

## SuperMonitor Help Contents

To learn how to use Help, press F1...

Your Windows 3.1, Windows For Workgroups, Windows 95, and Windows NT resource monitor and logger...

### Menu Commands:

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### File menu commands

The File menu offers the following commands:

<a href="#">New</a>	Open a new document.
<a href="#">Open</a>	Open an existing document.
<a href="#">Close</a>	Close an open document.
<a href="#">Save As</a>	Save a document with a new name (renames the document and its log file).
<a href="#">Print</a>	Print current document's view (window).
<a href="#">Print</a>	Display current document's view (window) exactly as it would appear on your printer.
<a href="#">Preview</a>	
<a href="#">Print Setup</a>	Setup your printer.
<a href="#">MRU 1-4</a>	Open most recently used document.
<a href="#">Exit</a>	Exit <b>SuperMonitor</b> .

## View menu commands

The View menu offers the following commands:

<u>Toolbar</u>	Shows or hides the toolbar.
<u>Statusbar</u>	Shows or hides the status bar.

## Options menu commands

The Options menu offers the following commands:

<a href="#"><u>Log to Disk</u></a>	Log file options.
<a href="#"><u>Stay on Top</u></a>	Stay on top or normal window behavior.
<a href="#"><u>Position</u></a>	Remember last window position upon startup.
<a href="#"><u>Multi-line Title</u></a>	Enables multi-line titles for iconic windows.
<a href="#"><u>KBytes in Title</u></a>	Show resource levels in KBytes or percentages in titles of iconic windows.
<a href="#"><u>Rates</u></a>	Rates options.
<a href="#"><u>Views</u></a>	View window options.

## **Actions menu commands**

The Actions menu offers the following commands:

[Start](#)  
[Stop](#)  
[Reset](#)  
[Restart](#)

## **Spy menu commands**

The Spy menu offers the following commands:

<u>DOS 1st Meg</u>	Displays a dialog box outlining which programs are using what DOS memory blocks.
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## Window menu commands

The Window menu offers the following commands:

<a href="#"><u>New Instants Window</u></a>	Create new Instants view (window) of current document.
<a href="#"><u>New Averages Windows</u></a>	Create new Averages view (window) of current document.
<a href="#"><u>New Minimums Window</u></a>	Create new Minimums view (window) of current document.
<a href="#"><u>Cascade</u></a>	Cascade all views.
<a href="#"><u>Tile</u></a>	Tile all views.
<a href="#"><u>Arrange Icons</u></a>	Arrange all views.

## Help menu commands

The Help menu offers the following commands:

<a href="#"><u>Contents</u></a>	Offers you an index to topics on which you can get help.
<a href="#"><u>Search for Help on</u></a>	Searches for a Help topic by typing or selecting a keyword.
<a href="#"><u>Using Help</u></a>	Provides general instructions on using help.
<a href="#"><u>Product Support</u></a>	Where to get technical and sales support.
<a href="#"><u>About</u></a>	Displays the version number of this application.

### **New command (File menu & Toolbar)**

Opens a new (non-existent) document and its associated views as defined in the [Views command \(Option menu\)](#) dialog.

Remember, **SuperMonitor** is a multiple-document aware program. You may have an unlimited number of documents open and monitoring your system resources.

The document name is used as the name of the log file (if logging to disk). It is not used anywhere else in the program.

### **Shortcuts**

Mouse: Click this button to open a new file (document)



### Open command (File menu & Toolbar)

Opens an existing document and its associated views as defined in the [Views command \(Option menu\)](#) dialog.

Remember, **SuperMonitor** is a multiple-document aware program. You may have an unlimited number of documents open and monitoring your system resources.

The document name is used as the name of the log file (if logging to disk). It is not used anywhere else in the program.

### Shortcuts

Mouse: Click this button to open an existing file (document)





**Close command (File menu)**

Closes the active document and all of its views. If the document was monitoring your system resources, you will first be prompted for permission to stop monitoring your system.

**Save As command (File menu)**

Renames (saves) the current document.

The document name is used as the name of the log file (if logging to disk). It is not used anywhere else in the program.

**Print command (File menu & Toolbar)**

Prints the active document's active view to the printer. Only the active view of the document is printed. If your document has all three views open, you must activate each view, print it, and repeat the process for the remaining views.

**Shortcuts**

Mouse: Click this button to print the active document's active view



### **Print Preview command (File menu & Toolbar)**

Displays the active document's active view as it will appear on the printer. Only the active view of the document is displayed. If your document has all three views open, you must activate each view, print it, and repeat the process for each remaining view.

### **Shortcuts**

Mouse: Click this button to preview the active document's active view



**Print Setup command (File menu)**

Displays the printer setup dialog box for your printer.

### **Exit command (File menu)**

Use this command to end your session. You can also use the Close command on the application Control menu.

### **Shortcuts**

Mouse: Double-click the application's Control menu button.



Keys: ALT+F4

**MRU 1-4 command (File menu)**

Displays the last four documents that were accessed. Click on one of these to quickly open the file (document).

**Toolbar command (View menu)**

Use this command to display and hide the Toolbar, which includes buttons for some of the most common commands in the program. A check mark appears next to the menu item when the Toolbar is displayed.

See [Toolbar](#) for help on using the toolbar.



## Toolbar



The toolbar is displayed across the top of the application window, below the menu bar. The toolbar provides quick mouse access to many tools used in this program,

To hide or display the Toolbar, choose Toolbar from the View menu (ALT, V, T).

**Status Bar command (View menu)**

Use this command to display and hide the Status Bar, which describes the action to be executed by the selected menu item or depressed toolbar button. A check mark appears next to the menu item when the Status Bar is displayed.

See [Status Bar](#) for help on using the status bar.

## Statusbar

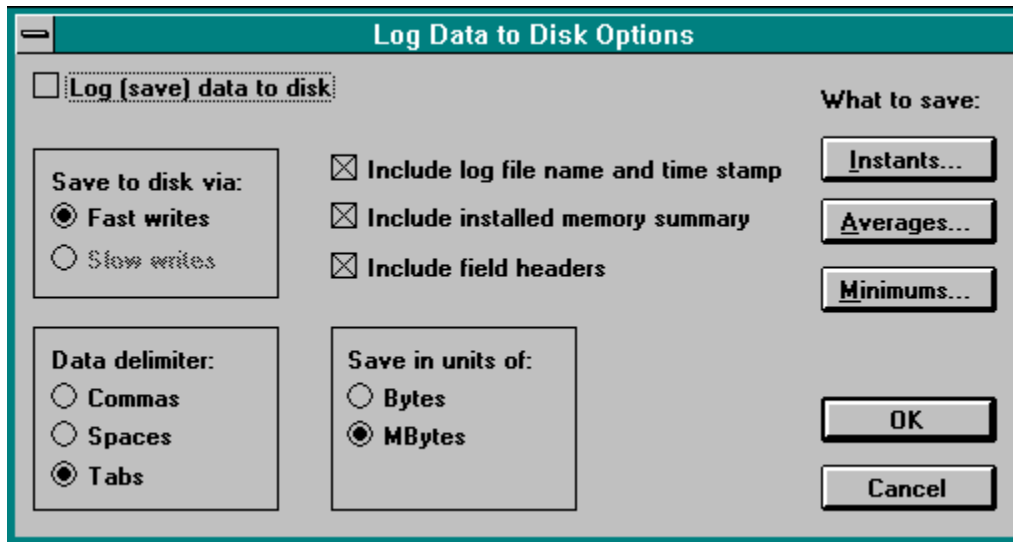


The status bar is displayed at the bottom of the program window. To display or hide the status bar, use the Status Bar command in the View menu.

