

HARD DRIVE INSTALLATION

Introduction

Hard drives can be added or swapped on the PS Series workstations. It stores the operating system, development and runtime software, projects, and applications.

The Hard Drive Replacement/Update kit includes a hard drive, 4 screws, and an Electrostatic Discharge Kit.

Before You Start

You will need the following items:

- Hard Drive Replacement/Update kit Model HDV-PSST (for standard size hard drive) or Model HDV-PSLG (for large capacity hard drive)
- Hard Drive Installation instructions
- Screwdriver

Precautions

The following precautions are essential during the installation of sensitive components:



Warning

For safety reasons, the PowerStation should be opened only by qualified service personnel.



Warning

Be sure to observe electrostatic discharge (ESD) precautions while working inside the unit.

Electrostatic Discharge Precautions Preparation

Important Open the Electrostatic Discharge Kit and follow the directions for attaching the wrist strap and handling sensitive electronic components.

Removing the Backcover

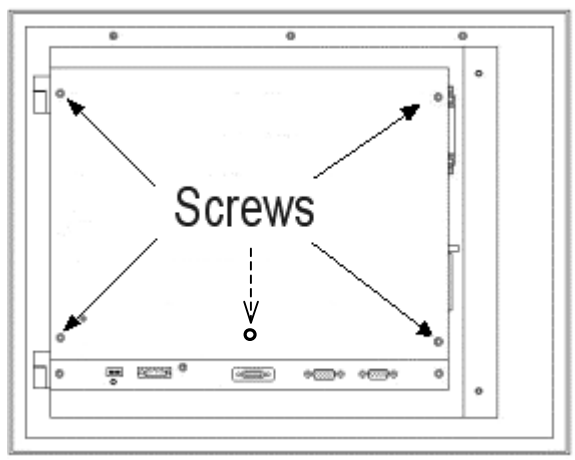
To open the unit, follow these steps:

1. Turn off the unit.
2. Disconnect the unit from the power source.
3. Disconnect all cables attached to the unit.

Caution Before you complete the next step, you must wear an ESD wrist strap connected to a good, known, earth ground to avoid damaging the unit.

4. Remove the fastening screws from the back cover of the unit. Set screws aside.

Note The unit illustrated below is a PS15-2. However, the 4 corner screws are located in the same place for all units within the PowerStation PS series regardless of the model number. The PXXX-3 and -6 (ISA majority backplate expansion) and PXXX-4 and -7 (PCI majority backplate expansion) have an additional fifth screw, indicated below by the dashed arrow.

