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The computer is equipped with several interface ports, including an enhanced parallel (printer) port, a serial port, and USB ports. These are provided as a means of connecting peripheral devices to the computer.

Connect peripheral devices to the computer's interface ports as shown below:





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## ***Running BIOS Setup***

### ***Introduction***

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The BIOS (Basic Input and Output System) Setup program is a menu driven utility that enables you to make changes to the system configuration and tailor your system to reflect installed hardware or alter system performance. When the Notebook is turned back on, the system is configured with the values stored in CMOS. With easy-to-use menus, you can configure such items as:

- Hard drives and peripherals

- 
- Bootup Drive Sequence
  - Password protection

The settings made in the BIOS Setup program intimately affect how the Notebook performs.

### *Navigating through BIOS Setup*

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The Setup program has been designed to make it as easy to use as possible. If you accidentally make a setting and don't know which one to switch back to, the Setup program has a hot key that allows you to return to the previous value.

### *Accessing the BIOS Setup Program*

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To access the BIOS Setup program, press the DEL key after the Notebook has run through its POST.

#### *Item Specific Help*

On the right side of the Setup screen is an area labeled Item Specific Help. This area will list navigation key shortcuts and information that is specific for the item that you are currently editing.

### *The Menu Bar*

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The top of the screen has a menu bar with the following selections:

**Main** - Use this menu to make changes to the basic system configuration.

**Advanced** - Use this menu to enable and make changes to the advanced features available on your system, such as enabling the FIR module.

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**Security** - Use this menu to set a password. The password allows bootup and controls access to the BIOS setup menu.

**Boot** - Use this menu to configure the default system device used to locate and load the Operating System and for booting up the Notebook.

**Exit** - Use this menu to exit the current menu or specify how to exit the Setup program.

To access the menu bar items, press the right or left arrow key on the keyboard until the desired item is highlighted.

### *The Legend Bar*

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At the bottom of the Setup screen you will notice a legend bar. The keys in the legend bar allow you to navigate through the various setup menus.

The following table lists the keys found in the legend bar with their corresponding alternates and functions.

| Legend Key | Alternate Key     | Function                                                                       |
|------------|-------------------|--------------------------------------------------------------------------------|
| F1         |                   | Displays the General Help window. It can be enabled from anywhere in the BIOS. |
| Esc        |                   | Jumps to the Exit menu or returns to the Main menu from a submenu.             |
| ←          |                   | Selects the menu item to the left.                                             |
| →          |                   | Selects the menu item to the right.                                            |
| ↑ or ↓     | Keypad arrow keys | Moves the cursor up and down between fields.                                   |
| Tab        | Enter             | Moves the cursor to the next position available in the field.                  |

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|               |      |                                                                          |
|---------------|------|--------------------------------------------------------------------------|
| Minus key (-) |      | Scrolls backward through the values for the highlighted field.           |
| Plus key (+)  |      | Scrolls forward through the values for the highlighted field.            |
| Home          | PgUp | Moves the cursor to the field at the top of the window.                  |
| End           | PgDn | Moves the cursor to the field at the bottom of the window.               |
| F9            |      | Sets the parameters for the current menu to their <i>default</i> values. |
| F10           |      | Save and Exit.                                                           |
| Enter         |      | Will select a sub menu or show a range of options for a field.           |

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## *Launching Submenus*

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Note that a right pointer symbol  $\triangleright$  appears to the left of certain fields. This pointer indicates that a submenu can be launched from this field. A submenu contains additional options for a field parameter.

To call up a submenu, simply move the cursor to highlight the field and press the **[Enter]** key. Use the **[Esc]** key to return to the Main menu.

## *General Help*

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In addition to the Item Specific Help window, the BIOS Setup program also provides a General Help screen can be called up from any menu by simply pressing **[F1]**.

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Use the [PgUp] and [PgDn] keys or the up and down arrow keys (↑↓) to scroll through the entire help document. Press the Home key to display the first page, press End to go to the last page. To exit the help window, press the [Enter] or the [Esc] key.

### *Save Changes and Exit the Setup Program*

Refer to the Exit menu section of this chapter for detailed information on saving changes and exiting the setup program.

## *The Main Menu*

---

When the Setup program is accessed, the following screen appears:

| BIOS Setup Utility                                         |                                             |
|------------------------------------------------------------|---------------------------------------------|
| Main                                                       | Advanced Security Boot Exit                 |
| <b>System Overview</b>                                     |                                             |
| Processor                                                  |                                             |
| Type                                                       | : Intel (R) Pentium (R) M processor 1300MHz |
| Speed                                                      | : 1300MHz                                   |
| System Memory                                              |                                             |
| Size                                                       | : 256MB                                     |
| System Time [00:18:12]                                     |                                             |
| System Date [Wed, 03/05/2003]                              |                                             |
| ▶ Primary IDE Master                                       | : [Hard Disk]                               |
| ▶ Secondary IDE Master                                     | : [ATAPI CDROM]                             |
| Use [ENTER], [TAB] or [SHIFT-TAB] to select a field.       |                                             |
| Use [+] or [-] to configure system Time                    |                                             |
| ←→ Select Screen                                           |                                             |
| ↑↓ Select Item                                             |                                             |
| +- Change Field                                            |                                             |
| Tab Select Field                                           |                                             |
| F1 General Help                                            |                                             |
| F10 Save and Exit                                          |                                             |
| ESC Exit                                                   |                                             |
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## *The Advanced Menu*

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Selecting *Advanced* from the menu bar displays the Advanced menu:

| BIOS Setup Utility                                                                      |                |                                                                                                                  |      |      |
|-----------------------------------------------------------------------------------------|----------------|------------------------------------------------------------------------------------------------------------------|------|------|
| Main                                                                                    | Advanced       | Security                                                                                                         | Boot | Exit |
| <b>Advanced Settings</b>                                                                |                | Configure CPU.                                                                                                   |      |      |
| <b>WARNING:</b> Setting wrong values in below sections may cause system to malfunction. |                |                                                                                                                  |      |      |
| ▶ SuperIO Configuration                                                                 |                |                                                                                                                  |      |      |
| Quick Boot                                                                              | [Enabled]      |                                                                                                                  |      |      |
| Quiet Boot                                                                              | [Enabled]      |                                                                                                                  |      |      |
| Touchpad Support                                                                        | [Enabled]      |                                                                                                                  |      |      |
| Legacy USB Support                                                                      | [Enabled]      |                                                                                                                  |      |      |
| AUTO DIM Supported                                                                      | [Enabled]      |                                                                                                                  |      |      |
| Graphics Mode Select                                                                    | [Enabled, 8MB] |                                                                                                                  |      |      |
| A.P.S. Support                                                                          | [Disabled]     |                                                                                                                  |      |      |
|                                                                                         |                | ←→ Select Screen<br>↑↓ Select Item<br>Enter Go to Sub Screen<br>F1 General Help<br>F10 Save and Exit<br>ESC Exit |      |      |
| V02.53 ( C )Copyright 1985-2002, American Megatrends, Inc.                              |                |                                                                                                                  |      |      |

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## *The Security Menu*

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The Notebook's advanced system of security allows you to set a password to prevent unauthorized access to system resources, data, and the BIOS Setup Program.

| BIOS Setup Utility                                                        |          |                                                                                                                                                                                                                                                                                |      |      |
|---------------------------------------------------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|
| Main                                                                      | Advanced | Security                                                                                                                                                                                                                                                                       | Boot | Exit |
| <b>Security Settings</b>                                                  |          | Install or Change the password                                                                                                                                                                                                                                                 |      |      |
| Supervisor Password : Not Installed<br>User Password : Not Installed      |          |                                                                                                                                                                                                                                                                                |      |      |
| Change Supervisor Password<br>Change User Password<br>Clear User Password |          |                                                                                                                                                                                                                                                                                |      |      |
| Boot Sector Virus Protection                                              |          | [Disabled]                                                                                                                                                                                                                                                                     |      |      |
|                                                                           |          |  Select Screen<br> Select Item<br>Enter Enter Change<br>F1 General Help<br>F10 Save and Exit<br>ESC Exit |      |      |
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## *The Boot Menu*

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The Boot menu allows the user to specify the order in which the Notebook is to check for a device to boot the system. You can also configure the way that the system will boot up.

