# PL-HD210
# Operation Instructions

This hard disk unit is made by the Digital Electronics Corporation for use with its Panel Computer PL-X900 Series devices. This 2.5 inch 6.0G byte hard disk is designed to be installed inside a Panel Computer.

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

## Warning - Safety Precautions

## ⚠ WARNING

- Be sure not to jar or bump this unit when installing it in the Panel Computer. Also, be sure to check that the Panel Computer's power is disconnected before installing the hard disk in order to prevent electrical shock.
- Do not attempt to modify or open this unit, due to the danger of shock or fire.
- When installing this hard disk, be sure to read the following "3 Installation" section's information completely to insure that the unit is correctly installed.
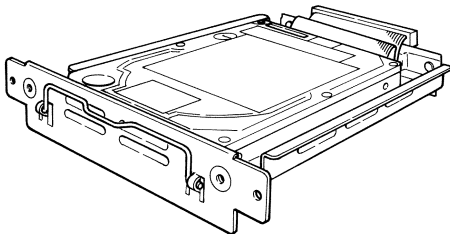
## To Prevent Accidents

- Since the PL-HD210 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 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 allow anyone other than Digital's own service staff to perform maintenance or adjustments to this unit.
- Do not move or shift the PL while the PL-HD210 is installed and the power is ON.

- Do not use the PL-HD210 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 unit's OS before turning OFF the main power.

# Package   Contents

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

**PL-HD210**          **(1)**



**PL-HD210 Operation**

**Instructions**          **(1)**

(this sheet)

| Operation Instructions |
| :---: |

Digital 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 Digital representative immediately for service.

# 1 Hardware Specifications

## Features

| | |
|---|---|
| Memory Capacity | 6.0G bytes |
| Sector Size | 512 bytes/Sector |
| No. of Disks | 1 |
| No. of Logic Heads | 2 |
| No. of User Cylinders | 12416 |
| Seek Time | 12msec(TYP) |
| Electric Power | At Startup : 4.7W (MAX) |
| | Read/Write : 2.0/2.1W (TYP) |
| | During Wait : 0.25W(TYP) |
| Interface | ATA-4 (E-IDE) |
| Lifetime | 5 years, or 20,000 operating hours, whichever comes first |

**CAUTION**

- *The PL-HD210 has a finite usage lifetime. Therefore, be sure to back up all HDD data regularly or prepare a backup HDD unit.*

- *The HDD unit's lifetime depends on the type of usage and surrounding environment, which may either lengthen or shorten the figure given here. This figure is for reference purposes only.*

## Environment

| | |
|---|---|
| Operating Temperature | 5 to 50 $^{o}$C |
| Storage Temperature | -10 to 60 $^{o}$C |
| Ambient Humidity | 30 to 85% RH (no condensation) |
| Noise Resistance (Depends on Noise Simulator) | Noise Voltage: 1500Vp-p |
| | Pulse Width: 50ns, 500ns, 1us |
| Static Resistance | 4kV |
| Vibration Resistance | 4.9m/s$^{2}$ (10 to 25Hz) |
| Shock Resistance | (shipped condition) 4900m/s$^{2}$ |

