

# TOSHIBA

# Satellite<sup>®</sup> M30X/M35X Series User's Guide

If you need assistance:

- ❖ Toshiba Global Support Centre  
Calling within the United States (800) 457-7777  
Calling from outside the United States (949) 859-4273

For more information, see [“If Something Goes Wrong”](#) on page 155 in this guide.

PMAD00020011  
08/04

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**▲ WARNING** Handling the cord on this product will expose you to lead, a chemical known to the State of California to cause birth defects or other reproductive harm. ***Wash hands after handling.***

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## Models: Satellite® M30X/M35X Series

### ReWritable CD/DVD Drives

The computer system you purchased may include a ReWritable CD and/or DVD drive(s), among the most advanced data storage technologies available. As with any new technology, you must read and follow all set-up and usage instructions in the applicable user guides and/or manuals enclosed. If you fail to do so, this product may not function properly and you may lose data or suffer other damage. **TOSHIBA AMERICA INFORMATION SYSTEMS (“TOSHIBA”), ITS AFFILIATES AND SUPPLIERS DO NOT WARRANT THAT OPERATION OF THE PRODUCT WILL BE UNINTERRUPTED OR ERROR FREE. YOU AGREE THAT TOSHIBA, ITS AFFILIATES AND SUPPLIERS SHALL HAVE NO RESPONSIBILITY FOR DAMAGE TO OR LOSS OF ANY BUSINESS, PROFITS, PROGRAMS, DATA OR REMOVABLE STORAGE MEDIA ARISING OUT OF OR RESULTING FROM THE USE OF THE PRODUCT, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.**

### Protection of Stored Data

For your important data, please make periodic back-up copies of all the data stored on the hard disk or other storage devices as a precaution against possible failures, alteration, or loss of the data. **IF YOUR DATA IS ALTERED OR LOST DUE TO ANY TROUBLE, FAILURE OR MALFUNCTION OF THE HARD DISK DRIVE OR OTHER STORAGE DEVICES AND THE DATA CANNOT BE RECOVERED, TOSHIBA SHALL NOT BE LIABLE FOR ANY DAMAGE OR LOSS OF DATA, OR ANY OTHER DAMAGE RESULTING THEREFROM. WHEN COPYING OR TRANSFERRING YOUR DATA, PLEASE BE SURE TO CONFIRM WHETHER THE DATA HAS BEEN SUCCESSFULLY COPIED OR TRANSFERRED. TOSHIBA DISCLAIMS ANY LIABILITY FOR THE FAILURE TO COPY OR TRANSFER THE DATA CORRECTLY.**

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## Critical Applications

The computer you have purchased is not designed for any “critical applications.” “Critical applications” means life support systems, medical applications, connections to implanted medical devices, commercial transportation, nuclear facilities or systems or any other applications where product failure could lead to injury to persons or loss of life or catastrophic property damage.

**ACCORDINGLY, TOSHIBA, ITS AFFILIATES AND SUPPLIERS DISCLAIM ANY AND ALL LIABILITY ARISING OUT OF THE USE OF THE COMPUTER PRODUCTS IN ANY CRITICAL APPLICATIONS. IF YOU USE THE COMPUTER PRODUCTS IN A CRITICAL APPLICATION, YOU, AND NOT TOSHIBA, ASSUME FULL RESPONSIBILITY FOR SUCH USE.**

## 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, it 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 to 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.

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### NOTE

Only Peripherals complying with the FCC Class B limits may be attached to this equipment. Operation with noncompliant 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 parallel port, monitor port, USB port, PS/2 port®, i.LINK® 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.

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This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- ❖ This device may not cause harmful interference.
- ❖ This device must accept any interference received, including interference that may cause undesired operation.

Contact:

Toshiba America Information Systems, Inc.

9740 Irvine Blvd.

Irvine, CA 92618-1697

(949) 583-3000

## Industry Canada requirement

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

## FCC requirements

The following information is pursuant to FCC CFR 47, Part 68 and refers to internal modems.

This equipment complies with Part 68 of the FCC rules. On the bottom of this equipment is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If requested, the information must be provided to the telephone company.

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

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC part 68 rules and requirements adopted by the ACTA. It is designed to be connected to a compatible modular jack that is also compliant.

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by the ## are the REN without a

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decimal point (e.g., 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

## 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 this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advanced notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

If trouble is experienced with this equipment, for repair or limited warranty information, please contact Toshiba Corporation, Toshiba America Information Systems, Inc. or an authorized representative of Toshiba, or the Toshiba Support Centre within the United States at (800) 457-7777 or Outside the United States at (949) 859-4273. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

## 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, including Fax machines, to send any message 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 or other entity, or other individual sending the message and the telephone number of the sending machine or such business, other entity, or individual. (The telephone number

provided may not be a 900 number or any other number for which charges exceed local or long-distance transmission charges.)

In order to program this information into your fax transmission, refer to the fax software instructions installed on this computer.

## Alarm Equipment

If your home has specially wired alarm equipment connected to the telephone line, ensure the installation of this equipment does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

## Instructions for IC CS-03 Certified Equipment

- 1** NOTICE: 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 system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: 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 this device can be found on the label affixed to your computer.

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NOTICE: 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.

## Wireless Interoperability

The TOSHIBA Wireless LAN Mini PCI Card products are designed to be interoperable with any wireless LAN product that is based on Direct Sequence Spread Spectrum (DSSS) radio technology, and is compliant to:

- ❖ The IEEE 802.11 Standard on Wireless LANs (Revision A/B/G), as defined and approved by the Institute of Electrical and Electronics Engineers.
- ❖ The Wireless Fidelity (Wi-Fi) certification as defined by the Wi-Fi Alliance. The “Wi-Fi CERTIFIED” logo is a certification mark of the Wi-Fi Alliance.

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### CAUTION

Bluetooth™ and Wireless LAN devices operate within the same radio frequency range and may interfere with one another. If you use Bluetooth™ and Wireless LAN devices simultaneously, you may occasionally experience a less than optimal network performance or even lose your network connection.

If you should experience any such problem, immediately turn off your Bluetooth™ or Wireless LAN device.

Please contact Toshiba PC product support on Web site <http://www.toshiba-europe.com/computers/tnt/bluetooth.htm> in Europe or <http://www.pcsupport.global.toshiba.com> in the United States for more information.

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### CAUTION

This device is restricted to indoor use due to its operation in the 5.15 GHz to 5.25 GHz frequency range.

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## Wireless LAN and your Health

Wireless LAN products, like other radio devices, emit radio frequency electromagnetic energy. The level of energy emitted by Wireless LAN devices however is far much less than the electromagnetic energy emitted by wireless devices like for example mobile phones.

Because Wireless LAN products operate within the guidelines found in radio frequency safety standards and recommendations, TOSHIBA believes Wireless LAN is safe for use by consumers. These standards and recommendations reflect the consensus of the scientific community and result from deliberations of panels and committees of scientists who continually review and interpret the extensive research literature.

In some situations or environments, the use of Wireless LAN may be restricted by the proprietor of the building or responsible representatives of the organization. These situations may for example include:

- ❖ Using the Wireless LAN equipment on board of airplanes, or
- ❖ In any other environment where the risk of interference to other devices or services is perceived or identified as harmful.

If you are uncertain of the policy that applies on the use of wireless devices in a specific organization or environment (e.g. airports), you are encouraged to ask for authorization to use the Wireless LAN device prior to turning on the equipment.

## Regulatory Information

The TOSHIBA Wireless LAN Mini PCI Card must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. This device complies with the following radio frequency and safety standards.

## Canada – Industry Canada (IC)

This device complies with RSS 210 of Industry Canada.

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**CAUTION**

The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Health Canada's Web site [www.hc-sc.gc.ca/rpb](http://www.hc-sc.gc.ca/rpb). The RF device shall not be co-located with any other transmitter that has not been tested with this device.

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Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of this device.

L'utilisation de ce dispositif est autorisée seulement aux conditions suivantes: (1) il ne doit pas produire de brouillage et (2) l'utilisateur du dispositif doit être prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

The term "IC" before the equipment certification number only signifies that the Industry Canada technical specifications were met.

To prevent radio interference to the licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.

Pour empêcher que cet appareil cause du brouillage au service faisant l'objet d'une licence, il doit être utilisé à l'intérieur et devrait être placé loin des fenêtres afin de fournir un écran de blindage maximal. Si le matériel (ou son antenne d'émission) est installé à l'extérieur, il doit faire l'objet d'une licence.

#### **CAUTION**

This device is restricted to indoor use due to its operation in the 5.15 GHz to 5.25 GHz frequency range. Industry Canada requires this product to be used indoors for frequency range 5.15 GHz to 5.25 GHz to reduce the potential for harmful interference to co-channel Mobile Satellite systems.

High power radars are allocated as primary users of the 5.25 GHz to 5.35 GHz and 5.65 GHz to 5.85 GHz bands. These radar stations can cause interference with and/or damage this device.

## Europe – EU Declaration of Conformity

❖ This device complies with the essential requirements of the R&TTE Directive 1999/5/EC with essential test suites as per standards:

EN 60950 Safety of Information Technology equipment

ETS 300 328 Technical requirements for radio equipment

ETS 300 826 General EMC requirements for radio equipment.

English:	Hereby, TOSHIBA Corp. Digital Media Network Company, declares that this Radio LAN device is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
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Finnish:	Valmistaja TOSHIBA Corp. Digital Media Network Company vakuuttaa täten että Radio LAN device tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Dutch:	Hierbij verklaart TOSHIBA Corp. Digital Media Network Company dat het toestel Radio LAN device in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
	Bij deze TOSHIBA Corp. Digital Media Network Company dat deze Radio LAN device voldoet aan de essentiële eisen en aan de overige relevante bepalingen van Richtlijn 1999/5/EC.
French:	Par la présente TOSHIBA Corp. Digital Media Network Company déclare que l'appareil Radio LAN device est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
	Par la présente, TOSHIBA Corp. Digital Media Network Company déclare que ce Radio LAN device est conforme aux exigences essentielles et aux autres dispositions de la directive 1999/5/CE qui lui sont applicables.
Swedish:	Härmed intygar TOSHIBA Corp. Digital Media Network Company att denna Radio LAN device står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.
Danish:	Undertegnede TOSHIBA Corp. Digital Media Network Company erklærer herved, at følgende udstyr Radio LAN device overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF
German:	Hiermit erkläre TOSHIBA Corp. Digital Media Network Company, dass sich dieser/diese/dieses Radio LAN device in Übereinstimmung mit den grundlegenden Anforderungen und den anderen relevanten Vorschriften der Richtlinie 1999/5/EG befindet". (BMW)
	Hiermit erkläre TOSHIBA Corp. Digital Media Network Company die Übereinstimmung des Gerätes Radio LAN device mit den grundlegenden Anforderungen und den anderen relevanten Festlegungen der Richtlinie 1999/5/EG. (Wien)
Greek:	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ ΤΟSHIBA Corp. Digital Media Network Company ΔΗΛΩΝΕΙ ΟΤΙ Radio LAN device ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ
Italian:	Con la presente TOSHIBA Corp. Digital Media Network Company dichiara che questo Radio LAN device è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.

Spanish:	Por medio de la presente TOSHIBA Corp. Digital Media Network Company declara que el Radio LAN device cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
Portuguese:	TOSHIBA Corp. Digital Media Network Company declara que este Radio LAN device está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.

## USA – Federal Communications Commission (FCC)

This device complies with Part 15 of FCC Rules. Operation of the devices in a Wireless LAN System is subject to the following two conditions:

- ❖ This device may not cause harmful interference.
- ❖ This device must accept any interference that may cause undesired operation.

TOSHIBA is not responsible for any radio or television interference caused by unauthorized modification of the devices included with this TOSHIBA Wireless LAN Mini PCI Card, or the substitution or attachment of connecting cables and equipment other than specified by TOSHIBA.

The correction of interference caused by such unauthorized modification, substitution or attachment will be the responsibility of the user.

## Caution: Exposure to Radio Frequency Radiation

The radiated output power of the TOSHIBA Wireless LAN Mini PCI Card is far below the FCC radio frequency exposure limits. Nevertheless, the TOSHIBA Wireless LAN Mini PCI Card shall be used in such a manner that the potential for human contact during normal operation is minimized. In normal operating configuration, the LCD in the upright position, the distance between the antenna and the user should not be less than 20 cm. The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. Antenna(s) used in 5.15 GHz to 5.25 GHz frequency band must be integral antenna which provide no access to the end user.

Refer to the Regulatory Statements as identified in the documentation that comes with those products for additional information.

## Caution: Radio Frequency Interference Requirements

This device is restricted to indoor use due to its operation in the 5.15 GHz to 5.25 GHz frequency range. FCC requires this product to be used indoors for frequency range 5.15 GHz to 5.25 GHz to reduce the potential for harmful interference to co-channel Mobile Satellite systems.

High power radars are allocated as primary users of the 5.25 GHz to 5.35 GHz and 5.65 GHz to 5.85 GHz bands. These radar stations can cause interference with and/or damage this device.

### NOTE

The above Caution information applies to products that operate with an 802.11a device.

## Taiwan

Article 14	Unless approved, for any model accredited low power radio frequency electric machinery, any company, trader or user shall not change the frequency, increase the power or change the features and functions of the original design.
Article 17	Any use of low power radio frequency electric machinery shall not affect the aviation safety and interfere with legal communications. In event that any interference is found, the use of such electric machinery shall be stopped immediately, and reusing of such products can be resumed until no interference occurs after improvement.

The legal communications mentioned in the above item refer to radio communications operated in accordance with telecommunication laws and regulations.

Low power radio frequency electric machinery shall resist against interference from legal communications or from industrial, scientific and medical radio emission electric machinery.

## Using this Equipment in Japan

In Japan, the frequency bandwidth of 2,400 MHz to 2,483.5 MHz for second generation low-power data communication systems such as this equipment overlaps that of mobile object identification systems (premises radio station and specified low-power radio station).

### 1. Sticker

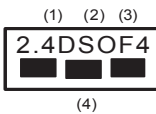
Please put the following sticker on devices incorporating this product.

In the frequency bandwidth of this equipment, industrial device, scientific device, medical device like microwave oven, licensed premises radio station and non-licensed specified low-power radio station for mobile object identification system (RF-ID) that is used in product line of factories.(Other Radio Stations) are used.

- 1 Please make sure before using this equipment that no Other Radio Stations are used in the neighborhood.
- 2 In case that RF interference occurs to Other Radio Stations from this equipment, please change promptly the frequency for use, place to use, or stop emitting Radio.
- 3 Please contact TOSHIBA Direct PC if you have a problem, such as interference from this equipment to Other Radio Stations

## 2. Indication

The indication shown below appears on this equipment.



- 1** 2.4: This equipment uses a frequency of 2.4 GHz.
- 2** DS: This equipment uses DS-SS modulation.  
OF: This equipment uses OFDM modulation.
- 3** The interference range of this equipment is less than 40m.
- 4** ■ ■ ■ This equipment uses a frequency bandwidth from 2,400 MHz to 2,483.5 MHz.

It is possible to avoid the band of mobile object identification systems.

## 3. TOSHIBA Direct PC

Monday – Friday: 10:00 – 17:00

Toll Free Tel: 0120-13-1100

Direct Dial: 03-3457-5916

Fax: 03-5444-9450

## Device Authorization

This device obtains the Technical Regulation Conformity Certification and the Technical Conditions Compliance Approval, and it belongs to the device class of radio equipment of low-power data communication system radio station stipulated in the Radio Law and the Telecommunications Business Law of Japan.

The Name of the radio equipment: refer to the equipment label provided on the computer

JAPAN APPROVALS INSTITUTE FOR TELECOMMUNICATIONS  
EQUIPMENT

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Approval Number: D01-1128JP

TELECOM ENGINEERING CENTER Approval Number: 03NY.A0018,  
03GZDA0017

The following restrictions apply:

- ❖ Do not disassemble or modify the device.
- ❖ Do not install the embedded wireless module into other device.
- ❖ 5.17 GHz to 5.23 GHz for indoor use only

## Radio approvals for wireless devices

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**NOTE** The following information is dependent on what type of wireless device is in your computer.

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### Approved Countries/Regions for use for the Atheros AR5BMB-43/44 Mini PCI Wireless network adapter

This equipment is approved to the radio standard by the countries/regions in the following table.

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**CAUTION**

Do not use this equipment except in the countries/regions in the following table.

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**NOTE** This device works on passive scan only.  
A peer-to-peer mode is not available in 802.11a and Turbo Mode.

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802.11b (2.4 GHz)

Australia	Austria	Belgium
Canada	Denmark	Finland
France	Germany	Greece
Ireland	Italy	Liechtenstein
Luxembourg	Netherlands	New Zealand
Norway	Portugal	Sweden
Switzerland	UK	USA

## Europe - Restrictions for use of 2.4 GHz Frequencies in European Community Countries

België/ Belgique:	For private usage outside buildings across public grounds over less than 300m no special registration with IBPT/BIPT is required. Registration to IBPT/BIPT is required for private usage outside buildings across public grounds over more than 300m. For registration and license please contact IBPT/BIPT.
	Voor privé-gebruik buiten gebouw over publieke grond over afstand kleiner dan 300m geen registratie bij BIPT/IBPT nodig; voor gebruik over afstand groter dan 300m is wel registratie bij BIPT/IBPT nodig. Voor registratie of licentie kunt u contact opnemen met BIPT.
	Dans le cas d'une utilisation privée, à l'extérieur d'un bâtiment, au-dessus d'un espace public, aucun enregistrement n'est nécessaire pour une distance de moins de 300m. Pour une distance supérieure à 300m un enregistrement auprès de l'IBPT est requise. Pour les enregistrements et licences, veuillez contacter l'IBPT.
Deutschland:	License required for outdoor installations. Check with reseller for procedure to follow.
	Anmeldung im Outdoor-Bereich notwendig, aber nicht genehmigungspflichtig. Bitte mit Händler die Vorgehensweise abstimmen.
France:	Restricted frequency band: only channels 1 to 7 (2400 MHz and 2454 MHz respectively) may be used outdoors in France. Please contact A.R.T. ( <a href="http://www.art-telecom.fr">http://www.art-telecom.fr</a> ) for applicable procedures to follow.
	Bande de fréquence restreinte: seuls les canaux 1- 7 (2400 et 2454 MHz respectivement) doivent être utilisés endroits extérieur en France. Vous pouvez contacter l'Autorité de Régulation des Télécommunications ( <a href="http://www.art-telecom.fr">http://www.art-telecom.fr</a> ) pour la procédure à suivre.
Italia:	License required for indoor use. Use with outdoor installations not allowed.
	E' necessaria la concessione ministeriale anche per l'uso interno. Verificare con i rivenditori la procedura da seguire.
Nederland:	License required for outdoor installations. Check with reseller for procedure to follow.
	Licentie verplicht voor gebruik met buitenantennes. Neem contact op met verkoper voor juiste procedure.

## 802.11a (5 GHz)

Australia	Austria	Belgium
Canada	Denmark	Finland
France	Germany	Greece
Ireland	Italy	Liechtenstein
Luxembourg	Netherlands	New Zealand
Norway	Portugal	Sweden
Switzerland	UK	USA

## Turbo Mode (5 GHz)

Canada	USA	
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## Europe - Restrictions for use of 5 GHz Frequencies in European Community Countries

European Community Countries	5150-5250 MHz Channels: 36, 40, 44, 48 Indoor Only	5250-5350 MHz Channels: 52, 56, 60, 64 Indoor Only	5470-5725 MHz Channels: 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140 Indoor/Outdoor
Austria	O	x	x
Belgium, France, Switzerland/Lichtenstein	O	O	x
Denmark, Finland, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Sweden, UK	O	O	O
Iceland, Spain	O	O	O

O: allowed x: forbidden

- ❖ To remain in conformance with European spectrum usage laws for Wireless LAN operation, the above 2.4 GHz and 5 GHz channel limitations apply. The user should use the wireless LAN utility to check the current channel of operation. If operation is occurring outside of the allowable frequencies as listed above, the user must cease operating the Wireless LAN at that location and consult the local technical support staff responsible for the wireless network.
- ❖ The 5 GHz Turbo mode feature is not allowed for operation in any European Community country.



- ❖ This device must not be operated in ad-hoc mode using channels in the 5 GHz bands in the European Community. Ad-hoc mode provides a direct communication between two client devices without a Wireless LAN Access Point.
- ❖ This device must be used with Access Points that have employed and activated a radar detection feature required for European Community operation in the 5 GHz bands. This device will operate under the control of the Access Point in order to avoid operating on a channel occupied by any radar system in the area. The presence of nearby radar operation may result in temporary interruption of operation of this device. The Access Point's radar detection feature will automatically restart operation on a channel free of radar. You may consult with the local technical support staff responsible for the wireless network to ensure the Access Point device(s) are properly configured for European Community operation.

### Approved Countries/Regions for use for the Atheros AR5001X Mini PCI Wireless network adapter

This equipment is approved to the radio standard by the countries/regions in the following table.

#### **CAUTION**

Do not use this equipment except in the countries/regions in the following table.

#### **NOTE**

This device works on passive scan only.

A peer-to-peer mode is not available in 802.11a and Turbo Mode.

#### 802.11b (2.4 GHz)

Australia	Austria	Belgium
Canada	Denmark	Finland
France	Germany	Greece
Ireland	Italy	Liechtenstein
Luxembourg	Netherlands	New Zealand
Norway	Portugal	Sweden
Switzerland	UK	USA

## 802.11a (5 GHz)

Australia	Austria	Belgium
Canada	Denmark	Finland
France	Germany	Greece
Ireland	Italy	Liechtenstein
Luxembourg	Netherlands	New Zealand
Norway	Portugal	Sweden
Switzerland	UK	USA

## Turbo Mode (5 GHz)

Canada	USA	
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## Approved Countries/Regions for use for the Intel® PRO/ Wireless LAN 2100 3B Mini PCI Adapter

This equipment is approved to the radio standard by the countries/regions in the following table.

**CAUTION**

Do not use this equipment except in the countries/regions in the following table.

Argentina	Australia	Austria
Belgium	Brazil	Canada
Chile	Denmark	Finland
France	Germany	Greece
Iceland	Ireland	Italy
Japan	Liechtenstein	Luxembourg
Mexico	Netherlands	New Zealand
Norway	Peru	Portugal
Singapore	Spain	Sweden
Switzerland	UK	Uruguay
USA	Venezuela	

## Approved Countries/Regions for use for the Toshiba Mini PCI Wireless LAN Card

This equipment is approved to the radio standard by the countries/regions in the following table.

### CAUTION

Do not use this equipment except in the countries/regions in the following table.

Australia	Austria	Belgium
Canada	Denmark	Finland
France	Germany	Greece
Hong Kong	Iceland	Ireland
Italy	Japan	Liechtenstein
Luxembourg	Malaysia	Netherlands
New Zealand	Norway	Philippines
Portugal	Singapore	Spain
Sweden	Switzerland	Thailand
UK	USA	

## Bluetooth wireless technology Interoperability

Bluetooth™ Cards from TOSHIBA are designed to be interoperable with any product with Bluetooth wireless technology that is based on Frequency Hopping Spread Spectrum (FHSS) radio technology, and is compliant to:

- ❖ Bluetooth Specification as defined and approved by The Bluetooth Special Interest Group.
- ❖ Logo certification with Bluetooth wireless technology as defined by The Bluetooth Special interest Group.

**CAUTION**

Bluetooth wireless technology is a new innovative technology, and TOSHIBA has not confirmed compatibility of its Bluetooth™ products with all PCs and/or equipment using Bluetooth wireless technology other than TOSHIBA portable computers.

Always use Bluetooth™ cards from TOSHIBA in order to enable wireless networks over two or more (up to a total of seven) TOSHIBA portable computers using these cards. Please contact TOSHIBA PC product support on Web site <http://www.toshiba-europe.com/computers/tnt/bluetooth.htm> in Europe or <http://www.pcsupport.global.toshiba.com> in the United States for more information.

When you use Bluetooth™ cards from TOSHIBA close to 2.4 GHz Wireless LAN devices, Bluetooth transmissions might slow down or cause errors. If you detect certain interference while you use Bluetooth™ cards from TOSHIBA, always change the frequency, move your PC to the area outside of the interference range of 2.4 GHz Wireless LAN devices (40 meters/43.74 yards or more) or stop transmitting from your PC. Please contact TOSHIBA PC product support on Web site <http://www.toshiba-europe.com/computers/tnt/bluetooth.htm> in Europe or <http://www.pcsupport.global.toshiba.com> in the United States for more information.

Bluetooth™ and Wireless LAN devices operate within the same radio frequency range and may interfere with one another. If you use Bluetooth™ and Wireless LAN devices simultaneously, you may occasionally experience a less than optimal network performance or even lose your network connection. If you should experience any such problem, immediately turn off either one of your Bluetooth™ or Wireless LAN. Please contact Toshiba PC product support on Web site <http://www.toshiba-europe.com/computers/tnt/bluetooth.htm> in Europe or <http://www.pcsupport.global.toshiba.com> in the United States for more information.

## Bluetooth wireless technology and your Health

The products with Bluetooth wireless technology, like other radio devices, emit radio frequency electromagnetic energy. The level of energy emitted by devices with Bluetooth wireless technology however is far much less than the electromagnetic energy emitted by wireless devices like for example mobile phones.

Because products with Bluetooth wireless technology operate within the guidelines found in radio frequency safety standards and recommendations, TOSHIBA believes Bluetooth wireless technology is safe for use by consumers. These standards and recommendations reflect the consensus of the scientific

community and result from deliberations of panels and committees of scientists who continually review and interpret the extensive research literature.

In some situations or environments, the use of Bluetooth wireless technology may be restricted by the proprietor of the building or responsible representatives of the organization. These situations may for example include:

- ❖ Using the equipment with Bluetooth wireless technology on board of airplanes, or
- ❖ In any other environment where the risk of interference to other devices or services is perceived or identified as harmful.

If you are uncertain of the policy that applies on the use of wireless devices in a specific organization or environment (e.g. airports), you are encouraged to ask for authorization to use the device with Bluetooth wireless technology prior to turning on the equipment.

## Regulatory statements

This product complies with any mandatory product specification in any country/region where the product is sold. In addition, the product complies with the following:

### European Union (EU) and EFTA

This equipment complies with the R&TTE directive 1999/5/EC and has been provided with the CE mark accordingly.

### Canada — Industry Canada (IC)

This device complies with RSS 210 of Industry Canada.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of this device.”

L'utilisation de ce dispositif est autorisée seulement aux conditions suivantes: (1) il ne doit pas produire de brouillage et (2) l'utilisateur du dispositif doit être prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

The term “IC” before the equipment certification number only signifies that the Industry Canada technical specifications were met.

---

## Caution: FCC Interference Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- ❖ This device may not cause harmful interference, and
- ❖ This device must accept any interference received, including interference that may cause undesired operation.

Note that any changes or modifications to this equipment not expressly approved by the manufacturer may void the authorization to operate this equipment.

## Caution: Exposure to Radio Frequency Radiation

The radiated output power of the Bluetooth™ Card from TOSHIBA is far below the FCC radio frequency exposure limits. Nevertheless, the Bluetooth™ Card from TOSHIBA shall be used in such a manner that the potential for human contact during normal operation is minimized.

In order to comply with FCC radio-frequency radiation exposure guidelines for an uncontrolled environment, the Bluetooth™ Card from TOSHIBA has to be operated while maintaining a minimum body to antenna which are located on top of LCD distance of 20 cm.

Refer to the Regulatory Statements as identified in the documentation that comes with those products for additional information.

The Bluetooth™ Card from TOSHIBA is far below the FCC radio frequency exposure limits.

Nevertheless, it is advised to use the Bluetooth™ Card from TOSHIBA in such a manner that human contact during normal operation is minimized.

---

### NOTE

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.

---

## Taiwan

Article 14	Unless approved, for any model accredited low power radio frequency electric machinery, any company, trader or user shall not change the frequency, increase the power or change the features and functions of the original design.
------------	---

Article 17	Any use of low power radio frequency electric machinery shall not affect the aviation safety and interfere with legal communications. In event that any interference is found, the use of such electric machinery shall be stopped immediately, and reusing of such products can be resumed until no interference occurs after improvement.
------------	---

The legal communications mentioned in the above item refer to radio communications operated in accordance with telecommunication laws and regulations.

