

## **Microsoft System Information**

Microsoft System Information is a basic tool for gathering system configuration information. It is intended primarily to help Product Support Services (PSS) engineers determine information that could indicate problems with your system.

### **File menu commands**

The File menu offers the following commands.

<u>S</u> ave	Saves a listing containing the information for each category.
<u>P</u> rint	Prints a listing containing the information for each category.
<u>R</u> un	Invokes a dialog box for specifying a program to run.
<u>E</u> xit	Quits Microsoft System Information.

### **Edit menu commands**

The Edit menu offers the following commands.

<u>C</u> opy	Copies data from the list view to the Clipboard.
<u>S</u> elect All	Selects all of the items in the list.

### **View menu commands**

The View menu offers the following commands.

<u>T</u> oolbar	Shows or hides the toolbar.
<u>S</u> tatus Bar	Shows or hides the status bar.
<u>R</u> efresh	Refreshes the list of items for the current category.
<u>A</u> lways on Top	Toggles the option to have Microsoft System Information appear in front of all other windows.

### **Help menu commands**

The Help menu offers the following commands, which provide you assistance with this program.

<u>H</u> elp Topics	Opens Help.
<u>A</u> bout	Displays program information, copyright and version number for Microsoft System Information.

### **Save command (File menu)**

Use this command to save a listing of all the information for the categories.

**Run command (File menu)**

Use this command to start another program. This will display a dialog box containing a list of common utilities to choose from. You can also type the file specification, or search for the file by clicking the Browse button.

**Exit command (File menu)**

Use this command to quit this program. You can also use the Close command on the Control menu.

**Copy command (Edit menu)**

Use this command to copy selected data onto the Clipboard.

Copying data to the Clipboard replaces any data previously stored there.

**Toolbar command (View menu)**

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

**Toolbar**

The toolbar is displayed across the top of the window, below the menu bar. The toolbar provides quick mouse access to many commands and tools used in Microsoft System Information.

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 performed by the selected command or toolbar button. A check mark appears next to the command when the status bar is displayed.



## **Status Bar**

The status bar appears at the bottom of the main window. To display or hide the status bar, use the Status Bar command on the View menu.

This area describes actions of commands as you use the arrow keys to navigate through menus and, similarly, the actions of toolbar buttons as you depress them, before releasing them. If after viewing the description of a toolbar button you decide not to run the command, move the pointer off the button and then release it.

**Help Topics command (Help menu)**

Use this command to display Help. From the opening window (Contents or Index), you can jump to step-by-step instructions for using Microsoft System Information and various types of reference information.

When a Help topic is open, you can click the Contents or Index button to return to the Contents or Index.

**About command (Help menu)**

Use this command to display program information, copyright, and version number of your copy of Microsoft System Information.

**Context Help command**

Use the Context Help command to obtain Help on some portion of Microsoft System Information. When you choose the Context Help button on the toolbar, the mouse pointer changes to an arrow and question mark. Then click the location in the window, such as another toolbar button, that you want information about.

**No Help Available**

No Help is available for this area of the window.

**No Help Available**

No Help is available for this message box.

**Print command (File menu)**

Use this command to print a listing of all the information for the categories.

**Note**

If your system is configured for VoiceView modem support, you have the option of sending the information over the modem.

**Select All command (Edit menu)**

Use this command to select all of the items displayed in the list view.



**Refresh command (View menu)**

Use this command to refresh the list of items for the current category. For example, if the System category is shown, you can use this command to update some of the statistics, such as available memory.

**Cancel Update command (View menu)**

Use this command to interrupt Microsoft System Information in the middle of gathering information for the selected category. The information displayed is incomplete if the data gathering process is interrupted. Select the Refresh command from the view menu or press F5 to show all the data.

**Always on Top command (View menu)**

Use this command to make the Microsoft System Information window always remain visible, even if another window has the focus.

## **System Info**

Shows information about your computer that is useful when attempting to troubleshoot system problems.

