



SERVICE MANUAL

PLASMA DISPLAY MONITOR

GD-V4210PZW GD-V4210PZW-G
GD-V4210PCE GD-V4211PCE

BASIC CHASSIS

P1

Supplementary

These models corresponded to the printed circuit board exchange in the PDP unit.
Therefore, this service manual describes only the information relevant to it.
For details other than those described in this manual, please refer to the GD-V4210PZW,
GD-V4210PZW-G, GD-V4210PCE service manual (No.51767 2000/10) and GD-V4211PCE
(No.51767B 2000/12).

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NOTES AT THE TIME OF PW BOARD EXCHANGE

It will become the cause of failure if dust adheres to the inside of a connector, or a flat wire and a point-of-contact part.

When the PW board is exchanged, be careful of the dust and dirt of the inside of a connector, or a flat wire and a point-of-contact part enough.

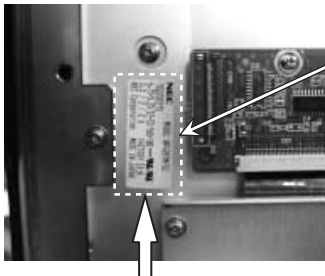
■ CONFIRMING MODEL NAME, SERIAL NUMBER, ID NUMBER AND CODE NUMBER

NOTE : The panel's ID number is used when you reference the characteristic voltage value of the panel on web site.

Voltage and CODE No.

SERIAL NO.
001200456
Vd=70V
Vs=182.1V
CODE AA-01

For example
CODE : AA

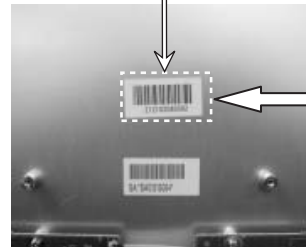
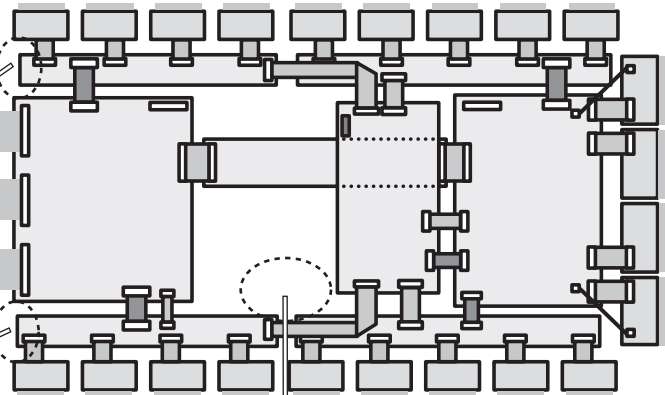


Model name and serial No.

NEC NP42B1MF03AA
001200456

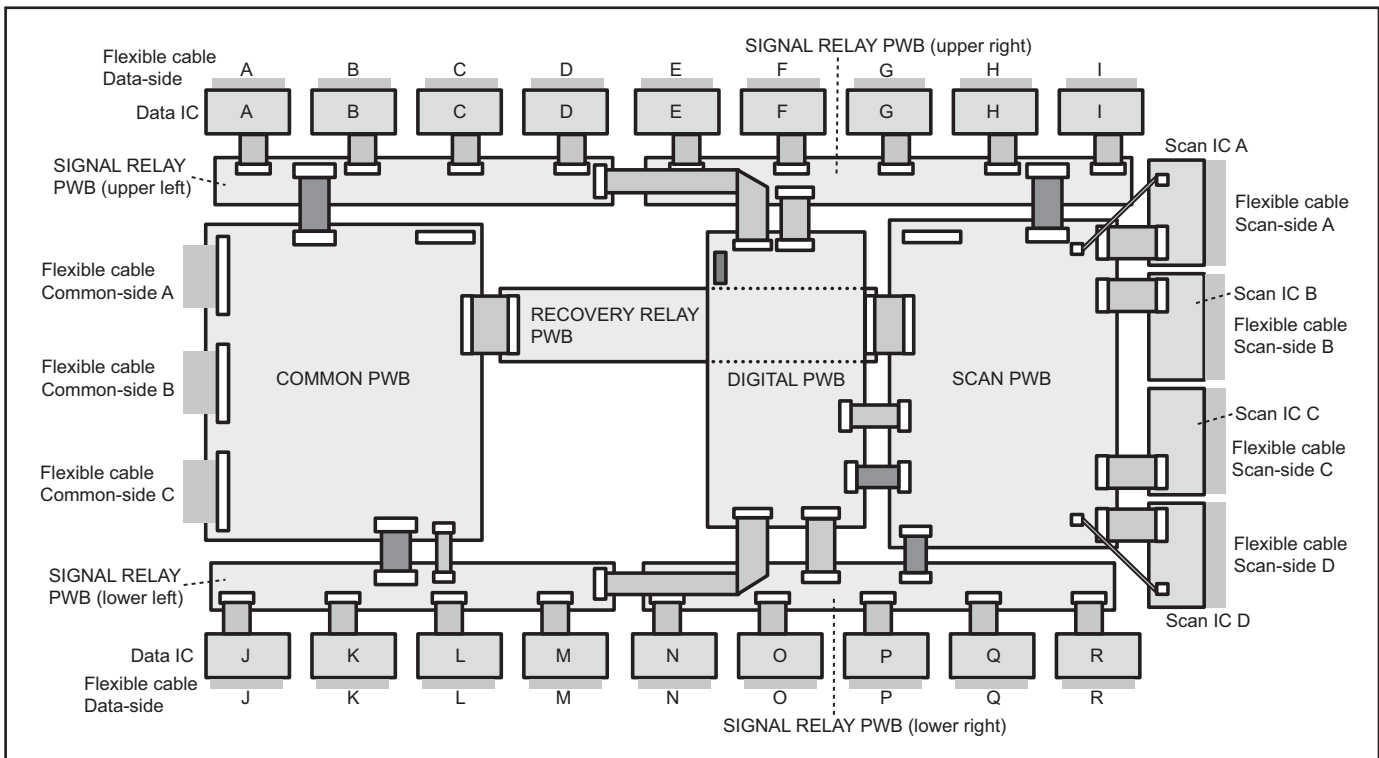
For example

Model : NP42B1MF03AA
Serial No. : 001200456 (9 figures)



