

PSB-HD020 Installation Guide

This hard disk drive unit is made by Pro-face for use with its Built-in computer (hereafter referred as the "PS-B") units. This 2.5 inch 20GB hard disk is designed to be installed inside the PS-B.

Corresponding units: PS-2000B Series units

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

MS-DOS, Windows: Microsoft Corporation (USA)



WARNINGS

- **Be sure to check that the PS-B's power is disconnected before installing the unit, in order to prevent an electrical shock.**
- **Do not attempt to modify or open the PSB-HD020, since it can cause a shock or fire.**
- **When installing the PSB-HD020, be sure to read this guide's "3. Installation" section's information completely to insure that the unit is correctly installed.**

To Prevent Accidents

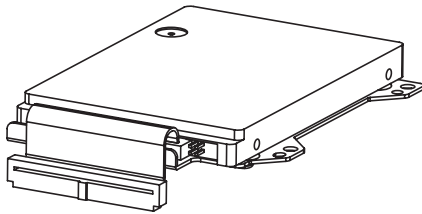
- Since the PSB-HD020 is a precision instrument, be sure it is neither hit by nor pressed strongly against another object. After unpacking, be sure the unit is not dropped or jolted during installation. Also, a PS-B built in to a larger unit (i.e. operation panel) should be removed and packed separately prior to shipping.
- Be sure water, liquids or metal particles are not allowed to enter the PSB-HD020. 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 PS-B while the PSB-HD020 is installed and the PS-B unit's power is ON.
- Do not use the PSB-HD020 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 PS-B unit's OS before turning OFF the main power.
- To prevent HDD memory leaks, restart the OS periodically.

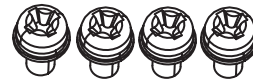
Package Contents

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

■ **PSB-HD020 (1)**



■ **Attachment Screws (4)**
(PSB-HD020)



■ **Installation Guide (this guide)**

Installation
Guide

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	20GB
Average Seek Time	12msec (TYP)
Power Consumption	At Startup : 4.5W (TYP)
	Read/Write : 1.6/1.6W (TYP)
	During Wait : 0.2W (TYP)
Interface	ATA
Operation Lifetime	5 years, or 20,000 operating hours, whichever comes first
Weight	Approx. 200g



- The PSB-HD020 has a finite usage lifetime. Therefore, be sure to back up all HDD data periodically or prepare a backup HDD unit.
- The HDD unit's lifetime depends on the type of usage and the operation environment, which may either lengthen or shorten the figure given here. This figure is for reference purposes only.

■ Environment

Operating Temperature	5°C to 50°C
Storage Temperature	-10°C to +60°C
Ambient Humidity	10%RH to 85%RH (no condensation) (Wet bulb temperature: 29°C or less)
Noise Resistance (via Noise Simulator)	Noise Voltage: 1500Vp-p
	Pulse Width: 50ns, 500ns, 1μs
Electrostatic Discharge Immunity	6kV
Vibration Resistance	4.9m/s ² (10Hz to 25Hz) (When Operating)
Shock Resistance	3920m/s ² (1ms, Half-sine shock pulse)(When Operating)

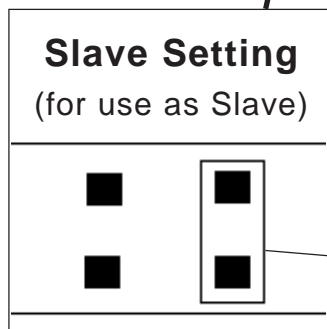
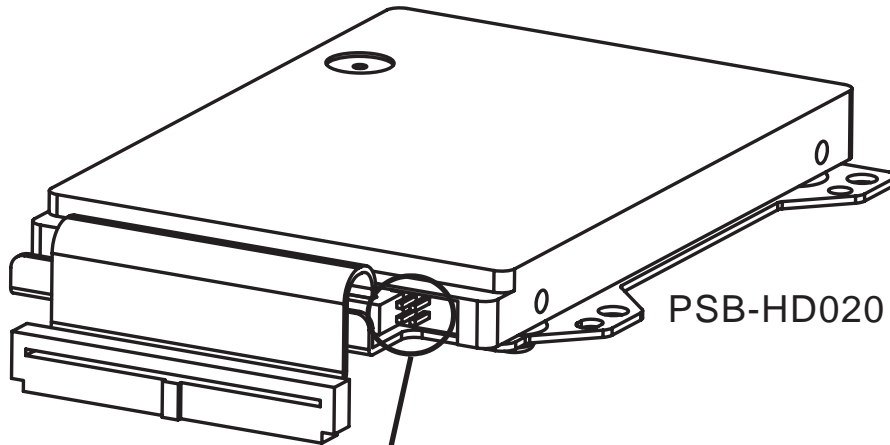


- The environment specifications given here are for a unit installed in a PS-B.
- Pro-face does not guarantee the preservation of any data stored on the HDD if the HDD has an accident, malfunctions or is damaged in any way. Therefore, the regular backing up of important HDD data to either a floppy disk, or other type of suitable magnetic media is strongly recommended.
- This HDD has a finite usage lifetime. The lifetime figure given in this document is for reference, and the periodic replacement of the current HDD unit with a new HDD unit is strongly advised.
- Using the Hard Disk in an environment that is excessively hot and/or humid will shorten the disk's usage lifetime. A wet bulb temperature of 29°C or less is recommended. This is equivalent to the following data.