To make changes, select *Boot* from the menu bar. The following screen appears:

| BIOS Setup Utility                                                                                                             |          |          |                                                                                                                                  |      |
|--------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------------------------------------------------------------------------------------------------------------------------------|------|
| Main                                                                                                                           | Advanced | Security | Boot                                                                                                                             | Exit |
| <b>Boot Settings</b>                                                                                                           |          |          | Configure CPU.                                                                                                                   |      |
| <ul style="list-style-type: none"><li>▶ Boot Device Priority</li><li>▶ Hard Disk Drives</li><li>▶ ATAPI CDROM Drives</li></ul> |          |          |                                                                                                                                  |      |
|                                                                                                                                |          |          | <div>←→ Select Screen<br/>↑↓ Select Item<br/>Enter Go to Sub Screen<br/>F1 General Help<br/>F10 Save and Exit<br/>ESC Exit</div> |      |
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## *The Exit Menu*

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Once you have made all of your selections from the various menus in the Setup program, you should save your changes and exit Setup. Select *Exit* from the menu bar to display the following menu:

| BIOS Setup Utility                                         |          |          |      |                                                                                                                  |
|------------------------------------------------------------|----------|----------|------|------------------------------------------------------------------------------------------------------------------|
| Main                                                       | Advanced | Security | Boot | Exit                                                                                                             |
| <b>Boot Settings</b>                                       |          |          |      | Exit system setup<br>after saving the<br>changes.                                                                |
| Save Changes and Exit                                      |          |          |      | F10 key can be used<br>for this operation                                                                        |
| Discard Changes and Exit                                   |          |          |      |                                                                                                                  |
| Discard Changes                                            |          |          |      |                                                                                                                  |
| Load Optimal Defaults                                      |          |          |      |                                                                                                                  |
| Load Failsafe Defaults                                     |          |          |      |                                                                                                                  |
| Battery Calibration                                        |          |          |      |                                                                                                                  |
|                                                            |          |          |      | ←→ Select Screen<br>↑↓ Select Item<br>Enter Go to Sub Screen<br>F1 General Help<br>F10 Save and Exit<br>ESC Exit |
| V02.33 ( C )Copyright 1985-2002, American Megatrends, Inc. |          |          |      |                                                                                                                  |

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## Chapter

# *The Software Utilities Disks*

### *AutoRun Installation*

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Follow the step-by-step procedures on the CD-ROM/DVD-ROM to execute the “AutoRun” application by selecting the topic of “Driver Installation”.



If you encounter this message when executing the Auto Run in

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Windows 2000, please perform the following procedures:

Click on the “Start” – “Setting” – “Control Panel” – “System” – “Advanced” tab – “Performance” tab – “Change” tab – reduce the maximum Virtual Memory setting to 200MB.

### ***Installing the INTEL\_INFINST Driver***

- Insert the CD-ROM Driver into your CD-ROM/DVD-ROM drive.
- Click “Start” and Select “Run”.
- Type the following: D:\Driver\INTEL\_INFINST\INFINST\_enu (If D is not your CD-ROM/DVD-ROM drive, substitute D with the correct drive letter).
- Click on “INFINST\_enu” to begin the Installation Wizard.
- Follow the Wizard’s on-screen instructions to complete the installation.
- Restart the system.

### ***Installing VGA Display Drivers***

This section describes the operation and installation of VGA display software drivers supplied on the Driver Utility CD-ROM that is shipped with your computer.

- Insert the CD-ROM Driver into your CD-ROM/DVD-ROM drive.
- Click “Start” and Select “Run”.
- Type the following: D:\Driver\VGA\Win2K&XP\Setup.exe (If D is not your CD-ROM/DVD-ROM drive, substitute D with the correct drive letter).
- Click on “Setup” to begin the Installation Wizard.
- Follow the Wizard’s on-screen instructions to complete the installation.
- Restart the system.

### ***Intalling the Audio Driver***

To install the audio driver you must first remove the currently installed driver.

- 
- Insert the CD-ROM Driver into your CD-ROM/DVD-ROM drive.
  - Click “Start” and Select “Run”.
  - Type the following: D:\Driver\Audio\Setup.exe (If D is not your CD-ROM/DVD-ROM drive, substitute D with the correct drive letter).
  - Click on “Setup” to begin the Installation Wizard.
  - Follow the Wizard’s on-screen instructions to complete the installation.
  - Restart the system.

### *Intalling the IR Driver*

To install the audio driver you must first remove the currently installed driver.

- Insert the CD-ROM Driver into your CD-ROM/DVD-ROM drive.
- Click “Start” and Select “Run”.
- Type the following: D:\Driver\IR\Setup.exe (If D is not your CD-ROM/DVD-ROM drive, substitute D with the correct drive letter).
- Click on “Setup” to begin the Installation Wizard.
- Follow the Wizard’s on-screen instructions to complete the installation.
- Restart the system.

### *Intalling the LAN Driver*

To install the LAN driver you must first remove the currently installed driver.

- Insert the CD-ROM Driver into your CD-ROM/DVD-ROM drive.
- Click “Start” and Select “Run”.
- Type the following: D:\Driver\LAN\Setup.exe (If D is not your CD-ROM/DVD-ROM drive, substitute D with the correct drive letter).
- Click on “Setup” to begin the Installation Wizard.
- Follow the Wizard’s on-screen instructions to complete the installation.
- Restart the system.

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### ***Installing the TouchPad Driver***

To install the touchpad driver you must first remove the currently installed driver.

- Insert the CD-ROM Driver into your CD-ROM/DVD-ROM drive.
- Click “Start” and Select “Run”.
- Type the following:  
D:\Driver\Touchpad\Win2K&XP\Setup.exe (If D is not your CD-ROM/DVD-ROM drive, substitute D with the correct drive letter).
- Click on “Setup” to begin the Installation Wizard.
- Follow the Wizard’s on-screen instructions to complete the installation.
- Restart the system.

### ***Installing the MDC Modem Driver***

Please follow these instructions to install the Modem driver:

- Insert the CD-ROM Driver into your CD-ROM/DVD-ROM drive.
- Click “Start” and Select “Run”.
- Type the following:  
D:\Driver\MDC\Liteon\Win2K&XP\MDMCHIPV.inf or  
D:\Driver\MDC\Billionton\WinXP\Setup.exe or  
D:\Driver\MDC\Billionton\Win2K\Setup.exe or  
D:\Driver\MDC\QCOM\Win2K&XP\Setup.exe (If D is not your CD-ROM/DVD-ROM drive, substitute D with the correct drive letter).
- Click on “Setup” to begin the Installation Wizard.
- Follow the Wizard’s on-screen instructions to complete the installation.
- Restart the system.

### ***Installing the MiniPCI Wireless LAN Card Driver***

Please follow these instructions to install the Wireless LAN driver:

- 
- From Start, click on the "My Computer" icon and click the "View System Information".
  - Click on the "Hardware" tab from the "System Properties" dialog window.
  - Click the "Device Manager" button.
  - Double click on the "Other Devices" , double click the " Network Controller "
  - and click on the "Driver" tab.
  - Click the "Update Driver" tab and select the "Install from a list or specific location (Advanced)" item and click "Next".
  - Select the "Include this location in the search" item and click on the "Browse" button and specify for the designate location of your CD driver  
D:\Driver\MiniPCI\Intel\21003B\PROW7100\WinXP\W70N51.inf (WinXP Intel 21003B)  
D:\Driver\MiniPCI\Intel\21003B\PROW7100\Win2K\W70N5.inf (Win2K Intel 21003B)  
D:\Driver\MiniPCI\Intel\2200BG\PROW2200\WinXP\W22N51.inf (WinXP Intel 2200BG)  
D:\Driver\MiniPCI\Intel\2200BG\PROW2200\Win2K\W22N50.inf (Win2K Intel 2200BG)  
D:\Driver\MiniPCI\Billionton\WinXP\NET8180.inf (WinXP Billionton)  
D:\Driver\MiniPCI\Billionton\Win2000\NET8180.inf (Win2K Billionton)  
D:\Driver\MiniPCI\QCOM\802MR\WinXP\NET8180.inf (WinXP QCOM 802MR)  
D:\Driver\MiniPCI\QCOM\802MR\Win2000\NET8180.inf (Win2K QCOM 802MR)

