

HANDLING BIOS-RELATED COMPUTER PROBLEMS – ENT 286 CLASS

When trouble-shooting a PC, I recommend a theoretical approach that deals with problem identification in this manner:

- 1) **Assure yourself that the system BIOS settings are correct for that particular PC**
- 2) Assure yourself that the system hardware is functioning properly
- 3) Assure yourself that the operating system is installed and configured correctly
- 4) Assure yourself that any installed applications are in good order and not conflicting with the operating system or other applications
- 5) Assure yourself that the attached peripherals are not causing software or hardware conflicts
- 6) Assure yourself that there are not any virus, spyware or malware issues that may mimic hardware or software problems
- 7) Assure yourself that user error is not the problem.

BIOS setting analysis is always the first point of attack when resolving an unusual or difficult computer problem, not necessarily doing a hardware analysis. If the BIOS settings are incorrect, your hardware may malfunction, even though it is indeed working properly.

Start by getting into the BIOS setup program, usually by pressing the Del key, the F2 or F10 key, or whatever key is designated to let you into the program. Review the settings for drive types, CPU speed, boot sequence, integrated peripherals, and so forth. Correct any obvious problems that you see. If you cannot determine what the “right settings” are for a given PC, try to bring the PC back to the default settings from the factory. Some BIOS programs give you a “LOAD BIOS DEFAULT SETTINGS” or “LOAD OPTIMAL BIOS SETTINGS” option from the main screen.

If you cannot reset the BIOS back to default settings, see if there is a CMOS reset jumper on the motherboard, and use it to wipe the current settings. Once the reset jumper is placed back to the “normal” location, the default values will be loaded automatically. If all else fails, pull the CMOS battery and leave the system unplugged for several hours; this will wipe the CMOS and bring you back to square one.

Use the four rules listed in the ENT 286 course notes when modifying the BIOS settings: documentation, recordation, experimentation, and education. Obtain any relevant documentation for the BIOS product or PC manufacturer before making modifications. Also, record any of the current BIOS settings on a piece of paper before changing anything. Then, experiment with the BIOS settings, in order to get a better-performing PC. Finally, let others in the field educate you about the “best practices” in BIOS setting adaptation.

Use the Internet to obtain information on discrete problems you encounter when trouble-shooting a computer. A Google search often will show that you are not the first person to encounter a given problem. Usually such searches will yield information on the nature of the problem, and ways to correct the issue.

Check with the instructor if you have any questions on this subject.