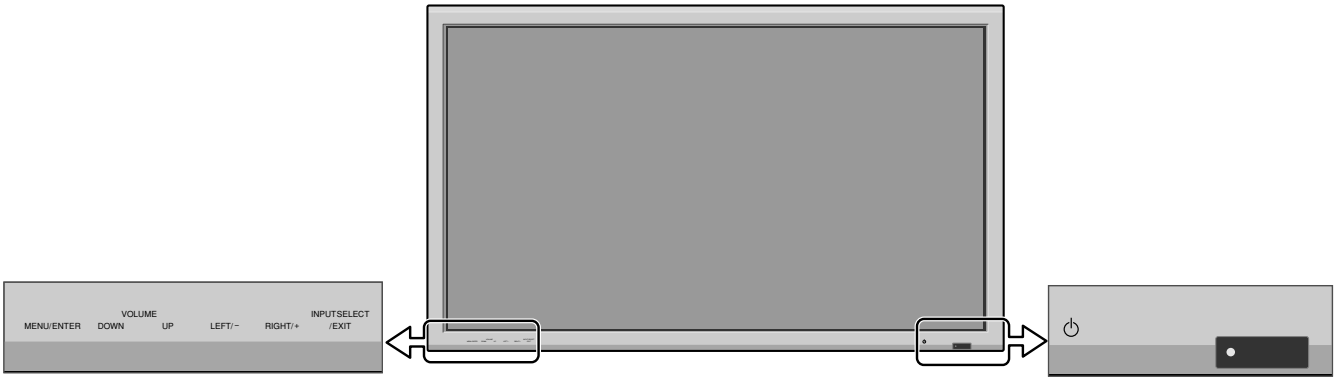
Service Manual

PD4250D / U1B

Plasma Monitor



REMARK : The PD4250D is a same product as the PX-42XR3A except the brand indications and accessories.
Please refer to the PX-42XR3A service manual except following parts.
Please refer to METHOD OF DISASSEMBLY of service manual about a parts layout.

PCB NAME	POS. NO.	VERS. COLOR	PART NO. (FOR EUR)	PART NO. (MJI)	PART NAME	DESCRIPTION	
MECHANISM PARTS / PCB ASSYS							
	M18			90M-29F01171R	COVER	COVER CONTROL(PD4230V)	29F01171
	M24			90M-29G00411R	BUTTON	BUTTON CONTROL(PD4230V)	29G00411
	M60			90M-29KS0121R	FILTER	FILTER	29KS0121
	M67			00M21BW248510	PANEL	FRONT ESCUTCHON ASSY	29DS0601
	P01			90M-3S342014R	DISPLAY	PDP-NP42H5MF01	3S342014
	A01			90M-937L7M01R	PCB ASSY	MAIN PWB ASSY	937L7M01
	A02			90M-937F3SA1R	PCB ASSY	232C PWB ASSY	937F3SA1
	A03			90M-937F3SB1R	PCB ASSY	CTL PWB ASSY	937F3SB1
	A04			90M-937F3SC1R	PCB ASSY	PWR PWB ASSY	937F3SC1
	A05			90M-937F3SD1R	PCB ASSY	LED PWB ASSY	937F3SD1
	A06			90M-937F3SE1R	PCB ASSY	SENB PWB ASSY	937F3SE1
	A07			90M-937F3SF1R	PCB ASSY	SENC PWB ASSY	937F3SF1
	A08			90M-937F3SG1R	PCB ASSY	SEND PWB ASSY	937F3SG1
	A09			90M-937F3SH1R	PCB ASSY	AUDIO PWB ASSY	937F3SH1
	A11			90M-3S110221R	PCB ASSY	POWER UNIT	3S110221
PACKING							
		/U1B		00M23BW851250	USER GUIDE	USER GUIDE PD4230V/4250D/5050D/6150D <U>	
	⚠ PK01	/U1B		90M-7S552001R	MAINS CORD	MAINS CORD U3 L3.0M L	7S552001
	PK02			00MZK23BW0010	UNIT KIT	REMOTE CONTROL RC5050DPD	3S120271

NOTE : “nsp” PARTS IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

Please use this service manual with referring to the user guide (D.F.U) without fail.
修理の際は、必ず取扱説明書を準備し操作方法を確認の上作業を行ってください。

marantz®

PD4250D

Part no. 90M26BW855010
First Issue 2004.09
ecm

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Using superior design and selected high grade components, **MARANTZ** company has created the ultimate in stereo sound. Only original **MARANTZ** parts can insure that your **MARANTZ** product will continue to perform to the specifications for which it is famous.

Parts for your **MARANTZ** equipment are generally available to our National Marantz Subsidiary or Agent.

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Parts can be ordered either by mail or by Fax.. In both cases, the correct part number has to be specified.

The following information must be supplied to eliminate delays in processing your order :

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3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature : any order form or Fax. must be signed, otherwise such part order will be considered as null and void.

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MARANTZ AMERICA, INC
1100 MAPLEWOOD DRIVE
ITASCA, IL. 60143
USA
PHONE : 630 - 741 - 0300
FAX : 630 - 741 - 0301

EUROPE / TRADING

MARANTZ EUROPE B.V.
P. O. BOX 8744, BUILDING SILVERPOINT
BEEMDSTRAAT 11, 5653 MA EINDHOVEN
THE NETHERLANDS
PHONE : +31 - 40 - 2507844
FAX : +31 - 40 - 2507860

CANADA

MARANTZ CANADA INC.
5-505 APPLE CREEK BLVD.
MARKHAM, ONTARIO L3R 5B1
CANADA
PHONE : 905 - 415 - 9292
FAX : 905 - 475 - 4159

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MARANTZ PROFESSIONAL PRODUCTS
2640 WHITE OAK CIRCLE, SUITE A
AURORA, ILLINOIS 60504 USA
PHONE : 630 - 820 - 4800
FAX : 630 - 820 - 8103

PROFESSIONAL **AUSTRALIA**

TECHNICAL AUDIO GROUP PTY, LTD
43-53 Bridge Rd.,
STANMORE NSW 2048
AUSTRALIA
PHONE : +61 - (0)2 - 9519 - 0900
FAX : +61 - (0)2 - 9519 - 0600

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Jolly ProAudio Broadcast Engineering Ltd.
UNIT 2, 10F, WAH HUNG CENTRE,
41 HUNG TO ROAD, KWUN TONG, KLN.,
HONG KONG
PHONE : 852 - 21913660
FAX : 852 - 21913990

AUSTRALIA

QualiFi Pty Ltd,
24 LIONEL ROAD,
MT. WAVERLEY VIC 3149
AUSTRALIA
PHONE : +61 - (0)3 - 9543 - 1522
FAX : +61 - (0)3 - 9543 - 3677

THAILAND

MRZ STANDARD CO., LTD
746 - 754 MAHACHAI ROAD.,
WANGBURAPAPIROM, PHRANAKORN,
BANGKOK, 10200 THAILAND
PHONE : +66 - 2 - 222 9181
FAX : +66 - 2 - 224 6795

SINGAPORE

WO KEE HONG DISTRIBUTION PTE LTD
No.1 JALAN KILANG TIMOR
#08-03 PACIFIC TECH CENTRE
SINGAPORE 159303
PHONE : +65 6376 0338
FAX : +65 6376 0166

NEW ZEALAND

WILDASH AUDIO SYSTEMS NZ
14 MALVERN ROAD MT ALBERT
AUCKLAND NEW ZEALAND
PHONE : +64 - 9 - 8451958
FAX : +64 - 9 - 8463554

TAIWAN

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6 TH FL NO, 148 SUNG KIANG ROAD,
TAIPEI, 10429, TAIWAN R.O.C.
PHONE : +886 - 2 - 25221304
FAX : +886 - 2 - 25630415

MALAYSIA

WO KEE HONG ELECTRONICS SDN. BHD.
2ND FLOOR BANGUNAN INFINITE CENTRE
LOT 1, JALAN 13/6, 46200 PETALING JAYA
SELANGOR DARUL EHSAN, MALAYSIA
PHONE : +60 - 3 - 7954 8088
FAX : +60 - 3 - 7954 7088

JAPAN *Technical*

MARANTZ JAPAN, INC.
35- 1, 7- CHOME, SAGAMIONO
SAGAMIHARA - SHI, KANAGAWA
JAPAN 228-8505
PHONE : +81 42 748 1013
FAX : +81 42 741 9190

日本マランツ株式会社

本 社 〒228-8505
神奈川県相模原市相模大野7-35-1

KOREA

MK ENTERPRISES LTD.
ROOM 604/605, ELECTRO-OFFICETEL, 16-58,
3GA, HANGANG-RO, YONGSAN-KU, SEOUL
KOREA
PHONE : +822 - 3232 - 155
FAX : +822 - 3232 - 154

SHOCK, FIRE HAZARD SERVICE TEST :

CAUTION : After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chassis bottom.

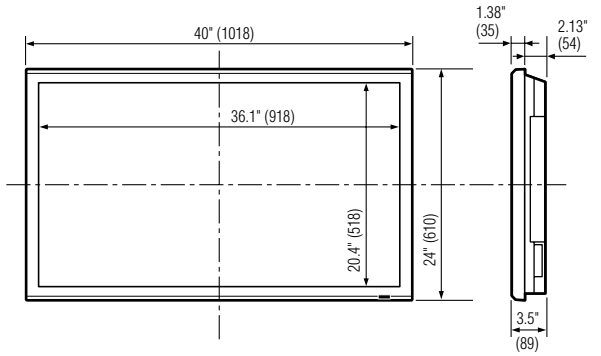
Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before it is return to the user/customer.

Ref. UL Standard No. 60950.

In case of difficulties, do not hesitate to contact the Technical Department at above mentioned address.

TECHNICAL SPECIFICATIONS

Screen Size	36.1"(H)×20.4"(V) inches 918(H)×518(V) mm diagonal 42"
Aspect Ratio	16 : 9
Resolution	1024(H)×768(V) pixels
Pixel Pitch	0.036"(H)×0.027"(V) inches 0.897(H)×0.675(V) mm
Color Processing	4,096 steps, 68.7 billion colors
Signals	
Synchronization Range	Horizontal : 15.5 to 110 kHz (automatic : step scan) Vertical : 50.0 to 120.0 Hz (automatic : step scan)
Input Signals	RGB, NTSC (3.58/4.43), PAL (B,G,M,N), PAL60, SECAM, HD*1 , DVD*1 , DTV*1
Input Terminals	
RGB	
Visual 1 (Analog)	mini D-sub 15-pin×1
Visual 2 (Analog)	BNC (R, G, B, H/CS, V)×1*2
Visual 3 (Digital)	HDMI×1*3
Video	
Visual 1	BNC×1*2
Visual 2	RCA-pin×1
Visual 3	S-Video: DIN 4-pin×1
DVD/HD/DTV	
Visual 1	RCA-pin (Y, PB[CB], PR[CR])×1*1
Visual 2	BNC (Y, PB[CB], PR[CR])×1*1, *2
Visual 3	HDMI×1*3
Audio	Stereo RCA×3(Selectable)
External Control	D-sub 9-pin×1(RS-232C)
Sound output	8W+8W at 6 ohm
Power Supply	AC100-240V 50/60Hz
Current Rating	5.2A (maximum)
Power Consumption	305W (typical)
Dimensions	40 (W)×24 (H)×3.5 (D) inches 1018 (W)×610 (H)×89(D) mm
Weight	65.0 lbs / 29.5 kg (without stand)
Environmental Considerations	
Operating Temperature	0°C to 40°C / 32°F to 104°F
Humidity	20 to 80% (no condensation)
Altitude	0 to 9180 feet / 0 to 2800 m
Storage Temperature	-10°C to 50°C / 14°F to 122°F
Humidity	10 to 90% (no condensation)
Altitude	0 to 9840 feet / 0 to 3000 m
Front Panel User Controls	Power on/off, Input source select, Volume up/down, OSM control
Remote Control Functions	Power on/off, Input source select, OSM control,Volume up/down, Cursor (UP, DOWN,LEFT, RIGHT), Zoom up/down, Picture control buttons
OSM Functions	PICTURE (PICTURE MEMORY/CONTRAST/ BRIGHTNESS/SHARPNESS/COLOR/TINT/ NR/COLOR TEMP./WHITE BALANCE/ GAMMA/LOW TONE/SET UP LEVEL/COLOR TUNE/CINEMA MODE/PICTURE MODE), AUDIO (BASS/TREBLE/BALANCE/AUDIO INPUT1/AUDIO INPUT2/AUDIO INPUT3), IMAGE ADJUST (ASPECT MODE/V-POSITION/H-POSITION/V-HEIGHT/H-WIDTH/AUTO PICTURE/FINE PICTURE/ PICTURE ADJ.), SET UP (LANGUAGE*/BNC INPUT/D-SUB INPUT/HD SELECT/RGB SELECT/HDMI SET UP/COLOR SYSTEM/BACK GROUND/GRAY LEVEL/S1/S2/DISPLAY OSM/OSM ADJ./ALL RESET), FUNCTION (POWER MGT./INPUT SKIP/PDP SAVER [PEAK BRIGHT / ORBITER / INVERSE/WHITE / SCREEN WIPER / SOFT FOCUS / OSM ORBITER / OSM CONTRAST]/ CLOSED CAPTION/CAPTION CONT), SIGNAL INFO.



Bezel color is silver.

Units are in inch (mm)

The features and specifications may be subject to change without notice.

***1 HD/DVD/DTV input signals supported on this system**

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

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

***3 Compatible with HDCP.**

Supported Signals

- 640×480P @ 59.94/60Hz
- 1280×720P @ 59.94/60Hz
- 1920×1080I @ 59.94/60Hz
- 720×480P @ 59.94/60Hz
- 1440 (720)×480I @ 59.94/60Hz
- 1920×1080I @ 50Hz
- 720×576P @ 50Hz
- 1440 (720)×576P @ 50Hz

Note: In some cases a signal on the plasma monitor may not be displayed properly. The problem may be an inconsistency with standards from the source equipment (DVD, Set-top box, etc...). If you do experience such a problem please contact NEC Solutions (America), Inc. and also the manufacturer of the source equipment.

	*English, German, French, Italian, Spanish, Swedish, Chinese, Russian
Other Features	Motion compensated 3D Scan Converter (NTSC, PAL, 480I, 576I, 525I, 625I, 1035I, 1080I), 2-3 pull down Converter (NTSC, 480I, 525I, 1035I, 1080I (60Hz)), 2-2 pull down Converter (PAL, 576I, 625I, NTSC, 480I, 525I), Digital Zoom Function (100-900% Selectable), Self Diagnosis, Image Burn reduction tools (PEAK BRIGHT, INVERSE, WHITE, ORBITER, SCREEN WIPER), Color Temperature select (high/middle/ middle low/low, user has 4 memories), Auto Picture, Input Skip, Color Tune, Low Tone (3 mode), Gamma Correction (4 mode), Plug and play (DDC1, DDC2b, RGB3: DDC2b only)
Accessories	Remote control with two AAA batteries, Power cord, User Guide, Safety metal fittings, Ferrite cores, Bands, Cable clamps
Regulations	UL approved (UL60950, UL6500, CSA C22.2 No.60950-00, CAN/CSA-E60065-00) SEMKO Approved (EN60950, EN60065, IEC60950, IEC60065) Meets FCC Part 15 Class B DOC Canada requirements Meets AS/NZS CISPR 22:2002 Class B
OPTION STAND	AS4250

Personal notes:

CONFIDENTIAL

NEC

No.PB24-04-B002

Empowered by Innovation

SERVICE MANUAL

PLASMA MONITOR

MODEL PX-42XM3 series

PX-42XR3 series

- This service manual provides the technical materials for maintenance servicing, programmed for the technical personnel in charge of repair services. Prior to starting maintenance servicing, read through the [SAFETY SERVICE (P3-1)] without fail and observe the caution notes described therein.
- External appearance and specifications are subject to change without notice, for reasons of quality and performance improvements and others.
- In order to maintain safety, quality, and performance, use the genuine parts, without fail, at the time of maintenance servicing.

NEC Plasma Display Corporation
TOKYO, JAPAN

CONTENTS

SAFETY SERVICE

■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.

TROBLESHOOTING

• Problems in the power supply, such as “Failure in Power ON” or “LED flashing or lighting (alarm display)”

→ 1. Go to Power failure (P5-2).

• Problems in the images, such as “No pictures available”

→ 2. Go to Image errors (P5-8).

• No video loop-out signal is generated.

→ The MAIN PWB is faulty.

• “Remote control not effective”

→ 3. Go to Audio errors (P5-16).

• “Remote control not effective”

→ 4. Go to Remote control not effective (P5-17).

• The closed caption is displayed incorrectly. (PX-***A only)**

→ 5. Go to "The closed caption (CC) is displayed incorrectly." (P.5-19).

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.

(1) The power supply is not turned on.

Move the main power setting for OFF→ ON.

Is the POWER/STANDBY lamp lit?

NO → Is the AC power output available at the AC connector (power cord)?

NO → **The power cord is defective.**

YES

(2) Blinking in green (Alarm of temperature sensor error or fan error) Go to (P5-3)

(3) Blinking in red after repeating reciprocal flash in red and green (POWER ON↔OFF) 3times (Alarm of temperature error) Go to (P5-5).

(4) Reciprocal flashing in red and green (Alarm of panel error) Go to (P5-6).

(5) Lighting in green, and then in red (Alarm of power line error) Go to (P5-7).

YES

Is a 6.8Vdc output available at Pin ① of the PM connector?

NO → Is a 6.8Vdc output available in the state that the LD connector is disconnected and the main power is turned ON?

YES → **The LD connector or the LED PWB is fault.**

NO

YES

Is a 6.8Vdc output available at Pin ① of the PW connector?

NO → **The PW connector or the PWR PWB is fault.**

Is a 6.8Vdc output available in the state that the PW connector is disconnected and the main power is turned ON?

YES → **The PW connector or the PWR PWB is fault.**

NO

YES

Is a 6.8Vdc output available at Pin ⑥ of the PM connector?

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

Is a 6.8Vdc output available in the state that the PM connector is disconnected and the main power is turned ON?

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

NO

YES

Is a 4.9Vdc output available at Pin ③ of the PM connector?

NO → **The power unit is fault.**

YES

Is a 5Vdc output available at Pin ④ of the PW connector?

NO → **The MAIN PWB is fault.**

YES

Is a 5Vdc output available in the state that the LD connector is disconnected and the main power is turned ON?

YES → **The LD connector or the LED PWB is fault.**

NO

Is a 5Vdc output available in the state that the RS connector is disconnected and the main power is turned ON?

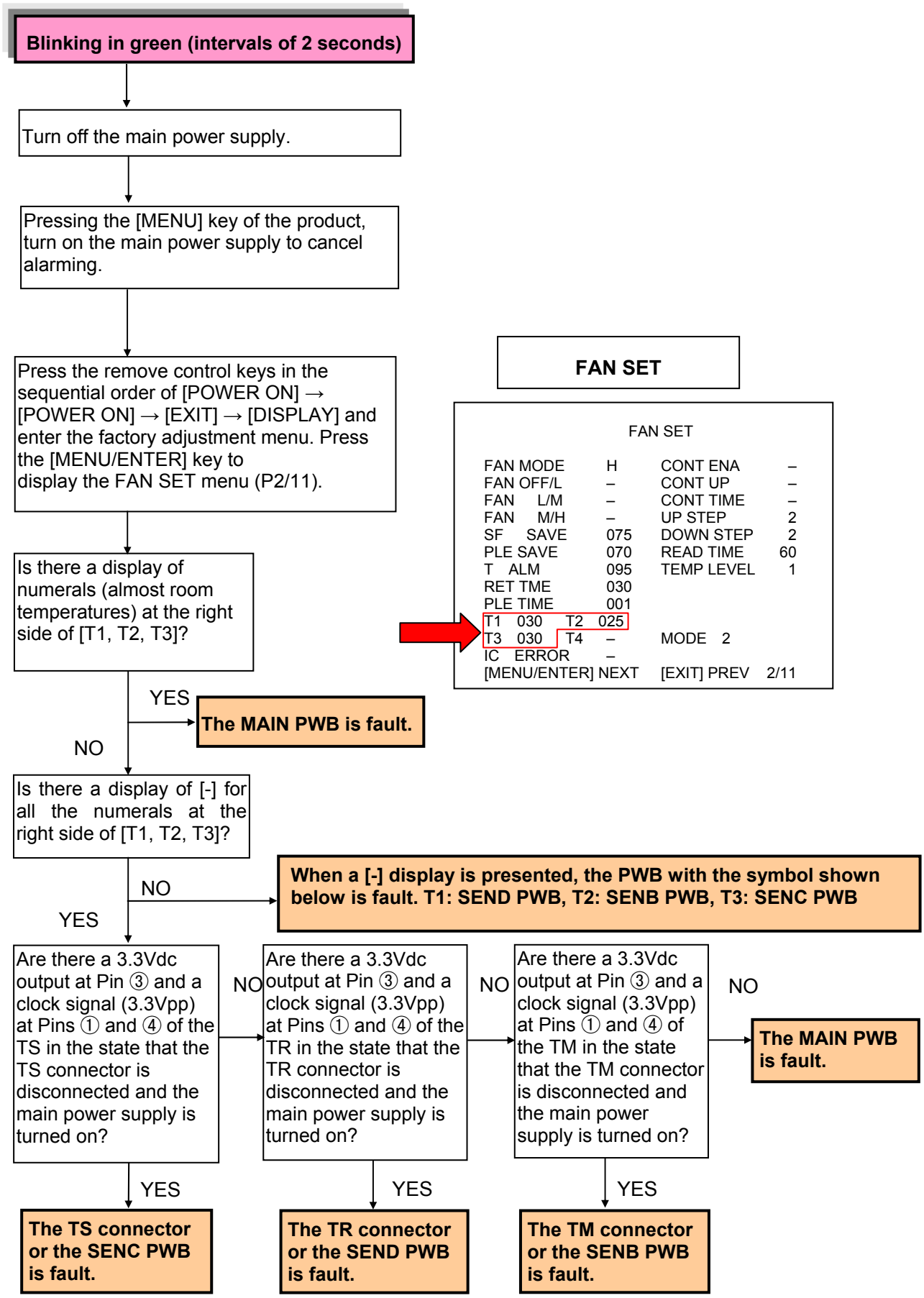
YES → **The RS connector or the 232C PWB is fault.**

NO

The PW connector, PWR PWB or the MAIN PWB is fault.

(2) Blinking in green

① Alarm of temperature sensor error



② Alarm of fan error

Blinking in green (intervals of 0.5seconds)

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 (P2/11) in the factory adjustment menu automatically moves from [ENA] to [H], thus causing the fan to run.

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	2/11

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	2/11

YES → Is there a 3.3Vdc output at Pin ③ of the FA and FB, FC connectors?
YES → **The fan is out of order on the side where a 3.3Vdc output is generated.**
NO → **The MAIN PWB is fault.**

NO → Is there a voltage output of 11.3Vdc for PX-42XM3/XR3, 11.2Vdc for PX-50XM4/XR4, and 9.3Vdc for PX-61XM3/XR3, respectively, at Pin 1 of the FA, FB, and FC connectors?
YES → **The FAN-A/FAN-B/FAN-C is fault.**

(Caution) The FAN-C and FC connectors are used only for the 61XM3 Series.

NO → Is there a voltage output of 11.3Vdc for PX-42XM3/XR3, 11.2Vdc for PX-50XM4/XR4, and 9.3Vdc for PX-61XM3/XR3, respectively, when the FA connector is disconnected and the mains power is turned ON?
YES → **The FAN-A is fault.**

NO → Is there a voltage output of 11.3Vdc for PX-42XM3/XR3, 11.2Vdc for PX-50XM4/XR4, and 9.3Vdc for PX-61XM3/XR3, respectively, when the FB connector is disconnected and the mains power is turned ON?
YES → **The FAN-B is fault.**

NO → Is there a voltage output of 11.3Vdc for PX-42XM3/XR3, 11.2Vdc for PX-50XM4/XR4, and 9.3Vdc for PX-61XM3/XR3, respectively, when the FC connector is disconnected and the mains power is turned ON?
YES → **The FAN-C is fault.**
NO → **The MAIN PWB is fault.**

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

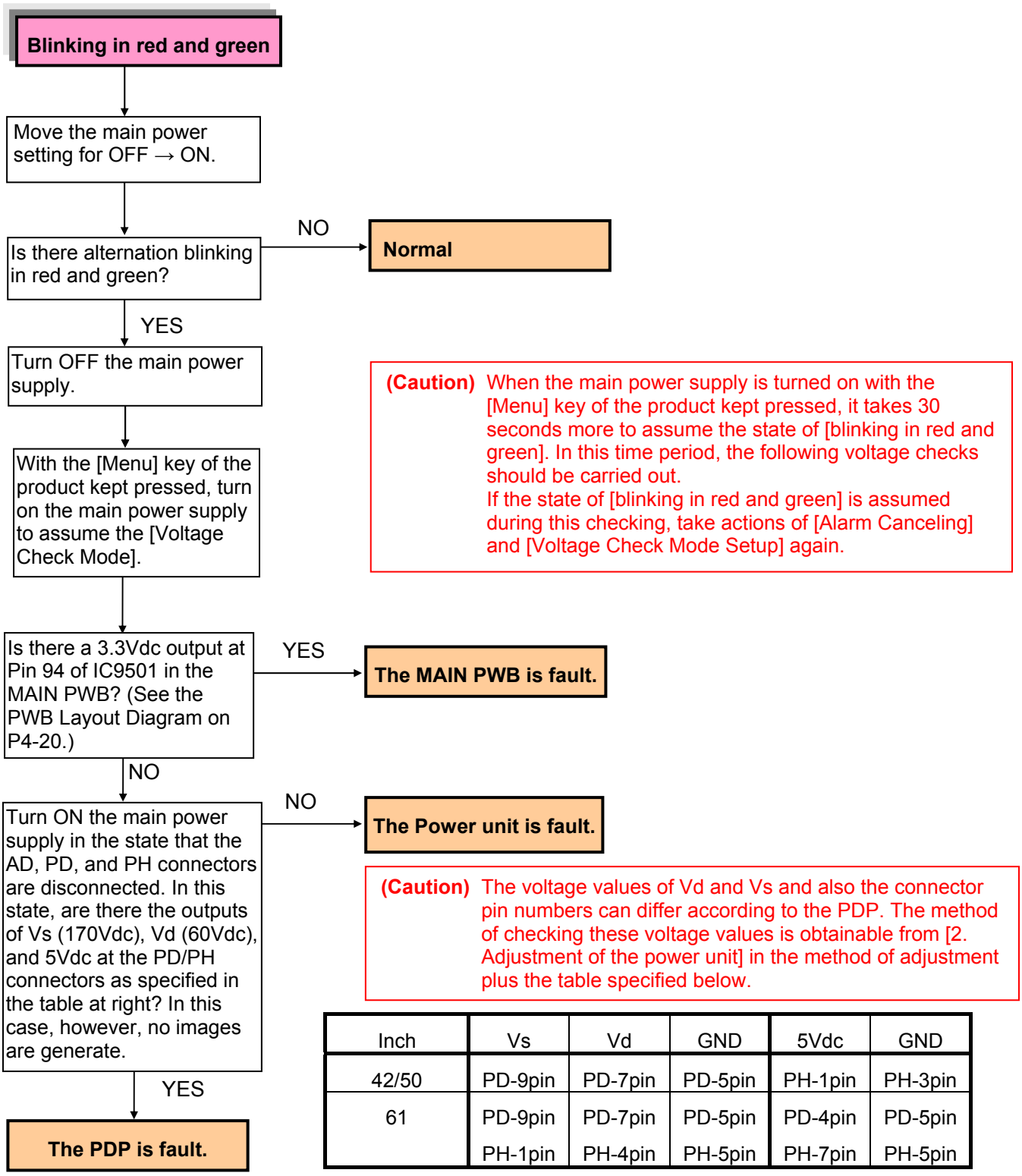
(3) Blinking in red (Alarm of temperature error)

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.



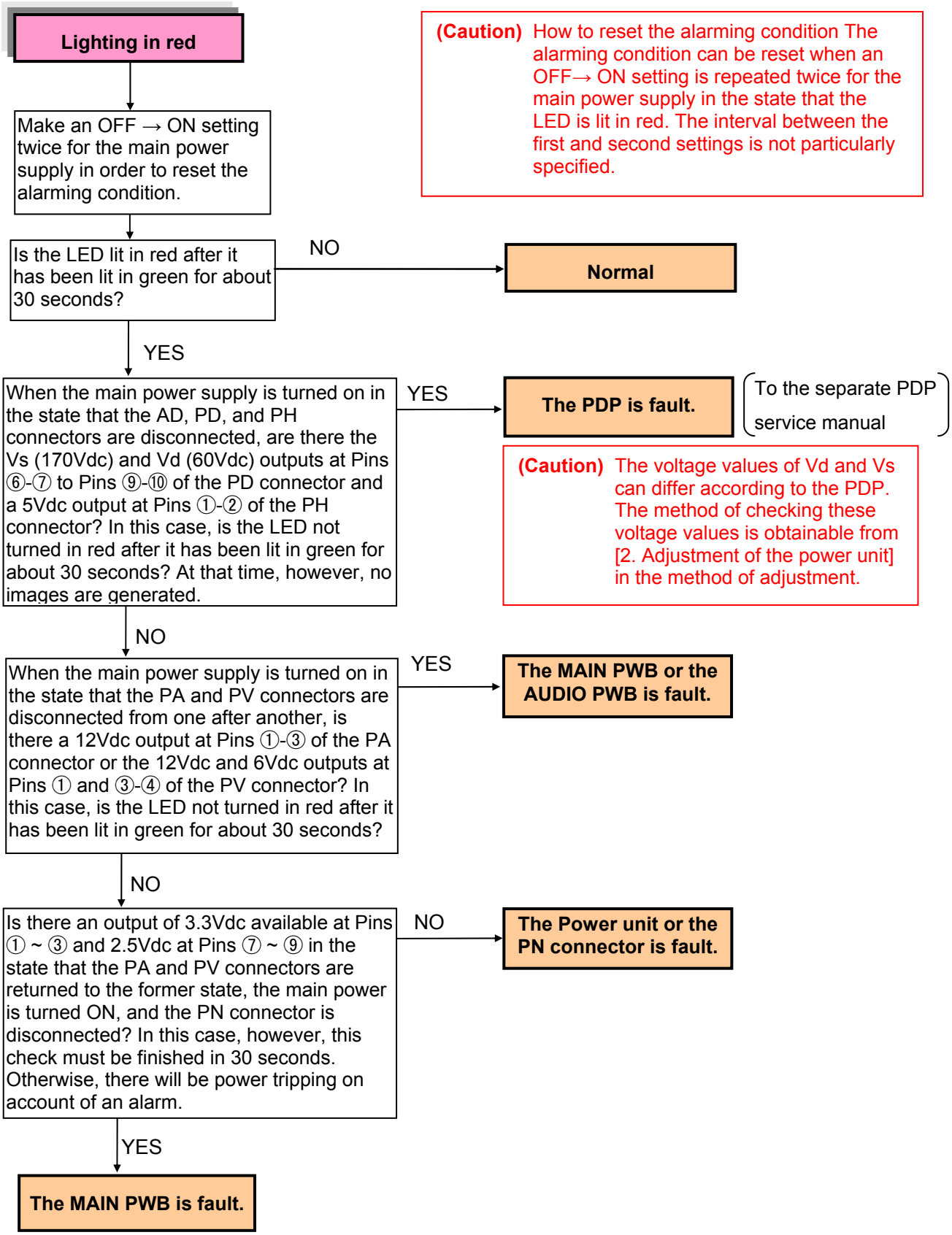
(Caution) When the main power supply is turned on with the [Menu] key of the product kept pressed, it takes 30 seconds more to assume the state of [blinking in red and green]. In this time period, the following voltage checks should be carried out.
If the state of [blinking in red and green] is assumed 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
42/50	PD-9pin	PD-7pin	PD-5pin	PH-1pin	PH-3pin
61	PD-9pin PH-1pin	PD-7pin PH-4pin	PD-5pin PH-5pin	PD-4pin PH-7pin	PD-5pin 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

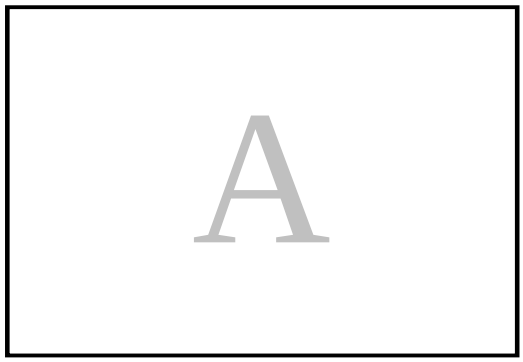
(Caution) Typical abnormal images are shown below. All errors do not always fall on these error samples.

(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

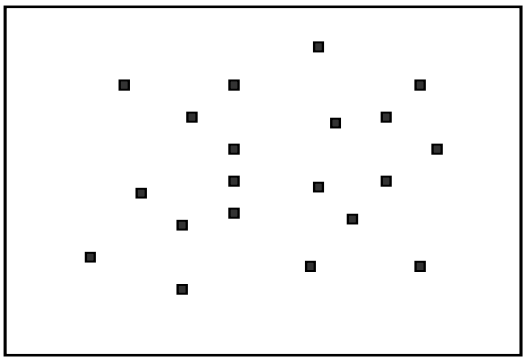
(2) Failure in writing

Failure in writing

↓

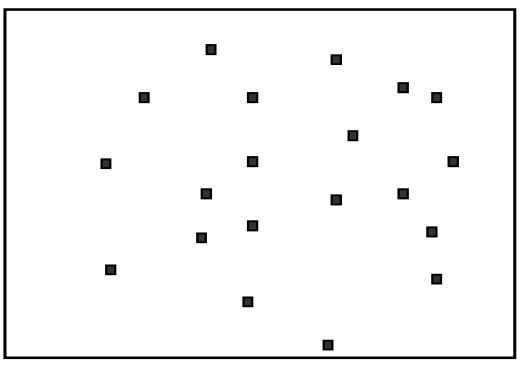
The PDP is fault.

(To the separate PDP service manual)



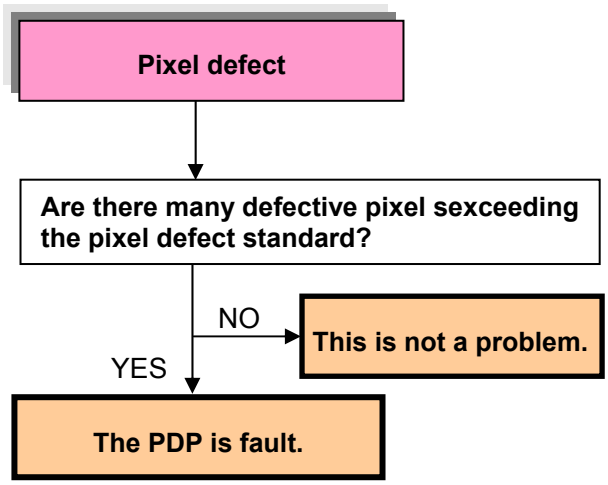
All-whitesignal

Dot errors change with no continuity.