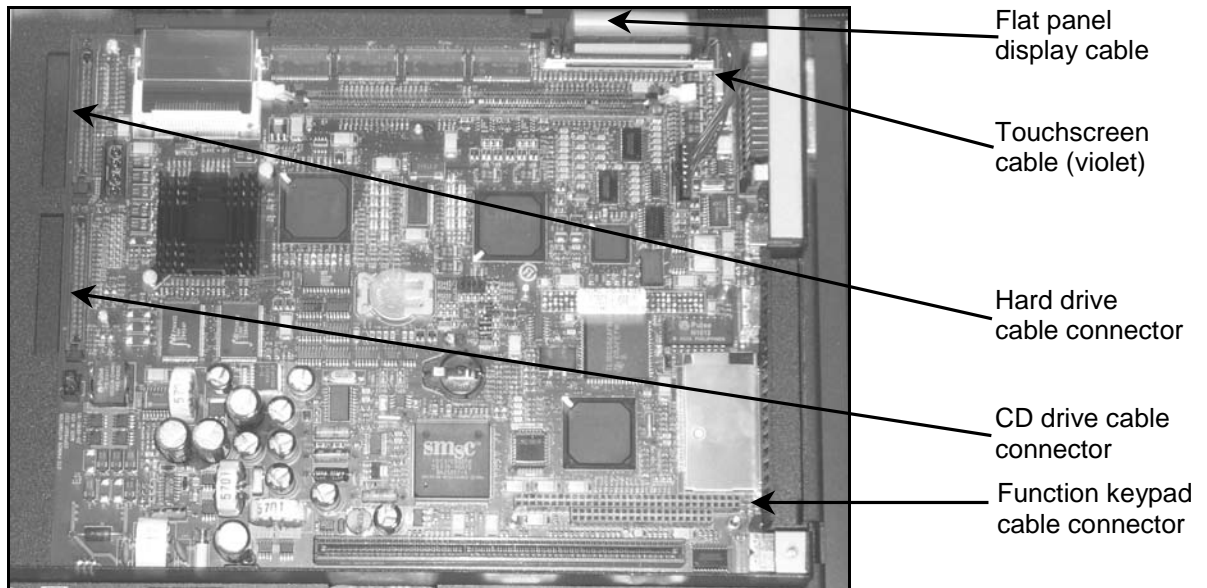


The back cover is removed and the CPU board is accessible.

Accessing the Hard Drive Area

To access the hard drive area from the CPU board, complete the following steps:

1. Detach the flat panel display cable from the CPU board connector, if the unit is attached to a display. Otherwise, skip to step 4.
2. Detach the function keypad cable, if the unit is attached to a faceplate with a function keypad.
3. Detach the touchscreen cable from the CPU board connector, if the unit is attached to a display.



4. If it is in the way, detach the CD-ROM drive cable from the CPU board connector, if the unit has a CD-ROM drive.

5. Detach the hard drive cable from the CPU board connector, if the unit has a pre-existing hard drive.
6. To access the hard drive area, which is on the other side of the CPU board, remove the 6 screws attaching the backshell to the display and set the screws aside.



7. Flip the backshell over.

You now have access to the hard drive area.

If there is an existing hard drive in the system, skip to the section *Removing Existing Hard Drive* on page 5.

If there is no hard drive currently installed in the system, continue with the next section *If no hard Drive has ever been installed in the unit* on page 4.

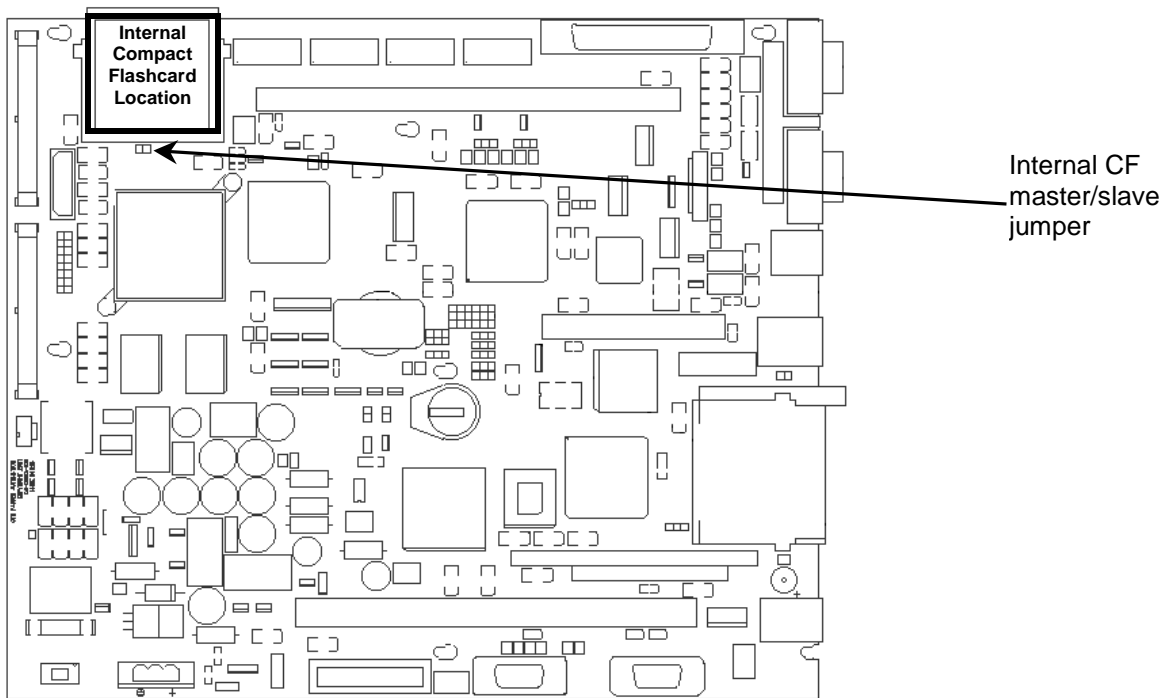
If no Hard Drive has ever been installed in this unit

If no hard drive has ever been installed in this unit, it will be necessary to check the jumper settings.

