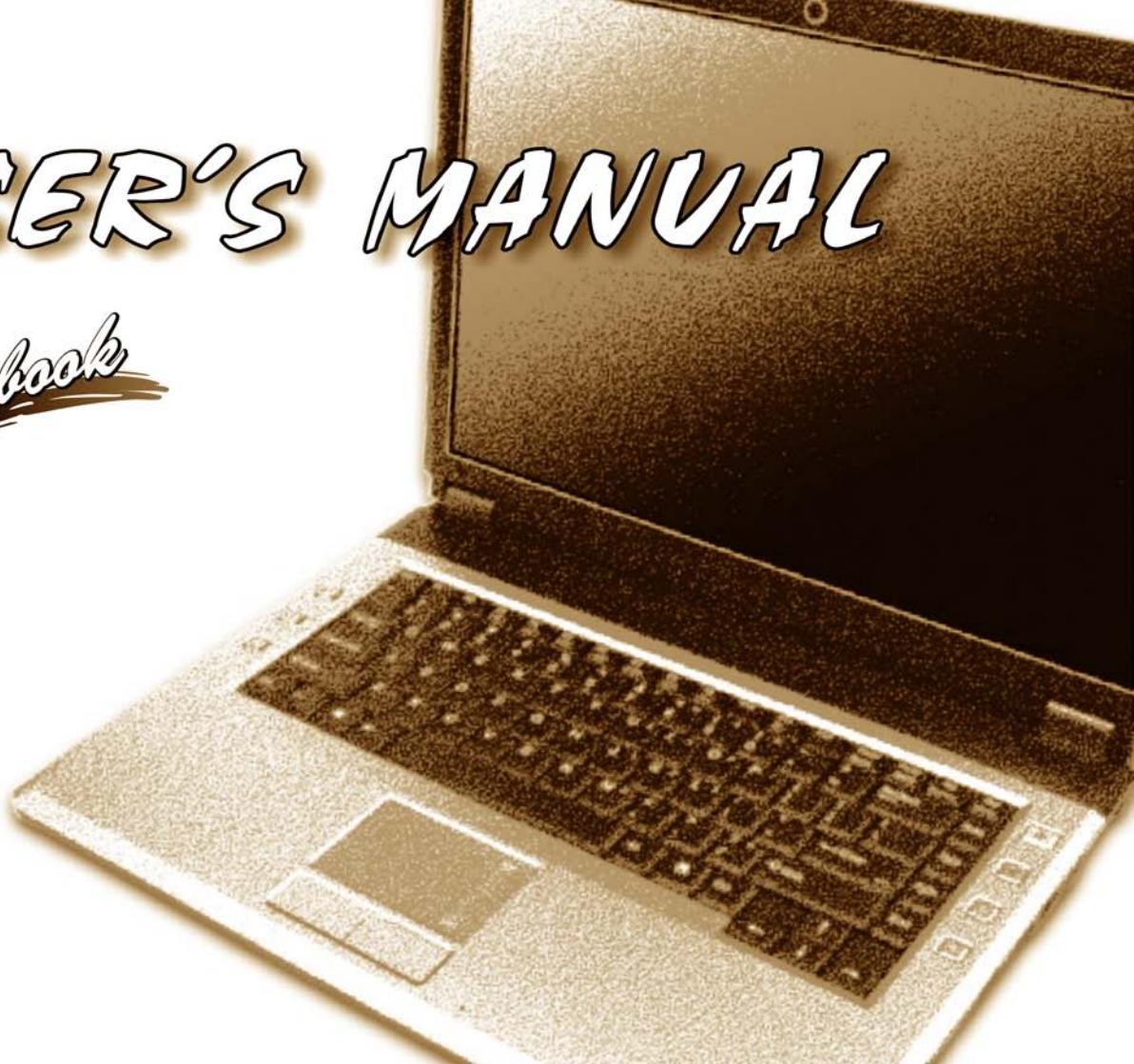
USER'S MANUAL

notebook



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FCC Statement

(Federal Communications Commission)

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

- Re orient 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.
- Consult the service representative or an experienced radio/TV technician for help.

Warning

Use only shielded cables to connect I/O devices to this equipment. You are cautioned that changes or modifications not expressly approved by the manufacturer for compliance with the above standards could void your authority to operate the equipment.

IMPORTANT SAFETY INSTRUCTIONS

Follow basic safety precautions, including those listed below, to reduce the risk of fire, electric shock, and injury to persons when using any electrical equipment:

1. Do not use this product near water, for example near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
2. Avoid using this equipment with a telephone line (other than a cordless type) during an electrical storm. There may be a remote risk of electrical shock from lightning.
3. Do not use the telephone to report a gas leak in the vicinity of the leak.
4. Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.
5. This product is intended to be supplied by a Listed Power Unit with an AC Input of 100 - 240V, 50 - 60Hz, DC Output of 19V, 3.42A (**65** Watts)/18.5V, 3.5A (**65** Watts) minimum AC/DC Adapter for **Model A** and **B** computers, OR 19V, 4.74A (**90** Watts) minimum AC/DC Adapter for **Model C** computers.

CAUTION

Always disconnect all telephone lines from the wall outlet before servicing or disassembling this equipment.

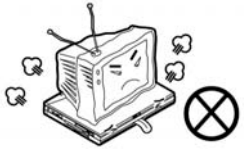
TO REDUCE THE RISK OF FIRE, USE ONLY NO. 26 AWG OR LARGER, TELECOMMUNICATION LINE CORD

This Computer's Optical Device is a Laser Class 1 Product

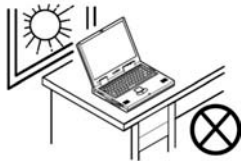
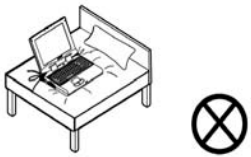
Instructions for Care and Operation

The notebook computer is quite rugged, but it can be damaged. To prevent this, follow these suggestions:

1. **Don't drop it, or expose it to shock.** If the computer falls, the case and the components could be damaged.

Do not expose the computer to any shock or vibration.	*Do not place it on an unstable surface.*	*Do not place anything heavy on the computer.*
		

2. **Keep it dry, and don't overheat it.** Keep the computer and power supply away from any kind of heating element. This is an electrical appliance. If water or any other liquid gets into it, the computer could be badly damaged.

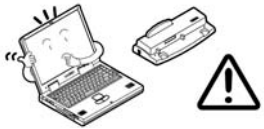
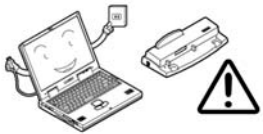
Do not expose it to excessive heat or direct sunlight.	*Do not leave it in a place where foreign matter or moisture may affect the system.*	*Don't use or store the computer in a humid environment.*	*Do not place the computer on any surface that will block the Vents/Fan Intakes.*
			

3. **Avoid interference.** Keep the computer away from high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage your data.

4. **Follow the proper working procedures for the computer.** Shut the computer down properly and don't forget to save your work. Remember to periodically save your data as data may be lost if the battery is depleted.

Do not turn off the power until you properly shut down all programs.	*Do not turn off any peripheral devices when the computer is on.*	*Do not disassemble the computer by yourself.*	*Perform routine maintenance on your computer.*
			

5. **Take care when using peripheral devices**.

Use only approved brands of peripherals.	*Unplug the power cord before attaching peripheral devices.*
	

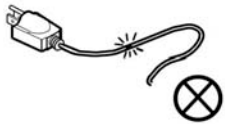
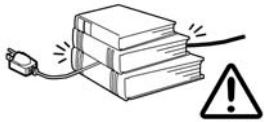
Power Safety

The computer has specific power requirements:

Power Safety Warning

Before you undertake any upgrade procedures, make sure that you have turned off the power, and disconnected all peripherals and cables (including telephone lines). It is advisable to also remove your battery in order to prevent accidentally turning the machine on.

- Only use a power adapter approved for use with this computer.
- Your AC/DC adapter may be designed for international travel but it still requires a steady, uninterrupted power supply. If you are unsure of your local power specifications, consult your service representative or local power company.
- The power adapter may have either a 2-prong or a 3-prong grounded plug. The third prong is an important safety feature; do not defeat its purpose. If you do not have access to a compatible outlet, have a qualified electrician install one.
- When you want to unplug the power cord, be sure to disconnect it by the plug head, not by its wire.
- Make sure the socket and any extension cord(s) you use can support the total current load of all the connected devices.
- Before cleaning the computer, make sure it is disconnected from any external power supplies (i.e. AC/DC adapter or car adapter).

Do not plug in the power cord if you are wet.	*Do not use the power cord if it is broken.*	*Do not place heavy objects on the power cord.*
		

Battery Precautions

- Only use batteries designed for this computer. The wrong battery type may explode, leak or damage the computer.
- Do not remove any batteries from the computer while it is powered on.
- Do not continue to use a battery that has been dropped, or that appears damaged (e.g. bent or twisted) in any way. Even if the computer continues to work with a damaged battery in place, it may cause circuit damage, which may possibly result in fire.
- Recharge the batteries using the notebook's system. Incorrect recharging may make the battery explode.
- Do not try to repair a battery pack. Refer any battery pack repair or replacement to your service representative or qualified service personnel.
- Keep children away from, and promptly dispose of a damaged battery. Always dispose of batteries carefully. Batteries may explode or leak if exposed to fire, or improperly handled or discarded.
- Keep the battery away from metal appliances.
- Affix tape to the battery contacts before disposing of the battery.
- Do not touch the battery contacts with your hands or metal objects.

Battery Disposal & Caution

The product that you have purchased contains a rechargeable battery. The battery is recyclable. At the end of its useful life, under various state and local laws, it may be illegal to dispose of this battery into the municipal waste stream. Check with your local solid waste officials for details in your area for recycling options or proper disposal.

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used battery according to the manufacturer's instructions.

Cleaning

Do not apply cleaner directly to the computer; use a soft clean cloth.
Do not use volatile (petroleum distillates) or abrasive cleaners on any part of the computer.

Servicing

Do not attempt to service the computer yourself. Doing so may violate your warranty and expose you and the computer to electric shock. Refer all servicing to authorized service personnel. Unplug the computer from the power supply. Then refer servicing to qualified service personnel under any of the following conditions:

- When the power cord or AC/DC adapter is damaged or frayed.
- If the computer has been exposed to rain or other liquids.
- If the computer does not work normally when you follow the operating instructions.
- If the computer has been dropped or damaged (do not touch the poisonous liquid if the LCD panel breaks).
- If there is an unusual odor, heat or smoke coming from your computer.

Removal Warning

When removing any cover(s) and screw(s) for the purposes of device upgrade, remember to replace the cover(s) and screw(s) before turning the computer on.

Travel Considerations

Packing

As you get ready for your trip, run through this list to make sure the system is ready to go:

1. Check that the battery pack and any spares are fully charged.
2. Power off the computer and peripherals.
3. Close the display panel and make sure it's latched.
4. Disconnect the AC/DC adapter and cables. Stow them in the carrying bag.
5. The AC/DC adapter uses voltages from 100 to 240 volts so you won't need a second voltage adapter. However, check with your travel agent to see if you need any socket adapters.
6. Put the notebook in its carrying bag and secure it with the bag's straps.
7. If you're taking any peripherals (e.g. a printer, mouse or digital camera), pack them and those devices' adapters and/or cables.
8. Anticipate customs - Some jurisdictions may have import restrictions or require proof of ownership for both hardware and software. Make sure your documents are prepared.

Power Off Before Traveling

Make sure that your notebook is completely powered off before putting it into a travel bag (or any such container). Putting a notebook which is powered on in a travel bag may cause the vent(s)/fan intake(s)/outlet(s) to be blocked. To prevent your computer from overheating make sure nothing blocks the vent(s)/fan intake(s)/outlet(s) while the computer is in use.

On the Road

In addition to the general safety and maintenance suggestions in this preface, and Chapter 8: Troubleshooting, keep these points in mind:

Hand-carry the notebook - For security, don't let it out of your sight. In some areas, computer theft is very common. Don't check it with normal luggage. Baggage handlers may not be sufficiently careful. Avoid knocking the computer against hard objects.

Beware of Electromagnetic fields - Devices such as metal detectors & X-ray machines can damage the computer, hard disk, floppy disks, and other media. They may also destroy any stored data - Pass your computer and disks around the devices. Ask security officials to hand-inspect them (you may be asked to turn it on). **Note**: Some airports also scan luggage with these devices.

Fly safely - Most airlines have regulations about the use of computers and other electronic devices in flight. These restrictions are for your safety, follow them. If you stow the notebook in an overhead compartment, make sure it's secure. Contents may shift and/or fall out when the compartment is opened.

Get power where you can - If an electrical outlet is available, use the AC/DC adapter and keep your battery(ies) charged.

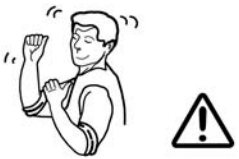
Keep it dry - If you move quickly from a cold to a warm location, water vapor can condense inside the computer. Wait a few minutes before turning it on so that any moisture can evaporate.

Developing Good Work Habits

Developing good work habits is important if you need to work in front of the computer for long periods of time. Improper work habits can result in discomfort or serious injury from repetitive strain to your hands, wrists or other joints. The following are some tips to reduce the strain:

- Adjust the height of the chair and/or desk so that the keyboard is at or slightly below the level of your elbow. Keep your forearms, wrists, and hands in a relaxed position.
- Your knees should be slightly higher than your hips. Place your feet flat on the floor or on a footrest if necessary.
- Use a chair with a back and adjust it to support your lower back comfortably.
- Sit straight so that your knees, hips and elbows form approximately 90-degree angles when you are working.
- Take periodic breaks if you are using the computer for long periods of time.

Remember to:



- Alter your posture frequently.
- Stretch and exercise your body several times a day.
- Take periodic breaks when you work at the computer for long periods of time. Frequent and short breaks are better than fewer and longer breaks.

Lighting

Proper lighting and comfortable display viewing angle can reduce eye strain and muscle fatigue in your neck and shoulders.

- Position the display to avoid glare or reflections from overhead lighting or outside sources of light.
- Keep the display screen clean and set the brightness and contrast to levels that allow you to see the screen clearly.
- Position the display directly in front of you at a comfortable viewing distance.
- Adjust the display-viewing angle to find the best position.

LCD Screen Care

To prevent **image persistence** on LCD monitors (caused by the continuous display of graphics on the screen for an extended period of time) take the following precautions:

- Set the *Windows* **Power Plans** to turn the screen off after a few minutes of screen idle time.
- Use a rotating, moving or blank screen saver (this prevents an image from being displayed too long).
- Rotate desktop background images every few days.
- Turn the monitor off when the system is not in use.

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VIA Video Driver Controls

NVIDIA Video Driver Controls

Specifications

Windows XP Information

Chapter 1: Quick Start Guide

Overview

This Quick Start Guide is a brief introduction to the basic features of your computer, to navigating around the computer and to getting your system started. The remainder of the manual covers the following:

- **Chapter 2** A guide to using some of the main features of the computer e.g. the **storage devices** (**hard disk**, **optical device**, **7-in-1 card reader**, **ExpressCard/34/54**), **TouchPad** & **Mouse**, **Function/Hot Keys**, **Quick Buttons**, **Audio** & **Printer**.
- **Chapter 3** The computer's **power** saving options.
- **Chapter 4** The installation of the **drivers** and utilities essential to the operation or improvement of some of the computer's subsystems.
- **Chapter 5** An outline of the computer's built-in software or **BIOS** (Basic Input Output System).
- **Chapter 6** Instructions for **upgrading** your computer.
- **Chapter 7** A quick guide to the computer's **Wireless LAN**, **Bluetooth** and **PC Camera**, modules (some of which may be **optional** depending on your purchase configuration).
- **Chapter 8** A **troubleshooting** guide.
- **Appendix A** Definitions of the **interface**, **ports**/**jacks** which allow your computer to communicate with external devices.
- **Appendix B** Information on the **VIA Video driver controls**.
- **Appendix C** Information on the **NVIDIA Video driver controls**.
- **Appendix C** The computer's **specification**.
- **Appendix E** Information on the ***Windows XP*** OS.

Model Differences

This notebook series includes **three** different model types. The models differ as indicated in the table below.

Feature	Model A	Model B	Model C
Video Adapter	VIA Integrated Video System (Internal On Chip)	NVIDIA Discrete Video System (External On Board)	
Windows Vista Version Supported	Windows Vista Home Basic Edition (32-bit)	Windows Vista (32-bit) Home Basic Edition/Home Premium Edition Windows Vista (32-bit) Business Edition/Enterprise Edition/Ultimate Edition	
Fingerprint Reader	No	Optional	
Zoom & Audio Record Buttons & Indicators	**Yes** See *Table 2 - 2, on page 2 - 10*		No
Power Supply Adapter	**65W** (DC Output 19V, 3.42A or 18.5V, 3.5A)		**90W** (DC Output 19V, 4.74A)
Display Supported			

Table 1 - 1 **- Model Differences**

Advanced Users

If you are an advanced user you may skip over most of this Quick Start Guide. However you may find it useful to refer to *"What to Install" on page 4 - 1*, *"BIOS Utilities" on page 5 - 1* and *"Upgrading The Computer" on page 6 - 1* in the remainder of the User's Manual. You may also find the notes marked with a ✎ of interest to you.

Beginners and Not-So-Advanced Users

If you are new to computers (or do not have an advanced knowledge of them) then the information contained in the Quick Start Guide chapter should be enough to get you up and running. Eventually you should try to look through all the documentation (more detailed descriptions of the functions, setup and system controls are covered in the remainder of the User's Manual), but do not worry if you do not understand everything the first time. Keep this manual nearby and refer to it to learn as you go. You may find it useful to refer to the notes marked with a ✎ as indicated in the margin. For a more detailed description of any of the interface ports and jacks see *"Interface (Ports & Jacks)" on page A - 1*.

✎

Notes

Check the light colored boxes with the mark above to find detailed information about the computer's features.

Warning Boxes

No matter what your level please pay careful attention to the warning and safety information indicated by the symbol. Also please note the safety and handling instructions as indicated in the *Preface*.

Not Included

Operating Systems (e.g. *Windows Vista*/*Windows XP*) and applications (e.g. word processing, spreadsheet and database programs) have their own manuals, so please consult the appropriate manuals.

Drivers

If you are installing new system software, or are re-configuring your computer for a different system, you will need to install the drivers listed in ***"Drivers & Utilities" on page 4 - 1***. Drivers are programs which act as an interface between the computer and a hardware component e.g. a wireless network module. It is very important that you install the drivers in the order listed in ***Table 4 - 1, on page 4 - 3***. You will be unable to use most advanced controls until the necessary drivers and utilities are properly installed. If your system hasn't been properly configured (your service representative may have already done that for you); refer to ***Chapter 4*** for installation instructions.

Ports and Jacks

See ***"Notebook Ports and Jacks" on page A - 2*** for a description of the interface (ports & jacks) which allow your computer to communicate with external devices, connect to the internet etc.

System Software

Your computer may already come with system software pre-installed. Where this is not the case, or where you are re-configuring your computer for a different system, you will find the following operating systems are supported.

Operating Systems Supported		Note
Model A Computers	**Model B & C Computers**	
*Windows XP Home or Professional Editions		In order to run ***Windows Vista*** without limitations or decreased performance, your computer requires a minimum **1GB** of system memory (RAM).
Windows Vista (32-bit) Home Basic Edition		
	Windows Vista (32-bit) Home Premium Edition	
	Windows Vista (32-bit) Business/Enterprise/Ultimate Editions	

Table 1 - 2 **- Operating Systems Supported**

Note**: For information on the ***Windows XP OS (specifically power, video and driver information) see ***"Windows XP Information" on page E - 1***.

System Startup

1. Remove all packing materials.
2. Place the computer on a stable surface.
3. Securely attach any peripherals you want to use with the notebook (e.g. keyboard and mouse) to their ports.
4. Attach the AC/DC adapter to the DC-In jack at the rear of the computer, then plug the AC power cord into an outlet, and connect the AC power cord to the AC/DC adapter.
5. Raise the lid/LCD to a comfortable viewing angle, and press the power button to turn the computer “on”.
6. Adjust the LCD panel to a comfortable viewing angle.
7. The LED indicators show the power and battery status of the computer.

Shutdown

Note that you should always shut your computer down by choosing the **Shut Down** command from the **Lock Button Menu** in ***Windows Vista***. This will help prevent hard disk or system problems.

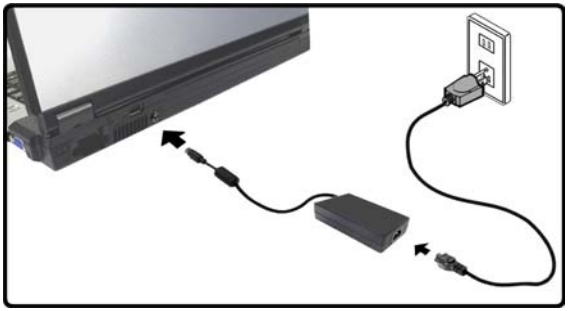


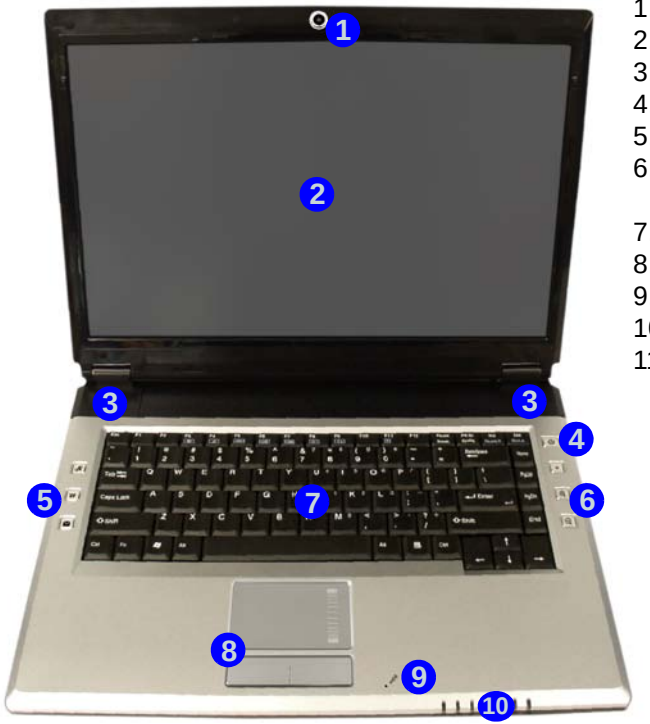
Figure 1 - 1 **- AC/DC Adapter In**

System Map: LCD Panel Open Models A & B

Wireless Device Operation Aboard Aircraft

The use of any portable electronic transmission devices aboard aircraft is usually prohibited. Make sure the module(s) are OFF if you are using the computer aboard aircraft.

Use the key combinations to toggle power to the WLAN/ Bluetooth modules, and check the LED indicator icon to see if the modules are powered on or not (see ***Table , on page 1 - 9*** / ***Table 1 - 5, on page 1 - 12***).



1. Optional Built-In PC Camera
2. LCD
3. Speakers
4. Power Button
5. Hot Key Buttons
6. Hot Key Buttons (Record Audio & PC Camera Zoom)
7. Keyboard
8. TouchPad and Buttons
9. Built-In Microphone
10. LED Indicators
11. Fingerprint Reader (**Optional** for **Model B** Computers only)

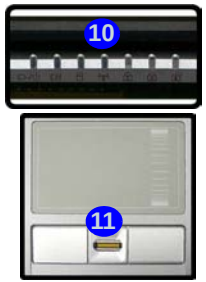
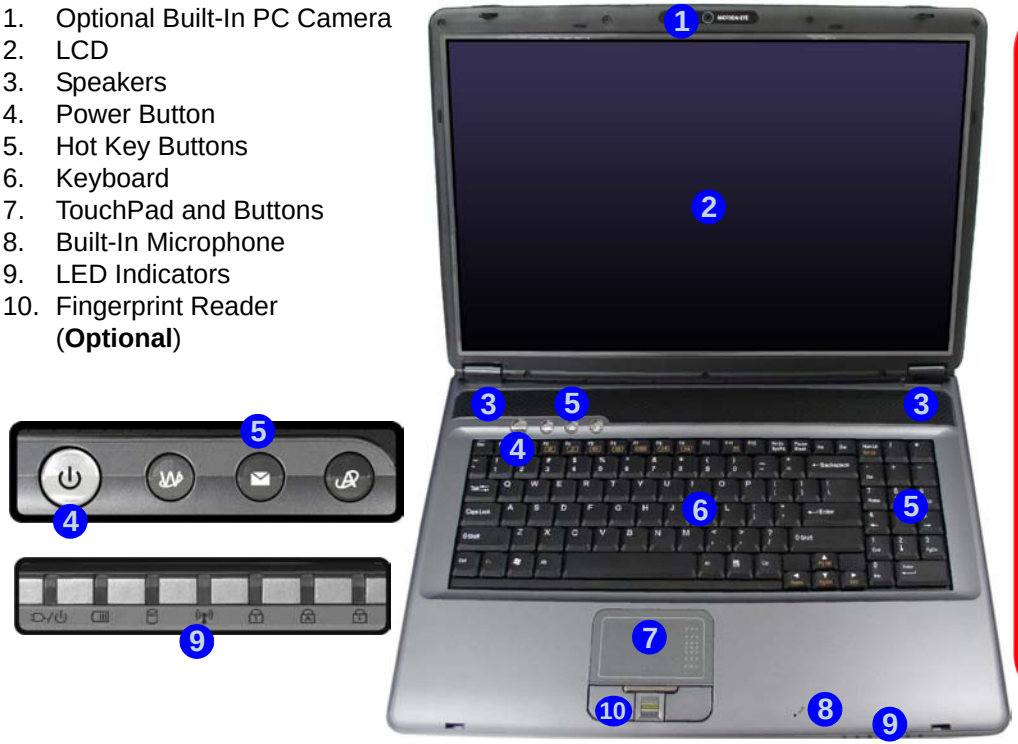


Figure 1 - 2 **- Top View with LCD Panel Open Models A & B**

System Map: LCD Panel Open Model C

1. Optional Built-In PC Camera
2. LCD
3. Speakers
4. Power Button
5. Hot Key Buttons
6. Keyboard
7. TouchPad and Buttons
8. Built-In Microphone
9. LED Indicators
10. Fingerprint Reader (**Optional**)



Wireless Device Operation Aboard Aircraft

The use of any portable electronic transmission devices aboard aircraft is usually prohibited. Make sure the module(s) are OFF if you are using the computer aboard aircraft.

Use the key combinations to toggle power to the WLAN/ Bluetooth modules, and check the LED indicator icon to see if the modules are powered on or not (see ***Table , on page 1 - 9***/ ***Table 1 - 5, on page 1 - 12***).

Figure 1 - 3 **- Top View with LCD Panel Open Model C**

LED Indicators

The LED indicators display helpful information about the current status of the computer.

Icon	Color	Description
	Green	Number Lock Activated
	Green	Caps Lock Activated
	Green	Scroll Lock Activated
	Green	The Computer is On
	Blinking Green	The Computer is in Sleep Mode
	Orange	The AC/DC Adapter is Plugged In & the Computer is Powered Off
	Orange	The AC/DC Adapter is Plugged In & the Battery is Charging
	Blinking Orange	The Battery has Reached Critically Low Power Status
	Green	The Battery is Fully Charged
	Green	Hard Disk Activity
	Green	The WLAN/Bluetooth Module(s) is/are Powered On

Table 1 - 3 **- LED Indicators**

Hot Key Buttons

These buttons give instant access to the functions indicated in the table below. The Application and zoom hot key functions depend on whether or not a PC Camera module is installed. Note that **Model C** does not support the Audio Record and Zoom (or Application Quick Buttons 2 & 3) hot key buttons.

Hot Key Button		Function
	PC Camera Installed	Activate the BisonCap program/Take Still Picture (See Page *7 - 17*)
	PC Camera Not Installed	Activate **Application Quick Button 1** (See Page *2 - 11*)
		Activate the Default Internet Program
		Activate the Default E-Mail Browser
		Audio Record Start/Stop (See Page *2 - 12*)
	PC Camera Installed	Camera Zoom-In (See Page *7 - 17*)
	PC Camera Not Installed	Activate **Application Quick Button 2** (See Page *2 - 11*)
	PC Camera Installed	Camera Zoom-Out (See Page *7 - 17*)
	PC Camera Not Installed	Activate **Application Quick Button 3** (See Page *2 - 11*)

Table 1 - 4 **- Hot Key Buttons**

Keyboard

The keyboard has a numerical keypad for easy numeric data input, and features function keys to allow you to change operational features instantly (see *Figure 1 - 4*). Note that **Model C** computers have a Numeric keypad to the right of the main keyboard.

Model A & B Computers

Model C Computers

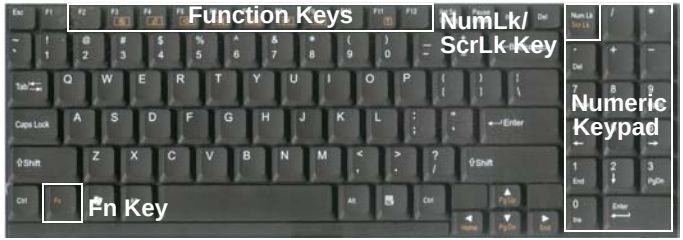


Figure 1 - 4 **- Keyboards**

Other Keyboards

If your keyboard is damaged or you just want to make a change, you can use any standard USB keyboard. The system will detect and enable it automatically. However special functions/hot-keys unique to the system's regular keyboard may not work.

Function Keys

The function keys (**F1 - F12** etc.) will act as hot keys when pressed while the **Fn** key is held down.

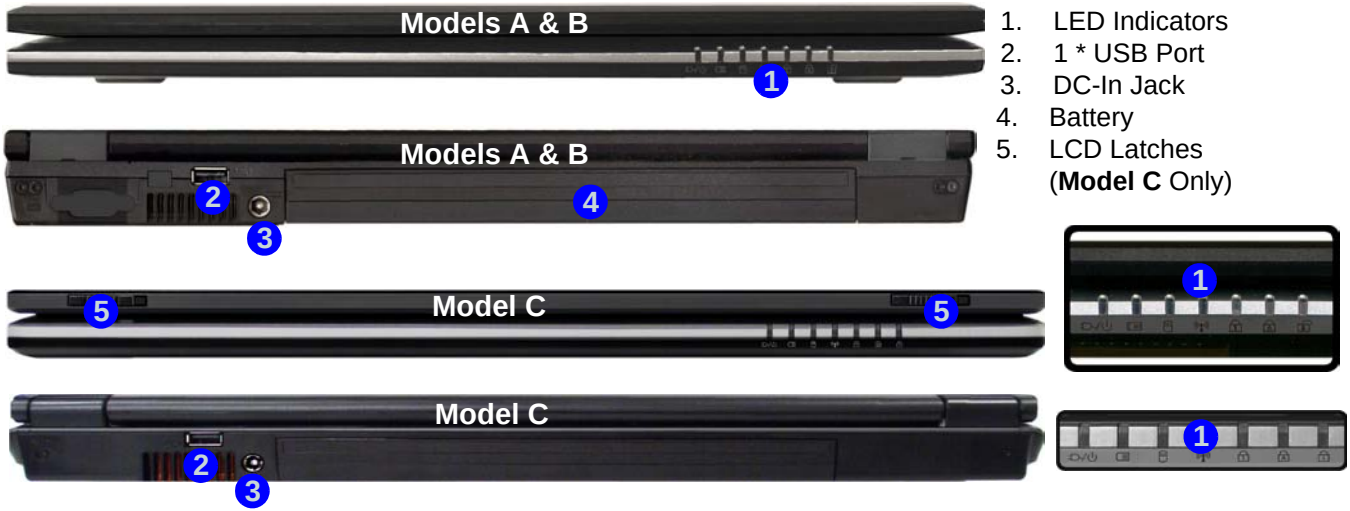
Key	Function	Key	Function
Fn + ~	Play/Pause (in Audio/Video Programs)	Fn + F8	Decrease LCD Brightness
Fn + F1	TouchPad Toggle	Fn + F9	Increase LCD Brightness
Fn + F2	Turn LCD Backlight Off (Press a key to or use TouchPad to turn on)	Fn + F10	PC Camera Module Power Toggle
Fn + F3	Mute Toggle	Fn + F11	Wireless LAN Module Power Toggle
Fn + F4	Sleep Toggle	Fn + F12	Bluetooth Module Power Toggle
Fn + F5	Decrease Audio Volume	Fn + NumLk	Number Lock Toggle (**Models A & B**)
Fn + F6	Increase Audio Volume	Fn + ScrLk	Scroll Lock Toggle
Fn + F7	Display Toggle	NumLk	Number Lock Toggle (**Model C**)

Table 1 - 5 **- Function Keys**

Special Characters

Some software applications allow the number-keys to be used with **Alt** to produce special characters. These special characters can only be produced by using the numeric keypad. Regular number keys (in the upper row of the keyboard) will not work. Make sure that **NumLk** is on.

System Map: Front & Rear Views



1. LED Indicators
2. 1 * USB Port
3. DC-In Jack
4. Battery
5. LCD Latches (**Model C** Only)

Figure 1 - 5 **- Front & Rear Views**

System Map: Left View

Figure 1 - 6 **- Left View**

1. Security Lock Slot
2. Optical Device Drive Bay (see page *2 - 3*)
3. RJ-11 Modem Jack
4. S/PDIF-Out Jack
5. Microphone-In Jack
6. Headphone-Out Jack
7. Recording Line-In Jack (see page *A - 2*)

CD Emergency Eject

If you need to manually eject a CD/DVD (e.g. due to an unexpected power interruption) you may push the end of a straightened paper clip into the emergency eject hole. Do not use a sharpened pencil or similar object that may break and become lodged in the hole.

Media Warning

Don't try to remove a floppy disk/CD/DVD while the system is accessing it. This may cause the system to "crash".

Changing DVD Regional Codes

Go to the **Control Panel** and double-click **Device Manager (Hardware and Sound)**, then click the **+** next to **DVD/CD-ROM drives**. Double-click on the DVD-ROM device to bring up the **Properties** dialogue box, and select the **DVD Region** (tab) to bring up the control panel to allow you to adjust the regional code (see *"DVD Regional Codes" on page 2 - 5*).

DVD region detection is device dependent, not OS-dependent. You can select your module's region code **5** times. The fifth selection is permanent. This cannot be altered even if you change your operating system or you use the module in another computer.

System Map: Right View

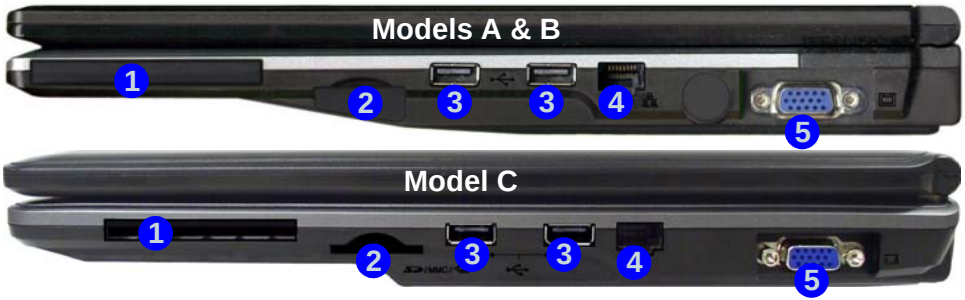


Figure 1 - 7 **- Right View**

1. ExpressCard Slot (see page *2 - 7*)
2. 7-in-1 Card Reader
3. 2 * USB 2.0 Ports
4. RJ-45 LAN Jack
5. External Monitor Port

ExpressCard Slot

The ExpressCard Slot accepts either **ExpressCard/34** or **ExpressCard/54** formats.

7-in-1 Card Reader

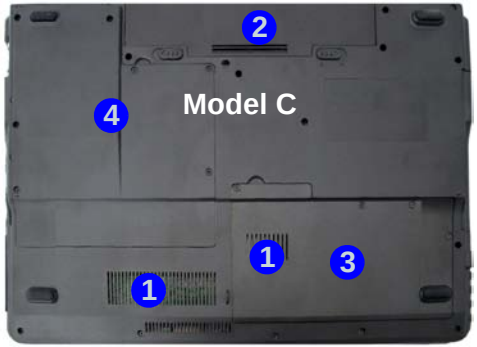
The card reader allows you to use the most popular digital storage card formats:

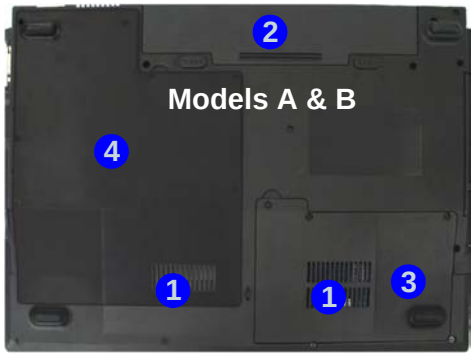
MMC (MultiMedia Card) / SD (Secure Digital) / MS (Memory Stick) / MS Pro (Memory Stick Pro) MS Duo (requires PC adapter) / Mini SD (requires PC adapter) / RS MMC (requires PC adapter)

System Map: Bottom View

Figure 1 - 8 **- Bottom View**

1. Vent/Fan Intake/Outlet
2. Battery
3. Hard Disk Bay Cover
4. CPU/RAM Bay Cover





CPU

The CPU is not a user serviceable part. Opening this compartment, or accessing the CPU in any way, may violate your warranty.