Low power radio frequency electric machinery shall resist against interference from legal communications or from industrial, scientific and medical radio emission electric machinery.

## Using this equipment in Japan

In Japan, the frequency bandwidth of 2,400 MHz to 2,483.5 MHz for second generation low-power data communication systems such as this equipment overlaps that of mobile object identification systems (premises radio station and specified low-power radio station).

### 1. Sticker

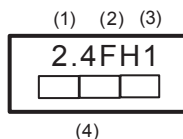
Please put the following sticker on devices incorporating this product.

In the frequency bandwidth of this equipment, industrial device, scientific device, medical device like microwave oven, licensed premises radio station and non-licensed specified low-power radio station for mobile object identification system (RF-ID) that is used in product line of factories, (Other Radio Stations) are used.

- 1 Please make sure before using this equipment that no Other Radio Stations are used in the neighborhood.
- 2 In case that RF interference occurs to Other Radio Stations from this equipment, please change promptly the frequency for use, place to use, or stop emitting Radio.
- 3 Please contact TOSHIBA Direct PC if you have a problem, such as interference from this equipment to Other Radio Stations

### 2. Indication

The indication shown below appears on this equipment.



- 1** 2.4: This equipment uses a frequency of 2.4 GHz.
- 2** FH: This equipment uses FH-SS modulation.

- 3 The interference range of this equipment is less than 10m.
- 4 This equipment uses a frequency bandwidth from 2,400 MHz to 2,483.5 MHz. It is impossible to avoid the band of mobile object identification systems.

### 3. TOSHIBA Direct PC

Monday – Friday: 10:00 – 17:00

Toll Free Tel: 0120-13-1100

Direct Dial: 03-3457-5916

Fax: 03-5444-9450

## Device Authorization

This device obtains the Technical Regulation Conformity Certification, and it belongs to the device class of radio equipment of low-power data communication system radio station stipulated in the Radio Law of Japan.

The Name of the radio equipment: EYXF2CS

TELECOM ENGINEERING CENTER

Approval Number: 01NYDA1305

The following restrictions apply:

- ❖ Do not disassemble or modify the device.
- ❖ Do not install the embedded wireless module into other device.

## DVD-ROM, multi-function drive safety instructions

The DVD-ROM and multi-function drives employ a laser system. To ensure proper use of this product, please read this instruction manual carefully and retain for future reference. Should the unit ever require maintenance, contact an authorized service location.

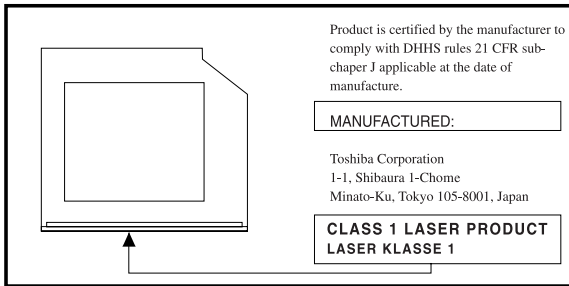
Use of controls, adjustments or the performance of procedures other than those specified may result in hazardous radiation exposure.

To prevent direct exposure to the laser beam, do not try to open the enclosure.



## Location of the required label

(Sample shown below. Location of the label and manufacturing information may vary.)



### **CAUTION**

This appliance contains a laser system and is classified as a “CLASS 1 LASER PRODUCT.” To use this model properly, read the user’s guide carefully and keep it for your future reference. In case of any trouble with this model, please contact your nearest “AUTHORIZED service station.” To prevent direct exposure to the laser beam, do not try to open the enclosure.

CLASS 1 LASER PRODUCT  
LASER KLASSE 1

Use of controls or adjustments or performance of procedures other than those specified in the owner’s manual may result in hazardous radiation exposure.

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All other brand and product names are trademarks or registered trademarks of their respective companies.

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## Computer disposal information

This product contains mercury. Disposal of this material may be regulated due to environmental considerations. For disposal, reuse or recycling information, please contact your local government or the Electronic Industries Alliance at [www.eiae.org](http://www.eiae.org).

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# Introduction

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Welcome to the world of powerful and portable multimedia computers! With your new Toshiba notebook computer, your access to information can accompany you wherever you go.

Your system comes with either the Microsoft® Windows® XP Home or Windows XP Professional operating system. Your operating system offers exciting features and easy Internet access.

This guide contains information about your operating system and how it functions with your Toshiba computer. For specific information on the software, see the Microsoft booklet that shipped with your computer.

**NOTE**

The product specifications and configuration information are designed for a product Series. Your particular model may not have all the features and specifications listed or illustrated. For more detailed information about the features and specifications on your particular model, please visit Toshiba's Web site at [pcsupport.toshiba.com](http://pcsupport.toshiba.com).

While Toshiba has made every effort at the time of publication to ensure the accuracy of the information provided herein, product specifications, configurations, prices, system/component/options availability are all subject to change without notice. For the most up-to-date product information about your computer, or to stay current with the various computer software or hardware options, visit Toshiba's Web site at [pcsupport.toshiba.com](http://pcsupport.toshiba.com).

---

## This guide

This guide introduces the computer's features. You can:

- ❖ Read the entire guide from beginning to end.
- ❖ Skim through and stop when a topic interests you.
- ❖ Use the table of contents and index to find specific information.

If you are new to computers, or have not used a notebook computer before, read through the first couple of chapters to familiarize yourself with the components of the computer and how to turn it on. After that, seek out whatever interests you most.

---

## Safety icons

This manual contains safety instructions that must be observed in order to avoid potential hazards that could result in personal injuries, damage to your equipment, or loss of data. These safety cautions have been classified according to the seriousness of the risk, and the icons highlight these instructions as follows:

---

**▲ DANGER**

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

---

---

**▲ WARNING**

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

---

---

**▲ CAUTION**

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

---

---

**CAUTION**

Indicates a potentially hazardous situation which, if not avoided, may result in property damage.

---

---

**NOTE**

Provides important information.

---

---

## Other icons used

Additional icons highlight other helpful or educational information:



**TECHNICAL NOTE:** This icon highlights technical information about the computer.

---



**HINT:** This icon denotes helpful hints and tips.

---



**DEFINITION:** This icon indicates the definition of a term used in the text.

---

## Other documentation

Your computer comes with the following documentation:

- ❖ This electronic user's guide.
- ❖ Guides for other programs that may come preinstalled on your computer or that are available for installation on your Recovery media (if applicable to your system).
- ❖ For accessory information, visit Toshiba's Web site at [accessories.toshiba.com](http://accessories.toshiba.com).
- ❖ The Microsoft® Windows® operating system documentation which explains the features of the operating system.

---

## Service options

Toshiba offers a full line of optional service programs to complement its limited warranty. To stay current on the most recent software and hardware options for your computer, and for other product information, be sure to regularly check the Toshiba Web site at [pcsupport.toshiba.com](http://pcsupport.toshiba.com).

If you have a problem or need to contact Toshiba, see “[If Something Goes Wrong](#)” on page 155.

# Chapter 1

## Getting Started

---

This chapter provides tips for working comfortably, describes how to connect components, and explains what to do the first time you use your notebook computer.

### Selecting a place to work

Your computer is portable and designed to be used in a variety of circumstances and locations.

### Creating a computer-friendly environment

Place the computer on a flat surface which is large enough for the computer and any other items you need to use, such as a printer. Leave enough space around the computer and other equipment to provide adequate ventilation and prevent overheating.

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.
- 

**CAUTION**

If you spill liquid into the computer, turn it off, unplug it from the AC power source, and let it dry out completely before turning it on again.

If the computer does not operate correctly after you turn it back on, contact your network administrator. If your computer still does not operate, refer to [“If you need further assistance” on page 181](#) for additional technical assistance.

---

## Keeping yourself comfortable

Strain and stress injuries are becoming more common as people spend more time using their computers. With a little care and proper use of the equipment, you can work comfortably throughout the day.

---

**WARNING**

Using the computer keyboard incorrectly may result in discomfort and possible injury. If your hands, wrists, and/or arms bother you while typing, stop using the computer and rest. If the discomfort persists, consult a physician.

---

This section provides hints on avoiding strain and stress injuries. For more information, consult books on ergonomics, repetitive-strain injury, and repetitive-stress syndrome.

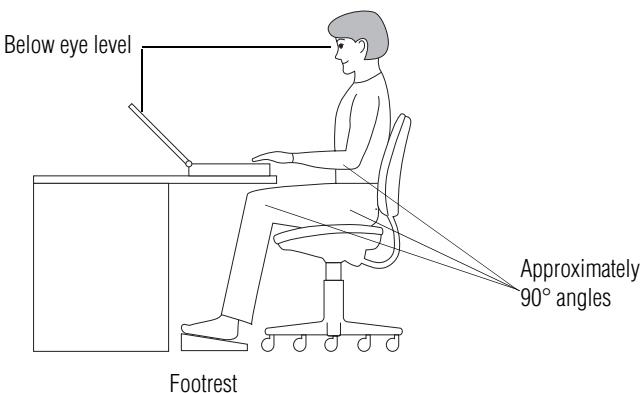
## Placement of the computer

Proper placement of the computer and external devices is important to avoid stress-related injuries.

- ❖ Place the computer on a flat surface at a comfortable height and distance. You should be able to type without twisting your torso or neck, and look at the screen without slouching.
- ❖ If you are using an external monitor, the top of the display should be no higher than eye level.
- ❖ If you use a paper holder, set it at about the same height and distance as the screen.

## Seating and posture

When using your computer, maintain good posture with your body relaxed and your weight distributed evenly. Proper seating is a primary factor in reducing work strain. Some people find a backless chair more comfortable than a conventional chair. Whichever type you choose, use the following guidelines to adjust your chair for maximum computing comfort.



*Correct posture and positioning of the computer*

Whichever type you choose, use the following guidelines to adjust your chair for maximum computing comfort.

- ❖ Position your chair so that the keyboard is at or slightly below the level of your elbow. You should be able to type comfortably with your shoulders relaxed and your forearms parallel to the floor.

If you are using a conventional chair:

- ❖ Your knees should be slightly higher than your hips. If necessary, use a footrest to raise the level of your knees and ease the pressure on the back of your thighs.
- ❖ Adjust the back of your chair so that it supports the lower curve of your spine. If necessary, use a cushion to provide extra back support. Lower-back-support cushions are available at many office supply stores.
- ❖ Sit with your back straight so that your knees, hips, and elbows form approximately 90-degree angles when you work. Do not slump forward or lean back too far.

## Lighting

Proper lighting can improve the visibility of the display and reduce eyestrain.

- ❖ Position the display panel or external monitor so that sunlight or bright indoor lighting does not reflect off the screen. Use tinted windows or shades to reduce glare.
- ❖ Avoid placing your computer in front of a bright light that could shine directly in your eyes.
- ❖ If possible, use soft, indirect lighting in your computer work area.

**▲ CAUTION** Your LCD display has a brightness approaching that of a TV device. We recommend that you adjust the brightness of your LCD to a comfortable level to prevent possible strain on your eyes.

---

## Arms and wrists

- ❖ Avoid bending, arching, or twisting your wrists. Keep them in a relaxed, neutral position while typing.
  - ❖ Exercise your hands, wrists, and arms to improve circulation.
- 

**▲ WARNING** Using the computer keyboard incorrectly may result in discomfort and possible injury. If your hands, wrists, and/or arms bother you while typing, stop using the computer and rest. If the discomfort persists, consult a physician.

---

## Work habits

The key to avoiding discomfort or injury from strain is to vary your activities. If possible, schedule a variety of tasks into your working day. Finding ways to break up the routine can reduce stress and improve your efficiency.

- ❖ Take frequent breaks to change position, stretch your muscles, and relieve your eyes. A break of two or three minutes every half hour is more effective than a long break after several hours.
- ❖ Avoid performing repetitive activities for long periods. Intersperse such activities with other tasks.
- ❖ Focusing your eyes on your computer screen for long periods can cause eyestrain. Look away from the

---

computer frequently and focus your eyes on a distant object for at least 30 seconds.

---

**CAUTION**

Your LCD display has a brightness approaching that of a TV device. We recommend that you adjust the brightness of your LCD to a comfortable level to prevent possible strain on your eyes.

---

## Other precautions

Your computer is designed to optimize safety, minimize strain, and withstand the rigors of portability. However, you should observe certain precautions to further reduce the risk of personal injury or damage to the computer.

- ❖ Avoid prolonged physical contact with the underside of the computer.

If the computer is used for long periods, its case can become very warm. While the temperature may not feel too hot to the touch, if you maintain physical contact with the computer for a long time (if you rest the computer on your lap, for example), your skin might suffer low-heat injury.

**CAUTION**

Never apply heavy pressure to the computer or subject it to sharp impacts. Excessive pressure or impact can damage computer components or otherwise cause your computer to malfunction.

---

**CAUTION**

Some PC Cards can become hot with prolonged use. If two cards are installed, both can become hot even if only one is used extensively. Overheating of a PC Card can result in errors or instability in the PC Card operation.

Be careful when you remove a PC Card that has been used for lengthy periods of time.

- ❖ Avoid spilling liquids into the computer's keyboard.

If you do spill a liquid that gets into the keyboard, turn off the computer immediately. Leave the computer turned off overnight to let it dry out before you use it again.

- ❖ Never turn off the computer if a drive light indicates a drive is active.

Turning off the computer while it is reading from or writing to a disk may damage the disk, the drive, or both.

- ❖ Keep the computer and disks away from objects that generate strong magnetic fields, such as large stereo speakers.

Information on disks is stored magnetically. Placing a magnet too close to a disk can erase important files.

- ❖ Scan all new files for viruses.

This precaution is especially important for files you receive via email or download from the Internet. Occasionally, even new programs you buy from a supplier may contain a computer virus. You will need a special program to check for viruses. Ask your dealer to help you.

---

## Important information on your computer's cooling fan

Your computer may have a CPU cooling fan that cools the CPU by drawing outside air into the computer. The cooling fan may be located on the bottom of the computer.

---

**CAUTION**

To prevent possible overheating of the CPU, make sure the air intake on the cooling fan is not blocked. The fan draws in air by creating a vacuum. If the fan is blocked, it could cause the CPU to run at a lower performance level or cause the computer to shut down. Loose items such as notebook and tissue paper, plastic wrappers, or other similar materials can block the air intake, preventing air from reaching the CPU. Do not use the computer on surfaces with objects that can be drawn in by the cooling fan.

---

---

**NOTE**

The cooling fan location will vary depending on the computer.

---

## Setting up your computer



**TECHNICAL NOTE:** You must complete all set up steps up to [“Setting up your software” on page 48](#) before adding external or internal components to your computer. These components include, but are not limited to, a mouse, keyboard, printer, memory, and PC cards.

---

Your computer contains a rechargeable high-capacity battery that needs to be charged before you can use it.

To use external power or to charge the battery, you must attach the AC adapter. See [“Connecting to a power source” on page 50](#) for more information.

---

## Setting up your software

The first time you turn on your computer, the Setup Wizard guides you through steps to set up your software.

- 1 From the welcome screen, click **Next** to enter the Setup Wizard.
- 2 Confirm acceptance of Microsoft's End User License Agreement and click **Next**.
- 3 Enter the computer name and description and click **Next** or **Skip**.

The computer will pause for a moment while checking for an internet connection, and you will see the screen "Checking your internet connectivity."

A window will display the message: "How will this computer connect to the internet?" The system displays three selections: Telephone modem, Digital subscriber line (DSL) or cable, or Local Area Network (LAN).

- 4 Click **Skip** to exit the process or **Next** to continue.

---

### NOTE

To register online, your computer must be connected to the Internet via a voice-grade telephone line or a Local-Area-Network (LAN).

---

A window displays asking if you wish to register with Toshiba and Microsoft.

- 5 Click **Yes** to register, or **No** to exit the process.

---

### NOTE

If you click No, you may register with Toshiba by clicking the Register with Toshiba icon on the desktop.

- 6 If you selected Yes in step 5, enter your personal information in the registration window.



---

A window displays the message, “Who will use this computer?”

- 7 Enter your name and click **Next** to complete the process.

A window displays the message, “Thank you.”

- 8 Click **Finish** to continue.

Your computer restarts automatically.

## Registering your computer with Toshiba

Product registration is strongly recommended, and allows Toshiba to send Customer periodic updates, announcements, and special offers applicable to the product. Product registration can be completed during the initial start up process of your computer. If you opt not to register at that time, you can either double-click the icon on your desktop or go to the Toshiba Web site at [www.register.toshiba.com](http://www.register.toshiba.com). Customer failure to complete Product Registration will not diminish Customer rights under this limited Warranty.

## Adding external devices

---

### NOTE

Before adding external devices, Toshiba recommends setting up your software first. See “Setting up your software” on page 48.

---

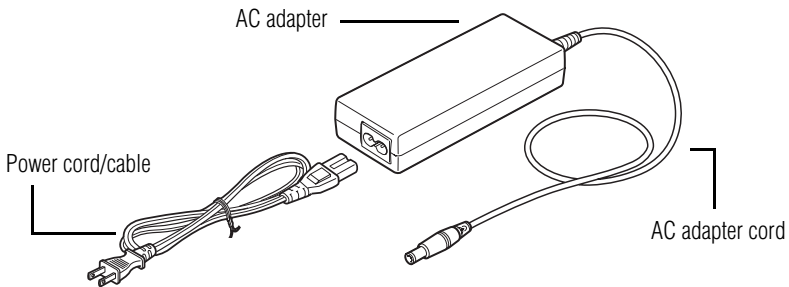
Before starting to use your computer, you may also want to:

- ❖ Add more memory (see “Installing additional memory (optional)” on page 58)
- ❖ Connect a mouse (see “Using a mouse” on page 63)
- ❖ Connect a local printer (see “Connecting a local printer” on page 64)
- ❖ Connect an external diskette drive (see “Connecting an optional external diskette drive” on page 69)

- ❖ Install PC Cards (see “Using PC Cards” on page 147)

## Connecting to a power source

Your computer requires power to operate. Use the power cord/cable and AC adapter to connect the computer to a live electrical outlet, or to charge the computer's battery.



### *Sample power cord/cable and AC adapter*

**⚠ WARNING**

Hold the power cord/cable by its plug when you connect/disconnect it. Do NOT pull the cable itself. Doing so may damage the power cord/cable and result in a short circuit or electric shock.

**⚠ WARNING**

When you connect the AC adapter to the computer, always follow the steps in the exact order as described in the User's Manual. Connecting the power cord/cable to a live electrical outlet should be the last step; otherwise the adapter 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.

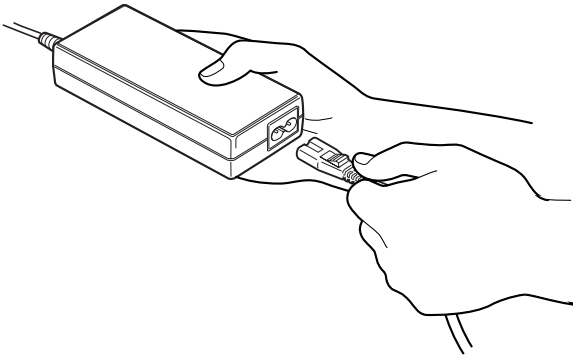
**CAUTION**

Use only the AC adapter supplied with your computer or an equivalent adapter that is compatible. Use of any incompatible adapter could damage your computer. Toshiba assumes no liability for any damage caused by use of an incompatible adapter.

---

To connect AC power to the computer:

- 1 Connect the power cord/cable to the AC adapter.



*Sample connecting the power cord/cable to the AC adapter*

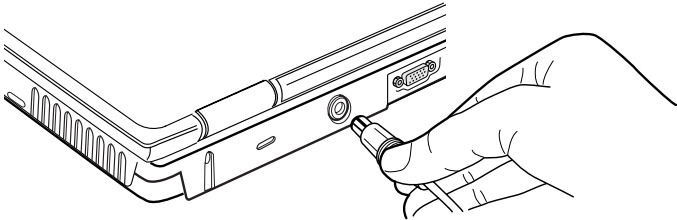
**WARNING**

Handling the cord on this product will expose you to lead, a chemical known to the State of California to cause birth defects or other reproductive harm. **Wash hands after handling.**

---



- 2 Plug the AC adapter cord into the DC-IN on the back of the computer.



*Sample connecting the AC adapter cord to the computer*



- 3 Connect the power cord/cable to a live electrical outlet.

The AC power indicator glows when the computer is connected to an external power source.



The battery light:

- ❖ Glows amber while the battery is being charged.
- ❖ Glows green when the battery is fully charged.
- ❖ Is unlit when the computer is not connected to an external power source. For information on determining battery power, see [“Monitoring battery power”](#) on page 116.

**⚠ WARNING**

Damaged power cords/cables can cause fire or electric shock. Never modify, forcibly bend, place heavy objects on top of, or apply heat to the power cord/cable.

If the power cord/cable becomes damaged or the plug overheats, discontinue use. There is a risk of electric shock.

Never remove the power plug from the outlet with wet hands. Doing so may cause an electric shock.

---

## Charging the main battery

To charge the main battery, plug the computer into a live wall outlet. It takes several hours to charge the battery with the computer off. It takes much longer to charge the battery while the computer is on. For more information on battery use, see [“Running the computer on battery power” on page 111](#).

---

**CAUTION**

Once the battery is charged for the first time, avoid leaving the computer plugged in and turned off for more than a few hours at a time. Continuing to charge a fully charged battery can damage the battery.

---



**TECHNICAL NOTE:** When your computer is using all of the power provided by the AC adapter to run applications, features, and devices, the recharging of the battery cannot occur. Your computer's Power Management utility can be used to select a power level setting that reduces the power required for system operation and will allow the battery to recharge.

---

---

**NOTE**

Battery life and charge time may vary depending on the applications, power management settings, and features used.

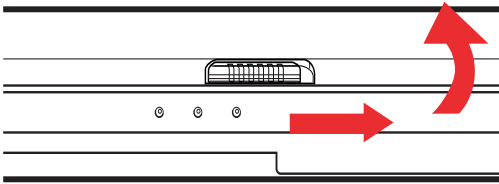
---

---

## Using the computer for the first time

### Opening the display panel

Slide the display latch to the right and lift the display panel.



*Sample opening the display panel*

---

**CAUTION**

To avoid damaging the display panel, do not force it beyond the point where it moves easily.

Never lift or move the computer using the display panel.

---

Small bright dots may appear on your TFT display when you turn on your computer. Your display contains an extremely large number of thin-film transistors (TFT) and is manufactured using high-precision technology. Any small bright dots that may appear on your display are an intrinsic characteristic of the TFT manufacturing technology.

---

**NOTE**

Over a period of time, and depending on the usage of the computer, the brightness of the LCD Screen will deteriorate. This is an intrinsic characteristic of LCD technology.

Screen will dim when the computer is operated on battery power and you may not be able to increase the brightness of the screen.

---

---

## Your computer's features and specifications

Certain notebook chassis are designed to accommodate all possible configurations for an entire product Series. Your selected model may not have all the features and specifications corresponding to all of the icons or switches shown on the notebook chassis, unless you have selected all those features.

Below are examples of some of the many possible icons that may come on your computer:



### *Sample system icons*

This information applies to all the features and icons described in this guide.

## Turning on the power

- 1 Check that any drives on the computer are empty.
- 2 Turn on the computer by pressing and releasing the power button located on the top of the keyboard.



---

### **NOTE**

When you turn on the computer for the first time, do not turn off the power again until the operating system has loaded completely.

---



The hard disk drive indicator flashes to indicate that the hard disk drive is currently in use.

---

### **CAUTION**

Never turn off the computer while any drive is in use.

---

---

## Using the TouchPad™

The TouchPad, the small, smooth square cutout located in front of the keyboard, is sensitive to touch and enables you to move the cursor with the stroke of a finger. Simply move your finger on the TouchPad in the direction you would like to move the cursor:

- ❖ To move the cursor to the top of the page, push your finger forward on the TouchPad.
- ❖ To move the cursor to the bottom of the page, drag your finger toward yourself.
- ❖ To move the cursor to the right side of the page, slide your finger across the TouchPad from left to right.
- ❖ To move it to the left side, slide your finger from right to left.

---

### NOTE

Because the TouchPad is much smaller than the display screen, moving your cursor across the screen often means having to move your finger several times across the TouchPad in the preferred direction.

---

Once you have positioned your cursor, you can either click by double-tapping the TouchPad or pressing the control buttons.

## Scrolling with the TouchPad™

There are two active regions on the TouchPad that allow you to scroll as you would with any wheel device on a mouse or trackball.

To scroll vertically, run your finger up or down along the right edge of the TouchPad. To scroll horizontally, run your finger along the bottom edge of the TouchPad.



---

## Using the Scroll button

For applicable systems, the scroll button, located between the primary and secondary control buttons on the TouchPad, is used for rapid viewing of pages on the screen.

## Using the Control buttons

When a step instructs you to click or choose an item, move the cursor to the item, then press and release the primary (left-hand) button. To double-click, press the primary button twice in rapid succession. The primary button usually corresponds to the left mouse button.

The function of the secondary (right-hand) button depends on the program you are using. It usually corresponds to the right mouse button. Check your program's documentation to find whether it uses the right mouse button.

## Disabling or enabling the TouchPad

The TouchPad is enabled by default. To change the enable/disable TouchPad setting:

- 1 Click **Start, Control Panel**.  
The Control Panel window appears.
- 2 Click **Printers and Other Hardware**.
- 3 Click **Mouse** or press the Fn + F9 hot keys.  
The Mouse Properties window appears.
- 4 Click the **TouchPAD ON/OFF** tab.  
The TouchPAD ON/OFF tab view window appears.
- 5 Select **Disable** or **Enable**, whichever is appropriate.
- 6 Click **Apply**.
- 7 Click **OK**.  
The Mouse Properties window closes.

- 8 Close the Printers and Other Hardware window.
  - 9 Close the Control Panel window.
- 

**NOTE**

The Fn + F9 shortcut can be used to enable or disable the TouchPad (see “Hot Keys” on page 185).

---

## Installing additional memory (optional)

---

**CAUTION**

Before you install or remove a memory module, turn off the computer using the Start menu. If you install or remove a memory module while the computer is in Stand by or Hibernation mode, data will be lost.

---

Your computer comes with enough memory to run most of today’s popular applications. You may want to increase the computer’s memory if you use complex software or process large amounts of data.

Additional memory comes in various capacities (to stay current on the most recent software and hardware options for your computer, and for other product information, be sure to regularly check the Toshiba Web site at [accessories.toshiba.com](http://accessories.toshiba.com)). There are two memory slots. Your system may have both slots occupied.

---

**CAUTION**

If you use the computer for a long time, the memory modules become hot. If this happens, let the modules cool to room temperature before you replace them.

---

---

You need a standard Phillips no. 1 screwdriver to install a memory module.

---

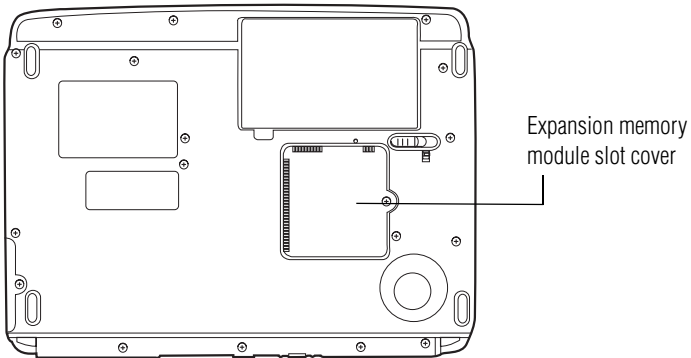
**CAUTION** To avoid damaging the computer's screws, use a standard Phillips no. 1 screwdriver that is in good condition.

---

The computer has two memory module slots—Slot A and Slot B. You can install one or two memory modules.

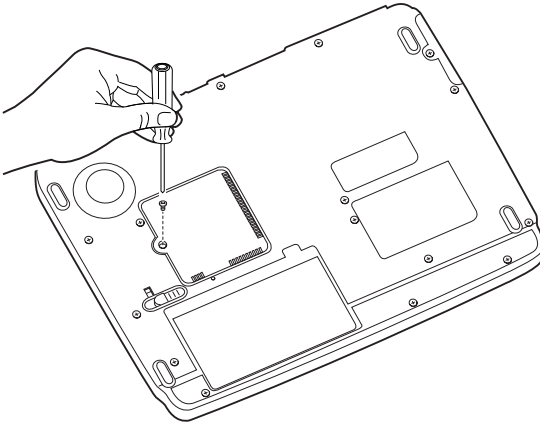
If you are adding memory after you have started to use the computer, begin at step 1, otherwise skip to step 2.