The left area of the status bar describes actions of menu items as you use the arrow keys to navigate through menus. This area similarly shows messages that describe the actions of toolbar buttons as you depress them, before releasing them. If after viewing the description of the toolbar button command you wish not to execute the command, then release the mouse button while the pointer is off the toolbar button.

### Log to Disk command (Options menu)

This command displays a dialog box that allows you to customize log files. Click on any of the dialog options for more help...



The dialog box is titled "Log Data to Disk Options" and has a standard Windows-style title bar with a minimize button. It contains several sections for configuring log file output:

- Log (save) data to disk:** A checkbox at the top left, currently unchecked.
- Save to disk via:** A group box containing two radio buttons: "Fast writes" (selected) and "Slow writes".
- Data delimiter:** A group box containing three radio buttons: "Commas", "Spaces", and "Tabs" (selected).
- Include options:** Three checked checkboxes: "Include log file name and time stamp", "Include installed memory summary", and "Include field headers".
- Save in units of:** A group box containing two radio buttons: "Bytes" and "MBytes" (selected).
- What to save:** Three buttons: "Instants...", "Averages...", and "Minimums...".
- Action buttons:** "OK" and "Cancel" buttons at the bottom right.

### **Stay on Top command (Options menu, System menu)**

Forces **SuperMonitor** to always be on top of all other programs. When you want to monitor your system while a wide variety of programs are executing, we suggest that you minimize **SuperMonitor** and make it stay on top so that its information is always visible. You may also execute **SuperMonitor** full screen while it is on top.

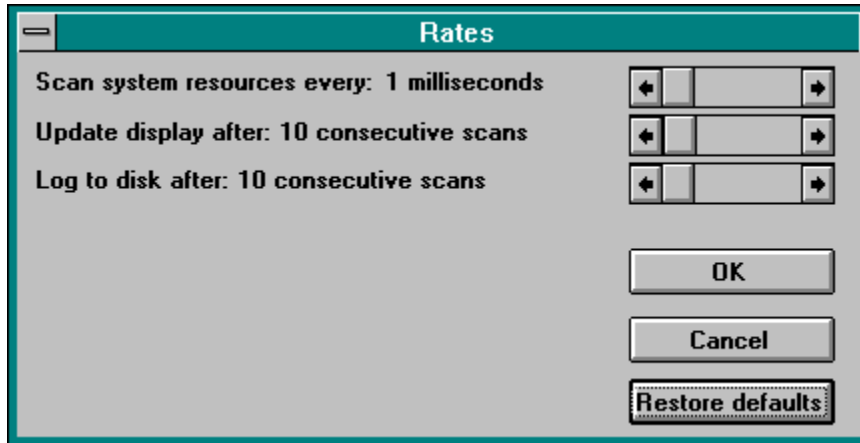
Note that when **SuperMonitor** is minimized (as an icon) you can access its system menu and perform a variety of useful commands (Stay on Top, Start, Stop, etc.) without having to maximize **SuperMonitor**, issue the command, and then re-minimize it.

### **Position command (Options menu)**

With Position disabled (not checked), **SuperMonitor** always starts executing almost full screen. If you want **SuperMonitor** to remember its last size and position right before it terminated, so that the next time you execute it, it will display in the same place as during its previous execution, enable this option (check it).

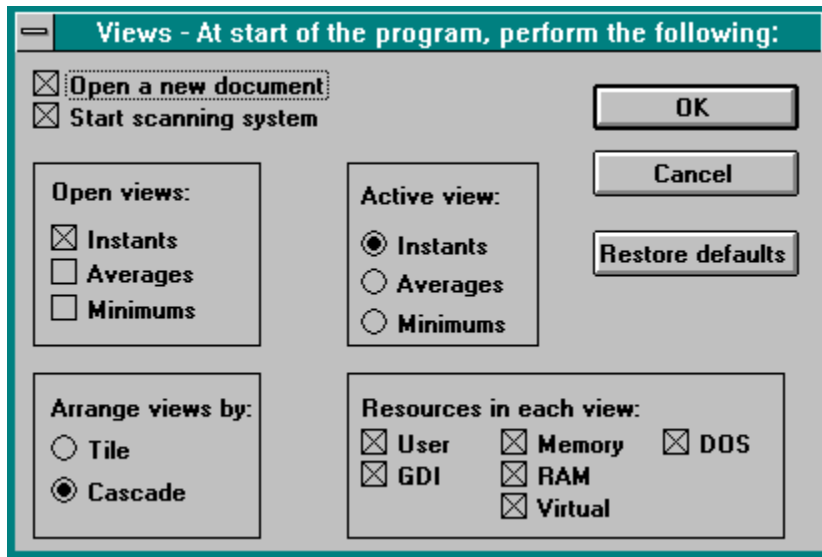
### Rates command (Options menu)

This command displays a dialog box that allows you to customize the sampling rates of **SuperMonitor...**  
Click on any of the dialog options for more help...



### Views command (Options menu)

This command displays a dialog box that allows you to customize the start up behavior of **SuperMonitor**... Click on any of the dialog options for more help...





### **Open a new document**

If this option is checked, then at the start of the program, **SuperMonitor** will automatically open a new document. If not checked, then you will have to manually open a new or existing document before monitoring may begin.

### **Start scanning system**

If this option is checked, then at the start of the program, **SuperMonitor** will automatically instruct the new document to start monitoring your system's resources. If not checked, then you will have to manually start your document.

**Open views: Instants**

If this option is checked, each document will automatically display your system's instantaneous (Instants) resource usage. If not checked, then you will have to manually open this view through the Window menu.

**Open views: Averages**

If this option is checked, each document will automatically display your system's average (Averages) resource usage. If not checked, then you will have to manually open this view through the Window menu.

**Open views: Minimums**

If this option is checked, each document will automatically display your system's minimum (Minimums) resource usage. If not checked, then you will have to manually open this view through the Window menu.

**Active view: Instants**

This group of choices determines which view will automatically be made active when **SuperMonitor** first executes. Only one view may be selected.