Overheating

To prevent your computer from overheating make sure nothing blocks any Vent/Fan Intake while the computer is in use.

Battery Information

Always completely discharge, then fully charge, a new battery before using it. Completely discharge and charge the battery at least once every 30 days or after about 20 partial discharges. See *“” on page 3 - 9* for full instructions.

Windows Vista Start Menu & Control Panel

Most of the control panels, utilities and programs within ***Windows Vista*** (and most other ***Windows*** versions) are accessed from the **Start** menu. When you install programs and utilities they will be installed on your hard disk drive, and a shortcut will usually be placed in the **Start** menu and/or the desktop. Right-click the **Start menu** icon , and then select **Properties** if you want to customize the appearance of the **Start** menu.

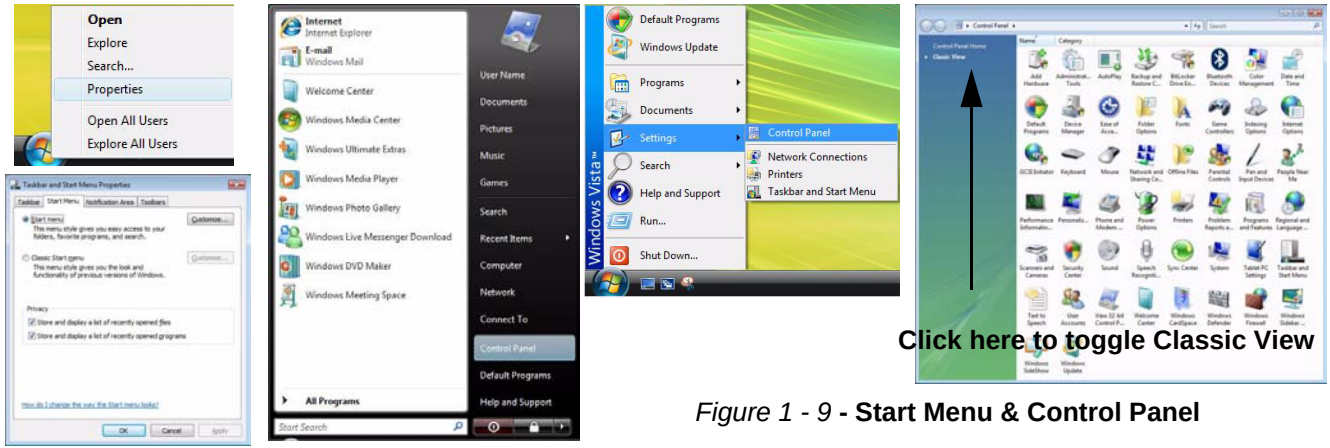


Figure 1 - 9 **- Start Menu & Control Panel**

In many instances throughout this manual you will see an instruction to open the **Control Panel**. The **Control Panel** is accessed from the **Start** menu, and it allows you to configure the settings for most of the key features in ***Windows*** (e.g. power, video, network, audio etc.). ***Windows Vista*** provides basic controls for many of the features, however many new controls are added (or existing ones are enhanced) when you install the drivers listed in ***Table 4 - 1, on page 4 - 3***. To see all controls it may be necessary to toggle to Classic View on.

Video Features

This computer features two different (either **VIA** for **Model A** or **NVIDIA for Models B & C**) video options. You will be provided with an appropriate driver on the ***Device Drivers & Utilities + User's Manual CD-ROM***.

You can switch display devices, and configure display options, from the **Display Settings** control panel (in **Personalization**) in ***Windows Vista***. For further information see ***"VIA Video Driver Controls" on page B - 1*** (**Model A** computers) **OR** ***"NVIDIA Video Driver Controls" on page C - 1*** (**Model B & C** computers).

To access Display Settings in ***Windows Vista***:

1. Click **Start**, and click **Control Panel** (or point to **Settings** and click **Control Panel**).
2. Click **Adjust screen resolution** under the **Appearance and Personalization** menu (or double-click **Personalization > Display Settings**).
3. Move the slider to the preferred setting in **Resolution:** 1 (***Figure 1 - 10 on page 1 - 19***).
4. Click the arrow, and scroll to the preferred setting In **Colors:** 2(***Figure 1 - 10 on page 1 - 19***).
5. Click **Advanced Settings** (button) 3 (***Figure 1 - 10 on page 1 - 19***) to bring up the **Advanced Settings** tabs.
6. For **NVIDIA** computers (**Models B & C**); click **GeForce.....** (tab), and then click **Start the NVIDIA Control Panel** 4 (***Figure 1 - 10 on page 1 - 19***) to make any video adjustments

OR

7. Right-click the desktop and click **Personalize**, and then click **Display Settings** and adjust as above.

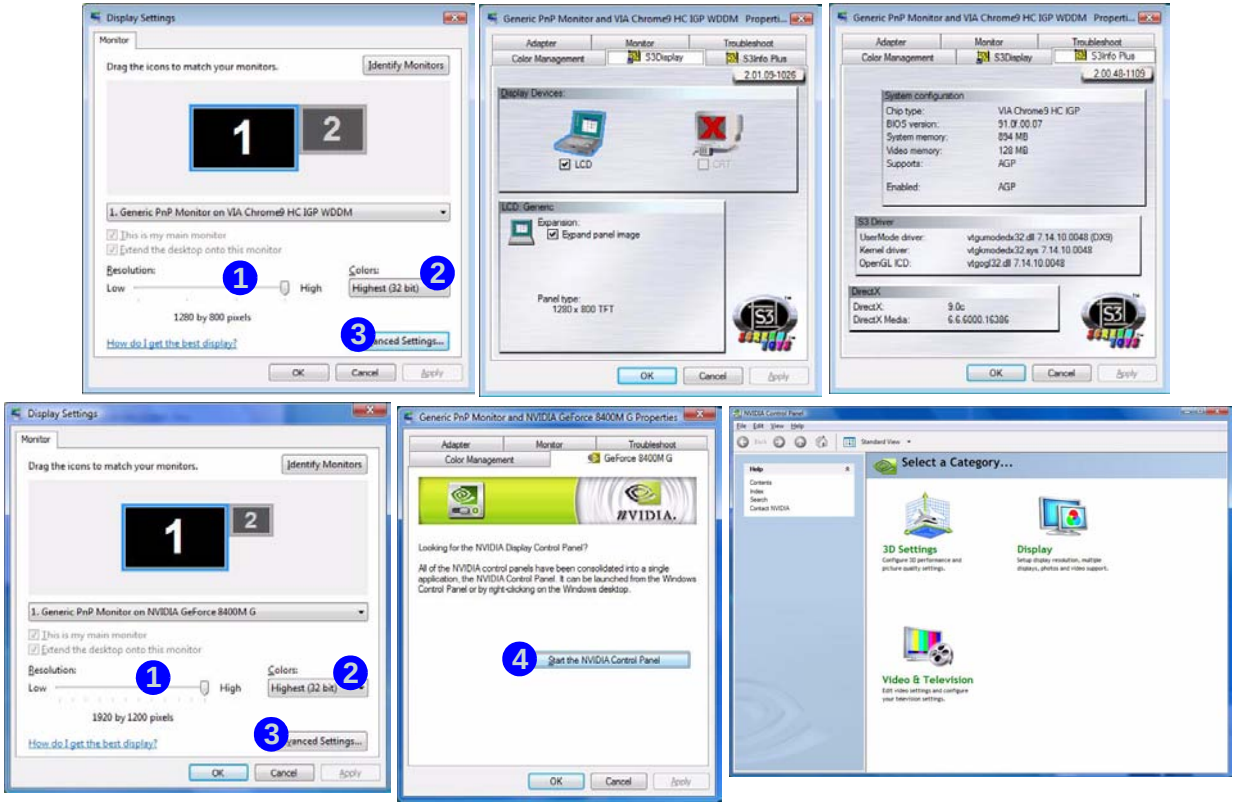


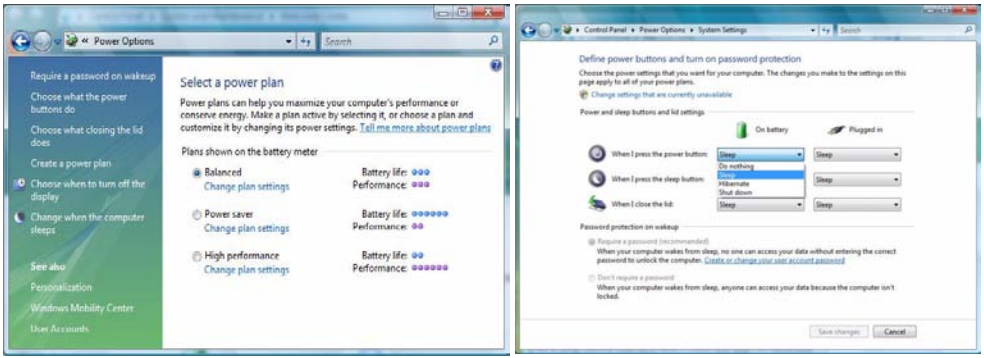
Figure 1 - 10 **- Display Settings**

Power Options

The **Power Options** (**Hardware and Sound** menu) control panel icon in ***Windows*** (see page ***1 - 17***) allows you to configure power management features for your computer. You can conserve power by means of **power plans** and configure the options for the **power button**, **sleep button**, **computer lid (when closed)**, **display** and **sleep** mode from the left menu. Note that the **Power saver** plan may have an affect on computer performance.

Click to select one of the existing plans, or click ***Create a power plan*** in the left menu and select the options to create a new plan. Click ***Change Plan Settings*** and click ***Change advanced power settings*** to access further configuration options.

Pay attention to the instructions on battery care in ***"" on page 3 - 9***.



Note: **Sleep** is the default power saving state in ***Windows Vista***

Figure 1 - 11 **- Power Options**

Chapter 2: Features & Components

Overview

Read this chapter to learn more about the following main features and components of the computer:

- Hard Disk Drive
- Optical (CD/DVD) Device
- 7-in-1 Card Reader
- ExpressCard Slot
- TouchPad and Buttons/Mouse
- Function Keys/Hot Keys
- Application Quick Buttons
- Recording Audio
- Audio Features
- Adding a Printer

Model C Computers

Note that Model C computers do not support the audio record or camera zoom hot keys functions.

Model C computers do not display the visual indicators illustrated in ***Table 2 - 2, on page 2 - 10***.

You may configure the Application Hot Key (for one application) as outlined in ***"Application Quick Buttons" on page 2 - 11***.

Power Safety

Before attempting to access any of the internal components of your computer please ensure that the machine is not connected to the AC power, and that the machine is turned off. Also ensure that all peripheral cables, including phone lines, are disconnected from the computer.

Hard Disk Drive

The hard disk drive is used to store your data in the computer. The hard disk can be taken out to accommodate other 2.5" serial (SATA) hard disk drives (see *"Storage" on page D - 3*) with a height of 9.5 mm.

The hard disk is accessible from the bottom of your computer as seen below. For further details see *"Upgrading the Hard Disk Drive" on page 6 - 4*.

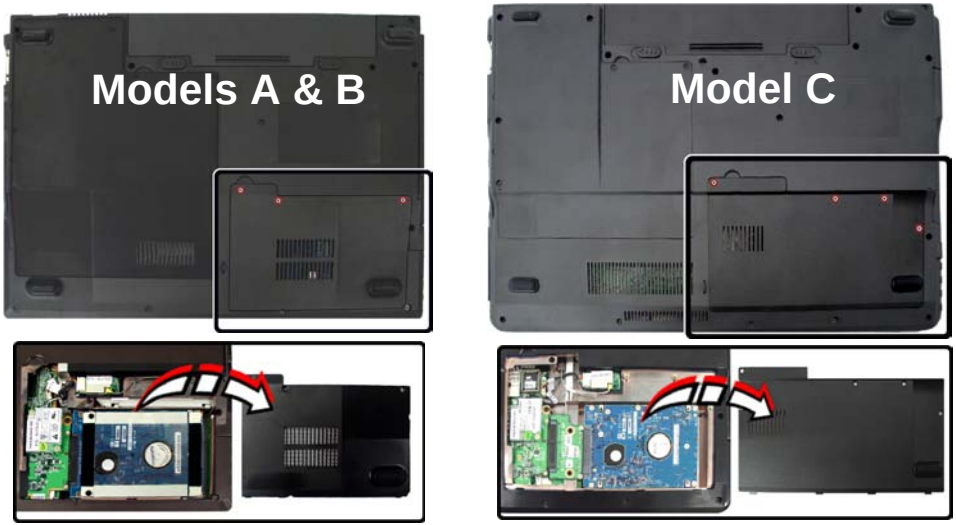


Figure 2 - 1
Hard Disk Location

Optical (CD/DVD) Device

There is a bay for a 5.25" optical (CD/DVD) device (12.7mm height). The actual device will depend on the module you purchased (see *"Storage" on page D - 3*). The optical device is usually labeled "**Drive D:**" and may be used as a boot device if properly set in the **BIOS** (see *"Security Menu" on page 5 - 9*).

Loading Discs

To insert a CD/DVD, press the open button 1 and carefully place a CD/DVD onto the disc tray with label-side facing up (use just enough force for the disc to click onto the tray's spindle). Gently push the CD/DVD tray in until its lock "clicks" and you are ready to start. The busy indicator 2 will light up while data is being accessed, or while an audio/video CD, or DVD, is playing. If power is unexpectedly interrupted, insert an object such as a straightened paper clip into the emergency eject hole 3 to open the tray.

Figure 2 - 2
Optical Device

Sound Volume Adjustment

How high the sound volume can be set depends on the setting of the volume control within ***Windows***. Click the **Volume** icon on the taskbar to check the setting (see *"Audio Features" on page 2 - 14*).

CD Emergency Eject

If you need to manually eject a CD (e.g. due to an unexpected power interruption) you may push the end of a straightened paper clip into the emergency eject hole. However please do NOT use a sharpened pencil or similar object that may break and become lodged in the hole.

Disk Eject Warning

Don't try to remove a CD/DVD while the system is accessing it. This may cause the system to "crash".

Handling CDs or DVDs

Proper handling of your CDs/DVDs will prevent them from being damaged. Please follow the advice below to make sure that the data stored on your CDs/DVDs can be accessed.

Note the following:

- Hold the CD or DVD by the edges; do not touch the surface of the disc.
- Use a clean, soft, dry cloth to remove dust or fingerprints.
- Do not write on the surface with a pen.
- Do not attach paper or other materials to the surface of the disc.
- Do not store or place the CD or DVD in high-temperature areas.
- Do not use benzene, thinner, or other cleaners to clean the CD or DVD.
- Do not bend the CD or DVD.
- Do not drop or subject the CD or DVD to shock.

DVD Regional Codes

To change the DVD regional codes see *"Changing DVD Regional Codes" on page 1 - 14*.

DVD Regional Coding	
Region	**Geographical Location**
1	USA, Canada
2	Western Europe, Japan, South Africa, Middle East & Egypt
3	South-East Asia, Taiwan, South Korea, The Philippines, Indonesia, Hong Kong
4	South & Central America, Mexico, Australia, New Zealand
5	N Korea, Russia, Eastern Europe, India & Most of Africa
6	China

Table 2 - 1
DVD Regional Coding

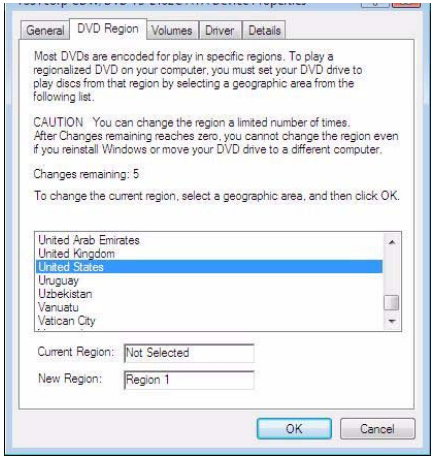


Figure 2 - 3
DVD Regions

Card Reader Cover

Make sure you keep the rubber cover provided in the card reader when not in use. This will help prevent foreign objects and/or dust getting in to the card reader.

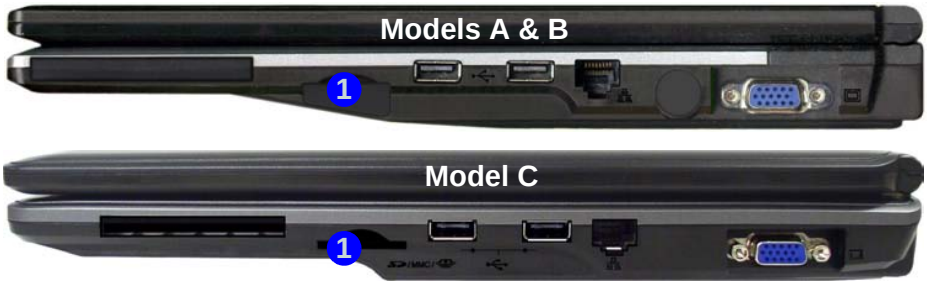
7-in-1 Card Reader

The card reader allows you to use some of the latest digital storage cards. Push the card into the slot and it will appear as a removable device, and can be accessed in the same way as your hard disk (s). Make sure you install the Card Reader driver (see *"CardReader" on page 4 - 6*).

- MMC (MultiMedia Card)
- SD (Secure Digital)
- MS (Memory Stick)
- MS Pro (Memory Stick Pro)
- MS Duo (requires PC adapter*)
- Mini SD (requires PC adapter*)
- RS MMC (requires PC adapter*)

*__Note__: The PC adapters are usually supplied with these cards.

Figure 2 - 4
Right View



1. Card Reader

ExpressCard Slot

The computer is equipped with an **ExpressCard/34/54** slot that reads Express Card/34 and ExpressCard/54 formats. ExpressCards are the successors to PCMCIA (PC Cards).

ExpressCard/54 is used for applications which require a larger interface slot, e.g. CompactFlash card reader. The number denotes the card width; 54mm for the Express Card/54 and 34mm for the ExpressCard/34.

Inserting and Removing ExpressCards

- Align the ExpressCard with the slot and push it in until it locks into place.
- To remove an ExpressCard, simply press the card to eject it.

ExpressCard Slot Cover

Make sure you keep the rubber cover provided in the ExpressCard slot when not in use. This will help prevent foreign objects and/or dust getting in to the ExpressCard Slot.

Figure 2 - 5
Express Card Slots

Mouse Driver

If you are using an external mouse your operating system may be able to auto-configure your mouse during its installation or only enable its basic functions. Be sure to check the device's user documentation for details.

TouchPad and Buttons/Mouse

The TouchPad is an alternative to the mouse; however, you can also add a mouse to your computer through one of the USB ports. The TouchPad buttons function in much the same way as a two-button mouse.

Once you have installed the TouchPad driver (see *"TouchPad" on page 4 - 6*) you can configure the functions by double-clicking the TouchPad driver icon on the **taskbar**. You may then configure the TouchPad tapping, buttons, scrolling, pointer motion and sensitivity options to your preferences. You will find further information at www.synaptics.com.

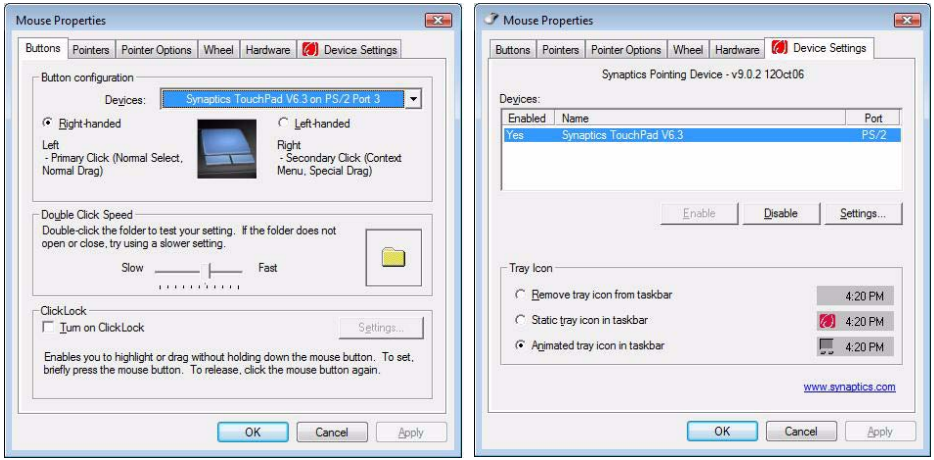


Figure 2 - 6
Mouse Properties

Function Keys/Hot Keys

The **function keys** (F1 - F12 etc.) will act as **hot keys** when pressed while the **Fn** key is held down.

Model A & B Computers

In addition to the basic function key combinations visual indicators are available (for **Models A & B** Only) when the hot key driver is installed (see *"Hot Key Utility (Model A & B Computers)" on page 4 - 6*). After installing the driver an icon  will appear in the taskbar.

The hot key buttons give quick access to the default internet browser and e-mail program . The PC Camera buttons  can be used to run the **BisonCap** application, to take still pictures and to zoom the camera in/out (see *"PC Camera Hot Key Buttons" on page 7 - 17*) if a PC Camera module is installed (this does not apply to **Model C**). If you do not have a PC Camera module installed see *"Application Quick Buttons" on page 2 - 11* for details.

Model C Computers

There are no visual indicators available for **Model C** computers, however you can configure an application (**Application 1**) to open when the hot key button is pressed (see *"Application Quick Buttons" on page A - 11*).

Hot Key Program

The hot key visual indicators will only be displayed (and the audio record function will only run) if the program is running (i.e. the icon  is displayed in the taskbar). If you have closed the program you can run it again from **C:\Program Files\HotKey_Driver\HotKeyDriver.exe**.

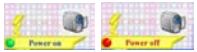
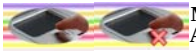
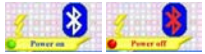
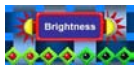
Keys/Button	Function	Keys/Button	Function
Fn + ~	Play/Pause (in Audio/Video Programs)	Fn + F10	PC Camera Power Toggle  **Models A & B Only**
Fn + F1	TouchPad Toggle  **Models A & B Only**	Fn + F11	WLAN Module Power Toggle  **Models A & B Only**
Fn + F2	Turn LCD Backlight Off (Press a key to or use TouchPad to turn on)	Fn + F12	Bluetooth Module Power Toggle  **Models A & B Only**
Fn + F3	Mute Toggle  **Models A & B Only**	Fn + NumLk	Number Lock Toggle (**Model A & B**)
Fn + F4	Sleep Toggle	Fn + ScrLk	Scroll Lock Toggle
Fn + F5/F6	Volume Decrease/ Increase  **Models A & B Only**	NumLk	Number Lock Toggle (**Model C**)
Fn + F7	Display Toggle		Audio Record Start/Stop  **Models A & B Only**
Fn + F8/F9	Brightness Decrease/ Increase  **Models A & B Only**		Activate BisonCap Program/ Take Still Picture

Table 2 - 2 **- Function Keys/Hot-Key Buttons & Visual Indicators**

Application Quick Buttons

Note that the application quick button utility is designed to allow use of the hot key buttons in absence of the optional PC Camera (**the quick button utility will only appear if no PC Camera is installed**). You will need to install the **Quick Button Utility** (see page *4 - 6*) to enable the functions.

The quick buttons give instant access to user-defined applications, with one quick button press. To configure a program to open when the buttons (see *Table , on page 1 - 10*) are pressed, follow the instructions below. The quick buttons will function as long as the program is running (the icon will appear in the taskbar). If the program is not running you will need to restart the computer.

1. **Press a button or right-click the icon** in the **taskbar**.
2. Select **Setup** from the menu, scroll to **AP1/2/3** (or just **Application 1** for **Model C** computers) and select **Custom**.
3. An **Open** dialog box will appear on the screen.
4. **Browse** to the directory where the required application**.exe** (see sidebar) exists.
5. **Double-Click** on the program file or choose **Open**.

Application.exe

You will need to locate the actual **application executable (.exe) file**, not just the **shortcut**. To find the application right-click its **shortcut** on the desktop and click **Properties**. Click the **shortcut** (tab) and see where the executable file is located by clicking the **Open File Location** (button).

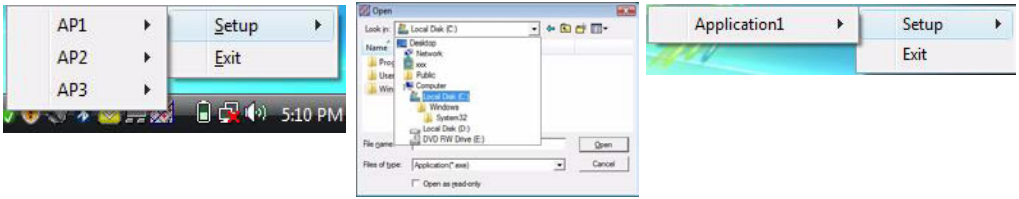


Figure 2 - 7
Quick Button Configuration Screens

Model C Computers

Note that Model C computers do not support the audio record or camera zoom hot keys functions.

Model C computers do not display the visual indicators illustrated in *Table 2 - 2, on page 2 - 10*.

You may configure the Application Hot Key (for one application) as outlined in *"Application Quick Buttons" on page 2 - 11*.

Recording Audio

(Models A & B only)

The audio record hot key button allows you to record audio from either the built-in microphone, or from a microphone connected to the microphone-in jack. To record on the computer, setup the audio recording options in ***Windows*** as follows (see *Figure 2 - 8 on page 2 - 13*).

1. Click **Start**, and click **Control Panel** (or point to **Settings** and click **Control Panel**).
2. Click **Sound** (**Hardware and Sound**).
3. Click **Recording** (tab).
4. Right-click **Microphone** (VIA High Definition Audio) and make sure the item is not disabled (if you wish to record from the internal microphone make sure that the **Front Mic** is not disabled).
5. Double-click **Microphone/Front Mic** (or select **Properties** from the right-click menu).
6. Click **Levels** (tab), and adjust the **Microphone/Front Mic** slider to the level required.
7. Click **OK** and close the control panels.
8. Press the audio record button to begin the recording process (the record icon 

will flash in the top left of the screen).
9. Press the audio record button again to stop the recording process (the record icon will disappear from the top left of the screen).
10. The recorded audio file (in .wav format) will appear in the **wav** folder in the **Users** folder (**C:\Users\wav**).
11. Double-click the file to playback the recorded audio.

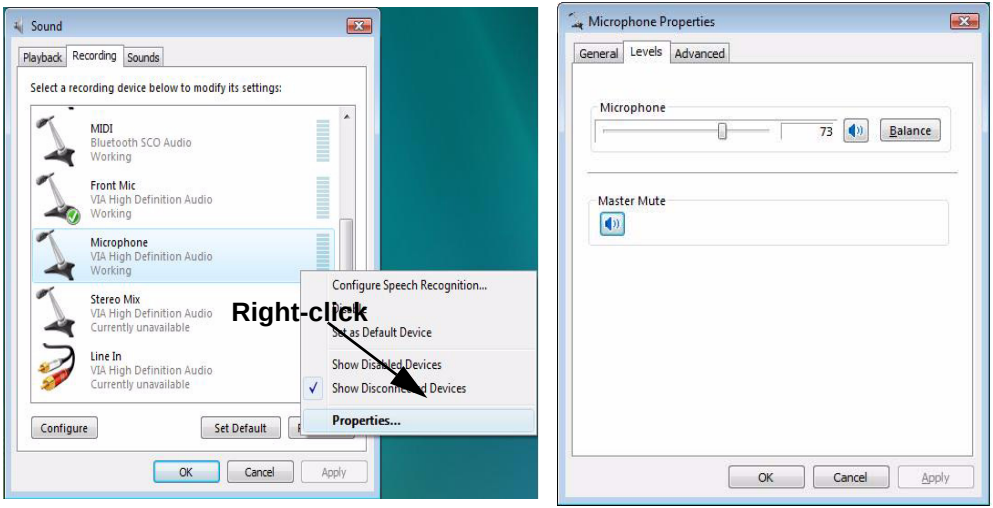
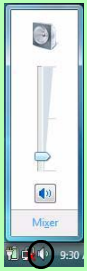


Figure 2 - 8
Audio Setup for Recording (Windows Vista)

Sound Volume Adjustment

The sound volume level is set using the volume control within ***Windows*** (and the volume function keys on the computer). Click the volume icon in the taskbar to check the setting.



Audio Features

You can configure the audio options on your computer from the **Sound** control panel in ***Windows***, or from the **VIA Audio Deck** icon in the taskbar, or on the desktop (this will bring up the VIA Audio Deck menu). The volume may also be adjusted by means of the **Fn** + **F5/F6** key combination.

Click any of the buttons (e.g.) on the left to expand the audio menu selections.

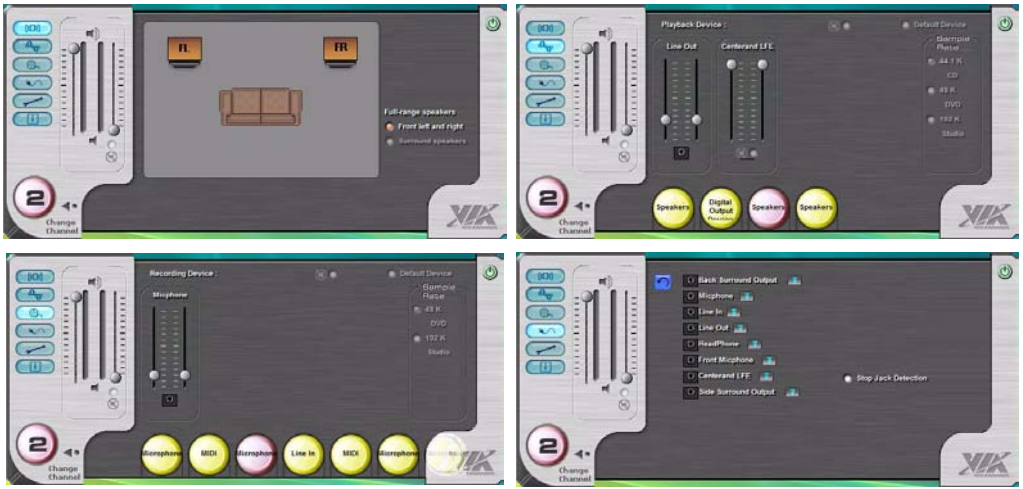


Figure 2 - 9
VIA Audio Deck Configuration Menus

Adding a Printer

The most commonly used peripheral is a printer. The following conventions will help you to add a printer; however it is always best to refer to the printer manual for specific instructions and configuration options.

USB Printer

Most current printers have a USB interface connection. You may use any one of the ports to connect the printer.

Install Instructions:

1. Set up the printer according to its instructions (unpacking, paper tray, toner/ink cartridge etc.).
2. Turn ON the computer.
3. Turn ON the printer.
4. Connect the printer's USB cable to one of the USB ports on the computer.
5. ***Windows*** will identify the printer and either load one of its own drivers or ask you to supply one. Follow the on-screen instructions.

Parallel Printer

This is still a very common type of printer. The install instructions are in the sidebar, however you will need to purchase a parallel to USB converter.

Parallel Printer

After setting up the printer attach the parallel cable to the printer.

Connect the printer's parallel cable to the Parallel to USB converter, and then plug the converter into the USB port.

Turn ON the printer, then turn ON the computer.

Windows will identify the printer and either load one of its own drivers or ask you to supply one. Follow the on-screen instructions.

Chapter 3: Power Management

Overview

To conserve power, especially when using the battery, your computer power management conserves power by controlling individual components of the computer (the monitor and hard disk drive) or the whole system. This chapter covers:

- The Power Sources
- Turning on the Computer
- Power Plans
- Power-Saving States
- Configuring the Power Buttons
- Battery Information

The computer uses enhanced power saving techniques to give the operating system (OS) direct control over the power and thermal states of devices and processors. For example, this enables the OS to set devices into low-power states based on user settings and information from applications.

OS Note

Power management functions will vary slightly depending on your operating system. For more information it is best to refer to the user's manual of your operating system.

(**Note**: All pictures used on the following pages are from the ***Windows Vista*** OS.)

The Power Sources

The computer can be powered by either an AC/DC adapter or a battery pack.

AC/DC Adapter

Use only the AC/DC adapter that comes with your computer. The wrong type of AC/DC adapter will damage the computer and its components.

1. Attach the AC/DC adapter to the DC-in jack at the rear of the computer.
2. Plug the AC power cord into an outlet, and then connect the AC power cord to the AC/DC adapter.
3. Raise the lid/LCD to a comfortable viewing angle.
4. Press the power button to turn “On”.

Battery

The battery allows you to use your computer while you are on the road or when an electrical outlet is unavailable. Battery life varies depending on the applications and the configuration you're using. **To increase battery life, let the battery discharge completely before recharging** (see ***“How do I completely discharge the battery?” on page 3 - 15***).

We recommend that you do not remove the battery. For more information on the battery, please refer to ***“” on page 3 - 9***.

Turning on the Computer

Now you are ready to begin using your computer. To turn it on simply press the power button on the front panel.

When the computer is on, you can use the power button as a Sleep/Hibernate hotkey button when it is pressed for less than **4 seconds** (pressing and holding the power button for longer than this will force the computer to shut down). Use **Power Options** (**Hardware and Sound** menu) control panel in ***Windows Vista*** to configure this feature.

Forced Off

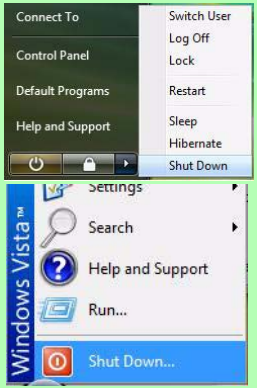
If the system "hangs", and the **Ctrl + Alt + Del** key combination doesn't work, press the power button for **4 seconds**, or longer, to force the system to turn itself off.

Power Button Sleep

Sleep is the default power mode when the power button is pressed for less than 4 seconds. You may configure the options for the power button from the **Power Options** (**Hardware and Sound** menu) control panel in ***Windows Vista*** (see your OS's documentation, or ***"Configuring the Power Buttons" on page 3 - 8*** for details).

Shut Down

Note that you should always shut your computer down by choosing the **Shut Down** command from the **Lock Button Menu** in ***Windows Vista***. This will help prevent hard disk or system problems.



Resuming Operation

See *Table 3 - 1, on page 3 - 9* for information on how to resume from a power-saving state.

Password

It is recommended that you enable a password on system resume in order to protect your data.

Power Plans

The computer can be configured to conserve power by means of **power plans**. You can use (or modify) an existing **power plan**, or create a new one.

The settings may be adjusted to set the **display** to turn off after a specified time, and to send the computer into **Sleep** after a period of inactivity.

Click ***Change plan settings*** and then click ***Change advanced power settings*** to access further configuration options in **Advanced Settings**.

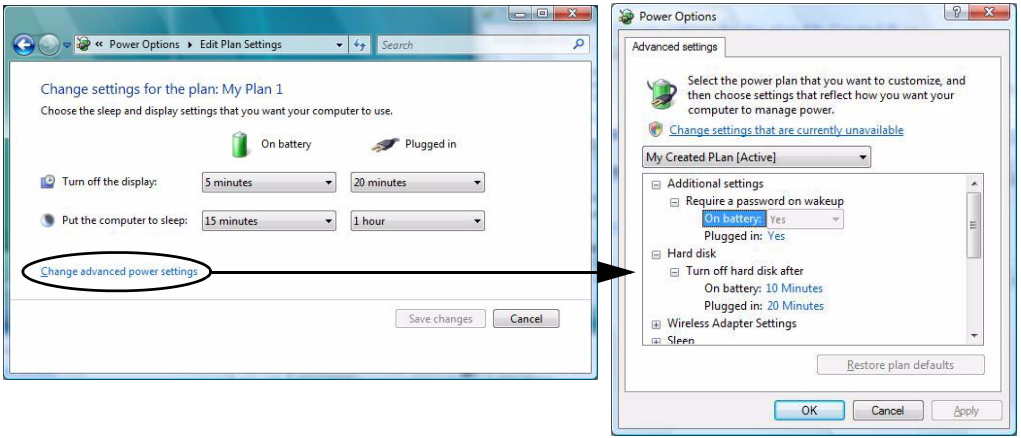


Figure 3 - 1
Power Plan Advanced Settings

Each ***Windows* power plan** will also adjust the processor performance of your machine in order to save power. This is worth bearing in mind if you are experiencing any reduced performance (especially under DC/battery power).

