

## PD-5030

**CAUTION:**

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

### SPECIFICATIONS

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

**\*<sup>1</sup> 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)

**\*<sup>2</sup> 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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## SERVICE SAFETY




### ■ 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.






	<b>WARNING</b>	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.
	<b>CAUTION</b>	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

	<ul style="list-style-type: none"><li>• <b>Observe the caution matter, without fail.</b><ul style="list-style-type: none"><li>• 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  <b>WARNING</b> given in the instruction manuals, etc., must be observed, without fail.</li></ul></li></ul>
	<ul style="list-style-type: none"><li>• <b>Be careful of an electric shock or a burn.</b><ul style="list-style-type: none"><li>• 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.</li></ul></li></ul>
	<ul style="list-style-type: none"><li>• <b>Modification of equipment is absolutely prohibited. Use the specified parts at all times.</b><ul style="list-style-type: none"><li>• 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.</li></ul></li></ul>
	<ul style="list-style-type: none"><li>• <b>The replaced parts and wiring must be arranged in the original conditions.</b><ul style="list-style-type: none"><li>• 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.</li></ul></li></ul>

- **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 500MΩ 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.)?	
Authentic repair	Trouble-shooting	Is equipment free from any abnormality in daily use?	
		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?	
	Specified parts	Is the normal condition confirmed after aging?	
		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?	
	Wires mounted	Is the part version correct?	
		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

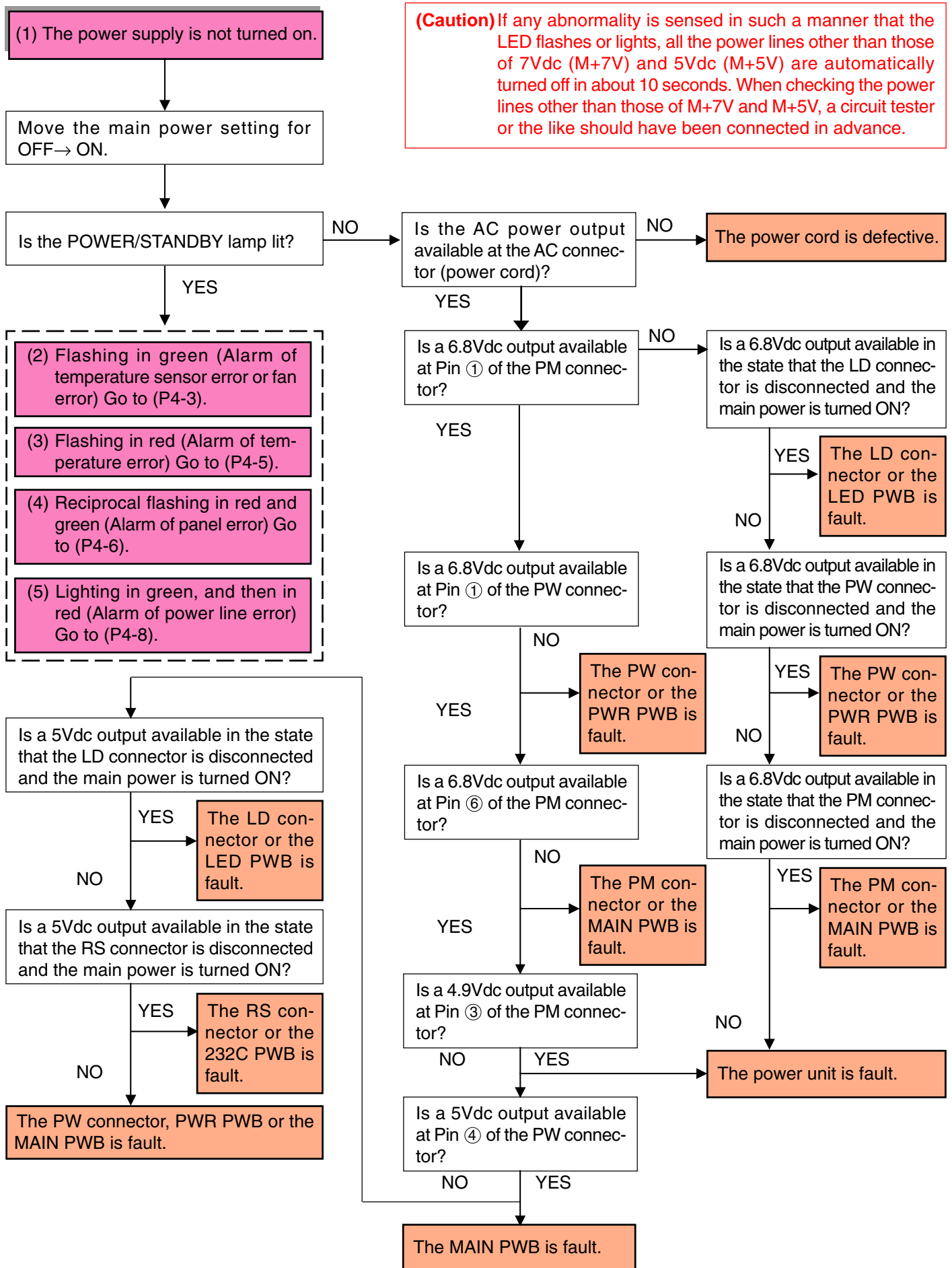
does not get any shock or stress.

- (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.

## TROUBLESHOOTING

- Problems in the power supply, such as “Failure in Power ON” or “LED flashing or lighting (alarm display)”  
→ 1. Go to Power failure (P3-2).
- Problems in the images, such as “No pictures available”  
→ 2. Go to Image errors (P3-8).
- “No output from the video loop out”  
→ Fault in the MAIN PWB
- Problems in the audio system, such as “No audio output”  
→ 3. Go to Audio errors (P3-15).
- “Remote control not effective”  
→ 4. Go to Remote control not effective (P3-15).

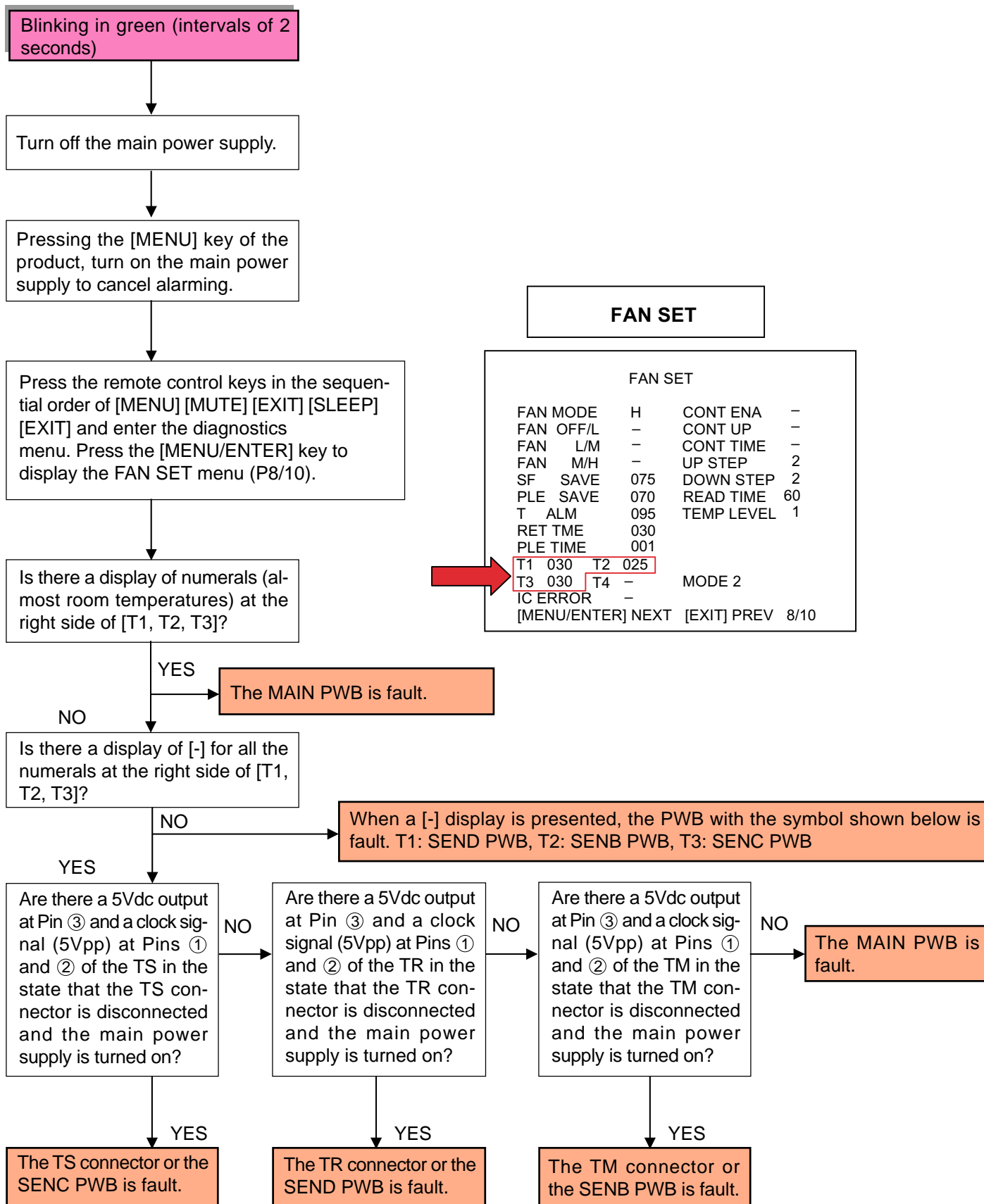
## 1. Power failure





## (2) Blinking in green

### ① Alarm of temperature sensor error



## ② Alarm of fan error

Blinking in green (intervals of 0.5 seconds)

Turn off the main power supply.

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

Is the fan running?

**(Caution)** When alarming is canceled, [FAN MODE] of FAN SET (P8/10) in the factory adjustment menu automatically moves from [ENA] to [H], thus causing the fan to run.

YES

Is there a 5Vdc output at Pin ③ of the FA and FB, FC connectors?

YES

The fan is out of order on the side where a 5Vdc output is generated.

NO

The MAIN PWB is fault.

NO

Is there a 9.3Vdc output at Pin ① of the FA and FB, FC connectors?

YES

The FAN-A/FAN-B/FAN-C is fault.

NO

Is there a 9.3Vdc output in the state that the FA connector is disconnected and the main power supply is turned on?

YES

The FAN-A is fault.

NO

Is there a 9.3Vdc output in the state that the FB connector is disconnected and the main power supply is turned on?

YES

The FAN-B is fault.

NO

Is there a 9.3Vdc output in the state that the FC connector is disconnected and the main power supply is turned on?

NO

The MAIN PWB is fault.

YES

The FAN-C is fault.

**(Caution)** The FAN-C and FC connectors are used only for the 61XM2 Series.

### FAN SET

**FAN MODE ENA** CONT ENA -  
FAN OFF/L - CONT UP -  
FAN L/M - CONT TIME -  
FAN M/H - UP STEP 2  
FAN 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 8/10

### FAN SET

**FAN MODE H** CONT ENA -  
FAN OFF/L - CONT UP -  
FAN L/M - CONT TIME -  
FAN M/H - UP STEP 2  
FAN 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 8/10

**(Caution)** When repairing is finished, press the [▶] key of POSITION/CONTROL at the remote control to return [H] of FAN MODE to [ENA], without fail. When the main power supply is moved from OFF to ON, [ENA] is automatically recovered.

### **(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:

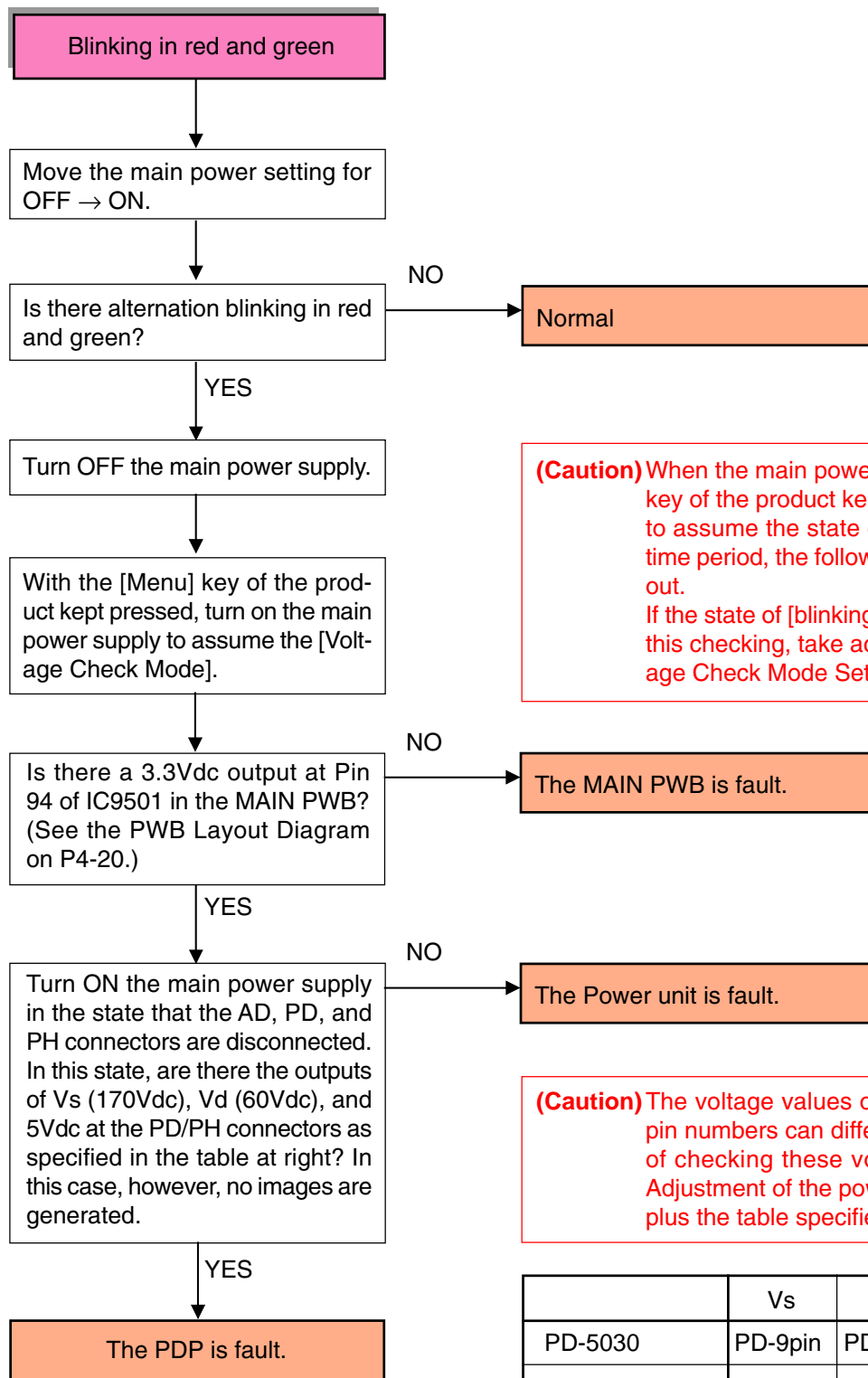
1. Turn off the main power supply and pull out the power cord from the wall outlet.
2. Wait for about 60 minutes until the temperature in the main unit lowers.
3. Check whether the heat discharge port is covered with dust or the like. If yes, remove the clogging substance.
4. If the unit is used where 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.

① For the PD-5030



**(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.

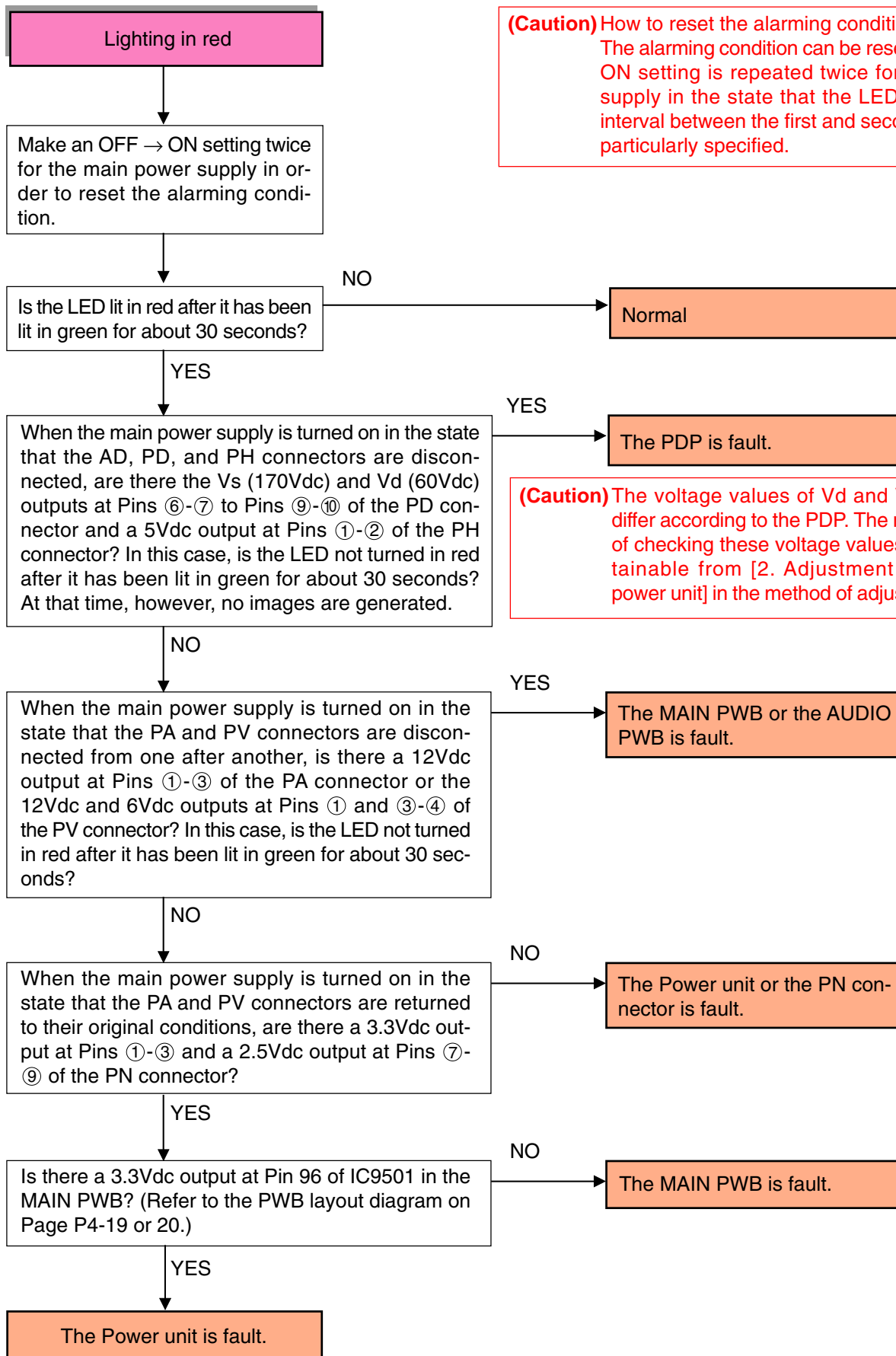
If the state of [blinking in red and green] is assumed during this checking, take actions of [Alarm Canceling] and [Voltage Check Mode Setup] again.

**(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.

	Vs	Vd	GND	5Vdc	GND
PD-5030	PD-9pin	PD-7pin	PD-5pin	PH-1pin	PH-3pin

### (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].



**(Caution)** How to reset the alarming condition

The alarming condition can be reset when an OFF→ON setting is repeated twice for the main power supply in the state that the LED is lit in red. The interval between the first and second settings is not particularly specified.

**(Caution)** The voltage values of Vd and Vs 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.

## 2. Image errors

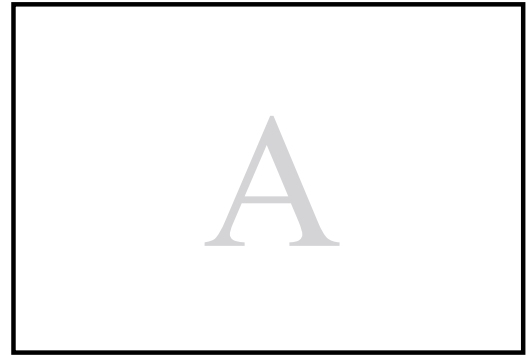
**(Caution)** Typical abnormal images are shown below. All errors do not always fall on these error samples.

### (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.



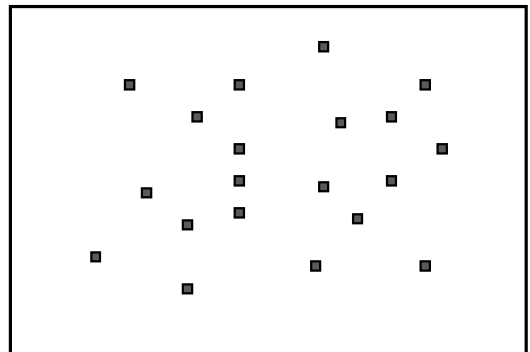
All-white signal

### (2) Failure in writing

Failure in writing



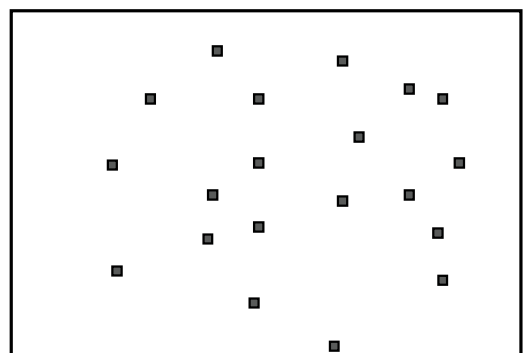
The PDP is fault.



All-white signal

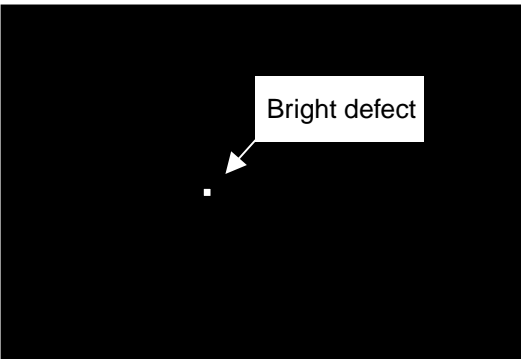
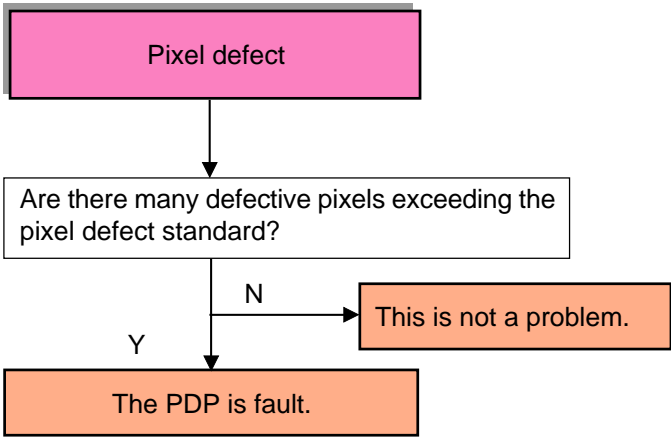


Dot errors change with no continuity.

