Notebook PC

Driver/Utility Setup & Reference

Product Name:Notebook PC Support CDManual Revision:1.00 E697Release Date:Oct 2001

Table of Contents

Windows Quick Install Guide	4
Support CD for Windows ME & 2000 Standard Model Autorun Screen for Windows ME Autorun Screen for Windows ME	6 6
Drivers for Windows ME & 2000 Selected Models Autorun Screen for Windows 2000 Autorun Screen for Windows 2000	6 6
Support CD Contents	7
ATKACPI Utility Submenu Autorun Screen for Windows ME Autorun Screen for Windows 2000	9
Preparing Windows 2000	10
INTEL 830M INF Update (on selected models only) Installing the INTEL 830M INF Update for Windows ME & 2000	
INTEL 815EP INF Update (on standard models only) Installing the INTEL 815EP INF Update for Windows ME & 2000 Installing the ATKACPI Driver for Windows 2000	12
ATKACPI Driver Installing the ATKACPI Driver for Windows ME	
VGA Driver Installing the VGA Driver for Windows ME and 2000	
Audio Driver (ESS) (depending on model) Installing the Audio Driver for Windows ME (autorun)	
Audio Driver (SigmaTel) (depending on model) Installing the Audio Driver for Windows ME and 2000 (autorun) Audio Controls	21
Audio Driver (ESS/Intel-SigmaTel) (depending on model) Manually Installing the Audio Driver for Windows ME	
DirectX 8.0 Installing DirectX 8.0 for Windows ME & 2000	
Modem Driver (depending on model) Installing the Modem Driver for Windows ME & 2000	
Modem Driver	28

Table of Contents (Cont')

Manually Installing the Modem Driver for Windows ME Installing the Modem Driver for Windows 2000	
TouchPad Installing the TouchPad Driver for Windows ME	
Fast IR Driver Installing the Fast IR Driver for Windows ME & 2000 Setting the IR port for Windows ME	35
SpeedStep (on selected models only) Installing SpeedStep for Windows ME & 2000	
LAN Driver (Required) Installing the LAN Driver for Windows ME & 2000 Installing the LAN Driver for Windows ME (Manual Installation) Joining a Domain (Windows ME) Joining a Domain (Windows 2000) Viewing Your Network	40 40 42 43
PC-cillin 2000 Installing the PC-cillin 2000 Anti-Virus Software for Windows ME	45
Hotkey Utility (Under ATKACPI Utility) Installing the Hotkey Utility for Windows ME & 2000	
Windows Flash Utility (Under ATKACPI Utility) Installing the Windows Flash Utility for Windows ME & 2000	
ASUS PC Probe (Under ATKACPI Utility) Installing PC Probe for Windows ME & 2000	
Windows ME & 2000 Software Reference	55

Windows Quick Install Guide

- 1. Insert the Windows ME/2000 CD into the CD-ROM drive.
- 2. ATAPI CD-ROM Drive must be set to boot before the Hard Drive in BIOS setup (press **F2** during boot) or press **Esc** and select "ATAPI CD-ROM Drive" (use the up and down arrows and press Enter)

IMPORTANT: In most cases, you will be prompted to press a key to boot from the CD. Failure to do so will result in booting from your next boot device.

- 3. Press Enter to Setup Windows and press F8 after you have read and accepted the Licensing Agreement.
- 4. Windows ME: If you have an existing OS, you can choose to install Windows ME in another directory in order to preserve your existing OS. You will be given an OS choice each time you boot up your Notebook PC. If you currently use Windows 95/98 and wish to preserve your installed applications and settings, "upgrade" Windows by installing into your existing directory.

Windows 2000: If you have a previous OS, press **ESC** to install a fresh copy of Windows 2000. Follow the next screens to partition your hard drive. Use the "NTFS" file system for increased functionality. Installing in the same partition as an existing OS will give you a choice to format or leave intact. If you leave intact without formatting, you will be given an OS choice each time you boot up your Notebook PC.

5. After you install Windows, insert the Notebook PC support CD to install drivers and utilities.

Support CD for Windows ME & 2000

The Notebook PC you purchased may or may not be preloaded with an operating system. The support CD included with this Notebook PC provides all the necessary drivers and utilities in order for you to use your Notebook PC with Microsoft[®] Windows[®] 98/ME/2000 (referred to as "Windows" in this User's Manual).

This Notebook PC offers its customers the choice of a pre-installed operating system such as **Microsoft Windows ME** (**Millennium Edition**) or **Windows 2000**. The choices and languages will depend on the territory. The levels of hardware and software support may vary depending on the installed operating system. Operating systems not pre-installed on this Notebook PC may produce different results than the ones described in the provided user's manuals.

If your Notebook PC is not preloaded with any operating system, or you want to install another operating system other than the preloaded one, the following pages will give step-by-step installation procedures for typical system configurations under the Windows[®] operating system. For application usage, please see the online help provided with each of the applications after installation. The following is what you will see when you insert the support CD. If the autorun menu does not appear, double clicking the CD-ROM disc drive icon in "My Computer" (may be the (D:) drive or (E:) drive on hard drives with two partitions) or running SETUP.EXE (through Start menu "Run...") located in the root of the support CD, will bring up the autorun menu.

Selected Models

Autorun Screen for Windows ME

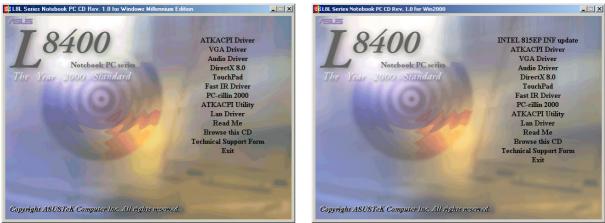


Standard Model Autorun Screen for Windows ME

Autorun Screen for Windows 2000



Autorun Screen for Windows 2000



Drivers for Windows ME & 2000

The following are descriptions of what each autorun menu item does when selected with the mouse. Due to ongoing improvements in the support CD, there may be some differences between this User's Manual and your support CD. The names in quotations are the actual driver names displayed in the System Properties of MS Windows. Windows cannot contain all the device drivers from every manufacturer, with every update; therefore the provided support CD will contain the best driver for your built-in devices and should be used in place of any Windows default drivers.

Support CD Contents

INTEL 830M INF Update (required) Intel Drivers (on selected models only)

This is a hardware dependent utility not available on standard models.

Shown under Windows "System devices." This installs drivers for the Notebook PC's Intel chipset.

INTEL 815EP INF Update (required) Intel Drivers (on standard models only) This is a hardware dependent utility not available on selected models.

Shown under Windows "System devices." This installs drivers for the Notebook PC's Intel chipset.

ATKACPI Driver (required) "ATK0100 ACPI UTILITY" Driver

Shown under Windows "**System devices**." This installs drivers for the Notebook PC's Advanced Configuration and Power Interface (ACPI) for power management functions.

VGA Driver (required) "ATI Mobility Radeon" Driver

Shown under Windows "**Display adapters**." This installs display drivers for your operating system in order to properly use the Notebook PC's built-in graphics controller and to provide optimal features. Once the display driver is installed, you can change your display's resolution and color through Display Properties.

Audio Driver "Intel AC'97 Audio Controller - SigmaTel Codec" Driver (depending on model) Standard models will use "ESS Allegro PCI Audio (WDM)".

Shown under Windows "**Sound, video and game controllers**." This installs audio drivers for your operating system in order to properly use the Notebook PC's built-in sound controller. All audio functions are configured through Windows and help can be located within Windows documentation or Windows help files.

DirectX 8.0 (recommended) (Integrated with Windows) Driver

Installs version 8 of the DirectX utility for modern multimedia software applications. Windows uses DirectX to enhance multimedia capabilities on your computer. DirectX provides better playback of different types of multimedia and manages 3-D graphics better than console computers. Most graphics intensive games require DirectX and will include it on their setup CD.

Modem Driver "WDM Modem Enumerator" and "HSP56 MR #2" (depending on model) Standard models will use "ESS WDM MODEM ENUMERATOR" and "ESS ES56CVM-PI Data Fax Voice Modem".

Shown under "**Modem**" and "**Modem Enumerator**". Installs the necessary driver in order for your operating system to have the correct files for the Notebook PC with built-in modem and drivers for integration with the internal audio.

TouchPad (recommended) "Synaptics PS/2 TouchPad" Driver

Shown under Windows "**Mice and other pointing devices**." Installs "**Synaptics**[®] **TouchPad**" utility. The Notebook PC already supports built-in or externally connected keyboard and PS/2 mouse devices. However, the provided device driver will provide enhancements and features to the TouchPad to increase the functionality of the TouchPad. For detailed information, see the Software Reference in the next section. To access help, right-click the TouchPad icon on the taskbar and select Help.

Fast IR Driver (required) "IrDA Fast Infrared Port" Setting

Shown under "Network adapters". Configures your Infrared Transceiver A to "VISHAY TFDS-6101E/ 6501E" so that your Infrared port can work properly.

SpeedStep (recommended) Utility (on selected models only)

This is a hardware dependent utility not available on standard models.

Installs **Intel[®] SpeedStepTM**. SpeedStepTM is a technology that provides adjustable processor speeds for maximum performance when connected to an external power and battery optimized performance when going mobile. The processors can dynamically switch clock frequency and voltage, depending on whether the computer is running on batteries or is plugged into AC power. These changes in frequency happen in only 1/2000th of a second — so fast, they are invisible to users, even if they occur in the middle of performance-intensive applications.

PC-cillin 2000 (optional) Utility

Installs **Trend's PC-cillin 2000**, a world-class anti-virus protection software for the new Internet era, to keep your PC virus-free. This very powerful anti-virus software is bundled with each Notebook PC to protect your investment. As software become more and more a part of our daily lives, measures have to be taken to protect them. You may skip this software if you have your own anti-virus software.

ATKACPI Utility (submenu) Link

Shows you a sub-menu with additional utilities. These utilities require that you first install the **ATKACPI** driver. See next page for descriptions of the utilities.

LAN Driver (required) "Realtek RTL8139(A)-based PCI Fast Ethernet Adapter" Driver

Located under Windows "**Network Adapters**." Installs the required LAN driver for the Notebook PC's built-in PCI Fast-Ethernet controller. Fast-Ethernet supports both 10 Base-T or 100 Base-TX networks at half or full duplex.

Read Me Text

Gives you notes concerning this support CD or the Notebook PC.

Browse this CD

Shows you the contents of this support CD using Windows Explorer.

Technical Support Form Text

Opens up a Technical Support Request Form so that you will understand what kind of information is needed if you run into problems and require technical assistance.

Exit

Closes the support CD autorun screen.

ATKACPI Utility Submenu



Autorun Screen for Windows 2000



Hotkey Utility (required) Utility

Installs **Hotkey utility**. Hotkey utility is a program designed to intercept key strokes so that key assignments can be made to run a program or script. This program cannot be used to change default keys or key combinations used by other software, operating systems, or by the Notebook PC's hardware.

Windows Flash Utility (recommended) Utility

Installs a BIOS update utility for Windows so that you can conveniently update your Notebook PC's BIOS without having to restart your Notebook PC in DOS mode.

ASUS PC Probe (optional) Utility

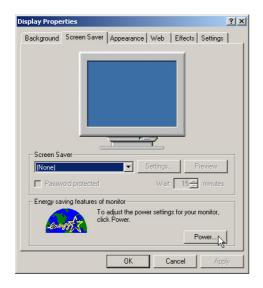
Installs **PC Probe** utility to monitor the Notebook PC's CPU temperature and other resources. This is an optional software to help you better manage your Notebook PC's resources.

Preparing Windows 2000

The following preparations will make it easier to install drivers in Windows 2000.

Disabling Power Management

It creates delays and confusion when the hard disk turns OFF or when the system goes to standby.



Power schemes				
Portable/Lapto Home/Office D Portable/Lapto Presentation)esk			
Always On Minimal Power Max Battery			6	
When compute Turn off monito	<u>\</u>	Plugged in	After 5 mi	
Turn off hard di			After 5 mi	
System standby	c After 2	0 mins 💌	After 5 mi	ns _

Disabling Operating System Menu

It creates delays when you are required to restart your system and the boot menu waits for your selection. If you must boot from another operating system or the wrong operating system was made default, press **F8** after system bootup and select **Safe Mode**. You can then go back to select another "**Default operating system**".

System Properties				
General Network Identification Hardware User Profiles Advanced				
Performance				
Performance options control how applications use memory, which affects the speed of your computer.				
Performance Options				
Environment Variables				
Environment variables tell your computer where to find certain types of information.				
Environment Variables				
Startup and Recovery				
Startup and recovery options tell your computer how to start and what to do if an error causes your computer to stop.				
Startup and Recovery				
OK Cancel Apply				

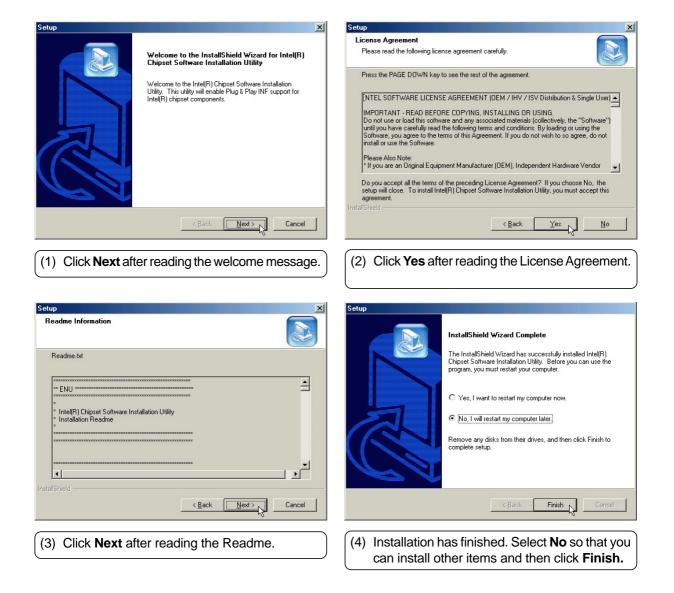
artup and Recovery	?
-System startup	
Default operating system:	
"Microsoft Windows 2000 Professional" /fastdetect	•
, Display list of operating systems for so	econds.
System Failure	
☑ Write an event to the system log	
🔽 Send an administrative alert	
Automatically reboot	
Write Debugging Information	
Small Memory Dump (64 KB)	
Small Dump Directory:	
%SystemRoot%\Minidump	
Verwrite any existing file	
ОК	Cancel
Jncheck Display list of oper	oting
meneek Display list of oper	auny

10

INTEL 830M INF Update (on selected models only)

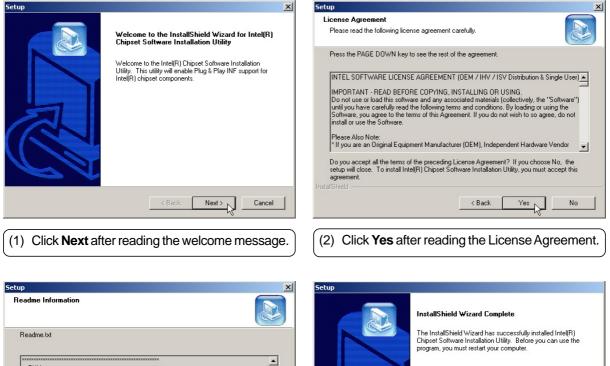
Installing the INTEL 830M INF Update for Windows ME & 2000

Installation is the same for Windows ME and 2000. Insert the support CD and click INTEL 830M INF Update on the autorun menu to start the installation wizard.



INTEL 815EP INF Update (on standard models only) Installing the INTEL 815EP INF Update for Windows ME & 2000

Installation is the same for Windows ME and 2000. Insert the support CD and click INTEL 815EP INF Update on the autorun menu to start the installation wizard.



Finish Cancel

-* ENU ** C Yes, I want to restart my computer now Intel(R) Chipset Software Installation Utility Installation Readme No, I will restart my computer later. Remove any disks from their drives, and then click Finish to complete set -1 Next > < Back Cancel (3) Click Next after reading the Readme. (4) Installation has finished. Select No so that you can install other items and then click Finish.

ATKACPI Driver

Installing the ATKACPI Driver for Windows ME

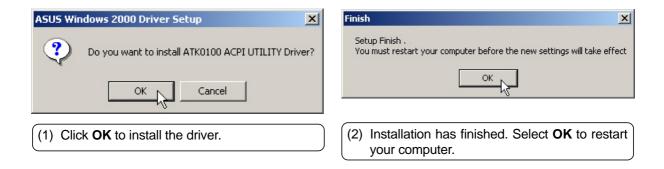
Installation is the same for Windows ME and 2000 but have different dialog boxes. Insert the support CD and click **ATKACPI Driver** on the autorun menu to start the installation wizard.