PANEL ID No.
212912220251
(12 figures)

■ MAIN PARTS LOCATION



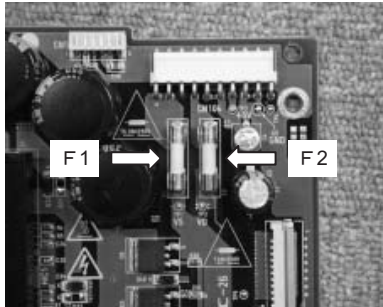
■ INSPECTION OF COMPONENTS ON THE PW BOARD

Diagnose the PW board in PDP unit by checking defects based on the following items.

1. INSPECTION OF FUSES

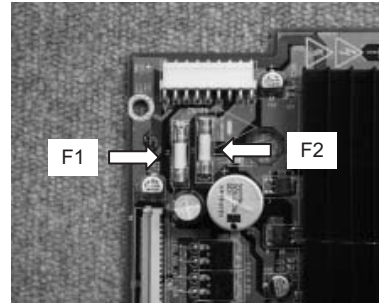
Measure the resistance of each fuse with a circuit tester, and check OK or NG.

1.1 Glass fuses (F1, F2) on the COMMON PWB



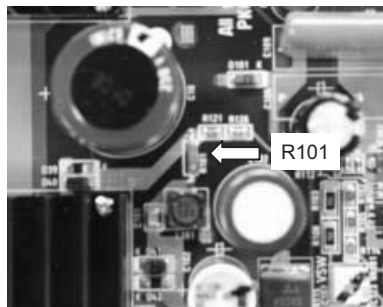
OK: Short
NG: Open

1.2 Glass fuses (F1, F2) on the SCAN PWB



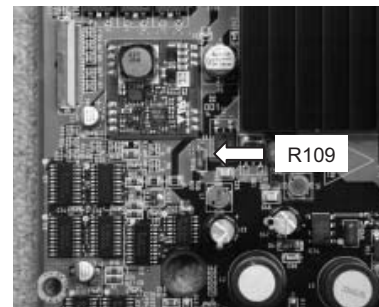
OK: Short
NG: Open

1.3 Fuse resistance (R101) on the COMMON PWB



R101
OK: Approx. 2Ω
NG: Open

1.4 Fuse resistance (R109) on the COMMON PWB

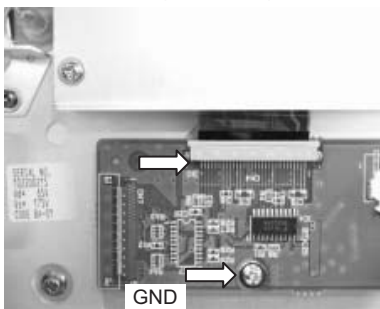


R109
OK: Approx. 2Ω
NG: Open

2. INSPECTION OF ALARM LINES

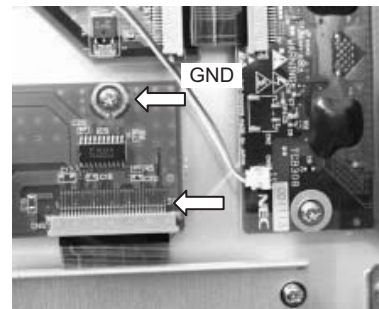
According to the following procedures, measure with a circuit tester and check OK or NG.

