BDP-N460

RMT-B104A

SERVICE MANUAL

US Model
BDP-N460

Self Diagnosis Supported model

Ver. 1.2 2010.01

Photo: BDP-N460

SPECIFICATIONS

System
Laser: Semiconductor laser

Inputs and outputs
(Jack name:
Jack type/Output level/Load impedance)
LINE OUT R-AUDIO-L:
Phono jack/2 Vrms/10 kilohms
DIGITAL OUT (OPTICAL):
Optical output jack/-18 dBm
(wave length 660 nm)
DIGITAL OUT (COAXIAL):
Phono jack/0.5 Vp-p/75 ohms
HDMI OUT:
HDMI 19-pin standard connector
COMPONENT VIDEO OUT (Y, P_B, P_R):
Phono jack/Y: 1.0 Vp-p/
P_B, P_R: 0.7 Vp-p/75 ohms
LINE OUT VIDEO:
Phono jack/1.0 Vp-p/75 ohms
LAN (100):
100BASE-TX Terminal
EXT:
External memory slot (For connecting the external memory)
DC output: 5 V 500 mA Max

USB:
USB jack Type A (For connecting digital still camera and USB memory)

General
Power requirements:
120 V AC, 60 Hz
Power consumption:
26 W
Dimensions (approx.):
430 mm × 238 mm × 70 mm
(17 in. × 9 3/8 in. × 2 7/8 in.)
(width/depth/height) incl. projecting parts
Mass (approx.):
2.8 kg (6 lb 2 3/4 oz)
Operating temperature:
5 °C to 35 °C (41 °F to 95 °F)
Operating humidity:
25 % to 80 %

Supplied accessories
- Audio/video cable (phono plug × 3) (1)
- AC power cord (1)
- Remote commander (remote) (1)
- Size AA (R6) Batteries (2)

Specifications and design are subject to change without notice.

BLU-RAY DISC/DVD PLAYER

SONY

9-890-718-13

Sony Corporation
Home Entertainment Bisiness Group

2009K6900-1

Published by Design Engineering Dept.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
6. Check the B+ voltage to see it is at the values specified.
7. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

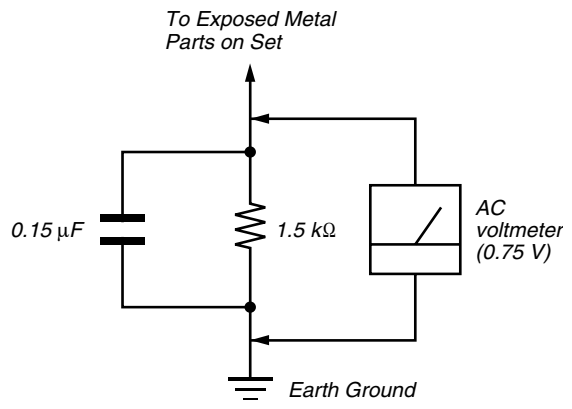


Fig. A. Using an AC voltmeter to check AC leakage.

WARNING!!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION, BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 25 cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

LEAKAGE TEST

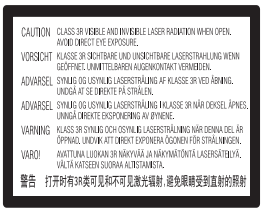
The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

CAUTION:

The use of optical instrument with this product will increase eye hazard.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.



This label is located on the laser protective housing inside the enclosure.

Unleaded solder

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)

: LEAD FREE MARK

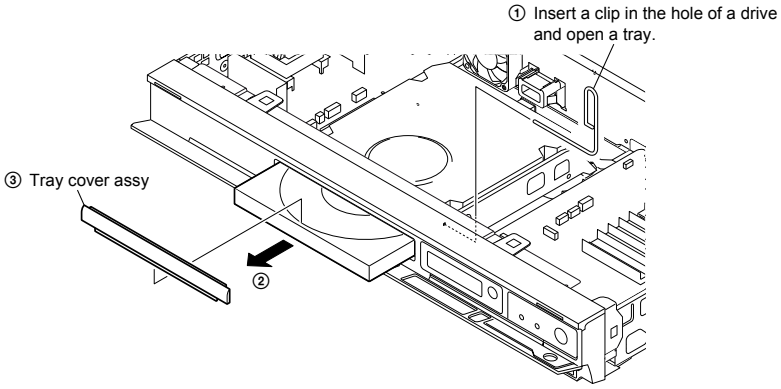
Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40°C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350°C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

TABLE OF CONTENTS

SECTION 1
SERVICE NOTE

1-1. DISC REMOVAL PROCEDURE IF THE TRAY CANNOT BE EJECTED (FORCED EJECTION)



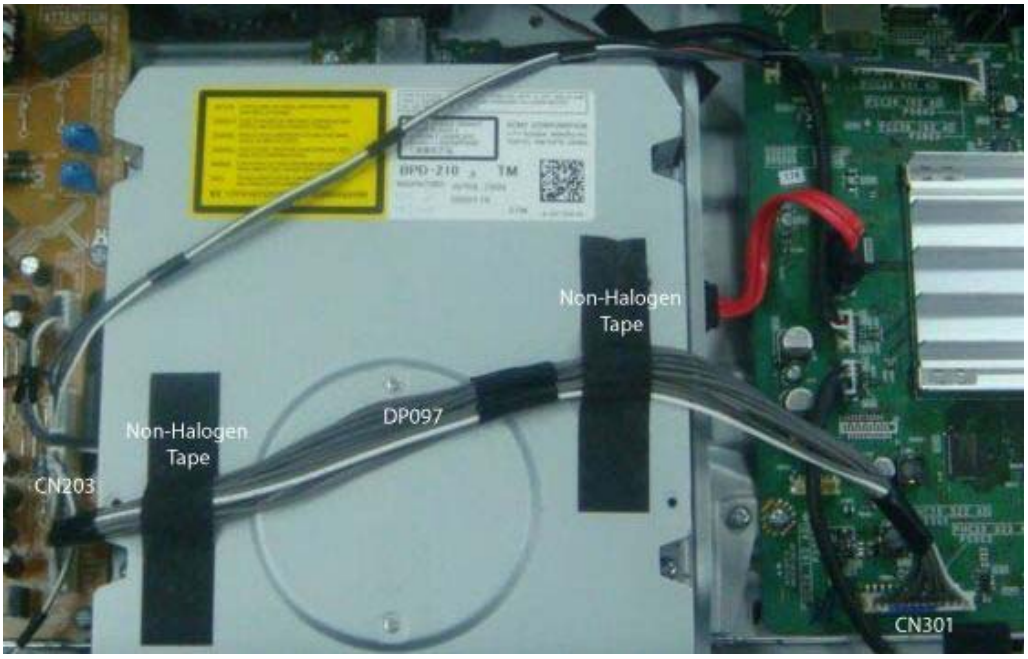
1-2 Caution : SATA cable and harness dressing

1-2a SATA cable CANNOT touch the Capacitor (C618).

- The SATA cable must twisted back and push down to avoid touching the uppercase and capacitor. Refer to the following picture.

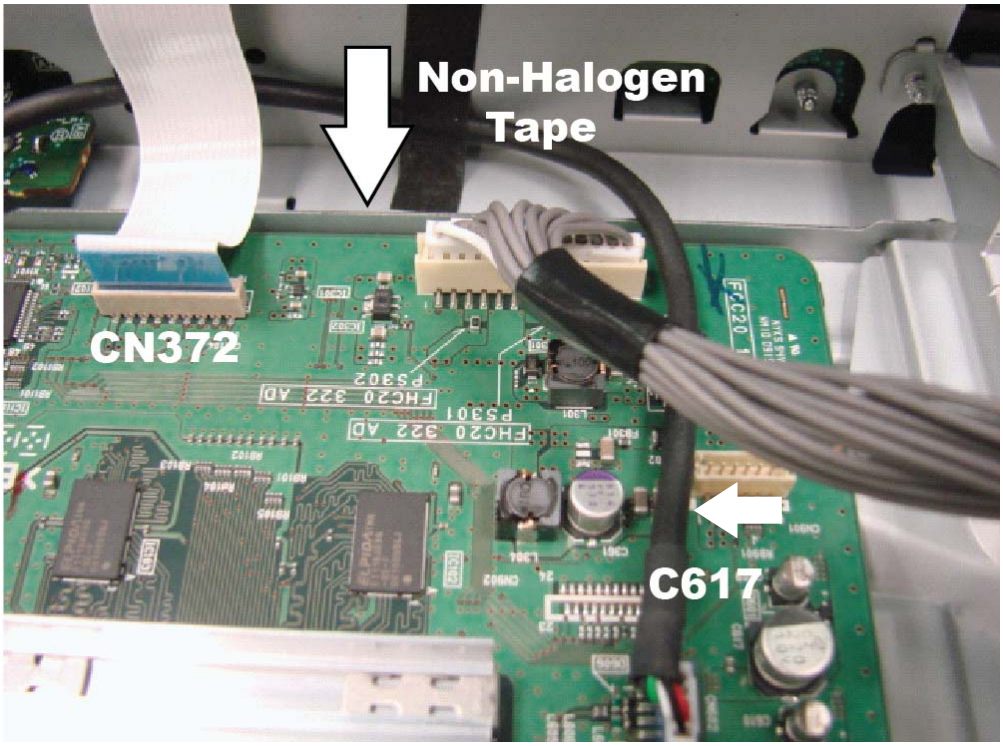
1-2b Harness (DP097) MUST ALWAYS stick on the BD DRIVE by applying the 2 Nonhalogen tape.

DP097 CANNOT TOUCH the uppercase. Need to press harder while inserting to the CN301 to avoid from tilt-up.
Refer to the following picture.



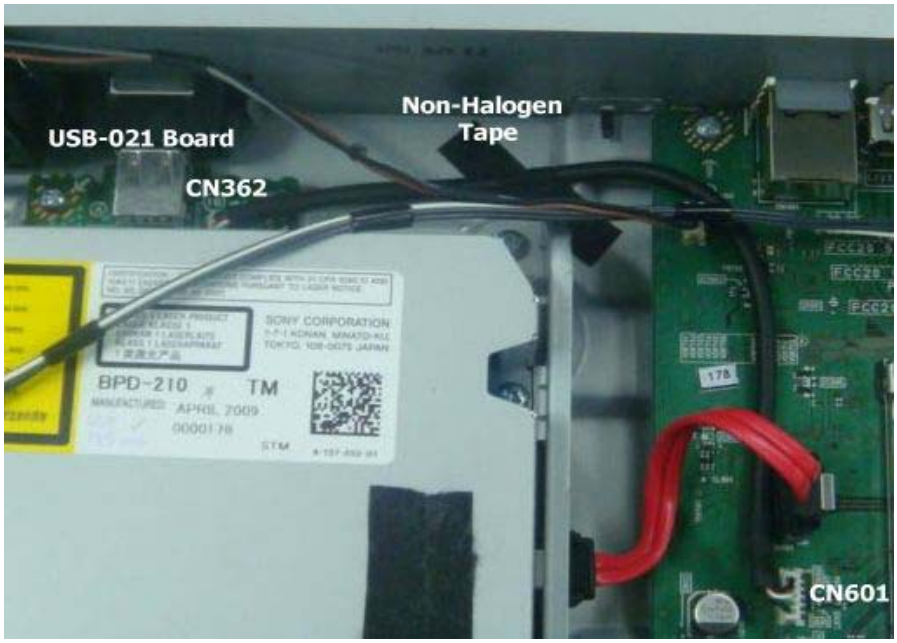
1-2c Front USB cable (UV-010)

UV-010 MUST always remain downward by sticking using the Non- Halogen tape AND **AVOIDING** touching the **C617** (Condenser).
Refer to the following picture.



1-2d Rear USB cable (UV-009)

UV-009 MUST always remain downward by sticking using the Non- Halogen tape.



1-3. TEST DISC

Description	Layer
BLX-104	Single Layer
BLX-204	Dual Layer
CD (YEDS-18)/HLX-A1	
HLX-504/513	Single Layer (NTSC)
HLX-505/514	Dual Layer (NTSC)

1-3-1. Operation and Display

Check Items

1) BLX-104
   1. Select 23.976Hz/1080p
   2. Play “4.Motion pictures”
   3. Check whether player can play back or not
   4. Check each outputs
      Video:
      Composite/S Video/component/HDMI
      Audio:
      Digital out (Coaxial/Optical)/Audio out/5.1Ch output

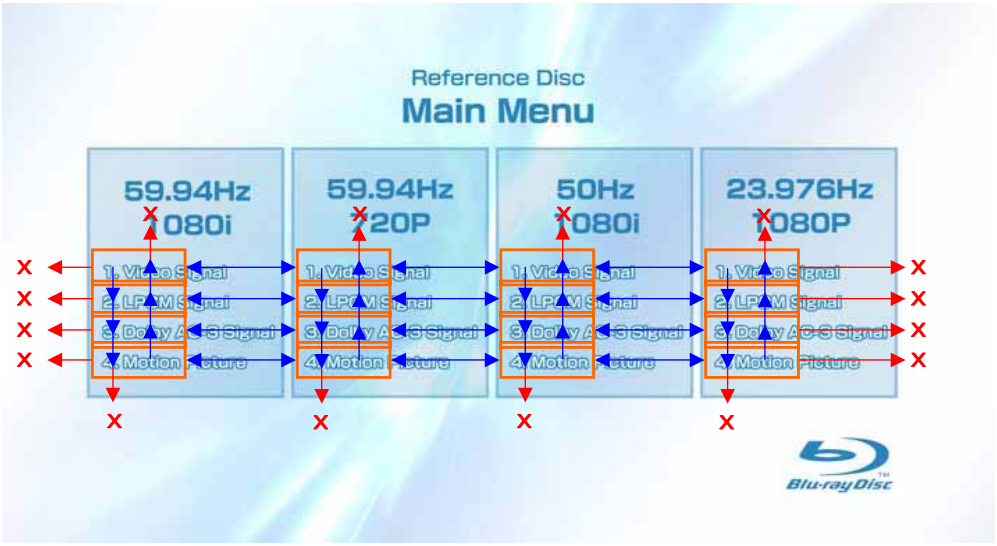
* When 1080/24p monitor is nothing, 1080i (59.94Hz or 50Hz) can use instead of 1080/24p.
However this is temporary correspondence.

2) BLX-204
   1. Select 1080i (59.94Hz or 50Hz)
   2. Play “4.Motion pictures”
   3. Check whether player can play back or not
      (Check the picture and sound output)

3) CD (YEDS-18)
   Check whether player can play back or not
   (Check the sound output)

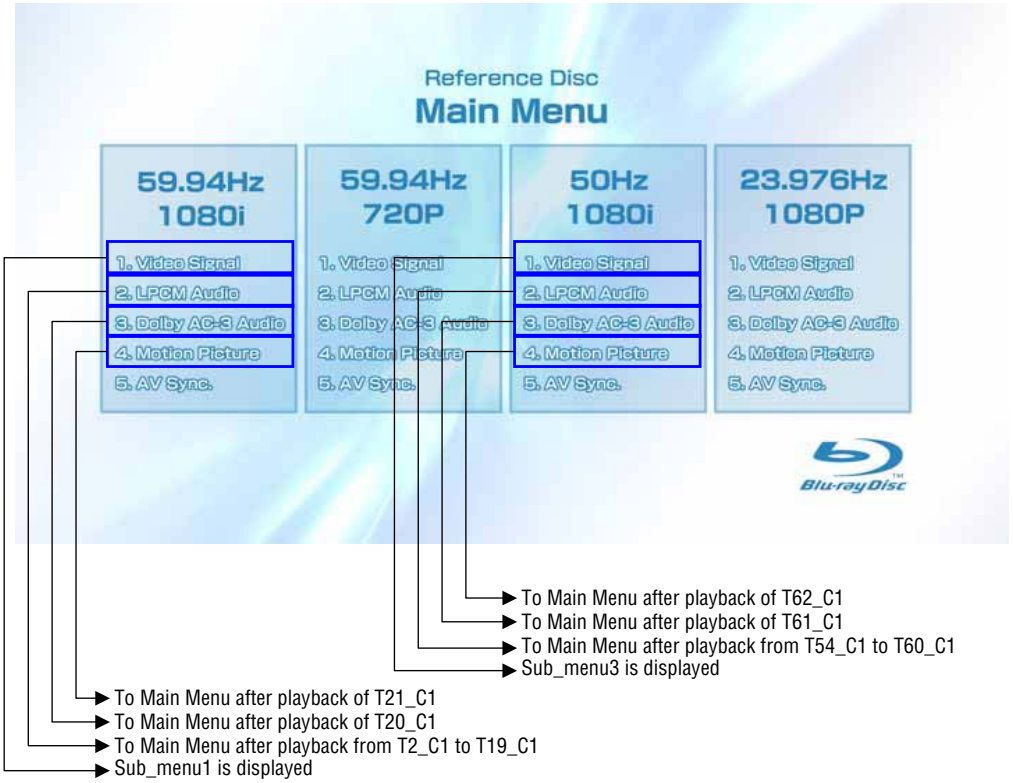
4) HLX-504/505 (NTSC), HLX-506/507 (PAL)
   1. After displayed Main Menu, select “1.Video”
   2. Play “1.Color Bar 100%”
      (Check the picture and sound output)
   3. Return to Menu
   4. Play “Demonstration 4:3” or “5.Demonstration 16:9”
      (Check the picture and sound output)

1-3-1-1. BLX-104 Menu Function (1)
Main Menu



1) When the disc is inserted, 1. Video Signal of 59.94Hz/1080i of the Main Menu is selectively displayed.

1-3-1-2. BLX-104 Menu Function (2)
Main Menu

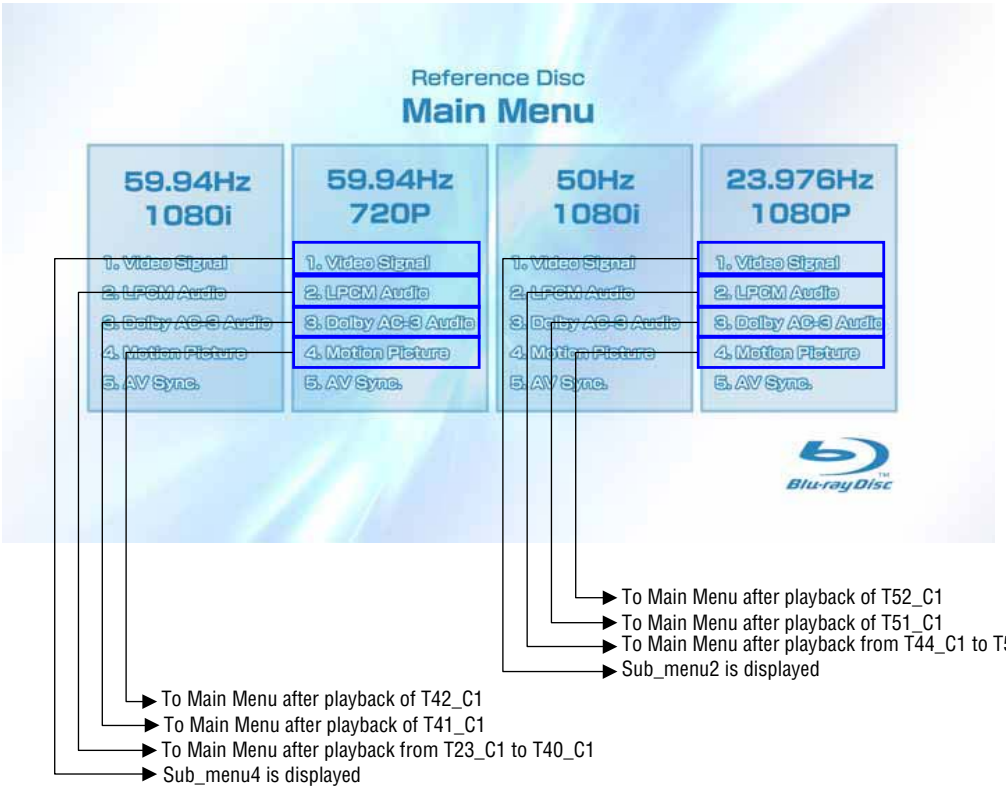


* When returning to Main Menu after playback from each button of 59.94Hz/1080i, 1. Video Signal of 59.94Hz/1080i is selectively displayed.
* When returning to Main Menu after playback from each button of 50Hz/1080i, 1. Video Signal of 50Hz/1080i is selectively displayed.
* 5. AV Sync does not operate.

Note:

Txx_ Cxx
- Chapter No.
- Title No.

1-3-1-3. BLX-104 Menu Function (3)
Main Menu

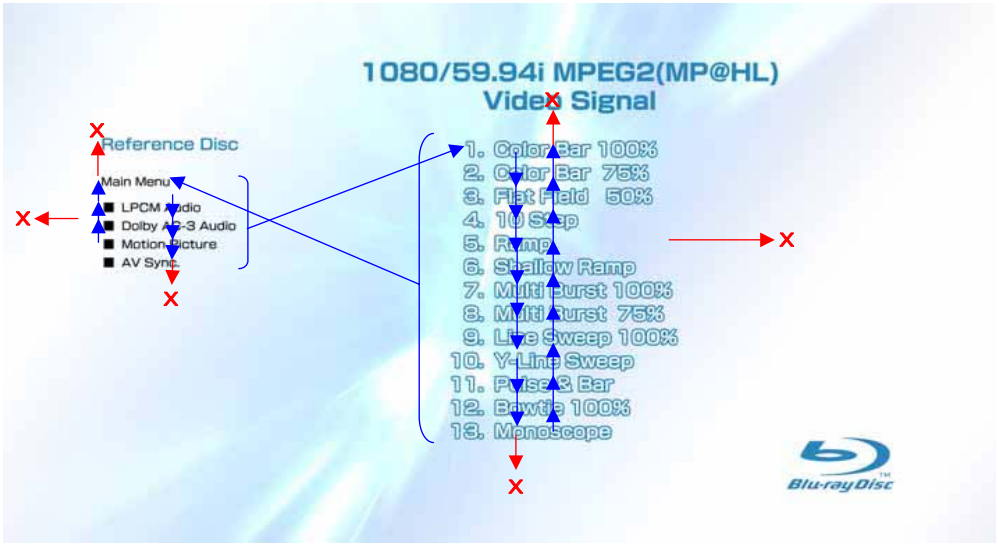


* When returning to Main Menu after playback from each button of 59.94Hz/720P, 1. Video Signal of 59.94Hz/720P is selectively displayed.

* When returning to Main Menu after playback from each button of 23.976Hz/1080P, 1. Video Signal of 23.976Hz/1080P is selectively displayed.

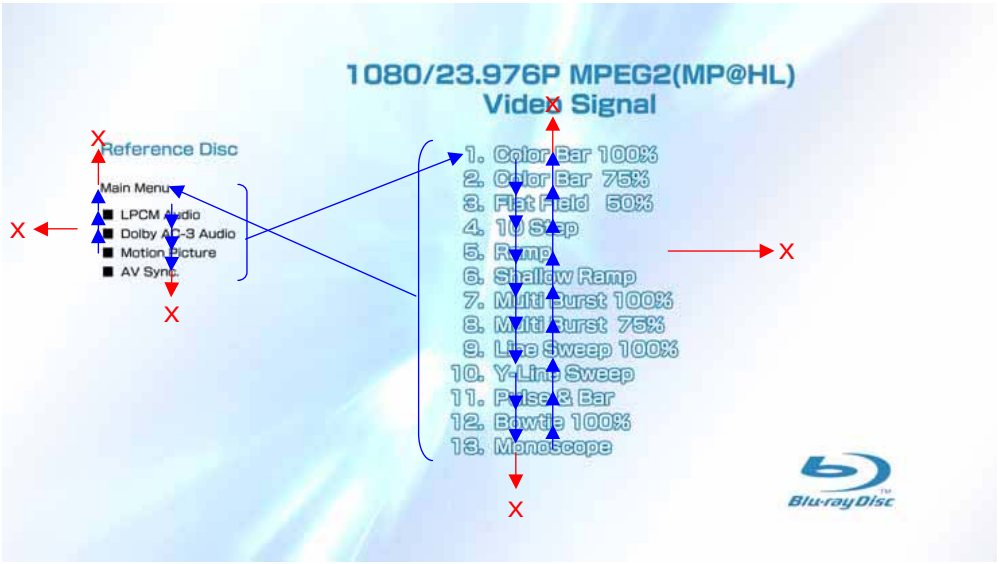
* 5. AV Sync does not operate.

1-3-1-4. BLX-104 Menu Function (4)
Sub menu1



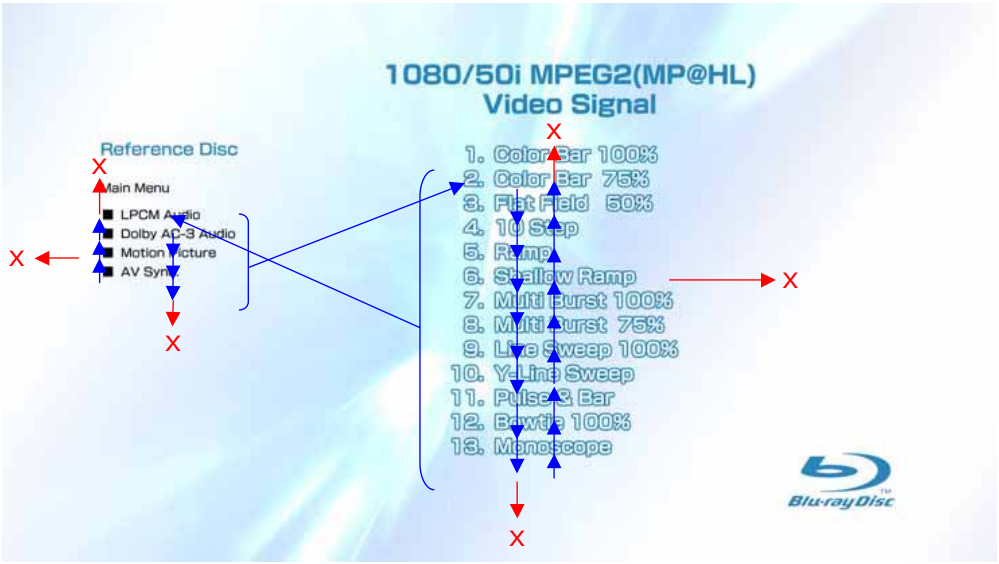
1) At the display of Sub menu1, 1. Color Bar 100% is selectively displayed.
2) Selection of 1. Color Bar 100% ⟶ Return to Sub menu1 after seamless playback from T1_C1 to T1_C13. 1. Color Bar 100% is selectively displayed on Sub menu1 screen.
3) Selection of 2. Color Bar 75% ⟶ Return to Sub menu1 after seamless playback from T1_C2 to T1_C13. 1. Color Bar 100% is selectively displayed on Sub menu1 screen.
4) At the selection of 3 - 13, item 3 mentioned above is executed as the routine.
5) At the display of Sub menu1, Main Menu is selected ⟶ Jump to Main Menu. At the display of Main Menu, 1. Video Signal of 59.94Hz/1080i is selectively displayed.
6) Selection of LPCM Audio ⟶ Playback from T2_C1 to T19_C1. SubPic that corresponds to Audio stream 1 is forcibly displayed. During the playback, when audio channel changes, the caption that corresponds to each audio stream is forcibly displayed. Return to Sub menu1 after playback. 1. Color Bar 100% is selectively displayed on Sub menu1 screen.
7) Selection of Dolby AC-3 Audio ⟶ Playback of T20_C1. SubPic that corresponds to Audio stream 1 is forcibly displayed. During the playback, when audio channel changes, the caption that corresponds to each audio stream is forcibly displayed. Return to Sub menu1 after playback. 1. Color Bar 100% is selectively displayed on Sub menu1 screen.
8) Selection of Motion Picture ⟶ Return to Sub menu1 after playback of T21_C1. 1. ColorBar 100% is selectively displayed on Sub menu1 screen.
9) At the selection of Main Menu, 1. VideoSignal of 1080/59.94i of Main Menu is selectively displayed.
10) AV Sync does not operate.

1-3-1-5. BLX-104 Menu Function (5)
Sub menu2



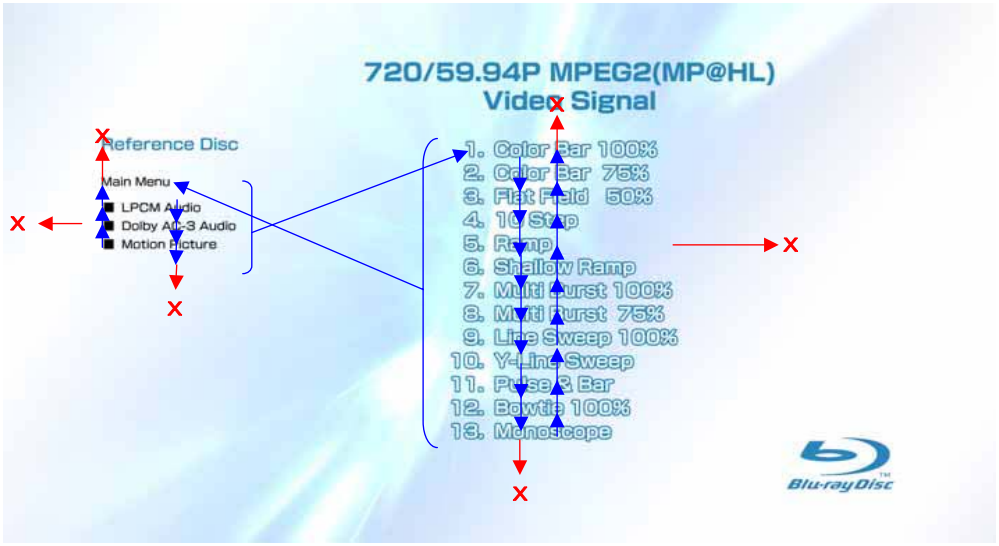
1) At the display of Sub menu2, 1. Color Bar 100% is selectively displayed.
2) Selection of 1. Color Bar 100% ⟶ Return to Sub menu2 after seamless playback from T43_C1 to T43_C13. 1. Color Bar 100% is selectively displayed on Sub menu2 screen.
3) Selection of 2. Color Bar 75% ⟶ Return to Sub menu2 after seamless playback from T43_C2 to T43_C13. 1. Color Bar 100% is selectively displayed on Sub menu2 screen.
4) At the selection of 3 - 13, item 3 mentioned above is executed as the routine.
5) At the display of Sub menu2, Main Menu is selected ⟶ Jump to Main Menu. At the display of Main Menu, 1. Video Signal of 23.976Hz/1080P is selectively displayed.
6) Selection of LPCM Audio ⟶ Playback from T44_C1 to T50_C1. SubPic that corresponds to Audio stream 1 is forcibly displayed. During the playback, when audio channel changes, the caption that corresponds to each audio stream is forcibly displayed. Return to Sub menu2 after playback. 1. Color Bar 100% is selectively displayed on Sub menu2 screen.
7) Selection of Dolby AC-3 Audio ⟶ Playback of T51_C1. SubPic that corresponds to Audio stream 1 is forcibly displayed. During the playback, when audio channel changes, the caption that corresponds to each audio stream is forcibly displayed. Return to Sub menu2 after playback. 1. Color Bar 100% is selectively displayed on Sub menu2 screen.
8) Selection of Motion Picture ⟶ Return to Sub menu2 after playback of T52_C1. 1. Color Bar 100% is selectively displayed on Sub menu2 screen.
9) At the selection of Main Menu, 1. Video Signal of 1080/23.976P of Main Menu is selectively displayed.
10) AV Sync does not operate.

1-3-1-6. BLX-104 Menu Function (6)
Sub menu3



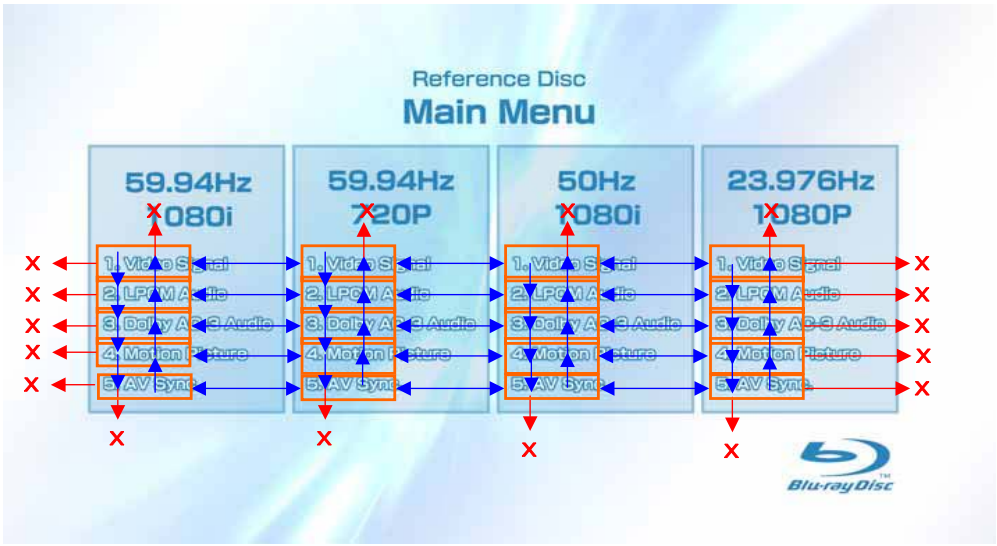
1) At the display of Sub menu3, 1. Color Bar 100% is selectively displayed.
2) Selection of 1. Color Bar 100% ⟶ Return to Sub menu3 after seamless playback from T53_C1 to T53_C13. 1. Color Bar 100% is selectively displayed on Sub menu3 screen.
3) Selection of 2. Color Bar 75% ⟶ Return to Sub menu3 after seamless playback from T53_C2 to T53_C13. 1. Color Bar 100% is selectively displayed on Sub menu3 screen.
4) At the selection of 3 - 13, item 3 mentioned above is executed as the routine.
5) At the display of Sub menu3, Main Menu is selected ⟶ Jump to Main Menu. At the display of Main Menu, 1. Video Signal of 50Hz/1080i is selectively displayed.
6) Selection of LPCM Audio ⟶ Playback from T54_C1 to T60_C1. SubPic that corresponds to Audio stream 1 is forcibly displayed. During the playback, when audio channel changes, the caption that corresponds to each audio stream is forcibly displayed. Return to Sub menu3 after playback. 1. Color Bar 100% is selectively displayed on Sub menu3 screen.
7) Selection of Dolby AC-3 Audio ⟶ Playback of T61_C1. SubPic that corresponds to Audio stream 1 is forcibly displayed. During the playback, when audio channel changes, the caption that corresponds to each audio stream is forcibly displayed. Return to Sub menu3 after playback. 1. Color Bar 100% is selectively displayed on Sub menu3 screen.
8) Selection of Motion Picture ⟶ Return to Sub menu3 after playback of T62_C1. 1. Color Bar 100% is selectively displayed on Sub menu3 screen.
9) At the selection of Main Menu, 1. Video Signal of 1080/50i of Main Menu is selectively displayed.
10) AV Sync does not operate.

1-3-1-7. BLX-104 Menu Function (7)
Sub menu4



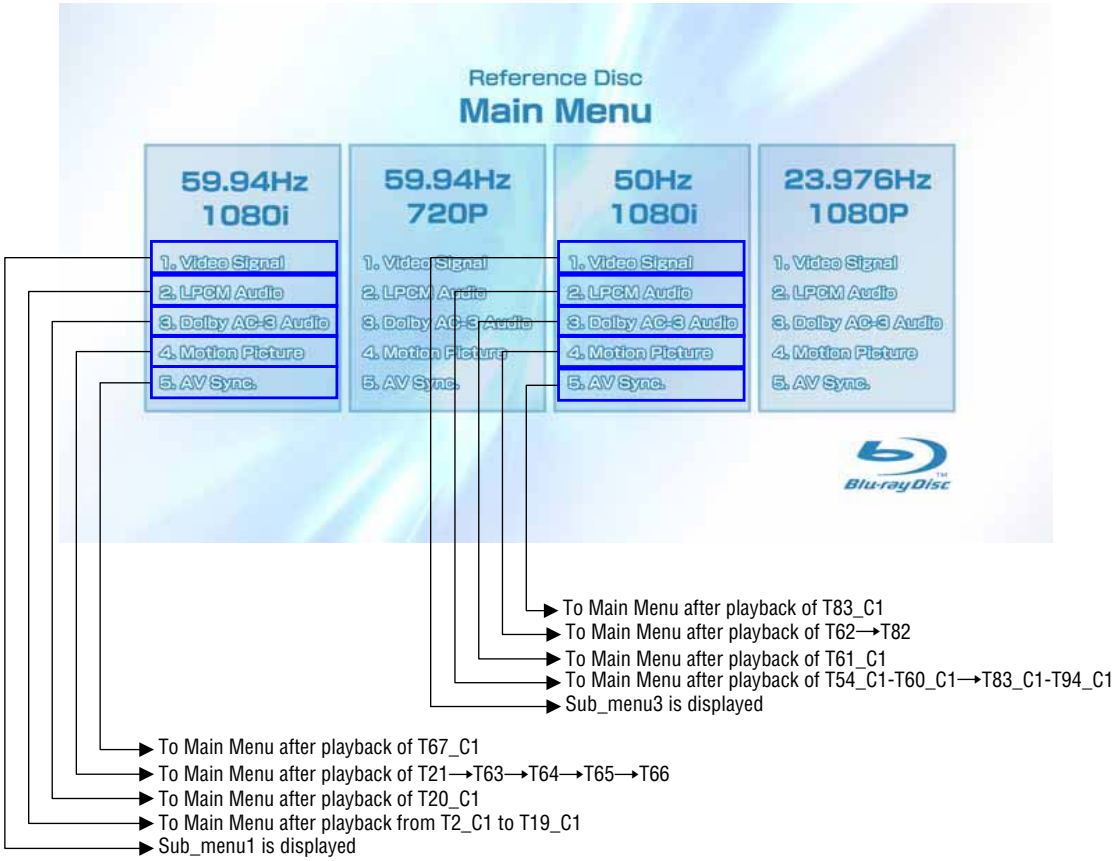
1) At the display of Sub menu4, 1. Color Bar 100% is selectively displayed.
2) Selection of 1. Color Bar 100% ⟶ Return to Sub menu4 after seamless playback from T22_C1 to T22_C13. 1. Color Bar 100% is selectively displayed on Sub menu4 screen.
3) Selection of 2. Color Bar 75% ⟶ Return to Sub menu4 after seamless playback from T22_C2 to T22_C13. 1. Color Bar 100% is selectively displayed on Sub menu4 screen.
4) At the selection of 3 - 13, item 3 mentioned above is executed as the routine.
5) At the display of Sub menu4, Main Menu is selected ⟶ Jump to Main Menu. At the display of Main Menu, 1. Video Signal of 59.94Hz/720P is selectively displayed.
6) Selection of LPCM Audio ⟶ Playback from T44_C1 to T50_C1. SubPic that corresponds to Audio stream 1 is forcibly displayed. During the playback, when audio channel changes, the caption that corresponds to each audio stream is forcibly displayed. Return to Sub menu4 after playback. 1. Color Bar 100% is selectively displayed on Sub menu4 screen.
7) Selection of Dolby AC-3 Audio ⟶ Playback of T51_C1. SubPic that corresponds to Audio stream 1 is forcibly displayed. During the playback, when audio channel changes, the caption that corresponds to each audio stream is forcibly displayed. Return to Sub menu4 after playback. 1. Color Bar 100% is selectively displayed on Sub menu4 screen.
8) Selection of Motion Picture ⟶ Return to Sub menu4 after playback of T52_C1. 1. Color Bar 100% is selectively displayed on Sub menu4 screen.
9) At the selection of Main Menu, 1. Video Signal of 720/59.94P of Main Menu is selectively displayed.
10) AV Sync does not operate.

1-3-2-1. BLX-204 Menu Function (1)
Main Menu



1) When the disc is inserted, 1. Video Signal of 59.94Hz/1080i of the Main Menu is selectively displayed.

1-3-2-2. BLX-204 Menu Function (2)
Main Menu



* When returning to Main Menu after playback from each button of 59.94Hz/1080i, 1. Video Signal of 59.94Hz/1080i is selectively displayed.

* When returning to Main Menu after playback from each button of 50Hz/1080i, 1. Video Signal of 50Hz/1080i is selectively displayed.

Note:

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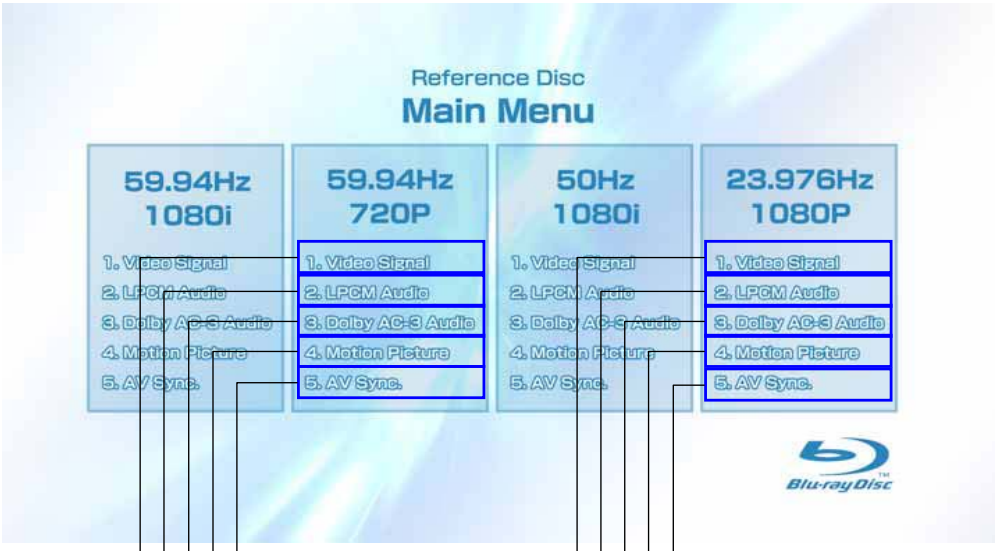
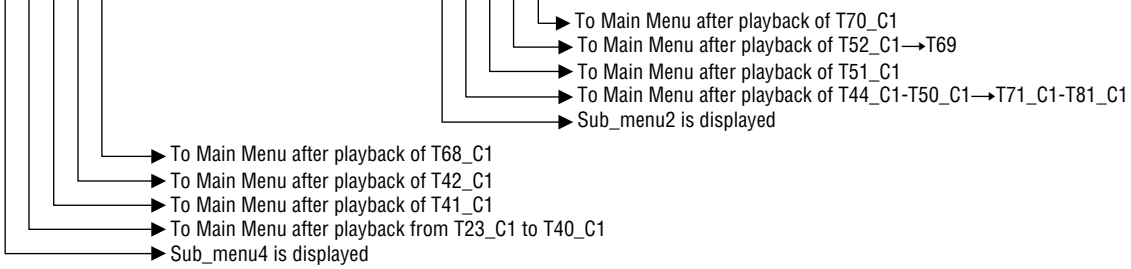
1-3-2-3. BLX-204 Menu Function (3)
Main Menu

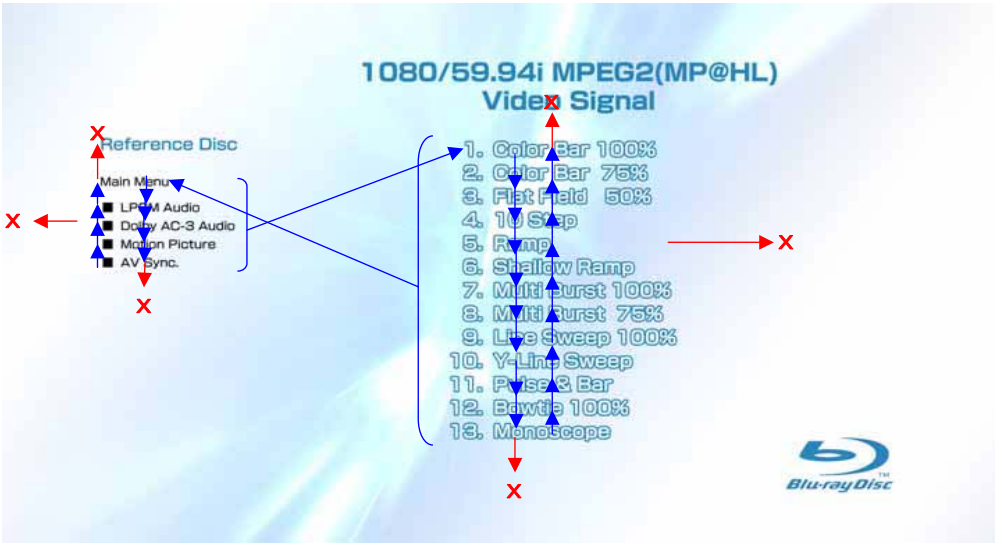




* When returning to Main Menu after playback from each button of 59.94Hz/720P, 1. Video Signal of 59.94Hz/720P is selectively displayed.

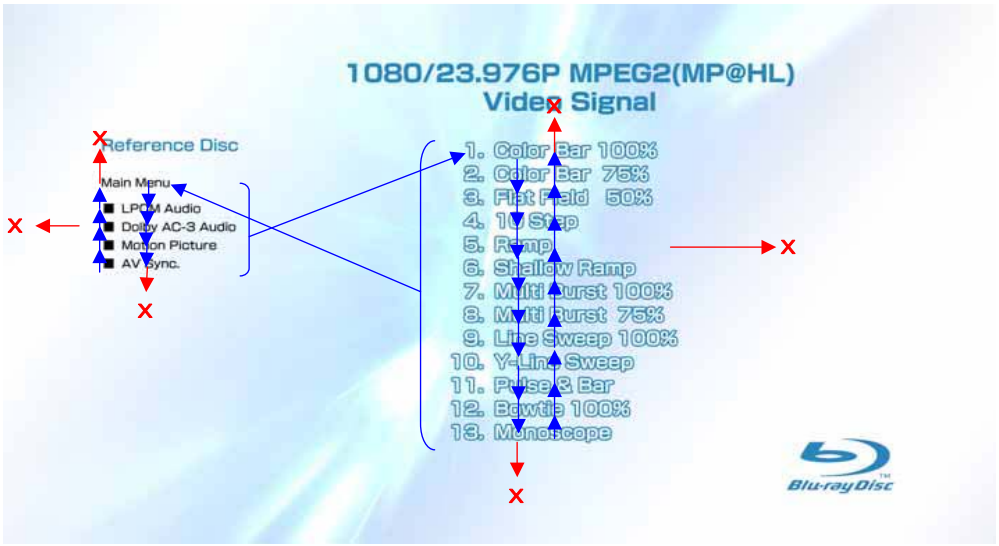
* When returning to Main Menu after playback from each button of 23.976Hz/1080P, 1. Video Signal of 23.976Hz/1080P is selectively displayed.