Choose **High performance** for maximum performance when the computer is powered from an AC power source. Choose the **Power saver** (bear in mind that this scheme may slow down the overall performance of the computer in order to save power) for maximum power saving when the computer is battery (DC power) powered.

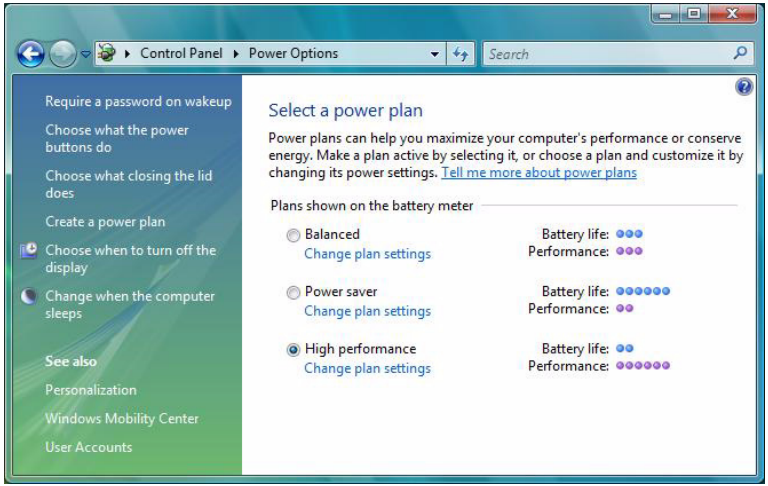


Figure 3 - 2
Power Plans

Power Button

The **Power Button**  in the Start Menu (in Classic View use the Shut Down button ) can be used to send the computer into a power-saving state.

Sleep Mode & Mobile PC Battery

A mobile PC in **Sleep** uses very little battery power.

After an extended period of time the computer will save any open documents and applications to hard disk.

Power-Saving States

You can use power-saving states to stop the computer's operation and restart where you left off. **Sleep** is the default power-saving state in ***Windows Vista***.

Earlier versions of ***Windows*** used Stand By and Hibernate as system power-saving states. ***Windows Vista*** combines the features of Stand By and Hibernate into the default **Sleep** power-saving state.

Sleep

In **Sleep** all of your work, settings and preferences are saved to memory before the system sleeps. When you are not using your computer for a certain length of time, which you specify in the operating system, it will enter **Sleep** to save power.

The PC wakes from **Sleep within seconds** and will return you to where you last left off (what was on your desktop) without reopening the application(s) and file(s) you last used.

If your mobile PC in **Sleep** is running on battery power the system will use only a minimum amount of power. After an extended period the system will save all the information to the hard disk and shut the computer down before the battery becomes depleted.

Hibernate

Hibernate uses the least amount of power of all the power-saving states and saves all of your information on a part of the hard disk before it turns the system off. If a power failure occurs the system can restore your work from the hard disk; if a power failure occurs when work is saved only to memory, then the work will be lost. **Hibernate** will also return you to where you last left off within seconds. You should put your mobile PC into **Hibernate** if you will not use the computer for a period of time, and will not have the chance to charge the battery.

Shut Down

You should **shut down** the computer if you plan to install new hardware (don't forget to remove the battery and follow all the safety instructions in **Chapter 6**), plan to be away from the computer for several days, or you do not need it to wake up and run a scheduled task. Returning to full operation from **shut down** takes longer than from **Sleep** or **Hibernate**.

Figure 3 - 3
Lock Button Menu

Password Protection

It is recommended that you enable a password on wake up in order to protect your data.

However you can disable this setting from the **Power Options** menu by clicking ***Require a password on wakeup*** in the left menu, and selecting the options (click ***Change settings that are currently unavailable***).

Configuring the Power Buttons

The power/sleep button (**Fn + F4** key combo) and closed lid may be set to send the computer in to a power-saving state.

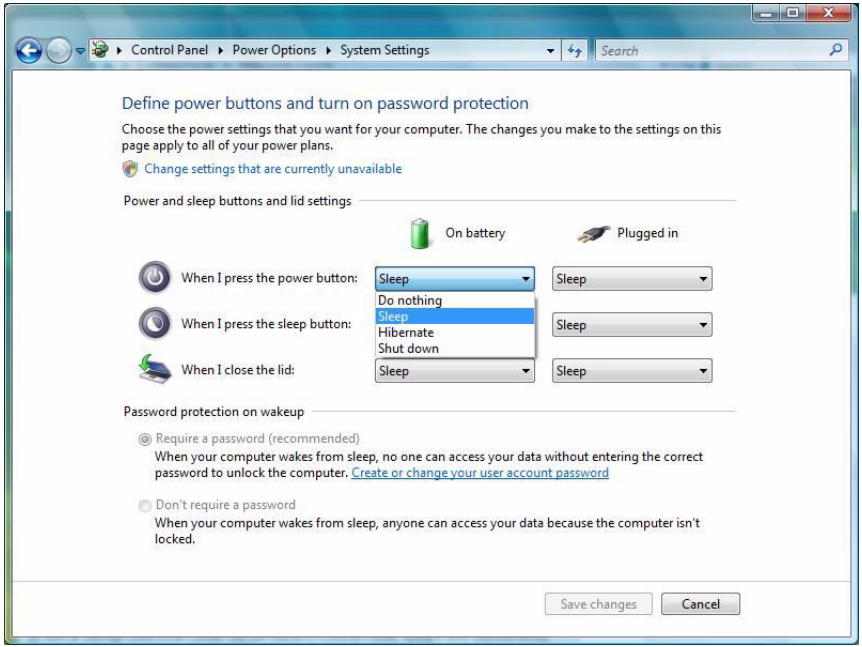


Figure 3 - 4
Power Options Define Power Buttons

Resuming Operation

You can resume operation from power-saving states by pressing the power button, or in some cases pressing the sleep button (**Fn + F4** key combo).

Power Status	Icon Color	To Resume
Power Off	Off	Press the Power Button
Sleep	Blinking Green	Press the Power Button Press the Sleep Button (Fn + F4 Key Combo)
Hibernate	Off (battery) Orange (AC/DC adapter)	Press the Power Button
Display Turned Off	Green	Press a Key or Move the Mouse/Touchpad

Power Button

When the computer is on, you can use the power button as a Sleep/Hibernate hot-key button when it is pressed for less than **4 seconds** (pressing and holding the power button for longer than this will shut the computer down).

Closing the Lid

If you have chosen to send the computer to **Sleep** when the lid is closed, raising the lid will wake the system up.

Table 3 - 1 **Resuming Operation**

Resolution Error

If you are experiencing screen resolution problems/screen flickering **after resuming from Sleep in *Windows Vista* (for NVIDIA Models B & C only)** see page ***8 - 13***.

Low Battery Warning

When the battery is critically low, immediately connect the AC/DC adapter to the computer or save your work, otherwise, the unsaved data will be lost when the power is depleted.

Battery Information

Please follow these simple guidelines to get the best use out of your battery.

Battery Charging on Model B & C Computers

Note that **Model B & C** computers under a heavy load (e.g. using applications which require a lot of video processing), while running on battery power, will take time (3 to 20 minutes before charging begins) to recharge the battery when plugged in to the AC/DC adapter. This is due to safety considerations which dictate that the battery should only start to recharge when the computer has reached a safe temperature to do so.

Make sure you save your work when the battery LED is blinking orange, and plug in the AC/DC adapter. The battery LED will change from blinking orange to orange when the battery starts to charge (3 to 20 minutes before charging begins).

Battery Power

Your computer's battery power is dependent upon many factors, including the programs you are running, and peripheral devices attached. You can set actions to be taken (e.g. Shut down, Hibernate etc.), and set critical and low battery levels from **power plan Advanced Settings** (see *Figure 3 - 1 on page 3 - 4*).

Click the battery icon in the taskbar to see the current battery level and charge status.

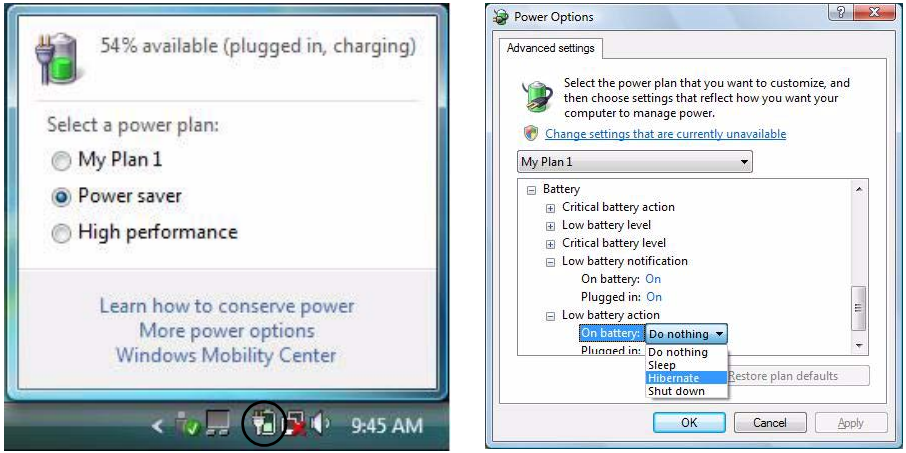


Figure 3 - 5
Battery Icon (Taskbar) & Battery Advanced Settings

Windows Mobility Center

The **Windows Mobility Center** control panel provides an easy point of access for information on battery status, power plans used and wireless device status etc.

Conserving Battery Power

- Use a **power plan** that conserves power (e.g **Power saver**), however note that this may have an affect on computer performance.
- Lower the brightness level of the LCD display. The system will decrease LCD brightness slightly to save power when it is not powered by the AC/DC adapter.
- Reduce the amount of time before the display is turned off.
- Close wireless, Bluetooth, modem or communication applications when they are not being used.
- Disconnect/remove any unnecessary external devices e.g. USB devices, ExpressCards etc.

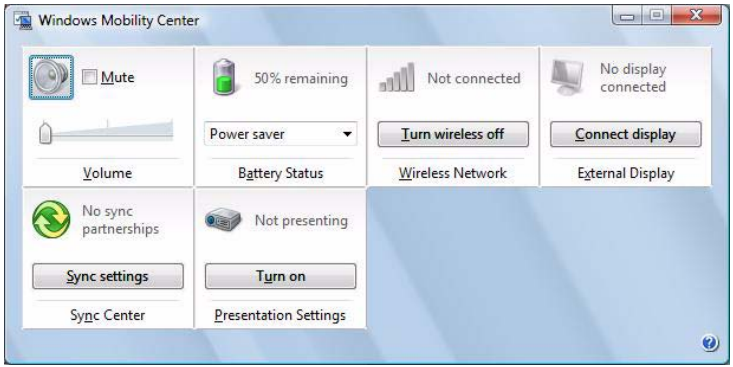


Figure 3 - 6
Windows Mobility Center

Battery Life

Battery life may be shortened through improper maintenance. **To optimize the life and improve its performance, fully discharge and recharge the battery at least once every 30 days**.

We recommend that you do not remove the battery yourself. If you do need to remove the battery for any reason see ***"Removing the Battery" on page 6 - 3***.

New Battery

Always completely discharge, then fully charge, a new battery (see ***"Battery FAQ" on page 3 - 15*** for instructions on how to do this).

Recharging the Battery with the AC/DC Adapter

The battery pack automatically recharges when the AC/DC adapter is attached and plugged into an electrical outlet. If the computer is powered on, and in use, it will take several hours to fully recharge the battery. When the computer is turned off but plugged into an electrical outlet, battery charge time is less. (Refer to ***"LED Indicators" on page 1 - 9*** for information on the battery charge status, and to ***"" on page 3 - 9*** for more information on how to maintain and properly recharge the battery pack.)

Caution

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer. Discard used battery according to the manufacturer's instructions.

Proper handling of the Battery Pack

- DO NOT disassemble the battery pack under any circumstances
- DO NOT expose the battery to fire or high temperatures, it may explode
- DO NOT connect the metal terminals (+, -) to each other

Damaged Battery Warning

Should you notice any physical defects (e.g. the battery is bent out of shape after being dropped), or any unusual smells emanating from the notebook battery, shut your computer down immediately and contact your service center. If the battery has been dropped we do not recommend using it any further, as even if the computer continues to work with a damaged battery in place, it may cause circuit damage, which may possibly result in fire. It is recommended that you replace your computer battery every two years.

Battery FAQ

How do I completely discharge the battery?

Use the computer with battery power until it shuts down due to a low battery. Don't turn off the computer even if a message indicates the battery is critically low, just let the computer use up all of the battery power and shut down on its own.

1. Save and close all files and applications.
2. **Create** a **power plan** for discharging the battery and set all the options to **Never**.
3. Click ***Change plan settings*** (after saving it) and click ***Change advanced power settings***.

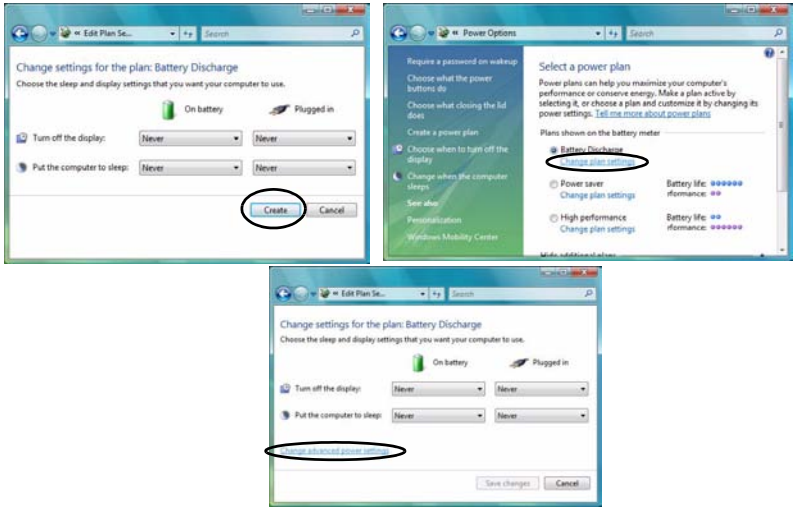


Figure 3 - 7
Power Plan Create

4. Scroll down to **Battery** and click **+** to expand the battery options.
5. Choose the options below (click **Yes** if a warning appears):

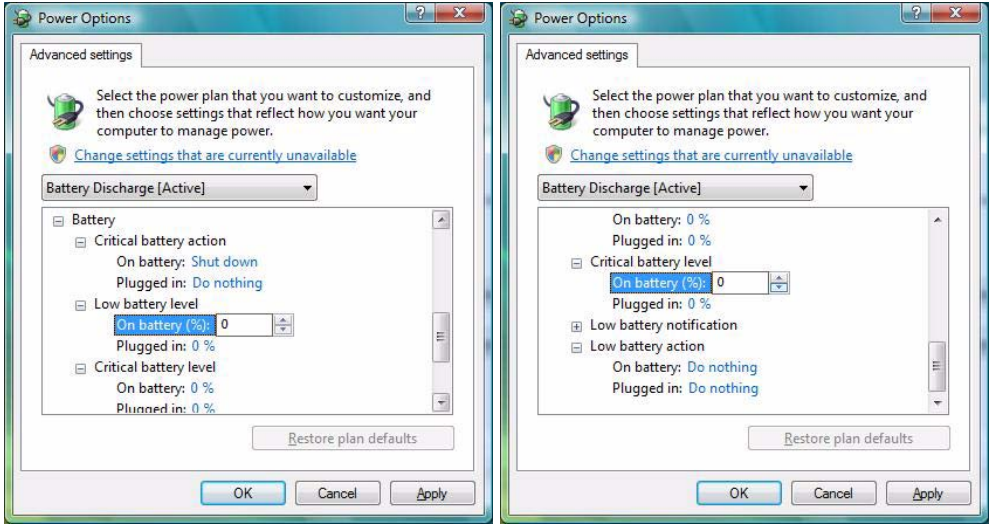


Figure 3 - 8
Power Options Advanced Settings - Battery

- Low battery levels = 0%
- Critical battery Levels = 0%
- Low battery action = Do Nothing
- Critical battery action (On battery) = Shut Down
- Critical battery action (Plugged in) = Do Nothing

How do I fully charge the battery?

When charging the battery, don't stop until the LED charging indicator light changes from orange to green.

How do I maintain the battery?

Completely discharge and charge the battery at least once every 30 days or after about 20 partial discharges.

Chapter 4: Drivers & Utilities

This chapter deals with installing the drivers and utilities essential to the operation or improvement of some of the computer's subsystems. The system takes advantage of some newer hardware components for which the latest versions of most available operating systems haven't built in drivers and utilities. Thus, some of the system components won't be auto-configured with an appropriate driver or utility during operating system installation. Instead, you need to manually install some system-required drivers and utilities.

What to Install

The ***Device Drivers & Utilities + User's Manual CD-ROM*** (Win Vista **OR** WinXP) contains the drivers and utilities necessary for the proper operation of the computer. There will be two CDs provided; one will contain drivers for ***Windows Vista***, the other will contain drivers for ***Windows XP*** (make sure you install the appropriate drivers for your system).

Table 4 - 1, on page 4 - 3 lists what you need to install and **it is very important that the drivers are installed in the order indicated** (see ***"Driver Installation" on page E - 35*** for ***Windows XP*** information).

Module Driver Installation

The procedures for installing drivers for the **Wireless LAN**, **Bluetooth**, **PC Camera** and **Fingerprint Reader** modules are provided in ***"Modules & Options" on page 7 - 1***.

Driver Installation

Insert the *Device Drivers & Utilities + User's Manual CD-ROM* and click ***Install Vista Drivers*** (button).

If you wish to install the drivers manually see page ***4 - 3***.

Figure 4 - 1 **- Drivers Installer Screen 1**

1. Check the driver installation order from ***Table 4 - 1, on page 4 - 3*** (**the drivers must be installed in this order**) which is the same as that listed in the ***Drivers Installer*** menu below.
2. Click to select the driver you wish to install, after installing each driver it will become grayed out (if you need to reinstall any driver, click the **Unlock** button).
3. Follow the instructions for each individual driver installation procedure as listed on the following pages.

Figure 4 - 2 **- Drivers Installer Screen 2**

Manual Driver Installation

If you wish to install the drivers manually, click the **Exit** button to quit the ***Drivers Installer*** application, and then browse to the executable file in the location listed in the table below and follow the installation procedure for each driver. **Note that X is the drive letter assigned to the CD/DVD-ROM drive**.

Driver	Page #	Driver Location
Video (VIA - Model A)	*Page 4 - 5*	**Vista 32bit**: X:\Drivers\Video\setup.exe
Video (NVIDIA - Models B & C)	*Page 4 - 5*	**Vista 32bit**: X:\Drivers\Video\setup.exe
Audio	*Page 4 - 5*	**Vista 32bit**: X:\Drivers\Audio\SETUP.EXE
Modem	*Page 4 - 5*	**Vista 32bit**: X:\Drivers\Modem\ssetup.exe
LAN	*Page 4 - 5*	**Vista 32bit**: X:\Drivers\LAN\setupvis.exe
CardReader	*Page 4 - 6*	**Vista 32bit**: X:\Drivers\CardReader\Setup.exe
TouchPad	*Page 4 - 6*	**Vista 32bit**: X:\Drivers\Touchpad\setup.exe
Hot Key Utility (Model C	*Page 4 - 6*	**Vista 32bit**: X:\Drivers\Hotkey\Setup.exe
Quick Button Utility	*Page 4 - 6*	**Vista 32bit**: X:\Drivers\QButton\3AP.exe
802.11 b/g USB WLAN Module	*Page 7 - 2*	**Vista 32bit**: X:\Drivers\WLAN\setup.exe
Bluetooth Module	*Page 7 - 7*	**Vista 32bit**: X:\Drivers\Bluetooth\setup.exe
PC Camera Module	*Page 7 - 12*	**Vista 32bit**: X:\Drivers\Camera\setup.exe
Fingerprint Reader Module	*Page 7 - 18*	**Vista 32bit**: X:\Drivers\FingerPrint\Application\x86\autorun.exe

Table 4 - 1 **- Driver Location**

Updating/Reinstalling Individual Drivers

If you wish to update/reinstall individual drivers it may be necessary to uninstall the original driver.To do this go to the **Control Panel** in the ***Windows OS*** and double-click the **Programs and Features** icon (**Programs** > **Uninstall a program**). Click to select the driver (if it is not listed see below) and click **Uninstall**, and then follow the on screen prompts (it may be necessary to restart the computer). Reinstall the driver as outlined in this chapter.

If the driver is not listed in the **Programs and Features** menu:

1. Click **Start**, and click **Control Panel** (or point to **Settings** and click **Control Panel**).
2. Double-click **Device Manager** (**Hardware and Sound > Device Manager**).
3. Double-click the **device** you wish to update/reinstall the driver for (you may need to click "+" to expand the selection).
4. Click **Driver** (tab) and click the **Update Driver** or **Uninstall** button and follow the on screen prompts.

User Account Control (Win Vista)

If a **User Account Control** prompt appears as part of the driver installation procedure, click **Continue** or **Allow**, and follow the installation procedure as directed.

Windows Security Message

If you receive a ***Windows*** security message as part of the driver installation process. Just click ***"Install this driver software anyway"*** or **Install** to continue the installation procedure.

You will receive this message in cases where the driver has been released after the version of ***Windows*** you are currently using. All the drivers provided will have already received certification for ***Windows***.

New Hardware Found

If you see the message ***"New Hardware Found"*** (**Found New Hardware Wizard**) during the installation procedure (other than when outlined in the driver install procedure), click **Cancel** to close the window, and follow the installation procedure as directed.

Driver Installation Procedure

Video (VIA - Model A)

1. Click **1.Install Video Driver** > **Yes**.
2. Click **Next** > **Next**.
3. Click **Finish** to restart the computer.

Video (NVIDIA - Models B & C)

1. Click **1.Install Video Driver** > **Yes**.
2. Click **Next**.
3. Click **Finish** to restart the computer.

Audio

1. Click **2.Install Audio Driver** > **Yes**.
2. Click **Next**.
3. Click the button to accept the license and click **Next**.
4. Click **Next** > **Next** > **Next**.
5. Click **Finish** to restart the computer.

Modem

1. Click **3.Install Modem Driver** > **Yes**.
2. Click **OK**.
3. The modem is ready for dial-up configuration.

Modem Country Selection

Go to the **Phone and Modem Options** control panel (**Hardware and Sound**) and make sure the modem country selection is appropriate for you.

LAN

1. Click **4.Install LAN Driver** > **Yes**.
2. Click **OK**.
3. The network settings can mow be configured.

CardReader

1. Click **5.Install CardReader Driver > Yes**.
2. Click **Next > Next**.
3. Click **Finish** to restart the computer.

TouchPad

1. Click **6.Install Touchpad Driver > Yes**.
2. Click **Next**.
3. Click **Finish > Restart Now** to restart the computer.
4. You may then configure your TouchPad as outlined in ***"TouchPad and Buttons/Mouse" on page 2 - 8***.

Hot Key Utility (Model A & B Computers)

1. Click **7.Install Hotkey Utility > Yes**.
2. Click **Next > Install**.
3. Click **Finish > Finish** to restart the computer.

Hot Key Utility (Model C Computers)

1. Click **7.Install Hotkey Utility > Yes**.
2. Click **Next**.
3. Click **Finish** to restart the computer.

Quick Button Utility

If you **do not have a PC Camera** module installed, then the Quick Button Utility will appear in the Drivers Installer menu (**only install the quick button driver if the PC Camera is not installed**). See ***Table , on page 1 - 10*** and ***"Application Quick Buttons" on page 2 - 11*** for details.

1. Click **10.Install QButton Utility > Yes**.
2. Click **Next**.
3. Click **Finish** to restart your computer.

Adding/Removing a PC Camera

Note that the Quick Button and PC Camera drivers cannot co-exist.

If you wish to **add** a PC Camera module to your computer at a later date, then uninstall the Quick Button Driver (entitled **Multimedia Keyboard Driver**) **before** installing the PC Camera and driver. Drivers can be uninstalled from the **Programs and Features** (Programs > Uninstall a program) control panel in ***Windows***.

If you wish to **remove** a PC Camera module from your computer at a later date, then uninstall the PC Camera Driver after removing the camera module. You can then insert the ***Device Drivers & Utilities + User's Manual CD-ROM*** and install the **Quick Button** driver from the Driver Installation menu.

Wireless LAN

See the introduction in ***"802.11 b/g USB WLAN Module" on page 7 - 2***, and check the installation procedure.

Bluetooth

See the introduction in ***"Bluetooth Module" on page 7 - 7***, and check the installation procedure.

PC Camera

See the introduction in ***"PC Camera Module" on page 7 - 11***, and check the installation procedure.

Fingerprint Module

See the introduction in ***"Fingerprint Reader Module" on page 7 - 18***, and check the installation procedure.

Chapter 5: BIOS Utilities

Overview

This chapter gives a brief introduction to the computer's built-in software:

The ***Setup*** utility
If your computer has never been set up, or you are making important changes to the system (e.g. hard disk setup), then you should review this chapter first and note the original settings found in ***Setup***. Even if you are a beginner, keep a record of the settings you find and any changes you make. This information could be useful if your system ever needs servicing.

There is one general rule: *Don't make any changes unless you are sure of what you are doing*. Many of the settings are required by the system, and changing them could cause it to become unstable or worse. If you have any doubts, consult your service representative.

BIOS Settings Warning

Incorrect settings can cause your system to malfunction. To correct mistakes, return to *Set-up* and restore the ***Set-up Defaults*** with <**F9**>.

POST Screen

1. **BIOS** information
2. CPU type
3. Memory status
4. Enter **Setup** prompt appears only during **POST**

Note: The **POST** screen as pictured right is for guideline purposes only. The **POST** screen on your computer may appear slightly different. If you disable the **Boot-time Diagnostic Screen**, the POST screen will not appear.

The Power-On Self Test (POST)

Each time you turn on the computer, the system takes a few seconds to conduct a **POST**, including a quick test of the on-board RAM (memory).

As the **POST** proceeds, the computer will tell you if there is anything wrong. If there is a problem that prevents the system from booting, it will display a system summary and prompt you to run ***Setup***.

If there are no problems, the ***Setup*** prompt will disappear and the system will load the operating system. Once that starts, you can't get into ***Setup*** without rebooting.

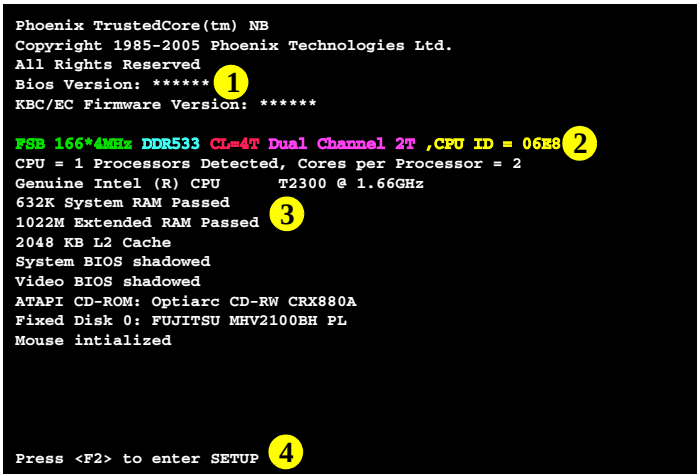


Figure 5 - 1
POST Screen

Failing the POST

Errors can be detected during the **POST**. There are two categories, “fatal” and “non-fatal”.

Fatal Errors

These stop the boot process and usually indicate there is something seriously wrong with your system. Take the computer to your service representative or authorized service center as soon as possible.

Non-Fatal Errors

This kind of error still allows you to boot. You will get a message identifying the problem (make a note of this message!) followed by the prompt:

- Press <F1> to resume
- <F2> to enter Setup

Press **F1** to see if the boot process can continue. It may work, without the correct configuration.

Press **F2** to run the **Setup** program and try to correct the problem. If you still get an error message after you change the setting, or if the “cure” seems even worse, call for help.

Setup Menus

The **Setup** menus shown in this section are for **reference** only. Your computer's menus will indicate the configuration appropriate for your model and options.

Setup Screens

The following pages contain additional advice on **portions** of the ***Setup***.

Along the top of the screen is a menu bar with five (**5**) menu headings. When you select a heading, a new screen appears. Scroll through the features listed on each screen to make changes to ***Setup***.

Instructions on how to navigate each screen are in the box along the bottom of the screen. If these tools are confusing, press **F1** to call up a **General Help** screen, and then use the arrow keys to scroll up or down the page.

The **Item Specific Help** on the right side of each screen explains the highlighted item and has useful messages about its options.

If you see an arrow ▶ next to an item, press **Enter** to go to a sub-menu on that subject. The sub-menu screen that appears has a similar layout, but the **Enter** key may execute a command.

Main Menu

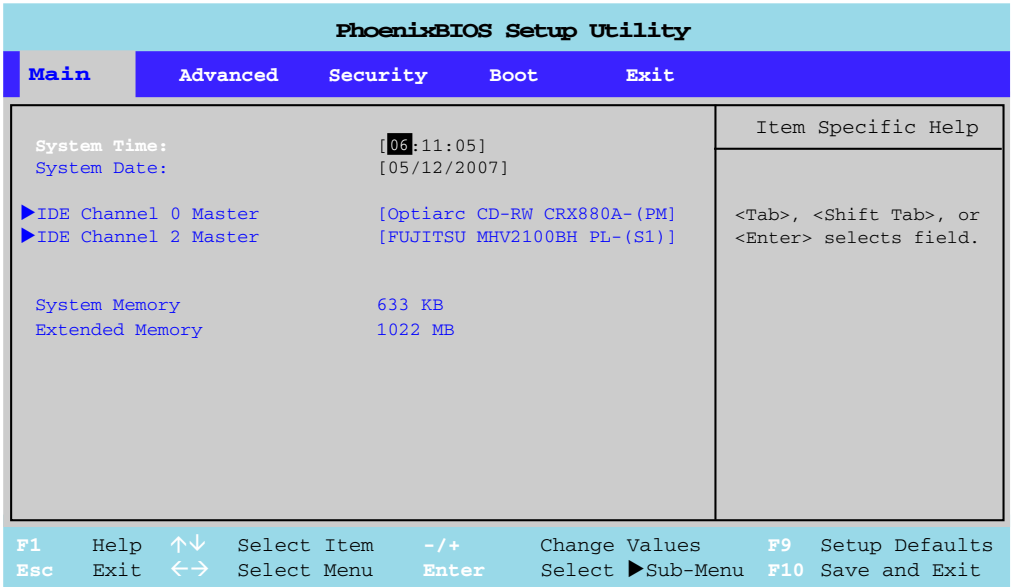


Figure 5 - 2
Main Menu

System Time & Date (Main Menu)

The hour setting uses the 24-hour system (i.e., ØØ = midnight; 13 = 1 pm). If you can change the date and time settings in your operating system, you will also change these settings. Some applications may also alter data files to reflect these changes.

IDE Channel 0/2 Master (Main Menu)
Pressing **Enter** opens the sub-menu to show the configuration of either a DVD/CD Device or HDD on the computer's IDE Channels. Use the ***Auto*** (Type:) setting to have the items configured automatically for you.

System/Extended Memory: (Main Menu)
This item contains information on the system memory, and is not user configurable. The system will auto detect the amount of memory installed.

Advanced Menu

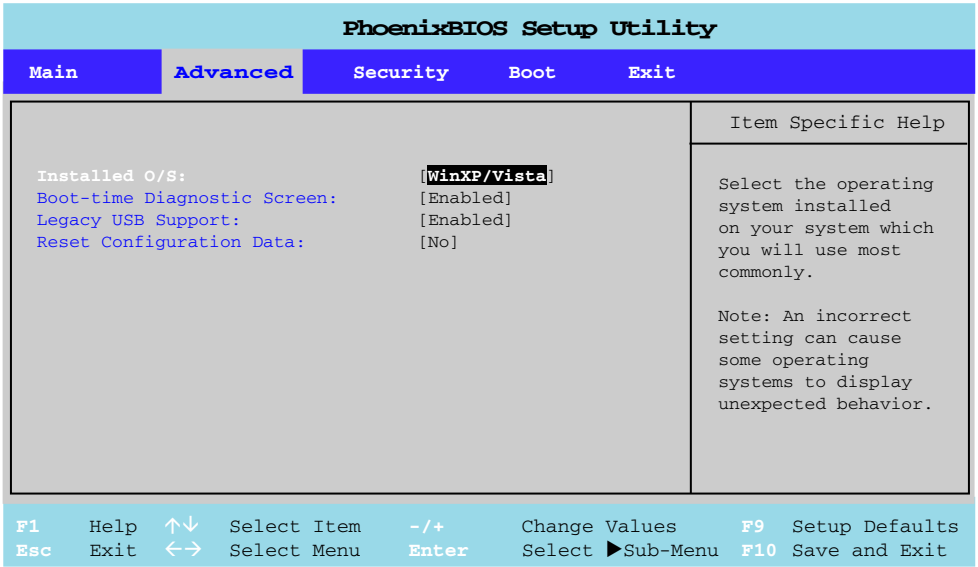


Figure 5 - 3
Advanced Menu

Installed O/S: (Advanced Menu)
This setting tells the computer what kind of operating system you're using.

Frame Buffer Size

This item will appear for **Model A** computers (see overleaf).

Boot-time Diagnostic Screen: (Advanced Menu)
Use this menu item to enable/disable the Boot-time Diagnostic Screen (see ***"The Power-On Self Test (POST)" on page 5 - 2***).

Legacy USB Support: (Advanced Menu)
Choose "**Enabled**" if you intend to use **USB** devices in systems which do not normally support USB functionality (e.g. DOS). The default setting is "**Enabled**" and does not need to be changed if you intend to use your USB devices in **Windows**.

Reset Configuration Data: (Advanced Menu)
This item is set to **No** as default. You can change the setting to **Yes** if you have installed a new add-on which has reconfigured the system, resulting in such a serious system conflict that the operating system is unable to boot.

Note: The Frame Buffer Size item below is applicable to **Model A computers only**.

Frame Buffer Size: (Advanced Menu)
Use this menu item to set the amount of system memory to be allocated for use by the **integrated** graphic system for **Model A computers**. The default memory size allocated is **128MB,** and this may be adjusted to **64MB or 256MB** if required.

Security Menu

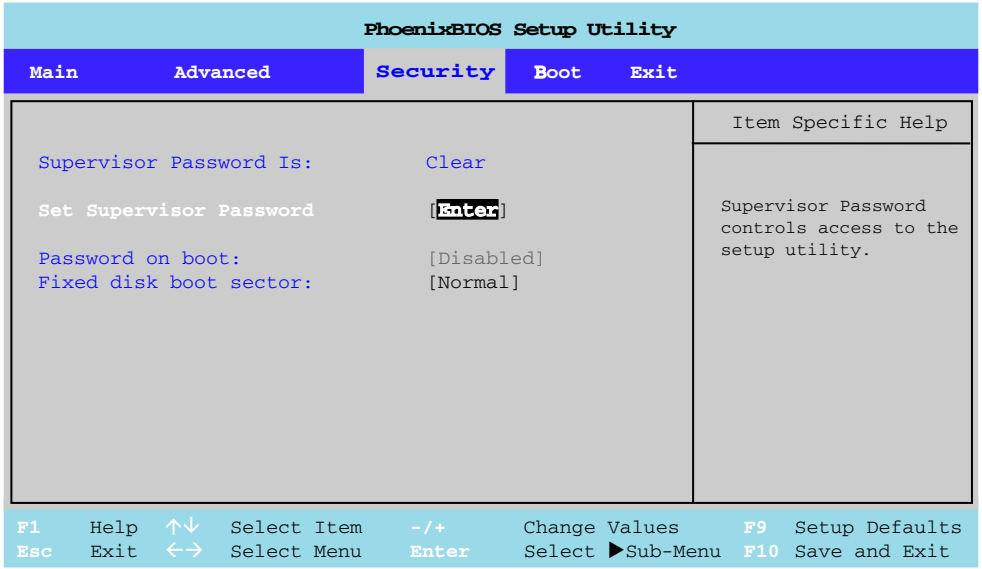


Figure 5 - 4
Security Menu

Set Supervisor Password (Security Menu)
You can set a password for access to the ***Setup*** utility. This will not affect access to the computer OS, (only the ***Setup*** utility) unless you choose to set a Password on Boot (see over).

Security Menu

The changes you make here affect the access to the **Setup** utility itself, and also access to your machine as it boots up after you turn it on. These settings do not affect your machine or network passwords which will be set in your software OS.