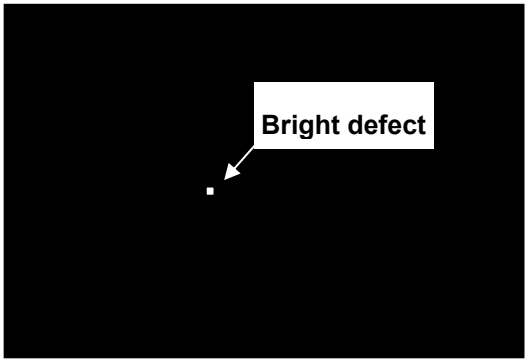


All-whitesignal

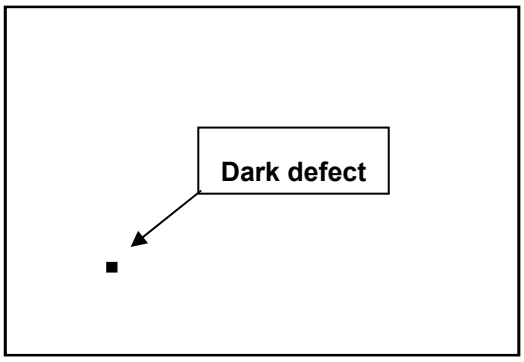
(3) Pixel defect



(To the separate PDP service manual)



(Fig. 1) All-Black Signal



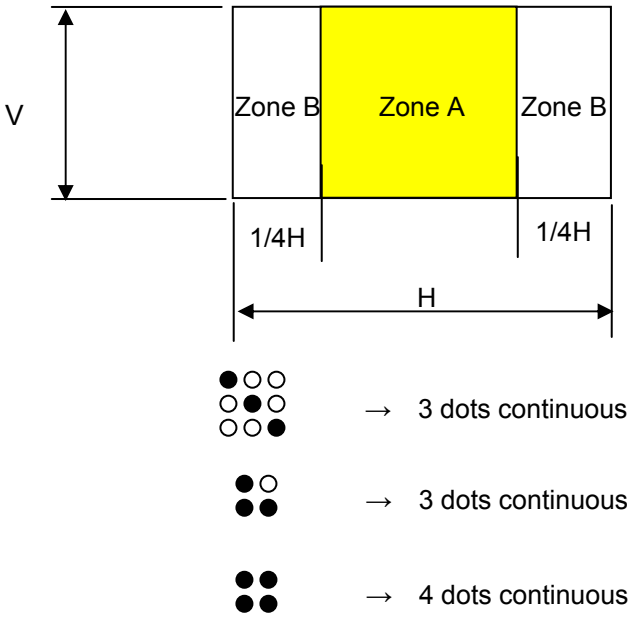
(Fig. 2) All-White Signal

[Pixel defect standard for reference]

	Displayed image	Pixel defect standard	
		Non-continuous 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 Zone B:□dots or less in all for each color Each zone:□dots or less for each uni-color	Defective when□dots or less are continuously horizontal and seen white.
	Green level 100% over the screen		
	Blue level 100% over the screen		
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 Zone B:□dots or less continuous Except for the continuous portions, however, the distance between dark dots shall be □cm or more.
	Green level 100% over the screen		
	Blue level 100% over the screen		
	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.

(Caution) In regard to the full information, refer to the PDP quality updating report (Japan) or the PDP quality report (other than Japan).

<For the 42XM3/XR3, 50XM4/XR4, and 61XM3/XR3>



→ 3 dots continuous

→ 3 dots continuous

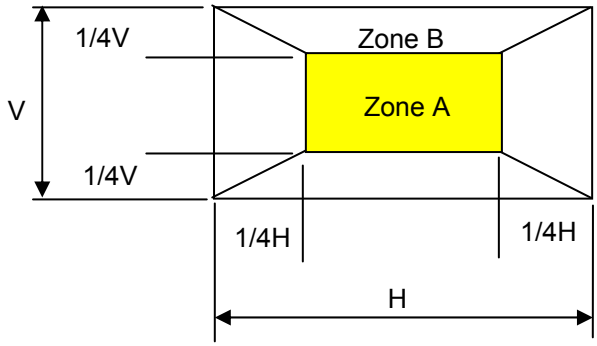
→ 4 dots continuous

(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:

<For the 42VM5/VP5>



→ 3 dots continuous

→ 3 dots continuous

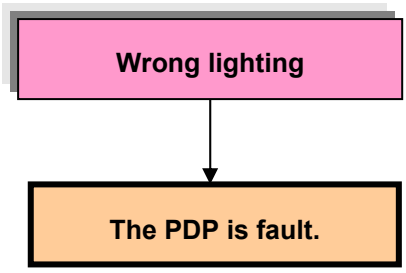
→ 4 dots continuous

(Caution1) Zone A: Central part (the area surrounded by the upper and lower sides, right and left sides by 1/4H) with the area that is 1/2 of the whole

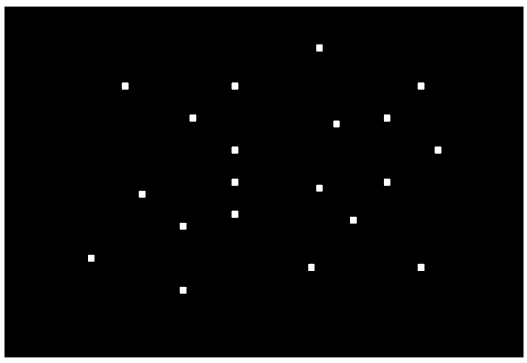
Zone B: Area other than A above

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

(4) Wrong lighting

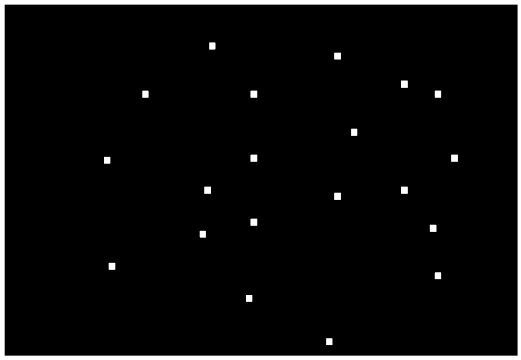


(To the separate PDP service manual)



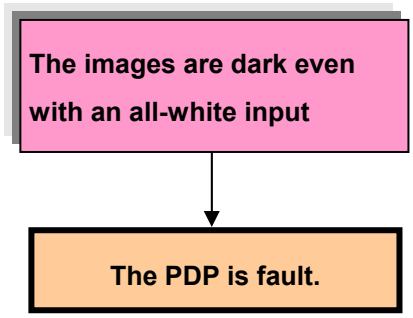
All-black signal

Dot errors change with no continuity.



All-black signal

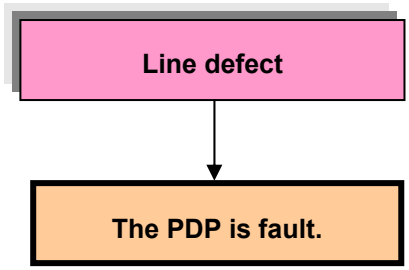
(5) Dark images [Other than the deterioration in brightness as per (1) above]



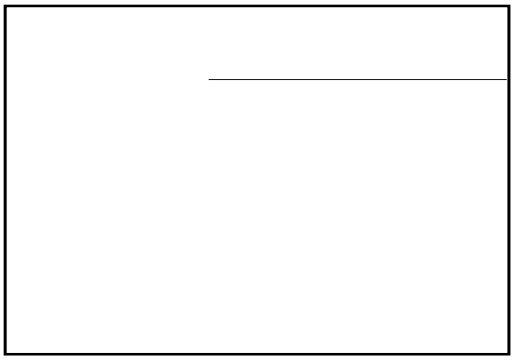
(To the separate PDP service manual)

All-white signal

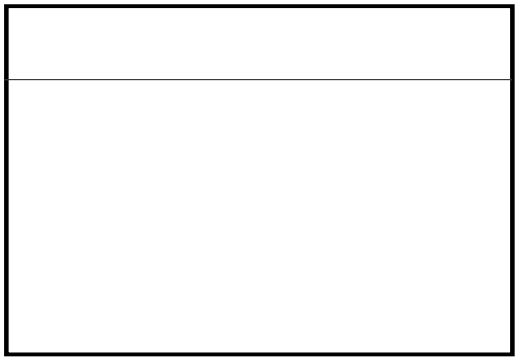
(6) Defect in horizontal lines



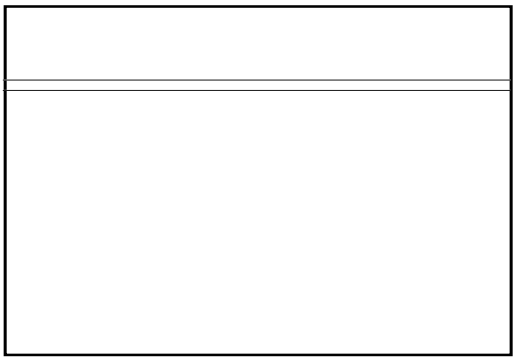
(To the separate PDP service manual)



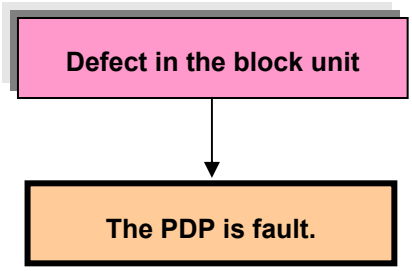
All-white signal



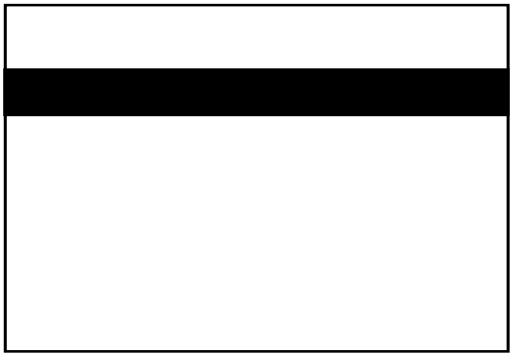
All-white signal



All-white signal



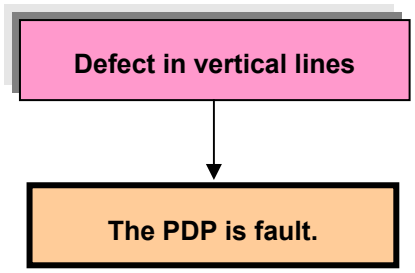
(To the separate PDP service manual)



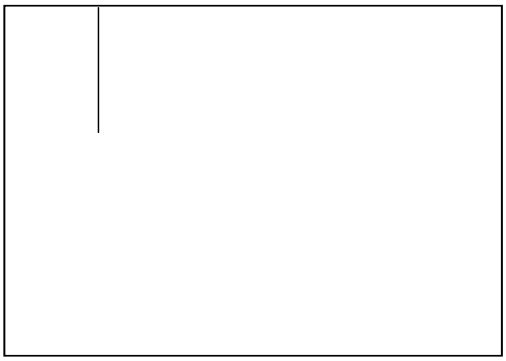
All-white signal

All-white signal

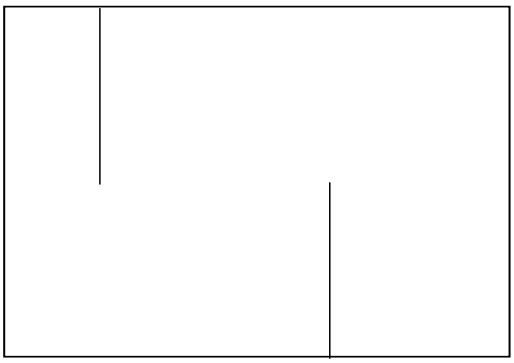
(7) Defect in vertical lines



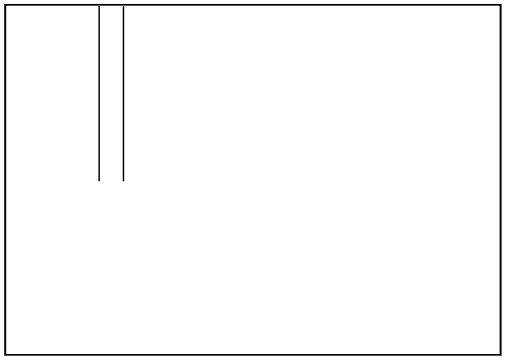
(To the separate PDP service manual)



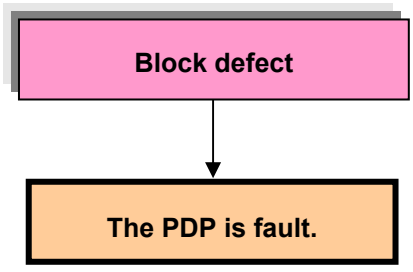
All-white signal



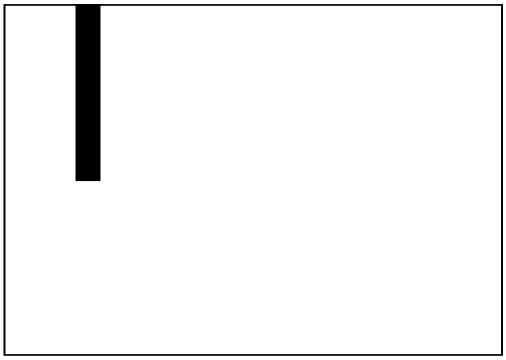
All-white signal



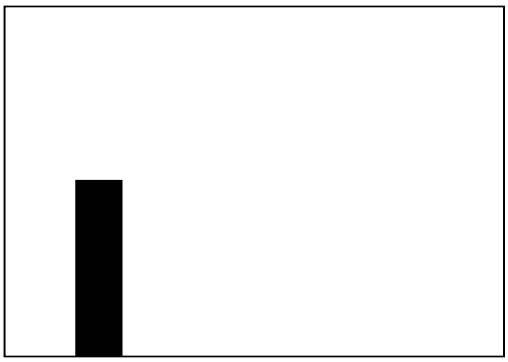
All-white signal



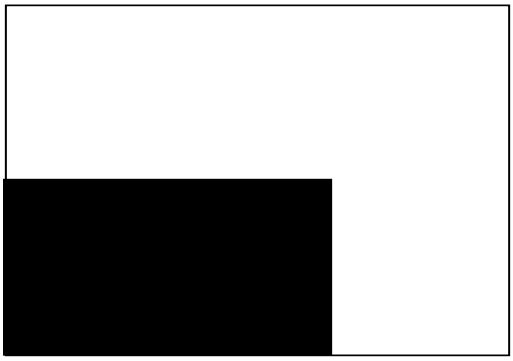
(To the separate PDP service manual)



All-white signal

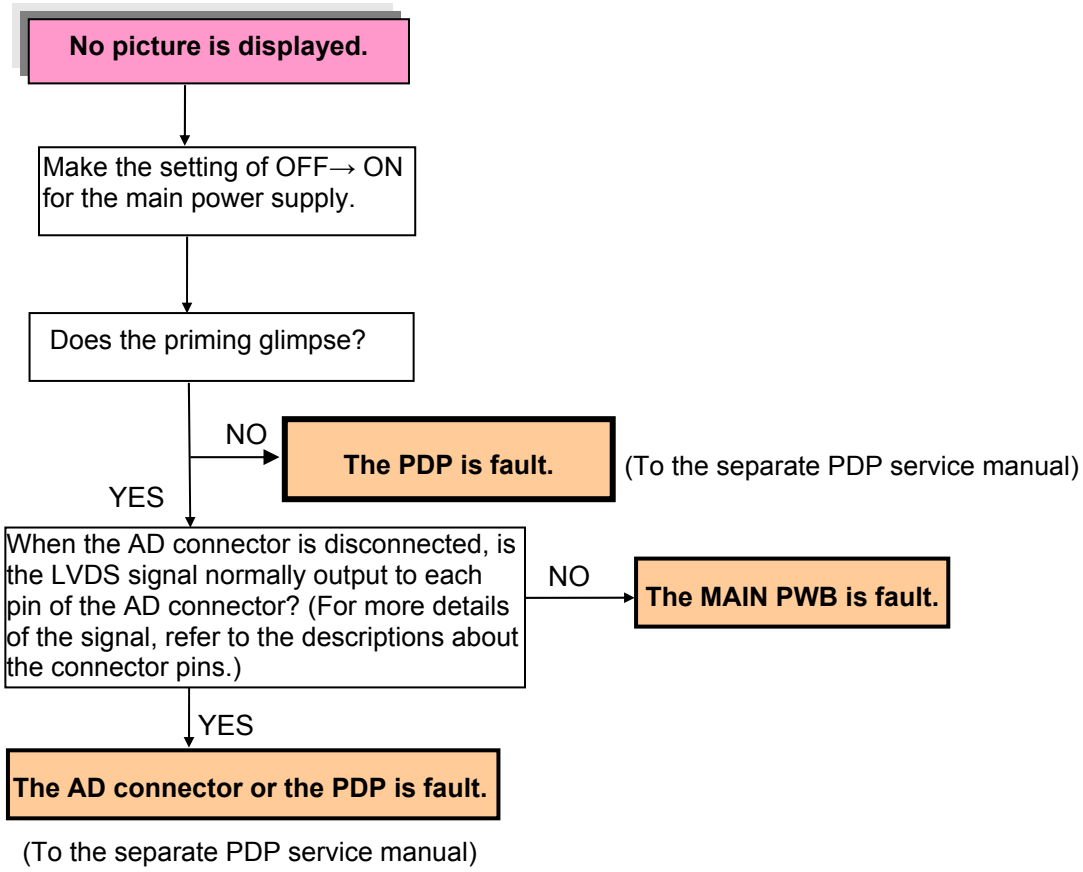


All-white signal



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?

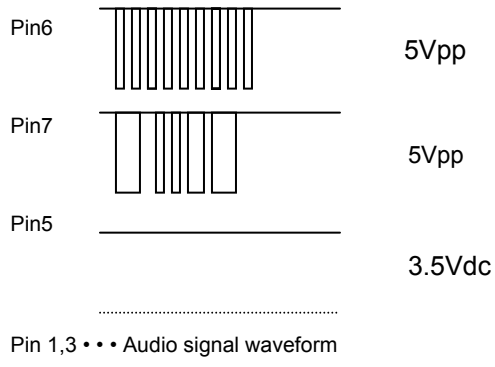
NO → **The power unit or the PA connector is fault.**

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

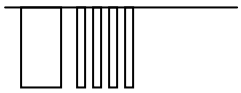
(1) The wired remote control is not effective.

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?

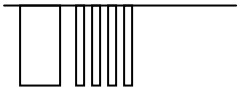


3.3Vpp

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.)

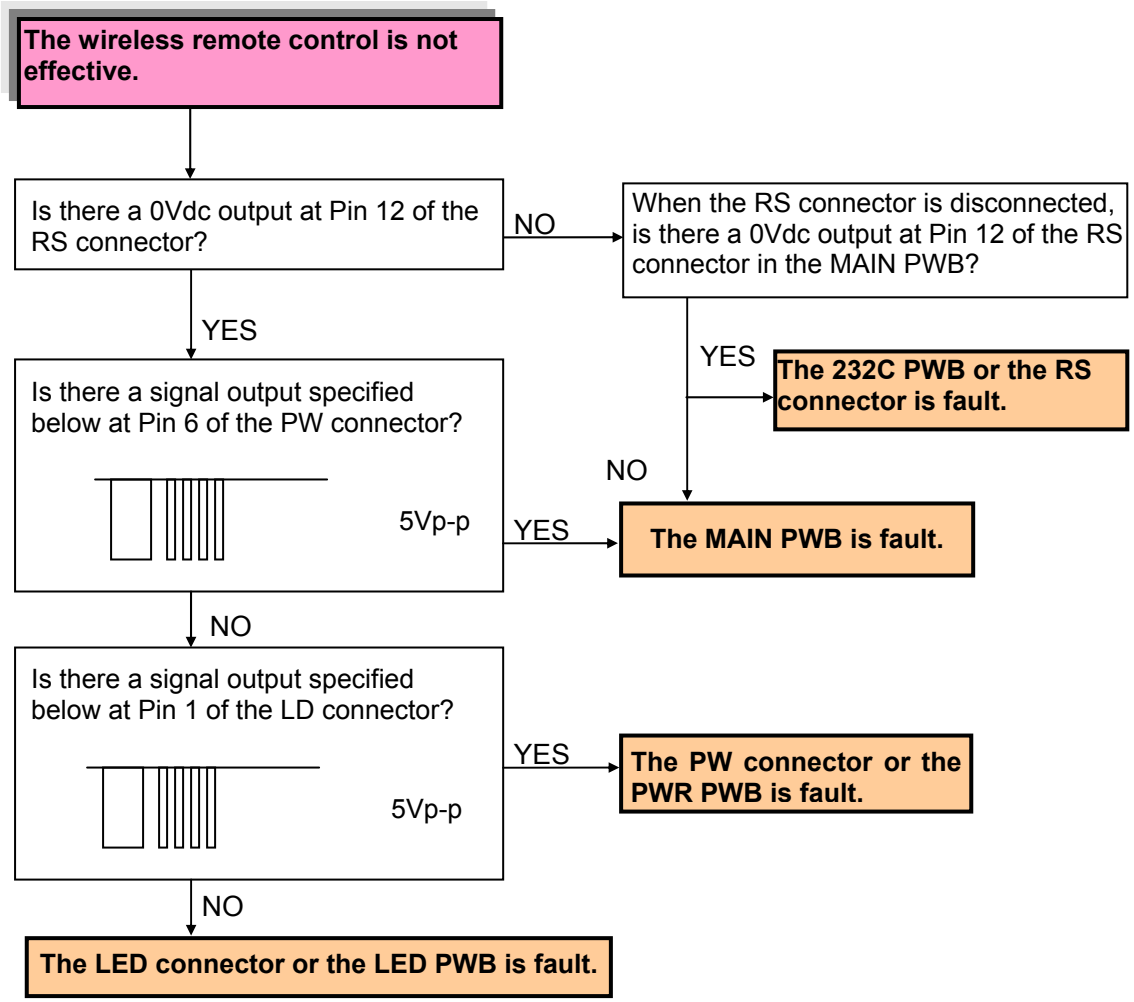
YES → **Check the products of second and thereafter according to "1 When a single item is used."**

NO → **The 232C PWB is fault.**

NO → **The MAIN PWB is fault.**

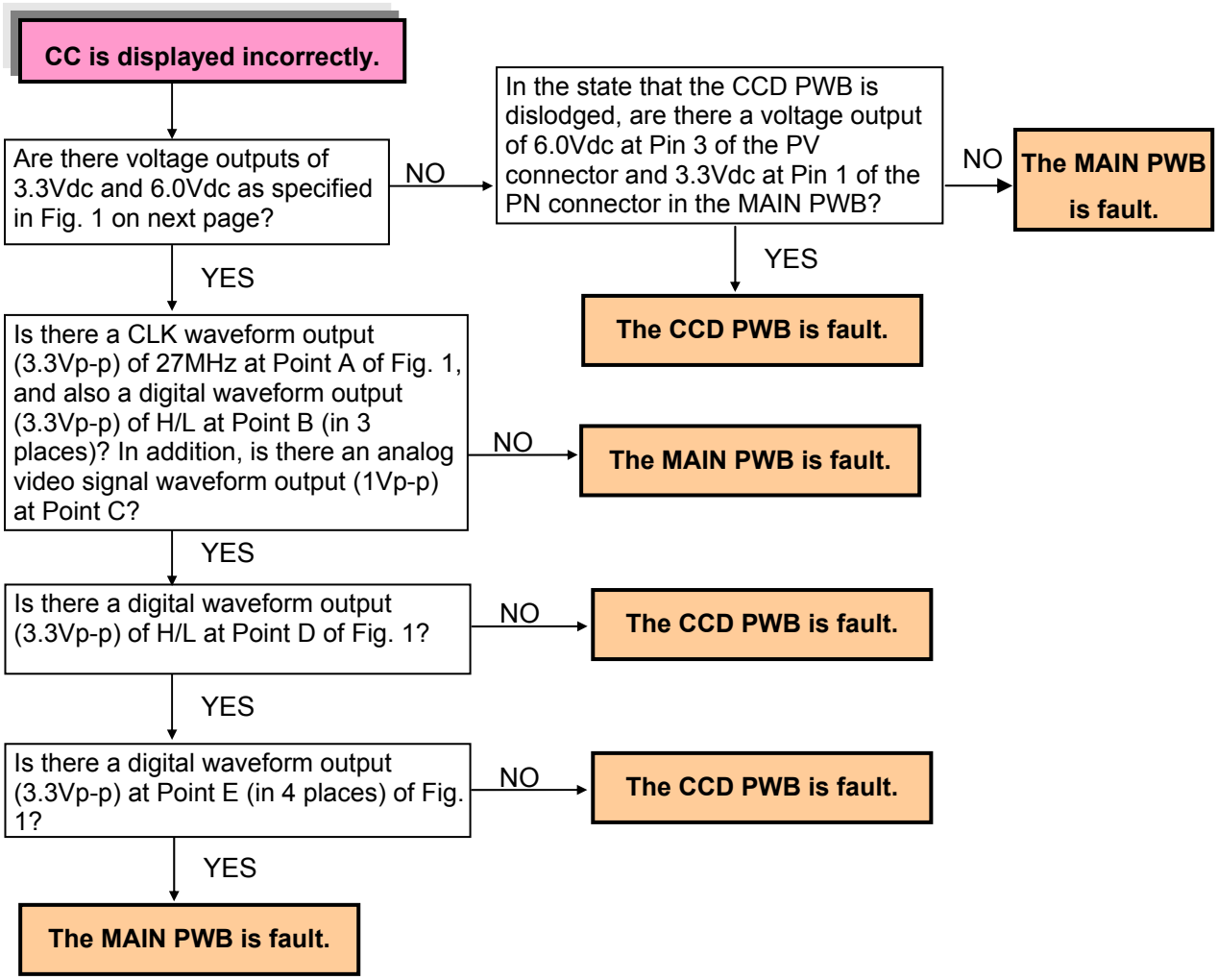
(2) The wireless remote control is not effective.

(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.



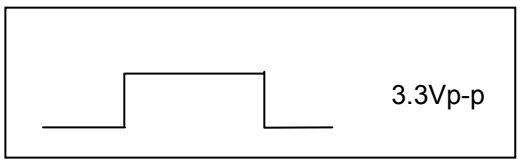
5. The closed caption (CC) is displayed incorrectly. (PX-*****A only)

(Caution) Only the models for North America. The PCB-5044 (CCD PWB) is not installed in other models. Checks are needed by applying a signal output to the video input circuit, which is equivalent to the closed caption.

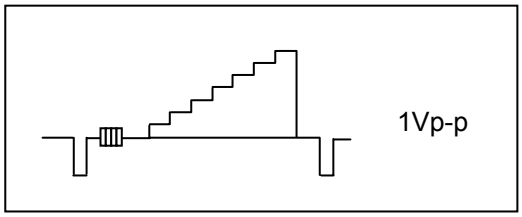


Waveform at Point B/D/E

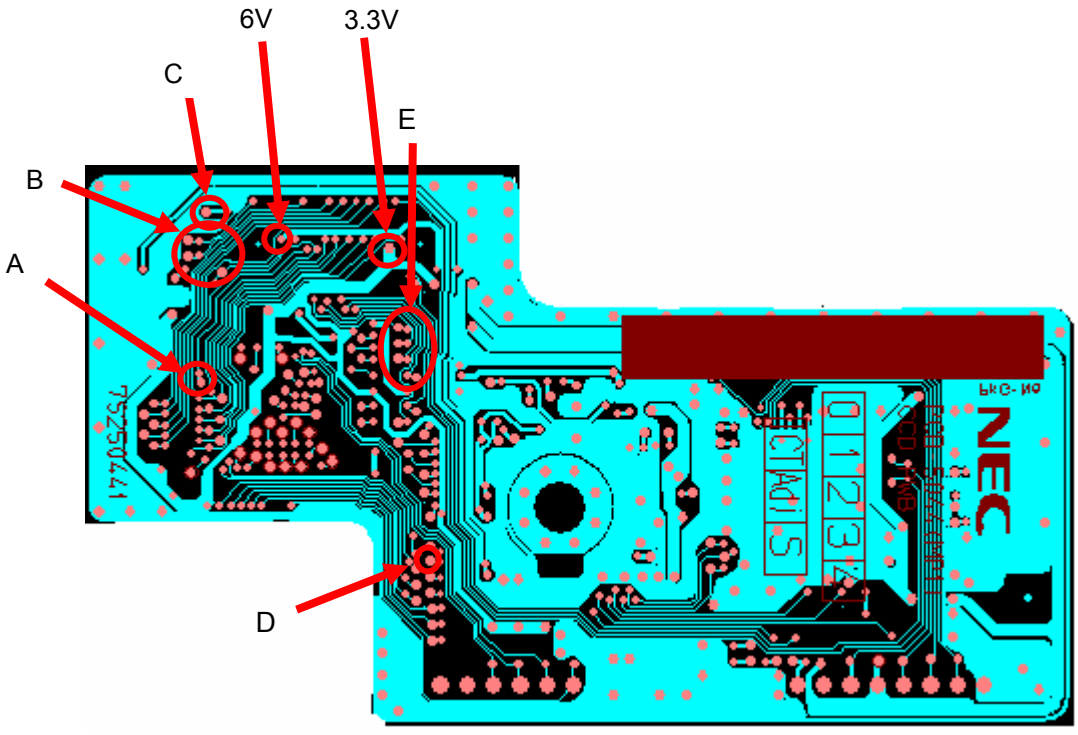
Check point: Check voltage and see whether a change in H/L is present.



Waveform at Point C



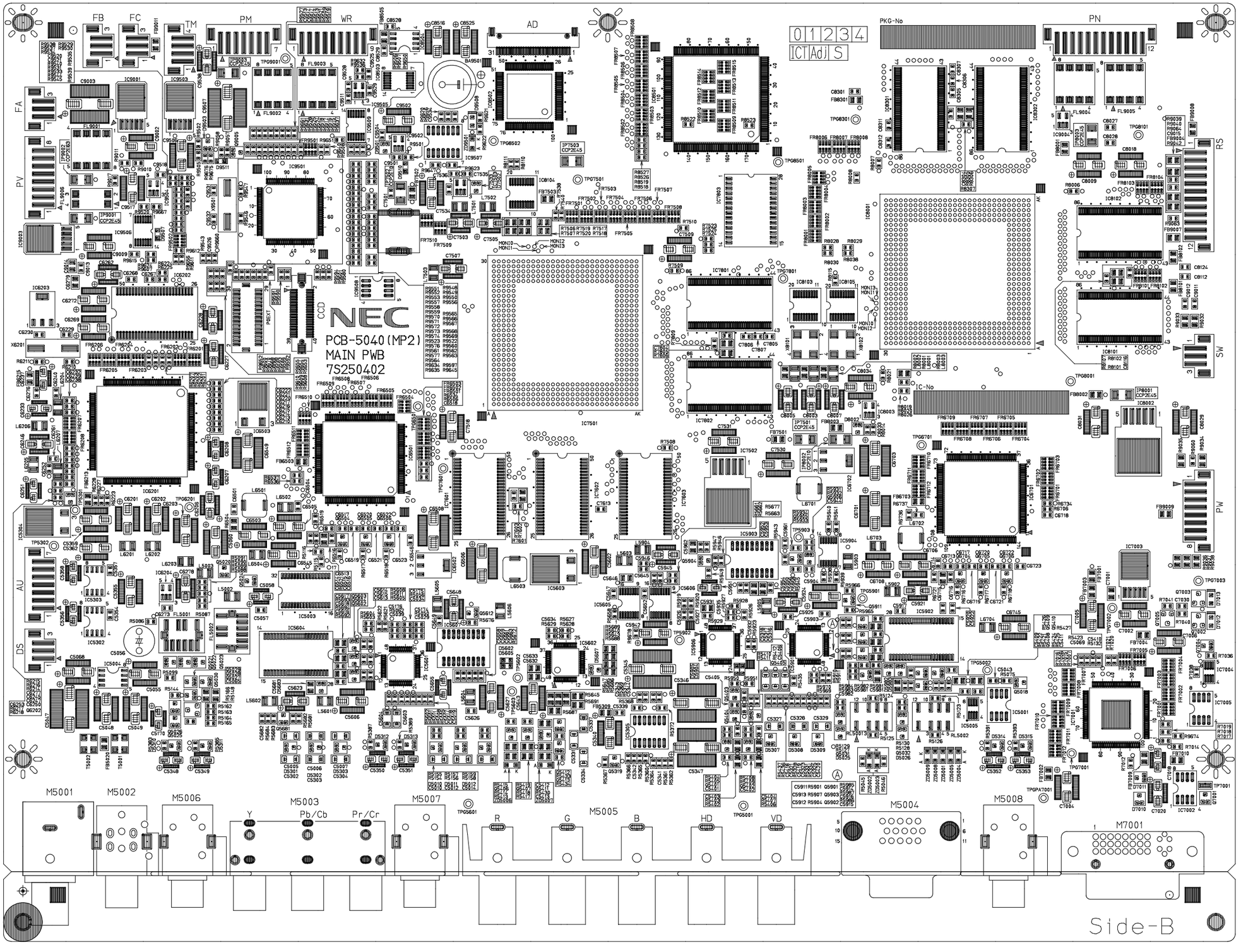
NTSC video signal (with gray scale input)

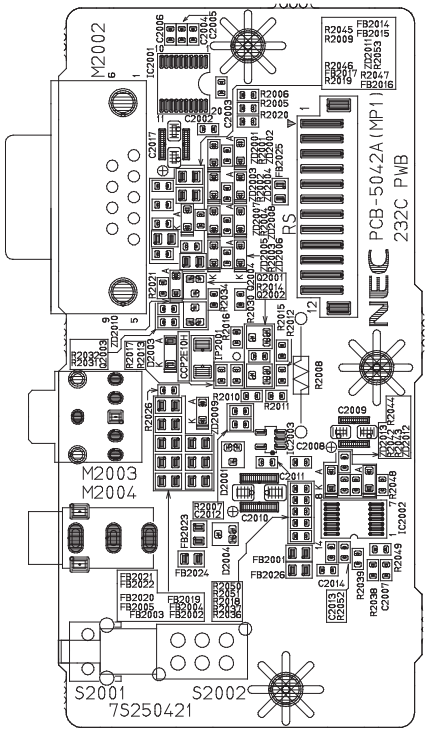


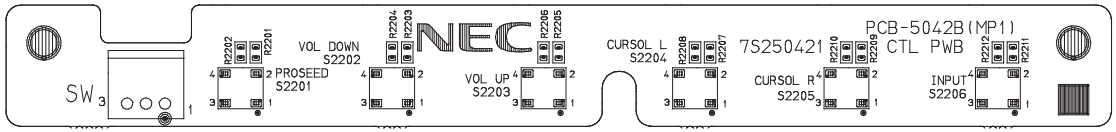
<Fig. 1 CCD PWB Pattern Diagram>

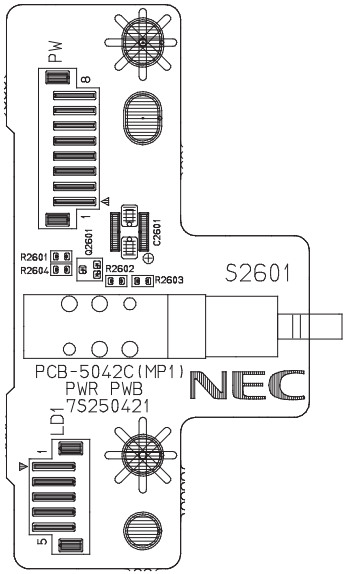
Check point

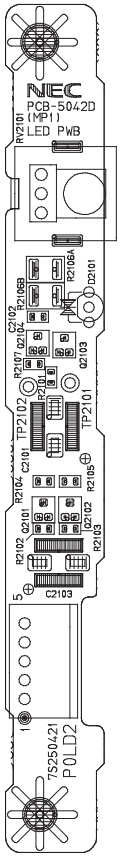
MAIN PWB

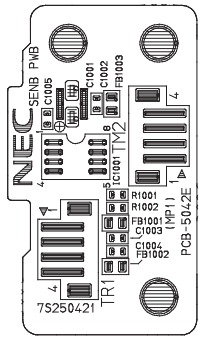


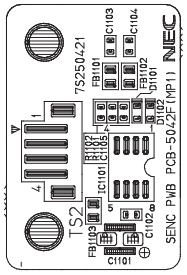


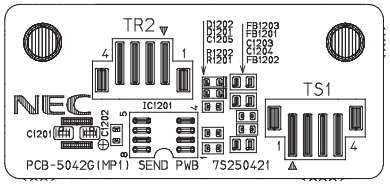


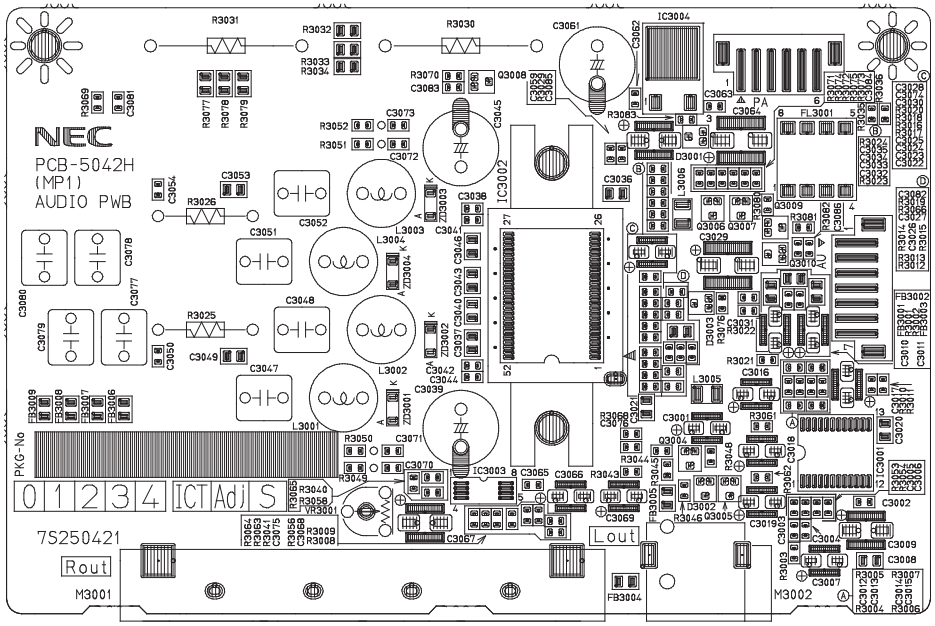


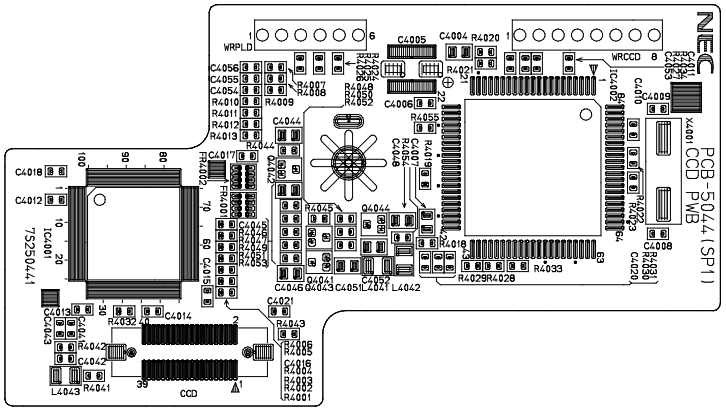












METHOD OF ADJUSTMENTS

■Adjusting conditions

Adjustments should be carried out in the procedures of A to C specified below. However, any adjustments other than the items A to C 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.

