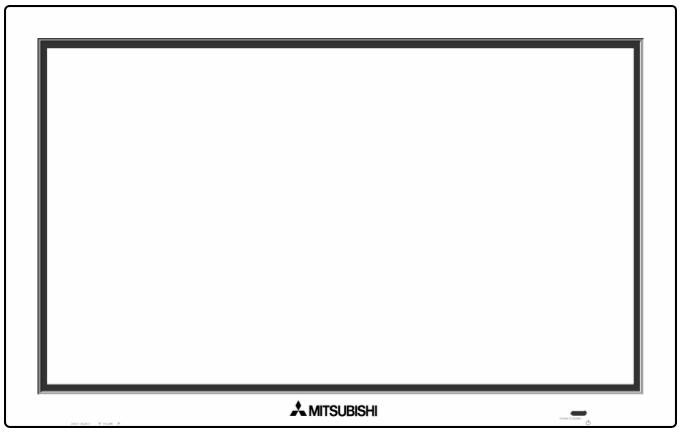
2004

MITSUBISHI ELECTRIC

# Service Manual

PLASMA DISPLAY PANEL




## PD-5050

**CAUTION:**
Before servicing this chassis, it is important that the service person read the "SERVICE SAFETY" section in this manual.

## SPECIFICATIONS

- **Power** : AC 120V, 50/60Hz
  480W (Typical)
  6.4A (Maximum)
- **Signals**
  Sync Range : Horiz : 15.5 to 110kHz
  (Automatic : step scan)
  : Vert : 50.0 to 120 Hz
  (Automatic : step scan)
  Input Signals : RGB, HD*1,
  DVD*1, DTV*1
- **Input Terminals**
  RGB : Visual 1 (Analog) : Mini D-sub 15-pin
  Visual 2 (Analog) : BNC (R,G,B,H/CS,V)*2
  Visual 3 (M-LINK) : MONITORLINK™ (HDMI)
  Video : Visual 1 : BNC
  Visual 2 : RCA-pin
  Visual 3 : S-Video: DIN 4-pin
  DVD/HD/DTV : Visual 1 : RCA-pin (Y,PB[CB},PR{CR])*1
  Visual 2 : BNC (Y,PB[CB},PR{CR])*1 *2
  Visual 3 (M-LINK) : MONITORLINK™ (HDMI)
  Audio : Stereo RCA x 3 (Selectable)
  External Control : D-sub 9-pin MONITORLINK™ (RS232C)
- **Sound Output** : 9W+9W at 6 ohms
- **Dimensions** : (W)48.1" (H)30" (D)3.8"
  (W)1222 (H)736 (D)96 mm
- **Weight** : 98 lbs / 44.5 kg

***1 HD/DVD/DTV Input Signals supported:**

| | |
|---|---|
| 480P (60Hz) | 480I (60Hz) |
| 525P (60Hz) | 525I (60Hz) |
| 576P (50Hz) | 576I (50Hz) |
| 625P (50Hz) | 625I (50Hz) |
| 720P (60Hz) | 1035I (60Hz) |
| 1080I (50Hz) | 1080I (60Hz) |

***2 The 5-BNC connectors are used as RGB/PC2 and HD/DVD2 input. Select one of them under "BNC SELECT".**

- Weight and dimensions shown are approximate.
- Design specifications are subject to change without notice.

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# CONTENTS

## ■Safety cautions

The matters to be observed without fail are explained below. These matters are indispensable for the prevention of an accident during the maintenance servicing, the “security of products” after the completion of servicing work, and the “prevention of the repeated occurrence of similar fault.”

(1) The degree of danger and material damage, caused as a result of wrong use by disregarding the contents of the display” is distinguished and explained in the table below.

| | |
|---|---|
| **WARNING** | If this display is disregarded and equipment is handled wrongly, this can be a cause of physical injury and a fire, thus leading a person to death or serious injury. |
| **CAUTION** | If this display is disregarded and equipment is handled wrongly, this may lead to personal injury or material damage. |

(2) Kinds of the matters to be observed are classified and explained in the icons shown below.

| | |
|---|---|
|  | This icon indicates a dangerous place where an electric shock is anticipated. |
|  | This icon indicates the contents of “caution” that must be borne in mind, without fail. |
|  | This icon indicates the contents of “caution” that must be practiced, without fail. |

## WARNING

- **Observe the caution matter, without fail.**

  - In the place where a particular caution is needed during maintenance servicing, such a caution note is displayed with a label or a stamp that is given to the cabinet, chassis, PWB, etc. These caution notes and also the caution matters of ⚠WARNING given in the instruction manuals, etc., must be observed, without fail.

- **Be careful of an electric shock or a burn.**

  - The power block or the PDP module involves the sections where high voltage or high temperature is prevalent. When equipment is energized, use working gloves in order to prevent an electric shock or a burn. At the time of transportation, disassembly, reassembly, and the replacement of parts, such a servicing job must be done after pulling out the power plug.

- **Modification of equipment is absolutely prohibited. Use the specified parts at all times.**

  - If any modification is performed, the validity of the manufacturer’s warranty is lost at that moment. The personnel who did this modification is responsible for the physical injury or the like, if it should occur as a result of the modification. The parts used are given the safety-based characteristics, such as non-flammability or sufficient withstand voltage. The parts to be replaced shall be those which are specified in the list of replacement parts.(Example: The lithium battery (circuit symbol BA9501 in the MAIN PWB) will give rise to explosion if its polarity is wrongly treated.

- **The replaced parts and wiring must be arranged in the original conditions.**

  - For safety reasons, insulation materials like tubes and tapes may be used or some parts may be mounted clear of the PWB. The internal wiring and the fastening with the clampers for separation from high-heat and high-voltage parts shall be returned to their original conditions, without fail.

**• For the maintenance servicing, safety inspection is needed in accordance with the check list.**

• Inspection should be carried out according to the check list shown below, in regard to safety inspection before and after repairing, authentic repair, and explanation to the user.

**(Method of insulation check)**

Mount a PDP module on the product to complete it. After the completion of aging and others, pull out the power plug from the wall outlet, remove the cable, and turn on the power switch. Use a 500V megger (Note 1) and confirm that the insulation resistance is 50M. or more between each terminal (except for the 3-core earth terminal) of the power plug (Note 2) and the external exposed metallic parts (Note 3). If the insulation resistance is found to be below the specified value, recover the faulty section and make another insulation check again.

**(Note 1)** If a 500V megger is not available at that time, use a circuit tester or the like.

**(Note 2)** In the case of a 3-core terminal, the earth resistance shall be 1Ω or less between the earth terminal and the earth side of each input terminal.

**(Note 3)** Head phone jack, speaker terminals, remote control terminals, each I/O terminals, control terminals, screws, etc.

| Check item | | | Check column |
|---|---|---|---|
| Safety inspection before repairing | Installation conditions | Is there any influence by high temperatures (due to direct sunlight, etc.), moisture (steam, etc.), oil fume, dust, and dew condensation? | |
| | | Is the condition of ventilation acceptable (distance to the wall, ventilation holes, etc.)? | |
| | | Is the condition of the antenna acceptable (reach to the wire, bend, tilt, etc.)? | |
| | | Is the condition of power supply acceptable (regular outlet, adequate earthing, concentrated wiring, etc.)? | |
| | | Is the condition of installation acceptable (unstability, height, tilt, falling preventive materials, etc.)? | |
| | Product main body | Are the power plug and the power cord free from damage or the attachment of dust? | |
| | | Is the product free from unusual sound, unusual odor, or unusually high temperature? | |
| | | Are the knobs, handles, and back cabinet free from abnormality (rattling, drop off, etc)? | |
| | | Is equipment free from any abnormality in daily use? | |
| Authentic repair | Trouble-shooting | Is the symptom examined according to the user's statement? | |
| | | Is the product disassembled to the grade where troubleshooting is possible? | |
| | | Is the symptom reproduced, the faulty part located as a result of fault diagnosis, and replaced? | |
| | | Is the normal condition confirmed after aging? | |
| | Specified parts | Is the part, specified in the list of parts, used for the power unit? | |
| | | Is the part, specified in the list of parts, used for the insulation material (material, thickness, etc)? | |
| | | Is the part, specified in the list of parts, used for the power plug and the power cord? | |
| | | Is the part, specified in the list of parts, used for the internal cabling and the high voltage lead wires? | |
| | | Is the part, specified in the list of parts, used for the PDP module? | |
| | | Are the rest of replaced parts those specified in the list of parts? | |
| | | Is the part version correct? | |
| | Wires mounted | Are the part mounting position, fixing method, and the distance the same as those of original? | |
| | | Is the wiring layout the same as the original (connector, clamper, distance from a heat generating part, etc)? | |
| | | Is the soldering condition acceptable (whisker, too much solder, tunnel, failure in winding, etc)? | |
| | | Is the insulation material the same as the original (tubes, tapes, fiber, etc.)? | |
| Safety inspection after repairing | Are the repaired section and its peripheral parts free from abnormality? | | |
| | Is there any intrusion of foreign substances (solder chips, wire chips, screw chips, screws, etc.)? | | |
| | Is everything free from danger due to deterioration (discoloration, damage, leakage, etc.)? | | |
| | Is the safety protection circuit in normal operation? | | |
| | Are contamination and dust removed after final finish? | | |
| | Is there any failure in mounting and tightening (back cabinet, falling preventive materials, etc.)? | | |
| | Is there any influence by high temperatures (direct sunlight, stove, etc.), moisture (steam, etc.), oil fume, dust, and dew condensation? | | |
| | Is the condition of ventilation acceptable (distance to the wall, ventilation holes, etc.)? | | |
| | Is the condition of the antenna acceptable (reach to the wire, bend, tilt, etc.)? | | |
| | Is the condition of power supply acceptable (regular outlet, adequate earthing, concentrated wiring, etc.)? | | |
| | Is the condition of installation acceptable (unstability, height, tilt, falling preventive materials, etc.)? | | |
| | Is the insulation check finished with a circuit tester or the like? (Refer to the above description, "Method of insulation check.") | | |
| Explanation to the user | Are the contents and actual treatment of repairing and safety inspection services duly explained? | | |
| | Explanation of use | To use equipment after reading through the instruction manual. | |
| | | Not to dislodge the back cabinet. | |
| | | Not to insert anything in ventilation holes and clearances. | |
| | | To pull out the power plug if the product is not used for a long time. | |
| | | To ask an NEC's authorized maintenance service company for the cleaning of the product interior for the removal of dust. | |
| | | To turn off the power switch when cleaning the panel surface and the cabinet. | |
| | | To turn off the power switch of the main unit for the product provided with a remote control, in case of going out or sleeping. | |
| | Are explanations given to pull out the power plug in case of abnormality and to contact the dealer or an NEC's authorized maintenance service company. | | |

# CAUTION

**• Observe the caution matter, without fail**

• The caution matters of CAUTION given in the instruction manuals, etc., must be observed, without fail.

**• Do not give shocks and vibration.**

• The panel surface (display plane) of the filter and the PDP module is made of glass. If any shocks or vibration is applied, it may be broken and the scattered glass chips will be a cause of injury.

**• Do not put anything.**

• Do not put anything on the product. Otherwise, this can be a cause of injury as a result of falling down or dropping caused by imbalance.

**• Transportation must be done by enough personnel.**

• The product is heavy. In the case of transportation, unpacking, or packing, more than two persons should do it (four persons for a product of 50-inch or larger) by supporting the top and the bottom of the product.

## ■Miscellaneous caution matters

(1) This product uses highly integrated semiconductor parts. Since these parts are fragile to electrostatic charges, earth bands should be used for handling. The product should be handled where measures have been taken against electrostatic charges.

(2) For this product, the PDP modules and the PWBs are repaired by replacement in a unit. Therefore, the units of the PDP modules and the PWBs must not be repaired or disassembled. Otherwise, the validity of warranty will be lost.

(3) If this product is used for the fixed character display or the like as in the case of a character display board, a phenomenon of burning (not warranted) will occur. Burning is a phenomenon that the unevenness in the brightness is caused in the display. In such a case, the brightness in the section where the integrated display time is longer becomes lower than the brightness in another section where the integrated display time is shorter. This phenomenon is in proportion to the integrated display time and the brightness. For this reason, to relieve this difficulty during servicing, do not use any still picture, but use a display by motion pictures of a video or the like. In addition, use “FULL” for the screen mode and avoid using any display by “NORMAL”, “TRUE”, or MULTI SCREEN like side by side etc. If it is necessary to use only a still picture for unavoidable reasons, use a burning relief function such as “PLE LOCK”, “ORBITER”, “SCREEN WIPER”, etc.

(4) When a PDP module is operated after a long time of storage, it may encounter a difficulty like a failure in displaying a screen or unstability according to the condition of storage. In such a case, the PDP module should be incorporated in the product and aging treatment should be carried out for about two hours (all screen display).

(5) Sulfides will deteriorate the PDP module and this is a cause of malfunction. Therefore, it is absolutely prohibited to put any vulcanized rubber or a material containing sulfur in the vicinity of the PDP module.

(6) When taking out a PDP module from the maintenance package box, do it slowly so that the

panel surface does not get any shock or stress.

(7) If one touches the connector of the flexible cable exposed to the rear side of the PDP module, there is danger of causing a poor contact. As such, it must be handled with utmost care. In addition, the flexible cable is very weak in mechanical strength. Therefore, this cable must not be touched during handling.

(8) The panel surface of the filter and the PDP module is easy to be hurt. These components should be handled very carefully not to press or rub them with a hard thing. Never put them on a hard thing with the panel surface faced downwards.

(9) When the panel surface of the PDP module is contaminated, gently wipe off the contaminant with a piece of soft dry cloth. Liquid-state contamination can be removed by lightly pressing it, without rubbing it. If it is difficult to remove the contamination, use a piece of cloth soaked with a neutral detergent. The cloth for wiping off should be clean. Never use the same cloth repeatedly. If a cleansing detergent or water drops should enter the module interior or be attached to the module surface other than the display plane at the time of cleaning, this will give rise to the destruction of the product when the product is energized.

(10) Refer to the “Instruction Manual” in regard to contamination in the filter and the cabinet.

(11) When transporting this product, use the packing materials specified in the list of parts. Once used, such packing materials should not be used again.

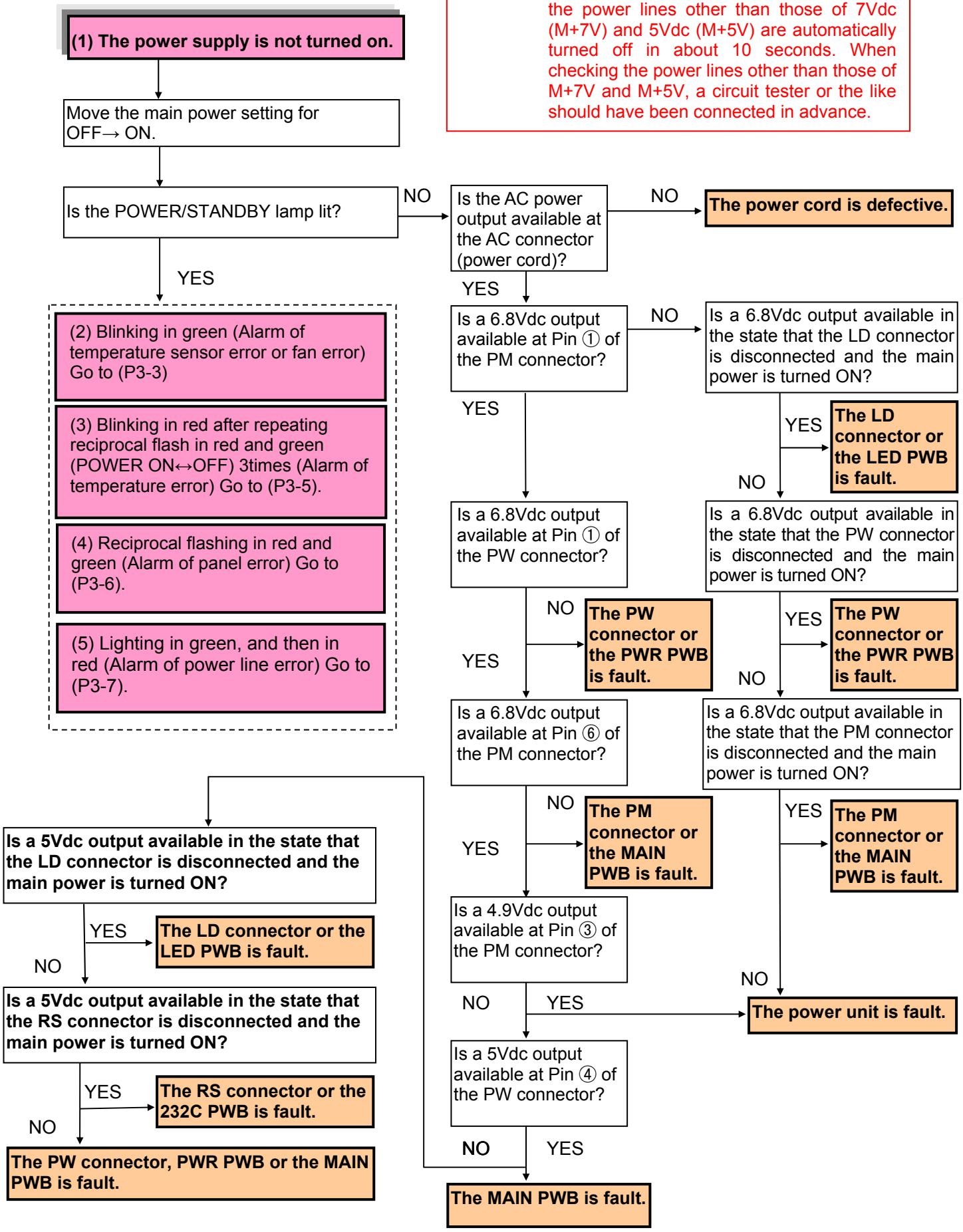
(12) This product is composed of a variety of parts, such as those made of materials like glass, metal, plastics, etc., and those like a lithium battery (circuit symbol of the MAIN PWB: BA9501), etc. Therefore, when abandoning this product, this should be done in accordance with the relevant law of the nation or an autonomous body.

CAUTION: Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to above the Instructions.

# TROUBLESHOOTING CONTENTS

## 1. Power failure

**(Caution)** If any abnormality is sensed in such a manner that the LED flashes or lights, all the power lines other than those of 7Vdc (M+7V) and 5Vdc (M+5V) are automatically turned off in about 10 seconds. When checking the power lines other than those of M+7V and M+5V, a circuit tester or the like should have been connected in advance.



## (2) Blinking in green

① Alarm of temperature sensor error

**Blinking in green (intervals of 2 seconds)**

Turn off the main power supply.

Pressing the [MENU] key of the product, turn on the main power supply to cancel alarming.

Press the remote control keys in the order of [MENU] [MUTE] [EXIT] [SLEEP] [EXIT] and enter the diagnostics menu. Press the [MENU/ENTER] key to display the FAN SET menu (P2/11).

**FAN SET**

FAN SET

| | | | |
|---|---|---|---|
| FAN MODE | H | CONT ENA | – |
| FAN OFF/L | – | CONT UP | – |
| FAN L/M | – | CONT TIME | – |
| FAN M/H | – | UP STEP | 2 |
| SF SAVE | 075 | DOWN STEP | 2 |
| PLE SAVE | 070 | READ TIME | 60 |
| T ALM | 095 | TEMP LEVEL | 1 |
| RET TME | 030 | | |
| PLE TIME | 001 | | |
| T1 030 | T2 025 | | |
| T3 030 | T4 – | MODE 2 | |
| IC ERROR | – | | |
| [MENU/ENTER] NEXT | | [EXIT] PREV | 2/11 |

Is there a display of numerals (almost room temperatures) at the right side of [T1, T2, T3]?

YES → **The MAIN PWB is fault.**

NO

Is there a display of [-] for all the numerals at the right side of [T1, T2, T3]?

NO → **When a [-] display is presented, the PWB with the symbol shown below is fault. T1: SEND PWB, T2: SENB PWB, T3: SENC PWB**

YES

Are there a 3.3Vdc output at Pin ③ and a clock signal (3.3Vpp) at Pins ① and ④ of the TS in the state that the TS connector is disconnected and the main power supply is turned on?

NO → Are there a 3.3Vdc output at Pin ③ and a clock signal (3.3Vpp) at Pins ① and ④ of the TR in the state that the TR connector is disconnected and the main power supply is turned on?

NO → Are there a 3.3Vdc output at Pin ③ and a clock signal (3.3Vpp) at Pins ① and ④ of the TM in the state that the TM connector is disconnected and the main power supply is turned on?

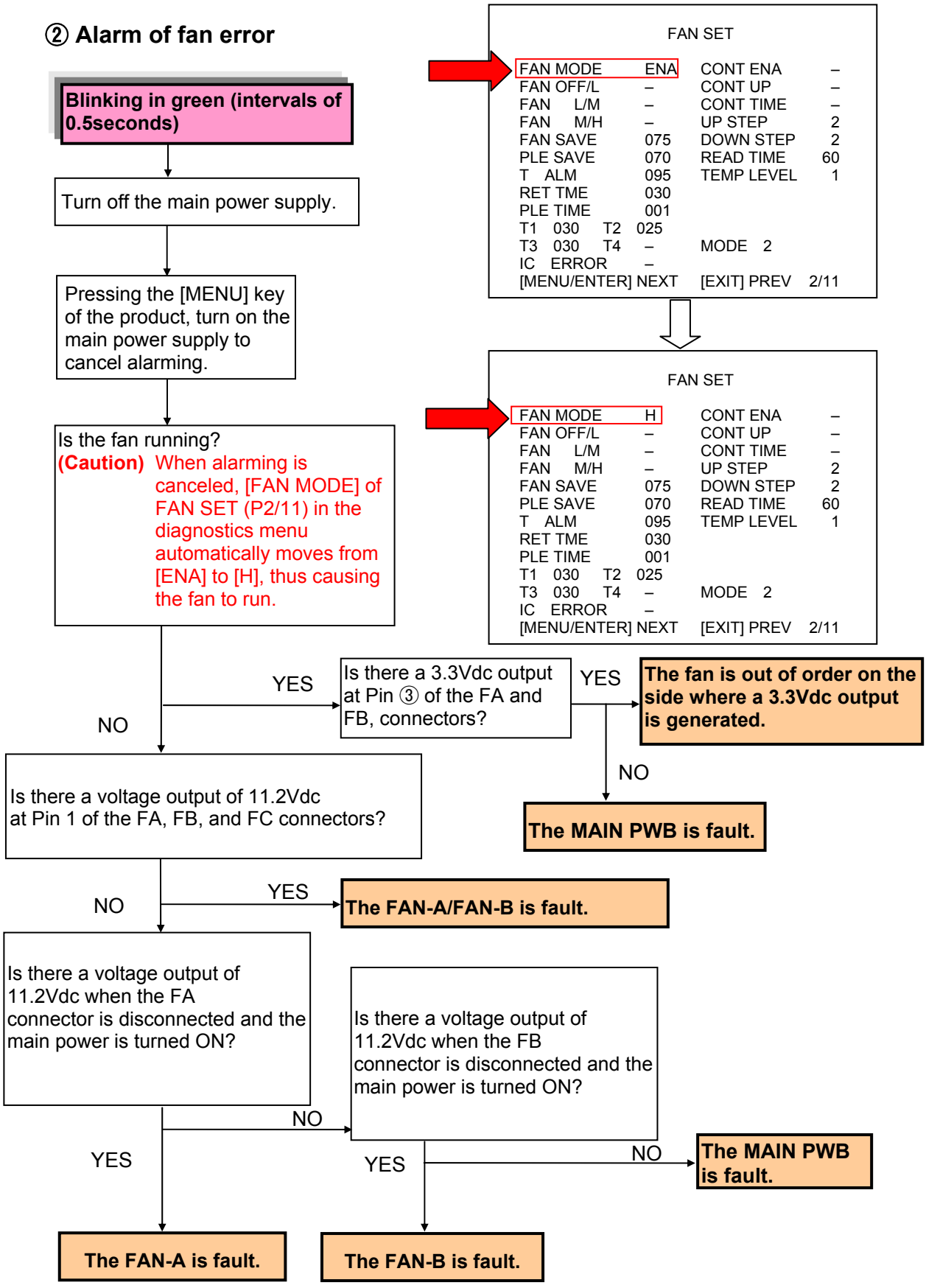
NO → **The MAIN PWB is fault.**

YES → **The TS connector or the SENC PWB is fault.**

YES → **The TR connector or the SEND PWB is fault.**

YES → **The TM connector or the SENB PWB is fault.**

## ② Alarm of fan error




**(Caution)** In the FAN MODE, [ENA] is automatically recovered when the main power is turned OFF → ON.

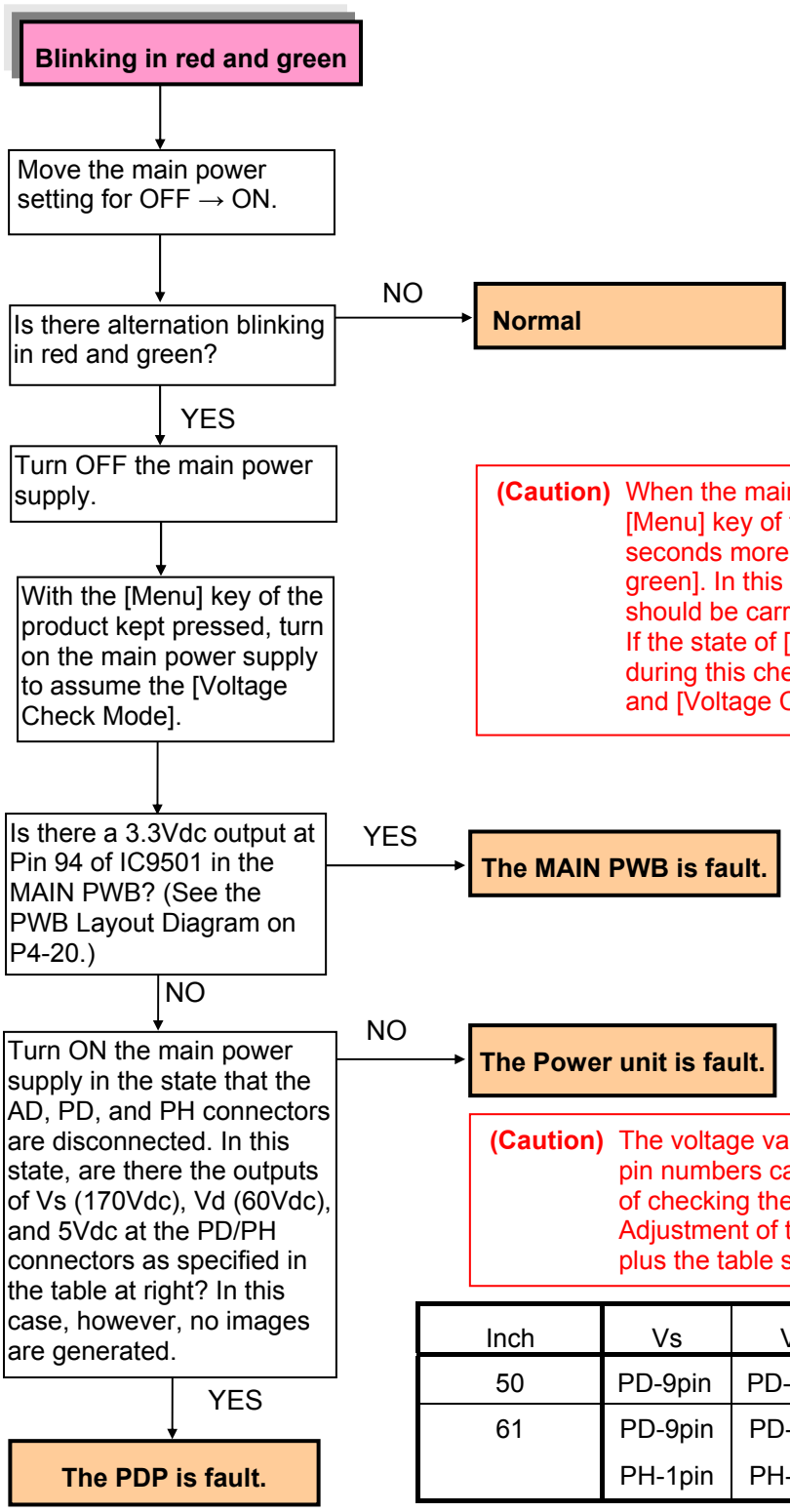
### (3) Blinking in red (Alarm of temperature error)

Since the internal temperature is too high in the product, the temperature protector has been actuated. In such a case, the following actions should be taken immediately:

1. Turn off the main power supply and pull out the power cord from the wall outlet.
2. Wait for about 60 minutes until the temperature in the main unit lowers.
3. Check whether the heat discharge port is covered with dust or the like. If yes, remove the clogging substance.
4. If the unit is used where the ambient temperature is high, it should be moved to an adequate place (air temperature ranging from 5°C to 35°C).

