



sysom *e*Soft

**Sysop Option Module**

## **SYSOM Version 1.2**

### **SYSOP Option Module**

Provides Online System Maintenance for  
TBBS Version 2.x

Installation and User Manual

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## **SYSOM Features**

The SYSOM Option Module offers the user of a TBBS Version 2.x system the capability to do many system maintenance functions online which were not previously possible. The functions provided fall into the following categories:

- Online maintenance of the USERLOG, including updating user privileges, while a user is logged on
- Remote control console for TBBS
- A DOS function *emulator* allowing full use of the following DOS commands while online:
  - DIR
  - TYPE
  - COPY
  - REN (RENAME)
  - DEL (ERASE)
  - CD (CHDIR), MD (MKDIR), RD (RMDIR)
  - TIME and DATE
  - Programmable Batch File Capability: Parameter passing plus REM, ECHO, IF, :label and GOTO commands.
- Added utility function programs:
  - MOVE - Allows moving directories and files on same drive
  - WHO - Reports who is logged online
  - MEMORY - Reports detailed statistics on TBBS memory usage
  - FILES - Reports all files currently open by all users
  - D and U - Download and Upload to directories
  - REMSYSOP - Enter REMote SYSOP control panel
  - EDIT - Online text editor for files up to 32k
  - DOTBBS - Ability to run any TBBS internal command

This added functionality will allow many system maintenance functions to be performed while users are online, making the scheduling of them much less of a burden. You can thus obtain even more value from your use of a TBBS multiline system as you increase the number of lines in use.

**CAUTION! SYSOM can provide full remote access to all files in your system. Precautions should be taken so that casual system users are not allowed access to menu items which access SYSOM. A user in SYSOM may access passwords and examine, delete, move or modify files in your system!**

## Installation of SYSOM

---

To install the SYSOM option module, copy the file SYSOM.EXE into the TBBS subdirectory on your hard disk. Then add the following command switch to your MLTBBS command line:

**/O:SYSOM**

This will install the option module. The extra memory required for this option module is:

**OM CODE memory = 37,286 bytes**

**OM UDATA memory = 48,000 bytes/user conventional or 48k/user EMS**

The OM CODE memory must fit in the 640k conventional memory on your computer, while part or all of the OM UDATA memory may go in either conventional or EMS memory. The OM code will be "overlaid" with other option modules in TBBS 2.3 automatically. In TBBS 2.2, this may be forced through the use of /OX:SYSOM instead of /O:SYSOM, reducing the amount of 640k memory the full TBBS installation requires.

## Adding SYSOM to a Menu

---

When the SYSOM option module is installed, a new command type becomes available for use in menus. This command becomes like any other TBBS menu command and may be used in any menu as you wish. The new command is:

**TYPE = 205**

The format of the SYSOM Opt Data field is as follows:

**OPT DATA = [d:][path][file] [/C] [/E/] [/T] [/U] [/S|R|L] [/B]**

These switches have the following meaning:

**/C = Remote console access allowed**

**/E = Text editor access allowed**

**/T = DOTBBS access allowed**

**/S = Full DOS emulator services allowed**

**/R = DOS emulator is restricted to the [d:][path] directory and below**

**/L = DOS emulator is restricted to ONLY the [d:][path] directory**

**/B = [d:][path][file] is a DOS style .BAT file and should be executed on entry**

If the /U switch is specified alone, SYSOM will directly enter ULEDIT and exit to the menu when ULEDIT is exited. If the /C switch is specified, SYSOM will directly enter the remote console and exit to the menu when the console is exited. The /S, /R, and /L switches cannot be combined – only one may be used.

Example menu entries:

**Entry:**

**<U> ledit Online**

**KEY = U TYPE = 205 OPT DATA = /U**

This entry will run the ULEDIT portion of SYSOM only.

**Entry:**

**<D> OS Emulator**

**KEY = D TYPE = 205 OPT DATA = C:\TBBS**

This entry will enter the DOS emulator and log onto drive C: in the \TBBS directory. The ULEDIT command will be legal from "DOS," and will run the online userlog editor, the remote console may be used, and DOTBBS commands are also legal. This is identical to OPTDATA = C:\TBBS /C/E/T/U/S

**Entry:**

**<D> OS Commands Only**

**KEY = D TYPE = 205 OPT DATA = C:\TBBS /S**

This entry will also enter the DOS emulator and log onto drive C: in the \TBBS directory, but the ULEDIT, CONSOLE, EDIT, and DOTBBS commands will not be legal.

**Entry:**

**<R> estricted DOS access**

**KEY = R TYPE = 205 OPT DATA = C:\JOES\FILES /R/E**

This allows DOS emulator access to only the specified directory and any of its sub-directories and edit files in them.