2.1 The conduction between the pin 30 of the connector [CN4] and GND on the SIGNAL RELAY PWB (upper left)



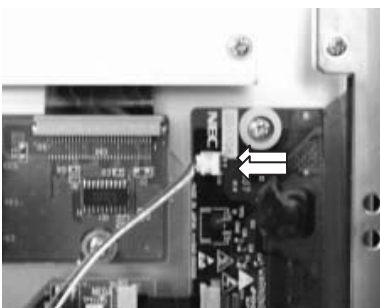
OK: Short
NG: Open

2.2 The conduction between the pin 30 of the connector [CN5] and GND on the SIGNAL RELAY PWB (lower right)



OK: Short
NG: Open

2.3 The conduction between the pins of CN3 on the scan IC [A]



OK: Short
NG: Open

2.4 The conduction between the pins of CN3 on the scan IC [D]

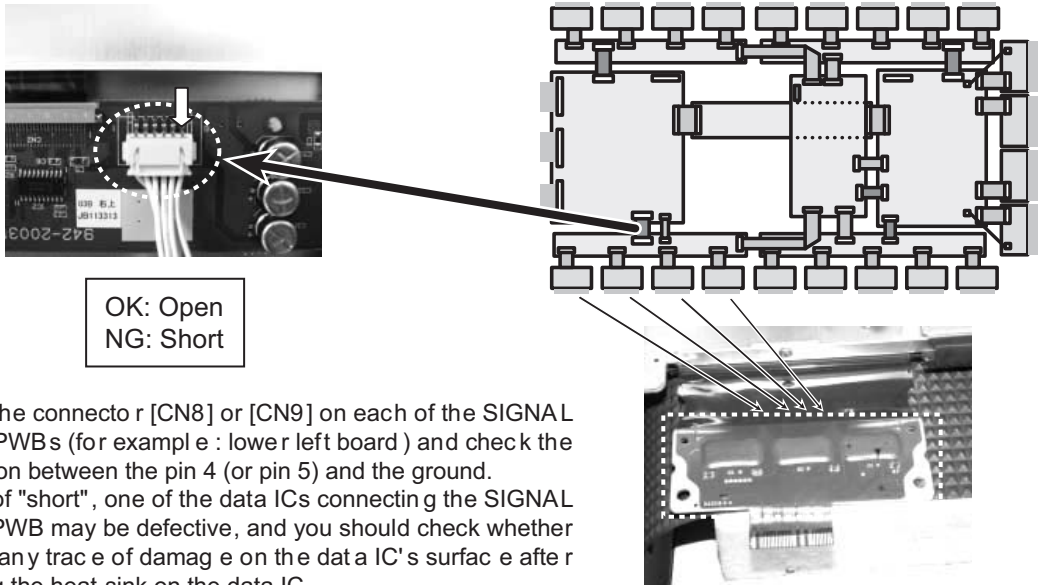


OK: Short
NG: Open

3. INSPECTION OF DATA ICS

According to the following procedures, measure with a circuit tester and check OK or NG.

Check the pin 4 or pin 5 of the connector [CN8] on the SIGNAL RELAY PWB (lower left).



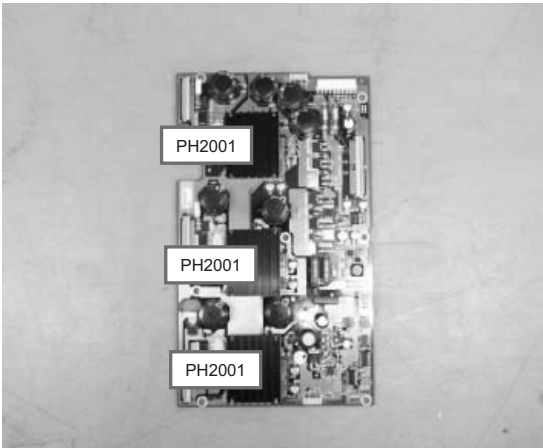
Detach the connector [CN8] or [CN9] on each of the SIGNAL RELAY PWBs (for example : lower left board) and check the conduction between the pin 4 (or pin 5) and the ground. In case of "short", one of the data ICs connecting the SIGNAL RELAY PWB may be defective, and you should check whether there is any trace of damage on the data IC's surface after removing the heat-sink on the data IC.

4. INSPECTION OF POWER ICS

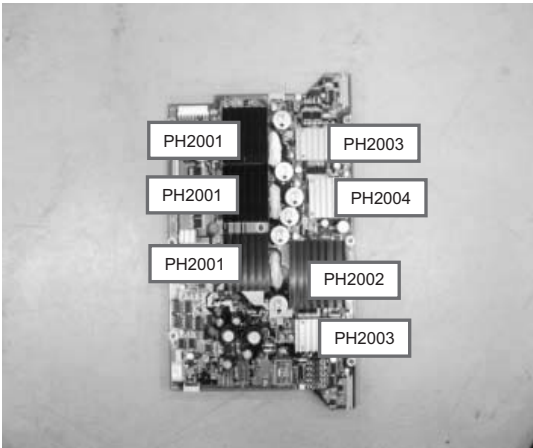
According to the following procedures, measure with a circuit tester and check OK or NG.

The allocation of power ICs to be checked is shown below.

COMMON PWB

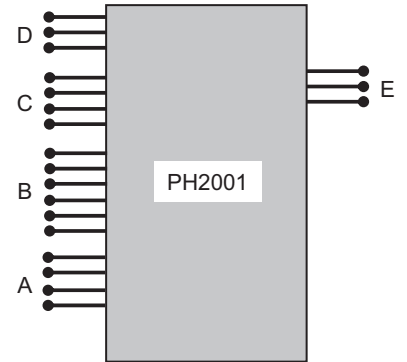
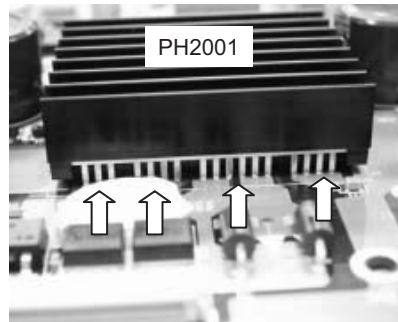
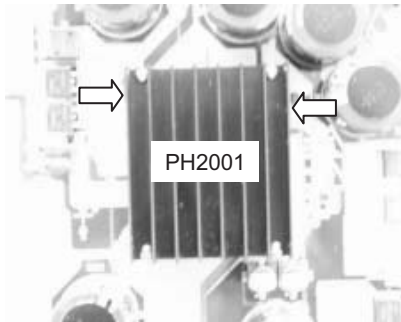


SCAN PWB



4.1 PH2001 on the COMMON PWB

Check each point of power IC as shown below.