To view information about a specific category, select the category in the left pane. You can sort a column by clicking the column's heading.

You can copy the data from selected rows in the right-hand pane. Click in the first column of the row(s) you want to copy, click the Edit menu, and then click Copy (or press CTRL+C). The data is tab delimited, so you can easily paste it into Microsoft Excel worksheets.

**System**

Lists hardware and system software information.

### **Items for System Category**

**Operating system:** The name of the system software on your computer

**Windows version:** The version of Windows that is running on your computer

**Processor:** The type of CPU (central processing unit)

**Total physical memory:** The total amount of installed RAM (random access memory)

**Available physical memory:** The amount of free physical RAM (in kilobytes)

**USER memory available:** The percent of free resources in the Windows User component

**GDI memory available:** The percent of free resources in the Windows Graphic Design Interface (GDI)

**Swap file size:** The size of the system file used to implement virtual memory.

**Swap file usage:** The percentage of the Windows swap file that is in use

**Swap file setting:** The swap-file configuration (for example, dynamic vs. fixed limit)

**Available space on drive <x:>:** The free disk space (in kilobytes) on a specific drive

**Windows directory:** The fully qualified path to the main Windows directory

**TEMP directory:** The fully qualified path to the system's temporary directory

**Virtual Memory**

A memory management technique to allow more programs to be active at the same time. Disk space is used to extend the amount of logical memory that programs can access. When a new program is run, infrequently used components or data of other programs can be moved out of physical memory to a special swap file on disk.

**Kilobyte (K)**

A measurement of memory or disk space. One kilobyte (K) equals 1024 bytes or characters.



**Printing**

Displays information about installed printer drivers.

### **Items for Printing Category**

**Default printer:** The printer that all Windows-based print jobs go to unless otherwise specified

**Using print manager spooling?:** Indicates whether the printer output is buffered through the printer manager instead of directly going to the printer port

**Unidriver (UNIDRV.DLL):** File information for universal printer driver

**Gen drv (GENDRV.DLL):** File information for generic library driver

**<specific printer>:** Name and file information for each printer that has been installed

## **System DLL's**

Lists the file name, version number, date stamp, file size, and build number of each DLL in the Windows System directory (for example, C:\Windows\System) and determines whether it's loaded in memory.

### **Items for System DLL's category**

Each item represents a Dynamic Link Library file in the Windows System directory (typically, C:\Windows\System or C:\Winnt\System32). The columns displayed are as follows:

**Files:** The DLL's filename

**Version:** The numeric version code (for example, 4.0.0.500).  
Often given as <major>.<minor>.<revision>.<build>.

**Date:** The date that the DLL was produced ("build" date)

**Size:** Size of the file in bytes

**Loaded:** Indicates whether the DLL is active (loaded in memory)

**Build No.:** Version code including build identification

**Font**

Shows information about some third party font engines.

## **Font Substitutions**

Displays the font substitutions for common fonts that are not installed.

## **Font Managers**

Lists some third party programs that control font size, format, design, and layout.

**Proofing**

Displays information about your thesaurus, spelling, and grammar checkers.



**Registry Settings**

Displays proofing tool information found in the Windows registry.

**INI Settings**

Displays proofing tool information found in the Win.ini file.

**File Info**

Lists the file name, version number, file date, file size, build number, and fully qualified path of each file associated with your proofing tools. This category also determines whether the file is currently loaded in memory.

**Graphic Filters**

Lists data about your graphics import and export capability.

## **Registry Settings**

Displays graphics filter information found in the Windows registry.

**INI Settings**

Displays graphics filter information found in the Win.ini file.

**File Info**

Lists the file name, version number, file date, file size, build number, and fully qualified path of each file associated with your graphics filters. This category also determines whether the file is currently loaded in memory.

## **Text Converters**

Lists data about your text import and export capability.



## **Registry Settings**

Displays text converter information found in the Windows registry.

## **INI Settings**

Displays text converter information found in the Win.ini file.