## (4) Alternation blinking in red and green (Alarm of PDP error)

**(Caution)** How to reset the alarming condition
Pressing the [Input Select] key of the product, turn on the main power supply of the main unit. In this state, keep pressing the [Input Select] key for more than 2 seconds until alarming is canceled. Make confirmation by the method specified below.



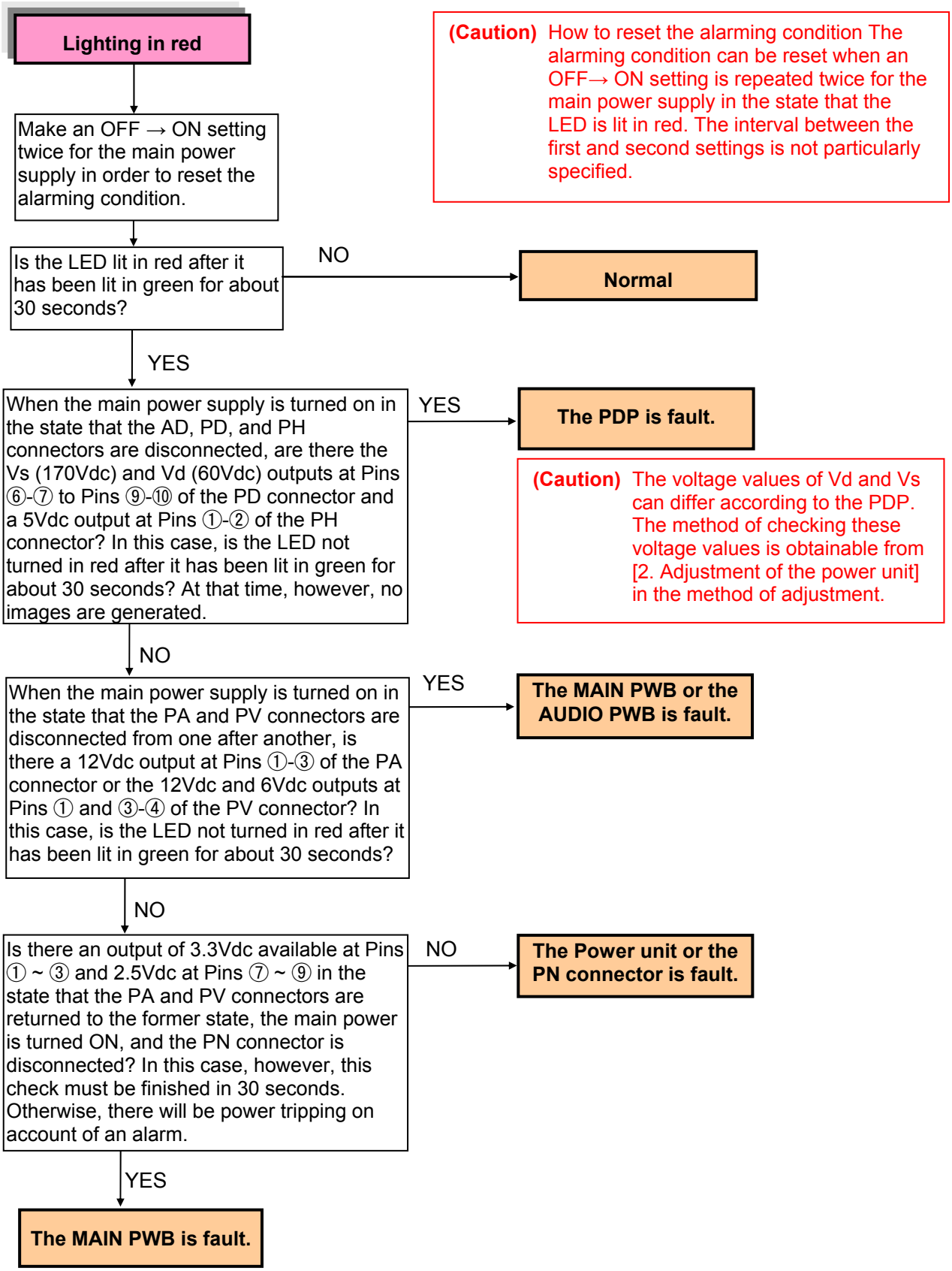

**(Caution)** When the main power supply is turned on with the [Menu] key of the product kept pressed, it takes 30 seconds more to assume the state of [blinking in red and green]. In this time period, the following voltage checks should be carried out.
If the state of [blinking in red and green] is assumed during this checking, take actions of [Alarm Canceling] and [Voltage Check Mode Setup] again.

**(Caution)** The voltage values of Vd and Vs and also the connector pin numbers can differ according to the PDP. The method of checking these voltage values is obtainable from [2. Adjustment of the power unit] in the method of adjustment plus the table specified below.

| Inch | Vs | Vd | GND | 5Vdc | GND |
|---|---|---|---|---|---|
| 50 | PD-9pin | PD-7pin | PD-5pin | PH-1pin | PH-3pin |
| 61 | PD-9pin | PD-7pin | PD-5pin | PD-4pin | PD-5pin |
| | PH-1pin | PH-4pin | PH-5pin | PH-7pin | PH-5pin |

## (5) Lighting in green, and then in red (Alarm of power voltage error)

Unlike [lighting in red] in the STANDBY mode, [lighting in green] continues for about 30 seconds without any output of images and audio signals. Since then, the mode turns into [lighting in red].



## 2. Image errors

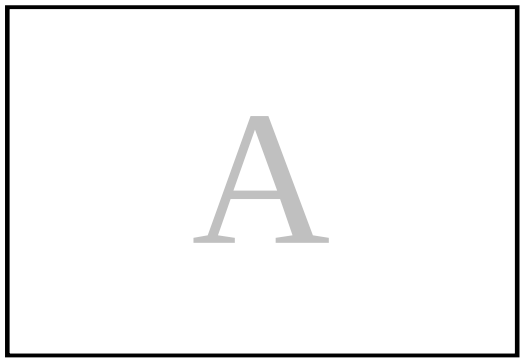
**(Caution)** Typical abnormal images are shown below. All errors do not always fall on these error samples.

**(1) Image burn and deterioration in brightness**

**Residual images are seen without signal entry.**

↓

**This is not a fault.**




**No signal**

**Deterioration in brightness**

↓

**This is not a fault.**

**All-whitesignal**

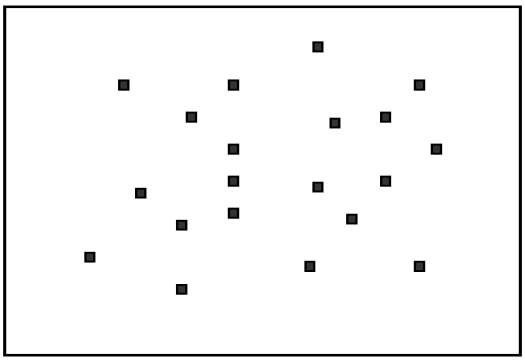
**(2) Failure in writing**

**Failure in writing**

↓

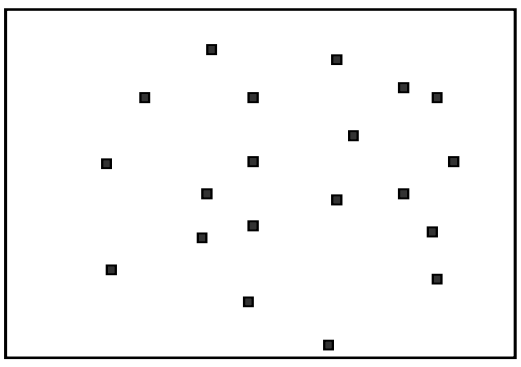
**The PDP is fault.**

(To the separate PDP service manual)



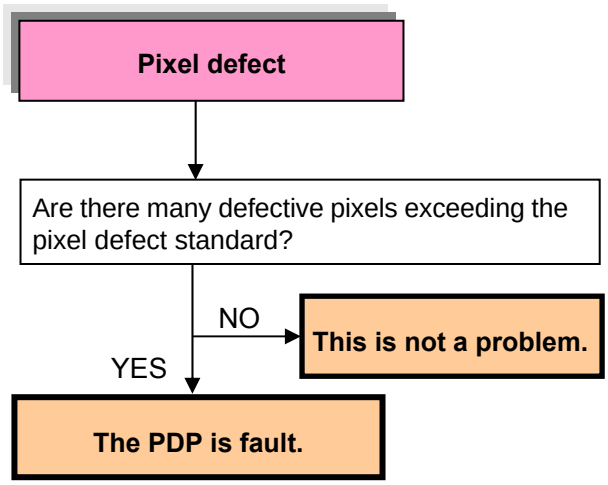
**All-whitesignal**

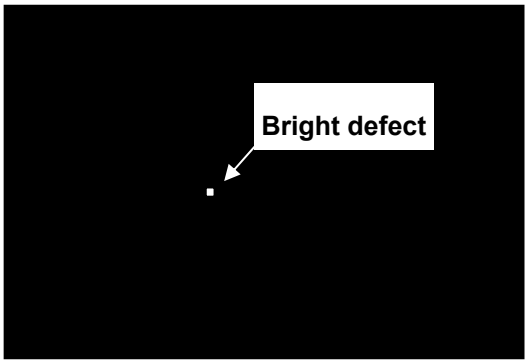
Dot errors change with no continuity.



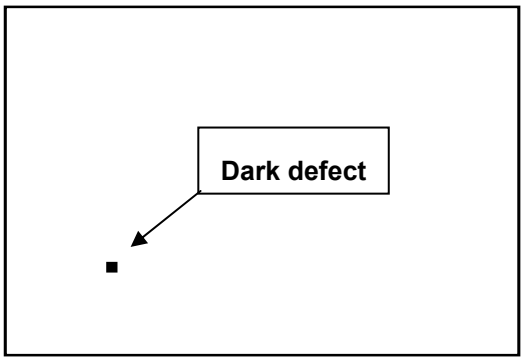
**All-whitesignal**

**(3) Pixel defect**



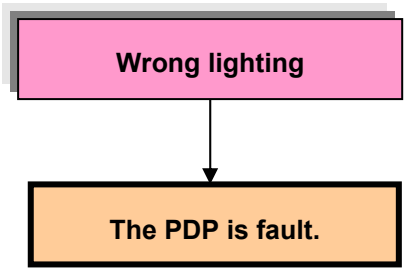




**(Fig. 1) All-Black Signal**

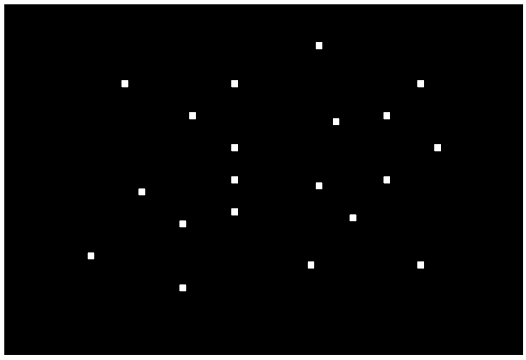



**(Fig. 2) All-White Signal**

**(4) Wrong lighting**

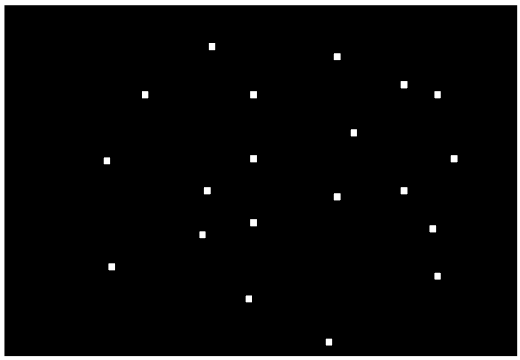



(To the separate PDP service manual)



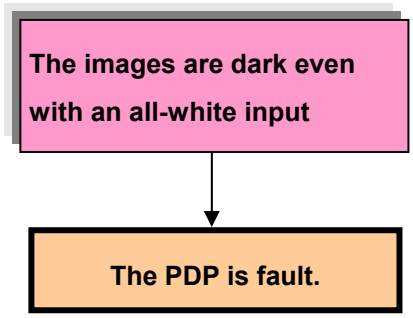
**All-black signal**

Dot errors change with no continuity.



**All-black signal**

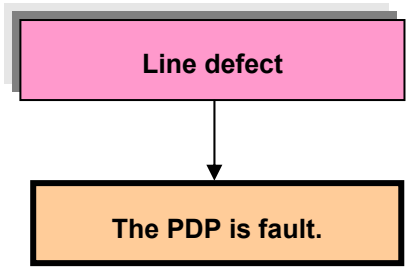
**(5) Dark images [Other than the deterioration in brightness as per (1) above]**



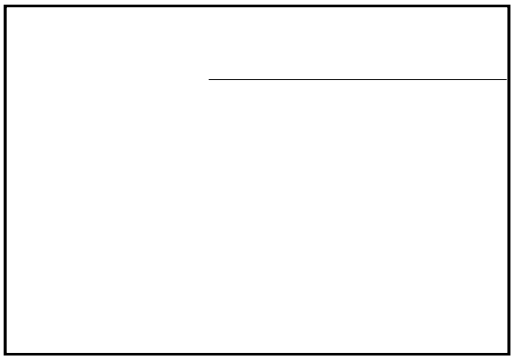

(To the separate PDP service manual)

**All-white signal**

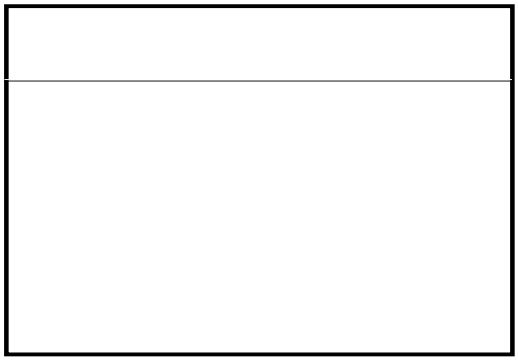
**(6) Defect in horizontal lines**



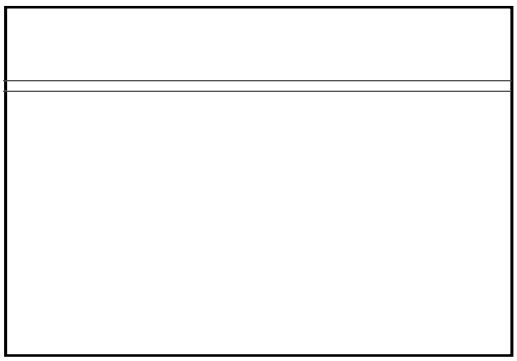

(To the separate PDP service manual)



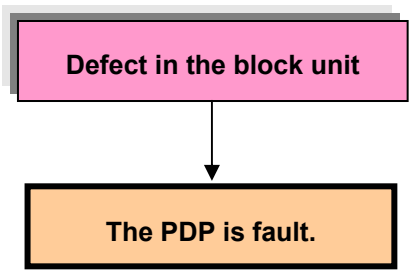
**All-white signal**

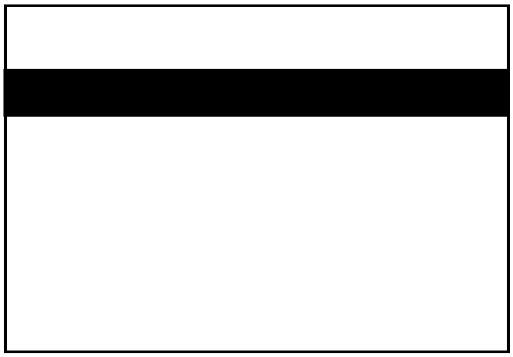


All-white signal



All-white signal

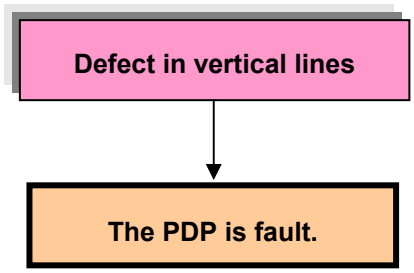


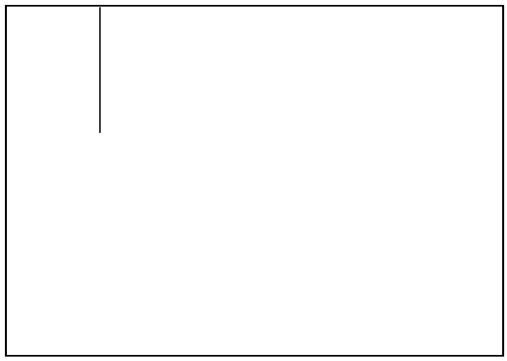



All-white signal

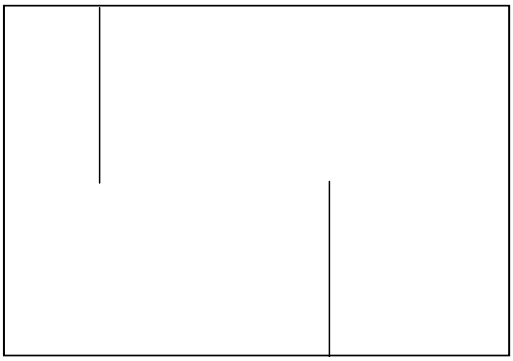
All-white signal

**(7) Defect in vertical lines**

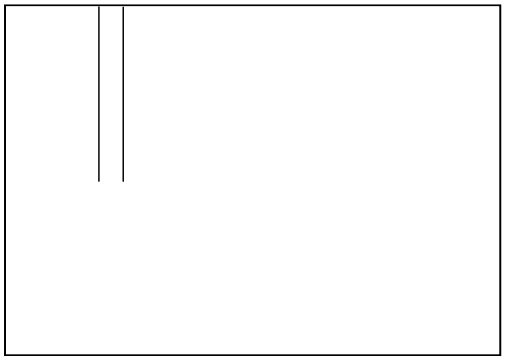


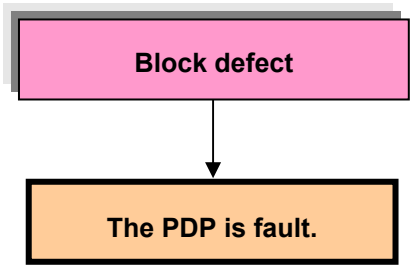
All-white signal

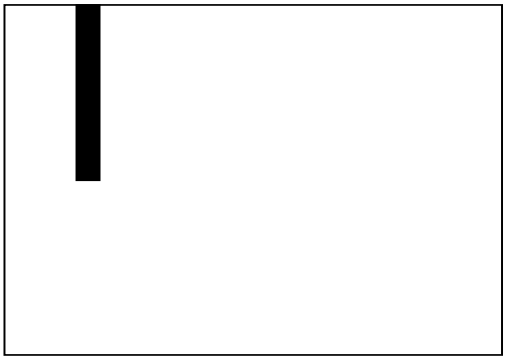


All-white signal

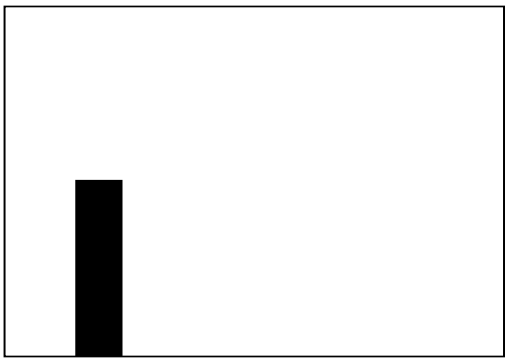


All-white signal

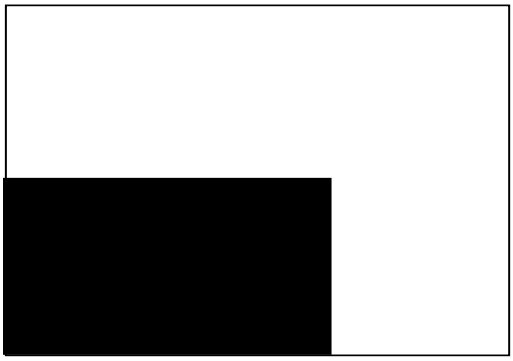


All-white signal

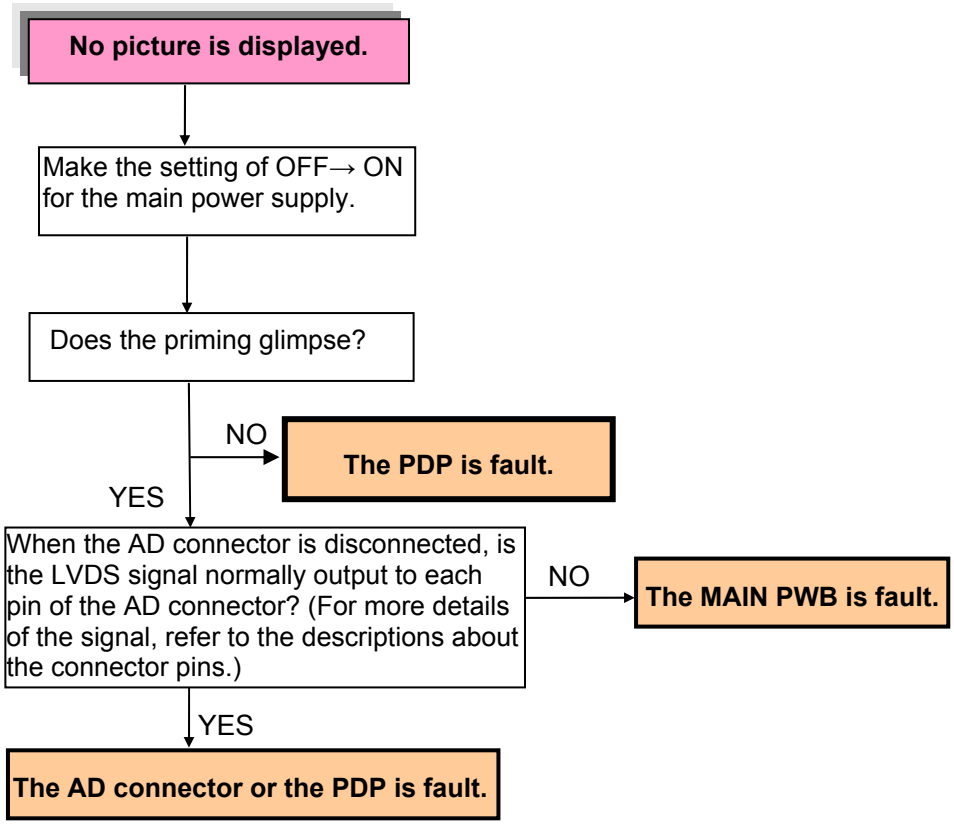


**All-white signal**



**All-white signal**

**(8) No pictures** [**(Caution)** The voltage outputs of Vs = 170V and Vd = 64V, 5Vdc are always generated, but the LED is not flashing or lighting for alarming. However, the voltage values can differ according to the PDP.]



## 3. Audio errors

**(Caution)** In regard to the method of audio input setting, refer to the specifications and the instruction manual to confirm that all the setting is free from errors. Since then, troubleshooting can be carried out. It must be noted that the protector functions and no audio output is available if the opposing electrodes of the speaker output or the speaker output and the ground (GND) are short-circuited. In such a case, turn off the main power supply and make the connections correctly. The protector is reset when the main power supply is turned on after that.

**Audio errors**

In the state that the speaker cable is disconnected, is the audio signal output available at the speaker terminal?

YES → **The speaker or the speaker cable is fault.**

NO

Is the voltage output specified below available at each pin of the PA connector in the AUDIO PWB?

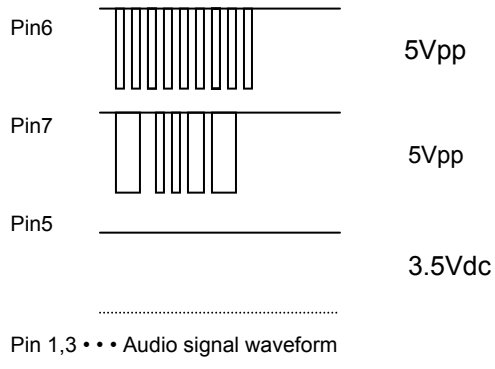
NO → **The power unit or the PA connector is fault.**

| Pin_NO | Name | Voltage |
|---|---|---|
| 1 | S+12 | 12Vdc |
| 2 | S+12 | 12Vdc |
| 3 | S+12 | 12Vdc |
| 4 | GND | GND |
| 5 | GND | GND |
| 6 | GND | GND |

YES

Is the waveform specified below output to the AU connector of the AUDIO PWB?

NO → **The MAIN PWB or the AU connector is fault.**




YES

**The AUDIO PWB is fault.**

## 4. Remote control not effective

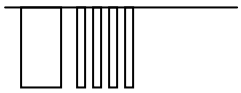
### (1) The wired remote control is not effective.

① When a single item is used

**(Caution)** The wired remote control is not effective if the setting of [PLE LINK], or [Repeat TIMER] is ON, or if the setting of [ID NUMBER] has been made. Therefore, such a setting should be turned off, without fail. Since then, troubleshooting can be carried out.

