EDOS

Enhanced DOS for Windows

A brief list of features:

- Change/display pif settings.
- EDOS commands will execute in batch files.
- Display extensive status information about current and other DOS sessions.
- DOS commands that corrupt disks are disabled.
- View the clipboard.

List of Information Topics

Glossary of Terms
System Time Real time that windows system is running.
VM Time   Time that a DOS Session(VM) has been allowed to execute. Not same as system time.
VM   A virtual machine. One DOS session = one VM.
Virtual Machine   One DOS session runs in one Virtual Machine(VM)>

DOSMEM

This command is the most technically sophisticated, and potentially environment sensitive of all EDOS commands. It has been tested with DOS 3.3, 4.01, 5.0., also Windows 3.0a and 3.1.

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Registered copies of EDOS with latest enhancements, may be purchased by writing to:

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Installation Instructions

Floppy Disk Installation

Install From ZIP File

Instructions for Trouble-shooting

If Windows hangs at startup, the first thing to do is to disble EDOS.   Use the DISABLE icon in the DOS session group. You can also disable   just EDOSLIB.EXE from loading. To disable it, place a semi-colon at the beginning of the line "EDOS=EDOSLIB.EXE", that is located in the system.ini file in the [drivers] section. If Windows will still not load, the next step is to disable EDOS.386.   If   disabling EDOS.386, works, then you can try disabling the system.ini switches. Setup installs some of these switches for you in the [edos] section. Prompt, PrtScr, AltF4 - to False   or 0 (zero).

If INTEL Inboard PC. Set the EDOSInbrdPC system.ini   switch to True.

Instructions for Reinstallation or DeInstallation.

Instructions for finishing installation

Fix the system.ini file as described below.

If you used the SETUP program included on the EDOS distribution disk then the installation should have been done for you automatically.   In case you did not use it or the installation did not complete succesfully, the following information is provided.
In order for EDOS installation to be complete, You must insert: device=Edos.386 in the system initialization file. Click on the "EDOS.386" hot spot, to see the instructions.

In **Windows 3.1** add EDOS to the drivers=, line in the [boot] section of system.ini file. Also, add: EDOS=EDOSLIB.EXE in the [drivers] section. For example:

[boot]
drivers=mmsystem.dll EDOS
[drivers]
EDOS=EDOSLIB.EXE

Note: there can be only ONE drivers= line in the [boot] section. Multiple drivers go on the same line separated by spaces. In the [drivers] section each driver has it's own separate line. Don't become confused.

Windows version 3.0
Be sure to add EDOSLIB.EXE to the load= line in WIN.INI.
For example:

load=pifedit.exe EDOSLIB.EXE

Print the topic out if you need a reminder on how to do it.
It is necessary for EDOS to be installed in a subdirectory located in your Windows subdirectory. This is necessary because of the way in which the automatic installation program works and due to the fact that several files in the EDOS system must be on the path. Eventually it is intended that EDOS can be installed anyhwere and be independent of the Windows subdirectory.

NOTE: System.ini contains a reference to EBIOS. This is not EDOS. It is not necessary to make any changes to the EBIOS entry.

 Instructions for modifying system.ini
 Fix winhelp and pif files

The pif files in the v31 directory should have been copied automatically by setup. Winhelp for EDOS needs a couple of hand fixes. The properties should be fixed to provide a legal path to the .HLP file. The EDOS help files are located in the EDOS subdirectory.
Ex. WINHELP.EXE YOURDRIVE:\WINDOWSDIR\EDOS\EDOS.HLP

Installation Instructions

Put the EDOS floppy disk in the A or B disk drives.

Click on the system menu. Click on the Run item.

Insert at the "RUN" prompt... A or B:SETUP

This will cause the SETUP program on the floppy disk to begin executing. It will copy all your files to the correct places and do all the tasks necessary to install EDOS.   If the installation does not complete successfully   you will have to insert a special line in the system.ini file; which you must do by hand. You must insert: device=Edos.386 in the system initialization file. Click on the "EDOS.386" hot spot in the line just preceding here, to see the instructions. Print the topic out if you need a reminder on how to do it.

NOTE: System.ini contains a reference to EBIOS. This is not EDOS. It is not necessary to make any changes to the EBIOS entry.

 Instructions for modifying system.ini

EDOS.386 is a special WINDOWS Virtual Device Driver. Not a DOS device driver that would go in the CONFIG.SYS file.