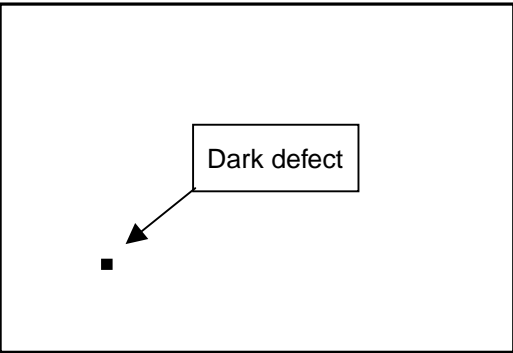


All-white signal

(3) Pixel defect



(Fig. 1) All-Black Signal

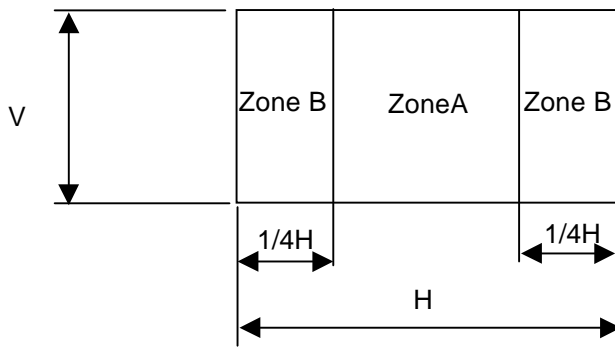


(Fig. 2) All-White Signal

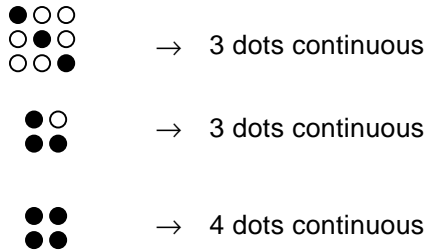
[Pixel defect standard for reference]

	Displayed image	Pixel defect standard	
		Non-continuous	Continuous
Bright defect	Black all over the screen (Fig. 1)	Zone A: □ dots or less in all for each color Zone B: □ dots or less in all for each color	Continuous □ dots or less
	Red level 100% over the screen	Zone A: □ dots or less in all for each color	Defective when □ dots or less are continuously horizontal and seen white.
	Green level 100% over the screen	Zone B: □ dots or less in all for each color	
	Blue level 100% over the screen	Each zone: □ dots or less for each uni-color	
Dark defect	Red level 100% over the screen	Zone A: □ dots or less in all for each color Zone B: □ dots or less in all for each color	Zone A: □ dots or less vertically continuous
	Green level 100% over the screen		Zone B: □ dots or less continuous
	Blue level 100% over the screen		Except for the continuous portions, however, the distance between dark dots shall be □ cm or more.
	White all over the screen (Fig. 2)	—	Zone A: □ dots continuous in one portion or less ( □ dots for vertical continuity) Zone B: □ dots or less continuous Except for the continuous portions, however, the distance between dark dots shall be □ cm or more.



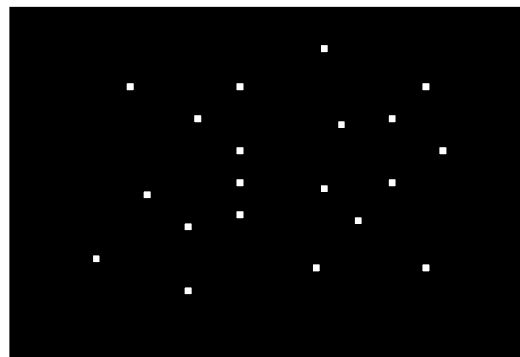
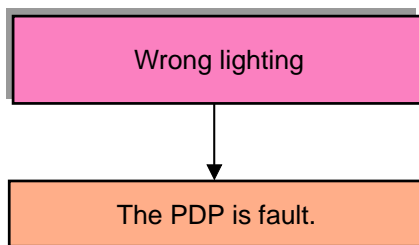


**(Caution1)** Zone A: Central part (the area surrounded by the right and left sides by  $1/4H$ ) with the area that is  $1/2$  of the whole  
 Zone B: Area other than A above

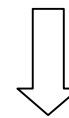


**(Caution2)** The continuous dots appearing in the slantwise direction or in a cluster state shall be defined as follows:

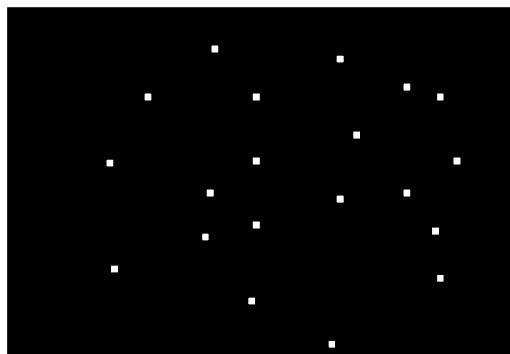
#### (4) Wrong lighting



All-black signal



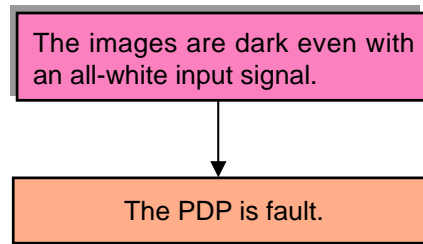
Dot errors change with no continuity.



All-black signal

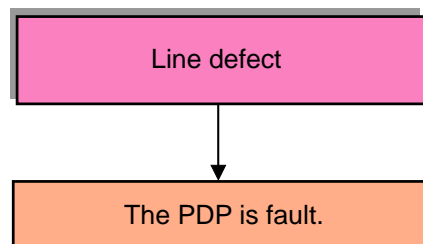


**(5) Dark images [Other than the deterioration in brightness as per (1) above]**

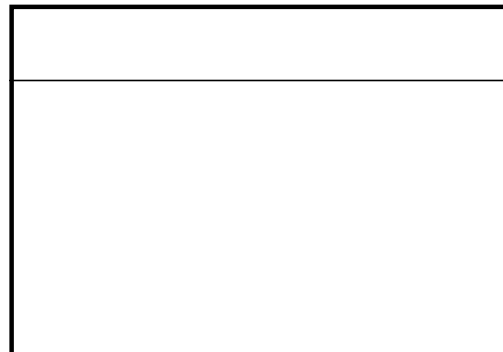


All-white signal

**(6) Defect in horizontal lines**



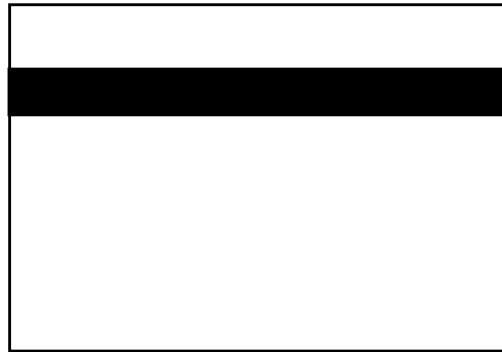
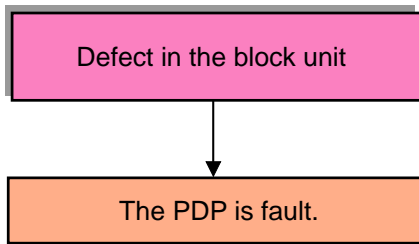
All-white signal



All-white signal



All-white signal

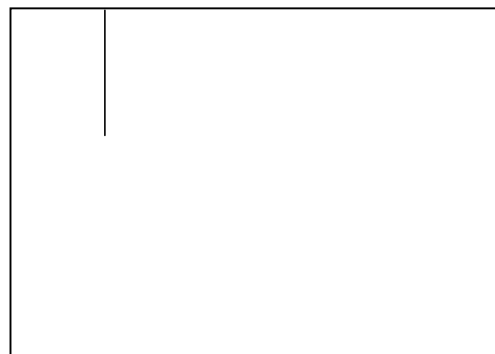
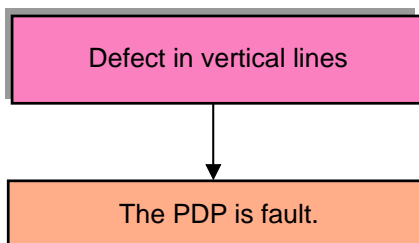


All-white signal

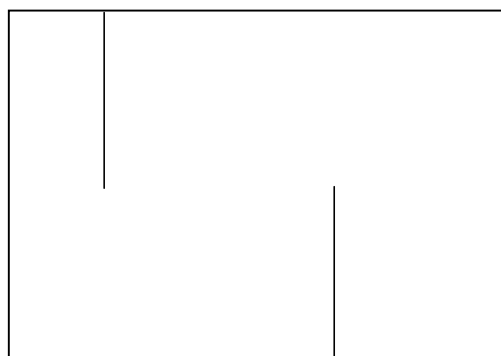


All-white signal

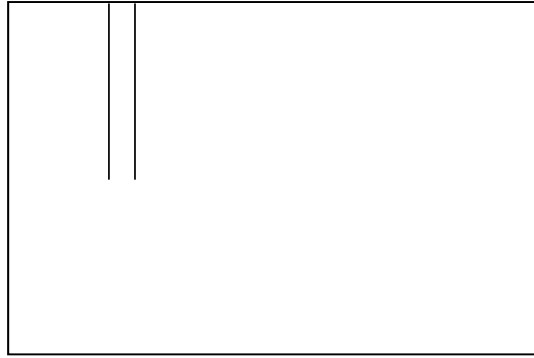
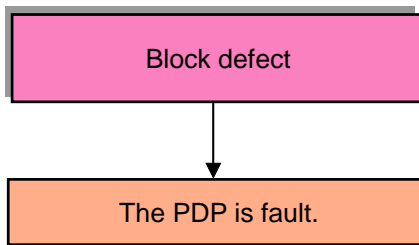
**(7) Defect in vertical lines**



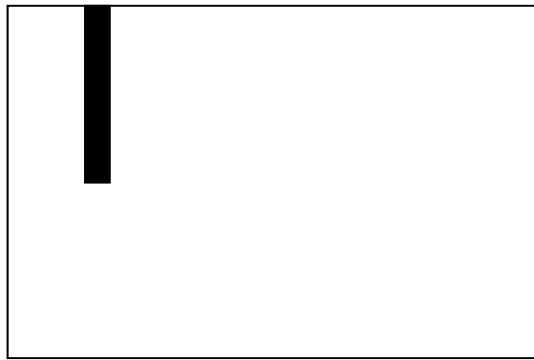
All-white signal



All-white signal



All-white signal



All-white signal

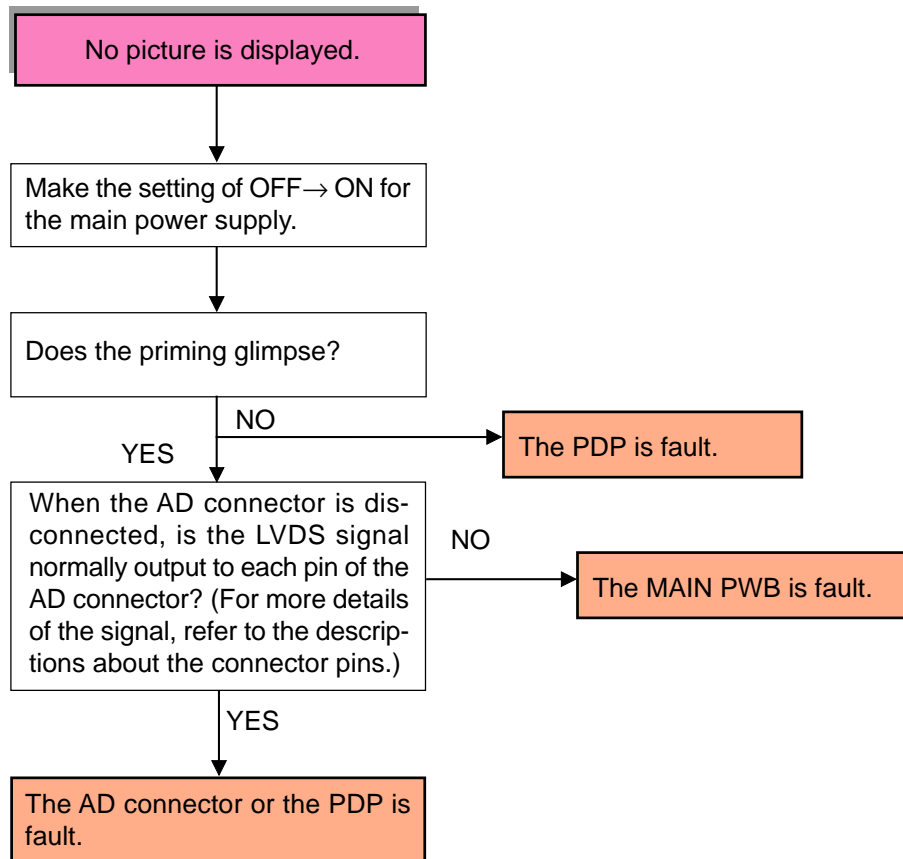


All-white signal



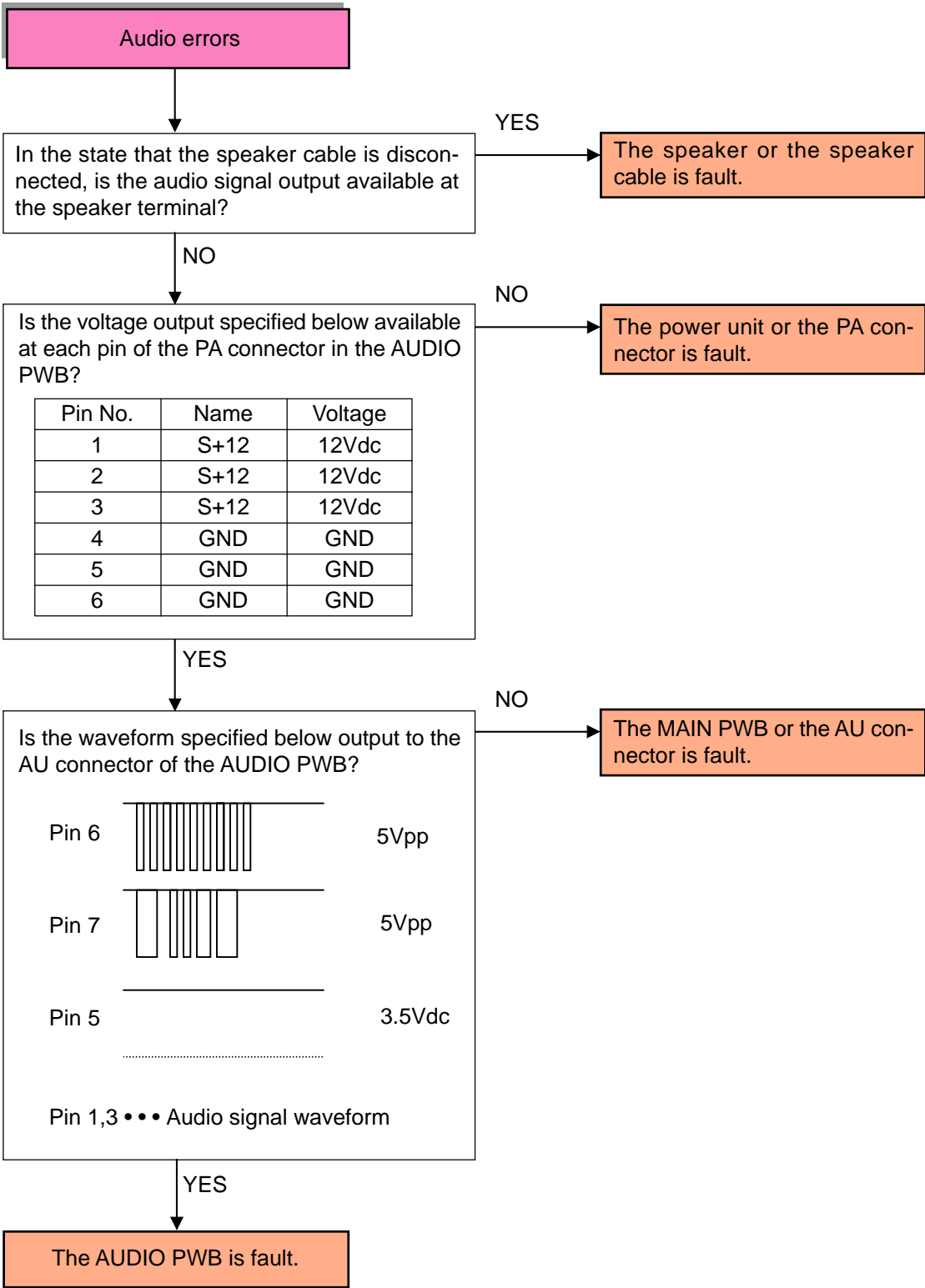
All-white signal

**(8) No pictures** **[(Caution)]** The voltage outputs of  $V_s = 170V$  and  $V_d = 64V$ , 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.

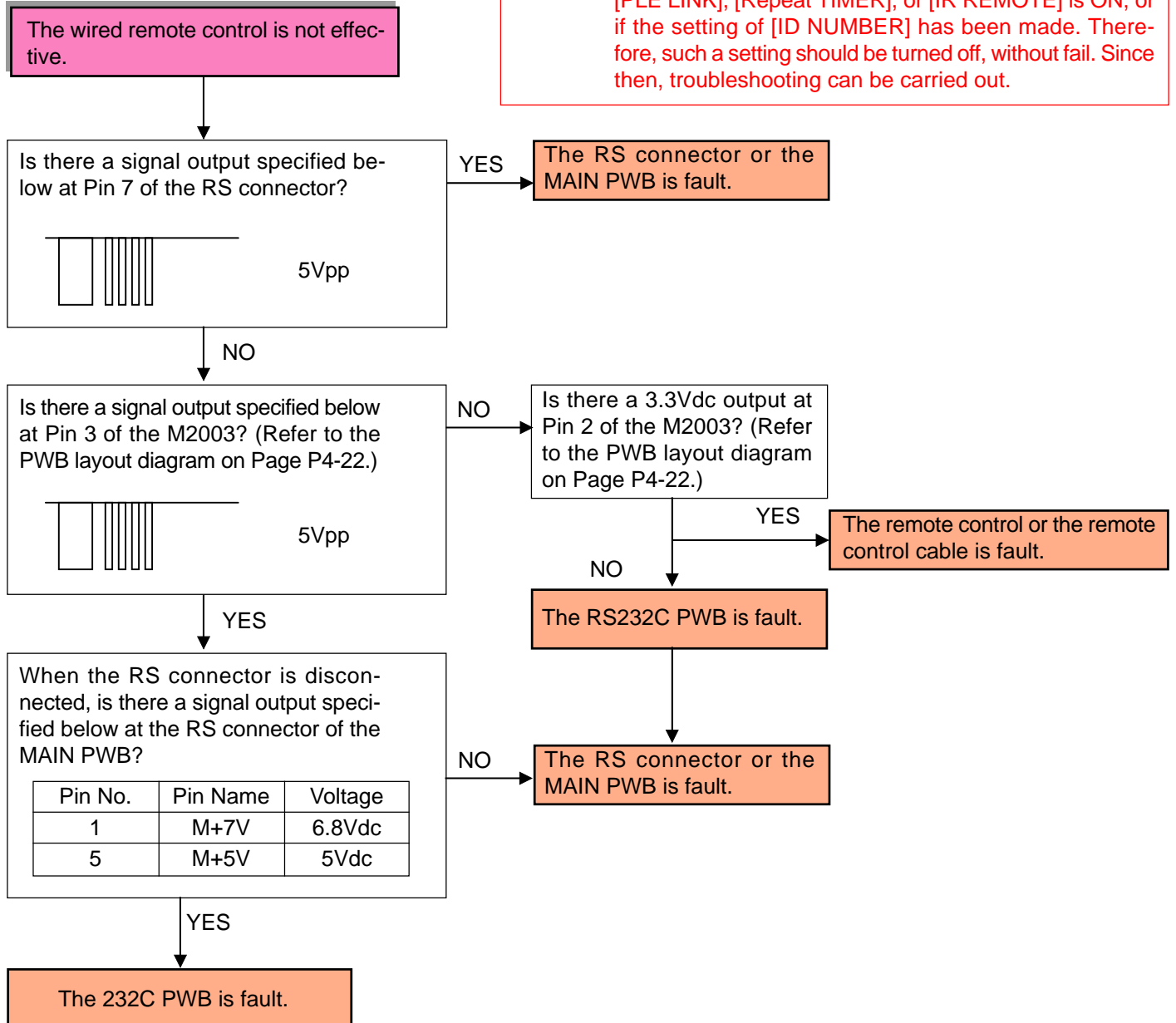


#### 4. Remote control not effective

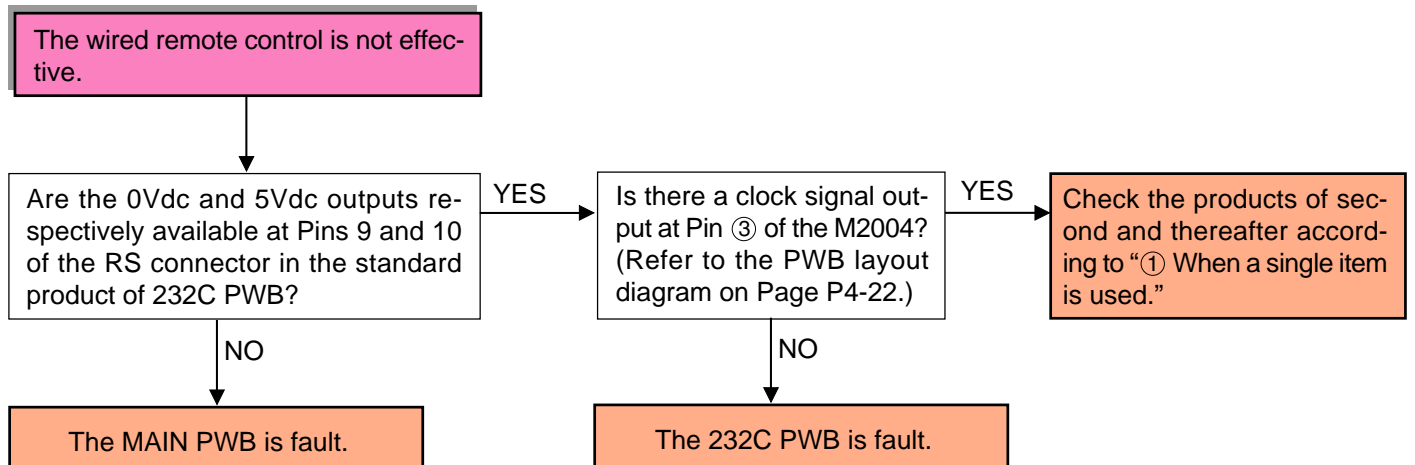
##### (1) The wired remote control is not effective.

① When a single item is used

**(Caution)** The wired remote control is not effective if the setting of [PLE LINK], [Repeat TIMER], or [IR REMOTE] 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.