### ***VGA Utilities***

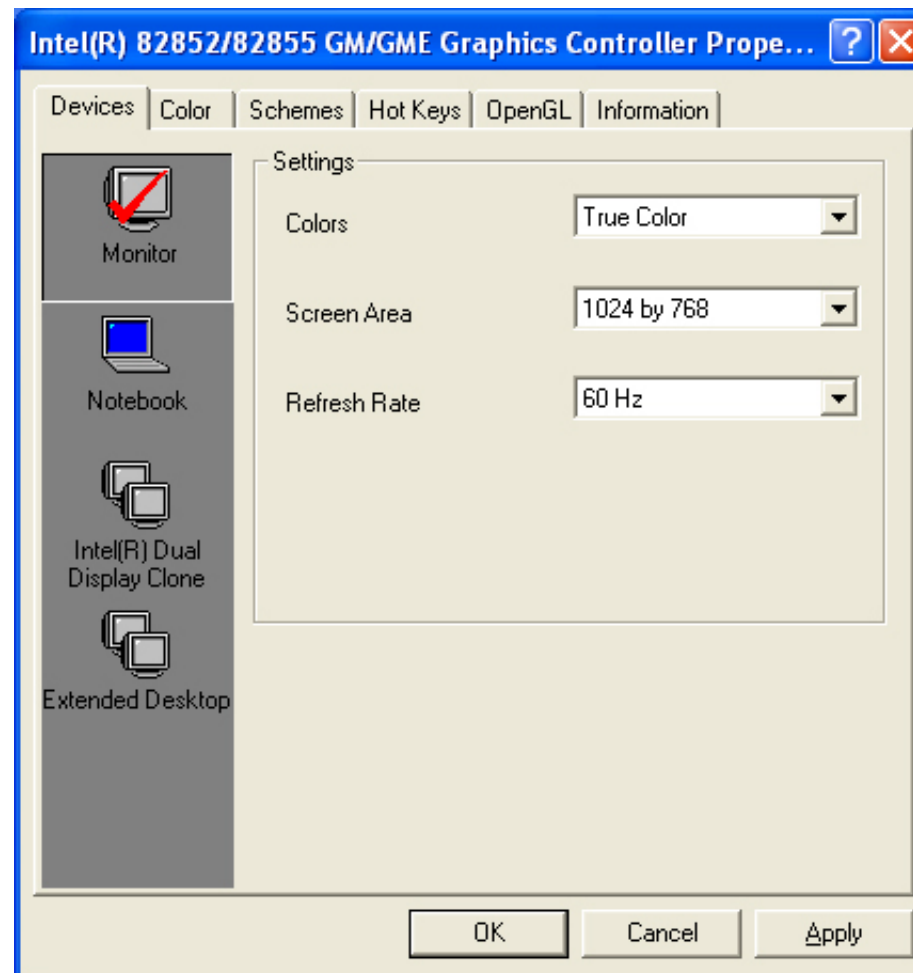
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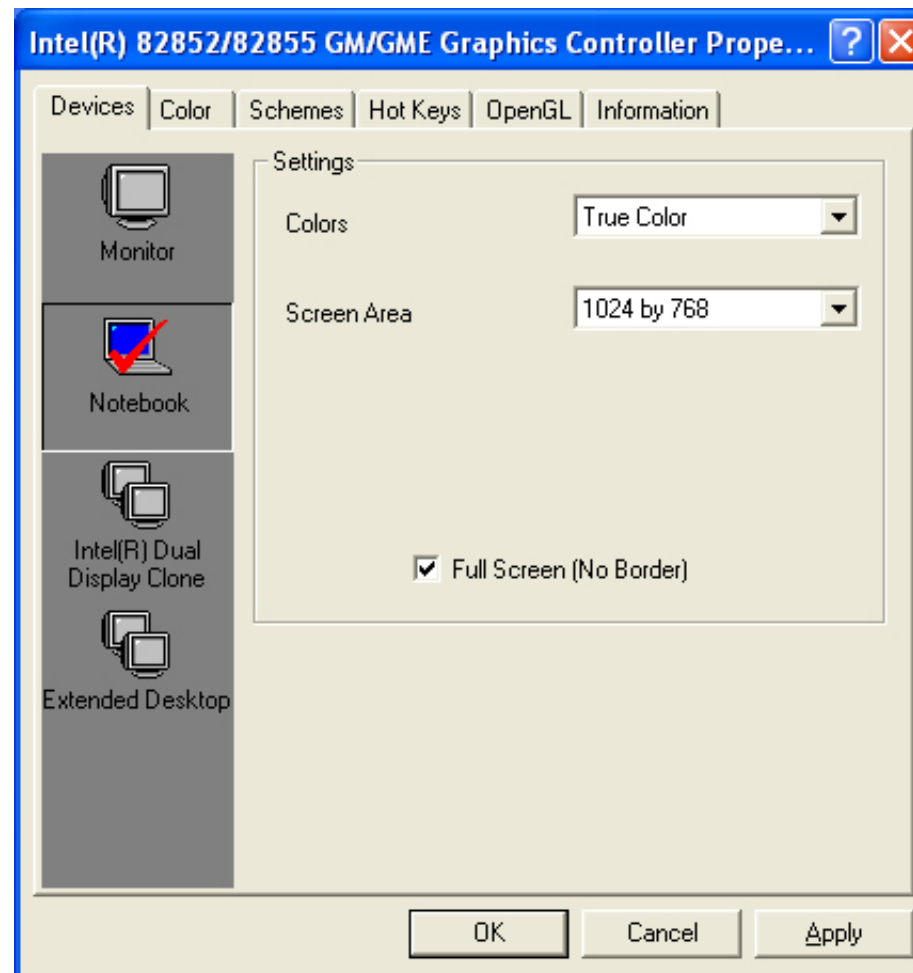
After you have restarted Windows, open the "Control Panel" and double click on the "Display" icon. From the "Display Properties" window, select the "Settings" tab and click on the "Advanced" tab to enter the "INTEL® 82852/82855 GM/GME Graphics Controller Properties" window.

