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Rev 1.0

TABLE OF CONTENTS

Preface

Using This Manual

This User's Manual contains general information about the hardware and software setup, troubleshooting, and technical specifications of the notebook computer.

Symbols and Conventions

The following conventions and symbols are used in this manual:

- ■ When keys are to be pressed at the same time, a plus (+) symbol is used. For instance, Fn+F7 means holding Fn and F7 keys at the same time.
- ■ When a series of clicking actions is needed in a Windows O/S, the [ ] and > symbols are used. For instance, [Start > Settings > Control Panel > Display] means clicking the Start icon first, then the Settings, then the Control Panel, then the Display icon.
- ■ When you need to make a selection with the touch pad (or mouse), you will be asked to 'select' or 'click' or 'double-click', 'right-click' the item.

Note: Text in this format and symbol represents specific instructions, commentary, sidelights, or any additional information or notes that you should be aware of.

Warning: Text in this format and symbol means that failure to comply with the given instructions or information could result in damage to your computer or could cause bodily harm or loss of life.

Protecting Your Computer - Avoid Abusive Handling and Adverse Environments

Following the advice below will help ensure that you get the most out of your investment.

Your computer will serve you well if you take good care of it.
- Do not expose the computer to direct sunlight or place it near sources of heat.
- Do not subject it to temperatures below 0^oC (32^oF) or above 35^oC (95^oF).
- Do not expose the computer to magnetic fields.
- Do not expose the computer to moisture or rain.
- Do not spill water or liquid on the computer.
- Do not subject the computer to adverse shock and vibration.
- Do not expose the computer to dust and dirt.
- Do not place objects on top of the computer to avoid damaging the computer.
- Do not place the computer on rocky surfaces.

Here are some ways of taking care of your AC adapter.
- Do not connect the adapter to any devices other than your computer.
- Do not let water get into the adapter.
- Do not block the ventilation airway of the adapter.
- Keep the adapter in a cool and ventilated place.
- Do not step on the power cord or place heavy objects on top of it.
- Carefully tuck away the power cord and any cables away from pedestrian traffic.
- When unplugging the power cord, do not pull on the cord itself; pull on the plug instead.

- Keep the adapter away from children.
- The total ampere ratings of the equipment plugged in should not exceed the ampere rating of the cord if you are using an extension cord.
- The total current rating of all equipment plugged into a single wall outlet should not exceed the fuse rating.
- Do not connect another AC adapter to your notebook. This Notebook uses exclusively the AC adapter: Lishin LSE0202B2090 (90W), Lishin LSE0202C2090 (90W), Lishin LSE0202D2090 (90W), Liteon PA-1900-05 (90W), Liteon PA-1900-06 (90W), Liteon PA-1121-22 (120W), Lishin 0227A20120 (120W).

When cleaning the computer, observe these steps:
1. Power off the computer and remove the battery pack.
2. Disconnect the AC adapter.
3. Use a soft cloth dampened with water. Do not use liquid or aerosol cleaners.

Contact tech support or see your service technician if any of the following occurs:
- Computer has been dropped or the body has been damaged.
- Liquid has been spilled into the product.
- The computer does not operate normally.

Cleaning the Ventilation Grills:
It is suggested that you clean the ventilation grills regularly to maintain optimal thermal regulation of the notebook. To do this, you may use a soft brush or a vacuum cleaner (with appropriate head adapter) to remove the dust buildup on the ventilation grills.

Chapter Summaries

The following is a summary of the available chapters and appendices in this manual.

Chapter 1: Getting to Know the Basics
 In this chapter, you will learn the basic operations and features of your computer. It gives you a general understanding of the components of your computer.

Chapter 2: BIOS Setup / Security
 In this chapter, you will learn how to change various firmware settings and what the settings mean. Also, you will learn how to take advantage of the built-in security feature provided by the BIOS.

Chapter 3: Battery Power & Power Management
 In this chapter, you will learn the fundamentals of power management and how to use them to achieve longer battery life.

Chapter 4: Upgrading Your Computer
 In this chapter, you will learn how to upgrade the system memory and the hard disk drive, and how to install a wireless mini PCI card.

Chapter 5: Troubleshooting
 In this chapter, you will learn how to solve common hardware and software problems.

Appendix A: Product Specification
 In this section, you will find a list of the computer's system specifications.

Appendix B: Agency Regulatory Notices
 In this section, you will find the general electro-magnetic and safety regulatory information.

Appendix C: Agency Regulatory Notices
 In this section, you will find the cyberlink power cinema guide information.

C H A P T E R ▼ O N E

GETTING TO KNOW THE BASICS

This chapter introduces the features and

components of the computer.

Performance Features

■ **High-Performance Processor**
The notebook PC is equipped with a powerful Mobile Intel Pentium M processor of the latest sub-micron process, processor technologies, and high bus bandwidths.

■ **Advanced Graphic Engine**
The system is assembled with high-performance nVidia GFX 6800 with 256MB DDR. The PCI-Express high-end graphics engine offers excellent graphics performance for the most demanding professionals or gamers. The advanced graphics chip also incorporates a hardware-based motion-compensation engine, which gives you smooth MPEG video playback. DirectX 9 graphics capability also adds realism to PC games.

■ **LCD Display**
The computer is equipped with a wide 17-inch TFT high-resolution display panel for clear text and brilliant colors.

■ **Expandability**
The system offers upgradeable hard disk drive slots and dual DDRII SDRAM sockets for expansion. This allows the user to easily increase the storage and system memory capacities as the need arises.

■ **Built-in Multiple Card Reader**
There is a built-in 4-in-1 card reader to access many of the portable media formats (SD Card, MS Card, MMC Card, and MS-Pro Card).

■ **Ethernet Port**
The system provides a built-in gigabit Ethernet network adapter for high bandwidth network connection.

■ **Firewire (IEEE1394 / 1394a) and USB2.0 ports**
   In addition to a full array of built-in I/O ports, the computer offers
   IEEE1394 for ultra high-speed connection to high bandwidth
   digital video devices and USB2.0 ports to connect to any
   USB-based peripheral devices.

■ **Wireless LAN**
   The optional internal Wireless LAN module allows your
   notebook to connect wirelessly to other 802.11-enabled
   systems, devices, or a network.

■ **Built-in Audio Subwoofer**
   The optional subwoofer gives you enhanced low-frequency
   response for audio enjoyment.

System At A Glance

Top View
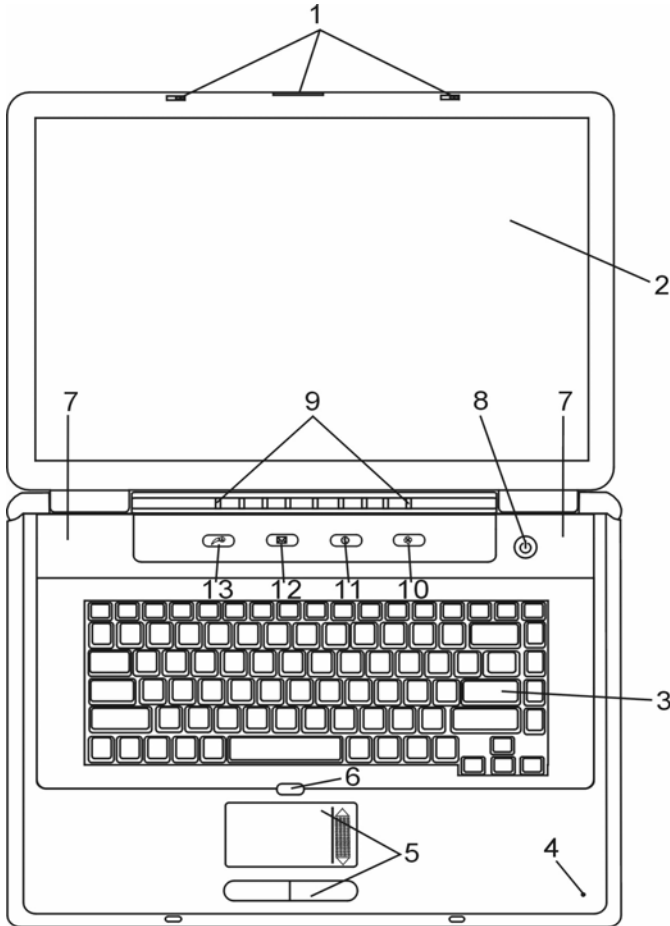
1. LCD Latch

The LCD latches lock / unlock the LCD panel.

2.   LCD Display

The panel is where the system content is displayed.

3.   Keyboard

The keyboard is used to enter data. It has an embedded numeric keypad and cursor control keys. (See Keyboard Section for details.)

4.   Built-in Microphone

The built-in microphone records sound.

5.   Touch Pad

The touch pad is a built-in pointing device with functions similar to a mouse.

6.   Touch Pad Disable / Enable Button

The button enables or disables Touch Pad function.

7.   Built-in Stereo Speakers

The built-in speakers output the sound in stereo.

8.   Power / Suspend Button

The power/suspend button turns the notebook on and off and it also acts as a system suspend key. Press momentarily to turn on the system. Press and hold for at least 4 seconds to turn off the system. How this key behaves can be defined in the [Start > Settings > Control Panel > Power Options > Advanced] menu. Press the power / suspend button again to return from the suspend mode. (See Chapter 3 for more details on system suspend function.)

9.   LED Status Indicator

The LED Status indicators reveal the status of these functions: Numeric keypad, cap lock, scroll lock, WLAN module enabling and

disabling and also the ODD and HDD activities. (See the LED Status Indicator Section for details.)

The LED Status indicators also reveal the status of the system power state and battery-charging state. See the LED Status Indicator Section for details.

10. Silent Mode Button

Pressing the key enables the system to lower its power usage; therefore the fan speed is reduced to achieve the lowest operating noise.

You may need to go to BIOS Setup to enable Silent Mode for this button. See Chapter 2 for details.

11. Outlook Express Quick Key

Pressing the button launches Outlook Express in Windows.

12. Internet Explorer Quick Key

Pressing the button launches Internet Explorer in Windows.

13. Power Cinema Multimedia Player Launch Key (Optional)

The key allows you to watch movies files, listen to music, or view photos in the optical drive or hard disk drive without having to boot to Windows.

Or it is a Windows media player launch function instead if you do not have Linux software.

Note: The way the Power Cinema software works is that when the quick key is pressed (when the system is in Power-Off mode), the system boots to a Linux-based O/S and media player application in a separate hard drive partition.

Front and Rear Views
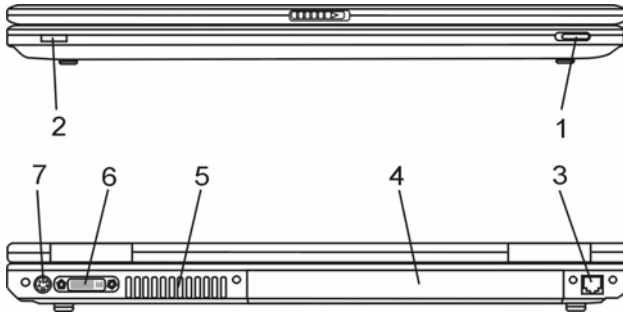
Warning: Do not place any heavy objects on the top of the notebook. This may damage the display.

1.   Wireless On/Off Switch
Use the Switch to disable or enable the Wireless function.

2.   Consumer IR Receiver
This is where the input from the Remote Control is received.

3.   Modem Port
This is where you plug the phone jack (RJ-11) for fax/modem functions.

4.   Battery Pack
The battery pack is a built-in power source for the notebook.

5.   Ventilation Grill
The fan grill is where air is exchanged to dissipate the internal heat. Do not block this airway completely.

6. DVI-I Port

The DVI-I video output port is for connecting the external LCD monitor or projector.

7. TV (S-Video) Port

The S-Video port permits you to redirect the screen output to a television set or any analog video playback device. This TV Port is copyright protected; when a DVD movie is played, the output is scrambled to prevent analog recording.

Side Views
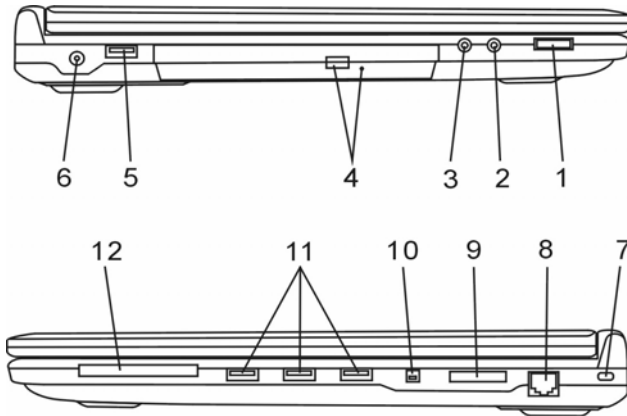
Warning: Do not place any heavy objects on the top of the notebook. This may damage the display.

1.   Audio Volume Dial
Use the volume dial to control the loudness of the speakers.

2.   Stereo Headphone / SPDIF-out Jack
The stereo headphone jack (3.5-mm diameter) is where you connect the headphones or external speakers. Alternatively, you may connect the SPDIF output to an external DTS, AC3, or PCM sound processor / decoder in your home stereo system.

3.   Microphone Jack
The microphone jack (3.5-mm diameter) is where you connect a microphone.

4. Optical Drive and Disk Eject Button and Manual Eject Key

1-9

Hole

If your computer comes with the Combo drive, DVD-RW, DVD+RW, or DVD-Dual drive, you may save data onto a CD-R / CD-RW or DVD RW disc. Press the eject button to eject the disk tray. The manual eject keyhole allows you to manually eject a jammed disk.

5.   USB2.0 Port (x1)

The Universal Serial Bus (USB2.0-compliant) port allows you to connect a wide variety of devices to your computer at a rate of up to 480 Mbps. This port conforms to the latest USB2.0 plug-and-play standards.

6.   Power Jack (DC-in)

The DC-out jack of the AC Adapter connects here and powers the computer.

7.   Kensington Lock Key Hole

A Kensington-type security lock latches to this keyhole for anti-theft purposes.

8.   Ethernet / LAN Port

The port connects to a network hub via the RJ-45 cable and also conforms to 10/100Base-TX transmission protocol.

9.   4-in-1 Card Reader

The 4-in-1 Card Reader supports SD Card, MS Card, MMC Card, and MS-Pro Card.

10.   Firewire / IEEE1394 / 1394a Port

This is a high-speed serial data port. You may connect any Firewire-ready device to this port.

11. USB2.0 Port (x3)

The Universal Serial Bus (USB2.0-compliant) port allows you to connect a wide variety of devices to your computer at a rate of up to 480 Mbps. This port conforms to the latest USB2.0 plug-and-play standards.

12. Express Card Slot (Type II)

The slot is where the Express Card (Type II) is inserted.

Note: For safety consideration, please insert the dummy card when not using the Express card.