**The wired remote control is not effective.**

Is there a signal output specified below at Pin 7 of the RS connector?

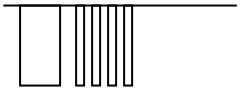


3.3Vpp

YES → **The RS connector or the MAIN PWB is fault.**

NO

Is there a signal output specified below at Pin 3 of the M2003? (Refer to the PWB layout diagram on Page P4-21.)



5Vpp

NO → **Is there a 3.3Vdc output at Pin 2 of the M2003? (Refer to the PWB layout diagram on Page P4-21.)**

YES → **The remote control or the remote control cable is fault.**

NO → **The RS232C PWB is fault.**

YES

When the RS connector is disconnected, is there a signal output specified below at the RS connector of the MAIN PWB?

| Pin No. | Pin name | Voltage |
|---|---|---|
| 1 | M+5V | 5Vdc |
| 5 | M+3.3V | 3.3Vdc |

NO → **The RS connector or the MAIN PWB is fault.**

YES

**The 232C PWB is fault.**

② When a daisy chain (including the video wall) is used

**The wired remote control is not effective.**

Are the 0Vdc and 5Vdc outputs respectively available at Pins 9 and 10 of the RS connector in the standard product of 232C PWB?

YES → Is there a clock signal output at Pin 3 of the M2004? (Refer to the PWB layout diagram on Page P4-21.)

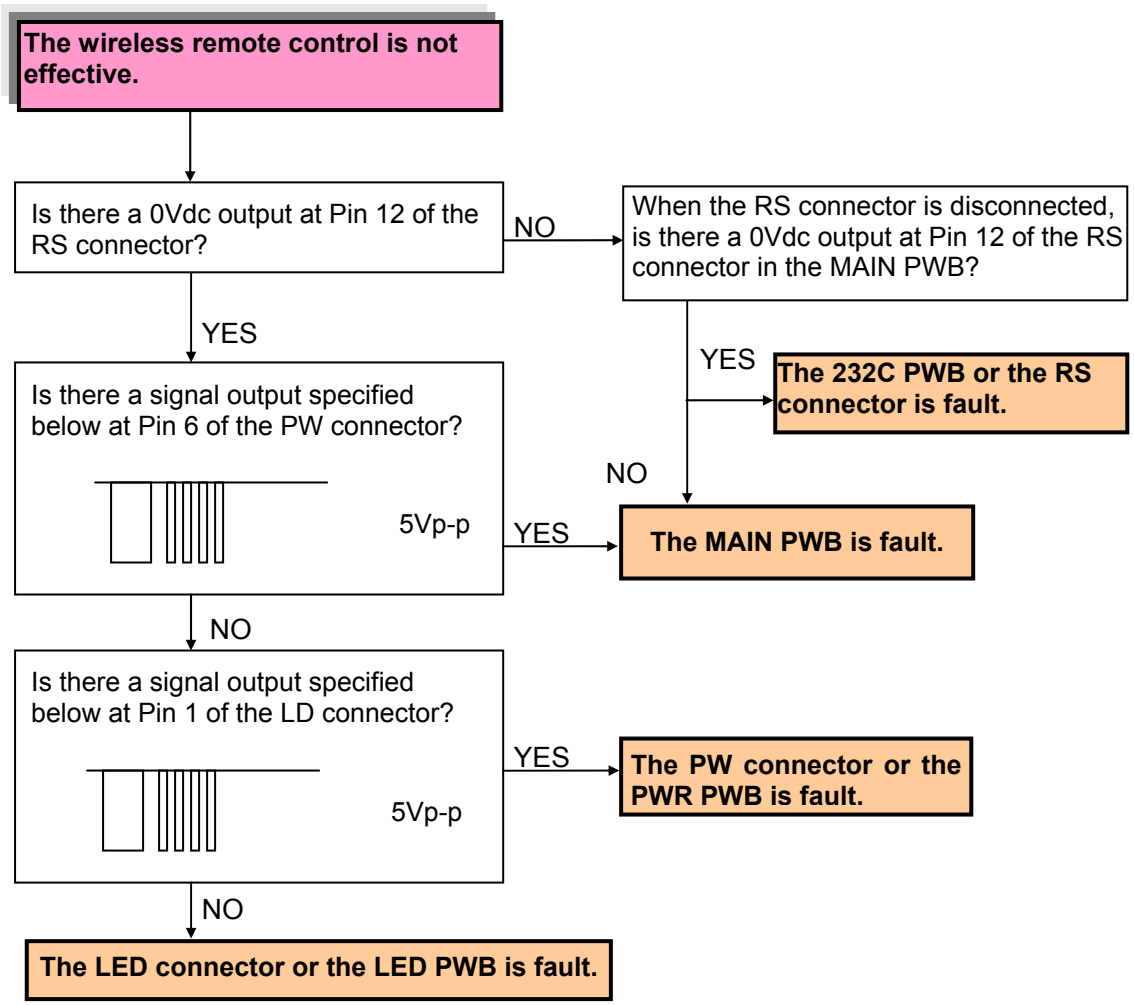
YES → **Check the products of second and thereafter according to "1 When a single item is used."**

NO → **The 232C PWB is fault.**

NO → **The MAIN PWB is fault.**

**(2) The wireless remote control is not effective.**

**(Caution)** Since the detection of “wired” or “wireless” is conducted for the remote control through the remote terminal, it is necessary to pull out the remote control cable from the remote terminal, without fail. Troubleshooting should be carried out after confirming that “IR REMOTE” is set at ON and that “ID NUMBER” is at ALL according to the user’s menu.



# METHOD OF ADJUSTMENTS

## ■Adjusting conditions

**Adjustments should be carried out in the procedures of A to D specified below. However, any adjustments other than the items A to D below are not required.**

**A. When the "PDP module" is replaced, adjustments should conform to the adjusting items of [1 and 2] specified below.**

**B. When the "POWER UNIT" is replaced, adjustments should conform to the adjusting item of [2] specified below.**

**C. When the "MAIN PWB" is replaced, adjustments should conform to the adjusting item of [3] specified below.**

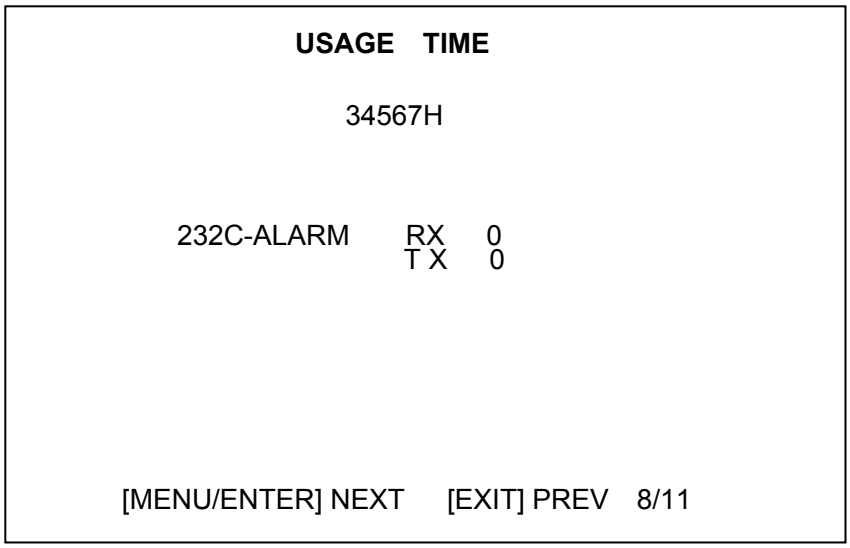
**D. When the "HIGH VOLTAGE PWB" is replaced, adjustments should conform to the adjusting item of [4] specified below.**

## ■Adjusting items

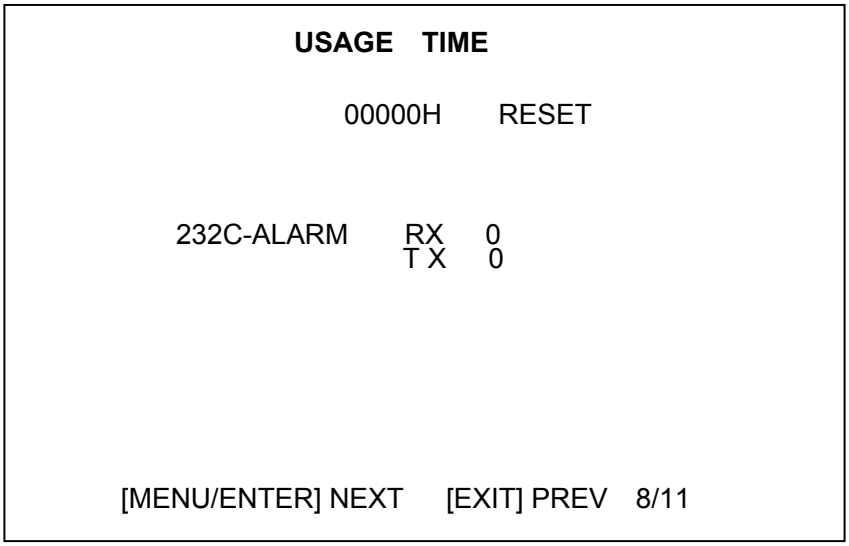
### 1. Clearing of the usage time (Using the remote control)

(1) Press the keys in the order of [MENU] [MUTE] [EXIT] [SLEEP] [EXIT] in order to enter the diagnostics menu.

(2) Press the [MENU/ENTER] key to select the [USAGE TIME] menu (8/11). Then, the integrated time [34567 (hours)] (example) accumulated till the present time is displayed when the main power supply is turned on (except for the standby mode).




(3) When the keys are pressed in the order of [MUTE] → POSITION/CONTROL [ ▲ ] → POSITION/CONTROL [ ▼ ] → [SLEEP], the display is cleared to [00000H]. At that time, the characters of [RESET] are displayed for about 5 seconds on the right side of time display.



## 2-2. For PD-5050

### 2-2-1. Adjustment of the Vs voltage

(1) Enter a color bar input by means of either video signal of VIDEO input, or DVD/HD input, or RGB input, and turn on the power switch of the main unit.

(2) Turn the volume control (RV6) in the power unit and make adjustments until the voltages of CH2 and CH1 (D, GND) of the power unit attain the voltage values specified for the PDP (Vs value of the voltage regulation indicator label on below the figure) ±1V.

### 2-2-2. Adjustment of the Vd voltage

(1) Enter a color bar input by means of either video signal of VIDEO input, or DVD/HD input, or RGB input, and turn on the power switch of the main unit.

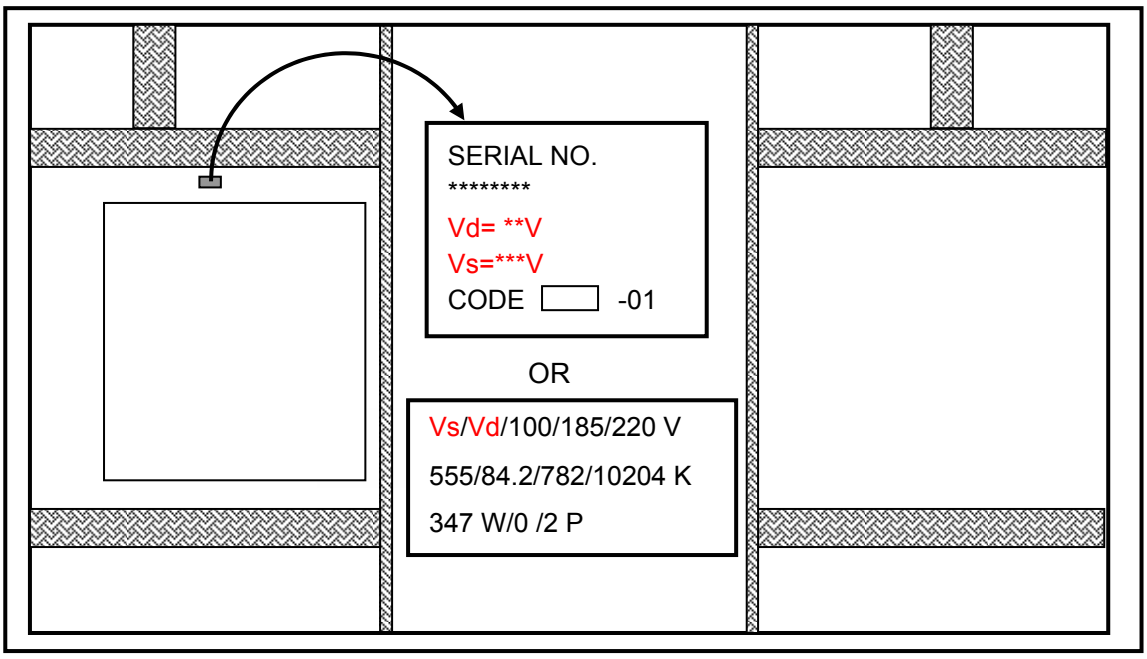
(2) Confirm that the voltages of CH4 and CH1 (D, GND) of the power unit are maintained at the voltage values specified for the PDP (Vd value of the voltage regulation indicator label on below the figure) ±1V.

Otherwise, turn the volume control (RV5) until the voltage attains the voltage values specified for the PDP (Vd value of the voltage regulation indicator label on below the figure) ±1V.

### 2-2-3. Adjustment of the +5V voltage

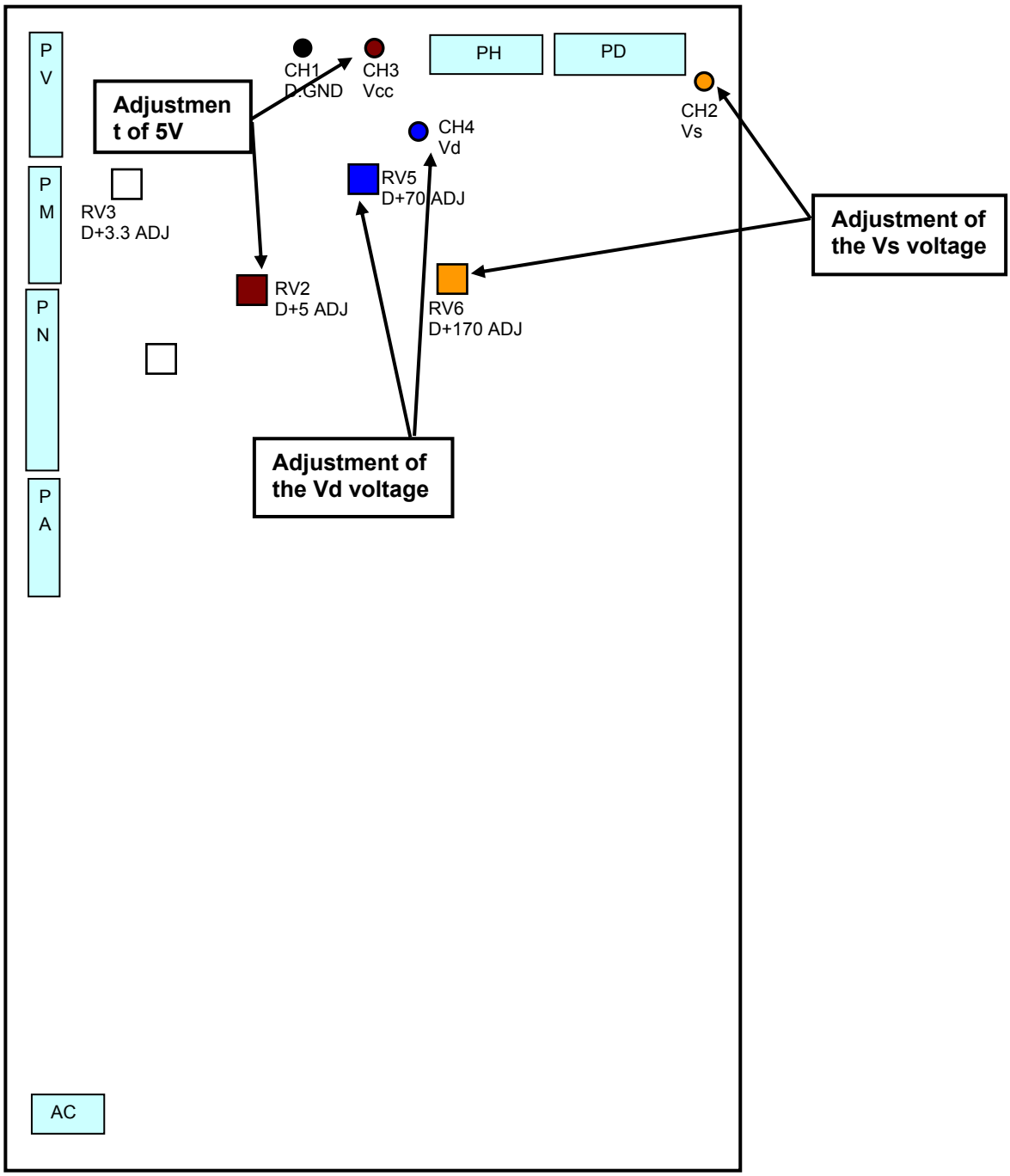
(1) Display a color bar by means of either video signal of VIDEO input, or DVD/HD input, or RGB input.

(2) Confirm that the voltages of CH3 and CH1 (D, GND) of the power unit are maintained at "5.15 ± 0.1V". Otherwise, turn the volume control (RV2) until the voltage attains "5.15 ± 0.1V".




**(Caution)** Rear-side view when the back cover is removed The label is concealed between the MAIN PWB and PDP. Check it by peeping through the space from above. The label position can be changed, without notice.

*** Top view of the power unit for the PD-5050**



## 3. Adjustments after the replacement of the MAIN PWB (Using the remote control)

### 3-1. Product serial No. registration

(1) Press the keys in the order of [MENU] [MUTE] [EXIT] [SLEEP] [EXIT] in order to enter the diagnostics menu.

(2) Press the [MENU/ENTER] key to select the [MONITOR INFORMATION] No. menu. (Example : PX-50XR4A)

**MONITOR INFORMATION**

MODEL NAME
: PX-50XR4A

SERIAL/NUMBER
:

SOFT WARE VERSION
: F123

USAGE TIME
: 00000H

T1 025 T2 025
T3 025 T4 - -

[MENU/ENTER] NEXT [EXIT] PREV

(3) Press the [FORMAT] key 4 times to display a cursor ▮ in the lower column of [SERIAL/NUMBER].

**MONITOR INFORMATION**

MODEL NAME
: PX-50XR4A ← **(Caution 1)**

SERIAL/NUMBER
: ▮

SOFT WARE VERSION
: F123 ← **(Caution 2)**

USAGE TIME
: 00000H

T1 025 T2 025
T3 025 T4 - -

[MENU/ENTER] NEXT [EXIT] PREV

**(Caution 1)** No modification is possible here because this modification is already finished by 3-2. Factory shipment setting (initial setting).

**(Caution 2)** No modification is possible here because registration is already finished at the time of shipment in terms of maintenance parts.

(4) Moving the POSITION/CONTROL keys of [ ▲ ] and [ ▼ ], select the numerals and characters of the serial number that is listed in the serial label located on the rear surface of the product. Register the serial number. (Blank → 0 ~ 9 → A ~ Z)

(5) Moving the POSITION/CONTROL keys of [ ◀ ] and [ ▶ ], select the next digit by means of a cursor.

(6) Repeat the processes of (4) and (5) above and register the serial number completely.

**• How to read the serial number**

Serial No. ① ② ③ ④⑤⑥⑦ ⑧ ⑨

① ····· Year of manufacture (lower one digit of the year)

② ····· Month of manufacture (January to September = 1 to 9, October = X, November = Y, December =Z)

③ ····· GS model: 1, Other than GS model: 0

④⑤⑥⑦ ····· Serial numbers of 0001 to 9999. The serial number starts with 0001 in each month of production. There is no duplication or missing of the number in the same month.

⑧ ····· Place of manufacture

⑨ ····· Control number S→A→M→T→Z→N→K→U→C→W→J→P

(* Arbitrary for the first symbol)

(Example) First unit in March 1999 → 93000019C

First unit in November 2000 → 0Y000019W

**(Example) When entering a serial number of [2900123 9Z]**

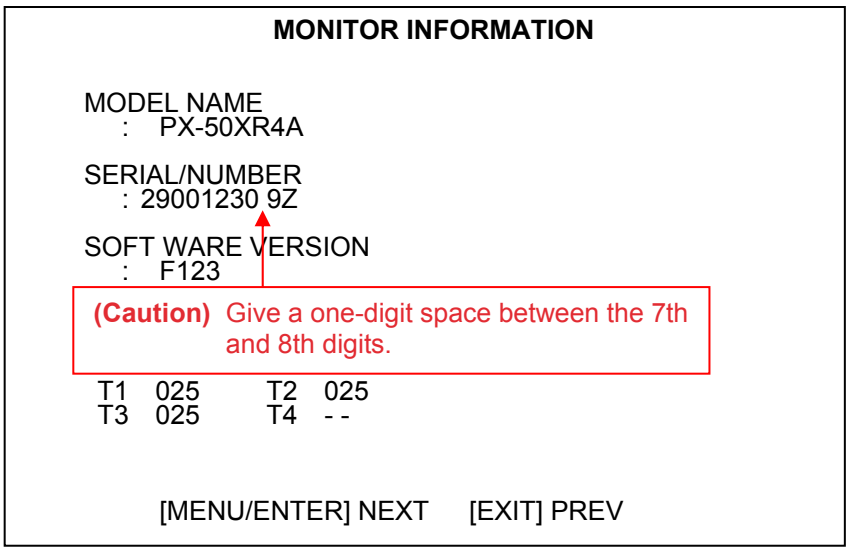
① Move the POSITION/CONTROL keys of [ ▲ ] and [ ▼ ] to select [2].

```
MONITOR INFORMATION

MODEL NAME
   :  PX-50XR4A

SERIAL/NUMBER
   : 2

SOFT WARE VERSION
   :  F123

USAGE TIME
   :  00000H

 T1  025      T2  025
 T3  025      T4  - -


      [MENU/ENTER] NEXT    [EXIT] PREV
```

② Move the POSITION/CONTROL keys of [ ◀ ] and [ ▶ ] to select the next digit.

```
MONITOR INFORMATION

MODEL NAME
   :  PX-50XR4A

SERIAL/NUMBER
   : 2

SOFT WARE VERSION
   :  F123

USAGE TIME
   :  00000H

 T1  025      T2  025
 T3  025      T4  - -


      [MENU/ENTER] NEXT    [EXIT] PREV
```

③ Repeat the procedures of ① and ② above, and enter all inputs of [2900123 9Z] from the left side.



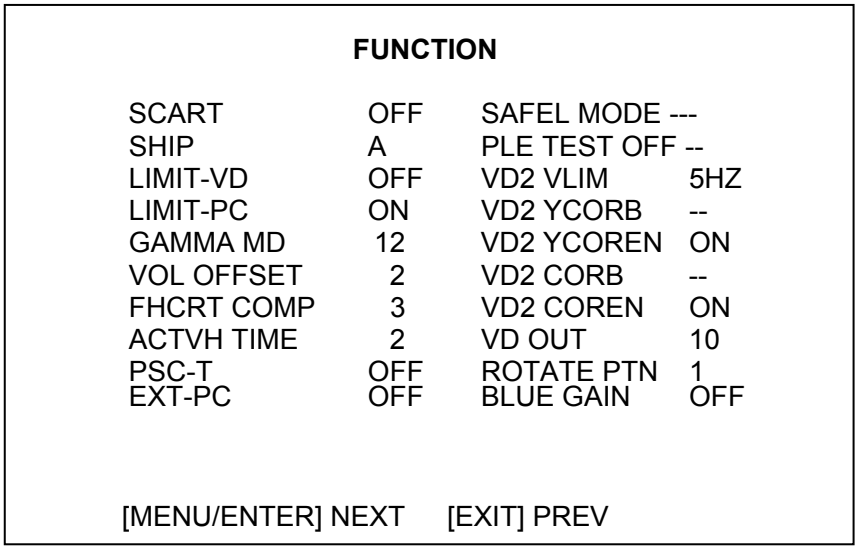

(7) Following the above, setting must be carried out without fail according to "3-2. Factory shipment setting (Initial setting)"

### 3-2.Factory shipment setting (Initial setting)

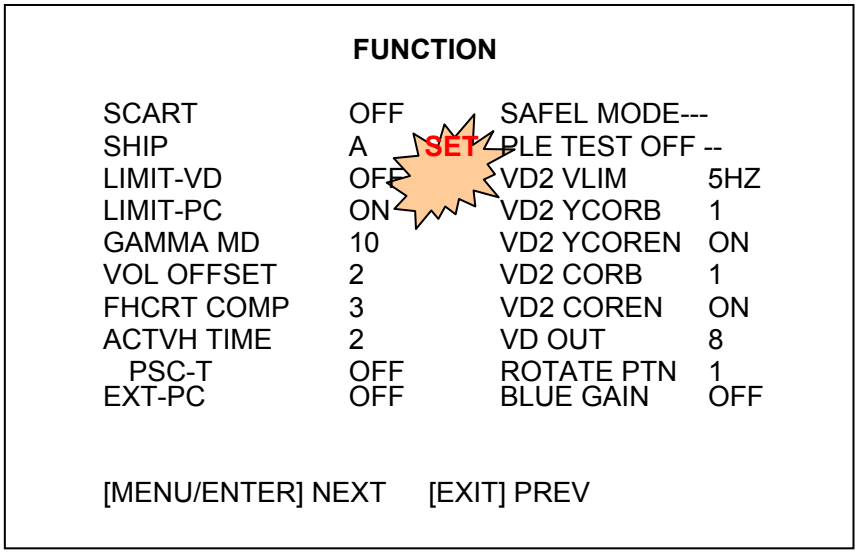
(1) Press the [MENU/ENTER] ke to select the [FUNCTION] menu.

(2) Move the POSITION/CONTROL keys of [ ▲ ] and [ ▼ ] to the item of [SHIP]. Then, move the POSITION/CONTROL keys of [ ◀ ] and [ ▶ ] to select [DESTINATION ALPHABETS] shown below. (The asterisks * shown below denote the numerals or the characters.)

| | | | |
|---|---|---|---|
| J : PX-*****J | JW : | OEM Specifications for use in Japan |
| A : PX-*****A | AW : | OEM Specifications for North America (PD-5050) |
| G : PX-*****G | GW : | OEM Specifications for European countries |
| W : PX-*****W | WW : | OEM Specifications for zones other than the above |




(3) Press the keys in the order of [MUTE] → POSITION/CONTROL [ ▲ ] → POSITION/CONTROL [ ▼ ] → [SLEEP] to make "Factory shipment setting". When "Factory shipment setting" is executed, the red characters of [SET] is shown for about 5 seconds on the right side of the [DESTINATION ALPHABETS]. The setting is finished when these red characters of [SET] go out. In regard to the factory shipment setting values, refer to the descriptions given below.




(4) Press the keys of the remote control in the order of [MENU] [MUTE] [EXIT] [SLEEP] [EXIT] in order to withdraw from the Factory shipment setting.