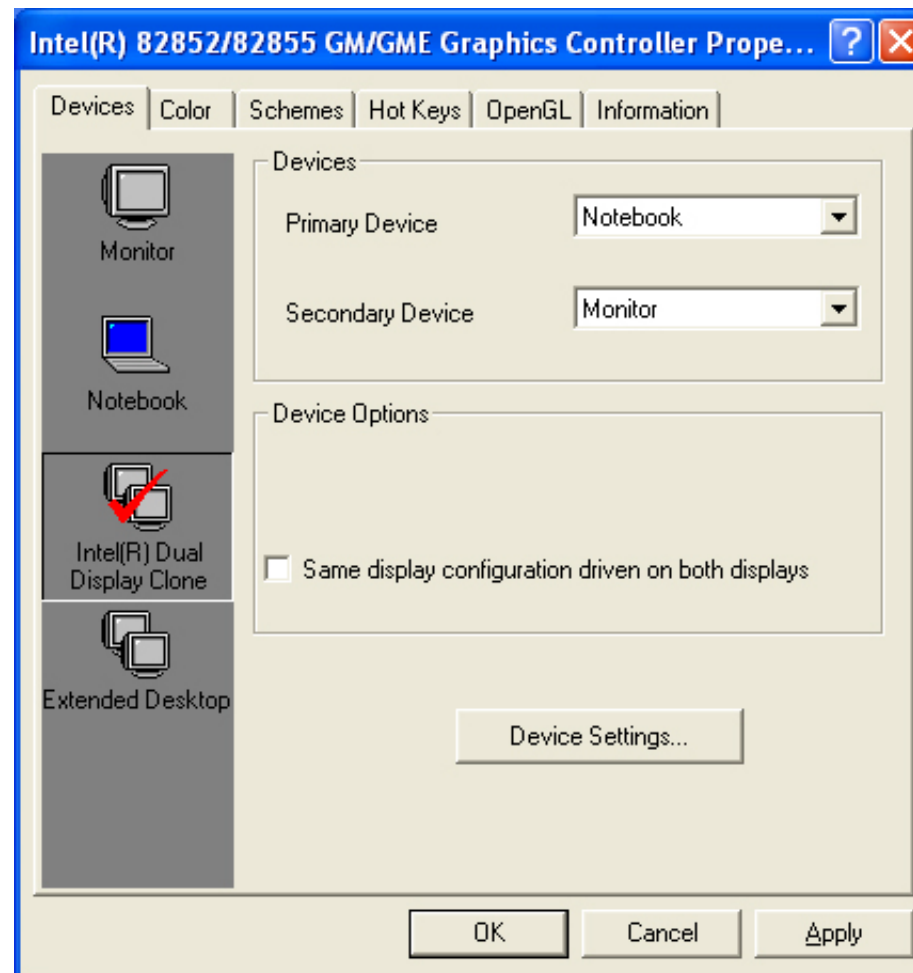
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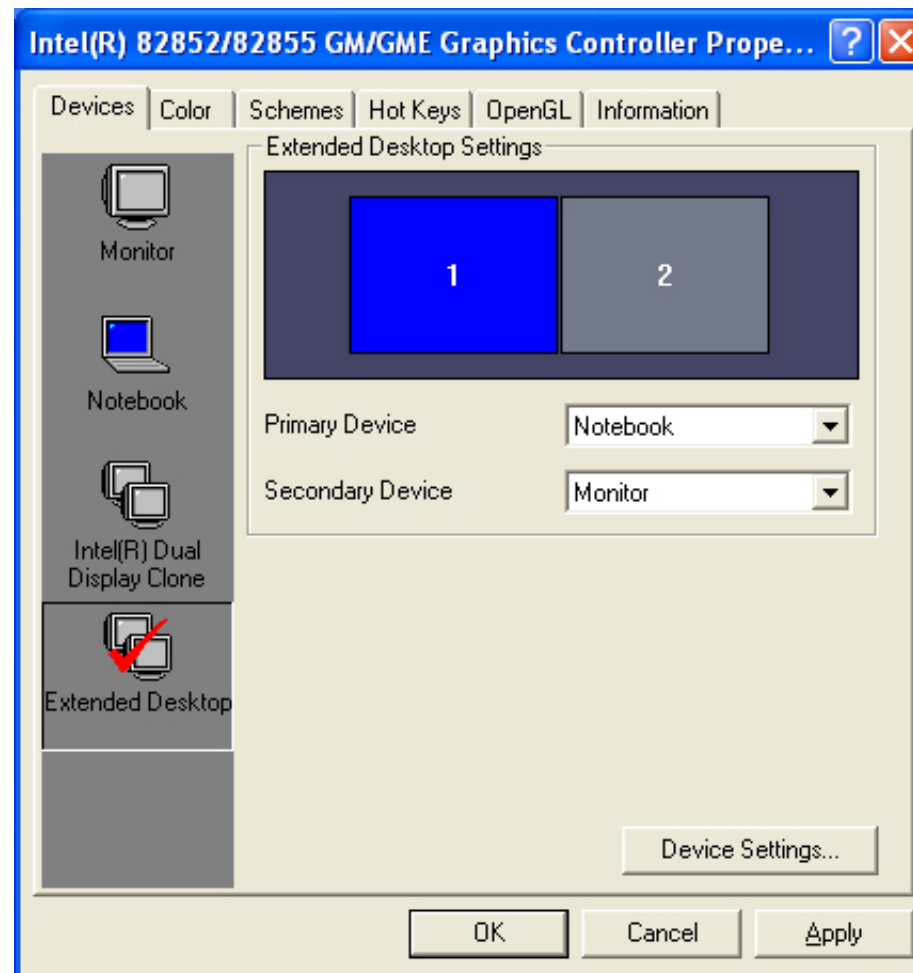
### *Devices*

You can connect up to three displays simultaneously to the notebook. You can watch a DVD movie on an external television while checking email on your notebook screen - or surf the web on a CRT monitor while working on a presentation on a digital flat panel. The option is yours with these features.