This choice makes the Instants view be active upon program startup.

**Active view: Averages**

This group of choices determines which view will automatically be made active when **SuperMonitor** first executes. Only one view may be selected.

This choice makes the Averages view be active upon program startup.

**Active view: Minimums**

This group of choices determines which view will automatically be made active when **SuperMonitor** first executes. Only one view may be selected.

This choice makes the Minimums view be active upon program startup.



### **Arrange views by: Tile**

If this option is checked, **SuperMonitor** will tile (side by side) your views upon program startup.

**Arrange views by: Cascade**

If this option is checked, **SuperMonitor** will cascade your views upon program startup.

**Resources in each view: User**

If checked, causes the User resource vertical usage bar to appear in all future document's views. If not checked, then the resource won't appear.

Checked resources always appear left to right within a view in the following order:

User, GDI, Memory, RAM, Virtual, DOS

**Resources in each view: GDI**

If checked, causes the GDI resource vertical usage bar to appear in all future document's views. If not checked, then the resource won't appear.

Checked resources always appear left to right within a view in the following order:

User, GDI, Memory, RAM, Virtual, DOS

**Resources in each view: Memory**

If checked, causes the Memory resource vertical usage bar to appear in all future document's views. If not checked, then the resource won't appear.

Checked resources always appear left to right within a view in the following order:

User, GDI, Memory, RAM, Virtual, DOS

**Resources in each view: RAM**

If checked, causes the RAM resource vertical usage bar to appear in all future document's views. If not checked, then the resource won't appear.

Checked resources always appear left to right within a view in the following order:

User, GDI, Memory, RAM, Virtual, DOS

**Resources in each view: Virtual**

If checked, causes the Virtual resource vertical usage bar to appear in all future document's views. If not checked, then the resource won't appear.

Checked resources always appear left to right within a view in the following order:

User, GDI, Memory, RAM, Virtual, DOS

**Resources in each view: DOS**

If checked, causes the DOS resource vertical usage bar to appear in all future document's views. If not checked, then the resource won't appear.

Checked resources always appear left to right within a view in the following order:

User, GDI, Memory, RAM, Virtual, DOS



**View: Restore defaults**

Pressing this button restores the dialog box options to the state that the program was shipped in.

**View: OK**

Saves your changes (if any) to the program's INI file and immediately alters the operation of the program.

**View: Cancel**

Disregards any changes that you made in this dialog box.

### **Start command (Actions menu, System menu, & Toolbar)**

Selecting this command tells the active document to start monitoring your system resources.

Documents that are started have an asterisk prefacing their title. Once you stop a document, the asterisk is removed.

Note that when **SuperMonitor** is minimized (as an icon) you can access its system menu and perform a variety of useful commands (Stay on Top, Start, Stop, etc.) without having to maximize **SuperMonitor**, issue the command, and then re-minimize it.

### **Shortcuts**

Mouse: Click this button to start the active document.



### **Stop command (Actions menu, System menu, & Toolbar)**

Selecting this command tells the active document to stop monitoring your system resources.

If the document was logging data to disk, this command stops the logging, and closes the disk file.

Note that when **SuperMonitor** is minimized (as an icon) you can access its system menu and perform a variety of useful commands (Stay on Top, Start, Stop, etc.) without having to maximize **SuperMonitor**, issue the command, and then re-minimize it.

### **Shortcuts**

Mouse: Click this button to stop the active document.



### **Reset command (Actions menu, System menu, & Toolbar)**

Selecting this command tells the active document to stop monitoring your system resources and then resets the document's data.

Note that when **SuperMonitor** is minimized (as an icon) you can access its system menu and perform a variety of useful commands (Stay on Top, Start, Stop, etc.) without having to maximize **SuperMonitor**, issue the command, and then re-minimize it.

### **Shortcuts**

Mouse: Click this button to reset the active document.



### **Restart command (Actions menu, System menu, & Toolbar)**

Selecting this command tells the active document to stop monitoring your system resources, resets the document's data, and then starts again.

Note that when **SuperMonitor** is minimized (as an icon) you can access its system menu and perform a variety of useful commands (Stay on Top, Start, Stop, etc.) without having to maximize **SuperMonitor**, issue the command, and then re-minimize it.

### **Shortcuts**

Mouse: Click this button to restart the active document.



**New Instants Window command (Window menu)**

This command opens a new Instants view for the active document. Only one view of this type may be opened per document.



**New Averages Window command (Window menu)**

This command opens a new Averages view for the active document. Only one view of this type may be opened per document.

**New Minimums Window command (Window menu)**

This command opens a new Minimums view for the active document. Only one view of this type may be opened per document.

**Cascade command (Window menu)**

Cascades (overlaps) all views of all documents on your screen.

**Tile command (Window menu)**

Tiles (displays side-by-side) all views of all documents on your screen.

**Arrange Icons command (Window menu)**

Arranges all iconic views on your screen.

**Contents command (Help menu)**

Use this command to display the opening screen of Help. From the opening screen, you can jump to step-by-step instructions for using this program and various types of reference information.

Once you open Help, you can click the Contents button whenever you want to return to the opening screen.

**Search for Help on... command (Help menu)**

Use this command to search for help on a topic or keyword of your choosing.

### **Using Help command (Help menu)**

Use this command for instructions about using Help.



### **Product Support command (Help menu)**

**SuperMonitor** is NOT free. Unregistered evaluation versions may be freely shared. Registered, purchased versions may NOT be shared. Unregistered versions are limited to 5 minutes of consecutive monitoring per document. Purchased versions are fully functional.

Site licenses and quantity discounts are available upon request. Feel free to contact us for a complete description of all of TNT's 35 programs in the collection.

Tessler's Nifty Tools (TNT) Release 5.7  
430 Canyon Woods Place Suite A  
San Ramon, Ca. 94583  
(510) 244-5449

CompuServe: 71044,542  
Internet: 71044.542@compuserve.com

More information on using this program may be found in the SuperMon.Doc or SuperMon.Txt files...

**About command (Help menu & System menu)**

Use this command to display the copyright notice and version number of your copy of this program.

## **Installation and removal instructions**

### **To install:**

Copy the following files to any single area of your PC's disk:

- SuperMon.exe
- SuperMon.hlp
- Super32.dll

A typical destination might be: C:\TNT\SUPERMON

### **To uninstall:**

Delete the above files along with SuperMon.ini from your Windows directory (typically c:\windows).

## Monitoring your system resources

**SuperMonitor** can monitor your system's USER, GDI, Memory, RAM, Virtual memory, and DOS resources. You can customize your views to show precisely the resources that you are interested in. See [Views command \(Option menu\)](#) for more information.

**SuperMonitor** can display the following resource information each within its own view window:

- Instantaneous resource usage (in percent free) of your system.
- Average resource usage (in percent free) of your system.
- Minimum resource usage (in percent free) of your system.