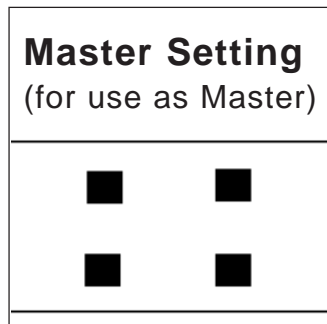
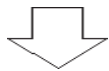
Temperature	Humidity
at 35°C	no higher than 64%
at 40°C	no higher than 44%

2 Hard Disk Unit Settings

The PSB-HD020 is factory set for use as the PS-B's Slave drive. However, the user can change this setting so that the PSB-HD020 can be used as the PS-B's Master drive. To do this, follow the procedures given below.



Jumper Plug



When using the PSB-HD020 as a Master, be sure to remove the jumper plug, as shown in the left side figure.



- All Pro-face PS-B units have a built-in hard disk. This hard disk, when shipped, is set as the PS-B's Master. Therefore, when an additional HDD unit (PSB-HD020) is used, be sure to set this HDD unit's jumper plug to "Slave".
- Except for the above Master/Slave settings, do NOT do any other settings with the PSB-HD020 and the jumper plug, since it can cause a malfunction or damage the unit.

3 Installation

Use the following steps to install the PSB-HD020 in the PS-B.

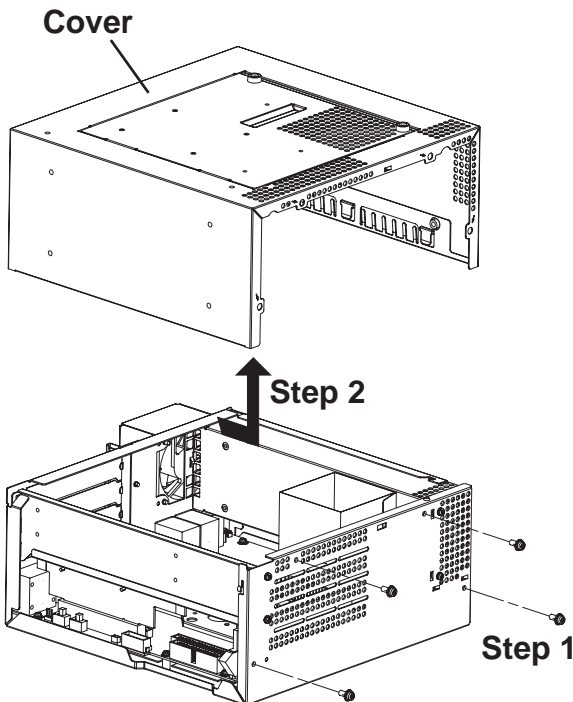


WARNING

Shock Danger! Be sure to unplug the PS-B unit from its power supply prior to installing the PSB-HD020.



Since the HDD unit is a precision instrument that has a low resistance to shocks, be sure it is neither hit by nor pressed strongly against another object when installing it.

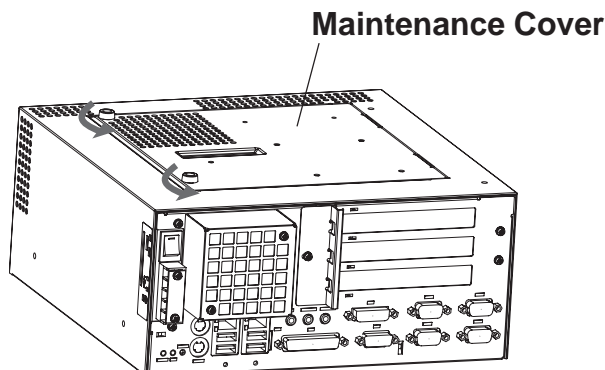


1) Lay the PS-B unit on its side and unscrew the four (4) cover attachment screws.

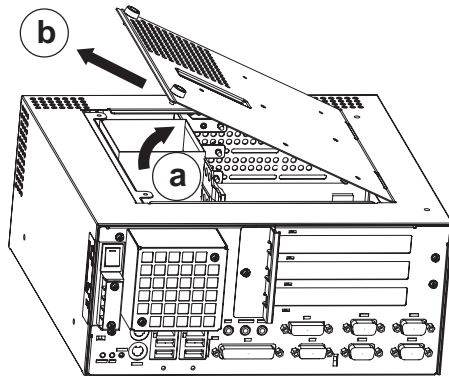
2) Slide the cover horizontally in the direction shown by the arrow (see diagram) and lift it out from the PS-B unit.
(Go to step 3.)

