : 08-S301B6-AM1)

IC



To eliminate POP noise for SE

A

B

C

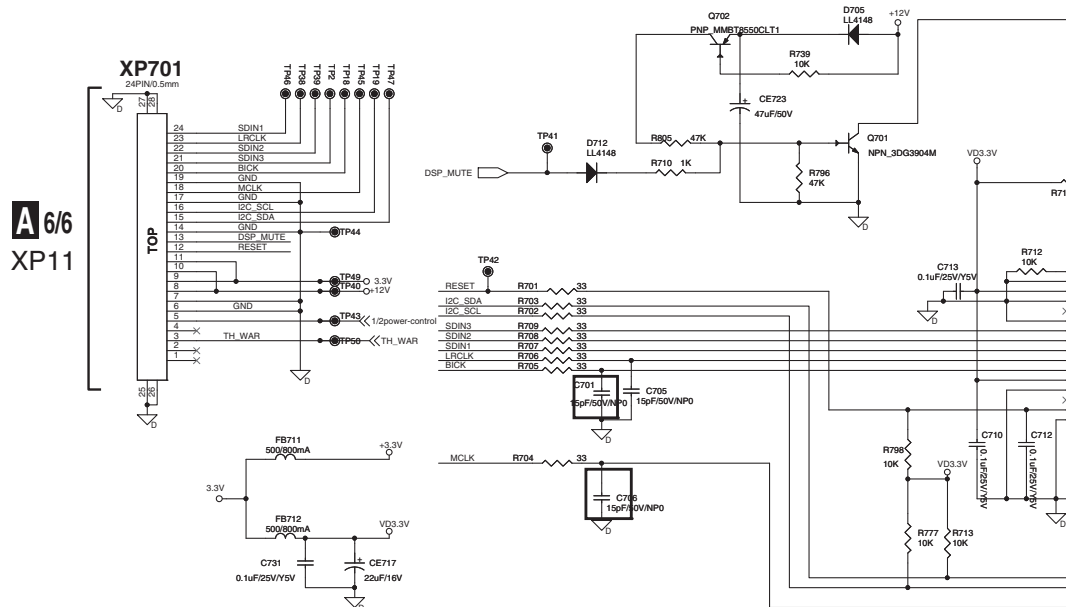
D

E

F

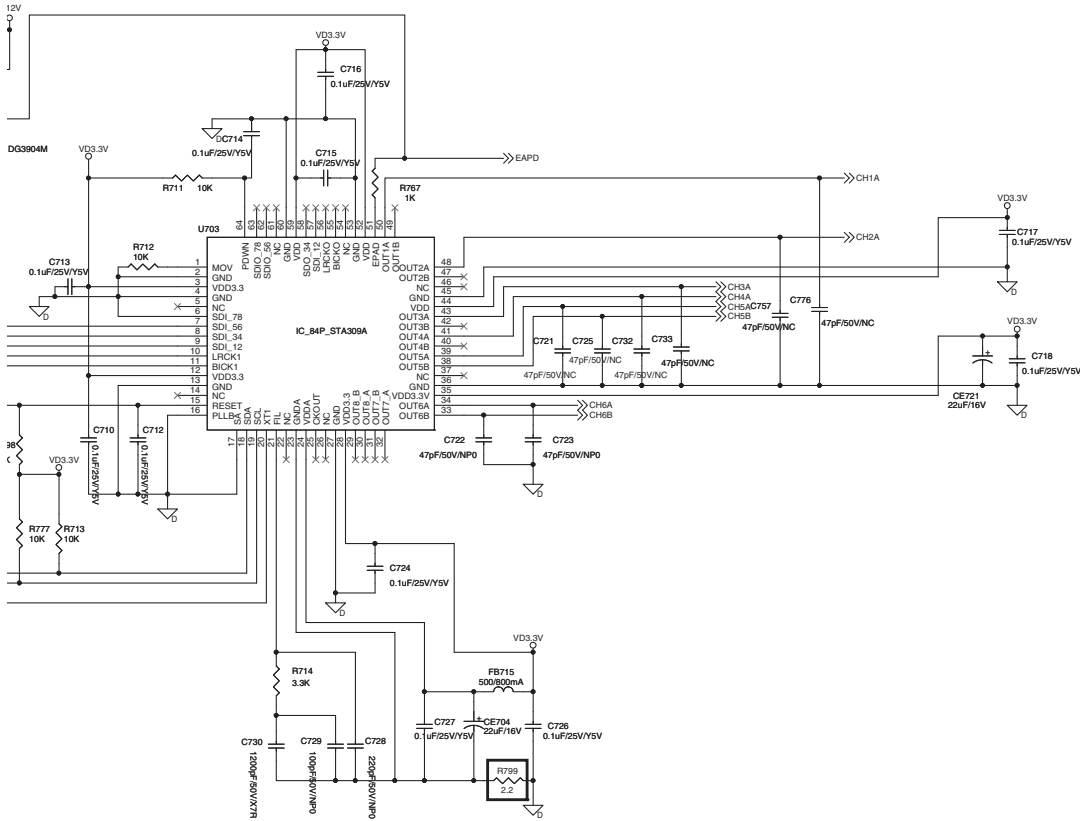
4

AMP Board Circu



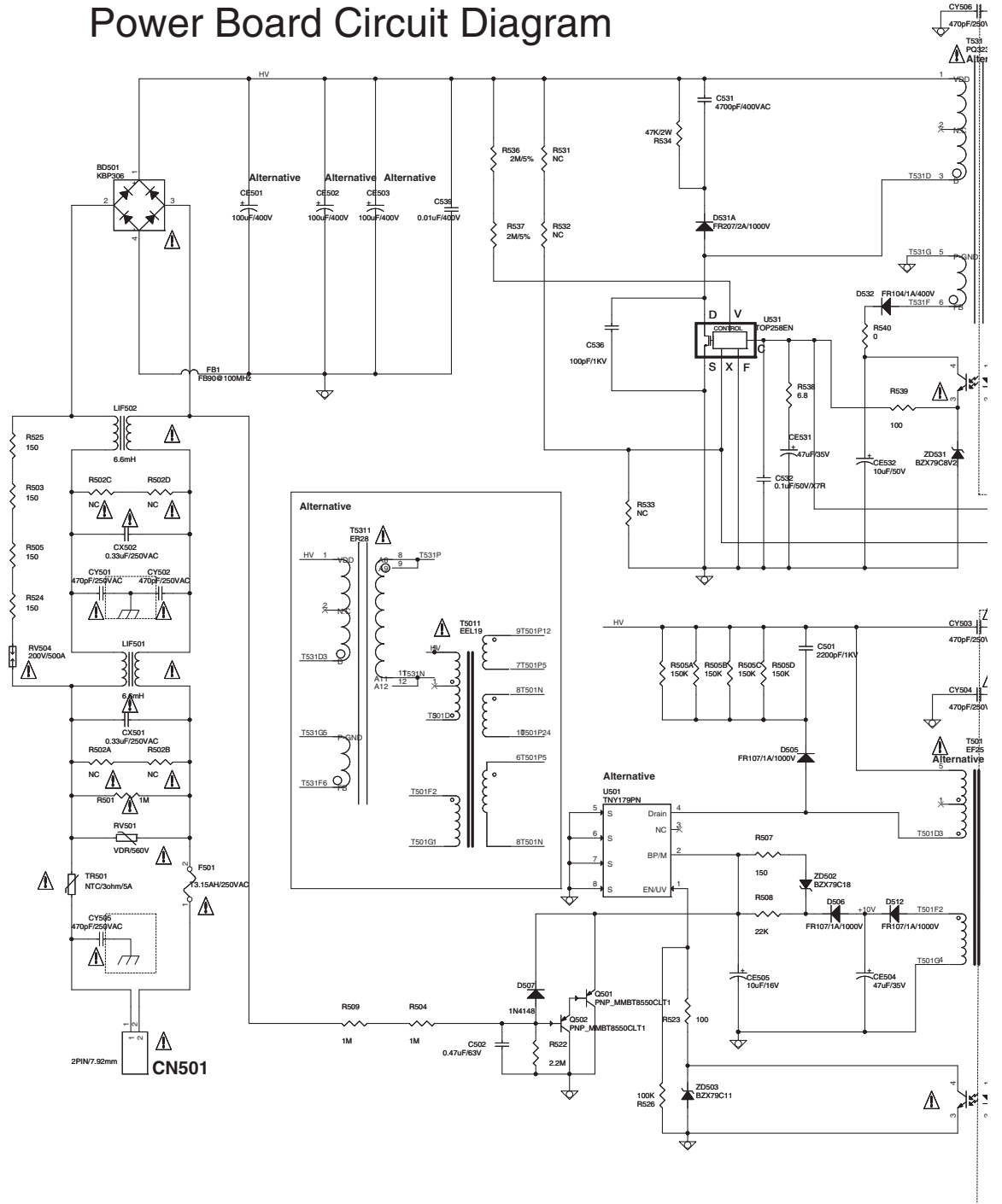
D2/2 AMP BOARD ASSY (2/2)
(HTZ-121DVD/LXE,
(DCS-222K/YXE8 : 08-DCS222-MA0)
(HTZ-121DVD/TWXE : 08-S301B6-AM1)