**[Factory shipment setting values]**

1. Initial setting values for the user menu

| MENU | A | |
|---|---|---|
| POWER ON/OFF | ON | |
| VOLUME | 10step | |
| INPUT MODE | VIDEO1 | |
| WIDE MODE | STADIUM | |
| AUTO PICTURE | OFF (RGB1~3) | |
| HD SELECT | 1080I | |
| LANGUAGE | ENGLISH | |
| COLOR SYSTEM | AUTO | |
| All items intended to recover the initial values through the selection of [All Reset] in the user menu | Initial values | |

I

2. Field menu initial setup values (applicable in common to all models)

| MENU | | A | | | | |
|---|---|---|---|---|---|---|
| SERVICE | SHIP | A | | | | |
| | PSC-LIMIT | OFF | | | | |
| | LIMIT-PC | ON | | | | |
| | U-SCAN | OFF | | | | |
| | V-FREQ OT | AUTO | | | | |
| | V-FREQ VD | AUTO | | | | |
| | SYNCLEVEL1 | TTL | | | | |
| | SYNCLEVEL2 | TTL | | | | |
| | SUB-ORB | ON | | | | |
| | PIC FREEZE | ON | | | | |
| MONITOR INFORMATION | MODEL NAME | PD-5050 | | | | |

PD-5050: 50-WXGA,

PD-6150: 61-WXGA,

3. Initial setting values for the Factory shipment setting menu The table shown below specifies only the items that can be changed in the factory adjusting mode. Therefore, any setting values of the items not specified below cannot be modified.

| MENU | | A | | | |
|---|---|---|---|---|---|
| | SHIP | A | | | |
| | LIMIT-PC | ON | | | |
| MONITOR INFORMATION | SERIAL/ NUMBER | - | - | - | - |

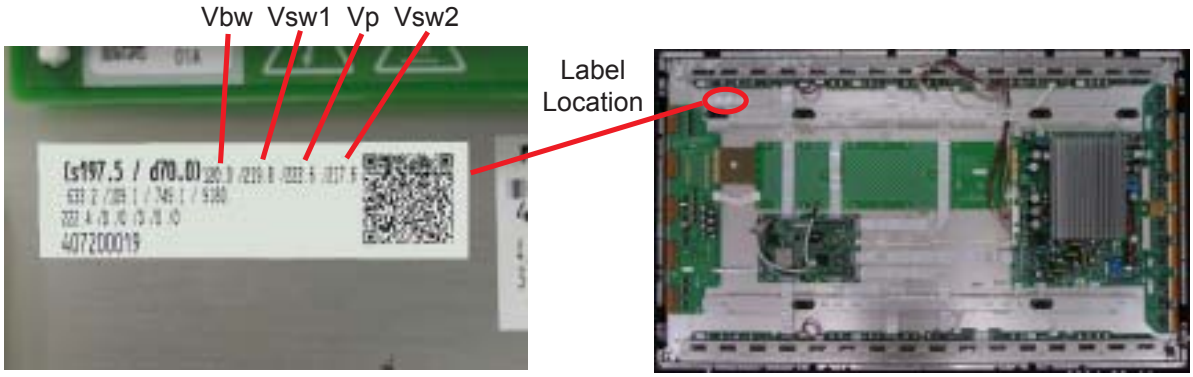
## 4. Adjustments after the replacement of the High Voltage PWB.

### 4-1 Condition of Adjustment

(1) After the High Voltage PWB has been replaced, perform the Vsw1, Vsw2, Vp and Vbw adjustments in the order described.

### 4-2 Voltage Label Check

(1) Prior to adjustment, note the voltage levels recorded on the Voltage Label as shown.




**Example:**

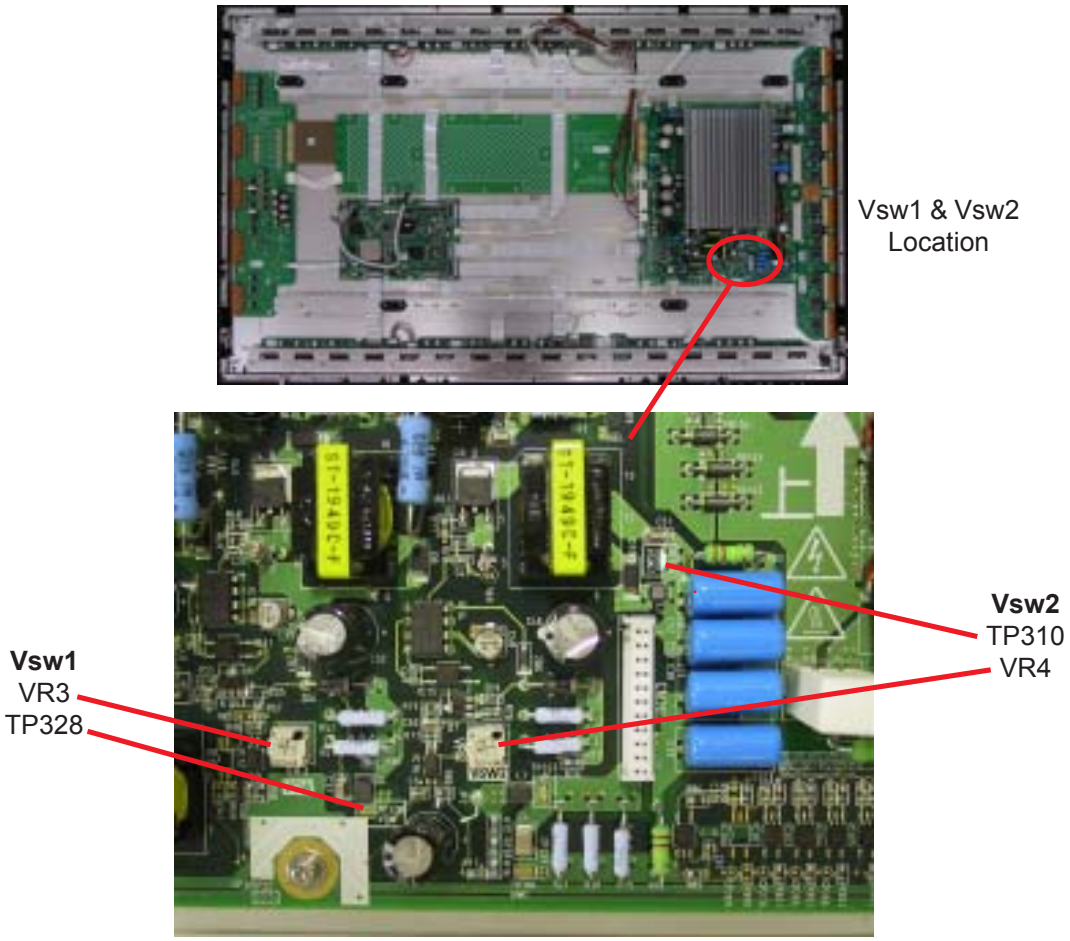
Vbw : 120.3
Vsw1 : 219.8
Vp : 222.6
Vsw2 : 217.6

### 4-3 Vsw1 & Vsw2 Adjustments

Note: Measure voltage between the TP and closest Chassis Ground.

(1) Vsw1 - Adjust VR3 so the voltage at TP328 is set to the level specified for Vsw1 on the Voltage Label +/- 0.5V.

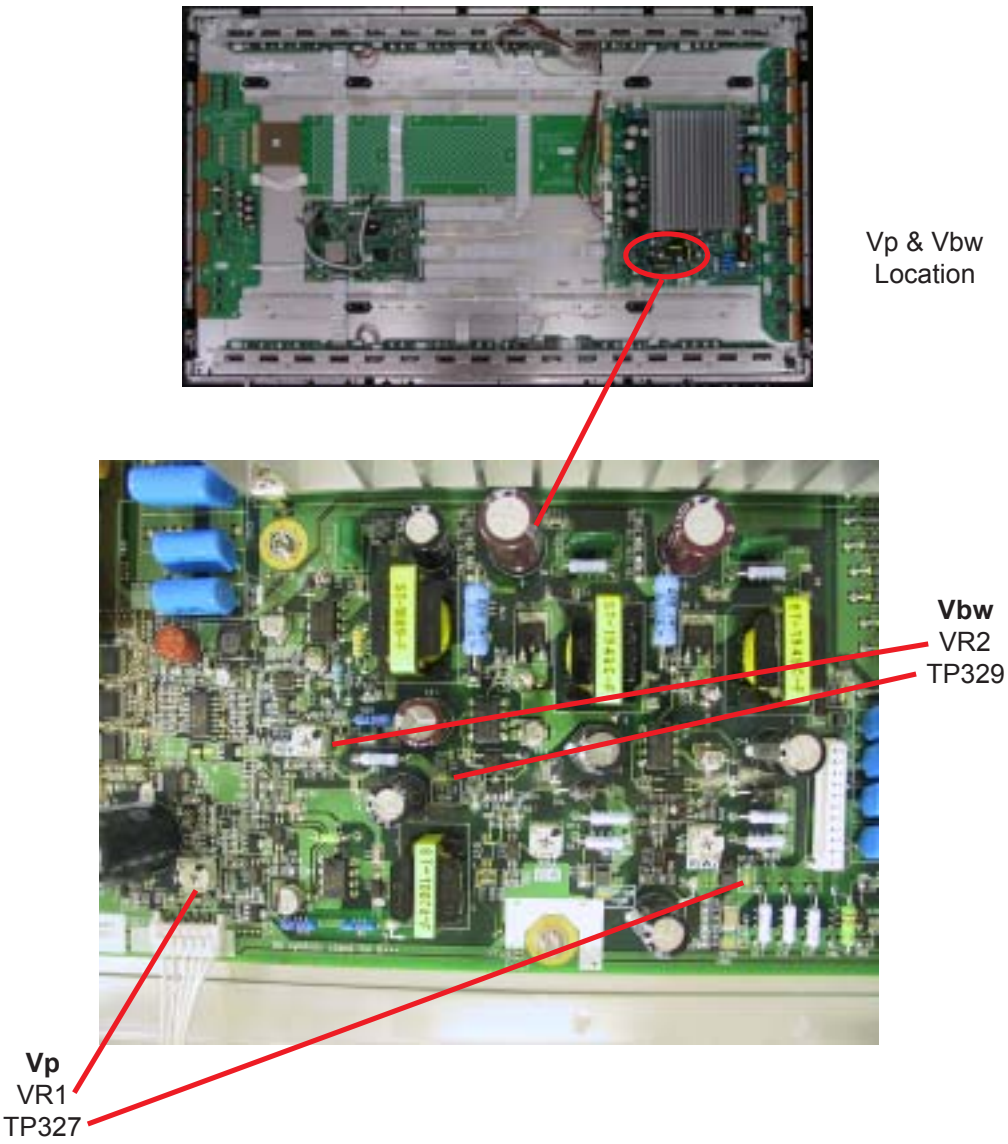
(2) Vsw2 - Adjust VR4 so the voltage at TP310 is set to the level specified for Vsw2 on the Voltage Label +/- 0.5V.



**4-4 Vp & Vbw Adjustments** Note: Voltage is measured between the TP and closest Chassis Ground.

(1) Vp - Adjust VR1 so the voltage at TP327 is set to the level specified for Vp on the Voltage Label +/- 0.5V.

(2) Vbw - Adjust VR2 so the voltage at TP329 is set to the level specified for Vbw on the Voltage Label +/- 0.5V.

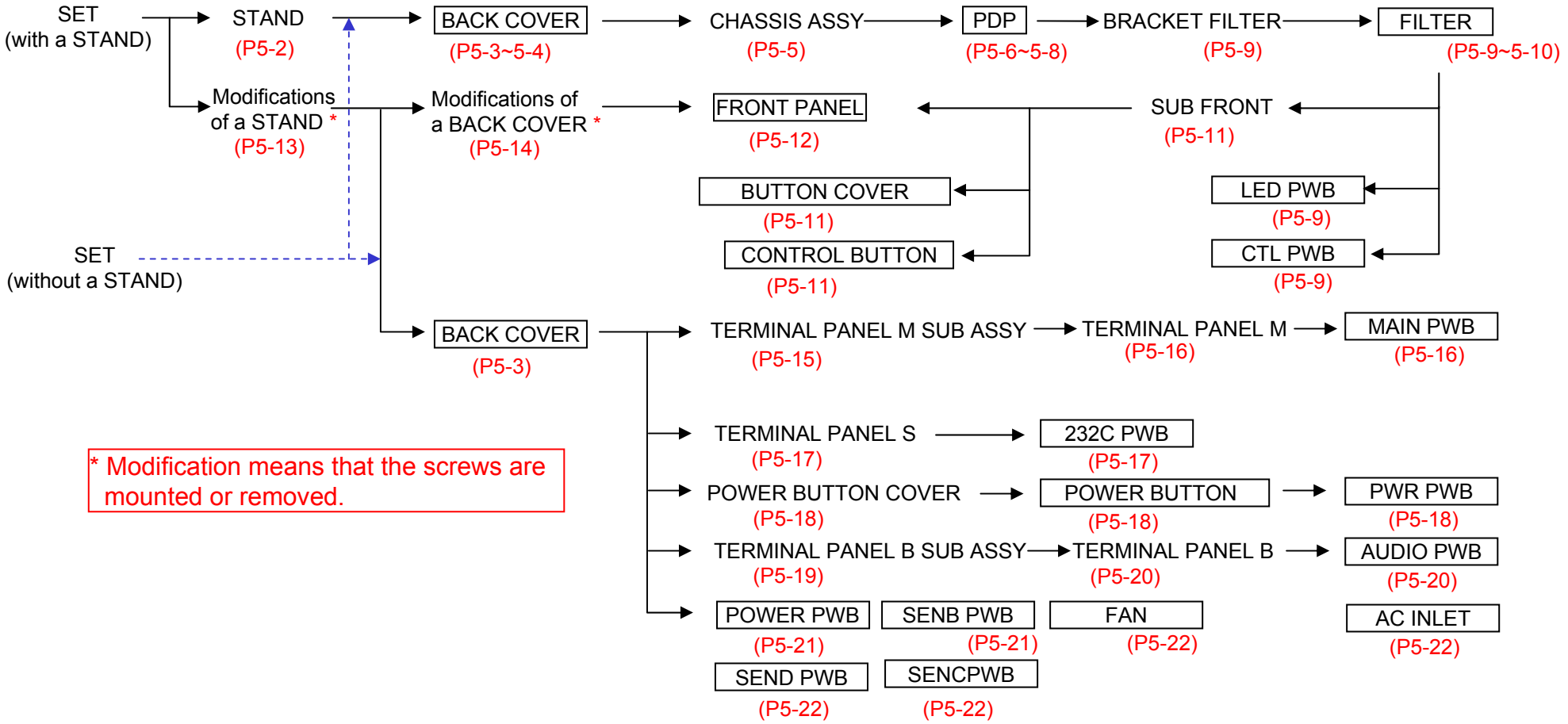


# METHOD OF DISASSEMBLY

**(Caution)**
1. Before disassembly, turn power off the main unit and pull out the power plug from the wall outlet.
2. Use a screwdriver with a fitting size. Otherwise, the screw threads may be damaged.
3. Reassembly can be carried out in the reverse order for disassembly. Refer to the disassembly procedures and forward reassembly in the reverse order.
4. The order for taking out the parts (or components) is indicated by the foregoing numeral that is attached to the name of each part.
5. The wire connector symbol is indicated by two digits of Marking ☐☐ . Read CN-☐☐ when examining the table of parts.
6. Class A or Class B in the text is applicable to the models specified. CLASS B: PD-5050

## 1. Outlined method of disassembly

The outlined procedures for the disassembly of the major parts [ ] are shown below (disassembled in the direction of → ).
In regard to the details of disassembly, cautions, etc., refer to the method of replacement for each part [page indicated in ( )].

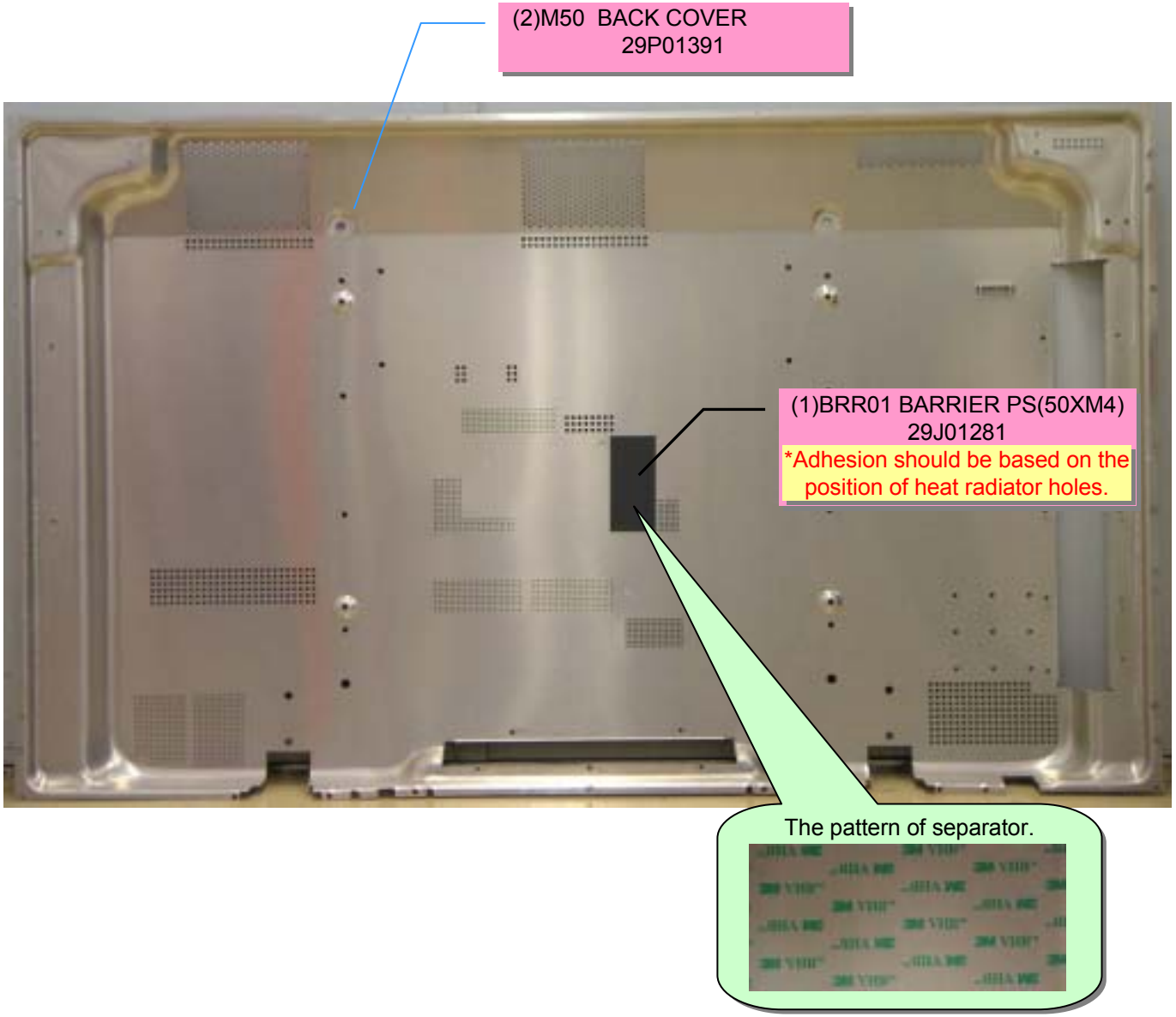



* Modification means that the screws are mounted or removed.

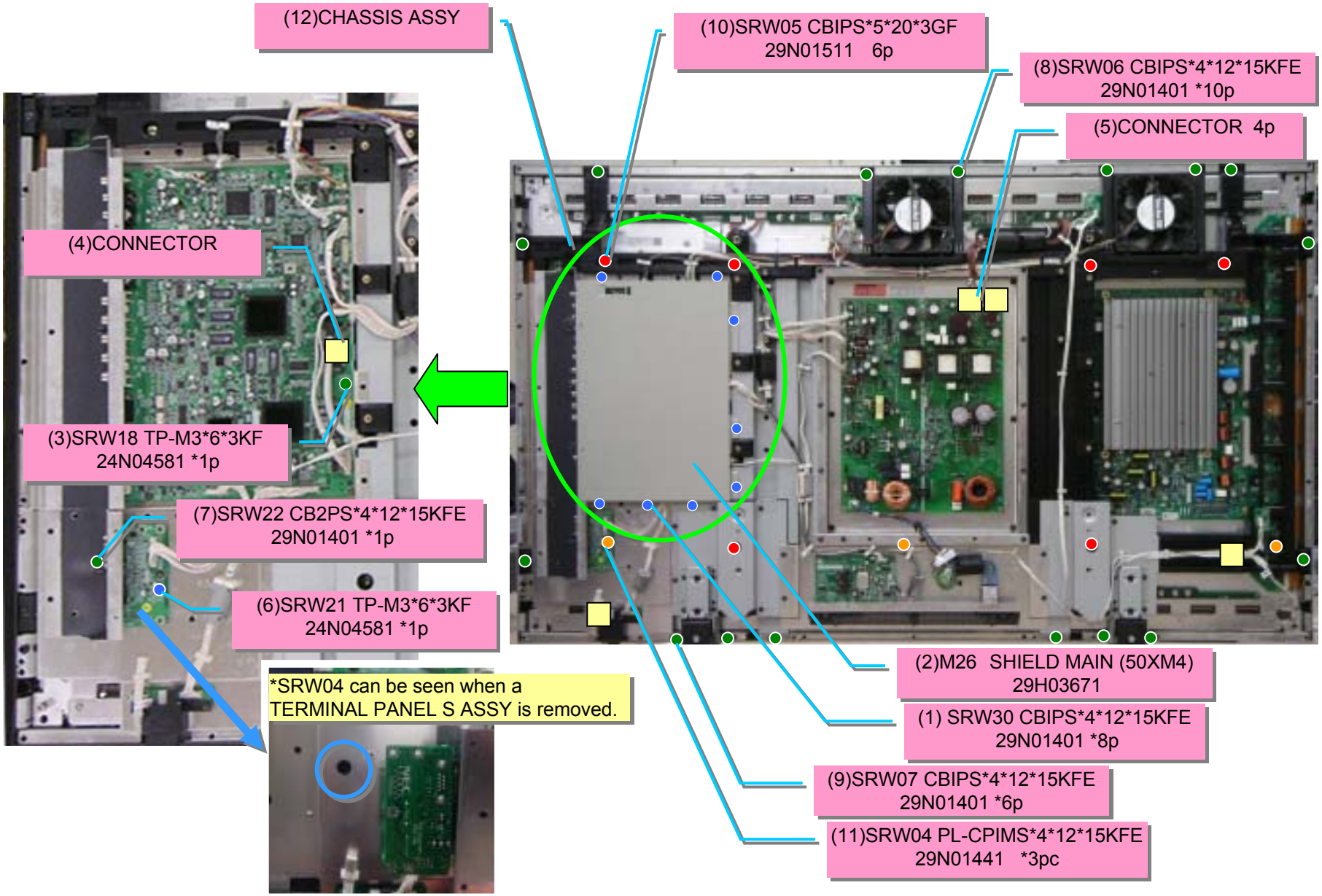
## 2. STAND

# 3. BACK COVER

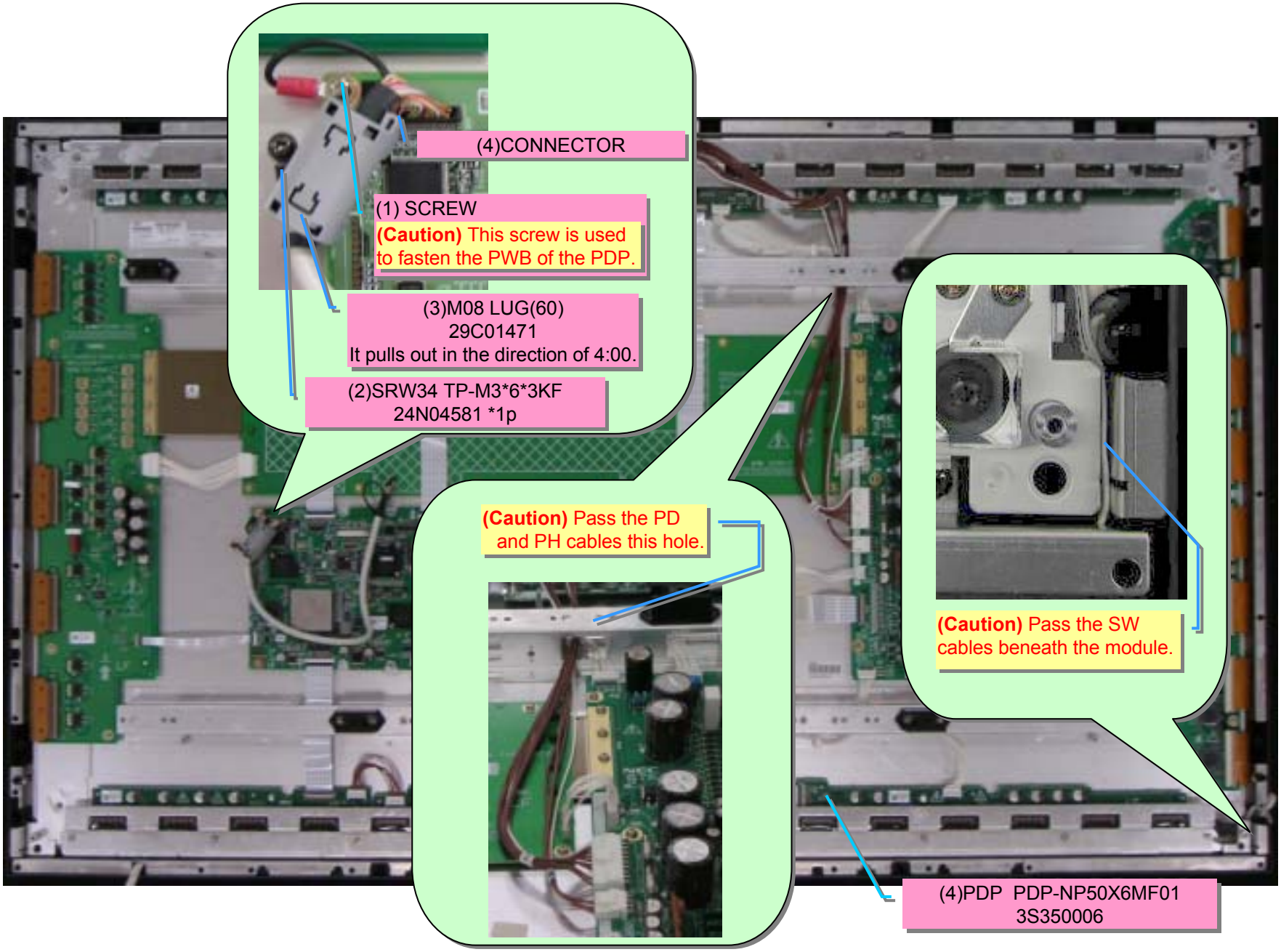

M02 SERIAL LABEL
24L44731
(5)BACK COVER ASSY
M47 NAME PLATE
(4)SRW31 CBIPS*4*12*15KFE
29N01401 *31p
(Caution) This is not a service part.
(2)M14 HANDLE
29F00591 *2p
(1)SRW33 CBIPS*5*16*15KFE
29N01411 *4p
M34 GS COVER
29H02782
Under of NAME PLATE
M48 SPEAKER LABEL
29L03552
M03 LABEL(EARTH)
24L44791
(3)SRW32 SCREW PL-CPIMS*3*10*15KFE
29N01431 *9p
M46 AC IN LABEL
29L00491

