Ergo

Preceptor 601

laptop PC

user guide

Ergo Computing

Based in Nottingham, Ergo Computing is the UK's largest independent provider of IT solutions to public sector and corporate clients seeking high-quality, innovative approaches to mobile computing challenges, flexible working, IT security and robust devices.

With a robotics-centred facility at the forefront of UK mobile computer manufacturing, Ergo offers unrivalled service and support. Ergo's experience includes delivering thousands of tough laptop PCs into the DfES's Laptops for Teachers initiative and the National University Notebook contract, presence on OGC's Catalist and NHScatIT accredited supplier lists, and the creation of a 1,000-user field engineer mobile information terminal.

Close partnerships with major IT players like Intel and Microsoft ensure that Ergo supplies the latest technology as well as implementing landmark products such as Microsoft Small Business Server. ▲

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Using the Preceptor 601

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About this guide

This User Guide provides information on the various features and component parts of the Ergo Preceptor 601 laptop PC and how to use them. The Guide is arranged in the following way:

The Preceptor 601
Introduces you to the laptop and its various features..

Getting Started
Helps you get started when you receive your laptop.

Using the Preceptor 601
Gives you information on using the laptop's features and components.

Appendix
Introduces you to optional accessories and gives additional information and safety advice.

Note
The following identification symbols are used throughout this guide:

WARNING! Information to prevent
damage to components, damage to data, or personal injury.

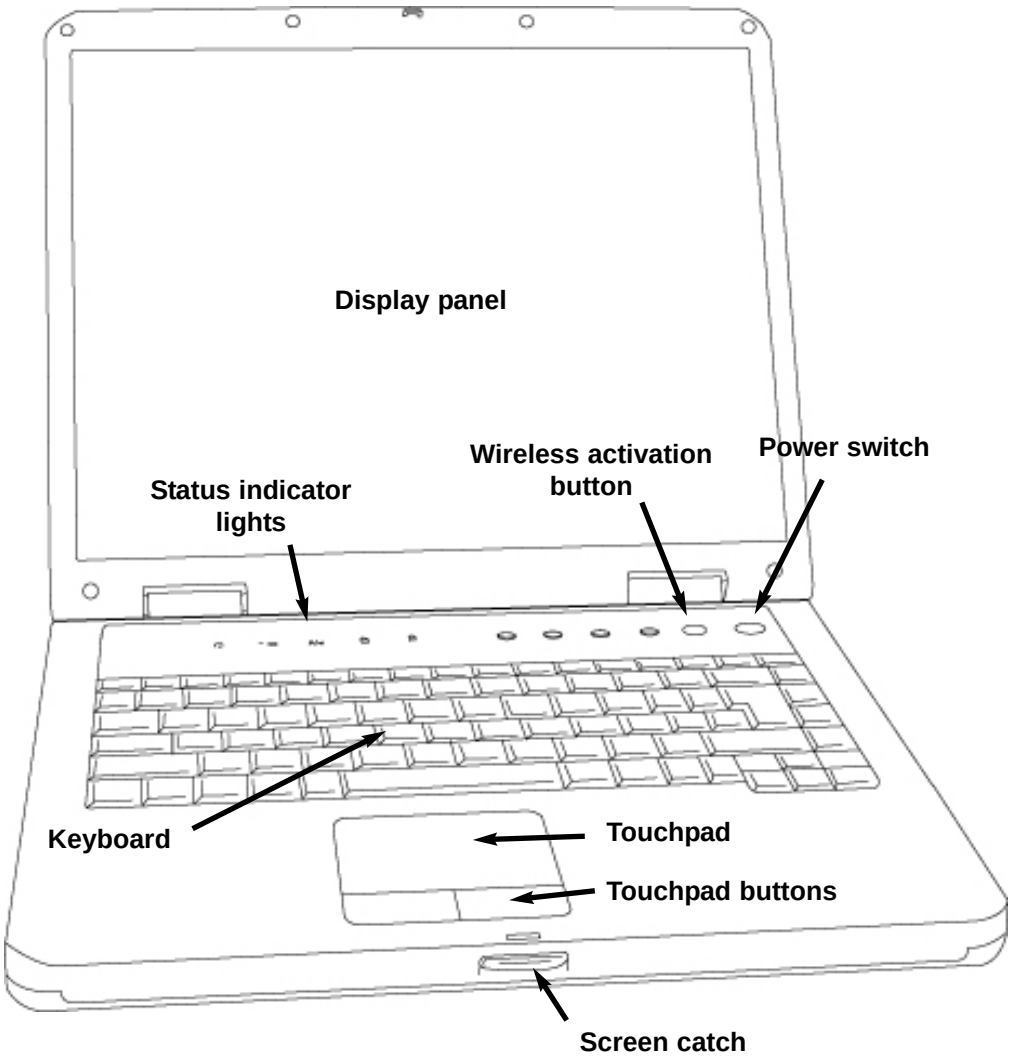
Notes, tips and additional information.

Text enclosed in [ ] represents a key on the keyboard; do not actually type the bracket.

The small symbols that appear beside some of the text represent symbols thet are etched into the laptop case to identify its various ports and slots.

Top side

Refer to the diagram below to identify the components on the top side of the laptop PC:



The various components identified in the diagram are described below:

Display panel

Opening the display panel

A spring-loaded latch on the front of the laptop locks the display panel in the closed position when it is not in use. To open the display panel, gently push the button inwards with a fingertip and lift up the display panel with the other hand. Slowly tilt the display panel forward or backward to achieve a comfortable viewing angle.

WARNING! When opening, do not force the display panel beyond the horizontal position or else the hinges may break! Never lift the laptop by its display panel!

Display panel function

The display panel functions the same as a desktop monitor. The Laptop uses an active matrix TFT LCD, which provides excellent viewing like that of desktop monitors. However, unlike desktop CRT monitors, the LCD panel does not produce any radiation or flickering, so it is easier on the eyes.

Display panel care

The LCD screen is very delicate and requires careful handling. Pay attention to the following precautions:

- When not in use, keep the display panel closed to prevent dust accumulation.
- Do not use chemical cleaners on the screen. Wipe only with a dry cloth or tissue.
- Do not put your fingers or any objects directly on the screen.
- Do not press or lay any objects on the machine when it is closed.
- Do not carry the laptop along with small or sharp objects (e.g. paper clips or staples) that may enter the laptop and scratch the display panel.

Power switch

Push the power switch once to turn ON and once to turn OFF the laptop. The switch is backlit while the laptop is on. Should the laptop freeze, pressing the power switch for five seconds will turn it off. Pressing the power switch briefly will also wake the laptop from standby mode (*see below, page 19*).

The keyboard

The keyboard provides full-sized keys with comfortable travel (the depth to which the keys can be depressed) and palm rest for both hands. Two Windows® function keys are provided to help ease navigation in the Microsoft® Windows® operating system. *See page 21* for further details of the functions of the various keys.

An external keyboard can be attached to the laptop either via the PS/2 port or a USB connection.

Touchpad and buttons

The touchpad with its buttons is a pointing device that provides the same functions as a desktop mouse. A software-controlled scrolling function is available after setting up the included touchpad utility to allow easy Windows® or web navigation.

An external mouse can be attached to the laptop either via the PS/2 port or a USB connection.

Status indicator lights

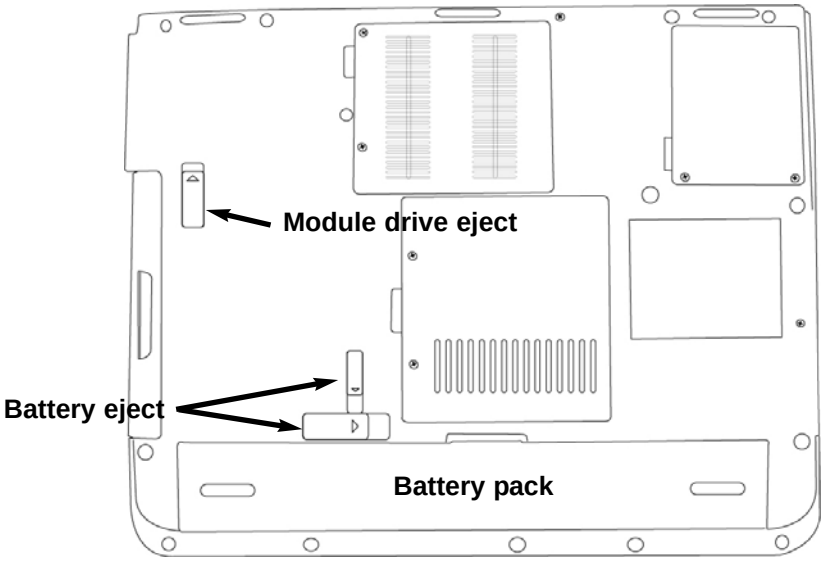
The various functions of the status indicator lights are described below on *page 23*.

Wireless network activation button

Pressing this button turns the wireless network card ON or OFF as required.

Underside

Refer to the diagram below to identify the components on the underside of the laptop PC:



WARNING! The underside of the laptop can get very hot. Be careful when handling it while it is in operation or has recently been in operation. High temperatures are normal during charging or operation. TO AVOID INJURY FROM THE HEAT, DO NOT PUT THE DEVICE ON THE LAP OR OTHER PARTS OF THE BODY.