P Board Circuit Diagram:DSP



10.11 POWER BOARD ASSY

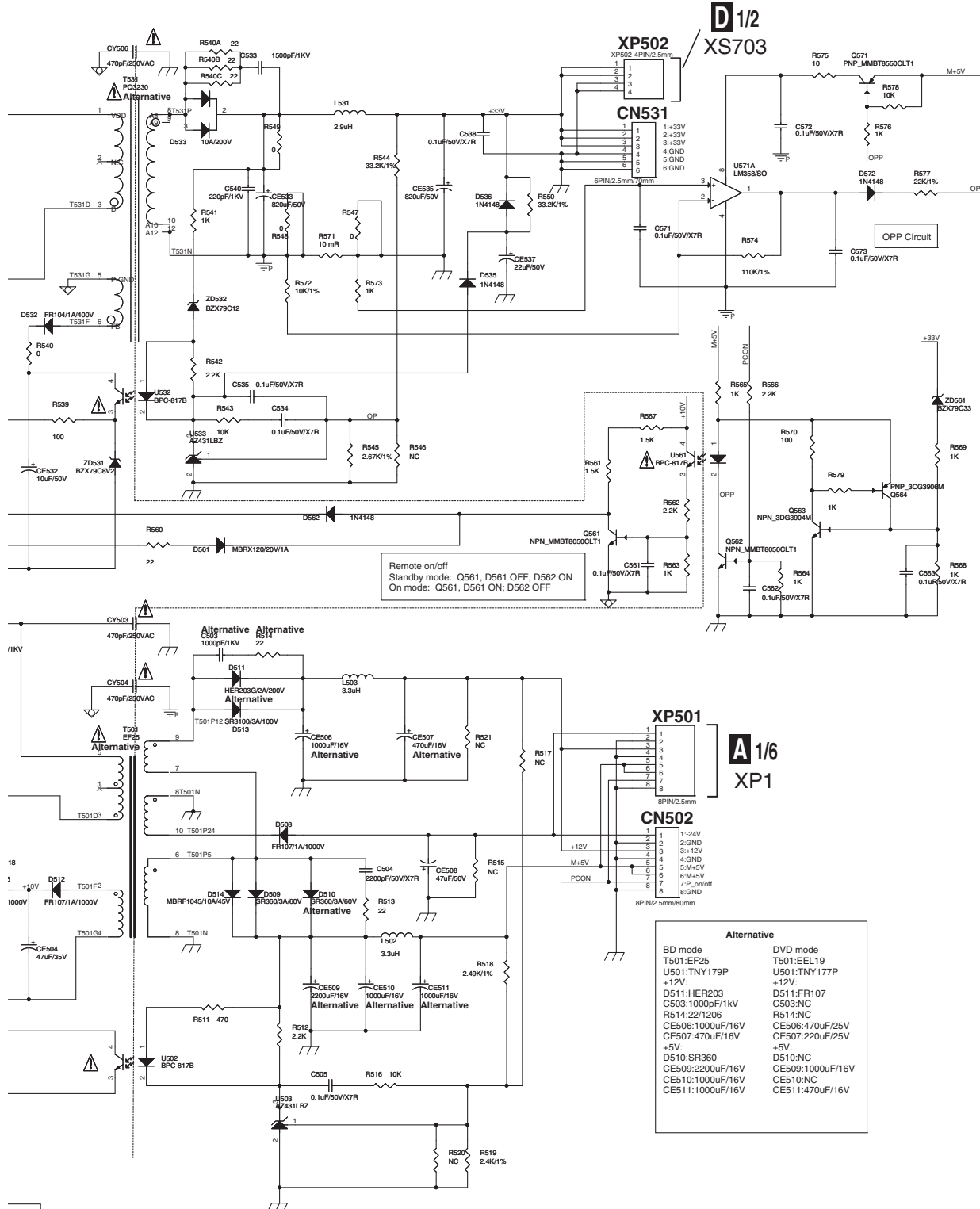
Power Board Circuit Diagram



* CAUTION :

THE PARTS MARKED WITH  ARE IMPORTANT PARTS ON THE SAFETY.
PLEASE USE THE PARTS HAVING THE DESIGNATED PARTS NUMBER WITHOUT FAIL.

POWER BOARD ASSY (HTZ-121DVD/LXE, (DCS-222K/YXE8 : 08-DCS222-PW0) (HTZ-121DVD/TWXE : 08-P075HE-PW1)

