

DOS Command Reference

Even if the systems you support, upgrade, and repair are all running the latest version of Windows, you will inevitably find yourself occasionally troubleshooting these systems from the DOS command line. With that in mind, I have included this brief DOS command reference to aid you when you are at the command line.*

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DOS Commands Found in DOS 6.22, Windows 95, and Windows 98

Windows 95 and Windows 98 both still include DOS commands. The version of DOS with Windows 95 is called 7.0 and the version with Windows 98 is called 7.1. For the most part, DOS 7.x commands are just a subset of the commands found in DOS 6.22. However, DOS 7.x does have a few new features not found in DOS 6.x, so the new DOS is not the same as the old DOS. Here's a partial list of improvements:

- You can start Windows programs from the DOS prompt and even from within batch files.
- The new DOS includes support for long filenames.
- Reduced reliance on real-mode drivers means that more conventional memory is available for DOS programs.
- Each DOS program can have its own settings and environment (CONFIG.SYS and AUTOEXEC.BAT). These are controlled via property sheets, so there's no need to create program information files (PIFs) from scratch for each program.
- You can run DOS programs in MS-DOS mode if they need full access to the computer's resources.
- The DOS session window has a toolbar for easy access to common features.
- You can access shared network folders via the command prompt.
- Most DOS commands are now native Windows 98 commands.

Windows 98 is, for the most part, the operating system on your machine. Yes, it comes with some real-mode components (such as IO.SYS) that are DOS-like, but they really just handle a few chores until Windows 98 can get itself into protected mode. After Windows 98 is running, however, "DOS" is just two things:

- COMMAND.COM, which provides the DOS prompt and a collection of internal DOS commands (such as COPY and DIR)
- A few external DOS commands, such as FORMAT.COM and XCOPY.EXE

For Windows 95 (and, so, Windows 98), Microsoft enhanced some of these commands, dropped other commands, and made a few of the dropped commands available on the CD-ROM.

Table 28 lists the internal DOS commands available within the DOS 6.22, Windows 95, and Windows 98 versions of COMMAND.COM.

Table 28 The Windows 98 Internal DOS Commands

Command	Description
BREAK	Sets or clears extended Ctrl+C checking.
CD	Changes to a different directory or, if run without parameters, displays the name of the current directory.
CHCP	Displays the number of the active character set (code page). You can also use this command to change the active character set for all devices that support character-set switching.
CHDIR	Takes the same action as the CD command.
CLS	Clears the screen.
COPY	Copies one or more files to the location you specify.
CTTY	Changes the terminal device used to control the computer.
DATE	Displays or sets the current date.
DEL	Deletes the files you specify.
DIR	Displays a list of the files and subfolders that exist in the current or specified folder.
ERASE	Deletes the files you specify.
EXIT	Quits COMMAND.COM and returns to the program that started the command interpreter, if one exists.
LH	Loads a program into upper memory.
LOADHIGH	Takes the same action as the LH command.
LOCK	Enables direct disk access.
MD	Creates a folder or subfolder.
MKDIR	Takes the same action as the MD command.
PATH	Specifies which folders Windows 98 should search for executable files.
PROMPT	Changes the appearance of the command prompt.
RD	Deletes a folder.
REN	Changes the name of the specified file or files.
RENAME	Takes the same action as the REN command.
RMDIR	Takes the same action as the RD command.
SET	Displays, sets, or removes environment variables.
TIME	Displays or sets the current time.
TYPE	Displays the contents of the specified text file.
UNLOCK	Disables direct disk access.
VER	Displays the operating system version number.
VERIFY	Directs the operating system to verify that files are written correctly to a disk and displays the status of verification.
VOL	Displays the volume label and serial number for a disk.

The DOS external commands are located in the **COMMAND** subfolder of the main Windows 95/98 folder. Table 29 lists the external DOS commands that ship with Windows 95/98.