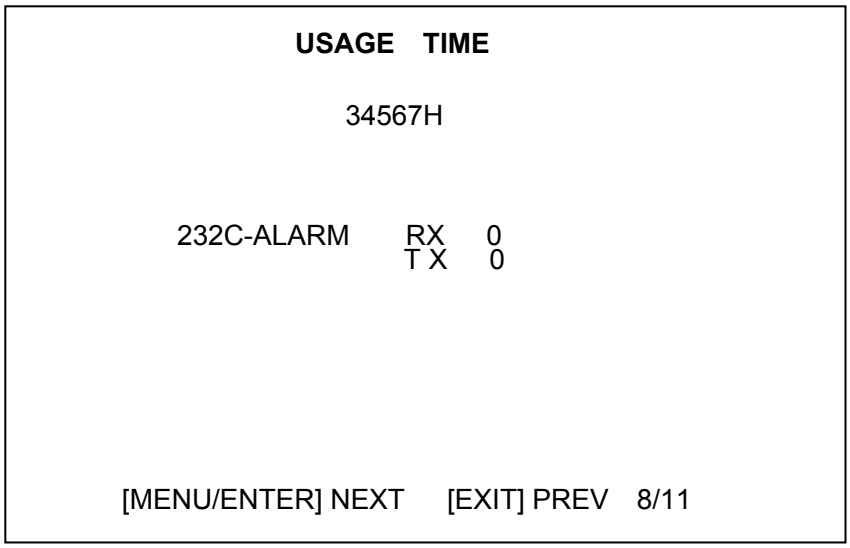
C. When the "MAIN PWB" is replaced, adjustments should conform to the adjusting item of [3] specified below.

■Adjusting items

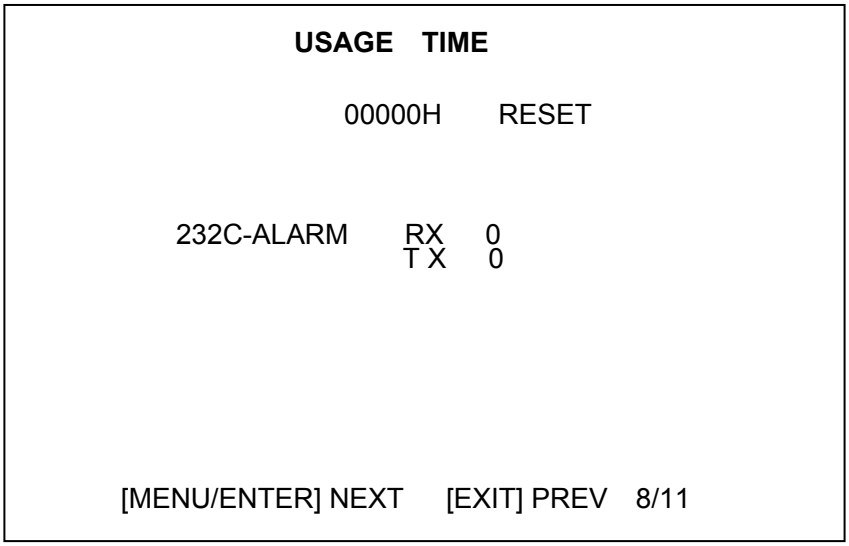
1. Clearing of the usage time (Using the remote control)

(1) Press the keys in the order of [POWER ON] → [POWER ON] → [EXIT] → [DISPLAY] in order to enter the factory adjustment 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 [▼] → [OFF TIMER], 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. Adjustment of the power unit (Using a screwdriver for general-purpose adjustments)

2-1. For the PX-42VM5/42VP5/42VR5,PX-42XM3/42XR3 Series

2-1-1. 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 (RV203) in the power unit and make adjustments until the voltages of TP204 and TP205 (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.

2-1-2. Adjustment of the Vd voltage

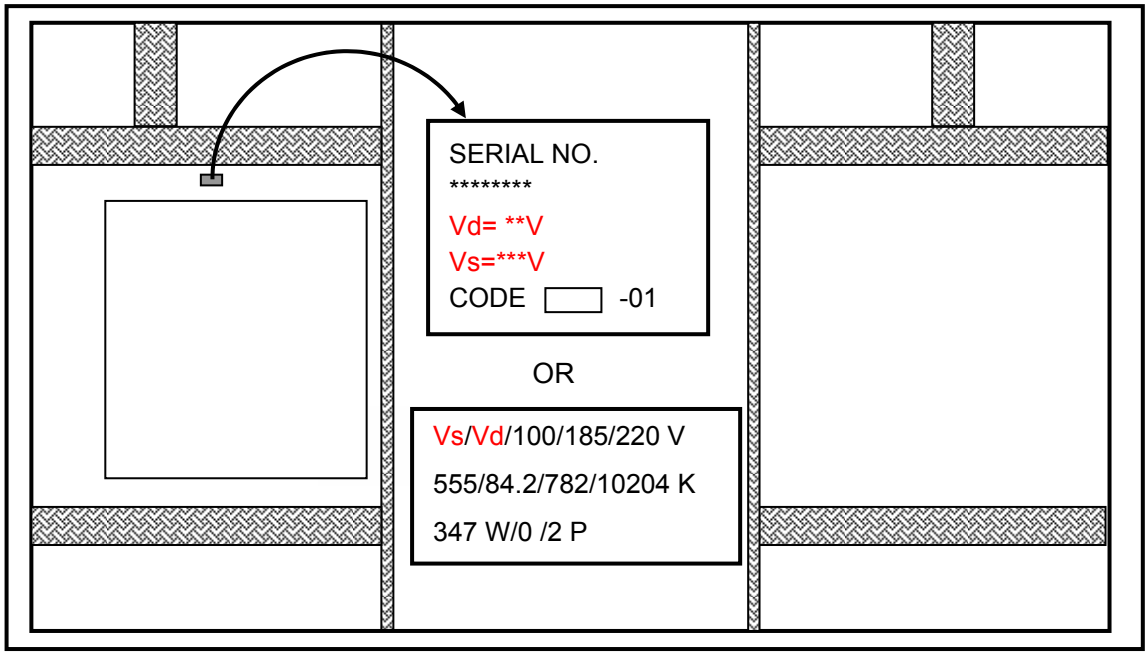
(1) Enter a color bar input by means of either video signal of VIDEO input, or DVD/HD input, or RGB input, and turn on the power switch of the main unit.

(2) Turn the volume control (RV204) in the power unit and make adjustments until the voltages of TP206 and TP205 (D, GND) of the power unit attain the voltage values specified for the PDP (Vd value of the voltage regulation indicator label on below the figure) ±1V.

2-1-3. Adjustment of the +5V voltage

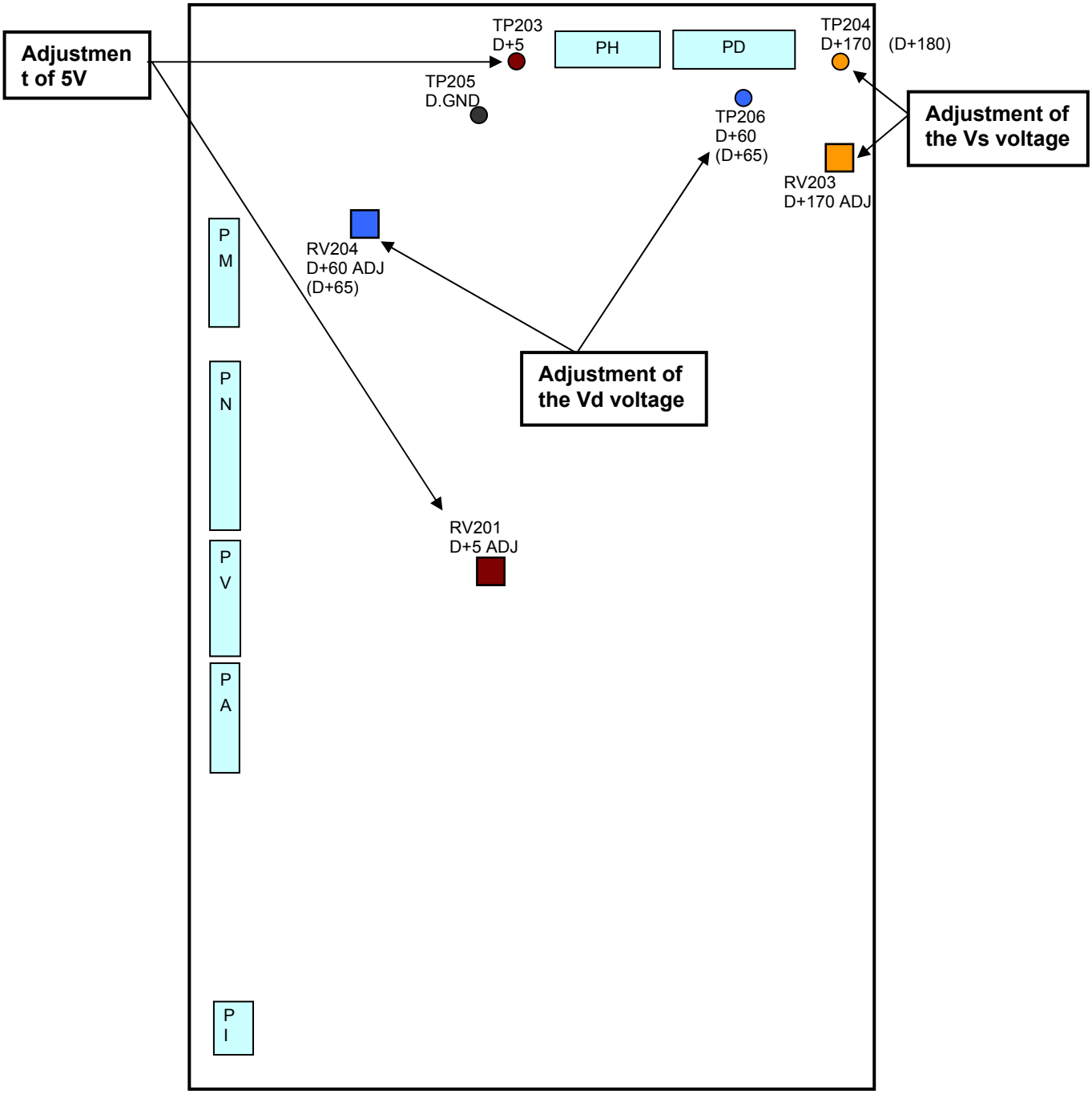
(1) Display a color bar by means of either video signal of VIDEO input, or DVD/HD input, or RGB input.

(2) Confirm that the voltages of TP203 and TP205 (D, GND) of the power unit are maintained at “5.15 ± 0.1V”. Otherwise, turn the volume control (RV201) 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 PX-42VM5/42VP5/42VR5,PX-42XM3/42XR3 Series**



(Caution) The values in ( ) are applicable to the PX-42XM2 Series.

2-2. For the PX-50XM4/50XR4 Series

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.

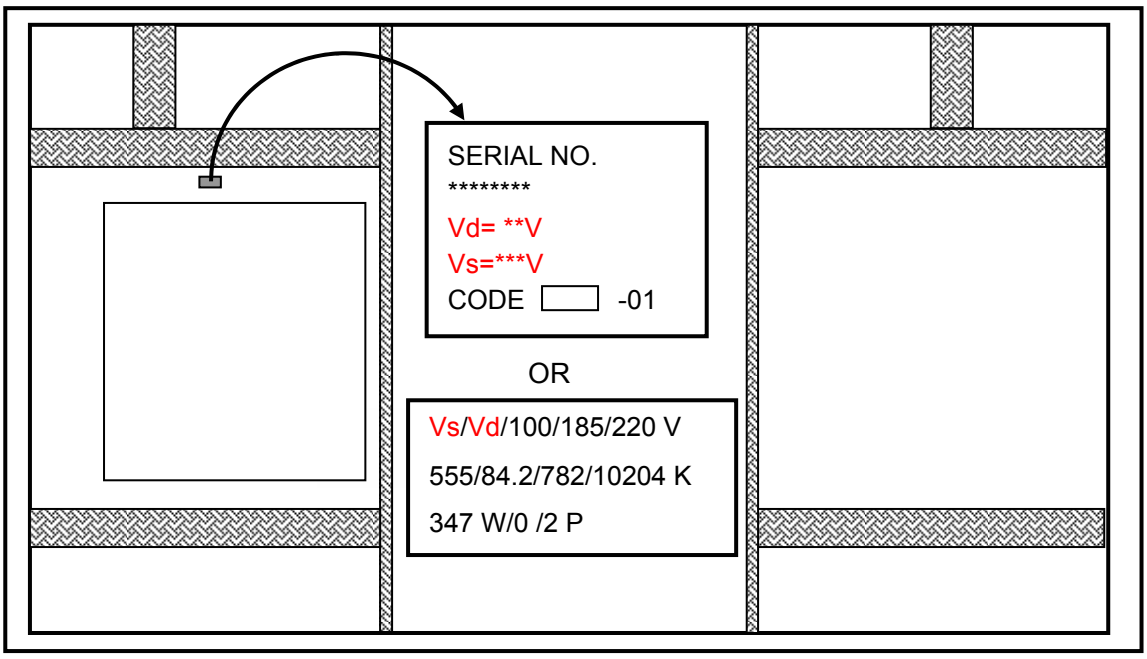
(2) Confirm that the voltages of CH4 and CH1 (D, GND) of the power unit are maintained at the voltage values specified for the PDP (Vd value of the voltage regulation indicator label on below the figure) ±1V.

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

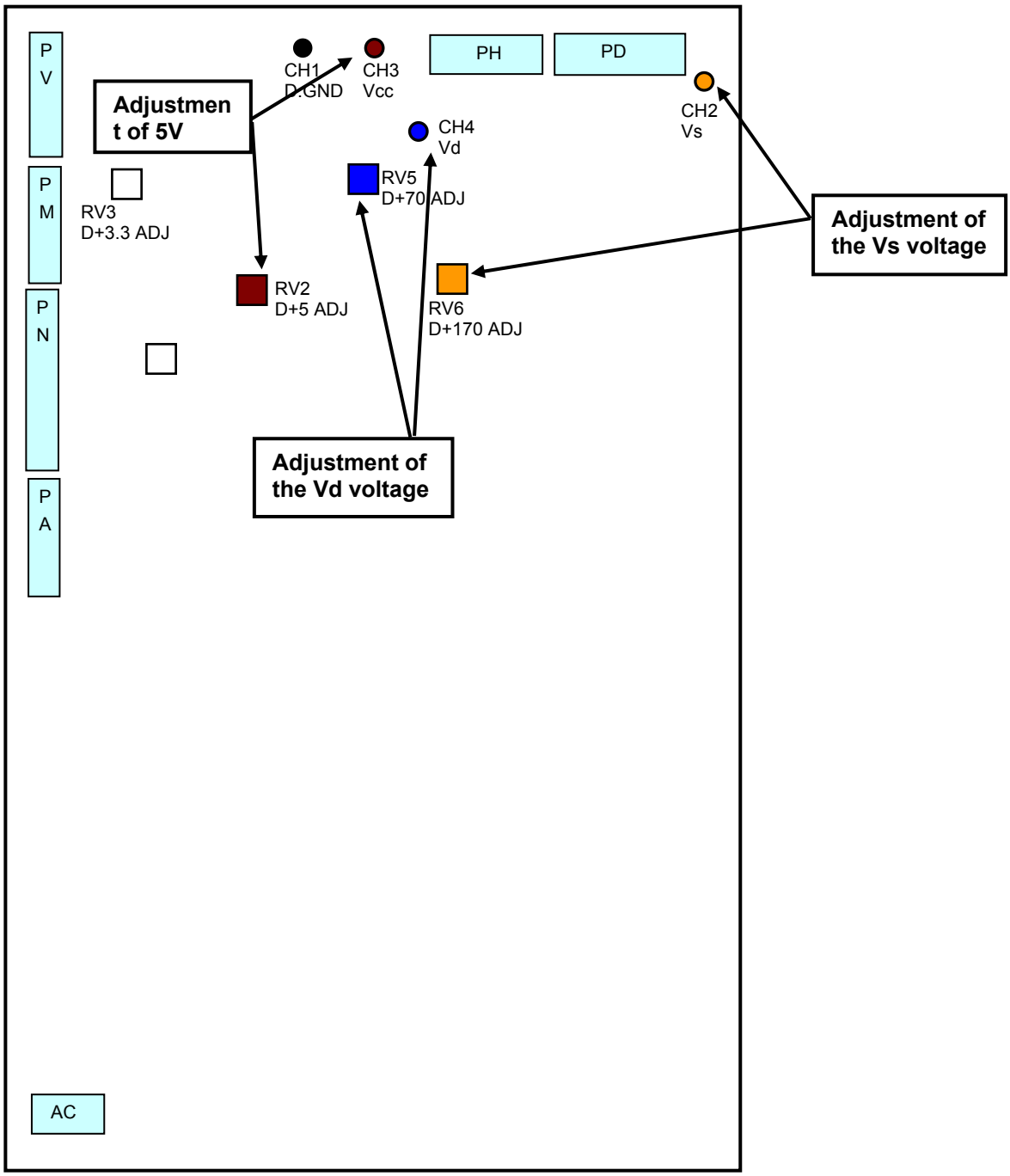
(1) Display a color bar by means of either video signal of VIDEO input, or DVD/HD input, or RGB input.

(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 PX-50XM4/50XR4 Series**



2-3. For the PX-61XM3/61XR3 Series

2-3-1. 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.

2-3-2. 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.

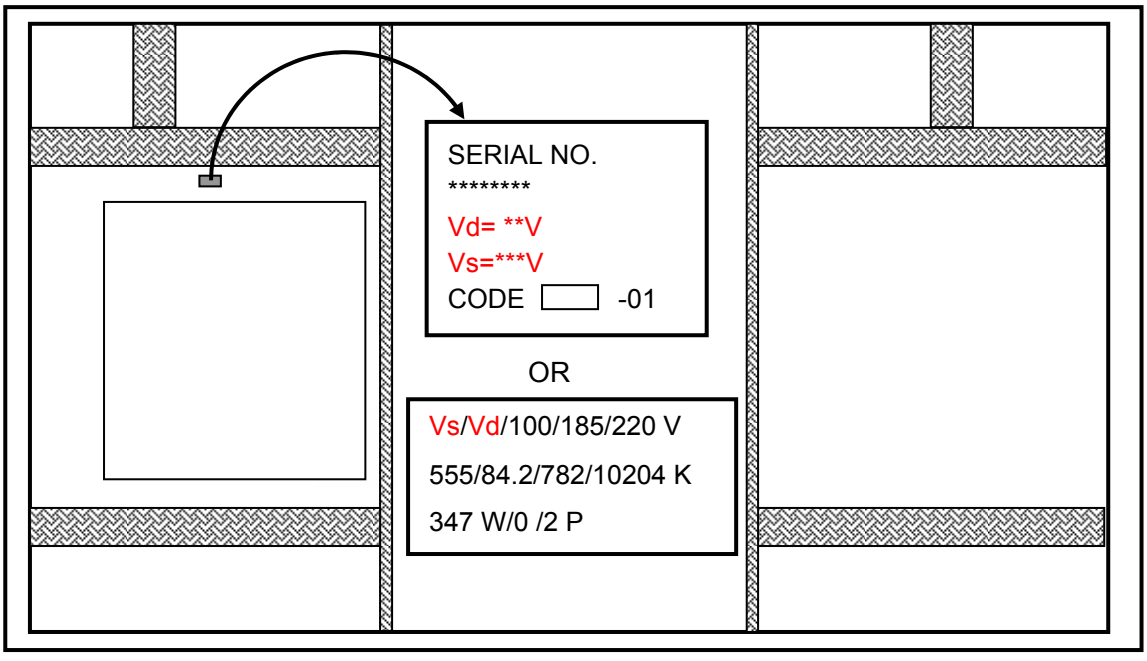
(2) Confirm that the voltages of CH4 and CH1 (D, GND) of the power unit are maintained at the voltage values specified for the PDP (Vd value of the voltage regulation indicator label on below the figure) ±1V.

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.

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

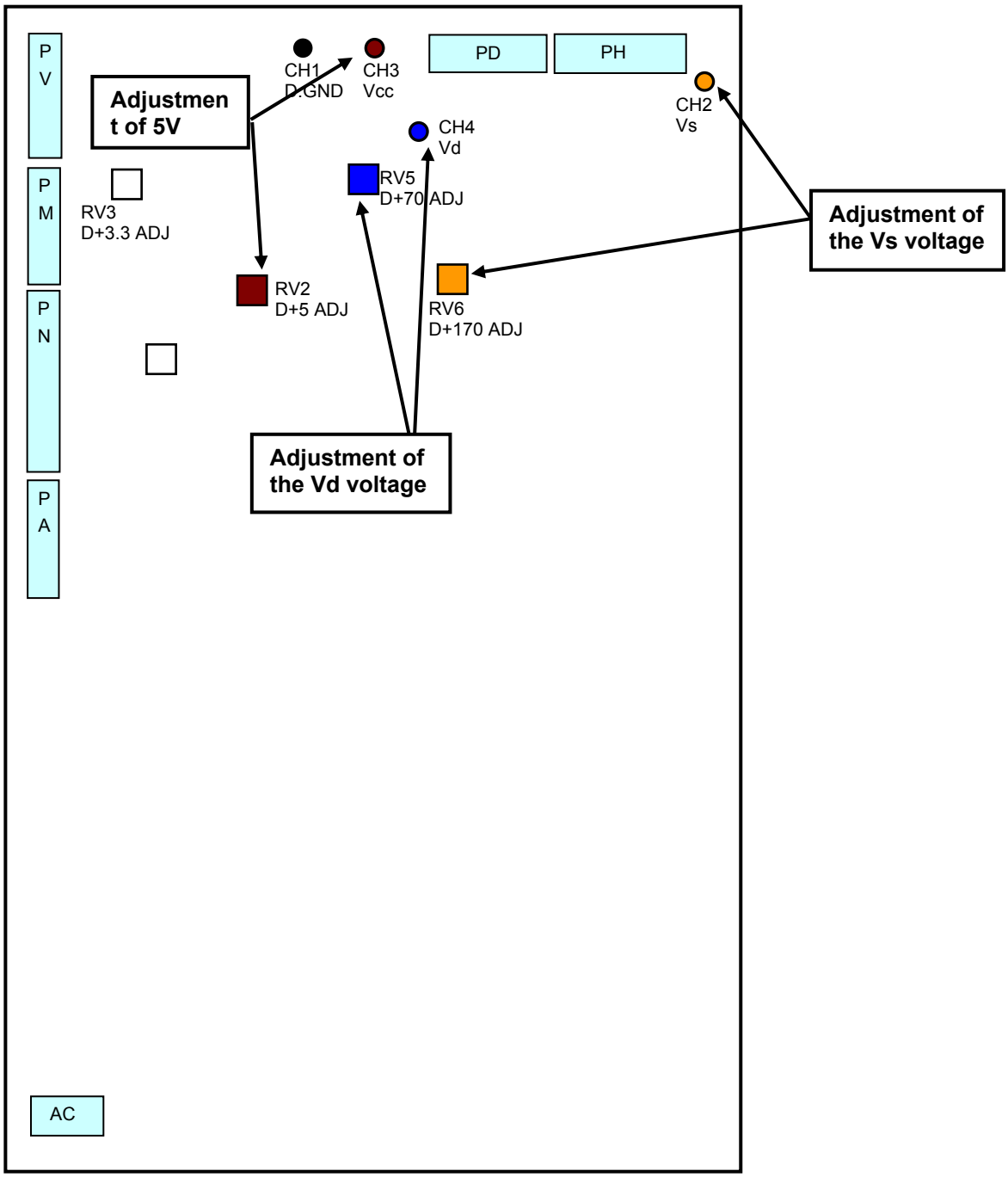
(1) Display a color bar by means of either video signal of VIDEO input, or DVD/HD input, or RGB input.

(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 PX-61XM3/61XR3 Series**

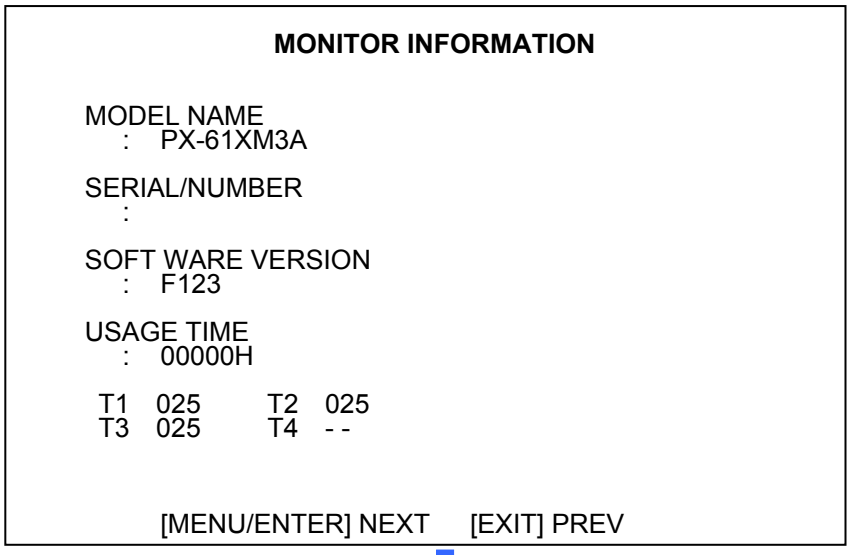


3. Adjustments after the replacement of the MAIN PWB (Using the remote control)

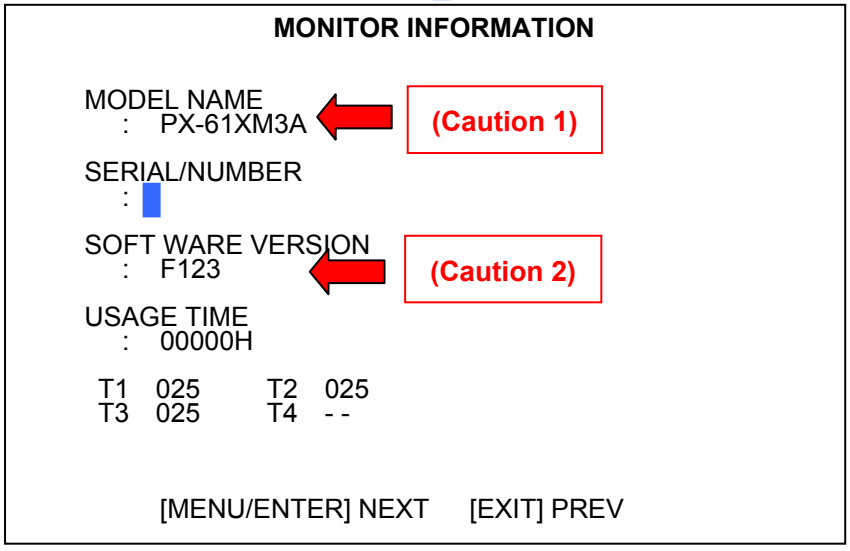
3-1. Product serial No. registration

(1) Press the keys in the order of [POWER ON] → [POWER ON] → [EXIT] → [DISPLAY] in order to enter the factory adjustment menu.

(2) Press the [MENU/ENTER] key to select the [MONITOR INFORMATION] No. menu. (Example : PX-61XM3A)



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



(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-61XM3A

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-61XM3A

SERIAL/NUMBER
: 2

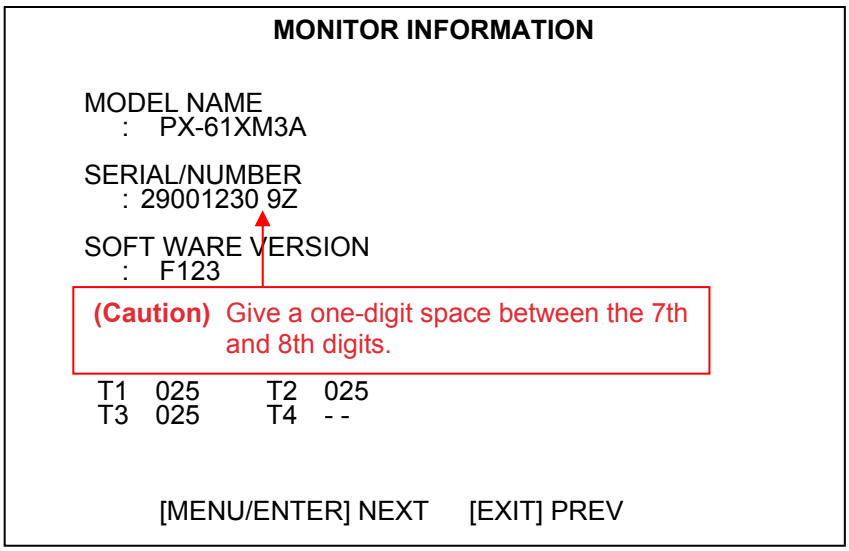
SOFT WARE VERSION
: F123

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.



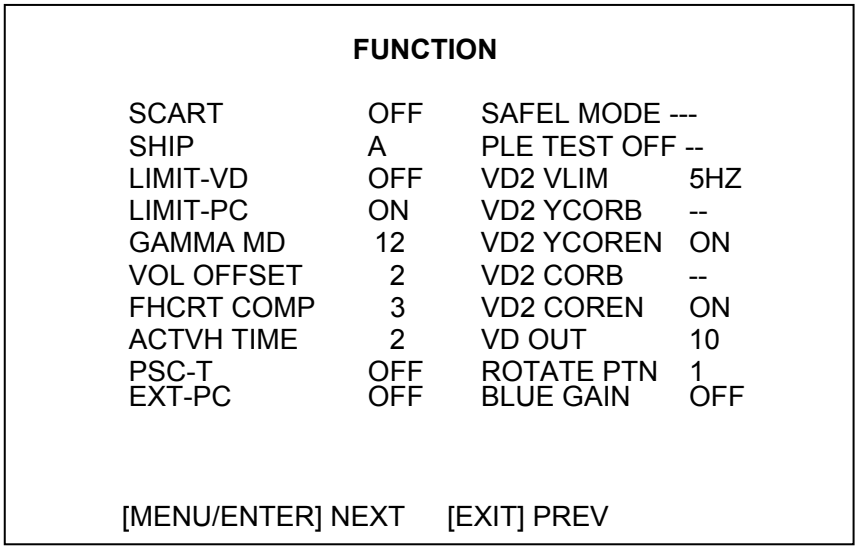
(7) Following the above, setting must be carried out without fail according to "3-2. Factory shipment setting (Initial setting)"

3-2.Factory shipment setting (Initial setting)

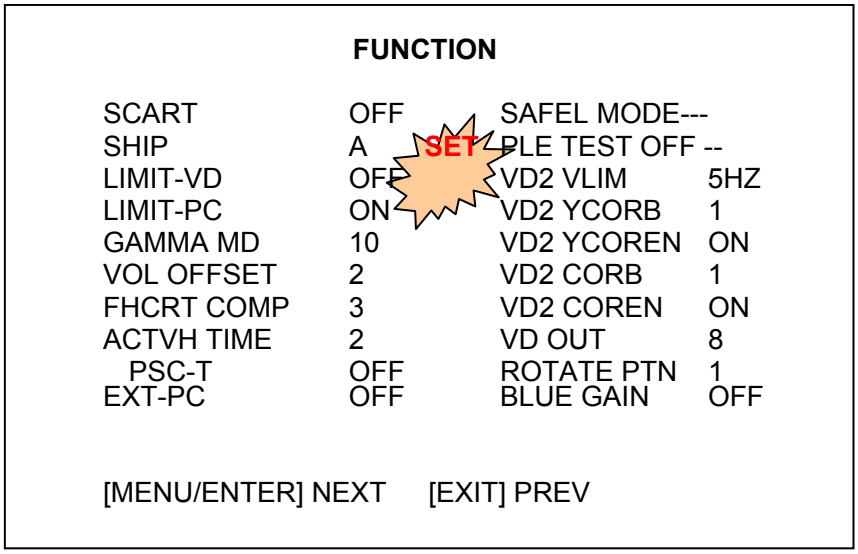
(1) Press the [MENU/ENTER] ke to select the [FUNCTION] menu.

(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
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 [▼] → [OFF TIMER] 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 [POWER ON] → [POWER ON] → [EXIT] → [DISPLAY] in order to withdraw from the Factory shipment setting.

[Factory shipment setting values]

1. Initial setting values for the user menu

MENU	A,AW,G,GW,W,WW	J,JW
POWER ON/OFF	ON	ON
VOLUME	10step	10step
INPUT MODE	VIDEO1	VIDEO1
WIDE MODE	STADIUM	STADIUM
AUTO PICTURE	OFF (RGB1~3)	OFF (RGB1~3)
HD SELECT	1080B *	1080B
LANGUAGE	ENGLISH	JAPANEASE
COLOR SYSTEM	AUTO	AUTO
All items intended to recover the initial values through the selection of [All Reset] in the user menu	Initial values	Initial values

* 1080I for *PX-***R**

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

MENU		A	G	W	J	AW,GW, WW,JW
SERVICE	SHIP	A	G	W	J	AW,GW, WW,JW
	PSC-LIMIT	OFF	OFF	OFF	OFF	OFF
	LIMIT-PC	ON	ON	ON	ON	ON
	U-SCAN	OFF	OFF	OFF	OFF	OFF
	V-FREQ OT	AUTO	60Hz	60Hz	AUTO	AUTO
	V-FREQ VD	AUTO	60Hz	60Hz	AUTO	AUTO
	SYNCLEVEL1	TTL	TTL	TTL	TTL	TTL
	SYNCLEVEL2	TTL	TTL	TTL	TTL	TTL
	SUB-ORB *1	ON	ON	ON	ON	ON
	PIC FREEZE *1	ON	ON	ON	ON	ON
MONITOR INFORMATION	MODEL NAME	PX-****A	PX-****G	PX-****W	PX-****J	*2

*1:PX-50XM4/50XR4,PX-61XM3/61XR3 Selies only.

