

Chapter 4

Traveling with Your Notebook

*This chapter covers all
aspects of using your
notebook while
traveling*

Battery and Power Saving

The internal rechargeable Li-Ion battery can power your notebook. The Li-Ion should keep you on the road for about 2 hours. Higher performance typically reduces the battery life. When you make your notebook work harder, e.g. by playing sound and video, or by running disk drives, battery life will be reduced faster. You can dramatically improve the battery life of your notebook by taking full advantage of the power management options described below.

Battery-Low Procedure

Your notebook tracks the amount of charge remaining in the internal battery. When your battery charge level gets low, you will receive several warnings.

When the battery charge drops to about 10%, the computer will issue a warning message on the display, if advanced power management is enabled in Windows. At the same time, the notebook will emit an audible beeping sound, and the LED next to the battery indicator on the front edge of the notebook will turn red, to alert you of the low battery.

When there is just enough charge remaining to power your system for 3 minutes, Windows will pop up another warning telling you to switch to AC power or to suspend operation, if advanced power management is enabled in Windows. At the same time, the red LED next to the battery indicator will start flashing, and the audible beeping sound will cease. Shortly after that, the notebook will automatically enter the Suspend-to-Disk mode.

If your battery drains completely without being placed into the Suspend-to-Disk mode, you might lose information that has not been saved. It is a good idea when using battery power to place the unit in suspend mode if you think you will be leaving the unit for any substantial length of time.

To check your battery charge level in Windows:

Battery Icon

The battery icon on the Windows taskbar provides a rough indicator of the battery charge level by starting out all blue, i.e. full charge, and becoming gray as the charge level drops. You can also hold the cursor over the icon to get a popup reading of battery charge level.

Control Panel

Double clicking on the **Power** icon in the **Control Panel** brings up the Windows power management menu. You can get a reading on the current

battery charge level here. You can also make changes here to the power management settings used during Windows sessions.

Responding to a Low Battery

When your notebook alerts you to a low battery, we strongly recommend that you either immediately use the AC adapter to connect your notebook to a suitable AC power outlet, or you immediately save all your work and either suspend your computer to disk, or use the Windows *Shut down* item in the **Start** menu to turn off your system.

If you shut down your computer shortly after the first warning, you will have plenty of power to save even long files to disk. After you have shut down the computer or suspended to disk, do not try to restart the computer unless you have connected the AC adapter, or you have replaced the discharged battery with a charged one.

Battery Charging

Whenever the Li-Ion battery is installed and the AC adapter is connected to the notebook, your battery will charge whether the computer is on, off, or in power saving mode. It will however charge much faster if the computer is turned off. While the battery is charging, the power indicator next to the battery icon will turn amber. When the battery is fully charged the indicator LED will turn green.

NOTE: Do not use battery chargers other than the designated one to charge this battery pack.

The fastest recharge occurs when the system is off. It takes about 3 hours to fully charge the Li-Ion battery.

The notebook will stop charging the battery when the temperature of the system becomes too high.

Battery Conditioning

Each time you charge and discharge the battery, it stores slightly less power. Similarly, if you do not use the battery for a few days, it will slowly discharge, and when it is recharged, it will hold less than 100% of the potential charge. We recommend that you frequently conduct the following operation to keep your battery in good condition.

1. Disconnect the AC adapter and turn on your notebook.

2. Allow your battery to fully discharge, ignore any warning alerts, and leave the system alone until it automatically turns off.
3. After fully discharging your system, connect the AC adapter until the battery is fully charged.

This operation carried out every few weeks, will maintain the battery efficiency and help calibrate the electronics that monitor and maintain the battery charge.

Over time, as the battery is charged and discharged, it gradually stores less charge. Li-Ion cells generally last for 500 or more cycles before they begin to deteriorate. You should replace the battery when you notice that it begins to store significantly less charge.

Changing the Battery

If you frequently use your notebook on the road, you might want to purchase a spare battery pack. Your notebook only supports standard Li-Ion battery packs that are designed for your system.

NOTE: Do not dispose the battery in fire. Do not directly connect (short circuit) the positive (+) and the negative (-) terminals. Never attempt to disassemble the battery pack.