ATKACPI Driver

Installing the ATKACPI Driver for Windows 2000

Installation is the same for Windows ME and 2000 but have different dialog boxes. Insert the support CD and click **ATKACPI Driver** on the autorun menu to start the installation wizard.



VGA Driver

Installing the VGA Driver for Windows ME and 2000

Installation is the same for Windows ME and 2000.

Insert the support CD and click VGA Driver on the autorun menu to start the installation wizard.





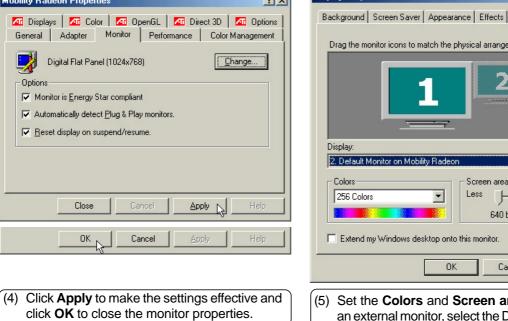
(4) Select **Yes...** and then click Click **Finish** so that you can restart your computer and continue installing other items using a larger screen area.

Finish

VGA Driver

Setting the Display Type in Windows ME

	ck on the Windows and click Properties .
Mobility Radeon Properties ? × Image: Second Sec	Select Device Image: Constraint of the second s
Mobility Radeon Properties ? × Image: Second Sec	Display Properties



(5) Set the Colors and Screen area. If you have an external monitor, select the Display pull down menu and select 2. Default Monitor.

Ū-

640 by 480 pixels

Cancel

-

More

Advanced.

_

VGA Driver Setting the Display Type in Windows ME (Cont')

Mobility Radeon Properties	<u>? ×</u>	Select Device
General Adapter Monitor Color Management Image: Default Monitor Image: Change Change Image: Default Monitor Image: Change Change Image: Default Monitor Image: Change Change Image: Monitor is Energy Star compliant Image: Change Change Image: Monitor is Energy Star compliant Image: Change Change Image: Monitor is Energy Star compliant Image: Change Change Image: Monitor is Energy Star compliant Image: Change Change Image: Monitor is Energy Star compliant Image: Change Change Image: Monitor is Energy Star compliant Image: Change Change Image: Monitor is Energy Star compliant Image: Change Change Image: Monitor is Energy Star compliant Image: Change Change Image: Monitor is Energy Star compliant Image: Change Change Image: Monitor is Energy Star compliant Image: Change Change Image: Monitor is Energy Star compliant Image: Change Change Image: Monitor is Energy Star compliant Image: Change Change Image: Monitor is Energy Star compliant Image: Change <th></th> <th>Click the Monitors that matches your hardware, and then click OK. If you don't know which model you have, click OK. If you have an installation disk for this device, click Have Disk. Manufacturers: Models: ViewSonic PT810 ViewSonic PT810-2 ViewSonic PT810-3 Zenith Data Systems ViewSonic VP150 Have Disk OK Cancel</th>		Click the Monitors that matches your hardware, and then click OK. If you don't know which model you have, click OK. If you have an installation disk for this device, click Have Disk. Manufacturers: Models: ViewSonic PT810 ViewSonic PT810-2 ViewSonic PT810-3 Zenith Data Systems ViewSonic VP150 Have Disk OK Cancel
(6) Click Change to change the monitor driver	r	(7) Select your monitor's make/model and click OK .
Mobility Radeon Properties	? ×	Display Properties
General Adapter Monitor Performance Color Management		Background Screen Saver Appearance Effects Web Settings
ViewSonic PT775 Options Monitor is Energy Star compliant Automatically detect Plug & Play monitors. Reset display on suspend/resume.		Drag the monitor icons to match the physical arrangement of your monitors
		Display:
Close Cancel Apply OK Cancel Apply Help		2. ViewSonic PT775 on Mobility Radeon Colors High Color (16 bit) Image: Streen area Less 1024 by 768 pixels Extend my Windows desktop onto this monitor.
		OK Canada La Asata
		OK Cancel Apply
(8) Click Apply to make the settings effective a click OK to close the monitor properties.	ind	(9) Set the Colors and Screen area and click OK to close the "Display Properties".

VGA Driver

VGA Driver

1024 by 768 pixels.

NOTE: Setting to larger screen areas will require panning (by moving your cursor to the screen's

border) in order to see the entire desktop.

Setting the Display Properties (Windows 2000)

Disperties N	Compatibility Warning
P <u>r</u> operties	The settings you have chosen may cause some programs to operate improperly if you do not restart your computer now.
(1) Right-click on the Windows	Would you like to:
desktop and click Properties .	C <u>R</u> estart the computer with the new color settings?
	Apply the new color settings without restarting?
Display Properties	OK Cancel
Background Screen Saver Appearance Web Effects Settings	Don't ask this question again
	Display Properties X Windows will now resize your desktop. This could take a few seconds, during which your screen might flicker. If Windows does not reappear correctly, wait 15 seconds, and your original settings will be restored. Cancel
Display: (Multiple Monitors) on Mobility Radeon	(4) You can select "Applywithout restarting?" and "Don't askagain" to save time in the fu- ture. Click OK to test your settings.
True Color (32 bit) 256 Colors High Color (16 bit) True Color (16 bit) True Color (32 bit)	Monitor Settings X You resized your desktop. Do you want to keep this setting?
Troubleshoot Advanced	Yes No
OK Cancel Apply	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
	(5) Click Yes to keep your settings. If you click
(2) Click the Settings tab	No or are unable to click to Yes, your previ- ous settings will be restored.
(3) Set Colors to True Color and Screen area to	

VGA Driver

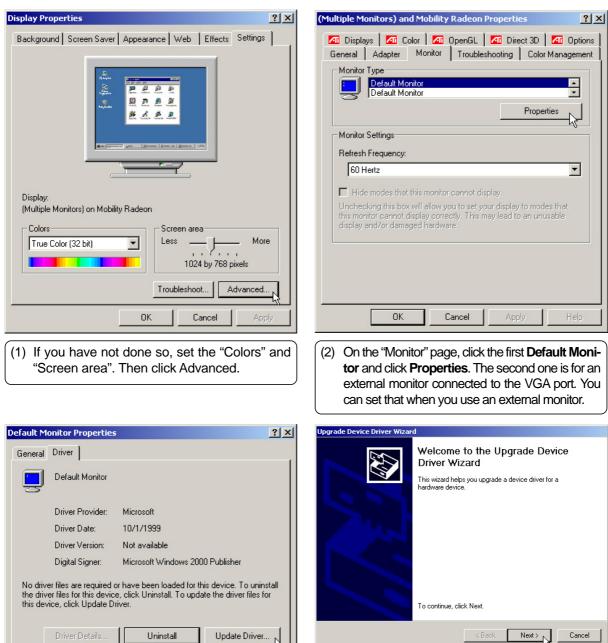
Setting the Display Type (Windows 2000)

OK

(3) Click Update Driver on the "Default Monitor

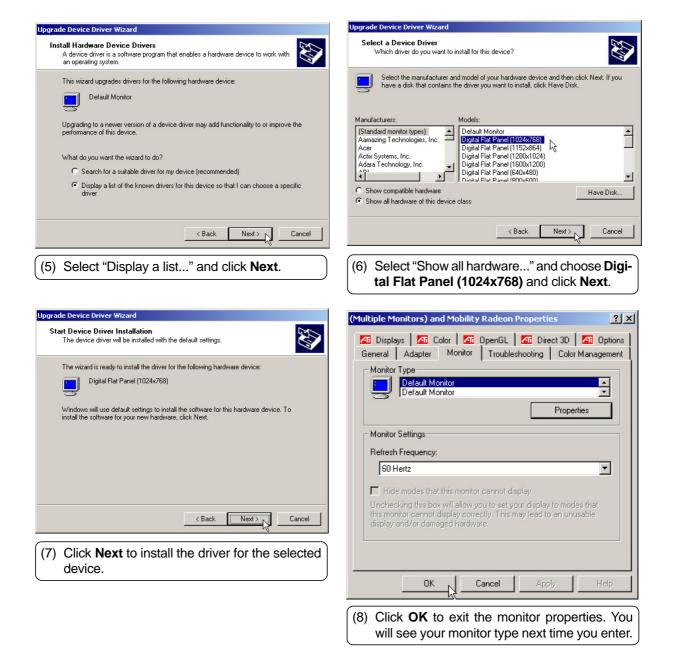
Properties".

Cancel



(4) Click Next on the upgrade device driver wizard.

VGA Driver Setting the Display Type (Windows 2000) (Cont')



Audio Driver (ESS) (depending on model)

Installing the Audio Driver for Windows ME (autorun)

Installation is different for Windows ME and 2000. Find the Windows 2000 steps after these steps. Insert the support CD and follow the steps below.



Audio Driver (SigmaTel) (depending on model)

Installing the Audio Driver for Windows ME and 2000 (autorun)

Installation is the same for Windows ME and 2000. Insert the support CD and follow the steps below.



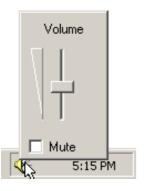
Audio Driver

Audio Controls

A Speaker icon will show on the task bar and when selected with the left mouse button. A simple master control will show. If selected with the right mouse button a menu will show allowing adjustment of audio properties or detailed volume controls.

Mouse Left-Click





Mouse Right-Click



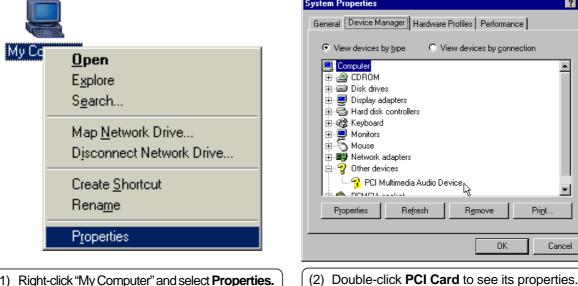
Select "Open Volume Controls" or Double Click Speaker Icon

f Volume Conti Options Help	rol				_ 🗆 ×
Volume Control Balance:	Wave Balance:	SW Synth Balance:	CD Player Balance:	Line In Balance:	PC Speaker Balance:
Volume:	Volume:	Volume:	Volume:	Volume:	Volume:
		i i i i i i i i i i i i i i i i i i i			

Audio Driver (ESS/Intel-SigmaTel) (depending on model)

Manually Installing the Audio Driver for Windows ME

Installation is different for Windows ME and 2000. Find the Windows 2000 steps after these steps. Manual installation is necessary if the driver cannot be installed automatically using the autorun. Insert the support CD and follow the steps below.





(1) Right-click "My Computer" and select Properties.

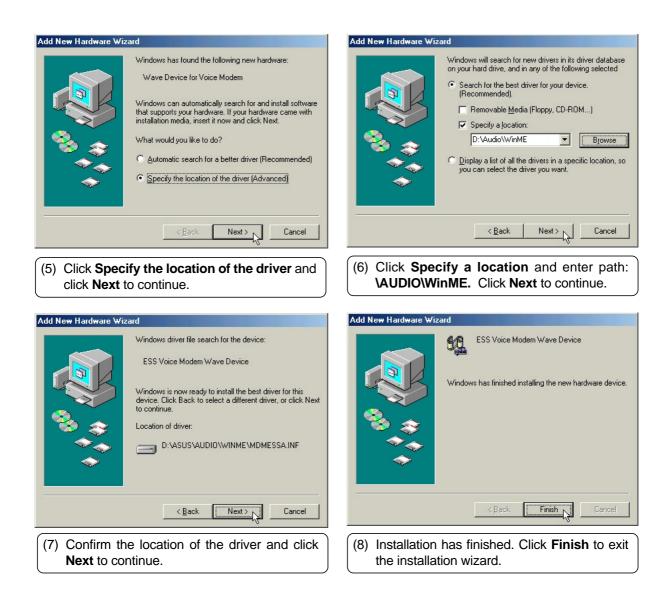
PCI Multimedia Audio Device Properties
General Driver Resources
PCI Multimedia Audio Device
Device type: Other devices
Manufacturer: None specified.
Hardware version: 064
Device status
The drivers for this device are not installed (Code 28.).To reinstall the drivers for this device, click Reinstall Driver
Reinstall Driver
Device usage
Disable in this hardware profile
Exists in all hardware profiles
OK Cancel
(3) Click Reinstall Driver.

Update Device Driver Wizard This wizard searches for updated drivers for: PCI Multimedia Audio Device Windows can search for and install an updated driver to replace the one currently being used by your hardware. Or, you can specify the location of another driver. What would you like to do? C Automatic search for a better driver (Recommended) • Specify the location of the driver (Advanced) Next> Cancel

Audio Driver (ESS) (depending on model)

Manually Installing the Audio Driver for Windows ME (Cont')

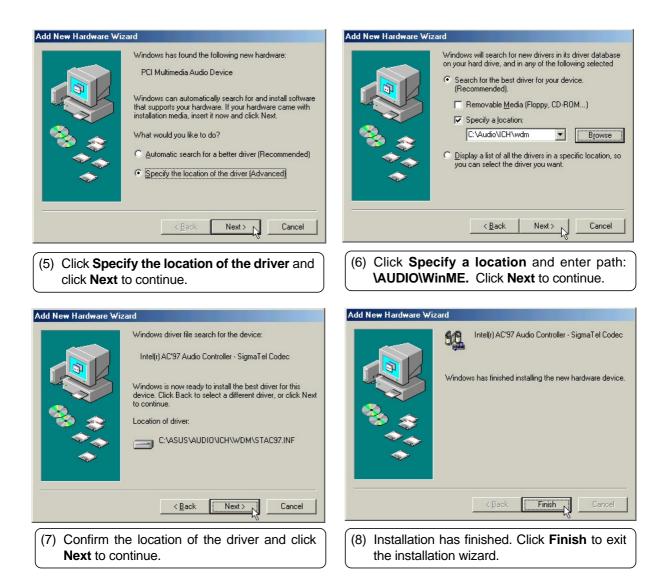
For Intel-Sigmal Tel models, skip to the next page.



Audio Driver (Intel-SigmaTel) (depending on model)

Manually Installing the Audio Driver for Windows ME (Cont')

For ESS models, see previous page.



DirectX 8.0

Installing DirectX 8.0 for Windows ME & 2000

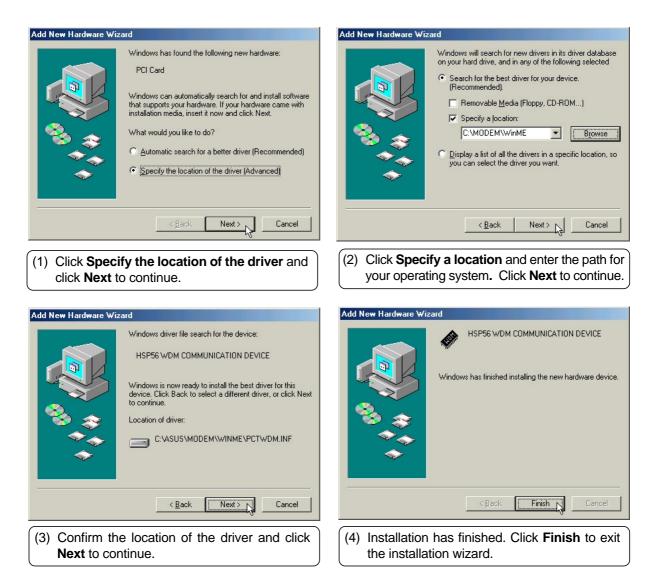
Installation is the same for Windows ME and 2000. Insert the support CD and click **DirectX 8.0** on the autorun menu to start the installation wizard.

Microsoft DirectX 8.0 Setup	Microsoft DirectX 8.0 Setup
This will install Microsoft DirectX 8.0. Do you wish to continue?	Please read the following license agreement. Press the PAGE DOWN key to see the rest of the agreement.
<u>Yes</u> <u>N</u> o	BUPPLEMENTAL END USER LICENSE AGREEMENT FOR MICROSOFT SOFTWARE IMPORTANT: IMPORTANT:
(1) Click Yes to continue and install DirectX.	("Microsoft") operating system components which you are about to install, including any "online" or electronic documentation ("OS COMPONENTS"), are subject to the terms and conditions of the
	agreement under which you have validly licensed the applicable Microsoft operating system product identified below (each an "End User License Agreement" or "EULA") and the terms and conditions of this Supplemental EULA. BY INSTALLING, COPYING OR
DirectX Setup DirectX setup needs to restart your machine, press DK to restart now.	OTHERWISE USING THE OS COMPONENTS, YOU AGREE TO BE BOUND BY THE TERMS AND CONDITIONS OF THE EULA FOR THE APPLICABLE OPERATING SYSTEM PRODUCT IDENTIFIED
	Do you accept all of the terms of the preceding License Agreement? If you choose No, Install will close. To install you must accept this agreement.
v	Yes No
(3) Installation has finished. Click OK to restart your computer.	(2) Click Yes after reading the license agreement.