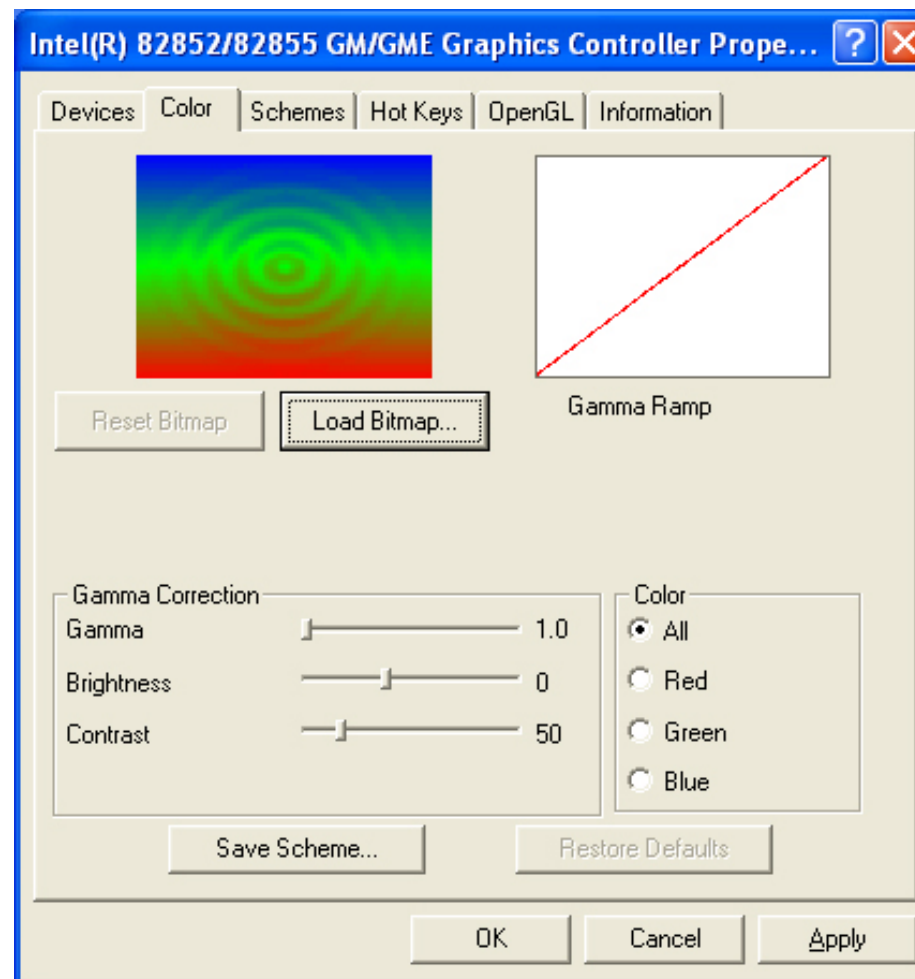




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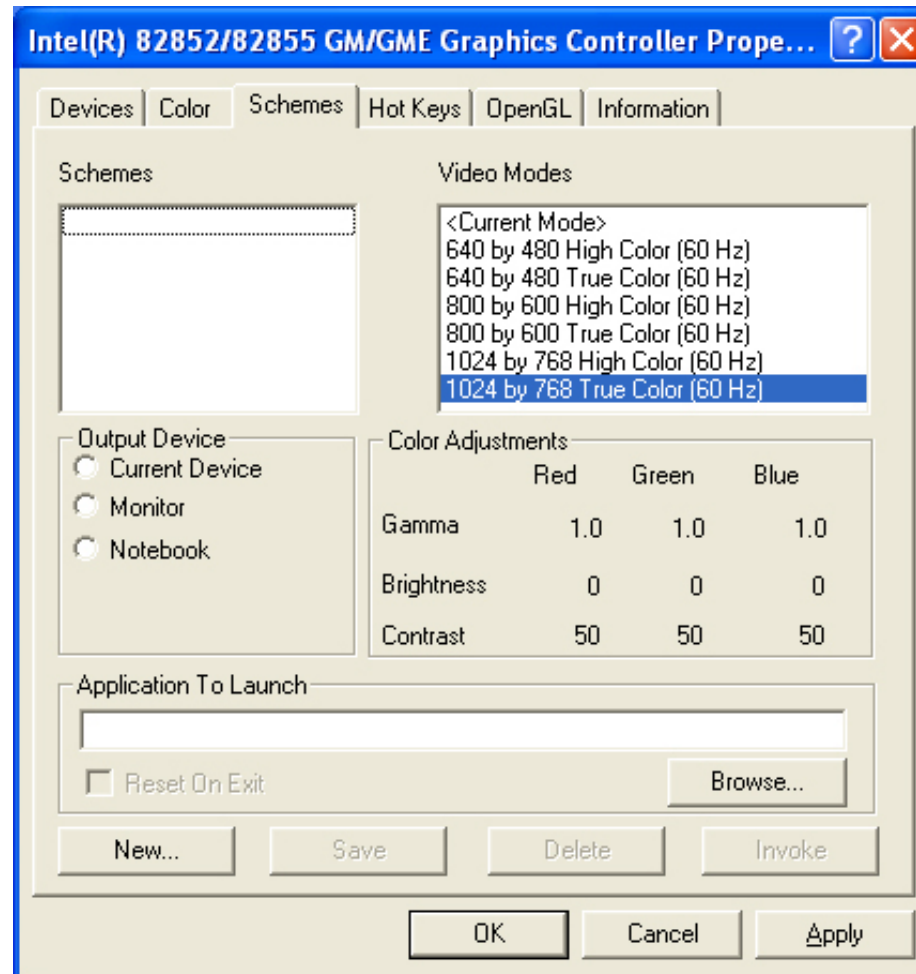
## Color

You can adjust the right resolution for your screen display.



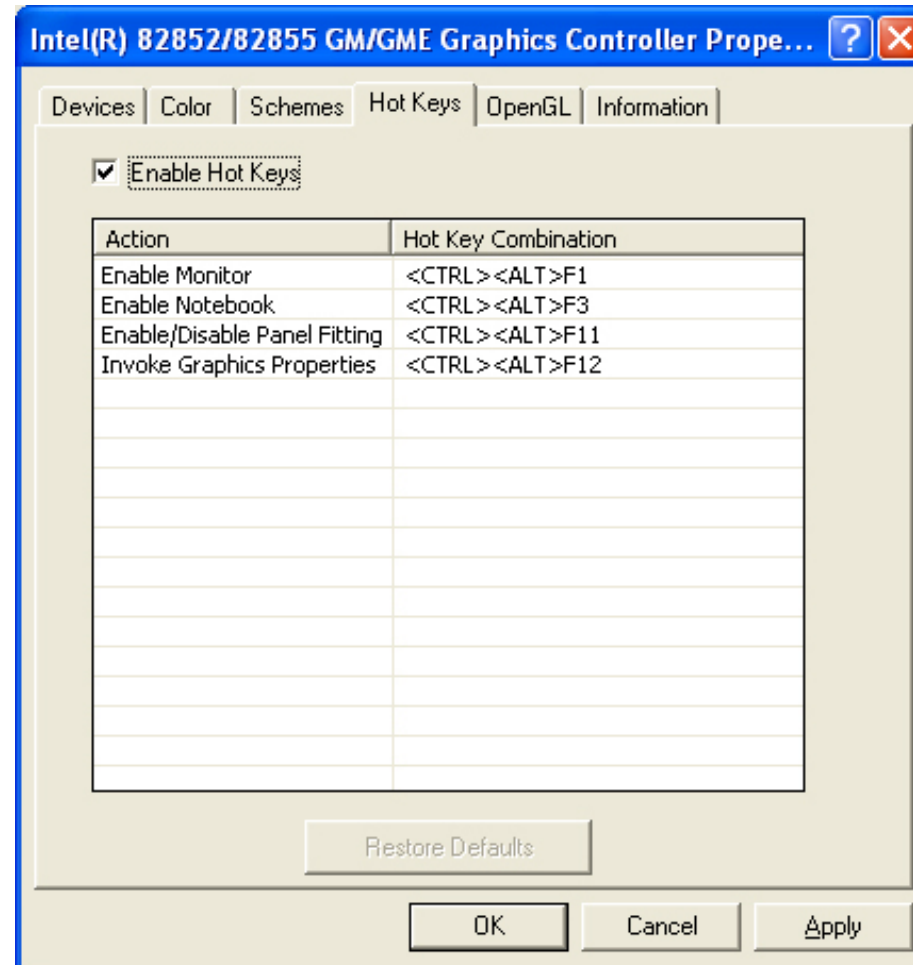
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## *Schemes*

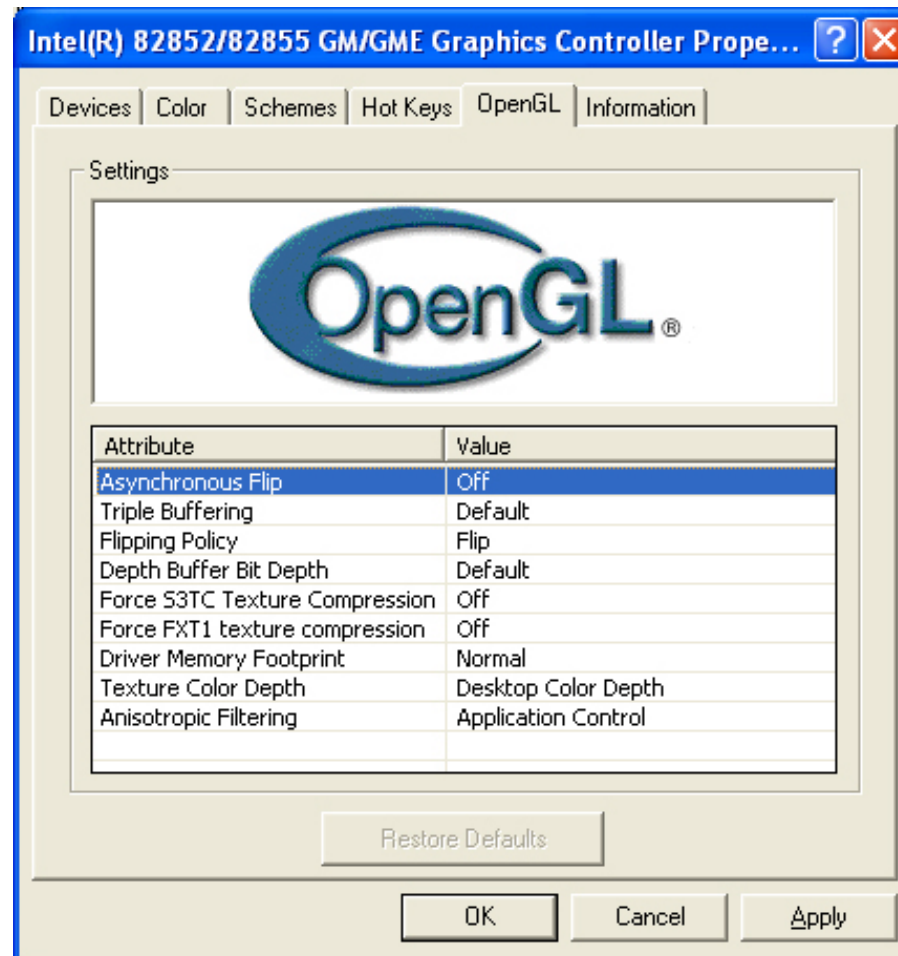


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## *Hot Keys*



## OpenGL



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# Chapter

## *Troubleshooting*

This chapter describes locating and solving problems that you may encounter while using your computer.

### *Locating a Problem*

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Problems with your computer can be caused by something as minor as an unplugged power cord – or as major as a damaged hard disk. The information in this chapter is designed to help you find and solve minor problems. If you try all the suggested solutions and you still have a problem, make a list of what steps you have taken to

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correct the problem and contact your dealer.