**Entry:**

**<R> emote TBBS Console**

**KEY = C TYPE = 205 OPT DATA = /C**

As with all TBBS commands, the new TYPE 205 command may be used in as many different menu entries in as many different forms as you wish. All normal TBBS security is in place via the Privilege and A-Flag settings on the menu

entries. Remember, SYSOM gives access to the control and security functions of your TBBS system. Do not let anyone whom you do not want to alter files or USERLOG entries and learn passwords etc. have such access. Use SYSOM with care!

NOTE: When the online editor is invoked by itself, you have the ability to either force the editing of only a single file, or to force special handling switches based on the data within the file. There are two special switches in this case:

/P = Process control characters

/W = Output wrapped lines with <CR> <LF>

Example:

Entry:

<D> OS Commands Only

KEY=D TYPE=205 OPT DATA=C:\TBBS\NEWS.TXT /E/P/W

These edit switches are normally specified on the EDIT command from the sysom command line. This line is not available when you use the editor in "one-shot" mode so these switches may be used on Opt Data in this case.

## What's New in SYSOM Version 1.2

The following are the highlights of the new features in SYSOM 1.2:

- Full online remote console. This console has a few restrictions in TBBS 2.2, but with TBBS 2.3 it will do all TBBS local console functions including monitoring users. The console does require ANSI and Graphics ability to use.
- Online text editor for files up to 1,000 lines or 32k bytes in size. This editor has options to allow editing files with control characters in them, and also to make either hard or soft returns on lines which wrap while editing.
- The DOS emulator has added the PROMPT command and also will now allow the DOS command line edit keys (F1 through F6) to edit or recall previous commands during typing.
- A DOTBBS command allows use of any internal TBBS command from the sysom command line.
- ULEDIT now allows editing of the address fields and has expanded template capability.

## The SYSOM Online ULEDIT Command

The SYSOM online userlog maintenance program is entered either directly from the Type 205 command (if OPT DATA=/U) or as the result of entering the command:

### ULEDIT

from the DOS emulator prompt (when not restricted by the /D switch). This program is nearly identical in operation to the normal stand alone ULEDIT program (supplied as part of your TBBS software package) except for the fact that it has a teletype line oriented interface. Other differences are:

- SYSOM ULEDIT implements "hot keys" when a record is displayed or the help menu is listing, so you don't have to wait to enter commands. This can be a major time savings when running remotely at slower modem speeds.
- SYSOM ULEDIT allows you to change records even when the user is logged on.
- SYSOM ULEDIT does not allow you to perform the <B> ackup function. All other ULEDIT functions are 100% implemented.

## How to Use the Userlog Editor

Since the SYSOM ULEDIT program is functionally identical to the normal TBBS ULEDIT program, you may refer to Chapter 11 of your TBBS manual for most operating instructions. This section will deal with those situations where the SYSOM ULEDIT program is different, or has extra considerations because you are editing the userlog on a "live" system with users running. The major restriction encountered because the system is running is that you may not alter the NAME field for any user.

Deleted records cannot be removed online. You should use the stand alone ULEDIT program to remove them. This can be automated as an external event by placing the following command as an external event in your RUNBBS.BAT batch file:

ULEDIT /U

## Restrictions When Editing a Currently Logged-on User

If you are editing the record of a user who is not currently logged on, then there are no other differences in operation between the SYSOM ULEDIT program and the stand alone ULEDIT program. If you are editing the record of a user who is logged on another line at this time, the following differences in the function of ULEDIT arise:

1. All changes to the user's record are applied immediately, so the <U>ndo command may not be used.
2. Some setting changes affect the online user immediately, and next user access to a menu will reflect them. Other settings changes are deferred until the user signs off and back on again. The following table indicates which settings are in each category:

Immediate	Deferred to next logon		
PRIV	Width	Pause	Line Feeds
A1, A2	UC/LC	CLS	Min/Call
A3, A4	Min/24hr	Calls/24hr	Bytes/24hr
ANSI	SYFGS	Expert Level	Expiration Date
Graphics	Password	Last Msg Read	(N)ews Flag
Location	Billing Class Time Limits		
(I) flag	Net Mail Credit and Options		

3. You may not manually change any of this user's Billing Class time limits until he logs off. You may manually change "per call" and "per 24 hour" limits. All time limit values may be updated from a template, however, even for logged on users.

Finally, if you begin editing a user's record when that user is not logged on, and then the user logs on (while you are still editing his record), any changes you made before his logon are discarded at the time he logs on.

## Templates for Authorization

A major feature of ULEDIT is the template option. This allows you to build templates to do extensive authorization modification in a single keystroke. The SYSOM ULEDIT program handles templates identically to the stand alone ULEDIT. In addition, templates may always change all fields in a record, even if a user is logged on; including fields which may not be changed manually. Templates also can never suffer loss of changes when a user logs on, since all logon activity is suspended while a template is applied (a process which takes only a fraction of a second). Because templates are so useful in an online environment, the section from Chapter 11 of your TBBS manual about template use is reproduced here in abbreviated form. Refer to that chapter for full details.