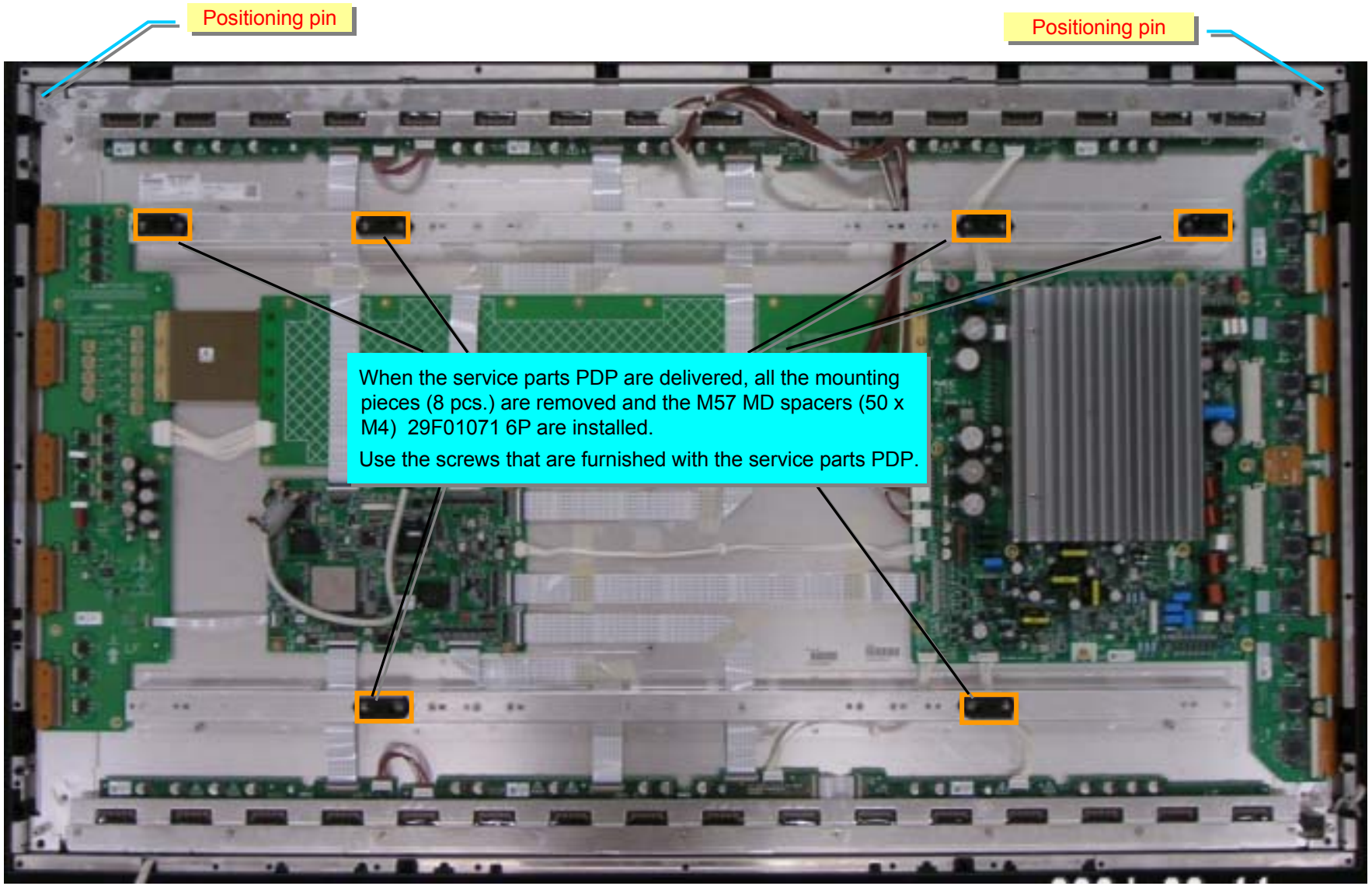

(2)M50 BACK COVER
29P01391
(1)BRR01 BARRIER PS(50XM4)
29J01281
*Adhesion should be based on the position of heat radiator holes.
The pattern of separator.

# 4. CHASSIS ASSY

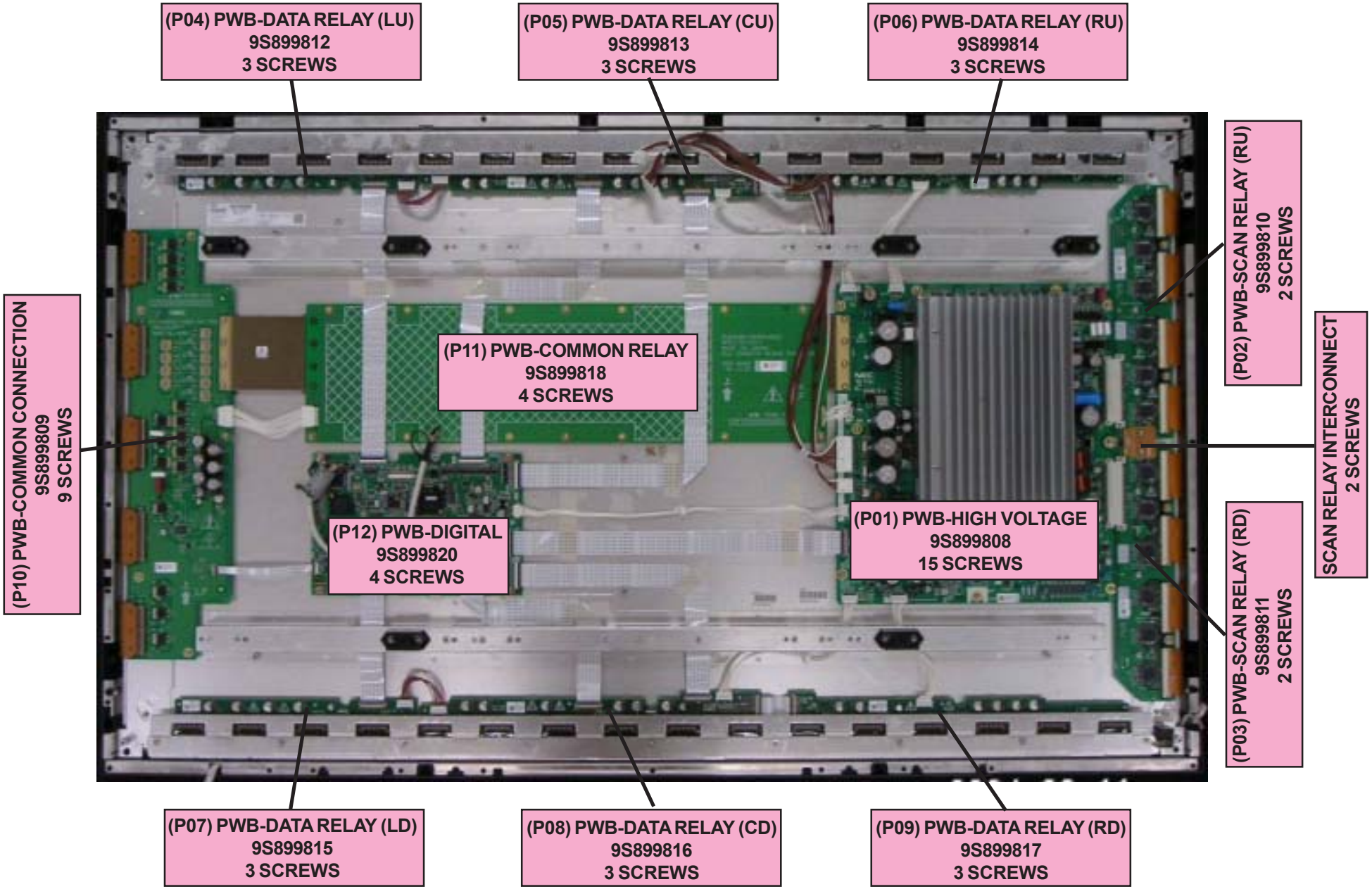


# 5. PDP

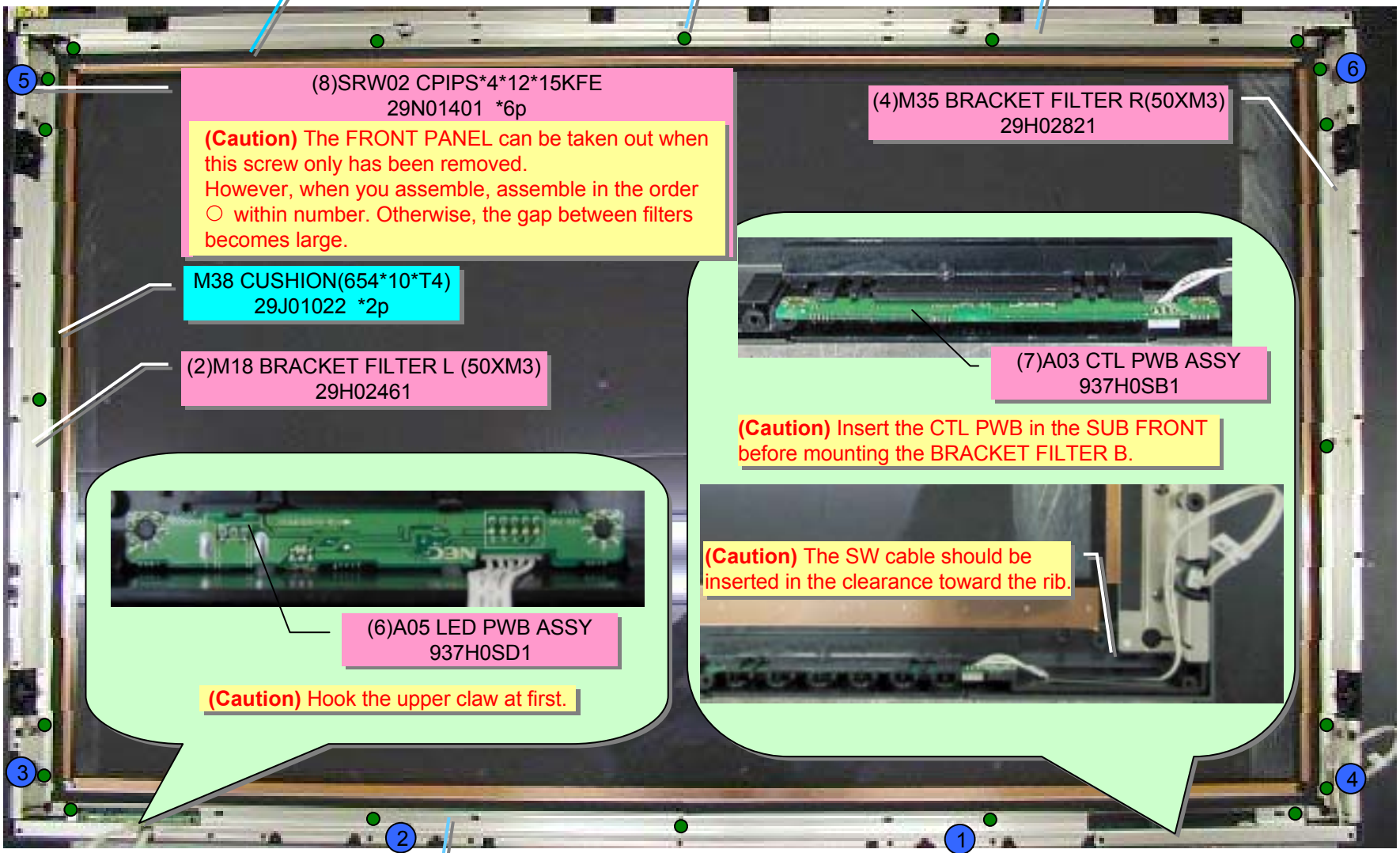

(4)CONNECTOR
(1) SCREW
(Caution) This screw is used to fasten the PWB of the PDP.
(3)M08 LUG(60)
29C01471
It pulls out in the direction of 4:00.
(2)SRW34 TP-M3*6*3KF
24N04581 *1p
(Caution) Pass the PD and PH cables this hole.
(Caution) Pass the SW cables beneath the module.
(4)PDP PDP-NP50X6MF01
3S350006


Positioning pin
Positioning pin
When the service parts PDP are delivered, all the mounting pieces (8 pcs.) are removed and the M57 MD spacers (50 x M4) 29F01071 6P are installed.
Use the screws that are furnished with the service parts PDP.

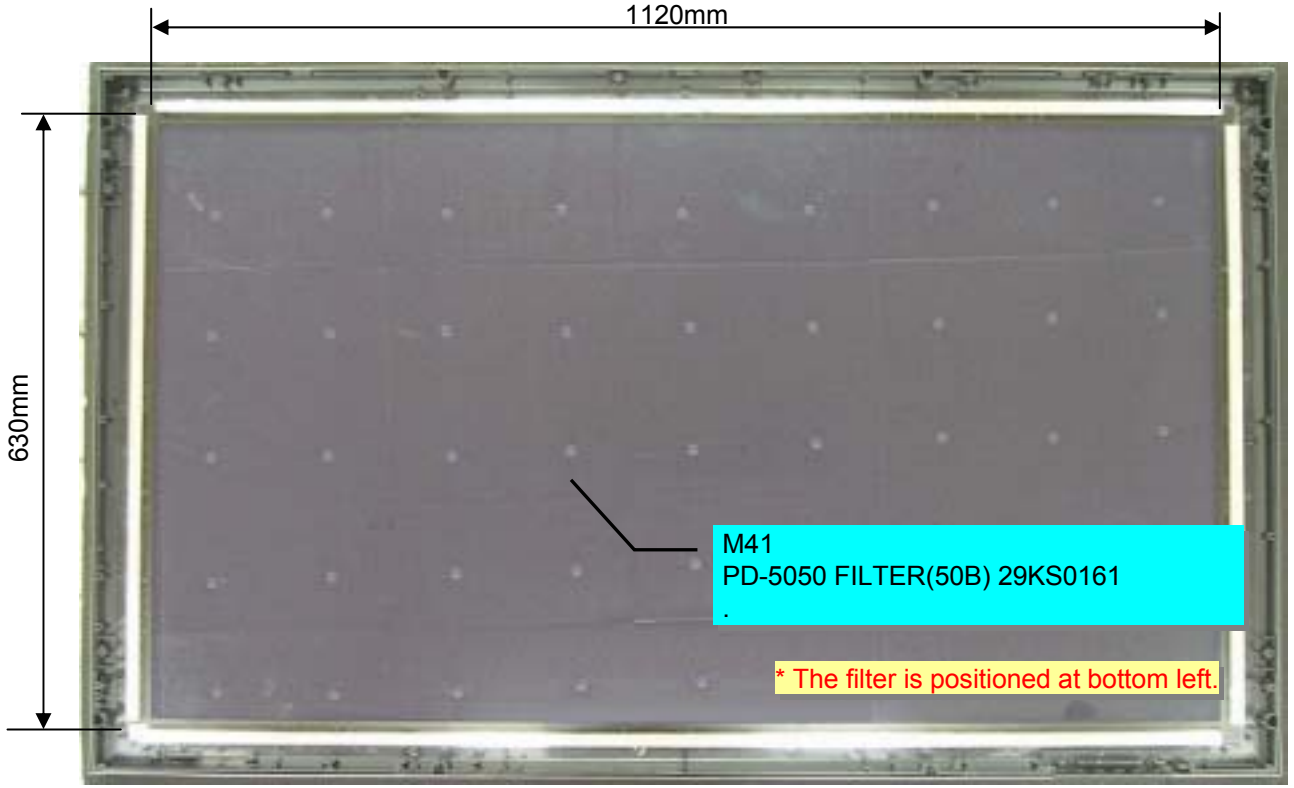
## 5-1. PDP ASSEMBLY



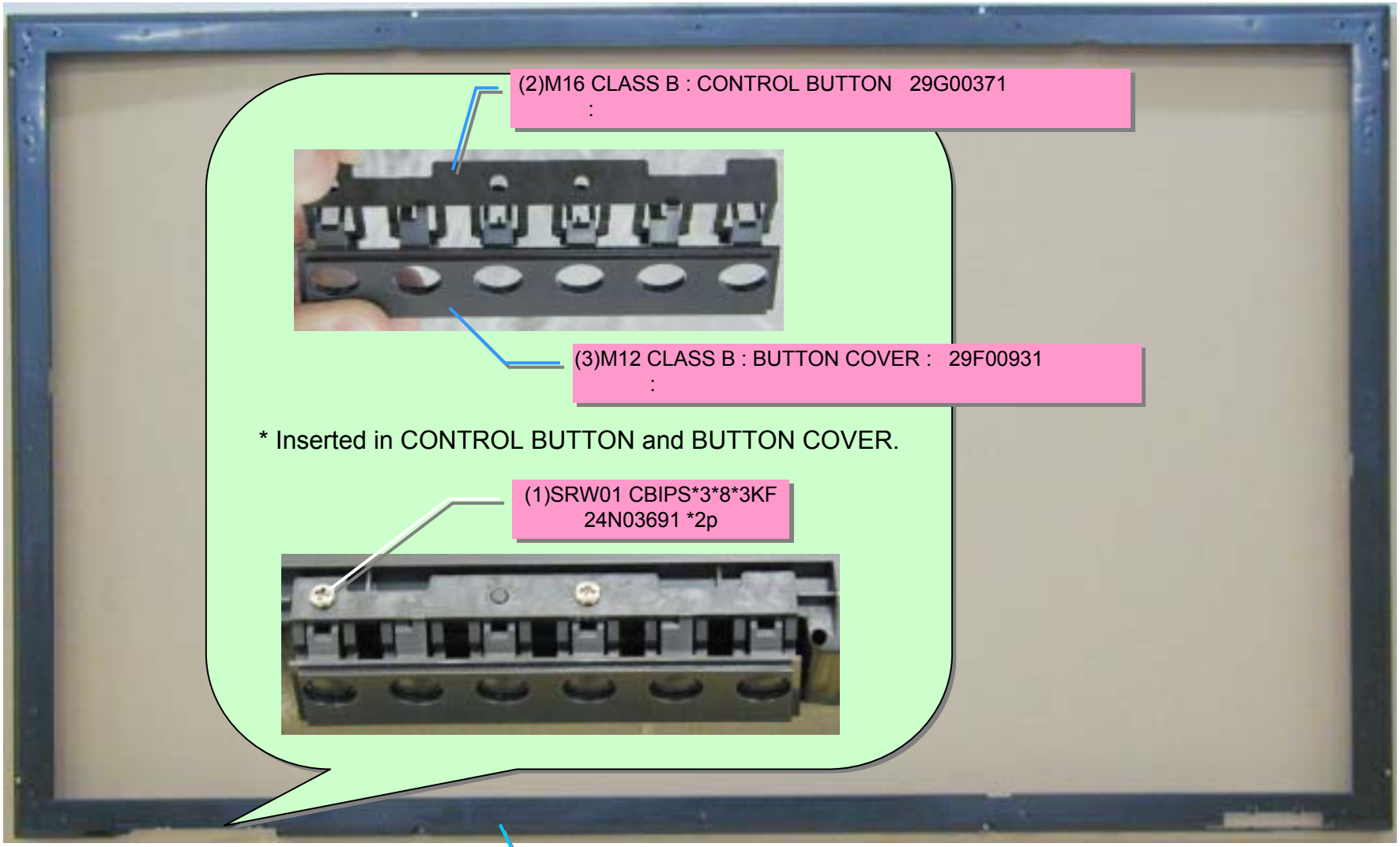
# 6. BRACKET FILTER/FILTER



# 7. FILTER


1120mm
630mm
M41
PD-5050 FILTER(50B) 29KS0161
.
* The filter is positioned at bottom left.

# 8. SUB FRONT

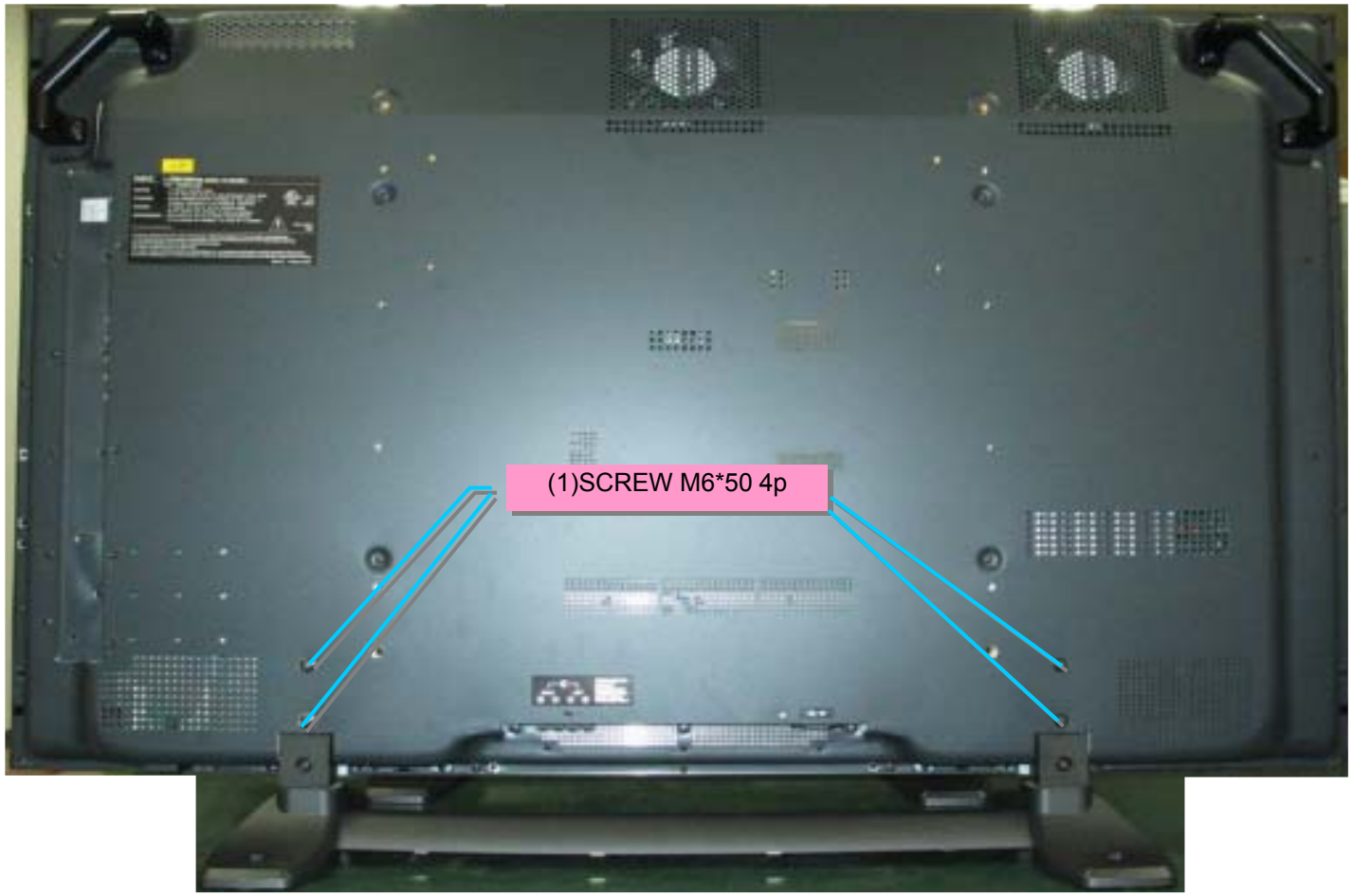

(2)M16 CLASS B : CONTROL BUTTON 29G00371
:
(3)M12 CLASS B : BUTTON COVER : 29F00931
:
* Inserted in CONTROL BUTTON and BUTTON COVER.
(1)SRW01 CBIPS*3*8*3KF
24N03691 *2p
(4)M10 SUB FRONT
29D00651

# 9. FRONT PANEL

(2)M09
CLASS B : FRONT PANEL ASSY: 29D00641

**(Caution)** The CLASS B is stuck to the logo batch.
If it is put on the stand with its front side facing downwards, make sure not to hurt this side.

