

2.1.8 Three Important DOS Files

If you use the DIR command to list the files in the ROOT directory of your hard disk, you will probably find the files COMMAND.COM, CONFIG.SYS, and AUTOEXEC.BAT. These three files are executed during start-up (BEFORE any PATHS have been set), so they must be located in the ROOT directory in order for the system to find them. Two of these, CONFIG.SYS and AUTOEXEC.BAT, are text files that may be modified if the need arises. We will explain each of the three and discuss some ways to make the last two work harder for you.

2.1.8.1 COMMAND.COM

This file is known as the "Command Processor". When DOS is loaded into the memory of the computer, COMMAND.COM is the program that you interact with. Commands that you enter at the keyboard are "processed" by this program. The commands of type *Internal* are contained within, and are executed directly by, COMMAND.COM. The *External* commands are loaded from disk and run by COMMAND.COM.

The method COMMAND.COM uses to interpret your commands is called "Parsing". Webster defines parse as follows: "To resolve (a sentence) into component parts of speech and describe them grammatically". One can think of a DOS command as a sentence, which DOS parses when you press <Return>. If the structure and syntax of the sentence match DOS's rules of grammar, DOS then executes the command.

2.1.8.2 CONFIG.SYS

This is a "configuration file" which contains commands and parameters that are used to set-up (configure) your system. When DOS starts, it searches the ROOT directory of the drive from which it started for CONFIG.SYS. If the file is found, DOS reads and interprets the information within it. If it is not found, DOS assigns default values for the configuration parameters.

Some of the more common parameters that can be set or changed with CONFIG.SYS are:

- The number of disk buffers used by DOS (Default = 2 (PC), 3 (AT); Maximum = 99).

A disk buffer is a block of memory used to hold data being read from, or written to, a disk. With more buffers, more data can be held in memory, and consequently, less disk access is required. With a large number of buffers, however, DOS may take more time to check all the buffers than it would to read the disk. As usual, therefore, there is a happy medium. In general, applications that read records from disk (dBASE III, other database programs) work well with about 20 buffers. Applications that read entire files (Lotus 1-2-3, WordPerfect, etc.) need only a few buffers, but are not hampered by 20.

- The number of files that may be open at one time (Default = 8; Maximum = 255).

For each open file, DOS allocates a small portion of memory to keep information about the file (its name, location on the disk, etc.). In order to have more than 8 files open at once, DOS needs to be told so that it can allocate more memory. If you are using a database program, you should set the files parameter to 20.

- The name of a file containing a device driver.

A device driver is a program that controls a specific device (monitor, real-time clock, RAMdisk, mouse, etc.). In order to use certain of these devices, a device driver must be installed in memory when DOS starts. For example, if you have a Hercules monitor card, the Hercules driver must be installed.