Templates are ASCII text files placed on disk (in any directory listed in the SET TBBSPATH = list). The files have the name USERn.TMP where "n" is the keystroke you want to call out the template by in ULEDIT. As an example if you wanted to register users using template "R" you would put that template in the file USERR.TMP.

**NOTE:** When locating a template SYSOM's ULEDIT program will search all of the directories listed in the SET TBBSPATH = list, the same as the stand alone ULEDIT does.

You may comment a template file by beginning a line with a semi-colon. The remainder of the line is commentary. Active lines must begin with an open parenthesis "(" followed by one or two key characters. The rest of the line up to an "=" character is commentary for your use. After the "=" comes the parameter (as explained below). The parameter must end the line.

**NOTE:** When setting authorization flags (A1, A2, A3, or A4) a dash (-) in a template will leave the specified flag at its current setting. To change a flag you must specify a dot (.) to reset the flag or an X to set it. This gives you the capability to change only the desired flags with a template, no matter what the current setting of the other flags is.

A template may set any parameter in the userlog except the name, location, password, or notes fields. Parameters are specified in the template file as follows:



```

(Priv) = 0-255           ;sets User PRIV = value
(A1) = -----         ;sets A1 flag values
(A2) = -----         ;sets A2 flag values
(A3) = -----         ;sets A3 flag values
(A4) = -----         ;sets A4 flag values
(E) = 0-255            ;sets minutes/Call value
(F) = 0-1440           ;sets minutes/day value
(H) = 0-99,999,999     ;sets Bytes/day value
(J) = 0-255            ;sets Calls/Day value
(Date) = dd/mm/yy      ;sets Expiration Date
(0) = 0-65535hr 59min  ;sets Billing Class 0 time
(1) = nnnhr nnnmin     ;sets Billing Class 1 time
(2) = nnnhr nnnmin     ;sets Billing Class 2 time
(3) = nnnhr nnnmin     ;sets Billing Class 3 time
(4) = nnnhr nnnmin     ;sets Billing Class 4 time
(5) = nnnhr nnnmin     ;sets Billing Class 5 time
(6) = nnnhr nnnmin     ;sets Billing Class 6 time
(7) = nnnhr nnnmin     ;sets Billing Class 7 time
(8) = nnnhr nnnmin     ;sets Billing Class 8 time
(9) = nnnhr nnnmin     ;sets Billing Class 9 time
(Tag) = [+|-]I         ;sets (I) flag on/off *
(Tag) = [+|-]K         ;sets (K) flag on/off *
(Tag) = [+|-]R         ;sets (R) flag on/off *
(Tag) = [+|-]F         ;sets (F) flag on/off *
(Tag) = [+|-]P         ;sets (P) flag on/off *
(M) = 0-255            ;set -more- line counter
(W) = 0-132            ;set Width of Terminal
(N) = 0-50             ;set Null Count
(I) = Y or N           ;set ANSI Yes or No
(L) = Y or N           ;set LF Yes or No
(U) = Y or N           ;set Upper Case Only Yes or No
(G) = Y or N           ;set Graphics Yes or No
(S) = num,num,num,num,num,num ;set CLS code
(K) = Y or N           ;set Crash Mail Yes or No
(V) = Y or N           ;set Free Mail Yes or No
(Y) = 0-65535          ;set Net Mail Credit in cents
(Z) = 0-65535          ;set Net Mail Debit in cents

```

\* On (Tag) = parameters a leading + sets the flag on, while a leading - sets the flag off. If neither + or - are given, + is assumed.

## Template Examples

A sample template that sets Priv=150, A1=X-X----- and A2=-----, while allowing 30 minutes per call and 60 minutes per day with a 100,000 byte per day file limit would look like:

```

;
; Authorize Class 2 user
; Comments here may be anything you wish
;
(P) = 255
(A1) = X-X-----
(A2) = -----
(E) = 30
(F) = 60
(H) = 100000

```

Any field not set by a template is left alone. To configure a user as an IBM PC terminal with screen length ("more") set at 24 lines you might have a template like:

```

;
; Configure IBM terminal, ANSI and Graphics 24 line screen
;
(M) = 24
(W) = 80
(N) = 0
(S) = 12,0,0,0,0,0
(L) = Y
(U) = N
(I) = Y
(G) = Y

```

To add a new user, configure him as an IBM terminal, and set him as a class 2 user, you would press the "+" key to add a new user. Then you would type in his name. Next press "T" followed by "R" to mark him a class 2 user (assuming USERR.TMP was the first template given here). Next press "T" followed by "I" to configure him as an IBM terminal (assuming USERI.TMP is the IBM configuration template). Lastly type in the location and password. The user is added to the log, and may log on immediately.

## The SYSOM DOS Emulator

The SYSOM DOS emulator provides the major functions of the DOS COMMAND.COM kernel program. It appears the same as an exit to DOS, and gives a prompt showing the directory you are logged into. This prompt can be changed (using the PROMPT command), but the first time each user enters SYSOM the default prompt is:

**PROMPT \$p \$g**

The DOS emulator gives you access to all disk devices online. The DOS commands to change directories, make directories, examine and copy files are all fully functional. This allows copying files from one directory to another to do file maintenance, to position them for remote download, or to install them after a remote upload. It also allows the local console user to copy files to and from floppy disks much more easily than can be done with the internal TBBS functions.