1-3-2-4. BLX-204 Menu Function (4)
Sub menu 1



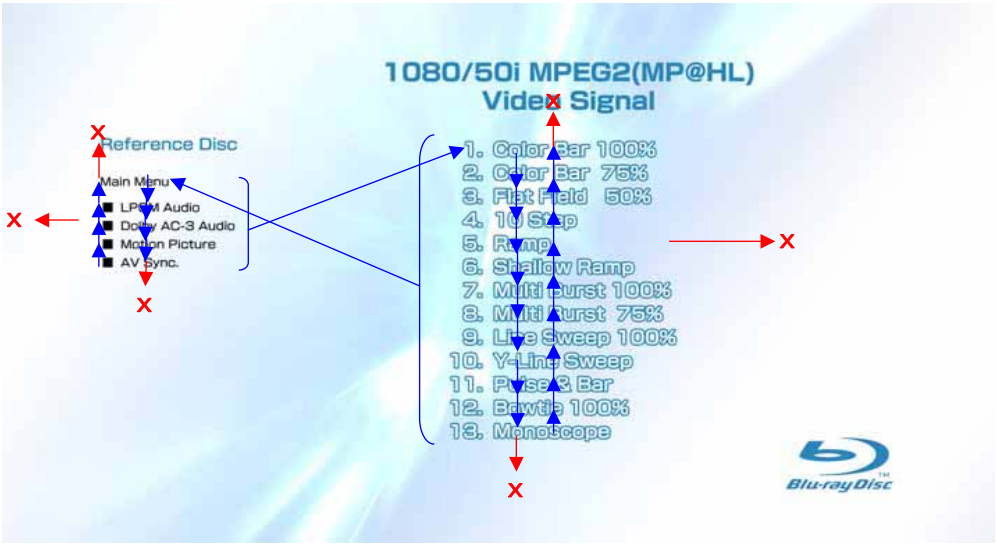
1) At the display of Sub menu1, 1. Color Bar 100% is selectively displayed.
2) Selection of 1. Color Bar 100% ⟶ Return to Sub menu1 after seamless playback from T1_C1 to T1_C13. 1. Color Bar 100% is selectively displayed on Sub menu1 screen.
3) Selection of 2. Color Bar 75% ⟶ Return to Sub menu1 after seamless playback from T1_C2 to T1_C13. 1. Color Bar 100% is selectively displayed on Sub menu1 screen.
4) At the selection of 3 - 13, item 3 mentioned above is executed as the routine.
5) At the display of Sub menu1, Main Menu is selected ⟶ Jump to Main Menu. At the display of Main Menu, 1. Video Signal of 59.94Hz/1080i is selectively displayed.
6) Selection of LPCM Audio ⟶ Playback from T2_C1 to T19_C1. SubPic that corresponds to Audio stream 1 is forcibly displayed. During the playback, when audio channel changes, the caption that corresponds to each audio stream is forcibly displayed. Return to Sub menu1 after playback. 1. Color Bar 100% is selectively displayed on Sub menu1 screen.
7) Selection of Dolby AC-3 Audio ⟶ Playback of T20_C1. SubPic that corresponds to Audio stream 1 is forcibly displayed. During the playback, when audio channel changes, the caption that corresponds to each audio stream is forcibly displayed. Return to Sub menu1 after playback. 1. Color Bar 100% is selectively displayed on Sub menu1 screen.
8) Selection of Motion Picture ⟶ Return to Sub menu1 after playback of T21_C1. 1. Color Bar 100% is selectively displayed on Sub menu1 screen.
9) Selection of AV Sync ⟶ Return to Sub menu1 after playback of T67_C1. 1. Color Bar 100% is selectively displayed on Sub menu1 screen.
10) At the selection of Main Menu, 1. Video Signal of 1080/59.94i of Main Menu is selectively displayed.

1-3-2-5. BLX-204 Menu Function (5)
Sub menu 2



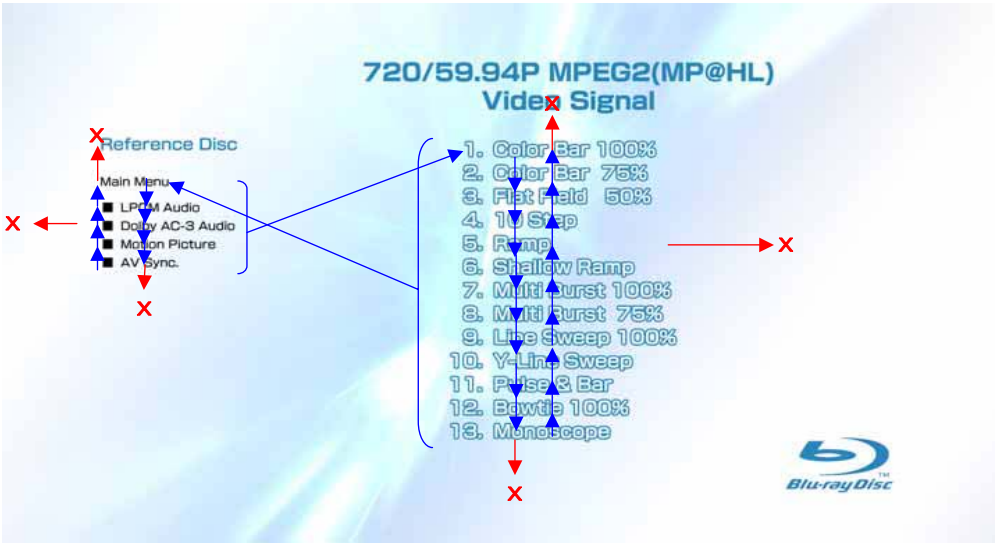
1) At the display of Sub menu2, 1. Color Bar 100% is selectively displayed.
2) Selection of 1. Color Bar 100% ⟶ Return to Sub menu2 after seamless playback from T43_C1 to T43_C13. 1. Color Bar 100% is selectively displayed on Sub menu2 screen.
3) Selection of 2. Color Bar 75% ⟶ Return to Sub menu2 after seamless playback from T43_C2 to T43_C13. 1. Color Bar 100% is selectively displayed on Sub menu2 screen.
4) At the selection of 3 - 13, item 3 mentioned above is executed as the routine.
5) At the display of Sub menu2, Main Menu is selected ⟶ Jump to Main Menu. At the display of Main Menu, 1. Video Signal of 23.976Hz/1080P is selectively displayed.
6) Selection of LPCM Audio ⟶ Playback from T44_C1 to T50_C1 and from T71_C1 to T81_C1. SubPic that corresponds to Audio stream 1 is forcibly displayed.
   During the playback, when audio channel changes, the caption that corresponds to each audio stream is forcibly displayed. Return to Sub menu2 after playback. 1. Color Bar 100% is selectively displayed on Sub menu2 screen.
7) Selection of Dolby AC-3 Audio ⟶ Playback of T51_C1. SubPic that corresponds to Audio stream 1 is forcibly displayed.
   During the playback, when audio channel changes, the caption that corresponds to each audio stream is forcibly displayed. Return to Sub menu2 after playback. 1. Color Bar 100% is selectively displayed on Sub menu2 screen.
8) Selection of Motion Picture ⟶ Return to Sub menu2 after playback of T52_C1 and T69. 1. Color Bar 100% is selectively displayed on Sub menu2 screen.
9) Selection of AV Sync ⟶ Return to Sub menu2 after playback of T70_C1. 1. Color Bar 100% is selectively displayed on Sub menu2 screen.
10) At the selection of Main Menu, 1. Video Signal of 1080/23.976P of Main Menu is selectively displayed.

1-3-2-6. BLX-204 Menu Function (6)
Sub menu 3



1) At the display of Sub menu3, 1. Color Bar 100% is selectively displayed.
2) Selection of 1. Color Bar 100% ⟶ Return to Sub menu3 after seamless playback from T53_C1 to T53_C13. 1. Color Bar 100% is selectively displayed on Sub menu3 screen.
3) Selection of 2. Color Bar 75% ⟶ Return to Sub menu3 after seamless playback from T53_C2 to T53_C13. 1. Color Bar 100% is selectively displayed on Sub menu3 screen.
4) At the selection of 3 - 13, item 3 mentioned above is executed as the routine.
5) At the display of Sub menu3, Main Menu is selected ⟶ Jump to Main Menu. At the display of Main Menu, 1. Video Signal of 50Hz/1080i is selectively displayed.
6) Selection of LPCM Audio ⟶ Playback from T54_C1 to T60_C1 and from T84_C1 to T94_C1. SubPic that corresponds to Audio stream 1 is forcibly displayed.
   During the playback, when audio channel changes, the caption that corresponds to each audio stream is forcibly displayed. Return to Sub menu3 after playback. 1. Color Bar 100% is selectively displayed on Sub menu3 screen.
7) Selection of Dolby AC-3 Audio ⟶ Playback of T61_C1. SubPic that corresponds to Audio stream 1 is forcibly displayed.
   During the playback, when audio channel changes, the caption that corresponds to each audio stream is forcibly displayed. Return to Sub menu3 after playback. 1. Color Bar 100% is selectively displayed on Sub menu3 screen.
8) Selection of Motion Picture ⟶ Return to Sub menu3 after playback of T62_C1 and T82. 1. Color Bar 100% is selectively displayed on Sub menu3 screen.
9) Selection of AV Sync ⟶ Return to Sub menu3 after playback of T83_C1. 1. Color Bar 100% is selectively displayed on Sub menu3 screen.
10) At the selection of Main Menu, 1. Video Signal of 1080/50i of Main Menu is selectively displayed.

1-3-2-7. BLX-204 Menu Function (7)
Sub menu 4

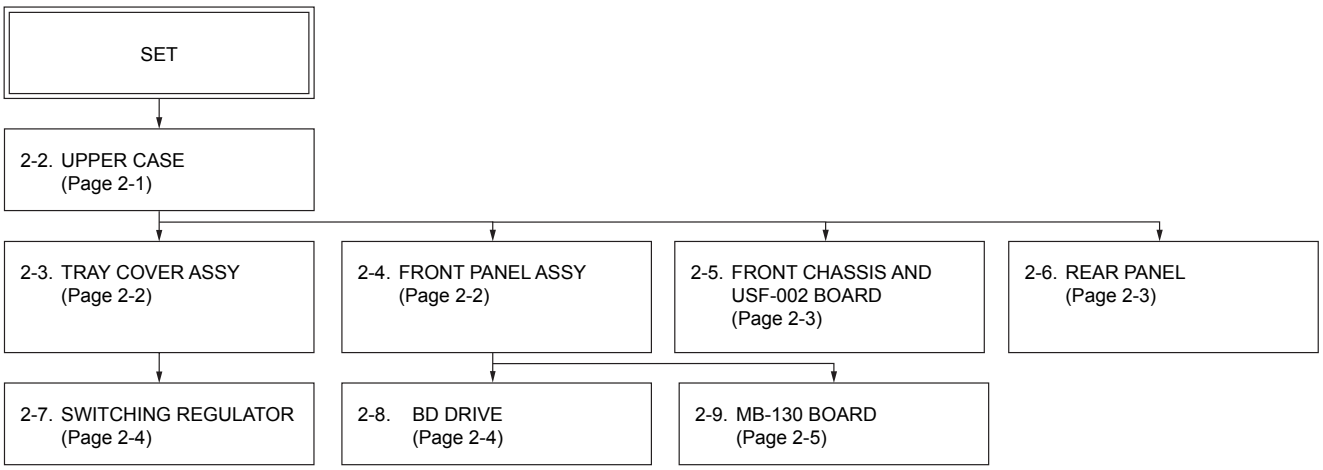


1) At the display of Sub menu4, 1. Color Bar 100% is selectively displayed.
2) Selection of 1. Color Bar 100% ⟶ Return to Sub menu4 after seamless playback from T22_C1 to T22_C13. 1. Color Bar 100% is selectively displayed on Sub menu4 screen.
3) Selection of 2. Color Bar 75% ⟶ Return to Sub menu4 after seamless playback from T22_C2 to T22_C13. 1. Color Bar 100% is selectively displayed on Sub menu4 screen.
4) At the selection of 3 - 13, item 3 mentioned above is executed as the routine.
5) At the display of Sub menu4, Main Menu is selected ⟶ Jump to Main Menu. At the display of Main Menu, 1. Video Signal of 59.94Hz/720P is selectively displayed.
6) Selection of LPCM Audio ⟶ Playback from T44_C1 to T50_C1. SubPic that corresponds to Audio stream 1 is forcibly displayed. During the playback, when audio channel changes, the caption that corresponds to each audio stream is forcibly displayed. Return to Sub menu4 after playback. 1. Color Bar 100% is selectively displayed on Sub menu4 screen.
7) Selection of Dolby AC-3 Audio ⟶ Playback of T51_C1. SubPic that corresponds to Audio stream 1 is forcibly displayed. During the playback, when audio channel changes, the caption that corresponds to each audio stream is forcibly displayed. Return to Sub menu4 after playback. 1. Color Bar 100% is selectively displayed on Sub menu4 screen.
8) Selection of Motion Picture ⟶ Return to Sub menu4 after playback of T52_C1. 1. Color Bar 100% is selectively displayed on Sub menu4 screen.
9) Selection of AV Sync ⟶ Return to Sub menu4 after playback of T68_C1. 1. Color Bar 100% is selectively displayed on Sub menu4 screen.
10) At the selection of Main Menu, 1. Video Signal of 720/59.94P of Main Menu is selectively displayed.

SECTION 2
DISASSEMBLY

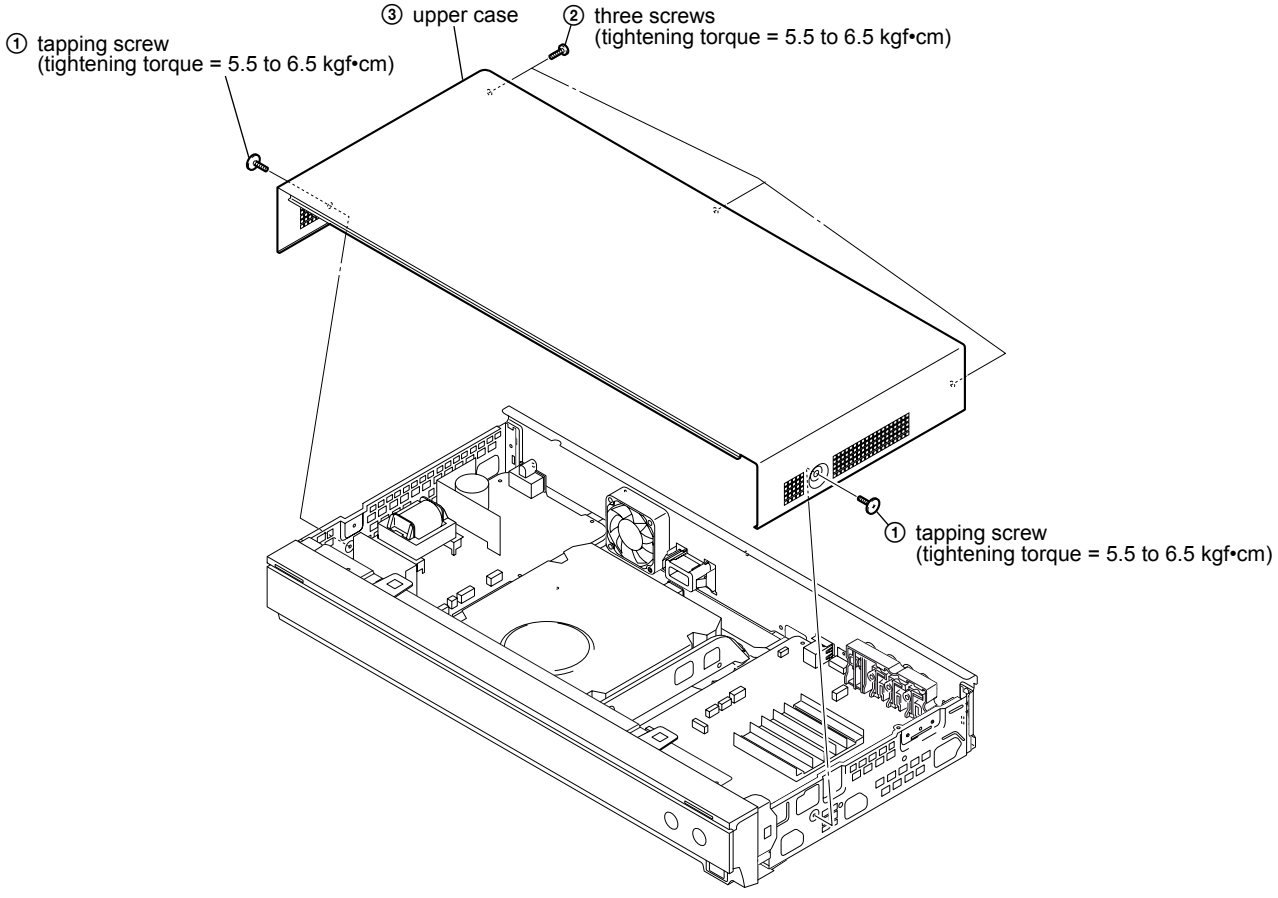
• This set can be disassembled in the order shown below.

2-1. DISASSEMBLY FLOW

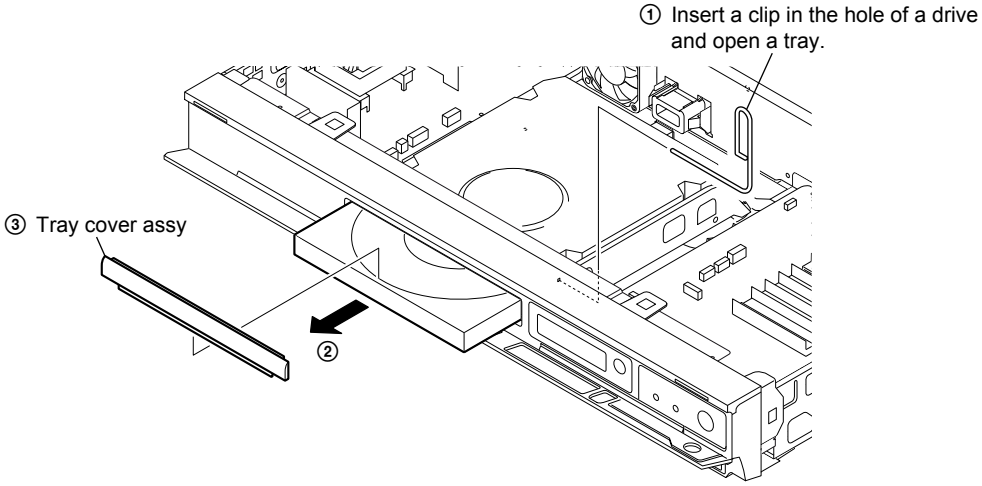


Note: Follow the disassembly procedure in the numerical order given.