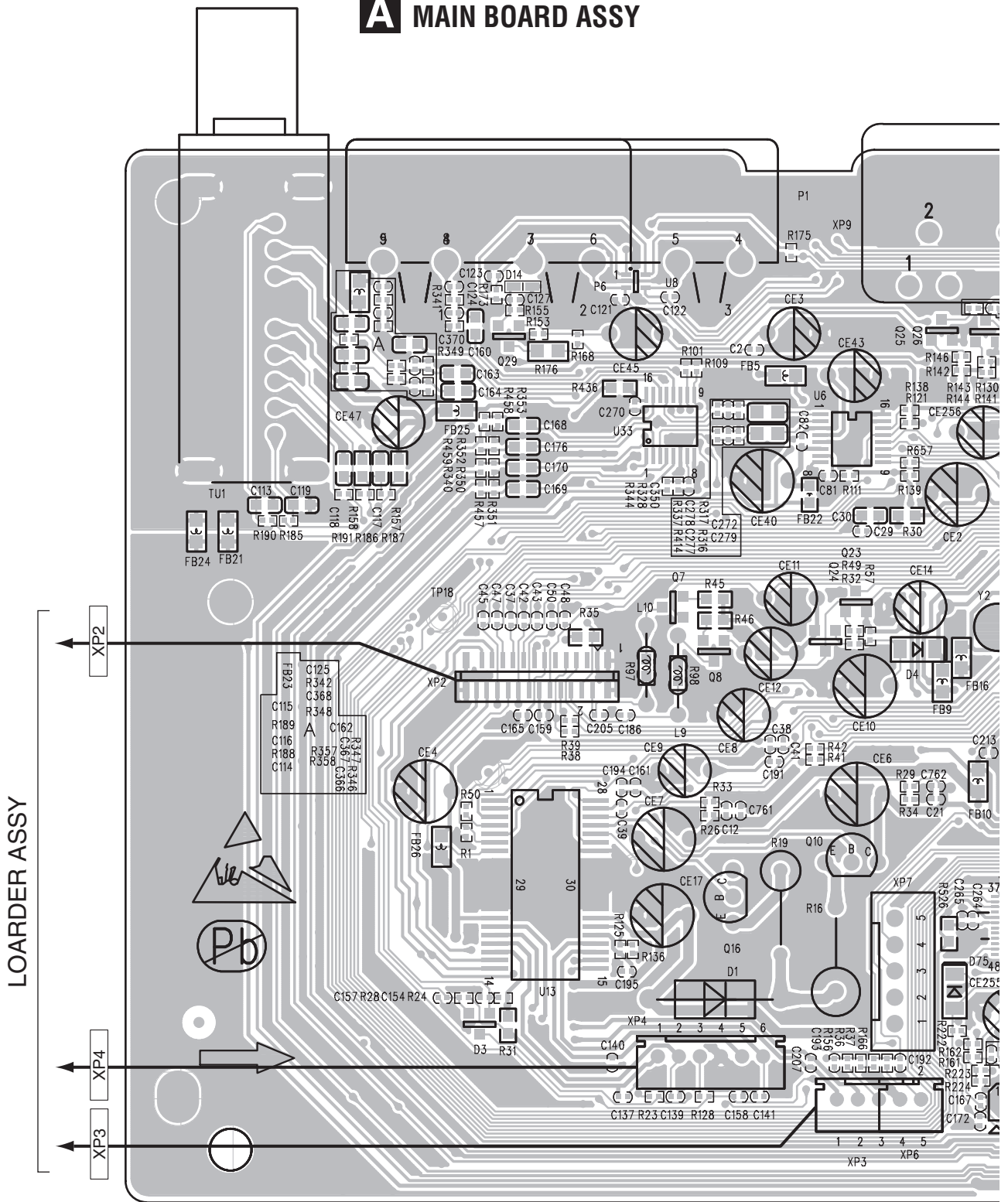


11. PCB CONNECTION DIAGRAM

11.1 MAIN BOARD ASSY

SIDE A

A MAIN BOARD ASSY



A

SIDE A

A

E

C

□

F

F

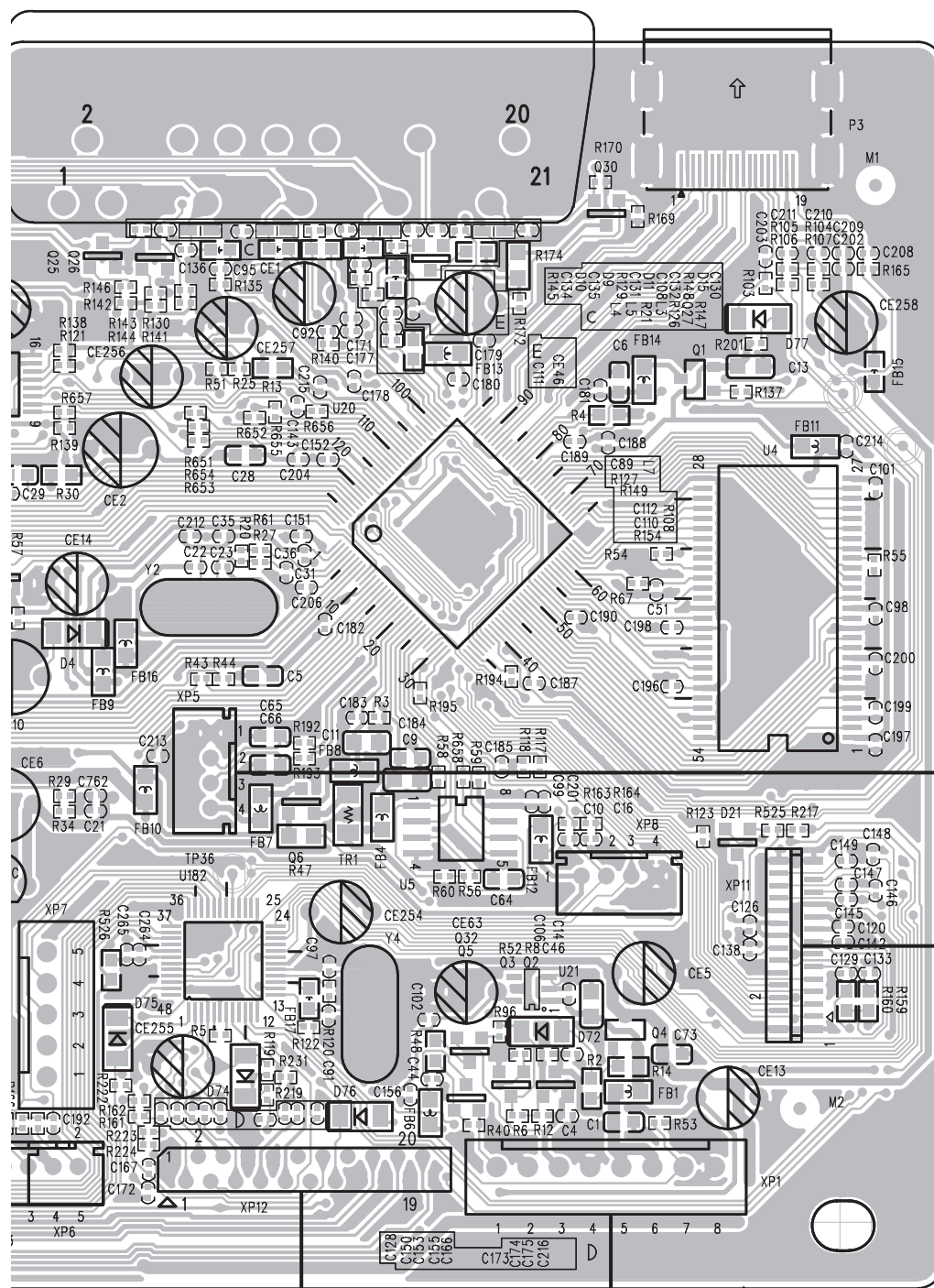
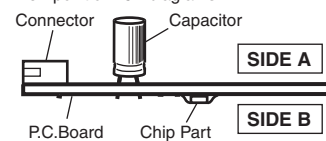
A

69

NOTE FOR PCB DIAGRAMS :