- 1** Turn off the computer via the Start menu.  
See “Using the Turn off computer or Shut down command” on page 100.  
The operating system turns off the computer.
- 2** Unplug and remove any cables connected to the computer.
- 3** Close the display panel and turn the computer upside down to locate the expansion memory module slot cover.



*Sample base of a Satellite M30X/M35X series computer*

- 
- 4 Using a standard Phillips no. 1 screwdriver, unscrew the screw that secures the expansion memory module slot cover, then remove the expansion memory module slot cover.



*Sample removing the expansion module memory slot cover*

- 5 Put the screw and cover in a safe place so that you can retrieve them later.

---

**CAUTION**

Static electricity can damage the memory module. Before you handle the module, touch a grounded metal surface to discharge any static electricity you may have built up.

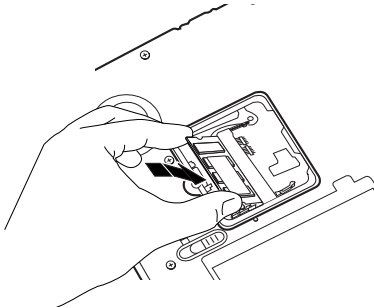
To avoid damaging the memory module, be careful not to touch its gold connector bar (on the side you insert into the computer).

- 
- 6 Remove the memory module from its antistatic packaging.
  - 7 Holding the memory module by its edges so that the gold connector bar faces the slot, fit the module into the socket.

*Installing additional memory (optional)*

- 
- 8** Gently put the memory module connector down at an angle and press down until the clips snap into place.

Do not force the memory module into position. The memory module should be level when secured in place.



*Sample inserting the memory module*

**CAUTION**

Avoid touching the connectors on the memory module or on the computer. Grease or dust on the connectors may cause memory access problems.

---

- 9** Replace the expansion memory module slot cover.
- 10** Replace the screw and tighten it.
- 11** Turn the computer over and reconnect any cables you removed.
- 12** Turn on the computer.

To verify that the computer correctly recognizes the memory, click **Start, Control Panel** and click **Performance and Maintenance**. Click **System** to view the recognized memory.

- 13** If the computer does not recognize the memory module, shut down the computer, remove the expansion memory module slot cover, and make sure the memory module is seated properly, as described in step 8.

---

## Removing a memory module

- 1 Follow steps 1 through 6 in “Installing additional memory (optional)” on page 58.

---

**CAUTION**

Do not try to remove a memory module with the computer turned on. You can damage the computer and the device.

Do not remove the memory module while the computer is in Standby mode. The computer could hang up the next time you turn it on and data in memory will be lost. In either of the above cases, the Standby configuration will not be saved.

The following message appears when you turn on the power:

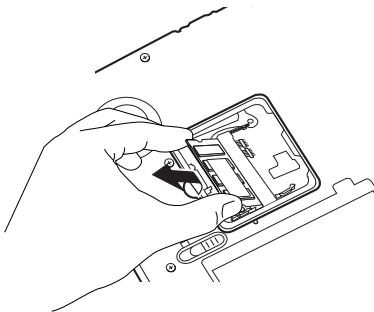
Warning: Resume Failure

Press Any Key To Continue

If the computer hangs up when you turn it on, perform the following: Press the power button and hold it down for five seconds, then turn the power on again.

---

- 2 Gently push the memory module locks outward until the memory module pops up.



*Sample removing the memory module*

- 3 Gently pull the memory module diagonally to pull it out of the slot.
- 4 Complete the procedure by following steps 10 through 12 in “Installing additional memory (optional)” on page 58.

## Checking total memory

When you add or remove memory, you can check that the computer has recognized the change. To do this:

- 1 Click **Start**, then click **Control Panel**.
- 2 Click **Performance and Maintenance**.
- 3 Click **System**.
- 4 The **General** tab view automatically appears and shows total memory.

If the computer does not recognize the memory configuration, turn off the computer, remove the memory slot cover, and make sure the memory module is seated properly, as described in step 10 of “Installing additional memory (optional)” on page 58.

## Using an external keyboard

If you prefer to use a full-size keyboard, you can attach one to your computer. The computer’s USB port supports any USB-compatible keyboard.

## Using a mouse

You may want to use a mouse instead of the TouchPad, the computer’s built-in pointing device.

To connect a USB mouse, plug the mouse cable into one of the USB ports.

## Connecting a local printer

Before you can connect a printer, you need a suitable USB printer cable, which may have been provided with your printer. Otherwise, you can purchase one from a computer or electronics store.

---

**CAUTION**

Your printer documentation may require you to install the printer software before physically connecting the printer to your computer. If you do not install the software as instructed by the printer manufacturer, the printer may not function correctly.

---

**CAUTION**

Never connect the printer cable while the computer's power is on. Doing so may damage the printer, the computer, or both.

---

**NOTE**

Read the documentation that came with your printer. Follow the manufacturer's instructions when connecting a local printer.

---

**NOTE**

You must supply the proper printer cable. If one did not come with your printer, you may purchase one from an electronics or computer store.

If your printer is ECP- or IEEE-compliant, make sure your printer cable is an IEEE 1284 cable.

---

These instructions assume you have a USB printer. Consult the document that came with your printer to verify the connection type.



---

To connect a USB printer:

- 1 Plug the USB connector into one of the USB ports on your computer
- 2 Plug the printer's power cable into a live AC outlet.

## Connecting a Parallel Printer

To connect a parallel printer:

---

**CAUTION**

Connecting the parallel printer cable while the computer is on may damage the printer, the computer, or both.

---



- 1 Connect the printer cable to the printer and to the computer's parallel port.



*Sample identifying the ends of a parallel printer cable*

- 2 Plug the printer's power cable into a live AC outlet.

See your printer documentation for additional configuration steps.

## Setting up your printer

If you started your computer with a printer connected and turned on, it may have been detected automatically (Plug and Play). If this is not the case, then you must install the printer driver for the model of printer that is connected to your computer. You install the printer driver either by following the instructions indicated in your printer manual, or by using the operating system Add Printer Wizard.

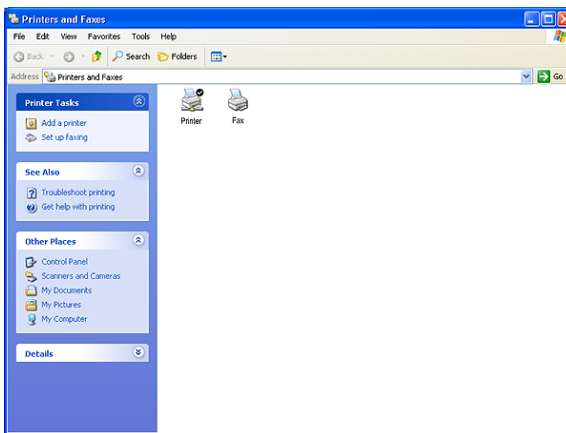
If you plan to set up a printer later, click **Cancel**.

## Using the Add Printer Wizard

To set up a printer with the Add Printer Wizard:

- 1 Click **Start**, **Control Panel**, then **Printers and Other Hardware**.
- 2 Select **Printers and Faxes**.

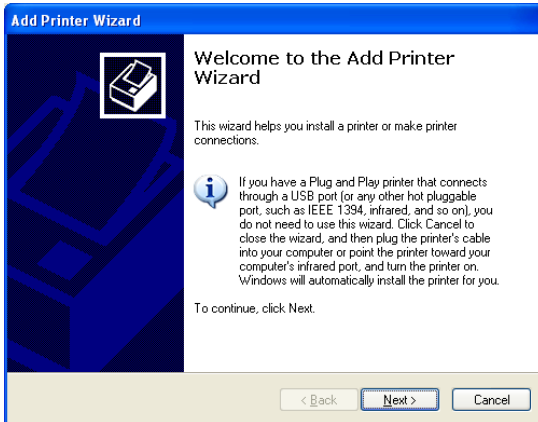
The Printers and Faxes window appears.



*Sample Printers and Faxes window*

- 3 Click **Add Printer**.

The Add Printer Wizard starts.



*Sample Add Printer Wizard*

#### 4 Click **Next**.

The Add Printer Wizard asks you to select your printer.



**TECHNICAL NOTE:** If your printer is Plug and Play, the operating system recognizes it automatically. You can ignore the remainder of this section. See your printer manual.

#### 5 If the printer you are setting up:

- ❖ Is not connected to a network, select **Local printer attached to this computer**.

If you select Local printer, check “Automatically detect and install my Plug and Play printer.”

- ❖ Is connected to a network, select **Network printer, or a printer attached to another computer**.

#### 6 Click **Next**.

The Add Printer Wizard prompts you to select your printer.

- 
- 7 From the list of manufacturers and printers, select your printer, then click **Next**.
  - 8 Select the port settings according to the instructions in your printer's documentation and the port to which your printer is connected, then click **Next**.

The Add Printer Wizard prompts you to enter a printer name.

- 9 Enter a name for your printer.



---

**HINT:** If you are using more than one printer, make sure the name is descriptive enough to help you tell the difference.

---

- 10 To set up the printer to be the default printer for the operating system, click **Yes**.

- 11 Click **Next**.

The operating system prompts you to print a test page.

- 12 If your printer is connected and turned on, click **Next**.

To complete the setup procedure without printing a test page, click **No**, then click **Next**.

- 13 Click **Finish**.

You are now ready to print.

Depending on your program, you may see various messages indicating the status of your print job.



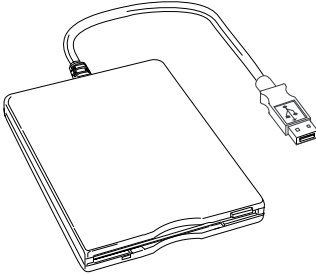
---

**TECHNICAL NOTE:** Some printers require a specific installation process. In this case, the Windows<sup>®</sup> XP operating system Add Printer Wizard will display an error message. If this happens, refer to your printer installation guide for further instructions.

---

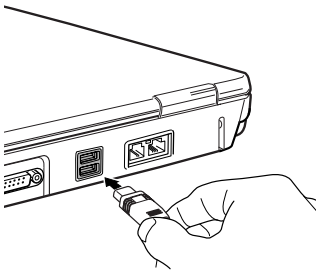
## Connecting an optional external diskette drive

Some operations, such as creating a password service diskette, require a diskette drive designed for use with 3.5-inch diskettes.



### *Sample optional external USB diskette drive*

To connect an optional external USB diskette drive, connect the cable to one of the USB ports.



### *Sample connecting an optional external USB diskette drive*

---

## Connecting external display devices

Your computer comes with a built-in LCD display, but you can also connect an external display device to the available video port:

- ❖ An external monitor or projector via the RGB (monitor) port.
- ❖ A television or video display device via the S-video port.

Before connecting an external monitor or video projector, configure your computer for the type of device you are connecting. To do this, refer to the documentation for your operating system and devices.

### Connecting an external monitor or projector

You can easily attach an external monitor or projector to your computer if you need a larger screen. To do this:



- 1 Connect the monitor's video cable to the RGB (monitor) port on the left side of the computer.
- 2 Connect the device's power cable to a live electrical outlet.
- 3 Turn on the external device.
- 4 Set the display mode by pressing Fn + F5, or by configuring the Display Properties settings.

### Connecting to the S-video port

---

**NOTE**

Video cables are not included with your computer. To connect a device to the video-out port, you will need to purchase an S-video cable.

---

To connect the device:

- 1 Connect one end of the video cable to the external video device.

Refer to the documentation provided with the device for the location of its video-in port.



- 2 Connect the other end of the video cable to the S-video port on the back of the computer.
- 3 Turn on the external video device.
- 4 Set the display mode by pressing Fn + F5, or by setting the Display Properties settings. For more information, see [“Directing the display output when you turn on the computer”](#) on page 71.



**TECHNICAL NOTE:** If you are connecting to a television, you may need to change the display properties. Most televisions use or support an 800 x 600 standard resolution.

---

## Directing the display output when you turn on the computer

Once you have connected an external display device, you can choose to use the internal display only, the external device only, or both simultaneously. The quickest way to change the display output settings is to use the display hot key (Fn + F5):

- 1 Press Fn and F5 simultaneously.
- 2 While holding down Fn, press F5 repeatedly until the setting you want takes effect.

This hot key cycles through the settings in the following order:

- ❖ Built-in display only
- ❖ Built-in display and external monitor simultaneously
- ❖ External monitor only

- ❖ TV
- ❖ TV and LCD

**3** Release the Fn key.

---



**TECHNICAL NOTE:** You can also change these settings using the Display Properties Box.

Set the option for the video controller by clicking Start, then Control Panel and clicking Display. Choose the Settings tab, click the Advanced button, select Display Device, select the applicable Monitor type, click Apply or OK.

---

For more information on switching the display output, see [“Directing the display output when you turn on the computer”](#) on page 71.

## **Adjusting the quality of the external display**

To obtain the best picture quality from your television (or other video display device), you may need to adjust the video settings. See the video device documentation for additional configuration steps.

---



**TECHNICAL NOTE:** In order to use one of the simultaneous modes, you must set the resolution of the internal display panel to match the resolution of the external display device. The external display device must support a resolution of 640 X 480 or higher.

---



---

## Turning off the computer

It is a good idea to turn off your computer when you are not using it for a while.

If you are using the computer for the first time, leave the computer plugged into a power source (even though the computer is off) to fully charge the main battery. With the computer off, it may take up to three hours to recharge the main battery.

When you power down the computer, you have three options to choose from: Turn Off (or Shut down), Hibernate and Standby. Each option has its advantages.

- ❖ Use the Turn Off command if you are using the Windows<sup>®</sup> XP Home or Windows<sup>®</sup> XP Professional operating system when not connected to a domain server.
- ❖ Use the Shut down command if you are using the Windows<sup>®</sup> XP Professional operating system and connected to a domain server.
- ❖ If you have work in progress and are not connected to a network, use the Windows<sup>®</sup> Standby or Hibernate commands to save your system settings to memory so that, when you turn on the computer again, you will automatically return to where you left off.
- ❖ To leave the computer off for a longer period, you can use the Windows<sup>®</sup> Turn Off command when not connected to a domain server or the Shut down when connected to a domain server instead.

---

**CAUTION**

Never turn off the computer while any drive is in use. Doing so may damage the media in use and result in loss of data.

---

For more information, see [“Powering down the computer” on page 100](#).

## Closing the display panel

When you are finished, shut the computer down and close the display panel to keep dust and dirt out of the computer.

If you close the computer while it is still on, these actions will occur:

- ❖ If you have the LCD power-saver feature set, the LCD panel will automatically turn off until you open it again.
- ❖ If you have the audible warning set, the computer will beep to notify you that it is still on.
- ❖ If you have an action feature set, the computer will perform either: Nothing, Standby, Hibernate, or Turn Off.

## Caring for your computer

This section gives tips on cleaning and moving your computer, and explains how to fit an antitheft lock. For information about taking care of your computer's battery, see [“Running the computer on battery power”](#) on page 111.

## Cleaning the computer

To keep your computer clean, gently wipe the display panel and exterior case with a lightly dampened cloth. Ask your Toshiba dealer for suggestions for appropriate cleaning products.

---

**CAUTION**

Keep liquid, including cleaning fluid, out of the computer's keyboard, speaker grille, and other openings. Never spray cleaner directly onto the computer. Never use harsh or caustic chemical products to clean the computer.

---

---

## Moving the computer

Before moving your computer, even across the room, make sure all disk activity has ended (the disk activity lights stop glowing) and all external peripheral cables are disconnected.

**CAUTION**

Never pick up the computer by its display panel or by the back (where the ports are located).

---

Although your notebook computer is built to withstand reasonable shock and vibration, transport it in a carrying case for long trips. You can purchase a carrying case from your Toshiba dealer (To stay current on the most recent software and hardware options for your computer, and for other product information, be sure to regularly check the Toshiba Web site at [accessories.toshiba.com](http://accessories.toshiba.com)).

## Using a computer lock

You may want to secure your computer to a heavy object such as your desk. The easiest way to do this is to purchase an optional PORT-Noteworthy<sup>®</sup> computer lock cable.




*Sample PORT-Noteworthy<sup>®</sup> computer lock cable*

To secure the computer:

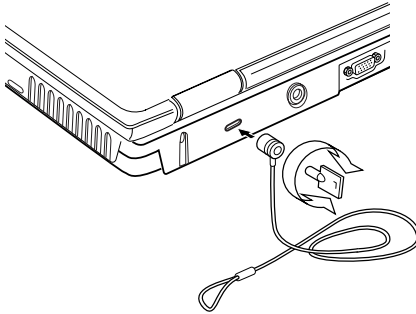
- 1 Loop the cable through or around some part of a heavy object.

Make sure there is no way for a potential thief to slip the cable off the object.

- 2 Pass the locking end through the loop.

- 
-  **3** Insert the cable's locking end into the security lock slot, then rotate the key a quarter turn and remove it.

The computer is now securely locked to deter computer theft.



*Sample locking the computer*

# Chapter 2

## Learning the Basics

---

This chapter lists some computing tips and provides important information about basic features.

### Computing tips

- ❖ Save your work frequently.

Your work temporarily stays in the computer's memory until you save it to the disk. You will lose all unsaved work, if, for example, a system error occurs and you must restart your computer, or your battery runs out of charge while you are working. Your computer can be configured to warn you when the battery is running low. See [“Power management”](#) on page 112.



HINT: Some programs have an automatic save feature which you can turn on. This feature saves your file to the hard disk at preset intervals. See your software documentation for details.

---

- ❖ Back up your files to storage media on a regular basis. Label the backup copies clearly and store them in a safe place.

If your hard disk suddenly fails, you may lose all the data on it unless you have a separate backup copy.

- ❖ Use Error-Checking and Disk Defragmenter regularly to conserve disk space and help your computer perform at its optimal level. Consult your Windows® XP operating system documentation for more information on these and other utilities.
- ❖ Scan all new files for viruses.

This precaution is especially important for files you receive via diskette, email, or download from the Internet. Take frequent breaks to avoid repetitive-motion injuries and eyestrain.

- ❖ Do not turn off the computer if a drive indicator light indicates a drive is active.

Turning off the computer while it is reading from or writing to a disk may damage the disk, the drive, or both.

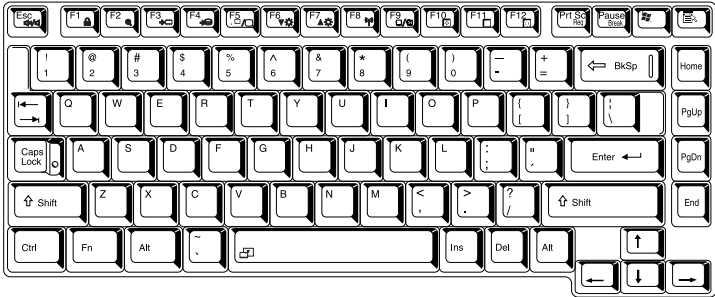
- ❖ Before turning off the computer, use the Turn off computer command or Standby command. See [“Powering down the computer” on page 100](#) to learn more about Standby.
- 

**CAUTION**

The operating system records information, such as your desktop setup, during its shut down procedure. If you do not let the operating system shut down normally, details such as new icon positions may be lost.

---

## Using the keyboard



*Keyboard*

### Character keys

Typing with the character keys is very much like typing on a typewriter, except that:

- ❖ The spacebar creates a space character instead of just passing over an area of the page.
- ❖ The lowercase l (el) and the number 1 are not interchangeable.
- ❖ The uppercase letter O and the number 0 are not interchangeable.
- ❖ The Caps Lock key changes only the alphabet keys to upper case — the number and symbol keys are not affected. The caps lock light on the keyboard indicator panel illuminates when you press the Caps Lock key.

## Ctrl, Fn, and Alt keys



### *Ctrl, Fn and Alt keys*

The Ctrl, Fn, and Alt keys do different things depending on the program you are using. For more information, see your program documentation.

## Function keys

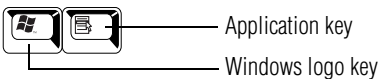
The function keys (not to be confused with the Fn key) are the 12 keys at the top of the keyboard.



### *Function keys*

F1 through F12 are called function keys because they run programmed functions when you press them. Used in combination with the Fn key, function keys marked with icons run specific functions on the computer.

## Windows® special keys



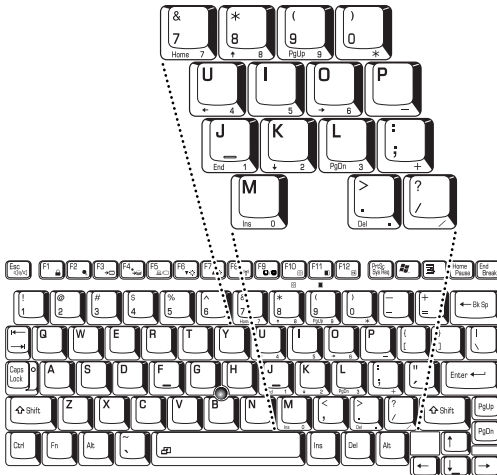
### *Windows® special keys*

The keyboard provides two keys that have special functions in the operating system:

- ❖ The Windows® logo key opens the Start menu.
- ❖ The Application key has the same function as the secondary TouchPad control button (or secondary mouse button).



## Overlay keys



### Keyboard overlay keys

The keys with numbers and symbols on the front of them form the numeric and cursor overlay. This overlay lets you enter numeric data or control the cursor as you would using the ten-key keypad on a desktop computer's keyboard.

### Using the numeric keypad overlay

The keys with the numbers on their right front are the numeric overlay keys.



To turn on the numeric keypad overlay, press Fn and F11 simultaneously. The numeric mode light on the keyboard indicator panel glows when the numeric overlay is on.

You can still use the overlay keys to type alphabetic characters while the numeric overlay is on. To do so:

- ❖ For lowercase letters, hold down Fn while you type the letters.
- ❖ For uppercase letters, hold down both Fn and Shift while you type the letters.

To use the cursor control overlay when the numeric overlay is on, press and hold down Shift while you use the cursor control keys. To return to the numeric overlay, release Shift.

To turn off the numeric keypad overlay, hold down the Fn key and press F11 again. The numeric mode light on the keyboard indicator panel goes out.

## Using the cursor control overlay

The keys with the gray arrows and symbols on their left front are the cursor control overlay keys.



To turn on the cursor control overlay, press Fn and F10 simultaneously. The cursor control mode light on the keyboard indicator panel glows when the cursor control overlay is on.

To type alphabetic characters while the overlay is on:

- ❖ For lowercase letters, hold down Fn while you type the letters.
- ❖ For uppercase letters, hold down both Fn and Shift while you type the letters.

To use the numeric keypad overlay when the cursor control overlay is on, hold down Shift while you use the numeric overlay keys. To return to the cursor control overlay, release Shift.

To turn off the cursor control overlay, hold down the Fn key and press F10 again. The cursor control mode light on the keyboard indicator panel goes out.

---

## Starting a program

The easiest way to start a program is to double-click the name of the file that contains the information you want to work on. To find the file, use My Computer or Windows Explorer.

If you prefer to open the program first, you have four options:

- ❖ Double-click the icon for the program on your desktop
- ❖ Use the Start menu
- ❖ Use Windows Explorer to locate the program file
- ❖ Use the Run dialog box

### Starting a program from the Start menu

When you install a program, the operating system usually puts an icon in the All Programs menu. To start a program that has an icon in the All Programs menu, follow these steps, which use the Windows® WordPad program as an example:

- 1** Click **Start**, then point to **All Programs**.


The Windows® XP operating system displays the All Programs menu, which lists programs and program groups. If your program is listed, go to step 3, otherwise, continue with step 2.

- 2** Point to the program group, in this example, **Accessories**.

The Accessories menu displays.

- 3** Click the program, in this example, **WordPad**.

WordPad opens.

-  To close the program, click the **Close** button in the upper-right corner of the program's window.

---

## Starting a program from Windows® Explorer

If a program is not listed in the Programs menu, you can start it from Windows® Explorer. Windows® Explorer gives you a view of your computer's contents as a hierarchy or "tree." You can easily see the content of each drive and folder on your computer. To use this method, you should know the file name and location of the program's executable file (this file ends with .exe).

This example opens WordPad using its file name, *wordpad.exe*.

- 1 Click **Start**, then point to **All Programs**.
- 2 Click **Accessories**.
- 3 Click **Windows Explorer**.
- 4 Click **My Computer** to expand the window.
- 5 In the left part of the window, under the C: icon, double-click the folder containing the program, in this case **Program Files**.

Windows® Explorer shows the contents of the Program Files folder on the right side of the window. The left side of the window shows all the folders contained within the Program Files folder.

- 6 In the left part of the window, click **Windows NT**.
- 7 Click **Accessories**.

Windows® Explorer shows the contents of the **Accessories** folder on the right side of the window.

- 8 In the right part of the window, double-click **WordPad**. WordPad opens.



To close the program, click the **Close** button in the upper-right corner of the program's window.

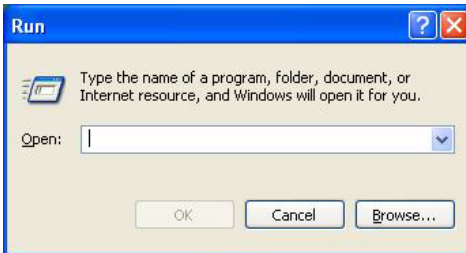
---

## Starting a program from the Run dialog box

This example uses the Run command to start WordPad:

- 1 Click **Start**, then click **Run**.

The Run dialog box appears.



*Sample Run dialog box*

- 2 In the Run dialog box:
  - ❖ If you know the program's location, type the command line. For a program in the Windows® folder, type just the program name. Otherwise, type the full file path. For example, to access WordPad, type:  
c:\Program Files\WindowsNT\Accessories\Wordpad, then click **OK**.
  - ❖ If you do not know the location, click **Browse...**  
In the Browse dialog box, enter the file name (for example, *wordpad.exe*) and select the drive to search. When the operating system has found the file, click **Open**.



HINT: To run the same program again, click the arrow to the right of the text box and select the command line from the drop-down list.

---

---

## Saving your work

Before you turn off the computer, save your work to the hard disk drive.

**CAUTION**

Always save your data even when you are using the Stand by. If your battery fully discharges, your information will be lost. Your computer can be configured to warn you when the battery is running low, see ["Power management" on page 112](#).

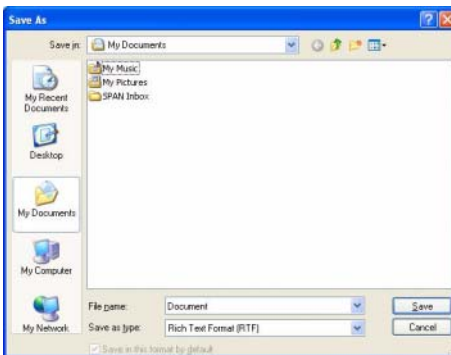
---

### Saving files

- 1 On the **File** menu of your Windows® program, click **Save**.

If you are working with a document that already has a file name, this is all you need to do. If you created a new document, your program displays a Save As dialog box.

Use this dialog box to specify where to store the document and to give it a file name.



*Sample Save As dialog box*

- 2 Choose the drive and folder where you want your file to be stored.

---

### 3 Type a file name, then click **Save**.

---



**HINT:** To make another copy of the file you are currently working with, choose **Save As** from the **File** menu and give the new file a different name.

---

The Windows® XP operating system supports file names of up to 255 characters; the names can include spaces. Some applications still require MS-DOS® file names.

## File names

If you plan to share your files with a computer using a pre-Windows® 95 version of the Windows® operating system, the file name must be no more than eight characters long. Typically the file name also has an extension, consisting of a period and up to three additional characters.

You may use all the letters and numbers on the keyboard plus these characters: `_ ^ $ ~ ! # % & { } ( ) @` and `'`. MS-DOS® file names are not case-sensitive and must not contain spaces.