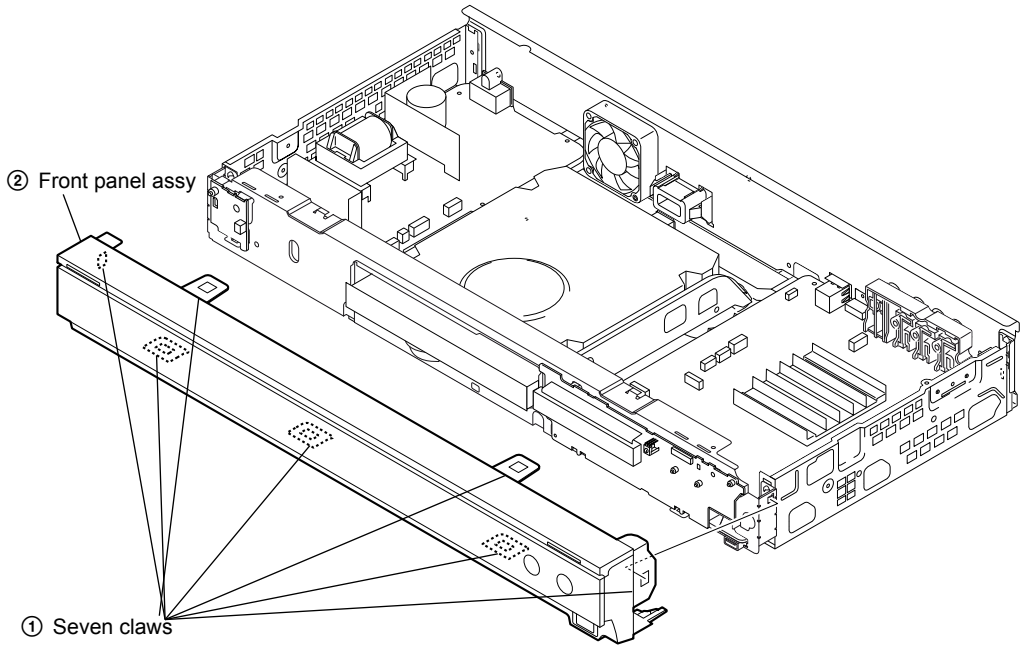
2-2. UPPER CASE



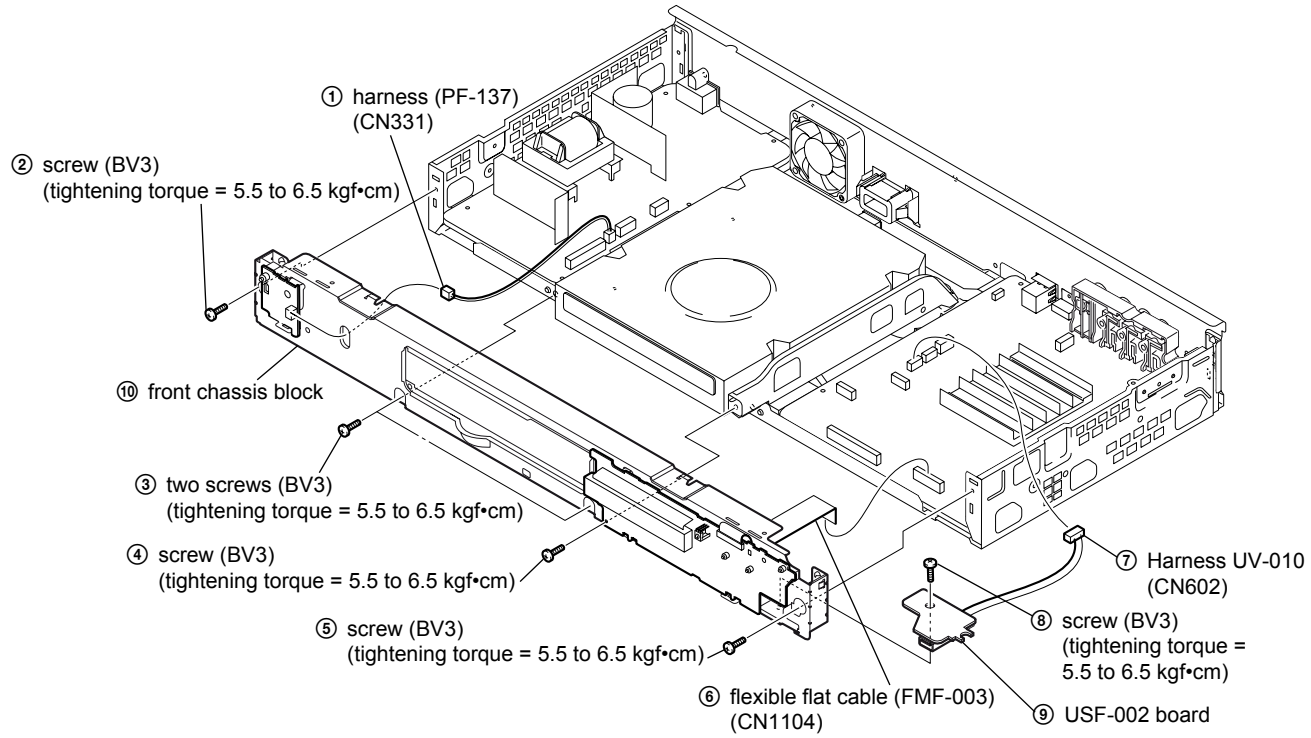
2-3. TRAY COVER ASSY



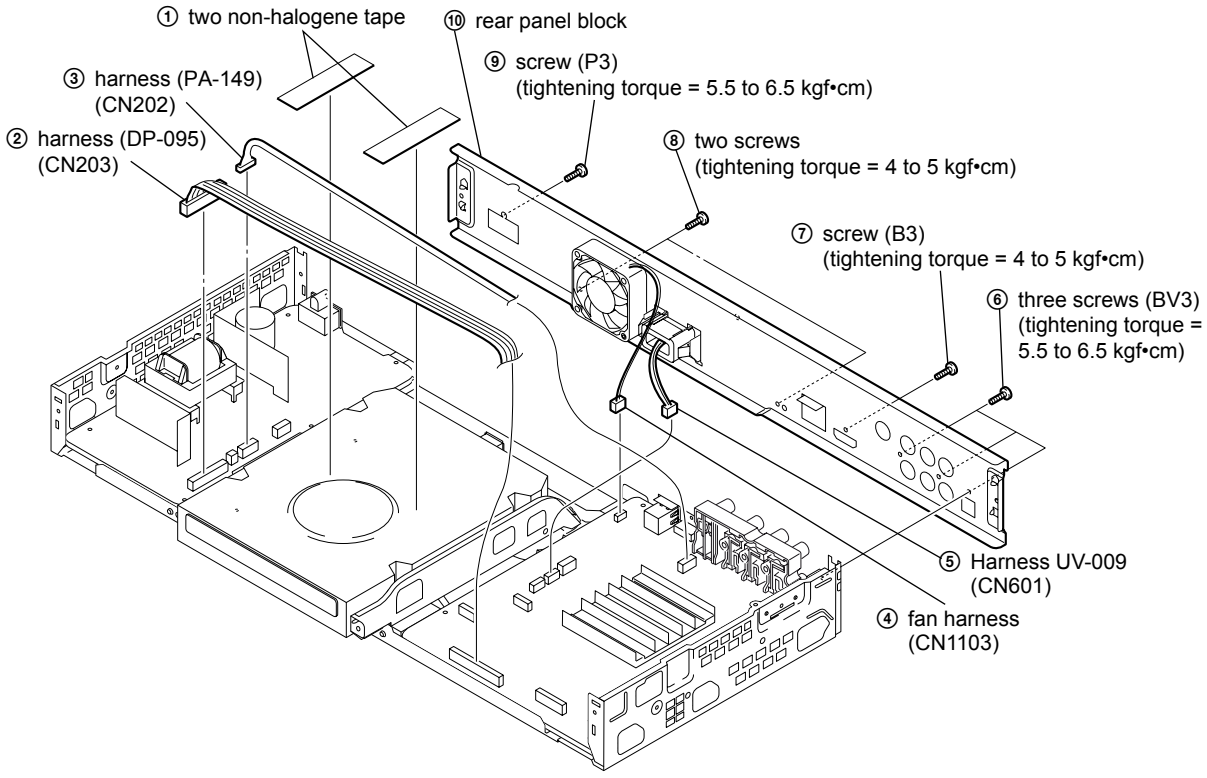
2-4. FRONT PANEL ASSY



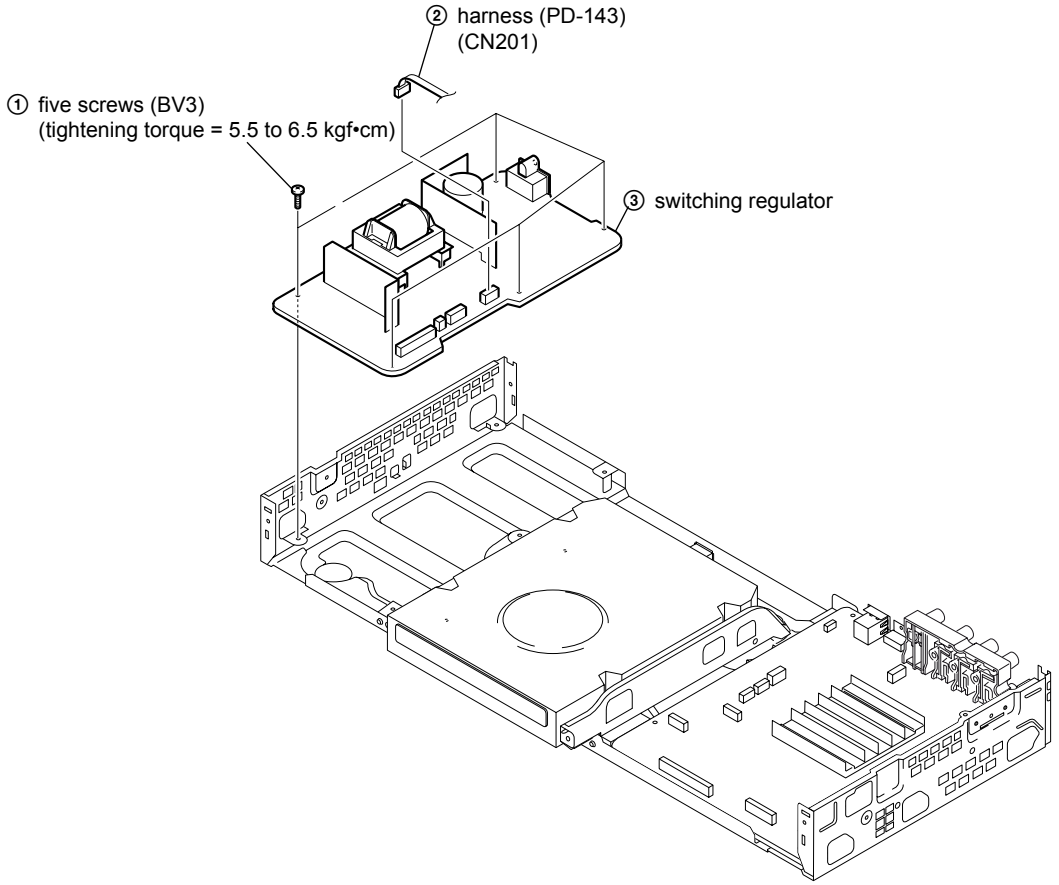
2-5. FRONT CHASSIS AND USF-002 BOARD



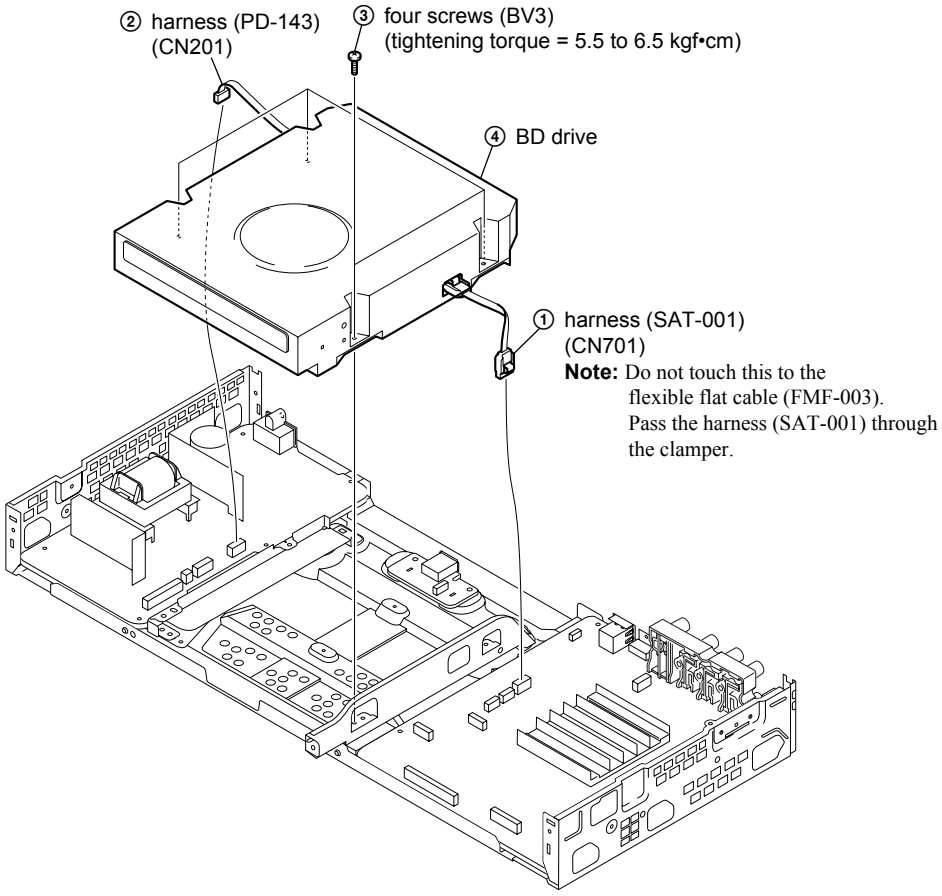
2-6. REAR PANEL



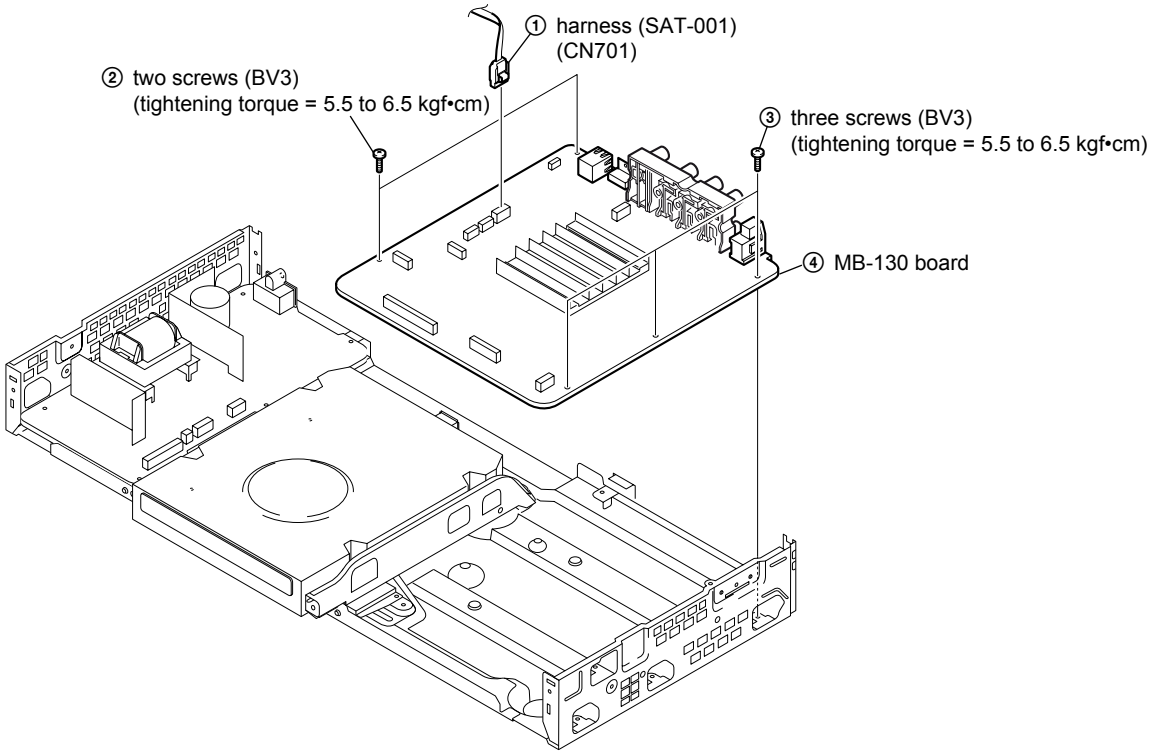
2-7. SWITCHING REGULATOR



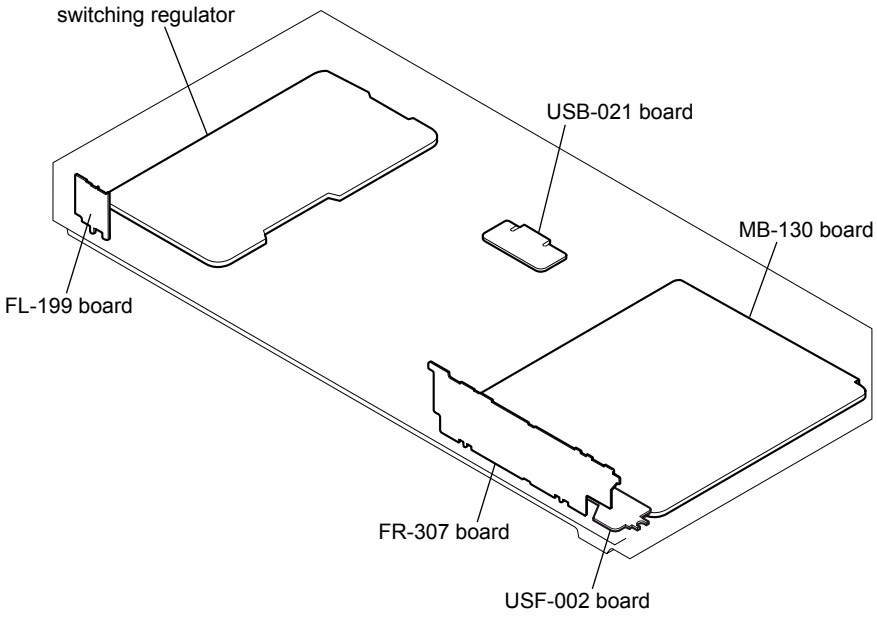
2-8. BD DRIVE



2-9. MB-130 BOARD

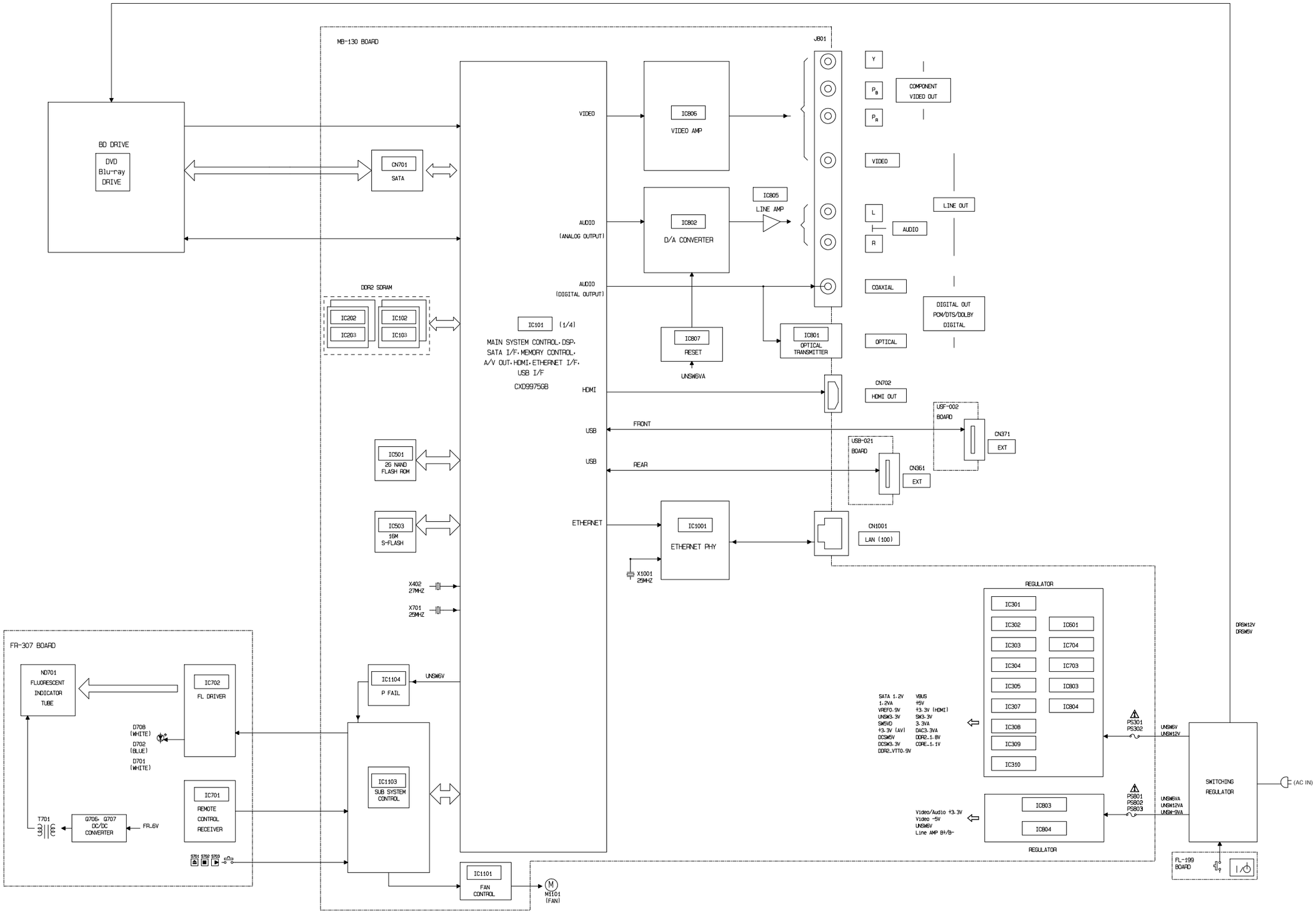


2-10. CIRCUIT BOARDS LOCATION



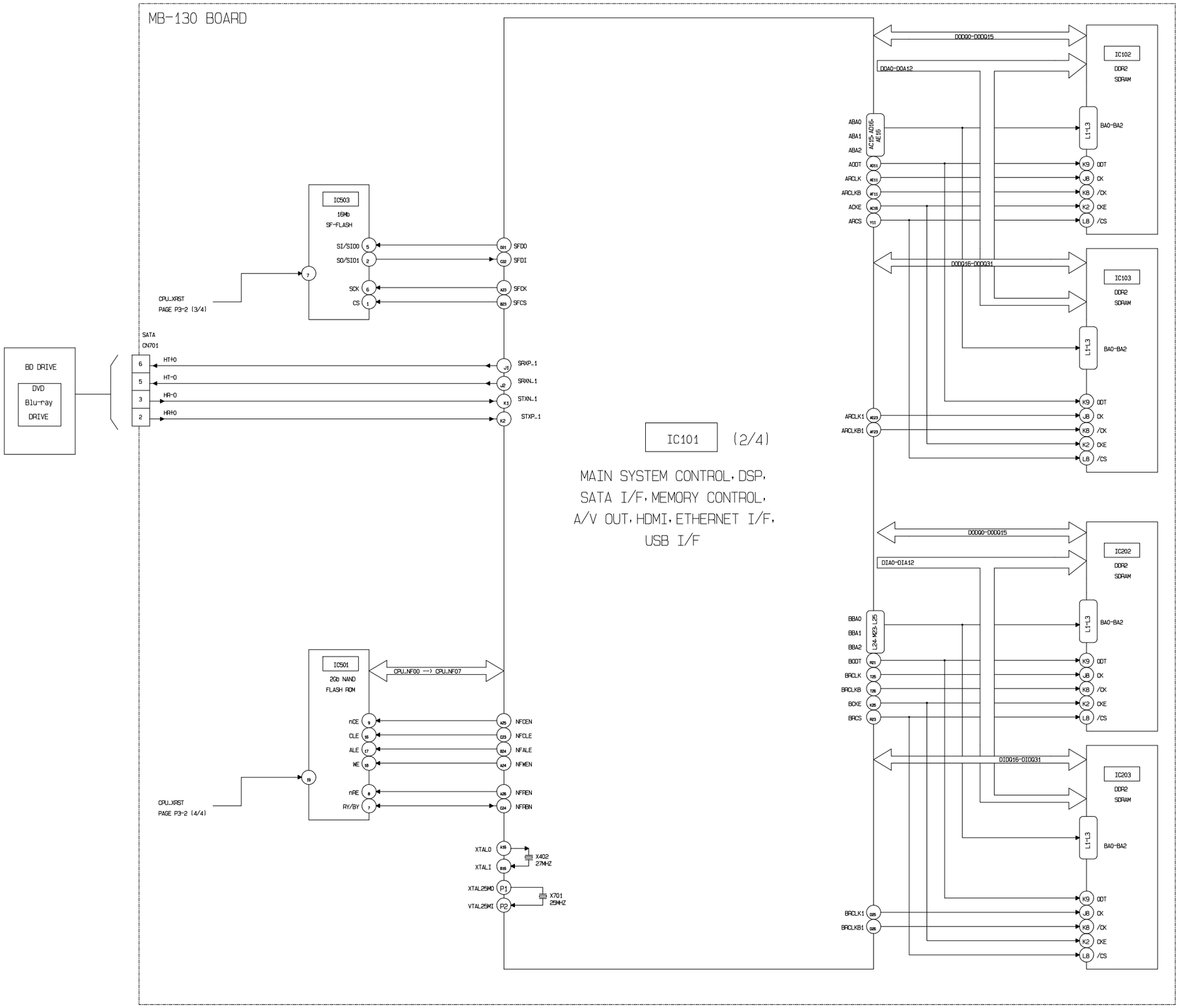
SECTION 3
BLOCK DIAGRAMS

3-1. OVERALL BLOCK DIAGRAM

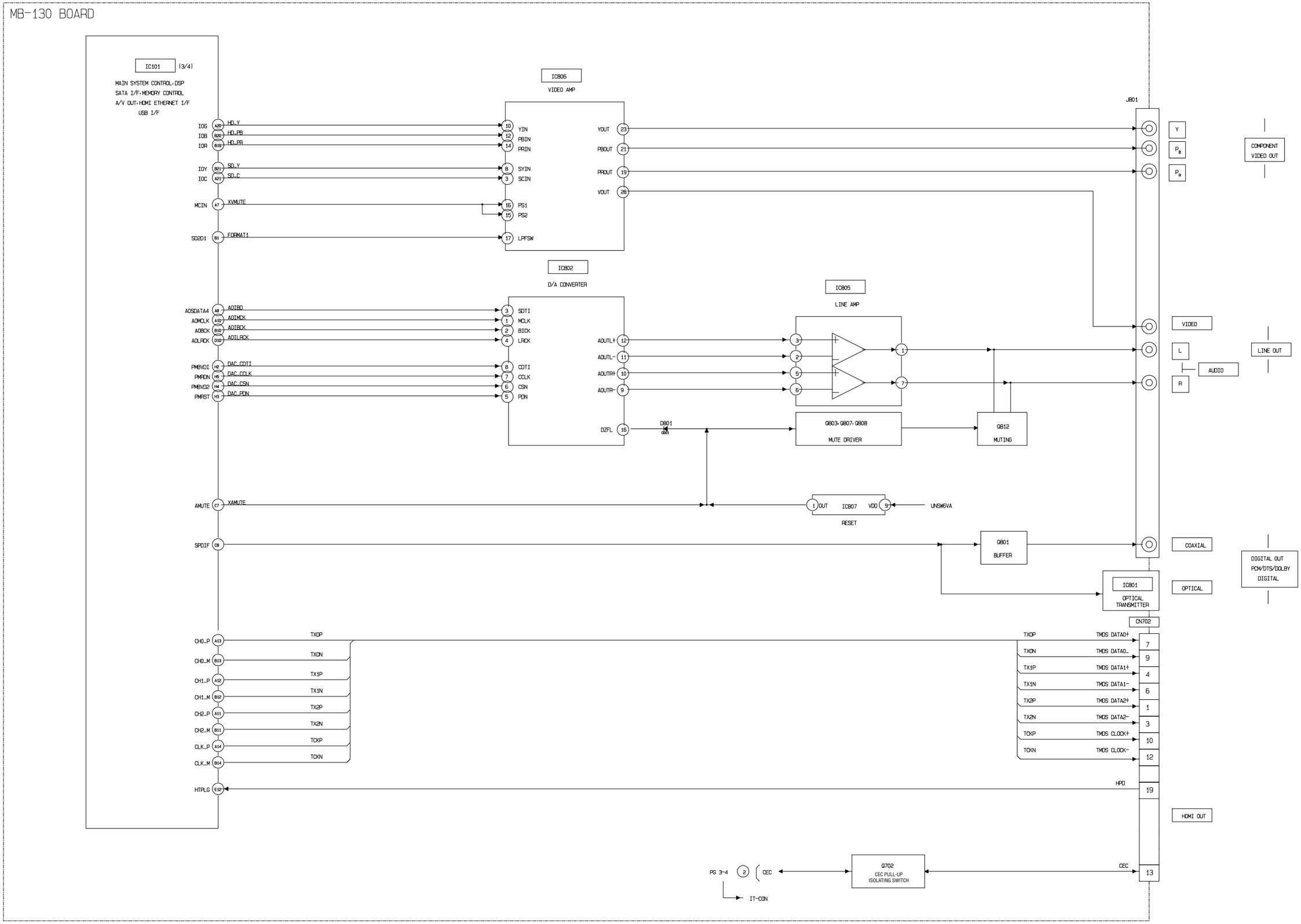


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

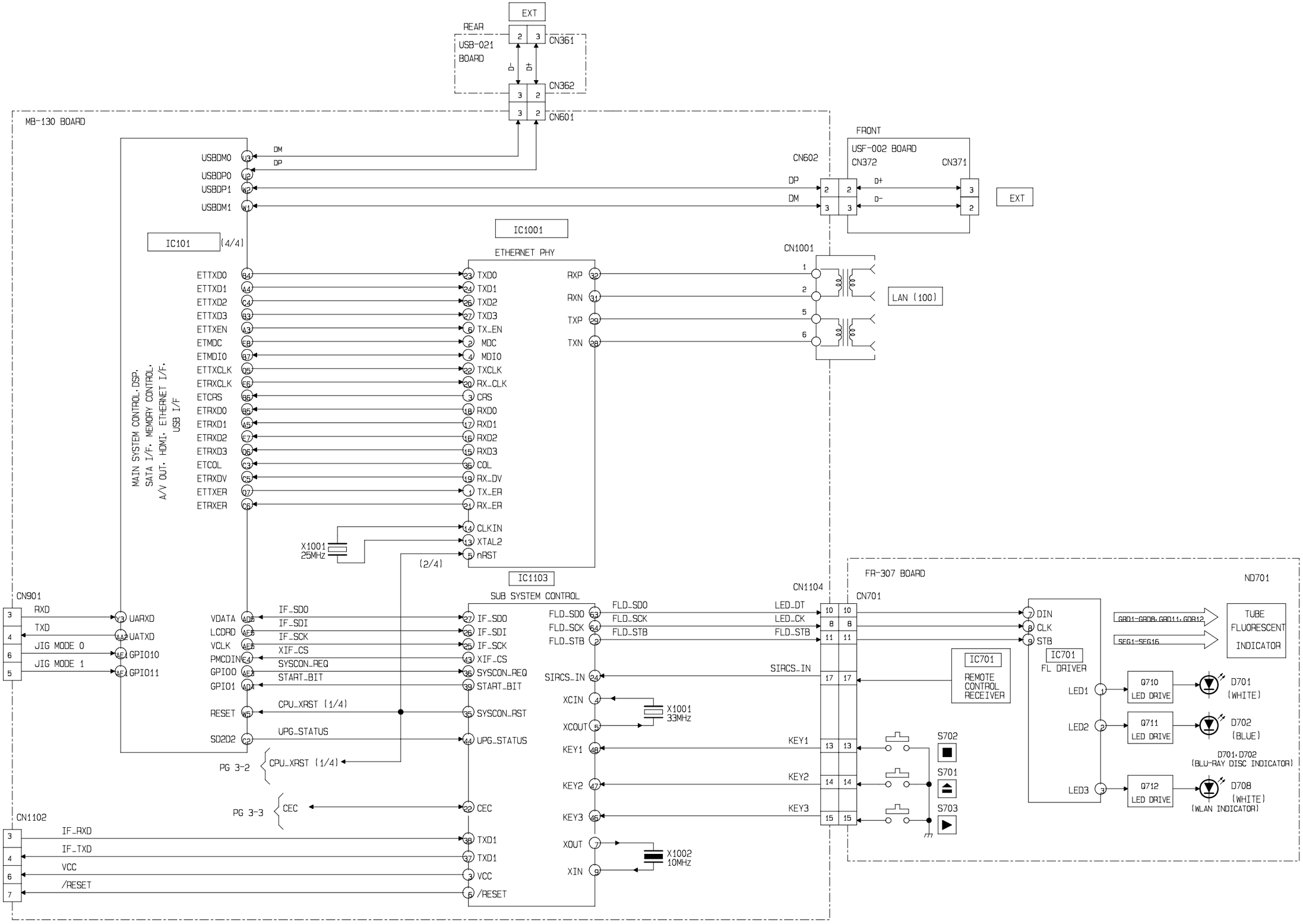
3-2. DSP BLOCK DIAGRAM



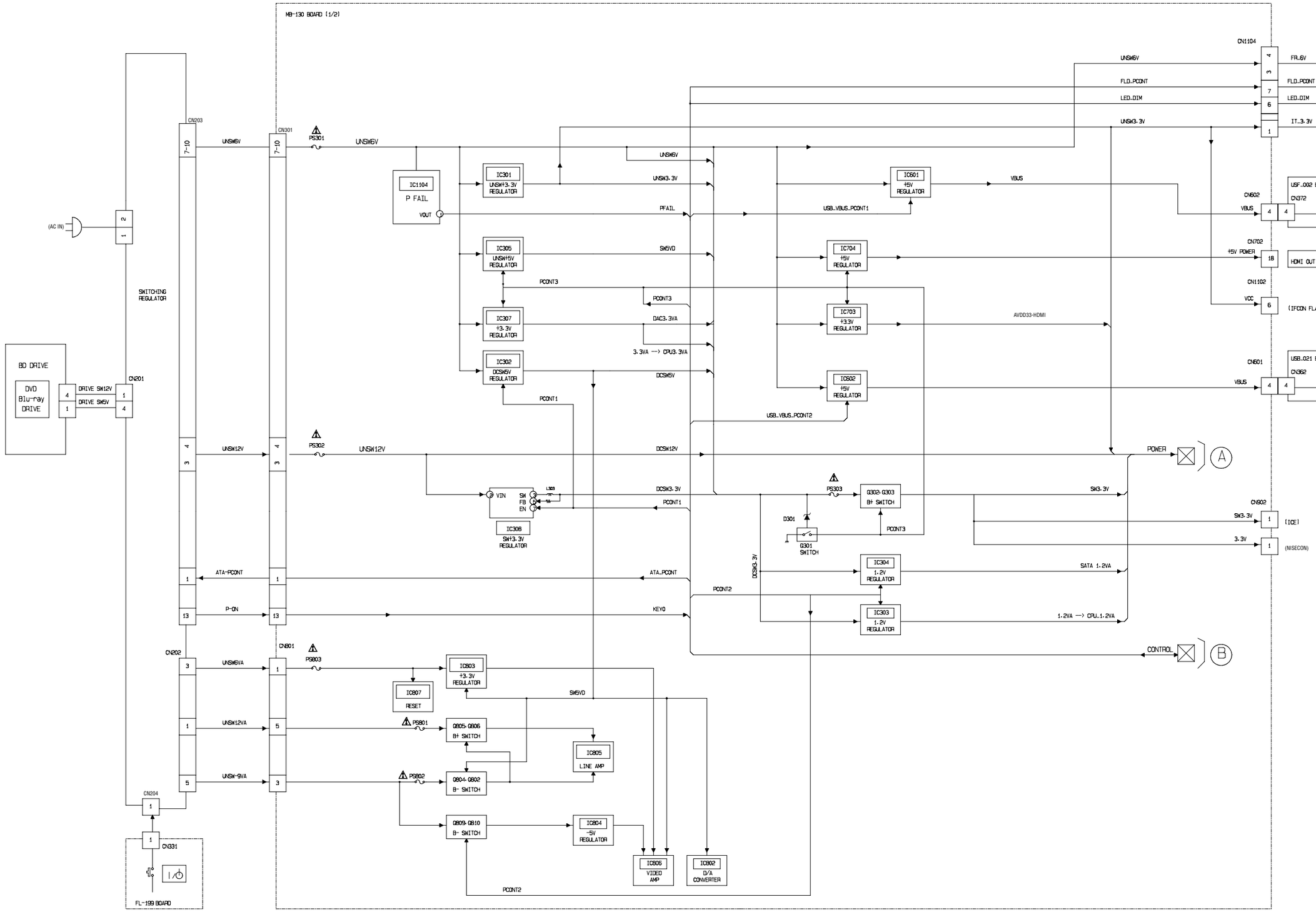
3-3. AV OUT BLOCK DIAGRAM



3-4. USB/ETHER, FL BLOCK DIAGRAM



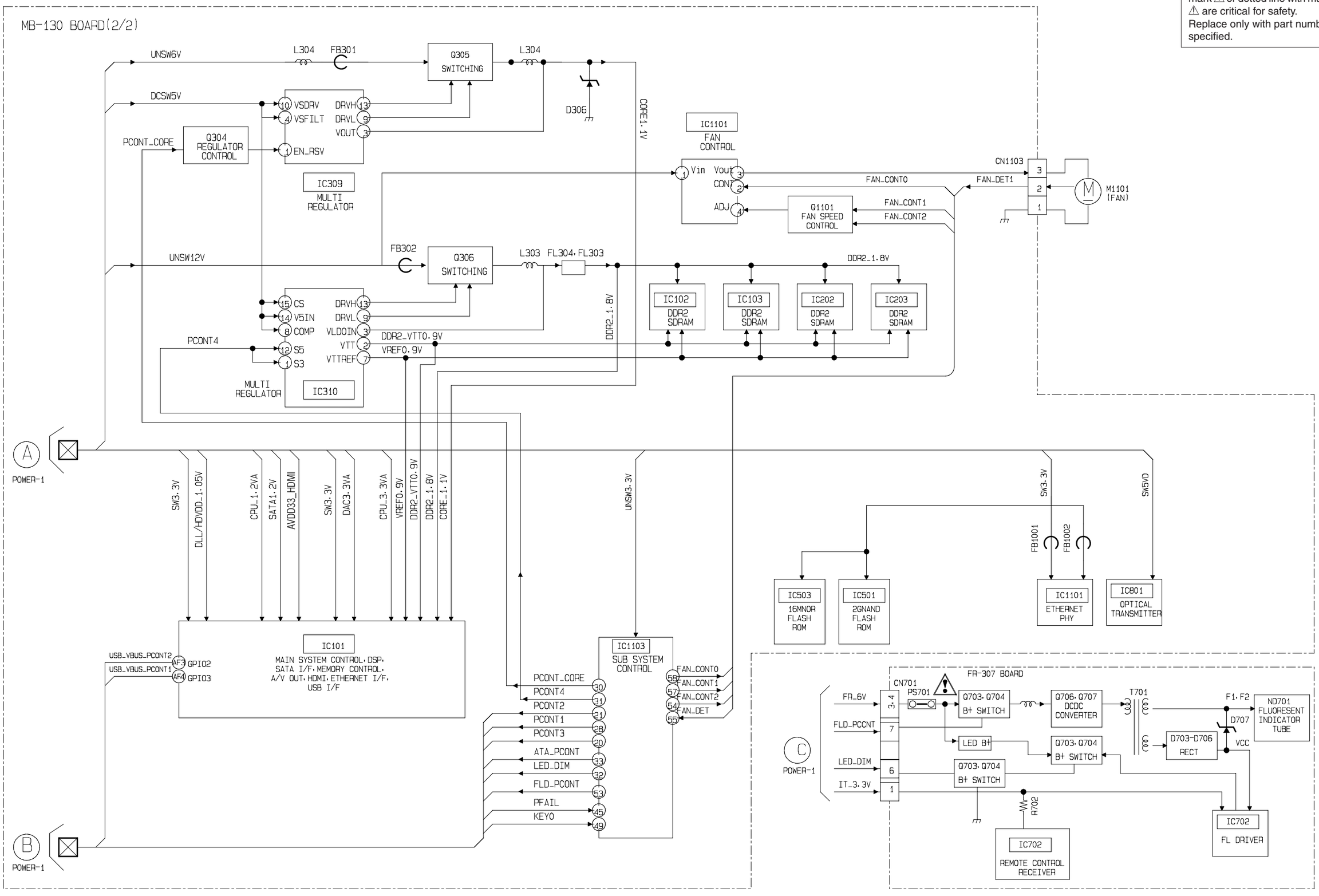
3-5. POWER BLOCK DIAGRAM (1/2)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

3-6. POWER BLOCK DIAGRAM (2/2)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.



SECTION 4
SCHEMATIC DIAGRAMS

4-1. THIS NOTE IS COMMON FOR SCHEMATIC DIAGRAMS

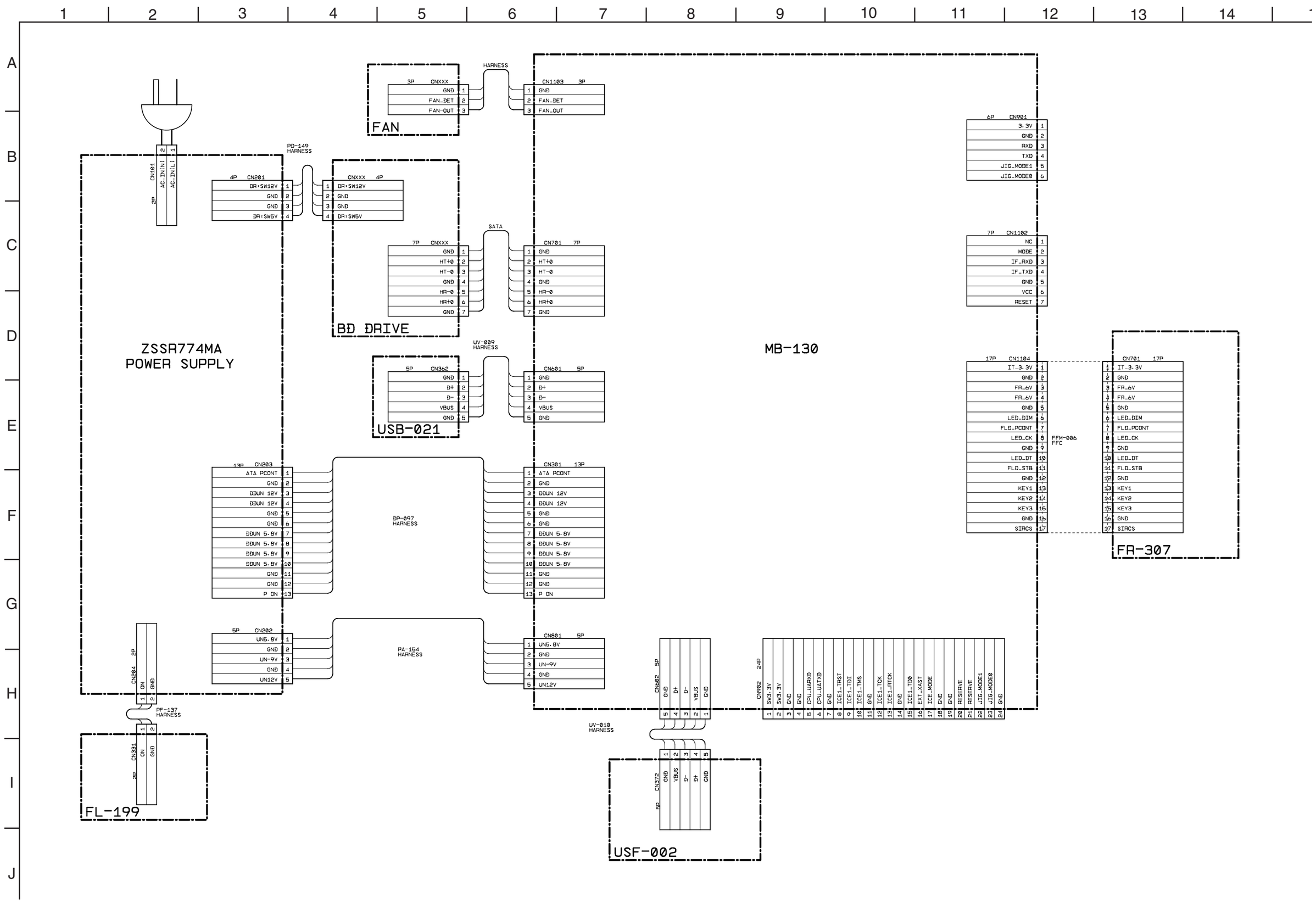
- All capacitors are in μF unless otherwise noted. pF : μμF. 50V or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/4 W (Chip resistors : 1 /10 W) un-less otherwise specified.
  kΩ=1000Ω, MΩ=1000kΩ.
- % : indicates tolerance.
- Caution when replacing chip parts.
  New parts must be attached after removal of chip.
  Be careful not to heat the minus side of tantalum capacitor, because it is damaged by the heat.
- Constants of resistors, capacitors, ICs and etc with XX indicate that they are not used.
  In such cases, the unused circuits may be indicated.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : nonflammable resistor
- : fusible resistor
- : panel designation
- △ : internal component.
- : adjustment for repair.
- : B+ Line
- : B– Line
- Circled numbers refer to waveforms.
- Voltages are dc between measurement point.
- Readings are taken with a color-bar signals on Blu-ray disc.
- Readings are taken with a digital multimeter (DC 10MΩ).
- Voltage variations may be noted due to normal production tolerances.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

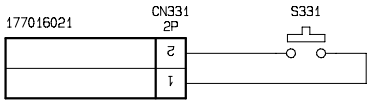
- Abbreviation
  CND : Canadian model

4-2. FRAME SCHEMATIC DIAGRAM



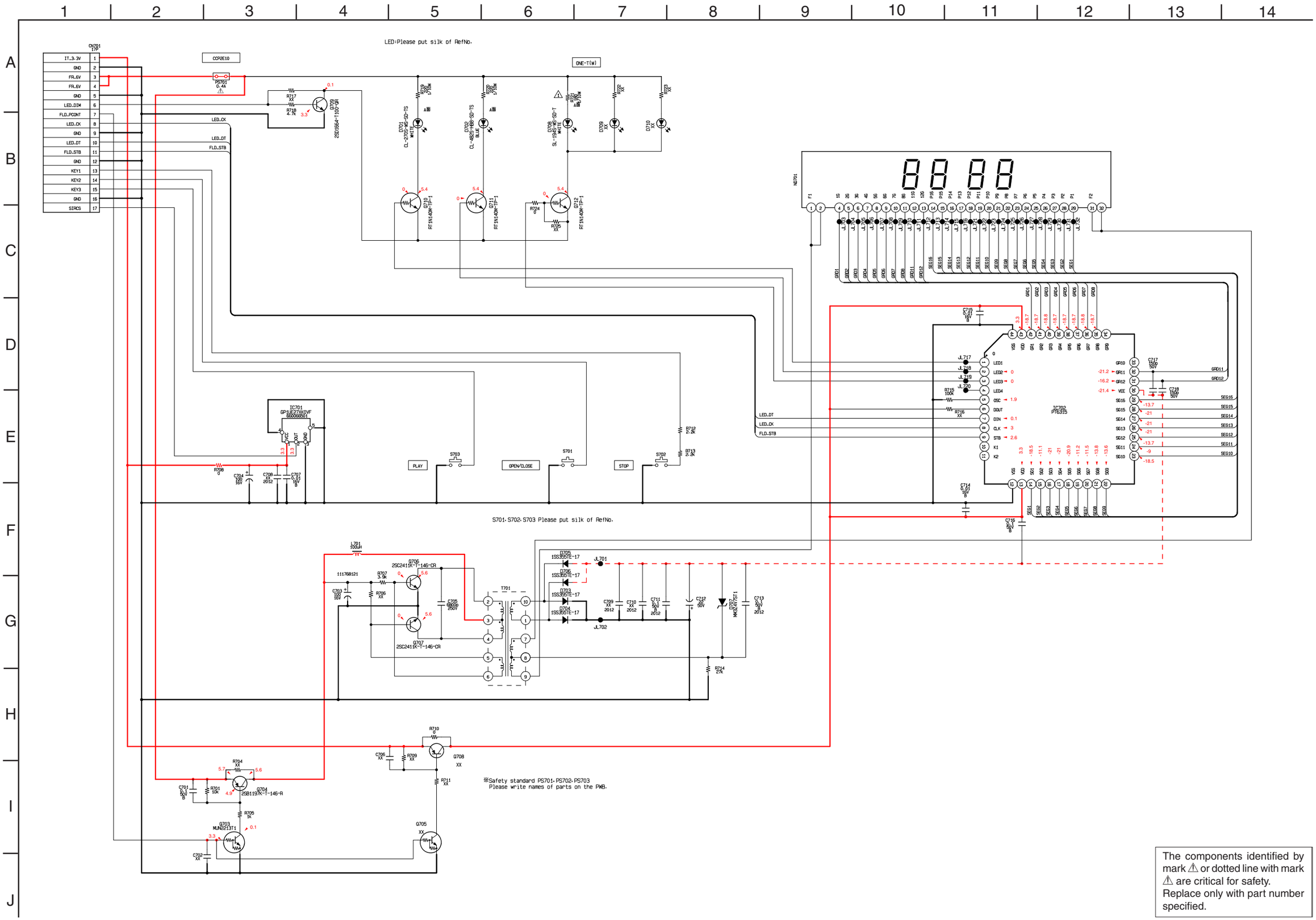
4-3. FL-199 BOARD (SWITCH) SCHEMATIC DIAGRAM • See page 5-2 for printed wiring board.

- Ref. No.: FL-199 board; 20,000 series -



4-4. FR-307 BOARD (FRONT RIGHT) SCHEMATIC DIAGRAM • See page 5-3 for printed wiring board.

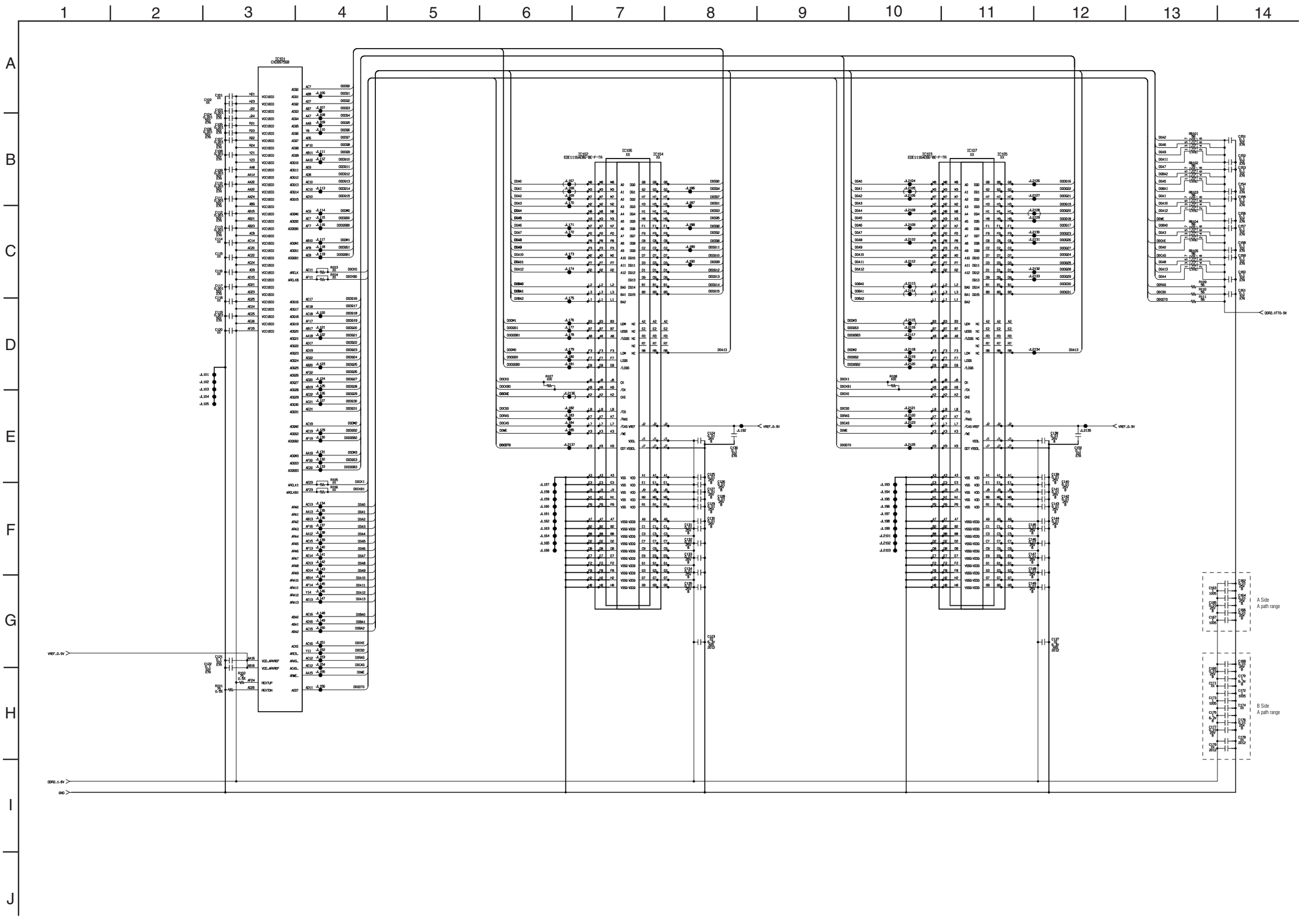
- Ref. No.: FR-307 board; 20,000 series -



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

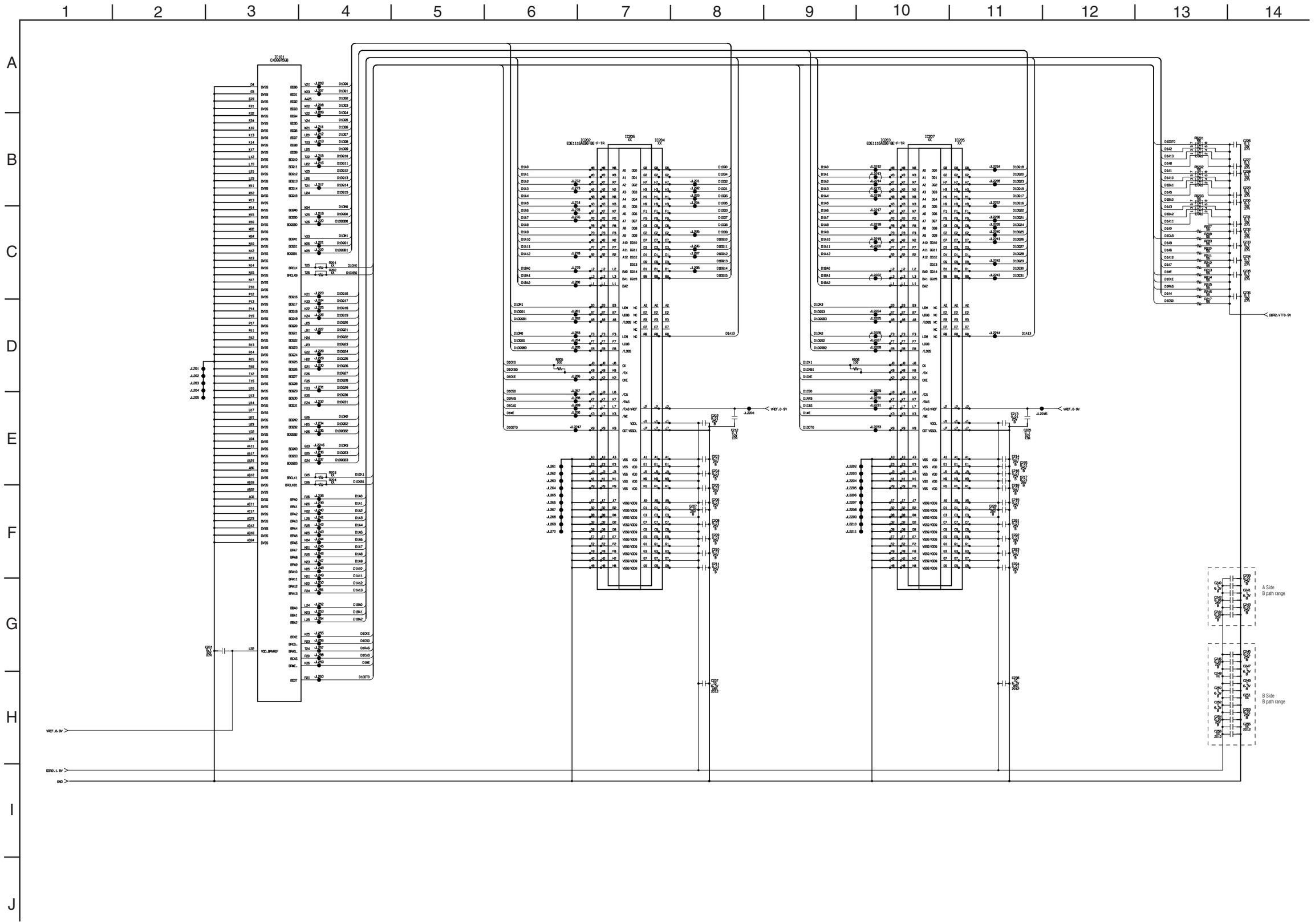
4-5. MB-130 BOARD (MT8520 DDR2-A) SCHEMATIC DIAGRAM (1/11) • See page 5-5 for printed wiring board.

- Ref. No.: MB-130 board; 10,000 series -



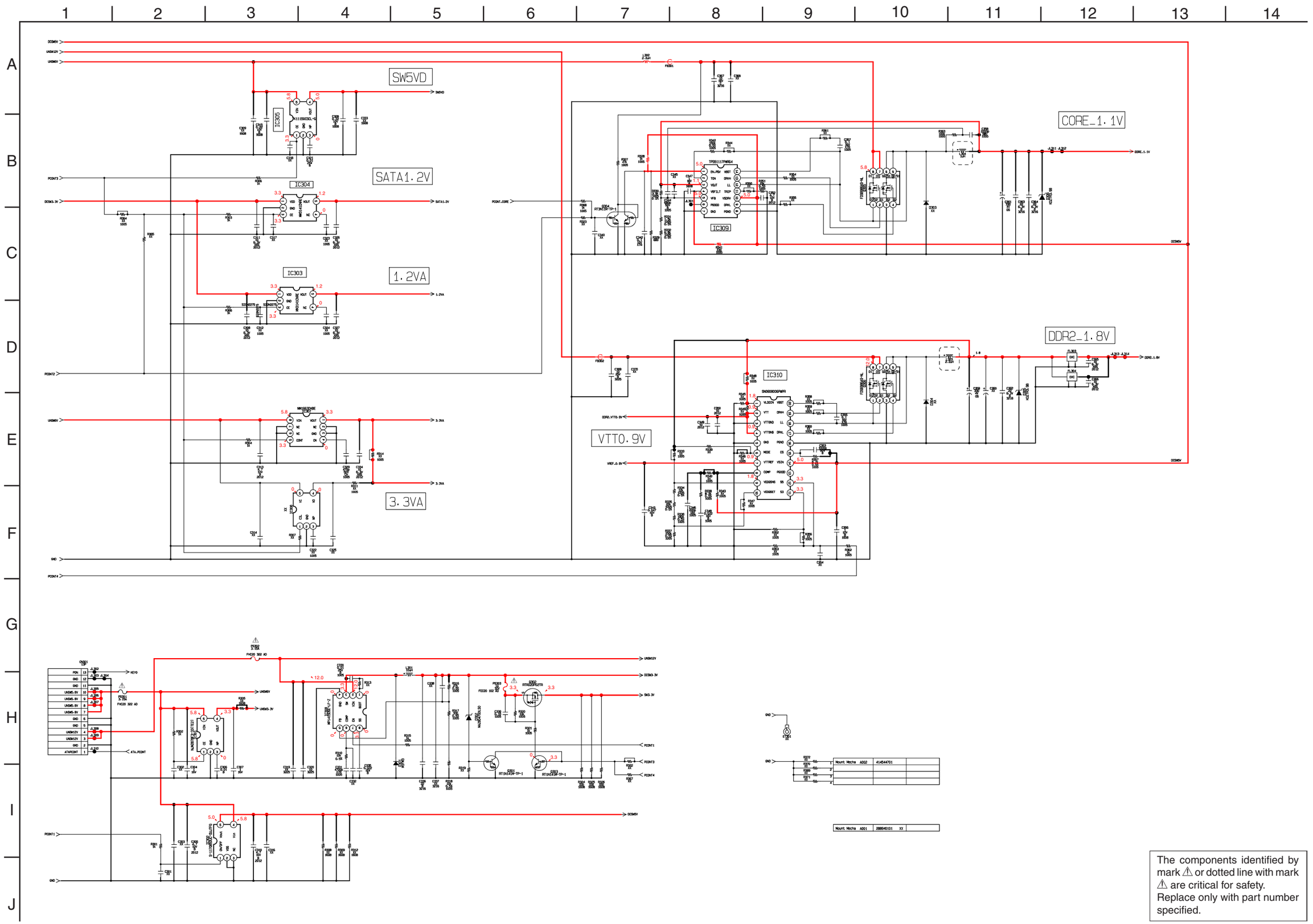
4-6. MB-130 BOARD (MT8520 DDR2-B) SCHEMATIC DIAGRAM (2/11) • See page 5-5 for printed wiring board.

- Ref. No.: MB-130 board; 10,000 series -



4-7. MB-130 BOARD (POWER1) SCHEMATIC DIAGRAM (3/11) • See page 5-5 for printed wiring board.

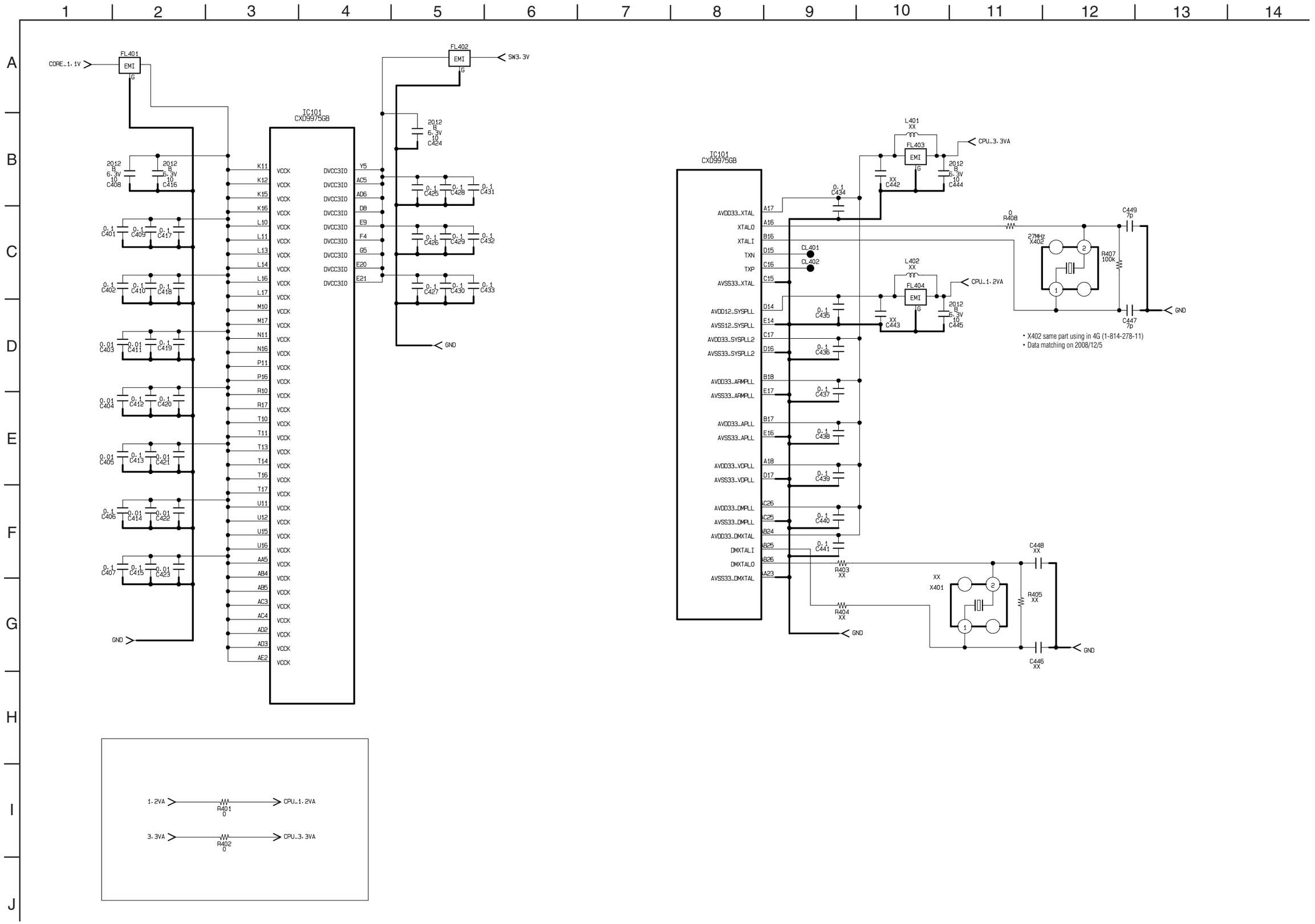
- Ref. No.: MB-130 board; 10,000 series -



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

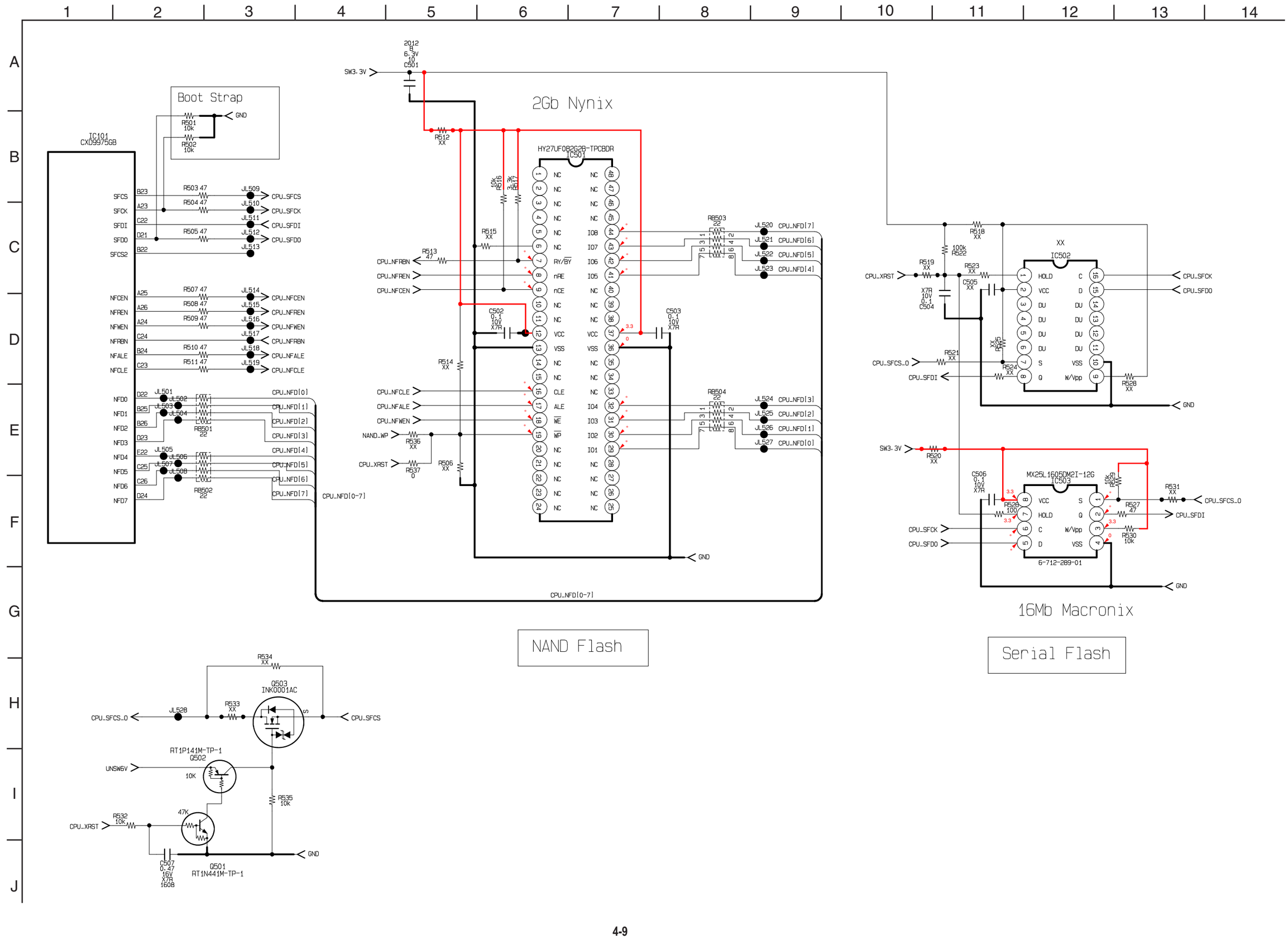
4-8. MB-130 BOARD (CLK/POWER2) SCHEMATIC DIAGRAM (4/11) • See page 5-5 for printed wiring board.

- Ref. No.: MB-130 board; 10,000 series -



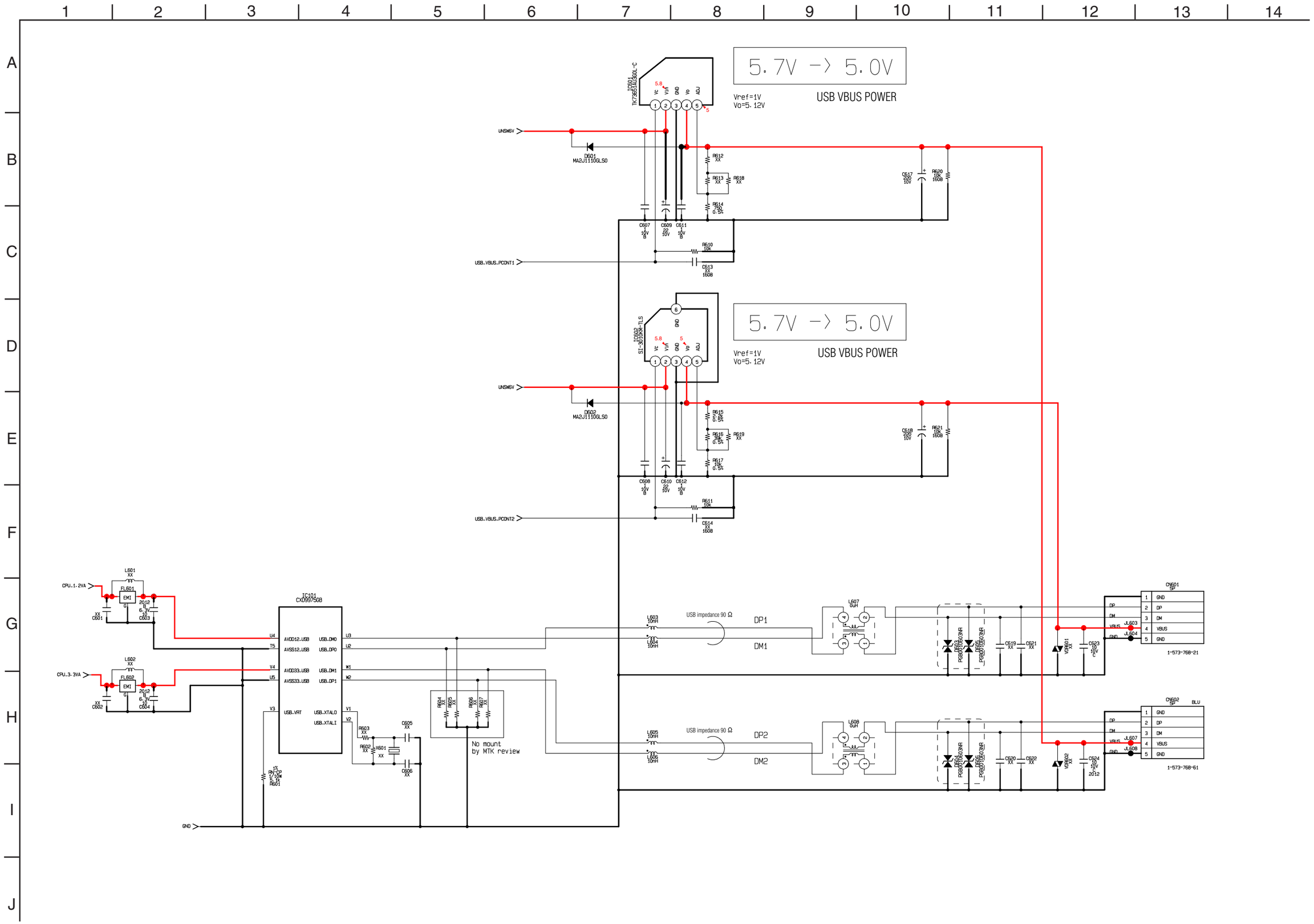
4-9. MB-130 BOARD (FLASH/HOST) SCHEMATIC DIAGRAM (5/11) • See page 5-5 for printed wiring board.