Table 29 The Windows 98 External DOS Commands

Command	Description
ATTRIB.EXE	Displays or changes the attributes of the specified files.
CHKDSK.EXE	Checks a disk for (and optionally repairs) lost and cross-linked clusters. ScanDisk does a better job at finding and repairing these errors.
CHOICE.COM	Used in batch files to present the user with a list of options.
COMMAND.COM	Starts a new instance of the command interpreter. This file is usually found in the root directory of the boot drive.
CSCRIPT.EXE	(Windows 98 only) Runs Windows Script Host scripts.
CVT.EXE	(Windows 95 OSR 2 and Windows 98 only) Converts FAT drives to FAT32.
DEBUG.EXE	Tests and edits executable files.
DELTREE.EXE	Deletes a folder and all its files and subfolders.
DISKCOPY.COM	Makes an exact copy of a floppy disk.
DOSKEY.COM	A memory-resident program that recalls commands, edits previous command lines, and runs macros.
EDIT.COM	Starts a text editor you can use to create and edit ASCII text files.
EXTRACT.EXE	(Windows 95/98 only) Extracts files from a compressed cabinet (CAB) file.
FC.EXE	Compares two files and displays the differences between them.
FDISK.EXE	Starts the FDISK utility.
FIND.EXE	Searches files for a specified text string.
FORMAT.COM	Formats a disk.
IEXTRACT.EXE	Extracts a file from an Internet Explorer backup information (DAT) file.
KEYB.COM	Configures a keyboard for a specific language.
LABEL.EXE	Creates or modifies the volume label of a disk.
MEM.EXE	Displays the amount of used and free memory on the computer.
MODE.COM	Configures a printer, serial port, or display adapter; sets the keyboard repeat rate; redirects printer output from a parallel port to a serial port; prepares, selects, refreshes, or displays the numbers of the character sets (code pages) for parallel printers or the keyboard and screen; and displays the status of all the devices installed on the computer.
MORE.COM	Pauses command output to display one screen at a time.
MOVE.EXE	Moves files and renames folders.
MSCDEX.EXE	Loads the real-mode CD-ROM driver.
NLSFUNC.EXE	Loads country-specific information for national language support.
SCANDISK.EXE	The real-mode version of ScanDisk.
SCANREG.EXE	(Windows 98 only) Scans the Registry for damage.
SORT.EXE	Reads input, sorts data, and writes the results to the screen, a file, or another device.
START.EXE	Enables you to set various parameters for running Windows programs from the DOS prompt.
SUBST.EXE	Substitutes a drive letter for a path name.
SYS.COM	Creates a bootable disk by copying Windows 98's system files and COMMAND.COM to the disk.
XCOPY.EXE	The extended copy command.
XCOPY32.EXE	(Windows 95 and Windows 98 only) The 32-bit version of XCOPY.

DOS 6.22 Commands Not Installed by Windows 95/98 but Available on the CD-ROM

Microsoft deleted quite a few DOS commands when it put together the Windows 98 package. Most of these commands were either obsolete (such as EGA.SYS) or dangerous (such as RECOVER). Three of these commands, however, can be found on the Windows 98 CD-ROM in the \TOOLS\OLDMSDOS\ folder. I've summarized them in Table 30.

Table 30 Old DOS Commands Available on the Windows 98 CD-ROM

Command	Description
HELP.COM	Displays descriptions, syntax, and examples for all DOS commands. HELP.HLP is also available.
MSD.EXE	Runs the Microsoft Diagnostics program used to gather system information for troubleshooting. Superseded by the System Information utility in Windows 98.
QBASIC.EXE	The programming environment for creating QBASIC applications. QBASIC.HLP is also available.

Table 31 lists commands that were available in the Windows 95 CD-ROM in the \OTHER\OLDMSDOS folder. These were commands that were available in DOS 6.22 but were not installed by Windows 95 because they are obsolete.