**CAUTION! You must remember at all times that when in the DOS emulator you are a user on an active multiuser system! That system requires certain files to be in certain places to operate correctly. DO NOT DELETE or COPY OVER any of the following files when using the DOS emulator, or system malfunction may result!!!**

MSG.BBS	MSGHDR.BBS	USERLOG.BBS
USERLOG.INX	CALLERS.BBS	DAYFILE.LST

Be very careful if you delete or copy over any active system files (e.g. CONFIG.CTL, MENU????CTL files, \*.QAF files, etc.) that you fully understand the impact you will have on the running system. You are not protected from damaging the running system by changing its control files.

Also be aware that if you make backup copies of active files such as the .BBS files, that these files may change during your copy. This means that they are not fully reliable as backups, since they may not be fully consistent if such changes occur during the copy. They are better than no backup of course!

The SYSOM DOS emulator also allows a subset of the DOS programmable batch file operations as well. These will be detailed next, followed by a description of each supported command.

## File Specifications

A full DOS file specification consists of four parts:

**[d:][path][filename][.ext]**

**d:** Denotes the drive specifier. Valid drive specifiers are the letters A through Z which represent physical drives installed on your computer. If the drive specifier is omitted from a file specification, the default drive is assumed. The default drive is the drive which is shown in the prompt.

**path** Denotes the file's path which leads from the root directory to the subdirectory which contains the file. File paths begin with the root directory which is specified with a back slash (\) character. If you begin a path specification without a back slash, it is assumed to be specified relative to the current directory on the specified drive, and the path from the root to the current directory is appended to the path you specify. There are also two "shorthand" directory specifications which may be used at any point in a path specification. These are "single dot" which represents the current directory, and "double dot" which means the parent directory to the current directory. The SYSOM DOS emulator fully supports all valid forms of these directory relative path specifications.

**filename** Denotes the file name. This name consists of from one to eight characters. Valid characters are A through Z plus

! # \$ % & - \_ ^ ~

**.ext** Denotes the file name extension. The extension consists of from one to three characters from the same valid character set as the filename. A file does not require an extension.

### Wild Card File Name References

**?** This character may replace any letter in a file name or extension. Any character from another file name can occupy that position. A character must exist in this position to qualify however.

**\*** This character means that any character (or no characters) may occupy all positions from here to the end of the filename or extension.

## Directory Relative File References

The SYSOM DOS emulator also supports all valid forms of directory relative file references to ease the burden of specifying long file paths. These are best explained by example:

If the current path on the current drive is: C:\TBBS\FILES

Then the reference:

```
temp\file1.txt
```

Will refer to the file:

```
C:\TBBS\FILES\TEMP\FILE1.TXT
```

The absence of a leading \ indicates that this reference is relative to the current directory, not to the root directory. Give the same starting conditions, using the "double dot" reference produces a variation on this form of specification:

```
..\upload\file1.txt
```

would refer to the file:

```
C:\TBBS\UPLOAD\FILE1.TXT
```

The "double dot" means to begin with the parent directory and then append the remainder of the current file specification. A drive may be specified along with the relative references as follows:

```
c:temp\file1.txt
```

Will also refer to the file:

```
C:\TBBS\FILES\TEMP\FILE1.TXT
```

```
c:..\upload\file1.txt
```

Will also refer to the file:

```
C:\TBBS\UPLOAD\FILE1.TXT
```

## Batch Files and Commands

Batch commands are DOS commands that are contained in a special file called a *batch* file. A batch file must have an extension of .BAT, and becomes a command which may be entered from the DOS prompt. The SYSOM DOS emulator differs from DOS in that it requires a batch file to be in the current logged on directory (the one shown by the prompt). SYSOM will not search the PATH = directory list to locate a batch file. A batch file may contain any valid SYSOM DOS emulator command, including the name of another batch file. In addition to including such commands in a batch file, you may also use the following batch file programming functions and commands:

```
ECHO [ON | OFF | message]
```

```
GOTO [:]label
```

```
IF [NOT] EXIST
```

```
IF [NOT] string1 == string2
```

```
IF [NOT] ERRORLEVEL number
```

```
PAUSE
```

```
REM [comment line]
```

```
:label
```

These commands are 100% implemented, and function 100% as they do in DOS batch files. You may create batch files offline, or you may use the COPY CON filename.BAT command to create short batch files online.

Parameter passing from the calling line to the batch file is fully implemented for up to 10 parameters (%0 through %9). The SWITCH command which allows more than 10 parameters is not implemented. The IF ERRORLEVEL command is fully implemented, but in version 1.1 of the SYSOM DOS emulator there is no function or program which can set an errorlevel other than 0. The FOR command is the only other DOS batch file capability which is not implemented in the SYSOM DOS emulator. Batch files may not call other batch files and return, but they may be chained. In all other respects, the SYSOM DOS emulator batch file function is identical to that of DOS.