Bottom View
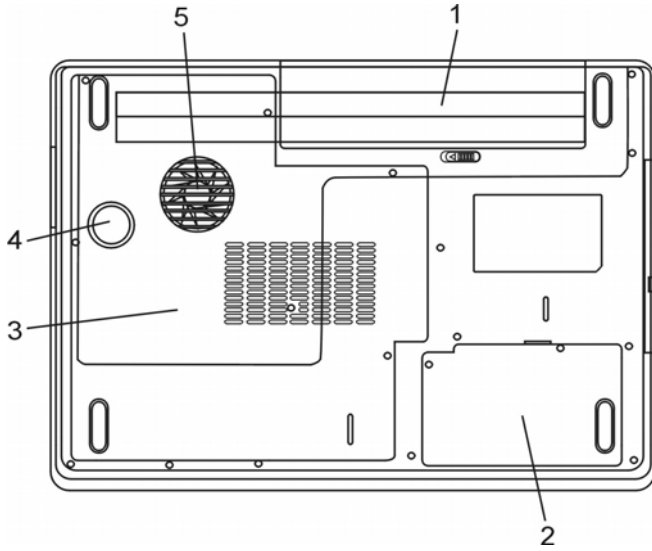
1. **Battery Pack and Battery Latch**
   The battery pack is a built-in power source for the notebook. Slide the battery latch to release the battery pack.
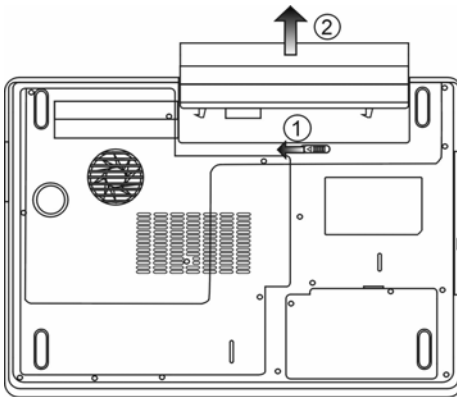
2. Hard Disk Drive Cover

The system's hard disk drive is located under the cover. The HDD can be upgraded to a larger capacity. (See Chapter 4 for instructions on an HDD upgrade.)

3. System Device Cover

The system's processor with cooler assembly, Wireless LAN module and DDR memory module are located under the case cover. The system memory can be upgraded to a larger capacity. (See Chapter 4 for instructions on a memory upgrade.)

4. Audio Subwoofer

The built-in audio subwoofer gives you enhanced bass response.

5. Ventilation Grill

The fan grill is where air is exchanged to dissipate the internal heat. Do not block this airway completely.

Warning: Do not block the Fan Grill outlet. Place the machine on hard surfaces only. The bottom case may get very hot.

AC Adapter
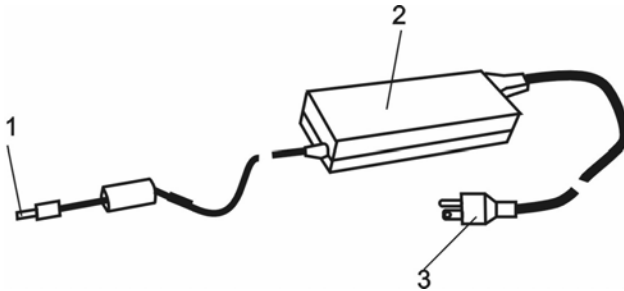
1.   **DC-out Connector**
The DC-out connector docks to the power jack (DC-in) on the computer.

2.   **Adapter**
The adapter converts alternating current into constant DC voltage for the computer.

3.   **AC Plug**
The AC plug plugs to the AC wall outlet.

Warning: Make sure you are using a standard 3-prong AC wall socket with a ground pin. If not, you may feel a slight tingling sensation on any of the computer's metal parts such as the I/O ports. This is caused by leakage current when the AC adapter is not properly grounded (via the ground pin). However, the amount of leakage current is within the safety regulation and is not harmful to the human body.

LED Status Indicator

The LED Status Indicator displays the operating status of your notebook. When a certain function is enabled, an LED will light up. The following section describes its indication.

System & Power Status Indicators

LED Graphic Symbol	Indication
⏻	Blue light indicates the system is ON.
((♀)) Å	Blue light indicates the WLAN module is active.
☽	Blinking blue light indicates the notebook is in suspend mode.
🔋←	Blinking orange light indicates the battery is being charged. Blinking red light indicates the battery level is low.
🗄	Blue light indicates the hard drive and/or optical drive is being accessed.
🔒1	Blue light indicates the numeric keypad is activated.
🔒A	Blue light indicates the cap-lock is activated.
🔒↓	Blue light indicates the scroll-lock is activated.
✤	Blue light indicates the Silent Mode is enabled.

Keyboard Features

Function Keys (Quick Keys)

Graphic Symbol	Action	System Control
☾	Fn + F1	Enters Suspend Mode.
▬◢ ⊘	Fn + F3	Turns the battery warning beep off or on.
▢⧹	Fn + F4	Changes Display Mode: LCD-only, CRT-only and LCD&CRT.
◀)))	Fn + F5	Turns Speaker Volume up.
◀)))	Fn + F6	Turns Speaker Volume down.
☼+	Fn + F7	Increases Display Brightness.
☼−	Fn + F8	Decreases Display Brightness.
	Fn + F10	Press Fn+F10 to enter the Turbo Mode. The CPU speed will increase by 10%. Press Fn+F10 again to exit the Turbo Mode. The CPU speed will return to normal.
	Fn + Num Lock	Enables the embedded keypad to work in numeric mode. The keys act like numeric keypads in a calculator. Use this mode when you need to do a lot of numeric data entry. An alternative would be to connect an external numeric keypad.
	Fn + Scroll Lock	Press the Scroll Lock key and then press ↑or ↓to move one line up or down.

For various system controls, press the Fn (Function) key and the Fx key simultaneously.

Windows Keys

Your keyboard also has two Windows keys:

1. Start Key

This key allows you to pull up the Windows Start Menu at the bottom of the taskbar.

2. Application Menu Key

This key brings up the popup menu for the application, similar to a click of the right mouse button.

Embedded Numeric Keypad

Press Fn+NumLock to enable the embedded numeric keypad. The numbers are printed in the upper right corner of a key, in a color different from the normal characters. This key pad is complete with arithmetic operators (+, -, * , /).

Press Fn+NumLock to revert to normal character keys.
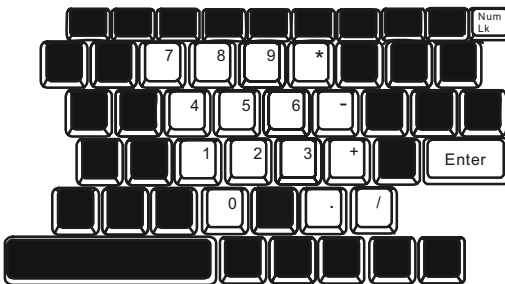
Touch Pad

The built-in touch pad, which is a PS/2-compatible pointing device, senses movement on its surface. As you move your fingertip on the surface of the pad, the cursor responds accordingly.

The following items teach you how to use the touch pad:
1.   Move your finger across the touch pad to move the cursor.
2.   Press buttons to select or execute functions. These two buttons are similar to the left and right buttons on a mouse. Tapping on the touch pad twice is similar to clicking the left button of a mouse.

Function	Left Button	Right Button	Equivalent Tapping Action
Execution	Click twice quickly		Tap twice (at the same speed as double-clicking the mouse button)
Selection	Click once		Tap once
Drag	Click and hold to drag the cursor		Tap twice quickly and on the second tap hold finger to the touch pad to drag the cursor
Access Context Menu		Click once	
Move One Page Up or Down			

Tips on Using the Touch Pad:
1.   The double-click speed is timed. If you double-click too slowly, your notebook responds as if you single-clicked twice.
2.   Keep your fingers dry and clean when using the touch pad. Also keep the surface of touch pad clean and dry to prolong its life.
3.   The touch pad is sensitive to finger movements. Hence, the lighter the touch, the better the response. Heavy touch does not produce a better response.

Graphic Subsystem

Your computer uses a high performance 17-inch active matrix TFT panel with high resolution and multi-million colors for comfortable viewing. The nVidia NV42M video graphics accelerator, which is Microsoft DirectX 9-compatible, performs graphics rendering at a lighting-fast speed.

Adjusting the Display Brightness

The notebook uses special key combinations, called hot keys, to control brightness.
Press Fn+F7 to increase the brightness.
Press Fn+F8 to decrease the brightness.

Note: To maximize your battery operating time, set the brightness to the lowest comfortable setting, so that the internal backlight uses less power.

Extending the Life of the TFT Display Device

Observe the following guidelines to maximize the life of the backlight in the display.

1.   Set the brightness to the lowest comfortable setting (Fn+F8).
2.   When working at your desk, connect your notebook to an external monitor and disable the internal display Fn+ F4.
3.   Do not disable the suspend time-outs.
4.   If you are using AC power and have no external monitor attached, change to suspend mode when not in use.

Opening and Closing the Display Panel

To open the display, push the LCD latch inwardly and lift up the lid. Then tilt it to a comfortable viewing position.

To close the display cover, fold it down gently until the LCD latches click into place.

Warning: To avoid damaging the display, do not slam it when closing. Do not place any object on top of the computer when the display is closed

Audio Subsystem

Your computer's audio subsystem is Sound Blaster Pro-compatible.

Adjusting the Volume Manually

To increase the volume, press Fn+F5.

To decrease the volume, press Fn+F6.

Adjusting the Audio Volume in Windows

1. Click the speaker symbol in the task tray in Windows.

2. Drag the volume control bar up or down to adjust the volume.

3. To temporarily silence the speaker without changing the volume setting, click Mute.

Voice Recording

A built-in microphone allows you to record sound. You will need to use audio processing software to enable the built-in microphone. For example, you may use Microsoft Sound Recorder.

Modem

Your computer comes with a 56K V.92 internal fax/modem and a phone jack (RJ-11), which is located on the left side of your computer.
Use a telephone cable to connect the computer to the telephone wall outlet.

Connecting the Modem

1.   Plug one end of the phone line into the modem port located on the rear side of the computer. (For EMI compliance, you need to clip the included EMI CORE to the phone line.)

2.   Plug the other end of the line into the analog phone wall outlet.

Depending on where your computer is used, you may need to change settings in the modem. Correct settings will allow you to maintain a stable connection in a country with a telecommunication system that may be different to others.

To change the modem setting, do the following:

1.   Go to [Start > Settings > Control Panel] and double-click on the Modem Settings icon. You will see a similar dialog box.
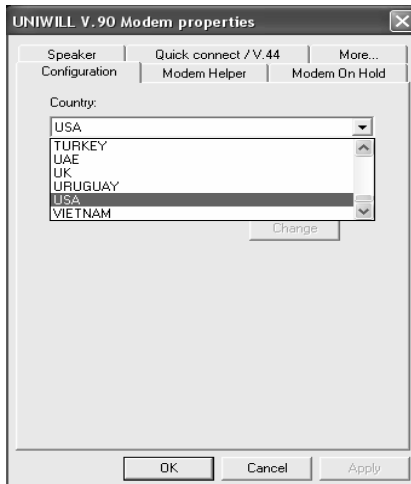
2.   Click on the pull-down menu and select the country where it is

applicable. Click on OK to exit.

Ethernet

Your computer is equipped with a 100/1000Base-TX Fast Ethernet network adapter. Connect the active LAN cable to the RJ-45 LAN port located on the left side of the computer. This allows you to access and transmit data in the local area network.

Connecting to the Network

Use the Unshielded Twisted Pair (UTP) Ethernet cable only.

1.   Insert one end of the UTP cable into the network connector until the connector snaps securely into the receptacle.

2.   Either connect the other end of the cable to an RJ-45 jack wall outlet or to an RJ-45 port on a UTP concentrator or hub in the network.

Cabling Restriction for Networks

The following restrictions should be observed for 100/1000BASE-TX networks:

■   The maximum cable run length is 100 meters(m) (328 feet[ft]).

■   For 100/1000-Mbps operations, use Category 5 wiring and connections.

Note: Consult the Windows manual and / or Novell Netware user's guide for the software installation, configuration, and operation of the network.

C H A P T E R ▼   T W O

BIOS SETUP AND SECURITY FEATURE

In this chapter, you will learn how to enter the BIOS Setup Menu and manipulate various hardware control settings. You will also learn how to use the built-in security features.

The Setup Utility is a hardware configuration program built into your computer's BIOS (Basic Input/Output System). It runs and maintains a variety of hardware functions. It is a menu-driven software, which allows you to easily configure and change the settings.

The BIOS contains manufacture's default settings for the computer's standard operations. However, there are occasions when you may be required to modify the default settings in the BIOS. For example, you may need to configure the BIOS power management (APM) settings if you are using DOS, or non-Windows operating system.

The BIOS allows you to set up passwords to limit access to users. This is an important feature because a great deal of vital information is carried within the computer nowadays. Unauthorized access can be prevented. Later in this chapter, you will learn how to use this security feature.

Entering the BIOS Setup Screen

First turn on the power. When the BIOS performs the POST (Power-On Self Test), press F2 key quickly to activate the AMI BIOS Setup Utility.

Note: You may need to press F2 key fairly quickly. Once the system begins to load Windows, you may have to retry by cycle-power on again

Leaving the BIOS Setup Screen

When you have finished modifying the BIOS settings, exit the BIOS. It takes a few seconds to record changes in the CMOS.

BIOS Action Keys

Function Key	Command	Description
ESC	Exit	Leaves a sub-menu to return to the previous menu OR exits the BIOS setup while saving changes.
Enter	Go to Sub Screen	Shows the Sub Menu
F1	General Help	Shows the Help Screen
F10	Save and Exit	Saves changes and reboots the computer.
<Tab>	Select a field	Selects the next field.
↑	Select an item	Selects the next upper item.
↓	Select an item	Selects the next lower item.
-	Lower value	Selects the next value within a field.
+	Higher value	Selects the next value within a field.

Modifying the BIOS Settings

The AMIBIOS setup main menu is subdivided into sub-menus. Each menu item is described in this section.

Main Setup

Under this menu, you may change time/date and view basic processor and system memory information.

Item	Selections / Sub-menu	Description
Date	N/A	Type in the current date, in MM/DD/YY format.
Time	N/A	Type in the current date, in HH:MM:SS format.

Advanced Setup

►IDE Configuration

Item	Selections / Sub-menu	Description
Secondary IDE Master	ATAPI CDROM	The secondary master controls the ATAPI CD-ROM drive.

Note: The sub-menu is not selectable. Press enter to view information of the storage device.

Item	Selections / Sub-menu	Description
Remote Control	Enable Disable	Enable or Disabled the remote control IR port
CPU Execute-Disable-Bit	Enable/Disable	When enabled the CPU will provide the system with protection from viruses that use the over run buffer vulnerability.
LCD Panel power Saving	Enable/Disable	When enabled dims the LCD in long batter life mode to conserver power.

Security Setup

►Boot Settings Configuration

Item	Selections / Sub-menu	Description
Change Supervisor Password	N/A	Install or Change the Password
Change User Password	N/A	Install or Change the Password
Clear User Password	N/A	Install or Change the Password

Using Password Protection
Two Levels of Password Protection are available. The BIOS provides both a Supervisor and a User password. If you try to activate both passwords, the Supervisor password must be set first.

The passwords activate two different levels of protection:

1.   System always asks for password every time it is powered on.

2.   System asks for password only when you attempt to enter BIOS utility.

The passwords are encrypted and stored in NVRAM. Make sure you write them down or memorize them. If you lost the passwords, the computer may need to be sent back to the factory or to an authorized service dealer to reset the passwords.

