



**TOSHIBA**

# **User's Manual**

**PORTÉGÉ M700/M710**

## Table of Contents

Copyright.....	vi
Disclaimer.....	vi
Trademarks.....	vi
FCC information.....	vii
EU Conformity Statement.....	viii
VCCI Class B Information.....	viii
Modem warning notice.....	viii
Japan regulations.....	ix
Instructions for IC CS-03 certified equipment.....	xii
Notes for Users in Australia and New Zealand.....	xiii
Following information is only for EU-member states:.....	xvi
Description on Laser specification.....	xvi
<b>Preface</b>	
Conventions.....	xvii
<b>General Precautions</b>	
Creating a computer-friendly environment.....	xx
Stress injury.....	xx
Heat injury.....	xxi
Pressure or impact damage.....	xxi
PC Card overheating.....	xxi
Mobile phones.....	xxi
Instruction Manual for Safety and Comfort.....	xxi
<i>Chapter 1</i> <b>Getting Started</b>	
Equipment checklist.....	1-1
Getting Started.....	1-3
System Recovery Options.....	1-12
System Recovery.....	1-13
<i>Chapter 2</i> <b>The Grand Tour</b>	
Front with the display closed.....	2-1
Left side.....	2-3

	Right side .....	2-4
	Back .....	2-5
	Underside .....	2-7
	Front with the display open .....	2-9
	Indicators .....	2-13
	Optical disc drives .....	2-15
	AC adaptor .....	2-17
<b>Chapter 3</b>	<b>Hardware, Utilities and Options</b>	
	Hardware .....	3-1
	Special features .....	3-6
	TOSHIBA Value Added Package .....	3-9
	TOSHIBA Tablet PC Extension .....	3-10
	Utilities and Applications .....	3-10
	Optional devices .....	3-14
	Bridge media slot .....	3-18
	Optional accessories .....	3-45
<b>Chapter 4</b>	<b>Operating Basics</b>	
	Pointing Devices .....	4-1
	Using the Tablet mode .....	4-9
	Using the Fingerprint Sensor .....	4-17
	Web Camera .....	4-25
	Changing Ultra Slim Bay modules .....	4-26
	Using optical disc drives .....	4-29
	Writing CD/DVDs on DVD Super Multi drives .....	4-33
	Media care .....	4-40
	Sound System .....	4-41
	Modem .....	4-43
	Wireless communications .....	4-47
	LAN .....	4-50
	Computer Handling .....	4-52
	Using the Hard Disk Drive (HDD) Protection .....	4-53
	Heat dispersal .....	4-55
<b>Chapter 5</b>	<b>The Keyboard</b>	
	Typewriter keys .....	5-1
	Function keys: F1 ... F12 .....	5-2
	Soft keys: FN key combinations .....	5-2
	Hot keys .....	5-3
	Windows special keys .....	5-5
	Keypad overlay .....	5-6
	Generating ASCII characters .....	5-7
<b>Chapter 6</b>	<b>Power and Power-Up Modes</b>	
	Power conditions .....	6-1
	Monitoring of power condition .....	6-4

	Battery . . . . .	6-5
	TOSHIBA Password Utility . . . . .	6-14
	Tablet mode . . . . .	6-18
	Power-up modes . . . . .	6-18
	Panel power on/off . . . . .	6-19
	System Auto Off . . . . .	6-19
<i>Chapter 7</i>	<b>HW Setup &amp; BIOS Setup</b>	
	Accessing HW Setup . . . . .	7-1
	HW Setup window . . . . .	7-1
	BIOS Setup Program . . . . .	7-8
<i>Chapter 8</i>	<b>Troubleshooting</b>	
	Problem solving process . . . . .	8-1
	Hardware and system checklist . . . . .	8-3
	TOSHIBA support . . . . .	8-26
<i>Appendix A</i>	<b>Specifications</b>	
	Physical Dimensions . . . . .	A-1
	Environmental Requirements . . . . .	A-1
<i>Appendix B</i>	<b>Display Controller and Video mode</b>	
	Display controller . . . . .	B-1
	Video mode . . . . .	B-1
<i>Appendix C</i>	<b>AT Commands</b>	
<i>Appendix D</i>	<b>S-registers</b>	
	S-register values . . . . .	D-1
	AT command set result codes . . . . .	D-5
<i>Appendix E</i>	<b>V.90</b>	
	V.90 mode . . . . .	E-1
	AT Command . . . . .	E-3
<i>Appendix F</i>	<b>Wireless LAN</b>	
	Card Specifications . . . . .	F-1
	Radio Characteristics . . . . .	F-2
	Supported Frequency Sub-bands . . . . .	F-3
<i>Appendix G</i>	<b>Intel® Matrix Storage Manager</b>	
	Manually Setting up Windows (Windows Vista®) . . . . .	G-1
	Manually Setting up Windows Manually (Windows XP) . . . . .	G-2
	How to install Intel® Matrix Storage Manager on Windows XP or Windows Vista®: . . . . .	G-3
<i>Appendix H</i>	<b>Bluetooth wireless technology Interoperability</b>	
	Bluetooth wireless technology and your Health . . . . .	H-3
	Regulatory statements . . . . .	H-3
	Using Bluetooth™ Adaptor from TOSHIBA equipment in Japan . . . . .	H-6

---

<i>Appendix I</i>	<b>AC Power Cord and Connectors</b>	
	Certification agencies .....	I-1
<i>Appendix J</i>	<b>TOSHIBA Anti-theft Protection Timer</b>	
<i>Appendix K</i>	<b>Legal Footnotes</b>	
	Non-applicable Icons*1 .....	K-1
	CPU*2.....	K-1
	Memory (Main System)*3.....	K-2
	Battery Life*4 .....	K-3
	Hard Disk Drive (HDD) Capacity*5 .....	K-3
	LCD*6.....	K-3
	Graphics Processor Unit ("GPU")*7 .....	K-3
	Wireless LAN*8.....	K-4
	Copy Protection*9 .....	K-4
	Images*10 .....	K-4
	<b>Glossary</b>	
	<b>Index</b>	

## Copyright

© 2007 by TOSHIBA Corporation. All rights reserved. Under the copyright laws, this manual cannot be reproduced in any form without the prior written permission of TOSHIBA. No patent liability is assumed, with respect to the use of the information contained herein.

*TOSHIBA PORTÉGÉ M700/M710 Portable Personal Computer User's Manual*

First edition November 2007

Copyright authority for music, movies, computer programs, databases and other intellectual property covered by copyright laws belongs to the author or to the copyright owner. Copyrighted material can be reproduced only for personal use or use within the home. Any other use beyond that stipulated above (including conversion to digital format, alteration, transfer of copied material and distribution on a network) without the permission of the copyright owner is a violation of copyright or author's rights and is subject to civil damages or criminal action. Please comply with copyright laws in making any reproduction from this manual.

## Disclaimer

This manual has been validated and reviewed for accuracy. The instructions and descriptions it contains are accurate for the TOSHIBA PORTÉGÉ M700/M710 Portable Personal Computer at the time of this manual's production. However, succeeding computers and manuals are subject to change without notice. TOSHIBA assumes no liability for damages incurred directly or indirectly from errors, omissions or discrepancies between the computer and the manual.

## Trademarks

IBM is a registered trademark and IBM PC is a trademark of International Business Machines Corporation.

Intel, Intel SpeedStep, Intel Core and Centrino are trademarks or registered trademarks of Intel Corporation.

Windows, Microsoft and Windows Vista are registered trademarks of Microsoft Corporation.

Bluetooth is a trademark owned by its proprietor and used by TOSHIBA under license.

InterVideo and WinDVD are registered trademarks of InterVideo Inc.

Photo CD is a trademark of Eastman Kodak.

Memory Stick and i.LINK are trademark and registered trademark of Sony Corporation.

Other trademarks and registered trademarks not listed above may be used in this manual.

## FCC information

### FCC notice "Declaration of Conformity Information"

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 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/TV technician for help.



*Only peripherals complying with the FCC class B limits may be attached to this equipment. Operation with non-compliant peripherals or peripherals not recommended by TOSHIBA is likely to result in interference to radio and TV reception. Shielded cables must be used between the external devices and the computer's external monitor port, Universal Serial Bus (USB 2.0) ports, i.LINK (IEEE1394) port and microphone jack. Changes or modifications made to this equipment, not expressly approved by TOSHIBA or parties authorized by TOSHIBA could void the user's authority to operate the equipment.*

### FCC conditions

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.
2. This device must accept any interference received, including interference that may cause undesired operation.

### Contact

**Address:** TOSHIBA America Information Systems, Inc.  
9740 Irvine Boulevard  
Irvine, California 92618-1697

**Telephone:** (949) 583-3000

## EU Conformity Statement



This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the Low Voltage Directive 2006/95/EC, the EMC Directive 2004/108/EC and/or R&TTE Directive 1999/5/EC.

Responsible for CE-marking: TOSHIBA EUROPE GMBH, Hammfelddamm 8, 41460 Neuss, Germany.  
 Manufacturer: Toshiba Corporation, 1-1 Shibaura 1-chome, Minato-ku, Tokyo, 105-8001, Japan

The complete official EU CE Declaration can be obtained on following internet page:

<http://epps.toshiba-teg.com/>

## VCCI Class B Information

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。  
 取扱説明書に従って正しい取り扱いをして下さい。

## Modem warning notice



*This information is applicable to the models equipped with a built-in modem.*

### Conformity Statement

The equipment has been approved to [Commission Decision "CTR21"] for pan-European single terminal connection to the Public Switched Telephone Network (PSTN).

However, due to differences between the individual PSTNs provided in different countries/regions the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN network termination point.

In the event of problems, you should contact your equipment supplier in the first instance.

### Network Compatibility Statement

This product is designed to work with, and is compatible with the following networks. It has been tested to and found to conform with the additional requirements conditional in EG 201 121.

Germany	ATAAB AN005,AN006,AN007,AN009,AN010 and DE03,04,05,08,09,12,14,17
Greece	ATAAB AN005,AN006 and GR01,02,03,04
Portugal	ATAAB AN001,005,006,007,011 and P03,04,08,10
Spain	ATAAB AN005,007,012, and ES01
Switzerland	ATAAB AN002
All other countries/regions	ATAAB AN003,004

Specific switch settings or software setup are required for each network, please refer to the relevant sections of the user guide for more details.

The hookflash (timed break register recall) function is subject to separate national type approvals. It has not been tested for conformity to national type regulations, and no guarantee of successful operation of that specific function on specific national networks can be given.

## Japan regulations

### Region selection

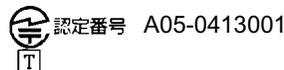
If you are using the computer in Japan, technical regulations described in the Telecommunications Business Law require that you select the Japan region mode. It is illegal to use the modem in Japan with any other selection.

### Redial

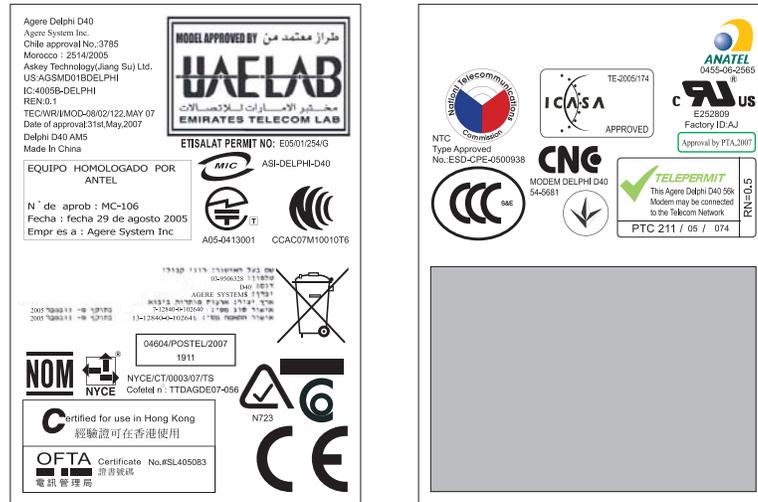
Up to two redial attempts can be made. If more than two redial attempts are made, the modem will return **Black Listed**. If you are experiencing problems with the Black Listed code, set the interval between redials at one minute or longer.

Japan's Telecommunications Business Law permits up to two redials on analogue telephones, but the redials must be made within a total of three minutes.

The internal modem is approved by Japan Approvals Institute for Telecommunications Equipment.



This label is located on the module.



**Pursuant to FCC CFR 47, Part 68:**

When you are ready to install or use the modem, call your local telephone company and give them the following information:

- The telephone number of the line to which you will connect the modem
- The registration number that is located on the device
 

The FCC registration number of the modem will be found on either the device which is to be installed, or, if already installed, on the bottom of the computer outside of the main system label.
- The Ringer Equivalence Number (REN) of the modem, which can vary.
 

For the REN of your modem, refer to your modem's label.

The modem connects to the telephone line by means of a standard jack called the USOC RJ11C.

**Type of service**

Your modem is designed to be used on standard-device telephone lines. Connection to telephone company-provided coin service (central office implemented systems) is prohibited. Connection to party lines service is subject to state tariffs. If you have any questions about your telephone line, such as how many pieces of equipment you can connect to it, the telephone company will provide this information upon request.

### **Telephone company procedures**

The goal of the telephone company is to provide you with the best service it can. In order to do this, it may occasionally be necessary for them to make changes in their equipment, operations, or procedures. If these changes might affect your service or the operation of your equipment, the telephone company will give you notice in writing to allow you to make any changes necessary to maintain uninterrupted service.

### **If problems arise**

If any of your telephone equipment is not operating properly, you should immediately remove it from your telephone line, as it may cause harm to the telephone network. If the telephone company notes a problem, they may temporarily discontinue service. When practical, they will notify you in advance of this disconnection. If advance notice is not feasible, you will be notified as soon as possible. When you are notified, you will be given the opportunity to correct the problem and informed of your right to file a complaint with the FCC. In the event repairs are ever needed on your modem, they should be performed by TOSHIBA Corporation or an authorized representative of TOSHIBA Corporation.

### **Disconnection**

If you should ever decide to permanently disconnect your modem from its present line, please call the telephone company and let them know of this change.

### **Fax branding**

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device to send any message via a telephone fax machine unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business, other entity or individual sending the message and the telephone number of the sending machine or such business, other entity or individual. In order to program this information into your fax modem, you should complete the setup of your fax software before sending messages.

## Instructions for IC CS-03 certified equipment

1. The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.  
Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection.  
The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations. Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.  
Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe systems, if present, are connected together. This precaution may be particularly important in rural areas.



*Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.*

2. The user manual of analog equipment must contain the equipment's Ringer Equivalence Number (REN) and an explanation notice similar to the following:  
The Ringer Equivalence Number (REN) of the modem, which can vary. For the REN of your modem, refer to your modem's label.



*The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.*

3. The standard connecting arrangement (telephone jack type) for this equipment is jack type(s): USOC RJ11C.  
The IC registration number of the modem is shown below.

Canada: 4005B-DELPHI

---

## Notes for Users in Australia and New Zealand

### Modem warning notice for Australia

Modems connected to the Australian telecoms network must have a valid Austel permit. This modem has been designed to specifically configure to ensure compliance with Austel standards when the country/region selection is set to Australia. The use of other country/region setting while the modem is attached to the Australian PSTN would result in you modem being operated in a non-compliant manner. To verify that the country/region is correctly set, enter the command AT1 which displays the currently active setting.

To set the country/region permanently to Australia, enter the following command sequence:

```
AT%TE=1
ATS133=1
AT&F
AT&W
AT%TE=0
ATZ
```

Failure to set the modem to the Australia country/region setting as shown above will result in the modem being operated in a non-compliant manner. Consequently, there would be no permit in force for this equipment and the Telecoms Act 1991 prescribes a penalty of \$12,000 for the connection of non-permitted equipment.

### Notes for use of this device in New Zealand

- The grant of a Telepermit for a device in no way indicates Telecom acceptance of responsibility for the correct operation of that device under all operating conditions. In particular the higher speeds at which this modem is capable of operating depend on a specific network implementation which is only one of many ways of delivering high quality voice telephony to customers. Failure to operate should not be reported as a fault to Telecom.
- In addition to satisfactory line conditions a modem can only work properly if:
  - a/ it is compatible with the modem at the other end of the call and.
  - b/ the application using the modem is compatible with the application at the other end of the call - e.g., accessing the Internet requires suitable software in addition to a modem.
- This equipment shall not be used in any manner which could constitute a nuisance to other Telecom customers.

- Some parameters required for compliance with Telecom's PTC Specifications are dependent on the equipment (PC) associated with this modem. The associated equipment shall be set to operate within the following limits for compliance with Telecom Specifications:
  - a/ There shall be no more than 10 call attempts to the same number within any 30 minute period for any single manual call initiation, and
  - b/ The equipment shall go on-hook for a period of not less than 30 seconds between the end of one attempt and the beginning of the next.
  - c/ Automatic calls to different numbers shall be not less than 5 seconds apart.
- Immediately disconnect this equipment should it become physically damaged, and arrange for its disposal or repair.
- The correct settings for use with this modem in New Zealand are as follows:
  - ATB0 (CCITT operation)
  - AT&G2 (1800 Hz guard tone)
  - AT&P1 (Decadic dialing make-break ratio =33%/67%)
  - ATS0=0 (not auto answer)
  - ATS6=4 (Blind dial delay)
  - ATS7=less than 90 (Time to wait to carrier after dialing)
  - ATS10=less than 150 (loss of carrier to hangup delay, factory default of 15 recommended)
  - ATS11=90 (DTMF dialing on/off duration=90 ms)
  - ATX2 (Dial tone detect, but not (U.S.A.) call progress detect)
- When used in the Auto Answer mode, the S0 register must be set with a value of 3 or 4. This ensures:
  - a person calling your modem will hear a short burst of ringing before the modem answers. This confirms that the call has been successfully switched through the network.
  - caller identification information (which occurs between the first and second ring cadences) is not destroyed.
- The preferred method of dialing is to use DTMF tones (ATDT...) as this is faster and more reliable than pulse (decadic) dialing. If for some reason you must use decadic dialing, your communications program must be set up to record numbers using the following translation table as this modem does not implement the New Zealand "Reverse Dialing" standard.
  - Number to be dialed: 0 1 2 3 4 5 6 7 8 9
  - Number to program into computer: 0 9 8 7 6 5 4 3 2 1
  - Note that where DTMF dialing is used, the numbers should be entered normally.

- The transmit level from this device is set at a fixed level and because of this there may be circumstances where the performance is less than optimal. Before reporting such occurrences as faults, please check the line with a standard Telepermitted telephone, and only report a fault if the phone performance is impaired.
- It is recommended that this equipment be disconnected from the Telecom line during electrical storms.
- When relocating the equipment, always disconnect the Telecom line connection before the power connection, and reconnect the power first.
- This equipment may not be compatible with Telecom Distinctive Alert cadences and services such as FaxAbility.

**NOTE THAT FAULT CALLOUTS CAUSED BY ANY OF THE ABOVE CAUSES MAY INCUR A CHARGE FROM TELECOM**

### General conditions

As required by PTC 100, please ensure that this office is advised of any changes to the specifications of these products which might affect compliance with the relevant PTC Specifications.

The grant of this Telepermit is specific to the above products with the marketing description as stated on the Telepermit label artwork. The Telepermit may not be assigned to other parties or other products without Telecom approval.

A Telepermit artwork for each device is included from which you may prepare any number of Telepermit labels subject to the general instructions on format, size and color on the attached sheet.

The Telepermit label must be displayed on the product at all times as proof to purchasers and service personnel that the product is able to be legitimately connected to the Telecom network.

The Telepermit label may also be shown on the packaging of the product and in the sales literature, as required in PTC 100.

The charge for a Telepermit assessment is \$337.50. An additional charge of \$337.50 is payable where an assessment is based on reports against non-Telecom New Zealand Specifications. \$112.50 is charged for each variation when submitted at the same time as the original.

An invoice for \$NZ1237.50 will be sent under separate cover.

**Following information is only for EU-member states:**



The use of the symbol indicates that this product may not be treated as household waste. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.



*This symbol may not stick depending on the country and region where you purchased.*

**Description on Laser specification**

The optical disc drive such as DVD Super Multi drive that is used in this computer is equipped with laser. The classification label with the following sentence is affixed to the surface of the drive.

CLASS 1 LASER PRODUCT  
 LASER KLASSE 1  
 LUOKAN 1 LASERLAITE  
 APPAREIL A LASER DE CLASSE 1  
 KLASS 1 LASER APPARAT

The drive with the above label is certified by the manufacturer that the drive complies with the requirement for laser product on the date of manufacturing pursuant to article 21 of Code of Federal Regulations by the United States of America, Department of Health & Human Services, Food and Drug Administration.

In other countries, the drive is certified to comply with the requirement pursuant to IEC 60825-1 and EN 60825-1 on class 1 laser product.

This computer is equipped with the optical disc drive in the following list according to the model.

Manufacturer	Type
Panasonic	UJ-852
Panasonic	UJ-862

## Preface

Congratulations on your purchase of the PORTÉGÉ M700/M710 series computer. This powerful notebook computer provides excellent expansion capability, includes multimedia functionality, and is designed to provide years of reliable, high-performance computing.

This manual tells how to set up and begin using your PORTÉGÉ M700/M710 computer. It also provides detailed information on configuring your computer, basic operations and care, using optional devices and troubleshooting.

If you are a new user of computers or if you're new to portable computing, first read over the Chapter 1, *Getting Started* and Chapter 3, *Hardware, Utilities and Options* chapters to familiarize yourself with the computer's features, components and accessory devices. Then read Chapter 1, *Getting Started* for step-by-step instructions on setting up your computer.

If you are an experienced computer user, please continue reading the preface to learn how this manual is organized, then become acquainted with this manual by browsing through its pages. Be sure to read the *Special features* section in Chapter 3, *Hardware, Utilities and Options* to learn about features that are uncommon or unique to this computer, as well as the section on Chapter 7, *HW Setup & BIOS Setup*, to understand how to setup and configure these features.

Read Chapter 3, *Hardware, Utilities and Options* if connecting optional products or external devices.

## Conventions

This manual uses the following formats to describe, identify, and highlight terms and operating procedures.

### Abbreviations

On first appearance, and whenever necessary for clarity, abbreviations are enclosed in parentheses following their definition. For example: Read Only Memory (ROM). Acronyms are also defined in the Glossary.

## Icons

Icons identify ports, dials, and other parts of your computer. The indicator panel also uses icons to identify the components it is providing information on.

## Keys

The keyboard keys are used in the text to describe many computer operations. A distinctive typeface identifies the key top symbols as they appear on the keyboard. For example, **ENTER** identifies the ENTER key.

## Key operation

Some operations require you to simultaneously use two or more keys. We identify such operations by the key top symbols separated by a plus sign (+). For example, **CTRL + C** means you must hold down **CTRL** and at the same time press **C**. If three keys are used, hold down the first two and at the same time press the third.

**ABC**

When procedures require an action such as clicking an icon or entering text, the icon's name or the text you are to type in is represented in the typeface you see to the left.

## Display



**ABC**

Names of windows or icons or text generated by the computer that appear on its display screen are presented in the type face you see to the left.

## Messages

Messages are used in this manual to bring important information to your attention. Each type of message is identified as shown below.



*Pay attention! A caution informs you that improper use of equipment or failure to follow instructions may cause data loss or damage your equipment.*



*Please read. A note is a hint or advice that helps you make best use of your equipment.*



*Indicates a potentially hazardous situation, which could result in death or serious injury, if you do not follow instructions.*

## Terminology

This term is defined in this document as follows:

**Start** The word "**Start**" refers to the "" button in Microsoft® Windows Vista®.

## General Precautions

TOSHIBA computers are designed to optimize safety, minimize strain and withstand the rigors of portability. However, certain precautions should be observed to further reduce the risk of personal injury or damage to the computer.

Be certain to read the general precautions below and to note the cautions included in the text of the manual.

### Creating a computer-friendly environment

Place the computer on a flat surface that is large enough for the computer and any other items you are using, such as a printer.

Leave enough space around the computer and other equipment to provide adequate ventilation. Otherwise, they may overheat.

To keep your computer in prime operating condition, protect your work area from:

- Dust, moisture, and direct sunlight.
- Equipment that generates a strong electromagnetic field, such as stereo speakers (other than speakers that are connected to the computer) or speakerphones.
- Rapid changes in temperature or humidity and sources of temperature change such as air conditioner vents or heaters.
- Extreme heat, cold, or humidity.
- Liquids and corrosive chemicals.

### Stress injury

Carefully read the *Instruction Manual for Safety and Comfort*. It contains information on the prevention of stress injuries to your hands and wrists that can be caused by extensive keyboard use. *Instruction Manual for Safety and Comfort* also includes information on work space design, posture and lighting that can help reduce physical stress.

## Heat injury

- Avoid prolonged physical contact with the computer. If the computer is used for long periods, its surface can become very warm. While the temperature will not feel hot to the touch, if you maintain physical contact with the computer for a long time, for example if you rest the computer on your lap or if you keep your hands on the palm rest, your skin might suffer a low-heat injury.
- If the computer has been used for a long time, avoid direct contact with the metal plate supporting the various interface ports as this can become hot.
- The surface of the AC adaptor can become hot when in use but this condition does not indicate a malfunction. If you need to transport the AC adaptor, you should disconnect it and let it cool before moving it.
- Do not lay the AC adaptor on a material that is sensitive to heat as the material could become damaged.

## Pressure or impact damage

Do not apply heavy pressure to the computer or subject it to any form of strong impact as this can damage the computer's components or otherwise cause it to malfunction.

## PC Card overheating

Some PC Cards can become hot during prolonged use which may result in errors or instability in the operation of the device in question. In addition, you should also be careful when you remove a PC Card that has been used for a long time.

## Mobile phones

Please be aware that the use of mobile phones can interfere with the audio system. The operation of the computer will not be impaired in any way, but it is recommended that a minimum distance of 30cm is maintained between the computer and a mobile phone that is in use.

## Instruction Manual for Safety and Comfort

All important information on the safe and proper use of this computer is described in the enclosed Instruction Manual for Safety and Comfort. Be sure to read it before using the computer.

## Chapter 1

### Getting Started

This chapter provides an equipment checklist, and basic information to start using your computer.



*Some of the features described in this manual may not function properly if you use an operating system that was not pre-installed by TOSHIBA.*

### Equipment checklist

Carefully unpack your computer, taking care to save the box and packaging materials for future use.

#### Hardware

Check to make sure you have all the following items:

- PORTÉGÉ M700/M710 Portable Personal Computer
- AC adaptor and power cord (2-pin plug or 3-pin plug)
- Battery pack (Is pre-installed in some computers)
- Slice Expansion Battery (Is included with some models)
- Tablet PC Pen (Is included with some models)
- Reserve Pen (Is included with some models)
- Ultra Slim Bay Weight Saver (Is included with some models)
- Ultra Slim Bay Case (Is provided with some models)



- *For some models, Tablet PC Pen is included together with spare pen tips and a tip removal tool in the small case coming with the product.*
- *For some models, Reserve Pen is included in the small case coming with the product.*

## Documentation

- PORTÉGÉ M700/M710 Series User Information Guide
- Instruction Manual for Safety and Comfort
- End User License Agreement

If any of the items are missing or damaged, contact your dealer immediately.

## Software

The following Windows® operating system and utility software are pre-installed.

- Microsoft® Windows Vista®
- TOSHIBA Value Added Package
- Recovery Disc Creator
- DVD Video Player
- TOSHIBA SD Memory Utilities
- TOSHIBA SD Memory Boot Utility
- CD/DVD Drive Acoustic Silencer
- TOSHIBA Assist
- TOSHIBA ConfigFree
- TOSHIBA HDD Protection
- TOSHIBA Disc Creator
- TOSHIBA Tablet PC Extension
- TOSHIBA Tablet Access Code Logon Utility
- Fingerprint Utility
- Windows Mobility Center
- Online Manual
  - PORTÉGÉ M700/M710 User's Manual (This manual)

## Getting Started



- All users should be sure to read the section [Starting up for the first time](#).
- Be sure to read the enclosed *Instruction Manual for Safety and Comfort* for information on the safe and proper use of this computer. It is intended to help you be more comfortable and productive while using a notebook computer. By following the recommendations in it you may reduce your chance of developing a painful or disabling injury to your hand, arms, shoulders or neck.

This section provides basic information to start using your computer. It covers the following topics:

- About the Tablet mode
- Connecting the AC adaptor
- Opening the display
- Turning on the power
- Starting up for the first time
- Turning off the power
- Restarting the computer
- Creating Optical Recovery Discs
- Restoring the pre-installed software from the Recovery hard disk drive
- Restoring the pre-installed software from your created Recovery Discs



- Use a virus-check program and make sure it is updated regularly.
- Never format storage media without checking its content - formatting destroys all stored data.
- It is a good idea to periodically back up the internal hard disk drive or other main storage device to external media. General storage media is not durable or stable over long periods of time and under certain conditions may result in data loss.
- Before you install a device or application, save any data in memory to the hard disk drive or other storage media. Failure to do so may result in the loss of data.

### About the Tablet mode

Change to "The TOSHIBA PORTÉGÉ M700/M710" computer can be used in two ways, as an ordinary laptop PC and as a Tablet PC. You can use the computer as Tablet PC, operated with the supplied Tablet PC Pen, by turning the display panel through 180 degrees and closing it. This manual calls the use as an ordinary laptop PC "Laptop mode", and the use as a Tablet PC "Tablet mode". Refer to [Changing to the Tablet mode](#) section in Chapter 4, Operating Basics for details on changing the mode.

## Connecting the AC adaptor

Attach the AC adaptor when you need to charge the battery or you want to operate from AC power. It is also the fastest way to get started, because the battery pack will need to be charged before you can operate from battery power.

The AC adaptor can be connected to any power source supplying from 100 to 240 volts and 50 or 60 hertz. For details on using the AC adaptor to charge the battery pack, refer to Chapter 6, [Power and Power-Up Modes](#).