Each view displays the resources that you chose above.

[USER resource](#)

[GUI \(Graphics Device Interface\) resource](#)

[Memory resource](#)

[RAM resource](#)

[Virtual resource](#)

[DOS resource:](#)

**USER resource:**

This is a 64 KByte resource that includes handles to windows and menu objects, etc.

The System Resources number reported by Program Manager's Help About dialog box reports the lower of the USER and GUI resources currently available.

**GUI (Graphics Device Interface) resource:**

This is a 64 KByte resource that includes handles to brushes, pens, bitmaps, device contexts, and regions, etc.

The System Resources number reported by Program Manager's Help About dialog box reports the lower of the USER and GDI resources currently available.

**Memory resource:**

This is the summation of real physical memory and virtual memory which is your swap file located on your fixed disk.

**RAM resource:**

RAM (random access memory) is the physical memory chips installed in your PC. Real physical memory is significantly faster than virtual disk based memory. In systems that don't have enough physical memory installed, Windows must swap programs in and out of real memory and into the virtual memory which slows down your applications.

**SuperMonitor** is ideal for users and PC administrators who need to determine how much physical memory to purchase for the user's PC. Simply monitor the RAM and Virtual resources!



**Virtual resource:**

This is pseudo memory that Windows creates from your disk swap file in 386-enhanced mode. Programs don't actually execute in virtual memory. Programs only execute in real physical RAM memory. Programs are swapped to RAM physical memory when they need to execute, and are swapped to virtual memory when Windows is low on RAM physical memory and needs more free RAM physical memory.

**DOS resource:**

DOS memory is the first 1024 kbytes (1 MByte) of memory in your PC. It consists of lower memory (640 Kb) and Upper memory (384 Kb). DOS memory is crucial to the proper operation of Windows. Each Windows program must use part of DOS' memory. If there is not enough DOS memory for your Windows program to execute, you'll get the dreaded "Not enough memory to run" Windows message. Use **SuperMonitor's** [DOS 1st Meg](#) command to examine what programs are using DOS memory.

**SuperMonitor** is ideal for users and PC administrators who need to determine which how much DOS memory their programs are using.

## Resource colors and what it all means

**SuperMonitor**'s vertical resource status bars change color based upon their percentage free level. The colors and their meanings are as follows:

<u>Color</u>	<u>% free</u>	<u>Resource condition</u>
Green	60 - 100	Excellent
Yellow	30 - 59	Fair
Red	0 - 29	Critical

Resources that become **red** may cause instability in Windows...

## Reported resource usage accuracy

**SuperMonitor** accurately reports USER, GDI, Memory, and DOS utilization because Windows provides well-documented resource information to **SuperMonitor**.

In order to compute RAM and Virtual memory utilization, **SuperMonitor** must resort to using poorly documented Windows functions that are not as accurate as they should be. **SuperMonitor's** Memory free value will not be the same as Program Manager's Help About memory free number because **SuperMonitor** uses a more accurate algorithm than Program Manager uses. Usually, **SuperMonitor** and Program Manager will have very similar answers.

**SuperMonitor** usually reports 100% accurate resource utilization numbers, but occasionally its RAM and Virtual answers are off by 1-5% by stating that you are using more memory than you actually using. This small error should be insignificant in your assessment of your PC's resource usage.

Since Memory is the summation of RAM plus Virtual memory, you would think that your RAM and Virtual resources would precisely add up to the size of your Memory resource. This isn't exactly true. Since Memory, RAM and Virtual resources all use different algorithms with different computational precisions, Memory approximately equals RAM plus Virtual memory.

If Microsoft improves their functions, we will immediately incorporate them into **SuperMonitor** and will notify you of the upgraded product. Thank you for understanding...

Keep in mind that both **SuperMonitor's** and Program Manager's Memory free number (and SuperMonitor's RAM free number) is memory/RAM that is available to Windows programs after Windows has finished loading any device and LAN drivers (VxDs). If you think SuperMonitor has incorrectly reported your memory/ram, you have probably forgot to subtract any RAM used by any disk caching software (like SmartDrv), RAM disk memory, DOS memory resident software, and memory used by Windows device drivers in your computation...

### Evaluation program limitations

Evaluation versions of **SuperMonitor** are fully functional except that each document is limited to five consecutive minutes of system resource monitoring. After five minutes, **SuperMonitor** will automatically stop the document. The document can not be restarted. You may however, open a new document and monitor your system for another five minutes. You may freely share unregistered evaluation versions of **SuperMonitor**.

Remember! Purchased **SuperMonitor** programs are not limited in any way. You may not share purchased copies of **SuperMonitor**.

### **Scan system every N milliseconds**

Determines how often **SuperMonitor** will attempt to monitor your system's resources.

In order to "catch" resource allocation "spikes", we recommend that you monitor your system every 50 milliseconds. Slow PCs may not be able to monitor every 50 milliseconds, but will automatically monitor as fast as possible.

### **Update display after N consecutive scans**

Determines how often **SuperMonitor** will update its display with current resource usage statistics. To reduce **SuperMonitor** processor overhead on your PC's CPU, we recommend that you update your display as infrequently as possible. If you only need to see updated statistics every one second, don't update more frequently. At 50 milliseconds, sample rate, the default display update after 18 scans is equal to approximately once every second ( $18 * 50 = 900$  msec).

### **Log to disk after N consecutive scans**

Determines how often **SuperMonitor** will write a snapshot of your system's resource utilization to your disk log file. The less frequent you write to disk, the smaller your log file will be. At 50 milliseconds, sample rate, logging to disk after 18 scans is equal to approximately once every second ( $18 * 50 = 900$  msec).

Remember: You must enable logging to disk through the [Options](#) dialog box.



**Rates: OK**

Saves your changes (if any) to the program's INI file and immediately alters the operation of the program.

**Rates: Cancel**

Disregards any changes that you made in this dialog box.

**Rates: Restore defaults**

Pressing this button restores the dialog box options to the state that the program was shipped in.

**Log (save) data to disk**

Checking this box enables logging of system resource usage to a disk file. The name of the disk file is the name of the document. To change the name of the log file, rename your document via the [Save As](#) command.

### **Save to disk via: Fast writes**

Select this option for fast disk writes. If your Windows session crashes while you happen to be logging to disk, your **SuperMonitor** log file will most likely be empty and your collected data will be lost. For safer but slower logging, see [Save to disk via: Slow writes](#) .

### **Save to disk via: Slow writes**

Select this option for slow (safe) disk writes. If your Windows session crashes while you happen to be logging to disk, your **SuperMonitor** log file will most likely still contain your data.

Only use this option if you have Windows stability problems. **Slow writes** significantly slows down your data logging rate. For faster but less safe logging, see [Save to disk via: Fast writes](#) .