To install "EDOS.386", a line must be added to the SYSTEM.INI file located in the Windows directory. This line must be placed in the "[386Enh]" section. A plain ascii text editor will do, like edit in DOS 5.0.

Note: if this was an automatic install using SETUP.EXE, then the line may alread be partly installed. The line that setup inserts reads "EDOSxx=[DRIVE:\WINDOWS]\ EDOS\EDOS.386".

Change the "EDOSxx" to "device". The DRIVE:\WINDOWS stands for the drive and subdirectory where you have Windows installed. If setup completed successfully this fix should already have been done for you.

The line should look like this:

[386Enh]
device=[DRIVE:\WINDOWS]\EDOS\edos.386

In Windows 3.1 there must also be lines placed in [boot] section and [drivers] sections of system.ini.

[boot]
drivers=mmsystem.dll EDOS

[drivers]
EDOS=EDOSLIB.EXE

Note: mmsystem.dll is not required, but is shown for example. Multiple drivers are placed on the same line in the drivers= line in the [boot] section.

Installation Instructions

Copy EDOS.ZIP from the distribution to a floppy disk.

Use pkunzip -d to decompress the file. The "-d" unzips the subdirectories.

Now go to the instructions on how to install from a floppy disk. Install Floppy Disk Distribution

Instructions for modifying system.ini

Introduction to EDOS

Enhanced DOS for Windows(EDOS) is a unique command line processor for DOS sessions, running in Windows 386 Enhanced Mode. Command line enhancers have been around for several years. Some of them completely replace command.com, such as 4DOS(recommended). EDOS is built using completely new technology. It is similar to 4DOS in that it catches commands typed at the keyboard and converts the command into a set of functions that provide some custom feature, like a dir command that sorts entries by alpha or maybe date.

What really sets EDOS apart is that it is a VxD. VxD's do not take up space in conventional memory. VxD's are what 386 enhanced mode windows is built from. This implies that EDOS is in fact a part of the Windows operating system. A VxD has access to the entire base of Windows code, as well as the hardware machine itself. There is almost nothing that a VxD can not do. By building EDOS as a VxD instead of a real mode TSR, EDOS can have commands that in effect can manipulate any aspect of Windows that can be dreamed of.

EDOS has access to any location in memory, to any data structure, to the Windows scheduler, task manager, display control, initialization system, and the list goes on and on. This is not inherently dangerous, but it is powerful. Users can be provided features that allow precise control of the environment. This power is provided by way of a set of commands, the enhanced commands of EDOS, in such a way that the operating system is protected.

EDOS also provides enhancements to a Windowed DOS session. A fully functional menu bar with many useful features is included. In addition, you can run Windows applications from the DOS command line.

Tested With

DOS 3.30, 4.01, 5.00.

Windows 3.0a, 3.1

EDOSPrtScr defaults to true. Which means that The hot key "PrtSc" is reserved to your DOS application; and that print screen will work as normal in that DOS, output will go to the printer, not the clipboard.

You may set this to false in <u>system.ini.</u>   In which case "Prtsc" will send screen output to the clipboard. This is the Windows default.

When getting a status, some of the memory values will seem strange. For instance, the size of the DOS mem is larger than the amount of memory that DOS 5.0's mem command reports.

The reason for this is that EDOS is reporting the amount of memory in PAGES (4k) that Windows is using. Status converts the page count into a byte count by multiplication.

Example:

Status reports DOS mem=684k DOS 5.0 mem reports conventional memory as - 512k

The difference is the wrapper that Windows provides, and includes the display memory buffer and other data areas that are "instanced". "Instance" means that Windows makes a local copy in each DOS session of that data. Data which gets instanced includes: the low vector table, the display buffer, etc.

The XLATE buffer segment address is the location that DOS uses to store read/write buffers until Windows can copy them into extended memory.

Making sense of conflicting numbers

You may assume that the numbers shown by EDOS are in fact accurate. They have been checked for bugs(in EDOS). However there are bugs in Windows and I have no control over those. Any bugs reported will be dealt with, where possible.

VDD Pif Bits

The VDD pif bits will receive a better report in a later release.

Acknowledgements

To the authors of "Windows 3 Secrets", Brian Livingston and Undocumented DOS, Andrew Shulman, et all: EDOS might never have been, were it not for the inspiration I received from these two books. Brian's book has been combed from cover to cover, for months. It is the book I fall asleep reading. There may not be any end to the goldmine that lies within it. Every day I wonder how I can find any more insights; and then I find another.