- Ref. No.: MB-130 board; 10,000 series -



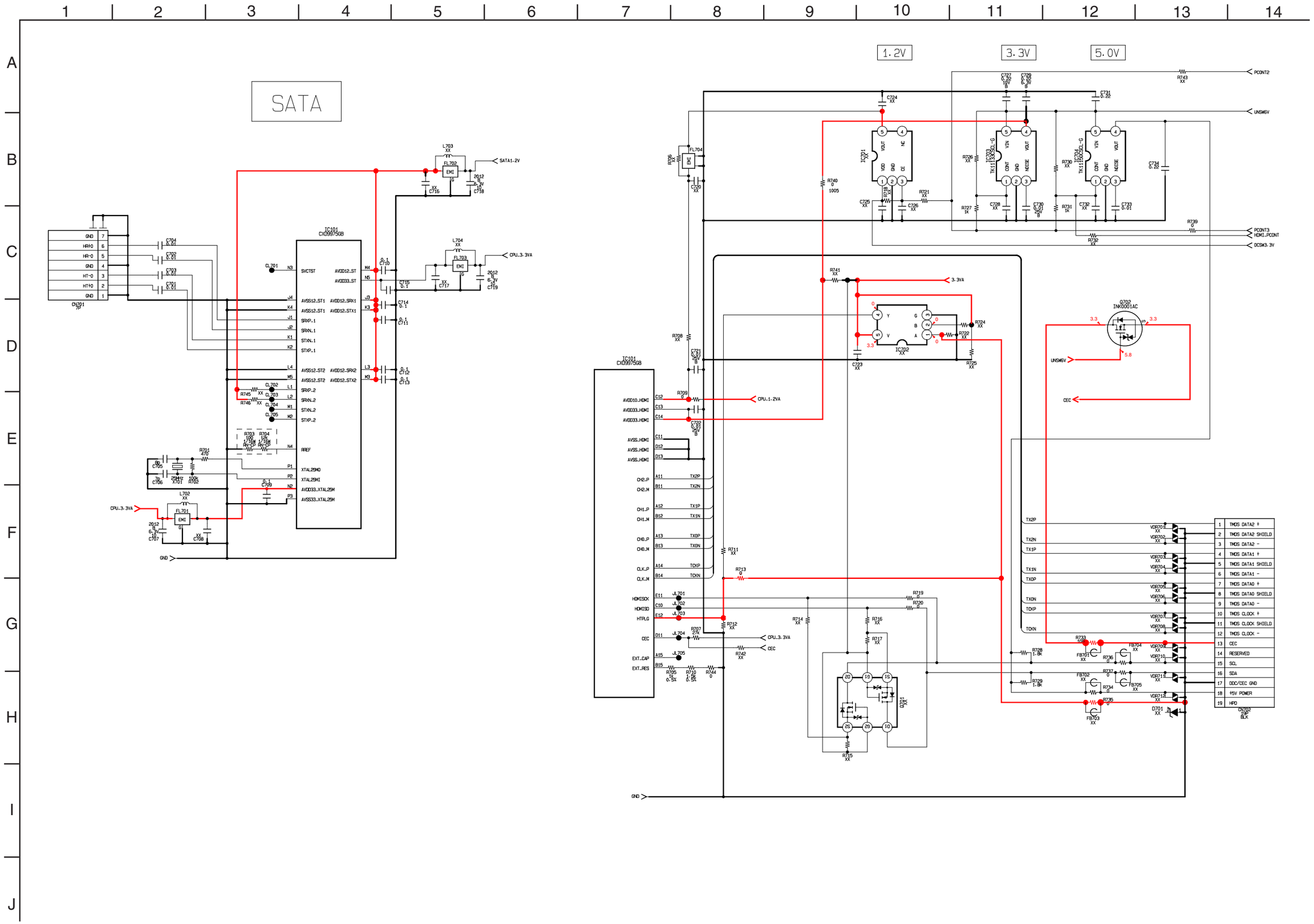
4-10. MB-130 BOARD (USB) SCHEMATIC DIAGRAM (6/11) **• See page 5-5 for printed wiring board.**

- Ref. No.: MB-130 board; 10,000 series -



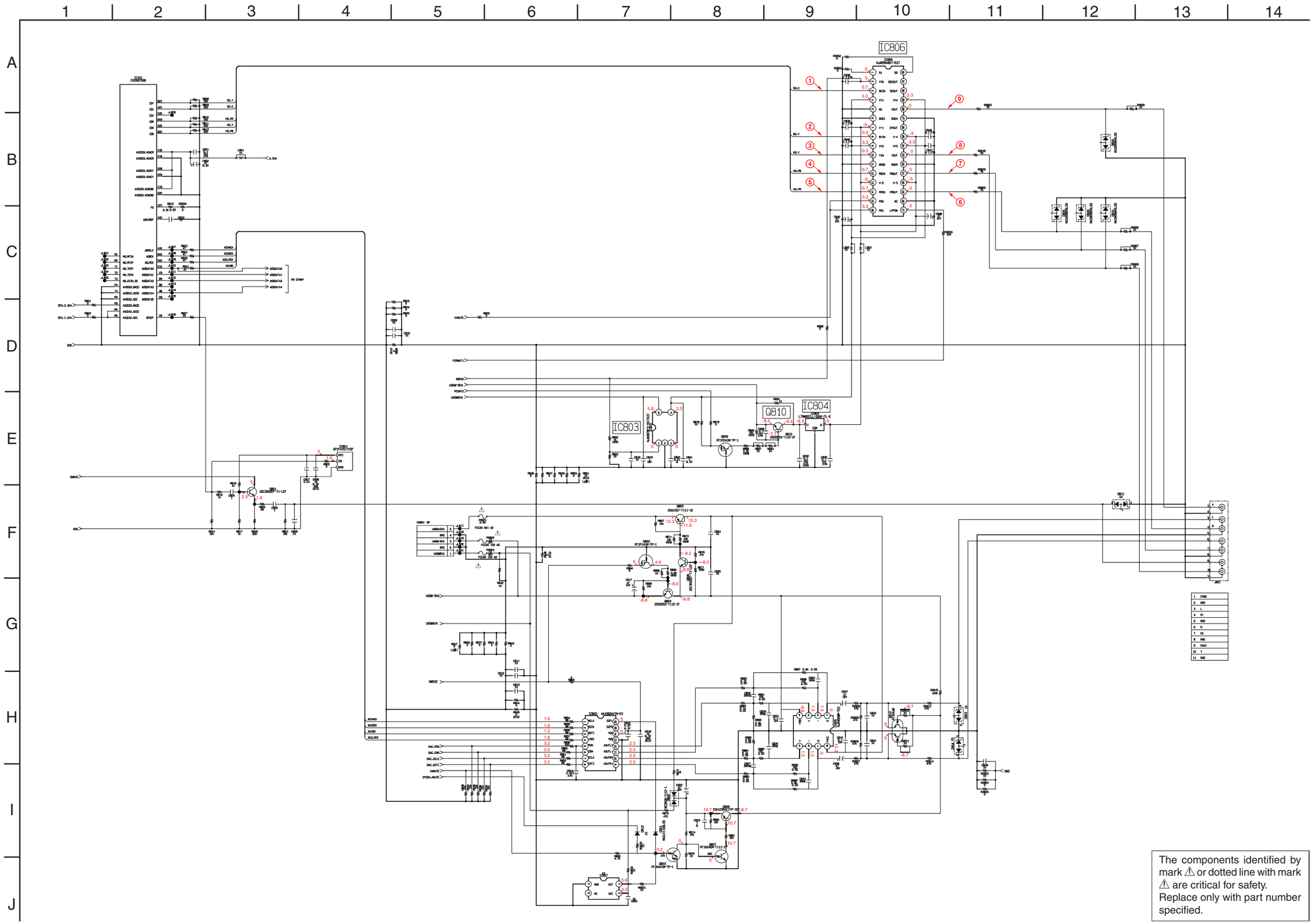
4-11. MB-130 BOARD (HDMI/SATA) SCHEMATIC DIAGRAM (7/11) • See page 5-5 for printed wiring board.

- Ref. No.: MB-130 board; 10,000 series -



4-12. MB-130 BOARD (AUDIO/VIDEO) SCHEMATIC DIAGRAM (8/11) • See page 5-5 for printed wiring board.

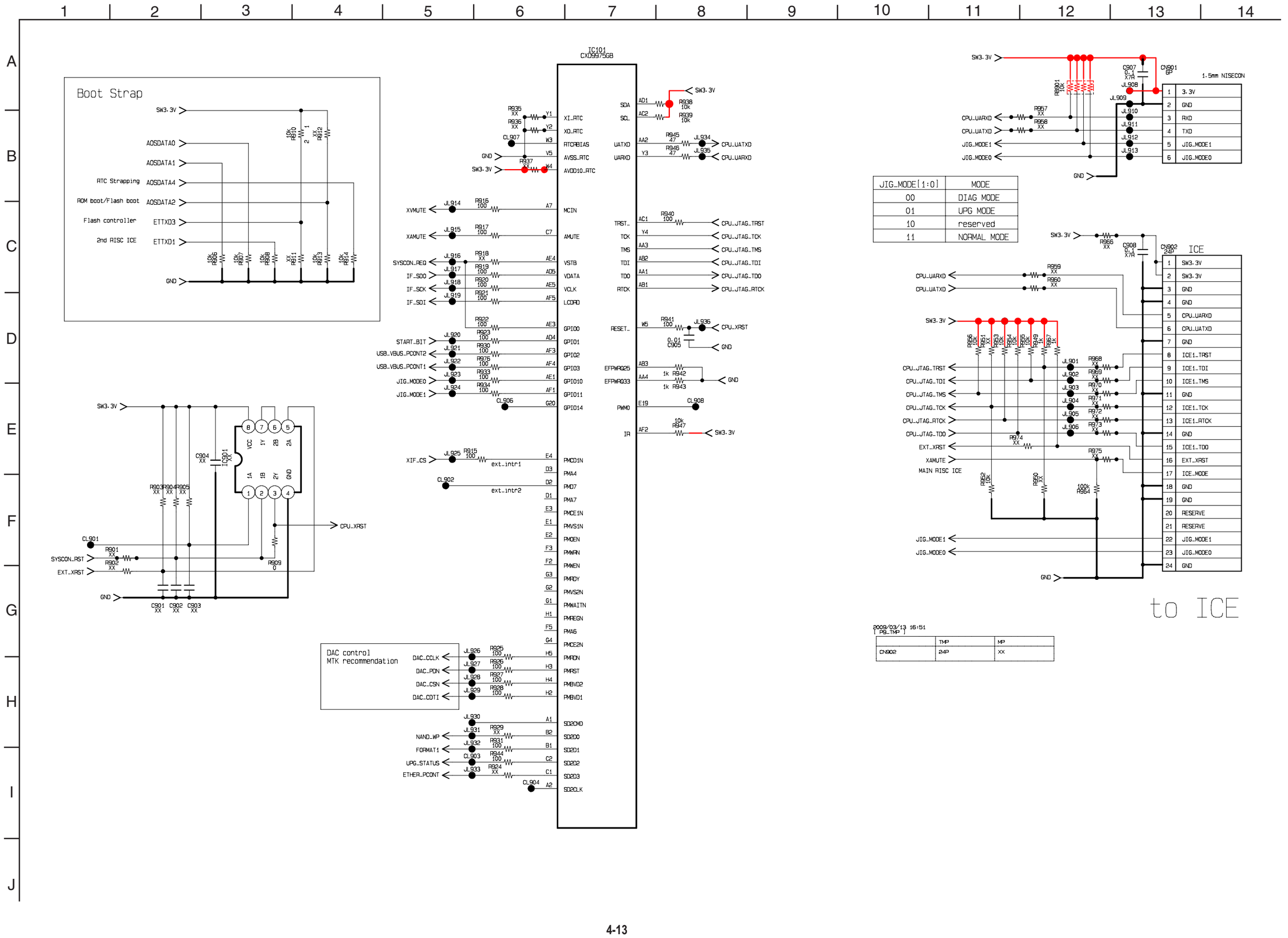
- Ref. No.: MB-130 board; 10,000 series -



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

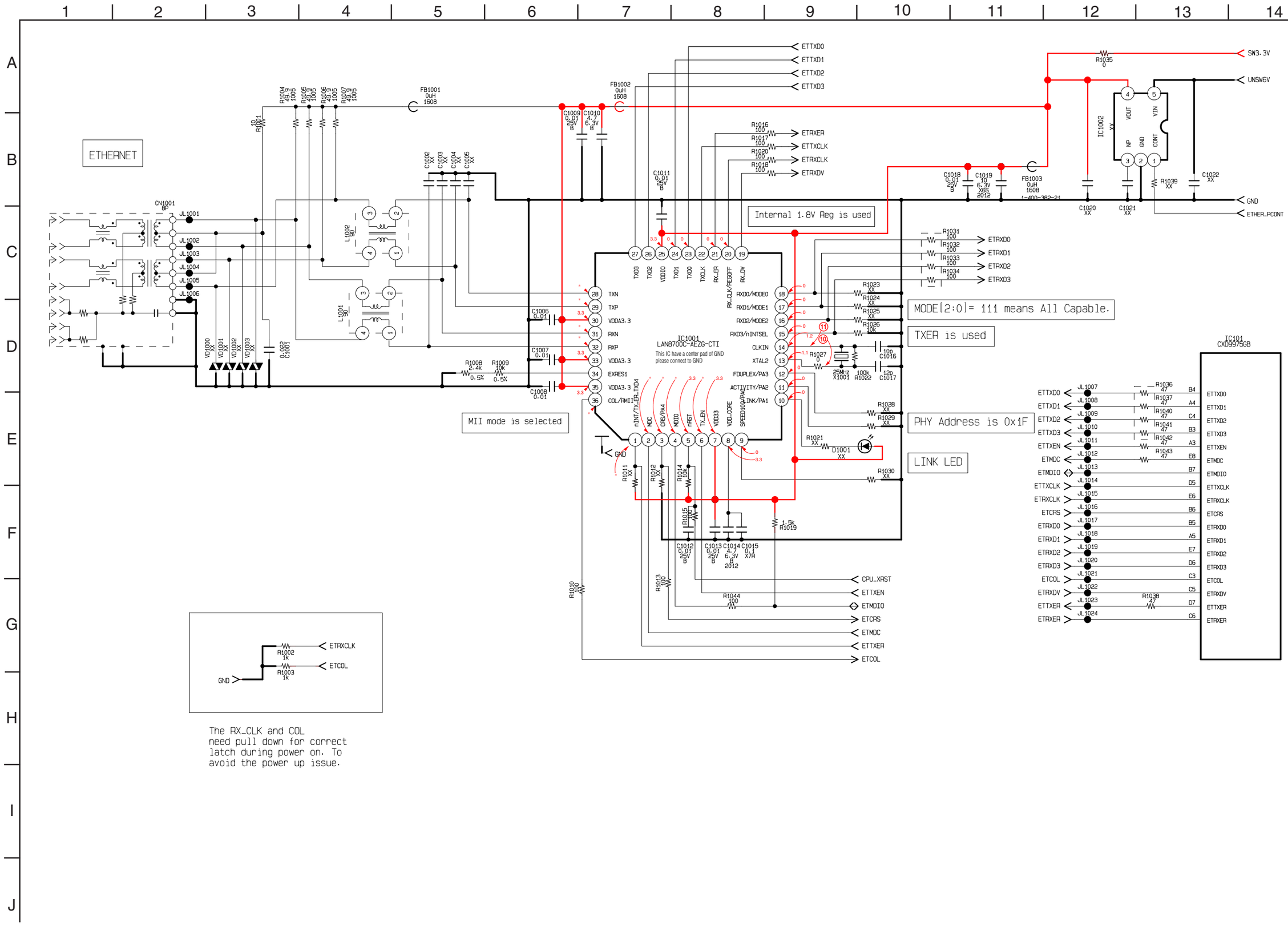
4-13. MB-130 BOARD (GPIO/JTAG) SCHEMATIC DIAGRAM (9/11) • See page 5-5 for printed wiring board.

- Ref. No.: MB-130 board; 10,000 series -



4-14. MB-130 BOARD (ETHERNET) SCHEMATIC DIAGRAM (10/11) • See page 5-5 for printed wiring board.

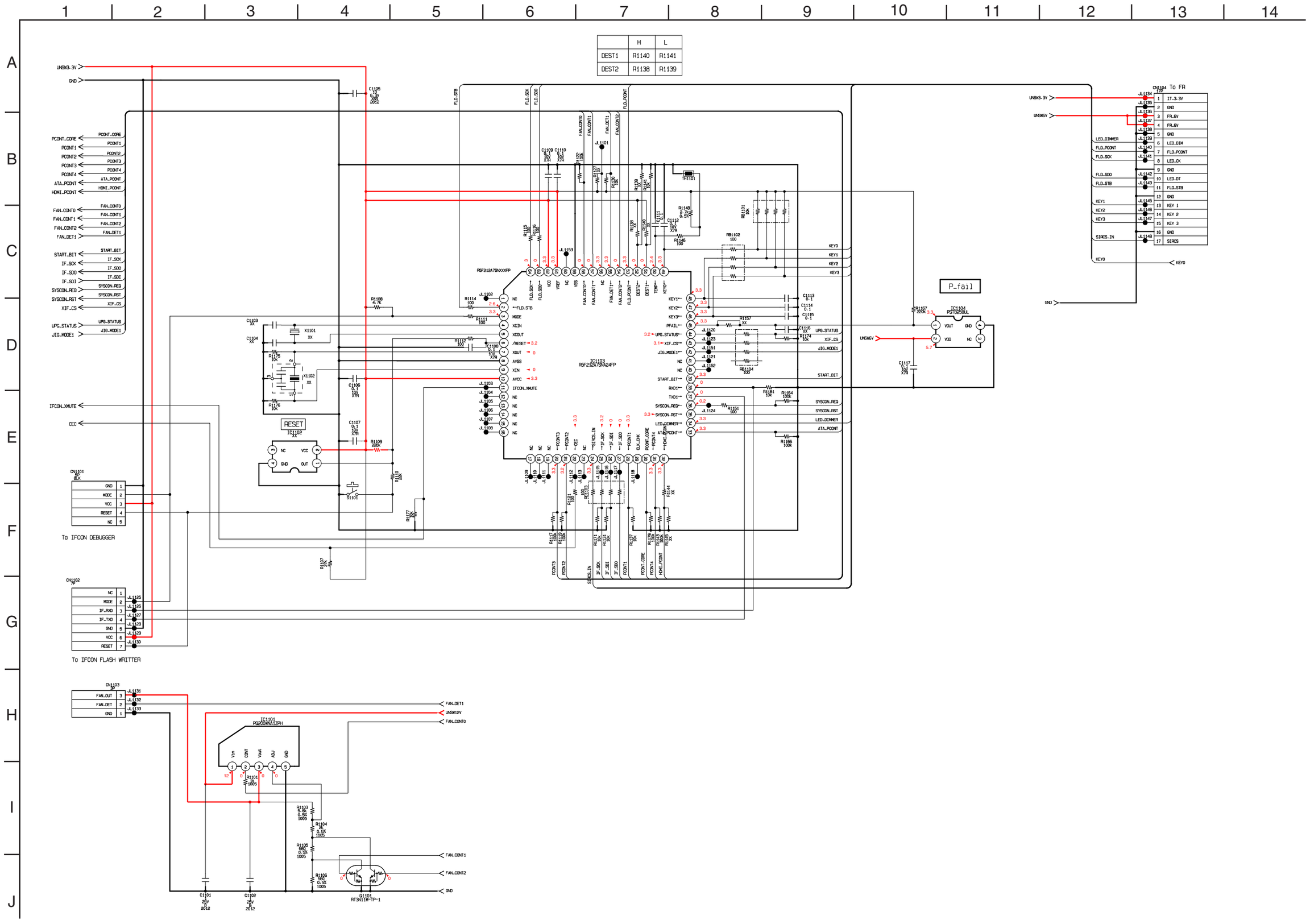
- Ref. No.: MB-130 board; 10,000 series -



The RX_CLK and COL need pull down for correct latch during power on. To avoid the power up issue.

4-15. MB-130 BOARD (IFD) SCHEMATIC DIAGRAM (11/11) • See page 5-5 for printed wiring board.

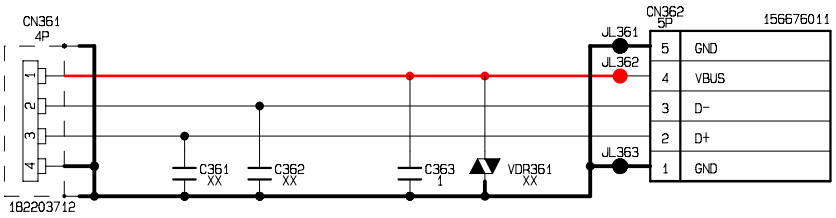
- Ref. No.: MB-130 board; 10,000 series -



4-16. USB-021 BOARD (USB (REAR)) SCHEMATIC DIAGRAM

- Ref. No.: USB-021 board; 20,000 series -

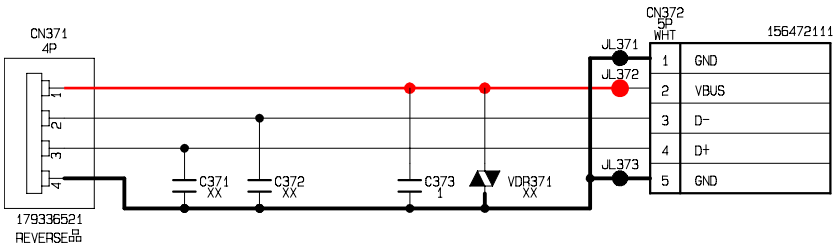
• See page 5-7 for printed wiring board.



4-17. USF-002 BOARD (USB (FRONT)) SCHEMATIC DIAGRAM

- Ref. No.: USF-002 board; 20,000 series -

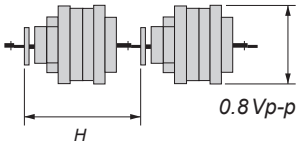
• See page 5-8 for printed wiring board.



4-18. WAVEFORMS

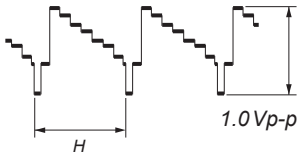
MB-130 BOARD

1 IC806 ③ (SCIN)



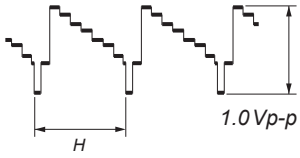
0.5 V/DIV, 20 µs/DIV

2 IC806 ⑧ (SYIN)



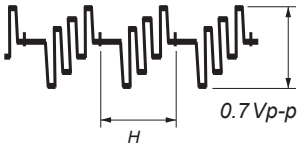
0.5 V/DIV, 20 µs/DIV

3 IC806 ⑩ (YIN)



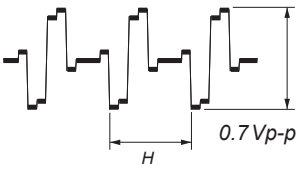
0.5 V/DIV, 20 µs/DIV

4 IC806 ⑫ (PBIN)



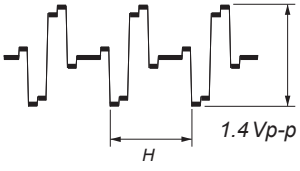
0.5 V/DIV, 20 µs/DIV

5 IC806 ⑭ (PRIN)



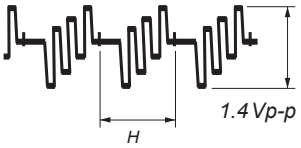
0.5 V/DIV, 20 µs/DIV

6 IC806 ⑲ (PROUT)



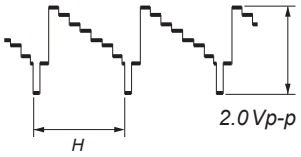
0.5 V/DIV, 20 µs/DIV

7 IC806 ㉑ (PBOUT)



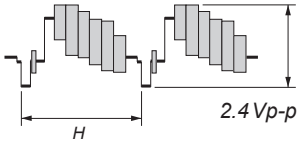
0.5 V/DIV, 20 µs/DIV

8 IC806 ㉓ (YOUT)



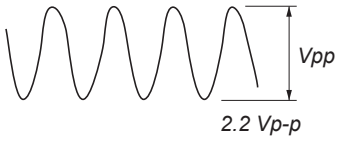
1.0 V/DIV, 20 µs/DIV

9 IC806 ㉘ (VOUT)



1.0 V/DIV, 20 µs/DIV

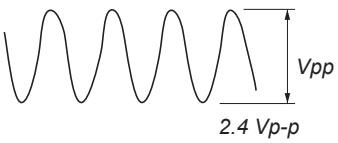
10 IC1001 ⑬ (XTAL2)



25 MHz

1.0 V/DIV, 20 ns/DIV

11 IC1001 ⑭ (CLKIN)



25 MHz

1.0 V/DIV, 20 ns/DIV

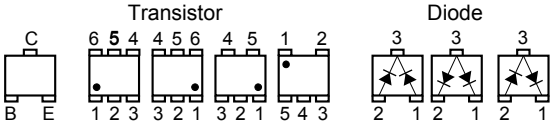
SECTION 5
PRINTED WIRING BOARDS

5-1. THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS

- : Uses unleaded solders.
- : Pattern from the side which enables seeing.
  (The other layers' patterns are not indicated)

Caution:	
Pattern face side: (SIDE B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (SIDE A)	Parts on the parts face side seen from the parts face are indicated.

- Through hole is omitted.
- There are few cases that the part printed on diagram isn't mounted in this model.
- : panel designation
- Chip parts.



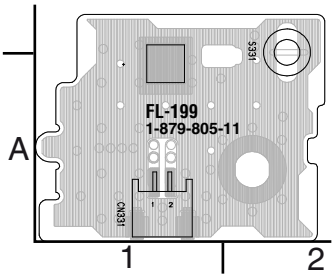
5-2. FL-199 BOARD (SWITCH) PRINTED WIRING BOARD • See page 2-5 for circuit boards location.

- Ref. No.: FL-199 board; 20,000 series -

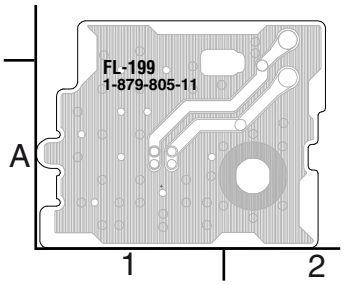
: Uses unleaded solder.

There are a few cases that the part isn't mounted in this model is printed on this diagram.

FL-199 BOARD (SIDE A)



FL-199 BOARD (SIDE B)



FL-199 BOARD (SIDE A)

CN331 A-1

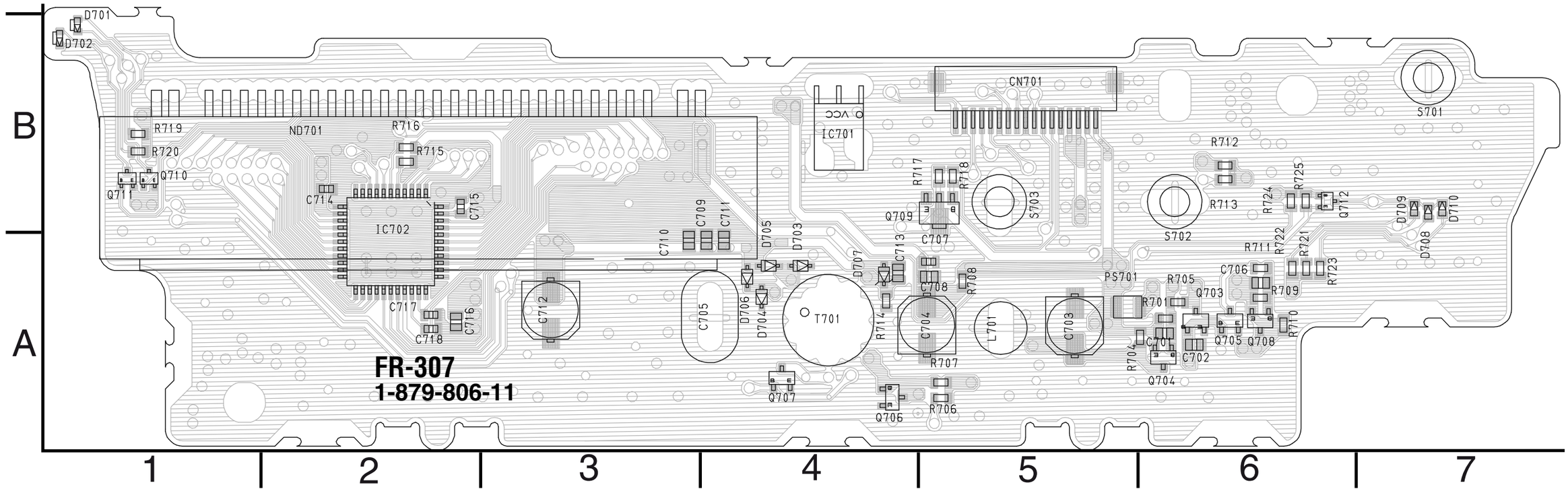
5-3. FR-307 BOARD (FRONT RIGHT) PRINTED WIRING BOARD (SIDE A) • See page 2-5 for circuit boards location.

There are a few cases that the part isn't mounted in this model is printed on this diagram.

- Ref. No.: FR-307 board; 20,000 series -

: Uses unleaded solder.

FR-307 BOARD (SIDE A)



FR-301 BOARD (SIDE A)

CN701	B-5
D701	B-1
D702	B-1
D703	A-4
D704	A-4
D705	A-4
D706	A-4
D707	A-4
D708	B-7
D709	B-7
D710	B-7
IC701	B-4
IC702	A-2
Q703	A-6
Q704	A-6
Q705	A-6
Q706	A-4
Q707	A-4
Q708	A-6
Q709	B-5
Q710	B-1
Q711	B-1
Q712	B-6

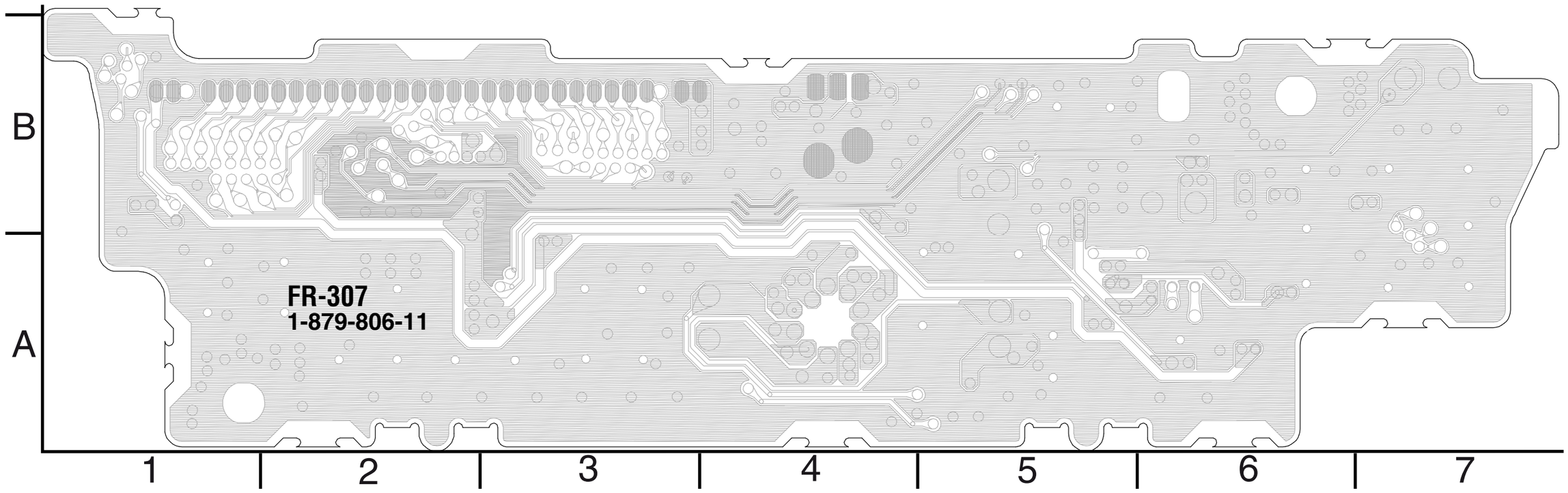
5-4. FR-307 BOARD (FRONT RIGHT) PRINTED WIRING BOARD (SIDE B) **• See page 2-5 for circuit boards location.**

- Ref. No.: FR-307 board; 20,000 series -

There are a few cases that the part isn't mounted in this model is printed on this diagram.

: Uses unleaded solder.

FR-307 BOARD (SIDE B)

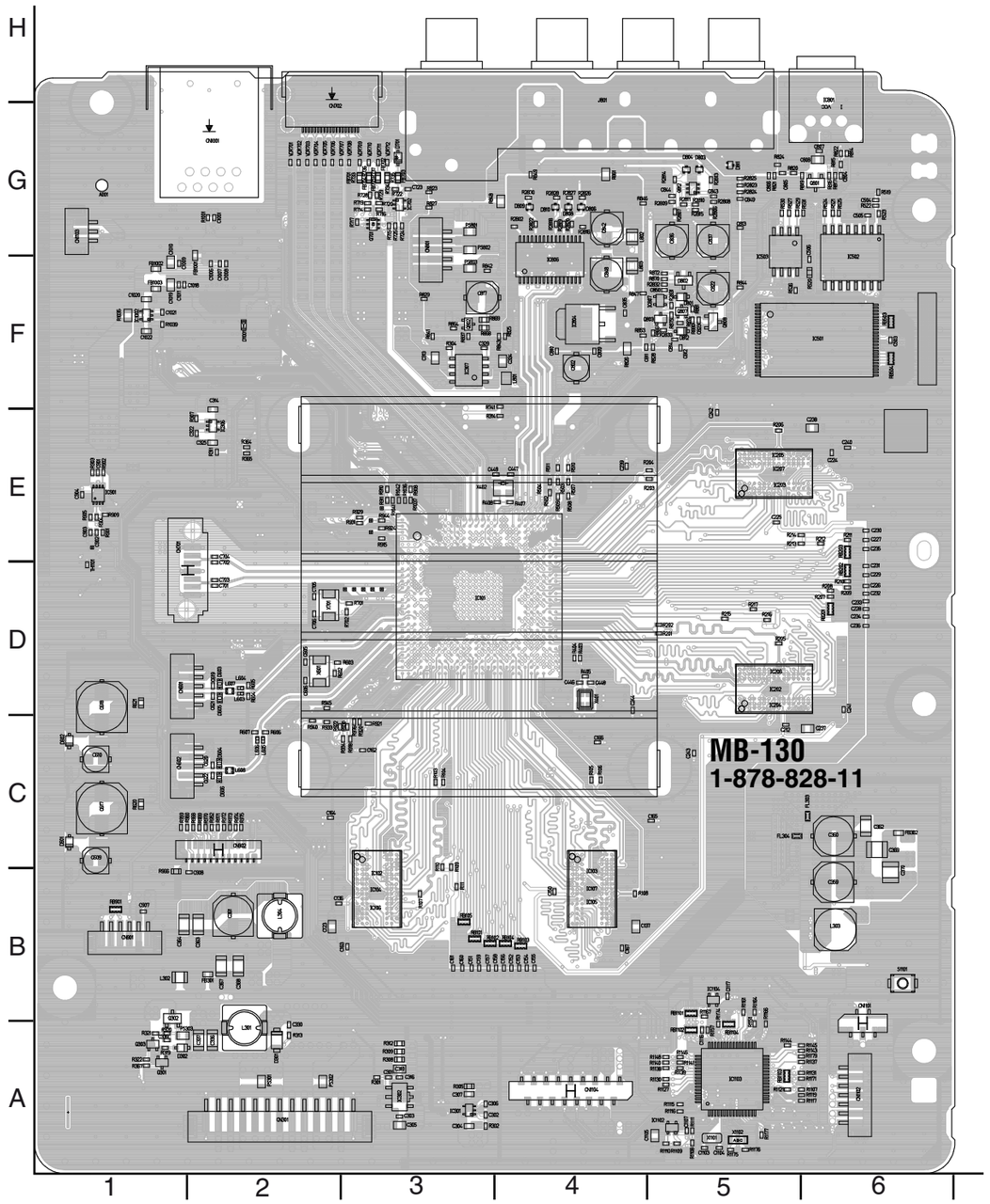


5-5. MB-130 BOARD (MAIN) PRINTED WIRING BOARD (SIDE A) • See page 2-5 for circuit boards location.

- Ref. No.: MB-130 board; 10,000 series -

: Uses unleaded solder.

There are a few cases that the part isn't mounted in this model is printed on this diagram.



MB-130 BOARD (SIDE A)

CN301	A-2
CN601	D-1
CN602	C-1
CN701	E-1
CN702	G-2
CN801	G-3
CN901	B-1
CN902	C-2
CN1001	G-2
CN1101	B-6
CN1102	A-6
CN1103	G-1
CN1104	A-4

D301	A-2
D302	A-1
D601	C-1
D602	C-1
D603	D-2
D604	C-2
D605	D-2
D606	C-2
D701	G-3
D801	F-5
D802	F-5
D803	G-5
D804	G-5
D806	G-4
D808	G-4
D809	G-4
D810	G-4
D811	G-5
D812	F-5
D1001	F-2

IC101	D-3
IC102	B-3
IC103	B-4
IC104	B-3
IC105	B-4
IC106	B-3
IC107	B-4
IC202	D-5
IC203	E-5
IC204	D-5
IC205	E-5
IC206	D-5
IC207	E-5
IC301	A-3
IC302	A-3
IC306	E-2
IC307	F-3
IC501	F-6
IC502	F-6
IC503	G-5
IC702	G-3
IC801	G-6
IC804	F-4
IC806	F-4
IC807	F-5
IC901	E-1
IC1002	F-1
IC1102	A-5
IC1103	A-5
IC1104	B-5

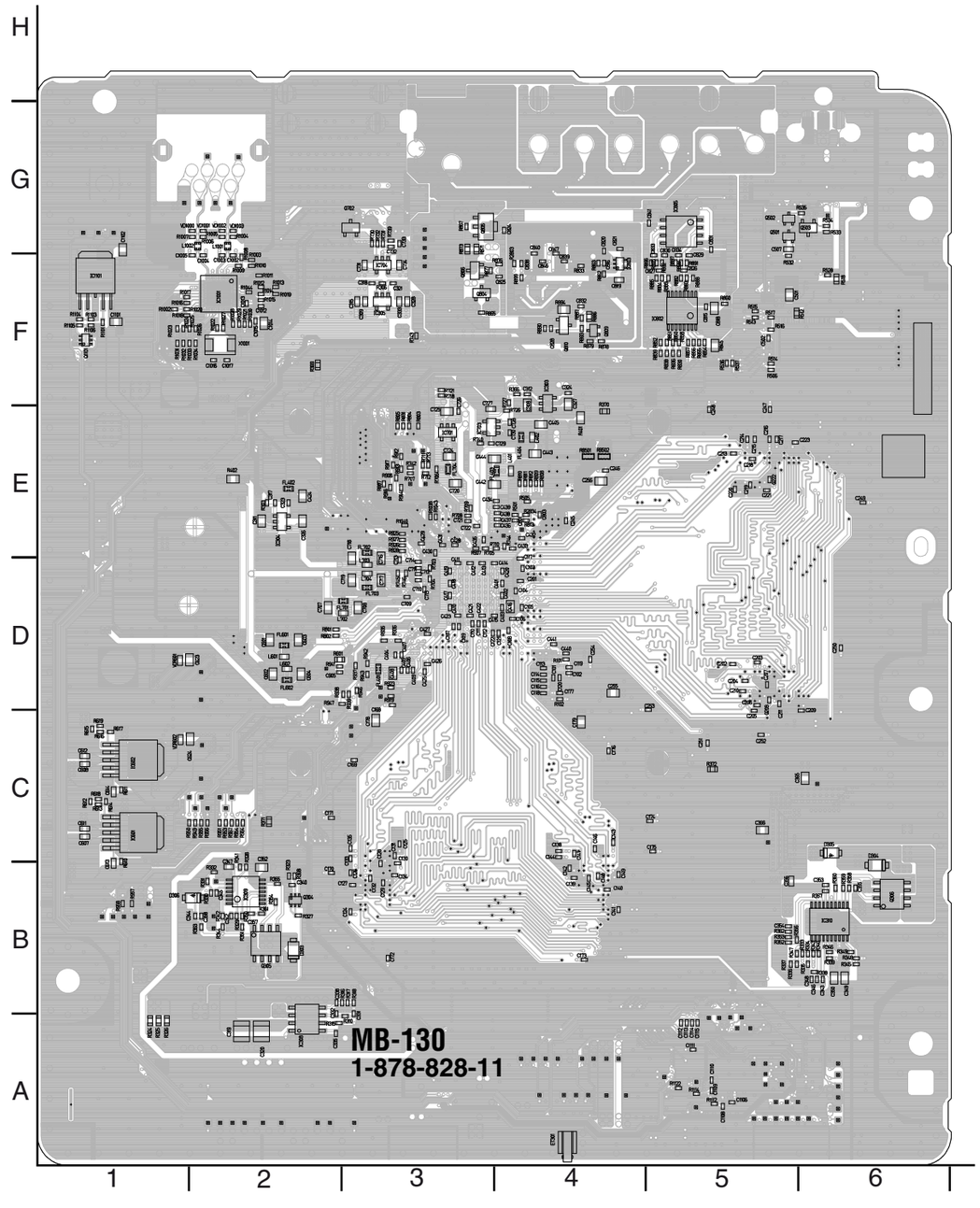
Q301	A-1
Q302	B-1
Q303	A-1
Q701	G-3
Q801	G-6
Q802	F-3
Q803	F-5
Q807	F-5
Q808	F-5
Q812	G-5

5-6. MB-130 BOARD (MAIN) PRINTED WIRING BOARD (SIDE B) • See page 2-5 for circuit boards location.

- Ref. No.: MB-130 board; 10,000 series -

: Uses unleaded solder.

There are a few cases that the part isn't mounted in this model is printed on this diagram.



MB-130 BOARD (SIDE B)

D303	B-2
D304	B-6
D305	C-6
D306	B-1
IC303	F-4
IC304	E-2
IC305	F-3
IC308	A-2
IC309	B-2
IC310	B-6
IC601	C-1
IC602	C-1
IC701	E-3
IC703	E-3
IC704	F-3
IC802	F-5
IC803	F-4
IC805	G-5
IC1001	F-2
IC1101	F-1
Q304	B-2
Q305	B-2
Q306	B-6
Q501	G-5
Q502	G-5
Q503	G-6
Q702	G-3
Q804	F-3
Q805	G-3
Q806	F-3
Q809	F-4
Q810	F-4
Q1101	F-1

5-7. USB-021 BOARD (USB (REAR)) PRINTED WIRING BOARD

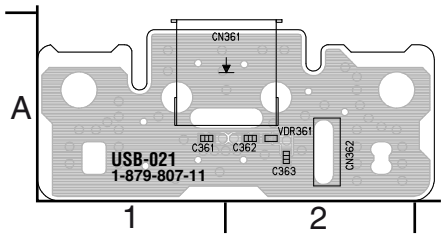
- Ref. No.: USB-021 board; 20,000 series -

• See page 2-5 for circuit boards location.

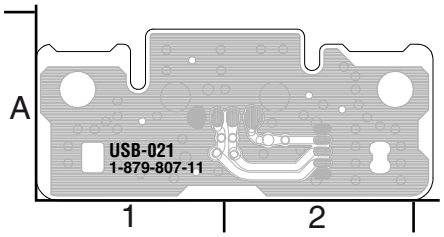
: Uses unleaded solder.

There are a few cases that the part isn't mounted in this model is printed on this diagram.

USB-021 BOARD (SIDE A)



USB-021 BOARD (SIDE B)



USB-021 BOARD (SIDE B)

CN361 A-2
CN362 A-2

5-8. USF-002 BOARD (USB (FRONT)) PRINTED WIRING BOARD

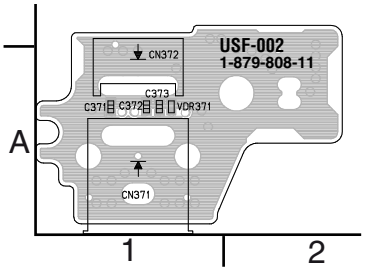
- Ref. No.: USF-002 board; 20,000 series -

• See page 2-5 for circuit boards location.

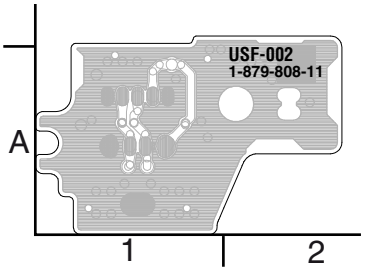
: Uses unleaded solder.

There are a few cases that the part isn't mounted in this model is printed on this diagram.