Password Warning

If you set a boot password (Password on boot is "Enabled"), **NEVER** forget your password.

The consequences of this could be serious. If you cannot remember your boot password you must contact your vendor and you may lose all of the information on your hard disk.

Password on boot: (Security Menu)
Specify whether or not a password should be entered to boot the computer. If "***Enabled***" is selected, only users who enter a correct password can boot the system (**see the warning in the sidebar**). The default setting is "***Disabled***".

Note: To clear existing passwords press **Enter** and type the existing password, then press **Enter** for the new password (without typing any password entry) and **Enter** again to confirm the password clearance.

Fixed disk boot sector: (Security Menu)
If you choose "**Write Protect**" this will protect against viruses being written to the hard disk boot sector (this is not a substitute for installing an anti-virus program - see ***"Viruses" on page 8 - 4***).

Boot Menu

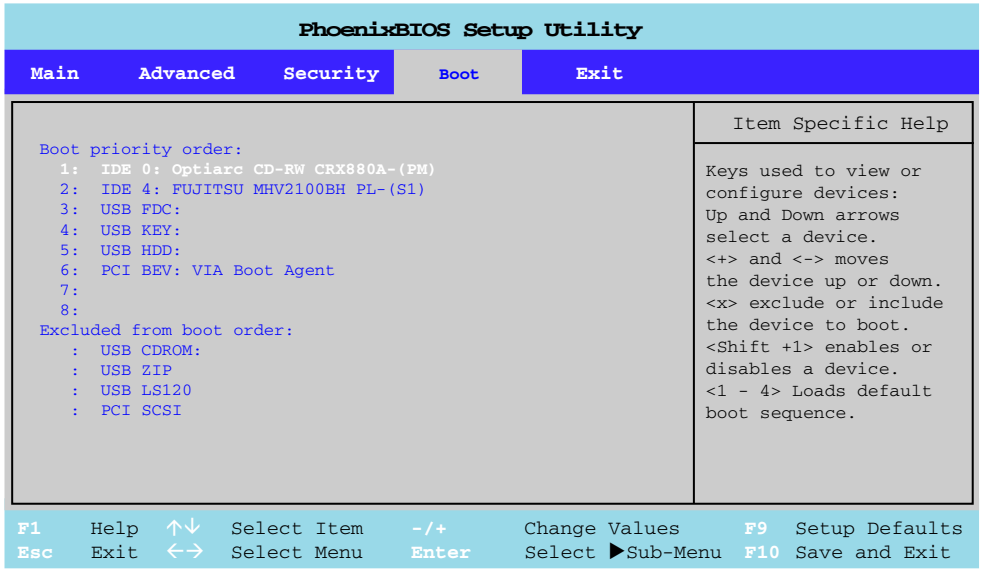


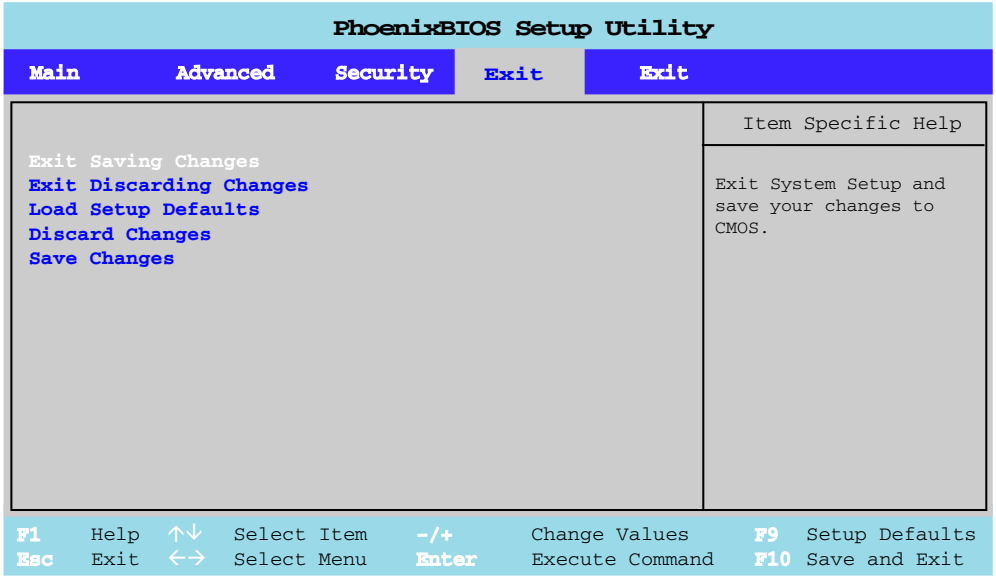
Figure 5 - 5
Boot Menu

5

When you turn the computer on it will look for an operating system (e.g. ***WindowsXP***) from the devices listed in this menu, and **in this priority order**. If it cannot find the operating system on that device, it will try to load it from the next device in the order specified in the **Boot priority order**. Item specific help on the right is available to help you move devices up and down the order.

Exit Menu

Figure 5 - 6
Exit Menu



Choosing to ***Discard Changes***, or ***Exit Discarding Changes***, will wipe out any changes you have made to the ***Setup***. You can also choose to restore the original ***Setup*** defaults that will return the ***Setup*** to its original state, and erase any previous changes you have made in a previous session.

Chapter 6: Upgrading The Computer

Overview

This chapter contains information on upgrading the computer. Follow the steps outlined to make the desired upgrades. If you have any trouble or problems you can contact your service representative for further help. Before you begin you will need:

- A small crosshead or Phillips screwdriver
- A small regular slotted (flathead) screwdriver
- An antistatic wrist strap

Before working with the internal components you will need to wear an antistatic wrist strap to ground yourself because static electricity may damage the components.

Warranty Warning

Please check with your service representative before undertaking any upgrade procedures to find out if this will VOID your warranty.

The chapter includes:

- Removing the Battery
- Upgrading the Hard Disk Drive
- Upgrading the Optical (CD/DVD) Device
- Upgrading the System Memory (RAM)

Please make sure that you review each procedure before you perform it.

Power Safety Warning

Before you undertake any upgrade procedures, make sure that you have turned off the power, and disconnected all peripherals and cables (including telephone lines). It is advisable to also remove your battery in order to prevent accidentally turning the machine on.

When Not to Upgrade

These procedures involve opening the system's case, adding and sometimes replacing parts.

You should **not** perform any of these upgrades if:

- Your system is still under warranty or a service contract
- You don't have all the necessary equipment
- You're not in the correct environment
- You doubt your abilities

Under any of these conditions, contact your service representative to purchase or replace the component(s).

Removal Warning

When removing any cover(s) and screw(s) for the purposes of device upgrade, remember to replace the cover(s) and screw(s) before turning the computer on.

Removing the Battery

If you are confident in undertaking upgrade procedures yourself, for safety reasons it is best to remove the battery.

1. Turn the computer **off**, and turn it over.
2. Slide the latch 1 in the direction of the arrow.
3. Slide the latch 2 in the direction of the arrow, and hold it in place.
4. Slide the battery out in the direction of the arrow 3.

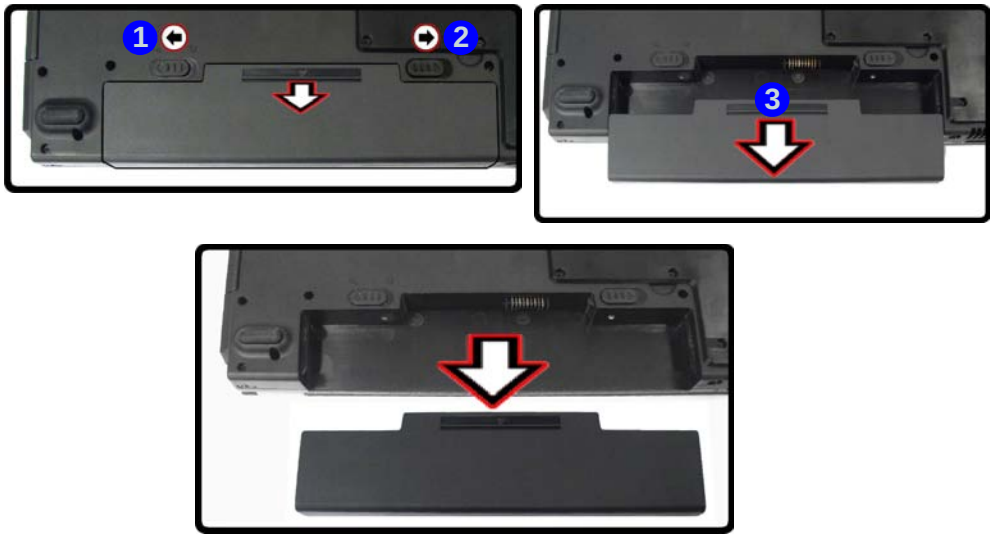


Figure 6 - 1
Battery Removal

Warranty Warning

Please check with your service representative before undertaking any upgrade procedures to find out if this will VOID your warranty.

HDD System Warning

New HDD's are blank. Before you begin make sure:
You have backed up any data you want to keep from your old HDD.
You have all the CD-ROMs and FDDs required to install your operating system and programs.
If you have access to the internet, download the latest application and hardware driver updates for the operating system you plan to install. Copy these to a removable medium.

Upgrading the Hard Disk Drive

The hard disk drive can be taken out to accommodate other 2.5" serial (SATA) hard disk drives with a height of 9.5mm (h) (see *"Storage" on page D - 3*). Follow your operating system's installation instructions, and install all necessary drivers and utilities (see *"Driver Installation" on page 4 - 2*), when setting up a new hard disk.

1. Turn **off** the computer, and turn it over and remove the battery.
2. Remove the HDD bay cover screws 1 - 3 (**Models A & B**)/ 1 - 4 (**Model C**).
3. Remove the HDD bay cover 5.

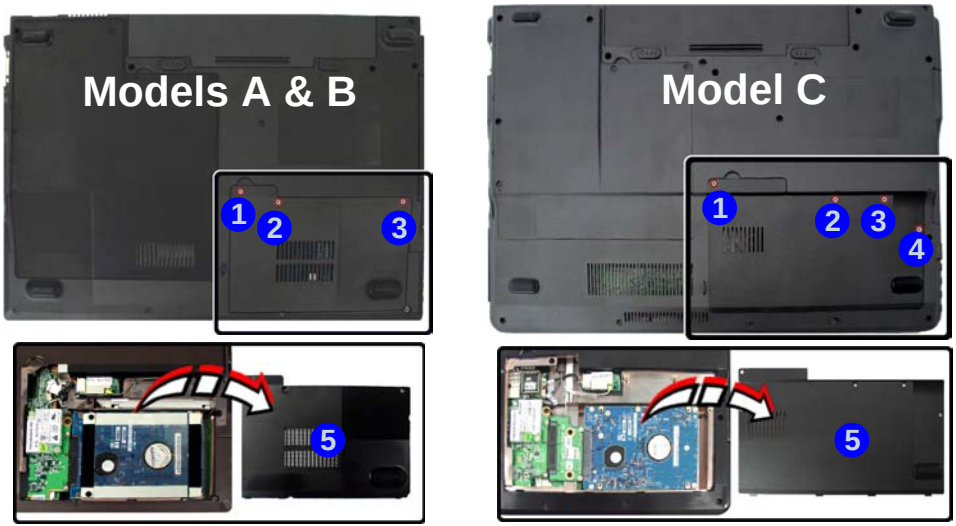


Figure 6 - 2
Hard Disk Bay & Screw

4. Grip the tab and slide the hard disk in the direction of arrow 6.

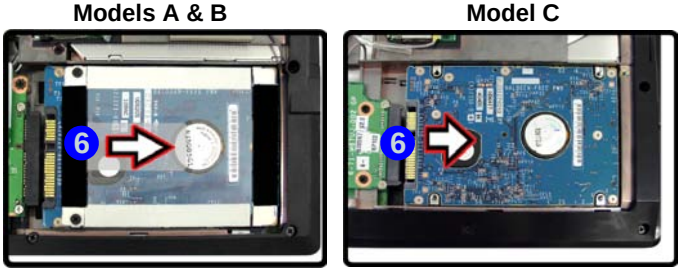


Figure 6 - 3
HDD Slide

5. Lift the hard disk up in the direction of arrow 7.
6. Remove the screws 8 & 9 and cover 10.
7. Reverse the process to install a new hard disk drive.

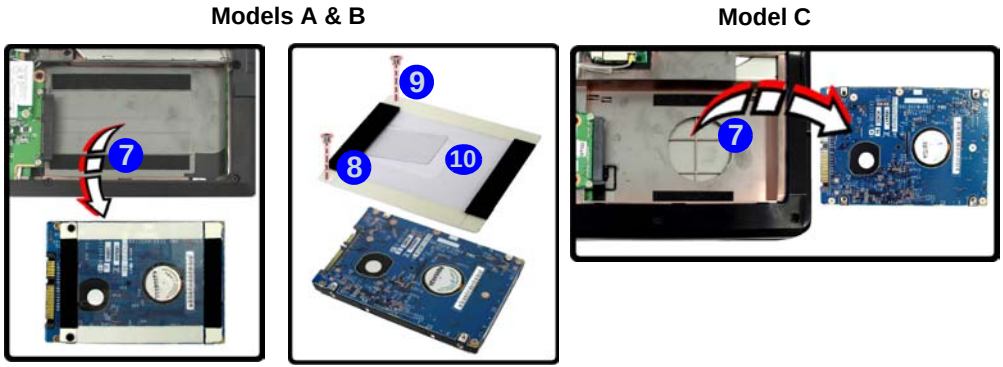


Figure 6 - 4
HDD Removal

Upgrading the Optical (CD/DVD) Device

1. Turn **off** the computer, and turn it over and remove the battery.
2. Remove the HDD bay cover screws 1 - 3 (**Models A & B**)/ 1 - 4 (**Model C**).
3. Remove the HDD bay cover 5.
4. Remove the screw at point 6, and use a screwdriver to carefully push out the optical device at point 7.
5. Reverse the process to install the new device.

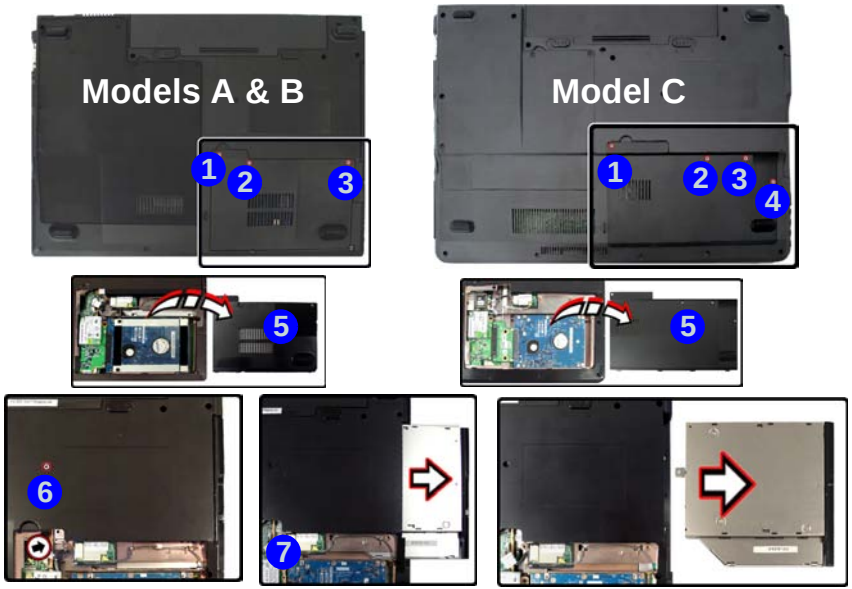


Figure 6 - 5
Removing the CD/ DVD Device

Upgrading the System Memory (RAM)

The computer has **two** memory sockets for 200 pin Small Outline Dual In-line (SO-DIMM) **DDRII (DDR2)** type memory modules (see *"Memory" on page D - 2* for details of supported module types).

The total memory size is automatically detected by the POST routine once you turn on your computer.

1. Turn **off** the computer, and turn it over and remove the battery.
2. Locate the CPU/RAM bay cover and remove screws 1 - 7.

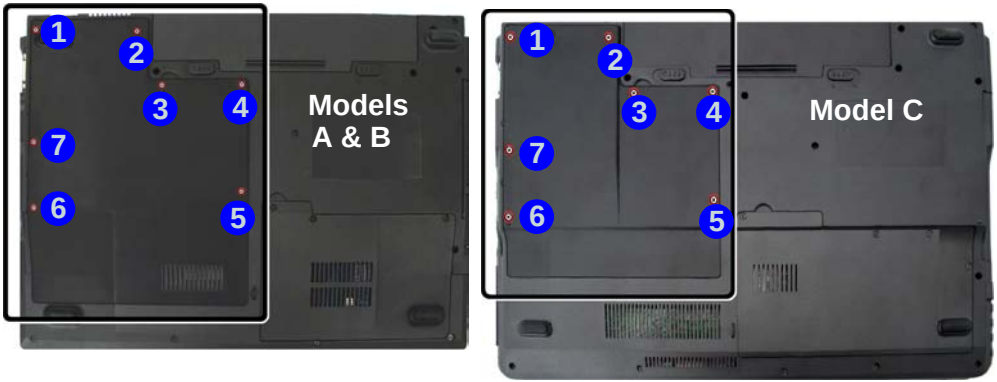
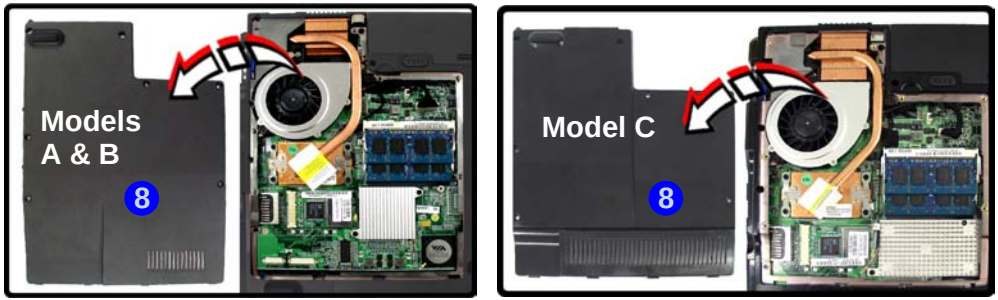


Figure 6 - 6
CPU/RAM Bay Screws

3. Remove the bay cover 8.

Figure 6 - 7
CPU/RAM Bay Cover Removed

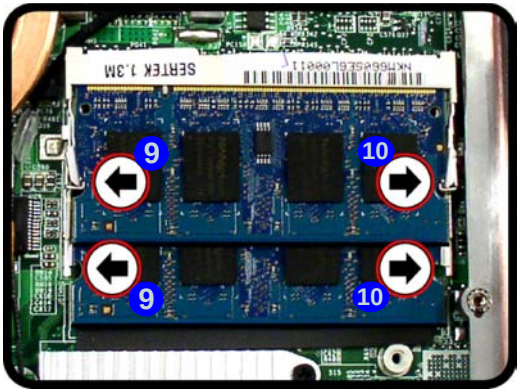


Contact Warning

Be careful not to touch the metal pins on the module's connecting edge. Even the cleanest hands have oils which can attract particles, and degrade the module's performance.

4. Gently pull the two release latches on the sides of the memory socket in the direction indicated by the arrows (9 & 10) in ***Figure 6 - 8***.

Figure 6 - 8
RAM Module Release Latches



5. The RAM module will 11 pop-up, and you can remove it.

Figure 6 - 9
RAM Module Removal

6. Pull the latches to release the second module if necessary.
7. Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory slot.
8. The module's pin alignment will allow it to only fit one way. Make sure the module is seated as far into the slot as it will go. DO NOT FORCE the module; it should fit without much pressure.
9. Press the module in and down towards the mainboard until the slot levers click into place to secure the module.
10. Replace the bay cover and screws.
11. Restart the computer to allow the BIOS to register the new memory configuration as it starts up.

Warranty

The CPU is not a user serviceable part. Opening this compartment, or accessing the CPU in any way, may violate your warranty.

Unauthorized tampering with the HDD may also violate your warranty.

Upgrading the Processor

If you want to upgrade your computer by replacing the existing processor with a faster/new one you will need to contact your customer service representative. We recommend that you do not do this yourself, since if it is done incorrectly you may damage the processor or mainboard.

Chapter 7: Modules & Options

Overview

This chapter contains information on the following modules, which may come with your computer, depending on the configuration purchased. If you are unsure please contact your service representative.

- 802.11 b/g USB WLAN Module
- Bluetooth Module
- PC Camera Module
- Fingerprint Reader Module

Wireless Device Operation Aboard Aircraft

The use of any portable electronic transmission devices aboard aircraft is usually prohibited. Make sure the module(s) are **OFF** if you are using the computer aboard aircraft.

Wireless Device Operation Aboard Aircraft

The use of any portable electronic transmission devices aboard aircraft is usually prohibited. Make sure the module(s) are OFF if you are using the computer aboard aircraft.

Use the **Fn + F11** key combination to toggle power to the WLAN module, and check the indicator to see if the module is powered on or not (see ***Table , on page 1 - 9***/***Table 1 - 5, on page 1 - 12***).

802.11 b/g USB WLAN Module

If you have included an **802.11b/g USB WLAN** module in your purchase option, you will have the appropriate software provided for your module.

Before installing the **802.11b/g USB WLAN** driver, make sure that the Wireless LAN module is on. Use the **Fn + F11 key combination** (see ***"Function Keys" on page 1 - 12***) **to toggle power to the Wireless LAN module**. Make sure you install the drivers in the order indicated in ***Table 4 - 1, on page 4 - 3***.

802.11 b/g WLAN Driver Installation

1. Make sure the module is powered on, and then insert the ***Device Drivers & Utilities + User's Manual CD-ROM*** into the CD/DVD drive.
2. Click **Install VISTA Drivers** (button), and then click **8.Install WLAN Driver > Yes**.
3. Click **Finish** to complete the installation.
4. The operating system is the default setting for Wireless LAN control in ***Windows Vista*** (see overleaf).

Connecting to a Wireless Network

Make sure the Wireless LAN module is turned on.

1. **Click** the taskbar wireless icon, and then click **Connect to a network** (or **right-click** the icon, and then click **Connect to a network**).

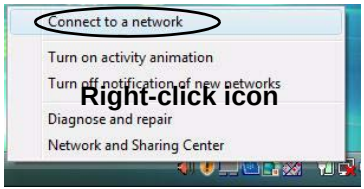


Figure 7 - 1
Taskbar Menus

2. In the **Show** list, click to choose **Wireless** from the drop-down menu.
3. A list of currently available networks will appear.

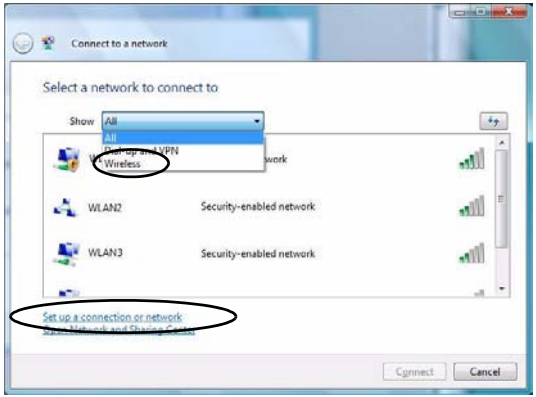


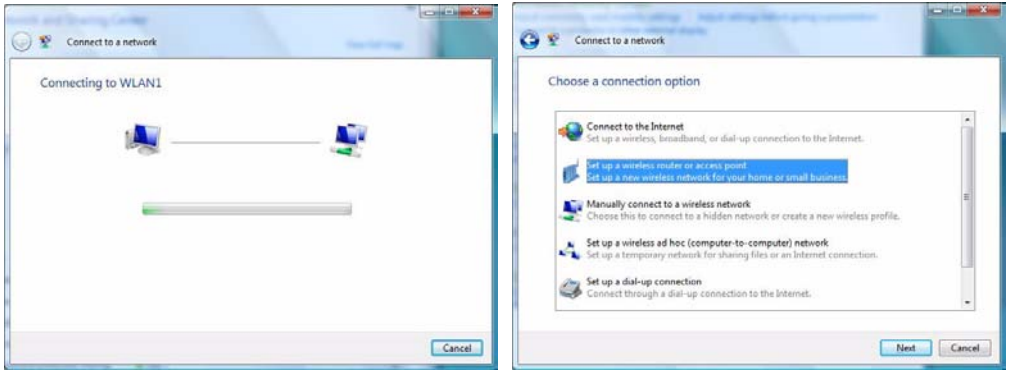
Figure 7 - 2
Connect to a Network

Network and Sharing Center

You can also use the **Network and Sharing Center** control panel in Windows (**Network and Internet**) to connect to any available wireless networks.

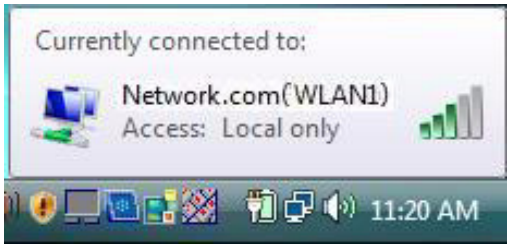
4. Click a network, and then click **Connect**.
5. If you do not see a network you want to connect to, click **Set up a connection or network** (a list of options will appear allowing manual searching, and creating a new network).

Figure 7 - 3
Connecting



6. Move the cursor over the taskbar icon to see the connection status (see below).

Figure 7 - 4
Connection Status



7. To disconnect from the wireless network you can click the taskbar wireless icon , and then select **Connect or disconnect** to access the network menu, and click Disconnect (or **right-click** the icon , and then click **Disconnect from**).

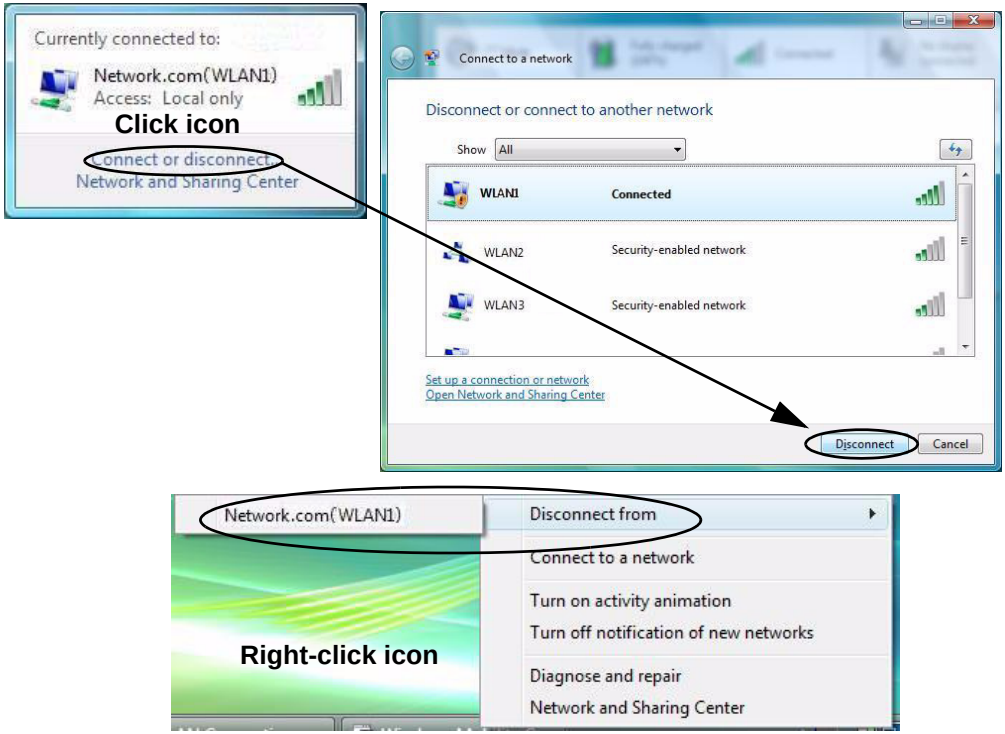


Figure 7 - 5
Disconnecting

Security Enabled Networks

You should try to make sure that any network you are connecting to is a secure network.

Connecting to unsecure networks may allow unauthorized access to your computer, documents, websites and files etc.

Windows Mobility Center

The **Windows Mobility Center** control panel provides an easy point of access for information on battery status, power plans used and wireless device status etc.

To access the Windows Mobility Center:

1. Click **Start**, and click **Control Panel** (or point to **Settings** and click **Control Panel**).
2. Double-click **Windows Mobility Center** (**Mobile PC**).
3. Click the button to **Turn wireless off/on**, or click the icon to access the network menu.

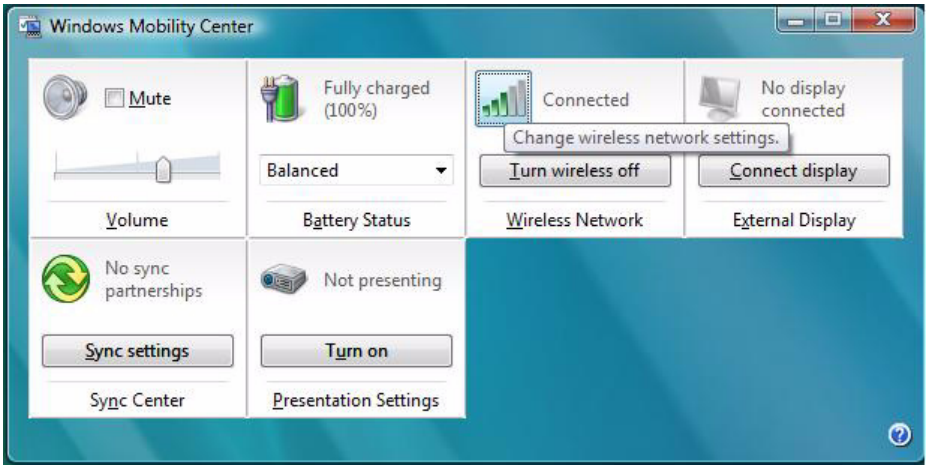


Figure 7 - 6
Windows Mobility Center

Bluetooth Module

Before installing the **Bluetooth** driver, make sure that the optional Bluetooth module is on. **Use the Fn + F12 key combination** (see *"Function Keys" on page 1 - 12*) **to toggle power to the Bluetooth module**. Make sure you install the drivers in the order indicated in *Table 4 - 1, on page 4 - 3*.

Bluetooth Driver Installation

1. Make sure the module is powered on, and then insert the ***Device Drivers & Utilities + User's Manual CD-ROM*** into the CD/DVD drive.
2. Click **Install VISTA Drivers** (button), and then click **9.Install Bluetooth Driver > Yes**.
3. Choose the language you prefer, and click **OK** > **Next**.
4. Click the button to accept the license agreement, and then click **Next**.
5. Click **Next** > **Install**.
6. Click **Finish**, and the **BlueSoleil** icon will appear on the desktop.
7. You can configure the settings at any time by going to the **IVT Corporation BlueSoleil - Main Window** (**Start** > **Programs/All Programs** > **IVT BlueSoleil** > **BlueSoleil**), or by clicking the desktop icon .

Wireless Device Operation Aboard Aircraft

The use of any portable electronic transmission devices aboard aircraft is usually prohibited. Make sure the module(s) are OFF if you are using the computer aboard aircraft.

Use the **Fn + F12** key combination to toggle power to the Bluetooth module, and check the indicator to see if the module is powered on or not (see *Table , on page 1 - 9*/ *Table 1 - 5, on page 1 - 12*).

User Guides & Help

View the BlueSoleil User Guides from the **Help** Menu (or press the **F1** key) in the **IVT Corporation BlueSoleil - Main Window** control panel.

Click the **Help** menu and select **Contents and Index**.

Look through **Getting Started** or select the appropriate **User Guide** from the **Contents** menu.

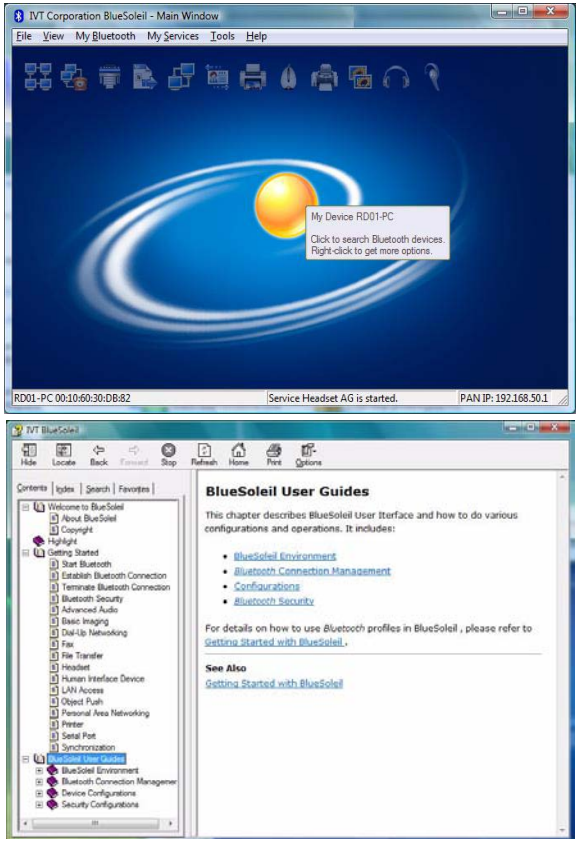
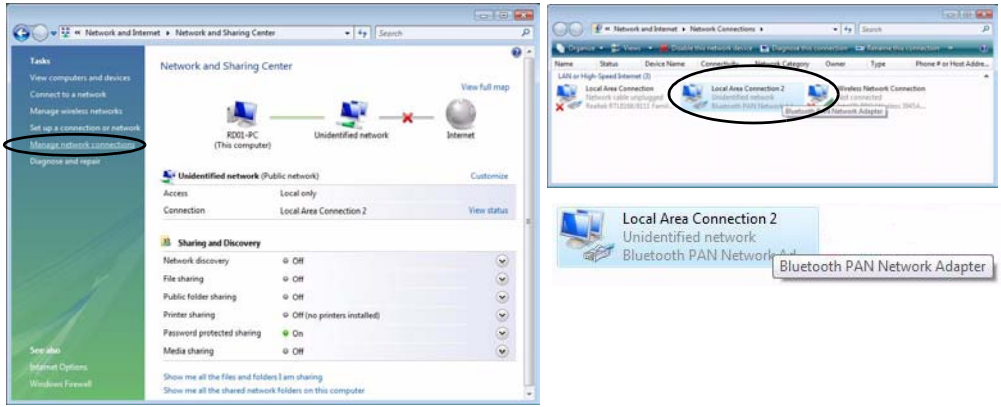


Figure 7 - 7
BlueSoleil Main Window & Help

Bluetooth Local Area Connection

You can check the Bluetooth connection status from the **Network and Sharing Center**:

1. Use the **Fn + F12** key combination to turn on the Bluetooth module.
2. Run the **IVT Corporation BlueSoleil** program from the desktop icon or **Start** menu.
3. Click **Start**, and click **Control Panel** (or point to **Settings** and click **Control Panel**).
4. Double-click **Network and Sharing Center** (**Network and Internet**).
5. Click **Manage network connections**.
6. The Bluetooth connection status will then be displayed in the control panel.



7. To **disconnect** click **File** from the **IVT Corporation BlueSoleil - Main Window**, and select **Exit** (the Local Area Connection will then display "**Network cable unplugged**").

Disconnecting

In order to have the Local Area Connection icon display the correct connection status, you will need to exit the **IVT Corporation BlueSoleil - Main Window** by clicking the **File** menu and selecting **Exit** (see over).

After exiting the program you can then use the **Fn + F12** key combination to turn off the Bluetooth module.

If you use the close button, or turn off the Bluetooth module (by using the **Fn + F12**) the icon will not display the correct status

Figure 7 - 8
Local Area Connection

8. Do not use the **close** button or **Fn + F12** key combination before clicking **File > Exit** or the correct status will not be displayed.
9. You can then use the **Fn + F12** key combination to turn off the Bluetooth module (check the LED icon for the Bluetooth module power status).