Changing the battery

1. Turn off the notebook, or suspend to disk.
2. Close the screens cover and turn the computer over.

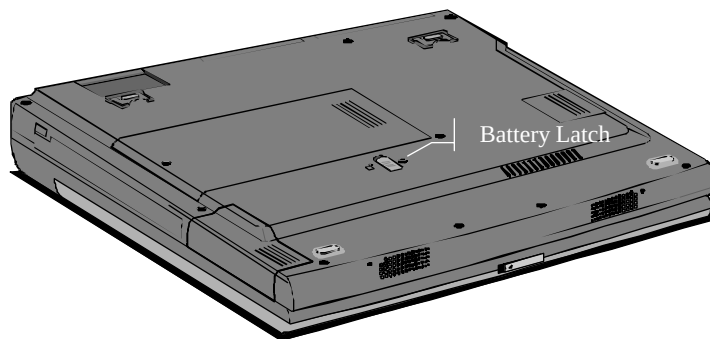


Figure 4-1: Battery Latch

3. Release the battery latch towards the back and hold it there.

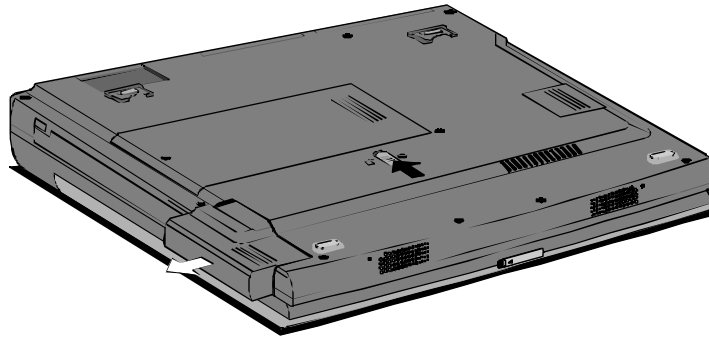


Figure 4-2: Removing the Battery

4. Slide the battery out towards the left until it is completely free. You can then remove the battery.

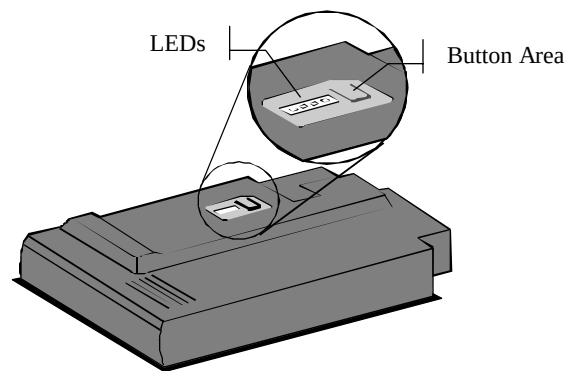


Figure 4-3: Battery

5. The top of the battery has an extra battery charge indicator. The indicator consists of a button and four small LEDs. When you press the area on the right side of the indicator, the button, some or all of the red LEDs will start flashing, depending on how much charge is left in the battery. All four lights flashing indicates that the battery is fully charged, one light flashing indicates low battery charge.
6. To replace the battery, slide the battery latch to the back and hold it there, then slide the battery pack in the compartment until it fits in completely. Engage the battery latch to secure the battery in the cabinet.

Power Management

In order to make the most of the mobile computing capabilities of your notebook, you will need to be aware of how to manage the power consumption of your system. Aggressive power conservation can provide extended computer usage. Sometimes aggressive power conservation will not be needed, or you might prefer not to engage it. You should set the default to match your most common needs. If you use the system primarily as a mobile system with long-term battery needs, you can use an aggressive setting. If your battery usage is usually limited, then you might prefer a more moderate setting. Remember, to reset the default, you must use the System Configuration Utility program described in Chapter 3.

Your computer is installed with two kinds of power management. One is transparent, and operates automatically. The other kind is user-programmable, and you can program how it operates.

Transparent Power Management

Your system is designed to use the Windows Advanced Power Management (APM) program to transparently reduce system power consumption. Whenever the processor inside your computer is inactive for a short time, the transparent power manager idles the processor so that it consumes less power. When the processor resumes working, it returns to full speed almost instantaneously with no loss of performance. This kind of power management is transparent and automatic, and can save a great deal of energy.

Thermal Management

The processor in this computer is extremely powerful. Consequently, it generates quite a lot of heat when it is working at full speed. Your computer has an efficient thermal design, which dissipates this heat safely in normal conditions. If, however, the computer is in an extremely hot environment, and the processor is working at full speed for sustained periods, the temperature of the processor may approach a critical level, which could damage the computer.

Your computer monitors the processor's temperature. Before critical temperatures can be generated your computer automatically turns on the internal cooling fan until the heat problem disappears. You may notice the sound of the fan when this procedure occurs.

Programmable Power Management

There are two programmable power management systems available to you.

1. Your notebook has power management features built into the System Configuration Utility program. The utility program provides a more extensive array of power management options than the Windows power management discussed below. See Chapter 3 for more information on the System Configuration Utility.
2. Windows has built-in power management features that can be used when running under the Windows operating system. Since you can control these without having to exit to the Setup Program, you might find it useful to take advantage of the Windows power management. You will be able to make fine adjustments to power management while working. You can activate these by double clicking on the **Power** icon in the **Control Panel**.