USF-002 BOARD (SIDE A)



USF-002 BOARD (SIDE B)



USF-002 BOARD (SIDE B)

CN371 A-1
CN372 A-1

SECTION 6
IC PIN FUNCTION DESCRIPTION

6-1. MAIN SYSTEM CONTROL PIN FUNCTION (MB-130 BOARD IC101: CXD9975GB)

Pin	Symbol	Type	Description
A1	N.U.	I/O	Not used
A2	N.U.	I/O	Not used
A3	ETTXEN	O	Transmit Enable to the PHY
A4	ETTXD1	O	Transmit Data to the PHY
A5	ETRXD1	I	Receive Data from the PHY
A7	MCIN	I/O	XVMUTE (Video Mute ON = “0”)
A8	AOSDATA4	O	Audio Out Serial Data 4
A10	AOMCK	I/O	Audio Out Master Clock
A11	CH2_P	Analog	HDMI TX Data 2 Differential pair (P)
A12	CH1_P	Analog	HDMI TX Data 1 Differential pair (P)
A13	CH0_P	Analog	HDMI TX Data 0 Differential pair (P)
A14	CLK_P	Analog	HDMI TX Clock Differential pair (P)
A15	N.U.	Analog	Not used
A16	XTALO	O	27MHz Crystal Out
A17	AVDD33_XTAL	Power	3.3V Analog Power for XTAL
A18	AVDD33_VDPLL	Power	3.3V Analog Power for VDPLL
A20	IOG	Analog	DAC Output
A21	IOC	Analog	DAC Output
A22	DACVREF	Analog	DAC Reference Voltage
A23	SFCK	I/O	Serial Flash Clock
A24	NFWEN	I/O	NAND Flash Write Enable
A25	NFCEN	I/O	NAND Flash Chip Enable
A26	NFREN	I/O	NAND Flash Read Enable
B1	SD2D1	I/O	FORMAT1 (480 = “0” 720,1080 = “1”
B2	SD2D0	I/O	NAND_WP (Nand Flash Write Protect)
B3	ETTXD3	O	Transmit Data to the PHY
B4	ETTXD0	O	Transmit Data to the PHY
B5	ETRXD0	I	Receive Data from the PHY
B6	ETCRS	I	Carrier Sense from the PHY
B7	ETMDIO	I/O	Management Data Input/Output from/to the MDIO pin
B8	N.U.	O	Not used
B9	AOSDATA2	O	Audio Out Serial Data 2
B10	AOBCK	I/O	Audio Out Bit Clock
B11	CH2_M	Analog	HDMI TX Data 2 Differential pair (M)
B12	CH1_M	Analog	HDMI TX Data 1 Differential pair (M)
B13	CH0_M	Analog	HDMI TX Data 0 Differential pair (M)
B14	CLK_M	Analog	HDMI TX Clock Differential pair (M)
B15	EXT_RES	Analog	HDMI Reference Voltage
B16	XTALI	I	27MHz Crystal In
B17	AVDD33_APLL	Power	3.3V Analog Power for APLL
B18	AVDD33_ARMPLL	Power	3.3V Analog Power for ARMPLL
B19	IOR	Analog	DAC Output
B20	IOB	Analog	DAC Output
B21	IOY	Analog	DAC Output
B22	N.U.	I/O	Not used
B23	SFCS	I/O	Serial Flash Chip Select
B24	NFALE	I/O	NAND Flash Address Latch Enable
B25	NFD1	I/O	NAND Flash Data Input/Output Bit 1
B26	NFD2	I/O	NAND Flash Data Input/Output Bit 2
C1	SD2D3	I/O	ETHER_PCONT (Ethernet Power Control)
C2	SD2D2	I/O	UPG_STATUS (Upgrade Status)
C3	ETCOL	I	Collision Detect from the PHY
C4	ETTXD2	O	Transmit Data to the PHY
C5	ETRXDV	I	Receive Data Valid Signal from the PHY
C6	ETRXER	I	Receive Error Signal from the PHY
C7	AMUTE	O	Audio DAC Mute (XAMUTE, L= MUTE)
C8	SPDIF (5V)	O	SPDIF Digital Audio Out
C9	AOSDATA1	O	Audio Out Serial Data 1
C10	HDMISD	I/O	HDMI I2C Data

Pin	Symbol	Type	Description
C11	AVSS_HDMI	Ground	Analog Ground
C12	AVDD12_HDMI	Power	1.2V Analog Power
C13	AVDD33_HDMI	Power	3.3V Analog Power
C14	AVDD33_HDMI	Power	3.3V Analog Power
C15	AVSS33_XTAL	Ground	Analog GND for XTAL
C16	N.C.	Analog	Not Used
C17	AVDD33_SYSPLL2	Power	3.3V Analog Power for SYSPLL
C18	AVDD33_VDACR	Power	3.3V Analog Power
C19	AVDD33_VDACBG	Power	3.3V Analog Power
C20	N.C.	Analog	Not Used
C21	FS	Analog	DAC Fullscale
C22	SFDI	I/O	Data Input from Serial Flash
C23	NFCLE	I/O	NAND Flash Command Latch Enable
C24	NFRBN	I/O	NAND Flash Ready/Busy
C25	NFD5	I/O	NAND Flash Data Input/Output Bit 5
C26	NFD6	I/O	NAND Flash Data Input/Output Bit 6
D1	N.U.	I/O	Not used
D2	N.U.	I/O	Not used
D3	N.U.	I/O	Not used
D4	DVSS	Ground	Digital Ground
D5	ETTXCLK	I	Transmit Clock from the PHY
D6	ETRXD3	I	Receive Data from the PHY
D7	ETTXER	O	Transmit Error Signal to the PHY
D8	DVCC3IO	Power	3.3 V Digital Power
D9	N.U.	I/O	Not used
D10	AOLRCK	I/O	Audio Out Left-Right Clock
D11	CEC	I/O	HDMI CEC
D12	AVSS_HDMI	Ground	Analog Ground
D13	AVSS_HDMI	Ground	Analog Ground
D14	AVDD12_SYSPLL	Power	1.2V Analog Power for SYSPLL
D15	N.C.	Analog	Not Used
D16	AVSS33_SYSPLL2	Ground	Analog Ground for SYSPLL
D17	AVSS33_VDPLL	Ground	Analog Ground for DVPLL
D18	AVDD33_VDACY	Power	3.3V Analog Power
D19	AVSS33_VDACY	Ground	Analog Ground
D20	AVSS33_VDACBG	Ground	Analog Ground
D21	SFDO	I/O	Data Output to Serial Flash
D22	NFD0	I/O	NAND Flash Data Input/Output Bit0
D23	NFD3	I/O	NAND Flash Data Input/Output Bit 3
D24	NFD7	I/O	NAND Flash Data Input/Output Bit 7
D25	BRCLK1	O	DRAM Clock 1
D26	BRCLKB1	O	DRAM Clock 1 Inverted
E1	N.U.	I/O	Not used
E2	N.U.	I/O	Not used
E3	N.U.	I/O	Not used
E4	PMCD1N	I/O	External Interrupt 1
E5	DVSS	Ground	Digital Ground
E6	ETRXCLK	I	Receive Clock from the PHY
E7	ETRXD2	I	Receive Data from the PHY
E8	ETMDC	O	Management Data Clock to the PHY
E9	DVCC3IO	Power	3.3 V Digital Power
E10	AOSDATA0	O	Audio out serial data 0
E11	HDMISCK	I/O	HDMI I2C Clock
E12	HTPLG	I/O	HDMI Hot Plug
E14	AVSS12_SYSPLL	Ground	Analog GND for SYSPLL
E16	AVSS33_APLL	Ground	Analog Ground for APLL
E17	AVSS33_ARMPLL	Ground	Analog Ground for ARMPLL
E18	AVSS33_VDACR	Ground	Analog Ground
E19	N.U.	I/O	Not used
E20	DVCC3IO	Power	3.3 V Digital Power
E21	DVCC3IO	Power	3.3 V Digital Power

Pin	Symbol	Type	Description
E22	NFD4	I/O	NAND Flash Data Input/Output Bit 4
E23	DVSS	Ground	Digital Ground
E24	BDQ31	I/O	DRAM Data Bus Bit 31
E25	BDQ30	I/O	DRAM Data Bus Bit 30
E26	BDQ27	I/O	DRAM Data Bus Bit 27
F2	N.U.	I/O	Not used
F3	N.U.	I/O	Not used
F4	DVCC3IO	Power	3.3 V Digital Power
F5	N.U.	I/O	Not used
F21	DVSS	Ground	Digital Ground
F22	DVSS	Ground	Digital Ground
F23	BDQ29	I/O	DRAM Data Bus Bit 29
F24	DVSS	Ground	Digital Ground
F25	BDQ28	I/O	DRAM Data Bus Bit 28
G1	N.U.	I/O	Not used
G2	N.U.	I/O	Not used
G3	N.U.	I/O	Not used
G4	N.U.	I/O	Not used
G5	DVCC3IO	Power	3.3 V Digital Power
G20	N.U.	I/O	Not used
G21	BDQ26	I/O	DRAM Data Bus Bit 26
G22	BDQ24	I/O	DRAM Data Bus Bit 24
G23	BDQM3	O	DRAM Data Mask 3
G24	BDQSB3	I/O	DRAM Data Strobe 3 Inverted
G25	BDQS3	I/O	DRAM Data Strobe 3
G26	BDQM2	O	DRAM Data Mask 2
H1	N.U.	I/O	Not used
H2	PMBVD1	I/O	DAC_CDTI (Audio DAC Control Data Input in Serial Mode)
H3	PMRST	I/O	DAC_PDN (Audio DAC Power Down Mode)
H4	PMBVD2	I/O	DAC_CSN (Audio DAC Chip Select)
H5	PMRDN	I/O	DAC_CCLK (Audio DAC Control Data Input)
H21	VCC18IO	Power	1.8 V Digital IO Power
H22	BDQ25	I/O	DRAM Data Bus Bit 25
H23	VCC18IO	Power	1.8 V Digital IO Power
H24	BDQ22	I/O	DRAM Data Bus Bit 22
H25	BDQS2	I/O	DRAM Data Strobe 2
H26	BDQSB2	I/O	DRAM Data Strobe 2 Inverted
J1	SRXP_1	Analog	SATA Channel 1 RX Differential pair
J2	SRXN_1	Analog	SATA Channel 1 RX Differential pair
J3	AVDD12_SRX1	Power	1.2 V Analog Power for SATA Channel 1 RX
J4	AVSS12_ST1	Ground	Analog Ground for SATA Channel 1
J21	BDQ21	I/O	DRAM Data Bus Bit 21
J22	VCC18IO	Power	1.8 V Digital IO Power
J23	BDQ23	I/O	DRAM Data Bus Bit 23
J24	VCC18IO	Power	1.8 V Digital IO Power
J25	BDQ20	I/O	DRAM Data Bus Bit 20
K1	STXN_1	Analog	SATA Channel 1 TX Differential pair
K2	STXP_1	Analog	SATA Channel 1 TX Differential pair
K3	AVDD12_STX1	Power	1.2 V Analog Power for SATA Channel 1 TX
K4	AVSS12_ST1	Ground	Analog Ground for SATA Channel 1
K10	DVSS	Ground	Digital Ground
K11	VCCK	Power	1.1V Digital Power
K12	VCCK	Power	1.1V Digital Power
K13	DVSS	Ground	Digital Ground
K14	DVSS	Ground	Digital Ground
K15	VCCK	Power	1.1V Digital Power
K16	VCCK	Power	1.1V Digital Power
K17	DVSS	Ground	Digital Ground
K21	BDQ16	I/O	DRAM Data Bus Bit 16
K22	BDQ18	I/O	DRAM Data Bus Bit 18
K23	BDQ17	I/O	DRAM Data Bus Bit 17

Pin	Symbol	Type	Description
K24	BDQ19	I/O	DRAM Data Bus Bit 19
K25	BCKE	O	DRAM Clock Enable
K26	BRWE_	O	DRAM Write Enable
L1	N.U.	Analog	Not Used
L2	N.U.	Analog	Not Used
L3	AVDD12_SRX2	Power	1.2 V Analog Power for SATA Channel 2 RX
L4	AVSS12_ST2	Ground	Analog Ground for SATA Channel 2
L10	VCCK	Power	1.1V Digital Power
L11	VCCK	Power	1.1V Digital Power
L12	DVSS	Ground	Digital Ground
L13	VCCK	Power	1.1V Digital Power
L14	VCCK	Power	1.1V Digital Power
L15	DVSS	Ground	Digital Ground
L16	VCCK	Power	1.1V Digital Power
L17	VCCK	Power	1.1V Digital Power
L21	DVSS	Ground	Digital Ground
L22	VDD_BRVREF	Power	DRAM Reference Voltage
L23	DVSS	Ground	Digital Ground
L24	BBA0	O	DRAM Bank Address 0
L25	BBA2	O	DRAM Bank Address 2
L26	BRA3	O	DRAM Address Bus Bit 3
M1	N.U.	Analog	Not Used
M2	N.U.	Analog	Not Used
M3	AVDD12_STX2	Power	1.2 V Analog Power for SATA Channel 2 TX
M4	AVDD12_ST	Power	1.2 V Analog Power for SATA
M5	AVSS12_ST2	Ground	Analog Ground for SATA Channel 2
M10	VCCK	Power	1.1V Digital Power
M11	DVSS	Ground	Digital Ground
M12	DVSS	Ground	Digital Ground
M13	DVSS	Ground	Digital Ground
M14	DVSS	Ground	Digital Ground
M15	DVSS	Ground	Digital Ground
M16	DVSS	Ground	Digital Ground
M17	VCCK	Power	1.1V Digital Power
M21	BRA7	I/O	DRAM Address Bus Bit 7
M22	DVSS	Ground	Digital Ground
M23	BRA1	O	DRAM Address Bus Bit 1
M24	DVSS	Ground	Digital Ground
M25	BRA5	O	DRAM Address Bus Bit 5
N2	AVDD33_XTAL25M	Power	Analog 3.3 V Power for 25MHz XTAL
N3	N.U.	Analog	Not used
N4	RREF	Analog	SATA Bias Resistor
N5	AVDD33_ST	Power	3.3 V Analog Power for SATA
N10	DVSS	Ground	Digital Ground
N11	VCCK	Power	1.1V Digital Power
N12	DVSS	Ground	Digital Ground
N13	DVSS	Ground	Digital Ground
N14	DVSS	Ground	Digital Ground
N15	DVSS	Ground	Digital Ground
N16	VCCK	Power	1.1V Digital Power
N17	DVSS	Ground	Digital Ground
N21	BRA11	I/O	DRAM Address Bus Bit 11
N22	BRA12	O	DRAM Address Bus Bit 12
N23	BRA9	O	DRAM Address Bus Bit 9
N24	BRA6	O	DRAM Address Bus Bit 6
N25	BRA10	O	DRAM Address Bus Bit 10
N26	BRA1	O	DRAM Address Bus Bit 1
P1	XTAL25MO	O	25MHz Crystal Output
P2	XTAL25MI	I	25MHz Crystal Input
P3	AVSS33_XTAL25M	Power	Analog Ground for 25MHz XTAL
P4	AVSS33_SACD	Ground	Analog Ground for SACD

Pin	Symbol	Type	Description
P5	AVSS12_ADC	Ground	Analog Ground for SACD
P10	DVSS	Ground	Digital Ground
P11	VCCK	Power	1.1V Digital Power
P12	DVSS	Ground	Digital Ground
P13	DVSS	Ground	Digital Ground
P14	DVSS	Ground	Digital Ground
P15	DVSS	Ground	Digital Ground
P16	VCCK	Power	1.1V Digital Power
P17	DVSS	Ground	Digital Ground
P20	BCAS_	O	DRAM Data Column Address Strobe
P21	VCC18IO	Power	1.8 V Digital IO Power
P22	BRA2	O	DRAM Address Bus Bit 2
P23	VCC18IO	Power	1.8 V Digital IO Power
P24	BRA13	O	DRAM Address Bus Bit 13
P25	BRA8	O	DRAM Address Bus Bit 8
P26	BRA0	O	DRAM Address Bus Bit 0
R1	N.U.	Analog	Not used
R2	N.U.	Analog	Not used
R3	AVDD33_SACD	Power	3.3 V Analog Power for SACD
R4	AVDD12_ADCD	Power	1.2 V Analog Power for SACD
R5	AVDD12_ADC	Power	1.2 V Analog Power for SACD
R10	VCCK	Power	1.1V Digital Power
R11	DVSS	Ground	Digital Ground
R12	DVSS	Ground	Digital Ground
R13	DVSS	Ground	Digital Ground
R14	DVSS	Ground	Digital Ground
R15	DVSS	Ground	Digital Ground
R16	DVSS	Ground	Digital Ground
R17	VCCK	Power	1.1V Digital Power
R21	BODT	O	DRAM On-Die Termination
R22	VCC18IO	Power	1.8 V Digital IO Power
R23	BRCS_	O	DRAM Chip Select
R24	VCC18IO	Power	1.8 V Digital IO Power
R25	BRA4	O	DRAM Address Bus Bit 4
T1	N.U.	Analog	Not used
T2	N.U.	Analog	Not used
T3	N.U.	Analog	Not used
T4	AVSS12_ADCD	Ground	Analog Ground for SACD
T5	AVSS12_USB	Ground	Analog Ground for USB
T10	VCCK	Power	1.1V Digital Power
T11	VCCK	Power	1.1V Digital Power
T12	DVSS	Ground	Digital Ground
T13	VCCK	Power	1.1V Digital Power
T14	VCCK	Power	1.1V Digital Power
T15	DVSS	Ground	Digital Ground
T16	VCCK	Power	1.1V Digital Power
T17	VCCK	Power	1.1V Digital Power
T21	BDQ14	I/O	DRAM Data Bus Bit14
T22	BDQ10	I/O	DRAM Data Bus Bit10
T23	BDQ8	I/O	DRAM Data Bus Bit 8
T24	BRAS_	O	DRAM Row Address Strobe
T25	BRCLK	O	DRAM Clock
T26	BRCLKB	O	DRAM Clock Inverted
U2	USB_DP0	Analog	USB Port 1 Differential Serial Data Bus (Plus)
U3	USB_DM0	Analog	USB Port 1 Differential Serial Data Bus (Minus)
U4	AVDD12_USB	Power	1.2 V Analog Power for USB
U5	AVSS33_USB	Ground	Analog Ground for USB
U10	DVSS	Ground	Digital Ground
U11	VCCK	Power	1.1V Digital Power
U12	VCCK	Power	1.1V Digital Power
U13	DVSS	Ground	Digital Ground

Pin	Symbol	Type	Description
U14	DVSS	Ground	Digital Ground
U15	VCCK	Power	1.1V Digital Power
U16	VCCK	Power	1.1V Digital Power
U17	DVSS	Ground	Digital Ground
U20	BDQ7	I/O	DRAM Data Bus Bit 7
U21	DVSS	Ground	Digital Ground
U22	BDQ11	I/O	DRAM Data Bus Bit11
U23	DVSS	Ground	Digital Ground
U24	BDQ15	I/O	DRAM Data Bus Bit 15
U25	BDQ9	I/O	DRAM Data Bus Bit 9
U26	BDQ13	I/O	DRAM Data Bus Bit 13
V1	N.C.	Analog	Not Used
V2	N.C.	Analog	Not Used
V3	USB_VRT	Analog	USB Reference Resistor
V4	AVDD33_USB	Power	3.3 V Analog Power for USB
V5	AVSS_RTC	Ground	Aux Ground
V21	BDQ0	I/O	DRAM Data Bus Bit 0
V22	DVSS	Ground	Digital Ground
V23	BDQM1	O	DRAM Data Mask 1
V24	DVSS	Ground	Digital Ground
V25	BDQ12	I/O	DRAM Data Bus Bit 12
W1	USB_DM1	Analog	USB Port 2 Differential Serial Data Bus (Minus)
W2	USB_DP1	Analog	USB Port 2 Differential Serial Data Bus (Plus)
W3	N.U.	Analog	Not used
W4	AVDD10_RTC	Power	Aux Power
W5	RESET_	I	Power On Reset
W21	BDQ6	I/O	DRAM Data Bus Bit 6
W22	BDQ3	I/O	DRAM Data Bus Bit 3
W23	BDQ1	I/O	DRAM Data Bus Bit 1
W24	BDQM0	O	DRAM Data Mask 0
W25	BDQSB1	I/O	DRAM Data Strobe 1 Inverted
W26	BDQS1	I/O	DRAM Data Strobe 1
Y1	XI_RTC	I	32.768k Crystal In (Grounded)
Y2	XO_RTC	O	32.768k Crystal Out (Grounded)
Y3	UARXD	I	1st RS232 RX
Y4	TCK	I	JTAG ICE Clock/JTAG Boundary Scan Clock
Y5	DVCC3IO	Power	3.3 V Digital Power
Y8	ADQ6	I/O	DRAM Data Bus Bit 6
Y11	ARCS_	O	DRAM Chip Select
Y14	ARA12	O	DRAM Address Bus Bit 12
Y21	VCC18IO	Power	1.8 V Digital IO Power
Y22	BDQ4	I/O	DRAM Data Bus Bit 4
Y23	VCC18IO	Power	1.8 V Digital IO Power
Y24	BDQ5	I/O	DRAM Data Bus Bit 5
Y25	BDQS0	I/O	DRAM Data Strobe 0
Y26	BDQSB0	I/O	DRAM Data Strobe 0 Inverted
AA1	TDO	I/O	JTAG ICE Data Out/JTAG Boundary Scan Data Out
AA2	UATXD	O	1st RS232 TX
AA3	TMS	I	JTAG ICE Mode Select/JTAG Boundary Mode Select
AA4	EFPWRQ33	Power	3.3 V Power for E-Fuse Programming
AA5	VCCK	Power	1.1V Digital Power
AA7	ADQ4	I/O	DRAM Data Bus Bit 4
AA8	VCC18IO	Power	1.8 V Digital IO Power
AA9	ADQ5	I/O	DRAM Data Bus Bit 5
AA10	ADQ10	I/O	DRAM Data Bus Bit 10
AA11	DVSS	Ground	Digital Ground
AA12	ARA4	O	DRAM Address Bus Bit 4
AA13	ARA1	O	DRAM Address Bus Bit1
AA14	VCC18IO	Power	1.8 V Digital IO Power
AA15	ARWE_	O	DRAM Write Enable
AA16	VDD_ARVREF	Power	DRAM Reference Voltage

Pin	Symbol	Type	Description
AA17	DVSS	Ground	Digital Ground
AA18	ADQ21	I/O	DRAM Data Bus Bit 21
AA19	ADQM3	O	DRAM Data Mask 3
AA20	VCC18IO	Power	1.8 V Digital IO Power
AA21	DVSS	Ground	Digital Ground
AA22	VCC18IO	Power	1.8 V Digital IO Power
AA23	AVSS33_DMXTAL	Ground	Analog Ground for DM_XTAL
AA24	VCC18IO	Power	1.8 V Digital IO Power
AA25	BDQ2	I/O	DRAM Data Bus Bit 2
AB1	RTCK	O	JTAG ICE Return Clock
AB2	TDI	I	JTAG ICE Data In/JTAG Boundary Scan Data In
AB3	EFPWRQ25	Power	2.5 V Power for E-Fuse Programming
AB4	VCCK	Power	1.1V Digital Power
AB5	VCCK	Power	1.1V Digital Power
AB6	DVSS	Ground	Digital Ground
AB7	ADQ3	I/O	DRAM Data Bus Bit 3
AB8	ADQ1	I/O	DRAM Data Bus Bit 1
AB9	VCC18IO	Power	1.8 V Digital IO Power
AB10	ADQM1	O	DRAM Data Mask 1
AB11	ADQ9	I/O	DRAM Data Bus Bit 9
AB12	DVSS	Ground	Digital Ground
AB13	ARA2	O	DRAM Address Bus Bit 2
AB14	ARA10	O	DRAM Address Bus Bit 10
AB15	VCC18IO	Power	1.8 V Digital IO Power
AB16	VDD_ARVREF	Power	DRAM Reference Voltage
AB17	ADQ20	I/O	DRAM Data Bus Bit 20
AB18	DVSS	Ground	Digital Ground
AB19	ADQ28	I/O	DRAM Data Bus Bit 28
AB20	ADQ25	I/O	DRAM Data Bus Bit 25
AB21	VCC18IO	Power	1.8 V Digital IO Power
AB22	DVSS	Ground	Digital Ground
AB23	VCC18IO	Power	1.8 V Digital IO Power
AB24	AVDD33_DMXTAL	Power	3.3V Analog Power for DM_XTAL
AB25	DMXTALI	I	Backup 27M Crystal I
AB26	DMXTALO	O	Backup 27M Crystal O
AC1	TRST_	I	JTAG ICE Reset
AC2	SCL	I/O	Serial Interface Control Line
AC3	VCCK	Power	1.1V Digital Power
AC4	VCCK	Power	1.1V Digital Power
AC5	DVCC3IO	Power	3.3 V Digital Power
AC6	DVSS	Ground	Digital Ground
AC7	ADQ0	I/O	DRAM Data Bus Bit 0
AC8	VCC18IO	Power	1.8 V Digital IO Power
AC9	ADQM0	O	DRAM Data Mask 0
AC10	ADQ14	I/O	DRAM Data Bus Bit 14
AC11	DVSS	Ground	Digital Ground
AC12	ARAS_	O	DRAM Row Address Strobe
AC13	ARA0	O	DRAM Address Bus Bit 0
AC14	VCC18IO	Power	1.8 V Digital IO Power
AC15	ABA2	O	DRAM Bank Address 2
AC16	ACKE	O	DRAM Clock Enable
AC17	DVSS	Ground	Digital Ground
AC18	ADQ18	I/O	DRAM Data Bus Bit 18
AC19	ADQM2	O	DRAM Data Mask 2
AC20	VCC18IO	Power	1.8 V Digital IO Power
AC21	ADQ30	I/O	DRAM Data Bus Bit 30
AC22	VCC18IO	Power	1.8 V Digital IO Power
AC23	DVSS	Ground	Digital Ground
AC24	VCC18IO	Power	1.8 V Digital IO Power
AC25	AVSS33_DMPLL	Ground	Analog Ground for DMPLL
AC26	AVDD33_DMPLL	Power	3.3V Analog Power for DMPLL

Pin	Symbol	Type	Description
AD1	SDA	I/O	Serial Interface Data Line
AD2	VCCK	Power	1.1V Digital Power
AD3	VCCK	Power	1.1V Digital Power
AD4	GPIO1	I/O	START_BIT
AD5	VDATA	I/O	VFD Data
AD6	DVCC3IO	Power	3.3 V Digital Power
AD7	ADQ2	I/O	DRAM Data Bus Bit 2
AD8	ADQ12	I/O	DRAM Data Bus Bit12
AD9	VCC18IO	Power	1.8 V Digital IO Power
AD10	ADQ15	I/O	DRAM Data Bus Bit 15
AD11	AODT	O	DRAM On-Die Termination
AD12	DVSS	Ground	Digital Ground
AD13	ARA8	O	DRAM Address Bus Bit 8
AD14	ARA9	O	DRAM Address Bus Bit 9
AD15	VCC18IO	Power	1.8 V Digital IO Power
AD16	ABA1	O	DRAM Bank Address 1
AD17	ADQ22	I/O	DRAM Data Bus Bit 22
AD18	DVSS	Ground	Digital Ground
AD19	ADQ23	I/O	DRAM Data Bus Bit 23
AD20	ADQ27	I/O	DRAM Data Bus Bit 27
AD21	VCC18IO	Power	1.8 V Digital IO Power
AD22	ADQ24	I/O	DRAM Data Bus Bit 24
AD23	VCC18IO	Power	1.8 V Digital IO Power
AD24	DVSS	Ground	Digital Ground
AD25	VCC18IO	Power	1.8 V Digital IO Power
AD26	TEXTDN	I	DRAM Driving Calibration
AE1	GPIO10	I/O	JIG_MODE0
AE2	VCCK	Power	1.1V Digital Power
AE3	GPIO0	I/O	SYSCON_REQ (Communication Request for Front Micon)
AE4	N.C.	I/O	Not Used
AE5	VCLK	I/O	VFD Clock
AE6	ADQ7	I/O	DRAM Data Bus Bit 7
AE7	ADQS0	I/O	DRAM Data Strobe 0
AE8	ADQSB1	I/O	DRAM Data Strobe 1 Inverted
AE9	ADQ11	I/O	DRAM Data Bus Bit 11
AE10	ADQ13	I/O	DRAM Data Bus Bit 13
AE11	ARCLK	O	DRAM Clock 0
AE12	ACAS_	O	DRAM Column Address Strobe
AE13	ARA13	O	DRAM Address Bus Bit 13
AE14	ARA7	O	DRAM Address Bus Bit 7
AE15	ARA5	O	DRAM Address Bus Bit 5
AE16	ABA0	O	DRAM Bank Address 0
AE17	ADQ16	I/O	DRAM Data Bus Bit 16
AE18	ADQ17	I/O	DRAM Data Bus Bit 17
AE19	ADQS2	I/O	DRAM Data Strobe 2
AE20	ADQSB3	I/O	DRAM Data Strobe 3 Inverted
AE21	ADQ31	I/O	DRAM Data Bus Bit 31
AE22	ADQ29	I/O	DRAM Data Bus Bit 29
AE23	ARCLK1	O	DRAM Clock 1
AE24	VCC18IO	Power	1.8 V Digital IO Power
AE25	VCC18IO	Power	1.8 V Digital IO Power
AE26	VCC18IO	Power	1.8 V Digital IO Power
AF1	GPIO11	I/O	JIG_MODE1
AF2	IR	I/O	Infrared Input
AF3	GPIO2	I/O	USB Power Control 2
AF4	GPIO3	I/O	USB Power Control 1
AF5	LCDRD	I/O	LCD Read Strobe
AF7	ADQSB0	I/O	DRAM Data Strobe 0 Inverted
AF8	ADQS1	I/O	DRAM Data Strobe 1
AF10	ADQ8	I/O	DRAM Data Bus Bit 8
AF11	ARCLKB	O	DRAM Clock 0 Inverted

Pin	Symbol	Type	Description
AF13	ARA6	O	DRAM Address Bus Bit 6
AF14	ARA11	O	DRAM Address Bus Bit 11
AF16	ARA3	O	DRAM Address Bus Bit 3
AF17	ADQ19	I/O	DRAM Data Bus Bit 19
AF19	ADQSB2	I/O	DRAM Data Strobe 2 Inverted
AF20	ADQS3	I/O	DRAM Data Strobe 3
AF22	ADQ26	I/O	DRAM Data Bus Bit 26
AF23	ARCLK1B	O	DRAM Clock 1 Inverted
AF24	REXTUP	I	DRAM Driving Calibration
AF25	VCC18IO	Power	1.8 V Digital IO Power

■ Enter ServiceMode
The set disconnect AC, and Push front panel key([OPEN/CLOSE] + [PLAY] + [STOP]) and AC IN
The keys will be released if the character of "SERVICE" displays on a front panel display.
Aftrer that, the screen in service mode is displayed on a monitor.
Contorl via Remote Controller
Caution) please connect TV via HDMI before AC IN.
Even if HDMI is connected after it enters Service Mode, it is not displayed.
Even if HDMI is pulled out and pulled in after it enters Service Mode, it is not displayed.

■ Display ErrorLog/CommandLog
Error log and Command log are displayed.
The displayed logs can be saved in a USB memory.

■ Diag
The unit test of the device mounted on the MainBoard.

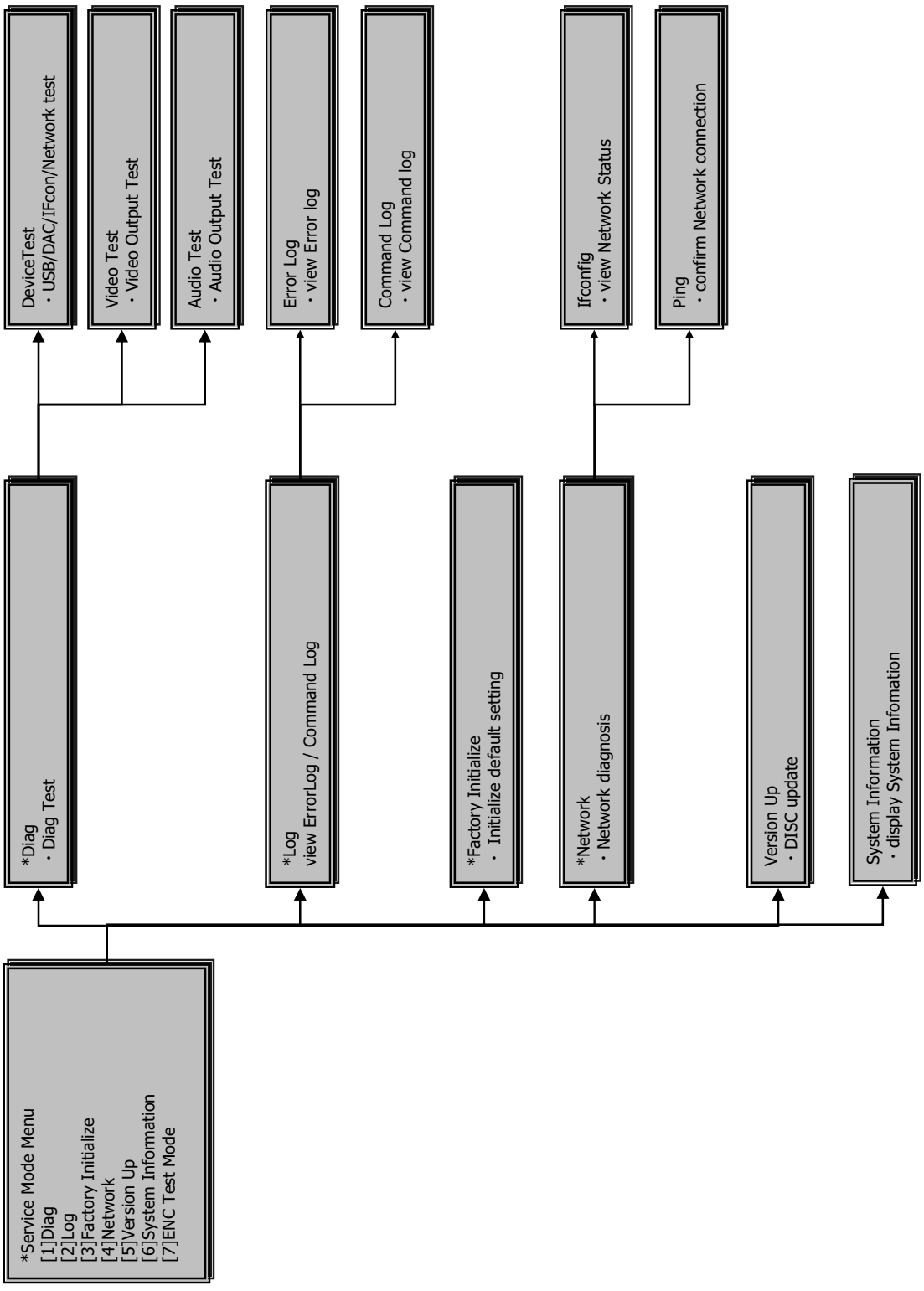
■ Factory Initialize
Return all of the player setting to their factory defaults.
Caution) please check boot normally after that. (See: "Factory Initialize" Page)

■ Network
Confirm Network connection.
1. Ifconfig: The setting of the network of the set is displayed.
The execution result of the ifconfig command is displayed.
2. Ping:The connection of the network with the terminal specified by IP address is confirmed.
The execution result of the ping command is displayed.

■ Version Up
The set updates by Update DISC.

■System Information
System information of the set is displayed.
The Information on a soft version and drive information, etc. is displayed.

Menu


*Service Mode Menu
[1]Diag
[2]Log
[3]Factory Initialize
[4]Network
[5]Version Up
[6]System Information
[7]ENC Test Mode
*Diag
· Diag Test
DeviceTest
· USB/DAC/IFcon/Network test
Video Test
· Video Output Test
Audio Test
· Audio Output Test
*Log
view ErrorLog / Command Log
Error Log
· view Error log
Command Log
· view Command log
*Factory Initialize
· Initialize default setting
*Network
· Network diagnosis
Ifconfig
· view Network Status
Ping
· confirm Network connection
Version Up
· DISC update
System Information
· display System Infomation

Outline :
Service Mode Top Menu
It selects to each function from here.
output HDMI/Component 480p forcibly.

Operation :

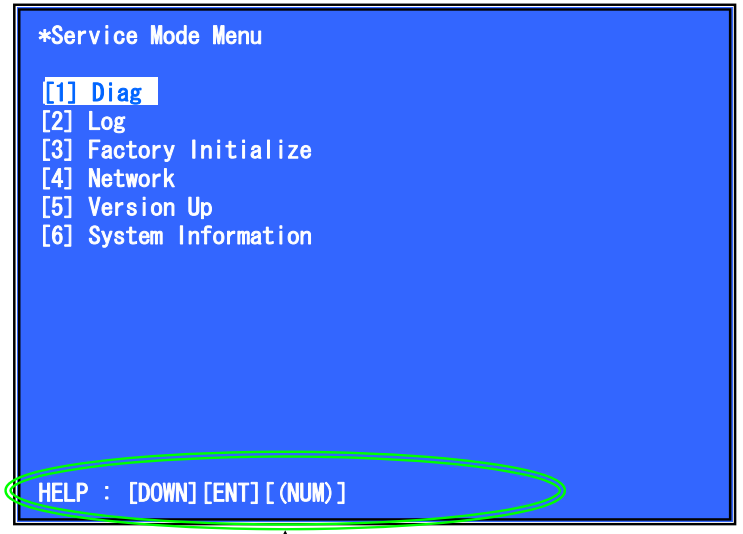
[1]	Select and Activate Diag Menu.
[2]	Select and Activate Log Menu,
[3]	Select and Activate Factory Initialize Menu.,
[4]	Select and Activate Network Menu
[5]	Select and Activate Version Up (DISC version Up) Menu,
[6]	Select and Activate System Information Menu.
[UP]	Move Up cursor
[DOWN]	Move Down cursor
[ENT]	Activate the selected cursor.

*The cursor is not displayed when initial.

Front Panel Display :
If cursor or arbitrary menu keys are operated,
the character will output to a front panel display, respectively.

*the character string.

initial display	SERVICE
Diag :	S-DIAG
Log :	S-LOG
Factory Initialize:	S-FINIT
Network:	S-NET
Version Up	S-VUP
System Information:	S-INFO



Display Hint
(The key in which the present use is possible)

Outline :
The device carried in the substrate is tested.

(Window 1) Select test category
Operation :

[LEFT] [RIGHT]	Select Category
[DOWN][ENT]	Activate the selected Category.
[RET]	Return to Service Top Menu.

(Window 2) Device Test
After "Device Test" selects in window 1, the device to test is chosen.
Operation:

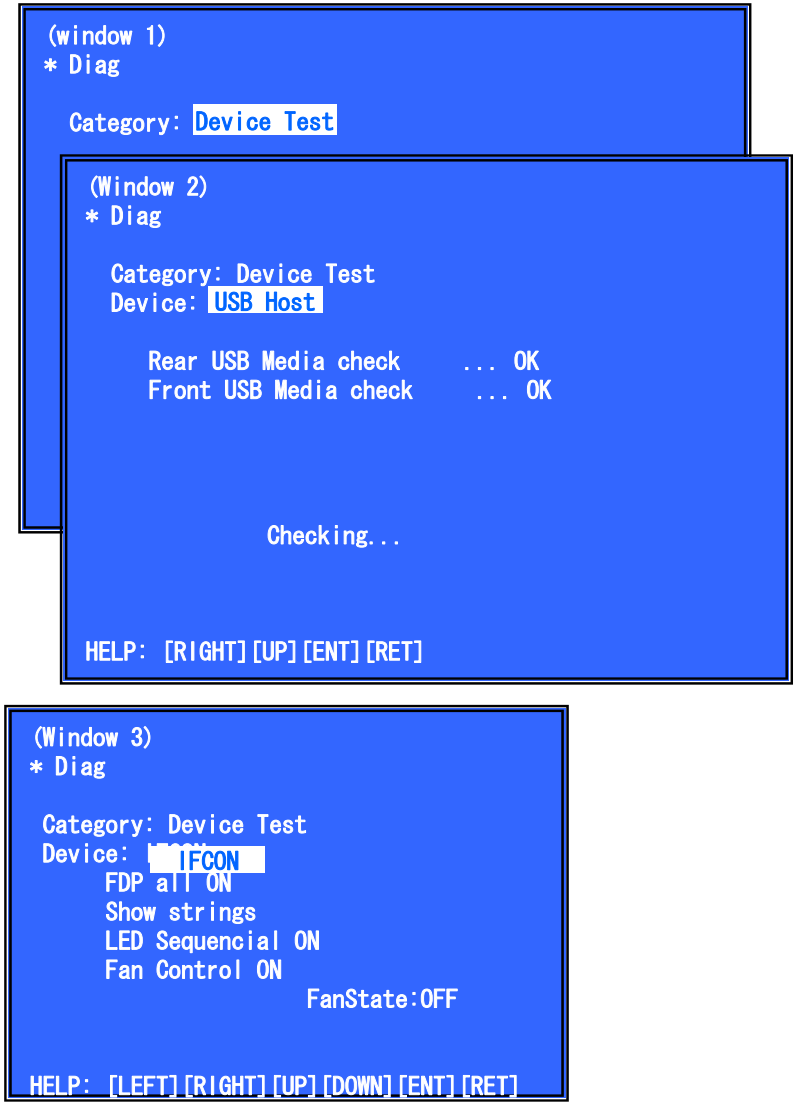
[LEFT][RIGHT]	Select Device
[ENT]	Activate and Start Test
[UP]	Return to test category selection. IF select IFCON, Move Up cursor.(see windows 3)
[DOWN]	IF select IFCON, Move Up cursor. (see windows 3)
[RET]	Return to test category selection.

>Test category list
Device Test
Video Test
Audio Test

>Device Test :Device List

USB Host	: USB MediaCheck(Front and Rear) **Only one time.**
D/A Converter	: DAC write check (non-verification)
IFCON	: IFCON Test(see windows 3)

FDP all ON
Show Strings
LED Swquencial
FAN Control ON
FanState (Display)



Outline:
Activate Vaideo Test and Auido Test

(Window 1)Select Video Test Category
Operation:

[ENT]	Activate and display ColorBar
[UP][RET]	Return to test category selection.

(Window 2)Display ColorBar
Operation :

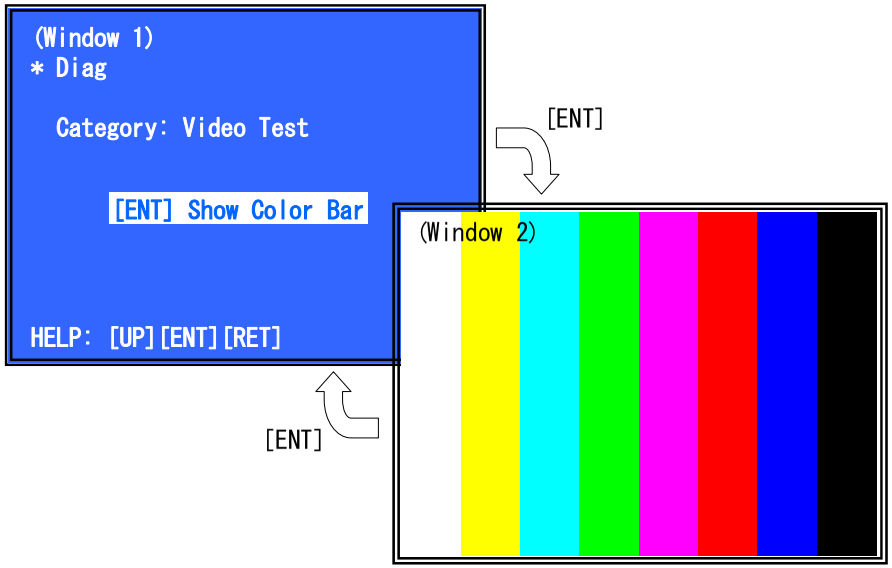
[ENT]	Return to Select Video Test Category.

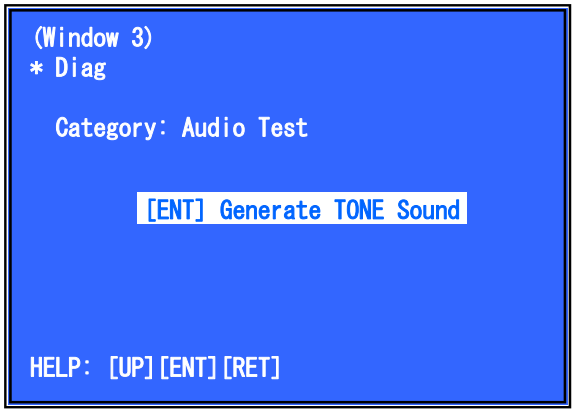
(Window3) Select Audio Test Category
Operation :

[ENT]	Play TONE Sound/Stop
[UP][RET]	Return to Select Audio Test Category

>Video Test:
Color Bar output S terminal & composite & Component & HDMI.

>Audio Test;
TONE sound output ineOut(2ch)&/ SPDIF & HDMI.





Outline :
Display each contents of the log,

(Window 1) select log.
Operation :

[1]	Activate and Display Error log
[2]	Activate and Display Command Log
[UP]	Move Up cursor
[DOWN]	Move Down cursor
[ENT]	Activate the selected cursor.
[RET]	Return to Service Top Menu.

(Window 2) : Display Error Log
Operation :

[LEFT]	Next Page
[RIGHT]	Previous Page
[RET]	Return to select log (window 1)
[RED]	Write the contents of an error log on a USB memory.