Power Setup

Item	Selections / Sub-menu	Description
Long Battery Life Mode	Enable Disable	[When enabled, maximum battery life can be achieved. The processor performance is lowered.

Note: The Suspend Mode selection in BIOS only applies to older Windows version (such as Windows 3.1 or Windows 95 or NT4) or non-Windows operating system. In Windows ME / 98SE / 2000 / XP, suspend mode and settings are determined by settings in the Power Options Properties (Start > Control Panel > Power Options).

Boot Setup

Item	Selections / Sub-menu	Description
Quiet Boot	Disabled Enabled	When Enabled, the system will display OEM logo instead of the POST messages. When Disabled, the system will display POST messages (i.e. devices information.)

►Boot Device Priority

Item	Selections / Sub-menu	Description
1st Boot Device	Removable Dev. CD/DVD Hard Drive Realtek Boot Agent Disabled	Set the type of device for the 1st drive BIOS attempts to boot from. If Realtek Boot Agent is selected, system will attempt to load boot sector from the Ethernet port.
2nd Boot Device		Set the type of device for the 2nd drive BIOS attempts to boot from.
3rd Boot Device		Set the type of device for the 3rd drive BIOS attempts to boot from.
4th Boot Device		Set the type of device for the 4th drive BIOS attempts to boot from.

Note: If you select Realtek Boot Agent, the system will attempt to boot from the network.

Note: When the BIOS performs POST, you may also press F12 Key to enable the Boot Device selection menu. You may choose CD/DVD, Hard Drive, or Realtek Boot Agent as the first storage device to boot from. If you have already connected a USB Floppy Disk Drive before powering up, it will appear as a Removable Device in the Boot Device selection menu

Exit Setup

Item	Selections / Sub-menu	Description
Saves Changes and Exit	N/A	After you have completed the BIOS settings, select this item to save all settings, exit BIOS Setup utility, and reboot. New system settings will take effect on next power-up. F10 key can be used for this operation.
Discard Changes	N/A	Discards changes done so far to any of the setup questions.
Load Optimal Defaults	N/A	Load Optimal Default value for all the setup questions. F9 key can be used for this operation.

C H A P T E R ▼ T H R E E

BATTERY POWER & POWER

MANAGEMENT

In this chapter, you will learn the fundamentals of power management and how to use it to achieve longer battery life.

In this chapter, you will learn how to operate your notebook on battery power, how to handle and maintain the battery pack, and learn about the system's power saving features.

The TFT display, central processor, and hard disk drive are the major hardware subsystems that consume the most power. Power management dictates how these key components should behave to conserve power. For example, you can have the system turn off its display after 2 minutes of inactivity to save power. Efficient power management can help you work longer sessions before having to recharge the battery.

The Battery Pack

Lithium-Ion Battery

Your notebook uses an eight-cell Lithium-Ion battery pack that provides power when you don't have access to an AC outlet.

Note: It is necessary that you charge the battery pack for at least 6 hours before using it for the first time.

Note: In the Standby Suspend mode, a fully charged battery loses its power in roughly 1/2 day or less. When not being used, the battery's power will deplete in 1-2 months.

Battery Low-Power Warning

1.   Low Battery Warning

Low battery condition occurs when battery power is reduced to 6%. The red battery status LED indicator blinks and the system beeps once every 16 seconds or so.

2.   Very Low Battery Warning

Very Low battery condition occurs at 3% power remaining. The red battery status LED indicator blinks and the system beeps at 4-second intervals.

When the notebook warns you of its low battery condition, you will have about 3-5 minutes to save your current work.

Warning: Do not expose battery packs to temperatures below 0 degrees Celsius (32 degree F) or above 60 degrees C (140F). This may adversely affect the battery pack.

Note: Press Fn+F3 to turn off the battery warning beep.

Installing and Removing the Battery Pack

To Remove the Battery Pack:

1. Place the notebook bottom-side up on a flat and secure surface.
2. Push the latch and pull the battery's hard case away from the notebook.
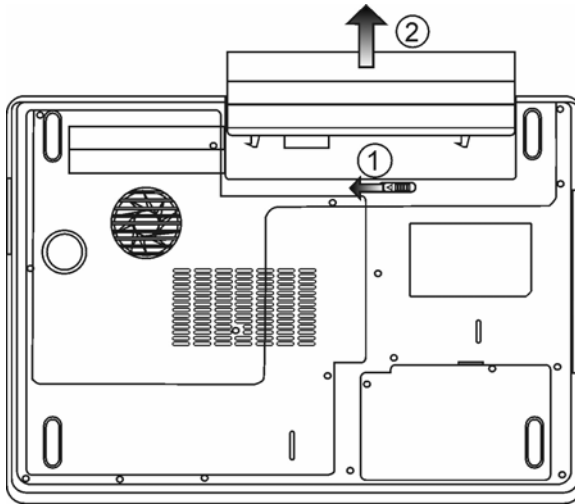
To Install the Battery Pack:

1. Place the notebook bottom-side up on a flat and secure surface.
2. Carefully insert the battery pack into the battery compartment of the notebook.
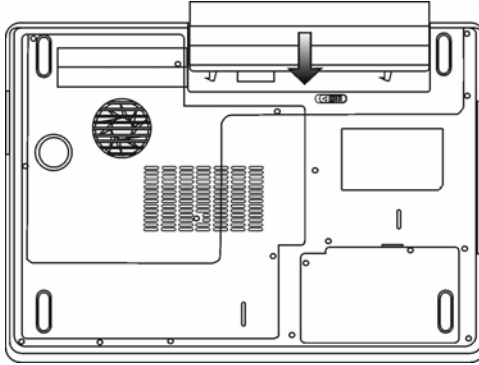
Charging the Battery and Charging Time

To charge the battery, while the battery pack is in the notebook, plug the AC adapter into the notebook and an electrical outlet. The charging time is approximately 4-6 hours when the notebook is turned off and approximately 6-10 hours when the notebook is turned on.

When the battery is fully charged, the battery charge indicator becomes dark.

Note: If the system runs at heavy loading or in a high temperature environment, the battery may not be fully charged. You need to continue to charge it with the AC adapter plugged in until the charging LED turns dark.

Checking the Battery Level

You can check the remaining battery power in the Windows battery status indicator, which is located at the lower right-hand corner of the task bar. (If you do not see a battery or AC-in icon on the task tray, go to the Power Options Properties box and click on the Advanced tab. Check off ``Always show icon on the task bar``.) Alternatively, you can access the power meter by clicking the Power Options icon in the Windows Control Panel.

Prolonging the Battery's Life and Usage Cycles

There are things you can do to prolong the use of the battery.

■ Use the AC adapter wherever an AC wall outlet is available. This will ensure uninterrupted computing.
■ Purchase an additional battery pack.
■ Store the battery pack in room temperature. Higher temperatures tend to deplete the battery's power faster.
■ Make good use of the power management function. Save To Disk (Hibernate) saves the most energy by storing current system contents in a hard disk space reserved for this function.
■ The life expectancy of the battery is approximately 300 recharges.
■ See the notices section in the beginning of the user manual on how to care of the battery pack.

Note: Read the section Protecting Your Notebook in the beginning of this manual for tips about how to maintain the battery pack.
Note: To achieve optimal battery performance, you may need to do a battery calibration at a 3-month interval. To do this:

1. Fully charge the battery.
2. Then discharge the battery by entering the BIOS setup screen. (Press F2 key as soon as you turn on the computer. And let it remain at the setup screen until the battery runs out.
3. Fully charge the battery again.

Using Windows Power Options

Windows Power Management provides basic power saving features. In the Windows Power Options Properties [Start > Settings > Control Panel > Power Options] dialogue box, you may enter time-out values for the display and hard disk drive. Windows power manager saves power by turning off the hard drive after 1 minute of inactivity, for example.

Windows' Power Schemes

The power management control panel in Windows XP, known as Power Schemes, is designed to provide the user with an easy-to-use interface. The Power Schemes tab can be found in the Power Options Properties panel that is accessible via the control panel window.

Schemes are easy to understand, based on notebook usage scenarios, and control not only processor power usage but other system peripherals as well.

Go to [Start > Settings > Control Panel] and double-click the Power Options icon.

Always on mode puts the processor into maximum performance mode, which provides no power saving. The other schemes control processor performance based on demand. For example, Max Battery mode lowers the processor's speed and voltage to conserve power as much as possible.
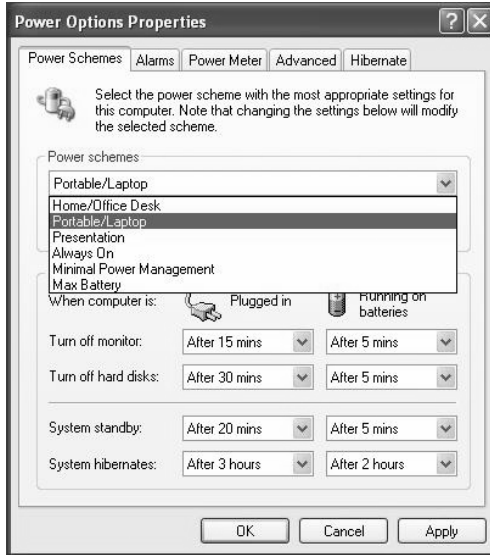
In this dialog box, you can manually set the LCD and hard drive's time-out values in the Plugged in column and in the Running on batteries column. Lower time-out values will save more battery power.

Note: Also consult the Windows user guide for more information on how to use Windows power management functions.

Note: Actual dialogue box may appear slightly different from what is shown above.

Suspend Mode

Standby Suspend

The system automatically enters this mode after a period of inactivity, which is set in the Power Schemes dialog box. In Standby mode, hardware devices, such as the display panel and hard disk, are turned off to conserve energy.

Hibernate Suspend

In this mode, all system data is saved in the hard disk before powering down. When this mode is activated, all system state and contents are saved to the hard disk drive after a period of inactivity defined by the user. No power or very little power is drawn from the battery module under this mode.

However, depending on how much RAM has been installed on your computer, the amount of time the system requires to restore all its previous contents can range from 5 to 20 seconds.

For Windows 2000 / XP users, hibernation is handled by the operating system; therefore, no special disk partition or disk file is necessary.

If you wish to activate Hibernate mode, you need to enable Hibernate Support in the Hibernate tab of the Power Options menu.

Note: Do not install or remove the memory module when the system is in the suspend mode.

Note: Actual dialogue box may appear different from what is shown above.

Power Button Action

The notebook PC's power button can be set to turn off the system or activate the suspend mode.

Go to [Start > Settings > Control Panel > Power Options] and click on the Advanced tab. In the pull-down menu, select how you wish the power button to work as.
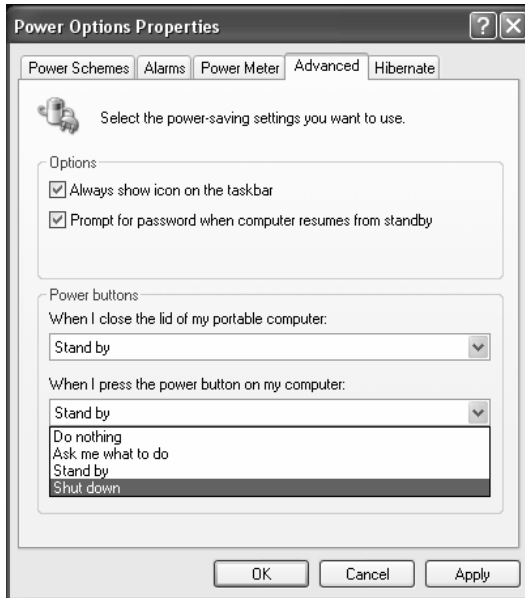
Note: Actual dialogue box may appear different from what is shown above.

Warning: In the *When I close the lid of my portable compute*r pull-down menu, DO NOT select *Do nothing* – otherwise the system will still run at high speed while the processor's fan grill is fully blocked by the closed LCD panel. The heat will damage the LCD panel.

Low Battery Warning

You can define when and how the system warns you of its battery-low condition.

Go to the Alarms tab in the Power Options Properties box. If you wish to hear audible beeps, click on the Alarm Action button and put a check on Sound Alarm.
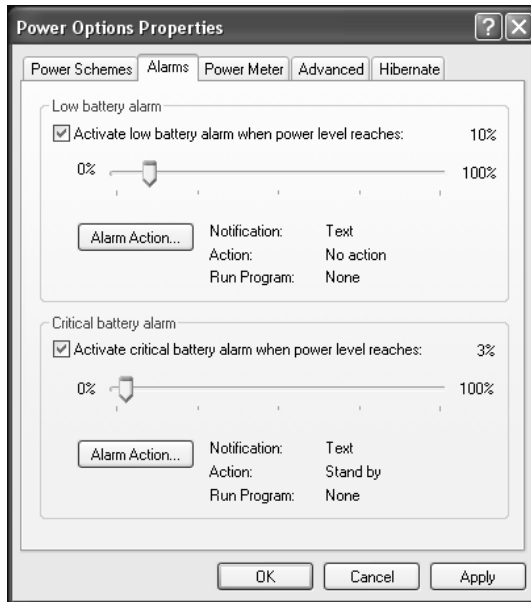
Note: Consult the Windows user guide for more information on how to use Windows power management functions.

Note: Actual dialogue box may appear different from what is shown above.

Power Menu Quick Access

Instead of making specific selections in the Power Options Properties box, you can quickly and easily specify which pre-set power saving function you desire by clicking on the Battery icon at the lower right-hand corner of the task bar. (If you do not see a battery or AC-in icon, go to the Power Options Properties box and click on the Advanced tab. Check off ``Always show icon on the task bar``.) Select Max Battery if you want the system to enter suspend mode more often. Or, select Always On if your notebook PC is plugged into an AC power source.
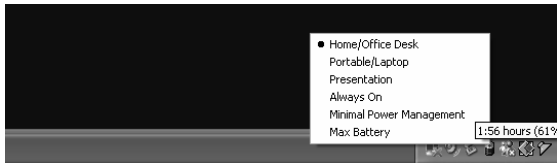
Note: Actual dialogue box may appear different from what is shown above.

C H A P T E R ▼   F O U R

UPGRADING YOUR COMPUTER

In this chapter, you will learn how to upgrade the DRAM and hard disk drive, and how to install the optional wireless LAN mini PCI.

Warning: We strongly recommend you contact Alienware when upgrading your system. When upgrading, please turn off the power, and disconnect the LAN and Modem cable first for your safety. After the upgrade is complete, please remember to screw all the screws before turning on the system.

Upgrading the Hard Disk Drive

Replacing the original drive with one of larger capacity can increase the hard drive capacity of your computer. The computer uses a 9.5 mm (height), 2.5-inch Serial ATA type hard disk.

Be sure to make a backup copy of all your data before attempting this operation.

Warning: A hard drive upgrade is a delicate process. Please observe the following instructions carefully or have a qualified technician install it for you. Damages due to mishandling of this procedure are NOT covered by the manufacturer's warranty.

Warning: Apply care when handling the hard disk.

■   Do not drop or apply any shock.

■   Do not press on the cover.

■   Do not touch the connector with your fingertips.

■   Mishandling of the hard drive can result in permanent loss of data. Make a backup copy of the drive's content before you remove it.