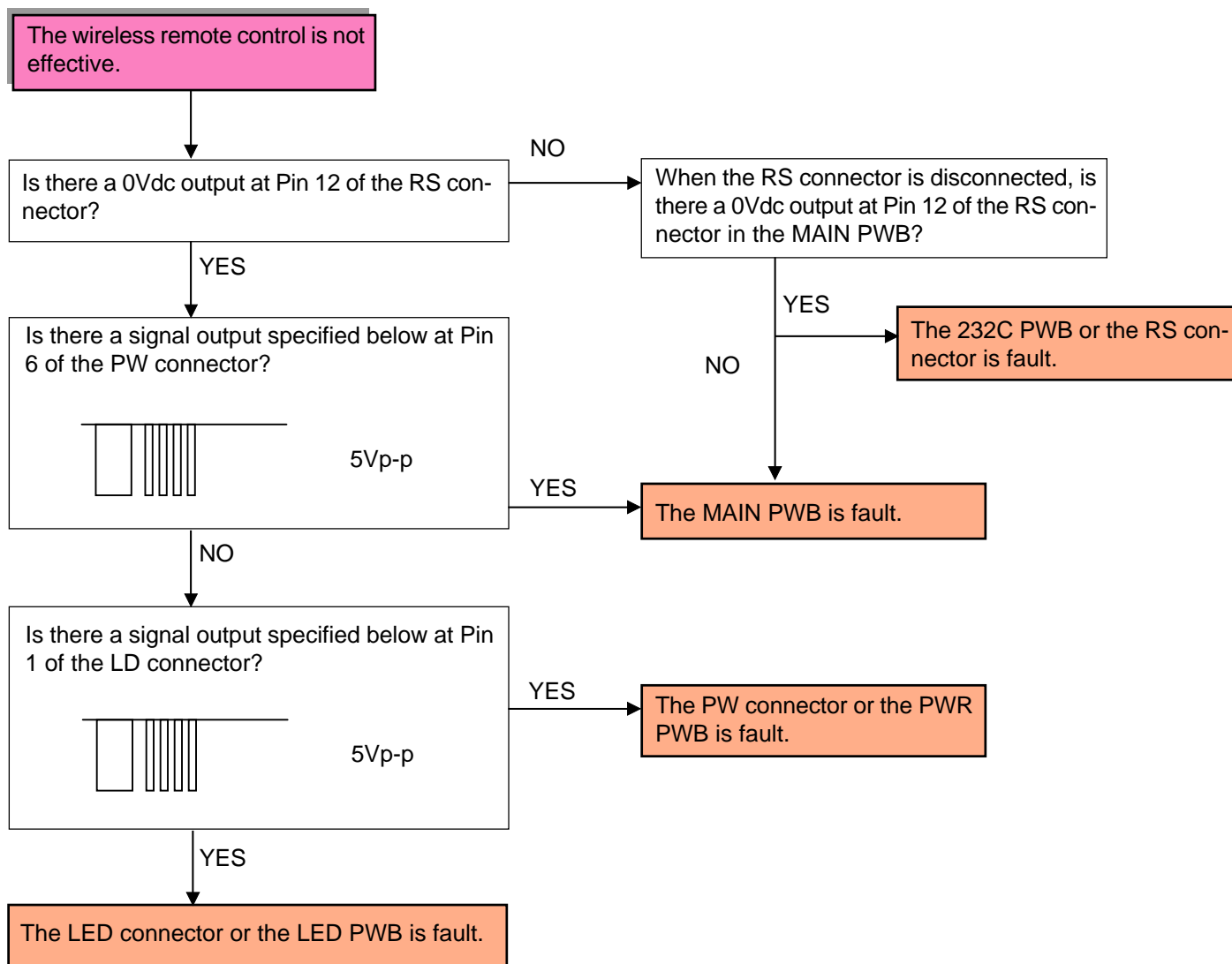


② When a daisy chain (including the video wall) is used

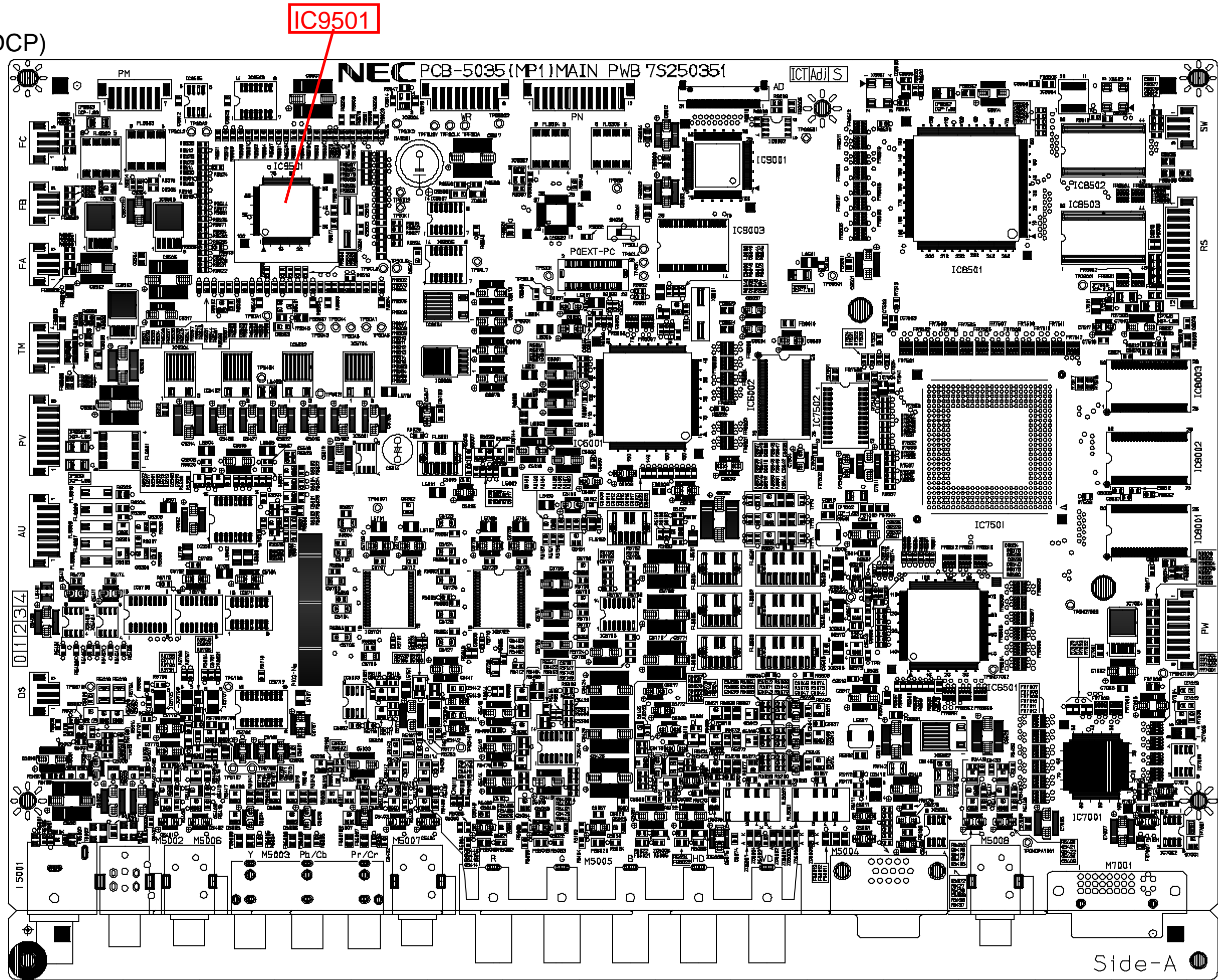


## (2) The wireless remote control is not effective.

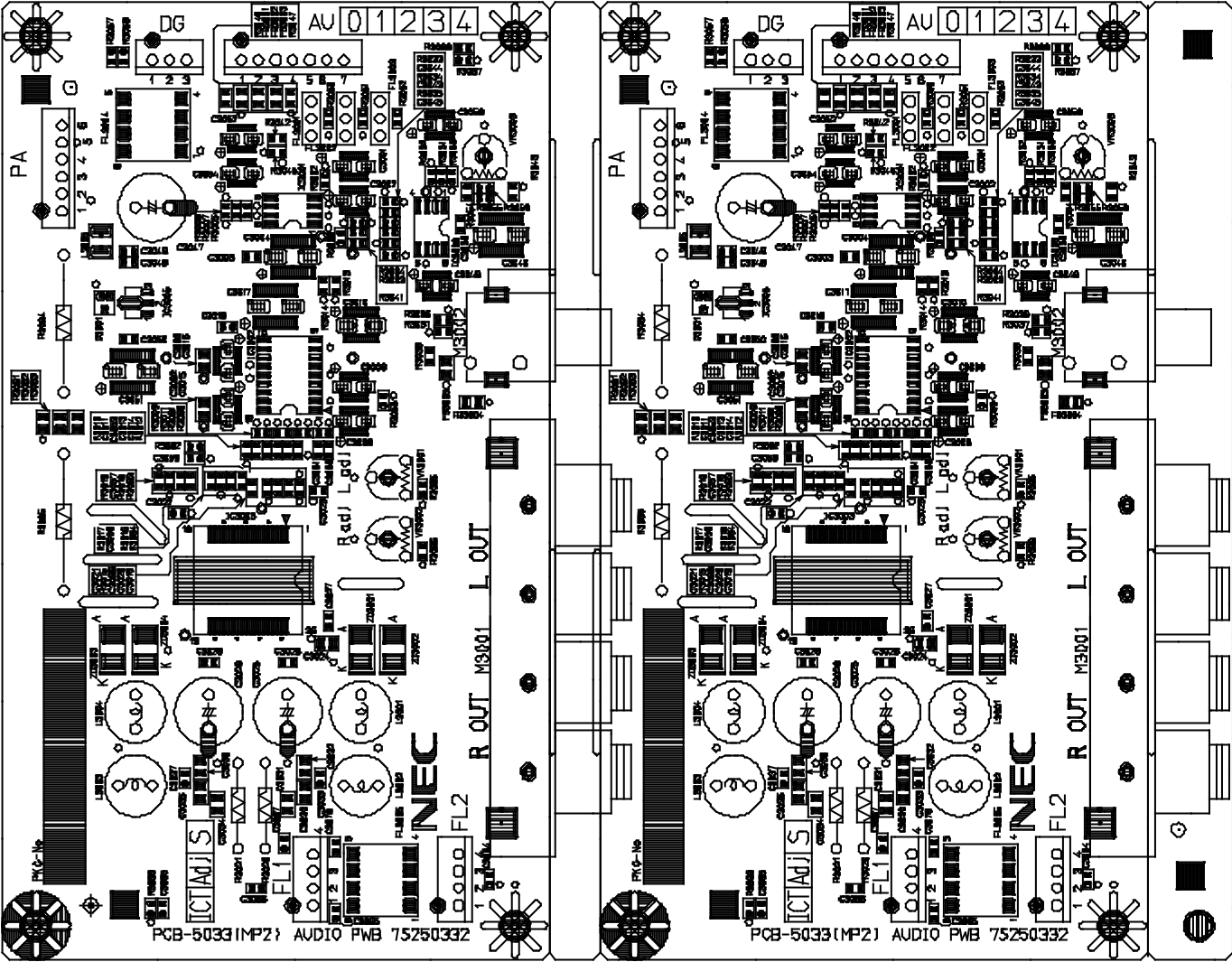
**(Caution)** Since the detection of “wired” or “wireless” is conducted for the remote control through the remote terminal, it is necessary to pull out the remote control cable from the remote terminal, without fail. Troubleshooting should be carried out after confirming that “IR REMOTE” is set at ON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



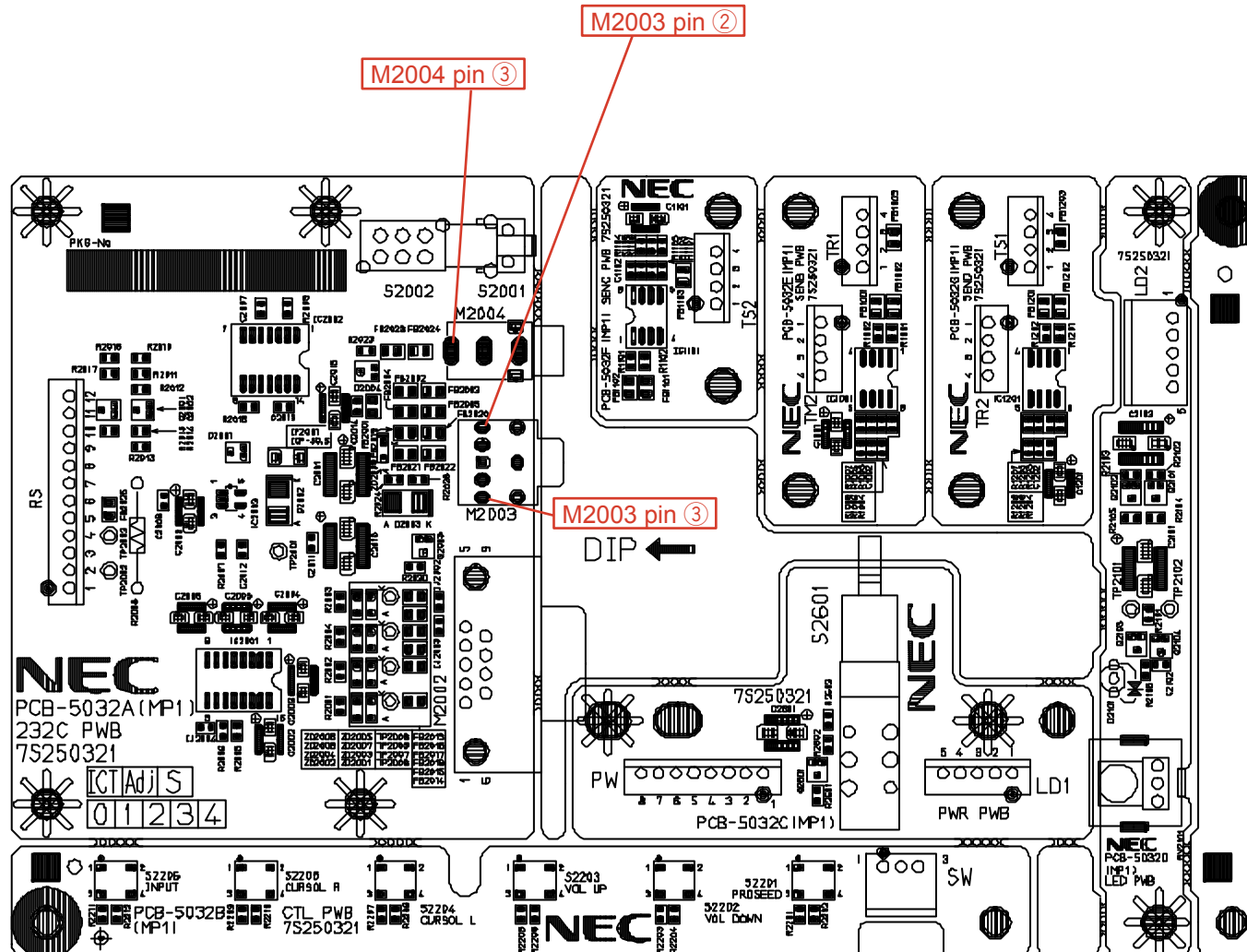
MAIN PWB(HDCP)







232C PWB  
CTL PWB  
PWR PWB  
LED PWB  
SENB PWB  
SENC PWB  
SEND PWB



# METHOD OF ADJUSTMENTS

## ■ Adjusting conditions

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

- A. When the “PDP module” is replaced, perform adjustment item 1-1 specified on the following page.
- B. When the “POWER UNIT” is replaced, perform adjustment item 1-1 specified on the following page.

## 1-1. For the PD-5030 Series

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

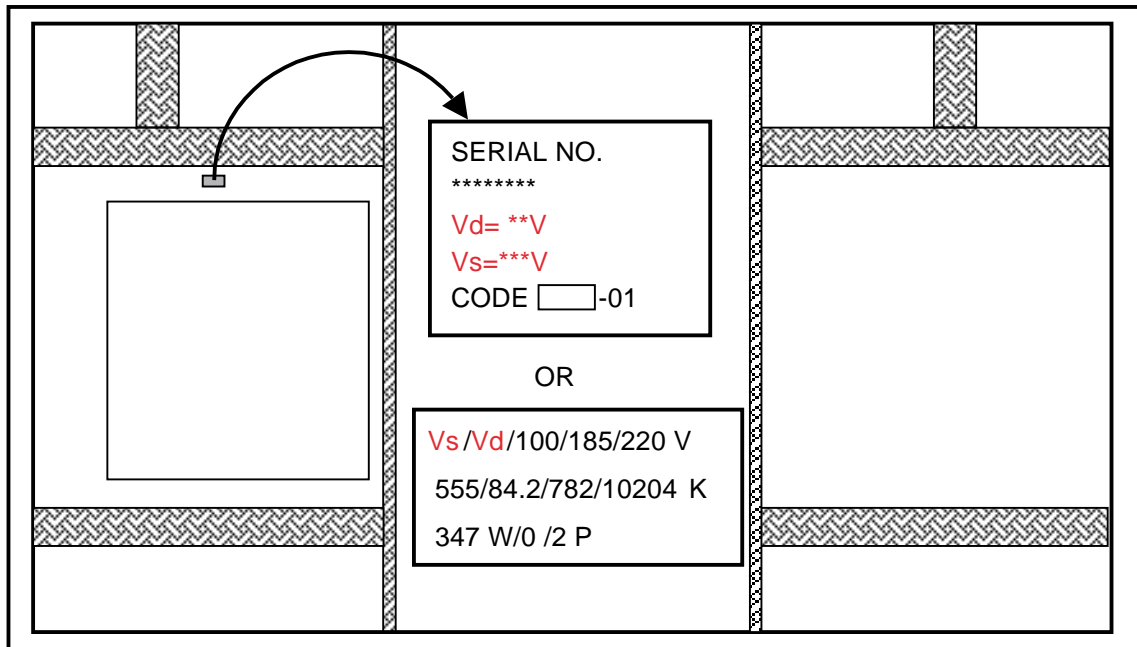
- (1) Enter a color bar input by means of either video signal of VIDEO input, or DVD/HD input, or RGB input, and turn on the power switch of the main unit.
- (2) Turn the volume control (RV6) in the power unit and make adjustments until the voltages of CH2 and CH1 (D, GND) of the power unit attain the voltage values specified for the PDP (Vs value of the voltage regulation indicator label on below the figure)  $\pm 1V$ .

### 1-1-2. 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)  $\pm 1V$ . 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)  $\pm 1V$ .

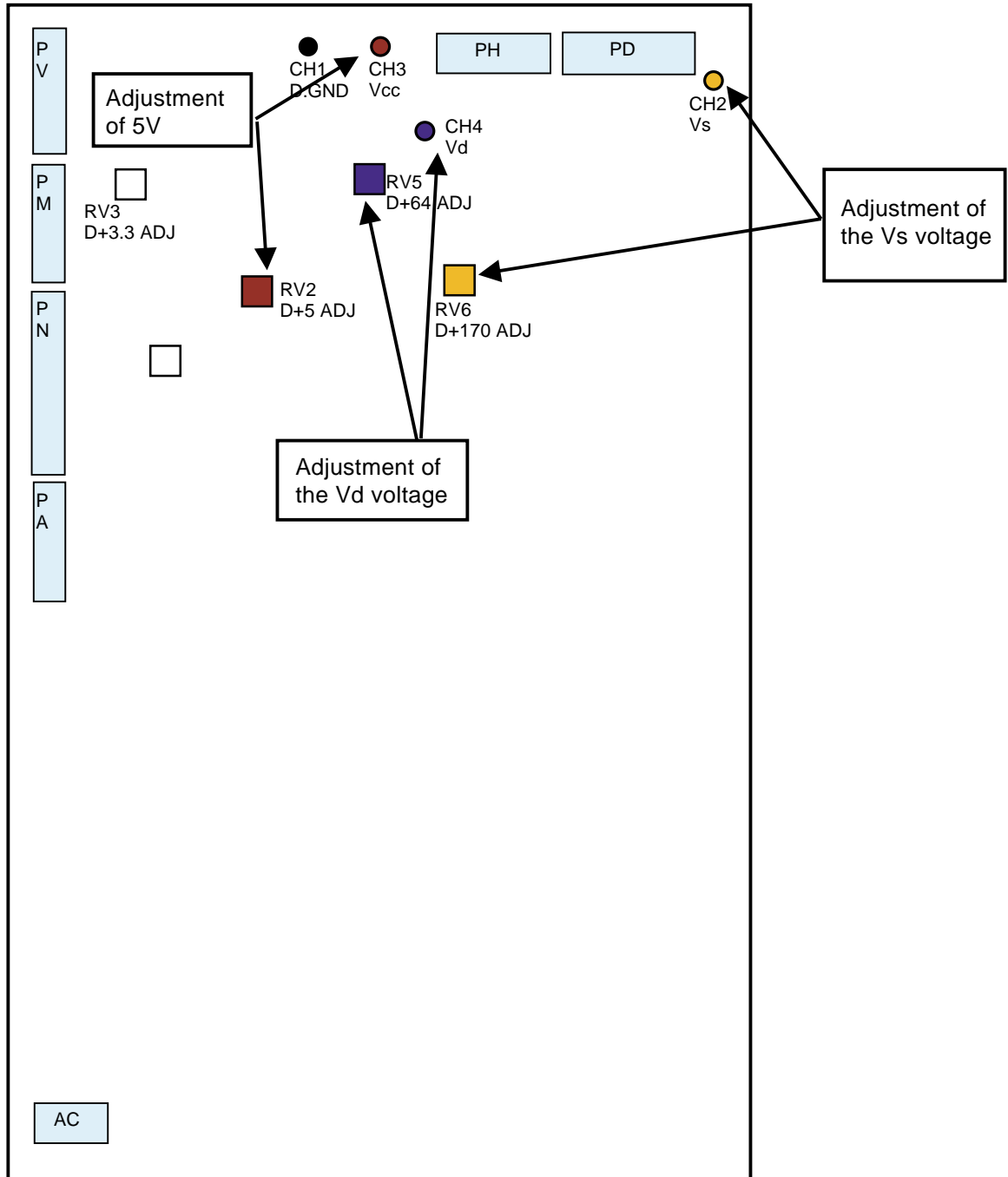
### 1-1-3. Adjustment of the +5V voltage

- (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 " $5.15 \pm 0.1V$ ". Otherwise, turn the volume control (RV2) until the voltage attains " $5.15 \pm 0.1V$ ".



**(Caution)** Rear Side View when the Rear Cover is Removed  
The label is hidden between the MAIN PWB and the PDP. It can be checked by peeping into the gap from above. The position of this label may be modified without preliminary notice.