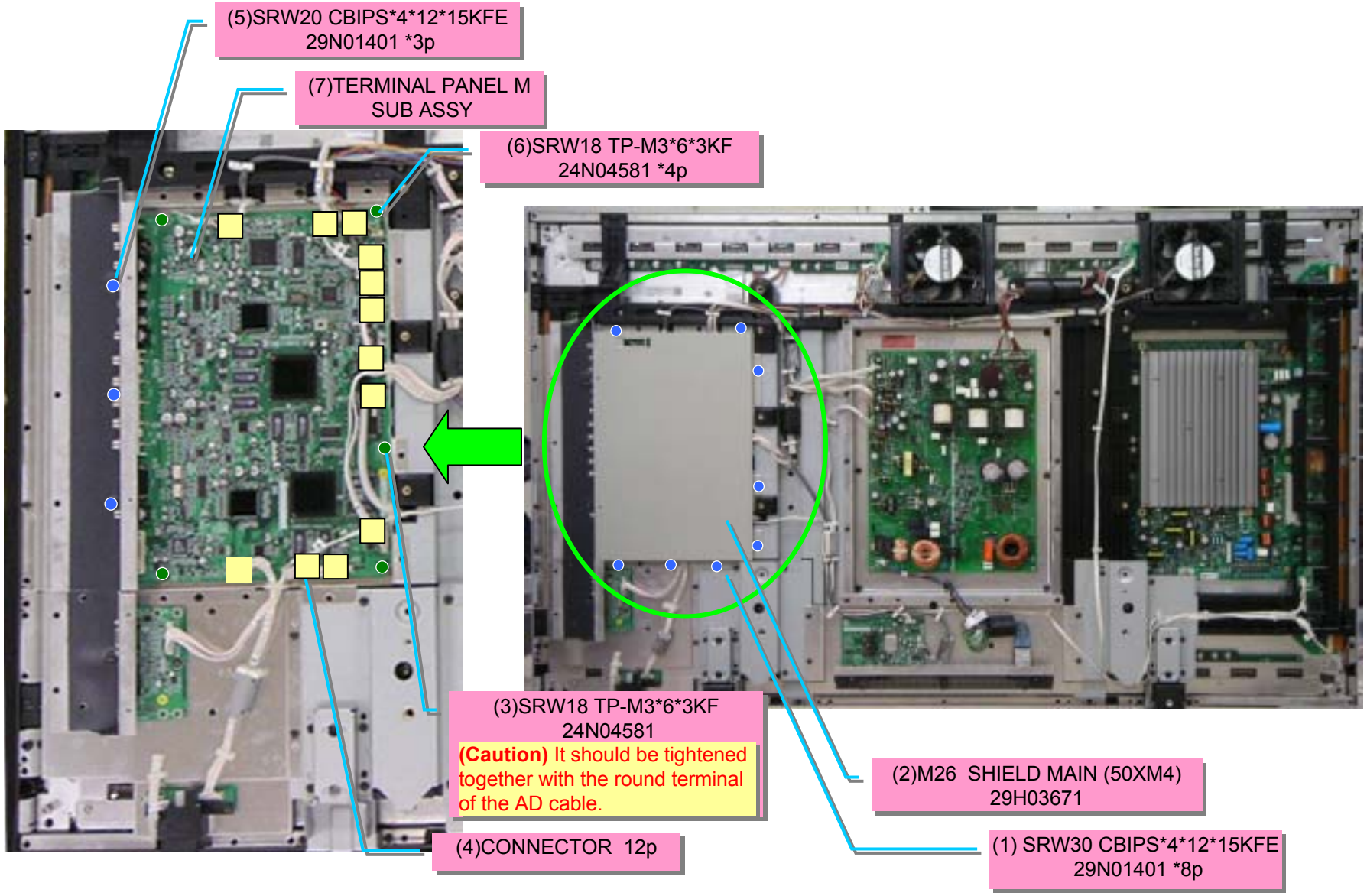
## 10. STAND (modification)



# 11. BACK COVER (modification)

**(Caution)** The illustration below shows a case when the STAND has been removed.

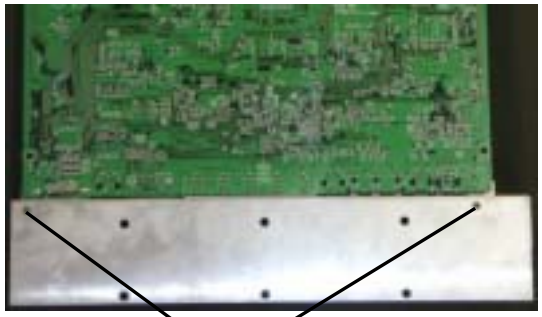
# 12. TERMINAL PANEL M SUB ASSY



# 13. TERMINAL PANEL M /MAIN PWB

**(Caution)** Please note that no DS connector is furnished even though the MAIN PWB is ordered.

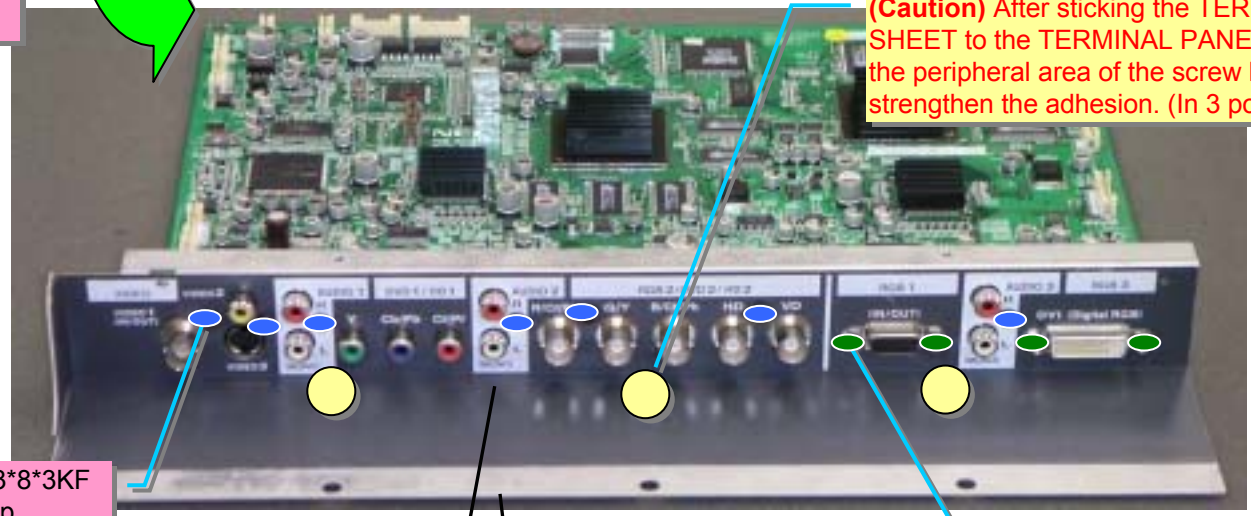
(6)A01 MAIN PWB ASSY
**(Caution)** Refer to Parts List



Rear side

***** Positioning hole
For mounting, it should be combined with the embossed part on the main unit side.

(5)M17
SHIELD PLATE MAIN(42XM3)
29H03541



**(Caution)** After sticking the TERMINAL SHEET to the TERMINAL PANEL, push the peripheral area of the screw hole to strengthen the adhesion. (In 3 positions)

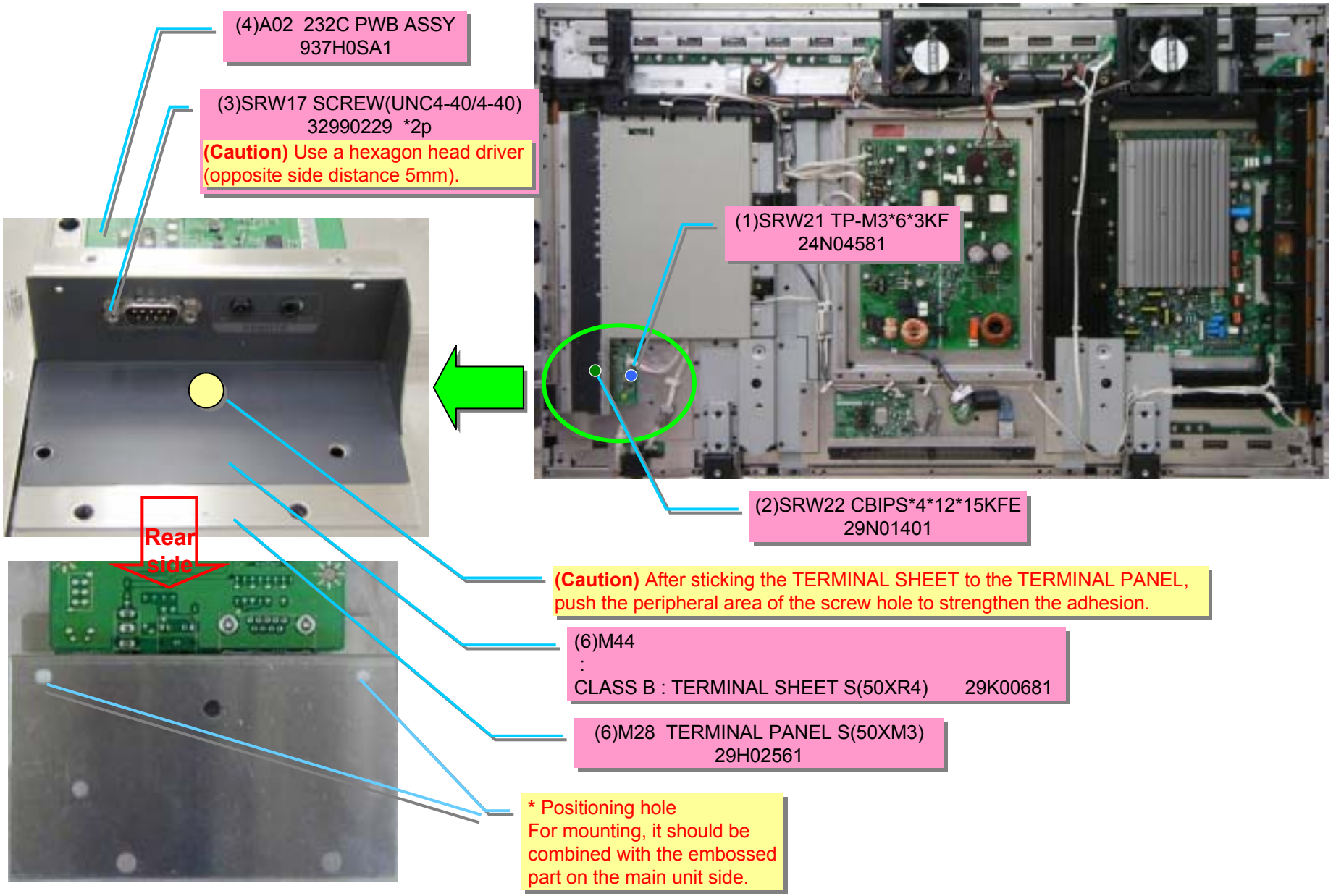
(2)SRW15 CBIPS*3*8*3KF
24N03691 *7p

(3)M43
50XM4 Series : TERMINAL SHEET M(50XM3)W 29K00571
50XR4 Series : TERMINAL SHEET M(50XR4)CP 29K00671
* Peel off the protection film.

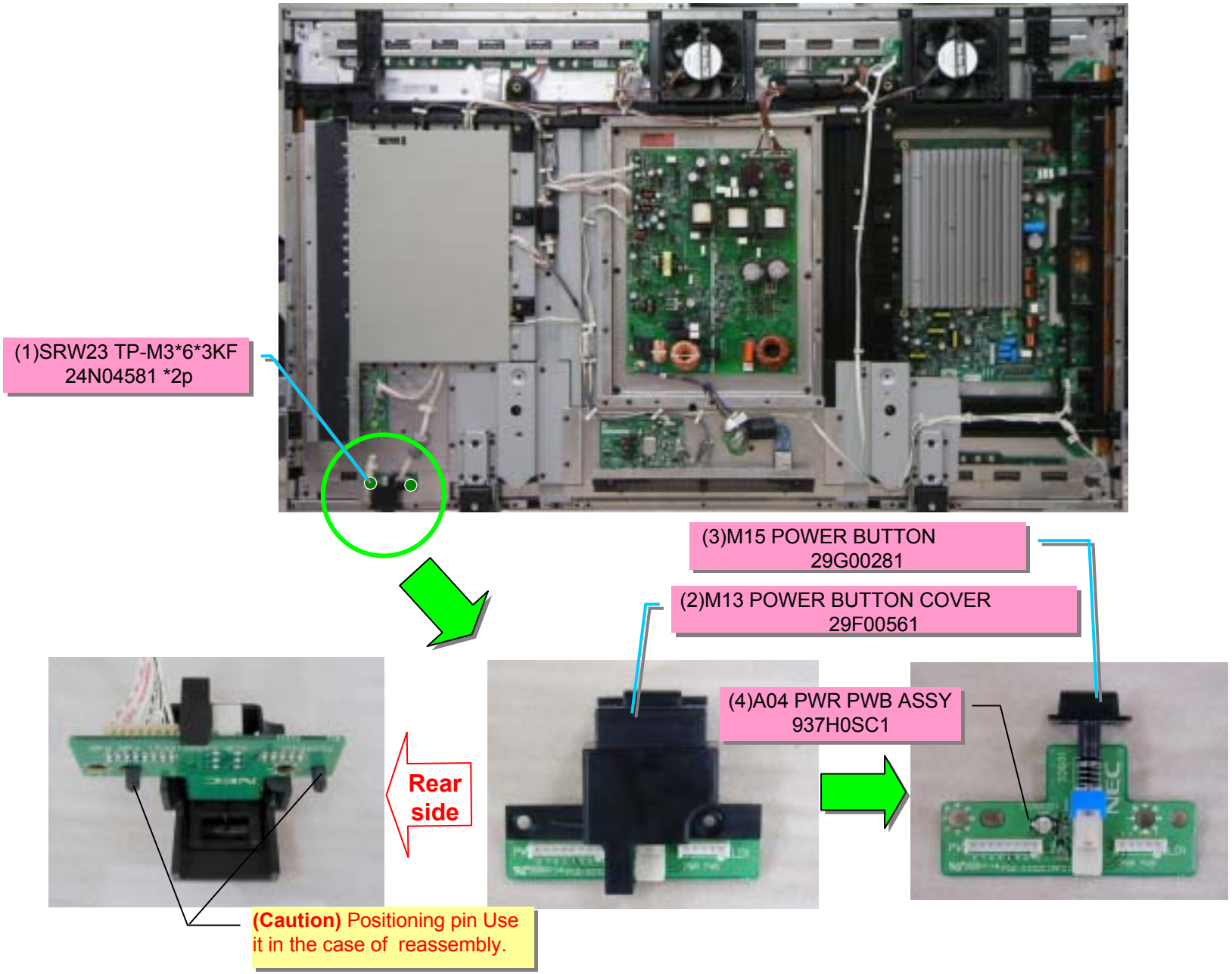
(4)M27 TERMINAL PANEL M(50XM3)
29H02551

(1)SRW16 SCREW(UNC4-40/4-40)
32990229 *4p
**(Caution)** Use a hexagon head driver (opposite side distance 5mm).