The list of EDOS features is rich, due in no small part to Windows 3 Secrets.

Undocumented DOS is almost as bad. Andrew's book may be nearly deaf and blind about Windows, but a flash of insight while reading the chapter on memory management led to the feature that allows EDOS to change the amount of DOS session memory, on the fly.

Undocumented DOS has been followed by Undocumented Windows by, you guessed it, Andrew Shullman. And as usual, EDOS has several new feature directly traceable to the book.

Viruses

EDOS.386 is written in assembly language, in 386 protected mode and runs at ring 0. There are no known viruses which can infect a file of this type. That does not mean that one will not arise. However, EDOS is much harder to infect than an ordinary, COM or EXE file.

DOS Commands Disabled

APPEND

CHKDSK /F

JOIN

SUBST

FDISK

ASSIGN

FORMAT (use File Manager)

FASTOPEN

RECOVER

DOSX

Note: This list of DOS commands disabled, contains external commands only. You should be aware that it is still possible to execute these external programs using syntax similar to: C:\ chkdsk /f

If you are concerned about this possibility, then you should obtain our shareware program system named WINSAFE.

DOS Commands User Disabled

 To disable a DOS command (or program) from running, insert the following line in SYSTEM.INI, in the [386enh] section. EDOSCommand=xxxxxxxx

for example:

[386enh]

EDOSCommand=FORMAT

EDOSCommand=COMPRESS

EDOSCommand=COPY

These 3 commands would disable FORMAT, COMPRESS and COPY.

Each line will disable one DOS program or command. Up to 20 such EDOSCommand(s) may be used.

EDOS, a DOS extender for Windows Enhanced Mode

EDOS is a powerful device driver program that extends the DOS environment to make DOS, Windows aware whenever DOS is being run from inside Windows. It's primary features include new command line commands and the ability to disable DOS commands. New commands provide technical information about the state of the DOS box and the state of Windows. Also, the ability to change PIF settings originally changeable only with the PIF editor. Other features include a hot key for exiting from a DOS Box, ability to view the clipboard and an alarm that returns you to the DOS Box where the alarm was originally created. Commands to start and stop high resolution timers for performance timing are also included.

EDOS is a VxD, a special class of Windows Device Driver. VxD's form the very foundation of Windows Enhanced Mode. The core VxD code resides in the WIN386.EXE file. This file consists of many smaller pieces of code copied together to form an integrated set of VxDs(the default system in 386 mode). Each VxD component can be replaced in it's entirety, or one internal function at a time. This replaceability and substitutability provides tremendous flexibility. Windows standard/286 mode is not built this way and lacks the flexibility, inherent therein. 286 mode is difficult to modify, add to or replace. As a consequence, it is likely to receive little future development work, inside or outside Microsoft.

EDOS uses so-called "undocumented DOS" function calls, hooking of protected mode/real mode interrupt vectors and service functions provided by other VxDs. EDOS employs VxD services for managing memory, scheduling, individual device and system control, keyboard, calling DOS & BIOS services, timing, initialization information and message displaying. In short, at least one or more functions from every major group of VxD support routines.

 A VxD runs at ring 0, the most privileged mode of the microprocessor. Because of this EDOS has access to the most basic parts of the Windows core. In tandem with a Windows Dynamic Link Library, a VxD like EDOS can be built to do almost anything, although at the present time no custom DLL is provided with EDOS. Even though the present version 2.00a is reasonably impressive, it is very crude compared to what could be done with more time and effort. VxD's offer great opportunities to enhance and extend Windows and it's components.

2   Features

EDOS features are provided by 5 groups of commands.

Control, Performance Timing, Information, Scheduling, Miscellaneous.

Control	Performance Timing	Information	Scheduling	Misc.
ALT-F4	BOXTIME	STATUS/EDOS	PRIB	ALARM
BOXSWITCH	SYSTIME	EMS	PRIF	
		XMS	BACKGROUND	
		PIF	EXCLUSIVE	
	MEM		SLICE	
		VER		CLIPBOARD

Overview of Feature Groups

EDOS functions & commands can be combined in a multitude of ways to enhance the way in which you use a DOS session in Windows. Several features are built in and simply make life

easier. The ALF-F4 exit feature is one of these. Once you become accustomed to it, you'll never want to be without it. The other most noticeable feature is the pif file name and edos version number displayed at DOS session start-up. This combined with the ability to define a batch file to be run at every DOS session start-up means that you have almost unlimited flexibility to customise DOS sessions in general and any session specifically.