*2:Monitor information when SHIP is for AW, GW, WW, JW setup

PX-42VM5/42VP5/42VR5 Series: 42-WVGA

PX-42XM3/42XR3 Series: 42-WXGA,

PX-50XM4/50XR4 Series: 50-WXGA,

PX-61XM3/61XR3 Series: 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,AW	G,GW	W,WW	J,JW
FUNCTION	SHIP	A or AW	G or GW	W or WW	J or JW
	LIMIT-PC	ON	ON	ON	ON
MONITOR INFORMATION	SERIAL/ NUMBER	-	-	-	-

[Materials for reference]

1. Signal generator

(1) Digital RGB

, Component signal generator

- Equivalent to the VIDEO GENERATOR LT1615 (made by LEADER)
- Equivalent to the PANEL LINK ADAPTER LT9217 (made by LEADER)
- Equivalent to the VIDEO ENCODER LT1606 (made by LEADER)

(2) NTSC signal generator

- Equivalent to the NTSC PATTERN GENERATER LCG-403YC (made by LEADER)

(3) PAL signal generator

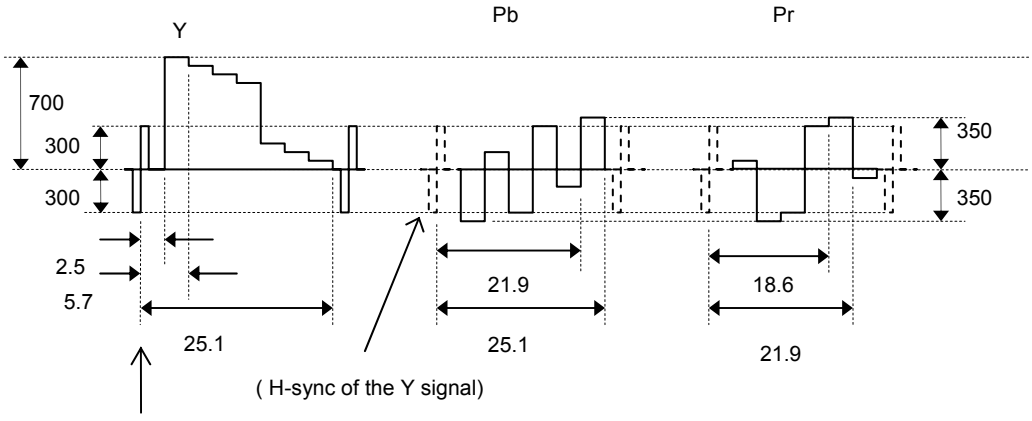
- Equivalent to the COLOR BAR PATTERN GENERATOR PM5518 (made by PHILIPS)

2. VIDEO input

Input: Composite video input or S-terminal input

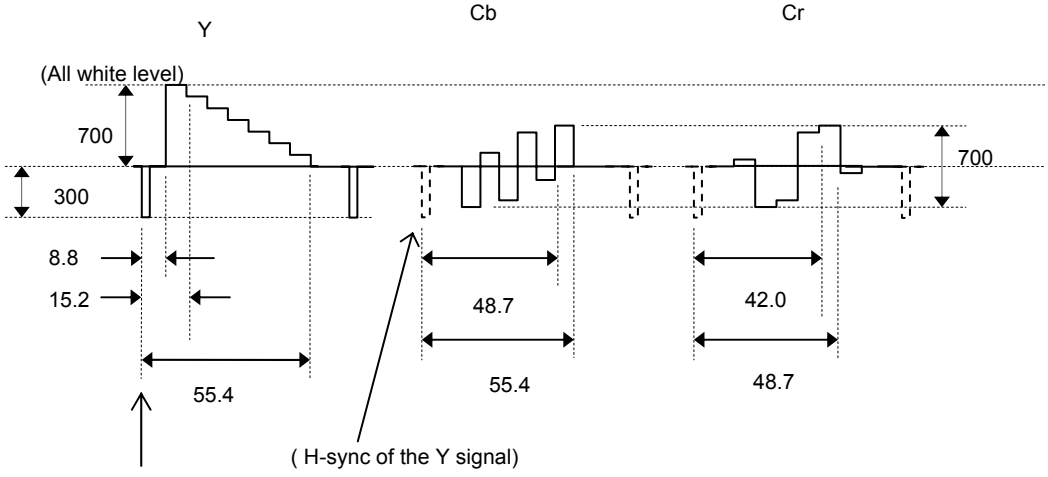
3. DVD/HD/DTV inputs

3-1. HD: Y/Pb/Pr component inputs, ternary sync signals



The time indication is based on the rise time of the ternary sync signals.

3-2. DVD: Y/Cb/Cr component inputs



The time indication is based on the lowering of the Horizontal sync signal.

4. RGB inputs

1) Horizontal sync period

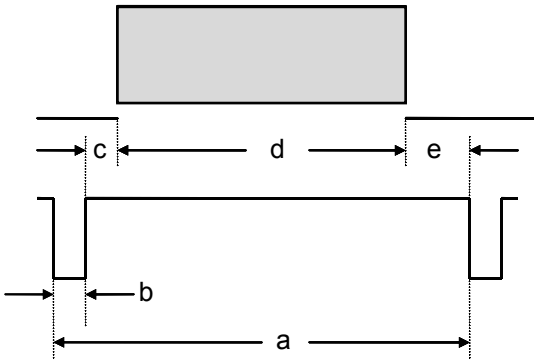
Video signal

0.7Vp-p

Sync signal

TTL level

Positive/negative polarity



2) Vertical sync period

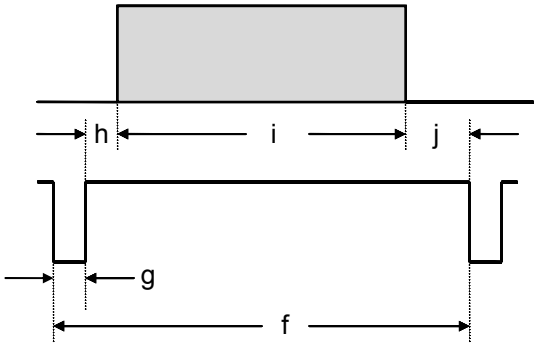
Video signal

0.7Vp-p

Sync signal

TTL level

Positive/negative polarity



For the respective inspection signals, the above “a” to “j” shall be listed on the next page and thereafter.

5. RGB/PC signal timing table

(Caution 1) For HDCP non-application products, the signals of the PC mode 1 ~ 89 can be received. For HDCP application products, the signals of the PC mode 1 ~ 98 can be received.

(Caution 2) The received PC mode number specified below is displayed in the memory column of the user menu “Information.”

PC mode	1	2	3	4	5
Signal name	VU-6010 NTSC	VU-6010 PAL/SECAM		PC98 400@70Hz	PC98 480@60Hz
Definition	640*240	768*288		640*400	640*480
Dot clock frequency (MHz)	12.214	14.752		25.175	25.175
H frequency (kHz)	15.734	15.557		31.469	31.469
V frequency (Hz)	59.94	50.39		70.086	59.94
H total (uS)	63.534	64.262		31.778	31.778
[a] (dots)	776	948		800	800
H display period (uS)	52.4	52.06		25.422	25.422
[d] (dots)	640	768		640	640
H front porch (uS)	1.146	1.288		0.675	0.596
[c] (dots)	14	19		17	15
H sync pulse width (uS)	8.76	8.677		2.542	3.813
[b] (dots)	107	128		64	96
H back porch (uS)	1.228	2.237	NOT USED	3.138	1.946
[e] (dots)	15	33		79	49
V total (mS)	16.652	20.055		14.268	16.683
[f] (line)	262	312		449	525
V display period (mS)	15.3	18.513		12.711	15.253
[i] (line)	240	288		400	480
V front porch (mS)	0.191	0.321		0.413	0.191
[h] (line)	3	5		13	6
V sync pulse width (mS)	1.144	1.093		0.064	0.064
[g] (line)	18	17		2	2
V back porch (mS)	0.064	0.064		1.08	1.176
[j] (line)	1	1		34	37
H sync polarity	Neg	Neg		Neg	Neg
V sync polarity	Neg	Neg		Neg	Neg
Scan type	Interlaced	Interlaced		Non Interlaced	Non Interlaced
Remarks					

PC mode	6	7	8	9	10
Signal name	MAC@13"	VESA 480@72Hz	VESA 480@75Hz	VESA 480@85Hz	
Definition	640*480	640*480	640*480	640*480	
Dot clock frequency (MHz)	30.24	31.5	31.5	36.0	
H frequency (kHz)	35	37.861	37.5	43.269	
V frequency (Hz)	66.667	72.809	75	85.008	
H total (uS) (dots)	28.571 864	26.413 832	26.667 840	23.111 832	
H display period (uS) (dots)	21.164 640	20.317 640	20.317 640	17.778 640	
H front porch (uS) (dots)	2.116 64	0.762 24	0.508 16	1.556 56	
H sync pulse width (uS) (dots)	2.116 64	1.27 40	2.032 64	1.556 56	
H back porch (uS) (dots)	3.175 96	4.064 128	3.81 120	2.222 80	NOT USED
V total (mS) (line)	15 525	13.735 520	13.333 500	11.764 509	
V display period (mS) (line)	13.714 480	12.678 480	12.8 480	11.093 480	
V front porch (mS) (line)	0.086 3	0.237 9	0.027 1	0.023 1	
V sync pulse width (mS) (line)	0.086 3	0.079 3	0.08 3	0.069 3	
V back porch (mS) (line)	1.114 39	0.739 28	0.427 16	0.578 25	
H sync polarity V sync polarity	Sync on G Sync on G	Neg Neg	Neg Neg	Neg Neg	
Scan type	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced	
Remarks					

PC mode	11	12	13	14	15
Signal name	VESA 600@56Hz	VESA 600@60Hz	VESA 600@72Hz	VESA 600@75Hz	VESA 600@85Hz
Definition	800*600	800*600	800*600	800*600	800*600
Dot clock frequency (MHz)	36	40	50	49.5	56.25
H frequency (kHz)	35.156	37.879	48.077	46.875	53.674
V frequency (Hz)	56.25	60.317	72.188	75	85.061
H total (uS) (dots)	28.444 1024	26.4 1056	20.8 1040	21.333 1056	18.631 1048
H display period (uS) (dots)	22.222 800	20 800	16 800	16.162 800	14.222 800
H front porch (uS) (dots)	0.667 24	1 40	1.12 56	0.323 16	0.569 32
H sync pulse width (uS) (dots)	2 72	3.2 128	2.4 120	1.616 80	1.138 64
H back porch (uS) (dots)	3.556 128	2.2 88	1.28 64	3.232 160	2.702 152
V total (mS) (line)	17.778 625	16.579 628	13.853 666	13.333 625	11.756 631
V display period (mS) (line)	17.067 600	15.84 600	12.48 600	12.8 600	11.179 600
V front porch (mS) (line)	0.028 1	0.026 1	0.77 37	0.021 1	0.019 1
V sync pulse width (mS) (line)	0.057 2	0.106 4	0.125 6	0.064 3	0.056 3
V back porch (mS) (line)	0.626 22	0.607 23	0.478 23	0.448 21	0.503 27
H sync polarity V sync polarity	Pos. Pos.	Pos. Pos.	Pos. Pos.	Pos. Pos.	Pos. Pos.
Scan type	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced
Remarks					

PC mode	16	17	18	19	20
Signal name	MAC@16"	I/O data wide		VESA wide (NEC1)	
Definition	832*624	852*480		848*480	
Dot clock frequency (MHz)	57.2832	34.006		33.75	
H frequency (kHz)	49.725	31.722		31.02	
V frequency (Hz)	74.55	59.966		60	
H total (uS) (dots)	20.111 1152	31.524 1072		32.237 1088	
H display period (uS) (dots)	14.524 832	25.055 852		25.126 848	
H front porch (uS) (dots)	0.559 32	0.659 22		0.474 16	
H sync pulse width (uS) (dots)	1.117 64	3.764 128		3.319 112	
H back porch (uS) (dots)	3.91 224	2.047 70	NOT USED	3.319 112	NOT USED
V total (mS) (line)	13.414 667	16.676 529		16.667 517	
V display period (mS) (line)	12.549 624	15.132 480		15.474 480	
V front porch (mS) (line)	0.02 1	0.378 12		0.193 6	
V sync pulse width (mS) (line)	0.06 3	0.095 3		0.258 8	
V back porch (mS) (line)	0.784 39	1.072 34		0.741 23	
H sync polarity V sync polarity	Sync on G Sync on G	Neg Neg		Pos. Pos.	
Scan type	Non Interlaced	Non Interlaced		Non Interlaced	
Remarks					

PC mode	21	22	23	24	25
Signal name		VESA wide (NEC4)		VESA 768@60Hz	VESA 768@70Hz
Definition		1360*768		1024*768	1024*768
Dot clock frequency (MHz)		85.5		65	75
H frequency (kHz)		47.712		48.363	56.476
V frequency (Hz)		60.015		60.004	70.069
H total (uS)		20.959		20.677	17.707
(dots)		1792		1344	1328
H display period (uS)		15.906		15.754	13.653
(dots)		1360		1024	1024
H front porch (uS)		0.749		0.369	0.32
(dots)		64		24	24
H sync pulse width (uS)		1.31		2.092	1.813
(dots)		112		136	136
H back porch (uS)	NOT USED	2.994	NOT USED	2.462	1.92
(dots)		256		160	144
V total (mS)		16.662		16.666	14.272
(line)		795		806	806
V display period (mS)		16.097		15.88	13.599
(line)		768		768	768
V front porch (mS)		0.063		0.062	0.053
(line)		3		3	3
V sync pulse width (mS)		0.126		0.124	0.106
(line)		6		6	6
V back porch (mS)		0.377		0.6	0.513
(line)		18		29	29
H sync polarity		Pos.		Neg.	Neg.
V sync polarity		Pos.		Neg.	Neg.
Scan type		Non Interlaced		Non Interlaced	Non Interlaced
Remarks					

PC mode	26	27	28	29	30
Signal name	VESA 768@75Hz	VESA 768@85Hz	MAC@19"	VESA 1024@60Hz	VESA 1024@75Hz
Definition	1024*768	1024*768	1024*768	1280*1024	1280*1024
Dot clock frequency (MHz)	78.75	94.5	80	108	135
H frequency (kHz)	60.023	68.677	60.24	63.981	79.976
V frequency (Hz)	75.029	84.997	74.93	60.02	75.025
H total (uS) (dots)	16.66 1312	14.561 1376	16.600 1328	15.63 1688	12.501 1688
H display period (uS) (dots)	13 1024	10.836 1024	12.8 1024	11.852 1280	9.481 1280
H front porch (uS) (dots)	0.203 16	0.508 48	0.4 32	0.444 48	0.119 2
H sync pulse width (uS) (dots)	1.219 96	1.016 96	1.2 96	1.037 112	1.067 144
H back porch (uS) (dots)	2.235 176	2.201 208	2.2 176	2.296 248	1.837 248
V total (mS) (line)	13.328 800	11.765 808	13.347 804	16.661 1066	13.329 1066
V display period (mS) (line)	12.795 768	11.183 768	12.749 768	16.005 1024	12.804 1024
V front porch (mS) (line)	0.017 1	0.015 1	0.050 3	0.016 1	0.013 1
V sync pulse width (mS) (line)	0.05 3	0.044 3	0.050 3	0.047 3	0.038 3
V back porch (mS) (line)	0.466 28	0.524 36	0.498 30	0.594 38	0.475 38
H sync polarity V sync polarity	Pos. Pos.	Pos. Pos.	– –	Pos. Pos.	Pos. Pos.
Scan type	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced
Remarks					

PC mode	31	32	33	34	35
Signal name	IDC-3000G PAL 625P	IDC-3000G NTSC 525P	HDTV-J	DTV (480P)	DTV (720P)
Definition	768*576	640*480	1920*1035	644*483	1280*720
Dot clock frequency (MHz)	29.687	24.39	74.25	24.37	74.25
H frequency (kHz)	31.389	31.47	33.75	31.469	45.000
V frequency (Hz)	50	59.9	60	59.94	60
H total (uS)	31.933	31.775	29.63	31.777	22.222
(dots)	948	775	2200	774	1650
H display period (uS)	25.87	26.24	25.86	26.427	17.239
(dots)	768	640	1920	644	1280
H front porch (uS)	0.269	0.41	0.59	0.75	0.943
(dots)	8	10	44	18	70
H sync pulse width (uS)	2.526	2.46	0.59	2.35	1.077
(dots)	75	60	44	57	80
H back porch (uS)	3.267	2.665	2.59	2.25	2.963
(dots)	97	65	192	55	220
V total (mS)	19.911	16.522	16.666	16.683	16.667
(line)	625	525	562.5	525	750
V display period (mS)	18.35	15.106	15.348	15.348	16
(line)	576	480	517/518	483	720
V front porch (mS)	0.223	0.252	0.163/0.148	0.191	0.111
(line)	7	8	5.5/5	6	5
V sync pulse width (mS)	0.223	0.22	0.148	0.191	0.111
(line)	7	7	5	6	5
V back porch (mS)	1.115	0.944	1.037/1.022	0.953	0.444
(line)	35	30	35/34.5	30	20
H sync polarity	Neg	Neg	Neg	Neg	Neg
V sync polarity	Neg	Neg	Neg	Neg	Neg
Scan type	Non Interlaced	Non Interlaced	Interlaced	Non Interlaced	Non Interlaced
Remarks					

PC mode	36	37	38	39	40
Signal name	HDTV-W			MAC@21"	VESA 1024@85Hz
Definition	1920*1080			1152*870	1280*1024
Dot clock frequency (MHz)	74.25			100	157.5
H frequency (kHz)	33.75			68.681	91.146
V frequency (Hz)	60			75.062	85.024
H total (uS) (dots)	29.630 2200			14.560 1456	10.971 1728
H display period (uS) (dots)	25.859 1920			11.520 1152	8.127 1280
H front porch (uS) (dots)	0.593 44			0.320 32	0.406 64
H sync pulse width (uS) (dots)	1.185 88			1.280 128	1.016 160
H back porch (uS) (dots)	1.993 148	NOT USED	NOT USED	1.440 144	1.422 224
V total (mS) (line)	16.666 562.5			13.322 915	11.761 1072
V display period (mS) (line)	16.000 540			12.667 870	11.235 1024
V front porch (mS) (line)	0.074/0.059 2.5/2			0.044 3	0.011 1
V sync pulse width (mS) (line)	0.148 5			0.044 3	0.033 3
V back porch (mS) (line)	0.444/0.459 15/15.5			0.568 39	0.483 44
H sync polarity V sync polarity	Neg Neg			Sync on G Sync on G	Pos. Pos.
Scan type	Interlaced			Non Interlaced	Non Interlaced
Remarks					

PC mode	41	42	43	44	45
Signal name	I/O data 480@100Hz	I/O data 480@120Hz	I/O data 600@100Hz	I/O data 600@120Hz	I/O data 768@100Hz
Definition	640*480	640*480	800*600	800*600	1024*768
Dot clock frequency (MHz)	42.506	51.008	66.022	79.942	111.987
H frequency (kHz)	51.089	61.307	62.998	75.703	80.451
V frequency (Hz)	100.370	120.440	99.838	119.97	100.56
H total (uS) (dots)	19.573 832	16.311 832	15.873 1048	13.209 1056	12.43 1392
H display period (uS) (dots)	15.057 640	12.574 640	12.117 800	10.007 800	9.144 1024
H front porch (uS) (dots)	1.506 64	1.255 64	0.606 40	0.300 24	0.214 24
H sync pulse width (uS) (dots)	1.317 56	1.098 56	0.969 64	1.001 80	0.786 88
H back porch (uS) (dots)	1.694 72	1.412 72	2.181 144	1.901 152	2.286 256
V total (mS) (line)	9.963 509	8.302 509	10.016 631	8.335 631	9.944 800
V display period (mS) (line)	9.395 480	7.829 480	9.524 600	7.926 600	9.546 768
V front porch (mS) (line)	0.020 1	0.016 1	0.016 1	0.013 1	0.012 1
V sync pulse width (mS) (line)	0.059 3	0.049 3	0.048 3	0.04 3	0.037 3
V back porch (mS) (line)	0.489 25	0.408 25	0.429 27	0.357 27	0.348 28
H sync polarity V sync polarity	Neg Neg	Neg Neg	Pos. Pos.	Pos. Pos.	Neg Neg
Scan type	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced
Remarks					

PC mode	46	47	48	49	50
Signal name	I/O data 768@120Hz	I/O data 1024@100Hz	EWS 4800@71Hz	RCA-STB 1080A	DTV(570P)
Definition	1024*768	1280*1024	1280*1024	1920*1034	768*576
Dot clock frequency (MHz)	132.953	190.908	125	81	29.538
H frequency (kHz)	95.512	108.47	75.12	33.75	31.25
V frequency (Hz)	119.39	100.06	71.204	60	50
H total (uS)	10.47	9.219	13.312	29.630	31.993
(dots)	1392	1760	1664	2400	945
H display period (uS)	7.702	6.7	10.24	23.7	26
(dots)	1024	1280	1280	1920	768
H front porch (uS)	0.181	0.545	0.256	0.59	0.745
(dots)	24	104	32	48	22
H sync pulse width (uS)	0.662	0.75	1.024	3.56	2.35
(dots)	88	143	128	288	69
H back porch (uS)	1.925	1.22	1.792	1.78	2.9
(dots)	256	233	224	144	86
V total (mS)	8.376	9.994	14.044	16.652	20
(line)	800	1084	1055	562	625
V display period (mS)	8.041	9.44	13.631	15.319	18.432
(line)	768	1024	1024	517	576
V front porch (mS)	0.010	0.01	0.04	0.059	0.16
(line)	1	1	3	2	5
V sync pulse width (mS)	0.031	0.03	0.04	0.089	0.16
(line)	3	3	3	3	5
V back porch (mS)	0.293	0.52	0.333	1.185	1.248
(line)	28	56	25	40	39
H sync polarity	Neg	Pos.	Neg	Pos.	Neg
V sync polarity	Neg	Pos.	Neg	Pos.	Neg
Scan type	Non Interlaced	Non Interlaced	Non Interlaced	Interlaced	Non Interlaced
Remarks					

PC mode	51	52	53	54	55
Signal name	VESA 864@75Hz	I/O data W_XGA@56Hz	I/O wide XGA	VESA 1200@60Hz	VESA 1200@65Hz
Definition	1152*864	1280*768	1376*768	1600*1200	1600*1200
Dot clock frequency (MHz)	108	76.064	87.34	162	175.5
H frequency (kHz)	67.5	45.064	48.307	75	81.25
V frequency (Hz)	75	56.187	59.934	60	65
H total (uS)	14.815	22.192	20.701	13.333	12.308
(dots)	1600	1688	1808	2160	2160
H display period (uS)	10.667	16.828	15.755	9.877	9.117
(dots)	1152	1280	1376	1600	1600
H front porch (uS)	0.593	0.631	0.366	0.395	0.365
(dots)	64	48	32	64	64
H sync pulse width (uS)	1.185	1.472	1.466	1.185	1.094
(dots)	128	112	128	192	192
H back porch (uS)	2.37	3.26	3.114	1.877	1.732
(dots)	256	248	272	304	304
V total (mS)	13.333	17.78	16.685	16.667	15.385
(line)	900	802	806	1250	1250
V display period (mS)	12.8	17.043	15.898	16	14.769
(line)	864	768	768	1200	1200
V front porch (mS)	0.015	0.044	0.062	0.013	0.012
(line)	1	2	3	1	1
V sync pulse width (mS)	0.044	0.067	0.124	0.04	0.037
(line)	3	3	6	3	3
V back porch (mS)	0.474	0.644	0.6	0.613	0.566
(line)	32	29	29	46	46
H sync polarity	Pos.	Pos.	Neg	Pos.	Pos.
V sync polarity	Pos.	Pos.	Pos.	Pos.	Pos.
Scan type	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced
Remarks					

PC mode	56	57	58	59	60
Signal name	VESA 1200@70Hz	VESA 1200@75Hz	VESA 1200@85Hz	HP 1024@72Hz	SUN 900@66Hz
Definition	1600*1200	1600*1200	1600*1200	1280*1024	1152*900
Dot clock frequency (MHz)	189	202.5	229.5	135	92.941
H frequency (kHz)	87.5	93.75	106.25	78.130	61.796
V frequency (Hz)	70	75	85	72.009	65.95
H total (uS)	11.429	10.667	9.412	12.8	16.182
(dots)	2160	2160	2160	1728	1504
H display period (uS)	8.466	7.901	6.972	9.481	12.395
(dots)	1600	1600	1600	1280	1152
H front porch (uS)	0.339	0.316	0.279	0.474	0.312
(dots)	64	64	64	64	29
H sync pulse width (uS)	1.016	0.948	0.837	1.442	1.377
(dots)	192	192	192	192	128
H back porch (uS)	1.608	1.501	1.325	1.442	2.098
(dots)	304	304	304	192	195
V total (mS)	14.286	13.333	11.765	13.887	15.163
(line)	1250	1250	1250	1085	937
V display period (mS)	13.714	12.8	11.294	13.107	14.564
(line)	1200	1200	1200	1024	900
V front porch (mS)	0.011	0.011	0.009	0.038	0.032
(line)	1	1	1	3	2
V sync pulse width (mS)	0.034	0.032	0.028	0.038	0.065
(line)	3	3	3	3	4
V back porch (mS)	0.526	0.491	0.433	0.704	0.502
(line)	46	46	46	55	31
H sync polarity	Pos.	Pos.	Pos.	SOG.	Csync
V sync polarity	Pos.	Pos.	Pos.	SOG.	Csync
Scan type	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced
Remarks					

PC mode	61	62	63	64	65
Signal name	SUN 900@76Hz	SGI 768@60Hz	VESA 960@60Hz	VESA 960@60Hz	VESA 1050@60Hz
Definition	1152*900	1024*768	1280*960	1280*960	1400*1050
Dot clock frequency (MHz)	105.561	70	108	148.5	108
H frequency (kHz)	71.710	49.716	60	85.938	63.981
V frequency (Hz)	76.047	60.043	60	85.002	60.020
H total (uS)	13.945	20.114	16.667	11.636	15.630
(dots)	1472	1408	1800	1728	1688
H display period (uS)	10.913	14.629	11.852	8.62	12.963
(dots)	1152	1024	1280	1280	1400
H front porch (uS)	0.152	2.057	0.889	0.431	0.444
(dots)	16	144	96	64	48
H sync pulse width (uS)	0.909	1.371	1.037	1.077	1.037
(dots)	96	96	112	160	112
H back porch (uS)	1.97	2.507	2.889	1.508	1.185
(dots)	208	144	312	224	128
V total (mS)	13.15	16.655	16.667	11.764	16.661
(line)	943	828	1000	1011	1066
V display period (mS)	12.55	15.448	16	11.171	16.411
(line)	900	768	960	960	1050
V front porch (mS)	0.028	0.443	0.017	0.012	0.016
(line)	2	22	1	1	1
V sync pulse width (mS)	0.112	0.06	0.05	0.035	0.047
(line)	8	3	3	3	3
V back porch (mS)	0.460	0.704	0.6	0.547	0.188
(line)	33	35	36	47	12
H sync polarity	Csync	SOG.	Pos.	Pos.	Neg
V sync polarity	Csync	SOG.	Pos.	Pos.	Neg
Scan type	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced	Non Interlaced
Remarks					

PC mode	66~74
Signal name	NOT USED
Definition	
Dot clock frequency (MHz)	
H frequency (kHz)	
V frequency (Hz)	
H total (uS) (dots)	
H display period (uS) (dots)	
H front porch (uS) (dots)	
H sync pulse width (uS) (dots)	
H back porch (uS) (dots)	
V total (mS) (line)	
V display period (mS) (line)	
V front porch (mS) (line)	
V sync pulse width (mS) (line)	
V back porch (mS) (line)	
H sync polarity V sync polarity	
Scan type	
Remarks	

PC mode	75	80	81	82	83
Signal name	1080I 50Hz	W_XGA		400H	350H
Definition	1920*1080	1280*768		720*400	720*350
Dot clock frequency (MHz)	74.25	81.0		28.3	28.3
H frequency (kHz)	28.125	47.99		31.5	31.5
V frequency (Hz)	50	59.34		70.1	70.1
H total (uS) (dots)	35.556 2640	20.84 1688		31.78 900	31.78 900
H display period (uS) (dots)	25.859 1920	15.80 1280		25.42 720	25.42 720
H front porch (uS) (dots)	6.519 484	0.593 48		0.636 18	0.636 18
H sync pulse width (uS) (dots)	1.185 88	1.38 112		3.81 108	3.81 108
H back porch (uS) (dots)	1.993 148	3.06 248	NOT USED	1.91 54	1.91 54
V total (mS) (line)	10 562.5	16.713 802		14.269 449	14.269 449
V display period (mS) (line)	9.6 540	16.005 768		12.712 400	11.123 350
V front porch (mS) (line)	0.074/0.059 2.5/2	0.063 3		0.424 12	1.307 37
V sync pulse width (mS) (line)	0.148 5	0.125 6		0.064 2	0.064 2
V back porch (mS) (line)	0.444/0.459 15/15.5	0.521 25		1.112 35	1.907 60
H sync polarity V sync polarity	Neg. Neg.	Pos. Neg.		Neg. Pos.	Pos. Neg.
Scan type	Interlaced	Non Interlaced		Non Interlaced	Non Interlaced
Remarks					

PC mode	84	85	86	87	88
Signal name	720P 24Hz	1080P 24Hz	720P 50Hz	1080I 48Hz	NOT USED
Definition	1280*720	1920*1080	1280*720	1920*1080	
Dot clock frequency (MHz)	74.176	74.176	74.25	74.1758	
H frequency (kHz)	17.982	26.973	37.5	26.973	
V frequency (Hz)	23.976	23.976	50	37.074	
H total (uS) (dots)	55.611 4125	37.704 2750	26.667 1980	37.074 2750	
H display period (uS) (dots)	17.256 1280	25.884 1920	17.239 1280	25.884 1920	
H front porch (uS) (dots)	34.310 2545	8.008 594	5.387 400	8.008 594	
H sync pulse width (uS) (dots)	1.078 80	1.078 88	1.078 80	1.078 88	
H back porch (uS) (dots)	2.256 220	1.995 148	2.963 220	1.995 148	
V total (mS) (line)	41.706 750	41.708 1125	20 750	20.855 1125	
V display period (mS) (line)	40.040 720	40.040 1080	19.2 720	20.020 1080	
V front porch (mS) (line)	0.278 5	0.148 4	0.133 5	0.093 5	
V sync pulse width (mS) (line)	0.278 5	0.185 5	0.133 5	0.185 10	
V back porch (mS) (line)	1.112 20	1.335 36	0.533 20	0.556 30	
H sync polarity V sync polarity	Neg Neg	Neg Neg	Neg Neg	Neg Neg	
Scan type	Non Interlaced	Non Interlaced	Non Interlaced	Interlaced	
Remarks					

PC mode	89	90	91	92	93
Signal name	NOT USED	480i(60Hz)	DTV(480P)	DTV(480P)	DTV(720P)
Definition		720*480Hz	640*480Hz	720*480Hz	1280*720Hz
Dot clock frequency (MHz)		27.000	25.175	27.000	74.250
H frequency (kHz)		15.734	31.469	31.469	45.000
V frequency (Hz)		59.94	59.940	59.94	60.000
H total (uS) (dots)		16.555 1716	31.777 800	31.777 858	22.222 1650
H display period (uS) (dots)		53.333 1440	25.422 640	26.666 720	17.239 1280
H front porch (uS) (dots)		1.407 38	0.635 16	0.592 16	1.481 110
H sync pulse width (uS) (dots)		4.593 124	3.813 96	2.296 62	0.538 40
H back porch (uS) (dots)		4.222 114	1.906 48	2.222 60	2.963 220
V total (mS) (line)		16.635 262	16.683 525	19.444 525	10.101 750
V display period (mS) (line)		15.253 240	15.253 480	15.253 480	16.000 720
V front porch (mS) (line)		0.254 4	0.317 10	0.333 9	0.067 5
V sync pulse width (mS) (line)		0.191 3	0.064 2	0.191 6	0.111 5
V back porch (mS) (line)		0.953 15	1.049 33	0.953 30	0.444 20
H sync polarity V sync polarity		Neg Neg	Neg Neg	Neg Neg	Pos Pos
Scan type		Interlaced	Non Interlaced	Non Interlaced	Non Interlaced
Remarks		HDCP*	HDCP	HDCP	HDCP

*HDCP : High-bandwidth Digital Content Protection

PC mode	94	95	96	97	98
Signal name	HDTV-W	NOT USED			
Definition	1920*1080Hz				
Dot clock frequency (MHz)	74.250				
H frequency (kHz)	33.750				
V frequency (Hz)	60.000				
H total (uS) (dots)	29.629 2200				
H display period (uS) (dots)	25.859 1920				
H front porch (uS) (dots)	1.185 88				
H sync pulse width (uS) (dots)	0.592 44				
H back porch (uS) (dots)	1.993 148				
V total (mS) (line)	7.582 563				
V display period (mS) (line)	16.000 540				
V front porch (mS) (line)	0.040 3				
V sync pulse width (mS) (line)	0.148 5				
V back porch (mS) (line)	0.444 15				
H sync polarity V sync polarity	Pos Pos				
Scan type	Interlaced				
Remarks	HDCP				

*HDCP : High-bandwidth Digital Content Protection

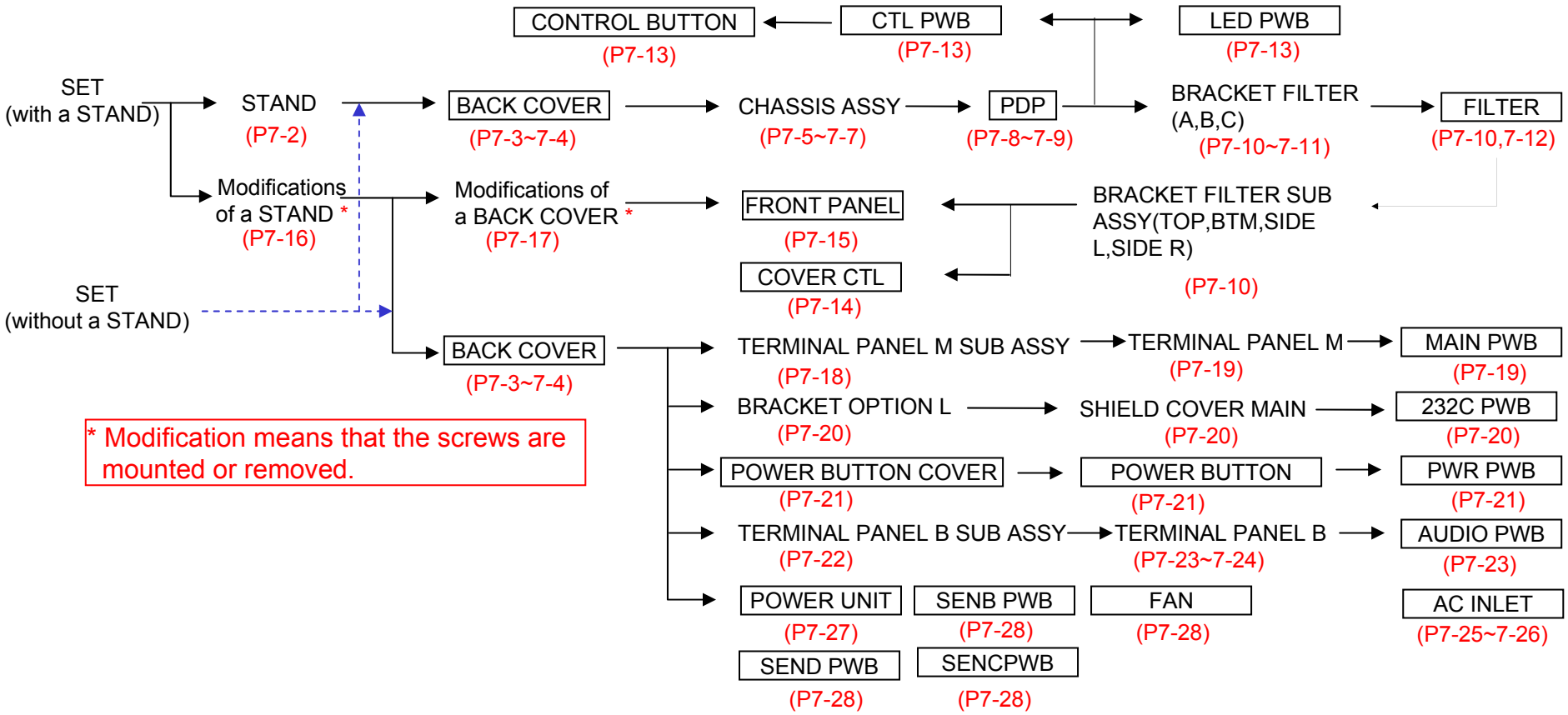
METHOD OF DISASSEMBLY

(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 A: PX-42XM3J, 42XM3A, 42XM3W, 42XM3G
CLASS B: PX-42XR3A, 42XR3W, 42XR3G

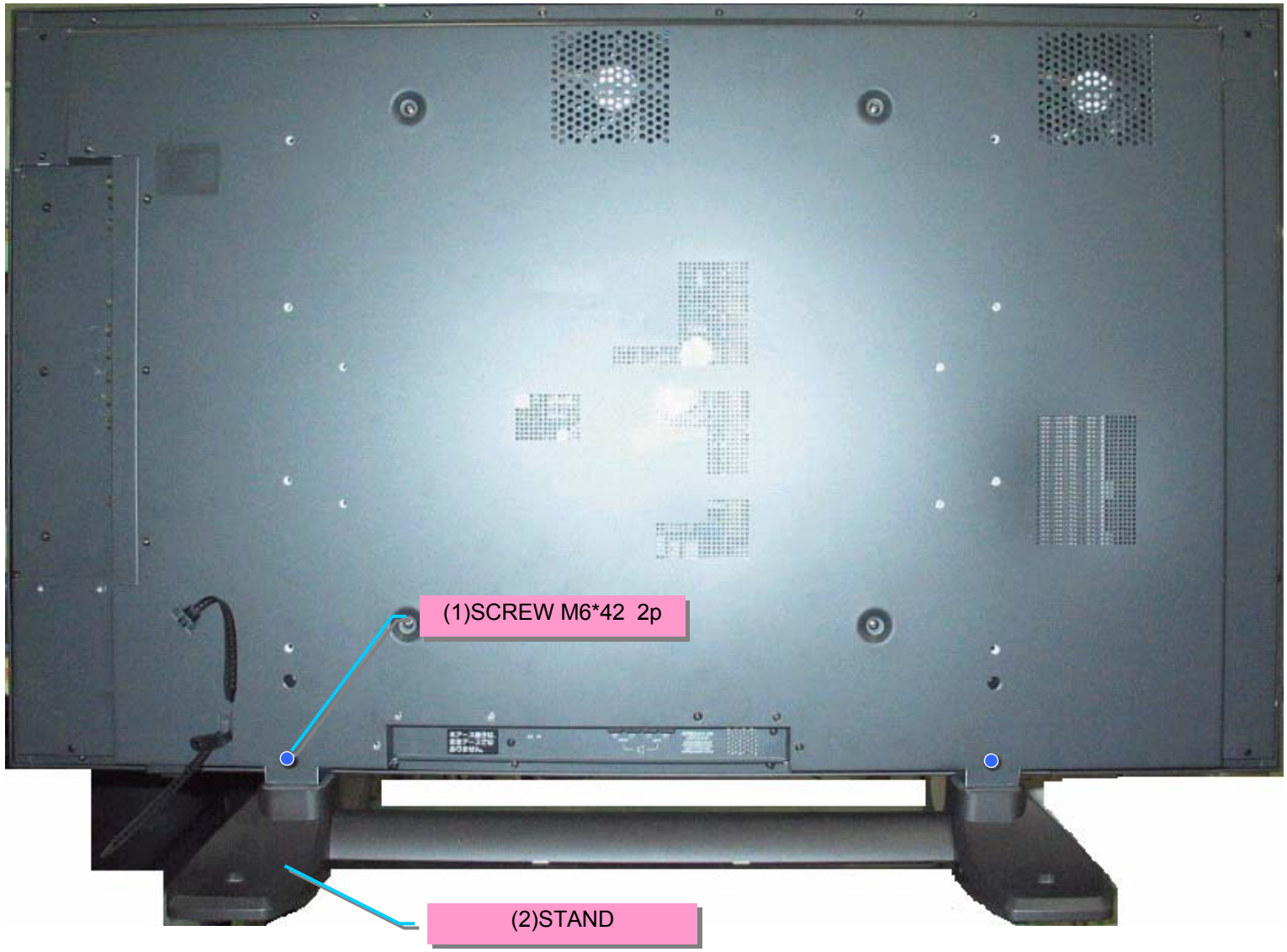
1. Outlined method of disassembly

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 ( )].