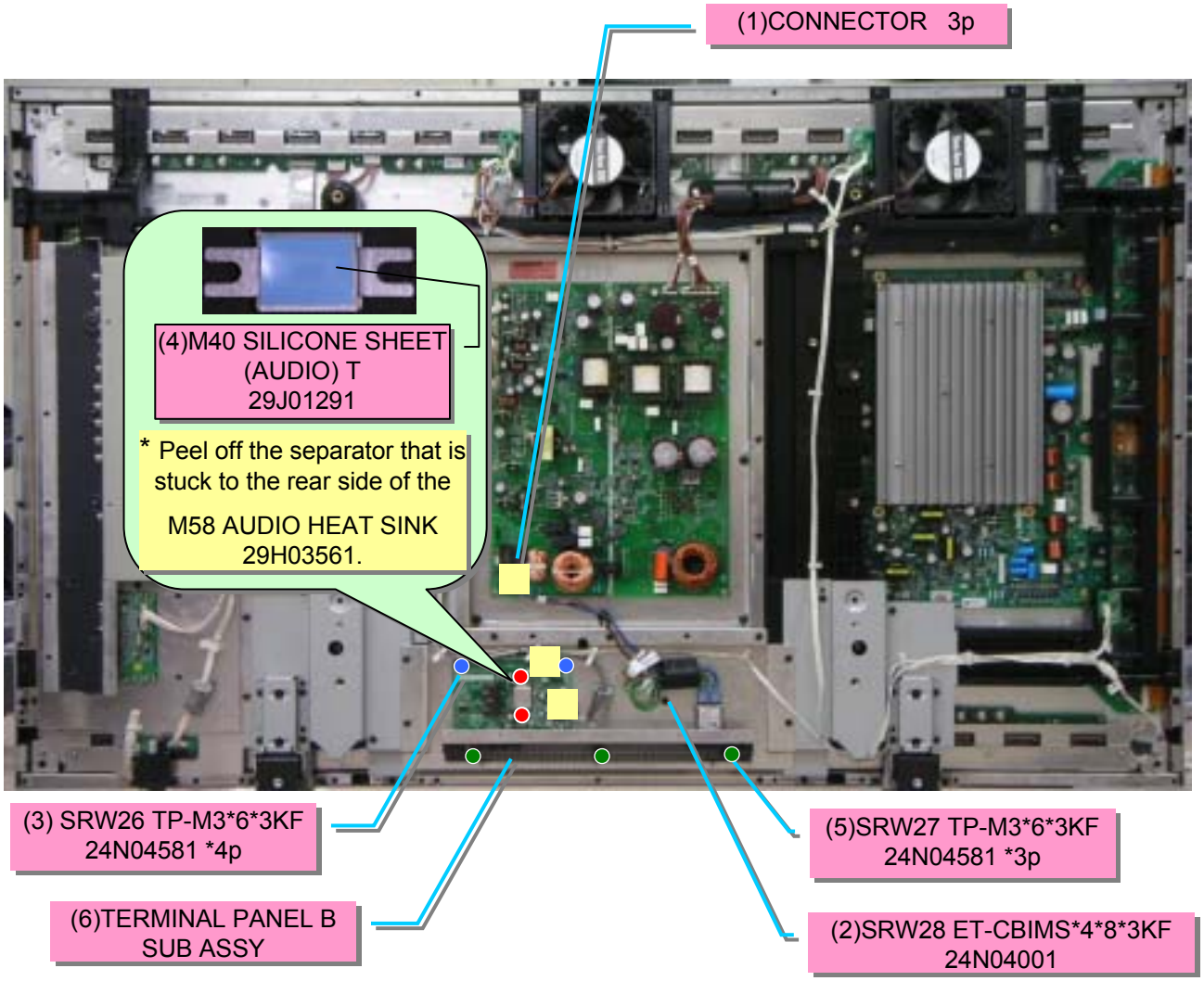
# 14. TERMINAL PANEL S/ 232C PWB



# 15. POWER BUTTON COVER/POWER BUTTON/PWR PWB

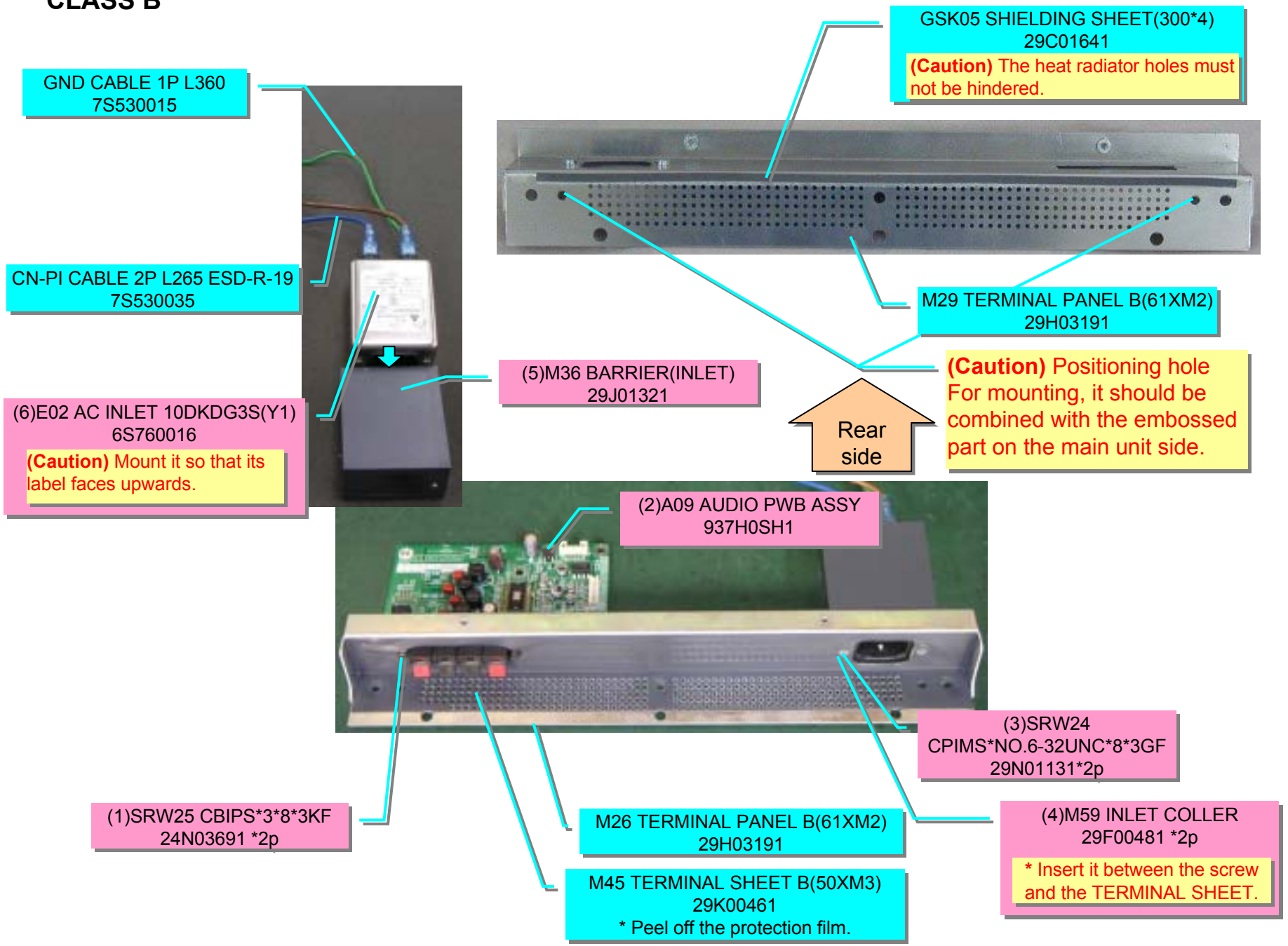


# 16. TERMINAL PANEL B SUB ASSY

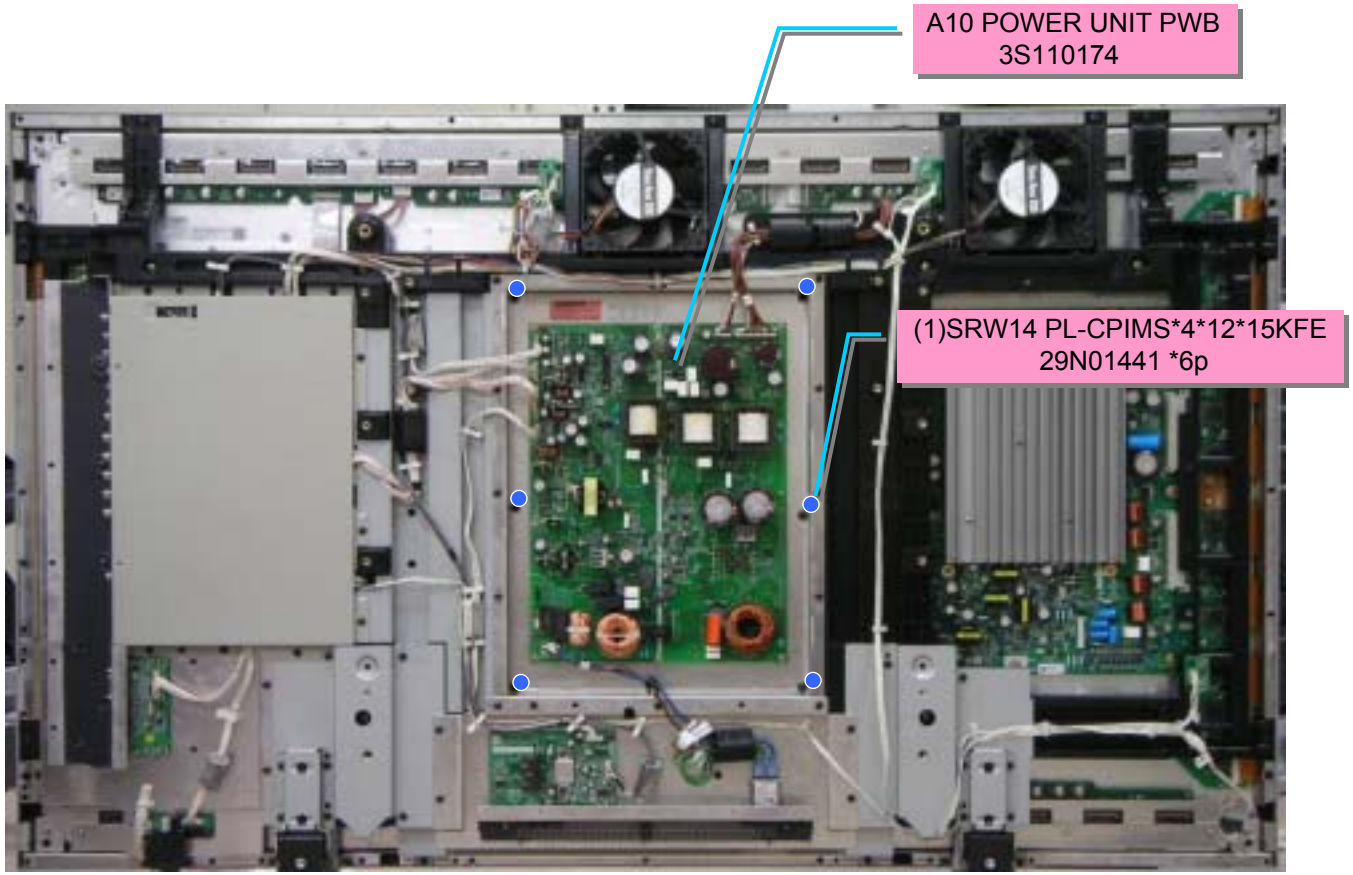


# 16. TERMINAL PANEL B/AUDIO PWB/AC INLET

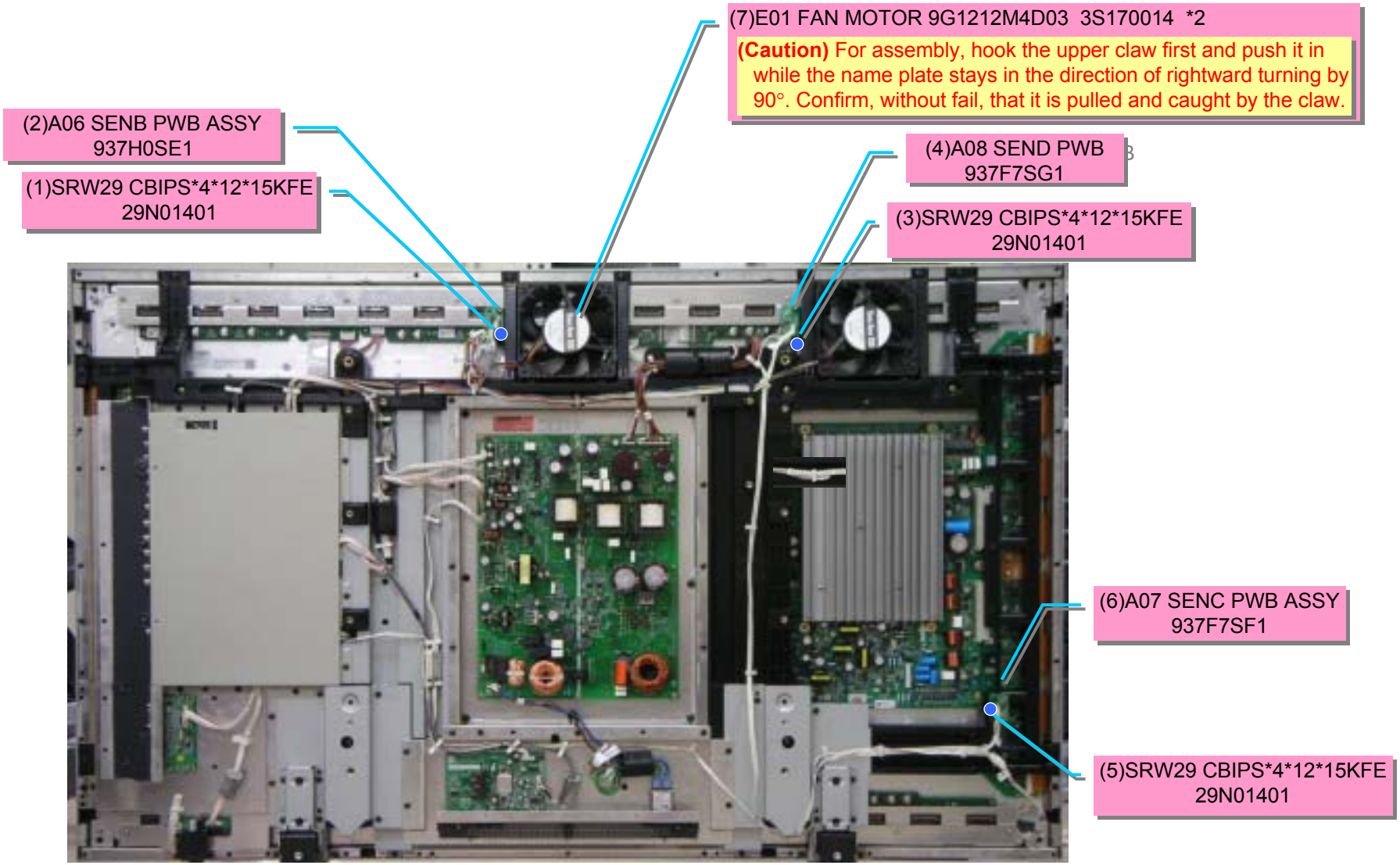
## CLASS B



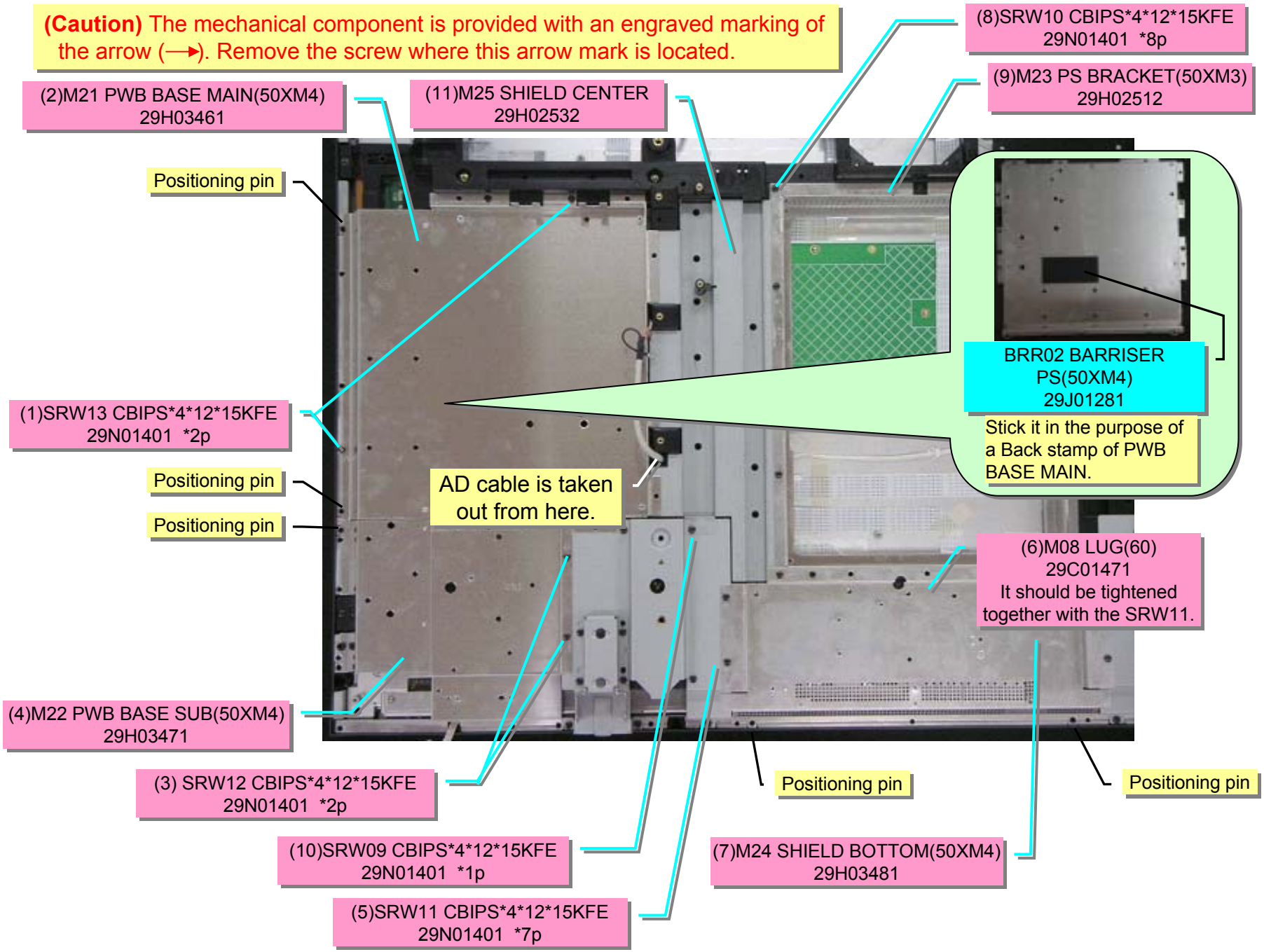
# 17. POWER UNIT



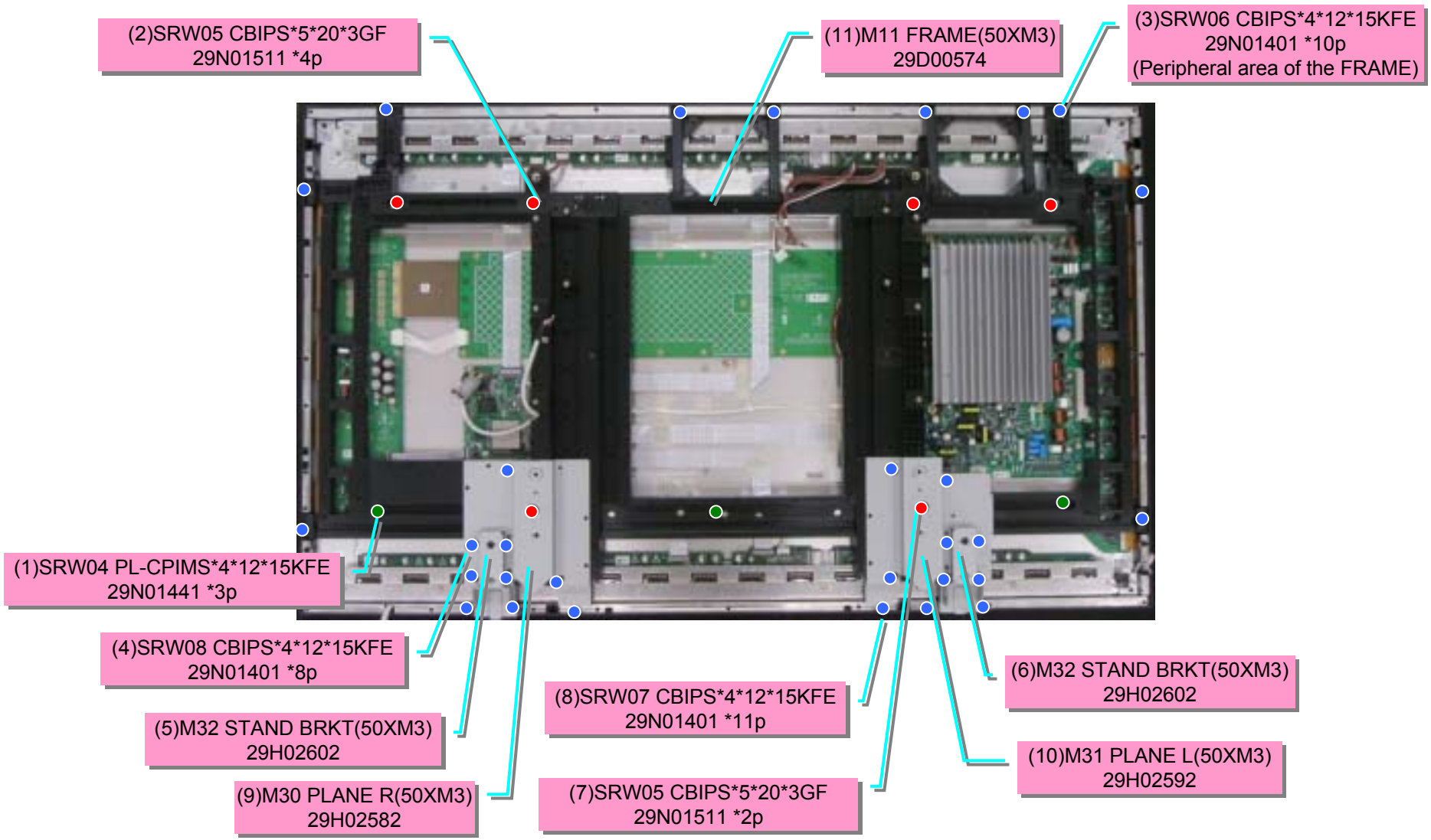
# 18. SENB PWB/SENC PWB/SEND PWB/FAN



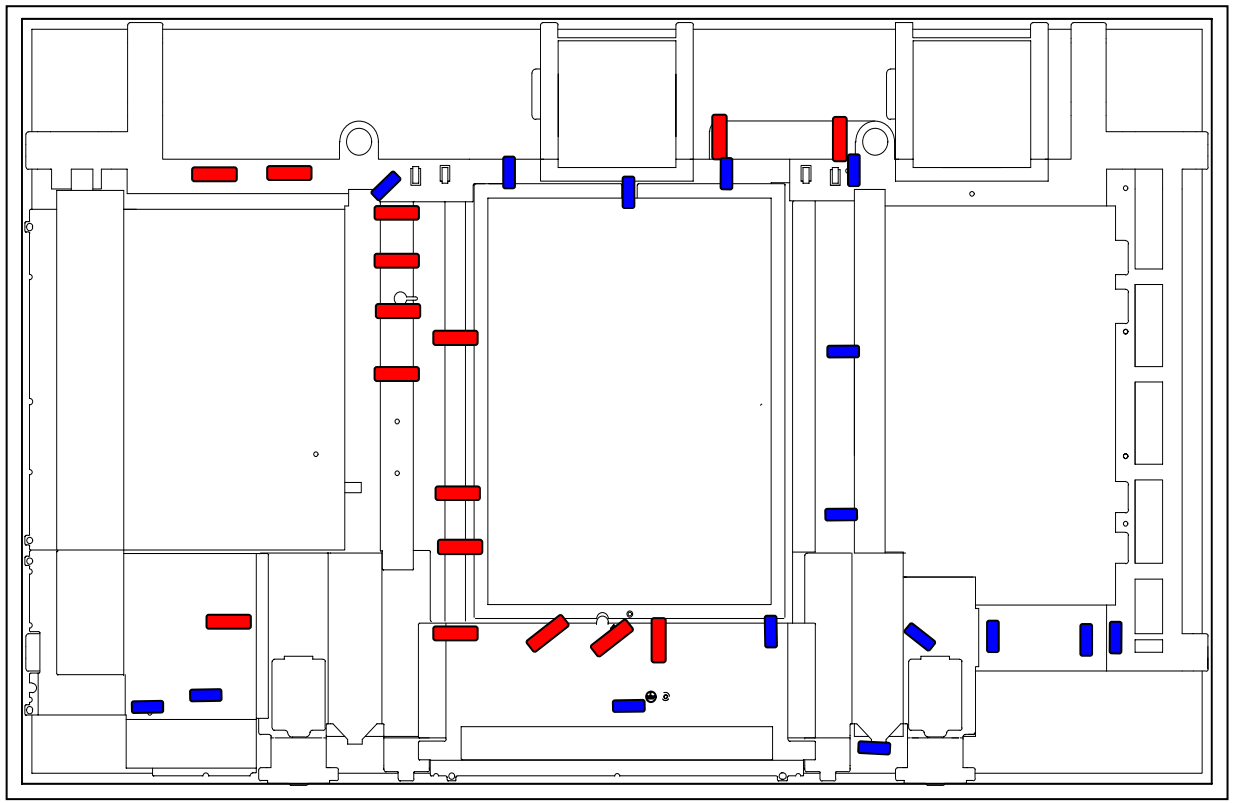
# 19. BRACKET/SHIELD

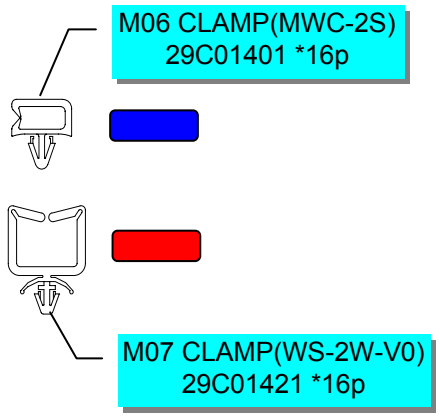


# 20. FRAME


(2)SRW05 CBIPS*5*20*3GF
29N01511 *4p
(11)M11 FRAME(50XM3)
29D00574
(3)SRW06 CBIPS*4*12*15KFE
29N01401 *10p
(Peripheral area of the FRAME)
(1)SRW04 PL-CPIMS*4*12*15KFE
29N01441 *3p
(4)SRW08 CBIPS*4*12*15KFE
29N01401 *8p
(5)M32 STAND BRKT(50XM3)
29H02602
(9)M30 PLANE R(50XM3)
29H02582
(8)SRW07 CBIPS*4*12*15KFE
29N01401 *11p
(7)SRW05 CBIPS*5*20*3GF
29N01511 *2p
(6)M32 STAND BRKT(50XM3)
29H02602
(10)M31 PLANE L(50XM3)
29H02592

# 21. WIRE CLAMP



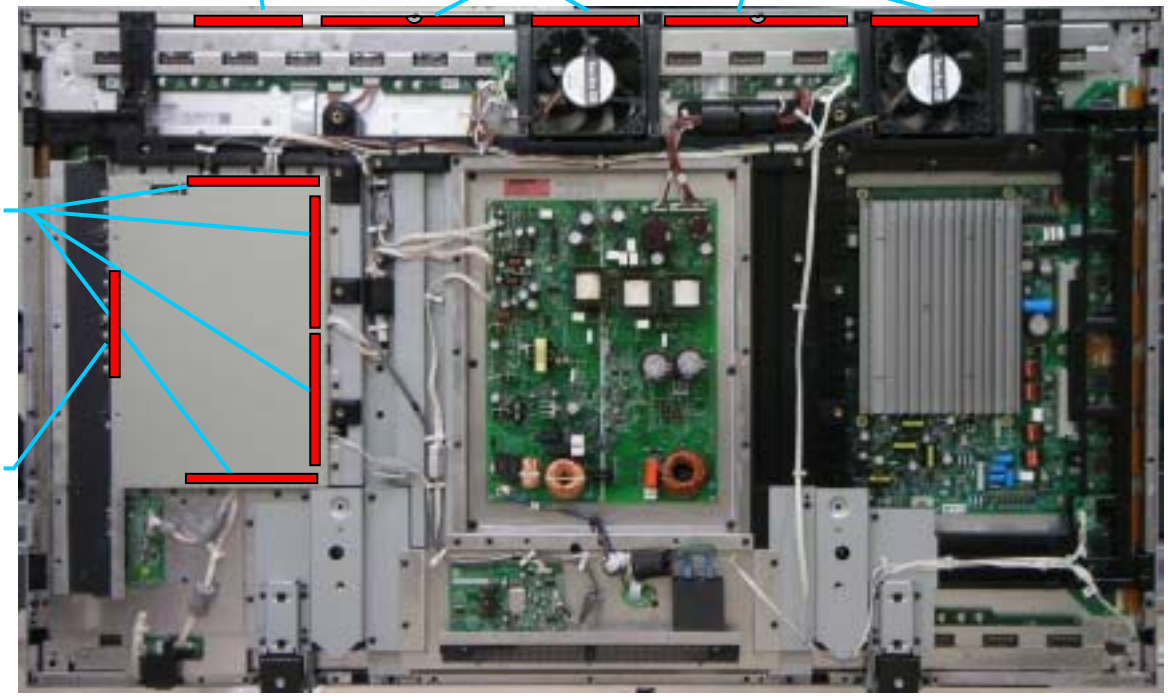


# 22. GASKET(CLASS B)

GSK03 SHIELDING SHEET(114*8)
29C01821 *3p

GSK02 SHIELDING SHEET(200*8)
29C01811 *2p

**(Caution)** Adhesion should be done in the state that the notch part is positioned upwards.



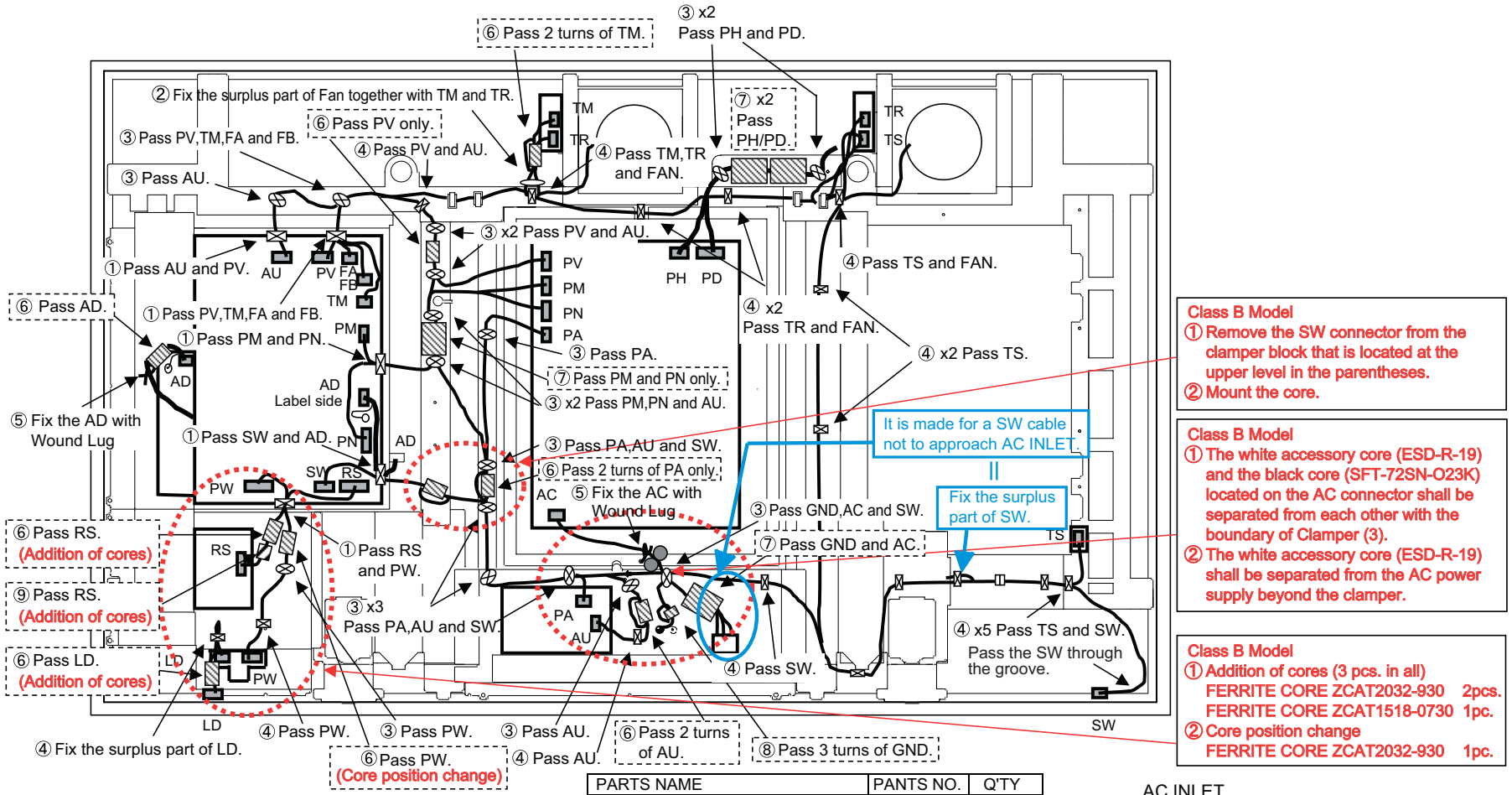
GSK01 GASKET(L140*13*T1.5)
29C01801 *4p

GSK04 SHIELDING SHEET(114*8)
29C01821 *1p

# 23. Wiring Diagram

**(Caution)** "Turns" in the illustration below denotes the number of cable turns to be wound around the ferrite core. **(Example)** 3 turns → 3 turns of a cable wound around.

## PD5050 Series (CLASS B) Wiring Diagram




**Class B Model**
① Remove the SW connector from the clamper block that is located at the upper level in the parentheses.
② Mount the core.

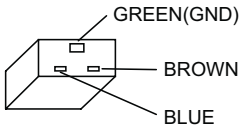
**Class B Model**
① The white accessory core (ESD-R-19) and the black core (SFT-72SN-O23K) located on the AC connector shall be separated from each other with the boundary of Clamper (3).
② The white accessory core (ESD-R-19) shall be separated from the AC power supply beyond the clamper.

**Class B Model**
① Addition of cores (3 pcs. in all)
FERRITE CORE ZCAT2032-930 2pcs.
FERRITE CORE ZCAT1518-0730 1pc.
② Core position change
FERRITE CORE ZCAT2032-930 1pc.

| PARTS NAME | PANTS NO. | Q'TY | |
|---|---|---|---|
| ① EDGING SADDLE(EDS-1208U) | 29C00461 | 5 | |
| ② CLAMPER,WIRE(D11.5) | 24281251 | 1 | |
| ③ CLAMP(WS-2W-V0) | 29C01421 | 16 | ⊗ |
| ④ CLAMP(MWC-2S) | 29C01401 | 16 | ⊠ |

| PARTS NAME | PANTS NO. | Q'TY | |
|---|---|---|---|
| ⑤ LUG(L60) | 29C01471 | 2 | |
| ⑥ FERRITE CORE ZCAT2032-930 | 6S170005 | 9 | |
| ⑦ CORE,FERRITE SFT-72SNB | 6S170003 | 4 | |
| ⑧ FERRITE CORE ESD-R-19 | 6S170007 | 1 | |
| ⑨ FERRITE CORE ZCAT1518-0730 | 6S170006 | 1 | ◪ |

AC INLET




CCD board : Try to push the bush rivet
and the connector to check for the freedom from floating.

# PARTS LIST

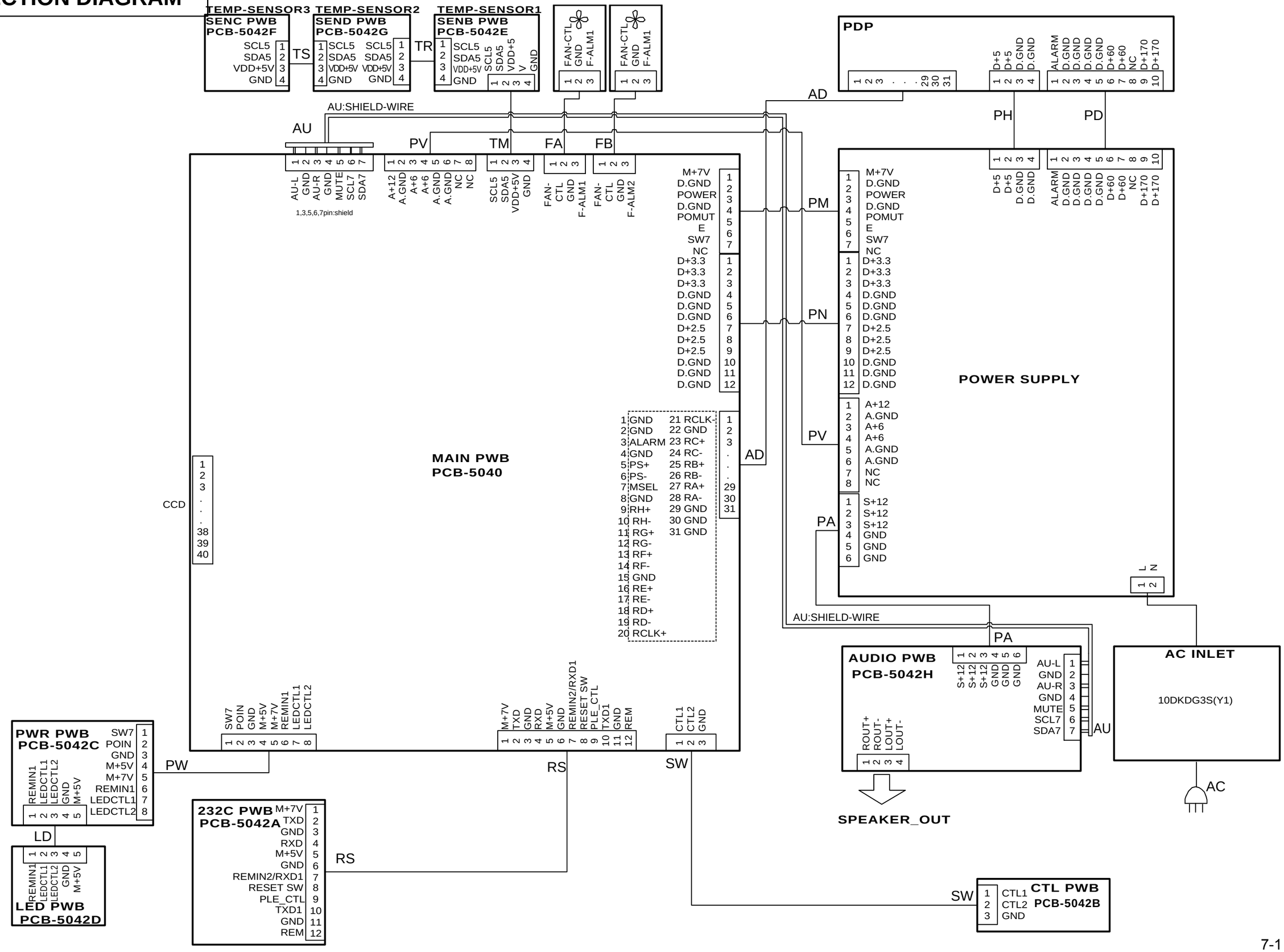
**PD-5050 Parts List**

| Ref | Part Number | Description |
|---|---|---|
| A01 | 937H0M01 | PWB-MAIN (PD5050) |
| A02 | 937H0SA1 | PWB-232C (PD5050) |
| A03 | 937H0SB1 | PWB-CTL (PD5050) |
| A04 | 937H0SC1 | PWB-PWR (PD5050) |
| A05 | 937H0SD1 | PWB-LED (PD5050) |
| A06 | 937H0SE1 | PWB-SENB (PD-5050) |
| A07 | 937H0SF1 | PWB-SENC (PD5050) |
| A08 | 937H0SG1 | PWB-SEND(PD5050) |
| A09 | 937H0SH1 | PWB-AUDIO ASSY (PD5050) |
| A10 | 3S110174 | PWB-POWER UNIT |
| E01 | 3S170014 | FAN-MOTOR (9G1212M4D03) |
| M09 | 29D00641 | PANEL-FRONT |
| M10 | 29D00651 | PANEL-FRONT SUB |
| M11 | 29D00574 | FRAME (50XM3) |
| M12 | 29F00931 | BUTTON-COVER |
| M13 | 29F00561 | BUTTON-POWER COVER |
| M14 | 29F00591 | HANDLE |
| M15 | 29G00281 | BUTTON-POWER |
| M16 | 29G00371 | BUTTON-CONTROL |
| M41 | 29KS0161 | SCREEN SHIELD (FILTER) |
| M50 | 29P01391 | COVER-BACK (50XM4) |
| PDP* | 3S350006 | PDP-NP50X6MF01 |
| | 29P01301 | ORNAMENT-TOP |
| | 29P01312 | ORNAMENT-BOTTOM |
| | 7S530015 | CABLE- 1P L360 |
| | 7S530035 | CABLE- 2P L265 ESD-R-19 |
| | 7S530036 | CABLE- 31P L390 |
| | 7S552001 | CORD-POWER AC |
| | 3S120231 | REMOTE |

***PDP-NP50X6MF01 PARTS LIST**

| Ref | Part Number | Description |
|---|---|---|
| P01 | 9S899808 | PWB-HIGH VOLTAGE |
| P02 | 9S899810 | PWB-SCAN RELAY (RU) |
| P03 | 9S899811 | PWB-SCAN RELAY (RD) |
| P04 | 9S899812 | PWB-DATA RELAY (LU) |
| P05 | 9S899813 | PWB-DATA RELAY (CU) |
| P06 | 9S899814 | PWB-DATA RELAY (RU) |
| P07 | 9S899815 | PWB-DATA RELAY (LD) |
| P08 | 9S899816 | PWB-DATA RELAY (CD) |
| P09 | 9S899817 | PWB-DATA RELAY (RD) |
| P10 | 9S899809 | PWB-COMMON CONNECTION |
| P11 | 9S899818 | PWB-COMMON RELAY |
| P12 | 9S899820 | PWB-DIGITAL |

# CONNECTION DIAGRAM



# CONNECTOR PIN EXPLANATION

**PD-5050 Series**

**(Caution)** The operating voltages specified below are used in common irrespective of the presence of signals. In this case, however, part of the operating voltages (red characters) may change according to the signal conditions when the main power supply is turned on (POWER button ON).