Modem Driver (depending on model)

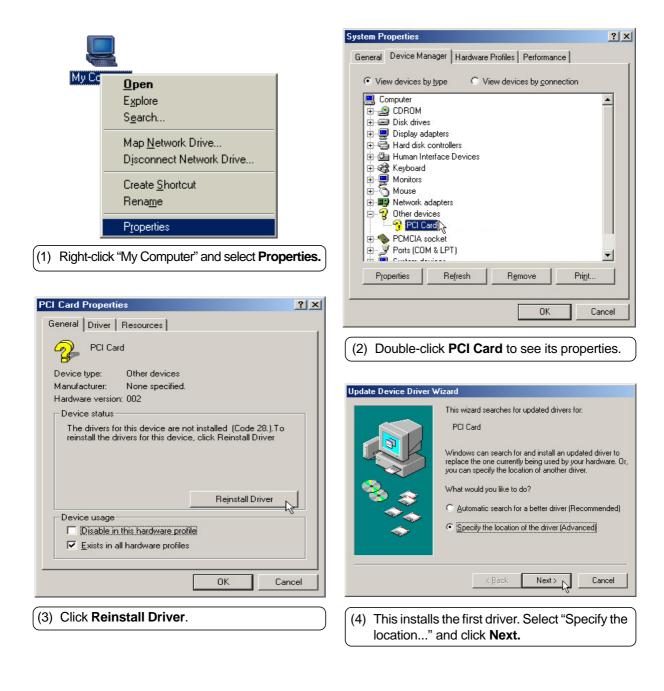
Installing the Modem Driver for Windows ME & 2000

Installation is the same for Windows ME and 2000. Insert the support CD and follow the steps below. There is no autorun installation for this driver.

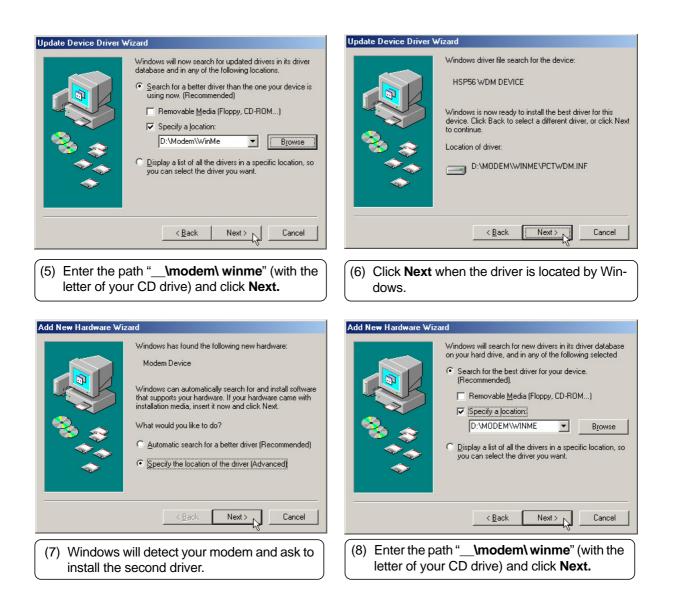


Manually Installing the Modem Driver for Windows ME

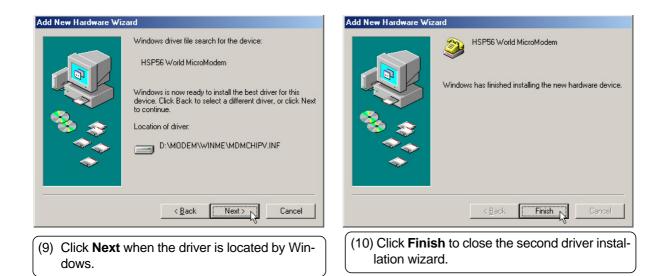
Installation is different for Windows ME and 2000. Find the Windows 2000 steps after Windows ME. Insert the support CD and follow the steps below. There is no installation wizard for this process.

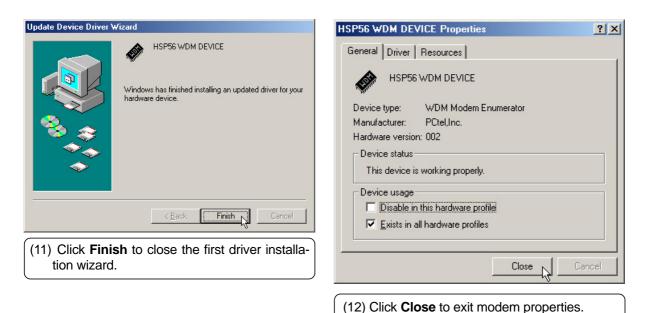


Manually Installing the Modem Driver for Windows ME (Cont')



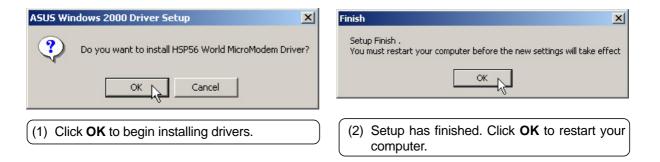
Manually Installing the Modem Driver for Windows ME (Cont')





Installing the Modem Driver for Windows 2000

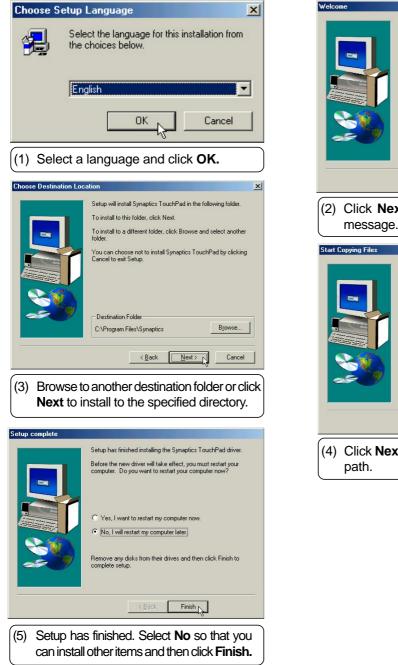
Installation is different for Windows ME and 2000. Find the Windows ME steps before Windows 2000 in this manual. Insert the support CD and click Modem Driver on the autorun menu to start the installation wizard.



TouchPad

Installing the TouchPad Driver for Windows ME

Windows 2000 has different installation steps (see next page). Insert the support CD and click TouchPad on the autorun menu to start the installation wizard.

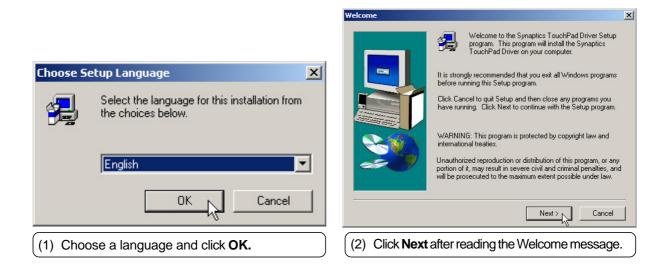


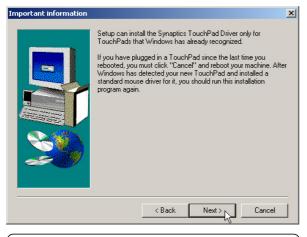


TouchPad

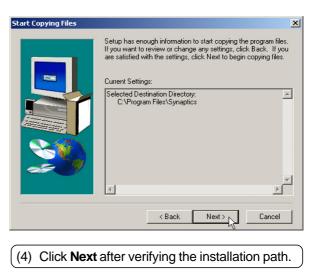
Installing the TouchPad Driver for Windows 2000

Windows ME has different installation steps (see previous page). Insert the support CD and click Touch-Pad on the autorun menu to start the installation wizard.





(3) The TouchPad is integrated into this Notebook PC. Click **Next** to continue.



TouchPad Installing the TouchPad Driver for Windows 2000 (Cont')

Digital Signature Not Found	X Setup complete
The Microsoft digital signature affirms that software here tested with Windows and that the software here tested with Windows and that the software here altered since it was tested. The software you are about to install does not conflucted with windows. The software you are about to install does not conflucted with windows. Synaptics PS/2 Port TouchPad If you want to search for Microsoft digitally signed software, visit the Windows Update Web site at http://windowsupdate.microsoft.com to see if one available. Do you want to continue the installation?	has not Before the new driver will take effect, you must restart your computer. Do you want to restart your computer now? ntain a Image: Computer computer now computer now. Image: Computer now computer now. Image: Computer now computer now. Image: No. 1 will restart my computer later. Image: No. 1 will restart my computer later.
(4) Click Yes to accept the driver because the driv this support CD has been fully tested by the m facturer to work correctly with MS Windows may have to answer this question a second t	s. You

Information about your TouchPad				
0	Your computer is equipped with a Synaptics TouchPad. Your TouchPad has many more features and capabilities than an old-fashioned mouse.			
	Please take a moment to learn about the useful, and fun, features of your TouchPad.			
The Synaptics TouchPad and related software are protected by one or more of the following U.S. patents: 5,374,787; 5,488,204; 5,495,077; 5,543,588; 5,543,590; 5,543,584; 5,543,590; 5,543,591; 5,560; 5,56				
□ Sh	Tell me more Close			
· · ·	fter you restart, you will get a "splash" screen			
	nat will give you easy access to "Synaptics			
	ouchPad Help" by clicking on the "Tell me			
	hore" button. Deselect the "Show" to disable			
l u	his from showing on every Windows startup.			

34

TouchPad

Fast IR Driver

Installing the Fast IR Driver for Windows ME & 2000

Installation is different for Windows ME and 2000. If your IR port is not enabled, you must first enable it in BIOS setup.

Enabling the IR port

- 1. Enter BIOS Setup Utility during bootup.
- 2. Enter the Advanced menu and select the sub-menu I/O Device Configuration
- 3. Set IR Port to [2E8H/IRQ3] or [2F8H/IRQ3] (the other two settings will conflict with serial port A)
- 4. Windows will install IR networking and IR serial port drivers. Answer Yes to restart your computer.

Advance	AwardBIOS Setup Uti	lity
I/O I	Device Configuration	Item Specific Help
Serial Port A:	[3F8H/IRQ4]	<enter> to select the I/O Address & IRQ for</enter>
IR Port Mode	[0E00H/IRQ3] [FIR]	Infrared.
Parallel Port Mode	[378H/IRQ7] [Bi-dir]	
F1 Help 14 Se	elect Item -/+ Change Val	ues F9 Setup Defaults

Setting the IR port (Windows 2000)

Insert the support CD and click **Fast IR Driver** on the autorun menu to make the setting as shown by the dialog box.

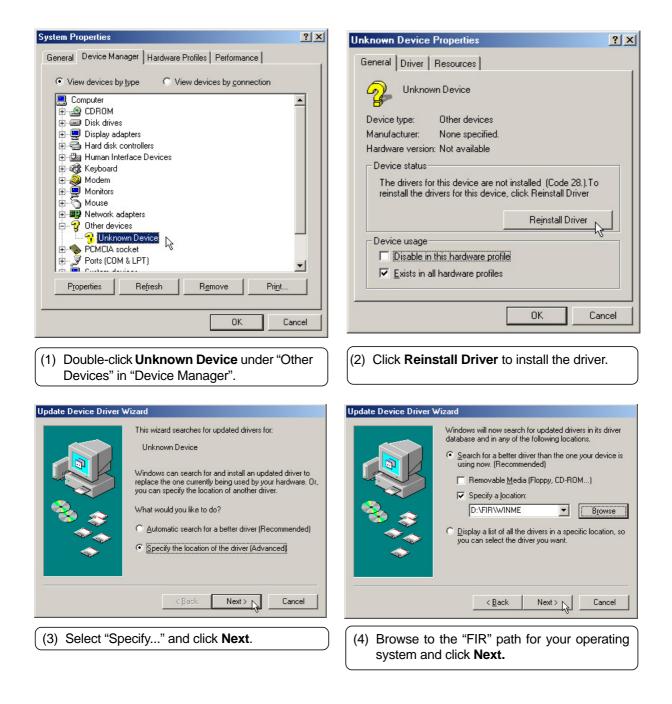


(1) Setting is complete. Click **No** so that you can install other drivers.



Setting the IR port for Windows ME

Insert the support CD but clicking Fast IR Driver only brings up a readme file for the following procedure:



37

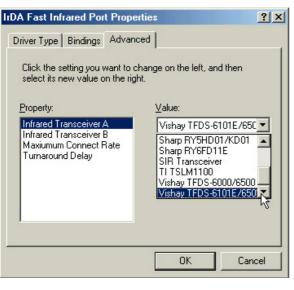
Fast IR Driver Setting the IR port for Windows ME (Cont')



Fast IR Driver

Setting the IR port for Windows ME (Cont')

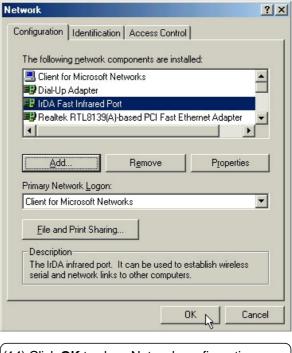




(13) Click Advanced tab and select Vishay TFDS-6101E/6501E for "Infrared Transceiver A" and click OK.

etwork	? ×
Configuration Identification Access Control	
The following network components are installed:	
📇 Client for Microsoft Networks	•
🕮 Dial-Up Adapter	
💷 IrDA Fast Infrared Port	
🕮 Realtek RTL8139(A)-based 🏾 CI Fast Ethernet Adapter	-
•	
Add Remove Properties	
Primary Network Logon:	
Client for Microsoft Networks	-
Eile and Print Sharing	
- Description	_
The IrDA infrared port. It can be used to establish wireless serial and network links to other computers.	
OK Car	

(12) Double click Fast Infrared Controller.



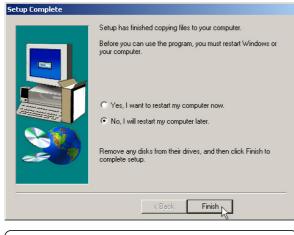
(14) Click **OK** to close Network configuration.

SpeedStep (on selected models only)

Installing SpeedStep for Windows ME & 2000

Installation is the same for Windows ME and 2000. Insert the support CD and click **SPEEDSTEP** on the autorun menu to start the installation wizard.





(3) Installation has finished. Select "**No...**" and click **Finish** to so that you can install other items and restart your computer later.

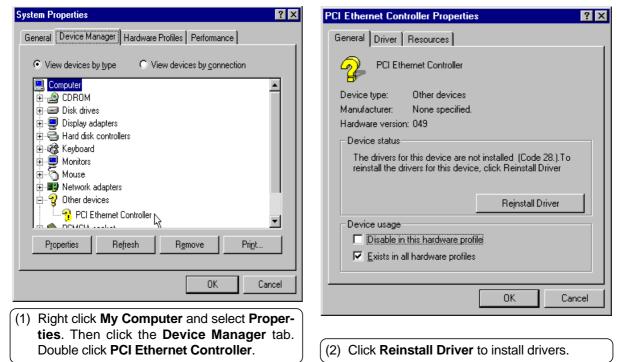
LAN Driver (Required)

Installing the LAN Driver for Windows ME & 2000

Installation is almost the same for Windows ME and 2000. Insert the support CD and click **LAN Driver** on the autorun menu to start the installation wizard. The first two captures will show auto installation using the Autorun menu. The second set of captures will show manual installation of the LAN drivers.

ASUS Drivers Auto-installer	Finish installing Drivers Image: Do you want to reboot your system? Image: Do you want to reboot your system?
(1) WinME: Click Yes to begin installing drivers.	(2) WinME: Installation has finished. Click No so that you can install other items and restart your computer later.
Windows 2000 Driver Setup Image: Setup Or you want to install Realtek RTL8139(A/B/C/8130) PCI Fast Ethernet NIC Driver? OK OK	Finish X Setup Finish . You must restart your computer before the new settings will take effect OK OK
(1) Win2K: Click OK to begin installing drivers.	(2) Win2K: Installation has finished. Click OK to restart your computer.

Installing the LAN Driver for Windows ME (Manual Installation)





(7) Installation has finished. Click **Finish** to exit the installation wizard.