You can also remove only the maintenance cover and install the HDD unit.

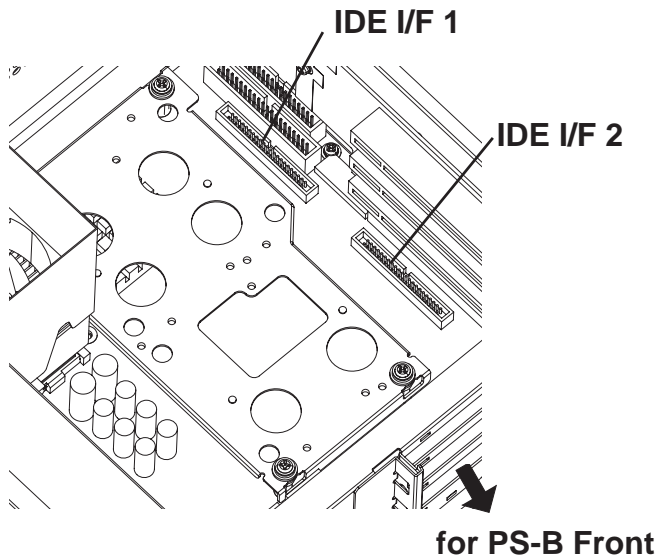
To do this, please perform the following steps.



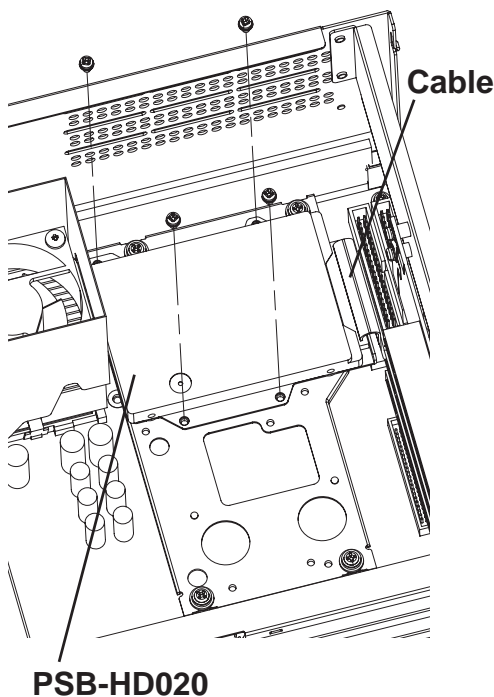
1) Loosen the two (2) maintenance cover attachment screws.



- 2) Tilt the maintenance cover up as shown by arrow (a) and lift it out in the direction shown by arrow (b) (see diagram). (Go to step 3.)



- 3) Insert the PSB-HD020 cable connector completely into the IDE I/F 1 socket.



- 4) Attach the PSB-HD020 using the four (4) attachment screws. (See diagram) The torque should be 0.5 to 0.6 N•m.



Note: When attaching two PSB-HD020 units, use IDE I/F 2. Insert the second HDD unit's cable into the IDE I/F 2 socket. (Refer to steps 3 and 4.) Then, attach that unit, using its four (4) attachment screws.

- 5) Replace the PS-B unit's cover and reattach all four (4) attachment screws. The torque should be 0.6 to 0.8 N•m. If you used the maintenance cover and start the attachment, replace the maintenance cover and reattach the two (2) attachment screws. The torque should be 0.5 to 0.6 N•m.

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.**



All the following explanation screens use the PS-B's factory settings (default settings).

- 1) Connect a keyboard to the PS-B.
- 2) Turn the PS-B unit's power ON.
- 3) When the start-up screen appears, press your PC's [F2] key to go to the BIOS Setup Screen.

In the Setup Screen, select [Standard CMOS Features], then, [IDE Primary Master] or [IDE Primary Slave] depending on the settings of the jumper plug to Master/Slave. The following screen will appear.

(When selecting [IDE Primary Master].)

Phoenix- AwardBIOS CMOS Setup Utility		Item Help
IDE Primary Master		
IDE HDD Auto-Detection	[Press Enter]	
IDE Primary Master Access Mode	[Auto] [Auto]	Menu Level ▶ ▶
Capacity	0 MB	To auto-detect the HDD's size, head...on this channel
Cylinder	0	
Head	0	
Precomp	0	
Landing Zone	0	
Sector	0	
↑↓→←: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults		

- 4) Confirm whether "AUTO" is selected for IDE Primary Master/IDE Primary Slave. Also, confirm whether "AUTO" is selected for [Access Mode]. If AUTO is not selected, change these settings to AUTO. If AUTO is selected in both, disk parameters will be automatically read when the PS-B is turned ON. The factory setting is AUTO and recommended for most users.
- 5) After all changes are made, press the [ESC] key and select [Save & Exit Setup] to save the settings.

5 Software Setup

After completing the hardware setup, in order to save data and application(s) to the HDD, use your OS (MS-DOS or Windows) 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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