NOTE: If you choose to allow Windows to control the power management, it will take command of the power management settings during Windows sessions.

Clicking on the **Advanced** button allows you to add the Suspend function to the start menu. It also allows you to set the system to resume normal function when the modem detects an incoming call. You can also specify the time period of inactivity before the hard disk is spun down. Spinning down the disk provides considerable power savings. For optimal battery life, consider a relatively short period of disk inactivity here.

Suspend Modes

Your computer can either suspend to RAM or suspend to disk. You can use the System Configuration Utility to program your computer so that it suspends to RAM or disk. A third, less aggressive power management mode is the Suspend.

Suspend Mode

In suspend mode, your system turns off and reduces the power consumption of a range of devices in order to save battery charge. The system will turn off the backlight of the LCD display, stop the hard disk drive, and put the CPU into doze mode. You can instantly return to full power by pressing any key or pointing device.

Suspend-to-RAM

In a Suspend-to-RAM, the contents of your computer's memory are held intact, while practically all the rest of the components in your notebook turn off completely, or reduce power consumption to a minimum. In a Suspend-to-RAM, your computer remains active but with the minimum possible power consumption. You can return the computer to full power by pressing any key.

If you are operating your notebook on battery power, a fully-charged battery can maintain a Suspend-to-RAM for many hours.

Suspend-to-Disk

Suspend-to-Disk is really another way of turning off your computer. When you suspend to disk, the contents of your computer's memory are copied to your hard disk drive as a file. When the contents of the memory have been safely stored to disk, your computer turns off. The next time the computer is turned on after suspend to disk, the file on the hard disk is quickly read back into memory. In just a few moments, your computer appears exactly as it was when you last suspended to disk.

Suspend to disk is very useful for Windows users who like to have many different programs open and ionized on the Windows desktop. It can take quite a few minutes to get a busy Windows desktop up and running, and then you have to shut down each program one by one when you want to turn off your computer.

NOTE: Don't use suspend to disk function while transferring files at network. It may cause your data loss.

Suspend-to-Disk Partition

Suspending to disk requires a special disk partition set up for that purpose. This partition has already been pre-installed on your notebook. The pre-installed partition is large enough to accommodate most system memory requirements. If you expand the system memory and get an error message when you suspend to disk, you will need to increase the size of this partition. You should not attempt to partition your hard drive unless you are an experienced user.

Initiating a Suspend mode

Your notebook will suspend fewer than four conditions:

1. You can click on the Suspend button in the Windows **Start** menu. The system will turn to suspend mode.
2. Pressing the hot key [Fn]+[F2] combination will suspend the system to disk.
3. After an automatic suspend timeout, set in the Power menu of the System Configuration Utility, elapses.
4. After the screen cover of the notebook is closed and no alternative display has been connected to the system, the system will suspend to RAM or to disk, depending on the settings in the System Configuration Utility.

Modem

Your notebook might come with the optional built-in software fax/modem that allows you to take full advantage of the fax and communications abilities of your system. In some countries, local regulations may not permit the use of the fax/modem that is designed for this system. Note that the telephone jack is covered with a cap and not present if your notebook does not have the fax/modem option built-in.

The fax/modem is capable of running in two modes, both as a fax and as a modem, which can be used to connect to other computers. The fax/modem can send and receive data at up to 56 Kbps and send and receive faxes at up to 14.4 Kbps.

If the fax/modem is present, the notebook is installed with an RJ11 telephone jack compartment on the rear side. In order to use the fax/modem you need to first plug a telephone cable into the RJ11 socket, and then use the fax or communications software to operate the device.



Figure 4-4: Fax/Modem Telephone Jack

Faxing

Your modem can allow the computer to send and receive faxes. Any Windows application, which has a print command, can be used to generate faxes. To send a fax from within a Windows program, you need only select the fax as your printer for that document. Then print the document as you would to your printer.

Modem Communications

If you purchased the modem, you can use it to connect to other computers with a modem, or to log into networks that allow modem access. Your modem, if purchased, can be set to emulate a terminal for logging into remote systems. It

can also be used with login protocols to connect to certain providers and on-line services, including those provided with Windows.

You should always try to connect at the highest rate of connection available. Your modem will automatically negotiate the connection and establish the actual rate of transmission of information.

To connect to anything with your modem, you will usually need to sign on with some provider or dial-in to another computer already set to receive such connections. Since such electronic connections are an important resource for computer users, Windows comes with its own software for making such connections, as well as with software from some other major service providers.