41

Configuring the Network Device

Joining a Domain (Windows ME)

Network ? × Configuration Identification Access Control Image: Computer on the network. Please type a name for this computer on the network. Please type a name for this description of the computer. Computer he workgroup i will appear in, and a short description of the computer. Image: Computer name: Notebook PC Workgroup: DOC_DEPT Computer Description: Notebook PC Image: OK Cancel	Use the tabs for other net- work settings.	
Network ? × Configuration Identification Access Control The following getwork components are installed: Image: Client for Microsoft Networks Microsoft Family Logon Image: Client for Microsoft Networks Microsoft Family Logon Image: Client for Microsoft Networks Pil IDA Fast Infrared Port Image: Poperties Primary Network Logon: Image: Client for Microsoft Networks Elle and Print Shaing Description The Client for Microsoft Networks enables you to connect to other Microsoft Windows computers and servers and use the files and printers shared on them. DK Cancel	Double click on the Network driver to make logon settings.	Client for Microsoft Networks Properties ? × General Logon validation ✓ Log on to Windows NT domain When you log on. your password will be verified on a Windows NT domain. Windows NT domain. Windows NT domain. DOC_DEPT Poloc_DEPT Network logon options © Quick logon Windows logs you onto the network. but network drives are not reconnected until you use them. © Logon and restore network connections When you log onto the network drive is ready for use. OK
Identification is necessary to use the networ Enter a workgroup as instructed by your ne ministrator or try using the name of your d servers may not be visible to you if you	etwork ad- "Log Iomain. All 95/9	ou want to log into a server, you must check g on" and enter your domain name. Windows 98/ME/2000 all use Windows NT domain. The nary server in the domain will perform routing

and login functions for your computer.

LAN Driver

enter a workgroup that has a primary controller.

Configuring the Network Device

Joining a Domain (Windows 2000)

	_	General Network Identification Hardware User Profiles Advanced	
		Windows uses the following information to identify your computer on the network.	
- Citizer	Open	Full computer name: notebook-pc.	
My Com	-	Workgroup: WORKGROUP	
	Explore	To use the Network Identification Wizard to join a Network ID	
	Search	domain and create a local user, click Network ID.	
	Manage	To rename this computer or join a domain, click Properties	
	Map Network Drive		
	Disconnect Network Drive		
	Disconnect Network Drive		
	Create Shortcut		
	Rename		
	Properties	OK Cancel Apply	
	rioperaes		
(1) Right-click the My Computer icon on the desktop and select Properties . (2) Select Network Identification and click Properties .			
Identifica	tion Changes	Identification Changes	
You can o	tion Changes ? X change the name and the membership of this . Changes may affect access to network resources.	Identification Changes ? × You can change the name and the membership of this computer. Changes may affect access to network resources.	
You can o computer.	change the name and the membership of this . Changes may affect access to network resources.	You can change the name and the membership of this computer. Changes may affect access to network resources.	
You can o	change the name and the membership of this . Changes may affect access to network resources. . name:	You can change the name and the membership of this	
You can o computer. Computer	change the name and the membership of this . Changes may affect access to network resources. name: kpc	You can change the name and the membership of this computer. Changes may affect access to network resources. Computer name: notebook-pc	
You can o computer. Computer notebook Full comp	change the name and the membership of this . Changes may affect access to network resources. . name: 	You can change the name and the membership of this computer. Changes may affect access to network resources. Computer name: notebook-pc Full computer name:	
You can o computer. Computer	change the name and the membership of this . Changes may affect access to network resources. . name: 	You can change the name and the membership of this computer. Changes may affect access to network resources. Computer name: notebook-pc	
You can o computer. Computer notebook Full comp	change the name and the membership of this . Changes may affect access to network resources. . name: 	You can change the name and the membership of this computer. Changes may affect access to network resources. Computer name: notebook-pc Full computer name:	
You can o computer Computer Inotebook	change the name and the membership of this . Changes may affect access to network resources. 	You can change the name and the membership of this computer. Changes may affect access to network resources. Computer name: notebook-pc Full computer name: notebook-pc. More	
You can o computer. Computer notebook Full comp	change the name and the membership of this . Changes may affect access to network resources. 	You can change the name and the membership of this computer. Changes may affect access to network resources. Computer name: notebook-pc Full computer name: notebook-pc. More	
You can o computer. Computer hotebook Full comp notebook	change the name and the membership of this . Changes may affect access to network resources. 	You can change the name and the membership of this computer. Changes may affect access to network resources. Computer name: notebook-pc Full computer name: notebook-pc. More	
You can o computer notebook Full comp notebook	change the name and the membership of this . Changes may affect access to network resources. . name: 	You can change the name and the membership of this computer. Changes may affect access to network resources. Computer name: notebook-pc Full computer name: notebook-pc. More More Dore	
You can o computer Totebook Full comp notebook	change the name and the membership of this . Changes may affect access to network resources. . name: 	You can change the name and the membership of this computer. Changes may affect access to network resources. Computer name: notebook-pc Full computer name: notebook-pc. More More More C Domain: DOC_DEPT C Workgroup:	
You can o computer Totebook Full comp notebook	change the name and the membership of this . Changes may affect access to network resources. . name: 	You can change the name and the membership of this computer. Changes may affect access to network resources. Computer name: notebook-pc Full computer name: notebook-pc. More More More	
You can o computer Totebook Full comp notebook	change the name and the membership of this . Changes may affect access to network resources. . name: 	You can change the name and the membership of this computer. Changes may affect access to network resources. Computer name: notebook-pc Full computer name: notebook-pc. More More More C Domain: DOC_DEPT C Workgroup:	

System Properties

(3) The primary server in the domain will perform routing functions for your computer. Select **Domain** and enter an existing domain you wish to join. **NOTE:** After clicking "OK", you will be asked for the Domain Controller's Administrator password to join the domain in Windows 2000.

<u>?×</u>

Configuring the Network Device

Joining a Domain (Windows 2000) (Cont')

Domain Username And Password 🔀	Network Identification
Enter the name and password of an account with permission to join the domain.	You must reboot this computer for the changes to take effect.
Name: Administrator	ОК
OK Cancel	
Network Identification	
Welcome to the DOC_DEPT domain.	System Settings Change
ОК	You must restart your computer before the new settings will take effect. Do you want to restart your computer now? Yes No
(4) Unfortunately, you will have to trouble your net- work administrator to grant you access.	(5) After you restart your computer, you should see some contents through Entire Network.

Viewing Your Network



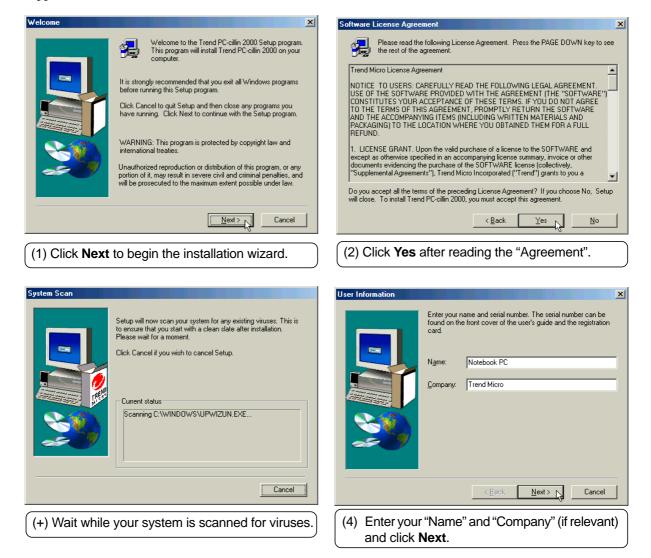
Microsoft Windows Network

(6) Clicking on "entire contents" will display networks which you have installed protocols for. Clicking a network protocol such as "MS Windows Network" will display all the servers available under that protocol.

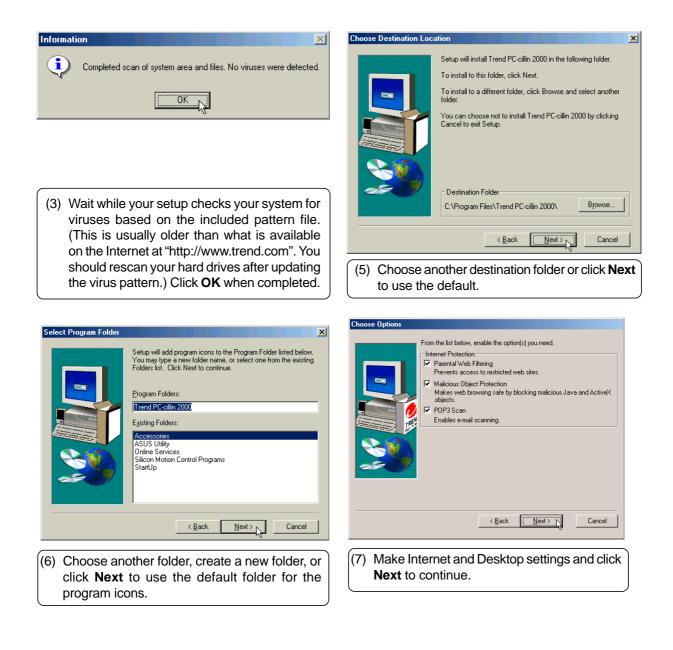
PC-cillin 2000

Installing the PC-cillin 2000 Anti-Virus Software for Windows ME

Installation is different for Windows ME and 2000. The following are steps for Windows ME. Insert the support CD and click **PC-cillin 2000** on the autorun menu to start the installation wizard.



Installing the PC-cillin 2000 for Windows ME (Cont')



Installing the PC-cillin 2000 for Windows ME (Cont')

Ipdating Through Proxy Server	Start Co
Updating virus pattern or program files requires access to the Internet. If there is a proxy server on your network, enter its name and port. Your System Administrator will have this information. Note: If you connect to the Internet using a dial-up connection, this option may not apply.	
Proxy Server Configuration	
I use a proxy server to connect to the Internet.	
Proxy server IP address: Port:	
Proxy Server Authentication	
If the proxy requires a user name and password, please enter them here. Otherwise, leave this field blank.	
User name: Password:	
ОК	
B) Make proxy settings if necessary and click OK	(9) (
to continue.	
Create Emergency Rescue Disks 🛛 🔀	Preate
Unable to find floppy disk.	
	4

Setup has enough information to start installing. To change any settings, click Back. Otherwise, click Next to start copying the files. Current Settings User Infomation: Notebook PC -Trend Micro PCEA-0011-0856-5650-5595 Destination Directory: C:\Program Files\Trend PC-cillin 2000\ estination Program Folder: Trend PC-cillin 2000 Þ < <u>B</u>ack <u>N</u>ext > Cancel

ying Files

heck the installation settings and click Next continue.



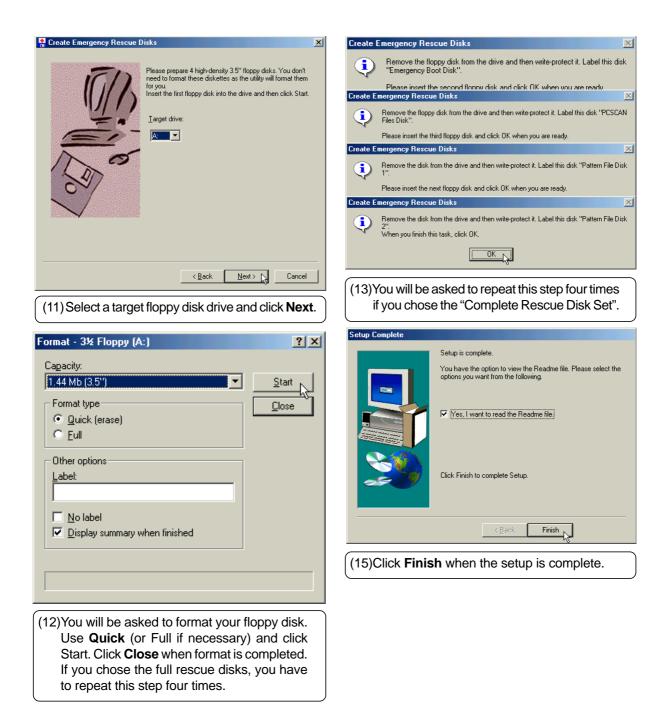
(+) The next step will require a floppy disk drive in order to create rescue disks. If you don't have one, a warning will be given and the rescue disk wizard will be skipped. If you have a floppy disk drive later, you can create rescue disks from the program.



(10)You will be asked to create either complete rescue disks or virus pattern disks. Select one and click Next. Click Cancel to skip to "Setup Complete".

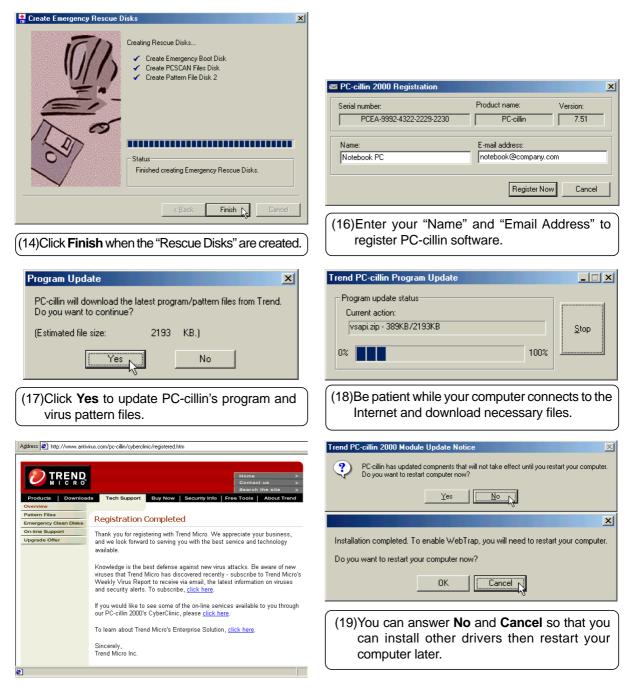
×

Installing the PC-cillin 2000 for Windows ME (Cont')



PC-cillin 2000

Installing the PC-cillin 2000 for Windows ME (Cont')



Installing the PC-cillin 2000 Anti-Virus Software for Windows 2000

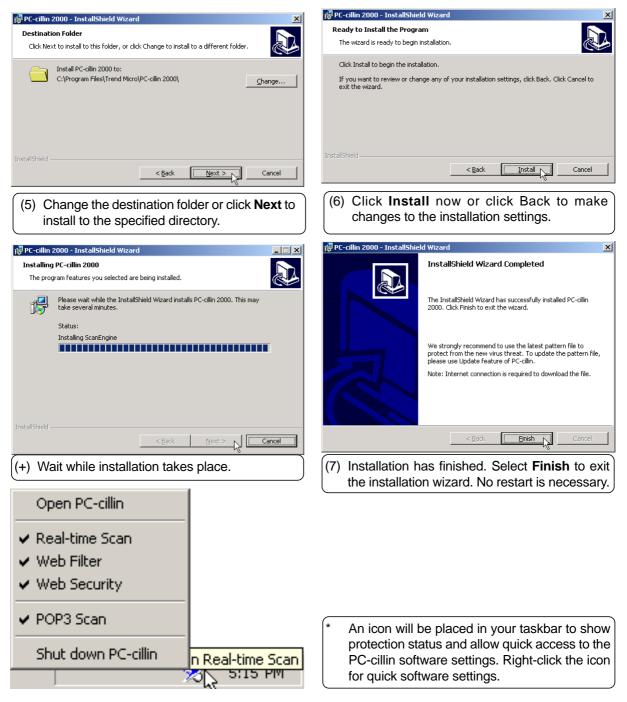
Installation is different for Windows ME and 2000. The following are steps for Windows 2000. Insert the support CD and click PC-cillin 2000 on the autorun menu to start the installation wizard.

🙀 PC-cillin 2000 - InstallShie	ld Wizard	PC-cillin 2000 - InstallShield Wizard
	Welcome to the InstallShield Wizard for PC-cillin 2000	License Agreement Please read the following license agreement carefully.
	The InstallShield(R) Wizard will install PC-cillin 2000 on your computer. To continue, click Next.	Trend Micro License Agreement
		NOTICE TO USERS: CAREFULLY READ THE FOLLOWING LEGAL AGREEMENT. USE OF THE SOFTWARE PROVIDED WITH THE AGREEMENT (THE "SOFTWARE") CONSTITUTES YOUR ACCEPTANCE OF THESE TERMS. IF YOU DO NOT AGREE TO THE TERMS OF THIS AGREEMENT, PROVMPTLY RETURN THE SOFTWARE AND THE ACCOMPANYING ITEMS (INCLUDING WRITTEM MATERIALS AND PACKAGING) TO THE LOCATION WHERE YOU OBTAINED THEM FOR A FULL REFUND. 1. LICENSE GRANT. Upon the valid purchase of a license to the SOFTWARE and except as otherwise specified in an accompanying license summary, invoice or other documents evidencing the purchase of the SOFTWARE license (collectively, "Supplemental Agreements"), I
		L accept the terms in the license agreement g on ot accept the terms in the license agreement InstallShield
	< Back Next > Cancel	<back next=""> Cancel</back>
(1) Click Next af	ter reading the welcome message.	(2) Click Next after reading the license agreement.
Scanning		🖓 PC-cillin 2000 - InstallShield Wizard
 that you start with a clear 	ur system for any existing viruses. This is to ensure an state after installation.	Customer Information Please enter your information.
Please wait for a mome	nt.	User Name:
		Organization:
- Current Status		
	T\System32\RSM.EXE	
		InstallShield
viruses bas (This is usu on the Intern	our setup checks your system for ed on the included pattern file. ally older than what is available net at "http://www.trend.com". You an your hard drives after updating	(4) Enter your "User Name" and "Organization" if applicable. Click Next to continue.

the virus pattern.) This screen will change

when completed.