**\* Top view of the power unit for the PD-5030 Series**



# 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.

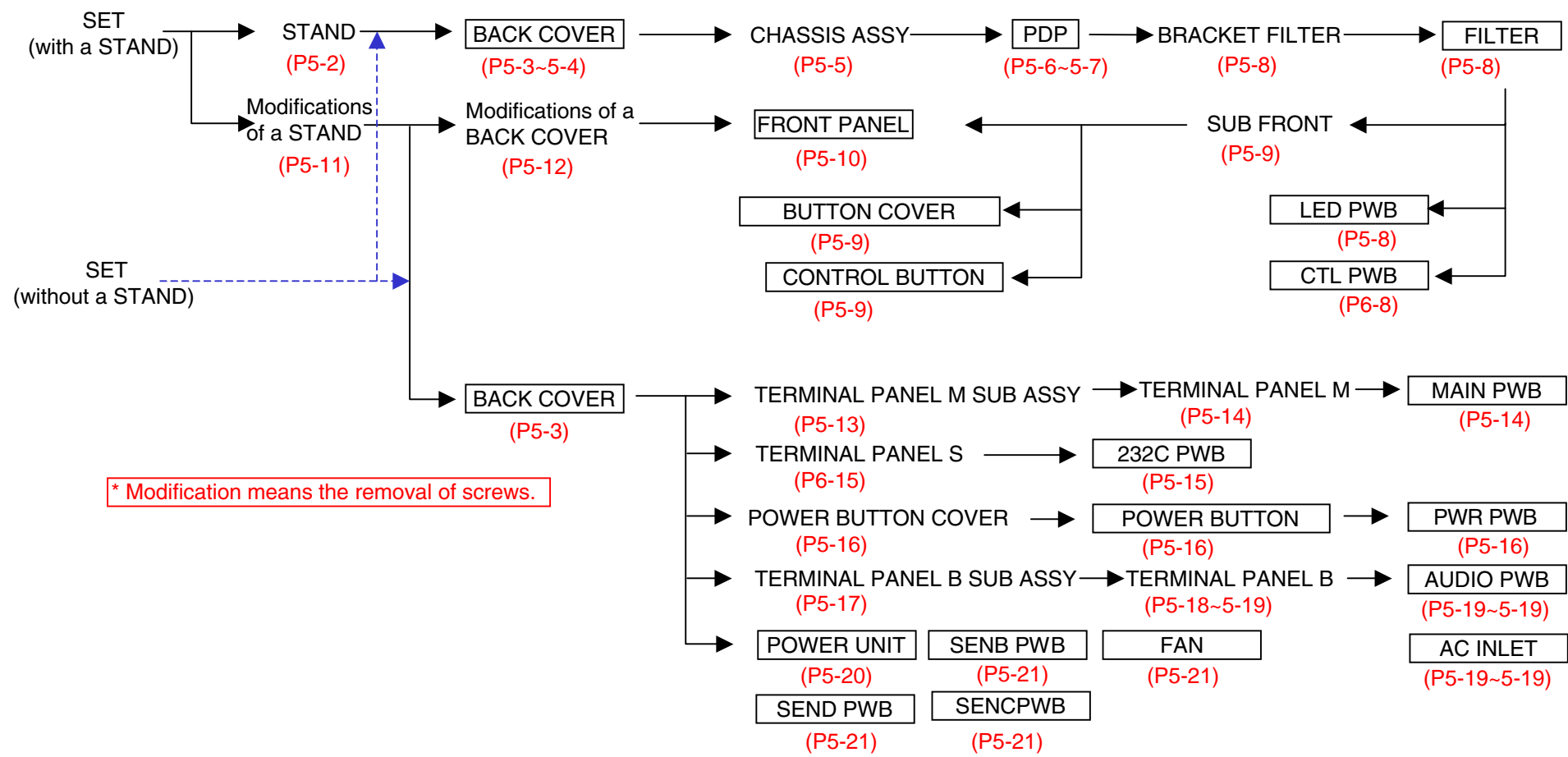
5. The wire connector symbol is indicated by two digits of Marking □ □. Read CN-□ □ when examining the table of parts.

6. Class A or Class B in the text is applicable to the models specified below.

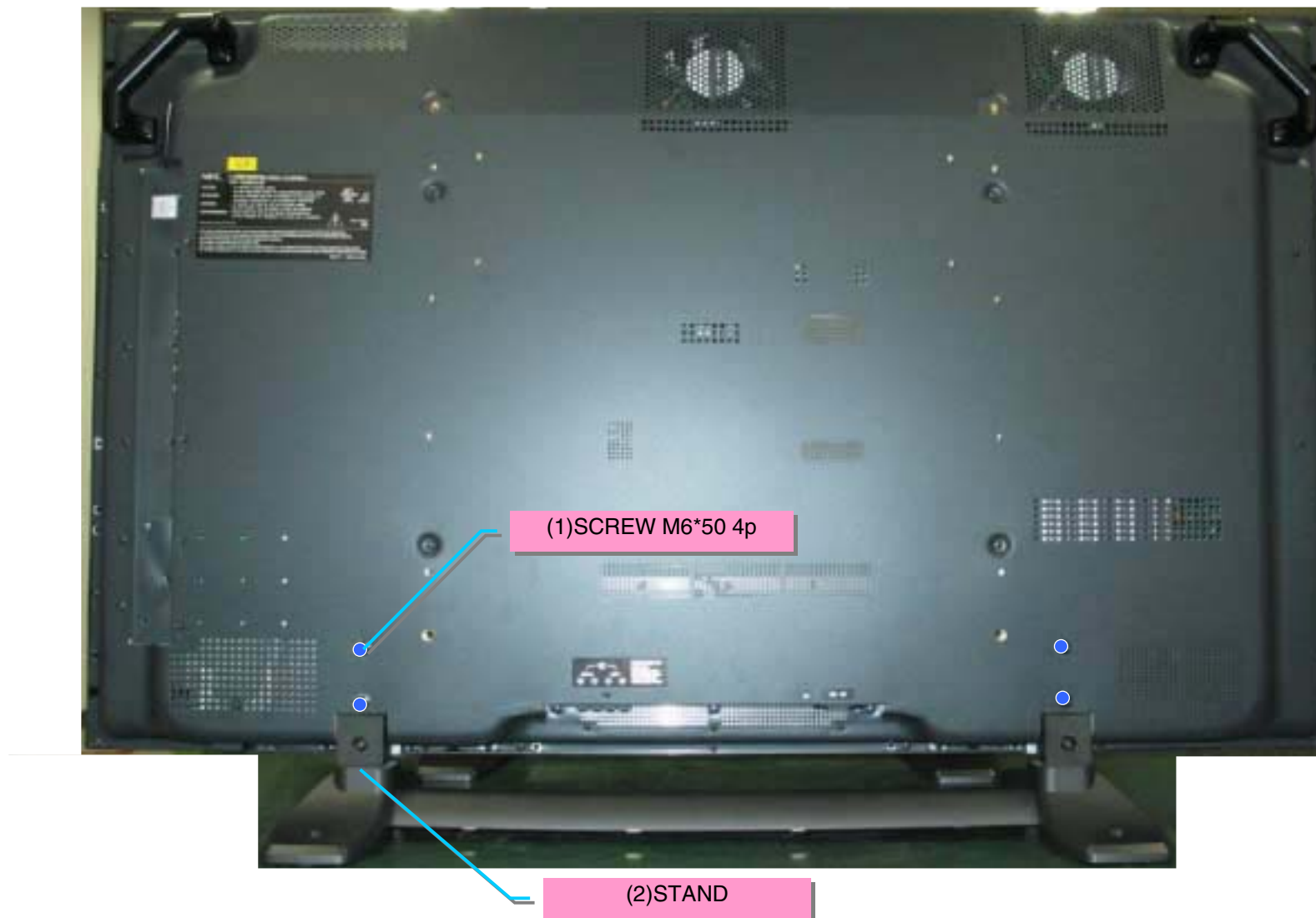
CLASS B: Model PD-5030

## 1. Outlined method of disassembly

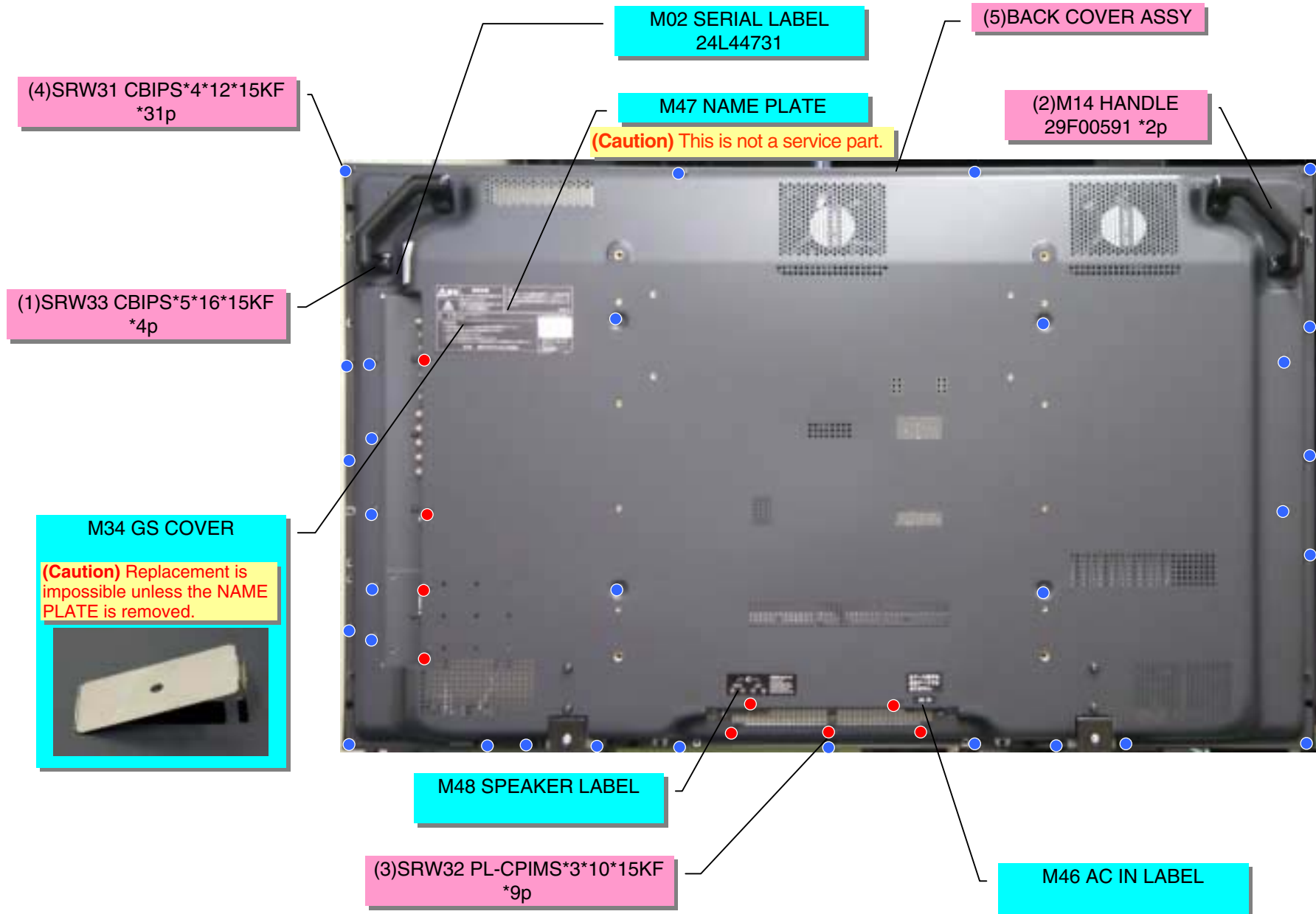
The outlined procedures for the disassembly of the major parts   are shown below (disassembled in the direction of →). In regard to the details of disassembly, cautions, etc., refer to the method of replacement for each part [page indicated in ( )].