Note: Certain models that come with the IBM-brand hard drive emit a clattering sound when they are being rattled. This is a normal condition.

Upgrading the Hard Disk Drive

To replace the hard disk drive, do the following:

1. Turn OFF the computer. Unhook the AC cord and all cables/devices attached to the notebook. Remove the battery.
2. Place your hand on a large metal object momentarily to discharge any static electricity.
    3.   Locate and remove two Screw A's.
    4.   Remove HDD Cover.
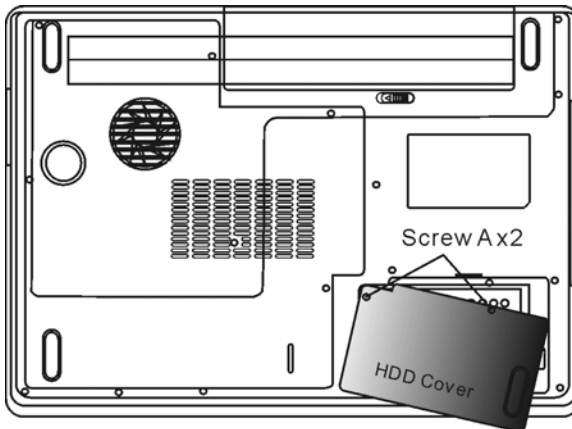
5. Locate and remove two Screw B's.
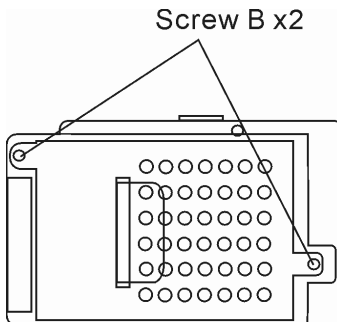
6. Push the HDD module to the right and separate it from the connector. Lift the module away from the bay.

HDD Connector
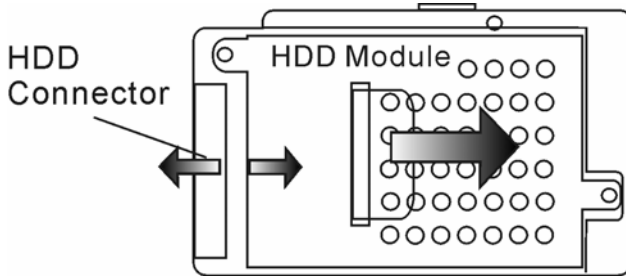
HDD Module

7. Locate and remove 4 Screw C's from the HDD module. Remove the metal case.

Screw C x2

Metal Case
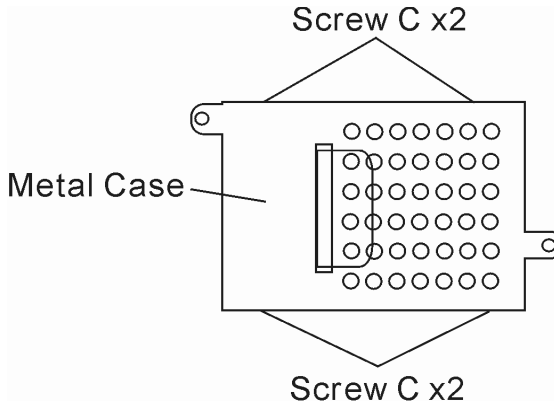
Screw C x2

8. Re-attach the metal cover to the new hard drive and tighten 4 Screw C's. Note the green PC board of the hard disk drive is facing against the metal case.

9. Re-attach the HDD module to the HDD connector. And re-attach 2 Screw B's.

10. Put the HDD cover back and re-attach 2 Screw A's.

Congratulations! You have now completed the hard drive upgrade. When you boot up the PC, you may need to create a primary HDD partition and reformat the new drive and re-install the O/S, drivers, and all the necessary applications.

Upgrading the System Memory

Many applications will generally run faster when the computer's dynamic memory capacity is increased. The computer provides two DDR2 memory sockets, located underneath the System Device Cover. You can increase the amount of memory by replacing the existing one with a dual inline memory module (commonly known as SO-DIMM) of a higher capacity. The SO-DIMM can be 128MB, 256MB, 512MB, or 1024MB in capacity. The SO-DIMM is of type DDR2 SDRAM, has 200 pins and runs on 2.5V. The SO-DIMM should be PC2 3200 or PC2 4200 compliant.

Warning: A memory upgrade is a delicate process. Please observe the following instructions carefully or have a qualified technician install it for you. Damages due to mishandling of this procedure are NOT covered by the manufacturer's warranty.

Warning: Changing memory while your computer is in suspend or power-saving mode may cause permanent damage to the hardware. Make sure you turn off the power and unplug the AC cord before proceeding with a memory upgrade.

Warning: You should only use the DIMM module that is approved by Alienware; otherwise the system may become unstable.

Installing a memory module (DIMM) into the system

To install the DIMM, do the following:

1.   Power OFF the notebook. Unplug the AC cord and all cables/devices attached to the notebook. Remove the battery.

2.   Place your hand on a large metal object momentarily to discharge any static electricity. Place the notebook on a flat surface and fully close the LCD lid.

3.   Locate and remove 6 Screw C's on the System Device Cover.
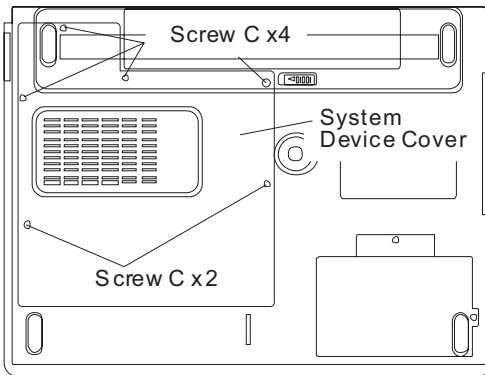
4. Remove the System Device Cover. The DIMM socket is now seen as shown below.

Dual DDR
DIMM Sockets
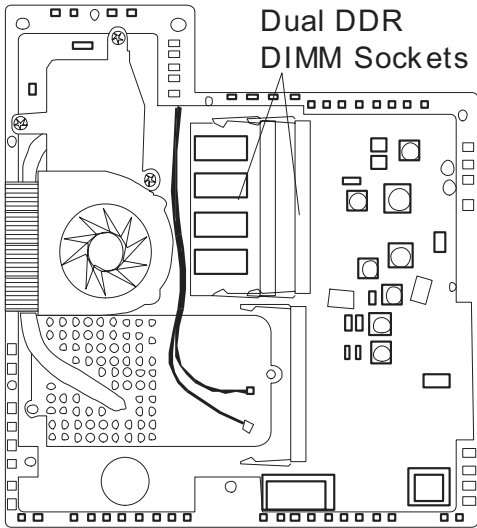
5.   If you need to remove an old DIMM from the socket, press
out on the latches located on both edges of the socket at the same
time. The DIMM should pop up to an angle of 30 degree (see
diagram below). Pull the DIMM module out of the memory socket.
Store away the DIMM for the future use.
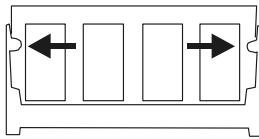
6.   Install the new DIMM module into the memory socket.
The DIMM will only fit in one orientation. Insert the DIMM at an
angle of approximately 30 degrees into the empty memory socket.
Then press it firmly so that the contact edge is driven into the
receiving socket.
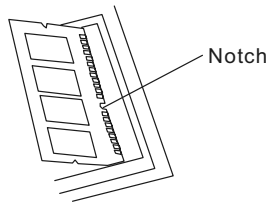
Notch

7.   Pivot the DIMM until the latches on both sides of the socket snap into place.

Note: Notice the notch on the DIMM. The notches should fit nicely with the socket.

8.   Put the System Device Cover back and tighten 6 Screw C's.

Congratulations! You have just completed the memory upgrade. When you boot up the computer, you should expect to see an increase in DRAM capacity.

Note: Your computer has been tested with a wide range of DIMM on the market. However, not all memory modules are compatible. Check with your system vendor for a list of compatible DIMM for your computer.

Adding a Mini-PCI Type Wireless LAN Card (Optional Device)

Your computer comes with a unique Mini PCI Card socket, which is located next to the DRAM socket and underneath the WLAN Module Cover. The socket allows the computer to add unique features such as wireless LAN (IEEE802.11x). Ask an Alienware customer service agent on the availability of the mini PCI card.

Warning: Installing a mini PCI card is a delicate process. Please observe the following instructions carefully or have a qualified technician install it for you. Damages due to mishandling of this procedure are NOT covered by the manufacturer's warranty.

Warning: Installing the mini PCI card while your computer is in suspend or power-saving mode may cause permanent damage to the hardware. Make sure you turn off the power and unplug the AC cord before proceeding with a memory upgrade.

Installing a Mini PCI Card into the System

To install a new Mini PCI card, do the following:

1.   Follow steps in the previous section, *Installing a memory module (DIMM) into the system*, to access the Mini PCI Socket.

Mini PCI
Socket

Antenna Cable
with Connector
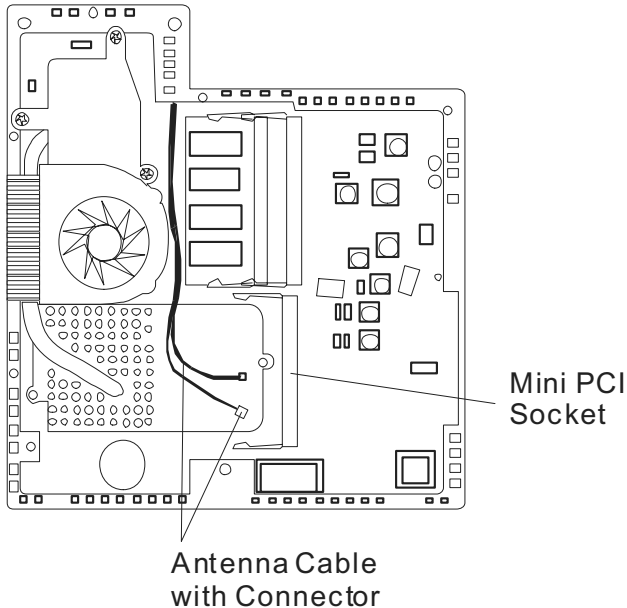
2.   The mini PCI card will only fit in one direction. Align the small notch in the module with the socket on the connector and insert the card at an angle of approximately 30 degrees into the empty socket. Then press it firmly so that the contact edge is driven into the receiving socket. Pivot the mini PCI card until the latches on both sides of the socket snap into place.

Note: If you want to remove a mini PCI card from the socket, press out on the latches located on both edges of the socket at the same time. The card should pop up to an angle of 30 degree.

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3.   Locate 2 antenna cables with connectors. Snap the cable onto the golden connector on the Mini PCI Wireless LAN card. *(Note: The connectors are fairly small! This may take some maneuvering. You may want to connect the antenna cables before inserting the wireless card into the socket.)*
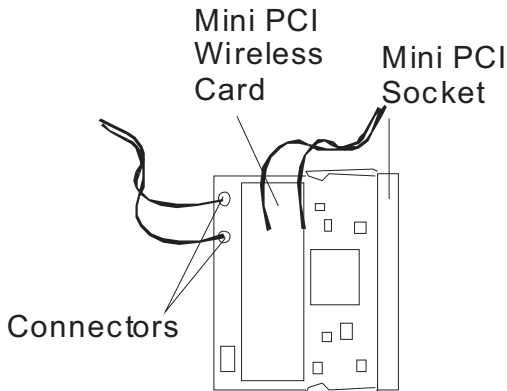
4.   Replace the System Device Cover and 6 Screw C's.

Congratulations! You have now completed the mini PCI card installation. During the next time the system boots to Windows, the system will prompt for driver location. Insert the Factory CD-ROM and point to the directory where the Wireless LAN driver can be found. In addition to installing the driver, you may also need to run a Setup.exe program to install the card's utility applications before it is fully operational.

C H A P T E R ▼ F I V E

TROUBLESHOOTING

In this chapter, you will learn how to solve
common hardware and software problems.

Your computer has been fully tested and complies with the system specifications before shipping. However, incorrect operations and/or mishandling may cause problems.

This chapter provides a reference for identifying and correcting common hardware and software problems that you may encounter.

When you encounter a problem, you should first try to go through the recommendations in this chapter. Instead of returning the computer and waiting for repair, you may easily solve the problems by considering the following scenarios and possible solutions. If the error continues, contact your reseller for service information.

Before taking further actions, consider the following suggestions:

■ Check to see if the problem persists when all the external devices are removed.

■ Check to see that the green light indicator on the AC adapter is lit.

■ Check to see the power cord is properly plugged to the wall outlet and to the computer.

■ Check to see the power indicator of the computer is on.

■ Check to see if your keyboard is operational by pressing and holding any key.

■ Check for any incorrect or loose cable connections. Make sure the latches on the connectors latch securely on to the receptor end.

■ Be sure you have not performed an incorrect setting on the

hardware devices in the BIOS Setup utility. A faulty setting may cause the system to misbehave. If you are not sure of the changes you made, try to restore all the settings to factory defaults.

■   Be sure all the device drivers are installed properly. For example, without the audio driver properly installed, the speakers and microphone will not work.

■   If external devices such as an USB camera, scanner, or printer do not function correctly when connected to the system, it is usually the device's own problem. Consult the device's manufacturer first.

■   Some software programs, which have not gone through rigorous coding and testing, may cause problems during your routine use. Consult the software vendor for problem solving.

■   Legacy peripheral are not plug-and-play capable. You need to restart the system with these devices powered up and connected first.

■   Be sure to go to BIOS SETUP and load DEFAULT SETTING after BIOS re-flash.

■   Be sure the Quick Key Lockout Switch on the bottom of the computer is not engaged; otherwise, the quick keys will not work.

Audio Problems

No speaker output -

■ Turn up the volume dial located at the right edge of the computer. See Chapter 1 for its location.

■ Software volume control is turned down in Microsoft Sound System or is muted. Double-click the speaker icon on the lower right corner of the taskbar to see if the speaker has been muted or turned down all the way.

■ Most audio problems are software-related. If your computer worked before, chances are software may have been set incorrectly.

■ Go to [Start > Settings > Control Panel] and double-click the Sounds and Audio Devices icon. In the Audio page, make sure that Vinyl AC'97 Audio (WAVE) is the default playback device.

Sound cannot be recorded -

■ Double-click the speaker icon on the lower right corner of the taskbar to see if the microphone has been muted.

1. Click Options and select Properties.
2. Select Recording and click the OK button.
3. After Click OK button, the recording volume control panel will appear.

■ Go to [Start > Settings > Control Panel] and double-click the Multimedia icon (or Sounds and Audio Devices icon). In the Volume or Audio page, make sure that Vinyl AC'97 Audio (WAVE) is the default recording device.

Hard Disk Problems

The hard disk drive does not work or is not recognizable -

■　　If you had just performed a hard disk upgrade, make sure the hard drive connector is not loose and the hard disk drive is also correctly seated. Remove it and reinsert it firmly, and restart your PC. (Refer to Chapter 4 for details.)

■　　The new HDD may need to be partitioned and reformatted. O/S and drivers will need to be re-installed as well.

■　　Check the hard disk indicator LED. When you access a file, the LED lamp should light up momentarily.

■　　The new HDD may be defective or is not compatible.