You can also use your modem in conjunction with financial software to perform your banking and pay your bills electronically.

Keep in mind that your modem is a phone, but unlike other phones, it is very sensitive to noise. If you find that your modem has a lot of disconnect problems, you might see if you can reduce the noise in your phone lines.

Internet and the World Wide Web

One of the most useful functions of your modem is to allow you to connect to the Internet or to browse the World Wide Web. The Internet is not a network, but a vast interconnection of networks. The Internet provides a connection to the world. You can send messages to anywhere on earth. You can login and use library catalogues. World Wide Web browsers, such as the Microsoft Internet Explorer browser built-into Windows, allow you to have access to text, images, sound and video stored on the Internet. To enter the Internet, you will need to log your computer into one of these networks.

Safety and Operation

- The notebook does not have a handle or rough surface for a sure grip, so use a carrying case when travelling. At times, you may want to put both the case and the notebook within a larger briefcase to conceal the system and reduce the risk of theft.
- Do not use the notebook in an unstable location. Serious damages could result if the system should fall.
- Avoid rough handling of you notebook. Jolts to the system can damage components or result in data loss.

- Avoid high and low temperatures when shipping or storing your notebook. Do not place the system in close proximity to a source of heat or dust.
- The batteries will not operate as well under extremes of temperature. If a battery is left in the sun and gets quite hot, it is apt to fail to charge. Once it cools down, you will be able to charge it again.
- Protect your modem. It is designed to work on an analog phone system. Before you hook up your modem, check to find an analog line.

Travel Tips

- It is a good idea to load common printer drivers onto your notebook. This will allow you to print from many printers at your destination, even if you do not carry your own printer with you.
- Take along a bootable diskette drive, just in case there is damage to your hard disk drive.
- Travel can present considerable risk of system shock or theft. Complete a full backup before travelling.
- Be familiar with your System Configuration Utility settings, or print a copy of them. In case there is damage to those settings, while you travel.
- If you will be travelling to another country, check with your travel agent to determine whether or not you will need a special adapter to use the electrical outlets.
- If you do a lot of travelling, you might find it useful to purchase an acoustic coupler for your modem, to allow connection even where compatible phone jacks cannot be found.
- Hand your notebook to an airport attendant rather than setting it on the conveyor for security checks, this will help reduce the possibility of theft.
- Password protects your system with at least one level of password, to help preserve your data.
- Brand or physically mark your notebook to make for easy identification.
- If you will be using an Internet provider or other on-line service, call ahead to find out local access numbers for your destination.
- In case your destination does not have outlets near convenient work-spaces, you might want to pack a short extension cord.

Remember to pack:

- Your notebook
- Your AC adapter/power cord
- Any optional expansion modules
- Any international converters for your adapter
- A spare length of phone cord
- Printer cable
- PC cards
- Spare battery packs
- Bootable diskettes
- Spare diskettes for easy file exchange
- Manuals for any critical software or device

Also remember to:

- Charge your battery
- Change your power management settings to more aggressive settings, if appropriate
- Transfer the files you need

Using a Computer Lock

You may want to secure your computer to a heavy object such as your desk or other immovable object to discourage theft.. The easiest way to do this is to purchase an optional *Kensington Micro saver* security cable. Your notebook has an anchor point for such a cable.

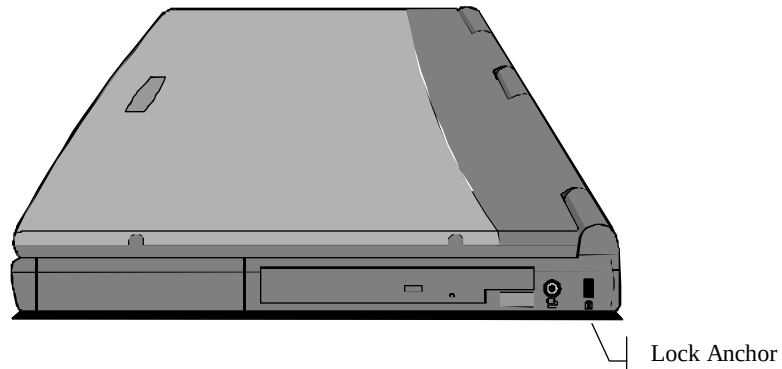


Figure 4-5: Anchor point for a Kensington-type security cable

To use this cable follow these instructions:

1. Loop the cable through or around some part of a heavy object. Make sure there is no way for a potential thief to slip the cable off the object.
2. Pass the locking end through the loop.
3. Insert the cable's locking end into the anchor point on your notebook, give the key a quarter turn and remove it. The computer is now securely locked.