

# PL-HD240

## Installation Guide

This hard disk drive unit is made by Pro-face for use with its panel-type computers, hereafter referred to as the "PL". This 2.5 inch 40GB hard disk is designed to be installed inside the PL.

Corresponding PL units: PL-X930 Series units

*(All product names that appear in this guide are the trademarks of their respective companies)*

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

*MS-DOS, Windows: Microsoft Corporation (USA)*



## WARNINGS

- **Be sure to check that the PL's power is disconnected before installing the unit, in order to prevent an electrical shock.**
- **Do not attempt to modify or open the PL-HD240, since it can cause a shock or fire.**
- **When installing the PL-HD240, be sure to read the following "3. Installation" section's information completely to insure that the unit is correctly installed.**

### To Prevent Accidents

- Since the PL-HD240 is a precision instrument, be sure it is neither hit by nor pressed strongly against another object. After unpacking, be sure the unit is not dropped or jolted during installation. Also, a PL built in to a larger unit (i.e. operation panel) should be removed and packed separately prior to shipping.
- Be sure water, liquids or metal particles are not allowed to enter the PL-HD240. 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 allow anyone other than Pro-face's own service staff to perform maintenance or adjustments to this unit.
- Do not move or shift the PL while the PL-HD240 is installed and the PL unit's power is ON.

- Do not use the PL-HD240 in locations where corrosive gasses are present, since they can lead to a hard disk breakdown.
- To prevent damage to file data, be sure to shut down the PL unit's OS before turning OFF the main power.

To extend the life of your PL unit's hard disk, use the BIOS menu [POWER MANAGEMENT SETUP] - [HDD Power Down] setting to turn the HDD unit's power OFF when the HDD is not being operated. Recommended setting is the factory setting of "5Min". When using Windows®2000, use the [Start] - [Settings] - [Control Panel] - [Power Options] - [Turn off hard disks] setting to turn the HDD unit's power OFF when not in use. Recommended setting is [After 5 mins]. When using Windows®XP, [Control panel]-[Performance and Maintenance]-[Power Management option]-[Turn off hard disks] selection to turn the hard disk off when the unit is not being operated. Recommended setting is the factory setting of "5Min".

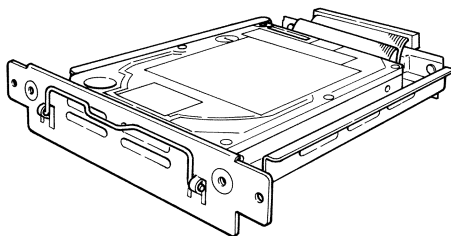
### Unit Disposal

- When this HDD unit is disposed of, it should be done so according to your country's regulations for similar types of industrial wastes.

## Package Contents

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

■ **PL-HD240 (1)**



■ **Installation Guide (PL-HD240)**



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

### ■ Features

Capacity	40GB
Seek Time	12msec(TYP)
Power Consumption	At Startup : 5.0W (TYP)
	Read/Write : 1.8/1.8W (TYP)
	During Wait : 0.2W(TYP)
Interface	PATA
Lifetime	5 years, or 20,000 operating hours, whichever comes first
Weight	Approx. 250g



- The PL-HD240 has a finite usage lifetime. Therefore, be sure to back up all HDD data periodically or prepare a backup HDD unit.
- The Hard Disk lifetime specified here may be reduced due to unforeseen environmental factors, however, the disk should operate for 20,000 hours or approximately 5 years, whichever comes first, at an operating temperature of 20°C and approximately 333 hours of operation per month. (HDD access frequency of 20% or less)

## ■ Environment

<b>Surrounding Air Temperature</b>	5°C to 50°C
<b>Storage Temperature</b>	-10°C to +60°C
<b>Ambient Humidity</b>	10%RH to 85%RH (no condensation, Wet bulb temperature: 29°C or less)
<b>Noise Resistance</b> (via Noise Simulator)	Noise Voltage: 1500Vp-p
	Pulse Width: 50ns, 500ns, 1μs
<b>Electrostatic Discharge Immunity</b>	4kV
<b>Vibration Resistance</b>	4.9m/s <sup>2</sup> (10Hz to 25Hz) (When Operating)
<b>Shock Resistance</b>	3920m/s <sup>2</sup> (1ms, Half-sine shock pulse)



- When using a PL optional unit, be sure to check that unit's specifications for any special conditions or cautions that may apply to its use.
- Since the PL unit's hard disk drive (HDD) is a consumable item, i.e. it has a limited lifetime, be sure to back up its data regularly and prepare a spare HDD unit.
- Using the Hard Disk in an environment that is excessively hot and/or humid will shorten the disk's operation life. A wet bulb temperature of 29°C or less is recommended, which is equivalent to the following data.