■　　If your computer has been subjected to static electricity or physical shock, you may have damaged the disk drive.

The hard drive is making abnormal whining noises -

■　　You should back up your files as soon as possible.

■　　Make sure the source of noise is indeed from the hard drive and not the fan or other devices.

The hard disk drive has reached its capacity -

■　　Run Disk Cleanup utility in Windows. [Start > All Programs > Accessories > System Tools > Disk Cleanup] The system will prompt you for what to do.

■　　Archive files or programs that you no longer use by moving them to an alternative storage medium (floppy disk, optical record-able disk, etc.) or uninstall programs that you no longer use.

■　　Many browsers store files in the hard drive as a cache to speed up the performance. Check the program's Online Help for

instructions on decreasing the cache size or on removing temporary Internet files.

■   Empty the Recycle Bin to create more disk space. When you delete files, Windows saves them to the Recycle Bin.

The hard disk takes longer to read a file -

■   If you have been using the drive for a period, the files may be fragmented. Go to [Start > Programs > Accessories > System Tools > Disk Defragmenter] to perform a disk defragmentation. This operation may take a while.

■   Interrupt requests or problems with other hardware devices may have occupied the CPU and therefore slow down the system performance.

The files are corrupted -

■   Run the Error-checking utility in Windows to check the HDD. Double-click My Computer. Right-click C: and select Properties. Click Check Now in Error-checking in Tools.

Optical Drive Problems

The optical drive does not work -

■ Try rebooting the system.

■ The disk is damaged or files are not readable.

■ After you have inserted a CD-ROM disk, it may take a moment before you can access its content.

The drive does not read any disks -

■ The CD may not be properly seated in the tray. Make sure the disk is firmly seated onto the spindle.

■ The disk is damaged or not readable.

The disk cannot be ejected -

■ Normally, it takes a few seconds to eject the disk.

■ If the disk cannot be ejected, it may be mechanically jammed. Straighten out a paper clip and insert it to a tiny hole next to the eject button. This should reject the disk tray. If not, return the unit for repair. Do not forcefully pull on the disk tray.

The Combo or DVD RW drive (optional device) cannot record -

■ You need to purchase and install a burner utility program to record files to a blank media.

Display Problems

The display panel is blank when the system is turned on -

■ Make sure the computer is not in the Standby or Hibernate suspend modes. The display is turned off to conserve energy in these modes.

The screen is difficult to read -

■ The display resolution should be set to at least 1024x768 for optimal viewing.

1. Go to [Start > Settings > Control Panel] and double-click the Display icon.

2. Under the Settings page, set the screen resolution to at least 1024x768 and choose at least 256 colors.

The screen flickers -

■ It is normal if the display flickers a few times during shutting down or powering up.

Keyboard and Mouse Problems

The built-in touch pad performs erratically -

■ Make sure there is no excess perspiration or humidity on your hand when using the touch pad. Keep the surface of the touch pad clean and dry.

■ Do not rest your palm or wrist on the surface of the touch pad while typing or using the touch pad.

The built-in keyboard accepts no input -

■ If you are connecting an external keyboard to the system, the built-in keyboard may not work.

■ Try restarting the system.

The characters on the screen repeat while I type.

■ You may be holding the keys down too long while you're typing.

■ Keep the keyboard clean. Dust and dirt under the keys could cause them to stick.

■ Configure the keyboard to wait longer before the auto repeat feature starts. To adjust this feature, go to [Start > Settings > Control Panel], and double-click the Keyboard icon. A dialogue box shows up with the adjustable settings for the keyboard.

CMOS Battery Problem

A message "CMOS Checksum Failure" displays during the booting process or the time (clock) resets when booting -

■ Try to reboot the system.

■ If the message "CMOS Checksum Failure" appears during the booting procedure even after rebooting, it may indicate failure of the CMOS battery. If so, you need to replace the battery. This battery normally lasts two to five years. The battery is of type CR2032 (3V). You may replace it by yourself. The battery is located under the System Device Cover on the bottom of the notebook. See Chapter 4 for more details.

Memory Problems

The POST does not show an increased memory capacity when you have already installed additional memory -

■ Certain brands of memory modules may not be compatible with your system. You should ask tech support for a list of compatible DIMM.

■ The memory module may not be installed properly. Go back to Chapter 4 to review the details of this operation.

■ The memory module may be defective.

The O/S issues an insufficient memory error message during operation -

■ This is often a software or Windows-related problem. A program is draining the memory resources.

■ Close the application programs you're not using and restart the system.

■ You need to install additional memory module. For instructions, go to Chapter 4 Upgrading Your Computer.

Modem Problems

The built-in modem does not respond -

■ Make sure the modem driver is loaded properly.

■ Go to [Start > Settings > Control Panel > Phone and Modem Options] and go to the Modems tab. Make sure SmartLink 56K Voice Modem or Uniwill V.92 Modem is listed. Otherwise, click the Add button to add the modem drive, which is located in the factory CD-ROM (or floppy diskette).

■ Go to [Start > Settings > Control Panel > System] and click the Device Manager button in the Hardware page to check for a possible resource or driver conflict. See Windows on-line help or manual for how to handle such problems.

■ Make sure the phone line, which the computer is connected to, is working.

Connection difficulties -

■ Be sure to disable Call Waiting on the phone line.

■ Be sure to have the correct country setting where your computer is used. [Start > Settings > Control Panel > Modem Settings > Configuration] In the Country/Area pull-down menu, select the appropriate country setting.

■ Excessive line noise might cause the connection to be dropped. To check this, put the regular phone handset on the line and place a phone call. If you do hear abnormal noise, try to make the modem connection with a different line or contact your local telephony company for service.

■ Make sure the cable connection is firm.

■ Try a different receiver number and see if the problem persists.

Network Adapter / Ethernet Problems

The Ethernet adapter does not work -

■ Go to [Start > Settings > Control Panel > System > Hardware > Device Manager]. Double-click on Network Adapters and check if Realtek RTL8139/810x Family Fast Ethernet NIC appears as one of the adapters. If it does not exist, Windows has not detected the Realtek RTL8139/810x Family Fast Ethernet NIC or the device driver has not been installed properly. If there is a yellow mark or red cross on the network adapter, it may be a device or resource conflict. Replace or update the device driver from the factory CD-ROM disk or consult the Windows manual on how to solve the resource conflict problem.

■ Make sure the physical connections on both ends of the cable are good.

■ The hub or concentrator may not be working properly. Check to see if other workstations connected to the same hub or concentrator are working.

The Ethernet adapter does not appear to operate in the 100Mbps transmission mode -

■ Make sure the hub you are using supports 100Mbps operation.

■ Make sure that your RJ-45 cable meets the 100Base-TX requirements.

■ Make sure the Ethernet cable is connected to the hub socket that supports 100Base-TX mode. The hub may have both 100Base-TX and 100Base-T sockets.

ExpressCard Problems

Note: Some systems may not have the PC Card Slot option.

ExpressCards do not function-
■ Make sure you have properly installed the driver for the card.
■ Consult the card's manual or contact the vendor for troubleshooting.

The ExpressCards cannot be recognized -
■ Windows NT4.0 does not support ExpressCards function. You may need an external program for this.
■ Make sure the card is fully inserted; the outer end of the card should be even with the edge of the computer.
■ Remove and insert the ExpressCards again.
■ Make sure there is no IRQ conflict with the card. See Windows on-line help for solving IRQ conflicts.
■ Reboot the computer and see if the problem persists.
■ The card may be defective. Try the card on another system, if possible.

Windows crashes or freezes when you remove the ExpressCards
Make sure you have stopped the ExpressCards before removing it. Double-click the Safely Remove Hardware icon at the lower right corner of the task bar and select the card you wish to stop. When you click <Close>, Windows will prompt you to remove the card in a few seconds.

Performance Problems

The computer becomes hot -

■ In a 35°C environment, certain areas of the computer's back case are expected to reach 50 degrees.

■ Make sure the air vents are not blocked.

■ If the fan does not seem to be working at high temperatures (50 degrees Celsius and up), contact the service center.

■ Certain programs that are processor-intensive may increase the computer temperature to a degree where the computer automatically slows down its CPU clock to protect itself from thermal damage.

The program appears stopped or runs very slowly -

■ Press CTRL+ALT+DEL to see if an application is still responding.

■ Restart the computer.

■ This may be normal for Windows when it is processing other CPU-intensive programs in the background or when the system is accessing slow-speed devices such the floppy disk drive.

■ You may be running too many applications. Try to close some applications or increase system memory for higher performance.

■ The processor may have been overheated due to the system's inability to regulate its internal heat. Make sure the computer's ventilation grills are not blocked.

Firewire (IEEE1394) and USB2.0 Problems

The USB device does not work -

■ Windows NT 4.0 does not support USB protocols

■ Check the settings in the Windows Control Panel.

■ Make sure you have installed the necessary device drivers.

■ Contact the device vendor for additional support.

The IEEE1394 port does not work -

■ Go to [Start > Settings > Control Panel > System > Hardware > Device Manager]. You should see an entry which reads "Texas Instrument OHCI Compliant IEEE 1394 Host Controllers". If it does not exist, Windows has not detected the host controller or the device driver has not been installed properly. If there is a yellow mark or red cross on the 1394 host controller, it may be a device or resource conflict. Replace or update the device driver from the factory CD-ROM disk or consult the Windows manual on how to solve the resource conflict problem.

■ Make sure the cable is fully connected.

■ Make sure you have installed the necessary device drivers.

■ Contact the device vendor for additional support.

A P P E N D I X ▼ A

PRODUCT SPECIFICATION

▼ Processor and Core Logic

■ Processor	

- Mobile Intel Pentium M (Dothan), up to 2.13GHz, 2 MB L2 cache or
- Mobile Intel Celeron M, up to 1.60GHz, 1MB L2 cache

■ Core Logic

el Alviso 915PM + ICH6-M (FW82801FBM) chipset with
dio, modem, and USB2.0 controllers integrated
3 MHz (Pentium M) / 400 (Celeron M) Front Side Bus
0/533 MHz DDR2 interface

▼ System Memory

■ Memory Type
■ Default
■ Memory
  Expansion

DR2 SDRAM 400/533MHz, PC2700 compatible
8 / 256 / 512 / 1024MB, 2.5-Volt 64-bit bus
o 200-pin DIMM sockets, Max 2 GB

▼ Display

■ LCD Panel

- 17-inch (1920x1200) WUXGA TFT display with 24-bit colors or
- 17-inch (1440x900) WXGA+ TFT display with 24-bit colors
- nVidia NV42M (with 256MB frame buffer)

■ Graphic
  Accelerator

CI Express bus architecture graphics capability
rdware Motion Compensation and IDCT Supported for
PEG1/2 Playback

■ Graphic Bus
■ Motion
Playback

rectX compatible

■ Other
Features

tegrated with graphic accelerator)

■ S-Video
TV-out Encoder

Audio

- ■ Chipset
- ■ Audio Codec
- ■ Sound Capabilities

Intel (ICH6M) integrated audio controller
Realtek ALC880
DirectSound 3D, EAX 1.0 & 2.0 compatible
A3D, I3DL2 compatible
AC97 V2.3 compatible
7.1 Multi-channel compatible (through S/PDIF)
Supports Azalia standard
2 Stereo Speakers with 1 Subwoofer

Modem

- ■ Chipset
- ■ Transmission Rate

el (ICH6M) integrated Modem Controller with MDC card,
alia standard support

Wireless LAN

- ■ Module
- ■ Transmission Protocol

el PRO/Wireless 2200, MiniPCI Interface
EE802.11 B&G

LAN / Ethernet

- ■ Chipset
- ■ PnP Function
- ■ Flow Control
- ■ Speed Selection
- ■ Other Features

Realtek 8110 Ethernet function for
10/100/1000Base-TX network standards
ndows 2000 / XP Plug and Play compatible
tomatic Jam and auto-negotiation for flow control
to Negotiation and Parallel detection for automatic speed
lection (IEEE 802.3u)
gh performance 32-bit PCI bus master architecture with
egrated DMA controller for low CPU and bus utilization
mote Wake-up Scheme supported
t Insertion supported

Firewire IEEE1394(a)

■Chipset

■Capabilities

TSB43AB22A IEEE1394 OHCI Host Controller and
to 400 Mbps
pandable up to 63 devices in chains

▼ Storage

■Hard Drive
■Combo Drive

■DVD±R/±RW
or DVD-Dual or
DVD-Multi
Standards

2.5-inch format hard disk drive
5.25-inch format (12.7mm height) fixed module
(Optional Purchase)
5.25-inch format (12.7mm height) fixed module
(Optional Purchase)

▼ Keyboard & Touch pad

■Keyboard

■Touch pad

88-key QWERTY keyboard with embedded numeric
keypad and Windows keys, 19.05mm Pitch
Built-in Touch Pad with Disable / Enable Touch Pad
button

▼ Express Card & Multiple Card Reader

■Chipset
■Express Card

■4-in-1 Card
Reader Format
Support

(PC Card), (Card Reader)
Card TYPE II, Hot insertion and removal supported
Multimedia Card (MMC), Secure Digital Card (SD),
Memory Stick (MS), and MS Pro Card

▼ **Ports and Connectors**

■Mic-In Port	e Microphone-in jack
■Audio-Out/SPDIF	e Headphone / SPDIF jack
■Firewire	e Firewire (IEEE1394) host connector
■USB2.0 Port	ur USB2.0-compliant connectors
■Ethernet	e standard network Ethernet connector (RJ-45)
■Modem	e modem / phone connector (RJ11)
■S-Video	e S-video (TV-out) output connector
■Power-In	e DC-in connector
■DVI-I Port	e DVI-I video connector
■Card Reader	e 4-in-1 Card Reader slot
■PC Card Slot	e PC Card Slot (type II)
■CIR Port	e Consumer IR Lens/receiver
■VR Dial	e VR Dial for audio/speaker volume

▼ **Battery Pack / AC Adapter**

■Primary Battery Pack	ion 8-Cell pack, 14.8V x 4400 mAH
■Feature	w battery state with low battery warning beep
	iwill SmartPower III Power Management
	art Battery Compliant; low battery warning beep
	ng Battery Life Mode and Silent Mode
■Adapter AC-Input / DC-Output	to sensing AC-in 100~240V, DC-out 20V, 120W or 90W

▼ **BIOS**

■PnP Function	MI PnP BIOS
■Self Test	wer On Self Test
■Auto Detection	RAM auto-detection, auto-sizing
	Cache auto-detection
	rd disk type auto-detection
■Power Management	PM 1.2 (Advanced Power Management) & CPI 2.0 (Advanced Configuration Power Interface)
■Security	o Level Password Protections
■Other Features	bit access, Ultra DMA, PIO5 Mode support lti-boot capability

■O/S	mpatible with Microsoft Windows 2000 / XP / DOS

▼ **Physical Specification**

■Dimension	8 (W) x 289 (D) x 25-38.1 (H) mm
■Weight	8 lbs / 4 KG (with 17"LCD, DVD-ROM Drive, and 8-cell ttery pack)
■Environmental Limits	perating Temperature: 5 to 30°C (41 to 86°F) perating Humidity: 20 to 80 percent RH (5 to 35°C) orage Temperature: -15 to 50°C (-5 to 122°F)

A P P E N D I X ▼ B

AGENCY REGULATORY NOTICES

Federal Communications Commission Notice

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:

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

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

"Alienware declare that M-5700 series (with wireless card: Intel WM3B2200BG) is limited in CH1~CH11 by specified firmware controlled in USA."