**Include log file name and time stamp**

Check this box to include the name of the log time and the date and time of its creation at the top of your log file.

**Include installed memory summary**

Check this box to include a summary of the amount of memory in your system at the top of your log file.



**Include field headers**

Check this box to include descriptions of the data fields that will appear in your log file. These descriptions help you understand the columns of data that you are analyzing.

**Data delimiter: Commas**

Select this option for a comma delimited log file. When importing this file into your spreadsheet, tell your spreadsheet that the delimiter is a comma.

**Data delimiters: Spaces**

Select this option for a space delimited log file. When importing this file into your spreadsheet, tell your spreadsheet that the delimiter is a space.

**Data delimiters: Tabs**

Select this option for a tab delimited log file. When importing this file into your spreadsheet, tell your spreadsheet that the delimiter is a tab.

**Save in units of: Bytes**

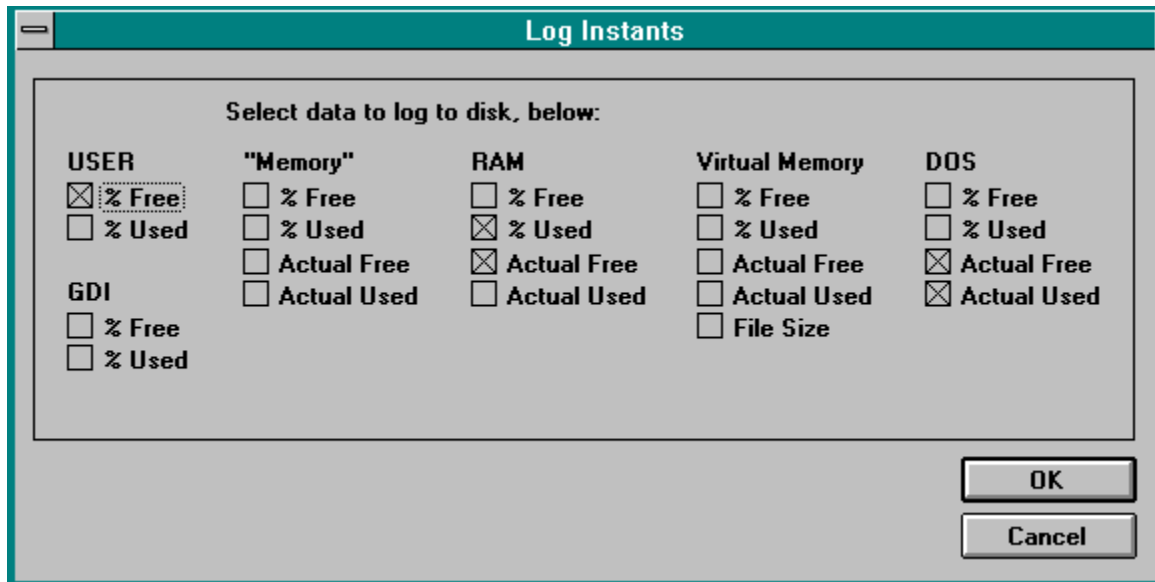
Select this option when you need a high degree of accuracy in your data. This high degree of accuracy significantly increases the size of your log file. Since most people don't need this precision, don't use it unless you need it. The data is reported in units of bytes -like 16462643 rather than in megabytes which would be 15.7 .

**Save in units of: MBytes**

Select this option when you need a less accurate reporting of your data. This setting is best for most people. The data is reported in units of megabytes -like 15.7 rather than in bytes which would be 16462643.

### What to save: Instants

Brings up the Instants resource data fields dialog box where you may choose which fields to actually log to disk.



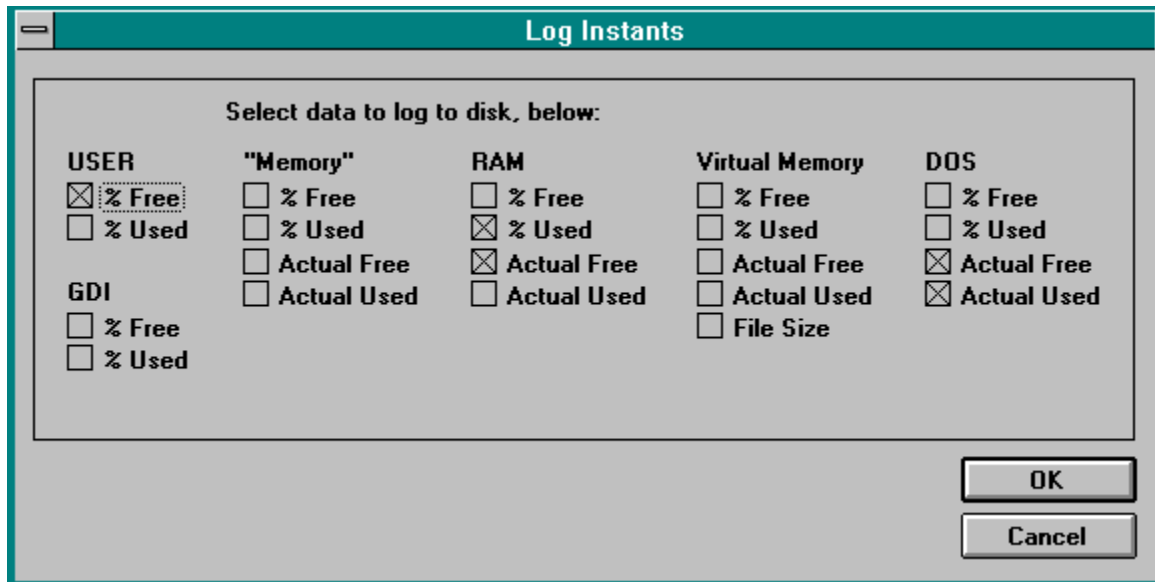
The dialog box is titled "Log Instants" and contains a section titled "Select data to log to disk, below:". This section is organized into five columns, each representing a different resource category. Each category has a list of data fields with checkboxes to select or deselect them. The categories and their fields are:

USER	"Memory"	RAM	Virtual Memory	DOS
<input checked="" type="checkbox"/> % Free	<input type="checkbox"/> % Free	<input type="checkbox"/> % Free	<input type="checkbox"/> % Free	<input type="checkbox"/> % Free
<input type="checkbox"/> % Used	<input type="checkbox"/> % Used	<input checked="" type="checkbox"/> % Used	<input type="checkbox"/> % Used	<input type="checkbox"/> % Used
	<input type="checkbox"/> Actual Free	<input checked="" type="checkbox"/> Actual Free	<input type="checkbox"/> Actual Free	<input checked="" type="checkbox"/> Actual Free
	<input type="checkbox"/> Actual Used	<input type="checkbox"/> Actual Used	<input type="checkbox"/> Actual Used	<input checked="" type="checkbox"/> Actual Used

Below the columns, there are two buttons: "OK" and "Cancel".