**File Info**

Lists the file name, version number, file date, file size, build number, and fully qualified path of each file associated with your text converters. This category also determines whether the file is currently loaded in memory.

**Display**

Shows the file name, version date, and size of the current video driver.

**Items for Display Category**

**<Optional Driver Description>**

**<Driver Filename>**: Version, date, and size in bytes

## **Applications Running**

Displays the module name, process ID number, and bitness of all active programs (.exe files).

### **Items for Applications Running Category**

Each item represents a Windows-based program that is active. The columns displayed are as follows:

**Module Name:** The application's file name, including its directory and path.

**Process ID:** The identifier that the operating system uses for the program

**16-bit:** Usually indicates whether the program was designed for previous versions of Windows.

#### **Note**

Some new utilities are 16-bit for compatibility reasons.

**OLE Registration**

Lists all the OLE server entries in the Windows registry and Win.ini file.



**Registry Settings**

Lists all the OLE server entries from the registry.

## **INI Settings**

Lists all the OLE server entries from the Win.ini file.

**Active Modules**

Displays the module name, version number, file date, file size, bitness, and fully qualified path to all modules (drivers, fonts, dynamic link libraries, and executable files) in memory.

### **Items for Active Modules category**

Each item represents an application extension or a system resource that is currently loaded in memory. The columns displayed are as follows:

**Module Name:** The module's file name

**Version:** The numeric version code (for example, 3.51.0.1057)  
Often given as <major>.<minor>.<revision>.<build>.

**Date:** The date that the DLL was produced ("build" date)

**Size:** Size of the file in bytes

**16-bit:** Usually indicates whether the module was designed for previous versions of Windows

#### **Note**

Some new module are 16-bit for compatibility reasons.

**Path:** The file name, including the full specification of its location

### **Custom DLLs**

Lists the file name, version number, date stamp, file size, and build number of each DLL in a user-specified directory and determines whether it's loaded in memory. This category is activated by the /C command-line option, for example:

`msinfo32 /c [My DLL's] c:\mydir` (Be sure to include the square brackets.)

**CD-ROM**

Displays a wide range of information about your CD-ROM drive(s). In addition to showing the drive and volume identification, this includes the results of a few performance tests. The tests estimate sustained data transfer rate with the percentage of CPU utilization under a simulated workload and check for data transfer integrity.

**Disclaimer regarding CD-ROM tests.**

The tests incorporated into the CD-ROM category are not meant to convey definitive performance results. They are included to provide Microsoft PSS with a rough indication of drive performance, in case this might be causing problems.

### **Items for CD ROM Category**

Each item represents a local CD-ROM drive on your system. The numerous columns displayed are as follows:

**Drive:** The logical drive letter assigned to the drive

**Volume:** The identifier for the CD currently in the drive

**Total Space:** The disk space, in kilobytes, allocated on the current CD

**Transfer File:** The file used for testing transfer rate

**Transfer Size:** Size of the transfer file in bytes

**Data Transfer Rate:** Estimated rate for sustained data transfer

**CPU Util @ 300KB/s:** Estimated drive/driver CPU utilization when accessing data at 300 kilobytes per second (the MPC II standard) under a simulated workload

**Integrity File:** File used for checking drive data transfer integrity

**Integrity Size:** Size of the integrity file in bytes

**Data Transfer Integrity:** Indicates whether the test file was read successfully

**Device:** Operating system hardware identifier for the CD-ROM drive

**Description:** Manufacturer-specific description, usually indicating model number



**Audio**

Displays information about multimedia drivers for audio playback and recording. There are three general categories of driver shown: low-level drivers designed for specific sound cards; compressor/decompressor (CODEC) drivers handled by the system Audio Compression Manager (ACM); and high-level drivers using the system Media Control Interface (MCI).