- *Always use the TOSHIBA AC adaptor that was included with your computer, or use AC adaptors specified by TOSHIBA to avoid any risk of fire or other damage to the computer. Use of an incompatible AC adaptor could cause fire or damage to the computer possibly resulting in serious injury. TOSHIBA assumes no liability for any damage caused by use of an incompatible adaptor.*
- *Never plug the AC adaptor into a power source that does not correspond to both the voltage and the frequency specified on the regulatory label of the unit. Failure to do so could result in a fire or electric shock, possibly resulting in serious injury.*
- *Always use or purchase power cables that comply with the legal voltage and frequency specifications and requirements in the country of use. Failure to do so could result in a fire or electric shock, possibly resulting in serious injury.*
- *The supplied power cord conforms to safety rules and regulations in the region the product is bought and should not be used outside this region. For use in other regions, please buy power cords that conform to safety rules and regulations in the particular region.*
- *Do not use a 3-pin to 2-pin conversion plug.*
- *When you connect the AC adaptor to the computer, always follow the steps in the exact order as described in the User's Manual. Connecting the power cable to a live electrical outlet should be the last step otherwise the adaptor DC output plug could hold an electrical charge and cause an electrical shock or minor bodily injury when touched. As a general safety precaution, avoid touching any metal parts.*
- *Never place your computer or AC adaptor on a wooden surface, furniture, or any other surface that could be marred by exposure to heat since the computer base and AC adaptor's surface increase in temperature during normal use.*
- *Always place your computer or AC adaptor on a flat and hard surface that is resistant to heat damage.*

*Refer to the enclosed Instruction Manual for Safety and Comfort for detailed precautions and handling instructions.*

1. Connect the power cord to the AC adaptor.

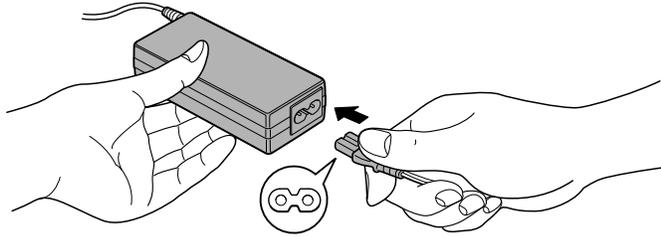


Figure 1-1 Connecting the power cord to the AC adaptor (2-pin plug)

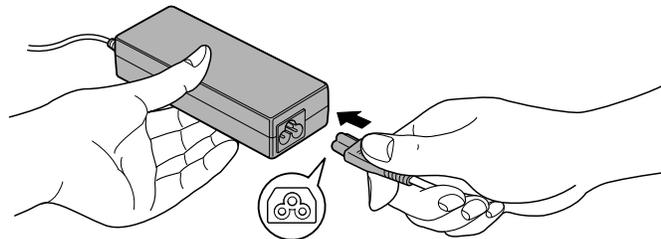


Figure 1-2 Connecting the power cord to the AC adaptor (3-pin plug)



Either a 2-pin or 3-pin adaptor/cord will be included with the computer depending on the model.

2. Connect the AC adaptor's DC output plug to the DC IN 15V jack on the back of the computer.

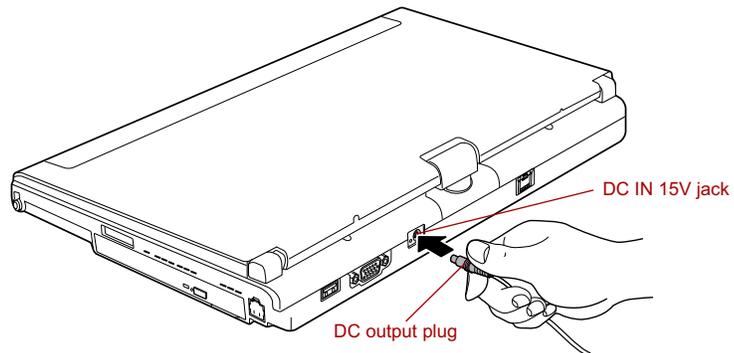


Figure 1-3 Connecting the DC output plug to the computer

3. Plug the power cord into a live wall outlet - the **Battery** and **DC IN** indicators on the front of the computer should glow.

## Opening the display

The display panel can be opened to a wide range of angles for optimal viewing.

While holding down the palm rest with one hand so that the main body of the computer is not raised, slowly lift the display panel - this will allow the angle of the display panel to be adjusted to provide optimum clarity.

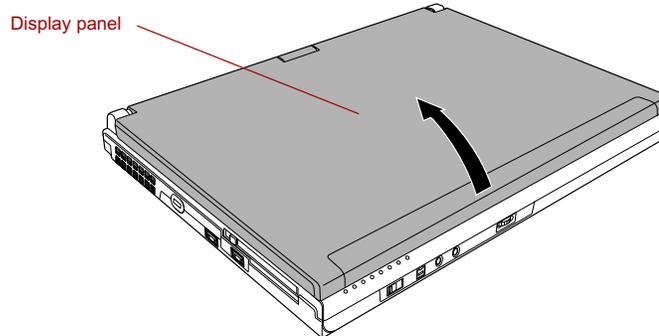


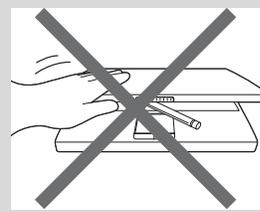
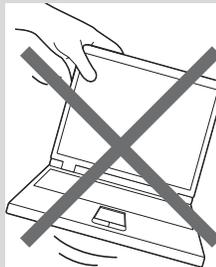
Figure 1-4 Opening the display panel



Use reasonable care when opening and closing the display panel. Opening it vigorously or slamming it shut could damage the computer.



- Be careful not to open the display panel too far as this could put stress on the display panel's hinges and cause damage.
- Do not press or push on the display panel.
- Do not lift the computer by the display panel.
- Do not close the display panel with pens or any other objects left in between the display panel and the keyboard.
- When opening or closing the display panel, place one hand on the palm rest to hold the computer in place and use the other hand to slowly open or close the display panel (Do not use excessive force when opening or closing the display panel).



## Turning on the power

This section describes how to turn on the power - the **Power** indicator will then indicate the status. Please refer to the [Monitoring of power condition](#) section in Chapter 6, Power and Power-Up Modes for more information.



- After you turn on the power for the first time, do not turn it off until you have set up the operating system. Please refer to the section [Starting up for the first time](#) for more information.
- Volume cannot be adjusted during Windows Setup.

1. Open the display panel.
2. Slide the Power Button Lock Switch to the right.
3. Press and hold the computer's power button for two or three seconds.

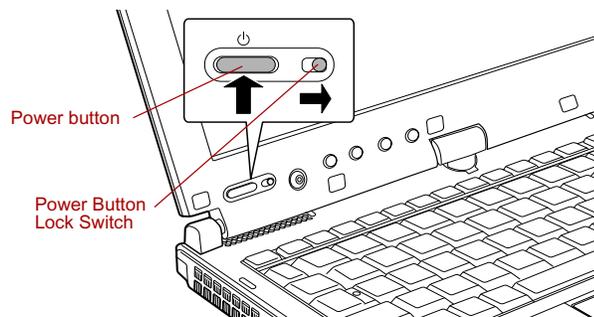


Figure 1-5 Turning on the power

## Starting up for the first time

The Microsoft Windows Vista® Startup Screen will be the first screen displayed when you turn on the power. Follow the on-screen instructions on each screen in order to properly install the operating system.



- When it is displayed, be sure to read the **Software License Terms** carefully.

## Turning off the power

The power can be turned off in one of three modes, either Shut Down (Boot) Mode, Hibernation Mode or Sleep Mode.

### **Shut Down mode (Boot Mode)**

When you turn off the power in Shut Down Mode no data will be saved and the computer will boot to the operating system's main screen the next time it is turned on.

1. If you have entered data, either save it to the hard disk drive or to other storage media.
2. Make sure all disk/disc activity has stopped before removing the CD/DVD or floppy diskette.



- *Make sure the **Hard Disk Drive and Ultra Slim Bay's module indicator** is off. If you turn off the power while a disk (disc) is being accessed, you may lose data or damage the disk.*
- *Never turn off the power while an application is running. Doing so could cause loss of data.*
- *Never turn off the power, disconnect an external storage device or remove storage media during data read/write. Doing so can cause data loss.*

3. Click **Start**.

4. Click the arrow button (  ) located in the power management buttons (  ) and select **Shut Down** from the menu.

5. Turn off any peripheral devices connected to your computer.



*Do not turn the computer or peripheral devices back on immediately - wait a short period to avoid any potential damage.*

### **Sleep Mode**

If you have to interrupt your work, you are able to turn off the power without exiting from your software by placing the computer into Sleep Mode. In this mode data is maintained in the computer's main memory so that when you turn on the power again, you can continue working right where you left off.



*When you have to turn off your computer aboard an aircraft or in places where electronic devices are regulated or controlled, always completely shut down the computer. This includes turning off any wireless communication switches or devices, and canceling settings that reactivate the computer automatically, such as a timer recording function. Failure to completely shut down the computer in this way could allow the operating system to reactivate and run pre-programmed tasks or preserve unsaved data, which could interfere with aviation or other systems, possibly causing serious injury.*



- *Before entering Sleep Mode, be sure to save your data.*
- *Do not install or remove a memory module while the computer is in Sleep Mode. The computer or the memory module could be damaged.*
- *Do not remove the battery pack while the computer is in Sleep Mode (unless the computer is connected to an AC power source). Data in memory could be lost.*



- When the AC adaptor is connected, the computer will go into Sleep Mode according to the settings in the Power Options (to access it, **Start -> Control Panel -> System and Maintenance -> Power Options**).
- To restore the operation of the computer from Sleep Mode, press and hold the power button or any key on the keyboard for a short amount of time. Please note that keyboard keys can only be used if the Wake-up on Keyboard option is enabled within the HW Setup utility.
- If the computer enters Sleep Mode while a network application is active, the application might not be restored when the computer is next turned on and the system returns from Sleep Mode.
- To prevent the computer from automatically entering Sleep Mode, disable Sleep Mode within the Power Options (to access it, **Start -> Control Panel -> System and Maintenance -> Power Options**). However, please be aware that this configuration will nullify the computer's Energy Star compliance.
- To use the Hybrid Sleep function, configure it in the Power Options.

### Benefits of Sleep Mode

The Sleep Mode feature provides the following benefits:

- Restores the previous working environment more rapidly than does the Hibernation Mode feature.
- Saves power by shutting down the system when the computer receives no input or hardware access for the time period set by the System Sleep Mode feature.
- Allows the use of the panel power off feature.

### Executing Sleep Mode



You can also enable Sleep Mode by pressing **FN + F3** - please refer to Chapter 5, [The Keyboard](#), for further details.

You can enter Sleep Mode in one of four ways:

- Click **Start** then click the power button (  ) located in the power management buttons (  ).  
Please note that this feature must be enabled within the Power Options (to access it, click **Start -> Control Panel -> System and Maintenance -> Power Options**).
- Click **Start** then click the arrow button (  ) and select **sleep** from the menu.
- Close the display panel. Please note that this feature must be enabled within the Power Options (to access it, click **Start -> Control Panel -> System and Maintenance -> Power Options**).
- Press the power button. Please note that this feature must be enabled within the Power Options (to access it, click **Start -> Control Panel -> System and Maintenance -> Power Options**).

When you turn the power back on, you can continue where you left when you shut down the computer.



- *When the computer is in Sleep Mode, the **Power** indicator will blink orange.*
- *If you are operating the computer on battery power, you can lengthen the overall operating time by turning it off into Hibernation Mode - Sleep Mode will consume more power while the computer is off.*

### *Sleep Mode limitations*

Sleep Mode will not function under the following conditions:

- Power is turned back on immediately after shutting down.
- Memory circuits are exposed to static electricity or electrical noise.

### *Hibernation Mode*

The Hibernation Mode feature saves the contents of memory to the hard disk drive when the computer is turned off so that, the next time it is turned on, the previous state is restored. Please note that the Hibernation Mode feature does not save the status of any peripheral devices connected to the computer.



- *Save your data. While entering Hibernation Mode, the computer saves the contents of memory to the hard disk drive. However, for safety sake, it is best to save your data manually.*
- *Data will be lost if you remove the battery or disconnect the AC adaptor before the save is completed. Wait for the **Hard Disk Drive** indicator to go out.*
- *Do not install or remove a memory module while the computer is in Hibernation Mode. Data will be lost.*

### *Benefits of Hibernation Mode*

The Hibernation Mode feature provides the following benefits:

- Saves data to the hard disk drive when the computer automatically shuts down because of a low battery condition.
- You can return to your previous working environment immediately when you turn on the computer.
- Saves power by shutting down the system when the computer receives no input or hardware access for the time period set by the System Hibernate feature.
- Allows the use of the panel power off feature.

### Starting Hibernation Mode



You can also enable Hibernation Mode by pressing **FN + F4** - please refer to Chapter 5, [The Keyboard](#), for further details.

To enter Hibernation Mode, follow the steps below.

1. Click **Start**.
2. Click the arrow button (  ) in the power management buttons (  ) and select **Hibernate** from the menu.

### Automatic Hibernation Mode

The computer can be configured to enter Hibernation Mode automatically when you press the power button or close the lid. In order to define these settings, you can follow the steps as described below:

1. Click **Start** and click the **Control Panel**.
2. Click **System and Maintenance** and click **Power Options**.
3. Click **Choose what the power button does** or **Choose what closing the lid does**.
4. Enable the desired Hibernation Mode settings for **When I press the power button** and **When I close the lid**.
5. Click the **Save changes** button.

### Data save in Hibernation Mode

When you turn off the power in Hibernation Mode, the computer will take a moment to save the current data in memory to the hard disk drive. During this time, the **Hard Disk Drive** indicator will glow.

After you turn off the computer, and the content of memory has been saved to the hard disk drive, turn off the power to any peripheral devices.



Do not turn the computer or devices back on immediately. Wait a moment to let all capacitors fully discharge.

### Restarting the computer

Certain conditions require that you reset the computer, for example if:

- You change certain computer settings.
- An error occurs and the computer does not respond to your keyboard commands.

If you need to restart the computer, there are three ways this can be achieved:

- Click **Start** then click the arrow button (  ) in the power management buttons (  ) and select **Restart** from the menu.
- Press **CTRL**, **ALT** and **DEL** simultaneously (once) to display the menu window, then select **Restart** from the **Shut down options**.

- Press the power button and hold it down for five seconds. Once the computer has turned itself off, wait between ten and fifteen seconds before turning the power on again by pressing the power button.

## System Recovery Options

About 1.5GB hidden partition is allocated on the hard disk drive for the System Recovery Options.

This partition stores files which can be used to repair the system in the event of a problem.



*The System Recovery Options feature will be unusable if this partition is deleted.*

### System Recovery Options

The System Recovery Options feature is installed on the hard disk when shipped from the factory. The System Recovery Options menu includes tools to repair startup problems, run diagnostics or restore the system.

See the **Windows Help and Support** content for more information about **Startup Repair**.

The System Recovery Options can also be run manually to repair problems.

The procedure is as follows. Follow the instructions shown on the on-screen menu.

1. Turn off the computer.
2. While holding the **F8** key, turn on the computer.
3. The **Advanced Boot Options** menu will be displayed. Use the arrow keys to select **Repair Your Computer** and press **ENTER**.
4. Follow the on-screen instructions.

The Windows Vista® CompletePC Backup feature can be used on Windows Vista® Business Edition and Ultimate Edition.

## System Recovery

This section describes the creation of Recovery Discs and their use.

### Creating Optical Recovery Discs

This section describes how to create Recovery Discs.



- *Be sure to connect the AC adaptor when you create Recovery Discs.*
- *Be sure to close all other software programs except the Recovery Disc Creator.*
- *Do not run software such as screen savers which can put a heavy load on the CPU.*
- *Operate the computer at full power.*
- *Do not use power-saving features.*
- *Do not write to the disc when the virus check software is running. Wait for it to finish, then disable virus detection programs including any software that checks files automatically in the background.*
- *Do not use utilities, including those intended to enhance hard disk drive access speed. They may cause unstable operation and damage data.*
- *Do not shut down/log off or Sleep/Hibernate while writing or rewriting the disc.*
- *Set the computer on a level surface and avoid places subjected to vibrations such as airplanes, trains, or cars.*
- *Do not use on unstable tables or other any other unstable surfaces.*

A recovery image of the software on your computer is stored on the hard disk drive, and can be copied to either CD or DVD media by using the following steps:

1. Select either blank CD or DVD media.
2. The application will allow you to choose from a variety of different media onto which the recovery image can be copied including CD-R, CD-RW, DVD-R, DVD-R DL, DVD-RW, DVD+R, DVD+R DL and DVD+RW.



*Please note that some of the above media may not be compatible with the optical disc drive installed into your computer. You should therefore verify the optical disc drive supports the blank media you have chosen before proceeding.*

3. Turn on your computer and allow it to load the Windows Vista<sup>®</sup> operating system from the hard disk drive as normal.
4. Insert the first blank media into the optical disc drive tray.
5. Double click the **Recovery Disc Creator** icon on the Windows Vista<sup>®</sup> desktop, or select the application from **Start Menu**.
6. After Recovery Disc Creator starts, select the type of media and the title you wish to copy, and then click the **Create** button.



*If your optical disc drive can only write to CDs, select 'CD' as the 'Disc Set' within the Recovery Disc Creator application.*

*Otherwise, if your optical disc drive can write both CDs and DVDs, select the type of media you want to create.*

## Restoring the pre-installed software from the Recovery hard disk drive

A portion of the total hard disk drive space is configured as a hidden recovery partition. This partition stores files which can be used to restore pre-installed software in the event of a problem.

If you subsequently set up your hard disk drive again, do not change, delete or add partitions in a manner other than specified in the manual, otherwise you may find that space for the required software is not available.

In addition, if you use a third-party partitioning program to reconfigure the partitions on your hard disk drive, you may find that it becomes impossible to setup your computer.



*When the sound mute feature has been activated by pressing the **FN + ESC** key, be sure to disable this to allow sounds to be heard before starting the restore process. Please refer to Chapter 5, [The Keyboard](#), for further details.*

*You can not use System Recovery Options if restoring the pre-installed software without System Recovery Options.*



*When you reinstall the Windows operating system, the hard disk will be reformatted and all data will be lost.*

1. Turn off your computer.
2. While holding down **0** (zero) key on the keyboard, turn on your computer.
3. A menu will be displayed from which you should follow the on-screen instructions.

## Restoring the pre-installed software from your created Recovery Discs

If the pre-installed files are damaged, you are able to either use the Recovery Discs you have created or the hard disk drive recovery process to restore the computer to the state it was in when you originally received it. To perform this restoration, follow the steps below:



*When the sound mute feature has been activated by pressing the **FN + ESC** key, be sure to disable this to allow sounds to be heard before starting the restore process. Please refer to Chapter 5, [The Keyboard](#), for further details.*

*You can not use System Recovery Options if restoring the pre-installed software without System Recovery Options.*



*When you reinstall the Windows operating system, the hard disk will be reformatted and all data will be lost.*

1. Load the Recovery Discs into the optical disc drive and turn off the computer's power.
2. While holding down **F12** key on the keyboard, turn on your computer - when the **TOSHIBA** logo screen appears, release the **F12** key.
3. Use the left and right cursors key to select the CD-ROM icon from the menu. Please refer to the [Boot Priority](#) section in Chapter 7, HW Setup & BIOS Setup for further information.
4. A menu will be displayed from which you should follow the on-screen instructions.



*When removing pre-installed drivers / utilities or when installing, you can setup the respective drivers / utilities from the following folder.*

*C: \TOSAPINS\\*\*\**

## Chapter 2

### The Grand Tour

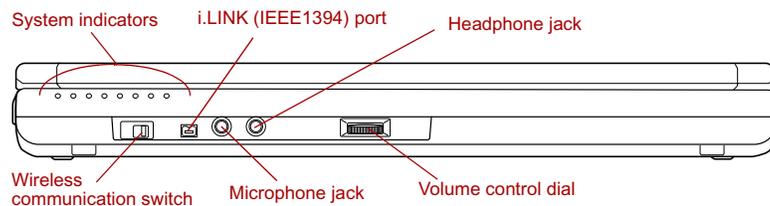
This chapter identifies the various components of the computer - it is recommended that you become familiar with each before you operate the computer.

#### **Legal Footnote (Non-applicable Icons)\*1**

For more information regarding Non-applicable Icons, please refer to the Legal Footnotes section in Appendix K or click the \*1 above.

### Front with the display closed

The following figure shows the computer's front with its display panel in the closed position.



*Figure 2-1 Front of the computer with display panel closed*

#### **System indicators**

These LED indicators allow you to monitor the status of various computer functions and are described in more detail within the [System indicators](#) section.

Off On  


#### **Wireless communication switch**

Slide this switch to the left to turn off Wireless LAN, Bluetooth and Wireless WAN functions. Slide it to the right to turn on the functions.

Only some models are equipped with Bluetooth, Wireless LAN and Wireless WAN functions.



- Turn Wi-Fi<sup>®</sup>, Bluetooth and Wireless WAN functionalities off when near a person who may have a cardiac pacemaker implant or other medical electric device. Radio waves may affect pacemaker or medical device operation, possibly resulting in serious injury. Follow the instruction of your medical device when using any Wi-Fi or Bluetooth or Wireless WAN functionality.
- Always turn off Wi-Fi or Bluetooth or Wireless WAN functionality if the computer is near automatic control equipment or appliances such as automatic doors or fire detectors. Radio waves can cause malfunction of such equipment, possibly resulting in serious injury.
- Do not use the Wi-Fi or Bluetooth functionalities near a microwave oven or in areas subject to radio interference or magnetic fields. Interference from a microwave oven or other source can disrupt Wi-Fi or Bluetooth operation.



**i.LINK (IEEE1394) port**

This port allows you to connect an external device, such as a digital video camera for high-speed data transfer.



**Microphone jack**

A 3.5 mm mini microphone jack enables connection of a three-conductor mini jack for monaural microphone input.



**Headphone jack**

A 3.5 mm mini headphone jack enables connection of stereo headphones.



**Volume control dial**

Use this dial to adjust the volume of the internal stereo speakers and optional external stereo headphones (if connected).

Move the Volume control dial to the right to increase the volume and to the left to decrease the volume.

## Left side

The following figure shows the computer's left side.

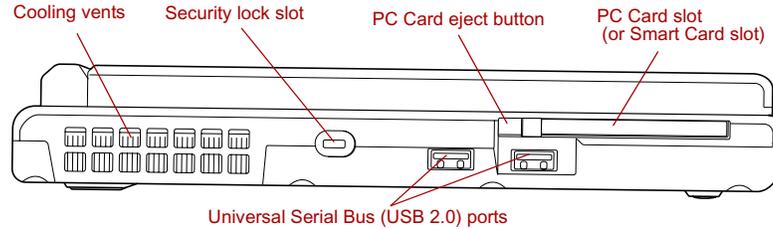


Figure 2-2 The left side of the computer



The computer is equipped with either a PC Card slot or a Smart Card slot.

### Cooling vents

The cooling vents help keep the processor from overheating.



Do not block the cooling vents. Keep foreign metal objects, such as screws, staples and paper clips, out of the cooling vents. Foreign metal objects can create a short circuit, which can cause damage and fire, possibly resulting in serious injury.



### Security lock slot

A security cable can be attached to this slot and then connected to a desk or other large object in order to deter theft of the computer.



### Universal Serial Bus (USB 2.0) ports

Two Universal Serial Bus ports, which comply to the USB 2.0 standard, are provided on the left hand side of the computer. The ports with the icon ( ⚡ ) has *USB Sleep and Charge function*.



Keep foreign metal objects, such as screws, staples and paper clips, out of the USB connectors. Foreign metal objects can create a short circuit, which can cause damage and fire, possibly resulting in serious injury.



Please note that it is not possible to confirm the operation of all functions of all USB devices that are available. In view of this it may be noted that some functions associated with a specific device might not operate properly.

### PC Card eject button

This button is used in order to remove a PC Card from within the computer.

### PC Card slot

This slot can accommodate a single Type II, 16-bit or 32-bit (CardBus) PC Card device. Some models are equipped with a PC Card slot.



Keep foreign metal objects, such as screws, staples and paper clips, out of the PC Card slot. Foreign metal objects can create a short circuit, which can cause damage and fire, possibly resulting in serious injury.

**Smart Card slot**

This slot can accommodate a single Smart Card device. Some models are equipped with a Smart Card slot.



Keep foreign metal objects, such as screws, staples and paper clips, out of the Smart Card slot. Foreign metal objects can create a short circuit, which can cause damage and fire, possibly resulting in serious injury.

**Right side**

The following figure shows the computer's right side.

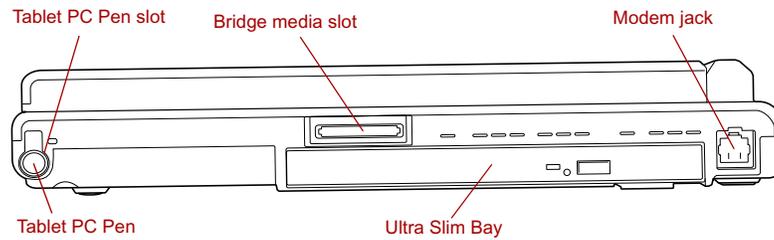


Figure 2-3 The right side of the computer

**Tablet PC Pen slot**

The Tablet PC Pen slot provides storage for the Tablet PC Pen.

**Tablet PC Pen**

The Tablet PC Pen is stored within the right side of the computer and enables direct data entry through the display screen. Some models are equipped with a Tablet PC Pen. Refer to the [Using the Tablet PC Pen and Reserve Pen](#) section in Chapter 4, Operating Basics.



**Bridge media slot**

This slot lets you insert an SD/SDHC memory card, miniSD/microSD Card, Memory Stick (PRO/PRO Duo), xD picture card and MultiMediaCard. Refer to the [Optional devices](#) section in Chapter 3, Hardware, Utilities and Options.



Keep foreign metal objects, such as screws, staples and paper clips, out of the Bridge media slot. Foreign metal objects can create a short circuit, which can cause damage and fire, possibly resulting in serious injury.

**Ultra Slim Bay** A DVD Super Multi drive or Ultra Slim Bay HDD Adaptor can be installed in the Ultra Slim Bay. Some models are equipped with a DVD Super Multi drive or Ultra Slim Bay HDD Adaptor.



**Modem jack** The modem jack allows you use to attach a modular cable in order to connect the internal modem directly to a telephone line. Some models are equipped with a built-in modem.



- *Connection to any communication line other than an analog phone line could cause a computer system failure.*
  - *Connect the built-in modem only to ordinary analog phone lines.*
  - *Never connect the built-in modem to a digital line (ISDN).*
  - *Never connect the built-in modem to the digital connector on a public telephone or to a digital private branch exchange (PBX).*
  - *Never connect the built-in modem to a key telephone system for residences or offices.*
- *Never operate your computer on AC power during a thunderstorm. If you see lightning or hear thunder, immediately turn off the computer. An electric surge caused by the storm, may result in a system failure, loss of data or hardware damage.*

## Back

The following figure shows the computer's back.

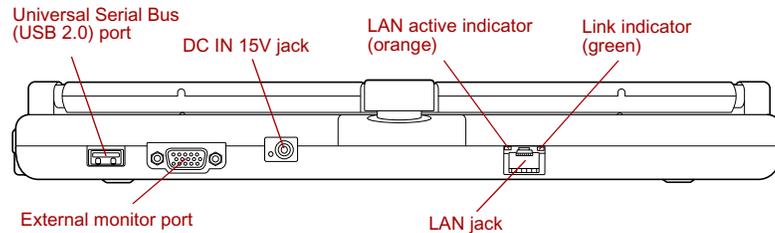


Figure 2-4 The back of the computer



**Universal Serial Bus (USB 2.0) port** One Universal Serial Bus port, which complies to the USB 2.0 standard, is provided on the back of the computer.



Keep foreign metal objects, such as screws, staples and paper clips, out of the USB connectors. Foreign metal objects can create a short circuit, which can cause damage and fire, possibly resulting in serious injury.



Please note that it is not possible to confirm the operation of all functions of all USB devices that are available. In view of this it may be noted that some functions associated with a specific device might not operate properly.



**External monitor port**

This port allows you to connect an external monitor to the computer.



**DC IN 15V jack**

The AC adaptor connects to this jack in order to power the computer and charge its internal batteries. Please note that you should only use the model of AC adaptor supplied with the computer at the time of purchase - using the wrong AC adaptor can cause damage to the computer.



**LAN jack**

This jack lets you connect to a LAN. The adaptor has built-in support for Ethernet LAN (10 megabits per second, 10BASE-T), Fast Ethernet LAN (100 megabits per second, 100BASE-TX) and Gigabit Ethernet LAN (1000 megabits per second, 1000BASE-T). Refer to Chapter 4, [Operating Basics](#), for details.



- Do not connect any cable other than a LAN cable to the LAN jack. It could cause damage or malfunction.
- Do not connect the LAN cable to a power supply. It could cause damage or malfunction.

**Link indicator (green)**

This indicator glows green when the computer is connected to a LAN and the LAN is functioning properly.

**LAN active indicator (orange)**

This indicator glows orange when data is being exchanged between the computer and the LAN.

## Underside

The following figure shows the underside of the computer. You should ensure that the display is closed before the computer is turned over to avoid causing any damage.

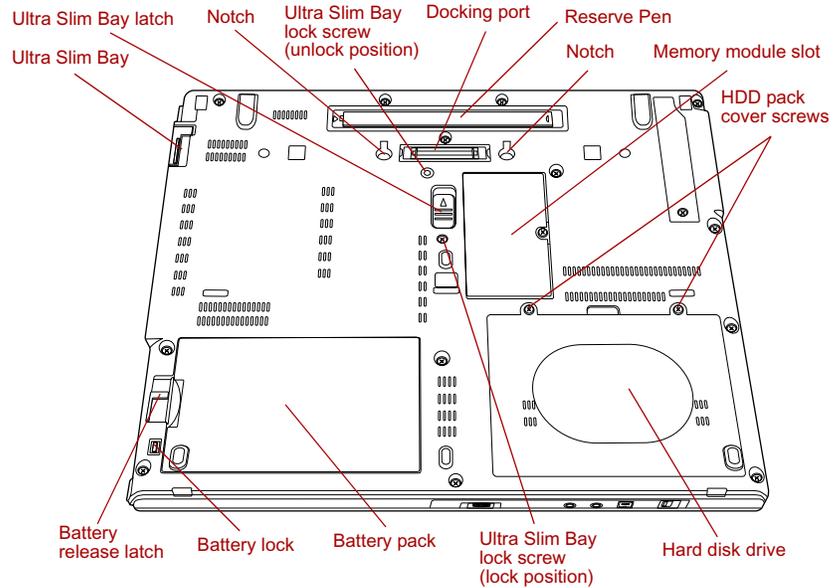


Figure 2-5 The underside of the computer

### Notches

Notches on the computer engage hooks on the TOSHIBA Express Port Replicator to ensure a secure connection.