## The CLS Command

This command clears the screen. It also will redisplay the DOS emulator title and a reminder that you type EXIT to return to the TBBS menu.

Format:           CLS

## The VER Command

This command will display the current SYSOM version, TBBS version, and DOS version on your console. Note: the DOS version displayed is the one returned by the DOS version function. It appears that with some minor update releases of some versions of DOS this will report a .x0 release when you may be running a .x1 release. This is actually due to a bug in your DOS if it occurs.

Format:           VER

## The PROMPT Command

This command allows you to set the prompt the DOS emulator command line uses. This command is 100% compatible with the DOS PROMPT command.

Format:           PROMPT <string>

The string may require some special characters which are specified with a two character sequence beginning with "\$". The following are supported:

\$Q equal sign (=)  
\$\$ dollar sign (\$)  
\$T current time of day  
\$D current date  
\$P current drive and path  
\$N current drive letter only  
\$V SYSOM version number  
\$G greater than character (>)  
\$L less than character (<)  
\$B pipe symbol (|)  
\$\_ ENTER-LINEFEED  
\$E ASCII escape code (chr\$(27))  
\$H Backspace (to delete a character that has been written already)

## The HELP Command

This command will list all of the valid commands that may be used while logged onto the SYSOM DOS emulator. It will also remind you that you should type EXIT to return to the TBBS menu.

Format:           HELP  
                  or  
                  ?

## The EXIT Command

This command will exit the DOS emulator, and return you to the calling TBBS menu.

Format:           EXIT

## The CHDIR (Change Directory) Command

This command changes the current directory of the specified or default drive, or displays the current directory path of a drive.

Format:           CHDIR [d:][path]  
                  or  
                  CD [d:][path]

If no parameters are given, the default drive and directory are listed.

If only the d: parameter is given, the current directory of the specified drive is listed.

If only the path parameter is given, then the current directory of the current drive is changed to the specified path.

If both d: and path are given, then the current directory of the specified drive is changed to the path given.

Wild card specifications are not legal, however the use of local and directory relative specifications is legal.

Compatibility with DOS: 100%

## The MKDIR (Make Directory) Command

This command will create a subdirectory on the specified disk.

Format:       MKDIR [d:]path  
or  
              MD [d:]path

If *d*: is not specified, the current drive is assumed. All directory relative path specifications are allowed.

Compatibility with DOS: 100%

## The RMDIR (Remove Directory) Command

This command will remove a subdirectory on the specified disk.

Format:       MKDIR [d:]path  
or  
              MD [d:]path

If *d*: is not specified, the current drive is assumed. All directory relative path specifications are allowed. Note: The directory to be removed must be empty, or an error message will result and the directory will not be removed. Note: The root and the current directory may not be removed.

Compatibility with DOS: 100%

## The DATE Command

This command allows you to display and/or change the DOS date while TBBS is running. The permanent hardware clock is also changed.

Format:       DATE [mm-dd-yy]

If no date is given on the command line the current date is displayed and you are prompted for a new one. Date format follows the CEDIT date setting.

Compatibility with DOS: 100%

## The TIME Command

This command allows you to display and/or change the DOS time while TBBS is running. The permanent hardware clock is also changed.

Format:       TIME [hh:mm[:ss[.xx]]]

hh = hours, mm = minutes, ss = seconds, and xx = hundredths of a second.

If no time is given, the current time is displayed and you are prompted for a new one. The time format follows the CEDIT setting.

Compatibility with DOS: 100%

## The DIR (Directory) Command

This command lists all or a portion of the directory entries as specified.

Format:       DIR [d:][path][filename][.ext][P][W]

If no parameters are given, the current directory is listed.

Wild card parameters are legal for either *filename* or *.ext*, and all directory relative notation is valid for *path*. In addition there are three special constructs (which only apply to the DIR command):

1. A single \* is treated the same as \*.\*
2. If no *.ext* is specified it is treated the same as \*.\*
3. If only *.ext* is specified it is treated the same as \*.\**.ext*.

/P will cause the display to pause every 23 lines.

/W will display only the file names five across for a more compact display.

Compatibility with DOS: 100%

## The DEL (Delete) and ERASE Command

This command will delete the specified file or files.

Format:        **DEL** [d:][path]filename[.ext] [/V]  
                 or  
                 **ERASE** [d:][path]filename[.ext] [/V]

If the drive is not specified, the default drive is assumed. If the path is not specified the current directory is assumed. Wild card specifications may be used in the filename and ext fields for multiple file deletes.

If you specify a directory name as a file name, then a filename of \*.\* is assumed.

If you use a filespec of \*.\* to delete all the files in a directory, the following message will be displayed to verify that you actually want to delete all files:

**Are you sure (Y/N)?**

Type **y** (yes) and press enter if you want to delete all the files, type **n** (no) and press enter if you want to cancel the erase command.