**CAUTION**
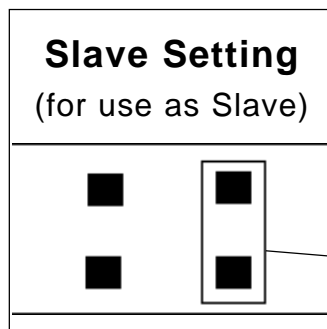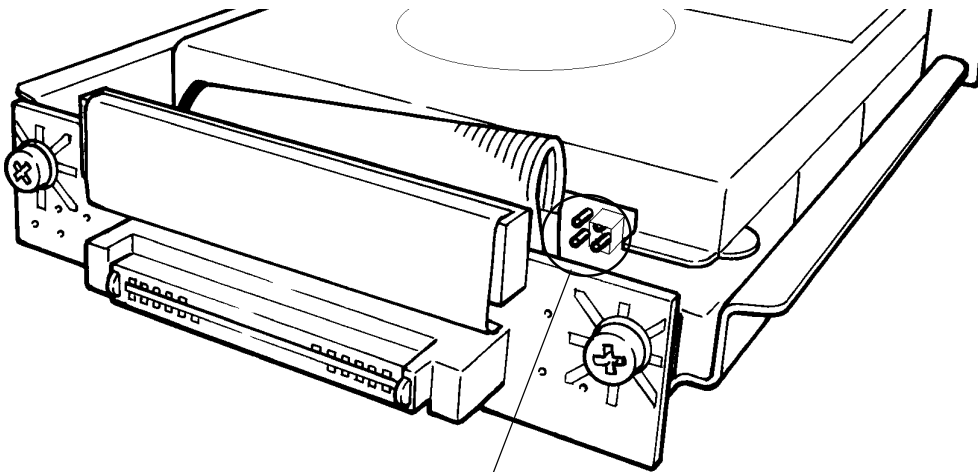
- *The environment specifications given here are for a PL that is built into a metal panel.*

- *The Digital Electronics Corporation 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's Features is for reference, and the regular exchanging of the current HDD unit for a new HDD unit is strongly advised.*
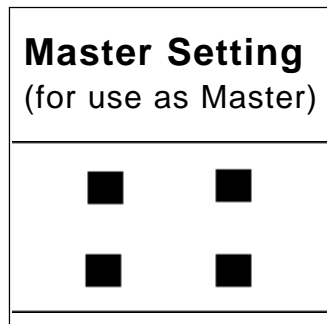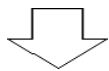
# 2 Hard Disk Unit Settings

The PL-HD210 is factory set for use as the PL's Slave drive, however, if the user desires to change this setting so that the PL-HD210 can be used as the PL's Master drive, follow the procedures given below.

**<PL-HD210 Front Face Connector>**



**Slave Setting**
(for use as Slave)

Jumper Plug

**Master Setting**
(for use as Master)

**When using the PL-HD210 as a Master, be sure to remove the jumper plug, like shown in the left side figure.**

⚠️ **Important**
- *All of Digital's PL-X900 Series units have a built-in hard disk unit. These units, when shipped, are all set as the PL's Master. When an additional HDD unit (PL-HD210) is used,be sure to set this unit's the jumper plug to Slave.*
- *Except for the jumper plug shown here, do NOT use any other short plugs with the PL-HD210, since it can cause a malfunction or damage the unit.*

# 3 Installation
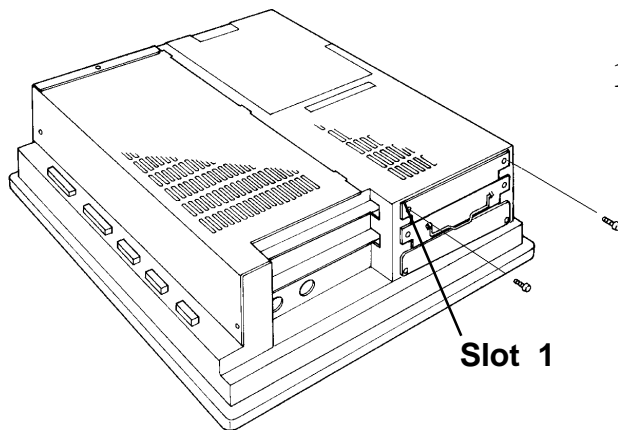
Use the following steps to install the PL-HD210 in the PL.
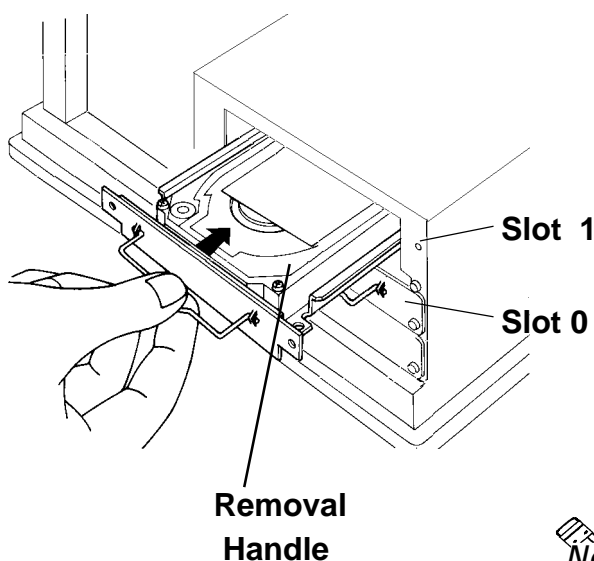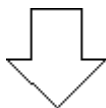
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### ⚠ WARNING