### What to save: Averages

Brings up the Averages resource data fields dialog box where you may choose which fields to actually log to disk.



The dialog box is titled "Log Instants" and contains a section titled "Select data to log to disk, below:". This section is organized into five columns, each representing a different system resource: USER, "Memory", RAM, Virtual Memory, and DOS. Each column lists several data fields with checkboxes next to them. The "USER" column has checkboxes for "% Free" (checked), "% Used", and "% Free" (unchecked). The "Memory" column has checkboxes for "% Free", "% Used", "Actual Free", and "Actual Used". The "RAM" column has checkboxes for "% Free", "% Used" (checked), "Actual Free" (checked), and "Actual Used". The "Virtual Memory" column has checkboxes for "% Free", "% Used", "Actual Free", "Actual Used", and "File Size". The "DOS" column has checkboxes for "% Free", "% Used", "Actual Free" (checked), and "Actual Used" (checked). At the bottom right of the dialog box are two buttons: "OK" and "Cancel".

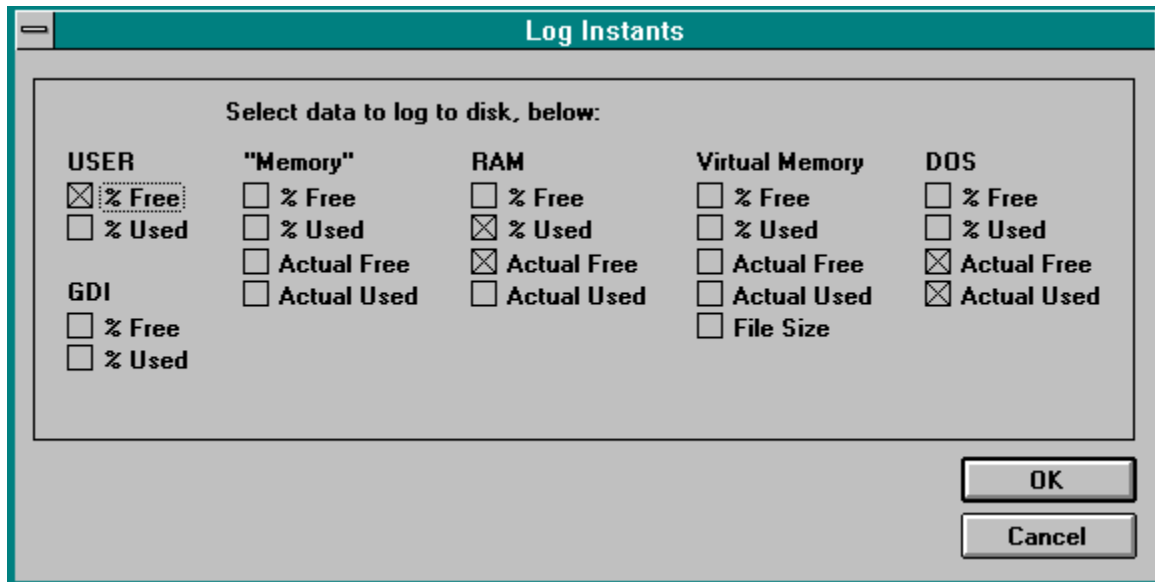
USER	"Memory"	RAM	Virtual Memory	DOS
<input checked="" type="checkbox"/> % Free	<input type="checkbox"/> % Free	<input type="checkbox"/> % Free	<input type="checkbox"/> % Free	<input type="checkbox"/> % Free
<input type="checkbox"/> % Used	<input type="checkbox"/> % Used	<input checked="" type="checkbox"/> % Used	<input type="checkbox"/> % Used	<input type="checkbox"/> % Used
	<input type="checkbox"/> Actual Free	<input checked="" type="checkbox"/> Actual Free	<input type="checkbox"/> Actual Free	<input checked="" type="checkbox"/> Actual Free
	<input type="checkbox"/> Actual Used	<input type="checkbox"/> Actual Used	<input type="checkbox"/> Actual Used	<input checked="" type="checkbox"/> Actual Used
			<input type="checkbox"/> File Size	

OK  
Cancel



### What to save: Minimums

Brings up the Minimums resource data fields dialog box where you may choose which fields to actually log to disk.



The dialog box is titled "Log Instants" and contains a section labeled "Select data to log to disk, below:". This section is organized into five columns, each representing a different system resource: USER, "Memory", RAM, Virtual Memory, and DOS. Each column lists specific data fields with checkboxes to select them for logging. The "USER" column includes "% Free" (checked), "% Used", and "GDI" (with "% Free" and "% Used" sub-options). The "Memory" column includes "% Free", "% Used", "Actual Free", and "Actual Used". The "RAM" column includes "% Free", "% Used" (checked), "Actual Free" (checked), and "Actual Used". The "Virtual Memory" column includes "% Free", "% Used", "Actual Free", "Actual Used", and "File Size". The "DOS" column includes "% Free", "% Used", "Actual Free" (checked), and "Actual Used" (checked). At the bottom right of the dialog are "OK" and "Cancel" buttons.

USER	"Memory"	RAM	Virtual Memory	DOS
<input checked="" type="checkbox"/> % Free	<input type="checkbox"/> % Free	<input type="checkbox"/> % Free	<input type="checkbox"/> % Free	<input type="checkbox"/> % Free
<input type="checkbox"/> % Used	<input type="checkbox"/> % Used	<input checked="" type="checkbox"/> % Used	<input type="checkbox"/> % Used	<input type="checkbox"/> % Used
	<input type="checkbox"/> Actual Free	<input checked="" type="checkbox"/> Actual Free	<input type="checkbox"/> Actual Free	<input checked="" type="checkbox"/> Actual Free
	<input type="checkbox"/> Actual Used	<input type="checkbox"/> Actual Used	<input type="checkbox"/> Actual Used	<input checked="" type="checkbox"/> Actual Used
<input type="checkbox"/> % Free			<input type="checkbox"/> File Size	
<input type="checkbox"/> % Used				

**Log data: OK**

Saves your changes (if any) to the program's INI file and immediately alters the operation of the program.

**Log data: Cancel**

Disregards any changes that you made in this dialog box.

## Choosing the optimal monitoring, updating, and logging rates

The following options in the [Log to disk](#) dialog box discuss optimal rates:

[Scan system every N milliseconds](#)

[Update display after N consecutive scans](#)

[Log to disk after N consecutive scans](#)

## **What you want is exactly what you see -customizing your views**

The [Views command \(Option menu\)](#) dialog box discuss viewing exactly what and only what you want to monitor.

## How to use SuperMonitor's multiple document capabilities to determine exactly how much resources a specific program uses

Since **SuperMonitor** monitors your overall system resources at any moment in time, you might think that its impossible to determine the exact resource requirements of a specific program. Well, you're wrong!