## Using a file extension

Most programs assign an extension to the file name that identifies the file as being created in the program with a particular format. For example, Microsoft® Word saves files with a `.doc` extension. Any file name with an extension of `“.doc”` is assumed to be a Microsoft® Word file. Creating your own extension is usually unwise, since the program is unlikely to recognize an unusual extension and may refuse to handle your file correctly.

Many programs offer a feature that saves documents at regular intervals. Check your programs' documentation to see whether they have an automatic save feature.

---

To save:

- ❖ A file you are updating, open the program's **File** menu and click **Save**.
- ❖ A new file, choose **Save As** from the **File** menu, type a name for the file, and click **OK**.



HINT: To make another copy of the file you are currently working with, choose **Save As** from the **File** menu and give the new file a different name.

---

## Printing your work

Verify that the Windows® XP operating system is set up for your printer as described in [“Setting up your printer” on page 65](#).



TECHNICAL NOTE: You only need to set up the printer the first time you connect it. If you use more than one printer or are changing printers, you will need to set up the operating system to run with the additional printer(s).

---

To print a file:

- 1 If your printer is not on, turn it on now.
- 2 In the **File** menu of your program, click **Print**.  
The program displays a **Print** dialog box.
- 3 Click **OK** to print.



---

## Backing up your files

Backing up your files means copying individual files to media, such as CDs, or copying entire sections of your hard disk to another device, such as a tape drive.

For those systems with a writable CD-ROM drive or DVD-ROM multi-function drive, you may back up file to a writable disc as follows:

- 1 To back up to a CD or other media, insert the media into the appropriate drive.
- 2 Click **Start**, then click **My Computer**.
- 3 Click the drive that contains the file you want to copy.
- 4 Double-click the folder that contains the file, then click the file you want to copy.



HINT: You can use the Ctrl or Shift keys to select more than one file.

---

- 5 Click **File**, then click **Send To** and select the drive from the list.

## Restoring your work

To restore information from your backup media to your hard disk, use the Restore page in the backup program. Look in the online Help or your operating system documentation for information on restoring files.



TECHNICAL NOTE: When restoring files, the backup program prompts you if you try to overwrite a file that already exists on the hard disk. Make sure the backup version is the one you want before overwriting the existing file.

---

---

## Using the DVD-ROM or multi-function drive

Optical storage has become the preferred medium for software, music, and video. Digital versatile discs (DVDs) provide a significant increase in data storage and support features that are not available on any other video platform. These features include wide-screen movies, multiple language tracks, digital surround sound, multiple camera angles, and interactive menus.

For these reasons, your computer may come with a DVD-ROM or multi-function drive.



**TECHNICAL NOTE:** Your DVD-ROM or multi-function drive is set to play region 1 (North America) DVD-ROMs. If you play a DVD disc from another region, the drive will automatically change to play in the format of the other region. The drive will allow you to change regions four times. On the fourth change, the region will be "locked in." That is, the drive will only play DVDs from that last region. Note that changing from region 1 to region 2 and back to region 1 is counted as two changes.

---

### NOTE

For optimum DVD performance, it is recommended that you play DVDs while running the computer on AC power.

---

You use CD-ROMs to load and run software, and to access reference material such as catalogs, as well as listen to music. A special feature allows you to play audio CDs even when the computer is turned off.

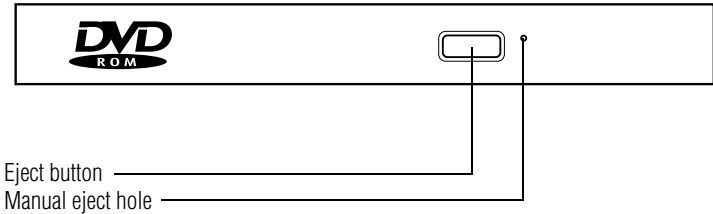
## Drive components and control buttons

The DVD-ROM or multi-function drive resides on the left side of the computer. The CD/DVD control buttons are located to the left of the keyboard and can be accessed when the display panel is open.

---

## DVD-ROM or multi-function drive components

Your DVD-ROM or multi-function drive may look like this:



*Sample DVD-ROM or multi-function drive*

---

**CAUTION**

Never press the eject button or turn off the computer while the drive-in-use indicator light is glowing. Doing so could damage the disc or the drive.

---

The eject button requires power to operate. The manual eject button does not require power.

---

**CAUTION**

Never use a pencil to press the manual eject button. Pencil lead can break off inside the computer and damage it. Instead, use a slim object such as a straightened paper clip.

---

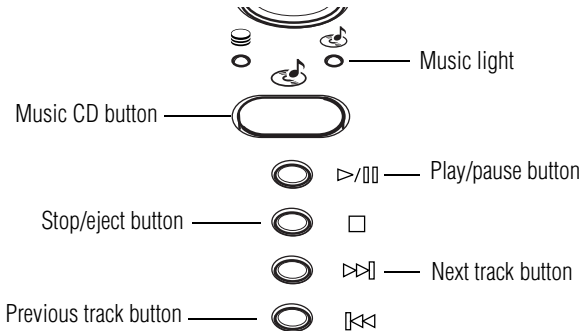


**HINT:** When the computer is off and the DVD-ROM or multi-function drive is on, press the stop/eject control button on the left side of the keyboard to eject a disc.

---

## CD/DVD control and Music CD buttons

The control buttons to the left of the keyboard let you to play audio CDs when the computer is off. You can also use them to play CDs and DVDs when the computer is on.



### *Sample CD/DVD control buttons*

The **Music CD** button activates the Media Player on your computer, and allows you to play music CDs when the computer is turned off.

If you wish to play a music CD while the computer is off:

- 1 Press the **Music CD** button.
- 2 When the Music light turns on, you may then insert a music CD into the DVD-ROM or multifunction drive.

If a CD is already in the drive, you may begin to play it using the **play/pause** button.

- 3 Use the CD/DVD control buttons to control the CD as with any typical CD player.

The **play/pause button** starts playing the disc or makes it pause if currently playing.

The **stop/eject** button stops a disc that is currently playing.

You can eject a disc by pressing the stop/eject button twice. Use this method to eject a disc when the computer is turned off and after the Music CD button has been pressed.

The **next track** button skips to the following track on the disc.

The **previous track** button returns to the preceding track on the disc.

## Inserting a disc

---

**CAUTION**

Before playing an audio CD, turn the volume down. Playing the compact disc at maximum volume could damage your ears. To turn the volume down, use the Volume Control switch or access the Volume Control program (click Start, All Programs, Accessories, Entertainment, Volume Control).

---

- 1 If the computer is turned on, press the eject button on the DVD-ROM or multi-function drive.

The disc tray partially opens.

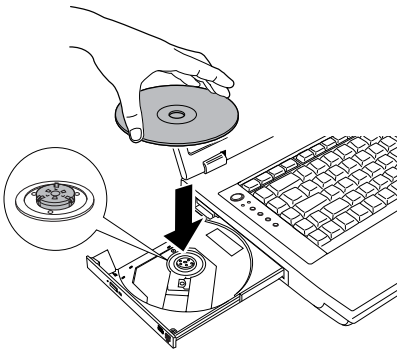
- 2 Grasp the disc tray and pull it fully open.
  - 3 Hold the disc by its edges and check that it is clean and free of dust.
- 

**CAUTION**

Handle discs carefully. Avoid touching the surface of the disc. Grasp it by its center hole and edge. If you handle the disc incorrectly, you could lose data.

---

- 4 Carefully place the disc in the empty tray with its label facing up.

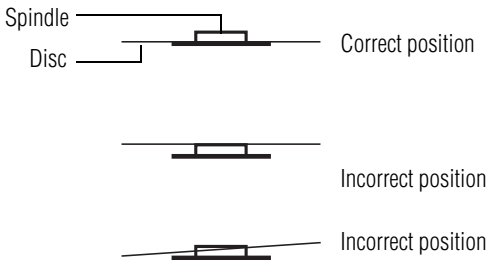


### *Sample inserting a disc*

**CAUTION**

Be careful not to touch the drive's lens (located underneath the drive's spindle) or the area around it. Doing so could cause the drive to malfunction.

- 5 Gently press the center of the disc onto the spindle until it locks into place.



### *Sample positioning the disc on the spindle*

**CAUTION**

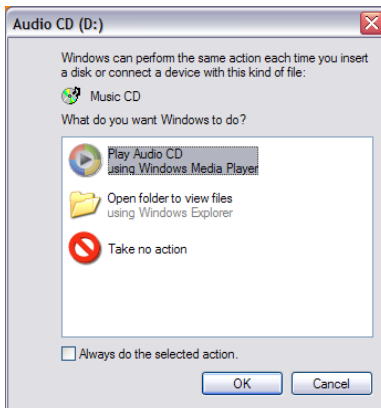
Make sure the disc is properly positioned on the spindle. If you position the disc incorrectly, it can jam the disc tray.

- 6 Close the disc tray by pressing gently on the center of the tray until it clicks indicating that it is locked.

## Playing an audio CD

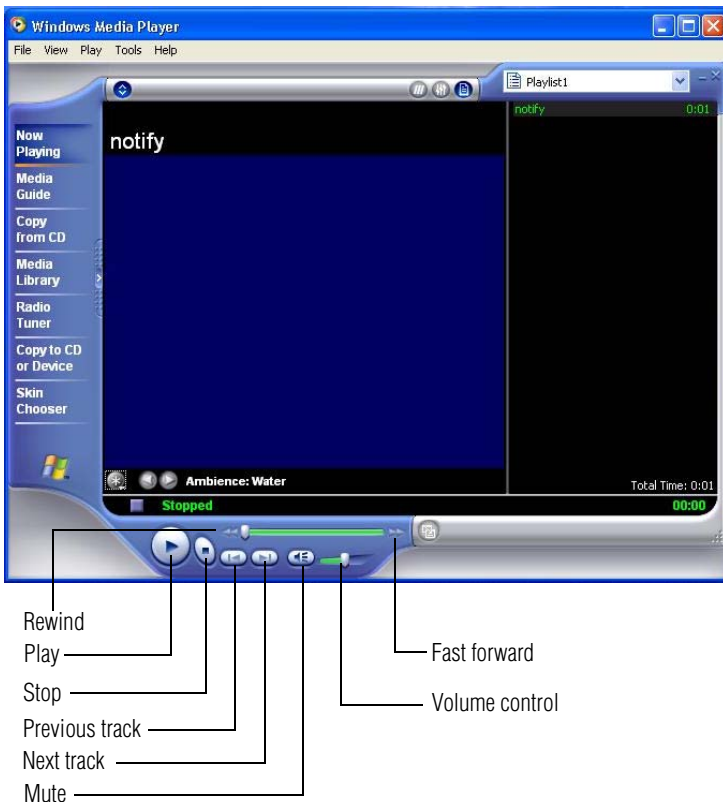
Insert an audio CD and close the disc tray.

The computer automatically detects a disc in the drive and opens the Audio CD window. To play an audio CD select the Play Audio CD using Windows Media® Player option and click **OK**.



### *Sample Audio CD window*

The Windows Media Player window appears.



### *Sample Windows Media® Player screen*

The Windows Media Player control panel works much like an ordinary compact disc player:

- ❖ To play the CD or to pause, click the **Play/Pause** button on the CD Player control panel.
- ❖ To stop the CD, click the **Stop** button.



---

## Playing CDs using Auto-Run

If you insert a CD into the DVD-ROM/multi-function drive and the Auto-Run feature does not automatically start your disk, try launching the CD manually. To do this, follow these steps:

- 1 Open the **Start** menu and select **My Computer**.
- 2 Click the DVD-ROM/multi-function drive icon.

The disk drive will run the CD.

If your disk does not run using this method, try using an application that is associated with the media on the disk. For example, if it is a music CD, open Windows® Media Player and point it to play the CD. For other types of media, use the associated software to open the files on the disk.

## Creating a CD

Your computer may come with a multi-function drive that allows you to:

- ❖ Play pre-recorded DVDs
- ❖ Play pre-recorded CDs
- ❖ Read and write data (depending on your system configuration) and music files to CD-Recordable (CD-R) and CD-Rewritable (CD-RW) discs; and read DVD-R/-RW or DVD RAM discs.

---

**NOTE** Copy protection technology included in certain media may prevent or limit recording or viewing of the media.

---

For details on how to use the software, please refer to the respective Online Help menus.

## Viewing the contents of a CD or DVD

CDs and DVDs contain files just like the hard disk. CDs are often used to install software or store files that require lots of space, such as photographs and large presentation files. You can use Explorer or My Computer to view the contents of any CD or DVD.

## Removing a disc with the computer on

---

**CAUTION**

Never press the eject button or turn off the computer while the drive-in-use light is glowing. Doing so could damage the disk or the drive.

---

- 1 Locate and press the eject button.  
The disc tray partially opens.
  - 2 Grasp the sides of the disc tray and pull it fully open.
  - 3 Remove the disc from the disc tray and place it in its protective cover.
- 

**CAUTION**

If the disc is spinning when you open the disc tray, wait for the disc to stop before removing it.

---

- 4 Close the disc tray by pressing gently on the center of the tray until it clicks indicating that it is locked.

---

## Removing a disc with the computer off

- 1 Insert a slender object, such as a straightened paper clip, into the manual eject button access hole.

---

**CAUTION**

Never use a pencil to press the manual eject button. Pencil lead can break off inside the computer and damage it.

---

- 2 Pull the tray fully open, remove the disc and place it in its protective cover.
- 3 Close the disc tray by pressing gently on the center of the tray until it clicks indicating that it is locked.

## Caring for CD or DVD discs

- ❖ Store your discs in their original containers to protect them from scratches and keep them clean.
- ❖ Never bend a disc or place heavy objects on top of it.
- ❖ Hold a disc by its outside edge. Fingerprints on the surface of a compact disc can prevent the drive from reading the data properly.
- ❖ Avoid exposing discs to direct sunlight or extreme heat or cold.
- ❖ To clean a disc, wipe it from the center outwards (not in a circle) with a clean, dry cloth. If necessary, moisten the cloth with water or a neutral cleaner (not benzine or rubbing alcohol). Let the disc dry completely before inserting it in the drive.

---

## Powering down the computer

---

**CAUTION**

Pushing the power button before shutting down the Windows<sup>®</sup> operating system could cause you to lose your work. Make sure the system indicator panel's disk light and the drive-in-use light are off. If you turn off the power while a disk is being accessed, you may lose data or damage the disk and/or drive.

---

When you power down the computer, you have three options to choose from: Turn Off, Stand By, and Hibernation.

You can set the computer to turn on automatically at a time you designate. This option is helpful for transferring files by modem at night. You can set the computer to turn on and send or receive the files while you are asleep. This option is called Auto Power On.



**TECHNICAL NOTES:** Before using any of these options to power down your computer, save your files and make sure the disk activity lights are off.

If you change your mind and decide to continue working after all, wait a few seconds before turning the computer on again.

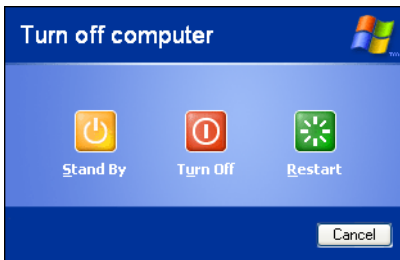
---

## Using the Turn off computer or Shut down command

For the Windows<sup>®</sup> XP Home operating system, follow these steps to shut down the computer:

- 1 Click **Start**, select **Turn off computer**.

The Turn off computer dialog box appears.



*Sample Turn off computer dialog box*

**2** Click **Turn Off**.

The computer shuts down completely.

For the Windows® XP Professional operating system, follow these steps to shut down the computer:

**1** Click the **Start** button, then **Shut down**.

The Shut Down Windows dialog box appears.

**2** Select **Shut down** from the drop-down list.

**3** Click **OK**.

The computer shuts down completely.

**NOTE**

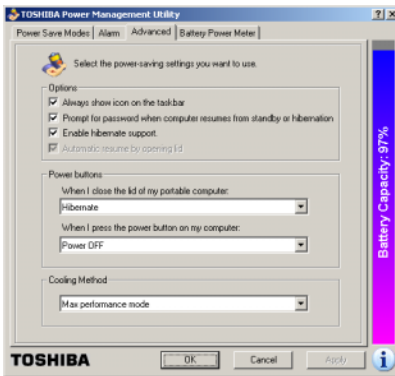
Holding the Shift key while the Turn Off computer Windows dialog box is open, changes the Stand By button to hibernate. For more information about setting up hibernation “[Using Hibernation Mode](#)” on page 103 and “[Using Hibernation](#)” on page 104.

## Shutting down more quickly

You can also turn off the computer by pressing the power button or closing the display panel.

To use either of these methods, you first need to turn on the feature in the Toshiba Power Management Utility.

- 1 Click **Start**, **Control Panel**, then **Performance and Maintenance**.
- 2 Click the **Toshiba Power Management** icon.  
The Power Options Properties dialog box appears.
- 3 Click the **Advanced** tab, and select the options you want.
  - ❖ **When I close the lid of my portable computer**  
Set this option to **Power Off** to have the computer shut down when you close the display panel.
  - ❖ **When I press the power button on my computer**  
Set this option to **Power Off** to have the computer shut down when you press the power button.



*Sample Toshiba Power Management Advanced tab*

- 4 Click **Apply**.
- 5 Click **OK**, then close the Control Panel.

## Starting again after Turn Off

To start the computer up again, press and release the power button. The on/off light turns on.

---

## Using Hibernation Mode

The Hibernation command shuts the computer down completely, but it first saves the current state of the computer to the hard disk. Since Hibernation mode does not require power to maintain the saved information, the system settings are retained indefinitely. Restoring information from the hard disk takes longer than restoring it from memory. When you start up again, the computer runs a self-test, loads the operating system, and then returns to the state in which you left it.

Factors when choosing Hibernation mode:

- ❖ While in Hibernation mode, the computer uses no battery power.
- ❖ Because the state of the system is held on the hard disk, no data is lost if the battery discharges.
- ❖ Restarting from Hibernation mode uses less time and battery power than restarting from Turn Off.
- ❖ Restarting from Hibernation mode uses a little more time and battery power than restarting from Stand by because information is being retrieved from the hard disk instead of memory.
- ❖ When starting up again, the computer returns to the state in which you left it, including all open programs and files you were using.

For more information about the Hibernation command, see [“Using Hibernation” on page 104](#). For information about going into Hibernation mode more quickly, see [“Going into Hibernation mode more quickly” on page 105](#).

---

## Configuring your computer for Hibernation

1 Open the **Start** menu, click **Control Panel**, then **Performance and Maintenance**.



2 Click the **Toshiba Power Management** icon.

3 Click the **Setup Action** tab.

4 Select **Hibernation** for the options you want.

❖ **When I press the power button**

Set this option to **Hibernate** so that the computer will go into Hibernation mode when you press the power button.

❖ **When I close the lid**

Set this option to **Hibernate** so that the computer will go into Hibernation mode when you close the display panel.

5 Click **Apply**.

6 Click **OK**.

The computer is now set to automatically enter into Hibernation when your option settings occur.

Once the computer is configured, place the computer into Hibernation mode by either pressing the power button or closing the display panel, depending on the hibernation options selected.

## Using Hibernation

Follow these steps to power down the computer using Hibernation:

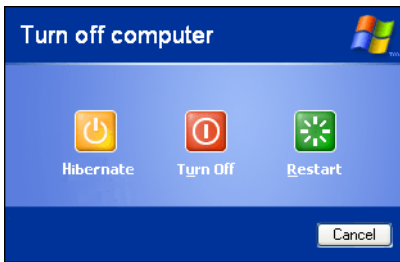
1 Click **Start**, select **Turn off computer**.

The Turn off computer dialog box appears.

2 Hold down the Shift key.

The Stand by option changes to the Hibernation option.





*Sample Turn off computer dialog box*

### 3 Click **Hibernate**.

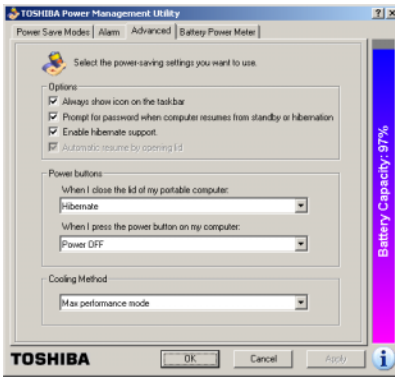
The computer saves the mode of the system, including all open programs and files, to the hard disk, and then powers down completely.

## Going into Hibernation mode more quickly

You can also put the computer into Hibernation mode by pressing the power button or closing the display panel.

- 1 Click **Start, Control Panel**, then **Performance and Maintenance**.
- 2 Click the **Toshiba Power Management** icon.
- 3 Click the **Advanced** tab, and select the options you want.
  - ❖ **When I press the power button**  
Set this option to **Hibernation** for the computer to go into Hibernation mode when you press the power button.
  - ❖ **When I close the lid**  
Set this option to **Hibernation** for the computer to go into Hibernation mode when you close the display panel.





*Sample Toshiba Power Management Advanced tab*

- 4 Click **Apply**.
- 5 Click **OK**, then close the Control Panel.

## Starting again from Hibernation mode

To start the computer from Hibernation mode, press and release the power button. The computer returns to the screen you were using.

If you put the computer in Hibernation mode by closing the display panel, you can start it again by opening the display panel.

### NOTE

If your computer is running on batteries, you cannot start it again by opening the display panel. To turn the system back on, press the Power button.

---

## Using Standby Mode

Standby mode places the computer into a power-saving mode. Standby holds the current state of the computer in memory so that, when you restart the computer, you can continue working from where you left off.

Factors to consider when choosing Standby:

- ❖ While in Standby mode, the computer uses some battery power. The battery will eventually discharge in Stand by mode. If the battery discharges, your data will be lost if you do not save your work before entering Standby mode.
- ❖ Restarting from Standby mode uses less time and battery power than restarting from Turn Off or Hibernation mode.
- ❖ When starting up again, the computer returns to the mode in which you left it, including all open programs and files you were using.

---

**CAUTION**

If you power down using the Standby and the battery discharges fully, your information will be lost. Be sure to save your work first.

---

To power down the computer using the Standby command, click **Start, Turn off computer**, and select **Stand By**.



*Sample Turn off computer Windows dialog box*

**NOTE**

If you hold down the Shift key, Stand By becomes Hibernate in the Turn off computer dialog box. To enter hibernation mode, you must hold down the Shift key while you select Hibernate.

The computer saves the status of all open programs and files, turns off the display, and enters into a low-power mode. The on/off light blinks amber, indicating the machine is in Standby mode.

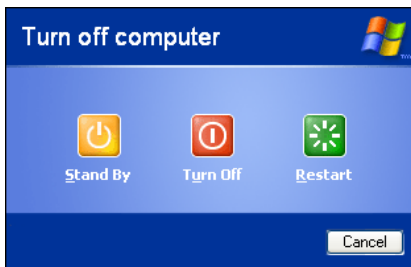
## Using Standby

Follow these steps to power down the computer using the Stand by:

- 1 Click **Start**, select **Turn off computer**.

The Turn off computer box appears.

- 2 Click **Stand By**.



*Sample Turn off computer dialog box*

The computer saves the status of all open programs and files to memory, turns off the display, and goes into a low-power mode. The on/off light blinks to indicate the machine is in Stand by mode.

**CAUTION**

If you power down using the Stand by and the battery discharges fully, your information will be lost. Be sure to save your work first.

## Going into Standby mode more quickly

You can also configure the computer to enter into Standby mode by either pressing the power button or closing the display panel. You can also specify an amount of time after which the computer automatically enters into Standby mode.

To use any of these methods, you first need to enable them in Toshiba's Power Management utility.

- 1 Open the **Start** menu, click **Control Panel**, then **Performance and Maintenance**.
- 2 Click the **Toshiba Power Management** icon.
- 3 Click the **Setup Action** tab.
- 4 Select **Stand by** for the options you want.
  - ❖ **When I press the power button**  
Set this option to **Standby** to put the computer into Standby mode when you press the power button.
  - ❖ **When I close the lid**  
Set this option to **Standby** to put the computer into Standby mode when you close the display panel.
- 5 Click **Apply**.
- 6 Click **OK**.

## Starting again from Standby mode

To restart the computer from Standby mode, press the power button until the on/off light changes to green. The computer returns to the screen you were previously using.

If you place the computer in Standby mode by closing the display panel, you can start it again by opening the display panel.

## Toshiba's online resources

Toshiba maintains a number of online sites to which you can connect. These sites provide information about Toshiba products, give help with technical questions, and keep you up to date with future upgrades. For more information, see [“Contacting Toshiba” on page 182](#).

# Chapter 3

## Mobile Computing

---

This chapter covers all aspects of using your computer while traveling.

### **Toshiba's energy-saver design**

Your computer enters a low-power standby mode when it is not being used, thereby conserving energy and saving money in the process. It has a number of other features that enhance its energy efficiency.

Many of these energy-saving features have been set by Toshiba. We recommend you leave these features active, allowing your computer to operate at its maximum energy efficiency, so that you can use it for longer periods while traveling.

### **Running the computer on battery power**

The computer contains a removable Lithium-Ion (Li-Ion) high-capacity battery that provides power when you are away from an AC outlet. You can recharge it many times.

## Battery Notice

Battery life may vary depending on applications, power management settings and features utilized. Recharge time varies depending on usage. The battery may not charge while the computer is consuming full power.

After a period of time, the battery will lose its ability to perform at maximum capacity and will need to be replaced. This is normal for all batteries. To purchase a new battery pack, see your accessories information that shipped with your computer, or to stay current on the most recent software and hardware options for your computer, and for other product information, regularly check the Toshiba Web site at [accessories.toshiba.com](http://accessories.toshiba.com).

To ensure that the battery maintains its maximum capacity, operate the computer on battery power at least once a month until the battery is fully discharged. Please see “[Maximizing battery life](#)” on page 126 for procedures. If the computer is continuously operated on AC power, either through an AC adapter or a docking station (if applicable to your system), for an extended period (more than a month) the battery may fail to retain a charge. This may shorten the life of the battery, and the battery light may not indicate a low-battery condition.

---

**NOTE**

For optimum DVD performance, Toshiba recommends that you play DVDs while running on AC power rather than on battery power.

---

## Power management

Your computer ships with the power management options preset to a configuration that will provide the most stable operating environment and optimum system performance for both AC power and battery modes.



---

---

**CAUTION**

Changes to these settings may result in system performance or stability issues. Users who are not completely familiar with the power management component of the system should use the preset configuration. For assistance with setup changes, contact Toshiba's Global Support Centre.

---

## Using additional batteries

If you spend a lot of time traveling and need to work for many hours without an AC power source, you may want to carry additional charged batteries with you. You can then replace a discharged battery and continue working.

---

**NOTE**

Over a period of time, and depending on the usage of the computer, the brightness of the LCD Screen will deteriorate. This is an intrinsic characteristic of LCD technology.

Screen will dim when the computer is operated on battery power and you may not be able to increase the brightness of the screen.

---

## Charging the batteries

---

**NOTE**

Battery charge time may vary depending on the applications, power management settings, and features used.

---

The battery needs to be charged before you can use it to power the computer.

To charge the battery, plug the computer into a live wall outlet. It takes several hours to charge the battery with the computer off. It takes much longer to charge the battery while the computer is on.

**CAUTION**

Never leave batteries in the battery charger for more than a week at a time. Doing so may reduce the potential charge of the battery.

Use only battery chargers designed to work with your notebook computer. You can order a Toshiba battery charger from Toshiba's Web site at [accessories.toshiba.com](http://accessories.toshiba.com).

## Charging the main battery

To charge the battery, plug the computer into a live wall outlet. It takes several hours to charge the battery with the computer off. It takes much longer to charge the battery while the computer is on.



**TECHNICAL NOTE:** When your computer is using all of the power provided by the AC adapter to run applications, features, and devices, the recharging of the battery cannot occur. Your computer's Power Management utility can be used to select a power level setting that reduces the power required for system operation and will allow the battery to recharge.

The battery may not start charging immediately if:

- ❖ The battery is extremely hot or cold.

To ensure that the battery charges to its full capacity, wait until it reaches room temperature (50 to 80 degrees Fahrenheit, 10 to 26 degrees Celsius).

- ❖ The battery is almost completely discharged.