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

2. View point of PCB diagrams.

**B** XP3

EXP501

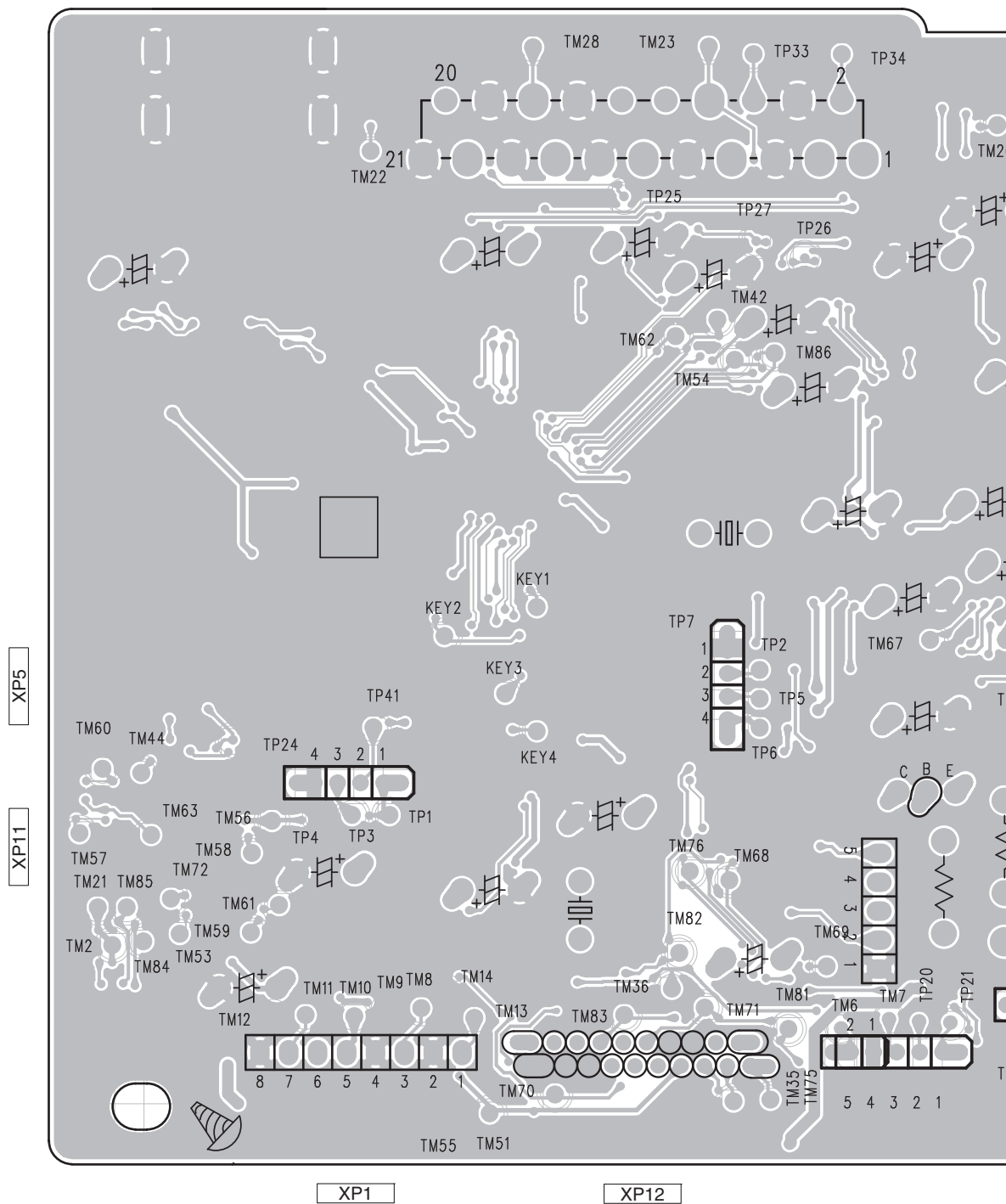
B XS604

D XP701

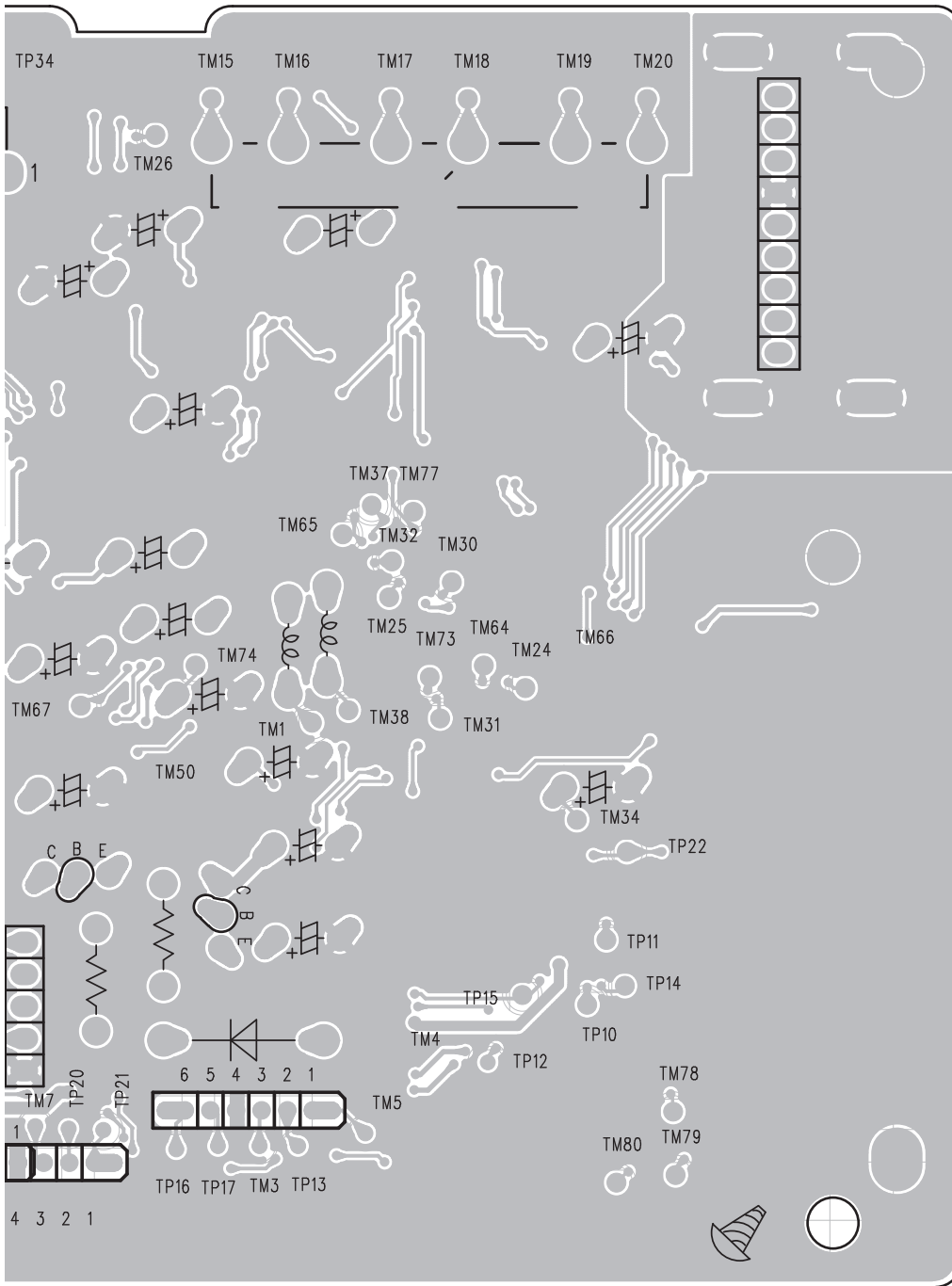
HTZ-121DVD

SIDE B

A MAIN BOARD ASSY



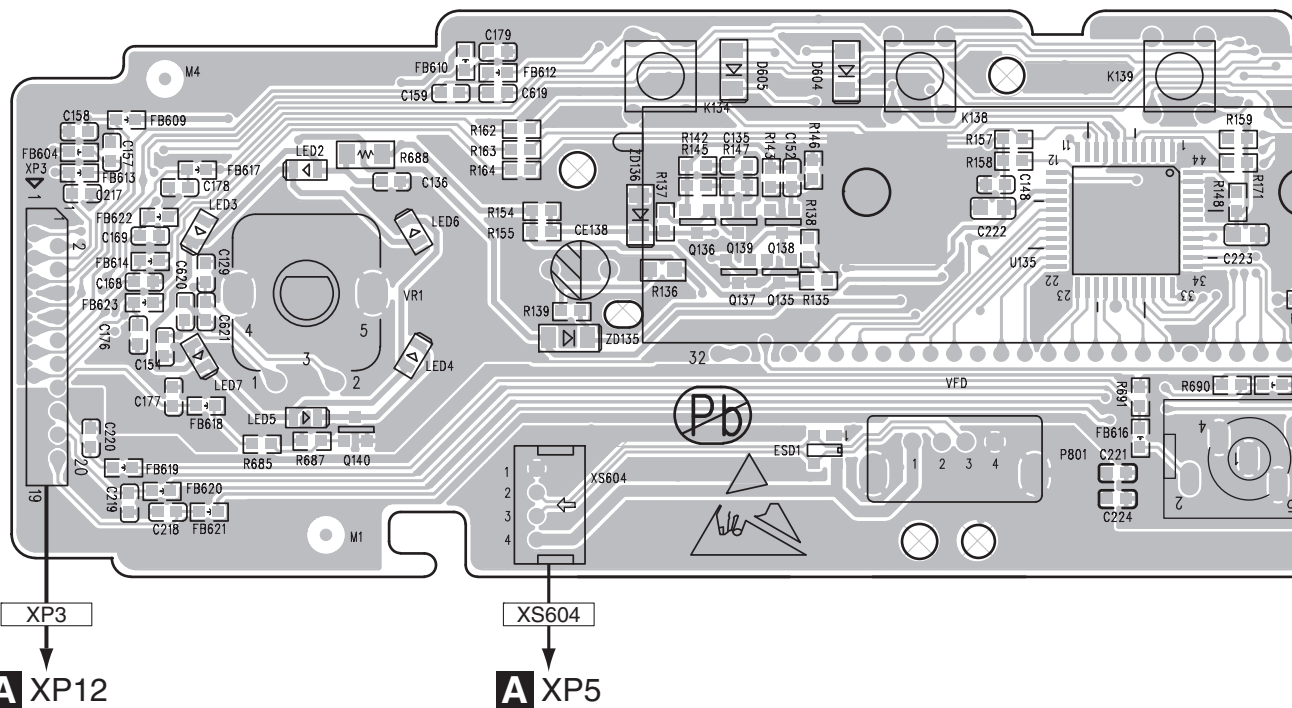
A



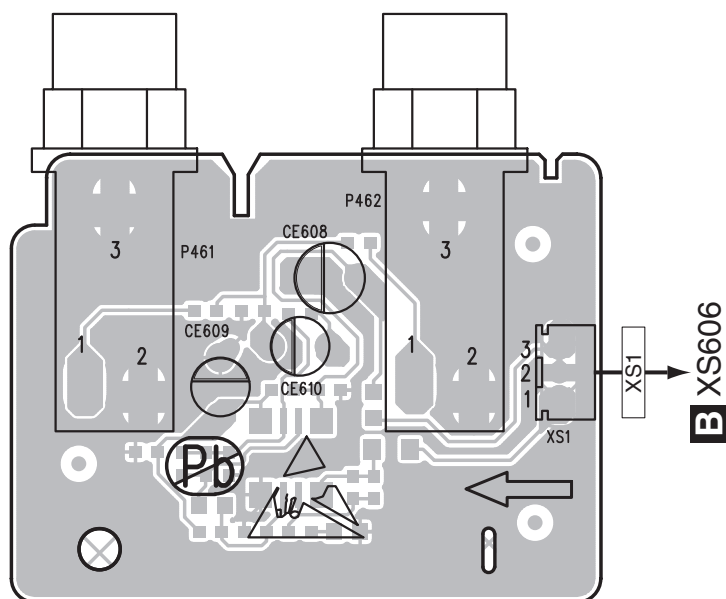
11.2 FRONT BOARD ASSY and KARAOKE BOARD ASSY