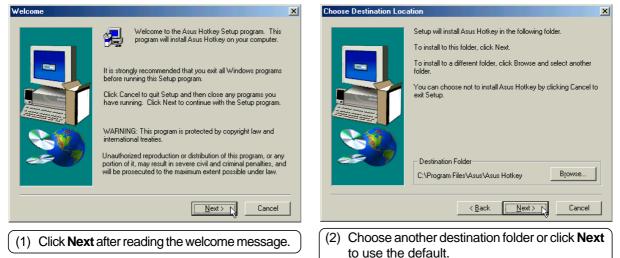
Installing the PC-cillin 2000 for Windows ME (Cont')

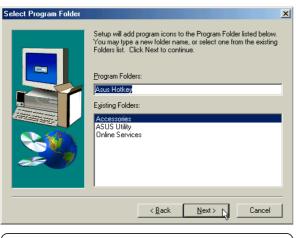


Hotkey Utility (Under ATKACPI Utility)

Installing the Hotkey Utility for Windows ME & 2000

Installation is the same for Windows ME and 2000. Insert the support CD and click Hotkey Utility on the autorun menu to start the installation wizard.





- (3) Choose another folder, create a new folder, or click **Next** to use the default folder for the program icons.
- Setup Complete

 Asus Hotkey Setup is complete. Choose the options you want below.

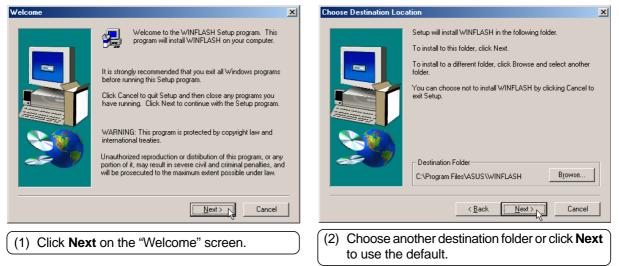
 Image: Choose the options you want below.<
- (4) Click **Finish** to exit the installation wizard and execute the selections. You can deselect the check boxes before clicking Finish if you want.

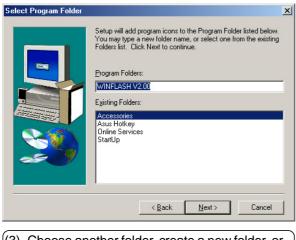
Finish

Windows Flash Utility (Under ATKACPI Utility)

Installing the Windows Flash Utility for Windows ME & 2000

Installation is the same for Windows ME and 2000. Insert the support CD and click Windows Flash Utility on the autorun menu to start the installation wizard.





(3) Choose another folder, create a new folder, or click **Next** to use the default folder for the program icons.



ASUS PC Probe (Under ATKACPI Utility)

Installing PC Probe for Windows ME & 2000

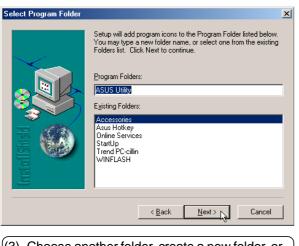
Installation is the same for Windows ME and 2000. Insert the support CD and click PC Probe on the autorun menu to start the installation wizard.

NOTE: In order for PC Probe to run, Intel's LDCM and other hardware monitoring software cannot be installed. You must first uninstall other such software before installing PC Probe.





(2) Choose another destination folder or click **Next** to use the default.



(1) Click **Next** after reading the welcome message.

(3) Choose another folder, create a new folder, or click **Next** to use the default folder for the program icons.

 Setup Complete

 ASUS Probe Setup is now completed. You should reboot the system and you can choose to auto-execute ASUS Probe each time Windows boots up. Choose the options you want below.

 Image: The setup of the setup.

 Image: The setup of the setup of the setup.

 Image: The setup of the setup of the setup.

 Image: The setup of the setup of the setup.

 Image: The setup of the setup of the setup.

 Image: The setup of the setup of the setup.

(4) Installation has finished. Deselect "...restart my computer now." and click Finish so that you can install other items and restart your computer later.

Notebook PC

Software Reference

Contents

VGA Driver	59
Dual Display Settings	60
Display Arrangement	60
Enabling an External Monitor	60
Displays	61
OpenGL	61
Display Settings	61
Color	61
Direct 3D	61
HydraVision Desktop (Win ME)	62
Options (Windows ME)	62
Options (Windows 2000)	62
HydraVision Hot Keys (Win ME)	62
Synaptics TouchPad	62
Overview of Synaptics® TouchPad Features	
Tap on the Pad Instead of Pressing the Buttons	
Drag Icons, Windows and Other Objects without Using Buttons	
Tap-and-a-Half	
Adjust the Overall Touch Sensitivity	
Customize Buttons and Taps	
A customization example:	
An Example TouchPad	
Prevent Accidental Pointing While Typing	
Scroll Through A Document without Using Scroll Bars	
How do I use Virtual Scrolling?	
Zoom In/Out and Pan on Documents	
Move the Pointer Long Distances	
Fine Tune the Pointer Movement	
Accessories	
More About the TouchPad	
Property Pages	
Scrolling Properties Page	
Enabling Virtual Scrolling of the Active Window	
Customizing Scroll Zone Sizes	
Customizing Virtual Scrolling Speed	
Tap Zones Properties Pages	
Customizing the Tap Zones	
More Features Properties Page	
Stop Pointer at Window Borders	
Snap to Default Button	
Slow Motion Key	70

Constrained Pointer Key	. 70
Synaptics TouchPad Tray Icon	. 70
Button Actions Properties Page	. 71
Customizing Button Assignments	. 71
Touch Properties Page	. 72
Taps	. 72
Touch Sensitivity	. 72
Palm Check	
Edge Motion Properties Page	. 73
Enabling Edge Motion	
Customizing Edge Zone Sizes	
Customizing Edge Motion Speed	
Frequently Asked Questions	. 74
SpeedStep	. 77
Intel® SpeedStep™ Overview	
How it Works	
IT Friendly	. 79
Summary	. 79
SpeedStep Properties and Settings	. 80
SpeedStep Software Notes	. 82
WARNING	. 82
The User Interface	. 82
Restricted User limitations	. 82
Over-installing	. 82
Uninstalling the Applet	. 82
PC-cillin 2000	. 83
Welcome to PC-cillin	. 84
What's New in PC-cillin 2000	. 85
What is a Computer Virus?	. 86
Test Virus	. 86
How Viruses Spread	. 87
Virus Writers	. 87
Scan Window	. 88
Manual Scan	. 88
Hotkey Utility	. 89
ASUS Hotkey	
Buttons	
Delete a Hotkey	
Add a Hotkey	

Hotkey Actions Enable all Hotkeys Disable all Hotkeys Adding a Program to Run	
Windows Flash Utility (WINFLASH)	
Updating Your BIOS	
Resetting Your BIOS	
ASUS PC Probe	
Welcome to ASUS PC Probe	
Starting ASUS PC Probe	
ASUS PC Probe	
Starting ASUS PC Probe	
Using ASUS PC Probe Monitoring	
Using ASUS PC Probe	
Monitoring	
Information	
ASUS PC Probe Task Bar Icon	100
Appendix	101
Modem Communication Regulations	
FCC Regulations	
FCC Part 68 Requirements	
Modem Declaration Of Conformity	
Canadian Department Of Communications (CDOC):	

VGA Driver

Dual Display Settings Enabling an External Monitor

Display Arrangement

Display Settings

Topics Covered:

Windows ME and 2000

VGA Driver

Dual Display Settings

When you enter the Display Properties Settings, two displays will be shown which allow you set the resolution, color, and monitor type independently from each other in order to make independent display adjustments. Dual display allows you to extend your Windows desktop onto an external monitor.

o lud

Jispiay Properties			
Background Screen Saver Appearance Effects Web (Settings)			
Drag the monitor icons to match the physical arrangement of your monitors			
Display:			
2. ViewSonic PT775 on Mobility Radeon			
Colors Screen area			
High Color (16 bit)			
1024 by 768 pixels			
Extend my Windows desktop onto this monitor.			
OK Cancel Apply			

Click on either 1 (the Notebook PC's LCD display) or 2 (externally connected monitor through the 15-pin VGA port).

Enabling an External Monitor

Use the LCD/Monitor Function keys <Fn><F8> to toggle between the Notebook PC's LCD display and an external monitor in this series: Notebook PC LCD -> External Monitor -> Both. You can also enable or disable displays using the display settings software.

Display Arrangement

You can drag either display with your cursor in order to arrange the two displays in a configuration that is convenient for your use. In this example, the second display can be accessed by moving down from the first display.



Yes No

Properties

Right-click on the Windows

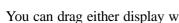
desktop and click Properties.

When you choose the second display, you will be asked whether you want to activate the second display. Select Yes to enable the second display. You can uncheck the "Extend my Windows desktop onto this monitor" at any time to disable the second display on the Notebook PC.







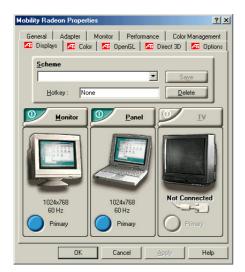


60

Display Settings

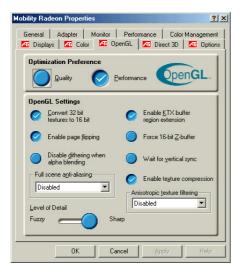
Displays

This is where you can graphically see all display devices and set its ON/OFF preferences. The preferences can be saved as a scheme and hotkey to be recalled when you need it.



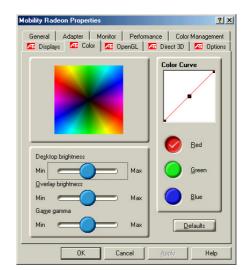
OpenGL

This is where you set OpenGL preferences used in 3D games using OpenGL technology.



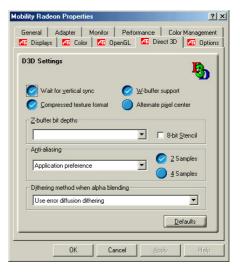
Color

This is where you can increase or decrease brightness for each color channel – Red, Green, or Blue independently by moving the red line or together using "Desktop brightness".



Direct 3D

This is where you set Direct 3D preferences used in 3D games using Direct 3D technology.



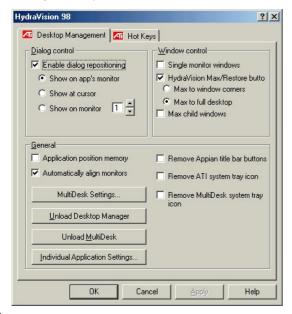
Display Settings Options (Windows ME)

This is where you see version information and enable/disable ATI taskbar icons.

Mob	ility Radeon Properties		? ×
		Performance Color Manage OpenGL 📶 Direct 3D 🚮 O	
	Version Information		
	Advanced Desktop Utilities	5.13.2509	
	Product Version	7.57.01-010708x-818C-Asus	
	Driver	4.13.7153	
	C Enable ATI	taskbar icon application con on taskbar	
HydraVision Desktop Manager			
	ок с	ancel <u>Apply</u> H	elp

HydraVision Desktop (Win ME)

This is where you can make advanced desktop settings and layouts.



Options (Windows 2000)

This is where you see version information and enable/disable ATI taskbar icons.

(Mult	iple Monitors) and Mobility I	Radeon Properties	? ×			
	General Adapter Monitor Troubleshooting Color Management					
	Version Information		1			
	Advanced Desktop Utilities	5.13.2509				
	Product Version	7.57.01-010708x-818C-Asus				
	Driver	5.13.01.3238				
			- 1			
	Show D3D	warning messages				
	C Enable ATI	taskbar icon application				
	Show ATI icon on taskbar					
	OK Ca	ancel Apply H	elp			

HydraVision Hot Keys (Win ME)

This is where you can set hotkeys for advanced desktop settings and layouts.

HydraVision 98 🛛 🕺 🗙						
🜆 Desktop Ma	nagement 🌆 H	Hot Keys				
<u>M</u> odifier key Shift Alt Ctrl Shift-Alt Shift-Alt Shift-Ctrl Alt-Ctrl	Hot <u>key</u> F1 F2 F3 F4 F5 F6 F7	Hot key fungtion SnapApp to Monitor HydraVision Popup Menu Run Application Gather all Windows to Monitor 1 Find Cursor Zoom Display In Zoom Display Un				
Shift-Alt-Ctrl	F8 💽	Zoom In on Monitor	•			
Agsigned hot k	eys .	Add Remove				
Disable hot keys						
OK Cancel Apply Help						

Synaptics TouchPad

Topics Covered: Overview of the TouchPad Scrolling Properties Page Tap Zones Properties Page More Features Properties Page Button Actions Properties Page Touch Properties Page Edge Motion Properties Page Frequently Asked Questions

Windows ME and 2000

Overview of Synaptics® TouchPad Features

Your Synaptics TouchPad is much more powerful than an old-fashioned mouse. In addition to providing all the features of an ordinary mouse, your TouchPad allows you to:

- Tap on the Pad Instead of Pressing the Buttons
- Drag Icons, Windows and Other Objects without Using Buttons
- Adjust the Overall Touch Sensitivity
- Customize Buttons and Taps
- Prevent Accidental Pointing While Typing (also known as Palm Check)
- Scroll Through a Document Without Using Scroll Bars
- Zoom In/Out and Pan on Documents
- Move the Pointer Long Distances
- Fine Tune the Pointer Movement

Tap on the Pad Instead of Pressing the Buttons

Tapping on the surface of the pad is the same as clicking the left mouse or TouchPad button (i.e. the primary TouchPad button). Tapping is usually quicker and more convenient than using the button. To double-click, just tap twice. A light, quick tap works best; very hard or very slow taps are less likely to work.

Drag Icons, Windows and Other Objects without Using Buttons

Often, you need to hold the mouse or TouchPad button down while moving the pointer (to move an icon or window around the screen, for example). This action is called dragging. Just like clicking and double clicking, you can also drag without using the button.

To move or drag an object (equivalent to pressing and holding the left TouchPad button):

- 1) Position the pointer over the object and tap twice, down-up-down, leaving your finger on the Touch-Pad on the second tap. This action is sometimes called tap-and-a-half.
- 2) Now move the selected object by sliding your finger across the TouchPad surface.
- 3) Lift your finger to drop the object.

Tap-and-a-Half

You might wonder what happens when you reach the edge of the pad and you are dragging an object. The Synaptics TouchPad has a feature called Locking Drags. This feature allows you to lift your finger from the pad without ending the drag. You can drag an object across the screen using several finger strokes. To end a Locking Drag action, tap again. The Synaptics TouchPad also has a feature called Edge Motion to help with long distance dragging. See Move the Pointer Long Distances for details.

The Tap and Drag and Locking Drags features are located on the Touch Properties Page in the Mouse Properties dialog.

Adjust the Overall Touch Sensitivity

You can control how much finger pressure you must apply before the TouchPad responds by adjusting the Touch Sensitivity slider. This slider is located on the Touch Properties Page in the Mouse Properties dialog.

At higher (more sensitive) Touch Sensitivity settings, the TouchPad recognizes even a very slight touch. If you see undesired or erratic pointer motion, try a lower setting. Lower (less sensitive) settings require a firmer touch to move the pointer. In general, a lighter touch works best.

Customize Buttons and Taps

Most TouchPads come with two buttons that work just like traditional mouse buttons. You can customize the behavior of these buttons.

Tapping on the TouchPad surface also performs the same action as pressing a button. Tapping in the center of the pad will always produce a left-click (the action of the primary button), but you can configure each of the four corners of the TouchPad surface to act as different buttons. These special corner regions are called tap zones . With four corner tap zones, the center of the TouchPad, and the two physical buttons you can turn your TouchPad into a seven-button mouse!