---

Leave the power connected, and the battery should begin charging after a few minutes.

---



HINT: Once the battery is fully charged, we recommend that you operate your computer on battery power until the battery discharges completely. Doing this extends battery life and helps ensure accurate monitoring of battery capacity.

---

## Charging the RTC battery

Your computer has an internal real-time clock (RTC) battery. The RTC battery powers the System Time Clock and BIOS memory used to store your computer's configuration settings. When fully charged it maintains this information for up to a month when the computer is powered off.

The RTC battery may have become completely discharged while your computer was shipped, resulting in the following error message during startup:

```
BAD RTC BATTERY  
BAD CHECKSUM (CMOS)  
CHECK SYSTEM
```

---

**NOTE** The above error message may vary by computer model.  
The RTC battery does not charge while the computer is turned off even when the AC adapter is charging the computer.

---

If the RTC battery is low, the real-time clock and calendar may display the incorrect time and date, or stop working.

**NOTE**

It is seldom necessary to charge the RTC battery because it charges while the computer is on. If the RTC battery is low, the real-time clock and calendar may display the incorrect time and date or stop working.

When Hibernation mode is enabled and the RTC battery is completely discharged, a warning prompts you to reset the real-time clock.

The computer can be used while the RTC battery is being charged, although the charging status of the RTC battery cannot be monitored.



## Monitoring battery power



The battery light indicates the battery's current charge. The indicator light:

- ❖ Green indicates the AC adapter has fully charged the battery.
- ❖ Amber indicates the AC adapter is charging the battery.
- ❖ Off indicates that the computer is not connected to AC power.
- ❖ Flashing amber indicates that the computer is using battery power, and the battery's charge is running low.



**HINT:** Be careful not to confuse the battery light (  ) with the on/off light (  ). When the on/off light flashes amber, it indicates that the system is suspended (using Windows® XP Standby command).

## Determining remaining battery power

**NOTE**

Wait at least 16 seconds after turning on the computer before trying to monitor the remaining battery power. The computer needs this time to check the battery's remaining capacity and perform its calculations.

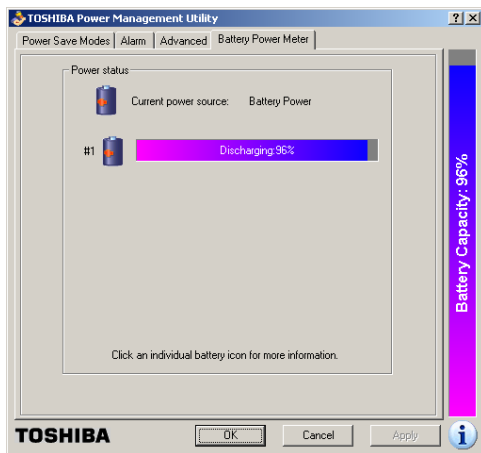
- 1 Click **Start, Control Panel**, then **Performance and Maintenance**.



- 2 Click the **Toshiba Power Management** icon.

The current power source and battery power remaining section displays the current charge state of the battery. The value displays as a percentage of remaining battery charge.

- 3 Click the **Battery Power Meter** tab.



*Sample Toshiba Power Management Battery Power Meter tab*



**TECHNICAL NOTE:** The computer drains the battery faster at low temperatures. Check your remaining charge frequently if you are working in temperatures below 50 degrees Fahrenheit.

The computer calculates the remaining battery charge based on your current rate of power use and other factors such as the age of the battery.

## What to do when the battery runs low

When the battery runs low you can:

- ❖ Plug the computer into an external power source and recharge the battery.
- ❖ Put the computer in Hibernate mode and replace the battery with a charged spare.
- ❖ Save your work and turn off the computer.

If you do not manage to do any of these things before the battery completely runs out of power, the computer automatically enters Hibernate mode and turns itself off. Hibernate mode keeps track of where you were so, when you turn on the power again, you can continue where you left off.

The computer stores the information on what you were doing until the battery runs out of power. If you have Hibernate mode enabled (the default), the computer copies the details of your open programs and files to the hard disk before shutting down.

## Setting battery alarms

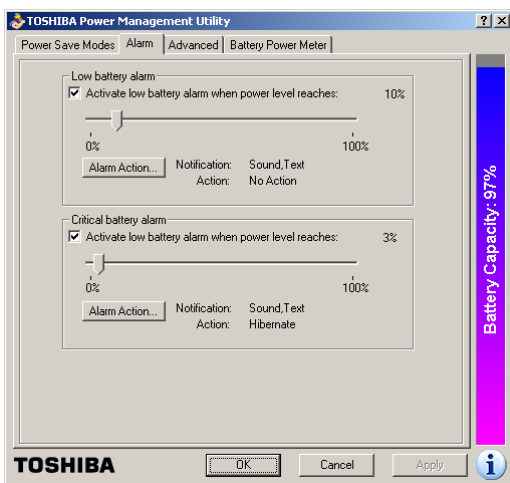
Your computer can be configured to warn you when the battery is running low.

You can set multiple alarms. Each alarm can be set to alert you when a specified percentage of remaining battery power has been reached. You can set how the warning occurs: sound

an alarm, display a message, both, or none. You can also set the computer to enter Standby mode or Hibernate mode or to completely power down when the alarm goes off.

To set an alarm:

- 1 Click **Start, Control Panel**, then **Performance and Maintenance**.
- 2 Click the **Toshiba Power Management** icon.
- 3 Click the **Alarm** tab and set the alarm, as desired.



*Sample Toshiba Power Management Alarm tab*

## Conserving battery power

How long a fully charged battery lasts when you are using the computer depends on a number of factors, such as:

- ❖ How the computer is configured
- ❖ How much you use the display panel instead of an external monitor
- ❖ How much you use the hard disk and other drives

- 
- ❖ Whether you use any optional devices to which the battery supplies power, such as a PC Card
  - ❖ Where you are working—since operating time decreases at low temperatures

There are various ways in which you can conserve power and extend the operating time of your battery:

- ❖ Enable Standby or Hibernation, which saves power when you turn off the computer and turn it back on again.
- ❖ Use Toshiba's power-saving options.

These power-saving options control the way in which the computer is configured. By using them, you can greatly increase the length of time you can use the computer before you need to recharge the battery.

Toshiba has combined these options into preset power usage modes.

## Power profiles in Windows XP

In Windows® XP, you can choose from predefined power profile or select your own combination of power management options. The following steps describe this procedure.

---

### NOTE

If you try to use the power management feature in Windows, a message tells you to close the Microsoft power options and use the Toshiba Power Management instead.

---

- 1 Open the **Start** menu, click **Control Panel**, then **Performance and Maintenance**.
- 2 Click on the **Toshiba Power Management** icon.
- 3 Select an appropriate profile for your work environment, or create your own custom profile.



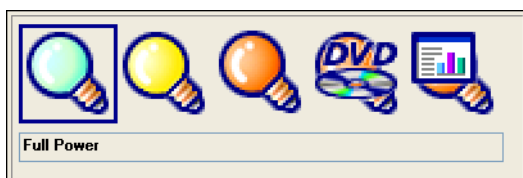


## Using a hot key to set the power profile

You may use a hot key to set the power profile.

To set the power profile:

- 1 Press Fn and F2 simultaneously to display the power profile pop-up window.



*Sample Power Profile mode pop-up window*

- 2 While continuing to press Fn, press F2 until you select the desired power profile.

The power profile options are: Full Power, High Power, Normal, DVD Playback, Presentation, and Long Life.

- 3 Release the Fn key.

The pop-up window disappears. You are now in the selected mode.

---

## Changing the main battery

When your battery power is running low, you have two options—connect the computer to an AC power source or install a charged battery.

---

**CAUTION**

When handling a battery, be careful not to drop it or short-circuit its terminals. Also, do not drop, hit or otherwise impact the battery. Do not scratch or break the casing and do not twist or bend the battery pack.

Do not remove the battery pack while the computer is in Standby mode. Data in memory will be lost.

---

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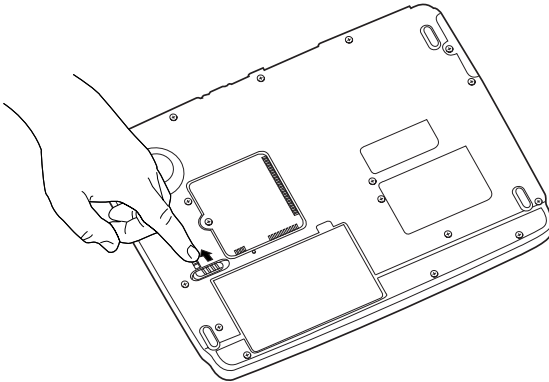
**CAUTION**

If your battery discharges fully, your information will be lost. Be sure to save your work often.

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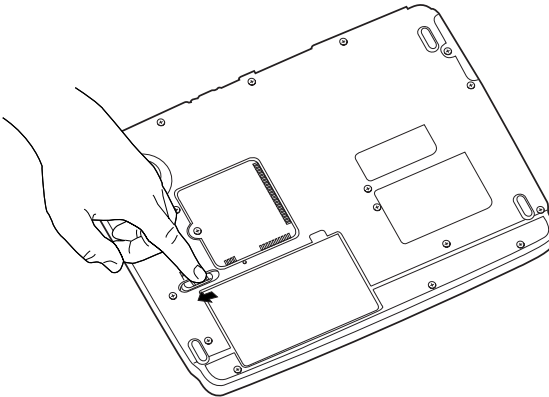
## Removing the battery from the computer

- 1 Save your work.
- 2 Turn off the computer via the **Start** menu or place it in Hibernate mode according to the instructions in [“Using Hibernation” on page 104](#).
- 3 Remove all cables connected to the computer.
- 4 Close the display panel and turn the computer upside down with the front side of the computer facing you.
- 5 Slide the battery lock toward the back of the system to unlock the battery pack.



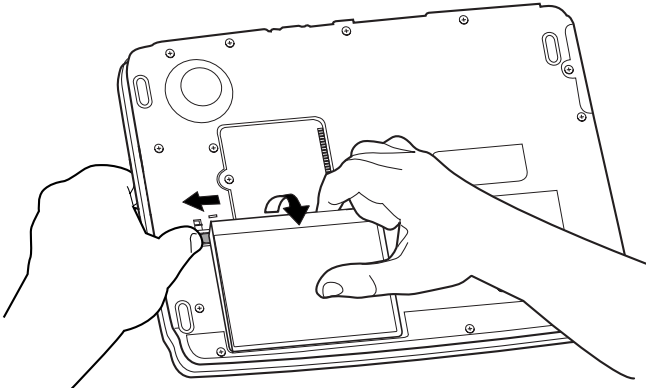
*Sample unlocking the battery*

- 6** Push and hold the battery release latch.



*Sample releasing the battery*

- 7** While still holding the release latch in the open position gently lift the battery pack out of the computer.



*Sample removing the battery*

---

**⚠ WARNING**

If the battery is leaking or its case is cracked, put on protective gloves to handle it, and discard it immediately following the advice in [“Disposing of used batteries safely”](#) on page 127.

---

## Inserting the battery into the computer

Assuming you just removed the battery pack (see [“Removing the battery from the computer”](#) on page 122):

- 1 Place the battery pack in the battery compartment.
- 

**⚠ CAUTION**

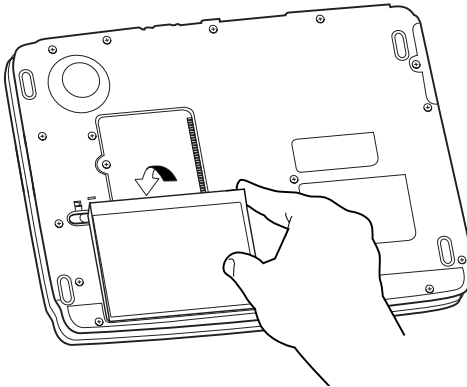
If the battery does not slide into the slot easily, move the battery release lock to the unlocked position and try again. Do not force the battery into position.

---

- 2 Ensure the battery release latch clicks into place.
- 3 Slide the battery release lock to the locked position.
- 4 Turn the computer right side up.
- 5 Reconnect the cables and turn on the computer.

---

The battery pack has been designed so that you cannot install it with reverse polarity.



*Sample inserting battery*

---

**NOTE**

When you replace your battery, slide the battery lock towards you to lock the battery pack.

---

## Taking care of your battery

The following sections offer tips on how to take care of your battery and prolong its life.

### Safety precautions

- ❖ If the battery pack produces an odor, overheats or changes color or shape while it is being used or charged, turn off the computer's power immediately and disconnect the power cord from the power socket. Carefully remove the battery pack from the computer.
- ❖ Do not try to disassemble a battery pack.
- ❖ Do not overcharge or reverse charge a battery. Overcharging will shorten its life, and reverse charging could damage it.

- ❖ Avoid touching the metal terminals of the battery with another metal object. Short-circuiting the battery can cause it to overheat and may cause damage to the battery or the computer.
- ❖ Do not incinerate a spent battery, as this could cause it to explode and release toxic materials.
- ❖ If a battery is leaking or damaged, replace it immediately. Use protective gloves when handling a damaged battery.
- ❖ To replace the main battery, use an identical battery that you can purchase through [accessories.toshiba.com](http://accessories.toshiba.com).
- ❖ Reverse Polarity should be avoided with all batteries. The main battery is designed so that it cannot be installed in reverse polarity.
- ❖ Charge the battery pack only in the computer.
- ❖ When you install the battery pack, you should hear a click when it is inserted properly.
- ❖ Do not expose the battery pack to fire. The battery pack could explode.

## Maximizing battery life

To maximize the life of your battery pack:

- ❖ At least once a month, disconnect the computer from a power source and operate it on battery power until the battery pack fully discharges. Before doing so, follow the steps below:
  - 1 Turn off the computer's power.
  - 2 Disconnect the AC adapter and turn on the computer's power. If it does not turn on, go to step 4.
  - 3 Operate the computer on battery power for five minutes. If the battery pack has at least five minutes of operating time, continue operating until the battery pack is fully discharged. If the battery light flashes or there is some other warning to indicate a low battery, go to step 4.

- 4 Connect the AC adapter to the computer and the power cord to a power outlet. The DC-IN or AC power-light should glow green, and the battery should glow amber to indicate that the battery pack is being charged. If the DC-IN or AC power-light indicator does not glow, power is not being supplied. Check the connections for the AC adapter and power cord.
- 5 Charge the battery pack until the battery glows green.
  - ❖ If you have extra battery packs, rotate their use.
  - ❖ If you will not be using the system for an extended period, more than one month, remove the battery pack.
  - ❖ Disconnect the AC adapter when the battery is fully charged. Overcharging makes the battery hot and shortens life.
  - ❖ If you are not going to use the computer for more than eight hours, disconnect the AC adapter.
  - ❖ Store spare battery packs in a cool dry place out of direct sunlight.

## Disposing of used batteries safely

The life of a battery pack should last for years. When the battery pack needs replacing, the main battery light flashes amber shortly after you have fully recharged the battery.

You must discard a battery if it becomes damaged.

---

**⚠ WARNING**

The computer's main battery is a Lithium-Ion (Li-Ion) battery, which can explode if not properly replaced, used, handled, or disposed of. Putting spent batteries in the trash is not only irresponsible, it may be illegal. Dispose of the battery as required by local ordinances or regulations.

Use only batteries recommended by Toshiba.

---

After repeated use, the batteries will finally lose their ability to hold a charge and you will need to replace them. Under federal, state and local laws, it may be illegal to dispose of old batteries by placing them in the trash.

Please be kind to our shared environment. Check with your local government authority for details regarding where to recycle old batteries or how to dispose of them properly. If you cannot find the information you need elsewhere, call Toshiba at: (800) 457-7777.

## Traveling tips

The environmental precautions listed in [“Selecting a place to work” on page 40](#), also apply while traveling.

- ❖ Never leave your computer on a sunny ledge or in a place where it could get wet or covered in dust.
- ❖ Always travel with the computer in a carrying case. Toshiba offers a choice of carrying cases for the computer. They all provide plenty of extra space for manuals, power cables, and compact discs. Contact your authorized Toshiba representative for more information.



**TECHNICAL NOTE:** When traveling by air, you may be required to pass your notebook through airport security equipment. The X-ray equipment will not harm your computer.

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# Chapter 4

## Exploring Your Options

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In this chapter, you will explore other features of your notebook computer.

In this chapter, you will explore some of the special features of your Satellite® Series notebook computer.

### Exploring the desktop

The desktop is the launching pad for everything you can do in the Windows® XP Home or XP Professional operating system. You use its features to start programs, find documents, set up system components, and perform most other computing tasks.



**HINT:** The illustrated examples in this guide may appear slightly different from the screens displayed by your system. The differences are not significant and do not indicate any change in the functionality of your system.

---

## Finding your way around the desktop

Your computer's desktop includes several standard features: icons, Start button, taskbar, system tray, and background pattern.



*Sample Windows® XP operating system desktop*

### Icons

An icon represents a folder, file, or program that can be quickly activated by double-clicking the icon.

You can create a new desktop icon for any folder, file, or program by dragging the element's icon from its location in a window to the desktop area.

The icons initially displayed on your system desktop include:



---

Recycle Bin — Holds files you have deleted. You may be able to retrieve these files until you empty the Recycle Bin.



---

**TECHNICAL NOTE:** If you delete a file from a diskette, it does not go into the Recycle Bin. For more information on the Recycle Bin, see Windows online Help.



---

Internet Explorer — The Microsoft® browser that provides access to the Internet.

---

**NOTE**

If you place the cursor over an icon, a popup description of the file contents appears.

---

Your desktop may contain other icons depending on your configuration. See Windows® XP online help for more specific information on each icon and how to use it.

## Start button

You use the Start button to:

- ❖ Start programs
- ❖ Access Microsoft® Windows® XP operating system update information
- ❖ Open documents
- ❖ Adjust system settings
- ❖ Find files
- ❖ Access Windows® Help
- ❖ Run programs
- ❖ Suspend system activity and shut down the computer

---

## Taskbar

Each time you open a program, a button associated with that program appears on the taskbar. With some programs, a button appears on the taskbar for each document or window you open. You can use these buttons to quickly switch between the programs or windows.

To make a program or window the currently active one, click the associated taskbar button.

You can personalize the taskbar to include not only shortcut icons but also your favorite Internet URL addresses.



DEFINITION: URL stands for Uniform Resource Locator, which is the address that defines the route to a file on the Web or any other Internet facility. Generically, it is known as the Web site address.

---

## System tray

The System tray displays icons of tasks or programs that run continuously in the background. To learn more about each task, position the cursor over the icon for a few moments and a short description of the task appears.

Typical tasks in the System tray are Current time, Power usage mode, Mouse properties, and speaker volume.

To activate a specific task, double-click the appropriate System tray icon.

---

## Setting up for communications

Your computer comes with a built-in modem that can be connected to a standard voice-grade telephone line.

The modem allows you to:

- ❖ Access the Internet.
- ❖ Communicate with your office's local area network (LAN), or a larger corporate wide area network (WAN).

For specific information about connecting to a LAN or WAN, consult your network administrator.

- ❖ Send a fax directly from your computer.

To connect to the Internet, use an online service, or communicate across telephone lines with another computer, you need:

- ❖ A modem (one comes with your computer)
- ❖ A telephone line
- ❖ A browser or communications program
- ❖ An Internet Service Provider (ISP) or online service if you plan to use the Internet

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### NOTE

To stay current on the most recent software and hardware options for your computer, and for other product information, be sure to regularly check the Toshiba Web site at [accessories.toshiba.com](http://accessories.toshiba.com).

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## Determining the COM port

Your modem is connected to one of the computer's COM (communications) ports. The default setting for the modem is COM3.

The following procedure is intended to support you if you need to either upgrade your modem or reset the port to the default settings.

If you are having trouble connecting through the modem, you may need to determine the current COM port name and possibly change it.

To find out which port your modem is connected to in the operating system:

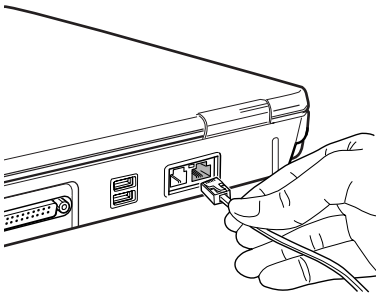
- 1** Click **Start, Control Panel**, then **Printers and Other Hardware**.
- 2** Click **Phone and Modem options**.
- 3** The Phone and Modem options window appears.
- 4** Click the **Modems** tab.  
A location box appears.
- 5** In the **Attached To** field, the COM port is specified.
- 6** Make a note of the COM port number.
- 7** To verify that the modem is set up properly, double-click the COM port to which your modem is connected.  
The Modem AMR Properties box appears.
- 8** In the device status area, the computer should indicate whether the modem is working properly.
- 9** If the modem is not working properly, click **Troubleshooting** and follow the instructions.
- 10** Click **OK** to close the properties box, then the Phone and Modem options box.
- 11** Close the Control Panel.

---

## Connecting the modem to a telephone line

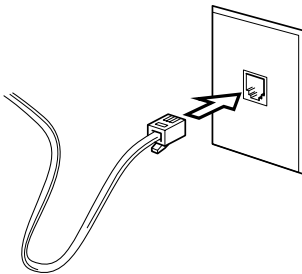
Before you can communicate using the modem, you need to connect it to a telephone line. Your computer's built-in modem port provides an RJ-11 jack, allowing you to connect the modem to a standard voice-grade telephone line.

- 1 Plug one end of a telephone cable (purchased separately) into the modem port on the back of the computer.



*Sample connecting the telephone cable to the modem port*

- 2 Connect the other end to the RJ-11 wall jack.



*Sample connecting to a wall jack*

---

**CAUTION**

The modem is designed for use with a standard analog telephone line. Do not connect the modem to a digital telephone line. A digital line will damage the modem.

---

---

Now you are ready to send a fax or use the modem to connect to an online service or the Internet.

## Connecting your computer to a network

You can connect your computer to a network to increase its capabilities and functionality using one of its communication ports.

### Accessing a network

To access a network:

- ❖ At the office, connect an Ethernet cable to the RJ-45 jack on your computer. For specific information about connecting to the network, consult your network administrator.
- ❖ While you are at home or traveling, you may need a dial-up connection. Ask your network administrator for the telephone number of the network.

### Setting up the connection

To set up an office connection, consult your network administrator for network settings and additional considerations.

To use a dial-up connection, have your network administrator configure your computer for the network and supply you with the telephone number for the dial-up connection. To set up the network connection, use the Dial-Up Networking Wizard:

- 1** Click **Start** and point to **All Programs**.
- 2** Point to **Accessories**, then to **Communications**.
- 3** Click **Network Setup Wizard** or **Network Connections**.
- 4** Enter the phone number of your network connection and let the program dial the number.

The computer connects with the network.



---

## Using the Ethernet LAN Port

When your computer starts, Windows attempts to contact a Dynamic Host Configuration Protocol (DHCP) server. If the computer is not connected to a network, it may pause a few minutes as it waits for a reply. To avoid this delay, you can reconfigure Windows to disable the LAN port.



TECHNICAL NOTE: You can also use ConfigFree to reconfigure Windows to disable the LAN port. For procedures, see [“Using ConfigFree™ with your Toshiba Computer”](#) on page 195.

---

To disable the LAN port:

- 1 Click **Start**, click **Control Panel**, then **Performance and Maintenance**.
- 2 Click the **System** icon, then click the **Hardware** tab, and then click the **Device Manager** button.
- 3 Select the appropriate network adapter.
- 4 Click **Actions**.
- 5 Select the **Properties** icon.
- 6 Select the **Do not use this device (disable)** option from the **Device usage** drop-down.
- 7 Click **OK**.

Your LAN port is now disabled.

To enable the Ethernet LAN port, repeat steps one through four. Select the **Use this device (enable)** check box, and click **OK**.

---

## Using Wireless LAN Connectivity

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**NOTE**

The transmission speed over the wireless LAN and the distance over which wireless LAN can reach may vary depending on surrounding electromagnetic environment, obstacles, access point design and configuration, and client design and software/hardware configurations.

---

Your system may come with an optional wireless LAN module. This is a technology that expands wireless communication beyond networking equipment, and can connect many different kinds of electronic devices without the need for cables.

For information on how to set up a wireless connection, refer to your wireless networking device documentation or your network administrator.

To use your wireless communication, flip the wireless antenna on/off switch to the On position.

### Using the Wi-Fi® Wireless LAN Mini PCI module

Your computer may have an integrated Wi-Fi Wireless LAN Mini PCI module. It is recommended that you do not remove the module from your computer. For assistance, contact a Toshiba Wireless Authorized Service Partner.

For systems equipped with Wi-Fi, flip the wireless on/off switch to the On position.

---

**NOTE**

To enable a wireless device, use the Fn + F8 hot key (refer to [“Enabling a wireless device”](#) on page 192 for more information).

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## An overview of using the Internet

The following sections give a quick introduction to the Internet and some of its exciting features, under these headings:

- ❖ The Internet
- ❖ The World Wide Web
- ❖ Internet Service Providers
- ❖ Connecting to the Internet
- ❖ Surfing the Internet
- ❖ Internet features
- ❖ Uploading and downloading files from the Internet

### The Internet

The Internet is an association of thousands of networks and millions of computers around the world connected by communications lines. They all work together to share information.

### The World Wide Web

The World Wide Web (or “Web”) is a subset of the Internet—a collection of interlinked documents (located on computers connected to the Internet) that work together using a specific Internet protocol called Hypertext Transfer Protocol (HTTP).

The World Wide Web offers information as text, images, audio, or video to be referenced from anywhere in the world. Special programs called Web browsers are specifically designed to work with HTTP. They make it easier to connect to a particular network address and send and receive information.

---

## Internet Service Providers

To connect a computer directly to the Internet, many people and businesses use an Internet Service Provider (ISP). An ISP is a company that has the equipment and the telecommunication lines necessary to maintain an Internet connection.

You can connect to the Internet by using a telephone and modem or through other higher-speed communication methods such as Digital Subscriber Lines (DSL), cable, and satellite links.

## Connecting to the Internet

To connect to the Internet, you need:

- ❖ A modem and telephone line, or a LAN connection
- ❖ A Web browser
- ❖ An Internet Service Provider (ISP) account

The Microsoft® Web browser Internet Explorer is automatically configured on your system so that when you first start it, it guides you through signing up for a new ISP account, or assists you in setting up your computer to work with your existing ISP.

Once you have established an ISP account, you can connect to the Internet.

- 1 Connect your computer's modem to a telephone line.
- 2 Start your Web browser. Have your modem dial the ISP's telephone number, and establish a connection with the ISP's computer.



If you are using your computer at the office, then you probably connect to the Internet through your company's network. See your network administrator about connecting to the Internet.

---

## Surfing the Internet

Once connected to the Internet, the Web browser displays a home page, for example, your ISP's home page on the Internet or your company's Web site home page.

To visit a desired Web site, type the Web address. The Web address, or Uniform Resource Locator (URL), is a unique identifier for that computer system linked to the Internet. Web addresses can also appear within a Web page's text, and are known as links. Clicking a link automatically transfers your Web browser to that site.

You can also use a Search Engine, a Web site specifically designed to help you look for information.

## Internet features

The Internet offers many types of communication tools to help you perform many tasks.

### ❖ Internet email

To send and receive your own email, you need a mailbox on the Web or an email address.

If you have an account with an ISP, you can probably set up an email address at the same time you sign up for the service.

### ❖ Internet chat rooms

A chat room is a Web site that offers a place where people with similar interests and ideas communicate in real-time, one-on-one or in groups, by typing messages which are instantly viewed by others on their computer screens.

### ❖ Internet news groups

A news group is similar to a chat room, but instead of using a dedicated site to converse about a specialized subject with others in real-time, it uses a Web site as a clearinghouse where all the messages are placed, like a gigantic bulletin board.

❖ Online shopping

Many Web sites offer products and services for sale.

## Uploading and downloading files from the Internet

Transferring files from one computer to another is termed uploading (transferring data from your computer to a site on the Web), or downloading (transferring data from a site on the Web to your computer).

There are several ways to upload or download data. It can be as simple as attaching a file or document to an email, or you can use the File Transfer Protocol (FTP) features of your Web browser to transfer large amounts of data.

## Exploring video features

Your computer's video features provide the viewing of presentations or DVD movies on the computer screen.