## Items for Audio Category

Each item is for a wave driver on your system. Note that the driver usually has been assigned a unique subcategory in the category tree view. This main category shows all the drivers to facilitate comparisons. The following information is shown for each driver:

**Key:** Unique identifier for the driver

**Description:** Text description for the driver, supplied by the driver vendor

**Group:** The type of driver, such as wave, MIDI, MCI, or ACM

**Driver:** File for the driver executable

**Status:** Group-specific status code, which might indicate if the driver is disabled

**Version:** The numeric version code (for example, 2.5.0811) for the driver

**Date:** The date that the DLL was produced ("build" date)

**Size:** Size of the file in bytes

**Loaded:** Indicates whether the driver is active (loaded in memory)

**Tested OK?:** Indicates whether a test of the driver has been verified by the user

See the [Test command](#) for testing requirements.

**Video**

Displays information about multimedia drivers for video playback. There are two general categories of driver shown: compressor/decompressor (CODEC) drivers handled by the system Installable Compression Manager (ICM); and high-level drivers using the system Media Control Interface (MCI). Note that the low-level drivers are part of the display adapter.

## Items for Video Category

Each item is for a video driver on your system. Note that the driver usually has been assigned a unique subcategory in the category tree view. This main category shows all the drivers to facilitate comparisons. The following information is shown for each driver:

**Key:** Unique identifier for the driver

**Description:** Text description for the driver, supplied by the driver vendor

**Group:** The type of driver, such as ICM or MCI

**Driver:** File for the driver executable

**Status:** Group-specific status code, which might indicate if the driver is disabled

**Version:** The numeric version code (for example, 2.5.0811) for the driver

**Date:** The date that the DLL was produced ("build" date)

**Size:** Size of the file in bytes

**Loaded:** Indicates whether the driver is active (loaded in memory)

**Tested OK?:** Indicates whether a test of the driver has been verified by the user

See the [Test command](#) for testing requirements.

**Test Media Driver command (Test menu)**

Use this command to test the selected multimedia type with a media sample specified in the program profile. The sample must be appropriate for the given driver.

**Note**

The test command relies heavily on registry profiles for client programs (for example, Microsoft Encarta 96). These profiles indicate the samples appropriate for testing the drivers required by the program (usually on the client program's CD). Be aware that without these profiles and supplied samples, most drivers will not be testable unless you have alternative samples of the appropriate type.

**Cancel Media Test command (Test menu)**

Use this command to cancel the ongoing multimedia test, bypassing the confirmation dialog box.

If you just want to proceed to the confirmation, stop the media playback, and close the dialog box.

**Locate Media Sample command (Test menu)**

Use this command to locate an alternative sample to test the current driver. This displays a standard file browsing dialog box. Afterwards, media testing will be initiated with the chosen file.

The chosen sample must represent an appropriate test or an error will be displayed.

**Note**

Some driver types are rarely used. Thus, you might not have a suitable sample available.

**Configure Multimedia command (Test menu)**

Use this command to open the Multimedia properties in Control Panel. Using this dialog box, you can configure current multimedia drivers.



**Appropriate Samples.**

To be an appropriate sample, the sample must be of a type specific to the driver. For CODECs, a further requirement is that the sample has been compressed in the driver's main format. For example, to test Microsoft's ADPCM audio CODEC, a wave file (.wav extension) must be available which has been compressed using the MS-ADPCM format. Just any wave file won't suffice because many are encoded using "vanilla" PCM.

**Pulse Code Modulation (PCM).**

Pulse Code Modulation (PCM) is a simple scheme for encoding analog wave data in digital format. For 8-bit wave files, there are 256 unique levels for representing the analog amplitude. An extension to this, called Adaptive Differential Pulse Code Modulation (ADPCM), compresses the samples by encoding the difference in the PCM values for consecutive samples. *Microsoft ADPCM* and *IMA ADPCM* are two of many variations on the ADPCM theme.

**Compressor/Decompressor (CODEC)**

A compressor/decompressor driver, or CODEC, compresses multimedia data when recording to a disk file and later decompresses the data during playback. Multimedia titles use compression to conserve disk space. The savings can be significant, because multimedia files usually compress better than typical data files, given their regularity. Even on compact discs, compression is important, considering the large number of files that multimedia programs require.