Battery eject

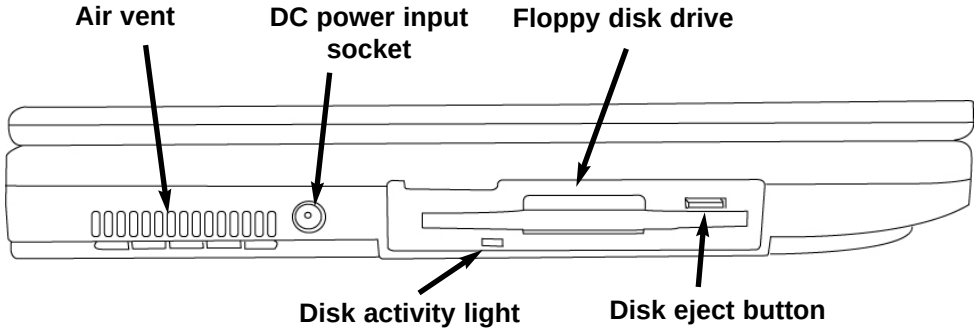
The battery is held by a double lock arrangement. The smaller sliding latch frees the spring-loaded latch which, when slid towards the unlocked symbol partially eject the battery pack. The battery pack is automatically locked in place when inserted. Usage details are described in the battery section later in this manual.

Battery pack

The battery pack is combined with the laptop's under-surface in order to reduce thickness. When the battery is released, the surface and battery pack will be seen as a single unit. The battery pack cannot be further disassembled and must be replaced as a single unit.

Left side

Refer to the diagram below to identify the components on the left side of the laptop.



Floppy disk drive

Gently push a 3.5” floppy disk into the slot until it clicks into place. Do not use brute force to push the disk in — it may be the wrong way up or wrongly aligned. The ejector button will automatically protrude. To eject the disk, push the ejector button inwards and the disk will spring partly out of the slot. The activity light will be illuminated when the disk is in use. Do not eject while the light is illuminated — you may damage the disk and its contents.

Air vent and cooling fan

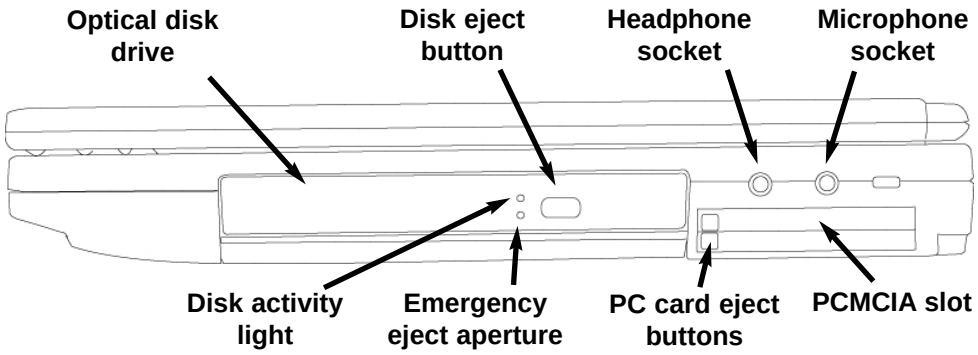
The cooling fan turns ON when the temperature of the CPU rises past a set threshold. You may hear it briefly run at start up. The air vents allow cool air to enter and warm air to exit the laptop. Do not block the air vents or else overheating may occur. The laptop will automatically shut down if overheating does occur, but this should be avoided.

DC power input socket

The supplied power adapter converts AC power to DC power for use with this jack. Power supplied through this jack supplies power to the laptop and charges the internal battery pack. To prevent damage to the laptop and battery pack, always use the supplied power adapter.

Right side

Refer to the diagram below to identify the components on the right side of the laptop.



PC card (PCMCIA) slot

A PCMCIA 2.1 compliant slot is available to support two type II PC cards or one type III. This allows accommodation of laptop PC expansion options such as memory cards, ISDN, SCSI, Smart Cards, and wireless network adapters.

Optical disk drive

The CD/DVD-ROM eject is an electronic eject button for opening the tray. You can also eject the CD/DVD through the software CD/DVD player or by right clicking the CD/DVD drive in Windows™ "My Computer." Insert a length of straight wire (e.g. a straightened paper-clip) into the emergency eject aperture to eject a CD/DVD if the electronic eject does not work. Do not use this method routinely as it can cause damage.

Microphone jack

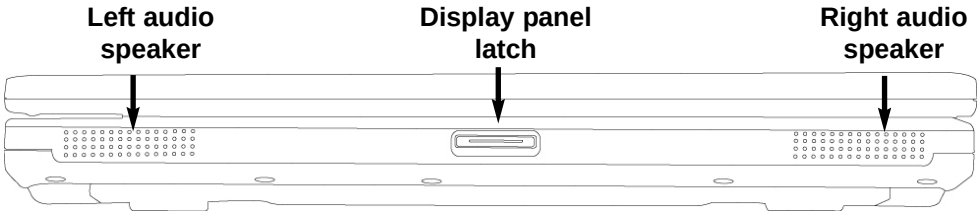
The microphone jack can be used to connect an external microphone or output signals from audio devices.

Headphone jack

The stereo headphone jack is used to connect the laptop's audio out signal to amplified speakers or headphones. Using this jack automatically disables the built-in speakers.

Front side

Refer to the diagram below to identify the components on the front side of the laptop.



Audio speakers (left and right)

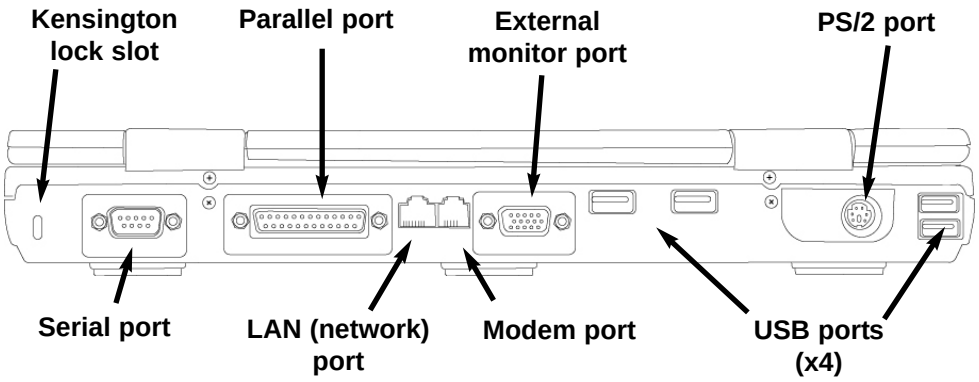
The built-in speakers allow you to hear audio without additional attachments. The multimedia sound system features an integrated digital audio controller that produces rich, vibrant sound in high quality 16-bit stereo (when used with external stereo headphones or speakers). All audio features are software controlled.

Screen catch

The screen catch is used to lock the display panel in the closed position. To release the panel, push the catch inwards.

Rear side

Refer to the diagram below to identify the components on the rear side of the laptop.



Kensington lock slot

The Kensington® lock port allows the laptop to be secured using Kensington® compatible laptop PC security products. These security products usually include a metal cable and lock that prevent the Preceptor 601 from being removed from a fixed object. Some security products may also include a motion detector to sound an alarm when moved.

Serial port

The nine-pin serial port can be used to connect a variety of compatible devices (e.g. modems, mice and printers) to the laptop. Few if any devices are manufactured these days that require this connection, but it is useful when using older (legacy) devices.

Parallel port

The 25-pin D-sub parallel/printer port supports parallel devices such as printers, hard drives, removable drives, or scanners. Most new devices these days use USB connections, but many printers still offer a parallel option.

LAN port

The RJ-45 LAN port supports an RJ-45 Ethernet cable. The internal LAN supports 10Base-T or 100Base-TX standard or duplex networks.

Modem port

The RJ-11 telephone port supports an RJ-11 telephone cable. The internal modem supports up to 56K V.90 transfers.

WARNING! The built-in modem does not support the voltage used in digital phone systems. Do not connect the modem port to a digital phone system — the laptop may be damaged.

USB ports

Universal Serial Bus (USB) supports many USB compatible devices such as keyboards, pointing devices, still and video digital cameras, modems, hard disk drives, printers, monitors, and scanners connected in a series up to 12Mbits/sec.

USB allows up to 127 devices to run simultaneously on a single computer, with some peripherals such as USB keyboards and some newer monitors acting as additional plug-in sites or hubs.

USB supports hot-swapping of devices so that peripherals can be connected or disconnected while the Laptop PC is ON.

External monitor port

The 15-pin D-sub monitor port supports a standard VGA-compatible device such as a monitor or projector to allow viewing on a larger external display.

PS/2 port

A 6-pin port that supports an external mouse or keyboard.

Operating system

The Preceptor will normally be preinstalled with an edition of the Microsoft® Windows® XP operating system. Levels of hardware and software support may vary depending on the installed operating system and its version. Operating systems not pre-installed on this laptop may produce different results than the ones described in this guide. The stability and compatibility of other operating systems cannot be guaranteed.

Support software

Support CD

The Preceptor 601 laptop is delivered with a support CD that provides BIOS, drivers and applications to enable hardware features, extend functionality, help manage your laptop, or add functionality not provided by the native operating system.

If updates or replacement of the support CD is necessary, connect to the Ergo Computing web site (http://www.ergo.co.uk/support).

The support CD contains all drivers, utilities and software for all popular operating systems including those that have been pre-installed. The support CD does not include the operating system itself. The support CD is necessary even if your laptop came pre-configured. It will provide additional software not included as part of the factory pre-install.

Recovery CD (optional)

A recovery CD is optional and includes an image of all the drivers and utilities included on the factory-installed hard drive as well as the operating system itself. The recovery CD provides a comprehensive recovery solution that quickly restores the laptop's operating system and software to its original working state provided that your hard disk drive is in good working order. Contact Ergo Computing if you require such a solution.