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TECHNICAL NOTE: Video CD playback capability is not enabled on all systems.

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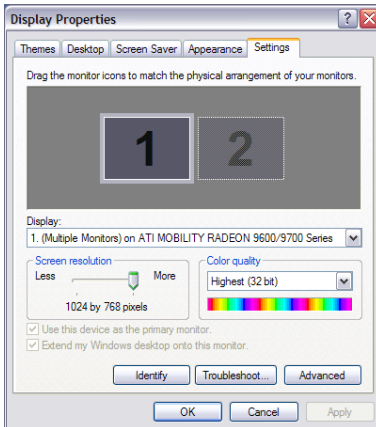


HINT: There are no menus for Video CD 1.0 titles.

---

## Changing the display properties setting

- 1 Right-click anywhere on your desktop and select **Properties**.  
The Display Properties dialog box appears.



*Sample Display Properties dialog box*

- 2 Click the **Settings** tab.
- 3 Slide the Screen area slider bar toward **Less** until the setting reads **800 x 600**, then click **Apply**.  
The screen blinks momentarily while the settings are adjusted. The Monitor Settings window appears and asks if you want to keep the settings.
- 4 Click **Yes**.
- 5 To change the settings back, repeat steps 2 through 4.

### Display settings hot key

Using the Fn + F5 keys, you can set your system's display to view DVD movies or presentations on an external device. For more information, see "[Display modes](#)" on page 191.

---

## Exploring audio features

You can use your computer to record sounds using an external microphone. You can play .wav sound files or audio CDs using the built-in speakers, headphones or external speakers.

### Recording sounds

You can make audio recordings and save them as .wav files by connecting an external microphone or other sound source to the microphone jack and using the Sound Recorder feature in the operating system.



**DEFINITION:** A .wav (pronounced “wave”) file is a format for storing sound in files.

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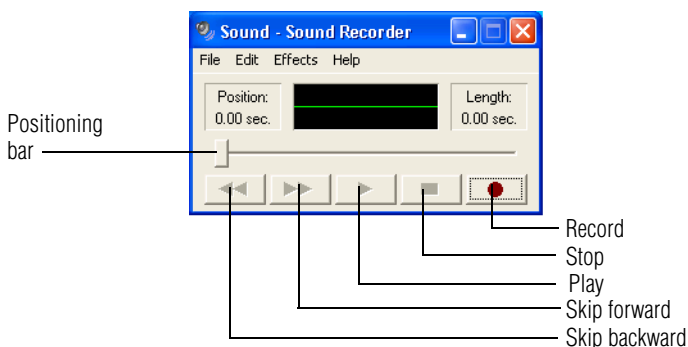
**TECHNICAL NOTE:** If you record MP3 files, you will only be able to play them on a device capable of playing MP3 files.

---

### Using a microphone

- 1 Connect an external microphone to the computer.
- 2 Click **Start**, point to **All Programs, Accessories, Entertainment**, then click **Sound Recorder**.





### Sample Sound Recorder screen



- 3 Click the **Record** button and speak normally into the microphone.

#### NOTE

You can only record 60 seconds at a time.



- 4 When you have finished recording, click the **Stop** button.



- 5 To hear what you just recorded, click the **Play** button.

- 6 To save the file, select **Save** from the **File** menu.

## Adjusting recording settings

The better the quality of the recording, the more disk space the sound file requires. Experiment to find a balance that fits your needs.

- 1 Open Sound Recorder, if necessary (click **Start**, point to **All Programs, Accessories, Entertainment**, then click **Sound Recorder**).
- 2 In the Sound Recorder window, click **Edit**, then click **Audio Properties**.
- 3 In the Audio Properties dialog box, adjust the Recording Volume and Preferred device.

---

**4** Click **OK**.

Your new settings take effect the next time you record.

## Using external speakers or headphones

Your computer is equipped with a full stereo sound system with internal speakers. Instead of using the internal speakers, you can connect headphones or a pair of external stereo speakers.

**CAUTION**

Before playing an audio CD, turn the volume down. Playing the compact disc at maximum volume could damage your ears. To turn the volume down, use the Volume Control switch or access the Volume Control program (click Start, All Programs, Accessories, Entertainment, Volume Control).



**TECHNICAL NOTE:** Use amplified speakers that require an external power source. Other types of speakers will be inadequate to produce sound from the computer.

To play back sound files through external speakers or headphones:



- 1** Locate the headphone jack on the right side of the computer.
- 2** Using any necessary adapters, plug the cable from the headphones or external speakers into the headphone jack.

The headphone jack requires a 16-ohm stereo mini-jack.

## Using the i.LINK® port

The i.LINK® port on the right side of the computer provides an extremely fast data transfer rate.

---

## Using PC Cards

PC Cards expand your computer's capabilities and usefulness. You can purchase additional PC Cards from your dealer. Most PC Cards conform to the PCMCIA (Personal Computer Memory Card International Association) standard.

Your computer has one PC Card slot and supports Type II PC Cards.

Check the documentation that came with the PC Card to see if it conforms to the PCMCIA 2.1 standard, or later. Other cards may work with your computer, but are likely to be much more difficult to set up and use.

### PC Card supporting software

PC Cards require Card and Socket Services software — a set of programs that acts as a translator between the PC Card and the computer, and that makes hot swapping (switching cards while the computer is on) possible.

The operating system provides the Card and Socket Services for your PC Card. Even if your PC Card comes with its own version of Card and Socket Services, you should use the files included in the operating system.

### Inserting a PC Card

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**NOTE**

Use caution when lifting or turning your computer. Failure to do so may result in damage to components, such as cables, attached to your computer, or to the computer itself.

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Before you insert a PC Card, refer to the documentation that comes with the card to see if you need to do anything before you insert it.

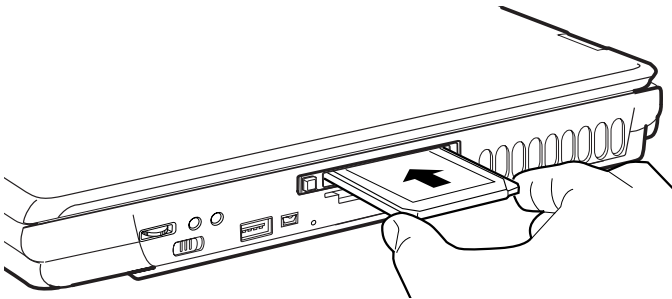
To insert a PC Card:

- 1 Turn off the computer.

---

You may also hot swap a PC Card. Stop the PC Card by clicking the **Safely Remove Hardware** icon on the System tray. After the Safe to Remove Hardware message appears, it is safe to remove the PC Card.

- 2 Align the card connectors with an available PC Card slot and carefully slide the card into the slot until it locks into place.



*Sample inserting a PC Card*

---

**CAUTION**

To avoid damaging the PC Card or the computer, do not force the card into the PC Card slot.

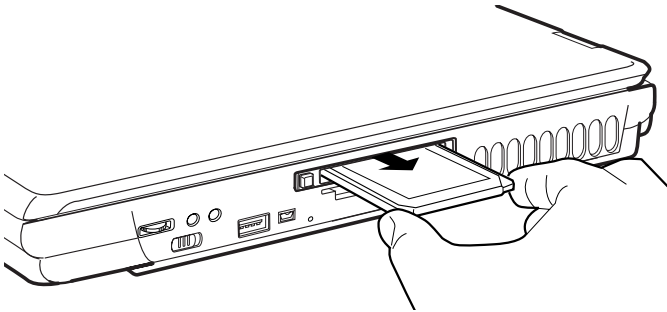
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## Removing a PC Card

- 1 Stop the PC Card by clicking the **Safely Remove Hardware** icon on the System tray.

After the Safe to Remove Hardware message appears, it is safe to remove the PC Card.

- 2 To remove the PC Card, press the eject button once.
- 3 Remove the PC Card and store it properly.



*Sample removing a PC Card*

## Hot swapping

One of the great things about PC Cards is that you can replace one PC Card with another while the computer is on. This is called “hot swapping.”

### Hot swapping precautions

Although you can insert a PC Card at any time, to avoid data loss never remove a card while it is in use. For example:

- ❖ Never remove a hard disk card while the system is accessing it.
- ❖ Never remove a network card while you are connected to a network.

Before removing a PC Card, stop it by clicking the **Safely Remove Hardware** icon on the System tray. Once the PC Card has stopped, you can safely remove it. See “[Removing a PC Card](#)” on page 148.

#### **CAUTION**

Never swap modules when the computer is in Hibernation or Standby mode. This is known as “warm swapping” and is not supported with this computer. For more information on Hibernation and Standby modes, see “[Using Hibernation Mode](#)” on page 103 and “[Using Standby Mode](#)” on page 107

---

## Using the Bridge Media slot

Your computer is equipped with a Bridge Media Slot, which supports the use of Memory Stick or Memory Stick PRO media, Secure Digital™ (SD™) Cards, SmartMedia™, or xD-Picture Cards. This media can be used with a variety of digital products: digital music players, cellular phones, PDAs, digital cameras, digital video camcorders, etc.

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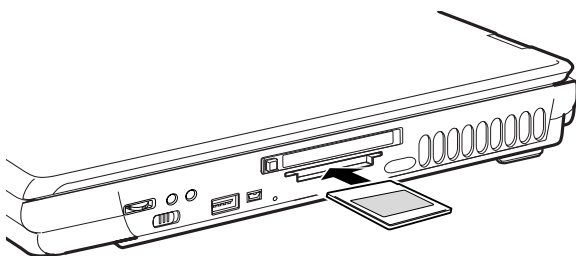
**NOTE**

Do not use the Copy Disk function for this type of media. To copy data from one media to another, use the drag-and-drop feature of Windows.

---

### Inserting Memory Stick or Memory Stick PRO media

- 1 Turn the Memory Stick so that the notched corner faces the back of the computer and the arrow is face up.
- 2 Push the media into the slot until it locks in place.



*Sample inserting Memory Stick or Memory Stick PRO media*

---

**CAUTION**

Do not remove Memory Stick media while data is being written or read. Even when the message "copying..." in the windows disappears, writing to the media might still be in progress and your data could be destroyed. Wait for the indicator light to go out.

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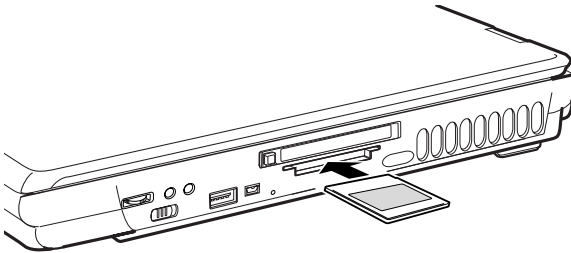
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## Removing Memory Stick or Memory Stick PRO media

- 1 Right-click the **Safely Remove Hardware** icon on the System tray. After the media is stopped, it is safe to remove.
- 2 Grasp the card and pull it straight out.

## Inserting an SD™ Card

- 1 Turn the card so that the contacts (metal areas) are face down.
- 2 Push the card into the slot until it locks in place.



*Sample inserting an SD Card*

---

**CAUTION**

Do not touch the SD™ connector (metal area). You could expose the storage area to static electricity, which can destroy data.

Do not remove an SD™ Card while data is being written or read. Even when the message “copying...” in the windows disappears, writing to the card might still be in progress and your data could be destroyed. Wait for the indicator light to go out.

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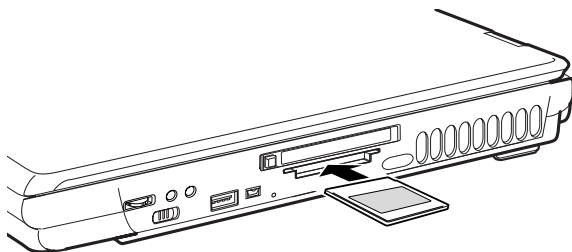
---

## Removing an SD™ Card

- 1 Right-click the **Safely Remove Hardware** icon on the System tray. After the card is stopped, it is safe to remove.
- 2 Grasp the card and pull it straight out.

## Inserting an xD-Picture Card™

- 1 Turn the card so that the contacts (metal areas) are face down.
- 2 Push the card into the slot until it locks in place.



*Sample inserting an xD-Picture Card*

---

**CAUTION**

Do not touch the xD-Picture™ Card connector (metal area). You could expose the storage area to static electricity, which can destroy data.

Do not remove an xD-Picture™ Card while data is being written or read. Even when the message “copying...” in the windows disappears, writing to the card might still be in progress and your data could be destroyed. Wait for the indicator light to go out.

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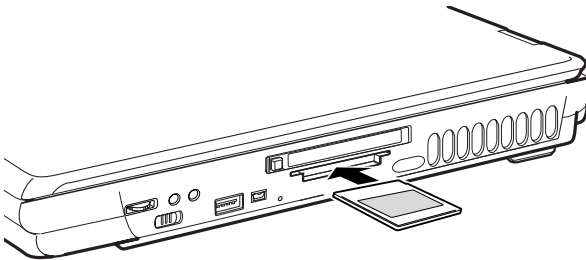
---

## Removing an xD-Picture Card™

- 1 Right-click the **Safely Remove Hardware** icon on the System tray. After the card is stopped, it is safe to remove.
- 2 Grasp the card and pull it straight out.

## Inserting a SmartMedia Card™

- 1 Turn the card so that the contacts (metal areas) are face down.
- 2 Push the card into the slot until it locks in place.



*Sample inserting an Smart Media Card*

---

**CAUTION**

Do not touch the Smart Media™ Card connector (metal area). You could expose the storage area to static electricity, which can destroy data.

Do not remove a Smart Media™ Card while data is being written or read. Even when the message “copying...” in the windows disappears, writing to the card might still be in progress and your data could be destroyed. Wait for the indicator light to go out.

---

## Removing a SmartMedia Card™

- 1 Right-click the **Safely Remove Hardware** icon on the System tray. After the card is stopped, it is safe to remove.
- 2 Grasp the card and pull it straight out.

# Chapter 5

## If Something Goes Wrong

---

Some problems you may encounter when using your notebook computer are relatively easy to identify and solve. Others may require help from your dealer or the manufacturer of a software program.

This chapter aims to help you solve many problems by yourself. It covers the problems you are most likely to encounter.

If all else fails, contact Toshiba. You will find information on Toshiba's support services at the end of this chapter.

### Problems that are easy to fix

#### **Your program stops responding.**

If you are working with a program that suddenly freezes all operations, chances are the program has stopped responding. You can exit the failed program without shutting down the operating system or closing other programs.

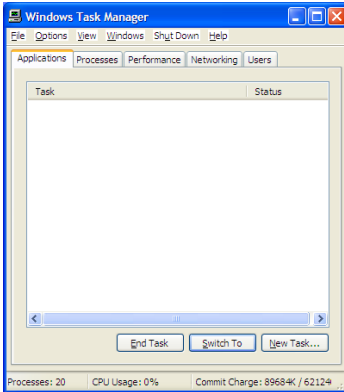
To close a program that has stopped responding in the Windows<sup>®</sup> XP operating system:

- 1 Press Ctrl, Alt, and Del simultaneously.

2 The Windows Task Manager appears.

3 Click the **Applications** tab.

If a program has stopped responding, the words “not responding” appear beside its name in the list.



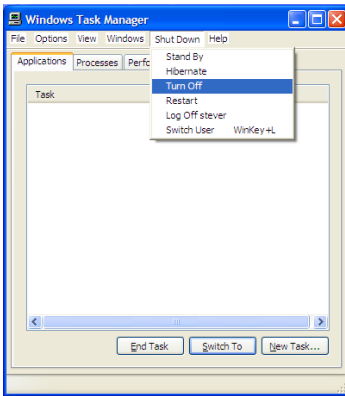
*Sample Windows Task Manager Applications tab*

4 Select the program you want to close, then click **End Task**.

Closing the failed program should allow you to continue working. If it does not, continue with step 3.

5 Close the remaining programs one by one by selecting the program name, then **End Task**.

6 Select the **Shut Down** menu, then click **Turn Off**.



*Sample Windows Task Manager Shutdown menu, Turn Off option*

The computer shuts down.

## Your program performs an illegal operation.

If you receive the message, “Your program has performed an illegal operation,” you should record the details of the message and consult the software manufacturer.

To record the details:

- 1 Click the **Details** button and select the text the operating system displays.  
The Details button displays information that the software manufacturer needs to help you solve your problem.
- 2 Press Ctrl and c simultaneously to copy the text to the clipboard.
- 3 Open Notepad (click **Start**, point to **All Programs**, then point to **Accessories** and click **Notepad**).
- 4 Press Ctrl and v simultaneously to paste the details into Notepad.
- 5 Add a paragraph break and type some notes describing what you were doing when you received the message.

- 6 Save the file and refer to it when you contact the software manufacturer.

## Problems when you turn on the computer

These problems may occur when you turn on the power.

### **The computer will not start.**

Make sure you attached the AC adapter and power cord/cable properly or installed a charged battery.

Press and hold down the power button for a few seconds.

If you are using the AC adapter, check that the wall outlet is working by plugging in another device, such as a lamp.

### **The computer starts but, when you press a key, nothing happens.**

You are probably in Standby mode and have a software or resource conflict. When this happens, turning the power on returns you to the problem instead of restarting the system. To clear the condition, press the power button until it turns off the computer.

Clearing the condition may get the computer running, but it will not solve a resource conflict. Read the documentation that came with the conflicting device and [“Resolving a hardware conflict” on page 161](#).

### **The computer displays the WARNING RESUME FAILURE message.**

The computer was placed in Standby mode and the battery has discharged. Data stored in the computer’s memory has been lost. Press Enter to continue booting.

To charge the battery, leave the computer plugged into a live wall outlet for several hours. For more information, see [“Power and the batteries” on page 166](#).

### **The computer displays the Non-System disk or disk error message.**

Press any key. If this does not resolve then problem, press Ctrl, Alt, and Del to restart the computer.

---

## The Windows® operating system is not working

Once you are familiar with the desktop and used to the way the operating system responds to your work routine, you can easily detect if the operating system is not working correctly. For example:

- ❖ The operating system fails to start after the Starting Windows XP message appears.
- ❖ The operating system takes a long time to start.
- ❖ The operating system responds differently from the normal routine.
- ❖ The screen does not look right.

Unless a hardware device has failed, problems usually occur when you change the system in some way such as installing a new program or adding a device.

If you experience any of these problems, use the options in the Startup menu to fix the problem.

### Using Startup options to fix problems

If the operating system fails to start properly, you may have to change your system's configuration or verify the startup procedure to fix the problem. To do this, use the options in the Startup menu.

To open the Startup menu:

- 1 Restart your computer.
- 2 Press F8 when your computer starts.

The Windows® Advanced Options menu displays these options:

- ❖ Safe Mode
- ❖ Safe Mode (with Networking)

- ❖ Safe Mode (with Command Prompt)
- ❖ Enable Boot Logging
- ❖ Enable VGA Mode
- ❖ Last known good configuration (your most recent settings that worked)
- ❖ Directory services restore mode (Windows® domain controllers only)
- ❖ Debugging Mode
- ❖ Disable Automatic Restart on System Failure
- ❖ Start Windows® normally
- ❖ Reboot
- ❖ Return to OS Choices Menu

For detailed information, refer to your operating system's documentation.

---



**TECHNICAL NOTE:** If your computer is connected to a network, the Startup menu may display different versions of Safe mode.

---

## Internet problems

### **My Internet connection is very slow.**

Many factors contribute to the speed with which you can surf the Internet. They include: modem speed, time of day (when everyone else is surfing, your access can be slow) and popularity of the site. If accessing a particular site is very slow, try later.

### **My browser cannot find the URL address I typed in.**

Make sure you separated the domain names of the address with the forward slash (/). Check the spelling of each name



---

and the syntax of the address carefully. A single incorrect letter or missed character, comma instead of period (“dot”) or other mistake makes it impossible for your browser to locate the site.

### **My browser cannot find a site I bookmarked.**

The World Wide Web is constantly changing. A site you bookmarked yesterday may not be available today or its server may be down for temporary repair. Try again later.

## **The Windows® XP operating system can help you**

If the operating system has started properly, but you still have a problem using your computer, the online Help can assist you in troubleshooting the problem.

To access Windows® XP Help and Support:

- 1** Click **Start**, then click **Help and Support**.

The Help and Support window appears.

- 2** Then do one or both of the following:

- ❖ In the search field, type in the topic of the problem with which you need help and follow the on-screen instructions.
- ❖ Click a problem you would like help with from the listings and follow the on-screen instructions.

## **Resolving a hardware conflict**

If you receive an error message telling you there is a device driver conflict or a general hardware problem, try using Windows® Help and Support to troubleshoot the problem first.

For help on hardware conflicts:

- 1** Click **Start**, then click **Help and Support**.
- 2** Click the **Hardware** link in the window.

A list of category links appear.

- 3 Click the **Fixing a hardware problem** or other appropriate link.
- 4 Choose from specific topics and follow the steps.

If there is still a problem, the operating system should display a message that explains what the conflict is.

## **A plan of action**

The smooth operation of the system depends on the interaction of all devices, programs, and features. If the system or one of its attached devices is not working, resolving the problem can be time-consuming and frustrating.

The recommended procedure for getting multiple devices to work together is to add and set up one device at a time. After you add each device, test it to make sure it and all previously connected devices work.

The device most recently connected to the system is the one most likely to be causing a hardware conflict.

## **Resolving hardware conflicts on your own**

Computer components need resources to accomplish a task. A device, such as a disk drive or a modem, needs a channel to the computer's Central Processing Unit (CPU). It also needs a direct channel to the computer's memory to store information as it works. These channels of communication are commonly referred to as system resources.

### **Interrupt Request Channel**

The channel to the CPU is called an Interrupt Request (IRQ) because it interrupts what the processor is doing and requests some of the processor's time.

---

## **Direct Memory Access**

Similarly, the data required by the device is stored in a specific place or address in memory called the Direct Memory Access (DMA). The DMA provides a dedicated channel for adapter cards to bypass the microprocessor and access memory directly. If two or more devices use the same DMA, the data required by one device overwrites the data required by the other. That may cause a hardware conflict.

## **Plug and Play**

With Plug and Play and the Windows® XP operating system, avoiding hardware conflicts is easy. Plug and Play is a computer standard that helps the system BIOS (basic input/output system) and the operating system to automatically assign resources to Plug and Play-compliant devices. In theory, if every device connected to the computer is Plug and Play-compliant, no two devices will compete for the same system resources. Simply plug in the device and turn on your computer. The operating system automatically sets up your system to accommodate the new device.

If you install an older (legacy) device that the operating system cannot recognize, the operating system may have difficulty assigning resources to it. As a result, a hardware conflict can occur. To see what resources the operating system has assigned to the device, see [“Checking device properties” on page 165](#).

## **Resolving conflicts**

There are three things you can do to resolve hardware conflicts:

- ❖ Disable the device.  
For an older device, remove it from the computer.
- ❖ Disable another system component and use its resources for the new device.

- 
- ❖ Reconfigure the device so that its requirements do not conflict. Refer to the device's documentation for instructions about changing settings on the device.

## Fixing a problem with Device Manager

Device Manager provides a way to check and change the configuration of a device.

### CAUTION

Changing the default settings using Device Manager can cause other conflicts that make one or more devices unusable. Device Manager is a configuration tool for advanced users who understand configuration parameters and the ramifications of changing them.

---

## Disabling or enabling a device

- 1 Click **Start**, click the **My Computer** icon with the secondary button, then click **Properties**.

The System Properties dialog box appears.

- 2 Click the **Hardware** tab.
- 3 Click the **Device Manager** button.
- 4 Select the specific device from the device category.
- 5 To enable a device, look for an icon of a monitor with a strike mark through a circle on the front located on the far right of the toolbar. When you mouse over the small icon, the status of Disabled displays.

To disable a device, look for an icon of a monitor with a blue check mark on it located on the far right of the toolbar. When you mouse over the small icon, the status of Enabled displays.

- 6 Click the icon.  
You are given the option of disabling or enabling the device.
- 7 Click **yes** or **no**, whichever is appropriate.

---

## Checking device properties

Device Manager provides a way to view the properties of a device. Properties include the name of the manufacturer, the type of device, the drivers installed, and the system resources assigned to the device.

To check a device's properties:

- 1 Click **Start**.
- 2 Click **My Computer** with the secondary button, then click **Properties**.  
The System Properties dialog box appears.
- 3 Click the **Hardware** tab.
- 4 Click the **Device Manager** button.
- 5 To view the device(s) installed, double-click the device type.
- 6 To view the properties, double-click the device.

The operating system displays the Device Properties dialog box, which provides an array of tabs. They include:

- ❖ The **General** tab, which provides basic information about the device.
- ❖ The **Resource** tab, which lists resources assigned to the monitor, DVD-ROM, and other power-using functions.
- ❖ The **Drivers** tab, which displays the drivers being used by the device.

A Troubleshooting button is also present.

- 7 Click **troubleshooting**.

A Help and Support window for that device appears.

For more information about Device Manager, refer to Windows® XP online help.

---

## Memory problems

Incorrectly connected or faulty memory modules may cause errors that seem to be device-related. It is worthwhile checking for these first:

- 1 Turn off the computer via the Start menu.
- 2 Remove the memory module.
- 3 Reinstall the memory module, following the instructions in [“Using the computer for the first time” on page 54](#), and making sure it is seated properly.
- 4 Check for the error again.
- 5 If the error recurs, remove the memory module entirely and check for the error again.

If removing the memory module eliminates the error, the memory module may be faulty. If the error recurs without the memory module installed, the error is not caused by the memory module.



**TECHICAL NOTE:** You must have at least one memory module installed for the computer to work.

---

### NOTE

Toshiba recommends using only memory modules approved by Toshiba.

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## Power and the batteries

Your computer receives its power through the AC adapter and power cord/cable or from the system batteries (main battery and optional secondary battery). Power problems are interrelated. For example, a faulty AC adapter or power cord/cable will neither power the computer nor recharge the batteries.

---

Here are some typical problems and how to solve them:

**The AC power light does not come on when you plug in the AC adapter and power cord/cable.**

Make sure the AC adapter and power cord/cable are firmly plugged into both the wall outlet and the computer.

If the AC power light still does not come on, check that the wall outlet is working properly by plugging in a lamp or other appliance.

**The AC adapter and power cord/cable work correctly, but the battery will not charge.**

The battery does not charge while the computer is consuming full power. Try turning off the computer.

The main battery may not be inserted correctly in the computer. Turn off the computer, remove and replace the battery.

The battery may be too hot or too cold to charge properly. If you think this is the probable cause, let the battery reach room temperature and try again.

If the battery has completely discharged, it will not begin charging immediately. Leave the AC adapter and power cord/cable connected, wait 20 minutes and see if the battery is charging.

If the battery light is glowing after 20 minutes, let the computer continue charging the battery for at least another 20 minutes before you turn on the computer.

If the battery light does not glow after 20 minutes, the battery may have reached the end of its useful life. Try replacing it.

**The battery appears not to power the computer for as long as it usually does.**

If you frequently recharge a partially charged battery, it may not charge fully. Let the battery discharge completely, then try charging it again.

Check the power options using the Toshiba Power Management Utility. Have you added a device, such as a PC Card or memory module, that takes its power from the battery? Is your software using the hard disk more? Is the display power set to turn off automatically? Was the battery fully charged to begin with? All these conditions affect how long the charge lasts.

For more information on maximizing battery power, see [“Charging the batteries” on page 113.](#)

## **Keyboard problems**

If, when you type, strange things happen or nothing happens, the problem may be related to the keyboard itself.

### **The keyboard produces unexpected characters.**

A keypad overlay may be on. If the numeric keypad or cursor control light is on, press Fn and F10 simultaneously to turn off the cursor control light or press Fn and F11 simultaneously to turn off the numeric keypad light.

If the problem occurs when both the keypad overlays are off, make sure the software you are using is not remapping the keyboard. Refer to the software’s documentation and check that the program does not assign different meanings to any of the keys.

### **You have connected an external keyboard and the operating system displays one or more keyboard error messages.**

If you have a second keyboard, try it. If it works, the first keyboard may be defective or incompatible with your computer.



---

## **Display problems**

Here are some typical display problems and their solutions:

### **The display is blank.**

Display Auto Off may have gone into effect. Press any key to activate the screen.