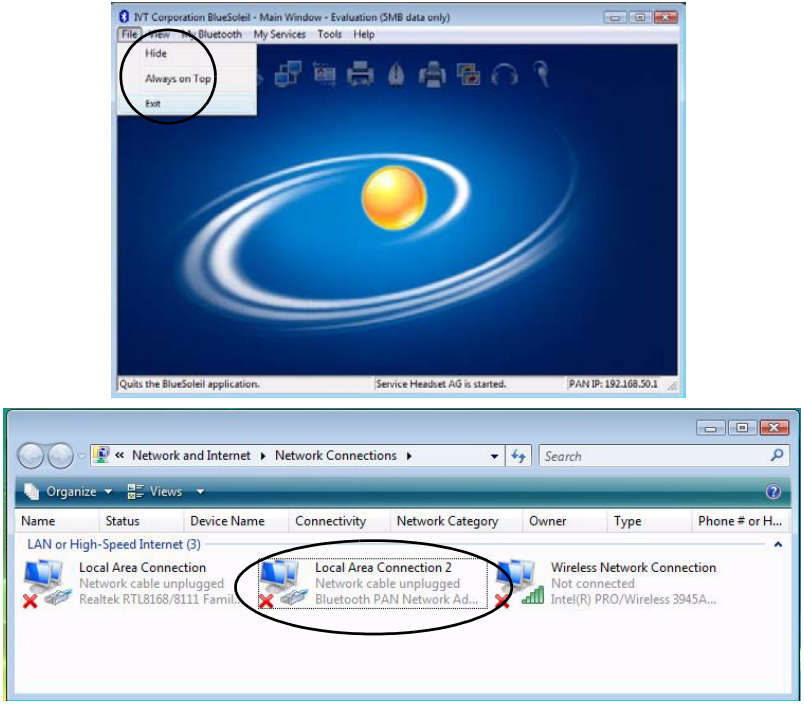


Figure 7 - 9
Bluetooth Disconnected

PC Camera Module

Before installing the **PC Camera** driver, make sure that the optional PC Camera is on. **Use the Fn + F10 key combination** (see *"Function Keys" on page 1 - 12*) **to toggle power to the PC Camera module**. Make sure you install the drivers in the order indicated in *Table 4 - 1, on page 4 - 3*.

Latest PC Camera Driver Information

Check the **CD**, and any accompanying insert pages for the latest updated information on the PC Camera driver, that may override the information provided here.

Adding/Removing a PC Camera

Note that the Quick Button and PC Camera drivers cannot co-exist.

If you wish to **add** a PC Camera module to your computer at a later date, then uninstall the Quick Button Utility Driver (entitled **Multimedia Keyboard Driver**) **before** installing the PC Camera and driver. Drivers can be uninstalled from the Add or Remove Programs control panel in Windows.

If you wish to **remove** a PC Camera module from your computer at a later date, then uninstall the PC Camera Driver after removing the camera module. You can then insert the ***Device Drivers & Utilities + User's Manual CD-ROM*** and install the **Quick Button Utility** driver from the Drivers Installer menu.

Taking Still Pictures

You can use the application button (**Model A & B** computers) to take still pictures if you have installed the hot key driver. (See *"PC Camera Hot Key Buttons" on page 7 - 17*.)

Color Scheme Setup

Before running the PC Camera application (**BisonCap**), make sure the Color Scheme in ***Windows Vista*** is set to **Windows Aero** (**Control Panel > Appearance and Personalization > Personalization > Windows Color and Appearance**).

PC Camera Power Error

The BisonCap application may not recognize that the camera module is powered on if you **manually** put the system into Sleep or Hibernate, and then resume, when the BisonCap application is still running.

Before putting the system into a power-saving state close the BisonCap application. If you resume from a power-saving state and see an error message displayed by the BisonCap application, simply quit the application and run it again.

PC Camera Driver Installation

1. Make sure the module is powered on (click **Cancel** if you see a "**New Hardware Found**" message), and then insert the ***Device Drivers & Utilities + User's Manual CD-ROM*** into the CD/DVD drive.
2. Click **10.Install Camera Driver > Yes**.
3. Choose the language you prefer and click **Next**.
4. Click **Next > Install**.
5. Click **Finish** to restart the computer.
6. Setup your ***Windows*** **Color and Appearance** to **Windows Aero** before running the **BisonCap** application (see ***"Color Scheme Setup" on page 7 - 11***).
7. Run the **BisonCap** application program from the **BisonCam** shortcut on the desktop, or from the **BisonCam** item in the **Start > Programs/All Programs** menu (if the hardware is turned off use the **Fn + F10** key combination to turn it on again).

Model A & B Computers Only

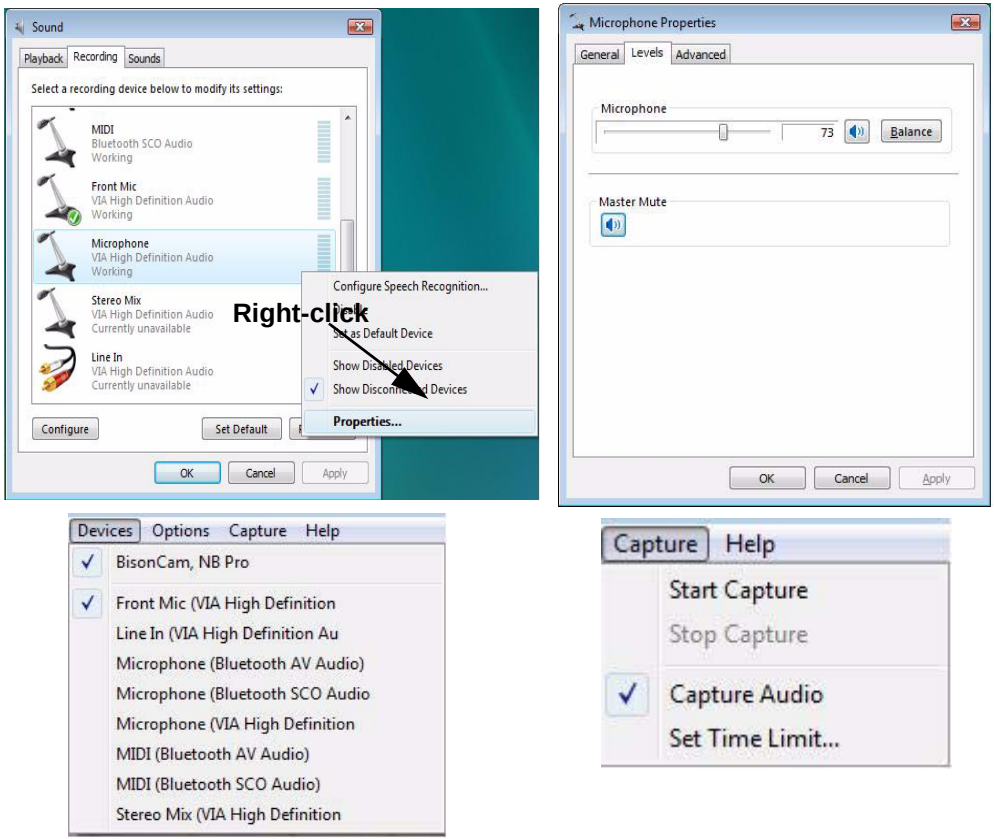
8. You can use the application button to run the **BisonCap** application if you have installed the hot key driver (see ***"Hot Key Utility (Model C Computers)" on page 4 - 6***).
9. A **Snapshot** folder will be placed on the desktop to record still pictures taken with using the application button (see ***"PC Camera Hot Key Buttons" on page 7 - 17***).

PC Camera Audio Setup

If you wish to capture video & **audio** with your camera, it is necessary to setup the audio recording options in ***Windows***.

1. Click **Start**, and click **Control Panel** (or point to **Settings** and click **Control Panel**).
2. Click **Sound** (**Hardware and Sound**).
3. Click **Recording** (tab).
4. Right-click **Microphone** (VIA High Definition Audio) and make sure the item is not disabled (if you wish to record from the internal microphone make sure that the **Front Mic** is not disabled).
5. Double-click **Microphone/Front Mic** (or select **Properties** from the right-click menu).
6. Click **Levels** (tab), and adjust the **Microphone/Front Mic** slider to the level required.
7. Click **OK** and close the control panels.
8. Run the **BisonCap** application program from the **Start > Programs/All Programs > BisonCam** menu (or press the application button).
9. Go to the **Devices** menu heading and select the appropriate recording device (it should have a tick alongside it) e.g **Front Mic (VIA High Definition)....** or **Microphone** (**VIA High Definition)....** .
10. Go to the **Capture** menu heading and select **Capture Audio** (it should have a tick alongside it).

Figure 7 - 10
Audio Setup for PC Camera



BisonCap

BisonCap is a video viewer useful for general purpose video viewing and testing, and can capture video files to .avi format.

1. Setup your ***Windows*** **Color and Appearance** to **Windows Aero** before running the **BisonCap** application (see ***"Color Scheme Setup" on page 7 - 11***).
2. Run the **BisonCap** application from the **Start > Programs/All Programs > BisonCam** menu (it is recommended that you **set the capture file** before the capture process - **see Set Capture File below**).
3. Go to the **Capture** menu heading (if you wish to capture audio check ***"PC Camera Audio Setup" on page 7 - 13***) and select **Start Capture**.
4. On the first run of the program (if you have not set the captured file) you will be asked to choose a file name and size (**see the sidebar - Pre-Allocating File Space**) for the captured file. Click **Start Capture** again.
5. Click **OK** to start capturing the video, and press **Esc** to stop the capture.
6. If you wish to, you may go to the **File** menu and select **Save Captured Video As...**, choose a file name and location, and then click **Open** (you can view the file using the **Windows Media Player**).

Set Capture File

In the **BisonCap** application you will only be asked to set the capture file name on the first run of the program. When you run the program the next time the file will automatically be overwritten with the newly captured file. To avoid overwriting files you can go to the **Set Capture File..** option in the **File** menu, and set the file name and location before capture. Set the name and location then click **Open** (you can choose **Cancel** to ignore the file size if prompted).

Pre-Allocating File Space

You may pre-allocate the file size for the capture file in the **BisonCap** application. You can choose to ignore this by clicking **Cancel**.

Pre-allocating space on the hard disk can improve the capture quality (particularly of large capture files), by reducing the amount of work the hard disk has to do in finding space for the video data as it is being captured.

You may find it helpful to defragment the HDD before capture.

Eliminating Screen Flicker

If you find that the video screen in the **BisonCap** application is flickering, you can try to adjust the setting in the **Video Capture Filter** options.

1. Run the **BisonCap** program.
2. Go to **Options** and scroll down to select "**Video Capture Filter...**".
3. Click either **50Hz** or **60Hz** under **Frequency** in **Property Page** (tab).

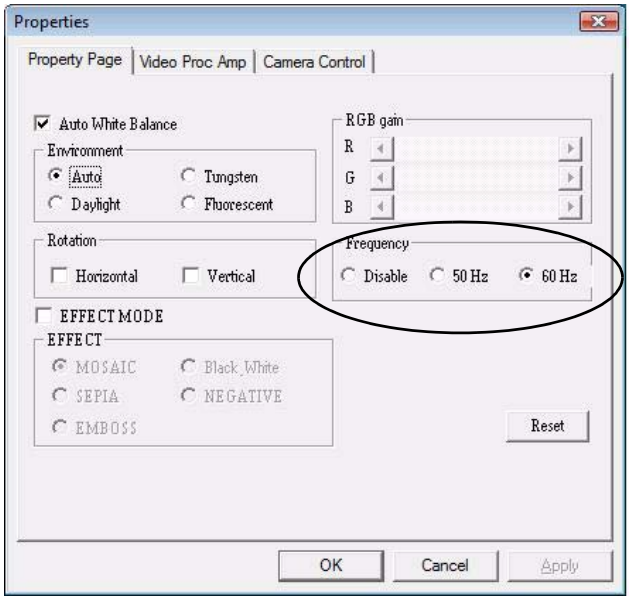


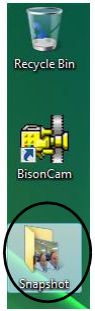
Figure 7 - 11
Video Capture Filter

PC Camera Hot Key Buttons

(Model A & B Computers)

You can use the PC Camera hot key buttons (the quick button utility must **NOT** be installed - see *"Quick Button Utility" on page 4 - 6*) to run the **BisonCap** program, to take still pictures and to zoom the camera in and out (if you have installed the hot key and PC Camera drivers - see *"Hot Key Utility (Model C Computers)" on page 4 - 6* & *"PC Camera Driver Installation" on page 7 - 12*).

1. Make sure the PC Camera is on (use the **Fn + F10** key combination to power on the camera).
2. Press the application button once.
3. The **BisonCap** application will run.
4. Use the zoom keys to obtain the picture required.
5. Press the application button for a second time (you will hear a camera motor sound to indicate the picture is being taken).
6. The picture (in JPEG format) will be placed in the **Snapshot** folder on the desktop.



Snapshot Folder

The Snapshot folder's default location is on the desktop. Do not move this folder or an error may appear when you try to take a still picture using the application hot key button.

If you accidentally delete or move the folder, you can create a new Snapshot folder on the desktop in order to capture the files.

Figure 7 - 12
Snapshot Folder

Help & Manual

Right-click the taskbar icon to bring up the menu to select **Help**.

Insert the *Device Drivers & Utilities + User's Manual CD-ROM* and click ***Install Vista Drivers*** (button). Click **Unlock** (button) and then click **11.Fingerprint > Yes**.

Click **Documentation** to open the folder containing the manual in .pdf format.

To install the Adobe Acrobat Reader software to read the file, insert the *Device Drivers & Utilities + User's Manual CD-ROM* and click ***User's Manual*** (button), and click **Install Acrobat Reader** (button).

Fingerprint Reader Module

(Optional for Model B & C Computers)

If you have included the fingerprint reader in your purchase option (**Optional** for **Model B & C** computers only) you will need to install the driver as per the instructions below.

Make sure you have administrator's rights to your computer, and have a ***Windows*** password enabled for full security protection.

Before beginning the enrollment process it is recommended that you go through the fingerprint tutorial. To run the tutorial click **Start** > **Programs/All Programs** > **Protector Suite QL** > **Fingerprint Tutorial** after installing the driver.

Fingerprint Reader Driver Installation

1. Insert the ***Device Drivers & Utilities + User's Manual CD-ROM*** into the CD/DVD drive.
2. Click **Install Vista Drivers** (button).
3. Click **11.Install Fingerprint Utility** > **Yes**.
4. Click **Software Installation**.
5. Click **Next** > **Next** > **Next**.
6. Click **Finish** > **Yes** to restart the computer.

User Enrollment

1. Click **Start > Programs/All Programs > Protector Suite QL > User Enrollment**, or double click the taskbar icon .
2. On the first run of the program you will be asked to click the button to accept the license, and then click **OK**.
3. Click **Next** and select "***Enrollment to the hard disk***", and click **Finish**.

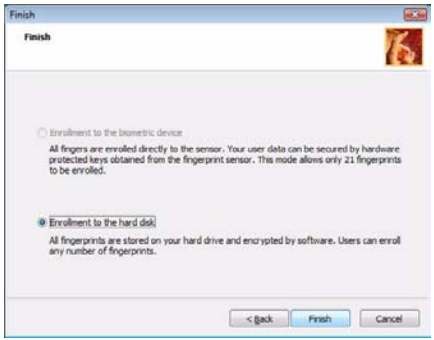


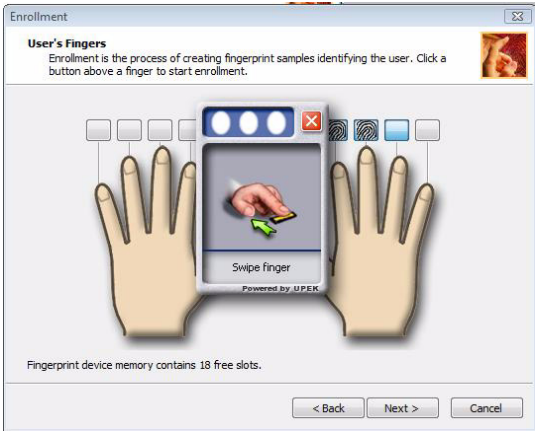
Figure 7 - 13
Enroll to Hard Disk

4. If you have not set a ***Windows*** password you will be prompted to do so (**note**: If you have not set a password **Protector Suite QL** cannot secure access to your computer).
5. Click **Next**.
6. You will then be prompted to enter your ***Windows*** password.
7. Click **Next > Next** (if you have the "***Run interactive tutorial***" tickbox selected you will run through the Fingerprint Tutorial).
8. Click **Next** for each window of the tutorial (you can click the button to "***skip tutorial***" at any time).

Fingerprint Enrollment

Note that it is strongly recommended that you **enroll more than one finger in case of injury etc.**

9. Click the button above any of the fingers to begin the enrollment process for that finger.
10. Swipe the finger three times to enroll that finger.
11. Repeat the process for all the fingers you wish to enroll (see sidebar), and then click **Next**.
12. Click **Finish**.
13. Click any of the headings under "**Learn more about**:" to get more information on any topic.
14. Click **Close**.



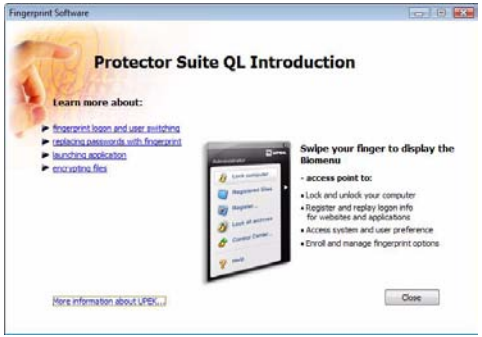


Figure 7 - 14
Fingerprint Enrollment

15. Restart the computer.
16. Right-click the taskbar icon to bring up the menu that allows you to **Edit Fingerprints**, **Start Control Center**, access the **Help** menu etc. You can also run

the **Control Center** etc. from the **Protector Suite QL** item in the **Programs/All Programs** menu.

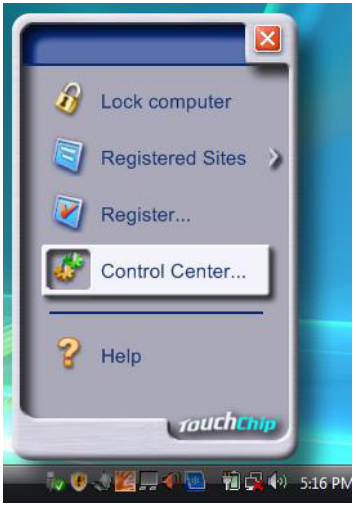


Figure 7 - 15
Control Center & Biomenu

17. See ***"Help & Manual" on page 7 - 18*** for further details.
18. If you swipe your finger over the reader at any time you can access the **Biomenu** to **lock the computer**, **register websites**, open the **Control Center** and access the **Help** menu.
19. The **Control Center** allows you to change the **Settings**, **enroll Fingerprints** and get **Help**.

Chapter 8: Troubleshooting

Overview

Should you have any problems with your computer, before consulting your service representative, you may want to try to solve the problem yourself. This chapter lists some common problems and their possible solutions. This can't anticipate every problem, but you should check here before you panic. If you don't find the answer in these pages, make sure you have followed the instructions carefully and observed the safety precautions in the preface. If all else fails, talk to your service representative. You should also make a record of what happened and what remedies you tried.

Of course, if something goes wrong, it will happen at the most inconvenient time possible, so you should preview this section just in case. If, after you've tried everything, and the system still won't cooperate, try turning it off for a few minutes and then rebooting. You will lose any unsaved data, but it may start working again. Then call your service representative.

Basic Hints and Tips

Many of the following may seem obvious but they are often the solution to a problem when your computer appears not to be working.

- **Power** - Is the computer actually plugged into a working electrical outlet? If plugged into a **power strip**, make sure it is actually working. Check the **LED Power & Communication Indicators** (see ***"LED Indicators" on page 1 - 9***) to see the computer's power status.
- **Connections** - Check all the **cables** to make sure that there are no **loose connections** anywhere.
- **Power Savings** - Make sure that the system is not in **Hibernate** or **Sleep** mode by pressing the keys configured in your P*ower Options* (see ***"Power Plans" on page 3 - 4***/***"Power-Saving States" on page 3 - 6***), the **Fn + F4** key combination, or power button to wake-up the system.
- **Brightness** - Check the brightness of the screen by pressing the **Fn** + **F8 and F9** keys to adjust the brightness.
- **Display Choice** - Press **Fn** + **F7** to make sure the system is not set to "external only" display.
- **Boot Drive** - Make sure there are no **optical media and/or USB storage devices** in any connected drive (this is a common cause of the message "***Invalid system disk - Replace the disk, and then press any key***" / "***Remove disks or other media. Press any key to restart***").

Backup and General Maintenance

- Always **backup** your important data, and keep copies of your OS and programs safe, but close to hand. Don't forget to note the **serial numbers** if you are storing them out of their original cases, e.g. in a CD wallet.

- Run **maintenance programs** on your hard disk and OS as often as you can. You may schedule these programs to run at times when you are not using your computer. You can use those that are provided free with your OS, or buy the more powerful dedicated programs to do so.

- Write down your passwords and keep them safe (away from your computer). This is especially important if you choose to use a **Supervisor** password for the BIOS (see *"Password Warning" on page 5 - 10*).

- Keep copies of vital **settings files** such as network, dialup settings, mail settings etc.(even if just brief notes).

Warranty

The CPU is not a user serviceable part. Opening this compartment, or accessing the CPU in any way, may violate your warranty.

Viruses

- Install an **Anti-Virus** program and keep the **definitions file** (the file which tells your program which viruses to look for) up to date. New computer viruses are discovered daily, and some of them may seriously harm your computer and cause you to lose data. **Anti-Virus** programs are commercially available and the **definitions file updates** are usually downloadable directly from the internet.

- Be careful when opening e-mail from sources you don't know. **Viruses** are often triggered from within **e-mail attachments** so take care when opening any attached file. You can configure most **Anti-Virus** programs to check all **e-mail attachments**. **Note**: You should also beware of files from people you know as the virus may have infected an **address book** and been automatically forwarded without the person's knowledge.

- Keep a "**Bootable CD-ROM/DVD-ROM/USB storage device**" (this CD/DVD/USB device provides basic information which allows you to startup your computer) handy. You may refer to your OS's documentation for instructions on how to make one, and many **Anti-Virus** programs will also provide such a disk (or at least instructions on how to make one).

Upgrading and Adding New Hardware/Software

- Do not be tempted to make changes to your **Windows Registry** unless you are very sure of what you are doing, otherwise you will risk severely damaging your system.

- Don’t open your computer or undertake any repair or upgrade work if you are not comfortable with what you are doing.

- Read the **documentation**. We can assume, since you are reading this that you are looking at the computer’s manual, but what about any new peripheral devices you have just purchased? Many problems are caused by the installation of new hardware and/or software. Always refer to the documentation of any new hardware and/or software, and pay particular attention to files entitled “**READ ME**” or “**READ ME FIRST**”.

- When installing a new device always make sure the device is powered on, and in many cases you will need to restart the computer. Always check that all the cables are correctly connected.

- Make sure you have installed the **drivers** for any new hardware you have installed (latest **driver files** are usually available to download from vendor’s websites).

Troubleshooting

- Thoroughly check any **recent changes** you made to your system as these changes may affect one or more system components, or software programs. If possible, go back and undo the change you just made and see if the problem still occurs.
- Don’t over complicate things. The less you have to deal with then the easier the source of the problem may be found; **Example** - if your computer has many devices plugged into its ports, and a number of programs running, then it will be difficult to determine the cause of a problem. Try disconnecting all of the devices and restarting the computer with all the peripheral devices unplugged. A process of elimination (adding and removing devices and restarting where necessary) will often find the source of a problem, although this may be time consuming.

Problems and Possible Solutions

Problem	Possible Cause - Solution
You turned on the **power** but it doesn't work.	*Battery missing / incorrectly installed.* Check the battery bay, make sure the battery is present and seated properly (the design of the battery only allows it to go in one way). Make sure there's nothing interfering with the battery contacts.
The battery **LED power** indicator  , is blinking orange.	*Low Battery.* Plug in the DC power source. If the computer doesn't start up immediately, turn it off then on again.
You are **losing battery power** too quickly.	*The system is using too much power.* If your *OS* has a *Power Options* scheme (see ***"Power Plans" on page 3 - 4***/***"Power Schemes" on page E - 25***) check its settings. You may also be using an PC Card/ExpressCard device/USB device/external device that is drawing a lot of power.
Actual **battery operating time** is shorter than expected.	*The battery has not been fully discharged before being recharged.* Make sure the battery is fully discharged and recharge it completely before reusing (see ***"Battery Information" on page 3 - 10***/***"Battery Information" on page E - 30***). *Power Options have been disabled.* Go to the **Control Panel** in *Windows* and re-enable the options. *A peripheral device/USB device/PC Card is consuming a lot of power.* Turn off/remove the unused device to save power.

Problem	Possible Cause - Solution
The **battery recharging time** (for **Model B & C** computers) is longer than expected.	*The computer has been working under a heavy load, and the system is allowing the system to cool to a safe temperature before charging begins*. **Model B & C** computers under a heavy load (e.g. using applications which require a lot of video processing), while running on battery power, will take time (3 to 20 minutes before charging begins) to recharge the battery when plugged in to the AC/DC adapter. This is due to safety considerations which dictate that the battery should only start to recharge when the computer has reached a safe temperature to do so. Make sure you save your work when the battery LED is blinking orange, and plug in the AC/DC adapter. The battery LED will change from blinking orange to orange when the battery starts to charge (3 to 20 minutes before charging begins).
The computer feels **too hot**.	Make sure the computer is properly ventilated and the Vent/Fan intakes are not blocked. If this doesn't cool it down, put the system into **Hibernate** mode or turn it off for an hour. Make sure the computer isn't sitting on a thermal surface (see ***"Overheating" on page 1 - 16***). Make sure you're using the correct adapter. Make sure that your notebook is completely powered off before putting it into a travel bag (or any such container). Putting a notebook which is powered on in a travel bag may cause the Vent/Fan intakes to be blocked.

Problem	Possible Cause - Solution
Nothing appears on screen.	*The system is in a power saving mode*. Toggle the sleep/resume key combination, **Fn + F4** (see ***"Configuring the Power Buttons" on page 3 - 8***/***"Sleep Button" on page E - 29***). *The screen controls need to be adjusted.* Toggle the screen control key combinations **Fn + F8/F9**. If you're connected to an external monitor, make sure it's plugged in and turned on. You should also check the monitor's own brightness and contrast controls. *The computer is set for a different display.* Toggle the screen display key combination, **Fn + F7**. If an external monitor is connected, turn it on. *The **screen saver** is activated.* Press any key or touch the **TouchPad**.
No image appears on the **external monitor** I have plugged in and powered on.	*You haven't installed the video driver and configured it appropriately from the **Control Panel**.* See ***Appendix B***/***"Video Features" on page E - 10*** for instructions on installing and configuring the video driver.
You forget the **boot password**.	*If you forget the password, you may have to discharge the battery of the CMOS.* Contact your service representative for help.

Password Warning

If you choose to set a boot password, **NEVER** forget your password. The consequences of this could be serious. If you cannot remember your boot password you must contact your vendor and you may lose all of the information on your hard disk.

Problem	Possible Cause - Solution
The sound cannot be heard or the **volume is very low**.	*The volume might be set too low.* Check the volume control in the ***Volume Control Panel*** in the *Windows* taskbar, or use the key combination **Fn + F5** and **F6** (see ***"Function Keys/Hot Keys" on page 2 - 9***) to adjust.
The **audio recording** cannot be heard or the volume is very low.	*The recording volume might be set too low.* Check the information in ***"Recording Audio" on page 2 - 12***/***"Recording Audio" on page E - 7***.
Audio cannot be heard through the **recording line-in jack**.	*The Recording Line-In jack allows you to record audio sources to the computer*. Note that the **audio will not play through the computer's speakers.** You will need to listen to the audio source on the original device, or split the audio signal through the notebook computer and another device.
The CD/DVD **cannot be read**.	*The CD/DVD is dirty.* Clean it with a CD/DVD cleaner kit.
The CD/DVD **tray will not open** when there is a disc in the tray.	*The* CD/DVD *is not correctly placed in the tray.* Gently try to remove the disc using the eject hole (see ***"Loading Discs" on page 2 - 3***).
The **DVD regional codes** can no longer be changed.	*The code has been changed the maximum **5** times.* See ***"DVD Regional Codes" on page 2 - 5***/ ***"DVD Regional Codes" on page E - 2***.
Unwelcome numbers appear when typing.	*If the LED*  *is lit, then Num Lock is turned **ON**.* (see ***"LED Indicators" on page 1 - 9***).

Problem	Possible Cause - Solution
Other Keyboards If your keyboard is damaged or you just want to make a change, you can use any standard USB keyboard. The system will detect and enable it automatically. However special functions/hot keys unique to the system's regular keyboard may not work.	
The **system freezes** or the screen goes dark.	*The system's power saving features have timed-out*. Use the AC/DC adapter, press the sleep (**Fn + F4**) key combination, or press the power button if no LEDs are lit.
The system never goes into a **power saving mode**.	Power Options features are not enabled. Go to the ***Windows*** Power Options menu and enable the features you prefer (see ***"Power Plans" on page 3 - 4***/***"System Power Options" on page E - 27***).
The **Wireless LAN/ Bluetooth** modules cannot be detected.	*The modules are off.* Check the LED indicator and/or function key indicator to see if the WLAN/Bluetooth module is on or off (see ***"LED Indicators" on page 1 - 9***). If the LED indicator is off, then press the **Fn + F11 (WLAN)** or **Fn + F12 (Bluetooth)** key combination(s) in order to enable the modules (see ***"Function Keys" on page 1 - 12***).
The **PC Camera** module cannot be detected.	*The module is off.* Press the **Fn + F10** key combination in order to enable the module (see ***"Function Keys" on page 1 - 12***). Run the **BisonCap** program (see ***"PC Camera Module" on page 7 - 11***/***"PC Camera Module" on page E - 46***) to view the camera picture.

Problem	Possible Cause - Solution
The **Wireless LAN/ Bluetooth/ PC Camera** modules cannot be configured.	*The driver(s) for the module(s) have not been installed*. Make sure you have installed the driver for the appropriate module (see the instructions for the appropriate module in ***"Modules & Options" on page 7 - 1***).
The **BisonCap PC Camera** application displays the message "***Sorry, please turn on the Video Capture power (Fn + F10).***" after resuming power from manually entering a power-saving state.	*The BisonCap application may not recognize that the camera module is powered on if you **manually** put the system into Sleep or Hibernate, and then resume, when the BisonCap application is still running.* Before putting the system into a power-saving state close the BisonCap application. If you resume from a power-saving state and see the error message displayed by the BisonCap application, simply quit the application and run it again.
The **audio** at *Windows* startup, or when playing mp3 format files in *Windows Media Player*, appears to **lag** (**Model B & C** computers only).	*This is a known issue with **Celeron M** CPUs.* Contact your service center for CPU upgrade information.
The **Bluetooth** module is **off** after resuming from Sleep (**Model B & C** computers only).	*The Bluetooth module's default state will be off after resuming from the Sleep power-saving state*. Use the key combination (**Fn + F12**) to power on the Bluetooth module after the computer resumes from Sleep.

Screen Resolution Error

If you are experiencing either screen resolution reduction, or screen flickering **after resuming from Sleep in *Windows Vista*** then follow the instructions below to fix this problem. This error arises in compliance with ***Windows Vista*** policy, which triggers **TMM** (Transient Multi-Manger) when the notebook lid (**S3**) is closed. **TMM** disconnects the LCD display from the OS and then adds the LCD display back when the lid is opened. This may trigger **TMM** to restore an old display setting which may result in screen flickering or a screen resolution change. To fix this problem you will need to disable **TMM** in the OS:

1. Go to the **Control Panel** in the ***Windows OS*** and double-click the **Administrative Tools** icon (**System and Maintenance**).
2. Double-click **Task Scheduler (Schedule Tasks)**.

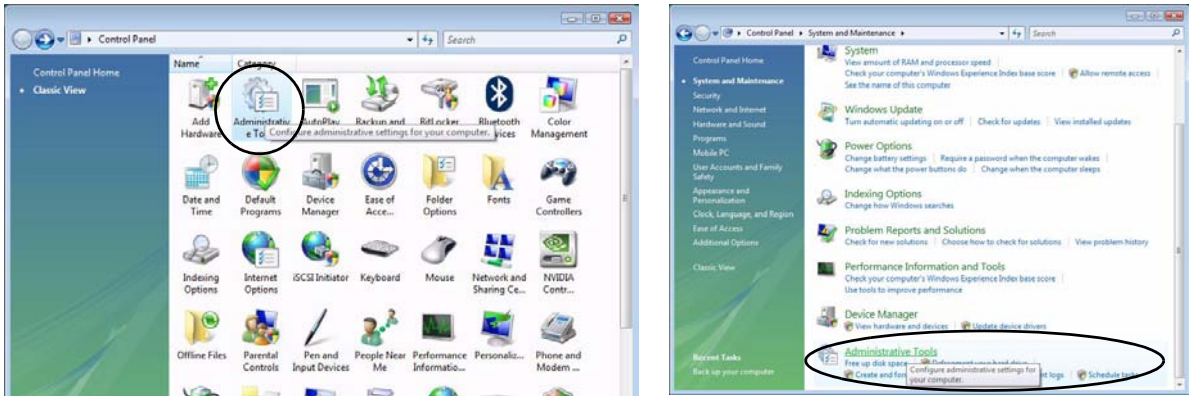


Figure 8 - 1 **- AC/DC Adapter In**

3. Double-click **Task Scheduler Library > Microsoft > Windows**.
4. Click **MobilePC** to open the control panel.
5. Right-click **TMM** and select **Disable**.

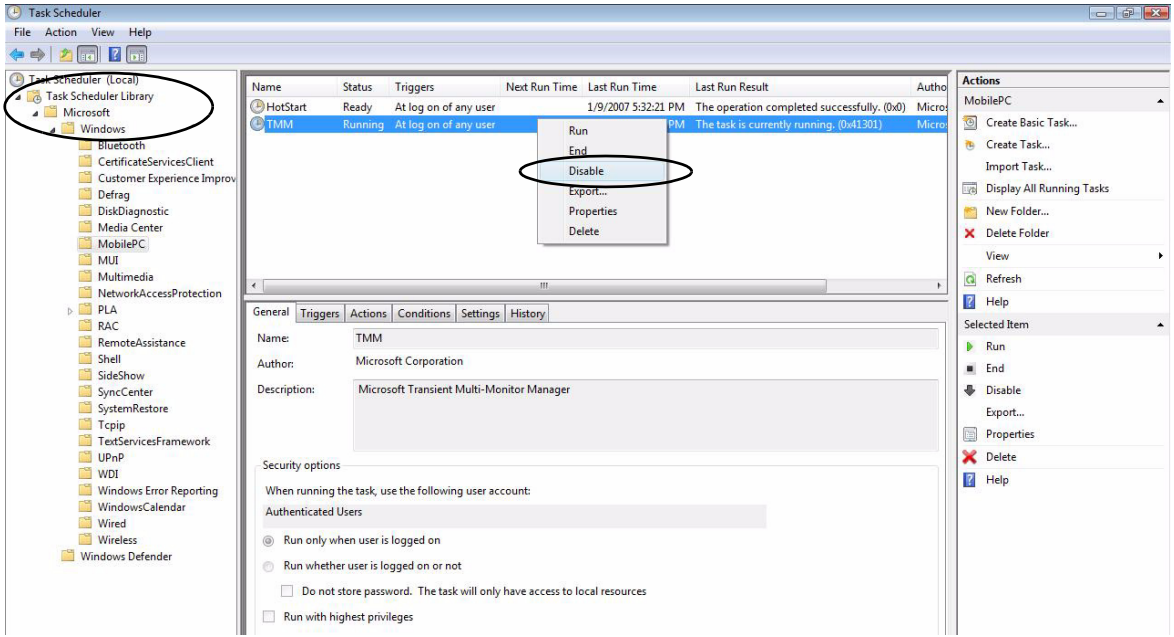


Figure 8 - 2 **- TMM Disable**

6. Close all the control panels.

Appendix A: Interface (Ports & Jacks)

Overview

The following chapter will give a quick description of the interface (ports & jacks) which allow your computer to communicate with external devices, connect to the internet etc.

Notebook Ports and Jacks

Item	Description
Card Reader Port 	The card reader allows you to use some of the latest digital storage cards. Push the card into the slot and it will appear as a removable device.
DC-In Jack 	Plug the supplied AC/DC adapter into this jack to power your computer.
External Monitor (VGA) Port 	This port allows you to connect an external monitor, or Flat Panel Display, to get dual video or simultaneous display on the LCD and external monitor/FPD.
Headphone-Out Jack 	Headphones or speakers may be connected through this jack. **Note**: Set your system's volume to a reduced level before connecting to this jack.
Recording Line-In Jack 	The Recording Line-In jack allows you to record audio sources to the computer. Note that the **audio will not play through the computer's speakers.** You will need to listen to the audio source on the original device, or split the audio signal through the notebook computer and another device.
Microphone-In Jack 	Plug an external microphone in to this jack to record on your computer.