(Window 3): Display Command Log
When the size of logs is very large, it takes time for the display or becomes impossible for loading. In that case, the command log is not used.
Operation :

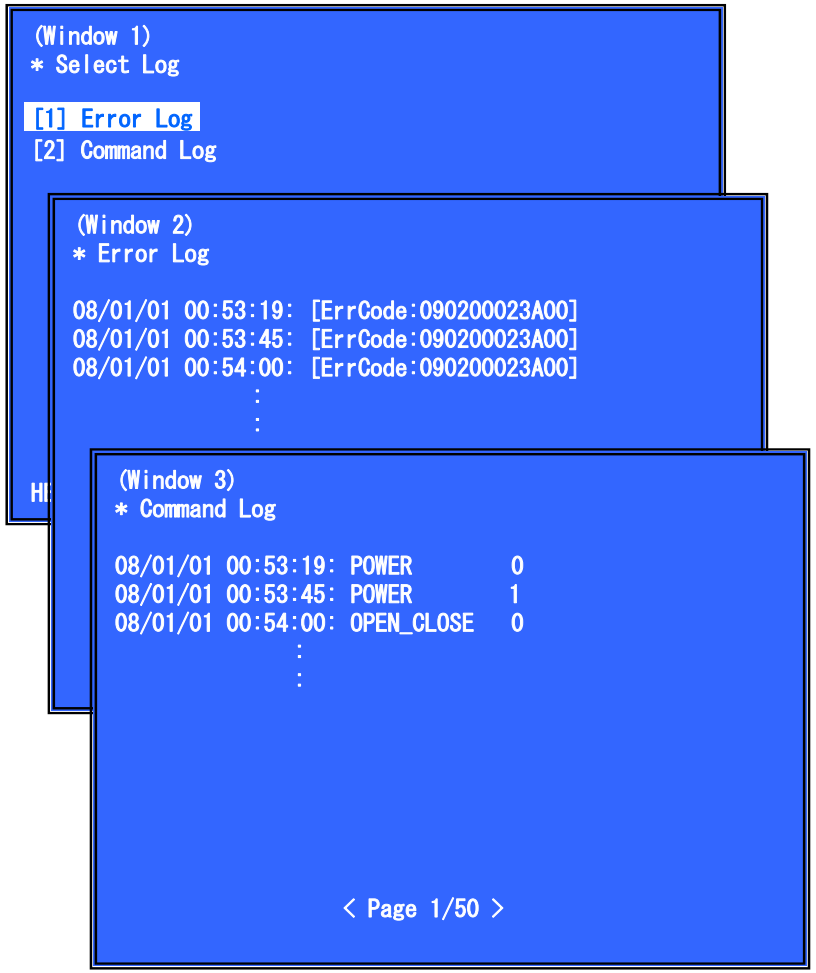
[LEFT]	Next Page
[RIGHT]	Previous Page
[RET]	Return to select log (window 1)
[RED]	Write the contents of a command log on a USB memory.

Front Panel Display :

select log	ErrorLog :	S-ELOG
	ComanndLog :	S-CLOG
Display Page	display page	ex) 001/050

>Log contents
ErrorLog :
08/01/01 00:53:19: [ErrCode:080400000000]
[Date] [Time] [ErrCode]
CommandLog:
08/01/01 00:53:19: 0 POWER 0
[Date][Time][Command][Edge 0:on 1:off]

****Write the contents of a log on a USB memory****
[RED] is pushed where a USB memory is inserted in a set in log display screen.
Please do not push the RED button immediately after USB memory is inserted.
Please do not pull out USB memory immediately after the RED button was pushed.
ErrorLog:
"getErrLogFile.trm" file is outputted in a USB memory.
Command Log:
"getCmdLogFile.trm" file is outputted in a USB memory.



Outline:
Return all of the player setting to their factory defaults.

Operation:
(Window 1)
When you return a set to the factory defaults, push [ENT] on this screen.
[ENT] Start Initialize
[RET] Return to Service Top Menu.

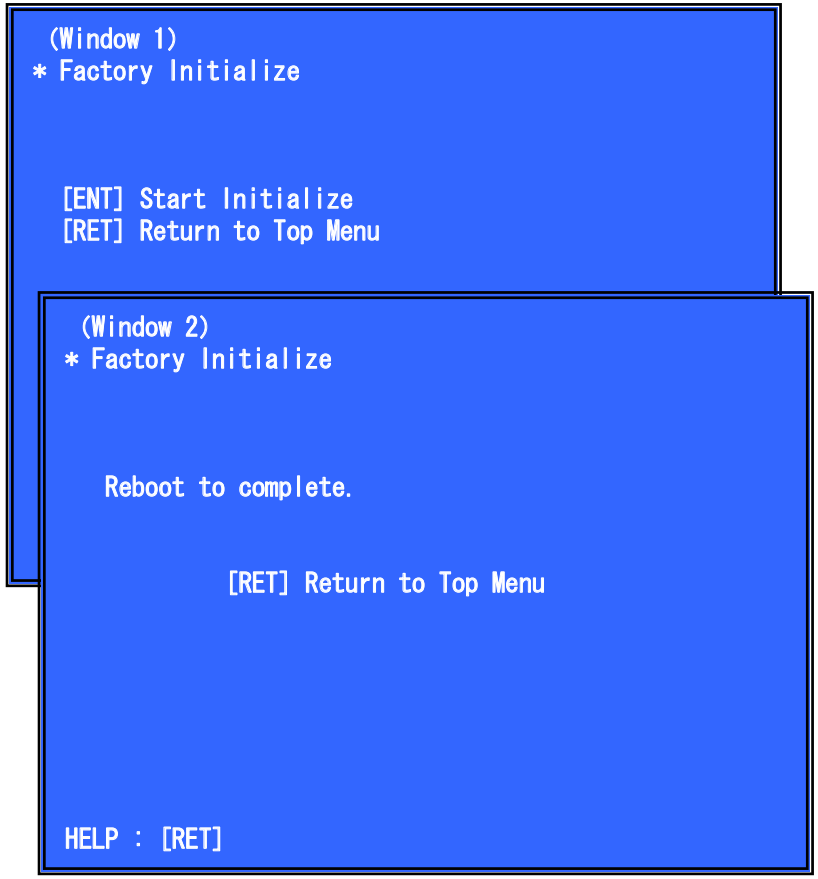
(Window 2)
It is a screen of the end of initialization.
[RET] Return to Service Top Menu.

Please disconnect AC power supply, and connect AC again.
- The operation of other service mode menu can be continued.

Caution) please do not connect USB Device.
If USB Device connects , The Factory Initialize is failed.

Front Panel Display:
Initialize : SETTING
Initialize OK : INIT-OK (window 2)
InitializeNG : INIT-NG

Caution:
When "Quick Stand By" sets ON, The additional processes of AC IN and OFF are needed.
Please confirm the following processes for all sets.
1. Initialize (This command)
2. AC Off
3. AC In
4. Check FLD. If WAIT keep blinking, go to 5.else go to 8.
5. AC Off
6. AC In
7. Check FLD.
8. AC Off. (finish)



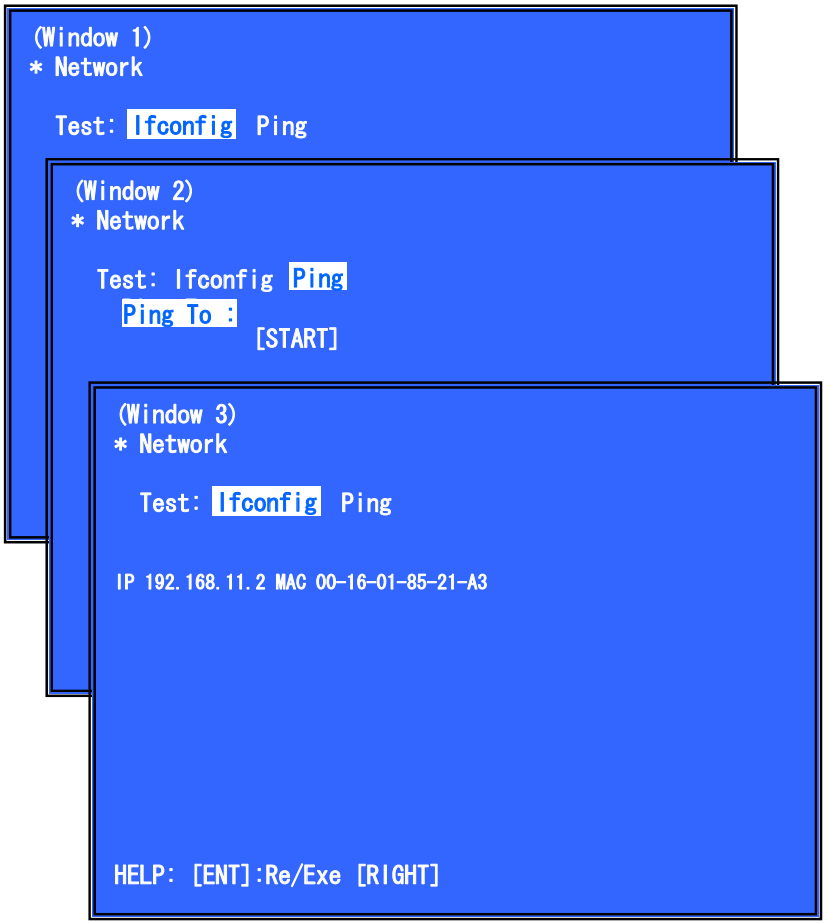
Outline :
Network Menu.

(Window1)Ifconfig Test
Operation :
[ENT] Activate Ifconfig (Display network setting)
[RIGHT] Select Ping Test.
[RET] Return to Service Top Menu.

(Window 2)Ping Test
Operation:
[LEFT] Select Ifconfig Test.
[RET] Return to Service Top Menu.
(The details of a Ping test are nest page)

(Widnow 3)Ifconfig Test Active
Display Ifconfig command results.
Operation:
[ENT] ifconfig retry
[RIGHT] Select Ping Test.
[RET] Return to Service Top Menu.

Front Panel Display :
S-NET



Outline :
Ping Test

(Window 1)Ping Test
Operation:

[LEFT]	Select Ifconfig Test.
[DOWN]	Ping execution preparation.
[RET]	Return to Service Top Menu.

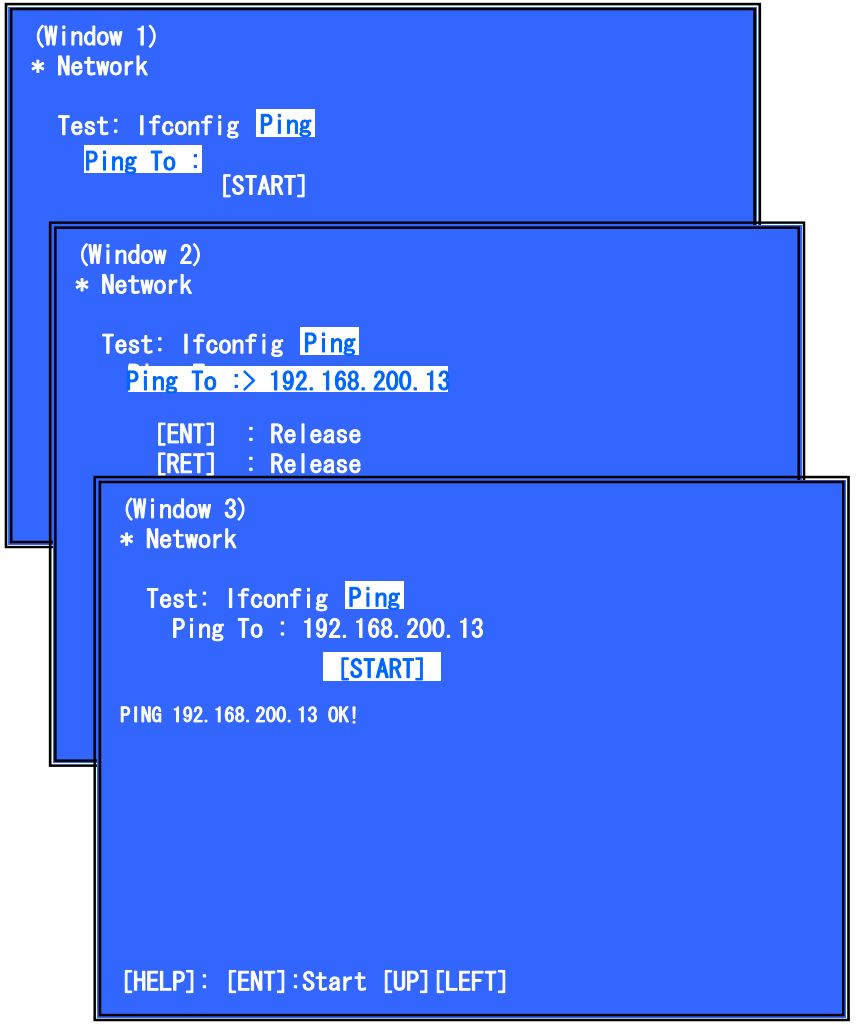
(Window 2) The IP address of the Ping point is set up.
(IP address input mode)
When "Ping to :>" is reversed, [ENT] is pushed and IP is inputted.
Operation:

[ENT]	Finish to input.
[RET]	Finish to input.
[LEFT]	Finish to input and Select Ifconfig Test.
[(NUM)]	Input Character sting '0-9'
[TIME]	Input Character sting '.'
[CLEAR]	Backspace

(Windows3): Ping Test Active
When [START] is reversed, [ENT] is pushed and execute ping .
Operation:

[ENT]	Activate PingTest
[UP]	The IP address of the Ping point is set up.
[RET]	Return to Service Top Menu.

Front Panel Display :
S-NET



Outline:
update software using DISC

(Window 1)Version Up Menu
Operation:
[ENT]　Start Update →(Tray Open and go to widnow 2)
[RET]　Return to Service Top Menu.

(Window 2)Place the Update Disc
Operation :
[ENT]　Tray Close and check DISC.
[RET]　Cancel Update (Tray Close and return to window 1)

(Window 3) Disc Check and OK (Right DISC)
Operation:　start update sequence automatically and reboot.
After reboot, please open tray and eject Update Disc manually.

(Window 4) Disc Check and NG (not update DISC)
Oepration:　[Error] ･･･ (error message)　and wait.
open tray automatically.

Front Panel Display :
DISC Insert　V-INSCD
Can't Mount　V-NODSC
DISC Check NG　V-CHKNG
DISC Check OK　V-CHKOK

Outline:
DIsplay System Infomation

Operation:

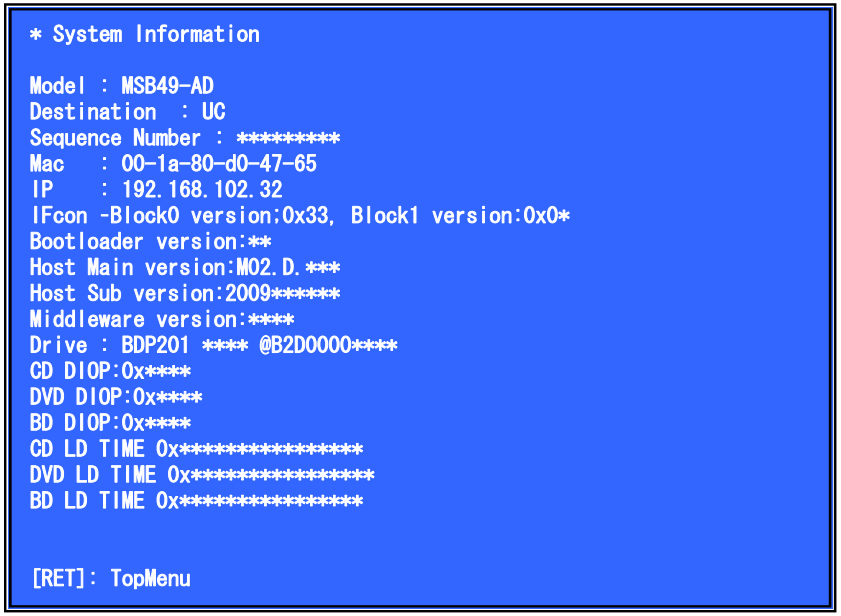
[ENT]	deltaIOP of a drive is measured (only once)
[RET]	Return to Service Top Menu.

When deltaIOP is measured, it becomes impossible to use the VersionUp function.

Contents List:

Model	
Destination	
Sequence Number	
MAC	
IP	
IFCON	IFCON Version
Bootloader	Bootloader Version
Host Main	Host Main Version
Host Sub	Host Sub Version
Middleware	Middleware Version
Drive	Model / Firm Revision @ Serial
CD DIOP	Delta IOP
DVD DIOP	Delta IOP
BD DIOP	Delta IOP
CD LD TIME	LDTime
DVD LD TIME	LDTime
BD LD TIME	LDTime

Front Panel Display :
Display Host Main Version

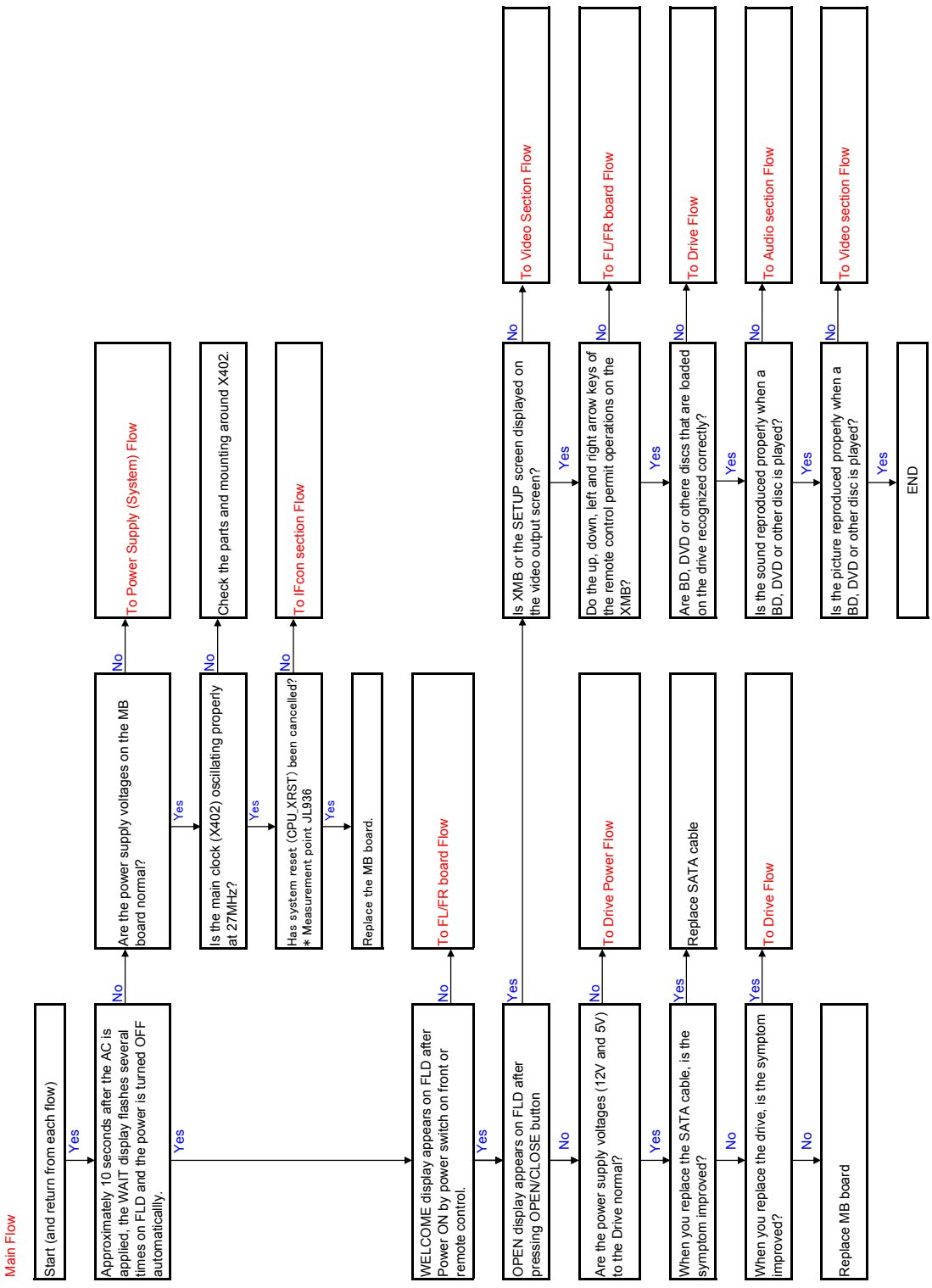


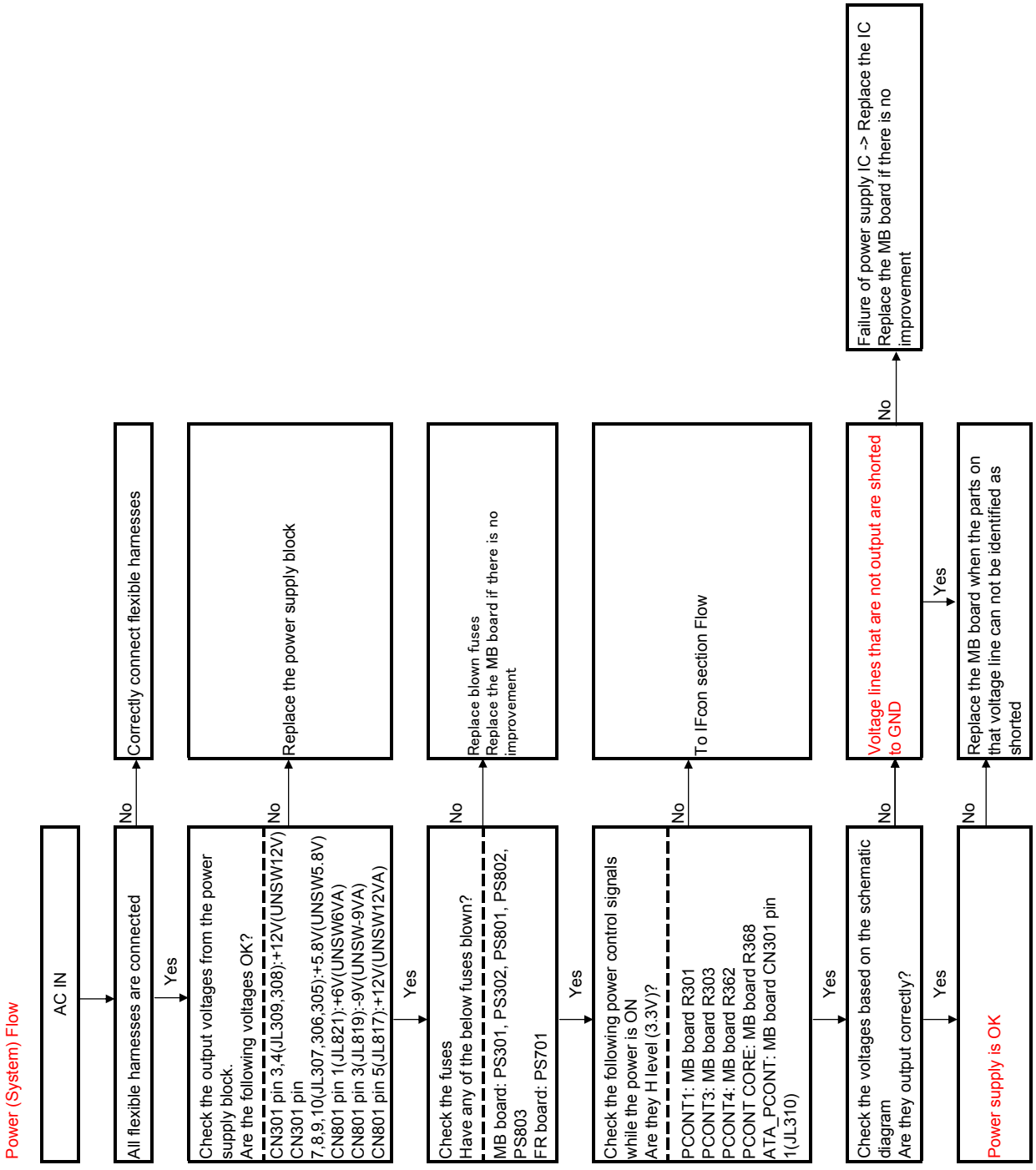
Error Log Information

issue	Error LogCode						note
	Category	ErrorCode	ErrorInfo_0	ErrorInfo_1	ErrorInfo_2	ErrorInfo_3	
CXD9975GB Error	0x01	0x**					
DDR2 Error	0x02	0x**					
Ifcon transmition time out	0x03	0x01	0x00	0x00	0x00	0x00	No response from Ifcon
Ifcon Error	0x03	0x**					Other Error
NAND Init Fail	0x04	0x00	0x00	0x00	0x00	0x00	NAND initialization failed
NAND Error	0x04	0x**					Other Error
NOR write Error	0x05	0x01	flash offset(0~~MAX_FLASH_SIZE)				flash wirte error
NOR Erase Error	0x05	0x02	flash offset(0~~MAX_FLASH_SIZE)				flash erase error
NOR Error	0x05	0x**					Other Error
DRIVE Error	0x06	0x01	Error Code				Cannot detect optical drive
DRIVE Error	0x06	0x02	Error Code				SATA cable disconnected
DRIVE Error	0x06	0x**					Other Error
Fan error	0x07	0x01	0x01	0x00	0x00	0x00	Temperature is too high
Fan error	0x07	0x01	0x02	0x00	0x00	0x00	Can not change fan state
Ethernet Error	0x08	0x**					
MEDIA - OPTICAL DISC	0x09	0x01	Read Error LBA				Disc read error
MEDIA - OPTICAL DISC	0x09	0x02	Cmd	Error Sense Key			Other commands read error
USB media read error	0x0A	0x01	0x1	0x1	0x00	0x00	ErrorInfo_0: LUN number ErrorInfo_1: LBA address
USB media write error	0x0A	0x02	0x1	0x1	0x00	0x00	ErrorInfo_0: LUN number ErrorInfo_1: LBA address
Unsupported USB device	0x0A	0xFF	0x1	0x1	0x1	0x1	ErrorInfo_0: Device Class ErrorInfo_1: bDeviceSubClass ErrorInfo_2: bDeviceProtocol ErrorInfo_3: bNumConfigurations
USB error	0x0A	0x**					Other Error

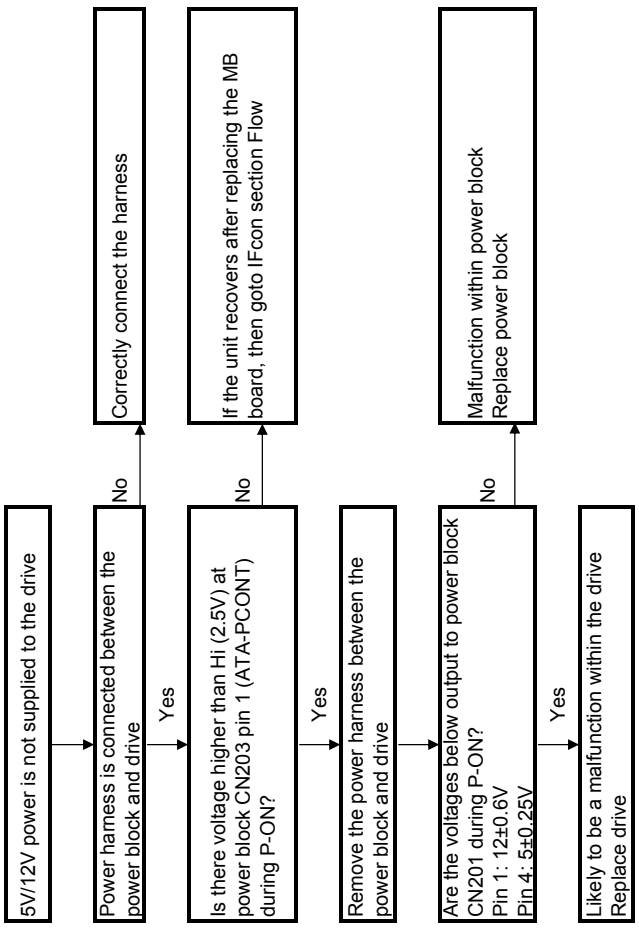
ver 0.10	2009.05.19	Manaka	First release
ver 0.20	2009.05.25	Manaka	Modify system information
ver 0.30	2009.08.06	Manaka	Add Caution: Factory Initialize
ver 0.40	2009.08.07	Manaka	Add Caution: HDMI connect
ver 0.50	2009.11.13	Manaka	Change Errorlog /Command log output method for USB
ver 0.60	2009.11.16	Manaka	Addition of disclaimer of command log
ver 0.70	2010.01.13	Manaka	Add Caution : Factory Initialize

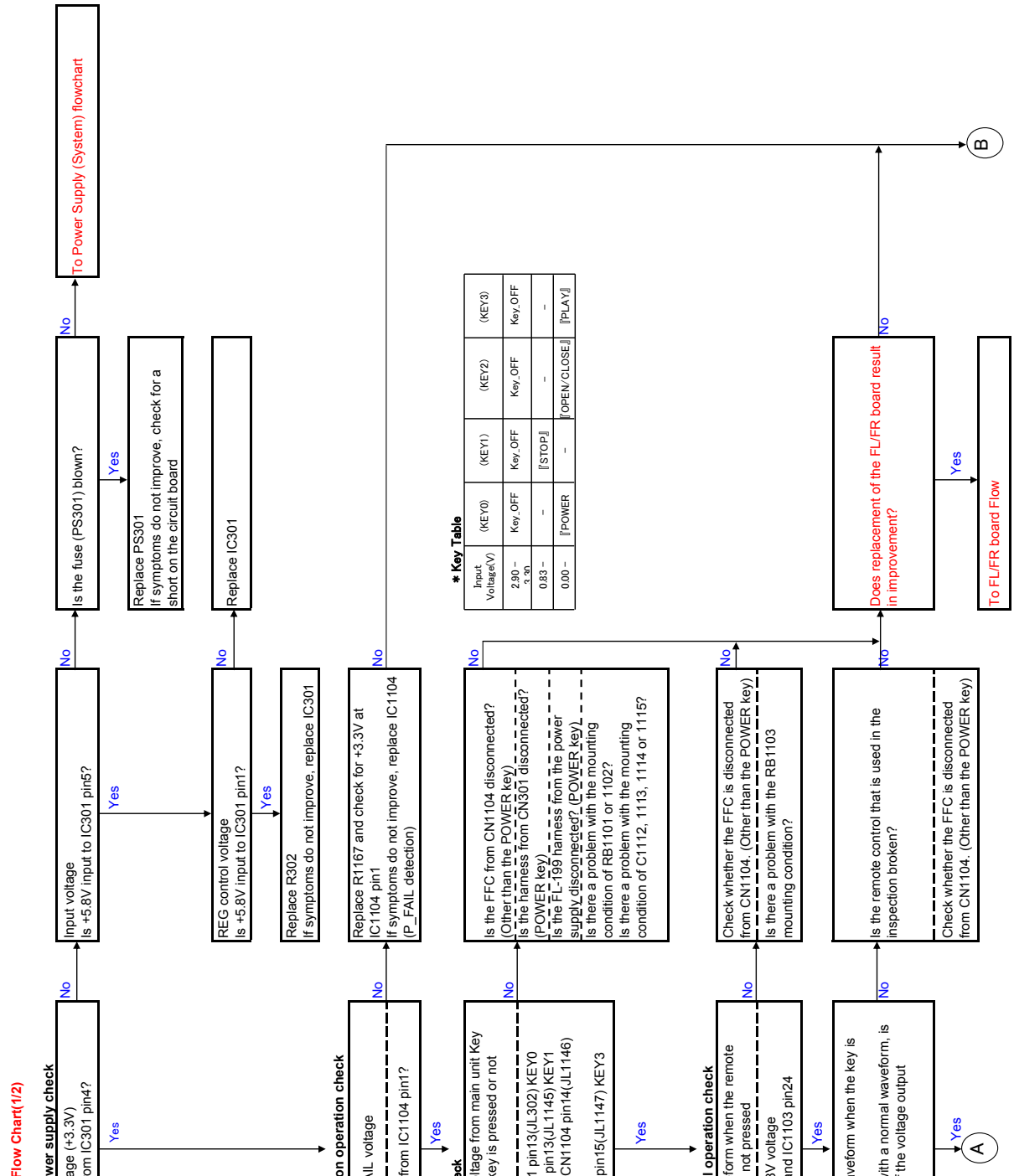
SECTION 9
TROUBLESHOOTING


Main Flow
Start (and return from each flow)
Yes
Approximately 10 seconds after the AC is applied, the WAIT display flashes several times on FLD and the power is turned OFF automatically.
No
Are the power supply voltages on the MB board normal?
No
To Power Supply (System) Flow
Yes
Is the main clock (X402) oscillating properly at 27MHz?
No
Check the parts and mounting around X402.
Yes
Has system reset (CPU_XRST) been cancelled?
* Measurement point JL936
No
To IFcon section Flow
Yes
Replace the MB board.
Yes
WELCOME display appears on FLD after Power ON by power switch on front or remote control.
No
To FL/FR board Flow
Yes
OPEN display appears on FLD after pressing OPEN/CLOSE button
Yes
Is XMB or the SETUP screen displayed on the video output screen?
No
To Video Section Flow
No
Are the power supply voltages (12V and 5V) to the Drive normal?
No
To Drive Power Flow
Yes
Do the up, down, left and right arrow keys of the remote control permit operations on the XMB?
No
To FL/FR board Flow
Yes
When you replace the SATA cable, is the symptom improved?
Yes
Replace SATA cable
No
Are BD, DVD or othere discs that are loaded on the drive recognized correctly?
No
To Drive Flow
Yes
When you replace the drive, is the symptom improved?
Yes
To Drive Flow
No
Is the sound reproduced properly when a BD, DVD or other disc is played?
No
To Audio section Flow
Yes
Replace MB board
Is the picture reproduced properly when a BD, DVD or other disc is played?
No
To Video section Flow
Yes
END

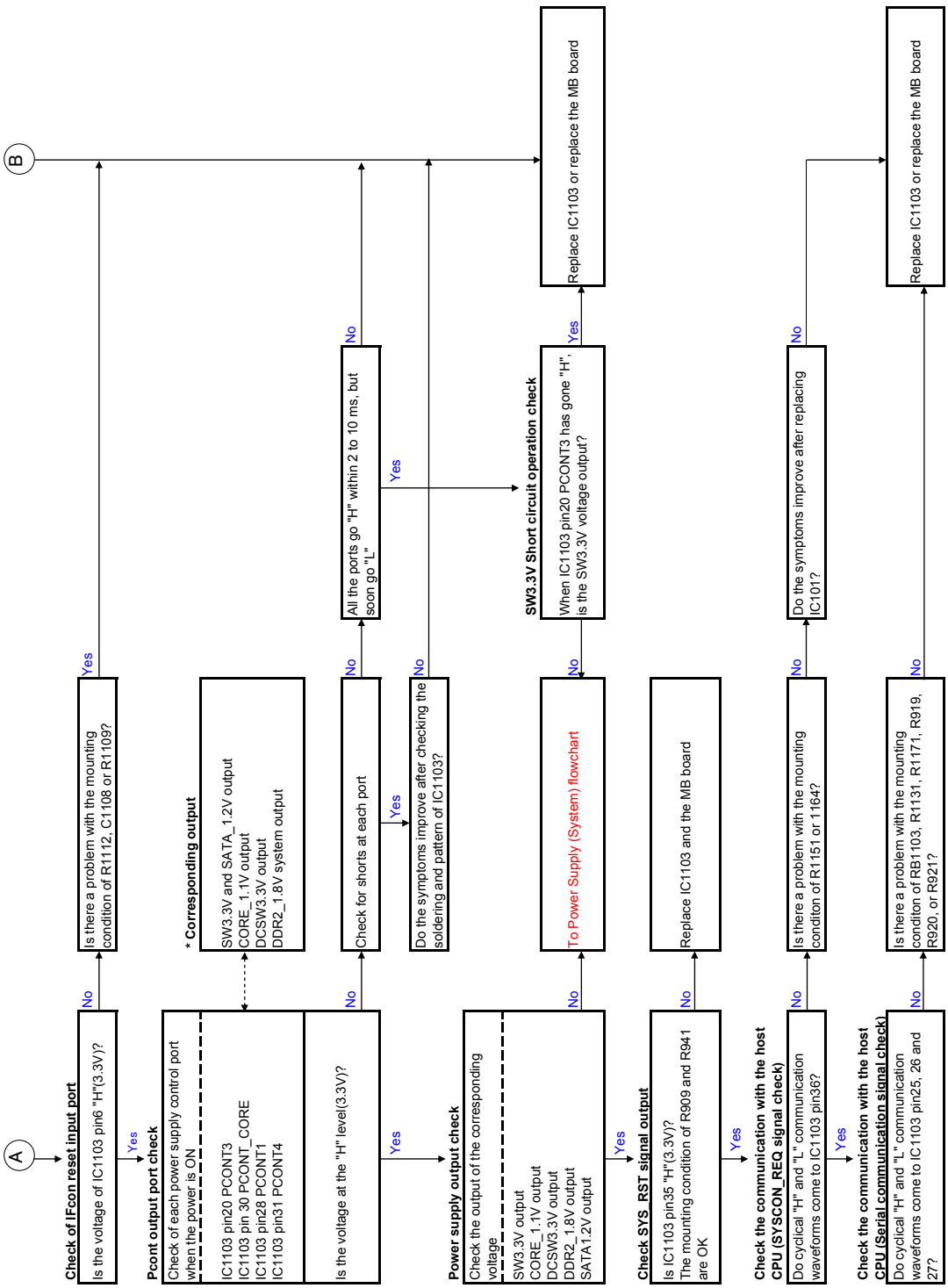

Power (System) Flow
AC IN
All flexible harnesses are connected
No
Correctly connect flexible harnesses
Yes
Check the output voltages from the power supply block.
Are the following voltages OK?
CN301 pin 3,4(JL309,308):+12V(UNSW12V)
CN301 pin 7,8,9,10(JL307,306,305):+5.8V(UNSW5.8V)
CN801 pin 1(JL821):+6V(UNSW6VA)
CN801 pin 3(JL819):-9V(UNSW-9VA)
CN801 pin 5(JL817):+12V(UNSW12VA)
No
Replace the power supply block
Yes
Check the fuses
Have any of the below fuses blown?
MB board: PS301, PS302, PS801, PS802, PS803
FR board: PS701
No
Replace blown fuses
Replace the MB board if there is no improvement
Yes
Check the following power control signals while the power is ON
Are they H level (3.3V)?
PCONT1: MB board R301
PCONT3: MB board R303
PCONT4: MB board R362
PCONT CORE: MB board R368
ATA_PCONT: MB board CN301 pin 1(JL310)
No
To IFcon section Flow
Yes
Check the voltages based on the schematic diagram
Are they output correctly?
No
Voltage lines that are not output are shorted to GND
Yes
Failure of power supply IC -> Replace the IC
Replace the MB board if there is no improvement
Yes
Power supply is OK
No
Replace the MB board when the parts on that voltage line can not be identified as shorted

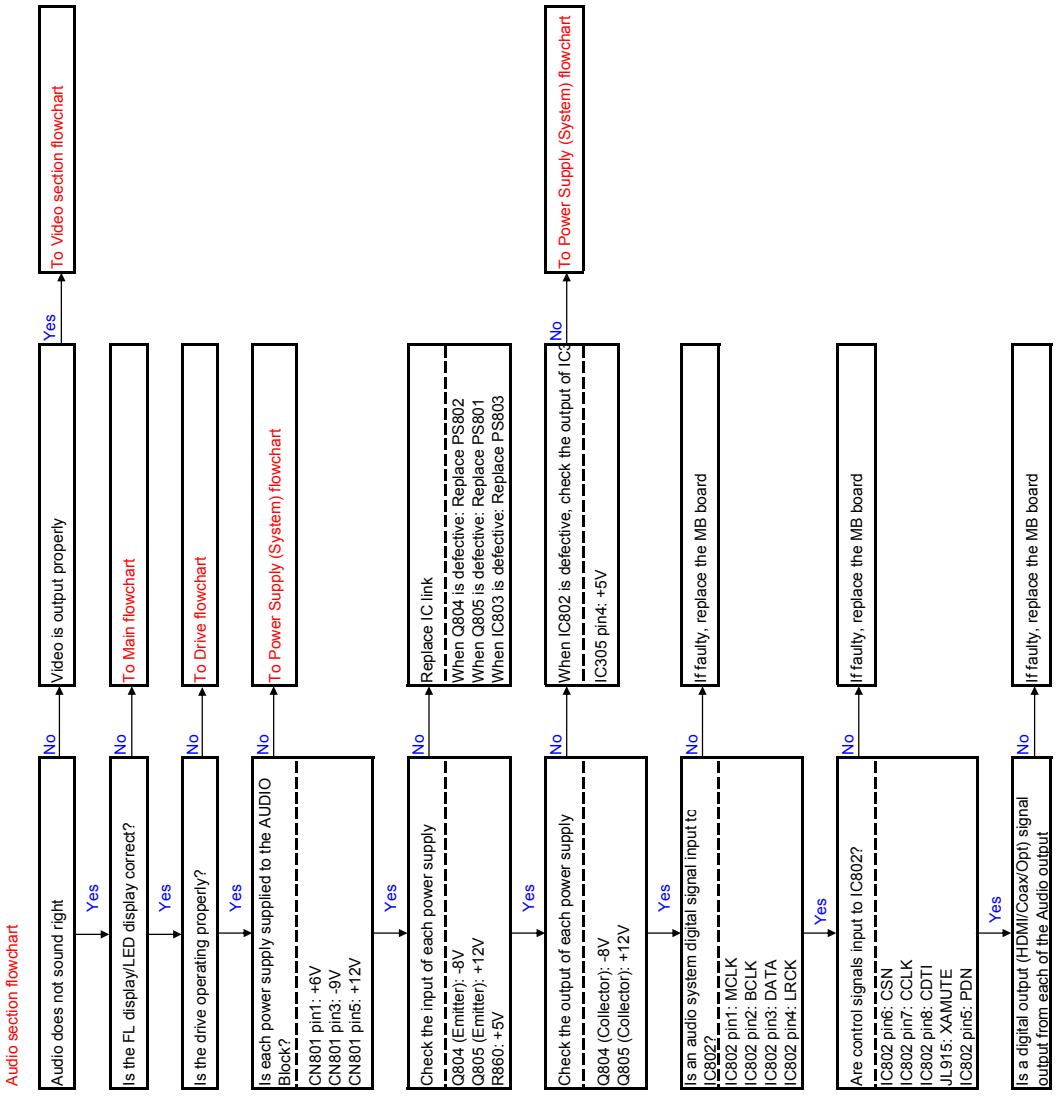
Drive Power Flow

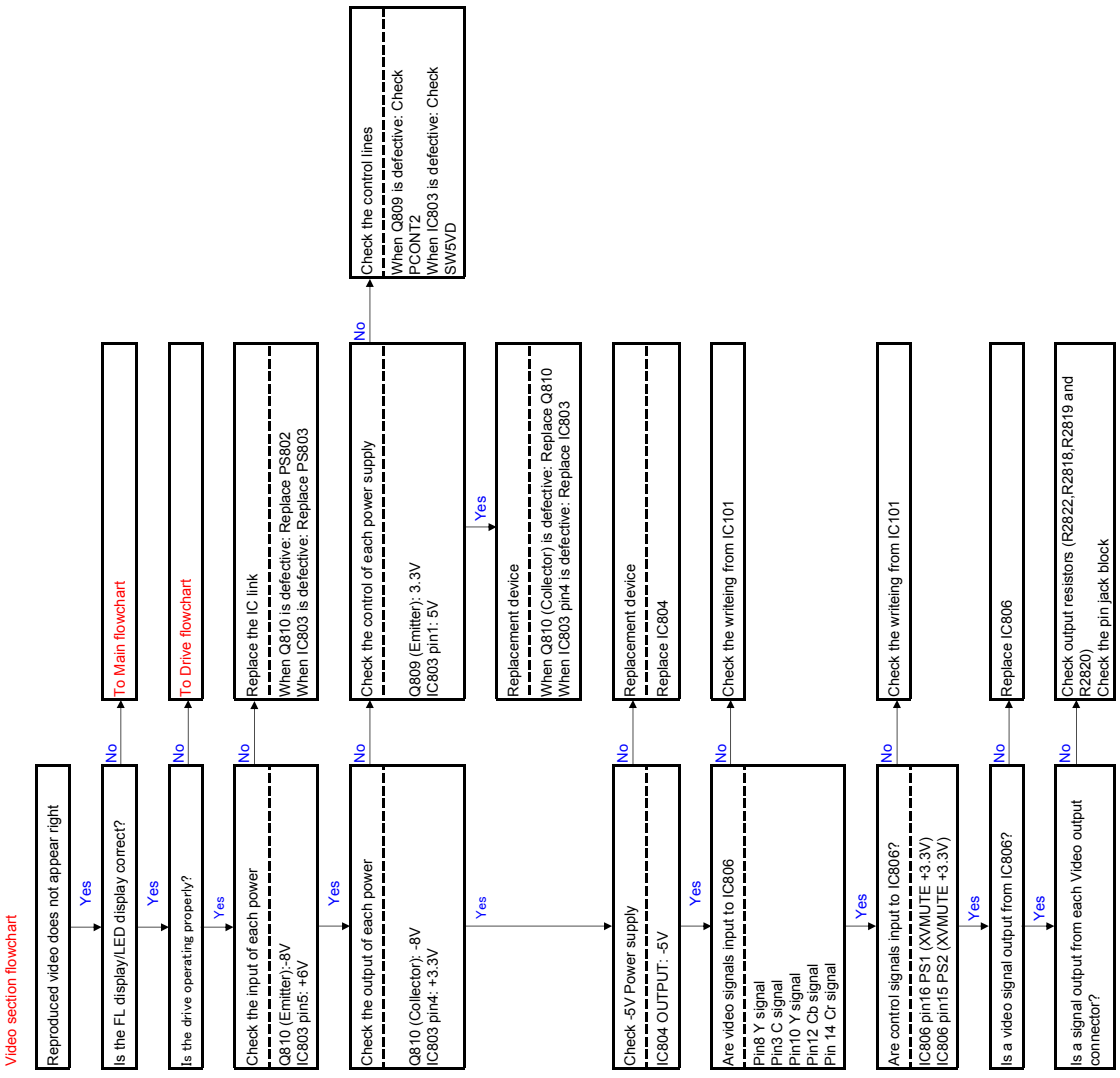



IFcon Section Flow Chart(1/2)
IFcon block power supply check
UNSW3.3V voltage (+3.3V)
Is 3.3V output from IC301 pin4?
No
Yes
Input voltage
Is +5.8V input to IC301 pin5?
No
Yes
Is the fuse (PS301) blown?
No
Yes
To Power Supply (System) flowchart
Replace PS301
If symptoms do not improve, check for a short on the circuit board
REG control voltage
Is +5.8V input to IC301 pin1?
No
Yes
Replace IC301
Replace R302
If symptoms do not improve, replace IC301
P_FAIL detection operation check
Check the P_FAIL voltage
Is +3.3V output from IC1104 pin1?
No
Yes
Replace R1167 and check for +3.3V at IC1104 pin1
If symptoms do not improve, replace IC1104 (P_FAIL detection)
No
* Key Table
Input Voltage(V) | (KEY0) | (KEY1) | (KEY2) | (KEY3)
2.90 – 3.30 | Key_OFF | Key_OFF | Key_OFF | Key_OFF
0.83 – | – | ‘STOP’ | – | –
0.00 – | ‘POWER’ | – | ‘OPEN/CLOSE’ | ‘PLAY’
Main unit key check
Check of key voltage from main unit Key Table (*) when key is pressed or not pressed
POWER: CN301 pin13(JL302) KEY0
STOP: CN1104 pin13(JL1145) KEY1
OPEN/CLOSE: CN1104 pin14(JL1146) KEY2
PLAY: CN1104 pin15(JL1147) KEY3
No
Yes
Is the FFC from CN1104 disconnected? (Other than the POWER key)
Is the harness from CN301 disconnected? (POWER key)
Is the FL-199 harness from the power supply disconnected? (POWER key)
Is there a problem with the mounting condition of RB1101 or 1102?
Is there a problem with the mounting condition of C1112, 1113, 1114 or 1115?
No
Remote control operation check
Check the waveform when the remote control button is not pressed
Check of the 3.3V voltage CN1104 pin17 and IC1103 pin24
No
Yes
Check whether the FFC is disconnected from CN1104. (Other than the POWER key)
Is there a problem with the RB1103 mounting condition?
No
Check of the waveform when the key is pressed
In comparison with a normal waveform, is the waveform of the voltage output correctly?
No
Yes
Is the remote control that is used in the inspection broken?
No
Check whether the FFC is disconnected from CN1104. (Other than the POWER key)
Does replacement of the FL/FR board result in improvement?
No
Yes
To FL/FR board Flow
A
B

IFcon Section Flow Chart(2/2)




Audio section flowchart
Audio does not sound right
No
Video is output properly
Yes
To Video section flowchart
Yes
Is the FL display/LED display correct?
No
To Main flowchart
Yes
Is the drive operating properly?
No
To Drive flowchart
Yes
Is each power supply supplied to the AUDIO Block?
CN801 pin1: +6V
CN801 pin3: -9V
CN801 pin5: +12V
No
To Power Supply (System) flowchart
Yes
Check the input of each power supply
Q804 (Emitter): -8V
Q805 (Emitter): +12V
R860: +5V
No
Replace IC link
When Q804 is defective: Replace PS802
When Q805 is defective: Replace PS801
When IC803 is defective: Replace PS803
Yes
Check the output of each power supply
Q804 (Collector): -8V
Q805 (Collector): +12V
No
When IC802 is defective, check the output of IC
IC305 pin4: +5V
No
To Power Supply (System) flowchart
Yes
Is an audio system digital signal input tc IC8022
IC802 pin1: MCLK
IC802 pin2: BCLK
IC802 pin3: DATA
IC802 pin4: LRCK
No
If faulty, replace the MB board
Yes
Are control signals input to IC802?
IC802 pin6: CSN
IC802 pin7: CCLK
IC802 pin8: CDTI
JL915: XAMUTE
IC802 pin5: PDN
No
If faulty, replace the MB board
Yes
Is a digital output (HDMI/Coax/Opt) signal output from each of the Audio output
No
If faulty, replace the MB board


Video section flowchart
Reproduced video does not appear right
Yes
Is the FL display/LED display correct?
No
To Main flowchart
Yes
Is the drive operating properly?
No
To Drive flowchart
Yes
Check the input of each power
Q810 (Emitter): -8V
IC803 pin5: +6V
No
Replace the IC link
When Q810 is defective: Replace PS802
When IC803 is defective: Replace PS803
Yes
Check the output of each power
Q810 (Collector): -8V
IC803 pin4: +3.3V
No
Check the control of each power supply
Q809 (Emitter): 3.3V
IC803 pin1: 5V
No
Check the control lines
When Q809 is defective: Check PCONT2
When IC803 is defective: Check SW5VD
Yes
Replacement device
When Q810 (Collector) is defective: Replace Q810
When IC803 pin4 is defective: Replace IC803
Yes
Check -5V Power supply
IC804 OUTPUT: -5V
No
Replacement device
Replace IC804
Yes
Are video signals input to IC806
Pin8 Y signal
Pin3 C signal
Pin10 Y signal
Pin12 Cb signal
Pin 14 Cr signal
No
Check the writeing from IC101
Yes
Are control signals input to IC806?
IC806 pin16 PS1 (XVMUTE +3.3V)
IC806 pin15 PS2 (XVMUTE +3.3V)
No
Check the writeing from IC101
Yes
Is a video signal output from IC806?
No
Replace IC806
Yes
Is a signal output from each Video output connector?
No
Check output resistors (R2822,R2818,R2819 and R2820)
Check the pin jack block

FL/FR Board flowchart (1/3)

Power button on the main unit does not work

Does symptom improve when replacing the FL board?
- No → To IFcon section flowchart
- Yes ↓

The potential of pin 1 of CN331 does not change from 3.3V to near 0V when pressing the power button
- No → Check pattern and S331 might be broken
- Yes ↓

Disconnected harness or replace FL board.

