

# PL-MD200-MD01

## Installation Guide

This unit is the Pro-face Mirror Disk unit's replacement HDD. This unit is used with Pro-face's PL Series Panel Computers, hereafter referred to collectively as the PL.

Corresponding Product: PL-MD200-HU01

(All product names used in this document are the trademarks of their respective manufacturers.)

Pro-face: Digital Electronics Corporation (in Japan and other countries)

MS-DOS: Registered trademark of the Microsoft Corporation



### Warning - Safety Precautions

- Be sure to check that the PL unit's power is disconnected before installing this unit in order to prevent an electrical shock.
- Do not attempt to modify or open this unit, due to the danger of shock or fire.
- Please read "2. HDD Installation" section's information carefully before installing this unit.

### To Prevent Accidents

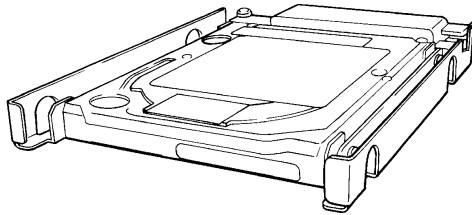
- This unit is a precision instrument. Especially after this unit is removed from its package, be sure it is neither hit by nor pressed strongly against another object. Do not transport the PL when it is built in to an Operation Panel, etc. and has this unit installed.
- Do not transport the system (i.e, the PL, this unit and any other related installed equipment) while the PL's power is on.
- Be sure water, liquids or metal particles are not allowed to enter the unit. Any of these may cause either a breakdown or an electrical shock.

- Do not place or store this unit in a location where there is direct sunlight, excessive heat, dust or vibration.
- Do not store or operate this unit near chemicals, or where there are chemical fumes.
- Do not operate this unit where corrosive gas is present, since it may damage the hard disk.
- To avoid damaging files, be sure to shut down the PL's operating system before turning off the computer.

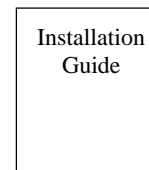
## Package Contents

Please check that the following items are included in your package.

- Spare HDD unit (1)  
(PL-MD200-MD01)



- Installation Guide (1)  
(PL-MD200-MD01)



- HDD No. Seals (2seals/set)



Pro-face has taken the utmost care to insure the quality of this product when it was shipped, however, should, for any reason problems or damage have occurred during shipping, please contact your Pro-face representative immediately for service.

**1****Hardware Specifications****■ General Specifications**

<b>Environmental</b>	<b>Ambient Operating Temperature</b>	5°C to 40°C
	<b>Ambient Storage Temperature</b>	-10°C to + 60°C
	<b>Operating Humidity</b>	30%RH to 85%RH (No Condensation)
	<b>Operating Atmosphere</b>	(No Dust, No Corrosive Gas)
<b>Electrical</b>	<b>Vibration Resistance</b>	4.9m/s <sup>2</sup> (When operating)
	<b>Shock Resistance</b>	4900m/s <sup>2</sup> -1/2 sine wave of 1ms duration (During shipping )
	<b>Noise Immunity (via noise simulator)</b>	Noise Voltage:1500Vp-p Pulse Length: 50ns, 500ns, 1μs
	<b>Static Electricity Resistance</b>	4kv IEC 61000 - 4 - 2
<b>structural</b>	<b>Weight</b>	170g or less
	<b>Dimensions</b>	W90 mm [ 3.54 in.] X H12.5 mm [ 0.49 in.] X D127.9 mm [ 5.04 in.]

**■ Functional Specifications**

<b>Memory Capacity</b>	2.1GB (This is an approximate value. It may differ depending on the system you use.)
<b>No.of LBAS</b>	4,232,592
<b>No. of Cylinders</b>	4199
<b>No. of Headers</b>	16
<b>No. of Sectors</b>	63
<b>Data Transfer Speed</b>	8.3MB/s
<b>Average Seeking Time</b>	14ms Read/16ms Write (typ.)
<b>Rotation Speed</b>	4200rpm



- The specifications given here are for when this unit is installed in a mirror disk unit.
- When this unit is installed in the PL, the ambient operation temperature must be lower than 40°C, regardless of the PL's allowable ambient temperature.
- Do not use this HDD beyond its normal lifetime. To prevent accidents, regular backing up and preparation of a spare HDD is recommended.
- Be sure to perform regular maintenance on this unit.