Many sound cards and video adapters don't support compressed samples, and those that do usually have a limited range. Thus, CODECs are used as intermediaries between the low-level drivers for the adapter card and the high-level drivers normally used for multimedia playback.

## **Compression**

The process of transforming data into a compact form (suitable for long-term storage). This generally involves analyzing data for regularities and substituting more space-efficient codes (for example, '1000000001' => '10\*91', where \* precedes an occurrence count).

**Bitness**

Refers to the distinction between software written for 16 bit operating systems and software written for 32 bit operating systems. Some of the data gathered by Microsoft System Information may contain a column labeled 'bit' that will contain 'Yes' if that item is determined to be 16 bit or blank if the item is 32 bit or not determined.

## **Available Physical Memory**

This is the amount of free physical memory reported by Windows. It is not uncommon for this number to be very small or even 0 KB and does not necessarily indicate a problem. Windows system processes may be using more of this memory simply because it is not being used by other processes or applications. Windows defaults to using your hard disk as memory for applications and processes that are inactive and can allocate more memory from the hard disk when needed as long as there is some free space on the disk. If you are having memory problems check the Swap file setting, Swap file usage and Available space on drive C: settings under the System category.

**To copy data**

Activate the right-hand pane, click in the first column of the row(s) you want to copy, click the Edit menu, and then click Copy (or press CTRL+C).

**To sort data**

Activate the right-hand pane, and then click the heading of the column you want to sort. A second click toggles the sort order.



**To save a report**

- ▶ On the File menu, click Save (or press CTRL+ S).

## **To print a report**

- ▶ On the File menu, click Print (or press CTRL+ P).

## **To show available space on network drives**

- 1 Select the System category while holding the SHIFT key down. If you are already in this category, choose the Refresh command while holding the SHIFT key down.
- 2 To enable the display of network drives throughout the session, start Microsoft System Information with the /N command-line switch:

```
MSInfo32 /n
```

### **Note**

By default, network drive space is not shown, to avoid network delays.

### **To test an audio driver**

- 1 Select the Audio category to view installed audio drivers.
- 2 From the list of installed drivers, click the driver you want to test. If there is a valid default sample to play, the Test button will be available.
- 3 If the Test button is not available, you need to locate an alternative sample in order to test the driver.  
If the Test button is available, click it to play the sample. If you hear the sample, the driver is configured correctly. If you do not hear the sample, check the volume setting for your speaker. Make sure your speakers are not set to mute or to a low volume setting.
- 4 If the volume settings are correct, you might need to configure the driver. Click Configure to display a dialog box for configuring the driver.  
If you do not know how to configure the driver, contact the manufacturer of your sound card or contact the technical support of Windows or your computer.

## **To locate an alternative sample**

- 1 If you need or want a different sample, click Locate to display a Browse dialog box.
- 2 Once you find an alternative file, click the file, and then click Open.

If the sample is of the correct format, the sample will play. If the sample is not correct, an error message appears, instructing you to locate another file.

## **To configure an audio driver**

1 To configure an Audio driver, click the installed driver from the Audio category, and then click Configure. This displays the Multimedia properties in Control Panel (if you are running Windows 95) or the Drivers dialog box or a mapper dialog box (if you are running Windows NT).

2 In Windows 95, select the driver you need to configure, and then click Properties.

Make sure the device is selected to be used by Windows. If the Settings button is available, click it to check the other settings for the device. If the device is a CODEC, changing the priority of the CODEC might enable the device work properly.

If you do not know how to configure the driver, contact the manufacturer of your sound card or contact the technical support of Windows or your computer.

In Windows NT, click Setup. If there is an auto-configure button, click it to allow the driver to reset its settings.

## **To copy specific category data**

- 1 Select the specific category you want to copy the information from.
- 2 On the Edit menu, click Copy. This copies all the information that appears for that category to the Clipboard so you can paste it into a text editor.