Key operations cannot be made on the main

Does symptom improve when replacing the FR board?
- No → To IFcon section flowchart
- Yes ↓

Which row of keys do not operate?

STOP buttons -> To Key1 does not operate

OPEN/CLOSE button -> To Key2 does not operate

PLAY button -> To Key3 does not operate

Reference: Relationship of Buttons and Voltages

Input Voltage(V)	{KEY0}	{KEY1}	{KEY2}	{KEY3}
2.90–3.30	Key_OFF	Key_OFF	Key_OFF	Key_OFF
0.83–1.23	–	『STOP』	–	–
0.00–0.40	『POWER	–	『OPEN/CLOS	『PLAY』

Key1 does not operate

Is there voltage of about 3.3V at pin 13 of CN701 without pressing the keys?
- No → To IFcon section flowchart
- Yes ↓

Check the resistance of resistors of Key1 line. Also check the surrounding pattern.

Key2 does not operate

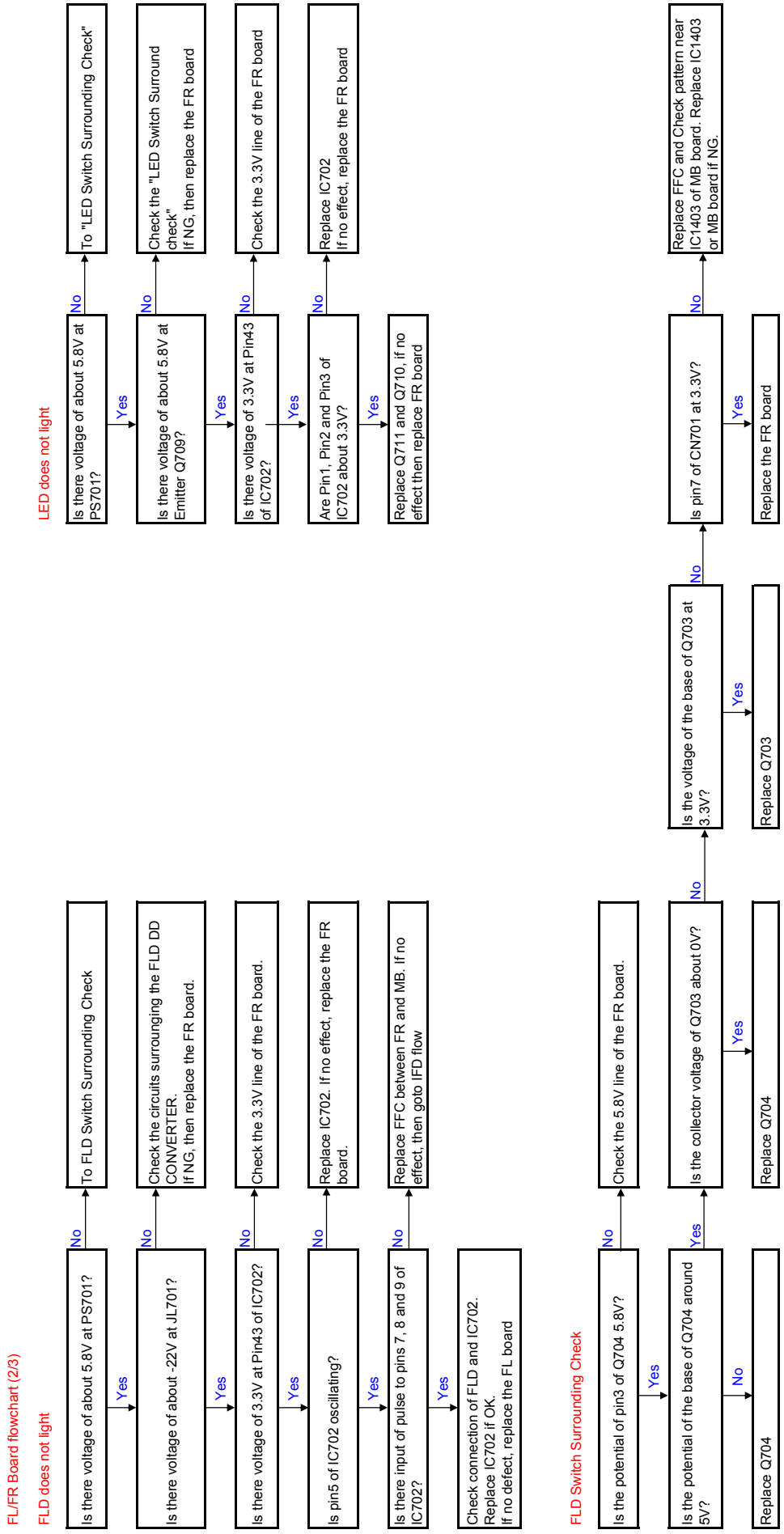
Is there voltage of about 3.3V at pin 14 of CN701 without pressing the keys?
- No → To IFcon section flowchart
- Yes ↓

Check the resistance of resistors of Key2 line. Also check the surrounding pattern.

Key3 does not operate

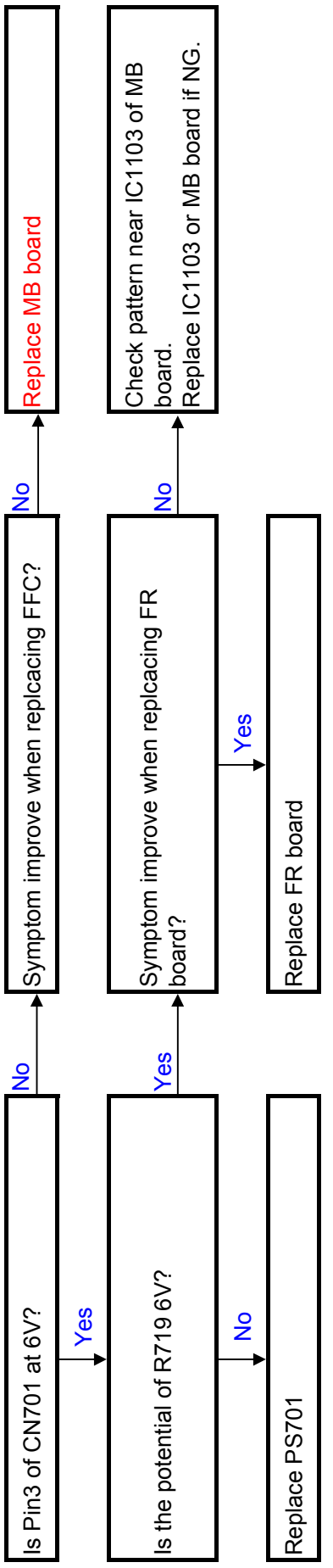
Is there voltage of about 3.3V at pin15 of CN701 without pressing the keys?
- No → To IFcon section flowchart
- Yes ↓

Check the resistance of resistors of Key3 line. Also check the surrounding pattern.

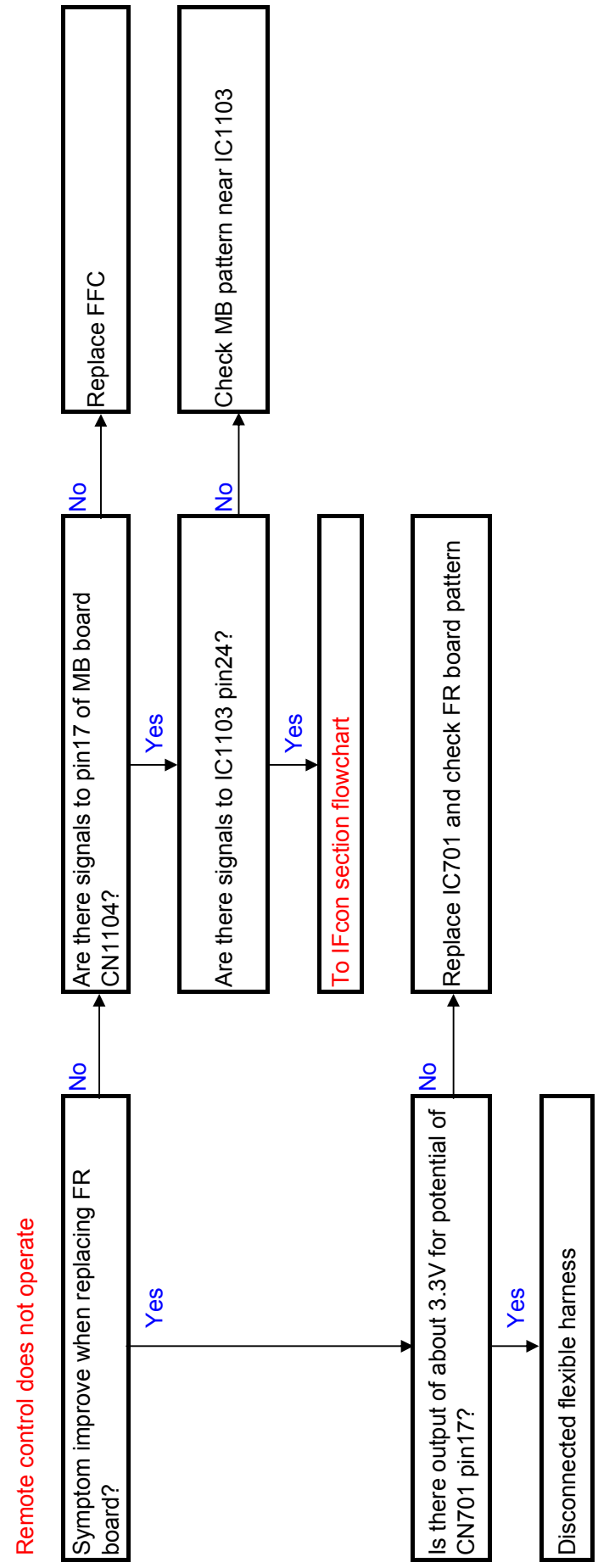

FL/FR Board flowchart (2/3)
FLD does not light
Is there voltage of about 5.8V at PS701?
No
To FLD Switch Surrounding Check
Yes
Is there voltage of about -22V at JL701?
No
Check the circuits surrounging the FLD DD CONVERTER.
If NG, then replace the FR board.
Yes
Is there voltage of 3.3V at Pin43 of IC702?
No
Check the 3.3V line of the FR board.
Yes
Is pin5 of IC702 oscillating?
No
Replace IC702. If no effect, replace the FR board.
Yes
Is there input of pulse to pins 7, 8 and 9 of IC702?
No
Replace FFC between FR and MB. If no effect, then goto IFD flow
Yes
Check connection of FLD and IC702.
Replace IC702 if OK.
If no defect, replace the FL board
LED does not light
Is there voltage of about 5.8V at PS701?
No
To "LED Switch Surrounding Check"
Yes
Is there voltage of about 5.8V at Emitter Q709?
No
Check the "LED Switch Surround check"
If NG, then replace the FR board
Yes
Is there voltage of 3.3V at Pin43 of IC702?
No
Check the 3.3V line of the FR board
Yes
Are Pin1, Pin2 and Pin3 of IC702 about 3.3V?
No
Replace IC702
If no effect, replace the FR board
Yes
Replace Q711 and Q710, if no effect then replace FR board
FLD Switch Surrounding Check
Is the potential of pin3 of Q704 5.8V?
No
Check the 5.8V line of the FR board.
Yes
Is the potential of the base of Q704 around 5V?
Yes
Is the collector voltage of Q703 about 0V?
No
Is the voltage of the base of Q703 at 3.3V?
No
Is pin7 of CN701 at 3.3V?
No
Replace FFC and Check pattern near IC1403 of MB board. Replace IC1403 or MB board if NG.
Yes
Replace the FR board
Yes
Replace Q703
No
Replace Q704
Yes
Replace Q704
No

FL/FR Board flowchart (3/3)

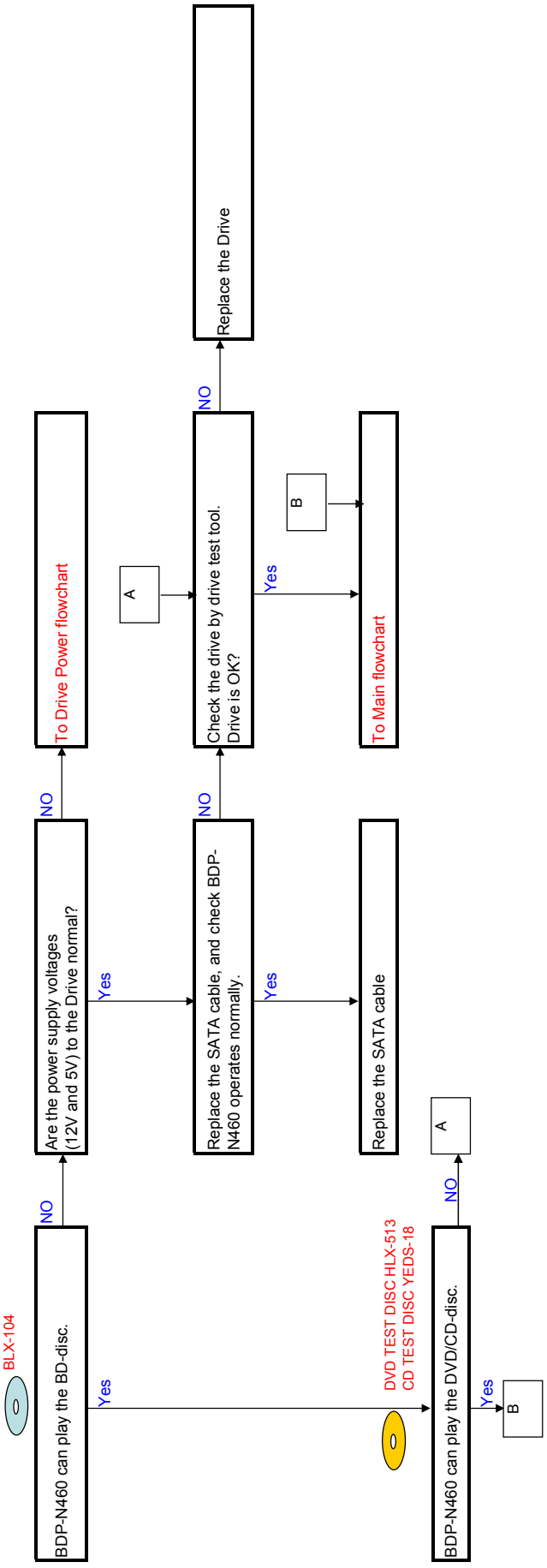
LED Switch Surrounding Check



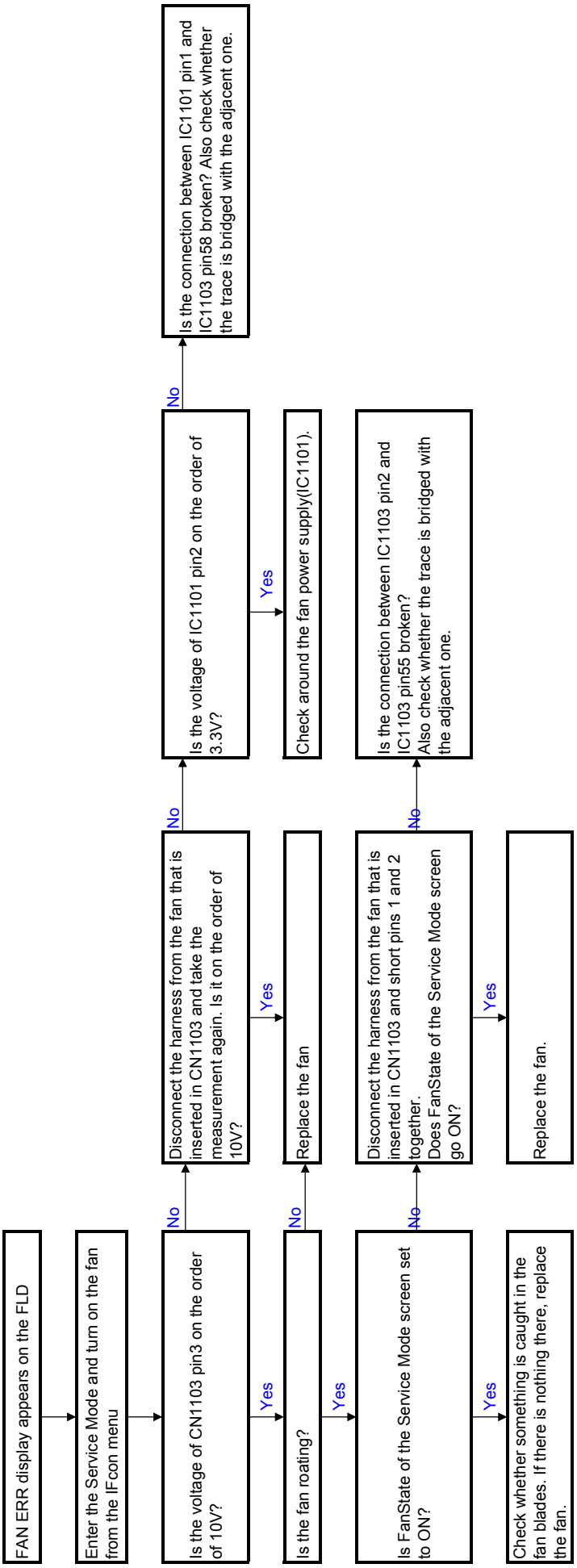
Remote control does not operate



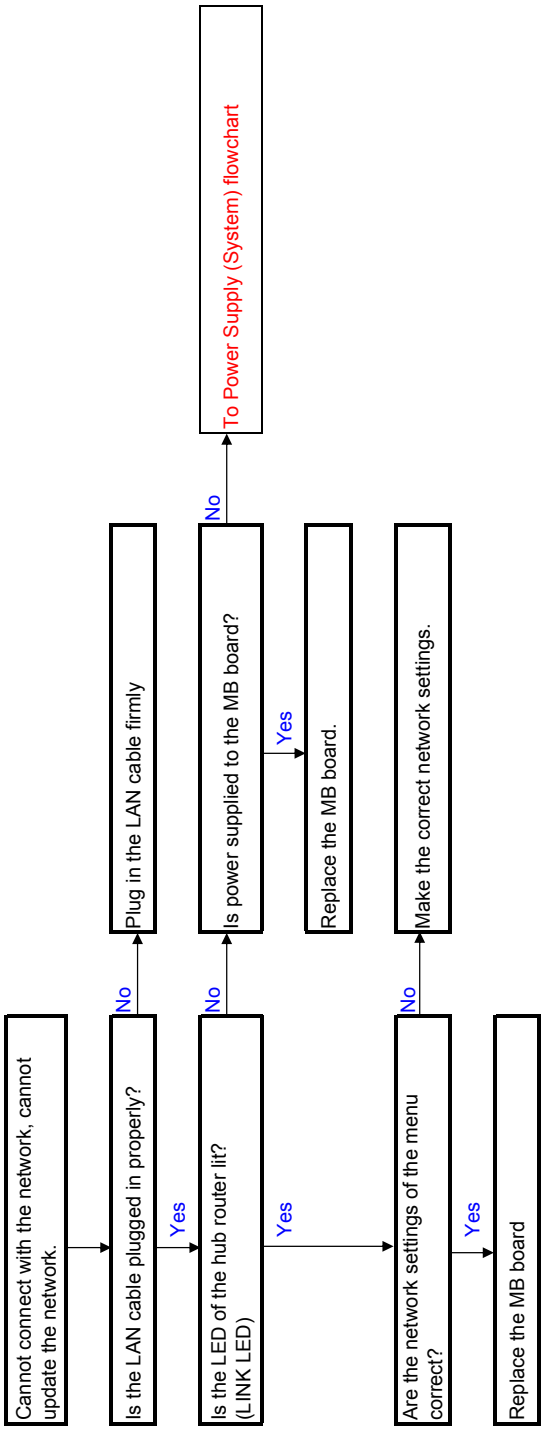
Checking Flow Drive section



Fan flowchart

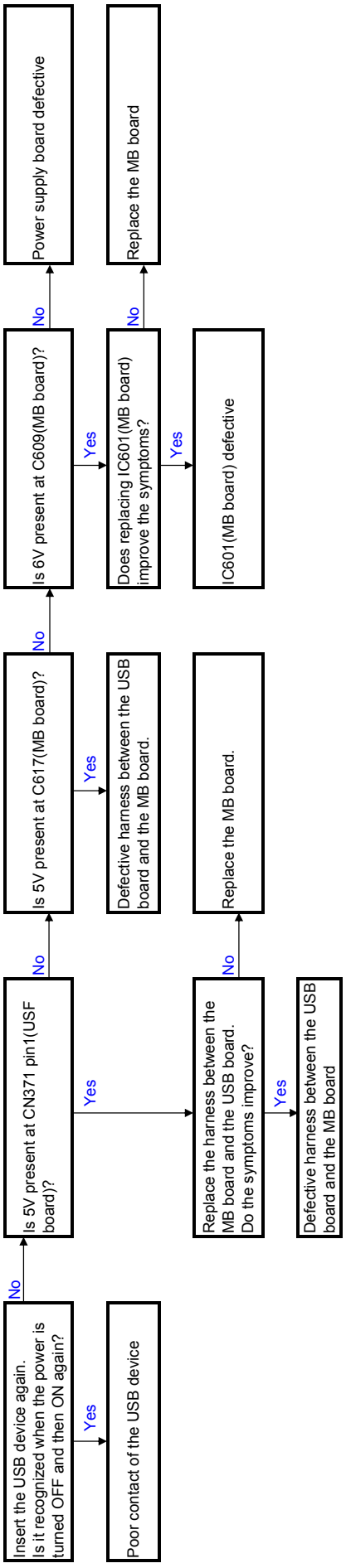


Ethernet flowchart



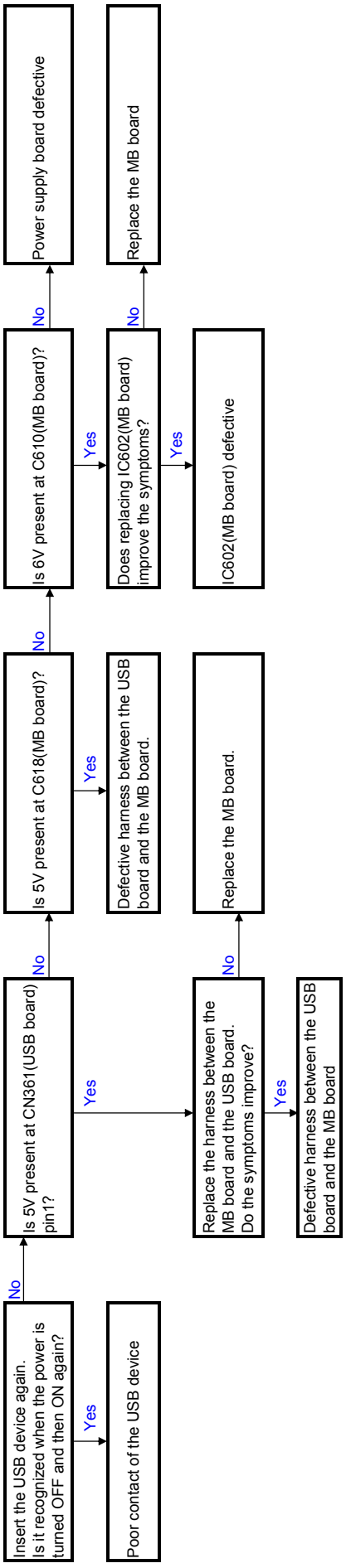
USB Device Flow

USB device is not recognized



USB Device Flow

USB device is not recognized



SECTION 10
REPAIR PARTS LIST

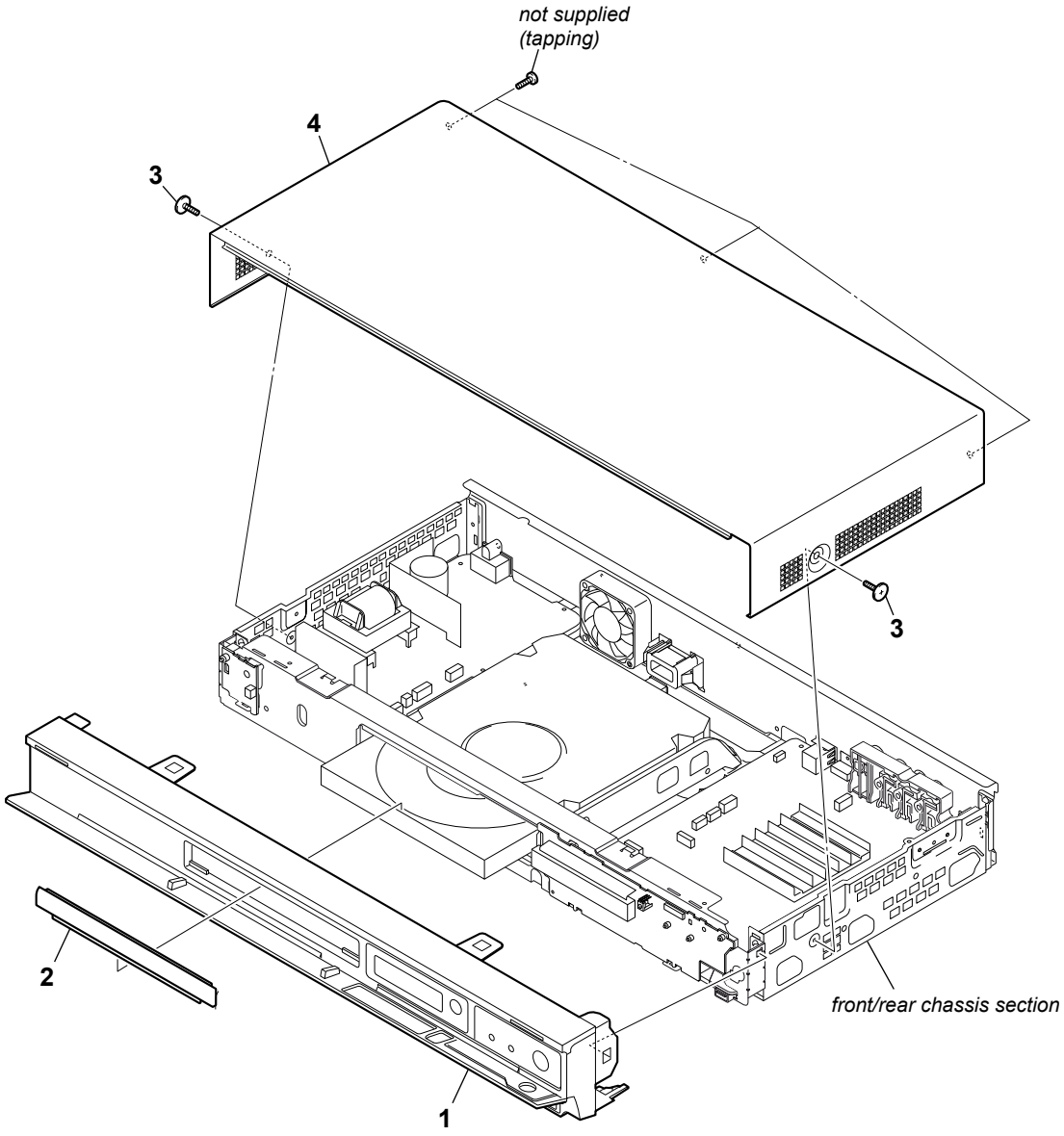
10-1. EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories and packing materials are given in the last of the electrical parts list.

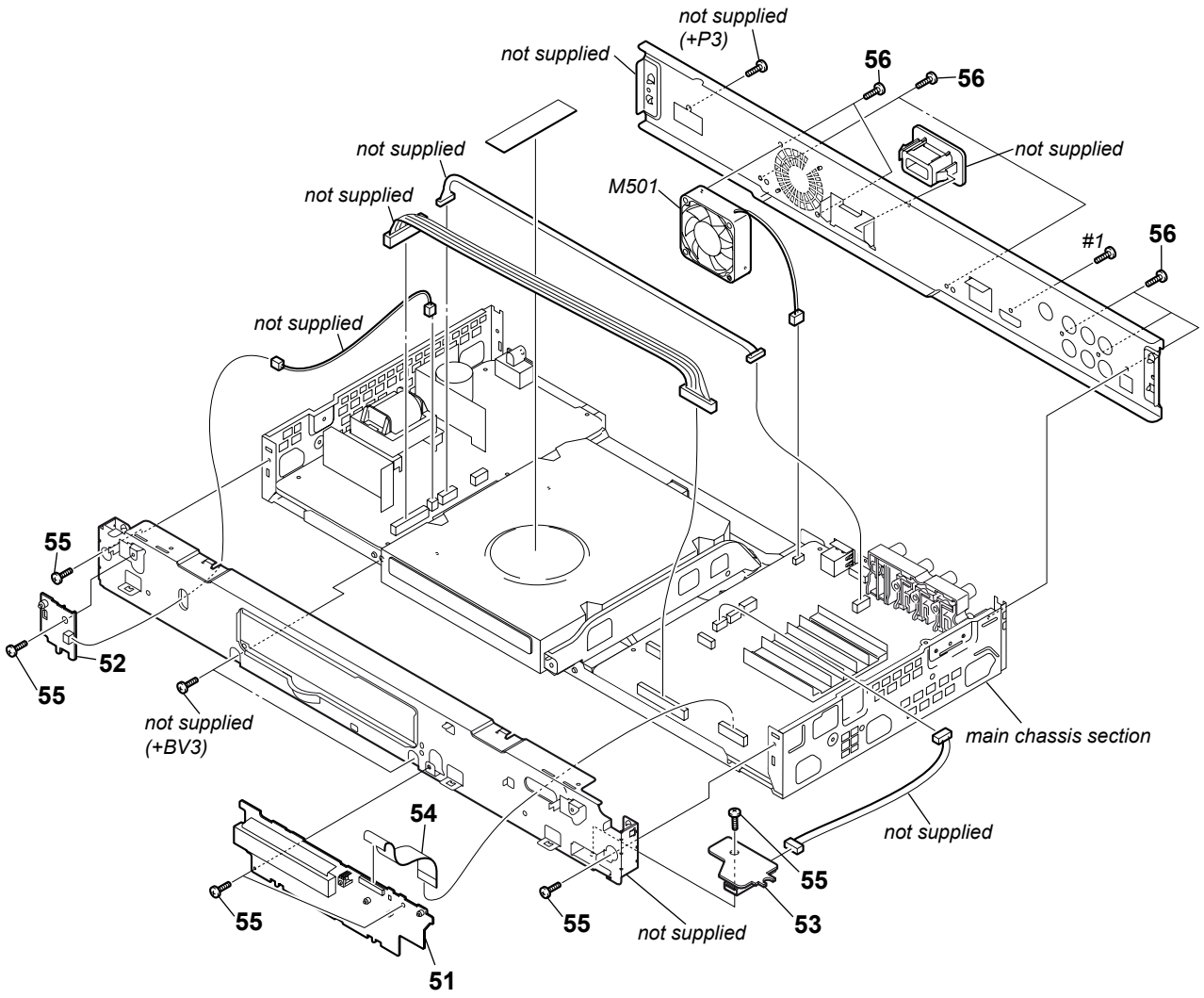
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.
Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
The components identified by mark 🔒 contain confidential information. Strictly follow the instructions whenever the components are repaired and/or replaced.
Les composants identifiés par la marque 🔒 contiennent des informations confidentielles. Suivre scrupuleusement les instructions chaque fois qu'un composant est remplacé et / ou réparé.

10-1-1. CASE SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-2349-006-1	PANEL ASSY, FRONT		3	3-070-883-71	SCREW, TAPPING	
2	A-2188-516-1	COVER ASSY, TRAY		4	A-1733-618-A	CASE BLOCK	

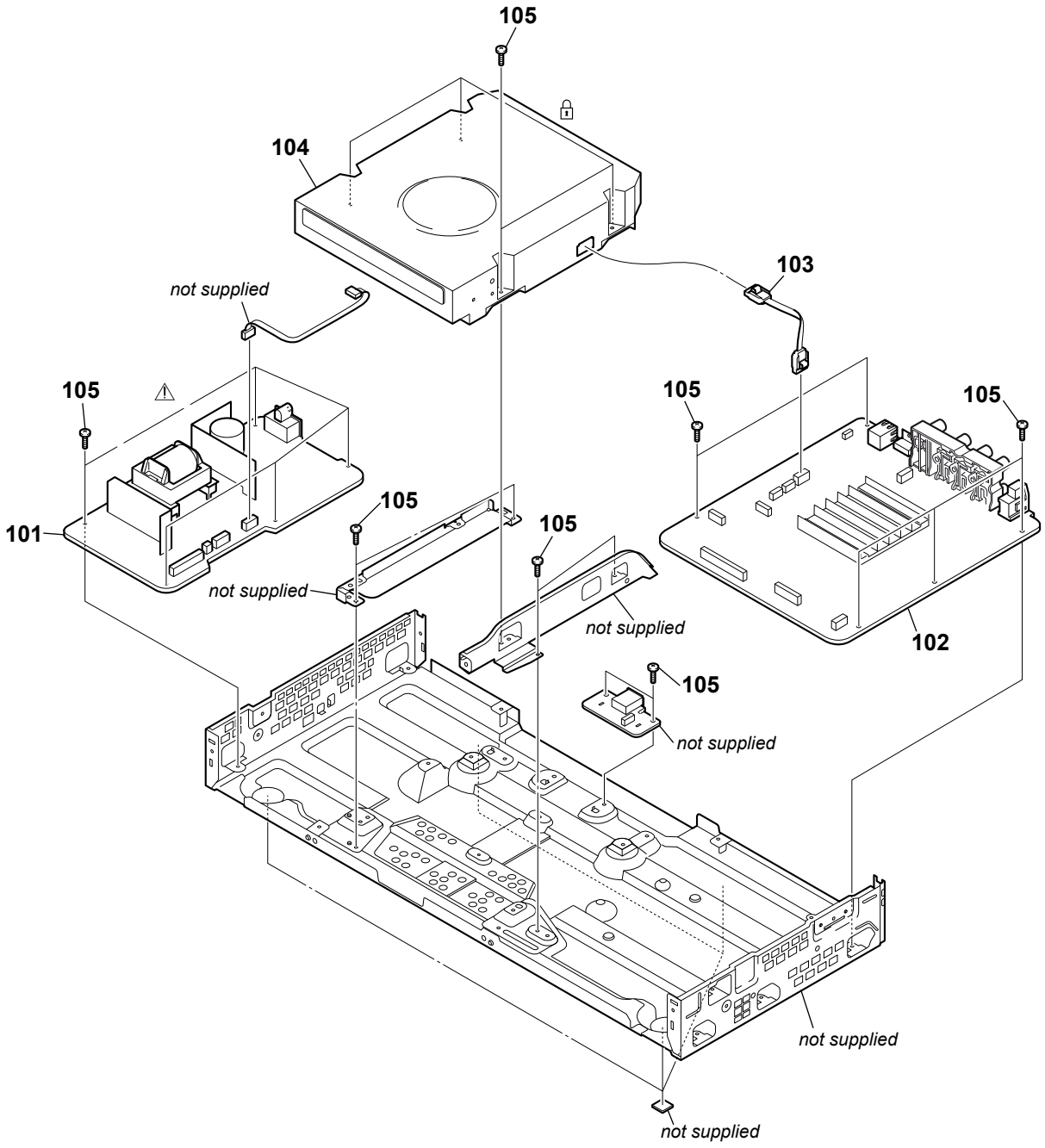
10-1-2. FRONT/REAR CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
51	A-1732-650-A	FR-307BM (U) COMPL	
52	A-1732-652-A	FL-199BM (U) COMPL	
53	A-1732-654-A	USF-002BM (U) COMPL	
54	1-836-996-11	CABLE, FLEXIBLE FLAT (FFM-006)	
55	3-077-331-62	+BV3 (3-CR)	

Ref. No.	Part No.	Description	Remark
56	3-077-331-31	+BV3 (3-CR)	
M501	1-787-760-31	FAN, D.C.	
#1	7-682-144-01	SCREW +P 3X3	

10-1-3. MAIN CHASSIS SECTION

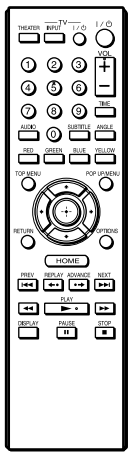


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

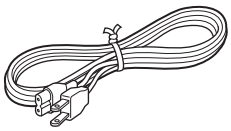
Ref. No.	Part No.	Description	Remark
⚠101	1-474-088-11	REGULATOR, SWITCHING (ZSSR774MA)	
🔒102	A-1733-750-A	MB-130 COMPLETE	
🔒103	1-966-110-11	HARNESS (SAT-001)	
🔒104	A-1732-209-A	BD DRIVE	
105	3-077-331-11	+BV3 (3-CR)	

10-1-4. ACCESSORIES

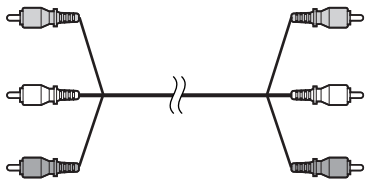
151
Remote Commander
(RMT-B104A)
(N460)



152
Power Cord



153
Audio/Video Cable (Phono Plug x3)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
151	1-487-218-11	REMOTE COMMANDER (RMT-B104A)	
⚠152	1-823-701-11	CORD, POWER	
153	1-751-271-71	CORD, CONNECTION (AV)	
*	4-151-461-11	MANUAL, INSTRUCTION	

10-2. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

The components identified by mark 🔒 contain confidential information.
Strictly follow the instructions whenever the components are repaired and/or replaced.

Les composants identifiés par la marque 🔒 contiennent des informations confidentielles.
Suivre scrupuleusement les instructions chaque fois qu'un composant est remplacé et / ou réparé.