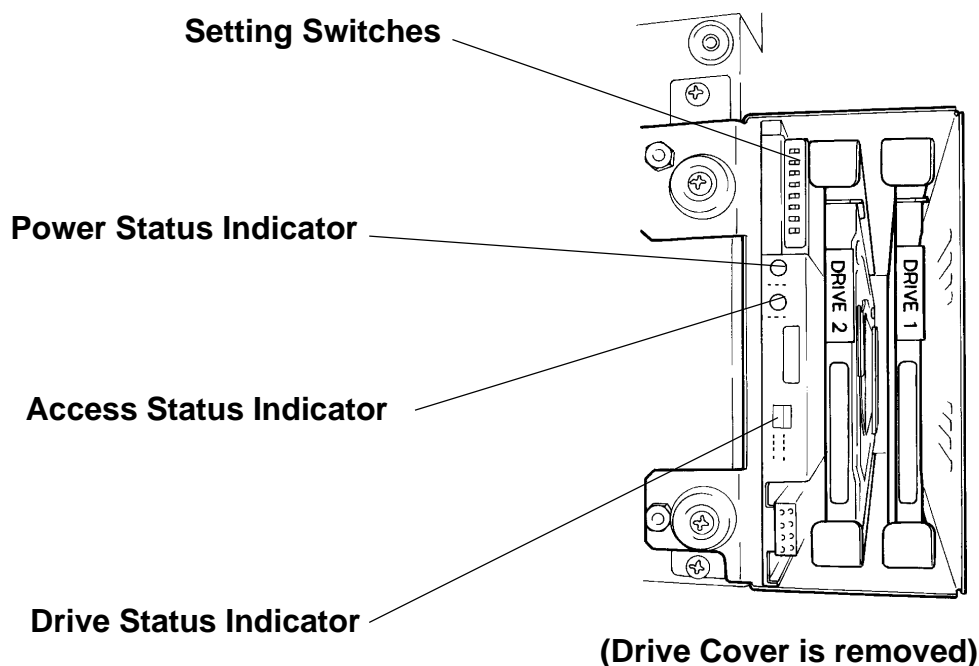
## 2 HDD Installation

### ■ When a single HDD is damaged:

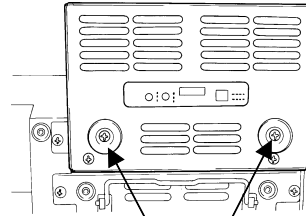
A damaged HDD **cannot be replaced when the system (i.e, the PL) is operating**. Also, data reconstruction will not begin until the system is re-started. Therefore, when a HDD is damaged, shut down the operating system and replace the damaged HDD with a spare HDD. Then, re-start the system as soon as possible. **The system cannot be accessed by the host computer while data is being reconstructed in the replaced HDD (approx.20mns).**

### ◆ Replacing the damaged HDD and reconstructing data on the new HDD :

- 1) Identify the damaged HDD via the orange-covered Drive Status Indicator.

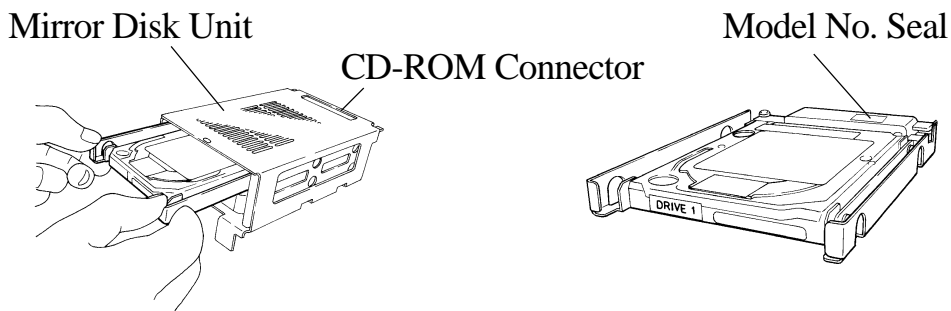


- 2) Shut down the PL's operating system, and turn OFF the PL's power.
- 3) Unplug the PL's power cord. Next, unscrew the Mirror Disk unit's attachment screws, and removing the Drive Cover.