As long as conduction above is met, further <u>transmitter</u> test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for Notebook).

IMPORTANT NOTE: In the event that these conditions <u>can not be met</u> (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID <u>can not</u> be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

<div align="center">End Product Labeling</div>

The final end product must be labeled in a visible area with the following: "Contains TX FCC ID: PD9WM3B2200BG

<div align="center">Manual Information That Must be Included</div>

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the users manual of the end product which integrate this module.

The users manual for OEM integrators must include the following information in a prominent location " IMPORTANT NOTE: To comply with FCC RF exposure compliance requirements. The antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

Modifications
The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by the Manufacture may void the user's authority to operate the equipment.

Connections to Peripheral Devices
Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

Declaration of Conformity
This device complies with Part 15(CLASS B)/68 the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

European Notice

Products with the CE Marking comply with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) and R&TTE Directive (1999/5/EC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms:

- EN55022 : 1998+A1: 2000+A2: 2003, CLASS B
- EN61000-3-2 : 2000
- EN61000-3-3 : 1995+A1: 2001
- EN55024 : 1998+A1 : 2001+A1: 2003
- IEC61000-4-2: 2001
- IEC61000-4-3:2002+A1:2002
- IEC61000-4-4:1995+A1:2000+A2:2001
- IEC61000-4-5:2001
- IEC61000-4-6:2001
- IEC61000-4-8:2001
- IEC61000-4-11:2001
- EN50082 (IEC801-2, IEC801-3, IEC801-4)   Electro-magnetic Immunity
- EN 300 328-2, EN 300 328-1, EN 301 489-1, EN 301 489-17 (ETSI 300 328, ETSI 301 489) Electro-magnetic Compatibility and Radio Spectrum Matter.
- TBR21 (ETSI TBR21) Terminal Equipment.
- EN60950 (IEC950) I.T.E. Product Safety

Canadian Notice

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

Le present appareil numerique nemet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de Classe B prescrites dans le reglement sur le brouillage radioelectrique edicte par le Ministere des Communications du Canada.

Power Cord Requirement

The power cord supplied with the AC adapter should match the plug and voltage requirements for your local area. Regulatory approval for the AC adapter has been obtained using the power cord for the local area. However, if you travel to a different area and need to connect to a different outlet or voltage, you should use one of the power cords listed below. To purchase a

power cord (including one for a country not listed below) or a replacement ac adapter, contact your local dealer.

U.S. and Canada
- The cord set must be UL-Listed and CSA-Certified or C-UL Listed.
- The minimum specifications for the flexible cord are (1) No. 18 AWG, (2) Type SJ, and (3) 3-conductor.
- The cord set must have a rated current capacity of at least 10 A.
- The attachment plug must be an earth-grounding type with a NEMA 5-15P (15A, 125V) or NEMA 6-15P (15 A, 250V) configuration.

Japan
- All components of the cord set (cord, connector, and plug) must bear a `PSE` mark and registration number in accordance with the Japanese Dentori Law.
- The minimum specification for the flexible cord are: (1) 0.75 mm^2 conductors, (2) Type VCT or VCTF, and (3) 3-conductor.
- The cord set must have minimum rated current capacity of 7 A.
- The attachment plug must be a two-pole, grounded type with a Japanese Industrial Standard C8303 (15 A, 125 VAC) configuration.

Other Countries
- The cord set fittings must bear the certification mark of the agency responsible for evaluation in a specific country. Acceptable agencies are:
  BSI (UK)
  OVE (Australia)
  CEBEC (Belgium)
  SEMKO (Sweden)
  FIMKO (Finland)
  DEMKO (Denmark)
  NEMKO (Norway)
  SETI (Finland)
  EANSW (Australia)
  SEV (Switzerland)
  IMQ (Italy)
  UTE (France)
  CCC (China)
  PSB (Singapore)
  PSE (Japan)
  BSMI (Taiwan)
  B (Polish)
  VDE (Germany)

SASO (Saudi Arabia)

■ The flexible cord must be of a HAR (harmonized) type HO5VV-F 3-conductor cord with a minimum conductor size of 0.03 square inches.

■ The minimum specification for the flexible cord for Class II product are: (1) 2X0.75 mm^2 conductors, (2) 2-conductor cord.

■ The cord set must have a current capacity of at least 10 A and a nominal voltage rating of 125 / 250 VAC.

CAUTION: MODEL M-5700 series IS DESIGNED TO USE WITH THE FLLOWING AC ADAPTER MODEL ONLY
Manufacture: LITE-ON ELECTRONICS, INC.; LI SHIN INTERNATIONAL ENTERPRISE CORP.
Model:, PA-1121-22 (120W), 0227A20120 (120W)

Telephone lines requirement
■ The appropriate utilization of 26AWG telephone line cord on unit.
CAUTION: Always disconnect all telephone lines from the wall outlet before servicing or disassembling this equipment.
CAUTION: To reduce the risk of fire, use only No. 26AWG or larger telecommunication line cord.

Battery Pack Safety
■ The battery pack is intended to use only with this notebook.
■ Do not disassemble the pack.
■ Do not dispose of the battery pack in fire or water.
■ To avoid risk of fire, burns, or damage to your battery pack, do not allow a metal object to touch the battery contacts.
■ Handle a damaged or leaking battery with extreme care. If you come in contact with the electrolyte, wash the exposed area with soap and water. If it contacts the eye, flush the eye with water for 15 minutes and seek medical attention.
■ Do not charge the battery pack if the ambient temperature exceeds 45 (113).
■ To obtain a replacement battery, contact your local dealer.
■ Do not expose the battery pack to high storage temperatures (above 60 , 140).
  ■ When discarding a battery pack, contact your local waste disposal provider regarding local restrictions on the disposal or recycling of batteries.
  ■ Use only supplied AC Adapter for charging.

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

VORSICHT! Explisionsgefahr bei unsachgernazen Austausch der Batterie. Ersatz nur durch denselben oder einem vom Hersteller empfohlenem ahnlichen Typ. Entsorgung gebrauchter Batterien navh Angaben des Herstellers.

Laser Safety

The optical drive used with this computer is certified as a Class 1 laser device according to the U.S. Department of Health and Human Services (DHHS) Radiation Performance Standard and International Standards IEC 825 / IEC 825-1 (EN60825 / EN60825-1). The device is not considered harmful, but the following precautions are recommended:

- ■ Do not open the unit.
- ■ Avoid direct exposure to the laser beam.
- ■ If the unit requires service, contact an authorized service center.
- ■ Ensure proper use by reading and following the instructions carefully.
- ■ Do not attempt to make any adjustment of the unit.

CLASS 1 LASER PRODUCT
APPAREIL A LASER DE CLASSE 1
LASERSCHUTZKLASSE 1 PRODUKT

Warning!

Do not attempt to disassemble the cabinet containing the laser. The laser beam used in this product is harmful to the eyes. The use of optical instruments, such as magnifying lenses, with this product increase the potential hazard to your eyes. For your safety, have this equipment serviced only by an authorized service provider.

Lithium battery warning / Bridge battery warning

This computer contains a lithium battery to power the clock and calendar circuitry.

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

ATTENTION: Il y a danger d'xplosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avcc unc batterie du meme type ou d'un type recommande par le constructer. Mettre au rebut les batteries usagees conformement aux instructions du fabricant.

VORSICHT! Explosionsgefahr bei unsachgemBen Austausch der Batterie Ersatz nur durch denselben oder einem vom Hersteller empfohlenem ahnlichen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

Der Arbeitsplatzbezogene Schalldruckpegel nach DIN 45 635 betragt 70dB (A) oder weniger.

Zum Netzanschlua dieses Gerates ist eine geprufte Leitung zu verwenden. Fur einen Nennstrom bis 6A und einem Gerategewicht groBer 3kg ist eine Leitung nicht leichter als (1)H05VV-F, 3G, 0.75mm^2 (2)2X0.75 mm^2 conductors einzusetzen.

Die Steckdose muB nahe dem Gerat angebracht und leicht zuganglich sein.

CAUTION!
This part is hot. Be Careful.
VORSICHT!
Diese Flache wird sehr heiss.

When you see this symbol, be careful as this spot may be very hot.

APPENDIX▼ C

CyberLink Power Cinema Guide

Copyright and Disclaimer

International Headquarters

Mailing Address

CyberLink Corporation

15F, #100, Min Chuan Road, Hsin Tian City

Taipei County, Taiwan, R.O.C.

Web Site

www.gocyberlink.com

Phone Numbers

Telephone: 886-2-8667-1298

Fax: 886-2-8667-1300

Contents

Chapter 1:

Overview

PowerCinema is an integrated player for Audio CDs, music clips, photos, DVD/VCD movies, and video clips. To watch or listen to different types of media, click a content button on the main page. The corresponding function opens, allowing you to enjoy the type of media you have selected.

Finding and Playing Content

Click or press **Enter** to open folders and to play or view media files.

To go up a folder level, click the onscreen up arrow. To return to a previous screen within a media function, click **Return**. Use the **Up**, **Down**, **Left**, and **Right** buttons to navigate within PowerCinema.

To return to the Welcome page from within a media function, click the **Backspace** key on the keyboard or press the **Back** button on the remote.

Settings

Click the **Settings** button on the Home page to open the Settings page.

DVD SPDIF...: Select the **DVD AC3/SPDIF** option for multi-channel sound. Select the **DVD PCM/SPDIF** option for 2-channel sound.

Language: Select the language you want to use for display in PowerCinema, then return to the main menu in order for the selection to take effect.

Eject

Click **Eject** to open your computer's CD/DVD ROM tray.

Power Off

Click **Power Off** to turn off your computer.

Battery Status

A battery icon appears on the Welcome page, indicating the power source (battery or AC adapter) your computer is currently using.

The icon appears as follows:

Your computer is currently using the battery. Approximate battery life is displayed next
to the icon.

Your computer is currently using the AC adapter (and simultaneously charging the
battery).

Audio CD

PowerCinema provides functions that allow you to listen to music on CD. For convenient access to your Audio CD collection, click the **Audio CD** button on the Home page.

Listening to Audio CDs

Insert a CD, then click the **Audio CD** button on the Home page to display the Audio CD function. CD music is listed by track order.

Click a track to play it or click **Play All** to play all of the listed tracks.

Click **Repeat All** to continue listening to all of the tracks after they have all been played.

Click **Stop** to stop music playback.

To navigate in the list of tracks, click **Next** or **Previous**.
Note: When you exit this function, music playback stops.

Chapter 3:

DVD/VCD

If your computer came with a DVD drive, you can play movies from DVDs and Video CDs (VCDs or SVCDs) with the DVD/VCD function in PowerCinema. This player has the features and controls of a normal living-room DVD player.

Playing DVD/VCDs

Insert a movie disc to begin playback. Whenever you move the mouse during playback, player controls appear at the bottom of the screen. These player controls include the following: **Play** (plays the movie), **Stop** (stops movie playback), **Pause** (pauses movie playback), **Next** (jumps to the next movie chapter), **Previous** (jumps to the previous movie chapter), **Fast Forward** (fast forwards movie playback), **Rewind** (rewinds movie playback), **Main Menu** (goes to the disc's main menu), and **Quit** (returns to the Welcome page). These controls automatically disappear several seconds after the mouse stops moving.

Chapter 4:

Music Clips

For convenient access to your music collection, click the **Music Clips** button on the Home page. Use this function to listen to music files in MP3, WAV, and WMA formats.

Playing Music Clips

Click **Device** to select a media source. You can select **USB** (for media on a removable device), or **Hard Drive** (for media located in hard drive folders).

Select the folder that contains the music you want to listen to. Folder contents are listed alphabetically.

Click a music clip to play it or click **Play All** to play all of the clips displayed.

Click **Repeat All** to continue listening to all of the listed music clips after they have all been played.

Click **Stop** to stop music playback.

To navigate in the list of clips, click **Next** or **Previous**.

Click **Eject** to open your computer's CD/DVD ROM tray.
Note: When you exit this function, music playback continues.

Chapter 5:

Photos

PowerCinema lets you view digital pictures, either individually or as a slide show, from any available drive on your computer. Use this function to view photo files in BMP, JPG, and PNG formats. Click the **Photos** button on the Home page to show the Photos main page.

Viewing Photos

Click **Device** to select a media source. You can select **CD-ROM** (for media on a CD), **USB** (for media on a removable device), or **Hard Drive** (for media located in hard drive folders).

Click on a folder to open it, or click a photo to view it.

To view a slide show, open the folder containing the pictures you want to view, then click the **Play slide show** button. The slide show is played at full screen. When the **Subfolders** option is selected, images in all of the subfolders contained in the selected directory are also displayed in the slide show. When this option is not selected, the slide show plays only the photos in the directory you have selected. Press the **Esc** or **Backspace** key on the keyboard to exit the slide show.

Chapter 6:

Video Clips

Use this function to watch video files in AVI, M1V, M2V, MPG, MPEG, VOB, and WMV formats. To open the Videos function, click the **Video Clips** button on the Home page.

Note: The Videos function is designed for video file playback of MPEG-1, MPEG-2 (if DVD drive is factory installed), AVI, and WMV files. If you want to watch a DVD or VCD, open the **DVD/VCD** function on the Home page.

Viewing Video Clips

The Videos page shows the video files in the content area on the right side. They are organized by folders and a thumbnail image shows the first frame of the video.

Click **Device** to select a media source. You can select **CD-ROM** (for media on a CD), **USB Device** (for media on a removable device), or **Hard Drive** (for media located in hard drive folders).

Click a video clip to play it at full screen.

Click **Eject** to open your computer's CD/DVD ROM tray.

PowerCinema Linux Licensing Information

This document contains Linux licensing information, including a copy of the GNU General Public License, the GNU Lesser General Public License, and the GNU Library General Public License, in addition to other copyright information and licenses. There is also a list of the third-party components and information on how to download them.

This document contains the following sections:

- "License Disclaimer" on page 16
- "Downloading Source Code" on page 16
- "List of Components" on page 17
- "Licenses and Copyrights" on page 19

License Disclaimer

This product includes certain copyrighted third-party software components licensed under the terms of the GNU General Public License, PSF LICENSE AGREEMENT FOR PYTHON 2.3, and other similar license agreements offering free distribution of these software components offered by organizations such as Free Software Foundation, Python Software Foundation, the X.Org Foundation, etc. Copies of these license agreements can be found by clicking the link associated with each of the component provided in the table below. You may also visit http://www.gnu.org/copyleft/gpl.html for a copy of GNU General Public License agreement.

GPL components and other components listed below are licensed without warranties of any kinds, either express or implied warranties, including without limitation the implied warranty of merchantability and fitness for a particular purpose. The entire risk as the quality and performance of these components is with you. Please check the respective license agreements for more details. Copyright holders under GPL and/or other license agreements mentioned herein shall not be responsible for any damages, general, special, incidental or consequential, arising out of the use or inability to use these components/software. Please check the respective license agreement for more details. For the list of components of such nature, and to acquire the full source code of these licensed components, including any scripts to control

compilation and installation of the object code, please see "List of Components" on page 17.