### Docking port

This port enables connection of an optional TOSHIBA Express Port Replicator or a Slice Expansion Battery described in Chapter 3, [Hardware, Utilities and Options](#).



- Only the TOSHIBA Express Port Replicator can be used with this computer. Do not attempt to use any other Port Replicator.
- Keep foreign objects out of the docking port. A pin or similar object can damage the computer's circuitry. A plastic shutter protects the connector.

	<b>Memory module slot</b>	<p>The slot B memory module is located here. The memory module slot allows for the installation, replacement and removal of additional memory module.</p> <p>Refer to the <a href="#">Additional memory module</a> section in Chapter 3, Hardware, Utilities and Options.</p>
	<b>HDD pack cover screws</b>	<p>The HDD pack cover screws are the screws that hold the hard disk drive cover in place.</p>
	<b>Hard disk drive</b>	<p>This contains a Hard disk drive pack, which can be removed and reinstalled. For more information on how to remove or reinstall, please refer to the <a href="#">HDD Kit (Serial-ATA)</a> section in Chapter 3, Hardware, Utilities and Options.</p>
	<b>Battery release latch</b>	<p>Slide and hold this latch into its 'Unlock' position in order to release the battery pack ready for removal. For more detailed information on removing the battery pack please refer to Chapter 6, <a href="#">Power and Power-Up Modes</a>.</p>
	<b>Battery lock</b>	<p>Slide the battery lock to release the battery pack for removal.</p>
	<b>Battery pack</b>	<p>The battery pack provides power to the computer when the AC adaptor is not connected. For more detailed information on the use and operation of the battery pack please refer to Chapter 6, <a href="#">Power and Power-Up Modes</a>.</p>
	<b>Ultra Slim Bay</b>	<p>Refer to the <a href="#">Right side</a> section in this chapter for details.</p>
	<b>Ultra Slim Bay latch</b>	<p>Slide the latch to release or secure the Ultra Slim Bay latch.</p>
	<p><i>Be sure to lock the Ultra Slim Bay latch before you transport or carry the computer.</i></p>	
	<b>Ultra Slim Bay lock screw (lock position)</b>	<p>Lock position is used to lock the Ultra Slim Bay Latch.</p> <p>The Ultra Slim Bay Latch is locked by securing the Ultra Slim Bay Lock screw into the lock position.</p>

<b>Ultra Slim Bay lock screw (unlock position)</b>	<p>Unlock position is used for changing the Ultra Slim Bay. To unlock the Ultra Slim Bay latch, please move the Ultra Slim Bay Lock screw to unlock position.</p> <p>For more information on how to remove or insert, please refer to the <a href="#">Changing Ultra Slim Bay modules</a> in Chapter 4.</p>
<b>Reserve Pen</b>	<p>Reserve Pen is contained in the Reserve Pen case of Underside. Reserve Pen enables data entry directly through display screen. Some models are equipped with a Reserve Pen. Refer to the <a href="#">Using the Tablet PC Pen and Reserve Pen</a> section in Chapter 4, Operating Basics.</p>

## Front with the display open

This section shows the computer with the display panel open. In order to open the display, lift the display panel up and position it at a comfortable viewing angle for you.

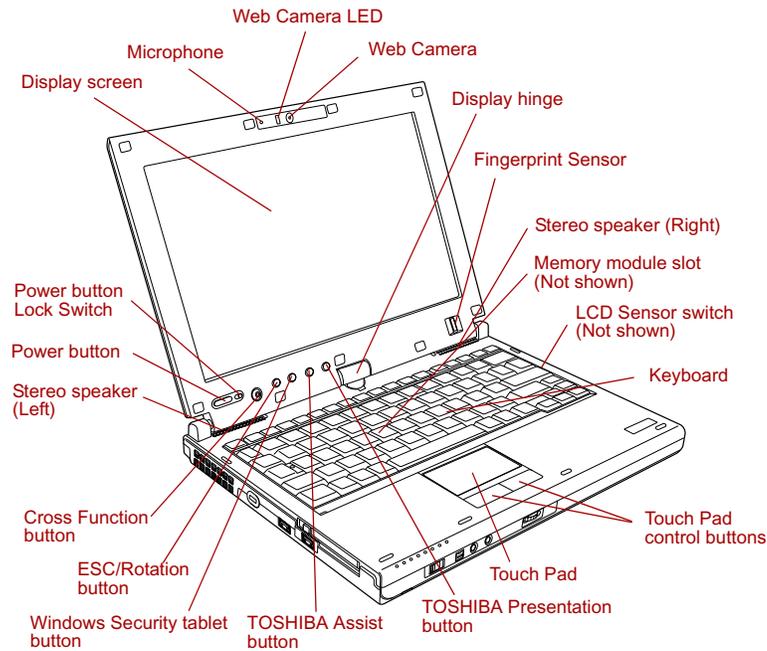


Figure 2-6 The front of the computer with the display panel open

<b>Web Camera</b>	<p><b>Web Camera</b> is a device that allows you to record video or take photographs with your computer. You can use it for video chatting or video conferences using a communication tool such as <b>Windows Live Messenger</b>. <b>Camera Assistant Software</b> will help you to add various video effects to your video or photograph.</p> <p>Enables the transmission of video and use of video chat via the internet using specialized applications.</p> <p>The effective pixel count for this web camera is 1.3 million.</p> <p>Some models are equipped with a Web Camera. Please refer to the <a href="#">Web Camera</a> section in Chapter 4, Operating Basics.</p>
<b>Web Camera LED</b>	<p>The Web Camera LED glows when the Web Camera is operating.</p>
<b>Display screen</b>	<p>Please be aware that, when the computer is operating on the AC adaptor, the image displayed on the internal screen will be somewhat brighter than when it operates on battery power. This difference in brightness levels is intended to save power when operating on batteries. For more information on the computer's display, please refer to the <a href="#">Display Controller and Video mode</a> section in Appendix B.</p>
	<p><b>Power button</b> Press this button to turn the computer's power on and off.</p>
	<p><b>Power Button Lock Switch</b> This switch locks the Power button in order to prevent them from being accidentally pressed. Slide the switch to the left to lock the Power button.</p>
	<p><b>Cross Function button</b> This button function will automatically open the Windows Mobility Center window.</p>
	<p><b>ESC/Rotation button</b> This button functions the same as the <b>ESC</b> key when tapped, or changes the orientation of the screen when pressed for more than a second.</p>
	<p><b>Windows Security tablet button</b> This button functions the same as the <b>Ctrl + Alt + Del</b> keys to show Menu window.</p>


**TOSHIBA Assist button**

Press this button to launch the program automatically. When power-off, Sleep Mode and Hibernation Mode, press this button to start the computer and launch the program.


**TOSHIBA Presentation button**

The TOSHIBA Presentation button has the same functionality as the Connect display button in the Mobility Center. Pressing this button when an external display is connected will open the Windows Vista® TMM (Transient Multimon Manager) screen.

**Display hinge**

The display hinge allows the display panel to be position at a variety of easy-to-view angles. Rotate the computer on this fulcrum point when switching between Tablet and Laptop modes.

**Fingerprint Sensor**

This sensor enables you to enroll and recognize a fingerprint. Some models are equipped with a Fingerprint Sensor. For detailed information on Fingerprint Sensor, refer to Chapter 4, [Using the Fingerprint Sensor](#).

**Stereo speakers**

The speakers emit sound generated by your software as well as audio alarms, such as low battery condition, generated by the system.

**Keyboard**

The internal keyboard provides the embedded numeric overlay keys, dedicated cursor control overlay keys,  and  Keys. The keyboard is compatible with the IBM® enhanced keyboard. Refer to Chapter 5, [The Keyboard](#), for details.

**Touch Pad**

The Touch Pad mouse control device located in the center of the palm rest is used to control the movement of the on-screen pointer. For more information, please refer to the [Using the Touch Pad](#) section in Chapter 4, Operating Basics.

**Touch Pad control buttons**

The control buttons located below the Touch Pad allow you to select menu items or manipulate text and graphics as designated by the on-screen pointer.

---

<b>Microphone</b>	A built-in microphone allows you to import and record sounds for your application - please refer to the <a href="#">Sound System</a> section in Chapter 4, Operating Basics for more information.
<b>LCD Sensor switch</b>	<p>This switch senses when the display panel is either closed or opened and activates the Panel Power Off/On feature as appropriate. For example, when you close the display panel the computer enters Hibernation Mode and shuts itself down and then, when you next open the display, the computer will automatically start up and return you to the application you were previously working on.</p> <p>You can specify within the Power Options. To access it, click <b>Start -&gt; Control Panel -&gt; System and Maintenance -&gt; Power Options</b>.</p>

---



*Do not put any magnetic objects close to this switch as they may cause the computer to automatically enter Hibernation Mode and shut down even if the Panel Power Off feature is disabled.*

---

<b>Memory module slot</b>	<p>The slot A memory module is located here. The memory module slot allows for the installation and replacement of additional memory module.</p> <p>Refer to the <a href="#">Additional memory module</a> section in Chapter 3, Hardware, Utilities and Options.</p>
---------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

---

## Indicators

This section explains indicator functions.

### System indicators

The LED system indicators for specific computer operations glow when those operations are in progress.

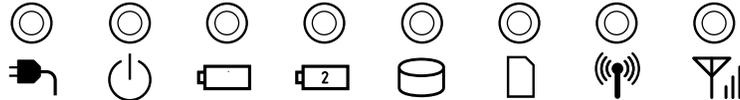


Figure 2-7 System indicators

	<b>DC IN</b>	The <b>DC IN</b> indicator normally glows green when power is being correctly supplied from the AC power adaptor. However, if the output voltage from the adaptor is abnormal, or if the computer's power supply malfunctions, this indicator will flash orange.
	<b>Power</b>	The <b>Power</b> indicator normally glows green when the computer is turned on. However, if you turn the computer off into Sleep Mode, this indicator will flash orange - approximately one second on, two seconds off - both while the system is shutting down and while it remains turned off.
	<b>Battery</b>	The <b>Battery</b> indicator shows the condition of the battery's charge - green indicates the battery is fully charged, orange indicates the battery is charging, and flashing orange indicates a low battery condition. Please refer to Chapter 6, <a href="#">Power and Power-Up Modes</a> for more information on this feature.
	<b>2nd battery</b>	The <b>2nd battery</b> indicator shows the condition of the Slice Expansion Battery's charge - green indicates the Slice Expansion Battery is fully charged, orange indicates the Slice Expansion Battery is charging, and flashing orange indicates a low battery condition. Please refer to Chapter 6, <a href="#">Power and Power-Up Modes</a> for more information on this feature.
	<b>Hard Disk Drive</b>	The <b>Hard Disk Drive</b> indicator glows green whenever the computer is accessing the built-in hard disk drive or Ultra Slim Bay HDD.

	<b>Bridge media slot</b>	The <b>Bridge media slot</b> indicator glows green when the computer is accessing the Bridge media slot.
	<b>Wireless communication</b>	The <b>Wireless communication</b> indicator blinks orange when the Bluetooth, Wireless LAN and Wireless WAN functions are turned on. Only some models are equipped with Bluetooth, Wireless LAN and Wireless WAN functions.
	<b>Wireless WAN</b>	The Wireless WAN indicator glows or blinks blue when the Wireless WAN function is on. The indicator will glow or blink in order to indicate the connection status of the Wireless WAN function. A Wireless WAN card must be installed to use this function. Some models are equipped with a Wireless WAN card.

### Keyboard indicators

The following figures show the positions of the **CAPS LOCK** indicator and the keypad overlay indicators which show the following conditions:

- When the **CAPS LOCK** indicator glows, the keyboard will produce capitals when any letter is typed.
- When the **Arrow Mode** indicator glows, the keypad overlay allows you to use cursor functions.
- When the **Numeric Mode** indicator glows, the keypad overlay allows you to enter numbers.

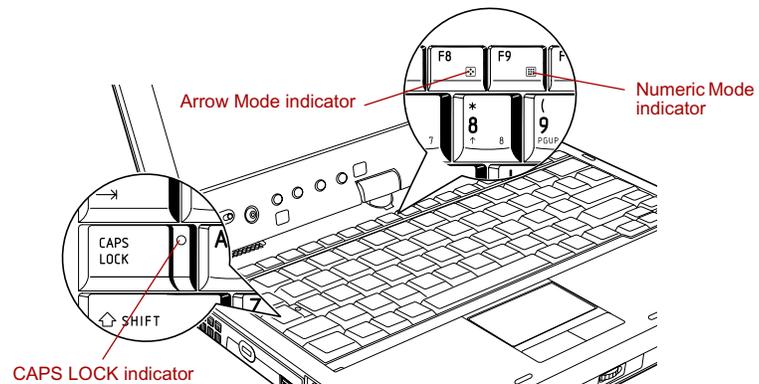


Figure 2-8 Keyboard indicators

	<b>CAPS LOCK</b>	This indicator glows green when letter keys are locked into their uppercase format.
	<b>Arrow Mode</b>	When the <b>Arrow Mode</b> indicator lights green, you can use the gray labeled keys on the keypad overlay as cursor keys. Please refer to the <a href="#">Keypad overlay</a> section in Chapter 5, The Keyboard for more information.
	<b>Numeric Mode</b>	When the <b>Numeric Mode</b> indicator lights green, you can use the gray labeled keys on the keypad overlay for number entry. Please refer to the <a href="#">Keypad overlay</a> section in Chapter 5, The Keyboard for more information.

## Optical disc drives

The computer is configured with a DVD Super Multi drive. Some models are equipped with an optical disc drive. An ATAPI interface controller is used for CD/DVD-ROM operation. When the computer is accessing a CD/DVD, an indicator on the drive glows.

For information on loading and unloading discs refer to the [Using optical disc drives](#) section in Chapter 4, Operating Basics.

### Region codes for DVD drives and media

DVD Super Multi drives and their associated media are manufactured according to the specifications of six marketing regions. When you purchase DVD-Video, make sure it matches your drive, otherwise it will not play properly.

Code	Region
1	Canada, United States
2	Japan, Europe, South Africa, Middle East
3	Southeast Asia, East Asia
4	Australia, New Zealand, Pacific Islands, Central America, South America, Caribbean
5	Russia, Indian Subcontinent, Africa, North Korea, Mongolia
6	China

## Writable discs

This section describes the types of writable CD/DVD discs. Check the specifications of your drive to see the types of discs it can write. Use TOSHIBA Disc Creator to write compact discs. Refer to Chapter 4, [Operating Basics](#).

### CDs

- CD-R discs can be written only once. The recorded data cannot be erased or changed.
- CD-RW discs including multi speed CD-RW discs, high-speed CD-RW discs and ultra-speed CD-RW discs can be recorded more than once.

### DVDs

- DVD-R, DVD+R, DVD-R (Dual Layer) and DVD+R (Double Layer) discs can be written only once. The recorded data cannot be erased or changed.
- DVD-RW, DVD+RW and DVD-RAM discs can be recorded more than once.

### Formats

The drive supports the following formats.

#### ***DVD Super Multi drive***

The drive supports the formats CD-ROM, DVD-ROM, DVD-Video, CD-DA, CD-Text, Photo CD™ (single/multi-session), CD-ROM Mode 1, Mode 2, CD-ROM XA Mode 2 (Form1, Form2), Enhanced CD (CD-EXTRA), Addressing Method 2, CD-R, CD-RW, DVD-R, DVD-R DL, DVD-RW, DVD+R, DVD+R DL, DVD+RW and DVD-RAM.



*Some types and formats of DVD-R DL and DVD+R DL discs may be unreadable.*

## DVD Super Multi drive

The full-size DVD Super Multi drive module lets you record data to rewritable CD/DVDs as well as run either 12 cm (4.72") or 8cm (3.15") CD/DVDs without using an adaptor.



*The read speed is slower at the center of a disc and faster at the outer edge.*

<b>DVD read</b>	8 speed (maximum)
<b>DVD-R write</b>	8 speed (maximum)
<b>DVD-R DL (UJ-852) write</b>	4 speed (maximum)
<b>DVD-R DL (UJ-862) write</b>	6 speed (maximum)
<b>DVD-RW write</b>	6 speed (maximum)
<b>DVD+R write</b>	8 speed (maximum)
<b>DVD+R DL (UJ-852) write</b>	4 speed (maximum)
<b>DVD+R DL (UJ-862) write</b>	6 speed (maximum)
<b>DVD+RW write</b>	8 speed (maximum)
<b>DVD-RAM write</b>	5 speed (maximum)
<b>CD read</b>	24 speed (maximum)
<b>CD-R write</b>	24 speed (maximum)
<b>CD-RW write</b>	16 speed (maximum, Ultra-speed media)

## AC adaptor

The AC adaptor can automatically adjust to any voltage ranging from 100 to 240 volts and to a frequency of either 50 or 60 hertz, enabling you to use this computer in almost all country/region. The adaptor converts AC power to DC power and reduces the voltage supplied to this computer.

To recharge the battery, simply connect the AC adaptor to a power source and to the computer. Please refer to Chapter 6, [Power and Power-Up Modes](#) for further information.

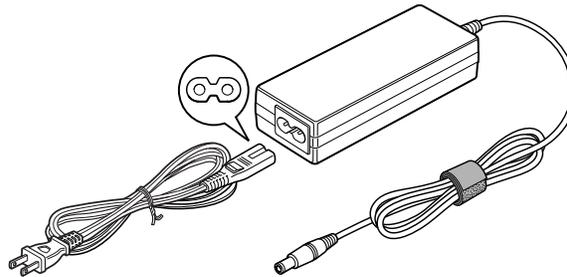


Figure 2-9 The AC adaptor (2-pin plug)

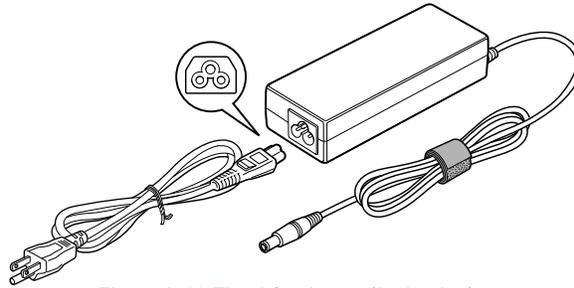


Figure 2-10 The AC adaptor (3-pin plug)



- Depending on the model in question, either a 2-pin or 3-pin adaptor/power lead will be bundled with the computer.
- Do not use a 3-pin to 2-pin conversion plug.
- The supplied power cord conforms to safety rules and regulations in the region the product is bought and should not be used outside of this region. In order to use the adaptor/computer in other regions, you should please buy a power cord that conforms to the safety rules and regulations in that particular region.



Always use the TOSHIBA AC adaptor that was included with your computer, or use AC adaptors specified by TOSHIBA to avoid any risk of fire or other damage to the computer. Use of an incompatible AC adaptor could cause fire or damage to the computer possibly resulting in serious injury. TOSHIBA assumes no liability for any damage caused by use of an incompatible adaptor.

## Chapter 3

### Hardware, Utilities and Options

#### Hardware

This section describes the hardware of your computer. The actual specifications may vary depending on the model you purchased.

#### **Processor**

##### **CPU**

The computer is equipped with one of the following Intel® processors.

- Intel® Core™ 2 Duo Processor, which incorporates a 2MB level2 cache memory. It also supports Enhanced Intel® SpeedStep® Technology.
- Intel® Core™ 2 Duo Processor, which incorporates a 4MB level2 cache memory. It also supports Enhanced Intel® SpeedStep® Technology.



*Some models in this series carry Intel® Centrino® Duo processor technology, which is based on three separate technologies of Intel® Core™ 2 Duo processor, Intel® PRO/Wireless Network Connection, and Mobile Intel® 965 Express Chipset Family.*

#### **Legal Footnote (CPU)\*2**

For more information on the CPU, please refer to the Legal Footnotes section in Appendix K or Click the \*2 above.

## Memory

<b>Module slot</b>	512, 1,024 or 2,048MB memory module can be installed in the computer's memory module slot for a maximum of 4,096MB system memory.
<b>Video RAM</b>	<p>The amount of Video RAM available is dependent on the computer's system memory.</p> <p><b>Start -&gt; Control Panel -&gt; Appearance and Personalization -&gt; Personalization -&gt; Display Settings.</b></p> <p>The amount of Video RAM can be verified by clicking the <b>Advanced Settings...</b> button in the Display Settings window.</p>

### **Legal Footnote (Memory (Main System))\*3**

For more information regarding Memory (Main System), please refer to the Legal Footnotes section in Appendix K or click the \*3 above.

## Power

<b>Battery pack</b>	The computer is powered by one rechargeable lithium-ion battery pack.
<b>Slice Expansion Battery</b>	<p>This battery pack increases your computer's operating time when main battery pack is also installed.</p> <p>Some models are equipped with a Slice Expansion Battery.</p>

### **Legal Footnote (Battery Life)\*4**

For more information regarding Battery Life, please refer to the Legal Footnotes section in Appendix K or click the \*4 above.

<b>RTC battery</b>	The internal RTC battery backs up the Real Time Clock (RTC) and calendar.
<b>AC adaptor</b>	<p>The AC adaptor provides power to the system and recharges the batteries when they are low. It comes with a detachable power cord which will either have a 2-pin or 3-pin plug enclosure.</p> <p>As the AC adaptor is universal, it can receive a range of AC voltages from 100 to 240 volts, however you should note that the output current varies among different models. Using the wrong adaptor can damage your computer. Refer to the <a href="#">AC adaptor</a> section in Chapter 2, The Grand Tour.</p>

### Disks

<b>Hard disk drive</b>	<p>This computer is equipped with one of the following hard disk drive types. The capacity of each hard disk drive model is different.</p> <ul style="list-style-type: none"> <li>■ 80GB</li> <li>■ 120GB</li> <li>■ 160GB</li> </ul> <p>Please note that part of the hard disk drive's overall capacity is reserved as administration space.</p>
------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

#### **Legal Footnote (Hard Disk Drive (HDD) Capacity)\*5**

For more information regarding Hard Disk Drive (HDD) Capacity, please refer to the Legal Footnotes section in Appendix K or click the \*5 above.

### Optical disc drive

<b>Drive</b>	<p>The following optical disc drive is pre-installed in this computer. Some models are equipped with an optical disc drive.</p> <ul style="list-style-type: none"> <li>■ DVD Super Multi drive</li> </ul>
--------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------



*2.6GB and 5.2GB DVD-RAM media cannot be read from or written to.*

## Display

The computer's internal display panel supports high-resolution video graphics and can be set to a wide range of viewing angles for maximum comfort and readability.

<b>Display panel</b>	<p>12.1" TFT LCD screen, 16 million colors, with a resolution of 1280 horizontal x 800 vertical pixels WXGA.</p> <p>The function of the display screen varies from model to model.</p> <ul style="list-style-type: none"> <li>■ Digitizer screen model: Operations on the display screen can be done by using the Tablet PC Pen which comes with the computer.</li> <li>■ Digitizer and touch screen model: Operations on the display screen can be done by a finger or using the Tablet PC Pen which comes with the computer.</li> <li>■ Display screen model: Operations on the display screen can not be done by using Tablet PC Pen or a finger. In order to prevent damages to the display screen please refrain from touching it.</li> </ul>
----------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

### Legal Footnote (LCD)\*6

For more information regarding the LCD, please refer to the Legal Footnotes section in Appendix K or click the \*6 above.

<b>Graphics controller</b>	The graphics controller maximizes display performance. Refer to <a href="#">Display Controller and Video mode</a> section in Appendix B for more information.
----------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------

### Legal Footnote (Graphics Processor Unit ("GPU"))\*7

For more information regarding the Graphics Processor Unit ("GPU"), please refer to the Legal Footnotes section in Appendix K or click the \*7 above.

## Sound

<b>Sound system</b>	The integrated sound system provides support for the computer's internal speakers and microphone, as allowing an external microphone and headphones to be connected via the appropriate jacks.
---------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

---

## Multimedia

---

<b>Web Camera</b>	<p><b>Web Camera</b> is a device that allows you to record video or take photographs with your computer. You can use it for video chatting or video conferences using a communication tool such as <b>Windows Live Messenger</b>. <b>Camera Assistant Software</b> will help you to add various video effects to your video or photograph.</p> <p>Please refer to the <a href="#">Web Camera</a> section in Chapter 4, Operating Basics.</p>
-------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

---

## Communications

---

<b>Modem</b>	<p>Some models are equipped with the integrated modem. The integrated modem provides capability for data and fax communications that support the V.90 (V.92) standards and includes a modem jack for connection to the telephone line. Please note that both the V.90 and V.92 standards are only supported in the USA, Canada, United Kingdom, France, Germany and Australia - only the V.90 standard is supported in other regions. You should also be aware that the speed of data and fax transfer will depend on the analog telephone line conditions.</p> <p>The integrated model is only installed as a standard device in some markets. Please refer to the <a href="#">V.90</a> section in Appendix E for more information.</p>
<b>LAN</b>	<p>The computer has built-in support for Ethernet LAN (10 megabits per second, 10BASE-T), Fast Ethernet LAN (100 megabits per second, 100BASE-TX) and Gigabit Ethernet LAN (1000 megabits per second, 1000BASE-T).</p> <p>It is pre-installed as a standard device in some markets.</p>
<b>Bluetooth</b>	<p>Some computers in this series offer Bluetooth wireless communication functionality which eliminates the need for cables between electronic devices such as computers, printers and mobile phones. When implemented, Bluetooth provides a fast, reliable and secure means to achieve wireless communication in a small space.</p>

---

<b>Wireless LAN</b>	Some computers in this series are equipped with a Wireless LAN card that is compatible with other LAN systems based on Direct Sequence Spread Spectrum/Orthogonal Frequency Division Multiplexing radio technology that complies with the IEEE 802.11 Standard (Revision A, B, G or n Draft 2.0).
---------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

### **Legal Footnote (Wireless LAN)\*8**

For more information regarding Wireless LAN, please refer to the Legal Footnotes section in Appendix K or click the \*8 above.

<b>Wireless WAN</b>	Some computers in this series are equipped with a Wireless WAN card. This card supports HSDPA and provides faster communications than previous Wireless WAN cards.
---------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------

### **Ultra Slim Bay**

<b>Ultra Slim Bay Modules</b>	Ultra Slim Bay is a single-drive bay that accommodates an optical disc drive and secondary hard disk drive.
-------------------------------	-------------------------------------------------------------------------------------------------------------

<b>Ultra Slim Bay Weight Saver</b>	To reduce weight, the Ultra Slim Bay module can be removed and a weight saver installed. It is preinstalled in some models.
------------------------------------	-----------------------------------------------------------------------------------------------------------------------------

## **Special features**

The following features are either unique to TOSHIBA computers or are advanced features which make the computer more convenient to use.

Access each function using the following procedures.

\*1 To access the Power Options, click **Start -> Control Panel -> System and Maintenance -> Power Options**.

<b>TOSHIBA Assist button</b>	Press this button to launch the program automatically. When power-off, Sleep Mode and Hibernation Mode, press this button to start the computer and launch the program.
<b>TOSHIBA Presentation button</b>	The TOSHIBA Presentation button has the same functionality as the Connect display button in the Mobility Center. Pressing this button when an external display is connected will open the Windows Vista® TMM (Transient Multimon Manager) screen.

---

<b>Hot keys</b>	Hot keys are specific key combinations that let you quickly change the system configuration directly from the keyboard without running a system program.
<b>Display automatic power off <sup>*1</sup></b>	This feature automatically cuts off power to the computer's display panel when there is no keyboard input for a specified time, with power being restored the next time a key is pressed. This can be specified in the Power Options.
<b>HDD automatic power off <sup>*1</sup></b>	This feature automatically cuts off power to the hard disk drive when it is not accessed for a specified time, with power being restored when the hard disk drive is next accessed. This can be specified in the Power Options.
<b>System automatic Sleep/Hibernation Mode <sup>*1</sup></b>	This feature automatically shuts down the system into either Sleep Mode or Hibernation Mode when there is no input or hardware access for a specified time. This can be specified in the Power Options.
<b>Keypad overlay</b>	A ten-key numeric keypad is integrated into the keyboard. Please refer to the <a href="#">Keypad overlay</a> section in Chapter 5, The Keyboard, for information on using this feature.
<b>Power on password</b>	Two levels of password security, supervisor and user, are available to prevent unauthorized access to your computer.
<b>Instant security</b>	A specific hot key function automatically locks the system providing data security.
<b>Intelligent power supply <sup>*1</sup></b>	A microprocessor in the computer's intelligent power supply detects the battery's charge, automatically calculates the remaining battery capacity and protects electronic components from abnormal conditions such as a voltage overload from the AC adaptor. This can be specified in the Power Options.
<b>Battery save mode <sup>*1</sup></b>	This feature lets you configure the computer in order to save battery power. This can be specified in the Power Options.
<b>Panel power on/off <sup>*1</sup></b>	This feature automatically turns power to the computer off when the display panel is closed, and turns it back on when the display panel is opened. This can be specified in the Power Options.

---

<b>Low battery automatic Hibernation Mode</b> *1	When battery power is exhausted to the point that computer operation cannot be continued, the system automatically enters Hibernation Mode and shuts itself down. This can be specified in the Power Options.
<b>Heat dispersal</b> *1	To protect against overheating, the processor has an internal temperature sensor so that, if the computer's internal temperature rises to a certain level, the cooling fan is turned on or the processing speed is lowered. This can be specified in the Power Options.
<b>TOSHIBA HDD Protection</b>	This feature uses the acceleration sensor built in the computer to detect vibration and shocks, and automatically moves the hard disk drive's read/write head to a safe position in order to reduce the risk of damage that could be caused by head-to-disk contact. Refer to the <a href="#">Using the Hard Disk Drive (HDD) Protection</a> section in Chapter 4, Operating Basics, for more details.
	<i>The TOSHIBA HDD Protection function does not guarantee that the hard disk drive will not be damaged.</i>
	<b>Optical Drive Auto Lock</b>
<b>Hibernation Mode</b>	This feature lets you turn off the power to the computer without exiting from your software. The contents of main memory are automatically saved to the hard disk drive so that when you next turn the power on again, you can continue working right where you left off. Refer to the <a href="#">Turning off the power</a> section in Chapter 1, Getting Started, for more details.
<b>Sleep Mode</b>	If you have to interrupt your work, you can use this feature to allow you to turn off power to the computer without exiting from your software. Data is maintained in the computer's main memory so that when you next turn on the power, you can continue working right where you left off.