Successful troubleshooting is the result of careful observation, deductive reasoning, and an organized approach to solving the problem.

The problems that you will encounter can be divided into two basic categories: hardware problems and software problems. Hardware problems can be further divided into electrical and mechanical problems. You will know you have a hardware problem if the screen is dark, the computer cannot read the disk drives, or you get an error message during the Power-On Self Test (POST).

Software errors can occur at several levels. The ROM BIOS and the operating system can give you a large number of error messages. On top of this, each application software package has its own set of error messages. It is important to determine whether the software error message you are getting is from the application or the operating system. Once you know this, you can look in the respective manual for a solution to the problem.

### *Checking Cables and Connections*

---

Start by performing a careful visual inspection of the exterior of the computer. If no LEDs are illuminated, make sure that your computer and its peripherals are getting power and communicating with each other properly.

To check the power cables, and connections:

1. If you have been using battery power, connect the Notebook to an external power source and make sure that the battery has a charge.
2. If you are using the Notebook with the AC adapter, check the power outlet, the power cord, and any power switches that may affect your computer.

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- Check the wall outlet or power strip with an item that you know is functioning properly. A lamp or radio is a convenient item for checking the power. You may also need to check the fuses and breakers in your electric box.
  - If the outlet is controlled by a wall switch, make sure that the switch is on.
  - If the outlet is controlled by a dimmer switch, use a different outlet.
  - If your computer is plugged into a power strip with an On/Off switch, make sure the switch is on.
3. With the computer's power switched off, check all cable connections. If the computer is connected to any peripheral devices, look for loose or disconnected cables.

If the computer is too close to a wall, a cable connection may be loose or the cables may be crimped.



Do not substitute cables for different devices (other than the manufacturer recommended cables) even if they look exactly alike. The wiring inside the cable may be different.

4. When you are certain that you have power available and all connections are good, turn the computer on again. If the computer still does not start, you may have a hardware problem.

## *The Power-On Self Test*

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The Power-On Self Test (POST) runs every time you turn on or reset the Notebook. The POST checks memory, the main system board, the display, the keyboard, the disk drives, and other installed options.

A few seconds after you turn on your computer, a copyright message appears on your display screen. A memory test message appears next; as the test continues, memory size increases until all installed memory is tested. Normally, the only test routine visible on the screen will be the memory test.

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Two classifications of malfunctions can be detected during the POST:

- Error messages that indicate a failure with either the hardware, the software, or the *Basic Input/Output System* (BIOS). These *critical malfunctions* prevent the computer from operating at all or could cause incorrect and apparent results. An example of a critical error is microprocessor malfunction.
- Messages that furnish important information on the power-on and boot processes (such as memory status). These *non-critical malfunctions* are those that cause incorrect results that may not be readily apparent. An example of a non-critical error would be a memory chip failure.

In general, if the POST detects a system board failure (a critical error), the computer halts and generates a series of beeps. If failure is detected in an area other than the system board (such as the display, keyboard, or an adapter card) an error message is displayed on the screen and testing is stopped. It is important to remember that the POST does not test all areas of the computer, only those that allow it to be operational enough to run diagnostic programs.

If your system does not successfully complete the POST, but displays a blank screen, emits a series of beeps, or displays an error code, consult your dealer.

## ***General Hardware Problems***

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A few common hardware problems and suggested solutions are presented in the table below:

***Problem:*** Failure in the installation of the Audio driver.

***Solution:*** Be sure to first remove the current audio device from your system. Please follow the instruction on the installation of audio driver.

***Problem:*** The display screen is dark

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**Solution:** Make sure that the computer is not in Suspend mode. Check the Brightness controls for the screen. If the controls are turned too far down, the screen will be dark.

**Problem:** An incorrect date and time are displayed.

**Solution:** Correct the date and time using the DOS DATE and TIME commands or the options in the Setup Utility. If the date and time become incorrect after a short time, your CMOS battery may be depleted. Contact your dealer to change the battery.

**Problem:** The message: "Invalid system disk, Replace the disk, and then press any key" appears during boot.

**Solution:** Check and make sure that you do not have a non-bootable floppy diskette inserted in your floppy drive. If your USB FDD is empty, you may not have an operating system installed on your drive. Contact technical support for assistance.

**Problem:** You hear irregular beeps during operation of the Notebook and the system halts.

**Solution:** The problem is beyond the scope of this manual. Contact technical support.

**Problem:** An unidentified message is displayed.

**Solution:** Reboot the computer and run the BIOS system setup. Confirm the Setup parameters. If the same message is displayed after booting up again, contact technical support for assistance.

**Problem:** The system cannot access the CD-ROM/DVD-ROM drive.

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**Solution:** Check that a CD is properly inserted in the drive. Make sure that you are using the correct program for that kind of CD. For example, the system cannot read a data CD using an audio program.

**Problem:** You cannot operate the printer.

**Solution:** Check the printer cable connection. Ensure that the printer power switch is turned on. Confirm that the printer is on-line.

**Problem:** You can't save data to disk.

**Solution:** Ensure that the disk has been formatted. Consult your operating system manual for information on formatting floppy diskettes.

**Problem:** The diskette is write-protected.

**Solution:** Eject the diskette, remove the write protection, and try again.

**Problem:** The diskette is full.

**Solution:** Try using another diskette or free up some space on the diskette. The disk drive is not operating. Contact your dealer for support.

**Problem:** You cannot use the mouse.

- Check the cable connection.
- Check the mouse with another application to see if there is a software incompatibility problem.
- If possible, check the mouse with another computer to see if it works. If it doesn't operate on a different system, the mouse might be broken.

## *Contacting Your Dealer*

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If you still have a problem after reading the preceding sections, the next step is to contact your dealer. Your dealer can determine if the problem is something that requires the computer to be taken to the shop. Before you call your dealer, however, prepare the following information:

- How is your computer configured? Your dealer needs to know what peripheral devices you are using.
- What messages, if any, are on the screen?
- What software were you running at the time?
- What have you done already to try to solve the problem? If you have overlooked a step, your dealer may be able to solve the problem over the phone.

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## *Upgrading your System*

### *Upgrading your Memory*

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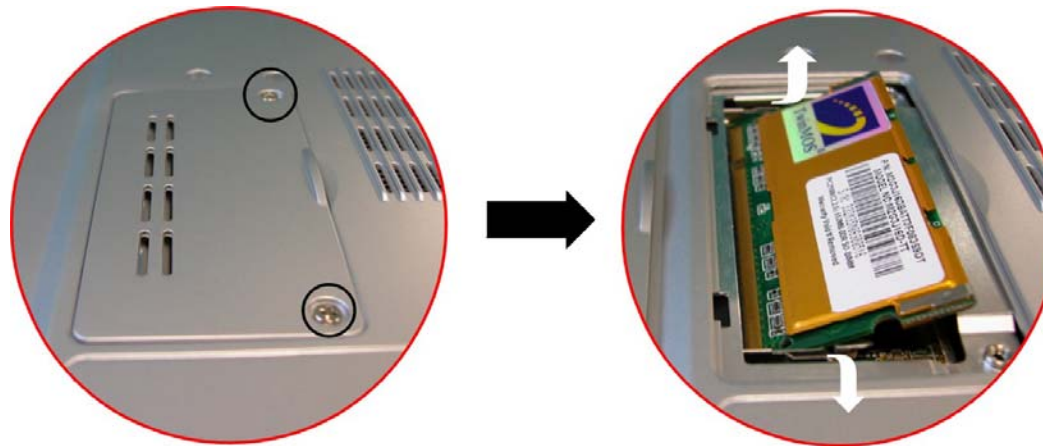
Refer to the following instructions and illustration for information on upgrading your notebook's memory.

1. Turn off the computer and disconnect the AC adapter and all peripherals.
2. Turn the notebook over so that the rear ports are facing you and locate the memory module compartment.
3. Remove the screws that secure the RAM module compartment cover and set it

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aside in a safe place.