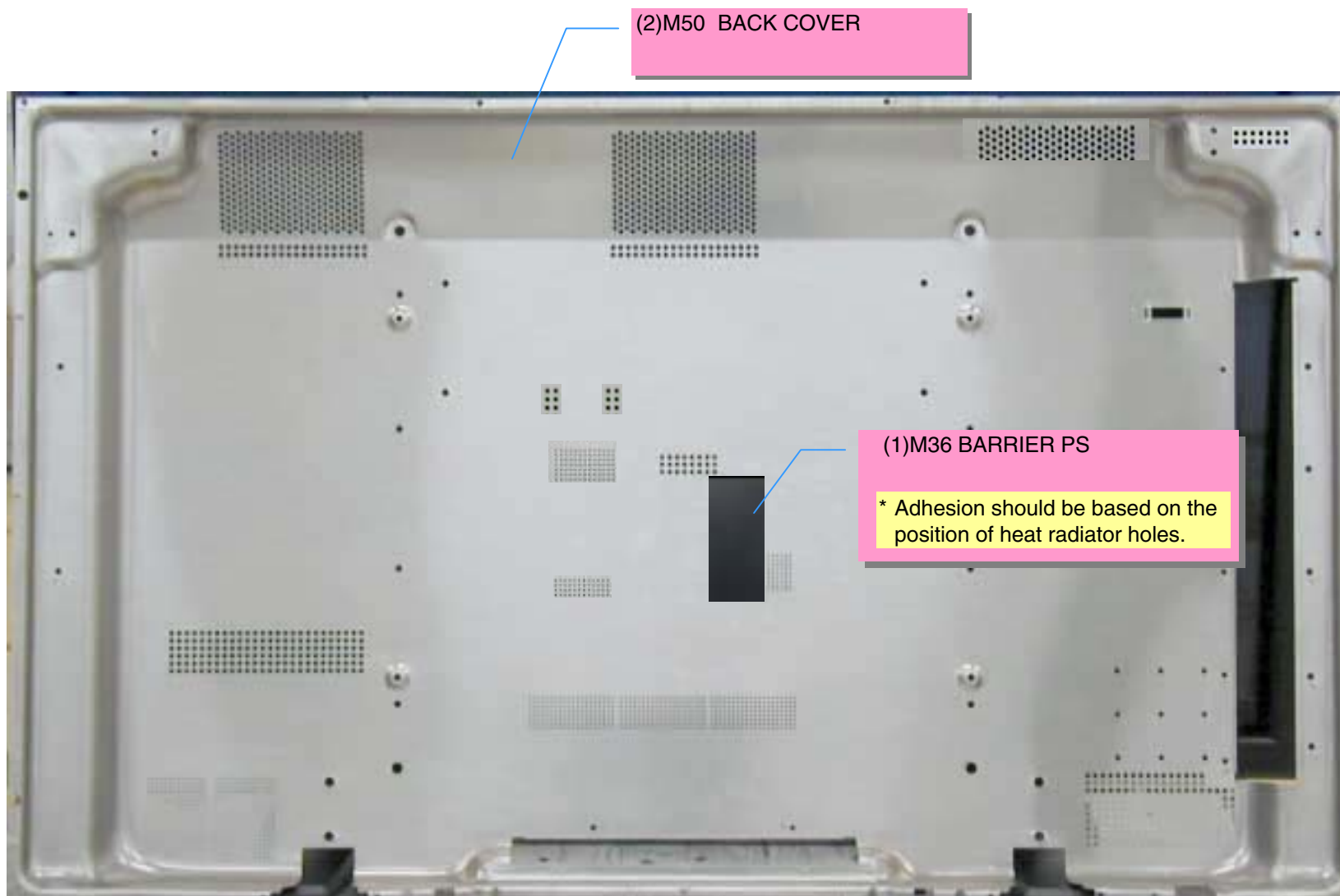
## 2. STAND



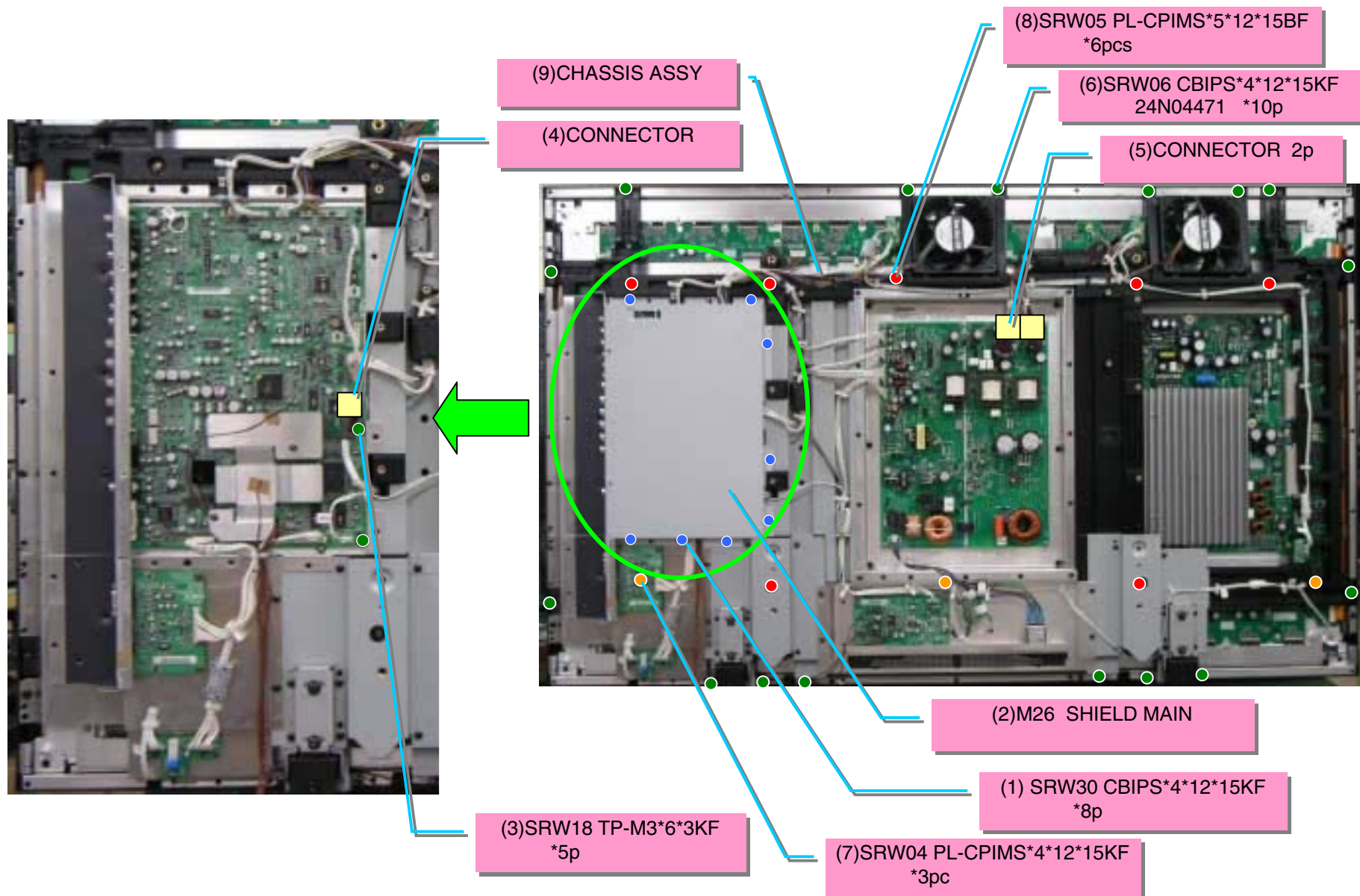
### 3. BACK COVER



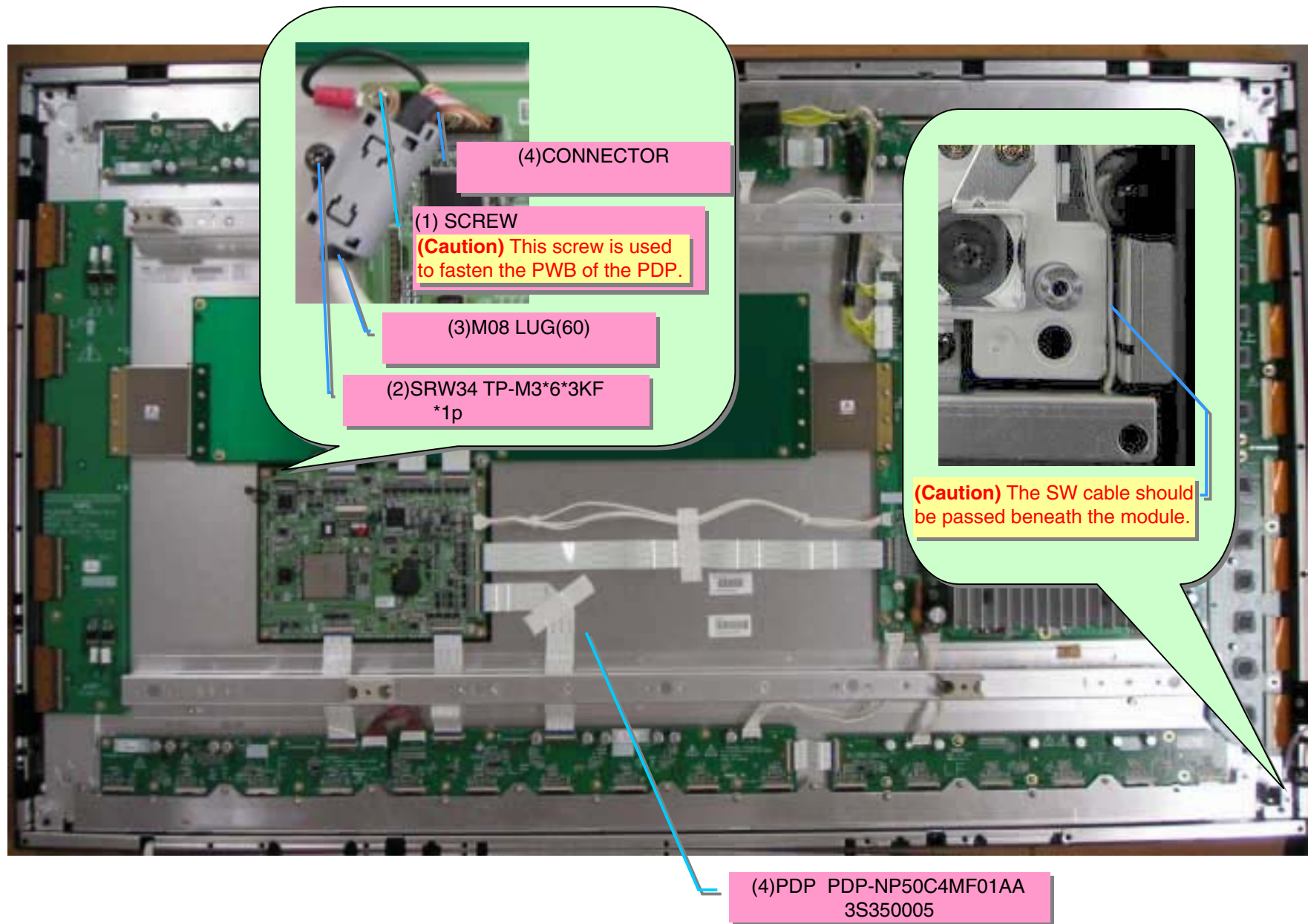




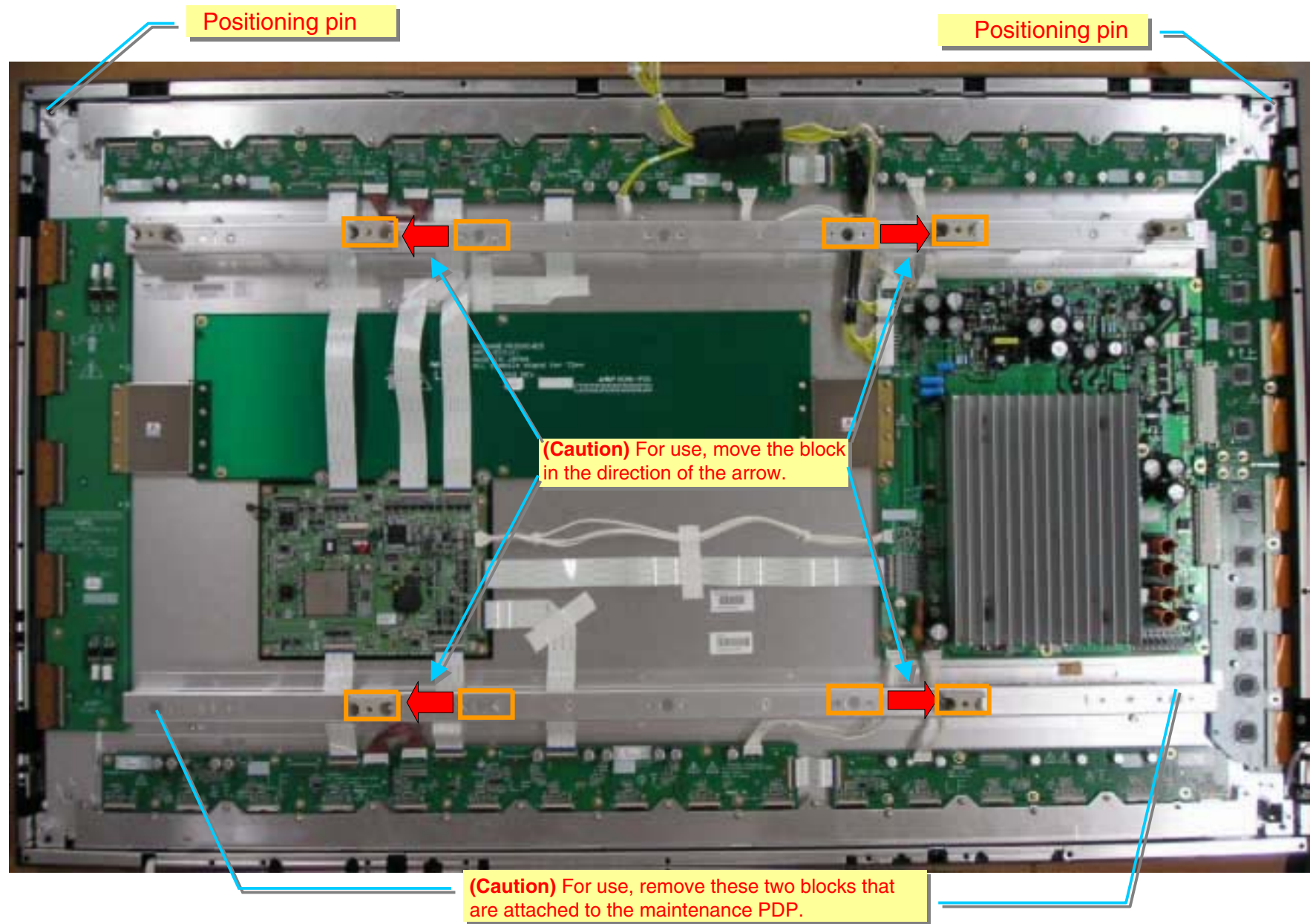
## 4. CHASSIS ASSY



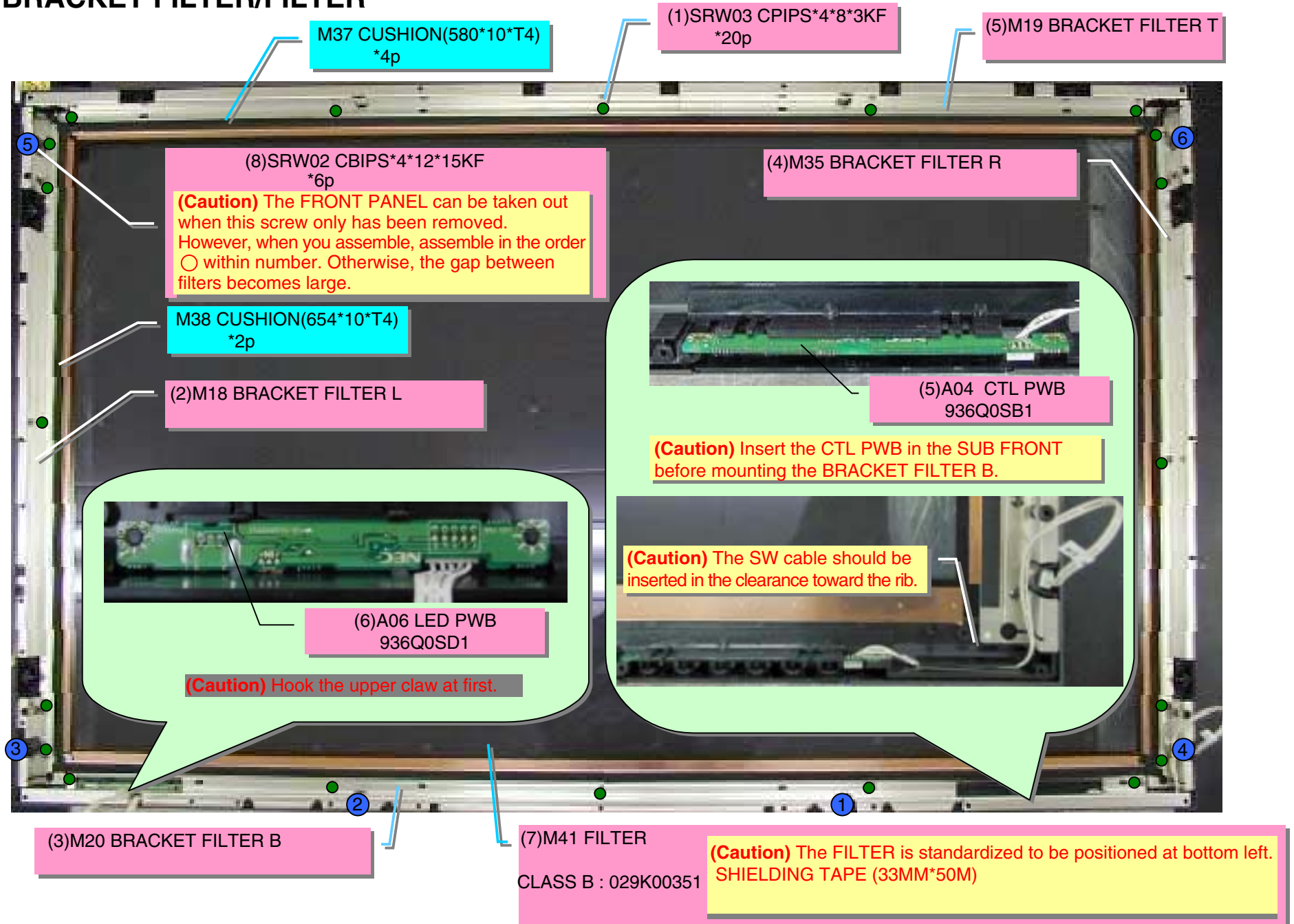
## 5. PDP



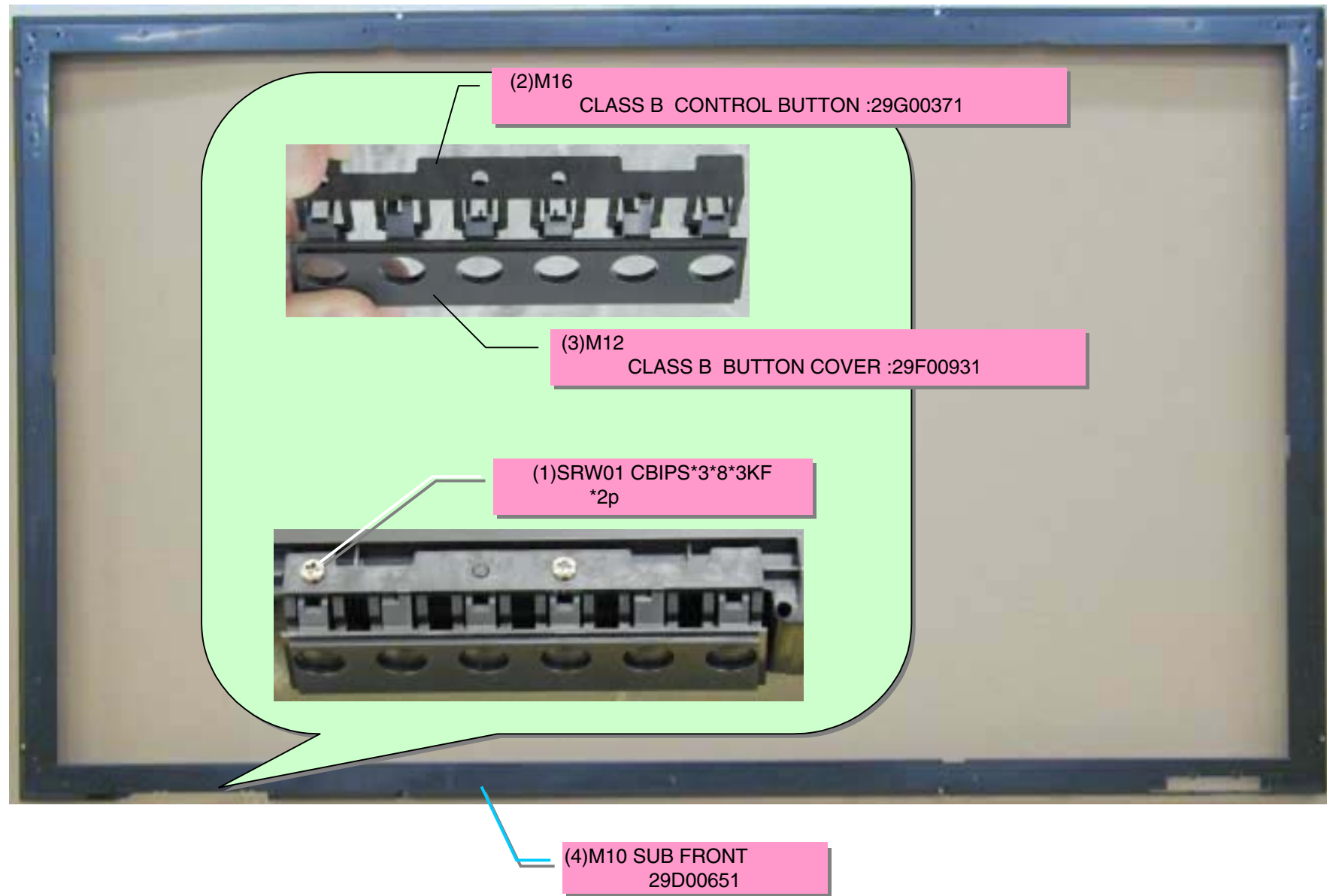




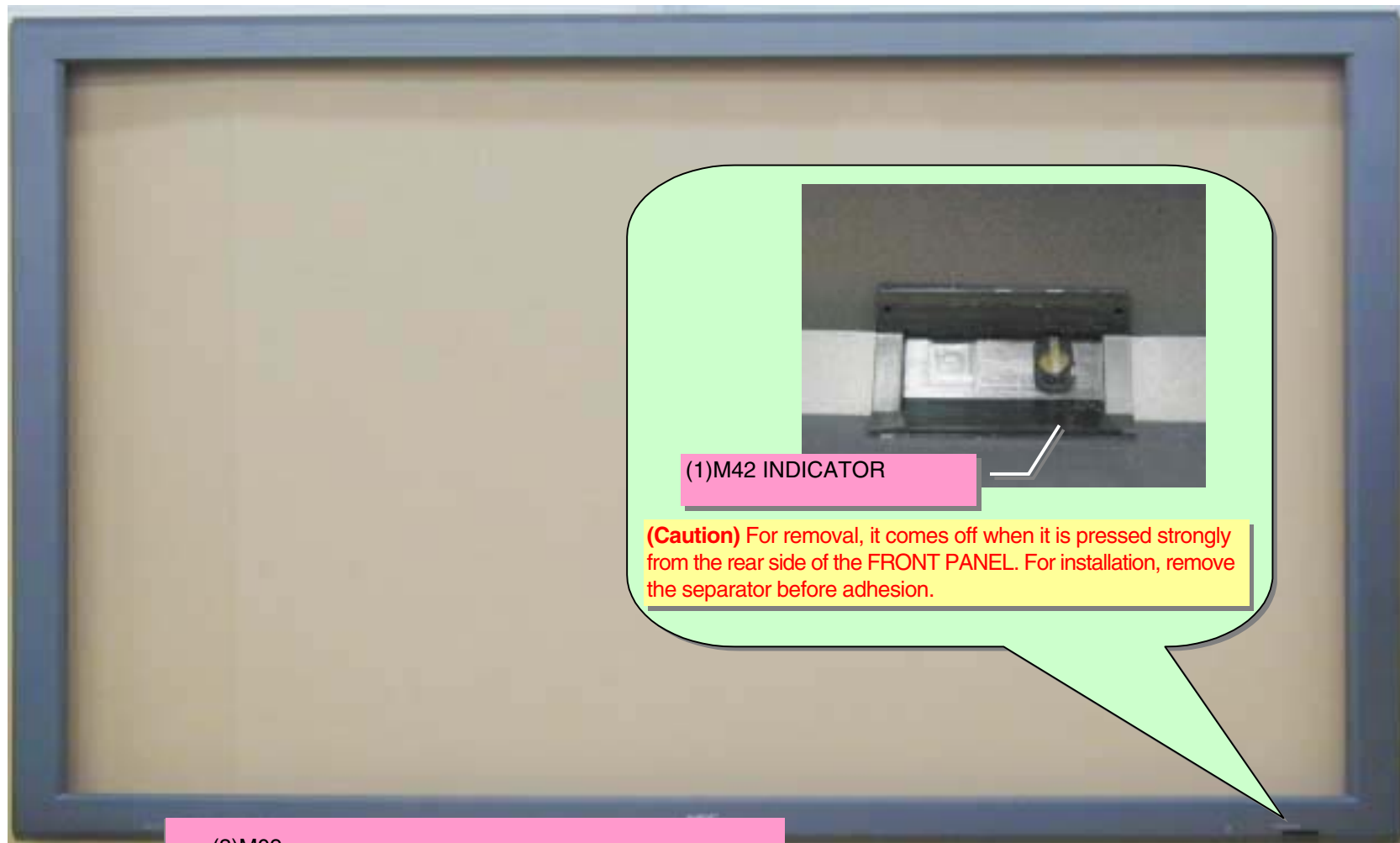
## 6. BRACKET FILTER/FILTER



## 8. SUB FRONT



## 9. FRONT PANEL



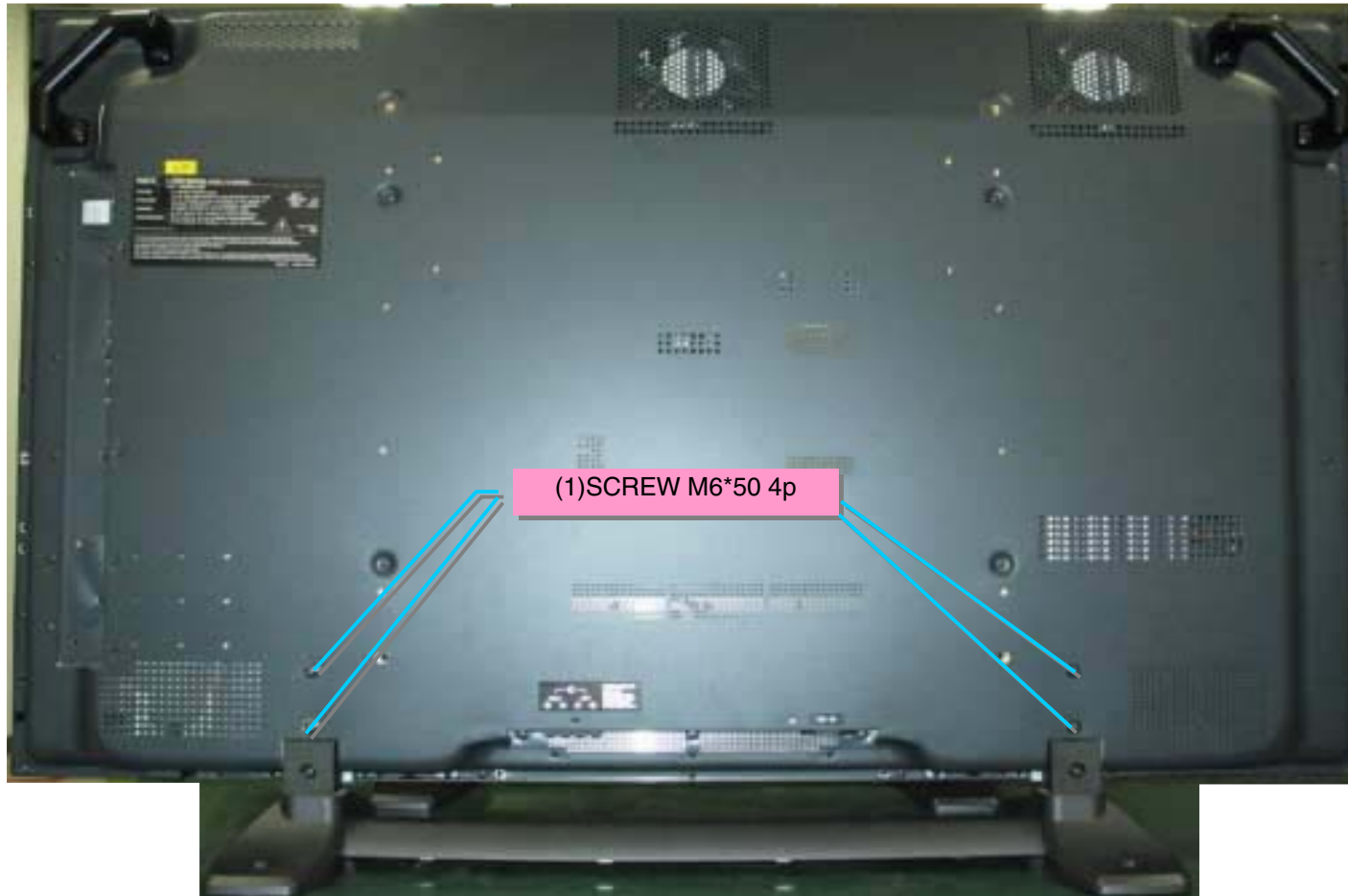
(1)M42 INDICATOR

**(Caution)** For removal, it comes off when it is pressed strongly from the rear side of the FRONT PANEL. For installation, remove the separator before adhesion.