By opening multiple documents and starting multiple monitoring sessions, you can precisely determine any program's resource requirements by performing the following steps:

1. Open a new document and for the sake of this example, call it BaseDoc1.
2. Command BaseDoc1 to start monitoring.
3. Command BaseDoc1 to stop monitoring. This document's views now show baseline resource levels before running your program.
4. Open another new document and for the sake of this example, call it Doc2.
5. Command Doc2 to start monitoring.
6. Execute your program and use it for as long as you wish.
7. When you are ready to terminate your program, stop Doc2 from monitoring.
8. Exit your program.

The exact resources that your program required may be determined by subtracting Doc2 values from BaseDoc1 (for example, if BaseDoc1 had 75% GDI free, and Doc2 had 70% GDI free, then your program required  $75 - 70 = 5\%$  GDI). Cool!

## Windows 95 and Windows NT issues

Windows 95 resource usage more closely mirrors Windows NT than Windows 3.1 !

In Windows 3.1, your "Memory" resource was defined as an approximate summation of the available memory in RAM and in virtual memory (swap file). Per Microsoft, in Windows 95 and NT, the "Memory" resource is now the amount of memory available in the global heap. Don't expect to see the same "Memory" free values in Windows 95 and NT as you often saw in Windows 3.1 .

Windows 95 "grabs" a significant amount of your RAM for caching of its components. It is typical for **SuperMonitor** to report as little as 10-30% of RAM free (on a 16 MByte system) because of Windows 95's caching. Windows 95 will release some of its cached components and thus free up some RAM when an application program needs more RAM. When this happens, you will see **SuperMonitor's** percentage RAM free increase!

In Windows 3.1, the virtual memory (swap file) was fixed in size. In Windows 95, you can either choose to have a fixed size swap file or let Windows 95/NT manage your swap file. In Windows NT, it is always variable. If you let Windows 95 manage your swap file, the size of your swap file is equal to the amount of free disk space on your hard disk. Windows 95/NT will shrink the swap file when another application needs more disk space. If you are using dynamic swap file sizing, and are logging your swap file usage percentages rather than the actual bytes used to disk, you might want to include the size of the swap file in your log file so that your percentages can reference the size of the swap file at the time of the data sampling.

## **Supported Windows operating systems**

**SuperMonitor** accurately reports resource usage under Windows 3.1, Windows For Workgroups 3.11, Windows 95 and Windows NT. **SuperMonitor** automatically detects which Windows operating system it is executing under and adjusts its resource monitoring algorithms to always give you the most accurate answers.



## Icon issues and the /i command line option

Since Windows 3.1n supports dynamically changing icons for its minimized applications, **SuperMonitor** (when executed under Windows 3.1) automatically uses dynamic icons that contain vertical resource usage bars.

Since Windows 95 does not support dynamically changing icons for its minimized applications, **SuperMonitor** (when executed under Windows 95) automatically uses static icons.

Since Windows NT will soon be receiving the same user interface look and feel of Windows 95, **SuperMonitor** automatically uses static icons.

You may force **SuperMonitor** to use dynamic icons by appending a **/i+** to the end of **SuperMonitor's** command line. E.g. **SuperMonitor.exe /i+**

You may force **SuperMonitor** to use static icons by appending a **/i-** to the end of **SuperMonitor's** command line. E.g. **SuperMonitor.exe /i-**

This command line option is useful for Windows NT users who want dynamic icons and realize that once Windows NT gets the new Windows 95 GUI, they'll have to forgo dynamic icons and remove the **/i+** option from their **SuperMonitor** command line.

## How SuperMonitor computes resource levels

**SuperMonitor** uses different algorithms to compute resources when executed under different operating systems...

### Under Windows 3.1n:

**USER & GDI** data is calculated with GetFreeSystemResources() and ToolHelp SystemHeapInfo() functions.

**Memory** data is calculated by examining the global heap.

**RAM** and **Virtual** data is calculated with the MemManInfo() function and a lot of special knowledge.

**DOS** data is calculated by examining the global heap.

### Under Windows 95 and NT:

**USER & GDI** data is calculated with GetFreeSystemResources() and ToolHelp SystemHeapInfo() functions.

**Memory** data is calculated by examining the global heap.

**RAM** and **Virtual** data is calculated with Win32's GlobalMemoryStatus and even more special knowledge.

**DOS** data is calculated by examining the global heap.

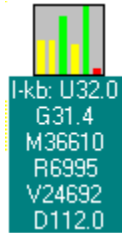
## Multi-line Title command (Options menu, System menu)

Checking this option makes any iconic view or app's title span multiple lines. Usually when you have **SuperMonitor** staying on top of your desktop, you'll want multiple line iconic titles to minimize **SuperMonitor's** icon title length so that it doesn't hide too much of the underlying application's screen.

If this option is not checked, then the title will appear on one line. Under Windows 95, this option is disabled. Windows 95 does not support multi-lined iconic titles.

See [KBytes in Title](#) for more information.

Here is an example of a multi-lined titled icon.



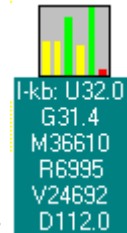
Here is an example of a single-lined titled icon.



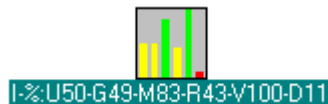
## KBytes in Title command (Options menu, System menu)

Checking this option causes **SuperMonitor** to display icons with resource free levels in units of KBytes. If this option is not checked, **SuperMonitor** displays icons with resource free levels in units of percentages.

See [Multi-line Title](#) for more information.



Here is an example of a KBytes icon (that is also multi-lined):



Here is an example of a percentage icon:

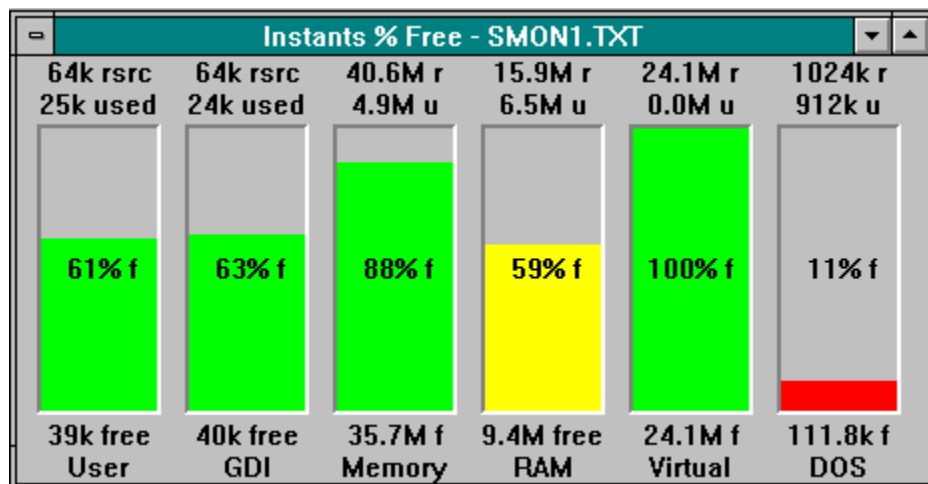
## How to understand what SuperMonitor is displaying on your screen

[What you see when SuperMonitor is windowed](#)

[What you see when SuperMonitor or the active view is iconic](#)

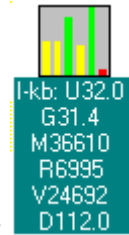
## What you see when SuperMonitor is windowed

Below is a typical windowed screen. Move your mouse over the element that you have interest in for more help...