Power

Your Preceptor 601 comes with a universal AC-DC adapter. That means that you may connect the power cord to any 110V-120V as well as 220V-240V outlet without setting switches or using power converters.

Different countries may require that an adapter be used to connect the provided AC power cord to a different socket. Many hotels will provide universal outlets to support different power cords as well as voltages.

TIP: You can buy travel kits that include power and modem adapters for almost every country.

With the AC power cord connected to the AC-DC converter, connect the AC power cord to an AC outlet (preferably with surge-protection) and then connect the DC plug to the laptop.

Connecting the AC-DC adapter to the AC outlet first allows you to test the AC outlet's power and the AC-DC converter itself for compatibility problems before connecting the DC power to the laptop. The green power LED on the adapter lights up if the power is within accepted ranges.

WARNING! Damage may occur if you use a different adapter to power the Preceptor 601 or use the laptop's adapter to power other electrical devices. If you notice smoke, a burning smell or extreme heat coming from the AC-DC adapter, disconnect the power supply and seek technical help. In any case, call technical support if you suspect that your AC-DC adapter is faulty in any way. You could damage both your battery pack and the laptop with a faulty AC-DC adapter.

NOTE: When using the three-pin plug provided, to ensure safe operation of the laptop.you must use a grounded AC outlet or use a properly grounded adapter.

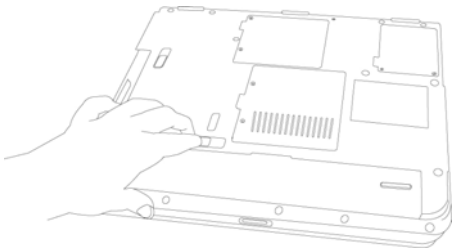
Using the battery pack

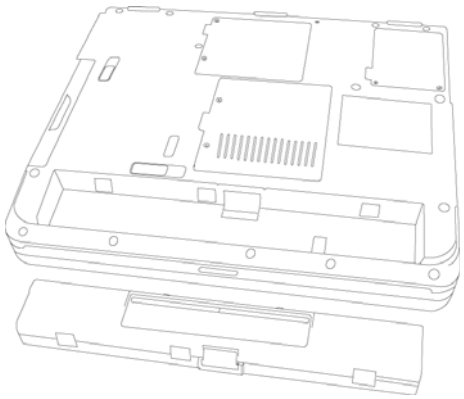
WARNING! Only use the battery pack and power adapter supplied with this laptop or devices specifically approved by Ergo Computing for use with this model.

Installing and removing the battery pack

To remove the battery pack:

1. Slide the Battery Lock Release to unlock
2. Push the Battery Release latch sideways. .
3. Lift the edge of the battery pack upwards and towards you.





To install the battery pack:

Insert the battery pack rear edge first and lower the front edge until it clicks into place.

WARNING! Never attempt to remove the battery pack while the laptop is turned ON, as this may result in the loss of working data.

Charging the battery pack

Before you use your Preceptor 601 on the road, you will have to charge the battery pack. The battery pack begins to charge as soon as the laptop is connected to external power. The battery will charge more quickly if the laptop is OFF, but it is perfectly normal to use the laptop while charging the battery.

Fully charge the battery pack before using it for the first time. A new battery pack must completely charge (the charge indicator light must be green) before the laptop is disconnected from external power.

When the battery power is low, the battery power LED will blink. It takes a few hours to fully charge the battery when the laptop is turned OFF and may take twice the time when it is turned ON. Whilst the battery is charging the indicator light glows ORANGE. It turns GREEN when the battery pack is fully charged.

Battery care

The Preceptor’s battery pack, like all rechargeable batteries, has a limit on the number times it can be recharged. If the battery is fully drained and charged once a day every day it will last about a year, but how long beyond that will depend on your environment temperature, humidity, and how your laptop is used.

Ideally the battery should be used in a temperature range between 10°C and 29°C (50°F and 85°F). You must also take into account that the laptop’s internal temperature is higher than the outside temperature. Any temperatures above or below this range will shorten the life of the battery.

In any case, the battery pack's usage time will eventually decrease and a new battery pack should be purchased from Ergo Computing. Because batteries also have a limited shelf life, it is not recommended that you buy extras in advance for storing.

Powering ON the laptop

The Laptop PC's power-ON message appears on the screen followed by a short beep when you turn it ON. If necessary, you may adjust the brightness by using the hot keys. If you need to run the BIOS Setup to set or modify the system configuration, press [F2] upon bootup to enter the BIOS Setup. If you press [Tab] during the splash screen, standard boot information such as the BIOS version can be seen. Press [ESC] and you will be presented with a boot menu with selections to boot from your available drives.

NOTE: Before bootup, the display panel flashes when the power is turned ON. This is part of the Laptop PC's test routine and is not a problem with the display.

The power-on self test

When you turn ON the Preceptor 601, it will first run through a series of software-controlled diagnostic tests called the Power-On Self Test (POST).

The software that controls the POST is installed as a permanent part of the laptop's architecture. The POST includes a record of the laptop's hardware configuration, which is used to make a diagnostic check of the system. This record is created by using the BIOS Setup program. If the POST discovers a difference between the record and the existing hardware, it will display a message on the screen prompting you to correct the conflict by running BIOS Setup. In most cases the record should be correct when you receive the Laptop PC. When the test is finished, you may get a message reporting "No operating system found" if the hard disk was not preloaded with an operating system. This indicates that the hard disk is correctly detected and ready for the installation of a new operating system.

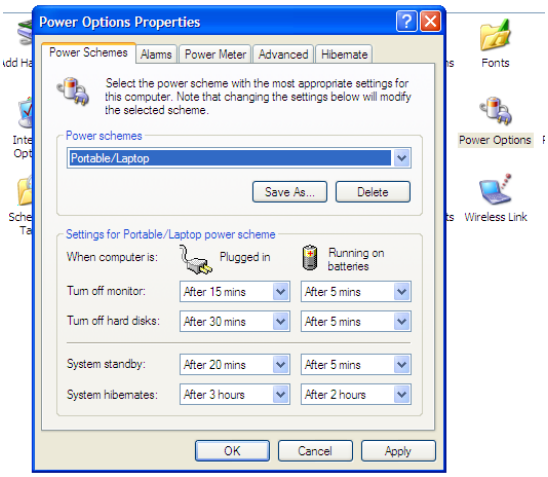
The S.M.A.R.T. (Self Monitoring and Reporting Technology) checks the hard disk drive during POST and gives a warning message if the hard disk drive requires servicing. If any critical hard disk drive warning is given during bootup, backup your data immediately and run Windows disk checking program. To run Window's disk checking program: (1) right-click any hard disk drive icon in **My Computer**, (2) choose **Properties**, (3) click the **Tools** tab, (4) click **Check Now**, (5) select a hard disk drive, (6) select **Thorough** to also check for physical damages, and (7) click **Start**.

Third party disk utilities such as Symantec's Norton Disk Doctor can also perform the same functions but with greater ease and more features.

WARNING! If warnings are still given during bootup after running a software disk checking utility, you should call Ergo Support helpdesk. Continued use may result in data loss.

Power management — stand by and hibernate

Power management settings (Power Options) can be found in the Windows® control panel. The following shows the power options properties in Microsoft® Windows® XP Professional:



You can use Power Options to match the most efficient power consumption with your use of the laptop, setting the amount of time that elapses between the last activity and power-saving functions such as turning off the display, powering down the hard disk, going into Stand By mode or Hibernation.

Stand by and Hibernate modes save power when the laptop is not in use by turning OFF certain components. When you resume your work, your last status (such as a document scrolled down half way or email typed half way) will reappear as if you never left. On the other hand, Power Off will close all applications and ask if you want to save your work if any are not saved.

Stand By is the same as Suspend-to-RAM (STR). This function stores your current data and status in RAM while many components are turned OFF. Because RAM is volatile, it requires power to keep (refresh) the data. Hibernate is the same as Suspend-to-Disk (STD) and stores your current data and status on the hard disk drive. By doing this, RAM does not have to be refreshed and power consumption is greatly reduced but not completely eliminated because certain wake-up components like LAN and the modem need to remain powered.

If the laptop is in any power-saving mode, it will wake if any key is pressed or the touchpad activated.

Restarting or rebooting

After making changes to your operating system, you may be prompted to restart the system. Some installation processes will provide a dialog box to allow restart. To restart the system manually:

Click the **Start** button and select **Shut Down** and choose **Restart**.

In case the operating system hangs (stops, freezes, crashes), try a "warm boot" by pressing the [Ctrl][Alt][Del] keys simultaneously. (You may try a few times.)

Powering OFF the laptop

In Windows XP, the laptop should normally be powered OFF by using **Start** / **Shut Down** / **Shut Down**, or by pressing the power button briefly.

If the operating system hangs, you can shut down by pressing the OFF button for five seconds.

WARNING! Never turn OFF or reset your laptop while the hard disk or floppy disk is in use and the activity LED is flashing; doing so can result in loss or destruction of your data. To protect the hard disk drive, always wait at least 5 seconds after turning OFF your Laptop PC before turning it back ON.

"Hot Keys"

The following diagrams identify the commands associated with the "hot keys" on the Preceptor's keyboard. The commands can only be accessed by first pressing and holding the function key [Fn] while pressing a key bearing a coloured icon.

