

## *Chapter 5*

### **Software**

This notebook comes pre-loaded with application software and system utilities. This chapter discusses some of these applications and how to make use of them.

## 5.1 System Software

The notebook comes preloaded with the following software<sup>1</sup>:

- Windows 95 or other operating systems
- **System utilities and applications**
  - Suspend-to-disk utility (Sleep Manager)
  - Touchpad driver
  - Display driver
  - Audio driver
  - Modem driver and application<sup>2</sup>
  - System core logic driver
  - File-transfer utility
  - PC Card slot driver and application
  - Other application software

The following sections discuss the software and how they work. For most of the software, make use of the online help provided by the software.

### Accessing the Applications

To access most of the software applications, click on the Start button and select the application folder. Then click on the application icon to run the selected application.

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<sup>1</sup> The pre-loaded software may differ.

<sup>2</sup> The modem driver and software are optimized for use only with the internal modem, and may not function properly with a different modem. For PCMCIA modems, use the software that came with your PC card modem. This driver is only preloaded on notebooks for the U.S. market.

## 5.2 Sleep Manager

Notebooks usually feature built-in power-saving functions. In addition to the normal standby mode for power-saving, our notebooks are also capable of a power management feature called 0-volt suspend to hard disk. When a suspend event occurs, this built-in function saves all the system's current status onto your hard disk in the form of a file. The system then shuts off the power. When the user resumes (e.g., opening the display), the system will restore the data from the hard disk and resume from where you left off upon leaving suspend mode.

Sleep Manager is a utility that reserves hard disk space needed to successfully perform the suspend-to-disk feature. The user can use this utility to create a contiguous area that resides on the hard disk. Once the reserved space is created, the notebook will be capable of the "0-Volt Suspend to Hard Disk" feature. User can also use this utility to remove the reserved space from the disk. In this case, the machine will not be able to enter 0-volt suspend mode.

Sleep Manager is functionally-connected with the Advanced Power Management (APM) system of Microsoft Windows. Sleep Manager uses many advanced APM functions. Sleep Manager is capable of auto-create and auto-recover features. If the system memory size was changed or the reserved space on the hard disk was corrupted, Sleep Manager will reallocate the hard disk space for you automatically.

### 5.2.1 Accessing the Sleep Manager

There are two ways to bring up the Sleep Manager:

- Taskbar. Double-click on the Sleep Manager status icon if enabled.
- Start menu
  1. Click on the Start button.
  2. Select Programs.
  3. Select 0V Suspend Utility.
  4. Select Sleep Manager.

The Sleep Manager displays below:

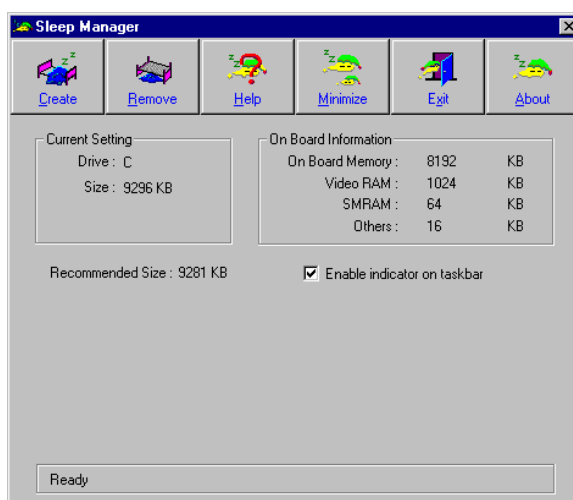


Table 5-1 Sleep Manager Window Items

Item	Description
Buttons	Click to access the Sleep Manager functions
Current Setting	Displays the drive and size of the current reserved space created by Sleep Manager.
On Board Information	<p>Displays the different areas of system memory and their respective values. These system resources need to be stored before the system can enter 0-volt suspend mode, so the system can resume to the previous state successfully.</p> <p>These system resources are the contents of:</p> <ul style="list-style-type: none"> <li>Onboard memory (DRAM or dynamic memory)</li> <li>Video RAM (VRAM or video memory)</li> <li>SMRAM (static memory)</li> <li>Others</li> </ul> <p>The total size of these system resources is displayed as the recommended size in the dialog box.</p>

Table 5-1 Sleep Manager Window Items (continued)

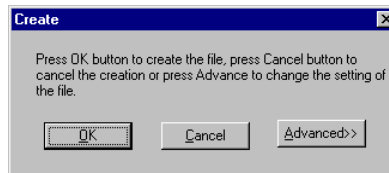
Item	Description
Recommended Size	Displays the minimum size of the contiguous space you need for the 0-volt suspend-to-disk feature. The actual size may be a little bit more due to file system alignment.
Enable Indicator on the Taskbar	When this checkbox is checked, the Sleep Manager status appears on the taskbar.  Double-click on the Sleep Manager status icon on the taskbar to bring up the main program, or simply rest your mouse pointer on the icon to display the current status.