Downloading Source Code

You can download the machine-readable source code of the corresponding licensed component from http://www.gocyberlink.com/pcmlinuxgpl_targa.htm. Please pay attention to the copyright notice, warranty disclaimer and a copy of license agreement accompanying these source codes.

List of Components

Component	Licensing Information
acpid	GNU General Public License
alsa_driver	GNU General Public License
alsa_lib	GNU Lesser General Public License
autofs	autofs Copyright
	GNU General Public License
Busybox	GNU General Public License
dialog	GNU General Public License
ffmpeg	GNU Lesser General Public License
Freetype	FreeType Project License
	GNU General Public License
glib	GNU Lesser General Public License
GRUB	GNU General Public License
GRUB_install	grubinstall README
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• David Turner david.turner@freetype.org
• Robert Wilhelm robert.wilhelm@freetype.org
• Werner Lemberg <werner.lemberg@freetype.org>

grubinstall README

Purpose: allow GRUB to be booted from NT/2K/XP.

This tool modifies the GRUB stage1 and stage2 image files located on an NTFS or FAT volume, to make them bootable by NTLDR.

Author: lode_leroy@hotmail.com

Acknowledgements:

• The AUTHORS of GNU GRUB 0.93 for creating GRUB
• Samuel Leo for writing fsys_ntfs.c
• Leonid Lisovskiy for writing fsys_iso9660.c
• Gary Ng for updating the GRUB makefiles for

NTFS+ISO9660

- Chris Semler and Tobias Svensson for testing

Limitations:

Booting OS'es from NTLDR requires stage1 to be on the same partition as NTLDR itself. Make sure that stage1 and stage2 are NOT on a compressed volume, and that the files are NOT compressed by Windows.

Usage:

Let's say C: is the first partition on the first harddisk hence (hd0,0) is the GRUB name of this partition and C:\boot\stage1 is the NT name of the boot file.

* To make the files stage1 and stage2 bootable from NTLDR:
C:\> grubinstall -d (hd0,0) -1 C:\boot\stage1 -2 C:\boot\stage2
When stage1, stage2, menu.lst are in C:\, use the following
C:\> grubinstall -d C:
* To make the installer detect the install location itself:
C:\> grubinstall -a -1 C:\boot\stage1 -2 C:\boot\stage2
* To make a boot floppy in A: (B: is not supported)
C:\> grubinstall -b -1 C:\boot\stage1 -2 C:\boot\stage2

Changes:

0.3:

• first released version

0.4:

• added experimental FAT support (not released)
• added support for DOS partition names (ie. "C:" instead of "(hd0,0)") this works only on windows XP

0.5:

• fixed bug with NTFS: hardcoded partition offset and clustersize replaced by information exposed by fsys_ntfs.c
• fixed FAT support
• added support for DOS path names (ie. C:\boot\stage1 instead

of "C:/boot/stage1");

- code cleanup

0.6:

- removal of quotes from command line
- support for writing to a diskette

0.7:

- bugfixes for win32_filepos and current_pos

- corrected debug info: use format %I64u (MSVCRT.DLL) instead of %llu (glibc)
- added option to write to a bootdisk image to a file

0.8:
- added autodetect '-a' command line option to probe disks+partitions

0.9:
- renamed ntfsinstall to grubinstall
- improved support for DOS names grubinstall -d C:
- somewhat improved (?) error messages
- added an alternate grub name option

0.9b:
- corrected GRUB names (use PartitionNumber instead of entry number)
- added '-B' option, so now it can be installed on any drive
- -m '' now works to install without menu

0.9c:
- fix bug in using PartitionNumber (of OBI1 type :-)

0.9d:
- no changes. 9c contained a debug-version of stage2

1.0:
- no changes.

1.01:
- compile in bugfix for fsys_ntfs.c from original author (http://savannah.gnu.org/bugs/?func=detailitem&item_id=8669)

ion_install Copyright

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(end)

ncurses Announcement

Announcing ncurses 5.4

The ncurses (new curses) library is a free software emulation of curses in System V Release 4.0, and more. It uses terminfo format, supports pads and color and multiple highlights and forms characters and function-key mapping, and has all the other SYSVcurses enhancements over BSD curses.

In mid-June 1995, the maintainer of 4.4BSD curses declared that he considered 4.4BSD curses obsolete, and is encouraging the keepers of Unix releases such as BSD/OS, freeBSD and netBSD to switch over to ncurses.

The ncurses code was developed under GNU/Linux. It has been in use for some time with OpenBSD as the system curses library, and on FreeBSD and NetBSD as an external package. It should port easily to any ANSI/POSIX-conforming UNIX. It has even been ported to OS/2 Warp!

The distribution includes the library and support utilities, including a terminfo compiler tic(1), a decompiler infocmp(1), clear(1), tput(1), tset(1), and a termcap conversion tool captoinfo(1). Full manual pages are provided for the library and tools.

The ncurses distribution is available via anonymous FTP at the
GNU distribution site [1]ftp://ftp.gnu.org/gnu/ncurses/.
It is also available at [2]ftp://invisible-island.net/ncurses/.

Release Notes

This release is designed to be upward compatible from ncurses 5.0 and 5.3; very few applications will require recompilation, depending on the platform. These are the highlights from the change-log since ncurses 5.3 release.

Interface changes:

*   add the remaining functions for X/Open curses widecharacter support.

+ pecho_wchar()
+ slk_wset()

These are only available if the library is configured using the –enablewidec option.

*   write getyx() and related 2-return macros in terms of getcury(), getcurx(), etc.
*   simplify ifdef for bool declaration in curses.h
*   modify ifdef's in curses.h that disabled use of __attribute__() for g++, since recent versions implement the cases which ncurses uses.
*   add key_defined() function, to tell which keycode a string is bound to.

New features and improvements:

*   library

+ implement logic in lib_mouse.c to handle position reports which are generated when XFree86 xterm is initialized with private modes 1002 or 1003. These are returned to the application as the REPORT_MOUSE_POSITION mask, which was not implemented.

+ modify soft-key initialization to use A_REVERSE if A_STANDOUT would not be shown when colors are used, i.e., if ncv#1 is set in the terminfo as is done in "screen".

+ add configure option for FreeBSD sysmouse, --with-sysmouse, and implement library support for that.

programs:
+ tack:
• allow it to run from fallback terminfo data.

- reset colors after each color test, correct a place where exit_standout_mode was used instead of exit_attribute_mode.

- improve bce test by making it set colors other than black on white.

+ tic:
- handle a case where an entry has no description, and capabilities begin on the same line as the entry name.
- allow a terminfo entry with a leading 2-character name.
- improved warnings when suppressing items to fit in termcap's 1023-byte limit.
- add check for multiple "tc=" clauses in a termcap.
- correct logic for resolving "use=" clauses allow infocmp and tic to show cancelled capabilities.
- check for incomplete line-drawing character mapping.
- check for missing/empty/illegal terminfo name.

+ tput:
- modify tput to use the same parameter analysis as tparm() does, to provide for user-defined strings, e.g., for xterm title, a corresponding capability might be title=\E]2;%p1%s^G,

+ tset:
- use the system's default values for CKILL and other default control characters.

- correct interchanged defaults for kill and interrupt characters, which caused it to report unnecessarily.

Major bug fixes:

- prevent recursion in wgetch() via wgetnstr() if the connection cannot be switched between cooked/raw modes because it is not a TTY.
- correct a case in _nc_remove_string(), used by define_key(), to avoid infinite loop if the given string happens to be a substring of other strings which are assigned to keys.
- modify logic of acsc to use the original character if no mapping is defined, rather than a null.

- several improvements for handling multi-cell display of wide characters.

+ modify setcchar() to allow converting control characters to complex characters.

+ correct handling of multibyte characters in waddch_literal() which force wrapping because they are started too late on the line.

+ modify setcchar() to allow for wchar_t input strings that have more than one spacing character.

other fixes for wide-character support:
+ rewrote lib_acs.c to allow PutAttrChar() to decide how to render alternate-characters, i.e., to work with Linux console and UTF-8 locale.

+ implement a workaround so that line-drawing works with screen's crippled UTF-8 support (tested with 3.9.13). This only works with the wide-character support (--enable-widec); the normal library will simply suppress line-drawing when running in a UTF-8 locale in screen.

+ corrections to lib_get_wstr.c:

o null-terminate buffer passed to setcchar(), which occasionally

failed.

o map special characters such as erase and kill-characters into keycodes so those will work as expected even if they are not mentioned in the terminfo.

* modify setupterm() to check if the terminfo and terminal-modes have already been read. This ensures that it does not reinvoke def_prog_mode() when an application calls more than one function, such as tgetent() and initscr().

* fix form_driver() cases for REQ_CLR_EOF, REQ_CLR_EOL, REQ_DEL_CHAR, REQ_DEL_PREV and REQ_NEW_LINE, which did not ensure the cursor was at the editing position before making modifications.

* correct keybound(), which reported definitions in the wrong table, i.e., the list of definitions which are disabled by keyok().

* fixes related to safe_sprintf.c:

+ correct an allocation size in safe_sprintf.c for the "*" format code.

+ correct safe_sprintf.c to not return a null pointer if the format happens to be an empty string.

+ make return value from _nc_printf_string() consistent. Before, depending on whether --enable-safe-sprintf was used, it might not be cached for reallocating.

* other low-level improvements to the optimization code include:

+ if the output is a socket or other non-tty device, use 1 millisecond for the cost in mvcur; previously it was 9 milliseconds because the baudrate was not known.

+ modify lib_getch.c to avoid recursion via wgetnstr() when the input is not a tty and consequently mode-changes do not work.

+ fix several places in tack/pad.c which tested and used the parameter and parameterless strings inconsistently.

+ change several tputs() calls in scrolling code to use putp(), to enable padding which may be needed for some terminals.

+ improve mvcur() by checking if it is safe to move when video attributes are set (msgr), and if not, reset/restore attributes within

that function rather than doing it separately in the GoTo() function in tty_update.c.

+ use tputs() rather than putp() in a few cases in tty_update.c since the corresponding delays are proportional to the number of lines affected: repeat_char, clr_eos, change_scroll_region.

* correct line/column reference in adjust_window(), needed to make special windows such as curscr track properly when resizing.

* fix a potential recursion between napms() and _nc_timed_wait()

* rewrote lib_insch.c, combining it with lib_insstr.c so both handle tab and other control characters consistently.

* do not try to open gpm mouse driver if standard output is not a tty; the gpm library does not make this check.

Portability:

* configure script:

+ new options:

--with-abi-version option.
addresses platforms where packagers have diverged from ncurses
ABI numbering.

--with-manpage-format=catonly
addresses behavior of BSDI, allow install of man+cat files on
NetBSD, whose behavior has
diverged by requiring both to be present.

--with-manpage-aliases
extends "--with-manpage-aliases" to provide the option of
generating ".so" files rather than symbolic links for manpage
aliases.

--with-rel-version
workaround to force libtool on Darwin generate the "same" library
names as with the "--with-shared" option. The Darwin ld program
does not work well with a zero as the minor-version value.

--with-trace

simplifies defining TRACE to incorporate trace() in libraries.

+ fixes/improvements for cross-compiling:

• allow BUILD_CC and related configure script variables to be overridden from the environment.

• use AC_CHECK_TOOL to get proper values for AR and LD for cross compiling.

• use $cross_compiling variable in configure script rather than comparing $host_alias and $target alias, since

"host" is traditionally misused in autoconf to refer to the target platform.

o modify run_tic.in to avoid using wrong shared libraries when crosscompiling.

+ fixes for Mac OS X:

- fix a redefinition of $RANLIB in the configure script when libtool is used.
- modify MKlib_gen.sh to avoid passing "#" tokens through the C preprocessor. This works around Mac OS X's preprocessor, which insists on adding a blank on each side of the token.

+ workarounds for broken tools:
- add configure check for wchar_t and wint_t types, rather than rely on preprocessor definitions. Also work around for gcc fixinclude bug which creates a shadow copy of curses.h if it sees these symbols apparently typedef'd.
- modify configure script to omit -Winline for gcc 3.3, since that feature is broken.
- several script fixes to work around the ironically named POSIXLY_CORRECT feature of GNU sed 4.0.
- modify configure script to avoid using "head -1", which does not work if POSIXLY_CORRECT (sic) is set.
- update configure script to reflect fix for AC_PROG_GCC_TRADITIONAL, which is broken in autoconf 2.5x for Mac OS X 10.2.3.
- repair check for missing C++ compiler, which is broken in autoconf 2.5x by hardcoding it to g++.

+ corrected ifdef's relating to configure check for wchar_t, etc.

+ remove configure script check to allow -Wconversion for older

versions of gcc

+ modify configure script to accommodate libtool 1.5, as well as add an parameter to the "--with-libtool" option which can specify the pathname of libtool.

+ change several sed scripts to avoid using "\+" since it is not a BRE (basic regular expression). One instance caused terminfo.5 to be misformatted on FreeBSD.

+ use '%' as sed substitute delimiter in run_tic script to avoid problems with pathname delimiters such as ':' and '@'.

+ add -D_XOPEN_SOURCE=500 if needed when configuring with "--enable-widec", to get mbstate_t declaration on HPUX 11.11.

* library:

+ adjust include-options in CF_ETIP_DEFINES to avoid missing ncurses_dll.h, fixing special definitions that may be needed for etip.h.

+ modify CF_LIB_SUFFIX for Itanium releases of HP-UX, which use a ".so" suffix.

+ improve ifdef's to guard against redefinition of wchar_t and wint_t in curses.h.

+ remove an #undef for KEY_EVENT from curses.tail used in the experimental NCURSES_WGETCH_EVENTS feature. The #undef confuses Debian dpkg's build script.

Features of Ncurses

The ncurses package is fully compatible with SVr4 (System V Release 4) curses:

• All 257 of the SVr4 calls have been implemented (and are documented).

• Full support for SVr4 curses features including keyboard mapping, color, forms-drawing with ACS characters, and automatic recognition of keypad and function keys.

• An emulation of the SVr4 panels library, supporting a stack of windows with backing store, is included.

- An emulation of the SVr4 menus library, supporting a uniform but flexible interface for menu programming, is included.
- An emulation of the SVr4 form library, supporting data collection through on-screen forms, is included.
- Binary terminfo entries generated by the ncurses tic(1) implementation are bit-for-bit-compatible with the entry format SVr4 curses uses.
- The utilities have options to allow you to filter terminfo entries for use with less capable curses/terminfo versions such as the HP/UX and AIX ports.

The ncurses package also has many useful extensions over SVr4:

- The API is 8-bit clean and base-level conformant with the X/OPEN curses specification, XSI curses (that is, it implements all BASE level features, but not all EXTENDED features). Most EXTENDED-level features not directly concerned with wide-character support are implemented, including many function calls not supported under SVr4 curses (but portability of all calls is documented so you can use the SVr4 subset only).

- Unlike SVr3 curses, ncurses can write to the rightmostbottommost corner of the screen if your terminal has an insert-character capability.

- Ada95 and C++ bindings.

- Support for mouse event reporting with X Window xterm and OS/2 console windows.

- Extended mouse support via Alessandro Rubini's gpm package.

- The function wresize() allows you to resize windows, preserving their data.

- The function use_default_colors() allows you to use the terminal's default colors for the default color pair, achieving the effect of transparent colors.