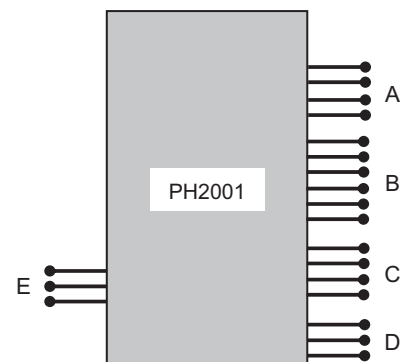
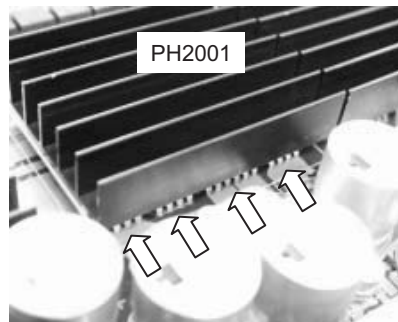
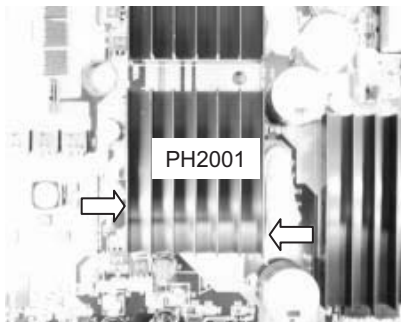
Check point

Between
A - B
B - C
D - E

OK: Over 1k Ω
NG: Short

4.2 PH2001 on the SCAN PWB

Check each point of power IC as shown below.



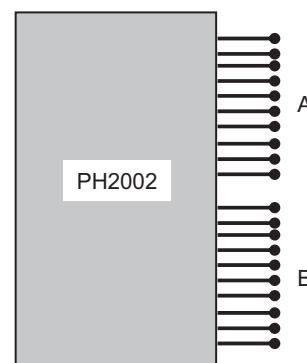
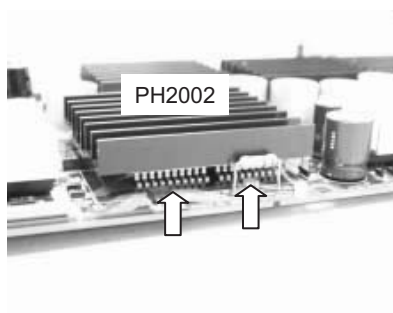
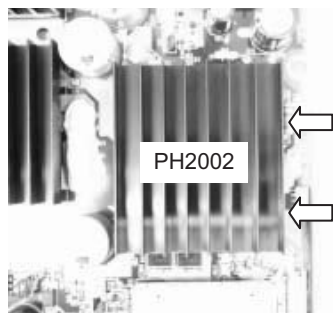
Check point

Between
A - B
B - C
D - E

OK: Over 1k Ω
NG: Short

4.3 PH2002 on the SCAN PWB

Check each point of power IC as shown below.



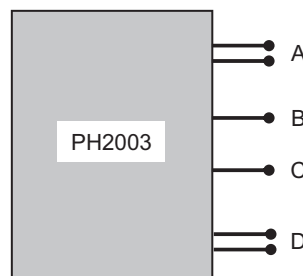
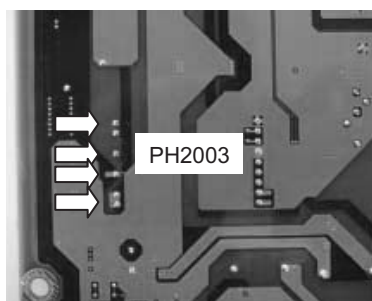
Check point

Between
A - B

OK: Over 1k Ω
NG: Short

4.4 PH2003 on the SCAN PWB

Turn over the board and check each point of power IC as shown below.



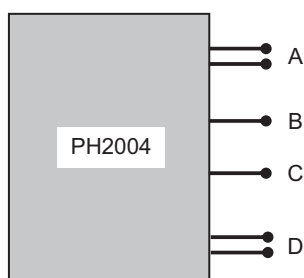
Check point

Between
A - B
C - D

OK: Over 1k Ω
NG: Short

4.5 PH2004 on the SCAN PWB

Turn over the board and check each point of power IC as shown below.



Check point

Between
A - B
C - D

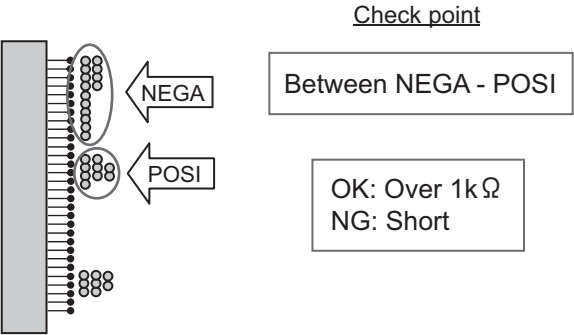
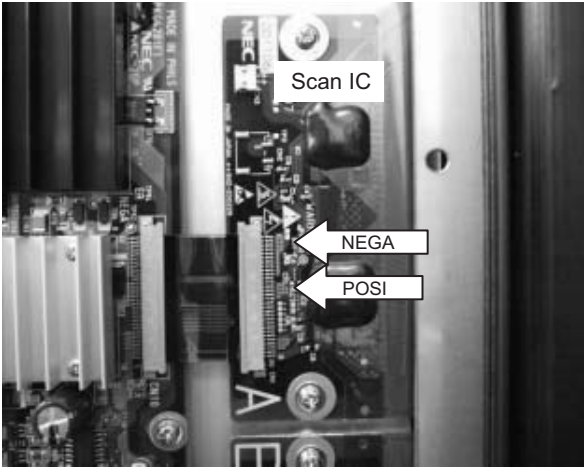
OK: Over 1k Ω
NG: Short