SIDE A

B FRONT BOARD ASSY



C KARAOKE BOARD ASSY



SIDE A

A

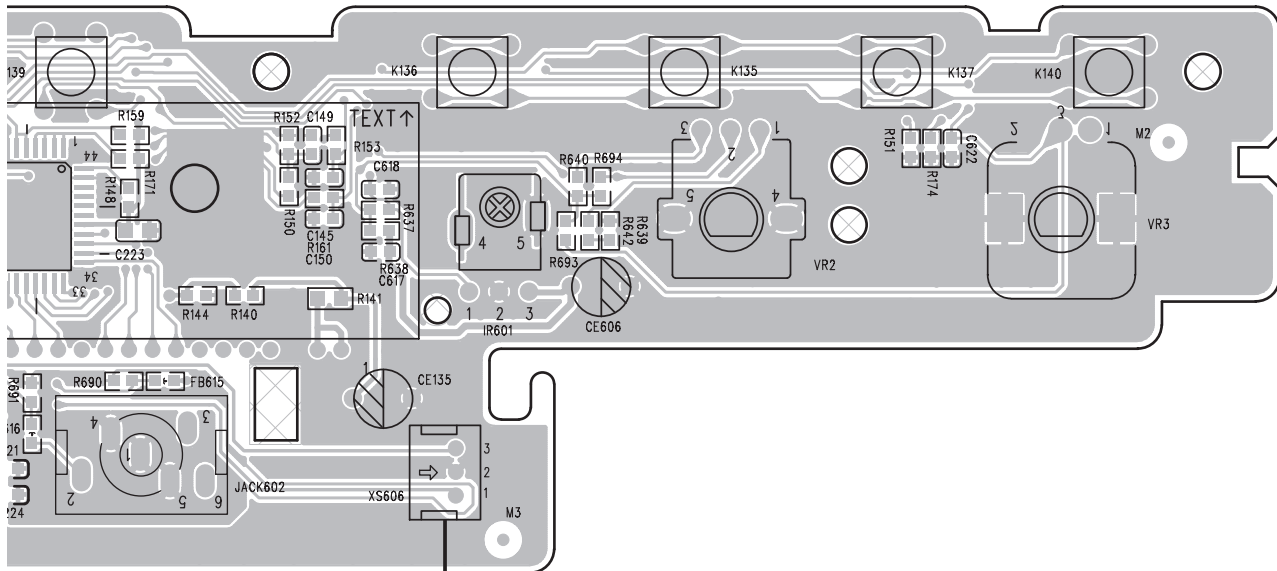
B

C

D

E

F

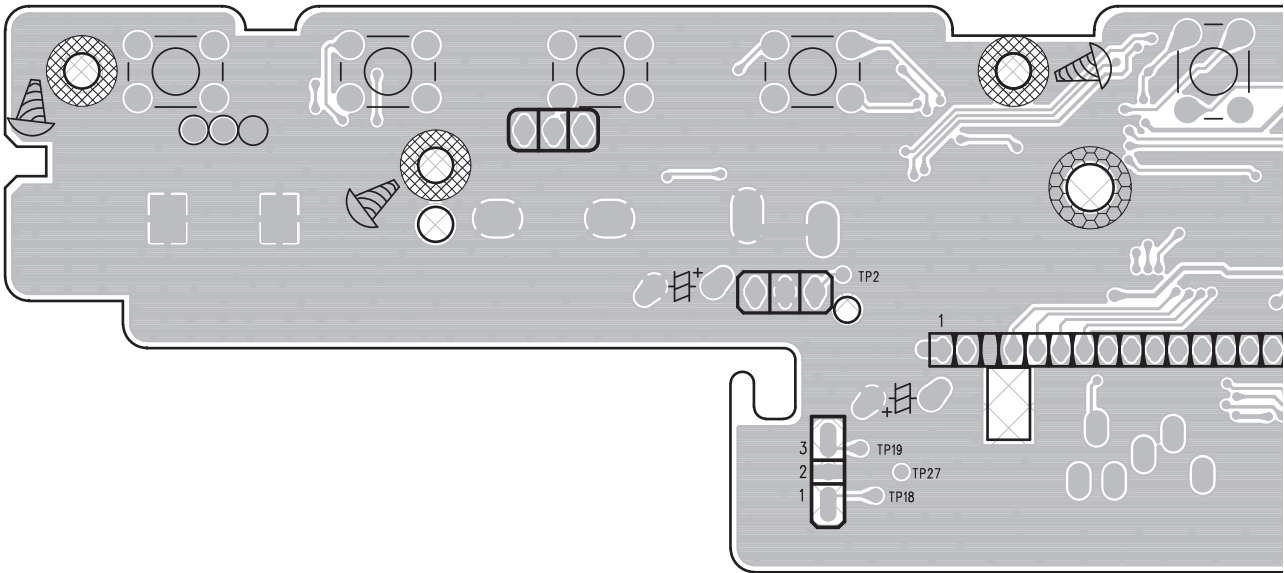


XS606

C XS1

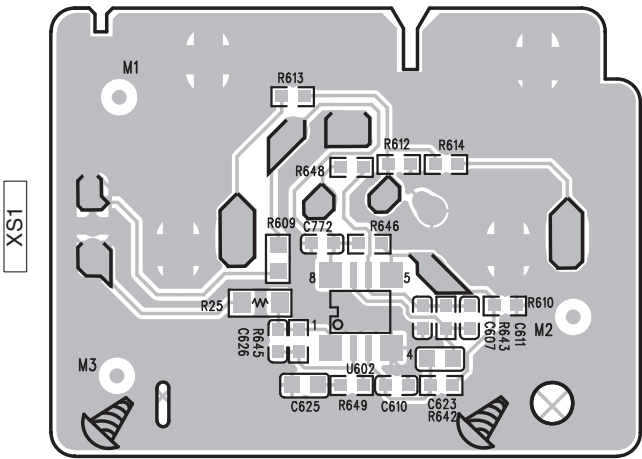
SIDE B

B FRONT BOARD ASSY



XS606

C KARAOKE BOARD ASSY



XS1

SIDE B

A

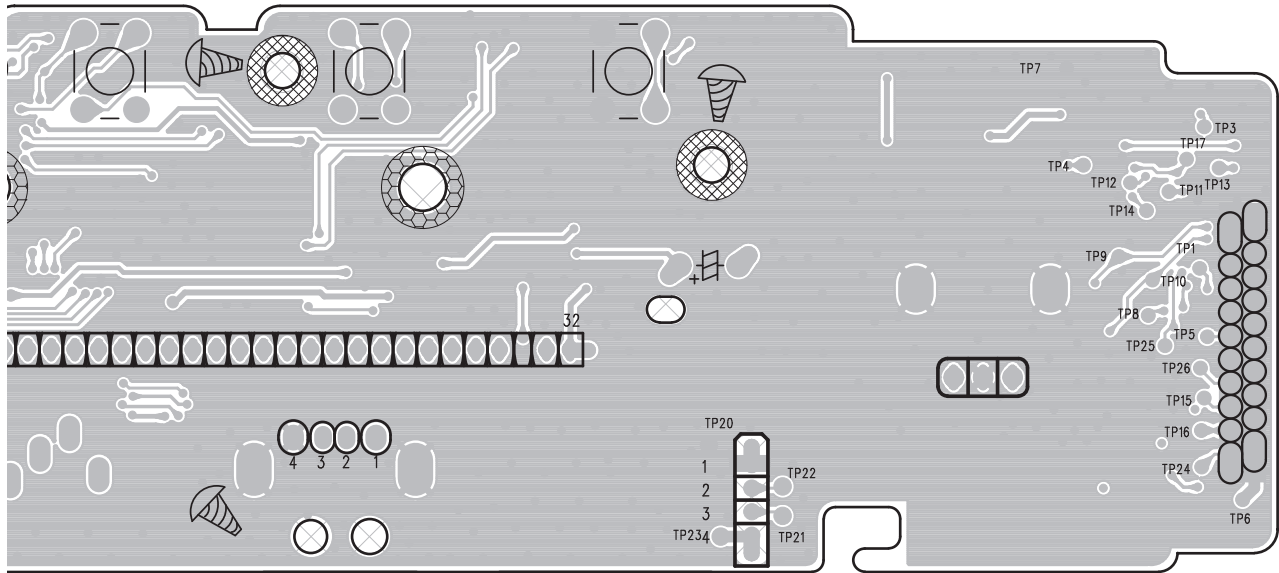
B

C

D

E

F



XS604

XP3

11.3 AMP BOARD ASSY

SIDE A

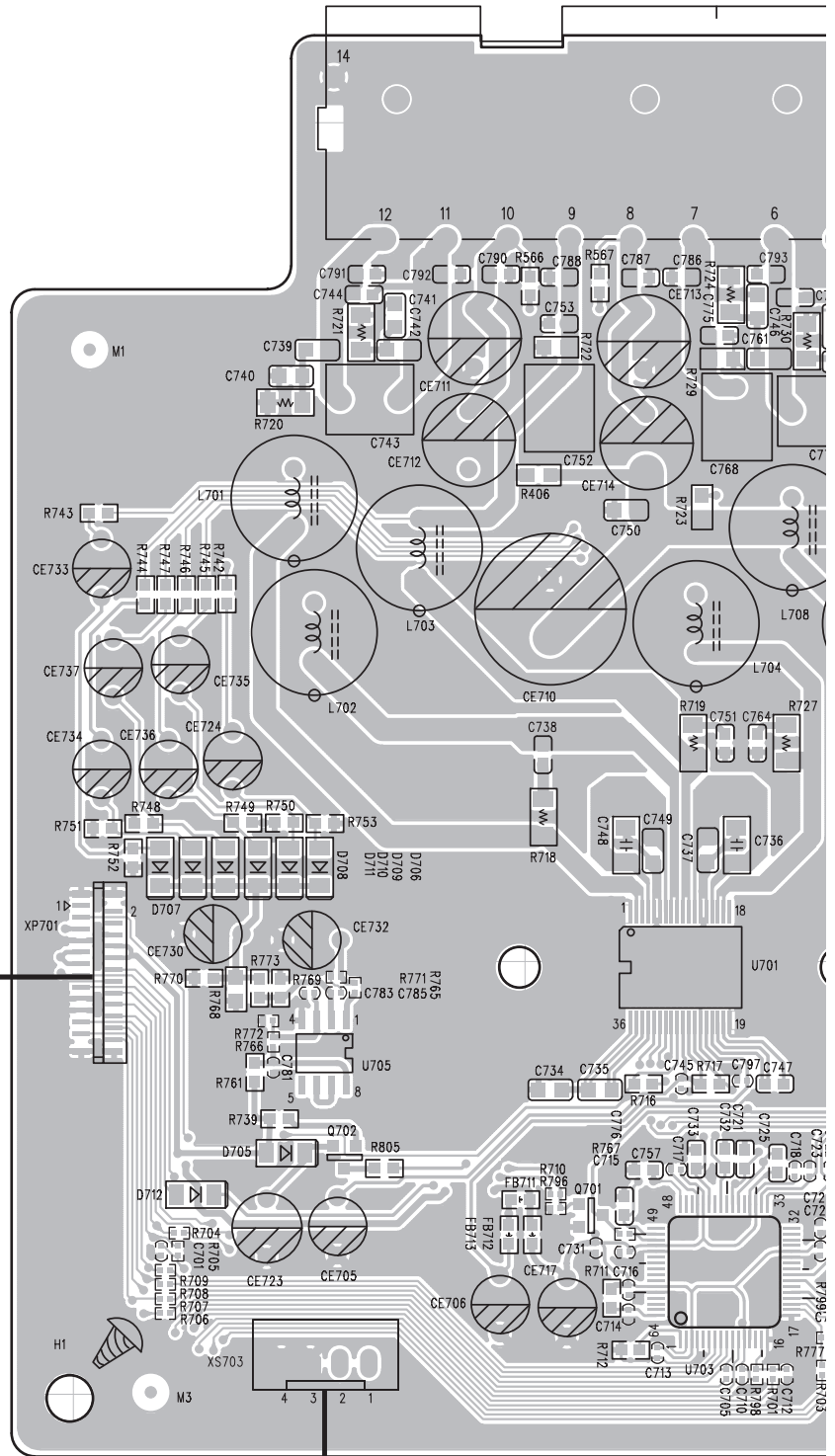
AMP BOARD ASSY

A XP11

XP701

XS703

E XP502



SIDE A

A

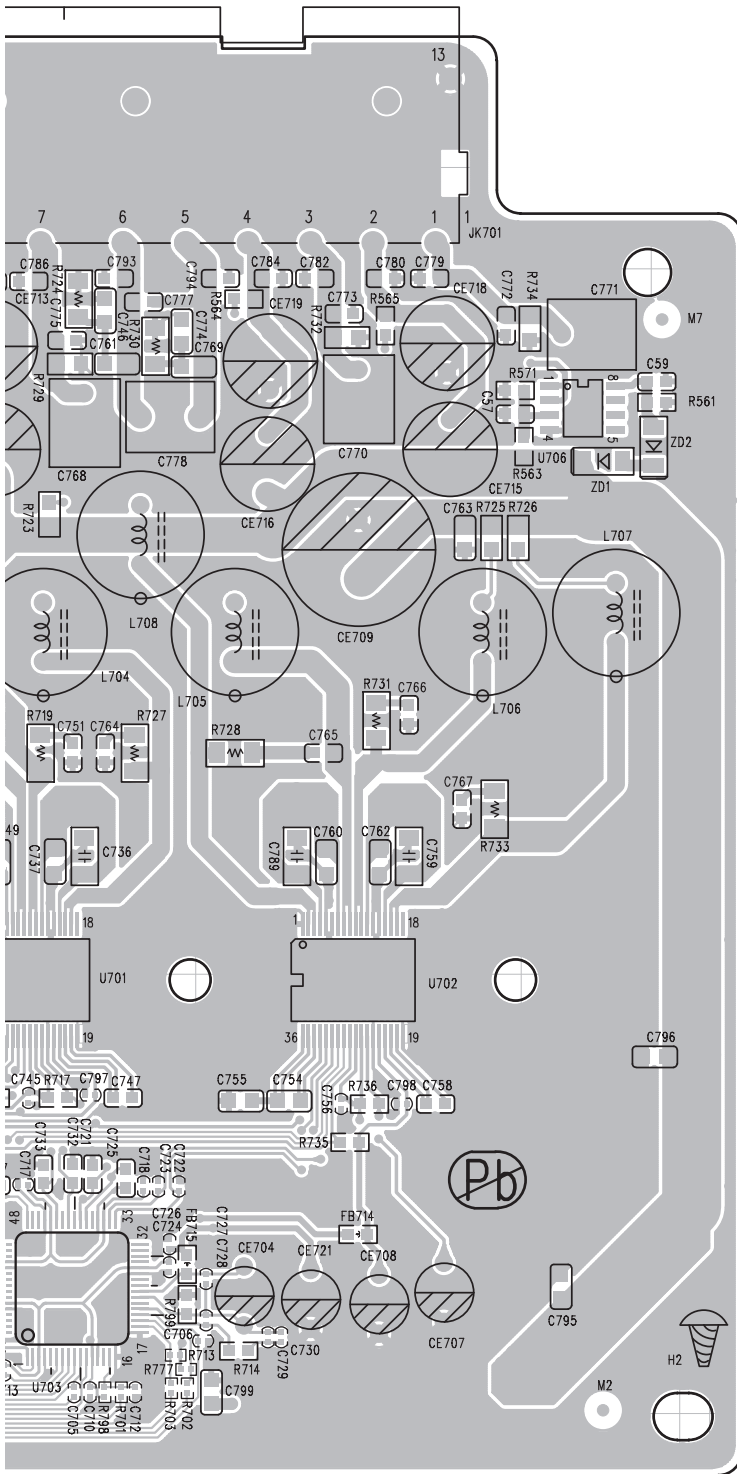
B

C

D

E

F



SIDE B

A

B

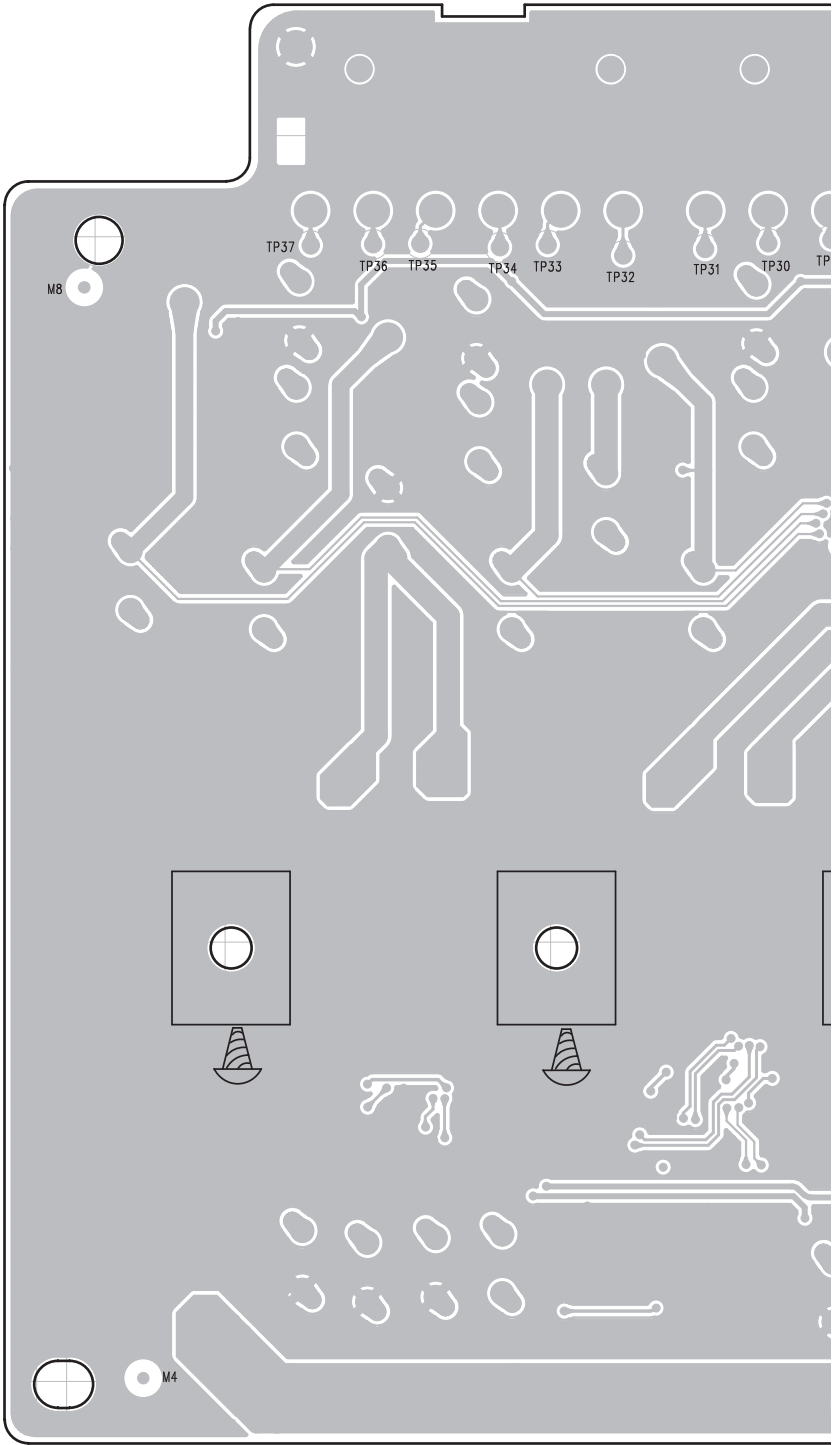
C

D

E

F

D AMP BOARD ASSY



SIDE B

A

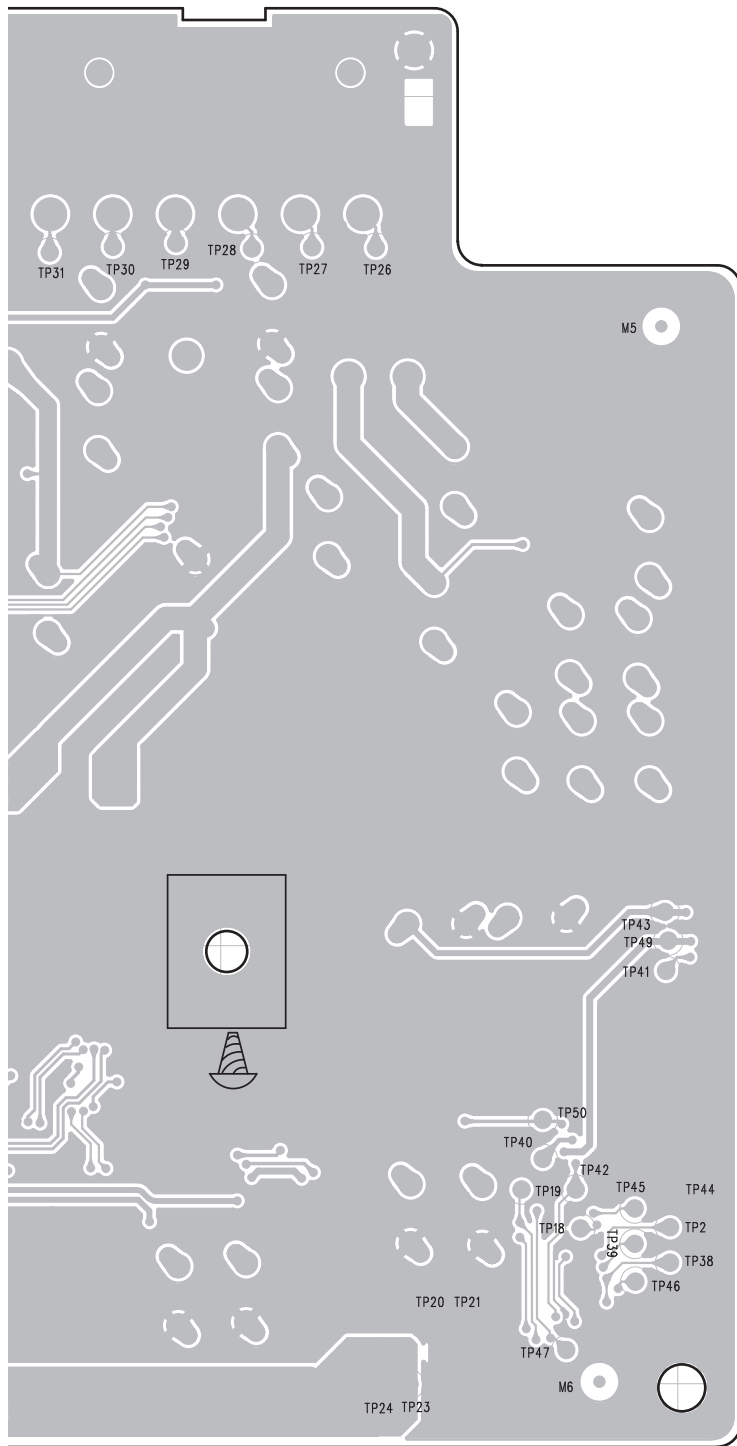