(3)M09

CLASS B FRONT PANEL :29D00641

## 10. STAND (modification)



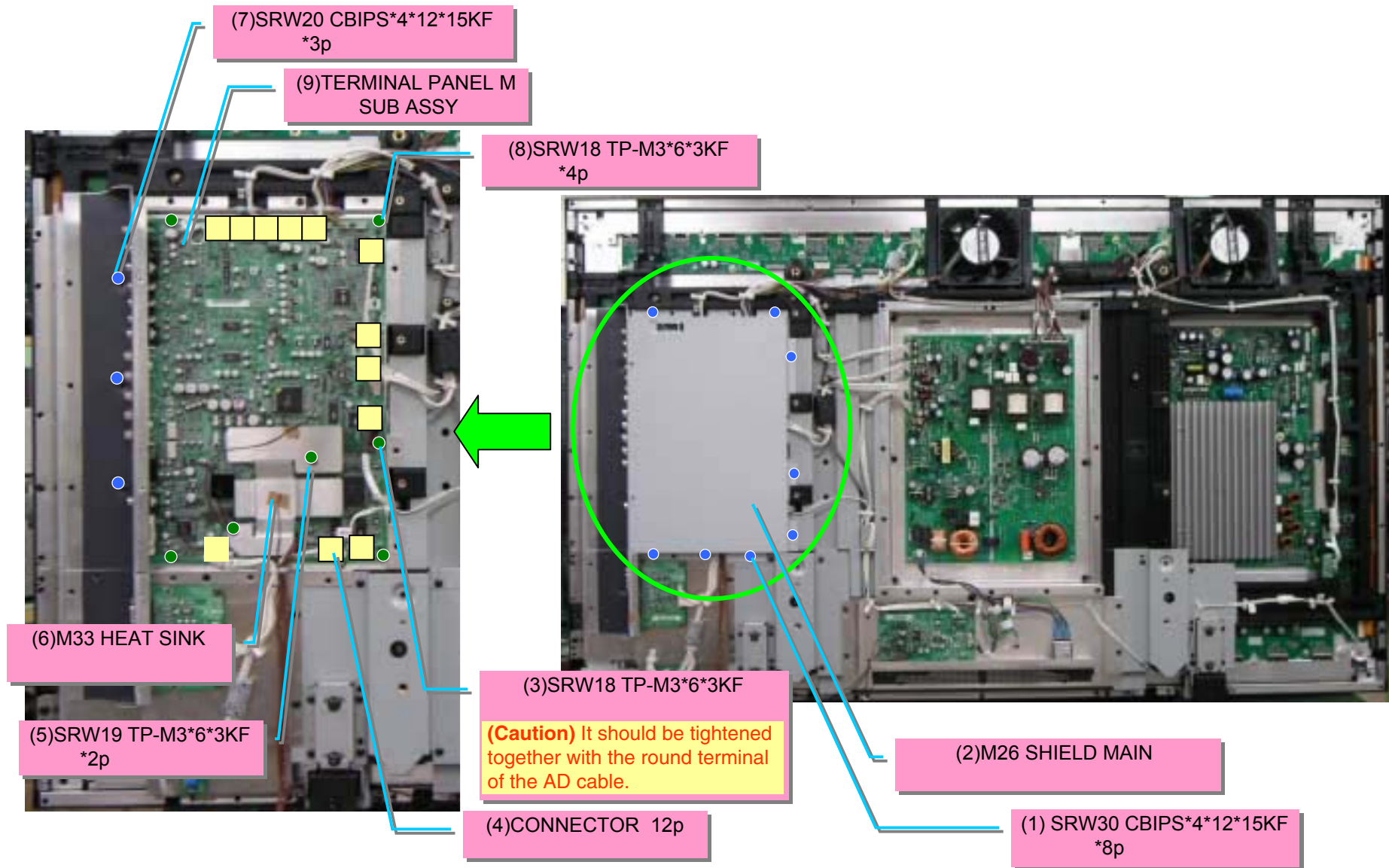


## 11. BACK COVER (modification)

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

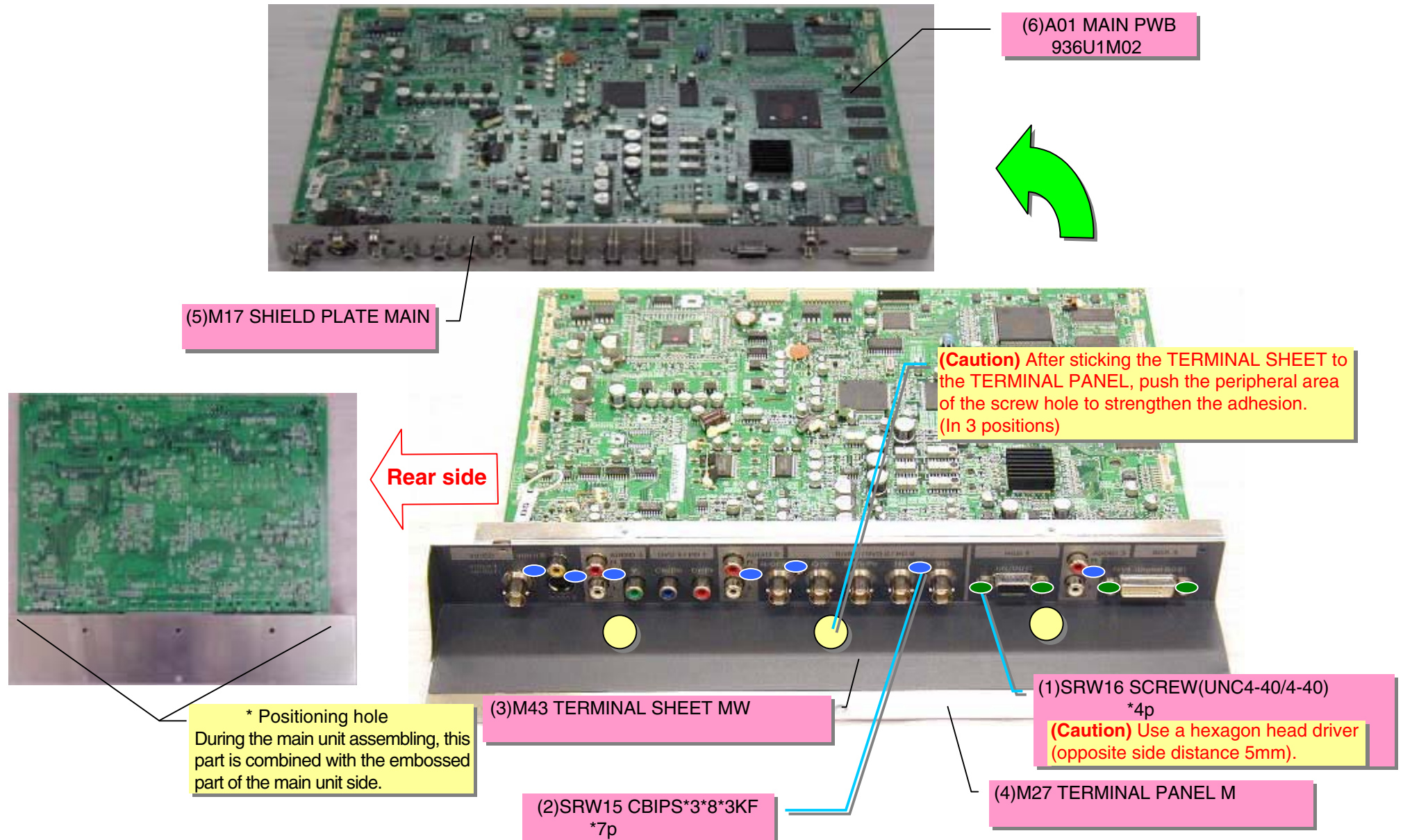


## 12. TERMINAL PANEL M SUB ASSY



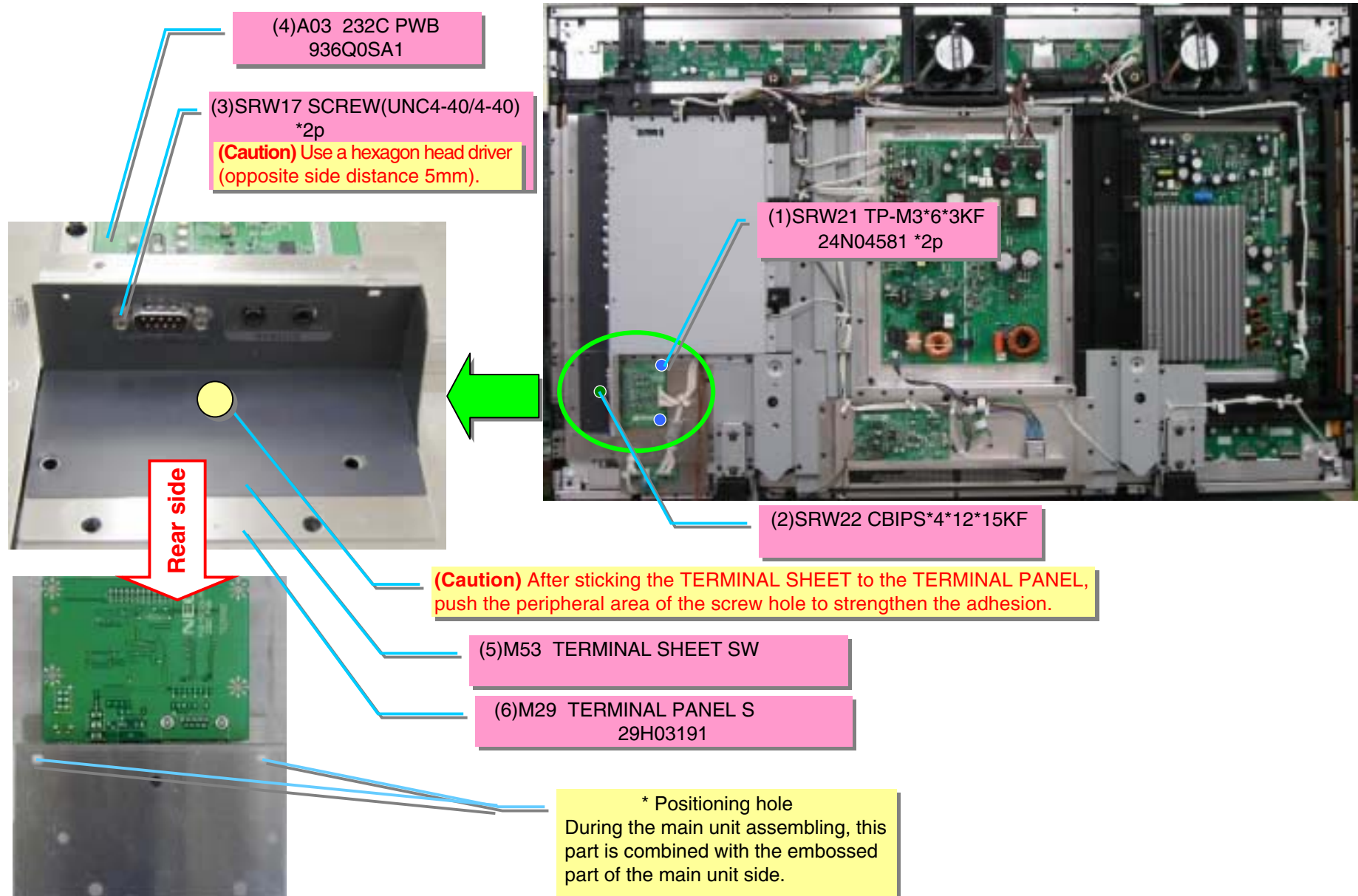
### 13. TERMINAL PANEL M/MAIN PWB

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

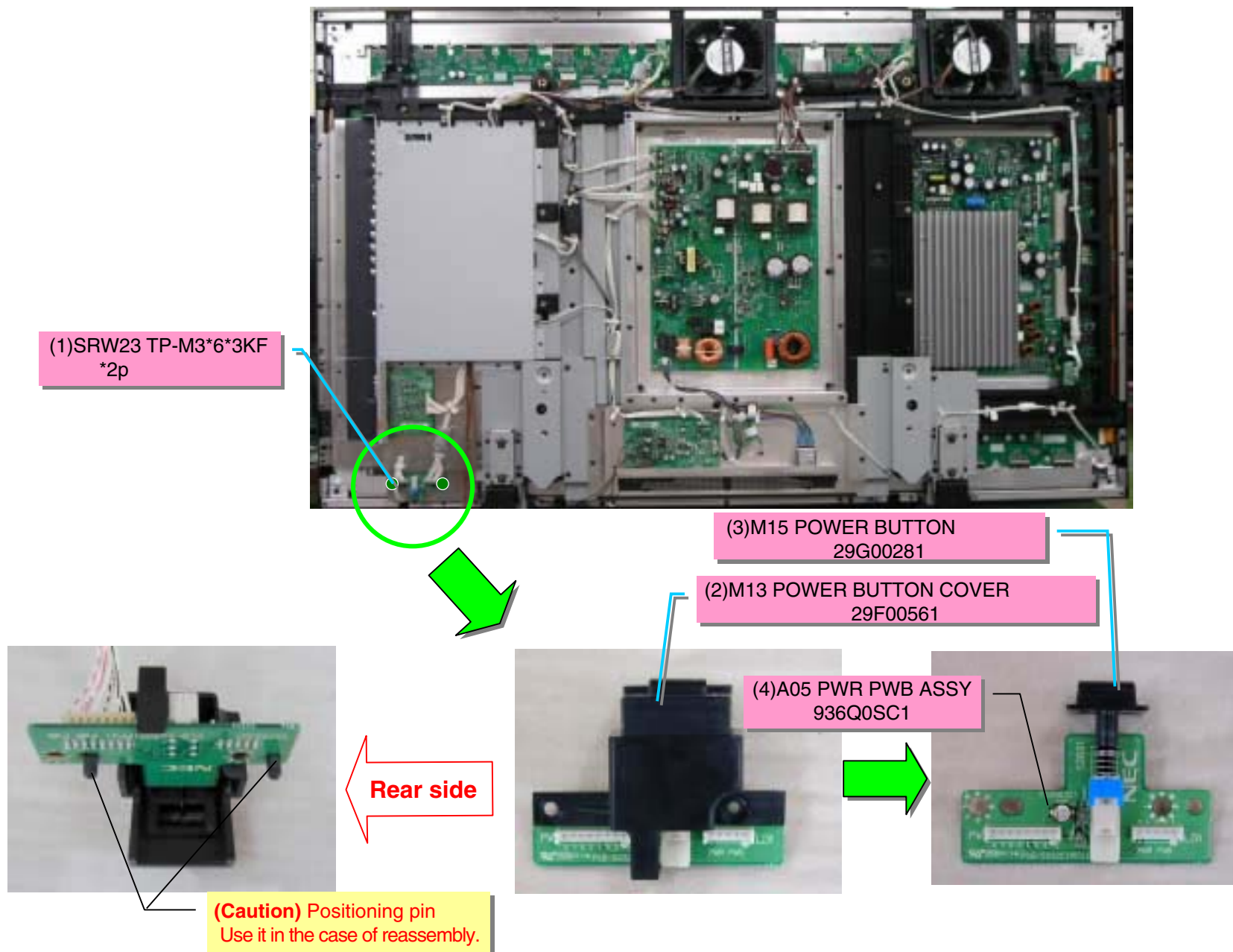




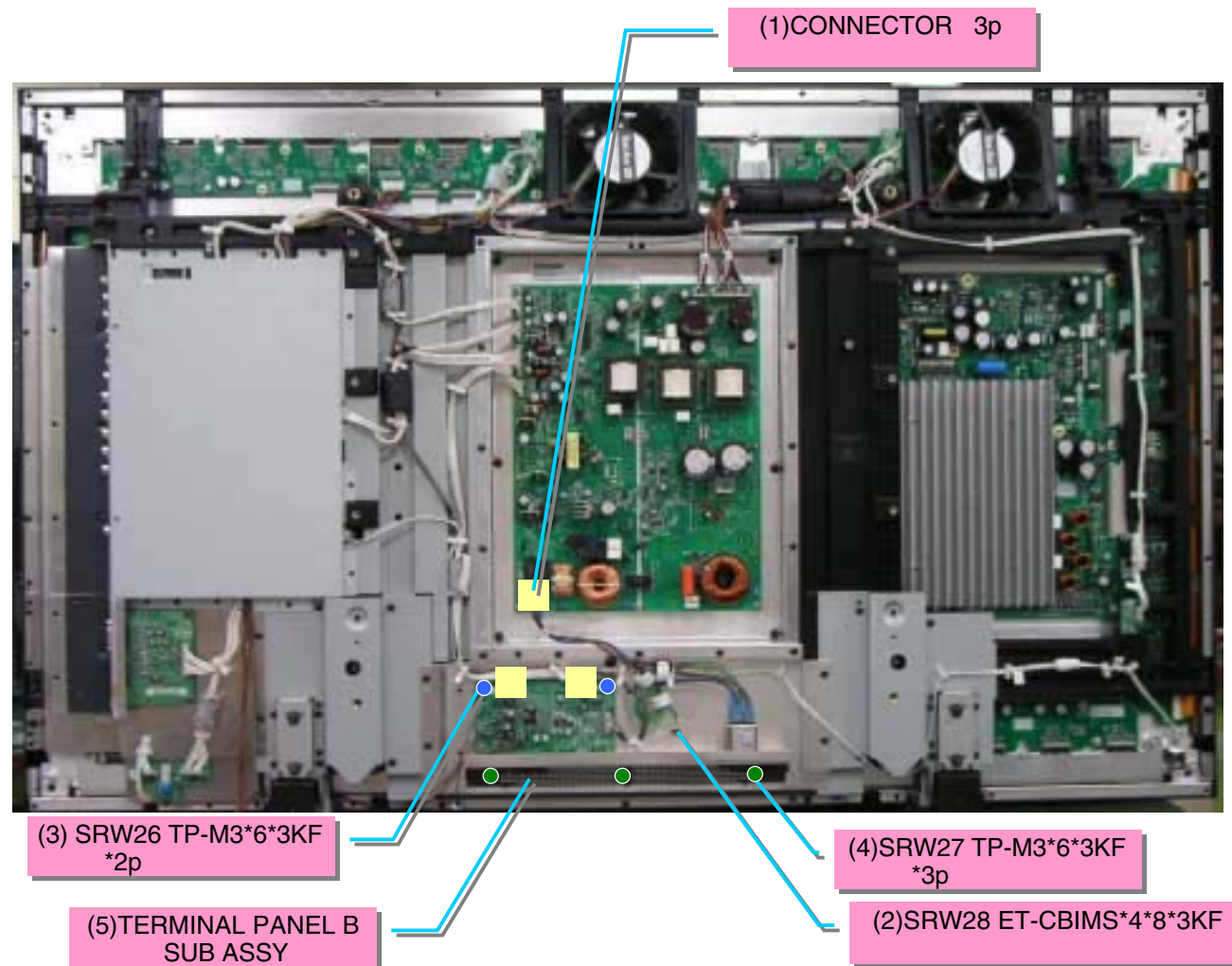
## 14. TERMINAL PANEL S/232C PWB



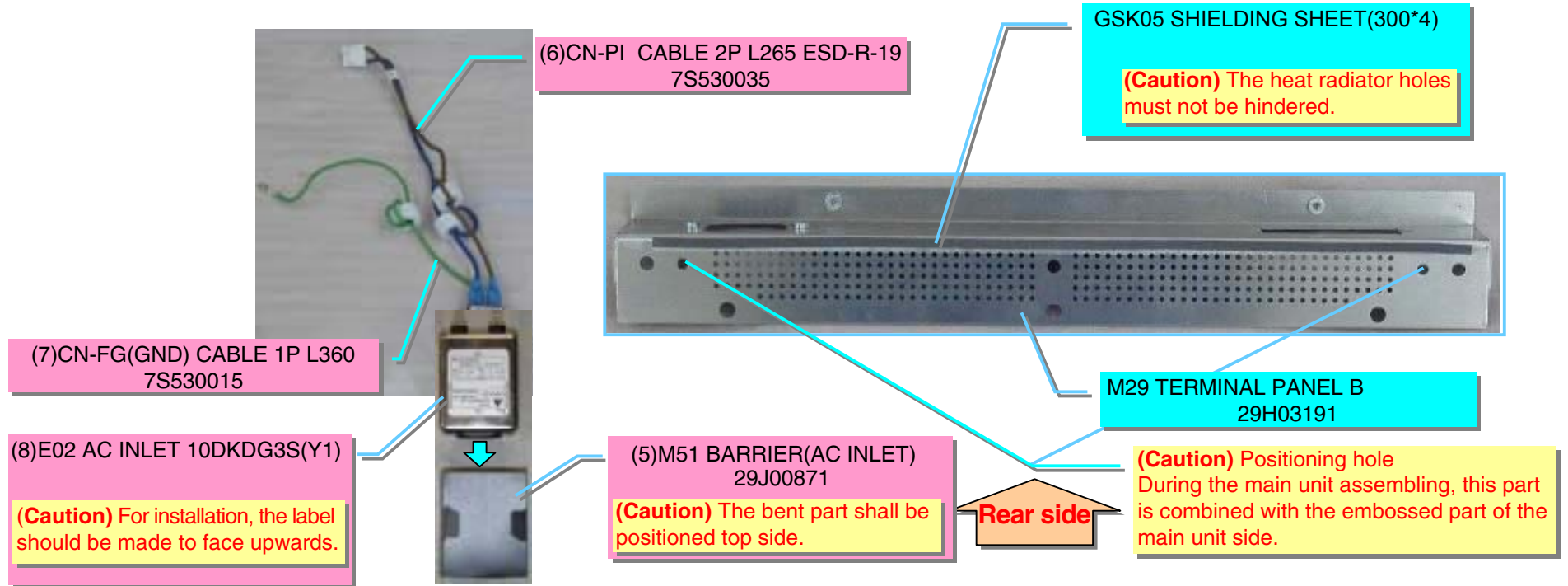
## 15. POWER BUTTON COVER/POWER BUTTON/PWR PWB



