

Module 3

Workstation Configuration Hardware

3.1 OBJECTIVES

Students will be able to:

- Demonstrate safe computer practices
- Describe the function of all major internal computer components
- Demonstrate how to properly install/configure major internal computer components

3.2 OVERVIEW

In this section we will start with safety, because we certainly want to prevent any damage to the equipment or to ourselves. This section will be spent primarily in our hardware lab. We will then start looking into the case and identify the different components. You will get your hand at removing and reinstalling different hardware components.

3.3 HARDWARE SETUP

3.3.1 COMPUTER SAFETY (PERSONAL SAFETY)

Our people are very valuable and important to our mission. We would not want to lose them anymore than we want to damage the equipment. With a few simple cautious thoughts, we can prevent a mishap. Personnel should always avoid working on energized equipment. You will need to reset the system after changes are made, so ensure the power is off before opening the case. You should remove all jewelry before entering the work area - not only rings and bracelets, but also any chains that could dangle in contact with the computer. The jewelry can act as conductors across two contact points causing severe burns. Never attempt to work on monitors or even remove the case. Monitors contain voltages (kV) that can exceed 25kV. Internal components can remain charged for hours after they are powered off.

3.3.2 COMPUTER SAFETY (EQUIPMENT SAFETY)

Inside those metal boxes are delicate electronic components. A seemingly minor incident can cause major damage. You should use anti-static straps or anti-static workstations when handling any computer component. At the very least, place a hand on a metal portion of the equipment to ground any static build-up before opening the protective anti-static bags or installing components. Always ensure the voltage switch is in the correct position before plugging in hardware. Many computers are built for use overseas, as well as here in the U.S. If you must replace integrated circuits, ensure they are properly aligned before making contact with the socket. Check for bent pins before plugging in connectors. Never use excessive force when making those connections. Inserting circuits, connectors or cables requires very little force. If you are having difficulty, check the connector for an obstruction.

3.4 HARDWARE LAB

During this section we will learn the parts of a computer and learn how to install hardware.