A few suggestions. If you use a "CLS" first, the screen will be cleared to a prompt. You can then issue whatever commands you want to create the entry screen of your choice. By "TYPE" ing a file to the screen, that says "Windows DOS Session", you will have a highly visible indicator that Windows is running. In short, you can execute any internal or external command or program that you want.
Outside of setting up the screen, the most likely thing you will want to do is add memory or change the scheduling system. Since you can set the scheduling options from a batch file it is no longer necessary to have a multitude of PIF files for every situation.

You can cause a Windows application to run from the DOS command line in a DOS session running under Windows if you have enabled it. To enable this feature see the system.ini switches.

The two control commands in EDOS are essentially hot key functions. ALT-F4 pushes "exit" + enter into the keyboard buffer which causes DOS to exit back to Windows.
BOXSWITCH controls the ability to switch out of a DOS Box and back into Windows.

The two performance timers The information services are the most detailed and complex of EDOS's functionality.

4   EDOS code consists of 4 major components.
Initialization: EDOS device initialization, hooking vectors and services, installing hot keys.
Processing hooked interrupts, service calls and hot keys.
Parsing and analyzing command lines.
Servicing a supported command.

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If EDOS is installed correctly, when Windows begins, EDOS starts up a DOS session and makes it hidden. This session is simply to keep the DOS session system running.

System.ini switches
With default condition

[edos]

Alt-F4	EDOSALTF4= True
Disables EDOS loading	EDOSDisable=0
Disable a command	EDOSCommand=<blank>
Print Screen	EDOSPrtScr= True
Intel Inboard PC	EDOSInbrdPC= False
Run Windows Apps.	EDOSExecWinApp= False
Enables over 640k	EDOS640KPlus= TRUE
Enables over 704k	EDOS704KPlus= TRUE
Hooks Fatals	EDOSHookFatalOK= TRUE
Fault Messages	EDOSFaultFlag= TRUE
Alarms allowed	EDOSNumMsgs=1 (Don't increase, call tech support).
Disables Ctrl+P	EDOSCtrlP= FALSE

Note: that these switches MUST be in the [edos] section.

Use: True or False. 1 or 0. TRUE or FALSE.

Batch Files
 These new DOS commands will execute in a batch file just like any ordinary command.

 Extensive use of this feature will allow you to eliminate many pif files.

Alt-F4 will cause the DOS   sessions to exit, as if "exit" plus enter had been entered at the keyboard.

Custom DOS Prompt

The DOS prompt system in EDOS has been changed.
In order to conform to the method used by Win 3.1, EDOS was modified
at the last minute, before release.

1. The EDOSPrompt system.ini switch has been dropped.

2. EDOS users may now have the DOS prompt set to THEIR way, in Windows
   3.0 and 3.1.

The method is as follows:
Use the DOS "SET" command to create an environment variable "WINPMT".
Like this:

SET WINPMT=pl

This will result in a prompt that looks like: C:\WINDOWS<
when you are in Windows in a DOS session.

The SET command should be installed in autoexec.bat, do not install
it in WINSTART.BAT!

YOU may use any legal prompt string when setting WINPMT.
The DOS prompt will use your WINPMT string when Windows is running
in a DOS session and will return to the original PROMPT when Windows
exits back to plain DOS.

This trick will work in Win 3.1 with or without EDOS.
In Win 3.0 it will ONLY work if EDOS.386 is installed.

It is necessary to have both a PROMPT string and a WINPMT string for
this to work.

Note: this is NOT the most elegant way to fix this very annoying problem. It will not work for
everyone, however, it is the simplest fix and it WORKS!

DOS Commands Modified

VER   (puts Windows Version + DOS Version).

VER /w puts up EDOS version number.

TIME (displays time, no altering. Use Control Panel).

DATE (same as time).

CHKDSK (/F not allowed, all other options ok).

MEM puts up Window related memory information.

WIN causes the DOS session to switch to the Windows Desktop.

Entering a command at the DOS prompt which referes to an executable file which is a Windows applictaion will cause that application to be executed as if it were a Windows application.

This feature can be disabled with the appropriate system.ini switch as well with the /Y and /N switches using the EDOS or STATUS commands at the DOS command line.