## TOSHIBA Value Added Package

This section describes the TOSHIBA Component features pre-installed on the computer.

<b>TOSHIBA Power Saver</b>	TOSHIBA Power Saver provides you with the features of more various power supply managements.
<b>TOSHIBA Button Support</b>	<p>This utility controls the following computer button functions.</p> <ul style="list-style-type: none"> <li>■ TOSHIBA Assist</li> <li>■ TOSHIBA Presentation</li> </ul> <p>The starting application from the button can be changed.</p>
<b>TOSHIBA Zooming Utility</b>	This utility allows you to enlarge or reduce the icon size on the Windows Desktop, or the zoom factor associated with specific supported applications.
<b>TOSHIBA PC Diagnostic Tool</b>	The TOSHIBA PC Diagnostic Tool will display basic system configuration information and allow the functionality of some of the computer's built-in hardware devices to be tested.
<b>TOSHIBA Password Utility</b>	The TOSHIBA Password utility allows you to set a password in order to restrict access to the computer.
<b>TOSHIBA Flash Cards</b>	<p>The TOSHIBA Flash Cards provide a quick way to modify selected system functions and to launch applications.</p> <ul style="list-style-type: none"> <li>■ Hot key function</li> <li>■ TOSHIBA utility launcher function</li> </ul>
<b>HW Setup</b>	This utility allows you to customize your hardware settings according to the way you work with the computer and the peripherals you use.
<b>TOSHIBA Accessibility</b>	The TOSHIBA Accessibility utility provides support to movement impaired users when they need to use the TOSHIBA Hot-key functions. In use, the utility allows you to make the <b>FN</b> key 'sticky', that is you can press it once, release it, and they press one of the 'F' keys in order to access its specific function. When set, the <b>FN</b> key will remain active until another key is pressed.

## TOSHIBA Tablet PC Extension

This section describes the pre-installed TOSHIBA Component features that come with the computer. To access these components, click **Start -> All Programs -> TOSHIBA**.

<b>TOSHIBA Rotation Utility</b>	<p>This utility controls the screen orientation setting for both Laptop mode and Tablet mode.</p> <p>You can set four types of orientation setting:</p> <ul style="list-style-type: none"> <li>■ Primary landscape</li> <li>■ Primary portrait</li> <li>■ Secondary landscape</li> <li>■ Secondary portrait</li> </ul> <p>The default setting of PC mode is Primary Landscape while that for Tablet mode is Primary Portrait.</p>
<b>TOSHIBA Accelerometer Utilities</b>	<p>When TOSHIBA Accelerometer Utilities is enabled, you can invoke the <b>Start</b> menu, switch active windows or launch predefined applications by shaking the computer vertically or horizontally, or by tilting it.</p>

## Utilities and Applications

This section describes the pre-installed utilities that come with the computer and details how to start them. For further information on their operation, please refer to each utility's online manual, help files or README.TXT file.

<b>DVD Video Player</b>	<p>The DVD Video Player is used to play DVD-Video. It has an on-screen interface and functions. Click <b>Start -&gt; All Programs -&gt; InterVideo WinDVD -&gt; InterVideo WinDVD for TOSHIBA</b>.</p>
-------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------



- *Frame dropping, audio skipping or out of synch audio and video may occur during playback of some DVD Video titles. Make sure to connect the computer's AC adaptor when playing a DVD Video. Power-saving features may interfere with smooth playback.*
- *When using the WinDVD™ software, a horizontal white line may appear during playback of a DVD media in VR-format. If this occurs, set the Windows Color scheme to "Windows® Aero™". Adding additional memory is also recommended.*

**Fingerprint Utility**

This product has a fingerprint utility installed for the purpose of enrolling and recognizing fingerprints which can then be linked to a username and password in order to remove the need to input these details from the keyboard. Just by swiping an enrolled finger against the fingerprint sensor, the following functions will be enabled:

- Logon to Windows and access a security enabled homepage through Internet Explorer.
- Files and folders can be encrypted/decrypted and third party access to them is prevented.
- Disable the password-protected screen-saver when returning from a power-saving mode such as Sleep Mode.
- Authentication of the User Password (and, if applicable, the HDD(Hard Disk Drive) Password) when booting up the computer (Pre-OS Authentication).
- Single-Swipe Sign On feature



*Fingerprint security cannot be used in models that do not have a fingerprint module installed.*

**Bluetooth Stack for Windows by Toshiba**

This software enables communication between the computer and external Bluetooth devices such as printers and mobile phones.



*Bluetooth functions cannot be used in models that do not have a Bluetooth module installed.*

**TOSHIBA SD Memory Boot Utility**

The TOSHIBA SD Memory Boot Utility allows you to create a bootable SD memory card to start the system. You can boot TOSHIBA SD Memory Boot Utility from the menu bar as follows. Click **Start -> All Programs -> TOSHIBA -> Utilities -> SD Memory Boot Utility**.



*SD Memory Card Format Utility and other SD functions are packaged into TOSHIBA SD Memory Utilities.*

**TOSHIBA SD Memory Card Format**

This utility allows you to format an SD/SDHC memory card by the SD standard format.

---

<b>TOSHIBA Assist</b>	TOSHIBA Assist is a graphical user interface that provides access to specific tools, utilities and applications that make the use and configuration of the computer easier.
<b>TOSHIBA ConfigFree</b>	TOSHIBA ConfigFree is a suite of utilities that improve the ease and control of communication devices and network connections, help in the identification of communication problems and allow the creation of profiles if you need to switch between different locations and communication networks. To access this utility, click <b>Start -&gt; All Programs -&gt; TOSHIBA -&gt; Networking -&gt; ConfigFree</b> .
<b>TOSHIBA Disc Creator</b>	<p>You can create CD's and DVD's in a number of formats including audio CD's that can be played on a standard CD player, and data CD's/DVD's which can store copies of the files and folders on your computer's hard disk drive. This software can be used on models with a DVD Super Multi drive.</p> <p>To start this utility, click <b>Start -&gt; All Programs -&gt; TOSHIBA -&gt; CD&amp;DVD Applications -&gt; Disc Creator</b>.</p>
<b>TOSHIBA DVD-RAM Utility</b>	This utility has the function of Physical Format and Write-Protect to DVD-RAM. This utility is contained the setup module of TOSHIBA Disc Creator. To start this utility, click <b>Start -&gt; All Programs -&gt; TOSHIBA -&gt; CD&amp;DVD Applications -&gt; DVD-RAM Utility</b> .
<b>CD/DVD Drive Acoustic Silencer</b>	<p>This utility allows you to configure the read speed of the optical disc drive. You can either configure Normal Mode, which operates the drive at its maximum speed for quick data access, or Quiet Mode which runs audio CDs at single speed and which can lessen operational noise.</p> <p>It is ineffective with DVDs.</p>

---

**Windows Mobility Center**

This section describes the Windows Mobility Center. Mobility Center is a utility for accessing several mobile PC settings quickly in one window. A default maximum of eight tiles are provided by the operating system, and the additional three tiles are added to your Mobility Center.

- **Ext. Screen Orientation :**  
This can be used to switch the orientation of an external display connected to your **Tablet PC** between portrait and landscape modes.
- **Lock Computer :**  
This can be used to lock your computer without turning it off. This has the same function as the **Lock** button at the bottom of the right pane in the start menu.
- **TOSHIBA Assist :**  
This can be used to open **TOSHIBA Assist** if it is already installed in your computer.

---

**TOSHIBA Tablet Access Code Logon Utility**

If a Windows password has been set, you can logon to the operating system by entering a handwriting signature into the dialog box using the Tablet PC Pen when prompted.

---

## Optional devices

Optional devices can expand the computer's capabilities and its versatility. This section describes the connection or installation of the following devices:



*To connect optional devices (such as USB device or External monitor) to the computer, be sure to check the shape and orientation of the connector before connecting.*

### **Cards/memory**

- PC Card
- Smart Card
- Bridge media slot
  - Secure Digital (SD) Card (SD memory card, SDHC memory card, miniSD Card, microSD Card)
  - Memory Stick (Memory Stick, Memory Stick PRO, Memory Stick PRO Duo)
  - xD picture card
  - MultiMediaCard
- Additional memory module

### **Peripheral devices**

- HDD Kit (Serial-ATA)
- Ultra Slim Bay HDD Adaptor
- External monitor
- USB
  - USB FDD Kit
  - USB Sleep and Charge function
  - USB WakeUp function
- i.LINK (IEEE1394)
- TOSHIBA Express Port Replicator

### **Other**

- Security lock

## PC Card

Some models are equipped with a PC Card slot. The computer is equipped with a single PC Card slot that can accommodate a Type II format card. Any PC Card that meets industry standards, either manufactured by TOSHIBA or another vendor, can be installed as the slot supports 16-bit PC Cards and 32-bit CardBus cards. For reference, CardBus supports the newer standard of 32-bit PC Cards and provides superior performance for the greater demands of applications such as multimedia data transmission.



*PC Cards can sometimes become hot during computer operation. Before you remove a PC Card always wait for it to cool. You could get burned removing a hot PC Card.*



- *The computer is equipped with either a PC Card slot or a Smart Card slot.*
- *When inserted in the PC Card slot, some PC Cards may block the optical disc drive tray and prevent it from opening. If this occurs please remove the PC Card each time you wish to open or close the optical disc drive tray.*

### Inserting a PC Card

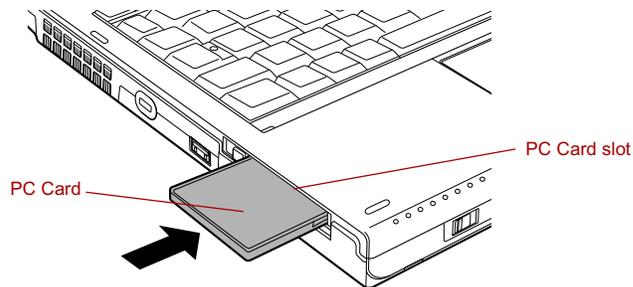
The Windows hot-install feature allows you to insert PC Cards while the computer is turned on.



*Do not insert a PC Card while the computer is in Sleep Mode or Hibernation Mode as you may find that some cards do not work properly.*

To insert a PC Card, follow the steps as detailed below:

1. Insert the PC Card into the PC Card slot on the side of the computer.
2. Press the PC Card gently to ensure a firm connection is made.



*Figure 3-1 Inserting the PC Card*

3. After inserting the PC Card, you should refer to its documentation and also check the configuration in Windows in order to ensure that it is correct.

### Removing a PC Card

To remove a PC Card, follow the steps as detailed below:

1. Open the **Safely Remove Hardware** icon on the Windows Taskbar.
2. Point to **PC Card** and click the left Touch Pad control button.
3. Press the PC card eject button to extend it.



*If the PC card is not inserted all the way, the eject button may not cause it to pop out sufficiently to allow it to be grasped. Be sure to push the PC card firmly into the computer and slide the eject button again.*

4. Press the extended PC Card eject button in order to eject the PC Card partially out of the computer.
5. Grasp the PC Card and remove it.

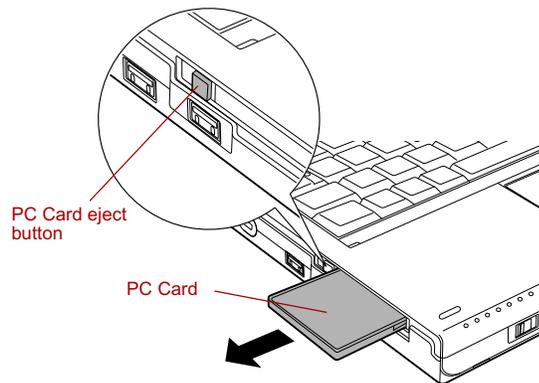


Figure 3-2 Removing the PC Card

### Smart Card

Some models are equipped with a Smart Card slot.

A Smart Card is a credit card sized plastic card. An extremely thin integrated circuit (IC chip) is embedded into the card on which information can be recorded. These cards can be used for a wide variety of applications including telephone related and electronic monetary payments.

This section contains information on the proper use of the Smart Card slot, and it is strongly recommended that you read it before operating the computer.



- Your computer supports ISO7816-3 asynchronous cards (support protocols are T=0 and T=1) with a working voltage of 5V.
- The computer is equipped with either a PC Card slot or a Smart Card slot.

### ***Inserting a Smart Card***

The Smart Card slot is located on the left side of the computer. The Windows hot-install feature allows you to insert a Smart Card while the computer is turned on.

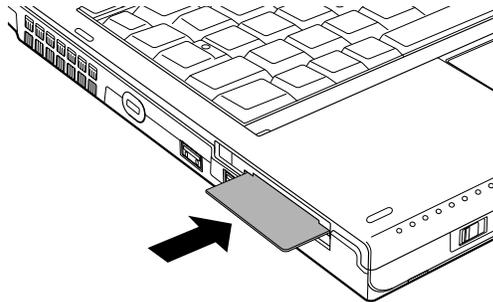
To install a Smart Card, follow the steps as detailed below:

1. Insert the Smart Card into the Smart Card slot with the metal connectors facing up.
2. Press the Smart Card gently to ensure a firm connection is made. The computer will identify the Smart Card and display an icon in the Windows Taskbar.



- *When inserting a Smart Card into the Smart Card slot, make sure to confirm that the card is oriented correctly before inserting.*
- *Insert the Smart Card until it reaches the end of the Smart Card slot. There will be about 2cm of the Smart Card sticking out of the Smart Card slot. Do not attempt to insert it further.*
- *Always remove the Smart Card from the Smart Card slot before moving the computer.*
- *Remove the Smart Card after use.*

*Failure to follow these instructions may result in damage to the computer and/or damage to the Smart Card.*



***Figure 3-3 Inserting a Smart Card***

3. After inserting the Smart Card, you should refer to its documentation and also check the configuration in Windows in order to ensure that it is correct.

### Removing a Smart Card

To remove a Smart Card, follow the steps as detailed below:

1. Open the **Safely Remove Hardware** icon on the Windows Taskbar.



- *Before removing the Smart Card, confirm that the Smart Card is not working with any program or system.*
- *Be careful not to bend the Smart Card while removing it from the computer.*

2. Point to **Smart Card** and click the left Touch Pad control button.
3. Grasp the Smart Card and remove it.

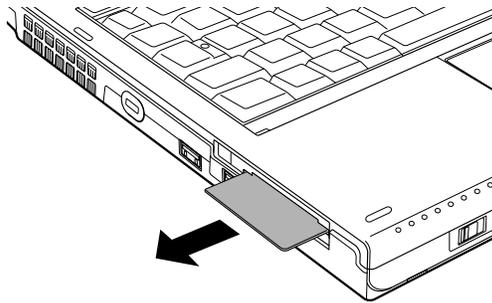


Figure 3-4 Removing a Smart Card

### Bridge media slot

The computer is equipped with a Bridge media slot that can accommodate some kinds of memory media with various memory capacities so that you can easily transfer data from devices, such as digital cameras and Personal Digital Assistants.



- *Keep foreign objects out of the Bridge media slot. Never allow metal objects, such as screws, staples and paper clips, to enter the computer or Keyboard. Foreign metal objects can create a short circuit, which can cause computer damage and fire, possibly resulting in serious injury.*
- *Memory Stick Duo is not compatible with the Bridge media slot. Do not insert Memory Stick Duo into the slot or you may not be able to remove it. Data may be lost or damaged if you use any memory media other than those supported.*



- This Bridge media slot supports the following memory media.
  - Secure Digital (SD) Card (SD memory card, SDHC memory card, miniSD Card, microSD Card)
  - Memory Stick (Memory Stick, Memory Stick PRO, Memory Stick PRO Duo)
  - xD picture card
  - MultiMediaCard (MMC)
- Please note that an adaptor is required to use miniSD/microSD Card.
- Please note that an adaptor is required to use Memory Stick PRO Duo.
- Please note that not all memory media have been tested and verified to work correctly. Therefore, it is not possible to guarantee that all memory media will operate properly.
- The slot does not support Magic Gate functions.

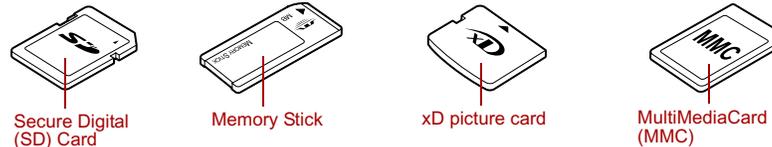


Figure 3-5 Examples of memory media

## Memory media

This section provides the important safety precautions in order to handle your memory media.

### **Points to note about the SD/SDHC memory card**

SD/SDHC memory cards comply with SDMI (Secure Digital Music Initiative), which is a technology adopted to prevent unlawful copy or playback of digital music. For this reason, you cannot copy or playback protected material on another computer or other device, and you may not reproduce any copyrighted material except for your personal enjoyment.

Below is a simple explanation for distinguishing SD memory cards from SDHC memory cards.

- SD and SDHC memory cards appear the same externally.
- The logo on SD and SDHC memory cards is different, so pay careful attention to the logo when purchasing.



- The SD memory card logo is (  ).
- The SDHC memory card logo is (  ).

- The maximum capacity of SD memory cards is 2GB. The maximum capacity of SDHC memory cards is 8GB.

Card Type	Capacities
SD	8MB, 16MB, 32MB, 64MB, 128MB, 256MB, 512MB, 1GB, 2GB
SDHC	4GB, 8GB

### Memory media format

New media cards are formatted according to specific standards. If you wish to reformat a media card, be sure to do so with a device that uses media cards.

#### Formatting an SD/SDHC memory card

SD/SDHC memory cards are sold already formatted in conformity to specific standards. If you format the SD/SDHC memory card again, be sure to format it with the TOSHIBA SD Memory Card Format utility, not with the format command provided within Windows.

In order to run the TOSHIBA SD Memory Card Format utility, click **Start -> All Programs -> TOSHIBA -> Utilities -> SD Memory Card Format**.



*The TOSHIBA SD Memory Card Format utility does not format the protected area of the SD/SDHC memory card - should you need to format all areas of the memory card, including the protected area, you will need to obtain an appropriate application that applies the copy protection system.*

### Media care

Observe the following precautions when handling the card.

#### Card care

- Do not twist or bend cards.
- Do not expose cards to liquids or store in humid areas or lay media close to containers of liquid.
- Do not touch the metal part of a card or expose it to liquids or let it get dirty.
- After using card, return it to its case.
- The card is designed so that it can be inserted only one way. Do not try to force the card into the slot.
- Do not leave a card partially inserted in the slot. Press the card until you hear it click into place.

### Memory card care

- Set the write-protect switch to the lock position, if you do not want to record data.
- Memory cards have a limited lifespan, so it is important to backup important data.
- Do not write to a card if the battery power is low. Low power could affect writing accuracy.
- Do not remove a card while read/write is in progress.



For more details on using memory cards, see manuals accompanying the cards.

### About the write-protect

The following memory media have a function for protect.

- SD Card (SD memory card, SDHC memory card)
- Memory Stick (Memory Stick, Memory Stick PRO, Memory Stick PRO Duo)
- MultiMediaCard (MMC)



Set the write-protect switch to the lock position, if you do not want to record data.

### Inserting a memory media

The following instructions apply to all types of supported media devices. To insert a memory media, follow the steps as detailed below:

1. Turn the memory media so that the contacts (metal areas) are face down.
2. Insert the memory media into the Bridge media slot on the side of the computer.
3. Press the memory media gently to ensure a firm connection is made.

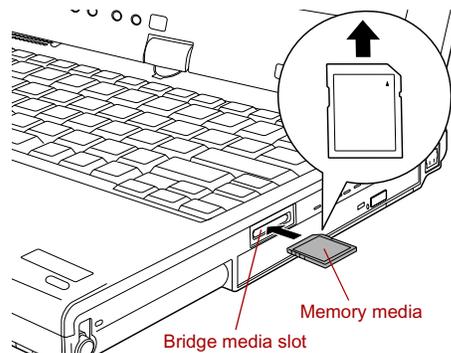


Figure 3-6 Inserting a memory media



- *Make sure memory media is oriented properly before you insert it. If you insert the media in wrong direction, you may not be able to remove it.*
- *When inserting memory media, do not touch the metal contacts. You could expose the storage area to static electricity, which can destroy data.*
- *Do not turn the computer off or switch to Sleep Mode or Hibernation Mode while files are being copied - doing so may cause data to be lost.*

### Removing a memory media

The following instructions apply to all types of supported media devices. To remove a memory media, follow the steps as detailed below:

1. Open the **Safely Remove Hardware** icon on the Windows Taskbar.
2. Point to **memory media** and click the left Touch Pad control button.
3. Press the memory media to partially extend it out of the computer.
4. Grasp the media and remove it.

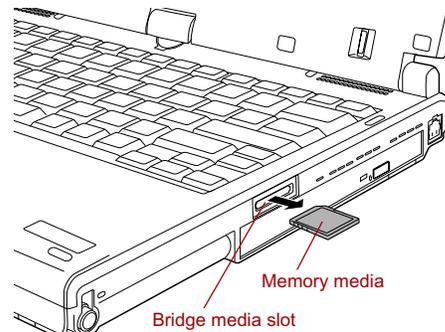


Figure 3-7 Removing memory media



- *Make sure the **Bridge Media slot** indicator is out before you remove the memory media or turn off the computer's power. If you remove the memory media or turn off the power while the computer is accessing the memory media, you may lose data or damage the media.*
- *Do not remove the memory media while the computer is in Sleep or Hibernation Mode. The computer could become unstable or data in the memory media could be lost.*
- *Do not remove only the miniSD/microSD Card while leaving the adaptor in the Bridge Media slot.*

## Additional memory module

This computer is equipped with two memory slots; Slot A is beneath the keyboard and Slot B is in the underside of the computer.

You can install additional memory into the computer in order to increase the amount of system memory that is available. This section describes how to install and remove optional memory modules.



- *You should place a mat beneath the computer in order to prevent the computer's lid from becoming scratched or damaged when you are installing/replacing the memory module. In this instance you should avoid mats that are made of materials that hold or generate static electricity.*
- *When installing or removing a memory module, you must ensure that you do not touch any other internal areas of the computer.*



- *Use only memory modules approved by TOSHIBA.*
- *Do not try to install or remove a memory module under the following conditions.*
  - a. *The computer is turned on.*
  - b. *The computer was shut down in either Sleep or Hibernation Mode.*
  - c. *Wake-up on LAN is enabled.*
  - d. *Wake-up on Wireless LAN is enabled.*
  - e. *The wireless communication switch is turned on.*
- *Be careful not to let screws or other foreign matter fall into the computer. It could cause malfunction or electric shock.*
- *Additional memory module is a precision electronic component that may be fatally damaged by static electricity. Since the human body can carry static electricity, it is important that you discharge yourself before touching or installing any additional memory modules. To discharge your body's static electricity, simply touch any metal close to you with bare hands.*

### **Point to note about memory module error**

If you install a memory module that is not compatible with the computer, the **Power** indicator will flash (on for 0.5 seconds, off for 0.5 seconds) in the following ways;

- If there is an error in only Slot A or no memory module is inserted in Slot A: repeatedly flashes orange twice, then green.
- If there is an error in Slot B: repeatedly flashes orange, then green twice.
- If there are errors in both Slot A and Slot B: repeatedly flashes orange twice, then green twice.

In all instances you should shut down the computer and remove the incompatible module(s).



Use a point size 0 Phillips screwdriver to remove and fasten the screws - the use of an incorrect screwdriver can damage the screw heads.

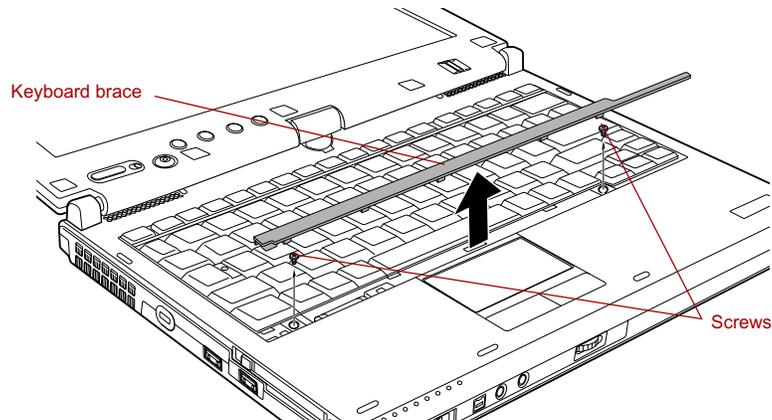
### **Installing a memory module (Slot A)**

To install a memory module, follow the steps as detailed below:

1. Set the computer to Boot Mode and turn its power off - make sure the **Power** indicator is off (refer to the [Turning off the power](#) section in Chapter 1, Getting Started if required).
2. Remove the AC adaptor and all cables and peripherals connected to the computer.
3. Turn the computer upside down and remove the battery pack (refer to [Replacing the battery pack](#) section in Chapter 6, Power and Power-Up Modes, if required).
4. Turn your computer over.
5. Open the display panel so that the screen faces directly upward.
6. Slip your finger under a notch at the end of the keyboard brace and lift up to release latches and remove the keyboard brace.
7. Remove two screws securing the keyboard.



Use a point size 0 Phillips screwdriver.



*Figure 3-8 Removing the keyboard brace and two screws*

8. Lift up the back of the keyboard, rotate it toward you and lay it face down on the palm rest.



- Never allow metal objects, such as screws, staples and paper clips, to enter the computer or keyboard. Foreign metal objects can create a short circuit, which can cause computer damage and fire, possibly resulting in serious injury.
- When you move the keyboard forward, do not touch the keys. Doing so could cause misalignment. Hold the keyboard by the sides and lay it gently on the palm rest.
- The keyboard is connected to the computer by a keyboard ribbon cable. Be careful not to apply tension to this cable when you lift up the keyboard. Do not try to disconnect this cable.

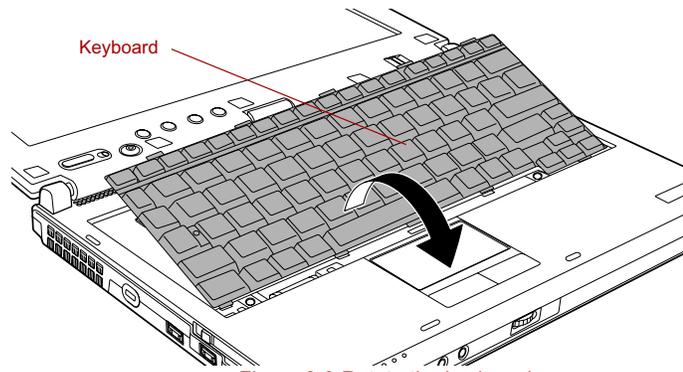


Figure 3-9 Rotate the keyboard

9. Remove the two screws and take off the memory module cover.

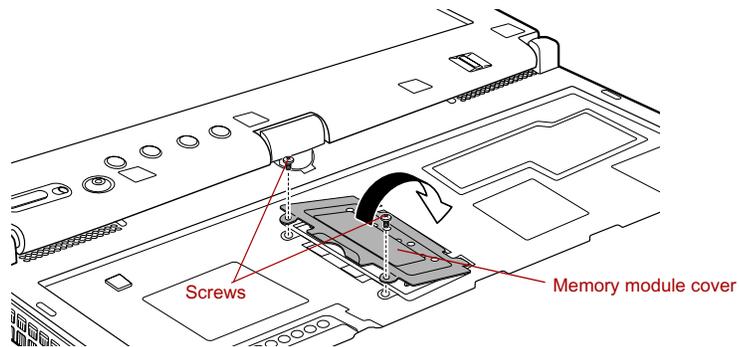


Figure 3-10 Removing the memory module cover

10. Align the notch of the memory module with that of the memory module slot and gently insert the module into the slot at about a 45 degree angle before holding it down until the latches on either side snap into place.

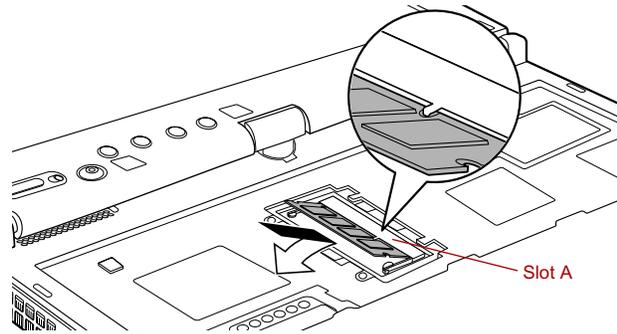


Figure 3-11 Installing the memory module



- Never allow metal objects, such as screws, staples and paper clips, to enter the computer or keyboard. Foreign metal objects can create a short circuit, which can cause computer damage and fire, possibly resulting in serious injury.
- Do not touch the connectors on the memory module or on the computer. Debris on the connectors may cause memory access problems.
- The memory module cover will be hot after using the computer for long periods of time. Exercise caution when removing.



- Slot A is reserved for the first memory module. Use slot B for expansion memory modules. If only one module is installed, use slot A.
- When inserting or removing memory modules, make sure to use the correct slot (A or B).
- Align the grooves along the edges of the memory module with the locking tabs on the connector and insert the memory module into the connector firmly - if you find it difficult to install the memory module, gently prise the locking tabs outwards using the tip of your finger. Please also ensure that you hold the memory module along its left and right hand edges - the edges with the grooves in.

11. Screw in the two screws and replace the memory module cover.

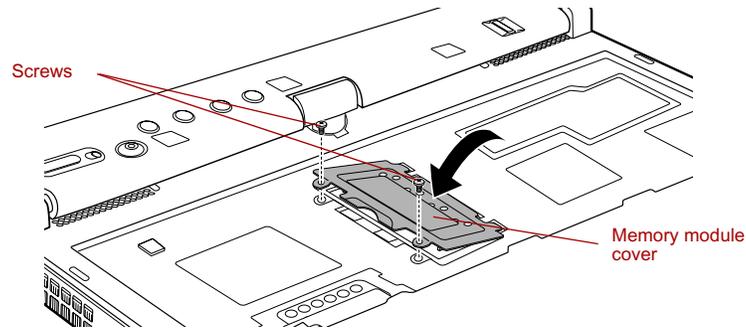


Figure 3-12 Seating the memory module cover

12. Insert the tabs on the front of the keyboard into the corresponding notches on the computer and place the keyboard down.