**Compatibility with DOS: 100%**

### SYSOM command Extension

If you add the /V switch to any variation of the DEL (ERASE) command, then the SYSOM DOS emulator will prompt you with each file name followed by the question:

**Delete (Y/N)?**

Answering **Y** will delete the file, answering **N** will leave the file untouched. This extension to the DOS ERASE command allows you to "vote" on each file to be deleted and helps avoid costly errors.

## The RENAME (REN) File Command

This command changes the name of the file specified in the first parameter to the name and extension given in the second parameter.

Format:        **REN[AME]** [d:][path]filename[.ext] filename[.ext]

You can use the abbreviated form **REN** for the **RENAME** command. You can also use the global characters ? and \* in the parameters (see Wild Card file specifications). A path can be specified only with the first file name; the file will remain in the same directory after its name has been changed.

**Compatibility with DOS: 100%**

## The TYPE Command

---

This command displays the contents of the specified text file on your console.

Format:           **TYPE** [d:][path]filename[.ext] [/P]

The data is not formatted except that tab characters are expanded to the nearest modulo 8 column. (i.e. column 8, 16, 24, etc.).

Text files appear in a legible form. Other files, such as program files, will be unreadable due to the presence of non-printable characters.

Wild Card characters are not allowed in the file specification. To "type" multiple files see the COPY file CON: command.

Compatibility with DOS: 100%

### **SYSOM command Extension**

If you add the /P switch to the TYPE command, the SYSOM DOS emulator will "page" the output. The length of a display page is based on your current TBBS page pause length setting. If you have set no pause in TBBS, the the /P switch will default to a 24 line page. At the end of each page, the message:

-more-

is printed and output is halted. At this prompt you may press ^C to halt the command, or any other key to view the next page of text.

## The COPY Command

---

This command copies one or more files to the specified output directory of file. Files may be optionally concatenated into a single file.

Format 1:           **COPY** [d:][path]filename[.ext][/A]/[B]  
                      [d:][path][filename[.ext]][/A]/[B]/[V]/[P]

Format 2:           **COPY** [d:][path]filename[.ext][/A]/[B]  
                      [ + [d:][path]filename[.ext][/A]/[B]] [ + ... ]  
                      [d:][path][filename[.ext]][/A]/[B]/[V]/[P]

The first file specified is the source file. The second file specified is the target file. If the second parameter is a directory (path with no filename) then the *filename.ext* of \*.\* is assumed on the output specification.

The second format allows concatenation of several files into a single file. Concatenation is also implied if the first file specified contains wild card characters and the second (target) file specification is a fully specified single file without any assumed filename or wild card characters. If any of the source file specifications in an explicit concatenation (more than one source file specification linked by + characters) contains wild card characters, all matching files are concatenated and have the same type (/A or /B) as is specified on the wild card specification (or is assume by default if no explicit type is given).

If no output file name is specified on a concatenation, then the first source file name specified becomes the name of the output file. If the first source specification contains wild card characters, then the name of the first file found which matches this specification becomes the name of the output file.

Note: A file cannot be copied over itself. This condition is detected and prevented by the COPY command.

The source or the destination may be CON or CON: to indicate the console device. This accepts input from or directs output to your screen. **If the output device is CON, then the SYSOM DOS emulator allows you to add the /P switch which will cause the output to be paged as described in the TYPE command.**

Devices PRN:, LPT1:, LPT2:, and LPT3: are valid as output devices and reference the local printer(s) connected to the TBBS computer.

Compatibility with DOS: 100% + /P switch extension

**Action with different file types:** If a source file has a type of /A (ASCII) then the data is copied up to, but not including, the first ^Z character found in the file. The remainder of the file is not copied. If a source file has a type of /B (Binary) then the entire file (based on the directory file size) is copied. If the output file has a type of /B (Binary) then it is an exact image of the source file (or concatenated source data). If the output file has a type of /A (ASCII) then a ^Z character will be added to the end of the file.

**Default file typing:** You may always explicitly specify the type of each input and output file. In fact this is strongly suggested if you are doing a complex COPY command. Versions of DOS COMMAND.COM from 2.1 through 5.0 default this typing somewhat differently from each other. Therefore, the SYSOM DOS emulator has adopted a simple to understand uniform set of default file type rules. These rules result in 100% compatibility with all versions of DOS where they are the same as each other, and is close to them all in the complex cases (except for DOS 3.3 which has several nasty bugs in some of its complex copy combinations). These rules are:

1. The output file(s) type is always /B by default.
2. If a single file, or group of files, are being individually copied (i.e. there is no concatenation taking place) all input file types are /B by default.
3. If file concatenation is taking place, all input file types are /B by default.

**Output File date and time:** Again DOS varies a bit here from version to version. The SYSOM DOS emulator has adopted a simple rule for when the source file date and time is retained, and when the date and time of the copy is assigned to the output file, which is usually the same as most versions of DOS.