Example:

EDOS /Y
CLOCK

The above will execute the clock Windows application.

or:
EDOS /N
CLOCK

The above will execute the stub at the beginning of the Windows application (CLOCK). The stub usually prints "this application requires Microsoft Windows".

AltF4   [ON | OFF]
STATUS [/? | /v | /l | /Y | /N]
EDOS [/? | /v | /l |/Y | /N]
EDOSEXIT [/?]
PIF [/?]
EMS [/?]
XMS [/?]
MEM [/?]
PRIB [/? | milliseconds]
PRIF [/? | milliseconds]
SLICE [/? | milliseconds]
DOSMEM [/? | k bytes | /P | /X | /V]
ALARM [/?] | [seconds ["message string"]]
BOXSWITCH [/? | ON | OFF]
BACKGROUND [/? | ON | OFF]
EXCLUSIVE [/? | ON | OFF]

CLIPBOARD [/? | /VIEW]
SYSTIME [/?]
BOXTIME [/?]
ISWIN [/?]

Execution of Windows applications from the DOS command line.
Menu Bar (in Windowed DOS session)
The new DOS commands accept a "/?" option which provides the usual help information.

Alt-F4

ALTF4 [/?	ON	OFF]

The hot key combination Alt-F4 will cause a DOS session to exit just as if "EXIT" + enter had been typed at the keyboard.

This feature can be disabled in this version. See <u>system.ini</u> switches. Can also be enabled/disabled using the optional parameter ON or OFF.

CLIPBOARD

```
CLIPBOARD [/? | /VIEW]
```

The clipboard command displays the clipboard status or the contents of the clipboard.

The clipboard status is printed if the command is typed. The clipboard text is viewed if the V option is used.

Redirection allows the clipboard to be printed.

Ex: clipboard /VIEW > PRN:

ALARM

```
ALARM   [/?] | [ seconds ["message string"]]
```

The alarm command allows you to set an alarm that will "ring" at the time indicated by the (delay in seconds) parameter. An optional message string may be included; it must be enclosed by double quote marks.

ALARM   5 "Time to Eat"

Will cause an alarm message to be displayed in 5 seconds. You will be returned to the DOS session where the alarm was set. The message string "Time to Eat" will be displayed in the message box.

NOTE: only one alarm is allowed per DOS session.

BACKGROUND

BACKGROUND [/? | ON | OFF]

The background command causes the DOS session to have the background mode changed. The background mode status is printed whenever the mode is changed or the command is typed.

The one allowed parameter turns the setting ON or OFF.

Ex. Background OFF

BOXSWITCH

BOXSWITCH [/? | ON | OFF]

The boxswitch command enables/disables switching away from the DOS session. The boxswitch mode status is printed whenever the mode is changed or the command is typed.

The one allowed parameter turns the setting ON or OFF.

Ex. Boxswitch OFF

BOXTIME

```
BOXTIME [/?]
```

First invocation starts a DOS Box-time timer. Second invocation prints the elapsed DOS session cpu time.

Time is measure in milliseconds.

Ex. Boxtime

DOSMEM

```
DOSMEM [/? | K bytes | /P | /X | /V]
```

DOSMEM allows you to add memory to the current DOS session.

Ex: DOSMEM   200

Adds 200K bytes of memory to the DOS session.

DOSMEM, with no parameter, displays the DOS session size, the space not occuppied by memory and the amount of memory left in the memory pool.

Example:

DOSMEM<enter>

Present DOS memory size=   362 K bytes,   100 K bytes can be added, From= 172K

This means that the DOS session is presently 362k, that 100k can be added and that there is 172k from which to get the memory.

DOSMEM /P

Adds memory to the DOS Session to make a 704 K partition

DOSMEM /X

Adds memory to the DOS session to make a 736 K partition

DOSMEM /V

Displays technical information about the DOS session memory layout.

WARNING: the /P & /X options create partitions that use address space where the VIDEO buffers normally reside. Therefore: a DOS session modified by /P or /X will not correctly run a DOS application which uses graphics or 43/50 line text display modes.

NOTE: it is not advisable to use all the remaining memory. If 172K is left, don't use more than 100-120k. Leave at least 50k.

Presently, can only be invoked one time in each DOS session.

NOTE: Use of more than 640k, means that you CAN NOT run any application in that session that uses graphics mode. You will recieve no warning about this, but if the application runs or shifts into graphics mode, your screen will be trashed and so will the session. The only cure will be to kill the session and start over.