Check the jumper settings

When you are installing a hard drive in a system that has not previously contained a hard drive, the hard drive and the Internal Compact Flashcard have to be jumpered properly according to master/slave status.

1. Set up the Hard Drive as master by setting the jumpers according to the label on your hard drive (master or Device 0 settings). The master setting is usually the default setting when the hard drive is shipped.
2. Determine whether you have an Internal Compact Flashcard (CF) on your system by checking your CPU board for a Flashcard in the following location:

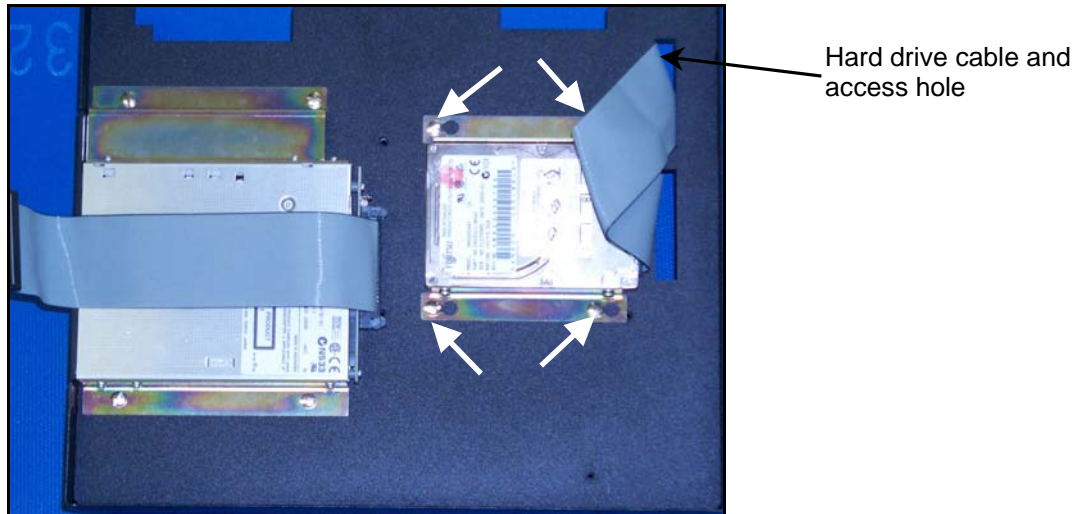


3. Set up the Internal Compact Flashcard (CF) as a slave by setting the Internal CF master/slave jumper shown above to OFF, or .
4. Skip to the section *Installing the new Hard Drive* on page 5.

Removing Existing Hard Drive

If you do not have an existing Hard Drive, skip to the section *Installing the new Hard Drive*. If you have an existing hard drive, you will need to remove the existing hard drive:

1. Locate the hard drive assembly.
2. Remove the 4 screws securing the hard drive brackets to the workstation.



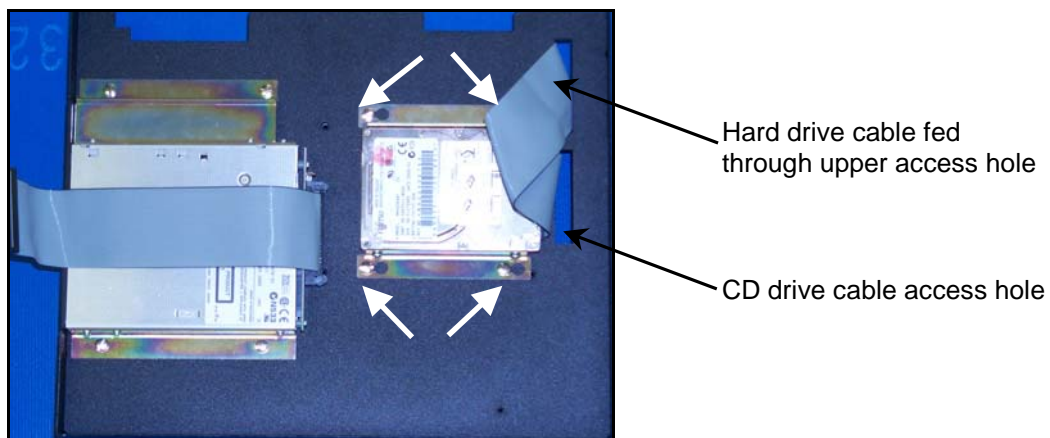
3. Remove the hard drive cable from the access hole.
4. Remove the hard drive.

You are now ready to install the new Hard Drive.

Installing the New Hard Drive

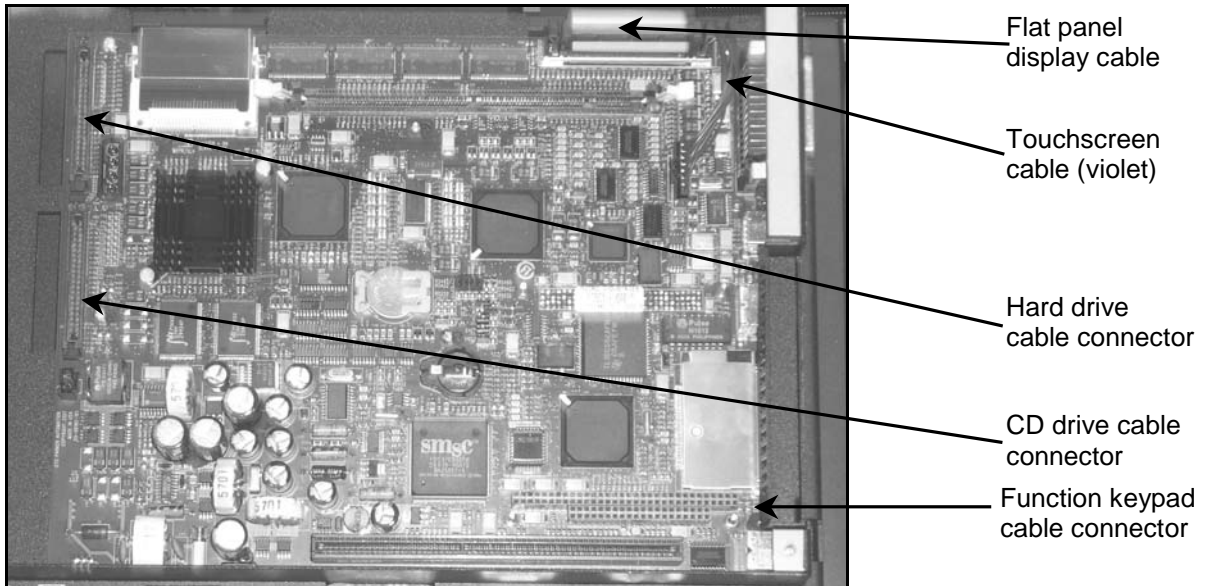
To install the new hard drive, follow these steps:

1. Move aside any cables that may hinder replacement of the hard drive (e.g. the CD cable).
2. Place the new hard drive as shown in photograph below, lining up the bracket holes and the holes in the plate.
3. Screw in the 4 screws provided with the Hard Drive Installation kit.



4. Feed the hard drive cable through the upper hole, as seen in the photograph above.

5. If the unit has a CD drive, feed the CD drive cable through the center access hole, as seen in photograph above.
6. Flip the backcover over to access the CPU board.
7. Plug the hard drive cable into the hard drive connector.