	**"Z" Icon**	Places the laptop in suspend mode (either Save-to-RAM or Save-to-Disk depending on sleep button action setting in power management setup.
	**Touchpad Icon**	Enables/disables the laptop touchpad.
	**Closed sun icon**	Decreases the display brightness
	**Open sun icon**	Increases the display brightness
	**LCD/monitor icon**	Toggles between the laptop's LCD display and an external monitor.
	**LCD toggle icon**	Toggles the display panel ON and OFF.
	**Speaker icon**	Toggles the speakers ON and OFF.
	**Down speaker icon**	Decreases the speaker volume.
	**Up speaker icon**	Increases the speaker volume.

NOTE: Hot Keys work only on the laptop's built-in keyboard and not on any externally-connected keyboards.

Del Scr Lk	**Scroll lock key**	Toggles the "scroll lock" ON and OFF (*see below*). Allows you to use a larger portion of the keyboard for cell navigation.
	Windows key	When pressed, opens the Windows Start menu
	Menu key	When pressed, opens whatever application menu would be activated by right-clicking the touchpad or mouse
Ins Num Lk	**Number lock key**	Toggles the numeric keypad (number lock, see below) ON and OFF. Allows you to use an area of the keyboard for entering numbers.

Keyboard as numeric keypad

The numeric keypad is embedded in the keyboard and consists of 15 keys that make number-intensive input more convenient. These dual-purpose keys are labelled in blue on the key caps.

Numeric assignments are located at the upper right hand corner of each key as shown in the figure.

When the numeric keypad is engaged by pressing the number lock key (*see above*) the number lock LED lights up (*see below, page 24*).

If an external keyboard is connected, pressing the on the external keyboard enables/disables the number lock on both keyboards simultaneously. To disable the numeric keypad while keeping the keypad on an external keyboard activated, press the keys on the laptop.

Keyboard as cursors

The keyboard can be used as cursors while number lock is ON or OFF in order to make navigation easier while entering numeric data in spreadsheets or similar applications.

With number lock OFF, press and one of the cursor keys shown in the diagram (*right*). For example [Fn][8] for up, [Fn][K] for down, [Fn][U] for left, and [Fn][O] for right.

NOTE: The large bold characters and arrows are printed here for your reference. They are not labelled on the keyboard as shown here.

With number lock ON, use [Shift] and one of the cursor keys shown below. For example [Shift][8] for up, [Shift][K] for down, [Shift][U] for left, and [Shift][O] for right.

Indicator lights

There are two sets of indicator lights on the Preceptor 601, three that are visible on the top of the laptop when the display screen is closed, and five that are visible, above the keyboard, when the display panel is open.

Top indicator lights

Flashes when packets are transmitted or received by the internal wireless LAN.

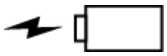
The charge indicator LED shows the status of the battery's power as follows:

ON (orange): Battery charging
Blinking: Battery power lower than 10%
ON (green): Battery is charged or completely

The green LED lights to indicate that the laptop is turned ON and blinks when it is in the suspend-to-RAM (standby) mode. The LED is OFF when the laptop is OFF or in the suspend-to-disk (hibernation) mode.

Inside indicator lights

Flashes when packets are transmitted or received by the internal wireless LAN.



The charge indicator LED shows the status of the battery's power as follows:

ON (orange): Battery charging
Blinking: Battery power lower than 10%
ON (green): Battery is charged or completely

Indicates that the laptop is accessing one or more storage device(s) such as the hard disk or optical storage drive.

When lit, indicates that the capital lock [Caps Lock] key has been pressed.

When lit, indicates that the laptop is in number lock mode (*see above*).

The touchpad

The laptop's integrated touchpad pointing device is fully compatible with all two/three-button and scrolling wheel USB and PS/2 mice.

The touchpad is pressure-sensitive and contains no moving parts; therefore, unlike external mice, mechanical failures and accumulations of dust and fluff can be avoided.

A device driver may be required for working with some application software.

Using the touchpad

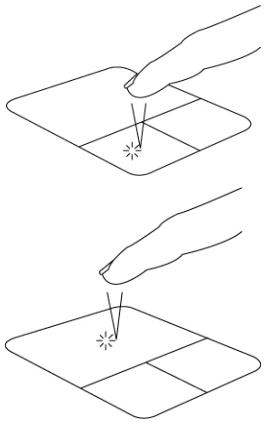
Light pressure with the tip of a finger is all that is required to operate the touchpad. Because the touchpad is electrostatically-sensitive, objects cannot be used in place of your fingers.

The touchpad's primary function is to move the cursor around or select items displayed on the screen with the use of your fingertip.

Moving the cursor - Place your finger in the centre of the touchpad and do the following to move the cursor:

Up - Slide your finger forward
Down - Slide your finger backward
Left - Slide your finger to the left
Right - Slide your finger to the right

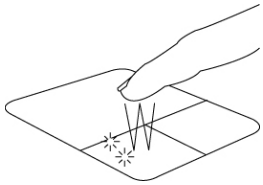
Clicking/tapping - With the cursor over an item, press the left button or use your fingertip to touch the touchpad lightly, keeping your finger on the touchpad until the item is selected. The selected item will change colour.

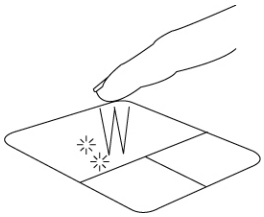


Double-clicking/double-tapping - This is a common skill for launching a program directly from the corresponding icon you select.

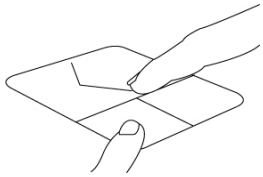
Move the cursor over the icon you wish to execute, press the left button or tap the pad twice in rapid succession, and the system launches the corresponding program.

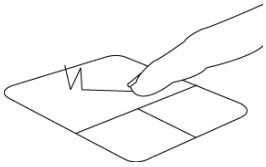
If the interval between the clicks or taps is too long, the operation will not be executed. You can set the double-click speed using the Windows Control Panel "Mouse."





Dragging - Dragging means to pick up an item and place it anywhere on the screen you wish. You can move the cursor over the item you select, and while keeping the left button depressed, moving the cursor to the desired location, then release the button. Or, you can simply double-tap on the item and hold while dragging the item with your fingertip.





NOTE: A software-controlled scrolling function is available after setting up the included touchpad utility to allow easy Windows® or web navigation. Basic functions can be adjusted at the Windows® control panel to allow comfortable clicking and tapping.

Caring for the Touchpad

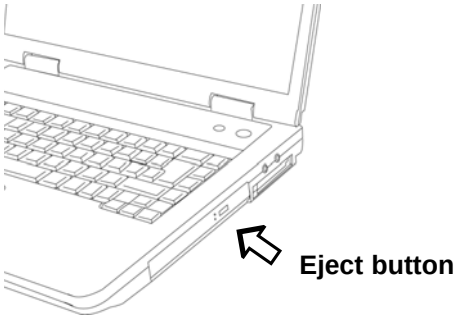
The touchpad is pressure-sensitive. If not properly cared for, it can be easily damaged. Take note of the following precautions:

- Make sure the touchpad does not come into contact with dirt, liquids or grease.
- Do not touch the touchpad if your fingers are dirty or wet.
- Do not rest heavy objects on the touchpad or the touchpad buttons.
- Do not scratch the touchpad with your finger nails or any hard objects.

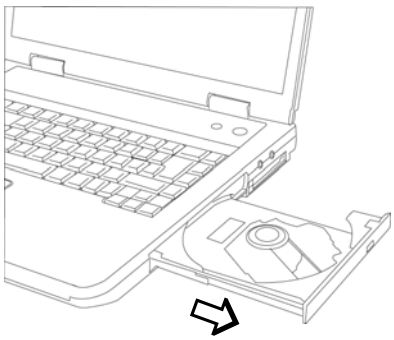
NOTE: The touchpad responds to movement not to force. There is no need to tap the surface too hard. Tapping hard does not increase the responsiveness of the touchpad. The touchpad responds best to light pressure.

The optical drive

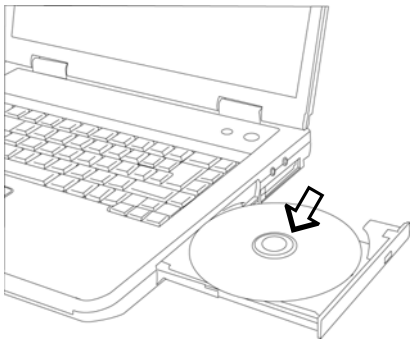
Inserting an optical disk



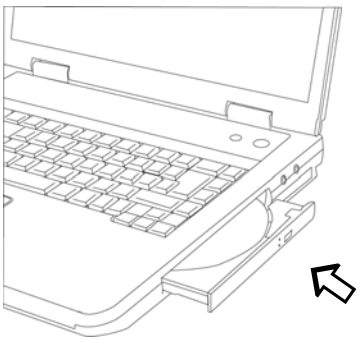
1. While the laptop's power is ON, press the drive's eject button and the tray will partially slide outwards.



2. Gently pull on the drive's front panel and slide the tray completely out. Be careful not to touch the CD drive lens and other mechanisms. Make sure there are no obstructions that may get jammed under the drive's tray.



3. Hold the disk by the edge and face the disc's printed side up. Push down on both sides of the disc's centre until the disk snaps onto the hub. The hub should be higher than the disc when correctly mounted.



4. Slowly push the drive's tray back in. The drive will begin reading the table of contents (TOC) on the disk. When the drive stops, the disc is ready to be used.

NOTE: It is normal to hear as well as feel the disk spinning with great intensity in the drive while data is read.

Using CDs and DVDs

Optical disks and equipment must be handled with care because of the precise mechanics involved. Keep in mind the important safety instructions from the disk suppliers. Unlike desktop optical drives, the laptop uses a hub to hold the disk in place regardless of the angle. When inserting a disk, it is important that it is pressed onto the centre hub or else the drive tray will scratch the disk.