5. INSPECTION OF SCAN IC DRIVERS

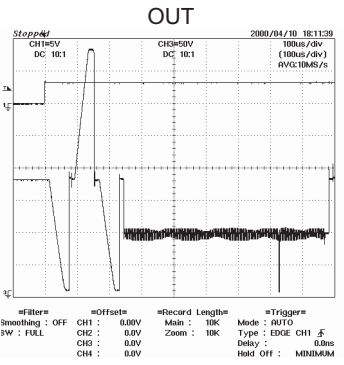
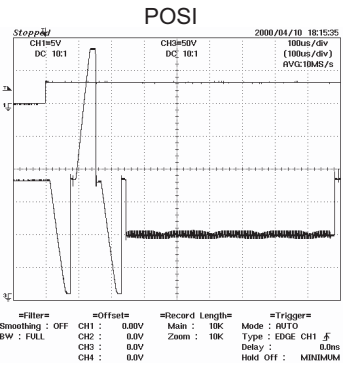
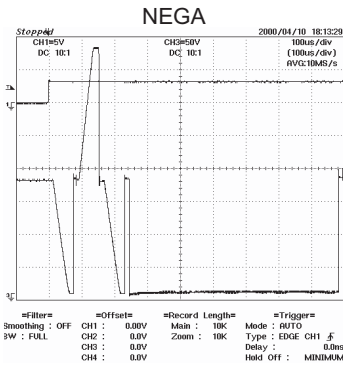
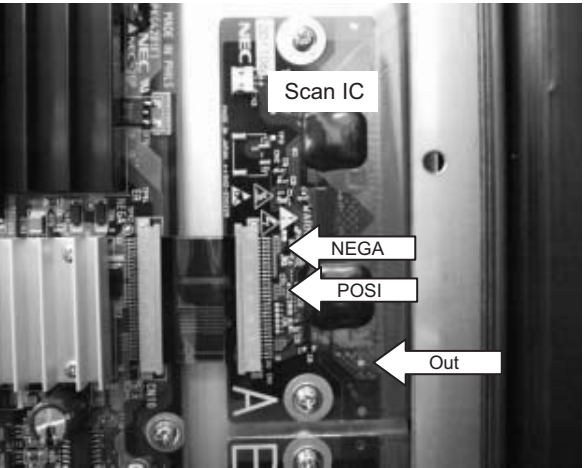
According to the following procedures, measure and check OK or NG.

5.1 Scan IC drivers [A-D]

Check each point with a circuit tester as shown below.

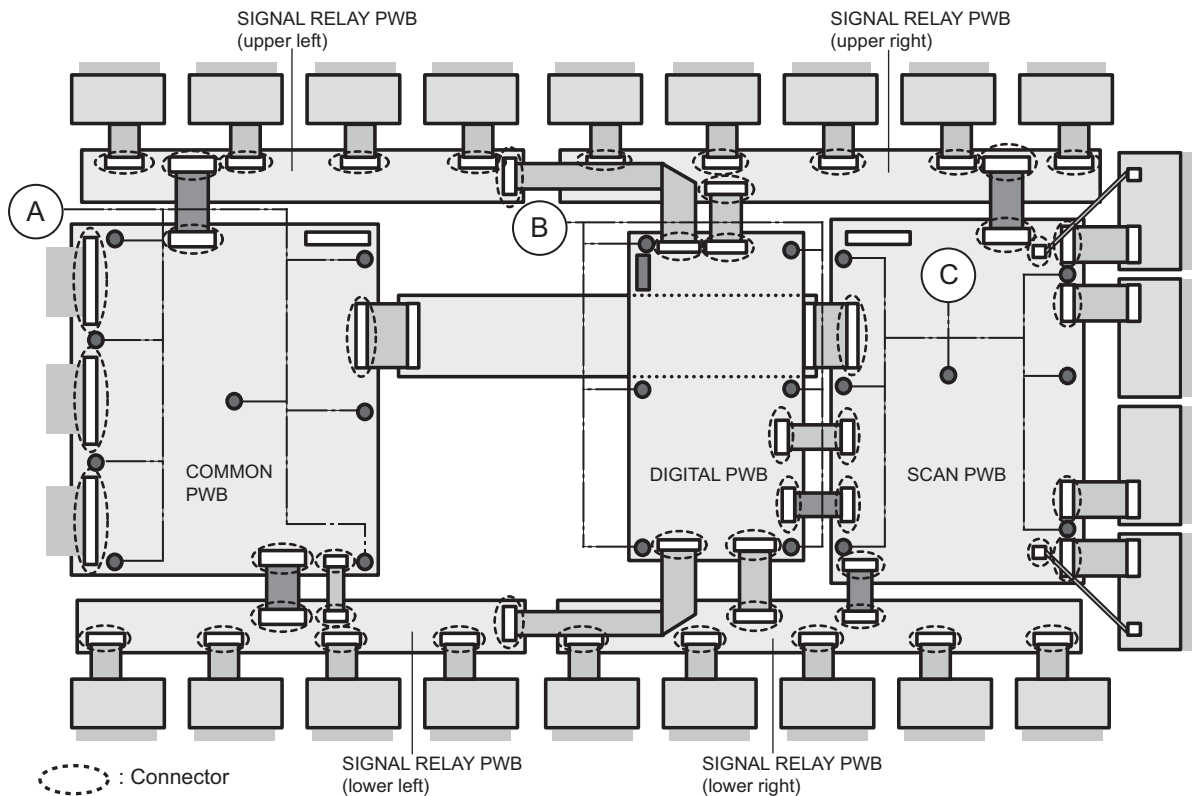


Measure the waveform of each point with an oscilloscope as shown below.