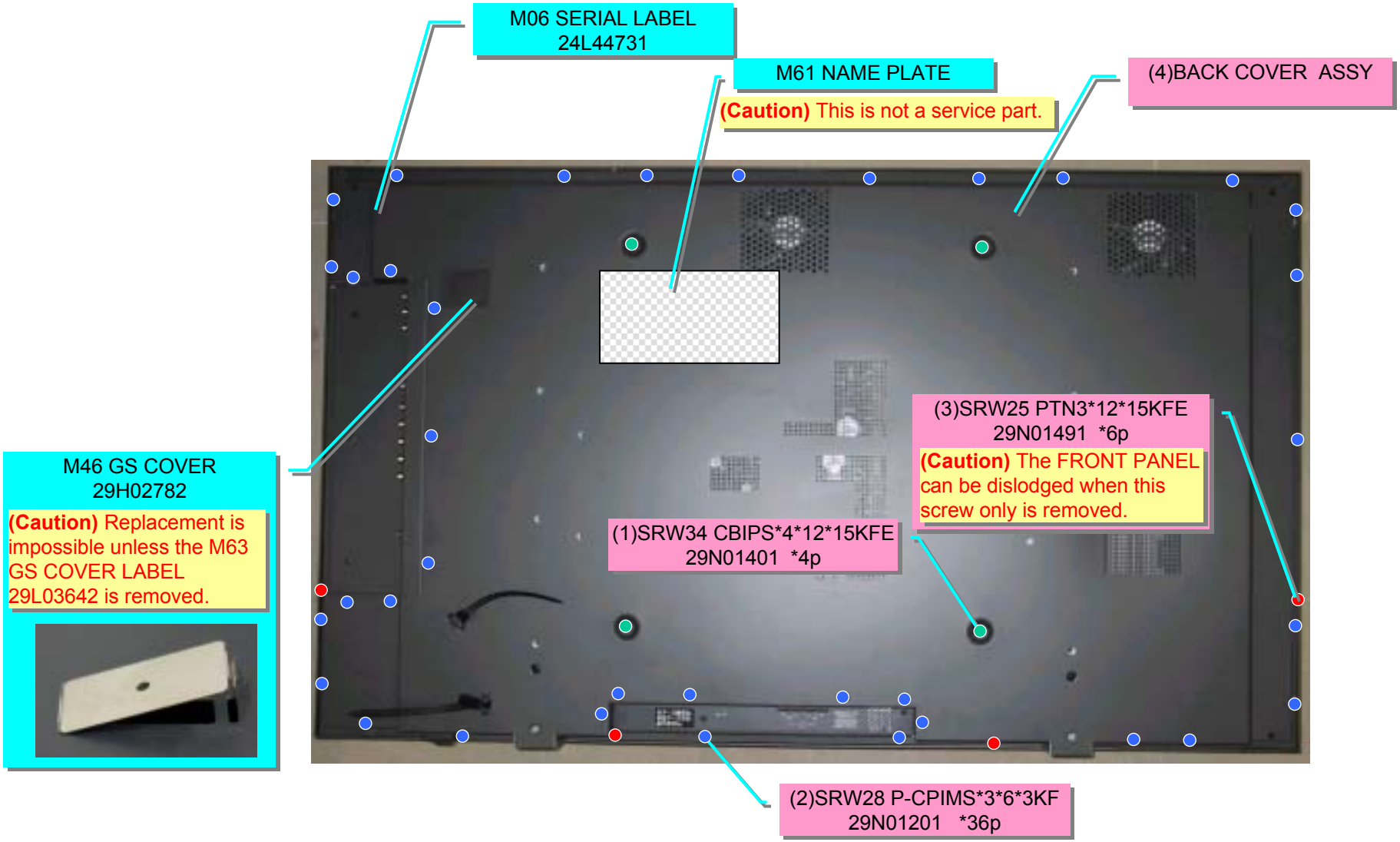


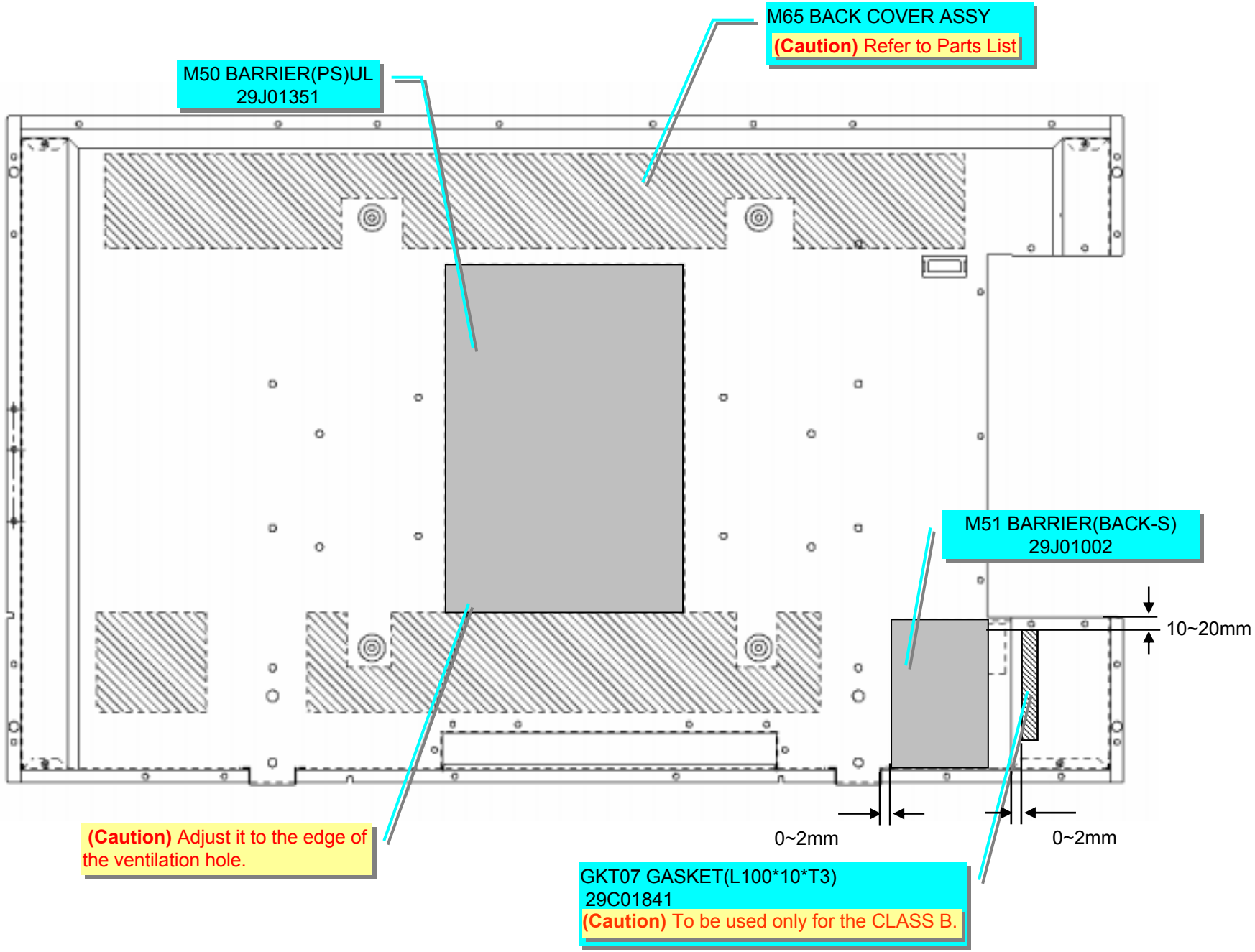
* Modification means that the screws are mounted or removed.

2. STAND

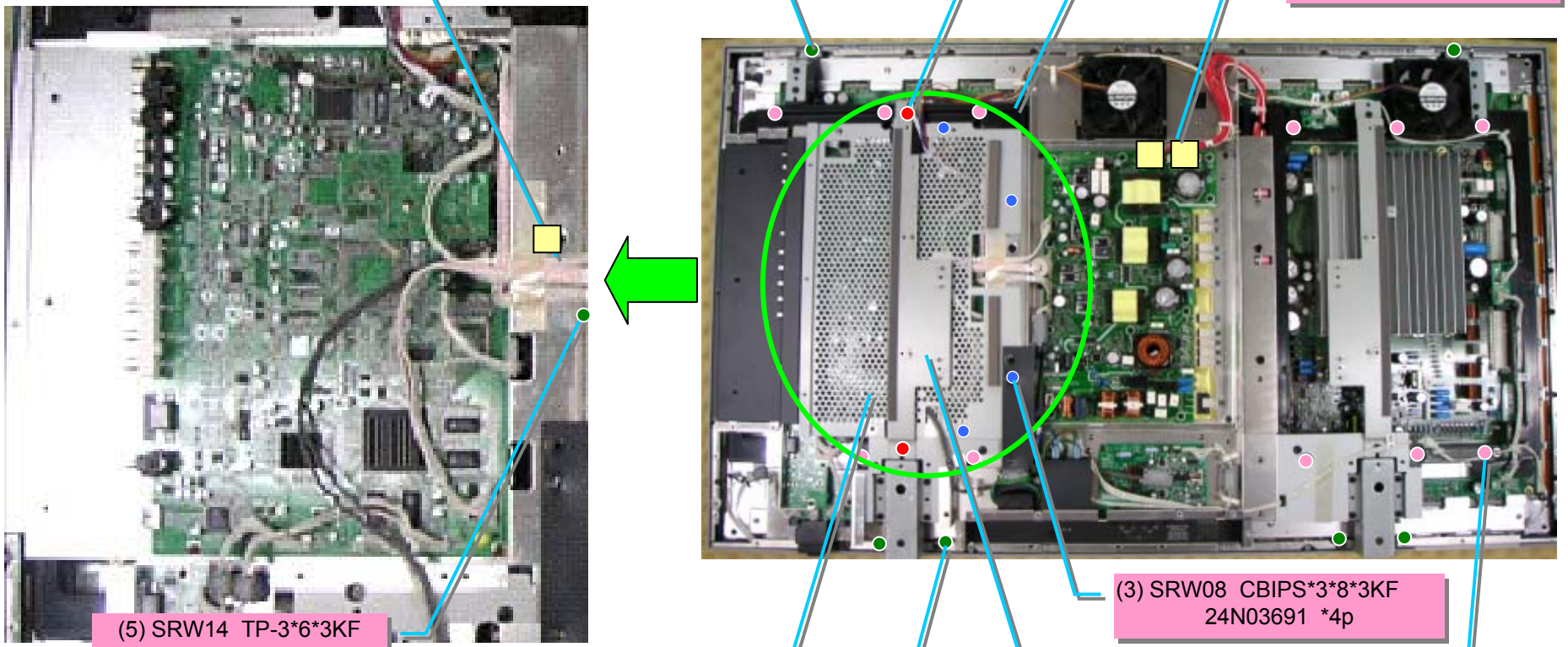


3. BACK COVER

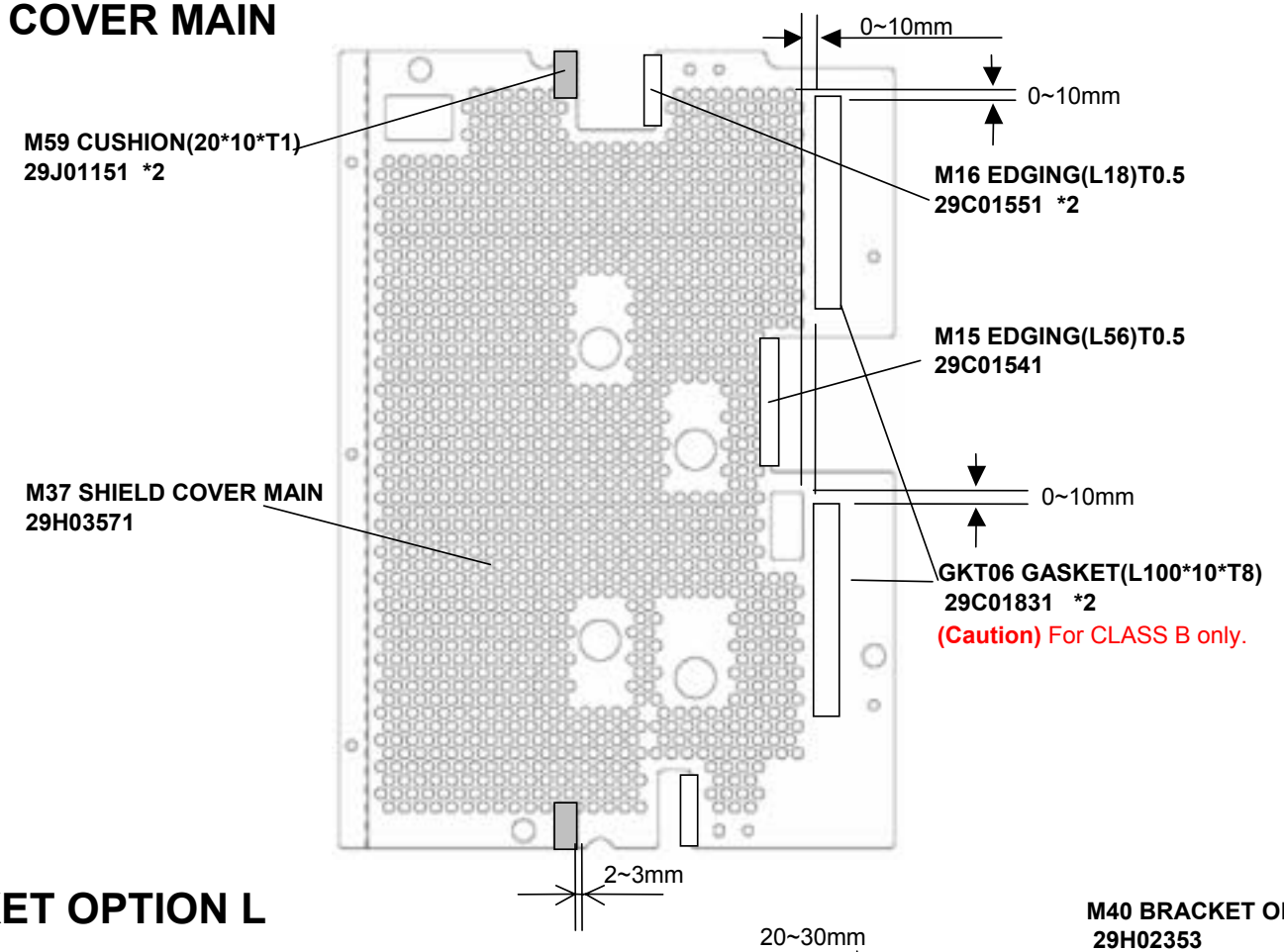

M06 SERIAL LABEL
24L44731
M61 NAME PLATE
(Caution) This is not a service part.
(4)BACK COVER ASSY
M46 GS COVER
29H02782
(Caution) Replacement is impossible unless the M63 GS COVER LABEL 29L03642 is removed.
(3)SRW25 PTN3*12*15KFE
29N01491 *6p
(Caution) The FRONT PANEL can be dislodged when this screw only is removed.
(1)SRW34 CBIPS*4*12*15KFE
29N01401 *4p
(2)SRW28 P-CPIMS*3*6*3KF
29N01201 *36p


M65 BACK COVER ASSY
(Caution) Refer to Parts List
M50 BARRIER(PS)UL
29J01351
M51 BARRIER(BACK-S)
29J01002
10~20mm
0~2mm
0~2mm
(Caution) Adjust it to the edge of the ventilation hole.
GKT07 GASKET(L100*10*T3)
29C01841
(Caution) To be used only for the CLASS B.

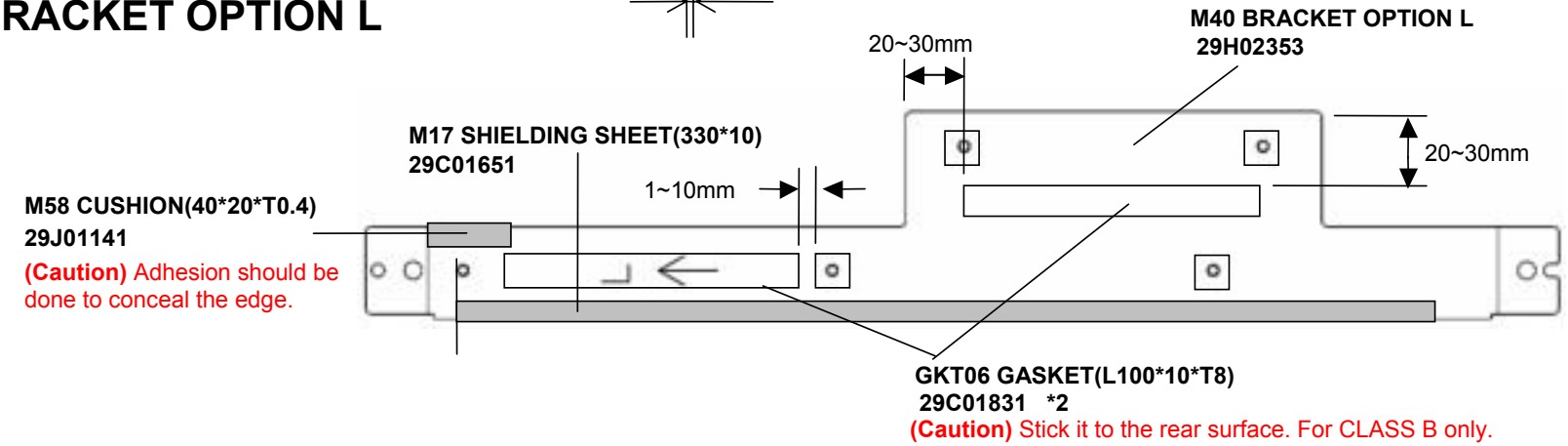
4. CHASSIS ASSY



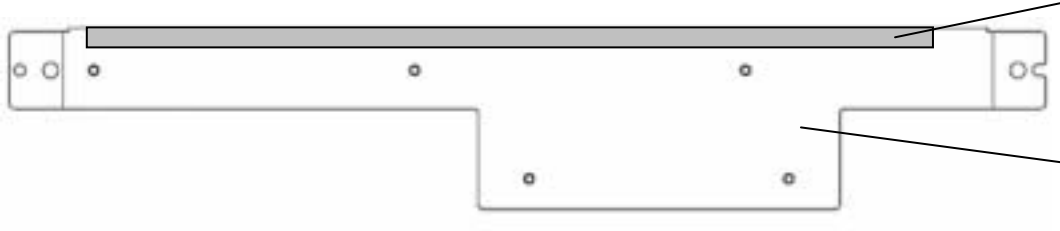
(1)SHIELD COVER MAIN



(2)BRACKET OPTION L



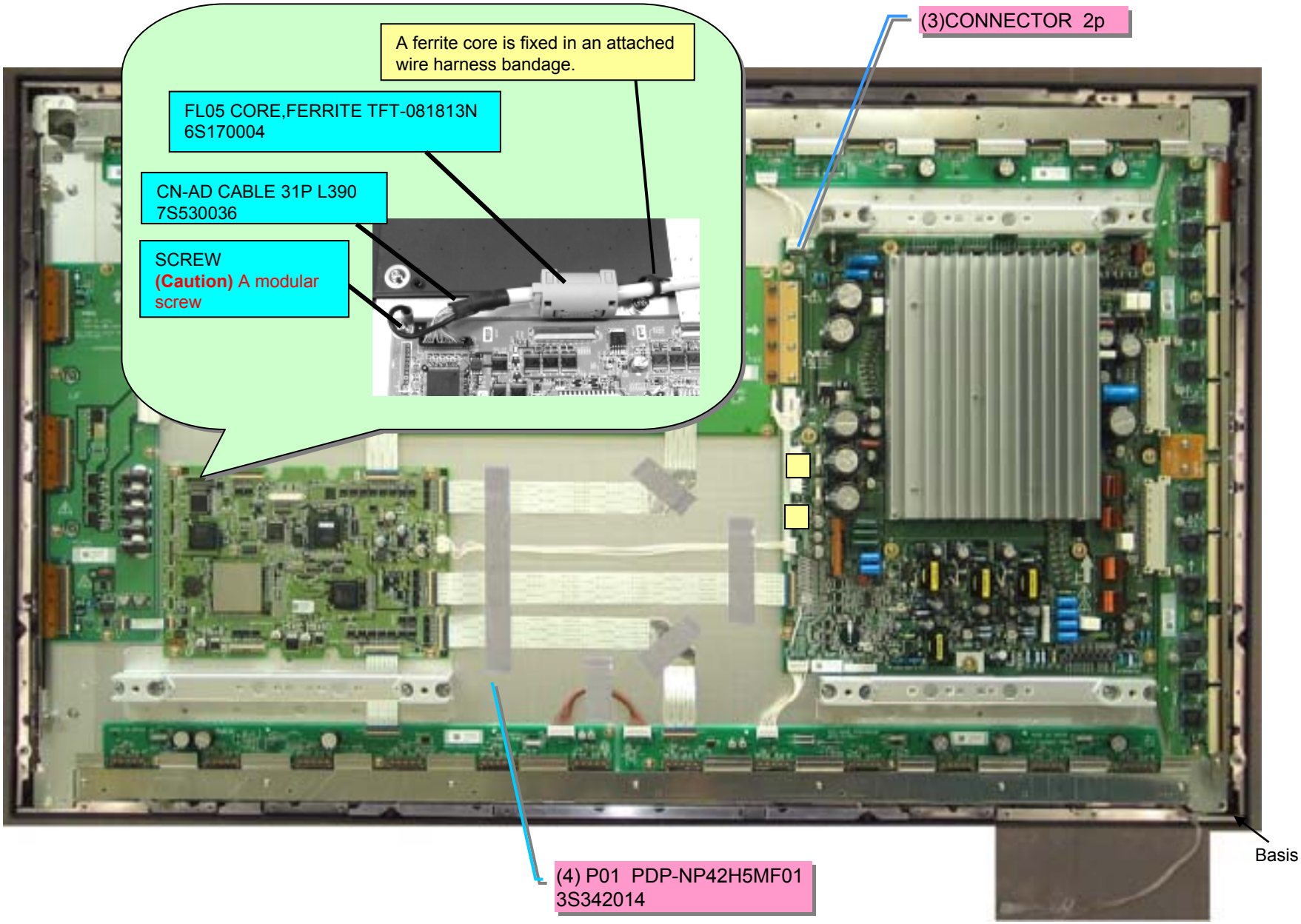
(3)BRACKET OPTION R

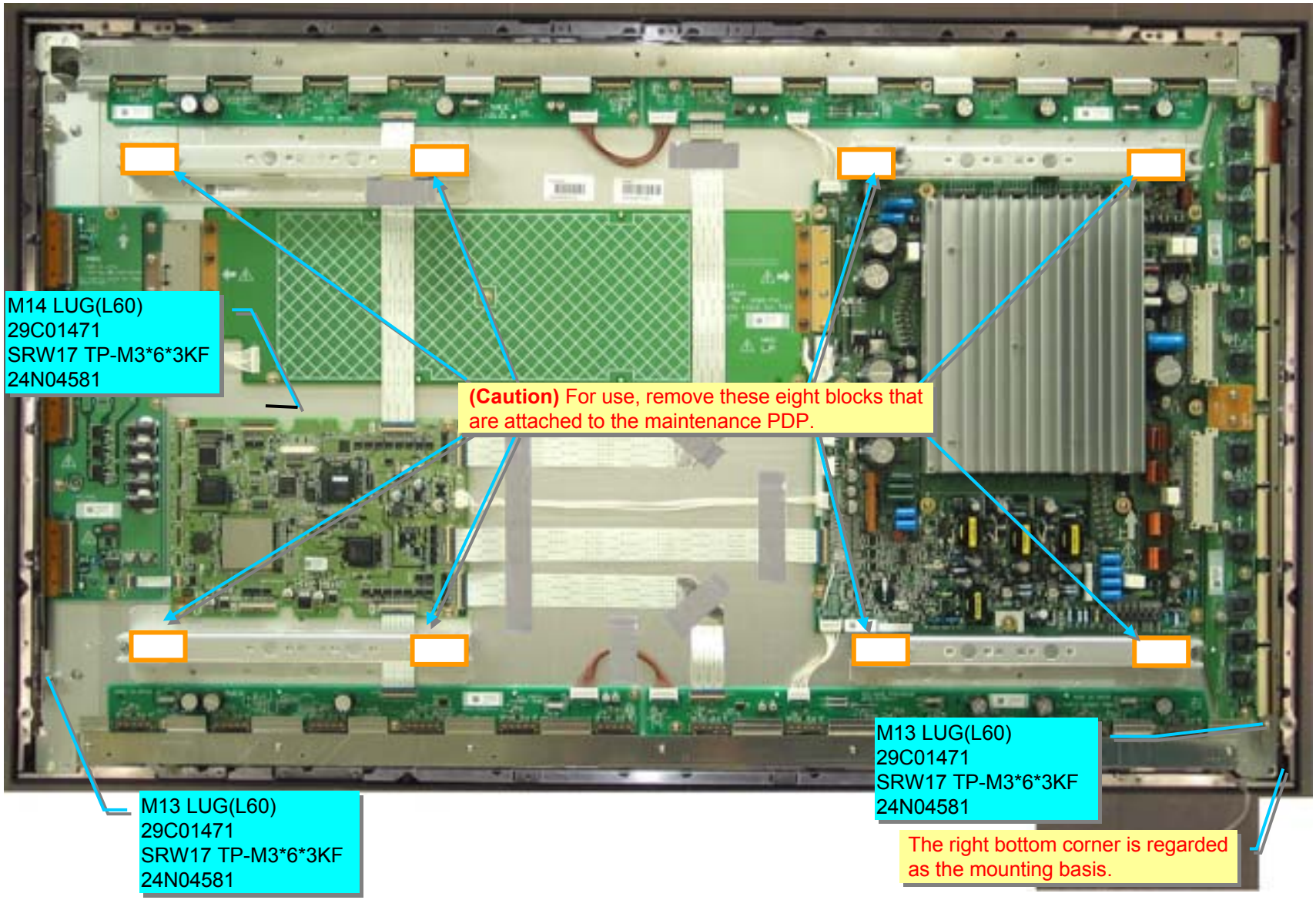


M17 SHIELDING SHEET(330*10)
29C01651
(Caution) Based on the tip of the screw hole, stick it in alignment with the end face.

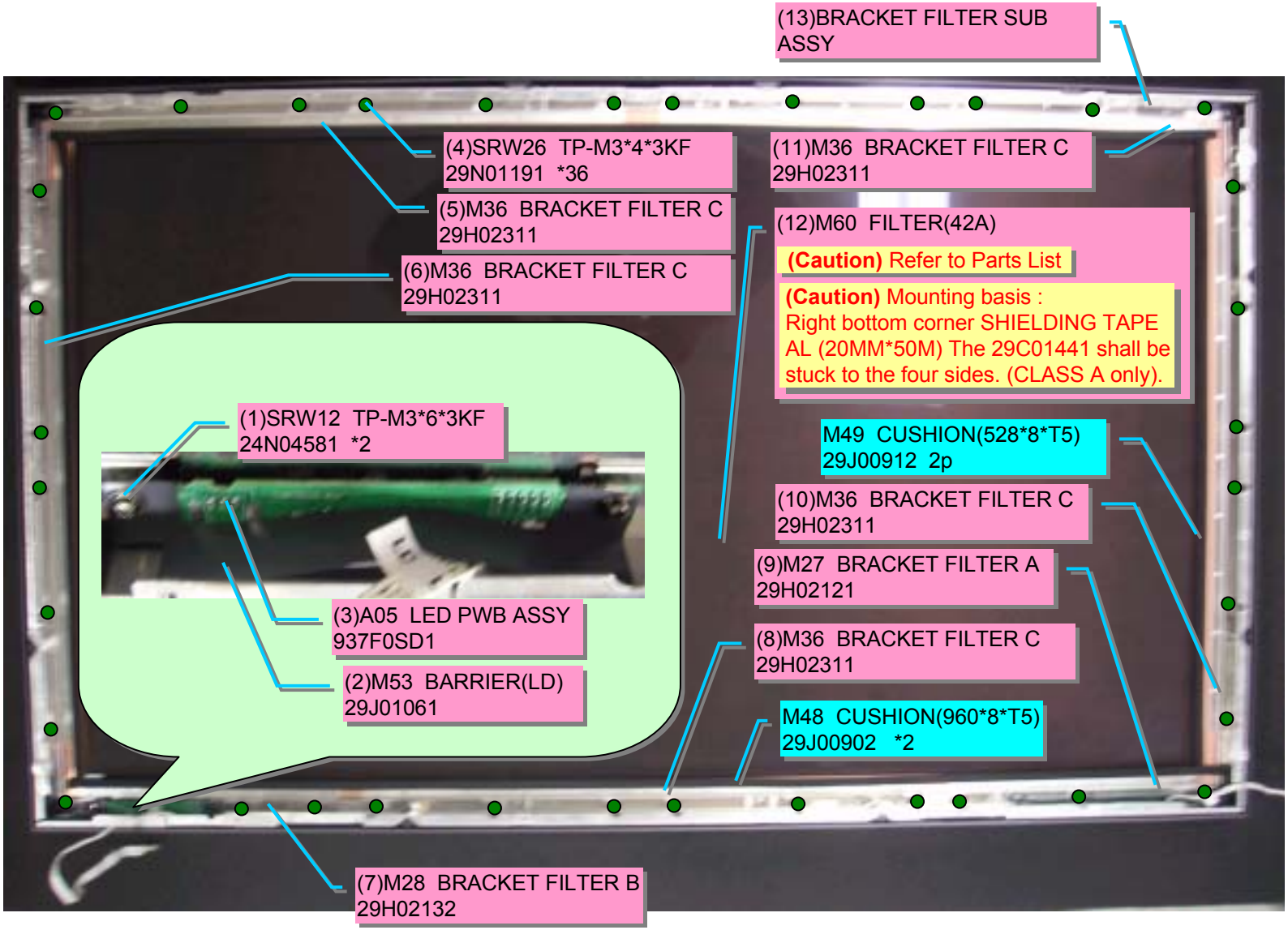
M45 BRACKET OPTION R
29H02753

5. PDP

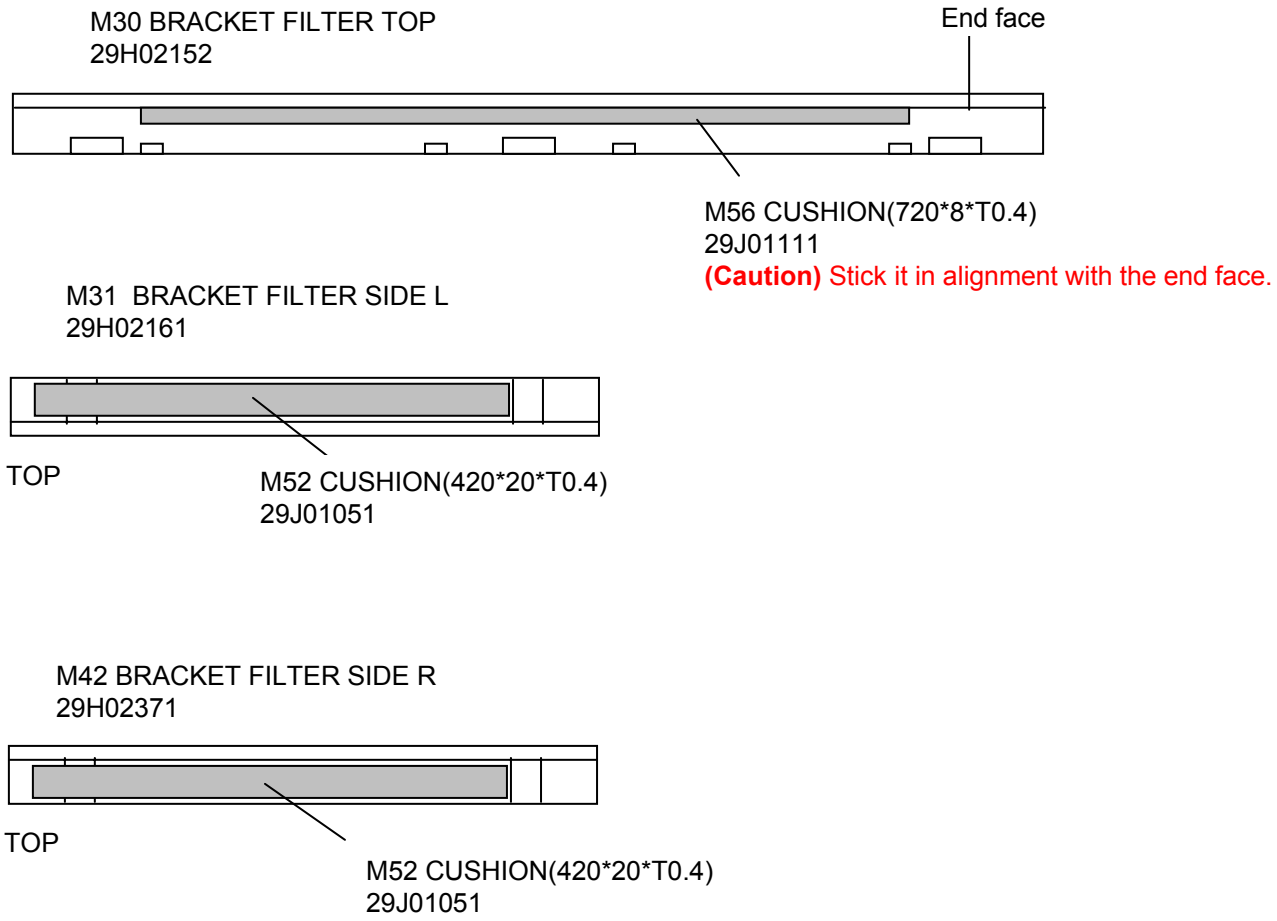

A ferrite core is fixed in an attached wire harness bandage.
FL05 CORE,FERRITE TFT-081813N 6S170004
CN-AD CABLE 31P L390 7S530036
SCREW
(Caution) A modular screw
(3)CONNECTOR 2p
(4) P01 PDP-NP42H5MF01 3S342014
Basis


M14 LUG(L60)
29C01471
SRW17 TP-M3*6*3KF
24N04581
(Caution) For use, remove these eight blocks that are attached to the maintenance PDP.
M13 LUG(L60)
29C01471
SRW17 TP-M3*6*3KF
24N04581
M13 LUG(L60)
29C01471
SRW17 TP-M3*6*3KF
24N04581
The right bottom corner is regarded as the mounting basis.