**WARNING** : Shock Danger! Be sure to unplug the PL unit prior
to installing the PL-HD210.

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⚠ *Important* ***Since the PL-HD210 is a precision instrument, be sure it is
neither hit by nor pressed strongly against another object.***



**Slot 1**

1) **Remove the uppermost (slot
1) expansion slot cover's two
(2) attachment screws.**



**Slot 1**

**Slot 0**

**Removal
Handle**

2) **Hold the PL-HD210's removal
handle and slide the unit
slowly into the expansion slot,
so that the rear face connector
is completely inserted into the
slot's connector pins.**
3) **Reattach the two (2) expansion
slot cover attachment screws.**

*Note:* *When installing an HDD unit in slot 0,
use the abovementioned installation
procedures.*

# 4 Hardware Setup

⚠️ *Normally, the factory settings (default settings) shoul be used.*
**Important**

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

1) Connect a keyboard to the PL unit.

2) Turn the PL unit's power ON.

3) When the "Press <DEL> to enter SETUP" message appears, press your keyboard's [DEL] key.

   The Setup utility will start and the following screen will

   appear.[STANDARD COMS SETUP]

```
                    ROM PCI/ISA BIOS(2A5LEU1C)
                       STANDARD CMOS SETUP
                      AWARD SOFTWARE, INC.

    Date (mm:dd:yy): Wed,Jul 2 1998

    Time (hh:mm:ss): 14 : 50 : 3

                    CYLS. HEADS  PRECOMP  LANDZONE  SECTORS  MODE
    Drive C:Auto(  0b)  0     0       0         0         0      AUTO
    Drive D:Auto(  0b)  0     0       0         0         0      AUTO

    Drive A:1.44M,3.5 in.
                                   ┌─────────────────────────────┐
                                   │ Base Memory :   640K        │
                                   │ Extended Memory: 31744K     │
                                   │ Other Memory :  384K        │
    Video :   EGA/VGA              │                             │
    VGA_Text Mode:Normal           ├─────────────────────────────┤
    Halt On  All, But Keyboard     │ Total  Memory : 32768K      │
                                   └─────────────────────────────┘

    ESC  Quit              Select Item    PU/PD/+/-:    Modify
    F1   Help            (Shift)F2    Change Color
```

**Operation Keys**

Displays the keys used (enabled) during Setup, and their

function(s)

**Help Information Display Area**

Provides detailed information about the currently highlighted

(cursor position) item

**System Settings Area**

Displays the current System Settings for each Menu area

(Main, Advanced, Power, etc.)

4) Confirm that both the C and D drives are set to [Auto]. This designates that when the PL is started up, the hard disk's parameters are automatically read out and used. If [Auto] is not selected, be sure to change this setting to [Auto]. The [Auto] setting is factory set and recommended for most users.

5) Press the [ESC] key to call up the [SAVE & EXIT SETUP] menu.

# 5 Software Setup

After completing the hardware setup, in order to record all data and application(s) use your OS (MS-DOS or Windows) to create partitions and initialize the hard disk. Please consult your OS's operation manuals for details.