*If the output file is an exact copy of the input file, the input file date and time are assigned to the output file. If the output file has been altered in any way from the input file, then the date and time of the COPY is assigned to the output file.*

The /V parameter in DOS causes VERIFY ON to occur while the output file is being written. Due to the system performance impact of the VERIFY ON command, this switch is commentary in the SYSOM DOS emulator.

## The MV (MOVE) File Utility

This command is a SYSOM DOS emulator utility program. There is no equivalent command in DOS itself. MV is similar to the RENAME command, but it allows renaming directories (with files still in them) allowing them to be moved anywhere on the same drive. It also allows renaming files into other directories, and thus moves a file to any directory on the same drive.

Format: MV [d:][path]filename[.ext] [d:][path]filename[.ext]  
or  
MOVE [d:][path]filename[.ext] [d:][path]filename[.ext]

The drive specified on both the source and target specification must be the same.

Move cannot move a file or directory to another drive.

MOVE is much faster than copying a file, and does not require extra disk space during the move as a copy does. This can be very important when moving very large files. Both the source and target file specification may contain wild cards.

Examples:

MV D:\TBBS\FILES\IBM D:\IBM

This command will move the directory IBM and all the files into it from the D:\TBBS\FILES directory to the root directory.

MV \*.BAT \IBM

This command will move all files in the current directory with the extension .BAT to the \IBM directory.

## The FIND File (FF) Utility

Locate lost files or directories by searching through all of the directories of a disk drive. Also produce directory of all files on a drive.

Format: FF [d:]filename[.ext] [/W]/[P]  
or  
FIND [d:]filename[.ext] [/W]/[P]

Find File searches all directories on the specified drive d: (if no drive is given, the default drive is assumed). For each file or directory name found which



matches the *filename[.ext]* given, FF prints the directory entry for that file (in the same format as the DIR command). Wild card characters may be used in either *filename* or *extension* (or both). No path may be specified, since Find File will examine all paths on the specified drive.

A search may be aborted by pressing ^C at any time.

If the /W switch is present, a "Wide" or compacted display is produced in the same format as the DIR command.

If the /P switch is present, the display will pause every full screen. If you have no page length configured in TBBS, 24 lines per screen is assumed.

To produce a directory of all of the files on a drive *d:* use the command:

**FF d:\*.\***

## The WHO Utility

This utility program produces a listing of all users currently logged on to TBBS at this time.

Format: **WHO**

The listing shows the line number and the logon ID.

## The FILES Utility

This utility program allows you to view all files which are currently open to DOS by all users.

Format: **FILES**

After the listing is produced, you may press the space bar to update the display, or any other key to exit the FILES program and return to the SYSOM DOS emulator prompt.

## The MEMORY Utility

This command will produce a detailed summary of memory usage by TBBS.

Format: **MEMORY**

The display details how both conventional and EMS memory is assigned and which lines are in conventional memory and which are in EMS memory. It may be used as an aid to allocating your memory resources.

## The Download Utility

This command allows download of any file in the current directory.

Format: **D filespec [filespec [...]]**

Wildcards and/or multiple file names are allowed.

## The Upload Utility

This command allows uploading files into the current directory

Format: **U [filespec]**

If no filespec is given a batch upload is invoked.

## The REMSYSOP Utility

This command allows you to enter the TBBS remote sysop control panel directly (the same as a TYPE 21 command from within TBBS). From there you can send messages to users, shut down the system, and enter DOS for remote hosted operation.

Format: **REMSYSOP**

## The DOTBBS Utility

---

This command allows you to run any TBBS menu command directly from the SYSOM command prompt.

Format:           DOTBBS [TYPE] <type#> [OPTDATA] [optional data]

This format is compatible with both the SDL menu command format and the TBBS DOTBBS command format, and it also allows shorthand once you become used to it. <type#> is the TBBS menu command type number, and "optional data" is any optional data parameters the command requires.

Examples:

```
DOTBBS TYPE 1 OPTDATA C:\TEXT\TEST.TXT
```

```
DOTBBS TYPE 1 C:\TEXT\TEST.TXT
```

```
DOTBBS 1 C:\TEXT\TEST.TXT
```

All of these forms do the same thing, display the text file TEST.TXT to your screen. Note that SYSOM does not alter the path information in your Opt Data fields, so all file references will be the same as if the command was issued from within a menu (i.e. the default path is the one TBBS was run from, not the one you are logged into in SYSOM).

NOTE: The "one-way" DOTBBS commands (5, 10, 35, 45, other option modules, etc.) will automatically close any open BATCH files and exit SYSOM. Also, SYSOM will not allow a DOTBBS 205 command, as this avoids a security breach which would otherwise be possible with /L or /R options.

## The EDIT Utility

---

SYSOM provides an online text editor which will edit ASCII text files up to 1,000 lines or 32k bytes in length. This editor is patterned after the TBBS full screen message editor in function. The syntax to enter the editor from the SYSOM command line is:

Format:           EDIT [d:][path]filename[.ext] [/W] [/P]

The two switches control the handling of text in the editor as follows:

/W - Output <CR> <LF> at the end of wrapped lines when saving the file.