If you are running QEMM, you should EXCLUDE=B000-B7FF, on the command line that loads QEMM.

386Max and other similar memory managers should have the similar option set.

Note: some SCSI drives are using memory space at 639k. DPT and Future Domain controllers, as well as some of the   Western Digital units. EDOS will correctly detect this in most cases. If the space at 639k is in use, you will not be able to have an oversized DOS session. DPT and Future Domain have special device drivers that will relocate this memory usage into upper memory. Once this is done, you will be able to use oversize DOS sessions.

EMS

```
EMS [/?]
```

Displays the Expanded Memory minimum and maximum settings for the DOS session. EMS settings cannot be changed once the session has started.

EMS Required=   0K EMS Limit=300K

EMS Free=   200K, Total=   290K ,   Page Frame Segment = E000 hex.

EXCLUSIVE

EXCLUSIVE [/?	ON	OFF]

The exclusive command causes the DOS session to have the exclusive mode changed. The exclusive mode status is printed whenever the mode is changed or the command is typed.

The one allowed parameter turns the setting ON or OFF.

Ex. Exclusive OFF

Note: the instant that exclusive ON is enabled, ALL other DOS sessions AND all WINDOWS applications cease to run, until the session that enabled exclusive on, is switched into the background.

EDOSEXIT

EDOSEXIT returns the exit code of the last internal EDOS command executed

This exit code may be tested in a batch file, like this:

DOSMEM /P

EDOSEXIT

IF ERRORLEVEL 1 ECHO EDOS DOSMEM Command Failed

ISWIN

ISWIN returns an exit code of 3 to indicate that windows 3.xx is running. Otherwise it returns zero.

This exit code may be tested in a batch file, like this:

ISWIN

IF ERRORLEVEL 3 goto Windows3

MEM

```
MEM [/?]
```

Displays the Windows low level memory information.

Example:

Total Mem= 7804K, Free Mem=5896K (unlocked),   Unlocked Mem=1252K

Physical Mem=2052K, Free Phys Mem=144K
NOTE: the most interesting number here is the Free Physical Mem. Which in the example was only 144K. When free physical reaches zero, all new memory is coming from the disk swap file. This has a significant impact on system performance.

PRIB

```
PRIB [/? | milliseconds]
```

The background priority command(PRIB) allows you to change or display the BACKGROUND Execution Priority of the DOS session.

Ex. Prib   27

PRIF

```
PRIF [/? | milliseconds]
```

The foreground priority command(PRIF) allows you to change or display the FOREGROUND Execution Priority of the DOS session.

PIF

PIF [/?]

Displays the pif settings for the DOS Box. Sample:

Command = COMMAND.COM

Command Tail = /E:2000 /C any.bat

C:\WIN_DEFAULT.PIF

Text Emulate

No Trap Text

No Trap Low Res Graphics

Trap High Res Graphics

Video Text Mode

EMS Required=   0K, Limit=1024K

XMS Required=   0K, Limit=1024K

VDD Bits = 0017   , VM Status   00004000

SLICE

```
SLICE   [/? | milliseconds]
```

The slice command allows you to change or display the Minimum Time Slice allocated to ALL sessions.   All Windows applications share one session, each DOS session is a a session, etc. Setting slice changes the time for everybody.

SYSTIME

SYSTIME [/?]

First invocation starts a system-time timer. Second invocation prints the elapsed system time.

Time is measured in milliseconds.

XMS

```
XMS [/?]
```

Displays the Extended Memory required & limit settings for the DOS session. The XMS settings cannot be changed once the session has started.

XMS Required=   0K XMS Limit=1024K

STATUS & EDOS

```
[STATUS | EDOS] [/? | /V | /L]
```

The /V option displays all (verbose) information.

The /L option lists all the sessions: current, other, Windows (system).

The /Y option turns on Execution of Windows applications.

The /N option turns off Execution of Windows applications.

The /V command displays a screen similar to the following:

Enhanced DOS for Windows Version 3.0

<u>Free Memory:</u>   No Lock or Fix=   516K,Lockable=   516K

<u>Swap File</u>   Size=   K, Type= None

<u>Total Paging Mem</u> =   0K, Free =   0K   In Use Total=   0 Kc, Contig=?