You may have activated the instant password feature by pressing Fn and F1 simultaneously. If you have registered a password, press the Enter key, type the password and press Enter. If no password is registered, press Enter. The screen reactivates and allows you to continue working.

If you are using the built-in screen, make sure the display priority is not set for an external monitor. To do this, press Fn and F5 simultaneously (once). If this does not correct the problem, press Fn and F5 simultaneously again to return the display priority to its previous setting.

If you are using an external monitor:

- ❖ Check that the monitor is turned on.
- ❖ Check that the monitor's power cable is firmly plugged into a working power outlet.
- ❖ Check that the cable connecting the external monitor to the computer is firmly attached.
- ❖ Try adjusting the contrast and brightness controls on the external monitor.
- ❖ Press Fn and F5 simultaneously to make sure the display priority is not set for the built-in screen.

### **The screen does not look right.**

You can change the display settings by clicking a blank area of the desktop with the secondary control button, then clicking Properties. This opens the Display Properties dialog box. The Appearance tab of this dialog box allows you to choose the colors for the screen. The Settings tab allows you to choose the screen resolution.

**The built-in screen flickers.**

Some flickering is a normal result of the way the screen produces colors. To reduce the amount of flickering, try using fewer colors.

To change the number of colors displayed:

- 1 Point at the desktop and click with the secondary button.
- 2 Click **Properties**, and then the **Settings** tab.
- 3 Choose a lower quality color option and click **OK**.

For more information, see Windows<sup>®</sup> Help.

**A message tells you that there is a problem with your display settings and that the adapter type is incorrect or the current settings do not work with your hardware.**

Reduce the size of the color palette to one that is supported by the computer's internal display.

To change the display properties:

- 1 Point at the desktop and click with the secondary button.  
The Display Properties window appears.
- 2 Click **Properties**, then click the **Settings** tab.
- 3 Adjust the screen resolution and/or color quality.
- 4 Click **OK**.

**The display mode is set to Simultaneous and the external display device does not work.**

Make sure the external monitor is capable of displaying at resolutions of 800 x 600 or higher. Devices that do not support this resolution will only work in Internal/External mode.

---

## **Small bright dots appear on your TFT display when you turn on your computer.**

Your display contains an extremely large number of thin-film transistors (TFT) and is manufactured using high-precision technology. The small bright dots that appear on your display are an intrinsic characteristic of the TFT manufacturing technology.

---

**NOTE** Over a period of time, and depending on the usage of the computer, the brightness of the LCD Screen will deteriorate. This is an intrinsic characteristic of LCD technology.

Screen will dim when the computer is operated on battery power and you may not be able to increase the brightness of the screen.

---

## **Disk drive problems**

Problems with the hard disk usually show up as an inability to access the disk or as sector errors. Sometimes a disk problem may cause one or more files to appear to have garbage in them. Typical disk problems are:

### **You are having trouble accessing a disk, or one or more files appear to be missing.**

Make sure you are identifying the drive by its correct name (for example, C:).

### **Error-checking**

Run Error-checking, which analyzes the directories, files and NT file system (NTFS) on the disk and repairs any damage it finds:

To run Error-checking:

- 1** Click **Start**, then click **My Computer**.
- 2** Right-click the drive you want to check.

The drive's properties box appears.

- 3** Click on **Properties**.
- 4** Click the **Tools** tab.
- 5** Click the **Check now** button.

The Check Disk box appears (for example, Check Disk C).

- 6** You can choose one or both options:
  - ❖ Automatically fix file system errors
  - ❖ Scan for and attempt recovery of bad sectors
  - ❖ Click **Start**.

Error-checking runs the test.

### **Your hard disk seems very slow.**

If you have been using your computer for some time, your files may have become fragmented. Run Disk Defragmenter. To do this, click **Start**, point to **All Programs, Accessories, System Tools**, and click **Disk Defragmenter**.

### **Your data files are damaged or corrupted.**

Refer to your software documentation for file recovery procedures. Many software packages automatically create backup files.

You may also be able to recover lost data using utility software, which is available from your dealer.

### **Some programs run correctly but others do not.**

This is probably a configuration problem. If a program does not run properly, refer to its documentation and check that the hardware configuration meets its needs.

---

## **DVD-ROM or multi-function drive problems**

### **You cannot access a disc in the drive.**

Make sure the drive tray has closed properly. Press gently until it clicks into place.

Open the drive tray and remove the disc. Make sure the drive tray is clean. Any dirt or foreign object can interfere with the laser beam.

Examine the disc to see whether it is dirty. If necessary, wipe it with a clean cloth dipped in water or a neutral cleaner.

Replace the disc in the tray. Make sure it is lying flat, label side uppermost. Press the disc down until it locks on the spindle. Close the drive tray carefully, making sure it has shut completely.

### **You press the disc eject button, but the drive tray does not slide out.**

Make sure the computer is connected to a power source and turned on. The modular bay drive eject mechanism requires power to operate.

To remove a disc without turning on the computer, use a narrow object, such as a straightened paper clip, to press the manual eject button. This button is in the small hole next to the disc eject button on the right side of the computer.

---

**CAUTION**

Never use a pencil to press the manual eject button. Pencil lead can break off inside the computer and damage it.

---

Pull the tray fully open, remove the disc and place it in its

### **Some discs run correctly, but others do not.**

If the problem is with an application CD-ROM, refer to the software's documentation and check that the hardware configuration meets the program's needs.

The color of the materials used to make the disc can affect its reliability. Silver-colored CD-ROMs are the most reliable, followed by gold-colored CD-ROM. Green-colored CD-ROMs are the least reliable.

## Sound system problems

### **You do not hear any sound from the computer.**

Adjust the volume control.

If you are using external headphones or speakers, check that they are securely connected to your computer.

### **The computer emits a loud, high-pitched noise.**

This is feedback between the microphone and the speakers. It occurs in any sound system when input from a microphone is fed to the speakers and the speaker volume is too loud. Adjust the volume control.

Changing the settings for the Record Monitor feature in the Recording Control Utility (default Off), or the Mute feature in the Mixer Utility (default Enabled), may cause feedback. Revert to the default settings.

## PC Card problems

PC Cards (PCMCIA-compatible) include many types of devices, such as a removable hard disk, additional memory, or a pager.

Most PC Card problems occur during installation and setup of new cards. If you are having trouble getting one or more of these devices to work together, several sections in this chapter may apply. Verify with the PC Card documentation that it is compatible with Windows<sup>®</sup> XP.

Resource conflicts can cause problems when using PC Cards. See [“Resolving a hardware conflict” on page 161](#).

---

## Card Information Structure

When you insert a PC Card into a slot, the computer attempts to determine the type of card and the resources it requires by reading its Card Information Structure (CIS). Sometimes the CIS contains enough information for you to use the card immediately.

Other cards must be set up before you can use them. Use the Windows<sup>®</sup> XP PC Card (PCMCIA) Wizard to set up the card. Refer to your Microsoft<sup>®</sup> documentation for more information, or refer to the documentation that came with the PC Card.

Some card manufacturers use special software called *enablers* to support their cards. Enablers result in nonstandard configurations that can cause problems when installing the PC Card.

If your system does not have built-in drivers for your PC Card and the card did not come with an operating system driver, it may not work under the operating system. Contact the manufacturer of the PC Card for information about using the card under the operating system.

## PC Card checklist

- ❖ Make sure the card is inserted properly into the slot.  
See [“Inserting a PC Card” on page 147](#) for how to insert PC Cards.
- ❖ Make sure all cables are securely connected.
- ❖ Make sure the computer is loading only one version of Card and Socket Services.
- ❖ Occasionally a defective PC Card slips through quality control. If another PCMCIA-equipped computer is available, try the card in that machine. If the card malfunctions again, it may be defective.

---

## Resolving PC Card problems

Here are some common problems and their solutions:

### **The slots appear to be dead. PC Cards that used to work no longer work.**

Check the PC Card status:

- 1 Click **Start**.
- 2 Click **My Computer** icon with the secondary button, then click **Properties**.

The System Properties dialog box appears.

- 3 Click the **Hardware** tab.
- 4 Click the **Device Manager** button.
- 5 Double-click the category listed as **PCMCIA adapter**.

The operating system displays your PC Card's Properties dialog box, which contains information about your PC Card configuration and status.

### **The computer stops working (hangs) when you insert a PC Card.**

The problem may be caused by an I/O (input/output) conflict between the PCMCIA socket and another device in the system. Use Device Manager to make sure each device has its own I/O base address. See [“Fixing a problem with Device Manager” on page 164](#) for more information.

Since all PC Cards share the same socket, each card is not required to have its own address.

### **Hot swapping (removing one PC Card and inserting another without turning the computer off) fails.**

Follow this procedure before you remove a PC Card:

- 1 Click the **PC Card** icon in the system tray.



- 
- 2 Click **Stop xxxx**, where *xxxx* is the identifier for your PC Card.

The operating system displays a message that you may safely remove the card.

- 3 Remove the card from the slot.

---

**CAUTION**

Never swap modules when the computer is in Hibernation or Standby mode. This is known as “warm swapping” and is not supported with this computer. For more information on Hibernation and Standby modes, see [“Using Hibernation Mode” on page 103](#) and [“Using Standby Mode” on page 107](#).

---

### **The system does not recognize your PC Card or PCMCIA socket controller.**

- 1 Make sure the computer is not in Standby mode. For more information, see [“Using Standby Mode” on page 107](#).
- 2 Turn off the computer.
- 3 Connect the AC adapter and power cord/cable.
- 4 Keep the computer plugged in for about three hours with the power turned off.

The problem may also be caused by a conflict with any additional memory in your system.

Removing a malfunctioning card and reinstalling it can correct many problems. For more information, see [“Inserting a PC Card” on page 147](#).

### **A PC Card error occurs.**

Reinsert the card to make sure it is properly connected.

If the card is attached to an external device, check that the connection is secure.

Refer to the card’s documentation, which should contain a troubleshooting section.

## Printer problems

This section lists some of the most common printer problems:

### **The printer will not print.**

Check that the printer is connected to a working power outlet, turned on and ready (on line).

Check that the printer has plenty of paper. Some printers will not start printing when there are just two or three sheets of paper left in the tray.

Make sure the USB printer cable is firmly attached to the computer and the printer.

Run the printer's self-test to check for any problem with the printer itself.

Make sure you installed the proper printer drivers, as shown in ["Setting up your printer" on page 65](#).

You may have connected the printer while the computer is on. Disable Standby mode, turn off the computer, and turn off the printer. Turn the printer back on, make sure it is on line, then turn the computer back on.

Try printing another file. For example, you could create and attempt to print a short test file using Notepad. If a Notepad file prints correctly, the problem may be in your original file.

If you cannot resolve the problem, contact the printer's manufacturer.

### **The printer will not print what you see on the screen.**

Many programs display information on the screen differently from the way they print it. See if your program has a print preview mode. This mode lets you see your work exactly as it will print. Contact the software manufacturer for more information.

---

## Modem problems

This section lists common modem problems:

### **The modem will not receive or transmit properly.**

Make sure the cable from the modem to the telephone line is firmly connected to the computer's modem port and the telephone line jack.

Check the port settings to make sure the hardware and software are referring to the same COM port. See [“Determining the COM port” on page 134](#).

Check the communications parameters (baud rate, parity, data length and stop bits) specified in the communications program. It should be set up to transmit at 300, 1200, 2400, 4800, 9600, 14400, 28800, 33600 bps (bits per second) or higher. Refer to the program's documentation and the modem manual for information on how to change these settings.

### **The modem is on, set up properly and still will not transmit or receive data.**

Make sure the line has a dial tone. Connect a telephone handset to the line to check this.

The other system may be busy or off line. Try making a test transmission to someone else.

## Develop good computing habits

Make sure you are prepared.

### **Save your work frequently.**

You can never predict when your computer will lock, forcing you to close a program and lose unsaved changes. Many software programs build in an automatic backup, but you should not rely solely on this feature. Save your work! See [“Computing tips” on page 77](#) for instructions.

**On a regular basis, back up the information stored on your hard disk.**

Here are some ways you can do this:

- ❖ Copy files to a CD or other media, following the steps in “[Saving your work](#)” on page 86.
- ❖ Connect a tape drive to the system and use specialized software to copy everything on the hard disk to a tape.

Some people use a combination of these methods, backing up all files to tape weekly and copying critical files to media, such as a CD, on a daily basis.

If you have installed your own programs, you should back up these programs as well as your data files. If something goes wrong that requires you to reformat your hard disk and start again, reloading all your programs and data files from a backup source will save time.

**Read the user’s guides.**

It is very difficult to provide a fail-safe set of steps you can follow every time you experience a problem with the computer. Your ability to solve problems will improve as you learn about how the computer and its software work together.

Get familiar with all the user’s guides provided with your computer, as well as the manuals that come with the programs and devices you purchase.

Your local computer store or book store sells a variety of self-help books you can use to supplement the information in the manuals.

---

## **If you need further assistance**

If you have followed the recommendations in this chapter and are still having problems, you may need additional technical assistance. This section contains the steps to take to ask for help.

### **Before you call**

Since some problems may be related to the operating system or the program you are using, it is important to investigate other sources of assistance first.

Try the following before contacting Toshiba:

- ❖ Review the troubleshooting information in your Windows<sup>®</sup> XP documentation.
- ❖ If the problem occurs while you are running a program, consult the program's documentation for troubleshooting suggestions. Contact the software company's technical support group for their assistance.
- ❖ Consult the dealer from whom you purchased your computer and/or program. Your dealer is your best source for current information.

Detailed system specifications are available at [www.ts.toshiba.com](http://www.ts.toshiba.com) by selecting your particular product and model number, clicking **GO**, and then clicking the **Detailed Specs** link from the menu on the left, or just refer to the computer documentation shipped with your product.

For the number of a Toshiba dealer near you in the United States, call: (800) 457-7777.

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## Contacting Toshiba

If you still need help and suspect that the problem is hardware-related, Toshiba offers a variety of resources to help you. You can access Toshiba on the Internet using any Internet browser by typing [support.toshiba.com](http://support.toshiba.com)

### Toshiba voice contact

Before calling Toshiba, make sure you have:

- ❖ Your computer's serial number.
- ❖ The computer and any optional devices related to the problem.
- ❖ Backup copies of your Windows operating system and all other preloaded software on your choice of media.
- ❖ Name and version of the program involved in the problem along with its installation media.
- ❖ Information about what you were doing when the problem occurred.
- ❖ Exact error messages and when they occurred.

For technical support, call the Toshiba Global Support Centre:

Within the United States at (800) 457-7777

Outside the United States at (949) 859-4273

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## Other Toshiba Internet Web sites

<a href="http://toshiba.com">toshiba.com</a>	Worldwide Toshiba corporate site
<a href="http://computers.toshiba.com">computers.toshiba.com</a>	Marketing and product information in the USA
<a href="http://www.toshiba.ca">www.toshiba.ca</a>	Canada
<a href="http://www.toshiba-Europe.com">www.toshiba-Europe.com</a>	Europe
<a href="http://www.toshiba.co.jp/index.htm">www.toshiba.co.jp/index.htm</a>	Japan
<a href="http://servicio.toshiba.com">http://servicio.toshiba.com</a>	Mexico and all of Latin America

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9740 Irvine Blvd.  
Irvine, California 92618  
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800-457-7777 (within the US)

949-859-4273 (outside of the US -  
this call may incur long-distance  
charges)

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Toshiba Information Systems  
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**The Rest of Europe**

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Germany

For more information on additional Toshiba worldwide  
locations, please visit: [www.toshiba.co.jp/index.htm](http://www.toshiba.co.jp/index.htm).



# Appendix A

## Hot Keys

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Hot keys are keys that, when pressed in combination with the Fn key, turn system functions on and off. Hot keys have a legend on or above the key indicating the option or feature the key controls.

### Volume Mute

Fn +




This hot key enables/disables volume mute on your computer.



When volume mute is enabled, no sound will come from the speakers or headphones.



## Instant password security

Fn +  This hot key blanks the display.

### Without a password

The Fn + F1 key combination turns off the display and activates instant security. Using the pointing device or any key will make the display's content reappear, if no password is set for the current user.

### With a password

The Fn + F1 key combination turns off the display and activates instant security.

If you set a blank screen saver, pressing the Fn + F1 key combination to activate instant security will cause the screen to go blank. Using the pointing device or any key will make the display's content reappear. The Windows® operating system log-on screen will appear, prompting you for a password. After typing in the password for the current user, press Enter.

To activate the password feature:

- 1 Click **Start, Control Panel**.
- 2 Click **Appearances and Themes**.
- 3 Click one of the following:
  - ❖ **Choose a screen saver** in the “Pick a task” section.
  - ❖ **Display** in the “or pick a Control Panel icon” section.

The Display Properties window appears.

- 4 If you clicked **Choose a screen saver**, the Screen Saver tab has already been selected. If it isn't selected, click the **Screen Saver** tab.
- 5 Click the **On resume, password protected** check box.
- 6 Click **OK**.

---

## Maintaining security when the battery is not fully charged

When the battery is not fully charged (even if the computer is operating on AC power) your display may reappear automatically after a short time. To protect your desktop, you must set up a screen saver with a password before activating the password feature.

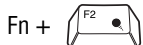
To set up a password with a screen saver, go to Windows XP Help for instructions:

- 1 Click **Start, Help and Support**.
- 2 In the **Search** field, type password screen saver.
- 3 Press Enter.
- 4 Click the **Protect your files with a screen saver password link** located under the suggested topics.

Follow the steps listed in the Windows help to set up your password-protected screen saver.

To ensure the password protection is activated after pressing Fn + F1 (to activate instant security), wait ten seconds before walking away from the computer.

## Power usage mode



This hot key displays the power usage pop-up window and cycles through the battery save modes.

The power usage modes in the operating system under battery power are:

Long Life, Normal, and High Power; DVD Playback, Presentation and Super Long Life

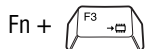


*Sample power usage modes*

The power usage mode in the Windows® operating system under AC power is Full Power only.

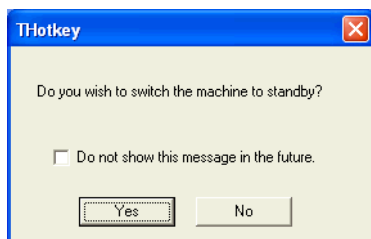
The properties of each mode are set in the Toshiba Power Management utility.

## Stand by mode



This hot key puts the computer into Stand by mode.

- ❖ A message box is displayed by default to confirm that the computer is going into Stand by mode. This message box can be set so it doesn't display.



*Sample Stand by confirmation box*

- ❖ For more information about Stand by mode, please see [“Using Standby Mode”](#) on page 107.

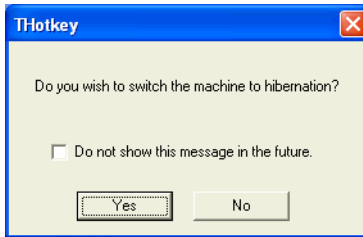
## Hibernation mode

Fn +



This hot key puts the computer into Hibernation mode.

- ❖ If Hibernation mode is enabled (the default) a message box is displayed by default to confirm the computer is going into Hibernation mode. The message box can be set so it doesn't display.



### *Sample Hibernation confirmation box*

- ❖ If Hibernation mode is disabled, this hot key will not respond. For more information on Hibernation mode, see [“Using Hibernation” on page 104.](#)

## Display modes

Fn +



This hot key cycles through the power-on display options.

The display modes are:

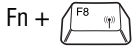
- ❖ Built-in display panel only
- ❖ Built-in display panel and external monitor simultaneously
- ❖ External monitor only
- ❖ Built-in display panel and external video device simultaneously
- ❖ External video device only



*Sample display options window*

In order to use a simultaneous mode, you must set the resolution of the internal display panel to match the resolution of the external display device.

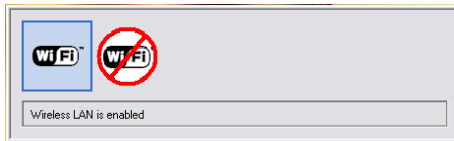
## Enabling a wireless device



This hot key enables/disables the optional wireless devices in your computer.

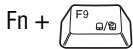
The wireless mode is:

Wi-Fi enabled—This enables the Wi-Fi antenna



*Sample enabling a wireless device*

## Disabling or enabling the TouchPad



This hot key enables/disables the TouchPad.

To use the TouchPad, see [“Disabling or enabling the TouchPad” on page 57.](#)





*Sample disable and enable TouchPad windows*




---

## Keyboard hot keys

Fn +  This hot key turns the cursor control overlay on and off.

Fn +  This hot key turns the numeric overlay on and off.

Fn +  This hot key turns the scroll lock feature on and off.

For more information, see [“Overlay keys” on page 81](#).

# Appendix B

## Power Cord/Cable Connectors

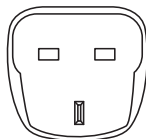
Your notebook computer features a universal power supply you can use worldwide. This appendix shows the shapes of the typical AC power cord/cable connectors for various parts of the world.

### USA and Canada



*UL approved*  
*CSA approved*

### United Kingdom



*BS approved*

### Australia



*AS approved*

### Europe



*VDA approved*  
*NEMKO approved*

# Appendix C

## Using ConfigFree™ with your Toshiba Computer

---

ConfigFree™ is a set of utilities that makes it easy to control communication devices and network connections. ConfigFree also lets you identify communication problems and create profiles for easy switching between locations and communication networks.

The ConfigFree utilities include the following:

- ❖ **Connectivity Doctor**—The Connectivity Doctor utility is used to analyze network connections and fix networking problems with your notebook computer. For more information, see [“Connectivity Doctor” on page 197](#).
- ❖ **Search for Wireless Devices**—The Search for Wireless Devices utility searches for wireless LAN and Bluetooth devices used in the neighborhood, and displays information about them on a virtual map. For more information, see [“Search for Wireless Devices” on page 200](#).
- ❖ **Profile Settings**—The Profiles utility lets you switch between network configurations. For more information, see [“Profile Settings” on page 202](#).

---



## Getting Started

This section contains information about the ConfigFree main screen, and how to start and setup ConfigFree.

For more detailed information on setting up and using ConfigFree, see the Help File included in the application.

### Starting ConfigFree

To start ConfigFree, be sure the computer has a wired or wireless connection. Then perform any of the following steps:

- ❖ (Microsoft® Windows® XP or 2000) Click the **Start** button, and select **All Programs, TOSHIBA, Networking, ConfigFree**.
- ❖ Double-click the **ConfigFree** icon  on the taskbar.
- ❖ Press the **Toshiba Console** button (if applicable to your system) to open the Toshiba Console, and then click the **ConfigFree** icon.
- ❖ Click the **ConfigFree** icon  on the taskbar, and then click the desired utility.

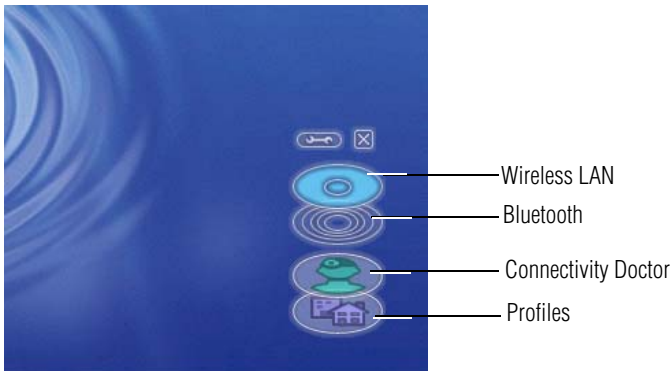
---

#### NOTE

If your computer is not connected to a network, the ConfigFree icon on the taskbar is displayed with an "X."

---

When you start a search for wireless devices, ConfigFree Launcher displays on your computer desktop. You can then click the appropriate icon on the Launcher to start the desired ConfigFree utilities.



*Sample ConfigFree Launcher*

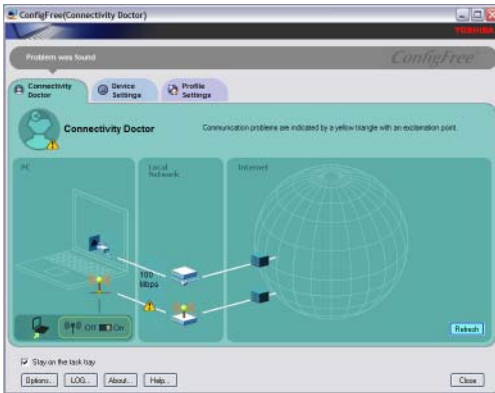
## ConfigFree Utilities

### Connectivity Doctor

The Connectivity Doctor lets you analyze your network connections and fix network-connection problems. Using Connectivity Doctor, you can view detailed network information by simply moving the mouse pointer.

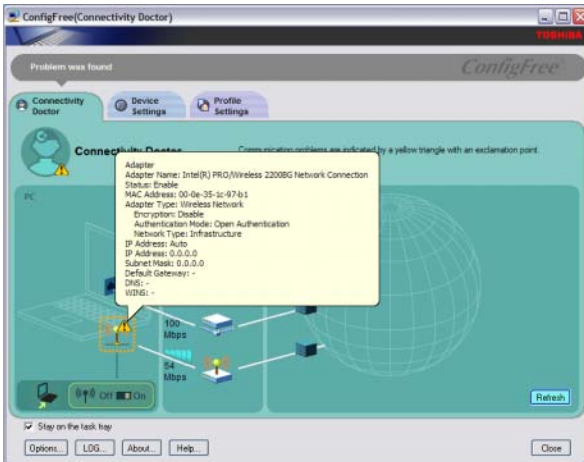
The Connectivity Doctor works with the following network devices:

- ❖ Wired and wireless network devices
- ❖ Routers, hubs, and bridges
- ❖ Access points



*Sample Connectivity Doctor screen*

Moving the mouse pointer over a wired or wireless network device icon displays information about the device, such as its IP address, subnet mask, and MAC address. A wireless network device also shows information such as the network SSID and the device's Wired Equivalent Privacy (WEP) key settings.



*Sample viewing device information*

If a problem, or potential problem, is detected, a triangle containing an exclamation point appears in the Connectivity Doctor screen and an orange frame describes the relevant location. You can then view a possible cause and solution for the problem by clicking the exclamation point.

For example, if the connection to a wireless network cannot be established because the wireless communication switch is turned off, an exclamation point appears next to the wireless communication switch. Clicking the exclamation point displays a description of the problem and a solution.

The following checkboxes and buttons are provided on the Connectivity Doctor screen:

- |                              |   |
|------------------------------|---|
| <b>Stay on the task tray</b> | When checked, the ConfigFree icon resides in the system tray.   |
| <b>Options</b>               | Displays ConfigFree setting screen.   |
| <b>Log</b>                   | Lets you create a diagnostic log, view a history of log files, or delete the history. Log files are saved as CFhtmlxxxxx.htm, where xxxxx is the creation date and time. They reside in the folder:<br>C:\Documents and Settings\username\Local Settings\Temp |
| <b>About</b>                 | Displays the version of Connectivity Doctor.  |
| <b>Help</b>                  | Displays online help.   |
| <b>Close</b>                 | Closes the Connectivity Doctor screen.  |

## Search for Wireless Devices

The Search for Wireless Devices utility searches for wireless LAN devices and Bluetooth devices currently used in the neighborhood, and displays information about them on a virtual map.

To search for wireless devices:

- 1 Click the  icon in the system tray.
- 2 Click **Search for Wireless Devices**.

A virtual map appears with a graphical representation of the wireless devices that have been detected.

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**NOTE** Search for Wireless Devices can also be started from the ConfigFree Launcher.

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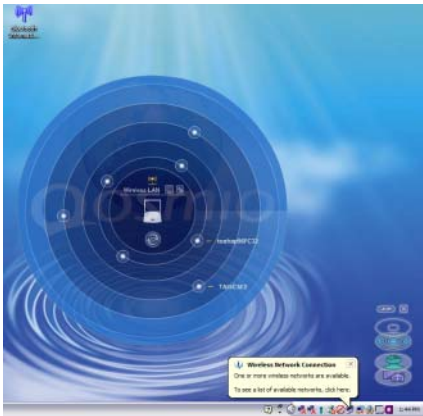
For Wi-Fi networks, the intensity of a signal is displayed in five levels or “bands.” The signal from the connected access point is displayed in the bands surrounding the PC icon at the center of the map. Placing the pointer over the displayed “point of light” shows detailed information about the wireless device.