When seating the keyboard, be sure to connect the circuit board if the keyboard ribbon cable was pulled out while you were removing the keyboard.

13. Replace the keyboard and secure it using the two screws.



Be sure to use all two screws removed in step 7. Make sure no screw was dropped into the computer. Make sure no foreign matter can be found inside the computer.

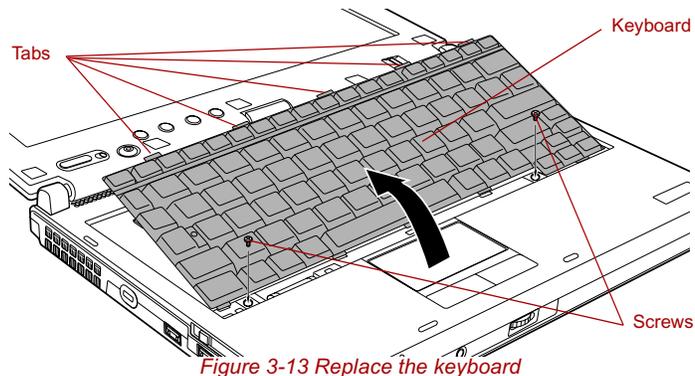


Figure 3-13 Replace the keyboard

14. Set the keyboard brace into its groove and hold down to secure the latches.
15. Install the battery pack. Refer to [Replacing the battery pack](#) section in Chapter 6, Power and Power-Up Modes, for details.
16. Turn your computer over.
17. Turn the computer on and make sure the added memory is recognized - to confirmed it, **Start -> Control Panel -> System and Maintenance -> System** icon.

### Removing a memory module (Slot A)



The slot A is reserved for main memory. Use the slot B for expanded memory. If only one card is installed, use the slot A.

To remove the memory module, follow the steps as detailed below:

1. Set the computer to Boot Mode and turn its power off - make sure the **Power** indicator is off (refer to the [Turning off the power](#) section in Chapter 1, Getting Started if required).
2. Remove the AC adaptor and all cables and peripherals connected to the computer.
3. Turn the computer upside down and remove the battery pack (refer to [Replacing the battery pack](#) section in Chapter 6, Power and Power-Up Modes, if required).
4. Follow steps 4 through 9 in [Installing a memory module \(Slot A\)](#) to appear the memory module.
5. Push the latches to the outside to release the memory module. A spring will force one end of the memory module up.
6. Grasp the sides of the memory module and pull it out.



- If you use the computer for a long time, the memory modules and the circuits locating close to the memory modules will become hot. In this case, let them cool to room temperature before you replace them. Or you will get burnt if you touch any of them.
- Do not touch the connectors on the memory module or on the computer. Debris on the connectors may cause memory access problems.

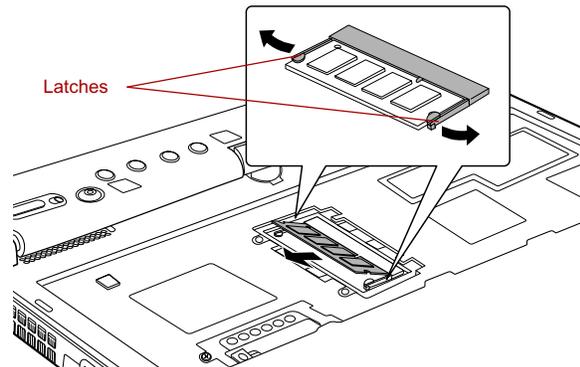


Figure 3-14 Removing the memory module

7. Rotate the keyboard back into place and secure the keyboard brace as described in the previous section.
8. Install the battery pack. Refer to [Replacing the battery pack](#) section in Chapter 6, Power and Power-Up Modes, for details.
9. Turn your computer over.

### **Installing a memory module (Slot B)**

To install a memory module, follow the steps as detailed below:

1. Set the computer to Boot Mode and turn its power off - make sure the **Power** indicator is off (refer to the [Turning off the power](#) section in Chapter 1, Getting Started if required).
2. Remove the AC adaptor and all cables and peripherals connected to the computer.
3. Close the display panel.



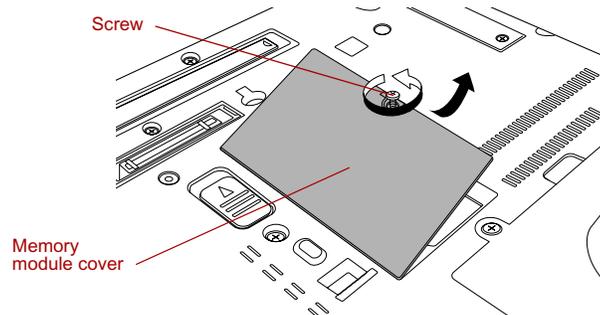
*Always make sure the display panel is closed in Laptop mode before turning the computer upside down.*

4. Turn the computer upside down and remove the battery pack (refer to the [Replacing the battery pack](#) section in Chapter 6, Power and Power-Up Modes, if required).
5. Loosen the screw securing the memory module cover in place - please note that this screw is attached to the cover in order to prevent it from being lost.



*Use a point size 0 Phillips screwdriver.*

6. Slide your fingernail or a thin object under the cover and lift it off.



*Figure 3-15 Removing the memory module cover*

7. Align the notch of the memory module with that of the memory module slot and gently insert the module into the slot at about a 45 degree angle before holding it down until the latches on either side snap into place.

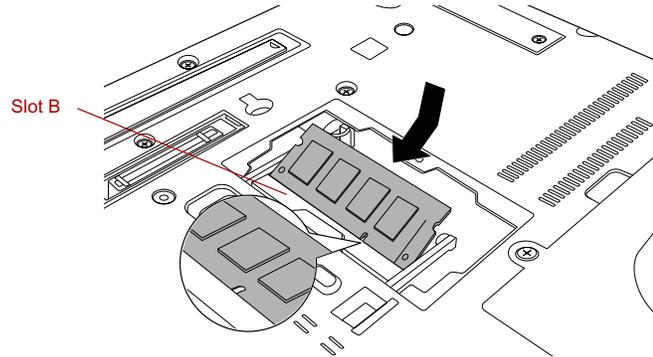


Figure 3-16 Seating the memory module



- Never allow metal objects, such as screws, staples and paper clips, to enter the computer. Foreign metal objects can create a short circuit, which can cause computer damage and fire, possibly resulting in serious injury.
- Do not touch the connectors on the memory module or on the computer. Debris on the connectors may cause memory access problems.



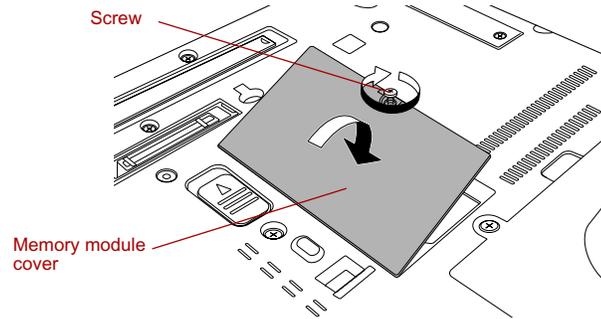
Align the grooves along the edges of the memory module with the locking tabs on the connector and insert the memory module into the connector firmly - if you find it difficult to install the memory module, gently prise the locking tabs outwards using the tip of your finger.

Please also ensure that you hold the memory module along its left and right hand edges - the edges with the grooves in.

8. Seat the memory module cover in place and secure it with one screw.



*Take care to ensure that the memory module cover is firmly closed.*



*Figure 3-17 Seating the memory module cover*

9. Install the battery pack - refer to [Replacing the battery pack](#) section in Chapter 6, Power and Power-Up Modes, if required.
10. Turn your computer over.
11. Turn the computer on and make sure the added memory is recognized - to confirmed it, **Start -> Control Panel -> System and Maintenance -> System** icon.

### **Removing a memory module (Slot B)**

To remove the memory module, follow the steps as detailed below:

1. Set the computer to Boot Mode and turn its power off - make sure the **Power** indicator is off (refer to the [Turning off the power](#) section in Chapter 1, Getting Started if required).
2. Remove the AC adaptor and all cables and peripherals connected to the computer.
3. Close the display panel.



*Always make sure the display panel is closed in Laptop mode before turning the computer upside down.*

4. Turn the computer upside down and remove the battery pack (refer to [Replacing the battery pack](#) section in Chapter 6, Power and Power-Up Modes, if required).
5. Loosen the screw securing the memory module cover in place - please note that this screw is attached to the cover in order to prevent it from being lost.
6. Slide your fingernail or a thin object under the cover and lift it off.
7. Push the latches away from the module in order to release it - a spring will force one end of the module up at an angle.

- Grasp the memory module by its edges and remove it from the computer.



- If you use the computer for a long time, the memory modules and the circuits locating close to the memory modules will become hot. In this case, let them cool to room temperature before you replace them. Or you will get burnt if you touch any of them.*
- Do not touch the connectors on the memory module or on the computer. Debris on the connectors may cause memory access problems.*

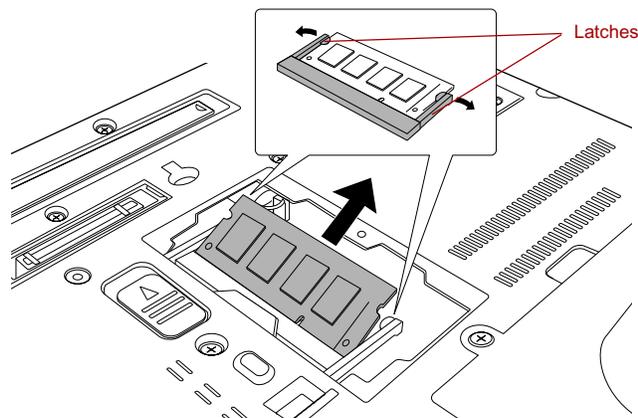


Figure 3-18 Removing the memory module

- Seat the memory module cover in place and secure it with one screw.



*Take care to ensure that the memory module cover is firmly closed.*

- Install the battery pack - refer to [Replacing the battery pack](#) section in Chapter 6, Power and Power-Up Modes, if required.
- Turn your computer over.

## HDD Kit (Serial-ATA)

An extra hard disk drive expands the flexibility of your system and allows you to carry your data separately without having to carry the computer. The HDD Kit (Serial-ATA) can either replace the hard disk drive installed inside the computer or be connected to the Ultra Slim Bay HDD Adaptor. Some models are equipped with a Ultra Slim Bay HDD Adaptor.



*Use a point size 0 Phillips screwdriver to remove and fasten the screws - the use of an incorrect screwdriver can damage the screw heads.*

### Removing the hard disk drive pack

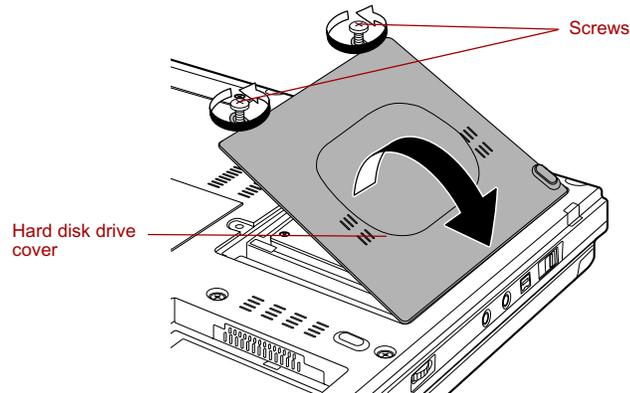
To remove the hard disk drive pack, follow the steps as detailed below:

1. Set the computer to Boot Mode and turn its power off - make sure the **Power** indicator is off (refer to the [Turning off the power](#) section in Chapter 1, Getting Started if required).
2. Remove the AC adaptor and all cables and peripherals connected to the computer.
3. Close the display panel.



*Always make sure the display panel is closed in Laptop mode before turning the computer upside down.*

4. Turn the computer upside down and remove the battery pack (refer to [Replacing the battery pack](#) section in Chapter 6, Power and Power-Up Modes, if required).
5. Loosen two screws securing the hard disk drive cover in place.
6. Lift the cover up and out, and remove it from the computer.



*Figure 3-19 Removing the hard disk drive cover*

7. Pull the hard disk drive pack up to a vertical position by holding the plastic tab.

8. With the hard disk drive in a vertical position, lift it straight up and away from the connector.



*Never allow metal objects, such as screws, staples and paper clips, to enter the computer. Foreign metal objects can create a short circuit, which can cause computer damage and fire, possibly resulting in serious injury.*

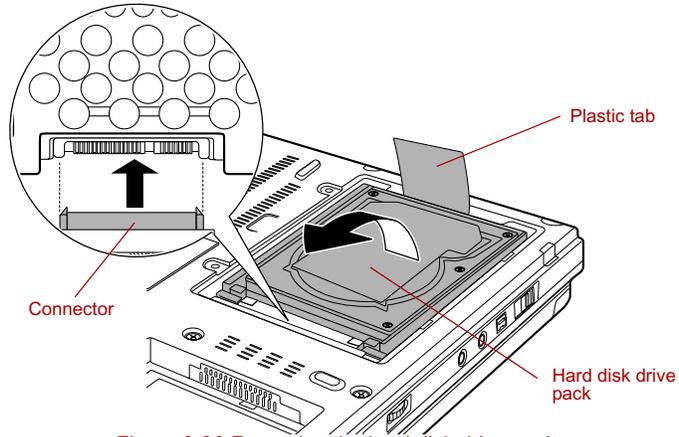


Figure 3-20 Removing the hard disk drive pack

### **Installing the hard disk drive pack**

To install the hard disk drive pack, follow the steps as detailed below:

1. Move the connector until it is vertical.
2. Hold the hard disk drive vertically with its label on the left.
3. Connect the hard disk drive to the connector.

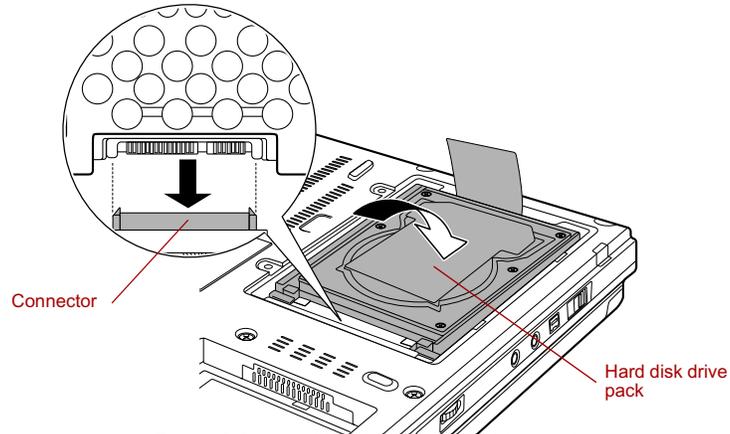


*Ensure that the hard disk drive is connected to the connector in a vertical position. If the hard disk drive is slanted and connected to the connector, it might damage the connector.*

4. With the connector connected, lower the hard disk drive down to the storage position.



*Never allow metal objects, such as screws, staples and paper clips, to enter the computer. Foreign metal objects can create a short circuit, which can cause computer damage and fire, possibly resulting in serious injury.*



*Figure 3-21 Installing the hard disk drive pack*

5. Seat the cover and press down until the latches click into place.
6. Secure the cover with two screws.
7. Turn your computer over.

### Ultra Slim Bay HDD Adaptor

You can increase your computer's data storage capacity by installing an additional 80GB hard disk drive in the Ultra Slim Bay.

To install a hard disk drive in the Ultra Slim Bay HDD Adaptor follow the steps below.

1. Slide the lock to the unlock position and open the lid.

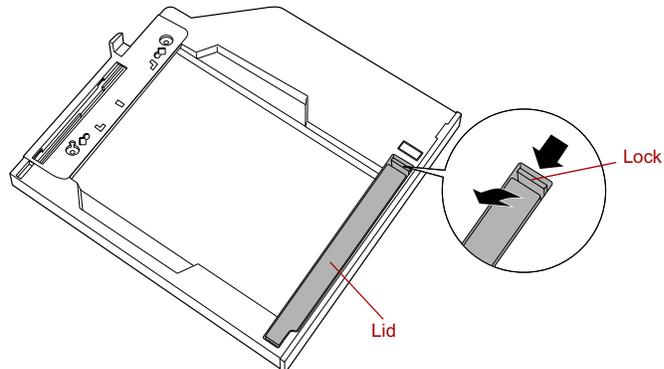


Figure 3-22 Opening the lid

2. Insert the hard disk drive in the Ultra Slim Bay HDD Adaptor and push forward to ensure a firm connection.



**Tuck the Plastic tab underneath the hard disk drive.**

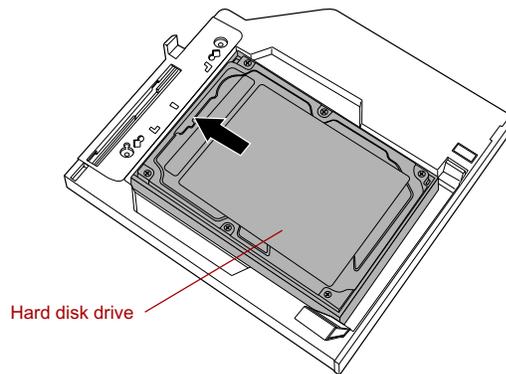


Figure 3-23 Inserting the hard disk drive

3. Close the lid and slide the lock to the lock position.

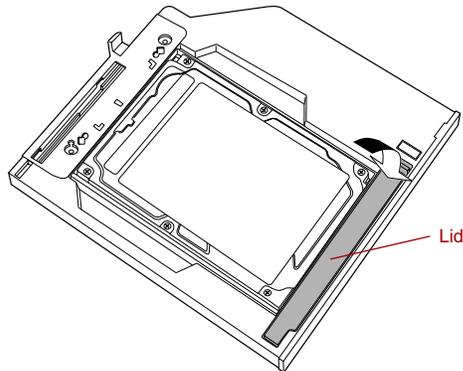


Figure 3-24 Closing the lid

For details on inserting the Ultra Slim Bay HDD Adaptor in the computer's Ultra Slim Bay slot, refer to Chapter 4, [Operating Basics](#).

### External monitor

An external analog monitor can be connected to the external monitor port on the computer.

#### Connecting the monitor cable

To connect a monitor, follow the steps as detailed below:

1. Turn the computer's power off.
2. Connect the monitor cable to the external monitor port and tighten the screws on the left and right hand side of the connector as required.

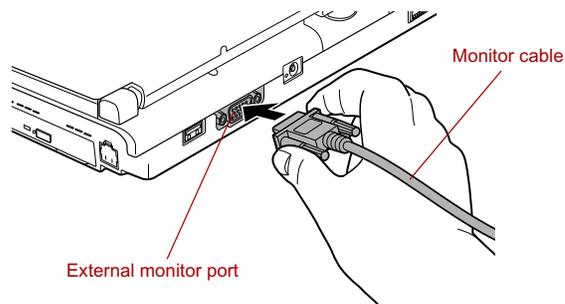


Figure 3-25 Connecting the monitor cable to the external monitor port

3. Turn the external monitor's power on.

#### 4. Turn the computer's power on.

When you turn on the power, the computer will automatically recognize the monitor and determine whether it is a color or monochrome device. In the event that you find that there are issues getting an image displayed on the correct monitor, you should consider using the **FN + F5** hot key to change the display settings (if you then disconnect the external monitor before you turn the computer's power off, be sure to press **FN + F5** hot key again to switch to the internal display).

Please refer to Chapter 5, *The Keyboard*, for further details on using hot keys to change the display setting.



*Do not disconnect the external monitor while in Sleep or Hibernation Mode. Turn off the computer before disconnecting the external monitor.*

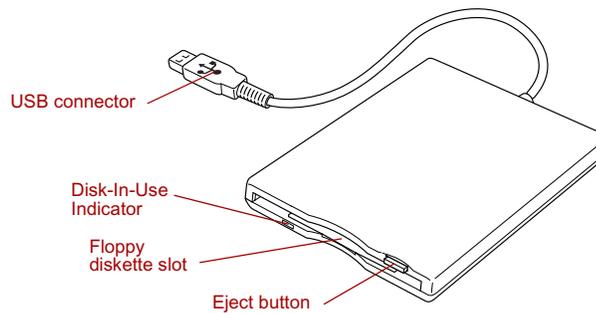
## USB

The computer is equipped with the Universal Serial Bus ports that can accommodate some kinds of devices.

These ports comply with the USB 2.0 standard.

### **USB FDD Kit**

The USB floppy diskette drive accommodates either a 1.44MB or 720KB floppy diskette and connects to one of the computer's USB ports.



*Figure 3-26 The USB floppy diskette drive*

### Connecting the USB floppy diskette drive

To connect the drive, plug the floppy diskette drive's USB connector into a computer's USB port.



*Make sure the connector is properly aligned with the socket. Do not try to force the connection, doing so can damage the connecting pins.*

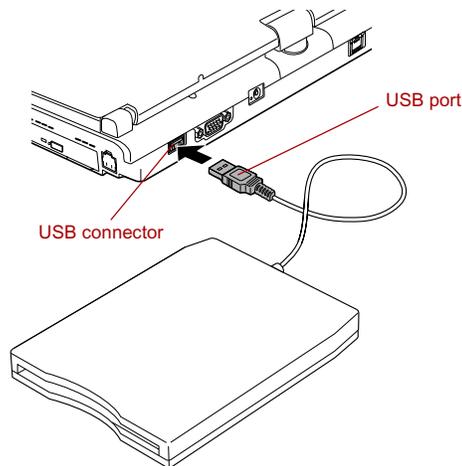


Figure 3-27 Connecting the USB floppy diskette drive



*If you connect the USB floppy diskette drive after the computer has already been turned on, it will take about ten seconds for it to be recognized by the computer. Do not attempt to disconnect and reconnect the drive before this period has elapsed.*

### Disconnecting the USB floppy diskette drive

When you have finished using the USB floppy diskette drive, you can follow the procedures below in order to disconnect it:

1. Wait for the Disk-In-Use Indicator light to go out to make sure all floppy diskette activity has stopped.



*If you disconnect the USB floppy diskette drive or turn off the power while the computer is accessing the drive you may lose data or damage the floppy diskette or the drive.*

2. Click the **Safely Remove Hardware** icon on the Windows Taskbar.
3. Click the USB floppy diskette drive device that you want to remove.
4. Carefully pull the floppy diskette drive's USB connector out from within the computer's USB port.

### **USB Sleep and Charge function**

Your computer can supply USB bus power (DC5V) to the USB port even when the power of the computer is turned OFF. "Power OFF" includes Sleep Mode, Hibernation Mode or shutdown state.

This function can only be used for ports that support the USB Sleep and Charge function (hereinafter called "compatible ports").

Compatible ports are USB ports that have the (⚡) symbol icon.

You can use the "USB Sleep and Charge function" to charge certain USB-compatible external devices such as mobile phones or portable digital music players.

However, the "USB Sleep and Charge function" may not work with certain external devices even if they are compliant with the USB specification. In those cases, turn the power of the computer ON to charge the device.



- *The "USB Sleep and Charge function" only works for compatible ports. This function is disabled in the default setting. To enable it, you must change [Disabled] to [Enabled] in the BIOS Setup. Refer to the [USB Sleep and Charge function](#) section in Chapter 7, HW Setup & BIOS Setup.*
- *When "USB Sleep and Charge function" is set to [Enabled] in BIOS Setup, USB bus power (DC5V) will be supplied to compatible ports even when the power of the computer is turned OFF. USB bus power (DC5V) is similarly supplied to the external devices which are connected to the compatible ports. However, some external devices cannot be charged solely by supplying USB bus power (DC5V). As for the specifications of the external devices, please contact the device manufacturer or check the specifications of the external devices thoroughly before use.*
- *Using the USB sleep and charge function to charge external devices will take longer than charging the devices with their own chargers.*
- *If external devices are connected to compatible ports when the AC adaptor is not connected to the computer, the battery of the computer will be depleted even when the power of the computer is turned OFF. As such, we recommend that you connect the AC adaptor to the computer when using the USB sleep and charge function.*
- *External devices connected to the USB bus power (DC5V) function that interfaces with the power ON/OFF of the computer may always be in an operational state.*
- *When there is a current overflow of the external devices connected to the compatible ports, USB bus power (DC5V) supply may be stopped for safety reasons.*



*Metal paper clips or hair pins/clips will generate heat if they come into contact with USB ports. Do not allow USB ports to come into contact with metal products, for example when carrying the computer in your bag.*

### USB WakeUp function

This function restores the computer from Sleep Mode depending on the external devices connected to the USB ports.

The "USB WakeUp function" operates under Windows Vista® OS and it works for all USB ports.



- "USB WakeUp function" will supply USB bus power (DC5V) to all USB ports, including compatible ports, even when the computer is in Sleep Mode.  
USB bus power (DC5V) will not be supplied if the computer is in Hibernation Mode or shutdown state.
- When "USB Sleep and Charge function" is set to [Enabled] in BIOS Setup, the "USB WakeUp function" does not work for compatible ports. The WakeUp setting (function to allow the WakeUp) check box will be displayed on the Device Manager. You can change the settings but the USB WakeUp function will not work. For example, if a mouse or USB keyboard is connected to a compatible port, moving the mouse/keyboard will not "wake up" the computer. In that case, attach the mouse or keyboard to an USB port that does not have the USB Sleep and Charge function-compatible icon (⚡).

### i.LINK (IEEE1394)

i.LINK (IEEE1394) is used for high-speed data transfer for a range of compatible devices such as:

- Digital video cameras
- Hard disk drives
- MO drives
- Writable optical disc drives



*i.LINK uses a four-pin connector, which does not carry any electric current. External devices will need their own power supply to operate.*

### Precautions

- Make a back-up of your data before transferring it to the computer. There is a possibility that the original data will be damaged. There is a particular risk that some frames will be deleted in the case of digital video transfer. TOSHIBA assumes no liability for such loss of data.
- Do not transfer data in areas where static electricity is easily generated or in areas subjected to electronic noise. Data can be destroyed.
- If you are transferring data through an IEEE1394 hub, do not connect or disconnect other devices from the hub during data transfer. There is a likelihood that data will be damaged. Connect all devices to the hub before you turn on the computer's power.
- You may not use any copyrighted video or music data copied from a video camera except for your personal enjoyment.

- If you connect/disconnect an i.LINK device to/from another i.LINK device that is currently exchanging data with the computer, data frames might be dropped.
- Make sure data transfer has ended or turn off the computer, before you:
  - Connect/disconnect an i.LINK device to/from the computer.
  - Connect/disconnect an i.LINK device to/from another i.LINK device that is connected to the computer.

### Connecting the i.LINK (IEEE1394) cable

To connect the i.LINK (IEEE1394) cable, follow the steps as detailed below:

1. Make sure the connectors are properly aligned and plug the i.LINK (IEEE1394) cable into the computer.

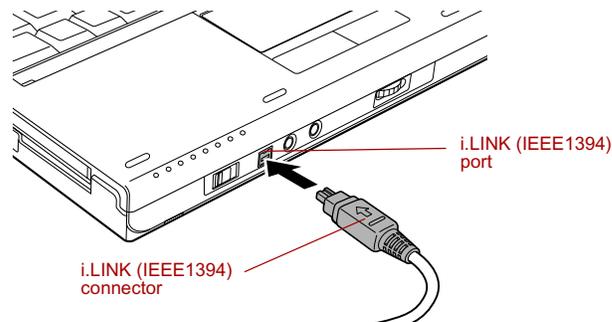


Figure 3-28 Connecting the i.LINK (IEEE1394) cable into the computer

2. Plug the other end of the cable into the device.

Note the following when you use i.LINK:

- You may need to install drivers for your i.LINK devices.
- Not all i.LINK devices have been tested. Therefore, compatibility with all i.LINK devices cannot be guaranteed.
- Some devices might not support sleep or automatic off functions.
- Do not connect or disconnect an i.LINK device while it is using an application or when the computer is automatically shutting it down to save power. Data might be destroyed.

### Disconnecting the i.LINK (IEEE1394) cable

To disconnect the i.LINK (IEEE1394) cable, follow the steps as detailed below:

1. Open the **Safely Remove Hardware** icon on the Windows Taskbar.
2. Point to **i.LINK (IEEE1394) device** and click.
3. Disconnect the cable from the computer then from the i.LINK device.



Refer also to the documentation that came with your i.LINK device.

## TOSHIBA Express Port Replicator

In addition to the ports available on the computer, the TOSHIBA Express Port Replicator. The TOSHIBA Express Port Replicator connects directly to the docking interface on the underside of the computer. The AC adaptor connects the TOSHIBA Express Port Replicator to a power source.



*The computer must be configured properly before connecting to a LAN. Logging onto a LAN using the computer's default settings could cause a malfunction in LAN operation. Check with your LAN administrator regarding set-up procedures.*



- *You must connect the AC adaptor before you connect to a TOSHIBA Express Port Replicator.*
- *When a TOSHIBA Express Port Replicator is connected to the computer, you can not use the following computer's ports: LAN jack, DC IN 15V jack and External monitor port.*
- *When connecting an AC Adaptor to the TOSHIBA Express Port Replicator, use only the AC Adaptor included with TOSHIBA Express Port Replicator. Do not use the computer's AC Adaptor.*

The following ports are available on the TOSHIBA Express Port Replicator.

- RJ45 LAN jack
- External monitor port
- DC IN 15V jack
- Security lock slot
- Universal Serial Bus 2.0 port (four)
- DVI port



- *As the port operation of all DVI (Digital Visual Interface) monitors has not been confirmed, some DVI monitors may not function properly.*
- *Set the TOSHIBA Express Port Replicator's Slide Adjuster to SLIDE position #4 when connecting this computer to the TOSHIBA Express Port Replicator. Refer to the TOSHIBA Express Port Replicator User's Manual for more details on connection methods.*

## Security lock

A security lock enables you to anchor your computer to a desk or other heavy object in order to help prevent unauthorized removal or theft. The computer has a security lock slot on its left side into which you can attach one end of the security cable, while the other end attaches to a desk or similar object. The methods used for attaching security cables differ from product to product. Please refer to the instructions for the product you are using for more information.