Table 31 Old DOS Commands Available on the Windows 95 CD-ROM

Command	Description
APPEND.EXE	Establishes a DOS search path for data files.
CHKSTATE.SYS	A device driver used by MemMaker to optimize memory use. You cannot use this driver.
EXPAND.EXE	Extracts a file from compressed format on the DOS distribution disks to a usable uncompressed form.
GRAPHICS.COM	Enables the Print Screen key to print the contents of a graphics screen on a suitable printer.
HELP.COM	Launches a full screen online help utility for the DOS commands.
INTERLNK.EXE	Client device driver for an InterLnk network.
INTERSVR.EXE	Server device driver for an InterLnk network.
LOADFIX.COM	Forces a program to load into the second 64KB of memory.
MEMMAKER.EXE	Utility for optimizing memory usage by device drivers and other programs loaded by CONFIG.SYS and AUTOEXEC.BAT.
MSD.EXE	Runs the Microsoft Diagnostics program used to gather system information for troubleshooting.
PRINT.EXE	Print spooler for ASCII text files.
QBASIC.EXE	Starts the Microsoft QuickBASIC development environment, a program for writing and running BASIC language programs.
REPLACE.EXE	Replaces or adds files to a subdirectory.
RESTORE.EXE	Restores files created by the BACKUP program from one disk to another.
SIZER.EXE	A program used by MemMaker to optimize memory use. You cannot use this program.
TREE.EXE	Displays the subdirectory structure of a disk.
UNDELETE.EXE	Undeletes a file or group of files.

DOS 6.22 Commands Not Available in Windows 95 or Windows 98

Finally, Table 32 is a list of DOS 6.22 commands that are gone for good and won't be found in either Windows 95 or Windows 98.

Table 32 DOS 6.22

Command	Description
ASSIGN	In DOS 2–5, attached an alias drive letter to an existing drive. Replaced by SUBST in DOS 6 and later.
BACKUP	A utility to back up files from a hard disk to a series of floppy disks. Replaced by MSBACKUP in DOS 6 and with the GUI version of Backup for Windows 95 and Windows 98.
COMP	Compares two sets of disk files of the same name and same length. Included in DOS 1–5 but only on supplemental disk in DOS 6.
DOSSHELL	In DOS 4–6, a full screen menu driven shell for the DOS command line. Included only on the supplemental disk for DOS 6.2.
EDLIN	In DOS 1–5, edits an ASCII file, replaced by EDIT. Only on supplemental disk in DOS 6.
FASTHELP	Returns the same help information as including the /? switch with a DOS command.
FASTOPEN	A utility that sped up the process of opening files in DOS.
GRAFTABL	A DOS 3–5 utility for loading tables of additional character sets for CGA adapters. Only on the supplemental disk in DOS 6.
JOIN	In DOS 3.1–5, connects one drive to a subdirectory of another. Only on the supplemental disk in DOS 6.
MIRROR	In DOS 5, records information about the FAT, the root directory, and optionally the partition table which can be used by UNFORMAT and UNDELETE . Only on the supplemental disk in DOS 6.
MSAV	Microsoft Anti-Virus for Windows 3.x.
MSBACKUP	Microsoft Backup for Windows 3.x.
POWER	Controls use of APM in laptop systems and other APM-enabled systems.
RECOVER	A file recovery utility with DOS 2–5 that was not distributed with DOS 6 or later. Not recommended for use with any version.
SETVER	DOS version control program that reports a different DOS version number to programs requiring a specific version of DOS to run.
SHARE	File sharing and locking capabilities for DOS.
SMARTMON	SMARTDrive monitoring and configuration program for Windows 3.x.
UNFORMAT	Recovers a disk that was accidentally formatted. Note that using the /U switch with the FORMAT command will prevent the UNFORMAT command from being able to recover the disk.
VSAFE	A memory resident utility that warns you of virus-like activity.