---

**NOTE** The wireless device shown near the center of the map is not necessarily near your notebook computer. If a wireless device located a distance away also has a strong signal, it appears near the center of the map as well.

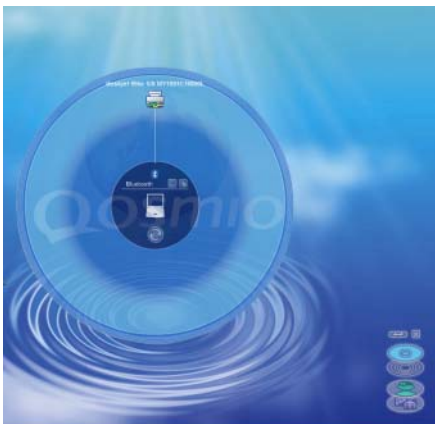
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*Sample viewing Wi-Fi devices*

The following screen shows an example of Bluetooth devices that are detected. As with the Wi-Fi screen, moving the mouse pointer over a device icon displays information about the device.



*Sample viewing Bluetooth devices*

You can connect to devices shown on the Bluetooth map:

- 1** Click the icon of a Bluetooth device.

- 2 Click your own computer at the center of the map.
- 3 Configured devices are automatically connected. Devices not yet configured launch the Add New Connection Wizard, where you can configure and connect to the device.

## Profile Settings

The Profile Settings utility lets you save network settings in “profiles.” ConfigFree profiles are useful for easily switching network settings and devices. You can switch network settings simply by selecting the profile with the desired settings.


If you visit a client company occasionally, for example, you can set up a profile to match that environment and connect to the network. Similarly, users who access networks in the office and at home can set up profiles to handle these networking environments.

A profile contains the currently configured network settings on the computer, as well as information about any network devices. The following settings can be saved (or “captured”) in a profile:

- ❖ **Internet settings** — includes LAN settings (proxy server settings) and the address of a home page that opens automatically when Internet Explorer starts.
- ❖ **Devices** — lets you enable or disable settings of wired and wireless network devices, infrared devices, and set the power status of Bluetooth antennas.
- ❖ **TCP/IP settings** — includes DHCP, IP address, subnet mask, default gateway, DNS server, and WINS server settings.

- ❖ Personal firewall settings for Internet connections.
- ❖ Dial-up connection settings for the default connection.
- ❖ File and printer sharing settings.
- ❖ Printer settings for the default printer.

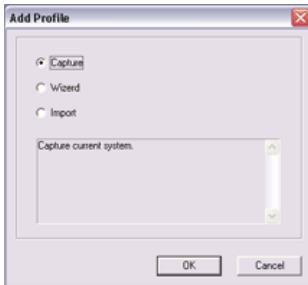
To create a profile:

- 1 Click the  icon in the system tray.
- 2 Move the pointer to **Profile**.
- 3 Click **Add**. The Add Profile screen appears.
- 4 Select **Capture** and click **OK**. The Add Profile screen appears.
- 5 Enter the name of the profile you want to create.
- 6 Enter any optional comments, if desired.
- 7 Click **Change Icon** and select an icon for this profile.
- 8 Under **Captured Items**, select the items you want to capture for this profile.
- 9 If connecting with a wireless network, select the desired **Auto Switch Settings**. (These options are unavailable if wireless devices have been disabled.)
- 10 Under **Execute this program after switching**, click the **Browse** button and select the program, file, or Web site URL that is to start after switching to this profile.

For example to have Internet Explorer start in Windows XP after switching profiles, type:

C:\Program Files\Internet Explorer\IEXPLORE.EXE

- 11 Click **OK**.



*Sample Add Profile screen*

---

**NOTE**

The online help provides real-world examples of setting up profiles for different networking environments.

---


After you set up one or more profiles, you can check their settings and fine-tune them as necessary. Profiles can also be imported and exported. This feature is useful when transferring profile settings to other computers. For more information about modifying, importing, and exporting profiles, refer to the online help.

## Quick Connect

The Quick Connect feature switches the Wireless LAN connection to connect to a Toshiba Wireless Projector. Once the projector utility is installed, launching the Quick Connect utility automatically opens the Wireless Data Projector Application. There you can configure how you would like to use the projector.


---

To connect to a Toshiba Wireless Projector:

- 1 Click the  icon in the system tray.
- 2 Move the mouse pointer to **Toshiba Wireless Projector (DPJ)**, then click **Connect**.

Launching Quick Connect prevents you from using the network to connect to a Toshiba Wireless Projector when the wireless LAN Configuration is set to Ad hoc. If you are connected to an access point, the connection is broken and re-established later.

To review the current Toshiba Wireless Projector settings and change them if necessary:

- 1 Click the  icon in the system tray.
- 2 Move the mouse pointer to **Toshiba Wireless Projector (DPJ)**, then click **Settings**. The Quick Connect properties dialog box appears.
- 3 Complete the settings. Refer to the online help if necessary.
- 4 Click **OK**.

---

**NOTE**

The default connection setting is for Ad hoc mode, therefore, if the setting on the Toshiba Wireless Projector is in Infrastructure mode, it will not connect, however; you can change the settings to Infrastructure mode to match the settings on the projector.

---



### *Sample Projector icon when connected with Quick Connect*

If the wireless mode for the wireless setting is set for 5 GHz (802.11a), Quick Connect changes this mode to 2.4 GHz (802.11b) and then connects to the projector.

The wireless LAN configuration returns to the settings that were last used before the Quick Connect function was started:

- ❖ If the Toshiba Wireless Projector utility is closed.
- ❖ If you select Toshiba Wireless Projector (DPJ) from the ConfigFree tray menu (this disconnects the wireless LAN connection).
- ❖ If you select a profile from the ConfigFree tray menu or when you disable a wireless device.
- ❖ If you close ConfigFree.


---

## Using the Automatic Switch

The Automatic Switch feature allows the computer to automatically switch profiles the next time it is powered on. This feature is particularly useful if you want your computer to automatically switch from the network configuration you use in your office to the one you use at home.

The Auto Switch feature contains options for automatically switching between wired and wireless devices. With these options, the computer automatically switches to a wireless LAN network when the cable of the wired LAN network is removed from the computer. When the cable is reconnected, the connection to the wired LAN is re-established.

To use the Automatic Switch feature:

- 1 Right-click the  icon in the system tray.
- 2 Click **Auto Switch**. The Auto Switch dialog box appears.
- 3 Check **Enable Wireless when cable disconnect occurs**.
- 4 Click **OK**.

---

### NOTE

If your computer is connected to multiple wireless LAN devices, the Auto Switch (SSID) feature is disabled. To enable this feature, only one wireless LAN device can be used.


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## Semi-Automatic Switch Feature

The Semi-Automatic feature alerts you when the computer connects to a Service Set Identifier (SSID) stored in a profile. When the computer connects to the designated SSID, a notification window appears. You can then click this window to connect using the settings specified in the profile.

To use the Semi-Automatic Switch feature:

- 1 Right-click the  icon in the system tray.
- 2 Click **Auto Switch**. The Auto Switch dialog box appears.
- 3 Select the **Auto Switch (SSID)** tab.
- 4 Select the profile to be automatically selected when the SSID is detected, then click **Add**. The profile is moved to the **List of target SSIDs and profiles**.
- 5 Repeat the previous step for each additional profile you want to select.
- 6 Select **Automatically switch profiles when connected to this SSID**.
- 7 Check **Automatically switch profile when connected to this SSID**.
- 8 Click **OK**.

The computer is now configured to use the Semi-Automatic Switch feature. When the computer connects to an SSID in a profile, a display notification window appears. You can then click **Switch** on the window to switch profiles. You can also set the option for having the switch be automatic without the need for a notification.

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### NOTE

Several profiles can be defined for a single SSID. In this case, several notification windows are displayed. By clicking these windows, you can switch to the profile for that location.

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# Glossary

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TECHNICAL NOTE: Some features defined in this glossary may not be available on your computer.

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## Acronyms

The following acronyms may appear in this user's guide.

<b>AC</b>	alternating current
<b>BIOS</b>	basic input/output system
<b>bps</b>	bits per second
<b>CD</b>	compact disc
<b>CD-ROM</b>	compact disc read-only memory
<b>CD-RW</b>	compact disc rewrite memory
<b>CMOS</b>	complementary metal-oxide semiconductor
<b>COM1</b>	communications port 1 (serial port)
<b>COM2</b>	communications port 2 (serial port)
<b>CPU</b>	central processing unit
<b>DC</b>	direct current

<b>DMA</b>	direct memory access
<b>DIMM</b>	dual inline memory module
<b>DOS</b>	disk operating system
<b>DPI</b>	dots per inch
<b>DSTN</b>	dual supertwist nematic
<b>DVD</b>	digital versatile (or video) disc
<b>DVD-ROM</b>	digital versatile (or video) disc read-only memory
<b>ECP</b>	enhanced capabilities port
<b>EPROM</b>	erasable programmable read-only memory
<b>FAT</b>	file allocation table
<b>FCC</b>	Federal Communications Commission
<b>FIR</b>	fast infrared
<b>GB</b>	gigabyte
<b>HDD</b>	hard disk drive
<b>HTML</b>	Hypertext Markup Language
<b>IEEE</b>	Institute of Electrical and Electronics Engineers
<b>I/O</b>	input/output
<b>IRQ</b>	interrupt request
<b>ISP</b>	Internet service provider
<b>KB</b>	kilobyte
<b>LAN</b>	local area network
<b>LCD</b>	liquid crystal display
<b>LPT1</b>	line printer port 1 (parallel port)
<b>LSI</b>	large-scale integration
<b>MB</b>	megabyte
<b>MIDI</b>	Musical Instrument Digital Interface
<b>NTFS</b>	<b>NT file system</b>
<b>PC</b>	personal computer
<b>PCI</b>	Peripheral Component Interconnect

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<b>PCMCIA</b>	Personal Computer Memory Card International Association
<b>RAM</b>	random access memory
<b>RFI</b>	radio frequency interference
<b>ROM</b>	read-only memory
<b>RTC</b>	real-time clock
<b>SCSI</b>	small computer system interface
<b>SDRAM</b>	synchronous dynamic random access memory
<b>SRAM</b>	static random access memory
<b>SVGA</b>	super video graphics adapter
<b>TFT</b>	thin film transistor
<b>USB</b>	universal serial bus
<b>URL</b>	uniform resource locator
<b>WAN</b>	wide area network
<b>www</b>	World Wide Web

## Terms

The following terms may appear in this user's guide.

### A

**active-matrix display** — A liquid crystal display (LCD) made from an array of liquid crystal cells using active-matrix technology. Also known as a “TFT display,” in its simplest form there is one thin film transistor (TFT) for each cell. This type of display works well with notebook computers because of its shallow depth and high-quality color. Active-matrix displays are viewable from wider angles than most passive-matrix displays.

**adapter** — A device that provides a compatible connection between two units. For example, the computer's internal display adapter receives information from the software and translates it into images on the screen. An adapter can take a number of forms, from a microprocessor to a simple connector. An intelligent adapter (one that is capable of doing some processing) may also be called a controller.

**alternating current (AC)** — The type of power usually supplied to residential and commercial wall outlets. AC reverses its direction at regular intervals. Compare *direct current (DC)*.

**application** — A computer program that you use to perform tasks of a specific type. Applications include word processors, spreadsheets, and database management systems. See also *program*.

**B**

**backup** — A copy of a file, usually on a removable disk, kept in case the original file is lost or damaged.

**basic input/output system (BIOS)** — See *BIOS*.

**baud rate** — The speed at which a communication device, such as a printer or modem, transmits information. Baud rate is the number of signal changes per second (not necessarily the same as bits per second). See also *bits per second*.

**BIOS (basic input/output system)** — Basic instructions, stored in read-only memory (ROM), containing the information the computer needs in order to check hardware and load the operating system when you start up the computer.

**bit:** — Short for “binary digit.” A bit is the smallest unit of information used by a computer. A group of eight bits is a byte. See also *byte*.

**bits per second (bps)** — A way of measuring the speed at which information is passed between two devices. The basic measure used in modem communications, bps is similar, but not identical, to the baud rate. See also *baud rate*.

**boot** — To start the computer. The term “boot” originates from bootstrap program (as in “pulling itself up by its bootstraps”), a program that loads and initializes the operating system. See also *reboot*.

**boot disk** — See *system disk*.

**boot priority (startup sequence)** — The order in which the computer accesses its disk drives to locate the startup files. Under the default startup sequence, the computer looks for the startup files in the diskette drive before checking the hard disk.

**bus** — An electrical circuit that connects the central processing unit (CPU) with other parts of the computer, such as the video adapter, disk drives, and ports. It is the pathway through which data flows from one device to another. See also *bus speed*, *frontside bus*.

**bus speed** — The speed at which the central processing unit (CPU) communicates with the other parts of the computer.

**byte** — A sequence of eight bits. A byte is the smallest addressable unit of data. See also *bit*, *gigabyte*, *kilobyte*, *megabyte*.

## C

**cache** — A section of very fast memory in which frequently used information is duplicated for quick access. Accessing data from cache is faster than accessing it from the computer's main memory. See also *CPU cache*, *L1 cache*, *L2 cache*.

**CD** — An individual compact disc. See also *CD-ROM*.

**CD-ROM (compact disc read-only memory)** — A form of high-capacity storage that uses laser optics instead of magnetic means for reading data. See also *CD*. Compare *DVD-ROM*.

**central processing unit (CPU)** — The chip that functions as the “brain” of the computer. It takes information from outside sources, such as memory or keyboard input, processes the information, and sends the results to another device that uses the information.

**character** — Any letter, number, or symbol you can use on the computer. Some characters are non-printing characters, such as a paragraph break in a word-processing program. A character occupies one byte of computer storage.

**chip** — A small piece of silicon containing computer logic and circuits for processing, memory, input/output, and/or control functions. Chips are mounted on printed circuit boards.

**click** — To press and release the TouchPad control button or mouse button without moving the cursor or mouse. In the Windows® operating system, this refers to the left mouse button or primary TouchPad control button, unless otherwise stated. See also *double-click*.

**color palette** — A set of specified colors that establishes the colors that can be displayed on the screen at a particular time.

**compatibility** — The extent to which computers, programs, or devices can work together harmoniously, using the same commands, formats, or language as another.

**configuration** — (1) The collection of components that make up a single computer system. (2) How parts of the system are set up (that is, configured).

**controller** — A device that controls the transfer of data from a computer to a peripheral device and vice versa. For example, disk drives, monitors, keyboards, and printers all require controllers.

**CPU** — See *central processing unit (CPU)*.

**CPU cache** — A section of very fast memory residing between the CPU and the computer's main memory that temporarily stores data and instructions the CPU will need to execute commands and programs. See also *cache, L1 cache, L2 cache*.

**cursor** — A symbol that indicates the current position on the screen. The shape of the cursor varies, depending on the program you're using and what you're doing.

## D

**default** — The setting selected by a program when the user does not specify an alternative setting.

**device** — A component attached to the computer. Devices may be external (outside the computer's case) or internal (inside the computer's case). Printers, disk drives, and modems are examples of devices.

**device driver** — A program (called a "driver") that permits a computer to communicate with a device.

**dialog box** — An on-screen window displayed by the operating system or a program giving a direction or requesting input from the user.

**direct current (DC)** — The type of power usually supplied by batteries. DC flows in one direction. Compare *alternating current (AC)*.

**direct memory access (DMA)** — A dedicated channel, bypassing the CPU, that enables direct data transfer between memory and a device.

**directory** — See *folder*.

---

**disable** — To turn a computer option off. See also *enable*.

**disc** — A round, flat piece of metal, designed to be read from and written to by optical (laser) technology, and used in the production of optical discs, such as CDs and DVDs. Compare *disk*.

**disk** — A round, flat piece of material that can be magnetically influenced to hold information in digital form, and used in the production of magnetic disks, such as diskettes and hard disks. Compare *disc*. See also *diskette*, *hard disk*.

**disk drive** — The device that reads and writes information and programs on a diskette or hard disk. It rotates the disk at high speed past one or more read/write heads.

**diskette** — A thin, flexible disk in a protective jacket that stores magnetically encoded data. Diskettes can be removed from the computer and come in two sizes: 5.25-inch and 3.5-inch. Your computer uses 3.5-inch diskettes. See also *double-density diskette*, *high-density diskette*.

**document** — Any file created with an application and, if saved to disk, given a name by which it can be retrieved. See also *file*.

**double-click** — To press the TouchPad control button or mouse button rapidly twice without moving the cursor or mouse. In the Windows® operating system, this refers to the primary TouchPad control button or left mouse button, unless otherwise stated.

**download** — (1) In communications, to receive a file from another computer through a modem or network. (2) To send font data from the computer to a printer. See also *upload*.

**drag** — To hold down the TouchPad control button or mouse button while moving the cursor to drag a selected object. In the Windows® operating system, this refers to the primary TouchPad control button or left mouse button, unless otherwise stated.

**driver** — See *device driver*.

**DVD** — An individual digital versatile (or video) disc. See also *DVD-ROM*.

**DVD-ROM (digital versatile [or video] disc read-only memory)** — A very high-capacity storage medium that uses laser optics for reading data. Each DVD-ROM can hold as much data as several CD-ROMs. Compare *CD-ROM*.

**E** **emulation** — A technique in which a device or program imitates another device or program.

**enable** — To turn on a computer option. See also *disable*.

**executable file** — A computer program that is ready to run. Application programs and batch files are examples of executable files. Names of executable files usually end with a .bat or .exe extension.

**extension** — See *file extension*.

**external device** — See *device*.

**F** **file** — A collection of related information, saved on disk with a unique name. A file may be a program, information used by a program, or a document. See also *document*.

**file allocation table (FAT)** — The section of a disk that keeps track of the location of files stored on the disk.

**file name** — A set of characters that uniquely identifies a file within a particular folder. It consists of two parts: the actual name and the file name extension. See also *file extension*.

**file extension** — The three characters following the period (pronounced “dot”) at the end of a file name. The extension indicates the type of file. Examples are .exe for program files and .hlp for help files. See also *file name*.

**folder** — Also called directory. A container for organizing files saved to a disk. A folder is symbolized on screen by a graphical image (icon) of a file folder. A folder can contain files and other folders.

**format** — (verb) To prepare a blank disk for use with the computer’s operating system. Formatting creates a structure on the disk so the operating system can write information to the disk or read information from it.

**frontside bus** — The primary pathway (bus) between the CPU and the computer’s main memory. Also called “system bus.” See also *bus*.



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**function keys** — The keys labeled F1 through F12, typically located on the keyboard. Their function is determined by the operating system and/or individual programs.

**G** **gigabyte (GB)** — A unit of data equal to 1,073,741,824 bytes (1024 x 1024 x 1024 bytes). See also *byte*.

**ground** — A conductor to which all components of an electric circuit are connected. It has a potential of zero (0) volts, is connected to the earth, and is the point of reference for voltages in the circuit.

**H** **hard disk** — A storage device composed of a rigid platter or platters that can be magnetically coded with data. Hard disks hold much more information than diskettes and are used for long-term storage of programs and data. The primary (or only) hard disk in a computer is usually fixed, but some computers have secondary hard disks that are removable. By default, the hard disk is referred to as drive C.

**hardware** — The physical components of a computer system. Compare *software*.

**Hibernate** — A feature of many Toshiba notebook computers that saves to the hard disk the current state of your work, including all open files and programs, when you turn the computer off. When you turn on the computer again, your work is returned to the same state it was when the computer was turned off. See also *Standby*, *Suspend*.

**high-density diskette** — A 3.5-inch diskette that holds 1.44 MB of data. See also *diskette*.

**hot key** — (1) A feature in which certain keys in combination with the Fn key can set system options or control system parameters, such as the battery save mode. (2) A key or combination of keys that activates a memory resident program.

**hot swapping** — The ability to add or remove devices from a computer while the computer is running and have the operating system automatically recognize the change.

**I** **icon** — A small image displayed on the screen that represents a function, file, or program.

**interlaced** — A method of refreshing a computer screen, in which only every other line of pixels is refreshed. Interlaced monitors take two passes to create a complete screen image. Compare *non-interlaced*.

**internal device** — See *device*.

**Internet** — The decentralized, world-wide network of computers that provides electronic mail, the World Wide Web, and other services. See also *World Wide Web*.

## K

**keyboard shortcut** — A key or combination of keys that you use to perform a task instead of using a pointing device such as the TouchPad.

**kilobyte (KB)** — A unit of data equal to 1024 bytes. See also *byte*.

## L

**L1 (level one) cache** — Memory cache built into the processor to help improve processing speed. See also *cache*, *CPU cache*, *L2 cache*.

**L2 (level two) cache** — Memory cache installed on the motherboard to help improve processing speed. It is slower than L1 cache and faster than main memory. See also *cache*, *CPU cache*, *L1 cache*.

**LAN (local area network)** — A group of computers or other devices dispersed over a relatively limited area and connected by a communications link that enables any device to interact with any other on the network.

**liquid crystal display (LCD)** — A type of display that uses a liquid substance between two transparent electrode panels. When an electric current passes through the electrodes, the molecules in the liquid form a crystalline pattern that polarizes the light passing through it. A filter over the electrodes permits only non-polarized light to pass to the surface of the display, creating light and dark pixels.

**load** — To move information from a storage device (such as a hard disk) into memory for processing.

**local area network** — See *LAN*.

**logical drive** — A section of a disk that is recognized by the operating system as a separate disk drive. A system's logical drives may differ from its physical drives. For example, a single hard disk drive may be partitioned into two or more logical drives.

- 
- M**
- megabyte (MB)** — A unit of data equal to 1,048,576 bytes (1024 x 1024 bytes). See also *bytes*.
- memory** — Typically refers to the computer's main memory, where programs are run and data is temporarily stored and processed. Memory can be volatile and hold data temporarily, such as RAM, or it can be nonvolatile and hold data permanently, such as ROM. A computer's main memory is RAM. See *RAM*, *ROM*.
- microprocessor** — See *central processing unit (CPU)*.
- MIDI (Musical Instrument Digital Interface)** — A standard for connecting musical instruments, synthesizers, and computers. The MIDI standard provides a way of translating music into a form computers can use, and vice versa.
- modem** — Short for “modulator/demodulator.” A device that converts information from digital to analog and back to digital, enabling information to pass back and forth between digital computers and analog telephone lines.
- motherboard** — The main circuit board in the computer. It contains the processor, memory, and other primary components.
- MS-DOS prompt** — See *system prompt*.
- multi-function drive** — A DVD drive that can read and write to CD and DVD media.
- multimedia** — A combination of two or more media, such as sound, animation, and video in a computer program or presentation.
- Musical Instrument Digital Interface** — See *MIDI*.
- N**
- network** — A collection of computers and associated devices that are connected by communications facilities. A network allows you to share data and peripheral devices, such as printers, with other users and to exchange electronic mail.
- non-interlaced** — A method of refreshing a computer screen, in which each pixel of every line is refreshed as the electron beam scans across and down the screen. Compare *interlaced*.
- non-system disk** — A disk for storing programs and data that cannot be used to start the computer. Compare *system disk*.

**NT file system (NTFS)** — An advanced file system designed for use specifically with the Windows NT operating system.

**O**

**online** — Available through the computer. Online may refer to information being read from your own computer's hard disk, such as online documentation or online help, or to information coming from another company on a company network or the Internet.

**operating system** — A set of programs that controls how the computer works. Examples of operating systems are Windows® 98 Second Edition and Windows® 2000 operating systems.

**P**

**palette** — See *color palette*.

**parallel** — Processes that occur simultaneously. In communications, it means the transmission of more than one bit of information at a time. On your computer, the parallel port provides a parallel communications interface between the computer and an appropriate device. Most modern printers are parallel. Compare *serial*.

**password** — A unique string of characters entered by a user to verify his or her identity to the computer or the network.

**PC Card** — A credit-card-sized expansion card designed to increase the capabilities of notebook computers. PC Cards provide functions such as modem, fax/modem, hard disk drive, network adapter, sound card, or SCSI adapter.

**peripheral** — Any device, such as a printer or joystick, that is attached to the computer and controlled by the computer's CPU.

**pixel** — Short for "picture element." The smallest dot that can be produced on a screen or printer.

**Plug and Play** — Generally, refers to the computer's ability to automatically configure itself to work with peripheral devices. When capitalized, refers to a standard that, when followed by a device manufacturer, allows a PC to configure itself automatically to work with the device.

**pointing device** — Any device, such as the TouchPad or a mouse, that enables you to move the cursor on the screen.

**port** — A socket on the computer where you plug in a cable for connection to a network or a peripheral device.

---

**processor** — See *central processing unit (CPU)*.

**program** — A set of instructions that can be executed by a computer. The general classes of programs (also called software) are operating system, application, and utility. See also *operating system, application, utility*.

**properties** — The attributes of an object or device. For example, the properties of a file include the file's type, size, and creation date.

## R

**RAM (random access memory)** — *Volatile memory that can be written to as well as read. By volatile, we mean that information in RAM is lost when you turn off your computer. This type of memory is used for your computer's main memory. See also memory. Compare ROM.*

**random access memory** — See *RAM*.

**read-only memory** — See *ROM*.

**reboot** — See *boot, restart*.

**removable disk** — A disk that can be removed from a disk drive. A diskette is one example of a removable disk.

**resolution** — A measure of the sharpness of the images that can be produced by a printer or displayed on a screen. For a printer, resolution is expressed in dots per inch (dpi). For a screen, it is expressed as the number of pixels available horizontally and vertically.

**restart** — Synonymous with reboot. To reset the computer by reloading the operating system without turning the computer off. See also *boot*.

**RJ-11** — A modular connector used on most U.S. telephone systems and direct-connect modems. The RJ-11 connector is a 6-wire connector.

**RJ-45** — A connector used to attach computers to LANS (local area networks) and to link ISDN (Integrated Services Digital Network) devices to NT-1 (Network Terminator devices). Also called.

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**ROM (read-only memory)** — *Non-volatile memory that can be read but not written to. By non-volatile, we mean that information in ROM remains whether or not the computer is receiving power. This type of memory is used to store your computer's BIOS, which is essential instructions the computer reads when you start it up. See also BIOS, memory. Compare RAM.*

**S**

**select** — To highlight or otherwise specify text, data, or graphics with the intent to perform some operation on it.

**serial** — Processes that occur one at a time. In communications, it means the transmission of one bit at a time sequentially over a single channel. On your computer, the serial port provides a serial interface between the computer and an appropriate device. Compare *parallel*.

**shortcut** — See *keyboard shortcut*.

**software** — See *program*. Compare *hardware*.

**Standby** — A feature of some Windows® operating systems that allows you to turn off the computer without exiting your open applications and to continue from where you left off when you turn the computer on again.

**Suspend** — A feature of some Windows® operating systems that allows you to turn off the computer without exiting your open applications and to continue from where you left off when you turn the computer on again.

**system disk** — A diskette that contains the operating system files needed to start the computer. Any diskette can be formatted as a system disk. A system disk is also called a “bootable disk” or a “startup disk.” Compare *non-system disk*.

**system prompt** — The symbol (in the MS-DOS® operating system, generally a drive letter followed by a “greater than” sign) indicating where users are to enter commands.

**T**

**TFT display** — See *active-matrix display*.

**U**

**universal serial bus (USB) 2.0**— A serial bus that supports a data transfer rate of up to 480 Mbps (480 million bits per second). USB can connect up to 127 peripheral devices through a single all-purpose USB port. USB allows hot swapping of peripherals. See also *bus*, *hot swapping*, *serial*.

**upload** — To send a file to another computer through a modem or network. See also *download*.

**USB** — See *universal serial bus (USB)*.

**utility** — A computer program designed to perform a narrowly focused operation or solve a specific problem. Utilities are often related to computer system management.

**W**

**Web** — See *World Wide Web*.

**Wi-Fi** — A trademarked term used by the Wireless Capability Ethernet Alliance which stands for Wireless Fidelity, and is another term for the communication protocol to permit an Ethernet connection using wireless communication components.

**World Wide Web (www)** — The worldwide network of Web sites linked together over the Internet. A user of the Web can jump from site to site regardless of the location of the computer hosting the site. See also *Internet*.

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