- The functions keyok() and define_key() allow you to better control the use of function keys, e.g., disabling the ncurses KEY_MOUSE, or by defining more than one control sequence to map to a given key code.

- Support for 16-color terminals, such as aixterm and XFree86

xterm.

- Better cursor-movement optimization. The package now features a cursor-local-movement computation more efficient than either BSD's or System V's.
- Super hardware scrolling support. The screen-update code incorporates a novel, simple, and cheap algorithm that enables it to make optimal use of hardware scrolling, lineinsertion, and line-deletion for screen-line movements. This algorithm is more powerful than the 4.4BSD curses quickch() routine.
- Real support for terminals with the magic-cookie glitch. The screen-update code will refrain from drawing a highlight if the magiccookie unattributed spaces required just before the beginning and after the end would step on a non-space character. It will automatically shift highlight boundaries when doing so would make it possible to draw the highlight without changing the visual appearance of the screen.

- It is possible to generate the library with a list of pre-loaded fallback entries linked to it so that it can serve those terminal types even when no terminfo tree or termcap file is accessible (this may be useful for support of screen-oriented programs that must run in single-user mode).
- The tic(1)/captoinfo utility provided with ncurses has the ability to translate many termcaps from the XENIX, IBM and AT&T extension sets.
- A BSD-like tset(1) utility is provided.
- The ncurses library and utilities will automatically read terminfo entries from $HOME/.terminfo if it exists, and compile to that directory if it exists and the user has no write access to the system directory. This feature makes it easier for users to have personal terminfo entries without giving up access to the system terminfo directory.
- You may specify a path of directories to search for compiled descriptions with the environment variable TERMINFO_DIRS (this generalizes the feature provided by TERMINFO under stock System V.)
- In terminfo source files, use capabilities may refer not just to other entries in the same source file (as in System V) but also to compiled entries in either the system terminfo directory or the user's $HOME/.terminfo directory.
- A script (capconvert) is provided to help BSD users transition from termcap to terminfo. It gathers the information in a TERMCAP environment variable and/or a ~/.termcap local

entries file and converts it to an equivalent local terminfo tree under $HOME/.terminfo.

- Automatic fallback to the /etc/termcap file can be compiled in when it is not possible to build a terminfo tree. This feature is neither fast nor cheap, you don't want to use it unless you have to, but it's there.

- The table-of-entries utility toe makes it easy for users to see exactly what terminal types are available on the system.
- The library meets the XSI requirement that every macro entry point have a corresponding function which may be linked (and will be prototype-checked) if the macro definition is disabled with #undef.
- An HTML "Introduction to Programming with NCURSES" document provides a narrative introduction to the curses programming interface.

State of the Package

Numerous bugs present in earlier versions have been fixed; the library is far more reliable than it used to be. Bounds checking in many `dangerous' entry points has been improved. The code is now type-safe according to gcc -Wall. The library has been checked for malloc leaks and arena corruption by the Purify memory-allocation tester.

The ncurses code has been tested with a wide variety of applications including (versions starting with those noted):

cdk

Curses Development Kit

[3]http://invisible-island.net/cdk/

[4]http://www.vexus.ca/products/CDK/

ded

directory-editor

[5]http://invisible-island.net/ded/

dialog

the underlying application used in Slackware's setup, and the basis
for similar applications on GNU/Linux.

[6]http://invisible-island.net/dialog/

lynx

the character-screen WWW browser

[7]http://lynx.isc.org/release/

Midnight Commander file manager

[8]http://www.ibiblio.org/mc/

mutt

mail utility

[9]http://www.mutt.org/

ncftp

file-transfer utility

[10]http://www.ncftp.com/

nvi

New vi versions 1.50 are able to use ncurses versions 1.9.7 and later.

[11]http://www.bostic.com/vi/

pinfo

Lynx-like info browser.

[12]http://dione.ids.pl/~pborys/software/pinfo/

tin

newsreader, supporting color, MIME [13]http://www.tin.org/

vh-1.6

Volks-Hypertext browser for the Jargon File

[14]http://www.debian.org/Packages/unstable/text/vh.html as well as some that use ncurses for the terminfo support alone:

minicom

terminal emulator

[15]http://www.netsonic.fi/~walker/minicom.html

vile

vi-like-emacs

[16]http://invisible-island.net/vile/

The ncurses distribution includes a selection of test programs (including a few games).

Who's Who and What's What

Zeyd Ben-Halim started it from a previous package pcurses, written by Pavel Curtis. Eric S. Raymond continued development. Jurgen Pfeifer wrote most of the form and menu libraries. Ongoing work is being done by [17]Thomas Dickey. Thomas Dickey acts as the maintainer for the Free Software Foundation, which holds the copyright on ncurses.

Contact the current maintainers at [18]bug-ncurses@gnu.org.

To join the ncurses mailing list, please write email to bug-ncursesrequest@gnu.org containing the line:

subscribe <name>@<host.domain>

This list is open to anyone interested in helping with the development and testing of this package.

Beta versions of ncurses and patches to the current release are made available at [19]ftp://invisible-island.net/ncurses/.

Future Plans

- Extended-level XPG4 conformance, with internationalization support.
- Ports to more systems, including DOS and Windows.

We need people to help with these projects. If you are interested in working on them, please join the ncurses list.

Other Related Resources

The distribution provides a newer version of the terminfo-format terminal description file maintained by [20]Eric Raymond. Unlike the older version, the termcap and terminfo data are provided in the same file.

You can find lots of information on terminal-related topics not covered in the terminfo file at [21]Richard Shuford's archive.

References

1. ftp://ftp.gnu.org/gnu/ncurses/

2. ftp://invisible-island.net/ncurses/

3. http://invisible-island.net/cdk/

4. http://www.vexus.ca/products/CDK/

5. http://invisible-island.net/ded/

6. http://invisible-island.net/dialog/

7. http://lynx.isc.org/release/

8. http://www.ibiblio.org/mc/

9. http://www.mutt.org/

10. http://www.ncftp.com/

11. http://www.bostic.com/vi/

12. http://dione.ids.pl/~pborys/software/pinfo/

13. http://www.tin.org/

14. http://www.debian.org/Packages/unstable/text/vh.html

15. http://www.netsonic.fi/~walker/minicom.html

16. http://invisible-island.net/vile/

17. mailto:dickey@invisible-island.net

18. mailto:bug-ncurses@gnu.org

19. ftp://invisible-island.net/ncurses/

20. http://www.catb.org/~esr/terminfo/

21. http://www.cs.utk.edu/~shuford/terminal_index.html

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Linus Torvalds

Python License

A. HISTORY OF THE SOFTWARE

Python was created in the early 1990s by Guido van Rossum at Stichting Mathematisch Centrum (CWI, see http://www.cwi.nl) in the Netherlands as a successor of a language called ABC. Guido remains Python's principal author, although it includes many contributions from others.

In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see http://www.cnri.reston.va.us) in Reston, Virginia where he released

several versions of the software.

In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations (now Zope Corporation, see http://www.zope.com). In 2001, the Python Software Foundation (PSF, see http://www.python.org/psf/) was formed, a non-profit organization created specifically to own Pythonrelated Intellectual Property. Zope Corporation is a sponsoring member of the PSF.

All Python releases are Open Source (see http://www.opensource.org for the Open Source Definition). Historically, most, but not all, Python releases have also been GPL-compatible; the table below summarizes the various releases.

Release Derived Year Owner GPL- from compatible? (1)
0.9.0 thru 1.2 1991-1995 CWI yes 1.3 thru 1.5.2 1.2 1995-1999
CNRI yes 1.6 1.5.2 2000 CNRI no 2.0 1.6 2000 BeOpen.com no
1.6.1 1.6 2001 CNRI yes (2) 2.1 2.0+1.6.1 2001 PSF no 2.0.1
2.0+1.6.1 2001 PSF yes 2.1.1 2.1+2.0.1 2001 PSF yes 2.2 2.1.1
2001 PSF yes 2.1.2 2.1.1 2002 PSF yes 2.1.3 2.1.2 2002 PSF yes
2.2.1 2.2 2002 PSF yes 2.2.2 2.2.1 2002 PSF yes 2.2.3 2.2.2 2003
PSF yes 2.3 2.2.2 2002-2003 PSF yes 2.3.1 2.3 2002- 2003 PSF yes
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2.3.3 2004 PSF yes

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(2)   According to Richard Stallman, 1.6.1 is not GPL-compatible,
      because its license has a choice of law clause. According to
      CNRI, however, Stallman's lawyer has told CNRI's lawyer
      that 1.6.1 is "not incompatible" with the GPL.

Thanks to the many outside volunteers who have worked under
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zlib README

ZLIB DATA COMPRESSION LIBRARY

zlib 1.2.1 is a general purpose data compression library. All the code is thread safe. The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files http://www.ietf.org/rfc/rfc1950.txt (zlib format), rfc1951.txt (deflate format) and rfc1952.txt (gzip format). These documents are also available in other formats from ftp://ftp.uu.net/graphics/png/documents/zlib/zdoc-index.html

All functions of the compression library are documented in the file zlib.h (volunteer to write man pages welcome, contact zlib@gzip.org). A usage example of the library is given in the file example.c which also tests that the library is working correctly. Another example is given in the file minigzip.c. The compression library itself is composed of all source files except example.c and minigzip.c.

To compile all files and run the test program, follow the instructions given at the top of Makefile. In short "make test; make install" should work for most machines. For Unix: "./configure; make test; make install" For MSDOS, use one of the special makefiles such as Makefile.msc. For VMS, use Make_vms.com or descrip.mms.

Questions about zlib should be sent to <zlib@gzip.org>, or to Gilles Vollant <info@winimage.com> for the Windows DLL version. The zlib home page is http://www.zlib.org or http://www.gzip.org/zlib/ Before reporting a problem, please check this site to verify that you have the latest version of zlib; otherwise get the latest version and check whether the problem still exists or not.

PLEASE read the zlib FAQ http://www.gzip.org/zlib/zlib_faq.html before asking for help.

Mark Nelson <markn@ieee.org> wrote an article about zlib for the Jan. 1997 issue of Dr. Dobb's Journal; a copy of the article is available in http://dogma.net/markn/articles/zlibtool/zlibtool.htm

The changes made in version 1.2.1 are documented in the file ChangeLog.

Unsupported third party contributions are provided in directory "contrib".

A Java implementation of zlib is available in the Java Development Kit http://java.sun.com/j2se/1.4.2/docs/api/java/util/zip/ package-summary.html See the zlib home page http://www.zlib.org for details.

A Perl interface to zlib written by Paul Marquess pmqs@cpan.org is in the CPAN (Comprehensive Perl Archive Network) sites http://www.cpan.org/modules/by-module/Compress/

A Python interface to zlib written by A.M. Kuchling <amk@magnet.com> is available in Python 1.5 and later versions, see http://www.python.org/doc/lib/module-zlib.html

A zlib binding for TCL written by Andreas Kupries <a.kupries@westend.com> is availllable at http://www.oche.de/~akupries/soft/trf/trf_zip.html

An experimental package to read and write files in .zip format, written on top of zlib by Gilles Vollant <info@winimage.com>, is available in the contrib/minizip directory of zlib.

Notes for some targets:

- For Windows DLL versions, please see win32/DLL_FAQ.txt
- For 64-bit Irix, deflate.c must be compiled without any optimization. With -O, one libpng test fails. The test works in

32 bit mode (with the -n32 compiler flag). The compiler bug has been reported to SGI.

- zlib doesn't work with gcc 2.6.3 on a DEC 3000/300LX under OSF/1 2.1 it works when compiled with cc.
- On Digital Unix 4.0D (formerly OSF/1) on AlphaServer, the cc option -std1 is necessary to get gzprintf working correctly. This is done by configure.
- zlib doesn't work on HP-UX 9.05 with some versions of /bin/cc. It works with other compilers. Use "make test" to check your compiler.
- gzdopen is not supported on RISCOS, BEOS and by some Mac compilers.
- For PalmOs, see http://palmzlib.sourceforge.net/
- When building a shared, i.e. dynamic library on Mac OS X, the library must be installed before testing (do "make install" before "make test"), since the library location is specified in the library.

Acknowledgments:
The deflate format used by zlib was defined by Phil Katz. The deflate and zlib specifications were written by L. Peter Deutsch. Thanks to all the people who reported problems and suggested various improvements in zlib; they are too numerous to cite here.

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Jean-loup Gailly Mark Adler jloup@gzip.org
madler@alumni.caltech.edu

If you use the zlib library in a product, we would appreciate *not*
receiving lengthy legal documents to sign. The sources are provided
for free but without warranty of any kind. The library has been
entirely written by Jean-loup Gailly and Mark Adler; it does not
include third-party code.

If you redistribute modified sources, we would appreciate that you
include in the file ChangeLog history information documenting
your changes. Please read the FAQ for more information on the
distribution of modified source versions.

Appendix

This chapter contains a list of the hotkeys available in the different modules in PowerCinema, as well as technical support information.

Hotkeys

To facilitate navigation and media playback, use the following hotkeys while enjoying media in PowerCinema:

Hotkey	Function	DVD	Music	Audio CD
Left arrow	Navigate left in the main menu	Y	Y	Y
Up arrow	Navigate up in the main menu	Y	Y	Y
Right arrow	Navigate right in the main menu	Y	Y	Y
Down arrow	Navigate down in the main menu	Y	Y	Y
Enter	Play	Y	Y	Y
Esc	Quit	Y	Y	Y
Spacebar	Pause	Y	--	--
0-9	Enter numbers 0-9	Y	--	--
*	Enter number 10	Y	--	--
A	Angle	Y	--	--
B	Scan backward	Y	--	--
E	Step backward	Y	--	--
F	Fast forward	Y	--	--
H	Audio	Y	--	--
K	Karaoke	Y	--	--
L	Main menu	Y	--	--
N	Next/End	Y	Y	Y
P	Previous/Beginning	Y	Y	Y

■ CyberLink Power Cinema Guide				
Q	Mute	**Y**	**Y**	**Y**
R	Go up (in main menu)	**Y**	**Y**	**Y**
S	Stop	**Y**	**--**	**--**
T	Step	**Y**	**--**	**--**
U	Subtitles	**Y**	**--**	**--**

Technical Support

Before asking CyberLink Corp. for technical support, please refer to this user's guide or online help for more information. You may also contact your local distributor/dealer. If your problem is still not resolved, the following sections provide ways to obtain technical support.

Web Support

Web support is available 24 hours a day:

support.gocyberlink.com

In addition to frequently asked questions, our website also provides troubleshooting techniques, the latest in product news, and other relevant information.

Fax Support

In order to answer your technical questions as quickly as possible, you may fax us at: **(886) 2-8667-1300**.

Note: Technical support is only offered to registered users, so please have your CD-key (located on your CD case) handy when you call or fax.

Telephone Support

Call the CyberLink's Technical Support Hotline at:

(886) 2-8667-1298

Phone support hours are Monday to Friday, 9:00 AM-5:00 PM (GMT+8:00) Taiwan local time excluding holidays. When calling for support, please have your computer ready and provide us with the following information:

- your registered CD-key
- product version
- Windows version
- hardware types (capture card, sound card, VGA card) and their specifications
- warning messages displayed
- detailed problem description and when it occurred

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