

PowerStation Flash Memory Replacement

Background

This document describes the procedures for replacing the flash memory on PowerStations. The P2, P3, and P5 PowerStations come equipped with flash memory in place of a hard drive. This section describes how to remove and replace flash memory for these units.

This procedure requires the following tools:

- Slotted head (#2) screwdriver
- Phillips head (#0) screwdriver
- Quarter inch nut driver

Important The PowerStation uses special flash memory SIMM modules that are available from CTC. Using flash memory modules from a different source will cause unreliable memory storage. Also, CTC cannot guarantee the integrity of backup operations.

Before you begin removing or replacing the flash memory, be sure to back up any important data or Interact projects on the existing flash disk. Refer to the Interact Project Manager User Guide for details on backing up Interact projects.

Electrostatic Discharge Precautions

Modern integrated electronic devices, especially CPUs and memory chips, are extremely sensitive to electrostatic discharges (ESD) and fields. Before you disassemble the PowerStation, be sure to follow these simple precautions to protect you and the PowerStation from harm resulting from ESD.

1. To avoid electric shock, always disconnect the power from the PowerStation before you remove the backshell cover or separate the backshell from the front panel. Do not touch any components of the CPU card or other cards while the PowerStation is on.
2. Disconnect power before making any hardware configuration changes. The sudden rush of power as you connect a jumper or install a card may damage sensitive electronic components.
3. Only handle internal components in an ESD-safe location using appropriate grounding methods.
 - Always ground yourself to remove any static charge before you touch the CPU card.
 - Be particularly careful not to touch the chip connectors.

- Keep any card in its anti-static packaging when it is not installed in the PowerStation, and place it on a static dissipative mat when you are working on it.
- Wear a grounding wrist strap for continuous protection.

Disassembling the PowerStation

If you have read and understand the ESD safety precautions, you are ready to disassemble the PowerStation. Follow these steps to disassemble the unit:

Important As you begin to disassemble the unit, you will encounter several different screw sizes. When you reassemble the PowerStation, be sure to replace the same size screw in the same location as the one that was removed. Failure to do so could result in damage to the unit.

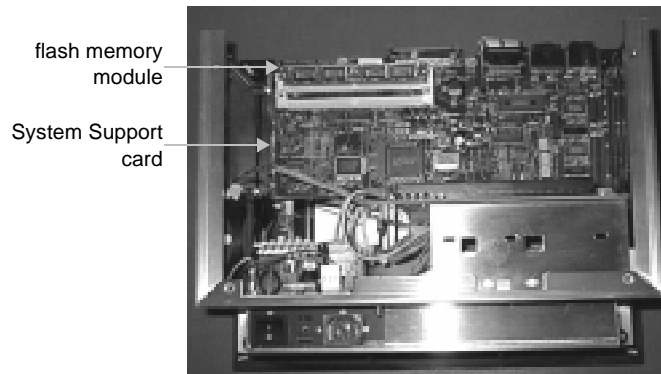
1. Turn off power to the unit.
2. Disconnect the unit from the power source.
3. Remove the unit from its enclosure, if installed.
4. Place the unit on a static dissipative mat in a location free from dirt and moisture and protected against static discharge. You must also wear an ESD wrist strap connected to a good known earth ground.
5. Place the unit on its display, and remove the screws securing the back cover.
6. Remove the back cover from the unit.

Removing a Flash Memory Module

The flash memory modules are located on the System Support Card located directly in front of the CPU card as you face the back of the unit. You can also identify the System Support card as the card with the 9-pin and 25-pin D-SUB connectors. The System Support card is shown below:

1. Locate the flash SIMM sockets located in the upper left corner of the

System Support Card.

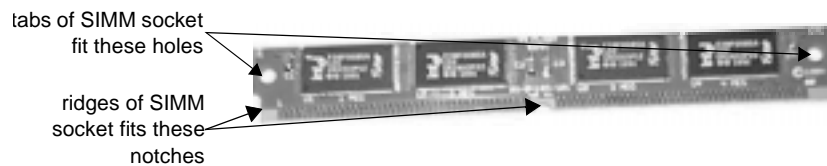


2. Push outward on the socket ejectors. It might be necessary to use a small screwdriver or the tip of a pen to push on the ejectors.
3. Gently flip the flash memory module upright from the 45-degree angle.
4. Pull the flash memory module outward to remove. Place the flash memory module on an anti-static surface.

Installing a Flash Memory Module

The steps to installing a flash memory module are the reverse of removing a module. Follow these steps to install a flash memory module:

1. Insert the flash memory module into the socket with the notch on the memory module to the left. The notch on the memory module aligns with the ridge on the socket. Refer to the picture below:



2. Gently push the module down to a 45 degree angle until the tabs on the socket snap onto the flash memory module. Make sure the socket ejectors are holding the flash memory module in place.

Setting the Flash Memory Jumpers

Like most PCs, the PowerStation uses jumpers to set addresses and enable or disable various functions of the system. The PowerStation has four sets of jumpers for configuring the serial ports, touch screen, and flash memory (if available). The jumper settings for the flash memory are shown below.

JP5

This set of jumpers is only available on units with flash memory. This set of jumpers controls where the flash memory appears in memory. The flash memory uses a 12 Kbyte region of memory starting at the specified address.

A	B	
●		C8000
	●	D0000
●	●	D8000

Starting address of mapped (used) region

Reassembling the PowerStation

Follow these steps to reassemble the unit.

Important When you reassemble the PowerStation, be sure to replace the same size screw in the same location as the one that was removed. Failure to do so could result in damage to the unit.

1. Replace the back cover, and tighten the four screws.
2. Reinstall the unit in its enclosure, if previously installed.
3. Restore power to the unit by plugging the power cord into the back of the unit.

Formatting the Flash Memory

PowerStations equipped with flash memory include a setup utility for formatting the flash memory. If the flash memory becomes corrupted or you install new flash memory, you must format the flash memory using the

flash setup disk. This format procedure will erase all data on the module.

Important DO NOT use the PowerStation's DOS Format command to format the flash memory.

1. Insert the flash setup disk into the PowerStation's floppy drive.
2. Power up the PowerStation.
3. Select option 2 from the Startup Menu, and press Enter to begin the flash memory test.

Warning The flash memory test erases the flash memory prior to testing the capabilities of the flash memory. Be sure to back up any important data stored on the module before you begin the flash memory test.

4. Press <Y> to continue with the flash memory test when the warning message appears.
5. Press any key to reboot the PowerStation when the test is complete.
6. Select option 1 from the Startup Menu, and press Enter to format the flash memory and make it bootable. The setup utility copies the most common DOS commands onto the flash memory.
7. When the flash memory preparation is complete, remove the flash set-up disk. Failure to remove the disk will restart the cycle when you reboot the PowerStation.
8. Press any key to reboot the PowerStation. The flash memory becomes drive C.

Note The above procedure does not install the shell. The shell must be installed using the shell installation disk.