4. Remove the compartment cover and then angling it up and out.
5. If you need to install a higher capacity module, gently push the edge clips on both sides to release the module. Angle the card slightly upward and gently slide it from its edge connector slot. Store the card in the anti-static bag that contains your new module(s).
6. To install the new memory card, hold the card with its gold edge connector toward the edge connector slot of the compartment. To help you orient the cards, the edge connector has been made with two unequal-length sections. You will only be able to insert the card in one direction.
7. Insert the edge connector into the slot. The gold edge connector of the card should not be visible when the card is fully inserted.
8. Press the card downward where you should hear an audible click as the latches of the connector secure the card in place.
9. Once the module is properly seated, you can replace the cover on this compartment.
10. Replace and tighten the screw.



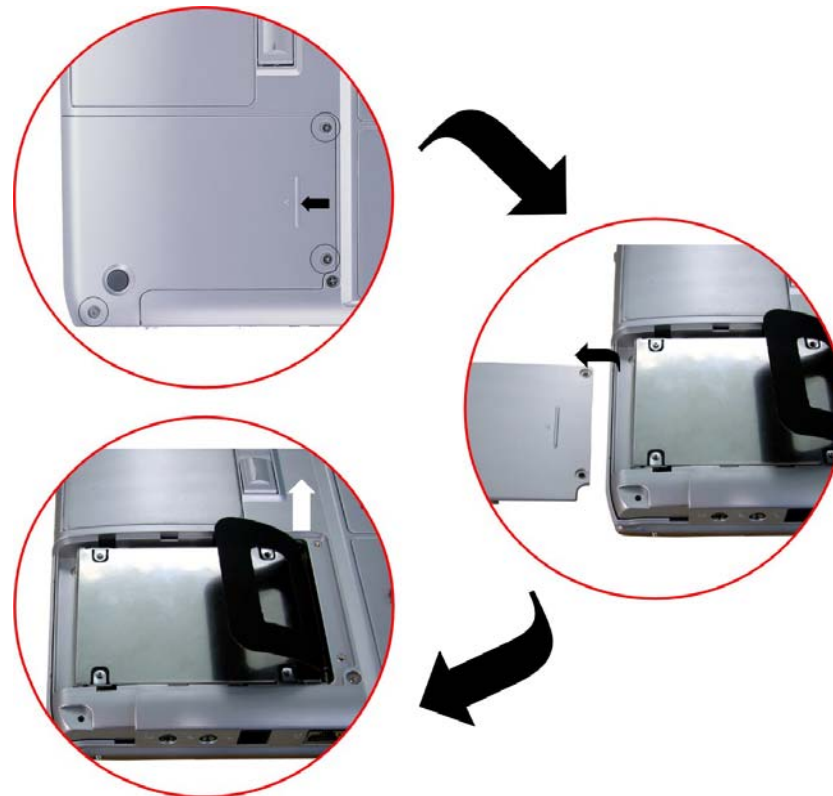
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## *The Easy to Upgrade HDD Module*

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The hard drive in your notebook computer is made to be easily swapped out for upgrading. You should back up your hard drive before attempting to change the hard drive. Make sure that before you install a new drive, all the files in your system should be backed up.

### *To upgrade your Hard Drive*



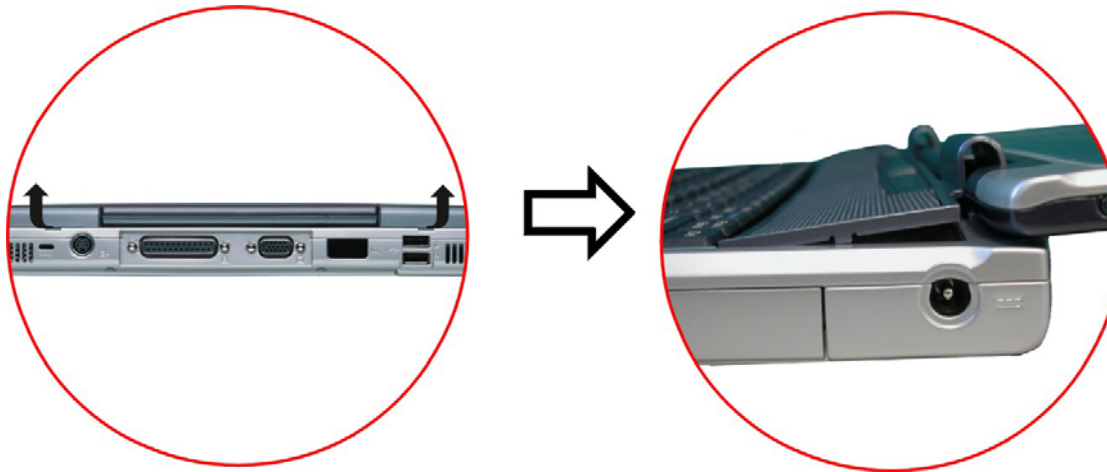
- 
1. Power down the system completely. Turn the system over with the front of the unit facing you.
  2. Remove the three screws that secure the compartment cover and set them in a safe place.
  3. Slide the HDD cover away from the compartment.
  4. The drive is attached to a special bracket that secures it to the notebook computer. There are 4 screws hold the bracket. Remove the screws and set them in a safe place.
  5. Push the HDD slightly in the direction of the arrow as shown in the illustration to release it from the pins of the drive.
  6. Gently hold the grip of the HDD, lift it up to release from its compartment.
  7. To install the new HDD, you will need to align the tabs on the drive bracket with the slots on the bay. Press down gently on the drive bracket until it engages with the system. Do not force the drive into place this can bend the pins on the hard drive.
  8. Slide the compartment cover into place and be sure the screw holes on the cover align completely with the screw holes in the case.
  9. Secure the cover with the three screws.

### *Upgrading your System CPU*

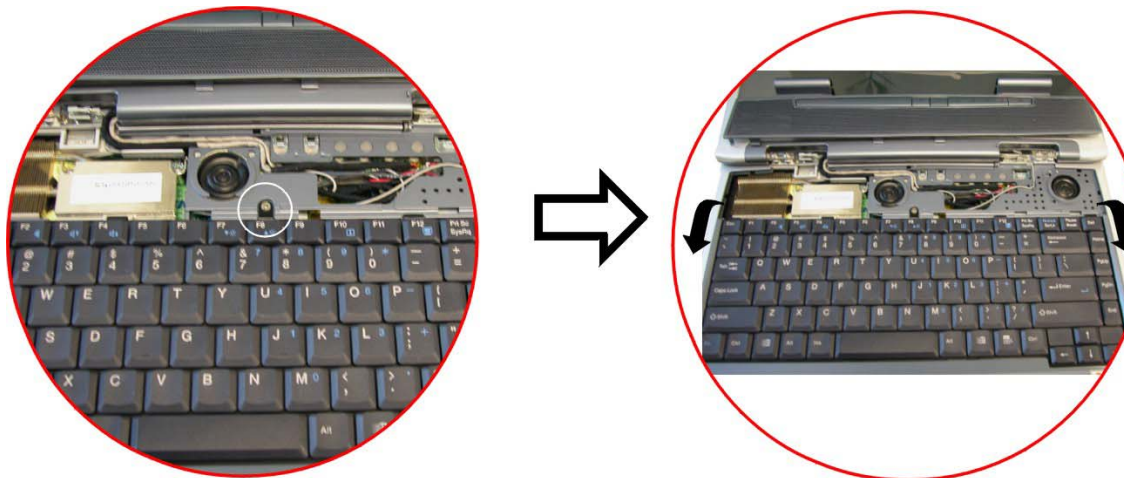
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Refer to the following instructions and illustration for information on upgrading your notebook's CPU

1. Turn off the computer and disconnect the AC adapter and all peripherals. From the rear side of your notebook, use your index finger to lift up the hinge cover attached to the LCD screen.
2. Bend your LCD screen into 90 degree angle then carefully lift up the hinge cover.