A customization example:

Suppose you want to use your TouchPad like a three-button mouse. You can configure the left TouchPad button to produce middle clicks when pressed. Remember that tapping on the TouchPad will produce left clicks, and pressing the right TouchPad button will produce right clicks. For additional convenience, you can configure the top right corner tap zone of the TouchPad to produce right clicks. Looking at the TouchPad surface in the picture below, taps in the top right corner (the red shaded area) will produce right clicks, but tapping anywhere else on the TouchPad (the solid gray area) produces left clicks.

An Example TouchPad

There are many different actions that you can assign to the buttons and tap zones. The following actions are provided as built-in features with the Synaptics TouchPad device driver. Additional actions might be available if you have installed any third-party TouchPad Plug-In software.

- Jump to the Start Button. This action causes the pointer to jump to the Start button in the Windows task bar and automatically opens the Start Menu.
- Jump to the current application's menu. This action causes the pointer to jump to the leftmost entry in the application's window menu (usually the File menu) and automatically pops up the submenu.
- Minimize the current application. This action minimizes the current application's window. If the current application's window is already minimized, this action will restore it to its normal size and location.
- Maximize the current application. This action maximizes the current application's window (expands it to cover the full screen). If the current application's window is already maximized, this action will restore it to its normal size and location.
- Run a program of your choosing. This action allows you to specify the name of any program you want to run automatically when you click the button or tap in the tap zone.

To customize taps and buttons, go to the Button Actions Properties Page in the Mouse Properties dialog.

Prevent Accidental Pointing While Typing

Unintentional pointer movement and accidental taps can be caused by accidentally brushing the surface of the TouchPad with your palm or another part of your hand. The results of this contact can be observed as a changing cursor location when typing, causing subsequent text to appear in the wrong place. Or text may "spontaneously" be highlighted and replaced. Most often, this unwanted pointing activity occurs when typing on the keyboard. The TouchPad can detect and prevent accidental and unwanted pointer movement while you are typing.

If you see unwanted pointer movement occurring while you are typing, you can adjust the Palm Check slider located on the Touch Properties Page in the Mouse Properties dialog. Move the slider thumb to the right towards Maximum. Now accidental brushes of your hand on the TouchPad while you are typing are more likely to be ignored.

On the other hand, in the midst of typing, you might purposefully use the TouchPad to point and click, and sometimes the TouchPad may not seem to respond. In this case, move the slider thumb to the left towards Minimum. Now pointing during typing is less likely to be interpreted as an accidental brush with the pad surface, and will not be ignored.

Scroll Through A Document without Using Scroll Bars

Virtual Scrolling allows you to perform a very common task – scrolling documents – without having to move the pointer away from your work. By simply sliding your finger up and down the right edge of the TouchPad, the contents of the current window will scroll vertically. Similarly, by sliding your finger left and right along the bottom edge of the TouchPad, the contents will scroll horizontally. You no longer need to laboriously maneuver the pointer to the small scroll bar elements; you can scroll no matter where the pointer happens to be.

Virtual Scrolling works with document windows (like word processors and spreadsheets), and it also works with file lists, font lists, and other scrollable items. As a rule, you can use Virtual Scrolling when you are working in any window that has a scroll bar.

And Virtual Scrolling does more than just make scrolling more convenient. It also can make scrolling smoother. When you scroll by dragging the scroll thumb with the mouse, many applications do not re-display the document window until you release the mouse button. Virtual Scrolling makes navigation through documents easier, because it forces the application to re-display the window contents as you scroll.

How do I use Virtual Scrolling?

To customize the Virtual Scrolling feature, go to the Scrolling Properties Page located in the Mouse Properties dialog.

Zoom In/Out and Pan on Documents

Note that zooming and panning only work in applications that support the Microsoft Intellimouse. With Intellimouse aware applications, you can zoom and/or pan to quickly maneuver your way through lengthy documents. To jump to a distant location within your document, zoom out, click on the desired location, then zoom in. To scroll horizontally and vertically at the same time, simply pan in a diagonal direction!

Move the Pointer Long Distances

Suppose you are dragging an object, scrolling at high speed (via Virtual Scrolling!), or merrily moving the pointer when you suddenly reach the edge of your TouchPad. Don't despair, the Synaptics TouchPad Edge Motion feature comes to the rescue! Edge Motion helps with long distance pointer motion. When you reach an edge of the TouchPad, the pointer (or scroll thumb when Virtual Scrolling) continues to move in the same direction until you lift your finger from the TouchPad or move your finger away from the edge.

Edge Motion speed can be pressure-sensitive or constant. Pressure-sensitive speed means that the harder you press, the faster the object or pointer moves.

You can configure the Edge Motion feature on the Edge Motion Properties Page in the Mouse Properties dialog.

Fine Tune the Pointer Movement

The Synaptics TouchPad has many additional features to help you control the way your pointer moves. Please take a look at the list of additional features.

Accessories

Your TouchPad is a productivity enhancing tool, designed for serious work. But we think it should also be fun. We have included two fun application programs that demonstrate some of the capabilities of the Touch-Pad: Pressure Graph and The Incomparable, Mysterious Synaptics MoodPad.

To run these applications, click once on the Synaptics TouchPad Icon in the Taskbar, go to the Accessories menu and select the desired application.

More About the TouchPad

The TouchPad detects your finger by capacitive sensing (it is not sensitive to heat or applied force). As your finger approaches the pad, it alters the electric field in the vicinity of the pad surface. The TouchPad sensor is just a circuit board with a matrix of conductive traces printed on the top surface. A special chip on the back side of the TouchPad continuously measures the capacitance of these traces, and thus can determine the presence and location of your finger.

To get the most out of your TouchPad, be sure that the TouchPad driver software is installed. If the Synaptics TouchPad driver is properly installed, the Mouse Properties dialog will include several TouchPad tabs along the top in addition to the standard mouse tabs.

Property Pages

The property pages allow you to customize TouchPad settings for your Notebook PC. The following pages will describe each property page with the Synaptics logo. The "Buttons", "Pointers", and "Pointer Options" pages come with Windows and should be described in Windows documentation.

Scrolling Properties Page

The Scrolling properties page allows you to customize the Virtual Scrolling capabilities of your TouchPad.

In some applications, the scroll zones which activate Virtual Scrolling can be used for zooming too.

Enabling Virtual Scrolling of the Active Window

Check the appropriate boxes on this page for the type of Virtual Scrolling that you prefer:

- Horizontal Scrolling
- Vertical Scrolling
- Coasting

Choose where you want Virtual Scrolling to occur:

- Scroll Selected Item
- OR -
- Scroll Item Under Pointer

Customizing Scroll Zone Sizes

This page includes a small map of the TouchPad with the scroll zones shaded in red. See the Scroll Zone TouchPad Map for a more detailed description.

You can adjust the size of each zone by dragging one of the black resize handles on the TouchPad map. If you are having trouble activating the Virtual Scrolling feature, you might want to try making the scroll zones wider. If you find that scrolling sometimes gets activated when you didn't mean to scroll, try narrowing the scroll zones.

Customizing Virtual Scrolling Speed

You can control the speed of Virtual Scrolling by adjusting the Scrolling Speed slider on this page. Drag the slider thumb to the right for faster scrolling.

Mouse Properties
Buttons Pointers Pointer Options O Touch O Edge Motion O Scrolling O Tap Zones O More Features O Button Actions
Synaptics TouchPad Properties - Version 5.0.104 08Dec00 Synaptics TouchPad V5.6 on PS/2 Port 3
Virtual Scrolling of Active Window
 C Scroll Selected Item C Scroll Item Under Pointer I C gasting
Practice IV Horizontal Scrolling
Sgrolling Speed (3)
Defaults
OK Cancel Apply Help

Tap Zones Properties Pages

The Tap Zones properties pages allow you to assign custom actions to taps in the Touchpad's corner zone regions (or tap zone regions).

The Synaptics TouchPad driver may also control other pointing devices attached to your system. If the Synaptics Touch-Pad driver is controlling more than one pointing device on your system, the Synaptics pages on the Mouse control panel will have a drop-down box listing all of the pointing devices that are controlled. You may set separate settings for each by selecting the appropriate device (settings which don't apply to a particular pointing device will be grayed out).

louse Properties							
Buttons Pointers Pointer Options 🗘 Touch 🗘 Edge Motion 🗘 Scrolling 😧 Tap Zones 🎝 More Features 🎝 Button Actions							
Synaptics TouchPad Properties - Version 5.0.104 08Dec00 Synaptics TouchPad V5.6 on PS/2 Port 3							
Tap Zones							
Select corner tap actions							
Menu 🗴 Maximize 💌							
Start V Minimize V							
Touchpad Patent Notification							
The Synaptics TouchPad and related software are protected by one or more of the following U.S. patents: 5374,787;5482,024;5459,077;5543,588;5543,589; 5543,581;5546,842;564,1078;566;1635,5880,411;5882,385;594,465; 5,942,733;5,943,052;6,028,271 as well as other U.S. and International patents							
Defaults							
OK Cancel Apply Help							

Customizing the Tap Zones

When the tap zones are enabled, each tap inside a corresponding tap zone region on your TouchPad can have a different meaning or action. For example, you can define the upper right corner tap zone to mean right clicks. Then when you tap your finger on the upper right corner of your TouchPad, it is as if you are clicking the right mouse or TouchPad button.

This page includes a small map of the TouchPad with the active tap zones shaded in red. Next to each zone is a text box specifying the action for that zone.

To Customize:

- 1. To activate the corner tap zones, check the box next to the text Enable Tap Zones. An unchecked box means that all taps on every part of the TouchPad surface will have left-click behavior.
- 2. To change an action for a particular zone, locate the text box nearest the zone. The text box displays the current action for this zone (for example, it might say No Zone which means that this particular zone is disabled and any taps here will produce the default left-click action). Click on the down arrow button located to the right of the text to display a list of actions. Select the desired action.
- 3. Each tap zone can be resized to be as large or as small as you desire by dragging one of the black resize handles located on the TouchPad map.

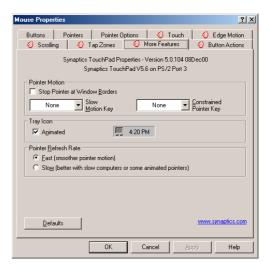
More Features Properties Page

The More Features properties page allows you to control the following features of you Synaptics TouchPad:

Stop Pointer at Window Borders

This feature constrains the pointer to stay inside the active window. When you try to move the pointer outside the window, it stops at the edge. If you try a second time, the pointer is free to leave the window.

Stopping the pointer at the window borders makes it easy to access controls that lie around the edges of windows. For example, to close or resize a window, you can casually toss the pointer in the general direction of the close box or the



edge of the window, and the pointer will stop exactly where you want it.

Snap to Default Button

This feature automatically moves the pointer to the Default Button when a dialog box appears on your screen.

Slow Motion Key

Sometimes you might need more accuracy when pointing with the TouchPad, such as in a drawing program. The speed of the pointer can make this type of accuracy difficult to obtain. To slow down the pointer movement, you can specify a slow motion key. Then, for slow pointer movement, press and hold this key as you move the pointer.

Constrained Pointer Key

At times you may want to restrict the pointer to move only horizontally or only vertically. You can specify a constrained pointer key, then press and hold this key as you move the pointer. The initial pointer direction when holding this key determines whether the pointer is constrained to move only horizontally or only vertically.

5:15 PM Synaptics TouchPad Tray Icon

The Synaptics TouchPad tray icon appears in the Windows Taskbar near the clock. You can choose between two icons:

This is the animated Touch Meter icon. The size of the dot on the touch meter indicates the amount of finger pressure. The icon turns blue while Virtual Scrolling is in progress.

This is the non-animated Synaptics logo icon.

You can access the "TouchPad Properties" dialog by double clicking on either tray icon.

5:15 PM

Button Actions Properties Page

The Button Actions properties page allows you to customize the physical buttons of your TouchPad.

Customizing Button Assignments

You can customize the TouchPad buttons in the same way that you customize the tap zones.

To Customize:

Each button has a text box that displays the current action (for example, it might say Left, which means the left-click or primary-click action). To display a list of possible actions,

click on the down arrow button located to the right of the text. Select the desired action.

ouse Propertie	5	<u>?</u>]	
Buttons	Pointers Pointer O		
🕗 Scrolling	🕗 Tap Zones	Ø More Features	
	Synaptics Touch	perties - Version 5.0.104 08Dec00 Pad V5.6 on PS/2 Port 3	
Select Action	is for Buttons		
Left Button Bight Button			
	Left 💌	Right 💌	
	2	www.synaptics.com	
<u>D</u> efault	·		

Touch Properties Page

The Touch properties page allows you to customize the tap response and sensitivity of your TouchPad.

Taps

Check the appropriate boxes in the Taps section of the Touch Properties Page for the tapping capabilities that you prefer:

- Tap to Click
- Tap and Drag
- Locking Drags

Touch Sensitivity

? × 🕗 Scrolling 📔 🤣 Tap Zones 📔 🥥 More Features 📔 🥥 Button Actions Buttons | Pointers | Pointer Options | O Touch | O Edge Motion Synaptics TouchPad Properties - Version 5.0.104 08Dec00 Synaptics TouchPad V5.6 on PS/2 Port 3 Taps Tap to Click ✓ Iap and Drag └ Locking Drags Touch Sensitivity (30) Light Touch Heavy Touch PalmCheck (4) Minimum [-] Helps to pre Disable this Device <u>D</u>efaults OK Cancel Help

Use the Touch Sensitivity slider to control how much finger pressure you must apply before the TouchPad responds. See Adjust the Overall Touch Sensitivity.

Palm Check

The Palm Check slider controls the TouchPad's detection of accidental and unwanted pointing movement. In addition to detecting palm contact with the TouchPad, the TouchPad can ignore much of the accidental and unwanted pointer movement that may occur while typing (due to accidentally contacting your Touch-Pad). See Prevent Accidental Pointing While Typing for more details.

Edge Motion Properties Page

The Edge Motion properties page allows you to customize the long distance pointer motion capabilities of your Touch-Pad. When your finger reaches the edge of your TouchPad, the Edge Motion feature allows the pointer to continue to move until you lift your finger. See Move the Pointer Long Distances for more details about the Edge Motion feature.

Enabling Edge Motion

Check the appropriate boxes on this page for the types of Edge Motion that you desire:

- When Dragging
- Always
- When Scrolling

Customizing Edge Zone Sizes

This page includes a small map of the TouchPad with the edge zones shaded in red. See the Edge Zone TouchPad Map for a more detailed description. You can adjust the size of each zone by dragging one of the black resize handles on the TouchPad map. If you are having trouble activating the Edge Motion feature, you might want to try making the edge zones wider.

Customizing Edge Motion Speed

During Edge Motion, the speed at which the pointer (or dragged object or Virtual Scrolling scroll thumb) moves can be pressure-sensitive or constant. With pressure-sensitive speed, the harder you press the faster the object or pointer moves. For this type of speed, check the box labeled Control edge motion speed with finger pressure.

If you prefer a constant speed for Edge Motion, you can adjust the speed with the Edge Motion speed slider located on this page.

Mouse Properties	?
O Scrolling O Tap Zones O More Features O Button / Buttons Pointers Pointer Options O Touch O Edge	
Synaptics TouchPad Properties - Version 5.0.104 08Dec00 Synaptics TouchPad V5.6 on PS/2 Port 3	
Edge Motion IF When Dragging IF Always IF When Scrolling	
Edge Motion Speed (3)	
Slow Fast	
	ics.com
OK Cancel Apply	Help

Frequently Asked Questions

Q: When I use Virtual Scrolling, the pointer jumps over to the scroll bar, and then jumps back where it came from when I'm done. Is this normal?

A: Yes.

- Q: Why doesn't the Virtual Scrolling feature work in some windows, even though they have a scroll bar?
- A: In order to scroll, Virtual Scrolling must be able to "see" the window's scroll bar. If the scroll bar is partially obscured by another window, or partially off the screen, then Virtual Scrolling will not activate in that window. In general, a window's scroll bar must be entirely on the screen, and fully visible, in order to use Virtual Scrolling in that window. There is an exception to this rule: Virtual Scrolling has "special knowledge" about many common types of windows, and can scroll them even if their scroll bars are not visible on the screen. A very small number of applications use nonstandard scroll bars that might not work reliably with Virtual Scrolling.
- Q: Why do some windows scroll smoothly, while others re-display their contents only occasionally as I scroll?
- A: The way a window responds to its scroll bars is entirely up to the application which owns that window. Some applications "smooth-scroll," while others wait until you release the scroll bar before updating their contents. Virtual Scrolling "knows" about many common applications and window types, and uses this knowledge to "trick" many windows into smooth-scrolling (Microsoft ® Word TM document windows, for example, do not normally smooth-scroll, but they do when you use Virtual Scrolling). If Virtual Scrolling does not "know" about a particular type of window, it still approximates smooth-scrolling by causing the window to re-display when your finger slows down or stops. This can help you more accurately scroll to the right place in a document.
- Q: Why does the scroll thumb sometimes "jump around" when I scroll, and not go exactly where the pointer is?
- A: Again, the application actually has complete control over the way the scroll thumb moves. Depending upon the window contents, some applications will actually prevent you from moving the scroll thumb to certain locations. Sometimes, the scroll thumb is only "allowed" to come to rest at one or two positions along the scroll bar! In these cases, even if you were to manually drag the scroll thumb with the pointer, you would find that it would "jump" to a final location when you released it. Virtual Scrolling, unfortunately, cannot control how applications manage their scroll bars.
- Q: Why doesn't Virtual Scrolling work properly with Microsoft Internet Explorer?
- A: Make sure you are using Internet Explorer version 4.01 or later, and that the Use Smooth Scrolling option on the Advanced page of the Internet Explorer Properties dialog is NOT checked.