■DISASSEMBLY PROCEDURE

1. Removing the COMMON PWB
 - (1) Detach the 7 connectors.
 - (2) Remove the 8 screws [A].
 - (3) Remove the COMMON PWB.
2. Removing the DIGITAL PWB
 - (1) Detach the 6 connectors.
 - (2) Remove the 6 screws [B].
 - (3) Remove the DIGITAL PWB.
3. Removing the SCAN PWB
 - (1) Detach the 11 connectors.
 - (2) Remove the 7 screws [C].
 - (3) Remove the SCAN PWB.
4. Removing the SIGNAL RELAY PWB (upper left)
 - (1) Detach the 6 connectors.
 - (2) Remove the SIGNAL RELAY PWB (upper left).
5. Removing the SIGNAL RELAY PWB (upper right)
 - (1) Detach the 7 connectors.
 - (2) Remove the SIGNAL RELAY PWB (upper right).
6. Removing the SIGNAL RELAY PWB (lower left)
 - (1) Detach the 7 connectors.
 - (2) Remove the SIGNAL RELAY PWB (lower left).
7. Removing the SIGNAL RELAY PWB (lower right)
 - (1) Detach the 7 connectors.
 - (2) Remove the SIGNAL RELAY PWB (lower right).



Notes : Check the state of the detached cables and connectors.

- (1) Check any dirt or peeling in the contact part of the flat cable, and any crack, crease, disconnection and short-circuit of wires.
- (2) Check any foreign substance in the connector's contact .
- (3) Check the state of plugging the flat cable into the connector, and confirm it locks completely.

■CONFIRMING REFERENCE VOLTAGE

Each PDP panel has the characteristic voltage value.
In the adjustment after fix or exchange of a PW board,
this voltage value is used as reference.
You can get it from the vendor's web site on the Internet.

1. Getting the characteristic voltage value of the PDP unit

1.1 Access the following address by the Web browser of your PC.

<http://203.126.119.92/necnpd/>

1.2 After [NEC-ITLS] screen is displayed, click "Click here to log on to NPD". (Fig. 1)

1.3 Type the following user name and password into the dialog box and click "Enter" button. (Fig. 2)

Username: JVCJPN01

Password: jvckoseki (lower-case)

1.4 After [WELCOME TO NEC-ITLS] is displayed (Fig. 3), click the "Voltage" icon in the "Enquiry" holder on the upper left part of the window. (Fig. 4)

1.5 After [VOLTAGE ENQUIRY] is displayed (Fig. 5), enter the panel ID number, which is shown on the panel (refer to page 2), into the dialog box and click "GO".