B

C

D

E

F



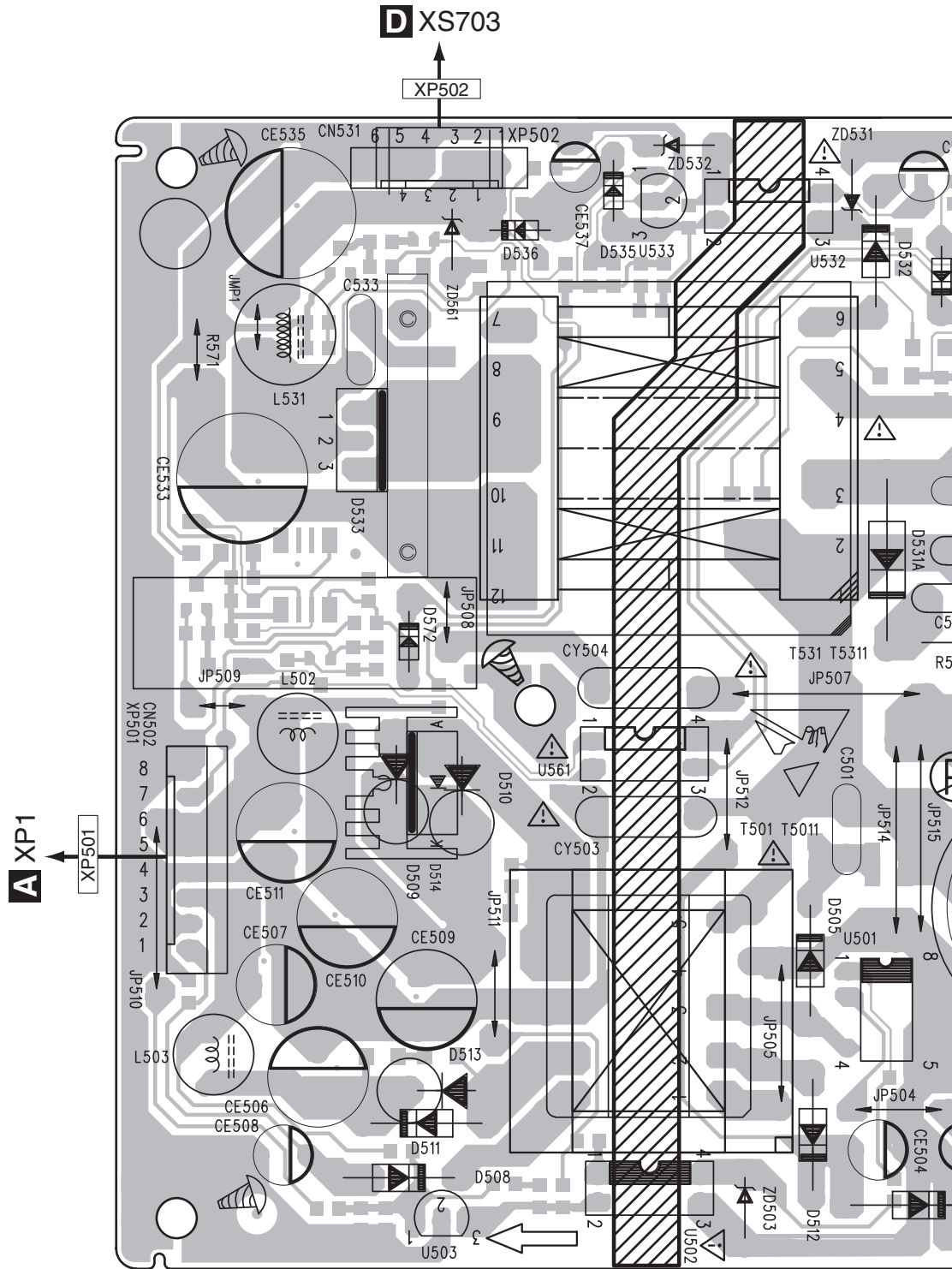
XS703

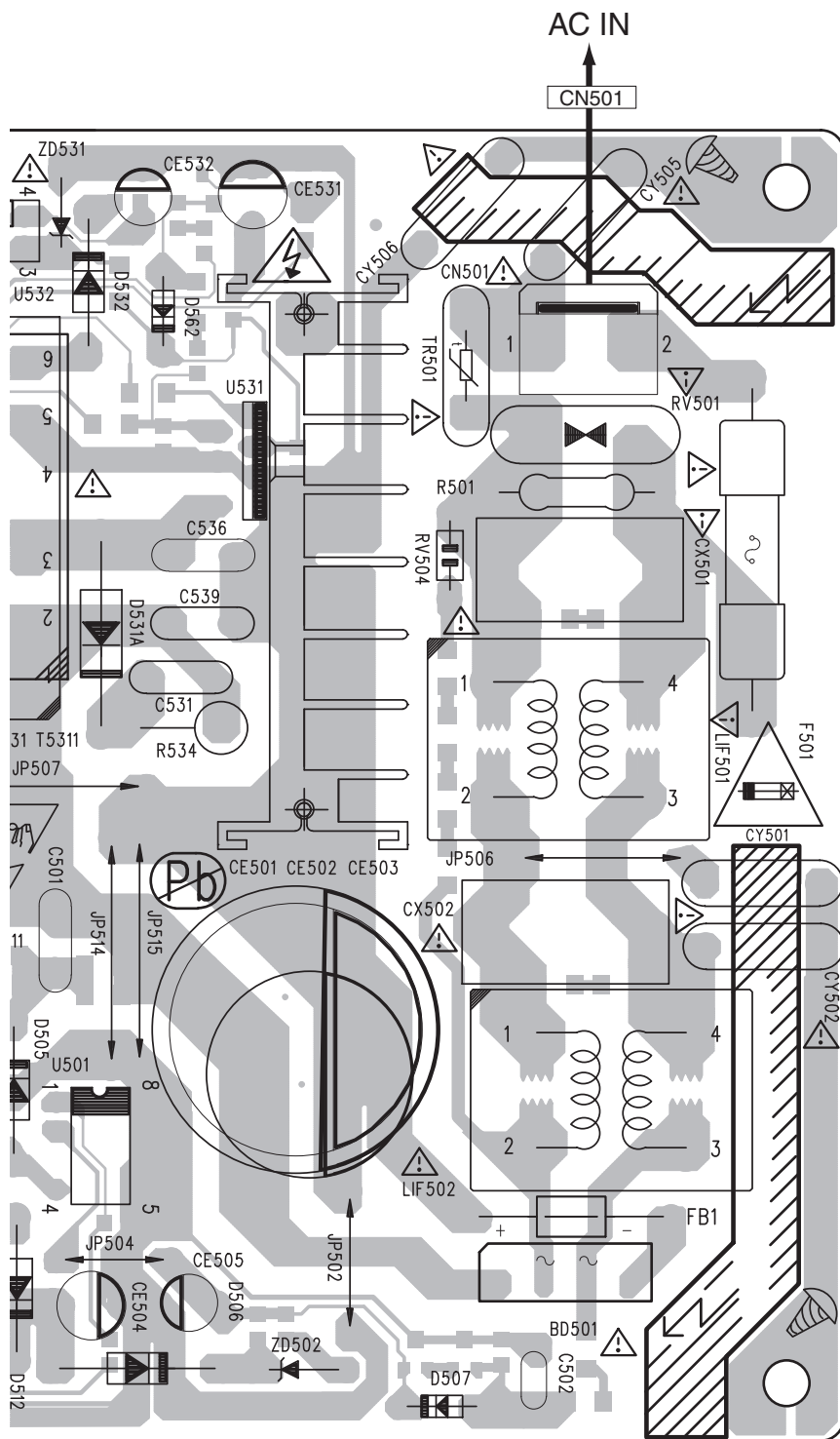
XP701

11.4 POWER BOARD ASSY

SIDE A

POWER BOARD ASSY





SIDE B

A

E POWER BOARD ASSY

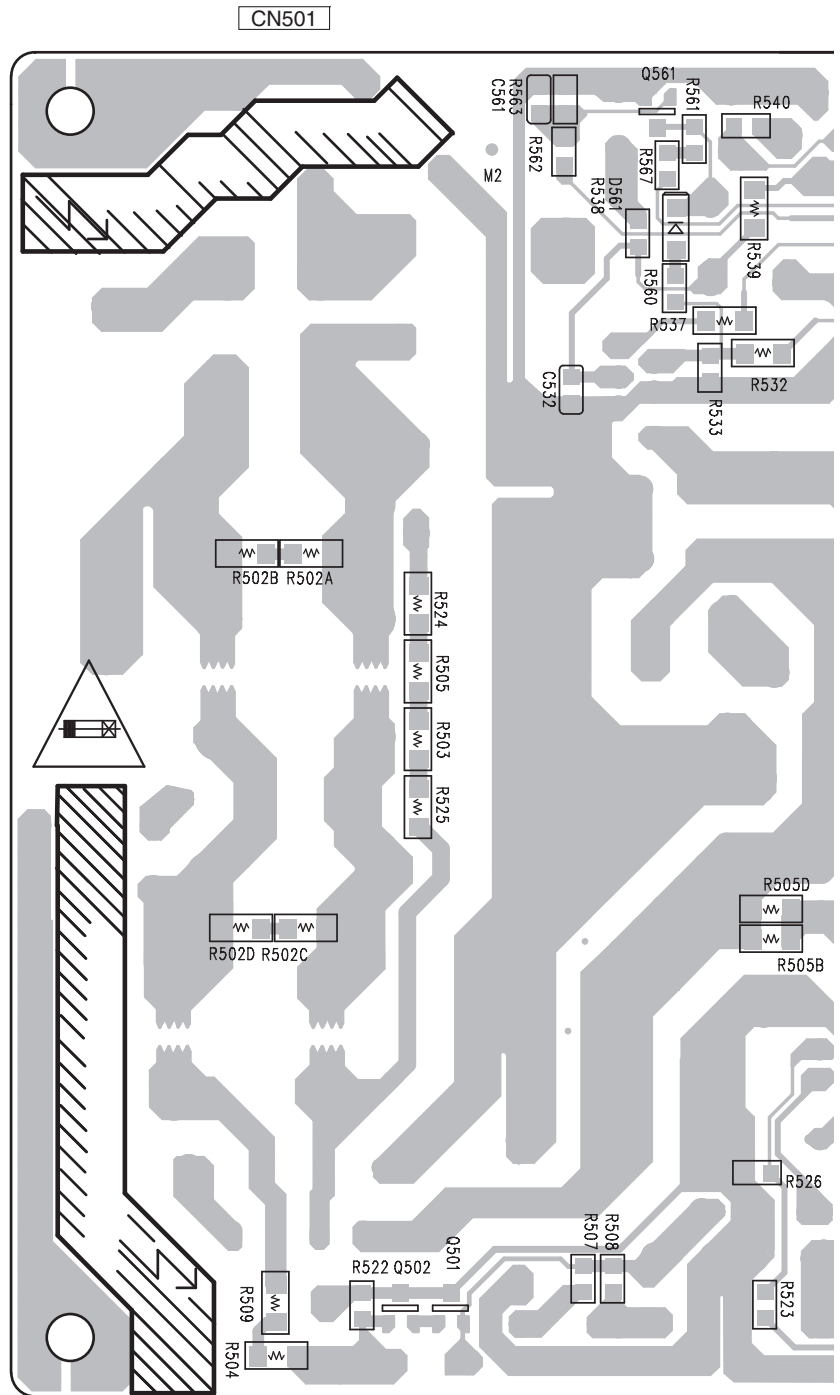
B

C

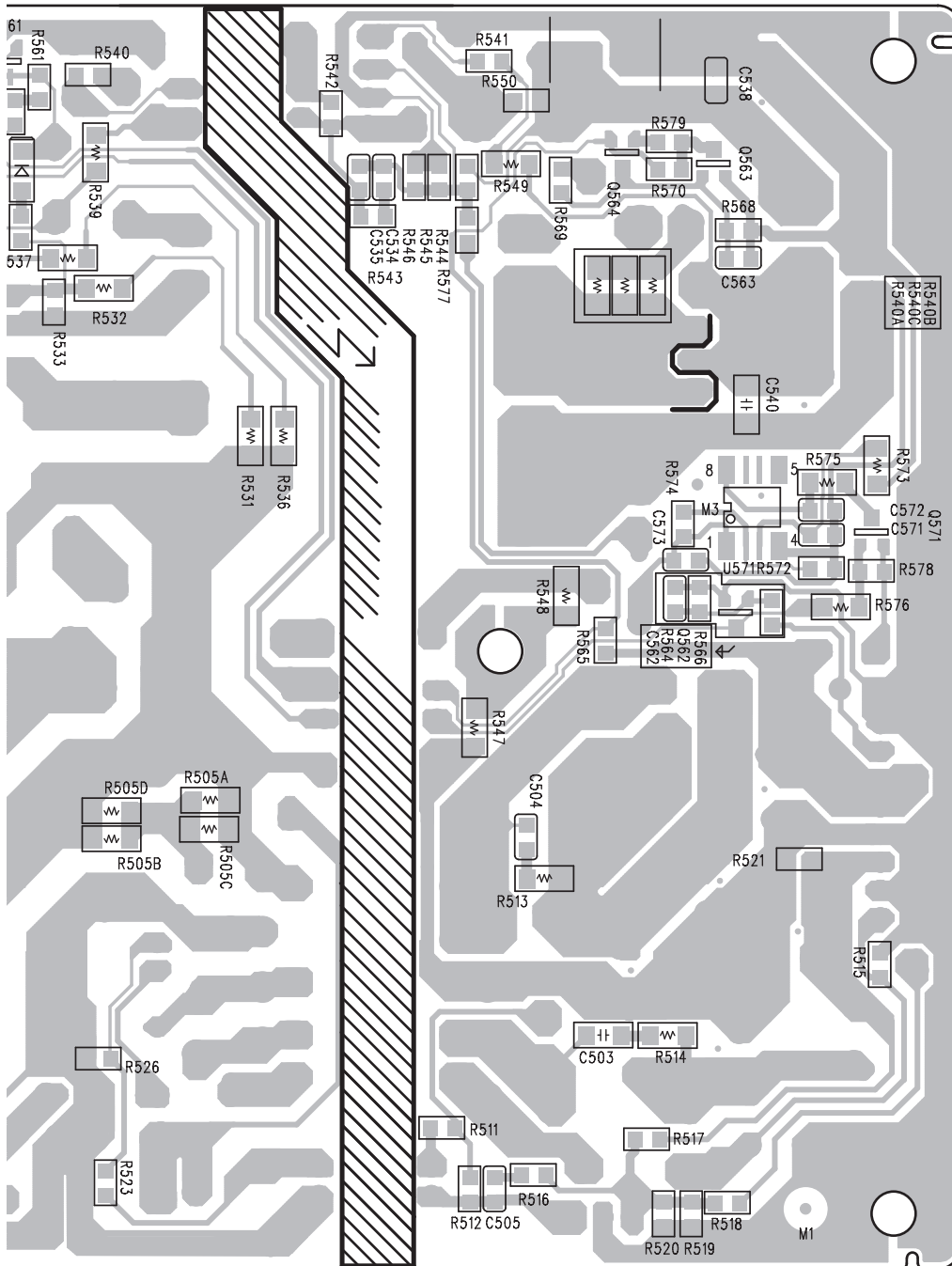
D

E

F



XP502



12. PCB PARTS LIST

NOTES: ● Parts marked by “NSP” are generally unavailable because they are not in our Master Spare Parts List.
● The ⚠ mark found on some component parts indicates the importance of the safety factor of the part.
Therefore, when replacing, be sure to use parts of identical designation.