WARNING! If the disk is not properly locked onto the centre hub, it can be damaged when the tray is closed. Always watch the disk closely while closing the tray slowly to prevent damage.

An optical drive letter should be present regardless of the presence of a disk in the drive. After the disk is properly inserted, data can be accessed in the same manner as hard disk drives. If the disk is “read-only”, nothing can be written to or changed on the disk. If the disk is writeable or rewriteable, data can be saved on it. Rewriteable disks can be reformatted to allow the disk to be reused.

Vibration is normal for all high-speed CD-ROM drives due to unbalanced CDs or CD print. To decrease vibration, use the Laptop PC on an even surface and do not place labels on the CD.

Listening to audio CDs and DVDs

CD-ROM, CD-RW, DVD-ROM and DVD-RW drives can all play audio CDs, but only DVD-ROM and DVD-RW drives can play DVD audio. When an audio CD is inserted Windows® automatically opens an audio player and begins playing.

Depending on the DVD audio disk and installed software, it may require that you open a DVD player to listen to DVD audio. You can adjust the volume using hotkeys or the Windows® speaker icon on the taskbar.

DVD drive information

The optical disk drive in the Preceptor 601 comes as standard with a combined DVD-ROM and CD-RW drive, which allows the viewing/reading of DVD disks and reading and writing to suitable CDs (writeable or rewriteable) . DVD viewer software is included. An optional DVD-RW/CD-RW combination which allows writing to both writeable DVDs and CDs is available. A “dual layer” DVD-RW/CD-RW combination, which allows the use of increased capacity DVDs, is also available.

While a CD can hold up to 750MB of data, a standard DVD can hold up to 4.7GB of data, and a dual layer DVD up to 8.5GB.

Regional Playback Information

Playback of DVD movie titles involves decoding MPEG2 video, digital AC3 audio and decryption of CSS protected content. CSS (sometimes called copy guard) is the name given to the content protection scheme adopted by the motion picture industry to satisfy a need to protect against unlawful content duplication.

Although the design rules imposed on CSS licensors are many, one rule that is most relevant is playback restrictions on regionalised content. In order to facilitate geographically staggered movie releases, DVD video titles are released for specific geographic regions as defined in **Region Definitions** *below*. Copyright laws require that all DVD movies be limited to a particular region (usually coded to the region at which it is sold). While DVD movie content may be released for multiple regions, CSS design rules require that any system capable of playing CSS encrypted content must only be capable of playing one region.

NOTE: The region setting may be changed up to five times using the viewer software, then it can only play DVD movies for the last region setting. Changing the region code after that will require factory resetting which is not covered by warranty. If resetting is desired, shipping and resetting costs will be at the expense of the user.

Region Definitions

Region 1
Canada, US, US Territories

Region 2
Czech, Egypt, Finland, France, Germany, Gulf States, Hungary, Iceland, Iran, Iraq, Ireland, Italy, Japan, Netherlands, Norway, Poland, Portugal, Saudi Arabia, Scotland, South Africa, Spain, Sweden, Switzerland, Syria, Turkey, UK, Greece, Former Yugoslav Republics, Slovakia

Region 3
Burma, Indonesia, South Korea, Malaysia, Philippines, Singapore, Taiwan, Thailand, Vietnam

Region 4
Australia, Caribbean (Except US Territories), Central America, New Zealand, Pacific Islands, South America

Region 5
CIS, India, Pakistan, Rest of Africa, Russia, North Korea

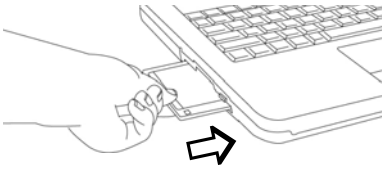
Region 6
China

The floppy disk drive

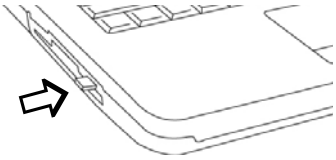
Floppy disks, though increasingly being replaced by CDs and DVDs as these media become more and more economical, are still used by many as a convenient way of storing and transporting small amounts of data (up to 1.4MB).

Using the floppy disk drive

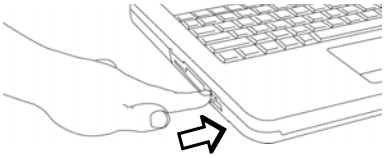
Insert a floppy disk in the drive slot, label side up. Push in gently until it clicks into place. Do not force it inwards.



Once the diskette is fully in place the eject button will protrude. The activity light will illuminate if the disk is being accessed.



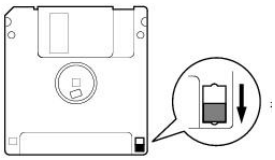
To remove the disk, first check that the activity light is not illuminated. Then press the eject button.



The disk will automatically emerge. Pull the disk the rest of the way out of the slot.

WARNING! Take care when moving the laptop with a floppy disk in place in the drive as the eject button may be knocked accidentally and be damaged.

NOTE: To prevent accidental loss of data from a floppy diskette, slide the security tab on the reverse side of the disk downwards until it clicks into place.



The PCMCIA card slot

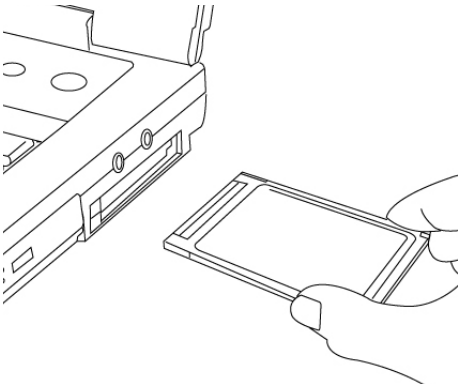
The Preceptor 601 supports PC Cards (or sometimes referred to as PCMCIA cards) to allow expansion like PCI cards on desktop computers. This allows you to customise your laptop to meet a wide range of application needs.

The Preceptor's PCMCIA socket can interface with two type II cards or a single type III PC card.

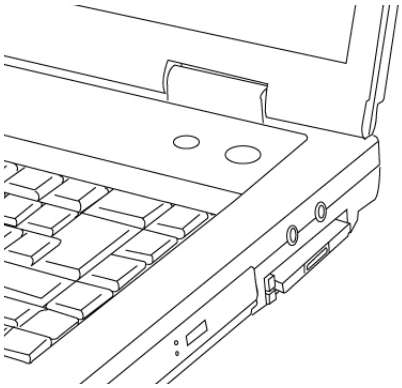
The PC Card standard accommodates a number of function, communication, and data storage expansion options. Examples are: memory/flash cards, fax/modems, networking adapters, Firewire adapters, SCSI adapters, MPEG I/II decoder cards, Smart Cards, and wireless modem or LAN cards. The laptop supports PCMCIA 2.1, and 32bit CardBus standards.

Installing a card in the PCMCIA card slot

1. Insert the PC card with the connector side first. Push firmly into place, but without excessive force.



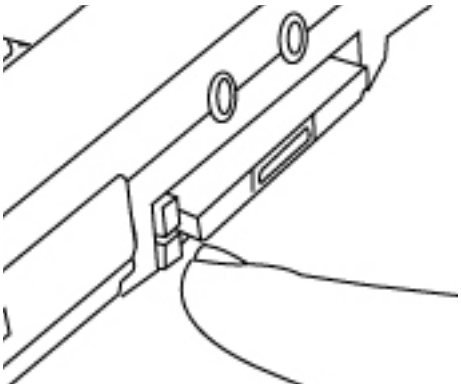
2. Carefully connect any cables or adapters needed by the PC card. Usually connectors can only be inserted in one orientation. Look for a sticker, icon, or marking on one side of the connector representing the top side. The card will normally be automatically recognised by the laptop.



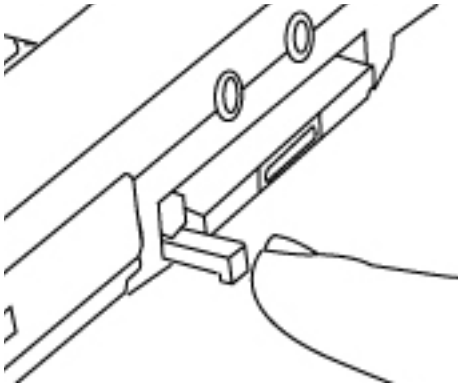
Removing a card from the PCMCIA card slot

Remove all cables or adapters attached to the PC card, then double-click the PC card icon on the Windows taskbar and stop the PC card you want to remove.

Press in the toggle eject button and release. The recessed spring loaded toggle button will extend when pushed in and released.

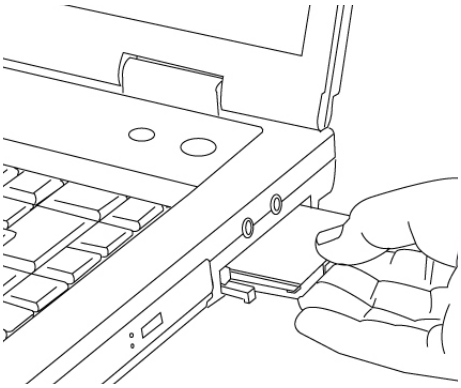


Press the extended button again to eject the PC Card.



Carefully pull the ejected PC card out of the socket.