<b>Temperature</b>	<b>Humidity</b>
at 35°C	no higher than 64%
at 40°C	no higher than 44%

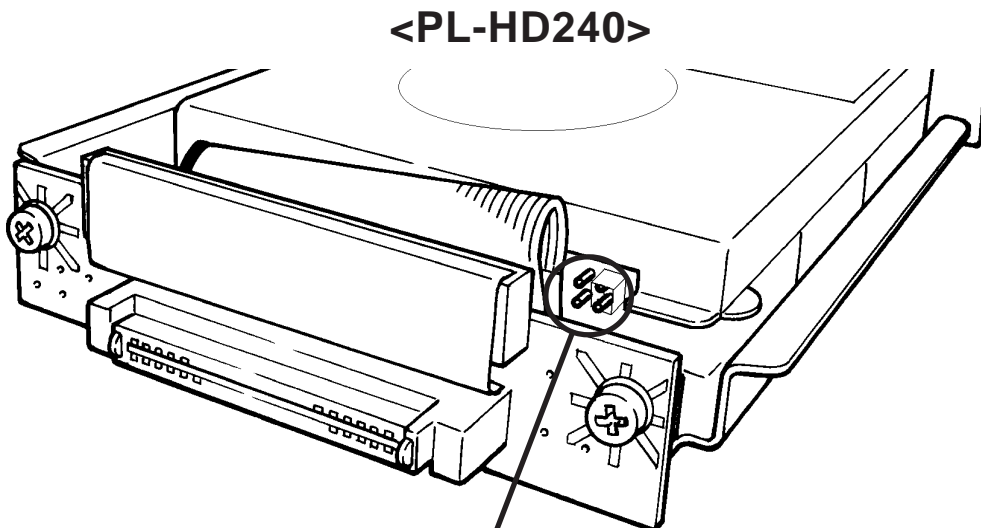
## 2 Hard Disk Unit Settings

The PL-HD240 is one of the Expansion Options for PL Series, when shipped, set as the PL's Slave drive (Second Hard Disk).

The PL-HD240 in combination with PL-X930 Series unit, when shipped, set as the PL's Master drive (First Hard Disk).

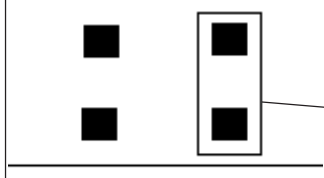


- Be sure to use the PL-HD240 as Master setting for PL-X930 Series units.
- When using both Pro-face's CD-ROM drive unit "PSS-CD01" and this unit (PL-HD240) built in PL-X930 Series unit's Expansion Slot 1, be sure to set PL-HD240's drive as Master, since it can cause a malfunction.
- Except for the jumper plug shown here, do NOT use any other short plugs with the PL-HD240, since it can cause a malfunction or damage the unit.

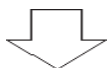


### Factory Setting

(for use as Slave)

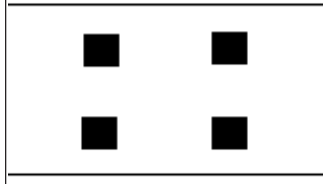


Jumper Plug



### Master Setting

(for use as Master)



**When using the PL-HD240 as a Master, be sure to remove the jumper plug, as shown in the left side figure.**

### 3 Installation

Use the following steps to install the PL-HD240 in the PL.