This switch allows you to use the word wrapping function of the editor while you are editing the file, but still output each visual line as a separate ASCII line in the saved file. Without this switch, all text in a wrapped region of the editor (lines which don't show a "<" at the end of them) are output as a long single line of text. With this switch, the editor will add a <CR> <LF> at the end of each visual line when the file is saved.

/P - Process control characters using the ^ ^ A - ^ ^ ] specification. On input, any true control characters will be changed to ^ ^ A ASCII representation, and when the file is saved, any ^ ^ A through ^ ^ Z ASCII strings will be changed back to true control characters in the file. This switch is only required when you are editing files that have real control characters within them.

NOTE: If the editor loads a file which contains any true control characters, /P processing is invoked automatically.

In addition to the editing functions supported by the internal TBBS message editor, the SYSOM text editor supports the following:

^> or ^F - Advance one word to the right

^< or ^A - Advance one word to the left

^QF - Search for string

^QA - Search and Replace string

^L - Repeat last search

The editor's online help file is named SYSOM.HLP.

## The Remote CONSOLE Utility

SYSOM provides a full function remote TBBS operator's console. This console may be invoked from the SYSOM command line with the command CONSOLE (if it has been allowed by the calling menu's Opt Data /C switch) or directly from the menu entry point (if ONLY the /C switch was present in Opt Data).

The console will look and operate identically to the TBBS local console, including the performance monitor bar graphs (a few of the display characters have undergone minor alteration to avoid using flow control characters on a data line).

NOTE: The caller MUST have both ANSI and GRAPHICS capability to use the SYSOM remote console. The function keys are input using either VT-100 or "Doorway mode" key emulation, and in addition have the same single control key equivalents as elsewhere in TBBS. The input key rules for VT-52/VT-100/ANSI key sequences for the console are the same as for the text editor and all of TBBS. These rules are:

	<i>Ctrl</i>	<i>VT/ANSI</i>
<i>Key</i>	<i>Key</i>	<i>Sequences</i>
Up Arrow	^E	^[A or ^[[A
Down Arrow	^X	^[B or ^[[B
Left Arrow	^S	^[D or ^[[D
Right Arrow	^D	^[C or ^[[C
^ Left Arrow	^A	^[H
^ Right Arrow	^F	^[K
Del	^G	
Ins	^V	
Page Up	^R	
Page Down	^C	
F1		^[P or ^[OP
F2		^[Q or ^[OQ
F3		^[R or ^[OR or ^[Ow or ^[?w
F4		^[S or ^[OS or ^[Ox or ^[?x
F5		^[Ot or ^[?t
F6		^[Ou or ^[?u
F7		^[Oq or ^[?q
F8		^[Or or ^[?r
F9		^[Op or ^[?p
F10		^[OM or ^[?M

NOTE: ^[ represents the "Escape" control character.

See Chapter 2 of your TBBS manual for a description of the operation of the TBBS local console.

With TBBS 2.3 or later, the SYSOM remote console allows all of the command the TBBS local console allows except that you cannot start a performance monitor disk log or protect or unprotect the local console. With TBBS 2.2, the line monitoring and control commands are not enabled.

Notes about the SYSOM remote TBBS console:

- Caution should be used when resetting the performance monitor parameters using the F8 key. TBBS only has a single set of internal performance monitor accumulators, so if you clear them from any console (the TBBS local console or any SYSOM remote console) the counters will reset for all consoles. So be certain that there is no one else doing any long term performance monitoring before you reset the counters, as you may disturb their monitoring runs if you don't.
- Only one TBBS remote console at a time may monitor a given TBBS line. If you attempt to monitor a line that another remote console is also monitoring, you will be told to try again later. Note that you can monitor the line which is monitoring another line to any depth. This should not be common practice as this can slow down your TBBS if high speed lines are involved.
- While you can run the SYSOM remote console by logging on to the local console, this should not be done regularly. Use of the remote console on the local console can slow down your TBBS, and if you try to shut the system down from the remote console running on the local console the shutdown attempt will proceed part way and then fail.

## **DOS Function Key Emulation**

---

Sysom emulates the DOS command line function keys on its command line. The previous command line you entered forms a template which you may recall all or part of and edit. These keys operate exactly like DOS does at its command prompt. They are:

**F1 - Recall next character from template**

**F2 - Search for character in template and recall up to it**

**F3 - Recall remainder of template to end of line**

**F4 - Delete partial string from template**

**F5 - Erase template**

**F6 - Enter ^Z character**

**Del - Delete character from template**

**Ins - Insert next characters typed into template**

The keyboard emulations required by the calling terminal are identical to those given in the EDIT command reference. That is, either ANSI, VT-100, VT-52 or "Doorway" mode keyboard emulation will allow the use of these function keys with the SYSOM command line.



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