## 5.2.2 Sleep Manager Functions

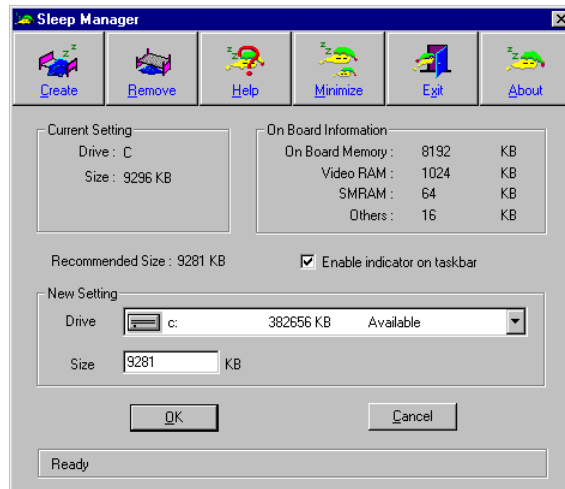
### Create

The main purpose of Sleep Manager is to find and reserve a contiguous area on the hard disk. The user can allocate the space themselves by using the 'Create' function on the Sleep Manager utility. Once a suspend event occurs, the system will enter the suspend mode. If the user did not create the space or the system DRAM size been changed, Sleep Manager is invoked and begins the process of creating a space for the system.

When you click on the **Create** button, a dialog box pops up:



You can select **OK** to automatically create space for the 0-volt suspend feature. Sleep Manager displays the recommend size based on onboard system information. You can also choose **Advance>>>** to manually set the space settings and size. The advanced screen shows.



Sleep Manager automatically checks the system configuration and displays the recommended size. The drive where the space will be created is defined by the system and will be the first available logical drive which has the requested contiguous free disk space on it. The recommended size is the minimum size needed to save the current system status.

If the program cannot find the required space on the hard disk during the space creation process, it shows a message box to inform the user.

#### **Not Enough Space for Allocation**

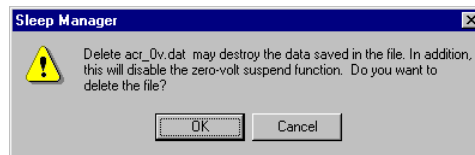
This is a common error message that appears when Sleep Manager is creating the space on the hard disk. There are several different reasons that may cause this error. One of the reasons is that the size of the free disk space on the specific drive is less than the required size. For example, if the onboard memory is 4MB and the VGA memory is 512KB, the total free disk space required will be 4608KB. If the total free disk space is less than 4608KB, the user has to delete some unnecessary files from the hard disk.

Another possible reason is that the hard disk has enough free space, but this free space exists as small fragments. The free disk space that Sleep Manager requires needs to be contiguous. To solve this problem, the user can use tools such as SpeedDisk (Norton Utilities) or Disk Defragmenter (Windows 95) to compact these free disk spaces. The user can then run Sleep Manager utility again to reserve the space.

Another factor that causes the error is when the user employs disk compression utilities. Sleep Manager can work with most compression software. However, Sleep Manager can only create the space on a host drive. A host drive stores original file information and will not be compressed. The free space on the host drive is usually very small, so the user should use the command provide by these compression software to enlarge the size of the host (uncompressed) drive for Sleep Manager.

### **Remove**

If you want to use or take back the reserved space, use the delete function of Sleep Manager by clicking on the Remove button. This deletion will result in the system not being able to enter 0-volt suspend mode. Instead, the system will only be able to enter standby mode.

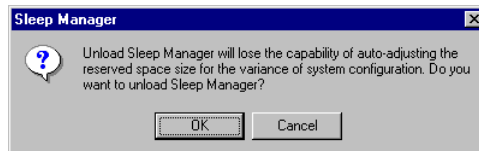


### **Minimize**

The user can minimize Sleep Manager by selecting the Minimize button. If the Enable indicator on taskbar is checked, Sleep Manager will then switch to the background by locating itself on the taskbar. You can pop-up the main program of Sleep Manager again by double-clicking whenever needed. If the Enable indicator on the taskbar is not checked, you have to select the Sleep Manager item from 0-Volt Suspend Utilities menu of Start button.

## Exit

The user can exit Sleep Manager by selecting the Exit button. Sleep Manager will then quit and disable the capability of auto-adjusting the reserved space size. Disconnecting this feature is NOT recommended.