## What you see when SuperMonitor or the active view is iconic

When **SuperMonitor** is iconic or its view is iconic, the resource levels are shown in miniature, with the amounts in the title of the icon. Resource levels may be displayed in percentages free or KBytes free. See [Multi-line Title](#) and [KBytes in Title](#) for more information.



Here is an example of a KBytes icon (that is also multi-lined):



Here is an example of a percentage icon:

**Resource size**

This is the size of the resource. For example, User and GDI resources are 64 kbytes in size. Memory, RAM and Virtual resources are system dependant. The DOS resource is 1024 kbytes in size (640k low memory plus 384k upper memory).



**Amount of resource in use**

This is the amount of the resource that is in use (not free) by programs that are already executing.

Depending on the resource in question, this number may be in Kbytes or Mbytes.

**Amount of resource that is free (not in use)**

This is the amount of the resource that is free (not in use) and available for use by programs.

Depending on the resource in question, this number may be in Kbytes or Mbytes.

**Name of the resource in question**

This is the name of the resource that the information above it relates to.

**Percentage of the resource that is free (not in use)**

This is the percentage of the resource that is free. It is derived from the amount of the resource that is free and the size of the resource.

**Type of window**

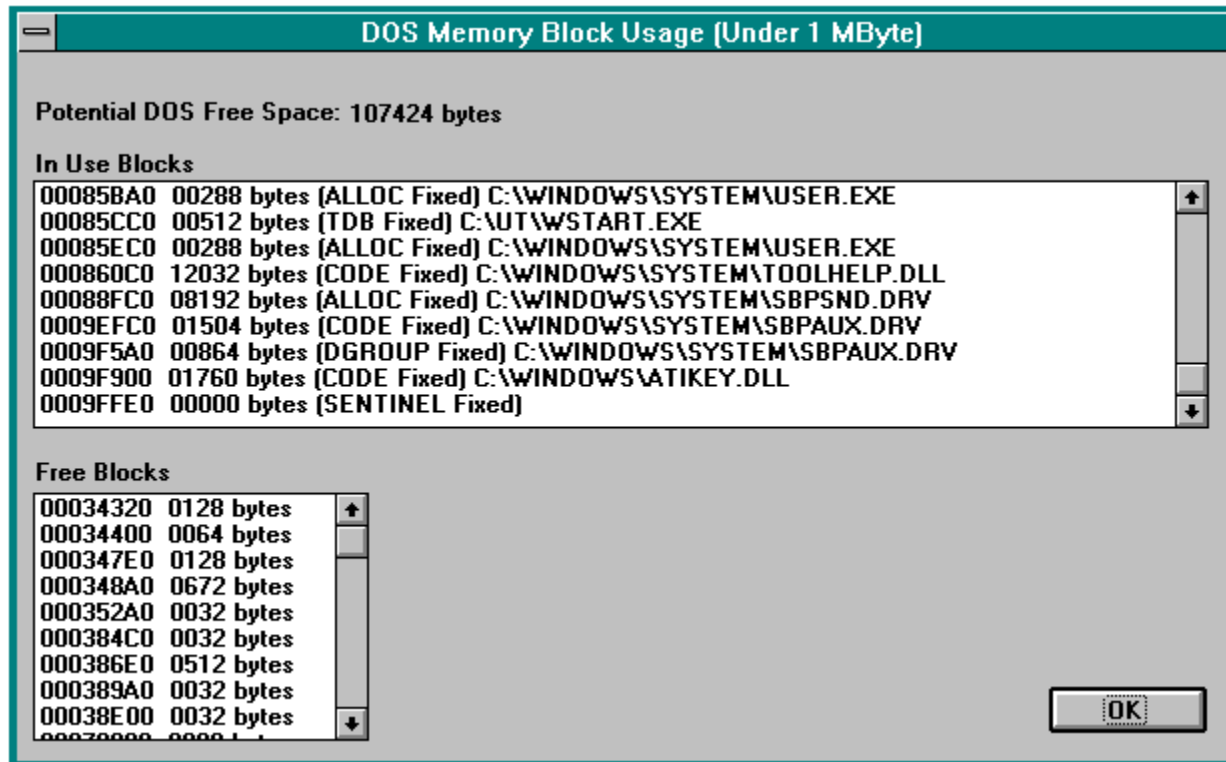
This is the type of window that you are viewing. It may be an Instants window for instantaneous data, an Averages window for averaged data, or a Minimums window for minimum free (most in use) data.

**Document name**

This is the name of your document. When logging to disk, this name is also the name of your disk output file.

## DOS 1st Meg

Displays a dialog box similar to the box below that outlines which programs are using what DOS memory blocks., which DOS blocks are free, and total DOS free space.



## **DOS Total Free Space**

This is the amount of DOS memory (0-1024 KB) that is available for use by Windows.

Each Windows program requires 512 bytes of DOS memory for its Task database (TDB) which includes 256 bytes for its program segment prefix (PSP). If there is not at least 512 bytes of DOS memory free, the Windows program will not be able to execute and Windows will present to you a dialog box stating that there is not enough memory to execute your application.

For an excellent discussion on DOS memory and Windows use of it, refer to the October 1993 issue of Microsoft Systems Journal.



### **Free Blocks**

This list box displays free DOS memory blocks that are available for use by any Windows or DOS-box program.

## **In Use Blocks**

This list box displays in-use DOS memory blocks. Since very few programs have a legitimate need for DOS memory, usually, if you find a program in this list box using a large amount of DOS memory (more than a couple of KBytes), you can assume that the program or DLL was poorly written and you should consider contacting the vendor that created this program and demand that they fix their program for it is improperly using DOS memory.

For an excellent discussion on how programs can accidentally use DOS memory when they don't really need to use it, refer to the October 1993 issue of Microsoft Systems Journal.

If there is not at least 512 bytes of DOS memory free, a Windows program that you are trying to execute, will not be able to execute and Windows will present to you a dialog box stating that there is not enough memory to execute your application.

