

Preface

The PSA-HD20 is made by Pro-face for use with PS-3700A Series (hereafter referred as the "PS-A") units. This 2.5 inch 20GB hard disk is designed to be installed inside the PS-A unit.

Corresponding units: PS-3700A 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-A unit's power is disconnected before installing the unit, in order to prevent an electrical shock.**
- **Do not attempt to modify or open the PSA-HD20, since it can cause a shock or fire.**
- **When installing the PSA-HD20, be sure to read this guide's "2. Installation" section's information completely to ensure that the unit is correctly installed.**

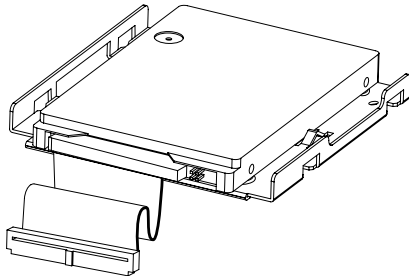
To Prevent Accidents

- Since the PSA-HD20 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-A unit built in to a larger piece of equipment (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 PSA-HD20. 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 the PSA-HD20 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 the PSA-HD20.
- Do not move or shift the PS-A unit while the PSA-HD20 is installed and the PS-A unit's power is ON.
- Do not use the PSA-HD20 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-A unit's OS before turning OFF the main power.
- To prevent HDD memory leaks, restart the OS periodically.
- In order to extend the lifetime of the hard disk, Pro-face recommends you set the Windows [Control panel]-[Power Management option]-[Turn off hard disks] selection to turn the hard disk off when the unit is not being operated. A setting of 5 minutes is recommended.

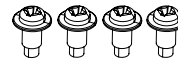
Package Contents

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

■ **HDD unit (1)**
(PSA-HD20)



■ **Attachment Screws (4)**



■ **Installation Guide (this 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 : 4.7W (TYP)
	Read/Write : 2.0/2.1W (TYP)
	During Wait : 0.25W(TYP)
Interface	ATA
Operation Lifetime	5 years, or 20,000 operating hours, whichever comes first
Weight	Approx. 200g



- The PSA-HD20 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 will vary, depending on the usage conditions and environment. The above value is calculated assuming an ambient temperature of 20°C and 333 hours of operation per month. (HDD access frequency of 20% or less)

■ Environment

Operating Temperature	PS-3700A	+5°C to +50°C
	PS-3701A	+5°C to +45°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		4kV
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 PSA-HD20 installed in a PS-A unit.
- Pro-face does not guarantee the preservation of any data stored on the PSA-HD20 if the HDD unit 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.
- The PSA-HD20 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 PSA-HD20 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%

- In order to extend the lifetime of the hard disk, Pro-face recommends you set the Windows [Control panel]-[Power Management option]-[Turn off hard disks] selection to turn the hard disk off when the unit is not being operated. A setting of 5 minutes is recommended.

2 Installation

Be sure to use the following installation procedures to insure that the PSA-HD20 is correctly installed. Installation location will differ depending on the type of PS-A unit you are using.

WARNING

Shock Danger! Be sure to unplug the PS-A unit from its power supply prior to installing the PSA-HD20.

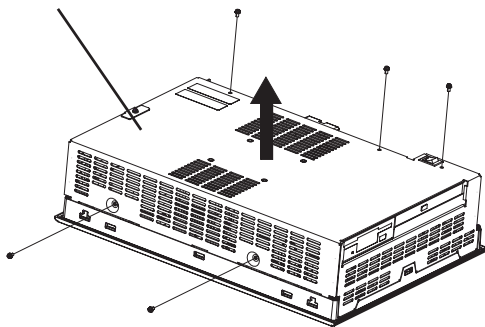


Since the HDD unit is a precision instrument that has a low resistance to shocks, be sure it is neither hit by nor pressed strongly against another object when installing it.

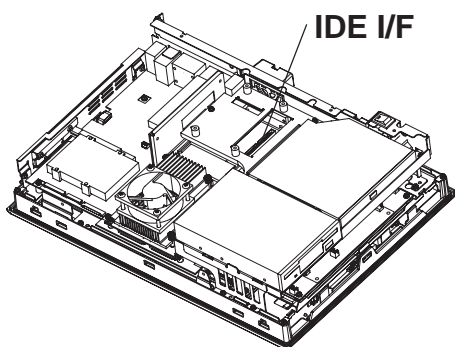
■ When using PS-3700A(Pentium® 4 - 1.7GHz Model)/PS-3700A(Eden™ ESP6000 - 667MHz Model)

The following procedure uses a PS-3700A(Pentium® 4 - 1.7GHz Model) unit as an example.