1.6 Then, the characteristic voltage value will be displayed. (Fig. 6)

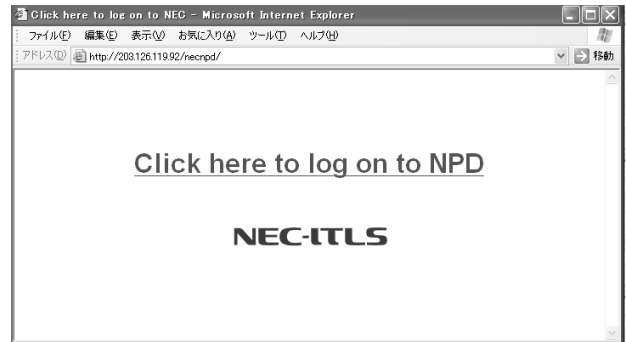


Fig. 1

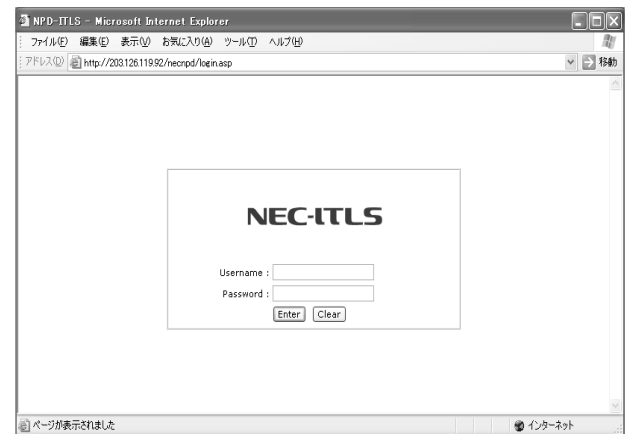


Fig. 2

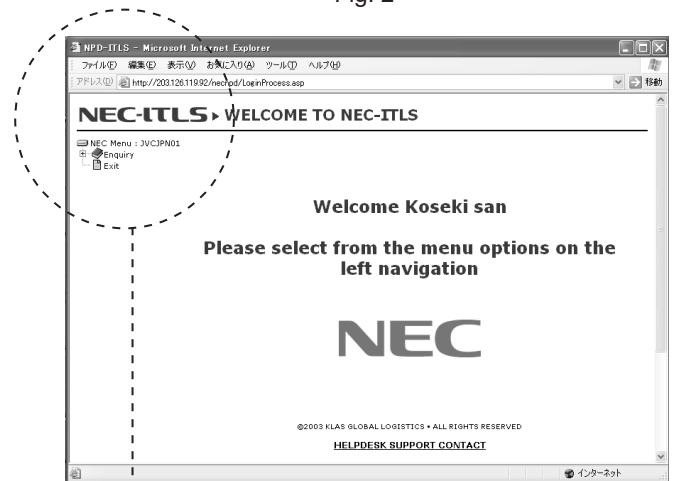


Fig. 3



Fig. 4

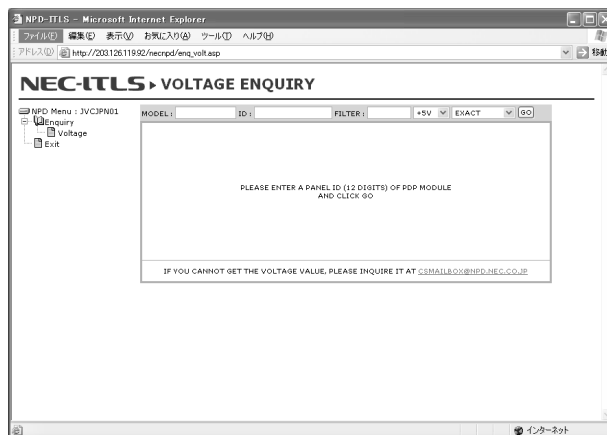


Fig. 5

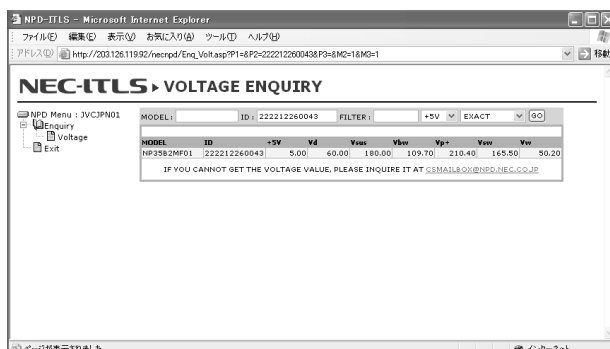
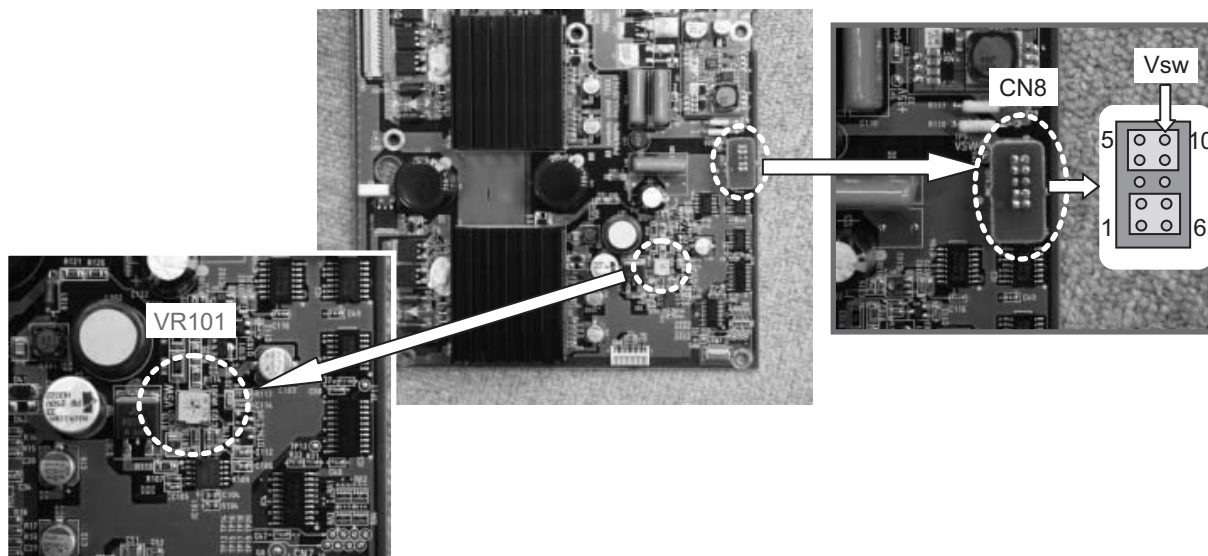