## 16. TERMINAL PANEL B SUB ASSY

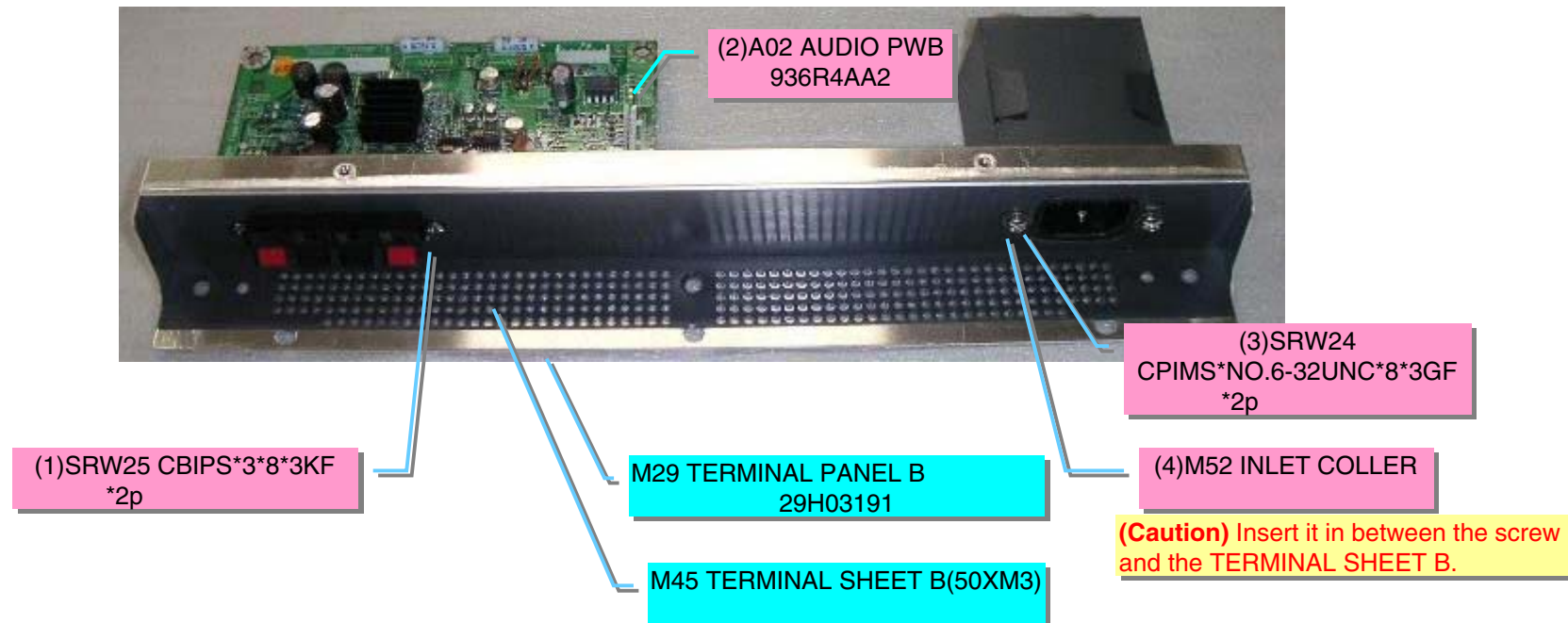


## 17-A. TERMINAL PANEL B/AC INLET



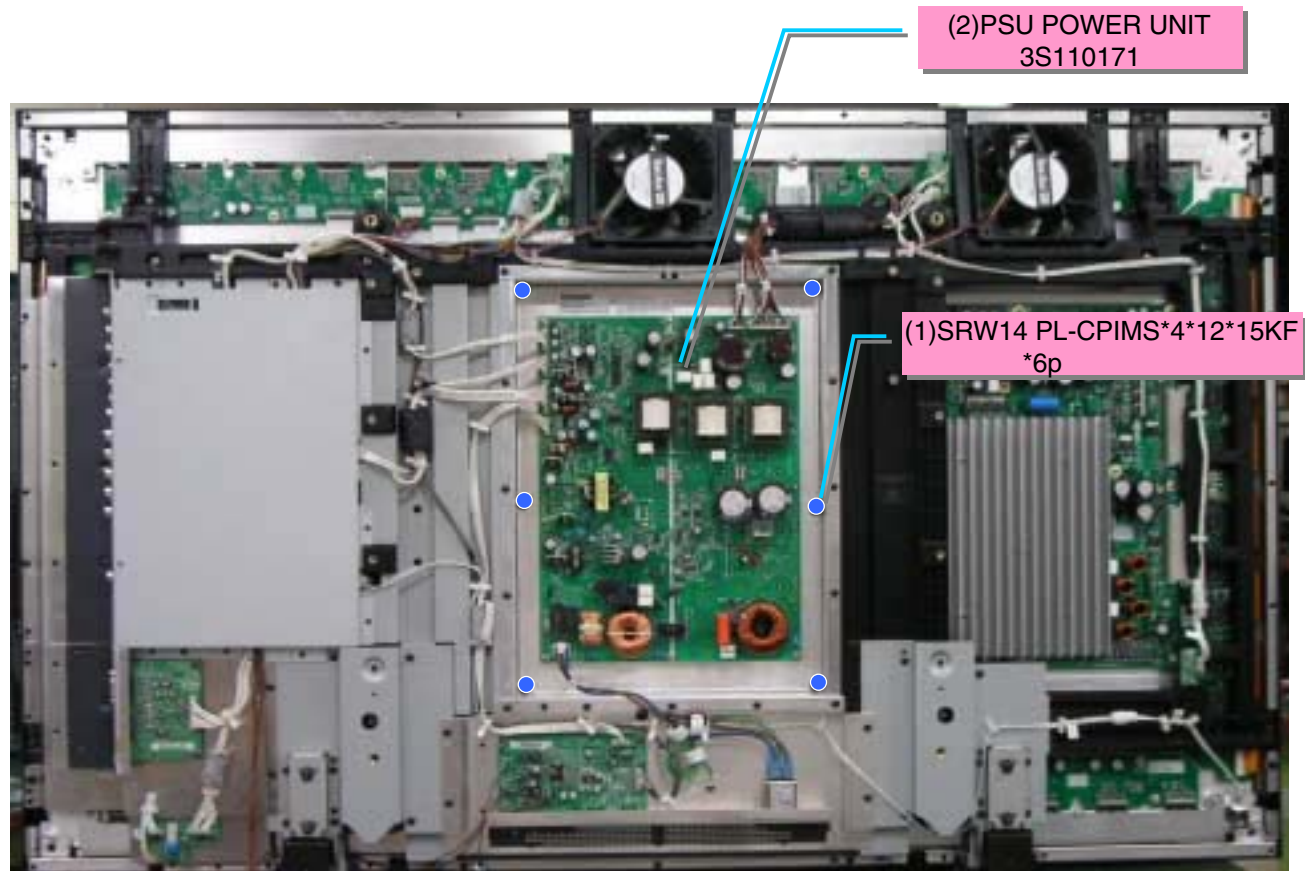


## 17-B. AUDIO PWB

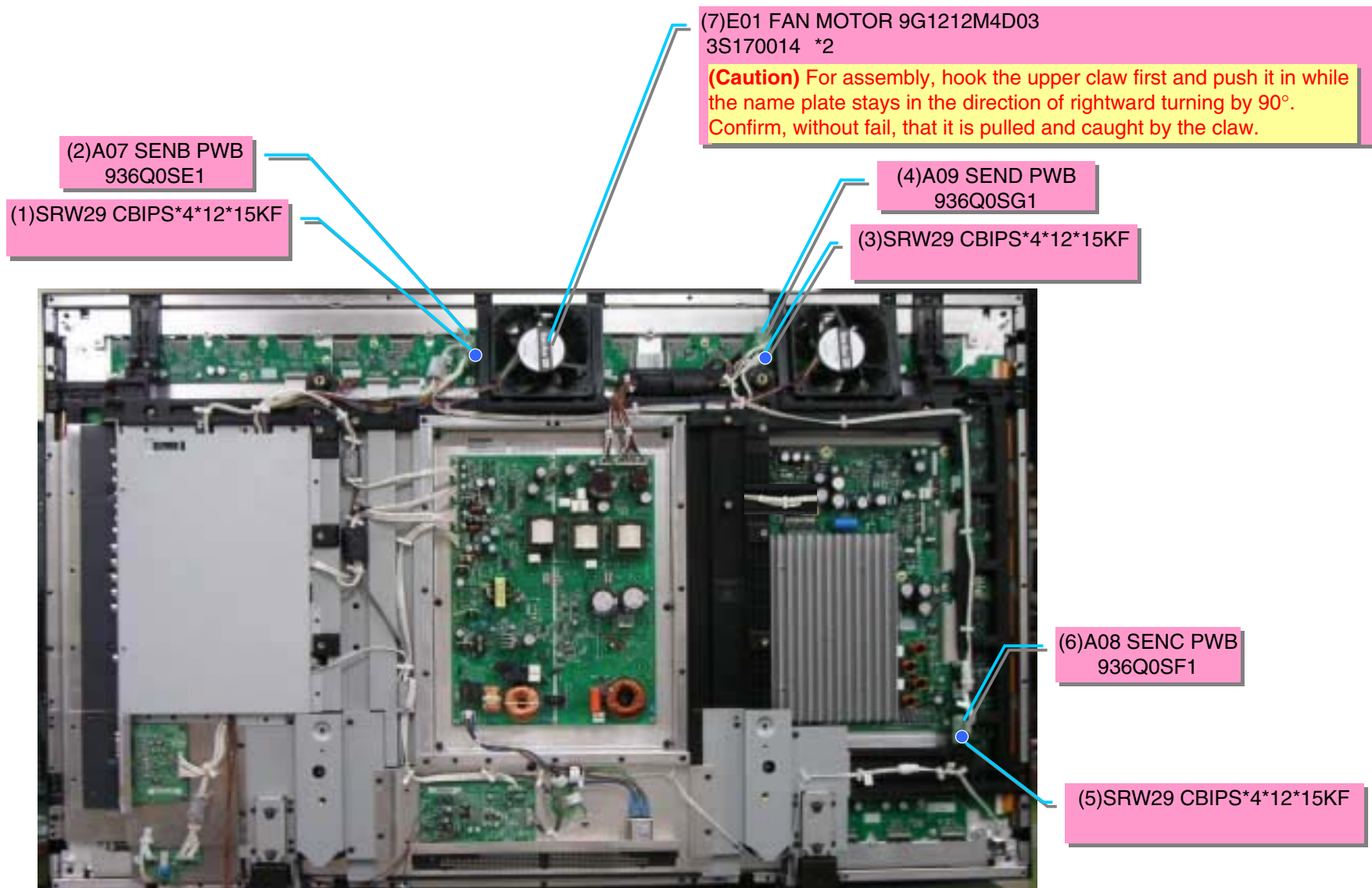




## 18. POWER UNIT

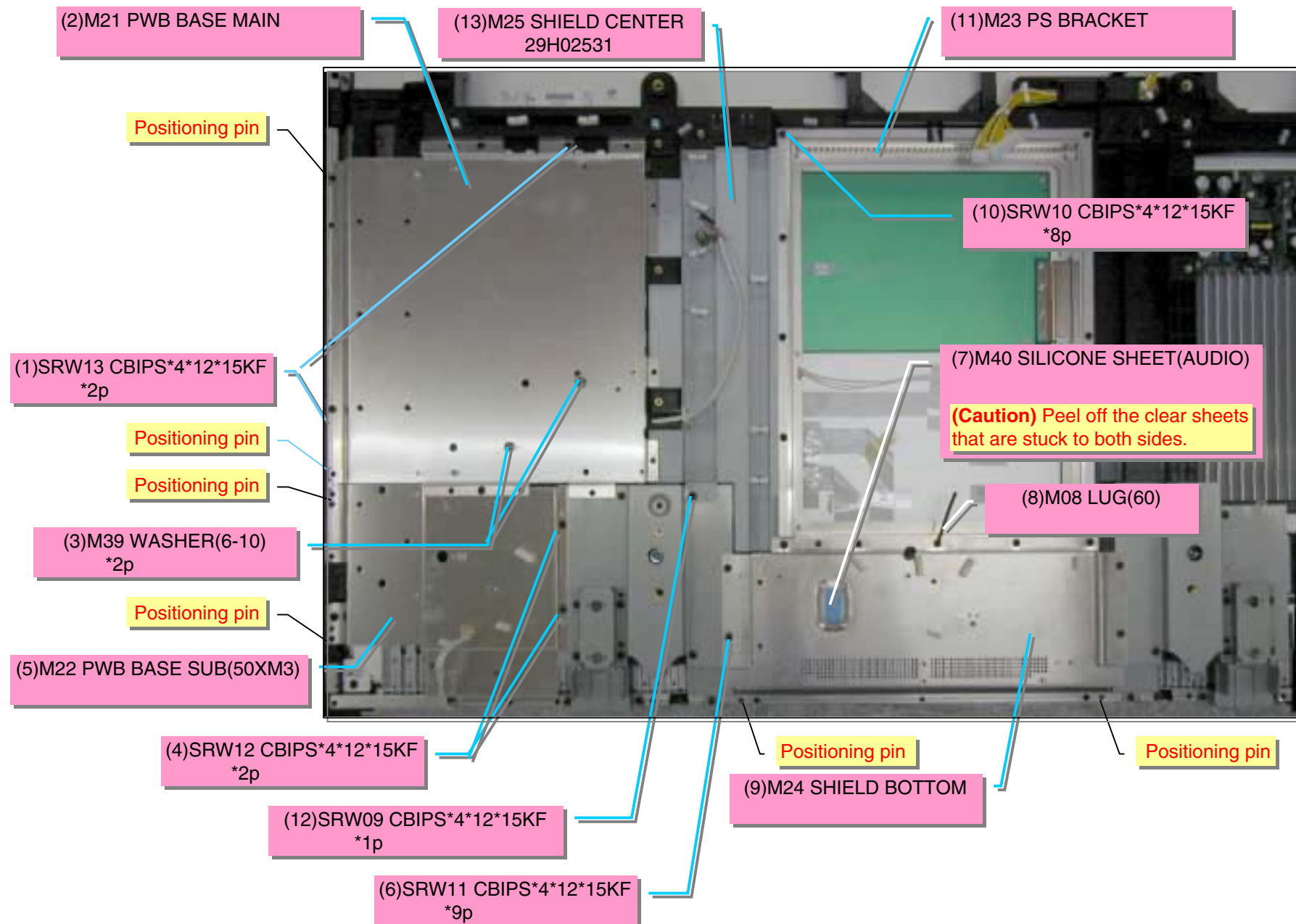


## 19. SENB PWB/SENC PWB/SEND PWB/FAN

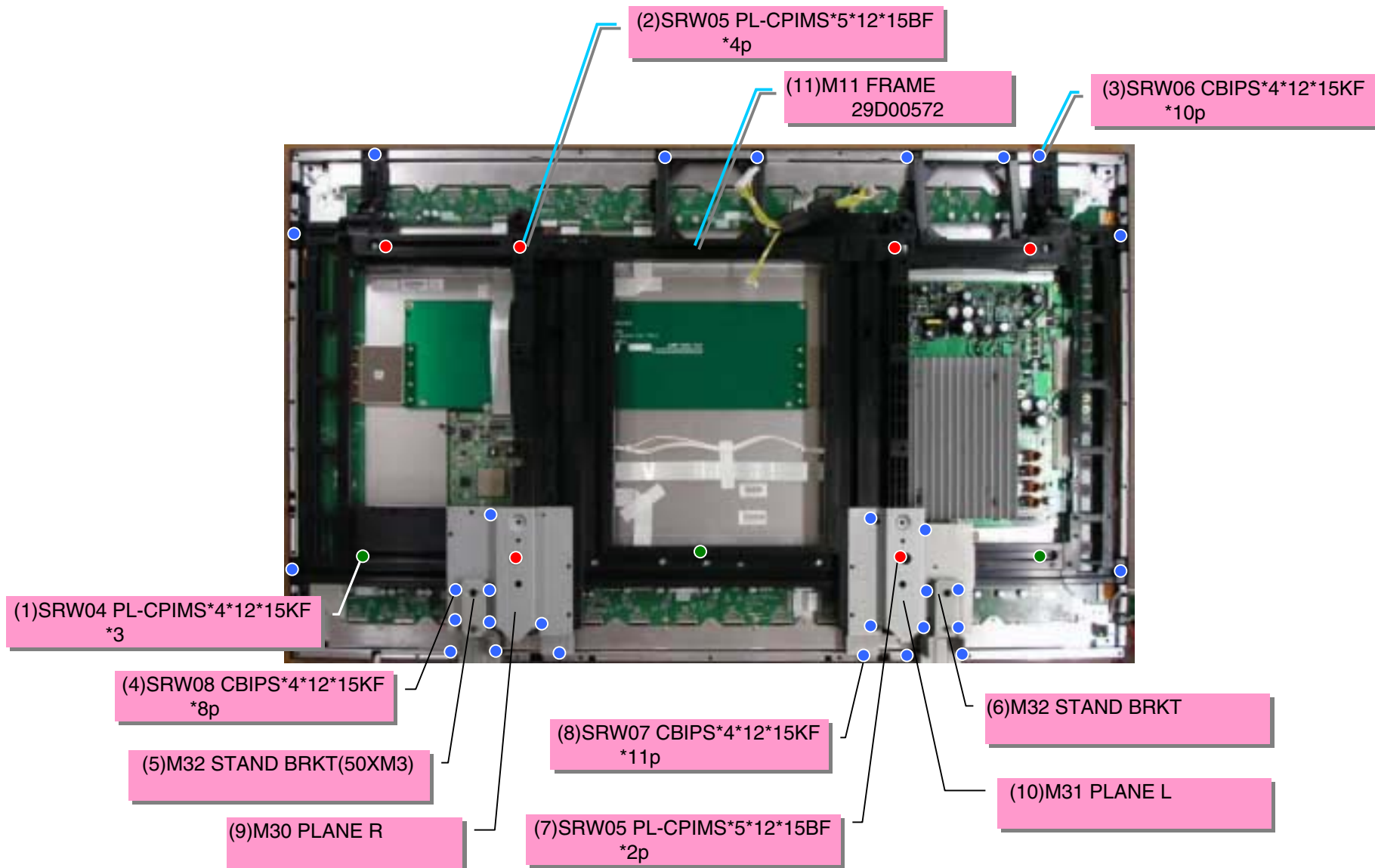


## 20. BRACKET/SHIELD

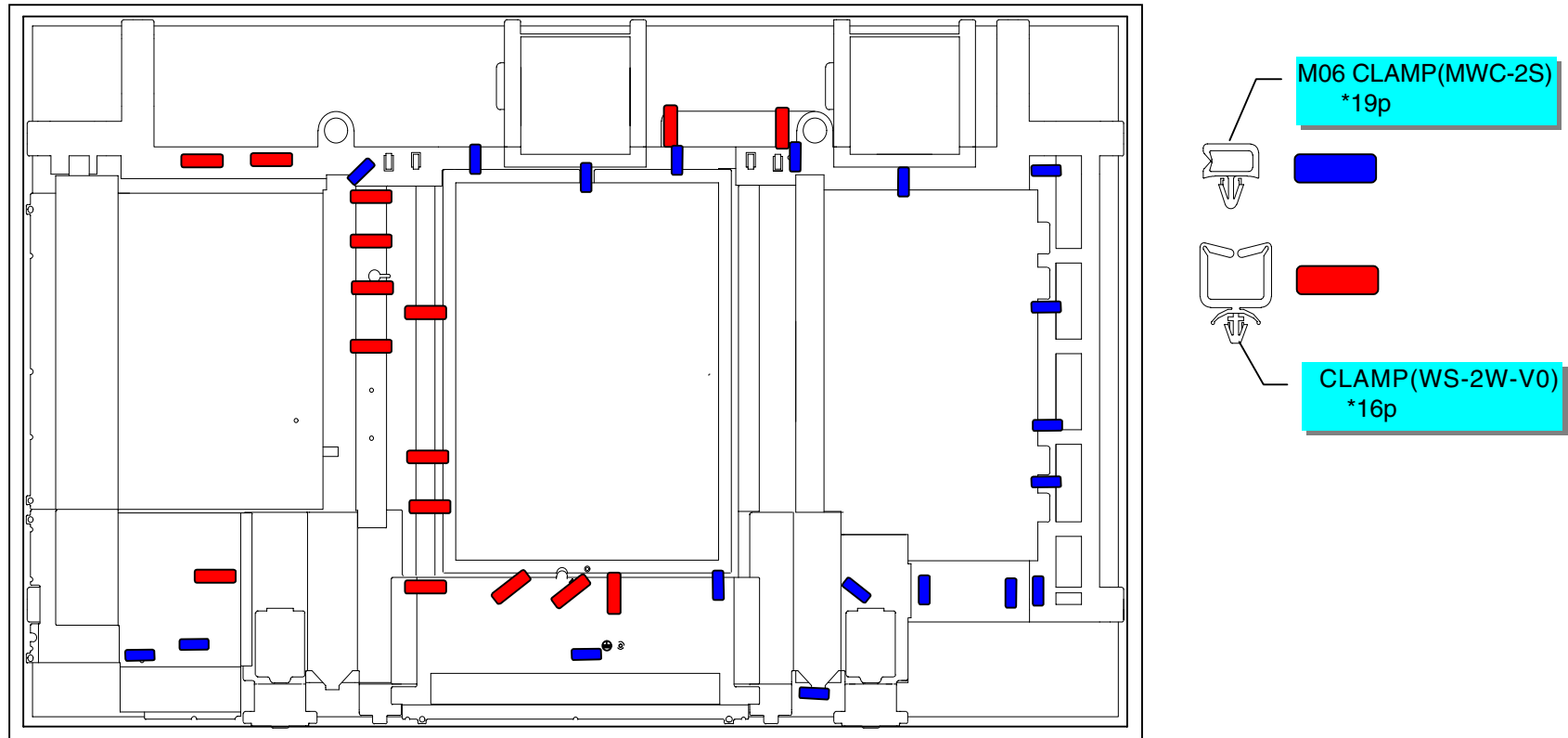
**(Caution)** The mechanical component is provided with an engraved marking of the arrow (→). Remove the screw where this arrow mark is located.



## 21. FRAME

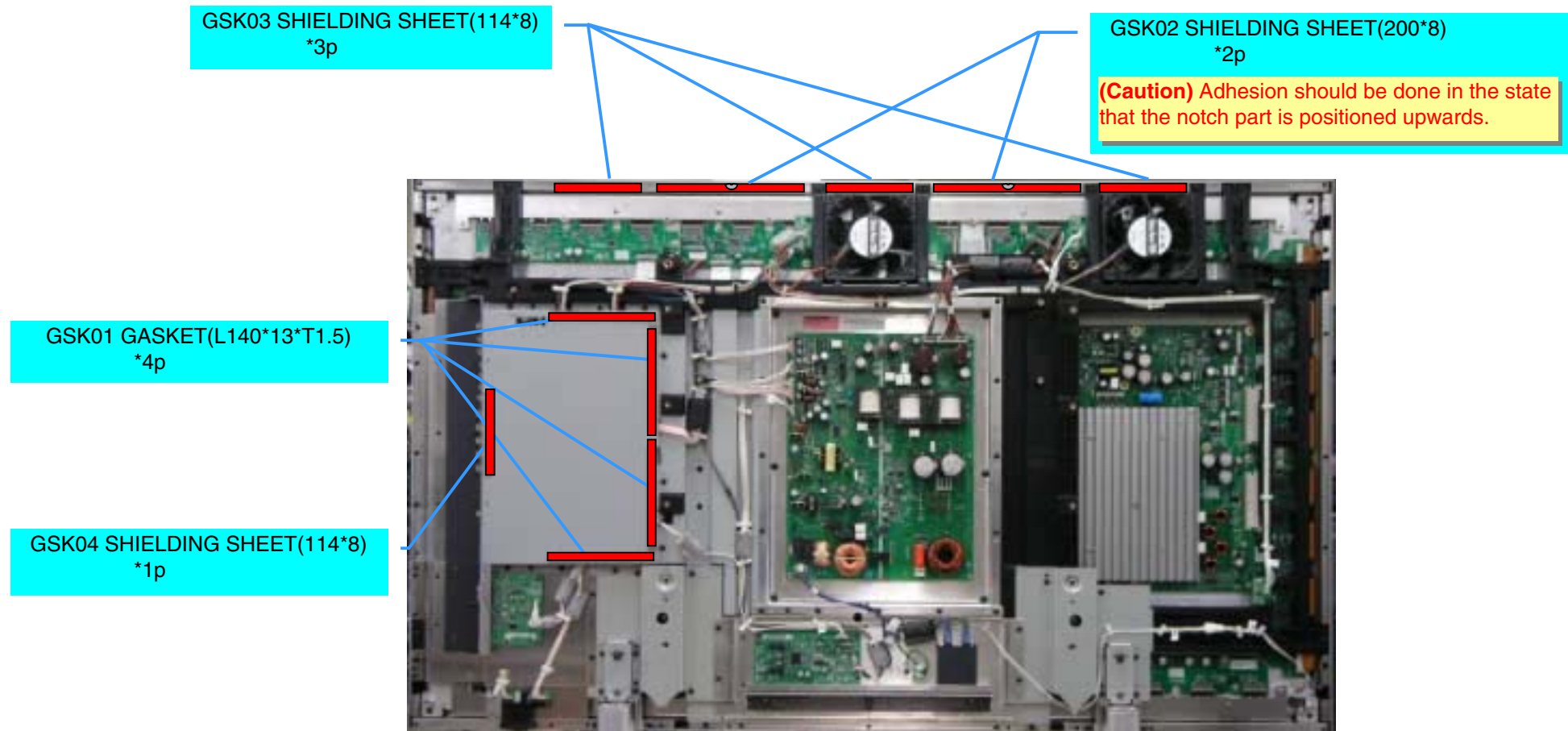


## 22. WIRE CLAMP



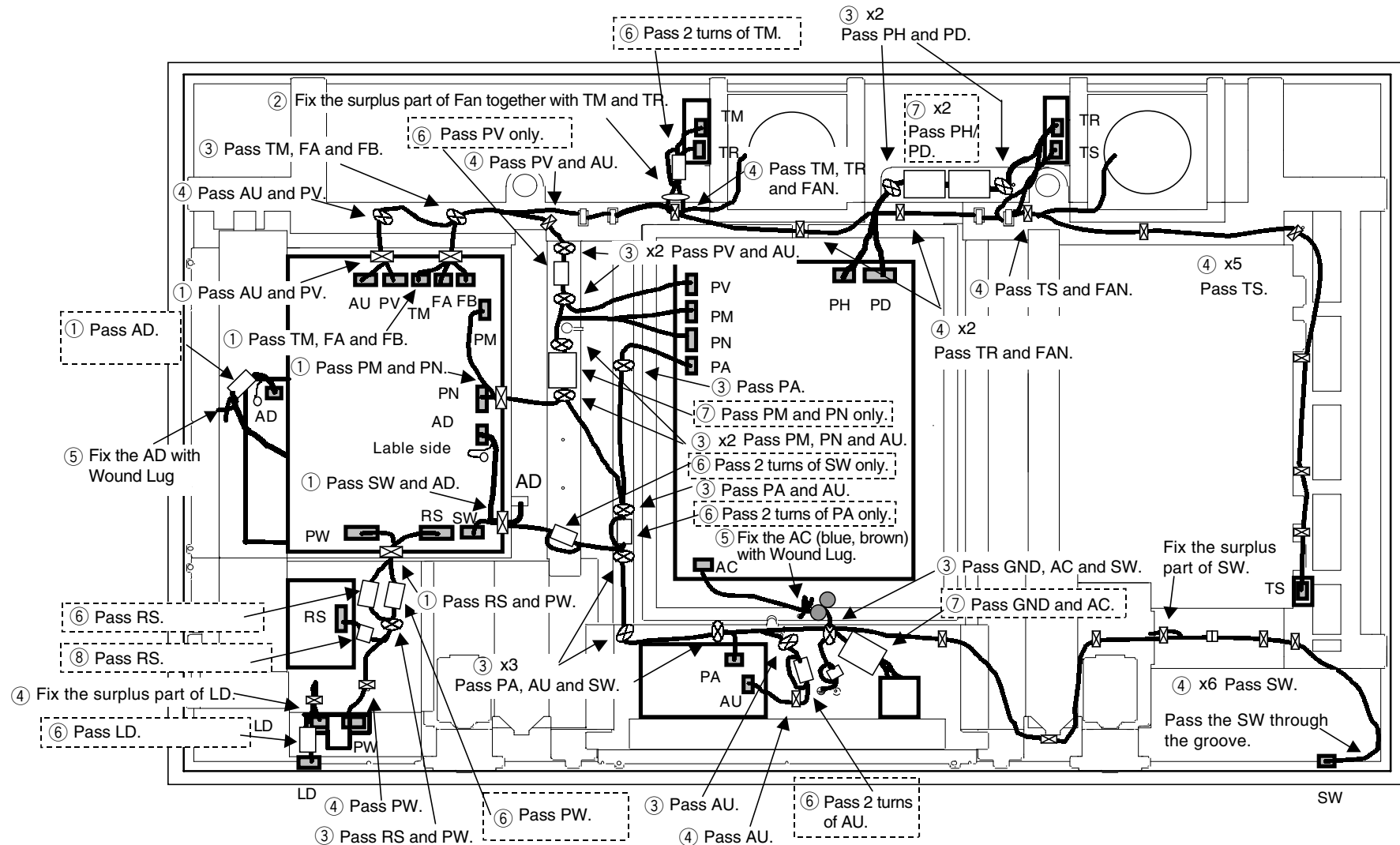


## 23. GASKET(CLASS B)



## 24. WIRING

**(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.



Names of parts	Quantity
① EDGING SADDLE(EDS-1208U)	5
② LEAD CLAMPER (D11.5)	1
⊗ ③ CLAMP(WS-2W-V0)	16
⊗ ④ CLAMP(MWC-2S)	19