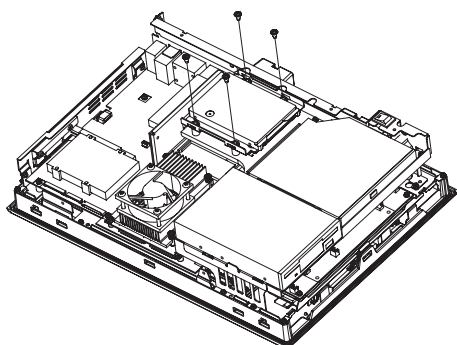
Rear Cover



- 1) Place the PS-A unit face down and unscrew five (5) attachment screws. (See diagram)
- 2) Lift the Rear Cover off of the PS-A unit.



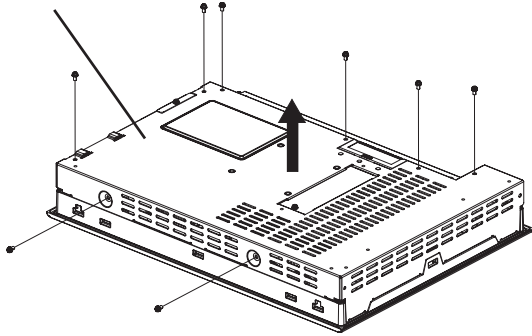
- 3) Insert the PSA-HD20 cable connector completely into the IDE I/F.



- 4) Attach the PSA-HD20 using four (4) attachment screws. (See diagram) The torque should be 0.5 to 0.6 N•m.
- 5) Replace the PS-A unit's Rear Cover and reattach five (5) attachment screws. The torque should be 0.5 to 0.6 N•m.

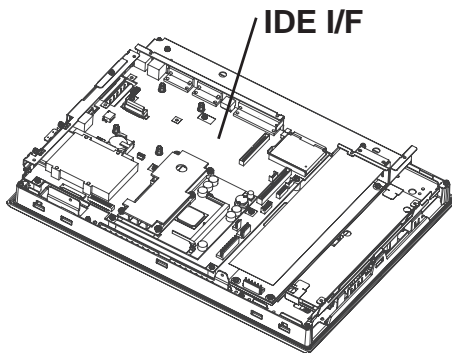
■ **When using PS-3701A(Eden™ ESP6000 - 667MHz Model)**

Rear Cover

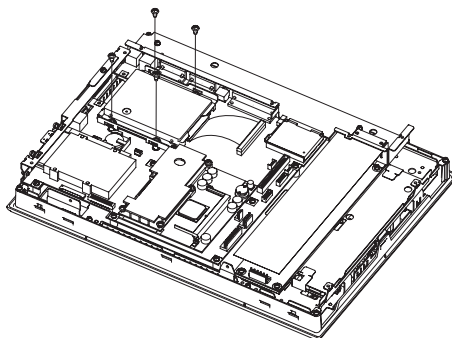


1) Place the PS-A unit face down and unscrew eight (8) attachment screws. (See diagram)

2) Lift the Rear Cover off of the PS-A unit.



3) Insert the PSA-HD20 cable connector completely into IDE I/F.



4) Attach the PSA-HD20 using the four (4) attachment screws. (See diagram) The torque should be 0.5 to 0.6 N•m.

5) Replace the PS-A unit's Rear Cover and reattach eight (8) attachment screws. The torque should be 0.5 to 0.6 N•m.

3 Hardware Setup



- **Normally, the factory default settings should be used.**
- **Certain BIOS screen items may differ from those shown here due to new versions or the PS-A unit you are using.**



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

- 1) Connect a keyboard to the PS-A unit.
- 2) Turn the PS-A unit's power ON.
- 3) When the start-up screen appears, press your PC's [DEL] key. The Setup utility will start. 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		
IDE Primary Master		
IDE HDD Auto-Detection	[Press Enter]	Item Help
IDE Primary Master	[Auto]	Menu Level ►► To auto-detect the HDD's size, head... on this channel
Access Mode	[Auto]	
Capacity	0 MB	
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-A 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.

4 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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