6. BRACKET FILTER(A,B,C)/FILTER/BRACKET FILTER SUB ASSY



7. BRACKET FILTER

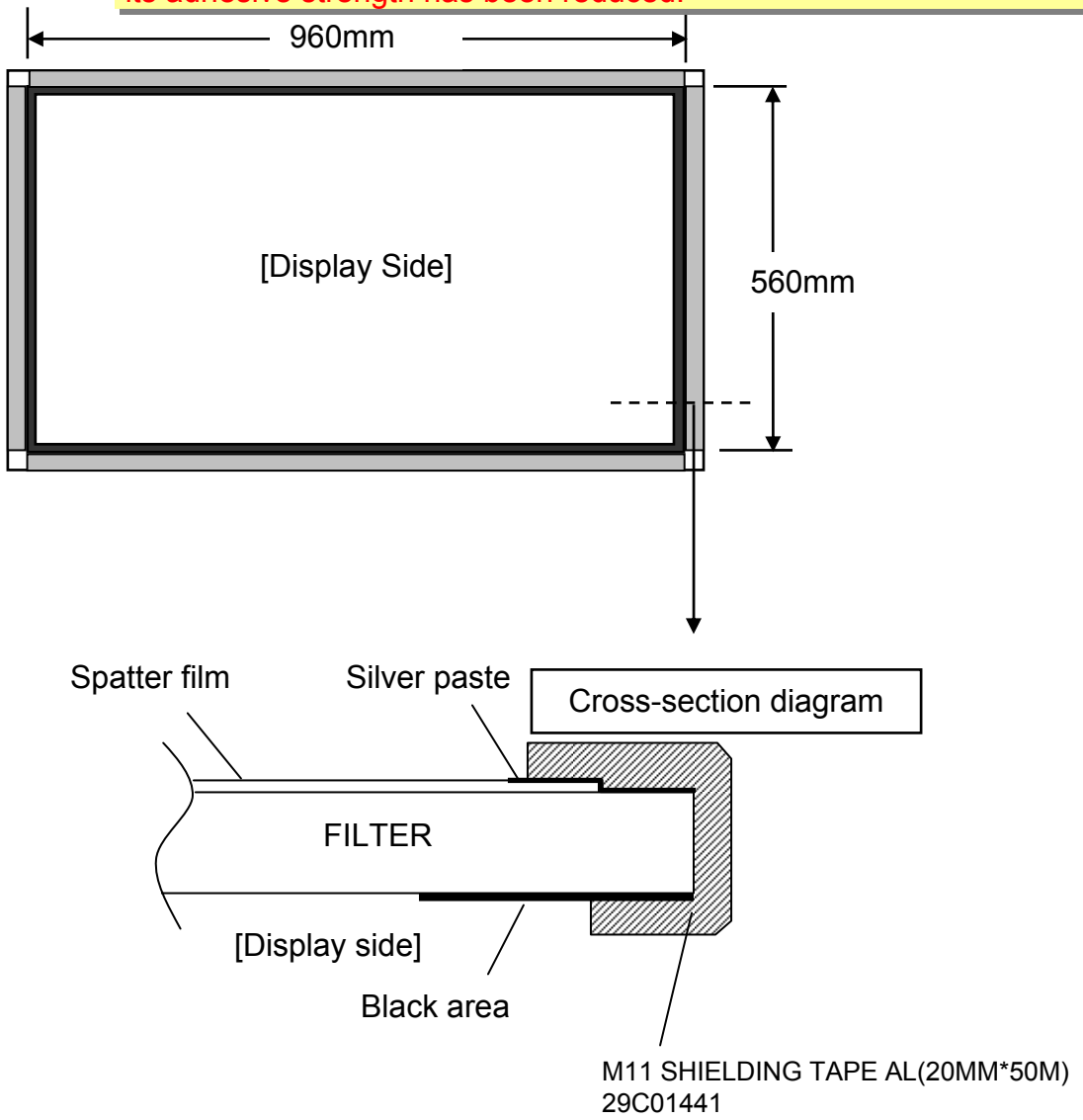


8. FILTER(CLASS A)

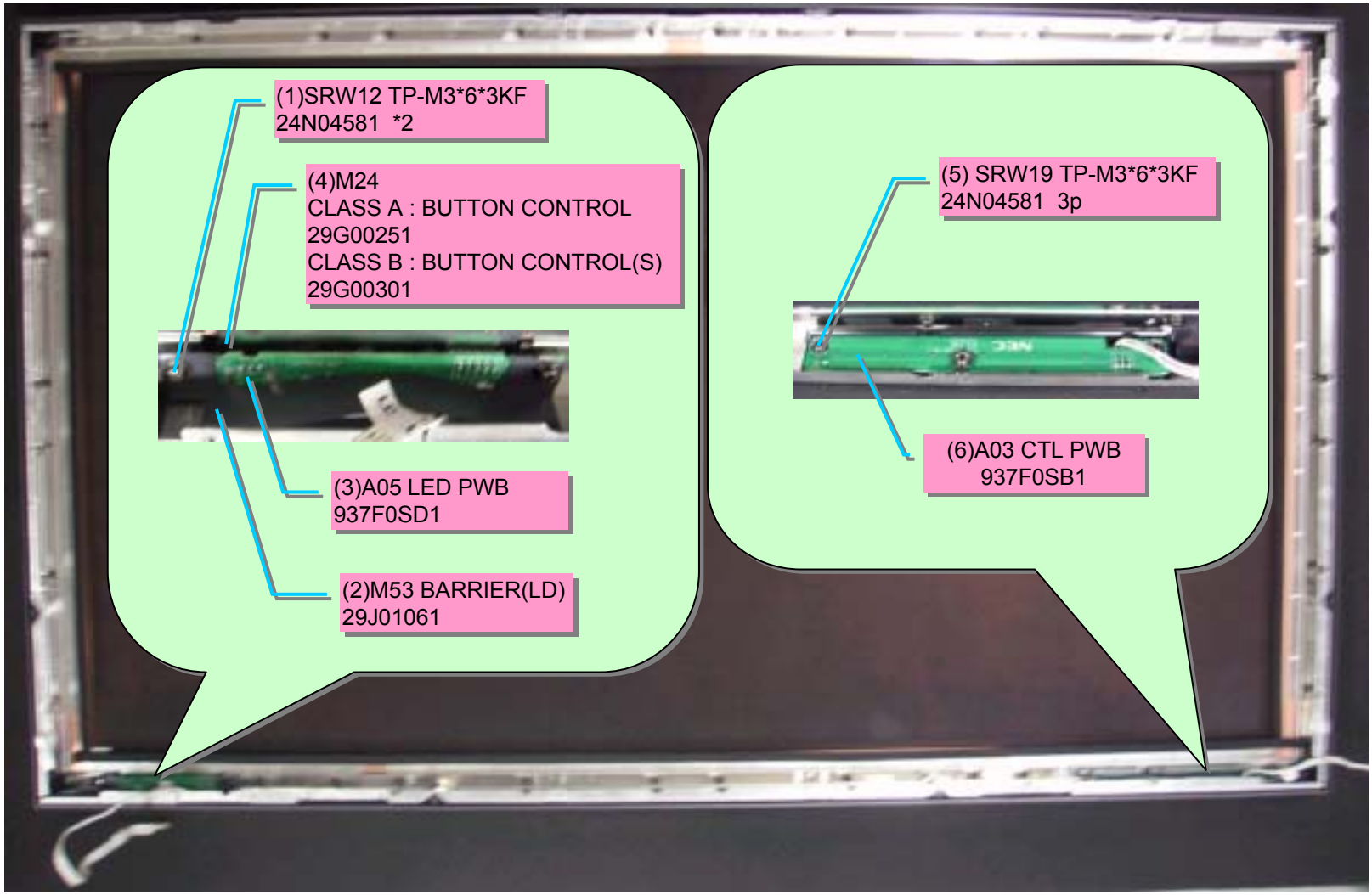
(Caution) No SHIELDING TAPE has been stuck to the service part FILTER. Therefore, in the case of filter replacement, please order the SHIELDING TAPE and stick it as illustrated below.

SHIELDING TAPE

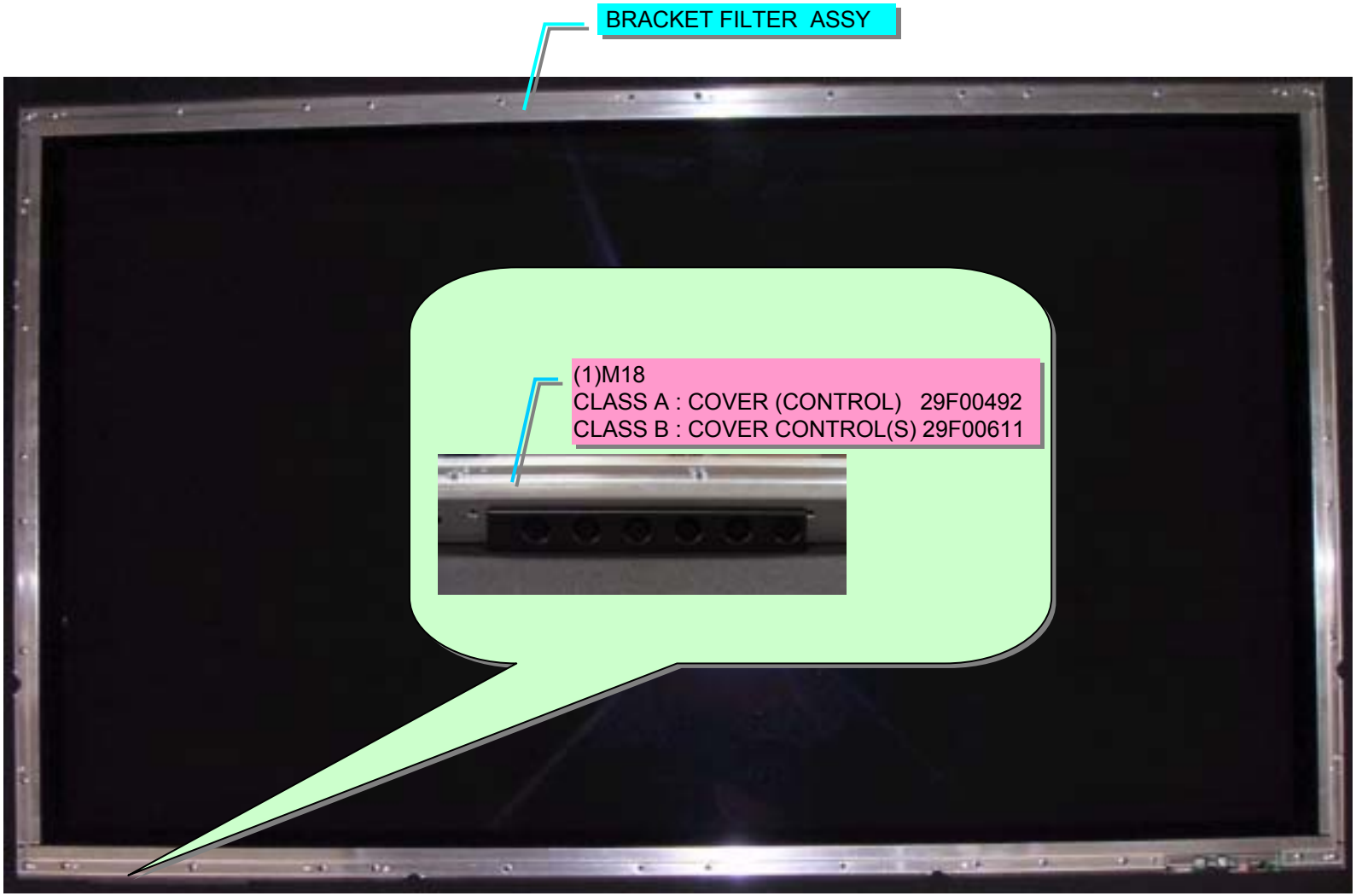
(Caution) Once the shielding tape is removed, it must not be used again because its adhesive strength has been reduced.



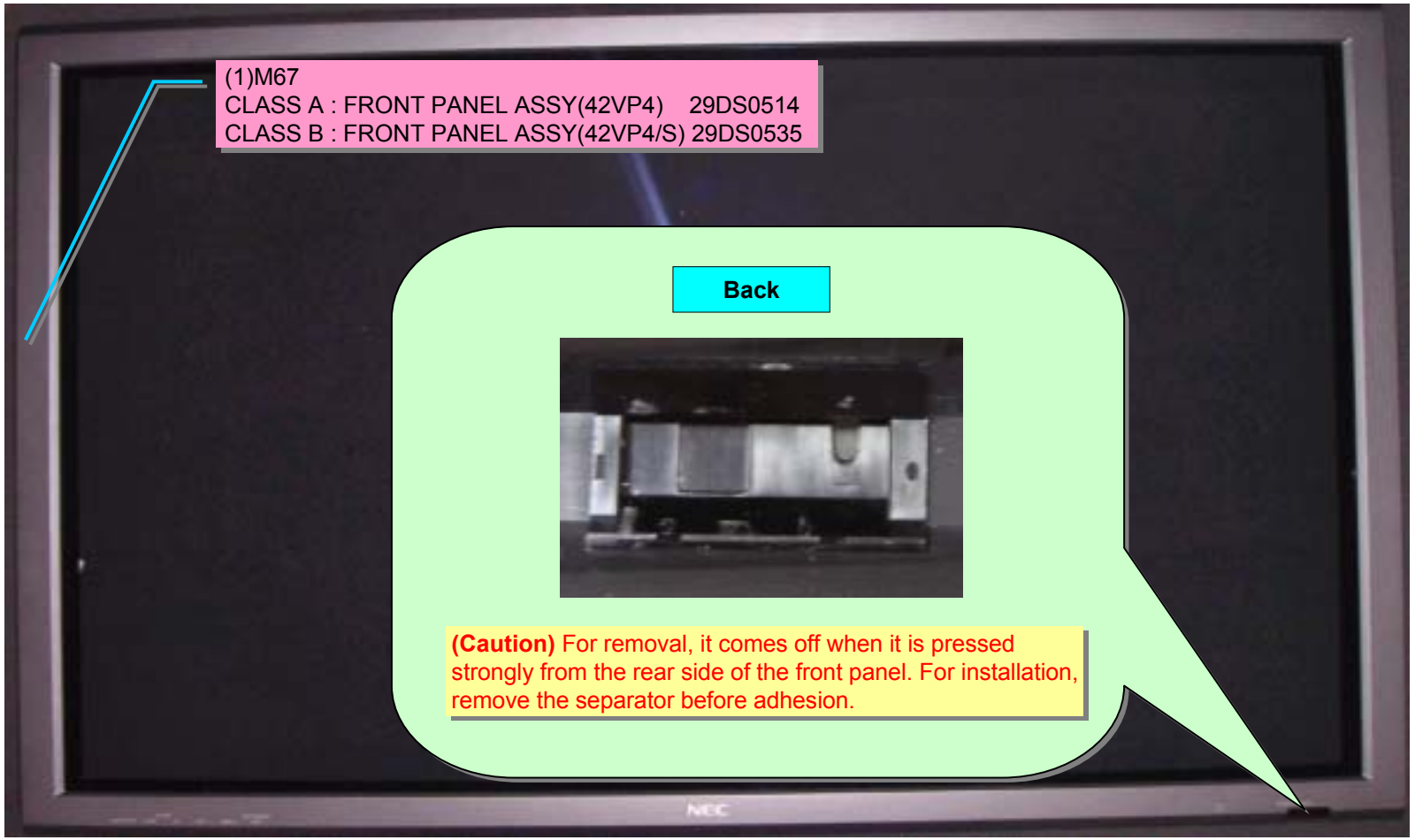
9. CTL PWB/CONTORL BUTTON/LED PWB



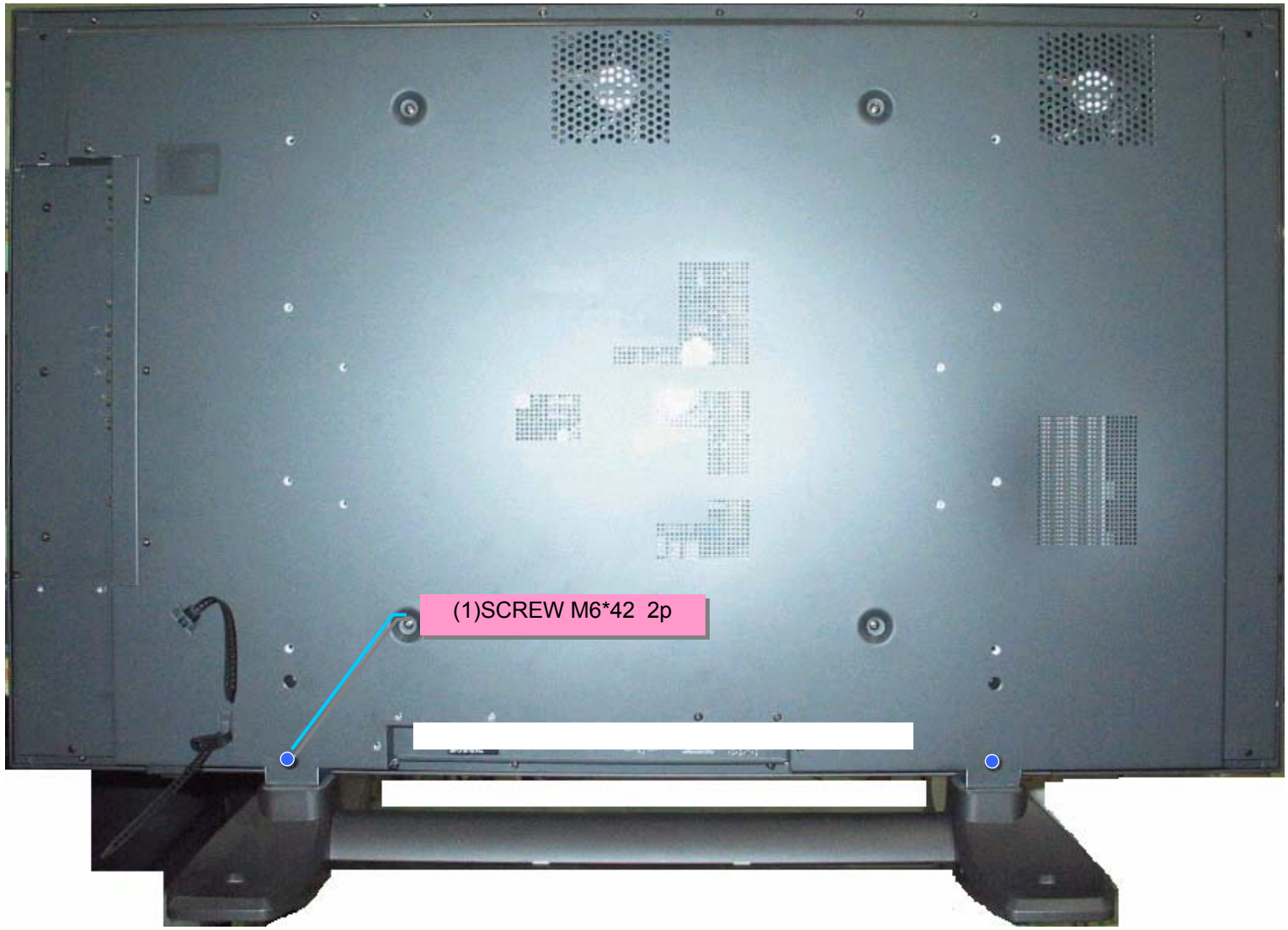
10. COVER CONTROL



11. FRONT PANEL

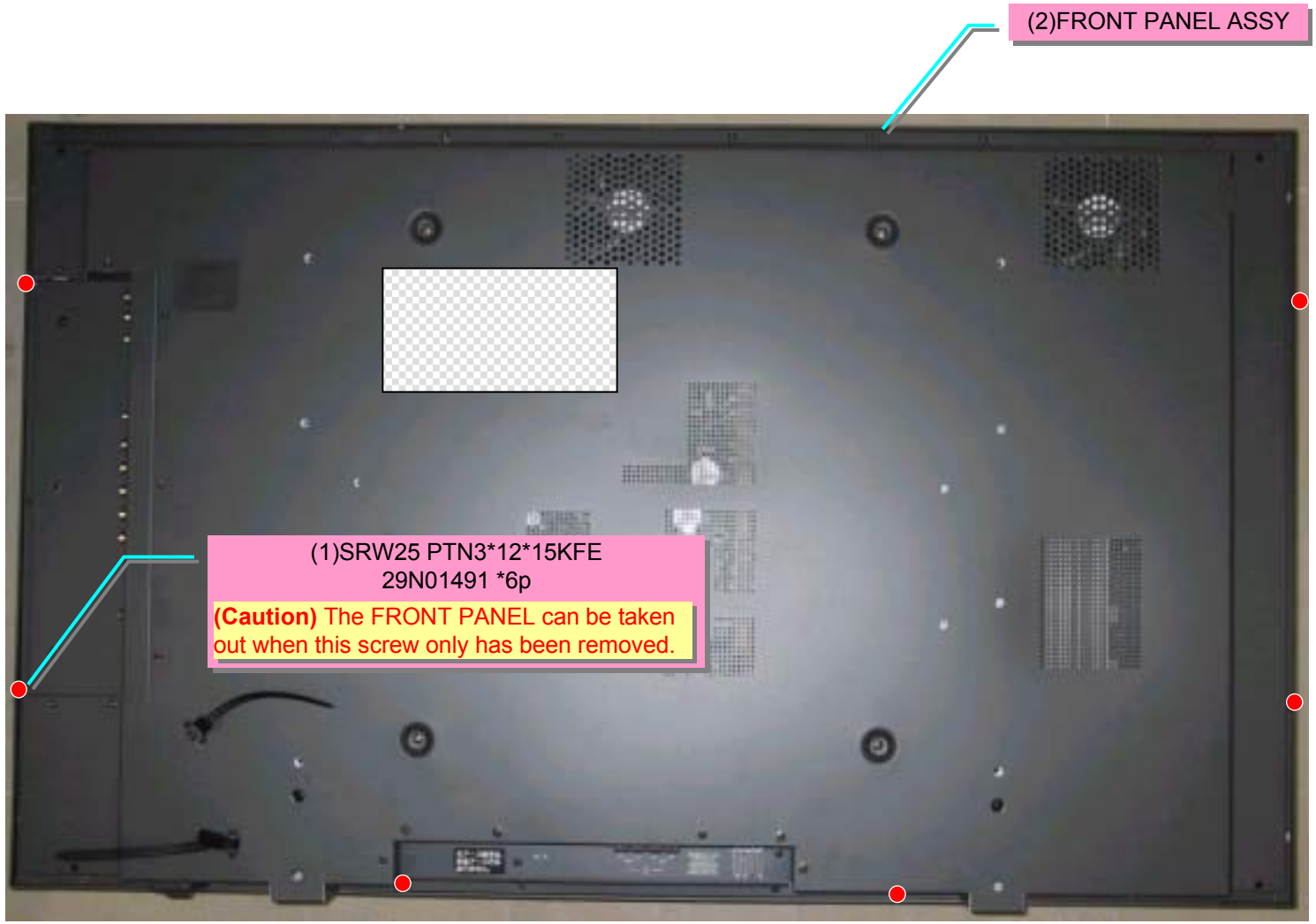


12. STAND (modification)

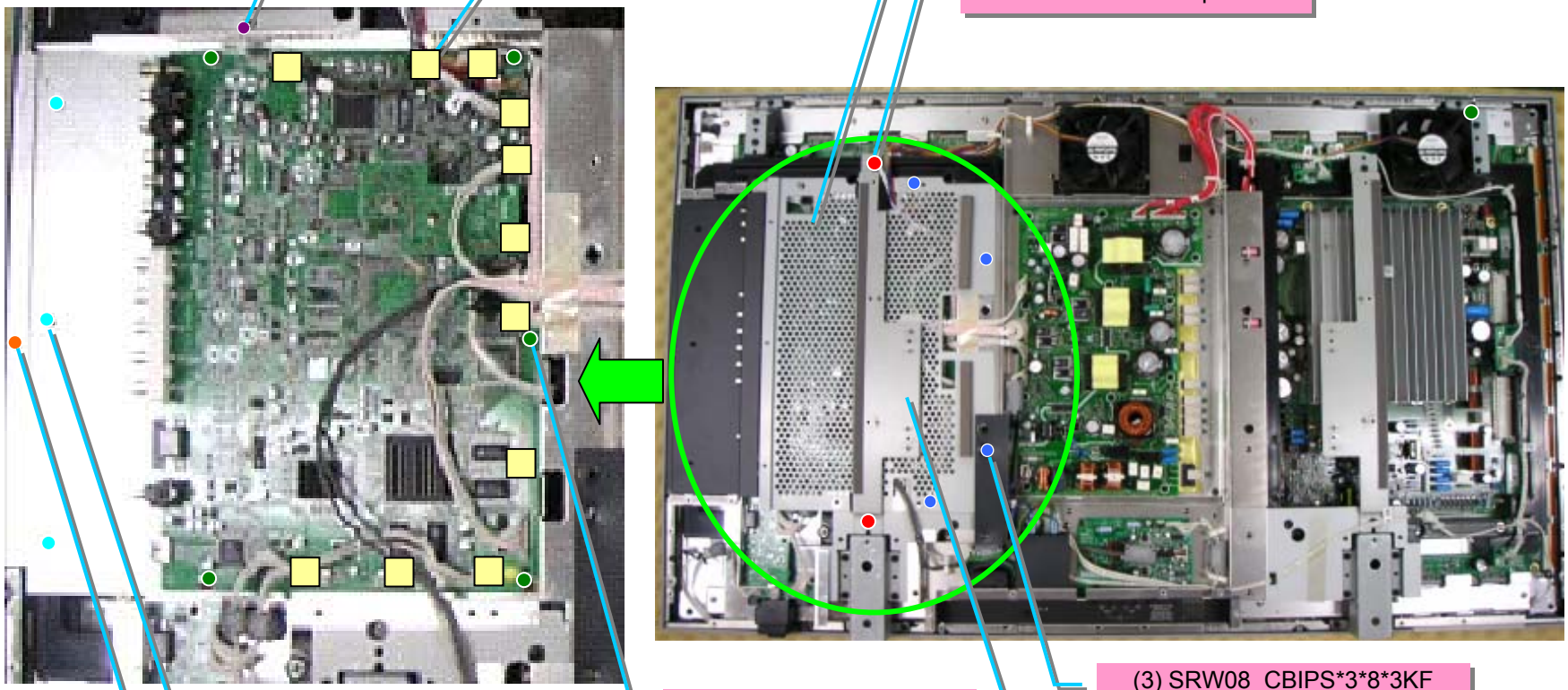


13. BACK COVER (modification)

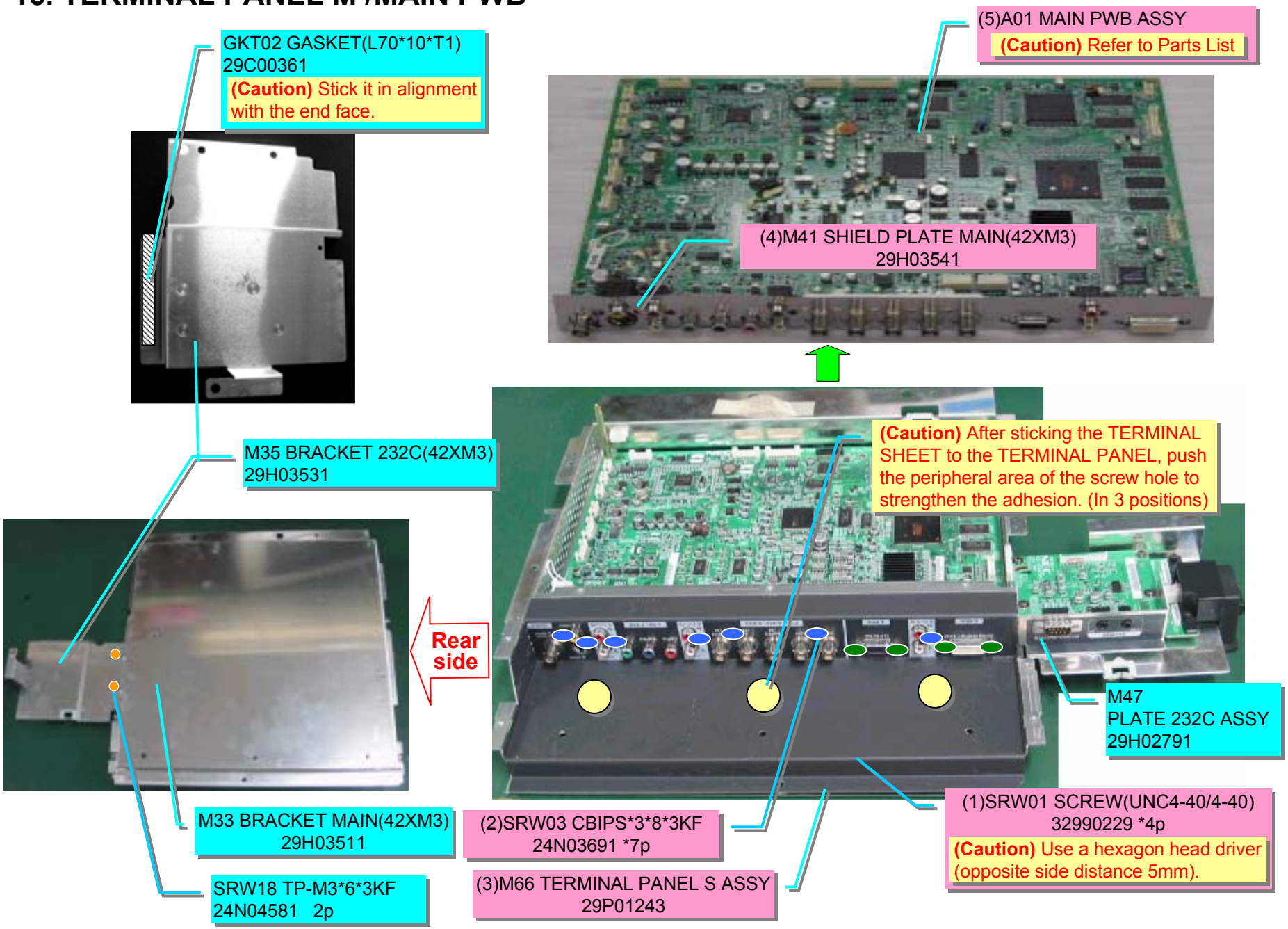
(Caution) The illustration below shows a case when the STAND has been removed.