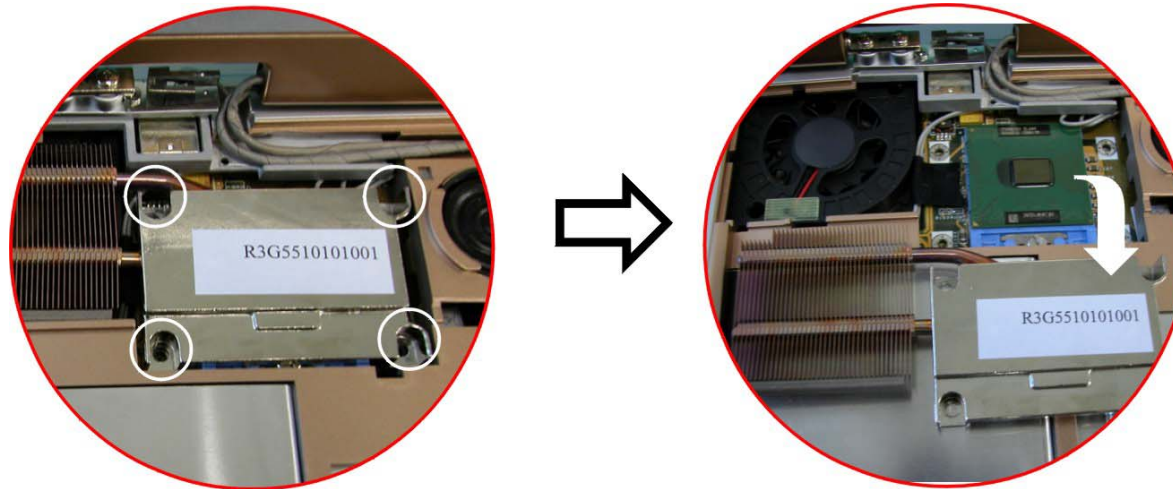


3. Remove the screen that is attached to the keyboard in order to remove the heatsink on top of the CPU.



4. Remove all the screws attached to the heatsink.

- 
5. Before removing the screws, there are certain measures to followed in removing the heatsink



6. To remove the heatsink, first loosen the screw carefully.
7. After loosening one screw, be certain that the next to be loosen should be the screw on its adjacent side as shown on the illustration.



Be sure to loosen all the screws first before removing it totally to release the heatsink. Failure to do so will cause a major damage to the heatsink.

8. Now you can totally remove all the screws also in that order when you first loosen the screw.

*A*

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# *Appendix*

## *Specification*

### *Detailed Notebook Specifications*

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#### *General*

#### *CPU*

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- Intel Pentium-M Baniyas processor from 1.3GHz to 1.7GHz, 1M L2 cache
- Intel Dothan processor from 1.8GHz to 2.0GHz, 2M L2 cache

- 
- 478 pin uFC-PGA2 478 socket, CPU front-side bus up to 400MHz
  - TDP : 21W.

### ***Core Logic***

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- Intel 855GM/GME,
- Support FSB 400MHz

### ***Memory***

#### ***Main Memory***

---

- 2 expandable memory slot up to 2GB,1GB per DIMM Max. with 512Mb technology
- 128/256/512 MB memory options
- Two 200 pin SO DIMM type memory slots
- 2.5V TSOP/CSP/WBGA DDR SDRAM
- Supports DDR266/333 Synchronous SDRAM

#### ***ROM***

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- 512KB Flash ROM factory option, 3V erase
- Boot block protection

### ***Mass Storage***

#### ***HDD***

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- Support enhanced IDE (PIO mode 4) and bus master(Ultra DMA 33/66/100 mode).
- Removable hard disk drive, 2.5" 9.5mm.

### ***Module Bay***

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- Supports CD-ROM/DVD-ROM/Combo Drive (DVD-ROM+CD-RW), DVD-RW, DVD+RW, DVD-Dual; 5.25" 12.7mm height
- Fast IDE and ATAPI interface CD-ROM/DVD-ROM/Combo Drive (DVD-ROM+CD-RW), DVD-RW, DVD+RW, DVD-Dual

### ***Pointing Devices***

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- Synaptics TouchPad
- Support four way scrolling feature

### ***Keyboard***

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- US/Europe, DOS/V keyboard for Japan, full size keyboard alike pitch
- 300 mm keyboard with key stroke 3.0mm
- Twelve function keys and Windows Function key
- Internal keyboard works a standard 101/102 desktop keyboard
- 2 short-cut keys: WWW & eMail

### ***Audio***

#### ***Controller***

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- Built-in Intel ICH 4-M chipset

#### ***Codec***

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- Realtek ALC202A

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### ***Features***

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- Dual full-duplex Direct Sound Channels
- Hardware SoundBlaster Pro for real-mode DOS legacy compatibility
- 18-bit ADC & DAC resolution
- Support S/PDIF out
- AC'97 2.2 & PC2001 compliant

### ***I/O Ports***

#### ***Standard Ports***

---

- One parallel port supported EPP/ECP (25-pin female D-connector)
- One S-video TV out port for TV
- One DC input port for External AC adapter (2-pin DC jack)
- One Type II PCMCIA card socket
- One video port for external analog VGA monitor (15-pin female D-connector)
- USB 2.0 port x 2
- MIC-in, headphone jack w/ adaptor for 5.1 channel SP/DIP support
- RJ-11 jack for Fax/Modem
- RJ-45 jack for LAN
- IEEE 1394 mini-jack

#### ***PCMCIA***

---

- Controller : RICHIO R5C551
- Supports 1 PC Card/CardBus slot
- Supports 16-bit & cardBUs PC Cards, PCI rev. 2.2 and PC Card Standard Release 7.0 compliant

- Integrated IEEE 1394a OHCI-link & two ports with IEEE 1394 internal PHY
- Data transfer rate : 100/200/400 Mbps

## ***Graphics and Video***

### ***Controller***

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- Intel 855GM/GME internal graphics.

### ***Features***

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- High performance 3D graphics engine (floating triangle setup/rendering)

### ***Graphic Memory***

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- Up to 64 MB of dynamic video memory allocation

### ***LCD Display***

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- 14.1"XGA/15"XGA/15" SXGA TFT

## ***Electrical***

### ***AC Adapter***

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- External universal type AC adapter, output maximum 65W

### ***Smart Battery***

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- Li-Ion battery @ 27 Whrs (4-cell); Optional 8-cell 53W
- User interchangeable
- Removable and rechargeable
- 3 hrs charge time while system off

- 
- 4 hrs charge time while system on
  - Charging time for one battery pack : 3.5 hours to full charge when system off or in suspend
  - More than 2.0 hrs w/ 4-cell battery, 4.0 hrs w/ 8-cell battery

### ***Dimensions***

- 326(W) x 258(D) x 25.3(H) mm/32mm (front/back)

### ***Weight***

- 2.4kg with 14.1" panel, Battery and DVD-ROM Drive installed

### ***Operating Environment***

#### ***Temperature***

- 
- Operating: 5°C ~ 35°C
  - Storage: -20°C ~ 60°C

#### ***Humidity***

- 
- Operating: 30% ~ 90% (non-condensing)
  - Non-operating: 10% ~ 90% (non-condensing)

#### ***Altitude***

- 
- Operating: -200 to 10,000 feet above sea level
  - Non-operating: -200 to 30,000 feet above sea level.

### ***Options***

- Spare Li-Ion Battery Pack : 4-cell battery and 8-cell battery

- Factory Option : 802.11b wireless LAN with MiniPCI slot
- Memory Extension Card
- Module bay : CD-ROM/ DVD-ROM/ Combo(DVD-ROM+CD-RW) Drive, DVD-RW, DVD+RW, DVD-Dual
- Bootable external USB FDD

### *Accessories*

- User's Manual & Driver CD title
- AC Adapter
- Power Cord

### *Software Specifications*

#### ***System Software***

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- System BIOS: AMI BIOS
- Supported Operating Systems
  - Optional Windows XP or above version
- Standard Software Drivers
  - INTEL\_INFINST driver,
  - VGA driver,
  - Audio driver,
  - Touch-Pad driver,
  - IR driver,
  - MDC Modem driver,
  - LAN driver,
  - MiniPCI Wireless LAN driver

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## ***Declaration of Conformity***

1. Notebook / Green553
2. This device complies with part 15 of FCC rules. The operation is subject to the following two conditions: (1) The device may not cause harmful interference. And (2) this device must accept any interference received, including the interference that may cause undesired operation

Information of Responsible Party in USA

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