### Connecting the security lock

In order to connect a security cable to the computer, follow the steps as detailed below:

1. Turn the computer so its left hand side faces you.
2. Align the security cable with the 'lock hole' and secure it in place.

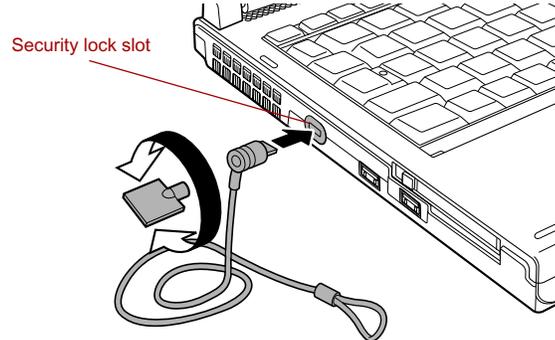


Figure 3-29 Security lock

## Optional accessories

You are able to add a number of options and accessories in order to make your computer even more powerful and convenient to use. For reference, the following list details some of the items that are available from your reseller or TOSHIBA dealer:

<b>DDR2-400/533 Memory Module</b>	A 512MB or 1,024MB memory module (DDR2-533) can easily be installed in the computer.
<b>DDR2-667 Memory Module</b>	A 512MB, 1,024 or 2,048MB memory module (DDR2-667) can easily be installed in the computer.
<b>Universal AC Adaptor</b>	If you frequently use your computer at more than one site, it may be convenient to purchase an additional AC adaptor to be kept at each site in order to remove the need to always carry the adaptor with you.
<b>Battery Pack</b>	An additional battery pack can be purchased for use as either a spare or replacement. Please refer to Chapter 6, <i>Power and Power-Up Modes</i> for further information.
<b>Slice Expansion Battery</b>	This battery pack increases your computer's operating time when a main battery pack is also installed. It is connectable to the Docking port of the computer.
<b>Slice Expansion Battery adaptor</b>	The Slice Expansion Battery adaptor is used to connect with the Battery Charger in order to charge a Slice Expansion Battery.
<b>Battery Charger</b>	The optional battery charger allows you to charge extra battery packs outside of having to use the computer.
<b>USB FDD Kit</b>	The USB floppy diskette drive accommodates either a 1.44MB or 720KB floppy diskette through connection to one of the computer's USB ports. In use, please be aware that, while you cannot format 720KB floppy diskettes under Windows Vista®, you are able to read and write to diskettes that have already been formatted.
<b>HDD Kit (Serial-ATA)</b>	You can increase your computer's data storage capacity with additional hard disk drive. It is available in the following size: <ul style="list-style-type: none"> <li>■ 80GB</li> </ul>

<b>TOSHIBA Express Port Replicator</b>	The TOSHIBA Express Port Replicator provides the ports available on the computer in addition to a digital visual interface (DVI) port, External monitor port, Universal Serial Bus port (USB2.0) x 4, LAN jack.
<b>Tablet PC Pen</b>	Tablet PC Pens can be purchased from your TOSHIBA dealer for use as spare items (spare pen tips and a tip draw-out tool are included).
<b>Reserve Pen</b>	Reserve Pen can be purchased from your TOSHIBA dealer. Use the Reserve Pen in place of the Tablet PC Pen if the Tablet PC Pen is lost or broken.

### ***Ultra Slim Bay options***

The following module can be installed in the Ultra Slim Bay. All other module is option.

<b>Ultra Slim Bay HDD Adaptor</b>	An adaptor lets you install an optional hard disk drive described in <a href="#">Ultra Slim Bay HDD Adaptor</a> .
<b>Ultra Slim Bay DVD Super Multi (Double Layer) Drive Kit</b>	Refer to the <a href="#">Hardware</a> section for details.

## Chapter 4

### Operating Basics

This chapter describes the basic operations of your computer, highlights the precautions that should be taken when using it.

#### Pointing Devices

The pointing devices of this computer vary from model to model.

- Digitizer screen model: The Touch Pad and the Tablet PC Pen which comes with the computer can be used as a pointing device.
- Digitizer and touch screen model: The Touch Pad and Tablet PC Pen which comes with the computer or a finger can be used as pointing devices.
- Display screen model: The Touch Pad can be used as a pointing device.



- *Digitizer and touch screen model: The Touch pointer is provided as a supplementary tool for operations which are difficult to carry out only using your finger.*
- *Display screen model: Operations on the display screen can not be done either by using Tablet PC Pen or your finger. Please refrain from touching the display screen to avoid damaging it.*

## Using the Touch Pad

To use the Touch Pad, simply touch and move your fingertip across it in the direction you want the on-screen pointer to go.

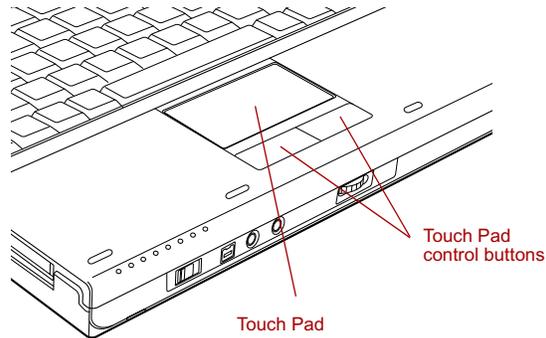


Figure 4-1 Touch Pad and Touch Pad control buttons

The two buttons below the Touch Pad are used like the buttons on a standard mouse - press the left button to select a menu item or to manipulate text or graphics designated by the pointer, and press the right button to display a menu or other function depending on the software you are using.



*You can also tap the Touch Pad to perform functions similar to those of the left button on a standard mouse.*

**Click:** Tap once

**Double-click:** Tap twice

**Drag and drop:** Tap to select the item(s) you want to move, leave your finger on the Touch Pad after the second tap and then move the item(s) to their new destination.

### Using the Tablet PC Pen and Reserve Pen

You can use the Tablet PC Pen to execute actions and enter data. Hold the Tablet PC Pen in a natural position and tap, press or trace on the screen lightly.

Some computers in the series are equipped with a Tablet PC Pen and a Reserve Pen.

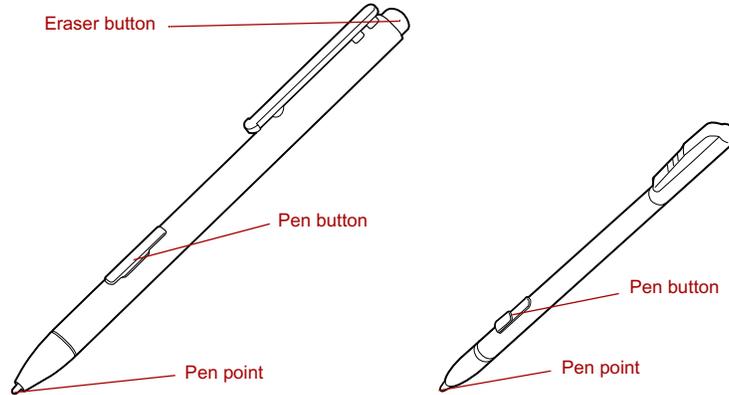


Figure 4-2 The Tablet PC Pen (the left) and Reserve Pen (the right)

<b>Eraser button</b>	You can use this button as an eraser when using a graphics software application. Text based software application enable you to select and delete characters with a one-touch action.
<b>Pen button</b>	Provides the same function as clicking the right Touch Pad control button.
<b>Pen point</b>	Provides the same function as clicking the left Touch Pad control button.



Observe the following precautions on the handling of the Tablet PC Pen.

- In order to avoid damages to the display screen, please refrain from doing anything other than the specified operation methods. Failure to do so could cause a malfunction or characteristic deterioration.
- Do not tap or press the Tablet PC Pen forcefully against the display as this could damage the Tablet PC Pen and the screen itself.
- Avoid using or keeping the Tablet PC Pen in areas where the temperature can change rapidly or in places, such as a car, where the Tablet PC Pen is exposed to direct sunlight. Store the Tablet PC Pen without any pressure being applied to the buttons. Failure to do so could cause a malfunction or characteristic deterioration.
- The Tablet PC Pen is composed of precision parts. Do not drop the Tablet PC Pen. Strong impact causes a malfunction or characteristic deterioration.
- Do not apply excessive force to the Tablet PC Pen point and the side buttons. Excessive force applied to these parts causes short life or characteristic deterioration (Allowable force to pen point, Eraser button, Pen button: less than 1 kg, for less than 30 seconds).
- Avoid water entering the Tablet PC Pen or condensation forming within it as either condition will cause a malfunction.
- Do not disassemble the Tablet PC Pen. It causes maladjustment or short life.
- Do not stain the Tablet PC Pen with cosmetics or chemicals as this will cause a deterioration in appearance. Use a glass wiping cloth or dry cloth to clean the Tablet PC Pen. Do not use volatile liquids such as alcohol, thinner or petroleum benzine to clean the Tablet PC Pen.
- Do not apply excessive force to the Tablet PC Pen point as a bent or deformed pen point will cause a malfunction.
- Keep the small parts of the Tablet PC Pen, such as the pen point or the knob of the side buttons, away from infants and small children to prevent the accidental ingestion by them.
- Do not use a ball point pen instead of the Tablet PC Pen included with the product.
- Do not use a broken pen tip.
- The pen tip cannot be replaced if it is worn (Reserve Pen only).



- You can change the Tablet PC Pen setting and the Touch pointer setting, using the Pen and Input Device.
- TOSHIBA is not liable for any problems arising on the products due to the use of the Tablet PC Pen in an environment where the above conditions are not satisfied or because of its use by unspecified number of users.

### Removing the Tablet PC Pen

To remove the Tablet PC Pen, follow the steps as described below:

1. Slide the Tablet PC Pen from the Tablet PC Pen slot, so that it protrudes slightly.
2. Pull the Tablet PC Pen to remove it from the Tablet PC Pen slot.

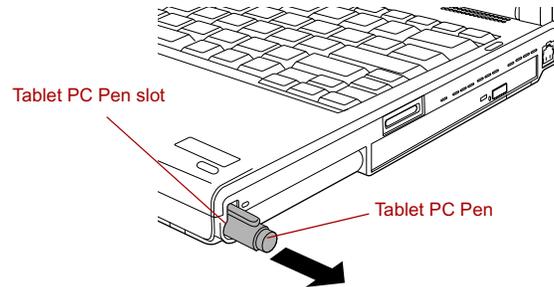


Figure 4-3 Removing the Tablet PC Pen

### Inserting the Tablet PC Pen

The Tablet PC Pen is included in the small case coming with the product. Remove the Tablet PC Pen from small case and install it to the computer as follows:

1. Insert the Tablet PC Pen into the Tablet PC Pen slot until it clicks.



*The Tablet PC Pen and the Reserve Pen are different in shape. Do not insert the Reserve Pen into the Tablet PC Pen slot.*

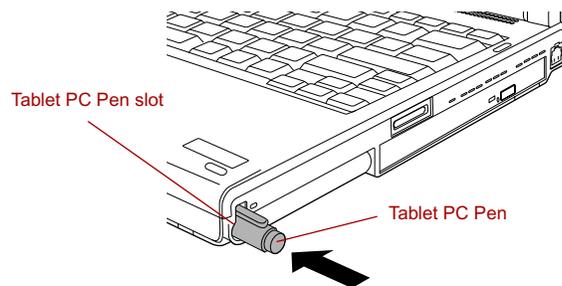


Figure 4-4 Inserting the Tablet PC Pen

### Pen actions

You can use the Tablet PC Pen to enter data, start programs, move objects and execute other actions.

#### Single tap

Lightly tap the tip of the Tablet PC Pen on an object and lift it immediately to execute an action. A single tap is similar to clicking the left touch pad control button.

### *Double tap*

Lightly tap the tip of the Tablet PC Pen twice on an object and lift it immediately to execute an action. A double-tap is similar to double-clicking the left touch pad control button.

### *Press and hold*

Touch the tip of the Tablet PC Pen to the display screen and hold it there to display a pop-up menu or other action. Press and hold is similar to clicking the right touch pad control button.

### *Drag*

Touch the Tablet PC Pen to the screen. Without lifting the Tablet PC Pen, drag it across the screen to select text or objects.

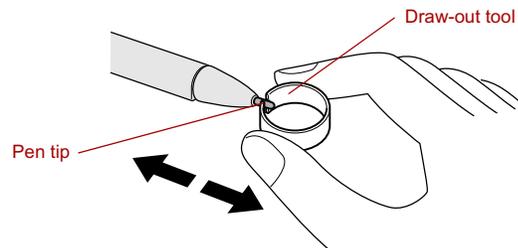
### *Drag and drop*

Touch the Tablet PC Pen to the screen to select an object. Without lifting the Tablet PC Pen, drag it across the screen. Lift the Tablet PC Pen to drop the object to a new location.

### *Replacing the pen tip*

To replace the pen tip, follow the steps as described below:

1. Pinch the tip with a draw-out tool and pull it out.
2. Insert a new pen tip into the Tablet PC Pen carefully, and press it securely.



*Figure 4-5 Replacing the pen tip*



*Do not continue to use a broken pen tip as this may result in scratching of the display panel. When the pen tip breaks replace it with one of the refills delivered with the Tablet PC Pen. When these refills have run out, you can purchase a new pen set from a TOSHIBA authorized dealer.*



- *A short and worn pen point is difficult to pull out. Replace the pen point with a refill before it becomes too short to remove.*
- *It is recommended that you keep another pen set as a spare. You can buy replacement pen sets from your TOSHIBA authorized dealer.*

### Removing the Reserve Pen case

To remove the Reserve Pen case, follow the steps as detailed below:

1. Save your work.
2. Turn the computer's power off - ensure that the **Power** indicator is off.
3. Remove all cables and peripherals that are connected to the computer.
4. Close the display panel and turn the computer upside down.



*Always make sure the display panel is closed in Laptop mode before turning the computer upside down.*

5. Slide and then lift out the Reserve Pen case.



*Push lightly the point shown by the arrow using an object with a thin tip.*

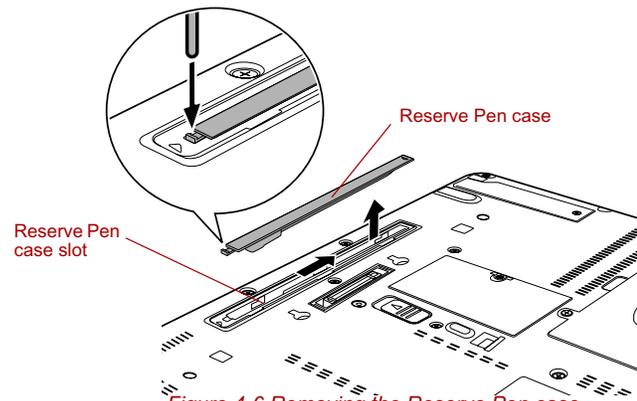


Figure 4-6 Removing the Reserve Pen case

### Inserting the Reserve Pen case

To insert the Reserve Pen case, follow the steps as detailed below:

1. Insert the Reserve Pen case into the Reserve Pen case slot on the computer and slide it until it locks.

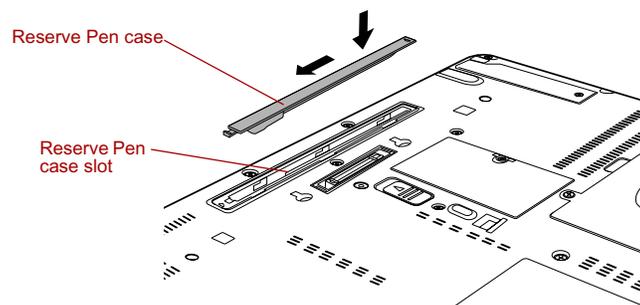


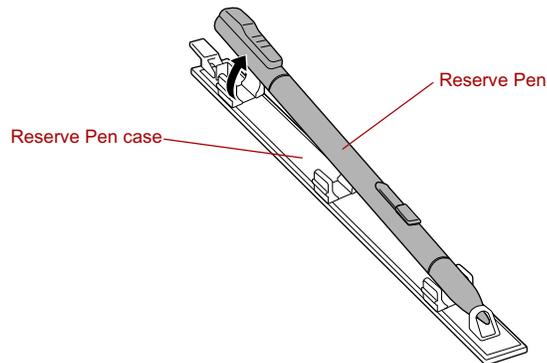
Figure 4-7 Inserting the Reserve Pen case

### ***Storing and Removing the Reserve Pen from the Reserve Pen case***

Follow the procedures below to remove the Reserve Pen from the Reserve Pen case.

#### ***Removing the Reserve Pen from the Reserve Pen case***

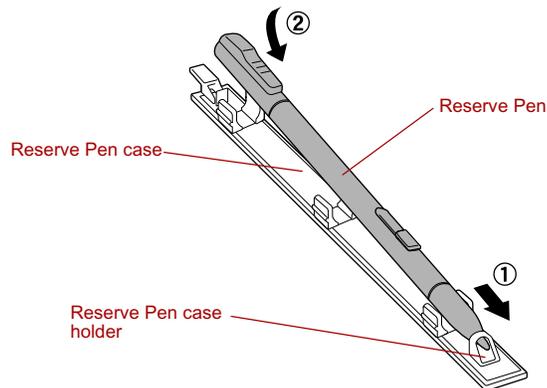
1. Lift the Reserve Pen up from the Reserve Pen case by its end.



*Figure 4-8 Removing the Reserve Pen from the Reserve Pen case*

#### ***Storing the Reserve Pen in the Reserve Pen case***

1. Insert the tip of the Reserve Pen into the Reserve Pen case holder and press down.



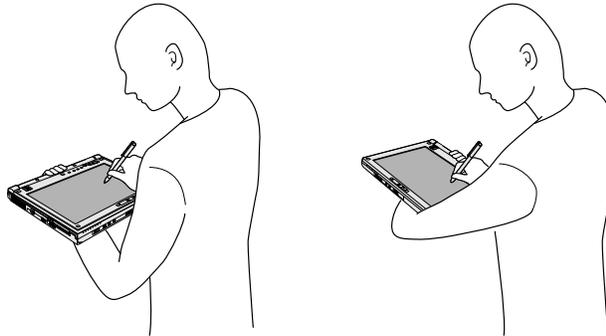
*Figure 4-9 Storing the Reserve Pen in the Reserve Pen case*

## Using the Tablet mode

This section explains Tablet mode functions and use.

### Operating the computer in Tablet mode

When operating the computer in Tablet mode, follow the instructions below.



*Figure 4-10 Operating the computer in Tablet mode (using a Tablet PC Pen)*

- Hold the computer firmly on your forearm. Do not block the vent.
- Remove the AC adaptor from the computer when using it in Tablet mode held in your forearm.
- Do not use the computer while walking or driving a car.
- Change to Laptop mode and turn off the computer before carrying it. Do not carry the computer with power on or in Sleep Mode. Do not carry the computer while the **Hard Disk Drive** indicator is glowing.
- Do not expose the computer to rapid temperature changes (such as would be the case if you brought the computer from a cold environment into a warm room). When rapid temperature changes are unavoidable, leave the computer for around two hours before turning it on to prevent the formation of condensation.
- Remove all external peripheral devices and their connection cables from the computer before carrying.
- Do not drop the computer or apply excessive impact to it. Do not leave the computer in a car or similar environment where it is exposed to direct sunlight.
- Do not put the computer in a bag when it is in Tablet mode.

- The function of the display screen varies from model to model.
  - Digitizer screen model: Please use the Tablet PC Pen to operate, which comes with the computer.

Please carefully observe the following items in order to avoid damaging the display screen. Incorrect use could cause the screen to be scratched.

    - Do not press on the screen with anything other than the included touch pen (especially with anything pointed)
    - Prevent long fingernails and rings or other metal from touching the screen
    - Do not apply excessive pressure to the screen
  - Digitizer and touch screen model: Please operate either using the Tablet PC Pen which comes with the computer or your finger.

Please carefully observe the following items in order to avoid damaging the display screen. Incorrect use could cause the screen to be scratched.

    - Do not press on the screen with anything other than the included touch pen (especially with anything pointed)
    - Prevent long fingernails and rings or other metal from touching the screen
    - Do not apply excessive pressure to the screen
    - If you operate simultaneously by finger and Tablet PC Pen, then the operation of Tablet PC Pen gets executed. Operations done by the finger are not available.
    - Only touch one location at a time when operating using your finger. If you touch multiple locations simultaneously, the input will not be correctly interpreted.
  - Display screen model: Operations on the display screen can not be done either by using Tablet PC Pen or your finger. Please refrain from touching the display screen to avoid damaging it.

- The display panel works as a touch sensitive digitizer screen. However, the outer edges of the screen may be less sensitive. Please keep the Tablet PC Pen or your finger inside the display area when you use it near the edges of the display panel. The position of the pen may not be recognized if you move the Tablet PC Pen or your finger too fast towards the outer edge. Please be sure to slide the Tablet PC Pen or your finger slowly in areas near the edges of the screen.

Use the Tablet PC Pen or your finger in the areas enclosed by the dotted line as shown in the following figure.



*Display screen model: Operations on the display screen can not be done either by using Tablet PC Pen or your finger. Please refrain from touching the display screen to avoid damaging it.*

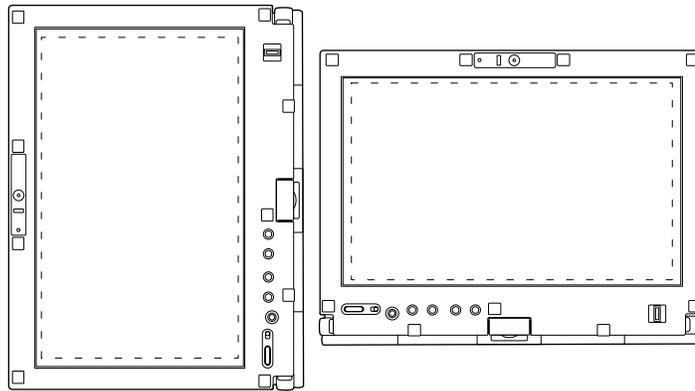


Figure 4-11 Use area of a Tablet PC Pen



- When performing operations on the display screen using the Tablet PC Pen or a finger, the on-screen cursor position may deviate from the actual pen (or finger) position in the following situations:

- If the screen resolution is lower than 1280 x 800 (For example 800 x 600)

- When the Aspect Ratio Options in the Intel® GMA Driver for Mobile (Intel® Graphics Media Accelerator Driver for mobile) Display Settings are set to Maintain Aspect Ratio or Center Desktop

Adjust one of the following settings to correct cursor position deviation.

- Set the resolution to 1280 x 800
- Set the Aspect Ratio Options to Full Screen (No Border)

- Do not block the vent of the computer when holding it. If you continue to expose your skin to the hot air expelled from the vent for a long time, your skin might suffer low temperature injury.

### Changing to the Tablet mode

To change from Laptop mode to the Tablet mode, follow the instructions below.

1. Open the display panel to the upright position.



*When rotating the display panel, be sure to keep the display panel at a 90-degree angle to the keyboard.*

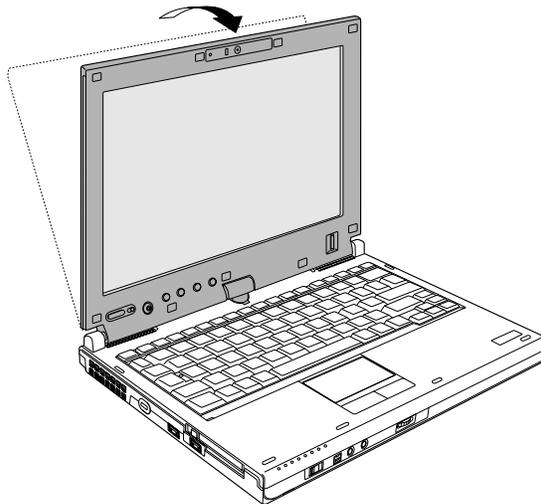


Figure 4-12 Changing to the Tablet mode (1)



- Place the computer on a stable, flat surface such as a desktop and rotate the display panel slowly, holding the panel at its lower part.
- To change from Laptop mode to Tablet mode you must rotate the display panel 180 degrees clockwise.



**Tablet mode icon** Turn the display panel to the direction indicated by the Tablet mode icon.



*To change from Tablet mode to Laptop mode you must rotate the display panel 180 degrees counter-clockwise.*



**Laptop mode icon** Turn the display panel to the direction indicated by the Laptop mode icon.

2. Rotate the display panel clockwise slowly.



- When rotating display panel of your computer, be sure to slowly turn it in the proper direction, and not apply excessive force or speed.
- Do not attempt to rotate the display panel past the maximum rotation point. Forcing the display panel past the maximum rotation point will damage the display panel.
- Rotating the display panel counter-clockwise will break the hinge and cause the computer to cease to function correctly.

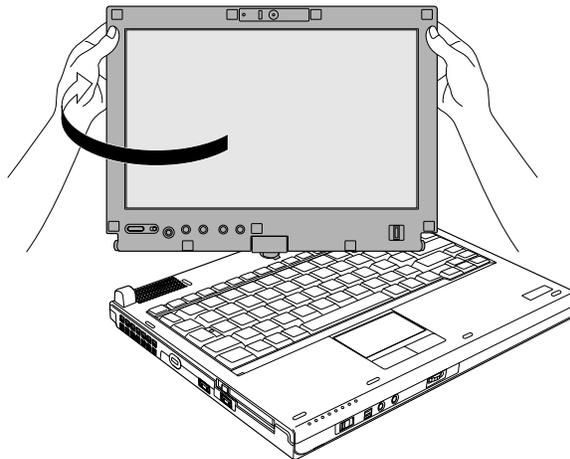


Figure 4-13 Changing to the Tablet mode (2)

3. Close the display panel slowly with display surface facing upwards.

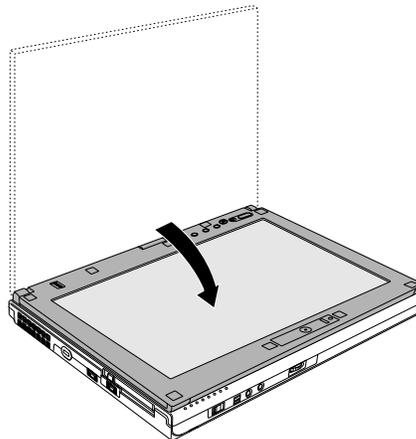


Figure 4-14 Changing to the Tablet mode (3)

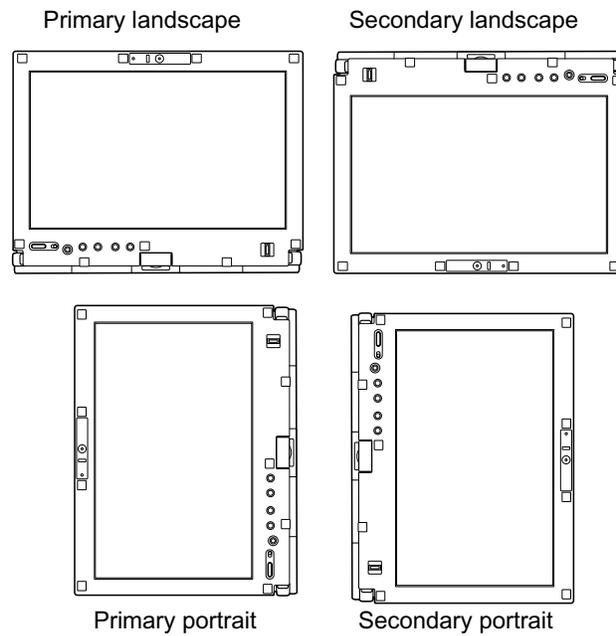
### Changing to the Laptop mode

To change the operating mode to the Laptop mode, follow the steps as detailed below:

1. Raise the display to the upright position carefully.
2. Rotate the display counter-clockwise slowly.
3. Close the display.

### Changing the screen orientation

The orientation of the computer screen can be changed to one of the following four display modes:



*Figure 4-15 Four display modes*



- *Execute the following applications on Primary landscape:*
  - *3D game software*
  - *3D screen saver*
  - *Playback of a motion picture as would be the case using DVD-Video playback on the computer connected to an external DVD-ROM Drive.*
- *The screen cannot automatically rotate in the following cases. You should first quit the running application and then rotate the screen:*
  - *Running of an application that changes the screen resolution dynamically, such as a game that is running in full-screen mode.*
  - *DOS prompt in full-screen mode.*
  - *Running of 3D screen saver.*



- *Do not play 3D game software or replay DVD-Video in a display mode other than Primary landscape. An abnormality will appear on the Windows screen display when you replay a DVD-Video in a mode other than Primary landscape because DVD playback software can boot only in the Primary landscape mode.*
- *An abnormality will appear on the Windows screen display when you change from Tablet mode to Laptop mode while a 3D screen saver is running. In this case, press any key while in Laptop mode to deactivate the 3D screen saver.*

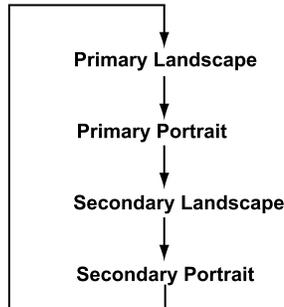
### **Method 1: Changing the screen orientation using TOSHIBA Accelerometer Utilities and TOSHIBA Rotation Utility**

When the TOSHIBA Accelerometer Utilities and TOSHIBA Rotation Utility are running, changes in the orientation of the top and bottom of the screen is automatically recognized by pressing ESC/Rotation button for more than a second.

### **Method 2: Changing the screen orientation using Taskbar**

1. Click **Start** and open **Control Panel**.
2. Select **Mobile PC**.
3. Open **Tablet PC Settings**.
4. Click **Change** button in **Display** tab.

5. Select a screen orientation from the Orientation pull down menu and change the screen.



You can set the orientation of the desktop screen just after rotating the display from **Start -> All Programs -> TOSHIBA -> Tablet PC -> Rotation Utility**.

### Using Accelerometer Utilities



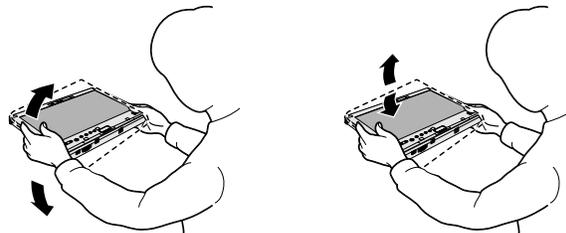
When you shake the computer:

- Do not shake the computer too strongly as this may cause the computer to be dropped or hit those people or items around you.
- Avoid using the computer in crowded places (e.g. in commuter trains or in busy streets).  
This may cause injury to children or adults, or damage to the computer.