- Q: When I press and hold the shift key or the control key (CTRL), the pointer movement is either very slow or restricted to move only horizontally or only vertically. What is happening?
- A: The shift keys and the control keys are special and are used for various things, such as selecting multiple files in Microsoft Windows Explorer or for zooming in and out on a spread sheet in Microsoft Excel. These keys can also be used for special pointer movement, such as for slowing the pointer down or for constraining the pointer to move only horizontally or only vertically. For example, you can assign the left shift key to be the Slow Motion Key. Then when you press and hold the left shift key, the pointer motion will be slower than usual. Note that you can still use this shift key for other special behaviors! You can still press and hold the left shift key to select multiple files in Microsoft Windows Explorer, but the pointer motion will also be a bit slower. If you see slow or constrained pointer movement when pressing shift or CTRL and you want to turn off this special behavior, go to the More Features Properties Page in the Mouse Properties dialog and uncheck the appropriate boxes.

(On selected models only)

Topics Covered:Intel® SpeedStep™ OverviewHow it WorksIT FriendlySummarySpeedStep Properties and SettingsSpeedStep Software Notes

Windows ME and 2000

Intel[®] SpeedStep[™] Overview

Most important, the new processors, rated at frequencies of 600MHz and 650MHz, will be the first to incorporate an innovative performance technology called Intel[®] SpeedStep[™] technology. Built into certain mobile Pentium III processors, this technology from Intel provides near-desktop performance with all the benefits of mobility. When connected to an AC power source, mobile Pentium III processors featuring Intel SpeedStep technology will deliver near-desktop-level performance. When working on battery, the mobile PC automatically detects the change and drops both the processor clock frequency and voltage to deliver outstanding performance without compromising battery life. This new technology will be available in the thinnest and lightest mobile PCs, so users won't have to compromise in order to enjoy the mobility they have come to expect.

How it Works

Mobile Pentium III processors featuring Intel SpeedStep technology can be switched between two performance modes—maximum performance and battery-optimized performance—either automatically or by user command. By default, mobile PCs with mobile Pentium III processors featuring Intel SpeedStep technology detect when they are plugged into or unplugged from an AC outlet. When a system is unplugged, the processor core automatically drops to 500MHz from the peak frequency of 600MHz or 650MHz. At the same time, the operating voltage of the processor drops to 1.35 volts from 1.6 volts. Plug that system back into an outlet, and the processor automatically speeds back up to peak frequency and boosts voltage to 1.6 volts.

Users can also manually adjust the Intel SpeedStep technology mode. For example, if a user needs to conduct a presentation away from an outlet, he or she can use the Intel SpeedStep technology applet to put the mobile PC into maximum performance mode. The applet is accessed via an icon in the Windows* Taskbar. When the presentation is complete, the system can be put back into battery-optimized performance mode.

When switching performance modes, Intel SpeedStep technology can reduce the active power of the processor up to 45% while maintaining up to 80% of the maximum performance. Switching voltage levels provides significant power savings, because power consumption occurs in proportion to the square of voltage. By contrast, clock frequency has a linear relationship with power consumption. The result: A slight reduction in voltage yields a significant impact on power savings. Of course, the overall impact on battery life depends on the application running and the design and components of the mobile PC.

IT Friendly

IT managers will be glad to know that Intel SpeedStep technology functionality is completely seamless. If we look under the hood, we find that Intel SpeedStep technology uses Intel[®] QuickStart technology to put the processor into "sleep" mode. The voltage level and processor frequency are then adjusted and the system awakened. The process is completely transparent to running applications and takes just one-half of a millisecond to complete—less time than the blink of an eye.

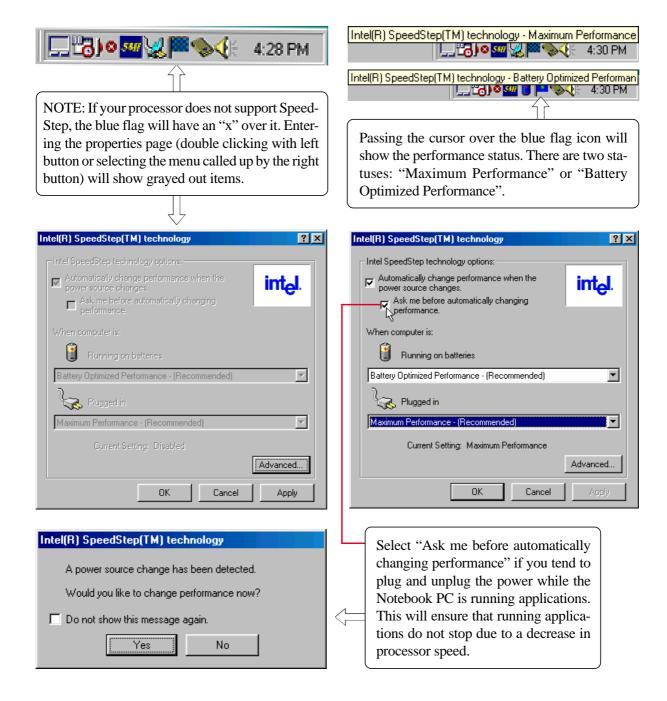
What's more, IT managers won't have to worry about implementing Intel SpeedStep technology in the enterprise. The technology works with all major operating systems, including Microsoft's Windows 95, Windows 98, Windows NT 4.0, and Windows 2000.

Summary

When the notebook is plugged in, mobile Pentium III processors run at peak clock frequency—600MHz and 650MHz for current models. When the system runs on battery power, clock rates drop to 500MHz.

- Operating voltages also switch, dropping to 1.35 volts when unplugged from 1.6 volts when running off an AC power source.
- The mode switch can be invoked automatically when systems are plugged into or unplugged from an outlet, or by user command using a simple utility.
- Mode switches occur in less than one-half a millisecond and are completely transparent to both the end user and running applications.
- Intel mobile Pentium III processors featuring Intel SpeedStep technology allow OEMs to build mobile PCs that closely match the performance and capabilities of advanced desktop systems.

SpeedStep Properties and Settings



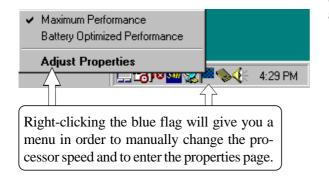
SpeedStep Properties and Settings (Cont')

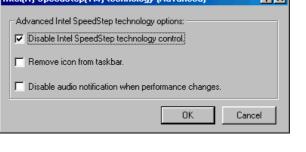
ntel(R) SpeedStep(TM) technology	
Intel SpeedStep technology options: Image: Automatically change performance when the power source changes.	
Power source changes. Ask me before automatically changing performance.	
When computer is:	
Bunning on batteries	Intel(R) SpeedStep(TM) technology (Advanced)
Battery Optimized Performance - (Recommended)	Advanced Intel SpeedStep technology options:
Battery Optimized Performance - (Recommended)	Disable Intel SpeedStep technology control
Maximum Performance - (Recommended)	E Remove icon from taskbar.
Battery Optimized Performance	Disable audio notification when performance changes.
Advanced	OK Cancel
OK Cancel Apply	

You can independently choose the performance level while "running on batteries" and when "plugged in".

Intel(R)	SpeedStep(TM) technology 🛛 🔀
?	To finish setting up your new hardware, you must restart your computer. Do you want to restart your computer now?
	Yes <u>N</u> o

You may have to restart your computer in order to activate certain settings.





Clicking "Advanced" gives you the choice to:

Disable SpeedStep - Your Notebook PC will always run at the maximum processor speed regardless of whether an AC power source is present.

Remove icon from taskbar - Removes the blue flag icon from the taskbar. You will then have to enter the properties settings through the Control Panel "Power Management" icon.

Disable audio notification when performance changes - By default, a "ping" sound is heard when speed changes. If the noise is a problem, you can disable it here.

SpeedStep Software Notes

WARNING

You are authorized and licensed to install this application and driver ONLY on a Licensed PC that has System Management Mode (SMM) BIOS support installed. This driver may permanently damage any system that does not meet these requirements. A Licensed PC is a computer which (1) is capable of seamlessly and automatically transitioning among multiple performance states (potentially operating at different efficiency ratings) based upon power source changes, end user preference, processor performance demand, and thermal conditions; and (2.) includes an Intel mobile Pentium II processor, Intel mobile Pentium III processor, or any other future Intel processors that incorporates the capability to transition between different performance states by altering some or any combination of the following processor attributes: core voltage, core frequency, bus frequency, number of processor cores available, or any other attribute that changes the efficiency (instructions/unit time-power) at which the processor operates.

The User Interface

The User Interface is accessed either from the system tray icon (a "flag") or from the power management icon in the Control Panel. If the user does not have restricted privileges (on Windows 2000 or NT4.0), the User Interface allows the user to select their processor performance level preference for when the computer is running on AC or on battery. The User Interface allows for advanced options, such as disabling the Applet. Disabling the Applet only disables the user's ability to set preferences and control transitions, it does not disable Intel SpeedStep technology in the BIOS. The Applet never issues a SetSpeedStepSetup SMI command with ECX = 0xFF to disable control. The only way to completely disable Intel SpeedStep technology is via the BIOS setup.

Restricted User limitations

With some Windows operating systems, like Windows 2000, a user account can be created that has restricted access to the operating system and its environment. While the IST Applet will run correctly, the system preferences will not be available for the user to modify. System level preferences include the ability to disable the Applet and the ability to set processor performance level preferences for AC and battery. These choices will be grayed out. User preferences will not be effected.

Over-installing

If the Intel SpeedStep technology Applet has been installed previously, we recommend that you first uninstall the Applet.

If you over-install the Intel SpeedStep technology Applet without first uninstalling, the Applet must be removed from the running task list. If the Applet is running while attempting to over-install, an error message will appear informing the user to first uninstall the Applet before proceeding. Also, the OEM configuration and user preference values stored in the Windows registry will be overwritten by the values contained in the Registry.ini file that is part of the installation package.

Uninstalling the Applet

Open **Control Panel** | **Add Remove Programs** and select the Intel SpeedStep technology Applet entry and press **Add/Remove**.

PC-cillin 2000

Topics Covered: PC-cillin 2000 Features What's New in PC-cillin 2000 Test Virus What is a Computer Virus? How Viruses Spread Virus Writers

Windows ME and 2000

Welcome to PC-cillin

Welcome to PC-cillin 2000, Trend Micro's award-winning antivirus software.

Here's what PC-cillin will do "straight out of the box":

- Checks for viruses every time you Open, Copy, Move, or Save a file
- Protects against downloading infected files from the Internet or FTP sites
- Guards against malicious Java applets and ActiveX controls while web surfing
- Monitors your Word and Excel sessions for macro viruses, using MacroTrapTM
- Scans and cleans all files on your hard drive every Friday
- Scans all program files for viruses every month Checks all your saved documents for macro viruses.

Here's what you can do with just the click of a button:

- Scan every file on your system and clean any infected files
- Scan any file from Windows Explorer or My Computer by right-clicking the file icon
- Scan floppy diskettes and clean any infected files
- Check all of your Word and Excel document(s) for macro viruses
- If you use Outlook Express 4.0 or above or Eudora Pro 4.0 or above email clients, scan your email message attachments as they are being downloaded from the POP3 email server.
- Manually scan message attachments in your local Outlook 97/98/2000 folders

No Limits

Of course, if you're a person who likes to customize your software, there is no limit to the Scan tasks you can configure PC-cillin to perform.

You can "set and forget" as many tasks as you see fit. For each task, you can select the file types you want to scan for viruses, the action PC-cillin will take upon finding a virus (Clean the infected file, Delete it, Quarantine it, Pass it, or Rename / Deny Access to it), and other program details.

Scan Engine

Viruses are detected using Trend's 32-bit, multi-threaded scan engine and a process called pattern matching. In addition to catching known viruses, PC-cillin detects and intercepts previously unknown polymorphic, or mutation, viruses.

MacroTrap

Additional layers of protection come from MacroTrapTM, Trend's macro virus scanning engine, which detects and removes both known and unknown macro viruses.

What's New in PC-cillin 2000

PC-cillin 2000 includes the following enhancements over the previous version:

- Windows 2000 Support: PC-cillin fully supports Windows 2000. Integration with the Windows installer means that you can install PC-cillin while installing other Windows components. PC-cillin is Windows 2000 compliant.
- Antivirus scanning of POP3 mail: If you use Microsoft Outlook Express 4.01 or above or Eudora Pro 4.0 or above as your email client, Trend PC-cillin 2000 will scan your email messages as they download from the POP3 server. Virus-infected attachments are stopped before they ever reach your computer!
- Virus Scanning of Local Outlook Folders: If you use Microsoft Outlook as your email client, Trend PC-cillin 2000 provides on-demand scanning of local folders for virus-infected attachments. Trend PC-cillin will automatically detect an installed copy of Microsoft Outlook on the computer and enable the user interface elements that permit the use of this feature. Please note that this feature does not scan messages stored on a Microsoft Exchange server, but only scans messages in local folders.
- Incremental Virus Pattern Download: No longer do you have to download the entire virus pattern file
 when updating your software. Trend PC-cillin 2000 supports incremental pattern updates whereby
 only the virus patterns that have changed since the last update are downloaded. This greatly reduces
 the download time, saving time and expense that you have to spend on Internet connection charges.
- PC-cillin Can Scan Virtually All Media: PC-cillin 2000 can scan the following types of drives in addition to conventional hard disk drives: CD-ROM, CD-R, CD-RW, PD, FDD, DVD, ZIP and LS120.
- PCSCAN Command Line Scanner Supports Pattern Files Larger Than 1.44 MB: Due to the large number of known computer viruses that have been identified, the virus pattern file is now too large to fit on a single 1.44 MB diskette. The emergency rescue disk creation utility can split the virus pattern file over several diskettes. Additionally, the PCSCAN command line scanner supports virus pattern files that have been spanned over more than one diskette.

What is a Computer Virus?

Simply put, a computer virus is a program that replicates. To do so, it will need to attach itself to other program files (for example, .exe, .com, .dll) and execute whenever the host program executes. Beyond simple replication, a virus almost always seeks to fulfill another purpose: to cause damage.

Called the damage routine, or payload, the destructive portion of a virus can range from overwriting critical information kept on your hard disk's partition table to scrambling the numbers in your spreadsheets to just taunting you with sounds, pictures, or obnoxious effects.

It's worth bearing in mind, however, that even without a "damage routine," viruses allowed to run unabated will continue to propagate—consuming system memory, disk space, slowing network traffic and generally degrading performance. Besides, virus code is often buggy and can also be the source of mysterious system problems that take weeks to understand. So, whether it was written to be harmful or not, a virus on your system can lead to instability and should not tolerated.

Some viruses, in conjunction with "logic bombs," do not make their presence known for months. Instead of causing damage right away, these viruses do nothing but replicate—until the preordained trigger day or event when they unleash their damage routines across the network.

To learn more about any particular virus, or about viruses in general, you can access Trend Micro's online Virus Encyclopedia that comes with the program or visit Trend Micro's web site at: http://www.antivirus.com

Test Virus

The European Institute of Computer Anti-virus Research, along with antivirus vendors, has developed a test file that can be used in checking your installation and configuration.

The file is not an actual virus; it will cause no harm and it will not replicate. Rather, it is a specially created file whose "signature" has been included in the Trend Micro virus pattern file and as such, can be detected by the virus engine.

You can download this file from: http://www.antivirus.com/vinfo/testfiles/index.htm!Internet ("http:// www.antivirus.com/vinfo/testfiles/index.htm")

Alternatively, copy the following text into a text editor and then save the file with a *.com extension.