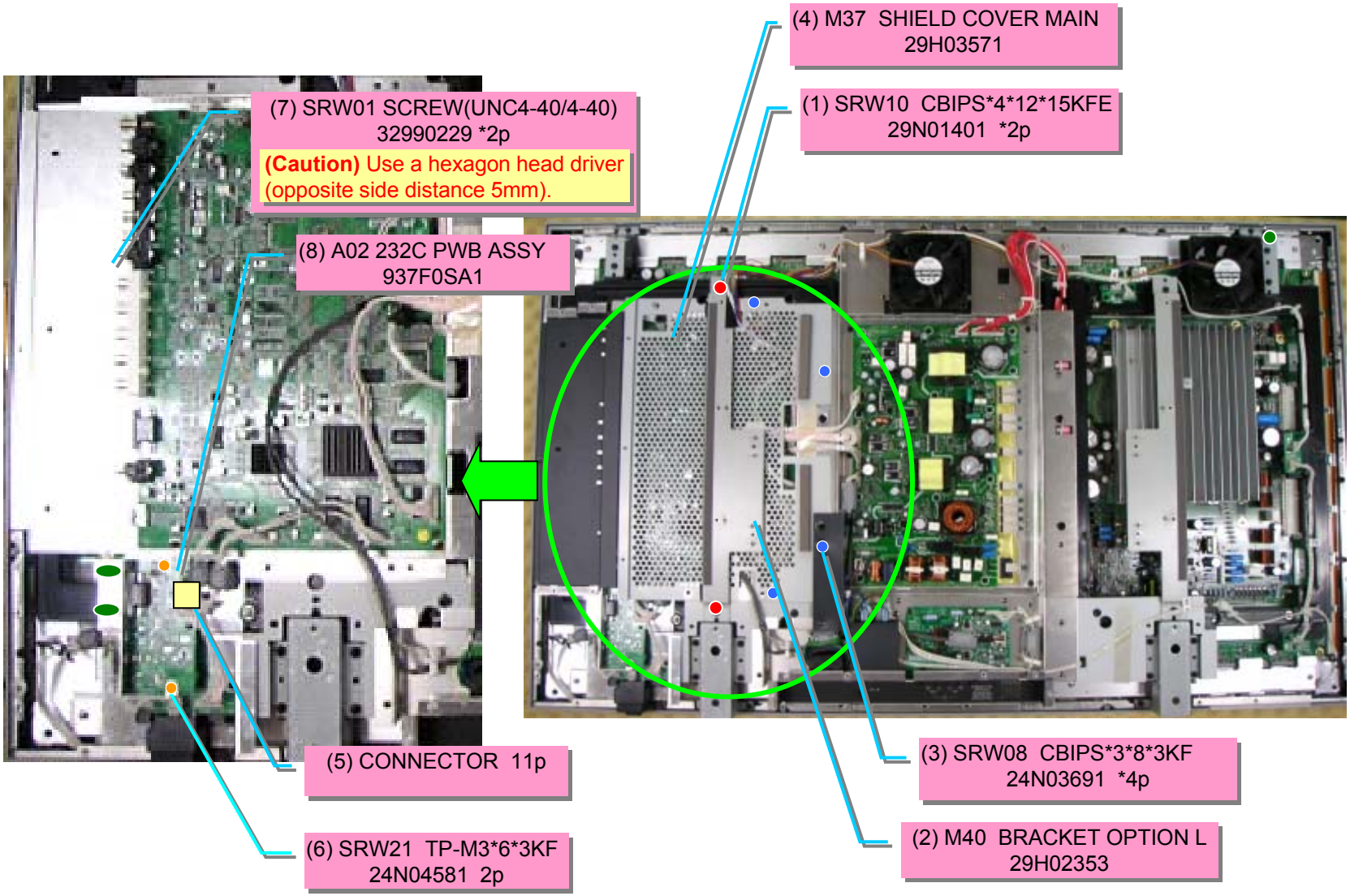
14. TERMINAL PANEL M SUB ASSY



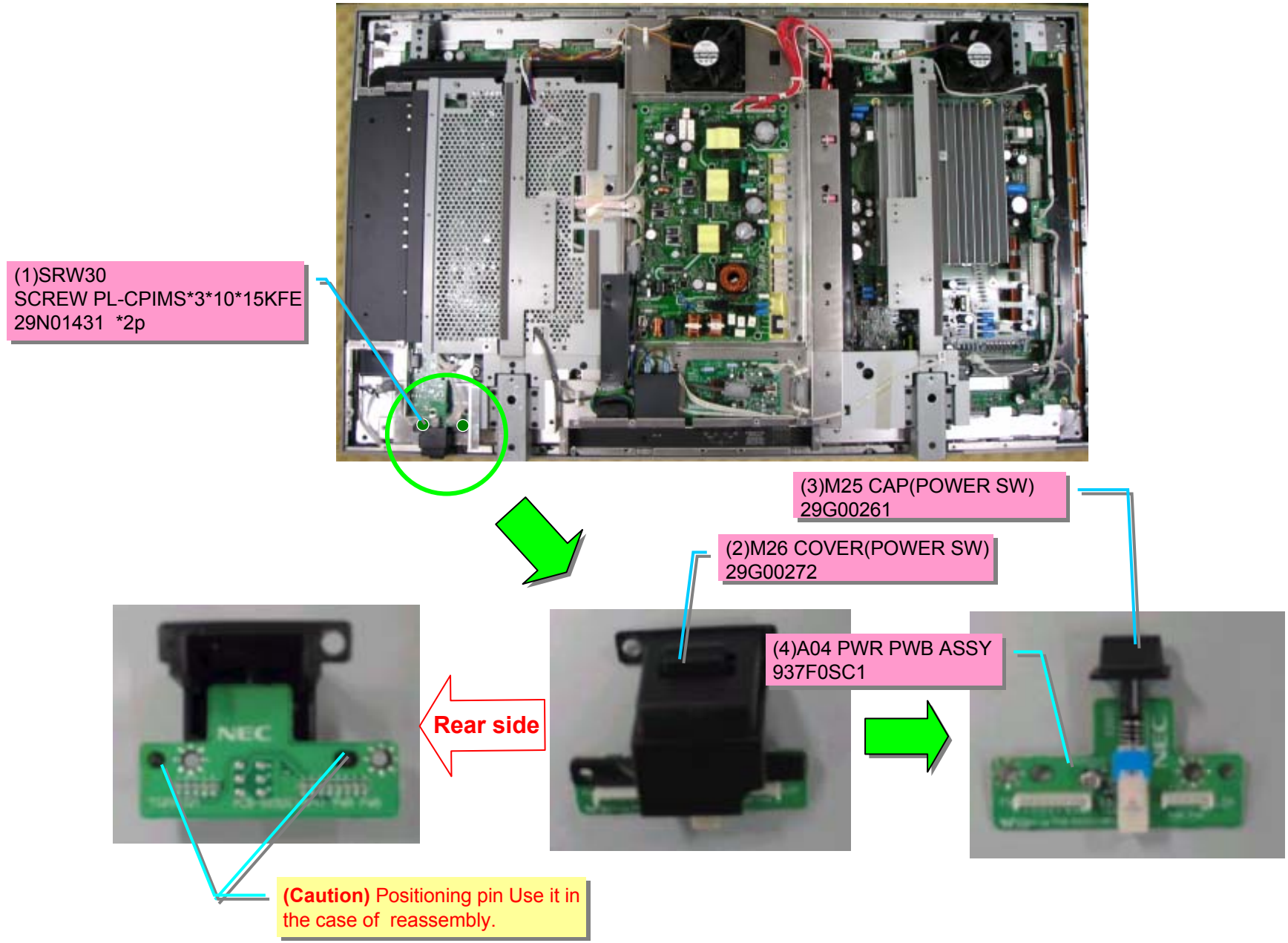
15. TERMINAL PANEL M /MAIN PWB



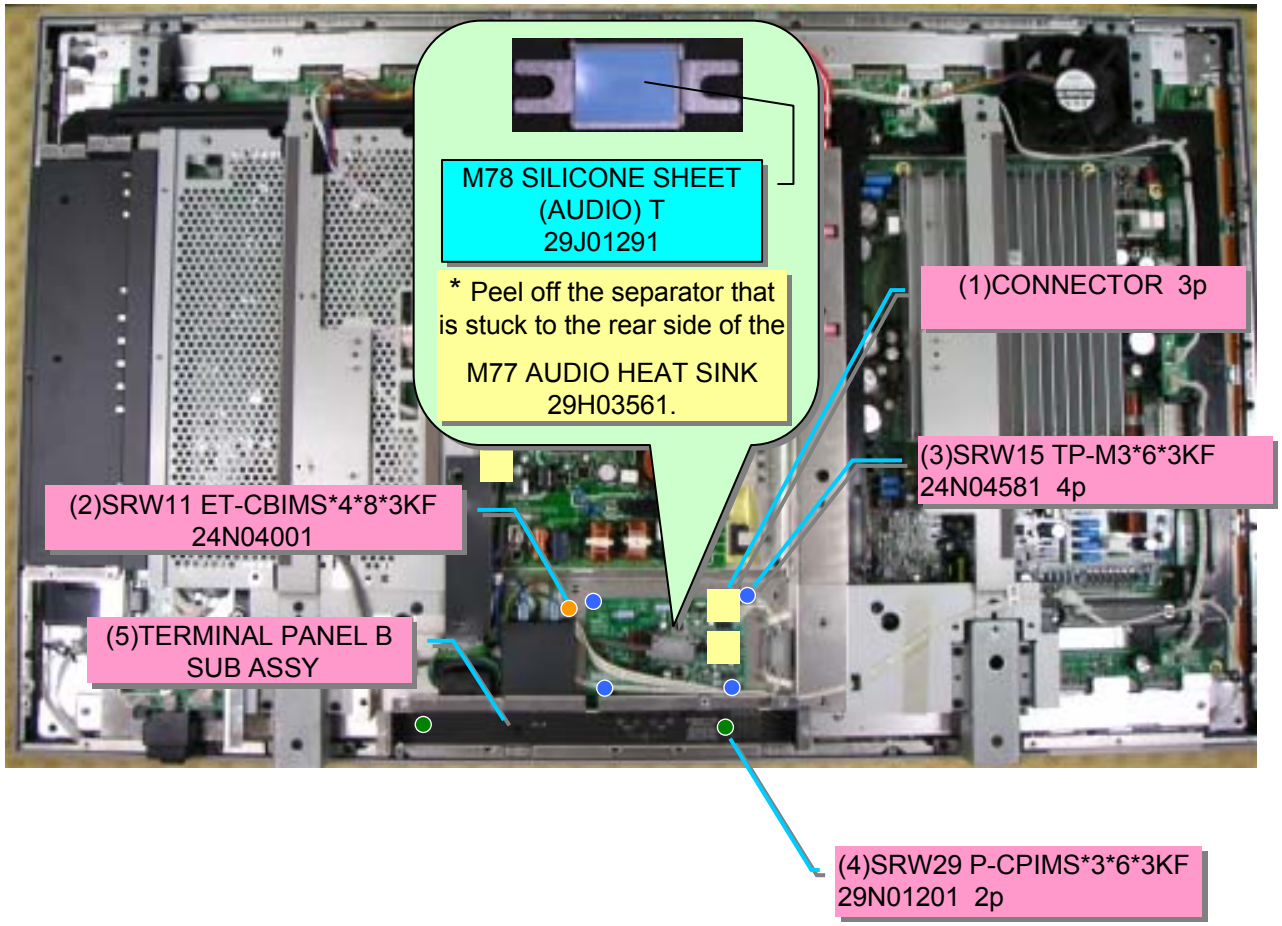
16. BRACKET OPTION L/SHIEL COVER/232C PWB



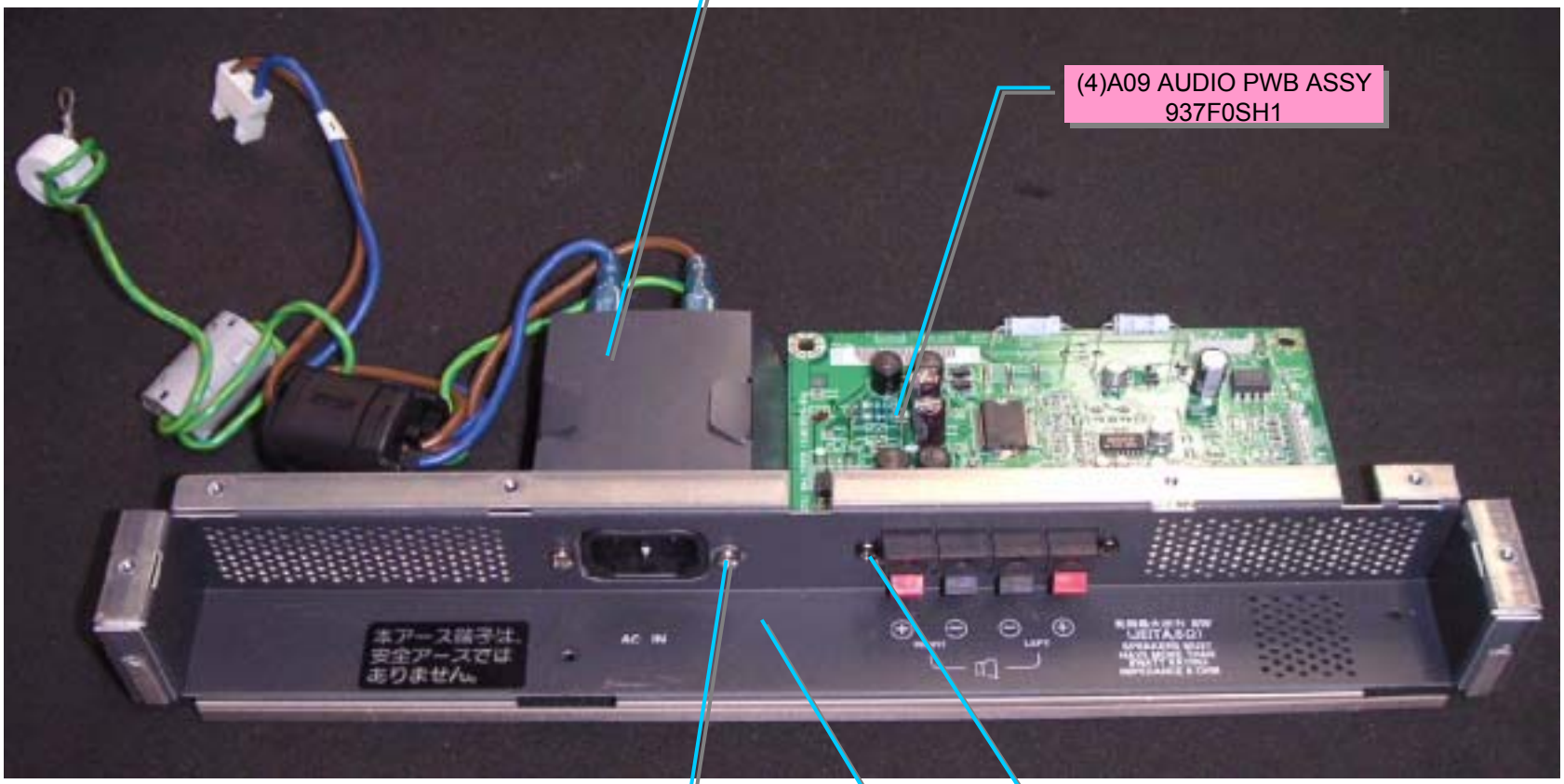
17. POWER BUTTON COVER/POWER BUTTON/PWR PWB



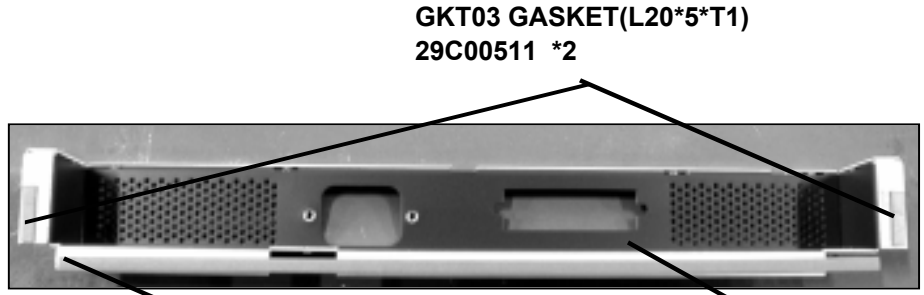
18. TERMINAL PANEL B SUB ASSY



19. TERMINAL PANEL B/AUDIO PWB/AC INLET ASSY



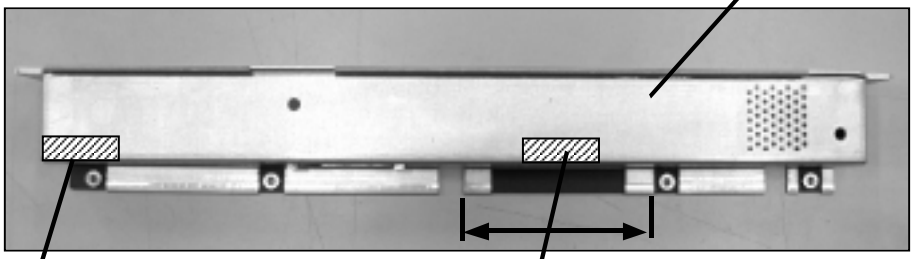
20. TERMINAL PANEL B



GKT03 GASKET(L20*5*T1)
29C00511 *2

GKT05 GASKET(L300*5*T1)
29C01481
(Caution) Stick it in alignment with this end.

M64
TERMINAL PANEL B : 29P01111 (CLASS A)
TERMINAL PANEL B(NO SP) : 29P01331 (CLASS B)

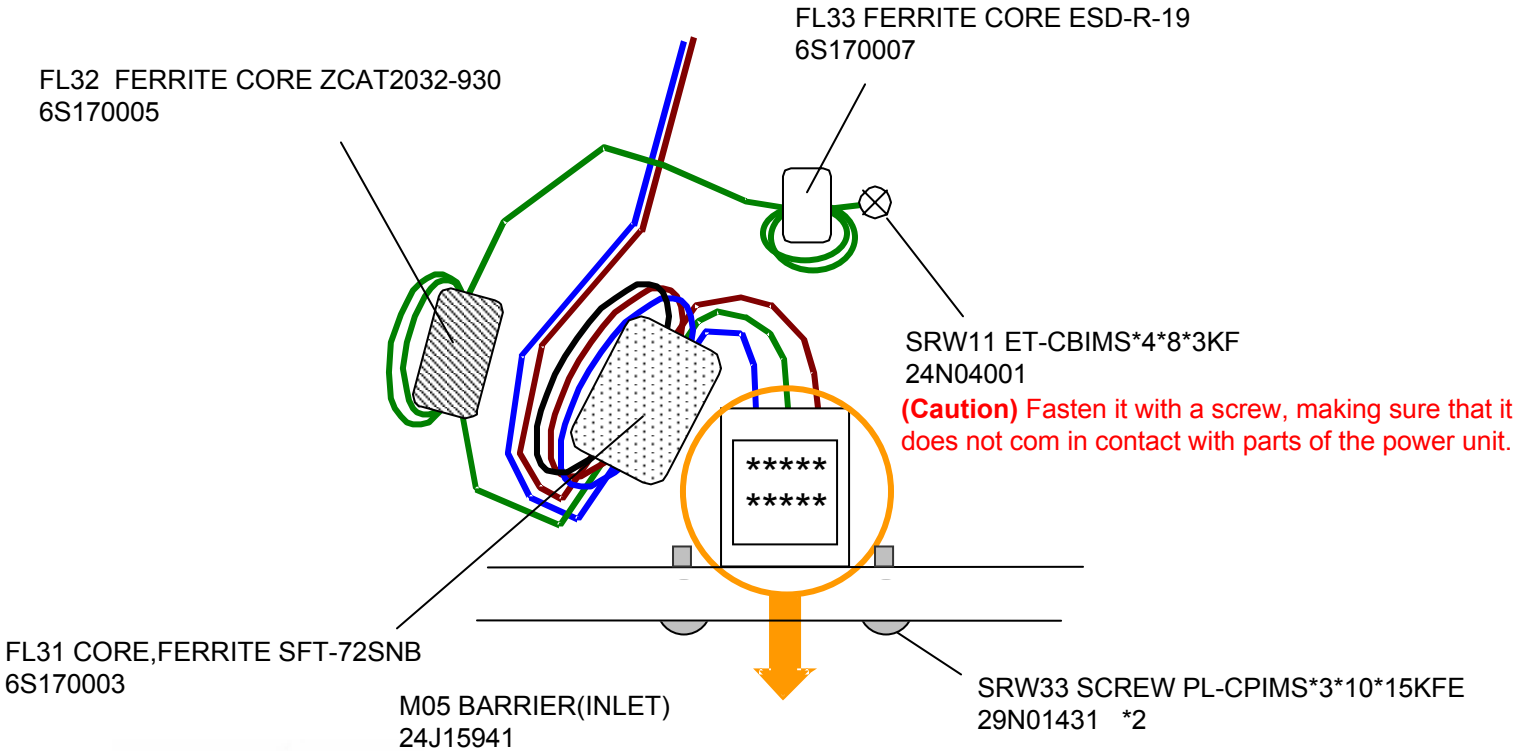


GKT04 GASKET(L20*5*T1)
29C00511
(Caution) Stick the GASKET based on the corner.

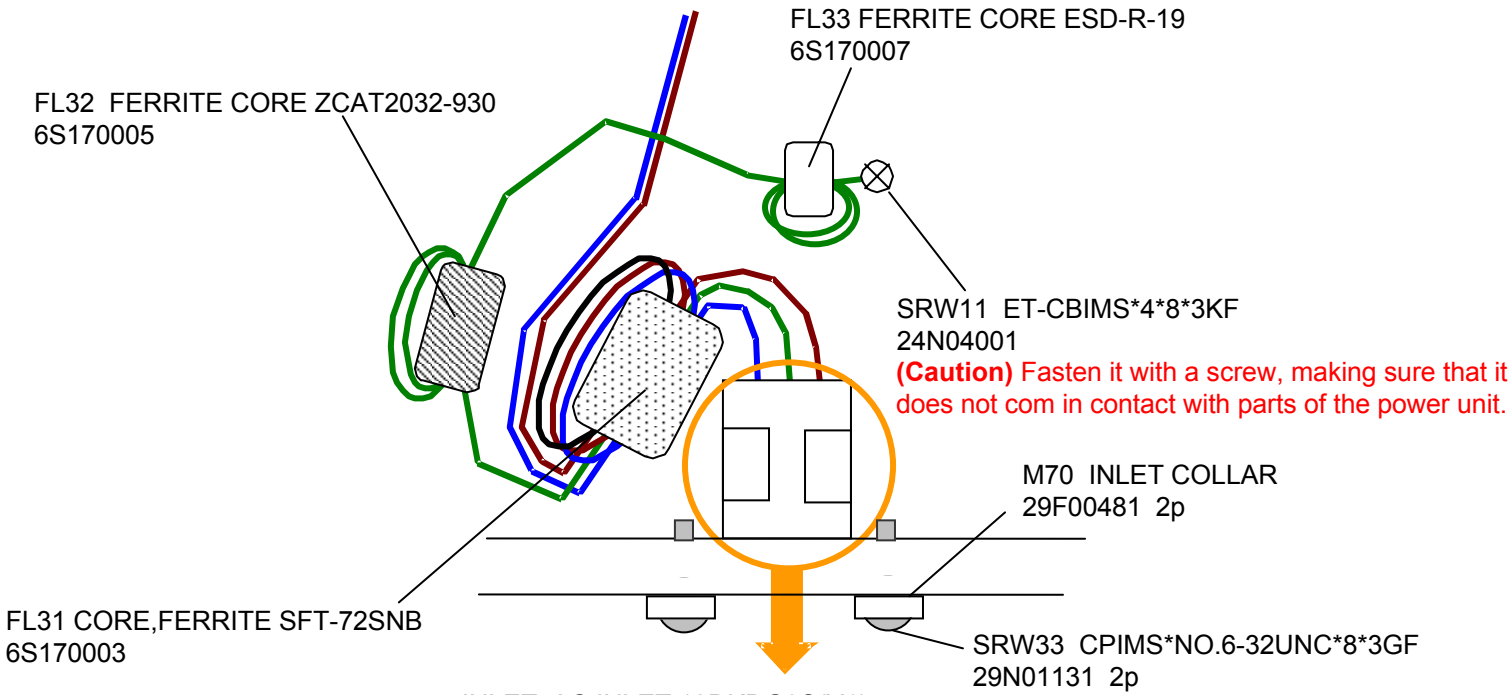
GKT04 GASKET(L20*5*T1)
29C00511
(Caution) Stick the GASKET to the middle section marked by the arrow.

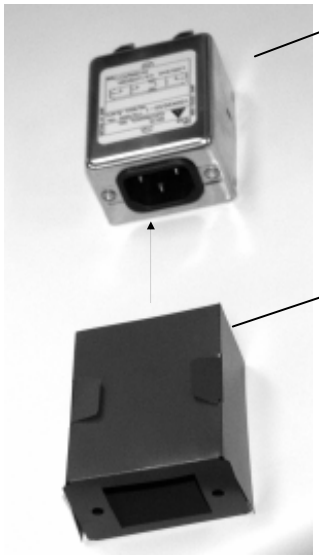
21. AC INLET

(1) CLASS A

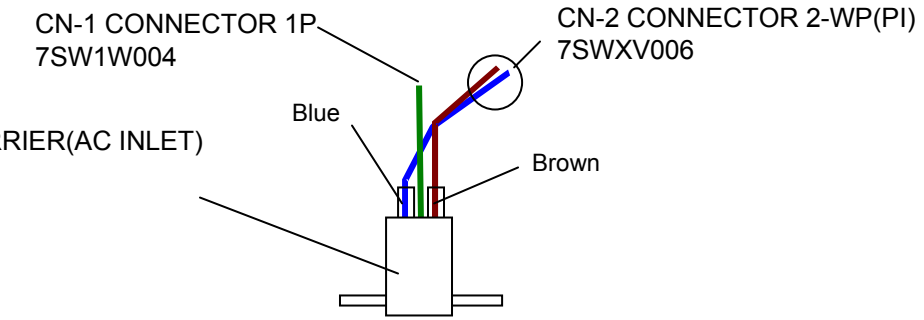


(2)CLASS B

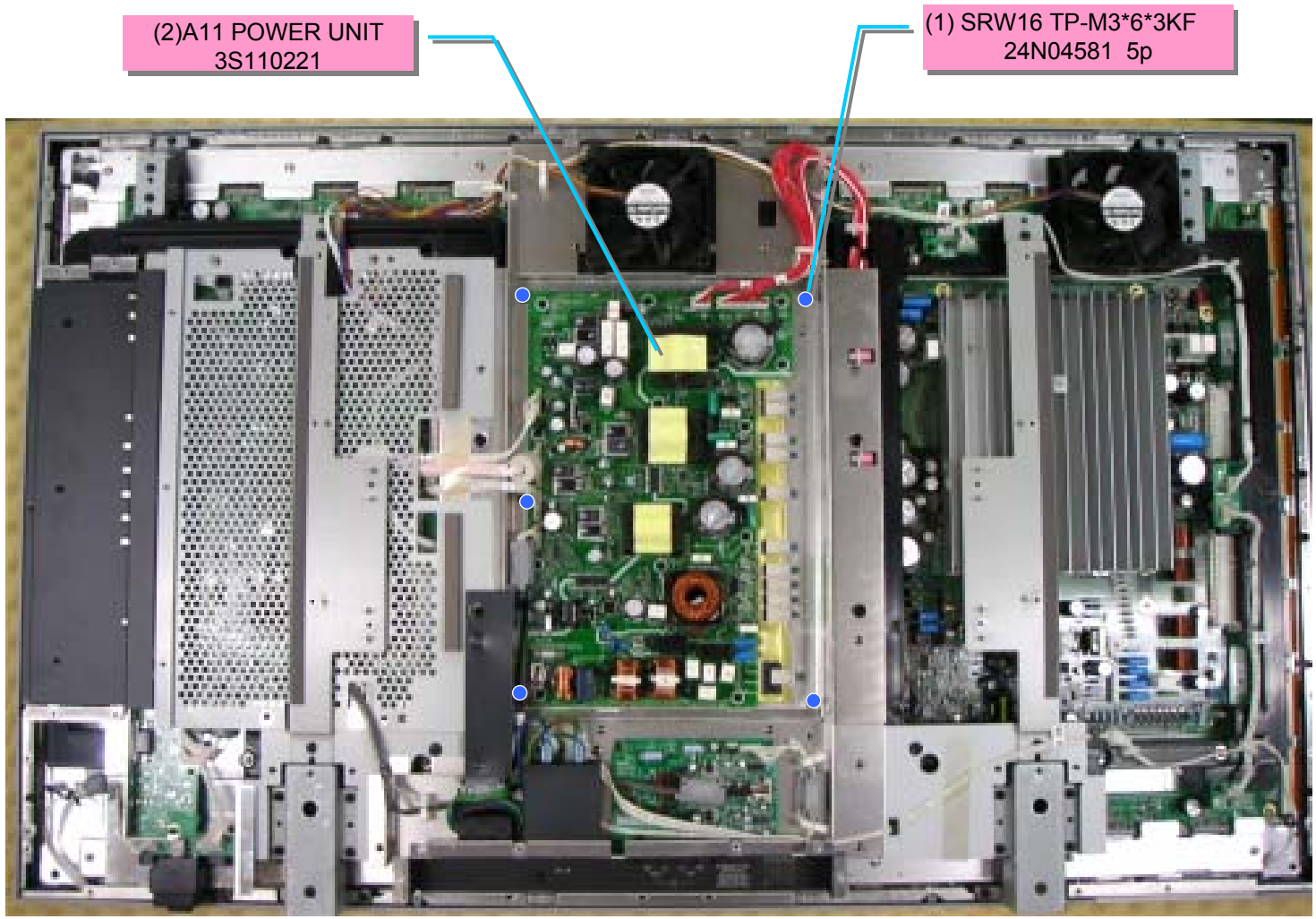




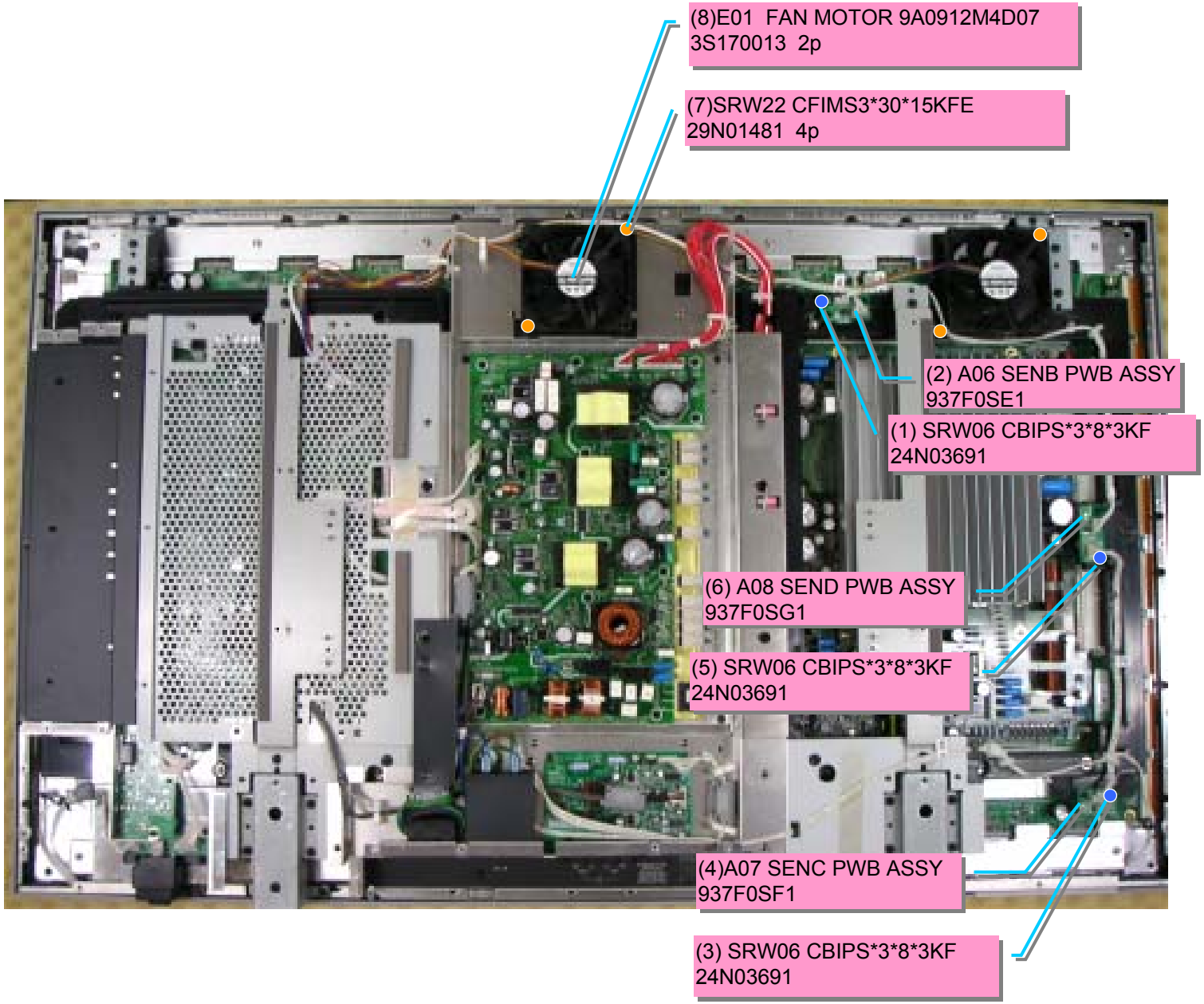
INLET AC INLET 10DKDG3S(Y1)
6S760016



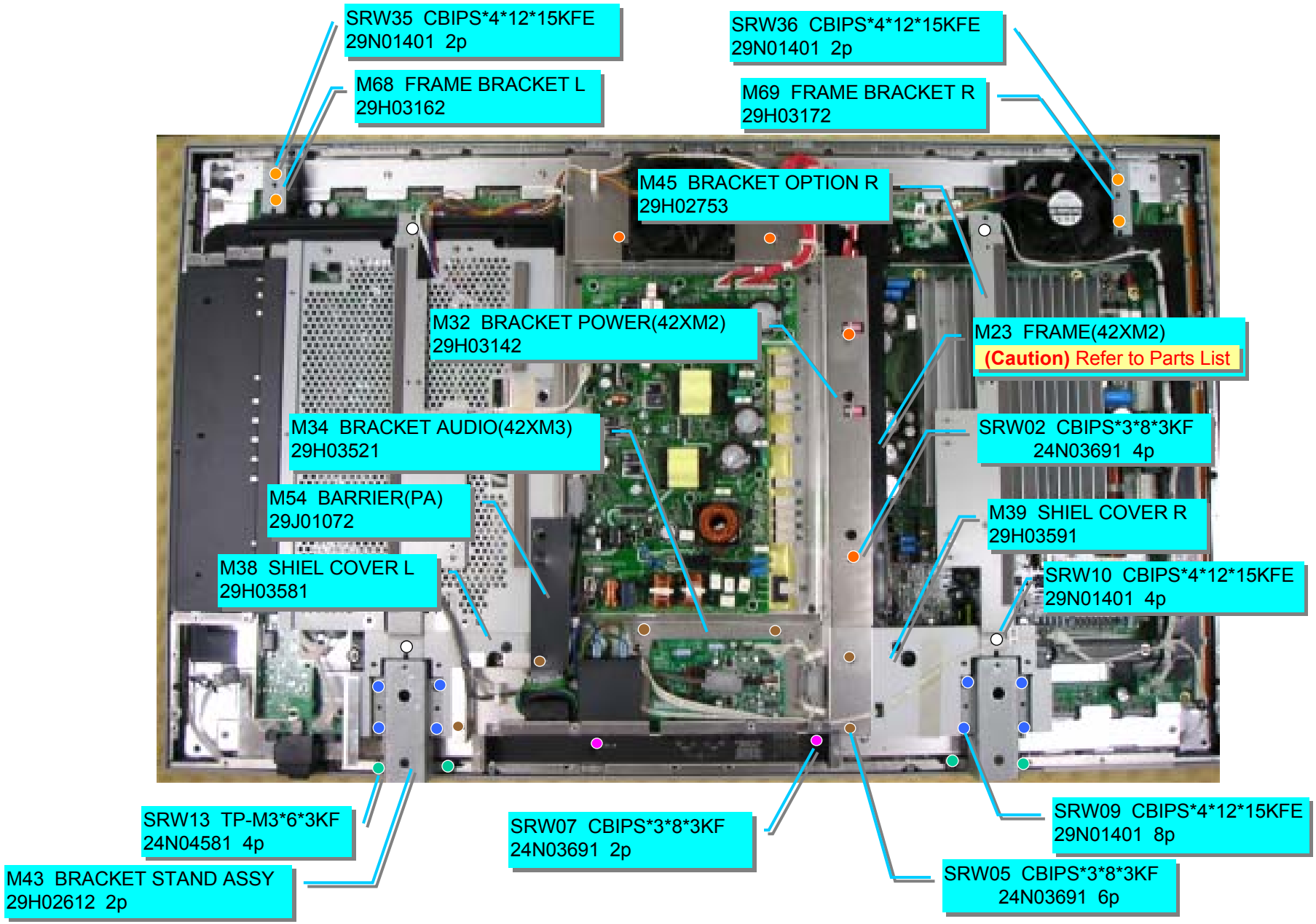
22. POWER UNIT

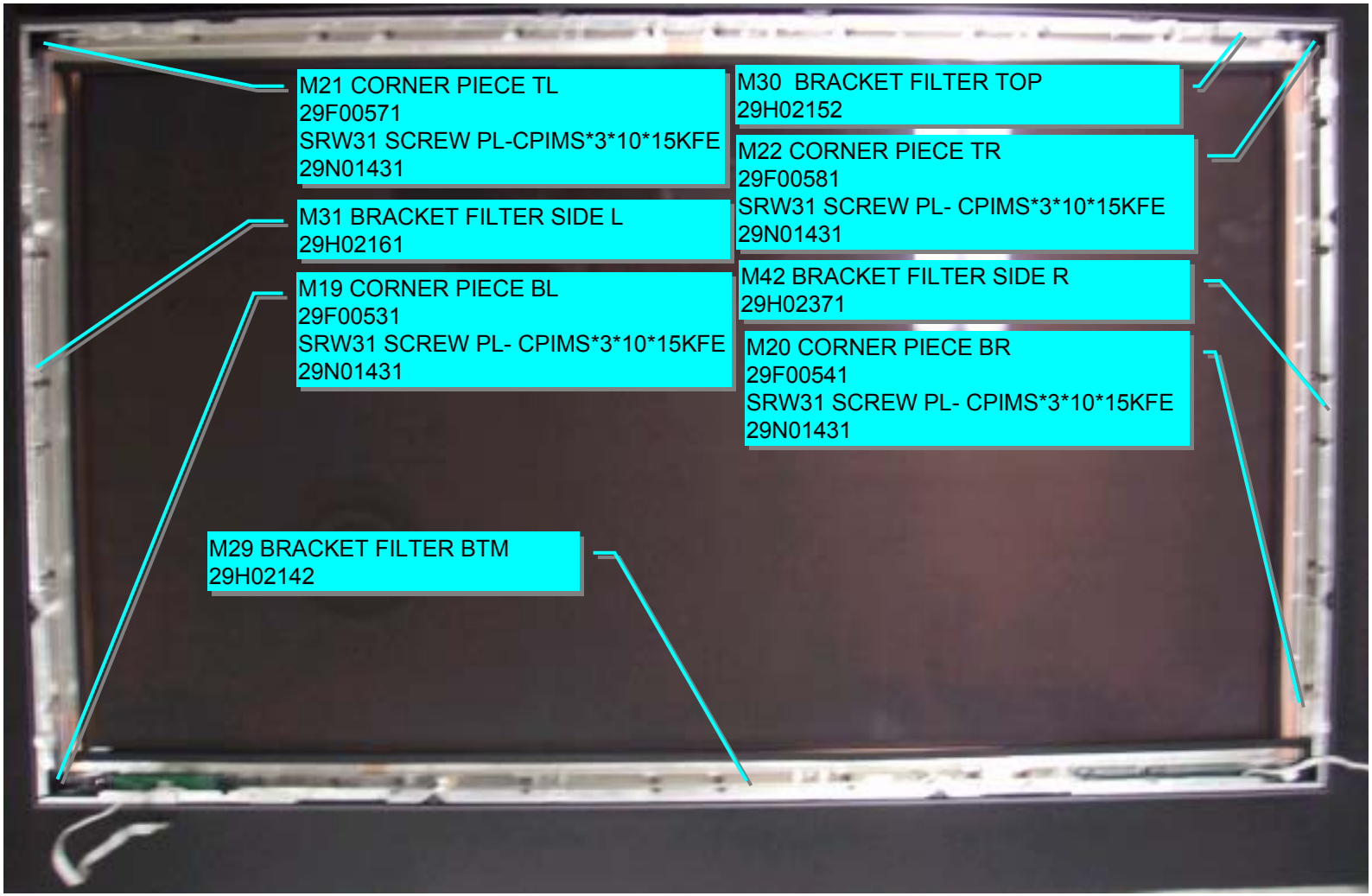


23. SENB PWB/SENC PWB/SEND PWB/FAN



24. MISCELLANEOUS PARTS




M21 CORNER PIECE TL
29F00571
SRW31 SCREW PL-CPIMS*3*10*15KFE
29N01431
M30 BRACKET FILTER TOP
29H02152
M22 CORNER PIECE TR
29F00581
SRW31 SCREW PL- CPIMS*3*10*15KFE
29N01431
M31 BRACKET FILTER SIDE L
29H02161
M42 BRACKET FILTER SIDE R
29H02371
M19 CORNER PIECE BL
29F00531
SRW31 SCREW PL- CPIMS*3*10*15KFE
29N01431
M20 CORNER PIECE BR
29F00541
SRW31 SCREW PL- CPIMS*3*10*15KFE
29N01431
M29 BRACKET FILTER BTM
29H02142

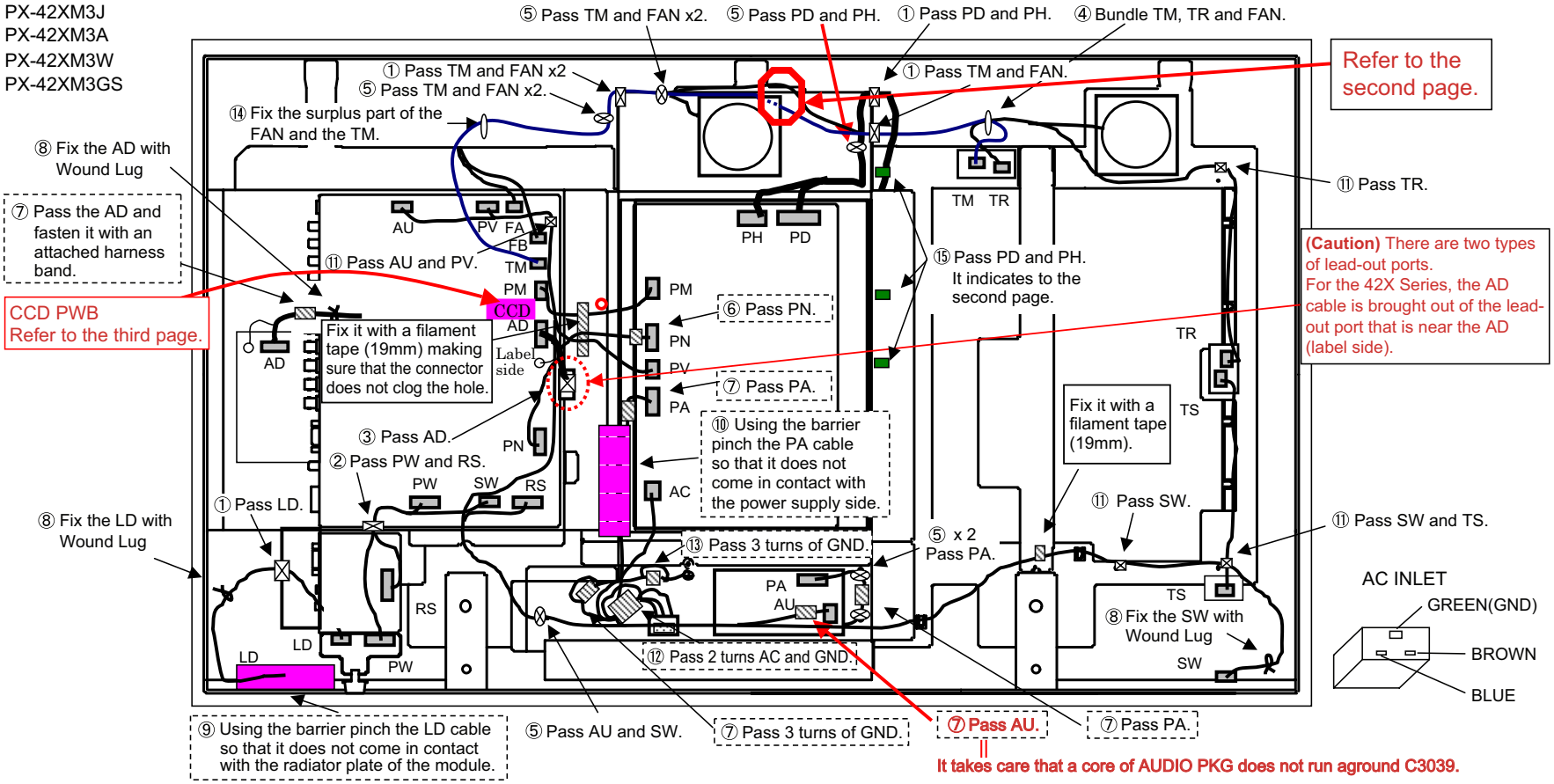
26. WIRING

(1)CLASS A

(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.