Item	Description
RJ-11 Modem Jack 	This port connects to the built-in modem. You may plug the telephone line directly into this RJ-11 telephone connection. **Note**: Broadband (e.g. ADSL) modems usually connect to the LAN port.
RJ-45 LAN Jack 	This port supports LAN (Network) functions. **Note**: Broadband (e.g. ADSL) modems usually connect to the LAN port.
Security Lock Slot 	To prevent possible theft, a Kensington-type lock can be attached to this slot. Locks can be purchased at any computer store.
S/PDIF-Out Jack 	This S/PDIF (Sony/Philips Digital Interface Format) Out Jack allows you to connect your DVD-capable PC to a Dolby AC-3 compatible receiver for “5.1” or ‘dts’ surround sound.
USB 2.0/1.1 Ports 	These USB 2.0 compatible ports (USB 2.0 is fully USB 1.1 compliant) are for low-speed peripherals such as keyboards, mice or scanners, and for high-speed peripherals such as external HDDs, digital video cameras or high-speed scanners etc. Devices can be plugged into the computer, and unplugged from the computer, without the need to turn the system off (if the power rating of your USB device is 500mA or above, make sure you use the power supply which comes with the device).

Appendix B: VIA Video Driver Controls

(Model A Computers)

The basic settings for configuring the LCD are outlined in ***"Video Features" on page 1 - 16***.

VIA Video Driver Installation

Make sure you install the drivers in the order indicated in ***Table 4 - 1, on page 4 - 6***. Insert the *Device Drivers & Utilities + User's Manual CD-ROM* and click ***Install Vista Drivers*** (button).

Video

1. Click **1.Install Video Driver > Yes**.
2. Click **Next > Next**.
3. Click **Finish** to restart the computer.

Function Key Combination

You can use the **Fn + F7** key combination to toggle through the display options:

- Notebook Only
- External Display Only
- Notebook + External Display

Make sure you give the displays enough time to refresh.

Advanced Video Controls

This section is about making adjustments for the LCD, and switching display devices. The basic settings for configuring the LCD are outlined in *"Video Features" on page 1 - 15*.

Video Driver Controls

The video interface lets you change the screen resolution and color output to whatever is most comfortable/efficient for you. This is a matter of hardware, video memory and the driver for your operating system.

Video Memory

The system does not feature dedicated video memory, but automatically and dynamically allocates as much (up to **256MB** maximum) system memory (RAM) as needed to the video system. You can define the amount of system memory to be allocated from the BIOS (see *"Frame Buffer Size: (Advanced Menu)" on page 5 - 8*). The system returns whatever memory is no longer needed to the operating system.

Attaching Other Displays

Besides the built-in LCD, you can also use an external monitor (CRT)/flat panel display as your display device. Connect it to the external monitor port on the right of the computer, and follow the instructions below:

Windows Vista

1. Attach your external display to the external monitor port and turn it on.
2. If a **New Display Detected** window does not appear in ***Windows Vista***, go to the **Windows Mobility Center** control panel (**Mobile PC > Adjust commonly used mobility settings**) and click ***Connect display***.
3. Click on any of the buttons to configure the displays to your preferences, or click **Display Settings** (in the New Display Detected window) to access the control panel.

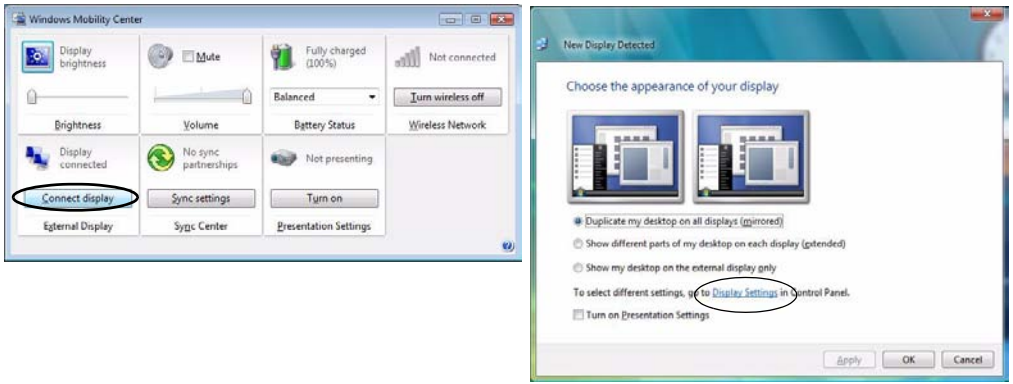


Figure B - 1
New Display Detected

External displays may also be configured from **S3Display** tab in Advanced **Display Settings**:

1. Attach the external display to the external monitor port and turn it on.
2. Click **Advanced Settings** in the **Display Settings** control panel (see *"Video Features" on page 1 - 18*) to display the additional tabs.
3. Select **S3Display** (tab).
4. Click to put a tick in the tickbox under the **CRT** icon.
5. Click **Apply** > **OK** and allow the monitor time to refresh the display.
6. Click **Yes** to confirm the settings.
7. Select the CRT icon, and then click **Refresh Rate** to change the settings for the attached display.

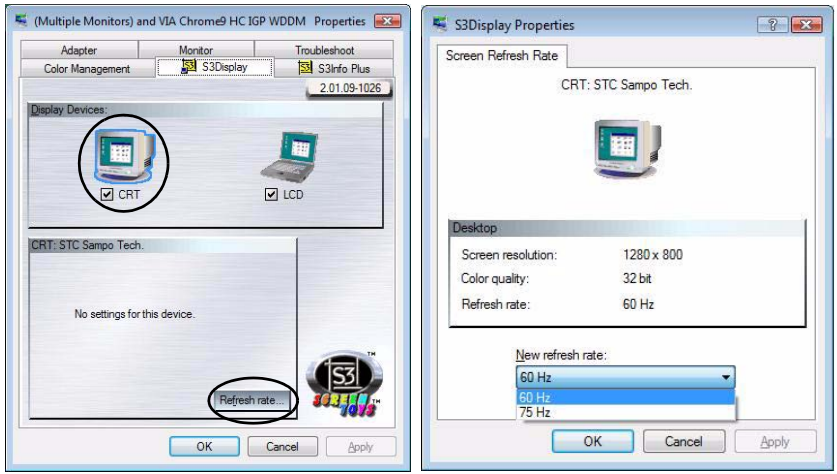


Figure B - 2
S3 Display

Display Modes

Single Display

Only one of your attached displays is used.

Mirrored

This display mode simply shows an exact copy of the **Primary** display desktop on the **Secondary** display(s).

Extended Desktop

An **Extended** desktop allows the desktop to span the displays to act as a large work area, thus creating a lot more screen area for display. Each display device can be configured independently for specific resolutions and refresh rates. Use the **Display Settings** control panel to drag the monitors to match the physical arrangement you wish to use.

Display Settings Extended Desktop

Use the control panel to drag the monitors to match the physical arrangement you wish to use.

You can drag any icons or windows across to either display desktop, which makes it possible to have one program visible in one of the displays, and a different program visible in the other display.

Using Windows Vista to Enable Extended Mode

1. Attach your external display to the external monitor port, and turn it on.
2. If a **New Display Detected** window does not appear in ***Windows Vista***, go to the **Windows Mobility Center** control panel (**Mobile PC > Adjust commonly used mobility settings**) and click ***Connect display***.
3. Click to select ***Show different parts of my desktop on each display (extended)***.
4. Click **Right** or **Left** under **Extend your desktop**.
5. Click **Apply > OK**.

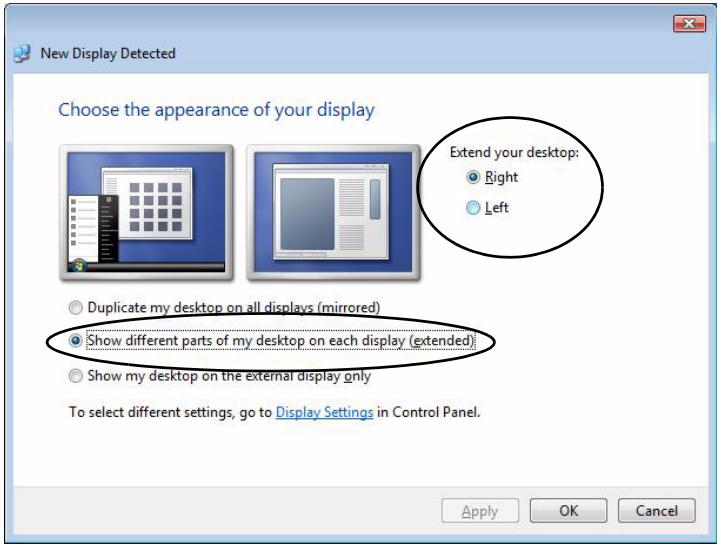
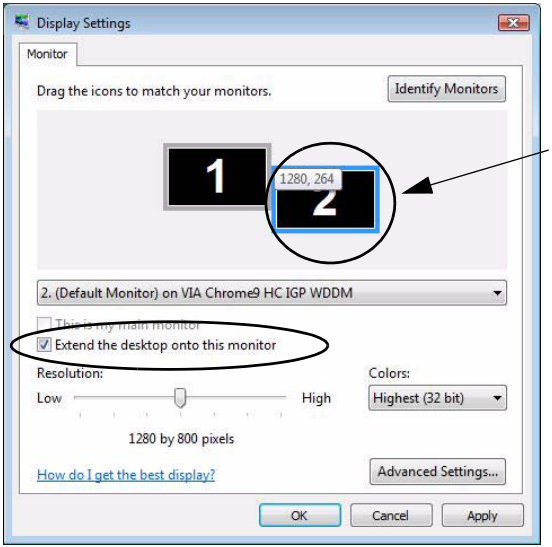


Figure B - 3
New Display Detected

Using Display Settings to Enable Extended Mode

1. Attach your external display to the external monitor port, and turn it on.
2. Open the **Display Settings** control panel (see *"Video Features" on page 1 - 18*).
3. Click the monitor icon (e.g. 2), and make sure you have checked "**Extend my Windows desktop onto this monitor**." and click **Apply**.



Click the appropriate monitor icon (e.g. 2) to be able to select the option to extend the desktop on to it.

In this example the Primary Display 1 is on the left, the Secondary Display 2 is on the right.

Figure B - 4
Display Properties (Extended Desktop)

B

Non DDC CRT Monitors (for Win Vista Only)

If you are experiencing screen flicker problems (in ***Windows Vista*** ONLY) when using an older CRT (**Non DDC**) as your external display, you can install an updated driver to fix this problem. Follow the steps below:

Uninstall the Original Driver

1. Detach any connected external CRT.
2. Go to the **Control Panel** in the ***Windows OS*** and double-click the **Programs and Features** icon (**Programs > Uninstall a program**).
3. Click to select the **VIA Display Vista Driver *****,** and then click **Uninstall** and follow the on screen prompts.
4. Click **Yes** to restart the computer.

Install the Updated Driver

1. Insert the ***Device Drivers & Utilities + User's Manual CD-ROM***.
2. Click **Browse** (button).
3. Navigate (**Browse...**) to **X:\Drivers\Video_NonDDC** and double-click **setup.exe**.
4. Click **Next > Next**.
5. Click **Finish** to restart the computer.
6. Reattach the external CRT and configure as outlined in ***"Attaching Other Displays" on page B - 3***.

Appendix C: NVIDIA Video Driver Controls

(Model B & C Computers)

The basic settings for configuring the LCD are outlined in *"Video Features" on page 1 - 18*.

NVIDIA Video Driver Installation

Make sure you install the drivers in the order indicated in ***Table 4 - 1, on page 4 - 3***. Insert the *Device Drivers & Utilities + User's Manual CD-ROM* and click ***Install Vista Drivers*** (button).

1. Click **1.Install Video Driver > Yes**.
2. Click **Next**.
3. Click the "***Yes, I want to restart my computer now.***" button, and click **Finish** to restart the computer.

Resolution Error

If you are experiencing screen resolution problems/screen flickering **after resuming from Sleep in *Windows Vista* (for NVIDIA Models B & C only)** see page ***8 - 13***.

Video Card Options

Note that card types, specifications and drivers are subject to continual updates and changes. The figures and information in this chapter are intended as a guideline, however the control panels etc. may be changed depending on the video driver release version.

NVIDIA Control Panel

To access the **GeForce..... control panel from the desktop;** right-click the **desktop**, then click **NVIDIA Control Panel**.

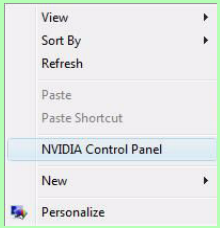


Figure C - 1

NVIDIA GeForce Control Panel

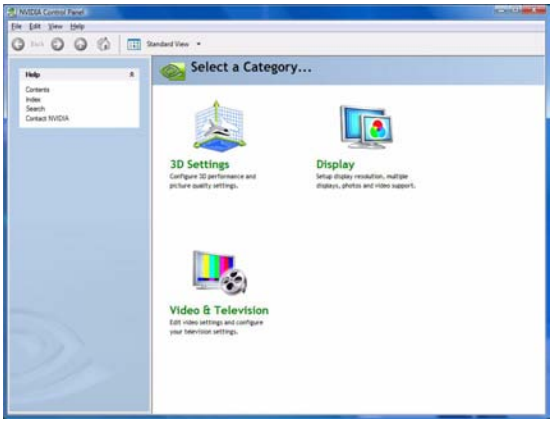
NVIDIA Control Panel

More advanced video configuration options are provided in the **NVIDIA Control Panel** tab.

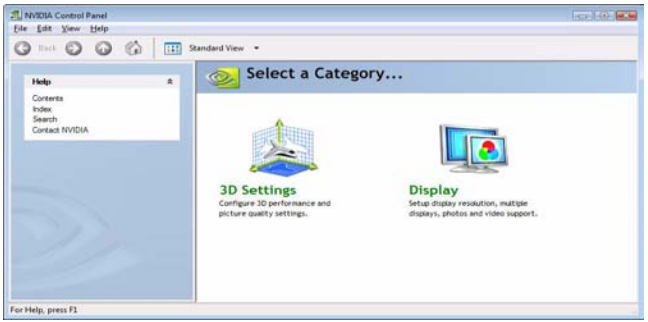
1. Open the **Display Settings** (see page ***1 - 18***) control panel.
2. Click **Advanced Settings** (button).
3. Click **GeForce.....** (tab).
4. Click **Start the NVIDIA Control Panel** to make any video adjustments

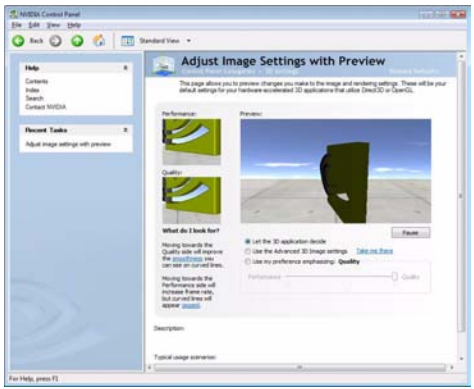
OR

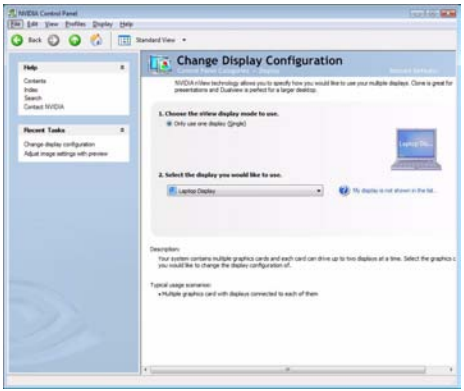
1. Click **Start**, and click **Control Panel** (or point to **Settings** and click **Control Panel**).
2. Double-click **NVIDIA Control Panel** (click "**Classic View"** from the left of the menu if you are in **Control Panel Home**).



The **NVIDIA Control Panel** provides additional video configuration controls and tools which allows quick access to features such as display configuration, 3D Settings and Help menus etc.







Navigating the Control Panel

Navigate through the control panels in much the same way as you would a web page. Click on the headings, menus and highlighted links for information. Use the buttons on the top left to go back, forward etc.

Figure C - 2
NVIDIA Control Panels

C

The **Help** menus provide index and search features, and direct links to the NVIDIA website etc.

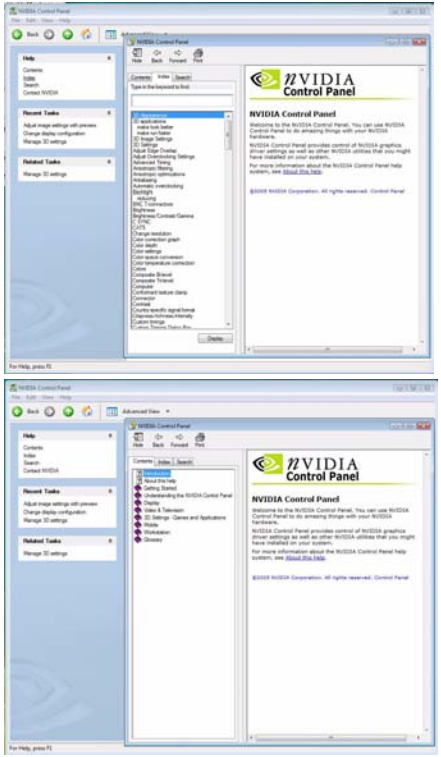
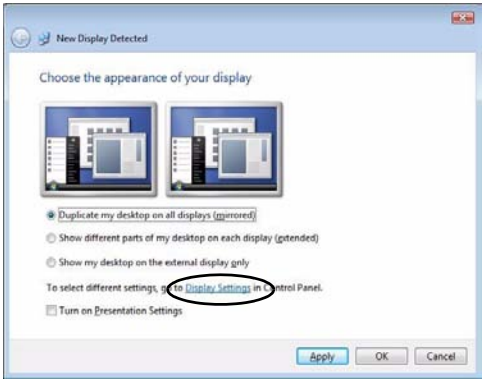


Figure C - 3
Help Menus

Attaching Other Displays

Configuring an External Display in Windows Vista

1. Attach your external display to the external monitor port and turn it on.
2. If a **New Display Detected** window does not appear in ***Windows Vista***, go to the **Windows Mobility Center** control panel (**Mobile PC > Adjust commonly used mobility settings**) and click ***Connect display***.
3. Click on any of the buttons to configure the displays to your preferences, or click **Display Settings** (in the ***New Display Detected*** window) to access the control panel.



Display Devices

Besides the built-in LCD, you can also use an external monitor/flat panel display as your display device. The following are the display options:

- The built-in LCD.
- An external monitor connected to the external monitor port.
- A flat panel display connected to the external monitor port.

Figure C - 4
New Display Detected

C

Function Key Combination

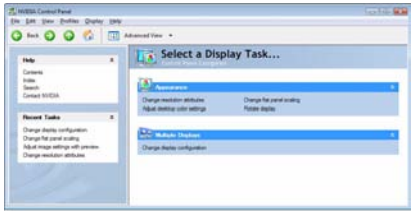
You can use the **Fn + F7** key combination to toggle through some display options:

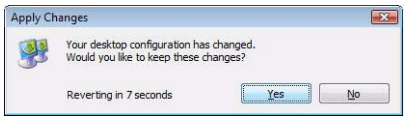
- Notebook Only
- External Display Only
- Notebook + External Display

Make sure you give the displays enough time to refresh.

Configuring an External Display using the NVIDIA Control Panel

1. Attach your external display to the external monitor port and turn it on.
2. Go to **NVIDIA Control Panel** (see ***"NVIDIA Control Panel" on page B - 2***).
3. Click **Display,** and then click **Change display configuration**.





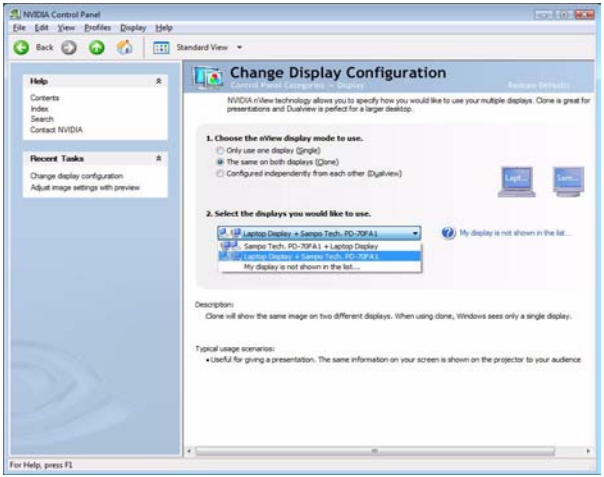


Figure C - 5
Change Display Configuration

4. Choose the nView **display mode** you wish to use (see page ***C - 7***).
5. Select the displays you want to use (if your display is not shown click "***My Display is not shown in the list...***", and choose which display is to be the primary display.
6. Click **Apply > Yes** to save the changes.

C

Display Modes

Single Display Mode

Only one of your displays is used.

Clone Mode

Clone Mode simply shows an exact copy of the Primary display desktop on the other display(s). This mode will drive multiple displays with the same content.

Dualview Mode

Dualview Mode treats both connected displays as separate devices, and they act as a virtual desktop resulting in a large workspace. When Dualview is enabled, you can drag any icons or windows across to the other display desktop. It is therefore possible to have one program visible in one of the displays, and a different program visible in the other display.

Using New Display Detected to Enable Extended Mode

1. Attach your external display to the external monitor port and turn it on.
2. If a **New Display Detected** window does not appear in ***Windows Vista***, go to the **Windows Mobility Center** control panel (**Mobile PC > Adjust commonly used mobility settings**) and click ***Connect display***.
3. Click to select ***Show different parts of my desktop on each display (extended)***.
4. Click **Right** or **Left** under **Extend your desktop**.
5. Click **Apply > OK**.

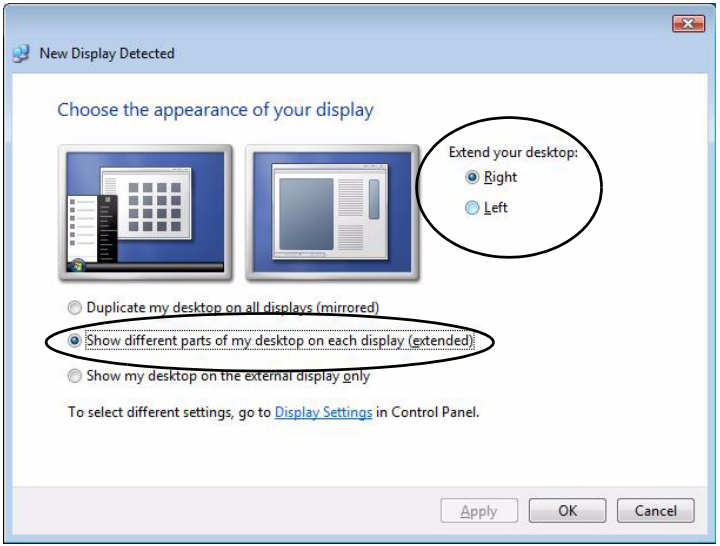
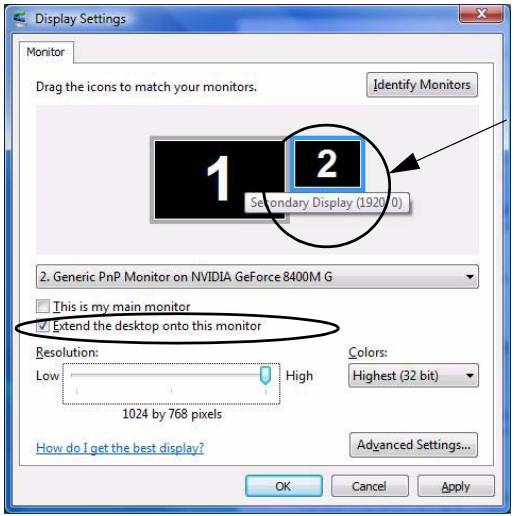


Figure C - 6
New Display Detected (Extended)

Using Display Settings to Enable Extended Mode

1. Attach your external display to the external monitor port and turn it on.
2. Click **Start**, and click **Control Panel** (or point to **Settings** and click **Control Panel**).
3. Click **Adjust screen resolution** under the **Appearance and Personalization** menu (or double-click **Personalization > Display Settings**).
4. Click the monitor icon (e.g. 2), and make sure you have checked "**Extend the desktop onto this monitor**." and click **Apply**.



Click the appropriate monitor icon (e.g. 2) to be able to select the option to extend the desktop on to it.

In this example the Primary monitor 1 is on the left, the secondary display 2 is on the right.

Display Settings Extended Desktop

Use the control panel to drag the monitors to match the physical arrangement you wish to use.

You can drag any icons or windows across to either display desktop, which makes it possible to have one program visible in one of the displays, and a different program visible in the other display.

Figure C - 7
Display Settings (Extend the Desktop)

C

Appendix D: Specifications

Latest Specification Information

The specifications listed in this Appendix are correct at the time of going to press. Certain items (particularly processor types/ speeds and CD/DVD device types) may be changed, delayed or updated due to the manufacturer's release schedule. Check with your service center for details.

Feature	Specification	
Processor	Intel® Core™2 Duo Processor (478-pin) Micro-FC-PGA Package **T7200/ T7400/ T7600**	65nm (65 Nanometer) Process Technology 4MB On-die L2 Cache & 667MHz FSB 2.0/ 2.16/ 2.33 GHz
	Intel® Core™2 Duo Processor (478-pin) Micro-FC-PGA Package **T5500/ T5600**	65nm (65 Nanometer) Process Technology 2MB On-die L2 Cache & 667MHz FSB 1.66/ 1.83 GHz
	Intel® Core™ Duo Processor (478-pin) Micro-FC-PGA Package **T2300/ T2400/ T2500/ T2600/ T2700**	65nm (65 Nanometer) Process Technology 2MB On-die L2 Cache & 667MHz FSB 1.66/ 1.83/ 2.0/ 2.16/ 2.33 GHz

Feature	Specification	
Processor	Intel® Core™ Solo Processor (478-pin) Micro-FC-PGA Package **T1300/ T1400**	65nm (65 Nanometer) Process Technology 2MB On-die L2 Cache & 667MHz FSB 1.66/ 1.83 GHz
	Intel® Celeron® M Processor (478-pin) Micro-FCPGA Package **410/ 420/ 430/ 440/ 450**	65nm (65 Nanometer) Process Technology 1MB On-die L2 Cache & 533MHz FSB 1.46/ 1.60/ 1.73/ 1.86/ 2.0 GHz
Core Logic	VIA VN896 + VT8237A Chipset	
Memory	Two 200 Pin SO-DIMM Sockets Supporting **DDRII (DDR2**) 533/667 MHz 64-bit Wide DDRII (DDR2) Data Per Channel Memory Expandable up to 2GB (256/ 512/ 1024 MB **DDRII** Modules)	
LCD	**Models A & B**	**Model C**
	15.4" WXGA (1280 * 800) TFT LCD OR 15.4'" WSXGA+ (1680 * 1050) TFT LCD (for **Model B** Computers Only)	17.0" WXGA (1440 * 900) TFT LCD OR 17.1" WSXGA+ (1680 * 1050) TFT LCD OR 17.1" WUXGA (1920 * 1200) TFT LCD

Feature	Specification	
Video Adapter	**Model A**	**Models B & C**
	VIA VN896 Integrated Video System (Internal On Chip) Integrated 128bit 2D/3D Graphic Engine and Clock up to 250MHz Supports CRT Resolutions up to 2048 * 1536 at 85Hz Supports Microsoft DirectX 9.0	**NVIDIA GeForce Go 8400M G (NB8M-SE) Discrete Video System (External On Board)** TurboCache™ Total Graphics Memory up to **895MB** (with System Memory) Supports Dual Display and Ergonomic Refresh Rates up to 2045 * 1536 at 85Hz Supports Microsoft DirectX 10.0 Applications and Shader Model 4.0 **128MB** Using On Board **DDRIII** (DDR3) Memory
Security	Security (Kensington® Type) Lock Slot	BIOS Password
BIOS	One 4Mb Flash ROM	Phoenix™ BIOS
Storage	One Changeable 12.7mm(h) Optical Device (CD/DVD) Type Drive (see ***"Optional" on page D - 5*** for drive options) Easy Changeable 2.5" 9.5 mm (h) **SATA** (Serial) HDD	
Audio	Integrated AZALIA Compliant Interface (HDA) 3D Stereo Enhanced Sound System Sound-Blaster PRO™ Compatible 2 * Built-In Speakers Built-In Microphone	

Specifications

Feature	Specification	
Keyboard & Pointing Device	Winkey Keyboard	Built-In TouchPad with Scrolling Function
Interface	Three USB 2.0 Ports One RJ-11 Modem Jack One RJ-45 LAN Jack One DC-in Jack	One External Monitor Port One Headphone-Out Jack One Microphone-In Jack One Recording Line-In Jack One S/PDIF Out Jack
Card Reader	Embedded 7-in-1 Card Reader (MS/ MS Pro/ SD/ Mini SD/ MMC/ RS MMC/ MS Duo) **Note:** MS Duo/ Mini SD/ RS MMC Cards require a PC adapter	
ExpressCard Slot	One ExpressCard/34(54) Slot	
Communication	AZALIA 56K Plug & Play Fax/Modem V.90/92 Compliant 10M/100Mb Base-T Ethernet LAN 802.11 b/g USB Wireless LAN Module (**Option**) Bluetooth 2.0 + EDR (Enhanced Data Rate) Module (**Factory Option**) 300K or 1.3M Pixel USB PC Camera Module (**Factory Option**)	
Power Management	Supports ACPI 2.0 and PCI Bus Power Management 1.1 Compliant	Battery Low Suspend Supports Wake on LAN

D

<table>
<tr><th>Feature</th><th colspan="2">Specification</th></tr>
<tr><td rowspan="2">Power</td><td>Models A & B</td><td>Model C</td></tr>
<tr><td>Full Range AC/DC Adapter AC input 100 - 240V, 50 - 60Hz, DC Output 19V, 3.42A (65 Watts) OR 18.5V, 3.5A (65 Watts)</td><td>Full Range AC/DC Adapter AC input 100 - 240V, 50 - 60Hz, DC Output 19V, 4.74A (90 Watts)</td></tr>
<tr><td>Battery</td><td colspan="2">6 Cell Smart Lithium-Ion Battery Pack, 4000mAH/4400mAH</td></tr>
<tr><td>Environmental Spec</td><td colspan="2">Temperature
Operating: 5°C ~ 35°C
Non-Operating: -20°C ~ 60°C

Relative Humidity
Operating: 20% ~ 80%
Non-Operating: 10% ~ 90%</td></tr>
<tr><td rowspan="2">Dimensions & Weight</td><td>Models A & B</td><td>Model C</td></tr>
<tr><td>360mm (w) * 267mm (d) * 25.4-34mm (h)
2.6 kg With 6 Cell Battery</td><td>397mm (w) * 280.5mm (d) * 39mm (h)
2.98 kg +/- 3% With 6 Cell Battery and Without Optional Modules</td></tr>
<tr><td>Optional</td><td><u>Optical Drive Module Options:</u>
DVD/CD-RW Combo Drive Module
DVD-Dual Drive Module (Super Multi)

Fingerprint Reader Module
(Factory Option for Models B & C Only)</td><td>802.11 b/g USB Wireless LAN Module

300K or 1.3M Pixel USB PC Camera Module (Factory Option)

Bluetooth 2.0 + EDR (Enhanced Data Rate) Module (Factory Option)</td></tr>
</table>

Appendix E: Windows XP Information

This Appendix contains information (including control panel information, driver installation etc.) for users of the ***Windows XP OS***.

Model C Computers

Note that **Model C** computers do not support the audio record or camera zoom hot keys functions.

You may configure the Application Hot Key (for one application) as outlined in ***"Application Quick Buttons" on page E - 6***.

DVD Regional Codes

Changing DVD Regional Codes

Go to the **Control Panel** and double-click **System > Hardware** (tab), click **Device Manager**, then click the **+** next to **DVD/CD-ROM drives**. Double-click on the DVD-ROM device to bring up the **Properties** dialogue box, and select the **DVD Region** (tab) to bring up the control panel to allow you to adjust the regional code.

DVD region detection is device dependent, not OS-dependent. You can select your module's region code **5** times. The fifth selection is permanent. This cannot be altered even if you change your operating system or you use the module in another computer.

Region	Geographical Location
1	USA, Canada
2	Western Europe, Japan, South Africa, Middle East & Egypt
3	South-East Asia, Taiwan, South Korea, The Philippines, Indonesia, Hong Kong
4	South & Central America, Mexico, Australia, New Zealand
5	N Korea, Russia, Eastern Europe, India & Most of Africa
6	China

Table E - 1 **- DVD Region Codes**

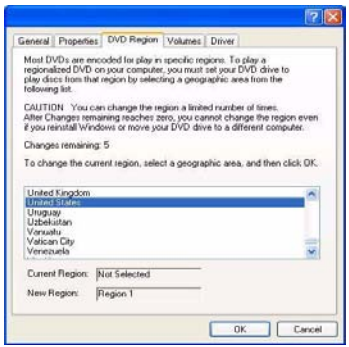


Figure E - 1 **- DVD Regions**

Windows XP Start Menu & Control Panel

Most of the control panels, utilities and programs within ***Windows XP*** (and most other ***Windows*** versions) are accessed from the **Start** menu. When you install programs and utilities they will be installed on your hard disk drive, and a shortcut will usually be placed in the **Start** menu and/or the desktop. You can customize the look of the **Start** menu by right-clicking the **Start** menu and selecting **Properties** from the menu.

Figure E - 2 **- Start Menu & Control Panel**

In many instances throughout this manual you will see an instruction to open the **Control Panel**. The **Control Panel** is accessed from the **Start** menu, and it allows you to configure the settings for most of the key features in ***Windows*** (e.g. power, video, network, audio etc.). ***Windows XP*** provides basic controls for many of the features, however many new controls are added (or existing ones are enhanced) when you install the drivers. To see all controls it may be necessary to toggle off Category View.

TouchPad and Buttons/Mouse

The TouchPad is an alternative to the mouse; however, you can also add a mouse to your computer through one of the USB ports. The TouchPad buttons function in much the same way as a two-button mouse.

Once you have installed the TouchPad driver (see ***"TouchPad" on page E - 39***) you can configure the functions by double-clicking the TouchPad driver icon on the **taskbar**. You may then configure the TouchPad tapping, buttons, scrolling, pointer motion and sensitivity options to your preferences. You will find further information at www.synaptics.com.

Mouse Driver

If you are using an external mouse your operating system may be able to auto-configure your mouse during its installation or only enable its basic functions. Be sure to check the device's user documentation for details.

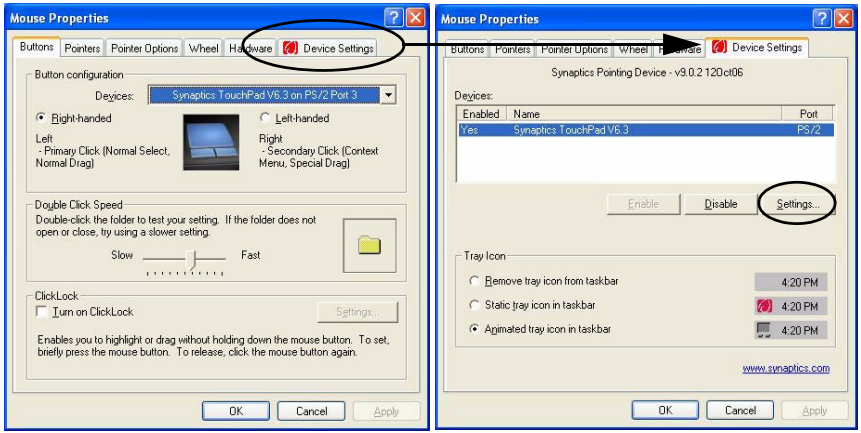


Figure E - 3 **- Mouse Properties**

Function Keys/Hot Keys

The **function keys** (F1 - F12 etc.) will act as **hot keys** when pressed while the **Fn** key is held down. *Table 2 - 2, on page 2 - 10* gives details of function key combinations, hot key buttons and visual indicators (for **Model A & B** computers).

Model A & B Computers

In addition to the basic function key combinations visual indicators are available when the hot key driver is installed (see *"Hot Key Utility (Model C Computers)" on page E - 39*). After installing the driver an icon will appear in the taskbar.

The hot key buttons give quick access to the default internet browser and e-mail program. The PC Camera hot key buttons can be used to run the **BisonCap** application, to take still pictures and to zoom the camera in/out (see *"PC Camera Hot Key Buttons" on page E - 52*) if a PC Camera module is installed (this does not apply to **Model C - see page** *E - 1*). If you do not have a PC Camera module installed see *"Application Quick Buttons" on page E - 6* for details.

Model C Computers

There are no visual indicators available for **Model C** computers, however you can configure an application (**Application 1**) to open when the hot key button is pressed (see *"Application Quick Buttons" on page E - 6*).