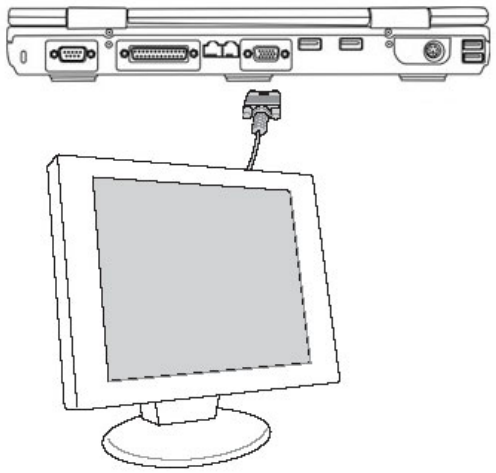
Push the ejection button back into the laptop until it clicks into place.



Optional external connections

External monitor connection

An external monitor can be connected to the laptop in the same way as to a standard desktop PC. Simply plug in the VGA cable and it is ready to use (some laptop configurations may require additional display driver settings).

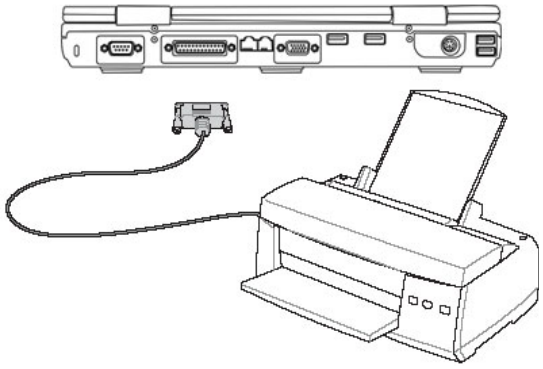


You can view the laptop display panel while simultaneously allowing others to view the external monitor. For large audiences, connect a suitable projector.

Peripheral connections

Parallel connections

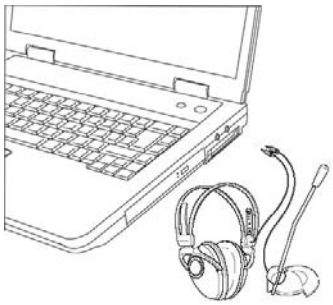
The Preceptor 601 provides a parallel port that allows you to connect devices such as injet/laser printers, hard drives, removable drives or scanners. The laptop and the device must be turned OFF when making the connection.



Alternatively, USB devices can be connected directly to any of the laptop's four USB ports. If you wish to connect more than four USB devices, you can connect a USB hub. Some devices will require a powered USB hub. Other will draw their power from the USB connection.

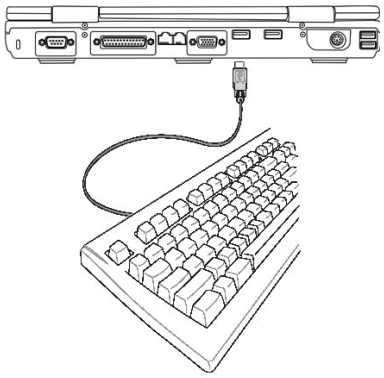
Audio connections

The Preceptor 601 provides easy access for connecting headphones, a microphone, and a stereo audio source.



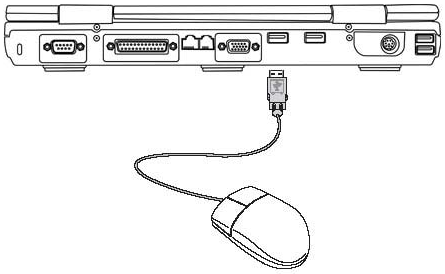
External keyboard connections

To allow easier data entry, you may connect any PS/2 or USB (shown here) keyboard.



External mouse connections

A USB mouse can be easily connected to the Laptop PC. The USB mouse will work simultaneously with the Laptop PC's touchpad. For extra USB connections, you can purchase either a USB hub or a keyboard with an integrated USB hub.



Modem and network connections

The built-in modem and network model comes with both an RJ-11 and an RJ-45 port. RJ-11 telephone cables have two or four wires and are used to connect telephones to telephone outlets found in the walls of residential homes and some commercial buildings (some commercial buildings may have telephone wiring designed for dedicated phone systems that may not be compatible). RJ-45 network cables are found connecting network computers to network hubs or switches usually found in business environments.

NOTE: The built-in modem and network cannot be installed later as an upgrade. Modem and/or network can be installed as a PC card (PCMCIA).

WARNING! Only use analogue telephone outlets. The built-in modem does not support the voltage used in digital phone systems. Do not connect the RJ-11 to digital phone systems found in many commercial buildings — damage will occur!

Modem Connection

The modem cable used to connect the laptop's internal modem to the telephone outlet should have an RJ-11 connector on the computer end and a BT connector at the other. Connect the RJ-11 connector to the modem port and the other end to an analogue telephone wall socket (the type typically found in residential buildings). Once the driver is setup, the modem is ready to use.

NOTE: When you are connected to an online service, do not place the laptop in suspend (or sleep mode) or else you will disconnect the modem connection.

Network Connection

Connect a network cable, with RJ-45 connectors on each end, to the modem/network port on the Laptop PC and the other end to a hub or switch. For 100BASE-TX speeds, your network cable must be category 5 (not category 3) with twisted-pair wiring. If you plan on running the interface at 100Mbps, it must be connected to a 100BASE-TX hub (not a 100BASE-T4 hub). For 10Base-T, use category 3, 4, or 5 twisted-pair wiring. Duplex transfers (up to 200Mbps) is supported on this Laptop PC but requires connection to a switch with "duplex" enabled. The software default is to use the fastest setting so no user intervention is required.

Twisted-pair cable

The cable used to connect the Ethernet card to a host (generally a Hub or Switch) is called a straightthrough Twisted Pair Ethernet (TPE). The end connectors are called RJ-45 connectors, which are not compatible with RJ-11 telephone connectors. If connecting two computers together without a hub in between, a crossover twisted-pair is required.

Wireless networking (optional)

The laptop can be connected to an existing wireless network in several ways.

An internal wireless card can be fitted. Since this involves opening the laptop case from the top (keyboard) side, please call the Ergo Computing Helpdesk to discuss this option.

A PCMCIA wireless network card can be purchased and fitted into the PCMCIA slot (*see above*).

Access to a wireless network can also be achieved using a USB wireless network adapter. This is normally the most economical method, with adapters readily available from computer hardware retailers.

In each case, the laptop will need to be configured to access the network, but Windows XP makes this a relatively painless procedure

Hard disk options

Although the Preceptor 601 is delivered with a minimum hard disk capacity of 40GB, you may wish to increase this, especially if you wish to store large files such as video.

Enhanced IDE drives provide a reliable, fast, and cost-effective mass storage solution in the PC storage industry. The high speed transfer modes supported are UltraATA/100 up to 100MB/ sec.

The Preceptor 601 comes with a removable 2.5" (6.35cm) wide and 0.374" (0.95cm) high UltraATA/100/66 IDE hard disk drive with current capacities up to 100GB. Current IDE hard drives support S.M.A.R.T. (Self Monitoring and Reporting Technology) to detect hard disk errors or failures before they happen.

Important Handling Note
Improper handling during transit may damage the hard disk drive. Handle the laptop carefully and keep it away from static electricity and strong vibrations or impact. The hard disk drive is the most sensitive component of the laptop and will likely be the first or only component that is damaged if the laptop is dropped.

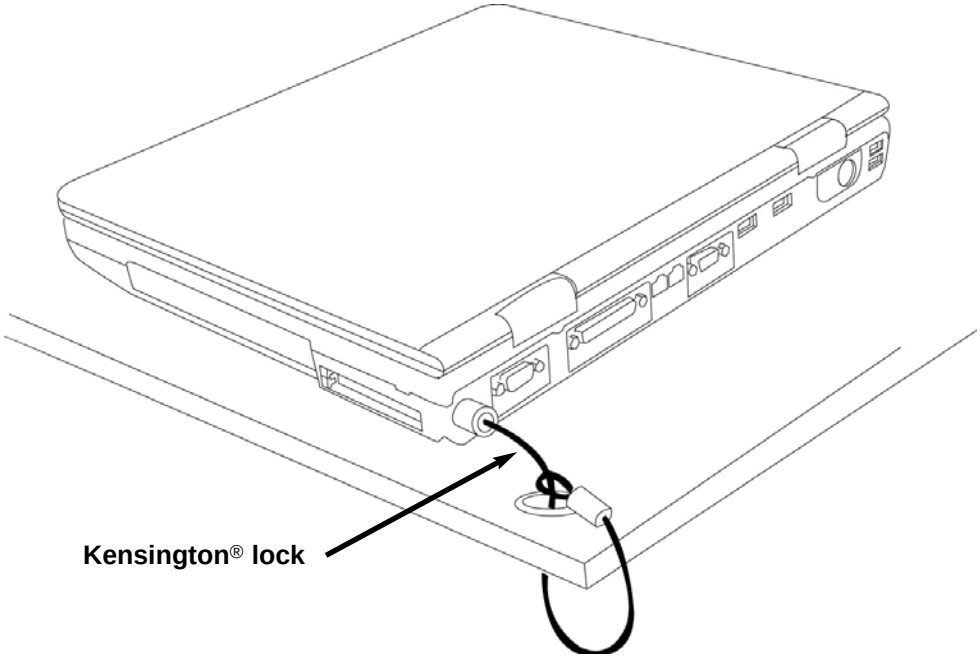
Processor or hard disk drive upgrades

If you wish to upgrade the processor or hard disk drive of the Preceptor 601, please call the Ergo Computing support helpdesk. Trained staff will be pleased to discuss the options available to you.

Securing your laptop (optional)

For system and hard disk drive security, see BIOS setup "Security".