● When ordering resistors, first convert resistance values into code form as shown in the following examples.
Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47 k ohm (tolerance is shown by J = 5%, and K = 10%).
560 Ω → 56 × 10¹ → 561 RD1/4PU 5 6 1 J
47 kΩ → 47 × 10³ → 473 RD1/4PU 4 7 3 J
0.5 Ω → R50 RN2H R 5 0 K
1 Ω → 1R0 RS1P 1 R 0 K
Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).
5.62 kΩ → 562 × 10¹ → 5621 RN1/4PC 5 6 2 1 F

Mark No. Description Part No.
LIST OF ASSEMBLIES

1..MAIN BOARD ASSY (HTZ-121DVD/LXE)	08-HTZ121-MA0
1..MAIN BOARD ASSY (HTZ-121DVD/TWXE)	08-H89GAU-MA1R
1..MAIN BOARD ASSY (DCS-222K/YXE8)	08-DCS222-MA0
1..FRONT BOARD ASSY	08-DCS222-FB0
1..KARAOKE BOARD ASSY	08-DCS222-KU0
1..AMP BOARD ASSY (HTZ-121DVD/LXE, DCS-222K/YXE8)	08-DCS222-AM0
1..AMP BOARD ASSY(HTZ-121DVD/TWXE)	08-S301B6-AM1
⚠ 1..POWER BOARD ASSY (HTZ-121DVD/LXE, DCS-222K/YXE8)	08-DCS222-PW0
⚠ 1..POWER BOARD ASSY (HTZ-121DVD/TWXE)	08-P075HE-PW1

Mark No. Description Part No.

A MAIN BOARD ASSY

MISCELLANEOUS	
Y2 CRYSTAL RESONATOR 12MHz	45-OSC12M-0Y2
Y4 CRYSTAL RESONATOR 27MHz	45-OSC27M-0YAGA

B FRONT BOARD ASSY

MISCELLANEOUS	
K134,K135,K136,K137,K138,K139,K140	
SWITCH TACT TSAB-1	48-TAC020-XX0-TL

C KARAOKE BOARD ASSY

KARAOKE BOARD ASSY has no service parts.

D AMP BOARD ASSY

AMP BOARD ASSY has no service parts.

E POWER BOARD ASSY

POWER BOARD ASSY has no service parts.