### 5.2.3 Running Sleep Manager

Once Sleep Manager is installed on the disk, the system automatically loads this utility every time you start Windows 95. Sleep Manager resides in the background by appearing on the taskbar.



To change the settings of Sleep Manager, simply double-click on the Sleep Manager icon (🛌) on the taskbar, or run the Sleep Manager program from the 0-Volt Suspend to Disk Utilities in the Programs menu.

The Sleep Manager icon may or may not appear on the taskbar. A checkbox in the Sleep Manager main screen determines whether to enable or disable the icon on the taskbar. When Sleep Manager has not created the space to be used for 0-volt suspend or if APM is not enabled, the exclamation icon will appear. If both Sleep Manager has not created the space to be used for 0-volt suspend and APM is not enabled, the icon appears with a red crossed circle.



## 5.2.4 Sleep Manager Troubleshooting Tips

The following table lists the error messages you may receive with their corresponding solutions:

*Table 5-2 Sleep Manager Error Messages and Solutions*

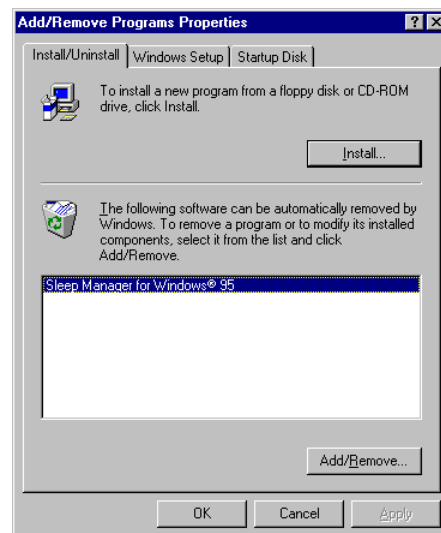
Error Message	Solution
BIOS not compliant with Sleep Manager.	Sleep Manager can only run on notebooks with a BIOS compatible with this computer.
This machine does not have a power management unit. You cannot run Sleep Manager without PMU.	Sleep Manager can only work on notebooks installed with a PMU.
The APM driver for Windows is not installed. Use Windows Setup to install the APM driver before you run Sleep Manager.	See section 3.2.3 for steps on how to enable APM on your notebook.
Requested disk space is not enough / The created file is not contiguous.	If the free space is actually greater than the requested free space but not contiguous, use the Windows 95 defragment utility Disk Defragmenter to compact the hard disk drive space. Then run Sleep Manager again. If you run Sleep Manager under a DoubleSpace environment, make sure the free space on the host drive is larger than the required size for Sleep Manager.
The [directory name] directory cannot be created. Enter another directory or try another drive.	The directory name that the user specified is not valid. Note that the user can create only one subdirectory at a time.
The software has not been successfully installed. You must run Setup again.	Sleep Manager is not completely installed. Try to install again.

## 5.2.5 Uninstalling Sleep Manager

Uninstalling Sleep Manager will delete all files and all system information for Sleep Manager, it loses the capability of auto-adjusting the reserved space size for the system configuration changes or modifications, though the 0-volt suspend feature still functions

To uninstall Sleep Manager from the Windows, follow these steps:

1. Quit the Sleep Manager if it is still running.
2. Click on the Start button and select the Control Panels folder from Settings.
3. Open the Add/Remove Programs Icon.



4. Select the Sleep Manager for Windows 95 and click on **Add/Remove....**
5. Follow the screen instructions to complete the uninstallation program.



*With Sleep Manager installed and the When Lid is Closed parameter in Setup set to [Suspend to Disk], the notebook enters suspend-to-disk mode when you close the display. The notebook also enters this mode when battery is critically low if the Suspend to Disk on Critical Battery parameter in Setup is set to [Enabled], regardless of the When Lid is Closed setting.*

*Opening the display returns the notebook to its previous state prior to entering suspend-to-disk mode.*

*Do not deactivate or uninstall Sleep Manager and do not remove or delete the zero-volt suspend/resume file. Otherwise, the function will not work — the notebook will only enter suspend-to-memory mode and not suspend-to-disk mode.*

## 5.3 Touchpad Driver

The touchpad works with most mouse drivers, but the touchpad driver supports special functions that work uniquely with the touchpad. The touchpad driver enhances the Mouse dialog box to include these special features.

### 5.3.1 Configuring the Touchpad

Follow these steps to configure the touchpad:

1. Click on the Start button, then select Settings...
2. Select Control Panel to display the Control Panel Window.
3. Double-click on the Mouse icon and select TouchPad.

You can configure different aspects of the touchpad. Refer to the online help for details.