A third party lock, such as those offered by Kensington®,can be used to secure your laptop physically to an unmovable object. The cable wraps around an object and the "T" shaped end inserts into the Kensington® lock port as shown in the illustration. A key or combination dial is used to secure the lock in place. Kensington® locks are readily available from computer retailers.



Federal Communications Commission Statement

This device complies with FCC Rules Part 15. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the Federal Communications Commission (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 or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate 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.
- Call the Ergo helpdesk..

WARNING! The use of a shielded-type power cord is required in order to meet FCC emission limits and to prevent interference to the nearby radio and television reception.

It is essential that only the supplied power cord be used. Use only shielded cables to connect I/O devices to this equipment. You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

Reprinted from the Code of Federal Regulations #47, part 15.193, 1993. Washington DC: Office of the Federal Register, National Archives and Records Administration, U.S. Government Printing Office.

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

This Class B digital apparatus complies with Canadian ICES-003.

(Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.)

For use with AC Adapter Model (Pour Utiliser Avec Modele) ADP-45GB (45W), ADP-50GB (50W), PA-1530 (50W), or ADP-60DH (60W)

Power Safety Requirement

Products with electrical current ratings up to 6A and weighing more than 3Kg must use approved power cords greater than or equal to: H05VV-F, 3G, 0.75mm2 or H05VV-F, 2G, 0.75mm2.

Nordic Cautions (for laptop PC with lithium-ion battery)

CAUTION! Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions. (English)

ATTENZIONE! Rischio di esplosione della batteria se sostituita in modo errato. Sostituire la batteria con un una di tipo uguale o equivalente consigliata dalla fabbrica. Non disperdere le batterie nell'ambiente. (Italian)

VORSICHT! Explosionsgetahr bei unsachgemäßen Austausch der Batterie. Ersatz nur durch denselben oder einem vom Hersteller empfohlenem ähnlichen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers. (German)

ADVARSELI! Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri af samme fabrikat og type. Levér det brugte batteri tilbage til leverandøren. (Danish)

VARNING! Explosionsfara vid felaktigt batteribyte. Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren. Kassera använt batteri enligt fabrikantens instruktion. (Swedish)

VAROITUS! Paristo voi räjähtää, jos se on virheellisesti asennettu. Vaihda paristo ainoastaan laitevalmistajan sousittelemaan tyyppiin. Hävitä käytetty paristo valmistagan ohjeiden mukaisesti. (Finnish)

ATTENTION! Il y a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du mêre type ou d'un type équivalent recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant. (French)

ADVARSEL! Eksplosjonsfare ved feilaktig skifte av batteri. Benytt samme batteritype eller en tilsvarende type anbefalt av apparatfabrikanten. Brukte batterier kasseres i henhold til fabrikantens instruksjoner. (Norwegian)

注意！この装置は、現在設置されている場所で妨害波の測定がされた情報技術装置です。
この場所以外で使用する場合は、その場所で、再び妨害波の測定が必要となります。(Japanese)

CDRH Regulations

The centre for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration implemented regulations for laser products on August 2, 1976. These regulations apply to laser products manufactured from August 1, 1976. Compliance is mandatory for products marketed in the United States

WARNING: Use of controls or adjustments or performance of procedures other than those specified herein or in the laser product installation guide may result in hazardous radiation exposure.

Safety Statements

WARNING! The following safety precautions will increase the life of the laptop. Follow all precautions and instructions. Except as described in this manual, refer all servicing to qualified personnel. Do not use damaged power cords, accessories, or other peripherals. Do not use strong solvents such as thinners, benzene, or other chemicals on or near the surface.

Disconnect the AC power and remove the battery pack(s) before cleaning. Wipe the laptop using a clean cellulose sponge or chamois cloth dampened with a solution of nonabrasive detergent and a few drops of warm water and remove any extra moisture with a dry cloth.

DO NOT place on uneven or unstable work surfaces. Seek servicing if the casing has been damaged.

DO NOT expose to or use near liquids, rain, or moisture. DO NOT use the modem during an electrical storm.

DO NOT place or drop objects on top of and do not push any foreign objects into the laptop.

DO NOT expose to dirty or dusty environments. DO NOT operate during a gas leak.

DO NOT press or touch the display panel. Do not place together with small items that may scratch or enter the laptop.

DO NOT expose to extreme temperatures above 50°C (122°F) or to direct sunlight.Do not block the fan vents!

DO NOT expose to strong magnetic or electrical fields.

DO NOT expose to extreme temperatures (below 0°C (32°F), otherwise the laptop may not boot

DO NOT leave the base of the laptop on the lap or any part of the body for an extended period while the laptop is turned ON or is charging in order to prevent discomfort or injury from heat exposure.

DO NOT throw batteries in fires as they may explode. Check local codes for special battery disposal instructions.

Transportation Precautions

To prepare the lapto for transport, you should turn it OFF and disconnect all external peripherals to prevent damage to the connectors. The hard disk drive's head retracts when the power is turned OFF to prevent scratching of the hard disk surface during transport. Therefore, you should not transport the laptop while the power is still ON. Close the display panel and check that it is latched securely in the closed position to protect the keyboard and display panel.

Remove Floppy Disks

Whether you have an internal or external 1.44MB floppy disk drive, make sure it does not contain a diskette when transporting the floppy disk drive. When a diskette is inserted into the floppy disk drive, the eject button protrudes out. If you attempt to transport the floppy disk drive with a diskette in the drive, you risk damaging the eject button and also risk scratching the surface of the diskette when the floppy disk drive is jolted.

Cover Your Laptop PC

Use a carrying case such as the one supplied with your Laptop PC to protect it from dirt, water, shock, and scratches.

NOTE: The surface of the laptop is easily dulled if not properly cared for. Be careful not to rub or scrape the laptop surfaces when transporting it.

Charge Your Batteries

If you intend to use battery power, be sure to fully charge your battery pack and any optional battery packs before going on long trips. Remember that the power adapter charges the battery pack as long as it is plugged into the computer and an AC power source. Be aware that it takes much longer to charge the battery pack when the laptop is in use.

Airplane Precautions

Contact your airline if you want to use the laptop on the airplane. Most airlines will have restrictions for using electronic devices. Most airlines will allow electronic use only between and not during takeoff and landing.

CAUTION! There are three main types of airport security devices: X-ray machines (used on items placed on conveyor belts), magnetic detectors (used on people walking through security checks), and magnetic wands (hand-held devices used on people or individual items). You can send your laptop and diskettes through airport Xray machines. However, it is recommended that you do not send your Laptop PC or diskettes through airport magnetic detectors or expose them to magnetic wands.

CTR21 Approval (for laptop PC with built-in modem)

Danish

"Udstyret er I henhold til Rådets beslutning 98/482/EF EU-godkendt til at blive opkoblet på de offentlige telefonnet som enkeltforbundet terminal. På grund af forseklle mellem de offentlige telefonnet i de forskellige lande giver godkendelsen dog ikke i sig selv ubetinget garanti for, at udstyret kan fungere korrekt på samtlige netterminerinspunkter på de offentlige telefonnet.
I tilfælde af problemer bør de I første omgang henvende dem til leverandøren af udstyret."

Dutch

"Dit apparaat is goedgekeurd volgens Beschikking 98/482/EG van de Raad voor de pan-Europese aansluiting van
enkelvoudige eindapparatuur op her openbare geschakelde telefoonnetwerk (PSTN). Gezien de verschillen tussen de individuele PSTN's in de verscillende landen, bidet deze goedkeuring op zichzelf geen onvoorwaardelijke garantie voor een succesvolle werking op elk PSTN-netwerkaansluitpunt.
Neem bij problemen in eerste instantie contact op met de leverancier van het apparaat."

English

"The equipment has been approved in accordance with Council Decision 98/482/EC for pan-Europea single terminal connection to the public switched telephone network (PSTN). However, due to differences between the individual PSTNs provided in different countries, the approval does not, in itself, give an unconditional assurance of successful operation on every PSTN network termination point.
In the event of problems, you should contact your equipment supplier in the first instance."

Finnish

"Tämä laite on hyväksytty neuvoston päätöksen 98/482/EY mukaisesti liitettäväksi yksittäisenä laitteena yleiseen kytkentäiseen puhelinverkkoon (PSTN) EU:n jäsenvaltioissa. Eri maiden yleisten kytkentäisten puhelinverkkojen välillä on kuitenkin eroja, joten hyväksyntä ei sellaisenaan taka häiriötöntä toimintaa kaikkien yleisten kytkentäisten puhelinverkkojen liityntäpisteissä.
Ongelmien ilmetessä ottakaa viipymättä yhteyttä laitteen toimittajaan."

French

"Cet equipement a recu l'agrement, conformement a la decision 98/482/CE du Conseil, convernant la connexion paneuropeenne de terminal unique aux reseaux telephoniques publics commutes (RTPC). Toutefois, comme il existe des differences d'un pays a l'autre entre les RTPC, l'agrement en soi ne constitue pas une garantie absolue de fonctionnement optimal a chaque point de terminaison du reseau RTPC.
En cas de probleme, vous devez contacter en premier lieu votre fournisseur."

German

"Dieses Gerät wurde gemäß der Entscheidung 98/482/EG des Rates europaweit zur Anschaltung als einselne Endeinrichtung an das öffentliche Fernsprechnetz zugelassen. Aufgrund der zwischen den öffentlichen Fernsprechnetzen verschiedener staaten bestehenden Unterschiede stellt diese Zulassung an sich jedoch keine unbedingte Gewähr fur einen erfolgreichen Betrieb des Geräts an jedem Netzabschlußpunkt dar.
Falls beim Betrieb Probleme auftreten, sollten sie sich zunächst an ihren Fachhändler wenden."