PX-42XM3 (CLASS A) Wiring Diagram

PX-42XM3J
PX-42XM3A
PX-42XM3W
PX-42XM3GS



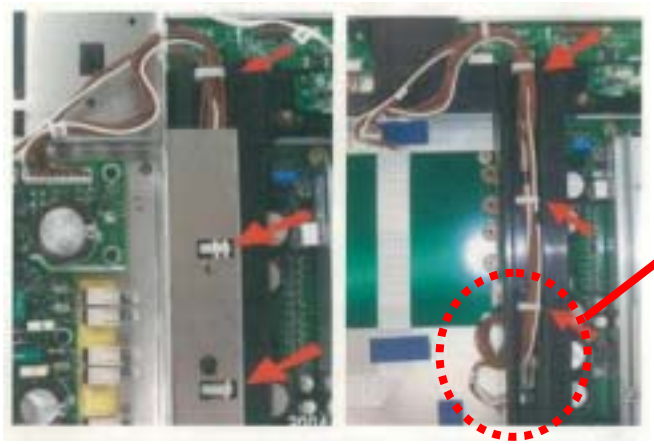
①EDGING SADDLE(EDS-1208U)	29C00461	4	☒
②EDGE SADDLE(TES-016NV)	29C01431	1	⊠
③EDGE SADDLE(TSB-1915)	24C05151	1	☒
④LEAD CLAMPER(D5.2)	24C00091	2	
⑤CLAMP(WS-2W-V0)	29C01421	6	⊗
⑥CORE,FERRITE TFT-081813N	6S170004	1	▯
⑦FERRITE CORE ZCAT2032-930	6S170005	5	▯

⑧LUG(L60)	29C01471	3	
⑨BARRIER(LD)	29J01061	1	
⑩BARRIER(PA)	29J01072	1	
⑪CLAMP(MWC-2S)	29C01401	4	⊠
⑫CORE,FERRITE SFT-72SNB	6S170003	1	▨
⑬FERRITE CORE ESD-R-19	6S170007	1	▨
⑭CLAMPER,WIRE (D8.3)	24C00101	1	
⑮CLAMP(LWS-1S V0)	29C01931	3	■ ← (It indicates to the second page.)

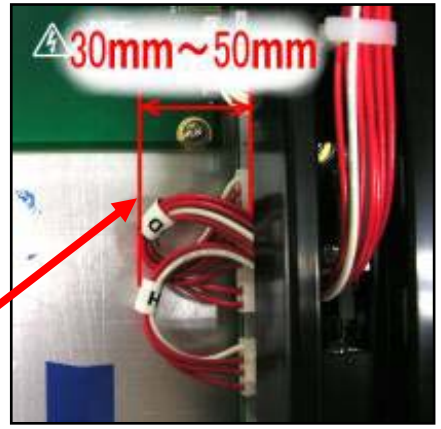
CCD board of PX-42XM3A : Try to push the bush rivet and the connector to check for the freedom from floating.

PX-42XM3 (CLASS A) Wiring Diagram

How to lay PD/PH cables

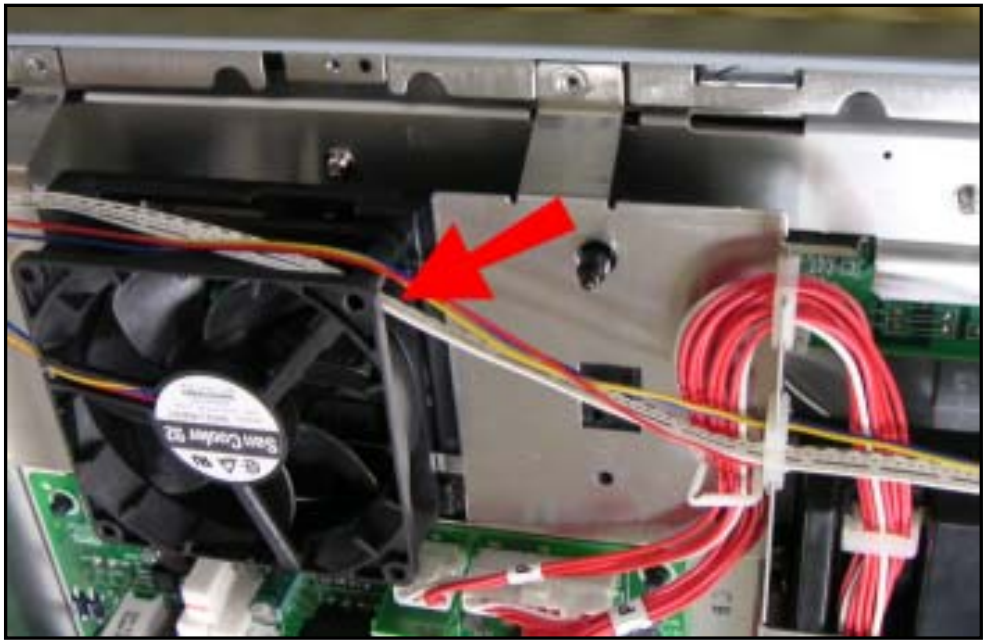


After assembly work During cabling work



The PD/PH cable is provided with a sag of 30mm ~ 50mm as shown in the photo above. In this state, the cable is fixed with clampers.

Prevention of interference between TM cable and fan:
The TM cable is made to pass through the hole located around the embossed part for fan fixing (indicated by the red arrow in the photo). This arrangement is effective in the prevention of the TM cable from touching the blade block of the fan.



PX-42XM3 (CLASS A) Wiring Diagram

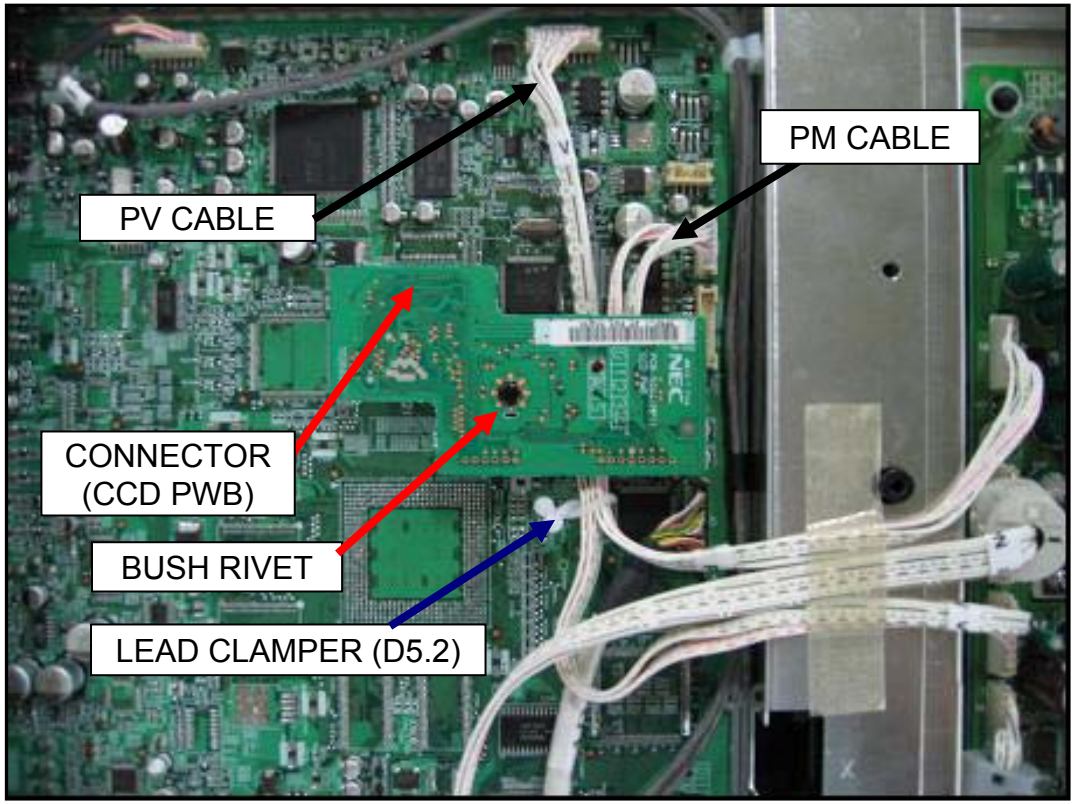
[Measures to be taken against connector go-through in the CCD PWB]
A problem of connector go-through in the CCD PWB can be caused by inadequate workmanship such that a wiring material is pinched between the CCD PWB and the shield lid. To eliminate this problem, wiring work should be carried out as specified below, so that the PV and PM cables are never led to the CCD PWB.

[Model] For North America (Version A only)

[Wiring instructions] (Refer to the diagram below.)

(1) Pass the PV and PM cables beneath the CCD PWB.
(2) Fix the PV and PM cables by means of lead clampers.
(3) Push the bush rivet and the connector to check for the freedom from floating.

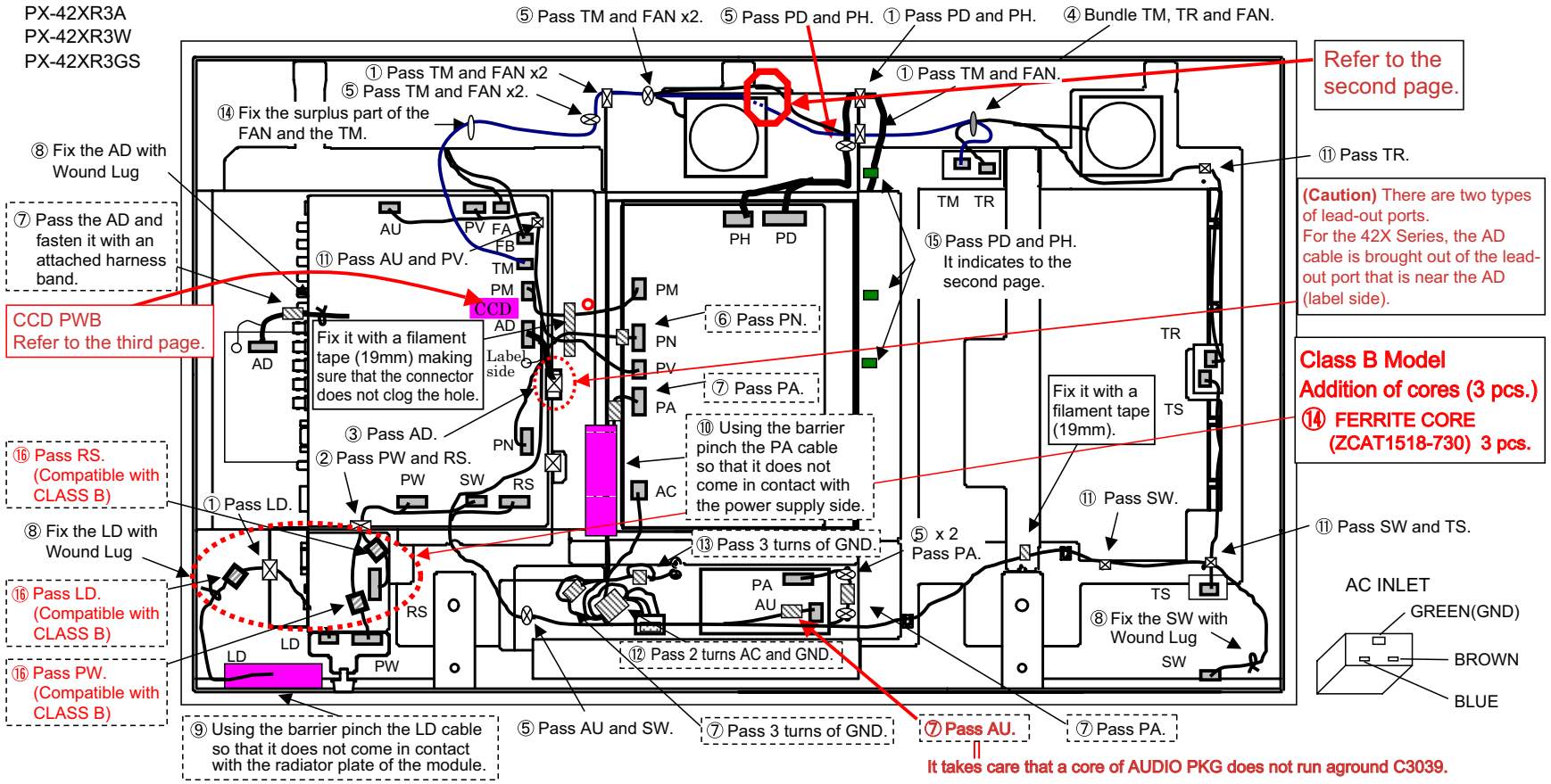
[Lead clampers to be used]
LEAD CLAMPER(D5.2): 24C00091



(2)CLASS B

(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.

PX-42XR3 (CLASS B) Wiring Diagram



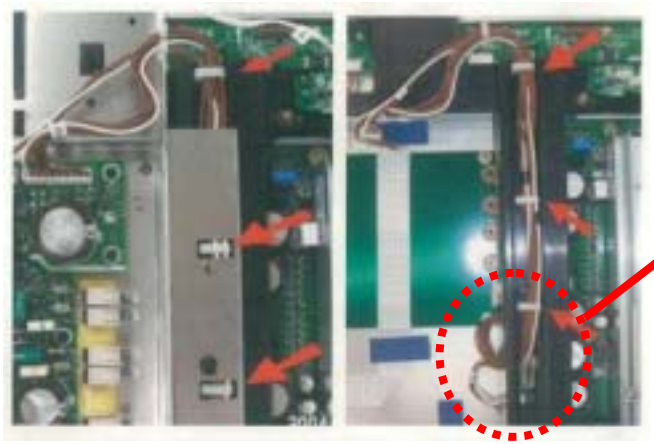
①EDGING SADDLE(EDS-1208U)	29C00461	4	
②EDGE SADDLE(TES-016NV)	29C01431	1	
③EDGE SADDLE(TSB-1915)	24C05151	1	
④LEAD CLAMPER(D5.2)	24C00091	2	
⑤CLAMP(WS-2W-V0)	29C01421	6	
⑥CORE,FERRITE TFT-081813N	6S170004	1	
⑦FERRITE CORE ZCAT2032-930	6S170005	5	

⑧LUG(L60)	29C01471	3	
⑨BARRIER(LD)	29J01061	1	
⑩BARRIER(PA)	29J01072	1	
⑪CLAMP(MWC-2S)	29C01401	4	
⑫CORE,FERRITE SFT-72SNB	6S170003	1	
⑬FERRITE CORE ESD-R-19	6S170007	1	
⑭CLAMPER,WIRE (D8.3)	24C00101	1	
⑮CLAMP(LWS-1S V0)	29C01931	3	← (It indicates to the second page.)
⑯FERRITE CORE ZCAT1518-0730	6S170006	3	

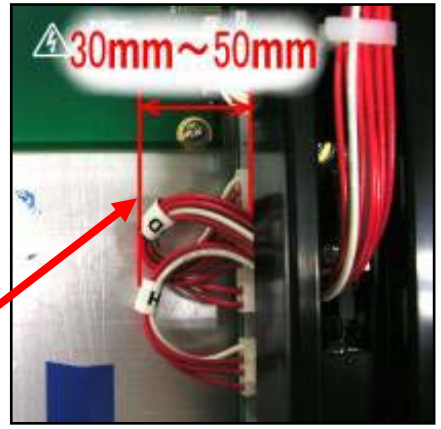
CCD board of PX-42XR3A : Try to push the bush rivet and the connector to check for the freedom from floating.

PX-42XR3 (CLASS B) Wiring Diagram

How to lay PD/PH cables

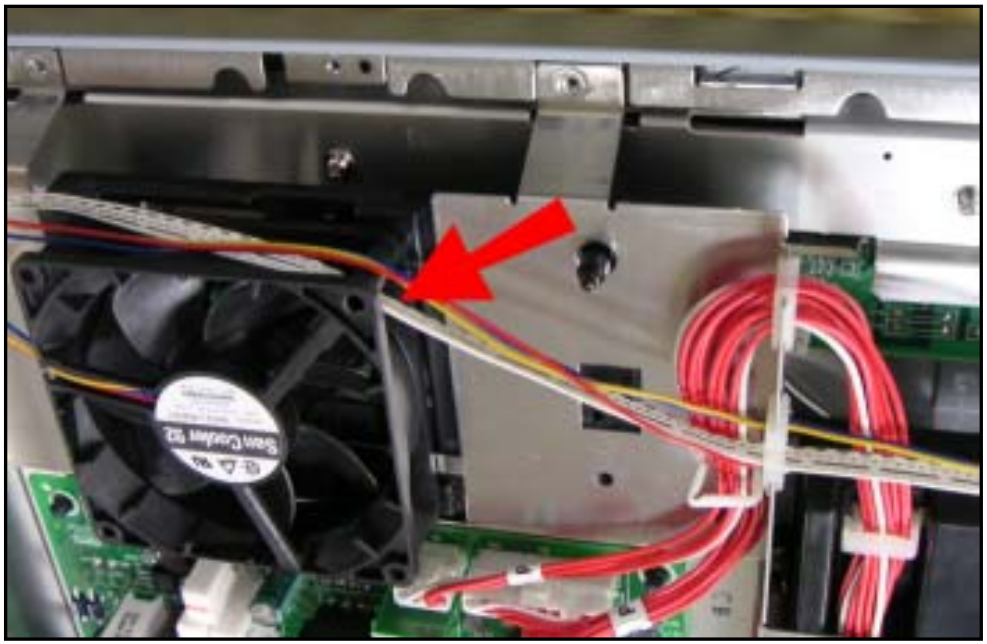


After assembly work During cabling work



The PD/PH cable is provided with a sag of 30mm ~ 50mm as shown in the photo above. In this state, the cable is fixed with clampers.

Prevention of interference between TM cable and fan:
The TM cable is made to pass through the hole located around the embossed part for fan fixing (indicated by the red arrow in the photo). This arrangement is effective in the prevention of the TM cable from touching the blade block of the fan.



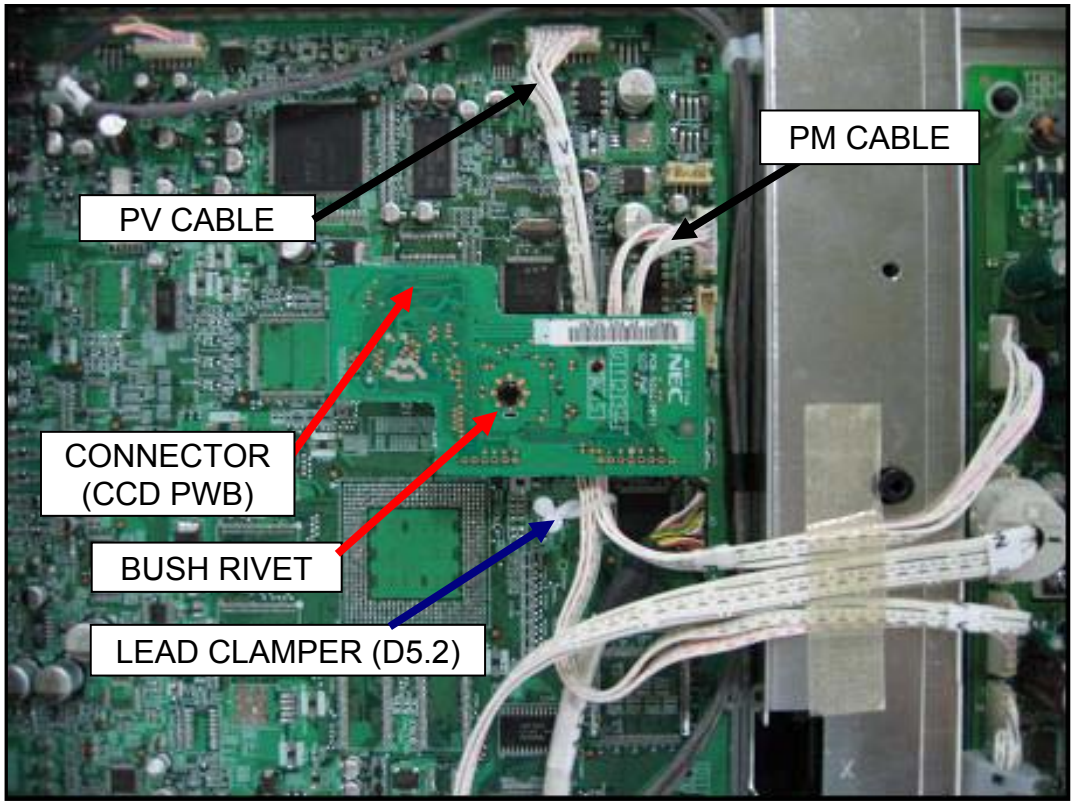
PX-42XR3 (CLASS B) Wiring Diagram

[Measures to be taken against connector go-through in the CCD PWB]
A problem of connector go-through in the CCD PWB can be caused by inadequate workmanship such that a wiring material is pinched between the CCD PWB and the shield lid. To eliminate this problem, wiring work should be carried out as specified below, so that the PV and PM cables are never led to the CCD PWB.

[Model] For North America (Version A only)

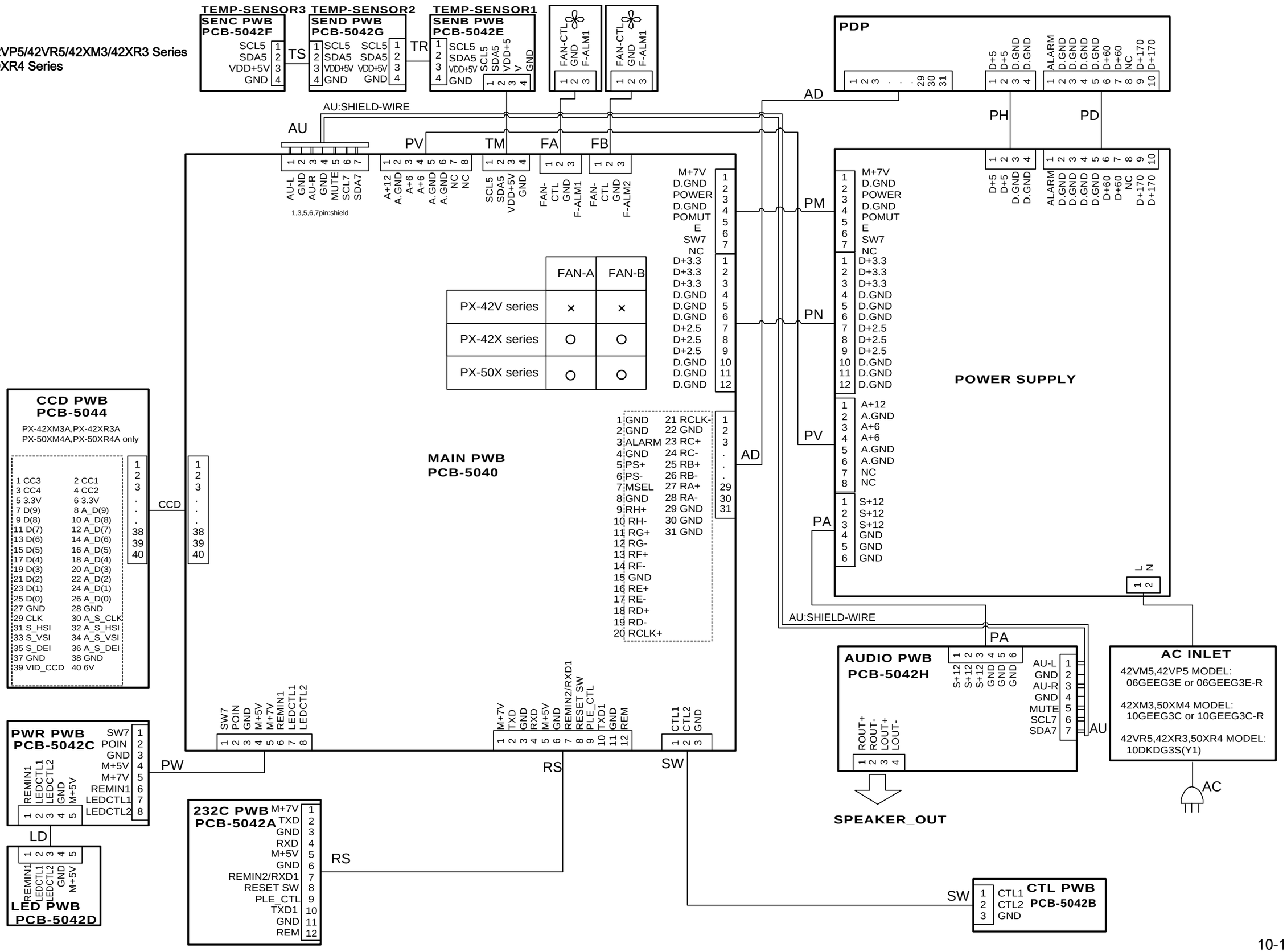
[Wiring instructions] (Refer to the diagram below.)
(1) Pass the PV and PM cables beneath the CCD PWB.
(2) Fix the PV and PM cables by means of lead clampers.
(3) Push the bush rivet and the connector to check for the freedom from floating.

[Lead clampers to be used]
LEAD CLAMPER(D5.2): 24C00091



CONNECTION DIAGRAMS

PX-42VM5/42VP5/42VR5/42XM3/42XR3 Series
PX-50XM4/50XR4 Series



CONNECTOR PIN EXPLANATION

PX-42VM5/42VP5/42VR5/42XM3/42XR3/50XM4/50XR4/61XM3/61XR3 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	42VM5 42VP5 42XM3 50XM4 61XM3	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
				42VR5 42XR3 50XR4 61XR3	0	0	0	0	0	0	-	
	8	RESET SW	NC		-	-	-	-	-	-	-	-
	9	PLE_CTL	PLE control	42VM5 42VP5 42XM3 50XM4 61XM3	0	3.3V duning data transmission for Video WOLL 0V when no data are transmitted	3.3V duning data transmission for Video WOLL 0V when no data are transmitted	3.3V duning data transmission for Video WOLL 0V when no data are transmitted	0	0	-	MAIN→RS232C
				42VR5 42XR3 50XR4 61XR3	0	0	0	0	0	0	-	
	10	TXD1	RS232 driver output	42VM5 42VP5 42XM3 50XM4 61XM3	0	Clock signal used during data transmission (5Vac) 5Vdc when no data are transmitted.	Clock signal used during data transmission (5Vac) 5Vdc when no data are transmitted.	Clock signal used during data transmission (5Vac) 5Vdc when no data are transmitted.	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					
				42VR5 42XR3 50XR4 61XR3	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	42VM5 42VP5 42XM3 50XM4 61XM3	0	3.3V when a wired remote control is connected/ When not connected.	3.3V when a wired remote control is connected/ When not connected.	3.3V when a wired remote control is connected/ When not connected.	3.3V when a wired remote control is connected/ When not connected.	0	-	RS232C→MAIN
				42VR5 42XR3 50XR4 61XR3	-	-	-	-	-	-	-	(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	42VM5 42VP5 42VR5	-	-	-	-	-	-	-	-
				42XM3 42XR3	0	11.5Vdc during high-speed revolution (Fan mode H); 8.5Vdc during medium speed revolution (Fan mode M); 6.5Vdc during low-speed revolution (Fan mode L)	11.5Vdc during high-speed revolution (Fan mode H); 8.5Vdc during medium speed revolution (Fan mode M); 6.5Vdc during low-speed revolution (Fan mode L)	0	0	0	-	MAIN→FAN
				50XM4 50XR4	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	-	
				61XM3 61XR3	0	9.3Vdc during high-speed revolution (Fan mode H); 7.6Vdc during medium speed revolution (Fan mode M); 5.3Vdc during low-speed revolution (Fan mode L)	9.3Vdc during high-speed revolution (Fan mode H); 7.6Vdc during medium speed revolution (Fan mode M); 5.3Vdc during low-speed revolution (Fan mode L)	0	0	0	-	
	2	GND	GND		0	0	0	0	0	0	-	-
	3	ALARM	FAN lock detect signal output	42VM5 42VP5 42VR5	-	-	-	-	-	-	-	-

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					
				42XM3 42XR3 50XM4 50XR4 61XM3 61XR3	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	42VM5 42VP5 42VR5	-	-	-	-	-	-	-	-
				42XM3 42XR3	0	11.5Vdc during high-speed revolution (Fan mode H); 8.5Vdc during medium speed revolution (Fan mode M); 6.5Vdc during low-speed revolution (Fan mode L)	11.5Vdc during high-speed revolution (Fan mode H); 8.5Vdc during medium speed revolution (Fan mode M); 6.5Vdc during low-speed revolution (Fan mode L)	0	0	0	-	MAIN→FAN
				50XM4 50XR4	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	-	
				61XM3 61XR3	0	9.3Vdc during high-speed revolution (Fan mode H); 7.6Vdc during medium speed revolution (Fan mode M); 5.3Vdc during low-speed revolution (Fan mode L)	9.3Vdc during high-speed revolution (Fan mode H); 7.6Vdc during medium speed revolution (Fan mode M); 5.3Vdc during low-speed revolution (Fan mode L)	0	0	0	-	
	2	GND	GND		0	0	0	0	0	0	-	-
	3	ALARM	FAN lock detect signal output	42VM5 42VP5 42VR5	-	-	-	-	-	-	-	-
				42XM3 42XR3 50XM4 50XR4 61XM3 61XR3	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	42VM5 42VP5 42VR5 42XM3 42XR3 50XM4 50XR4	-	-	-	-	-	-	-	-
				61XM3 61XR3	0	9.3Vdc during high-speed revolution (Fan mode H); 7.6Vdc during medium speed revolution (Fan mode M); 5.3Vdc during low-speed revolution (Fan mode L)	9.3Vdc during high-speed revolution (Fan mode H); 7.6Vdc during medium speed revolution (Fan mode M); 5.3Vdc during low-speed revolution (Fan mode L)	0	0	0	-	FAN→MAIN
	2	GND	GND		0	0	0	0	0	0	-	-
	3	ALARM	FAN lock detect signal output	42VM5 42VP5 42VR5 42XM3 42XR3 50XM4 50XR4	-	-	-	-	-	-	-	-
				61XM3 61XR3	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
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 * Only for the PX-42VP4 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 mode LVDS serial differential E- output 0Vac; Bias 1.4Vdc	Video mode LVDS serial differential E- output 0.3Vac; Bias 1.25Vdc * Only for the PX-42VP4 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 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	42VM5 42VP5 42VR5 42XM3 42XR3 50XM4 50XR4	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
	1	ALARM	PDP alarm signal	61XM3 61XR3	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+5	5V power supply for digital circuits		0	5.15	5.15	0	0	0	-	POWER→PDP
	5	D.GND	GND		0	0	0	0	0	0	-	-
	6	D.GND	GND		0	0	0	0	0	0	-	-
	7	D+65	Vd power supply for PDP		0	65Vdc (changeable according to the PDP)	65Vdc (changeable according to the PDP)	0	0	0	-	POWER→PDP
	8	NC	digital circuits		-	-	-	-	-	-	-	-
	9	D+175	Vs power supply for PDP high-voltage circuits		0	175Vdc (changeable according to the PDP)	175Vdc (changeable according to the PDP)	0	0	0	-	POWER→PDP
	10	D+175	Vs power supply for PDP high-voltage circuits		0	175Vdc (changeable according to the PDP)	175Vdc (changeable according to the PDP)	0	0	0	-	POWER→PDP
PH	1	D+5	5V power supply for digital circuits	42VM5 42VP5 42VR5 42XM3 42XR3 50XM4 50XR4	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	-	-
	1	D+175	Vs power supply for PDP high-voltage circuits	61XM3 61XR3	0	175Vdc (changeable according to the PDP)	175Vdc (changeable according to the PDP)	0	0	0	-	POWER→PDP
	2	D+175	Vs power supply for PDP high-voltage circuits		0	175Vdc (changeable according to the PDP)	175Vdc (changeable according to the PDP)	0	0	0	-	POWER→PDP
	3	NC	Non-connection		-	-	-	-	-	-	-	-
	4	D+65	Vd power supply for PDP		0	65Vdc (changeable according to the PDP)	65Vdc (changeable according to the PDP)	0	0	0	-	POWER→PDP
	5	D.GND	digital circuits		0	0	0	0	0	0	-	-
	6	D.GND	GND		0	0	0	0	0	0	-	-
	7	D+5	5V power supply for digital circuits		0	5.15	5.15	0	0	0	-	POWER→PDP
	8	D.GND	GND		0	0	0	0	0	0	-	-
	9	D.GND	GND		0	0	0	0	0	0	-	-

BLOCK DIAGRAM

PX-42VR5/42XR3 Series