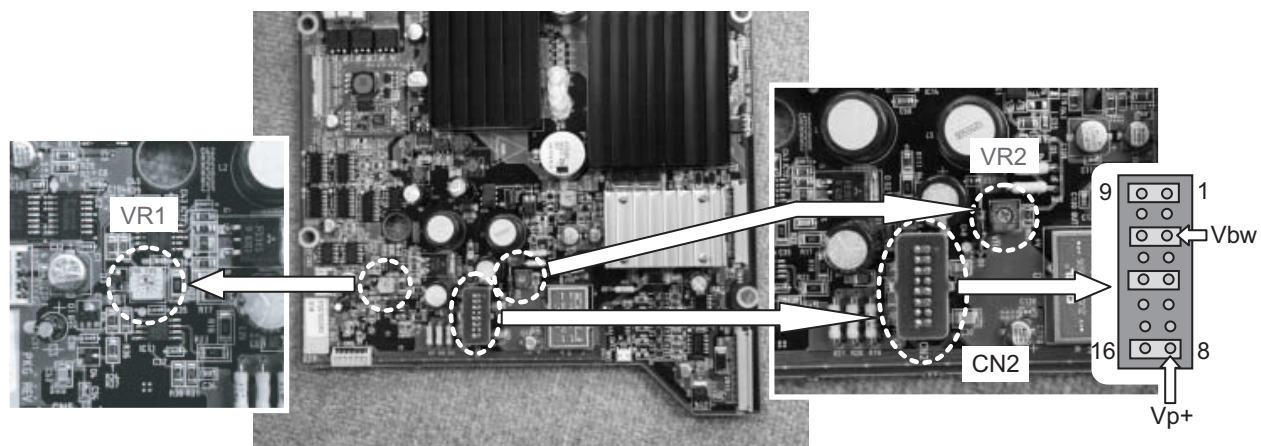
Fig. 6

■ADJUSTMENTS

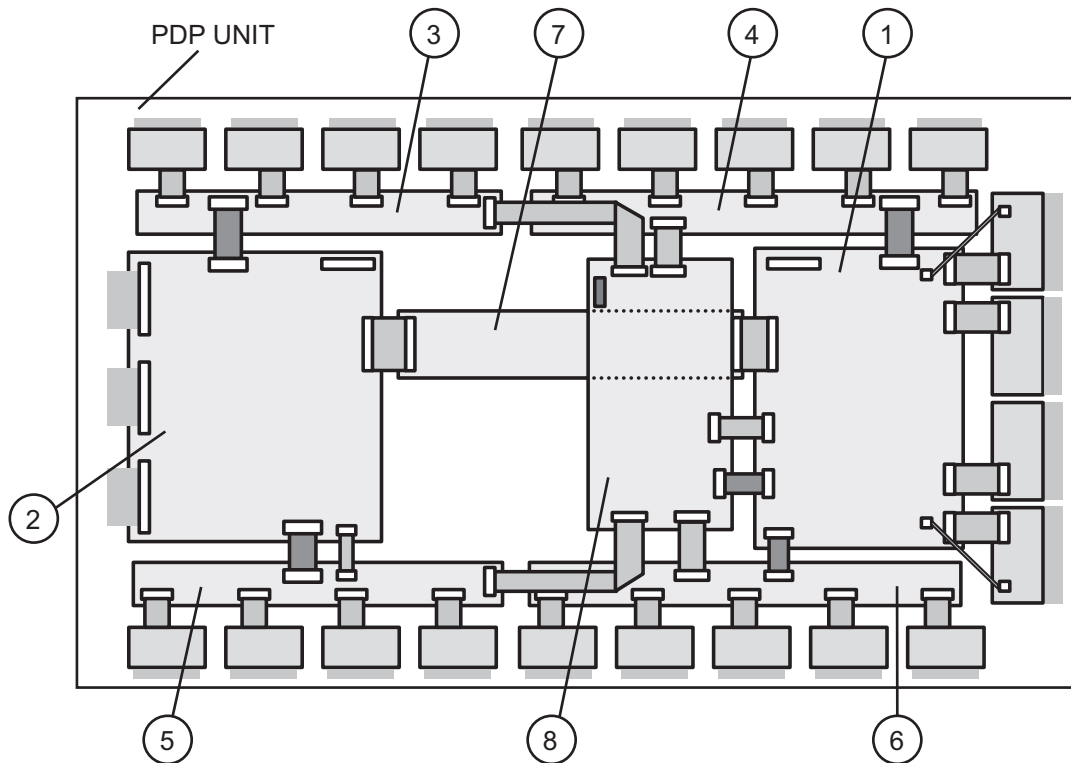
Item	Measuring instrument	Test point	Adjustment part	Description
Vsw VOLTAGE ADJUSTMENT	DC voltmeter	CN8 -pin 10 GND [COMMON PWB]	VR101 [COMMON PWB]	<p>(1) Measure the voltage between the pin 10 of the connector [CN8] and GND on the COMMON PWB.</p> <p>(2) Adjust the voltage same as the reference data of Vsw shown in web site by VR101.</p> <p>※The adjustment accuracy is within $\pm 0.5V$.</p>



Vbw / Vp+ VOLTAGE ADJUSTMENT	DC voltmeter	CN2 -pin 3(Vbw) -pin 8 (Vp+) GND [SCAN PWB]	VR2 (Vbw) VR1 (Vp+) [SCAN PWB]	<p>(1) Measure the voltage between the pin 3 of the connector [CN2] and GND on the SCAN PWB.</p> <p>(2) Adjust the voltage same as the reference data of Vbw shown in web site by VR2.</p> <p>※The adjustment accuracy is within $\pm 0.5V$.</p> <p>(3) Measure the voltage between the pin 8 of CN2 and GND on the SCAN PWB.</p> <p>(4) Adjust the voltage same as the reference data of Vp+ shown in web site by VR1.</p> <p>※The adjustment accuracy is within $\pm 1.5V$.</p>
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■PARTS LIST



△	Ref No.	Parts No.	Parts name	Description
△	1	NE-9S899485	SCAN PWB	
△	2	NE-9S899631	COMMON PWB	
△	3	NE-9S899329	SIGNAL RELAY PWB	(upper left)
△	4	NE-9S899325	SIGNAL RELAY PWB	(upper right)
△	5	NE-9S899331	SIGNAL RELAY PWB	(lower left)
△	6	NE-9S899327	SIGNAL RELAY PWB	(lower right)
△	7	NE-9S899446	RECOVERY RELAY PWB	
△	8	NE-9S899632	DIGITAL PWB	

NOTES AT THE TIME OF PW BOARD EXCHANGE

It will become the cause of failure if dust adheres to the inside of a connector, or a flat wire and a point-of-contact part.

When the PW board is exchanged, be careful of the dust and dirt of the inside of a connector, or a flat wire and a point-of-contact part enough.



Victor Company of Japan, Limited
AV & MULTIMEDIA COMPANY VIDEO DISPLAY CATEGORY 12, 3-chome, Moriya-cho, kanagawa-ku, Yokohama, kanagawa-prefecture, 221-8528, Japan

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