Status of LED lighting: ★ for lighting in green, ★★ for unlighting, and ★★★ for lighting in red.

Vol.1

| Name | Pin No. | Pin name | Function | Basic operation (Numerical unit: Vdc; except for the case when units are individually indicated) | | | | | | | Signal direction |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AC power ON (Power cord connected to the wall outlet) ★★ | Main power ON (POWER button ON) ★ | | Power management ★★ | Standby ★★★ | Main power OFF ★★ | AC power OFF (Power cord pulled out of the wall outlet) ★★ | |
| | | | | | No signal | With signal | | | | | |
| PN | 1 | D+3.3 | 3.3V power supply for digital circuits | 0 | 3.3 | 3.3 | 0 | 0 | 0 | - | POWER→MAIN |
| | 2 | D+3.3 | 3.3V power supply for digital circuits | 0 | 3.3 | 3.3 | 0 | 0 | 0 | - | POWER→MAIN |
| | 3 | D+3.3 | 3.3V power supply for digital circuits | 0 | 3.3 | 3.3 | 0 | 0 | 0 | - | POWER→MAIN |
| | 4 | D.GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 5 | D.GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 6 | D.GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 7 | D+2.5 | 2.5V power supply for digital circuits | 0 | 2.5 | 2.5 | 0 | 0 | 0 | - | POWER→MAIN |
| | 8 | D+2.5 | 2.5V power supply for digital circuits | 0 | 2.5 | 2.5 | 0 | 0 | 0 | - | POWER→MAIN |
| | 9 | D+2.5 | 2.5V power supply for digital circuits | 0 | 2.5 | 2.5 | 0 | 0 | 0 | - | POWER→MAIN |
| | 10 | D.GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 11 | D.GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 12 | D.GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| PM | 1 | M+7 | 7V power supply for microcomputer | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | - | POWER→MAIN |
| | 2 | D.GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 3 | POWER | Power control | 0 | 4.9 | 4.9 | 0 | 0 | 0 | - | MAIN→POWER |
| | 4 | D.GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 5 | POMUTE | Mute signal for AC power OFF | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8→- | POWER→MAIN |
| | 6 | SW7 | Power start control | 0 | 6.8 | 6.8 | 6.8 | 6.8 | 0 | - | POWER→MAIN |
| | 7 | N C | Non-connection terminal | - | - | - | - | - | - | - | - |
| PV | 1 | A+12 | 12V power supply for analog circuits | 0 | 12 | 12 | 0 | 0 | 0 | - | POWER→MAIN |
| | 2 | A.GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 3 | A+6 | 6V power supply for analog circuits | 0 | 6 | 6 | 0 | 0 | 0 | - | POWER→MAIN |
| | 4 | A+6 | 6V power supply for analog circuits | 0 | 6 | 6 | 0 | 0 | 0 | - | POWER→MAIN |
| | 5 | A.GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 6 | A.GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 7 | NC | Non-connection terminal | - | - | - | - | - | - | - | - |
| | 8 | NC | Non-connection terminal | - | - | - | - | - | - | - | - |
| AU | 1 | AU_L | Audio signal L CH | 0 | Selected input signals are output. | Selected input signals are output. | 0 | 0 | 0 | - | MAIN→AUDIO |
| | 2 | GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 3 | AU_R | Audio signal R CH | 0 | Selected input signals are output. | Selected input signals are output. | 0 | 0 | 0 | - | MAIN→AUDIO |
| | 4 | GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 5 | MUTE | Mute signal of audio output | 3.5 | 3.5→0 | 3.5→0 | 3.5 | 3.5→0 | 3.5 | 3.5→- | MAIN→AUDIO |
| | 6 | SCL7 | Clock line of the I2C bus | 0 | Clock signal (5Vac) when data are received; 5Vdc when no data are received. | Clock signal (5Vac) when data are received; 5Vdc when no data are received. | 0 | 0 | 0 | - | MAIN→AUDIO |
| | 7 | SDA7 | Data line of the I2C bus | 0 | Clock signal (5Vac) when data are received; 5Vdc when no data are received. | Clock signal (5Vac) when data are received; 5Vdc when no data are received. | 1 | 1 | 0 | - | MAIN→AUDIO |
| RS | 1 | M+5V | 5V power supply for microcomputer | 0 | 5 | 5 | 5 | 5 | 0 | - | MAIN→RS232C |
| | 2 | TXD | RS232 driver output | 0 | Clock signal used during data transmission (3.3Vac) 3.3Vdc when no data are received. | Clock signal used during data transmission (3.3Vac) 3.3Vdc when no data are received. | Clock signal used during data transmission (3.3Vac) 3.3Vdc when no data are received. | Clock signal used during data transmission (3.3Vac) 3.3Vdc when no data are received. | 0 | - | MAIN→RS232C |
| | 3 | GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 4 | RXD | RS232 receiver input | 0 | Clock signal (3.3Vac) when data are received; 3.3Vdc when no data are received. | Clock signal (3.3Vac) when data are received; 3.3Vdc when no data are received. | Clock signal (3.3Vac) when data are received; 3.3Vdc when no data are received. | Clock signal (3.3Vac) when data are received; 3.3Vdc when no data are received. | 0 | - | RS232C→MAIN |
| | 5 | M+3.3V | 3.3V power supply for microcomputer | 0 | 3.3 | 3.3 | 3.3 | 3.3 | 0 | - | MAIN→RS232C |
| | 6 | GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 7 | REMIN2/RXD1 | Data signal of wired remote control | | | | | | 0 | - | RS232C→MAIN |
| | | | | 0 | 0 | 0 | 0 | 0 | 0 | - | |
| | 8 | RESET SW | NC | - | - | - | - | - | - | - | - |
| | 9 | PLE_CTL | PLE control | | | | | 0 | 0 | - | MAIN→RS232C |
| | | | | 0 | 0 | 0 | 0 | 0 | 0 | - | |
| | 10 | TXD1 | RS232 driver output | | | | | 0 | 0 | - | MAIN→RS232C |

| Name | Pin No. | Pin name | Function | Basic operation (Numerical unit: Vdc; except for the case when units are individually indicated) | | | | | | | Signal direction |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AC power ON (Power cord connected to the wall outlet) ★★ | Main power ON (POWER button ON) ★ | | Power management ★★ | Standby ★★★ | Main power OFF ★★ | AC power OFF (Power cord pulled out of the wall outlet) ★★ | |
| | | | | | No signal | With signal | | | | | |
| | | | | 0 | 0 | 0 | 0 | 0 | 0 | - | |
| | 11 | 232C_SHUT | ON/OFF control for TXD0 driver | 0 | 3.3 | 3.3 | 3.3 | 3.3 | 0 | - | MAIN→RS232C |
| | 12 | REM | Insertion detection for wired remote control input | | | | | | 0 | - | RS232C→MAIN |
| | | | | - | - | - | - | - | - | - | (NC for Model R) |
| TM | 1 | SCL5 | Clock line of the I2C bus | 0 | Clock signal used during data transmission (3.3Vac) 3.3Vdc when no data are transmitted. | Clock signal used during data transmission (3.3Vac) 3.3Vdc when no data are transmitted. | 0 | 0 | 0 | - | MAIN→SENB |
| | 2 | GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 3 | VDD+3.3V | 3.3V power supply for analog signals | 0 | 3.3 | 3.3 | 0 | 0 | 0 | - | MAIN→SENB |
| | 4 | SDA5 | Data line of the I2C bus | 0 | During data exchange: Clock signal (3.3Vac), Data not exchanged: 3.3Vdc | During data exchange: Clock signal (3.3Vac), Data not exchanged: 3.3Vdc | 0 | 0 | 0 | - | MAIN←→SENB |
| TR | 1 | SCL5 | Clock line of the I2C bus | 0 | Clock signal used during data transmission (3.3Vac) 3.3Vdc when no data are transmitted. | Clock signal used during data transmission (3.3Vac) 3.3Vdc when no data are transmitted. | 0 | 0 | 0 | - | SENB→SEND |
| | 2 | GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 3 | VDD+3.3V | 3.3V power supply for analog signals | 0 | 3.3 | 3.3 | 0 | 0 | 0 | - | SENB→SEND |
| | 4 | SDA5 | Data line of the I2C bus | 0 | During data exchange: Clock signal (3.3Vac), Data not exchanged: 3.3Vdc | During data exchange: Clock signal (3.3Vac), Data not exchanged: 3.3Vdc | 0 | 0 | 0 | - | SENB←→SEND |
| TS | 1 | SCL5 | Clock line of the I2C bus | 0 | Clock signal used during data transmission (3.3Vac) 3.3Vdc when no data are transmitted. | Clock signal used during data transmission (3.3Vac) 3.3Vdc when no data are transmitted. | 0 | 0 | 0 | - | SEND→SENC |
| | 2 | GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 3 | VDD+3.3V | 3.3V power supply for analog signals | 0 | 3.3 | 3.3 | 0 | 0 | 0 | - | SEND→SENC |
| | 4 | SDA5 | Data line of the I2C bus | 0 | During data exchange: Clock signal (3.3Vac), Data not exchanged: 3.3Vdc | During data exchange: Clock signal (3.3Vac), Data not exchanged: 3.3Vdc | 0 | 0 | 0 | - | SEND←→SENC |
| FA | 1 | FAN-CTL | Voltage-controllable power supply | | | | | | | | |
| | | | | | | | 0 | 0 | 0 | - | MAIN→FAN |
| | | | | 0 | 11.6Vdc during high-speed revolution (Fan mode H); 7.8Vdc during medium speed revolution (Fan mode M); 5.3Vdc during low-speed revolution (Fan mode L) | 11.6Vdc during high-speed revolution (Fan mode H); 7.8Vdc during medium speed revolution (Fan mode M); 5.3Vdc during low-speed revolution (Fan mode L) | 0 | 0 | 0 | - | |
| | | | | | | | 0 | 0 | 0 | - | |
| | 2 | GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 3 | ALARM | FAN lock detect signal output | - | - | - | - | - | - | - | - |

| Name | Pin No. | Pin name | Function | | Basic operation (Numerical unit: Vdc; except for the case when units are individually indicated) | | | | | | | Signal direction |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | AC power ON (Power cord connected to the wall outlet) ★★ | Main power ON (POWER button ON) ★ | | Power management ★★ | Standby ★★★ | Main power OFF ★★ | AC power OFF (Power cord pulled out of the wall outlet) ★★ | |
| | | | | | | No signal | With signal | | | | | |
| | | | | | 0 | 0V during normal fan operation;3.3V dc while the fan is stopped. | 0V during normal fan operation;3.3V dc while the fan is stopped. | 0 | 0 | 0 | - | FAN→MAIN |
| FB | 1 | FAN-CTL | Voltage-controllable power supply | | | | | | | | | |
| | | | | | | | | 0 | 0 | 0 | - | MAIN→FAN |
| | | | | | 0 | 11.6Vdc during high-speed revolution (Fan mode H); 7.8Vdc during medium speed revolution (Fan mode M); 5.3Vdc during low-speed revolution (Fan mode L) | 11.6Vdc during high-speed revolution (Fan mode H); 7.8Vdc during medium speed revolution (Fan mode M); 5.3Vdc during low-speed revolution (Fan mode L) | 0 | 0 | 0 | - | |
| | | | | | | | | 0 | 0 | 0 | - | |
| | 2 | GND | GND | | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 3 | ALARM | FAN lock detect signal output | | - | - | - | - | - | - | - | - |
| | | | | | 0 | 0V during normal fan operation;3.3V dc while the fan is stopped. | 0V during normal fan operation;3.3V dc while the fan is stopped. | 0 | 0 | 0 | - | FAN→MAIN |
| FC | 1 | FAN-CTL | Voltage-controllable power supply | | | | | | | | | |
| | | | | | | | | 0 | 0 | 0 | - | FAN→MAIN |
| | 2 | GND | GND | | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 3 | ALARM | FAN lock detect signal output | | | | | | | | | |
| | | | | | | | | 0 | 0 | 0 | - | FAN→MAIN |
| AD | 1 | GND | GND | | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 2 | GND | GND | | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 3 | ALARM | Module alarm signal | | 0 | 5Vdc during normal PDP operation; 0V when the PDP is out of order. | 5Vdc during normal PDP operation; 0V when the PDP is out of order. | 0 | 0 | 0 | - | PDP→MAIN |
| | 4 | GND | GND | | 0 | 0 | 0 | 0 | 0 | 0 | - | - |

| Name | Pin No. | Pin name | Function | Basic operation (Numerical unit: Vdc; except for the case when units are individually indicated) | | | | | | | Signal direction |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AC power ON (Power cord connected to the wall outlet) ★★ | Main power ON (POWER button ON) ★ | | Power management ★★ | Standby ★★★ | Main power OFF ★★ | AC power OFF (Power cord pulled out of the wall outlet) ★★ | |
| | | | | | No signal | With signal | | | | | |
| | 5 | PS+ | PSS input PS+ | 0 | PSS LVDS serial differential PS+ input 0Vac; Bias 1.1Vdc | PSS LVDS serial differential PS+ input 0.3Vac; Bias 1.25Vdc | 0 | 0 | 0 | - | PDP→MAIN |
| | 6 | PS- | PSS input PS- | 0 | PSS LVDS serial differential PS+ input 0Vac; Bias 1.4Vdc | PSS LVDS serial differential PS+ input 0.3Vac; Bias 1.25Vdc | 0 | 0 | 0 | - | PDP→MAIN |
| | 7 | MSEL | 42V5 compatible interface OFF | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 8 | GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 9 | RH+ | OSD system output H+ | 0 | OSD LVDS serial differential H+ output 0Vac; Bias 1.1Vdc | OSD LVDS serial differential H+ output 0Vac; Bias 1.1Vdc | 0 | 0 | 0 | - | MAIN→PDP |
| | 10 | RH- | OSD system output H– | 0 | OSD LVDS serial differential H- output 0Vac; Bias 1.4Vdc | OSD LVDS serial differential H- output 0Vac; Bias 1.4Vdc | 0 | 0 | 0 | - | MAIN→PDP |
| | 11 | RG+ | OSD system output G+ | 0 | OSD LVDS serial differential G+ output 0.3Vac; Bias 1.25Vdc | OSD LVDS serial differential G+ output 0.3Vac; Bias 1.25Vdc | 0 | 0 | 0 | - | MAIN→PDP |
| | 12 | RG- | OSD system output G- | 0 | OSD LVDS serial differential G- output 0.3Vac; Bias 1.25Vdc | OSD LVDS serial differential G- output 0.3Vac; Bias 1.25Vdc | 0 | 0 | 0 | - | MAIN→PDP |
| | 13 | RF+ | Mode system output F+ | 0 | Video mode LVDS serial differential F+ output 0.3Vac; Bias 1.25Vdc | Video mode LVDS serial differential F+ output 0.3Vac; Bias 1.25Vdc | 0 | 0 | 0 | - | MAIN→PDP |
| | 14 | RF- | Mode system output F- | 0 | Video mode LVDS serial differential F- output 0.3Vac; Bias 1.25Vdc | Video mode LVDS serial differential F- output 0.3Vac; Bias 1.25Vdc | 0 | 0 | 0 | - | MAIN→PDP |
| | 15 | GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 16 | RE+ | Video system output E+ | 0 | Video mode LVDS serial differential E+ output 0Vac; Bias 1.1Vdc | Video mode LVDS serial differential E+ output 0Vac; Bias 1.1Vdc | 0 | 0 | 0 | - | MAIN→PDP |
| | 17 | RE- | Video system output E- | 0 | Video mode LVDS serial differential E- output 0Vac; Bias 1.4Vdc | Video mode LVDS serial differential E- output 0.3Vac; Bias 1.25Vdc | 0 | 0 | 0 | - | MAIN→PDP |
| | 18 | RD+ | Video system output D+ | 0 | Video mode LVDS serial differential D+ output 0Vac; Bias 1.1Vdc | Video mode LVDS serial differential D+ output 0.3Vac; Bias 1.25Vdc | 0 | 0 | 0 | - | MAIN→PDP |
| | 19 | RD- | Video system output D– | 0 | Video mode LVDS serial differential D- output 0Vac; Bias 1.4Vdc | Video mode LVDS serial differential D- output 0.3Vac; Bias 1.25Vdc | 0 | 0 | 0 | - | MAIN→PDP |

| Name | Pin No. | Pin name | Function | Basic operation (Numerical unit: Vdc; except for the case when units are individually indicated) | | | | | | | Signal direction |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AC power ON (Power cord connected to the wall outlet) ★★ | Main power ON (POWER button ON) ★ | | Power management ★★ | Standby ★★★ | Main power OFF ★★ | AC power OFF (Power cord pulled out of the wall outlet) ★★ | |
| | | | | | No signal | With signal | | | | | |
| | 20 | RCLK+ | Video system output clock+ | 0 | Video data clock LVDS serial differential clock+ output 0.3Vac; Bias 1.25Vdc | Video data clock LVDS serial differential clock+ output 0.3Vac; Bias 1.25Vdc | 0 | 0 | 0 | - | MAIN→PDP |
| | 21 | RCLK- | Video system output clock– | 0 | Video data clock LVDS serial differential clock- output 0.3Vac; Bias 1.25Vdc | Video data clock LVDS serial differential clock- output 0.3Vac; Bias 1.25Vdc | 0 | 0 | 0 | - | MAIN→PDP |
| | 22 | GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 23 | RC+ | Video system output C+ | 0 | Video data LVDS serial differential C+ output 0.3Vac; Bias 1.25Vdc | Video data LVDS serial differential C+ output 0.3Vac; Bias 1.25Vdc | 0 | 0 | 0 | - | MAIN→PDP |
| | 24 | RC- | Video system output C– | 0 | Video data LVDS serial differential C- output 0.3Vac; Bias 1.25Vdc | Video data LVDS serial differential C- output 0.3Vac; Bias 1.25Vdc | 0 | 0 | 0 | - | MAIN→PDP |
| | 25 | RB+ | Video system output B+ | 0 | Video data LVDS serial differential B+ output 0Vac; Bias 1.1Vdc | Video data LVDS serial differential B+ output 0Vac; Bias 1.1Vdc | 0 | 0 | 0 | - | MAIN→PDP |
| | 26 | RB- | Video system output B– | 0 | Video data LVDS serial differential B- output 0Vac; Bias 1.4Vdc | Video data LVDS serial differential B- output 0.3Vac; Bias 1.25Vdc | 0 | 0 | 0 | - | MAIN→PDP |
| | 27 | RA+ | Video system output A+ | 0 | Video data LVDS serial differential A+ output 0Vac; Bias 1.1Vdc | Video data LVDS serial differential A+ output 0.3Vac; Bias 1.25Vdc | 0 | 0 | 0 | - | MAIN→PDP |
| | 28 | RA- | Video system output A– | 0 | Video data LVDS serial differential A- output 0Vac; Bias 1.4Vdc | Video data LVDS serial differential A- output 0.3Vac; Bias 1.25Vdc | 0 | 0 | 0 | - | MAIN→PDP |
| | 29 | GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 30 | GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 31 | GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| LD | 1 | REMIN1 | Infrared remote control data | 0 | Clock signal (5Vac) when data are received; 5Vdc when no data are received. | Clock signal (5Vac) when data are received; 5Vdc when no data are received. | Clock signal (5Vac) when data are received; 5Vdc when no data are received. | Clock signal (5Vac) when data are received; 5Vdc when no data are received. | 0 | - | LED→PWR |
| | 2 | LEDCTL1 | Standby red LED control | 0 | 0 | 0 | 3.3 | 3.3 | 0 | - | PWR→LED |
| | 3 | LEDCTL2 | POWER ON green LED control | 0 | 3.3 | 3.3 | 0 | 0 | 0 | - | PWR→LED |
| | 4 | GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 5 | M+5V | 5V power supply for microcomputer | 0 | 5 | 5 | 5 | 5 | 0 | - | PWR→LED |
| PW | 1 | SW7 | Power start control | 0 | 6.8 | 6.8 | 6.8 | 6.8 | 0 | - | PW→MAIN |
| | 2 | POIN | Power start detection | 0 | 3.3 | 3.3 | 3.3 | 3.3 | 0 | - | PW→MAIN |
| | 3 | GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 4 | M+5V | 5V power supply for microcomputer | 0 | 5 | 5 | 5 | 5 | 0 | - | MAIN→PW |
| | 5 | M+7V | 7V power supply for microcomputer | 0 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | - | MAIN→PW |
| | 6 | REMIN1 | Infrared remote control data | 0 | Clock signal (5Vac) when data are received; 5Vdc when no data are received. | Clock signal (5Vac) when data are received; 5Vdc when no data are received. | Clock signal (5Vac) when data are received; 5Vdc when no data are received. | Clock signal (5Vac) when data are received; 5Vdc when no data are received. | 0 | - | PW→MAIN |
| | 7 | LEDCTL1 | Standby red LED control | 0 | 0 | 0 | 3.3 | 3.3 | 0 | - | MAIN→PW |
| | 8 | LEDCTL2 | POWER ON green LED control | 0 | 3.3 | 3.3 | 0 | 0 | 0 | - | MAIN→PW |
| SW | 1 | CTL1 | Key input detection | 0 | 0.7~2.8Vdc when key inputs are entered; 3.3Vdc when no key inputs are entered. | 0.7~2.8Vdc when key inputs are entered; 3.3Vdc when no key inputs are entered. | 0.7~2.8Vdc when key inputs are entered; 3.3Vdc when no key inputs are entered. | 0.7~2.8Vdc when key inputs are entered; 3.3Vdc when no key inputs are entered. | 0 | - | SW→MAIN |
| | 2 | CTL2 | Key input detection | 0 | 0.7~2.8Vdc when key inputs are entered; 3.3Vdc when no key inputs are entered. | 0.7~2.8Vdc when key inputs are entered; 3.3Vdc when no key inputs are entered. | 0.7~2.8Vdc when key inputs are entered; 3.3Vdc when no key inputs are entered. | 0.7~2.8Vdc when key inputs are entered; 3.3Vdc when no key inputs are entered. | 0 | - | SW→MAIN |
| | 3 | GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| PA | 1 | S+12 | +12V power supply for audio circuits | 0 | 12 | 12 | 0 | 0 | 0 | - | POWER→AUDIO |
| | 2 | S+12 | +12V power supply for audio circuits | 0 | 12 | 12 | 0 | 0 | 0 | - | POWER→AUDIO |
| | 3 | S+12 | +12V power supply for audio circuits | 0 | 12 | 12 | 0 | 0 | 0 | - | POWER→AUDIO |
| | 4 | GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |

| Name | Pin No. | Pin name | Function | Basic operation (Numerical unit: Vdc; except for the case when units are individually indicated) | | | | | | | Signal direction |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AC power ON (Power cord connected to the wall outlet) ★★ | Main power ON (POWER button ON) ★ | | Power management ★★ | Standby ★★★ | Main power OFF ★★ | AC power OFF (Power cord pulled out of the wall outlet) ★★ | |
| | | | | | No signal | With signal | | | | | |
| | 5 | GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 6 | GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| PD | 1 | ALARM | PDP alarm signal | 0 | 5Vdc when the PDP is normal; 0V when it is abnormal. | 5Vdc when the PDP is normal; 0V when it is abnormal. | 0 | 0 | 0 | - | PDP→POWER |
| | 2 | D.GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 3 | D.GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 4 | D.GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 5 | D.GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 6 | D+60 | Vd power supply for PDP | 0 | 60Vdc (changeable according to the PDP) | 60Vdc (changeable according to the PDP) | 0 | 0 | 0 | - | PDWER→PDP |
| | 7 | D+60 | digital circuits | 0 | 60Vdc (changeable according to the PDP) | 60Vdc (changeable according to the PDP) | 0 | 0 | 0 | - | PDWER→PDP |
| | 8 | NC | digital circuits | - | - | - | - | - | - | - | - |
| | 9 | D+170 | Vs power supply for PDP high-voltage circuits | 0 | 170Vdc (changeable according to the PDP) | 170Vdc (changeable according to the PDP) | 0 | 0 | 0 | - | PDWER→PDP |
| | 10 | D+170 | Vs power supply for PDP high-voltage circuits | 0 | 170Vdc (changeable according to the PDP) | 170Vdc (changeable according to the PDP) | 0 | 0 | 0 | - | PDWER→PDP |
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| PH | 1 | D+5 | 5V power supply for digital circuits | 0 | 5.15 | 5.15 | 0 | 0 | 0 | - | PDWER→PDP |
| | 2 | D+5 | 5V power supply for digital circuits | 0 | 5.15 | 5.15 | 0 | 0 | 0 | - | PDWER→PDP |
| | 3 | D.GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
| | 4 | D.GND | GND | 0 | 0 | 0 | 0 | 0 | 0 | - | - |
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# BLOCK DIAGRAM