X5O!P%@AP[4\PZX54(P^)7CC)7}\$EICAR-STANDARD-ANTIVIRUS-TEST-FILE!\$H+H*

You may need to disable real-time scanning before downloading the file. Once on your machine, you can use the test virus to see for yourself how PC-cillin's various scanning features work.

How Viruses Spread

There are many ways for a virus to enter your system:

- Email attachments
- World Wide Web (WWW) sites
- FTP traffic from the Internet (file downloads)
- Shared network files & network traffic in general
- Demonstration software
- Pirated software
- Shrink-wrapped, production programs (rare)
- Computer labs
- Electronic bulletin boards (BBS)
- Diskette swapping (using other people's diskettes for carrying data and programs back and forth)

The most likely virus entry points are email, Internet and network connections, floppy disk drives, and modems or other serial or parallel port connections. In today's increasingly interconnected workplace (Internet, intranet, shared drives, removable drives, and email), virus outbreaks now can spread faster and wider than ever before.

Virus Writers

In the typical scenario, it is an individual, working alone, who writes a virus program and then introduces it onto a single computer, network server, or the Internet. Why? Ego, revenge, sabotage, and basic disgruntlement have all been cited as motivations. Recently, do-it-yourself "virus kits" have been popping up on the Internet, and macro scripts are becoming both easier to learn and more powerful, putting the capacity to engineer viruses in the hands of nearly everyone. In other words, no single, likely profile exits by which virus writers can be described or understood.

So whatever the reason one may have for writing a virus, the important thing is to make certain your company is not victimized, that your data you are responsible for is safe, and that precious time is not wasted hunting down (and cleaning up after) viruses. Scan Macro scans Microsoft Word, Excel, and template files on local disks (includes floppy disk driver). You cannot select folders for this scan option.

When you click Scan Macro button, all local disks will be scanned. If there is any network disk assigned, it will be scanned too. Network disk device will be scanned after finishing all local disk scanning.

You can setup actions on virus found in the Manual Scan Configure window. If you select one of the Clean, Delete, Rename, or Move action, the action which you selected will be processed automatically, cannot be terminated. If you select Access Denied, PC-cillin 98 will not process to the infected file.

Scan Window

While scanning, PC-cillin 98 displays the Scan Window. This window shows information, such as: scan status, detected virus and file name.

If you set the Action on Virus Found option to Clean, Delete, Rename, or Move, 4 buttons in the middle become disable.

If you select Access Denied in the Action on Virus Found option, these 4 buttons become active when PCcillin 98 detect viruses. Select the infected file, then click the button you want to process to the file.

Manual Scan

Set up the scan target files of manual scan, and actions to be taken when viruses detected on this window.

Hotkey Utility

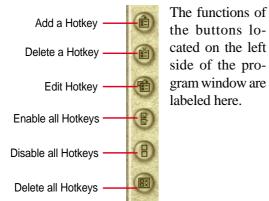
_

Topics Covered: ASUS Hotkey Buttons Hotkey Actions Add "Run Program" Procedure

Windows ME and 2000

ASUS Hotkey

Buttons



Delete a Hotkey

Highlight a Hotkey and click this button to delete it from the current category.



If you did not select a Hotkey, a message will show:



Delete all Hotkeys

Deletes all Hotkeys in the current category. This confirmation will be shown:



Add a Hotkey

You can assign three Hotkeys to the two preset by the utility for a maximum of five. If you don't use the two preset, you can delete them for your own applications.

When you choose to add a hotkey, you can specify a key by pressing that key or key combination in the Hotkey box (the <Fn> key cannot be entered and will be automatically added to the "Notebook Fn Hotkey" category). The available Hotkey actions for assignment are shown in the "Hotkey Action" pull down.

	Add Fn Hotkey	
Hotkey	Fn+5	
Hotkey Action	Run Program	3
	Show Normal Size	1
Program Path	Restore Log Off	
	Shut Down	的一般的问题
	Reboot	Browse
	Run Explorer	1.1
a columnation of the second second	Run Browser	and in case of the local division in
	Run Program	•

If you already have five hotkey settings, you will get this message.



Edit a Hotkey

Highlight a Hotkey and click this button to change its Hotkey or action.

You can enter any information just like adding a Hotkey.



ASUS Hotkey (Cont')

Fn Hotkey	Action	Parameter
S1	Run Program	explorer
S2	Run Program	control desk.cpl
▼ \$3	Run Program	Test 1
🖉 🗹 S4	Run Program	Test 2
S5	Run Program	Test 3
友		
)		
S24		

Enable all Hotkeys

Enables all Hotkeys by placing check marks in front of the Hotkeys in the current category.

Fn Hotkey					
•	S1				
•	S2				
<	S3				
<	S4				
~	S5				

Disable all Hotkeys

Disables all Hotkeys by removing check marks from the front of the Hotkeys in the current category.

Fn Hotkey
S1
🗌 S2
🗌 S3
🗌 S4
🗌 S5

Hotkey Actions

Actions	Descriptions	Examples (of action)		
None:	Performs no action			
Move Window To Left:	Moves the active window left between 1-50 steps			
Move Window To Up:	Moves the active window up between 1-50 steps			
Move Window To Right:	Moves the active window right between 1-50 steps			

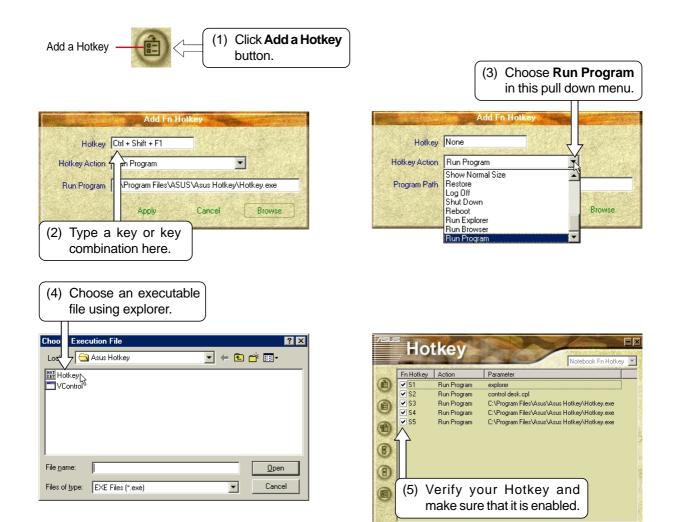
Actions	Descriptions	Examples (of action)
Move Window To Below:	Moves the active window down between 1-50 steps	
Extend Window From Left:	Stretches the active window left between 1-50 steps	My Computer Eile Edit Yew Go Fayoni The payon is a fayon i
Extend Window From Up:	Stretches the active window up between 1-50 steps	Image: Second
Extend Window From Right:	Stretches the active window right between 1-50 steps	Image: Second
Extend Window From Below:	Stretches the active window down between 1-50 steps	Image: Second
Shrink Window from Left:	Shrinks the active window from the left between 1-50 steps	My Computer Eile Edit Yew Go Fayoni Image: Second S
Shrink Window from Up:	Shrinks the active window from the top between 1-50 steps	My Computer Plan Lat Yow Go Fgrowt ? Stringe (A) Latoo (C) Data (D) Y
Shrink Window From Right:	Shrinks the active window from the right between 1-50 steps	My Computer File Edt Yiew So Yiew So
Shrink Window From Below:	Shrinks the active window from the bottom between 1-50 steps	My Computer

Actions	Descriptions	Examples (of action)		
Minimize Window:	Minimizes the active window	Minimize		
Maximize Window:	Maximizes the active window	Maximize		
Show Normal Size:	Shows the active window in normal size (user adjustable)	Hor Computer More Computer More Computer More Computer More Computer Service()		
Restore:	Restores a minimized window to its previous size.			
Log Off:	Logs the current user OFF from the current Windows session and any connected networks.	Log Off Guest Shut Down Start		
Shut Down:	Exits from Windows and turns OFF the Notebook PC.	Shut Down Window Image: Computer to do? What do you want the computer to do? Image: Computer to do? First down Image: Computer to do? First you areasin and thus down Windows so that you can addy turn of power. Image: Computer to down. OK Cancel Heb		
Reboot:	Restarts the Notebook PC	Shut Down Windows X What do you want the computer to do? Image: Computer to do? Image: Computer to do and the computer to do and states Image: Computer to do and states OK Cancel Help		
Run Explorer:	Runs Windows Explorer	 Notepad Windows Explorer Windows Movie Maker 		
Run Browser:	Runs the Internet Browser	 Internet Explorer Outlook Express Windows Media Player 		
Run Program:	Runs a user defined program			

ASUS Hotkey (Cont')

Adding a Program to Run

To add a Hotkey to run a program follow the steps below.



Windows Flash Utility (WINFLASH)

Topics Covered: Updating Your BIOS Resetting Your BIOS

Windows ME and 2000

Updating Your BIOS

If you ever hear "resetting your BIOS", it entails pressing [F2] on bootup to enter BIOS setup and then selecting Load Setup Defaults on the "Exit" menu.

**	Windows Update							
s 📾	Programs	•	(Accessories	۲			
ti E		_	(initial)	Online Services	۲			
findows///c Millennium Edition	Documents	•	(]	StartUp	۲			
E R.			e	Internet Explorer				
mi 🕅	<u>S</u> ettings	,	٤.	Outlook Express				
E 👧	Sear <u>c</u> h	•		Windows Media Player				
			(init)	Asus Hotkey	۲			
1	Help		(initial)	Asus M1 series	۲			
Š ፹	Run		()	ASUS Utility	۲			
<u>v</u> <u>a</u>	<u></u>		(initial)	Commuter Utility	۲			
6	Log Off Doc		Ē	Trend PC-cillin 2000	۲			
2 📟	209 01 0 00		Ē.	WINFLASH V1.0	Þ	P	WINFLASH V1.	0
50	Shut Down							
Start	🖸 🥴 🗳 🕨							

To run **WINFLASH**, access the program shortcut through the **Start** button.

🟉 BIOS Flash f	ior Win9X/WinME/Win2K	×
WinF	lash	
Version: ASL		
Model: M10 Version: ASL	rmation MINDOVVS'DesktopW1A0102G.002 300A US M1000 ACPI BIOS Revision 0102g 08/2001	.002
Reserve DMI	data in Flash ROM	
Erase ROM		
Flash ROM		
Verify ROM		
Message BIOS image form update BIOS ROM	at is correct, you can press [Flash] b M	utton to Flash
		EXIT

Compare the BIOS ROM (your current BIOS) to the BIOS image (the new BIOS). If this is correct, click **Flash** to write the new BIOS to your Notebook PC. If necessary select "Reserve DMI data in Flash ROM" if there are information added to the DMI. If you don't know, leave it unselected.

Resetting Your BIOS

If you ever hear "reset your BIOS", it entails pressing **[F2]** on bootup to enter BIOS setup and selecting **Load Setup Defaults**, and then **Exit Saving Changes** on the "Exit" menu.





When you enter WINFLASH, you will be immediately asked for the BIOS image file. Browse to the file and click **Open**.

BIOS Flash for Win9X/WinME/Win2K			
Win	Flash		
	Intel 82802AB		
	M1000A ASUS M1000 ACPI BIOS Revision 0100g 02/02/2001		
BIOS Image Information			
File Name:	C:WVINDOW/S\Desktop\M1A0102G.002		
Model:	M1000A		
Version:	ASUS M1000 ACPI BIOS Revision 0102g.002		
Date:	03/08/2001		
Reserve	DMI data in Flash ROM		
Erase ROM	100%		
Flash ROM	100%		
Verify ROM	100%		
Message EEPROM has been flashed successfully. Please press the [EXIT] button to exit. Rebott the computer and then press [F2] key to enter BIOS Setup. Reset the new BIOS and then exit.			
	EXIT		

Click **Exit** when done. You need to restart your Notebook PC and "reset your BIOS". See instructions below.

ASUS PC Probe

Topics Covered: Starting ASUS PC Probe Using PC Probe Monitoring ASUS PC Probe Task Bar Icon

Windows ME and 2000

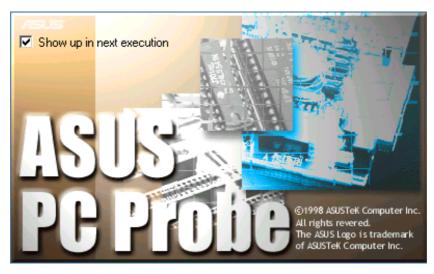
Welcome to ASUS PC Probe

ASUS PC Probe is a convenient utility to continuously monitor your computer system's vital components, such as fan rotations, voltages, and temperatures. It also has a utility that lets you review useful information about your computer, such as hard disk space, memory usage, and CPU type, CPU speed, and internal/external frequencies through the DMI Explorer.

Starting ASUS PC Probe

If the ASUS Probe icon (magnifying glass) is not shown on the taskbar (see below), click the Windows **Start** button, point to **Programs**, and then **ASUS Utility**, and then click **Probe VX.XX**.

When ASUS PC Probe starts, a splash screen appears allowing you to select whether to show the screen again when you open PC Probe or not. To bypass this startup screen, clear the **Show up in next execution** check box.



The PC Probe icon kill appear on the taskbar's system tray indicating that ASUS PC Probe is running. Clicking the icon once will allow open the PC Probe interface.

Using ASUS PC Probe

Monitoring



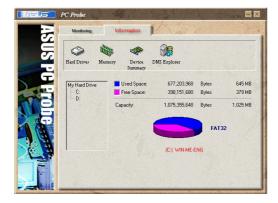
Monitor Summary

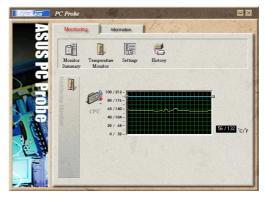
Shows a summary of the items being monitored.



Settings

Lets you set threshold levels and polling intervals or refresh times of the PC's temperature, fan rotation, and voltages.





Temperature Monitor Shows the PC's temperature.



History

Lets you record the temperature monitoring activity by date, time, and target history. Click the record button and select a date. To view a previous recording, simply choose that date.

Information

Hard Drives

Shows the used and free space of the PC's hard disk drives and the file allocation table or file system used.

More Hard Drives

Information on other hard drives can be accessed by clicking on the relevant drive letter.



Memory

Shows the PC's memory load, memory usage, and paging file usage.



DMI Explorer

Shows information pertinent to the PC, such as CPU type, CPU speed, and internal/external frequencies, and memory size.

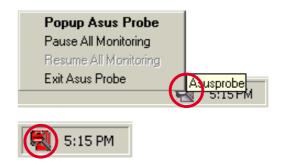
ASUS PC Probe Task Bar Icon

Right clicking the PC Probe icon will bring up a menu to open or exit ASUS PC Probe and pause or resume all system monitoring.

When the ASUS PC Probe senses a problem with your PC, portions of the ASUS PC Probe icon changes to red and the PC speaker makes clicking noises.



Device Summary Shows a summary of devices in your PC.



NOTE: PC Probe will constantly use resources to check the system status while Windows is operating. It is suggested to exit PC Probe while using high demanding applications.

Appendix

_

Topics Covered: Communication Regulations Declaration Of Conformity

Modem Communication Regulations

FCC Regulations

The following statements are provided in accordance with the Federal Communications Commission (FCC) regulations. Please read these statements carefully before installing your modem.

FCC Part 68 Requirements

This equipment complies with Part 68 of the FCC Rules. On the bottom of this equipment is a label that contains, among other information, the FCC Registration Number and Ringer Equivalence Number (REN) for this equipment. If requested, this information must be given to the telephone company.

The REN is used to determine the maximum number of devices connected to your telephone line that will ring in response to an incoming call. In most, but not all, areas, the total REN of devices connected to a line should not exceed five (5.0). To find out the total permitted in your area, contact your local telephone company.

If your telephone equipment causes harm to the telephone network, the telephone company can discontinue your service temporarily. If possible, the company will notify you in advance. But if advance notice isn't practical, you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC.

Your telephone company can make changes in its facilities, equipment, operations, or procedures that could affect the operation of your equipment. If so, you will be notified in advance so you can make the changes needed to maintain uninterrupted service.

If you experience trouble with this equipment, please contact the manufacturer at the address given in this manual. The telephone company may ask that you disconnect this equipment from the network until the problem has been corrected or until you are sure that the equipment in is not malfunctioning.

This equipment may not be used on public coin service provided by the telephone company. Connection to party lines is subject to state tariffs.

Modem Declaration Of Conformity

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio and television reception, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING! CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT

Canadian Department Of Communications (CDOC):

Notice: The Canadian Department of Communications label identifies certified equipment. This certification means the equipment meets certain telecommunications network requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment users should ensure that connection to the line is allowed by the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a telephone extension cord. Compliance with the above conditions may not prevent degradation of service in certain situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

WARNING! Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.