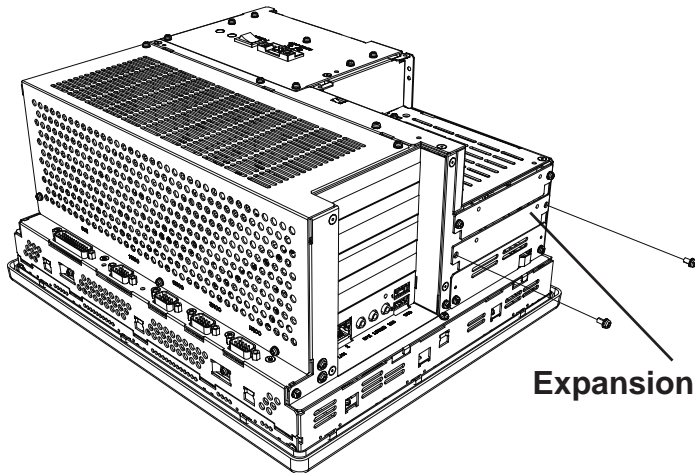


## WARNING

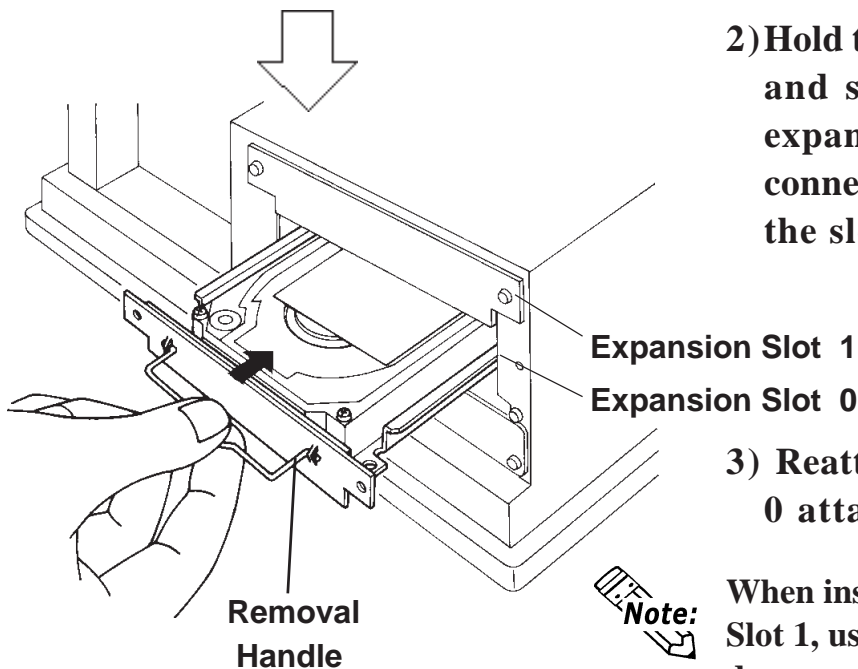
- Shock Danger! Be sure to unplug the PL unit from its power supply prior to installing the PL-HD240.
- Even when the PL-X930 Series unit's screen display disappears, the power might be distributed inside (such as the "Soft OFF" status\*<sup>1</sup> etc). Be sure to confirm that the power supply switch on the rear side of the PL unit is OFF.



Since the PL-HD240 is a precision instrument that has a low resistance to shock, be sure it is neither hit by nor pressed strongly against another object when installing it.



- 1) Unscrew the Expansion Slot 0 two (2) attachment screws and remove the cover.



- 2) Hold the PL-HD240's removal handle and slide the unit slowly into the expansion slot 0, until the rear face connector is completely inserted into the slot's connector pins.

- 3) Reattach the two (2) expansion slot 0 attachment screws.



**Note:** When installing an HDD unit in Expansion Slot 1, use the above installation procedures.

\*1 The Soft OFF refers to the state that Windows(R) has been shut down and the power is provided only for the electric circuit to boot system. This Soft OFF State is different from what is System Standby set by Windows(R).

## 4 Hardware Setup



- **Normally, the factory default settings should be used.**
- **Certain BIOS screen items may differ from those shown here due to new versions.**



**Note:** All the following explanation screens use the PL's factory settings (default settings).

- 1) Connect a keyboard to the PL.
- 2) Right after turn the PL unit's power ON, keep on pressing [F2] key.  
The Setup utility will start.
- 3) Depending on the PL-HD240's installation point (Expansion Slot 0 or 1), the following menu will be displayed.
  - When installing to the Expansion Slot 0: [Primary Master]
  - When installing to the Expansion Slot 1: [Secondary Master]
 Point the cursor to either [Primary Master] or [Secondary Master] on [Main] menu and press the [Enter] key and the following screen appears.



- **Be sure to use the PL-HD240 as Master setting for PL-X930 Series units. For the details, see [2. Hard Disk Unit Settings].**

PhoenixBIOS Setup - Copyright 1985-2001 Phoenix Technologies Ltd.		
Main		
Type:	[Auto]	Item Specific Help
Total Sectors:		User = you enter Parameters of hard-disk drive installed at this connection. Auto = autotypes hard-disk drive installed here. 1-39 = you select pre-determined type of hard-disk drive installed here. CD-ROM = a CD-ROM drive is installed here. ATAPI Removable = removable disk drive is installed here.
Maximum Capacity:		
Multi-Sector Transfer:	[16 Sectors]	
LBA Mode Control:	[Enabled]	
32 Bit I/O:	[Disabled]	
Transfer Mode:	[FPIO 4 / DMA 2]	
Ultra DMA Mode:	[Mode 5]	
F1 Help    ↓ ↑ Select Item    -/+ Change Values    F9 Setup Defaults Esc Exit    ← → Select Menu    Enter Select    ► Sub-Menu    F10 Previous Values		

- 4) Confirm whether "AUTO" is selected for [Type]. (The factory setting is "AUTO" and recommended for most users.)
- 5) Press the [ESC] key and the screen returns to the previous one. Select [Exit] menu and point the cursor to [Exit Saving Changes] and press the [Enter] key. The system settings will be saved and this process will exit and the OS will then start.

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## **5** Software Setup

After completing the hardware setup, in order to save data and application(s) to the HDD, use your OS to create partitions and format (initialize) the unit. Please consult your OS's operation manual for details about these procedures.

### **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.

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