8. If the unit has a display, plug the Touchscreen cable (violet cable) and the Flat Panel Display cable into the connectors from which they were removed. If the display has a function keypad, attach the function keypad cable to the connector from which it was removed.
9. If the unit has a CD drive, plug the CD drive cable into the center connector from which it was removed.

Close the Unit

To close the unit, follow these steps:

1. Place the CPU assembly on the touchscreen assembly.
2. Reattach the CPU assembly to the unit with the 6 screws (2 on each side) removed earlier.
3. Place the back cover on the unit.
4. Reattach the back cover using the screws removed earlier.
5. Reconnect the power cable and any other disconnected cables to the unit.
6. Reconnect the unit to the power source.

You may now restart the unit. If this is the first time that a Hard Drive has been installed in the unit, go to the section *First Installation* below. Otherwise, your Hard Drive installation is complete.

First Installation

If the unit never had a Hard Drive before, you will need to check the BIOS boot options.

Changing the system BIOS Boot Options

Your new hard drive is a bootable device. When the workstation is turned on, it will attempt to load the operating system (such as Windows or DOS) from a bootable device. If you have several bootable devices on your system, you will need to check or change the device boot order in the BIOS by changing the Boot Options.

To check or change the Boot Options on your workstation, follow these steps:

1. Turn on your workstation.
2. Press **F2** immediately, before the system finishes the boot sequence.

The BIOS Setup screen appears.

Note If the line **Primary Master** option reads **[None]**, your hard drive has not been detected. Go to the *Troubleshooting* section.

3. Scroll down using the down arrow key until you reach **Boot Options**.
4. Press Enter to select **Boot Options**.

The list you see is the boot order list. The system will try to boot from the first item on the list. If the system cannot boot from the first item (usually a Removable Device such as a floppy drive), it tries to boot from the second item (usually the CD drive), and so forth down the list until it can boot.

The items which have a + sign next to them contain sub-items. The Enter key expands or collapses the sub-list.

Note If you want your system to boot from the hard drive sub-items **before** it tries booting from the floppy drive, the CD-ROM drive, or the network, the Hard Drive item must be at the top of the list.

5. Decide in which order you want the boot list. To change the boot order, shuffle the items around using the plus (+) key to move an item up in the list or the minus (-) key to move the item down in the list.
6. Expand the **Hard Drive** item by selecting it and pressing the Enter key.

The system will have automatically detected the new hard drive, and placed it on the Hard Drive list under a code name (such as Fujitsu XXX). The list may also contain Bootable Add-in Card (PCMCIA), or other items, depending on what is installed on your system. These items are all considered 'hard drives' by the system.

Note If you do not see your freshly installed hard drive on this list, go to the *Troubleshooting* section.

7. Decide in which order you want the hard drive sub-list. To change the boot order, shuffle the items around using the plus (+) key to move an item up in the list or the minus (-) key to move the item down in the list.
8. Collapse the Hard Drive item by selecting it and pressing the Enter key.
9. When the boot list is ordered to your satisfaction, press **F10** to save your new settings and exit the BIOS Setup.
10. Reboot the workstation.

Troubleshooting

Hard Drive not Detected

If your hard drive has not been detected at boot up, follow these steps:

1. Check, in the BIOS Setup, that the Auto-detect option has been turned on:
 - a. Turn on or reboot your workstation.
 - b. Press **F2** before the system finishes booting.
 - c. The BIOS Setup screen appears.
 - d. Scroll down using the down arrow key until you reach the **Primary Master** option.
 - e. Press Enter to select Primary Master screen.
 - f. Check the Type.
 - g. If the type is set to **Auto**, exit the BIOS setup and skip to step 2. Otherwise,
 - h. Toggle the options until you see **Auto**.
 - i. Press **F10** to save and exit the BIOS setup.
 - j. Reboot the workstation. The hard drive should now be detected automatically. If not,
2. Turn off the workstation.
3. Check that the hard drive cable is properly seated in the hard drive socket.
4. Check that the Internal Compact Flashcard jumpers are set to Slave (if you have an Internal Compact Flashcard).
5. Reboot the workstation.