Ref. No.	Part No.	Description			Remark
	A-1732-652-A	FL-199 COMPL PWB			
		**********			
	S331	1-771-874-11	SWITCH, TACTILE		
	A-1732-650-A	FR-307 BM(U) COMPL			
		**********			
		< CAPACITOR >			
C701	1-115-339-91	CERAMIC CHIP	0.1UF	10.00%	50V
C703	1-117-681-21	ELECT CHIP	100UF	20.00%	16V
C704	1-117-681-21	ELECT CHIP	100UF	20.00%	16V
C705	1-114-913-91	FILM	0.0068UF	5%	250V
C707	1-107-726-91	CERAMIC CHIP	0.01UF	10.00%	16V
C711	1-115-339-91	CERAMIC CHIP	0.1UF	10.00%	50V
C712	1-114-601-21	ELECT CHIP	22UF	20%	50V
C713	1-115-339-91	CERAMIC CHIP	0.1UF	10.00%	50V
C714	1-107-726-91	CERAMIC CHIP	0.01UF	10.00%	16V
C715	1-107-726-91	CERAMIC CHIP	0.01UF	10.00%	16V
C716	1-115-339-91	CERAMIC CHIP	0.1UF	10.00%	50V
C717	1-164-217-91	CERAMIC CHIP	150PF	5.00%	50V
C718	1-164-217-91	CERAMIC CHIP	150PF	5.00%	50V
		<CONNECTOR>			
CN701	1-793-806-51	CONNECTOR, FFC/FPC 17P			
		<DIODE>			
* D701	6-502-466-01	DI CL-270S-WS-SD-TS			
D703	8-719-988-61	DIODE 1SS355TE-17			
D704	8-719-988-61	DIODE 1SS355TE-17			
D705	8-719-988-61	DIODE 1SS355TE-17			
D706	8-719-988-61	DIODE 1SS355TE-17			
D707	6-500-021-01	DIODE MM3Z4V7ST1			
D708	6-502-395-01	DI SL-194S-WS-SD-T			
		<IC>			
IC701	6-600-665-01	IC GP1UE27XK0VF			
IC702	6-701-729-01	IC PT6315			

Ref. No.	Part No.	Description			Remark
		<COIL>			
L701	1-411-919-11	INDUCTOR	100UH		
		< FLUORESCENT INDICATOR TUBE >			
ND701	1-483-022-11	INDICATOR TUBE, FLUORESCENT			
		< IC LINK >			
⚠PS701	1-576-122-21	IC LINK	0.4A	72V	
		<TRANSISTOR>			
Q703	8-729-024-89	TRANSISTOR MUN2213T1			
Q704	8-729-904-92	TRANSISTOR 2SB1197K-T-146-R			
Q706	8-729-901-92	TRANSISTOR 2SC2411K-T-146-CR			
Q707	8-729-901-92	TRANSISTOR 2SC2411K-T-146-CR			
Q709	8-729-920-86	TRANSISTOR 2SD1664-T100-QR			
Q710	8-729-038-36	TRANSISTOR RT1N140M-TP-1			
Q711	8-729-038-36	TRANSISTOR RT1N140M-TP-1			
Q712	8-729-038-36	TRANSISTOR RT1N140M-TP-1			
		<RESISTOR>			
R701	1-216-833-91	METAL CHIP	10K	5%	1/10W
R705	1-216-821-91	METAL CHIP	1K	5%	1/10W
R707	1-216-828-91	METAL CHIP	3.9K	5%	1/10W
R708	1-216-864-91	SHORT CHIP	0		
R710	1-216-864-91	SHORT CHIP	0		
R712	1-216-825-91	METAL CHIP	2.2K	5%	1/10W
R713	1-216-825-91	METAL CHIP	2.2K	5%	1/10W
R714	1-216-838-91	METAL CHIP	27K	5%	1/10W
R715	1-216-845-91	METAL CHIP	100K	5%	1/10W
R718	1-216-829-91	METAL CHIP	4.7K	5%	1/10W
R719	1-216-813-91	METAL CHIP	220	5%	1/10W
R720	1-216-813-91	METAL CHIP	220	5%	1/10W
R721	1-216-812-91	METAL CHIP	180	5%	1/10W
R724	1-216-864-91	SHORT CHIP	0		
		<SWITCH>			
S701	1-771-874-11	SWITCH, TACTILE			
S702	1-771-874-11	SWITCH, TACTILE			
S703	1-771-874-11	SWITCH, TACTILE			

Ref. No.	Part No.	Description			Remark
		<TRANSFORMER>			
* T701	1-445-447-11	TRANSFORMER, DC-DC CONVERTER			
		**********			
🔒	A-1733-750-A	MB-130 COMPLETE			
		**********			
		<CAPACITOR>			
C103	1-100-905-11	CERAMIC CHIP	0.001UF	10%	50V
C104	1-100-905-11	CERAMIC CHIP	0.001UF	10%	50V
C105	1-100-905-11	CERAMIC CHIP	0.001UF	10%	50V
C106	1-100-905-11	CERAMIC CHIP	0.001UF	10%	50V
C107	1-100-905-11	CERAMIC CHIP	0.001UF	10%	50V
C108	1-100-905-11	CERAMIC CHIP	0.001UF	10%	50V
C109	1-100-905-11	CERAMIC CHIP	0.001UF	10%	50V
C110	1-100-905-11	CERAMIC CHIP	0.001UF	10%	50V
C111	1-100-905-11	CERAMIC CHIP	0.001UF	10%	50V
C112	1-100-905-11	CERAMIC CHIP	0.001UF	10%	50V
C113	1-100-905-11	CERAMIC CHIP	0.001UF	10%	50V
C117	1-100-905-11	CERAMIC CHIP	0.001UF	10%	50V
C119	1-100-905-11	CERAMIC CHIP	0.001UF	10%	50V
C121	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C122	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C123	1-100-909-11	CERAMIC CHIP	10UF	10%	6.3V
C124	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C125	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C126	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C127	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C128	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C129	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C130	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C131	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C132	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C133	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C134	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C135	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C136	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C137	1-100-909-11	CERAMIC CHIP	10UF	10%	6.3V
C138	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C139	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C140	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C141	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C142	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C143	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C144	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C145	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C146	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C147	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C149	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C150	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C151	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C152	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C153	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C154	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C155	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C156	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C157	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C158	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C159	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C160	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V

Ref. No.	Part No.	Description			Remark
C161	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C162	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C163	1-112-717-91	CERAMIC CHIP	1UF	10%	6.3V
C164	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C165	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C166	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C167	1-112-717-91	CERAMIC CHIP	1UF	10%	6.3V
C168	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C169	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C170	1-112-717-91	CERAMIC CHIP	1UF	10%	6.3V
C172	1-112-717-91	CERAMIC CHIP	1UF	10%	6.3V
C173	1-112-717-91	CERAMIC CHIP	1UF	10%	6.3V
C175	1-112-717-91	CERAMIC CHIP	1UF	10%	6.3V
C176	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C177	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C201	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C202	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C203	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C204	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C205	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C206	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C207	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C208	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C209	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C210	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C211	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C212	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C213	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C214	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C215	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C216	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C218	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C219	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C220	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C221	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C222	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C223	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C224	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C225	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C226	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C227	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C228	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C229	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C230	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C231	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C232	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C233	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C234	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C235	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C236	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C237	1-100-909-11	CERAMIC CHIP	10UF	10%	6.3V
C238	1-100-909-11	CERAMIC CHIP	10UF	10%	6.3V
C239	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V

The components identified by mark 🔒 contain confidential information. Strictly follow the instructions whenever the components are repaired and/or replaced.	Les composants identifiés par la marque 🔒 contiennent des informations confidentielles. Suivre scrupuleusement les instructions chaque fois qu'un composant est remplacé et / ou réparé.

Ref. No.	Part No.	Description			Remark
C240	1-112-717-91	CERAMIC CHIP	1UF	10%	6.3V
C241	1-112-717-91	CERAMIC CHIP	1UF	10%	6.3V
C242	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C243	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C244	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C245	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C246	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C247	1-112-717-91	CERAMIC CHIP	1UF	10%	6.3V
C249	1-112-717-91	CERAMIC CHIP	1UF	10%	6.3V
C250	1-112-717-91	CERAMIC CHIP	1UF	10%	6.3V
C252	1-112-717-91	CERAMIC CHIP	1UF	10%	6.3V
C253	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C254	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C304	1-112-298-91	CERAMIC CHIP	1UF	10%	16V
C305	1-112-300-91	CERAMIC CHIP	4.7UF	10%	10V
C306	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
* C307	1-112-298-91	CERAMIC CHIP	1UF	10%	16V
C308	1-100-909-11	CERAMIC CHIP	10UF	10%	6.3V
C310	1-112-300-91	CERAMIC CHIP	4.7UF	10%	10V
C311	1-100-909-11	CERAMIC CHIP	10UF	10%	6.3V
C313	1-112-300-91	CERAMIC CHIP	4.7UF	10%	10V
C315	1-115-467-91	CERAMIC CHIP	0.22UF	10.00%	10V
C320	1-135-960-91	CERAMIC CHIP	10UF	10%	25V
C321	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C326	1-100-909-11	CERAMIC CHIP	10UF	10%	6.3V
C327	1-100-909-11	CERAMIC CHIP	10UF	10%	6.3V
C328	1-115-467-91	CERAMIC CHIP	0.22UF	10.00%	10V
C329	1-114-214-81	CERAMIC CHIP	470PF	5%	50V
C330	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C331	1-112-776-11	CERAMIC CHIP	0.0047UF	10%	50V
C334	1-100-909-11	CERAMIC CHIP	10UF	10%	6.3V
C335	1-107-819-81	CERAMIC CHIP	0.022UF	10.00%	16V
C336	1-100-159-91	CERAMIC CHIP	22UF	10%	6.3V
C339	1-114-411-21	CERAMIC CHIP	0.33UF	10%	6.3V
C342	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C343	1-119-923-81	CERAMIC CHIP	0.047UF	10.00%	10V
C344	1-164-936-81	CERAMIC CHIP	680PF	10.00%	50V
C346	1-164-882-81	CERAMIC CHIP	220PF	5.00%	16V
* C347	1-112-298-91	CERAMIC CHIP	1UF	10%	16V
C348	1-107-819-81	CERAMIC CHIP	0.022UF	10.00%	16V
C349	1-100-909-11	CERAMIC CHIP	10UF	10%	6.3V
C350	1-100-909-11	CERAMIC CHIP	10UF	10%	6.3V
C352	1-112-300-91	CERAMIC CHIP	4.7UF	10%	10V
C353	1-164-937-81	CERAMIC CHIP	0.001UF	10.00%	50V
C355	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C356	1-165-908-91	CERAMIC CHIP	1UF	10%	10V
C357	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C358	1-164-939-81	CERAMIC CHIP	0.0022UF	10.00%	50V
C359	1-114-532-21	ELECT CHIP	330UF	20%	4V
C361	1-114-532-21	ELECT CHIP	330UF	20%	4V
C362	1-100-159-91	CERAMIC CHIP	22UF	10%	6.3V
C363	1-100-159-91	CERAMIC CHIP	22UF	10%	6.3V
C364	1-100-159-91	CERAMIC CHIP	22UF	10%	6.3V
C365	1-100-909-11	CERAMIC CHIP	10UF	10%	6.3V
C366	1-100-909-11	CERAMIC CHIP	10UF	10%	6.3V
C367	1-100-672-91	CERAMIC CHIP	10UF	20%	16V
C369	1-135-960-91	CERAMIC CHIP	10UF	10%	25V
C401	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C402	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C403	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V

Ref. No.	Part No.	Description			Remark
C404	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C405	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C406	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C407	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C408	1-137-710-91	CERAMIC CHIP	10UF	20%	6.3V
C409	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C410	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C411	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C412	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C413	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C414	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C415	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C416	1-137-710-91	CERAMIC CHIP	10UF	20%	6.3V
C417	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C418	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C419	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C420	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C421	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C422	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C423	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C424	1-137-710-91	CERAMIC CHIP	10UF	20%	6.3V
C425	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C426	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C427	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C428	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C429	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C430	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C431	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C432	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C433	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C434	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C435	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C436	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C437	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C438	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C439	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C440	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C441	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C444	1-137-710-91	CERAMIC CHIP	10UF	20%	6.3V
C445	1-137-710-91	CERAMIC CHIP	10UF	20%	6.3V
C447	1-164-847-81	CERAMIC CHIP	7PF	0.50PF	50V
C449	1-164-847-81	CERAMIC CHIP	7PF	0.50PF	50V
C501	1-137-710-91	CERAMIC CHIP	10UF	20%	6.3V
C502	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C503	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C504	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C506	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C507	1-112-780-11	CERAMIC CHIP	0.47UF	10%	16V
C603	1-137-710-91	CERAMIC CHIP	10UF	20%	6.3V
C604	1-137-710-91	CERAMIC CHIP	10UF	20%	6.3V
C607	1-165-908-91	CERAMIC CHIP	1UF	10%	10V
C608	1-165-908-91	CERAMIC CHIP	1UF	10%	10V
C609	1-128-993-21	ELECT CHIP	22UF	20%	10V
C610	1-128-993-21	ELECT CHIP	22UF	20%	10V
C611	1-165-908-91	CERAMIC CHIP	1UF	10%	10V
C612	1-165-908-91	CERAMIC CHIP	1UF	10%	10V
C617	1-128-394-21	ELECT CHIP	220UF	20%	10V
C618	1-128-394-21	ELECT CHIP	220UF	20%	10V
C620	1-164-850-81	CERAMIC CHIP	10PF	0.50PF	50V
C622	1-164-850-81	CERAMIC CHIP	10PF	0.50PF	50V

Ref. No.	Part No.	Description			Remark
C623	1-100-966-91	CERAMIC CHIP	10UF	20%	10V
C624	1-100-966-91	CERAMIC CHIP	10UF	20%	10V
C701	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C702	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C703	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C704	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C705	1-164-848-81	CERAMIC CHIP	8PF	0.50PF	50V
C706	1-164-847-81	CERAMIC CHIP	7PF	0.50PF	50V
C707	1-137-710-91	CERAMIC CHIP	10UF	20%	6.3V
C709	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C710	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C711	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C712	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C713	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C714	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C715	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C718	1-137-710-91	CERAMIC CHIP	10UF	20%	6.3V
C719	1-137-710-91	CERAMIC CHIP	10UF	20%	6.3V
C721	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C722	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C727	1-115-467-91	CERAMIC CHIP	0.22UF	10.00%	10V
C729	1-165-887-91	CERAMIC CHIP	0.22UF	10%	6.3V
C730	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C731	1-115-467-91	CERAMIC CHIP	0.22UF	10.00%	10V
C733	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C734	1-115-467-91	CERAMIC CHIP	0.22UF	10.00%	10V
C801	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C802	1-165-708-21	ELECT CHIP	47UF	20%	6.3V
C804	1-112-717-91	CERAMIC CHIP	1UF	10%	6.3V
C805	1-112-717-91	CERAMIC CHIP	1UF	10%	6.3V
C807	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C808	1-100-909-11	CERAMIC CHIP	10UF	10%	6.3V
C814	1-100-905-11	CERAMIC CHIP	0.001UF	10%	50V
C815	1-165-887-91	CERAMIC CHIP	0.22UF	10%	6.3V
C817	1-128-994-21	ELECT CHIP	47UF	20%	10V
C818	1-100-909-11	CERAMIC CHIP	10UF	10%	6.3V
* C819	1-112-298-91	CERAMIC CHIP	1UF	10%	16V
C820	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C821	1-112-717-91	CERAMIC CHIP	1UF	10%	6.3V
C822	1-137-765-21	ELECT CHIP	47UF	20%	16V
C823	1-112-717-91	CERAMIC CHIP	1UF	10%	6.3V
C828	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C829	1-100-740-81	CERAMIC CHIP	390PF	5%	50V
C830	1-100-740-81	CERAMIC CHIP	390PF	5%	50V
C831	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C832	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C833	1-100-740-81	CERAMIC CHIP	390PF	5%	50V
C834	1-100-740-81	CERAMIC CHIP	390PF	5%	50V
C835	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C836	1-137-765-21	ELECT CHIP	47UF	20%	16V
C837	1-137-765-21	ELECT CHIP	47UF	20%	16V
C838	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C839	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C840	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C841	1-100-916-11	CERAMIC CHIP	0.1UF	10%	16V
C842	1-128-994-21	ELECT CHIP	47UF	20%	10V
C846	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C847	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C848	1-128-994-21	ELECT CHIP	47UF	20%	10V
C905	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V

Ref. No.	Part No.	Description			Remark
C907	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C908	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C1001	1-107-819-81	CERAMIC CHIP	0.022UF	10.00%	16V
C1006	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C1007	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C1008	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C1009	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C1010	1-127-760-91	CERAMIC CHIP	4.7UF	10%	6.3V
C1011	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C1012	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C1013	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C1014	1-127-760-91	CERAMIC CHIP	4.7UF	10%	6.3V
C1015	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C1016	1-164-850-81	CERAMIC CHIP	10PF	0.50PF	50V
C1017	1-164-852-81	CERAMIC CHIP	12PF	5.00%	50V
C1018	1-100-567-81	CERAMIC CHIP	0.01UF	10%	25V
C1019	1-100-909-11	CERAMIC CHIP	10UF	10%	6.3V
C1101	1-100-591-91	CERAMIC CHIP	1UF	10%	25V
C1102	1-100-591-91	CERAMIC CHIP	1UF	10%	25V
C1105	1-100-909-11	CERAMIC CHIP	10UF	10%	6.3V
C1106	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C1107	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C1108	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C1109	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C1110	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C1111	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C1112	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C1113	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C1114	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C1115	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V
C1117	1-100-907-11	CERAMIC CHIP	0.1UF	10%	10V

<CONNECTOR>

CN301	1-815-954-21	PIN, CONNECTOR (PC BOARD) 13P
CN602	1-573-768-61	PIN, CONNECTOR (1.5MM) (SMD) 5P
CN701	1-819-876-21	CONNECTOR, SATA SMT (7P)
CN702	1-820-735-31	HDMI CONNECTOR
CN901	1-573-806-21	PIN, CONNECTOR (1.5MM) (SMD)6P
CN1001	1-819-875-31	ETHERNET CONNECTOR (8P)
CN1102	1-764-177-21	PIN, CONNECTOR (SMD) (1.5MM) 7P"
CN1103	1-691-550-21	PIN, CONNECTOR (1.5MM) (SMD) 3P"
CN1104	1-820-116-51	CONNECTOR, FFC/FPC 17P

<DIODE>

D301	8-719-081-67	DIODE M1FM3
D302	6-501-724-01	DIODE MAZ8047G0LS0
D305	6-502-248-01	DI KDZTR3.9B
D306	6-502-248-01	DI KDZTR3.9B
D601	6-501-817-01	DIODE MA2J1110GLS0
D602	6-501-817-01	DIODE MA2J1110GLS0
D603	6-500-701-01	DIODE PGB1010603NR
D604	6-500-701-01	DIODE PGB1010603NR
D605	6-500-701-01	DIODE PGB1010603NR
D606	6-500-701-01	DIODE PGB1010603NR
D801	6-501-817-01	DIODE MA2J1110GLS0
D802	6-500-335-01	DIODE MC2838-T112-1
* D806	6-501-930-01	DI MAZW068HGLS0
* D808	6-501-930-01	DI MAZW068HGLS0
* D809	6-501-930-01	DI MAZW068HGLS0
* D810	6-501-930-01	DI MAZW068HGLS0

Ref. No.	Part No.	Description			Remark
		<FERRITE BEAD>			
FB301	1-400-794-21	FERRITE	0UH		
FB302	1-400-794-21	FERRITE	0UH		
FB1001	1-400-382-21	FERRITE	0UH		
FB1002	1-400-382-21	FERRITE	0UH		
FB1003	1-400-382-21	FERRITE	0UH		
		<FILTER>			
FL303	1-234-939-21	FILTER, EMI REMOVAL (SMD)			
FL304	1-234-939-21	FILTER, EMI REMOVAL (SMD)			
FL401	1-234-986-11	FILTER, EMI REMOVAL (1608SMD)			
FL402	1-234-986-11	FILTER, EMI REMOVAL (1608SMD)			
FL403	1-234-986-11	FILTER, EMI REMOVAL (1608SMD)			
FL404	1-234-986-11	FILTER, EMI REMOVAL (1608SMD)			
FL601	1-234-986-11	FILTER, EMI REMOVAL (1608SMD)			
FL602	1-234-986-11	FILTER, EMI REMOVAL (1608SMD)			
FL701	1-234-986-11	FILTER, EMI REMOVAL (1608SMD)			
FL702	1-234-986-11	FILTER, EMI REMOVAL (1608SMD)			
FL703	1-234-986-11	FILTER, EMI REMOVAL (1608SMD)			
FL704	1-234-939-21	FILTER, EMI REMOVAL (SMD)			
		<IC>			
IC301	6-711-237-01	IC NJM2878F3-33 (TE2)			
IC302	6-711-050-01	IC S-1170B50UC-OUJTFG			
IC303	6-709-932-01	IC MM3141CNRE			
IC304	6-709-932-01	IC MM3141CNRE			
IC305	6-705-337-01	IC TK11150CSCL-G			
IC307	6-709-584-01	IC MM1663DHBE			
IC310	6-710-949-01	IC SN0608006PWPR			
IC602	6-712-613-01	IC SI-3010KM-TLS			
IC703	6-702-302-01	IC TK11133CSCL-G			
IC704	6-705-337-01	IC TK11150CSCL-G			
IC802	6-702-630-01	IC AK4382AVTN-E2			
IC803	6-711-237-01	IC NJM2878F3-33 (TE2)			
IC804	8-759-667-17	IC L79M05TLL-SONY-TL-E			
IC805	8-759-100-96	IC UPC4558G2			
IC806	6-713-907-01	IC NJM2564BV(TE2)			
IC1001	6-712-663-11	IC LAN8700C-AEZG-CTI			
IC1101	6-708-762-01	IC PQ200WNA1ZPH			
		<COIL>			
L302	1-400-789-21	INDUCTOR	2.2UH		
L303	1-481-246-11	INDUCTOR	2.2UH		
L603	1-414-840-21	INDUCTOR	10NH		
L604	1-414-840-21	INDUCTOR	10NH		
L605	1-414-840-21	INDUCTOR	10NH		
L606	1-414-840-21	INDUCTOR	10NH		
L607	1-457-223-11	INDUCTOR	0UH		
L608	1-457-223-11	INDUCTOR	0UH		
		<FUSE>			
⚠PS301	1-523-095-31	FUSE	3.15A	32V	
⚠PS302	1-523-095-31	FUSE	3.15A	32V	
⚠PS303	1-523-074-31	FUSE	1A	32V	
⚠PS801	1-523-093-31	FUSE	0.5A	50V	
⚠PS802	1-523-074-31	FUSE	1A	32V	
⚠PS803	1-523-074-31	FUSE	1A	32V	

Ref. No.	Part No.	Description				Remark
		<TRANSISTOR>				
Q301	8-729-028-96	TRANSISTOR DTC114EUA-T106				
Q302	6-551-456-01	TRANSISTOR RTR020P02TL				
Q303	8-729-028-96	TRANSISTOR DTC114EUA-T106				
Q304	6-551-690-01	TRANSISTOR RT3N11M-TP-1				
Q305	6-709-438-01	TRANSISTOR FDS6986AS				
Q306	6-709-438-01	TRANSISTOR FDS6986AS				
Q501	8-729-029-14	TRANSISTOR DTC144EUA-T106				
Q502	8-729-028-73	TRANSISTOR DTA114EUA-T106				
Q503	6-551-714-01	TRANSISTOR INK0001AC1-T112A-1				
Q702	6-551-714-01	TRANSISTOR INK0001AC1-T112A-1				
Q801	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF				
Q802	8-729-028-73	TRANSISTOR DTA114EUA-T106				
Q803	8-729-029-14	TRANSISTOR DTC144EUA-T106				
Q804	6-552-138-01	TR 2SC6053-T112-1F				
Q806	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF				
Q808	6-551-696-01	TRANSISTOR ISA1235AC1TP-1EF				
Q809	8-729-028-83	TRANSISTOR DTA124EUA-T106				
Q810	6-552-138-01	TR 2SC6053-T112-1F				
Q1101	6-551-690-01	TRANSISTOR RT3N11M-TP-1				
		<RESISTOR>				
R101	1-208-860-81	METAL CHIP	75	0.5%	1/16W	
R102	1-208-860-81	METAL CHIP	75	0.5%	1/16W	
R107	1-218-941-81	METAL CHIP	100	5%	1/16W	
R108	1-218-941-81	METAL CHIP	100	5%	1/16W	
R109	1-218-938-81	METAL CHIP	56	5%	1/16W	
R110	1-218-938-81	METAL CHIP	56	5%	1/16W	
R111	1-218-938-81	METAL CHIP	56	5%	1/16W	
R205	1-218-941-81	METAL CHIP	100	5%	1/16W	
R206	1-218-941-81	METAL CHIP	100	5%	1/16W	
R207	1-218-938-81	METAL CHIP	56	5%	1/16W	
R208	1-218-938-81	METAL CHIP	56	5%	1/16W	
R209	1-218-938-81	METAL CHIP	56	5%	1/16W	
R210	1-218-938-81	METAL CHIP	56	5%	1/16W	
R211	1-218-938-81	METAL CHIP	56	5%	1/16W	
R212	1-218-938-81	METAL CHIP	56	5%	1/16W	
R213	1-218-938-81	METAL CHIP	56	5%	1/16W	
R214	1-218-938-81	METAL CHIP	56	5%	1/16W	
R215	1-218-938-81	METAL CHIP	56	5%	1/16W	
R216	1-218-938-81	METAL CHIP	56	5%	1/16W	
R217	1-218-938-81	METAL CHIP	56	5%	1/16W	
R301	1-218-953-81	METAL CHIP	1K	5%	1/16W	
R302	1-218-953-81	METAL CHIP	1K	5%	1/16W	
R303	1-218-953-81	METAL CHIP	1K	5%	1/16W	
R304	1-218-953-81	METAL CHIP	1K	5%	1/16W	
R306	1-218-953-81	METAL CHIP	1K	5%	1/16W	
R310	1-208-911-81	METAL CHIP	10K	0.5%	1/16W	
R315	1-218-953-81	METAL CHIP	1K	5%	1/16W	
R316	1-218-970-11	RES, CHIP	27K			
R317	1-208-671-11	RES, METAL FILM CHIP		330 (1005)		
R318	1-208-911-81	METAL CHIP	10K	0.5%	1/16W	
R320	1-218-965-81	METAL CHIP	10K	5%	1/16W	
R321	1-218-953-81	METAL CHIP	1K	5%	1/16W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
R324	1-216-815-91	METAL CHIP	330	5%	1/10W
R325	1-216-815-91	METAL CHIP	330	5%	1/10W
R326	1-216-815-91	METAL CHIP	330	5%	1/10W
R327	1-218-973-81	METAL CHIP	47K	5%	1/16W
R328	1-218-953-81	METAL CHIP	1K	5%	1/16W
R329	1-218-951-81	METAL CHIP	680	5%	1/16W
R330	1-208-697-11	RES,METAL FILM CHIP		3.9K (1005)	
R331	1-208-687-11	RES,METAL FILM CHIP		1.5K (1005)	
R332	1-208-703-11	RES,METAL FILM CHIP		6.8K (1005)	
R334	1-208-709-11	RES, METAL FILM CHIP		12K (1005)	
R335	1-208-715-11	RES, METAL FILM CHIP		22K (1005)	
R336	1-208-941-81	METAL CHIP	180K	0.5%	1/16W
R337	1-208-939-81	METAL CHIP	150K	0.5%	1/16W
R338	1-208-909-81	METAL CHIP	8.2K	0.5%	1/16W
R341	1-218-947-81	METAL CHIP	330	5%	1/16W
R342	1-208-939-81	METAL CHIP	150K	0.5%	1/16W
R351	1-208-711-11	RES, METAL FILM CHIP		15K (1005)	
R354	1-218-929-81	METAL CHIP	10	5%	1/16W
R357	1-208-909-81	METAL CHIP	8.2K	0.5%	1/16W
R362	1-218-953-81	METAL CHIP	1K	5%	1/16W
R363	1-218-977-81	METAL CHIP	100K	5%	1/16W
R366	1-218-953-81	METAL CHIP	1K	5%	1/16W
R368	1-218-953-81	METAL CHIP	1K	5%	1/16W
R401	1-216-295-91	SHORT CHIP	0		
R402	1-216-295-91	SHORT CHIP	0		
R407	1-218-977-81	METAL CHIP	100K	5%	1/16W
R408	1-218-990-81	SHORT CHIP	0		
R501	1-218-965-81	METAL CHIP	10K	5%	1/16W
R502	1-218-965-81	METAL CHIP	10K	5%	1/16W
R503	1-218-937-81	METAL CHIP	47	5%	1/16W
R504	1-218-937-81	METAL CHIP	47	5%	1/16W
R505	1-218-937-81	METAL CHIP	47	5%	1/16W
R507	1-218-937-81	METAL CHIP	47	5%	1/16W
R508	1-218-937-81	METAL CHIP	47	5%	1/16W
R509	1-218-937-81	METAL CHIP	47	5%	1/16W
R510	1-218-937-81	METAL CHIP	47	5%	1/16W
R511	1-218-937-81	METAL CHIP	47	5%	1/16W
R513	1-218-937-81	METAL CHIP	47	5%	1/16W
R516	1-218-965-81	METAL CHIP	10K	5%	1/16W
R517	1-218-959-81	METAL CHIP	3.3K	5%	1/16W
R522	1-218-977-81	METAL CHIP	100K	5%	1/16W
R526	1-218-941-81	METAL CHIP	100	5%	1/16W
R527	1-218-937-81	METAL CHIP	47	5%	1/16W
R529	1-218-965-81	METAL CHIP	10K	5%	1/16W
R530	1-218-965-81	METAL CHIP	10K	5%	1/16W
R532	1-218-965-81	METAL CHIP	10K	5%	1/16W
R535	1-218-965-81	METAL CHIP	10K	5%	1/16W
R537	1-218-990-81	SHORT CHIP	0		
R610	1-218-965-81	METAL CHIP	10K	5%	1/16W
R611	1-218-965-81	METAL CHIP	10K	5%	1/16W
R614	1-208-884-81	METAL CHIP	750	0.5%	1/16W
R615	1-208-691-11	RES,METAL FILM CHIP		2.2K (1005)	
R616	1-208-721-11	RES, METAL FILM CHIP		39K (1005)	
R617	1-208-911-81	METAL CHIP	10K	0.5%	1/16W
R620	1-216-833-91	METAL CHIP	10K	5%	1/10W
R621	1-216-833-91	METAL CHIP	10K	5%	1/10W
R701	1-218-949-81	METAL CHIP	470	5%	1/16W
R702	1-218-977-81	METAL CHIP	100K	5%	1/16W
R703	1-208-659-81	METAL CHIP	100	0.5%	1/16W
R704	1-208-709-81	METAL CHIP	12K	0.5%	1/16W

Ref. No.	Part No.	Description			Remark
R705	1-208-683-11	RES,METAL FILM CHIP		1.0K (1005)	
R707	1-218-970-81	METAL CHIP	27K	5%	1/16W
R709	1-218-990-81	SHORT CHIP	0		
R710	1-208-687-11	RES,METAL FILM CHIP		1.5K (1005)	
R713	1-218-990-81	SHORT CHIP	0		
R719	1-218-990-81	SHORT CHIP	0		
R720	1-218-990-81	SHORT CHIP	0		
R727	1-218-953-81	METAL CHIP	1K	5%	1/16W
R728	1-218-956-81	METAL CHIP	1.8K	5%	1/16W
R729	1-218-956-81	METAL CHIP	1.8K	5%	1/16W
R731	1-218-953-81	METAL CHIP	1K	5%	1/16W
R733	1-216-809-91	METAL CHIP	100	5%	1/10W
R734	1-216-864-91	SHORT CHIP	0		
R735	1-216-864-91	SHORT CHIP	0		
R736	1-216-864-91	SHORT CHIP	0		
R737	1-216-864-91	SHORT CHIP	0		
R739	1-218-990-81	SHORT CHIP	0		
R740	1-218-990-81	SHORT CHIP	0		
R744	1-218-990-81	SHORT CHIP	0		
R801	1-218-990-81	SHORT CHIP	0		
R802	1-218-990-81	SHORT CHIP	0		
R803	1-218-937-81	METAL CHIP	47	5%	1/16W
R804	1-218-937-81	METAL CHIP	47	5%	1/16W
R805	1-218-937-81	METAL CHIP	47	5%	1/16W
R807	1-218-935-81	METAL CHIP	33	5%	1/16W
R808	1-208-663-11	RES, METAL FILM CHIP		150 (1005)	
R809	1-208-663-11	RES, METAL FILM CHIP		150 (1005)	
R810	1-208-663-11	RES, METAL FILM CHIP		150 (1005)	
R811	1-208-663-11	RES, METAL FILM CHIP		150 (1005)	
R812	1-208-663-11	RES, METAL FILM CHIP		150 (1005)	
R813	1-208-691-11	RES,METAL FILM CHIP		2.2K (1005)	
R814	1-218-965-81	METAL CHIP	10K	5%	1/16W
R815	1-218-953-81	METAL CHIP	1K	5%	1/16W
R816	1-218-953-81	METAL CHIP	1K	5%	1/16W
R817	1-218-953-81	METAL CHIP	1K	5%	1/16W
R819	1-218-945-81	METAL CHIP	220	5%	1/16W
R820	1-218-939-81	METAL CHIP	68	5%	1/16W
R821	1-218-965-81	METAL CHIP	10K	5%	1/16W
R822	1-218-990-81	SHORT CHIP	0		
R823	1-218-990-81	SHORT CHIP	0		
R824	1-218-990-81	SHORT CHIP	0		
R825	1-218-990-81	SHORT CHIP	0		
R826	1-216-295-91	SHORT CHIP	0		
R827	1-218-990-81	SHORT CHIP	0		
R828	1-218-965-81	METAL CHIP	10K	5%	1/16W
R829	1-218-990-81	SHORT CHIP	0		
R830	1-218-965-81	METAL CHIP	10K	5%	1/16W
R831	1-218-937-81	METAL CHIP	47	5%	1/16W
R833	1-218-990-81	SHORT CHIP	0		
R836	1-218-965-81	METAL CHIP	10K	5%	1/16W
R837	1-218-990-81	SHORT CHIP	0		
R838	1-218-965-81	METAL CHIP	10K	5%	1/16W
R839	1-218-965-81	METAL CHIP	10K	5%	1/16W
R841	1-218-990-81	SHORT CHIP	0		
R843	1-218-990-81	SHORT CHIP	0		
R844	1-218-990-81	SHORT CHIP	0		
R845	1-216-295-91	SHORT CHIP	0		
R846	1-218-990-81	SHORT CHIP	0		
R847	1-218-990-81	SHORT CHIP	0		
R848	1-216-295-91	SHORT CHIP	0		

Ref. No.	Part No.	Description			Remark
R849	1-218-990-81	SHORT CHIP	0		
R850	1-218-939-81	METAL CHIP	68	5%	1/16W
R851	1-218-939-81	METAL CHIP	68	5%	1/16W
R852	1-218-939-81	METAL CHIP	68	5%	1/16W
R853	1-218-990-81	SHORT CHIP	0		
R854	1-218-939-81	METAL CHIP	68	5%	1/16W
R855	1-218-939-81	METAL CHIP	68	5%	1/16W
R856	1-218-939-81	METAL CHIP	68	5%	1/16W
R857	1-218-939-81	METAL CHIP	68	5%	1/16W
R858	1-218-941-81	METAL CHIP	100	5%	1/16W
R860	1-218-990-81	SHORT CHIP	0		
R862	1-218-953-81	METAL CHIP	1K	5%	1/16W
R864	1-218-990-81	SHORT CHIP	0		
R865	1-218-965-81	METAL CHIP	10K	5%	1/16W
R866	1-218-961-81	METAL CHIP	4.7K	5%	1/16W
R867	1-218-965-81	METAL CHIP	10K	5%	1/16W
R869	1-216-830-91	METAL CHIP	5.6K	5%	1/10W
R870	1-218-949-81	METAL CHIP	470	5%	1/16W
R871	1-216-833-91	METAL CHIP	10K	5%	1/10W
R872	1-218-953-81	METAL CHIP	1K	5%	1/16W
R873	1-216-833-91	METAL CHIP	10K	5%	1/10W
R874	1-218-965-81	METAL CHIP	10K	5%	1/16W
R876	1-218-973-81	METAL CHIP	47K	5%	1/16W
R877	1-218-977-81	METAL CHIP	100K	5%	1/16W
R879	1-218-990-81	SHORT CHIP	0		
R880	1-218-965-81	METAL CHIP	10K	5%	1/16W
R881	1-218-965-81	METAL CHIP	10K	5%	1/16W
R882	1-218-864-11	RES, CHIP	5.1K (1608)		
R883	1-218-864-11	RES, CHIP	5.1K (1608)		
R884	1-218-864-11	RES, CHIP	5.1K (1608)		
R885	1-218-864-11	RES, CHIP	5.1K (1608)		
R886	1-216-827-91	METAL CHIP	3.3K	5%	1/10W
R888	1-208-905-81	METAL CHIP	5.6K	0.5%	1/16W
R889	1-208-905-81	METAL CHIP	5.6K	0.5%	1/16W
R890	1-218-965-81	METAL CHIP	10K	5%	1/16W
R891	1-208-663-11	RES, METAL FILM CHIP	150 (1005)		
R892	1-208-663-11	RES, METAL FILM CHIP	150 (1005)		
R895	1-208-663-11	RES, METAL FILM CHIP	150 (1005)		
R896	1-208-905-81	METAL CHIP	5.6K	0.5%	1/16W
R897	1-208-905-81	METAL CHIP	5.6K	0.5%	1/16W
R898	1-208-663-11	RES, METAL FILM CHIP	150 (1005)		
R899	1-218-990-81	SHORT CHIP	0		
R906	1-218-965-81	METAL CHIP	10K	5%	1/16W
R907	1-218-965-81	METAL CHIP	10K	5%	1/16W
R908	1-218-965-81	METAL CHIP	10K	5%	1/16W
R909	1-218-990-81	SHORT CHIP	0		
R910	1-218-965-81	METAL CHIP	10K	5%	1/16W
R913	1-218-965-81	METAL CHIP	10K	5%	1/16W
R914	1-218-965-81	METAL CHIP	10K	5%	1/16W
R915	1-218-941-81	METAL CHIP	100	5%	1/16W
R916	1-218-941-81	METAL CHIP	100	5%	1/16W
R917	1-218-941-81	METAL CHIP	100	5%	1/16W
R919	1-218-941-81	METAL CHIP	100	5%	1/16W
R920	1-218-941-81	METAL CHIP	100	5%	1/16W
R921	1-218-941-81	METAL CHIP	100	5%	1/16W
R922	1-218-941-81	METAL CHIP	100	5%	1/16W
R925	1-218-941-81	METAL CHIP	100	5%	1/16W
R926	1-218-941-81	METAL CHIP	100	5%	1/16W
R927	1-218-941-81	METAL CHIP	100	5%	1/16W
R928	1-218-941-81	METAL CHIP	100	5%	1/16W

Ref. No.	Part No.	Description			Remark
R930	1-218-941-81	METAL CHIP	100	5%	1/16W
R931	1-218-941-81	METAL CHIP	100	5%	1/16W
R933	1-218-941-81	METAL CHIP	100	5%	1/16W
R934	1-218-941-81	METAL CHIP	100	5%	1/16W
R938	1-218-965-81	METAL CHIP	10K	5%	1/16W
R939	1-218-965-81	METAL CHIP	10K	5%	1/16W
R940	1-218-941-81	METAL CHIP	100	5%	1/16W
R941	1-218-941-81	METAL CHIP	100	5%	1/16W
R942	1-218-953-81	METAL CHIP	1K	5%	1/16W
R943	1-218-953-81	METAL CHIP	1K	5%	1/16W
R944	1-218-941-81	METAL CHIP	100	5%	1/16W
R945	1-218-937-81	METAL CHIP	47	5%	1/16W
R946	1-218-937-81	METAL CHIP	47	5%	1/16W
R947	1-218-965-81	METAL CHIP	10K	5%	1/16W
R949	1-218-953-81	METAL CHIP	1K	5%	1/16W
R952	1-218-965-81	METAL CHIP	10K	5%	1/16W
R953	1-218-965-81	METAL CHIP	10K	5%	1/16W
R954	1-218-965-81	METAL CHIP	10K	5%	1/16W
R955	1-218-965-81	METAL CHIP	10K	5%	1/16W
R956	1-218-965-81	METAL CHIP	10K	5%	1/16W
R964	1-218-977-81	METAL CHIP	100K	5%	1/16W
R967	1-218-953-81	METAL CHIP	1K	5%	1/16W
R976	1-218-941-81	METAL CHIP	100	5%	1/16W
R1001	1-218-929-81	METAL CHIP	10	5%	1/16W
R1002	1-218-953-81	METAL CHIP	1K	5%	1/16W
R1003	1-218-953-81	METAL CHIP	1K	5%	1/16W
R1008	1-208-692-11	RES,METAL FILM CHIP	2.4K (1005)		
R1009	1-208-911-81	METAL CHIP	10K	0.5%	1/16W
R1010	1-218-941-81	METAL CHIP	100	5%	1/16W
R1013	1-218-941-81	METAL CHIP	100	5%	1/16W
R1014	1-218-965-81	METAL CHIP	10K	5%	1/16W
R1015	1-218-941-81	METAL CHIP	100	5%	1/16W
R1016	1-218-941-81	METAL CHIP	100	5%	1/16W
R1017	1-218-941-81	METAL CHIP	100	5%	1/16W
R1018	1-218-941-81	METAL CHIP	100	5%	1/16W
R1019	1-218-955-81	METAL CHIP	1.5K	5%	1/16W
R1020	1-218-941-81	METAL CHIP	100	5%	1/16W
R1022	1-218-977-81	METAL CHIP	100K	5%	1/16W
R1026	1-218-965-81	METAL CHIP	10K	5%	1/16W
R1027	1-218-990-81	SHORT CHIP	0		
R1031	1-218-941-81	METAL CHIP	100	5%	1/16W
R1032	1-218-941-81	METAL CHIP	100	5%	1/16W
R1033	1-218-941-81	METAL CHIP	100	5%	1/16W
R1034	1-218-941-81	METAL CHIP	100	5%	1/16W
R1035	1-216-295-91	SHORT CHIP	0		
R1036	1-218-937-81	METAL CHIP	47	5%	1/16W
R1037	1-218-937-81	METAL CHIP	47	5%	1/16W
R1038	1-218-937-81	METAL CHIP	47	5%	1/16W
R1040	1-218-937-81	METAL CHIP	47	5%	1/16W
R1041	1-218-937-81	METAL CHIP	47	5%	1/16W
R1042	1-218-937-81	METAL CHIP	47	5%	1/16W
R1043	1-218-937-81	METAL CHIP	47	5%	1/16W
R1044	1-218-941-81	METAL CHIP	100	5%	1/16W
R1101	1-218-953-81	METAL CHIP	1K	5%	1/16W
R1103	1-208-905-81	METAL CHIP	5.6K	0.5%	1/16W
R1104	1-208-894-81	METAL CHIP	2K	0.5%	1/16W
R1105	1-208-883-81	METAL CHIP	680	0.5%	1/16W
R1106	1-208-677-11	RES, METAL FILM CHIP	560 (1005)		
R1107	1-218-970-11	RES, CHIP	27K		
R1108	1-218-961-81	METAL CHIP	4.7K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R1109	1-218-981-81	METAL CHIP	220K	5%	1/16W
R1110	1-218-969-81	METAL CHIP	22K	5%	1/16W
R1111	1-218-941-81	METAL CHIP	100	5%	1/16W
R1112	1-218-941-81	METAL CHIP	100	5%	1/16W
R1114	1-218-941-81	METAL CHIP	100	5%	1/16W
R1115	1-218-941-81	METAL CHIP	100	5%	1/16W
R1116	1-218-941-81	METAL CHIP	100	5%	1/16W
R1117	1-218-977-81	METAL CHIP	100K	5%	1/16W
R1119	1-218-977-81	METAL CHIP	100K	5%	1/16W
R1121	1-218-941-81	METAL CHIP	100	5%	1/16W
R1122	1-218-977-81	METAL CHIP	100K	5%	1/16W
R1130	1-218-965-81	METAL CHIP	10K	5%	1/16W
R1131	1-218-965-81	METAL CHIP	10K	5%	1/16W
R1137	1-218-965-81	METAL CHIP	10K	5%	1/16W
R1141	1-218-965-81	METAL CHIP	10K	5%	1/16W
R1143	1-218-977-81	METAL CHIP	100K	5%	1/16W
R1146	1-218-941-81	METAL CHIP	100	5%	1/16W
R1148	1-218-958-11	RES, CHIP	2.7K		
R1151	1-218-941-81	METAL CHIP	100	5%	1/16W
R1161	1-218-965-81	METAL CHIP	10K	5%	1/16W
R1164	1-218-977-81	METAL CHIP	100K	5%	1/16W
R1166	1-218-977-81	METAL CHIP	100K	5%	1/16W
R1167	1-218-981-81	METAL CHIP	220K	5%	1/16W
R1171	1-218-965-81	METAL CHIP	10K	5%	1/16W
R1174	1-218-965-81	METAL CHIP	10K	5%	1/16W
R1175	1-218-965-81	METAL CHIP	10K	5%	1/16W
R1176	1-218-965-81	METAL CHIP	10K	5%	1/16W
R1177	1-218-965-81	METAL CHIP	10K	5%	1/16W
R1179	1-218-977-81	METAL CHIP	100K	5%	1/16W
R2802	1-218-990-81	SHORT CHIP	0		
R2803	1-218-990-81	SHORT CHIP	0		
R2806	1-218-949-81	METAL CHIP	470	5%	1/16W
R2807	1-218-949-81	METAL CHIP	470	5%	1/16W
R2808	1-218-973-81	METAL CHIP	47K	5%	1/16W
R2809	1-218-973-81	METAL CHIP	47K	5%	1/16W
R2813	1-218-949-81	METAL CHIP	470	5%	1/16W
R2814	1-218-949-81	METAL CHIP	470	5%	1/16W
R2815	1-218-977-81	METAL CHIP	100K	5%	1/16W
R2816	1-218-941-81	METAL CHIP	100	5%	1/16W
R2818	1-220-169-81	METAL CHIP	75	5%	1/16W
R2819	1-220-169-81	METAL CHIP	75	5%	1/16W
R2820	1-220-169-81	METAL CHIP	75	5%	1/16W
R2822	1-220-169-81	METAL CHIP	75	5%	1/16W
R2824	1-218-990-81	SHORT CHIP	0		
R2825	1-218-990-81	SHORT CHIP	0		
R2834	1-218-990-81	SHORT CHIP	0		
* RB101	1-234-714-21	RES, NETWORK	56 (1005X4)		
* RB102	1-234-714-21	RES, NETWORK	56 (1005X4)		
* RB103	1-234-714-21	RES, NETWORK	56 (1005X4)		
* RB104	1-234-714-21	RES, NETWORK	56 (1005X4)		
* RB105	1-234-714-21	RES, NETWORK	56 (1005X4)		
* RB201	1-234-714-21	RES, NETWORK	56 (1005X4)		
* RB202	1-234-714-21	RES, NETWORK	56 (1005X4)		
* RB203	1-234-714-21	RES, NETWORK	56 (1005X4)		
RB501	1-234-370-21	RES, NETWORK	22 (1005X4)		
RB502	1-234-370-21	RES, NETWORK	22 (1005X4)		
RB503	1-234-370-21	RES, NETWORK	22 (1005X4)		
RB504	1-234-370-21	RES, NETWORK	22 (1005X4)		

Ref. No.	Part No.	Description			Remark
RB901	1-234-378-21	RES, NETWORK	10K (1005X4)		
RB1101	1-234-378-21	RES, NETWORK	10K (1005X4)		
RB1102	1-234-372-21	RES, NETWORK	100 (1005X4)		
RB1104	1-234-372-21	RES, NETWORK	100 (1005X4)		
		<THERMISTOR>			
TH1101	1-804-949-11	THERMISTOR, NTC (SMD)			
		<VIBRATOR>			
X701	1-813-210-11	VIBRATOR, CRYSTAL (NX5032GA)			
X1001	1-813-210-11	VIBRATOR, CRYSTAL (NX5032GA)			
		USB-021			
		*******			
		<CAPACITOR>			
* C363	1-112-298-91	CERAMIC CHIP	1UF	10%	16V
		<CONNECTOR>			
CN362	1-566-760-11	PIN, CONNECTOR (PC BOARD) 5P			
	A-1732-654-A	USF-002 BM(U) COMPL			
		**********			
		<CAPACITOR>			
* C373	1-112-298-91	CERAMIC CHIP	1UF	10%	16V
		<CONNECTOR>			
CN371	1-793-365-21	CONNECTOR, USB (A)			
CN372	1-564-721-11	PIN, CONNECTOR (SMALL TYPE) 5P			
		MISCELLANEOUS PARTS			
		**********			
⚠101	1-474-088-11	REGULATOR,SWITCHING(ZSSR774MA)			
54	1-836-996-11	CABLE, FLEXIBLE FLAT (FFM-006)			
55	3-077-331-11	+BV3 (3-CR)			
M501	1-787-760-31	FAN, D.C.			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

REVISION HISTORY

Ver.	Date	Description of Revision
1.0	2009.08	New
1.1	2009.11	Section7:Replacement section 7 and 8(Page 7-1 until page 8-2E)
1.2	2010.01	Update Service Mode ver 0.70