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This article tells you how to maintain and operate your PC.

Introduction

By now we know enough of what is inside our PCs and of the software that runs on top of it. In this last article of the series, we shall see how to ensure a long trouble-free service life from your PC. This article is organized as a set of modules. When you buy or install your next PC, check these modules out before you use it extensively and depend on its correct and smooth functioning.

Mechanical Assembly

Make sure all the mounting holes of the motherboard have the screws. No portion of the motherboard should bend if you gently press it down with your thumb. All the screws should be tight enough so that the motherboard does not move with respect to the cabinet, but not so tight as to crack the printed circuit board of the motherboard. Make sure that teflon washers are there between the head of the screw and the PCB surface for each mounting screw.

Trends in Assembling PCs

Early PCs were packaged in rectangular boxes on top of which the video monitor was kept. See Figure 1 for such a box. Many low cost PCs are assembled like this even now. See Figure 2 for an assembled PC. Modern high-end PCs are encased in tower cabinets. This packaging idea came from the Japanese who value office real-estate. See Figure 3 for such a cabinet.
Figure 1. A primitive PC cabinet with just the power supply.

All mounting screws are to have their heads intact. Using the same screwdriver tool-bit and the same amount of torque, the screws should be turnable. Look for marks of abrasions or other signs of bad workmanship. The cabinet must not have loose screws, metal fillings or tiny balls of soldering metal inside.

Figure 2. An assembled primitive PC with lid open.

Fix it Yourself
You may find your motherboard very badly mounted. Do not panic. Most PCs assembled and sold at low prices are like that. Inspect and re-do the assembly yourself. Put in the missing screws. If any portion of the PCB touches the floor of the cabinet, put in a rectangular cardboard piece to make sure that there is no short circuit. Fix the cardboard to the floor of the cabinet with an adhesive.

Thin Walls
Do not accept a cabinet made of very thin sheet metal. A thin cabinet wall is dangerous. During usage and while transporting, the walls will bend and will cause short circuits. The motherboard PCB will also be stressed. To check this, place a 400-page book on all the walls (one by one), at the centre. If the centre sags visibly, reject the cabinet.