<u>Windows Physical Memory</u>   Total= 2200K, Free=   544K

Physical UnLocked(in use)=   0Kc, Unlocked=   544K

Real Physical Memory Base=   640K, Extended=   3456K, Total =   4096K

<u>EMS Free</u> =   0K, EMS Total=   0K, Page Frame Address= E000 hex

<u>PageOutCount</u> =   1

<u>Xlate Buffer Segment</u> = 2800hex, Size   8192 bytes

<u>Stack Unused</u> = 3606hex, Stack Used   1364, Stack Total = 4970hex

<u>Ebios Page</u> = 9F00hex, Size   1000 hex, Remain = 0000 hex, Start = 0000hex

<u>Com Ports</u> ComPort1=ID#1

<u>Global Min. Time Slice</u> =   21 ms.

The /V and /L commands display a screen similar to the following:

Current DOS Session

<u>Background</u> =N, <u>Exclusive</u> =N

<u>Foreground Priority</u> =   100, <u>Background Priority</u> =   50, <u>CPU Time</u> =   66%

<u>Memory Used</u> =   164K, <u>Not Mapped</u> =   0K (1K=1024 Bytes)

Windows Session(System)

Background=Y,   Exclusive=Y

Foreground Priority=   101, Background Priority=   51, CPU Time=   33%

Memory Used=   960K, <u>Not Mapped</u> =   0K (1K=1024 Bytes)

Free Memory: No Lock..   Memory (free) not lockable or fixable

| Lockable | Free memory (lockable) |

Swap File Size	Size of Swap file in K bytes
Type	None, DOS/BIOS, Direct to hard disk.

Total Paging Memory	Memory available to the demand pager
In use total	A calculation of Total minus Free = in use.
Contig	Y=Yes, N=No.

Windows Physical Mem   Total real memory available to Windows

EMS Free,Total   EMS memory, free and total available

PageOutCount   Number of pages on page out list

Xlate Buffer Segment   Segment & size of translation buffer

Stack Space   Size of Stack

Ebios Page   Segment & size of Extended Bios Data Area

Com Ports | Com Port Assignments

| Global Min. Time Slice | Minimum time slice in milliseconds |

Background   Y=Background enabled. N=disabled

| Exclusive | Y=Exclusive enabled. N=disabled |

Memory Used   Memory dedicated to this session.

Not Mapped   Memory dedicated to session but not mapped in.

For/Back Priority   From PIF file, priority when in fore/background

Windowed DOS session have a menu bar.

This menu consists of:

File

Edit

View

Settings

EDOS Help

Indicators Background & Exclusive... {b} and [X]

Menu Items for SETTINGS:

Current   Allows changing of Background and Exclusive states.

                        also contains menu item to KILL the current task and others.

        Fast Paste   Turn on/off the PIF option for fast pasting.

        WinAppExec Turn on/off option for allowing Windows applications to run from the
DOS command line.

        Drag/Drop   Turn on/off DOS session accepting a Drop Object.

                        Currently File Manager provides Drop Objects and

                        DOS sessions and PIF Editor will accept them.

                        Other utilites may   also work with Drag/Drop.

Startup   Loads PIF editor with PIF for the current DOS session.

Menu Items under VIEW:

SCROLL	Turns on/off Scroll mode. ESC & Enter will exit from this mode. Use arrow keys.
FULL- SCREEN	Switches from Windowed to FULL SCREEN.
FONTS	Dialog Box selection list of FONTS.
50 Lines	Switches into 50 line mode.
25 Lines	Switches into 25 line mode.
SCREENSAVE	Switches on the screen saver.
FONTS	Dialog box of available fonts.

Menu items under EDIT:

MARK	Start mark mode, to create a selection region.
COPY	Copy the selection region to the clipboard.
PASTE	Paste the contents of the clipboard into the DOS session at the cursor.
VIEW	Startup the Clipboard Viewer.
CLIP STATUS	Display size and contents of clipboard.
PRINT CLIP	Print the contents of the clipboard to the printer.

Menu Items for {b}   and   [X]

The {b} is the indicator for Background on/off. When the indicator is grayed, Background is OFF.

The [X] is the indicator for Exclusive on/off. When the indicator is grayed, Exclusive is OFF.

Menu Items for EDOS Help:

INDEX

KEYBOARD

COMMANDS

SEARCH FOR HELP ON...

HELP ON HELP

Menu items under File:

NEW   Select a file to run as a NEW session.

PICK   Select a file name to be placed at the cursor.

EXIT   Exit and close the DOS session.

CPU Time   Percent of CPU time assigned to this DOS session