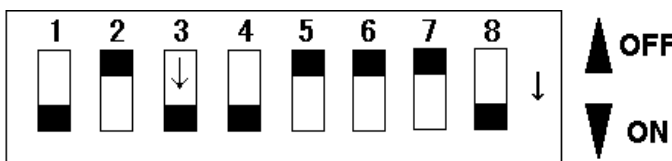
Drive Cover Attachment screws  
on the case

- 4) Remove the damaged HDD.
- 5) Insert the new HDD firmly into the drive slot .



When installing an HDD in the Mirror Disk Unit :  
Be sure that the Mirror Disk's CD-ROM Connector  
and the HDD Drive's Model No. seal are both facing  
upwards. Do not insert the HDD unit upside down.

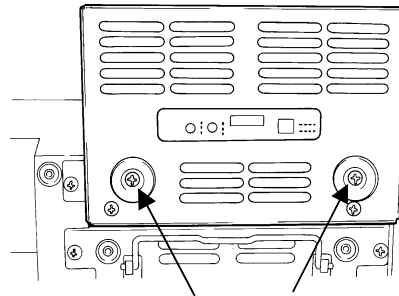
- 6) Move Reset Mode Setting Switch SW3 to ON.



1	Master
2	Slave
3	Reset Mode
4	Fixed
5	Fixed
6	Fixed
7	Fixed
8	Buzzer Mode

- 7) Reconnect the power cord and turn on the PL's power.
- 8) The HDD will start copying data to the replaced HDD automatically.  
(approximately 20 minutes)
- 9) While data is being copied, the HDD with the green LED is sending data, and the HDD with the orange LED is receiving data.
- 10) When data copy is completed, both LED's will turn OFF. If the Buzzer Mode Switch is ON, a buzzer will sound. The PL's front panel power LED(green) will turn ON.
- 11) Turn the PL's power OFF.
- 12) Set the Reset Mode Setting Switch (SW3) to OFF.

13) Re-attach the Drive Cover and secure its attachment screws in place.



Drive Cover Attachment screws  
on the case

14) Turn the PL's power ON and start up the system.

15) Confirm that the system is operating correctly.

■ **When both HDDs are damaged:**

Turn OFF the PL's power, and remove the HDD unit which seems to have been damaged first. Then, turn the PL's power ON, which will enable you to access the other HDD unit. This method, however, should be used only in emergencies and can be used only when the PL's system itself is not damaged, or when the system allows the other HDD to start up. Data integrity, however, cannot be guaranteed.

■ **When data is not recovered after replacing an HDD:**

Turn OFF the PL's power, and remove the HDD. Then push the unit back firmly into the same slot. Check the unit's status after the PL's power is turned ON again. If data is still not recovered in the replaced HDD, please contact your nearest PL distributor.

■ **Additional problems:**

For other problems, please contact your nearest PL distributor.



- If an HDD is damaged, the HDD's drive status indicator's red LED will turn ON. Be sure to identify the damaged HDD by checking which drive's (DRIVE1 or DRIVE2) drive status indicator's red LED has turned ON before replacing the HDD.
- When an HDD unit is damaged, please replace it with a spare unit. Since data cannot be recovered when both HDDs are damaged, be sure to replace the HDD unit as soon as damage is noticed.
- If an HDD which is not damaged is replaced by mistake, the replaced HDD unit's Drive Status Indicator's red LED will blink, (the other HDD unit's LED will not turn ON,) and data recovery cannot take place. To recover data, please turn the PL OFF, and install the previous, undamaged HDD in the drive. Insert the spare HDD unit in the other drive, and then turn the PL unit ON to begin recovering data.
- Use only spare HDD units made by Digital Electronics Corporation. Do not use any other hard disk to replace this unit's HDD. If any other hard disk is used, the normal operation of the Mirror Disk unit cannot be guaranteed.

### **Note**

Please be aware that Digital Electronics Corporation shall not be held liable by the user for any damages, losses, or third party claims arising from the uses of this product.

## **Digital Electronics Corporation**

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