Application Note

The key functions will only be displayed if the program is running (i.e. the icon is displayed in the taskbar). If you have closed the program you can run it again from the **Start** menu (**Start > Programs > Startup > HotKey Driver**) in ***Windows***.

Application.exe

You will need to locate the actual **application executable (.exe) file**, not just the **shortcut**. To find the application right-click its **shortcut** on the desktop and click **Properties**. Click the **shortcut** (tab) and see where the executable file is located by clicking the **Find Target** (button).

Application Quick Buttons

Note that the application quick button utility is designed to allow use of the hot key buttons in absence of the optional PC Camera (**the quick button utility will only appear if no PC Camera is installed**). You will need to install the **Quick Button Utility** (see *"Quick Button Utility" on page E - 39*) to enable the functions.

The quick buttons give instant access to user-defined applications, with one quick button press. To configure a program to open when the buttons are pressed, follow the instructions below. The quick buttons will function as long as the program is running (the icon will appear in the taskbar). If the program is not running you will need to restart the computer.

1. **Press a button or right-click the icon** in the **taskbar**.
2. Select **Setup** from the menu, scroll to **AP1/2/3** (or just **Application 1** for **Model C** computers) and select **Custom**.
3. An **Open** dialog box will appear on the screen.
4. **Browse** to the directory where the desired application**.exe** (see sidebar) program exists.
5. **Double-Click** on the program file or choose **Open**.

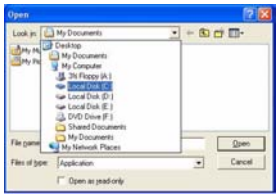


Figure E - 4
Quick Button Configuration Screens

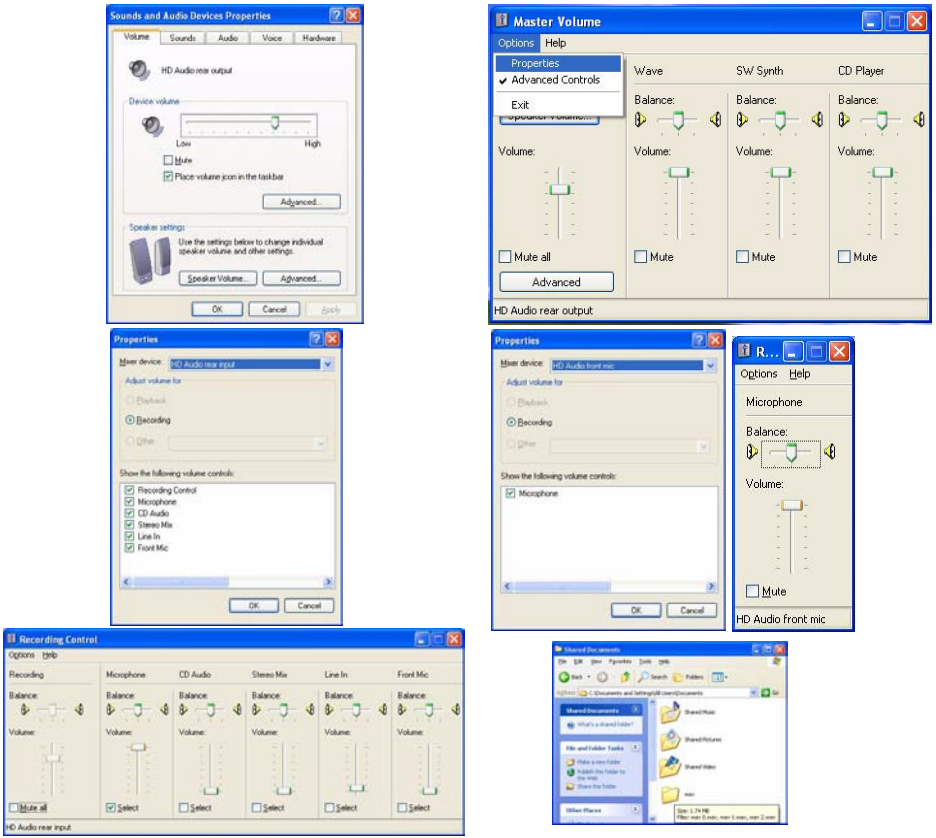
Recording Audio

(Model A & B Computers)

The ⦿ audio record hot key button allows you to record audio from either the built-in microphone, or from a microphone connected to the microphone-in jack. To record on the computer, setup the audio recording options in ***Windows*** as follows (see ***Figure E - 5 on page E - 8***).

1. Go to the **Start** menu and point to **Settings** (or just click **Control Panel**) and click **Control Panel**, then double-click the **Sounds & Audio Devices** icon (**Sounds, Speech, and Audio Devices** in Category View).
2. Click **Advanced** in the **Volume > Device volume** tab.
3. Click **Options** and scroll down and click **Properties**.
4. Select **HD Audio rear input** (for a microphone plugged in to the microphone-in jack)/**HD Audio Front Mic** (for the built-in microphone) from the **Mixer device** menu and click **OK** (make sure there is a tick in the **Microphone** tick box).
5. Click **Recording** (button) and click **OK**.
6. Boost the volume in the **Microphone** section as high as it will go (make sure there is a tick in the **Select** tick box if you have selected **HD Audio rear input)**.
7. Close the open windows.
8. You can also boost the microphone from the **Mixer** in the **VIA Audio Deck** menu (see page ***E - 9***).
9. Press the audio record button ⦿ to begin the recording process (the record icon Record will flash in the top left of the screen).
10. Press the ⦿ audio record button again to stop the recording process (the record icon will disappear from the top left of the screen).
11. The recorded audio file (in .wav format) will appear in the **Shared Documents > Wav** folder in **My Computer**.
12. Double-click the file to playback the recorded audio.

Figure E - 5
Audio Setup for Recording (Windows XP)



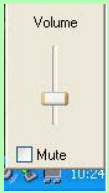
Audio Features

You can configure the audio options on your computer from the **Sounds and Audio Devices** *Windows* control panel, or from the **VIA Audio Deck** icon in the taskbar, or on the desktop (this will bring up the VIA Audio Deck menu). The volume may also be adjusted by means of the **Fn** + **F5/F6** key combination.

Figure E - 6
VIA Audio Deck Configuration Menus

Sound Volume Adjustment

How high the sound volume can be set depends on the setting of the volume control within ***Windows*** (and the volume control function keys on the computer). Click the Volume icon on the taskbar to check the setting.



Video Features

This computer features two different video (either **VIA** for **Model A** or **NVIDIA** for **Model B & C Computers**) options (see ***"Video Adapter" on page D - 3*** for details). You will be provided with an appropriate driver on the ***Device Drivers & Utilities + User's Manual CD-ROM (WinXP)***.

You can switch display devices, and configure display options, from the **Display Properties** control panel in ***Windows*** as long as the **video driver** is installed. For further information see either ***"VIA Video Driver Controls" on page E - 12*** (from pages ***E - 12*** to ***E - 16***) or ***"NVIDIA Video Driver Controls" on page E - 17*** (from pages ***E - 17*** to ***E - 21***).

1. Click **Start**, point to **Settings** and click **Control Panel** (or click **Control Panel**).
2. Double-click **Display** (icon); **Display** (icon) is in the **Appearances and Themes** category.
3. Click **Settings** (tab) in the **Display Properties** dialog box.
4. Move the slider to the preferred setting in **Screen resolution** 1.
5. Click the arrow, and scroll to the preferred setting in **Color quality** 2.
6. Open the **Display Properties** control panel, and click **Advanced** (button) 3 to bring up the **Advanced properties** tabs.
7. The Advanced properties tabs include specific **VIA** OR **NVIDIA** controls, which allow you to make any video adjustments you require.

Figure E - 7 **- Display Properties**

Advanced Video Controls

This section is about making adjustments for the LCD, and switching display devices.

Video Driver Controls

The video interface lets you change the screen resolution and color output to whatever is most comfortable/efficient for you. This is a matter of hardware, video memory and the driver for your operating system.

Video Memory

The **Model A** computer system does not feature dedicated video memory, but automatically and dynamically allocates as much (up to **256MB** maximum) system memory (RAM) as needed to the video system. You can define the amount of system memory to be allocated from the BIOS (see ***"Frame Buffer Size: (Advanced Menu)" on page 5 - 8***). The system returns whatever memory is no longer needed to the operating system.

NVIDIA TurboCache

NVIDIA® TurboCache™ technology (**Model B & C** computers only) allows the GPU so share the capacity and bandwidth of dedicated video memory and dynamically available system memory. The TurboCache Manager dynamically allocates memory for maximum system performance.

Function Key Combination

You can use the **Fn + F7** key combination to toggle through the display options:

- Notebook Only
- External Display Only
- Notebook + External Display

Make sure you give the displays enough time to refresh.

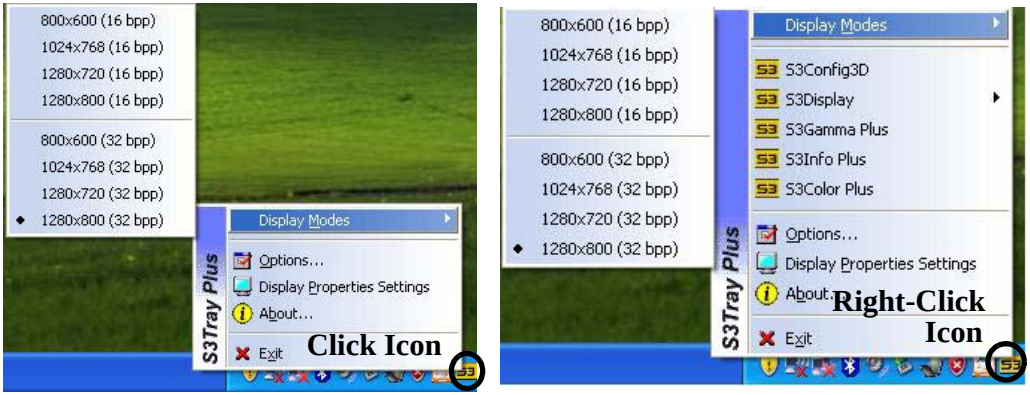
VIA Video Driver Controls

(Model A Computers)

VIA S3Tray Plus Utility

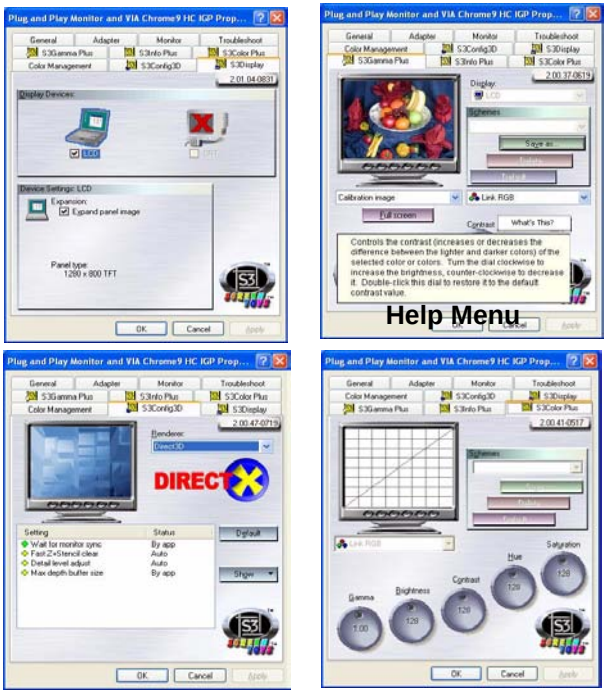
The **S3Tray Plus utility** will appear in the taskbar when the video driver is installed. Click/Right-click the icon to bring up the menu below. From this menu you will also be able to make display adjustments, access the Display Properties control panel, check video memory information etc.

Figure E - 8
S3Tray Plus Taskbar Utility



VIA S3 Display Control Panels

Right-click the **S3Tray Plus utility** in the taskbar to bring up the menu for the individual control panels, or access the menus from the **Advanced** tab in the Display Properties control panel.



Help Menus

Right-click on almost any item in the tabs to bring up the "What's This?" button.

Click the "What's This?" button to bring up a help menu (if the item has a help menu associated with it).

Figure E - 9
S3 Control Panels

S3Tray Plus Utility

You can also use the **S3Tray Plus utility** in the taskbar to configure an external display.

Attach the external display (CRT) to the external monitor port.

Right-click the S3 icon in the taskbar and select **S3Display**.

Select the CRT (it should have a tick alongside it) and click **Yes** to confirm the settings.

Display Devices (VIA)

Besides the built-in LCD, you can also use an external monitor (CRT)/flat panel display as your display device. Connect it to the external monitor port on the right of the computer. See the instructions below:

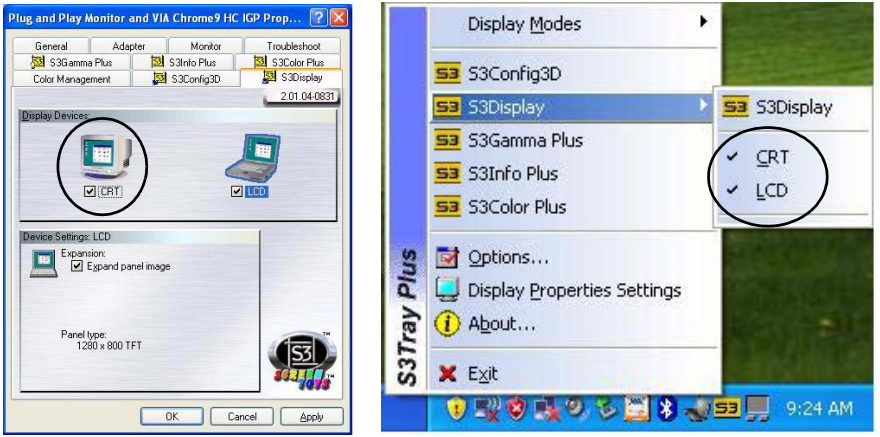


Figure E - 10
S 3Display

1. Attach the external display to the external monitor port and turn it on.
2. Click **Advanced** in the Display Properties control panel (see ***"Video Features" on page E - 10***) to display the additional tabs.
3. Select **S 3Display** (tab).
4. Click to put a tick in the tickbox under the **CRT** icon.
5. Click **Apply** > **OK** and allow the monitor time to refresh the display.
6. Click **Yes** to confirm the settings.

Display Modes (VIA)

Single Display

Only one of your attached displays is used.

Multiple Monitors

This display mode simply shows an exact copy of the **Primary** display desktop on the **Secondary** display(s).

Extended Desktop

An **Extended** desktop allows the desktop to span the displays to act as a large work area, thus creating a lot more screen area for display. Each display device can be configured independently for specific resolutions and refresh rates. Use the **Display Properties** control panel to drag the monitors to match the physical arrangement you wish to use.

Playing DVD Videos

If you want to play a DVD video in a multiple monitor mode, then choose **EITHER** the notebook LCD **OR** external display as the display device. It is not possible to play a DVD video simultaneously on both displays.

Display Settings Extended Desktop

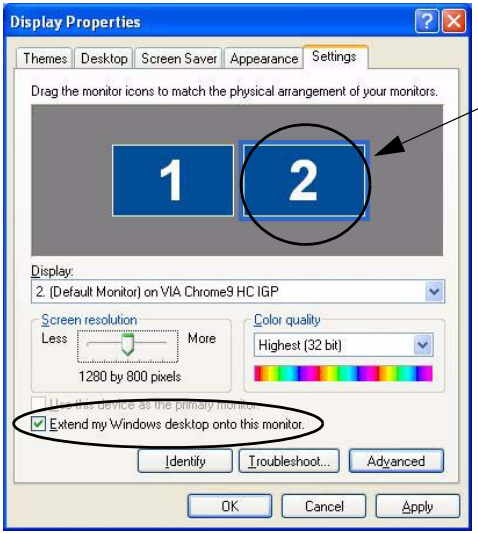
Use the control panel to drag the monitors to match the physical arrangement you wish to use.

You can drag any icons or windows across to either display desktop, which makes it possible to have one program visible in one of the displays, and a different program visible in the other display.

Figure E - 11
Display Properties (Extended Desktop)

To Enable Extended Desktop (Display Properties)

1. Attach the external display to the external monitor port and turn it on.
2. Go to the Display Properties control panel (see *"Video Features" on page E - 10*) and click **Settings** (tab).
3. Click the monitor icon (e.g. 2), and click to put a tick in the "**Extend my Windows desktop onto this monitor**." box, and then click **Apply**.
4. As long as the appropriate monitor icon is selected you can adjust the screen resolution, color quality etc.
5. Click **Apply > Yes** to confirm any setting changes



Click the appropriate monitor icon (e.g. 2) to be able to select the option to extend the desktop on to it.

In this example the Primary monitor 1 is on the left, the secondary display 2 is on the right.

NVIDIA Video Driver Controls

(Model B & C Computers)

More advanced video configuration options are provided in the **GeForce.....** control panel tab.

1. Open the **Display Properties** (see *"Video Features" on page E - 10*) control panel.
2. Click **Advanced** (button).
3. Click **GeForce.....** (tab).
4. Click **Start the NVIDIA Control Panel** (click to select **Standard** or **Advanced** options and click **OK**).

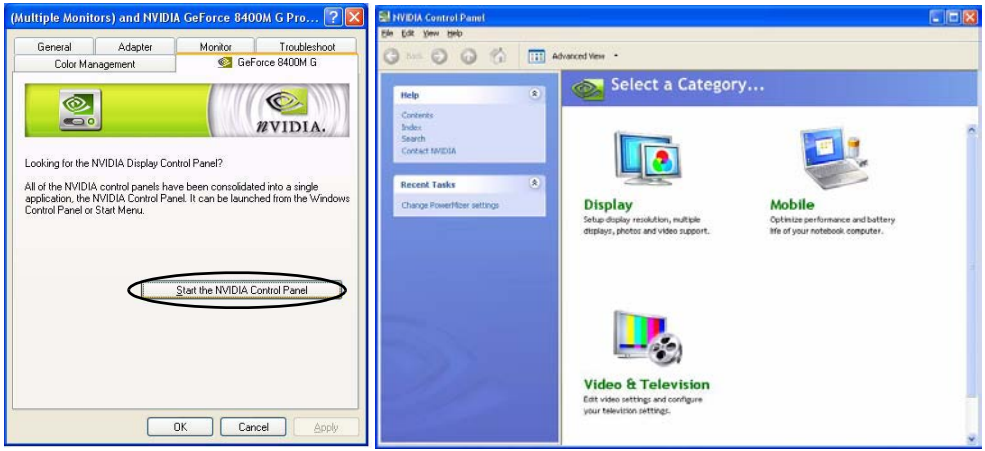


Figure E - 12
NVIDIA Control Panels

GeForce Control Panel

To access the **GeForce.....** control panel from the desktop:

Right-click the **desktop**, then point to or click **NVIDIA Control Panel**.

Navigating the Control Panel

Navigate through the control panels in much the same way as you would a web page. Click on the headings, menus and highlighted links for information. Use the buttons on the top left to go back, forward etc.

The **Help** menus provide index and search features, and direct links to the NVIDIA website etc.

Control Panels (NVIDIA)

The **NVIDIA Control Panel** provides additional video configuration controls and tools which allows quick access to features such as display configuration, appearance, mobile support and Help menus etc.

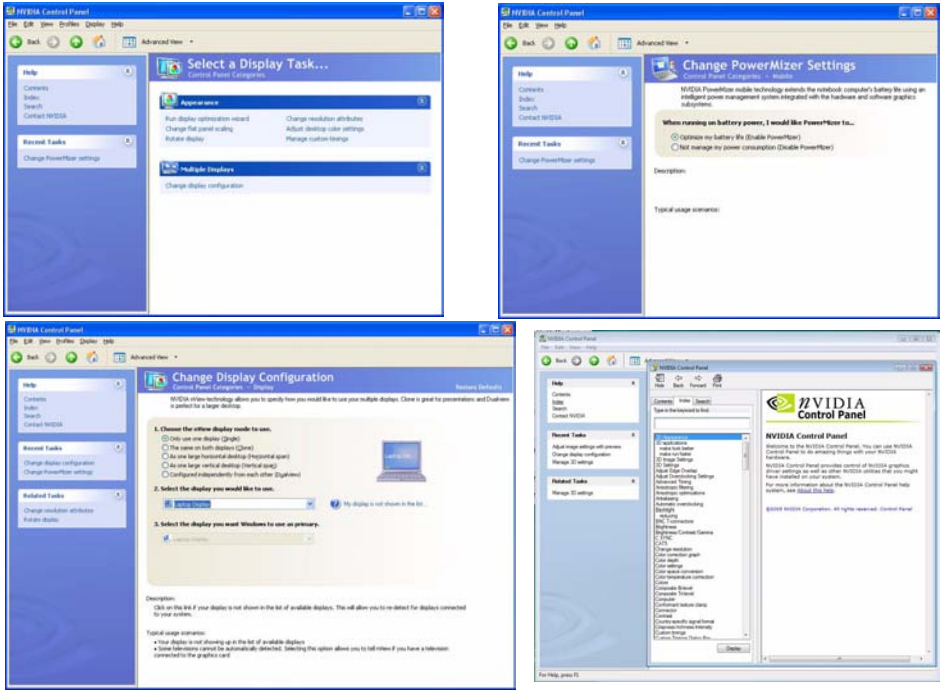


Figure E - 13
NVIDIA Control Panels

Display Devices (NVIDIA)

Besides the built-in LCD, you can also use an external monitor/flat panel display as your display device. The following are the display options:

1. The built-in LCD.
2. An external monitor connected to the external monitor port.
3. A flat panel display connected to the external monitor port.

Configure the display modes (see over) for any attached display devices from the **Display** control panel (**Change Display Configuration** - see page *E - 21*).

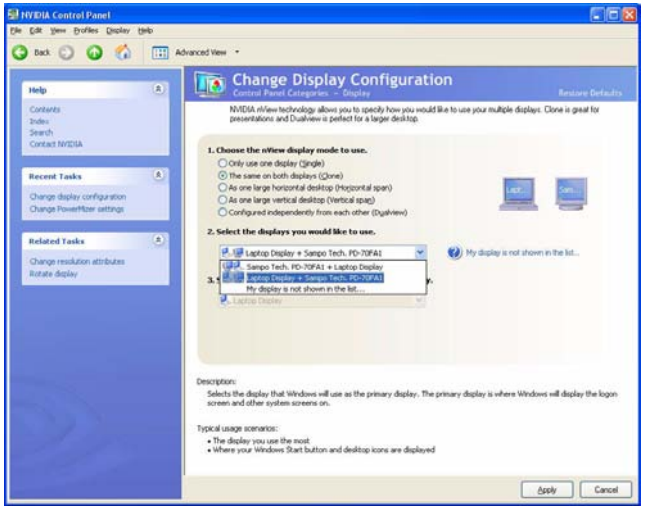


Figure E - 14
Change Display Configuration

Function Key Combination

You can use the **Fn + F7** key combination to toggle through the display options:

- Notebook Only
- External Display Only
- Notebook + External Display

Make sure you give the displays enough time to refresh.

Display Modes (NVIDIA)

Single Display Mode

Only one of your displays is used.

Clone Mode

Clone Mode simply shows an exact copy of the Primary display desktop on the other display(s). This mode will drive multiple displays with the same content and each display device can be configured independently.

Dualview Mode

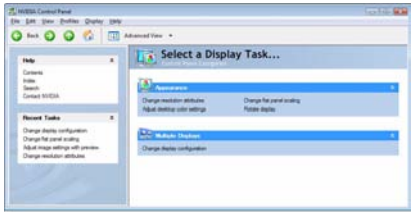
Dualview Mode treats both connected displays as **separate devices** (unlike Horizontal/Vertical Span mode) acting as a virtual desktop, resulting in a large workspace.

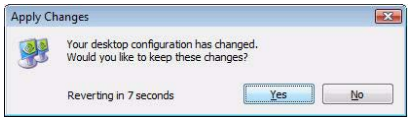
Horizontal/Vertical Span Mode

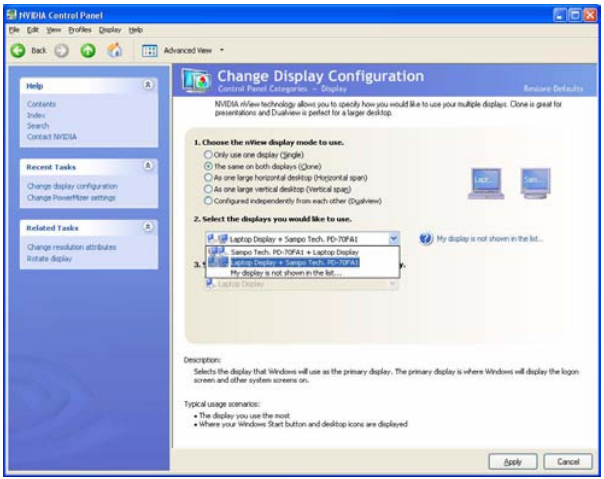
Horizontal/Vertical Span Mode treats both connected displays as a virtual desktop. Unlike Dualview, in Horizontal/Vertical Span Mode the displays are not treated as separate devices and the taskbar will be stretched across the displays. 3D applications are accelerated more efficiently in Horizontal/Vertical Span Mode.

Attaching Other Displays (NVIDIA)

1. Attach your external display to the external monitor port and turn it on.
2. Go to the **NVIDIA Control Panel**.
3. Click **Display,** and then click **Change Display configuration**.







4. Choose the nView **display mode** you wish to use.
5. Select the displays you want to use (if your display is not shown click "***My Display is not shown in the list...***", and choose which display is to be the primary display.
6. Click **Apply > Yes** to save the changes.

Function Key Combination

You can use the **Fn + F7** key combination to toggle through some display options:

- Notebook Only
- External Display Only
- Notebook + External Display

Make sure you give the displays enough time to refresh.

Figure E - 15
Change Display Configuration

OS Note

Power management functions will vary slightly depending on your operating system. For more information it is best to refer to the user's manual of your operating system.

(**Note**: All pictures used on the following pages are from the ***Windows XP*** OS.)

Power Management Features

To conserve power, especially when using the battery, your computer uses the ACPI power management system. Power management conserves power by controlling individual components of the computer (the monitor and hard disk drive) or the whole system.

The **Power Options** control panel icon in ***Windows*** (see page ***E - 3***) allows you to configure power management features for your computer. You may conserve power through individual components such as the monitor or hard disk, or you may use either **Stand by** or **Hibernate** mode to conserve power throughout the system.

Advanced Configuration and Power Interface

The **ACPI** interface provides the computer with enhanced power saving techniques and gives the operating system (OS) direct control over the power and thermal states of devices and processors. For example, it enables the OS to set devices into low-power states based on user settings and information from applications. ACPI is fully supported in *Windows XP*.

The Power Sources

The computer can be powered by either an AC/DC adapter or a battery pack.

AC/DC Adapter

Use only the AC/DC adapter that comes with your computer. The wrong type of AC/DC adapter will damage the computer and its components.

1. Attach the AC/DC adapter to the DC-in jack at the rear of the computer.
2. Plug the AC power cord into an outlet, and then connect the AC power cord to the AC/DC adapter.
3. Raise the lid/LCD to a comfortable viewing angle.
4. Press the power button to turn “On”.

Battery

The battery allows you to use your computer while you are on the road or when an electrical outlet is unavailable. Battery life varies depending on the applications and the configuration you're using. **To increase battery life, let the battery discharge completely before recharging** (see ***“How do I completely discharge the battery?” on page E - 34***).

We recommend that you do not remove the battery. For more information on the battery, please refer to ***“Battery Information” on page E - 30***.

Turning on the Computer

Now you are ready to begin using your computer. To turn it on simply press the power button on the front panel.

When the computer is on, you can use the power button as a Stand by/Hibernate/Shutdown hot-key button when it is pressed for less than **4 seconds** (pressing and holding the power button for longer than this will shut the computer down). Use **Power Options** in the ***Windows*** control panel to configure this feature.

Shutdown

Note that you should always shut your computer down by choosing the **Turn Off Computer** command from the **Start** menu in ***Windows***. This will help prevent hard disk or system problems.

Forced Off

If the system "hangs", and the **Ctrl + Alt + Del** key combination doesn't work, press the power button for **4 seconds**, or longer, to force the system to turn itself off.

Power Button as Stand by or Hibernate Button

If you are using a fully ACPI-compliant OS, (such as Windows XP) you can use the OS's "Power Options" control panel to set the power button to send the system into Stand by or Hibernate mode (see your OS's documentation, or ***"Configuring the Power Button" on page E - 29*** for details).

Power Schemes

You can set your computer to conserve power through individual components by means of **Power Schemes**. You can also adjust the settings for each scheme to set the monitor to turn off after a specified time, and the computer's hard disk motor to turn off if the hard disk drive has not been accessed for a specified period of time (if the system reads or writes data, the hard disk motor will be turned back on). The schemes may also be set to set a specified time for the system to enter **Stand by** or **Hibernate** modes (see *"System Power Options" on page E - 27*).

Resuming Operation

Press a key on the keyboard, or move the mouse/TouchPad to resume from Monitor or Hard Disk Stand by.

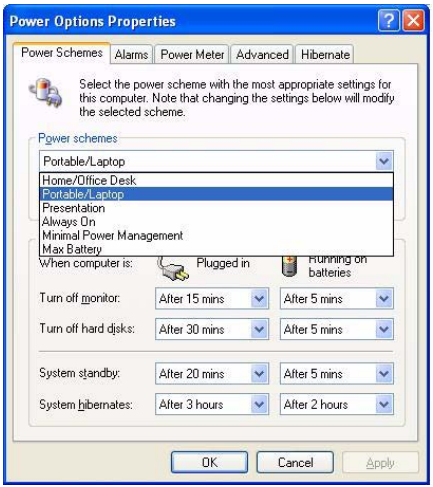


Figure E - 16
Power Schemes

Each ***Windows*** **Power Scheme** will also adjust the processor performance of your machine in order to save power. This is worth bearing in mind if you are experiencing any reduced performance (especially under DC/battery power).

Choose the **Home/Office Desk** scheme for maximum performance when the computer is powered from an AC power source. Choose the **Max Battery** scheme (bear in mind that this scheme may slow down the overall performance of the computer in order to save power) for maximum power saving when the computer is battery (DC power) powered. ***Windows*** will use **Portable/Laptop** as the default scheme.

System Power Options

You can use the system power options to stop the computer's operation and restart where you left off. This system features **Stand by** and **Hibernate** sleep mode levels (**Hibernate** mode will need to be enabled by clicking the option in the **Hibernate** tab in the **Power Options** control panel - see *"Hibernate" on page E - 28*).

Hibernate Mode vs. Shutdown

Hibernate mode and Shutdown are the same in that the system is off and you need to press the power button to turn it on. Their main difference is:

When you come back from hibernation, you can return to where you last left off (what was on your desktop) without reopening the application(s) and file(s) you last used.

You can use either method depending on your needs.

Stand by Mode vs. Hibernate Mode

If you want to stay away from your work for just a while, you can put the system on Stand by instead of in hibernation. It takes a longer time to wake up the system from **Hibernate** mode than from **Stand by** mode.

Stand by/Hibernate or Shutdown Error

The computer may stop responding when you put it into (or resume from) Stand By or Hibernate, or when you shut down.

This error is caused by power management within ***Windows XP***, when applied to a **PC Camera** attached to the internal USB hub.

Microsoft has posted a Hotfix for this error on its website (search for Hotfix KB909667).

Download and install the Hotfix to correct this error.

System Resume

The system can resume from Stand by mode by:

- Pressing the power button
- Pressing the **Sleep/ Resume** key combination
- An incoming call received on the modem (if enabled)
- Network card (Wake On LAN) activity (if enabled)

Stand by

Stand by saves the least amount of power, but takes the shortest time to return to full operation. During Stand by the hard disk is turned off, and the CPU is made to idle at its slowest speed. All open applications are retained in memory. When you are not using your computer for a certain length of time, which you specify in the operating system, it will enter Stand by mode to save power.

Hibernate

Hibernate uses no power and saves all of your information on a part of the HDD before it turns the system off. Although it saves the most power it takes the longest time to return to full operation. You can set your computer to automatically enter Hibernate mode when the battery power is almost depleted. You will need to enable Hibernate mode from the **Hibernate** tab in the Power Options control panel. **The system will resume from Hibernate mode by pressing the power button**.

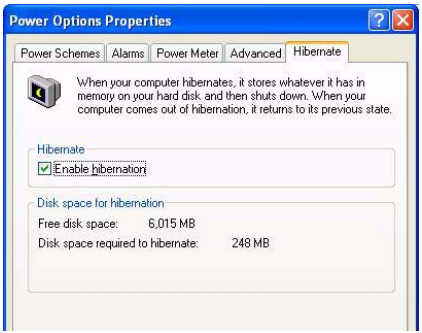


Figure E - 17
Enable Hibernation

Configuring the Power Button

The power button may be set to send the computer in to either **Stand by** or **Hibernate** mode. In **Stand by** mode, the LED will blink green. In **Hibernate** mode the LED will be off (battery) or orange (AC/DC adapter). If you are in a power saving mode set to save power through individual components (e.g. hard disk, monitor), the LED will remain green.

Power Button

Lid

Sleep/Resume (Sleep) Button

Sleep Button

You may also configure the **Sleep/Resume** key combination (**Fn + F4**) from the menu illustrated. In ***Windows*** this is referred to as the **Sleep** button.

Figure E - 18
Power Options (Advanced - Power Buttons)

Low Battery Warning

When the battery is critically low, immediately connect the AC/DC adapter to the computer or save your work, otherwise, the unsaved data will be lost when the power is depleted.

Battery Information

Please follow these simple guidelines to get the best use out of your battery.

Battery Charging on Model B & C Computers

Note that **Model B & C** computers under a heavy load (e.g. using applications which require a lot of video processing), while running on battery power, will take time (3 to 20 minutes before charging begins) to recharge the battery when plugged in to the AC/DC adapter. This is due to safety considerations which dictate that the battery should only start to recharge when the computer has reached a safe temperature to do so.

Make sure you save your work when the battery LED is blinking orange, and plug in the AC/DC adapter. The battery LED will change from blinking orange to orange when the battery starts to charge (3 to 20 minutes before charging begins).

New Battery

Always completely discharge, then fully charge, a new battery (see ***"Battery FAQ" on page E - 34*** for instructions on how to do this).

Battery Life

Your computer's battery life is dependent upon many factors, including the programs you are running, and peripheral devices attached. **Power Options** (you may set low battery **Alarms** and actions, and check the **Power Meter** from the **Power Options** control panel), and settings in the OS will help prolong the battery life if configured appropriately.

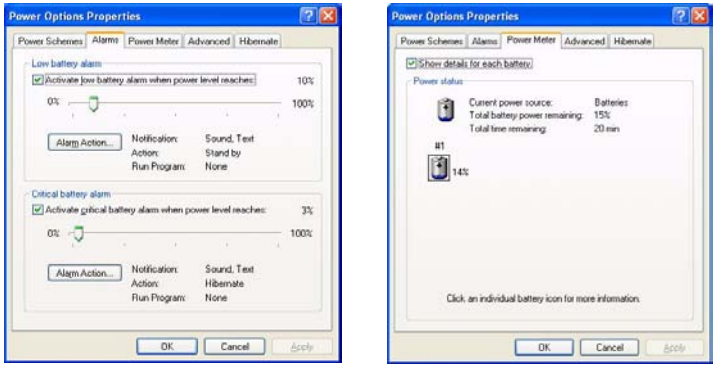


Figure E - 19 **- Power Options (Alarm & Power Meter)**

Battery life may be shortened through improper maintenance. **To optimize the life and improve its performance, fully discharge and recharge the battery at least once every 30 days**.

We recommend that you do not remove the battery yourself. If you need to remove the battery for any reason, see ***"Removing the Battery" on page 6 - 3***.

Recharging the Battery with the AC/DC Adapter

The battery pack automatically recharges when the AC/DC adapter is attached and plugged into an electrical outlet. If the computer is powered on, and in use, it will take several hours to fully recharge the battery. When the computer is turned off but plugged into an electrical outlet, battery charge time is less. (Refer to *"LED Indicators" on page 1 - 9* for information on the battery charge status, and to *"Battery Information" on page E - 30* for more information on how to maintain and properly recharge the battery pack.)

Conserving Battery Power

To conserve battery power:

Lower the brightness level of the LCD display. The system will decrease LCD brightness slightly to save power when it is not powered by the AC/DC adapter.

Close modem or communication applications when they are not being used.

Remove any unused PC Cards from the computer (PC Cards quickly use up battery power even if the system enters sleep mode).

Disconnect any unnecessary external devices.