When the TOSHIBA HDD protection function is turned on and the Tilt function (function to start applications, etc. by waving the computer vertically or horizontally) is used, the TOSHIBA HDD protection message may be displayed on the screen. Turn off the TOSHIBA HDD protection function in order to stop such messages from displaying.

It is safer if you hold the computer with both hands horizontally as shown in the below example.



The computer is shaken horizontally.

The computer is shaken perpendicularly.

Figure 4-16 Shake the computer

## Using the Fingerprint Sensor

This product has a fingerprint utility installed for the purpose of enrolling and recognizing fingerprints. By enrolling the ID and password onto the fingerprint authentication feature, it is no longer necessary to input the password from the keyboard. Fingerprint feature enables you to:

- Logon to Windows and access a security enabled homepage through Internet Explorer.
- Files and folders can be encrypted/decrypted and third party access to them prevented.
- Disable the password-protected screen-saver when returning from a power-saving mode such as Sleep Mode.
- Authentication of the User Password (and, if applicable, the HDD(Hard Disk Drive) Password) when booting up the computer (Pre-OS Authentication).
- Single-Swipe Sign On feature



*Fingerprint cannot be used in models that do not have a fingerprint module installed.*

### How to Swipe your Finger

Using the following steps when swiping fingers for fingerprint registration or authentication will help to minimize authentication failures:

Align the first joint of the finger to the center of the sensor. Lightly touch the sensor and swipe finger levelly towards you when in portrait mode, and sideways when in either landscape mode or Laptop mode.

While lightly touching the sensor, swipe the finger towards you when in portrait mode, and sideways when in either landscape mode or Laptop mode until the sensor surface becomes visible.

The following illustrations show the recommended way to swipe your finger over the fingerprint sensor.

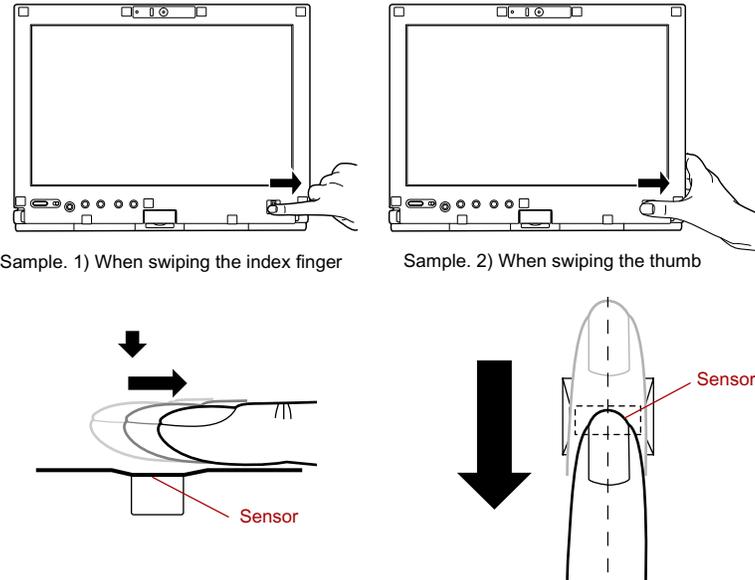


Figure 4-17 Swipe the finger



- Avoid swiping with your finger stiff or pressed too hard onto the sensor, and take care to ensure that the center of the fingerprint is touching the sensor before swiping. Either of these conditions may cause fingerprint reading to fail.
- Check the center of the fingerprint whorl before swiping and then ensure this is swiped along the center line of the sensor.
- There is a possibility of authentication failures if the finger is swiped too quickly or too slowly - follow any on-screen instructions to adjust the speed used during the swipe process.

## Points to note about the Fingerprint Sensor

Please be aware of the following considerations when using the fingerprint sensor. A failure to follow these guidelines might result in damage to the sensor, sensor failure, fingerprint recognition problems or a lower fingerprint recognition success rate.

- Do not scratch or poke the sensor with your nails or any hard or sharp objects.
- Do not press the sensor strongly.
- Do not touch the sensor with a wet finger or any wet objects - keep the sensor surface dry and free from water vapor.
- Do not touch the sensor with a soiled or dirty finger as minute foreign particles of dust and dirt may scratch it.
- Do not paste stickers or write on the sensor.
- Do not touch the sensor with a finger or any other object which may have a build-up of static electricity on it.

Observe the following before you place your finger on the sensor whether for fingerprint enrollment/registration or recognition.

- Wash and dry your hands thoroughly.
- Remove static electricity from your fingers by touching any metal surface. Static electricity is a common cause of sensor failures, especially when the weather is dry.
- Clean the sensor with a lint-free cloth - do not use detergent or any other chemicals to clean the sensor.
- Avoid the following finger conditions for enrollment or recognition as they may result in fingerprint enrollment errors or a drop in the fingerprint recognition success rate
  - Soaked or swollen finger, for example as may occur after taking a bath.
  - Injured finger
  - Wet finger
  - Soiled or oily finger
  - Extremely dry skin condition on finger

Observe the following to improve the fingerprint recognition success rate.

- Enroll two or more fingers.
- Enroll additional fingers if a recognition failure often occurs when using already enrolled fingers.
- Check the condition of your finger - any conditions which have changed since enrollment, such as injury, rough skin, and extremely dry, wet, soiled, dirty, oily, soaked or swollen fingers, may lower the recognition success rate. Also if the fingerprint is worn down or the finger becomes thinner or fatter, the recognition success rate may be lowered.
- As the fingerprint for each finger is different and unique you should ensure that only the registered or enrolled fingerprint or fingerprints are used for identification.

- Check the position and speed at which you swipe your finger across the sensor - please refer to the preceding drawing.
- The fingerprint sensor compares and analyzes the unique characteristics in a fingerprint. However, there may be instances where certain users are unable to register their fingerprints due to insufficient unique characteristics in their fingerprints.
- The recognition success rate may differ from user to user.

### Setup Procedure

Please use the following procedure when first using fingerprint authentication.

#### **Fingerprint Registration**

You should initially enroll the required authentication data using the **Fingerprint Enrollment Wizard**.



- *In use, the fingerprint authentication system will use the same username and password as defined within the Windows operating system. If no Windows password has been configured, you must do this before starting the fingerprint registration process.*
- *This sensor has the memory space for at least twenty-one fingerprint patterns. You might be able to register more fingerprint patterns depending on the sensor memory usage.*

1. To run this program, click **Start -> All Programs -> TrueSuite Access Manager -> Fingerprint Application**.



*You are also able to start the Fingerprint Enrollment Wizard by using the following methods.*

- *Click the Fingerprint Application icon in the Taskbar.*
2. The **Verify** screen will be displayed, enter the Windows logon password and click the **Next** button.
  3. On the **User's Fingers** screen click the box above the finger you wish to register.  
If any of the previously enrolled fingerprints is selected again, the latest information will be enrolled and any previous information over-written.
  4. The **Fingerprint Enrollment** screen will be displayed and the tutorial will begin. First click "Replay video" and confirm the proper movement for the finger you wish to register. Then confirm the message displayed on this screen and ensure that there is a check mark in the **Run Interactive Tutorial** box. Once this has been done, click **Next**.
  5. At the **Scanning Practice** screen, you are able to practice swiping (three times) your finger to ensure you use the correct method. Click "Try again" to if you wish to practice again. You have finished practicing, click **Next** button.

6. Register your fingerprint on the **Fingerprint Image Capture** screen.  
Let the computer read the finger to be registered 3 times. An image of your fingerprint will be shown on the screen each time the fingerprint is successfully read.  
Once the fingerprint is successfully read for the third time, the message **Successfully combined** will be displayed beneath the fingerprint images. Click the **Next** button.
7. When the **Store To Sensor** screen is displayed, check **Store fingerprint to Sensor**. Click **Finish** to complete fingerprint registration.



*It is strongly recommended that you register 2 or more fingerprints. Repeat the procedure from step 3 to register another fingerprint.*

### **How to Delete the Fingerprint Data**

Saved fingerprint data is stored in special non-volatile memory inside the fingerprint sensor. Therefore, if you give the computer to someone else, or dispose of it in any way, the following process is recommended to delete your fingerprint information:

1. To run this program, click **Start -> All Programs -> TrueSuite Access Manager -> Fingerprint Application**.
2. The **Verify** screen will be displayed, so either swipe your registered finger or enter the Windows logon password and click the **Next** button.
3. The **User's Fingers** screen is displayed.
  - To delete all registered fingerprints
    1. Click **Delete All Fingerprints**.
    2. Follow the on-screen instructions to delete the registered fingerprints.
  - To delete individual fingerprints
    1. Click the fingerprint mark above the registered finger.
    2. Click **Delete All Fingerprints**.
    3. "Are you sure you want to delete this fingerprint?" will be displayed on the screen, click **Yes** button.
4. When **Delete All Fingerprints** is selected, the user selection screen will be displayed, so select which user's fingerprint data to delete.
  - Selecting "Delete current user's fingerprints" will delete the fingerprint data for the currently logged in user.
  - Selecting "Delete all users' fingerprints" will delete the fingerprint data for all users, however this item can only be selected if the currently logged in user has administrator privileges.
5. A message will be displayed asking for confirmation to delete the fingerprint data, click the **Yes** button.

In use, please be aware of the following limitations of the fingerprint sensor:

- A warning message will be displayed when recognition is abnormal or recognition is not successful within a fixed duration.
- The fingerprint sensor compares and analyzes the unique characteristics in a fingerprint. However, there may be instances where certain users are unable to register their fingerprints due to insufficient unique characteristics in their fingerprints.
- The recognition success rate may differ from user to user.
- Toshiba does not guarantee that this fingerprint recognition technology will be error-free.
- Toshiba does not guarantee that the fingerprint sensor will recognize the enrolled user or accurately screen out unauthorized users at all times. Toshiba is not liable for any failure or damage that might arise out of the use of this fingerprint recognition software or utility.

### Points to note about the Fingerprint Utility software



*You are able to backup saved fingerprint data and information within the by using the Import or Export User Data facility under the fingerprint management software. However, please be aware that any encrypted files cannot be backup within File protection using this function - in these instances it is recommended that you backup these files to external media using standard file copy processes.*

The Encrypting File System (EFS) is a Windows Vista® feature.

If a file is encrypted using EFS, it cannot be encrypted further using the fingerprint authentication function.

### Windows Logon via Fingerprint Authentication

If required, you are also able to use fingerprint authentication in place of the usual Windows logon process using your username and password.

This method is especially useful where there are many users using the same computer as it removes the need for actual user selection when the system is started.

#### ***Fingerprint Authentication Procedure***

1. Start up the computer.
2. At the Windows **Welcome** screen, choose any of the enrolled fingers and swipe the fingerprint on the sensor - if the authentication process is successful, the user will automatically be logged in to Windows.



*If the fingerprint authentication process fails you will need to log into Windows using the appropriate username and password. In addition, you should use this manual login process if fingerprint authentication fails for three consecutive tries - a warning message will be displayed when authentication is not normal or is not successful within a fixed duration.*

## Fingerprint Pre-OS Authentication

### General

The fingerprint authentication system can be used to replace the keyboard based password authentication system that is used when the computer is turned on.

If you do not want to use the fingerprint authentication system for password authentication while booting up the computer, instead you prefer using the keyboard entry method, simply press the **BACK SPACE** key or the ESC/Rotation button when the Fingerprint Pre-OS Authentication screen is displayed.

Using this process will switch the password input screen across to the keyboard based entry screen.



- *You must ensure that you use the TOSHIBA Password Utility to register a User Password before using the Fingerprint Pre-OS Authentication and its extended function to allow fingerprints to be used to access the computer when it is turned on.*
- *If the fingerprint authentication process fails five times, a preset time limit is exceeded, or you press the **BACK SPACE** key, [Password =] will be displayed on the screen and you will have to enter either the User Password or Supervisor Password manually in order to start the computer.*
- *When swiping your finger, please ensure that you do it slowly and at a constant speed. If you find that this does not improve the authentication rate, you should try to adjust the speed at which the finger is swiped.*
- *If there are any changes in the environment or settings related to authorization, you will be required to provide authorization information such as a User Password (and, if applicable, the HDD(Hard Disk Drive) password).*

### How to Enable Fingerprint Pre-OS Authentication Settings

It is necessary to first enroll your fingerprint with the Fingerprint Application prior to enabling and configuring the Fingerprint Pre-OS Authentication System. You should check that your fingerprint is enrolled before configuring the settings (please refer to the Manual for Fingerprint Registration/Enrollment for further instructions).

1. To run this program, click **Start** -> **All Programs** -> **TrueSuite Access Manager** -> **Fingerprint Application with Admin**.
2. UserAccountControl screen is displayed, click the **Allow** button.  
This setting can only be changed if the currently logged in user has administrator privileges.
3. Swipe a registered finger on the fingerprint sensor.
4. Click the **Setting menu** at the TrueSuiteAccessManager screen.
5. Administrator Setting screen is displayed, check the "Enable Pre-OS Fingerprint Authentication" check box and then click **OK**.
6. Click the **Exit** button at the TrueSuiteAccessManager screen.

## Fingerprint Single-Swipe Sign On Feature

### General

This is a feature that allows the user to complete the authentication for both the User/BIOS Password (and, if applicable, the HDD(Hard Disk Drive) Password) and logging onto Windows using only one fingerprint authentication when booting up.

It is necessary to register the User/BIOS Password and Windows Logon Password before using the Fingerprint Pre-OS Authentication and this Fingerprint Single-Swipe Sign On Feature. Please use the TOSHIBA Password Utility to register your User/BIOS Password. If Windows Logon is not the default for your system, see Manual to register your Windows Logon Password.

Only one fingerprint authentication is required to replace the User/BIOS Password (and, if applicable, the HDD(Hard Disk Drive) Password) and the Windows Logon Password.

### How to Enable Fingerprint Single-Swipe Sign On Feature

It is necessary to first enroll your fingerprint with the Fingerprint application prior to enabling and configuring the Fingerprint Single-Swipe Sign On feature. You should check that your fingerprint is enrolled before configuring the settings (please refer to the Manual for Fingerprint Registration/Enrollment for further instructions).

1. To run this program, click **Start -> All Programs -> TrueSuite Access Manager -> Fingerprint Application with Admin**.
2. UserAccountControl screen is displayed, click the **Allow** button.  
This setting can only be changed if the currently logged in user has administrator privileges.
3. Swipe a registered finger on the fingerprint sensor.
4. Click the **Setting menu** at the TrueSuiteAccessManager screen.
5. Administrator Setting screen is displayed, check the "Enable Single-Sign On Fingerprint Authentication" check box and then click **OK**.
6. Click the **Exit** button at the TrueSuiteAccessManager screen.

### Fingerprint utility limitations

TOSHIBA does not guarantee that the fingerprint utility technology will be completely secure or error-free, or that it will accurately screen out unauthorized users at all times. TOSHIBA is not liable for any failure or damage that might arise out of the use of the fingerprint software.



- *The fingerprint sensor compares and analyzes the unique characteristics in a fingerprint. However, there may be instances where certain users are unable to register their fingerprints due to insufficient unique characteristics in their fingerprints.*
- *The recognition success rate may differ from user to user.*

## Web Camera

**Web Camera** is a device that allows you to record video or take photographs with your computer. You can use it for video chatting or video conferences using a communication tool such as **Windows Live Messenger**. **Camera Assistant Software** will help you to add various video effects to your video or photograph.

Enables the transmission of video and use of video chat via the internet using specialized applications.

The effective pixel count for this web camera is 1.3 million.

Please refer to the Camera Assistant Software Online Help for details.

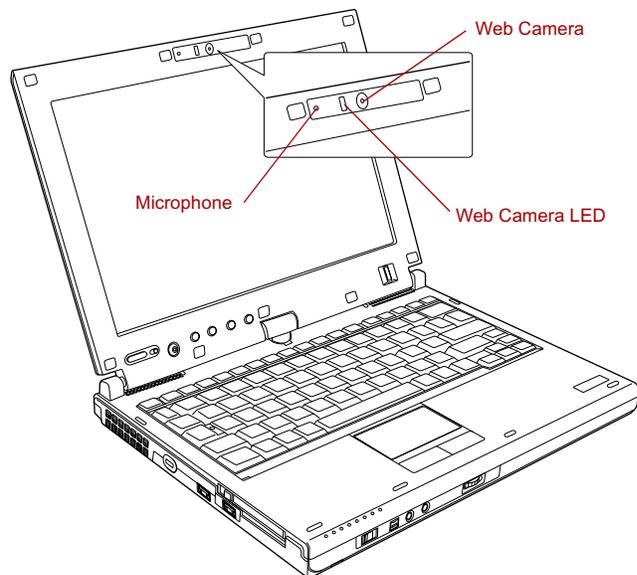


Figure 4-18 Web Camera



- Do not point the web camera directly at the sun.
- Do not touch or press strongly on the web camera lens. Doing so may reduce image quality. Use an eyeglass cleaner (cleaner cloth) or other soft cloth to clean the lens if it becomes dirty.
- Setting the [Size] to more than "800x600" will cause a larger amount of data to be written to the hard disk drive and may interfere with smooth recording.
- When recording in dimly lit environments, the following procedure can be used to select "Night Mode" which allows for brighter images with less noise.
  1. Click the **Properties** button on the [Web Camera] menu.
  2. Check **Night Mode** on the [Options] tab.
  3. Click the **OK** button.

The number of frames per second is lowered when "video recording" in "Night Mode". This may result in the playback of the recorded video file seeming unsmooth.

## Changing Ultra Slim Bay modules

This section explains how to change modules in the Ultra Slim Bay. The illustrations show replacement of the optical disc drive with the Ultra Slim Bay HDD Adaptor.



To avoid injury, do not put your hand into the Ultra Slim Bay slot.

### Removing a module

To remove the optical disc drive, follow the steps as described below:

1. Save your work.
2. Turn the computer's power off - ensure that the **Power** indicator is off.
3. Remove all cables and peripherals that are connected to the computer.
4. Close the display panel.



Always make sure the display panel is closed in Laptop mode before turning the computer upside down.



Wait for all disk indicators to go out before you turn over the computer and do not lay the computer down gently. Shock can damage the HDD or other components.

5. Turn the computer upside down and remove the battery pack (refer to [Replacing the battery pack](#) section in Chapter 6, Power and Power-Up Modes, if required).
6. Remove the Ultra Slim Bay lock screw from the Lock position.
7. Set the Ultra Slim Bay lock screw in the Unlock position.

8. Slide the Ultra Slim Bay latch to the unlock position.
9. Grasp the optical disc drive and slide it out.



The optical disc drive and other Ultra Slim Bay modules can become hot with use. Be careful when removing the module.

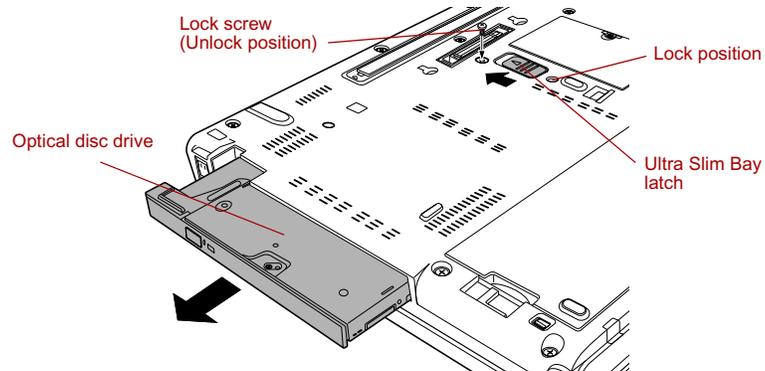


Figure 4-19 Removing the optical disc drive

### Inserting a module

To insert the Ultra Slim Bay HDD Adaptor, follow the steps as described below:

1. Insert the Ultra Slim Bay HDD Adaptor in the computer as shown below and press until the Ultra Slim Bay latch clicks.
2. Remove the Ultra Slim Bay lock screw from the Unlock position.
3. If you want to lock the Ultra Slim Bay HDD Adaptor, set the Ultra Slim Bay lock screw in the hole for the lock position.

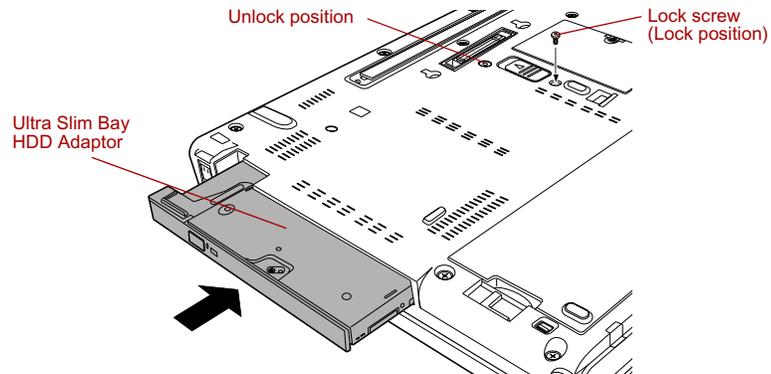


Figure 4-20 Inserting the Ultra Slim Bay HDD Adaptor

### **Ultra Slim Bay Case (UJ-862 model only)**

The DVD Super Multi drive unit (UJ-862) is equipped with an Ultra Slim Bay Case. This section explains how to remove and install the DVD Super Multi drive unit (UJ-862).



Store the DVD Super Multi drive unit (UJ-862 model only) in the Ultra Slim Bay Case when removing it from the computer or transporting it. Refer to [Ultra Slim Bay Case \(UJ-862 model only\)](#) section in this chapter.

#### **Removing a unit**

To remove the DVD Super Multi drive unit from the Ultra Slim Bay Case, follow the steps as described below:

1. Slide the Ultra Slim Bay latch to the unlock position.
2. Grasp the DVD Super Multi drive unit and slide it out.

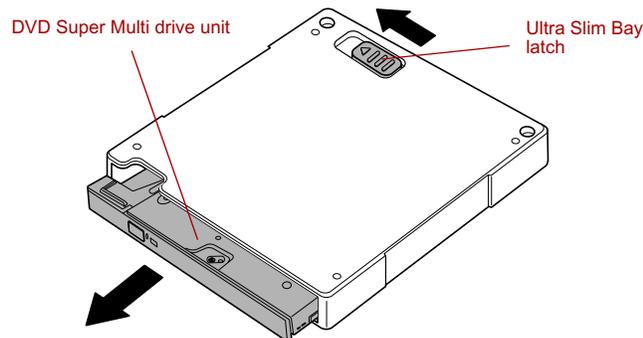


Figure 4-21 Removing the DVD Super Multi drive unit

#### **Inserting a unit**

To insert the DVD Super Multi drive unit into the Ultra Slim Bay Case, follow the steps as described below:

1. Insert the DVD Super Multi drive unit in the Ultra Slim Bay Case as shown below and press until the Ultra Slim Bay latch clicks.

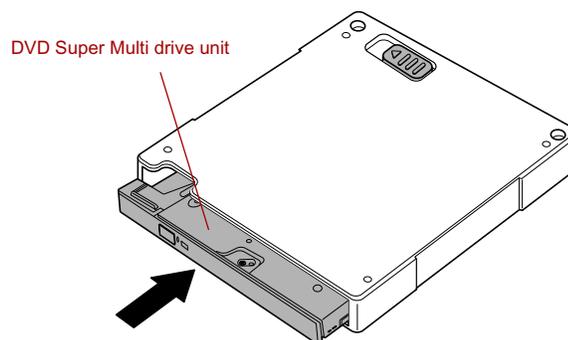


Figure 4-22 Inserting the DVD Super Multi drive unit

## Using optical disc drives

The full-size drive provides high-performance execution of CD/DVD-ROM-based programs. You can run either 12 cm (4.72") or 8 cm (3.15") CD/DVDs without an adaptor. An ATAPI interface controller is used for CD/DVD-ROM operation. When the computer is accessing a CD/DVD-ROM, an indicator on the drive glows.



Use the WinDVD application to view DVD-Video discs.

If you have a DVD Super Multi drive, refer also to the [Writing CD/DVDs on DVD Super Multi drives](#) section for precautions on writing to CDs/DVDs.



When the power of the optical disc drive is off, pressing the **FN + Tab** keys will turn the power of the optical disc drive on. Furthermore, it is possible to set it to turn the power of the optical disc drive on and eject the tray at the same time.

### Loading discs

To load CD/DVDs, follow the steps as detailed below:

1. When the computer's power is on, press the eject button to open the disc tray slightly.
2. Grasp the disc tray gently and pull until it is fully opened.

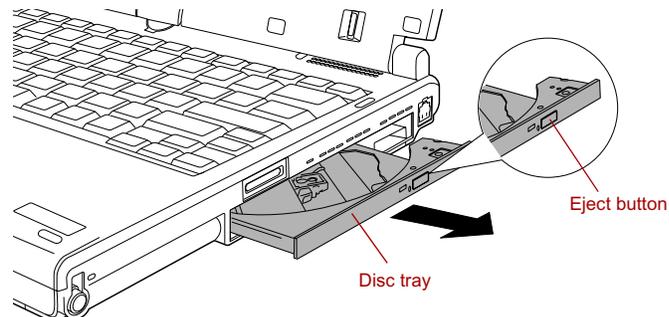


Figure 4-23 Pressing the eject button and pulling the disc tray open

3. Lay the CD/DVD, label side up, in the disc tray.

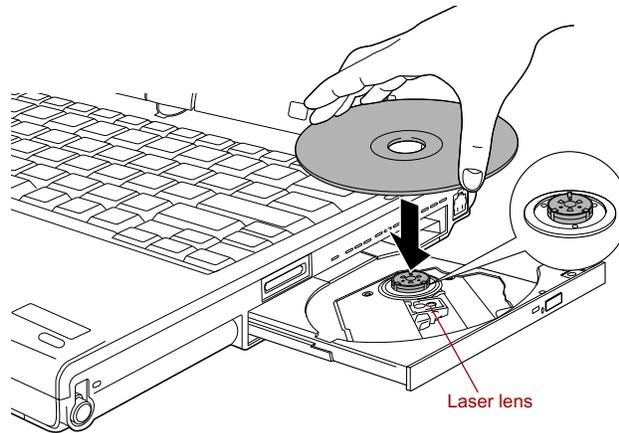


Figure 4-24 Inserting a CD/DVD



*When the disc tray is fully opened, the edge of the computer will extend slightly over the CD/DVD tray. Therefore, you will need to turn the CD/DVD at an angle when you place it in the disc tray. After seating the CD/DVD, however, make sure it lies flat.*



- *Do not touch the laser lens or any portion of its surrounding casing as this could cause misalignment.*
- *Prevent foreign objects from entering the drive. Check the surface of the disc tray, especially the area behind the front edge of the disc tray, to make sure there are no such objects before closing the drive.*

4. Press gently at the center of the CD/DVD until you feel it click into place. The CD/DVD should lie below the top of the spindle, flush with the spindle base.

5. Push the center of the disc tray to close it. Press gently until it locks into place.



*If the CD/DVD is not seated properly when the disc tray is closed, the CD/DVD might be damaged. Also, the disc tray might not open fully when you press the eject button.*

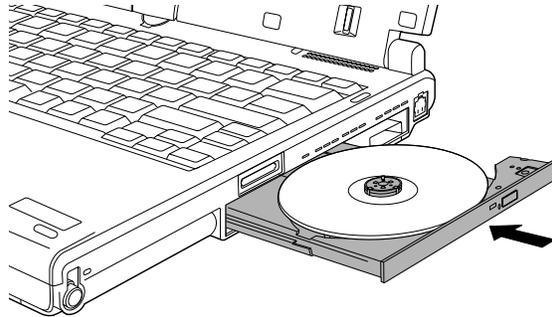


Figure 4-25 Closing the CD/DVD disc tray

### Removing discs

To remove the CD/DVD, follow the steps as detailed below:



*Do not press the eject button while the computer is accessing the media drive. Wait for the optical disc drive indicator to go out before you open the disc tray. Also, if the CD/DVD is spinning when you open the disc tray, wait for it to stop before you remove it.*

1. To pop the disc tray partially open, press the eject button. Gently pull the disc tray out until it is fully opened.



*When the disc tray pops open slightly, wait a moment to make sure the CD/DVD has stopped spinning before pulling the disc tray fully open.*

2. The CD/DVD extends slightly over the sides of the disc tray so you can grasp it. Gently lift out the CD/DVD.

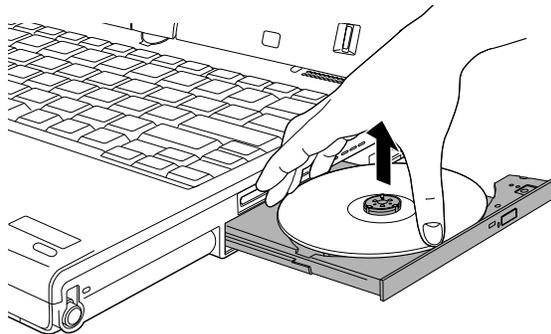


Figure 4-26 Removing a CD/DVD

3. Push the center of the disc tray to close it. Press gently until it locks into place.

### Optical Drive Auto Lock

This function automatically locks the optical disc drive eject button if the computer detects any vibration or other shocks while running on the battery.

This function prevents the disc tray from opening even if the eject button is pushed unexpectedly.

When the Optical Drive Auto Lock is on, there will be key mark on the bottom right of the Optical Drive Power icon in the Taskbar.



*To enable this function, turn the Optical Drive Power ON.*

### Setting the Optical Drive Auto Lock

Right click the Optical Drive Power icon in the Taskbar to change the Optical Drive Auto Lock settings.

#### *Enabling and Disabling Optical Drive Auto Lock*

1. Right click on the **Optical Drive Power** icon on the Taskbar.
2. Click **Optical Drive Auto Lock -> Enable or Disable**.

#### *Lock Time Settings for Optical Drive Auto Lock*

This sets the amount of time required to pass before the optical disc drive eject button unlocks when the Computer detects vibration or other shock.