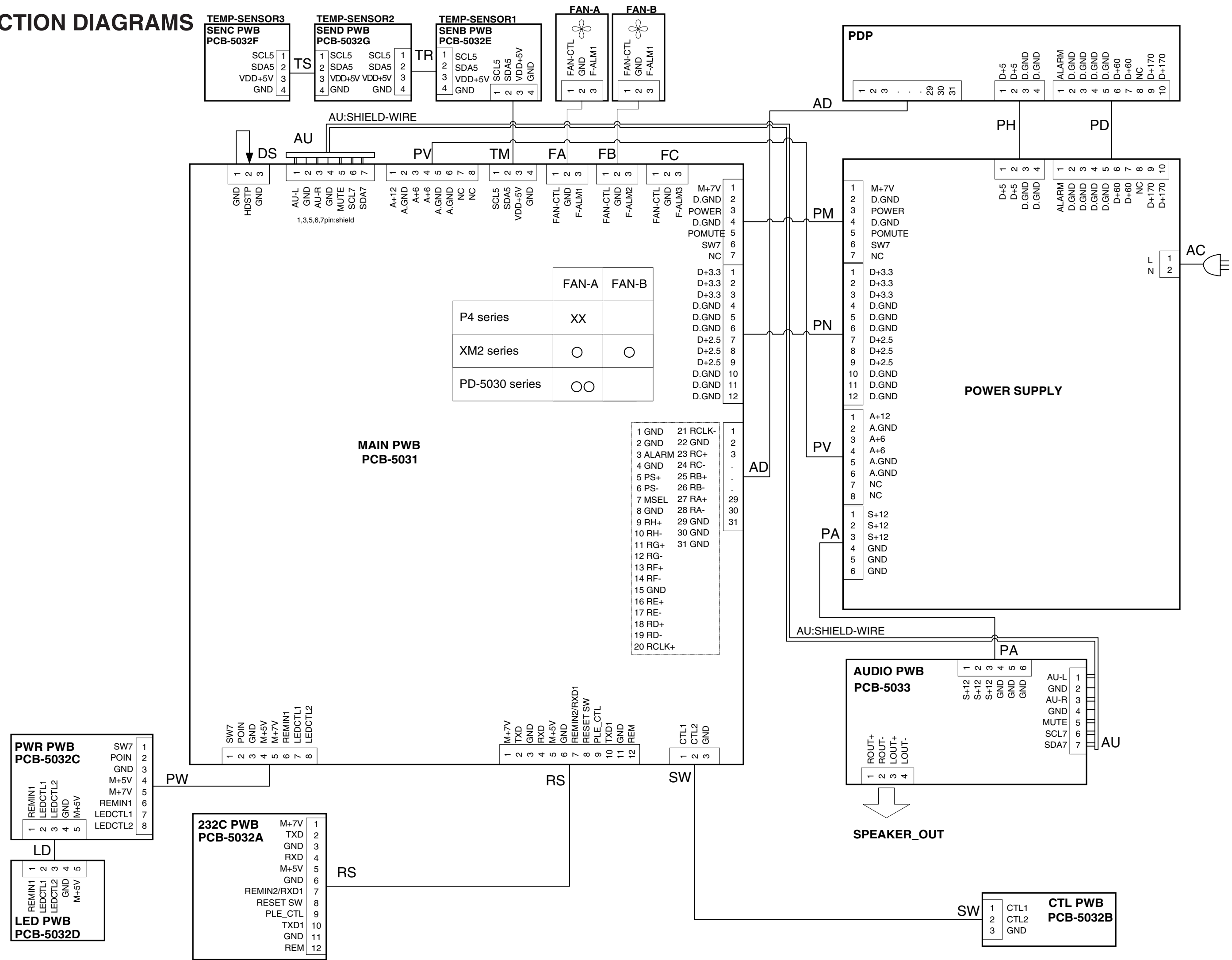
Names of parts	Quantity
⑤ LUG(L60)	2
⑥ FERRITE CORE (ZCAT2032-930)	9
⑦ FERRITE CORE (SFT-72SN-026K)	3
⊗ ⑧ FERRITE CORE (ZCAT1518-730)	1

## PARTS LIST

Ref.	Part Number	Description
A01	936U1M02	PWB-MAIN
A02	936R4AA2	PWB-AUDIO ASSY
A03	936Q0SA1	PWB-232C
A04	936Q0SB1	PWB-CTL
A05	936Q0SC1	PWB-PWR SWITCH
A06	936Q0SD1	PWB-PWR LED
A07	936Q0SE1	PWB-SENB
A08	936Q0SF1	PWB-SENC
A09	936Q0SG1	PWB-SEND
CN-AD	7S530030	CABLE- 31P L320
CN-PI	7S530035	CABLE- 2P L265 ESD-R-19
E01	3S170014	FAN-MOTOR (9G1212M4D03)
CN-FG	7S530015	CABLE- 1P L360
M09	29D00641	PANEL-FRONT
M10	29D00651	PANEL-FRONT SUB
M11	29D00572	FRAME (50XM3)
M12	29F00931	BUTTON-COVER
M13	29F00561	BUTTON-POWER COVER
M14	29F00591	HANDLE
M15	29G00281	BUTTON-POWER
M16	29G00371	BUTTON-CONTROL
M29	29H03191	PANEL-TERMINAL
M36	29J00871	BARRIER (AC INLET)
M41	029K00351	SCREEN SHIELD (FILTER)
PDP	3S350005	PDP-NP50C4MF01AA (T/A REQ)
PSU	3S110171	PWB-POWER UNIT
	7S580006	CABLE-D-SUB 15P L1800
	7S580010	CABLE-STEREO MINI L3M
	7S552001	CORD-POWER AC
	I/B PD5030	OWNERS GUIDE
	3S120171	REMOTE



CONNECTION DIAGRAMS



# CONNECTOR PIN EXPLANATION

**(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.

Ver. 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	NC	Non-connection terminal	—	—	—	—	—	—	—	—
PV	1	A+12V	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	No-connection terminal	—	—	—	—	—	—	—	—
	8	NC	No-connection terminal	—	—	—	—	—	—	—	—
DS	1	GND	GND	0	0	0	0	0	0	—	—
	2	HDSTP	Video mute control for chroma signals	0	0V when the DS connector is connected; High-Z when it is not connected (Video mute)	0V when the DS connector is connected; High-Z when it is not connected (Video mute)	0V when the DS connector is connected; High-Z when it is not connected (Video mute)	0V when the DS connector is connected; High-Z when it is not connected (Video mute)	0	—	—
	3	GND	GND	0	0	0	0	0	0	—	—
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→0	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.	0	1	0	—	MAIN→AUDI
RS	1	M+7V	7V power supply for microcomputer	6.8	6.8	6.8	6.8	6.8	6.8	—	MAIN→RS232C
	2	TXD	RS232 driver output	5	5	5	5	5	5	—	MAIN→RS232C
	3	GND	GND	0	0	0	0	0	0	—	—
	4	RXD	RS232 receiver input	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.	0	0	—	RS232C→MAIN
	5	M+5V	5V power supply for microcomputer	0	5	5	5	5	0	—	MAIN→RS232C
	6	GND	GND	0	0	0	0	0	0	—	—
	7	REMIN2/RXD1	Data signal of wired remote control	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.	0	0	—	RS232C→MAIN

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					
	8	RESET SW	NC	—	—	—	—	—	—	—	—
	9	PLE_CTL	PLE control	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.	0	0	—	MAIN→RS232C
	10	TXD1	RS232 driver output	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.	0	0	—	MAIN→RS232C
	11	GND	GND	0	0	0	0	0	0	—	—
	12	REM	Insertion detection for wired remote control input	0	5V when the wired remote control is connected; 0V when no wired remote control is connected.	5V when the wired remote control is connected; 0V when no wired remote control is connected.	5V when the wired remote control is connected; 0V when no wired remote control is connected.	0	0	—	RS232C→MAIN
TM	1	SCL5	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.	Clock signal (5Vac) when data are received; 5Vdc when no data are received.	0	0	—	MAIN→SENB
	2	SDA5	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.	Clock signal (5Vac) when data are received; 5Vdc when no data are received.	0	0	—	MAIN↔SENB
	3	VDD+5V	5V power supply for analog signals	0	5	5	0	0	0	—	MAIN→SENB
	4	GND	GND	0	0	0	0	0	0	—	—
TR	1	SCL5	I2C bus clock for temperature sensors	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.	0	0	—	SENB↔SEND
	2	SDA5	I2C bus data for temperature sensors	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.	0	0	—	SENB↔SEND
	3	VDD+5V	5V power supply for analog signals	0	5	5	0	0	0	—	SENB→SEND
	4	GND	GND	0	0	0	0	0	0	0	—
TS	1	SCL5	I2C bus clock for temperature sensors	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.	0	0	—	SEND↔SENC
	2	SDA5	I2C bus data for temperature sensors	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.	0	0	—	SEND↔SENC
	3	VDD+5V	5V power supply for analog signals	0	5	5	0	0	0	—	SEND→SENC
	4	GND	GND	0	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						
FA	1	FAN-CTL	Voltage-controllable power supply										
	2	GND	GND		0	0	0	0	0	0	—	—	
	3	ALARM	Fan lock detect signal output										
					0	0V during normal fan operation; 5V while the fan is stopped.	0V during normal fan operation; 5V while the fan is stopped.	0	0	0	—	FAN→MAIN	
FB	1	FAN-CTL	Voltage-controllable power supply										
	2	GND	GND		0	0	0	0	0	0	—	—	
	3	ALARM	Fan lock detect signal output										
					0	0V during normal fan operation; 5V while the fan is stopped.	0V during normal fan operation; 5V while the fan is stopped.	0	0	0	—	FAN→MAIN	
FC (not used)	1	VCC 0-9V	Voltage-controllable power supply		—	—	—	—	—	—	—	—	MAIN→FAN
	2	GND	GND		—	—	—	—	—	—	—0	—	
	3	ALARM	Fan lock detect signal output		—	—	—	—	—	—	—	—	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 1.41Vdc	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 data LVDS serial differential E+ output 0Vac; Bias 1.1Vdc	Video data LVDS serial differential E+ output 0Vac; Bias 1.1Vdc * Only for the PX-42VP4V Series, 0.3Vac and bias 1.25 Vdc in theater mode when 60Hz motion pictures are displayed.	0	0	0	—	MAIN→PDP
	17	RE–	Video system output E–	0	Video data LVDS serial differential E– output 0Vac; Bias 1.4Vdc	Video data LVDS serial differential E– output 0.3Vac; Bias 1.25Vdc * Only for the PX-42VP4V Series, 0.3Vac and bias 1.25 Vdc in theater mode when 60Hz motion pictures are displayed.	0	0	0	—	MAIN→PDP
	18	RD+	Video system output D+	0	Video data LVDS serial differential D+ output 0Vac; Bias 1.1Vdc	Video data LVDS serial differential D+ output 0.3Vac; Bias 1.25Vdc	0	0	0	—	MAIN→PDP
	19	RD–	Video system output D–	0	Video data LVDS serial differential D– output 0Vac; Bias 1.4Vdc	Video data LVDS serial differential D– output 0.3Vac; Bias 1.25Vdc	0	0	0	—	MAIN→PDP

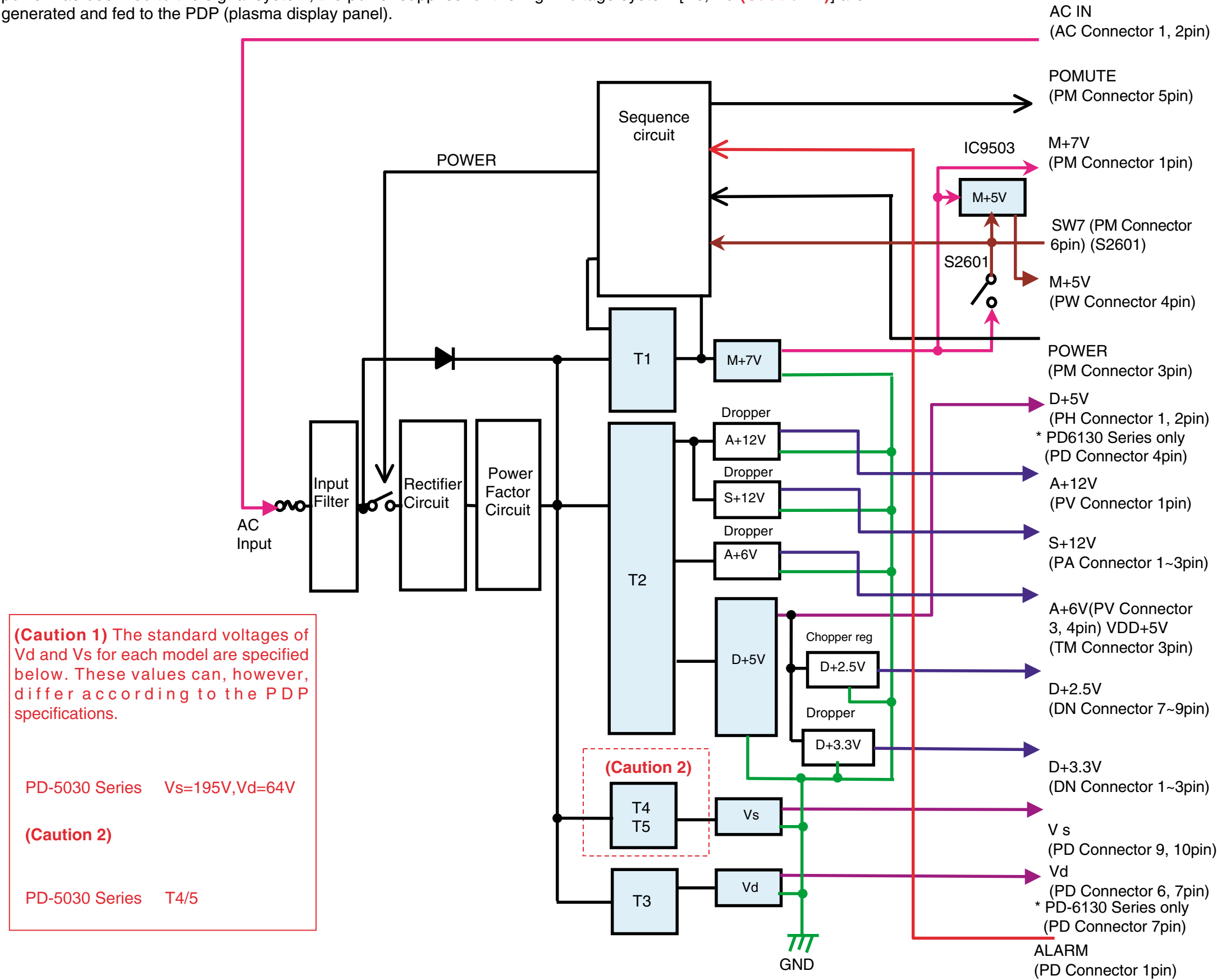
Name	Pin No.	Pin name	Function	Basic operation (Numerical unit: Vdc; except for the case when units are individually indicated)							Signal direction
				AC power ON (Power cord connected to the wall outlet) ★★	Main power ON (POWER button ON) ★		Power management ★★★	Standby ★★★	Main power OFF ★★	AC 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
	235	RB+	Video system output B+	0	Video data LVDS serial differential B+ output 0Vac; Bias 1.1Vdc	Video data LVDS serial differential B+ output 0.3Vac; Bias 1.25Vdc	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.	0	0	—	LED→PWR
	2	LEDCTL1	Standby LED control	0	0	0	5	5	0	—	PWR→LED
	3	LEDCTL2	Standby LED control	5	5	5	5	0	5	—	PWR→LED
	4	GND	GND	0	0	0	0	0	0	—	—
	5	M+5V	5V power supply for microcomputer	0	5	5	5	0	0	—	PWR→LED
PW	1	SW7	Power start control	0	6.8	6.8	0	0	0	—	PW→MAIN
	2	POIN	Power start detection	0	5	5	5	5	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.	0	0	—	PW→MAIN
	7	LEDCTL1	Standby red LED control	0	0	0	5	5	0	—	MAIN→PW
	8	LEDCTL2	Standby green LED control	0	5	5	5	0	0	—	MAIN→PW
SW	1	CTL1	Key input detection	0	1~4.2Vdc when key inputs are entered; 5Vdc when no key inputs are entered.	1~4.2Vdc when key inputs are entered; 5Vdc when no key inputs are entered.	1~4.2Vdc when key inputs are entered; 5Vdc when no key inputs are entered.	0	0	—	SW→MAIN
	2	CTL2	Key input detection	0	1~4.2Vdc when key inputs are entered; 5Vdc when no key inputs are entered.	1~4.2Vdc when key inputs are entered; 5Vdc when no key inputs are entered.	1~4.2Vdc when key inputs are entered; 5Vdc when no key inputs are entered.	0	0	—	SW→MAIN
	3	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					
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	—	—
	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 digital circuits	0	60Vdc (changeable according to the PDP)	60Vdc (changeable according to the PDP)	0	0	0	—	PDWER→PDP
	7	D+60	Vd power supply for PDP digital circuits	0	60Vdc (changeable according to the PDP)	60Vdc (changeable according to the PDP)	0	0	0	—	PDWER→PDP
	8	NC	Non-connection terminal	—	—	—	—	—	—	—	—
	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
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	—	—

BLOCK DIAGRAMS

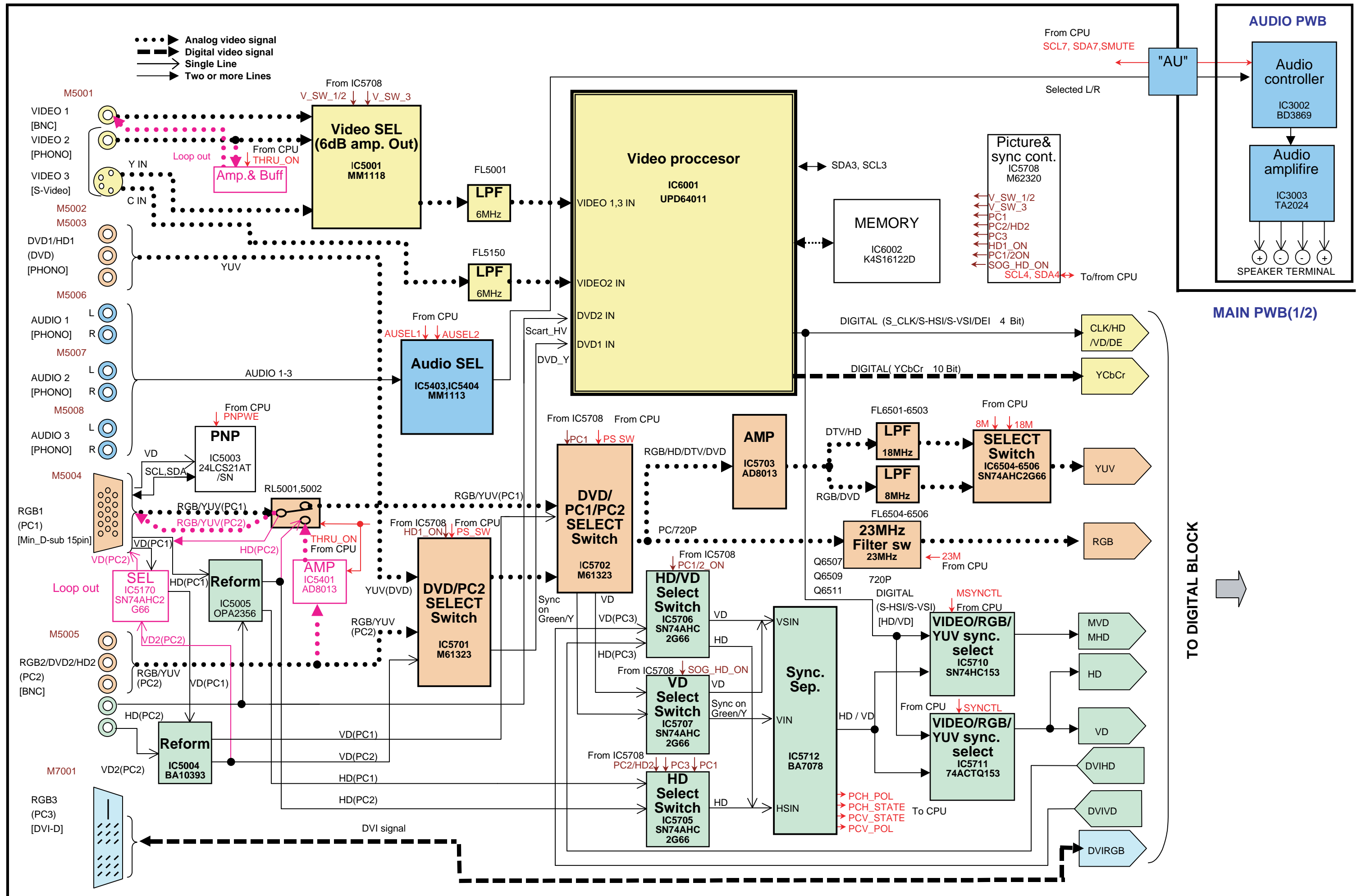
■Power supply

When the power cord is connected to a wall outlet, M+7V (7Vdc) begins to be fed to IC9503 (M+5V) from Pin① of the PM connector. When the main power switch (S2601) is turned on, IC9503 is turned on by means of SW7 (M+7V) and M+5V (5Vdc) is fed to the CPU (IC9501). With the power supply of M+5V, the CPU feeds the POWER signal [H] to the power unit from Pin③ of the PM connector. As a result, power supplies of the signal system (D+5V, D+3.3V, D+2.5V, A+12V, A+6V, S+12V) are turned on so that power can be fed to the respective circuits of the signal system. After the power has been fed to the signal system, the power supplies for the high-voltage system [Vs, Vd (Caution 1)] are generated and fed to the PDP (plasma display panel).





# ANALOG BLOCK DIAGRAM



## DIGITAL BLOCK DIAGRAM (HDCP)