Greek

«Ο εξοπλισμός έχει εγκριθεί για πανευρωπαϊκή σύνδεση μεμονωμένου τερματικού με το δημόσιο τηλεφωνικό δίκτυο μεταγωγής (PSTN), σύμφωνα με την απόφαση 98/482/ΕΚ του Συμβουλίου· ωστόσο, επειδή υπάρχουν διαφορές μεταξύ των επιμέρους PSTN που παρέχονται σε διάφορες χώρες, η έγκριση δεν παρέχει αφ' εαυτής ανεπιφύλακτη εξασφάλιση επιτυχούς λειτουργίας σε κάθε σημείο απόληξης του δικτύου PSTN.

Εάν ανακύψουν προβλήματα, θα πρέπει κατ' αρχάς να απευθύνεστε στον προμηθευτή του εξοπλισμού σας.»

Italian

"La presente apparecchiatura terminale e stata approvata in conformitá della decisione 98/482/CE del Consiglio per la connessione paneuropea come terminale singolo ad una rete analogical PSTN. A causa delle differenze tra le reti dei differenti paesi, l'approvazione non garantisce peró di per sé il funzionamento corretto in tutti I punti di terminazione di rete PSTN.
In case di problemi contattare in primo luogo il fornitore del prodotto. "

Portuguese

"Este equipamento foi aprovado para ligação pan-europeia de um único terminal á rede telefónica pública comutada (RTPC) nos termos da Decisâo 98/482/CE. No entanto, devido ás diferenças existents entre as RTPC dos diversos países, a aprovação não garante incondicionalmente, por si só, um funcionamento correcto em todos os pontos terminais da rede da RTPC.
Em caso de problemas, deve entrar-se em centacto, em primeiro lugar, com o fornecedor do equipamento."

Spanish

"Este equipo ha sido homologado de conformidad con la Decisión 98/482/CE del Consejo para la conexión paneuropea de un terminal simple a la red telefónica pública conmutada (RTPC). No obstante, a la vista de las diferencias que existen entre las RTPC que se ofrecen en diferentes países, la homologación no constituye por sí sola una garantía incondicional de funcionamiento satisfactorio en todos los puntos de terminación de la red de una RTPC.
En caso de surgir algún problema, procede ponerse en contacto en primer lugar con el proveedor del equipo."

Swedish

"Utrustningen har godkänts I enlighet med rådets beslut 98/482/EG för alleuropeisk anslutning som enskild terminal till det allmänt tillgängliga kopplade telenätet (PSTN). På grund av de skillnader som finns mellan telenätet i olika länder utgör godkännandet emellertid inte i sig självt en absolut garanti för att utrustningen kommer att fungera tillfredsställande vid varje telenätsanslutningspunkt.
Om problem uppstår bör ni i första hand kontakta leverantörn av utrustningen"

UL Safety Notices

Required for UL 1459 covering telecommunications (telephone) equipment intended to be electrically connected to a telecommunication network that has an operating voltage to ground that does not exceed 200V peak, 300V peak-to-peak, and 105V rms, and installed or used in accordance with the National Electrical Code (NFPA 70).

When using the laptop modem, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

- Do not use the laptop near water, for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
- Do not use the laptop during an electrical storm. There may be a remote risk of electric shock from lightning.
- Do not use the laptop in the vicinity of a gas leak.

Required for UL 1642 covering primary (non-rechargeable) and secondary (rechargeable) lithium batteries for use as power sources in products. These batteries contain metallic lithium, or a lithium alloy, or a lithium ion, and may consist of a single electrochemical cell or two or more cells connected in series, parallel, or both, that convert chemical energy into electrical energy by an irreversible or reversible chemical reaction.

- Do not dispose the Laptop PC battery pack in a fire, as they may explode. Check with local codes for possible special disposal instructions to reduce the risk of injury to persons due to fire or explosion.
- Do not use power adapters or batteries from other devices to reduce the risk of injury to persons due to fire or explosion. Use only UL certified power adapters or batteries supplied by the manufacturer or authorised retailers.

Glossary

ACPI (Advanced Configuration and Power Management Interface)
Modern standard for reducing power usage in computers.

APM (Advanced Power Management)
Modern standard for reducing power usage in computers.

BIOS (Basic Input/Output System)
BIOS is a set of routines that affect how the computer transfers data between computer components, such as memory, disks, and the display adapter. The BIOS instructions are built into the computer's read-only memory. BIOS parameters can be configured by the user through the BIOS Setup program. The BIOS can be updated using the provided utility to copy a new BIOS file into the EEPROM.

Bit (Binary Digit)
Represents the smallest unit of data used by the computer. A bit can have one of two values: 0 or 1.

Boot
Boot means to start the computer operating system by loading it into system memory. When the manual instructs you to "boot" your system (or computer), it means to turn ON your computer. "Reboot" means to restart your computer. When using Windows 95 or later, selecting "Restart" from "Start | Shut Down..." will reboot your computer.

Bus Master IDE
PIO (Programmable I/O) IDE requires that the CPU be involved in IDE access and waiting for mechanical events. Bus master IDE transfers data to/from the memory without interrupting the CPU. Bus master IDE driver and bus master IDE hard disk drives are required to support bus master IDE mode.

Byte (Binary Term)
One byte is a group of eight contiguous bits. A byte is used to represent a single alphanumeric character, punctuation mark, or other symbol.

COM Port
COM is a logical device name used by to designate the computer serial ports. Pointing devices, modems, and infrared modules can be connected to COM ports. Each COM port is configured to use a different IRQ and address assignment.

CPU (Central Processing Unit)
The CPU, sometimes called "Processor," actually functions as the "brain" of the computer. It interprets and executes program commands and processes data stored in memory.

Device Driver
A device driver is a special set of instructions that allows the computer's operating system to communicate with devices such as VGA, audio, Ethernet, printer, or modem.

Hardware
Hardware is a general term referring to the physical components of a computer system, including peripherals such as printers, modems, and pointing devices.

IDE (Integrated Drive Electronics)
IDE devices integrate the drive control circuitry directly on the drive itself, eliminating the need for a separate adapter card (in the case for SCSI devices). UltraDMA/66 or 100 IDE devices can achieve up to 33MB/Sec transfer.

Kensington® Locks
Kensington® locks (or compatible) allow the Laptop PC to be secured usually using a metal cable and lock that prevent the Laptop PC to be removed from a fixed object. Some security products may also include a motion detector to sound an alarm when moved.

LPT Port (Line Printer Port)
Logical device name reserved by DOS for the computer parallel ports. Each LPT port is configured to use a different IRQ and address assignment.

PCI Bus (Peripheral Component Interconnect Local Bus)
PCI bus is a specification that defines a 32-bit data bus interface. PCI is a standard widely used by expansion card manufacturers.

PC Cards (PCMCIA)
PC cards are about the size of a few stacked credit cards and have a 68-pin connector at one end. The PC Card standard accommodates a number of function, communication, and data storage expansion options. PC cards come in memory/flash cards, fax/modems, networking adapters, SCSI adapters, MPEG I/II decoder cards, and even wireless modem or LAN cards. The Laptop PC supports PCMCIA 2.1, and 32bit CardBus standards. The three different PC Card standards actually have different thicknesses. Type I cards are 3.3mm, Type II cards are 5mm, and Type III cards are 10.5mm thick. Type I and Type II cards can be used in a single socket. Type III cards take up two sockets and must be used on Laptop PCs with two sockets.

POST (Power On Self Test)
When you turn on the computer, it will first run through the POST, a series of software-controlled diagnostic tests. The POST checks system memory, the motherboard circuitry, the display, the keyboard, the diskette drive, and other I/O devices.

PS/2 Port
PS/2 ports are based on IBM Micro Channel Architecture. This type of architecture transfers data through a 16-bit or 32-bit bus. A PS/2 mouse and/or keyboard may be used on ATX motherboards.

RAM (Random Access Memory)
There are several different types of RAM such as DRAM (Dynamic RAM), EDO DRAM (Extended Data Output DRAM), SDRAM (Synchronous DRAM).

ROM (Read Only Memory)
ROM is non-volatile memory used to store permanent programs (called firmware) used in certain computer components. Flash ROM (or EEPROM) can be reprogrammed with new programs (or BIOS).

Suspend Mode
In Save-to-RAM (STR) and Save-to-Disk (STD), the CPU clock is stopped and most of the laptop devices are put in their lowest active state. The laptop enters Suspend when the system remains idle for a specified amount of time or manually using the function keys. The timeout setting of both Hard Disk and Video can be set by the BIOS Setup. The Power LED blinks when the Laptop PC is in STR mode. In STD mode, the laptop will appear to be powered OFF.

System Disk
A system disk contains the core file of an operating system and is used to boot up the operating system.

Twisted-Pair Cable
The cable used to connect the Ethernet card to a host (generally a Hub or Switch) is called a straight-through Twisted Pair Ethernet (TPE). The end connectors are called RJ-45 connectors, which are not compatible with RJ-11 telephone connectors. If connecting two computers together without a hub in between, a crossover twisted-pair is required.

UltraDMA/66 or 100
UltraDMA/66 or 100 are new specifications to improve IDE transfer rates. Unlike traditional PIO mode, which only uses the rising edge of IDE command signal to transfer data, UltraDMA/66 or 100 uses both rising edge and falling edge.

USB (Universal Serial Bus)
A 4-pin serial peripheral bus that allows plug-and-play computer peripherals such as keyboard, mouse, joystick, scanner, printer and modem/ISDN to be automatically configured when they are attached physically, without having to install drivers or reboot. With USB, the traditional complex of cables from the back panel of your PC can be eliminated.

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