1. Right click on the **Optical Drive Power** icon on the Taskbar.
2. Click **Unlock time settings -> 1s or 3s or 5s**.



- *When the Optical Drive Auto Lock is engaged, the **FN+Tab** key combination and Eject Buttons on application screens are disabled.*
- *Optical Drive Auto Lock is not enabled immediately after the computer is started, the Disc tray is closed, or the optical disc drive is switched from OFF to ON using the **FN+Tab** keys.*

### How to remove CD/DVD when the disc tray will not open

Pressing the eject button will not open the disc tray when the computer power is off. If the power is off, you can open the disc tray by inserting a slender object (about 15 mm) such as a straightened paper clip into the eject hole near the eject button.

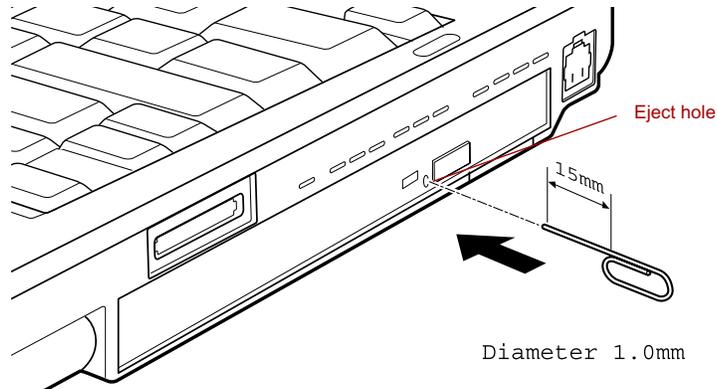


Figure 4-27 Manual release with the eject hole



Turn off the power before you use the eject hole. If the CD/DVD is spinning when you open the disc tray, the CD/DVD could fly off the spindle and cause injury.

### Writing CD/DVDs on DVD Super Multi drives

You can use the DVD Super Multi drive to write data to either CD-R, CD-RW, DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer), DVD+RW or DVD-RAM discs. TOSHIBA Disc Creator is provided as writing software with this computer.



- Please refer to the [Writable discs](#), Chapter 2 for details about the types of writable CD and DVD discs that can be supported by this computer.
- Do not turn off the power to the optical disc drive while the computer is accessing it as this may cause you to lose data.
- To write data to CD-R/-RW media, use the **TOSHIBA Disc Creator** feature that is installed on your computer.
- When the power of the optical disc drive is off, the disc tray will not open even if the eject button is pushed. Use the ODD to turn the power of the optical disc drive on. Please refer to Chapter 5, [Hot keys](#).



*When writing information to media using an optical drive, you should always ensure that you connect the AC adaptor to a live power socket. It is possible that, if data is written while powered by the battery pack, the write process may sometimes fail due to low battery power - in these instances data loss may occur.*

### Important message

Before you write or rewrite to any of the media supported by the DVD Super Multi Drive, please read and follow all of the setup and operating instructions in this section. If you fail to do so, you may find that the DVD Super Multi drive may not function properly, and you may fail to write or rewrite information successfully - this may cause you to either lose data or incur other damage to the drive or media.

### Disclaimer

TOSHIBA does not bear responsibility for the following:

- Damage to any CD-R, CD-RW, DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer), DVD+RW or DVD-RAM disc that may be caused by writing or rewriting with this product.
- Any change or loss of the recorded contents of CD-R, CD-RW, DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer), DVD+RW or DVD-RAM media that may be caused by writing or rewriting with this product, or for any business profit loss or business interruption that may be caused by the change or loss of the recorded contents.
- Damage that may be caused by using third party equipment or software.

Given the technological limitations of current optical disc writing drives, you may experience unexpected writing or rewriting errors due to disc quality or problems with hardware devices. In view of this, it is good practice to make two or more copies of important data, in case of any undesired change or loss of the recorded contents.

### Before writing or rewriting

- Based on TOSHIBA's limited compatibility testing, we suggest the following manufacturers of CD-R, CD-RW, DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer), DVD+RW or DVD-RAM media, however, it must be noted that disc quality can affect write or rewrite success rates. Please also be aware that in no event does TOSHIBA guarantee the operation, quality or performance of any disc.

---

#### CD-R:

TAIYO YUDEN CO., LTD.  
MITSUBISHI CHEMICAL CORPORATION  
RICOH Co., Ltd.

---

---

**CD-RW: (Multi-Speed and High-Speed)**

MITSUBISHI CHEMICAL CORPORATION  
RICOH Co., Ltd.

---

**CD-RW: (Ultra-Speed)**

MITSUBISHI CHEMICAL CORPORATION

---

**DVD-R:**

**DVD Specifications for Recordable Disc for General Version 2.0**  
TAIYO YUDEN CO., LTD.  
Matsushita Electric Industrial Co., Ltd

---

**DVD-R (Dual Layer):**

MITSUBISHI CHEMICAL CORPORATION

---

**DVD+R:**

MITSUBISHI CHEMICAL CORPORATION  
RICOH Co., Ltd.

---

**DVD+R (Double Layer):**

MITSUBISHI CHEMICAL CORPORATION

---

**DVD-RW:**

**DVD Specifications for Recordable Disc for Version 1.1 or version 1.2**  
VICTOR COMPANY OF JAPAN.LIMITED  
MITSUBISHI CHEMICAL CORPORATION

---

**DVD+RW:**

MITSUBISHI CHEMICAL CORPORATION  
RICOH Co., Ltd.

---

**DVD-RAM:**

**DVD Specifications for DVD-RAM Disc for Version 2.0, Version 2.1 or Version 2.2**  
Matsushita Electric Industrial Co., Ltd.  
Hitachi Maxell Ltd.

---



- *DVD Super Multi drive cannot use discs that allow writing faster than 16x speed (DVD-R and DVD+R media), 8x speed (DVD-R (Dual Layer), DVD+RW and DVD+R (Double Layer) media), 6x speed (DVD-RW media), 5x speed (DVD-RAM media).*
- *Some types and formats of DVD-R (Dual Layer) and DVD+R (Double Layer) discs may be unreadable.*
- *2.6GB and 5.2GB DVD-RAM media cannot be read from or written to.*
- *DISC created in DVD-R (Dual Layer) format4 (Layer Jump Recording) cannot be read.*
- If the disc is poor in quality, or is dirty or damaged, writing or rewriting errors may be noted - ensure that you check all discs for dirt or damage before you use them.
- The actual number of rewrites to CD-RW, DVD-RW, DVD+RW or DVD-RAM media will be affected by the quality of the disc itself and the way in which it is used.
- There are two types of DVD-R media available, authoring discs and general use discs. Do not attempt to use authoring discs as only general use discs can be written to by a computer drive.
- You can use both DVD-RAM discs that can be removed from a cartridge and DVD-RAM discs designed without a cartridge.
- You may find that other computer DVD-ROM drives or other DVD players may not be able to read DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer) or DVD+RW discs.
- Data written to a CD-R, DVD-R, DVD-R (Dual Layer), DVD+R or DVD+R (Double Layer) discs cannot be deleted either in whole or in part.
- Data deleted/erased from a CD-RW, DVD-RW, DVD+RW or DVD-RAM disc cannot be recovered. You must check the content of the disc carefully before you delete it, taking care that, if multiple drives that can write data to discs are connected, you do not delete data from the wrong one.
- In writing to DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer), DVD+RW or DVD-RAM media, some space is required for file management, so you may not be able to write to the full capacity of the disc.
- Since the disc is based on the DVD standard, it might be filled with dummy data if the written data is less than about 1GB. Therefore, in these circumstance, even if you write only a small amount of data, it might take additional time to fill in the dummy data.
- When multiple drives that can write data to discs are connected, be sure that you do not write to or delete data from the wrong drive.
- Be sure to connect the AC adaptor to the computer before you write or rewrite any information.

- Before you enter either Sleep Mode or Hibernation Mode, take care to ensure that any DVD-RAM writing has been completed. In this instance, writing is finished if you can eject the DVD-RAM media.
- Be sure to close all other software programs except for the writing software itself.
- Do not run software such as a screen saver which can put a heavy load on the processor.
- Operate the computer at its full power settings - do not use any power-saving features.
- Do not write information while virus checking software is running, instead wait for it to finish, then disable the virus protection applications, including any software that checks files automatically in the background.
- Do not use any hard disk utilities, including those that are intended to enhance hard disk drive access speeds, as they may cause unstable operation and damage data.
- CD-RW (Ultra Speed +) media should not be used as data may be lost or damaged.
- You should always write from the computer's hard disk drive onto the CD/DVD - do not try to write from shared devices such as a server or any other network device.
- Writing with software other than TOSHIBA Disc Creator has not been confirmed, therefore operation with other software applications cannot be guaranteed.

### When writing or rewriting

Please observe the following points while you write or rewrite data to CD-R, CD-RW, DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer), DVD+RW or DVD-RAM media:

- Always copy data from the hard disk drive to the optical media - do not use the cut-and-paste function as the original data will be lost if there is a write error.
- Do not perform any of the following actions:
  - Change users in the Windows Vista® operating system.
  - Operate the computer for any other function, including such tasks as using a mouse or Touch Pad, or closing/opening the display panel.
  - Start a communication application such as a modem.
  - Apply impact or vibration to the computer.
  - Install, remove or connect external devices, including such items as a PC Card, Smart Card, SD/SDHC Card, USB device, external monitor, i.LINK device, or an optical digital device.
  - Use the audio/video control button to reproduce music or voice.
  - Open the optical disc drive.
- Do not use shut down, log off, Sleep Mode or Hibernation Mode functions while writing or rewriting.

- Make sure that the write/rewrite operation is completed before going into either Sleep Mode or Hibernation Mode (writing is completed if you can remove an optical media on the DVD Super Multi drive).
- If the media is of poor quality, or is dirty or damaged, writing or rewriting errors may occur.
- Set the computer on a level surface and avoid places subject to vibration such as airplanes, trains or cars. In addition, do not use the computer on an unstable surface such as a stand.
- Keep mobile phones and other wireless communication devices away from the computer.

### TOSHIBA Disc Creator

Please be aware of the following limitations when you use the TOSHIBA Disc Creator:

- DVD Video cannot be created using TOSHIBA Disc Creator.
- DVD Audio cannot be created using TOSHIBA Disc Creator.
- You cannot use TOSHIBA Disc Creator's 'Audio CD for Car or Home CD Player' function to record music to DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer) or DVD+RW media.
- Do not use the 'Disc Backup' function of TOSHIBA Disc Creator in order to copy DVD Video or DVD-ROM material that has copyright protection.
- DVD-RAM discs cannot be backed up using the 'Disc Backup' function of TOSHIBA Disc Creator.
- You cannot back up CD-ROM, CD-R or CD-RW media to DVD-R, DVD-R (Dual Layer) or DVD-RW media using the 'Disc Backup' function of TOSHIBA Disc Creator.
- You cannot back up CD-ROM, CD-R or CD-RW media to DVD+R, DVD+R (Double Layer) or DVD+RW media using the 'Disc Backup' function of TOSHIBA Disc Creator.
- You cannot back up DVD-ROM, DVD Video, DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer) or DVD+RW to CD-R or CD-RW media using the 'Disc Backup' function of TOSHIBA Disc Creator.
- TOSHIBA Disc Creator cannot record in packet format.
- You might not be able to use the 'Disc Backup' function of TOSHIBA Disc Creator to back up a DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer) or DVD+RW disc that was made with other software on a different optical media recorder.
- If you add data to a DVD-R, DVD-R (Dual Layer), DVD+R or DVD+R (Double Layer) disc that you have already recorded to, you might not be able to read the added data under some circumstances. For example, it cannot be read under 16-bit operating systems, such as Windows 98SE and Windows Me, while in Windows NT4 you will need Service Pack 6 or later, and in Windows 2000, you will need Service Pack 2. In addition to this, some DVD-ROM and DVD-ROM / CD-R/RW drives cannot read this added data regardless of the operating system.

- TOSHIBA Disc Creator does not support recording to DVD-RAM discs - to achieve this you should use Windows Explorer or another similar utility.
- When you back up a DVD disc, be sure that the source drive supports recording to DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer) or DVD+RW media - if this is not the case then the source disc might not be backed up correctly.
- When you back up a DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer) or DVD+RW disc, be sure to use the same type of disc.
- You cannot partially delete any data written to a CD-RW, DVD-RW or DVD+RW disc.

### ***Data Verification***

To verify that data has been written or rewritten correctly to a data CD/DVD you should follow the steps below before you begin the write/rewrite process:

1. Display the setting dialog box by one of the following two steps:
  - Click the **Recording settings** button (  ) for writing on the main toolbar in the **Data Disc** mode.
  - Select **Settings for Each Mode** -> **Data Disc** in the **Settings** menu.
2. Mark the **Verify written data** check box.
3. Select **File Open** or **Full Compare** mode.
4. Click the **OK** button.

### ***How to learn more about TOSHIBA Disc Creator***

Please refer to the Help files for additional TOSHIBA Disc Creator information.

## Media care

This section provides tips on protecting data stored on your CD's, DVD's and floppy diskettes. Handle your media with care. Following the simple precautions listed below will increase the lifetime of your media and protect the data stored on it.

### CD/DVDs

1. Store your CD's and DVD's in the containers they originally came in to protect them and keep them clean.
2. Do not bend the CD's or DVD's.
3. Do not write on, apply a sticker to, or otherwise mar the surface of the CD or DVD that contains the data.
4. Hold the CD or DVD by its outside edge or the edge on the center hole - any fingerprints on the surface of the disc can prevent the drive from properly reading data.
5. Do not expose the CD or DVD to direct sunlight, extreme heat or cold.
6. Do not place heavy objects on your CD's or DVD's.
7. If your CD's or DVD's become dusty or dirty, wipe them with a clean dry cloth from the center hole outwards - do not wipe in a circular direction. If necessary, you can use a cloth that has been lightly dampened in water or a neutral cleaner but you must not use benzine, thinner or any similar cleaning solution.

### Floppy diskettes



*The USB floppy diskette drive is available only as an option.*

1. Store your floppy diskettes in the container they came in to protect them and keep them clean. If a floppy diskette becomes dirty, clean it with a soft, lightly dampened cloth - do not use cleaning fluid.
2. Never open the shutter or touch the magnetic surface of your floppy diskette - doing this could permanently damage it and lose data.
3. Always handle floppy diskettes with care to prevent the loss of stored data.
4. Always apply the floppy diskette label in the correct location and never apply a new label on top of an existing one - in this instance the label could come loose and damage the floppy diskette drive.
5. Never use a pencil for writing on a floppy diskette label as the dust from the pencil lead could cause a system malfunction if it found its way onto the computer's components. In this instance, always use a felt-tipped pen and write the label first before applying it to the floppy diskette.
6. Never put a floppy diskette in a location where water or other liquid may make contact with it, or where it is excessively damp - either of these conditions could cause data loss.
7. Never use a wet or damp floppy diskette - this could damage the floppy diskette drive or other devices within the computer.

8. Data may be lost if the floppy diskette is twisted, bent, or exposed to direct sunlight, extreme heat or cold.
9. Do not place heavy objects on your floppy diskettes.
10. Do not eat, smoke, or use items such as erasers near your floppy diskettes as foreign particles inside the jacket of the floppy diskette can damage the magnetic surface.
11. Magnetic energy can destroy the data on your floppy diskettes. In view of this you should keep your floppy diskettes away from speakers, radios, televisions and other sources of magnetic fields.

## Sound System

This section describes some of the audio control functions.

### Volume Mixer

The Volume Mixer utility lets you control the audio volume for playback of devices and applications under Windows.

- To launch the Volume Mixer utility, right click on the speaker icon on the Taskbar, and select **Open Volume Mixer** from the sub menu.
- To adjust the volume level of speakers or headphones, move the **Speakers** slider.
- To adjust the volume level of an application that you are using, move the slider for the corresponding application.

### Microphone Level

Follow the steps below to change the microphone recording level.

1. Right click on the speaker icon on the Taskbar, and select **Recording Devices** from the sub menu.
2. Select **Microphone**, and click **Properties**.
3. On the **Levels** tab move the **Microphone** slider to increase or decrease the microphone volume level.

If you feel the microphone volume level is inadequate, move the **Microphone Boost** slider to a higher level.

### PC Beep Level

Follow the steps below to change the PC Beep playback level.

1. Right click on the speaker icon on the Taskbar, and select **Playback Devices** in the sub menu.
2. Select **Speakers**, and click **Properties**.
3. On the **Levels** tab move the **PC Beep** slider to increase or decrease the PC Beep volume level.

## Audio Enhancements

In order to apply the sound effects for your current speaker, follow the steps below.

1. Right click on the speaker icon on the Taskbar, and select **Playback Devices** from the sub menu.
2. Select **Speakers**, and click **Properties**.
3. On the **Enhancements** tab select the sound effects you would like, and click **Apply**.

## Realtek HD Audio Manager

You can confirm and change the audio configuration using the **Realtek Audio Manager**. To launch the **Realtek Audio Manager**, click **Start -> Control Panel -> Hardware and Sound -> Realtek HD Audio Manager**.

When you first launch the Realtek Audio Manager, you will see two device tabs. **Speakers** is the default output device. **Microphone** is the default input device. To change the default device, click the **Set Default Device** button under the chosen device tab.

### Information

Click the **information button**  to view hardware information, software information, and language setting.

### Power Management

The audio controller in your computer can be turned off when the audio function is not used. To adjust the configuration of audio power

management, click the **battery button** .

- When audio power management is enabled, the circle button at the upper left of the Power Management is blue and convex.
- When audio power management is disabled, the button is black and concave.

### Speaker Configuration

Click the **playback button**  to confirm the internal speakers or the headphone sound is coming from the right direction.

### Default Format

You can change the sample rate and bit depth of sound.

## TOSHIBA Mic Effect

**TOSHIBA Mic Effect** provides you with a hands-free environment for holding mutual communication via the Internet Protocol or Local Area Network. If you wish to communicate with someone on your computer, you can use a messenger application. However, with such an application, you would hear your own voice returning to you as echo during the communication if you did not use a headset system or headphone. TOSHIBA Mic Effect will reduce these echoes generated on your computer.

To apply the echo cancellation, follow the steps below.

1. Click the right button of a mouse on the speaker icon on the Taskbar, and select **Playback Devices** in the sub menu.
2. On the **Playback** tab, select **Speakers**, and click **Properties**.
3. On the **Advanced** tab, select “**16 bit, 48000 Hz (DVD Quality)**” in the pull-down menu of Default Format, and then click **OK**.
4. On the **Recording** tab, select **Microphone**, and click **Properties**.
5. On the **Advanced** tab, select “**2 channel, 16 bit, 48000 Hz (DVD Quality)**” in the pull-down menu of the Default Format pane.
6. On the **TOSHIBA Mic Effect** tab, select the **Enable Echo Canceller** check box, and click **Apply**.

## Modem

This section describes how to connect and disconnect the internal modem to and from a telephone jack.



- *Connection to any communication line other than an analog phone line could cause a computer system failure.*
  - *Connect the built-in modem only to ordinary analog phone lines.*
  - *Never connect the built-in modem to a digital line (ISDN).*
  - *Never connect the built-in modem to the digital connector on a public telephone or to a digital private branch exchange (PBX).*
  - *Never connect the built-in modem to a key telephone system for residences or offices.*
- *Never operate your computer on AC power during a thunderstorm. If you see lightning or hear thunder, immediately turn off the computer. An electric surge caused by the storm, may result in a system failure, loss of data or hardware damage.*
- *Modem functions cannot be used in models which are not equipped with a modem.*



*This information is applicable to the models equipped with a built-in modem.*

## Region selection

Telecommunication regulations vary from one region to another, so you will need to make sure the internal modem's settings are correct for the region in which it will be used.



*The built-in modem can be used only in specified countries and regions. Using the modem in an area not specified for use may cause a system failure. Check the specified areas carefully before using it.*

To select a region, follow the steps as detailed below:

1. Click **Start -> All Programs -> TOSHIBA -> Networking -> Modem Region Select**.



*If it is available, do not use the Country/Region Select function included as part of the modem setup utility within the Control Panel - if you change the country/region setting this way you may find that the change does not take effect.*

2. The Region Selection icon will appear in the Windows Taskbar.
3. Click the icon with the primary (left) mouse button to display a list of regions that the modem supports, together with a sub-menu which details telephony location information - a check mark will appear next to the currently selected region and telephony location.
4. Select either a region from the region menu or a telephony location from the sub-menu.
  - When you click a region it becomes the modem's default selection for any new dialling locations that are created within the Windows Control Panel (Phone and Modem Options).
  - When you select a telephony location, the corresponding region is automatically selected and becomes the modem's default setting.

## Properties menu

Click the icon with the secondary (right) mouse button in order to display a Properties menu on the screen.

## Setting

Within the Properties menu you are able to either enable or disable the following settings:

### **AutoRun Mode**

Allows you to configure whether the Modem Region Select utility starts automatically whenever you start up the operating system.

### **Open the Dialing Properties dialog box after selecting region.**

Allows you to configure whether the dialing properties dialog box will be displayed automatically after you have selected a region.

**Location list for region selection.**

Displays a sub-menu appears which details location information.

**Open dialog box, if the modem and Telephony Current Location region code do not match.**

Displays a warning if the current settings for both region code and telephony location are different.

**Modem Selection**

If the computer cannot recognize the internal modem, a dialog box is displayed from which you should select the appropriate communications port for your modem to use.

**Dialing Properties**

You should select this item in order to display the dialing properties.



*If you are using the computer in Japan, the Telecommunications Business Law requires that you select Japan region mode. It is illegal to use the modem in Japan with any other selection.*

**Connecting the modular cable**

To connect the modem's modular cable, follow the steps as detailed below:



- *Connection to any communication line other than an analog phone line could cause a computer system failure.*
- *Connect the built-in modem only to ordinary analog phone lines.*
- *Never connect the built-in modem to a digital line (ISDN).*
- *Never connect the built-in modem to the digital connector on a public telephone or to a digital private branch exchange (PBX).*
- *Never connect the built-in modem to a key telephone system for residences or offices.*
- *Never operate your computer on AC power during a thunderstorm. If you see lightning or hear thunder, immediately turn off the computer. An electric surge caused by the storm, may result in a system failure, loss of data or hardware damage.*

1. Plug the end of the modular cable into the computer's modem jack.

2. Plug the other end of the modular cable into a telephone jack.

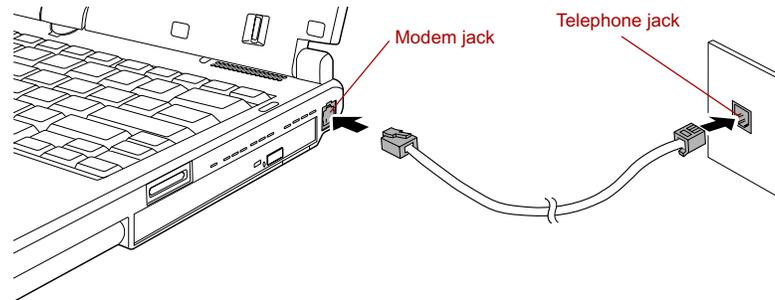


Figure 4-28 Connecting the internal modem



*Do not pull on the cable or move the computer while the cable is connected.*



*If you use a storage device such as an optical drive or hard disk drive connected to a 16-bit PC Card, you might experience the following problems with the operation of the modem:*

- *The modem speed is slow or communication is periodically interrupted.*
- *Skips or jumps may be noted in sound.*

### Disconnecting the modular cable

To disconnect the modular cable, follow the steps as detailed below:

1. Pinch the lever on the plug in the telephone jack and pull it out from within the connector.
2. Pinch the lever on the plug in the computer's modem jack and pull it out from within the computer.

## Wireless communications

The computer's wireless communication function supports both Wireless LAN and Bluetooth devices.

Only some models are equipped with both Wireless LAN and Bluetooth functions.



- *Do not use the Wireless LAN (Wi-Fi), Bluetooth or Wireless WAN functionalities near a microwave oven or in areas subject to radio interference or magnetic fields. Interference from a microwave oven or other source can disrupt Wi-Fi, Bluetooth or Wireless WAN operation.*
- *Turn Wi-Fi, Bluetooth and Wireless WAN functionalities off when near a person who may have a cardiac pacemaker implant or other medical electric device. Radio waves may affect pacemaker or medical device operation, possibly resulting in serious injury. Follow the instruction of your medical device when using any Wi-Fi or Bluetooth or Wireless WAN functionality.*
- *Always turn off Wi-Fi or Bluetooth or Wireless WAN functionality if the computer is near automatic control equipment or appliances such as automatic doors or fire detectors. Radio waves can cause malfunction of such equipment, possibly resulting in serious injury.*
- *It may not be possible to make a network connection to a specified network name using the ad hoc network function. If this occurs, the new network(\*) will have to be configured for all computers connected to the same network in order to re-enable network connections.  
\* Please be sure to use new network name.*

### Wireless LAN

The Wireless LAN is compatible with other LAN systems based on Direct Sequence Spread Spectrum / Orthogonal Frequency Division Multiplexing radio technology that complies with the IEEE802.11 Wireless LAN standard (Revision A, B, G or n Draft 2.0).



*Do not install or remove a memory module while Wake-up on Wireless LAN is enabled.*



- *The Wake-up on Wireless LAN function consumes power even when the system is off. Leave the AC adaptor connected while using this feature.*
- *The Wake-up on Wireless LAN function is effective only when it is connected with an Access Point. This function becomes invalid when the connection is broken.*
- Frequency Channel Selection of 5GHz for IEEE 802.11a or 2.4GHz for 802.11b/g
- Roaming over multiple channels
- Card power management

- Wired Equivalent Privacy (WEP) data encryption based on an 128-bit encryption algorithm
- Wi-Fi Protected Access (WPA)



*The transmission speed over the wireless LAN, and the distance over which the wireless LAN can reach, may vary depending on surrounding electromagnetic environment, obstacles, access point design and configuration, client design and software/hardware configurations. The transmission rate described is the theoretical maximum speed as specified under the appropriate standard - the actual transmission speed will be lower than the theoretical maximum speed.*

### **Setting**

1. Please make sure that the **Wireless Communication Switch** is turned on.
2. Click **Start** and then click **Connect To** to display **Connect to a network** window.
3. Click **Set up a connection or network**.
4. Follow the wizard. You will need the name of the wireless network together with security settings. Consult the documentation accompanied with your router or ask your wireless network administrator for the settings.

### **Security**

- TOSHIBA strongly recommend that you enable encryption functionality, otherwise your computer will be open to illegal access by an outsider using a wireless connection. If this occurs, the outsider may illegally access your system, eavesdrop, or cause the loss or destruction of stored data.
- TOSHIBA is not liable for the loss of data due to eavesdropping or illegal access through the wireless LAN and the damage thereof.

### **Bluetooth wireless technology**

Bluetooth™ wireless technology eliminates the need for cables between electronic devices such as desktop computers, printers and mobile phones. You cannot use the computer's built-in Bluetooth functions and an optional Bluetooth devices simultaneously. For reference, Bluetooth wireless technology has the following features:

#### **Worldwide operation**

The Bluetooth radio transmitter and receiver operate in the 2.4GHz band, which is license-free and compatible with radio systems in most countries in the world.

### **Radio links**

You can easily establish links between two or more devices, with these links being maintained even if the devices are not within a line-of-sight of each other.

### **Security**

Two advanced security mechanisms ensure a high level of security:

- Authentication prevents access to critical data and makes it impossible to falsify the origin of a message.
- Encryption prevents eavesdropping and maintains link privacy.

### **Bluetooth™ Stack for Windows® by TOSHIBA**

Please note that this software is specifically designed for the following operating systems:

- Microsoft® Windows Vista®

Information regarding the use of this software with these operating systems is listed below, with further details being contained with the electronic help files supplied with the software.



*This Bluetooth™ Stack is based on the Bluetooth™ Version 1.1/1.2/2.0+EDR specification. However, TOSHIBA cannot confirm the compatibility between any computing products and/or other electronic devices that use Bluetooth™, other than TOSHIBA notebook computers.*

### **Release Notes related to the Bluetooth™ Stack for Windows® by TOSHIBA**

1. Fax application software:  
Please be aware that there is some fax application software that you cannot use on this Bluetooth™ Stack.
2. Multi-user considerations:  
On Windows Vista®, the use of Bluetooth is not supported in a multi-user environment. This means that, when you use Bluetooth, other users that are logged into the same computer will not be able to use this type of functionality.

### **Product Support:**

The latest information regarding operating system support, language support or available upgrades can be found on our web site <http://www.toshiba-europe.com/computers/tnt/bluetooth.htm> in Europe or [www.pcsupport.toshiba.com](http://www.pcsupport.toshiba.com) in the United States.

### **Wireless communication switch**

You can enable or disable Wireless communication (Wireless LAN, Bluetooth and Wireless WAN) functions, with the on/off switch. No transmissions are sent or received when the switch is off. Slide the switch to the right to turn it on and to the left to turn it off.

## Wireless communication Indicator

The wireless communication indicator shows the status of the computer's wireless communication functions.

Indicator status	Indication
Indicator off	The wireless communication switch is off - no wireless functionality is available.
Indicator glows	Wireless communication switch is on. Wireless LAN or Bluetooth is turned on by an application.

If you used the Taskbar to disable the wireless LAN, restart the computer or perform the following procedure to re-enable it: **Start -> Control Panel -> System and Maintenance -> System -> Device Manager -> Network adapters** and right click **the wireless device** then choose **enable**.

## LAN

The computer has built-in support for Ethernet LAN (10 megabits per second, 10BASE-T), Fast Ethernet LAN (100 megabits per second, 100BASE-TX) and Gigabit Ethernet LAN (1000 megabits per second, 1000BASE-T).

This section describes how to connect/disconnect to a LAN.



*Do not install or remove a memory module while Wake-up on LAN is enabled.*



- *The Wake-up on LAN function consumes power even when the system is off. Leave the AC adaptor connected while using this feature.*
- *The Link speed (10/100/1000 megabits per second) changes automatically depending on the network conditions (connected device, cable or noise and so on).*

## LAN cable types



*The computer must be configured properly before connecting to a LAN. Logging onto a LAN using the computer's default settings could cause a malfunction in LAN operation. Check with your LAN administrator regarding set-up procedures.*

If you are using Gigabit Ethernet LAN (1000 megabits per second, 1000BASE-T), be sure to connect with a CAT5E cable or higher. You cannot use a CAT3 or CAT5 cable.

If you are using Fast Ethernet LAN (100 megabits per second, 100BASE-TX), be sure to connect with a CAT5 cable or higher. You cannot use a CAT3 cable.

If you are using Ethernet LAN (10 megabits per second, 10BASE-T), you can connect with a CAT3 or higher cable.