

Excerpt from Study Unit

# Monitors, Video Cards, Printers, and Other Output Devices

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# *Preview*

The following is a sample excerpt from a study unit converted into the Adobe Acrobat format. A sample online exam is available for this excerpt.

The sample text, which is from the PC Repair program, discusses the software-related problems that may affect computer monitors (or more precisely, video systems). The excerpt also shows a questionnaire useful in troubleshooting malfunctioning video systems. After reading through the material, feel free to take the [sample exam](#) based on the excerpt.

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## Software-Related Video Problems

The programs you use on your computer must be compatible with your video system. How do you know if this compatibility is present? You don't—until you try the programs and a problem develops.

The first possible configuration-related software problem will arise if your video system requires a device driver and you haven't installed it. This problem also occurs if you've installed the driver in the wrong directory. You can head this problem off by using the `DEVICE=` command in your `CONFIG.SYS` file and specifying the path correctly.

Advanced operating environments like Windows don't work with all video systems. So, you must configure the system to work with the monitor installed (Figure 1). If the video display is garbled but everything else seems to be working, you'll know that you have a problem.

*FIGURE 1—Even if all the necessary hardware adjustments have been made, your video system won't work unless the software has been set up correctly.*



Application software usually has a setup or configuration module that lets you adjust the video system. If you don't use the setup module, the default values remain in place, and there's a good chance the quality of the display will be affected.

The image on some video monitors might be off center. The indication of this is the loss of a character on the left or right. You can adjust the image area with the DOS `MODE` commands shown below:

- `DOS MODE 80, R, T` (presents a test line and shifts the image one character to the right)
- `DOS MODE 80, L, T` (presents a test line and shifts the image one character to the left)

These commands are most useful with older video systems. They don't work with many newer video systems, unless the system is emulating an older monitor / adapter combination.

Sometimes a video problem can be caused by a screen saver. Make sure the screen saver is set up correctly to avoid the screen blanking out too quickly.

## Video Troubleshooting Questionnaire

The following list contains some questions that you should ask when you're troubleshooting a video system. (Note that it's a good idea to ask them in the order in which they're presented.)

1. Is the monitor plugged into a live outlet? Is it turned on?
2. Is the monitor connected to the adapter? Do the connectors on the cable and adapter match?
3. Do the cables seem to be in good working order?
4. Is the monitor's contrast set correctly?
5. Have the switches or jumpers on the motherboard been set correctly?
6. Have the switches or jumpers on the adapter card been set correctly?
7. Has the setup information in CMOS been entered correctly?
8. Does the ROM on the motherboard support the video system that's installed?
9. Is the adapter card seated correctly in the slot?
10. Are all chips on the adapter card seated correctly? Are any of them so hot or cold that they might have failed?
11. Are the operating system files (AUTOEXEC.BAT, CONFIG.SYS) correct?
12. Is the application software configured correctly?
13. Is there another device nearby or on the same circuit as the monitor that can be causing interference?
14. Is there a conflict between the adapter card and another card in the system?