Proper handling of the Battery Pack

- DO NOT disassemble the battery pack under any circumstances
- DO NOT expose the battery to fire or high temperatures, it may explode
- DO NOT connect the metal terminals (+, -) to each other

Damaged Battery Warning

Should you notice any physical defects (e.g. the battery is bent out of shape after being dropped), or any unusual smells emanating from the notebook battery, shut your computer down immediately and contact your service center. If the battery has been dropped we do not recommend using it any further, as even if the computer continues to work with a damaged battery in place, it may cause circuit damage, which may possibly result in fire. It is recommended that you replace your computer battery every two years.

Caution

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer. Discard used battery according to the manufacturer's instructions.

Battery FAQ

How do I completely discharge the battery?

Use the computer with battery power until it shuts down due to a low battery. Don't turn off the computer by yourself even when you see a message that indicates the battery is critically low, just let the computer use up all of the battery power and shut down on its own. Disable the **Power Options** functions in the **Control Panel**, especially any **Alarms** (**unclick** the tickboxes - see page *E - 31*) and **Schemes** (change all the settings to **Never** - see page *E - 25*). As the battery nears the end of its life save and close any critical files.

How do I fully charge the battery?

When charging the battery, don't stop until the LED charging indicator light changes from orange to green.

How do I maintain the battery?

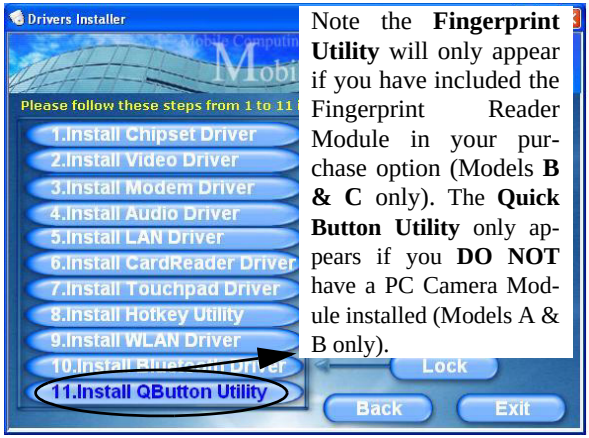
Completely discharge and charge the battery at least once every 30 days or after about 20 partial discharges.

Driver Installation

This section covers driver and utility installation instructions for *Windows XP Home & Professional (WinXP)*. Insert the ***Device Drivers & Utilities + User's Manual CD-ROM***, click ***Install WinXP Drivers*** (button) and then click the appropriate driver name from the ***Drivers Installer*** menu and then follow the instructions to install the driver. Alternatively click **Start**, navigate (**Browse..**) to the executable file and then follow the manual setup instructions.

Figure E - 20 **- Drivers Installer Screen 1**

1. Check the driver installation order from ***Table E-E - 2*** (**all the drivers must be installed in this order**) which is the same as that listed in the ***Drivers Installer*** menu below.
2. Click to select the driver you wish to install, after installing each driver it will become grayed out (if you need to reinstall any driver, click the **Unlock** button).
3. Follow the instructions for each individual driver installation procedure as listed on the following pages.



Note the **Fingerprint Utility** will only appear if you have included the Fingerprint Reader Module in your purchase option (Models **B & C** only). The **Quick Button Utility** only appears if you **DO NOT** have a PC Camera Module installed (Models A & B only).

Figure E - 21 **- Drivers Installer Screen 2**

E

Installation Methods (Win XP)

If you wish to install the drivers manually, click the **Exit** button to quit the ***Drivers Installer*** application, and then browse to the executable file in the location listed in the table below and follow the installation procedure for each driver. **Note that X is the drive letter assigned to the CD/DVD-ROM drive**.

WinXP (SP2) Driver	Page #	Driver Location	Note
Chipset	*Page E - 38*	X:\Drivers\Chipset\SETUP.EXE	
Video	*Page E - 38*	X:\Drivers\Video\setup.exe	
Modem	*Page E - 38*	X:\Drivers\Modem\ssetup.exe	
Audio	*Page E - 39*	X:\Drivers\Audio\SETUP.EXE	
LAN	*Page E - 39*	X:\Drivers\LAN\WinSetup.exe	
CardReader	*Page E - 39*	X:\Drivers\Cardreader\Setup.exe	
TouchPad	*Page E - 39*	X:\Drivers\Touchpad\setup.exe	
Hotkey Utility	*Page E - 39*	X:\Drivers\Hotkey\Setup.EXE	
Quick Button Utility	*Page E - 39*	X:\Drivers\QButton\3AP.exe	Only appears if no PC Camera module is installed
Wireless LAN	*Page E - 40*	X:\Drivers\WLAN\Setup.exe	
Bluetooth	*Page E - 42*	X:\Drivers\Bluetooth\Setup.exe	
PC Camera	*Page E - 47*	X:\Drivers\Camera\Driver\Setup.exe	
Fingerprint Reader	*Page E - 53*	X:\Drivers\Fingerprint\Application\x86\autorun.exe	Only appears if a fingerprint reader module is installed

Table E - 2 **- Driver Installation**

Updating/Reinstalling Individual Drivers

If you wish to update/reinstall individual drivers it may be necessary to uninstall the original driver.To do this go to the **Control Panel** in the ***Windows OS*** and double-click the **Add/Remove Programs** item. **If you see the individual driver listed** (if not see below), uninstall it, following the on screen prompts (it may be necessary to restart the computer). Go to the appropriate section of the manual to complete the update/reinstall procedure for the driver in question.

If the driver is not listed in the **Add/Remove Programs** item:

1. Click **Start** (menu), point to **Settings** and click **Control Panel** (or click **Start > Control Panel**).
2. Double-click **System** (icon); System (icon) is in **Performance and Maintenance** (category).
3. Click **Hardware** (tab) > **Device Manager** (button).
4. Double-click the **device** you wish to update/reinstall the driver for (you may need to click "+").
5. Look for the **Update Driver** button (check the **Driver** tab) and follow the on screen prompts.

Windows XP Service Pack 2

Make sure you install **Windows XP Service Pack 2** (or a Windows XP version which includes Service Pack 2) **before installing any drivers**. Service Pack 2 includes support for **USB 2.0**.

If you have **upgraded** the system by installing **Service Pack 2** (i.e. your Windows XP version does not include Service Pack 2) then follow these instructions:

1. Click **Start** (menu), point to **Settings** and click **Control Panel** (or click **Control Panel**).
2. Double-click **System** (icon); **System** (icon) is in **Performance and Maintenance** (category).
3. Click the **Hardware** (tab) > **Device Manager** (button).
4. Click "+" next to **Other Devices** (if its sub-items are not shown).
5. Right-click **Universal Serial Bus (USB) Controller** and select **Uninstall > OK** (if you don't see the item then there is no need to take any further action).
6. Restart the computer and it will find the USB 2.0 controller.

New Hardware Found

If you see the message "***New Hardware Found***" (**Found New Hardware Wizard**) during the installation procedure (other than when outlined in the driver install procedure), click **Cancel** to close the window, and follow the installation procedure as directed.

Service Pack Information

Make sure you install **Windows XP Service Pack 2** (or a Windows XP version which includes Service Pack 2) **before installing any drivers**.

Chipset

1. Click **1.Install Chipset Driver > Yes**.
2. Click **Next**.
3. Click the button to accept the license, and then click **Next**.
4. Click **Next > Next > Next**.
5. Click **Finish** to restart the computer.

Video

VIA (Model A)

1. Click **2.Install Video Driver > Yes**.
2. Click **Finish**.

NVIDIA (Models B & C)

1. Click **2.Install Video Driver > Yes**.
2. Click **Next** (click **Continue Anyway** if asked if you want to continue at any time).
3. Click to select "***Yes, I want to restart my computer now***".
4. Click **Finish** to restart the computer.

Modem

1. Click **3.Install Modem Driver > Yes**.
2. Click **OK**.
3. The modem is ready for dial-up configuration.
4. Check if the modem country selection is appropriate for you (**Control Panel** > **Phone and Modem Options**).

Audio

1. Click **4.Install Audio Driver > Yes**.
2. Click **Next > Next > Next**.
3. Click **Finish** to restart the computer.

LAN

1. Click **5.Install LAN Driver > Yes**.
2. Click **OK**.
3. The network settings can now be configured.

CardReader

1. Click **6.Install CardReader Driver > Yes**.
2. Click **Next > Next**.
3. Click **Finish** to restart the computer.

TouchPad

1. Click **7.Install TouchPad Driver > Yes**.
2. Click **Next > Next > Next** (click **Continue Anyway** if asked if you want to continue at any time).
3. Click **Finish** to restart the computer.

Hot Key Utility (Model A & B Computers)

1. Click **8.Install Hotkey Utility > Yes**.
2. Click **Next > Install**.
3. Click **Finish > Finish** to restart the computer.

Hot Key Utility (Model C Computers)

1. Click **8.Install Hotkey Utility > Yes**.
2. Choose the language you prefer, and click **OK**.
3. Click **Next**.
4. Click **Finish** to restart the computer.

Quick Button Utility

If you **do not have a PC Camera** module installed, then the Quick Button Utility will appear in the Drivers Installer menu (**only install the quick button driver if the PC Camera is not installed**). See ***Table 1 - 2, on page 1 - 7*** and ***"Application Quick Buttons" on page E - 6*** for details.

1. Click **11.Install Quick button Utility > Yes**.
2. Click **Next**.
3. Click **Finish** to restart your computer.

Wireless Device Operation Aboard Aircraft

The use of any portable electronic transmission devices aboard aircraft is usually prohibited. Make sure the module(s) are OFF if you are using the computer aboard aircraft.

Use the **Fn + F11** key combination to toggle power to the WLAN module, and check the indicator to see if the module is powered on or not (see ***Table , on page 1 - 10***/ ***Table 1 - 5, on page 1 - 12***).

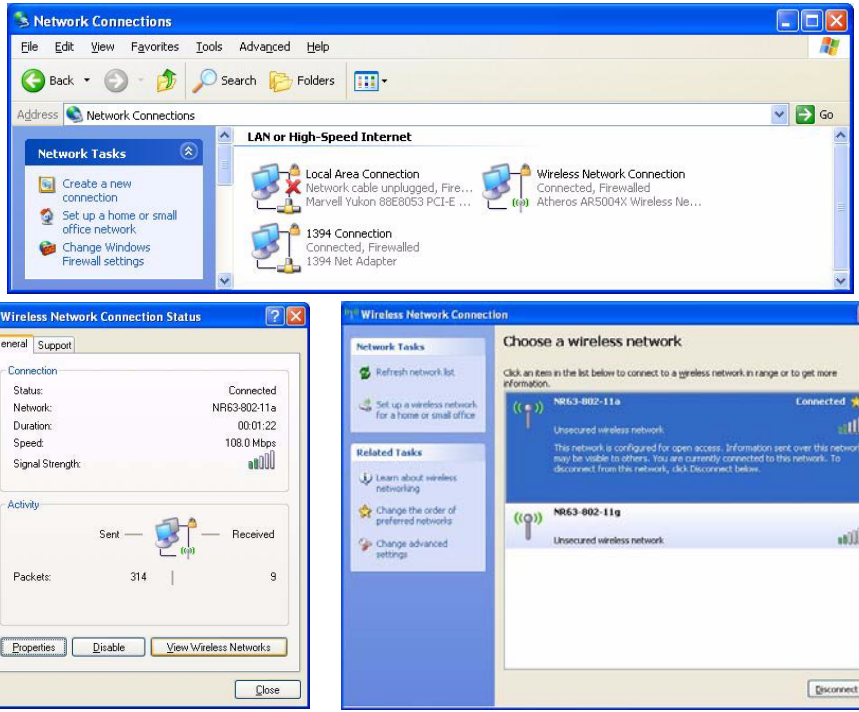
802.11 b/g USB WLAN Module

If you have included an **802.11b/g USB WLAN** module in your purchase option, you will have the appropriate software provided for your module.

Before installing the **802.11b/g USB WLAN** driver, make sure that the Wireless LAN module is on. Use the **Fn + F11 key combination** (see ***"Function Keys" on page 1 - 12***) **to toggle power to the Wireless LAN module**. Make sure you install the drivers in the order indicated in ***Table E - 2, on page E - 36***.

802.11 b/g WLAN Driver Installation

1. Make sure the module is powered on, and then insert the ***Device Drivers & Utilities + User's Manual CD-ROM*** into the CD/DVD drive.
2. Click **Install WinXP Drivers > 9.Install WLAN Driver > Yes**.
3. Click **Next**.
4. Click **Finish** to complete the installation.
5. The operating system is the default setting for Wireless LAN control in ***Windows XP*** (see overleaf).
6. Access any available wireless networks from **Network Connections > Wireless Network Connection** menu in ***Windows*** (or click the icon  in the taskbar), and click **View Wireless Connections**.



Network Connection

Use the ***Windows*** **Network Connections** control panel to access available wireless networks (**Start > Settings > Network Connections** or **Start > Connect To > Show all Connections**).

Figure E - 22
Wireless Network Control Panels

E

Wireless Device Operation Aboard Aircraft

The use of any portable electronic transmission devices aboard aircraft is usually prohibited. Make sure the module(s) are OFF if you are using the computer aboard aircraft.

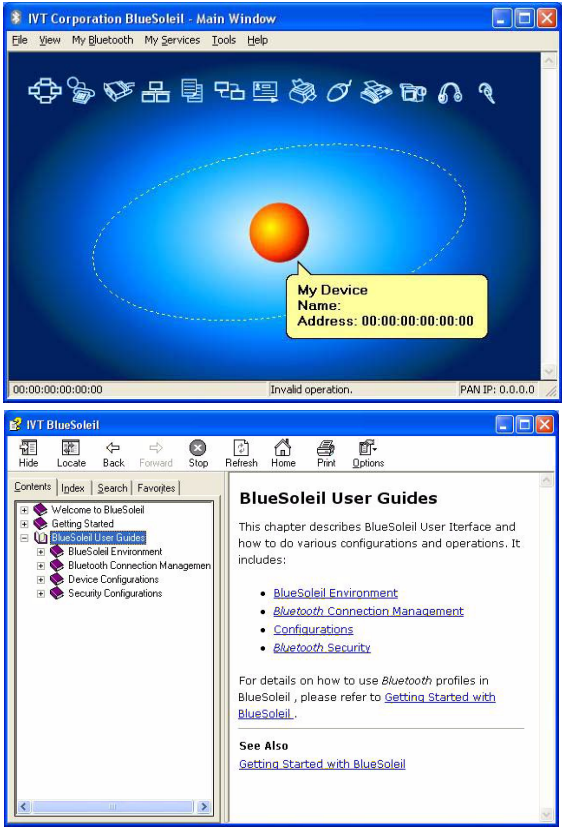
Use the **Fn + F12** key combination to toggle power to the Bluetooth module, and check the indicator to see if the module is powered on or not (see *Table , on page 1 - 9*/ *Table 1 - 5, on page 1 - 12*).

Bluetooth Module

Before installing the **Bluetooth** driver, make sure that the optional Bluetooth module is on. **Use the Fn + F12 key combination** (see *"Function Keys" on page 1 - 12*) **to toggle power to the Bluetooth module**. Make sure you install the drivers in the order indicated in *Table 4 - 1, on page 4 - 3*.

Bluetooth Driver Installation

1. Make sure the module is powered on, and then insert the ***Device Drivers & Utilities + User's Manual CD-ROM*** into the CD/DVD drive.
2. Click **Install WinXP Drivers > 10.Install Bluetooth Driver > Yes**.
3. Click **Install Software Drivers v2.3.0.1**.
4. Choose the language you prefer, and click **OK**.
5. Click **Next**.
6. Click the button to accept the license agreement, and then click **Next**.
7. Click **Next > Next > Install**.
8. Click **Finish**.
9. You can configure the settings at any time by going to the **IVT Corporation BlueSoleil - Main Window** control panel (**Start** > **Programs/All Programs** > **IVT BlueSoleil**), or by clicking the taskbar/desktop icon .



User Guide

View the BlueSoleil User Guides (Contents and Index) from the **Help** menu (or press the **F1** key) in the **IVT Corporation BlueSoleil - Main Window** control panel. Click **BlueSoleil User Guides** in the **Contents** tab, and click to select the appropriate User Guide from the panel on the right.

Figure E - 23
Bluetooth Control Panel & User Guides

Disconnecting

In order to have the taskbar icon display the correct connection status, you will need to exit the **IVT Corporation BlueSoleil - Main Window** by clicking the **File** menu and selecting **Exit** (see over).

After exiting the program you can then use the **Fn + F12** key combination to turn off the Bluetooth module.

If you use the close button, or turn off the Bluetooth module (by using the **Fn + F12**) the taskbar icon will not display the correct status

Bluetooth Local Area Connection Icon

If you want to display the Local Area Connection icon for the Bluetooth connection in the taskbar, set it up as follows:

1. Access the **Network Connections** control panel in ***Windows*** (**Start > Settings > Network Connections OR Start > Connect To > Show all Connections**) or by clicking the taskbar icon .
2. Right-click the Bluetooth connection icon, and select **Properties**.
3. Click to put a tick in the "***Show icon in the notification area when connected***" box.
4. Close the control panels and the icon for the Bluetooth connection will be displayed in the taskbar when connected (see sidebar and overleaf).

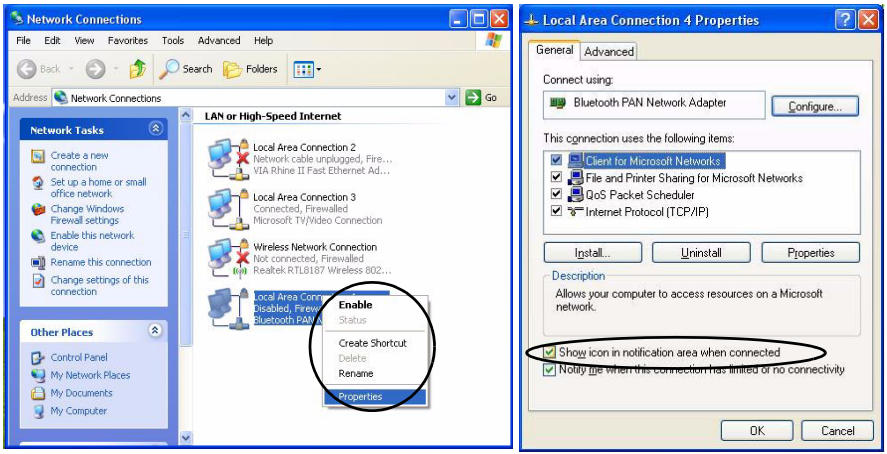


Figure E - 24
Local Area Connection

5. Use the **Fn + F12** key combination to turn on the Bluetooth module.
6. Run the **IVT Corporation BlueSoleil** program from the desktop icon or **Start** menu.
7. The connection status will then be displayed.

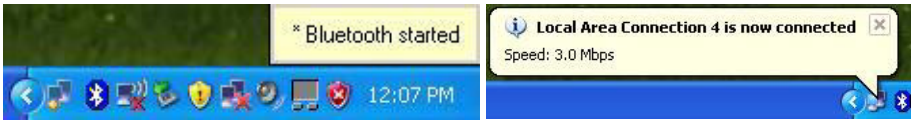


Figure E - 25 **- Bluetooth Connected**

8. To **disconnect** click **File** from the **IVT Corporation BlueSoleil - Main Window**, and select **Exit** (the Local Area Connection will then display "**A network cable is unplugged**").
9. Do not use the **close** button or **Fn + F12** key combination before clicking **File > Exit** or the correct status will not be displayed.
10. You can then use the **Fn + F12** key combination to turn off the Bluetooth module (check the LED icon for the Bluetooth module power status).

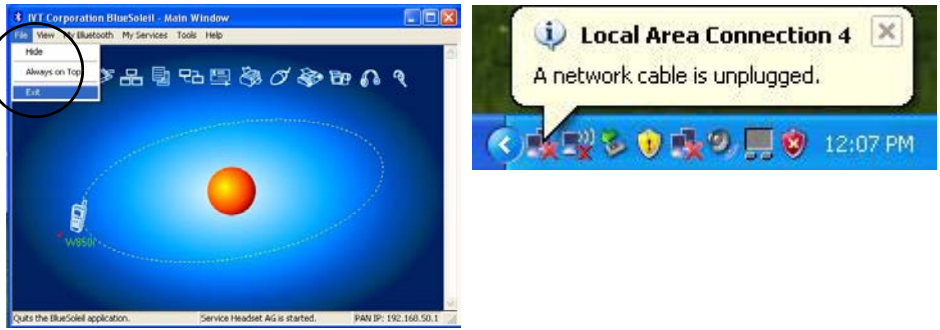


Figure E - 26 **- Bluetooth Disconnected**

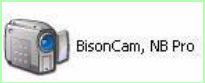
PC Camera Module

Before installing the **PC Camera** driver, make sure that the optional PC Camera is on. **Use the Fn + F10 key combination** (see *"Function Keys" on page 1 - 12*) **to toggle power to the PC Camera module**. Make sure you install the drivers in the order indicated in *Table 4 - 1, on page 4 - 3*.

Taking Still Pictures

Double-click the **My Computer** icon on the desktop, or go the **Start** menu and point to **My Computer**, then click it.

Double-click the **BisonCam, NB Pro** icon.



Click **Take a new picture** in the **Camera Tasks** box.

You can use the application button to take still pictures if you have installed the hot key driver. (See *"PC Camera Hot Key Buttons" on page E - 52*.)

Latest PC Camera Driver Information

Check the **CD**, and any accompanying insert pages for the latest updated information on the PC Camera driver, that may override the information provided here.

Adding/Removing a PC Camera

Note that the Quick Button and PC Camera drivers cannot co-exist.

If you wish to **add** a PC Camera module to your computer at a later date, then uninstall the Quick Button Utility Driver (entitled **Multimedia Keyboard Driver**) **before** installing the PC Camera and driver. Drivers can be uninstalled from the Add or Remove Programs control panel in Windows.

If you wish to **remove** a PC Camera module from your computer at a later date, then uninstall the PC Camera Driver after removing the camera module. You can then insert the ***Device Drivers & Utilities + User's Manual CD-ROM*** and install the **Quick Button Utility** driver from the Drivers Installer menu.

PC Camera Driver Installation

1. Make sure the module is powered on (click **Cancel** if you see a "**New Hardware Found**" message), and then insert the ***Device Drivers & Utilities*** + ***User's Manual CD-ROM*** into the CD/DVD drive.
2. Click **Install WinXP Drivers > 11.Install Camera Driver > Yes**.
3. Click **Install Products**.
4. Choose the language you prefer, and click **OK**.
5. Click **Next > Finish** to restart the computer.
6. Run the **BisonCap** application program from the **BisonCam** shortcut on the desktop or from the **BisonCam** item in the **Start > Programs/All Programs** menu (if the hardware is turned off use the **Fn + F10** key combination to turn it on again).

Model A & B Computers Only

7. You can use the application button to run the **BisonCap** application if you have installed the hot key driver (see ***"Hot Key Utility (Model C Computers)" on page 4 - 6***).
8. A **Snapshot** folder will be placed on the desktop to record still pictures taken with using the application button (see ***"PC Camera Hot Key Buttons" on page E - 52***).

Stand by/Hibernate or Shutdown Error

The computer may stop responding when you put it into (or resume from) Stand By or Hibernate, or when you shut down.

This error is caused by power management within ***Windows XP***, when applied to a **PC Camera** attached to the internal USB hub.

Microsoft has posted a Hotfix for this error on its website (search for Hotfix KB909667).

Download and install the Hotfix to correct this error.

PC Camera Audio Setup

If you wish to capture video & **audio** with your camera, it is necessary to setup the audio recording options in ***Windows*** (see ***Figure E - 27 on page E - 49***).

1. Go to the **Start** menu and point to **Settings** (or just click **Control Panel**) and click **Control Panel**, then double-click the **Sounds & Audio Devices** icon (**Sounds, Speech, and Audio Devices** in Category View).
2. Click **Advanced** in the **Volume > Device volume** tab.
3. Click **Options** and scroll down and click **Properties**.
4. Select **HD Audio rear input** (for a microphone plugged in to the microphone-in jack)/**HD Audio Front Mic** (for the built-in microphone) from the **Mixer device** menu and click **OK** (make sure there is a tick in the **Microphone** tick box).
5. Click **Recording** (button) and click **OK**.
6. Boost the volume in the **Microphone** section as high as it will go (make sure there is a tick in the **Select** tick box if you have selected **HD Audio rear input)**.
7. Close the open windows.
8. You can also boost the microphone from the **Mixer** in the **VIA Audio Deck** menu (see page ***E - 9***).
9. Run the **BisonCap** application program from the **Start > Programs/All Programs > BisonCam** menu (or press the application button).
10. Go to the **Devices** menu heading and select **HD Audio rear input OR HD Audio front mic** (it should have a tick alongside it).
11. Go to the **Capture** menu heading and select **Capture Audio** (it should have a tick alongside it).

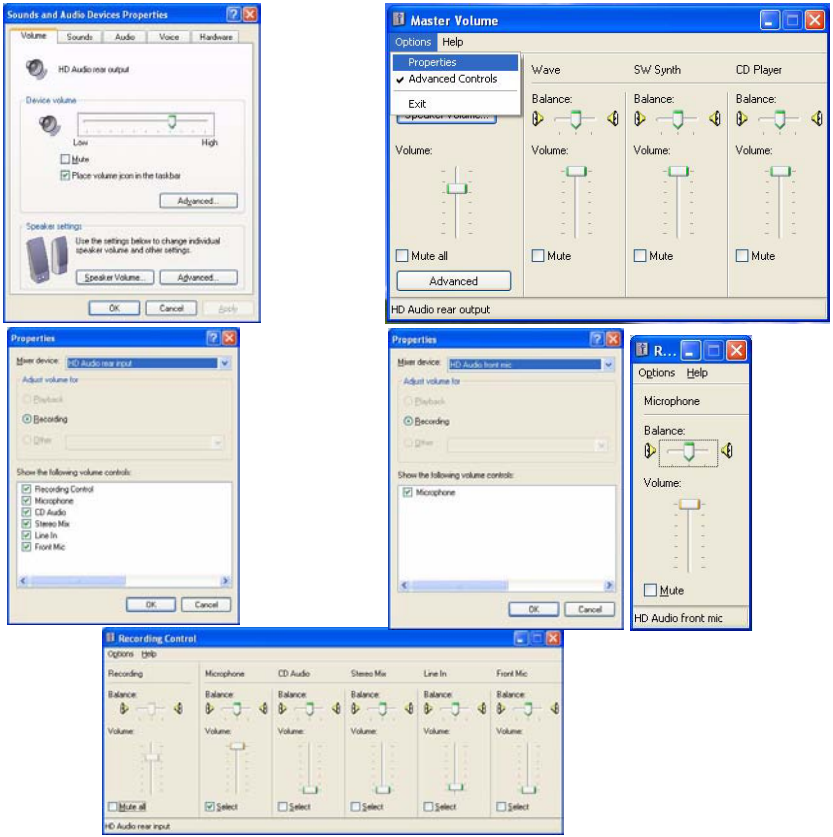


Figure E - 27
Audio Setup (Windows XP)

BisonCap

BisonCap is a video viewer useful for general purpose video viewing and testing, and can capture video files to .avi format.

1. Run the **BisonCap** application from the **Start > Programs/All Programs > Bison-Cam** menu (it is recommended that you **set the capture file** before the capture process - **see Set Capture File below**).
2. Go to the **Capture** menu heading (if you wish to capture audio check ***"PC Camera Audio Setup" on page E - 48***) and select **Start Capture**.
3. On the first run of the program (if you have not set the captured file) you will be asked to choose a file name and size (**see the sidebar - Pre-Allocating File Space**) for the captured file. Click **Start Capture** again.
4. Click **OK** to start capturing the video, and press **Esc** to stop the capture.
5. If you wish to, you may go to the **File** menu and select **Save Captured Video As...**, choose a file name and location, and then click **Open** (you can view the file using the **Windows Media Player**).

Set Capture File

In the **BisonCap** application you will only be asked to set the capture file name on the first run of the program. When you run the program the next time the file will automatically be overwritten with the newly captured file. To avoid overwriting files you can go to the **Set Capture File..** option in the **File** menu, and set the file name and location before capture. Set the name and location then click **Open** (you can choose **Cancel** to ignore the file size if prompted).

Pre-Allocating File Space

You may pre-allocate the file size for the capture file in the **BisonCap** application. You can choose to ignore this by clicking **Cancel**.

Pre-allocating space on the hard disk can improve the capture quality (particularly of large capture files), by reducing the amount of work the hard disk has to do in finding space for the video data as it is being captured.

You may find it helpful to defragment the HDD before capture.

Eliminating Screen Flicker

If you find that the video screen in the **BisonCap** application is flickering, you can try to adjust the setting in the **Video Capture Filter** options.

1. Run the **BisonCap** program.
2. Go to **Options** and scroll down to select "**Video Capture Filter...**".
3. Click either **50Hz** or **60Hz** under **Frequency** in **Property Page** (tab).

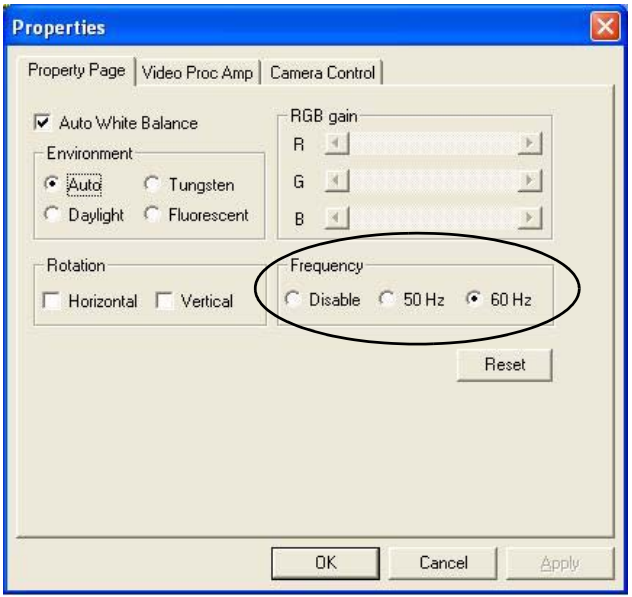


Figure E - 28
Video Capture Filter

Snapshot Folder

The Snapshot folder's default location is on the desktop. Do not move this folder or an error may appear when you try to take a still picture using the application hot key button.

If you accidentally delete or move the folder, you can create a new Snapshot folder on the desktop in order to capture the files.

PC Camera Hot Key Buttons

(Model A & B Computers)

You can use the PC Camera hot key buttons (the quick button utility must not be installed - see *"Quick Button Utility" on page E - 39*) to run the **BisonCap** program, to take still pictures and to zoom the camera in and out (if you have installed the hot key and PC Camera drivers - see *"Hot Key Utility (Model C Computers)" on page E - 39* & *"PC Camera Driver Installation" on page E - 47*).

1. Make sure the PC Camera is on (use the **Fn + F10** key combination to power on the camera).
2. Press the application button once.
3. The **BisonCap** application will run.
4. Use the zoom keys to obtain the picture required.
5. Press the application button for a second time (you will hear a camera motor sound to indicate the picture is being taken).
6. The picture (in JPEG format) will be placed in the **Snapshot** folder on the desktop.

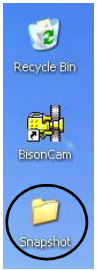


Figure E - 29
Snapshot Folder

Fingerprint Reader

(Optional for Model B & C Computers)

If you have included the fingerprint reader in your purchase option (for **Model B** and **C** computers only) you will need to install the driver as per the instructions below.

Make sure you have administrator's rights to your computer, and have a ***Windows*** password enabled for full security protection.

Before beginning the enrollment process it is recommended that you go through the fingerprint tutorial. To run the tutorial click **Start > Programs/All Programs > Protector Suite QL > Fingerprint Tutorial** after installing the driver.

Fingerprint Reader Driver Installation

1. Insert the ***Device Drivers & Utilities + User's Manual CD-ROM*** into the CD/DVD drive.
2. Click **Install WinXP Drivers > 12.Install Fingerprint Utility > Yes**.
3. Click **Software Installation**.
4. Click **Next > Next > Next**.
5. Click **Finish > Yes** to restart the computer.

Help & Manual

Right-click the taskbar icon to bring up the menu to select **Help**.

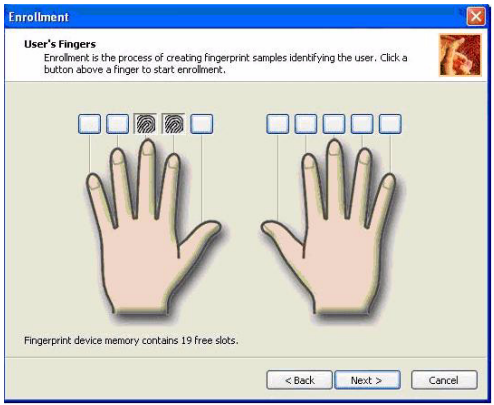
Insert the *Device Drivers & Utilities + User's Manual CD-ROM* and click ***Install WinXP Drivers*** (button). Click **Unlock** (button) and then click **12.Install Fingerprint Utility > Yes**.

Click **Documentation** to open the folder containing the manual in .pdf format.

To install the Adobe Acrobat Reader software to read the file, insert the *Device Drivers & Utilities + User's Manual CD-ROM* and click ***User's Manual*** (button), and click **Install Acrobat Reader** (button).

User Enrollment

1. Click **Start > Programs/All Programs > Protector Suite QL > User Enrollment**, or double click the taskbar icon .
2. On the first run of the program you will be asked to click the button to accept the license, and then click **OK**.
3. Click **Next** and select "***Enrollment to the hard disk***", and click **Finish**.
4. Click **Next** and you will then be prompted to enter your ***Windows*** password (**note**: If you have not set a password **Protector Suite QL** cannot secure access to your computer).
5. Click **Next > Next** (tick the "***Run interactive tutorial***" tickbox to run through the Fingerprint Tutorial).
6. Click **Next** for each window of the tutorial (you can click the button to "***skip tutorial***" at any time).
7. Click the button above any of the fingers to begin the enrollment process for that finger.
8. Swipe the finger three times to enroll that finger.
9. Repeat the process for all the fingers you wish to enroll (see below), and then click **Next**.



Fingerprint Enrollment

Note that it is strongly recommended that you **enroll more than one finger in case of injury etc.**

Figure E - 30 **- Fingerprint Enrollment**

10. Click **Finish > Close**.
11. Right-click the taskbar icon to bring up the menu that allows you to **Edit Fingerprints**, start **Control Center**, access the **Help** menu etc. You can also run the **Control Center** etc. from the **Protector Suite QL** item in the **Programs/All Programs** menu.
12. See ***"Help & Manual" on page E - 53*** for further details.
13. If you swipe your finger over the reader at any time you can access the **Biomenu** to **lock the computer**, **register websites**, open the **Control Center** and access the **Help** menu.

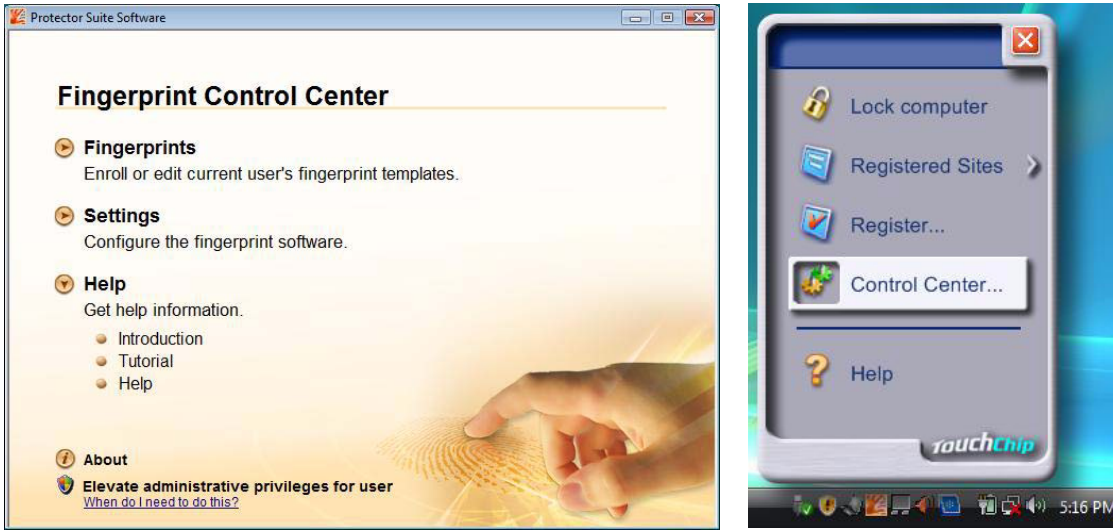


Figure E - 31 **- Control Center & Biomenu**